PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Specifications for training deliverables and the training of District personnel in the installation, management, operation, and maintenance of furnished equipment and systems.

B. Where training requirements are specified under another Section in these Specifications, coordinate requirements with the requirements specified herein to provide a complete and comprehensive training program.

1.02 RELATED SECTIONS

A. Section 01 33 00 Submittal Procedures

B. Section 01 43 00 Quality Assurance

C. Section 01 78 23 Operation and Maintenance Data

1.03 MEASUREMENT AND PAYMENT

A. Consider final payment for all training material deliverables for each specification section to be a separate schedule of values line item in the bid schedule of the Contract and not be a part of a related item of work in the price schedule or incidental to the work.

See the following language in Specification Section 01 20 00, Price and Payment Procedures, Article 1.02 para. A.1:

If the Contractor requests progress payments for lump-sum items or amounts in the bid schedule, such progress payments will be made in accordance with a well-balanced, detailed program of payment – apportioning, prepared by the contractor and submitted to the Engineer for approval. Such payment-apportioning may require modifications during the contract, as determined by the Engineer.

1.04 DEFINITIONS

A. Audience: Group of individuals to be trained, typically from the same or similar job classifications.

B. Class: A group of students attending the same course at the same time and place.
C. Classroom training: Training occurs in a classroom setting. May include various delivery methods.

D. Computer Based Training: Training occurs in a classroom or office setting. Content is delivered through a computer module. The delivery may or may not require instructor technical support or moderation.

E. Course: Related content organized in modules and lessons. Content is directed towards achieving an expected measurable outcome.

F. Course Evaluation: A written review by the students, providing feedback on the course content and quality of presentation.

G. Curriculum: A series of courses intended for the same group of participants (for example, electricians.)

H. Delivery Method: How the content will be delivered. Typical methods include lecture, demonstration, computer-based, hands-on practice.

I. Demonstration Training: A class delivered to determine if the course meets the expected outcomes defined by this specification and the training plan.

J. Employee Development Specialist (EDS): Trainer.

K. Familiarization training: Instructor describes, points out or demonstrates on the equipment. May occur either in the field or a simulated classroom environment.

L. Field Instruction/Training: Delivery of content occurs at the location where the equipment or system being trained is installed or maintained.

M. Go-Live: System and/or equipment is released for use by District staff or start of revenue service, whichever date is later.

N. Hands-On Practice: Each class participant practices installation, maintenance, operation, or configuration with the equipment and tools in class. Practice mirrors work participants shall perform on the job.

O. Instructor Guide: A document that is a written record of all the facts and details required for an instructor to teach a course so that training objectives are met, students receive consistent information and experience similar activities regardless of the instructor delivering classes.

P. Lecture: Instructor speaking to students, asking questions, presenting slides or using other reference materials.

Q. Lesson: A component of learning that contributes toward the outcome of a module.

R. Module: A self-contained segment of learning consisting of a series of lessons that covers key topics of a course and has an independent outcome.

S. Prerequisite: Knowledge or skill required prior to attending a course to be successful in the course.
T. Staged Training: Delivery of classes to the audience.

U. Student Guide: A document provided to follow course delivery including all documents a student will reference or need to participate in class. Allows students to follow the lessons and organize class notes.

V. Training Program Plan: An approach for training specific knowledge and skill with a defined outcome.

W. Train the Trainer (TTT): Delivery of a class to participants who are expected to be able to redeliver the same content with the same results. Delivery includes additional time spent with the participants to explain how to set up the classroom, deliver the class using the training materials, and use any special tools or equipment required to deliver the course.

1.05 TRAINING PROGRAM DESCRIPTION

A. The training program shall:

1. Be approved by the District. At least one approver shall be from the applicable training department.

2. Train District’s training, maintenance, engineering, and operations personnel in details of the furnished systems and equipment.

3. Enable District personnel to install, operate, service, configure, maintain, and interact with the hardware, software, and firmware, such that the systems and equipment will perform in accordance with the requirements in the individual Sections of these Specifications.

