

EXHIBIT 1
CITY OF SAN MARCOS
BLANCO GARDENS DRAINAGE IMPROVEMENT PROJECT
FINAL DESIGN – SCOPE OF SERVICES

Project Understanding

The work to be performed by Scheibe Consulting, LLC. (Scheibe or the Consultant) under this contract will consist of providing a revised 30% design Construction Documents (CDs), final design (60/90/100%) CDs, Bid Phase Services, and Construction Phase Services for the Blanco Gardens Drainage Improvement Project. The project consists of the following proposed improvements (reference **Exhibit A** for an illustration of these proposed improvement locations):

- New Storm Drain System – the installation of up to approximately 7,300 linear feet of 24- to 60-inch stormsewer line within Barbara Drive, Conway Drive, Bliss Lane, and River Road and a new outfall to the San Marcos River. The proposed system will relieve the existing, undersized storm drain system to achieve the City's 25-year level of service criteria. Minor modifications and rerouting of portions of the existing stormsewer system will also be evaluated to meet the project objectives.
- New Water Line Improvements – the installation of up to approximately 320 linear feet of 8-inch DIA water main from along Bliss Ln., between Conway Dr. and Barbara Dr.
- River Road Reconstruction – the regrading of River Road, from approximately 175-ft South of Linda Drive to 140-ft North of Cape Road, to improve conveyance of regional flooding of the Blanco Gardens Neighborhood (from the Blanco River). Regional conveyance will be improved by lowering the (super-elevated) Western side of River Road by crowning the road in the center, and ultimately allowing more flood conveyance to the diversion channel at the Woods Apartment Complex.
- New Diversion Channel – the construction of an approximate 60 ft bottom width, 3:1 side slope, trapezoidal diversion channel. This channel is to convey a portion of the overflow water from the Blanco River (post berm construction) that runs along River Rd., and convey this overflow runoff in a southeasterly direction along Animal Shelter Rd. and ultimately discharging it into an open field (owned by the City of San Marcos). At this discharge point of this diversion channel, the runoff is to be converted back to a sheet flow condition, and ultimately drain toward the San Marcos River, away from the Blanco Gardens Neighborhood.

Note: These main improvements are to be permitted following standard NEPA requirements. Preliminary discussions with USFWS has revealed that project mitigation will be handled via updates to the current MS4 permit and will include regional updates to public awareness and public educational programs. The City is currently working with another consulting firm on this update to the MS4 permit, and as a result no proposed water quality improvements are planned for this project.

This proposed drainage improvement project is proposed in proximity to other regional drainage improvements (designed by others). These adjacent projects are as follows:

- CDBG-DR funded Blanco River "Berm" Project. This project will include the construction of a diversion berm along a portion of the western bank of the Blanco River, along with a large diversion "channel" through City owned property (east / southeast) of the WWTP on Animal Shelter Rd. This project also includes the construction of a berm along Animal Shelter Rd. in close proximity to this proposed diversion channel.
- COSM WW Force Main Project. This project will consist of a new wastewater force main along River Rd. to the WWTP along Animal Shelter Rd, and construction of an approximate 60" storm drain pipe within River Road ROW that will be used as part of this Blanco Gardens Stormsewer Improvement Project.

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The general scope of this proposed drainage improvement project was defined in the Blanco Gardens Drainage Improvement Project PER report. As noted in the PER report, the construction of the proposed stormsewer improvements will aid in reducing local drainage nuisance flooding and local flood risk to the overall neighborhood. The construction of the roadway improvements to River Road will result in a reduction in regional flood risk to the neighborhood that may occur from flood waters overflowing of the Blanco River and draining through this neighborhood. The full benefit of the River Road regrading will be realized when it is constructed in conjunction with the regional Blanco River “Berm” Project.

Basic Scope of Services

I. Design Phase (30% Revised)

A preliminary 30% design of the proposed stormsewer improvements was developed in the PER stage of this project with the main goal of identifying utility conflicts and collaboration with the on-going River Road Force Main Project. This “30% Revised” effort will include minor updates to the previously developed 30% stormsewer design (focused mainly on outfall changes and other minor tweaks), followed by a 30% roadway improvement design, additional field survey, and a large portion of the environmental permitting for this project.

1. Project Management: This task consists of effort associated with project administration, coordination with City staff, coordination and supervision of the project team, project meetings, monthly progress reports (assuming 2 total), and quality management so that project milestones and deliverables meet schedule and budget constraints. Meetings are further defined below:
 - a. Project Meetings: Four (4) in-person project meetings at the City of San Marcos Engineering Department have been budgeted for the Design Phase (30% Revised) of this project. *It is assumed that no public meetings will be required for this phase of the project. If additional meetings are needed, these can be billed at our hourly rates as noted in our fee schedule.*
2. Topographic & SUE Survey: Scheibe (via a subconsultant) will conduct a topographic and SUE survey for the (blue) shaded area (noted as “Area A”) shown in the attached **Exhibit B**, for the purpose of preparing Design Documents. Scheibe will prepare an electronic map showing the following:
 - a. Topographic Survey:
 - i. Will utilize existing project control as established during previous work authorization and will supplement control as needed. Vertical datum for this survey will be based upon GPS observations to NGS CORS stations using NAVD88 datum, and orthometric heights computed using Geoid 12A.
 - ii. Will perform a topographic survey (1-ft Contours) for “Area A” & “Area B” as noted in **Exhibit B**.
 - iii. For “Area A” existing trees, size and type – 8” and above caliper for Native Oaks, Elms, Madrone, and Pecan, Celtis Occidentalis (Hackberry), Juniperus Virginiana, Juniperus Ashei (Common Cedar), Chinaberry, mesquite and Ligustrum trees per San Marcos City Ordinances, Section 5.5.2.2-(g)(2).
 - iv. Locate visible and apparent physical features within survey area, including but not limited to grade breaks, pavement markings, curbs, driveways, sidewalks, steps, ramps, docks, fences, walls, buildings, stairs, railings, signs, utility meters, fire

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hydrants, utility valves, power poles, light poles, manholes, clean-outs, pull boxes, inlets, drains, drainage features, water meters, and culverts.

- v. Shot at top of nut of water and gas valves. Provide spot elevations at top of accessible utility manhole covers. Provide invert elevation of manhole, size and elevation of pipes entering or existing manhole, and direction of flow of accessible sewer and storm drainage structures with the limits of the survey area.
- vi. Prepare a Digital Terrain Model and depict contours at 1' intervals. Include spot elevations (on an approximate 50-foot grid) to the nearest 0.01 foot on paved or hard surfaces, and to the nearest 0.10 foot on non-paved surfaces.
- vii. Survey drawing will be provided in Microstation Format.
- viii. Two supplemental survey efforts have been identified and will be conducted should the need arise.

Note: The effort for "Area B" does not include a Subsurface Utility Engineering (SUE) Survey, ROW survey, boundary survey, or existing easement survey. Should this effort be needed, this will be considered as additional services.

b. SUE Survey "Area A" Only

- i. Scheibe Team will provide Subsurface Utility Engineering (SUE) Quality Levels B through D within the areas shown as Proposed Survey (Area A) on **Exhibit B**, within River Road from back of existing curb line to back of existing curb line.
- ii. The accuracy of subsurface data can be influenced by factors beyond Scheibe's control such as conductivity of materials and their surroundings, soil moisture content, proximity of other underground utilities or structures, depth of utility, etc. Therefore, only the accuracy of data obtained by actual physical verification (through vacuum excavation or otherwise) can be guaranteed to applicable engineering and/or surveying standards.
- iii. Paint markings placed on the ground by Scheibe Team are to be used for design purposes only and not for construction purposes. The use of QL-B information provided does not relieve any contractor or the Client from the duty to comply with applicable utility damage prevention laws and regulations, including, but not limited to, giving notification to utility owners or One-Call centers before excavation. Scheibe Team will not be responsible for any omission of utility information that is not obtainable via electromagnetic, sonic, or acoustical designating services.
- iv. Non-metallic piping, inactive electric, and/or communication lines may or may not be found by electromagnetic, sonic, or acoustical designating practices. Scheibe Team does not warrant and/or guarantee that all existing utilities will be found.
- v. The Client will provide Scheibe Team with all record information and profile drawings of utilities within the project site that the Client has already collected.
- vi. Scheibe Team personnel will have un-restricted access to the project area for ten (10) daylight hours per day. No night work will be required.

