

THIS PRINT COVERS CALENDAR ITEM NO.: 10.4

**SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY**

DIVISION: Transit

BRIEF DESCRIPTION:

Authorizing the Director of Transportation to execute Contract No. SFMTA-2020-64, Overhaul of Breda Light Rail Vehicle Master Controllers, with Denver Test Systems, Inc., to overhaul up to 150 base master controller units on 75 Breda light rail vehicles (LRVs), with an option to overhaul up to 148 additional master controller units on 74 Breda LRVs, for an amount not to exceed \$1,840,746, and for a term not to exceed 30 months.


SUMMARY:

- The current fleet of Breda light rail vehicles (LRVs) is aging, causing diminished performance and reliability; and
- It is necessary to keep a sufficient number of the Breda LRVs in service through 2026, until all of the Breda LRVs are replaced by the new Siemens LRV4 fleet; and
- The master controller is the handle and control unit that allows the driver to operate the vehicle. It is the primary interface point for the operator and needs to be overhauled.
- On June 16, 2020, the SFMTA issued a Request for Proposals (RFP) to obtain qualified vendors to overhaul the master controller in the Breda LRVs. A selection committee reviewed five proposals and ranked Denver Test Systems as the highest-ranked proposer.
- The proposed Contract will allow refurbishment of a limited number of the master controller units and help keep the vehicles operational until they are retired.

ENCLOSURES:

1. SFMTA Board Resolution
2. Contract No. SFMTA-2020-64 with Denver Test Systems

APPROVALS:

	DATE
DIRECTOR <u></u>	<u>March 8, 2021</u>
SECRETARY <u>Caroline Celaya</u>	<u>March 8, 2021</u>

ASSIGNED SFMTAB CALENDAR DATE: March 16, 2021

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PURPOSE

The purpose of this calendar item is to authorize the Director of Transportation to execute Contract No. SFMTA-2020-64, Overhaul of Breda Light Rail Vehicle Master Controllers, with Denver Test Systems., to overhaul up to 150 base master controller units on 75 Breda light rail vehicles (LRVs), with an option to overhaul up to 148 additional master controller units on 74 Breda LRVs, for an amount not to exceed \$1,840,746, and for a term not to exceed 30 months.

STRATEGIC PLAN GOALS AND TRANSIT FIRST POLICY PRINCIPLES

Contract No. SFMTA-2020-64 would assist in the implementation of the following goals and objectives in the SFMTA Strategic Plan:

Goal 1: Create a safer transportation experience for everyone.

Objective 1.2: Improve the safety of the transit system

Goal 2: Make transit and other sustainable modes of transportation the most attractive and preferred means of travel.

Objective 2.1: Improve transit service

Objective 2.2: Enhance and expand use of the city's sustainable modes of transportation.

Goal 4: Create a workplace that delivers outstanding service.

Objective 4.2: Improve the safety, security and functionality of SFMTA work environments

This action supports the following SFMTA Transit First Policy Principles:

Policy 1: To ensure quality of life and economic health in San Francisco, the primary objective of the transportation system must be the safe and efficient movement of people and goods.

BACKGROUND

The SFMTA operates Muni, the City's public transportation system. Muni operates 24 hours a day, 365 days a year. The SFMTA operates a fleet of approximately 900 buses (diesel, hybrid electric, and electric trolley buses), 149 LRV2/3 (Breda) vehicles, 68 LRV4 (Siemens) vehicles, and approximately 100 other rail vehicles, including cable cars and historic streetcars, which consist of Milan, Presidents Conference Committee (PCC) cars, and Vintage cars.

Based on typical annual ridership, Muni is the seventh largest system in the United States, and the San Francisco Bay Area's largest and most heavily used public transit system, transporting approximately 45 percent of all transit passengers in the region during normal operations. Muni's fleet of LRVs comprises 149 Breda (LRV2/3) and 68 Siemens (LRV4) vehicles.

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Vehicle breakdowns are the largest source of reliability issues on our rail system and make up approximately 50 percent of delay hours in the subway. Fortunately, the new Siemens LRV4s, which we started introducing into the system in 2017, are significantly more reliable than their predecessors, the Breda vehicles. Replacement is currently underway for the Breda fleet; however, these vehicles have to last up to five more years as we phase in the new equipment. In order to reduce breakdowns during that time period, rail maintenance and Fleet Engineering worked together to identify four key systems for overhaul or replacement: master controllers; heating, ventilation and air conditioning units; headlights; and control boards for the propulsion system. Not all of the units will be overhauled; the proposed quantities will allow the fleet to perform through the end of their useful life. These systems, or parts of systems, are relatively cost-effective to replace, but break down at a high frequency.

The Breda fleet is scheduled for retirement when the replacement LRV4 vehicles are delivered from 2021 – 2025. Despite the service interruption as a result of the pandemic and the fleet's impending retirement, we must plan to keep at least some of the vehicles in service until early 2026. As mentioned above, the SFMTA identified a few critical systems on the Breda LRVs that must be rehabilitated in order for the vehicles to remain serviceable until replaced by the LRV4s. The master controller unit, located in the operator's cab, enables the driver to operate the train. Only half of the master controllers will be overhauled because of the limited remaining life of the vehicles, and to make the best use of available funding. The remaining best performing units will continue to be maintained in-house. The contract does include an option to overhaul additional units if necessary.

PROCUREMENT

On June 16, 2020, the SFMTA issued a Request for Proposals (RFP) to obtain a qualified contractor to overhaul the master controller units for the Breda LRVs.

On August 3rd, 2020, the SFMTA received five proposals—from Alstom Transportation Inc., Denver Test Systems, Gray Manufacturing Industries, LLC, Knorr Brake Company, and Technical Services and Logistics, Inc. The SFMTA formed a technical evaluation panel and a price evaluation panel to review the initial proposals. Both panels scored the proposals; the scores were combined and each proposer was assigned a final score. Denver Test Systems was the highest-ranked proposer.

SCOPE

The selected contractor, Denver Test Systems, will overhaul 150 master controller units. There are 2 units per vehicle, allowing 75 vehicles to receive overhauled units. The scope includes provision of prototype units and testing to validate the quality and performance of the work. The contract includes an option to provide up to an additional 148 units if required by the SFMTA, in the event that we need to extend the life of the Breda vehicles beyond their anticipated retirement. The work will be completed in 30 months.

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STAKEHOLDER ENGAGEMENT

Rail maintenance was consulted during the development of the scope of work and participated in the technical evaluation of the proposals.

ALTERNATIVES CONSIDERED

The current fleet of Breda Light Rail vehicles is aging, causing diminished performance and reliability. The SFMTA identified a few specific problematic systems for limited overhaul in order to focus funds in critical areas. In addition, recognizing that a full fleet replacement is underway, the SFMTA limited the base contract overhaul work to 75 vehicles (150 master controller units), rather than the whole fleet. In the event that we need to prolong the life of additional Breda cars beyond their predicted retirement dates, we can execute some or all of the units included in the Option.

The alternative would be to not perform the overhaul of this critical system. The result would be likely be failures of the units, resulting in service delays and disruption.

FUNDING IMPACT

All funding for this work (up to \$1,840,746) will come from the Prop K sales tax.

ENVIRONMENTAL REVIEW

On November 6, 2020, the SFMTA, under authority delegated by the Planning Department, determined that Contract No. SFMTA-2020-64 is not a “project” under the California Environmental Quality Act (CEQA) pursuant to Title 14 of the California Code of Regulations Sections 15060(c) and 15378(b).

A copy of the CEQA determination is on file with the Secretary to the SFMTA Board of Directors and is incorporated herein by reference.

OTHER APPROVALS RECEIVED OR STILL REQUIRED

Staff obtained approval for the contract from the Civil Service Commission by PSC No. 4781018/19 on May 20, 2019.

The Contract Compliance Office waived the Local Business Enterprise (LBE) participation requirement for this Contract after determining that there were no local vendors with the capacity or qualifications to perform this work.

The City Attorney's Office has reviewed this calendar item.

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RECOMMENDATION

Staff recommends that the SFMTA Board authorize the Director of Transportation to execute Contract No. 2020-64, Overhaul of Breda Light Rail Vehicle Master Controllers, with Denver Test Systems, to overhaul up to 150 base master controller units on 75 Breda light rail vehicles (LRVs), with an option to overhaul up to 148 additional master controller units on 74 Breda LRVs, for an amount not to exceed \$1,840,746, and for a term not to exceed 30 months.

SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
BOARD OF DIRECTORS

RESOLUTION No. _____

WHEREAS, The current fleet of Breda light rail vehicles (LRVs) is aging, causing diminished performance and reliability; and

WHEREAS, It is necessary to keep a sufficient number of the Breda LRVs in service through 2026, until they are replaced by the new Siemens LRV4 fleet; and

WHEREAS, The master controller, which allows the driver to operate the LRV, is a critical system that needs to be overhauled; and

WHEREAS, On June 16, 2020, the SFMTA issued a Request for Proposals (RFP) for Contract No. SFMTA-2020-64, to overhaul 298 master controller units for the Breda LRVs; and

WHEREAS, On August 3, 2020, the SFMTA received proposals in response to the RFP from Alstom Transportation Inc., Denver Test Systems, Gray Manufacturing Industries, LLC, Knorr Brake Company, and Technical Services and Logistics, Inc.; and

WHEREAS, A selection panel, comprised of technical and price committees, evaluated the five proposals and selected Denver Test Systems as the highest-ranked proposer; and

WHEREAS, Local sources will provide funding for the overhaul of the master controller units; and,

WHEREAS, The Contract Compliance Office has waived the LBE participation requirement for this Contract; and,

WHEREAS, On November 6, 2020, the SFMTA, under authority delegated by the Planning Department, determined that Contract Nos. SFMTA-2020-64, is not a “project” under the California Environmental Quality Act (CEQA) pursuant to Title 14 of the California Code of Regulations Sections 15060(c) and 15378(b); and,

WHEREAS, A copy of the CEQA determination is on file with the Secretary to the SFMTA Board of Directors, and is incorporated herein by reference; now, therefore, be it

RESOLVED, That the SFMTA Board of Directors authorizes the Director of Transportation to execute Contract No. 2020-64, Overhaul of Breda Light Rail Vehicle Master Controllers, with Denver Test Systems, to overhaul up to 150 base master controller units on 75 Breda light rail vehicles (LRVs), with an option to overhaul up to 148 additional master controller units on 74 Breda LRVs, for an amount not to exceed \$1,840,746, and for a term not to exceed 30 months.

I certify that the foregoing resolution was adopted by the San Francisco Municipal Transportation Agency Board of Directors at its meeting of March 16, 2021.

Secretary to the Board of Directors
San Francisco Municipal Transportation Agency

ENCLOSURE 2
Contract No. SFMTA-2020-64

**City and County of San Francisco
Municipal Transportation Agency
One South Van Ness Ave., 7th Floor
San Francisco, California 94103**

Agreement between the City and County of San Francisco and

Denver Test Systems

for

**Overhaul of Breda Light Rail Vehicle
Master Controllers**

Contract No. SFMTA-2020-64

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**City and County of San Francisco
Municipal Transportation Agency
One South Van Ness Ave., 7th Floor
San Francisco, California 94103**

**Agreement between the City and County of San Francisco and
Denver Test Systems
Contract No. SFMTA-2020-64**

This Agreement is made as of _____, in the City and County of San Francisco (City), State of California, by and between Denver Test Systems (Contractor), a Colorado corporation, and City, a municipal corporation, acting by and through its Municipal Transportation Agency (SFMTA).

Recitals

A. The SFMTA wishes to perform overhaul/rehabilitation of master controllers currently installed in the agency's fleet of Breda Light Rail Vehicles (LRV). The Breda LRVs were placed into revenue service between 1996 and 2003. The master controllers have reached their midlife point and require overhaul in order to maintain reliability and service availability. There are two master controllers (units) in each LRV. The base Contract quantity is for 150 units, with an option for up to an additional 148 units.

B. This Agreement was competitively procured as required by San Francisco Administrative Code Chapter 21.1 through a Request for Proposals (RFP) issued on June 16, 2020, pursuant to which the City selected Contractor as the highest-qualified scorer.

C. There is no Local Business Entity (LBE) subcontracting participation requirement for this Agreement.

D. Contractor represents and warrants that it is qualified to perform the Services required by City as set forth under this Agreement.

E. The City's Civil Service Commission approved Contract No. 47810-18/19 for this Agreement on May 20, 2019.

Now, THEREFORE, the parties agree as follows:

Article 1 Definitions

The following definitions apply to this Agreement. Where any word or phrase defined below, or a pronoun in place of the word or phrase, is used in any part of this Agreement, it shall have the meaning set forth below:

1.1 “**Acceptance**” means the formal written acceptance by the City that all Work, or a specific portion thereof, under the Contract has been satisfactorily completed.

1.2 “**Agreement**” or “**Contract**” means this contract document covering the performance of the Work and furnishing of labor, materials, equipment, tools, and services, to include the Technical Specifications, the Contract bonds or other security, any future amendments, all attached exhibits, and all applicable City Ordinances and Mandatory City Requirements that are specifically incorporated into this Agreement by reference as provided herein.

1.3 “**Award**” means notification from the City to Contractor of acceptance of Contractor’s Proposal, subject to the execution and approval of a satisfactory Contract and bond to secure the performance of the Contract, and to such other conditions as may be specified or otherwise required by law.

1.4 “**LRV**” or “**Light Rail Vehicles**” or “**Vehicles**” or “**Cars**” means the Breda Light Rail Vehicles for which the Master Controllers are being rehabilitated under this Contract.

1.5 “**CCO**” means the SFMTA Contract Compliance Office.

1.6 “**City**” or “**the City**” means the City and County of San Francisco, a municipal corporation, acting by and through its Municipal Transportation Agency.

1.7 “**City Data**” or “**Data**” means all data given to Contractor by City in the performance of this Agreement.

1.8 “**CMD**” means the Contract Monitoring Division of the City.

1.9 “**Conditional Acceptance**” means the circumstance in which a Vehicle has been delivered to SFMTA and placed in revenue service despite not having met all requirements for Acceptance.

1.10 “**Confidential Information**” means confidential City information including, but not limited to, personally-identifiable information (PII), protected health information (PHI), or individual financial information (collectively, "Proprietary or Confidential Information") that is subject to local, state or federal laws restricting the use and disclosure of such information, including, but not limited to, Article 1, Section 1 of the California Constitution; the California Information Practices Act (Civil Code § 1798 et seq.); the California Confidentiality of Medical Information Act (Civil Code § 56 et seq.); the federal Gramm-Leach-Bliley Act (15 U.S.C. §§ 6801(b) and 6805(b)(2)); the privacy and information security aspects of the Administrative Simplification provisions of the federal Health Insurance Portability and Accountability Act (45 CFR Part 160 and Subparts A, C, and E of part 164); and San Francisco Administrative Code Chapter 12M (Chapter 12M).

1.11 “**Contract Administrator**” means the contract administrator assigned to the Contract by the SFMTA, or his or her designated agent.

1.12 “Contract Modification” means a written amendment to the Contract, agreed to by the City and Contractor, covering changes within the general scope of the Contract and establishing the basis of payment and time adjustments for the Work affected by the changes.

1.13 “Contractor” means Denver Test Systems, 4845 W. McDowell Road, Suite 50A, Phoenix, Arizona 85035.

1.14 “C&P” means SFMTA Contracts and Procurement.

1.15 “Controller” means the Controller of the City.

1.16 “Correction” means the elimination of a Defect.

1.17 “Day” (whether or not capitalized) means a calendar day, unless otherwise designated.

1.18 “Defect” means any patent or latent malfunctions or failure in the manufacture or design of any component or subsystem.

1.19 “Deliverables” means Contractor’s Work product resulting from the Services that are provided by Contractor to City during the course of Contractor’s performance of the Agreement, including without limitation, the Work product described in the “Technical Specifications.”

1.20 “Director” means the Director of Transportation of the SFMTA or his or her designee.

1.21 “Effective Date” means the date upon which the City’s Controller certifies the availability of funds for this Agreement as provided in Section 3.1.

1.22 “Engineer” means the SFMTA Engineer assigned to the Contract or his or her designated agent.

1.23 “Final Acceptance” means the formal written Acceptance by the Director of Transportation or his or her designee that all Contract Deliverables for the Contract have been satisfactorily completed and accepted.

1.24 “Fleet Defect” is the failure of identical items covered by the warranty and occurring in the warranty period in at least five percent of the total base quantity of units. Identical items include components and subsystems covered within the Work.

1.25 “Mandatory City Requirements” means those City laws set forth in the San Francisco Municipal Code that impose specific duties and obligations upon Contractor, including the duly authorized rules, regulations, and guidelines implementing such laws.

1.26 “Material and/or Equipment” means the master controller (including all parts and equipment installed in each master controller) and other Deliverables furnished by the Contractor under the provisions of the Contract.

1.27 “**Notice to Proceed**” means written notice to the Contractor of the date on which it shall begin prosecution of the Work to be done under the Contract.

1.28 “**Overhaul**” or “**Rehabilitation**” means Work performed by the Contractor to replace or rebuild the master controller.

1.29 “**Party**” and “**Parties**” mean the City and Contractor either collectively or individually.

1.30 “**Project Manager**” means the project manager assigned to the Contract for the SFMTA, or his or her designated agent.

1.31 “**Proposal**” means the technical and management information and prices submitted by Contractor in response to the RFP.

1.32 “**Purchase Order**” means the written order issued by the City to the Contractor, authorizing the Effective Date as provided in Section 2.1.

1.33 “**Related Defect**” means damages to any component or subsystem as a direct result of a Defect.

1.34 “**Request for Proposals**” or “**RFP**” means the Request for Proposals issued by the SFMTA on June 16, 2020, for the overhaul of master controllers for the Breda light rail vehicles.

1.35 “**San Francisco Municipal Transportation Agency**” or “**SFMTA**” means the agency of City with jurisdiction over surface transportation in San Francisco, as provided under Article VIII A of the City’s Charter.

1.36 “**Subcontractor**” or “**Supplier**” means any individual, partnership, firm, or corporation that, under an agreement with Contractor, undertakes integrally on the Project the partial or total design, manufacture, performance of, or furnishes one or more items of Work under the terms of the Contract. As used in this Agreement, the terms Subcontractor and Supplier are synonymous.