4. Enable engineering personnel to install, configure, modify, and perform application software development, application software updates, hardware adds, moves, changes to systems and sub-systems on a continuing basis.

5. Be designed to be replicated without impact to project testing or revenue service when delivered after Go-Live.

6. Identify delivery methods and training equipment required for content delivery including classroom, hands-on, and field instruction and training aids to conduct the training program.

7. Be District specific including how the system and equipment integrate with other equipment and systems within the District.

8. Consist of a logically-related sequence of separate Courses covering the content required herein.

9. Incorporate, as applicable, the requirements of regulatory agencies and instruments, such as the California Public Utilities Commission (CPUC), American With Disabilities Act (ADA), Environmental Protection Agency (EPA), California Code of Regulations: Title 8, California Occupational Safety and Health
Administration (CAL/OSHA), California Building Code (CBC), and the California Department of Motor Vehicles.

B. Provide access to technical personnel as needed to consult with District's training representatives to support review and development of training programs.

1.06 SUBMITTALS

A. Refer to Section 01 33 00, Submittal Procedures, for submittal requirements and procedures.

B. Attend a one-day training submittal workshop with a District training representative prior to demonstration and training submittals. The purpose of the workshop is to make the submittal process more efficient by clarifying expectations of this section, reviewing attachment information, discussing audience expectations, and answering questions.

C. At least 7 Days prior to submittal of Training Program Plan, provide a familiarization walkthrough to include a tour of the facility and equipment (or representative example), basic explanation of planned function, operation, location and integration with legacy equipment, for a minimum of six (6) District training submittal approvers for each course planned. Focus of walkthrough is to understand work performed, differences from legacy systems and equipment, and required Audience for each course.

D. Obtain verification in writing from the Engineer that training submittal prerequisites (documents and equipment) as defined in Table 1 of this Section have been met.

E. Submittals of written documents shall be in a native electronic format that is searchable with changes visible (e.g. MS Word Track Changes).

F. Submit the following for each course:

1. Training Submittal Schedule
2. Training Program Plan
3. Instructor resumes
4. Instructor guides and attachments
5. Student guides
6. Training aids and supporting documentation
7. Training demonstrations
8. Staged training schedule
9. Training reports
10. Final deliverables

G. A submittal will not be approved prior to receipt of each training program prerequisite per Table 1 below.

This table identifies the prerequisites required before a submittal can be approved. The Submittal Schedule shall reflect these dependencies.

Table 1: Training Submittal Prerequisite Table

<table>
<thead>
<tr>
<th>Submittal</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Submittal Schedule</td>
<td></td>
</tr>
<tr>
<td>Training Program Plan</td>
<td>• Training Submittal Schedule&lt;br&gt;• District approver familiarization&lt;br&gt;walkthrough</td>
</tr>
<tr>
<td>• Instructor guides &amp; student guides</td>
<td>• Approved Training Program Plan&lt;br&gt;• Approved prefinal O&amp;M manual</td>
</tr>
<tr>
<td>• Training aids supporting documentation</td>
<td></td>
</tr>
<tr>
<td>• Training locations identified</td>
<td></td>
</tr>
<tr>
<td>Training aids installation at training location</td>
<td>Room locations approved and secured</td>
</tr>
<tr>
<td>Instructor resumes</td>
<td>Approved Training Program Plan</td>
</tr>
<tr>
<td>Training demonstration</td>
<td>• Training aids installed at training location&lt;br&gt;• Verification equipment/system is working as designed&lt;br&gt;• Approved instructor guide&lt;br&gt;• Approved student guide&lt;br&gt;• Approved instructor resume&lt;br&gt;• Approved prefinal O&amp;M manual</td>
</tr>
<tr>
<td>Staged training class schedule</td>
<td>Approved training demonstration &amp; updated materials</td>
</tr>
<tr>
<td>Training delivery starts</td>
<td>• Lead time for scheduling met&lt;br&gt;• Mitigation if required (Go-Live more than 5 months before training start)&lt;br&gt;• Approved staged training class schedule</td>
</tr>
<tr>
<td>Final deliverables</td>
<td>Last class delivered</td>
</tr>
<tr>
<td>Updates to materials</td>
<td>Updates to system or equipment if needed</td>
</tr>
</tbody>
</table>

1.07 VIDEO AND AUDIO RECORDINGS

A. Prerecorded lectures or lessons shall not substitute for a classroom instructor.

B. Record and provide electronic copies of the presentation of the training courses.
1.08 SUPPLEMENTAL TRAINING

A. Conduct supplemental training courses if the form, fit, or function of the system or equipment is modified or reconfigured after start of the staged training.

