City of Sunset Valley

At

3205 Jones Road

Modification of a Previously Approved Water Pollution Abatement Plan Application

Travis County

Submitted to:

TCEQ

Austin Regional Office

May, 2024

AVO 54168

05/24/2024
TBPELS Firm 312

13620 Briarwick Dr., Building C, Suite 100
Austin, TX 78729

WPAP – Table of Contents

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X. Core Data Form (*TCEQ-10400*)

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.
3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or if not withdrawn the application will be denied and the application fee will be forfeited.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the effected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: The City of Sunset Valley						2. Regulated Entity No.: N/A			
3. Customer Name: City of Sunset Valley						4. Customer No.: CN600694970			
5. Project Type: (Please circle/check one)	New		Modification			Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential		Non-residential			8. Site (acres):		11.784	
9. Application Fee:	$6,500		10. Permanent BMP(s):			Retention/Irrigation; Contech Jellyfish Filter			
11. SCS (Linear Ft.):	N/A		12. AST/UST (No. Tanks):			N/A			
13. County:	Travis		14. Watershed:			Williamson Creek			

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	__	_X_	__
Region (1 req.)	__	_X_	__
County(ies)	__	_X_	__
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	_X_Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock _X_Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence __Georgetown __Jerrell __Leander __Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.
Robert W. Scholz, PE Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 05/24/2024

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

Section I

General Information Form (TCEQ-0587)

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

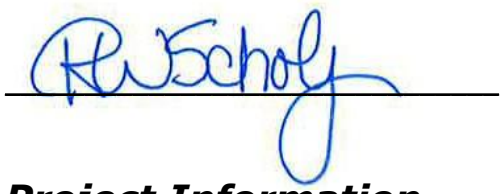
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Robert W. Scholz, PE

Date: 05/24/2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: The City of Sunset Valley
2. County: Travis
3. Stream Basin: Williamson Creek
4. Groundwater Conservation District (If applicable): Barton Springs/Edwards Aquifer
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☒ Modification
   ☐ AST

☐ UST ☐ Exception Request

7. Customer (Applicant):

Contact Person: Matt Lingafelter
Entity: The City of Sunset Valley
Mailing Address: 3205 Jones Road
City, State: Sunset Valley, Texas Zip: 78745
Telephone: 512-892-1383 FAX: 512-892-6108
Email Address: mlingafelter@sunsetvalley.org

8. Agent/Representative (If any):

Contact Person: Robert W. Scholz, PE
Entity: Halff Associates, Inc.
Mailing Address: 711 N. Carancahua St., Suite 1190
City, State: Corpus Christi, Texas Zip: 78401
Telephone: (361) 400-0981 FAX: (512) 252-8141
Email Address: rscholz@halff.com

9. Project Location:

☒ The project site is located inside the city limits of Sunset Valley.
☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

3205 Jones Road, Sunset Valley, TX. The site surrounds the existing city hall at this property.

11. ☒ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

☒ Project site boundaries.
☒ USGS Quadrangle Name(s).
☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate

the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☒ Survey staking will be completed by this date: Site improvements are constructed.

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

☒ Area of the site
☒ Offsite areas
☒ Impervious cover
☒ Permanent BMP(s)
☒ Proposed site use
☒ Site history
☒ Previous development
☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

☒ Existing commercial site
☐ Existing industrial site
☐ Existing residential site
☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☐ Undeveloped (Undisturbed/Uncleared)
☐ Other: _____

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

(2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

(3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

(4) The use of sewage holding tanks as parts of organized collection systems; and

(5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

(6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
☐ A request for an extension to a previously approved plan.

19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

☐ TCEQ cashier
☒ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

Attachment 1A
Road Map

(Not to Scale)

Project Site

Directions From TCEQ Austin Regional Office

-Merge onto I-35 S toward US-290 W
-Continue on I-35 S
-Take Exit 230 to merge onto TX-71 W/US-290 W
-Continue on W US Hwy 290 Service Road
-Take exit toward Texas Loop 1/Brodie Ln/Southwest Pkwy
-Continue and merge onto W US Hwy 290 Service Road
-Sharp left onto E US Hwy 290 Service Rd.
-Turn right onto Ernest Robles Way, then turn left onto Jones Road
-3205 Jones Road on the right

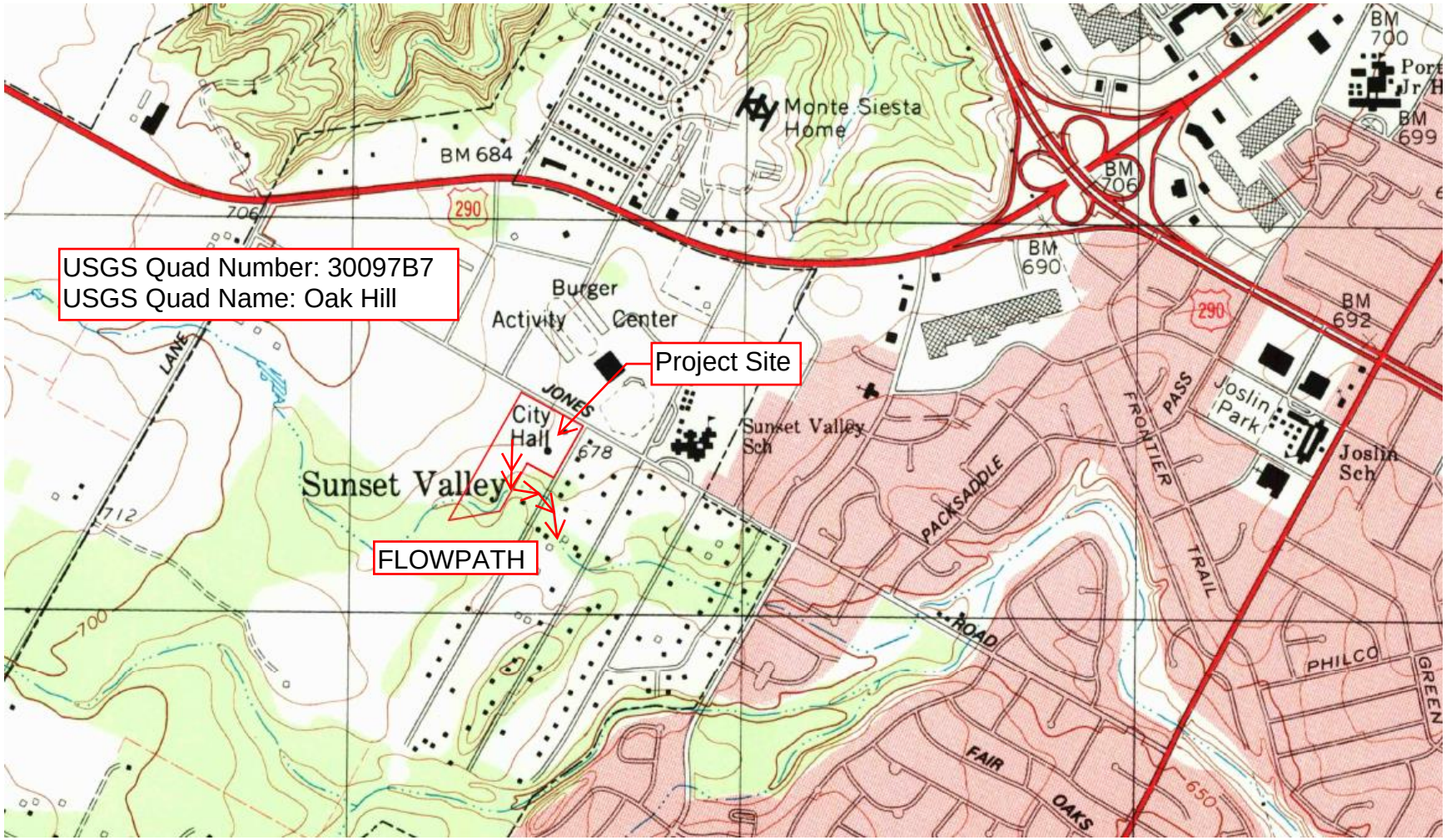
Sunset Valley Police Station & Public Works Facility

3205 Jones Road

Sunset Valley, Texas 78745

AVO #32119

Attachment 1B
USGS / Edwards Recharge Zone



Attachment 1C – Project Description

The 11.784-acre site is located at the southwest intersection of Jones Road and Lone Oak Trail at 3205 Jones Road, Sunset Valley, Texas 78745. The project site was previously platted as 10.785 acres of land in the Sunset Valley subdivision and recorded as Document No. 200100281 in the official public records of Travis County, Texas. It was re-platted in January of 2017 to include a one-acre lot along Lone Oak Trail and is recorded as Sunset Valley City Hall Subdivision, Document No. 201700014, in the Official Public Records of Travis County, Texas. At the time of the 07/07/2017 WPAP Modification submittal (Edwards Aquifer Protection Program ID No. 11000662), the site consisted of the existing Sunset Valley City Hall building, portable Public Works building and permanent foundation garage, a portable Police Station building, and associated parking. There was a bioretention pond that provided the site with stormwater runoff treatment, as well as a detention pond that provided stormwater quantity management. The site is relatively flat with slopes ranging from 3% to 5% draining in a southerly direction. A portion of the site drained to the bioretention and detention ponds, while the rest of the site drains to a tributary to Williamson creek on the south side of the site. The runoff from the detention pond drains to the same tributary on the south side of the site.

In 2001, a WPAP was submitted and approved by TCEQ for the realignment of Jones Road immediately to the west of Lone Oak Trail and the excavation of a drainage swale to direct stormwater runoff from Jones Road to a vegetated filter strip. This project consisted of approximately 0.18 acres of impervious cover. The TCEQ Regulated Entity Number for this WPAP is RN102931292 and the Edwards Aquifer Protection Program File Number is 00112102. The drainage from this area was redirected to the permanent BMPs, as approved in the 07/07/2017 WPAP Modification and constructed thereafter.

In 2003, a WPAP was submitted and approved by TCEQ for the construction of Sunset Valley's City Hall building and associated parking, driveways, and a detention system and water quality system. This project consisted of approximately 0.50 acres of impervious cover on an 8.50-acre tract of land. Since that time, the City has added more adjacent land to their property to equal the platted 11.784-acre tract today. The Edwards Aquifer Protection Program ID Number for the 2003 WPAP is 03040803.

The 07/07/2017 Modification submittal project consisted of the addition of a new Police Station, a new Public Works building, and the renovation of an existing Public Works garage. Site improvements included the continuation of the current circular drive at City Hall to Jones Road, as well as the addition of associated parking and sidewalks. The total impervious cover for the site, after construction, is 20.77%. The existing bioretention pond prior to this project was mostly removed and replaced with a combination of water quality controls consisting of a rain garden for pre-treatment, a retention/irrigation facility, and a Contech Jellyfish Filtration System. A small permanent pool wet pond is utilized for landscape irrigation and is located at the bottom of the retention pond, but the 07/07/2017 WPAP Modification submittal did not request water quality credit for the wet pond. This same WPAP Modification also did not request water quality credit through TCEQ for the rain garden pre-treatment as it was not an approved TCEQ best management

practice. The existing detention pond has been expanded to handle the increased stormwater runoff from the site. The existing outlet structure for the detention pond was removed and replaced with a new outlet structure. Water service was provided to the new Police Station, Public Works building, and the renovated Public Works garage from an existing waterline located onsite. Wastewater service was provided to the new Police Station, Public Works building, the renovated Public Works garage, and the existing City Hall building through an Organized Sewage Collection System (SCS), which was submitted concurrently with the 07/07/2017 WPAP Modification. There were some offsite improvements on the property to the west of the site. These improvements included landscaping, landscape berms, and a small drainage channel to intercept upgradient drainage. The adjacent property is described as Lot 1, Block A and Lot 17 of the Villas at Sunset Valley Homestead. The Deed from the official records of Travis County Document Number 2007084979 shows that this property is owned by the City of Sunset Valley.

This current WPAP Modification is submitted to adjust the Water Quality Volume (WQV) elevations and the provided WQV, which exceeds the required WQV. Additionally, more irrigation area has been proposed with this current WPAP Modification. See the *Modification to a Previously Approved Plan* application section for more information.

Section II

Geologic Assessment Form (TCEQ-0585)

Regulated Entity: Sunset Valley, TX (new Police & Public Works Buildings)

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

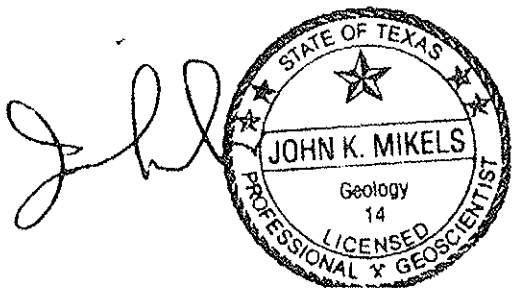
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30TAC213.

Print Name of Geologist: John K. Mikels, PG Telephone: 512-445-3433

Date: 4/24/17 Fax: 512-445-5005

Representing: Sole Proprietorship, d/b/a GEOS Consulting (No firm registration #) (Name of Company and TBPG or TBPE registration number)

Signature & Seal of Geologist:



Regulated Entity Name:

Project Information

1. Date(s) Geologic Assessment was performed: 3/16 & 18/17
2. Type of Project:
   - ☒ WPAP
   - ☒ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone ***(per TCEQ online map; CZ within TZ located immediately east of site)***
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. ☒ **Soil cover** on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 – Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness (ft)
CrB: Crawford clay, 1-3% slopes	D	2-2.7
DeB: Denton silty clay, 1-3% slopes	D	2-3.3
PuC: Purves silty clay, 1-5% slopes	D	0.8-1.7
TaD: Tarrant soils, 5-18% slopes	C	≤0.7

Soil Group Definitions (abbreviated)

A - Soils having a high infiltration rate when thoroughly wetted.

B - Soils having a moderate infiltration rate when thoroughly wetted.

C - Soils having a slow infiltration rate when thoroughly wetted.

D - Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = 30 '

   Site Geologic Map Scale: 1" = 30' ***NOTE: Two Geologic Maps attached; Fig. 1. Is of the entire Sunset Valley tract (1"=106') & Fig. 2 is of the area of proposed buildings & improvements (1"=30').***

   Site Soils Map Scale (if more than 1 soil type): 1" = 30 ' (*soils on same map as geology*)

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.

   ☒ Other method(s). Please describe method of data collection: Aerial imagery & site maps

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or **manmade** features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown & labeled, if appropriate. ***(outside of map area)***

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☒ There are 2 wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☒ The wells are in use and comply with 16 TAC Chapter 76.

    ☐ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, & county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

Site Name & Address: Sunset Valley Police Building, 3205 Jones Rd., Sunset Valley, TX

Attachment A - Geologic Assessment Table: (attached hereto)

Attachment B - Stratigraphic Column: *(*indicates formation cropping out on this Site)*

Group	Formation	Member	Est. Thickness Beneath Site (ft)
NA	Qht, Quaternary high terrace*	NA	≤18
Washita	Kdr, Del Rio Clay	NA	20-40
Washita	Kgt, Georgetown Limestone*	NA	40-60

Attachment C - Site Geology

The surficial geology, and soils, of the Site are indicated on the attached GA Maps (Figs. 1 & 2). This geology is based on:

- Regional geologic mapping (BEG, COA, BSEACD)
- Site inspection by GEOS Consulting on 3/16&18/17
- Geotechnical borings on the Site (by Terracon in Dec. 2016)
- Soils data from the USDA/NRCS Web Soil Survey site

The only formations observed cropping out on the Site are the Quaternary High Terrace deposits (Qht) and the Georgetown Limestone (Kgt), and these are largely masked by soil and vegetation (see Figs. 1 & 2). Outcrops of the Georgetown appear to be limited to the floor and banks of Sunset Valley tributary, in its eastward flowing reach near the east Site boundary (Fig. 1).

The Site is within the Balcones Fault Zone. Regional geologic mapping does indicate faults transecting the Site (Figs. 1 & 2); however these faults are not exposed on the Site (masked by the Qht & soils). The lack of bedrock outcrops, with significant vertical exposure, on the Site precludes identifying faults and other geologic structures on the Site. The strata beneath the Site probably dip easterly at 2 to 5 degrees, the regional trend.

The Site is entirely within the Recharge Zone (per TCEQ's online Edwards Aquifer Zone delineations map). However, immediately east of the Site (extending east from Lone Oak Trail; Fig. 1) is an area designated as Contributing Zone within Transition Zone. The lack of Edwards and/or Georgetown Limestone outcrops on or near the areas of the proposed new buildings (indicated on Figs. 1 & 2) and the relatively thick (>5ft) clayey soil and Qht strata beneath these areas, suggest that recharge from these areas, directly down into the Edwards Aquifer, would be greatly impeded.

No karst or recharge features were found on the Site. A small, non-karstic Closed Depression (channel scour?) was found in the Sunset Valley Tributary (F-1 on Fig. 1 and in the GA Table). The depression is lined with clayey soil, gravel, and vegetative debris. There was no water in this depression, nor the associated creek, at the time of the GA inspection (3/16 & 18/17).

Two water wells are located on the Site and their locations are indicated on Figs. 1 & 2. Both wells are completed in the Edwards Aquifer. Brief data on these wells:

- **W-1**: SW#58-50-233; former USGS monitor well, now monitored by the BSEACD
- **W-2**: SW#58-50-215; currently unused City of Sunset Valley public water supply well

Attachment D - GA Maps: (two maps attached hereto)

- **Fig. 1** covers the entire Sunset Valley municipal tract
- **Fig. 2** covers the two Site areas on which new buildings and associated facilities will be located

GEOLOGIC ASSESSMENT TABLE

Project Name: Sunset Valley; new police building **Location:** 3205 Jones Rd., Sunset Valley, Travis County, TX 78745

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B	1C	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE I.D. NO.	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	GEOL. FORM.	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILLING	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		0/10	SF,Z,O	SF,Z,O		per flowchart	2B+5A+8B	<40	≥40	<1.6	≥1.6	
F-1	30.22641	-97.81196	CD	5	Kgt	10	5	1-1.5	None	NA	NA	NA	C,O	25	30	X			X	Drainage

NOTES:

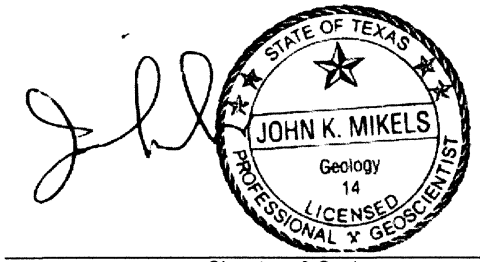
Lat/Long Datum: NAD1983

2A: FEATURE TYPE		2B: POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features, vuggy rock, etc.	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A: INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12: TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.



John K. Mikels, PG
Geologist's Printed Name

Signature & Seal

4/18/17
Date

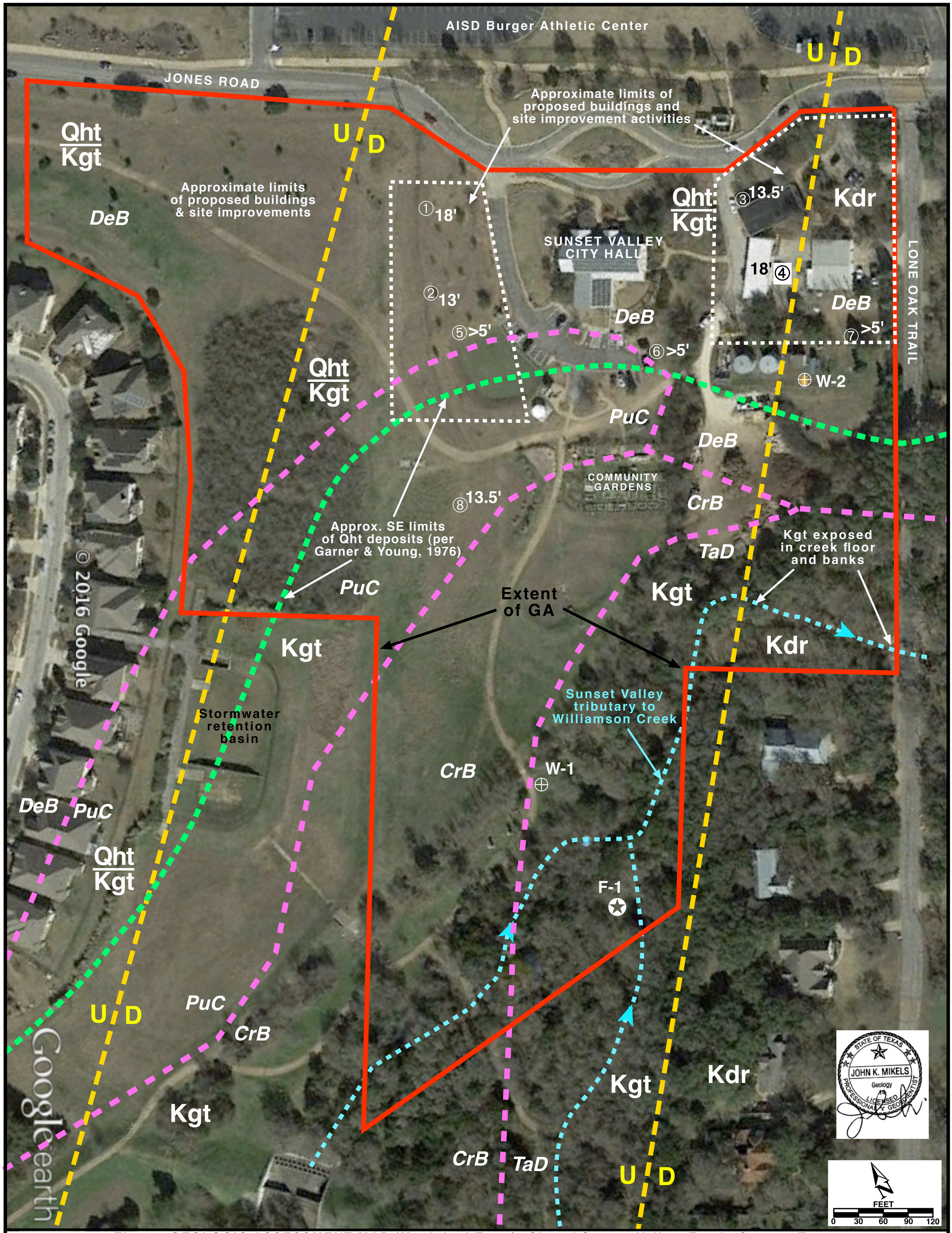


Fig. 1 - GEOLOGIC ASSESSMENT MAP (Municipal Tract): City of Sunset Valley, Travis County, Texas

GEOLOGIC STRATA
- Qht: High terrace deposits
- Kdr: Del Rio Formation
- Kgt: Georgetown Formation

Geologic Fault — U / D

GEOTECH BORING DATA
- ❶ 18' Boring # and depth to base of soil/alluvium and top of Georgetown Limestone

SOILS (Soil Unit Boundaries: - - - -)
- *CrB*: Crawford clay, 1-3% slopes
- *DeB*: Denton silty clay, 1-3% slopes
- *PuC*: Purves silty clay, 1-5% slopes
- *TaD*: Tarrant soils, 5-18% slopes

F-1 ✪ Potentially significant feature

W-1 ⊕ Water Well

DATA SOURCES
Map base: 1/7/17 GoogleEarth imagery. Geology by GEOS Consulting and from area geologic mapping by: the City of Austin (Nico Hauwert), the Barton Springs/Edwards Aquifer Conservation District, and "Geologic Map Of The Austin Area" by E. Garner & K. Young (UT-BEG, 1986ver). Geotech boring data from Jan. 2017 geotechnical report by Terracon, Inc. Soils data from USDA/NRCS Web Soil Survey.

STATE OF TEXAS — JOHN K. MIKELS — Geology — LICENSED PROFESSIONAL GEOSCIENTIST

FEET: 0 30 60 90 120

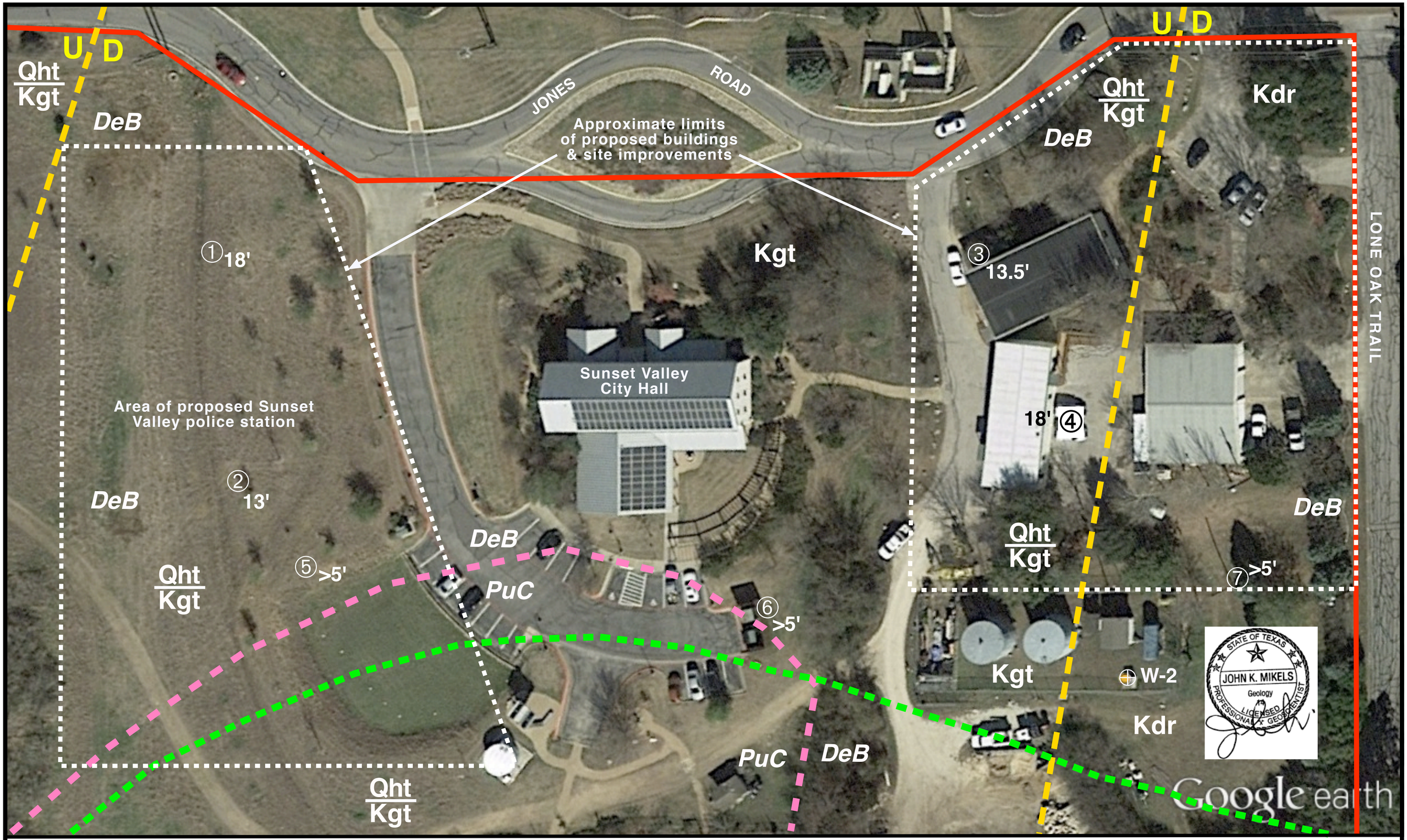


Fig. 2 - GEOLOGIC ASSESSMENT MAP (Limits of Building and Construction Areas): City of Sunset Valley, Travis County, Texas

GEOLOGIC STRATA
Qht: High terrace deposits
Kdr: Del Rio Formation
Kgt: Georgetown Formation

GEOTECH BORING DATA
18' ❶ Boring # and depth to base of soil/alluvium and top of Georgetown Limestone

SOILS (Soil Unit Boundaries: - - - - -)
DeB: Denton silty clay, 1-3% slopes
PuC: Purves silty clay, 1-5% slopes

Geologic Fault U/D

Approximate southern limits of Qht deposits (per Garner & Young, 1986) - - - -

F-1 ✪ Potentially significant feature

W-2 ⊕ Water Well

FEET
0 30 60

DATA SOURCES
Map base: 1/7/17 GoogleEarth imagery. Geology by GEOS Consulting and from area geologic mapping by: the City of Austin (Nico Hauwert), the Barton Springs/Edwards Aquifer Conservation District, and the "Geologic Map Of The Austin Area" by E. Garner & K. Young (UT-BEG, 1986ver). Geotech boring data from Jan. 2017 geotechnical report by Terracon, Inc. Soils data from USDA/NRCS Web Soil Survey.

GEOS Consulting ★ Austin, TX ★ (512)445-3433 ★ geos-jkm@swbell.net ★ Project No. 17-05 ★ Final Date: 4/26/17

Section III

Modification to a Previously Approved Plan (TCEQ-0590)

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This request for a **Modification of a Previously Approved Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Robert W. Scholz, PE

Date: 05/24/2024

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: The City of Sunset Valley
   Original Regulated Entity Name: The City of Sunset Valley
   Regulated Entity Number(s) (RN): 103168001
   Edwards Aquifer Protection Program ID Number(s): 11000662, 00112102, 03040803
   ☒ The applicant has not changed and the Customer Number (CN) is: 600694970
   ☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters**. A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):
   - ☒ Physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
   - ☐ Change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
   - ☐ Development of land previously identified as undeveloped in the original water pollution abatement plan;
   - ☐ Physical modification of the approved organized sewage collection system;
   - ☐ Physical modification of the approved underground storage tank system;
   - ☐ Physical modification of the approved aboveground storage tank system.

4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	8.68	11.78
Type of Development	Government Building	Government Building
Number of Residential Lots	N/A	N/A
Impervious Cover (acres)	0.68	2.44
Impervious Cover (%	7.83%	20.77%
Permanent BMPs	2	2
Other	N/A	N/A

SCS Modification Summary	***Approved Project***	***Proposed Modification***
Linear Feet	_____	_____
Pipe Diameter	_____	_____
Other	_____	_____

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	_____	_____
Volume of ASTs	_____	_____
Other	_____	_____

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	_____	_____
Volume of USTs	_____	_____
Other	_____	_____

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Project**. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
   - ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
   - ☒ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. ☐ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
   ☒ Acreage has not been added to or removed from the approved plan.

8. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

Attachment A - Original Approval Letter and Approved Modification Letters

COPY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 7, 2017

Mr. Clay Collins
City Administrator
City of Sunset Valley
3205 Jones Road
Sunset Valley, Texas 78745

Re: Edwards Aquifer, Travis County

NAME OF PROJECT: Sunset Valley Police Station and Public Works Facility; 3205 Jones Road, Sunset Valley, Texas

TYPE OF PLAN: Request for Approval of Modification of an Approved Water Pollution Abatement Plan (WPAP Modification); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11000662; Regulated Entity No. RN103168001

Dear Mr. Collins:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the Austin Regional Office by Halff Associates, Inc. on behalf of the City of Sunset Valley on May 5, 2017. Final review of the WPAP Modification was completed after additional material was received on July 5, 2017. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

Structures on the site that pre-existed the Edwards Aquifer Recharge Zone requirements in Travis County (adopted on March 21, 1990) comprise 0.45 acres of impervious cover consisting of the original City Hall and associated parking, a water plant and water storage tanks, a

maintenance building and associated parking, sidewalks, paths and miscellaneous storage areas. The aforementioned structures were constructed between 1977 and 1989.

On March 15 2000, The City of Sunset Valley ('City') received a clarification letter from TCEQ (formerly TNRCC) Austin Region Office ('Region') for the reconstruction of Jones Road, which was determined to be maintenance and repairs, rather than regulated activity. During construction activities, City Officials decided to revise street alignment immediately west of Lone Oak Trail in preparation of the Town Hall building. The City's engineering firm was informed by TCEQ that the proposed modifications of the original construction plans would require WPAP approval.

On November 21, 2000, the Region received the Sunset Valley Town Hall Loop Improvements WPAP application. The WPAP was approved by letter on January 4, 2001 (EAPP ID: 00112102) for the re-alignment of a portion of Jones Road with a curved roadway section and traffic island resulting in 0.18 acres of impervious cover. A vegetated swale and Vegetative filter Strip (VFS) were constructed through the City Hall site to meet the required 80% removal of increased TSS load caused by the proposed project.

On April 8, 2003, the Region received the Sunset Valley City Hall WPAP application. The WPAP was approved by letter on January 4, 2001 (EAPP ID: 03040803) for the municipal office building, associated parking, driveways, and stormwater water quality and flood control facilities. The proposed imperious cover on the 8.5 acre site was approximately 0.5 acres (5.8%). An exception from permanent BMPs was granted due to the low impervious cover percentage, and authorized the construction of the bioretention system, which was not a TCEQ approved permanent BMP.

The site was re-platted in March 2005 as 10.785 acres, and re-platted again in January 2017 as 11.784 acres for the addition of a one-acre lot along Lone Oak Trail. To date, the municipal facility consists of the City Hall building, portable Public Works building, portable Police Station, Public Works garage, associated parking, and the aforementioned water quality and flood control structures.

