



Public Notice

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

Applicant: City of Austin

Permit Application No.: SWF—2008-00067

Date: January 8, 2009

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 would 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

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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 the construction of the Waller Creek Tunnel Project (WCTP). The WCTP would capture and divert floodwaters from the upper 85% of the Waller Creek watershed and discharge them into Lady Bird Lake. The tunnel would relieve the eastern downtown corridor of flooding threats and, in turn, foster future development of businesses and recreational facilities along the banks of Waller Creek.

APPLICANT: City of Austin (COA)
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APPLICATION NUMBER: SWF-2008-00067

DATE ISSUED: December 24, 2008

LOCATION: The proposed WCTP would be set in downtown Austin, Travis County, Texas. Construction on the surface would be limited to four sites along Waller Creek (**Exhibit 1**): the inlet site at Waterloo Park; a creek side tunnel inlet site between 8th and 9th Streets; a creek side tunnel inlet site between 4th and 5th Streets; and the outlet site located west of the creek's confluence with Lady Bird Lake. The subterranean tunnel would extend from Waterloo Park to the aforementioned confluence, but it would be constructed from the surface sites referenced above. The proposed project would be located approximately at UTM coordinates 621198m East and 3349375m North (Zone 14N) on the Austin East 7.5-minute USGS quadrangle map in the USGS Hydrologic Unit 12.

OTHER AGENCY AUTHORIZATIONS: Agency coordination is being performed as follows:

AGENCY	ACTION	APPROVAL
United States Fish and Wildlife Service (USFWS)	Coordination letters describing the biological activity along Waller Creek and the project's anticipated effects were submitted on May 30, 2008.	7-28-2008
Texas Parks and Wildlife Department (TPWD)	Coordination letters were sent to the TPWD, including a Threatened and Endangered Species Survey Report and Rare Resources Review Request, on May 30, 2008.	8-22-08
Land and Water Conservation Fund (LWCF)	The project team is coordinating the mitigation required under Section 6(f) of the Land and Water Conservation Act for the conversion of parkland to a non-parkland use.	Pending
Texas Historical Commission (THC)	A Historical Review and an Archeological Coordination Report were submitted to the THC, per Section 106 of the National Historical Preservation Act.	Pending
Federal Emergency Management Agency (FEMA)	A Conditional Letter of Map Revision document was submitted to FEMA. Coordination is on-going to record the change in the 100 and 500-year flood hazard areas.	Pending
Texas Commission on Environmental Quality (TCEQ)	The project team is coordinating with the State of Texas for a Water Rights Permit. This permit is required for diversion, impoundment, and the use of state waters.	Pending
TCEQ	Texas Pollutant Discharge Elimination System (TPDES) permitting will be completed with the construction documents. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared. A Notice of Intent (NOI) letter will be sent by the project owner prior to commencing construction.	Pending
TCEQ	A Tier II 401 Certification Review was submitted to the TCEQ for compliance with Section 401 of the Clean Water Act	Pending
General Land Office (GLO)	Coordination with the GLO is currently being conducted for miscellaneous easement(s). This is necessary for construction on or under state owned land.	Pending
Lower Colorado River Authority (LCRA)	The project team is coordinating with the LCRA for a water use agreement/contract.	Pending

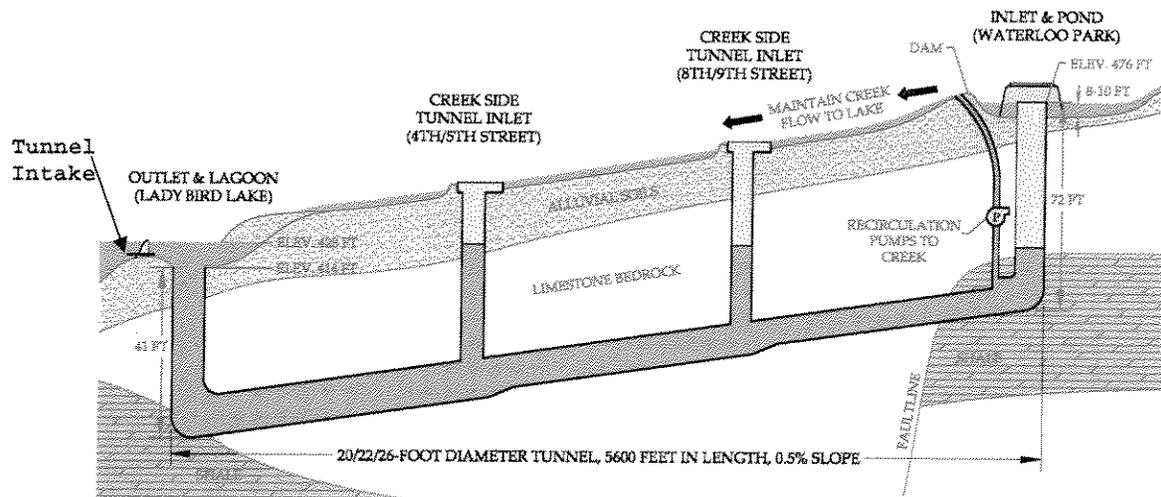
PROJECT DESCRIPTION: The COA WCTP would capture and divert floodwaters from the upper 85% of the Waller Creek watershed and discharge them into Lady Bird Lake. The tunnel would relieve the eastern downtown corridor of flooding threats and foster future development of businesses and recreational facilities along the banks of Waller Creek.

The Waller Creek watershed is the most developed of the tributary watersheds of the Colorado River within the incorporated limits of Austin, Texas. The total watershed area includes 3,700 acres of parks, single family, commercial and institutional land uses. Waller Creek drains to the south and flows into Lady Bird Lake between Trinity Street and Red River Street.

The 100-year floodplain of lower Waller Creek (downstream of 12th Street) is up to 800-feet wide and has restricted development in the area. The COA has long been interested in improving flood control and enhancing water quality in the lower Waller Creek watershed. The COA has conducted several flood management and water-quality studies of the Waller Creek watershed. The reports

indicate that a storm water bypass tunnel with surface-level inlet and outlet structures and a recirculation system would meet the City's flood protection, environmental, and cost objectives. On May 2, 1998, Austin voters approved the proposed tunnel project and its associated financing.

The project is intended to provide multiple benefits including flood-control, water-quality enhancement, and economic development. Design objectives include flood control, water-quality enhancement, ease of operation and maintenance, cost-effectiveness and construction of aesthetically pleasing above ground structures. The proposed project would consist of a bypass tunnel with an average diameter of 22 feet and a length in excess of 5,500 feet, two in-channel diversion structures, inlet and outlet structures, and a recirculation pump system. Storm water would be intercepted at Waterloo Park below 15th Street and discharge into Lady Bird Lake. The figure below illustrates the profile of the proposed Waller Creek Tunnel.



Once the project is completed, flow from the 100-year storm event would be contained within the existing creek channel downstream of the inlet structure. Approximately 42 commercial and residential structures and 12 roadway crossings currently subject to flooding would be afforded flood protection at the completion of the project. Additional reduction in flood levels would be achieved by incorporating intermediate creek side tunnel inlets along the lower channel reach to divert flood waters from the lower watershed into the proposed tunnel.

Exhibit 1 shows the location of the Waller Creek Tunnel as a dashed line. Locations of the inlet at Waterloo Park and the outlet located on the north shore of Lady Bird Lake are also shown. Two creek side tunnel inlets would be located along the creek as shown. In addition to the creek side tunnel inlets capturing and diverting floodwaters from the lower reach of Waller Creek, they would also play a critical role in the bank stabilization and aesthetic revitalization of the respective adjacent areas.

The proposed project includes the construction of the following:

- A floodwater diversion tunnel
 - Approximately 5,500 feet in length
 - Average diameter of 22 feet
 - 50-80 feet underground
- Four surface features
 - Inlet at Waterloo Park
 - Outlet at Lady Bird Lake
 - Two creek side tunnel inlets
- A creek recirculation system that would allow water to flow through the creek, even during dry periods

There are three existing wetlands within the proposed limits of construction at three of the proposed project surface sites (0.35 total acres):

- W1: Located at the outlet site on the shore of Lady Bird Lake (0.28 acres). This wetland is a fringe adjacent to the north shoreline of Lady Bird Lake at the Waller Creek delta. W1 is the largest wetland within the project area. This wetland includes all major vegetation strata, including a dense canopy layer. The area along the shoreline contains primarily non-native, invasive emergent vegetation, such as Elephant Ear (*Colocasia* spp.); this is the only wetland area that would be modified and mitigation for this area is proposed. The cape area around the confluence comprises of forested wetland hosting large deciduous trees, including Black Willow (*Salix nigra*), Bald Cypress (*Taxodium distichum*), and their saplings. This area was identified as the most critical area of this wetland due to the vegetation composition and density and as such would not be impacted by the project. New and existing wetlands would be integrated with the WCTP outlet site. This would consist of a large marshy area in the proposed shallow section of the outlet structure.
- W2: Located just upstream of the 8th Street bridge over Waller Creek at a creek side tunnel inlet (0.02 acres). This is the smallest of the three wetlands and likely only exists as a result of a manmade check dam that crosses Waller Creek just upstream of the 8th Street bridge. This dam appears to divert stormwater flows to each side of the creek as high water recedes. The diversion has created flow patterns through deposited aggregates and resulted in the formation of a dense organic detritus layer under the surface layer. The nutrients from the organic matter combined with low substrate oxygen levels have provided ideal conditions for hydrophilic plants. However, the existing check dam would be removed and would be replaced with a pool and riffle system, which may result in the ultimate loss of this wetland. Wetland areas along the proposed creek water edge have been incorporated into the design of this site.
- W3: This wetland is confined within a channelized section of the creek at Waterloo Park (0.05 acres), between two pedestrian bridges. These bridges hinder flow during storm events,

allowing litter, debris, and sediment to accumulate on the opposite side of the creek's tall concrete bank wall. W3 is a result of numerous storm events, which have dumped heavy sediment loads along the creek bank creating a shelf and allowing vegetation to grow. Vegetation is dominated by Giant Ragweed (*Ambrosia trifida*), which is indicative of disturbed soil. This plant is well known for its ability to propagate in recently disturbed areas. This wetland would be removed as a result of the project. It would be replaced with a wetland greater in size and quality. The established features would include vegetation that is more acclimated to wetland habit, species that are more beneficial to wildlife, and transitional zones from fully aquatic to semi-aquatic, and from semi-aquatic to upland.

All three wetlands identified and delineated within the project limits would be modified to some degree. Each modification involves different types of alterations, but only W3 would be removed entirely. Mitigation efforts would establish new wetlands, in addition to reshaping and enhancing existing wetlands.

The primary effects of the WCTP would include control of flooding and improving water quality. Current habitat value for aquatic life in the creek is poor. Moreover, riparian areas are becoming less healthy as a result of root exposure caused by bank erosion. The WCTP would lay the foundation for a positive transformation of the lower Waller Creek watershed. Floodwaters would no longer impact adjacent land and a stable base flow condition would be accomplished. Stabilization of the creek's flow would enliven the aquatic environment, while greatly enhancing the aesthetic value of the affected area, and restoration associated with the proposed tunnel, such as long-term bank stabilization, would improve public safety along the creek's corridor.

ALTERNATIVES ANALYSIS: Two primary and six secondary alternatives were evaluated for this project:

- Alternative #1: No Action
- Alternative #2: WCTP
 - Inlet structure: Alternative 2a
 - Inlet structure: Alternative 2b
 - Creek side tunnel inlet: Alternative 2a
 - Creek side tunnel inlet: Alternative 2b
 - Outlet structure: Alternative 2a
 - Outlet structure: Alternative 2b

Alternative #1: No Action

If no action is taken then there would be no reduction of the 100-year floodplain and the Waller Creek corridor would remain largely unchanged. There are places along Waller Creek where stream bank erosion has exposed utilities and caused structural failures. Stream banks are undermined. If no action is taken, then severe erosion would not be controlled and there would be continued exposure of property to the destructive effects of flooding.

Alternative #2: WCTP

The WCTP would provide numerous benefits to the COA and its residents:

- There would be a reduction of the 100-year floodplain.
- Over 1,200,000 square feet of land would be reclaimed, including 42 commercial and residential structures and 12 roadways.
- There would be a reduced risk of severe flooding and erosion.
- The influx of debris and pollutants to Waller Creek and Lady Bird Lake would be substantially reduced.
- Overall water quality and conditions for plants and wildlife would improve.
- It would allow for redevelopment opportunities and development of COA amenities (such as hike and bike trails) along the creek.

INLET STRUCTURE ALTERNATIVES

Alternative 2a. The initial design of the inlet facility included a reservoir and morning glory inlet structure within Waterloo Park. This structure would consist of an opening surrounded by an octagonal screen, divided into panels for ease of cleaning and maintenance. Screen cleaning and maintenance devices would be used to keep the screens clear and maintain optimal flow into the tunnel. A debris handling system would be incorporated into the facility to minimize debris entering the tunnel and for removal of smaller debris that passes the screens. A recirculation system would be added to keep water flowing through the tunnel during dry weather conditions. This would prevent stagnation and maintain the quality of water within the tunnel system. It would also maintain flow in the portion of the creek downstream of the inlet.

Alternative 2b. The initial project design was presented to the public in November, 2007. As a direct result of that presentation, the following overall feedback was received:

- There was desire for the public to have contact with features created by the water.
- The public wanted to maintain a natural character at the outlet.
- The concept of an amphitheater at the outlet was rejected due to public concern for noise and parking.
- The public was concerned that construction and implementation might interfere with existing activities and conditions.
- The public wanted to preserve wildlife, vegetation, and the limestone character of the creek;
- The public wanted to be sure that the project aligned with the Mayor's Climate Protection Plan;
- The public wanted to ensure that the diverse activities brought in by the project would be mutually compatible; and
- The public wanted an increase of recreational activities in the area of the project, including biking, running, strolling, connectivity, creek side dining, unique uses, public art, and shopping.

The applicant's preferred alternative for the inlet structure (Alternative 2b) is similar to Alternative 2a, but incorporates public feedback. The location and layout of the structure around the morning glory style inlet were revised, and the inlet structure was shifted closer to 12th Street. **Exhibit 2** presents the overall Inlet Site plan. **Exhibit 3** presents the existing and proposed conditions for Waterloo Park at the Inlet Site. The benefits of this alternative might include:

- Preservation of more area in Waterloo Park for events;
- Maintenance and improvement of trails and bridges;
- New ADA-compliant trails;
- Bikeway enhanced;
- Addition of driveway for event delivery access would be added;
- Addition of scenic overlook and other water features; and
- Increased opportunity for educational activities.

Exhibit 4 and **Exhibit 5** show cross sections (upper and lower) through the proposed Waterloo Park Inlet Site.

CREEK SIDE TUNNEL INLET ALTERNATIVES

To further reduce the 100-year floodplain downstream of the inlet structure at Waterloo Park, creek side tunnel inlets were designed to intercept storm flows and redirect them to the main tunnel. Connecting tunnels would be used to redirect collected storm water to the main tunnel.

Alternative 2a. Under this alternative, four creek side tunnel inlet structures would be constructed at 3rd, 6th, 9th and 10th Streets. This design was based on:

- Engineering requirements to:
 - Capture additional street and storm drain run-off; and
 - Increase creek bank stabilization / restoration.
- Environmental requirements to:
 - Minimize impacts to natural habitat and vegetation;
 - Improve water quality; and
 - Stabilize the channel.
- Project requirements to ensure compatibility with future master plan needs.
- A desire for guidance through public outreach and City Council resolutions.