1.37 “**Technical Specifications**” means the portion of the Exhibit A that contains the specifications, provisions, and requirements that detail the Work and the materials, products (including the assembly, and testing, delivery and Acceptance), and other requirements relative to the performance of the Work.

1.38 “**Unavoidable Delay**” means an interruption of the Work beyond the control of the Contractor, which Contractor could not have avoided by the exercise of care, prudence, foresight, and diligence.

1.39 “**Work**” or “**Services**” means the furnishing of all design, engineering, manufacturing, labor, supervision, services, products, materials, machinery, equipment, tools, supplies, and facilities and the performance of all requirements called for by Exhibit A of the

Contract and necessary to the completion and warranty of the master controller overhaul, including all services, labor, supervision, materials, equipment, actions and other requirements to be performed and furnished by Contractor under this Agreement.

1.40 “Working Days” means those Days during which regular business is conducted, excluding Saturdays, Sundays, and all Federal, State, and municipal holidays that are observed by the SFMTA during the duration of the Contract.

Article 2 Term of the Agreement

2.1 The term of this Agreement shall commence on the Effective Date and expire 18 months thereafter, unless earlier terminated as otherwise provided herein.

2.2 The City has one option to renew the Agreement for up to one year. The City may extend this Agreement beyond the expiration date by exercising an option at the Director of Transportation’s sole and absolute discretion and by modifying this Agreement as provided in Section 11.5 (Modification of this Agreement).

Article 3 Financial Matters

3.1 Certification of Funds; Budget and Fiscal Provisions; Termination in the Event of Non-Appropriation. This Agreement is subject to the budget and fiscal provisions of the City’s Charter. Charges will accrue only after prior written authorization certified by the Controller in the form of a Purchase Order, and the amount of City’s obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization. This Agreement will terminate without penalty, liability or expense of any kind to City at the end of any fiscal year if funds are not appropriated for the next succeeding fiscal year. If funds are appropriated for a portion of the fiscal year, this Agreement will terminate, without penalty, liability or expense of any kind at the end of the term for which funds are appropriated. City has no obligation to make appropriations for this Agreement in lieu of appropriations for new or other agreements. City budget decisions are subject to the discretion of the Mayor and the Board of Supervisors. Contractor’s assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

THIS SECTION CONTROLS AGAINST ANY AND ALL OTHER PROVISIONS OF THIS AGREEMENT.

3.2 Guaranteed Maximum Costs. The City’s payment obligation to Contractor cannot at any time exceed the amount certified by City’s Controller for the purpose and period stated in such certification. Absent an authorized Emergency per the City Charter or applicable Code, no City representative is authorized to offer or promise, nor is the City required to honor, any offered or promised payments to Contractor under this Agreement in excess of the certified maximum amount without the Controller having first certified the additional promised amount and the Parties having modified this Agreement as provided in Section 11.5 (Modification of this Agreement).

3.3 Compensation

3.3.1 Payment. Contractor shall provide an invoice to the SFMTA pursuant to the Schedule set out in Exhibit B.2 (Payment Milestones). Compensation shall be made for Work identified in the invoice that the Director of Transportation, or his or her designee, in his or her sole discretion, concludes has been satisfactorily performed. Payment shall be made within 30 Days of receipt of the invoice, unless the City notifies the Contractor that a dispute as to the invoice exists. In no event shall the amount of this Agreement exceed One Million, Eight Hundred Forty Thousand, Seven Hundred Forty-Six Dollars (**\$1,840,746**). The breakdown of charges associated with this Agreement appears in Exhibit B.1 (Schedule of Prices).

As described in Exhibit B.2, the City will withhold 10% of the vehicle amount as retention until Final Acceptance of the base master controller units and Option units, respectively. In no event shall City be liable for interest or late charges for any late payments. The City will not make price adjustments to this Contract to protect Contractor from economic inflation.

3.3.2 Payment Limited to Satisfactory Work. Contractor is not entitled to any payments from City until the SFMTA approves Work, including any furnished Deliverables, as satisfying all of the requirements of this Agreement. Payments to Contractor by City shall not excuse Contractor from its obligation to replace unsatisfactory Deliverables, including equipment, components, materials, or Work even if the unsatisfactory character of such Deliverables, equipment, components, materials, or Work may not have been apparent or detected at the time such payment was made. Deliverables, equipment, components, materials and Work that do not conform to the requirements of this Agreement may be rejected by City and in such case must be replaced by Contractor without delay at no cost to the City.

3.3.3 Withhold Payments. If Contractor fails to provide Services in accordance with Contractor's obligations under this Agreement, the City may withhold any and all payments due Contractor until such failure to perform is cured, and Contractor shall not stop Work as a result of City's withholding of payments as provided herein.

3.3.4 Invoice Format. Invoices furnished by Contractor under this Agreement must be in a form acceptable to the City's Controller and the SFMTA, and must include a unique invoice number. City will make payment as specified in Section 3.3.6, or in such alternate manner as the Parties have mutually agreed upon in writing. Each invoice shall include:

- (a) Relevant milestones.
- (b) Contract order number.
- (c) Quantity of items.
- (d) Description of items.
- (e) Unit price.
- (f) Total invoice amount.

- (g) Supporting documentation and/or documentation referencing submittal or delivery.
- (h) Amount of any sales taxes due, as specified in Section 7.1 of this Agreement

3.3.5 Reserved. (LBE Payment and Compliance Tracking System)

3.3.6 Getting Paid by the City for Goods and/or Services

a. All City vendors receiving new contracts, contract renewals, or contract extensions must sign up to receive electronic payments through the City's Automated Clearing House (ACH) payments service/provider. Electronic payments are processed every Working Day and are safe and secure. To sign up for electronic payments, visit www.sfgov.org/ach.

b. The following information is required to sign up: (i) The enroller must be their company's authorized financial representative, (ii) the company's legal name, main telephone number and all physical and remittance addresses used by the company, (iii) the company's U.S. federal employer identification number (EIN) or Social Security number (if they are a sole proprietor), and (iv) the company's bank account information, including routing and account numbers.

3.4 Audit and Inspection of Records. Contractor agrees to maintain and make available to the City, during regular business hours, accurate books and accounting records relating to its Work. Contractor will permit City to audit, examine and make excerpts and transcripts from such books and records, and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all other matters covered by this Agreement, whether funded in whole or in part under this Agreement. Contractor shall maintain such data and records in an accessible location and condition for a period of not fewer than five years after final payment under this Agreement or until after final audit has been resolved, whichever is later. The State of California or any Federal agency having an interest in the subject matter of this Agreement shall have the same rights as conferred upon City by this Section. Contractor shall include the same audit and inspection rights and record retention requirements in all subcontracts.

3.5 Submitting False Claims. The full text of San Francisco Administrative Code Chapter 21, Section 21.35, including the enforcement and penalty provisions, is incorporated into this Agreement. Pursuant to San Francisco Administrative Code §21.35, any contractor or subcontractor who submits a false claim shall be liable to the City for the statutory penalties set forth in that section. A contractor or subcontractor will be deemed to have submitted a false claim to the City if the contractor or subcontractor: (a) knowingly presents or causes to be presented to an officer or employee of the City a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false

claim paid or approved by the City; (c) conspires to defraud the City by getting a false claim allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to the City; or (e) is a beneficiary of an inadvertent submission of a false claim to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim.

3.6 Reserved. (Payment of Prevailing Wages)

Article 4 Services and Resources

4.1 Services Contractor Agrees to Perform

4.1.1 Base Contract. Contractor agrees to perform the Services stated in Appendix A (Scope of Services). Officers and employees of the City are not authorized to request, and the City is not required to reimburse the Contractor for, Work beyond the Work provided in the Scope of Services listed in Appendix A, unless the Agreement is modified as provided in Section 11.5 (Modification of this Agreement).

4.1.2 Option. The City has one option to amend the Agreement to include the overhaul of up to an additional 148 master controllers.

4.2 Qualified Personnel. Contractor shall use only competent personnel under the supervision of, and in the employment of, Contractor (or Contractor's authorized Subcontractors) to perform the Work. Contractor will comply with City's reasonable requests regarding assignment and/or removal of personnel, but all personnel, including those assigned at City's request, must be supervised by Contractor. Contractor shall commit adequate resources to allow timely completion within the project schedule specified in this Agreement.

4.3 Subcontracting

4.3.1 Subcontracts. Contractor may subcontract portions of the Work only upon prior written approval of City. Contractor is responsible for its Subcontractors throughout the course of the Work. All subcontracts must incorporate the terms of Article 10 (Additional Requirements Incorporated by Reference) of this Agreement, unless inapplicable. Neither Party shall, on the basis of this Agreement, contract on behalf of, or in the name of, the other Party. Any agreement made in violation of this provision shall be null and void.

4.4 Independent Contractor; Payment of Employment Taxes and Other Expenses

4.4.1 Independent Contractor. For the purposes of this Article 4, "Contractor" shall be deemed to include not only Contractor, but also any agent or employee of Contractor. Contractor acknowledges and agrees that at all times, Contractor or any agent or employee of Contractor shall be deemed at all times to be an independent contractor and is wholly responsible for the manner in which it performs the Services and Work requested by City under this

Agreement. Contractor, its agents, and employees will not represent or hold themselves out to be employees of the City at any time. Contractor or any agent or employee of Contractor shall not have employee status with City, nor be entitled to participate in any plans, arrangements, or distributions by City pertaining to or in connection with any retirement, health or other benefits that City may offer its employees. Contractor or any agent or employee of Contractor is liable for the acts and omissions of itself, its employees and its agents. Contractor shall be responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, FICA, income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to Contractor's performing Services and Work, or any agent or employee of Contractor providing same. Nothing in this Agreement shall be construed as creating an employment or agency relationship between City and Contractor or any agent or employee of Contractor. Any terms in this Agreement referring to direction from City shall be construed as providing for direction as to policy and the result of Contractor's Work only, and not as to the means by which such a result is obtained. City does not retain the right to control the means or the method by which Contractor performs Work under this Agreement. Contractor agrees to maintain and make available to City, upon request and during regular business hours, accurate books and accounting records demonstrating Contractor's compliance with this section. Should City determine that Contractor, or any agent or employee of Contractor, is not performing in accordance with the requirements of this Agreement, City shall provide Contractor with written notice of such failure. Within five business days of Contractor's receipt of such notice, and in accordance with Contractor policy and procedure, Contractor shall remedy the deficiency. Notwithstanding, if City believes that an action of Contractor, or any agent or employee of Contractor, warrants immediate remedial action by Contractor, City shall contact Contractor and provide Contractor in writing with the reason for requesting such immediate action.

4.4.2 Payment of Employment Taxes and Other Expenses. Should City, in its discretion, or a relevant taxing authority such as the Internal Revenue Service or the State Employment Development Division, or both, determine that Contractor is an employee for purposes of collection of any employment taxes, the amounts payable under this Agreement shall be reduced by amounts equal to both the employee and employer portions of the tax due (and offsetting any credits for amounts already paid by Contractor which can be applied against this liability). City shall then forward those amounts to the relevant taxing authority. Should a relevant taxing authority determine a liability for past services performed by Contractor for City, upon notification of such fact by City, Contractor shall promptly remit such amount due or arrange with City to have the amount due withheld from future payments to Contractor under this Agreement (again, offsetting any amounts already paid by Contractor which can be applied as a credit against such liability). A determination of employment status pursuant to this Section 4.4 shall be solely limited to the purposes of the particular tax in question, and for all other purposes of this Agreement, Contractor shall not be considered an employee of City.

Notwithstanding the foregoing, Contractor agrees to indemnify and save harmless City and its officers, agents and employees from, and, if requested, shall defend them against any and all claims, losses, costs, damages, and expenses, including attorneys' fees, arising from this section.

4.5 Assignment. The Work to be performed by Contractor are personal in character. Neither this Agreement, nor any duties or obligations hereunder, may be directly or indirectly assigned, novated, hypothecated, transferred, or delegated by Contractor, or, where the Contractor is a joint venture, a joint venture partner (collectively referred to as an "Assignment") unless first approved by City by written instrument executed and approved as required under City law and under the policy of the SFMTA Board of Directors. The City's approval of any such Assignment is subject to the Contractor demonstrating to City's reasonable satisfaction that the proposed transferee is: (a) reputable and capable, financially and otherwise, of performing each of Contractor's obligations under this Agreement and any other documents to be assigned, (b) not forbidden by applicable law from transacting business or entering into contracts with City; and (c) subject to the jurisdiction of the courts of the State of California. A change of ownership or control of Contractor or a sale or transfer of substantially all of the assets of Contractor shall be deemed an Assignment for purposes of this Agreement. Contractor shall immediately notify City about any Assignment. Any purported Assignment made in violation of this provision shall be null and void.

4.6 Warranty

4.6.1 General

a. The Contractor warrants that all Material and/or Equipment, and installation thereof, meet all requirements and standards set by the Technical Specifications. The Contractor warrants that any Material and/or Equipment, and installation thereof, shall conform to representations and descriptions, either oral or written, made by the Contractor, and to any literature, sample, or other information supplied by the Contractor.

b. In addition to all warranties under or implied by law or required by the Specifications, the Contractor expressly warrants all Material and/or Equipment, including all parts and labor, against any defect in design, material or workmanship that may be discovered by the SFMTA within one year from the date of Acceptance of each overhauled master controller. The Contractor shall make any necessary repairs to and any replacements of all or parts of the Material and/or Equipment during the warranty period set forth above at no cost to the SFMTA and to the SFMTA's sole satisfaction.

c. If separate or additional warranties covering the Material and/or Equipment are furnished by the manufacturer, supplier, or seller of component part or parts of any item of said Material and/or Equipment, the SFMTA shall have the right, but not the duty, to benefit from these separate or additional warranties, along with the primary warranties set forth above. The SFMTA shall look only to Contractor for fulfillment of all warranty requirements,

expressed and implied. The existence of any separate or additional warranties that run to the Contractor from the OEM of a component part shall not relieve the Contractor of its obligation to repair or replace any of the Material and/or Equipment on account of faulty design, manufacture, or workmanship during the warranty period.

d. If the Contractor becomes aware at any time before Acceptance by the SFMTA that a defect exists in any Material and/or Equipment or services, the Contractor shall promptly correct the defect and notify the SFMTA in writing.

4.6.2 Fleet Defects

a. The Contractor shall correct a Fleet Defect under the warranty provisions. The Contractor shall submit to the SFMTA for approval a plan to correct a Fleet Defect (Plan) within five Working Days after notice of the Fleet Defect. Contractor shall begin actual Work for correction of a Fleet Defect within 30 days of notice of the Fleet Defect. An extension may be granted by the Engineer. After correcting the Fleet Defect, the Contractor shall promptly undertake and complete a work program (Work Program) reasonably designed to prevent the occurrence of the same Defect in all other units purchased under this Contract. The Work Program shall include inspection and/or correction of the potential or defective parts in all of the units.

b. Failure to correct a Fleet Defect in accordance with the approved Plan or Work Program shall result in liquidated damages in accordance with paragraph 4.7 below. The warranty on items determined to be Fleet Defects shall be extended for the unexpired time of the original warranty. This extended warranty shall begin on the date of repair or replacement. The liquidated damages are in addition to any other damages which are recoverable by the City specified elsewhere in the Contract.

4.7 Liquidated Damages

4.7.1 Amounts. The Contractor agrees that (a) in the event the Work, as set forth in Appendix A (Scope of Work), is delayed beyond the scheduled milestones and timelines as provided in the Project Delivery Schedule (Exhibit B.3), or (b) in the event of a Fleet Defect, the Contractor does not comply with an approved Plan or Work Program, and excepting for Unavoidable Delays (as defined below), the SFMTA will suffer damages that will be impracticable or extremely difficult to determine. Further, Contractor agrees that the amounts listed below for each day of delay beyond scheduled milestones and timelines are not a penalty, but are a reasonable estimate of the loss that the SFMTA will incur based on the delay.

Milestone	Amount per unit per Day
Delivery of 10 prototype units within 90 days of NTP	\$100
Commencement of production phase delivery within 30 Days of SFMTA approval	\$100
Completion of production deliveries by 168 Days after SFMTA approval of prototype	\$100
Failure to fully correct Fleet Defect in accordance with the agreed Plan or Work Program	\$100

4.7.2 Agreement to Pay. Contractor agrees to pay such amount of liquidated damages as specified above, and in case such amount is not paid, Contractor agrees that the City may deduct the amount therefor from any money due or that may become due Contractor under the Contract. Should the money due or to become due to Contractor be insufficient to cover such agreed liquidated damages, then Contractor forthwith shall pay the remainder to the City.

4.8 Unavoidable Delays. Subject to the SFMTA’s approval, Contractor will be entitled to relief for Unavoidable Delays only as provided below. In each case, Contractor must establish for the SFMTA that the interruption (i) meets the definition of Unavoidable Delay (as defined in Section 1.38), and (ii) extends the most current delivery milestone for which liquidated damages apply. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed delays within the control of Contractor (i.e., avoidable delays).

4.8.1 Non-compensable Delay/Time Extension. Contractor will be entitled to a non-compensable extension of Contract time only for the following types of Unavoidable Delay:

- a.** Acts of God (flood, windstorm, tornado, other adverse weather conditions, earthquake in excess of a magnitude 3.5 on the Richter Scale, tidal wave, or other natural disaster);
- b.** fire;
- c.** war, domestic or foreign terrorism;
- d.** riots or insurrections;
- e.** epidemics or quarantine restrictions;
- f.** labor disputes, including strikes, lockouts, sit-downs, and slowdowns, provided that: (i) whenever Contractor has knowledge that any actual or potential labor dispute is delaying or is threatening to delay the timely performance of the Contract, Contractor shall immediately give to the City written notice of the dispute, including all relevant

information with respect thereto; and (ii) Contractor has taken all “appropriate measures” to eliminate or minimize the effect of such labor dispute on the current, City-approved Project Schedule, including, without limitation, promptly seeking appropriate injunctive relief, filing appropriate charges with the National Labor Relations Board under the applicable provisions of the Labor Management Relations Act of 1947 (as amended), filing appropriate damage actions, establishing a reserved gate, seeking other sources of labor supply or service, or any other measures that may be appropriately utilized as deemed by the City to limit or eliminate the effect of the labor dispute on the Work. To the extent Contractor fails to initiate appropriate measures, it shall not be entitled to an extension of Contract Time. In addition, any delay impact on the progress schedule caused by said failure to initiate appropriate measures will be considered a Contractor-Caused Delay under any and all applicable provisions of the Contract Documents;

g. government embargoes that affect Contractor’s supply of fuel or Materials for the Project;

h. adoption by the City, State of California, or United States of a law, including a statute, code, regulation, ordinance, rule, order, or decree, after the Effective Date of this Agreement that has a material, adverse effect on the prosecution of the Work, so long as the law is materially inconsistent with the law in effect on the Effective Date;

i. prevention of Contractor from commencing or prosecuting the Work because of the acts of third parties, excepting Contractor's Subcontractors or Lower-Tier Subcontractors; and

j. a utility owner’s failure to cooperate with Contractor in providing or performing services required for Contractor to complete the Work. In this context, a utility owner shall mean the owner or operator of any utility, including privately and publicly held entities.

