



COOPERATIVE PURCHASE CUSTOMER AGREEMENT

This **Cooperative Purchase Customer Agreement** ("**Customer Agreement**") is entered into by and between Terracon Consultants, Inc. ("**Vendor**") and the **City of Burleson**, ("**Customer**" or "**Authorized Customer**"), a Texas government entity, and a Customer authorized to purchase goods or services pursuant to the Agreement between the The Interlocal Purchasing System (TIPS) Cooperative Purchasing ("**Cooperative Entity**") and Vendor, Contract No. 210602, as amended, (the "**Agreement**") with an expiration date of 08/31/26.

This Customer Agreement includes and shall be governed by the following items which are attached hereto and/or incorporated herein by reference.

- i. The terms and conditions of the Agreement, which are incorporated herein by reference and available online or upon request from Vendor;
- ii. The attached Vendor Quote/Purchase Order, if applicable;
- iii. The Standard Addendum for Contracts with the City of Burleson, if applicable

Authorized Customer is eligible and desires to purchase Facility Condition Assessment and Planning Services pursuant to the terms and conditions of the Agreement as the Cooperative Entity may specify from time to time, as well as the terms and conditions of this Customer Agreement. To ensure goods and services are provided directly to the Customer, the Cooperative Entity will only be responsible for services provided to the Cooperative Entity will not be responsible for payments for services provided to the Customer.

The Authorized Customer agrees to the terms and conditions of the Agreement as applicable and as authorized by law. The Authorized Customer hereby agrees that it is separately and solely liable for all obligations and payments for equipment, products and services provided hereunder. Vendor agrees that Customer shall be entitled to the same rights and protections under the law afforded to the Cooperative Entity under the Agreement, as applicable, as if Customer had entered into the Agreement. Except in the event of gross negligence or intentional misconduct, Customer's liability shall not exceed the amount paid by Customer under this Customer Agreement for the proceeding twelve (12) month period. Vendor agrees that until the expiration of three (3) years after final payment under this Customer Agreement, or the final conclusion of any audit commenced during the said three years, Customer, or Customer's designated representative, shall have access to and the right to audit at reasonable times, all records, hard copy or electronic, involving transactions relating to this Customer Agreement necessary to determine compliance herewith, at no additional cost to the Customer. Vendor agrees that the Customer shall have access to such records during normal business hours. Customer shall provide Vendor with reasonable advance notice of any intended audits.

Purchase Price - Payments under this Customer Agreement shall not exceed \$247,604.00 ("**Purchase Price**").

Term - The Term of this Customer Agreement ("**Term**") shall be for one of the following as selected below (Select the type of contract that applies):

Single Purchase Contract -The Term shall not exceed one (1) year, and this Customer Agreement shall be for the purchase of goods or services as specified and quoted by the Vendor, and the Purchase Price shall not exceed the budgeted amount for Customer's current fiscal year for the applicable goods and services.

Supply / As Needed Contract- The Term shall be effective as of October 1st and shall expire on September 30th at the end of FY. This Customer Agreement shall be for multiple purchases of goods or services on an as needed basis, from the same vendor under the same contract, and shall not exceed the budgeted amount for Customer's current fiscal year for the applicable goods and services.

Multi-Year Contract-The Term shall be for one (1) year(s) expiring on _____. This Customer Agreement may be renewed for two one- year renewals . Customer Agreement shall be with a single vendor for products and services. If the amount of expenditures under this Multi-Year Contract equals or exceeds \$50,000 in the aggregate, City Council approval is required. In the event the City does not appropriate sufficient funds to make payments during the current or any subsequent year, the City shall have the right to terminate this Multi-Year Contract at the end of any such fiscal year without penalty.

Emergency Purchase - Purchases that are necessary to address a public calamity, because of unforeseen damage to property, or to protect the public health or safety where the City's ability to serve the public would be impaired if the purchase were not made immediately. Emergency purchases must meet the requirements of Local Government Code 252.022, and must be ratified by City Council if the purchase is \$50,000 or more.

(Standard Addendum - Select if Vendor has additional terms and conditions that apply to this purchase)

Standard Addendum for Contracts with the City of Burleson, Texas - If this purchase contains additional terms and conditions from the Vendor, other than those set forth in the Agreement, the Vendor shall separately execute the Standard Addendum with the City of Burleson, Texas. Such applicable terms and conditions as set forth in the Standard Addendum shall supersede any conflicting terms of the Vendor's terms and conditions, and such Standard Addendum shall control. The Standard Addendum is attached hereto, incorporated herein by reference and made a part of this Customer Agreement for all purposes.

The undersigned represents and warrants that he/she has the power and authority to execute this Customer Agreement, bind the respective party, and that the execution and performance of this Customer Agreement has been duly authorized by the respective party. This Customer Agreement, and any amendment hereto, may be executed in counterparts, and electronically signed, scanned, digitally signed and sent via electronic mail and such signatures shall have the same effect as original manual signatures.

Each party has caused this Customer Agreement to be executed by its duly authorized representative on this the _____ day of _____, 20____.

CITY OF BURLESON

By: _____

Name: _____

Title: _____

Date: _____

VENDOR:

By: DRB _____

Name: Douglas R. Baum _____

Title: National Director _____

Date: 03/20/2024 _____



March 20, 2024

City of Burleson TX
141 West Renfro Street
Burleson, Texas

Attention: Mr. Errick Thompson, PE, CFM
Director
Public Works & Engineering
E: ethompson@burlesontx.com
D: 817.426.9610

RE: Proposal for Facilities Master Planning and Facility Condition Assessment
City of Burleson, TX
Terracon Proposal No. PFA246022 Rev 2

Dear Mr. Thompson:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal for providing professional services to meet the City of Burleson's ("City") requirements for Facilities Master Planning (FMP) and Facility Condition Assessment (FCA) Services.

Terracon Consultants, Inc. (Terracon) provides professional consulting services through our nationwide network of offices from four disciplines that include: Environmental, Facilities, Geotechnical and Materials. For more detailed information on all of Terracon's services please visit our website at <http://www.terracon.com>. Work to conduct an FCA is provided by staff from our Facilities division. Terracon has a 100% commitment to the safety of its employees and professional relations. As such, Terracon will conduct our services in accordance with our incident and injury free® (IIF®) culture.

1 Project Background

We understand that you would like Terracon to conduct a Facilities Master Planning (FMP) and Facility Condition Assessment (FCA) of the subject facilities that is to include field observations, and the documentation of inventory, Capital Projects, and Work Item deficiency records. The FMP services of the subject facilities include an evaluation of the needs, space requirements and potential costs for recommended capital improvements over a 10-year planning timeframe. These FMP services will be subcontracted to and performed by Parkhill.

The facilities that are the subject of this proposal include 25 buildings located on 14 sites. Facility gross building areas range from approximately 400 to 66,245 square feet and having combined total of approximately 295,251 square feet. The list of facilities is shown in **Appendix A - Facilities List** and based on information provided to us on March 1, 2024.

2 Compensation

The table below presents our proposed fee for the services described in the attached Scope of Work as offered in this proposal.

TASK	Fee	Authorized*
Facility Condition Assessment (FCA) <ul style="list-style-type: none"> • 25 facilities at 14 sites • Approximately 296,000 square feet. • Includes asset tagging. • See Appendix B for Scope Details 	\$99,866	Included
Facilities Master Planning (FMP) <ul style="list-style-type: none"> • See Appendix C for Scope Details 	\$166,750	Included
TIPS Discount (10%)	-\$26,662	Included
Base Project Total:	\$239,954	
Additional Services	Fee	Please Check*
First Year subscription to use Paragon software	\$6,500	<input type="checkbox"/> Yes <input type="checkbox"/> No
TIPS Discount (10%)	-\$650	
Start-up Paragon software training for City staff	\$2,000	<input type="checkbox"/> Yes <input type="checkbox"/> No
TIPS Discount (10%)	-\$200	
Additional Services - Subtotal	\$7,650	\$ _____
Base Project Total with Additional Services Options:	\$247,604	\$ _____

*Check the “Yes” box provided to authorize Additional Services. Please insert the total Authorized Amount in the space provided. Note that all additional proposed fees are based on acceptance of the Base fee. If neither box is checked, Terracon assumes the service is not authorized.

Any additional services requested beyond the Scope of Work will be negotiated between us. Our fee includes costs for labor, materials, travel expenses, and direct project related expenses. Our proposal is valid for a period of 90 days.

If during the on-site work, we determine that the actual square footage of the buildings included in the scope of work differs by more than 10% of the gross square footage we used in our fee estimate, we reserve the right to request a fee adjustment based on a written Change Order.

2.1 Transfer of Software Subscription for Client Use

Our proposal includes the use of Paragon, a capital asset management software system that we use on a regular basis when conducting FCAs. We will use this software to record the data we collect during the project, as well as the analyses we run to prepare your multi-year capital plan.

Our proposal includes an option for transfer of the subscription to the software to the City of Burleson for its internal use. The software can be accessed by as many of your staff as you desire. The subscription may be renewed each year in the future on the anniversary of the FCA contract date.

2.2 Startup Software Training

Our proposal includes an option for start-up training for your staff on the use of the Paragon software. Training will be provided via on-line meetings and software demonstrations using the data collected and analyzed during the FCA.

When provided remotely, training is typically divided into multiple one to two-hour meetings over the course of multiple days that support our Client’s work schedules.

For this engagement, we have included 6 hours of online training over the Internet for as many City staff that wish to attend. When provided remotely, training is typically divided into three, two-hour sessions over the course of multiple days that mutually support both Terracon’s and the City’s schedules.