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- vii. Due to the presence of utility manholes within the roadway of River Road, Scheibe Team assumes that special traffic control measures will be required to complete the QL-B SUE work. Scheibe Team assumes that no special traffic control plans will need to be developed to obtain closure permitting from the City.
- viii. Scheibe Team assumes that 2 days of special traffic control will be required, and the daily cost will not exceed \$2,500 per day.
- ix. Scheibe Team assumes that all manholes will be easily opened, and adjacent structure will be free of all obstructions.
- x. Scheibe Team assumes that no more than 4,000 LF of utilities exist to be designated and that any facilities that do not have surface access for the passage of a duct rodder will be made of a material that is conducive to conductive or inductive electromagnetic designating.
- xi. No confined space entry of any manholes or structure will be required and is excluded from the scope of this proposal.
- xii. It is assumed that no more than 6 manholes exist within the project limits requiring access by utility designation crews.
- xiii. If any of the above assumptions proves incorrect, a change order for additional funds will be developed based on the additional expense incurred.

Scheibe Team will provide all the following Subsurface Utility Engineering (SUE) services within Area A only to the standard of care applicable in the Subsurface Utility Engineering (SUE) profession. The services meet the standard guidelines of ASCE C-I 38-02 circular for “Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.”

Quality Service Level D (QL-D) – Collect existing utility records information (as-builts) from utility providers, municipalities, counties, and other agency suppliers within the area of investigation. These utilities could include electrical, telephone, cable TV, fiber optic, gas, petroleum, water, wastewater, steam, and storm drain systems.

Scheibe Team will attempt to contact utility providers, counties and other agency suppliers identified through the utility easement information, Texas One-Call systems, and via vehicle reconnaissance and inventory of utility marker posts along adjacent roadways. The sole purpose of this activity is to collect existing record information of utility systems that may have an impact on this project. Any utility that is found in the field, by use of designating geophysical equipment and is not evident on any collected record information, will be shown in the QL-B utility file as an “unknown” utility as required by ASCE CI 38-02.

Quality Service Level C (QL-C) – Scheibe Team survey crew will provide this service consisting of field surveying to obtain accurate horizontal position of visible utility surface features associated with the underground utility systems located within the project limits.

Quality Level B (QL-B) Designating Service (Horizontal Location of Utilities) – Designating is to indicate, by marking with paint, the presence, and approximate horizontal location of subsurface utilities using geophysical prospecting techniques including, without limitations, electromagnetic, sonic, and acoustical techniques. Scheibe Team will provide the following designating services to aid the Client in the design of site, ROW, construction plans, or

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project development plans, or for other purposes as agreed to by the parties. Scheibe Team will:

- Provide QL-B within the project limits as previously stated.
- Provide all equipment, personnel, and supplies required for performing toning services. Scheibe Team shall determine which equipment, personnel, and supplies are required to perform these toning service.
- Designate the existing underground utilities, which may consist of water, wastewater, gas, petroleum pipelines, telephone, fiber optics, cable TV, and electrical utilities within the project area previously described.
- Conduct appropriate investigation of site conditions.
- Mark the utilities on the ground to be surveyed.
- Analyze and correlate all of the field-collected information with the collected record information for ensuring continuity of the information collected. Resolve conflicts with Level D, C, and B information.

Note: This effort does not include any new ROW survey, boundary survey, or existing easement survey for "Area A". Should this effort be needed, this will be considered as additional services.

3. Environmental Assessment (EA): Scheibe assumes that the appropriate level of effort associated with the ultimate project's environmental review would be an Environmental Assessment (EA) in accordance with 24 CFR Part 58 Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities – Subpart E (Environmental Review Process: Environmental Assessments). Excluded services are listed below under **Additional Clarifications and Exclusions**. Although this particular task is to be started in the "30% Revised" phase of this project, it is anticipated that this EA will extend into the "Design Phase (60/90/100%)". In addition, it is assumed that the majority of the archeological/cultural resources aspects of this overall EA will be completed during the "construction phase" of this project, to ensure daily monitoring of excavation within the sensitive area of the proposed stormsewer outfall to the San Marcos River. It should be noted that a portion of this project will include a pre-construction archeological investigation, but this effort will be focused on the proposed diversion channel area only, as noted below.

Scheibe Team will provide the documentation necessary to complete the EA along with supporting mapping and documentation where necessary.

Scheibe assumes that the EA will assess one (1) Build Alternative. Scheibe Team will investigate the following primary topics and provide the indicated project support tasks:

- Cultural Resources
 - Archeological Resources
 - Antiquities Permit Submittal
 - The permit application will summarize known resources in the area, assess the likelihood of encountering unknown deposits, and propose a pre-construction survey of the drainage channel (approximately 50' x 2,500'). The permit will cover pre-construction survey of drainage channel alignment and construction-phase monitoring of trunk line installation.
 - Pre-construction Archeological Survey

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- Pre-construction survey is assumed to be primarily focused on the proposed diversion channel, which is anticipated to require mechanical excavations and limited shovel tests. Additional, limited shovel tests are possible along the trunk line alignment.
- Interim Draft Survey Report submittal to THC
 - Interim report will cover findings from the pre-construction survey.
- Full Draft and Final Survey Report to THC
 - Full report will include results from the drainage channel survey and the trunk line excavation monitoring.
- THC Coordination Letter
 - The letter will summarize known resources in the area, assess the likelihood of encountering unknown deposits, and propose construction-phase monitoring of the excavation of the proposed stormsewer near its outfall into the San Marcos River.
- Historic Resources
 - THC Coordination Letter
 - The letter will summarize known resources in the area and propose survey of parcels within the projects Area of Potential Effects (APE) because known historic-age structures are present in the vicinity.
 - Historic Resources Survey and Letter
 - The Historic Resources Survey will document historic-age resources in the APE and provide recommendations regarding eligibility for listing on the National Register of Historic Places. In addition, potential impacts to the properties will be assessed.
- Water Resources, Wetlands, and Floodplains (no hydrologic analysis or modelling included)
 - Waters of the U.S. (including wetlands) determination and delineation
 - Pre-construction Notification to the USACE
- Threatened and Endangered Species Habitat Assessment
- Informal Endangered Species Act (ESA) section 7 consultation with USFWS
- Hazardous Materials Database Search and Analysis
- Socioeconomic/Environmental Justice
- HUD Noise Analysis (manual method to be completed according to HUD requirements)
- Airport Clear Zones/CZMA Proximity
- Draft language for EA Finding and RROF to support the City's submittal

The EA will be prepared to comply with 24 CFR Part 50.4, 58.5, and 58.6 Laws and Authorities including statements with regard to these categories mentioned in the guidance:

- the National Historic Preservation Act of 1966 and other cultural resources regulations
- Floodplain Management
- Wetlands Protection
- Coastal Zone Management
- Sole Source Aquifers
- Endangered Species
- Wild and Scenic Rivers
- Air Quality
- Farmland Protection
- Noise Control and Abatement
- Explosive and Flammable Operations
- Airport Hazards (Runway Clear Zones)

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- Contamination and Toxic Substances (a Hazardous Materials Database Search will be conducted)
- Environmental Justice (Executive Order 12898)

Additional Clarifications and Exclusions

The National Historic Preservation Act of 1966 and other cultural resources regulations: A search of the Texas Archaeological Resources Laboratory (TARL) and Texas Historical Commission (THC) databases will be conducted to identify known resources in the project area. The THC coordination letter for historic resources will be prepared that establishes the APE for historic resource investigations and proposes surveys for historic-age resources. It is assumed that a Historic Resource Survey and report will be required where major excavations and or new easements/acquisitions are proposed. Archeological field investigations would include pre-construction deep trenching along the alignment of the proposed diversion channel (approximately 50 feet by 2,500 feet), and construction-phase monitoring of the excavation and installation of the trunk line outfall. An Interim Survey Report will be prepared and submitted to the THC that details the finding of pre-construction surveys. A Full Survey Report will be prepared and submitted after completion of construction phase monitoring and will detail findings from the monitoring.

Scheibe understands the City may provide the equipment and operator needed to perform the mechanical trenching associated with the archeological survey. Should Scheibe be required to secure these items, they would be provided on a per-day basis. The potential cost for these supplemental services is included as SS-5 in the Fee Schedule, and assumes five (5) days total for 3rd party backhoe trenching services.