4.8.2 Compensable Delay/Time Extension. Contractor will be entitled to a compensable extension of Contract time only for the following types of Unavoidable Delay (each a City-caused delay):

a. changes in the Work ordered by the City insofar as they necessarily require additional time in which to complete the Work; and

b. the prevention by the City (acting as a Party) of Contractor from commencing or prosecuting the Work.

4.8.3 Concurrent Delay. Contractor will be entitled to only a non-compensable extension of the Contract Time if a City-caused (otherwise compensable) delay is concurrent with either a Contractor-caused delay or a non-compensable Unavoidable Delay.

4.8.4 Notification of Delay. Contractor shall notify the SFMTA as soon as Contractor has, or should have, knowledge that an event has occurred that will delay deliveries.

Within five Days, Contractor shall confirm such notice in writing, furnishing as much detail as is available.

4.8.5 Request for Extension. Contractor agrees to supply, as soon as such data are available, any reasonable proof that is required by the SFMTA to make a decision on any request for extension. The SFMTA shall examine the request and any documents supplied by the Contractor and shall determine if Contractor is entitled to an extension, and if so, the duration of such extension. The SFMTA shall notify Contractor of its decision in writing. The granting of an extension of time because of Unavoidable Delays shall in no way operate as a waiver on the part of the City of the right to collect liquidated damages for other delays or of any other rights to which the City is entitled.

4.9 Performance and Payment Security. The following provisions set forth financial guarantees that must be met by Contractor. Contractor may choose to meet the requirements of this Section 4.9 by obtaining either the required bonds or an irrevocable letter of credit (Letter of Credit) in an equivalent amount.

4.9.1 Bonds

a. The Contractor shall furnish to City a performance and payment (labor and materials) bond, in an amount not less than 20 percent of the total Contract amount, to guarantee Contractor's faithful performance of all obligations of the Contract, including warranty obligations in existence until the last overhauled master controller units and associated Deliverables is Accepted, and to guarantee Contractor's payment to all Suppliers of labor and materials under this Contract, excluding the period covered by the warranty bond described in Subsection (b) below.

b. From Acceptance by City of the last overhauled master controller units and associated Deliverables, and throughout the warranty period of the last accepted overhauled master controller unit, Contractor shall provide a one-year warranty or guaranty bond in the amount of 10 percent of the Contract price covering all of Contractor's warranty obligations under the Contract, which bond shall become effective upon release of the Performance Bond required under Subsection 4.9.1(a) above.

4.9.2 Requirements for Bonds

a. Bonding entities on the above bonds must be legally authorized to engage in the business of furnishing performance bonds in the State of California. All bonding entities must be satisfactory to the SFMTA and to the Controller and Risk Manager of the City.

b. During the period covered by the Agreement, if any of the sureties upon the bond shall have an AM Best rating that falls below A-, VIII, or become insolvent and unable to pay promptly the amount of such bond to the extent to which the surety might be liable, Contractor, within 30 Days after notice given by the SFMTA to Contractor, shall by supplemental bond or otherwise, substitute another and sufficient surety approved by SFMTA in

place of the surety becoming insolvent or unable to pay. If Contractor fails within such 30-Day period to substitute another and sufficient surety, Contractor, if the SFMTA so elects, shall be deemed to be in default in the performance of its obligations hereunder and upon the said bond. The City, in addition to any and all other remedies, may terminate the Agreement or bring any proper suit or proceeding against moneys then due or which thereafter may become due Contractor under the Agreement. The amount for which the surety shall have justified on the bond and the moneys so deducted shall be held by City as collateral for the performance of the conditions of the bond.

4.9.3 Requirements for Letter of Credit

a. General Requirements. Any Letter of Credit submitted as required security under this Agreement shall be a confirmed, clean, irrevocable Letter of Credit in favor of the City and County of San Francisco, a municipal corporation. It must have an original term of one year, with automatic renewals of the full amount (subject to modification as otherwise provided in this Section 4.9.3 to reflect the adjustments set forth above in Section 4.9.1) throughout the term of the Agreement and throughout the performance of Contractor's obligations under the Agreement. If Contractor fails to deliver the Letter of Credit as required, City will be entitled to cancel this Agreement. The Letter of Credit must provide that payment of its entire face amount, or any portion thereof, will be made to City upon presentation of a written demand to the bank signed by the Director of Transportation on behalf of the City.

b. Financial Institution. The Letter of Credit must be issued on a form and issued by a financial institution acceptable to the City in its sole discretion, which financial institution must (a) be a bank or trust company doing business and having an office in the City and County of San Francisco, (b) have a combined capital and surplus of at least \$25,000,000, and (c) be subject to supervision or examination by federal or state authority and with at least a Moody's A rating. Should the financial institution fail to maintain such rating, Contractor shall replace the Letter of Credit within 30 Days with a Letter of Credit from a financial institution with such a rating.

c. Demand on Letter of Credit. The Letter of Credit will constitute a security deposit guaranteeing faithful performance by Contractor of all terms, covenants, and conditions of this Agreement, including all monetary obligations set forth herein. If Contractor defaults with respect to any provision of this Agreement, the SFMTA may make a demand under the Letter of Credit for all or any portion thereof to compensate City for any loss or damage that they may have incurred by reason of Contractor's default, negligence, breach or dishonesty. Such loss or damage may include without limitation any damage to or restoration of City property or property that is required to be constructed, maintained or repaired pursuant to this Agreement, payments to City, and claims for liquidated damages; provided, however, that City will present its written demand to said bank for payment under said Letter of Credit only after City first has made its demand for payment directly to Contractor, and five full

Working Days have elapsed without Contractor having made payment to City. Should the City terminate this Agreement due to a breach by Contractor, the City shall have the right to draw from the Letter of Credit those amounts necessary to pay any fees or other financial obligations under the Agreement and perform the Work described in this Agreement until such time as the City procures another contractor and the agreement between the City and that contractor becomes effective. City need not terminate this Agreement in order to receive compensation for its damages. If any portion of the Letter of Credit is so used or applied by City, Contractor, within 10 Working Days after written demand by City, shall reinstate the Letter of Credit to its original amount; Contractor's failure to do so will be a material breach of this Agreement.

d. Expiration or Termination. The Letter of Credit must provide for 60 days notice to City in the event of non-extension of the Letter of Credit; in that event, Contractor shall replace the Letter of Credit at least 10 Working Days prior to its expiration. In the event the City receives notice from the issuer of the Letter of Credit that the Letter of Credit will be terminated, not renewed or will otherwise be allowed to expire for any reason during the period from the commencement of the term of this Agreement to 90 Days after the expiration or termination of this Agreement, or the conclusion of all of Contractor's obligations under the Agreement, whichever occurs last, and Contractor fails to provide the City with a replacement Letter of Credit (in a form and issued by a financial institution acceptable to the City) within 10 Working Days following the City's receipt of such notice, such occurrence shall be an event of default, and, in addition to any other remedies the City may have due to such default (including the right to terminate this Agreement), the City shall be entitled to draw down the entire amount of the Letter of Credit (or any portion thereof) and hold such funds in an account with the City Treasurer in the form of cash guarantying Contractor's obligations under this Agreement. In such event, the cash shall accrue interest to the Contractor at a rate equal to the average yield of Treasury Notes with one-year maturity, as determined by the Treasurer. In the event the Letter of Credit is converted into cash pursuant to this paragraph, upon termination of this Agreement, Contractor shall be entitled to a full refund of the cash (less any demands made thereon by the City) within 90 Days of the termination date, including interest accrued through the termination date.

e. Return of Letter of Credit. The Letter of Credit will be returned within 90 Days after the end of the term of this Agreement, provided that Contractor has faithfully performed throughout the life of the Agreement, Contractor has completed its obligations under the Agreement, there are no pending claims involving Contractor's performance under the Agreement and no outstanding disagreement about any material aspect of the provisions of this Agreement. In the event this Agreement is assigned, as provided for in Section 4.5, City will return or release the Letter of Credit not later than the effective date of the assignment, provided that the assignee has delivered to the City an equivalent Letter of Credit, as determined by City.

f. Excessive Demand. If City receives any payments from the aforementioned bank under the Letter of Credit by reason of having made a wrongful or excessive demand for payment, City will return to Contractor the amount by which City's total receipts from Contractor and from the bank under the Letter of Credit exceeds the amount to which City is rightfully entitled, together with interest thereon at the legal rate of interest, but City will not otherwise be liable to Contractor for any damages or penalties.

Article 5 Insurance and Indemnity

5.1 Insurance

5.1.1 Required Coverages. Without in any way limiting Contractor's liability pursuant to the "Indemnification" section of this Agreement, Contractor must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverages:

- a.** Workers' Compensation, in statutory amounts, with Employers' Liability Limits not less than \$1,000,000 each accident, injury, or illness; and
- b.** Commercial General Liability Insurance with limits not less than \$1,000,000 each occurrence for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and
- c.** Commercial Automobile Liability Insurance with limits not less than \$1,000,000 each occurrence, "Combined Single Limit" for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable.
- d.** Reserved. (Cyber and Privacy Coverage)
- e.** Bailee's insurance in a form appropriate for the nature of City property in the care, custody, or control of Contractor, on an all-risk form including earthquake and flood, for 100% of the replacement value.
- f.** Cargo insurance in a form appropriate for the nature of City property while in transit, on an all-risk form including earthquake and flood for 100% of the replacement value.

5.1.2 Commercial General Liability and Commercial Automobile Liability Insurance policies must be endorsed to name as Additional Insured the City and County of San Francisco, its Officers, Agents, and Employees.

5.1.3 Contractor's Commercial General Liability and Commercial Automobile Liability Insurance policies shall provide that such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that the insurance applies separately to each insured against whom claim is made or suit is brought.

5.1.4 All policies shall be endorsed to provide 30 days' advance written notice to the City of cancellation for any reason, intended non-renewal, or reduction in coverages. Notices shall be sent to the City address set forth in Section 11.1 (Notices to the Parties). All notices, certificates and endorsements shall include the SFMTA contract number and title on the cover page.

5.1.5 Should any of the required insurance be provided under a claims-made form, Contractor shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of three years beyond the expiration of this Agreement, to the effect that, should occurrences during the contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

5.1.6 Should any of the required insurance be provided under a form of coverage that includes a general annual aggregate limit or provides that claims investigation or legal defense costs be included in such general annual aggregate limit, such general annual aggregate limit shall be double the occurrence or claims limits specified above.

5.1.7 Should any required insurance lapse during the term of this Agreement, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by this Agreement, effective as of the lapse date. If insurance is not reinstated, the City may, at its sole option, terminate this Agreement effective on the date of such lapse of insurance.

5.1.8 Before commencing any Work, Contractor shall furnish to City certificates of insurance and additional insured policy endorsements from insurers with ratings comparable to A-, VIII or higher that are authorized to do business in the State of California, and that are satisfactory to City, in form evidencing all coverages set forth above. Approval of the insurance by City shall not relieve or decrease Contractor's liability hereunder.

5.1.9 The Workers' Compensation policy(ies) shall be endorsed with a waiver of subrogation in favor of the City for all Work performed by the Contractor, its employees, agents and Subcontractors.

5.1.10 If Contractor will use any Subcontractor(s) to provide Work, Contractor shall require the Subcontractor(s) to provide all necessary insurance and to name the City and County of San Francisco, its officers, agents and employees and the Contractor as additional insureds.

5.2 Indemnification

5.2.1 Contractor shall indemnify and hold harmless City and its officers, agents and employees from, and, if requested, shall defend them from and against any and all claims, demands, losses, damages, costs, expenses, and liability (legal, contractual, or otherwise) arising from or in any way connected with any: (i) injury to or death of a person, including employees of

City or Contractor; (ii) loss of or damage to property; (iii) violation of local, state, or federal common law, statute or regulation, including but not limited to privacy or personally identifiable information, health information, disability and labor laws or regulations; (iv) strict liability imposed by any law or regulation; or (v) losses arising from Contractor's execution of subcontracts not in accordance with the requirements of this Agreement applicable to Subcontractors; so long as such injury, violation, loss, or strict liability (as set forth in subsections (i) – (v) above) arises directly or indirectly from Contractor's performance of this Agreement, including, but not limited to, Contractor's use of facilities or equipment provided by City or others, regardless of the negligence of, and regardless of whether liability without fault is imposed or sought to be imposed on City, except to the extent that such indemnity is void or otherwise unenforceable under applicable law, and except where such loss, damage, injury, liability or claim is the result of the active negligence or willful misconduct of City and is not contributed to by any act of, or by any omission to perform some duty imposed by law or agreement on Contractor, its Subcontractors, or either's agent or employee. The foregoing indemnity shall include, without limitation, reasonable fees of attorneys, consultants and experts and related costs and City's costs of investigating any claims against the City.

5.2.2 In addition to Contractor's obligation to indemnify City, Contractor specifically acknowledges and agrees that it has an immediate and independent obligation to defend City from any claim which actually or potentially falls within this indemnification provision, even if the allegations are or may be groundless, false or fraudulent, which obligation arises at the time such claim is tendered to Contractor by City and continues at all times thereafter.

5.2.3 Contractor shall hold the City harmless from and defend the City against all claims, suits or other proceedings instituted against the City for copyright infringement, misuse or misappropriation of a trade secret, or for access to the documents or Deliverables under the City's Sunshine Ordinance or the California Public Records Act. Contractor will pay the costs and damages awarded in any such action or proceeding, or the cost of settling such action or proceeding, provided that Contractor shall have sole control of the defense of any such action and all negotiations or its settlement or compromise. If notified promptly in writing of any informal claim (other than a judicial action) brought against City based on an allegation that City's use of the buses, spare parts, documents or Deliverables constitutes infringement, Contractor will pay the costs associated with resolving such claim and will pay the settlement amount (if any), provided that Contractor shall have sole control of the resolution of any such claim and all negotiations for its settlement.

5.3 Notice of Claim; Tender of Defense. The City shall use its best efforts to give prompt written notice to Contractor of any claim for which it requires indemnification from Contractor and will not admit liability or fault as to the allegations of the claim. Provided Contractor accepts the City's tender of defense without reservations, City agrees to grant

Contractor sole control over the defense and settlement of the claim and provide timely assistance to Contractor in the defense of the claim.

Article 6 Liability of the Parties

6.1 Liability of City. CITY'S PAYMENT OBLIGATIONS UNDER THIS AGREEMENT SHALL BE LIMITED TO THE PAYMENT OF THE COMPENSATION PROVIDED FOR IN SECTION 3.3.1 (PAYMENT) OF THIS AGREEMENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, IN NO EVENT SHALL CITY BE LIABLE, REGARDLESS OF WHETHER ANY CLAIM IS BASED ON CONTRACT OR TORT, FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE SERVICES PERFORMED IN CONNECTION WITH THIS AGREEMENT.

6.2 Liability for Use of Equipment. City shall not be liable for any damage to persons or property as a result of the use, misuse or failure of any equipment used by Contractor, or any of its Subcontractors, or by any of their employees, even though such equipment is furnished, rented or loaned by City.

6.3 Liability for Incidental and Consequential Damages. Contractor shall be responsible for incidental and consequential damages resulting in whole or in part from Contractor's acts or omissions.

Article 7 Payment of Taxes

7.1 Payment of Taxes. The City will pay any sales taxes levied by the State of California directly to the State provided that Contractor indicates on each invoice it submits the amount of sales taxes due. Contractor shall be solely responsible for any penalties, interest or fees assessed as a result of incorrect sales tax amounts listed on the invoices.

The City warrants that it is a public entity exempt from certain federal excise taxes and in connection therewith that it has obtained a federal excise tax exemption certificate. Contractor will pay all other taxes, including possessory interest taxes, licenses imposts, duties, and all other governmental charges of any type whatsoever levied upon or as a result of this Agreement or Work performed pursuant hereto.

7.2 Possessory Interest Taxes. Contractor acknowledges that this Agreement may create a "possessory interest" for property tax purposes. Generally, such a possessory interest is not created unless the Agreement entitles the Contractor to possession, occupancy, or use of City property for private gain. If such a possessory interest is created, then the following shall apply:

7.2.1 Contractor, on behalf of itself and any permitted successors and assigns, recognizes and understands that Contractor, and any permitted successors and assigns, may be subject to real property tax assessments on the possessory interest.

7.2.2 Contractor, on behalf of itself and any permitted successors and assigns, recognizes and understands that the creation, extension, renewal, or assignment of this Agreement may result in a “change in ownership” for purposes of real property taxes, and therefore may result in a revaluation of any possessory interest created by this Agreement. Contractor accordingly agrees on behalf of itself and its permitted successors and assigns to report on behalf of the City to the County Assessor the information required by Revenue and Taxation Code section 480.5, as amended from time to time, and any successor provision.

7.2.3 Contractor, on behalf of itself and any permitted successors and assigns, recognizes and understands that other events also may cause a change of ownership of the possessory interest and result in the revaluation of the possessory interest. (see, e.g., Rev. & Tax. Code section 64, as amended from time to time). Contractor accordingly agrees on behalf of itself and its permitted successors and assigns to report any change in ownership to the County Assessor, the State Board of Equalization or other public agency as required by law.

7.2.4 Contractor further agrees to provide such other information as may be requested by the City to enable the City to comply with any reporting requirements for possessory interests that are imposed by applicable law.

