CITY OF COPPELL

CONSULTING ENGINEERS CONTRACT

STATE OF TEXAS §
KNOW ALL BY THESE PRESENTS §
CITY OF COPPELL §

THIS ENGINEERING SERVICES CONTRACT**,** hereinafter referred to as "Contract," made, entered into, and executed this the ___day of June_____, 2018, by and between the City of Coppell acting by and through the City Manager with approval of the City Council hereinafter referred to as "**City**", and Halff Associates, Inc.**,** hereinafter referred to as "**Engineer**".

WITNESSETH

WHEREAS, the **City** desires to contract for Professional Engineering Services, hereinafter referred to as "Services", in connection with the CONCEPTUAL DRAINAGE MASTER PLAN AND STORMWATER UTILITY RATE STUDY Project, hereinafter referred to as the "**Project**"; and

WHEREAS, the **Engineer** is acceptable to the **City** and is willing to enter into a Contract with the **City** to perform the hereinafter defined Services necessary to complete the Project; and

WHEREAS, said Services shall be as defined herein and in the detailed Basic Services, Attachment A, and Special Services, incorporated herein by attachment and by reference; and

WHEREAS, this contract shall be administered on behalf of the **City** by its **City Engineer** or his duly authorized representative. The **Engineer** shall fully comply with any and all instructions from said **City Engineer.**

AGREEMENT

NOW, THEREFORE, the **City** and the **Engineer,** in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

The **City** agrees to retain the **Engineer,** and the **Engineer** agrees to provide Services in connection with the Project as defined herein, and for having rendered such Services the **City** agrees to pay to the **Engineer** fee for these Services as mutually agreed. All Services under this Contract shall be performed under the direct supervision of the **City Engineer.**

1. **Scope of Services,**

A. Basic Services Parts A, B, & C: The work tasks and activities to be performed and deliverable to be provided by the **Engineer** shall be in accordance with Attachment A, Scope of Services, including modifications to the Basic Services as mutually agreed to by the **City** and the **Engineer** in accordance with the provisions of this Contract.

B. Additional Services Not Included In Basic Services: When mutually agreed to in writing by the **City** and the **Engineer**, the Additional Services shall be provided by the **Engineer.** These Additional Services are not included as a part of Basic Services and shall be paid for by the **City** in addition to payment for Basic Services. Should it be determined that one or more of the requirements of this Contract conflict with the requirements of the Scope of Services, including modifications to the Scope of Services or any attachments to this contract; the requirement of the Contract shall govern.

2. **Progress Schedule.** Within ten (10) days after receiving Notice to Proceed (NTP) the **Engineer** shall submit to the **City** a Schedule of Services consisting of a listing of the major Project tasks, the estimated consultant hours required to perform the tasks, the percentage of the Contract budget estimated to be allocated to each task and a bar chart schedule showing task beginning and completion dates. Significant milestones for the Project shall be identified. At a minimum, milestones shall be provided for the two study submittals described in Attachment A, Scope of Services: Conceptual Drainage Master Plan and Stormwater Utility Rate Study Submittal. Based on Schedule of Services, the **City** shall compile Attachment D, Project Schedule which shall become a part of this Contract upon approval of the **Engineer** and the **City.** The **Engineer** shall provide to the **City** information to report and monitor the project tasks within the Project Schedule by completing a "Progress Report" on a form provided by the **City.** The **Engineer** shall complete and provide to the **City** said report at two week intervals.

3. **Compensation.**

A. Basic Services Fee: The **Engineer** shall be paid a fee for Basic Services Part I under this Contract pursuant to the Fee Schedule described in Attachment A, Scope of

Services. Basic Services Fee shall not exceed the lump sum of Two Hundred Sixty Eight Thousand Three Hundred Dollars ($268,300.00) provided, however, that modifications to the Basic Services, or other conditions defined herein may necessitate a change of Fee which shall be reduced to writing and approved by the City or its designee.

B. Additional Services Fee as Attached: The **Engineer** should be paid a fee under this contract for services pursuant to the Fee Schedule described in Attachment A, Scope of Services.

C. Total Maximum Fee: Total Maximum Fee for this Contract shall be a lump sum of Two Hundred Sixty Eight Thousand Three Hundred Dollars ($268,300.00).

D. Invoices: The **Engineer** shall submit invoices at not less than thirty (30) calendar days for Basic Services Part I and Additional Services on or before the twenty fifth (25th) calendar day of the month, or the preceding business day if the twenty fifth occurs on a weekend and/or observed holiday. Payment shall be based on the invoices submitted to the **City**, provided that Services completed as indicated in the Study Progress Reports approved by the **City** equals or exceeds the increment percentage requested on the **Engineer's** invoices. **Engineer's** invoices to **City** shall provide complete information and documentation to substantiate **Engineer's** charges and shall be in a form to be specified by the **City Engineer.** Should additional documentation be requested by the **City Engineer,** the **Engineer** shall comply promptly with such request.