2.3 Annual Software Subscription Renewal

As an option, the City may elect to extend its subscription to use Paragon for an additional year from the date of the Contract for additional fees. Assuming no additional building square footage is added above the current subscription limitation of 300,000 square feet, the fee for the

subscription renewal in Year 2 would be \$2,300.

3 Authorization

Our work will be performed in accordance with the Terms and Conditions of a Cooperative Purchase Customer Agreement (CPCA) between the City of Burleson TX and Terracon Consultants Inc., the terms of which will control in the event of any conflict with this proposal. To authorize us to proceed, contingent upon receipt of an authorized CPCA and in accordance with The Interlocal Purchasing System (TIPS) requirements, please email both a Purchase Order (PO) and this proposal, both referencing the TIPS Contract Number (210602), to tipspo@tips-usa.com.

3.1 Invoicing Schedule

We will invoice monthly for our labor effort and expenses incurred in the prior month, determined as the percentage of work complete for each task included in our fee.

4 Closing

Terracon excels in providing cost-effective and innovative solutions to our FCA services line, from the most complex and challenging projects to the most basic. We pride ourselves in exceeding our clients' expectations through active partnering and collaboration to achieve desired goals. We appreciate the opportunity to respond to this solicitation and look forward to your positive review of our submittal. Should you have any questions, please feel free to contact us.

Sincerely,

Terracon Consultants, Inc.



William J. Faesenmeier
Senior Facilities Consultant
William.faesenmeier@terracon.com



Douglas R. Baum
National Director of Facility Assessment Services
Doug.baum@terracon.com

- Attachments: Appendix A - Facilities List
Appendix B - FCA Scope of Work
Appendix C - Master Planning Scope of Work
Appendix D - Cooperative Purchase Customer Agreement

APPENDIX A - FACILITIES LIST
City of Burleson

#	Facility	Address	Sq Ft
1	Fire Station 3	245 LAKEWOOD DR	9,800
2	BRiCk	550 NW SUMMERCREST BLVD	66,245
3	City Hall	141 W RENFRO ST	22,016
4	Fire Station 1	828 SW ALSBURY BLVD	22,806
5	Fire Station 16	250 E HIDDEN CREEK PKWY	13,917
6	Fire Station 2	620 MEMORIAL PLAZA	4,784
7	Hidden Creek Golf - Cart Barn	700 S BURLESON BLVD	5,244
8	Hidden Creek Golf - Club House	700 S BURLESON BLVD	2,500
9	Hidden Creek Golf - Maint Barn	700 S BURLESON BLVD	4,644
10	Hidden Creek Golf - Restroom	700 S BURLESON BLVD	1,050
11	Library	248 SW JOHNSON AVE	18,168
12	Municipal Court	1131 SW WILSHIRE BLVD	7,620
13	Police Headquarters	1161 SW WILSHIRE BLVD	21,945
14	Senior Center	216 SW JOHNSON AVE	16,312
15	Service Center - Admin Bldg	725 SE JOHN JONES	6,500
16	Service Center - Staging	725 SE JOHN JONES	10,500
17	Animal Shelter	725 SE JOHN JONES	6,500
18	Equipment Repair Shop	725 SE JOHN JONES	10,000
19	Warehouse / Storage	725 SE JOHN JONES	11,000
20	Vehicle Wash Bays	725 SE JOHN JONES	5,500
21	Police Storage	725 SE JOHN JONES	2,400
22	Parks Annex Building	725 SE JOHN JONES	12,000
23	Fuel Island	725 SE JOHN JONES	1,400
24	Animal Shelter - Out Bldg	725 SE JOHN JONES	400
25	City of Burleson Annex	135 W ELLISON	12,000
			295,251

Appendix B - Scope of Work

Facility Condition Assessment **City of Burleson**

This document describes our approach, methodology and Scope of Work to conduct a Facility Condition Assessment (FCA) of facility assets owned and managed by the City of Burleson TX ("Client"). It describes the tasks we plan to perform and the resulting deliverables from our work.

1 FCA Approach and Methodology

Terracon will furnish the personnel, services, equipment, supplies, materials, and other necessary resources to conduct a Facilities Condition Assessment (FCA) of Client-owned and managed facilities. The FCA is primarily focused on the inventory and assessment of building elements, sub-elements, and components. The FCA will be conducted based on visual, non-destructive inspection techniques, interviews of persons knowledgeable regarding the construction and maintenance history of the facilities, and review of existing building data and maintenance history.

We plan to use a software program called Paragon together with its field data collection application called Paragon Data Collector to store, analyze and report data collected as part of the FCA. This software will serve as the repository for data collected and generated by Terracon during the performance of the FCA.

1.1 Facilities Included in the Scope of Work

The facilities that are the subject of this proposal include twenty-five (25) buildings located on fourteen (14) sites. Facility gross building areas range from 400 to 66,245 square feet and having combined total of approximately 295,251 square feet. The list of facilities is shown in **Appendix A - Facilities List** and based on information provided to us on March 1, 2024.

1.1.1 Building Systems Included in the Scope of Work

Based on our understanding of the Client requirements for the Scope of Work, we have listed the components and sub-components that we understand are to be included in the FCA. Should Client wish to change this list in any way, please contact us so we may alter this scope of work and re-submit our fee proposal.

The building components and subcomponents included in the scope of work are listed below. The inventory will be limited to components and sub-components that are visible to our assessors without destructive access, and only for elements marked with a check at Unifomat Level 3. Items not checked are specifically excluded from the scope.

Whenever feasible, we plan to describe facility and site inventory using classification records that group multiple components together as assemblies per various building types. We will quantify these assemblies based on overall square footage of the facility or site features, whichever applies.

Building Elements

A-Substructure - Level 1 (Major Group Element)	
A10-Foundations - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> A1010-Standard Foundations	Includes: Foundation assemblies for crawl space and shallow foundations that include: (1) Wall and column foundations (2) Foundation walls up to level of top of slab on grade (3) Slab on grade (4) Footings and bases (5) Perimeter drainage and perimeter waterproofing. Excludes: Foundation excavation, backfill, and compaction; Anchor plates; and Dewatering.
<input checked="" type="checkbox"/> A1020-Special Foundations	Includes: Foundation assemblies for deep foundations that include: (1) Pilings (2) Caissons (3) Slab on grade (4) Raft foundations and/or (5) Grade beams. Excludes: Underpinning, Dewatering, and any other special foundation systems.
<input type="checkbox"/> A1030-Slab on Grade	Includes: Slab on grade thickened foundations that are not included in A1010 or A1020 above.
A20-Basement Construction - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> A2010-Basement Excavation	Includes (1) Additional excavation required for construction of basement, (2) Backfill and compaction, and (3) Excavation support system.
<input checked="" type="checkbox"/> A2020-Basement Walls	Includes (1) Basement wall construction, (2) Moisture protection, and (3) Basement wall construction below grade.

A10 & A20 - Foundations and Basement Construction: Inventoried as assemblies based on the general category of foundation. Includes assembly costs for footings, grade beams, foundation walls, waterproofing, reinforcing, basement floors and walls, etc. Foundation records are inventoried at Level 5 with separate codes for shallow foundations (slab-on-grade), basements, and deep foundations (with piles). Quantity is recorded as the square foot area of the selected foundation system.

B-Shell - Level 1 (Major Group Element)	
B10-Superstructure - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> B1010-Floor Construction	Raised floor construction assemblies that include: (1) Floor structural frame (2) Interior structural walls (3) Floor slabs and decks (4) Inclined and stepped floors (5) Expansion and contraction joints (6) Balcony construction (7) Suspended ramps (8) Exterior stairs and fire escapes (9) Exterior handrail and railing assemblies and (10) Other floor construction (such as catwalks, spaceframes, etc.).
<input checked="" type="checkbox"/> B1020-Roof Construction	Roof structural assemblies that include (1) Roof structural frame (2) Structural interior walls supporting roof (3) Roof decks, slabs, and sheathing, and (4) Canopies.
B20-Exterior Enclosure - Level 2 (Group Element)	
<input checked="" type="checkbox"/> B2010-Exterior Walls	Includes (1) Exterior wall construction assemblies with facing materials, exterior applied finishes, back-up construction, framing, sheathing, wallboard, parapets, insulation, and vapor retarders (2) Exterior load-bearing wall construction (3) Exterior louvers and screens (4) Exterior sun control devices (5) Balcony railings (6) Exterior soffits (7) Exterior trim, moldings, and columns, and (8) Exterior Window shutters.
<input checked="" type="checkbox"/> B2020-Exterior Windows	Includes (1) Windows (2) Storefronts, and (3) Curtain walls. Excludes: (4) Exterior painting of windows; and (5) Wall opening elements such as lintels, sills, flashings, etc.
<input checked="" type="checkbox"/> B2030-Exterior Doors	Includes (1) Personnel doors (2) Revolving doors (3) Overhead doors, and (4) Other doors (such as, hanger doors, blast-resistant doors, etc.).
B30-Roofing - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> B3010-Roof Coverings	Roofing assemblies for (1) Low slope and high slope roofing membranes, shingles, tiles, panels Includes and (9) Gutters and downspout. Excludes: Specific inventory records for roof system components that are included in the roof assembly pricing, such as (2) Traffic coatings (3) Waterproof membranes below paving (4) Expansion joints (5) Vapor retarders (6) Roof and deck insulation (7) Roof fill and (8) Flashings and trim.
<input checked="" type="checkbox"/> B3020-Roof Openings	Includes (1) Skylights (2) Area glazing (3) Roof hatches (4) Gravity roof ventilators and chimney caps, and (5) Smoke vents.