7.3 Withholding. Contractor agrees that it is obligated to pay all amounts due to the City under the San Francisco Business and Tax Regulations Code during the term of this Agreement. Pursuant to Section 6.10-2 of the San Francisco Business and Tax Regulations Code, Contractor further acknowledges and agrees that City may withhold any payments due to Contractor under this Agreement if Contractor is delinquent in the payment of any amount required to be paid to the City under the San Francisco Business and Tax Regulations Code. The City will pay Contractor any monies withheld under this paragraph, without interest, when Contractor comes into compliance with its obligations.

Article 8 Termination and Default

8.1 Termination for Convenience

8.1.1 Exercise of Option. City shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. City shall exercise this option by giving Contractor written notice of termination. The notice shall specify the date on which termination shall become effective.

8.1.2 Contractor Actions. Upon receipt of the notice of termination, Contractor shall commence and perform, with diligence, all actions necessary on the part of Contractor to effect the termination of this Agreement on the date specified by City and to minimize the liability of Contractor and City to third parties as a result of termination. All such actions shall be subject to the prior approval of City. Such actions shall include, without limitation:

a. Halting the performance of all Work under this Agreement on the date(s) and in the manner specified by the SFMTA.

b. Terminating all existing orders and subcontracts, and not placing any further orders or subcontracts for materials, Services, equipment or other items.

c. At the SFMTA's direction, assigning to City any or all of Contractor's right, title, and interest under the orders and subcontracts terminated. Upon such assignment, the SFMTA shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

d. Subject to the SFMTA's approval, settling all outstanding liabilities and all claims arising out of the termination of orders and subcontracts.

e. Completing performance of any Work that the SFMTA designates to be completed prior to the date of termination specified by the SFMTA.

f. Taking such action as may be necessary, or as the SFMTA may direct, for the protection and preservation of any property related to this Agreement which is in the possession of Contractor and in which the SFMTA has or may acquire an interest.

8.1.3 Contractor Invoice. Within 30 days after the specified termination date, Contractor shall submit to the SFMTA an invoice, which shall set forth each of the following as a separate line item:

a. The reasonable cost to Contractor, without profit, for all Work prior to the specified termination date, for which Work the SFMTA has not already tendered payment. Reasonable costs may include a reasonable allowance for actual overhead, not to exceed a total of 10% of Contractor's direct costs for Services. Any overhead allowance shall be separately itemized. Contractor may also recover the reasonable cost of preparing the invoice.

b. A reasonable allowance for profit on the cost of the Work described in the immediately preceding subsection (a), provided that Contractor can establish, to the satisfaction of the SFMTA, that Contractor would have made a profit had all Work under this Agreement been completed, and provided further, that the profit allowed shall in no event exceed 5% of such cost.

c. The reasonable cost to Contractor of handling material or equipment returned to the vendor, delivered to the SFMTA or otherwise disposed of as directed by the SFMTA.

d. A deduction for the cost of materials to be retained by Contractor, amounts realized from the sale of materials and not otherwise recovered by or credited to the SFMTA, and any other appropriate credits to the SFMTA against the cost of the Work or other work.

8.1.4 Non-Recoverable Costs. In no event shall the City be liable for costs incurred by Contractor or any of its Subcontractors after the termination date specified by the SFMTA, except for those costs specifically enumerated and described in Section 8.1.3. Such non-recoverable costs include, but are not limited to, anticipated profits on the Work under this Agreement, post-termination employee salaries, post-termination administrative expenses, post-termination overhead or unabsorbed overhead, attorneys' fees or other costs relating to the prosecution of a claim or lawsuit, prejudgment interest, or any other expense which is not reasonable or authorized under Section 8.1.3.

8.1.5 Deductions. In arriving at the amount due to Contractor under this Section, the SFMTA may deduct: (a) all payments previously made by the SFMTA for Work covered by Contractor's final invoice; (b) any claim which the SFMTA may have against Contractor in connection with this Agreement; (c) any invoiced costs or expenses excluded pursuant to the immediately preceding subsection 8.1.4; and (d) in instances in which, in the opinion of the SFMTA, the cost of any Service performed under this Agreement is excessively high due to costs incurred to remedy or replace defective or rejected Services, the difference between the invoiced amount and the SFMTA's estimate of the reasonable cost of performing the invoiced Services in compliance with the requirements of this Agreement.

8.1.6 Survival. The City's payment obligation under this Section shall survive termination of this Agreement.

8.2 Termination for Default; Remedies

8.2.1 Event of Default. Each of the following shall constitute an immediate event of default (Event of Default) under this Agreement:

a. Contractor fails or refuses to perform or observe any term, covenant or condition contained in any of the following Sections of this Agreement:

- 3.5 Submitting False Claims
- 4.5 Assignment
- Article 5 Insurance and Indemnity
- Article 7 Payment of Taxes
- 10.10 Alcohol and Drug-Free Workplace
- 11.10 Compliance with Laws
- Article 13 Data and Security

b. Contractor fails or refuses to perform or observe any other term, covenant or condition contained in this Agreement, including any obligation imposed by ordinance or statute and incorporated by reference herein, and such default is not cured within 10 days after written notice thereof from the SFMTA to Contractor. If Contractor defaults a second time in the same manner as a prior default cured by Contractor, the SFMTA may in its sole

discretion immediately terminate the Agreement for default or grant an additional period not to exceed five days for Contractor to cure the default.

c. Contractor (i) is generally not paying its debts as they become due; (ii) files, or consents by answer or otherwise to the filing against it of a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction; (iii) makes an assignment for the benefit of its creditors; (iv) consents to the appointment of a custodian, receiver, trustee or other officer with similar powers of Contractor or of any substantial part of Contractor's property; or (v) takes action for the purpose of any of the foregoing.

d. A court or government authority enters an order (i) appointing a custodian, receiver, trustee or other officer with similar powers with respect to Contractor or with respect to any substantial part of Contractor's property, (ii) constituting an order for relief or approving a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction or (iii) ordering the dissolution, winding-up or liquidation of Contractor.

8.2.2 Remedies. On and after any Event of Default, City shall have the right to exercise its legal and equitable remedies, including, without limitation, the right to terminate this Agreement or to seek specific performance of all or any part of this Agreement. In addition, where applicable, City shall have the right (but no obligation) to cure (or cause to be cured) on behalf of Contractor any Event of Default; Contractor shall pay to City on demand all costs and expenses incurred by City in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. City shall have the right to offset from any amounts due to Contractor under this Agreement or any other agreement between City and Contractor: (i) all damages, losses, costs or expenses incurred by City as a result of an Event of Default; and (ii) any liquidated damages levied upon Contractor pursuant to the terms of this Agreement; and (iii), any damages imposed by any ordinance or statute that is incorporated into this Agreement by reference, or into any other agreement with the City.

8.2.3 No Waiver. All remedies provided for in this Agreement may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy. Nothing in this Agreement shall constitute a waiver or limitation of any rights that City may have under applicable law.

8.2.4 Notice of Default. Any notice of default must be sent to the address set forth in Article 11, and in the manner prescribed in Article 11.

8.3 Non-Waiver of Rights. The omission by either party at any time to enforce any default or right reserved to it, or to require performance of any of the terms, covenants, or provisions hereof by the other party at the time designated, shall not be a waiver of any such default or right to which the party is entitled, nor shall it in any way affect the right of the party to enforce such provisions thereafter.

8.4 Rights and Duties upon Termination or Expiration

8.4.1 Survival. This Section and the following Sections of this Agreement listed below, shall survive termination or expiration of this Agreement:

3.3.2	Payment Limited to Satisfactory Services
3.4	Audit and Inspection of Records
3.5	Submitting False Claims
Article 5	Insurance and Indemnity
6.1	Liability of City
6.3	Liability for Incidental and Consequential Damages
Article 7	Payment of Taxes
8.1.6	Survival
8.2.2	Remedies
9.1	Ownership of Results
9.2	Works for Hire
11.6.3	Dispute Resolution Procedure
11.7	Agreement Made in California; Venue
11.8	Construction
11.9	Entire Agreement
11.10	Compliance with Laws
11.11	Severability
Article 13	Data and Security

8.4.2 Contractor Duties. Subject to the survival of the Sections identified in Section 8.4.1 above, if this Agreement is terminated prior to expiration of the term specified in Article 2, this Agreement shall be of no further force or effect. Contractor shall transfer title to City, and deliver in the manner, at the times, and to the extent, if any, directed by City, any Work in progress, completed Work, supplies, equipment, and other materials produced as a part of, or acquired in connection with the performance of this Agreement, and any completed or partially completed Work which, if this Agreement had been completed, would have been required to be furnished to City.

Article 9 Rights In Deliverables

9.1 Ownership of Results. Any interest of Contractor or its Subcontractors, in the Deliverables, including any materials, equipment, drawings, plans, specifications, blueprints,

studies, reports, memoranda, computation sheets, computer files and media or other documents prepared by Contractor or its Subcontractors for the purposes of this Agreement, shall become the property of and will be transmitted to City. However, unless expressly prohibited elsewhere in this Agreement, Contractor may retain and use copies for reference and as documentation of its experience and capabilities.

9.2 Works for Hire. If, in connection with Work, Contractor or its Subcontractors creates Deliverables including, without limitation, artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, blueprints, source codes, or any other original works of authorship, whether in digital or any other format, such works of authorship shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works shall be the property of the City. If any Deliverables created by Contractor or its Subcontractor(s) under this Agreement are ever determined not to be works for hire under U.S. law, Contractor hereby assigns all Contractor's copyrights to such Deliverables to the City, agrees to provide any material and execute any documents necessary to effectuate such assignment, and agrees to include a clause in every subcontract imposing the same duties upon Subcontractor(s). With City's prior written approval, Contractor and its Subcontractor(s) may retain and use copies of such works for reference and as documentation of their respective experience and capabilities.

Article 10 Additional Requirements Incorporated by Reference

10.1 Laws Incorporated by Reference. The full text of the laws listed in this Article 10, including enforcement and penalty provisions, are incorporated by reference into this Agreement. The full text of the San Francisco Municipal Code provisions incorporated by reference in this Article and elsewhere in the Agreement (Mandatory City Requirements) are available at http://www.amlegal.com/codes/client/san-francisco_ca.

10.2 Conflict of Interest. By executing this Agreement, Contractor certifies that it does not know of any fact which constitutes a violation of Section 15.103 of the City's Charter; Article III, Chapter 2 of City's Campaign and Governmental Conduct Code; Title 9, Chapter 7 of the California Government Code (Section 87100 *et seq.*), or Title 1, Division 4, Chapter 1, Article 4 of the California Government Code (Section 1090 *et seq.*), and further agrees promptly to notify the City if it becomes aware of any such fact during the term of this Agreement.

10.3 Prohibition on Use of Public Funds for Political Activity. In performing the Services, Contractor shall comply with San Francisco Administrative Code Chapter 12G, which prohibits funds appropriated by the City for this Agreement from being expended to participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure. Contractor is subject to the enforcement and penalty provisions in Chapter 12G.

10.4 Consideration of Salary History. Contractor shall comply with San Francisco Administrative Code Chapter 12K, the Consideration of Salary History Ordinance or "Pay Parity

Act." Contractor is prohibited from considering current or past salary of an applicant in determining whether to hire the applicant or what salary to offer the applicant to the extent that such applicant is applying for employment to be performed on this Agreement or in furtherance of this Agreement, and whose application, in whole or part, will be solicited, received, processed or considered, whether or not through an interview, in the City or on City property. The ordinance also prohibits employers from (a) asking such applicants about their current or past salary or (b) disclosing a current or former employee's salary history without that employee's authorization unless the salary history is publicly available. Contractor is subject to the enforcement and penalty provisions in Chapter 12K. Information about and the text of Chapter 12K is available on the web at <https://sfgov.org/olse/consideration-salary-history>. Contractor is required to comply with all of the applicable provisions of 12K, irrespective of the listing of obligations in this Section.

10.5 Nondiscrimination Requirements

10.5.1 Nondiscrimination in Contracts. Contractor shall comply with the provisions of Chapters 12B and 12C of the San Francisco Administrative Code. Contractor shall incorporate by reference in all subcontracts the provisions of Sections 12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all Subcontractors to comply with such provisions. Contractor is subject to the enforcement and penalty provisions in Chapters 12B and 12C.

10.5.2 Nondiscrimination in the Provision of Employee Benefits. San Francisco Administrative Code 12B.2. Contractor does not as of the date of this Agreement, and will not during the term of this Agreement, in any of its operations in San Francisco, on real property owned by San Francisco, or where work is being performed for the City elsewhere in the United States, discriminate in the provision of employee benefits between employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees, subject to the conditions set forth in San Francisco Administrative Code Section 12B.2.

10.6 Local Business Enterprise and Non-Discrimination in Contracting Ordinance. Contractor shall comply with all applicable provisions of Chapter 14B (LBE Ordinance). Contractor is subject to the enforcement and penalty provisions in Chapter 14B.

10.7 Minimum Compensation Ordinance. If Administrative Code Chapter 12P applies to this contract, Contractor shall pay covered employees no less than the minimum compensation required by San Francisco Administrative Code Chapter 12P, including a minimum hourly gross compensation, compensated time off, and uncompensated time off. Contractor is subject to the enforcement and penalty provisions in Chapter 12P. Information about and the text of the Chapter 12P is available on the web at <http://sfgov.org/olse/mco>. Contractor is required to comply with all of the applicable provisions of 12P, irrespective of the

listing of obligations in this Section. By signing and executing this Agreement, Contractor certifies that it complies with Chapter 12P.

10.8 Health Care Accountability Ordinance. If Administrative Code Chapter 12Q applies to this contract, Contractor shall comply with the requirements of Chapter 12Q. For each Covered Employee, Contractor shall provide the appropriate health benefit set forth in Section 12Q.3 of the HCAO. If Contractor chooses to offer the health plan option, such health plan shall meet the minimum standards set forth by the San Francisco Health Commission. Information about and the text of Chapter 12Q, as well as the Health Commission's minimum standards, is available on the web at <http://sfgov.org/olse/hcao>. Contractor is subject to the enforcement and penalty provisions in Chapter 12Q. Any subcontract entered into by Contractor shall require any Subcontractor with 20 or more employees to comply with the requirements of the HCAO and shall contain contractual obligations substantially the same as those set forth in this Section.

10.9 First Source Hiring Program. Contractor must comply with all of the provisions of the First Source Hiring Program, Chapter 83 of the San Francisco Administrative Code, that apply to this Agreement, and Contractor is subject to the enforcement and penalty provisions in Chapter 83.

10.10 Alcohol and Drug-Free Workplace. City reserves the right to deny access to, or require Contractor to remove from, City facilities personnel of any Contractor or Subcontractor who City has reasonable grounds to believe has engaged in alcohol abuse or illegal drug activity which in any way impairs City's ability to maintain safe work facilities or to protect the health and well-being of City employees and the general public. City shall have the right of final approval for the entry or re-entry of any such person previously denied access to, or removed from, City facilities. Illegal drug activity means possessing, furnishing, selling, offering, purchasing, using or being under the influence of illegal drugs or other controlled substances for which the individual lacks a valid prescription. Alcohol abuse means possessing, furnishing, selling, offering, or using alcoholic beverages, or being under the influence of alcohol.

10.11 Limitations on Contributions. By executing this Agreement, Contractor acknowledges its obligations under section 1.126 of the City's Campaign and Governmental Conduct Code, which prohibits any person who contracts with, or is seeking a contract with, any department of the City for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, for a grant, loan or loan guarantee, or for a development agreement, from making any campaign contribution to (a) a City elected official if the contract must be approved by that official, a board on which that official serves, or the board of a state agency on which an appointee of that official serves, (b) a candidate for that City elective office, or (c) a committee controlled by such elected official or a candidate for that office, at any time from the submission of a proposal for the contract until the later of either the termination of negotiations for such contract or twelve months after the date the City approves the contract. The prohibition on contributions applies to each prospective party

to the contract; each member of Contractor's board of directors; Contractor's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 10% in Contractor; any Subcontractor listed in the bid or contract; and any committee that is sponsored or controlled by Contractor. Contractor certifies that it has informed each such person of the limitation on contributions imposed by Section 1.126 by the time it submitted a proposal for the contract, and has provided the names of the persons required to be informed to the City department with whom it is contracting.

10.12 Reserved. (Slavery Era Disclosure)

10.13 Reserved. (Working with Minors)

10.14 Consideration of Criminal History in Hiring and Employment Decisions

10.14.1 Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T (City Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions) of the San Francisco Administrative Code (Chapter 12T), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the web at <http://sfgov.org/olse/fco>. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Section. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.

10.14.2 The requirements of Chapter 12T shall only apply to a Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of this Agreement, shall apply only to applicants and employees who would be or are performing Work in furtherance of this Agreement, and shall apply when the physical location of the employment or prospective employment of an individual is wholly or substantially within the City of San Francisco. Chapter 12T shall not apply when the application in a particular context would conflict with federal or state law or with a requirement of a government agency implementing federal or state law.

10.15 Reserved. (Public Access to Nonprofit Records and Meetings)

10.16 Reserved. (Food Service Waste Reduction Requirements)

10.17 Reserved. (Distribution of Beverages and Water)

10.18 Tropical Hardwood and Virgin Redwood Ban. Pursuant to San Francisco Environment Code Section 804(b), the City urges Contractor not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood or virgin redwood wood product.

10.19 Preservative Treated Wood Products. Contractor shall comply with the provisions of San Francisco Environment Code Chapter 13, which requires that each Contractor purchasing preservative-treated wood products on behalf of the City, shall only purchase such products from the list of alternatives adopted by the Department of the Environment pursuant to Section 1302 of Chapter 13, unless otherwise granted an exemption by the terms of that Chapter.

Article 11 General Provisions

11.1 Notices to the Parties. Unless otherwise indicated in this Agreement, all written communications sent by the Parties may be by U.S. mail or e-mail, and shall be addressed as follows:

To City: Janet Gallegos
Project Manager
San Francisco Municipal Transportation Agency
1 South Van Ness, 7th Floor
San Francisco, CA 94103
Email: Janet.Gallegos@sfmta.com

To Contractor: Karol Shupe
Denver Test Systems
4845 W. McDowell Road, Suite 50A
Phoenix, Arizona 85035
E-mail: karol@denvertest.com

Any notice of default must be sent by overnight delivery service or courier, with a signature obtained at delivery. Either Party may change the address to which notice is to be sent by giving written notice thereof to the other Party. If email notification is used, the sender must specify a receipt notice.

