



REQUEST FOR PROPOSALS

Southwestern Medical District Green Spine Design: Harry Hines Boulevard Streetscape Improvements

[West Mockingbird Lane to the
Market Center DART Station]

Solicitor:
Texas Trees Foundation
2906 Swiss Avenue
Dallas, Texas 75204

RFP Released: January 9, 2020
RFP Due: February 7, 2020

CONTENTS

Team Focus.....	3
Project Rationale.....	3
Project Background	5
Southwestern Medical District Urban Streetscape Master Plan	5
Harry Hines Boulevard Context	7
Project Details.....	9
Project Philosophy.....	9
Project Description.....	9
Project Limits and Coordination with Other Work.....	10
SWMD Implementation Team	13
Texas Trees Foundation (TTF) Leadership Team	13
Advisory Committee	14
Engineering and Technical Consultants.....	14
Equitable Engagement Team.....	15
History Consultant.....	15
Impact Research Team	15
Additional Project Partners	15
Proposal Details	18
Landscape and Urban Design Team.....	18
Proposal Contents	18
Submittal Instructions	19
Anticipated Evaluation Timeline.....	19
Evaluation Considerations.....	19
Appendices.....	21
Appendix A: Disciplines Influencing Project Design.....	22
Appendix B: SWMD Implementation Team Organizational Chart	23
Appendix C: Standard City of Dallas Requirements	24

TEAM FOCUS

The Texas Trees Foundation (TTF) is seeking an innovative and leading-edge landscape architecture and urban design team to join the implementation team that the Texas Trees Foundation is currently assembling to transform the streetscape of Harry Hines Boulevard in the Southwestern Medical District (SWMD) in Dallas, Texas as a signature project of the [SWMD Urban Streetscape Master Plan](#). For the city and broader region, this project will set the tone for developing localized streetscape projects and serve as a basis in fostering healthier and holistic medical districts across the nation. The successful team must pioneer new ideas, have a proven track record of creating successful, vibrant places, and possess the following key attributes:

- Seeks out complicated, innovative design challenges
- Exhibits a willingness to take design risks
- Demonstrates creative approaches to design to include multi-modal transportation options including bicycle/pedestrian access, autonomous vehicles, history, art, research and equity options
- Understands biophilic design and the intersection between nature, health and the environment
- Demonstrates a collaborative approach to design and supports a strong stakeholder outreach initiative
- Communicates proactively with both the public and private sectors
- Pays attention to details
- Celebrates success!

This project represents a public-private partnership between TTF, SWMD, City of Dallas, North Central Texas Council of Governments (NCTCOG), and other government agencies. While TTF, with a broad base of support from the philanthropic community, will be leading and funding the design effort, construction will be partially funded by City of Dallas, NCTCOG and other potential government and private sources. As a result, close coordination and cooperation with various agencies will be necessary, and deliverables will also be subject to City of Dallas and Texas Department of Transportation (TxDOT) review and approval. The project will need to meet relevant City of Dallas requirements, such as the Complete Streets manual, most current pavement design manual and relevant TxDOT standards.

PROJECT RATIONALE

This project represents a generational opportunity to dramatically transform a corridor that under-performs with respect to placemaking, multimodal connections, promoting health and healing, and environmental performance. The institutions that comprise the SWMD are an enormous asset to Dallas and the region; however, the current public realm does not reflect the area's importance nor its function as a place for healing. The future vision for the area states: "The SWMD is an area in critical need of urban heat island mitigation, economic development, beautification and connectivity. The primary goal of this project is to foster a livable district that carefully

considers the health of the natural environment, the health of thriving neighborhood systems, and the health of all employees, patients, residents and visitors.” The end product from this effort will be a model 21st Century boulevard that uses innovative design to define a dynamic and exciting campus community focused on collaborative efforts in health and wellness, prevention, clinical and research sciences, and education that will become a model for medical districts.

The Southwestern Medical District Streetscape Urban Streetscape Master Plan (Plan), completed in 2016, represents a bold new vision for a major economic hub for the City of Dallas, North Texas region and for a sustainable and healthy Southwestern Medical District. As with all the Texas Trees Foundation projects, this initiative will help to unite, through an integrated collaborative process, the three medical institutions and surrounding community to create a medical district that is safe, beautiful, interesting, and serves all people.

Findings from the Plan determined that the SWMD’s aging infrastructure, 8-miles of missing sidewalks, lack of bicycle trails, and minimal connectivity result in an unattractive environment that makes it harder to recruit and retain the best doctors, employees, and students. Extensive stakeholder meetings and detailed feedback on the conditions of the District confirmed that a change was needed. Pedestrian and bicycle infrastructure are limited and inconsistent. Intersections are daunting and unsafe for pedestrian crossings, further discouraging pedestrian activity on the corridor.

Users of the District, the 2.8 million patients and visitors; 3,600 medical and nursing students; 37,000 employees; world renowned doctors, and the more than 22,594 neighbors living in and adjacent to the District (Zip Codes 75235 and 75390) are hoping for an area that quilts together ideas, strategies and a vision to create an easily accessible area that connects people and a functional infrastructure for a better quality of life for all. They envision a place where they can sit and contemplate or celebrate their latest diagnosis, share their fears and hopes, and a place that gently meets their needs for a quick lunch out of the hospital cafeteria; a place where access is easy, and friends can congregate.

The resulting place will be magical yet functional, beautiful yet adaptable. The streetscape will be sensitive to ecological requirements of low water-use plant materials and organic maintenance. This reformatted corridor will have impacts upon the SWMD as a destination and activity center, as well as stimulate economic development positively in and around the SWMD. The design will specifically emphasize the healing of the mind, body and spirit, whether one is walking or driving through the area. This project will be one of the cornerstones upon which to build the Medical District for the next Century. The chosen landscape and urban design team will be an integral part of the implementation team leading change and transformation in this significant area of Dallas.

PROJECT BACKGROUND

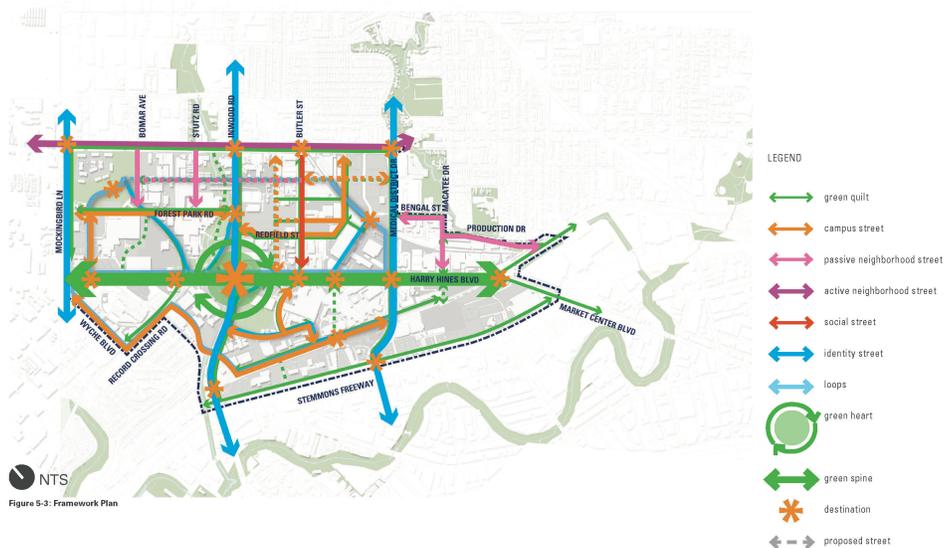
SWMD Urban Streetscape Master Plan

Two prior studies, [State of the Dallas Urban Forest report](#) and [Urban Heat Island Management Study](#), provided the foundation for the creation of the [Southwestern Medical District Urban Streetscape Master Plan](#). These two studies outlined environmental challenges facing Dallas, and the SWMD's built environment exemplifies many of the factors contributing to these conditions. After a ten-month planning process, the Master Plan was completed in November 2016. The vision outlined in the Plan states:

The SWMD is an area in critical need of urban heat island mitigation, economic development, beautification and connectivity. The primary goal of this project is to foster a livable district that carefully considers the health of the natural environment, the health of thriving neighborhood systems and the health of all of its employees, patients, residents and visitors. The Plan articulates a design that is magical yet functional, beautiful yet adaptable. It is sensitive to ecological requirements of low water-use plant materials and organic maintenance. The Plan also carefully considers the SWMD as a destination and activity center, and how economic development may be positively stimulated in and around the SWMD. The design specific emphasizes the healing of the mind, body and spirit, whether one is walking or driving through the area. The Plan lays out the framework that helps create the future for the history yet to be made within the SWMD.

