



**US Army Corps
of Engineers** ®
Fort Worth District

Public Notice

Rush Creek at Indian Trail

Project No.: SWF-2019-00154

Date: December 19, 2019

The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

Regulatory Program

Since its early history, the U.S. Army Corps of Engineers has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the U.S. Army Corps of Engineers Regulatory Program.

Section 10

The U.S. Army Corps of Engineers is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States*. The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

Section 404

The U.S. Army Corps of Engineers is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the *discharge of dredged and fill material into all waters of the United States, including wetlands*. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

Contact

Name: Mr. Joseph L. Shelnut

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JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT
AND
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUBJECT: Application for a Department of the Army Permit under Section 404 of the Clean Water Act (CWA) and for water quality certification under Section 401 of the CWA to discharge dredged and fill material into waters of the United States associated with infrastructure protection located in Arlington, Tarrant County, Texas.

APPLICANT: City of Arlington
Ms. Amy Cannon
101 W. Abram Street
Arlington, Texas 76010

APPLICATION NUMBER: SWF-2019-00154

DATE ISSUED: December 19, 2019

LOCATION: The Rush Creek Project Area (Project Area) is in Tarrant County, in the southwestern quadrant of the City of Arlington, Texas (Figures 1-6). The Project Area is a segment of Rush Creek that begins on the downstream side of the Indian Trail low-water crossing and extends 1,320 linear feet (LF) downstream. The Project Area traverses through a single residential property managed for livestock (ranch) and the entire property is zoned by the City of Arlington as single-family residential. Adjacent properties are suburban residential within the municipal limits of Arlington to the west and southwest and Dalworthington Gardens to the east and northeast. The USGS topographic 7.5-minute quadrangle map (Kennedale quadrangle) shows the Rush Creek Project Area reach as a perennial stream. (Exhibit 1 of 6).

OTHER AGENCY AUTHORIZATIONS: State Water Quality Certification (Tier I)

PROJECT DESCRIPTION: The applicant proposes to discharge fill material into a total of 1,320 LF (0.95 ac) of perennial stream in conjunction with proposed infrastructure protection including modification of the channel hydraulic geometry and associated bedform, in order to reduce erosive velocities and stresses on currently eroding valley walls next to critical roadway and sanitary sewer public assets. The realignment of the existing stream meanders and the creation of a new cutoff channel are proposed. All three meander realignments in the project area would result in a length of 912 LF and the proposed constructed cutoff channel creates an additional 288 LF (0.2 ac) of stream, for a total post-construction length of 1,200 LF of channel. The proposed channel realignment allows steep, eroding banks to be adjusted and regraded to stable 3:1 side slopes. The creation of the constructed cutoff channel allows for the redirection of the primary high-flow path and a reduction in shear stress on, and therefore erosion of, the channel banks within the Project Area. No indirect impacts are anticipated as a result of this project.

I. INTRODUCTION: The applicant proposes to perform an infrastructure protection project within the Rush Creek watershed. The Rush Creek Project Area is in the southwestern quadrant of the City of Arlington, Texas and is bordered by the City of Dalworthington Gardens along the north-northeast side (right bank when looking in the downstream direction). The Rush Creek infrastructure protection project will start on the downstream side of the Indian Trail low water crossing at Rush Creek and extend approximately 1,320 linear feet (LF) downstream. The project entails modification of the channel hydraulic geometry and associated bedform, including realignment of the channel to direct flow away from the eroding valley wall that is threatening infrastructure (Figure 5 and 6 of 6). The project is critical for protecting roadway from washing out, which would cut off emergency response from both Arlington and Dalworthington Gardens and protecting a sanitary sewer pipeline from being exposed and breaking.

PURPOSE AND NEED STATEMENT: The applicant states that, "The proposed project will provide protection of infrastructure and reduce erosion along Rush Creek from the low water crossing on Indian Trail to approximately 1,320 LF downstream."

