



**TRANE**

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TECHNOLOGIES

Pacific Southwest District  
3253 E. Imperial Hwy.  
Brea, CA 92821

**City of Carson**

## **Memorandum of Understanding**

*The City of Carson selects Trane U.S. Inc. and Enters into the Detailed Engineering Phase for a Trane Comprehensive Solutions Project*

August 4, 2020

City of Carson  
701 E Carson Street  
Carson, CA 90745

The City of Carson (the "City") is interested in moving forward with a Trane Comprehensive Solutions Project to implement the City Hall and Community Center HVAC and Roof Project. By executing this Memorandum of Understanding ("MOU" or "Agreement"), which is inclusive of the Terms and Conditions set forth below, the City of Carson selects Trane U.S. Inc ("Trane") as the awarded contractor and both parties agree to enter into the Detailed Phase of Trane's Comprehensive Solutions Program. The following describes the details of this agreement, and the responsibilities of both Trane and the City of Carson.

Trane is hereby authorized to proceed with a detailed engineering study necessary to further verify site conditions, project scope of work, and final project construction layout and details required to implement the infrastructure measures explored. The result of this engineering study will be final fixed-fee proposal to the City of Carson for the City Hall and Community Center HVAC and Roof Project.

It is the intent of the City of Carson to move forward with Trane to implement this project. The City is expecting the following items be performed or included in this detailed engineering phase, after Trane's consideration of the City's Project Labor Agreement and Enhanced Electrical Safety Policy:

- Partial design development drawings (roughly 30% complete) of mechanical, electrical, and structural design
- Detailed scope of work based on discussion and site walks between the City of Carson and Trane
- Fixed-fee firm proposal from Trane to The City for the turnkey construction of the City Hall and Community Center HVAC and Roof Project
- Negotiation of construction contract terms and conditions
- Calculation of and submission for utility rebates and incentives (if applicable)
- Financial proformas (if applicable)
- Detailed Energy Audit Report with energy savings and payback analysis for potential project options (if applicable)
- Any necessary documentation to satisfy procurement method chosen by The City



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**Conceptual Scope of Work for Design**, with consideration of the potential scope of work attached hereto as Exhibit "A," a summary of which is provided below (final scope to be determined during Detailed Engineering Phase based on constructability and budget):

- Replace HVAC system at City Hall including chillers, pumps, air handlers, exterior ductwork, reheat coils, exhaust fans, VFDs, and split system
- Replace pneumatic controls with DDC controls and Install a new Building Management System for City Hall (central system that can communicate with multiple City facilities is preferred)
- Replace the roof at City Hall with a new PVC membrane roof to match the Community Center
- Integrate a new advanced, centralized filtration system such as the Trane Catalytic Air Cleaning System or similar into the new air handlers
- Replace a portion of the HVAC system at the Community Center including chillers, pumps, central plant controls system, boilers, and one air handler and associated exterior ductwork for that air handler. New air handler to have advanced air cleaning system. Evaluate options for further air cleaning systems in existing air handlers for Community Center.
- Additional options may be presented to the City of Carson that Trane finds beneficial to the City during our detailed engineering phase

The City of Carson will need to continue to support Trane in completing the Detailed Engineering Phase. This support is defined as:

- Provide Trane access to buildings, drawings and appropriate operating/capital budget information needed to assist in completion of the Detailed Engineering Phase.
- Help Trane as necessary in providing all known information relative to this project.
- Provide Trane with 12-36 months consecutive months of all energy bills (gas, electric, fuel oil, etc.), if available and accessible.
- 15 minute interval electrical data (as available)
- Mechanical as built drawings with mechanical schedule (as available)
- Electrical as built drawings (as available)
- Site plan / architectural as built drawings (as available)
- Structural as built drawings
- Description of operating hours / schedule for the year
- Any equipment lists you have for each site including HVAC, lighting, controls, etc.
- Any other energy audits, lighting survey's etc. that have been done on the building already
- **A meeting with Financial and Technical Decision Makers upon completion of detailed engineering phase to present findings**

Trane expects the Detailed Engineering phase to take approximately 60 calendar days to complete from the execution date of this Memorandum of Understanding.

#### **Financial Commitment**

Should the City of Carson enter into a construction agreement with Trane for the City Hall and Community Center HVAC and Roof Project within 90 days of the final proposal resulting from the Detailed Engineering Phase, there is no upfront cost for the engineering services, as these engineering costs will be made part of



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the final construction cost. If the City of Carson does not enter into a construction contract with Trane within 90 days, the City will compensate Trane \$100,000 for engineering services. The billing terms will be Net 30 days.