B. During warranty period, provide arrangements for District staff to accompany warranty support personnel during service calls.

1.09 REVISIONS

A. Revise training program deliverables and training aids to incorporate design changes, retrofits, changes generated during testing, and to correct errors and omissions.

B. Updates and revisions to the instructor guides, student guides, and attachments shall be incorporated no less than quarterly for the duration of the Contract and warranty.

1.10 QUALITY ASSURANCE

A. General:

1. Training program deliverables shall be developed, fabricated, assembled, submitted, demonstrated, evaluated, and reworked as required, in accordance with the District’s quality assurance standard.

2. Meet quality assurance standards specified in Section 01 43 00, Quality Assurance.

B. Evaluation and Approval: Training program will be examined, checked, inspected, and evaluated by the District to achieve the following objectives:

1. Verify that the workmanship and content comply with requirements herein.

2. Identify and document nonconformances in materials, workmanship, and technical content.

3. Recommend rework actions to correct defects.

4. Recommend process improvements to prevent repetition of those nonconformances.

C. Examinations, checks, inspections, and evaluations performed by District to verify compliance shall not relieve the Contractor of responsibility to comply with the requirements herein.

D. Contractor may request authorization to depart from a requirement herein or may request that District accept a training program deliverable identified as nonconforming by submitting a request for deviation or waiver.
PART 2 – PRODUCTS

2.01 TRAINING SUBMITTAL SCHEDULE

A. Prepare a submittal schedule (reference Table 1: Training Submittal Prerequisite) for training activities including document delivery dates; review and acceptance periods; training class preparation time; lead times for delivery scheduling; and class delivery. Schedule to include critical path milestones from the Contract Schedule as defined in 01 32 16, Construction Progress Schedules. Schedule to be approved by the District.

1. Obtain approval of class schedule four (4) weeks prior to delivery of staged training.

2. Start staged training delivery no sooner than five months before go-live unless a mitigation plan for the gap between training completion and go-live is defined and accepted.

2.02 TRAINING PROGRAM PLAN

A. The Training Program Plan shall include a list of courses and the following details for each course:

1. A course description and objectives
   a. Course description shall be a summary of what is included in the course and shall include
      1) Modules covered in the course.
      2) List of new equipment including model numbers.
      3) List of equipment or systems that are integrated with new equipment or systems to be trained.
   b. Objectives shall be precisely worded statements of the end-of-course performance expected of the students. Course objectives shall include:
      1) The knowledge, skills, and abilities students will acquire by the end of the course.
      2) The methods of evaluating achievement of the objective (e.g. written exam, performance evaluation, oral quiz).
      3) The conditions under which the evaluation will occur (e.g. open book, on a simulator).
      4) The measurable level of performance required.

2. Planned target population for each course based on feedback from walkthrough from Article 1.6.C herein feedback and Attachment 1: Training Courses by Audience.
3. An outline of the major modules covered in each course broken down into increments of either:

   a. 2 hours or less, or
   b. One quarter of the total time to teach the course

   whichever is less. If a module will take more than what is indicated above to teach, it shall be broken into additional modules to meet this requirement.

   Each module shall include:

   a. Short description of content covered.
   b. Approximate time allocation.
   c. Where it will be delivered; field or classroom.
   d. Delivery method (lecture, demonstration, hands-on practice)
   e. List of training equipment, tools, training aids required.

   Total course length shall be no less than the length defined in Attachment 1: Training Courses by Audience.