In 2012, a rainwater harvesting system was constructed for the City Hall rooftop with a 5,331 sq. ft. (0.12 acre) area. The system includes a 10,000 gallon above-ground tank, which is equivalent to 3 inches of collection volume for the rooftop area. This stored rainwater is used to water the community garden.

PROJECT DESCRIPTION

The proposed modification of Sunset Valley City Hall, and the re-alignment of Jones Rd. WPAP approvals (EAPP IDs: 00112102 and 03040803) is for the construction of a Police Station, a Public Works building, and renovations of the existing Public Works garage and City Hall complex. Site improvements will include continuation of the circular drive around the City Hall, associated parking and sidewalks, crushed granite trails, and water and wastewater utilities. The existing bioretention pond, and VFS will be removed and replaced by a combination of water quality controls to treat the proposed project and the offsite area from Jones Rd. In addition, improvements will be constructed west of the site on City owned property, which include landscaping, berms, and a drainage channel. The total limits of construction (LOC) has an area of approximately 12.0 acres. The total impervious cover to include the 0.181 acre Jones

Road extension is 2.447 acres (20.77%). The impervious cover consists of 0.509 acres of structures/rooftops, 1.398 acres of parking, and 0.540 acres of other paved surfaces.

The Temporary Stormwater Section and a Construction General Permit (CGP) Stormwater Pollution Prevention Plan (SWPPP) will be implemented, and maintained to minimize sedimentation, erosion, and other pollutant discharges until construction is completed. The site is in the Edwards Aquifer Recharge Zone, and within the Williamson Creek watershed. A portion of the site is within the 100-year floodplain. Project wastewater is conveyed to the existing South Austin Regional Wastewater Treatment Plant for treatment and disposal.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, two permanent BMPs consisting of a proposed Retention/Irrigation System, and a proposed Jellyfish Filtration System by Contech, designed using the City of Austin (COA) Environmental Criteria Manual, and the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed. The proposed project on the 11.784 acre site with 2.447 acres of impervious cover (minus the 0.12 acre rainwater harvesting area) has a required Total Suspended Solids (TSS) removal of 1,628 lbs.

A proposed Bioretention facility (Rain Garden) with a clay liner and underdrain system connected directly to the Retention/Irrigation System will be constructed to pre-treat stormwater runoff from a drainage area of 2.72 acres with road and parking pavement.

The proposed Retention/Irrigation System has a drainage area of 3.10 acres with 1.49 acres of impervious cover resulting in a required TSS removal of 1,391 lbs. The required water quality volume is 5,624 cu. ft., and the required irrigation area is 11,248 sq. ft. (0.26 acres). The provided water quality volume is 15,288 cu. ft., and the provided irrigation area is 35,747 sq. ft. (0.82 acres). The proposed JF4 -2-1 Jellyfish Filtration System has a drainage area of 0.313 acres with 0.258 acres of impervious cover resulting in a required TSS removal of 237 lbs.

Treatment design calculations were sealed by Robert W. Scholz, P.E. on July 3, 2017 to demonstrate that the designed treatment load removal meets the TCEQ required treatment load removal.

GEOLOGY

The Geologic Assessment (GA) was performed on March 16 and 18, 2017 on the site by Mr. John K. Mikels, P.G. According to the GA, the project site is underlain by the Quaternary high Terrace deposits (Qht) and Georgetown Limestone (Kgt) which crop out along floor and banks of the Sunset Valley tributary. The soil types mapped in the area is Crawford clay (CrB), Denton silty clay (DeB), Purves silty clay (PuV), and Tarrant soils (TaD) (combined > 5 ft.) which are classified as having slow to very slow infiltration rate when thoroughly wetted. The site is entirely within the Edwards Aquifer Recharge Zone and the Balcones Fault Zone. Regional geologic mapping indicate faults transecting the site, although exposed faults were not noted (masked by Qht and soils) during the GA. No sensitive natural recharge features were found. Two wells are located onsite, consisting of a former USGS monitor well and a Sunset Valley public supply well (currently not being used). The lack of observed sensitive features, and relatively thick clayey soil and Qht strata on the site suggests that the potential for fluid movement to the Edwards Aquifer beneath the site is greatly impeded. On June 8, 2017, the

TCEQ Austin Region Office conducted a site assessment, and determined that the site generally appeared as described in the GA. Construction of the proposed project had not commenced.

SPECIAL CONDITIONS

I. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP Modification application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be

removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

<u>During Construction:</u>

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
14. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
15. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
16. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

17. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the Austin Regional Office within 30 days of site completion.
18. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
19. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
20. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Boyd Guthrie of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Shawn Stewart, Water Section Manager
Austin Regional Office
Texas Commission on Environmental Quality

CSS/btg

Enclosures: Deed Recordation Affidavit, TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, TCEQ-10263

cc: Mr. Robert W. Scholz, P.E., Halff Associates, Inc.
Ms. Carolyn Meredith, City Environmentalist, City of Sunset Valley
The Honorable Sarah Eckhardt, County Judge, Travis County
Mr. John Dupnik, P.G., General Manager, Barton Springs/Edwards Aquifer Conservation District

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 30, 2003

Ms. Jayme Foley, City Administrator
City of Sunset Valley
Two Lone Oak Trail
Austin, Texas 78745

Re: Edwards Aquifer, Travis County
NAME OF PROJECT: Sunset Valley City Hall; 3205 Jones Road; Sunset Valley, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program File No. 03040803

Dear Ms. Foley:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the Austin Regional Office by Glenrose Engineering, Inc. on behalf of the City of Sunset Valley on April 8, 2003. As presented to the TCEQ, the Temporary Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed municipal office building project will have an area of approximately 8.5 acres. It will include the construction of a 5,279 square foot civic building, associated parking, driveways, stormwater detention structure and a water quality control system. The impervious cover will be approximately 0.5 acres (5.8 percent). Project wastewater will be disposed of by conveyance to the existing South Austin Regional Wastewater Treatment Plant owned by the City of Austin.

PERMANENT POLLUTION ABATEMENT MEASURES

A request for an exception from the requirement for Permanent BMPs was submitted with the application. The justification for this request was that, due to the low impervious cover percentage, the project would not significantly impact the water quality of the Edwards Aquifer. In addition, a bioretention water quality treatment system has been proposed to treat stormwater runoff from the site. Although bioretention systems are not formally recognized by the TCEQ Edwards Aquifer Protection Program as an approved stormwater Best Management Practice, the Commission recognizes the benefits to water quality this BMP will provide for this project. Therefore, the TCEQ hereby grants exception request and authorizes the construction of the bioretention system.

GEOLOGY

According to the geologic assessment included with the application, no geologic features exist on the site. The Austin Regional Office site inspection of May 16, 2003, revealed that the site is generally as described by the geologic assessment.

SPECIAL CONDITIONS

I. Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering excavated areas and/or areas of accumulated stormwater becomes necessary, the discharge shall be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

II. If the impervious cover percentage or the land use ever change, the Permanent BMP exemption for the whole site may no longer apply and the property owner must notify the Austin Regional Office of these changes.

III. Although the bioretention system is not an approved TCEQ BMP and is not a requirement of this approval, the system must be properly maintained to avoid becoming a potential source of pollution or a nuisance to public health.

IV. As stated in the WPAP application, the vegetative filter strip BMP for the Jones Road Town Loop Improvement will be maintained as part of the proposed project.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the

county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.

3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and file number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The

applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

10. No wells exist on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the Austin Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new

property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Mr. Leon Sparks of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Margaret Hoffman
Executive Director
Texas Commission on Environmental Quality

MH/lbs

Enclosures: Deed Recordation Affidavit, Form TNRCC-0625
Change in Responsibility for Maintenance on Permanent BMPs, Form TNRCC-10263

cc: Ms. D. Lauren Ross, P.E., Ph.D., Glenrose Engineering, Inc., Austin
Ms. Veva McCaig, Barton Springs/Edwards Aquifer Conservation Dist., Austin
The Honorable Sam Biscoe, County Judge, Travis County
Central Records, TCEQ Information Resources, Austin

DEED RECORDATION AFFIDAVIT
Edwards Aquifer Protection Plan

STATE OF TEXAS)(

COUNTY OF TRAVIS)(

BEFORE ME, the undersigned authority, on this day personally appeared Jayme S. Foley, who, being duly sworn by me, deposes and says:

(1) That my name is Jayme S. Foley and I am the duly appointed City Secretary for the City of Sunset Valley and do hereby affirm that the City of Sunset Valley is the owner of the real property described below.

(2) That said real property is subject to an EDWARDS AQUIFER PROTECTION PLAN, which was required under the 30 Texas Administrative Code (TAC) Chapter 213.

(3) That the EDWARDS AQUIFER PROTECTION PLAN for said property was approved by the TEXAS NATURAL RESOURCE CONSERVATION COMMISSION (TNRCC) on January 4, 2001.

(4) The said real property is located in Travis County, Texas and the legal description of the property is as follows:

An 8.50 acre tract or parcel of land out of the Theodore Bissell Survey No. 18, conveyed to the City of Sunset Valley, Travis County, Texas, by deed of record in Volume 13134, page 0976 of the Real Property Records of Travis County, Texas. Said 8.50 acres being a portion of that certain 280.5 acre tract of land conveyed to the J.D. Weaver Family Limited Partnership by deed of record in Volume 12345, page 1715 of the Real Property Records of Travis County, Texas.

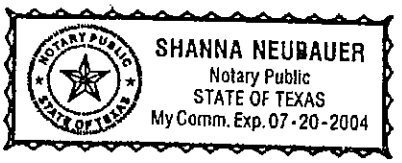
Jayme S. Foley

Jayme S. Foley, Affiant
Agent for the City of Sunset Valley, Tx

BEFORE ME, the undersigned authority, on this day personally appeared Jayme S. Foley known to me to be person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this the 21 day of February, 2001.

Shanna Neubauer
Notary Public



Shanna Neubauer
Typed or Printed name of Notary

MY COMMISSION EXPIRES 7/20/04

RECEIVED JAN 12 2001

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

January 4, 2001

Ms. Jayme Foley
City of Sunset Valley
2 Lone Oak Trail
Austin, Texas 78745

Re: Edwards Aquifer, Travis County
NAME OF PROJECT: City of Sunset Valley Town Hall Loop Improvements; Near the Intersection of Jones Road and Lone Oak Trail; Austin, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program File No. 00112102

Dear Ms. Foley:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project submitted to the Austin Regional Office by Hejl, Lee & Associates, Inc. on behalf of the City of Sunset Valley on November 21, 2000. Final review of the WPAP submittal was completed after additional material was received on December 11, 2000. As presented to the TNRCC, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 20 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed project will include the realignment of approximately 480 linear feet of Jones Road immediately to the west of Lone Oak Trail and the excavation of a drainage swale to direct the stormwater runoff from the street to a vegetated filter strip. Approximately 258 linear feet (western

end) of the proposed project is located on the Recharge Zone of the Edwards Aquifer. This proposed activity will disturb less than one (1) acre. The impervious cover proposed on the Recharge Zone will be approximately 0.18 acres (less than 20 percent). No wastewater will be generated by this project. The existing pavement of Jones Road within the old realignment will be removed and the area revegetated.

PERMANENT POLLUTION ABATEMENT MEASURES

A temporary vegetated filter strip will be provided to treat the stormwater runoff from this project. This treatment measure will consist of a vegetated swale directing the stormwater runoff to a 130-foot by 65-foot vegetated strip (8,450 square feet). Native grasses will be established in the swale and filter strip. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project. Permanent treatment will be provided with the WPAP application for the Town Hall.

GEOLOGY

According to the geologic assessment included with the application, the only geologic or manmade feature observed is the City of Sunset Valley's municipal water well located approximately 200 feet south of the project. The Austin Regional Office site inspection of December 28, 2000, revealed that the site is generally as described by the geologic assessment.

STANDARD CONDITIONS

1. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TNRCC-0625) that you may use to deed record the approved WPAP is enclosed.

3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

5. The applicant must provide written notification of intent to commence construction of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and file number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

10. No wells exist on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the Austin Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the Regional Office within 30 days of the transfer. A copy of the transfer form (TNRCC-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence

any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Mr. James Bice, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Jeffrey A. Saitas, P.E.
Executive Director
Texas Natural Resource Conservation Commission

JAS/jeb

Enclosure: Deed Recordation Affidavit, Form TNRCC-0625
Change in Responsibility for Maintenance on Permanent BMPs, Form TNRCC-10263

cc: Mr.Chein Lee, P.E., AICP, Hejl, Lee & Associates, Inc., Austin, Texas
Mr. Stovy Bowlin, Barton Springs/Edwards Aquifer Conservation Dist., Austin, Texas
The Honorable Sam Biscoe, County Judge, Travis County
Ms. Jeffie Barbee, TNRCC Field Operations, Austin, Texas

UPON FILING RETURN TO:

Jayme S. Foley
City of Sunset Valley
2 Lone Oak Trail
Sunset Valley, Texas 78745

FILED AND RECORDED
OFFICIAL PUBLIC RECORDS

02-26-2001 01:49 PM 2001028616
KNOWLESR $23.00
DANA DEBEAUVOIR ,COUNTY CLERK
TRAVIS COUNTY, TEXAS

ORIGINAL
FILED FOR RECORD

Attachment 3B – Narrative of Proposed Modification

Historical WPAPs and Modifications:

The original WPAP for the Sunset Valley City Hall was approved by TCEQ on May 30, 2003. The TCEQ Regulated Entity Number is RN103168001 and EAPP File number is 03040803. This approved WPAP was for the construction of the 5,279-square foot City Hall building, associated parking, driveways, and water quality and flood control facilities. The City of Sunset Valley designed and constructed a bioretention treatment system which provided storm water runoff treatment that exceeded TCEQ's requirement to remove 80% of the increased TSS load. However, bioretention facilities were not formally recognized by TCEQ as approved stormwater BMPs. As such, the project was granted an exception from the requirement for a Permanent BMP based on low impervious cover percentage.

On January 4, 2001, TCEQ approved a WPAP for the Sunset Valley Town Hall Loop Improvements. The TCEQ Regulated Entity Number is RN102931292 and the EAPP File number is 00112102. This approved WPAP was for the realignment of Jones Road immediately to the west of Lone Oak Trail and the excavation of a drainage swale to direct stormwater runoff from Jones Road to a vegetated filter strip. The area of impervious cover from Jones Road that drained to the vegetated filter strip is 0.18 acres.

On July 7, 2017, TCEQ approved a WPAP Modification for Sunset Valley Police Station and Public Works Facility. The TCEQ Regulated Entity Number is RN103168001 and the EAPP File number is 11000662. This approved WPAP Modification was a modification to the original Sunset Valley City Hall WPAP and consisted of the addition of a new Police Station, a new Public Works building, and the renovation of an existing Public Works garage on the Sunset Valley City Hall complex. Site improvements included the continuation of the circular drive at City Hall to Jones Road, as well as the addition of associated parking, concrete sidewalks, crushed granite pathways and water and wastewater utilities. The total impervious cover after construction for the site was proposed at 20.77%. The existing bioretention pond was proposed to be removed and replaced with a combination of water quality controls consisting of a biofiltration system (rain garden) for pre-treatment, a Retention/Irrigation System, and a Contech Jellyfish Filtration System. The existing vegetated filter strip constructed with the Town Hall Loop Improvements was proposed to be removed, though the area will remain naturally vegetated. The 0.18 acres of impervious cover and associated stormwater runoff from Jones Road was proposed to be collected in a storm sewer system, routed to, and pretreated by the proposed biofiltration system (Rain Garden), then discharged to the Retention/Irrigation System.

Construction:

The site improvements associated with the WPAP Modification for Sunset Valley Police Station and Public Works Facility were commenced soon after receipt of the approval letter for the 07/07/2017 WPAP Modification. An initial civil construction punch list was provided to the client on April 26, 2019. Included within this punch list were line items to re-test both the rain garden and retention pond for adequate drainage and retention of water, as well as to run tests on the pump system and irrigation system in the presence of the Engineer of Record.

The pond system was filled with water to observe the water level drop. City personnel observed the water level dropping at rates that indicated a leak in the retention pond. Additionally, leakage was observed on the mortared rock wall separating the rain garden from the retention pond. Several attempts to retest

the pond were made while plugging the discharge pipes from the rain garden and storm sewer pipes so that these piping systems could be eliminated as a cause of leakage. The Contractor endeavored to fix any leaks by reinstalling a portion of the storm sewer pipe leading into the pond with watertight joints, placing clay plugs around the storm sewer pipe discharges into the pond, and via the use of a pond/dam sealing agent within the pond to plug any potential leaks within the clay liner. Additionally, the contractor installed a layer of bentonite along the backside of the wall to prevent the transfer of water between the rain garden and retention pond through the wall.

These repair methods proved only partially successful. Halff conducted a test in March of 2023 and observed the pond levels in the morning and evening for nine days after the City filled the pond to an elevation of 675.50 ft-msl. After this test, it was determined that the pond successfully holds water (taking into account acceptable seepage and evaporation losses) to an elevation of approximately 673.9 ft-msl instead of the designed level of 676.50 ft-msl which is equivalent to the flowlines of the outfall/overflow pipes which take stormwater to the detention pond downstream. The results of the test are below:

Date	Time	Type	Elevation	Drop in Water (ft)	
3/1/2023	8:30 AM	Estimated	675.5	-	
	4:30 PM	Estimated	675.33	0.17	
3/2/2023	8:30 AM	Estimated	674.96	0.37	
	4:30 PM	Estimated	674.78	0.18	
3/3/2023	8:30 AM	Estimated	674.78	0	*It rained the evening of 3/2
	4:30 PM	Estimated	674.7	0.08	
3/5/2023	11:00 AM	Estimated	674.33	0.37	
3/6/2023	11:00 AM	Estimated	674.12	0.21	
	6:30 PM	Measured	674.04	0.08	
3/7/2023	9:00 AM	Estimated	673.94	0.1	
	5:30 PM	Estimated	673.92	0.02	
3/8/2023	8:30 AM	Estimated	673.88	0.04	
	5:00 PM	Measured	673.9	-0.02	Pond Holds to 673.90'
3/9/2023	8:30 AM	Measured	673.85	0.05	
	6:00 PM	Measured	673.81	0.04	

This 673.9 ft-msl elevation is above the elevation needed to hold the required water quality volume (WQV) of 5,624 cubic feet. That required elevation is 673.33 ft-msl. Thus, approximately 2,770 cubic feet of extra storm water may be collected in the pond before there is a threat of leakage in the pond, which equates to approximately 49% oversizing in volume, which may be utilized by the City for normal irrigation purposes. This is above and beyond the 20% excess required for potential silting of the pond. The originally designed retention pond was approved by TCEQ (07/07/2017) as an online retention pond. The pond design had an abundance of excess storm water volume collected by the pond (15,288 cubic feet) to be irrigated onsite. During larger storm events which lead to a larger volume of water collected within the retention pond, some leakage will now occur in the pond above 673.9 ft-msl elevation and associated capture volume of 8,394 cubic feet prior to the irrigation commencing. The source of the leak is unknown after several attempts to repair the pond over the last few years. In these larger storm events, there is a

potential for mixing of water quality volume with the excess water collected above the provided WQV elevation. It should be noted, however, that the drainage runoff from all pavement area filters through the rain garden facility prior to entering the retention pond. All other drainage runoff entering directly to the retention pond is collected directly from the roofs of buildings. The rain garden facility was not formally approved as a permanent best management practice by TCEQ but is mentioned within the approval letter from TCEQ as a pre-treatment facility.

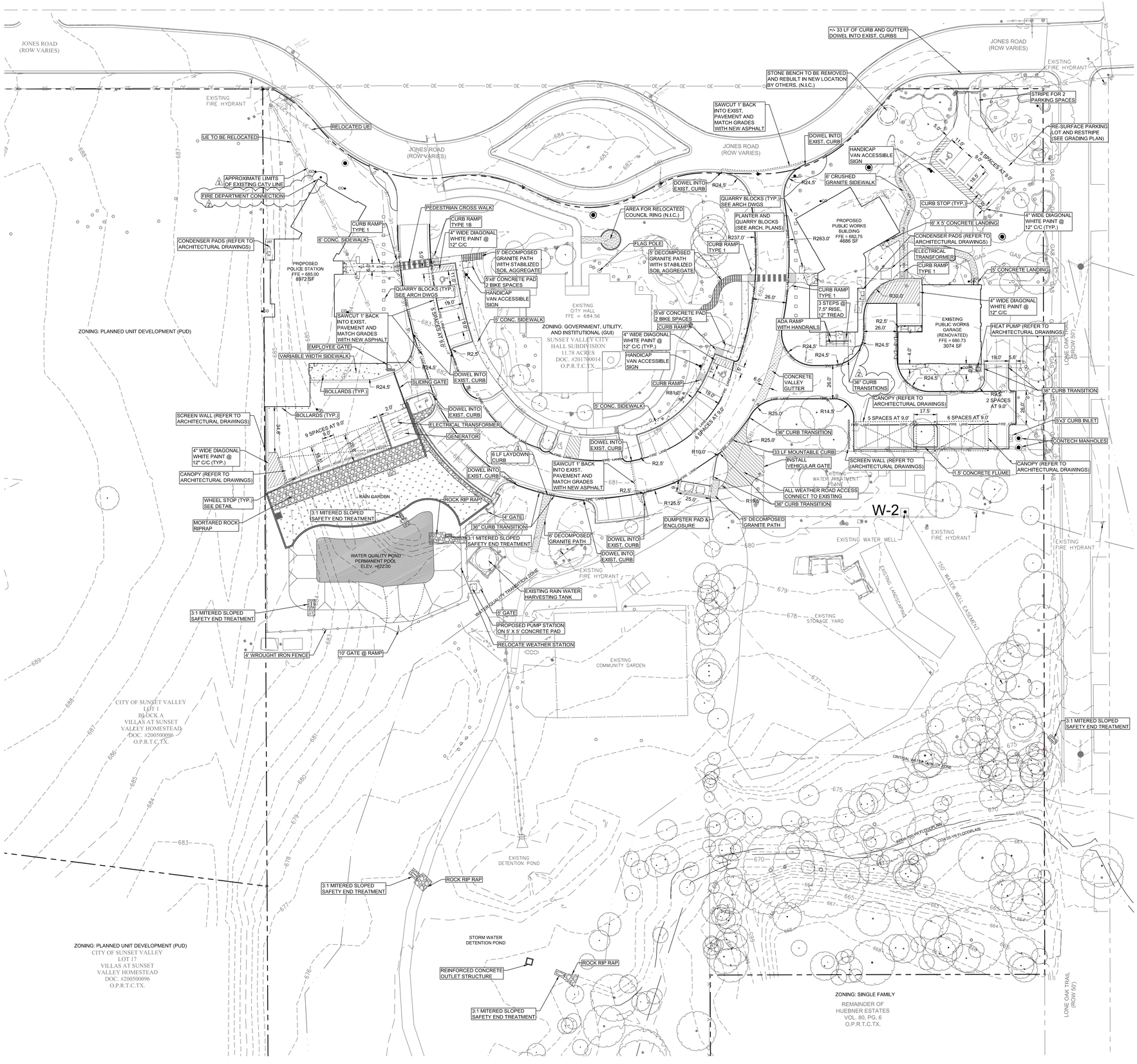
Summary:

This WPAP Modification is submitted to request the approval of the adjusted provided WQV and the adjusted provided WQV elevation. The required WQV remains at 5,624 cubic feet at elevation 673.33 ft-msl. The provided WQV of this permanent BMP is now 8,394 cubic feet at an elevation of 673.9 ft-msl. There is potential for some leakage of mixed water from the retention pond above this provided WQV elevation.

Since the pond outfall remains at an elevation of 676.50 ft-msl, the excess runoff captured above the adjusted water quality volume elevation must be irrigated within 72 hours, along with the water quality volume of collected stormwater runoff. As such, more irrigation area will be required than originally provided. The additional irrigation area needed is 18,200 square feet, using an irrigation rate of 0.1 in/hr. The additional irrigation area will be provided on City property to the west of the police station. The total irrigation area provided will now total 53,972 square feet.

No changes are proposed to the JF4-2-1 Jellyfish Filtration System and this system was installed in 2019. The only item still under construction will be the additional irrigation piping for the added irrigation area submitted with this Modification. All other improvements have been physically constructed. Some final plants within the rain garden may need to be reinstalled prior to project closeout.

Attachment C – Current Site Plan of the Approved Project



30 0 30 60

ORIGINAL SCALE: 1" = 30'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPERTY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- CURB & GUTTER
- RIBBON CURB
- ADA ACCESSIBLE ROUTE
- PROPOSED FIRE LANE
- OHE — OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE LINE
- FO — EXISTING FIBER OPTIC LINE
- FM — EXISTING FORCE MAIN
- GAS — EXISTING GAS LINE
- ST — EXISTING STORM SEWER LINE
- T — EXISTING TELEPHONE LINE
- WW — EXISTING WASTEWATER LINE
- W — EXISTING WATER LINE
- UE — UNDERGROUND ELECTRIC LINE
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- PROPOSED CURB INLET
- PROPOSED MANHOLE
- DECOMPOSED GRANITE PATH
- N.I.C. — NOT IN CONTRACT
- W-2 — MANMADE GEOLOGIC FEATURE
- UE — UNDERGROUND ELECTRIC

Site Data	
Water Quality Zone	**Total Area (Acre)**
Uplands Zone	4.492
Water Quality Transition Zone	4.348
Critical Water Quality Zone	2.944
Total Site Area	**11.784**

Site Floodplain Data	
Floodplain	**Total Area (Acre)**
FEMA 100-yr Floodplain	2.156

PARKING DATA

USE	BUILDING FLOOR AREA (SF)	CODE RATIO	SPACES REQUIRED	SPACES PROVIDED
GOVERNMENT BUILDING - POLICE STATION	8972	1/300 SF	30	17
GOVERNMENT BUILDING - PUBLIC WORKS FACILITY	4694	1/300 SF	16	24
GOVERNMENT BUILDING - EXISTING CITY HALL	5330	1/300 SF	18	21
TOTAL	18996		64	**62**
ACCESSIBLE SPACES			3	**4**
BICYCLE SPACES			4	**4**

*A VARIANCE FOR THE PARKING WAS APPROVED BY CITY COUNCIL ON APRIL 18, 2017.

Site Impervious Cover

Impervious Cover Item	Impervious Cover (sf)	Impervious Cover (Acre)	% Impervious Cover (11.784 Total Site Area)
Existing Buildings	8,530	0.196	
Existing Pavement	31,820	0.730	
Existing Concrete Sidewalks	4,164	0.096	
Existing Crushed Granite Paths*	6,196	0.142	
Proposed Buildings	13,653	0.313	
Proposed Pavement	29,069	0.667	
Proposed Concrete Sidewalks	4,423	0.102	
Proposed Crushed Granite Paths*	865	0.020	
Jones Road Improvements*	7,884	0.181	
Impervious Cover Per TCEQ	106,604	2.447	20.77%
Impervious Cover Per City of Sunset Valley	91,659	2.104	17.86%

* CRUSHED GRANITE PATHS AND JONES ROAD IMPROVEMENTS NOT INCLUDED IN IMPERVIOUS COVER CALCULATIONS FOR THE CITY OF SUNSET VALLEY. THE ALLOWABLE IMPERVIOUS COVER FOR SUNSET VALLEY IS 18%

NOTES:

1. ALL DIMENSIONS ARE GIVEN TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURB RETURN RADII ARE 2.5' UNLESS OTHERWISE NOTED AND ARE MEASURED TO THE BACK OF CURB.
3. ALL STRIPING SHALL BE 4-INCH THICK WHITE PAINT, UNLESS MARKED OTHERWISE.
4. CONTRACTOR SHALL ADJUST ALL CASTINGS, MANHOLE LIDS, AND OTHER APPLICABLE APPURTENANCES TO MATCH PROPOSED GRADES AS NECESSARY.
5. CONTRACTOR SHALL CONTACT THE ENGINEER WITH ANY ITEMS ON THESE PLANS THAT NEED CLARIFICATION OR ANY ITEMS FOUND IN THE FIELD THAT ARE NOT CONSISTENT WITH THESE PLANS.
6. CONTRACTOR SHALL VERIFY ACCESSIBLE FEATURES MEET THE TEXAS DEPARTMENT OF LICENSING AND REGISTRATION ARCHITECTURAL BARRIERS ACT AND TEXAS ACCESSIBILITY STANDARDS (CURRENT AT THE TIME OF CONSTRUCTION) PRIOR TO POURING CONCRETE.
7. COORDINATE NEW WEATHER STATION LOCATION WITH DIRECTOR OF PUBLIC WORKS.
8. STABILIZED SOIL AGGREGATE IS A PRODUCT MANUFACTURED BY STABILIZER SOLUTIONS, INC. SPECIFICALLY REQUESTED BY THE CITY OF SUNSET VALLEY. SEE WWW.STABILIZERSOLUTIONS.COM FOR MORE INFORMATION AND DISTRIBUTERS IN CENTRAL TEXAS.
9. ALL STOOPS AND RAMP LANDINGS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE.
10. VEHICULAR GATES SHALL BE CHAIN-LINK MATCHING EXISTING STYLE WITH PAD LOCK.

HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

Know what's **below.** **Call** before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wigginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History		
#	Date	Description
1	11/08/17	CONSTRUCTION ISSUE
2	01/04/18	SI-02

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER

01/04/2018

Sheet Name

OVERALL SITE PLAN

21607
2018-01-04
C007

FOR CONSTRUCTION

Section IV

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

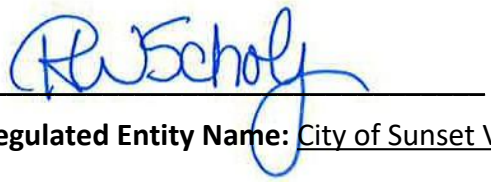
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Robert W. Scholz, PE

Date: 05/24/2024

Signature of Customer/Agent:



Regulated Entity Name: City of Sunset Valley

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☒ Other:Government Property

2. Total site acreage (size of property):11.784 acres

3. Estimated projected population:N/A

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	22183	÷ 43,560 =	0.509
Parking	60889	÷ 43,560 =	1.398
Other paved surfaces	8587+ 7884 (Jones Rd.)+ 7087 (Crushed Granite Paths)	÷ 43,560 =	0.197+ 0.181 (Jones Rd.)+ 0.162 (Crushed Granite Paths)
Total Impervious Cover	106630	÷ 43,560 =	2.447

Total Impervious Cover 2.447 **÷ Total Acreage** 11.784 **X 100 =** 20.77**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

   ☐ TXDOT road project.
   ☐ County road or roads built to county specifications.
   ☐ City thoroughfare or roads to be dedicated to a municipality.
   ☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

12. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

13. ☒ **Attachment B - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

14. The character and volume of wastewater is shown below:

100 % Domestic	_____Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	
357,120Gallons/day	

TOTAL gallons/day 357,120

15. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

☒ The SCS was previously submitted on7/7/2017 and approved.

☐ The SCS was submitted with this application.
☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☒ The sewage collection system will convey the wastewater to the South Austin Regional Wastewater (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

16. ☒ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 30'.

18. 100-year floodplain boundaries:

☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☐ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FIRM 48453C0580H and 48453C0585H dated 09/26/08

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☒ There are 2 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☐ The wells are not in use and have been properly abandoned.
☐ The wells are not in use and will be properly abandoned.
☒ The wells are in use and comply with 16 TAC §76.

☐ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☒ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

☐ No sensitive geologic or manmade features were identified in the Geologic Assessment.

☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

23. ☒ Areas of soil disturbance and areas which will not be disturbed.

24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. ☒ Locations where soil stabilization practices are expected to occur.

26. ☐ Surface waters (including wetlands).

☒ N/A

27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

☒ There will be no discharges to surface water or sensitive features.

28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Attachment 4A – Factors Affecting Water Quality

At the time of the 07/07/2017 Modification submittal for which this Modification replaces, the site consisted of the existing Sunset Valley City Hall building, a portable Public Works building, a Public Works garage, a portable Police Station building, and associated parking, sidewalks, and crushed granite pathways. The 07/07/2017 Modification project consisted of the addition of a new permanent Police Station building approximately 8,972 square feet in area, a new permanent Public Works building approximately 4,694 square feet in area, and the renovation of the existing 3,074 square foot Public Works garage. The total site impervious cover after construction is 20.77%, as opposed to the previous impervious cover of 7.83%. This includes 0.181 acres of pavement from Jones Road. The increase in impervious cover will cause increases in Total Suspended Solids (TSS) in the stormwater runoff. Although the site will receive a relatively low traffic volume on a daily basis, the parking and paved areas may contribute to an increase of fuels, oils, greases, and other liquids released from vehicles. Other factors affecting water quality might include potential herbicides and pesticides for landscaping and turfed areas.

The current Modification does not change any of these factors affecting water quality.

Attachment 4B – Volume and Character of Stormwater

The existing site is 11.784 acres that, at the time of the 07/07/2017 Modification application, consisted of an existing City Hall building, portable Public Works building, Public Works garage, a portable Police Station building, and associated parking, sidewalks, and crushed granite pathways. 7.83% of the site was impervious cover, including the 0.181 acres of impervious cover draining to the site from Jones Road. The 07/07/2017 Modification project consisted of the addition of a new Police Station, a new Public Works building, and the renovation of the existing Public Works garage. Site improvements included the continuation of the current circular drive at City Hall to Jones Road, as well as the addition of associated parking and sidewalks. The 07/07/2017 Modification increased the overall impervious cover to 20.77% on the site, which includes 0.181 acres of pavement from Jones Road. This added impervious cover consists of asphalt pavement, concrete sidewalks and driveways, crushed granite paths, and two buildings. The runoff from the improvements will contain increased TSS loads from pavements receiving light vehicular traffic and from building rooftops.