E. Payments: All payments to **Engineer** shall be made on the basis of the invoices submitted by the **Engineer** and approved by the **City**. Following approval of invoices, **City** shall endeavor to pay **Engineer** promptly, however, under no circumstances shall **Engineer** be entitled to receive interest on amounts due. The **City**, in compliance with Texas State law, shall process a maximum of one payment to the **Engineer** per month. **City** reserves the right to correct any error that may be discovered in any invoice whether paid to the **Engineer** or not, and to withhold the funds requested by the **Engineer** relative to the error.

4. **Fee Increases.** Any other provision in this Contract notwithstanding, it is specifically understood and agreed that the **Engineer** shall not be authorized to undertake any Services pursuant to this Contract requiring the payment of any fee, expense or reimbursement in addition to the fees stipulated in Article 3 of this Contract, without having first obtained specific written authorization from the **City.** The written authorization for additional Services shall be in the form of a Modification to the Scope of Services approved by the City Engineer and/or the City Council, if required.

5. **Modifications to the Scope of Services.** Either the **Engineer** or the **City Engineer** may initiate a written request for a Modification to the Scope of Services when in the opinion of

the requesting Party, the needs and conditions of the Project warrant a modification. Upon the receipt of a request by either Party, the **Engineer** and the **City Engineer** shall review the conditions associated with the request and determine the necessity of a modification. When the Parties agree that a modification is warranted, the **Engineer** and the **City Engineer** shall negotiate the specific modification(s) and any changes in the Total Maximum Fee or Project Schedule resulting from the modification(s). Approval of a modification shall be in the form of a written Modification to the Scope of Services which clearly defines the changes to the previously approved Scope of Services, Fee and/or Project Schedule. Said written Modification shall be approved by **Engineer,** authorized by the City Council, if required, and issued by the **City Engineer.** Issuance of the approved Scope of Services modification shall constitute a notice to proceed with the Project in accordance with the modified Scope of Services. The **City Engineer** may issue written Modifications to the Scope of Services without prior approval of the City Council when the modifications are to be accomplished within the authorized Total Maximum Fee and do not materially or substantively alter the overall scope of the Project, the Project Schedule or the Services provided by the **Engineer.**

6. **Project Deliverables.** For each submittal identified in Attachment A, Scope of Services, the **Engineer** shall provide the **City** with electronic media of the submittal documents. The **Engineer** shall provide two sets of draft and one set of final Study Reports. The Study Reports shall be submitted as original reproducibles and on electronic media. The electronic file may omit photographs and prepared maps. If photographs are included in the report they shall be taken with a 35 mm camera or larger format camera. Color laser copies may be substituted for the original photographs in the final report.

A transmittal letter shall be included with the Study Reports and shall include an executive summary outlining: a.) Findings of the Reports; b.) Conclusions; c.) Recommendations; and d.) Alternative cost estimates.

7. **Project Control.** It is understood and agreed that all Services shall be performed under the administrative direction of the **City Engineer.** No Services shall be performed under this Contract until a written Notice to Proceed is issued to the **Engineer** by the **City Engineer.** In addition, the **Engineer** shall not proceed with any Services after the completion and delivery to the **City** of the Conceptual Drainage Master Plan or the Final Stormwater Utility Rate Study Submittal as described in the Basic Services without written instruction from the **City.** The **Engineer** shall not be compensated for any Services performed after the said submittals and before receipt of **City's** written instruction to proceed.

8. **Partnering.** The **City** shall encourage participation in a partnering process that involves the **City, Engineer** and his or her sub-consultants, and other supporting jurisdictions and/or agencies. This partnering relationship shall begin at the Pre-Project Meeting and continue for the duration of this Contract. By engaging in partnering, the parties do not intend to create a legal partnership, to create additional contractual relationships, or to in any way alter the legal relationship which otherwise exists between the **City** and the **Engineer.** The partnering effort shall be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives of partnering are effective and efficient contract performance

and completion of the Project within budget, on schedule, in accordance with the Scope of Services, and without litigation. Participation in partnering shall be totally voluntary and all participants shall have equal status.

9. **Disputes.** The **City Engineer** shall act as referee in all disputes under the terms of this Contract between the Parties hereto. In the event the **City Engineer** and the **Engineer** are unable to reach acceptable resolution of disputes concerning the Scope of Services to be performed under this Contract, the **City** and the **Engineer** shall negotiate in good faith toward resolving such disputes. The **City Engineer** may present unresolved disputes arising under the terms of this Contract to the City Manager or designee. The decision of the City Manager or designee shall be final and binding. An irreconcilable or unresolved dispute shall be considered a violation or breach of contract terms by the **Engineer** and shall be grounds for termination. Any increased cost incurred by the City arising from such termination shall be paid by the **Engineer.**

10. **Engineer's Seal.** The **Engineer** shall place his Texas Professional Engineers seal on all engineering documents and engineering data prepared under the supervision of the **Engineer** in the performance of this Contract.