II. EXISTING CONDITIONS: The project area includes an urban perennial stream (Rush Creek) approximately 4.6 acres in size and located south of the intersection of Indian Trail and Garden Lane, City of Arlington, Tarrant County, Texas. The project area is predominantly comprised of upland forest adjacent to Rush Creek. Overall, the topography of the Project Area generally slopes toward Rush Creek. The banks of Rush Creek are nearly vertical in areas, and the surrounding topography was sloped towards the creek, which was not conducive to pooling or the collection of water/inundation. The topography effectively drains the area, preventing wetland hydrology from occurring. No wetland hydrology was recorded at any of the sample point locations. Vegetation around the creek consisted of a mix of wetland and upland species such as southern hackberry (*Celtis laevigata*), Texas cedar elm (*Ulmus crassifolia*), poison bean (*Sebania drummondii*) and giant ragweed (*Ambrosia trifida*). No hydric soils were identified within the proposed project area. (Exhibit 3 of 6).

III. ADVERSE IMPACTS: Proposed construction plans include grading and other earthwork to address active stream erosion. A total of 1,320 LF (0.95 ac) of earthen fill into a jurisdictional perennial stream is proposed.

IV. ALTERNATIVES TO THE PROPOSED PROJECT: The USACE has not yet evaluated this alternatives analysis.

NO ACTION ALTERNATIVE

The applicant states that, "the purpose of this project encompasses the need to protect existing infrastructure from becoming exposed and/or becoming a safety hazard. The existing infrastructure consists of a sanitary sewer line that runs parallel to Rush Creek, Indian Trail, a road that crosses the upstream end of the project area and a barn currently used to house livestock. If this section of stream is not adequately stabilized and erosion is not controlled, the above listed infrastructure would become exposed and possibly leak into Rush Creek (sanitary sewer line) or wash into the creek thus becoming unusable (Indian Trail roadway and the livestock barn)." "Even though no impacts would occur to WOUS, this alternative would not meet purpose and need since it would provide no protection to the local infrastructure. Thus, this alternative is not considered to be practicable."

ALTERNATIVE SITE ANALYSIS

The following alternatives information was supplied by the applicant and has not yet been evaluated by USACE:

Alternative 1- SPOT REPAIRS:

Alternative 1 is considered the spot repair option. Spot repairs, for the purposes of this project, are defined as repairs (stabilization/protection) to areas along the streambanks of Rush Creek within the project area targeted near infrastructure. Spot repairs include bank stabilization of Rush Creek in the form of grouted riprap (60 LF) on the downstream side of the low water crossing at Indian Trail and a modular gravity retaining wall system (530 LF) to rebuild/repair the eroded bank near the road and sanitary sewer line.

Spot repairs would be at more risk of failure while the stream continued to shift horizontally and vertically until reaching a stable planform and profile. Due to this alternative not adequately stabilizing and protecting the infrastructure along this reach of Rush Creek over the long term this alternative would not be practicable.

Alternative 2 - EXISTING ALIGNMENT STABILIZATION:

Alternative 2 is considered the existing alignment stabilization option. This alternative was studied as a reach-scale stabilization approach where the stream was to remain largely in its current planform while constructing stabilized side slopes at 3H:1V where possible but had steeper slopes (1.5V:1H) at the upstream and downstream tie-in locations. The stabilization of the project reach would include bank stabilization and protection (rock toe with rootwads, live brush layering) and bed protection (rock riffles) structures. This alternative would also require that the right and left banks be shifted away from the outside of the meanders and road/sewer alignment creating stabilized slopes and reducing risk to infrastructure.

Because this design keeps a sinuous stream alignment, areas of high shear stress would remain throughout the project which would need to be addressed to prevent erosion and encourage vegetation growth. Due to this alternative not adequately stabilizing and protecting the infrastructure along this reach of Rush Creek over the long term this alternative would not be practicable.

Alternative 3 - MODIFIED STABILIZATION WITH OFFLINE WETLANDS:

Alternative 3 is considered the modified stabilization with offline wetlands option. This option consists of modifying the stream creating a more stable planform in the project area and creating offline wetlands in the larger meander near the majority of the infrastructure needing protection. The remaining fill would be placed in the smaller meander to result in a balanced material design.