The Master Plan outlines a framework to systematically address the key challenges facing the street system in the SWMD and transform the rights-of-way within the district to increase connectivity, improve environmental functions, incorporate works of art, educate users, and support multiple modes of transit.

DESIGN FRAMEWORK DIAGRAM



SWMD Design Framework Plan

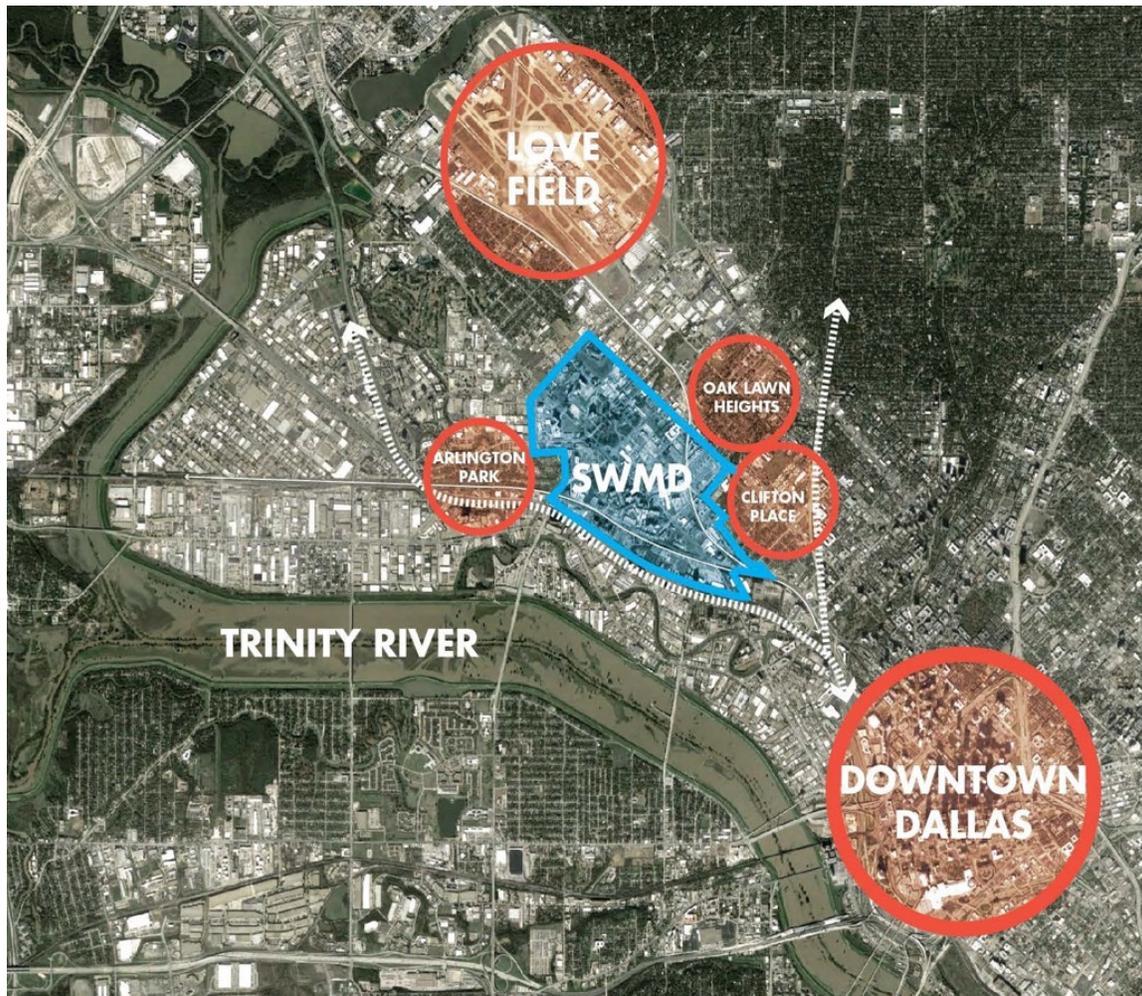
Bringing the plan to life through this public/private partnership will provide substantial benefits to all users of the District—patients, employees, physicians, visitors, students, residents, area business patrons, as well as the City of Dallas and North Texas region as a whole. To be inclusive, the Texas Trees Foundation has invested in and created strong partnerships. Surveys sent to all district employees resulted in a 20% response rate. Outreach to the public, businesses, and surrounding neighborhoods garnered input into the direction of needed investments. Some of the key themes from this input include:

- Physicians— create an environment that will better support the recruitment and retention of physicians and their ability to better transect the district without the use of an automobile;
- Employees— provide better connectivity for walking, biking, and places that provide restoration, dining and comradery;
- Patients/Visitors—create spaces to better recover and de-stress, connectivity and transportation to inter-building use, and safer pedestrian access;
- Students—improve connectivity especially for bicycles;
- Residents—Foster a neighborhood that provides a healthy environment and supports vibrant economic growth providing increased amenities; and
- Hospitals—Capitalize upon an urban planning opportunity and create a holistic healthy environment.

Since its completion, the Plan has been well received by numerous stakeholders from both the private and public sector, even winning two awards within two months of its completion: The 2016 Greater Dallas Planning Council Dream Study Award and the Texas Chapter of the American Society of Landscape Architects Honor Award for 2016. The Plan has also won the American Planning Association, Texas Chapter 2017 Current Planning Award. Not only will the plan serve to transform the Medical District environmentally, socially and economically, but it will influence urban planning policy at both the local and national levels.

The Plan is a foundational document that provides a jumping off point upon which the chosen landscape architecture and urban design team will help to build this transformation.

Harry Hines Boulevard Context



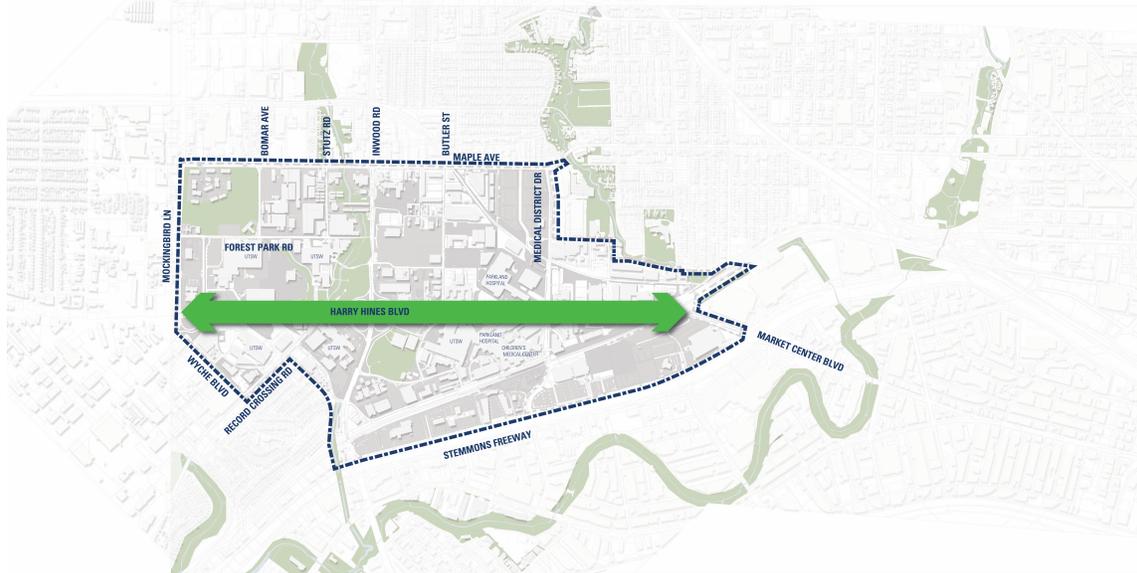
SWMD Location

SWMD is located in North Texas' Dallas-Fort Worth metropolitan area, the fourth largest metro area in the United States with a 2018 estimated population of 7.5 million people. The Medical District is home to three world-renown anchor institutions — University of Texas Southwestern Medical Center, Parkland Health & Hospital System, and Children's Medical Center Dallas. SWMD is the largest medical district in North Texas and the second largest employment center in the City of Dallas with over 40,000 people working and studying in the district each day. Generally located midway between downtown Dallas on the southeast and Dallas' Love Field Airport to the northwest, the medical district's three member institutions own approximately 400-acres mostly along Harry Hines Blvd.

Harry Hines Blvd. is one of the primary arterials that serves this District. Harry Hines Blvd. is categorized as a Principal Arterial by the City of Dallas connecting the region to a destination that generates over 2.8 million visits to its clinics and hospitals annually. Today approximately 82,000 vehicles travel through the interchange of Harry Hines

Blvd. at Inwood Road on an average day—33,000 of these are traveling on Harry Hines Blvd.