11. **Liability.** Approval of the Plans, Specifications, and Estimate (PS&E) by the **City** shall not constitute nor be deemed a release of the responsibility and liability of **Engineer,** its employees, subcontractors, agents and consultants for the accuracy and competency of their designs, working drawings, tracings, magnetic media and/or computer disks, estimates, specifications, investigations, studies or other documents and work; nor shall such approval be deemed to be an assumption of such responsibility by the **City** for any defect, error or omission in the design, working drawings, tracings, magnetic media and/or computer disks, estimates specifications, investigations, studies or other documents prepared by **Engineer,** its employees, subcontractors, agents and consultants. **Engineer** shall indemnify **City** for damages resulting from such defects, errors or omissions and shall secure, pay for and maintain in force during the term of this Contract sufficient errors and omissions insurance in the amount of $250,000.00 single limit, with certificates evidencing such coverage to be provided to the **City.** The redesign of any defective work shall be the sole responsibility and expense of the **Engineer**. Any work constructed, found to be in error because of the **Engineer's** design, shall be removed, replaced, corrected or otherwise resolved at the sole responsibility and expense of the **Engineer.** The parties further agree that this liability provision shall meet the requirements of the express negligence rule adopted by the Texas Supreme Court and hereby specifically agree that this provision is conspicuous.

12. **Indemnification.** **Engineer** shall indemnify, hold harmless and defend the City of Coppell, its officers, agents and employees from any loss, damage, liability or expense, including attorney fees, on account of damage to property and injuries, including death, to all persons, including employees of **Engineer** or any associate consultant, which may arise from any errors, omissions or negligent act on the part of **Engineer,** its employees, agents, consultants or subcontractors, in performance of this Contract, or any breach of any obligation under this Contract. It is further understood that it is not the intention of the parties hereto to create

liability for the benefit of third parties, but that this agreement shall be solely for the benefit of the parties hereto and shall not create or grant any rights, contractual or otherwise to any person or entity. The parties further agree that this indemnification provision shall meet the requirements of the express negligence rule adopted by the Texas Supreme Court and hereby specifically agree that this provision is conspicuous.

13. **Delays and Failure to Perform.** **Engineer** understands and agrees that time is of the essence and that any failure of the **Engineer** to complete the Services of this Contract within the agreed Project Schedule shall constitute material breach of this Contract. The **Engineer** shall be fully responsible for its delays or for failures to use diligent effort in accordance with the terms of this Contract. Where damage is caused to the **City** due to the **Engineer's** failure to perform in these circumstances, the **City** may withhold, to the extent of such damage, **Engineer's** payments hereunder without waiver of any of **City's** additional legal rights or remedies. The **Engineer** shall not be responsible for delays associated with review periods by the **City** in excess of the agreed Project Schedule.

14. **Termination of Contract.** It is agreed that the **City** or the **Engineer** may cancel or terminate this Contract for convenience upon fifteen (15) days written notice to the other. Immediately upon receipt of notice of such cancellation from either party to the other, all Services being performed under this Contract shall immediately cease. Pending final determination at the end of such fifteen-day period, the **Engineer** shall be compensated on the basis of the percentage of Services provided prior to the receipt of notice of such termination and indicated in the final Progress Report submitted by the **Engineer** and approved by the **City.**

15. **Personnel Qualifications.** **Engineer** warrants to the **City** that all Services provided by **Engineer** in the performance of this Contract shall be provided by personnel who are appropriately licensed or certified as required by law, and who are competent and qualified in their respective trades or professions.

16. **Quality Control.** The **Engineer** agrees to maintain written quality control procedures. The **Engineer** further agrees to follow those procedures to the extent that, in the **Engineer's** judgment, the procedures are appropriate under the circumstances.

17. **Ownership.** All **Engineer's** work product under this Contract, including but not limited to tracings, drawings, electronic or magnetic media and/or computer disks, estimates, specifications, investigations, studies and other documents, completed or partially completed, shall be the property of the **City** to be used as **City** desires, without restriction; and **Engineer** specifically waives and releases any proprietary rights or ownership claims therein and is relieved of liability connected with any future use by **City.** Copies may be retained by **Engineer.** **Engineer** shall be liable to **City** for any loss or damage to such documents while they are in the possession of or while being worked upon by the **Engineer** or anyone connected with the **Engineer,** including agents, employees, consultants or subcontractors. All documents so lost or damaged while they are in the possession of or while being worked upon by the Engineer shall be replaced or restored by **Engineer** without cost to the **City.**

18. **Project Records and Right to Audit.** The **Engineer** shall keep, retain and safeguard all records relating to this Contract or work performed hereunder for a minimum period of three (3) years following the Project completion, with full access allowed to authorized representatives of the **City** upon request for purposes of evaluating compliance with provisions of this Contract. Should the **City Engineer** determine it necessary, **Engineer** shall make all its records and books related to this Contract available to **City** for inspection and auditing purposes.