The City of Carson also understands that the drawings and specifications, as instruments of Trane's service are and shall remain the property of Trane, whether the project, for which they are made, is executed or not. They are not to be used on other projects or extensions to this project except by agreement in writing.

[SIGNATURES ON FOLLOWING PAGE]



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IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.



ATTEST:

*[Handwritten signature]*  
\_\_\_\_\_

Donesia Gause-Aldana, City Clerk

APPROVED AS TO FORM:  
ALESHIRE & WYNDER, LLP

*[Handwritten signature]*  
\_\_\_\_\_

Sunny K. Soltani, City Attorney  
[R/L]

CITY:

CITY OF CARSON, a municipal corporation

*[Handwritten signature]*  
\_\_\_\_\_

Albert Robles, Mayor

TRANE:

TRANE U.S. INC.

By: *[Handwritten signature]*  
\_\_\_\_\_

Name: Scott Smithie  
Title: Assistant Secretary

By: *[Handwritten signature]*  
\_\_\_\_\_

Name: Adam Wittwer  
Title: Vice President and Regional General Manager  
Address: 3253 E. Imperial Highway  
Brea, CA 92821

Two corporate officer signatures required when Consultant is a corporation, with one signature required from each of the following groups: 1) Chairman of the Board, President or any Vice President; and 2) Secretary, any Assistant Secretary, Chief Financial Officer or any Assistant Treasurer.



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### **Additional Terms and Conditions:**

**1. Indemnity.** To the fullest extent permitted by law, Company shall indemnify, defend and hold harmless Customer from any and all claims, actions, costs, expenses, damages and liabilities, including reasonable attorneys' fees, resulting from death or bodily injury or damage to real or tangible personal property, to the extent caused by the negligence, recklessness or willful misconduct of Company's employees or other authorized agents in connection with their activities within the scope of this Agreement. Company shall not indemnify Customer against claims, damages, expenses or liabilities to the extent attributable to the acts or omissions of Customer. Company's obligation to indemnify shall be proportional to its relative fault. The duty to indemnify will continue in full force and effect, notwithstanding the expiration or early termination hereof, with respect to any claims based on facts or conditions that occurred prior to expiration or termination.

**2.1 Insurance Coverages.** Company shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to Customer, during the entire term of this Agreement including any extension thereof, the following policies of insurance which shall cover all elected and appointed officers, employees and agents of Customer:

**a. Commercial General Liability Insurance (Occurrence Form CG0001 or equivalent).** A policy of comprehensive general liability insurance written on a per occurrence basis for bodily injury, personal injury and property damage. The policy of insurance shall be in an amount not less than \$1,000,000.00 per occurrence or if a general aggregate limit is used, either the general aggregate limit shall apply separately to this contract/location, or the general aggregate limit shall be twice the occurrence limit.

**b. Worker's Compensation Insurance.** A policy of worker's compensation insurance in such amount as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for Company against any loss, claim or damage arising from any injuries or occupational diseases occurring to any worker employed by or any persons retained by Company in the course of carrying out the work or services contemplated in this Agreement.

**c. Automotive Insurance (Form CA 0001 (Ed 1/87) including "any auto" and endorsement CA 0025 or equivalent).** A policy of comprehensive automobile liability insurance written on a per occurrence basis for bodily injury and property damage in an amount not less than either (i) bodily injury liability limits of \$100,000 per person and \$300,000 per occurrence and property damage liability limits of \$150,000 per occurrence or (ii) combined single limit liability of \$1,000,000. Said policy shall include coverage for owned, non-owned, leased, hired cars, and any other automobile.

**d. Professional Liability.** Professional liability insurance appropriate to Company's profession. This coverage may be written on a "claims made" basis, and must include coverage for contractual liability. The professional liability insurance required by this Agreement must be endorsed to be applicable to claims based upon, arising out of or related to services performed under this Agreement. The insurance must be maintained for at least 5 consecutive years following the completion of Company's services or the termination of this Agreement. During this additional 5-year period, Company shall annually and upon request of the Customer submit written evidence of this continuous coverage.