The corridor is primarily divided by a median. The median includes an informal and inconsistent collection of mature oaks and other ornamental trees. Street trees between the curb and the sidewalk are also provided in an inconsistent arrangement. However, the majority of the trees are mature in size, providing the highest level of the limited tree canopy along a corridor within the SWMD.



Green Spine Location

Current conditions, imperfectly, cater to vehicles alone. Pedestrian sidewalks are inconsistent, as numerous sections of sidewalks are discontinuous or have not been constructed. Bicycle use and facilities are non-existent. Recent pedestrian-involved accidents on corridors within the district further emphasize the need to reshape the rights-of-way to better accommodate pedestrian and bicycle safety.

Crash data from 2010 through September 2019 show 572 crashes have occurred on the section of Harry Hines Blvd. under consideration, resulting in seven (7) fatalities and 434 injuries. The majority of these crashes (336) were intersection related. Crossing the road is difficult and perilous. In fact, there were 69 pedestrians involved in crashes. Currently there are sizable gaps in sidewalks, no formal bike lanes and bike paths and no buffers between pedestrians and fast-moving vehicle traffic. Street design can bring down vehicle speeds on Harry Hines Blvd. and improve safety and reduce the severity of crashes.

PROJECT DETAILS

Project Philosophy

A comprehensive approach will not only employ the design strategies of the Complete Streets guidelines adopted by the City of Dallas and recommendations outlined in the Urban Streetscape Master Plan but will draw on a wide array of disciplines. TTF is desiring a holistic design process that will look at opportunities in the arenas of transportation and mobility, arts and humanities, education and research, environment, economic development, equity and operations (See Appendix A). The successful design team will demonstrate the ability to manifest each of these issues through innovative design that results in enduring and meaningful places.

Project Description

Planning for this project has been the result of a private-public partnership with the TTF, SWMD and numerous stakeholders. Together, the partners want to address the issues of increasing density in development and its impact on an area of the City already feeling the limitations of this aging infrastructure—in terms of health and safety, traffic congestion, stormwater management and the environment. The Harry Hines Blvd. project ("Green Spine") is focused on providing relief and alternatives to the 35,000 to 45,000 vehicles that are projected travel along Harry Hines Blvd. each day by 2045.

The Green Spine project is not intended to change the function of the roadway and its importance as a regional thoroughfare between downtown Dallas and Dallas' Love Field Airport, but rather to elevate additional modes of transportation such as walking, bicycling and transit to the benefit of those visiting, working and living in the Medical District. Since "Identity streets" like Harry Hines Blvd. carry the majority of the automobile traffic in the SWMD, it is important that it makes a lasting, positive impression while aspiring to the highest standards of safety, cohesion, aesthetics and environmental stewardship. Harry Hines Blvd. plays a key role in the overall district identity and the experience of all users who pass through or travel to the SWMD.



Perspective of proposed improvements

The first step to implement the SWMD's Urban Streetscape Mater Plan is focused on the construction of the Green Spine, transforming Harry Hines Blvd. as a green multi-modal corridor from the Market Center DART Station, north to West Mockingbird Lane. The spine will be the backbone to future planned transportation improvements throughout the Medical District, including a transformation of the major intersection of Harry Hines Boulevard and Inwood Road as a subsequent phase of the project.

It is currently anticipated that design services will be primarily limited to back of curb improvements to integrate a multi-use path, environmental amenities such as rain gardens, and high-caliber streetscape amenities. There are additional improvements anticipated as part of these services to improve the safety of significant intersections, and potentially include design cues to clarify the use and function of the outside lanes for transit/shuttle uses. Additionally, green space along the corridor is currently disconnected and generally under-utilized as an amenity for District users. Once completed, a re-imagined Harry Hines Blvd. will transform these fragments of open space into a cohesive system.



Green Spine as a connector of green space

Project Limits and Coordination with Other Work

The Green Spine runs the length of the Medical District from West Mockingbird Lane closer to Dallas' Love Field Airport to the Market Center DART Station towards Downtown Dallas. There are several ongoing and parallel projects that will need to be coordinated with and accommodated through the requested design services:

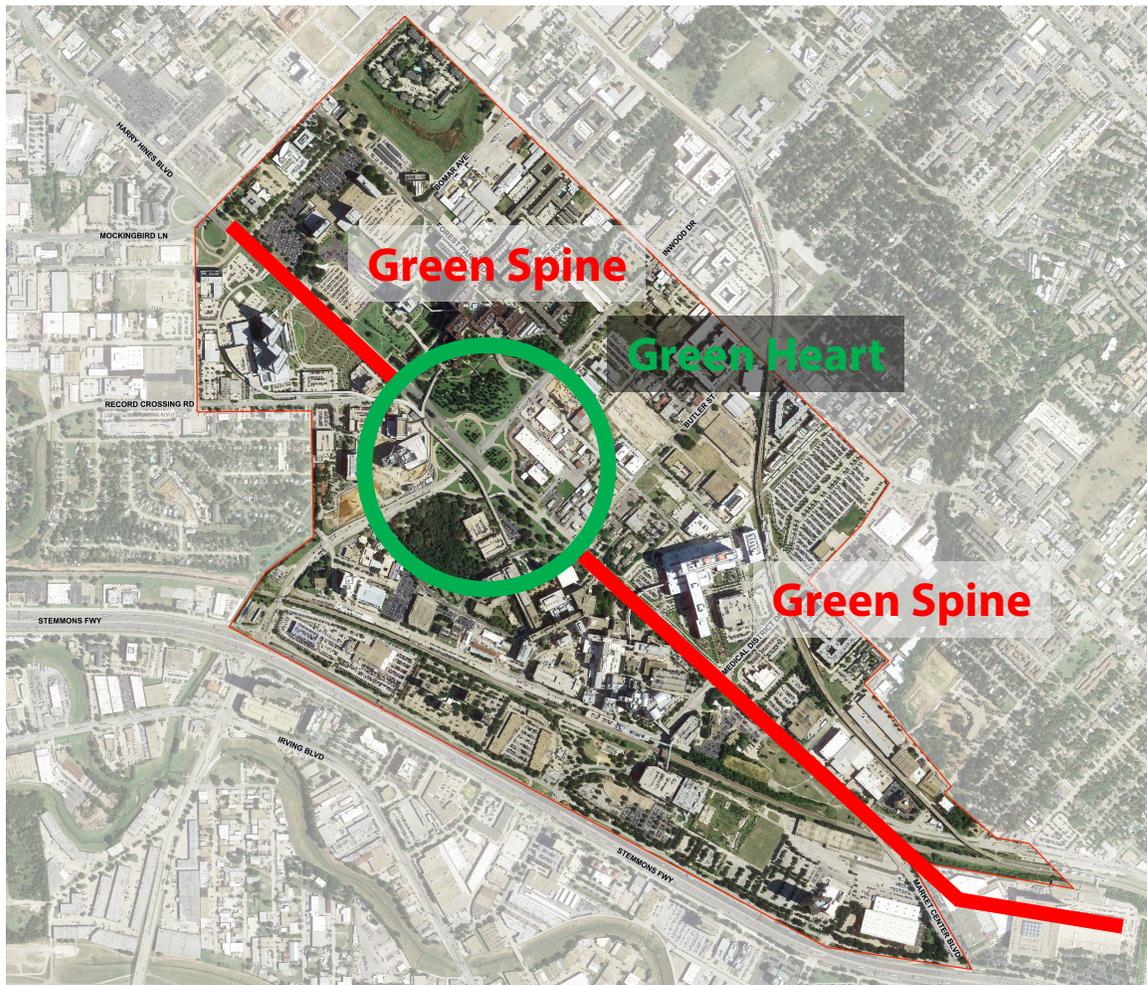
- There is currently ongoing work by PWP Landscape Architecture to complete early design concepts to reconfigure the interchange of Harry Hines Blvd. at

Inwood Road. The reconfiguration will result in the reclamation of approximately 10-acres of open space currently tied up in the interchange to provide an open space amenity and improved bike and pedestrian connectivity through the center of the Medical District campus. The final deliverable from PWP's work will provide a more detailed design vision for the interchange that can then be translated into construction documents in the future;

- Coordination with a North Central Texas Council of Governments Corridor Study for Harry Hines Blvd. from Loop 12 to Downtown Dallas anticipated to begin in 2020;
- City of Dallas extension of the Trinity Strand Trail through the District, including a segment along Harry Hines Blvd from Medical District Drive to Market Center Boulevard, which is currently under design; and
- Various hospital and private development projects that are currently in the design and planning phases.