Alternative 2b. As with the inlet structure, the initial design and layout for the creek side tunnel inlets was presented to the public in November, 2007. Under this alternative the number of creek side tunnel inlet sites would be reduced from four to two sites. These sites would be located between 4th and 5th Streets as well as 8th and 9th Streets. The benefits of the applicant's preferred alternative might include:

- Meet the objectives to capture additional runoff with minimal impact to the surrounding environment and properties;

- Capture of additional storm runoff;
- Stream bank restoration and stabilization through natural channel design;
- Enhanced water quality through:
 - Creation of riffles and pools;
 - Provision of a removal point for debris and litter; and
 - Establishment of a flood bench.
- Addition of new pedestrian access points to the creek.

Layouts, site area plans, and cross sections for the two proposed Creek Side Tunnel Inlets are presented in the following exhibits:

- **Exhibit 6:** 8th Street – Creek Side Tunnel Inlet – Overall Site Layout
- **Exhibit 7:** 8th Street – Creek Side Tunnel Inlet – Overall Site Area Plan
- **Exhibit 8:** 8th Street – Creek Side Tunnel Inlet – Existing and Proposed Conditions
- **Exhibit 9:** 8th Street – Creek Side Tunnel Inlet – Cross Section A
- **Exhibit 10:** 8th Street – Creek Side Tunnel Inlet – Cross Section B
- **Exhibit 11:** 8th Street – Creek Side Tunnel Inlet – Cross Section C
- **Exhibit 12:** 4th Street – Creek Side Tunnel Inlet – Overall Site Layout
- **Exhibit 13:** 4th Street – Creek Side Tunnel Inlet – Overall Site Area Plan
- **Exhibit 14:** 4th Street – Creek Side Tunnel Inlet – Existing and Proposed Conditions
- **Exhibit 15:** 4th Street – Creek Side Tunnel Inlet – Cross Section A
- **Exhibit 16:** 4th Street – Creek Side Tunnel Inlet – Cross Section B
- **Exhibit 17:** 4th Street – Creek Side Tunnel Inlet – Cross Section C

OUTLET STRUCTURE ALTERNATIVES

Alternative 2a. The following requirements were incorporated into the outlet design process:

- Engineering functions:
 - To convey flood waters.
 - To facilitate maintenance.
- Maintaining park use:
 - Local rowing clubs access to Lady Bird Lake from this location.
 - The general public access to the lake and the trails from this location.
- General environment and land use:
 - Minimize impact to the environment.
 - Conduct public outreach for input to the project.

The outlet structure for Waller Creek Tunnel, under the first alternative, would be located just west of the confluence of Waller Creek at Lady Bird Lake. The outlet would be a semi-circular cove structure, with a floating stage and amphitheatre to host events such as concerts and other performances.

Alternative 2b. Alternative 2b for the outlet structure of the Waller Creek Tunnel does not include the floating stage and amphitheater as proposed in Alternative 2a. Instead, it includes a semi-circular lagoon/cove. **Exhibit 18** presents the proposed overall Outlet Site plan. **Exhibit 19** presents the existing and proposed conditions for the Outlet Site. Public feedback suggested a desire for a more natural looking approach to blend into the shoreline. The outlet structure for the applicant's preferred alternative is also farther from the confluence of Waller Creek at Lady Bird Lake. This schematic was presented to the public in April of 2008. The benefits of this alternative might include:

- Conservation of existing wildlife habitat;
- Maintenance of a natural shoreline;
- Protection and preservation of existing Live Oak trees;
- Creation of a new wetland ecosystem;
- New and improved rowing club facilities including:
 - Elevating the club house out of the floodplain;
 - Addition of square footage to the club house; and
 - Improving the dock and piers.
- New and improved trails including:
 - New ADA-compliant trails; and
 - Uninterrupted operation of trails during construction.
- New observation/overlook point;
- New public restroom facilities; and
- Educational opportunities.

Exhibit 20 shows a cross section through the proposed Outlet Site.

The Austin Rowing Club's facilities would need to be moved to the west of the outlet structure to accommodate the project. The relocation of the facilities offers many benefits to the Austin Rowing Club, including a finished floor elevation above the 100 year floodplain, removal from the 100-foot setback along Lady Bird Lake, additional square footage, and new and improved docks and piers.

IMPACTS AND EFFECTS: The following tables provide anticipated impact calculations and resulting surface area estimations. These numbers are derivatives from determinations of how the proposed construction would reshape existing waters of the United States, including wetlands. Analysis of the information presented in each of these tables is provided throughout the remainder of this section.

Cut/fill estimations for waters of the United States, including wetlands.

Site	Site Description	Name and Water Type	Description of Impacts	Total Excavation within Jurisdictional limits (Cubic Yards)	Fill Material Below OHWM (Cubic Yards)	Wetlands Fill Material (Cubic Yards)	Total Fill Material within Jurisdictional limits (Cubic Yards)	Net Change Δ Cut/Fill (Cubic Yards)
1	Tunnel inlet at Waterloo Park	Waller Creek – RPW	<ul style="list-style-type: none"> Remove existing channel walls and pedestrian bridges; Re-grade channel; Construct morning-glory spillway/tunnel inlet structure; Construct dam and outfall; Bank stabilization; and Wetland establishment. 	-1,651	986	31	1,017	-634 (Cut)
2	CSTI at 8th & 9th Streets	Waller Creek – RPW	<ul style="list-style-type: none"> Remove existing channel walls; Re-grade channel to create a check dam, deep pool, and spillover; Construct creek side tunnel inlet and overflow weir structure; Bank stabilization; and Wetland establishment. 	-1,180	68	51	119	-1,061 (Cut)
3	CSTI at 4th and 5th Streets	Waller Creek – RPW	<ul style="list-style-type: none"> Re-grade channel to create a check dam, deep pool, and spillover; Construct creek side tunnel inlet and overflow weir structure; Bank stabilization; and Wetland establishment. 	-1,039	478	0	478	-561 (Cut)
4	Tunnel outlet at ARC facility	Lady Bird Lake – TNW	<ul style="list-style-type: none"> Excavate shoreline and lake floor; Re-grade shoreline area to accommodate construction of the tunnel outlet and associated structures; and Wetland establishment. 	-15,191	4,748	2,232	6,980	-8,211 (Cut)
TOTAL				--19,061	6,280	2,314	8,594	--10,467 (Cut)

The table below explains the estimated impacted and resulting surface area calculations for waters of the United States, including wetlands, at each of the four proposed sites.

Site	Linear Feet of Impacts Parallel to Centerline	Surface Area of Impact to Wetlands (Acres)	Surface Area of Constructed Wetlands (Acres)	Net Change Δ Wetlands (Acres)	Surface Area of Impact to Waters, Excluding Wetlands (Acres)	Resulting Surface Area of Waters, Excluding Wetlands (Acres)	Resulting Net Change Δ Waters, Excluding Wetlands (Acres)	Total Surface Area of Impact to Waters, Including Wetlands (Acres)	Total Resulting Surface Area of Waters, Including Wetlands (Acres)	Total Net Change Δ Waters, Including Wetlands (Acres)
1	711	0.053	0.129	+0.076	0.464	1.438	+0.974	0.517	1.566	+1.049
2	351	0.017	0.021	+0.004	0.301	0.135	-0.166	0.318	0.157	-0.161
3	282	0	0.022	+0.022	0.277	0.183	-0.094	0.277	0.205	-0.072
4	351	0.281	0.193	-0.088	1.188	1.553	+0.365	1.469	1.746	+0.277
TOTAL	1695	0.351	0.365	+0.014	2.230	3.309	+1.079	2.581	3.674	+1.093

As shown in these tables, the proposed project would impact approximately 2.581 acres of existing waters of the United States, including wetlands. Upon completion of the proposed project, an estimated 3.674 acres would be established within the four project sites, resulting in an additional 1.093 acres of waters of the United States, including wetlands. Lady Bird Lake would receive an additional 0.277 acres of water surface area, including wetlands, and 0.816 acres of water surface area, including wetlands, would be added to Waller Creek.

The WCTP would provide a remedy to degradation of waters of the United States caused by many years of urban development. As a result, Waller Creek has been subject to flooding, erosion, and pollution. Current habitat value for aquatic life in the creek is poor. Moreover, riparian areas are becoming less healthy as a result of root exposure caused by bank erosion.

Best management practices would be used to reduce the likelihood of affecting water quality during construction. A Compensatory Mitigation Plan would be implemented that includes substantial permanent benefits. A constant base flow would be established in the creek, from Waterloo Park to Lady Bird Lake. The creek would still convey storm water, but it would be assisted by the bypass tunnel, in turn reducing erosion associated with flooding in the lower reach. Lady Bird Lake would be impacted, as proposed construction within its waters includes the tunnel outlet and associated structures. Limited reshaping of channel configurations is necessary to support structures involved with the proposed storm water management system. Banks would be reinforced using native and natural materials.

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 would result in a direct impact of greater than three acres of waters of the state or 1,500 linear feet of streams (or a combination of the two is above the threshold), and as such would not fulfill Tier I criteria for the project. Therefore, Texas Commission on Environmental Quality (TCEQ) certification is required. Concurrent with USACE processing of this Department of the Army application, the TCEQ is reviewing this application under Section 401 of the Clean Water Act, and Title 30, Texas Administrative Code Section 279.1-13 to determine if the work would comply with State water quality standards. By virtue of an agreement between the USACE and the TCEQ, this public notice is also issued for the purpose of advising all known interested persons that there is pending before the TCEQ a decision on water quality certification under such act. **Any comments concerning this application may be submitted to the Texas Commission on Environmental Quality, 401 Coordinator, MSC-150, P.O. Box 13087, Austin, Texas 78711-3087.** The public comment period extends 30 days from the date of publication of this notice. A copy of the public notice with a description of the work is made available for review in the TCEQ's Austin Office. The complete application may be reviewed in the USACE's office. The TCEQ may conduct a public meeting to consider all comments concerning water quality if requested in writing. A request for a public meeting must contain the following information: the name, mailing address, application number, or other recognizable reference to the application; a brief description of the interest of the requestor, or of persons represented by the requestor; and a brief description of how the application, if granted, would adversely affect such interest.

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 Travis County, Texas, where the Whooping crane (*Grus americana*), Goldern-cheeked warbler (*Dendroica chrysoparia*), Black-capped vireo (*Vireo atricapilla*), Barton Springs salamander (*Eurycea sosorum*), Bone Cave harvestman (*Texella reyesi*), Bee Creek Cave harvestman (*Texella reddelli*), Tooth Cave pseudoscorpion (*Tartarocreagris texana*), Tooth Cave spider (*Neoleptoneta myopica*), Kretschmarr Cave mold beetle (*Texamaurops reddelli*), and Tooth Cave ground beetle (*Rhadine Persephone*) are known to occur or may occur as migrants. These animals are all listed as 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: The Waller Creek Tunnel project was surveyed for the presence of historic and prehistoric cultural resources. The survey for non-architectural (prehistoric sites, and historic sites with no structural components) involved the

placement of backhoe trenches in Waterloo Park and at the outlet of the project at Waterloo Beach on Lady Bird Lake. The trenches at Waterloo Park identified a single historic site. Site 41TV2304 represented the remains of an early 20th century home (or homes) that was removed or torn down by the 1960's. The few structural remains and artifacts identified on the site were consistent with the neighborhoods present in the area at that time. The site is considered ineligible for listing in the National Register of Historic Places (NRHP). The Texas Historical Commission accepted this report and its conclusions in a letter dated October 13, 2008.

Historic buildings were documented in an architectural report submitted to the Texas Historical Commission dated on October 16, 2008. Survey documented twelve areas containing structures potentially eligible for the NRHP. One house/former residence, one former commercial building, and four bridges are potentially eligible for inclusion in the NRHP. The Hauk House dates from 1872, while the bridges - within Waterloo Park, and at 12th Street, and 5th Street crossings of Waller Creek -- date between 1925 and 1934. The single commercial structure recommended for NRHP eligibility dates from 1968. All of these structures may be affected by the proposed work, either directly or visually.

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 information 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 February 6, 2009, 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:

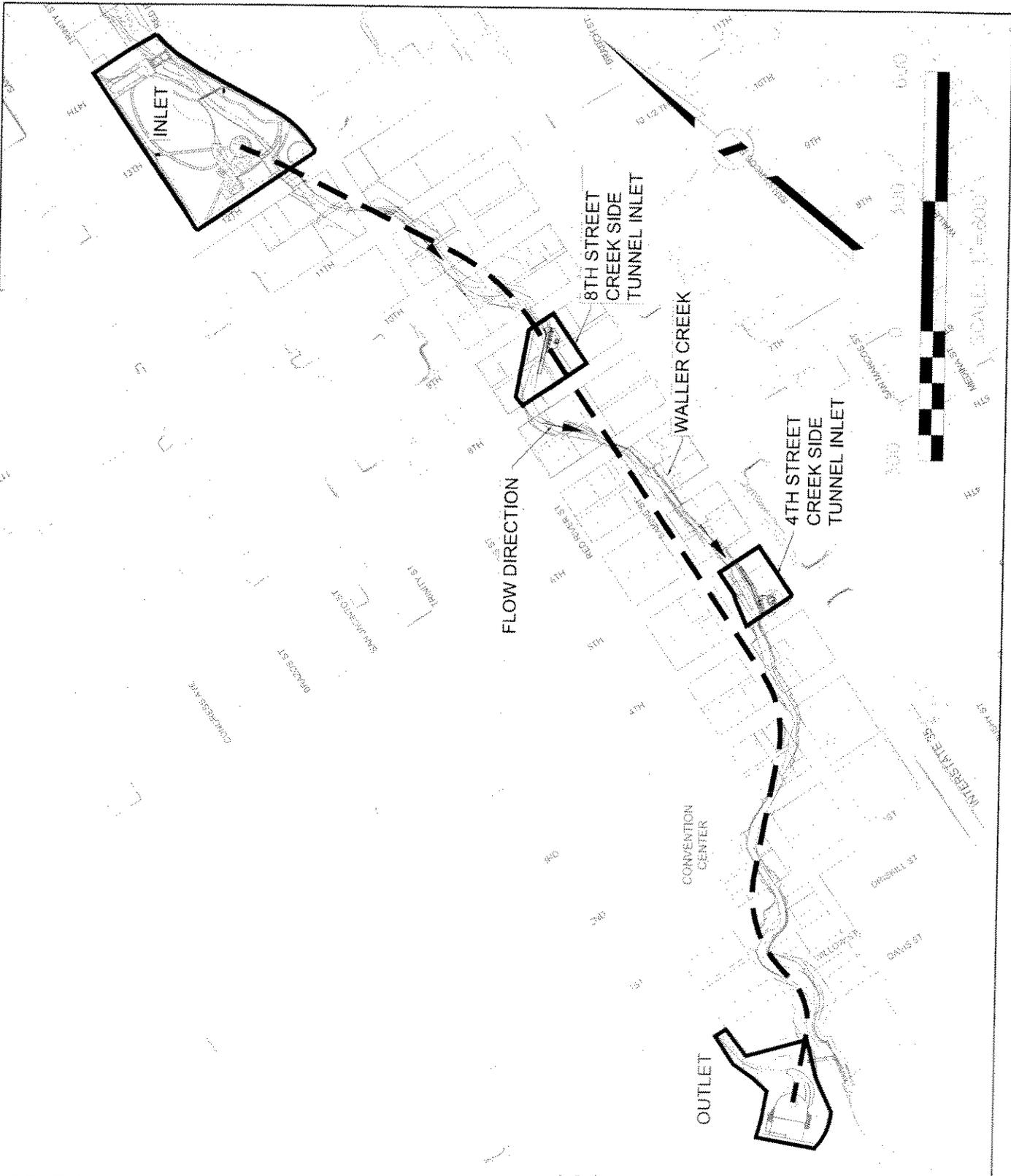
Regulatory Branch
CESWF-PER-R
U. S. Army Corps of Engineers
Post Office Box 17300
Fort Worth, Texas 76102-0300

You may visit the Regulatory Branch 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 (817) 886-1731. 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

