

EXHIBIT A

SCOPE OF WORK/SERVICES

1.1 INTRODUCTION & PURPOSE

The Riverside Transit Agency (RTA) was established as a Joint Powers Agency on August 15, 1975, and began operating bus service on March 16, 1977. RTA is the Consolidated Transportation Service Agency for western Riverside County and is responsible for coordinating transit services throughout the approximate 2,500 square mile service area, providing driver training, assistance with grant applications and development of Short-Range Transit Plans (SRTPs).

RTA provides both local and regional services throughout the region with 32 fixed routes, three CommuterLink express routes, GoMicro Microtransit and Dial-A-Ride services using 311 vehicles. In the cities of Corona, Beaumont and Banning, RTA coordinates regional services with municipal transit systems. In Riverside, RTA coordinates with the city's Riverside Connect, which provides ADA complementary service to RTA's fixed-route services. Parts of its transportation services are provided by transportation providers under agreement with the Riverside Transit Agency. The RTA currently has two facilities, one located in Riverside at 1825 Third Street and one in Hemet at 700 Scaramella Circle.

RTA is embarking on a phased 40' fleet transition to fuel cell electric buses (FCEBs). These FCEBs will replace retiring Compressed Natural Gas (CNG) buses on a one-to-one basis. The contractor will install a new hydrogen fueling station at the Riverside and Hemet facilities to fuel the FCEBs. The station plans and technical specifications will be prepared by the Contractor. All plan check submittals, permitting applications and fees and revisions will be the responsibility of the Contractor. The overall hydrogen fueling station design will be based on the Agency's Zero Emission Bus (ZEB) Rollout Plan and Implementation Strategy dated December 18, 2020, completed by Stantec Transit Advisory Services (Attachment 1). The contractor may also propose a scope and proposed compensation approach for installing a light duty (700 bar) public fueling dispenser at both facilities that RTA may choose to execute as an option.

The hydrogen fueling stations at the Riverside and Hemet facilities are expected to be fully commissioned and available to RTA for fueling its buses prior to June 30, 2025.

1.2 PROJECT OVERVIEW

- A.** The Contractor shall be responsible for all work associated with construction, including the design, permitting, approvals, equipment/material sourcing, construction/installation, and commissioning necessary to install the hydrogen fueling station to support the initial five (5) FCEBs. This requirement includes ensuring that all parties on the Contractor's team are properly qualified and licensed in the necessary professions and jurisdictions. Specifically, Final Design documents and calculations require the seal of a Professional Engineer registered in the State of California. Designs must conform to all applicable standards including any specific to the cities of Riverside and/or Hemet, where the stations will be located.
- B.** Contractor shall provide all material and equipment, supplies, labor, expertise, services, supervision, tools, plant, apparatus, conveyances, construction equipment, temporary buildings, safety equipment, transportation, and incidental expenses for accomplishing the work covered by this solicitation, except the materials and services specifically named elsewhere to be provided by RTA or other project partners (e.g., Riverside Public Utilities (RPU), Southern California Gas Company (SoCalGas), Southern California Edison (SCE)).

- C. The selected Contractor shall sell to RTA and RTA shall buy from the Contractor the equipment, O&M services, and an optional fuel supply component, as presented in Section 1.29 WORK PLAN AND SCHEDULE and EXHIBIT B - COST AND PRICE PROPOSAL, with milestones, deliverables, and payments in accordance with the cost and prices identified in Section 1.29 WORK PLAN AND SCHEDULE. As part of the design-build for the turnkey hydrogen fueling stations, the contractor shall provide O&M services for a one-year period during the initial warranty period.
- D. The new hydrogen refueling stations may require upgrades to RTA's utility infrastructure, including electrical, communications, and possibly stormwater drains. The selected Contractor will be responsible for making any necessary modifications to RTA's utilities. Offerors submitting proposals will be required to determine the extent of upgrades and define this work in their narrative work plan and include the associated costs in their cost proposal.
- E. All taxes (except for income taxes of Contractor), state excises, license and other fees, assessments and impositions now or hereafter levied or imposed by any governmental authority, which relate in any manner to the Equipment, its delivery, presence or use, or any aspect of any performance necessitated hereunder shall be paid by Contractor.
- F. The Contractor shall participate in on-site meetings with RTA to review site conditions, access requirements, construction progress, and confirmed or potential utility conflicts.
- G. The planned locations of the hydrogen fueling station and associated utilities are shown in Section 7.1 HEMET DIVISION FACILITY AND INFRASTRUCTURE MODIFICATIONS; **7.1.0 Hemet ZEB Implementation – Minimal Impact Master Plan Option** and Section 7.2 RIVERSIDE DIVISION FACILITY AND INFRASTRUCTURE MODIFICATIONS; **7.2.0 Riverside ZEB Implementation – Minimal Impact Master Plan Option** of Stantec's study. The design for this project will be based on those two Master Plan Options. During the preliminary design phase, the Contractor shall coordinate with RTA for approval of the final location of the hydrogen fueling station and electrical equipment. Additional information will be provided to Offerors during the site visits and pre-proposal conference. The hydrogen fueling system shall minimally include:
- i. Equipment for fueling station
 1. Assume liquid hydrogen delivery
 2. Three days of storage
 3. Two dispensers with simultaneous fueling capabilities
 - ii. Civil work, as required, including but not limited to curb, bollard, and associated drainage adjustments necessary to enable safe operation of buses at both facilities.
 - iii. Investigation of existing improvements for suitability of use. Examples include but are not limited to fire separation, structural support(s), existing electrical conduit, and paths of travel for personnel.
 - iv. Recommendations for equipment location and additional electrical infrastructure needed to accommodate future FCEB fleet expansion, as described in Stantec's ZEB Rollout Plan.
 - v. Optional scope of work for public fueling dispenser at both facilities.
- H. All facilities indicated on the site plan drawings and that exist at time of NTP are to remain. Facilities not shown on the plans or specified to be removed, replaced, or altered and not in conflict with the new construction shall remain.