As a result, proposals should accommodate the following key deliverables:

- 100% Construction Documents for the segments of Harry Hines Blvd. between West Mockingbird Lane and Record Crossing Road and between Butler Street and the Market Center DART Station. These documents will be provided to the City of Dallas for bidding and construction, and will need to adhere to City requirements as well as TxDOT review;
- Add alternate components to the scope to carry the infrastructure improvements through the Green Heart along Harry Hines Blvd. from Butler Street to Record Crossing Road to 20% design [this scope will not include park design];
- Coordination and accommodation of ongoing development projects and the extension of the Trinity Strand Trail; and
- Operation and Maintenance Plan for proposed streetscape improvements along the corridor.



Green Spine Project Segments

SWMD IMPLEMENTATION TEAM

Texas Trees Foundation (TTF) Leadership Team

Overall project management and project coordination to implement the SWMD Urban Streetscape Master Plan will be managed through the leadership team that has been assembled and is outlined below. Additional information can be found in Appendix B: SWMD Implementation Team Organizational Chart.

Strategic Project Oversight

TTF's President and CEO will provide high-level oversight and direction-setting for the project, serving as a direct link with the TTF Board and donors, as well as a strategic link with key project partners.

Project Manager

The Project Manager will provide overall project management to coordinate and direct activities related to implementing the SWMD Urban Streetscape Master Plan, including coordinating selection of appropriate consultants, establishing necessary deliverables and schedule for completion, organizing and directing team members' work to ensure successful project completion, and managing the review and approval process. In general, this role will also be to provide expertise on the ground relating to local requirements and processes impacting the implementation of the plan.

Project Coordinator

The Project Coordinator is an internal administrative position that will provide multi-task logistical and administrative support, including coordination and scheduling. The Project Coordinator will report directly to the TTF President and CEO and will be responsible for managing and coordinating a variety of tasks primarily related to the ongoing advocacy, planning and design of the SWMD Urban Streetscape Master Plan, as well as other ongoing and future projects. The Project Coordinator will work closely with the Project Manager.

Equitable Engagement Coordinator

The Engagement Coordinator will be an internal administrative position that will provide help to define and support an equitable engagement program that will focus on ensuring all voices are brought to the table and reflected in the end product. The Engagement Coordinator will report directly to the TTF President and CEO and will be responsible for managing and coordinating a variety of tasks primarily related to community and strategic partnerships associated with the SWMD Urban Streetscape Master Plan. The Engagement Coordinator will work closely with the Project Manager, Equitable Engagement Firm (to be hired), and the Design Team.

QA/QC Advisor

The Quality Control/Quality Assurance Advisor will be a contracted service and will be a registered professional Engineer in the State of Texas with demonstrated expertise in developing capital construction projects of the scope and scale of the Green Heart and Green Spine or be a similarly qualified project management professional. They will work at the direction of the Project Manager to ensure that the process and deliverables are meeting all technical requirements and utilizing best practices, so that Construction Documents are

delivered on time and on budget and are acceptable for City of Dallas for periodic reviews, as well as bid and construction purposes.

O&M Advisor(s)

Will be contracted with TTF to provide general insight and guidance on development of open space with particular attention to operational and maintenance concerns with open space design. They will review scopes and design deliverables to ensure that long-term O&M considerations are top of mind, while providing guidance on creating a high-quality open space.

Advisory Committee

The Advisory Committee will provide national and global expertise on issues facing the Medical District. Serve as a sounding board during the implementation process to ensure best practices and state of the art approaches are being considered. The purpose is not to duplicate disciplines on the design team, but to augment points of view so that the design team is pushed to think outside the bounds of standard operating procedure.

Meetings will be convened at key project milestones, anticipated to generally occur quarterly. Meetings are expected to be approximately 2 hours each, with additional 1 hour of preparation will be needed to review materials. Additional salon discussions will be organized for the general public and key stakeholders and coordinated with project milestones. The purpose will be to broaden the discussion around streetscape design, and its impact upon our physical, environmental, and economic health. The Committee will be comprised of 20-25 members in the following disciplines:

Planning, Design, & Development

Transit/Transportation
Multi-modal
Future Mobility
Public Policy
Economic Development
Tourism
Open Space
Urban Design and
Placemaking

Landscape and Habitat
Systems/Biophilic
Water Management
Utilities

Science & Humanities

Public Art
Cultural Affairs
Education
Medical Research
Public Health
Energy

Advocacy

Downtown Dallas Inc
Uptown Dallas Inc
Equity
Congressional Delegation

Operations

Innovation
Technology/
Smart Cities
Safety/Security
Branding & graphic
design

Engineering and Technical Consultants

TTF is currently developing the scope of engineering services to provide engineering and technical services associated with the design of Harry Hines Blvd. improvements. Their team of subconsultants is anticipated to provide the following disciplines and services:

- Civil and structural engineers,
- Survey and subsurface utility,
- Geotech,

- Traffic planners,
- Traffic control plan, and
- MEP engineer.

Additionally, the engineering and technical team is anticipated to lead a feasibility study based upon initial findings and analysis. This study will allow project scopes to be refined, if necessary, to adjust and accommodate any changes to our understanding.

Equitable Engagement Consultants

Through a separate RFQ process, TTF is seeking qualifications from firms and organizations wishing to provide equitable community engagement services for the Southwestern Medical District (“SWMD”) Urban Streetscape Project in Dallas, Texas. Equitable stakeholder engagement will be the cornerstone of the project. TTF desires to build a team that can collectively create a robust and equitable engagement process that engages the community in creative and thought-provoking new ways and empowers those traditionally underserved communities to co-design the project so that is accessible and meaningful to all appropriate constituencies. The landscape and urban design team will be coordinating with and providing support to the engagement team.

History Consultant

An historian has been engaged to conduct the history research for the area. Design should be grounded in the history of the place in order to be authentic. It is anticipated that the final deliverable from the historian will be available as the design effort kicks off so that it can provide insight and direction.

Impact Research Team

Harry Hines Blvd. currently does little to contribute positively to public health or promote healing within a major medical district. TTF is currently discussing and negotiating a scope of services to administer a research program to assess the pre-construction and post-construction conditions, and their effect upon environmental and public health. This will be achieved through a detailed assessment of changes in environmental exposures and biological markers in a study population that is directly impacted by the proposed Harry Hines Blvd. improvements.

Additional Project Partners

Given the scope and complexity of the project, TTF is working closely with a number of agencies regarding project implementation. They include:

SOUTHWESTERN MEDICAL DISTRICT (SWMD)

District and member institution representation will be provided by Robert Prejean, Manager for the SWMD. Additionally, his urban planning background brings

additional creativity, wisdom and oversight to the design process. Mr. Prejean's role will also include liaison between TTF and the SWMD Board of Directors.

CITY OF DALLAS

Various executive management and department heads have and will continue to be invited to the table for this project as an integral part of the design, funding and implementation strategies. Financial support through city allocated or bond funds is expected by our philanthropic and other governmental agency funders to demonstrate the City of Dallas' willingness to accept ownership in the improvement efforts for this major project that has city wide impacts. Municipal support in both the permitting and implementation process is critical for the transition of this project from design to realization. The City of Dallas has committed \$7.5M toward construction of the project.

North Central Texas Council of Governments (NCTCOG)

NCTCOG Transportation Director Michael Morris and his staff have been engaged with TTF throughout the master planning process of this project; and, have committed \$6M in funds [CMAQ and STBG funds] for Harry Hines Blvd. Additionally, NCTCOG will perform a corridor study for the entire Harry Hines Blvd. corridor from downtown to Loop 12, coordinating with TTF-led efforts to investigate alternatives for the Green Heart. NCTCOG's continued involvement and support with the project is critical to the long-term success of the implementation of this phase and all future phases.

Texas Department of Transportation (TxDOT)

The Texas Department of Transportation provides review oversight to ensure that the initial project complies with relevant standards and guidelines required of its funding. TxDOT will review design documents at various stages throughout the project.

DALLAS COUNTY

Dallas County will provide input and direction on process and participants; Coordinate specifically with Parkland Hospital and other County partners as necessary; promote and support stakeholder engagement efforts. The role of the County will be further defined based upon the outcome of a request for construction funds submitted through the MCIP 7th Call for Projects.

Dallas Area Rapid Transit and Trinity Railway Express (DART/TRE)

Both agencies have demonstrated substantial interest in this project and have organized staff teams dedicated to participating in this project. Because the District is served by a TRE station and several DART stations, as well as numerous bus stops, we believe there are mutually beneficial advantages gained from working together to improve transit services for District users.

ONCOR

ONCOR has also created a staff team dedicated to assisting us with electrical utility lines and services as needed. The Medical District is burdened with an inordinate

number of overhead utility lines that impede sidewalk and bicycle lane improvements - another dated infrastructure component of existing conditions in need of modifications. Having ONCOR as a team member is key to the long-term success of this project.