B1010 - Floor Construction, Structural Frame: Inventoried at Level 5 as a modeled assembly that includes various structural sub-components, such as columns, beams, joists, and trusses. Quantity is recorded as the square foot floor area in which the structure is observed.

B1020 - Roof Construction, Structural Frame: Inventoried at Level 5 as a modeled assembly that includes various structural sub-components, such as columns, beams, joists, and trusses. Quantity is recorded as the square foot of the roof area under which the structure is observed.

B2020 - Exterior Windows: Quantity documented as square foot area of glazed windows, by type, versus individual window counts.

B2030 - Exterior Doors: Inventory is per assembly that includes the door, frame, and standard hardware. Quantity documented as “each” for personnel man-doors, and “square foot” area of overhead, roll-up and sliding doors, versus individual door counts. Automatic openers, motor operators and exterior door panic hardware inventoried separately.

B3010 - Roof Coverings: Inventory is by roof assembly type by major material types. Replacement costs include flashing and expansion joint components typically installed with each roof covering system.

C-Interiors - Level 1 (Major Group Element)	
C10-Interior Construction - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> C1010-Partitions	Includes (1) Fixed partitions (2) Demountable partitions (3) Retractable and movable partitions (4) Operable partitions (5) Interior balustrades and screens, and (6) Interior windows and storefronts.
<input checked="" type="checkbox"/> C1020-Interior Doors	Includes (1) Standard swinging doors (2) Glazed doors (3) Sliding and folding doors (4) Fire doors, (5) Other doors, (8) Door opening elements, and (10) Hatches and access doors. Excludes separate inventory records for Interior Door Components include in each door assembly, such as (6) Door frames (7) Door hardware, and (9) Door painting and staining.
<input checked="" type="checkbox"/> C1030-Fittings	Includes (4) Toilet and bath accessories, (6) Handrails and ornamental metals, and (7) Fabricated toilet partitions. Excludes (1) Chalk and tack boards, (2) Identifying devices, (3) Lockers, (5) Storage shelving, (8) Fabricated compartments and cubicles, and (9) Closet specialties.
C20-Stairs - Level 2 (Group Element)	
<input checked="" type="checkbox"/> C2010-Stair Construction	Includes (1) Stair treads, risers, and landings; and (2) handrails and balustrades.
<input checked="" type="checkbox"/> C2020-Stair Finishes	Includes (1) Finishes to treads, risers, landings, and soffits; and (2) Finishes to handrails and balustrades.
C30-Interior Finishes - Level 2 (Group Element)	
<input checked="" type="checkbox"/> C3010-Wall Finishes	Includes (1) Concrete wall finishes (2) Wall plastering (3) Wallboard (4) Tile and terrazzo (5) Painting (6) Wall coverings (7) Acoustic wall treatments, and (8) Other coatings and finishings.
<input checked="" type="checkbox"/> C3020-Floor Finishes	Includes (1) Floor toppings and traffic membranes (2) Hardeners and sealers (3) Tile, terrazzo, wood, and resilient flooring (4) Carpeting (5) Masonry and stone flooring (6) Other flooring (for example, conductive, armored) (7) Painting and staining, and (8) Access pedestal flooring.
<input checked="" type="checkbox"/> C3030-Ceiling Finishes	Includes (1) Exposed concrete finishes (2) Plaster ceiling finishes (3) Wallboard ceiling finishes (4) Acoustic ceiling tiles and panels (5) Painting and staining (6) Metal strip ceilings (7) Other ceilings and (8) Ceiling systems.

C1010 - Interior Partitions: Inventory and replacement value based on quantity of the floor area that includes modeled quantities of various interior walls and finishes, based on the

general type of facility in which the partitions are constructed.

C1020 - Interior Doors: Inventory and replacement value based on each, square footage, or lineal footage of various types of interior door assemblies. Assemblies include door, frame, hardware, and finishes.

C103001 - Toilet and Bath Accessories: Inventory quantified by public restrooms based on number of toilet fixtures. Assemblies include toilet partitions, mirrors, towel bars, tub/shower enclosures, curtain rods, and other toilet room accessories.

C103004 through C103009 - Cabinets, Countertops and Casework: Typically inventoried by lineal feet based on material type and configuration.

C2010 - Stairs: Inventoried as assemblies that include framing, railings, and landings, quantified by "Riser" or "Square Feet" based on predominant material type.

C3010 - Wall Finishes: Option A Inventoried as a combined quantity of wall finishes based on the facility area that includes modeled quantities of various interior wall finishes, based on the general type of facility in which the finishes are constructed.

C3020 - Floor Finishes: Option A Inventoried as a combined quantity of floor finishes based on the facility area that includes modeled quantities of various interior floor finishes, based on the general type of facility in which the finishes are constructed.

C3030 - Ceiling Finishes: Option A Inventoried as a combined quantity of ceiling finishes based on the facility area that includes modeled quantities of various interior ceiling finishes, based on the general type of facility in which the finishes are constructed.

C3020 - Floor Finishes: Option B Inventoried as separate records for each different category of floor finish material observed and quantified based on the floor area of each different interior floor finish.

C3010 - Wall Finishes: Option B Inventoried as separate records for each different type of wall finish material observed and quantified based on the wall surface area of each different interior wall finish.

C3030 - Ceiling Finishes: Option B Inventoried as separate records for each different category of ceiling finish material observed and quantified based on the ceiling area of each different interior ceiling finish.

D-Services - Level 1 (Major Group Element)	
D10-Conveying - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> D1010-Elevators and Lifts	Includes (1) Passenger elevators (2) Freight elevators (3) People lifts, and (4) Wheelchair lifts.
<input checked="" type="checkbox"/> D1020-Escalators & Moving Walks	Includes (1) Escalators, and (2) Moving walks.
<input checked="" type="checkbox"/> D1090-Other Conveying Systems	Includes (1) Hoists and cranes (2) Conveyors (3) Dumbwaiters;(4) Pneumatic tube systems (5) Linen, trash, and mail chutes (6) Turntables (7) Operable scaffolding, and (8) Transportation systems (for example, baggage handling and aircraft loading systems).

D1010 - Elevators and Lifts: Inventory based on category of elevator (traction or hydraulic), use (passenger, freight, or hospital) weight capacity and number of floors.

D1090 - Other Conveying Systems: Inventory for hoists and cranes based on layout, span, and weight capacity.

D-Services - Level 1 (Major Group Element)	
D20-Plumbing - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> D2010-Plumbing Fixtures	Includes Toilet Room Plumbing fixture assemblies including (1) Water closets (2) Urinals (3) Lavatories (4) Sinks (5) Showers (6) Bathtubs, and (8) Bidets. (7) Drinking fountains and sinks observed outside Toilet Rooms inventoried separately.
<input checked="" type="checkbox"/> D2020-Domestic Water Distribution	Includes (1) Pipes and fittings (2) Valves, hydrants, and hose bibbs (3) Water heaters, and (4) Domestic water distribution equipment. Excludes (5) Piping and equipment insulation
<input checked="" type="checkbox"/> D2030-Sanitary Waste	Includes (1) Waste piping, and (4) Sanitary waste equipment. Excludes (2) Vent pipe and fittings, (3) Floor drains, and (5) Insulation.
<input checked="" type="checkbox"/> D2040-Rainwater Drainage	Includes (1) Rainwater piping, and (2) Roof drains. Excludes (3) Rainwater drainage piping insulation
<input checked="" type="checkbox"/> D2090-Other Plumbing Systems	Includes (1) Other piping systems (2) Gas distribution (3) Acid waste systems (4) Indoor Pool equipment, and (5) Indoor Fountain piping systems and devices.

D2010 - Plumbing Fixtures: Inventory and replacement values based on number of toilet fixtures and associated accessories for private and public restrooms, per room versus individual fixture counts.

D202001 - Domestic Water Distribution Pipes and Fittings: Replacement value based on facility floor area and general facility type.

D203001- Sanitary Waste Pipes and Fittings: Replacement value based on facility floor area and general facility type.

D204001 - Rainwater Drainage Pipe and Fittings: Replacement value based on number and size of roof drains and the number of facility floors above grade.

D-Services - Level 1 (Major Group Element)	
D30-HVAC - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> D3010-Energy Supply	Includes (1) Oil, gas, and coal supply (2) Steam, hot, and chilled water supply (3) Solar energy supply, and (4) Wind energy supply.
<input checked="" type="checkbox"/> D3020-Heat Generating Systems	Includes (1) Boilers (2) Piping and fittings adjacent to boilers (3) Primary pumps; and (4) Auxiliary equipment. Excludes (5) Equipment and piping insulation.
<input checked="" type="checkbox"/> D3030-Cooling Generating Systems	Includes (1) Chillers (2) Cooling towers and evaporative coolers, (3) Condensing units (4) Piping and fittings, (5) Primary pumps, and (6) Direct expansion systems. Excludes (7) Equipment and piping insulation.
<input checked="" type="checkbox"/> D3040-Distribution Systems	Includes (1) Supply and return air systems, including air handling units with coils (electric included), filters, ductwork, and associated devices such as VAV boxes, duct heaters, induction units, and grilles (2) Ventilation and exhaust systems (3) Steam, hot water, glycol, and chilled water distribution (4) Associated terminal devices including convectors, fan-coil units, induction units, and water and steam unit heaters (5) Heat recovery equipment, and (6) Auxiliary equipment such as secondary pumps, heat exchangers, sound attenuation, and vibration isolation. Excludes (7) Piping, duct, and equipment insulation.
<input checked="" type="checkbox"/> D3050-Terminal & Package Units	Includes (1) Electric baseboards (2) Electric or fossil fuel fired unit heaters, unit ventilators, and radiant heaters (3) Window or through-the-wall air conditioners, with or without heating of any type (4) Reverse-cycle, water- or air-cooled, terminal heat pumps (6) Electric or fossil fuel fired air-handling units or furnaces (7) Self-contained, air- or water-cooled, floor, ceiling, and rooftop air conditioners, and heat pumps (8) Ductwork and accessories, including flue stacks; and (9) Factory-integrated controls. Excludes (5) Wall sleeves
<input checked="" type="checkbox"/> D3060- Controls & Instrumentation	Includes controls and instrumentation for (1) Heating generating systems (2) Cooling generating systems (3) Heating/cooling air handling units (4) Exhaust and ventilating systems (5) Terminal devices (6) Energy monitoring and control, and (7) Building automation systems.
<input type="checkbox"/> D3070-Systems Testing and Balancing	Excludes (1) Piping systems testing and balancing, and (2) Air systems testing and balancing.
<input checked="" type="checkbox"/> D3090-Other HVAC Systems & Equipment	Includes (1) Special cooling systems and devices (2) Special humidity control (3) Dust and fume collectors (4) Air curtains (5) Air purifiers (6) Paint spray booth ventilation systems, and (7) General construction items associated with mechanical systems.