- i. The Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site, the existing structures, the existing utilities lines, the roads approaching the Site, and all other existing conditions.
 - ii. The Contractor shall clear the Equipment Area of all equipment, vehicles, and debris, and provide this area in a “broom-clean” condition.
 - iii. Ensure that all vehicles (cars, trucks, or others) using the Equipment Area have been removed of and all rights of others to the Equipment Area extinguished prior to construction.
 - iv. The Contractor shall comply with RTA’s requirements for specified critical operating areas (e.g., pedestrian, and vehicular access routes, maintenance access, loading areas) that must be maintained during the construction. Permitted locations to stage and store materials will be provided to the Contractor. The Contractor shall indicate how access to sites will be maintained without impacting transit operation or maintenance. All critical operating areas will be reviewed during the Site Visit and Pre-Bid Conference. Availability of other areas can be discussed during contract execution, if Contractor is able to show that such can be utilized without impacting RTA’s ability to maintain operations.
 - v. The Contractor shall restore all temporary staging areas to original condition prior to completion of the project.
- I. All necessary site design, permitting, approvals, and associated coordination with project stakeholders shall be coordinated by the Contractor.
 - J. The work, including but not limited to demolition, removals, civil install, electrical install, structural install, and restoration shall be provided by the Contractor.
 - K. Any deviations and/or waivers must be formally requested, identify the basis for the request, discuss the resulting benefits to RTA, and obtain RTA's prior approval.
 - L. The RTA Project Manager will perform continuous and ongoing reviews of the project status and progress. The Offeror shall assume that weekly progress review meetings will be conducted throughout the project with the RTA Project Manager, where the Contractor shall provide updates on the project timeline (as a 3-week “Look Ahead” schedule), budget, completion of scope, and project risks. The Contractor shall provide web conferencing services for each meeting and submit minutes to the RTA Project Manager within one week of each meeting.
 - M. No current surveys or information regarding subsurface conditions are available. Contractor will be expected to conduct all necessary surveys and subsurface exploration/testing. For the purpose of developing proposal, assume subsurface conditions to be typical of the geographic area.

1.3 PROJECT SCOPE

- A. Contractor must be available for a minimum one-hour conference call per week. This is applicable from initial contract signature, through the duration of the contract period. Exclusions must be provided in writing by RTA. Contractor to provide status update, schedule review, and a minimum three-week look ahead of all tasks to be started and completed.

- B. All drawing sheets and engineering scopes necessary for the successful permitting and construction of the resulting improvements, are to be considered in scope. This includes any special studies requested by regulatory agencies or the local AHJ.
- C. Contractor shall provide RTA with Design Documents at the 30% (Conceptual Design Documents), 60%, and 90% complete stages with engineering drawings & calculations confirming the design, as well as Final Design Documents
- D. A detailed project schedule must be published to RTA's satisfaction within two weeks of contract award and maintained current at an interval of no less than one week.
- E. Contractor to include new outdoor lighting within equipment compound, as well as fueling positions (if existing lighting is insufficient). Minimum lamination at any point within the equipment compound is 5ft-candles, with a minimum of 10ft-candles available at any accessible equipment or electrical panel access points. Fueling positions must have a minimum of 10ft-candles of illumination.
- F. NFPA -70E Arc Flash Study and labeling must be conducted and included.
- G. An Emergency Response Plan must be prepared by Contractor and submitted to RTA for approval, prior to the introduction of H2 gas.
- H. Facility must be designed and built to the following codes and standards, as a minimum. Versions must be most up to date as published by issuing organization at time of contract award.
 - i. California Building Code (CBC), California Electrical Code (CEC), California Mechanical Code (CMC), California Fire Code (CFC)
 - ii. NFPA 2 v.2020. Compliance with v.2016 is acceptable for AHJ reviewed items, in the event AHJ had not yet adopted v.2020. Balance of code considerations must be to v.2020.
 - iii. NFPA 30A, 55, 52 (considerations for integration with adjacent CNG facility), 70
 - iv. ASME
 - v. ANSI
 - vi. CGA 5.5
 - vii. All codes and standards adopted by reference within the above list.
- I. Contractor to provide RTA, and AHJ (if requested/necessary) noise measurement data at a distance of 5' from the equipment compound enclosure and fueling island. Compliance with all applicable noise regulations must be ensured. Measurements must be provided in decibels. A maximum noise level, as well as average noise and duty cycle must be provided as a minimum. Data may be either empirically derived, or theoretical. Equipment noise in excess of disclosed data must be mitigated at Contractor's expense.
- J. Contractor to provide a canopy/covering over new proposed fueling positions which shall be evaluated for the potential of trapping H2 fugitive emissions. The canopies shall be approximately 8' deep x 20' long x 13' high in size; large enough to protect the hydrogen dispensing and fuel management equipment as well as protect fueling personnel in inclement weather. Appropriate ventilation of such potential gas entrapment must be included as part of Contractor's design and is also required by NFPA 2.
- K. Contractor to consider modification of, or addition to existing stormwater management design and improvements, accounting for the inclusion of new proposed improvements under this scope.

- L. Contractor to conduct “Hazard Analysis” per NFPA 2. Extend, detail, and effort of Hazard Analysis must at a minimum be consistent with industry specific HAZOP or HAZID best practices. Format shall consist of initial meeting(s), followed by formal report and recommendations. Contractor to seek a qualified third-party facilitator to manage and conduct Hazard Analysis. Contractor to ensure all recommendations are concluded, as a prerequisite to commissioning and start-up. Attendees of Hazard Analysis must include process design, RTA facility, operations, and safety Subject Matter Experts (SMEs), and may also include local fire marshal.
- M. Contractor must follow a formal change management process for all proposed changes to equipment or facility design beyond approved “Issue for Construction” plans, or final vendor documents. Detail clarifications that do not constitute a change in design or engineering do not require change management.
- N. Issue for Permit/Construction drawings must include the following sheets as a minimum. Additional sheets must be added per regulatory requirements, AHJ, or consistent with the overall scope of work:
 - i. Site Plan
 - ii. Demolition plan, including equipment staging area, spoils sequestration, and SWPPP.
 - iii. Equipment Plan
 - iv. Grading Plan, including new proposed or modified stormwater improvements
 - v. Elevation drawings
 - vi. Site survey
 - vii. Structural drawings, including foundation plan and anchoring callouts
 - viii. Single Line Diagram, including load list
 - ix. Panel schedule
 - x. Conduit and conductor list
 - xi. Conduit and conductor routing plan
 - xii. Electrical site plan, identifying new proposed electrical power improvements
 - xiii. Lighting plan
 - xiv. Title 24 compliance forms
 - xv. Grounding plan
 - xvi. Hazardous electrical location plan, in plan-view and elevations
 - xvii. Piping plan
 - xviii. Line list – Must include pipe/tube service/fluid type, material, wall thickness, MAWP, termination/connection type, and service state (liquid/gas, temperature, pressure)
 - xix. P&ID
 - xx. Architectural drawings as necessary
 - xxi. Mechanical, electrical, structural, civil, and architectural details
- O. Plans submitted to the local AHJ for permit review must be complete and intended for construction. Additional details may be added to plans upon permit issuance only if consistent with permitted drawings, and not within the scope of review of the AHJ.
- P. Existing improvements witnessed by Contractor during site walk are to be taken into consideration for design, engineering, and construction impacts. Relocation, demolition, or