Alternative 3 improvements included modification of the stream creating a more stable planform with banks graded at 3H:1V slopes where possible but had steeper slopes (1.5V:1H) at the upstream and downstream tie-in locations. Bank protection (rock toe with rootwads, live brush layering) and bed protection (rock riffles) structures were proposed within the modified stream alignment. The larger meander would have wetlands constructed within and would be activated at bankfull flow events and continue to provide flood storage and minimal conveyance. The smaller meander would be filled to approximately 5-feet below the existing floodplain and would be used for valley storage only.

Due to the decrease of high shear stress areas and stable planform design, this alternative was initially recommended as the preferred alternative to stabilize the project reach. This alternative, however, causes the loss of 670 LF of perennial stream length which requires off-site mitigation. Mitigation for this amount of perennial stream was not available in the primary or secondary service areas and only partially available in the tertiary service area. Because of these challenges, this alternative would not be practicable.

Alternative 4 -MODIFIED STABILIZATION WITH CONTINUOUS ORDINARY HIGH WATER MARK

Alternative 4 is considered the modified stabilization with continuous OHWM and is the preferred alternative. This alternative consists of modifying the stream alignment where the larger meander was constructed to have a lower flowline resulting in split flow and a continuous OHWM. Fill material from the modified alignment would be used to bury the smaller meander completely and remaining fill would be removed offsite to an upland location.

Alternative 4 improvements include modification of the stream creating a more stable planform with bank protection at 3H:1V slopes where possible but would have steeper slopes (1.5H:1V) at the upstream and downstream tie-in locations. Bank protection (rock toe with rootwads, live brush layering) and bed protection (rock riffles) structures are proposed within the modified stream alignment. The larger meander flowline would match the modified stream resulting in split flow conveyance. The smaller meander would be filled completely.

Due to this alternative being the only alternative to adequately address shear stress, stabilize and protect infrastructure, and cause the loss of only 120 LF of perennial stream length, this alternative is the applicant's preferred alternative. Note this option will include the creation of 288 LF of new jurisdictional stream length.

V. COMPENSATORY MITIGATION: The applicant is proposing that the proposed project would require realignment of approximately 1,320 LF of perennial stream and a loss of approximately 120 LF of waters of the United States. Mitigation is required in order to compensate for the impacts. This project would be considered "self-mitigating, permittee-responsible" mitigation, and would result in an ecological uplift in stream function. The Mitigation Plan includes Maintenance and Adaptive Management Plan, and a Monitoring Plan.

PUBLIC INTEREST REVIEW FACTORS: This application will be reviewed in accordance with 33 CFR 320-332, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b)(1) of the CWA. The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concerns for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including its cumulative effects. Among the factors addressed are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the USACE in determining whether to issue, issue with modifications, or conditions, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

STATE WATER QUALITY CERTIFICATION: This project incorporates the requirements necessary to comply with the Texas Commission on Environmental Quality's (TCEQ) Tier I project criteria. Tier I projects are those that result in a direct impact of three acres or less of waters of the State or 1,500 linear feet of streams (or a combination of the two is below the threshold) for which the applicant has incorporated best management practices (BMPs) and other provisions designed to safeguard water quality. The USACE has received a completed checklist and signed statement fulfilling Tier I criteria for the project. Accordingly, a request for 401 certification is not necessary and there will be no additional TCEQ review.

ENDANGERED AND THREATENED SPECIES: The USACE has reviewed the U.S. Fish and Wildlife Service's latest published version of endangered and threatened species to determine if any may occur in the project area. The proposed project would be located in Tarrant County where the least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), and whooping crane (*Grus americana*) are known to occur or may occur as migrants. The piping plover and red knot are threatened species and the least tern and whooping crane are endangered species. Our initial review indicates that the proposed work would have no effect on federally-listed endangered or threatened species.