D-Services - Level 1 (Major Group Element)	
D40-Fire Protection - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> D4010-Sprinklers	Includes (1) Water supply equipment (2) Piping, valves and fittings, and (3) Sprinkler heads and release devices.
<input checked="" type="checkbox"/> D4020-Standpipes	Includes (1) Water supply equipment (2) Piping, valves and fittings, and (3) Cabinets and hoses.
<input checked="" type="checkbox"/> D4030-Fire Protection Specialties	Includes (2) Fire extinguisher cabinets. Excludes (1) Portable fire extinguishers.
<input checked="" type="checkbox"/> D4090-Other Fire Protection Systems	Includes (1) Carbon dioxide systems (2) Clean agent systems, (3) Foam generating systems (4) Dry chemical systems, and (5) Exhaust hood systems.

D4010 - Sprinklers: Inventory based on type of system and hazard level. Quantity is based on square foot of sprinklered area versus count of individual sprinkler heads.

D4020 - Standpipes: Inventory based on type of system and number of floors served.

D-Services - Level 1 (Major Group Element)	
D50-Electrical - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input checked="" type="checkbox"/> D5010-Electrical Service & Distribution	Includes (1) Primary transformers (2) Secondary transformers (3) Main switchboard (4) Interior distribution transformers (5) Branch circuit panels (6) Enclosed circuit breakers and (7) Motor control centers. Excludes: (8) Conduit and wiring to circuit panels.
<input checked="" type="checkbox"/> D5020-Lighting and Branch Wiring	Includes (1) Branch wiring and devices for lighting fixtures (2) Lighting fixtures (3) Branch wiring for devices and equipment connections (4) Devices, and (5) Exterior building lighting.
<input checked="" type="checkbox"/> D5030-Communications & Security	Includes (1) Fire alarm systems and (9) Security systems. Excludes (2) Call systems, (3) Telephone systems (4) Local area networks (5) Public address and music systems (6) Intercommunication systems and paging (7) Clock and program systems and (8) Television systems.
<input checked="" type="checkbox"/> D5090-Other Electrical Systems	Includes (1) Emergency generators (2) UPS (3) Emergency lighting systems (4) Power factor correction (5) Lightning and grounding protection systems (6) Raceway systems, and (7) Power generation systems.

D502001 - Electrical Branch Wiring: Quantity is based on facility square footage versus linear feet of wiring.

D5020 - Interior Lighting Equipment: Quantity is based on square foot of lit area and fixture density per 1,000 SF versus individual fixture counts.

D509003 - Grounding Systems: Replacement value of system based on facility square

footage as quantity versus individual quantification of sub-component parts.

D509004 - Lightning Protection: Replacement value of system based on facility square footage as quantity versus individual quantification of sub-component parts.

D509006 - Energy Management Control Systems: Replacement value of system based on facility square footage as quantity versus individual quantification of sub-component parts.

E-Equipment and Furnishings - Level 1 (Major Group Element)

E10-Equipment - Level 2 (Group Element)

Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> E1010-Commercial Equipment	Includes (1) Security and vault equipment (2) Teller and service equipment,(3) Registration equipment (4) Checkroom equipment (5) Mercantile equipment,(6) Commercial laundry and dry cleaning equipment (7) Vending equipment, and (8) Office equipment.
<input type="checkbox"/> E1020-Institutional Equipment	Includes (1) Ecclesiastical equipment (2) Library equipment (3) Theater and stage equipment (4) Instrumental equipment (5) Audio-visual equipment (6) Detention equipment (7) Laboratory equipment (8) Medical equipment, and (9) Mortuary equipment.
<input checked="" type="checkbox"/> E1030-Vehicular Equipment	Includes (1) Vehicular service equipment (2) Parking control equipment, and (3) Loading dock equipment.
<input type="checkbox"/> E1010-Commercial Equipment	Includes (3) Food service equipment Excludes: (1) Maintenance equipment (2) Solid waste handling equipment, (4) Residential equipment and (5) Unit kitchens.

E20-Furnishings - Level 2 (Group Element)

Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> E2010-Fixed Furnishings	Includes (1) Fixed artwork (2) Fixed casework (3) Window treatments (4) Fixed floor grilles and mats (5) Fixed multiple seating, and (6) Fixed interior landscaping.
<input type="checkbox"/> E2020-Movable Furnishings	Includes (1) Movable artwork (2) Furniture and accessories (3) Movable rugs and mats (4) Movable multiple seating and (5) Movable interior landscaping.

F-Special Construction and Demolition - Level 1 (Major Group Element)

F10-Special Construction - Level 2 (Group Element)

Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> F1010-Special Structures	Includes (1) Air supported structures (2) Pre-engineered structures, and (3) Other special structures.
<input type="checkbox"/> F1020-Integrated Construction	Includes (1) Integrated assemblies (2) Special purpose rooms, and (3) Other integrated construction.
<input type="checkbox"/> F1030-Special Construction Systems	Includes (1) Sound, vibration, and seismic construction (2) Radiation protection (3) Special security systems, and (4) Other special construction systems.
<input type="checkbox"/> F1040-Special Facilities	Includes (1) Aquatic facilities (2) Ice rinks (3) Site constructed incinerators (4) Kennels and animal shelters (5) Liquid and gas storage tanks, and (6) Other special facilities.
<input type="checkbox"/> F1050-Special Controls & Instrumentation	Includes (1) Recording instrumentation (2) Building automation systems, and (3) Other special controls and instrumentation.
<input type="checkbox"/> F1010-Special Structures	Includes (1) Air supported structures (2) Pre-engineered structures, and (3) Other special structures.

F20-Selective Building Demolition - Level 2 (Group Element)	
<input type="checkbox"/> F2010-Building Elements Demolition	Includes (1) Demolition of existing building components.
<input type="checkbox"/> F2020-Hazardous Components Abatement	Includes (1) Removal or encapsulation of hazardous building materials and components.

Site Elements

G-Building Sitework - Level 1 (Major Group Element)	
G10-Site Preparation - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> G1010-Site Clearing	Includes (1) Clearing and grubbing, and (2) Tree removal and thinning.
<input type="checkbox"/> G1020-Site Demolition and Relocations	Includes (1) Complete building demolition (2) Demolition of site components, and (3) Relocation of buildings and utilities.
<input type="checkbox"/> G1030-Site Earthwork	Includes (1) Grading, excavating, and fill to modify site contours (2) Soil stabilization and treatment (3) Site dewatering (4) Site shoring, and (5) Embankments.
<input type="checkbox"/> G1040-Hazardous Waste Remediation	Includes (1) Removal and restoration of contaminated soil.

G-Building Sitework - Level 1 (Major Group Element)	
G20-Site Improvements - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> G2010-Roadways	Includes Vehicular paving assemblies for (1) Paving sub-base and (2) Paving and surfacing, plus (3) Curbs and gutters (4) Rails and barriers (5) Painted lines, and (6) Markings and signage.
<input type="checkbox"/> G2020-Parking Lots	Includes Vehicular paving assemblies for (1) Parking lot paving and surfacing; plus (2) Curbs, rails, and barriers (3) Parking booths and equipment, and (4) Markings and signage.
<input type="checkbox"/> G2030-Pedestrian Paving	Includes (1) Paving and surfacing, and (2) Exterior steps.
<input type="checkbox"/> G2040-Site Development	Includes (1) Fences and gates (2) Retaining walls (3) Terrace and perimeter walls (4) Signs (5) Site furnishings (6) Fountains, pools, and watercourses (7) Playing fields (8) Flagpoles (9) Miscellaneous structures, and (10) Site equipment (for example, car wash, banking system, and theatre equipment located on the site).
<input type="checkbox"/> G2050-Landscaping	Includes (5) Planters (6) Other landscape features, and (7) Irrigation systems. Excludes (1) Fine grading and soil preparation (2) Topsoil and planting beds, (3) Seeding and sodding, and (4) Plantings.