modification of existing improvements which can be identified visually (at or above grade) are to be considered within scope.

- Q.** Improvements below grade which are not identifiable via solicitation documents (EX: record drawings), are to be considered outside scope due to a lack of definition. Works associated with these existing underground improvements are to be considered outside of scope.
- R.** All permitting fees for the purpose of constructing in-scope improvements are reimbursable by RTA, at cost. Licensing fees, business licenses, or any other fees which are not project-specific are to be considered within Contractor's scope. Permit fee reimbursement requires a clear receipt documenting payment to the relevant regulatory body.
- S.** Contractor shall provide all necessary submittals, shop drawings, and construction schedules to RTA required for the completion of the project. Contractor must also provide and maintain a Submittal Log to track submittal versions, submittal and return dates, approval status, comments, and similar.
- T.** When selecting cryogenic liquid H2 tanks, Contractor must include the following considerations:
 - i. Capacity must be sufficient to offload the complete liquid contents of a commercially available cryogenic H2 delivery trailer
 - ii. Must maintain a minimum of 300 kg's of usable H2 in storage, prior to accepting a complete liquid fuel delivery
 - iii. Required vapor head space and minimum fuel level (keel)
 - iv. The interface between the storage tank and the delivery trailer must be adaptable to accept fuel supply from multiple competing fuel suppliers.
- U.** Fueling system must not drain complete contents of liquid H2 tank during normal operation and must maintain a minimum keel as specified by the tank manufacturer.
- V.** Contractor to staff the project site with full-time supervision, often referred to as a construction superintendent, at all times between initial mobilization and demobilization. This requirement excludes times/dates outside of normal working hours such as company holidays and weekends. Contractor must seek written approval from RTA to de-staff onsite superintendent during normal working hours.
- W.** Contractor to ensure a full-time, qualified HSSE representative is on-site at all times work is being conducted. This includes work performed by either direct labor, or subcontractors. The HSSE personnel may also serve as construction superintendent.
- X.** Contractor to provide a written construction summary to RTA between initial mobilization and demobilization. Written summaries are to be transmitted via e-mail on a weekly basis, no later than the Tuesday (COB) following the prior represented Monday-Friday work week. At a minimum, the following information must be provided in the summary of the applicable week:
 - i. Tasks begun
 - ii. Tasks completed
 - iii. AHJ or deputy inspections undertaken and status
 - iv. Listing of all subcontractors performing work over the subject period
 - v. Safety or security incidences or close calls
 - vi. Any events or occurrences affecting overall project schedule
 - vii. Prospective Change Orders identified by Contractor

- viii. Attached photographs of all disturbed areas, and notable improvements.
 - ix. Staff of contractor and subcontractors and construction equipment expected to be on site the following week.
- Y.** Contractor to ensure pavement, pads, and foundations are designed and installed in a manner to ensure no pooling or trapping of stormwater or condensation occurs. Correction of such improvements is to be considered within scope.
- Z.** Contractor to assume all works necessary for the delivery of new electrical service are to be within scope, with the exception of scope items explicitly defined as being the responsibility of the utility.
- AA.** An existing 480v electrical power transformer is available within the adjacent CNG compound. Contractor may consider this transformer as an option (either upgraded, or residual capacity) for the new electrical service necessary at the proposed H2 equipment enclosure. Contractor to include temporary power to operate CNG facility (at full capacity) within scope, during any electrical power disruptions to existing service.
- BB.** All electrical conduit transitions from below to above grade must be PVC coated.
- CC.** An emergency shutdown (ESD) system shall be provided that when activated, the ESD system shall stop all hydrogen fueling station operations.
- DD.** Emergency shutdown button should be remotely located so the system can be shut down without requiring personnel to be adjacent to the equipment compound or fueling positions. Actual locations of ESD buttons will be determined during pre-construction meetings to the approval of RTA, any AHJ, and the Contractor.
- EE.** Facility Emergency Shutdown (ESD) system must include an integrated HMI panel or enclosure, by which resetting of the ESD system is facilitated. Upon inspection, the status of all ESD devices, detectors, or triggers must be readily identifiable. This may be achieved through relay logic, PLC, or microprocessor-based systems.
- FF.** ESD detection devices which are triggered falsely or in error must be corrected by the Contractor. Repeated falsely triggered devices must be replaced with an alternate approved device as a means of eliminating false alarms.
- GG.** Facility design and engineering must be capable of Supervisory Control and Data Acquisition (SCADA) integration. Materials or equipment necessary to achieve such integration is to be considered within scope. Contractor must provide a means for remote monitoring of fueling system operation, and ESD status.
- HH.** Direct burial of piping/tubing in native soil or otherwise, must employ a means of galvanic protection designed and installed by qualified personnel. In lieu of galvanic protection, Contractor may propose alternate means of ensuring metallic pipe/tube surfaces are not in direct contact with substrate.
- II.** Contractor to provide RTA complete project documentation package at completion of facility commissioning. Content of package must be precise and accurate to final installed state (as-built, and final). Package must include as a minimum:
 - i. Equipment
 - 1. Data sheets
 - 2. General arrangement drawings.
 - 3. Foundation, anchoring, and lifting plans/procedures
 - 4. Mechanical and electrical termination list and diagrams
 - 5. Operations and maintenance manuals