4. A list of equipment, tools, and training aids being provided to deliver the training.

5. Description of method of evaluating student knowledge and skill, for example written or performance exercises.

   a. Provide grading system to identify students for whom further training is required and include a remediation plan for students who do not meet mastery level. Grading system shall be approved by the District.

6. A list of prerequisites for each course:

   a. Include other courses from within the plan that need to be completed.
   b. Include knowledge and skills that need to be acquired prior to start of this program plan and strategy to meet these requirements.
   c. Assume that the personnel to be trained have only the basic skills pertinent to their craft, as outlined in the District’s job descriptions.
   d. Assume that District personnel to be trained have no knowledge of features of the system or equipment to be taught.

2.03 INSTRUCTOR RESUMES

A. Instructor qualifications, listed below, shall be documented in a resume and other supporting documents as required to demonstrate compliance with these requirements. In the case of a knowledge or experience gap, document how and when the gap will be filled.

1. Fluency in English and ability to be heard in required training situation.
2. Experience as a classroom instructor.

3. Possesses relevant licenses, equipment or factory certifications for subject taught.

4. Relevant technical and practical experience with the District-contracted system and equipment installation at the level (installation/operations/maintenance/configuration) required to teach the course. The instructor for configuration courses shall have direct engineering experience and expertise for the specific system(s) trained.

5. A thorough knowledge of the instructor guides, training manuals, references, procedures, tools, test equipment, and other training aids required to present the training courses.

6. Obtain District approval of instructor resumes at least 30 Days prior to the scheduling of demonstration training or if any change in instructor becomes necessary during the Contract.

2.04 TRAINING COURSE CONTENT REQUIREMENTS

A. Courses shall provide students practice using source and reference documents.

B. Courses shall provide students with hands-on practice of key, unique, or new procedures and troubleshooting.

C. Each course shall include a quick reference document for critical or emergency situations if applicable.

D. Each course shall be District-specific and applicable to the BART environment and job function.

E. Each course shall include how the system or equipment integrates into other BART equipment and systems.

F. Each course shall include pertinent safety precautions for the system or equipment being trained, including LOTO procedures and other applicable Control of Hazardous Energy (COHE) requirements.

G. Each course shall include a test or performance evaluation.

1. Written and/or performance-based evaluations shall be used to determine whether each student has learned the objectives for the course.

2. Tests and performance evaluations shall validate participant ability to install, operate, maintain, and configure equipment and systems to the requirements identified herein. Testing and evaluation items must directly link to the content of the class and cover the range and complexity of the course. Questions that evaluate course prerequisites are not acceptable.
3. Tests and evaluations shall be designed to be completed independently by each student and have a grade to indicate mastery of the course content.

4. Grades shall be kept strictly confidential and shall be submitted only to the District training department.

5. The instructor will grade tests and go over the answers of quizzes, tests, and performance evaluations given during class delivery after the test or quiz is completed.

H. The training program shall be conducted for the equipment, systems and audiences listed in Attachment 1: Training Courses by Audience.

1. Classes noted as TTT in Attachment 1: Training Courses by Audience will be delivered by the Contractor to District trainers and include items indicated in 3.2.A.11 and 2.5.I herein.

2. Classes noted as Contractor Delivered shall be delivered to District personnel identified in Attachment 1: Training Courses by Audience.

I. In cases where the training scope is not defined in Attachment 1: Training Courses by Audience, propose a scope for approval by the District, in consultation with the training department.

J. The training program shall not be limited to the equipment and systems listed in Attachment 1: Training Courses by Audience, if the District determines that additional courses are required to achieve the objectives of the training program.

K. When an operation and maintenance (O&M) manual is referenced herein, it shall be understood to mean the O&M manual prepared for the specific system or equipment, in accordance with Standard Specifications Section 01 78 23, Operation and Maintenance Data.

L. Course content shall meet the requirements for the specified course type. There are 5 course types: Installation, System and Equipment Operation, System Configuration, Primary Maintenance, Secondary Maintenance. The type of course required for each subject is dependent upon the primary audience for the course. Course types can be combined if appropriate to the audience.