EXHIBITS

1. Site Plan
2. Overall Inlet Site Plan
3. Waterloo Park – Existing and Proposed Conditions
4. Upper Inlet Cross Section
5. Lower Inlet Cross Section
6. 8th Street – Creek Side Tunnel Inlet – Overall Site Layout
7. 8th Street – Creek Side Tunnel Inlet – Overall Site Area Plan
8. 8th Street – Creek Side Tunnel Inlet – Existing and Proposed Conditions
9. 8th Street – Creek Side Tunnel Inlet – Cross Section A
10. 8th Street – Creek Side Tunnel Inlet – Cross Section B
11. 8th Street – Creek Side Tunnel Inlet – Cross Section C
12. 4th Street – Creek Side Tunnel Inlet – Overall Site Layout
13. 4th Street – Creek Side Tunnel Inlet – Overall Site Area Plan
14. 4th Street – Creek Side Tunnel Inlet – Existing and Proposed Conditions
15. 4th Street – Creek Side Tunnel Inlet – Cross Section A
16. 4th Street – Creek Side Tunnel Inlet – Cross Section B
17. 4th Street – Creek Side Tunnel Inlet – Cross Section C
18. Overall Outlet Site Plan
19. Waller Beach – Existing and Proposed Conditions
20. Waller Beach – Outlet Site Section



City of Austin
Watershed Protection Department



Brown & Root / Espey Padden Joint Venture
3809 South Second ST., Suite B-300
Austin, Texas

WALLER CREEK TUNNEL PROJECT

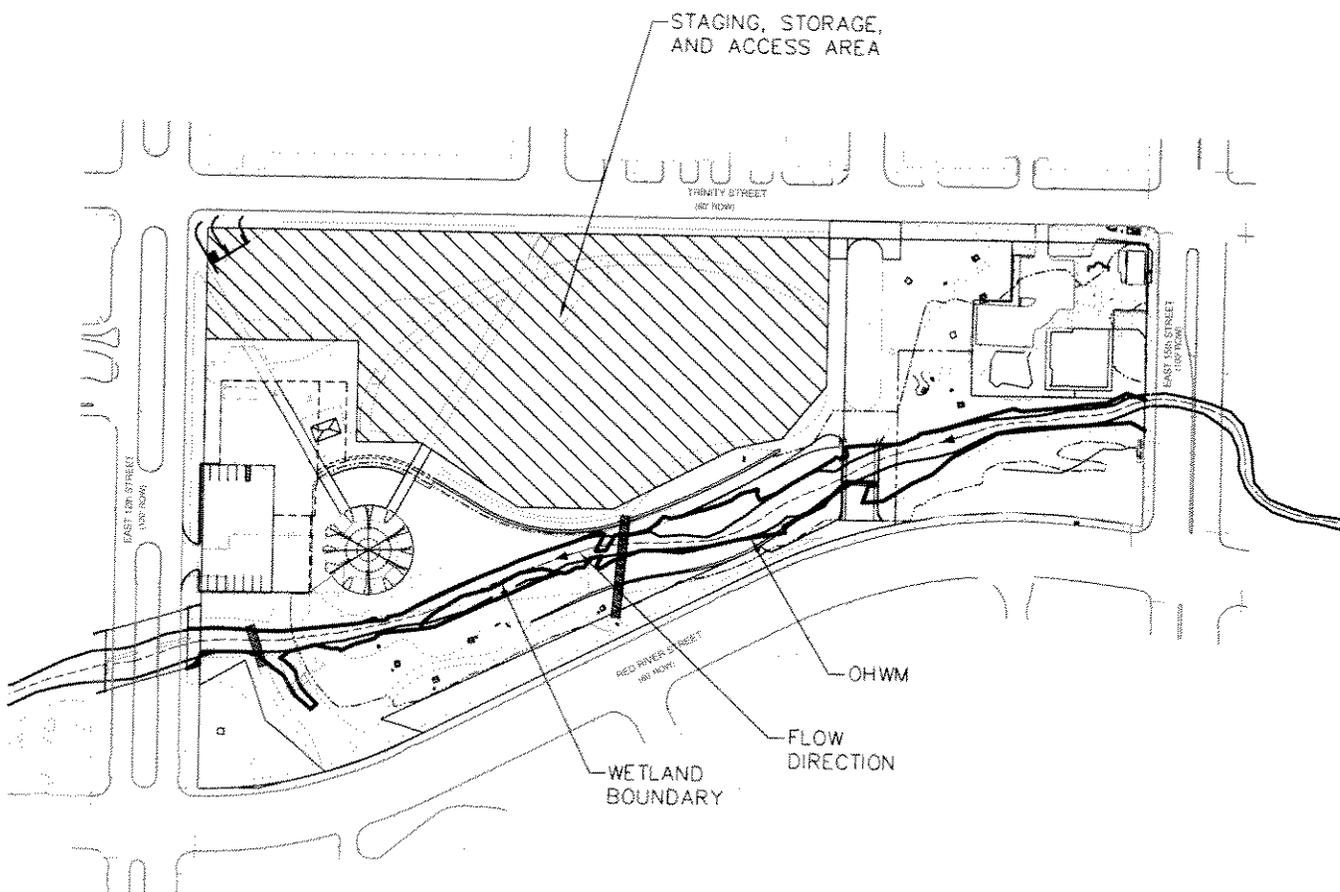
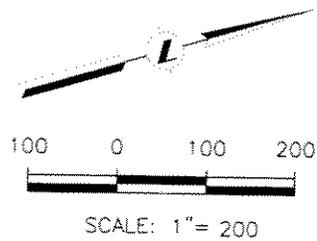
**EXHIBIT 1
SITE PLAN**

DATE: 10/30/2008

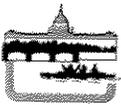
JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 1 OF 20



City of Austin
Watershed Protection Department



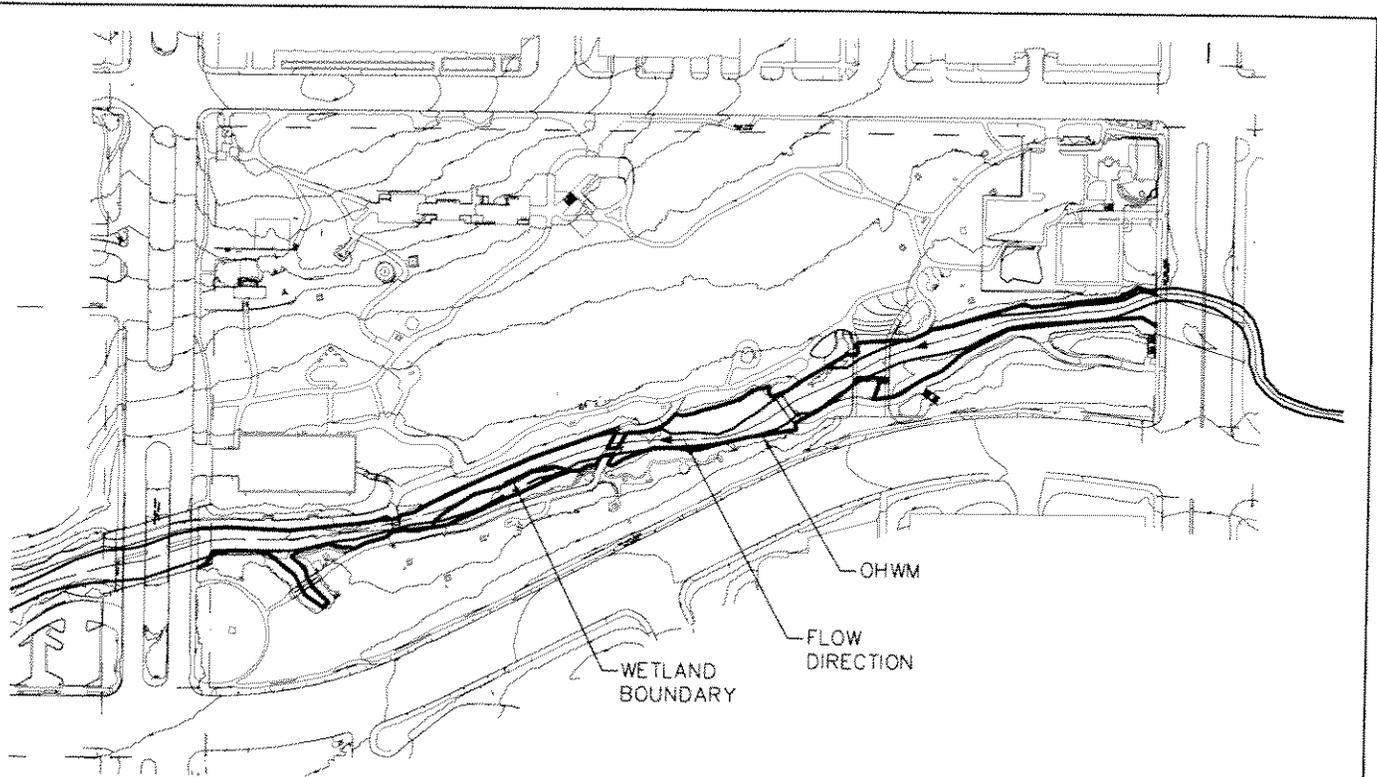
Brown & Root / Espey Padden Joint Venture
3809 South Second ST., Suite B-300
Austin, Texas

WALLER CREEK TUNNEL PROJECT

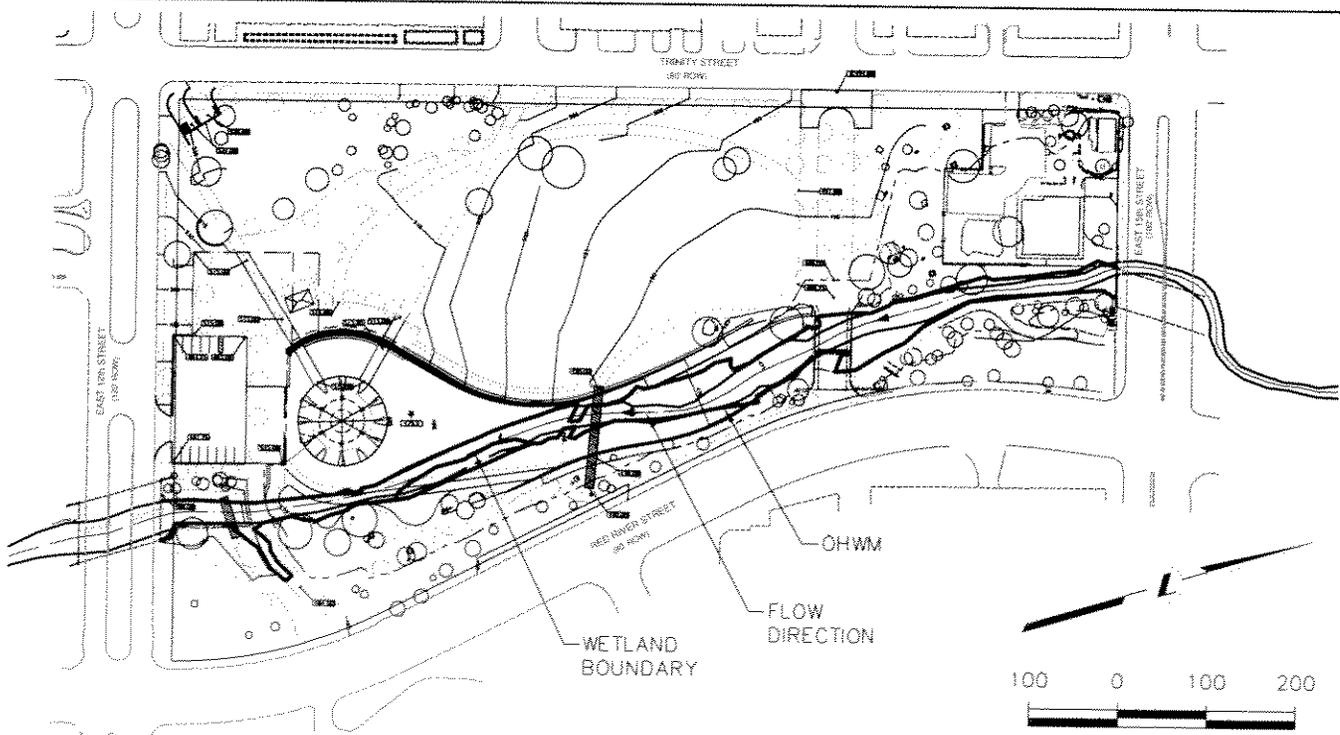
EXHIBIT 2
OVERALL INLET
SITE PLAN

DATE: 10/29/2008

JOB NO.: 6030.02.115



EXISTING CONDITIONS

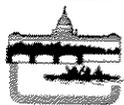


PROPOSED SITE LAYOUT

SCALE: 1" = 200



City of Austin
Watershed Protection Department



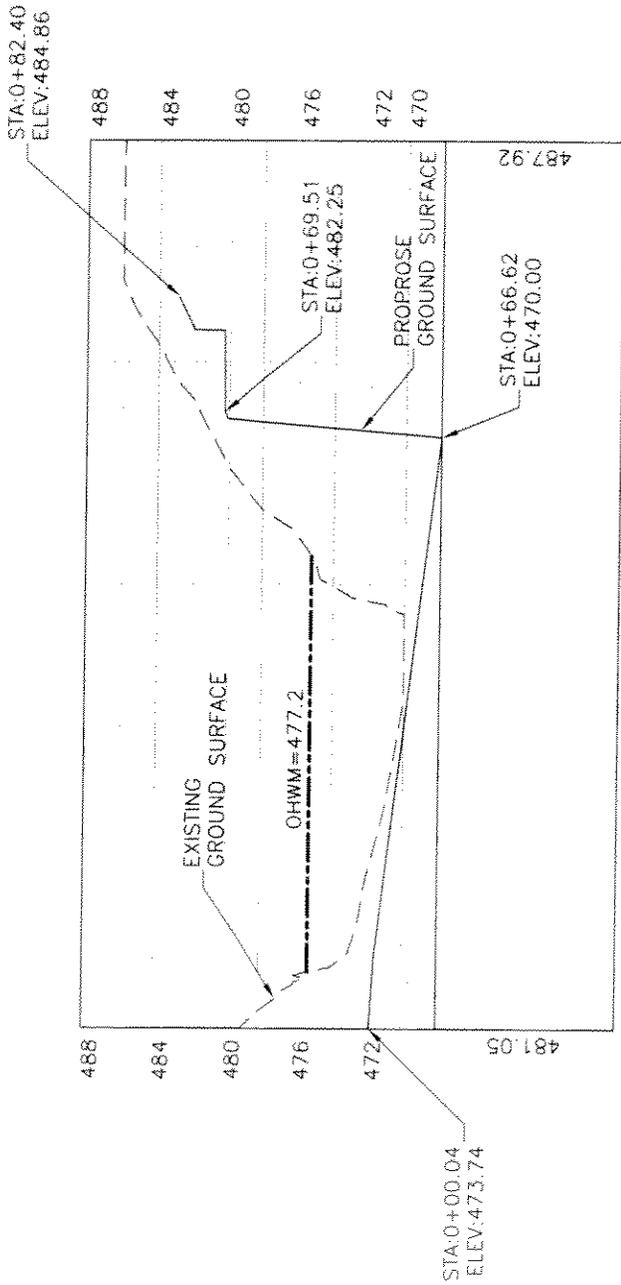
Brown & Root / Espey Padden Joint Venture
3809 South Second ST., Suite B-300
Austin, Texas