- ii. Single Line Diagram, load list, and panel schedules
 - iii. PFD & P&ID
 - iv. Complete as-built drawings package, updated in CAD format.
 - v. QA/QC documentation
 - 1. Welding scoped (if applicable)
 - a. WPS & PQR's
 - b. Welder certifications
 - c. Non-destructive testing including X-rays
 - 2. Documentation of all AHJ, deputy, and periodic inspections
 - 3. Concrete batch and mix documents
 - vi. Overall facility Operations and Maintenance Procedures, with special consideration made to local AHJ requirements and NFPA 2
 - vii. Unconditional lien release, as well as releases from all subcontractor materials, services and direct labor.
 - viii. Emergency Response Plan (ERP), with considerations for inclusion into ERP of existing facility.
 - ix. Hazardous Materials Business Plan
- JJ.** Project documentation Package is to be reviewed for completeness, consistency, and content by RTA prior to acceptance.
- KK.** Contractor must conduct a Pre-Start-up Safety Review (PSSR) prior to introducing hazardous materials on-site (IE: H2 gas or liquid).
- LL.** Field verification of critical process documentation (IE: P&ID's) against as-built conditions.
- MM.** Bench review of critical safety documentation. RTA to provide facilities for review meeting, including conference room.

1.4 CONTRACT TERMS

- A.** The station construction, installation, and commissioning at both facilities must be fully completed no later than June 30, 2025.
- B.** At the completion of the contract term, the Contractor shall provide all documentation and materials associated with the station to allow a third party to safely operate and maintain all hydrogen fueling station equipment.
- C.** All information or instructions required to safely operate or maintain the station shall be public sourced and not proprietary. If RTA does not elect to option the O&M, a third party should not require any Intellectual Property (IP) to safely operate or maintain the station.

1.5 WARRANTY

The contractor shall provide a minimum three-year warranty on all major components (such as, but not limited to, liquid tanks, gaseous buffer storage, compressors/pumps, dispensers, and precooling system) of the station equipment.

1.6 O&M SERVICE PLAN

- A.** The contractor shall be responsible for Operation and Maintenance (O&M) services for a period of one-year from the date of final acceptance. Offerors shall describe in detail their service plan, including response times, to minimize the downtime of the station related to both scheduled and unscheduled maintenance and repairs.

- a. The contractor shall be expected to be available to receive reports of malfunction 24 hours a day, every day of the year.
 - b. A representative of the OEM of the malfunctioning equipment must be on-site at RTA's property within 24 hours of receiving notice of a fueling station issue from RTA. The malfunctioning system or component must be properly functioning within 48 hours of receiving notice of an issue from RTA.
 - c. If during the warranty period, any replacement, repair, or modification on a fueling station component, made necessary by defective design, materials, or workmanship is not completed within 48 hours, the warranty period for the entire system shall be extended by the number of days equal to the delay period.
 - d. Scheduled or preventive maintenance of the station may not be performed during RTA's daily fueling period, from 9:00 pm to 6:00 am. Unscheduled or corrective maintenance should be avoided between the hours of 9:00 pm – 6:00 am, if at all possible.
 - e. The station may not be taken offline for more than 24 hours without the contractor providing an alternate fueling solution.
- B.** The proposal shall identify and list both preventive and corrective maintenance tasks and parts and/or equipment that are expected to be replaced under the service plan.
 - C.** Contractor shall provide RTA with an Operating and Maintenance Plan and 2 copies of associated manuals for each facility prior to the start of station commissioning.
 - D.** Contractor shall provide RTA with standard operating procedures or response protocols that will be incorporated into their Emergency Response Plan for any emergency situations that may occur during the operation or maintenance of the hydrogen fueling stations.

1.7 HYDROGEN SAFETY PLAN REVIEW

- A. Offerors must contact the Pacific Northwest National Laboratory's or Center for Hydrogen Safety's Hydrogen Safety Panel (HSP) prior to submitting their proposal. Offerors must submit documentation that HSP has been contacted to discuss this project, such as a copy of emails, or minutes from a meeting.
- B. Contractor shall commit to developing a Hydrogen Safety Plan for the proposed project that addresses the hydrogen fueling infrastructure that will support RTA's FCEBs. The Contractor shall also commit to participate in an early design review by HSP. The Contractor shall work with RTA and HSP to determine the timing and scope of the design review participation, including options for remote or in-person reviews.
Participating in HSP design reviews will be a mandatory technical task and shall be completed by the dates specified in the Applicant's Work Plan. Offerors should assume a 68-week duration for safety plan review.
- C. The Contractor must prepare a preliminary Hydrogen Safety Plan and submit it to the HSP to review. If the Contractor wishes the plan to be kept confidential by the HSP, it is up to the Contractor to work with the HSP to achieve that confidentiality. The safety plan shall describe the Contractor's work and activities to ensure safety, the technologies being demonstrated, and the evaluation results of any hazard analysis performed. The Contractor shall also include the following in the Hydrogen Safety Plan:
 - a. A detailed description about how the Contractor will conform to the National Fire Protection Association (NFPA) 2, Hydrogen Technologies Code 2020 edition. The current edition of NFPA 2 should be used unless another edition is specifically

required by the authority having jurisdiction. If the AHJ is using an older edition, the Contractor is recommended to work with the AHJ to consider using the latest edition as it has been updated to better address fueling infrastructure safety.

- b. A detailed description about how the Contractor will provide safety training for the hydrogen fueling infrastructure's initial operation and safety training for all operators and first responders.
- D. The Contractor will forward HSP's non-confidential assessment of the preliminary Hydrogen Safety Plan to RTA. The Contractor will prepare a final Hydrogen Safety Plan following the HSP assessment. As with the preliminary Hydrogen Safety Plan, it is up to the Contractor to work directly with the HSP to submit the final Hydrogen Safety Plan to the HSP. If the Recipient wishes the plan to be kept confidential by the HSP, it is up to the Contractor to work with the HSP to achieve that confidentiality.
- E. All charges incurred by HSP staff will be the sole responsibility of the Contractor to pay.