11.2 Compliance with Americans with Disabilities Act. Contractor shall provide the Work in a manner that complies with the Americans with Disabilities Act (ADA), including but not limited to Title II's program access requirements, and all other applicable federal, state and local disability rights legislation.

11.3 Incorporation of Recitals. The Recitals are incorporated into and made part of this Agreement.

11.4 Sunshine Ordinance. Contractor acknowledges that this Agreement and all records related to its formation, Contractor's performance of Work, and City's payment are subject to the California Public Records Act, (California Government Code §6250 et. seq.), and the San Francisco Sunshine Ordinance, (San Francisco Administrative Code Chapter 67). Such records are subject to public inspection and copying unless exempt from disclosure under federal, state or local law. See also Section 5.2.3 for Contractor's legal obligations for requests under the Sunshine Ordinance.

11.5 Modification of this Agreement. This Agreement may not be modified, nor may compliance with any of its terms be waived, except as noted in Section 11.1 (Notices to Parties) regarding change in personnel or place, and except by written instrument executed and approved as required under City law and under the policy of the SFMTA Board of Directors. Contractor shall cooperate with the SFMTA to submit to the CCO any amendment, modification, supplement or change order that would result in a cumulative increase of the original amount of this Agreement by more than 20% (CMD Contract Modification Form).

11.6 Authority of Project Manager; Claims; Disputes . The Project Manager shall decide all questions that may arise as to the quality or acceptability of materials furnished and Work performed and as to the manner of performance and rate of progress of the Work; all questions, which may arise as to the acceptable fulfillment of the Contract on the part of the Contractor; and all questions as to compensation. In discharging the responsibilities outlined above, the Project Manager shall at all times act fairly and reasonably. Any appeal of the Project Manager's decisions shall be in accordance with the provisions of Section 11.6.3 of this Agreement. As with any claim, change, extra or additional Work, Contractor shall be paid in accordance with the payment provisions set out in Article 3 of this Contract when the dispute is finally resolved.

Should any questions arise as to the meaning and intent of the Contract, the matter shall be referred to the Project Manager, who, in consultation with other City representatives, as applicable, and with input the Contractor, shall decide the true meaning and intent of the Contract. The Project Manager's decision in this regard shall be administratively final and conclusive.

11.6.1 Claims for Additional Compensation

(a) Contractor shall not be entitled to the payment of any additional compensation for any action, or failure to act, by the SFMTA, including failure or refusal to issue a Contract Modification or for the happening of any event, thing, occurrence, or other cause, unless Contractor shall have given the Project Manager due written notice of potential claim.

(b) The written notice of potential claim shall set forth the reasons for which Contractor believes additional compensation will or may be due, the nature of the costs involved, and insofar as possible, the amount of the potential claim. The said notice as above required must have been given to the Project Manager prior to the time that Contractor shall have performed the Work giving rise to the potential claim for additional compensation, or in all other cases, within 30 Days after the happening of the event, thing, occurrence, or other cause giving rise to the potential claim.

(c) It is the intention of this Section 11.6.1 that differences between the Parties arising under and by virtue of the Contract be brought to the attention of the SFMTA

at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly be taken. Contractor agrees that it shall have no right to additional compensation for any claim that may be based on any such act, failure to act, event, thing, or occurrence for which no written notice of potential claim as herein required was filed.

11.6.2 Other Claims. For any dispute involving a question of fact that does not involve a claim for additional compensation, the aggrieved party shall furnish the other party with a notice of dispute within 15 Days of the determination of the dispute. The party receiving a notice of dispute shall submit a written reply with 15 Days of delivery of the notice. The notice and response shall contain the following: (a) a statement of the party's position and a summary of the arguments supporting that position, and (b) any evidence supporting the party's position.

11.6.3 Dispute Resolution Procedure. Disputes arising in the performance of this Agreement that are not resolved by negotiation between the parties shall be decided in writing by the SFMTA Project Manager. The Project Manager's decision shall be administratively final and conclusive unless within 10 Working Days from the date of such decision, the Contractor mails or otherwise furnishes a written appeal to the Director of Transit, or his/her designee. In connection with such an appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Director of Transit shall be administratively final and conclusive. This section applies to all disputes unless a specific provision of this Agreement provides that the Project Manager's decision as to a particular dispute is final.

11.6.4 No Cessation of Work. Pending final resolution of a dispute hereunder, the Contractor shall proceed diligently with the performance of its obligations under this Agreement in accordance with the written directions of the Project Manager.

11.6.5 Alternative Dispute Resolution. If agreed by both Parties in writing, disputes may be resolved by a mutually agreed-upon alternative dispute resolution process. If the parties do not mutually agree to an alternative dispute resolution process or such efforts do not resolve the dispute, then either Party may pursue any remedy available under California law. The status of any dispute or controversy notwithstanding, Contractor shall proceed diligently with the performance of its obligations under this Agreement in accordance with the Agreement and the written directions of the City. Neither Party will be entitled to legal fees or costs for matters resolved under this section.

11.6.6 Disputes Among Contractor's Partners. The resolution of any contractual disputes related to Contractor's Joint Venture or Association partners (if any) shall be the sole responsibility of the Contractor. Each party of the Joint Venture or Association shall resolve all such disputes within 30 calendar days of when the dispute first surfaced so as not to impact the performance of the contract with the City. Any such disputes which impact the Project and which are left unresolved for more than one month shall be cause for the City to

withhold and/or reduce invoice payments to the Contractor's Joint Venture or Association firms until the dispute is resolved.

11.6.7 Government Code Claim Requirement. No suit for money or damages may be brought against the City until a written claim therefor has been presented to and rejected by the City in conformity with the provisions of San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq. Nothing set forth in this Agreement shall operate to toll, waive or excuse Contractor's compliance with the California Government Code Claim requirements set forth in San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq.

11.7 Agreement Made in California; Venue. The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California. Venue for all litigation relative to the formation, interpretation and performance of this Agreement shall be in San Francisco.

11.8 Construction. All paragraph captions are for reference only and shall not be considered in construing this Agreement.

11.9 Entire Agreement. This contract sets forth the entire Agreement between the parties, and supersedes all other oral or written provisions. All appendices to this Agreement are incorporated by reference as though fully set forth. This Agreement may be modified only as provided in Section 11.5 (Modification of this Agreement).

11.10 Compliance with Laws. Contractor shall keep itself fully informed of the City's Charter, codes, ordinances and duly adopted rules and regulations of the City and of all state, and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, and regulations and all applicable laws as they may be amended from time to time.

11.11 Severability. Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (a) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (b) such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties and shall be reformed without further action by the parties to the extent necessary to make such provision valid and enforceable.

11.12 Cooperative Drafting. This Agreement has been drafted through a cooperative effort of City and Contractor, and both Parties have had an opportunity to have the Agreement reviewed and revised by legal counsel. No Party shall be considered the drafter of this Agreement, and no presumption or rule that an ambiguity shall be construed against the Party drafting the clause shall apply to the interpretation or enforcement of this Agreement.

11.13 Order of Precedence. Contractor agrees to perform the Services described below in accordance with the terms and conditions of this Agreement, including amendments, the RFP,

and Contractor's proposal dated June 16, 2020. The RFP and Contractor's proposal are incorporated by reference as though fully set forth herein. Should there be a conflict of terms or conditions, the order of precedence shall be (a) this Agreement, including exhibits and any amendments; (b) the RFP; and (c) Contractor's proposal.

11.14 Notification of Legal Requests. Contractor shall immediately notify City upon receipt of any subpoenas, service of process, litigation holds, discovery requests, and other legal requests (Legal Requests) related to City Data, or which in any way might reasonably require access to City's Data, and in no event later than 24 hours after it receives the request. Contractor shall not respond to Legal Requests related to City without first notifying City other than to notify the requestor that the information sought is potentially covered under a non-disclosure agreement. Contractor shall retain and preserve City Data in accordance with the City's instruction and requests, including, without limitation, any retention schedules and/or litigation hold orders provided by the City to Contractor, independent of where the City Data is stored.

11.15 Time of Essence. Time is of the essence in this Agreement.

Article 12 SFMTA Specific Terms

12.1 Large Vehicle Driver Safety Training Requirements

12.1.1 Contractor agrees that before any of its employees and Subcontractors drive large vehicles within the City and County of San Francisco, those employees and Subcontractors shall successfully complete either (a) the SFMTA's Large Vehicle Urban Driving Safety training program or (b) a training program that meets the SFMTA's approved standards for large vehicle urban driving safety. The SFMTA's approved standards for large vehicle urban driving safety is available for download at www.SFMTA.com/largevehicletrainingstandards. This requirement does not apply to drivers providing delivery services who are not employees or Subcontractors of the Contractor. For purposes of this section, "large vehicle" means any single vehicle or combination of vehicle and trailer with an unladen weight of 10,000 pounds or more, or a van designed to carry 10 or more people.

12.1.2 By entering into this Agreement, Contractor agrees that in the event the Contractor fails to comply with the Large Vehicle Driver Safety Training Requirements, the City will suffer actual damages that will be impractical or extremely difficult to determine; further, Contractor agrees that the sum of up to One Thousand Dollars (\$1,000) per employee or Subcontractor who is permitted to drive a large vehicle in violation of these requirements is not a penalty, but is a reasonable estimate of the loss that City will incur based on the Contractor's failure to comply with this requirement, established in light of the circumstances existing at the time this Contract was awarded. City may deduct a sum representing the liquidated damages from any money due to Contractor. Such deductions shall not be considered a penalty, but rather agreed monetary damages sustained by City because of Contractor's failure to comply.

Article 13 Data and Security

13.1 Nondisclosure of Private, Proprietary or Confidential Information

13.1.1 Protection of Private Information. If this Agreement requires City to disclose "Private Information" to Contractor within the meaning of San Francisco Administrative Code Chapter 12M, Contractor and Subcontractors shall use such information only in accordance with the restrictions stated in Chapter 12M and in this Agreement and only as necessary in performing the Services. Contractor is subject to the enforcement and penalty provisions in Chapter 12M.

13.1.2 Confidential Information. In the performance of Services, Contractor may have access to City's proprietary or Confidential Information, the disclosure of which to third parties may damage City. If City discloses proprietary or Confidential Information to Contractor, such information must be held by Contractor in confidence and used only in performing the Agreement. Contractor shall exercise the same standard of care to protect such information as a reasonably prudent contractor would use to protect its own proprietary or Confidential Information.

13.1.3 Contractor Information. To the extent that the Contractor considers any document or Deliverable to be a trade secret or otherwise proprietary, Contractor shall so mark them. The SFMTA shall require individuals using such proprietary documents to maintain the confidentiality of the documents, and if necessary, sign a confidentiality agreement regarding use of highly sensitive documents.

13.2 Reserved. (Payment Card Industry (PCI) Requirements)

13.3 Reserved. (Business Associate Agreement)

13.4 Management of City Data and Confidential Information

13.4.1 Access to City Data. City shall at all times have access to and control of City Data, and shall be able to retrieve it in a readable format, in electronic form and/or print, at any time, at no additional cost.

13.4.2 Use of City Data and Confidential Information. Contractor agrees to hold City's Confidential Information received from or created on behalf of the City in strictest confidence. Contractor shall not use or disclose City's Data or Confidential Information except as permitted or required by the Agreement or as otherwise authorized in writing by the City. Any Work using, or sharing or storage of, City's Confidential Information outside the United States is subject to prior written authorization by the City. Access to City's Confidential Information must be strictly controlled and limited to Contractor's staff assigned to this project on a need-to-know basis only. Contractor is provided a limited non-exclusive license to use the City Data or Confidential Information solely for performing its obligations under the Agreement and not for Contractor's own purposes or later use. Nothing herein shall be construed to confer any license

or right to the City Data or Confidential Information, by implication, estoppel or otherwise, under copyright or other intellectual property rights, to any third party. Unauthorized use of City Data or Confidential Information by Contractor, Subcontractors or other third parties is prohibited. For purpose of this requirement, the phrase “unauthorized use” means the data mining or processing of data, stored or transmitted by the service, for commercial purposes, advertising or advertising-related purposes, or for any purpose other than security or service delivery analysis that is not explicitly authorized.

13.4.3 Disposition of Confidential Information. Upon termination of Agreement or request of City, Contractor shall within 48 hours return all Confidential Information, including all original media. Once Contractor has received written confirmation from City that Confidential Information has been successfully transferred to City, Contractor shall, within 10 business days, purge all Confidential Information from its servers, any hosted environment Contractor has used in performance of this Agreement, work stations that were used to process the Data or for production of the Data, and any other work files stored by Contractor in whatever medium. Contractor shall provide City with written certification that such purge occurred within five business days of the purge.

Article 14 MacBride Principles And Signature

14.1 MacBride Principles - Northern Ireland. The provisions of San Francisco Administrative Code §12F are incorporated herein by this reference and made part of this Agreement. By signing this Agreement, Contractor confirms that Contractor has read and understood that the City urges companies doing business in Northern Ireland to resolve employment inequities and to abide by the MacBride Principles, and urges San Francisco companies to do business with corporations that abide by the MacBride Principles.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day first mentioned above.

<p>CITY</p> <p>San Francisco Municipal Transportation Agency</p> <hr/> <p>Jeffrey P. Tumlin Director of Transportation</p> <p>Authorized By:</p> <p>San Francisco Municipal Transportation Agency Board of Directors Resolution No. _____ Adopted: _____ Attest:</p> <hr/> <p>Secretary, SFMTA Board of Directors</p> <p>Approved as to Form:</p> <p>Dennis J. Herrera City Attorney</p> <p>By: _____ Robin M. Reitzes Deputy City Attorney</p>	<p>CONTRACTOR</p> <p>Denver Test Systems</p> <hr/> <p>Karol Shupe President / CEO</p> <p><u>Acknowledgement of Large Vehicle Driver Safety Training Requirements:</u></p> <p>By signing this Agreement, Contractor acknowledges that it has read and understands Section 12.1: Large Vehicle Driver Safety Training Requirements.</p> <p>City Supplier Number: 0000021525</p>
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Appendices

- A: Scope of Services
- B.1: Schedule of Prices
- B.2: Payment Milestones
- B.3: Project Delivery Schedule
- C: SFMTA Furnished Drawings, Schematics and Documents

Appendix A Scope of Work

I. Description of Work

The Contractor shall overhaul master controllers for the SFMTA Breda LRVs in accordance with the instructions provided below and in the associated documents.

A. General

1. As-Built Drawings

The Contractor shall provide as-built assembly, wiring diagrams, detail, and component-level drawings for all parts that are replaced with new or modified from the baseline design. The Contractor shall provide component level bill of materials (BOMs) for all new and modified parts provided under this project. BOMs shall list the OEM name and part number.

2. Shipment and Delivery

All costs associated with shipment of master controllers from the SFMTA's storeroom and return delivery from the Contractor's overhaul facility shall be covered within the itemized costs of this Contract. The Contractor shall provide appropriate shipment insurance to cover damage during shipping and handling.

3. Pre-Shipment Inspection

The SFMTA shall conduct a pre-shipment visual inspection and functional bench test of each master controller prior to shipment to the Contractor for overhaul. The pre-shipment inspection checklist in Appendix C shall be used to document the condition of each master controller. Upon re-delivery, the Contractor shall be responsible for all damage to the master controller and missing parts not listed on the checklist.

4. Materials and Workmanship

Unless otherwise noted, the Contractor shall supply all material and labor necessary to complete this project. The Contractor is responsible for the design and function of all components whether or not explicitly mentioned within this specification. The Contractor may use alternates if approved by the Engineer.

The Engineer reserves the right to review any and all parts removed from the master controller assemblies but not reinstalled. The Contractor shall return to the SFMTA all such parts deemed salvageable by the Engineer.

5. Work Plan, Quality Control, Testing and Commissioning

a. Work Plan. The Contractor shall prepare a work plan listing all parts to be replaced along with complete OEM material information and datasheets. The work plan shall outline the Contractor's proposed method for disassembly, overhaul, re-assembly, quality

control, and testing. The work plan shall include a project schedule. The work plan shall be reviewed and approved by the Engineer prior to Contractor commencing the overhaul work.

b. Quality Control Plan. The Contractor shall provide a quality control plan for approval by the Engineer. The plan shall describe the Contractor's quality control processes, material review procedures, and inspection and testing processes.

c. Post-Overhaul Testing. The Contractor shall provide a post-overhaul testing procedure for approval by the Engineer. The test shall be performed at the Contractor's facility and be designed to ensure that the overhauled units are functional, with basic adjustments performed, and ready for a final bench test verification (at SFMTA) prior to installation onto an LRV.

d. Commissioning. SFMTA personnel will perform final commissioning and adjustments of the overhauled units at SFMTA's electronic shop facility prior to installation on an LRV. The Contractor is responsible for correcting any newly damaged or missing parts not noted on the pre-shipment checklist, as well as any final adjustments to controls, limit switches, or p-signal output that cannot be accomplished using the established maintenance procedures.

B. Equipment and Overhaul Work

Task 1: Hardware Replacement

The following items shall be removed and replaced with new parts. Item numbers refer to Transit Control Systems (TCS) parts list 44-1050 in Appendix C. Additional part replacements and overhaul requirements are listed below:

- Item 19: Modification, gear, stainless steel
- Item 23: T-Stick lock solenoid (K1)
- Item 35: Stack switch (S1)
- Item 36: Stack switch (S2)
- Item 37: Deadman handle switch (S3)
- Item 38: EB switch (S4)
- Item 39: FSB and BRK switch (S5/S6), quantity 2
- Item 40: Potentiometer R1
- Item 43: Connector P1
- Item 44: Connector P2
- Item 45: Connector P3
- Item 52: Spur gear attached to R1, stainless steel
- Item 67: Spur gear, drilled, stainless steel
- Item 124: Deadman spring, 0.062"

Any hardware removed must be replaced with new hardware and torqued to industry standards for size and grade. Any drift pin removed during the overhaul shall be replaced with a new drift pin. All torqued hardware shall be sealed with witness marking.

Task 2: Aluminum Wafer

The fiber wafer (qty 2) sandwiched between the S1 and S2 switch and solenoid adapter plates shall be replaced with an aluminum wafer. The SFMTA will provide a sample to the Contractor.