NATIONAL REGISTER OF HISTORIC PLACES: USACE has reviewed the latest complete published version of the National Register of Historic Places and found no listed properties to be in the project area. However, presently unknown scientific, archaeological, cultural or architectural data may be lost or destroyed by the proposed work under the requested permit.

FLOODPLAIN MANAGEMENT: The USACE is sending a copy of this public notice to the local floodplain administrator. In accordance with 44 CFR part 60 (Flood Plain Management Regulations Criteria for Land Management and Use), the floodplain administrators of participating communities are required to review all proposed development to determine if a floodplain development permit is required and maintain records of such review.

SOLICITATION OF COMMENTS: The public notice is being distributed to all known interested persons in order to assist in developing fact upon which a decision by the USACE may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

PUBLIC HEARING: Prior to the close of the comment period any person may make a written request for a public hearing setting forth the particular reasons for the request. The District

Engineer will determine whether the issues raised are substantial and should be considered in his permit decision. If a public hearing is warranted, all known interested persons will be notified of the time, date, and location.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before January 20, 2020, which is the close of the comment period. Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to ; Regulatory Division, CESWF-DE-R; U. S. Army Corps of Engineers; Post Office Box 17300; Fort Worth, Texas 76102-0300. You may visit the Regulatory Division in Room 3A37 of the Federal Building at 819 Taylor Street in Fort Worth between 8:00 A.M. and 3:30 P.M., Monday through Friday. Telephone inquiries should be directed to Joseph L. Shelnutt at (817) 886-1738. Please note that names and addresses of those who submit comments in response to this public notice may be made publicly available.