1.8 PERFORMANCE DATA

- A. The Contractor will be required to provide data and evaluation of station performance (to begin after the station is fully commissioned to the FCEBs) on a continuous basis to RTA. The Contractor shall provide RTA with access to an online portal to monitor real-time station performance and equipment status. The Contractor is required to report the following metrics to RTA at the frequency indicated below during the data reporting period:

H2 Station Performance Evaluation							
Metric Category	Measurement	Unit		Frequency			Monthly Report
		Bus	Fleet	D	W	M	
1.0 Fueling Metrics							
1.1 Rate	Kg/minute		X	X			X
1.2 Time	Time (minutes) and Quantity (kg)		X	X			X
1.3 Fuel Quantity	Total Kg/fill/bus	X	X	X			X
2.0 Energy Consumption							
2.1 Liquid Pumps	kWh/kg			X			X
2.2 Dispensers	kWh/kg			X			X
2.3 Station	kWh			X			X
3.0 Fuel Delivered							
3.1 Station	Quantity of Fuel Delivered			X	X	X	X
3.2 Cost	Cost of Fuel Delivered			X	X	X	X
4.0 Station Maintenance							
4.1 PM	Hours of Preventive Maintenance			X	X	X	X
4.2 CM-SCHED	Hours of Corrective Maintenance Scheduled			X	X	X	X
4.3 CM-UNSCHED	Hours of Corrective Maintenance Unscheduled			X	X	X	X
4.4 Availability	Hours station is available to fill			X	X	X	X
4.5 Unavailability	Hours station is not available to fill						X

Figure 1. Required Performance Metrics

- B. The Contractor can propose additional performance metrics. RTA must review and approve the final list of metrics and reporting templates. The Contractor will also need to maintain a log of fueling activity to compare with RTA's fueling management system and another log to track station incidents and status.
- C. Fueling accuracy must be within + or – 3% to effectively measure fuel dispensed, in order for RTA to calculate vehicle fuel economy.
- D. The Contractor will be required to integrate the hydrogen fueling dispenser and control systems with RTA's fuel management system. The system must be capable of identifying the service worker who is operating the fueling dispenser (the service worker must enter a password to activate the dispenser), the vehicle number, the start and stop time of fueling, and the amount of fuel dispensed. (Note: any wireless or hardwire communication link associated with the fuel management system is different from the required infrared communication link between the dispenser nozzle and the bus hydrogen receptacle, as specified elsewhere in this SOW).

1.9 STATION ACCESS

- A. The hydrogen supply, compression, and storage system will be fenced-in on RTA's property, restricting access to authorized personnel only. The hydrogen dispensers are also located within RTA's controlled area with restricted public access.
 - a. At minimum, Contractor will provide two man-gates and one equipment sliding gate with a total opening of 10 feet.
 - b. Contractor will provide additional security recommendations based on equipment manufacturer access, maintenance, and utility company access.
- B. Construction work is expected to be performed Monday through Friday, 7:00 am – 5:00 pm. Hours outside this time would need to be approved by the RTA project manager and Director of Maintenance. Delivery of gaseous or liquid supply may be delivered seven days a week between the hours of 7:00 am – 5:00 pm.

1.10 HYDROGEN QUALITY

As part of the station maintenance plan, which is automated to trigger the various preventative maintenance tasks required to maintain the entire system, a further trigger shall be programmed to schedule the bi-annual purity testing requirement. Contractor shall meet SAE J2719 fuel quality standard for hydrogen.

1.11 RENEWABLE HYDROGEN

- A. Offerors shall provide renewable hydrogen as prescribed for fueling stations receiving state funds included in the California Code, Health and Safety Code Section 43869. No less than 33.3 percent of the hydrogen dispensed by, the fueling station shall be made from eligible renewable energy resources as defined in Section 399.12 of the Public Utilities Code.
- B. Contractor will be required to report renewable fuel dispensed through CARB's Low Carbon Fuel Standard program (<https://ww2.arb.ca.gov/our-work/programs/low-carbonfuel-standard>).

1.12 FUELING PROTOCOLS

The station will fuel buses according to SAE J2601/2. This protocol guideline establishes key safety and performance standards. The fueling will be a communication fill using the IrDA system.

1.13 BACK UP FUEL AND POWER SUPPLY

- A. The Contractor shall develop a plan to provide a backup supply of hydrogen to reduce the risk of not being able to fuel RTA's buses during the critical daily fueling window, from 9:00 pm to 6:00 am.
- B. The Contractor shall develop a plan to provide backup power generation to support hydrogen pumps to reduce the risk of damage to fueling equipment during times of power loss.

1.14 OPERATING CONDITIONS

The Contractor shall design the system to be fully functional for any ambient conditions expected in the Riverside and Hemet, CA regions. For reference, see average monthly temperatures below.