Task 3: Stainless Steel Gears

The three gears (items 19, 52, and 67) shall be replaced with stainless steel gears. The SFMTA will provide samples to the Contractor.

Task 4: P-Signal Generator Board Relay

Relay K1 located on the p-signal generator board shall be removed and replaced with a Mors Smitt CP-U201 G relay designed as a drop-in replacement for the obsolete American Zettler AZ2428-V50-4WHUS. Refer to Appendix C for the datasheet.

Task 5: P-Signal Generator Board Capacitor

Capacitor C9 (100 uF, 50V) located on the p-signal generator board shall be removed and replaced with an equivalent part rated for 105 degrees C. De-soldering and soldering equipment and materials shall conform to industry standard practices for workmanship and validation, and be explained within the quality control plan.

Task 6: D-Frame Solenoids

The D-Frame solenoids (S1K1 and S2K2) attached to switches S1 and S2 shall be removed and replaced with new solenoids. The current OEM part is preferred, but alternates may be proposed for approval by the Engineer.

Task 7: D-Frame Solenoid Mechanical Armatures

The D-Frame solenoid mechanical armatures shall be removed, cleaned, and inspected for damage that impedes normal movement. All drift pins shall be replaced with new drift pins. Damaged parts shall be replaced with new or reworked to like new condition. The Contractor's Work Plan shall outline the proposed methods of rework.

Task 8: Actuating Handle

The actuating handle for switches S1 and S2 shall be replaced with a new actuating handle, including hardware.

Task 9: Wiring Harness

The existing wiring harness shall be removed and replaced with a new wire harness. Wire insulation shall be abrasion-resistant Teflon. Wire ends shall be clearly labeled. Terminations shall be solderless crimp type. The Contractor shall produce a new wiring diagram showing wire numbers and component interconnections.

Task 10: Front Panels

The Contractor shall design and manufacture new front panels. Dimensions, thickness, cutouts, fastener holes, engraved painted lettering, and paint shall match the current design. The top side edge shall have a bullnose finish.

Task 11: T-Stick Handle

The T-Stick handle and exposed area of the cast housing shall be repainted as necessary.

Task 12: Labels

A label shall be affixed to the lower assembly of all overhauled units indicating the Contractor's business name, part and serial number, and month/year of overhaul.

II. Services Provided by Attorneys

Any services to be provided by a law firm or attorney must be reviewed and approved in writing in advance by the City Attorney. No invoices for services provided by law firms or attorneys, including, without limitation, as Subcontractors of Contractor, will be paid unless the provider received advance written approval from the City Attorney.

III. Reports

Contractor shall submit written reports as requested by the SFMTA and as included above. Format for the content of such reports shall be determined by the SFMTA. The timely submission of all reports is a necessary and material term and condition of this Agreement. The reports, including any copies, shall be submitted on recycled paper and printed on double-sided pages to the maximum extent possible.

IV. Department Liaison

In performing the Services provided for in this Agreement, Contractor's liaison with the **SFMTA** will be Michael Motta.

**Appendix B.1
Schedule of Prices**

	Item	Price/Unit	No of Units	Total Line Item Price*
1	Base Overhauled Master Controller Units (2 per LRV)	\$6,177	150	\$926,550
2	Option Overhauled Master Controller Units (2 per LRV)	\$6,177	148	\$914,196
	Total		298	\$1,840,746

- **Amounts exclude any applicable sales tax.**

**Appendix B.2
Payment Milestones**

A. Base Units

	Milestone	140 Base Units Percentage	10 Prototype Units Percentage
1	Submittal and Acceptance of Work Plan, Quality Control Plan, and Test Procedure	10% of Contract Amount	
2	Successful delivery, installation and assessment by SFMTA of 10 prototype units		80% of price for 10 units
3	Successful completion of post-overhaul testing at Contractor's facility and delivery of production unit to SFMTA.	60% of price per unit	
4	Successful completion of final adjustments and commissioning at SFMTA.	20% of price per unit	
5	Completion and Approval of all Contract Requirements (excludes Option Units)	10% of Contract Amount (Retention)	
	Total	100%	100%

B. Option Units

	Milestone	Percentage
1	Successful completion of post-overhaul testing at Contractor's facility and delivery of option unit to SFMTA.	70% per unit
2	Successful completion of final adjustments and commissioning at SFMTA.	20% per unit
3	Completion and Approval of all Option Units	10% (Retention)
	Total	100%

**Appendix B. 3
Project Delivery Schedule**

Base

Item	Days After NTP (unless otherwise indicated)
Submittal of Work Plan, Quality Control Plan, and Test Procedure	30 Days
Overhaul and return to SFMTA of 10 prototype units	90 Days
Successful installation and on-car assessment at SFMTA facility	150 Days
Delivery of first production unit to SFMTA.	30 Days after approval of post-overhaul testing
Delivery of overhauled production base units	6/week
Successful completion of final adjustments and commissioning of base units at SFMTA	168 Days after approval of post-overhaul testing
Completion of all written Deliverables <ul style="list-style-type: none"> • As built drawings and BOM • Wiring Diagram 	To be delivered with the first production unit

Option

Item	Days After NTP(unless otherwise indicated)
Delivery of first option unit to SFMTA	175 Days after approval of post-overhaul testing
Delivery of option units	6/week

Appendix C
SFMTA Furnished Drawings, Schematics and Documents

H1 - General Overview Photo (1/10)



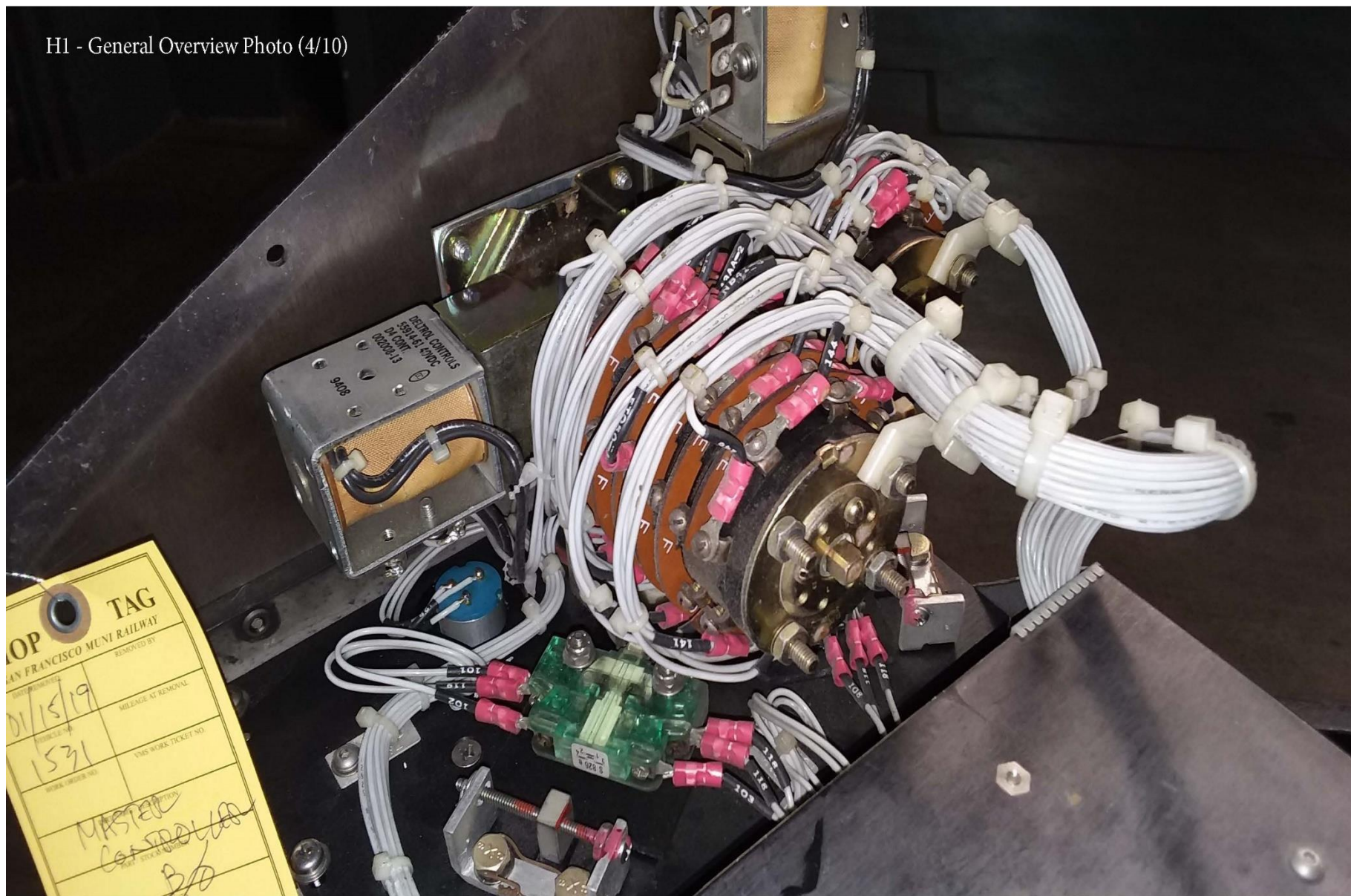


H1 - General Overview Photo (2/10)

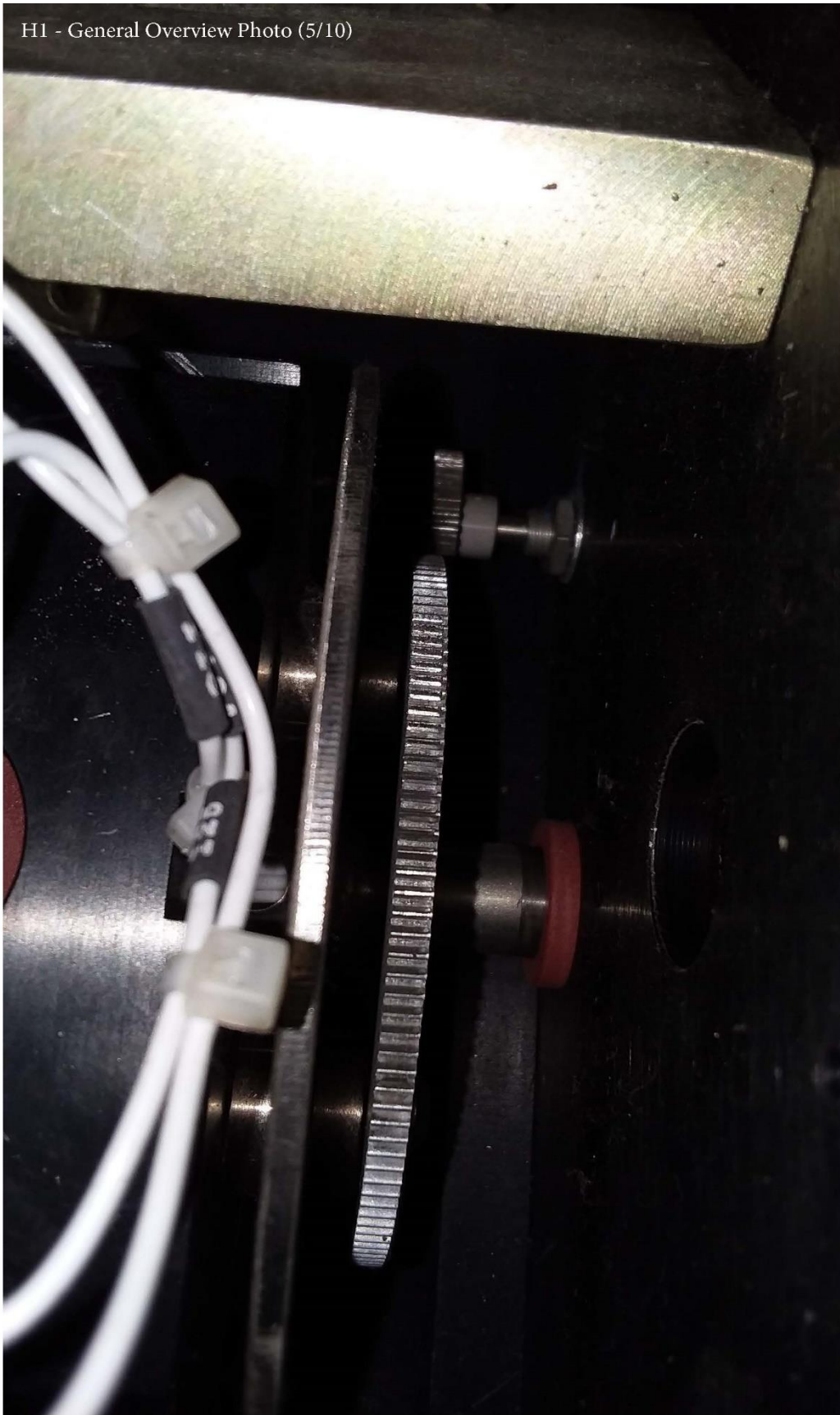
H1 - General Overview Photo (3/10)



H1 - General Overview Photo (4/10)



H1 - General Overview Photo (5/10)

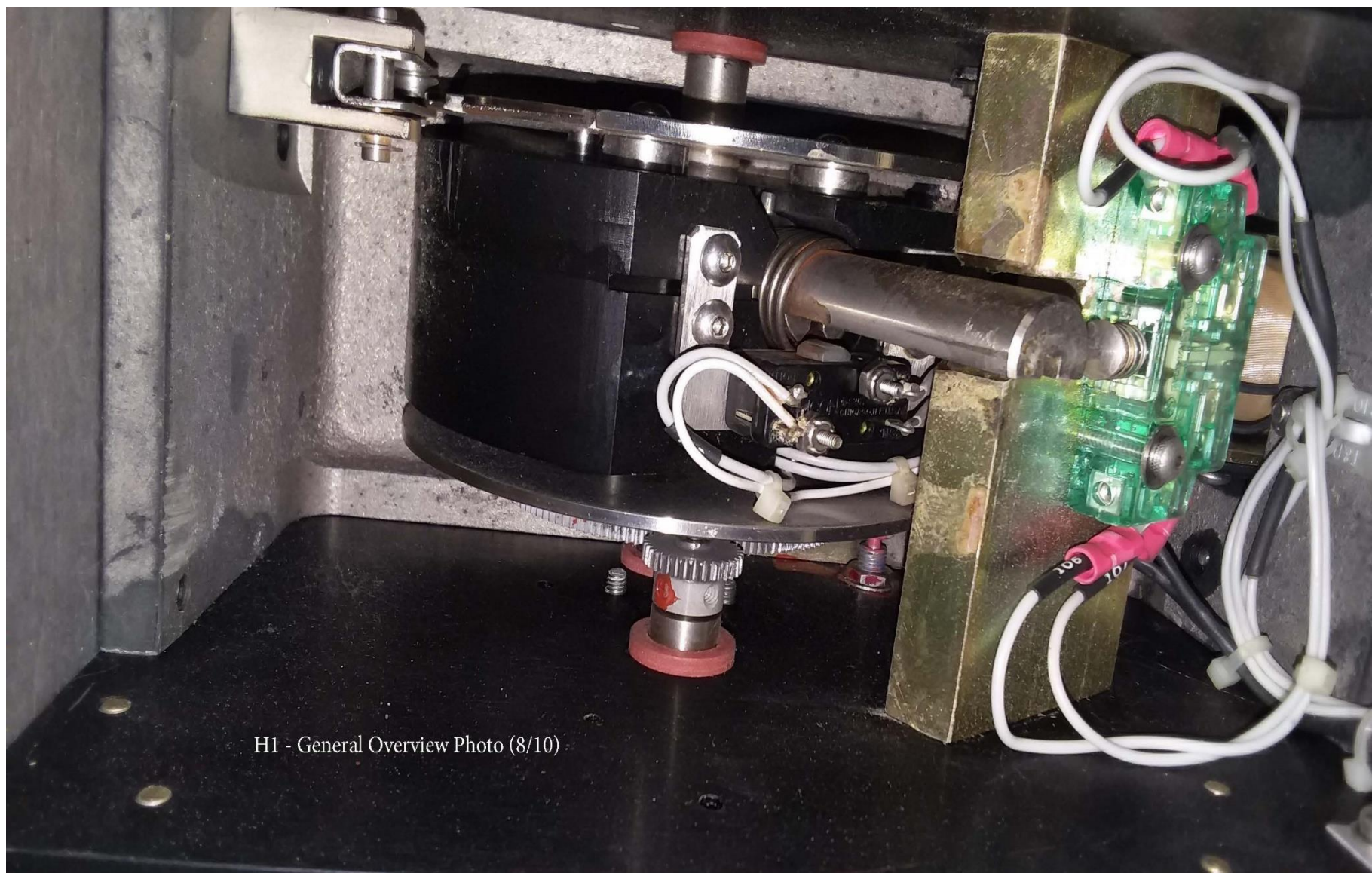


H1 - General Overview Photo (6/10)