DISTRICT ENGINEER
FORT WORTH DISTRICT
CORPS OF ENGINEERS

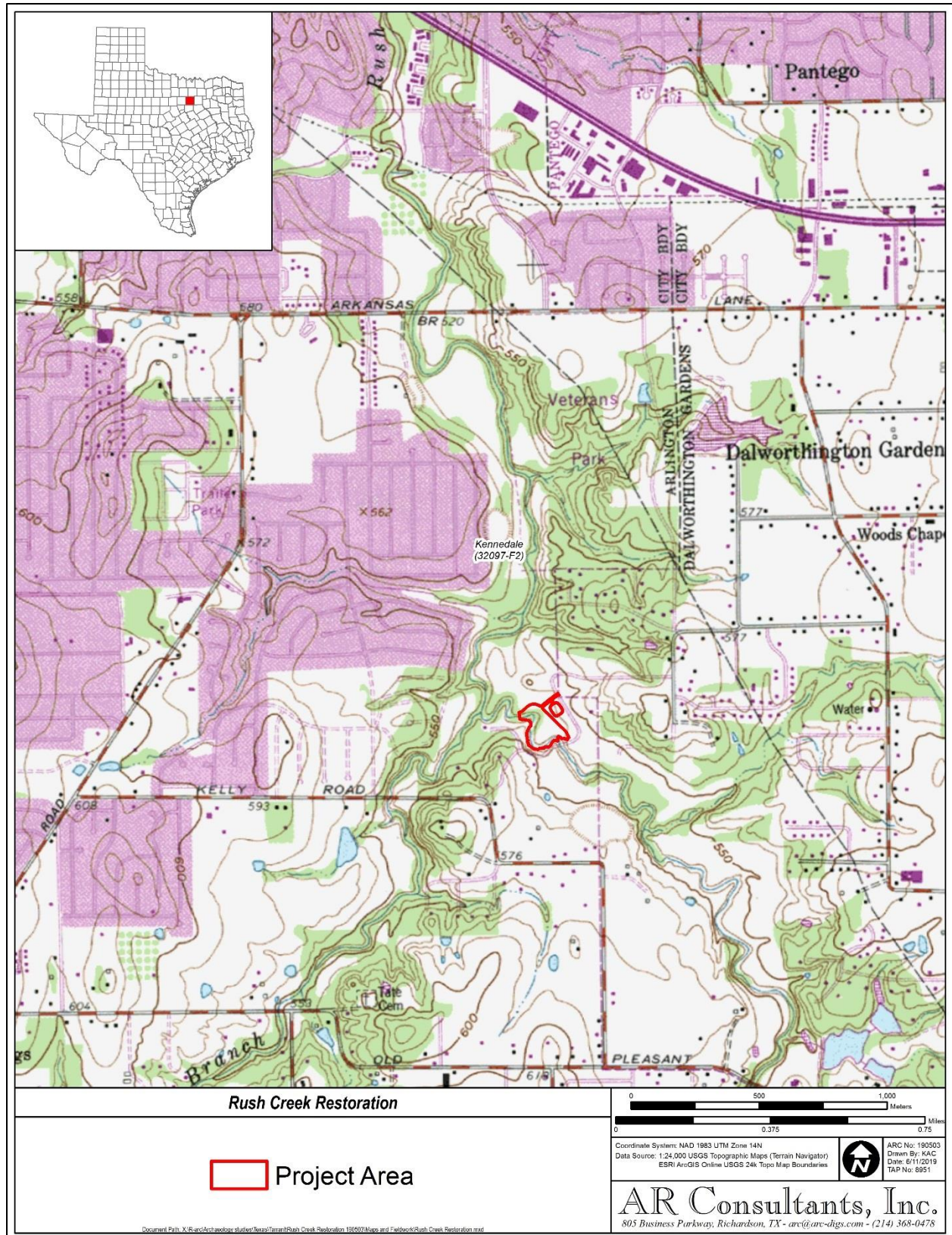