G30-Site Mechanical Utilities - Level 2 (Group Element)	
<input type="checkbox"/> G3010-Water Supply	Includes: (4) Pumping stations, and (5) Water storage.
	Excludes: (1) Potable and non-potable water systems, (2) Well systems, (3) Fire protection systems,
<input type="checkbox"/> G3020-Sanitary Sewer	Includes: (4) Lift stations, and (5) Package wastewater treatment plants.
	Excludes: (1) Piping (2) Manholes, and (3) Septic tanks.
<input type="checkbox"/> G3030-Storm Sewer	Includes (4) Lift stations.
	Excludes: (1) Piping (2) Manholes (3) Catch basins (5) Retention ponds, and (6) Ditches and culverts.
<input type="checkbox"/> G3040-Heating Distribution	Includes: (4) Pumping stations.
	Excludes: (1) Steam supply (2) Condensate return, and (3) Hot water supply systems,
<input type="checkbox"/> G3050-Cooling Distribution	Includes (3) Pumping stations, and (4) Cooling towers on site.
	Excludes: (1) Chilled water piping, and (2) Wells for cooling.
<input type="checkbox"/> G3060-Fuel Distribution	Includes: (3) Storage tanks
	Excludes: (1) Piping, (2) Equipment
<input type="checkbox"/> G3090-Other Site Mechanical Utilities	Includes (1) Industrial waste systems, and (2) POL (Petroleum Oil and Lubricants) distribution systems.

G-Building Sitework - Level 1 (Major Group Element)	
G40-Site Electrical Utilities - Level 2 (Group Element)	
Level 3 (Individual Elements)	Levels 4 and 5 - (Components and Sub-Components)
<input type="checkbox"/> G4010-Electrical Distribution	Includes: (1) Substations.
	Excludes: (2) Overhead power distribution (3) Underground power distribution (4) Ductbanks and (5) Grounding
<input type="checkbox"/> G4020-Site Lighting	Includes: (1) Fixtures and transformers, (2) Poles.
	Excludes: (3) Wiring conduits and ductbanks, (4) Controls and (5) Grounding
<input type="checkbox"/> G4030-Site Communications and Security	Includes (2) Site security and alarm systems
	Excludes: (1) Overhead and underground communications, (3) Ductbanks, and (4) Grounding.
<input type="checkbox"/> G4040-Other Site Electrical	Includes: (2) Emergency power generation.
	Excludes: (1) Cathodic protection.
G90-Other Site Construction - Level 2 (Group Element)	
<input type="checkbox"/> G9010-Service and Pedestrian Tunnels	Includes (1) Constructed service and pedestrian tunnels and (2) Prefabricated service and pedestrian tunnels.
	Excludes: (3) Trench boxes
<input type="checkbox"/> G9090-Other Site Systems	Includes: (1) Snow melting systems

1.2 Component Assemblies and Area Quantification Methods

For facility components that are not visible, have a long service life, or are excessively time consuming to quantify as individual records, we plan to inventory these components as component assemblies. We will quantify these components using square foot areas (floor area, roof area, facility area) versus linear measurements or each. Unit costs used to calculate current replacement values for these assemblies have been adjusted to a square foot basis from costs per linear foot or each. Note that selected inventory components and sub-components will be excluded from the Scope of Work based on their hidden construction or low replacement value.

1.3 Inventory Components Excluded from the Scope

There are a few UNIFORMAT II inventory categories that are typically excluded from our assessments. Items listed below are typically excluded due to (1) the difficulty to gain access to observe, (2) the effort to inventory/assess relative to the asset value, (3) the sub-element or component is an activity rather than an asset, (4) the sub-element or component is considered equipment or furnishings, and not typically considered real property, or (5) the sub-element or component does not have a readily definable replacement value or design life.

These categories include interior components that are not visible without destructive access, exterior components that are buried beneath grade, components typically included with other components as part of a system, and components that have a low replacement value compared with the labor effort and cost to obtain the inventory.

Listed below are components that we typically exclude from our assessments. Should the Owner desire that some of these items be included in the assessment scope of work, we can modify our standard scope to accommodate these requests. Should we modify our standard assessment scope to include additional components, we reserve the right to review and modify our fee proposal.

Inventory Elements, Sub-Elements and Components Excluded from the Scope of Work

- B201003 - Exterior Enclosure, Insulation and Vapor Retarders
- B201004 - Parapets. Included as part of Exterior Wall Enclosure.
- B203008 - Exterior Door Hardware. Included value in the door assembly.
- B301003 - Roof Insulation and Fill. Not visible.
- C101008 - Interior Joint Sealant
- C103003 - Marker Boards and Tack Boards
- C103004 - Identifying Devices (Interior Signage)
- C103005 - Lockers
- C103006 - Shelving
- C103011 - Fire-stopping Penetrations.
- C103012 - Sprayed Fire Resistive Materials

D109005 - Operable Scaffolding
D202005 - Plumbing Pipe Insulation and Identification
D203003 - Floor Drains
D203005 - Sanitary Waste Pipe Insulation and Identification
D204004 - Rainwater Pipe Insulation and Identification
D209004 - Pool Piping and Equipment
D503002 - Telecommunications Systems
D503002 - Nurse Call Systems
D503007 - Television Systems
E1010 - Commercial Equipment
E1020 - Institutional Equipment
E1090 - Other Equipment: Excludes inventory and assessment of equipment related to built-in maintenance equipment; food service, waste handling, and residential equipment; unit kitchens; darkrooms; athletic, recreational, and therapeutic equipment; planetarium, observatory, and agricultural equipment; and other specialized fixed and moveable equipment.
E20 - Furnishings: Excludes inventory and assessment of all fixed and moveable furnishings.
F - Special Construction and Demolition
G - Building Sitework

Note that selected inventory elements will be excluded from the Scope of Work as described herein based on their hidden construction or low value. Various line items within the UNIFORMAT II catalog are combined as assemblies, and the detailed components which comprise these assemblies are also excluded from the inventory scope.

1.4 Understanding of the Scope of Work

We propose to include field observations to classify and quantify the inventory of building elements, sub-elements, and components, determine their physical and operating condition, and determine their remaining useful service life. We will estimate costs for short- and long-term repairs and replacements, and then combine this information into a multi-year Capital Improvement Plan based on facility and component priorities.

The FCA will be conducted based on visual, non-destructive inspection techniques, interviews of persons knowledgeable regarding the construction and maintenance history of the facilities, and review of existing building data and maintenance history.

1.4.1 Facility Access and Escorts

As is always the case, accessibility and security will be a critical issue for field activities. We will work with the Client and agree to specific procedures for gaining access to each building area to conduct field assessment activities. Assurance of smooth access with flexibility and ease will play a large role in the time required for the field team to complete their assessment.

Please note that our assessment teams are typically comprised of multiple individuals who will be conducting the inventory and assessment of components of different building systems (such as exteriors, HVAC, plumbing and electrical systems, fire protection systems, etc.) at the same time. During the FCA, team members often split apart to focus on data collection from different systems they each are assigned.

1.5 Work Tasks Included in the FCA

Our assessments will be performed by a team of architects, engineers, and facility specialists experienced in the major building and site systems we assess. The specific tasks we plan to carry out to meet the requested scope of work is listed below:

1.5.1 Stage 1 - Project Launch and Planning Stage

- 1.) Listen to our Client to clearly understand their requirements. We always seek Client involvement and engagement in the launch phase so that we can truly align and begin the partnering relationship based on full understanding of Client requirements and needs.
- 2.) Send a Kick-Off Meeting Questionnaire and solicit Client response to questions related to scope, schedule, access, background data availability and other planning topics.
- 3.) Using the Kick-Off Meeting Questionnaire as an agenda outline, conduct Kick-Off Meeting to confirm Client's and Terracon's understanding of the project requirements, schedule, and deliverables.
- 4.) Develop a preliminary field assessment schedule for discussion during the Kick-Off Meeting. Following the Kick-Off Meeting, update the preliminary schedule so that it meets both the project performance requirements and the Client's constraints.
- 5.) Configure FCA software to establish the facility hierarchy for analysis and reporting purposes based on its association to a hierarchical list of facility assets.
- 6.) Review and confirm System Configuration Settings in the FCA software to support Client-specific requirements.
- 7.) Conduct internal Terracon Pre-Mobilization Calibration Meeting to review standard field data collection procedures, special data collection fields, and project specific requirements for inventory collection.

1.5.2 Stage 2 - Stakeholders Interview and Background Data Collection

- 8.) Interview the primary stakeholders, facilities maintenance supervisor, and/or building engineers knowledgeable regarding the construction and maintenance history of each facility.
- 9.) Document known deficiencies identified by Client stakeholders and staff.
- 10.) Document the future expectations of each property and any known plans for Plant Adaptation.

1.5.3 Stage 3 - Investigative Stage

- 11.) Gather and review existing background information that describes the as-built construction of a facility, its repair and maintenance history, and plans for future repair and replacement projects.

1.5.4 Stage 4 - Field Data Collection Stage

- 12.) Record data describing the general construction of each facility, either from background information provided to us or from field observations. The data will include descriptive narratives describing the major construction features and building systems that comprise each facility, database field entries, and photos.
- 13.) Develop and quantify the inventory of visually accessible building components, equipment, and infrastructure assets of each property. Take digital photographs to document existing field conditions.
- 14.) Rate the existing condition of inventoried components to calculate an estimated Remaining Service Life.
- 15.) Perform a non-destructive, visual condition assessment of each facility to identify component-level deficiencies and life-cycle conditions. Record data describing observed deficiencies, called Work Items. Evaluate Work Items for potential repair or replacement.

1.5.5 Stage 5 - Work Item Cost Estimating

- 16.) Estimate the costs of building element repairs and replacements identified during the assessment.
- 17.) Combine Work Items into logical Work Packages for consideration as "Capital Improvement Projects."