Exclusions: Human remains evaluation/coordination/removal.

Endangered Species Act: Scheibe assumes that the project impacts would require informal section 7 consultation with the US Fish & Wildlife Service (USFWS) due to critical habitat units and other resources in the San Marcos River. Scheibe Team will support preliminary discussions with USFWS to discuss impacts associated with the proposed project (as others if appropriate) and to formulate a strategy for avoiding, minimizing, or mitigating potential impacts. Scheibe Team will provide background research and exhibits related to known biological resources and San Marcos River ecology. Scheibe Team will provide analysis and correspondence for informal ESA section 7 consultation to support a “may affect not likely to adversely affect” impact determination. The scope does not include Endangered Species Presence/Absence Surveys; Endangered Species Act Section 10(a) Formal Consultation and/or the preparation of a Habitat Conservation Plan or assistance with a Biological Opinion. If informal consultation results in findings other than those described above, additional consultation services could be covered under an additional scope and fee.

Section 404 of the Clean Water Act: Scheibe assumes that impacts associated with proposed outfall structures may require authorization by a Nationwide Permit (e.g., 7, 12, or 42) and that a preconstruction notification may be required. Permit obligations would be determined by final design parameters. Scheibe Team assumes that potential impacts would not require mitigation and that a functional assessment and conceptual mitigation plan would not be required.

Noise: According to HUD regulations (24 CFR Part 51 Subpart B, Noise Abatement and Control), HUD’s goal is that exterior noise levels not exceed 55 dB. For the purposes of meeting this goal, noise levels not exceeding a day-night average of 65 dB are considered acceptable. Noise levels over 65 dB may require special approvals, environmental review, and attenuation; noise levels below 65 dB do not require these. HUD’s manual determination of noise levels will be conducted (no on-site noise monitoring will be conducted).

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Public Involvement: It is assumed that the City of San Marcos staff will handle any public notice of document availability for review (including newspaper publications) or any public meeting requirements.

4. H&H Modeling (InfoWorks ICM): Scheibe will enhance the PER Local Event InfoWorks ICM model based on the final stormsewer outfall location that is selected by City staff. The results of this modeling effort will be used to provide updated capacity information needed for the 30% level stormsewer plan and profile information. The results of this model will be made available for review by the City of San Marcos and other consultants as deemed necessary by the City.

In addition, Scheibe will enhance the Regional Overflow PER InfoWorks ICM model to initially evaluate alternative diversion channel alignments to aid with the optimal use of this City property that this channel is to be constructed on. Scheibe will provide a technical memorandum based on this initial alternative analysis prior to moving forward with 30% design modeling and analysis.

Upon approval of the final channel alignment, Scheibe will further refine the InfoWorks model based on the 30% design (including side slopes, channel curvature, and other refined tweaks). This 30% model will also attempt to take into account known utility information collected from the field survey, realignments made during the 30% design, and the preliminary analysis for up to two (2) culverts or low-water crossings to maintain access to the City owned property. The results of this modeling effort will be used to provide 30% level plan and profile information. The results of this model will be made available for review by the City of San Marcos and other consultants as deemed necessary by the City.

5. General Coordination: This task includes coordination with various outside entities, permitting authorities, and adjacent project design teams. This effort will specifically focus on the following:
 - a. *Coordination with River Road Force Main Team:* This effort will involve coordination with the design team working on the River Road WW Force Main Project. It is assumed that the contractor that is to install the Force Main project will install the section of 60" DIA storm sewer that is proposed to cross River Road near the outfall of the project. *It is assumed that the other five (5) proposed stormsewer crossings of River Road, in proximity to the River Road regrading, that ultimately drain into the Woods Apartment Complex ditch will be constructed as part of the Blanco Gardens Drainage Improvement Project.*
 - b. *Coordination with the Water Reuse Project Team:* A water reuse project is proposed in proximity to this drainage improvement project. Coordination is needed between this design team and our team to ensure not conflicts exist with infrastructure and proposed easements.
 - c. *Coordination with Landowners/City (Easements, final outfall alignment):* Some coordination is needed to lock-in the final outfall alignment as it crosses private property. Some coordination with private landowners will be needed. Although, the City will be the main point of contact with private landowners, it is expected that Scheibe will be called upon to assist with figures and other coordination materials during the process of negotiations, and general dialog with landowners.
 - d. *Coordination on WQ Analysis & Updates to MS4 Permit / USFWS:* Scheibe will need to provide continued coordination assistance with USFWS and other staff as it relates to anticipated MS4 updates needed to meet mitigation requirements for this project. This effort includes up to four (4) meetings with City of San Marcos Staff and USFWS staff as it relates to WQ mitigation requirements for this project.

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- e. *Coordination with Blanco “Berm” Team*: This effort will involve coordination with the design team working on the Blanco River “Berm” Project. Close coordination is required to ensure this project can work seamlessly with the Blanco “Berm” project, and the various proposed components.
 - f. *Coordination with the Site Feasibility Study of Parcel (R12384)*: Parcel R12384 is currently owned by the City of San Marcos, and this proposed project is to be located along the outer boundary of this property. The City is currently in the process of redeveloping this property to enhance its use, and has a consulting team conducting a feasibility study on this tract. Scheibe will need to coordinate any proposed improvements on this tract, with this design team.
 - g. *Coordination with Utility Providers (Diversion Channel Area Only)*: Scheibe will need to coordinate with existing gas, fiber, cable, and electric transmission owners (as necessary) within proximity of the proposed diversion channel. There is some flexibility in the final location of this diversion channel, likely requiring additional coordination effort with potential conflicting utility providers. This will require coordination on existing utility locations, and the potential need to relocate dry utilities prior to or during construction.
6. Preliminary Roadway Geometric Design: Scheibe Team shall mobilize resources to set up the project and establish project controls in Microstation Geopak. Scheibe Team shall obtain and review the existing data provided by the COSM including, but not limited to, as-built plans, planning studies along the proposed and/ or connecting routes, documents for existing and proposed development along the proposed route, and other studies. The Scheibe roadway design team shall conduct field reconnaissance and collect data. The Scheibe Team shall establish project design criteria in coordination with the COSM for Roadway, Signing, Pavement Marking, Traffic Control, and Illumination designs. The criteria is assumed to comply with COSM, TxDOT and AASHTO design criteria. The Scheibe Team shall recommend a proposed design speed for River Road (if not provided by the COSM). Should COSM elect to revise the posted speed limit, a speed study will be required; speed studies are excluded from this scope of work. The Scheibe Team shall develop preliminary horizontal and vertical alignments and typical sections for River Road and display the preliminary geometry on Roll Plot layouts for the Preliminary Geometric Layout Submittal. Using Bentley GEOPAK SS4 software, the Engineer shall develop a 3D model along the proposed roadway alignment. The 3D model shall include the proposed roadway and related pedestrian improvements. The 3D model will be built and tweaked throughout the design process and will be started in the 30% design. The geometry will comply with the design criteria established for the project. The Scheibe Team shall prepare Horizontal Alignment Data Sheets for roadway alignments, beginning with the 30% Milestone submittal.
7. Prepare 30% Construction Documents (CDs): Scheibe will prepare revised 30% construction documents with the goal of providing a cover sheet, project layout sheet, River Road plan/profile sheets, River Road preliminary cross-sections, alley drainage improvements plan/profile sheets, stormsewer plan/profile sheets, traffic control plan sheets, preliminary quantities, preliminary cost estimate, preliminary diversion channel plan/profile sheets, and an updated project schedule (if necessary). Construction documents will be provided to the City for review. At the request of the City, these preliminary documents may also be distributed to other consultant teams working on projects in proximity to this project (if needed).