WALLER CREEK TUNNEL PROJECT

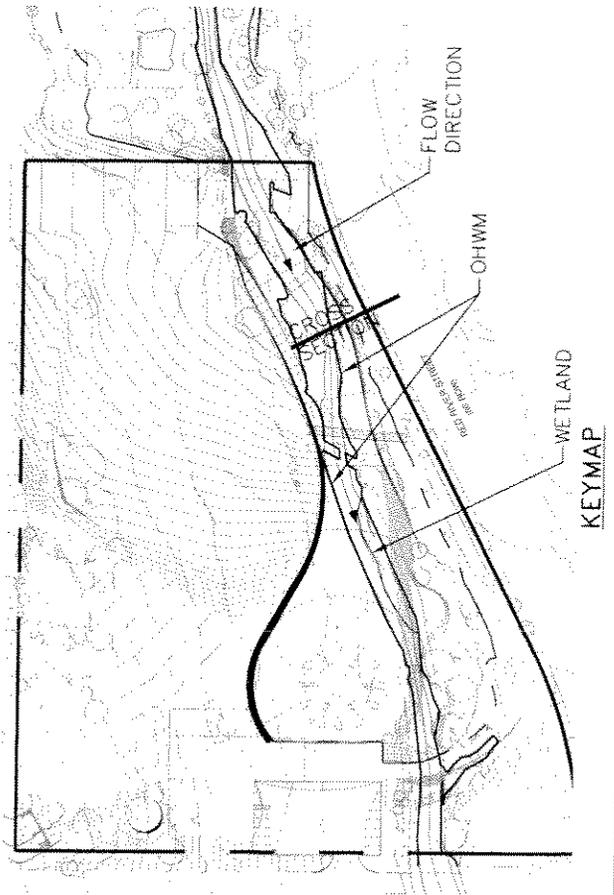
EXHIBIT 3
WATERLOO PARK
EXISTING AND PROPOSED CONDITIONS

DATE: 10/29/2008

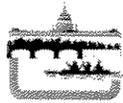
JOB NO.: 6030.02.115



0+00 1+00



City of Austin
Watershed Protection Department

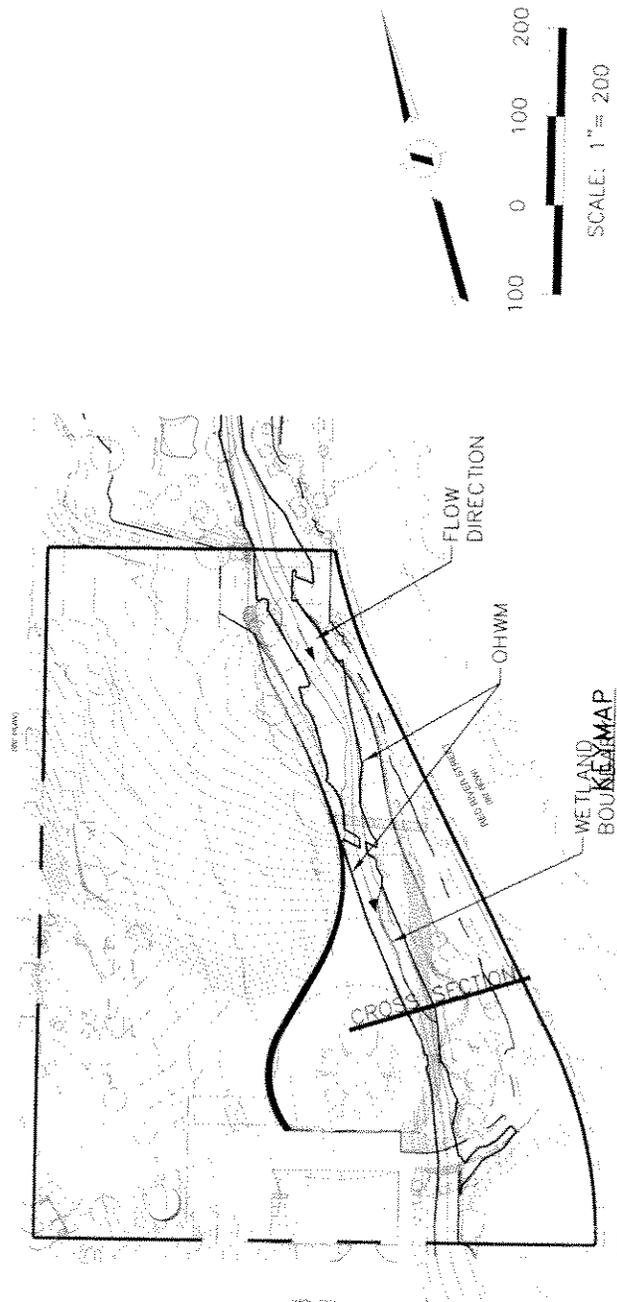
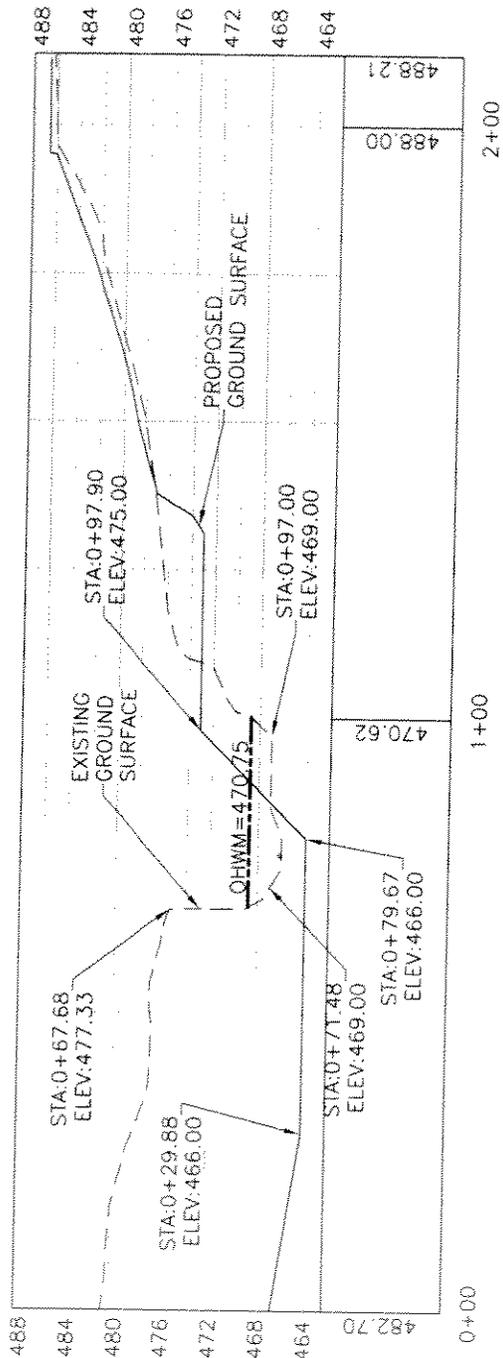


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Austin, Texas

WALLER CREEK TUNNEL PROJECT
EXHIBIT 4
UPPER
INLET CROSS SECTION

DATE: 10/30/2008

JOB NO.: 6030.02.115



City of Austin
Watershed Protection Department



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Austin, Texas

WALLER CREEK TUNNEL PROJECT

EXHIBIT 5

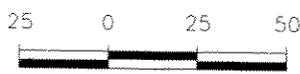
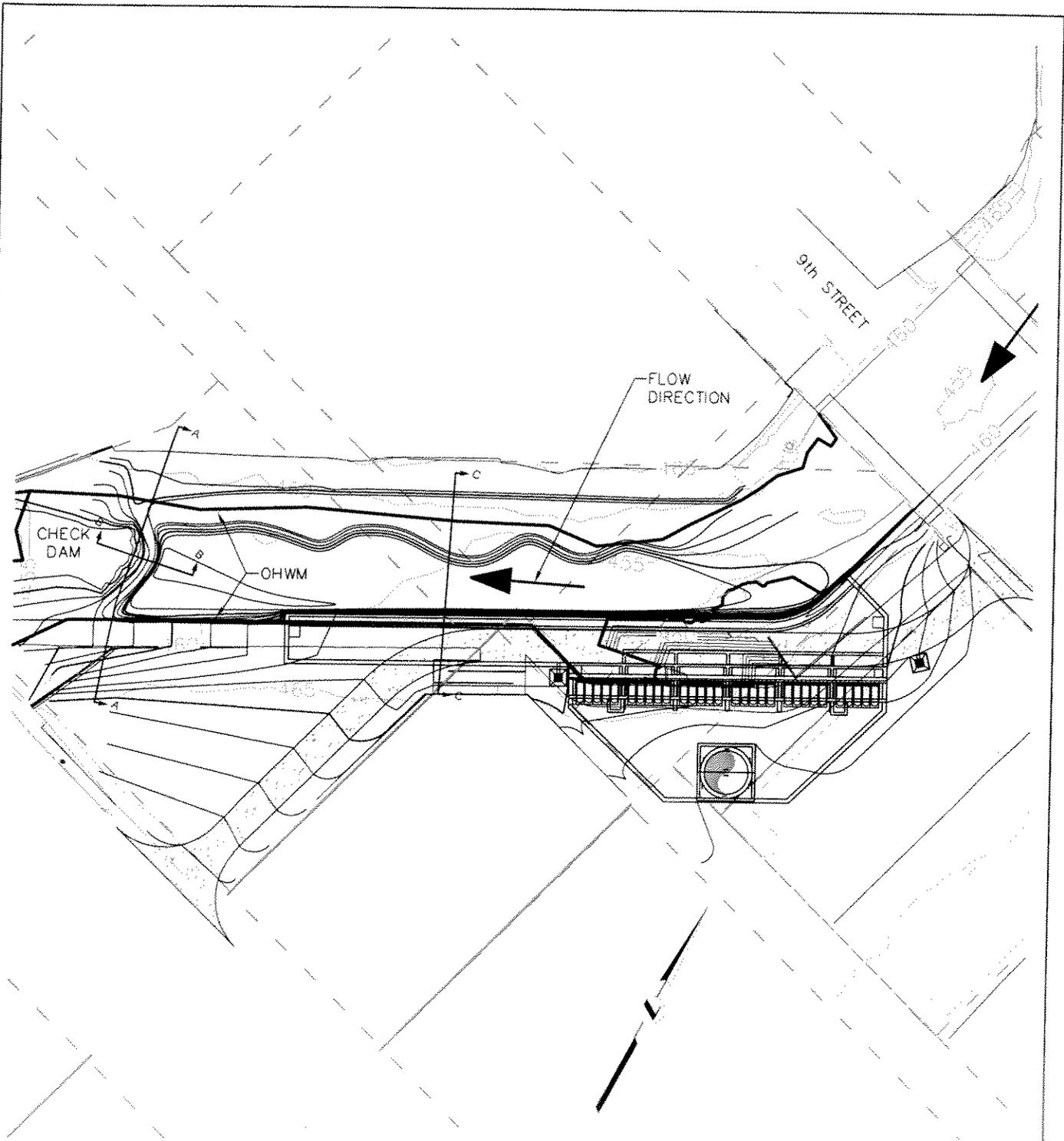
LOWER
INLET CROSS SECTION

DATE: 10/30/2008

JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 5 OF 20



SCALE: 1" = 50



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WALLER CREEK TUNNEL PROJECT
EXHIBIT 6:8TH STREET
CREEK SIDE TUNNEL INLET
OVERALL SITE LAYOUT

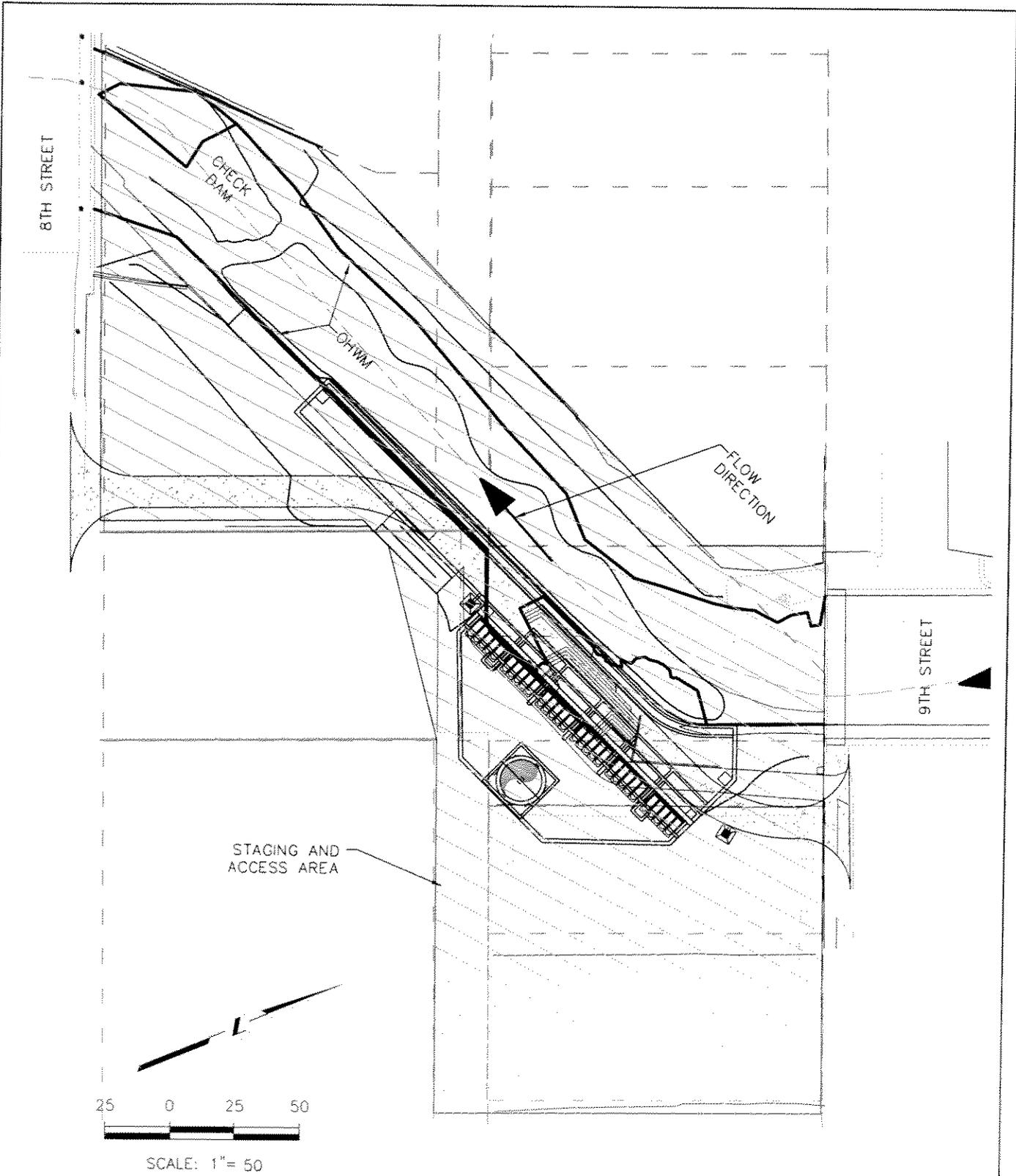
DATE: 10/30/2008

JOB NO.: 6030.02.115

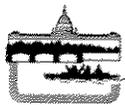
SWF-2008-00067

SHEET 6 OF 20

P:\active\6030 CAD\13_00 Dwg\13_05 Creek\13_05_02 Exhibit\WC06-002_CI-EXH-PERMIT-WEIR-8ST.dwg



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Watershed Protection Department