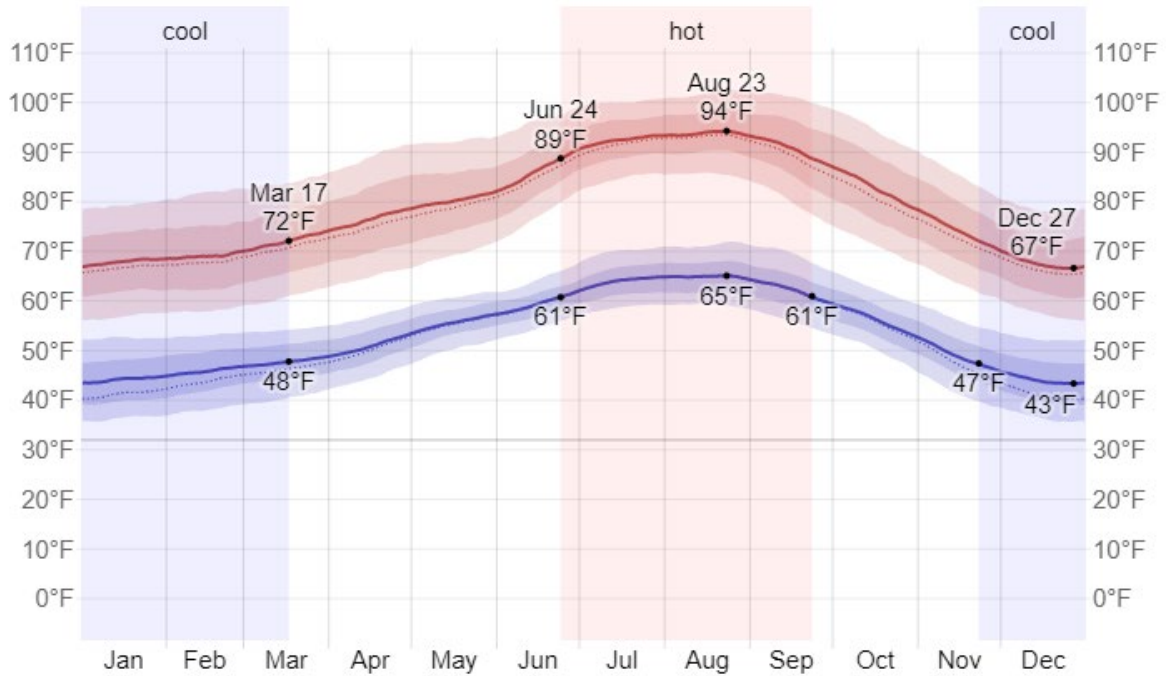


Figure 1: Riverside, CA Average Monthly Temperatures

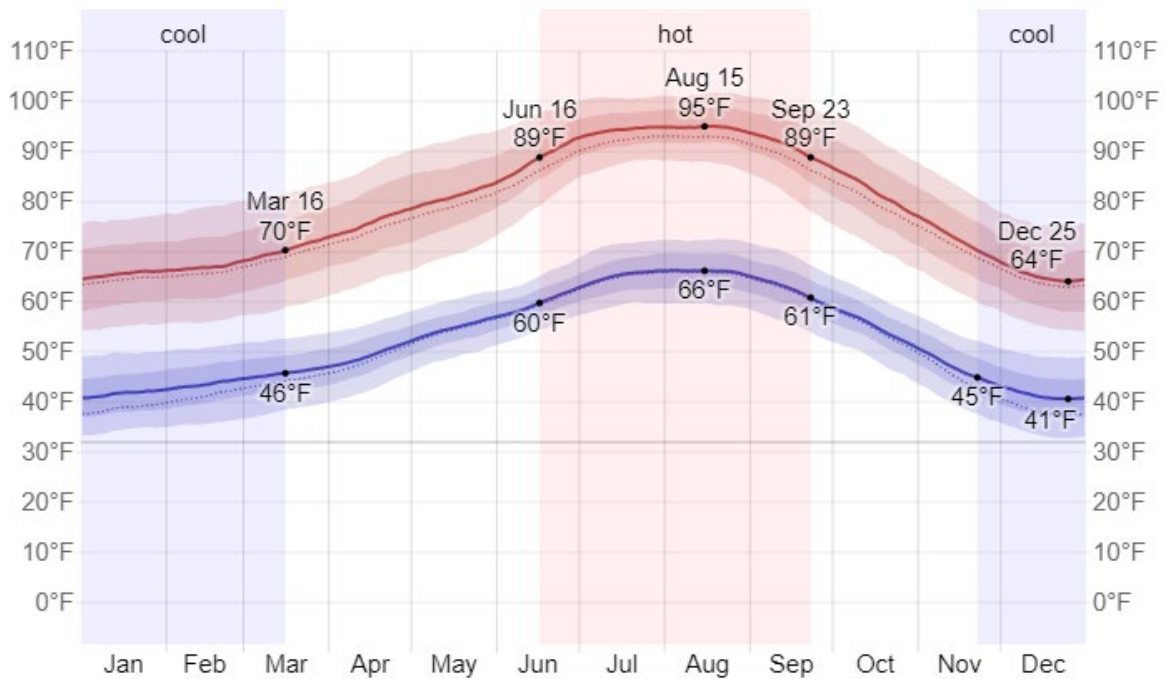


Figure 2: Hemet, CA Average Monthly Temperatures

1.15 DEMAND CHARGES, ELECTRIC UTILITY RATES, AND SYSTEM EFFICIENCY

The systems shall be designed to minimize the cost of demand charges associated with peak power consumption and utility rates, minimizing the cost of hydrogen dispensed at the nozzle, and ensuring the overall reliability and durability of the station. Contractor should supply RTA with data from the governing utility company on available grid power now and estimated available grid power 10 years from now.

1.16 FIRE AND SAFETY AWARENESS, PRIORITIZATION, AND ADHERENCE

Fire detection safety devices that serve the immediate area where the station and dispenser(s) will be placed shall be integrated into the existing fire alarm panel or provide an additional auxiliary panel as needed.

1.17 PROCESS SAFETY MANAGEMENT (PSM) REQUIREMENTS OF CAL/OSHA

- A.** Contractor is responsible for ensuring compliance with the Cal/OSHA §5189, Process Safety Management of Acutely Hazardous Materials standards. All compliance activities shall be documented as required by the regulations.
- B.** The Process Safety Information, Process Hazard Analysis, Pre-startup Safety Review, Safe Operating Procedures, and the Mechanical Integrity procedures shall be provided to RTA via hard copy and electronically in advance of the system being fully commissioned and made ready for fueling buses.
- C.** Contractor is to serve as the system expert and through the system turn-over process, shall provide training and certification to RTA staff in compliance with §5189(g) <https://www.dir.ca.gov/title8/5189.html>.
- D.** Contractor is responsible for providing gas and fire detection safety devices for the dispenser(s) and the station equipment, including any upgrades to ventilation, electrical, heating, and fire control panels and systems that serve the immediate area where the station and dispenser(s) will be placed. All gas and fire detection sensors and related equipment shall have backup battery power to ensure continued operation should there be a loss of grid power. Gas detection and safety systems tied to the new fueling stations should be tied back to the maintenance building Maintenance Supervisors office.
- E.** Contractor is responsible for the assessment, development of design, and installation of upgrades to gas detection and HVAC system modifications for both maintenance buildings in Hemet and Riverside, as well as the covered bus storage building at Riverside.

1.18 DISPENSER PRESSURE

At the time of release of this RFP, RTA has not selected a vehicle manufacturer, so bus specifications are not available at this time. It is expected that RTA will select a vehicle in 2025. RTA expects to purchase buses with an average range up to 360 miles requiring a 50 kg tank so station dispensing should be designed accordingly.