PROPOSAL DETAILS

Landscape and Urban Design Consultant

TTF is seeking an innovative landscape and urban design team to join the implementation team currently being assembled. The landscape and urban design team design consultant firm will be selected through this RFP process. Potential disciplines for the Landscape and Urban Design Team include:

- Design Landscape Architect
- Production Landscape Architect
- Urban Design
- Graphic Design
- Lighting
- Public Art
- Irrigation Designer

Proposal Contents

1. Cover Letter
2. Team information
 - a. Firm background and history of prime
 - b. Organization chart
 - c. Background and history of subcontractor firms
 - d. Resumes and bios of proposed team members with anticipated availability
3. Relevant projects in last 5 years
 - a. Description
 - b. Budget
 - c. Client/Reference
 - d. Highlight innovation [approaches/process, design solutions, etc.]
 - e. Similar project experience with professional and project awards
4. Project approach description, including anticipated tasks and deliverables to achieve the following:
 - a. Feasibility study identifying opportunities and constraints, as well as reviewing previous studies
 - b. 100% Construction Documents for the segments of Harry Hines Blvd. between West Mockingbird Lane and Record Crossing Road and between Butler Street and the Market Center DART Station;
 - c. Add alternate components to the scope to carry the infrastructure improvements through the Green Heart along Harry Hines Blvd. from Butler Street to Record Crossing Road to 20% design and 100% construction documents;
 - d. Coordination and accommodation of ongoing development projects and the extension of the Trinity Strand Trail; and
 - e. Operation and Maintenance Plan for proposed improvements along the corridor.
5. Proposed timeline and budget for proposed tasks and deliverables to be provided

Submittal Instructions

By February 7, 2020 at 5:00 PM CST, please submit your proposal in a single PDF. An optional informational webinar will be offered on January 22, 2020 at 12:00 PM CST. For login information, please contact David Whitley at david@drwplanning.com. All emails should be sent with the subject line: "Green Spine Design RFP Webinar."

In an effort to maintain a comprehensive inventory of questions and answers, questions and requests for clarification regarding this RFP must be submitted in writing to David Whitley at david@drwplanning.com by January 24, 2020 at 12:00 PM CST. All emails should be sent with the subject line: "Green Spine Design RFP Questions." All questions received and their respective answers will be posted by January 29, 2020 at 5:00 PM CST on the TTF website on the SWMD Project page (<https://www.texas-trees.org/projects/southwestern-medical-district>).

Final submission should be sent in a link to download a single PDF document to David Whitley at david@drwplanning.com by the deadline. Submissions received after this time will not be reviewed. All emails should be sent with the subject line: "Green Spine Design RFP Submission."

Anticipated Evaluation Timeline

- RFP Released: January 9, 2020
- Informational Webinar: January 22, 2020
- Questions due: January 24, 2020
- Q&A published: January 29, 2020
- Proposals Due: February 7, 2020
- Selection committee review: February 10-February 14, 2020
- Shortlist notified: February 17, 2020
- Interview date(s): Week of February 24, 2020
- Top finalist notified: February 28, 2020

Evaluation Considerations

The Selection Committee will review all responsive submittals and select the best evaluated teams for interviews. Proposals should highlight the team's strengths in the following areas:

Past Work

- Does not follow "cookie-cutter" approach to streetscape and public space design
- Exhibits design excellence and innovation through creative integration of art, history and nature into the landscape
- Successful completion of projects of similar scale, complexity and scope, and to what levels projects were implemented
- Prior experience on transformational projects

- Success in integrating public realm and adjacent private open space to knit together places and districts
- Work on public/private projects

Team Capacity & Capability

- Staffing size and areas of expertise
- Current staff workload
- History of meeting deadlines
- History of staying within budget
- Expertise of project manager and project team
- Current workload of project manager
- Past performance on similar contracts
- Current financial capability and business practices

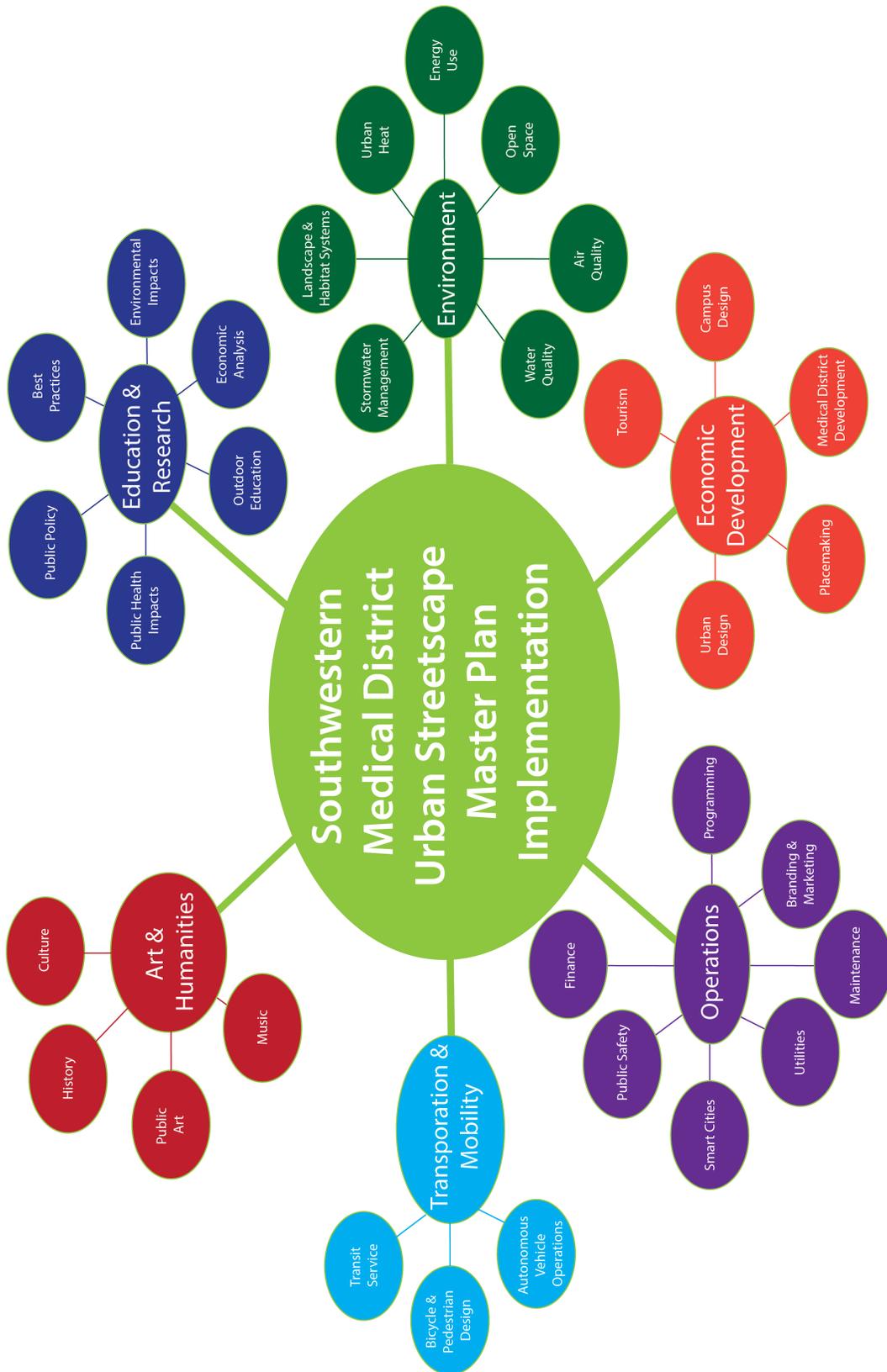
Technical Considerations

- Prior and current litigation claims
- Potential conflicts of interest with other related projects
- Team diversity