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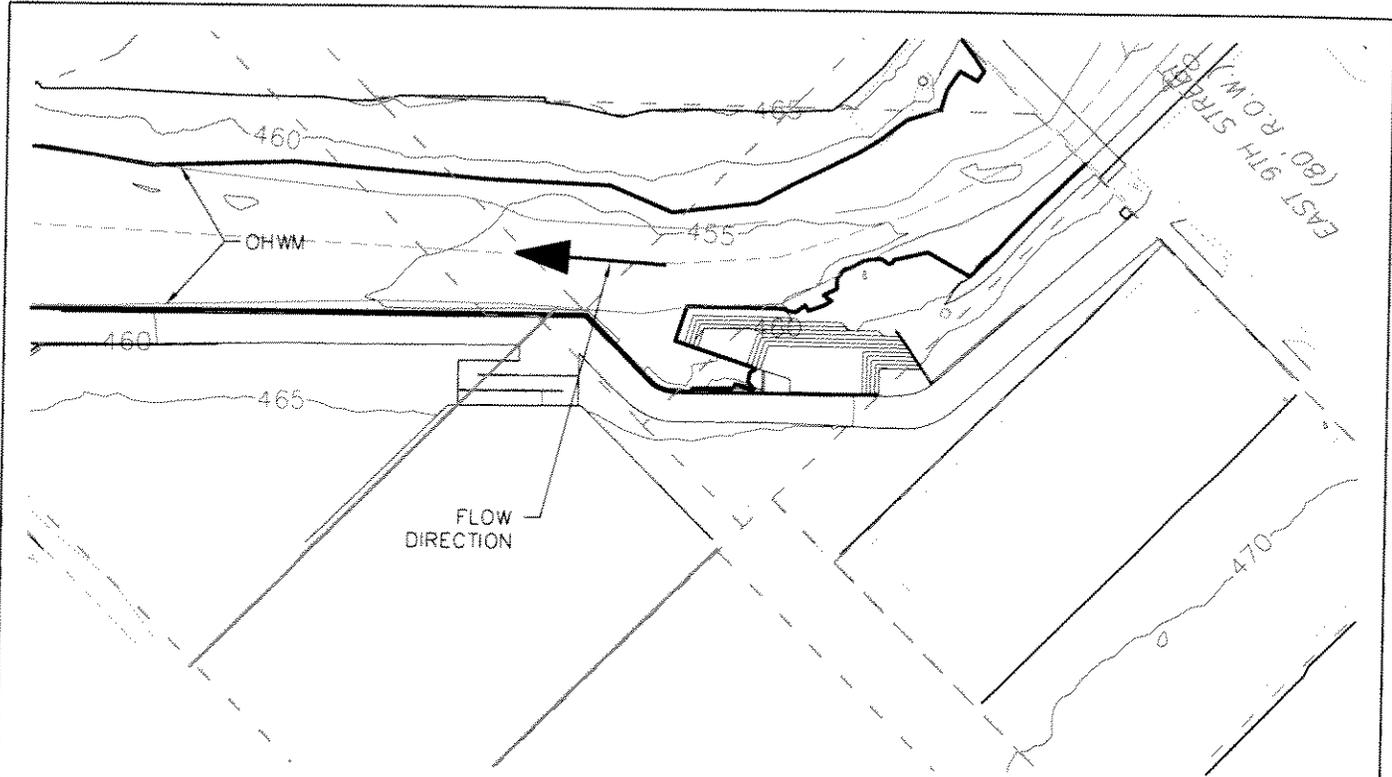
WALLER CREEK TUNNEL PROJECT
EXHIBIT 7:8TH STREET
CREEK SIDE TUNNEL INLET
OVERALL SITE AREA PLAN

DATE: 10/30/2008

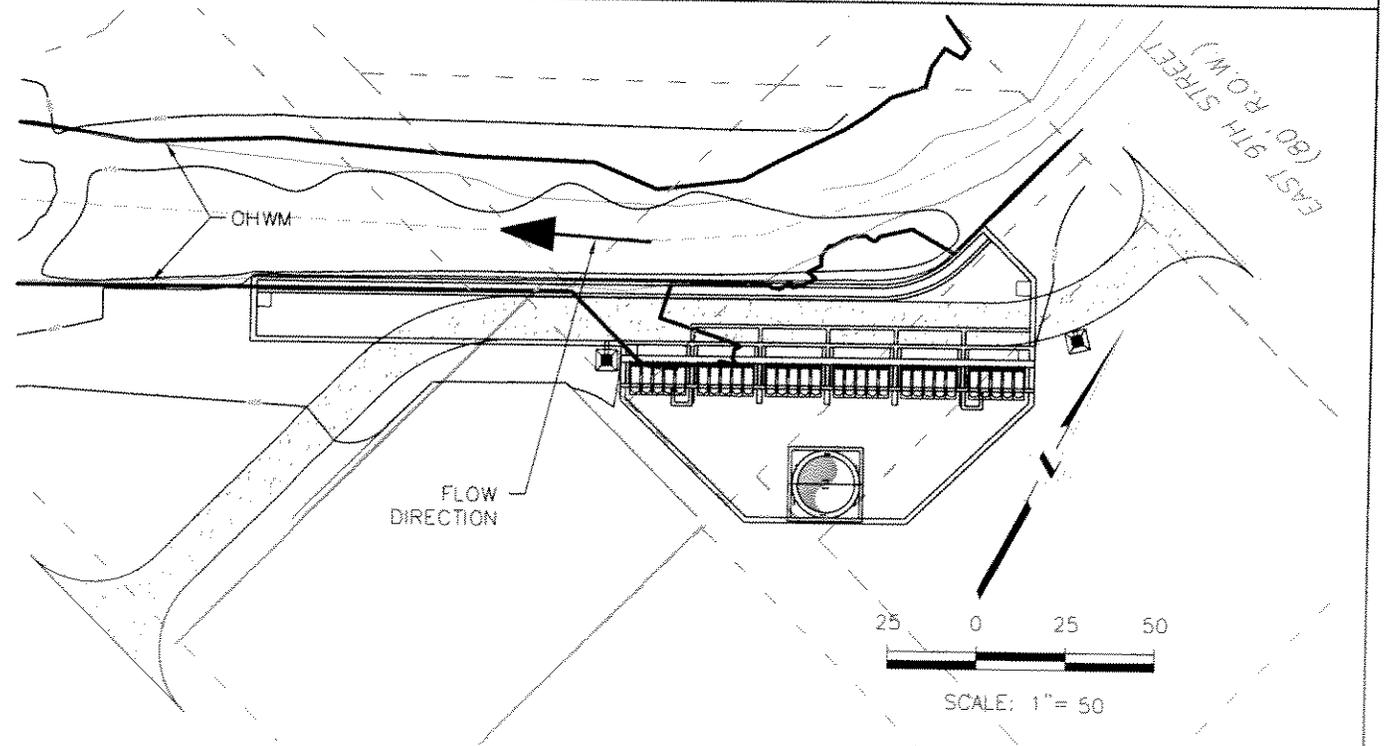
JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 7 OF 20



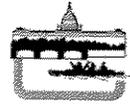
EXISTING CONDITIONS



PROPOSED SITE LAYOUT



City of Austin
Watershed Protection Department



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3808 South Second ST., Suite B-300
Austin, Texas

WALLER CREEK TUNNEL PROJECT
EXHIBIT 8:8TH STREET
CREEK SIDE TUNNEL INLET
EXISTING AND PROPOSED CONDITIONS

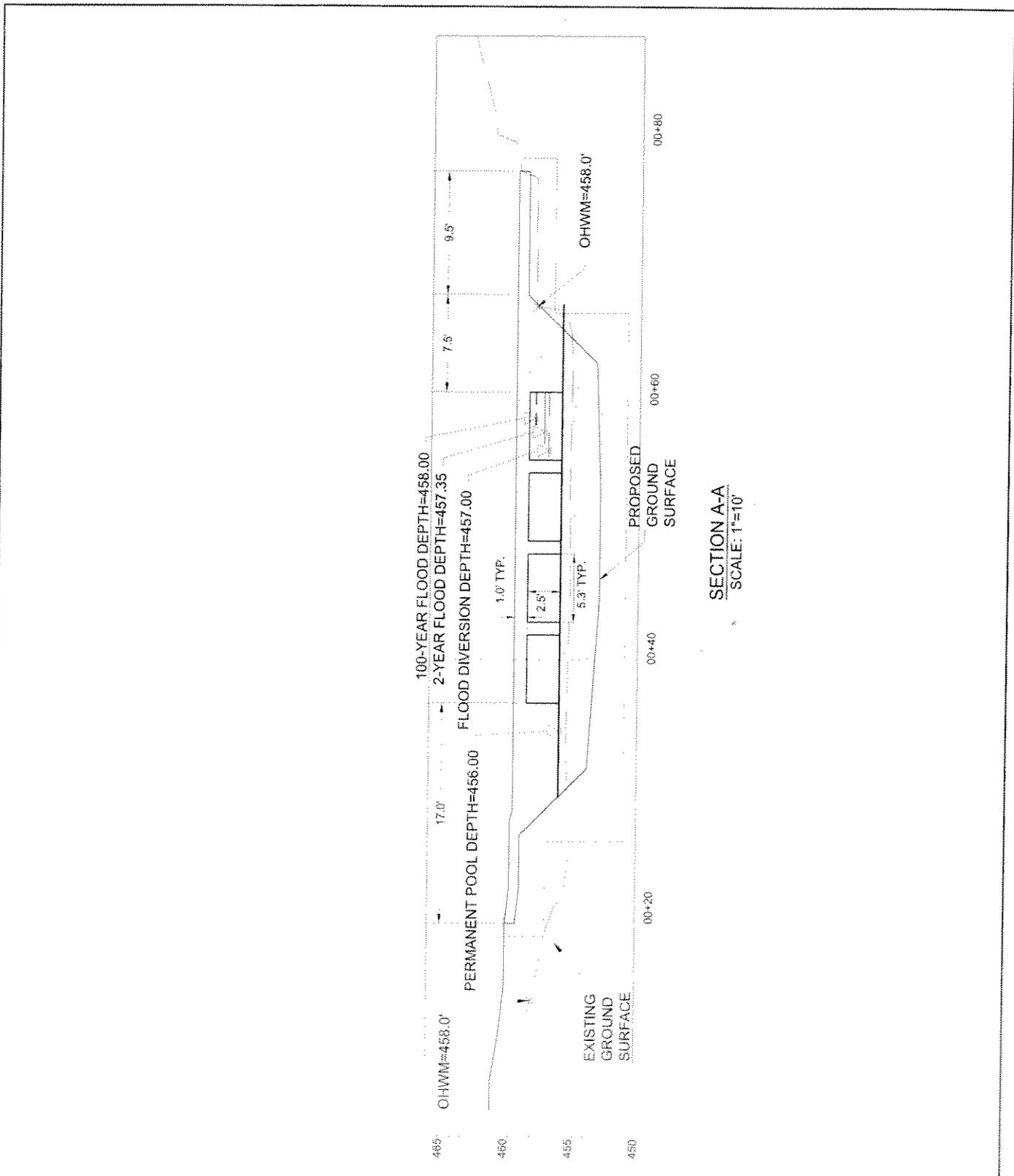
DATE: 10/30/2008

JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 8 OF 20

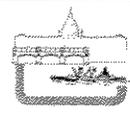
Plactive:6030 CAD:13_00 Dwg:13_05 Creek:13_05_02 Exhib:WC06-001_CJ-EXH-PERMIT-WEIR-8ST.dwg



SECTION A-A
SCALE: 1"=10'



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WALLER CREEK TUNNEL PROJECT
EXHIBIT 9:8TH STREET
CREEK SIDE TUNNEL INLET
CROSS SECTION A

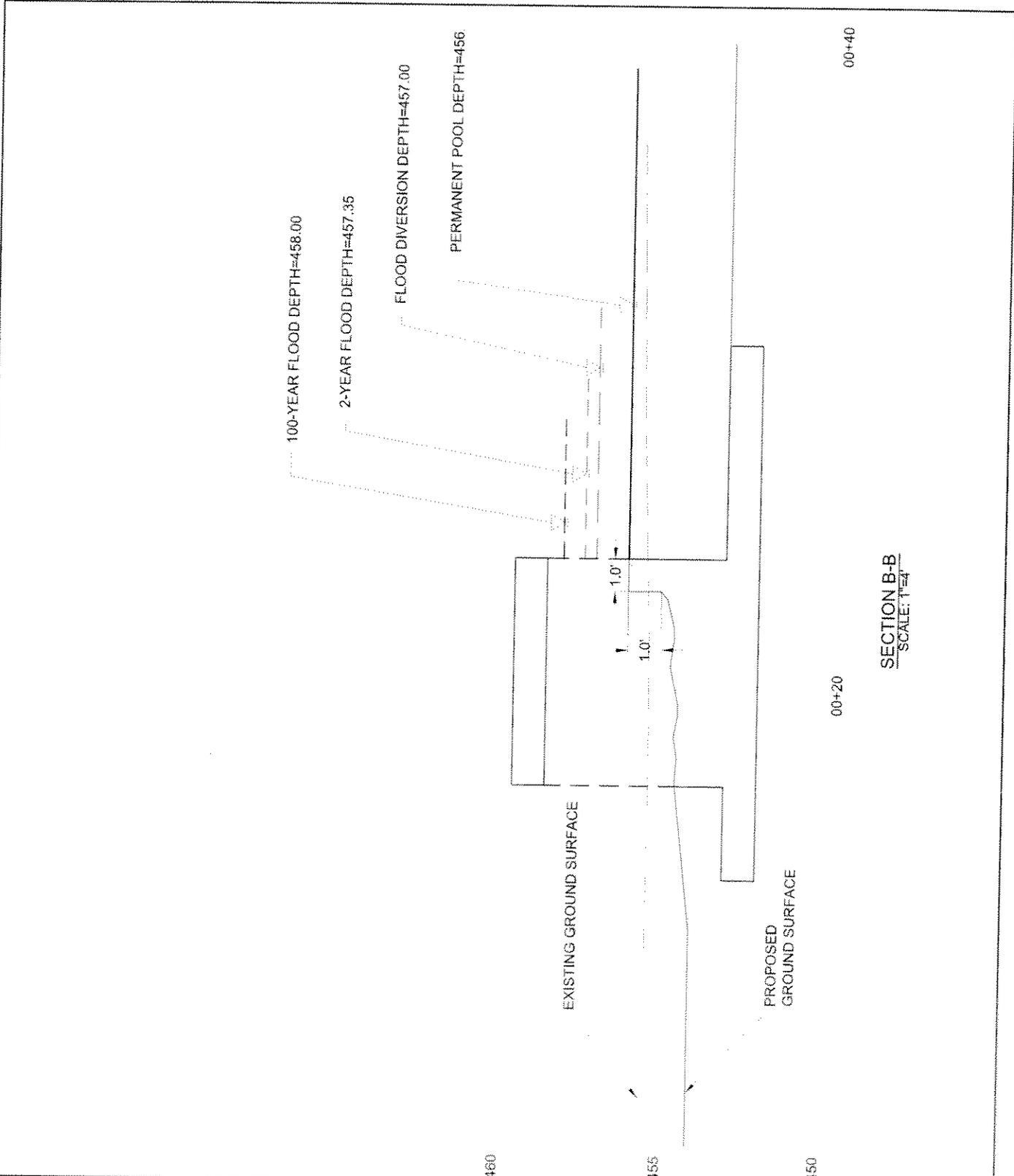
DATE: 10/30/2008

JOB NO.: 6030.02.115

SWF - 2008 - 00067

SHEET 9 OF 20

Project: 6030 CAD: 13_00 Dwg: 13_05 Creek 13_05_02 Exhibit: W008-002_CI-EXH-PERMIT-SECT-85T.dwg



SECTION B-B
SCALE: 1"=4'

00+40

00+20

EXISTING GROUND SURFACE

PROPOSED GROUND SURFACE

100-YEAR FLOOD DEPTH=458.00

2-YEAR FLOOD DEPTH=457.35

FLOOD DIVERSION DEPTH=457.00

PERMANENT POOL DEPTH=456

1.0'

1.0'