1.19 TRAINING

- A.** Offeror shall provide 40 hours of training for RTA personnel upon initial system installation and for future operation of the system. The training plan shall consist of the following details: description of the courses, suggested attendees, course length, and suggested timing. The following training courses shall be provided:
 - a. Operations training
 - b. Safety training
 - c. First Responder training
- B.** RTA reserves the right to modify the proposed training plan to meet the needs of the Agency.
- C.** The instructor must be capable of training 10 RTA personnel simultaneously in each course.

- D. The Contractor shall provide a Training Plan, which includes the training syllabus and all training material, for review and approval by the RTA Project Manager prior to commencement of training. Contractor shall provide all necessary equipment to facilitate the training. RTA will specify the time and location for delivery for the on-site training courses at a later date after consulting with the Contractor for availability.
- E. The Contractor must provide a one hour bi-annual webinar for new RTA employees and a refresher course within 60 days before expiration of the warranty.
- F. The Contractor shall prepare a quick reference Emergency Response Guide that can be distributed to first responders to place in their trucks and engines. The guide shall provide a map showing the location of all station equipment and dispensers and ESD devices, as well as the distances to this equipment from the entry driveway and nearby structures.

1.20 UPDATES

For a period of 20 years following RTA's final acceptance of the hydrogen fueling station, Contractor shall provide RTA with all updates to maintenance manuals, parts lists, and procedures for all systems, equipment, or components of the hydrogen fueling system as issued by the Contractor and/or supplier to the Contractor.

1.21 FUELING REQUIREMENTS

- A. The storage and dispenser system for the station should be able to refuel a bus within 6-10 minutes and refuel 20 buses using two dispensers simultaneously within approximately two hours.
- B. The Riverside system proposed should be designed to initially support up to 69 FCEBs and have the capacity to dispense about 2,000 kg of hydrogen per day.
- C. The Hemet system proposed should be designed to support up to 50 FCEBs and have the capacity to dispense up to 1,600 kg of hydrogen per day.

1.22 FUELING INTERFACE BETWEEN NOZZLE AND BUS TN1 RECEPTACLE

Dispenser(s) and fueling nozzle(s) shall provide infrared communication and grounding interfaces with the TN1 HF receptacle on buses, so that only two connections are made between the dispenser and buses, one for grounding and the other to connect the dispenser to the bus.

1.23 COMPLIANT SAE STANDARDS

- A. The hydrogen storage systems on the buses will be compliant with all appropriate SAE standards and requirements. The fueling stations and hydrogen supplies must be compliant with **SAE J2601-2 (2014)** fueling protocol, **SAE J2799** FCEV to station communications, and **SAE J2719** fuel quality standards. To ensure that the fuel meets quality standards, the contractor will be required to conduct fuel purity tests during the commissioning phase of the project and prior to filling any of RTA's buses. The purity test will check for particulates, CO, and hydration levels, as well as other contaminants. Bi-annual purity quality tests will need to be conducted to ensure SAE J2719 standards are being met. Additional tests are required following any repairs that have the potential of introducing contaminants to the closed system.
- B. The codes, regulations and standards adopted by RTA and city, state, and federal agencies having jurisdiction shall govern minimum requirements for this project. Where codes,

regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the RTA Project Manager.

1.24 INSPECTIONS, ACCEPTANCE, AND COMMISSIONING

- A. Inspections will be carried out by RTA to determine compliance with Requirements that may be beyond the scope of jurisdictional inspections. RTA will prepare a punch list because of physical inspections, start-up tests, and functional demonstrations. The completion schedule for the punch list will be agreed upon by RTA and the Contractor.
- B. Contractor will be responsible for providing RTA a detailed station commissioning plan, identifying the steps, tasks, responsibilities, and schedule to start and complete commissioning of the station. The plan shall be provided no less than 60 days in advance of the start of the commissioning process. The Contractor shall include in the plan a list of activities to be performed by a third-party vendor during installation that would require technical support and provide details on how the Contractor plans to provide technical support for these activities. The Contractor shall coordinate the scheduling of acceptance testing activities to minimize disruptions to normal transit service.
- C. At the time of acceptance testing and commissioning, Contractor shall submit a written report to RTA listing all incidents and unusual system performance issues, as well as documenting correct function per the approved commissioning plan. Acceptance testing and commissioning involves ensuring that the hydrogen fueling station solution integrates with and fuels with a pilot bus and that there are no physical obstructions blocking the use of the hydrogen fueling equipment. Acceptance testing should also include confirmation that 20 buses can be filled back-to-back in a two-hour period. In addition, the Contractor must demonstrate the successful operation of any data monitoring services and emergency shutdown systems. RTA personnel may observe any testing in progress.

1.25 SCOPE OF ACTIVITIES

The scope of activities after the hydrogen fueling station is completed and commissioned to the buses is summarized in Table 4 below. The Contractor may note additional scope in Table 4, if required.

Table 4. Summary of Scope Responsibilities Post-Station Completion

Description	Responsible		Notes
	Contractor	RTA	
Provide O&M Services and supply hydrogen fuel	X		One-Year from the date of final acceptance
Fuel Buses and Conduct ongoing visual inspections	X-Assist	X	The Contractor will conduct training for RTA staff
Station and data communications	X		
[Add more rows as necessary]			

1.26 Future Expansion

- A. Phase one should be designed to fuel up to 69 FCEBs in Riverside and 50 FCEBs in Hemet. Contractor shall design a conceptual next phase of the hydrogen fueling station equipment, electrical infrastructure, and installation effort that would be required to support 140 FCEBs at the Riverside location.
- B. Final designs under the scope of this project are not required to detail recommendations for future expansion, but the recommendations for the expansion shall be presented with the 60% Design Documents for RTA's consideration. RTA may elect to add additional construction scope at a mutually agreed cost if additional provision for a station to accommodate a larger fleet is warranted during execution of this project. Regardless of that decision, however, the provisions for expansion as agreed are to be maintained as design and construction progress, with nothing being built that makes that expansion more difficult as it was agreed at the 60% Design Documents phase.
- C. No additional construction activities will be required for the hydrogen fueling station installation beyond what is required to support the initial 69 bus deployment, unless agreed to as a change of scope as indicated above.