19. **Non-Discrimination.** As a condition of this Contract, the **Engineer** shall take all necessary action to ensure that, in connection with any work under this Contract it shall not discriminate in the treatment or employment of any individual or groups of individuals on the grounds of race, color, religion, national origin, age, sex or physical impairment unrelated to experience, qualifications or job performance, either directly, indirectly or through contractual or other arrangements.

20. **Gratuities.** City of Coppell policy mandates that employees shall never, under any circumstances, seek or accept, directly or indirectly from any individual doing or seeking to do business with the City of Coppell, loans, services, payments, entertainment, trips, money in any amount, or gifts of any kind.

21. **No Waiver.** No action or failure to act on the part of either Party at any time to exercise any rights or remedies pursuant to this Contract shall be a waiver on the part of that Party of any of its rights or remedies at law or contract.

22. **Compliance with Laws.** The **Engineer** shall comply with all Federal, State and local laws, statutes, City Ordinances, rules and regulations, and the orders and decrees of any courts, or administrative bodies or tribunal in any matter affecting the performance of this Contract, including without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, and licensing laws and regulations. When required, **Engineer** shall furnish the **City** with satisfactory proof of compliance therewith.

23. **Severability.** In case one or more of the provisions contained in this Contract shall for any reason be held invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions hereof and this Contract shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

24. **Venue.** With respect to any and all litigation or claims, the laws of the State of Texas shall apply and venue shall reside in Dallas County.

25. **Prior Negotiations.** This Contract supersedes any and all prior understandings and agreement by and between the Parties with respect to the terms of this Contract and the negotiations preceding execution of this Contract.

26. **Contacts.** The **Engineer** shall direct all inquiries from any third party regarding information relating to this Contract to the **City Engineer**.

27. **Notification.** All notices to either Party by the other required under this Contract shall be delivered personally or sent by certified U.S. mail, postage prepaid, addressed to such Party at the following respective addresses:

City: City of Coppell Engineering Dept.
Kent Collins, P.E., Director of Public Works
255 Parkway Blvd
Coppell TX 75019

Engineer: Halff Associates, Inc.
Jeffrey J. Alvarez, P.E., CFM, Water Resources Team Leader
1201 N. Bowser Road
Richardson, TX 75081-2275

IN WITNESS WHEREOF, the City of Coppell, Texas and the **Engineer** has caused these presents to be executed by duly authorized representatives on the day and year set forth above.

THE CITY OF COPPELL
BY:

_____
Mayor

Date: _____

ATTEST:

_____

HALFF ASSOCIATES, INC. BY:

Jeffrey J. Alvarez, W.R.Team Leader

Date: June 8, 2018

ATTEST:

_____
(CORPORATE SEAL)

HALFF ASSOCIATES, INC. SEAL TEXAS

ATTACHMENT A – SCOPE OF SERVICES
CITY OF COPPELL
CONCEPTUAL DRAINAGE MASTER PLAN AND STORMWATER UTILITY RATE STUDY
SCOPE OF SERVICES

The scope of services described in the following tasks defines the Halff Associates, Inc. (Halff) team's ("Halff Team" or "project team" consisting of representatives of Halff, representatives of Willdan Financial Services, and Jenkins Consulting Group, Inc.) understanding of the activities and deliverables that will be required to assist the City with a Drainage Master Plan and Stormwater Utility Rate Study (the Services, including the activities and deliverables, are sometimes referred to herein as the "project"). The Services to be provided hereunder are for the purpose of providing the City of Coppell, Texas ("City") all of the studies, evaluations, reports, estimates, documents, and other information that the City will need to be able to, in its discretion, evaluate the cost of service and levels of utility funding in accordance with Chapter 552, Subchapter C of the Texas Local Government Code.

The estimated project budget and project schedule that accompanies this scope assumes that several of the tasks will be performed by City staff and by other consultants and vendors under separate contract to the City in addition to tasks performed by the Halff Team, including resources from:

- Dallas County Appraisal District: database manager for the City's property records
- North Central Texas Council of Governments (NCTCOG): vendor for the City's 2011 aerial photography
- Dallas County 911: database manager for the City's 911 street addresses
- Dallas County USPS: database manager for the City's USPS street addresses
- The City's billing system vendor
- The City's Consulting Attorney
- The City's newspaper of record for public notifications
- The City's printing vendor

I. CONCEPTUAL DRAINAGE MASTER PLAN

1. Project Management

1.1 Administration

a. Provide single point of contact with City of Coppell staff (Jeffrey J. Alvarez, PE, CFM).
b. Submit monthly progress reports.
c. Submit technical memoranda at the conclusion of each phase documenting study methodology, results and recommendations.
d. Conduct monthly progress meetings in-person or via conference call.
e. Conduct two (2) visioning meetings with City staff and key stakeholders from other City departments.