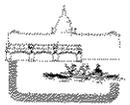
460

455

450



City of Austin
Watershed Protection Department



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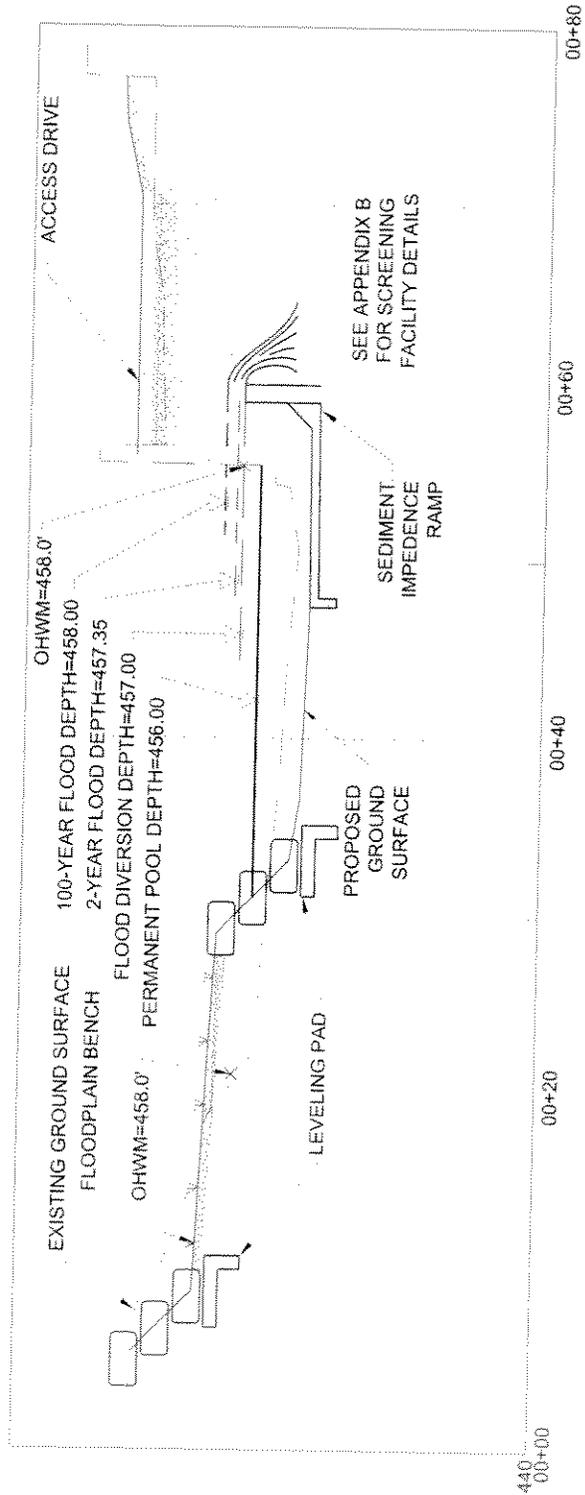
WALLER CREEK TUNNEL PROJECT
EXHIBIT 10:8TH STREET
CREEK SIDE TUNNEL INLET
CROSS SECTION B

DATE: 10/30/2008

JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 10 OF 20



SECTION C-C
SCALE: 1"=10'



City of Austin
Watershed Protection Department



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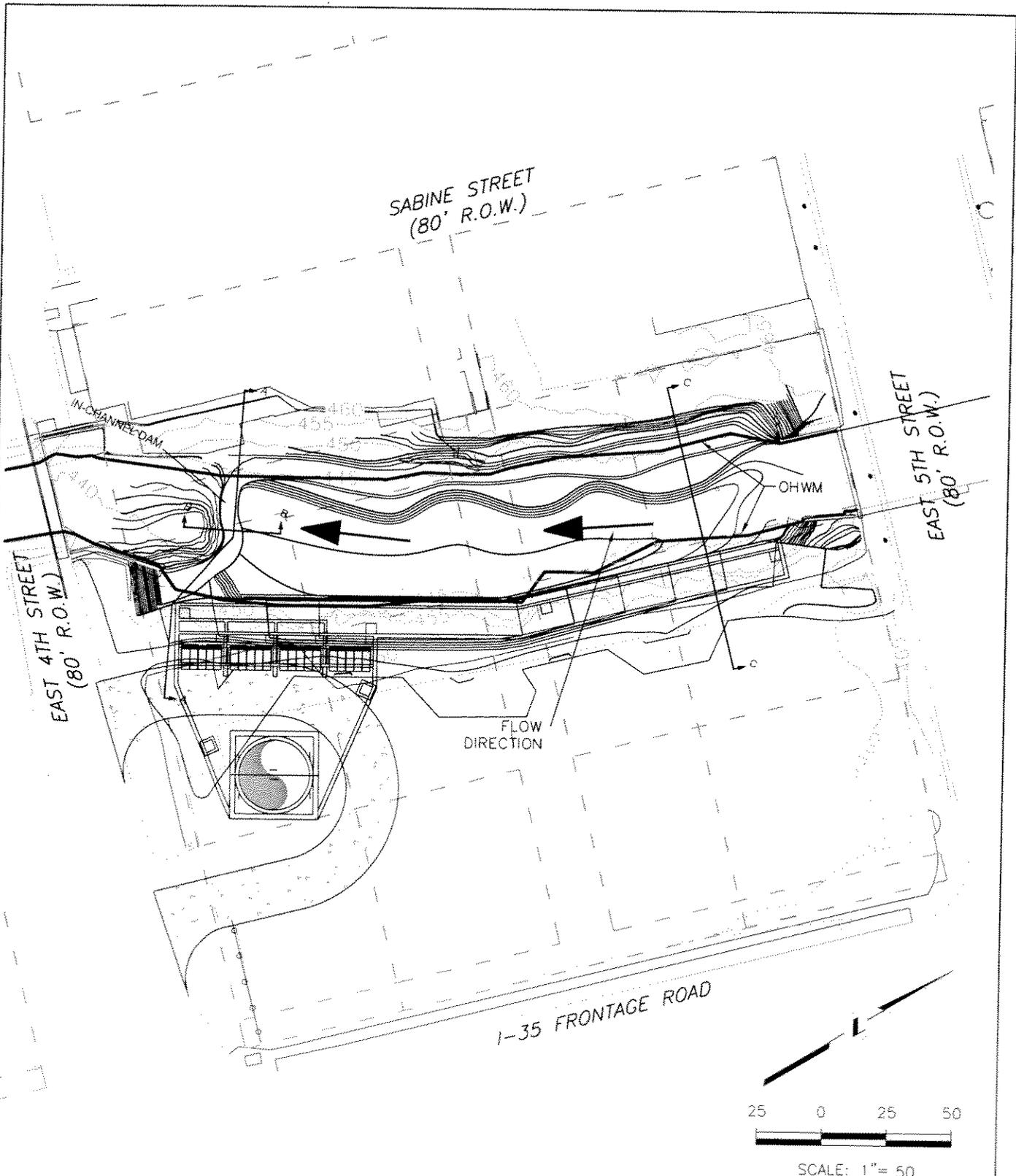
WALLER CREEK TUNNEL PROJECT
EXHIBIT 11:8TH STREET
CREEK SIDE TUNNEL INLET
CROSS SECTION C

DATE: 10/30/2008

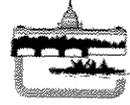
JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 11 OF 20



City of Austin
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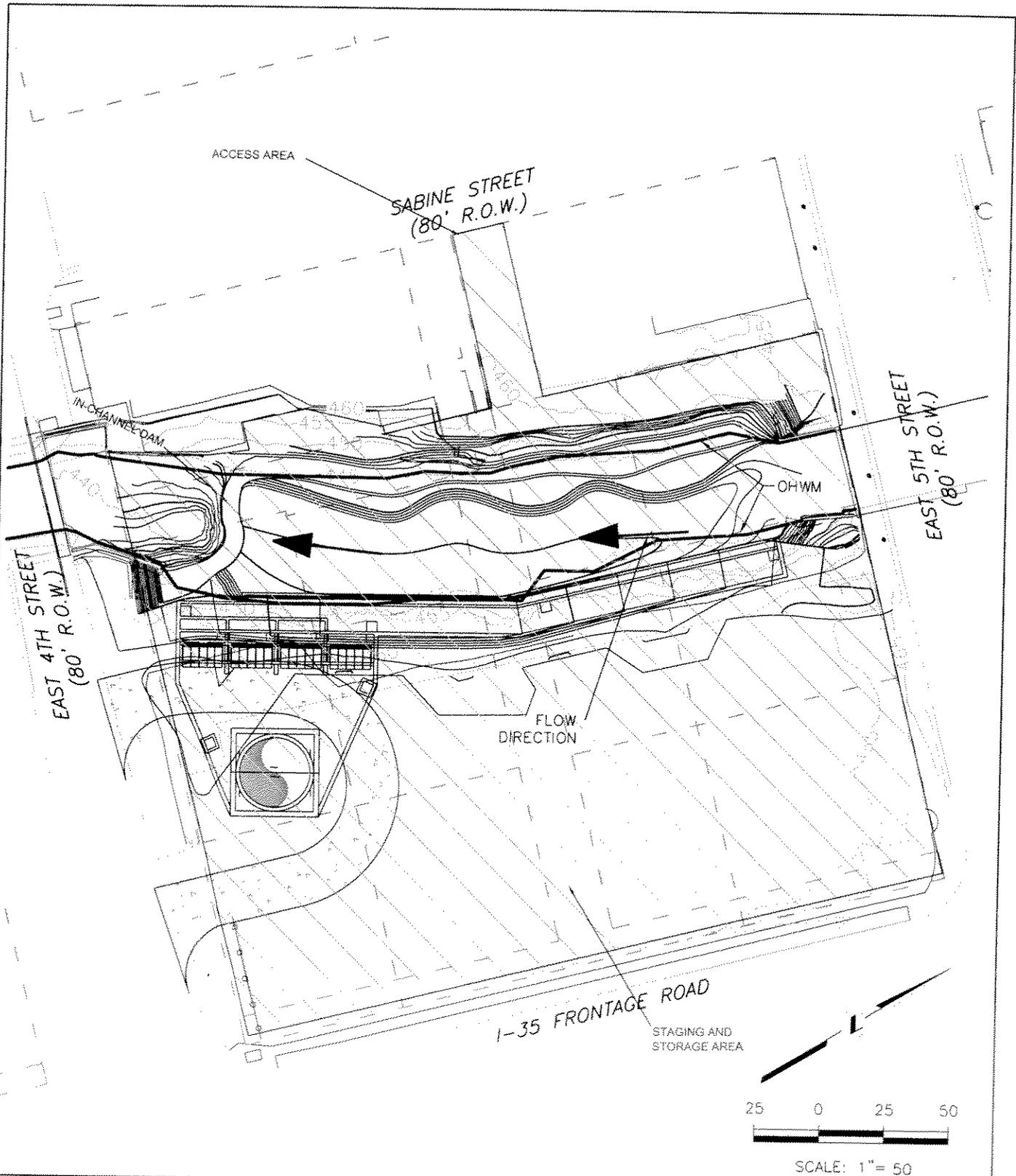
WALLER CREEK TUNNEL PROJECT
EXHIBIT 12:4TH STREET
CREEK SIDE TUNNEL INLET
OVERALL SITE LAYOUT

DATE: 10/31/2008

JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 12 OF 20



City of Austin
Watershed Protection Department

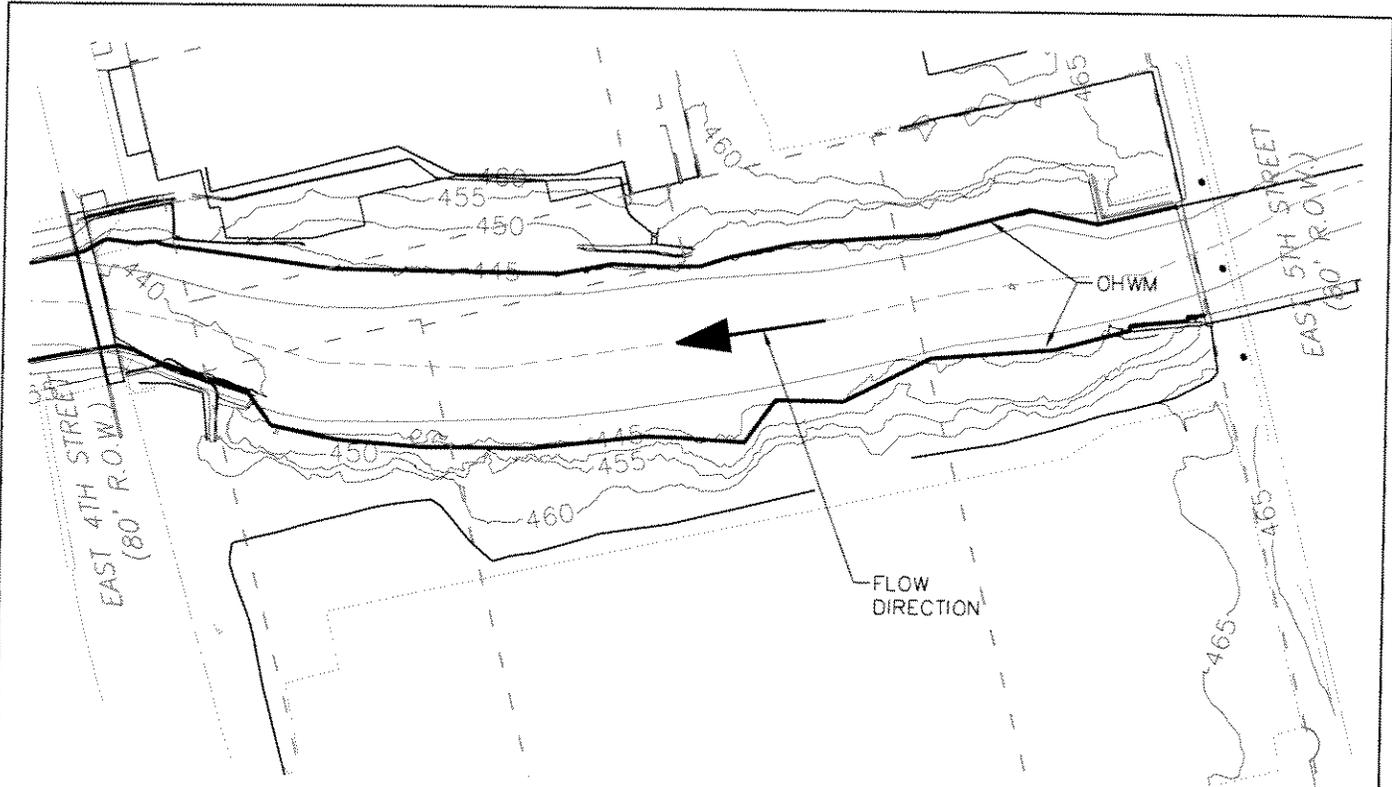


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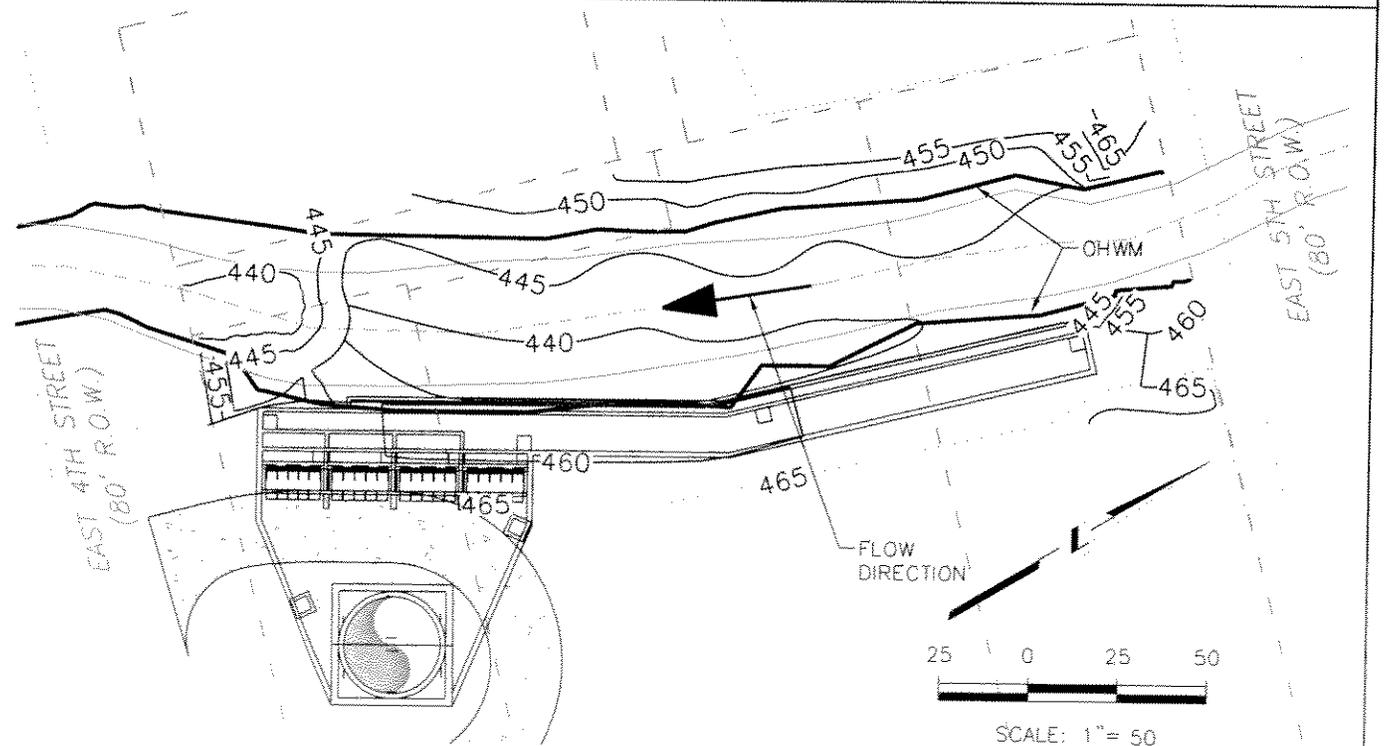
WALLER CREEK TUNNEL PROJECT
EXHIBIT 13: 4TH STREET
CREEK SIDE TUNNEL INLET
OVERALL SITE AREA PLAN