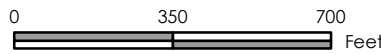
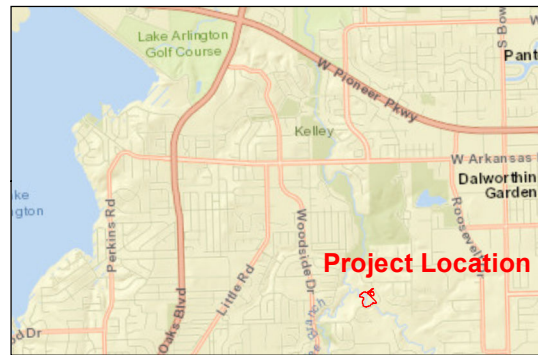
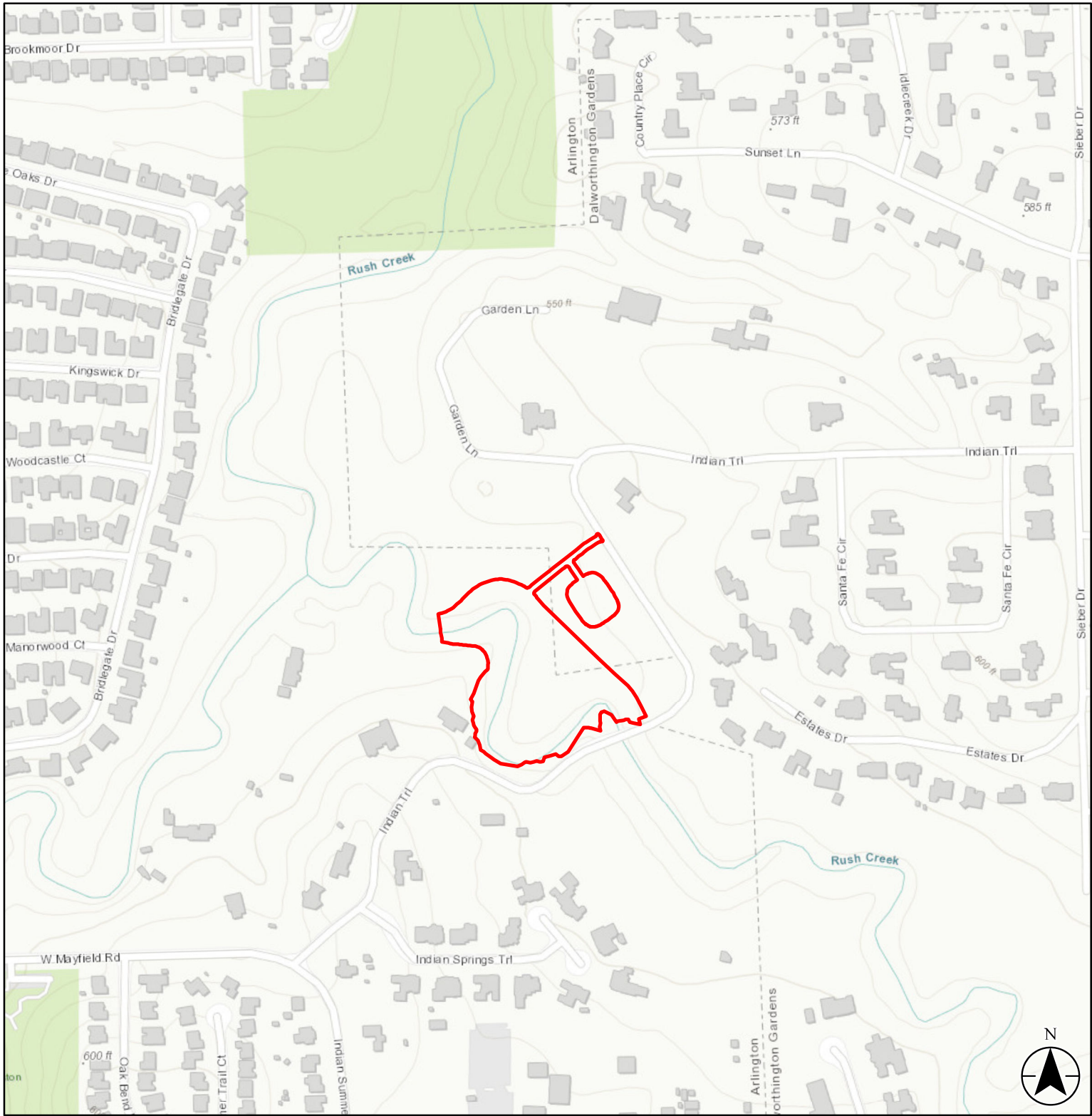