1. Installation training courses:
   a. Enable District personnel to install, configure, test, troubleshoot, and accept systems and equipment.
   b. Provide hands-on practice installing, configuring, testing and placing equipment or services into a production environment.
   c. Review written procedures for installation.
2. System and Equipment Operation training courses:
   a. Enable District personnel to operate the facility, system, and equipment
      unassisted including interfaces to other equipment.
   b. Provide classroom and hands-on practice in operation of the facility, system,
      and equipment including operation level troubleshooting.
   c. Cover written procedures from the O&M manual for the following:
      1) Operating the facility, system, and equipment.
      2) Operator-level fault diagnosis and corrective action.

3. System Configuration training courses:
   a. Enable District personnel to configure and program the system and
      equipment.
   b. Provide classroom and hands-on practice in the use of the software and
      firmware development environments.
   c. Enable District personnel to install software revisions and upgrades.
   d. Provide training in the use of the software and firmware development
      environment to enable the District personnel, including Engineering staff, to
      perform application software development and modifications; and hardware
      adds, moves, and changes for the equipment and systems.
   e. Provide hands-on practice to fully demonstrate each procedure to configure,
      modify, and perform application software development, application software
      development, updates, hardware adds, moves, and changes to all equipment
      room systems, wayside systems, and sub-systems.
   f. Provide training on each procedure to configure, modify, and perform
      application software development, application software updates, hardware
      adds, moves, and changes to all equipment room systems, wayside systems,
      and sub-systems.
   g. Include warranty timeframes and limitations.

4. Primary Maintenance training courses:
   a. Provide detailed theory of operation including power distribution, data paths,
      and signal conditions for inputs and outputs of electromechanical modules
      and sub modules.
   b. Provide practice with written procedures from the O&M manual for facility,
      system and equipment operation, preventive maintenance, and corrective
      maintenance.
   c. Provide students with hands-on, step-by-step instruction and practice in the
      disassembly and assembly of mechanical, electrical, electromechanical, and
      electronic modules and sub modules to the lowest level field replaceable
      units (LLFRUs).
d. Train District personnel to utilize facility, system, and equipment documentation to perform preventive and corrective maintenance.

e. Provide students with hands-on instruction and practice in preventive maintenance, including procedures for cleaning, lubricating, and adjusting; and for evaluating the wear of modules and sub-modules.

f. Enable District maintenance personnel to practice corrective maintenance to diagnose, isolate, and repair faults to the LLFRU using commercially available and special test equipment supplied under the Contract.

g. Include warranty timeframes and limitations.

5. Secondary Maintenance training courses:

a. Provide detailed theory of operation including power distribution, data paths, and signal conditions for all inputs and outputs of all modules, sub modules, and circuit boards to component level.

b. Provide practice with written procedures from the O&M manual, for system and equipment operation, preventive maintenance, and corrective maintenance to component level.

c. Provide students hands-on, step-by-step instruction and practice in the disassembly and assembly of mechanical, electrical, electromechanical, and electronic modules and sub modules to component level.

d. Train District personnel to utilize system and equipment documentation to perform preventive and corrective maintenance to the component level.

e. Provide students hands-on instruction and practice in preventive maintenance, including procedures for cleaning, lubricating, and adjusting, and for evaluating the wear of modules and sub-modules to the component level.

f. Enable District maintenance personnel to practice corrective maintenance to diagnose, isolate, and repair faults to component level, using commercially available and special test equipment supplied under the Contract.

g. Enable District maintenance personnel to operate and maintain (diagnose, isolate, and repair faults to the component level), special test equipment, maintenance test bench, and fixtures supplied under the Contract.

2.05 TRAINING AIDS AND SUPPORTING DOCUMENTATION

A. Provide training aids required to train course participants. Training aids include: training devices, special tools, fixtures, racks, models, mockups, simulators, application software, development tools, software development environment, development computer(s), compilers, prom programmers, and other equipment for the course.