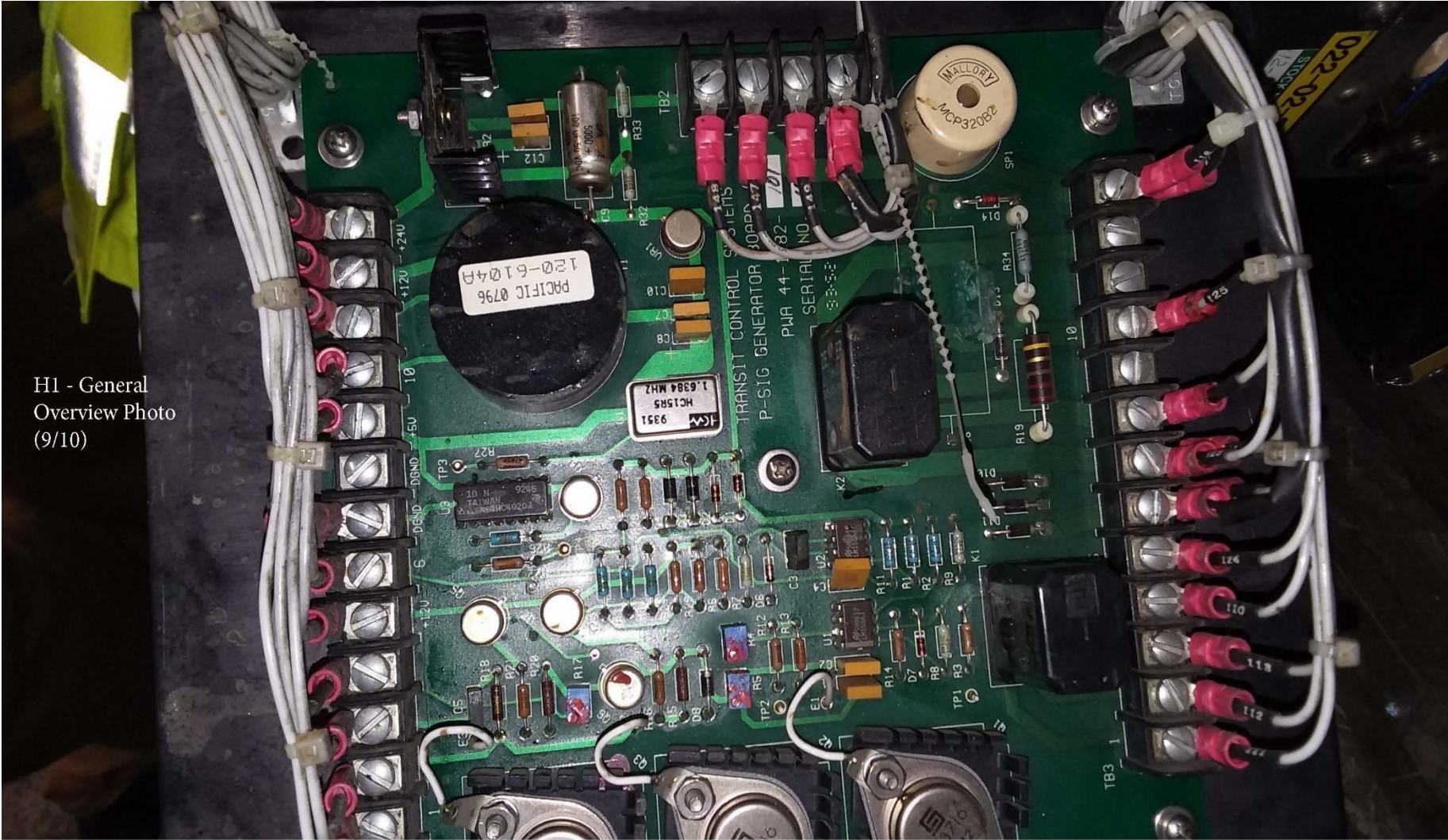


H1 - General Overview Photo (7/10)





H1 - General Overview Photo (8/10)



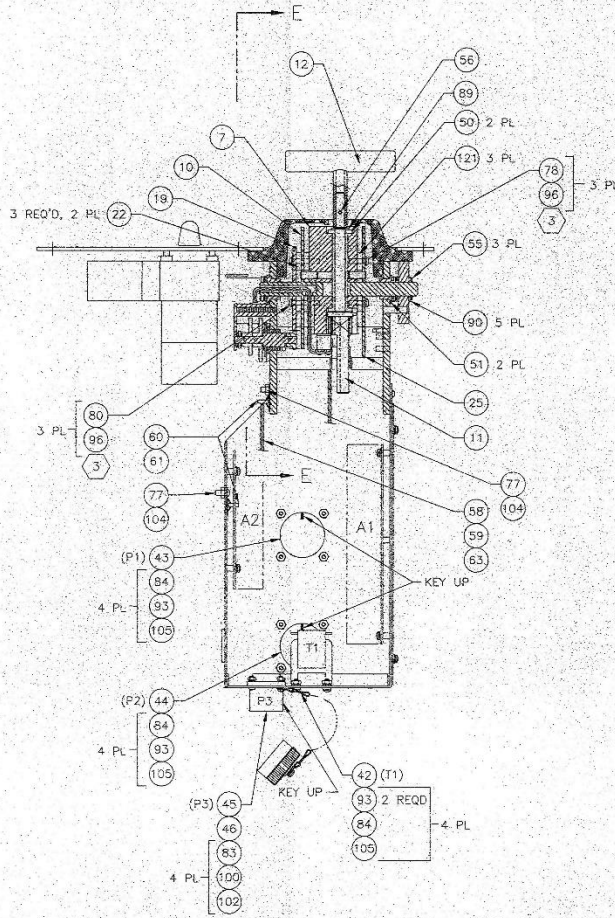
H1 - General Overview Photo (9/10)

H1 - General Overview Photo (10/10)

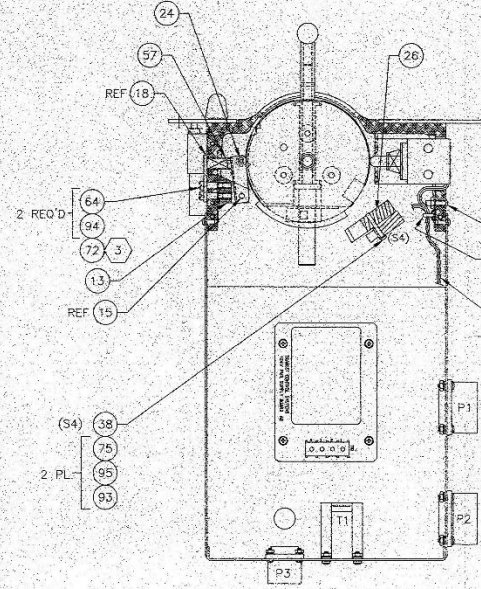


8 | 7 | 6 | 5 | 4 | 3

H3 - TCS Assembly Drawings 44-1050 (2/3)

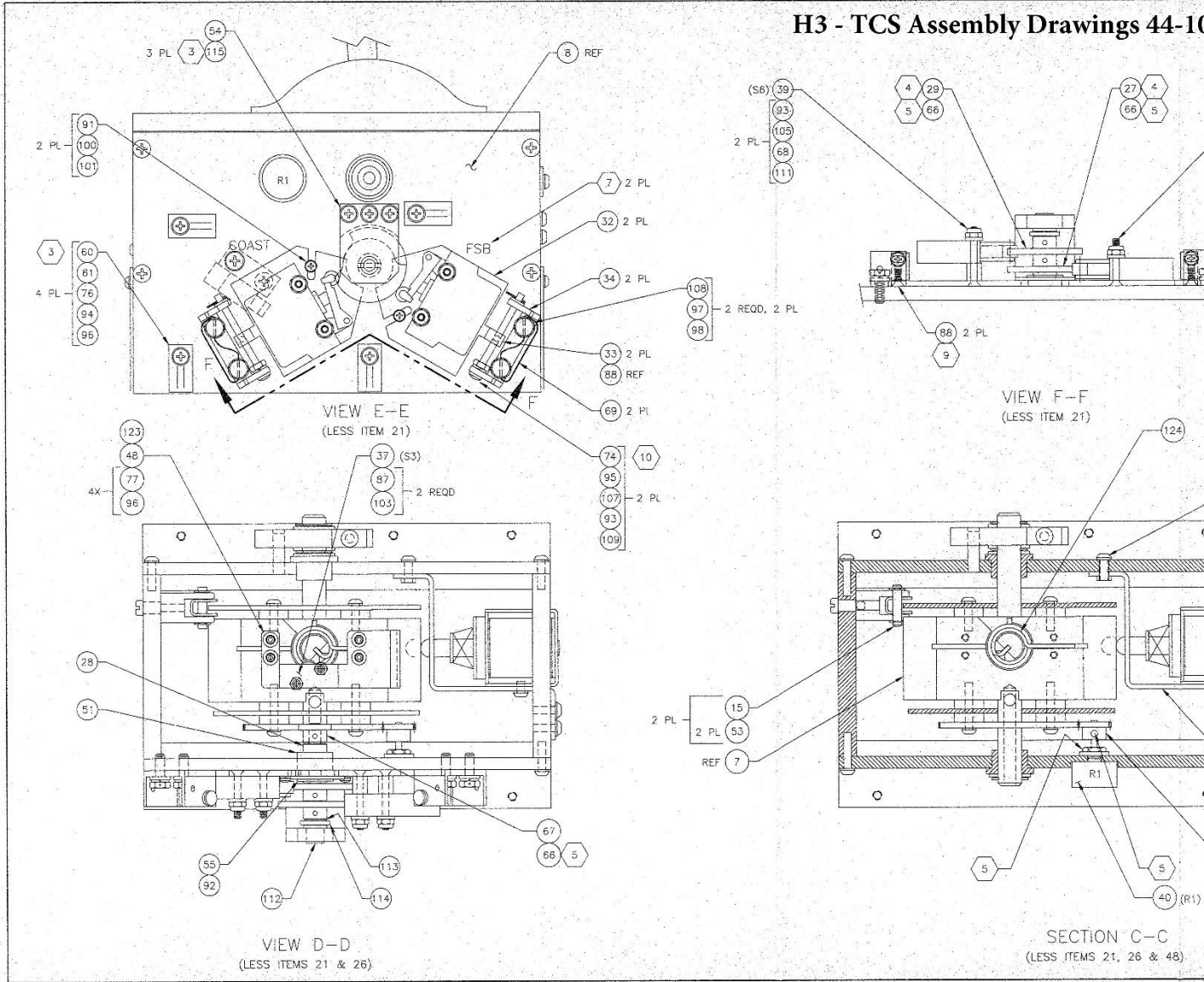


SECTION A-A



SECTION B-B

H3 - TCS Assembly Drawings 44-10



H4 - TCS Parts List 44-1050 (1/6)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	RELEASED FOR PROTOTYPE #	12-2-92	JH
A	DELETED ITEM 39 (CR1, RECTIFIER). ITEM 52 WAS QT ADDED ITEM 69.	12-3-92	JH
B	ITEM 7 P/N WAS 44-2158-1. ITEMS 10, 12, 15, 22, 57 WERE QTY 1. ITEMS 53, 65, 83 WERE QTY 2. ITEM 98 WAS QTY 20.	12-15-92	BC
C	REVISED ITEM NO'S. A1 WAS P/N 44-1053-101. ADDED A2. HANDLE, OPERATOR WAS P/N 44-2160-2. DEL COVER P/N 44-2126-1. ADDED P/N FOR S1 & S2. CR1, CR2 WAS CR2, CR3. ADDED -T12 TO P1 & P2 P/N'S. ADDED P/N FOR P3. ADDED P/N CIR18TF. DEL P/N Z3-3, QTY 2, RETAINING RING, .250 SHAFT. P/N C3-11 WAS QTY 2. P/N 38031-96C-6 WAS QTY 12. ADDED P/N MS51957-18. P/N MS51957-25 WAS QTY 5. P/N MS15795-806 WAS QTY 41. P/N MS35338-155 WAS QTY 31. P/N MS35338-157 WAS QTY 22. P/N MS15795-804 WAS QTY 2. P/N MS35338-154 WAS QTY 2. ADDED P/N 79NM-40. DEL P/N 79NM-02, QTY 8, ESNA NUT. ADDED MS51958-61. R1 P/N WAS 6657S-1-202. P/N G62-32 WAS G4-32.	1-26-93	BC
D	ITEM 10 WAS P/N 44-2140-1. ITEM 11 WAS P/N 44-2123-1. ITEM 13 WAS QTY 2. ITEM 15 WAS QTY 2. ITEM 17 WAS P/N 44-2124-1. ITEM 18 WAS QTY 2. ITEM 24 WAS QTY 2. ITEM 26 WAS P/N 44-2129-1. ITEM 53 WAS QTY 4. ADDED ITEM 54. ITEM 55 WAS QTY 5. ITEM 56 WAS P/N C3-17, .131 DIA X .625. ITEM 57 WAS QTY 2. ITEM 64 WAS QTY 4. ITEM 78 WAS QTY 3. ITEM 79 WAS QTY 2. ITEM 80 WAS QTY 6. ITEM 81 WAS QTY 4. ITEM 90 WAS QTY 5. ITEM 94 WAS QTY 13. ITEM 96 WAS QTY 16. ITEM 97 WAS QTY 30. ITEM 104 WAS QTY 6. ADDED ITEMS 112 THRU 115 (ADDED SHT 5). ITEM 35 WAS P/N 81203LF.	4/21/93	BC
E	ITEM 70 WAS TCS P/N 123-3605-218, WIRE, 18AWG, SHIELDED PAIR.	6-21-93	BB
F	ITEM 10 WAS P/N 44-2158-1. ITEM 26 WAS P/N 44-2144-1. ITEMS 13, 15, 18, 24, 57 WERE QTY 1. ITEMS 53, 64, 81 WERE QTY 2. ITEM 97 WAS QTY 28. ITEM 35 WAS P/N 81207LA.	7-6-93	BB
G	ITEM 10 P/N WAS 44-2140-1. ITEM 25 P/N WAS 44-2128-1.	7-26-93	BC
H	ITEM 35 P/N WAS 81208LA.	8-2-93	BC
J	DELETE ITEM 99 - WAS: SEASTROM P/N 5806-92-3, QTY 2. ITEM 95 QTY WAS 29 IS 31.	8-11-93	BC
NOTES: UNLESS OTHERWISE SPECIFIED			
DRAWN: HITCHCOCK, J		DATE: 9-17-92	TRANSIT CONTROL SYSTEMS
CHECKED: B.C.		11-9-92	TITLE: MASTER CONTROLLER ASSEMBLY PARTS LIST
ENGINEER: S.F. MUNI		B.T. BLEACHER	SIZE: A
DASH	NEXT ASSY	CHIEF ENG: J.G. KIEL	CODE IDENT NO. PART LIST NO. PL 44-1050
APPLICATION			SCALE: NONE SHEET 1 OF 6

H4 - TCS Parts List 44-1050 (2/6)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
K	ITEM 6 WAS P/N 44-2154-2. ITEM 8 WAS P/N 44-2121-1. ITEM 9 WAS P/N 44-2122-1. ITEM 10 WAS P/N 44-2158-2. ITEMS 13, 15, 18, 24 WERE QTY 2. ITEM 25 WAS P/N 44-2128-2. ITEM 26 WAS P/N 44-2129-1. ITEM 53 WAS QTY 4. ITEM 57 WAS QTY 2. ITEM 64 WAS QTY 4. ITEM 81 WAS QTY 4. ITEM 97 WAS QTY 30.	9-13-93	BC
L	ITEM 6 WAS P/N 44-2154-1.	9-20-93	BC
M	INCORPORATED EO's 44P050L1 THRU 5: ADDED ITEM 116, 117, 120 & 121; ITEM 106 WAS SCREW, MS51958-61, QTY 8; QTY ITEM 97 WAS 28; QTY ITEM 98 WAS 18; QTY ITEM 94 WAS 10; QTY ITEM 22 WAS 9, QTY ITEM 90 WAS 4; ITEM 18 WAS SPRING KEEPER, P/N 44-2167-1, QTY 1; ITEM 23 WAS SOLENOID, P/N 41-1068-101, QTY 1; ITEM 64 WAS SHOULDER SCREW, QTY 2, 3/16x8-32x1/2L, AMATOM P/N 7459-SS-0832; ITEM 112 WAS BEARING .254 ID x .375 OD x .375 LG, QTY 1, PIC P/N B15-5. ITEM 47 WAS LOCKNUT, 1/2", T & B P/N 141; ITEM 48 WAS CABLE CONNECTOR, 90 DEG, LIQUID TIGHT, T & B P/N 2251. ADDED ITEM 122; ITEM 85 WAS MS51957-25; THIS REPRESENTS "AS BUILT" CONDITION	3-25-94	BC
N	ITEM 16 WAS 44-2165-1; ITEM 11 WAS 44-2143-1. ADDED -102 CONFIG & ITEM 3.	4-6-95	KRH
O	REVISED PER E.O. A02513, P/N 65 WAS MS51960-63	10-12-95	ALS
P	ADDED CONFIG. -103	5-16-96	RY
R	CONFIG.-102, 103) ITEM 12 WAS QTY NONE, (ITEM 17) WAS QTY 1, (ITEM 81) WAS QTY 2, (ITEM 98) WAS QTY 10	8-22-96	R. YATES
T	CONFIG.-102, 103) ITEM 77 & 96 QTY WAS: 4,4 ; 20,20	3-12-99	M. CHU
U	ITEM 48 WAS: 44-2117-1; IN -103, ITEM 20 QTY WAS 1	3-15-99	M. CHU
V	ADDED -104 & ASSY	3-17-99	M. CHU
W	ADDED -105 & ASSY; & DELETED -101 & -102 IN -104, QTY OF ITEM 126, WAS: 1; ITEM 48 P/N WAS: -2 IN -104, REMOVED ITEM 48 & REPLACE WITH ITEM 123 DELETED ITEM 20, WAS: 44-2125-1	4-7-99	M. CHU
Y	IN -105, ADDED ITEM 127 & CHG QTY OF ITEM 86,97,98 WAS: 14,26,18	4/22/99	M. CHU <i>OK</i>
NSIT CONTROL SYSTEMS	TITLE: MASTER CONTROLLER ASSEMBLY PARTS LIST	PART LIST NO. PL 44-1050	REV. Y
			SHEET 2 OF 6

H4 - TCS Parts List 44-1050 (3/6)