Figure 1. Proposed Rush Creek Restoration project area shown on the 1959 photorevised (1981) Kennedale, TX 7.5' USGS topographic maps.



Legend

Project Area



Project Location
Tarrant County, TX
Client/Project
City of Arlington/Rush Creek at Indian Trail Project

Figure No.

1

Title

Project Location and Topography (USGS)

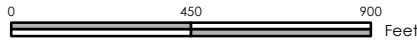
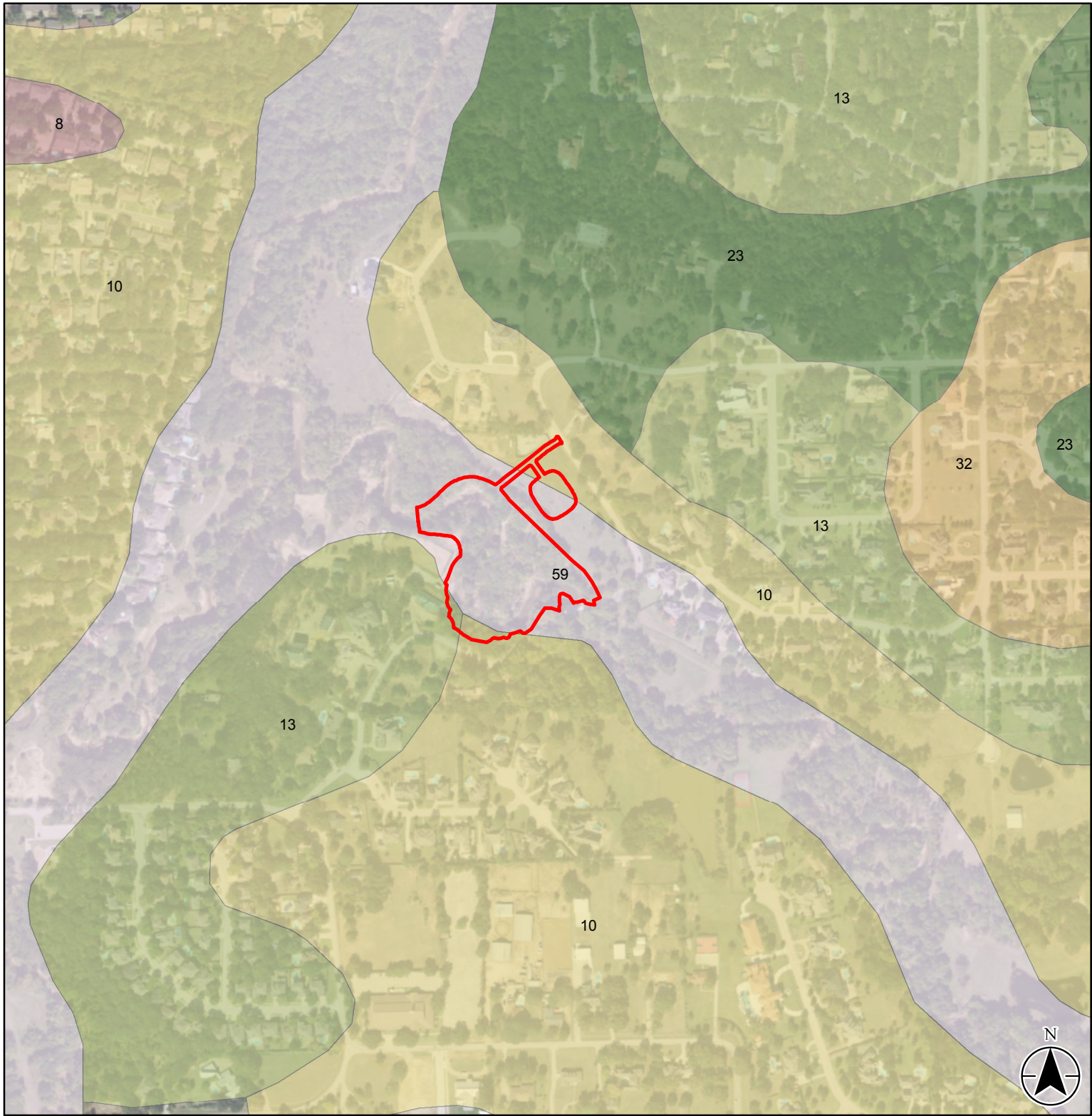
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December 19, 2019

2 of 6

SWF-2019-00154



Legend

Project Area

NRCS Soils

- 8 - Arenas, loamy
- 10 - Bastil-Urban land complex, 0 to 5 percent slopes
- 13 - Birome-Aubrey-Urban land complex, 5 to 15 percent slopes
- 23 - Crosstell-Urban land complex, 1 to 5 percent slopes
- 32 - Gasil-Urban land complex, 1 to 8 percent slopes
- 59 - Pulexas fine sandy loam, frequently flooded



Project Location

Tarrant County, TX

Client/Project

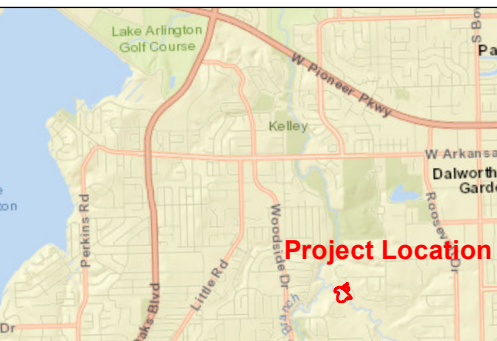
City of Arlington/Rush Creek at Indian Trail Project

Figure No.