**e. Subcontractors.** Company shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

**2.2 General Insurance Requirements.** All of the above policies of insurance shall be primary insurance and shall name the Customer, its elected and appointed officers, employees and agents as additional insureds and any insurance maintained by Customer or its officers, employees or agents may apply in excess of, and not contribute with Company's insurance. The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the Customer, its officers, employees and agents and their respective insurers, solely to the extent of the Company's negligence, but only as to commercial general liability insurance, automotive insurance, and professional liability insurance. The insurance policy must specify that where the primary insured does not satisfy the self-insured retention, any additional insured may satisfy the self-insured retention. All of said policies of insurance shall provide that said insurance may not be amended or cancelled by the Insurer or any party hereto without providing thirty (30) days prior written notice by certified mail return receipt requested to the Customer. In the event any of said policies of insurance are cancelled, Company shall, prior to the cancellation date, submit new evidence of insurance to the Contract Officer. No work or services under this Agreement shall commence until Company has provided the Customer with Certificates of Insurance, additional insured endorsement forms or appropriate insurance binders evidencing the above insurance coverages and said Certificates of Insurance or binders are approved by the Customer. Customer reserves the right to inspect complete, certified copies of and endorsement to all required insurance policies at any time. Any failure to comply with the reporting or other provisions of the policies including breaches or warranties shall not affect coverage provided to Customer. The insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Customer's Risk Manager or other designee of the Customer due to unique circumstances.

The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the Customer, its officers, employees and agents and their respective insurers, solely to the extent of the Company's negligence

### **3. Default; Termination.**

The following events are "Events of Default," the occurrence of which gives the non-defaulting party the right to terminate this Agreement by written notice following the expiration of any stated cure periods and pursue its remedies under the Agreement:

**a.** Customer fails to fully pay any of the payments required hereunder within five (5) days after receipt of written notice of such failure; or

**b.** Except as provided in clause (a), above, the breach of any material term or condition of this Agreement and such breach remains uncured thirty (30) days after delivery to the breaching party of written notice of such breach. If the breach is of a nature or involves circumstances reasonably requiring more than thirty (30) days to cure, the time period may be extended provided the breaching party proceeds diligently to cure the breach.



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Customer reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days' written notice to Company, except that where termination is due to the fault of Company, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, Company reserves the right to terminate this Agreement at any time, with or without cause, upon sixty (60) days' written notice to Customer, except that where termination is due to the fault of Customer, the period of notice may be such shorter time as Company may determine. Upon receipt of any notice of termination, Company shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where Company has initiated termination, Company shall be entitled to compensation for all services rendered prior to the effective date of the notice of termination and for any services authorized by the Contract Officer thereafter. In the event Company has initiated termination, Company shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to this Section 16b.

4. **Time for Completion.** Unless earlier terminated in accordance with this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding 180 days from the date hereof.

5. **General.** Except as provided below, to the maximum extent provided by law, this Agreement is made and shall be interpreted and enforced in accordance with the laws of the state or province in which the Work is performed, without regard to choice of law principles which might otherwise call for the application of a different state's or province's law. Any dispute arising under or relating to this Agreement that is not disposed of by agreement shall be decided by litigation in a court of competent jurisdiction located in the state or province in which the Work is performed. To the extent the Work site is owned and/or operated by any agency of the Federal Government, determination of any substantive issue of law shall be according to the Federal common law of Government contracts as enunciated and applied by Federal judicial bodies and boards of contract appeals of the Federal Government. This Agreement contains all of the agreements, representations and understandings of the parties and supersedes all previous understandings, commitments or agreements, oral or written, related to the subject matter hereof. This Agreement may not be amended, modified or terminated except by a writing signed by the parties hereto. No documents shall be incorporated herein by reference except to the extent Company is a signatory thereon. If any term or condition of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, all other terms and conditions of this Agreement will nevertheless remain in full force and effect as long as the economic or legal substance of the transaction contemplated hereby is not affected in a manner adverse to any party hereto. Customer may not assign, transfer, or convey this Agreement, or any part hereof, or its right, title or interest herein, without the written consent of the Company. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of Customer's permitted successors and assigns. This Agreement may be executed in several counterparts, each of which when executed shall be deemed to be an original, but all together shall constitute but one and the same Agreement. A fully executed facsimile or electronic copy hereof or the several counterparts shall suffice as an original.





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## EXHIBIT "A"

### POTENTIAL SCOPE OF WORK

#### CITY HALL (provide by TRANE TECHNOLOGIES)

The central plant at City Hall consists of two constant volume 130 ton McQuay centrifugal chillers providing the chilled water cooling needs of the building. These chillers are at the end of their useful usage.

The plant naturally includes ancillary mechanical and electrical equipment, including a cooling tower, condenser pumps, chilled and hot water pumps, etc. The cooling tower was replaced in 2011 and is in good operating condition. There is an existing 1.5MMBTU (one million British Thermal units) boiler serving the heating requirements of the building. This boiler was also replaced in 2010 and is in fair to good operating condition.

There are a total of four pumps; one chilled water, one condenser water, one hot water and one combined back-up pump used for condenser and chilled water distribution. These pumps serve the building chiller, cooling tower, boiler, and hot and chilled water distribution systems. These pumps are old, with low efficiency motors and their associated strainers and valves are stuck in fixed positions and not operating properly.