1.5.6 Stage 6 - Data Analysis and Forecasting

- 18.) Calculate a Facility Condition Index (FCI) for each building and for individual building systems that comprise each building.
- 19.) Forecast requirements for maintenance costs and future capital repair and replacement expenditures over multi-year study period.

1.5.7 Stage 7 - Reporting and Presentation Stage

- 20.) Provide a portfolio level written report of findings of our observations, conclusions, and recommendations, with supporting data lists, cost estimates and photos.
- 21.) Present the findings of the Assessment to appropriate Client staff.

The work tasks outlined above are described in greater detail below, grouped by Work Stage.

1.6 Work Stage 1 - Project Launch and Planning

Preparation is the most critical task for the successful completion of any project. Upon receipt of a contract award and/or Notice to Proceed, Terracon's senior management will begin to carry out the tasks listed below.

1.6.1 Prepare FCA Kick-Off Meeting Questionnaire

Soon after receiving authorization to proceed, Terracon will prepare a FCA Kick-Off Meeting Questionnaire and send to Client primary contact for this project, The document includes questions grouped in the following categories:

- Client Goals and Objectives
- Client Contacts
- Escorts
- On Site Interviews
- Existing Background Data
- Safety and Security
- Scheduling and Site Access
- Known Site Restrictions
- Invoicing

We request that Client provide written answers to the questions and return the completed questionnaire to us in a timely manner. The questionnaire will serve as the basis of the agenda for our FCA Kick-Off Meeting Teleconference.

1.6.2 Conduct FCA Kick-Off Teleconference

Terracon's Project Manager will work with Client's primary point of contact for this project and schedule an FCA Kick-Off Teleconference. These meetings are meant to include key project staff from both organizations.

The purpose of the meeting is to confirm planning assumptions and answer any questions regarding Terracon's proposed Scope of Work. During this meeting, we will reiterate our proposed scope, clarify issues, remove potential obstacles, and validate the end goals and deliverables desired by Client.

During the Kick-Off teleconference we will review safety and security requirements, including any supplementary training, badging, or related procedures as part of conducting the on-site portion of the work under this contract. We will expand on the end goal and drill down into the desired details and output for the assessment, including performance schedule, options for data import/export with other software platforms the Client may use, including any Computerized Maintenance Management System (CMMS), forecasting metrics such as inflation allowances, and Client work prioritization factors based on the building type or function. During the meeting, we will identify Client staff responsible for arranging site and building access during the assessment project.

We will present a preliminary field assessment schedule for discussion during the Kick-Off Meeting. Following the Kick-Off Meeting, we will update the preliminary schedule so that it meets both the project performance requirements and the Client's constraints.

We plan to conduct the Kick-Off meeting via on-line video conference a few weeks in advance of our proposed mobilization to begin on-site data collection. We will rely on the Client to invite appropriate members of its project team to attend the meeting. FCA Kick-Off meetings typically last about one hour.

1.6.3 Establish Facility Hierarchy

Data stored in Paragon will be organized for analysis and reporting purposes based on its association with a hierarchical list of facility assets. We will work with the Client during the Project Planning Phase to configure the FCA software to establish the location hierarchy in Paragon.

The top tier of the hierarchy is the Owner of the facilities. Depending on Client requirements, we can configure additional hierarchy levels to group facility assets in a manner that supports the Client's navigation and reporting requirements.

1.6.4 Background Data Review and Pre-Survey Data Population

Information describing each facility name, number, location, size, and year of construction will be drawn from information provided to us by the Client. We will review the background data provided to us for reasonableness and accuracy and may choose to pre-populate our software with this data prior to going to the field. Facility "asset" information will be populated in Paragon and downloaded to field data collection tablets prior to the start of the on-site data collection activity.

1.6.5 Pre-Survey Staff Calibration

Prior to mobilizing to the site, we will convene a meeting of Terracon's On-Site Assessment Team(s) to calibrate each assessor on the specific scope requirements of the project. We will review standard field data collection procedures, special data collection fields, and project specific requirements for inventory collection per UNIFORMAT II levels.

1.7 Work Stage 2 - Stakeholders Interview and Background Data Collection

Interview the facility manager and/or lead maintenance personnel for each site who may have knowledge about the property to gather detailed information about usage, failed systems, frequent repairs, building's construction background, and the recent history of facility repair and maintenance activities at each site. We request that the name, telephone number and e-mail address of our primary site contacts be provided to us prior to our visit to each site.

Information that is beneficial to our inventory and assessment work may include:

- Equipment lists and nomenclature.
- Major repair, replacement or retrofit project data.
- Reports of previous, recent facility investigations.

- Data regarding recent costs for component/system replacements.
- Current facility system problems or concerns.
- Current year planned facility projects.
- Facility system warranty information.

We will document background data provided and use it as appropriate while conducting our assessments. Our interviews will be focused on collecting information from the Client that describes known deficiencies identified by Client stakeholders and staff. We also need to discover the future expectations for the use of each property and any known plans for Plant Adaptation.

We will assume the data provided to us is accurate without third party verification unless our visual observations conflict with the background data provided.

1.8 Work Stage 3 - Investigative Stage

Terracon requests that the Client provide us with readily available and pertinent background information describing the construction and maintenance history of the facilities included in the Scope of Work, including information regarding hazardous materials. We ask that data available in electronic format be provided to us as soon as possible before we mobilize to the site.

To minimize delays while on site, we ask that any important documentation that is only available in hard copy be gathered and made available for our review immediately after our initial mobilization to the first site. For hard copy documentation, especially building plans, we ask that the Client assemble the documentation in one central area of one facility and provide temporary workspace for our assessors for document review. We request the ability to retain such documents until the completion of the project or have copies of relevant documents made available for our use.

Information obtained during the document review will be used as best supports our work and may be recorded in Paragon prior to initiating the site assessments. During the on-site walk-throughs, data obtained from background documents will be verified. Part of our evaluation will include an evaluation of major building systems for obvious and apparent indications of code non-compliance.

1.9 Work Stage 4 - Field Data Collection

1.9.1 Documenting Facility Data

We will record data describing the general construction of each facility, either from background information provided to us or from field observations. The data will include descriptive

narratives, database field entries, and photos.

We will include a narrative Asset Summary and Asset History for each facility included in the assessment and include one or more photos of exterior building elevations. We will record data describing the predominant type of construction, number of stories, year built, and construction/addition history (if known).

We will use this data stored in Paragon to prepare our report deliverables. The FCA report will contain an asset report for each facility assessed. The asset report page will contain the date each facility was assessed. The facility information will include the facility address, facility analysis category (FAC) code, year built, asset size, facility replacement value, and the facility condition index (FCI) calculated for each facility.

1.9.2 Documenting Inventory

Our assessors will walk through each of the accessible spaces in each building included in the Scope of Work to make visual observations and to record the inventory of elements, sub-elements and components that make up each building.

We will walk over low-sloped roofs and steep sloped roofs with a pitch of 4/12 or less. Roofs with a pitch greater than 4/12 will be observed from the ground, adjacent buildings, or man-lifts if provided. We will rely on Client to provide ladders or man-lifts to gain access to rooftop areas where internal access or fixed ladders are not provided. We do not intend to crawl through attics and crawl spaces, as these may be defined as confined spaces.

Each assessor will record his/her observations describing the inventory and condition of the facility components. Data will be recorded in the field using Paragon DC installed on iPads.

Data will be organized and reported using the UNIFORMAT II coding methodology in general accordance with *ASTM E1557-Standard Classification for Building Elements and Related Sitework-UNIFORMAT II*. "The classification serves as a consistent reference for analysis, evaluation, and monitoring during the feasibility, planning, and design stages of buildings. Using UNIFORMAT II ensures consistency in the economic evaluation of building projects over time and from project to project." (ASTM E 1557-05)

To collect and record our inventory information, the construction of each building will be broken down into its various components (Level 5), organized within sub-elements (Level 4), individual elements (Level 3), group elements (Level 2) and major group elements (Level 1). In a standard FCA, we typically generate most of the facility inventory at Levels 4 or 5. An example is shown below that describes the five levels of detail associated with a building component. This example is for a four-ply BUR covering with gravel surface coating.



For each component or sub-element, we will record data describing its size or quantity and its year of installation (age). Inventory may be grouped by Section, where appropriate, based on differences of physical, operational and age characteristics. A current replacement value and estimated design life is linked to each component and stored in the Paragon Cost Catalog. This provides the information necessary to forecast component renewals by replacement of each building component into the future.

Photos will be taken of inventory items where it improves our ability to document make, material, finish, size, configuration, or location of the item.

1.9.3 Condition Assessment

The condition of each inventoried component will be assessed and documented after it is inventoried using our Direct Condition Rating (DCR) method, based on standard rating definitions (see **Figure 1**).

The ratings will be used (along with other data) to forecast the Remaining Service Life of each inventoried component used in capital renewal forecasting. Paragon automatically records the date of the assessment and the individual who performed it.

Where appropriate, we will record notes specific to the condition rating. Once the record is saved, the software will display the numerical index linked to the condition rating that is used in calculation of Remaining Service Life as a factor of the original design life of the component.