TCEQ requires a TSS reduction rate of 80% for proposed developments. As such, the permanent water quality controls were calculated using the guidelines in TCEQ'S RG-348 manual. A combination of water quality controls consisting of Retention/Irrigation and a Contech Jellyfish System were designed for this site. A Rain Garden was also proposed for the site for pretreatment of stormwater from the proposed parking, drives, and the Jones Road extension. The total volume of runoff for pre-treatment from the Rain Garden is 6,000 cubic feet. Following TCEQ's guidelines, the total WQV required for the Retention Pond is determined to be 5,624 cubic feet. The retention pond accepts runoff from the Rain Garden and from the rooftops, except for the existing City Hall rooftop, which drains to a 10,000-gallon rainwater harvesting tank. As such, the impervious cover from this existing City Hall rooftop is removed from the calculations for the BMPs. A total of 2.72 acres drains to the Rain Garden. Using a runoff coefficient of 0.95 and a rainfall intensity of 12.50 inches/hour determined using the City of Austin Drainage Criteria Manual (DCM), the volumetric rate of the stormwater runoff for the 100-year event entering the Rain Garden overflow structure is 32.30 cfs. A total of 3.10 acres drains to the Retention Pond. Using a runoff coefficient of 0.95 and a rainfall intensity of 12.50 inches/hour determined using the City of Austin DCM, the volumetric rate of the stormwater runoff for the 100-year event entering the Retention Pond overflow pipes is 36.81 cfs.

The Rain Garden pretreats approximately 1.02 acres total of stormwater runoff through sheet flow and concentrated flow from a storm sewer system. The area of Jones Road (0.181 acres) that previously drained to the existing onsite vegetated filter strip now drains to the Rain Garden for pre-treatment as well. This area drains into a proposed storm inlet that connects to a storm sewer system that outfalls in the Rain Garden. The Retention/Irrigation Facility treats the stormwater runoff from the rooftops from the police station, the Public Works building, and the renovated Public Works garage. The area from these rooftops totals 0.38 acres. The stormwater from the rooftops is collected through roof drains that are now picked up by storm sewer systems that outfall to the Retention/Irrigation Facility. This facility also serves as a primary treatment for the runoff that was pre-treated by the Rain Garden. The Contech Jellyfish Filter System treats a small, paved drainage area totaling 0.313 acres. Of that drainage area, 0.258 acres is impervious cover. All stormwater runoff draining to the Contech Jellyfish Filter System begins as sheet flow and is collected via curb and gutter until it reaches a curb inlet. The curb inlet is

connected to a Contech Stormgate manhole which directs the water quality volume of storm water to the Jellyfish Filter System and will bypass the overflow volume.

Due to the low impervious cover on this site, the existing and proposed runoff coefficients for the entire site, including the portion of Jones Road draining through the site, do not significantly change from existing to proposed conditions. The estimate of existing runoff coefficient is 0.56. The estimate of proposed runoff coefficient is 0.60. Note that this would only be seen in large rain storm events where the water quality overflow structures are used. During the majority of rain storm events, the runoff coefficients will remain unchanged for the most part, due to the significant amount of storage within the retention/irrigation facility.

Attachment 4C – Suitability Letter from Authorized Agent

No onsite sewage facility is proposed, therefore this attachment has been omitted

Section not applicable to this project.

Attachment 4D – Exception to the Required Geologic Assessment

A Geologic Assessment has been included with this application, therefore this attachment has been omitted

Section not applicable to this project.

Section V

Organized Sewage Collection System Plan (TCEQ-0582)

Intentionally Deleted – Modification to OSCS Not Requested

Section VI

Temporary Stormwater Section (TCEQ-0602)

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

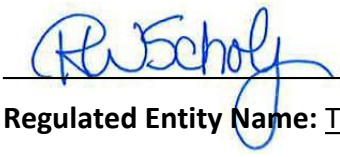
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Robert W. Scholz, PE

Date: 05/24/2024

Signature of Customer/Agent:



Regulated Entity Name: The City of Sunset Valley

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☒ The following fuels and/or hazardous substances will be stored on the site: 55 gallon drums of form oils and curing compounds for the construction of concrete structures.

   These fuels and/or hazardous substances will be stored in:

   ☒ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☐ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Williamson Creek

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. ☒ **Attachment D – Temporary Best Management Practices and Measures**. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☒ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

☐ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☒ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

Attachment 6A – Spill Response Actions

No spills of hydrocarbons or hazardous substances are expected. However, in the event such an incidence does occur, the contractor should carefully follow the TCEQ guidelines outlined below:

Cleanup:

(1) Clean up leaks and spills immediately.
(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
(3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

Minor Spills:

(1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
(2) Use absorbent materials on small spills rather than hosing down or burying the spill.
(3) Absorbent materials should be promptly removed and disposed of properly.
(4) Follow the practice below for a minor spill:

- Contain the spread of the spill.
- Recover spilled materials.
- Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills:

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities. Spills should be cleaned up immediately:
(1) Contain spread of the spill.
(2) Notify the project foreman immediately.
(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
(5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills:

From any event, the Reportable Quantity (RQ) = for highly toxic materials the RQ>25 gals. For petroleum/hydrocarbon liquids, spills the RQ>250 gallons (on land) or that which creates "a sheen" on water. Only certified Hazmat teams will be responsible for handling the material at the site.

For significant or hazardous spills that are in reportable quantities:

(1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site. Additionally in the event of a hazardous material spill, local Williamson County and/or city of Sunset Valley police, fire and potentially EMS should be contacted in order to initiate the hazardous material response team.

(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

(3) Notification should first be made by telephone and followed up with a written report of which one copy is to be kept onsite in the report binder and one copy provided to the TCEQ.

(4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

(5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tceq.state.tx.us/response/spills.html

Attachment 6B – Potential Sources of Contamination

No particular activity or process during construction at the facility is anticipated to present a significant risk of being a potential source of contamination. However, during regular construction operations, several common and minor risks of contamination are anticipated. Should the unforeseeable mishap occur during construction or regular operation of the facility, the contractor shall follow the guidelines set forth in "Attachment 5A – Spill Response Plan."

Potential sources of sediment to stormwater runoff:

- Clearing and grubbing
- Grading and excavation
- Vehicle Tracking
- Topsoil stripping and stockpiling
- Landscaping

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Area – small fueling, minor equipment maintenance, sanitary facility.
- Materials Storage Area – solvents, adhesives, paving materials, aggregates, trash, etc.
- Construction Activities – paving, concrete pouring
- Concrete washout area

Potential onsite pollutants:

- Fertilizer
- Concrete
- Glue, adhesives
- Gasoline, diesel fuel, hydraulic fluids, antifreeze
- Sanitary toilets

Attachment 6C – Sequence of Major Activities

Temporary erosion and sedimentation controls are to be installed as indicated on the approved site plan or subdivision construction plan and in accordance with the stormwater pollution prevention plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures. The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow the storm water pollution prevention plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with city inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion and sedimentation control plan.

1. Install temporary erosion and sedimentation controls which will be inspected and maintained in accordance with the storm water pollution prevention plan (SWPPP) posted on the site. (12.00 acres)
    a. 2,434 LF of Silt Fence
    b. 4,967 LF of Tree Protection
    c. 126 LF of Inlet Protection
    d. 102 LF of Rock Check Dams
    e. 3,544 SF of Temporary Sediment Trap
    f. 76 LF of Filter Sock

2. Begin site clearing/grubbing (or demolition) activities. (3.29 acres)
    a. 2,434 LF of Silt Fence
    b. 4,967 LF of Tree Protection
    c. 126 LF of Inlet Protection
    d. 102 LF of Rock Check Dams
    e. 3,544 SF of Temporary Sediment Trap
    f. 76 LF of Filter Sock

3. Begin rough site grading and installation of site utilities. (3.29 acres)
    a. 2,434 LF of Silt Fence
    b. 4,967 LF of Tree Protection
    c. 126 LF of Inlet Protection
    d. 102 LF of Rock Check Dams
    e. 3,544 SF of Temporary Sediment Trap
    f. 76 LF of Filter Sock

4. Final building construction shall begin once rough grading of the site is essentially complete and stabilized. (1.33 acres)
    a. 2,434 LF of Silt Fence

b. 4,967 LF of Tree Protection
c. 126 LF of Inlet Protection
d. 102 LF of Rock Check Dams
e. 3,544 SF of Temporary Sediment Trap
f. 76 LF of Filter Sock

5. Begin and complete the fine site grading and paving. (3.29 acres)
    a. 2,434 LF of Silt Fence
    b. 4,967 LF of Tree Protection
    c. 126 LF of Inlet Protection
    d. 102 LF of Rock Check Dams
    e. 3,544 SF of Temporary Sediment Trap
    f. 76 LF of Filter Sock

6. Re-vegetation of the site. (12.00 acres)

Upon completion of the site construction and re-vegetation of a project site, the design engineer shall submit an engineer's letter of concurrence to the City of Sunset Valley indicating that construction, including re-vegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate city inspector.

After construction is complete and all disturbed areas have been re-vegetated per plan to at least 90 percent established, remove the temporary erosion and sedimentation controls and complete any necessary final re-vegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls.

Attachment 6D – Temporary Best Management Practices and Measures

Prior to the commencement of any construction activity whatsoever, the contractor shall install the silt fencing, the stabilized construction entrance, the concrete washout controls, and inlet protections per the Erosion and Sedimentation Control Plan. The silt fencing and stabilized construction entrance shall be installed per TCEQ and local requirements. The proposed temporary BMP's, such as silt fencing, tree protection fencing, inlet protection, filter socks, rock check dams, and a temporary sediment trap, are intended to control increased TSS from construction activities in the following manner:

Additional notes regarding temporary BMP's:

A. Some upgradient flows will merge with stormwater onsite and will be treated with the proposed onsite BMPs. Most of the upgradient drainage, coming from the west of the site, will be diverted to the south via a proposed swale. However, until the swale is completed, silt fencing and a rock berm will aid in the temporary sedimentation and filtration efforts. See Drainage Area Maps for upgradient flows.

B. The temporary BMPs proposed during construction activities will prevent pollution of surface water by filtering the increased sediment loads and other pollutant sources listed in "Attachment 5B, Potential Sources of Contamination". The primary method of treating sediment-laden stormwater runoff is through silt control fencing and a stabilized construction entrance. The silt control fencing will be placed per plan along the downslope edges of the project area to filter runoff before passing offsite and in strategic locations of drainage. The stabilized construction entrance will assist in removing debris and sediment caught up within construction vehicles tires exiting the site. Rock berms will be used to retain sediment from concentrated flows that will be too high for silt fence. Filter socks will be used to retain sediment and other pollutants from sheet flow runoff. As a final measure to mitigate stormwater contamination, inlet protection for proposed inlets is proposed as well as rock check dams along the proposed swale. A temporary sediment trap will be excavated onsite in order to detain sediment-laden runoff from the disturbed areas. This will allow the majority of the sediment and other debris to settle out. A concrete washout will be located on the site to prevent contaminated rinse water from concrete trucks from leaving the site.

C. All entrance points to the creek on the south side of the site have temporary BMP's in place to aid in treating the runoff from the site before it leaves the limits of construction. The control measures in place are silt fences, tree protection fences, rock berms, and inlet protection. Stabilized construction exits will supplement the control of off-site tracking of material. After construction is complete, the site will be stabilized by permanent landscaping vegetation throughout the project area.

D. There are no naturally occurring sensitive features on this site, other than the creek bed downgradient.

Attachment 6E – Request to Temporarily Seal a Feature

No temporary sealing of naturally-occurring sensitive features on the site are proposed.

Section not applicable to this project.

Attachment 6F – Structural Practices

The following temporary BMP structural practices will be employed on the site:

A. Silt Fence – used as barrier protection around the downslope perimeter of the project and within strategic locations of drainage. The fence retains sediment primarily by retarding flow and promoting deposition on the uphill side of the slope. Runoff is filtered as is passes through the geotextile.

B. Inlet Protection – will be provided around all existing and proposed storm sewer inlets during construction. Locations are indicated on the construction plans. These measures will trap and settle out pollutants from the onsite runoff before the runoff enters into the storm drain system and exits the site.

C. Tree Protection Fence – will be used to protect the tree and root system by keeping out all detrimental construction activity.

D. Stabilized Construction Exits - Anti-tracking pads consisting of stone will be installed at the exit to each phase of construction to prevent the off-site transport of sediment by construction vehicles. The anti-tracking pads will be at least 50 feet long, a minimum of 10 feet wide, flared at the end closest to the paved road, and will consist of a 8-inch-thick layer of crushed stone. The crushed stone will be placed over a layer of geotextile filter fabric to reduce the mitigation of sediment from the underlying soil.

E. Rock Berms – Serve as a check dam in areas of concentrated flow. The berm retains sediment by retarding flow in areas where the volumetric flow rate of runoff is too high for silt fence.

F. Concrete Washout Area – Prevent or reduce the discharge of pollutants from concrete waste by designating a specific armored area to perform onsite concrete washouts.

G. Filter Socks – Placed perpendicular to sheet flow runoff to retain sediment while allowing the cleaned stormwater to flow through.

H. Temporary Sediment Trap – used to detain sediment-laden runoff for a sufficient period of time to allow the majority of sediment and other water-based debris to settle out.

The placement of structural practices in the floodplain has been avoided.

Attachment 6G – Drainage Area Map

Existing and Proposed Drainage Area Maps for the project area and encompassing basin attached within the construction documents.

Attachment 6H – Temporary Sediment Pond(s) Plans and Calculations

The calculations associated with the temporary sediment pond are attached.

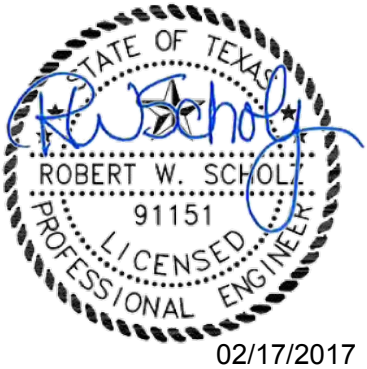
City of Sunset Valley Police Station and Public Works Building

Temporary Sediment Basin Design

Purpose: This design is provided to properly size the temporary sediment basin. The proposed permanent BMP will be utilized as a temporary sediment basin during construction. Because the excavation of the permanent BMP will be deeper than the available outfall via gravity, a pump will be required to dewater the temporary sediment basin and the discharge should be filtered through a high service rock berm.

2-year, 24-hour Storm Depth for Travis County = 3.4 inches
Drainage Area: 2.78 acres
HEC-HMS Software Input:

Freq. Year	DA 1		DA 1A	
	Area (Ac) =	2.709	Area (Ac) =	0.071
	Impervious Cover =	48%	Impervious Cover =	100%
	CN =	80	CN =	80
	n =	0.011	n =	0.011
	Tc (min) =	5.00	Tc (min) =	5.00
	Q (CFS)		Q (CFS)	
2	6.10		0.21	



02/17/2017
TBPE Firm No. F-312

Volume, using the Type II SCS Unitless Hydrograph in HEC-HMS Software:
0.58 acre-feet = 25,265 CF

Global Summary Results for Run "Prop 002-yr"

Project: SSV Simulation Run: Prop 002-yr

Start of Run: 01Jan2015, 00:00 Basin Model: Proposed
End of Run: 02Jan2015, 00:05 Meteorologic Model: 002 year
Compute Time: 17Feb2017, 16:07:31 Control Specifications: Control 1

Show Elements: All Elements Volume Units: IN AC-FT Sorting: Hydrologic

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
DA 1	0.0042335	6.10	01Jan2015, 12:05	0.56
DA 1A	0.0001103	0.21	01Jan2015, 12:05	0.02

Total Excavated Volume Provided from Pond
Stage-Storage Curve:

Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)		
677	7791	7434	**32056**	**>25,265 CF**	**OKAY**
676	7076	6723	24623		
675	6369	5870	17900		
674	5371	4899	12030		
673	4427	3986	7131		
672	3544	3146	8283		
671	2747	2382	5137		
670	2017	1684	2755		
669	1351	1071	1071		
668	791				

Attachment 6I – Inspection and Maintenance for BMPs

The inspection and maintenance of temporary BMP's will be made according to TCEQ RG-348, Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices, July 2005 Revision.

Inspection Personnel:

Inspections shall be conducted by qualified representatives of the contractor acting on behalf of the owner or a designated party if hired separately by the owner. Each operator must delegate authority to the specifically described position or person performing inspections, as provided by 30 TAC 305.128, as an authorized person for signing reports and performing certain activities requested by the director or required by the TPDES general permit. This delegation of authority must be provided to the director of TCEQ in writing and a copy shall be kept along with the signed effective copy of the SWP3.

Inspection Schedule and Procedures - Inspections must comply with the following:

An inspection shall occur weekly and after any rain event.

The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.

Disturbed areas and areas used for storage of materials that are exposed to precipitation or within limits of the 1% annual chance (100 year) floodplain must be inspected for evidence of, or the potential for, pollutants entering the runoff from the site. The silt fence, inlet protection, filter socks, and concrete washout controls identified in the plan must be observed to ensure that they are operating correctly and are in good condition. Observations can be made during wet or dry weather conditions. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. This can be done by inspecting receiving waters to see whether any signs of erosion or sediment are associated with the discharge location. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible after an inspection that reveals inadequacies. The inspection and plan review process must provide for timely implementation of any changes to the plan with 7 calendar days following the inspection.

An inspection report must be prepared that summarizes the scope of the inspection, name(s) and qualifications of personnel conducting the inspection, the dates of the inspection, major observations relating to the implementation of the SWP3. Major observations shall include, as a minimum, location of discharges of sediment or other pollutants from the site, location of BMPs that need to be maintained, location of BMPs that failed to operate as designed or proved inadequate for a particular location, locations where BMPs are needed, and overall condition of the BMPs. Actions taken as a result of the inspections must be described within, and retained as a part of, the SWP3. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWP3and the TPDES general permit. The report must be signed by the authorized representative delegated by the operators in accordance with TAC 305.128.

Maintenance and Corrective Actions - Maintenance of erosion control facilities shall consist of the minimum requirements as follows:

A. In ongoing construction areas inspect silt fence, inlet protection, filter socks, and concrete washout controls to confirm facilities are in place, operable, and in good condition. Where facilities have been temporarily set aside or damaged due to construction activity, place facilities in service before leaving job site.

B. If weather forecast predicts possibility of rain, check entire facilities throughout site to assure facilities are in place and operable. If job site weather conditions indicate high probability of rain, make special inspection of erosion control facilities.

C. After rainfall events review erosion control facilities as soon as site is accessible. Clean rock berms, berm/swales and ensure silt fencing, inlet protection, and filter socks are in place and replace as needed. Determine where additional facilities or alternative techniques are needed to control sediment leaving site.

D. After portions of site have been seeded, review these areas on regular basis in accordance with project specifications to assure proper watering until grass is established. Reseed areas where grass is not well established.

E. Spills are to be handled as specified by the manufacturer of the product in a timely safe manner by personnel. The site superintendent will be responsible for coordinating spill prevention and cleanup operations.

F. Concrete trucks will discharge extra concrete or wash out drum only at an approved location on site. Residual product shall be properly disposed of.

G. Inspect vehicle entrance and exits for evidence of off-site tracking and correct as needed.

H. Remove sediment from traps/ponds no later than when the design capacity has been reduced by 50%.

I. If sediment escapes the site, the contractor, where feasible and where access is available, shall collect and remove sedimentation material by appropriate non-damaging methods. Additionally, the contractor shall correct the condition causing discharges.

J. If inspections or other information sources reveal a control has been used incorrectly, or that a control is performing inadequately, the contractor must replace, correct or modify the control as soon as practical after discovery of the deficiency.

Attachment 6J – Schedule of Interim and Permanent Soil Stabilization Practices

The schedule of interim and permanent soil stabilization practices will be according to:
Federal Register / Vol. 63, No 31 (February 17, 1998).

Prior to Disturbance – Install all temporary erosion and sedimentation control features.

During Construction – Maintain all temporary erosion and sedimentation control structures. Inspect all temporary erosion and sedimentation control structures on a weekly basis and after rain events.

After Completion of Permanent Erosion and Sediment Controls – Stabilize and restore all areas disturbed during construction. Permanent seeding will be applied immediately after the final design grades are achieved on portions of the site but no later than 14 days after construction activities have permanently ceased. After the entire site is stabilized, any sediment that has accumulated will be removed and hauled off-site for disposal. Construction debris, trash and temporary BMPs including silt fences, material storage areas, sanitary toilets, etc.) will also be removed and any areas disturbed during removal will be seeded immediately.

Section VII

Permanent Stormwater Section (TCEQ-0600)

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

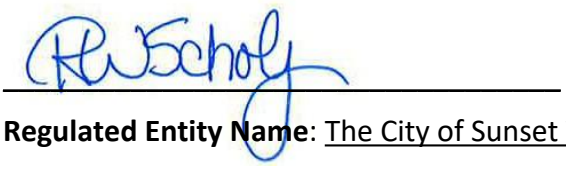
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Robert W. Scholz, PE

Date: 05/24/2024

Signature of Customer/Agent



Regulated Entity Name: The City of Sunset Valley

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☐ N/A

2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☒ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: City of Austin Environmental Criteria Manual was also used as a referenced for the design of the permanent BMPs.

☐ N/A

3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

   ☐ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☒ **Attachment B - BMPs for Upgradient Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

8. ☒ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☐ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☒ All geologic features

☒ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☒ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☒ Signed by the owner or responsible party
    ☒ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☒ A discussion of record keeping procedures

    ☐ N/A

12. ☐ **Attachment H - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

13. ☒ **Attachment I -Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.

    ☐ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☐ N/A

15. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☐ N/A

Attachment 7A – 20% or Less Impervious Cover Waiver

The site will not be used for multi-family residential developments, schools, or small business sites.

Section not applicable to this project.

Attachment 7B – BMPs for Upgradient Stormwater

As shown on the existing topography on the site plan, surface water, groundwater, or stormwater originates upgradient of the project site. Jones Road is located upgradient of the project site, with 0.181 acres of the road draining to an existing onsite vegetated filter strip that existed at the time of the 07/07/2017 WPAP Modification application.

Under a previous WPAP for the Jones Road Town Loop Improvements, TCEQ approved a vegetative filter strip as the BMP to treat this stormwater runoff through uptake and sedimentation of potential pollutants from the roadway prior to its discharge to the Sunset Valley Branch of Williamson Creek. For the 07/07/2017 WPAP Modification project, the vegetated filter strip was removed. The 0.181 acres of stormwater runoff from Jones Road is now collected in a storm sewer system which is routed to a rain garden for pre-treatment. The runoff then filters to the retention pond which will then be used to irrigate the Sunset Valley City Hall complex.

Stormwater runoff from the adjacent property to the west of the site drains toward an onsite channel. The drainage channel directs runoff from the adjacent property to the creek on the south side of the site. The channel was proposed to be redesigned and relocated to the adjacent property to the west of the site (also owned by the City of Sunset Valley) with the 07/07/2017 Modification. The redesigned drainage channel now diverts the stormwater runoff from the adjacent property into the creek on the south side of the site.

Attachment 7C – BMPs for On-site Stormwater

Rain Garden (Pre-Treatment):

The TCEQ does not have design criteria for a rain garden within their pre-approved permanent best management practices (BMPs) list. However, the rain garden designed for this site is in general conformance with the requirements of the City of Austin Environmental Criteria Manual. The rain garden is used on this project as pre-treatment for pavement areas and other site impervious cover, besides building roofs. The media used for the basin is the bio-filtration media approved by the City of Austin. The design is a full filtration rain garden, which utilizes a system of perforated pipes under the growing media. The rain garden requires a liner system (e.g., clay liner) under the media to allow no direct infiltration to the aquifer. The rain garden will remove impurities in the storm water runoff via filtration through the growing media and through the biological element from the plantings within the pond. The ponding depth within the rain garden is approximately 16 inches instead of the normal 12 inches used by the City of Austin. The contributing drainage area to the rain garden is 2.72 acres, which is composed of overland flow and pavement. No rooftop drainage is included in this area. A portion of this area (0.181 of an acre) is draining from Jones Road. A WPAP was previously approved by the TCEQ for this portion of Jones Road (Edwards Aquifer File No. 00112102), whereby roadway drainage was picked up in an inlet and discharged to a small channel leading to a vegetative filter strip on this site. The 07/07/2017 WPAP Modification to the previous WPAP documented the capturing of this drainage and routing it via storm sewer piping to the new BMPs constructed with this project. The overflow structure within the pond is a 4' x 4' grate inlet and 24-inch reinforced concrete pipe, which take up to and including the 100-year storm event runoff to the onsite detention pond downgradient from this BMP. The grate inlet is not an offline splitter box, but this methodology and configuration is utilized for rain gardens, per the City of Austin Environmental Criteria Manual.

Retention/Irrigation:

One permanent BMP selected for this project is Retention/Irrigation. All of the perforated drainage pipes from the rain garden BMP discharge directly to this retention pond through a wall separating the two BMPs. The discharge pipes have flap valves on the end so that water from the retention pond will not backflow into the rain garden. Two 24-inch RCP pipes are installed with an inlet flowline elevation of 676.50, which act as an overflow system for larger storm events. This also provides additional freeboard within the retention pond. The water quality volume needs to be irrigated onsite within 72 hours of the storm to make room in the pond for another storm event. Additionally, due to a leak in the retention pond mentioned in the "Narrative of Proposed Modification" section, the maximum elevation that the pond successfully holds water at is 673.9 ft-msl. Thus, all of the storm water collected in this pond between the 24-inch RCP elevation and this elevation will also need to be irrigated onsite within 72 hours to minimize the leakage and make room for another storm event. This requires more irrigation area than originally designed in the 07/07/2017 Modification. As such, this Modification includes the design of additional irrigation area. The additional irrigation area is 18,200 square feet, using an irrigation rate of 0.1 in/hr and is proposed to be added west of the police station. The maximum elevation of the pond at

any time outside of the 72-hour drawdown time window should be 672.7 ft-msl but may be as low as 672.00 ft-msl.

The bottom of the rainwater harvesting pond has a small wet pond within it. The top of this wet pond is at elevation 672.00 ft-msl, i.e., the bottom elevation of the pond needed for the water quality volume requirements. Typically, a wet pond is used for larger drainage areas, i.e., contributing more than 10 acres of potential stormwater runoff to meet the TCEQ requirements and more than 20 acres to meet the City of Austin requirements. This is due to the fact that wet ponds need an adequate supply of runoff. Additionally, they require pond depths great enough to minimize the fluctuations in water surface and allow for vegetative growth and aeration in the pond. Since this particular BMP was selected for this site and it does not meet the minimum criteria for either TCEQ or the City of Austin, the pond was not formally recognized as a permanent BMP by the TCEQ. However, specific design steps have been taken to mitigate for these minimum requirements and the City of Sunset Valley will indeed see some water quality benefits from the construction of this wet pond, in addition to its aesthetic appeal for residents, employees, and visitors. The pond will act as a reservoir for the storage of irrigation water for the turf and landscaping around the buildings. The make-up water source for this pond is the existing water well on this site. In the event that the water well is not working for any reason, potable water may be utilized as a make-up water source, but should be added to the pond very slowly to minimize the chlorine intake to the pond. The wet pond has a vegetated bench within it, as stipulated by the wet pond design regulations, containing various aquatic plantings to aid in the biological breakdown of pollutants. Additionally, an aeration pump is provided within the pond. A permanent pumping system was constructed to allow for irrigation. The pumping system selected for the irrigation of the harvested rainwater and runoff is an above-ground horizontal centrifugal pump system with no wet well. Though wet wells with submersible pumps are typically selected for irrigation, the above-ground system provides easier access and more control over the operations. This system is desired to be used by the City of Sunset Valley for these reasons. The pumps are variable frequency driven and are controlled by state-of-the-art software that allows for the pumps to be used for irrigation of stormwater runoff as well as routine landscaping irrigation. The overall pond system has a 4-foot wrought iron or aluminum fence with vehicular gates leading to a 4:1 sloped earthen ramp into the pond for maintenance access purposes.

Proprietary Water Quality Control - Contech Jellyfish Filtration System

The eastern portion of the site makes use of a proprietary system by Contech Engineering Solutions, called the Jellyfish Filter System. This system takes in the water quality volume from an approximate 0.22-acre parking area and filters it via high flow pretreatment and membrane filtration. The impervious cover draining to this system is considered 100% of the 0.22-acre drainage area. This system has proven that it removes many pollutants, including trash, oil, debris, total suspended solids (TSS), fine silt-sized particles, and a high percentage of particulate-bound pollutants, including phosphorus, nitrogen, metals, and hydrocarbons. The overflow for the 100-year storm event is provided within a custom “Stormgate” manhole with a weir, also provided by Contech. A 12-inch RCP takes the discharge from the unit and the overflow to the roadside ditch located within Lone Oak Trail right-of-way. The flow from the 100-year storm is 3.36 cfs.

Existing Rainwater Harvesting Tank

The existing City Hall Building rooftops drain to an existing 10,000-gallon rainwater harvesting tank. The impervious cover and associated drainage area for this building rooftop is 0.12 acre, or 5,227 square feet. Since the tank is capable of handling 10,000 gallons (1,337 cubic feet), it can hold up to 2 storm events using TCEQ's criteria of collecting 1.5 inches of runoff. The city patrons use this water regularly to irrigate their community garden. As such, the impervious cover from this rooftop is negated from the total impervious cover on the site, in accordance with the TCEQ criteria manual.

Existing Impervious Cover on the site prior to the 1990 TCEQ (TNRCC) Edward's Aquifer rules and regulations taking effect consisted of the following list of improvements on this site. Halff has estimated this impervious cover to be 0.45 acre from measuring these existing improvements in CAD. Proof of these existing improvements is contained within the following documents, as researched on the City's website and contained within a book therein entitled An Informal History of Sunset Valley, Texas 1954-2001. The book is available at http://www.sunsetvalley.org/index.asp?Type=B_BASIC&SEC=%7B2D89AFF2-E41F-4E3B-A0C3-0C3334D02AAE%7D

- Original City Hall building and associated parking lot constructed in 1977. We are not counting the original city hall building in the existing impervious cover because it was demolished. The pavement area is the same as existed in 1977.
- Water plant and water storage tanks constructed in 1977 and 1988.
- Maintenance/Storage Building and associated parking/driveway constructed in 1989.
- Miscellaneous impervious cover of sidewalks, crushed granite paths, and mulch/storage areas south of the maintenance and storage building that are heavily compacted.

Calculations for the BMPs are presented hereafter. A summary of the calculations are presented within table below:

TCEQ TSS LOADING AND REMOVAL SUMMARY

Total Project Area	11.78	acres
Post-Development IC	2.44	acres
Existing Rooftop (Treated by Existing Rainwater Harvesting)	-0.12	acre
Total Post-Development IC	2.32	acres

	L_M (lbs)	L_R (lbs)	Notes
Total for Project	**1628**		Total Site Loading
DA-A (3.10 acres)	1297		
BMP#1 (Retention/Re-irrigation)		1391	
DA-D (0.313 acre)	225		
BMP#3 (Contech Jellyfish)		237	
Total Removed		**1628**	

Sunset Valley Public Works and Police Station Modification

5/3/2024

Permanent Best Management Practices Calculations

Permanent BMP #1

Retention and Re-Irrigation

Description:

This BMP will treat the runoff from the rooftops from the proposed police station, the proposed public works building, and the renovated public works garage. It will also be the treatment for the runoff from the asphaltic areas from Drainage Area A after it has been pre-treated by the rain garden. The outfall pipes within the sand media will drain into the retention basin to be re-irrigated. Note that the existing city hall roof will continue to drain to an existing rain water harvesting tank, which the City residents use to water their community garden on this site. In addition to the retention pond, there will be a permanent pool elevation within this basin, which will provide plantings to inhibit the biological process mimicking that of a wet basin; however, the permanent pool within this BMP is not being requested to be recognized as a separate best management practice. It is being utilized for the associated aesthetics. Make up water source for this permanent pool will be provided by an existing water well on the City property.

From the TCEQ Removal Calculations Spreadsheet:

Rainfall Depth =	1.20	inches
On-site Water Quality Volume =	4,687	c.f.
Storage for Sediment =	937	c.f.
Total Capture Volume =	**5,624**	**c.f.**

Pond Holds Water to Elevation 673.90'

Per the Stage-Storage Table below, the volume that will be retained for the City's use of Irrigation is interpolated to be 8,394 c.f.

Stage-Storage Curve:

Notation	Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)	Cum. Vol. (gal)	
	677	7791	7433.5	28910.5	216251	
Freeboard	676.5			25194	188449	
	676	7076	6722.5	21477	160648	
Old WQV Capture Storm #2	675.06			15580	116538	
	675	6369	5870	14754.5	110364	
Old WQV Capture Storm #1	674.17			9906	74097	
	674	5371	4899	8884.5	66456	
Max Pond Holding (from Test)	673.9			8394.6	62792	**WQV ELEVATION PROVIDED**
Required volume from bottom of retention	673.33			5624	42068	WQV Required
	673	4427	3985.5	3985.5	29812	
New Max Allowable Pond Elev.	672.7			2770.6	20724	Pump On/Off
Bottom of Retention Elev.	672	3544			0	

Bottom of Retention Elevation = 672.00 ft-msl

Max Pond Holding (from Test) Elevation = 673.9 @ 8,394 c.f.