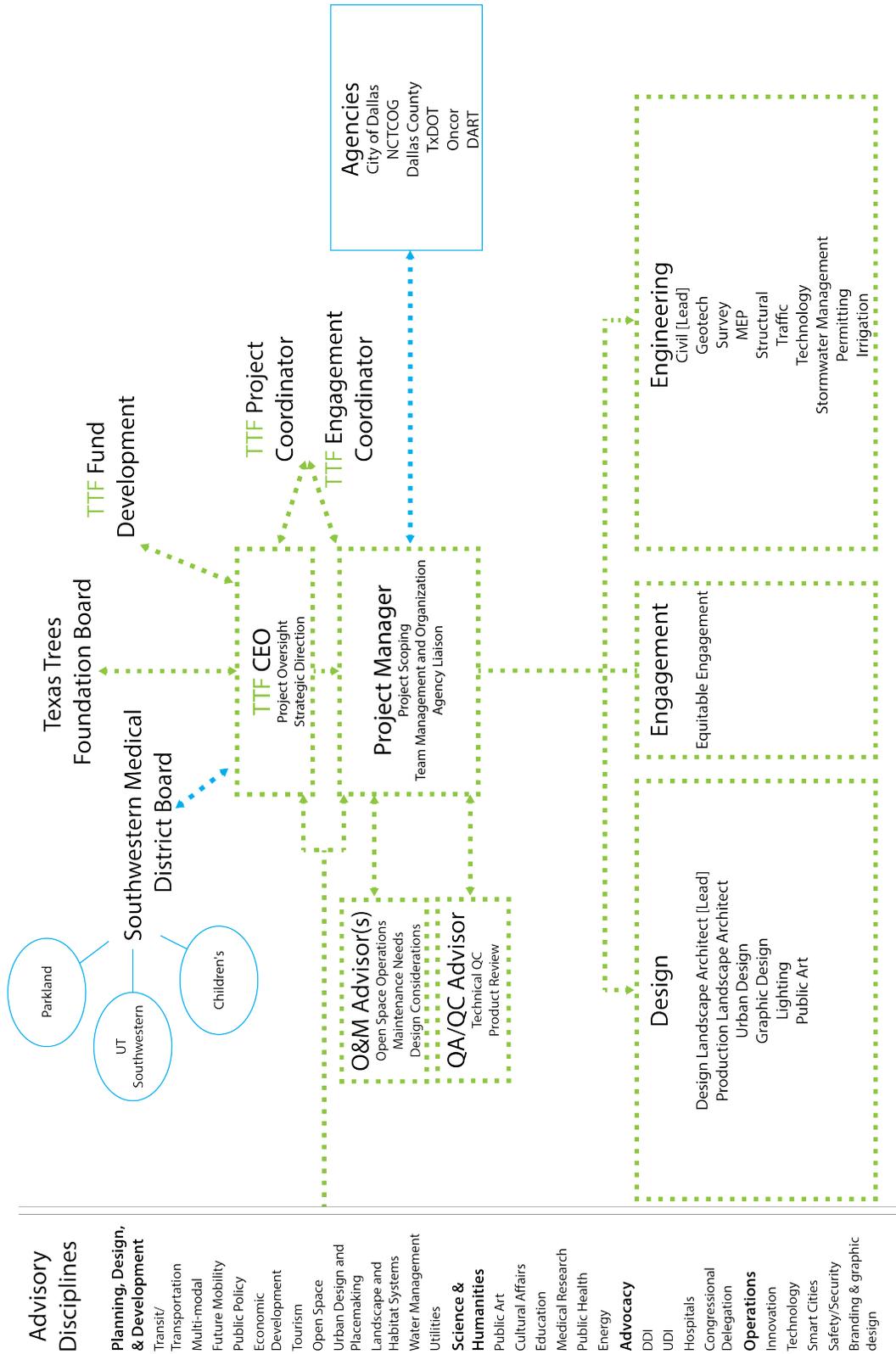
Appendices

- Appendix A: Disciplines Influencing Project Design
- Appendix B: SWMD Implementation Team
Organizational Chart
- Appendix C: Standard City of Dallas Requirements

Appendix A: Disciplines Influencing Project Design



Appendix B: SWMD Implementation Team Organizational Chart



Appendix C: Standard City of Dallas Requirements

Construction drawings developed during this process will be provided to the City of Dallas to bid and award for construction. Standard City requirements are outlined below for your information.

GENERAL REQUIREMENTS

1. Provide all manpower, technical equipment, software, office supplies, transportation, professional services, deliveries, and incidentals, etc. necessary to accomplish the Scope of Work per contract.
2. The Consultant firm shall assign to this project only qualified personnel capable of performing the design and coordination of all elements of the project scope. The consultant must be responsive to the work requests and meet ambitious project schedules.
3. Develop a Project Task Schedule and provide weekly or monthly progress/status reports sufficient enough to support monthly billings. Monthly status reports shall be consistent with each billing period.
4. Coordinate appropriate meetings with City staff for the purpose of information transfer, gaining input, project status, site visits, and product reviews. Conduct monthly project meetings with City design review (project) team and prepare and distribute minutes of the meetings. Distribute agenda for each meeting a minimum of one week in advance of the meeting date. Advise Project Manager of comments/requests which are out of scope or which will affect construction/engineering costs.
5. Assist City representative at public meetings and hearings and conduct Executive Briefings when so requested by the City Project Manager. These items must be authorized in advance and in writing by the Project Manager and will be paid only as used based on hourly billings of time expended by consultant. Such billings shall not exceed the amount established for this item.
6. Identify, coordinate and conform design/recommendations of assigned project(s) to meet legal and regulatory parameters/constraints, codes and applicable requirements set forth by agencies, including, but not limited to State of Texas, City of Dallas, Dallas County or other counties within the project limit, Texas Department of Transportation (TxDOT), railroad regulations, U.S. Environmental Protection Agency (EPA), the Federal Emergency Management Agency (FEMA), United States Army Corps of Engineers (USACE), Texas Commission on Environmental Quality (TCEQ), Texas Water Development Board (TWDB), and any other local codes or agencies as they may apply.

7. Identify all permits and approvals necessary along with their requirements to include all documentation, coordination, testing, forms, and permit applications required by Local, State and Federal Agencies, Departments, Boards, and Commissions, etc. Supply necessary reports and studies to the agencies as required and provide responses to their comments, etc. as necessary.
8. The Consultant shall prepare all necessary plans, specifications, reports, technical memorandums, etc., that may be required for this project, and submit to the City for review.
9. Provide written responses to all comments received on reports, status paper, technical memoranda, plans and specifications and make necessary corrections prior to re-submitting to City for review.
10. Maximize use of existing information, reports, surveys and data available. Confirm existing information, as necessary, provided by the Owner.
11. The Consultant shall, after a thorough review of all available data from the City of Dallas, other applicable agencies, and interviews with appropriate City personnel, shall formulate, analyze, present alternatives, evaluate sustainable practices and make reasonable and appropriate recommendations on all design elements in accordance with the General and Specific Requirements stated herein.
12. The Consultant, when directed to do so by the City Project Manager, shall prepare a report listing "Opinion of Probable Cost" on various alternatives to aid in determining the most cost-effective solutions. In addition, from time to time, the Project Manager may direct the consultant to produce an engineer's opinion of various alternatives that may be presented.
13. Designs shall be compatible with the final alignments, grades, and known requirements of facilities occupying public rights-of-way. If modifications to public rights-of-way are deemed necessary, the consultant shall provide plans, specifications, field notes, etc., as may be required to obtain such right-of-way. All right-of-way acquisitions shall be identified at the 20 percent design phase, and shall be coordinated with the City of Dallas Real Estate and Survey division and meet the requirements.
14. The Consultant shall produce all design drawings in the latest version of Bentley System, Inc. MicroStation Computer Aided Design and Drafting system (CADD). All design drawings shall be created electronically and shall meet the City's requirements. In addition, the Consultant shall submit all electronic data in the form and format listed herein.

15. Provide the required information for input into the City's fixed asset management system Enterprise Work Order and Asset Management System (EWAMS).

SPECIFIC REQUIREMENTS

A. Preliminary Investigation/Study and Design Report

1. Preliminary Investigation:

- a. Existing survey data
- b. Existing GIS Maps, Needs Inventory project file, as-built markups, record drawings, and design drawings
- c. Existing utilities
- d. Property ownership and tax plat information from Dallas County, Collin County, etc.
- e. Flood Studies from Trinity Watershed Management Department
- f. Fourth Edition of North Central Texas Council of Governments (NCTCOG) *Public Works Construction Standards, North Central Texas*, available from NCTCOG, 616 Six Flags Drive, Arlington, TX 76011 (800) 272-3921.
- g. *City of Dallas Addendum to the North Central Texas Council of Governments Public Works Construction Standards, North Central Texas*, Latest Edition, available from the following location:
<http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/2011->
- h. [COD_NCTCOG_addendum.pdf](http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/2011-COD_NCTCOG_addendum.pdf)
- i. DWU standard Technical Specification for Water & Wastewater Construction, Latest Edition available from the following location:
<http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/DWU>
- j. [StandardTechSpecs_Water-WastewaterConstruction_aug2014.pdf](http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/StandardTechSpecs_Water-WastewaterConstruction_aug2014.pdf)
- k. Pavement Cut and Repair Standards Manual, Department of Public Works, Latest Edition, available from the following location:
<http://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/DrainageDesignManual-searchable.pdf>
- l. Paving Design Manual, Department of Public Works, Latest Edition, available from:
<http://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/PavingDesignManual-searchable.pdf>
- m. <http://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/PavingDesignManual-searchable.pdf>
- n. Drainage Design Manual, City of Dallas, Latest Edition, available from:
<http://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/DrainageDesignManual-searchable.pdf>