Traffic Control Plan Special Note: Scheibe Team shall develop plan sheets for a proposed **single-phase** traffic control plan (TCP) for the full project limits (i.e., all improvements prepared for the Blanco Gardens CDBG-DR project, including proposed storm sewer outside the limits of roadway reconstruction on River Road and proposed storm sewer within the Blanco Gardens subdivision) in accordance with COSM, TxDOT and Texas Manual on Uniform Traffic Control Devices (TMUTCD)

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requirements, beginning with the 30% Milestone submittal. The Engineer shall provide a written narrative of the construction sequencing and work activities for one (1) phase and determine the existing and proposed traffic control devices to be used to handle traffic during construction. The Engineer shall show temporary roadways and detours required to maintain lane continuity throughout construction. The Engineer shall develop the TCP to provide continuous, safe access to each adjacent property during the one (1) phase of construction and to preserve existing access. The Engineer shall prepare a Sequence of Work Narrative Sheet, Traffic Control Typical Section Sheets, Traffic Control Layout Sheets, and Detour Sheets, as needed. The Engineer shall prepare an Estimate of Construction Duration. **If it is determined that a two-phase TCP is required or desired by the City; this can be done for an added fee. This additional fee is further discussed in the supplemental services section of this scope of work.**

River Road Plan/Profile Special Note: The ENGINEER shall incorporate pedestrian and bicycle facilities, in the form of a sidewalk along the western (southbound) side of River Road and a bicycle lane adjacent to the southbound lane. All pedestrian and bicycle facilities shall be designed in accordance with the latest Americans with Disabilities Act Accessibility Guidelines (ADAAG), the Texas Accessibility Standards (TAS), and the AASHTO Guide for the Development of Bicycle Facilities. The Engineer shall use either COSM standard street furniture details or custom details provided by COSM; **custom street furniture details are excluded from this scope of work.** The limits of permanent construction shall not extend into the River Road intersections with Linda Drive or with Cape Street; **work within these intersections is excluded from this scope of work.** The Engineer shall reuse existing street furniture if possible and shall otherwise use either COSM standard street furniture details or custom details provided by COSM. The roadway pavement is assumed to match existing pavement section and/or City standard details. **This effort does not include a pavement design or geotechnical services necessary for a pavement design.**

Design Phase (30%) Deliverables:

- Monthly Status Report: Scheibe will provide a monthly status report, including a brief summary of work completed as well as a status plan set.
- 30% Design Construction Plans: Scheibe will provide one (1) pdf electronic copy (22" x 34" sheets).

II. Design Phase (60/90/100%)

8. Project Management: This task consists of effort associated with project administration, coordination with City staff, coordination and supervision of the project team, project meetings, monthly progress reports (assuming 8 total), and quality management so that project milestones and deliverables meet schedule and budget constraints. Meetings are further defined below:
 - a. Project Meetings: Six (6) in-person project meetings at the City of San Marcos Engineering Department have been budgeted for the Design Phase (60/90/100%) of this project. *It is assumed that no public meetings will be required for this phase of the project. If additional meetings are needed, these can be billed at our hourly rates as noted in our fee schedule.*
9. Drainage Easement (Metes/Bounds & Recordation): This effort will consist of the Scheibe Team quantifying the exact limits of this proposal drainage easement needed to construct the portion of the stormsewer outfall that is proposed to drain across private property. A metes and bounds description will be developed and provided to the City for review, coordination with the private landowner, and recordation. It is assumed for budgeting purposes that this easement will be 50-ft wide by 600-ft long (approximately).

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10. H&H Modeling (InfoWorks ICM): Scheibe will enhance the 30% Design InfoWorks ICM model to include a more refined alignment/configuration based on the 60/90/100% design. This alignment will take into account known utility information collected from the field survey, realignments made post 30% design, the various stages of the River Road regrading designs, and the potential need for a culvert or low-water crossing to maintain access to the City owned property. The results of this modeling effort will be used to provide 60/90/100% level plan and profile information for the stormsewer and alley surface drainage improvements. The results of this model will be made available for review by the City of San Marcos and other consultants as deemed necessary by the City.
11. General Coordination: This task includes continued coordination with various outside entities, permitting authorities, and adjacent project design teams through the 60/90/100% design phase. This effort will specifically focus on the following:
 - a. *Coordination with River Road Force Main Team*: This effort will involve continued coordination with the design team working on the River Road WW Force Main Project. It is assumed that the contractor that is to install the Force Main project will install the section of 60" DIA storm sewer that is proposed to cross River Road near the outfall of the project. *It is assumed that the other five (5) proposed stormsewer crossings of River Road, in proximity to the River Road regrading, that ultimately drain into the Woods Apartment Complex ditch will be constructed as part of the Blanco Gardens Drainage Improvement Project.*
 - b. *Coordination with the Water Reuse Project Team*: A water reuse project is proposed in proximity to this drainage improvement project. Continued coordination is needed between this design team and our team to ensure not conflicts exist with infrastructure and proposed easements.
 - c. *Coordination on WQ Analysis & Updates to MS4 Permit / USFWS*: Scheibe will need to provide continued coordination assistance with USFWS and other staff as it relates to anticipated MS4 updates needed to meet mitigation requirements for this project. This effort includes up to four (4) meetings with City of San Marcos Staff and USFWS staff as it relates to WQ mitigation requirements for this project.
 - d. *Minor Utility Adjustments Coordination*: Scheibe will coordinate with city wet utility departments, city dry utility departments, and private dry utility organizations as needed to ensure utility adjustment costs, timing, and quantities are properly accounted for throughout the various design phases of this project.
 - e. *Coordination with Blanco "Berm" Team*: This effort will involve coordination with the design team working on the Blanco River "Berm" Project. Close coordination is required to ensure this project can work seamlessly with the Blanco "Berm" project, and the various proposed components.
 - f. *Coordination with the Site Feasibility Study of Parcel (R12384)*: Parcel R12384 is currently owned by the City of San Marcos, and this proposed project is to be located along the outer boundary of this property. The City is currently in the process of redeveloping this property to enhance its use, and has a consulting team conducting a feasibility study on this tract. Scheibe will need to coordinate any proposed improvements on this tract, with this design team.

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- g. *Coordination with Utility Providers (Diversion Channel Area)*: Scheibe will need to coordinate with existing gas, fiber, cable, and electric transmission owners (as necessary) within proximity of the proposed diversion channel. There is some flexibility in the final location of this diversion channel, likely requiring additional coordination effort with potential conflicting utility providers. This will require coordination on existing utility locations, and the potential need to relocate dry utilities prior to or during construction.
12. Prepare 60/90/100% Construction Documents (CDs): Scheibe will prepare 60/90/100% construction documents for this project. These CDs will include a cover sheet, general notes, project layout sheet, demolition sheets, stormsewer plan/profile sheets (with standard (*i.e. non-Atlas 14*) 25-yr and 100-yr HGLs), River Road plan/profile sheets, River Road sections, alley drainage plan/profile sheets (with standard (*i.e. non-Atlas 14*) 25-yr and 100-yr HGLs), design for two (2) culvert/roadway crossings of the diversion channel, diversion channel plan/profile sheets, illumination plan sheets, water line extension plan sheets, traffic control plan sheets, signing/parking/pavement layout sheets, driveway detail sheets, temporary erosion control plans sheets, San Marcos River stormsewer outfall sheets, general detail sheets, quantities, cost estimate, and an updated project schedule (if necessary). Construction documents will be provided to the City for review at 60%, 90%, and 100%. At the request of the City, these documents may also be distributed to other consultant teams working on projects in proximity to this project (if needed).

Signing & Pavement Marking Layout Special Note: The Engineer shall develop plan sheets for the proposed small signs and pavement markings for the roadway reconstruction limits in accordance with COSM, TxDOT and Texas Manual on Uniform Traffic Control Devices (TMUTCD) requirements, beginning with the 60% Milestone submittal. The sheets shall include existing signs (to remain, to be removed, to be relocated or to be replaced), stationing to be annotated for existing and proposed sign locations, proposed signs (illustrated, numbered and sized), and designation of the shields to be attached to guide signs. The sheets shall include proposed pavement markings, object markings and delineation (illustrated and quantified), and quantities of existing pavement markings to be removed. The Engineer shall prepare Sign Detail Sheets and Small Sign Summary Sheets.

Illumination Plan Special Note: The Engineer shall refer to the San Marcos Transportation Design Criteria Manual (TDCM) and other approved manuals deemed necessary for design of continuous lighting for all conventional lighting. The Engineer shall prepare circuit wiring diagrams showing the number of luminaires on each circuit, electrical conductors, length of runs, and service pole assemblies. The engineer shall coordinate with San Marcos Electric Utility. The Engineer shall prepare Illumination Layouts to display existing illumination poles relocated to proposed finished grade elevations in their existing horizontal locations, wiring requirements, service locations and requirements, and display elements for continuous lighting on this project, and in accordance with the San Marcos TDCM, beginning with the 60% Milestone submittal. The Engineer shall reuse existing illumination poles if possible and shall otherwise use either COSM standard luminaire details or custom details provided by COSM; **custom luminaire details are excluded from this scope of work.**

13. Project Specifications: Scheibe will prepare project specifications for this design at the 100% CD submittal. These specifications will be based primarily on the City of San Marcos specifications, and/or nearby City specifications (tailored to the needs of this project). Scheibe will work closely with the City Project Manager to ensure all project specifications meet the needs of the city for this project.