1.2 Data Collection/Reconnaissance

a. Collect previous floodplain studies, reports, plans, etc. from City.
b. Interview City staff to identify stormwater hot spots and frequent road closure locations.
c. Obtain drainage complaints and historical flooding issues from City
d. Collect existing GIS data for stormwater infrastructure (pipes, inlets, etc.). Analyze GIS to identify gaps and needs. This will be a very high level cursory review of database structure and will not include detailed analysis or accuracy evaluation of asset data.

1.3 Project Webmap

a. Incorporate past studies, reports, drainage plans, etc. into a comprehensive geodatabase for storing existing and future study information that can be accessed from desktop and browser based applications.
b. Incorporate hotspots from rapid assessment performed with CIP Program Tasks.
c. Assemble and integrate available GIS data such as storm drain infrastructure, land use, drainage complaints, etc.

DELIVERABLE

- *Attend up to twelve (12) meetings in person or via conference call to discuss project status.*
- *Submit monthly progress reports and schedule updates.*
- *Conduct two (2) visioning meetings with City staff to kick-off drainage master plan. Submit memorandum summarizing the established goals and initiatives for the Drainage Master Plan updates.*
- *SharePoint site and web-based GIS project management tools.*

CITY RESPONSIBILITIES

- *Attend monthly progress meetings and visioning meetings.*
- *Provide requested data under Data Collection/Reconnaissance (site visit excluded).*
- *Provide available City of Coppell GIS data, studies, and historical flooding issues/complaints.*

2. Capital Improvement Project Program

2.1 Rapid Assessment

a. Perform high level 2D hydraulic analysis to determine hot-spot locations based on the 2-year and 100-year return events with a 24-hour storm. This analysis will focus on overland flow and will not include detailed modeling of initial conditions or peak water surface elevations. Rapid assessment will not include storm drain pipes, culverts, or other infrastructure and is intended primarily to identify low lying areas with a probability of flooding based on watershed conditions. Hot spots may include up to ten (10) high priority areas based on flooding risk.
b. Compare to existing complaints, flood records and local knowledge.
c. Identify hot-spot locations as either local or system drainage issues.

2.2 Review & Update Current CIPs

a. Utilize rapid assessment to review current CIPs identified in the 1991 Storm Water Management Master Plan.
b. Standardize unit costs based on latest bid tabs from City and TXDOT projects.
c. Update cost estimates for current CIPs that are still valid.

2.3 Prioritization

a. Develop criteria to evaluate and prioritize problem areas identified with the Rapid Assessment.
b. Develop database for CIP ranking and GIS incorporation.
c. City will participate on the prioritization.

2.4 Detailed Analysis for the Ten (10) High Priority Problem Areas

a. Perform a <u>detailed existing conditions analysis for the ten (10) high priority problem areas</u> identified from the rapid assessment (item 2.1 above). This analysis consists of developing a detailed hydrologic and hydraulics storm sewer model using XPSWMM as follows:
    i. <u>Hydrologic Analysis based on Future Land Use</u>:
        - Delineate drainage areas per inlet or group inlet.
        - Develop flow path for time of concentration (Tc) based on topography.
        - Calculate future land use curve numbers (CN).
        - Existing Conditions QAQC –Hydrology
        - Address QAQC comments.
    ii. <u>Hydraulics Analysis based on Future Land Use</u>:
        - Create the existing storm sewer system in GIS referencing the as-built plans provided by the City of Coppell. This scope assumes that all as-built plans are available, and will require no survey. Should survey be required it can be provided as and additional service with City approval of scope and fee.
        - Generate inlet rating curves based on inlet characteristics and calculate minor losses for storm sewer main systems.
        - Develop the XPSWMM model as follows:
            1) Import the storm sewer lines (links) and inlets, manholes and outfalls (nodes) into XPSWMM.

2) Input the inlet rating curves and minor losses into the storm sewer mains.
3) Import all hydrologic parameters (sub-basins, Tc, CN, land use for the 2D simulation, and rainfall) into XPSWMM.
4) Any ditch, channel, and/or swale will be modeled in 2D utilizing the LiDAR terrain assuming that it reflects the channel depressions sufficiently.
5) Any existing stormwater detention will be modeled in 2D utilizing the LiDAR terrain assuming that it reflects the depressions accurately.
6) Run the model for the 2-, 10-, and 100-year storm events based on rainfall as specified in the City design manual .
7) Map only the 100-year storm event.
8) Existing Conditions XPSWMM QAQC – Hydrology & Hydraulics.
9) Address QAQC comments.