- o. DWU Standard Drawings for Water and Wastewater Construction available at:
http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/StandardDrawings_manual_Oct2012Edition.pdf
- p. The latest edition of the *Dallas Water Utilities Drafting Standards for Water/Wastewater Pipeline Projects*, available from the following location:
http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/PipelineDrafting_standards_july2012.pdf
- q. DWU Drafting Resource Files available from the following location:
http://dallascityhall.com/departments/waterutilities/Pages/dwu_design_standards_drafting_resource.aspx
- r. DWU Bid Item and Cost Estimating Manual, Latest Edition, available from the following location:
<http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/BidItemCostManual.pdf>

2. Design Report (if applicable)

Consultant shall develop a design report if required/applicable per awarded contract. The design report may include, but is not limited to, the following information for each segment of the project that is to be replaced or rehabilitated:

- a. Segment description based on either upstream to downstream - stream station, from manhole to adjacent manhole and/or from street/alley intersection to street/alley intersection.
- b. Consultant shall provide Support Data and Exhibits for Storm Sewer / Creek Maps, Location Maps, TV Inspection Summary Reports, Aerial Photo(s) of Proposed Alignment in GIS exhibit, etc.
- c. The Consultant shall make recommendations for each project segment and include the following:
 - (i) Proposed pipe / box culvert / channel size(s)
 - (ii) Proposed channel and erosion control measures
 - (iii) Proposed alignment of storm sewer system(s) or channel(s)
 - (iv) Proposed and existing adjacent water/wastewater mains, franchise utilities, channels, and roadways. The Consultant will note the need and make recommendations for potential Subsurface Utilities Engineering (SUE) Work in project area
 - (v) Proposed and existing 1-percent-annual expected probability flood mapping (100-year floodplain)
 - (vi) Need for additional investigations, including but not limited to television inspection, condition assessments, etc.
 - (vii) Proposed construction methods and any potential concerns related to constructability
 - (viii) Potential permits needed on project including but not limited to:
 - (a) Corps of Engineers Permit(s)
 - (b) DART Permit(s)
 - (c) TxDOT Permit(s)

- (d) TCEQ Permit(s)
- (e) Railroad Permit(s)
- (f) City of Dallas Street Cut Permit(s)
- (g) City of Dallas Grading Permit
- (ix) Potential coordination with outside agencies and stakeholders including but not limited to:
 - (a) Trinity River Authority (TRA)
 - (b) Dallas Area Rapid Transit (DART)
 - (c) County Government(s): (Dallas, Denton, Collin, Kaufman, and Rockwall)
 - (d) North Central Texas Council of Governments (Corridor Development Certificate if required)
 - (e) Texas Department of Transportation (TxDOT)
 - (f) North Texas Tollway Authority (NTTA)
 - (g) Other cities where the city facilities may be in non-City of Dallas Public Right-of-Way (ROW) or public owned easements
 - (h) Neighborhood Associations and Community Groups, Advocacy Groups and Special Purpose Associations
- (x) Potential Rights-of-Way (ROW) or easements required for the project
 - (a) Number of fieldnote sets required (per City survey requirements)
 - (b) Approximate area of new easement(s) or new property to be purchased or dedicated that may be required to complete this project
- (xi) The need for Potential Environmental Services required for project(s)
 - (a) File Research
 - (b) Phase 1 Environmental Investigation(s)
 - (c) Phase 2 Environmental Investigation(s)
 - (d) Soil characterization to support appropriate soil disposal
 - (e) Environmental Impact Analyses (as necessary related to scope and project permit requirements)
 - (f) Aquatic Relocation Plan (as necessary related to scope)
 - (g) 404 Nationwide Permit (NWP) and other Environmental Permit support
 - (h) Develop environmental, scoping document and prepare environmental assessment (EA) or environmental impact statement (EIS) or categorical exclusion (CE) if required. Complete final documents including environmental permits, issues and comments (EPICS) for federal/state funded projects.
- (xii) Proposed projects by others to include:
 - (a) Project Scope
 - (b) Agency
 - (c) Project Schedule
 - (d) Impact to PBW
- (xiii) Potential Community Impacts and Related Outreach.

Deliverables:

- Each report shall be up to 10 pages in length.
- One hard copy with color photographs, with identical electronic formatted copy.
- Provide opinion of probable cost for each project segment.

B. Plans and Specifications

1. Design Phases Deliverables at 20%, 65%, 85%, 100%

The Design Consultant shall prepare construction plans for review and obtain approval from authorized City personnel at key stages of assigned project. Below is each stage of required deliverables.

a. Conceptual Design Deliverables (20%)

- (i) Horizontal and Vertical Control sheets (must be approved before design begins)
- (ii) Plan sheet(s) of the proposed improvement(s) of the project.
- (iii) Easement area identified and field notes submitted
- (iv) Opinion of Probable Construction Cost

b. Preliminary Design Deliverables (65%)

- (i) Cover Sheet
- (ii) Construction Quantity Summary Sheet(s)
- (iii) General Notes Sheet(s)
- (iv) Quantity Summary Sheet
- (v) Drainage Area Map Sheet
- (vi) Plan and Profile Sheet(s)
- (vii) Structural Details Sheet(s), if applicable
- (viii) Utility Adjustment/Relocation Plan and Profile Sheet(s)
- (ix) Engineering Calculations
- (x) Trees identified for mitigation, if applicable
- (xi) Opinion of Probable Construction Cost

c. Pre-Final Design Deliverables (85%)

- (i) Cover Sheet
- (ii) General Notes Sheet(s)
- (iii) Quantity Summary Sheet(s)
- (iv) Drainage Area Map Sheet(s)
- (v) Plan and Profile Sheet(s)
- (vi) Structural Details Sheet(s), if applicable
- (vii) Utility Adjustment/Relocation Plan and Profile Sheet(s)
- (viii) Engineering Calculations
- (ix) Opinion of Probable Construction Cost

d. Final Design Deliverables (100%)

- (i) Refer to Section B., Item 6 of the Preliminary Scope of Work
- (ii) For federal and state funded projects, plans and specifications will be prepared in accordance to TxDOT guidelines and procedures. Consultant shall follow TxDOT Local Government Project Management Guide, Local Governments Projects Policy Manual and Project Development Process Manual.

2. Topographic and Boundary Surveys (Special Services)

a. Topographic Surveying

Topographic Surveying shall be in accordance with the **latest edition** of City of Dallas Paving Design Manual.

The Consultant shall obtain the following survey data and apply them in the development of awarded construction plan(s)/project(s):

- (i) Establish and monument (mark) the survey baseline in accordance with the City standards.
- (ii) Establish Vertical Control (Bench Marks) in accordance with the City standards.
- (iii) Perform SUE method as requested by City Project Manager (PM).
- (iv) Identify existing storm drainage inlet(s), outfall(s), manhole diameter(s), invert(s) and rim elevation(s), etc.
- (v) Identify existing pavement type and thickness.
- (vi) Identify locations and elevations of all underground utilities, which may be in conflict. Identify and locate all underground utilities or structures that may be within four (4) foot parallel to or across the proposed embedment zone.
- (vii) Locate and establish control from the City's existing benchmarks (at least two benchmarks for each location). Benchmark file can be found here:
http://dallascityhall.com/departments/waterutilities/DCH%20Documents/pdf/benchmark_042014.pdf

b. Boundary Surveying

Shall be in accordance with the Texas Professional Land Surveying Practices Act and General Rules of Procedures and Practices. Field Notes (consisting of the metes and bounds description, boundary drawing and locator map) shall conform to the City of Dallas Field Note Guidelines. All surveying shall be under the direct supervision of a Texas Registered Professional Land Surveyor. Horizontal & Vertical Control drawings shall contain all boundary information, all monumentation found or set, and shall identify controlling monuments.

All submittals, whether Field Notes or Horizontal & Vertical Control drawings shall contain the seal and signature of the Texas Registered Professional Land Surveyor responsible for the work. Submittals that do not contain the seal and signature will not be accepted.

Horizontal & Vertical Control drawings shall be submitted 30 to 60 days after notice to proceed, as determined by the City Project Manager. Design shall not begin until Horizontal & Vertical Control drawings are approved.