Design Phase (60/90/100%) Deliverables:

- **Monthly Status Report**: Scheibe will provide a monthly status report, including a brief summary of work completed as well as a status plan set.

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- 60% Design Construction Plans: Scheibe will provide one (1) pdf electronic copy (22" x 34" sheets).
- 90% Design Construction Plans: Scheibe will provide one (1) pdf electronic copy (22" x 34" sheets).
- 100% Design Construction Plans: Scheibe will provide one (1) pdf electronic copy (22" x 34" sheets). This submittal will also include a submittal of the project specifications for review.
- InfoWorks ICM Model for this project area (at 100% design)

III. Bid Phase

14. Project Management: This task consists of effort associated with project administration, coordination with City staff, coordination and supervision of the project team, project meetings, and monthly progress report. Meetings are further defined below:
 - a. Project Meetings: One (1) in-person project meeting at the City of San Marcos Engineering Department, one (1) pre-bid meeting at the City of San Marcos Engineering Department (or other place as deemed necessary), and one (1) bid opening meeting at the City of San Marcos Engineering Department (or other place as deemed necessary). Scheibe will prepare a presentation at the pre-bid meeting to assist with presenting the overall project to interested contractors. *If additional meetings are needed, these can be billed at our hourly rates as noted in our fee schedule.*
15. Bid Package: This task will include compilation of a bid package for posting of the bid. Scheibe will utilize the City's standard bid document and incorporate the unique project information into this basic format. *If the City does not have a bid document format, then Scheibe can customize one for an additional scope and fee.*
16. RFIs / Addendums: Scheibe has budgeted for two (2) minor RFIs during the bid process, and one (1) minor addendum to the plans. *If the City desires any major addendums, or if RFIs exceed a reasonable amount, then additional scope and fee may be necessary.*

Bid Phase Deliverables:

- Monthly Status Report: Scheibe will provide a monthly status report, including a brief summary of work completed as well as a status plan set.
- Bid Package for posting of bid documents.
- Assistance with final selection of contractor.

IV. Construction Phase

17. Project Management: This task consists of effort associated with project administration, coordination with City staff, coordination and supervision of the project team, project meetings, and monthly progress report. Meetings are further defined below:
 - a. Project Meetings: One (1) in-person pre-construction meeting at the City of San Marcos Engineering Department or on-site (and with the selected contractor), and one (1) project

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close-out meeting at the City of San Marcos Engineering Department (or other place as deemed necessary). *If additional meetings are needed, these can be billed at our hourly rates as noted in our fee schedule.*

18. RFIs: This task will include (during construction) RFI reviews and responses. For budgeting purposes, it is assumed that there will be eight (8) RFI submittals for this project.
19. Minor Redesign: This task will include minor redesigns. Minor redesigns are defined as effort that is limited to three (3) full days of work to make necessary updates per instance. For budgeting purposes, it is assumed that there will be four (4) minor redesigns on this project.
20. Submittal Reviews: This task will include submittal reviews for various submittals and test results provided by the contractor. It is assumed that the Contractor or City staff will provide all testing for this project (if necessary). For budgeting purposes, it is assumed that the contractor will provide eight (8) submittals for Scheibe staff to review.
21. Site Inspections: This task will include field inspections of this project by Scheibe staff. These inspections are anticipated to occur on average of every other week for the duration of construction. For budgeting purposes, it is assumed that there will be a total of 48 site inspections for the duration of construction. Should these assumptions be incorrect, then additional fee may be necessary to continue or increase the number of site inspections. At the end of each site inspection, Scheibe will prepare an inspection memorandum documenting the findings, issues, and photos from the inspection. This information will be made available to City and contractor for review.
22. Construction Phase Cultural Resources Monitoring: This task will include daily monitoring of all excavation activities associated with the proposed stormsewer trunkline outfall into the San Marcos River. This task will include monitoring by the Scheibe Team environmental specialist qualified to identify cultural resources that may be found or identified during the course of this project. For budgeting purposes, it is assumed that this effort will involve 12 full days of full-time monitoring for the segment of 60" DIA stormsewer to be constructed from River Road to the San Marcos River. Mobilization for monitoring efforts will be considered as a full day commitment.
23. Pay Application Reviews: This task will include the review of monthly pay applications provided by the contractor. Scheibe will review pay applications relative to evidence in the field from the site inspections. Scheibe will provide comments to the City for consideration prior to payment of funds to the contractor. It is assumed that the construction for this project will occur within a 14-month time window; and thus, there will be 14 pay monthly applications to review. Should this assumption be incorrect, then additional fee may be necessary.
24. Close-Out Walk-Thru: This task will include two (2) final "walk-thru's" of the project. Scheibe will provide a punch-list for the contractor to work through and will follow-up with a second and final walk-through to confirm that the contractor completed all punch-list items. Upon confirmation that the contractor resolved all punch-list items, Scheibe will issue a final concurrence letter to the City.

Construction Phase Deliverables:

- Monthly Status Report: Scheibe will provide a monthly status report, including a brief summary of work completed as well as a status plan set.
- Timely RFI and submittal reviews/responses.
- Site Inspection Memorandums.

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- USFWS Coordination and Cultural Resources Excavation Monitoring Report(s).
- Pay Application Reviews.
- Punch-List.
- Final Concurrence Letter/Memo.

SUPPLEMENTAL SCOPE OF SERVICES *(additional authorization required)*

The Scheibe Team shall provide Supplemental Services at the written request of the COSM. The written request must include a description of the work requested, a mutually agreed upon time limit, and any special instructions for coordination and submittal. These services shall include the following:

SS-1. Water Quality Vault Design: This effort will be focused on the design of up to six (6) underground water quality vaults at each of the six (6) proposed new outfall locations. It is currently not anticipated that proposed water quality improvements are needed for this project, based on preliminary meetings with USFWS and TPWD during the PER phase of this project. However, given the tendency for resource agencies to “change direction” during the environmental approval process, it is deemed necessary to quantify the potential engineering fee needed should all or a portion of these underground water quality vaults be needed to secure the necessary environmental approvals. Details of this effort are as follows:

Prepare 60% design plans for six (6) water quality vault systems, one at each of the proposed outfall locations. The design plans will be based on the vault systems identified in the “Blanco Gardens Water Quality Vault Analysis Technical Memorandum – Study 3 – Water Quality Vaults”, February 8, 2019. The Technical Memorandum estimated the water quality vault system to cost approximately \$600,000 to install, not including traffic control, erosion control, and contingencies. This task includes establishment of flow lines, final location, and any grading improvements to facilitate construction. This effort will include a 60%, 90%, and 100% design CDs. Construction specifications including maintenance requirements will also be provided.

SS-2. Traffic Control Plan (2-Phase Approach): Should a second phase of TCP be required, the Engineer shall develop plan sheets for the proposed additional phase of the traffic control plan (TCP) for the full project limits (i.e., all improvements prepared for the Blanco Gardens CDBG-DR project, including proposed storm sewer outside the limits of roadway reconstruction on River Road and proposed storm sewer within the Blanco Gardens subdivision) in accordance with COSM, TxDOT and Texas Manual on Uniform Traffic Control Devices (TMUTCD) requirements. The Engineer shall supplement the written narrative of the construction sequencing and work activities for one (1) additional phase and determine the existing and proposed traffic control devices to be used to handle traffic during the additional phase. The Engineer shall show temporary roadways and detours required to maintain lane continuity throughout the additional phase. The Engineer shall develop the TCP to provide continuous, safe access to each adjacent property during the one (1) additional phase of construction and to preserve existing access. The Engineer shall supplement the Sequence of Work Narrative Sheet for the one (1) additional phase, and prepare Traffic Control Typical Section Sheets, Traffic Control Layout Sheets, and Detour Sheets, as needed, for the one (1) additional phase. The Engineer shall supplement the Estimate of Construction Duration for the one (1) additional phase.