Table 1- Direct Condition Rating (DCR) Definitions		
Rating	SRM Needs	Rating Definition
Green	Sustainment consisting of possible preventive maintenance (where applicable)	Entire component section or component section sample is free of observable or known distresses. Component section is less than one year old
	Sustainment consisting of possible preventive maintenance (where applicable) and minor repairs (corrective maintenance) to possibly few or some subcomponents.	No component section or sample serviceability or reliability reduction. Some, but not all, minor (non-critical) subcomponents may suffer from slight degradation or few major (critical) subcomponents may suffer from slight degradation. Component section greater than one year old Slight or no serviceability or reliability reduction overall to the component-section or sample. Some, but not all, minor (non-critical) subcomponents may suffer from minor degradation or more than one major (critical) subcomponent may suffer from slight degradation.
Amber (+)	Sustainment or restoration to any of the following: Minor repairs to several subcomponents; significant repair, rehabilitation, or replacement of one or more subcomponents, but not enough to encompass the component-section as a whole, or combinations thereof.	Component-section or sample serviceability or reliability is degraded but adequate. A very few major (critical) subcomponents may suffer from moderate deterioration with perhaps a few minor (non-critical) subcomponents suffer from severe deterioration
Amber		Component-section or sample serviceability or reliability is definitely impaired. Some but not a majority. Major (critical) subcomponents may suffer from moderate deterioration with perhaps many minor (non-critical) subcomponents suffering from severe deterioration.
Amber (-)		Component-section or sample has significant serviceability or reliability loss. Most subcomponents may suffer from moderate degradation or a few major (critical) subcomponents may suffer from severe degradation.
Red (+)	Sustainment or restoration required consisting of major repair, rehabilitation, or replacement to the component-section as a whole.	Significant serviceability or reliability reduction in component-section or sample. A majority of subcomponents are severely degraded and others may have varying degrees of degradation.
Red		Severe serviceability or reliability reduction to the component-section on or sample such that it is barely able to perform. Most subcomponents are severely degraded
Red (-)		Overall component-section on degradation is total. Few, if any subcomponents salvageable. Complete loss of component-section or sample serviceability.

Figure 1-DCR Definitions

1.9.3.1 Calculation of Remaining Service Life

A Remaining Service Life (RSL) is calculated for each component based on the DCR of the component and the date it is rated. The Rating Index is multiplied by the Estimated Service Life (also referred to as the Design Life) for each component, as defined in the Paragon Cost Catalog.

The product of this calculation determines the estimated Remaining Service Life (RSL) for each component, from the data it is rated. The ratings will be used (along with other data) to forecast the Remaining Service Life of each inventoried component used in capital renewal forecasting.

1.9.3.2 Ratings for Components Beyond their Estimated Service Life

Terracon will use a different set of ratings for building components that are determined to be beyond their Estimated Service Life (ESL), often called Design Life. These ratings are encoded with the prefix of BSL, to indicate the component is beyond its service life based on age. BSL ratings have been created for each standard rating, except for G+. A G+ rating indicates the component is less than one year old, so the BSL ratings do not apply.

BSL ratings are linked to a Direct Rating Index of one half the percentage of the standard rating of the same level. For example, a G- rating has a Direct Rating Index of 70% of the inventoried component's ESL, whereas a BSL G- rating has a Direct Rating Index of 35% of the inventoried component's ESL. These differences are intended to account for the impact of age on a component, while still considering its observed physical condition.

1.9.3.3 Ratings for Components Abandoned in Place

Another rating that may be used in the field is called Abandoned -in-Place, Non-Functional. This rating, abbreviated as AIP-NF, is used to document the condition of components that assessors learn have not been working for some time, and are not planned for repair or replacement in accordance with information provided by our escorts.

The Direct Rating Index for a component rated AIP-NF is zero (0), which sets the Estimated Remaining Service Life to zero years. As a best practice, Work Items are created for most components rated AIP-NF, to include costs for demolition and disposal. The Current Replacement Value for components identified as AIP-NF must be overridden to \$0.00 in the inventory to ensure that no costs are linked to the component for future replacement.

1.9.3.4 Age-Based Ratings

For inventoried components that (1) cannot be seen by visual observation without destructive access methods and (2) no information describing the condition of the component has been provided by either client background data or by interviews with escorts, the component will be rated as AB-RSL. This stands for Age-Based Remaining Service Life. Components rated as AB-RSL will have an estimated RSL calculated as being the Estimated Service Life minus the chronological age of the component. The Rating Risk priority will be automatically set by the software based on age calculations.

This rating is typically only applied to inventory components that cannot be visually observed. Examples would include Branch Wiring, Domestic Water Distribution Piping, Domestic Sanitary Piping as examples.

1.9.4 Documentation of Work Items

As we observe and document our inventory and condition assessment findings, we will record data describing observed deficiencies. These are called Work Items. Work Items will be evaluated in the field for potential repair or replacement. Work Items are linked to Budget Categories and Budget Accounts.

For each Work Item, we will assign a Work Item Name, and describe the Distress Type and Work Category. We will prepare a narrative Problem Statement and Solution Statement for each deficiency describing the nature of the deficiency and our proposed method to mitigate the problem. We will describe potential code issues if they are observed on any Work Item.

Terracon will assign a Priority Rating and Impact Type to each deficiency. Priority ratings will be assigned in a consistent manner across all facilities and are based on the knowledge and experience of the assessor. Priority ratings are evaluated based on the ability to operate each building component in a safe manner and the anticipated potential for failure of systems or components. Forecasts will be made of the improved condition of the component after Work Items are completed, providing a simple ability to calculate Return on Investment.

Any observation of "immediate" life/safety concerns will be brought to the attention of the on-site Client representative and Client's Project Manager.

We will take digital photographs and link them to each Work Item we record in the field. Selected photos will be used in development of report deliverables. Our clients value these photos as they can be used to help visualize the need for a repair project while establishing a "snapshot-in-time" record of an identified deficiency that can be used later to determine if a known condition may have worsened.

Deficiencies with a repair or replacement cost less than \$3,000 will not be included as Work Items, but rather will be considered as part of routine maintenance.

1.9.5 ADA Compliance Assessment

As part of the FCA, we will document any non-conformances we identify related to the accessibility of public areas of the buildings as defined by the American with Disabilities Act of 1990 (ADA) and subsequent revisions. We will observe the public areas of each building to determine whether general conformance with applicable requirements has been met.

The scope is limited to the determination of general compliance with the physical attributes of the property and is not considered to be a full survey. No measurements will be collected as

part of this limited ADA assessment.

Our evaluation will be limited to the items addressed in the Uniform Abbreviated Screening Checklist for the 2010 ADA per ASTM E2018-15 format. Observed non-conformance with the specific disability guidelines will be noted as Work Items within the FCA software. Our evaluation will not include testing of decibel levels of fire alarms, measuring tolerances, light level recording, or other disruptive tests.

1.9.6 Asset Tagging

Our assessors will apply/affix semi-permanent tags with barcodes on or near major HVAC, electrical, and plumbing equipment. Barcode values will be recorded in the field and entered into Paragon. Terracon will consult with Client to confirm equipment types to be tagged and specific location of affixed tags.

1.9.7 Field Data Uploads and Data Quality Control

Data collected in the field will be uploaded at the end of each day from our field data collection tablets to the FCA application software housed in the Web. Built-in quality control checks are run from within the field data collection software to ensure data integrity and quality prior to uploading data to the Web application.

1.10 Work Stage 5 - Cost Estimating

Once the component inventory is documented and the as-built condition has been assessed, we will create cost estimates to execute Work Items based on documented problem and solution statements.

We intend to use in-house cost databases developed by Terracon. Costs in these databases include common repair and replacement unit costs derived from industry standard data sources, such as *RSMean Online*, years of facility assessment cost estimating, contractor estimates and corporate research.

Cost estimates will be generated at a "preliminary planning" level of detail and should be considered as order of magnitude estimates for potential work without design or bid estimates, and with no information regarding the method of execution, time of year to conduct the work or schedule to complete the work. Estimates we enter will reflect direct costs for material and labor.

Soft-cost markup factors for inflation, geography, contractor overhead and profit, and owner's design fees, supervision, and contingencies will be applied to the direct costs from settings stored in Paragon to generate fully burdened cost estimates. By storing the soft cost mark-ups separately from the raw costs, Client can modify cost estimates in the future should local conditions change.

1.11 Work Stage 6 - Data Analysis and Forecasting

Following completion of the field data collection, data review, and Work Item cost estimating, we will use Paragon to analyze the data and prepare reports to meet the Scope of Work requirements for deliverables. Our data analysis includes the preparation of Requirements Analyses over a ten (10) year period.

The Requirements Analysis will include both cyclical renewal needs and non-cyclical repairs and upgrades. Cyclical needs, which include deferred renewal and capital repairs, are components that require replacement at regularly scheduled intervals. Non-cyclical needs include one-time repairs to extend the life of a component and upgrades associated with issues such as accessibility and building and safety code non-compliance.

The Requirements analysis allows the user to identify all backlog and future costs linked to an Asset or a group of Assets over a defined analysis period. Requirements Analysis does not consider funding that may be available over the analysis period, but rather, focuses only on costs for repairs and replacements in the year it is first recommended for remedial action.

1.12 Work Stage 7 - Reporting and Project Deliverables

1.12.1 Preliminary Work Item List

Soon after the field work is complete and data has been reviewed for quality control purposes, we will provide Client with a list of Work Items that were identified in the field. We will group Work Items together in logical groupings that may be considered as Capital Improvement Projects. As a preliminary list only, the Work Items will not include estimated costs for suggested repairs or replacements.

1.12.2 Report Deliverables

Terracon will submit a report summarizing the FCA and our findings at the end of the project. The report will be provided in electronic file format.

We will utilize the data stored in Paragon, as well as the results of various data analyses we will run using the software to prepare our report deliverables. Our reports will include a narrative overview of our work, plus data attachments extracted from Paragon and stored in either in .xls (Excel), .pdf (Adobe) or .doc (Word) file formats.