New Max Pond Elevation = 672.7 @ 2,770 c.f.

Difference between 8394 and 2770 = 5,624 c.f. required by TCEQ.

Extra volume provided to City for additional rainwater harvesting = 2,770 c.f. = 20,719 gallons

Permanent Pool Stage-Storage Curve:

Notation	Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)	
Permanent Pool	672.0	3544	3145.5	8282.5	61953 gallons
	671	2747	2382	5137	
	670	2017	1684	2755	
	669	1351	1071	1071	
Bottom of Pond	668	791			

Rain Garden Overflow Structure

Drainage Area = 2.72 acres

Q = CIA for worst case scenario (5-min time of concentration)

100-year Q (cfs) = 22.25 cfs from entire Drainage Area 1:

Q_{100} = 2.72 x 0.95 x 12.50 inches/hour = 32.30 cfs

Using Orifice Formula: Q = CA(2gh)^0.5

where:

Q = 100-year storm flow (cfs) = 32.30 cfs

C = Orifice coefficient = 0.67

A = Clear Opening of Inlet (16 sf x 75%)

g = 32.2 ft/s^2

h = head over the top of inlet

32.30 = 0.67 x 16 x .75 x (2 x 32.2 x h)^0.5

h = 0.25 ft of head

Use 0.25 feet as the head over the top of the inlet elevation.

Therefore, WSEL in rain garden will rise to following elevation to pass the 100-year storm.

679.00 WSEL + 0.25 = 679.25 ft-msl

Top of Wall between Rain Garden and Retention Pond = 679.50 ft-msl.

Retention Pond Overflow Structure

Drainage Area = 3.10 acres

Q = CIA for worst case scenario (5-min time of concentration)

Q_{100} = 3.10 x 0.95 x 12.50 inches/hour = 36.81 cfs

Using Culvert Master Program 2-24-inch RCPs with mitered ends at FL = 676.50, Headwater will be 679.33 ft-msl. This designs for the 100-year event, which is not required for TCEQ.

679.33 < 679.50 Good

Original Designed Irrigation Area

The irrigation area for the storm water runoff is calculated via the following formula:

A = (12 x V)/(T x r)

where:

A = area required for irrigation (ft^2)

V = water quality volume (ft^3)

T = period of active irrigation (30 hr)

r = Permeability (in/hr)

The turf areas and landscaping around the buildings will utilize the storm water runoff for irrigation collected within the Rain Water Harvesting Pond. Therefore, 0.2 inches/hr will be utilized as the Permeability rate due to the fact that imported soil has and will be placed for landscaping.

Using the amount of volume from elevation 676.50 to elevation 674.17,
the total volume required for re-irrigation would be 15,288 cf. The area required would be

A = (12 x 15288)/(30 x 0.2)
A = 0.71 of an acre > 0.26 acres required by TCEQ **OK**
Provided Area: 0.821 of an acre (35,747 sf)

Additional Irrigation Area Needed:
Original project allocated 0.821 acres or 35,747 sf of irrigation area with an infiltration rate of 0.2 in/hr.
(35747 x (30 x 0.2))/12 = 17,874 cf
This area can treat 17,874 cf of water.
New total Volume of Water to treat:
Volume at Elev. 676.50 - Volume at Max. Allow. Pond Elev. 672.70
25194cf - 2771cf = 22,423 cf
22423 - 17874 = 4,549 cf of additional water to treat

Additional Irrigation Needed at 0.1 in/hr:
A = (12 x 4549)/(30 x 0.1)
A = 18,196 sf
A = 18,200 sf of additional irrigation area needed

07/07/2017 WPAP Modification Calculations

Sunset Valley Public Works and Police Station

Permanent Best Management Practices Calculations

Pre-Treatment

Rain Garden - Filtration System with No Infiltration (Combined City of Austin Design Criteria and TCEQ)

Description: This BMP will pre-treat the pavement runoff and other surface flow from Drainage Area A. It will not include the drainage runoff from the rooftops within Drainage Area A. The rain garden will include filtration media and an underdrain system that drains to BMP #2 for water reuse. A clay liner will be used. This type of rain garden is essentially a partial sedimentation/filtration basin; however the media has silt and sand to inhibit the growth of plantings within the rain garden.

Drainage Area DA-A:	3.10 acres	(Includes portion of Jones Rd. Edwards File No. 00112102)
Rooftop in DA-A:	0.38 acres	
Total Drainage Area:	2.72 acres	Rooftops do not drain to rain garden.
Contributing Area:	**2.72 acres**	

Load Calculation: $L=A \times P \times Rv \times C \times 0.226$ (TCEQ Equation 3.1)

where:

L = annual pollutant load (pounds)

A = Contributing drainage area (acres)

P = Average annual precipitation (inches) = 32 inches for Travis County

Rv = Appropriate runoff coefficient

C = Average TSS concentration (mg/L)

0.226 = units conversion factor

Because this site will be removing the existing BMPs (biofiltration pond and vegetated filter strip) for the Sunset Valley City Hall (RN103168001 and Permit No. 11-03040803) and a portion of Jones Road Town Hall Loop (RN10293192 and Permit No. 11-00112102), respectively, replacing them with the proposed BMPs within this WPAP Modification, the entire area will be used for the calculations so as not to take credit for the existing impervious cover.

Equation 3.1 Reduces to Equation 3.3, per TCEQ Guidance Manual:

$L_M = 27.2 (A_N \times P)$

where:

L_M = Required TSS Removal (pounds)

A_N = Net increase in impervious area (acres)

P = Average annual precipitation (inches) = 32 inches for Travis County

Impervious Cover:

Drainage Area A IC = 44,063 SF x 1% Allowance = 44,504 SF

Impervious Cover over Drainage Area A = 44,504 SF/43560 SF/Acre = 1.02 Acres

Therefore A_N = 1.02 Acres

IC = 1.02/2.72 = 0.378 = 37.5%

Required Load Removal: $L_M = 27.2 (1.02 \times 32) = 888$ pounds

Load Removed: L_R = (BMP Efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

L_R = Load Removed by BMP = 0.89 for sand filter and biofiltration, i.e., closest BMP to rain garden

BMP Efficiency = TSS removal efficiency (expressed as a decimal fraction)

A_I = impervious tributary to the BMP (ac)

A_P = pervious tributary to the BMP (ac)

P = average annual precipitation (in.) = 32 inches for Travis County

LR = (0.89) x 32 x (1.02 x 34.6 + (2.72 - 1.02) x 0.54))

LR = 1031 pounds

Desired Fraction of Annual Runoff to Be Treated: 931 lbs

F = L_M/sum(L_R)

where:

F = Fraction of annual rainfall treated by the BMP

L_R = Load removed for each BMP (pounds)

L_M = Desired load reduction (pounds) = 929 lbs

F = 931/1051 = 0.89

Capture Volume: From Table 3-5 in the the TCEQ Manual

0.90 = 1.70 inches of rainfall depth required

Equation 3.10: WQV = Rainfall depth x Runoff Coefficient x Area

Equation 3.11: Runoff Coefficient = $1.72(IC)^3 - 1.97(IC)^2 + 1.23(IC) + 0.02$

Runoff Coefficient = $1.72(0.375)^3 - 1.97(0.375)^2 + 1.23(0.375) + 0.02$

Runoff Coefficient = 0.29

Therefore: WQV = 4,950 ft^3 Using TCEQ Spreadsheet *USE 5,000 ft^3*

20% Increase for sediment = 1000 ft^3

Total WQV = 6,000 ft^3

TCEQ Filter Basin Design:

A_f = WQV/10 Combined filter and sedimentation in single basin.

A_f = 5000/10 = 500 sf

A_f provided = 4439 sf; thus approx. 1.35 ft of ponding is required over the media.

Top of Growing Media Elevation 677.65 ft-msl

WSEL in Rain Garden = 679.00 ft-msl

City of Austin Rain Garden Design:

Filter Surface Area

A_f=WQV/(H+0.24 x L) (Equation H-3 COA ECM)

where:

A_f = filtration area (ft^2)

WQV = Water Quality Volume (ft^3)

L = depth of biofiltration growing media (ft)

H = Maximum head over the growing media (ft)

A_f = 5000/(1 + 0.24 x 1.5')

A_f = 3,677 sf

A_f Provided = 4464 sf OK

Permanent BMP #1

Retention and Re-Irrigation

Description:

This BMP will treat the runoff from the rooftops from the proposed police station, the proposed public works building, and the renovated public works garage. It will also be the treatment for the runoff from the asphaltic areas from Drainage Area A after it has been pre-treated by the rain garden The outfall pipes within the sand media will drain into the retention basin to be re-irrigated Note that the existing city hall roof will continue to drain to an existing rain water harvesting tank, which the City residents use to water their community garden on this site.

In addition to the retention pond, there will be a permanent pool elevation within this basin, which will provide plantings to inhibit the biological process mimicking that of a wet basin; however, the permanent pool within this BMP is not being requested to be recognized as a separate best management practice. It is being utilized for the associated aesthetics. Make up water source for this permanent pool will be provided by an existing water well on the City property.

From the TCEQ Removal Calculations Spreadsheet:

Rainfall Depth =	1.20	inches
On-site Water Quality Volume =	4,687	c.f.
Storage for Sediment =	937	c.f.
Total Capture Volume =	**5,624**	**c.f.**

In order to provide additional factor of safety and more collection/harvesting of rainwater, the City will size the retention tank for 4 inches of rainwater collection from the rooftops.

Rooftops = 16,740 sf

4 inches - 1.20 inches = 2.80 inches

16740 sf x 2.80 inches/12 = 3,906 ft^3

Additionally, the City will size the pond for two (2) storm events from the rain garden contributing drainage area for water conservation. The 60-hour drawdown time for the first storm event is not necessary since a second capture volume is available within the pond. The second capture volume will need to be available to collect the runoff from a rain storm event within 72 hours from the first storm.

5,624 x 2 = 11,248 c.f.

Total amount of extra storage for City = 3,906 + 6,000 = 9,906 c.f.

Therefore, the total provided WQV will be:

3,906 c.f. + 11,248 c.f.= 15,154 ft^3 20% extra is not added in
15,580 c.f. is provided in pond. for the 2nd storm.

Top of Growing Media Elevation 677.65 ft-msl
Drainage Pipe discharge from growing media basin = 675.00 ft-msl

Stage-Storage Curve:

Notation	Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)	
	677	7791	7433.5	28910.5	
Freeboard	676.5			25194	
	676	7076	6722.5	21477	
WQV Capture Storm #2	675.06			15580	116538 gallons
	675	6369	5870	14754.5	
WQV Capture Storm #1	674.17			9906	74097 gallons
	674	5371	4899	8884.5	
	673	4427	3985.5	3985.5	
Permanent Pool	672	3544			

Top of Permanent Pool Elevation = 672.00 ft-msl
1st Capture Volume Elevation = 674.17 ft-msl @ 9,906 ft^3 volume
2nd Capture Volume Elevation = 675.06 ft-msl @ 15,580 ft^3 volume
Difference between 15580 cf and 9906 cf = 5,684 c.f. > 5,624 c.f. required by TCEQ.

Permanent Pool Stage-Storage Curve:

Notation	Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)	
Permanent Pool	672.0	3544	3145.5	8282.5	61953 gallons
	671	2747	2382	5137	
	670	2017	1684	2755	
	669	1351	1071	1071	
Bottom of Pond	668	791			

Rain Garden Overflow Structure

Drainage Area = 2.72 acres
Q = CIA for worst case scenario (5-min time of concentration)
100-year Q (cfs) = 22.25 cfs from entire Drainage Area 1:
Q_{100} = 2.72 x 0.95 x 12.50 inches/hour = 32.30 cfs
Using Orifice Formula: Q = CA(2gh)^0.5
where:
Q = 100-year storm flow (cfs) = 32.30 cfs
C = Orifice coefficient = 0.67
A = Clear Opening of Inlet (16 sf x 75%)

g = 32.2 ft/s^2
h = head over the top of inlet

32.30 = 0.67 x 16 x .75 x (2 x 32.2 x h)^0.5

h = 0.25 ft of head

Use 0.25 feet as the head over the top of the inlet elevation.

Therefore, WSEL in rain garden will rise to following elevation to pass the 100-year storm.
679.00 WSEL + 0.25 = 679.25 ft-msl
Top of Wall between Rain Garden and Retention Pond = 679.50 ft-msl.

Retention Pond Overflow Structure
Drainage Area = 3.10 acres
Q = CIA for worst case scenario (5-min time of concentration)
Q_{100} = 3.10 x 0.95 x 12.50 inches/hour = 36.81 cfs

Using Culvert Master Program 2-24-inch RCPs with mitered ends at FL = 676.50, Headwater will be 679.33 ft-msl. This designs for the 100-year event, which is not required for TCEQ.
679.33 < 679.50 Good

Irrigation Area
The irrigation area for the storm water runoff is calculated via the following formula:

A = (12 x V)/(T x r)
where:
A = area required for irrigation (ft^2)
V = water quality volume (ft^3)
T = period of active irrigation (30 hr)
r = Permeability (in/hr)

The turf areas and landscaping around the buildings will utilize the storm water runoff for irrigation collected within the Rain Water Harvesting Pond. Therefore, 0.2 inches/hr will be utilized as the Permeability rate due to the fact that imported soil has and will be placed for landscaping.

Using the amount of volume from elevation 676.50 to elevation 674.17,
the total volume required for re-irrigation would be 15,288 cf. The area required would be

A = (12 x 15288)/(30 x 0.2)
A = 0.71 of an acre > 0.26 acres required by TCEQ **OK**

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: City of Sunset Valley
Date Prepared: 6/27/2017

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	11.78	acres
Predevelopment impervious area within the limits of the plan * =	0.45	acres
Total post-development impervious area within the limits of the plan* =	2.32	acres
Total post-development impervious cover fraction * =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	**1628**	lbs.

* **The values entered in these fields should be for the total project area.**

Number of drainage basins / outfalls areas leaving the plan area = 5

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A

Total drainage basin/outfall area =	3.10	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.49	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.48**	

$L_{M\ THIS\ BASIN}$ = **1297** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
Removal efficiency = **100** percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **3.10** acres
A_I = **1.49** acres
A_P = **1.61** acres
L_R = **1678** lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = **1391** lbs.

F = **0.83**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	**1.20**	inches
Post Development Runoff Coefficient =	**0.35**	
On-site Water Quality Volume =	**4687**	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**937**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**5624**	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin =	**5624**	cubic feet	
Irrigation Area Calculations:			
Soil infiltration/permeability rate =	**0.2**	in/hr	**Enter determined permeability rate or assumed value of 0.1**
Irrigation area =	**11248**	square feet	
	0.26	acres	

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: City of Sunset Valley Police Department and Public Works
Date Prepared: 6/28/2017

1. The Required Load Reduction for the total project:

Calculations from RG-348
Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	**Williamson**	
Total project area included in plan * =	**11.780**	acres
Predevelopment impervious area within the limits of the plan * =	**0.45**	acres
Total post-development impervious area within the limits of the plan* =	**2.320**	acres
Total post-development impervious cover fraction * =	**0.20**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**1628**	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	**1**	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = **1**

Total drainage basin/outfall area =	**0.313**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.258**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.82**	
$L_{M\ THIS\ BASIN}$ =	**225**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**JF**	abbreviation
Removal efficiency =	**86**	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
LR = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	**0.313**	acres
A_I =	**0.258**	acres
A_P =	**0.06**	acres
L_R =	**246**	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ =	**237**	lbs.
F =	**0.96**	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	**0.00**	acres
Offsite impervious cover draining to BMP =	**0.00**	acres

Calculations from RG-348
Pages Section 3.2.22

Rainfall Intensity =	**1.80**	inches per hour
Effective Area =	**0.23**	acres
Cartridge Length =	**54**	inches
Peak Treatment Flow Required =	**0.42**	cubic feet per second

7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size

Jellyfish Size for Flow-Based Configuration =	**JF4-2-1**	
Jellyfish Treatment Flow Rate =	**0.45**	cfs

Scholz, Robert

From: Clay Collins <ccollins@sunsetvalley.org>
Sent: Thursday, June 29, 2017 3:02 PM
To: Scholz, Robert
Cc: Katy Phillips
Subject: Sunset Valley Police Station and Public Works Facility WPAP Modification and SCS technical review

Robert:

We have looked through city records and can confirm the following development existed on the City Hall Tract currently addressed as 3205 Jones Road and previously addressed as 2 Lone Oak Trail prior to 1990:

1. The original City hall building built early 1970's. It was later demolished and replaced with modular buildings to house police and public works (2005 to present)
2. The City Hall driveway with parking on #2 Lone Oak built early 1970's still exists today
3. Maintenance building that exists today with associated driveway/parking area was bid and constructed 1989
4. Water storage tanks and water plant area added a second tank in 1988. The Plan still exists in its original footprint.
5. There was miscellaneous impervious cover south of the water storage tanks used for storage, equipment, and mulch/gravel storage and parking as well as a gravel access drive to the water plant and the rear of the maintenance building from Jones Road. Most of this area is still utilized for this purpose.

For reference I used a locally published book "An Informal History of Sunset Valley, Texas 1954-2004". Each decade contains excerpts from meeting minutes documenting the development of the City. If needed archive records should be available for verification.

Please let me know if additional information is needed.

Clay Collins

Clay Collins
City Administrator
(512) 892-1383 phone
(512) 892-6108 fax
www.sunsetvalley.org

CITY GOVERNMENT

Year	Mayor	Council Members
1974	Phil Thompson	William Rider, Bill Bolger, Bob Denman, Sam Chrisco, and Burford Westlund
1975	Phil Thompson	Sam Chrisco, Arlon Bindseil, Frances Underwood, William Rider, and Bill Bolger
1976	W.R "Bud" Fowler	Sam Chrisco, Arlon Binseil, Frances Underwood, Susan Jung, and Burford Westlund
1977	W.R "Bud" Fowler	Susan Jung, Burford Westlund, Robert Lehman, Frances Underwood, and Eugene Powell
1978	Frances Underwood	Susan Jung, Burford Westlund, Robert Lehman, Eugene Powell, and Philip J. Wylie
1979	Frances Underwood	Susan Jung, Donny Hurwitz, Robert Lehman, Gene Powell, and Burford Westlund
1980	Frances Underwood	Susan Jung, Donny Hurwitz, Pat Barber, Russell Harding, and Burford Westlund
1981	Frances Underwood	Pat Barber, Rosemary Follis, Russell Harding, Donny Hurwitz, Mickie Powers, and Cynthia Kunz
1982	Frances Underwood	Sandy Cox, Rosemary Follis, Larry Hada, Russell Harding, Mickie Powers, and Cynthia Kunz
1983	Rosemary Follis	Larry Hada, Pat Barber, Russell Harding, Aaron Morris, and Mickie Powers

During the mid 1970s, the Council focused on improving city government, constructing the city's first administration building, creating a Police Department, and purchasing a water system for the city. Ordinances and other regulations were adopted to preserve and protect the community's health and welfare.

- January 2, 1974: The residents of Lone Oak Trail filed a petition protesting the use of city land located at the corner of Jones Road and Lone Oak Trail as an obstacle course and race track for motor bikes.

SUNSET VALLEY Texas

The History of Sunset Valley, TX

On September 13, 1954, the citizens in the area now known as Sunset Valley voted to incorporate as a town. They elected Clinton Vilven to serve as the first mayor of the area which now measures a little over 681 acres. Today, we remain a relatively small town, but there certainly have been a lot of changes and growth.

Origin of the Land

Abstracts indicate the first recorded land transaction involving our area occurred when the State of Cochuila, Mexico and Texas granted 25 labors of land to Theodore Bissell in 1835. Bissell's' name appears in many of our legal descriptions here in Sunset Valley. According to a map in one of the old abstracts, a part of the Valley was also granted to Thomas Anderson in 1835.

Over many succeeding years pieces of these properties were sold to others, some of whom settled in the area we now know as Sunset Valley. Eventually, two brothers, M.H. and Clarence Flournoy purchased a large tract of the pasture type land in the early 50's to develop as a subdivision. M.H. Flournoy's son, Malcolm, who lives on Reese Drive said that his father and uncle were called crazy by their friends because the area was so far out from Austin!

The Development of City Services

The beginning of the first water system to serve the area occurred when the Flournoys drilled a well in the early 50's. The system was purchased later by the city and served until a new system was installed in 1977. Natural gas lines were installed in 1965 and Cable TV was installed in 1975. In the mid- 70's we also saw the addition of the elementary school and athletic stadium. Additionally, during the late 60's and 70's, the paving of streets took place throughout the city. Sunset Valley's waste water system was constructed in 1990 with a grant from the Texas Water Development Board.

The first City Hall was built in 1977. Meetings and other activities no longer required the use of the elementary school and other locations. City Hall sits on a three acre tract which was named the "Fred W. Adams Park". A fire hall/maintenance building was later built in 1989. This building is used for community events such as National Night Out and Meet The Candidates each year.

Police Protection was implemented in 1954 by appointing Gordon Fowler as City Marshal. Deputies were added later and a police reserve force was created in 1978. The Sunset Valley Police Department was formally created in 1979.

Fire Protection got a boost with the acquisition of a fire truck in 1964. Beginning in 1973, however, Sunset Valley came under the protection of the Manchaca Volunteer Fire Department. As the City grew and the number of volunteers diminished, the city entered into an inter local agreement with the City of Austin Fire Department to provide fire fighting services in 1998.

Valley Creek Park (1.43 acres) was donated in 1973 by Clyde Copus, of Nash-Phillips-Copus. This land is used to be the picnic grove for the Flournoy family years ago. Now it is equipped with picnic tables and play structures for the children.

Historical information provided by Carol F. Knight author of *Sunset Valley: An Informal History and Other Tales*


An Informal History of Sunset Valley Texas 1954-2004

$350,000. The funds were to be used to construct wastewater lines and a maintenance and storage facility.

- August 30, 1990: The City approved funds to construct a wastewater sleeve under Highway 290 while the highway was under construction.
- October 15, 1991: The City decided not to construct a wastewater line to serve Stearns Lane because it could not acquire needed easements from property owners.
- January 21, 1992: The City decided not to construct a wastewater line to serve one property on Oakdale and two properties on Brodie Lane because it could not acquire needed easements from property owners. After repeated requests for service by residents on Brodie, the Council agreed to pursue condemnation to allow for easements along Lots 3 & 4 of Rosemary Estates. The easements would allow the wastewater line to be extended from Oakdale Drive to the back of properties on Brodie Lane. On November 3, 1992, the City authorized $4,000 to purchase the wastewater easement.
- May 5, 1992: The City authorized an additional $100,000 in Certificates of Obligation to construct the wastewater collection system.

Fire Protection

- June 19, 1984: The City started planning a new garage to house the fire truck. The city contacted the Sunset Valley Women's Club about raising funds to help pay for it.
- March 7, 1989: The Council advertised bids for the construction of a 2,700 square foot maintenance / storage building. A contractor was selected in May. The Manchaca Volunteer Fire Department offered to contribute $4,000 toward construction of the building. The Manchaca Fire Department also planned to provide a larger truck for the City after construction was completed.

Robert Pavlica, volunteer fireman

- June 16, 1992: The Council supported aggressive recruitment of additional volunteer fire personnel to improve response time to fires occurring during daytime hours.

- November 9, 1976: Construction started on the well casing and the pressure plant.
- February 1977: The water storage tank was completed and the drilling company reported: "We have hit an underground river," that would allow the city to pump 40-50 gallons of water per minute. The "river of water" was located in a section of the Edwards Aquifer.
- April 1977: The City accepted the improvements to the water plant.
- June 21, 1977: The Council called an emergency meeting to discuss continued difficulties with the water system.
- May 9, 1978: The Council discussed the color of the water coming from the water system. Members were told that the City's hard, highly corrosive water had rusted the old steel water lines. The Council decided not to flush the lines more often. Instead, they raised the chlorine levels to create a coating inside the older pipes.
- July 21, 1978: The Council called an emergency meeting because the State Health Department had given the city only 90 additional days to use its old wells.
- October 1978: The Council approved a contract to repair the water system.

April 1978 Maura, Frances, Kay, and Herbert Underwood and unknown

Wastewater

- 1980: The city applied for a grant from the Environmental Protection Agency to develop of a wastewater collection system. The City also signed its first contract with Austin to a maximum of 800 Living Unit Equivalents (LUEs). The contract was renegotiated in 1986.
- 1981: The City adopted an ordinance regulating the construction of septic systems.

Administration

- April 16,1986: The City hired its first full-time City Secretary/Clerk, Jayme Sturgis Foley. She was responsible for processing building permits, billing for utilities, serving as City Treasurer, and covering the Municipal Court until the part-time court clerk arrived in the afternoon. Jayme supervised the installation of the city's first computerized accounting system and, as the City grew, she worked with the Mayor and the City Council on the development of a balanced budget to meet the changing needs of the community and its residents. By 1993, the department's budget had grown to $199,195.00.

CITY SERVICES

Water

- January 17, 1984: The Council reviewed plans submitted by Ron Zent to extend the water line to serve a subdivision on Pillow Road.
- February 21, 1984: The costs associated with maintaining the water system and making bond payments exceeded city revenues. The Council hoped that increased sales of water during the summer months would compensate for shortfalls during the winter.
- January 9, 1986: The Council approved the City of Austin's plan to install a 42-inch waterline along Jones Road.
- April 7, 1987: The City approved a water service contract with the City of Austin. The contract provided for installation of service point connections in areas not served by the city's well system (i.e., Stearns Lane, Highway 290, Brodie Lane, and Oakdale Drive). The City of Austin approved the contract in September.
- January 19, 1988: The City approved the addition of a second 44,000-gallon water storage tank.
- February 16, 1988: The Council approved plans to construct the 44,000-gallon tank.
- May 3, 1988: The minutes indicate problems with obtaining suitable water samples for testing. High levels of rust had contaminated samples, rendering them unusable for coliform counts. The State Health Department agreed to an alternative method of testing and a member of the Council reported that the city "may be back on its own system on Friday."
- January 15, 1991: The City authorized an engineering firm to design an emergency interconnect water line from Jones Road to the city's water storage tanks.

Attachment 7D – BMPs for Surface Streams

The BMPs selected for this site include a retention/irrigation facility, a Contech Jellyfish System, and a rain garden, the last of which is not recognized by TCEQ as a BMP.

The rain garden was selected as a pretreatment to the retention/irrigation to provide some removal of oils, greases, suspended solids, and trash prior to the runoff entering the retention pond. The rain garden has biofiltration media and vegetation/plantings within it and treats the runoff from the roadway prior to it entering the retention pond. The entire pond system is designed to be underlain with a clay liner to protect infiltration of pollutants into the aquifer.

All of the perforated drainage pipes from the rain garden BMP discharge directly to the retention pond through a wall separating the two BMPs. The discharge pipes have flap valves on the end so that water from the retention pond will not backflow into the rain garden. Two 24-inch RCP pipes are installed with an inlet flowline elevation of 676.50, which act as an overflow system for larger storm events. This also provides additional freeboard within the retention pond. The water quality volume needs to be irrigated onsite within 72 hours of the storm to make room in the pond for another storm event. Additionally, due to a leak in the retention pond mentioned in the "Narrative of Proposed Modification" section, the maximum elevation that the pond successfully holds water at is 673.9 ft-msl. Thus, all of the storm water collected in this pond between the 24-inch RCP elevation and this elevation will also need to be irrigated onsite within 72 hours to minimize the leakage and make room for another storm event. As such, this Modification includes the design of additional irrigation area. The additional irrigation area is 18,200 square feet, using an irrigation rate of 0.1 in/hr and is proposed to be added west of the police station. The maximum elevation of the pond at any time outside of the 72-hour drawdown time window should be 672.7 ft-msl but may be as low as 672.00 ft-msl. The retention/irrigation system is intended to retain the water quality volume on site so as to prevent pollutants from the water quality volume from entering surface streams, sensitive features, and the aquifer. The originally designed retention pond was approved by TCEQ (07/07/2017) as an online retention pond. The pond design had an abundance of excess storm water volume collected by the pond (15,288 cubic feet) to be irrigated onsite. During larger storm events, which lead to a larger volume of water collected within the retention pond, some leakage will now occur in the pond above 673.9 ft-msl elevation (provided WQV elevation) and associated capture volume of 8,394 cubic feet prior to the irrigation commencing. The source of the leak is unknown after several attempts to repair the pond over the last few years. In these larger storm events, there is a potential for mixing of water quality volume with the excess water collected above the provided WQV elevation. It should be noted, however, that the drainage runoff from all pavement areas filters through the rain garden facility prior to entering the retention pond. All other drainage runoff entering directly to the retention pond is collected directly from the roofs of buildings.

Additionally, a Contech Jellyfish Filtration System is being installed for the additional pavement area added within Drainage Area DA-D, which will remove 86% of the increase in TSS from the pavement runoff. This meets TCEQ's criteria for pollutant removal and the discharge will drain to a tributary to Williamson Creek.

None of the drainage from the proposed impervious cover will drain to the existing water well located on this site as it will be collected via curb/gutter, and/or storm sewer prior to reaching the well via overland flow.

Attachment 7E – Request to Seal Features

The permanent sealing of or diversion of flow from a naturally-occurring “sensitive” or “possibly sensitive” feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring “sensitive” or “possibly sensitive” features on this site.

Section not applicable to this project.

Attachment 7F – Construction Plans

Full-sized copies of the construction plans are submitted at the end of this report.

Attachment 7G – Inspection, Maintenance, Repair and Retrofit Plan

The following are recommended maintenance procedures as outlined in TCEQ's Edwards Aquifer Technical Guidance Manual:

Inspections: BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or re-vegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, filter cartridges etc.) must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. It is desirable to inspect during a storm to observe the relative flow through the filter cartridges. If the submerged cartridges are severely plugged, then typically large amounts of sediments will be present and very little flow will be discharged from the drainage pipes. If this is the case, then maintenance is warranted and the cartridges need to be replaced. Additional Inspection recommendations from the manufacturer are provided as Appendix 4.

Sediment Removal: Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure. Remove sediment from rain gardens when the sediment depth reaches 3 inches or when the sediment interferes with the health of vegetation or ability of the facility to meet required drawdown times. Sediment removal should be performed at least every 2 years.

Cartridge Replacement: Maintenance of the filter media is necessary when there exists more than 4" of standing water 24 hours after a rainfall event or in the event of a chemical spill. When the conditions of Appendix 4 are met, cartridges should be replaced on an as needed basis. Until such time it is determined the cartridges life expectancy exceeds one year, cartridges shall be replaced on an annual basis.

Debris and Litter Removal: Debris and litter will accumulate near the sedimentation basin outlet device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device.

Cartridge Vault: Clean sediment from vault when greater than 4" has built up on the floor of the vault. Remove trash and debris that is in the vault. The vault should be inspected at least two times per year (once after a heavy rainfall event).

Mowing: Grass areas in and around the sedimentation basin should be mowed regularly to limit vegetation height to 12 inches. More frequent mowing to maintain aesthetic appeal may be necessary in

landscaped areas. Vegetation on the pond embankments should be mowed as appropriate to prevent the establishment of woody vegetation.

The following are recommended maintenance procedures as outlined in City of Austin's Environmental Criteria Manual:

Rain Gardens (Per City of Austin Environmental Criteria Manual 1.6.7.5.H.3): During design, the following should be considered to facilitate long-term maintenance:

Whenever possible, design the rain garden to be offline (whereby surface flow enters and exits (only when full) the system through the same opening), with runoff by-passing the system once ponding depth equals the water quality volume elevation. This configuration may reduce erosion from larger storm events and will also minimize mixing of the water quality volume.

While not required, consider providing pre-treatment to help reduce the extent and frequency of maintenance, especially if the contributing drainage area is expected to generate sediment, debris, or other pollutant that may cause decreased system functionality. Pre-treatment may include a sedimentation chamber, a vegetated or manufactured separator element (to functionally separate the rain garden into higher deposition and lower deposition zones), a vegetated filter strip, or an inlet designed at a minimal slope to encourage sediment deposition prior to flows entering the rain garden.

Select native vegetation whenever possible to reduce the need for long-term irrigation and maintenance. If rain gardens are over-irrigated and receive significant applications of fertilizers and herbicides, they can become sources of pollution rather than pollutant removal BMPs. Thus, it is essential that these rain garden systems be managed carefully and that an approved and recorded Integrated Pest Management plan be required for the drainage area up to and including the rain garden.

Whenever possible, vegetation should be planted throughout the entire rain garden to provide a fully stabilized surface. Containerized plants are typically grown in a looser growing medium conducive to drainage whereas grass sod is sometimes grown in more cohesive soils that may inhibit drainage. Avoid the use of wood chips because they tend to float and may clog the outlet or be washed downstream. Coarsely-shredded hardwood mulch such as that obtained from the primary run through an industrial tub grinder will be more resistant to movement and is recommended. Gravel or stone mulch is also resistant to movement but may cause sediment to build up and inhibit infiltration.

If pedestrian traffic is expected, provide stepping stone paths along a predefined route to discourage trampling of vegetation and compaction of soil. Planting spiny vegetation such as yucca, sotol, or agarita along the edge of the rain garden may effectively discourage pedestrian use.