B. Training aids used in the course shall be connected and configured to faithfully simulate the District environment.
C. Training aids shall be integrated/interfaced into corresponding existing training and wayside training equipment where needed to faithfully simulate the BART revenue environment.

D. Training aids shall be installed with the appropriate essential and non-essential power and mounted for earthquake safety.

E. Training aids will be designed to allow replication of training without impact to project testing or revenue service when delivered after go-live.

F. Contractor will verify training aids are fully functional before delivery of any training course.

G. Provide District with revisions to the training aids to faithfully simulate the District environment, during the performance of the Work, including applicable warranty terms.

H. Training aids shall be of durable construction and shall become the property of District on completion of staged training.

I. Source code used in the development of computer-based training materials or simulations shall be provided and become the property of District.

J. A TTT course is required on the use of training aids and other equipment required to train course participants to enable personnel to configure, maintain and use supporting documentation for training aids provided.

K. Provide supporting documentation including O&M manuals, Book of Plans, and complete specification documents for training aids and other equipment required to train the course.

L. Provide a complete set of all software, development tools, compilers for training aids to enable repair and rebuild of training aids.

M. Spare parts for training aids shall be provided and covered under the same spare parts requirements as the corresponding revenue service installation.

2.06 INSTRUCTOR GUIDE

A. Prepare instructor guides and attachments for the approval of the District. Current District template to facilitate compliance with this Section available upon request.

1. Instructor guide shall be detailed enough to determine what the instructors and students are doing during the course.

B. Provide one instructor guide for each training course. Each instructor guide shall be arranged as specified herein.

C. Content, including attachments, shall be clear and readable in the format intended for class. (e.g., slides will be clear on the computer screen as well as when projected for class).
D. Guides shall contain a Table of Contents and each page will have a footer that includes the document title and page number.

E. The title shall be short and descriptive and contain the name of the training course and, if applicable, the target population (e.g. AFC Equipment Operation for Station Agents).

F. Time to Teach: An estimate of the time to teach the lessons in a training course. The actual time to teach may vary with student loading and knowledge level. Time to teach estimate is to be based on class size in Attachment 1: Training Courses by Audience. This includes delivery, breaks, and travel time within the training session required for class.

G. Course timeline, to include in order:
   1. Lesson titles
   2. Time to teach each lesson
   3. Type of instruction employed in delivering each lesson, such as classroom, hands-on, or field.

H. Objectives: Each instructor guide shall have one or more performance-based objectives. See Article 2.02.A.1.b herein for requirements for writing objectives.

I. Reference Documents List: The O&M manual shall be the primary reference document for the instructor guide. Sources of the material presented in the instructor guide shall be listed. Reference documents may include test equipment manuals, original equipment manufacturer manuals, software manuals, and documents developed by the Contractor for this Contract.

J. Materials and Equipment: Material and equipment used in the presentation of the training course shall be listed in the instructor guide, and may include the following:
   1. Student guide titles
   2. Training tools such as dry erase boards, markers, erasers, easels, projectors, and monitors.
   3. Training aids and equipment such as hand tools, notebook computers, test equipment, training racks, simulators, fixtures, and parts for disassembly.
   4. Special facility requirements, such as compressed air, network access, or unusual power requirements.

K. All materials and equipment used in the presentation of training are deliverables and shall become the property of District.

L. Introduction:
   1. Name and background of the instructor.
2. An overview of the subjects covered in the training course.

3. The objectives of the training course.

4. The outline of the training course.

5. The schedule of course activities, breaks, and class hours.

6. Safety precautions related to the training environment.

7. Classroom rules and procedures.

8. Facility information, such as location of restrooms, lunchrooms, parking, and emergency evacuation routes.

M. Presentation:

1. Serves as a written record of the specific facts and information in the training course.

2. Consists of a series of modules and lessons covering the key topics of the course.

3. Clearly describes the delivery method (lecture, demonstration, practice, video, etc.) of each lesson and time to teach.