DATE: 10/31/2008

JOB NO.: 6030.02.115



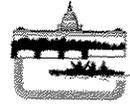
EXISTING CONDITIONS



PROPOSED SITE LAYOUT



City of Austin
Watershed Protection Department

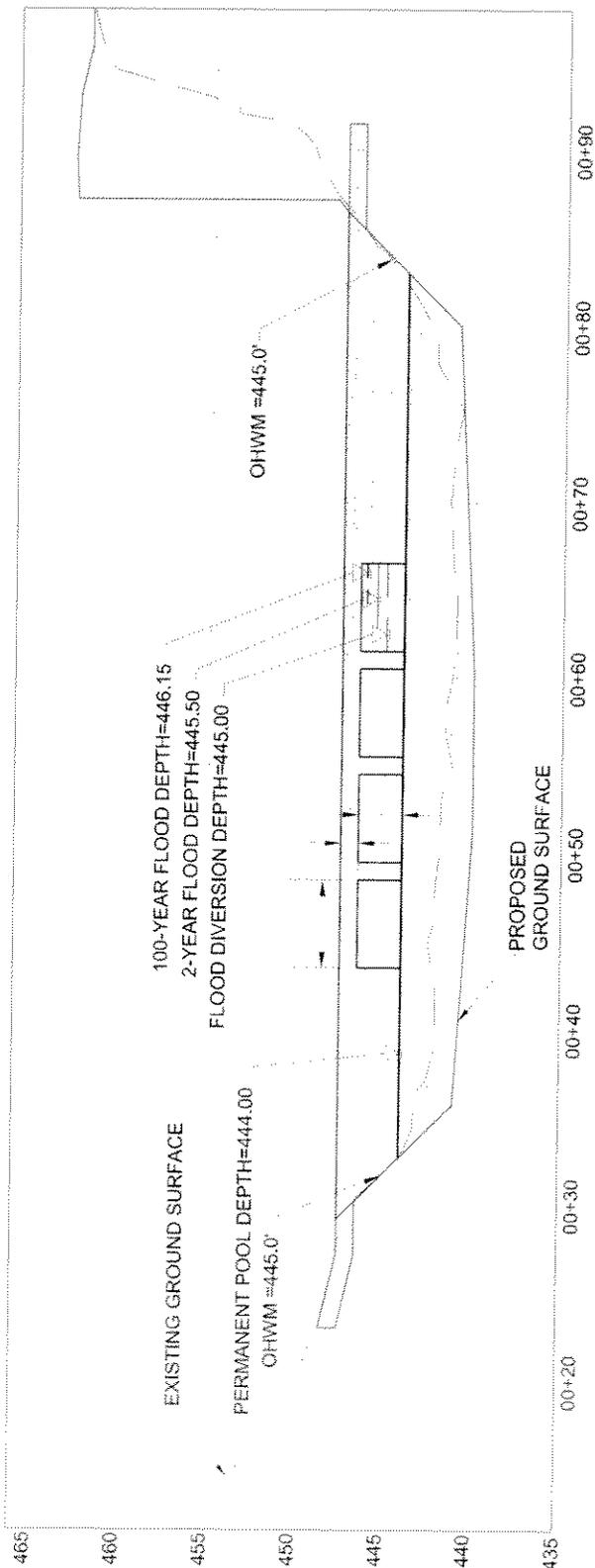


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Austin, Texas

WALLER CREEK TUNNEL PROJECT
EXHIBIT 14:4TH STREET
CREEK SIDE TUNNEL INLET
EXISTING AND PROPOSED CONDITIONS

DATE: 10/31/2008

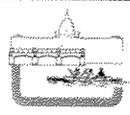
JOB NO.: 6030.02.115



SECTION A-A
SCALE: 1"=10'



City of Austin
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 Department
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 Austin, Texas



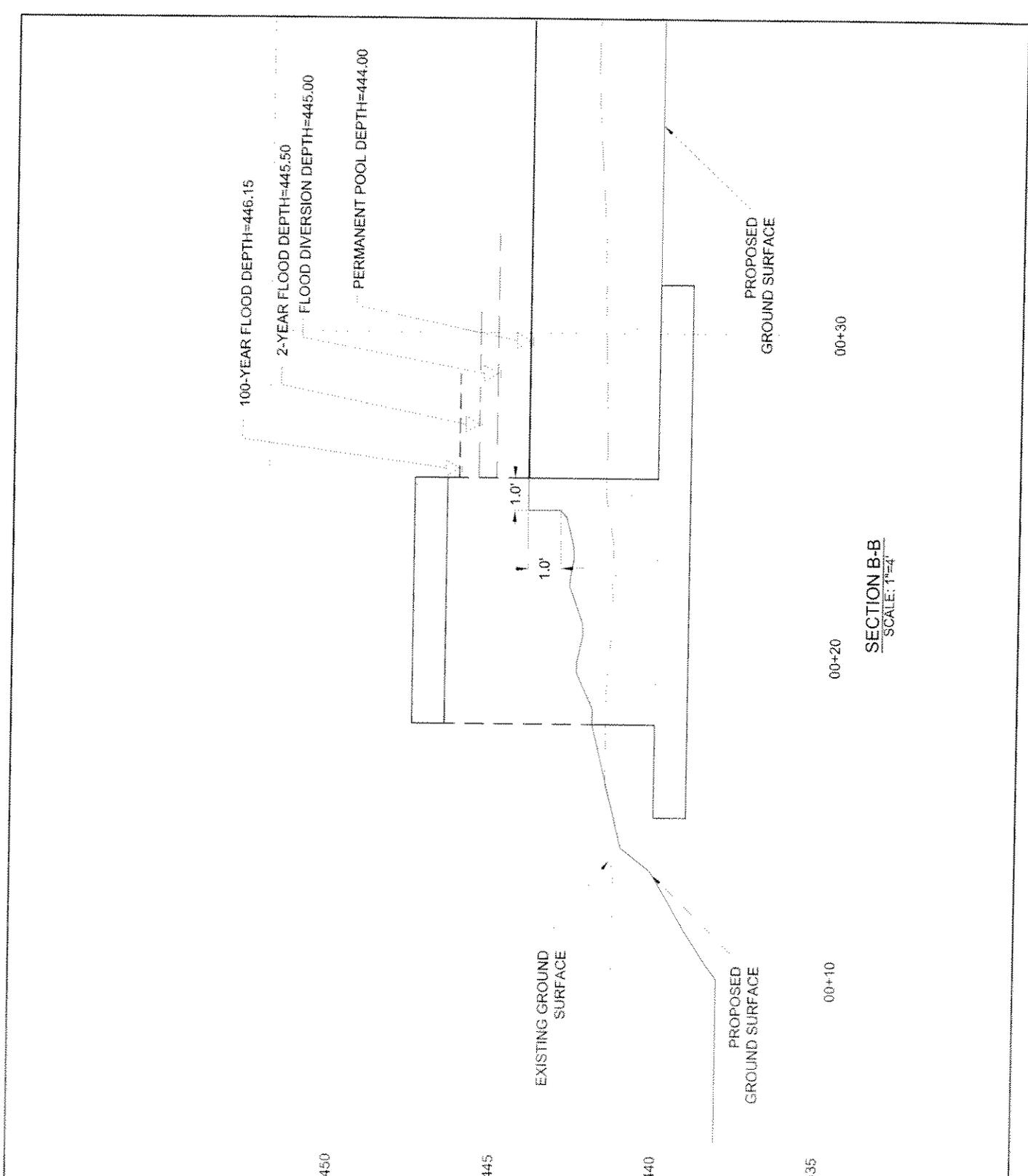
WALLER CREEK TUNNEL PROJECT
 EXHIBIT 15:4TH STREET
 CREEK SIDE TUNNEL INLET
 CROSS SECTION A

DATE: 10/30/2008

JOB NO.: 60.50.02.115

SWF -2008-00067

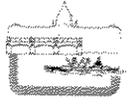
SHEET 15 OF 20



SECTION B-B
SCALE: 1"=4'



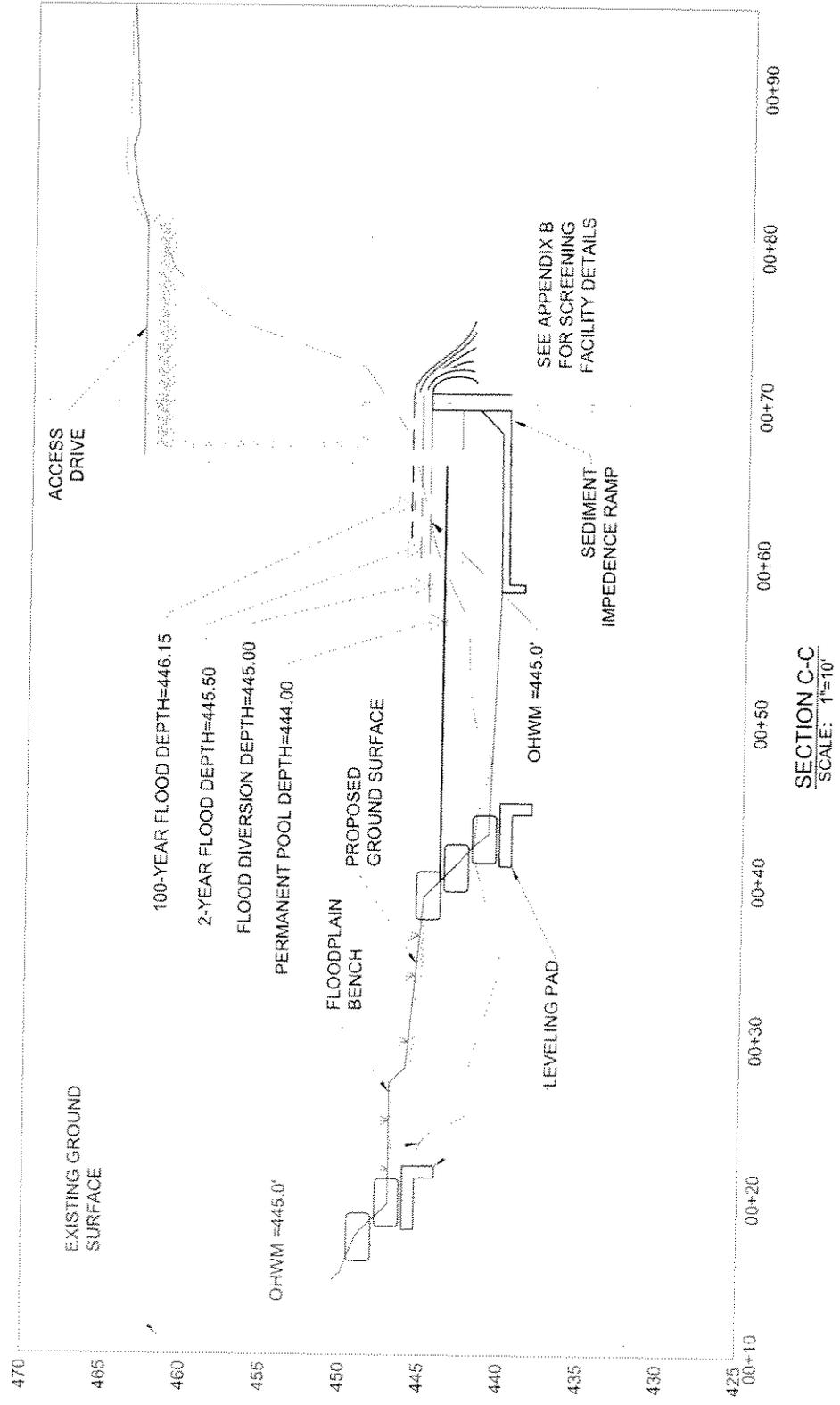
City of Austin
 WATERshed Protection
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 Brown & Root / Espy Padden Joint Venture
 3809 South Second ST., Suite B-300
 Austin, Texas



WALLER CREEK TUNNEL PROJECT
 EXHIBIT 16:4TH STREET
 CREEK SIDE TUNNEL INLET
 CROSS SECTION B

DATE: 10/30/2008	JOB NO.: 6030.02.115
SWF-2008-00067	SHEET 16 OF 20

P:\adiver\6030 CAD\13_00 Dwg\13_05 Creek\13_05_02 Exh\13\WC06-002_CI-EXH-PE\FMT-SECT-4ST.dwg



SECTION C-C
SCALE: 1"=10'



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 WATERshed Protection
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 3809 South Second ST., Suite B-300
 Austin, Texas