1.27 PUBLIC USE FUELING STATION – OPTION

- A. The Offeror shall propose a scope and proposed financial compensation that would be provided to RTA for installing one light duty (700 bar) public hydrogen fueling dispenser at the Riverside and Hemet facilities. RTA reserves the right to execute this as an option. A response to the public access hydrogen station is required, but will not factor into evaluation criteria. It is assumed that the fuel supply would be derived from the bulk storage used to also fuel RTA's fleet of buses.
- B. The public hydrogen dispenser would be located adjacent to the public parking lots at both facilities. The existing CNG dispenser will not be removed from the Hemet location.
- C. Costs associated with the installation of this station will not be covered through any award resulting from this RFP. The Contractor would be responsible for all costs associated with the equipment purchases and installation, as well as the operation and maintenance of the station. RTA would have the option to enter into an agreement with the Contractor allowing for usage of the property owned by RTA to install, operate, and maintain a public access station in exchange for financial compensation. Offerors shall include suggested compensation in their response to the optional scope.
- D. RTA will need to conduct interviews with industry stakeholders regarding the potential demand and market value of a public access hydrogen stations at these locations. A facility analysis will need to be conducted to assess the feasibility of public access hydrogen stations.

1.28 SITE DESCRIPTION AND LAYOUTS

The proposed location of the hydrogen fueling station are shown in Section 7.1 HEMET DIVISION FACILITY AND INFRASTRUCTURE MODIFICATIONS and Section 7.2 RIVERSIDE DIVISION FACILITY AND INFRASTRUCTURE MODIFICATIONS of Stantec's study (Attachment 1). During the preliminary design phase, the Contractor shall coordinate with RTA for approval of the final location of the hydrogen fueling station and electrical equipment. Proposers can

suggest deviations in the site layout. Proposals should indicate any deviations from the proposed site plans in the RFP.

1.29 WORK PLAN AND SCHEDULE

Table 5 summarizes the high-level tasks and deliverables. The Contractor shall complete the table and submit a work breakdown structure (WBS) to the third level (X.X.X) and a schedule that shows commissioning of the stations no later than June 30, 2025.

Table 5. Deliverable Milestone Schedule (To be completed by the Contractor)

Task/Deliverable	Completion Milestone (Shaded boxes to be completed by Contractor)
Task 1. Notice to Proceed	February 1, 2024
Task 2. Fueling Station Kickoff Meeting	
Task 3A. 30% Design Documents (Conceptual Design)	
Task 3B. 60% Design Documents, Including Provisions for Fleet Expansion	
Task 3C. 90% Design Documents	
Task 3D. Final Design Documents	
Task 4. Hydrogen Safety Panel (HSP) Safety Review	(To occur after 30% design documents are developed)
Task 5. Equipment Procurement	
Task 6. Permitting	
Task 7. Station Construction and Installation	June 30, 2025
Task/Deliverable	Completion Milestone (Shaded boxes to be completed by Contractor)
Task 8. Commissioning	
Task 9A. Safety Training	

Task 9B Operations Training	
Task 9C First Responder Training	

Draft Work Plan Task List

[Modified version to be submitted by Offeror in proposal.]

The purpose of this project is to design, install, and commission a hydrogen fueling station that will support up to 69 fuel cell electric buses in Riverside and 50 fuel cell electric buses in Hemet. The contract for this project will include; design-build services for a turnkey hydrogen fueling station, O&M services and hydrogen fuel supply for one-year from the date of final acceptance.

Task 1 Contractor Contract – Notice to Proceed (NTP): RTA will work with Contractor to finalize the technical specifications and commercial terms for a procurement and O&M service agreement. Upon execution of a contract, RTA will issue a NTP to Contractor.

Deliverable(s): Executed Agreement

Task 2 Fueling Station Kickoff Meeting: Contractor, with RTA, will coordinate and hold the Station Kickoff Meeting. This meeting will be held to review the project scope, schedule, price, roles, and responsibilities.

Deliverable(s): Kickoff Meeting Agenda, Presentation, and Minutes

Task 3 Site/Station Design: Contractor, working with RTA will finalize and prepare architectural and engineering plans and drawings. This process will go through three phases of review – preliminary, critical, and final design. Mechanical, civil, and electrical (and other disciplines as needed) layouts will be properly established along with all necessary reports/studies and construction scheduling.

Deliverable(s): 30%, 60%, 90% and approved Issued for Construction (IFC) and specifications

Task 4 Third-Party Safety Review: Contractor will work with the Hydrogen Safety Panel to draft, review, and adopt a Hydrogen Safety Plan

Deliverable(s): Preliminary and Final Hydrogen Safety Plan

Task 5 Equipment Procurement: Contractor will execute orders for subcomponents and materials, build equipment, and make deliveries to RTA for installation. All equipment must meet FTA Buy America requirements.

Deliverable(s): Purchase Orders/Invoices/Agreements for all delivered equipment

Task 6 Permitting: Contractor, with support from RTA, will apply for Plan Check to the appropriate jurisdictions and obtain the required permits to begin station installation. In accordance with California Senate Bill No. 288, this project is deemed to be categorically exempt from CEQA statutes.

Deliverable(s): All Necessary Approved Permits

Task 7 Station Construction and Installation: Contractor will complete site preparation and equipment installation. Site construction will be completed including all civil, mechanical, and electrical work. All fueling equipment will be installed and made ready for commissioning.

Deliverable(s): Progress Reports and Updated Project Schedule Showing Status

Task 8 Commissioning: Contractor, with support from RTA will test all equipment (storage, compression, storage and dispensing), control systems, and high-pressure lines, and conduct additional tests for purity and particulate contamination. Equipment operation and station calibration will be tested and adjusted using the first of the buses to arrive.

Deliverable(s): Certification that station is ready to start fueling buses for service; no later than June 30, 2025.

Task 9 Training: Contractor will be responsible for organizing and coordinating training sessions with RTA and local first responders to ensure that all relevant RTA staff and first responders are fully trained on all safety systems and the safe and successful operation and maintenance of the station. RTA will conduct a number of sessions over a three-week period.

Deliverable(s): Training Curriculum, Session Agendas, and Attendee Rosters