4. Provides clear directions for the instructor for set up of student exercises and activities.

5. Is detailed enough for another instructor with knowledge and experience in the subject to teach the training course.

6. Ensures that the information presented during the training is consistent each time the course is taught.

7. Ensures achievement of the objectives of the training course.

N. Summary: This shall be a comprehensive review of the lesson objectives, summarizing key elements of the training for the entire course.

2.07 INSTRUCTOR GUIDE ATTACHMENTS

A. Provide training materials required for presentation of the course with the instructor guide. The following attachments, as used in the course, shall be supplied with each instructor guide at Submittal:

1. Slides, pictures, videos, tables, charts, diagrams, self-paced instruction, computer-based training, and multimedia materials.
2. Written procedures, specific to the District, for operating, maintaining, diagnosing, troubleshooting, and repairing the hardware, software, and firmware if O&M references not used in class.

3. Command code, service code, and error code lists.


5. Warranty information, if applicable.

B. Reference Documents: documents used as sources of the material in the instructor guide shall be provided with the instructor guide submittal.

2.08 STUDENT GUIDE

A. Provide one copy of the student guide for each student plus two additional copies.

B. Student guides shall be separate from, and in addition to, the O&M manuals.

C. The student guide shall include:

1. Table of Contents, including titles and page numbers of each lesson. The guide will have a footer that includes the document title and page numbers.

2. Course timeline, to include in order:
   a. Lesson titles
   b. Time to teach each lesson
   c. Type of instruction employed in delivering each lesson, such as classroom, hands-on, or field.

3. Lesson contents, including lesson titles and objectives.

4. Materials students will refer to in class including but not limited to: slides, pictures, tables, charts, diagrams, written procedures, code lists, system address lists, and drawings

5. Course evaluation form.

D. Provide the District with changes and revisions to the student guide throughout the Contract and warranty.

2.09 TRAINING REPORTS

A. Maintain a roster of each class that includes: Class Name, Class Date(s), Instructor Name, Start Time, Location, Participant Employee ID No and Name with space for signature and final grade and submit after class sign-in to the District training department.
B. Within two days of completion of each training class, update the roster with student final grade and submit along with student evaluations of the training course to the District training department.

2.10 FINAL DELIVERABLES

A. After changes through staged training have been incorporated and approved, submit final approved deliverables for all courses consisting of the final versions of the following:

1. Instructor guides and attachments to the instructor guides, in electronic editable native format in accordance with current District standards.

2. Questions and Answers (Q&As) per Article 3.03.J herein compiled in electronic editable native format in accordance with current District standards.

3. Training aids and supporting documentation.

4. Self-paced, computer-based, or multimedia software and materials needed to deliver including licensing.

5. Other training materials and equipment that have not already been provided needed to deliver training courses.

PART 3 – EXECUTION

3.01 TRAINING LOCATION AND CLASSROOMS

A. Conduct training classes in facilities subject to District approval. Equip facilities with tables, chairs, equipment, and tools required to deliver each course. District facilities may be available upon request.

B. Secure access to field equipment required for class delivery.

C. Locations with District access or within close proximity to work locations shall be given higher priority when selecting a training location.

D. Plan for transportation between training locations during class delivery and after students have arrived.

E. An instructor training at a BART facility for more than two (2) weeks will be required to submit a photo ID and personal information for a background check to be performed and a BART contractor badge to be issued. Training conducted under two (2) weeks does not require a Department of Justice (DOJ) investigation and a temporary contractor badge will be issued.
3.02 TRAINING DEMONSTRATION

A. After approval of all training materials and equipment, schedule a training demonstration of each training course to demonstrate compliance with requirements herein.

1. Prior to scheduling of the demonstration class, confirm in writing that the instructor has been on the Jobsite and is proficient with the training course materials, training equipment, and knowledgeable of the details of the equipment installation and integration at the District.

2. Prior to scheduling of the demonstration class, verify in writing to training department that systems and equipment are working as designed.

3. Approved instructor guides, student training manuals, other training materials and training aids for the course shall be used in the training demonstrations.

4. The approved course shall be presented in its entirety to an evaluation team composed of District technical, supervisory, and training personnel.