SS-3. Illumination Plan (Complete Lighting Survey): The Engineer shall complete a lighting survey of existing illumination through field visit and record drawings review. The Engineer shall prepare

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Illumination Layouts to display proposed illumination pole locations for continuous lighting on this project, and in accordance with the San Marcos TDCM, beginning with the 60% Milestone submittal.

- SS-4. Utility Probing Survey: During the course of design of this project, it may be found that additional detail is needed to define the exact location of existing wet and dry utilities within the project corridor. This additional effort will be conducted in the form of physically locating existing utilities via digging and physically locating the utility. It is assumed that the City maintenance crews and associated City utility departments will be able to expose said utility via excavation equipment. Thus, this effort will be focused solely on the additional surveying needed to tie the exposed utility to the project coordinates and benchmark using Trimble R10 GPS equipment. For budgeting purposes, it is assumed that there will be a total of five (5) separate utilities that need to be probed and surveyed.
- SS-5. Archeological Trenching – 3rd Party Backhoe Services: During the course of the design of this project, it may be found that the City of San Marcos staff is not available to provide backhoe trenching services associated with the Pre-Construction Archeological Investigation. If this is the case, Scheibe will need to secure the services of a third-party backhoe trenching company to provide the necessary trenching services needed to meet the requirements of this project. This supplemental service assumes a total of 5 days of backhoe excavation trenching.
- SS-6. Diversion Channel Drainage Easement: During the course of the design of the diversion channel alignment, it may be found that a portion or all of the channel needs to be located within a recorded drainage easement. As such, for budgeting purposes, this supplemental service fee assumes a new 3,000 ft long by 100 ft wide drainage easement will need to be recorded. This supplemental also includes a fee to locate the LCRA electric transmission line easement that traverses a portion of the proposed diversion channel alignment. This easement may need to be located and locked in-place prior to recording a drainage easement, or for other purposes.

Project Schedule

Reference **Exhibit C: Blanco Gardens Drainage Improvement Project Schedule – DRAFT**. The estimated timeframes identified attempt to account for City reviews of submittals, but are approximate and may change depending on City staff allocations.

City Responsibilities

1. The City will provide to Scheibe all data in the City's possession relating to Scheibe's services on the Project. Scheibe will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.
2. The City will give prompt notice to Scheibe whenever the City observes or becomes aware of any development that affects the scope or timing of Scheibe's services.
3. The City will assist Scheibe with coordination of utility providers that have infrastructure within the project limits.
4. The City will assist Scheibe with coordination between other consultants and known projects within proximity of this project.

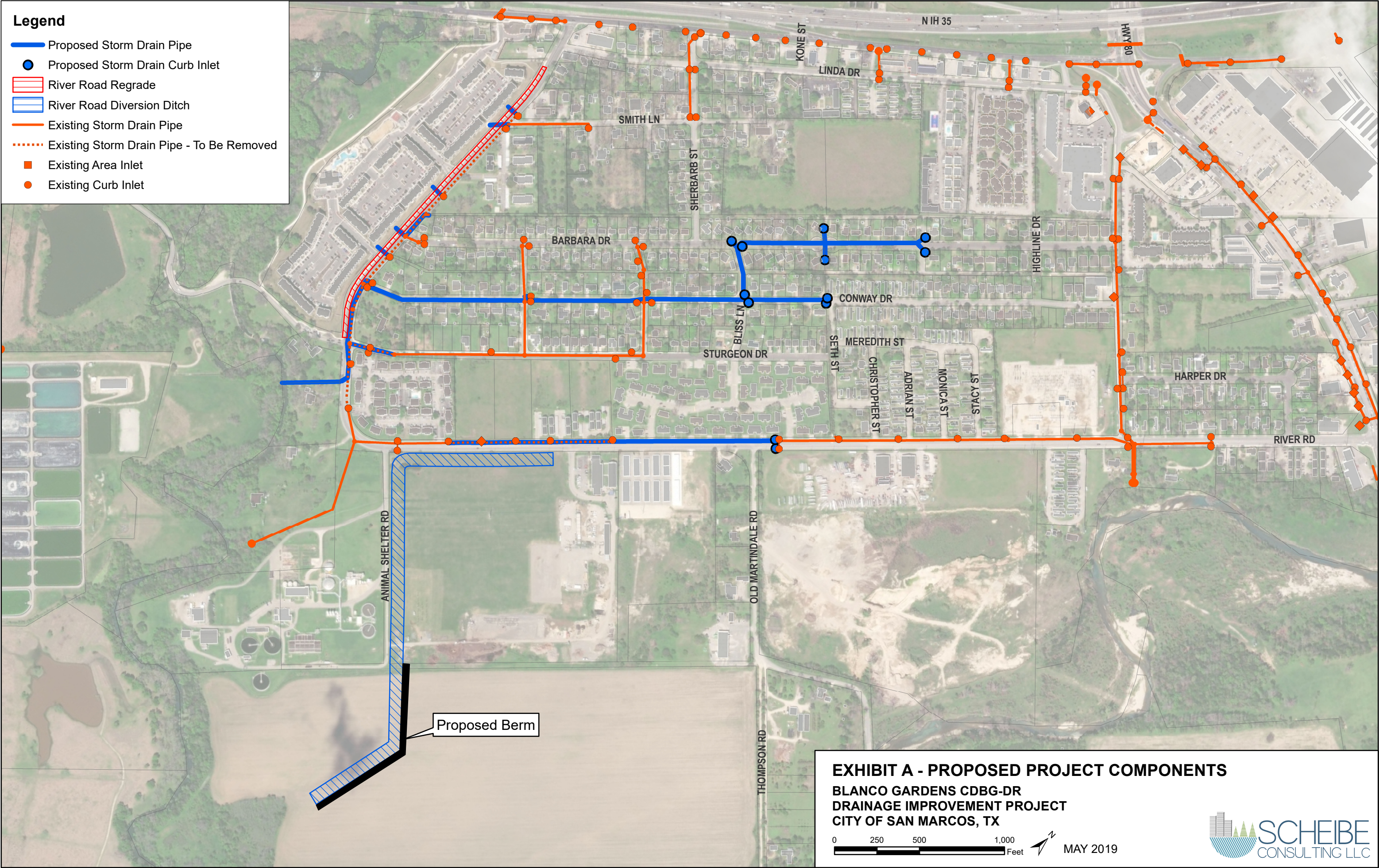
EXHIBIT 1
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5. The City will examine information submitted by Scheibe and render in writing or otherwise provide comments and decisions in a timely manner.
6. The City will obtain all necessary right-of-entries from required landowners.
7. The City will provide Title Reports for properties with proposed easements.
8. The City will obtain all permanent sanitary sewer line, access, and temporary construction easements, including services such as appraisal of properties, negotiations with the property owners, and actual purchase of the easements.

Additional Services

Additional Services to be performed, if authorized in writing by the City, but which are not included in the above-described Basic and Supplemental Scope of Services, and once a mutually agreed upon fee is negotiated are as follows:

1. Performing Geotechnical Investigation or Subsurface Utility Engineering.
2. Performing Pavement Design.
3. Performing title searches for easement or joint-use agreement preparation.
4. Preparation of additional easement/ boundary exhibits beyond the number identified in the Scope of Services.
5. Acting as an agent of the City in the acquisition of permanent or temporary easements.
6. Preparation of platting documents and/or real property survey for site acquisition.
7. Accompanying the City when meeting with the TCEQ, U.S. Environmental Protection Agency, or other regulatory agencies during the course of the Project, beyond those meetings identified above.
8. Preparing applications and supporting documents for government grants, loans, or planning advances.
9. Appearing before regulatory agencies or courts as an expert witness in any litigation with third parties or condemnation proceedings arising from the development or construction of the Project, including the preparation of engineering data and reports for assistance to the City.
10. Providing professional services associated with the discovery of any hazardous waste or materials in the project site.
11. Modifications to the design based on cultural resource findings as a direct result of this project or any adjacent project.



Legend

-  Survey Available from PER (9.4 AC)
-  Survey Available from Others (5.8 AC)
-  Final Design Survey Area A (1.3 AC)
-  Final Design Survey Area B (26.0 AC)

Outfall Alternative A

Outfall Alternative B

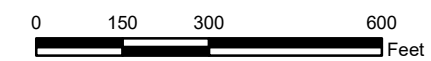
Outfall Alternative C

Proposed Survey (Area B): Topographic Survey
(Includes topo survey up to the centerline of River Rd.)