Design the rain garden depression to be as shallow as possible to facilitate mowing and reduced erosion.

Wet Ponds (Per City of Austin Environmental Criteria Manual 1.6.3.C.4): Due to the nature of wet ponds being full of water when in operation, the need for maintenance is not easily visible. However, when the ponds are built in stable upland areas, the need for maintenance of these ponds should be infrequent. Accumulation of sediment in the basin is the primary reason the pond will require intensive maintenance. Because of this, very careful attention should be paid to adequate, well-

maintained erosion and sedimentation controls in the contributing drainage area during construction. This, in combination with the sediment forebay, should prevent the requirement of maintenance of the main pool soon after the pond is put online. The following are guidelines for pond maintenance:

During Site Construction - The sediment load to the sediment forebay shall be closely monitored after every storm event. If heavy sediment loads are detected during an inspection, the source should be corrected. Sediment shall be removed from the sediment forebay when one-third of the forebay volume is lost.

Upon Completion of Site Revegetation - Any sediment build-up (greater than 5% volume loss) shall be removed from the forebay upon completion of site revegetation. The sediment build-up in the main pool shall be checked and if more the ten-percent of the volume is lost, it should be cleaned at that time.

Every Three Months for the First Two Years - During the three month initial inspection cycle, if more than fifteen percent of the volume of the forebay is lost, it shall be cleaned at that time.

Every Three Months - Turf areas around the pond should be mowed. Accumulated paper, trash, and debris shall be removed every three months or as necessary. Cattails, cottonwoods, and willows can quickly colonize shallow water and the edge of the pond. These species or any areas of plant overgrowth may be thinned at this time or as needed.

Annually - The basin should be inspected annually for side slope erosion and deterioration or damage to the structural elements. Any damage shall be repaired. Large areas, which have dead or missing vegetation, shall be replanted.

Every Three Years - The sediment build-up in the sediment forebay shall be checked. The sediment forebay shall be cleaned if more than one-third of the forebay volume is lost.

Every Six Years - The sediment build-up in the main pool shall be checked. Sediment shall be removed from the main pool when twenty percent of the main pool volume is lost.

Record Keeping:

Records of all inspections and maintenance for the facility shall be recorded and maintained for the water quality facility beginning at startup of the facility. Record keeping shall be detailed to provide type of maintenance or repair made, date of the service and detail of the extent of maintenance or repair. The owner or responsible party of the facility is responsible for maintaining the facility as outlined in this plan until such time as another entity assumes responsibility in writing or ownership of the property is transferred. A copy of the transfer of ownership or responsibility must be filed with the Executive Director of TCEQ within 30-days of the transfer.

Owner:

Matt Lingafelter

Print Name

Signature

5/14/24

Date

CONTECH
ENGINEERED SOLUTIONS

Jellyfish® Filter Manhole Installations
Inspection and Maintenance Manual

CONTECH Engineered Solutions
1-800-548-4667

Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Maintenance activities may be required in the event of an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted form surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW)

Maintenance activities typically include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed.

It is recommended that Jellyfish Filter inspection and maintenance be performed by professionally trained individuals, with experience in stormwater maintenance and disposal services. Maintenance procedures may require manned entry into the Jellyfish structure. Only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Procedures, safety and damage prevention precautions, and other information, included in these guidelines, should be reviewed and observed prior to all inspection and maintenance activities.

Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent.*

- Post-construction inspection is required prior to putting the Jellyfish Filter into service. All construction debris or construction-related sediment within the device must be removed, and any damage to system components repaired.
- A minimum of two inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
- Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
- Inspection is recommended after each major storm event.
- Immediately after an upstream oil, fuel or other chemical spill.

Inspection Tools and Equipment

The following equipment and tools are typically required when performing a Jellyfish Filter inspection:

- Access cover lifting tool
- Sediment probe (clear hollow tube with check valve)
- Tape measure
- Flashlight
- Camera
- Inspection and maintenance log documentation
- Safety cones and caution tape
- Hard hat, safety shoes, safety glasses, and chemical-resistant gloves

Inspection Procedure

The following procedure is recommended when performing inspections:

- Provide traffic control measures as necessary.
- Inspect the MAW for floatable pollutants such as trash, debris, and oil sheen.
- Measure oil and sediment depth by lowering a sediment probe through the MAW opening until contact is made with the floor of the structure. Retrieve the probe, record sediment depth, and presences of any oil layers and repeat in multiple locations within the MAW opening. *Sediment depth of 12 inches or greater indicates maintenance is required.*
- Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
- Inspect the MAW, cartridge deck, and backwash pool weir, for cracks or broken components. If damaged, repair is required.
- **Dry weather inspections:** inspect the cartridge deck for standing water.
    - No standing water under normal operating condition.
    - Standing water **inside** the backwash pool, but not outside the backwash pool, this condition indicates that the filter cartridges need to be rinsed.
    - Standing water **outside** the backwash pool may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- **Wet weather inspections:** observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW.
    - **Less than 6 inches**, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
    - **Greater than 6 inches**, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
    - **18 inches or greater** and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges are occluded with sediment and need to be rinsed.

Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

- Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.

- Floatable trash, debris, and oil must be removal.
- Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
- Replace filter cartridge if rinsing does not remove accumulated sediment from the tentacles, or if tentacles are damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
- Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
- The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged by the spill.

Maintenance Tools and Equipment

The following equipment and tools are typically required when performing Jellyfish Filter maintenance:

- Vacuum truck
- Ladder
- Garden hose and low pressure sprayer
- Rope or cord to lift filter cartridges from the cartridge deck to the surface
- Adjustable pliers for removing filter cartridge tentacles from cartridge head plate
- Plastic tub or garbage can for collecting effluent from rinsed filter cartridge tentacles
- Access cover lifting tool
- Sediment probe (clear hollow tube with check valve)
- Tape measure
- Flashlight
- Camera
- Inspection and maintenance log documentation
- Safety cones and caution tape
- Hard hats, safety shoes, safety glasses, chemical-resistant gloves, and hearing protection for service providers
- Proper safety equipment for confined space entry
- Replacement filter cartridge tentacles if required

Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

- Provide traffic control measures as necessary.
- Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures.
- **Caution:** Dropping objects onto the cartridge deck may cause damage.
- Perform **Inspection Procedure** prior to maintenance activity.
- To access the cartridge deck for filter cartridge service, descend the ladder and step directly onto the deck. **Caution:** Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
- **Filter Cartridge Rinsing Procedure**
    - Remove a cartridge lid.
    - Remove the cartridge from the receptacle using the lifting loops in the cartridge head plate. **Caution:** Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Rotate the cartridge with a slight sideways motion to clear the snag and continue removing the cartridge.

- Thread a rope or cord through the lifting loops and lift the filter cartridge from the cartridge deck to the top surface outside the structure.
- **Caution:** Immediately replace and secure the lid on the exposed empty receptacle as a safety precaution. Never expose more than one empty cartridge receptacle.
- Repeat the filter cartridge removal procedure until all of the cartridges are located at the top surface outside the structure.
- Disassemble the tentacles from each filter cartridge by rotating counter-clockwise. Remove the tentacles from the cartridge head plate.
- Position a receptacle in a plastic tub or garbage can such that the rinse water is captured. Using a low-pressure garden hose sprayer, direct a wide-angle water spray at a downward 45° angle onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. **Caution:** Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane.
- Remove rinse water from rinse tub or garbage can using a vacuum hose as needed.
- Slip the O-ring over the pipe nipple on the top end of the tentacle and reassemble onto the cartridge head plate; hand tighten.
- If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.
- Lower a rinsed filter cartridge to the cartridge deck. Remove the cartridge lid on a receptacle and carefully lower the filter cartridge into the receptacle until the head plate gasket is seated squarely on the lip of the receptacle. **Caution:** Should a snag occur when lowering the cartridge into the receptacle, do not force the cartridge downward; damage may occur. Rotate the cartridge with a slight sideways motion to clear the snag and complete the installation.
- Replace the cartridge lid on the exposed receptacle. Check the fit before completing rotation to a firm hand-tight attachment. Rinse away any accumulated grit from the receptacle threads if needed to get a proper fit.
- Repeat cartridge installation until all cartridges are installed.

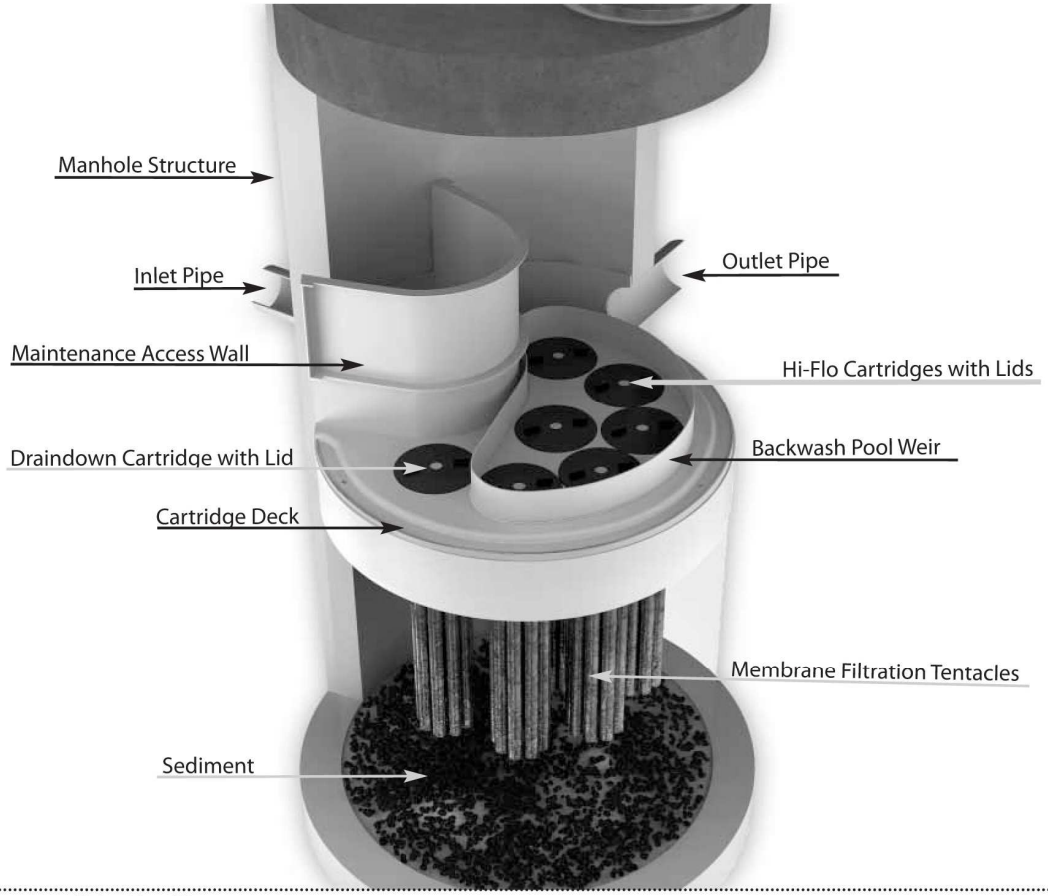
- **Vacuum Cleaning Procedure**
  - **Caution:** Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning **only through the maintenance access wall (MAW) opening**, being careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck. The separator skirt surrounds the filter cartridge zone, and could be torn if contacted by the wand. **Do not lower the vacuum wand through a cartridge receptacle**, as damage to the receptacle will result.
  - To remove floatable trash, debris, and oil, lower the vacuum hose into the MAW opening and vacuum floatable pollutants off the surface of the water. Alternatively, floatable solids may be removed by a net or skimmer.
  - Using a vacuum hose, remove the water from the lower chamber to the sanitary sewer, if permitted by the local regulating authority, or into a separate containment tank.
  - Remove the sediment from the bottom of the unit through the MAW opening.
  - For larger diameter Jellyfish Filter manholes (8-ft, 10-ft, 12-ft diameter), complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle..
  - After the unit is clean, re-fill the lower chamber with water if required by the local jurisdiction, and re-install filter cartridges.
  - Dispose of sediment, floatable trash and debris, oil, spent tentacles, and water according to local regulatory requirements.

- **Chemical Spills**
    - **Caution:** If a chemical spill has been captured by the Jellyfish Filter, do not attempt maintenance. Immediately contact the local hazard response agency, and contact Contech Engineered Services.

Below is a cut-away schematic of the Jellyfish Filter manhole with key components identified (6-ft diameter manhole is depicted).

FIGURE 1

Jellyfish Filter and Components



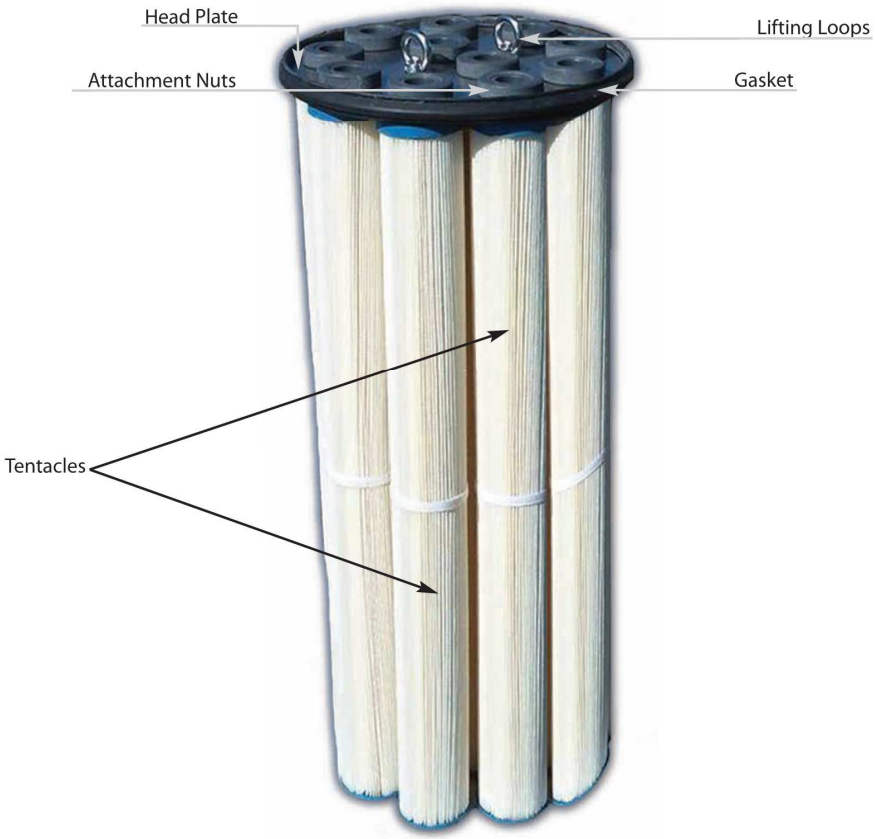
Note: Separator Skirt Not Shown

The Jellyfish Filter has no moving parts to wear out and therefore maintenance activities are generally focused on pollutant removal and filter cartridge service.

Below is a schematic of a Jellyfish Filter membrane filtration cartridge. Tentacles can be easily removed from the head plate and rinsed or replaced as needed.

FIGURE 2

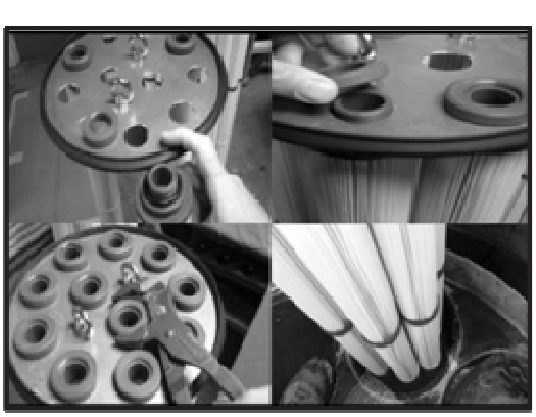
Jellyfish Membrane Filtration Cartridge



The depth of sediment and oil can be measured from the surface by using a sediment probe or dipstick tube equipped with a ball check valve and inserted through the Jellyfish Filter's maintenance access wall opening. The large opening provides convenient access for inspection and vacuum removal of water and pollutants.

A maintenance worker stationed on the surface uses a vacuum hose to evacuate water, sediment, and floatables from the Jellyfish Filter by inserting the vacuum wand through the maintenance access wall opening.

A view of a Jellyfish Filter cartridge deck from the surface showing all the cartridge lids intact and no standing water on the deck (left image), and inspection of the flexible separator skirt from inside the maintenance access wall opening (right image).



Assembly of a Jellyfish Filter cartridge (left) and installation of a filter cartridge into a cartridge receptacle in the deck (right).

Rinsing of dirty filter cartridge tentacles with a low-pressure garden hose sprayer, and using a plastic garbage container to capture rinse water.

The benefits of regular inspection and maintenance are many – from ensuring maximum operation efficiency, to keeping maintenance costs low, to the continued protection of natural waterways – and provide the key to the Jellyfish Filter's long and effective service life.

Ordering Replacement Parts

Jellyfish Filter cartridges, replacement tentacles, cartridge lids, and other system components can be ordered by contacting: **Contech Engineered Solutions, 1-800-548-4667**

Attachment 7H – Pilot-Scale Field Testing Plan

The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

Section not applicable to this project.

Attachment 7I – Measures for Minimizing Surface Stream Contamination

The BMPs utilized to reduce the effect of the increased runoff factor and to mitigate stream flashing, excessive velocities and to control erosion produced by increased imperviousness of the site are as follows:

- Rain Garden
- Retention Pond and Re-Irrigation
- Contech Jellyfish Filter System

BMPs proposed to reduce the increase of pollutants in surface streams are discussed above in "Attachment 7D." Estimations for stormwater runoff were accomplished using HEC-HMS. The summary of the calculations from the model are contained in the construction drawings.

According to Section 1.6.8 of the City of Austin's Environmental Criteria Manual, the two-year storm event results in bank-full conditions in natural channels in undeveloped watersheds. The development of a watershed will increase the amount of runoff caused from this storm. As a result, streams and natural channels are subject to greatly increased erosion and transport of sediment. Therefore, on-site control of the two-year storm is required per Section 25-7-61 of the City of Austin's Land Development Code. On-site control of the two-year storm is achieved when the developed conditions peak runoff rate leaving the site for a given drainage area is less than or equal to the existing conditions runoff rate. The BMP's proposed for this project help reduce the rate of runoff leaving the site. However, control of the two-year storm is incorporated within the proposed detention pond down-gradient of these controls. The existing flowrate from the site for the two-year storm event is 15.25 cfs. The proposed flowrate for the two-rate storm event is 14.28 cfs.

Section VIII

Agent Authorization Form (TCEQ-0599)

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Matt Lingafelter,
Print Name

City Administrator,
Title - Owner/President/Other

of City of Sunset Valley,
Corporation/Partnership/Entity Name

have authorized Robert W. Scholz, PE
Print Name of Agent/Engineer

of Halff Associates, Inc.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

5/14/24
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Matt Lingafelter known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 14 day of May, 2024

MELISSA MARQUEZ
Notary Public, State of Texas
Comm. Expires 10-05-2025
Notary ID 133371377

NOTARY PUBLIC

Melissa Marquez
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 10/5/25

Section IX

Application Fee Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: City of Sunset Valley
Regulated Entity Location: 3205 Jones Road
Name of Customer: City of Sunset Valley
Contact Person: _____ Phone: _____
Customer Reference Number (if issued):CN 600694970
Regulated Entity Reference Number (if issued):RN 103168001

Austin Regional Office (3373)

☐ Hays ☒ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	11.784 Acres	$ 6,500
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 05/24/2024

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

Section X

Core Data Form (TCEQ-10400)

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)*

☒ Other **WPAP Modification**

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 600694970		**RN 103168001**

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* | *If new Customer, enter previous Customer below:*

City of Sunset Valley - Matt Lingafelter

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
		74621173	

11. Type of Customer:

☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☐ 0-20 ☒ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☐ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

3205 Jones Road

City	Sunset Valley	**State**	TX	**ZIP**	78745	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	mlingafelter@sunsetvalley.org

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(512) 892-1383		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Sunset Valley Police Station and Public Works Facility

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	3205 Jones Road							
	City	Sunset Valley	**State**	TX	**ZIP**	78745	**ZIP + 4**	
24. County								

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.2283		**28. Longitude (W) In Decimal:**	97.8108	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	13	42	97	48	39

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
9199	9221	921120	921120 (police classified as same)

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Municipal Government and Assembly; police department

34. Mailing Address:	**3205 Jones Road**							
	City	**Sunset Valley**	**State**	**TX**	**ZIP**	**78745**	**ZIP + 4**	
35. E-Mail Address:								

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 892-1383		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
		10000662		
☐ Municipal Solid Waste	☐ New Source Review Air	☒ OSSF	☐ Petroleum Storage Tank	☐ PWS
		10000662		
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

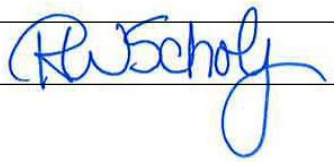
SECTION IV: Preparer Information

40. Name:	Robert W. Scholz	**41. Title:**	Vice President/Operations Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(361 **)** 400-0981		**( ) -**	rscholz@halff.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Halff Associates, Inc.	**Job Title:**	Vice President/Operations Manager
Name *(In Print):*	Robert W. Scholz	**Phone:**	**(** 361 **)** 400- **0981**
Signature:		**Date:**	05/24/2024

SITE PLANS FOR

POLICE STATION & PUBLIC WORKS FACILITY

CITY OF SUNSET VALLEY

3205 JONES ROAD
SUNSET VALLEY, TEXAS 78745

OWNER APPLICANT
CITY OF SUNSET VALLEY
3205 JONES ROAD
SUNSET VALLEY, TEXAS 78745
(512) 892-1383

ARCHITECT
BRINKLEY SARGENT WIGINTON
611 SOUTH CONGRESS, SUITE 225
AUSTIN, TEXAS 78704
(512) 610-4700

CIVIL ENGINEER
HALFF ASSOCIATES, INC.
9500 AMBERGLEN BOULEVARD, BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
(512) 777-4600

UTILITY PROVIDERS

WATER:
SUNSET VALLEY PUBLIC WORKS - (512) 891-9103

WASTEWATER:
SUNSET VALLEY PUBLIC WORKS - (512) 891-9103

ELECTRIC:
AUSTIN ENERGY - (512) 494-9400

BENCHMARK NOTE:

TBM - 01: SQUARE CUT IN SOUTHEAST CORNER OF INLET AT THE INTERSECTION OF JONES ROAD AND LONE OAK TRAIL.
ELEV = 679.80'

TBM - 02: SQUARE CUT BACK OF CURB AT THE EAST END OF ISLAND IN JONES ROAD.
ELEV = 681.11'

TBM - 03: SQUARE CUT IN BACK OF CURB AT THE INTERSECTION OF JONES ROAD AND THE WEST ROW OF ERNEST ROBLES WAY
ELEV = 699.10'

PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF TWO 1-STORY BUILDINGS TOTALING APPROXIMATELY 13,665 SQ. FT. ON AN 11.784-ACRE SITE WITH ASSOCIATED PARKING, UTILITY, WATER QUALITY, AND DETENTION IMPROVEMENTS. THE TOTAL IMPERVIOUS COVER IS 17.86%.

PROJECT INFORMATION:

PROPOSED USE: MUNICIPAL GOVERNMENT & EMERGENCY SERVICES

1. ZONING: GOVERNMENT, UTILITY, AND INSTITUTIONAL (GUI).
2. THE PROJECT LOCATION CONSISTS OF ONE (1) TRACT OF LAND THAT IS 11.784 AC.
3. LIMITS OF CONSTRUCTION: 12.003-ACRES
4. TOTAL IMPERVIOUS COVERAGE: 2.104-ACRES
5. LEGAL DESCRIPTION: REPLAT OF 11.784 ACRES SITUATED IN THE SUNSET VALLEY CITY HALL SUBDIVISION DOCUMENT NUMBER 201700014, IN THE OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS.

SITE INFORMATION NOTES:

1. A PORTION OF THE SITE LIES WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN AS IDENTIFIED BY THE FLOOD INSURANCE RATE MAP PANEL NO. 48453C0580H AND NO. 48453C0585H, DATED SEPTEMBER 26, 2008.
2. THE PROJECT IS LOCATED ENTIRELY WITHIN THE EDWARDS AQUIFER RECHARGE ZONE. A MODIFICATION TO THE EXISTING WATER POLLUTION ABATEMENT PLAN WILL BE REQUIRED.

The following Zoning Variances were approved by the Board of Adjustment on January 11, 2017: (1)

a) From Section 2.505 (b)(1) to not require a minimum 100-foot landscape buffer for both the east and west side of the property with the condition that on the west side the applicant comply with landscaping requirements by installing required buffering on the applicant's adjacent property, and compliance with all drainage requirements.

b) From Section 2.1004 to not require a 20-foot side setback for the west side of the property for the new proposed Police Facility.

c) From Section 2.1004 to not require a 50-foot front setback from Jones Road.

The following variances were approved by the City Council on April 18, 2017:

a) A variance from Section 10.102 to not provide 1 parking space be required for every 300-square foot of floor area. There will be an increase of 24 parking spaces for a total of 53 at the site, which is less than the 73 required by code.

b) A variance from Section 16.201 to allow for the removal of a heritage Mesquite Tree and a heritage Mountain Laurel tree with replacement trees provided at a 2 to 1 ration

c) A variance from Section 4.402 to allow for 86% removal of suspended solids for Drainage Area D.

CITY OF AUSTIN GRID: F19 | LOCATION / ZONING MAP 1"=1000' (APPROX.) | MAPSCO GRID: 613Y

Sheet List Table

APPROVAL FOR ACCEPTANCE:

APPROVED BY:
ROSE CARDONA, MAYOR (DATE)
CITY OF SUNSET VALLEY

APPROVED BY:
CITY OF AUSTIN FIRE DEPARTMENT (DATE)

APPROVED BY:
AUSTIN WATER (DATE)

APPROVED BY:
McCOMIS (DATE)

CIVIL ENGINEER

HALFF
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

REVISIONS / CORRECTIONS

No.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) Sheet No.'s	CITY OF SUNSET VALLEY APPROVAL / DATE
R1	5/24/2024 WQ POND CHANGES AND IRRIGATION AREA ADDITION BY RWS	(R) C9, C16, C21-25, (A) I103	

811 Know what's below. Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

BRINKLEY SARGENT WIGINTON ARCHITECTS

History

#	Date	Description
1	12/20/17	SI-1

STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER
12/20/2017

Sheet Name

COVER SHEET

21607
2017-12-20

FOR CONSTRUCTION

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL CALL THE ONE CALL CENTER (1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.
2. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, AUSTIN TEXAS.)
3. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
4. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATIONS AND DETAILS, UNLESS APPROVED OTHERWISE WITHIN THIS CONSTRUCTION PLAN SET.

CITY OF AUSTIN ELECTRIC UTILITY NOTES

1. AUSTIN ENERGY HAS THE RIGHT TO PRUNE AND/OR REMOVE TREES, SHRUBBERY, AND OTHER OBSTRUCTIONS TO THE EXTENT NECESSARY TO KEEP THE EASEMENTS CLEAR. AUSTIN ENERGY WILL PERFORM ALL TREE WORK IN COMPLIANCE WITH CHAPTER 25-8, SUBCHAPTER B OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
2. THE OWNER/DEVELOPER OF THE SUDIVISION/LOT SHALL PROVIDE AUSTIN ENERGY WITH ANY EASEMENT AND/OR ACCESS REQUIRED, IN ADDITION TO THOSE INDICATED FOR THE INSTALLATION AND ONGOING MAINTENANCE OF OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES. THESE EASEMENTS AND/OR ACCESS ARE REQUIRED TO PROVIDE ELECTRIC SERVICE TO THE BUILDING(S) AND WILL NOT BE LOCATED SO AS TO CAUSE THE SITE TO BE OUT OF COMPLIANCE WITH CHAPTER 25-8 OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
3. THE OWNER SHALL BE RESPONSIBLE FOR ANY INSTALLATION OF TEMPORARY EROSION CONTROL, REVEGETATION, AND TREE PROTECTION. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR ANY TREE PRUNING AND TREE REMOVAL THAT IS WITHIN TEN FEET OF THE CENTERLINE OF THE OVERHEAD ELECTRICAL FACILITIES DESIGNED TO PROVIDE ELECTRIC SERVICE TO THIS PROJECT. THE OWNER SHALL INCLUDE AUSTIN ENERGY'S WORK WITHIN THE LIMITS OF CONSTRUCTION FOR THIS PROJECT.
4. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR MAINTAINING CLEARANCES REQUIRED BY THE NATIONAL ELECTRIC SAFETY CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. CITY OF AUSTIN RULES AND REGULATIONS AND TEXAS STATE LAWS PERTAINING TO CLEARANCES WHEN WORKING IN CLOSE PROXIMITY TO OVERHEAD POWER LINES AND EQUIPMENT. AUSTIN ENERGY WILL NOT RENDER ELECTRIC SERVICE UNLESS REQUIRED CLEARANCES ARE MAINTAINED. ALL COSTS INCURRED BECAUSE OF FAILURE TO COMPLY WITH THE REQUIRED CLEARANCES WILL BE CHARGED TO THE OWNER.

AMERICANS WITH DISABILITIES ACT

THE CITY OF AUSTIN HAS REVIEWED THIS PLAN FOR COMPLIANCE WITH CITY DEVELOPMENT REGULATIONS ONLY. THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

CITY OF SUNSET VALLEY EROSION AND SEDIMENTATION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF SUNSET VALLEY STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE CITY COUNCIL OF SUNSET VALLEY. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. CONTRACTOR MUST FOLLOW TCEQ APPROVAL GUIDELINES AND REGULATIONS, IN ADDITION TO EPA-NPDES GUIDELINES FOR DUST CONTROL AS WELL AS EROSION-SEDIMENTATION CONTROL WHICH ARE APPLICABLE TO THIS PROJECT. IN ADDITION,
   - A. BARE SOILS WILL BE WATERED DURING WINDY PERIODS,
   - B. DUST WILL BE REMOVED FROM CONSTRUCTION SITE AS FEASIBLE.
9. ANY POTENTIAL CEF'S ON THIS SITE, AS IDENTIFIED BY THE GEOLOGICAL REPORT, HAVE BEEN DEEMED TO BE EROSIONAL FEATURES AND NOT CRITICAL FEATURES.
10. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF SUNSET VALLEY ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
11. ALL FILL MATERIAL TO BE USED IN THE CONSTRUCTION OF THIS SITE WILL BE CERTIFIED BY THE OWNER/CONTRACTOR TO BE FREE OF TOXIC SUBSTANCES OR MATERIALS. SHOULD ANY OTHER NON-SELECT MATERIAL BE TRANSPORTED TO THE SITE THE SOURCE OF SUCH MATERIAL WILL BE PROVIDED TO THE CITY OF SUNSET VALLEY.
12. SITE FILL MATERIAL SHOULD BE FREE OF ORGANIC DEBRIS AND ROCKS LARGER THAN 9 INCHES IN DIAMETER. LARGER ROCKS SHOULD BE REMOVED OR BROKEN DOWN PRIOR TO USE FOR FILL MATERIAL.
13. ANY CONSTRUCTION SITE SOILS, SILT, SEDIMENT OR CONSTRUCTION MATERIAL IN THE GUTTERS OF HOMESTEAD ENTRY DRIVE AND BRODIE LANE WILL BE REMOVED BY THE END OF EACH WORK DAY.

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: (WESTERN WHEATGRASS (PASCOPYRUM SMITHII) AT 5.6 POUNDS PER ACRE, OATS (AVENA SATIVA) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRAIN (SECALE CEREALE) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEMS 604S OR 609S.
   - A. FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S, FERTILIZER. FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
   - B. HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
   - C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   - D. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, AND STANDARD SPECIFICATIONS 604S OR 609S.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

Material	Description	Longevity	Typical Applications	Application Rates
100% or any blend of wood, cellulose, straw, and/or cotton plant material (except no mulch shall exceed 30% paper)	70% or greater Wood/Straw 30% or less Paper or Natural Fibers	0-3 months	Moderate slopes; from flat to 3:1	1500 to 2000 lbs per acre

PERMANENT VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEMS 604S OR 609S.
   - A. FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER. APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
   - B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
   - C. WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOIST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
   - D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 16 SQUARE FEET.
   - E. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS 604S AND 609S.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

Material	Description	Longevity	Typical Applications	Application Rates
Bonded Fiber Matrix (BFM)	80% Organic defibrated fibers			
10% Tackifier	On slopes up to 2:1 and erosive soil conditions	6 months	2,500 to 4,000 lbs per acre (see manufacturers recommendations)	
Fiber Reinforced Matrix (FRM)	70% or greater Wood/Straw 30% or less Paper or Natural Fibers	Up to 12 months	On slopes up to 1:1 and erosive soil conditions	3000 to 4500 lbs per acre (see manufacturers recommendations)

CITY OF SUNSET VALLEY STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS AS ADOPTED BY THE CITY OF SUNSET VALLEY FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   - A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   - B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ARBORIST;
   - C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   - D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
6. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   - A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
   - B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE).
   - C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;

   SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.
7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
8. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
13. ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
14. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

SEQUENCE OF CONSTRUCTION

1. CONTACT THE DIRECTOR OF PUBLIC WORKS AT (512) 892-1383 TO ARRANGE A PRECONSTRUCTION MEETING.
2. INSTALL EROSION CONTROLS AS INDICATED ON APPROVED CONSTRUCTION PLANS.
3. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.
4. ATTEND PRE-CONSTRUCTION MEETING.
5. EROSION CONTROLS TO BE REVISED, IF NEEDED, TO COMPLY WITH INSPECTOR'S DIRECTIVES.
6. BEGIN SITE CLEARING AND DEMOLITION.
7. TEMPORARY EROSION CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED.
8. ROUGH GRADE SITE.
9. CONSTRUCT SITE UTILITIES AND INSTALL SERVICES.
10. CONSTRUCT PAVING, PARKING, AND BUILDING ACCESS.
11. COMPLETE CONSTRUCTION AND INSTALL LANDSCAPING.
12. REVEGETATE DISTURBED AREAS FOR THE REVEGETATION. FINAL ACCEPTANCE WILL TAKE PLACE AFTER SITE REVEGETATION IS COMPLETE.
13. PERMANENT CONTROLS WILL BE CLEANED OUT DURING CONSTRUCTION AND AFTER VEGETATION OF THE SITE.
14. PROJECT ENGINEER INSPECTS JOB AND WRITES CONCURRENCE LETTER TO THE CITY. FINAL INSPECTION IS SCHEDULED UPON RECEIPT OF LETTER.
15. RECEIVE CITY APPROVAL AND ACCEPTANCE.
16. REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS.