We will prepare a draft report to be reviewed by Client. Following Client's review of the draft report, we will make any modifications that may be necessary and issue a Final Report. Our report will include the following sections and attachments.

1.12.2.1 Report Narrative

The Report will include an Executive Summary of our work and our findings. The report

will be a narrative describing the purpose and scope of the work, type of assessment, assessment methodology and our evaluation of the overall condition, corrective actions, and estimated costs for maintenance, repair, and replacement of facility components over the analysis study period. We will include summary and detailed spreadsheet data and graphs depicting any requirements, budgets and forecasts generated as part of the data analysis.

1.12.2.2 Data Reports

In addition to the narrative report, we will provide data extracted from Paragon that describes our findings in detail.

- **Appendix A - Facilities List**
Includes the final list of facilities included in the Scope of Work.
- **Appendix B - Facilities List ranked by Facility Condition Index (FCI)**
List of facilities ranked by FCI, high to low. Includes facility size, Detailed Replacement Value and Current Backlog Impacting FCI.
- **Appendix C - Asset Summary and History**
Asset per page. Provides overall summary of the Asset and its condition, one asset per page. Includes Asset photograph, FCI, and narratives for Asset Summary.
- **Appendix D - Inventory Summary**
Provides a listing of all inventory items in each asset in a hierarchical structure based on UNIFORMAT II Classification format. Provides data for each component included in the inventory, including Year Installed, Estimated Service Life, Condition Rating, Remaining Service Life, Quantity and Current Replacement Value.
- **Appendix E - Work Item Summary**
Includes a summary of each of the Work Items generated during the project, grouped by building.
- **Appendix F - Work Item Detail Reports**
Organized by Work Item ID; one Work Item per page.
- **Appendix G - Ten-Year Inventory Recapitalization List**
Includes a summary list of components scheduled for replacement in the next ten years. Data is grouped by forecasted year of replacement, and then by facility.
- **Appendix H - Facility Asset Management Glossary of Terms**
Includes definitions of various terms used throughout the Facility Asset management industry.

Photo images will be included in many of the various reports included in the Data section of the deliverable.

1.12.3 Transfer of Paragon Subscription to Client

In addition to our narrative report of findings, we plan to transfer a subscription to the Paragon software to the City. The subscription includes an integrated, companion field data collection

application called Paragon Data Collector (DC) at no additional charge.

Paragon is a web-based facility condition assessment and capital planning asset management software product used to document the inventory of facility and site assets, evaluate current conditions, estimate cost to repair deficiencies, forecast asset deterioration, and prepare sustainment budgets. Paragon meets each of the requirements as stated in the RFP to serve as a Business Intelligence platform that conveys real-time asset FCI degradation scores that can be filtered, scaled, and compared across buildings and asset mixes.

The software will be loaded with the data collected during the FCA, plus all report data we generate in .pdf or Excel spreadsheet formats.

There are no limits to the number of users a Client can assign to access the software.

The software solution will enable the City to access live data sets and reports that provide asset inventory descriptions and condition ratings, current replacement values, remaining service life calculations, deficiency Work Items with repair or replacement cost estimates, and capital planning forecast recommendations based on work priorities and remaining service life. This provides the City with the capability to update data populated in the database by Terracon during the baseline assessment project.

1.12.4 End-User Software Training

After delivery and acceptance of final reports, Terracon will train selected Client staff to enter/update/analyze data and run/export an array of reports from the Paragon software. Training can be provided for both field maintenance staff, cost estimators, planners, and management staff. Training can be tailored to meet Client-specific requirements. The topics we cover in our start-up training session are listed below in **Table 1**.

Topic	Applicability		
	General	Tablet	Web App
Overview of the Software	X		
Log In and System Configuration			X
Data Uploads			X
User Assignment and Security			X
Location Hierarchy			X
Facility Assets			X
Inventory		X	X
Condition Assessment		X	X
Work Items		X	X
Work Item Cost Estimating			X
Work Packaging			X
Analysis - Requirements			X
Analysis - Budgets			X
Analysis - Forecasting			X
Reporting			X

Table 1 -Software Start-up Training Agenda

Training is proposed to be provided via on-line meetings and software demonstrations using Client’s data collected and analyzed during the FCA. When provided remotely, training is typically divided into three, two-hour sessions over the course of multiple days that mutually support both Terracon’s and the City’s schedules. Support to be Provided by Client

Projects of this size are most successful when the Consultant and the Client enter into a partnering agreement in support of the project’s goals and objectives. As a partner, the Client can reduce non-productive field time, and enhance data collection accuracy by providing support to Terracon during the project.

The areas where we anticipate Client support are listed below.

- Assignment of Project Manager
- Attendance at Kick Off Meeting
- Advance Notification of Site Visits
- Facility Escorts and Access
- Scheduling On-Site Interviews
- Providing Background Data for Review

We assume the Client will appoint a Project Manager to represent their interests for this project. Responsibilities will include project organization, and assistance in scheduling all meetings

required under the Contract.

The Client's Project Manager will participate in status teleconferences during field work, and will assist Terracon obtain identification badges, vehicle passes and/or site access permits. The Project Manager will be responsible for arranging access within any secured building areas. Other requirements may include arranging for any Contractual provisions for the Client to furnish materials, equipment and/or labor, and the review and approval of deliverables and Terracon invoices.

2 Project Schedule

A preliminary project schedule will be developed and forwarded to the Client for discussion during the Project Kick Off Meeting. The preliminary schedule will include estimated milestones and date for delivery of the draft report of findings. We will develop a management plan specific to the project and will monitor it routinely to ensure resources are efficiently allocated, costs are controlled, and progress is maintained. The Client will be kept abreast of scheduled plans as necessary. If problems arise, the Client's Project Manager will be informed as quickly as practical.

We typically require a period of 30 days from the date of contract execution to conduct project planning activities. We will conduct our Kick-Off meeting during this 30 day planning period. Client is also responsible to provide background information to Terracon during this period to provide sufficient time for review prior to mobilizing to the field.

Once we mobilize to the field, we anticipate completing the inventory data collection in 4 to 6 weeks. We may demobilize after completing the data collection to conduct Work Item cost estimating and data quality control reviews and updates. We anticipate an additional week after completing the field data collection at the last site to complete data quality reviews, updates, and Work Item cost estimates.

Following final review and acceptance of the field data, we will prepare our draft report of findings within two weeks of completing the final data review. The draft report will be delivered to Client for review and comment. Following receipt of Client review comments, we can typically make necessary changes and issue a Final Report within one week.

Appendix C - Scope of Work

Facilities Master Plan City of Burleson

This document describes our approach, methodology and Scope of Work to conduct a Facilities Master Plan (FMP) of facility assets owned and managed by the City of Burleson TX ("Client"). It describes the tasks we plan to perform and the resulting deliverables from our work. These FMP services will be subcontracted to and performed by Parkhill.

1 Project Information

1.1 Project Description.

The Project consists of professional services to prepare a facilities master plan (Study) for city facilities and departments. Facilities included in the Study are attached as **Appendix A - Facilities List**. The Study will evaluate the needs, space requirements and potential costs for recommended capital improvements over a 10-year planning timeframe.

1.2 Site.

Not applicable.

1.3 Project Construction Budget.

Not applicable.

2 Scope of Services

2.1 Facilities Master Plan

- 2.1.1 Collect base data including staffing levels, site/floor plans, and review existing projects and studies, and coordinate our work with external consultants working on concurrent studies that impact this Study.
- 2.1.2 Tour each facility with staff to document existing conditions related to space utilization and function.
- 2.1.3 Consult with users to obtain input regarding facility needs related to space and function and establish design vision and performance criteria.

-
- 2.1.4** Quantify the spatial requirements for facilities (square feet) and site development (acreage) considering the intended functions.
 - 2.1.5** Determine specific space requirements by identifying required spaces, establishing sizes and adjacency relationships, establishing efficiency and grossing factors, and documenting special requirements such as structural, mechanical, electrical, lighting, acoustical, FF&E, technology, and security.
 - 2.1.6** Visit up to 3 potential sites and review available data and drawings to evaluate existing site conditions and physical characteristics and identify constraints and opportunities that may impact development such as access, views, building organization, circulation, parking, topography, drainage, and available utilities.
 - 2.1.7** Evaluate alternatives and development options for capital improvements to address current and future facility needs including renovation, expansion/additions, relocation, or new facility construction.
 - 2.1.8** Prepare conceptual drawings based on the programming and site evaluation including diagrammatic blocking floor plans illustrating the layout of major functional spaces, and a site master plan illustrating the layout of buildings, site access, circulation, parking, and other site development requirements.
 - 2.1.9** Develop a list of recommended improvements with conceptual budgets.

2.2 Deliverables

- 2.2.1** Summary presentation report documenting analysis, findings, and recommendations of the Study including needs analysis, space programming, site evaluation, and conceptual drawings.

2.3 Exclusions

- 2.3.1** Services specifically excluded from our scope of services include the following:
 - Topographic and Boundary Surveys
 - Entitlement, Platting, Easements, and Permitting Services
 - Geotechnical Investigations and Soil Reports
 - Construction Materials Testing
 - Asbestos & Hazardous Material Studies
 - Environmental, FEMA/Floodplain, and Traffic Studies

3 Schedule

- 3.1** Based on the proposed scope of work, we anticipate a 4-month project duration from your authorization to proceed. Parkhill will render its services as expeditiously as is consistent with professional skill and care. During the Project, unanticipated events may impact the Project schedule. Changes to the schedule may become necessary due to changes in scope or other circumstances beyond the Parkhill's control.