Proposed Survey (Area A): Back of Curb
to Back of Curb Topo and SUE Survey

EXHIBIT B - FINAL DESIGN SURVEY NEEDS

BLANCO GARDENS CDBG-DR
DRAINAGE IMPROVEMENT PROJECT
CITY OF SAN MARCOS, TX



MAR 2019

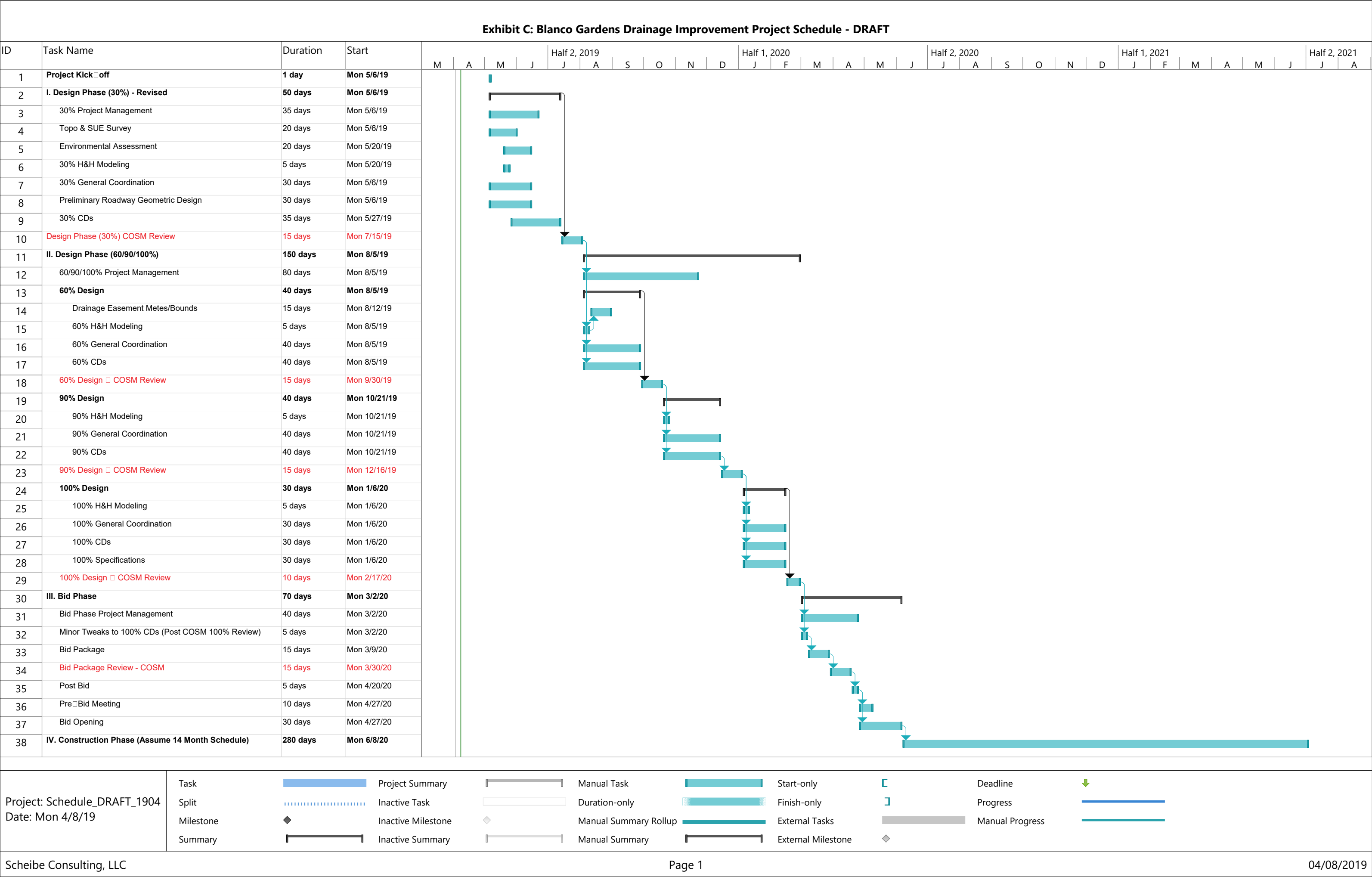


EXHIBIT 3 - FEE SCHEDULE
City of San Marcos, Texas
Blanco Gardens Drainage Improvements