SPECIAL CONSTRUCTION TECHNIQUES COA ECM 3.5.4(D)

1. PRIOR TO EXCAVATION WITHIN TREE DRIPLINES OR THE REMOVAL OF TREES ADJACENT TO OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
2. IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH A MINIMUM OF 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. IN AREAS WITH HIGH SOIL PLASTICITY GEOTEXTILE FABRIC, PER STANDARD SPECIFICATION 620S, SHOULD BE PLACED UNDER THE MULCH TO PREVENT EXCESSIVE MIXING OF THE SOIL AND MULCH. ADDITIONALLY, MATERIAL SUCH AS PLYWOOD AND METAL SHEETS, COULD BE REQUIRED BY THE CITY ARBORIST TO MINIMIZE ROOT IMPACTS FROM HEAVY EQUIPMENT. ONCE THE PROJECT IS COMPLETED, ALL MATERIALS SHOULD BE REMOVED, AND THE MULCH SHOULD BE REDUCED TO A DEPTH OF 3 INCHES.
3. PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
4. WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.

DEVELOPER INFORMATION:

OWNER: CITY OF SUNSET VALLEY ADDRESS: 3205 JONES RD, SUITE 107, SUNSET VALLEY, TX 78745

PHONE #: 512-892-1383

APPLICANT: CITY OF SUNSET VALLEY ADDRESS: 3205 JONES RD, SUITE 107, SUNSET VALLEY, TX 78745

PHONE #: 512-892-1383

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:

______ ________________ PHONE#: ________________

PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:

______ ________________ PHONE#: ________________

PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:

______ ________________ PHONE#: ________________

THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE DEVELOPMENT SERVICES DEPARTMENT AT 974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - A. THE NAME OF THE APPROVED PROJECT;
   - B. THE ACTIVITY START DATE; AND
   - C. THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   - A. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   - B. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   - C. AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
   - A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
   - B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
   - C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE	SAN ANTONIO REGIONAL OFFICE
12100 PARK 35 CIRCLE, BLDG. A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
ORGANIZED SEWAGE COLLECTION SYSTEM
GENERAL CONSTRUCTION NOTES

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SCS PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.
3. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - -- THE NAME OF THE APPROVED PROJECT;
   - -- THE ACTIVITY START DATE; AND
   - -- THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.
5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TCEQ OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING AND THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
7. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.
8. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.
9. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

   THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED ON PLAN SHEET __ OF __.

   IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.
10. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
11. WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER: ____________________.

   IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED: ____________________.

   SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.
12. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

   IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET __ OF __. (FOR POTENTIAL FUTURE LATERALS).

   THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET __ OF __ AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET __ OF __.
13. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.
14. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).
15. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:

(a) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

(1) *LOW PRESSURE AIR TEST.*

(A) A LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.

(B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.

(I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.

(II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:

EQUATION C.3

$$T=\frac{0.085\times D\times K}{Q}$$

WHERE:

T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

PIPE DIAMETER (in)	MINIMUM TIME (sec)	MAXIMUM LENGTH FOR MINIMUM TIME (ft)	TIME FOR LONGER LENGTH (sec/ft)
6	340	398	0.8550
8	454	298	1.5200
10	567	239	2.3740
12	680	199	3.4190
15	850	159	5.3420
18	1020	133	7.6930
21	1190	114	10.4710
24	1360	100	13.6760
27	1530	88	17.3090
30	1700	80	21.3690
33	1870	72	25.8560

(D)AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.

(E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.

(F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.

(G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

(2) *INFILTRATION/EXFILTRATION TEST.*

(A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.

(B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.

(C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.

(D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARAGRAPH (C) OF THIS PARAGRAPH.

(E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.

(a) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:

(1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.

(A) *MANDREL SIZING.*

(I) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.

(II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.

(III) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.

(B) MANDREL DESIGN.

(I) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.

(II) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.

(III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.

(IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.

(C) *METHOD OPTIONS.*

(I) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.

(II) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.

(III) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.

(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.

(3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.
(4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.
(5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).
(6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

1. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.
   (A) ALL MANHOLES MUST PASS A LEAKAGE TEST.
   (B) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.

   (1) HYDROSTATIC TESTING.

   (A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.

   (B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.

   (C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.

   (2) VACUUM TESTING.

   (A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.

   (B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.

   (C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.

   (D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.

   (E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

   (F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.

   (G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.

   (H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.
2. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

HALFF®
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TBPE FIRM #F-312

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Know what's **below.**
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THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect:	Brinkley Sargent Wiginton Architects	(972) 960-9970
Civil:	HALFF Associates, Inc.	(512) 777-4600
Structural:	JQ & Associates	(512) 474-9094
MEP:	Hendrix Consulting Engineers	(512) 218-0060
Landscape:	HALFF Associates, Inc.	(512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS
SITE
3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

#	Date	Description

ROBERT W. SCHOLZ
91151
11/08/2017

Sheet Name

GENERAL NOTES

21607
2017–11–08
C001

FOR CONSTRUCTION

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$75.00

1-12-2017

201700014

STATE OF TEXAS
COUNTY OF TRAVIS

KNOW ALL MEN BY THESE PRESENTS THAT THE CITY OF SUNSET VALLEY, ACTING HEREIN AND THROUGH ROSE A. CORDONA , AUTHORIZED SIGNATORY; OWNER OF 11.78 ACRES OF LAND LOCATED IN THE THEODORE BISSLE LEAGUE SURVEY NUMBER 18, IN THE CITY OF SUNSET VALLEY, TRAVIS COUNTY, TEXAS, BEING COMPOSED OF LOT 1, SUNSET VALLEY SUBDIVISION, A SUBDIVISION OF RECORD IN DOCUMENT NUMBER 200100281, OFFICIAL PUBLIC RECORDS, TRAVIS COUNTY, TEXAS, AND A 0.998 ACRE PORTION OF LOT 1, HUEBNER ESTATES, CONVEYED TO THE CITY OF SUNSET VALLEY AND DESCRIBED IN DOCUMENT NUMBER 2002146367, OFFICIAL PUBLIC RECORDS, TRAVIS COUNTY, TEXAS, AND DO HEREBY REPLAT SAID TRACT PURSUANT TO CHAPTER 232 OF THE LOCAL GOVERNMENT CODE OF TEXAS, IN ACCORDANCE WITH THIS REPLAT, TO BE KNOWN AS "SUNSET VALLEY CITY HALL SUBDIVISION" A REPLAT OF LOT 1, SUNSET VALLEY SUBDIVISION, A SUBDIVISION OF RECORD IN DOCUMENT NUMBER 200100281, OFFICIAL PUBLIC RECORDS, TRAVIS COUNTY, TEXAS, AND A 0.998 ACRE PORTION OF LOT 1, HUEBNER ESTATES, CONVEYED TO THE CITY OF SUNSET VALLEY AND DESCRIBED IN DOCUMENT NUMBER 2002146367, OFFICIAL PUBLIC RECORDS, TRAVIS COUNTY, TEXAS, SUBJECT TO THE COVENANTS AND RESTRICTIONS SHOWN HEREON, AND HEREBY DEDICATES TO THE PUBLIC, THE USE OF ALL THE STREETS AND EASEMENTS SHOWN HEREON.

WITNESS MY HAND THIS 05 DAY OF OCTOBER 2016 A.D.

BY: Rose A. Cardona — 10-05-16
AUTHORIZED SIGNATORY — DATE
CITY OF SUNSET VALLEY
3205 JONES ROAD
SUNSET VALLEY, TRAVIS COUNTY
TEXAS 78745

STATE OF TEXAS
COUNTY OF TRAVIS

BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED ROSE A. CORDONA. KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

Rae Dene Greenough
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISION EXPIRES: 2/26 2018 A.D.

RAE GENE GREENOUGH NOTARY PUBLIC STATE OF TEXAS 02-26-2018

ACCORDING TO THE F.E.M.A. MAP NO. 48453C0585H, DATED SEPTEMBER 26, 2008, THE SUBJECT PROPERTY SHOWN HEREON LIES WITHIN:

OTHER FLOOD AREAS:
ZONE X. (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD)

OTHER AREAS:
ZONE X. (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.)

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD.
THE 1% ANNUAL CHANCE FLOOD (100-YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. THE BASE FLOOD ELEVATION IS THE WATER-SURFACE ELEVATION OF THE 1% ANNUAL CHANCE FLOOD.
ZONE AE. (BASE FLOOD ELEVATIONS DETERMINED)

FLOODWAY AREAS IN ZONE AE:
THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS.

FLOODWAY AREAS IN ZONE AE:
THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS.

I, KEITH A. MOODY, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS, TO PRACTICE THE PROFESSION OF ENGINEERING, AND DO HEREBY CERTIFY THAT THIS PLAT IS FEASIBLE FROM AN ENGINEERING STANDPOINT, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

10/3/16

KEITH A. MOODY, P.E.
REGISTERED PROFESSIONAL ENGINEER NO. 87829
RPS
4801 SW PARKWAY 2, STE 150
AUSTIN TEXAS 78735
TBPE FIRM #F-293

STATE OF TEXAS 87829 KEITH A. MOODY LICENSED PROFESSIONAL ENGINEER

STATE OF TEXAS
COUNTY OF TRAVIS

KNOW ALL MEN BY THESE PRESENTS:

I, JOHN E BRAUTIGAM, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED FROM AN AN ACTUAL SURVEY OF THE PROPERTY MADE ON THE GROUND UNDER MY SUPERVISION.

9-29-16
DATE

STATE OF TEXAS JOHN E BRAUTIGAM 5057 REGISTERED PROFESSIONAL LAND SURVEYOR

JOHN E BRAUTIGAM
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 5057 STATE OF TEXAS
DELTA SURVEY GROUP, INC.
8213 BRODIE LANE, STE 102
AUSTIN, TEXAS 78745
TBPLS FIRM NO. 10004700

THE CITY COUNCIL OF THE CITY OF SUNSET VALLEY HAS FOUND THIS FINAL PLAT CONFORMS TO ALL REQUIREMENTS OF THE SUBDIVISION REGULATIONS AND OTHER REVELANT REGULATIONS OF THE CITY OF SUNSET VALLEY. THIS SUBDIVISION PLAT IS HEREBY ACCEPTED AND AUTHORIZED FOR RECORDING BY THE CITY COUNCIL OF THE CITY OF SUNSET VALLEY,

THIS THE 05 DAY OF OCTOBER 2016 A.D.

Rose A. Cardona
ROSE CARDONA
MAYOR OF THE CITY OF SUNSET VALLEY

STATE OF TEXAS:
COUNTY OF TRAVIS:

I, DANA DEBEAUVOIR, CLERK OF THE COUNTY COURT, OF TRAVIS COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THE ___DAY OF _____, 201 __ A.D., THE COMISSIONERS' COURT OF TRAVIS COUNTY, TEXAS, PASSED AN ORDER AUTHORIZING THE FILING FOR RECORD OF THIS PLAT AND THAT SAID ORDER WAS DULY ENTERED IN THE MINUTES OF SAID COURT.

WITNESS MY HAND AND SEAL OF OFFICE OF THE COUNTY COURT OF SAID COUNTY, THE ___ DAY OF _____, 201__ A.D.

DANA DEBEAUVOIR, COUNTY CLERK
TRAVIS COUNTY, TEXAS

_____
DEPUTY

STATE OF TEXAS:
COUNTY OF TRAVIS:

I, DANA DEBEAUVOIR, CLERK OF TRAVIS COUNTY, TEXAS DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING AND ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE 12TH DAY OF JANUARY, 201 7, A.D., AT 2:49 O'CLOCK P M., DULY RECORDED ON THE 12TH DAY OF JANUARY, 201 7, A.D., AT 2:49 O'CLOCK P M., PLAT RECORDS OF SAID COUNTY AND STATE IN DOCUMENT NO. 201700014 OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY.

WITNESS MY HAND AND SEAL OF OFFICE OF THE COUNTY CLERK, THIS 12th DAY OF January, 2017, A.D.

DANA DEBEAUVOIR, COUNTY CLERK,
TRAVIS COUNTY, TEXAS.
DEPUTY D. Bartholomew
D. BARTHOLOMEW

THIS PROPERTY IS LOCATED WITHIN THE CITY LIMITS OF SUNSET VALLEY, TEXAS AND IS NOT LOCATED IN THE E.T.J.

Delta Survey Group Inc.
8213 Brodie Lane Ste. 102 Austin, TX. 78745
office: (512) 282-5200 fax: (512) 282-5230
TBPLS Firm No. 10004700

SUNSET VALLEY CITY HALL SUBDIVISION

SHEET 1 OF 2

201700014

CURVE	RADIUS	ARC	CHORD	BEARING	DELTA
C1	105.00'	44.39'	44.06'	S 22°20'13" E	24°13'17"
C2	105.00'	111.33'	106.19'	S 40°25'51" E	60°44'56"
C3	100.00'	58.68'	57.84'	S 54°00'02" E	33°37'14"
C4	75.00'	67.03'	64.84'	S 62°52'28" E	51°13'29"
C5	75.00'	36.23'	35.88'	S 74°32'00" E	27°40'46"
C6	100.00'	84.41'	81.93'	S 84°55'43" E	48°21'58"
C7	50.00'	10.65'	10.63'	N 77°08'43" E	12°12'18"

LINE	BEARING	DISTANCE
L1	S 60°21'40" E	7.82'
L2	S 37°01'57" E	20.76'
L3	S 88°31'54" E	23.11'
L4	S 60°41'47" E	39.07'
L5	N 70°58'24" E	34.72'

201700014

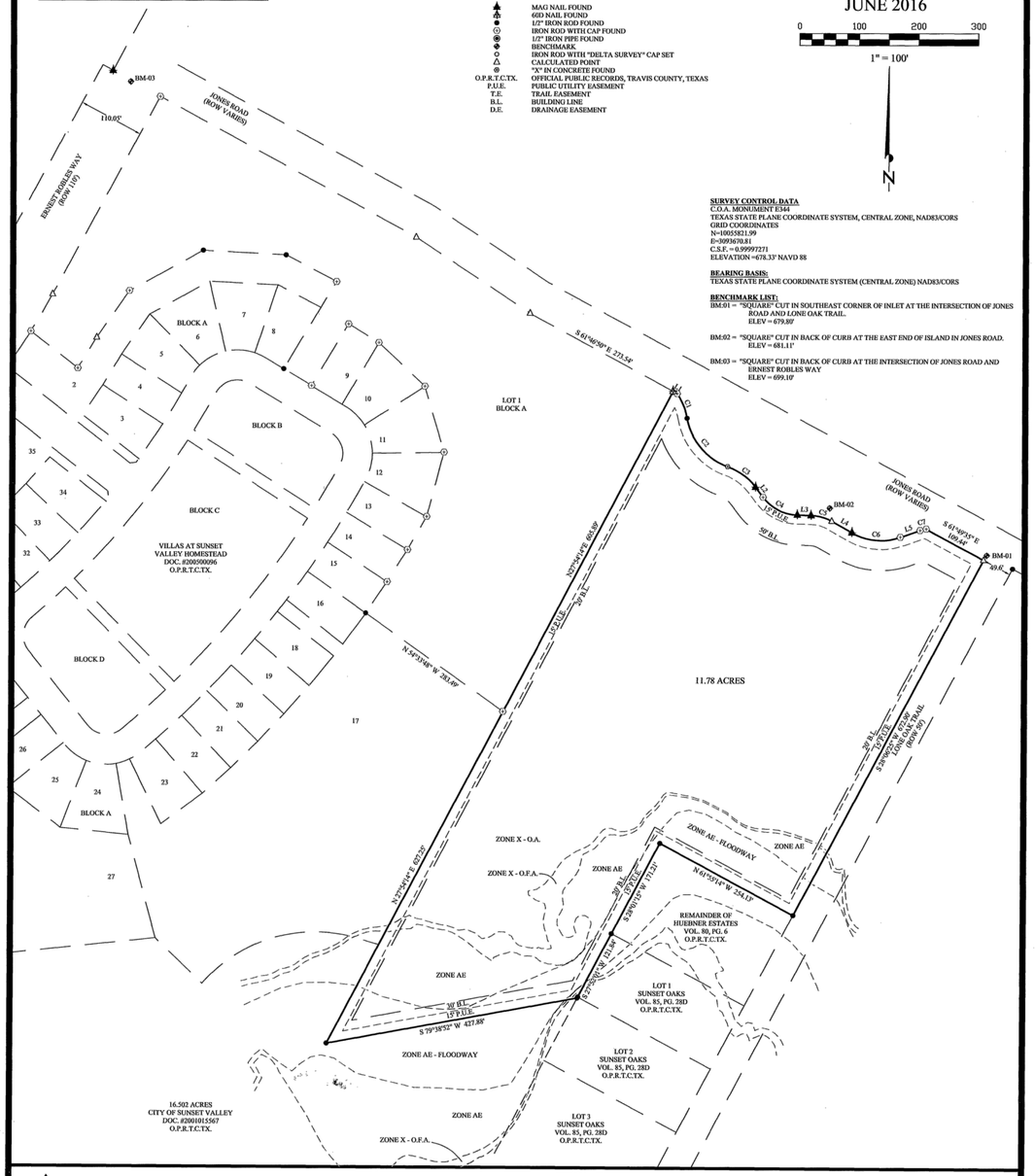
THEODORE BISSELL LEAGUE SURVEY NUMBER 18 CITY OF SUNSET VALLEY TRAVIS COUNTY, TEXAS JUNE 2016

0 100 200 300
1" = 100'

N

LEGEND

▲	MAG NAIL FOUND
▲	6D NAIL FOUND
●	1/2" IRON ROD FOUND
⊙	IRON ROD WITH CAP FOUND
◉	1/2" IRON PIPE FOUND
✦	BENCHMARK
○	IRON ROD WITH "DELTA SURVEY" CAP SET
△	CALCULATED POINT
⊕	"X" IN CONCRETE FOUND
O.P.R.T.C.TX.	OFFICIAL PUBLIC RECORDS, TRAVIS COUNTY, TEXAS
P.U.E.	PUBLIC UTILITY EASEMENT
T.E.	TRAIL EASEMENT
B.L.	BUILDING LINE
D.E.	DRAINAGE EASEMENT



SURVEY CONTROL DATA
C.O.A. MONUMENT 8344
TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NAD83/CORS
GRID COORDINATES
N=10055821.99
E=3093670.81
C.S.F. = 0.99997271
ELEVATION =678.33' NAVD 88

BEARING BASIS:
TEXAS STATE PLANE COORDINATE SYSTEM (CENTRAL ZONE) NAD83/CORS

BENCHMARK LIST:
BM.01 = "SQUARE" CUT IN SOUTHEAST CORNER OF INLET AT THE INTERSECTION OF JONES ROAD AND LONE OAK TRAIL.. ELEV = 679.80'

BM.02 = "SQUARE" CUT IN BACK OF CURB AT THE EAST END OF ISLAND IN JONES ROAD. ELEV = 681.11'

BM.03 = "SQUARE" CUT IN BACK OF CURB AT THE INTERSECTION OF JONES ROAD AND ERNEST ROBLES WAY ELEV = 699.10'

Delta Survey Group Inc.
8213 Brodie Lane Ste. 102 Austin, TX. 78745
office: (512) 282-5200 fax: (512) 282-5230
TBPLS Firm No. 10004700

SUNSET VALLEY CITY HALL SUBDIVISION

SHEET 2 OF 2

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JG & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

BRINKLEY SARGENT WIGINTON ARCHITECTS

HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

811 Know what's below. Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

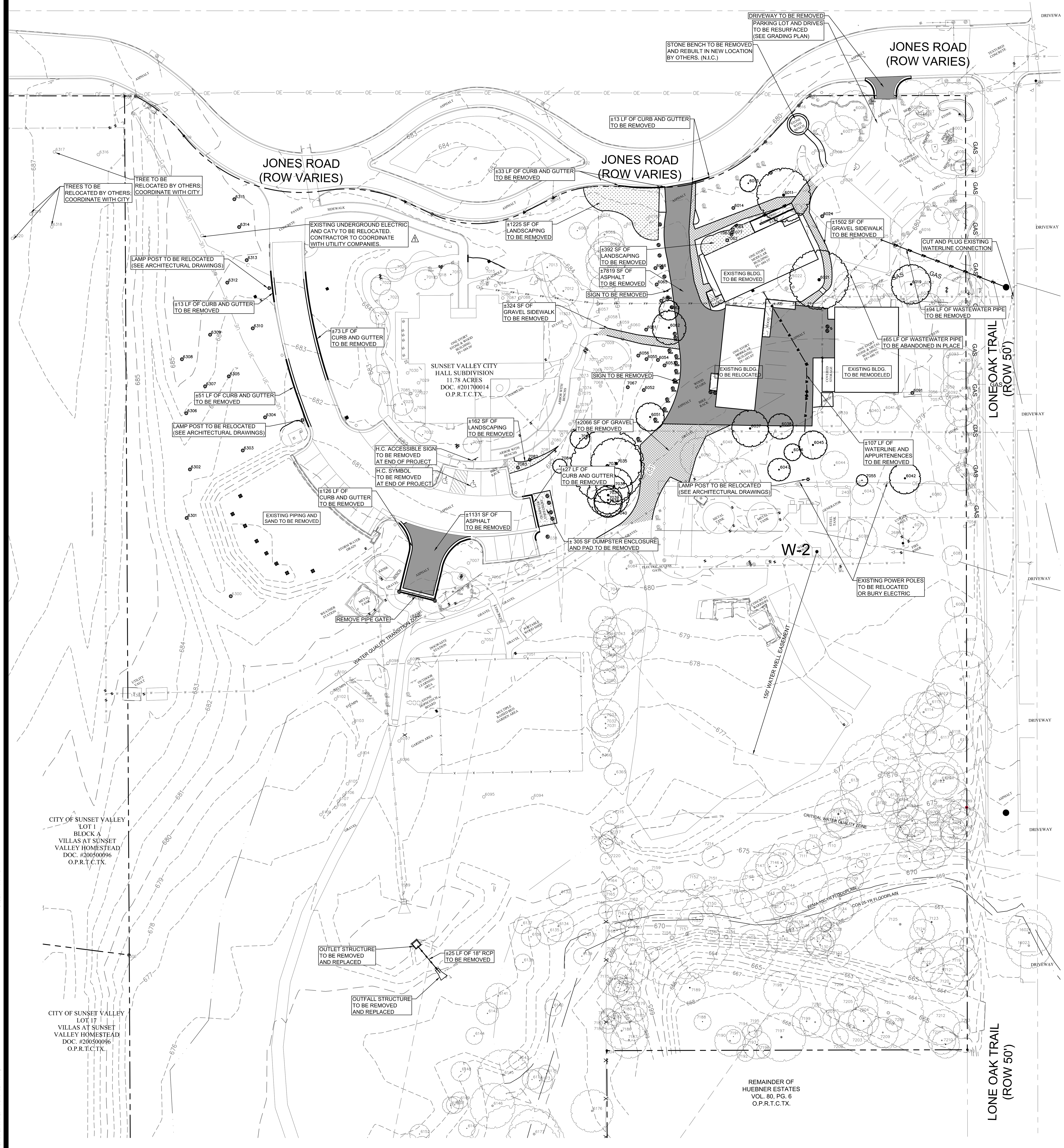
History

#	Date	Description

Sheet Name
PLAT

21607
2017-11-08
C002

FOR CONSTRUCTION



LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- BOUNDARY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMNT
- OVERHEAD ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING FORCE MAIN
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING TELEPHONE LINE
- EXISTING WASTEWATER LINE
- EXISTING WATER LINE
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- ROCK TO BE REMOVED
- TREE TO REMAIN
- TREE TO BE REMOVED
- ASPHALT TO BE REMOVED
- GRAVEL TO BE REMOVED
- CONCRETE TO BE REMOVED
- LANDSCAPING TO BE REMOVED
- W-2 • MANMADE GEOLOGIC FEATURE