2

Title

NRCS Soil Survey



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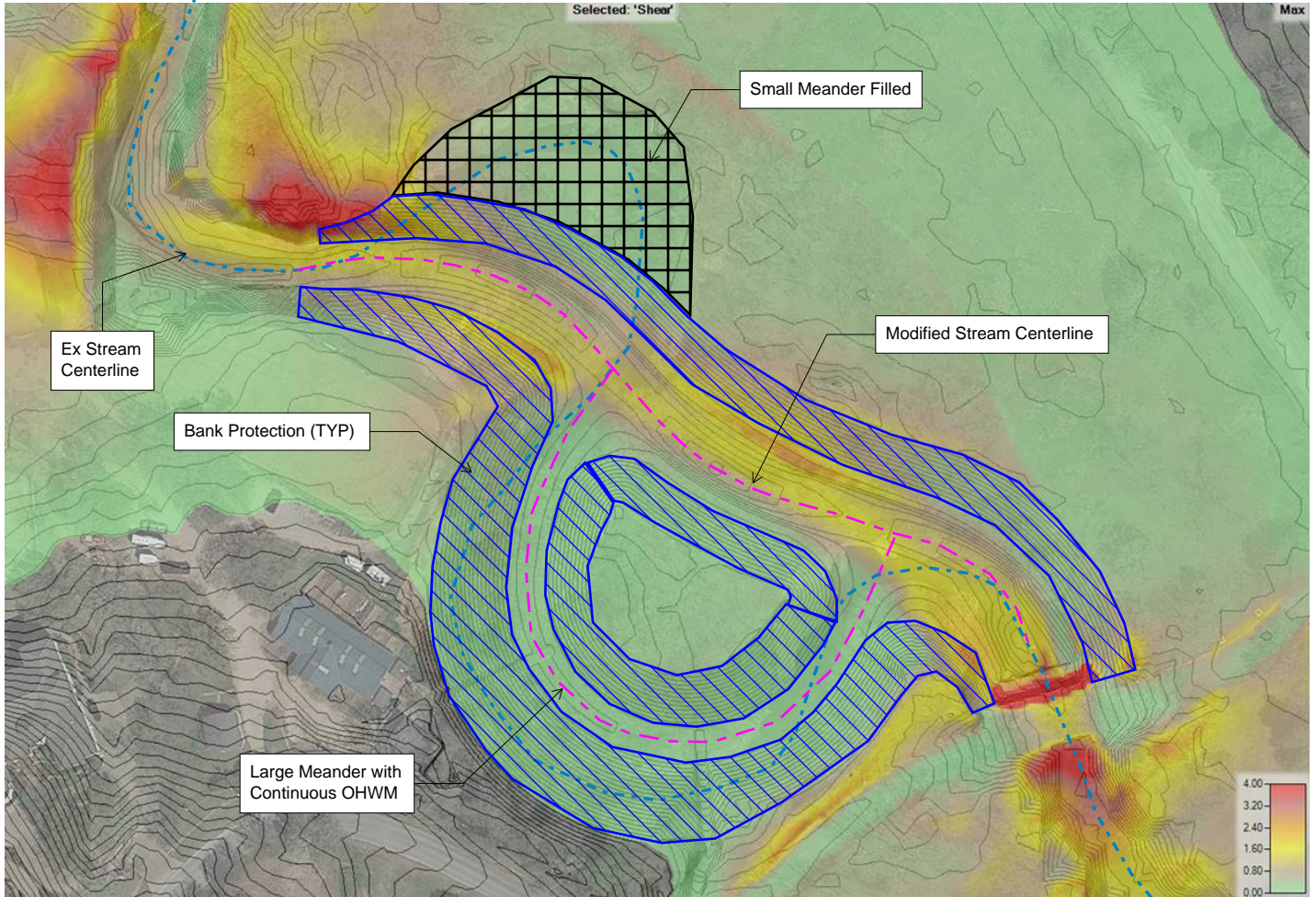
December 19, 2019

3 of 6

SWF-2019-00154

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Client/Project
CITY OF ARLINGTON

RUSH CREEK
INFRASTRUCTURE
PROTECTION

Project No.
224701085

Title
**Alternative 4 - Modified
Stabilization with Continuous
OHWM**

Revision

Reference Sheet

Date
2019.11.25

Figure No.

4