There are currently five air handling units (AHU's) providing the required air heating and cooling to the various spaces of the City Hall building. All the units are at the end of their useful life and need to be replaced. City Hall also has split systems and exhaust fans that are beyond their useful life and in need of replacement.

#### SCOPE:

- Investigate temporary cooling system with MERV-13 filters and set outside air (OSA) as high as possible.
- Provide mechanical, electrical, and structural engineering for the project
- Obtain plan check and permits for the project
- Replace the roof with a new PVC membrane roof to match the Community Center



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- Use of Trane Catalytic Air cleaning system (TCACS) (Filtration MERV-13, germ-killing ultraviolet light, and a photocatalytic oxidation process)
- Provide and install 2 New Trane RTWD Chillers in the Central Plant in place of the existing chillers
- Provide and install 3 new water pumps, 1 for chilled water, 1 for condenser water, and 1 for backup
- Provide and install VFD's on all new pumps
- Provide and install a new controls system in the Central Plant for the cooling tower, pumps, and chillers
- Provide and install a new ASHRAE 15 refrigerant ventilation system to meet code
- Provide and install 5 new variable speed air handlers to replace AHU #1, #2, #3, #4 and #5
- Replace all the exterior ductwork on the roof
- Provide and install 6 new hot water reheat coils in the plenum spaces
- Replace qty. 2 5 ton split systems for the IT room
- Replace qty. 1 3 ton split system for the phone room
- Replace qty. 1 1.5 ton mini split system for the AV room
- Replace qty. 1 1.5 ton mini split system for the radio room
- Provide and install 21 new exhaust fans
- Install DDC controls for all new air handlers and existing mixing / VAV boxes (over 50 boxes)
- Provide a split or package unit for the Public Safety office in basement that is only occupied Friday through Sunday
- All air handling units need outside air/fresh air intake
- Provide for Air Balancing of the Whole Building
- Calculate and file for any applicable SCE energy incentives for the project

**COMMUNITY CENTER (provide by TRANE TECHNOLOGIES)**

Similar to City Hall, there is a central plant at the Community Center which consists of two constant volume 130 ton McQuay centrifugal chillers providing the chilled water cooling needs of the building. These chillers are at the end of their useful life.

The plant naturally includes ancillary mechanical and electrical equipment, including a cooling tower, condenser pumps, chilled and hot water pumps, air separators etc. The cooling tower was replaced in 2011 and is in good operating condition. There are two existing boilers providing the hot water heating needs of the building. One boiler is decommissioned and disconnected and the second boiler has required constant repair and maintenance over the years; therefore building heating requirements are difficult to meet.





Additionally, maintenance for the operational boiler is difficult, as parts are hard to find and are very expensive.

Similar to City Hall, there are a total of four pumps: one chilled water, one condenser water, one hot water and one combined back-up pump used for both condenser and chilled water distribution. These pumps serve the building chiller, cooling tower, boilers and hot and chilled water distribution systems. The pumps are old, with low efficiency motors, and the associated strainers and valves are stuck in fixed positions and do not operate properly.

The controls for the system consist of a mixture of DDC and pneumatic control valves and actuators.

There are currently seven AHU's providing the required air heating and cooling to the various spaces of the Community Center building. Most of the AHU, except AHU 1, were replaced when the Community Center was renovated about 10 years ago, Trane will investigate if these units have or can accommodate an air cleaning/filtration system.

*AHU 1* – Is an outdoor constant volume multi-zone unit with a cold and bypass deck serving the west wing of the building. The west wing consists of a large special event area, conference rooms and offices. The unit has 3-way DDC control valves and actuators; however, the unit is old and has exceeded its useful life.

#### SCOPE:

- Provide mechanical, electrical, and structural engineering for the project
- Obtain plan check and permits for the project
- Use of Trane Catalytic Air cleaning system (TCACS) for new air handler no. 1 (Filtration MERV-13, germ-killing ultraviolet light, and a photocatalytic oxidation process)
- Investigate applicability of indoor air quality products on existing equipment to remain.
- Provide and install 2 New Trane RTWD Chillers in the Central Plant in place of the existing chillers
- Provide and install 3 new water pumps, 1 for chilled water, 1 for condenser water, and 1 for backup
- Provide and install VFD's on all new pumps
- Provide and install a new controls system in the Central Plant for the cooling tower, pumps, and chillers
- Provide and install a new ASHRAE 15 refrigerant ventilation system to meet code
- Provide and install 1 new variable speed air handler to replace AHU #1
- Replace all the exterior ductwork for Air Handler #1
- Provide for Air Balancing for AHU#1
- Provide and install qty. 2 new high efficiency boilers
- Calculate and file for any applicable SCE energy incentives for the project



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