Note: The scope of work fee assumes that a maximum of 30,000 linear feet of storm sewer will be modeled. Should more storm sewer system be required to be modeled to further assess the 10 problem areas it can be performed as an additional service with City approval.

2.5 Alternatives Analysis for Flood Risk Reduction

a. CIP alternatives will be developed for the ten (10) high priority problem areas to reduce flood risk at each location based on the 100-year storm event. The types of relief alternatives that will be evaluated are increases in pipe size, inlet capacity, detention (if practical), and storm sewer diversion. A maximum of two (2) alternatives will be evaluated per site if necessary.
b. Consult with internal civil design engineer (PE) and the City to develop conceptual alternatives for analysis.
c. Develop conceptual level construction cost estimates and include contingency and engineering costs.
d. City will provide input to unit costs for standard CIP bid items.
e. Alternatives XPSWMM QAQC – Hydrology & Hydraulics.
f. Review alternatives with the City to obtain feedback.

Note: It could be possible that a high priority problem area identified previously based on the rapid assessment is no longer considered a high priority problem area after the detail analysis. If this is the case, alternatives will not be evaluated for that area. Alternatives will be evaluated only for the ten (10) high priority problem areas identified on the rapid assessment.

2.6 Capital Planning

a. City will provide any current City prioritization criteria for CIP planning.
b. City will provide any stormwater utility revenue projects for short-term (5-year) and long-term (25-year) planning constraints.
c. Develop Short-term (5-year) & Long-Term (25-year) Capital Improvement Project Program with 5-year updates.
d. Evaluate need and size of reserve funding. Establish a plan to fund the reserve.
e. Evaluate future growth trends for the City of Coppell.
f. Project major infrastructure needs over the next 25 years.
g. Develop CIP fund investment categories to understand current expenditures relative to current revenue.
h. Develop appropriations schedule to support planned CIP fund investments.
i. Identify and evaluate possible funding based on projects including FEMA, EPA, TCEQ, and TWDB

3. Report Preparation & Deliverables

3.1 Executive Summary Report (Roadmap):

a. Prepare an illustrative and highly graphic Executive Summary report. It will provide the major findings and recommendations appropriate for residents and council review. This summary report will be accompanied by a digital appendix section which will include detail information regarding hydrologic and hydraulic methodology used to develop the XPSWMM models. It will also include an action plan schedule for the

recommended drainage master plan components. This action plan will be high-level and generally identify tasks and milestones by fiscal year for the upcoming five (5) year period. Long-term initiatives will be included, but will not be identified by fiscal year.

b. Executive Summary QAQC.
c. Address QAQC comments.
d. Submit two (2) draft copies of the preliminary executive summary report for City review and comment.
e. The Executive Summary will be subject to one review by the City.
f. One (1) meeting will be scheduled to discuss City comments.
g. Prepare final report incorporating City comments. Print two (2) copies of the final report and all digital data on CD to submit to the City.

DELIVERABLE

The Executive Summary Report will include the following exhibits and tables (some of them will be a printed copy and others will be on digital as part of the appendices):

- *Prepare exhibits showing the existing floodplain for the 2-, 10-, and 100-year based on the rapid assessment.*
- *Prepare an exhibit showing the 10 hot spot locations with the 100-year floodplain identified during the rapid assessment analysis*
- *Prepare exhibits showing the existing floodplain for the 2-, 10-, and 100-year based on the detail analysis only for the 10 hot spots identified on the rapid assessment.*
- *Prepare a drainage area map for the 10 hot spots locations.*
- *Prepare hydrologic parameters table. Include: drainage area name, size, time of concentration, curve number, and runoff for existing conditions (only for the 10 hot spots identified on the rapid assessment).*
- *Hydraulic input data for the existing conditions (only for the 10 hot spots identified on the rapid assessment). Include: link name, upstream node name, downstream node name, upstream invert elevation, downstream invert elevation, height (diameter), width, number of barrel, shape, and roughness value.*
- *Hydraulics output data for the existing conditions (only for the 10 hot spots identified on the rapid assessment). Include: maximum flow, maximum velocity, and maximum water surface elevation upstream and downstream for the 2-, 10-, and 100- year storm events.*
- *Prepare exhibits showing the recommended alternative to reduce flood risk for each problem area identified on the detail analysis.*
- *Prepare cost estimates tables for the recommended alternatives.*
- *Generate XPSWMM profiles for the existing and proposed conditions for the 100-year only.*
- *Prepare a prioritization table for all problem areas identified on the rapid assessment.*
- *Provide a table for the short term (5-year) and long term (25-year) capital improvement project program.*

Note: council workshop preparation and participation are not included in this initial task.