				Staff								Expenses	Subconsultants				
		Professional Service Description	Total Task Hours	Total Task Cost	Project Manager	Senior Engineer	Engineer III	Engineer II	Engineer I	EIT II	EIT I	Clerical Staff	SAM, LLC	CMEC (HUB)	APAI	Doucet	Aguirre & Fields (HUB)
					\$215.00	\$180.00	\$145.00	\$135.00	\$125.00	\$115.00	\$100.00	\$75.00	Fee	Fee	Fee	Fee	Fee
Design Phase (30% Revised)			651	\$ 283,538													
1a		PM - Coordination with Subconsultants	42	\$ 6,230	14					28							
1b		PM - QC Review and Address QC Comments - 30%	44	\$ 9,272		20				24							\$ 2,912.00
1c		PM - Project Accounting and Administration	13	\$ 2,917	5							8					\$ 1,242.00
1d		PM - Meetings: (4) Project	26	\$ 6,628	12					14			\$ 750.00				\$ 1,688.00
1e		PM - Prepare Monthly Status Report (3)	20	\$ 2,700	4					16							
2		Topographic & SUE Survey (Area A - Exhibit A)	9	\$ 64,009	1					8			\$ 62,873.82				
3		Environmental Assessment (EA)	12	\$ 61,258	4					8				\$ 59,477.50			
4		H&H Modeling (InfoWorks ICM)	100	\$ 16,580	4	72				24							
5a		General Coordination - With Force Main Project Team	14	\$ 2,320	2	4				8			\$ 250.00				
5b		General Coordination - With Water Reuse Project Team	14	\$ 2,320	2	4				8			\$ 250.00				
5c		General Coordination - With Landowners/City (Easements, final outfall alignment)	14	\$ 2,320	2	4				8			\$ 250.00				
5d		General Coordination - WQ Analysis & Updates to MS4 Permit / USFWS Coordination	20	\$ 8,810	8	4				8			\$ 250.00			\$ 5,200.00	
5e		General Coordination - With Blanco Berm Team	10	\$ 1,350	2					8							
5f		General Coordination - Site Feasibility Study of Parcel (R12384)	10	\$ 1,350	2					8							
5g		General Coordination - With Utility Providers (Diversion Channel Area Only)	18	\$ 2,270	2					16							
6		Preliminary Roadway Geometric Design	8	\$ 32,852	2					6							\$ 31,732.00
7a		Prepare 30% Plans - Cover Sheet (Revised)	9	\$ 1,135	1					8							
7b		Prepare 30% Plans - Project Layout Sheet (Revised)	26	\$ 3,190	2					24							
7c		Prepare 30% Plans - River Road - Roadway Plan/Profile Sheets (5 sheets)	6	\$ 7,597	2					4							\$ 6,706.92
7d		Prepare 30% Plans - Alley Drainage Improvement Sheets (16 sheets)	124	\$ 14,780	4	24					96						
7e		Prepare 30% Plans - Stormsewer Plan and Profile Sheets (3 sheets - New; 16 sheets - Revised)	58	\$ 6,870	2					56							
7f		Prepare 30% Plans - Traffic Control Plan Sheets (1 Phase, Double Banked, 12 sheets)	6	\$ 14,710	2					4							\$ 13,820.40
7g		Prepare 30% Plans - Quantities / Cost Estimate (Revised)	36	\$ 4,540	4					32							
7h		Prepare 30% Construction Project Schedule	12	\$ 1,580	2					10							
7i		Prepare 30% Plans - Diversion Channel Plan and Profile Sheets (22 x 34 @ 1":20') (6 sheets)	50	\$ 5,950	2					48							
Design Phase (60/90/100%)			2,710	\$ 546,081													
8a		PM - Coordination with Subconsultants	48	\$ 6,720	12					36							
8b		PM - QC Review and Address QC Comments - 60/90/100%	124	\$ 22,044	4	56				64							\$ 3,744.00
8c		PM - Project Accounting and Administration	32	\$ 7,526	10							22					\$ 3,726.00
8d		PM - Meetings: (6) Project	42	\$ 10,568	18					24			\$ 2,250.00				\$ 1,688.00
8e		PM - Prepare Monthly Status Report (8)	25	\$ 3,375	5					20							
9		Drainage Easement, Topo, Tree, & Boundary Survey (assumed 50-ft wide X 600-ft long) - Stormsewer Outfall on Private Property	32	\$ 29,480	8					24			\$ 25,000.00				
10		H&H Modeling (InfoWorks ICM)	117	\$ 19,675	5	88				24							
11a		General Coordination - With Force Main Project Team	30	\$ 3,910	2	4				24							
11b		General Coordination - With Water Reuse Project Team	30	\$ 3,910	2	4				24							
11c		General Coordination - WQ Analysis & Updates to MS4 Permit / USFWS Coordination	22	\$ 3,990	12	4				6							
11d		General Coordination - Minor Utility Adjustments (Water, WW, Electric, Gas, Cable, Phone, Fiber)	78	\$ 11,030	18	4				56							
11e		General Coordination - Permitting Requirements	10	\$ 1,350	2					8							
11f		General Coordination - Blanco Berm Team	10	\$ 1,350	2					8							
11g		General Coordination - Utility Providers (Diversion Channel Area Only)	20	\$ 2,700	4					16							
12a		Prepare 60/90/100% Plans - Cover Sheet	17	\$ 2,023	0.5					16			\$ 75.00				
12b		Prepare 60/90/100% Plans - General Notes (2 sheets)	26	\$ 6,440	2					24			\$ 150.00				\$ 3,100.00
12c		Prepare 60/90/100% Plans - Project Layout Sheet	25	\$ 3,050	1					24			\$ 75.00				
12d		Prepare 60/90/100% Plans - Demolition Sheets (11 sheets)	246	\$ 36,297	6					240			\$ 675.00				\$ 6,732.00
12e		Prepare 60/90/100% Plans - Stormsewer Plan and Profile Sheets (19 sheets)	366	\$ 60,221	6					360			\$ 1,425.00		\$ 16,106.00		
12f		Prepare 60/90/100% Plans - River Road - Roadway Sections (3 sheets)	18	\$ 35,435	6					12			\$ 225.00				\$ 32,540.00
12g		Prepare 60/90/100% Plans - River Road - Roadway Plan/Profile Sheets (5 sheets)	18	\$ 16,662	6					12			\$ 375.00				\$ 13,617.08
12h		Prepare 60/90/100% Plans - Alley Drainage Improvement Sheets (16 sheets)	214	\$ 27,130	6	48					160		\$ 1,200.00				
12i		Prepare 60/90/100% Plans - Illumination Plan Sheets (3 sheets)	12	\$ 9,929	8					4			\$ 225.00				\$ 7,524.00
12j		Prepare 60/90/100% Plans - Water Line Extension (1 sheet)	18	\$ 14,745	6					12			\$ 75.00		\$ 12,000.00		
12k		Prepare 60/90/100% Plans - Traffic Control Plan Sheets (1 Phase, Double Banked, 12 sheets)	18	\$ 31,630	6					12			\$ 900.00				\$ 28,059.60
12l		Prepare 60/90/100% Plans - Signing, Parking, Pavement Layout Sheets (3 sheets)	18	\$ 11,863	6					12			\$ 225.00				\$ 8,968.00
12m		Prepare 60/90/100% Plans - Driveway Details Sheets (2 sheets)	9	\$ 5,399	3					6			\$ 150.00				\$ 3,914.00
12n		Prepare 60/90/100% Plans - Temp. Erosion Control (21 sheets)	331	\$ 35,690	7					24	300		\$ 1,425.00				
12o		Prepare 60/90/100% Plans - San Marcos River Stormsewer Outfall Design/Details (2 sheets)	147	\$ 19,035	3	48					96		\$ 150.00				
12p		Prepare 90/100% Plans - Detail Sheets (11 sheets)	121	\$ 26,891	9					112			\$ 675.00		\$ 3,000.00		\$ 8,401.00
12q		Prepare 60/90/100% Plans - Quantities / Cost Estimate	138	\$ 27,558	14					124							\$ 10,288.00
12r		Prepare 60/90/100% Construction Project Schedule	42	\$ 5,630	8					34							
12s		Prepare 60/90/100% Plans - Diversion Channel Plan and Profile Sheets (22 x 34 @ 1":20') (6 sheets)	146	\$ 16,990	2					144							
12t		Prepare 60/90/100% Plans - Culvert Design Plan and Profile Sheets (2 Crossings)	74	\$ 8,710	2					72							
13		Project Specifications (at 100%)	86	\$ 17,126	6	16				64			\$ 100.00				\$ 5,496.00
Bid Phase			183	\$ 26,868													
14a		PM - Project Accounting and Administration	6	\$ 623	1.5							4					
14b		PM - Meetings: (1) Project, (1) Pre-Bid, (1) Bid Opening	40	\$ 6,950	16					24			\$ 750.00				
14c		PM - Prepare Monthly Status Report (1)	5	\$ 675	1					4							
15		Bid Package	96	\$ 13,480	14	16				66							

EXHIBIT 3 - FEE SCHEDULE
City of San Marcos, Texas
Blanco Gardens Drainage Improvements

				Staff									Expenses	Subconsultants						
		Professional Service Description	Total Task Hours	Total Task Cost	Project Manager	Senior Engineer	Engineer III	Engineer II	Engineer I	EIT II	EIT I	Clerical Staff		SAM, LLC	CMEC (HUB)	APAI	Doucet	Aguirre & Fields (HUB)		
16		RFIs (2) / Addendums (1)	36	\$ 5,140	10					26			Fee	Fee	Fee	Fee	Fee	Fee		
Construction Phase (Assumes a 4 month Construction Duration)			890	\$ 145,213																
17a		PM - Coordination with Subconsultants	48	\$ 7,520	20					28										
17b		PM - Project Accounting and Administration	48	\$ 5,000	10							38								
17c		PM - Meetings: (1) Pre-Construction Meeting, (1) Project Close-Out Meeting	22	\$ 3,530	10					12										
17d		PM - Prepare Monthly Status Report (16)	50	\$ 6,750	10					40										
18		RFIs (8)	81	\$ 18,287	5					76								\$ 8,471.50		
19		Minor Redesign (4)	136	\$ 26,992	8	32				96								\$ 8,471.50		
20		Submittal Reviews (8)	69	\$ 9,035	9					60			\$ 200.00							
21		Site Inspections (48)	323	\$ 42,245	51					272										
22		Construction Phase Cultural Resources Monitoring (12 Days)	18	\$ 12,830	2					16					\$ 10,560.00					
23		Pay Application Reviews (14)	58	\$ 7,670	10					48										
24		Close-Out Inspection (2)	37	\$ 5,355	11					26										
END BASIC SERVICES																				
		Total Basic Service Hours:	4,483	\$ 1,001,699	493	452	0	0	0	2814	652	72	\$ 13,075.00	\$ 87,873.82	\$ 70,037.50	\$ 31,106.00	\$ 5,200.00	\$ 212,842.00		
Total Basic Services				\$ 1,001,699																
Supplemental Services			63	\$ 127,354																
SS-1		WQ Vault Design (6 Outfall Locations)	51	\$ 60,075	3	24					24		\$ 840.00				\$ 51,870.00			
SS-2		Traffic Control (2 Phase Approach)	12	\$ 28,246	4					8			\$ 900.00					\$ 25,566.00		
SS-3		Illumination Plan (Complete lighting survey)	10	\$ 4,722	2					8			\$ 360.00					\$ 3,012.00		
SS-4		Utility Probing Survey (Assumes City excavation equipment will be used) - (5 utility locations)	43	\$ 8,288	2.5						40		\$ 750.00	\$ 3,000.00						
SS-5		Archeological Trenching - 3rd Party Backhoe Services (5 days Total)	4	\$ 11,660	2					2			\$ -		\$ 11,000.00					
SS-6		Drainage Easement Metes/Bounds Description (~3,000 LF x 100' wide) - Diversion Channel	5	\$ 14,363	1					4			\$ 200.00	\$ 13,488.20						
END																				
		Total Supplemental Services	\$ 127,354	\$ -																
Total Fee Basic + Supplemental Services				\$ 1,129,053																