3. Geotechnical and Environmental Support (Special Services)

Geotechnical investigation may be required for a project by the City Project Manager. Environmental due diligence for each project location should be made to develop designs and specifications for areas impacted when it is required. Environmental services may also include soil characterization in support of appropriate spoil disposal, and any necessary assessments in support of project permit requirements.

4. Easements

Provide suitable documents and field notes necessary to acquire temporary and/or permanent easements for construction, where required by City Project Manager. All field surveying and field notes shall be prepared in accordance with procedures established by City of Dallas Surveyor.

5. Design Services

The following must be included as a minimum:

- a. Consultant shall coordinate with other utility companies to ensure proper clearance
- b. for the proposed projects. Upon request, provide a list of all contacted utility representatives to City Project Manager that includes names of people contacted, phone numbers, email addresses, physical location, etc.
- c. Create presentations for public meetings and assist City staff at these meetings as requested.
- d. Prepare construction drawings and technical specifications required for the awarded projects, in accordance with the applicable City, state and federal regulations, requirements, and guidelines.
- e. Provide appropriate level of Quality Assurance and Quality Control (QA/QC) review on all deliverables to the City of Dallas.

6. Final Design Deliverables

The Design Consultant shall prepare construction plans for awarded project(s) as required for each location independently. The plans shall be in conformance with all applicable City standards, policies, and criteria. Plans shall be created in a professional manner and be adequate to advertise for construction bids. Final deliverables shall include but not be limited to the following:

- a. Prepare final design plan and profile sheets.
- b. Prepare project layout control showing pertinent survey data on the plan and profile sheets and all pertinent construction notes.

- c. Confirm recommendations from design report information that was gathered during design phase. Finalize the methodology of construction of underground infrastructure as either open cut or trenchless method. If trenchless is chosen, specify which method would be best to utilize.
- d. Finalize horizontal and vertical utility locations on the plan and profile sheets.
- e. Finalize special design considerations as requested by the City Project Manager.
- f. Finalize plan and profile designs; identify locations of all conflicts; adjust horizontal and vertical alignment to optimize hydraulics, eliminate conflicts, and maximize utility clearance.
- g. Finalize plan and profile designs for DWU water and wastewater relocations, other utility relocations and adjustments.
- h. Identify and specify storm water pipe materials based on drainage design criteria and soil types.
- i. Provide coordination required to maintain continuous service for all utility and service lines as requested by the City Project Manager.
- j. Prepare traffic sequencing plans as necessary to support construction activities within specific roadway project(s) limits, or areas providing project ingress/egress. Traffic Sequencing Plans shall be sealed by the responsible Texas Professional Engineer.
- k. As directed by the City Project Manager, provide requested number of final plan sets and electronic copies of design files per project.
- l. Provide three copies of original signed, sealed, and notarized (if required) copies of City approved easements, field notes and all pertinent documentation to City Project Manager.
- m. Provide additional plans, specifications, reports, technical memorandums, status papers, and other documents as requested by the City Project Manager.

7. Contract Services

Provide the following contract services:

- a. Prepare Special Provisions and Special Technical Specification for use in Bid Specification documents as requested by the City Project Manager. Special Provisions are only those specifications not specifically in the *DWU Standard Specifications Manual*, *NCTCOG Public Works Construction Standards*, or the *City of Dallas Addendum to the NCTCOG Public Works Construction Standard*.
- b. Prepare Engineer's Estimate of Probable Costs and bid item tabulations.
- c. Provide other required construction services as requested by Department of Public Works (PBW). This shall include but not be limited to: plan revisions, submittal reviews, periodic site visits, review of proposed change orders, and attend pre-bid meetings, etc.

- d. Deliver one set of sealed design drawings on DMIBOP10 "Indoor Banner-Outdoor Poster Paper" Nylon Reinforced 10 mil/250 Micron and special specifications to City Project Manager.
- e. Furnish files of the scanned images of the final sealed drawings and specifications with the construction records posting on a CD or DVD to Project Manager.

8. Plan Drawings

Submit all original CADD drawings to PBW, including any special appurtenance and detail sheets, with the following stipulations:

- a. All submitted CADD Drawings shall be done in ink (CADD Plotter) on DMIBOP10 "Indoor Banner-Outdoor Poster Paper" Nylon Reinforced 10 mil/250 Micron.
- b. All design and plan drawings shall be produced in an electronic file format created by a CADD system completely compatible with the latest version of Bentley System Inc.'s MicroStation®.
- c. Each final design sheet must be in its own computer file in a format completely compatible with the latest version of Bentley System Inc.'s MicroStation® and each final design sheet will incorporate the computer file extension ".dgn" as the last characters in the file name. No reference files, no special or proprietary cell libraries, no special or proprietary font files, and no special or proprietary line styles, shall be attached. With the exception of Bentley System Inc.'s proprietary data files for applications such as InRoads® or InRoads Survey®, no other proprietary files may be included.
- d. Each individual design sheet shall be provided in a "Tagged Image File Format (TIFF)", latest version (this extension may be abbreviated to "tif").
- e. Additionally, each individual design sheet shall be provided in the latest version in the Public Domain of the "Portable Document Format (PDF)" type file.
- f. Should the Consultant desire to supply electronic files in some other format or created by some other program, prior approval from City Project Manager must be obtained.

9. CADD Deliverables

All reference files and cell libraries used to create the design sheets shall be included. If proprietary files for fonts, lines styles, aerial photographs, or other such attachments are included, legal and binding permanent licenses for the use of such files shall be included. Detail sheets, special appurtenances, and other such design details should be supplied as outlined above. Any proprietary or copyrighted details shall include a release from the copyright holder allowing the City of Dallas to make an unlimited number of copies of the submitted special details.

10. Specification Documents

The Consultant shall furnish all computer specification files, including all word processor or spreadsheet files in latest version of Microsoft Office for Windows®. Specification Document files shall be furnished on Compact Disc® or other agreed upon media as approved by the City Project Manager.

Scanned images, photographs, reports, analysis, and all other project data shall be submitted in file formats compatible with software and computers owned by the City of Dallas. All such specification documents shall be furnished on Compact Disc®, Digital Video Disc or other agreed upon media as approved by the City Project Manager.

11. Media Submittal

Submittals must be on a Compact Disc® (CD) or Digital Video Disc (DVD) "Write Once" media. The CD or DVD must be "closed" (formatted for use on any computer and write protected so that no additional data can be added). Note: The requirement for "Write Once" media is driven by the need to maintain an archival record of the actual file submitted in a means that CANNOT be modified.

Each CD or DVD shall have written in permanent ink on the label side the name of the consultant company submitting the plans, the contract number, project name, date, location description, the correct drawing number, and data type contained, (i.e.) CADD or GIS. Original, unmodified CDs or DVDs will be submitted to the Project Manager and ultimately filed.

Should the Consultant desire to furnish any of the required submittals in another type of media, the Consultant must obtain approval from City Project Manager for the project(s).

12. Digital Drawing File Information

The CD or DVD shall contain an electronic copy of the digital drawing file in MicroStation DGN format. A compressed and self-extracting file type (.ZIP) of these is acceptable.

- a. These submittals must follow the specifications listed above.

The CD or DVD shall also contain a copy of the transmittal letter accompanying the submittal in Microsoft Word for Windows® software, current release, or other compatible text file format of MS "Word" is the preferred document software.

13. Digital Drawing Registration and Survey Control

- a. Digital drawing file data shall be in U.S. Survey Feet for distances, and degrees, minutes, and seconds for bearings and angles.

- b. Consultant shall set stable, accessible horizontal and vertical control monumentation, as directed by the project manager and in accordance with the City of Dallas Paving Design Manual. Horizontal and Vertical Control monumentation data shall include State Plane Coordinate (ON GRID) values. Coordinates shown for a surface projection shall be modified in such a way to not be confused with true State Plane Coordinates.

Accuracy for Horizontal Control shall be as specified in the Texas Professional Land Surveying Practices Act and General Rules of Procedures and Practices. Vertical Control shall be of second order accuracy, as specified by the United States National Geodetic Survey.

All survey baseline index stations (10+00, 15+00, 20+00, etc.) and controlling monuments found, shall be tagged with their State Plane ON GRID coordinate values. Design features requiring surface projection values shall be derived from a Global Origin whose origin is at the extreme southwest of the project area. In no case shall the surface projection values resemble valid State Plane Coordinates.

- c. The data provided shall be referenced to the State Plane Coordinate System, Texas North Central Zone 4202, North American Datum of 1983, U.S. Survey Feet. For the horizontal coordinate system, the projected coordinate system name is:
NAD_1983_StatePlane_Texas_North_Central_FIPS_4202_Feet, the geographic coordinate system name is: GCS_North_American_1988.
- d. The accuracy will be at a minimum 3 cm (horizontal).