TREE LIST

	6001	SPANISH OAK 5"
	6002	ORNAMENTAL
	6003	LIVE OAK 26"16"
	6004	ORNAMENTAL
	6005	CEDAR ELM 15"7"5"
	6006	ASH 14"
	6007	MONTEREY OAK 13"
	6008	ORNAMENTAL
	6009	ORNAMENTAL
	6010	ORNAMENTAL
R	6011	ASH 19"
	6012	ORNAMENTAL
	6013	SOAPBERRY 6"
	6014	ORNAMENTAL
	6015	MONTEREY OAK 6"
	6016	CEDAR ELM 21"
	6017	CEDAR ELM 16"
	6018	CEDAR ELM 8"
R	6019	BRADFORD PEAR 14"
	6020	POST OAK 14"
R	6021	CEDAR ELM 13"9"7"
	6022	BUR OAK 10"
	6023	POST OAK 4"
R	6024	ORNAMENTAL
	6025	ORNAMENTAL
	6026	ORNAMENTAL
	6027	ORNAMENTAL
	6028	ORNAMENTAL
	6029	ORNAMENTAL
	6030	ORNAMENTAL
	6031	ORNAMENTAL
	6032	ORNAMENTAL
	6033	ORNAMENTAL
	6034	ORNAMENTAL
	6035	ORNAMENTAL
	6036	ORNAMENTAL
R	6037	LIVE OAK 13"
R	6038	BUR OAK 9"
	6039	SYCAMORE 14"
	6040	SYCAMORE 9"
	6041	SYCAMORE 10"
R	6042	CEDAR 11"
	6043	SOAPBERRY 8"
	6044	MONTEREY OAK 10"
R	6045	LIVE OAK 10"
R	6046	REDBUD 6"
R	6047	MONTEREY OAK 8"
	6048	MONTEREY OAK 11"
	6049	REDBUD 13"
	6050	POST OAK 14"
R	6051	REDBUD 6"5"3"
R	6052	ORNAMENTAL
R	6053	ORNAMENTAL
R	6054	ORNAMENTAL
R	6055	ORNAMENTAL
R	6056	ORNAMENTAL
	6057	ORNAMENTAL
	6058	ORNAMENTAL
	6059	ORNAMENTAL
	6060	ORNAMENTAL
R	6061	ORNAMENTAL
R	6062	REDBUD 6"5"3"3"
R	6063	REDBUD 7"
R	6064	ORNAMENTAL
R	6065	ORNAMENTAL
R	6066	ORNAMENTAL
	6067	CEDAR ELM 6"
	6068	HACKBERRY 13"
	6069	HACKBERRY 11"
	6070	HACKBERRY 10"8"
	6071	HACKBERRY 14"
	6072	HACKBERRY 14"
	6073	CEDAR ELM 9"
	6074	ORNAMENTAL
	6075	ORNAMENTAL
	6076	ORNAMENTAL
R	6077	ORNAMENTAL
	6078	MIMOSA 9"9"
	6079	CEDAR 10"
	6080	MONTEREY OAK 11"
	6081	CEDAR 7"
	6082	CEDAR 7"
	6083	CHINA BERRY 13"9"
	6084	CHINA BERRY 10"5"
	6085	CEDAR 12"
	6086	POST OAK 14"
	6087	CEDAR 11"
	6088	POST OAK 12"
	6089	CEDAR 10"
	6090	CEDAR 10"
R	6091	ORNAMENTAL
	6092	ORNAMENTAL
	6093	ORNAMENTAL
	6094	ORNAMENTAL
	6095	ORNAMENTAL
	6096	ORNAMENTAL
	6097	ORNAMENTAL
	6098	ORNAMENTAL
	6099	ORNAMENTAL
	6100	ORNAMENTAL
	6101	ORNAMENTAL
	6102	ORNAMENTAL
	6103	ORNAMENTAL
	6104	ORNAMENTAL
	6105	ORNAMENTAL
	6106	ORNAMENTAL
	6107	ORNAMENTAL
	6108	ORNAMENTAL
	6109	ORNAMENTAL
	6110	MESQUITE 13"12"
	6111	LIVE OAK 20"
	6112	CEDAR ELM 7"4"
	6113	LIVE OAK 10"
	6114	LIVE OAK 14"
	6115	CEDAR ELM 16"
	6116	LIVE OAK 8"
	6117	LIVE OAK 10"
	6118	LIVE OAK 29"
	6119	LIVE OAK 6"
	6120	LIVE OAK 10"
	6121	LIVE OAK 13"
	6122	LIVE OAK 22"
	6123	CEDAR ELM 6"6"
	6124	LIVE OAK 15"
	6125	CEDAR ELM 13"
	6126	CEDAR ELM 9"
	6127	LIVE OAK 1"16"
	6128	LIVE OAK 6"
	6129	CEDAR ELM 6"
	6130	LIVE OAK 23"
	6131	HACKBERRY 6"
	6132	CEDAR ELM 8"
	6133	CEDAR ELM 6"
	6134	CHINA BERRY 11"
	6135	CHINA BERRY 9"
	6136	CEDAR ELM 7"
	6137	HACKBERRY 6"
	6138	HACKBERRY 6"
	6139	CEDAR ELM 6"
	6140	CEDAR ELM 6"
	6141	HACKBERRY 7"4"
	6142	HACKBERRY 8"
	6143	CEDAR ELM 7"
	6144	HACKBERRY 6"
	6145	CHINA BERRY 8"7"5"4"3"
	6146	CEDAR ELM 16"
	6147	CEDAR ELM 6"
	6148	CEDAR ELM 7"
	6149	CEDAR ELM 6"
	6150	CEDAR ELM 6"
	6151	CEDAR ELM 6"
	6152	CEDAR ELM 7"
	6153	CEDAR ELM 6"
	6154	CEDAR ELM 7"
	6155	CEDAR ELM 10"
	6156	CEDAR ELM 6"
	6157	CEDAR ELM 10"
	6158	CEDAR ELM 16"5"
	6159	CEDAR ELM 12"
	6160	CEDAR ELM 11"
	6161	CEDAR ELM 7"
	6162	CEDAR ELM 7"6"
	6163	CEDAR ELM 8"2"
	6164	CEDAR ELM 7"
	6165	CEDAR ELM 9"
	6166	CEDAR ELM 6"
	6167	CEDAR ELM 7"4"
	6168	CEDAR ELM 8"
	6169	CEDAR ELM 7"
	6170	HACKBERRY 7"
	6171	CEDAR ELM 11"
	6172	CEDAR ELM 19"
	6173	CEDAR ELM 9"
	6174	CEDAR ELM 7"
	6175	HACKBERRY 6"
	6176	CEDAR ELM 15"
	6177	LIVE OAK 18"
	6178	CEDAR ELM 20"
	6179	LIVE OAK 36"
	6180	CEDAR ELM 12"
	6181	LIVE OAK 22"
	6182	CEDAR ELM 6"
	6183	CEDAR ELM 6"
	6184	CEDAR ELM 9"
	6185	CEDAR ELM 11"8"
	6186	CEDAR ELM 12"11"
	6187	CEDAR ELM 16"
	6188	CEDAR ELM 9"
	6189	CEDAR ELM 7"
	6190	CEDAR ELM 16"
	6191	CEDAR ELM 15"
	6192	CEDAR ELM 7"
	6193	CEDAR ELM 6"
	6194	CEDAR ELM 8"
	6195	HACKBERRY 7"
	6196	CEDAR ELM 9"
	6197	CEDAR ELM 8"
	6198	CEDAR ELM 8"
	6199	CEDAR ELM 14"
	6200	CEDAR ELM 10"
	6201	CEDAR ELM 14"
	6202	CEDAR ELM 14"
	6203	CEDAR ELM 12"
	6204	CEDAR ELM 17"
	6205	HACKBERRY 6"
	6206	CEDAR ELM 13"3"2"
	6207	HACKBERRY 7"
	6208	HACKBERRY 9"
	6209	CHINA BERRY 8"
	6210	CHINA BERRY 8"
	6211	CEDAR ELM 14"
	6212	CEDAR ELM 14"
	6213	HACKBERRY 10"
	6214	HACKBERRY 7"
	6215	HACKBERRY 10"
	6216	HACKBERRY 7"
	6217	HACKBERRY 7"
	6218	CEDAR ELM 11"
	6219	CEDAR ELM 13"
	6220	CEDAR ELM 10"
	6221	CEDAR ELM 11"
	6222	CEDAR ELM 7"
	6223	CEDAR ELM 13"
	6224	CEDAR ELM 12"
	6225	CEDAR ELM 11"
	6226	CEDAR ELM 8"
	6227	CEDAR ELM 12"
	6228	CEDAR ELM 8"
	6229	CEDAR ELM 8"
	6230	CEDAR ELM 7"
	6231	CEDAR ELM 9"
	6232	CEDAR ELM 8"
	6233	CEDAR ELM 7"
	6234	CEDAR ELM 11"
	6235	CEDAR ELM 10"
	6236	CEDAR ELM 10"
	6237	CEDAR ELM 8"
	6238	CEDAR ELM 10"
	6239	CEDAR ELM 9"
	6240	CEDAR ELM 7"
	6241	CEDAR ELM 8"
	6242	CEDAR ELM 11"
	6243	CEDAR ELM 11"
	6244	CEDAR ELM 7"
	6245	CEDAR ELM 8"
	6246	CEDAR ELM 8"
	6247	CEDAR ELM 14"
	6248	CEDAR ELM 7"
	6249	CEDAR ELM 10"
	6250	CEDAR ELM 14"
	6251	CEDAR ELM 13"
	6252	CEDAR ELM 8"
	6253	GUM BULLY 10"
	6254	GUM BULLY 9"
	6255	CHINA BERRY 9"
	6256	HACKBERRY 7"
	6257	HACKBERRY 6"
	6258	HACKBERRY 8"
	6259	HACKBERRY 6"
	6260	CEDAR ELM 15"
	6261	HACKBERRY 7"
	6262	CHINA BERRY 11"
	6263	CHINA BERRY 8"
	6264	CEDAR ELM 14"
	6265	CHINA BERRY 11"
	6266	HACKBERRY 7"
	6267	CEDAR ELM 22"
	6268	CEDAR ELM 13"
	6269	CEDAR ELM 14"
	6270	CEDAR ELM 12"
	6271	HACKBERRY 6"
	6272	CEDAR ELM 6"
	6273	HACKBERRY 6"
	6274	HACKBERRY 6"
	6275	CHINA BERRY 13"
	6276	CEDAR ELM 17"
	6277	HACKBERRY 6"
	6278	CEDAR ELM 13"
	6279	CEDAR ELM 15"14"14"9"
	6280	HACKBERRY 6"
	6281	CEDAR ELM 6"
	6282	CEDAR ELM 13"
	6283	HACKBERRY 6"
	6284	HACKBERRY 6"
	6285	CEDAR ELM 15"
	6286	CEDAR ELM 10"
	6287	CEDAR ELM 11"
	6288	CEDAR ELM 14"9"3"
	6289	CEDAR ELM 8"
	6290	CEDAR ELM 9"
	6291	CEDAR ELM 8"
	6292	CEDAR ELM 14"10"
	6293	HACKBERRY 8"
	6294	CEDAR ELM 6"5"
	6295	CEDAR ELM 6"
	6296	CEDAR ELM 6"
	6297	HACKBERRY 7"
	6298	HACKBERRY 6"
	6299	HACKBERRY 6"
	6300	ORNAMENTAL
R	6301	ORNAMENTAL
R	6302	ORNAMENTAL
R	6303	ORNAMENTAL
R	6304	ORNAMENTAL
R	6305	ORNAMENTAL
R	6306	ORNAMENTAL
R	6307	ORNAMENTAL
R	6308	ORNAMENTAL
R	6309	ORNAMENTAL
R	6310	ORNAMENTAL
R	6311	ORNAMENTAL
R	6312	ORNAMENTAL
R	6313	ORNAMENTAL
R	6314	ORNAMENTAL
R	6315	ORNAMENTAL
	6316	ORNAMENTAL
R.B.O.	6317	ORNAMENTAL
R.B.O.	6318	ORNAMENTAL
R.B.O.	6319	ORNAMENTAL
R.B.O.	6320	ORNAMENTAL
	6321	ORNAMENTAL
	6322	ORNAMENTAL
	6323	ORNAMENTAL
	6324	ORNAMENTAL
	6325	ORNAMENTAL
	6326	ORNAMENTAL
	6327	ORNAMENTAL
	6328	ORNAMENTAL
	6329	ORNAMENTAL
	6330	ORNAMENTAL
	6331	ORNAMENTAL
	6332	ORNAMENTAL
	6333	ORNAMENTAL
	6334	ORNAMENTAL
	6335	ORNAMENTAL
	6336	ORNAMENTAL
	6337	MESQUITE 8"6"
	6338	LIVE OAK 6"
	6339	ORNAMENTAL
	6340	ORNAMENTAL
	6341	ORNAMENTAL
	6342	ORNAMENTAL
	6343	ORNAMENTAL
	6344	ORNAMENTAL
	6345	ORNAMENTAL
	6346	ORNAMENTAL
	6347	ORNAMENTAL
	6348	ORNAMENTAL
	6349	ORNAMENTAL
	6350	ORNAMENTAL
	6351	ORNAMENTAL
	6352	ORNAMENTAL
	6353	ORNAMENTAL
	6354	ORNAMENTAL
	6355	ORNAMENTAL
	6356	ORNAMENTAL
	6357	ORNAMENTAL
	6358	ORNAMENTAL
	6359	ORNAMENTAL
	6360	ORNAMENTAL
	6361	CHINESE TALLOW 6"5"
	6362	HACKBERRY 8"
	6363	HACKBERRY 8"
	7001	CEDAR ELM 7"
	7002	PECAN 6"
	7003	PECAN 6"
R	7004	CEDAR ELM 7"
	7005	LIVE OAK 5"
	7006	ORNAMENTAL
	7007	ORNAMENTAL
	7008	CEDAR ELM 7"7"4"3"
	7009	ORNAMENTAL
	7010	ORNAMENTAL
	7011	LIVE OAK 8"
	7012	LIVE OAK 11"
	7013	SUMAC 8"4"
	7014	ORNAMENTAL
	7015	ORNAMENTAL
	7016	ORNAMENTAL
	7017	CEDAR ELM 8"
	7018	ORNAMENTAL
	7019	CEDAR ELM 7"
	7020	CEDAR ELM 7"
	7021	CEDAR ELM 7"
	7022	POST OAK 7"
	7023	CEDAR ELM 6"
	7024	CEDAR ELM 7"
	7025	LIVE OAK 8"
	7026	ORNAMENTAL
	7027	ORNAMENTAL
	7028	ORNAMENTAL
	7029	ORNAMENTAL
	7030	ORNAMENTAL
	7031	CEDAR ELM 10"
	7032	CEDAR ELM 7"5"
	7033	CEDAR ELM 9"8"
R	7034	MESQUITE 12"11"9"8"
R	7035	CHINA BERRY 7"7"6"5"4"
R	7036	HACKBERRY 13"
R	7037	HACKBERRY 15"
R	7038	HACKBERRY 10"
R	7039	CHINA BERRY 10"
R	7040	HACKBERRY 8"
	7041	HACKBERRY 6"
	7042	CEDAR ELM 7"5"
	7043	CHINA BERRY 13"
	7044	MESQUITE 8"
	7045	HACKBERRY 7"
	7046	HACKBERRY 9"
	7047	HACKBERRY 9"
	7048	HACKBERRY 10"
	7049	CEDAR ELM 8"
	7050	MESQUITE 9"
	7051	ORNAMENTAL
	7052	ORNAMENTAL
	7053	VITEX 12"
	7054	RETAMA 10"
R	7055	SOAPBERRY 6"
	7056	YAUPON 7"
	7057	MOUNTAIN LAUREL 5"
	7058	MOUNTAIN LAUREL 3"
	7059	MOUNTAIN LAUREL 6"
	7060	ORNAMENTAL
	7061	ORNAMENTAL
R	7062	YAUPON 5"
R	7063	YAUPON 3"
R	7064	YAUPON 4"
R	7067	REDBUD 3"
	7068	DESERT WILLOW 4"
	7069	MOUNTAIN LAUREL 4"
	7070	MOUNTAIN LAUREL 6"
	7071	ANACACHO ORCHID 5"
	7072	REDBUD 5"
	7073	ORNAMENTAL
	7074	YAUPON 3+"
	7075	YAUPON 3+"
	7076	YAUPON 3+"
	7077	ORNAMENTAL
	7078	YAUPON 3+"
	7079	YAUPON 3+"
	7080	YAUPON 3+"
	7081	YAUPON 3+"
R	7082	YAUPON 3+"
R	7083	YAUPON 3+"
R	7084	CEDAR ELM 6"
	7085	MOUNTAIN LAUREL 4"
	7086	MOUNTAIN LAUREL 6"
	7087	MOUNTAIN LAUREL 5"
	7088	MOUNTAIN LAUREL 4"
	7089	ELM 7"
	7090	ELM 5"
	7091	ELM 11"
	7092	ELM 8"
	7093	ELM 13"6"
	7094	ELM 9"
	7095	ELM 9"
	7096	ELM 6"
	7097	ELM 5"
	7098	LIVE OAK 21"13"
	7099	ELM 10"
	7100	LIVE OAK 16"
	7101	ELM 5"
	7102	ELM 5"
	7103	ELM 12"
	7104	ELM 13"8"
	7105	ELM 7"3"
	7106	MESQUITE 9"
	7107	ELM 4"
	7108	ELM 6"
	7109	ELM 6"
	7110	HACKBERRY 8"
	7111	LIVE OAK 9"
	7112	ELM 6"
	7113	LIVE OAK 8"
	7114	LIVE OAK 17"
	7115	LIVE OAK 10"
	7116	LIVE OAK 11"
	7117	ELM 5"
	7118	ELM 5"
	7119	ELM 10"6"
	7120	ELM 14"
	7121	ELM 16"
	7122	ELM 12"
	7123	ELM 13"
	7124	ELM 9"
	7125	ELM 13"11"
	7126	ELM 10"
	7127	ELM 8"
	7128	ELM 7"
	7129	ELM 9"
	7130	ELM 8"3"
	7131	ELM 6"5"3"
	7132	ELM 4"
	7133	ELM 5"
	7134	HACKBERRY 7"
	7135	ELM 15"
	7136	CHINABERRY 9"
	7137	ELM 4"
	7138	CHINABERRY 5"
	7139	CHINABERRY 5"
	7140	CHINABERRY 8"6"
	7141	HACKBERRY 4"
	7142	LIVE OAK 9"
	7143	HACKBERRY 6"
	7144	LIVE OAK 31"
	7145	HACKBERRY 10"
	7146	LIVE OAK 8"
	7147	LIVE OAK 10"
	7148	ELM 7"
	7149	HACKBERRY 6"
	7150	HACKBERRY 7"
	7151	ELM 4"
	7152	HACKBERRY 8"
	7153	HACKBERRY 5"
	7154	LIVE OAK 36"
	7155	ELM 10"
	7156	HACKBERRY 5"
	7157	LIVE OAK 32"
	7158	LIVE OAK 34"
	7159	ELM 7"
	7160	SPANISH OAK 8"
	7161	HACKBERRY 4"
	7162	HACKBERRY 9"
	7163	ELM 9"
	7164	ELM 9"
	7165	ELM 5"
	7166	HACKBERRY 5"
	7167	HACKBERRY 6"
	7168	ELM 8"
	7169	HACKBERRY 7"
	7170	ELM 4"
	7171	ELM 12"5"
	7172	ELM 5"
	7173	ELM 6"
	7174	ELM 6"
	7175	ELM 12"
	7176	ELM 7"
	7177	ELM 7"
	7178	ELM 10"
	7179	ELM 9"
	7180	ELM 8"
	7181	ELM 5"
	7182	ELM 5"
	7183	ELM 7"
	7184	ELM 6"
	7185	ELM 13"
	7186	ELM 13"
	7187	ELM 13"
	7188	SOAPBERRY 6"
	7189	ELM 11"
	7190	ELM 9"4"
	7191	ELM 5"
	7192	ELM 6"
	7193	ELM 10"
	7194	ELM 5"
	7195	ELM 5"
	7196	ELM 5"
	7197	ELM 12"10"
	7198	ELM 13"
	7199	ELM 10"
	7200	ELM 11"
	7201	ELM 6"
	7202	ELM 6"
	7203	ELM 13"
	7204	ELM 11"
	7205	ELM 16"
	7206	ELM 14"
	7207	ELM 14"10"7"
	7208	ELM 6"
	7209	ELM 9"8"
	7210	ELM 10"
	7211	ELM 10"
	7212	BUR OAK 12"
	7213	BUR OAK 6"
	7214	CHINABERRY 8"
	7215	HACKBERRY 5"
	7216	HACKBERRY 6"
	7217	HACKBERRY 5"
	7218	HACKBERRY 5"
	7219	HACKBERRY 5"
	7220	HACKBERRY 4"
	16023	ELM 16"
	16024	ELM 11"11"

"R" DENOTES BE REMOVED.
"R.B.O." DENOTES TO BE RELOCATED BY OTHERS

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Landscape:	HALFF Associates, Inc.	(512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

#	Date	Description
1	11/08/17	CONSTRUCTION ISSUE

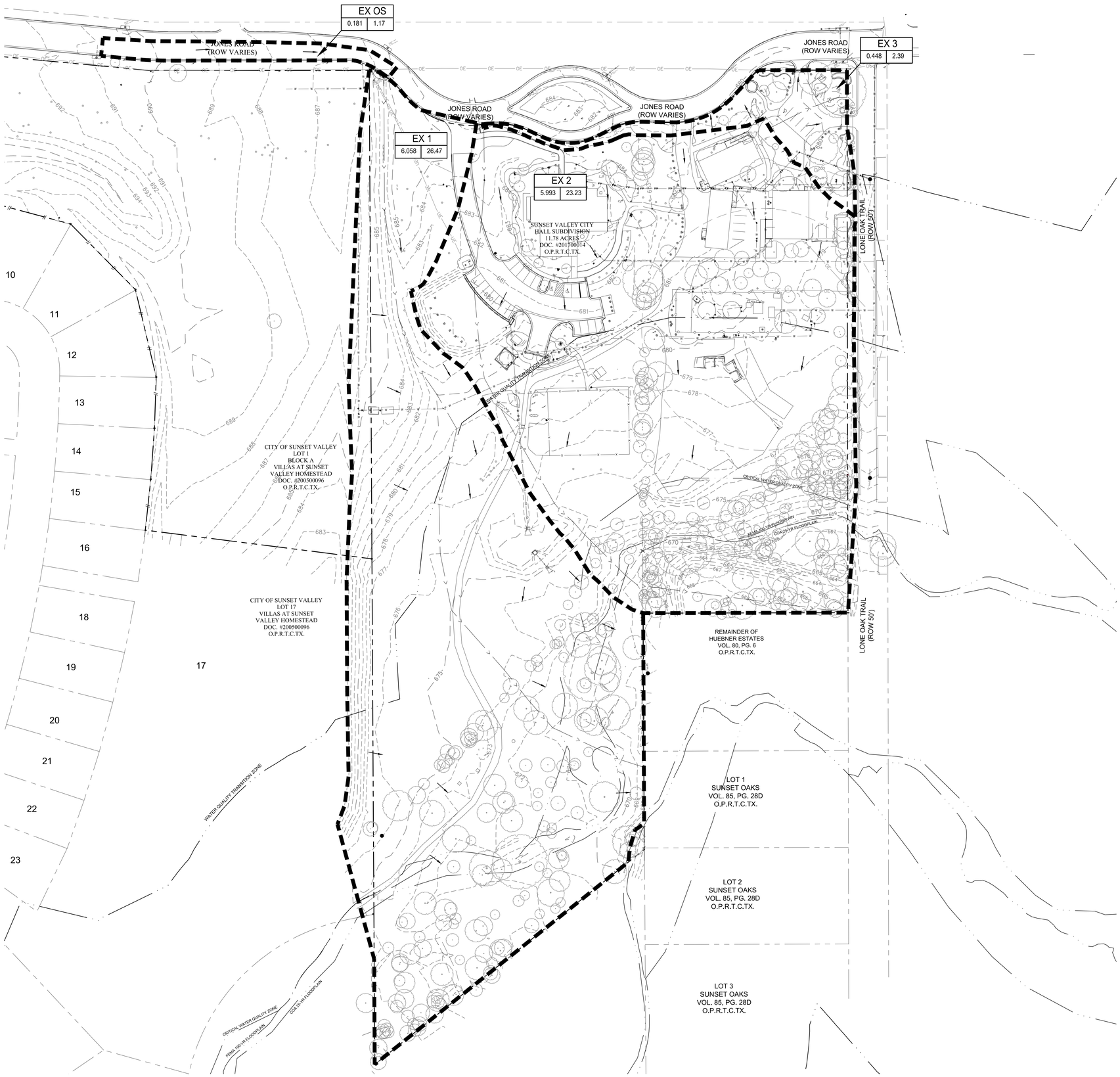
STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER
11/08/2017

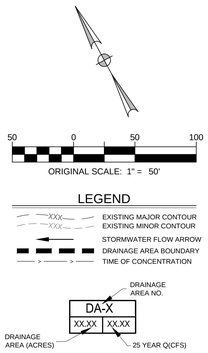
Sheet Name

EXISTING CONDITIONS AND DEMOLITION PLAN

21607
2017-11-08
C003

FOR CONSTRUCTION





EXISTING RAINFALL INTENSITY (In./Hr.)				
STORM EVENT	EX 1 INTESITY	EX 2 INTESITY	EX 3 INTESITY	EX OS INTESITY
2-YEAR	3.91	3.23	5.30	5.76
10-YEAR	5.86	4.87	7.89	8.57
25-YEAR	6.99	5.84	9.34	10.11
100-YEAR	9.00	7.60	11.69	12.54

HEC-HMS Stormwater Runoff Calculations Summary For Existing Drainage Areas

Freq. Year	EX 1		EX 2		EX 3		EX OS	
	Area (Ac) =	6.058	Area (Ac) =	5.993	Area (Ac) =	0.448	Area (Ac) =	0.181
	Impervious Cover =	0%	Impervious Cover =	0%	Impervious Cover =	18%	Impervious Cover =	100%
	CN =	80	CN =	80	CN =	80	CN =	80
	n =	0.13	n =	0.13	n =	0.13	n =	0.011
	Tc (min) =	14.77	Tc (min) =	21.60	Tc (min) =	6.73	Tc (min) =	5.00
	Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)	
2	7.93		6.97		0.80		0.53	
10	19.51		17.13		1.79		0.94	
25	26.47		23.23		2.39		1.17	
100	38.06		33.40		3.38		1.57	

NOTES:

1. THE HYDROLOGIC ANALYSIS FOR THE EXISTING CONDITIONS IS BASED ON UNDEVELOPED SITE CONDITIONS.

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

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History

#	Date	Description

STATE OF TEXAS — ROBERT W. SCHULZ — 91151 — LICENSED PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
DRAINAGE AREA MAP: EXISTING CONDITIONS

21607
2017-11-08
C004

FOR CONSTRUCTION

Know what's **below.**
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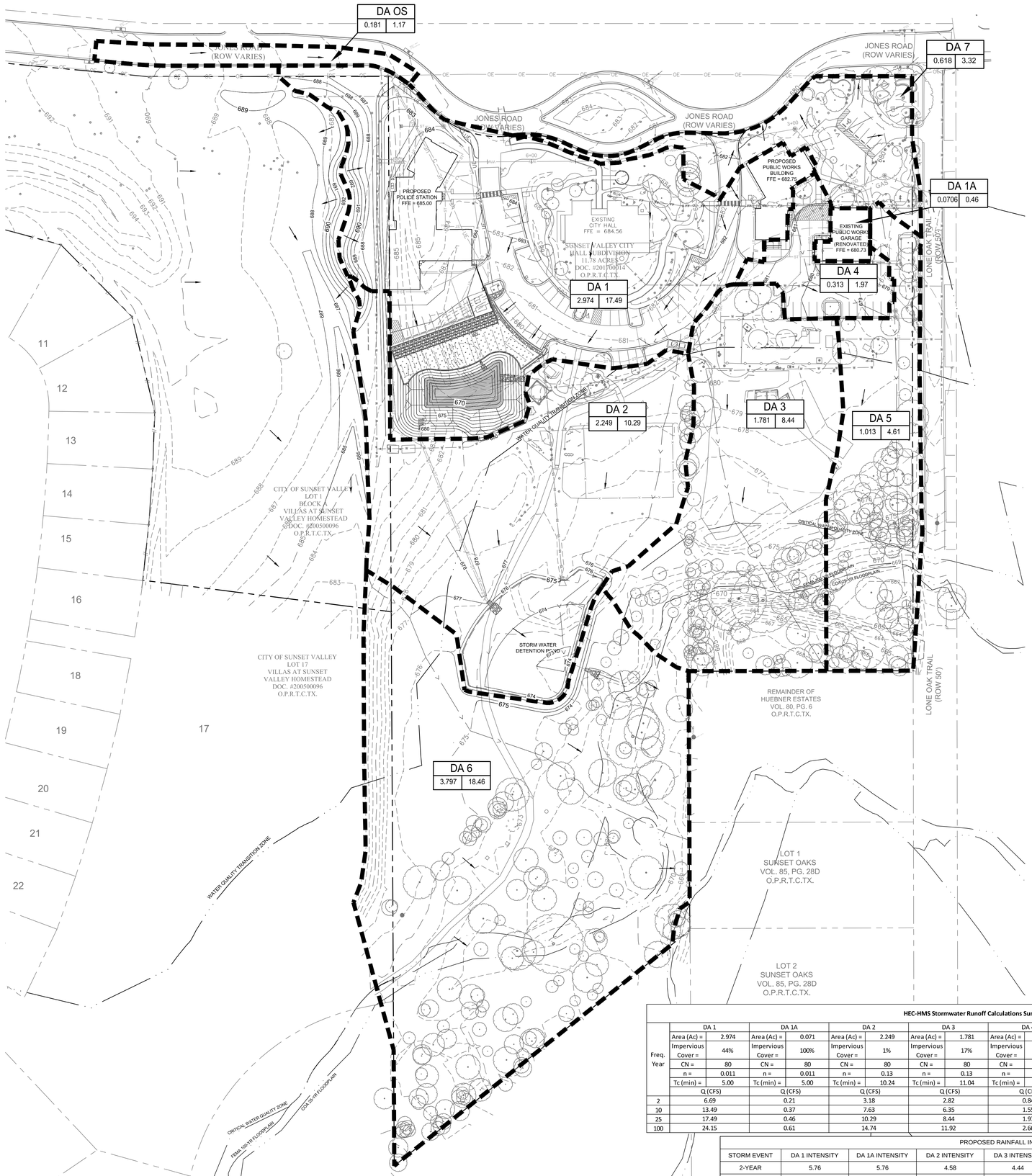

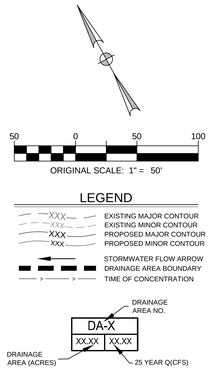

HEC-HMS Stormwater Runoff Calculations Summary For Proposed Drainage Areas

Freq. Year	DA 1		DA 1A		DA 2		DA 3		DA 4		DA 5		DA 6		DA 7		DA OS	
	Area (Ac) =	2.974	Area (Ac) =	0.071	Area (Ac) =	2.249	Area (Ac) =	1.781	Area (Ac) =	0.313	Area (Ac) =	1.013	Area (Ac) =	3.797	Area (Ac) =	0.618	Area (Ac) =	0.181
	Impervious Cover =	44%	Impervious Cover =	100%	Impervious Cover =	1%	Impervious Cover =	17%	Impervious Cover =	81%	Impervious Cover =	4%	Impervious Cover =	0%	Impervious Cover =	22%	Impervious Cover =	100%
	CN =	80	CN =	80	CN =	80	CN =	80	CN =	80	CN =	80	CN =	80	CN =	80	CN =	80
	n =	0.011	n =	0.011	n =	0.13	n =	0.13	n =	0.011	n =	0.13	n =	0.13	n =	0.13	n =	0.011
	Tc (min) =	5.00	Tc (min) =	5.00	Tc (min) =	10.24	Tc (min) =	11.04	Tc (min) =	5.00	Tc (min) =	12.93	Tc (min) =	8.36	Tc (min) =	6.73	Tc (min) =	5.00
	Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)		Q (CFS)	
2	6.69		0.21		3.18		2.82		0.84		1.43		5.50		1.13		0.53	
10	13.49		0.37		7.63		6.35		1.55		3.42		13.60		2.50		0.94	
25	17.49		0.46		10.29		8.44		1.97		4.61		18.46		3.32		1.17	
100	24.15		0.61		14.74		11.92		2.66		6.60		26.57		4.68		1.57	

PROPOSED RAINFALL INTENSITY (In./Hr.)									
STORM EVENT	DA 1 INTENSITY	DA 1A INTENSITY	DA 2 INTENSITY	DA 3 INTENSITY	DA 4 INTENSITY	DA 5 INTENSITY	DA 6 INTENSITY	DA 7 INTENSITY	DA OS INTENSITY
2-YEAR	5.76	5.76	4.58	4.44	5.76	4.16	4.93	5.30	5.76
10-YEAR	8.57	8.57	6.83	6.64	8.57	6.22	7.36	7.89	8.57
25-YEAR	10.11	10.11	8.12	7.89	10.11	7.41	8.72	9.34	10.11
100-YEAR	12.54	12.54	10.31	10.05	12.54	9.48	11.00	11.69	12.54

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SUNSET VALLEY POLICE & PUBLIC WORKS
SITE
3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

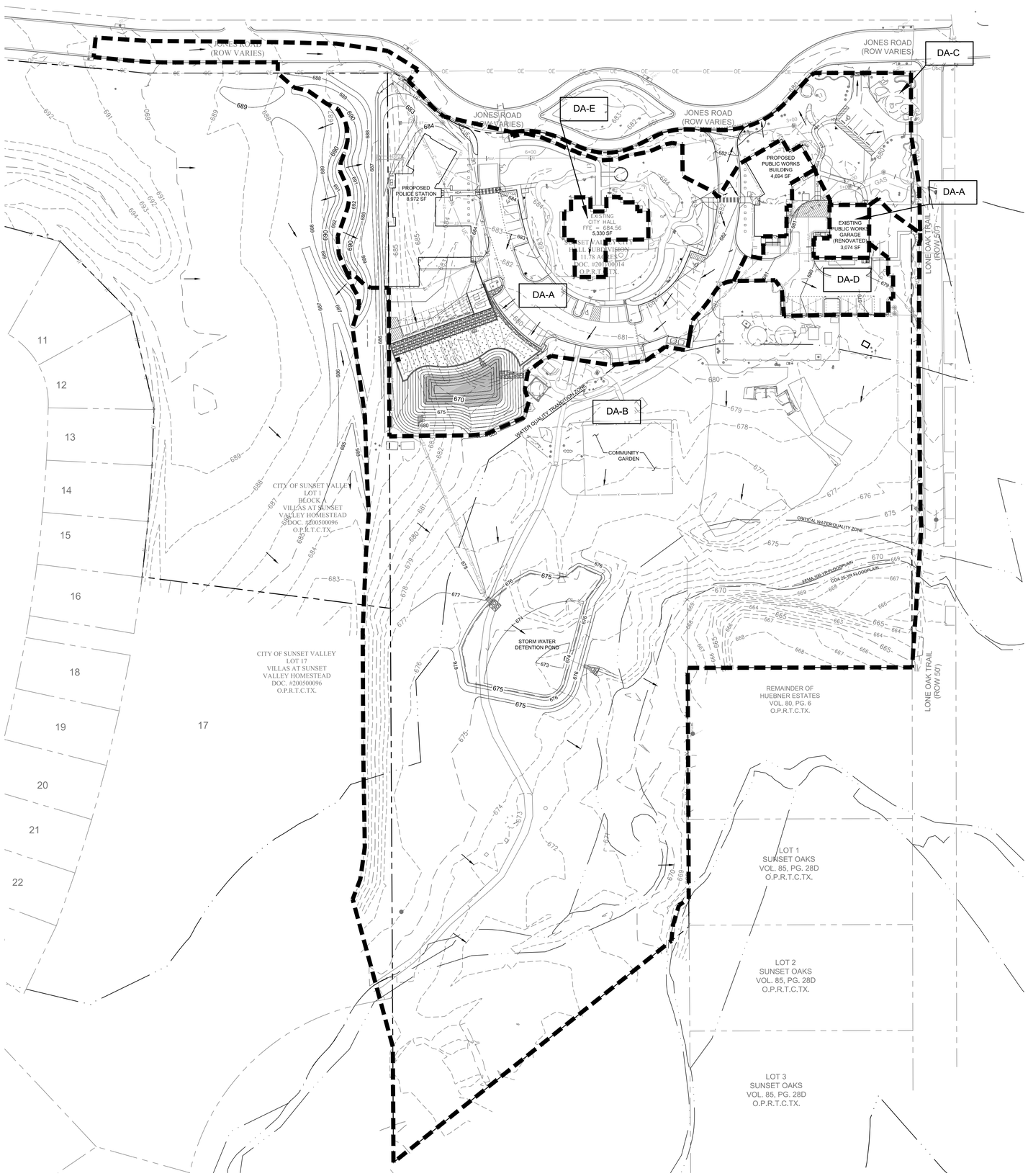
History

#	Date	Description

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER — 11/08/2017

Sheet Name
DRAINAGE AREA MAP: PROPOSED CONDITIONS

21607
2017-11-08
C005



50 0 50 100

ORIGINAL SCALE: 1" = 50'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STORMWATER FLOW ARROW
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- DRAINAGE AREA NO. (DA-X)

Water Quality Drainage Areas (TCEQ)								
DA	Drainage Area (sf)	Drainage Area (ac)	Existing Impervious Cover (sf)	Existing Impervious Cover (ac)	Existing Impervious Cover Percentage	Post-Construction Impervious Cover (sf)	Post-Construction Impervious Cover (ac)	Post-Construction Impervious Cover Percentage
DA-A	135150	3.10	0	0.00	0.00%	64903	1.49	48.02%
DA-B	385080	8.84	15346	0.35	3.99%	18146	0.42	4.71%
DA-C	26913	0.62	4278	0.10	15.90%	6728	0.15	25.00%
DA-D	13644	0.31	0	0.00	0.00%	11470	0.26	84.07%
DA-E (Rooftop)	5331	0.12	5331	0.12	100.00%	5331	0.12	100.00%
TOTAL IMPERVIOUS COVER TO BE TREATED (LESS ROOFTOPS) =							2.447	20.77%

NOTES:

1. DRAINAGE AREA DA-E DRAINS TO AN EXISTING RAINWATER HARVESTING TANK ONSITE. THE RAINWATER IS USED FOR IRRIGATION OF THE CITY'S COMMUNITY GARDEN.