CITY RESPONSIBILITIES

- *Provide review comments for the Drainage Master Plan and Executive Summary.*

II. STORMWATER UTILITY RATE STUDY

1. Data Collection and Review

1.1 Data Collection

a. As a means of initiating the project activities, the City will be provided with a list of specific data items needed to conduct the stormwater utility rate study. During the course of the study, additional information may be requested in accordance with specific needs of the analysis. The following is a typical list of data items required:
   i. Adopted utility operating budget;
   ii. Copies of prior relevant studies (e.g. rate, master plans, etc.);
   iii. most recently approved CIP;
   iv. Historical operating reports; and

v. Historical Equivalent Residential Units (ERU's) - Impervious Area by Customer Class.

1.2 Data Review

a. Upon allowing time for the City to gather and provide data in accordance with the initial data request, a kick-off meeting will be conducted with key City representatives to gain a thorough understanding of the utility operations, discuss any data concerns, discuss additional data requirements, and to ensure that the project objectives are clearly defined and understood by all parties.

2. Financial Requirements, ERU Projections and Revenue Calculation

2.1 Revenue Requirements

a. The project team will utilize the Test Year operating and capital budget provided by the City to develop Test Year revenue requirements for the stormwater utility, including operating and non-operating expenses that are expected to be incurred by the City. Revenue requirements for the stormwater utility are defined as the amount of revenues that are required to meet all O&M costs, debt service and capital expenditures associated with the provision of stormwater utility service.

b. In order to develop the revenue requirements for the City, the project team will review the City's audited financial statements, annual operating budgets and Capital Improvement Plans specific to the stormwater utility. This portion of the study will also include a review the City's financial policies regarding internal and external funding of capital improvements to establish the parameters within which revenue requirements are determined. The project team will combine existing O&M and capital expenses to determine total Test Year revenue requirements. Applicable escalation factors and other increases or decreases will be incorporated into projection of costs to develop the estimated annual and cumulative needs of the utility for a multi-year planning period.

2.2 Development of Historical and Projected Equivalent Stormwater Units.

a. Based on historical ERU's provided by the City, the project team will develop a projection based upon historical growth trends, as well as through discussions with City staff regarding anticipated ERU growth.

2.3 Stormwater Revenue Determination

a. The project team will apply the existing stormwater user fee to the projected ERU's previously developed in Task 2.2 to calculate stormwater utility revenues each year of the projection period and determine if revenues are sufficient to recover projected revenue requirements. The stormwater user fee will further be adjusted based on the City's policy of adjusting the prior year commodity charge each October 1 up to 100 percent of the percentage increase in the CPI-(U), U.S Averages or some percentage in excess of the CPI as set forth by Ordinance.

3. Stormwater Utility O&M

3.1. Costs and Practices

The objective of this task is to assess current and future storm water infrastructure operations and maintenance (O&M) costs and practices. Equipment and personnel currently involved in storm water O&M will be identified and estimated costs allocated to the storm water utility (SWU) for inclusion in the SWU cost of service. The costs of additional O&M associated with future capital projects will be developed and programmed within the utility cost of service. These costs will include additions to equipment inventory as well as increases in SWU personnel.

a. **Data Collection -** Provide the City with a list of specific data items related to current storm water infrastructure O&M. During the course of the study, additional information may be requested in accordance with specific needs of the analysis. The following is a typical list of data items required:

   i. List of current equipment and personnel involved in storm water infrastructure O&M, including annual costs (equipment operations and maintenance, personnel salaries, benefits, and overhead costs, etc.);

   ii. Recorded or estimated annual time that personnel and equipment have been allocated to storm water O&M for the past two years;

iii. Inventory of existing storm water utility infrastructure (SF of drainage channels, LF of storm sewers (by diameter), number of storm inlets, creeks maintained (miles), detention ponds maintained, etc.);
iv. Descriptions of current levels of service for storm water infrastructure maintenance;
v. GIS mapping of storm water utility infrastructure; and
vi. Minimum control measures for MS4 compliance (with annual costs for each MCM).

b. **Data Review -** The kick-off meeting will include discussions with key City representatives regarding storm water utility O&M practices and levels of service, any data concerns, and additional data requirements needed to ensure that the project objectives are clearly defined and understood by all parties.

4. Operating and Capital Funding Analysis

4.1. Projected Operating Results

a. The project team will develop a business model that allows the City to anticipate the future financial performance of the stormwater utility based on various assumptions. This model will produce the stormwater utility's projected operating results and cash flow for a multi-year planning period as required by the City. The financial model will determine projected system revenues, operating and maintenance expenses, capital expenditures and the respective funding sources, existing and anticipated debt service and debt service coverage, fund transfers and the resulting fund balances for each year of the projection period. The model will also provide a summary of the activity within the utility's operating accounts and the projected year-end cash balances for the stormwater utility.