TRANSIT CONTROL SYSTEMS				TITLE: MASTER CONTROLLER ASSEMBLY PARTS LIST		PARTS LIST NO. PL 44-1050
ITEM NO.	TY REQD			PART NO.	REFERENCE DESIGNATOR	DESCRIPTION
	-103	-104	-105			
1	/	-	-	-103		ASSEMBLY, MASTER CONTR
1	-	/	-	-104		ASSEMBLY, MASTER CONTR
1	-	-	/	-105		ASSEMBLY, MASTER CONTR
3	-	-	-	44-2143-1		SHAFT, CAM
4	-	-	-	44-1282-101	A1	P.C.B. ASSEMBLY, P-SIG GEN
5	1	1	1	44-1294-101	A2	P.C.B. ASSEMBLY, +24V PWR
6	1	1	1	44-2154-3		HOUSING
7	1	1	1	44-2120-1		CAM, PRIMARY
8	1	1	1	44-2121-2		PLATE, LEFT SIDE
9	1	1	1	44-2122-2		PLATE, RIGHT SIDE
10	1	1	1	44-2158-1		CAM, SECONDARY
11	1	1	1	44-2143-2		SHAFT, CAM
12	1	1	1	44-2141-1		HANDLE, OPERATOR
13	1	1	1	44-2162-1		BASE, DETENT LEVER
14	1	1	1	44-2139-1		MTG BRACKET, CAM LOCK
15	1	1	1	44-2164-1		PIN, DETENT LEVER
16	1	1	1	44-2165-2		BLOCK, FRICTION
17	-	-	-	44-2166-1		MTG BRACKET, DEADMAN S
18	1	1	1	44-2272-1		KEEPER, SPRING
19	1	1	1	44-2168-1		MODIFICATION, GEAR
20						
21	1	1	1	44-2127-1		ENCLOSURE, ELECT.
22	6	6	6	44-2172-1		SPACER, CAM
23	1	1	1	41-1067-101	K1	SOLENOID
24	1	1	1	44-1195-101		LEVER DETENT ASSEMBLY
25	1	1	1	44-2128-1		CAM, DETENT
26	1	1	1	44-2129-2		STOP BLOCK
27	1	1	1	44-2130-1		CAM, FSB
28	1	1	1	44-2131-1		CAMSHAFT
29	1	1	1	44-2132-1		CAM, COAST
30	1	1	-	44-2133-1		PANEL, FRONT
31	1	1	1	99-1005-01		LABEL, IDENTIFICATION
32	2	2	2	44-2134-1		PLATE, SWITCH MTG
33	2	2	2	44-2135-1		BLOCK, PIVOT
34	2	2	2	44-2136-1		BRACKET, SWITCH ADJUST
35	1	1	1	81208LC	S1	SWITCH
36	1	1	1	81203LE	S2	SWITCH

37 11-304 S3 Deadman handle switch

BREDA COSTRUZIONI PERROVINO			
PROGETTO / TYPE		R07	
MATR. / FILE	4.92.250	TAV. / SHEET	6/9
SEZ. ARCH. / FILE SECTION		FASE PROG. / DESIGN STAGE	
UGUAGLIANZE / EQUALITES			

H4 - TCS Parts List 44-1050 (4/6)

TRANSIT CONTROL SYSTEMS					TITLE: MASTER CONTROLLER ASSEMBLY PARTS LIST	PARTS LIST NO. PL 44-1050
ITEM NO.	TY REQD			PART NO.	REFERENCE DESIGNATOR	DESCRIPTION
	-103	-104	-105			
38	1	1	1	S 800 b	S4	SWITCH
39	2	2	2	S 826 e	S5, S6	SWITCH
40	1	1	1	6638S-1-202	R1	POTENTIOMETER
41	2	2	2	1N4007	CR1,CR2	DIODE
42	1	1	1	40-2098-01	T1	TRANSFORMER
43	1	1	1	CIR030-28-12P-F80-T12	P1	CONNECTOR
44	1	1	1	CIR030-28-21P-F80-T12	P2	CONNECTOR
45	1	1	1	CIR030-18-1P-F80-T12	P3	CONNECTOR
46	1	1	1	CIR18TF		DUST CAP
47	1	1	1	44-1282-103	A1	PCB ASSEMBLY, P-SIG GENERA
48	1	-	-	44-2117-1		BRACKET, DEADMAN SWITCH
49	2	2	2	863	E1, E2, E3, E4	TERMINAL STRIP, 2 POS
50	2	2	2	B15-9		BEARING, .379 ID X .565 OD X .5
51	3	3	3	B15-11		BEARING, .504 ID X .753 OD X .5
52	1	1	1	G62-32		SPUR GEAR
53	2	2	2	Z3-2		RETAINING RING, .187 SHAFT
54	1	1	1	44-2142-1		SUPPORT, CAMSHAFT
55	4	4	4	Z2-6		RETAINING RING, .500 SHAFT
56	1	1	1	C3-14		SPRING PIN, .131 DIA X .438
57	1	1	1	LC-045F-6		SPRING, MUSIC WIRE
58	A/R	A/R	A/R	123-3604-906		WIRE, 18 AWG, WHT
59	A/R	A/R	A/R	FIT-600-3/8		TUBING, SHRINK - NEOPRENE
60	6	6	6	TC105		BASE, WIRE TYE
61	6	6	6	TY-25M		WIRE TYE
62	A/R	A/R	A/R	PIF-240-3/4		SLEEVING, FIBERGLASS
63	A/R	A/R	A/R	123-3604-908		WIRE, 22 AWG, WHT
64	2	2	2	91829A205		SCREW, SHOULDER, 3/16D X 8-
65	4	4	4	MS51960-65		SCREW, FH, CROSS REC, 10-32
66	3	3	3	C3-11		SPRING PIN, .094 DIA X .50 LON
67	1	1	1	44-2138-1		SPUR GEAR, DRILLED
68	2	2	2	9288A140		STANDOFF, 5/16 DIA X 3/8, #6
69	A/R	A/R	A/R	8860K62		WIRE, 22 AWG, 304 CRES (1 LB
70	A/R	A/R	A/R	123-3605-118		WIRE, 18 AWG, SHIELDED
71	A/R	A/R	A/R	RED GLPT		INSULATING VARNISH
72	A/R	A/R	A/R	GRADE "H"		SEALANT, SEMI-PERMANENT
73	6	6	6	38031-96C-6		SCREW, BH, REC SOC, 6-32 X .3
74	2	2	2	44-2137-1		SCREW, PPH, 6-32 X 2.00, DRILL

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PROGETTO / TYPE		R07	
MATR. / FILE	G.92.250	TAV. / SHEET	7/9
SEZ. ARCH. / FILE SECTION		FASE PROG. / DESIGN STAGE	
UGUAGLIANZE / EQUALITES			

H4 - TCS Parts List 44-1050 (5/6)

TRANSIT CONTROL SYSTEMS					TITLE: MASTER CONTROLLER ASSEMBLY PARTS LIST	PARTS LIST NO. PL 44-1050	
ITEM NO.	TY REQD	103	104	105	PART NO.	REFERENCE DESIGNATOR	DESCRIPTION
75		2	2	2	38031-96C-16		SCREW, BH, REC SOC, 6-32 X 1.0
76		8	8	8	38031-98C-4		SCREW, BH, REC SOC, 8-32 X .25
77		6	6	6	38031-98C-8		SCREW, BH, REC SOC, 8-32 X .50
78		7	7	7	38031-98C-10		SCREW, BH, REC SOC, 8-32 X .62
79		1	1	1	38031-98C-12		SCREW, BH, REC SOC, 8-32 X .75
80		3	3	3	38031-98C-16		SCREW, BH, REC SOC, 8-32 X 1.0
81		-	-	-	38031-98C-6		SCREW, BH, REC SOC, 10-24 X .3
82		1	1	1	38031-3F-16		SCREW, BH, REC SOC, 10-32 X 1
83		4	4	4	MS51957-18		SCREW, PPH, 4-40 X .625
84		12	12	12	MS51957-31		SCREW, PPH, 6-32 X .625
85		9	9	9	MS51957-29		SCREW, PPH, 6-32 X .437
86		14	14	8	MS51957-64		SCREW, PPH, 10-24 X .63
87		2	2	2	MS51959-10		SCREW, FH, CROSS REC, 2-56 X
88		2	2	2	Y3-6-T-LL		SCREW, FH, SELF-LOCKING, 6-32
89		1	1	1	AN960C616		WASHER, FLAT, .390 ID X .625 O
90		5	5	5	AN960C816		WASHER, FLAT, .515 ID X .875 O
91		2	2	2	MS51957-14		SCREW, PPH, 4-40 X .31
92		1	1	1	5710-193-60		WASHER, FLAT, .505 ID X 1.25 O
93		39	39	39	MS15795-806		WASHER, FLAT, #6
94		12	12	12	MS15795-807		WASHER, FLAT, #8
95		31	31	31	MS35338-155		WASHER, LOCK, #6
96		22	22	22	MS35338-156		WASHER, LOCK, #8
97		26	26	20	MS35338-157		WASHER, LOCK, #10
98		18	18	12	MS15975-808		WASHER, FLAT, #10
99							
100		6	6	6	MS15795-804		WASHER, FLAT, #4
101		6	6	6	MS35338-154		WASHER, LOCK, #4
102		4	4	4	79NM-40		NUT, HEX, SELF-LOCKING, 4-40
103		2	2	2	79NM-26		NUT, HEX, SELF-LOCKING, 2-56
104		2	2	2	79NM-82		NUT, HEX, SELF-LOCKING, 8-32
105		16	16	16	79NM-62		NUT, HEX, SELF-LOCKING, 6-32
106							
107		2	2	2	MS35649-264		NUT, HEX, 6-32
108		4	4	4	AN3H3A		BOLT, DRILLED HEAD, 10-32 X .4
109		2	2	2	C6-1		COTTER PIN, .030 DIA X .38 LON
110		2	2	2	MS51959-34		SCREW, FH, CROSS REC, 6-32 X
111		2	2	2	MS51959-35		SCREW, FH, CROSS REC, 6-32 X

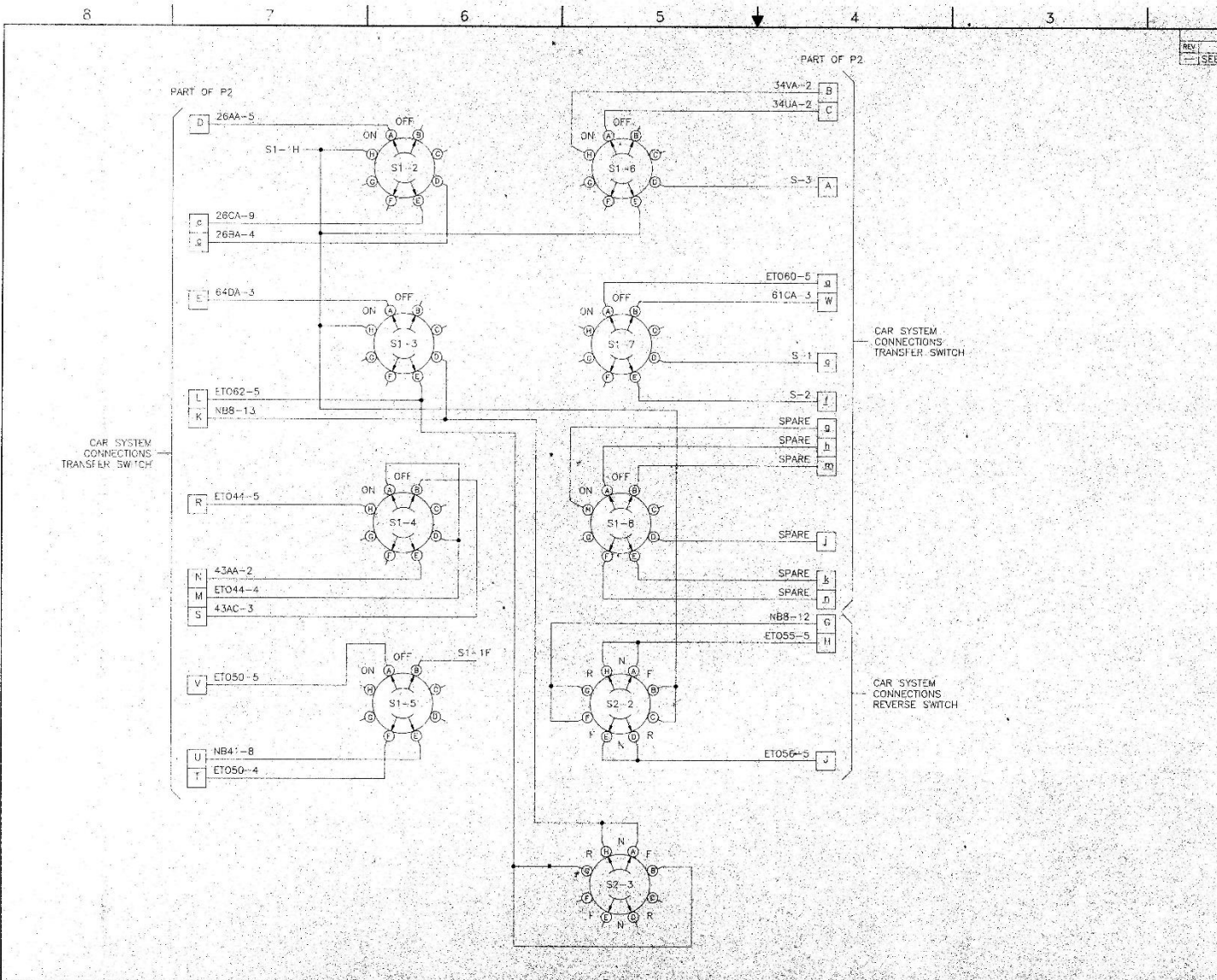
BRIDA COSTRUZIONI F. V.	
PROGETTO / TYPE	R07
MATR. / FILE	6.92.250
TAV. / SHEET	8/9
SEZ. ARCH. / FILE SECTION	FASE PROG. / DESIGN STAGE
UGUAGLIANZE / EQUALITES	

H4 - TCS Parts List 44-1050 (6/6)

0 TRANSIT CONTROL SYSTEMS				TITLE: MASTER CONTROLLER ASSEMBLY PARTS LIST		PARTS LIST NO. PL 44-1050
ITEM NO.	TY REQD			PART NO.	REFERENCE DESIGNATOR	DESCRIPTION
	-103	-104	-105			
112	1	1	1	44-2065-1		BEARING, .254 ID X .375 OD
113	1	1	1	Z2-3		RETAINING RING, .250 SHA
114	1	1	1	MS15795-810		WASHER, FLAT, .281 ID X .6
115	3	3	3	MS51959-52		SCREW, FH, CROSS REC, 8
116	8	8	8	MS24693-269		SCREW, 100 DEG FH, #10-3
117	8	8	8	90401A240		SCREW, HEX HD, #10-24 X 3 W/LOCK WASHER
119						
120	2	2	-	44-2059-1		ADAPTER PLATE
121	3	3	3	44-2148-1		SPACER, CAM
122	1	1	1	2703		HOLE PLUG
123	-	1	1	44-2117-2		BRACKET, DEADMAN SWITC
124	1	1	1	44-2125-1		SPRING, DEADMAN 0.062
125	-	-	1	44-2133-2		PANEL, FRONT
126	-	-	2	44-2059-2		ADAPTER PLATE
127	-	-	6	MS51959-63		SCREW, 82 DEG FH, #10-24
128						
129						
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131						
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BRENDA COSTRUZIONI PERI MANI			
PROGETTO / TYPE		R07	
MATR. / FILE	6.92.250	TAV. / SHEET	9/9
SEZ. ARCH. / FILE SECTION		PAGE PROG. / DESIGN STAGE	
UGUAGLIANZE / EQUALIZES			

H5 - TCS Wiring Diagram 44-3052 (2/2)



SC: 929181

CUSTOMER SPECIFICATION

H6: Mors-Smitt CP-U201 G, Relay Datasheet (1/1)

MS REL
2 rue de la M
Tel: +33 (0)2.43

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FEATURE

Nominal load current : 6 Amps
2 changeover contacts (form C) DPDT.
PC board layout and wiring diagram fully compatible with ZETTLER AZ2428 relay.
Resistance to impact and vibration conform to standards in force for railway transported Equipment.
Weld no transfer function within the specified voltage range.

COIL DATA CP U201-G

- Nominal Voltage : 24 Vdc
- Voltage range : 16.8-30 Vdc
- Nominal power : 0.45W
- Pull in voltage : 16.8 Vdc
- Drop-out voltage : 2.4 Vdc
- Resistance (Ohms) : 1555

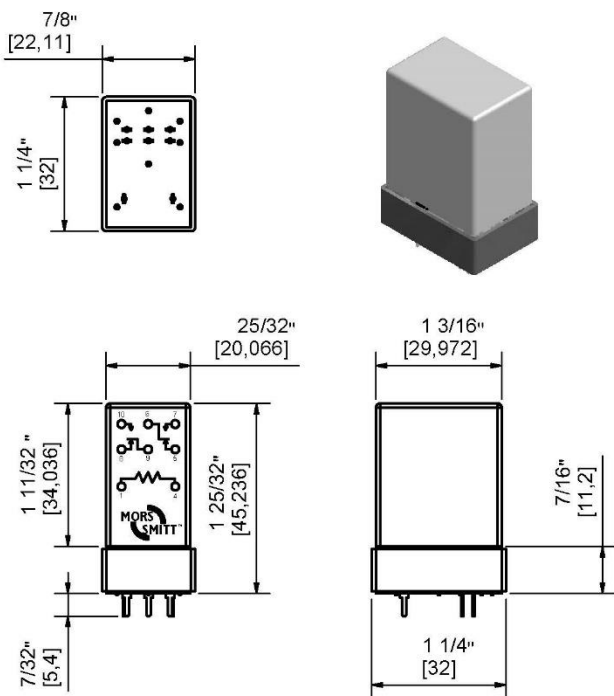
CONTACTS DATA

- Nominal Current : 6 Amps AC resistive, according to IEC 60947-5-1
- Breaking capacity : 1 Amp @ 24 VDC L/R = 15 mH
- Electrical life : 100 000 Ops
- Pull-in time : 15ms
- Release time : 4 ms
- Minimum contacts continuity : 4V, 2mA, 0.1W-VA
- No. OF contacts : 2 changeover contacts (from IEC 60947-5-1)
- Contact material : Silver with gold flash 0.2µm

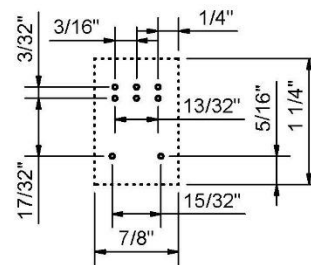
DESCRIPTION: 929181 MN APPLICATION:

THIS DRAWING HAS BEEN CREATED BY CAD AND CAN BE MODIFIED ONLY BY CAD

Outline drawing

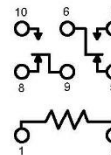


PC Board layout (Zettler relay : AZ24-28-V50 Compatible)



Viewed toward terminals

Wiring diagram and Pins location



Viewed toward terminals

ASSEMBLY D



Dimensions in inches with metric equivalent in parentheses Tolerance : ± 0.010"

DESIGNATION: Mors Smitt CP-U201 G replacement for Zettler relay



Scale	1:1
Drawn	L.M.
Date	26/03/03
Checked	O.D.
Date	31/03/03

PRODUCT REFERENCE: 929181

CUSTOMER CODE: _____