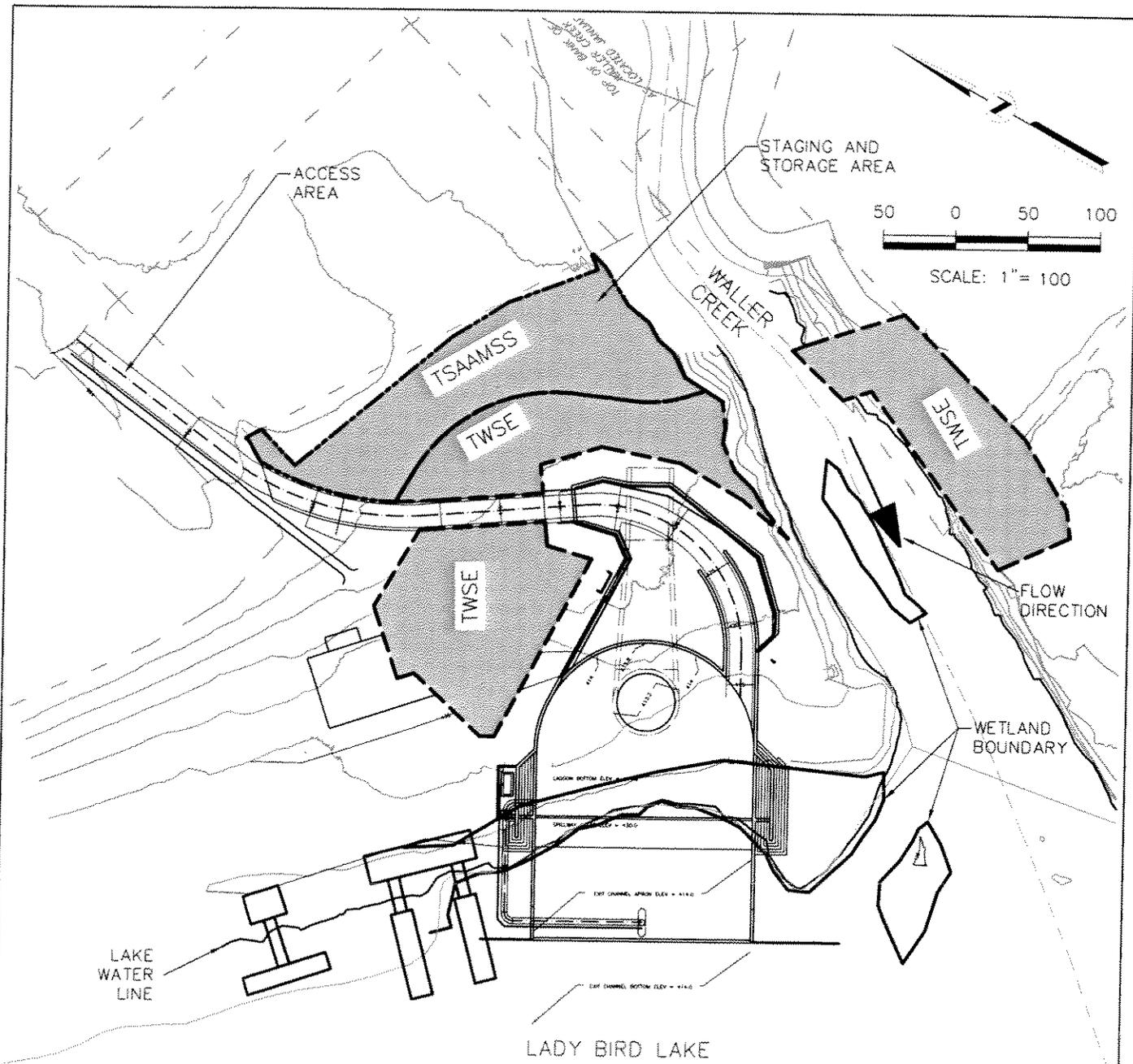
WALLER CREEK TUNNEL PROJECT
 EXHIBIT 17:4TH STREET
 CREEK SIDE TUNNEL INLET
 CROSS SECTION C

DATE: 10/30/2008

JOB NO.: 6030.02.115

SWF - 2008 - 00067

SHEET 17 OF 20



LEGEND

- TWSE - TEMPORARY WORK SPACE EASEMENT
- TSAAMSS - TEMPORARY STAGING AREA AND MATERIAL STORAGE SITE



City of Austin
Watershed Protection Department



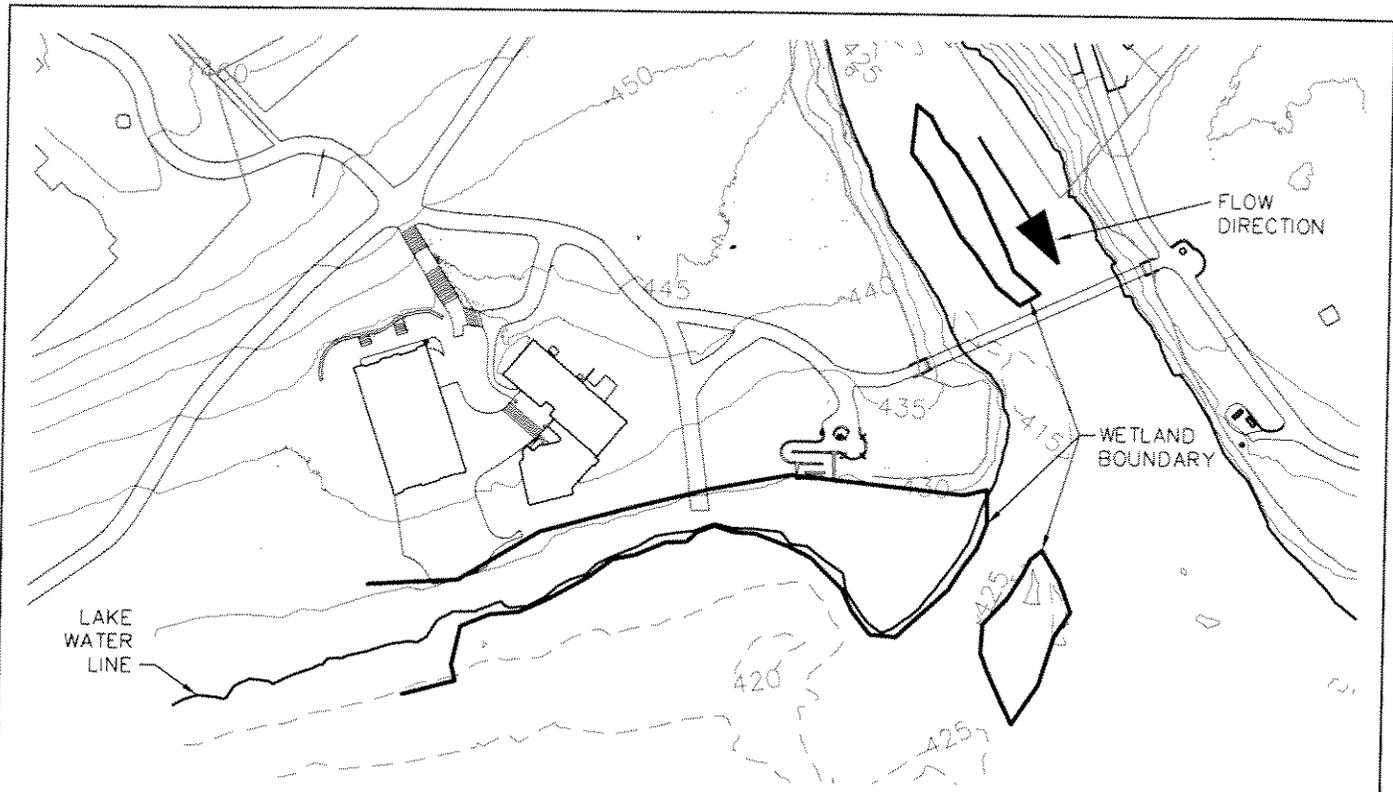
Brown & Root / Espey Padden Joint Venture
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Austin, Texas

WALLER CREEK TUNNEL PROJECT

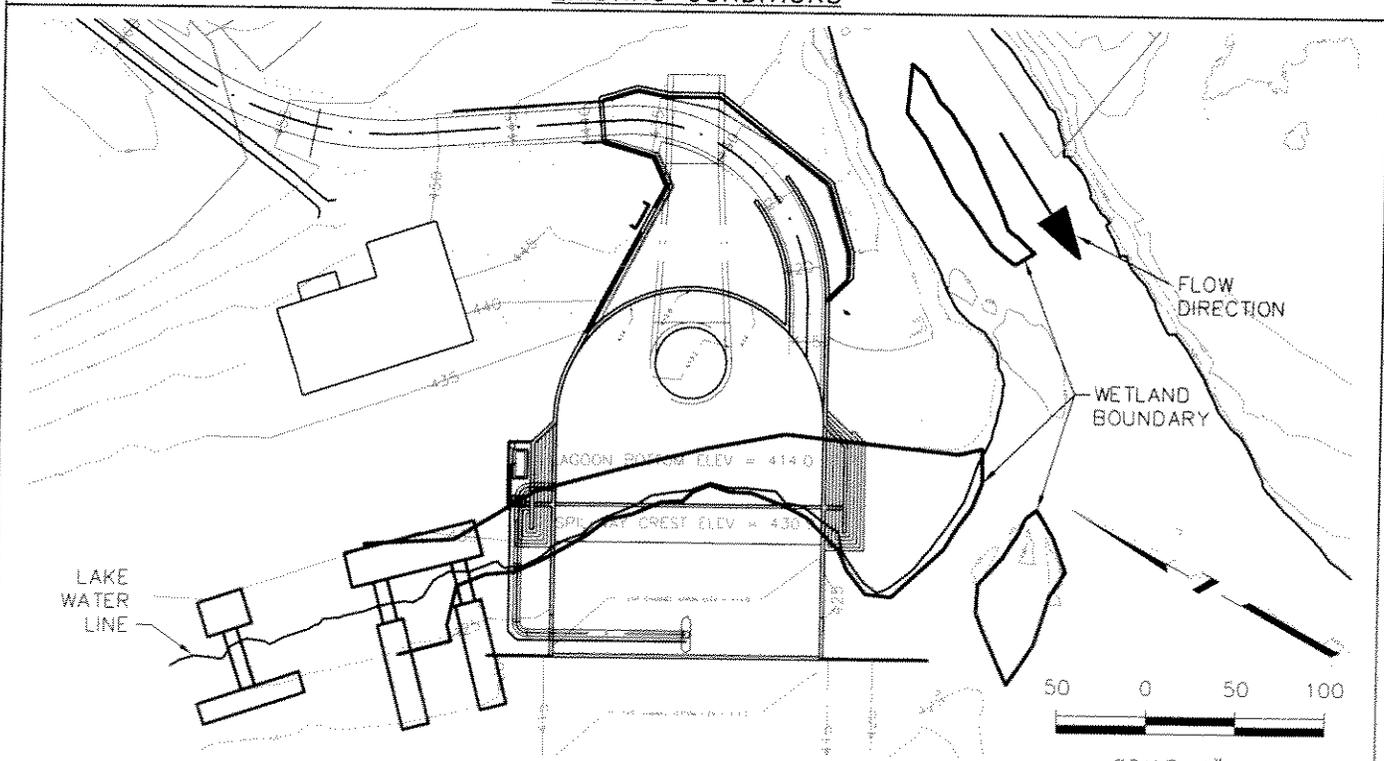
EXHIBIT 18
OVERALL OUTLET
SITE PLAN

DATE: 10/31/2008

JOB NO.: 6030.02.115



EXISTING CONDITIONS



PROPOSED SITE LAYOUT



City of Austin
Watershed Protection Department



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Austin, Texas

WALLER CREEK TUNNEL PROJECT

EXHIBIT 19

WALLER BEACH

EXISTING AND PROPOSED CONDITIONS

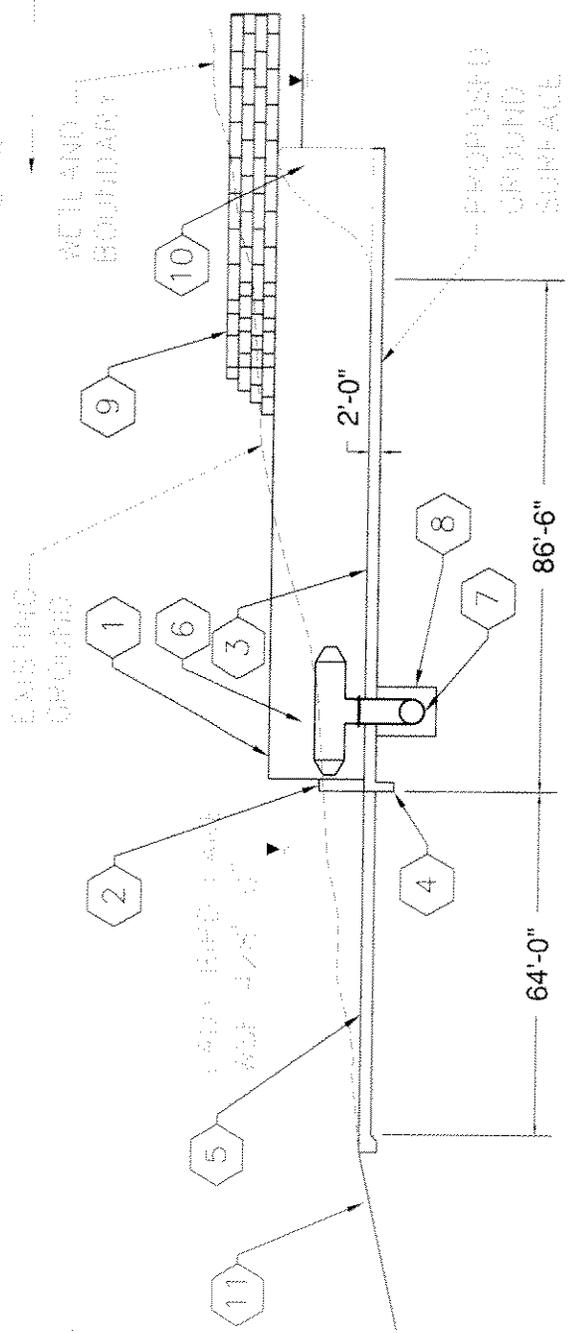
DATE: 10/31/2008

JOB NO.: 6030.02.115

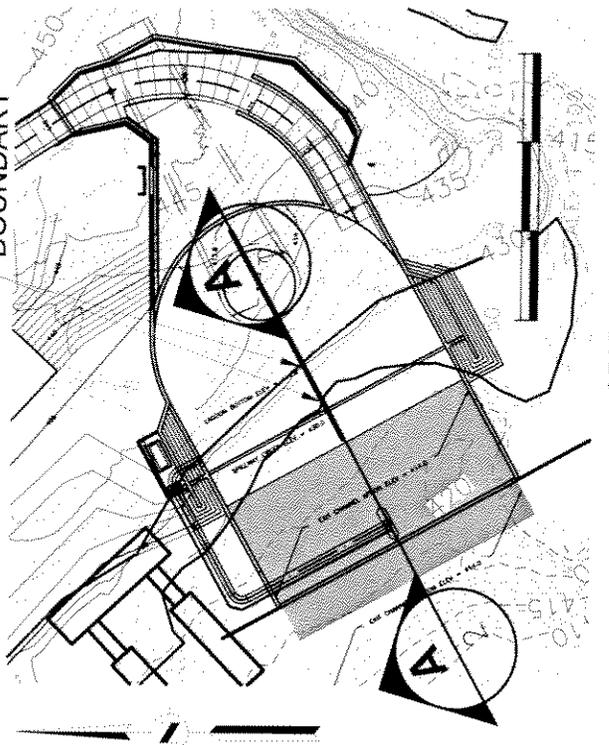
SWF-2008-00067

SHEET 19 OF 20

LADY BIRD UPLANDS
LAKE



WETLAND BOUNDARY



SECTION MAP

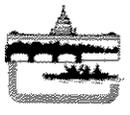
SHEET KEYNOTES



- 1 RETAINING WALL TOC=430.0'
- 2 RETAINING WING WALL TOC=421.5'
- 3 EXIT CHANNEL APRON BOT EL=414.0'
- 4 EXIT CHANNEL APRON KEY IN BOT EL=409.0'
- 5 2' RIP RAP W/ GEOTEXTILE BOT EL=414.0'
- 6 48" WATER INTAKE TOP=422.5'
- 7 48" WATER INTAKE BOT=404.0'
- 8 LEAN CONCRETE BACKFILL
- 9 STONE RETAINING WALL ELE = 438.0'
- 10 OGEE SPILLWAY TOP =430.0'
- 11 EXISTING LADY BIRD LAKE BED



City of Austin
Watershed Protection Department



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Austin, Texas

WALLER CREEK TUNNEL PROJECT
EXHIBIT 20
WALLER BEACH
OUTLET SITE SECTION

DATE: 10/30/2008

JOB NO.: 6030.02.115

SWF-2008-00067

SHEET 20 OF 20