4.2. Scenario Analyses

a. The resulting model will give the City the ability to test the financial impact of changes to various assumptions such as customer growth, user rates and levels of capital expenditure scenarios. As part of this task, the project team will develop the following:

i. A "base case" scenario which establishes the reference case for other scenarios to be compared to this one will be based on:
ii. Anticipated revenues generated from existing user fees and moderate increase in the number of customers and associated ERU's;
iii. Anticipated system expenses projected using reasonable escalators;
iv. Current, unadjusted Capital Improvement Program; and
v. Other costs including payments to the City, if any.
vi. An alternative scenario that reflects the magnitude of rate changes that would be necessary, if any, to support projected revenue requirements including the current, unadjusted Capital Improvement Program.
vii. An alternative scenario that adjusts the timing and costs associated with current capital improvement program as well as allows for alternative funding strategies and incorporates the recommendations developed in the Rate Design phase.

b. The proposed model will be designed to be flexible enough to accommodate additional scenarios should the City so desire. It is important to note that this model will integrate the City's stormwater Capital Improvement Plan and anticipated system revenues and expenses and produce a concise summary by fiscal year in a comprehensible format. The model will allow the City to determine the optimum rate path for balancing the financial health of the stormwater utility against political and other considerations. The model will be developed using Microsoft Excel and, at the completion of the project, will be provided to the City.

5. Reports and Deliverables

5.1. Draft Report

a. The project team will prepare a draft report document presenting the findings of the analyses performed in Task 1 through Task 3. The report will include:

   i. A description of the methodologies used to develop recommended rates and charges for the Test Year and subsequent years of the projection period;
   ii. The methods utilized to project system expenses and revenues through the multi-year forecast period;
   iii. The results of the multi-year financial forecast; and
   iv. Recommendations to the City regarding user fee adjustments and, as relevant, other financial issues.

5.2. Final Report

a. Based on comments received from staff, the City Council and other participants, the draft report will be revised to incorporate the agreed upon changes. Upon completion, hard copies of the final rate study letter report will be provided to the City. In addition, an electronic PDF copy of the complete letter report will be delivered.

6. Meetings & Presentations

6.1. Initial Meeting (1)

a. The stormwater utility rate study will include an initial kick-off meeting with the City. As previously addressed, the purpose of the meeting will be to discuss project requirements, finalize project scheduling and reporting requirements, and receive overall project direction.

6.2. Project Progress Conference Calls/Webinars

a. An engagement of this nature will require ongoing communication with applicable City staff during the development of the study. This will take place through conference calls with City staff and management at various points during the course of the study in order to review project progress and analysis assumptions.

6.3. City Council Meetings (1)

a. Upon completion of the study, the results and recommendations of the rate study will be presented to the City Council at a scheduled public meeting. This presentation will be provided in order to offer the supporting rationale for the proposed rates and charges and to address any questions and/or concerns raised by Council members and residents prior to action being taken on the proposed rates and charges.

CITY OF COPPELL

CONCEPTUAL DRAINAGE MASTER PLAN AND STORMWATER UTILITY RATE STUDY

FEES

Task/Description	Estimated Budget
I. CONCEPTUAL DRAINAGE MASTER PLAN	
1. Project Management 1.1. Administration 1.2. Data Collection/Reconnaissance 1.3. Project Webmap	$18,000
2. Capital Improvement Project Program 2.1. Rapid Assessment 2.2. Review and Update Current CIPs 2.3. Prioritization 2.4. Detail Analysis for the 10 Problem Areas 2.5. Alternatives Analysis based on the Detail Analysis Results 2.6. Capital Planning	$175,000
3. Report Preparation 3.1. Executive Summary Report (Roadmap)	$26,000
Subtotal **CONCEPTUAL DRAINAGE MASTER PLAN**	**$219,000**
II. STORMWATER UTIILITY RATE STUDY	
1. Data Collection and Review 1.1 Data Collection 1.2 Data Review	$10,500
2. Financial Requirements, ERU Projections and Revenue Calculation 2.1 Revenue Requirements 2.2 Development of Historical and Projected Equivalent Stormwater Units 2.3 Stormwater Revenue Determination	$16,000
3. Stormwater Utility O&M 3.1 Costs and Practices	$6,800
4. Operating and Capital Funding Analysis 4.1 Projected Operating Results 4.2 Scenario Analyses	$9,000
5. Reports and Deliverables 5.1 Draft Report 5.2 Final Report	$8,000
6. Meetings & Presentations 6.1 Initial Meeting (1) 6.2 Project Progress Conference Calls/Webinars 6.3 City Council Meetings (1)	$8,000
Subtotal **STORMWATER UTILITY RATE STUDY**	**$49,300**
Grand Total Estimated Fee	**$268,300**