5. Demonstration training does not count toward staged training.

6. The evaluation team will participate fully as students evaluating the course content, organization, and presentation for applicability and compliance with the requirements herein.

7. The evaluation team will prepare a list of nonconformances, and recommend either acceptance, acceptance with changes, or rejection of the training demonstration.

8. Document updates or requested changes that result from the demonstration class. Include how the change will be incorporated into the training materials or reason for not incorporating it for approval by the District training representative.

9. Required changes shall be made and approved prior to staged delivery.

10. The evaluation team will recommend to the District that all (when rejected), or a portion (when accepted with changes) of the training demonstration be repeated.

11. For TTT courses after the demonstration course is approved, deliver a TTT process as follows:

   a. Deliver the approved course to identified EDS.

   b. Review the instructor guide with the EDS after delivery of the course.

   c. Walk through how to configure training equipment and training aids in accordance with the instructor guide.

   d. Observe delivery by each EDS trained via TTT process until it is confirmed course is delivered as designed and accurate information provided.
e. Be available to answer questions from staged training until all staff are trained. Questions shall be answered within two calendar days of submission.

### 3.03 STAGED TRAINING

A. Unless identified as a TTT course in Attachment 1: Training Courses by Audience, all training delivery shall be the responsibility of the Contractor.

B. Staged training shall use approved training materials and training aids provided by the Contractor.

C. The maximum class size for classroom training shall be consistent with the maximum class size defined for the functional group receiving the training per Attachment 1: Training Courses by Audience.

D. The maximum class size for field and hands-on practice shall be four persons.

E. The training shall not exceed eight hours per day, including lunch and breaks.

F. Classes shall be scheduled on the three shifts (days, swing, graves) as required to train the number of staff working on that shift per Attachment 1: Training Courses by Audience. Concurrent training delivery on each shift may be required to meet project deadlines.

G. Class schedules shall be submitted to the District for approval at least four weeks prior to the projected start of training. Staged training shall be included on the schedule regardless of training delivery responsibility.

H. Train the number of staff identified in Attachment 1: Training Courses by Audience.

I. Provide sufficient training aids and materials for the number of students in the class.

J. During the delivery of training, gather unanswered questions from the classes, identify answers, and prepare a summary (appending to the last class list) of Q&As for distribution to training participants. Applicable information shall be incorporated into the final instructor guide and student guide materials prior to submission of final deliverable.

K. Have each participant complete a standard course evaluation form provided by District training department.
### ATTACHMENT 1: TRAINING COURSE BY AUDIENCE

<table>
<thead>
<tr>
<th>System or Equipment</th>
<th>Course Type</th>
<th>Staged Training Delivery</th>
<th>Delivery Method</th>
<th>Minimum Course Length (hours)</th>
<th>Audience</th>
<th>Audience Number by Shift</th>
<th>Maximum Class Size by Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Notes for completing the table:**

- **System or equipment is broken out or grouped based on responsible District maintenance group.**
- **Course Type** indicates which of the 5 types are delivered. A given system or equipment may have multiple course types. Include a separate line for each course type. Insert the appropriate code from the list below:
  - I = Installation
  - O = System and Equipment Operation
  - C = System Configuration
  - P = Primary Maintenance
  - S = Secondary Maintenance
- **Staged Training Delivery** indicates whether it is the sole responsibility of the contractor OR the contractor will perform Train the Trainer and District will deliver staged training. Insert the appropriate code from the list below:
  - CON = Contractor delivered
  - TTT = Contractor delivers train the trainer and District delivers
- **Delivery Method** lists the expected delivery method(s) for the training: lecture, demonstration, computer-based, hands-on practice. More than one Delivery Method may be applicable.
- **Audience** is the primary classification(s) for which the training will be created. Job Description of this classification is used for prerequisite planning.
- **Audience Number by Shift** is the total number of students who require training to be delivered on each shift.
- **Maximum Class Size by Shift** is the maximum number of students that can attend classroom training on each shift. Class sizes may need to be smaller due to District scheduling needs or hands-on practice requirements.