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

History

#	Date	Description

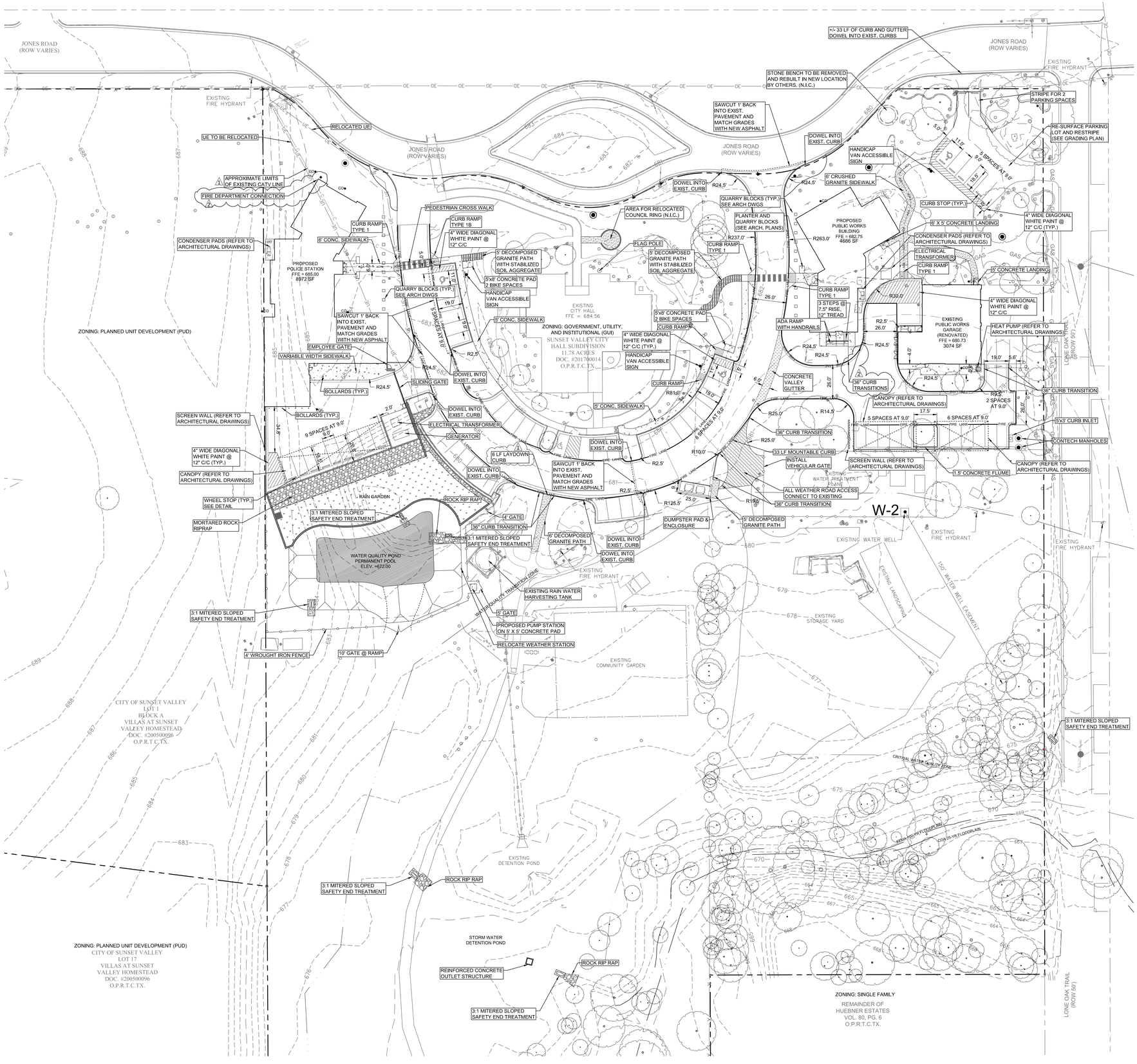
ROBERT W. SCHULZ 91151 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

11/08/2017

Sheet Name

DRAINAGE AREA MAP: WATER QUALITY

21607
2017-11-08
C006



30 0 30 60

ORIGINAL SCALE: 1" = 30'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPERTY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- CURB & GUTTER
- RIBBON CURB
- ADA ACCESSIBLE ROUTE
- PROPOSED FIRE LANE
- OHE — OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE LINE
- FO — EXISTING FIBER OPTIC LINE
- FM — EXISTING FORCE MAIN
- GAS — EXISTING GAS LINE
- ST — EXISTING STORM SEWER LINE
- T — EXISTING TELEPHONE LINE
- WW — EXISTING WASTEWATER LINE
- W — EXISTING WATER LINE
- UE — UNDERGROUND ELECTRIC LINE
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- PROPOSED CURB INLET
- PROPOSED MANHOLE
- DECOMPOSED GRANITE PATH
- N.I.C. — NOT IN CONTRACT
- W-2 — MANMADE GEOLOGIC FEATURE
- UE — UNDERGROUND ELECTRIC

Site Data	
Water Quality Zone	**Total Area (Acre)**
Uplands Zone	4.492
Water Quality Transition Zone	4.348
Critical Water Quality Zone	2.944
Total Site Area	**11.784**

Site Floodplain Data	
Floodplain	**Total Area (Acre)**
FEMA 100-yr Floodplain	2.156

PARKING DATA

USE	BUILDING FLOOR AREA (SF)	CODE RATIO	SPACES REQUIRED	SPACES PROVIDED
GOVERNMENT BUILDING - POLICE STATION	8972	1/300 SF	30	17
GOVERNMENT BUILDING - PUBLIC WORKS FACILITY	4694	1/300 SF	16	24
GOVERNMENT BUILDING - EXISTING CITY HALL	5330	1/300 SF	18	21
TOTAL	18996		64	**62**
ACCESSIBLE SPACES			3	**4**
BICYCLE SPACES			4	**4**

*A VARIANCE FOR THE PARKING WAS APPROVED BY CITY COUNCIL ON APRIL 18, 2017.

Site Impervious Cover

Impervious Cover Item	Impervious Cover (sf)	Impervious Cover (Acre)	% Impervious Cover (11.784 Total Site Area)
Existing Buildings	8,530	0.196	
Existing Pavement	31,820	0.730	
Existing Concrete Sidewalks	4,164	0.096	
Existing Crushed Granite Paths*	6,196	0.142	
Proposed Buildings	13,653	0.313	
Proposed Pavement	29,069	0.667	
Proposed Concrete Sidewalks	4,423	0.102	
Proposed Crushed Granite Paths*	865	0.020	
Jones Road Improvements*	7,884	0.181	
Impervious Cover Per TCEQ	106,604	2.447	20.77%
Impervious Cover Per City of Sunset Valley	91,659	2.104	17.86%

* CRUSHED GRANITE PATHS AND JONES ROAD IMPROVEMENTS NOT INCLUDED IN IMPERVIOUS COVER CALCULATIONS FOR THE CITY OF SUNSET VALLEY. THE ALLOWABLE IMPERVIOUS COVER FOR SUNSET VALLEY IS 18%

NOTES:

1. ALL DIMENSIONS ARE GIVEN TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURB RETURN RADII ARE 2.5' UNLESS OTHERWISE NOTED AND ARE MEASURED TO THE BACK OF CURB.
3. ALL STRIPING SHALL BE 4-INCH THICK WHITE PAINT, UNLESS MARKED OTHERWISE.
4. CONTRACTOR SHALL ADJUST ALL CASTINGS, MANHOLE LIDS, AND OTHER APPLICABLE APPURTENANCES TO MATCH PROPOSED GRADES AS NECESSARY.
5. CONTRACTOR SHALL CONTACT THE ENGINEER WITH ANY ITEMS ON THESE PLANS THAT NEED CLARIFICATION OR ANY ITEMS FOUND IN THE FIELD THAT ARE NOT CONSISTENT WITH THESE PLANS.
6. CONTRACTOR SHALL VERIFY ACCESSIBLE FEATURES MEET THE TEXAS DEPARTMENT OF LICENSING AND REGISTRATION ARCHITECTURAL BARRIERS ACT AND TEXAS ACCESSIBILITY STANDARDS (CURRENT AT THE TIME OF CONSTRUCTION) PRIOR TO POURING CONCRETE.
7. COORDINATE NEW WEATHER STATION LOCATION WITH DIRECTOR OF PUBLIC WORKS.
8. STABILIZED SOIL AGGREGATE IS A PRODUCT MANUFACTURED BY STABILIZER SOLUTIONS, INC. SPECIFICALLY REQUESTED BY THE CITY OF SUNSET VALLEY. SEE WWW.STABILIZERSOLUTIONS.COM FOR MORE INFORMATION AND DISTRIBUTERS IN CENTRAL TEXAS.
9. ALL STOOPS AND RAMP LANDINGS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE.
10. VEHICULAR GATES SHALL BE CHAIN-LINK MATCHING EXISTING STYLE WITH PAD LOCK.

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Know what's **below.** **Call** before you dig.

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BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wigginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History		
#	Date	Description
1	11/08/17	CONSTRUCTION ISSUE
2	01/04/18	SI-02

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER

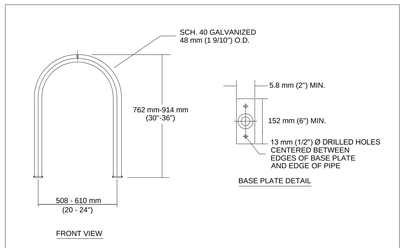
01/04/2018

Sheet Name

OVERALL SITE PLAN

21607
2018-01-04
C007

FOR CONSTRUCTION



FRONT VIEW

BASE PLATE DETAIL

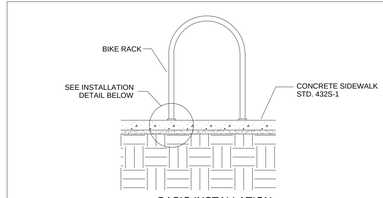
TOP VIEW

ALT BASE PLATE DETAIL
(CIRCULAR OR OVAL PLATE)

GENERAL NOTES:

1. RACK INSTALLATION METHOD SHALL COMPLY WITH CITY STANDARD DETAIL 710S-3, 710S-4, OR 710S-5.
2. RACK PLACEMENT SHALL COMPLY WITH APPLICABLE CITY STANDARD DETAILS 710S-6A, 710S-6B, OR 710S-6C AND CITY OF AUSTIN CODE SECTION 25-6-477 OR ITS SUCCESSOR.
3. BASE PLATES TO BE 6.35 mm (1/4") PLATES, ASTM A-36 1010-1018 LOW CARBON PRIME STEEL

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	CLASS III STYLE BICYCLE PARKING	
RECORD COPY SIGNED BY COUNG TRAN 09/26/12	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-1
ADOPTED		1 OF 1



BASIC INSTALLATION

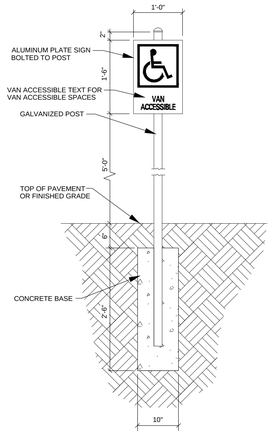
INSTALLATION DETAIL

GENERAL NOTES:

1. RACKS SHALL COMPLY WITH CITY STANDARD DETAIL 710S-1 OR 710S-2.
2. RACK PLACEMENT SHALL COMPLY WITH APPLICABLE CITY STANDARD DETAILS 710S-6A, 710S-6B, OR 710S-6C AND IN COMPLIANCE WITH CITY OF AUSTIN CODE SECTION 25-6-477 OR ITS SUCCESSOR.

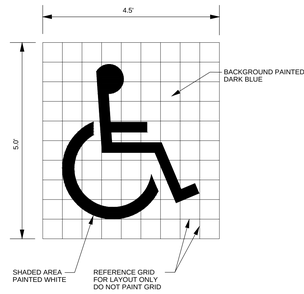
*TO PREVENT THEFT OF BICYCLE RACK OR BIKES, EXPOSED BOLTS MUST BE DEFORMED AND NUTS RE-TIGHTENED TO PREVENT THEM FROM BEING EASILY UNTHREADED. NUTS SHOULD BE TESTED TO ENSURE THAT THEY CANNOT BE EASILY REMOVED AFTER DEFORMATION.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	BICYCLE RACK INSTALLATION IN CONCRETE SIDEWALK-ALTERNATE 1	
RECORD COPY SIGNED BY COUNG TRAN 09/26/12	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 710S-4
ADOPTED		1 OF 1



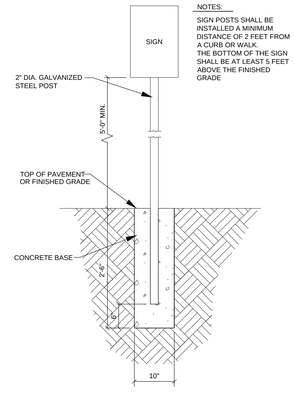
H.C. PARKING SIGN

N.T.S.



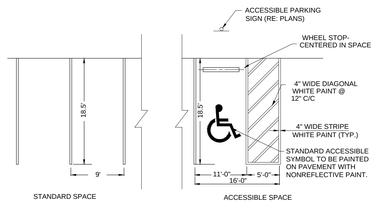
H.C. PARKING SYMBOL

N.T.S.



SIGN MOUNTING DETAIL

N.T.S.



STANDARD SPACE

ACCESSIBLE SPACE

NOTES:

1. RAMP ACCESS AND SURFACE SLOPES SHALL COMPLY WITH ADA REQUIREMENTS.
2. EACH ACCESSIBLE PARKING SPACE SHALL BE SIGNED IN ACCORDANCE WITH ADA REQUIREMENTS.

ADA HANDICAP PARKING SPACES

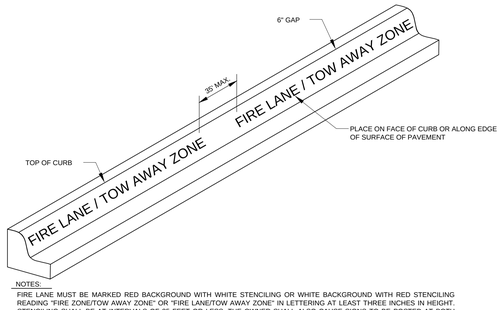
SLOPES WITHIN AN ADA PARKING SPACE OR STRIPED AISLE SHALL NOT EXCEED 2% IN EITHER DIRECTION.

ADA CROSSWALKS, SIDEWALKS AND ACCESSIBILE ROUTES

CROSS SLOPE SHALL NOT EXCEED 2%.
RUNNING SLOPE SHALL NOT EXCEED 5%.

TYPICAL PARKING SPACE LAYOUT

N.T.S.

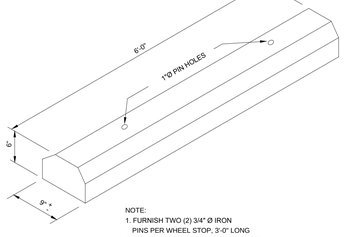


NOTES:

FIRE LANE MUST BE MARKED RED BACKGROUND WITH WHITE STENCILING OR WHITE BACKGROUND WITH RED STENCILING READING "FIRE ZONE/TOW AWAY ZONE" OR "FIRE LANE/TOW AWAY ZONE" IN LETTERING AT LEAST THREE INCHES IN HEIGHT. STENCILING SHALL BE AT INTERVALS OF 35 FEET OR LESS. THE OWNER SHALL ALSO CAUSE SIGNS TO BE POSTED AT BOTH ENDS OF A FIRE ZONE OR FIRE LANE AND AT EACH ENTRY AND EXIT POINT WHICH CONSTITUTES A PORTION OF THE FIRE ZONE OR FIRE LANE. ALTERNATIVE MARKING OF FIRE ZONES AND FIRE LANES MAY BE APPROVED BY THE FIRE CODE OFFICIAL PROVIDED FIRE ZONES OR FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET AND ARE CLEARLY MARKED "TOW AWAY ZONES" AT LEAST EVERY 35 FEET. THE SIGNS SHALL BE INSTALLED WITH THE TOP OF THE SIGN NO HIGHER THAN EIGHT FEET ABOVE GRADE AND NO LESS THAN FIVE FEET ABOVE GRADE.

FIRE LANE MARKING DETAIL

N.T.S.

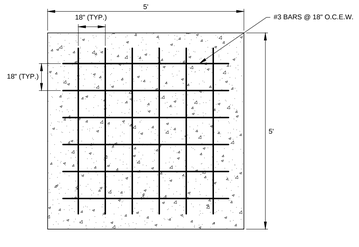


NOTE:

1. FURNISH TWO (2) 3/4" Ø IRON PINS PER WHEEL STOP, 3'-0" LONG
2. MINIMUM REINFORCEMENT TO BE 2 EA. LONGITUDINAL #3 BARS.

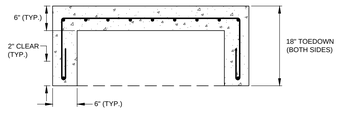
PRECAST CONCRETE WHEEL STOP

N.T.S.



PLAN

N.T.S.

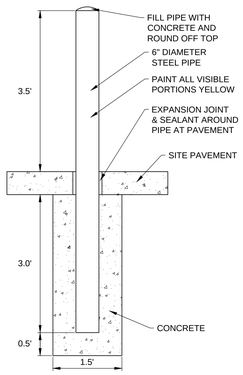


SECTION

N.T.S.

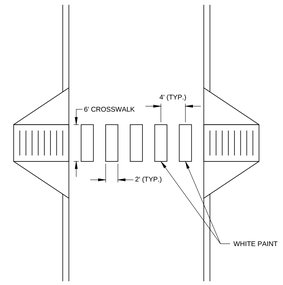
5'x5' CONCRETE PAD

N.T.S.



BOLLARD DETAIL

N.T.S.



PEDESTRIAN CROSSWALK DETAIL

N.T.S.

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TBPE FIRM #F-312

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Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

History

#	Date	Description

STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL
ENGINEER

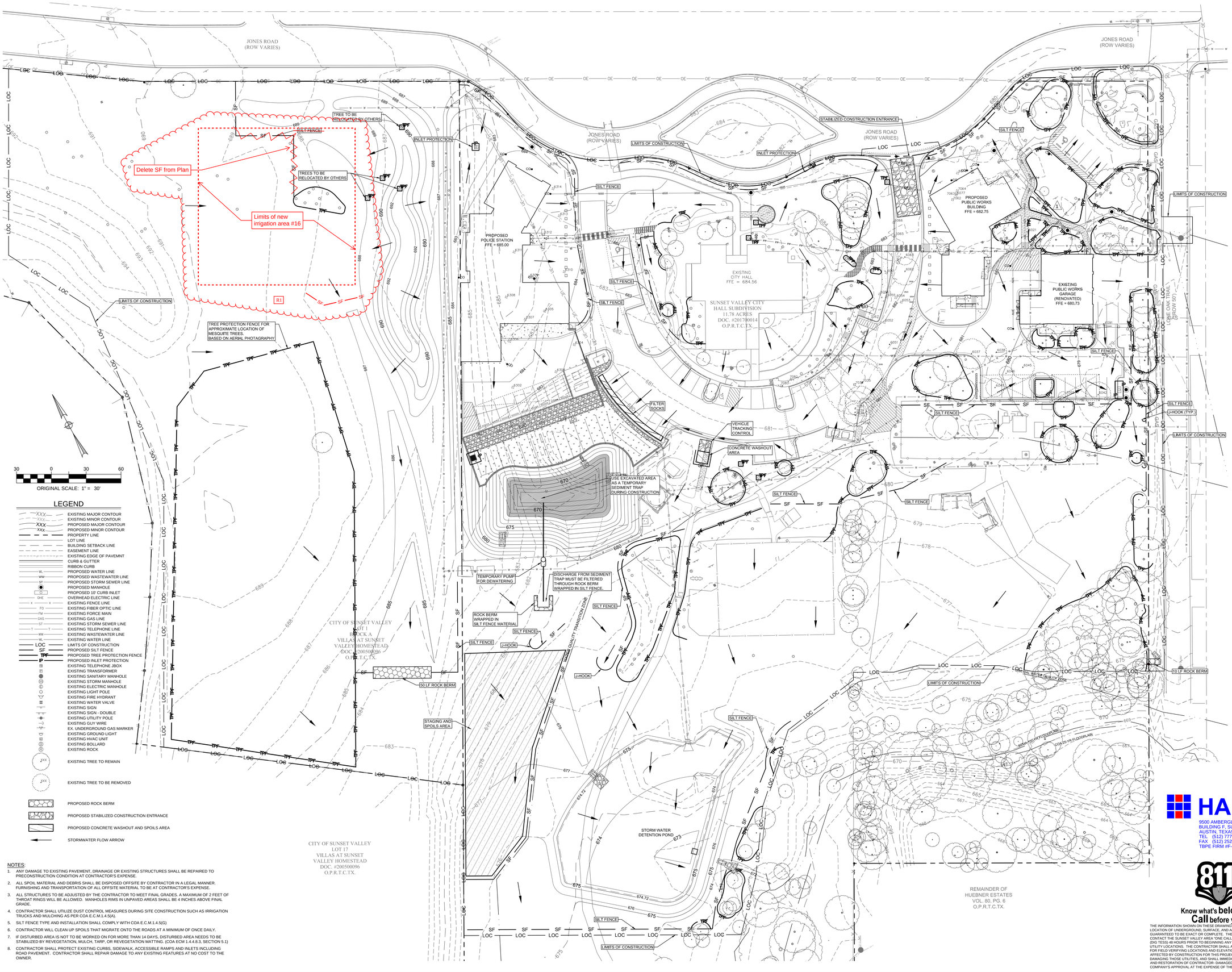
11/08/2017

Sheet Name

SITE PLAN DETAILS

21607
2017-11-08

C008



LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPERTY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- CURB & GUTTER
- RIBBON CURB
- PROPOSED WATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED MANHOLE
- PROPOSED 10' CURB INLET
- OVERHEAD ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING FORCE MAIN
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING TELEPHONE LINE
- EXISTING WASTEWATER LINE
- EXISTING WATER LINE
- LIMITS OF CONSTRUCTION
- PROPOSED SILT FENCE
- PROPOSED TREE PROTECTION FENCE
- PROPOSED INLET PROTECTION
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- PROPOSED ROCK BERM
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED CONCRETE WASHOUT AND SPOILS AREA
- STORMWATER FLOW ARROW

NOTES:

1. ANY DAMAGE TO EXISTING PAVEMENT, DRAINAGE OR EXISTING STRUCTURES SHALL BE REPAIRED TO PRECONSTRUCTION CONDITION AT CONTRACTOR'S EXPENSE.
2. ALL SPOIL MATERIAL AND DEBRIS SHALL BE DISPOSED OFFSITE BY CONTRACTOR IN A LEGAL MANNER. FURNISHING AND TRANSPORTATION OF ALL OFFSITE MATERIAL TO BE AT CONTRACTOR'S EXPENSE.
3. ALL STRUCTURES TO BE ADJUSTED BY THE CONTRACTOR TO MEET FINAL GRADES. A MAXIMUM OF 2 FEET OF THROAT RINGS WILL BE ALLOWED. MANHOLES RIMS IN UNPAVED AREAS SHALL BE 4 INCHES ABOVE FINAL GRADE.
4. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER COA E.C.M.1.4.5(A).
5. SILT FENCE TYPE AND INSTALLATION SHALL COMPLY WITH COA E.C.M.1.4.5(G)
6. CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AT A MINIMUM OF ONCE DAILY.
7. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING. (COA ECM 1.4.4.8.3, SECTION 5.1)
8. CONTRACTOR SHALL PROTECT EXISTING CURBS, SIDEWALK, ACCESSIBLE RAMPS AND INLETS INCLUDING ROAD PAVEMENT. CONTRACTOR SHALL REPAIR DAMAGE TO ANY EXISTING FEATURES AT NO COST TO THE OWNER.

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

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History

#	Date	Description
1	11/08/17	CONSTRUCTION ISSUE
R1	5/24/24	ADD SILT FENCE FOR ADDITIONAL IRRIGATION AREA

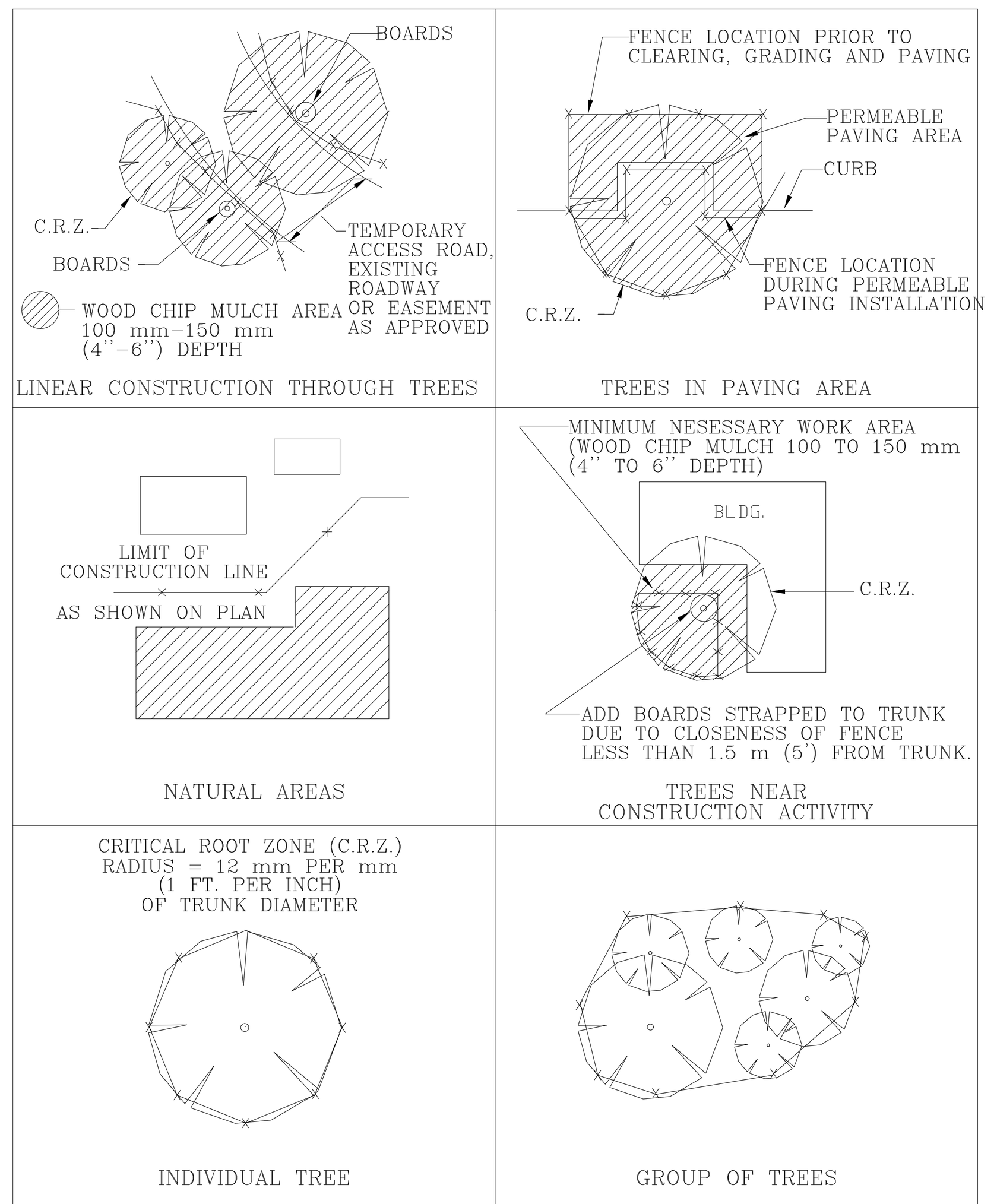
STATE OF TEXAS
ROBERT W. SCHOCH
91151
LICENSED PROFESSIONAL ENGINEER

11/08/2017

FOR CONSTRUCTION

Sheet Name
EROSION & SEDIMENTATION CONTROL PLAN

21607
2017-11-08
C009



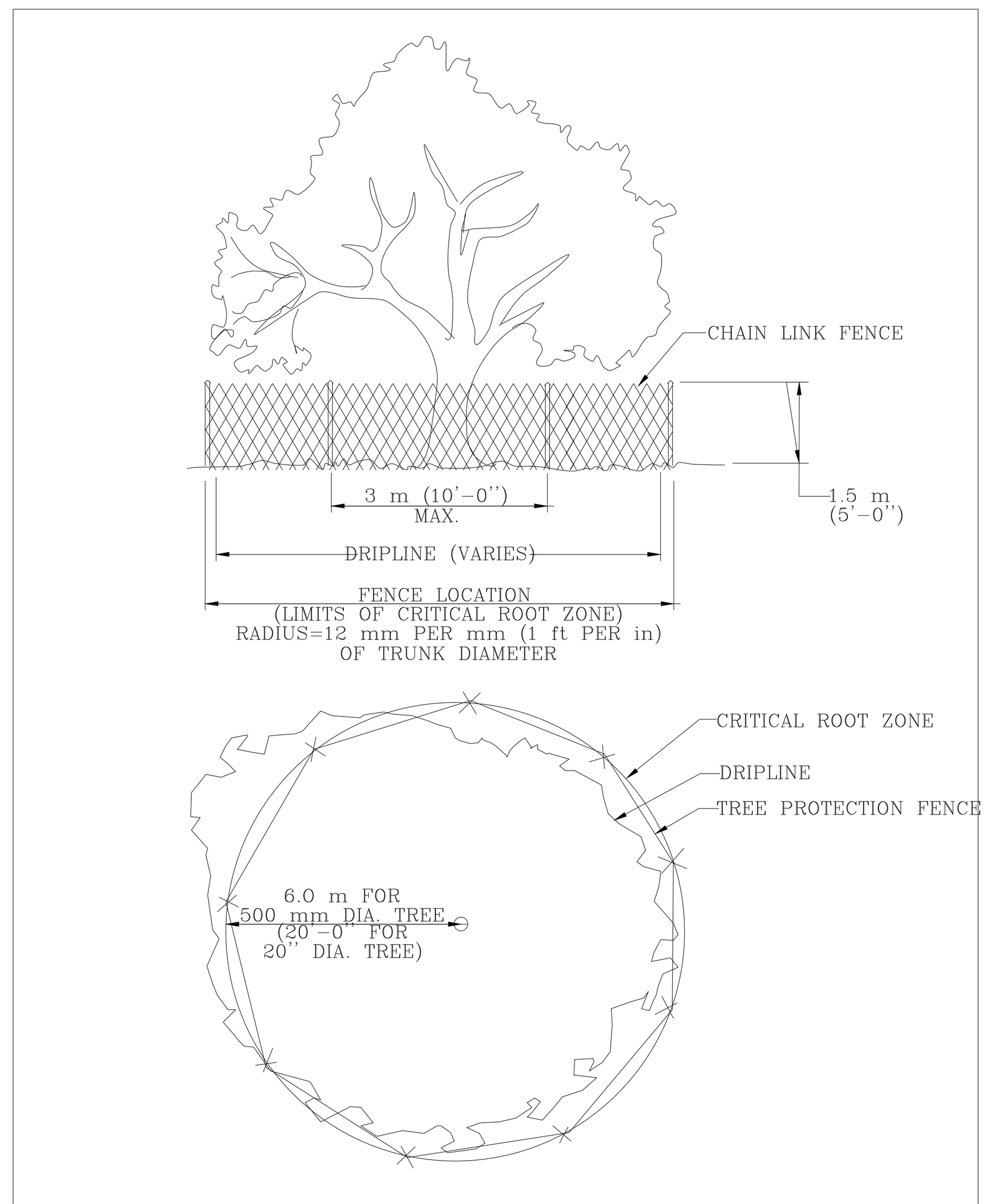
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TREE PROTECTION FENCE LOCATIONS

RECORD COPY SIGNED BY J. PATRICK MURPHY — *11/15/99* ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 610S-1



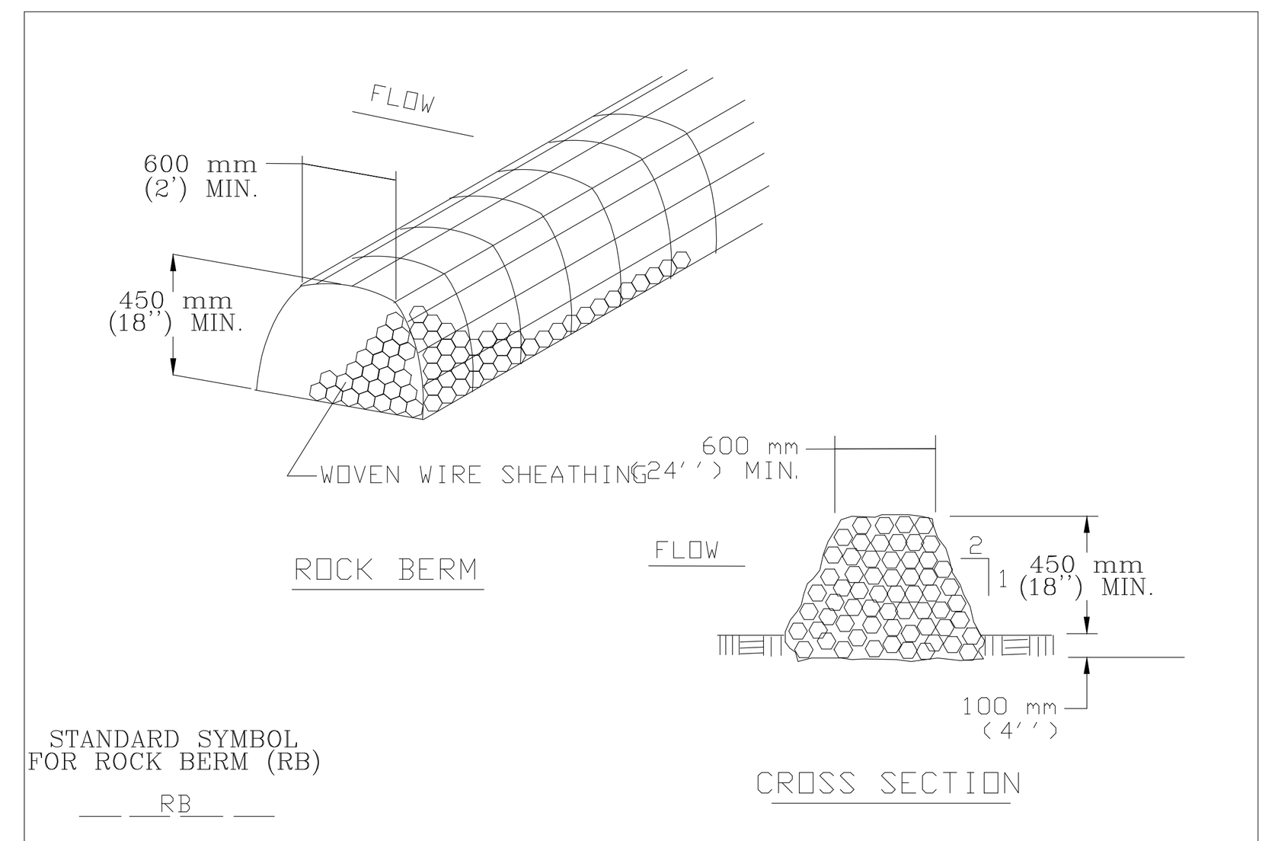
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TREE PROPTECTION FENCE TYPE A - CHAIN LINK

RECORD COPY SIGNED BY J. PATRICK MURPHY — *11/15/99* ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 610S-2



NOTES:

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

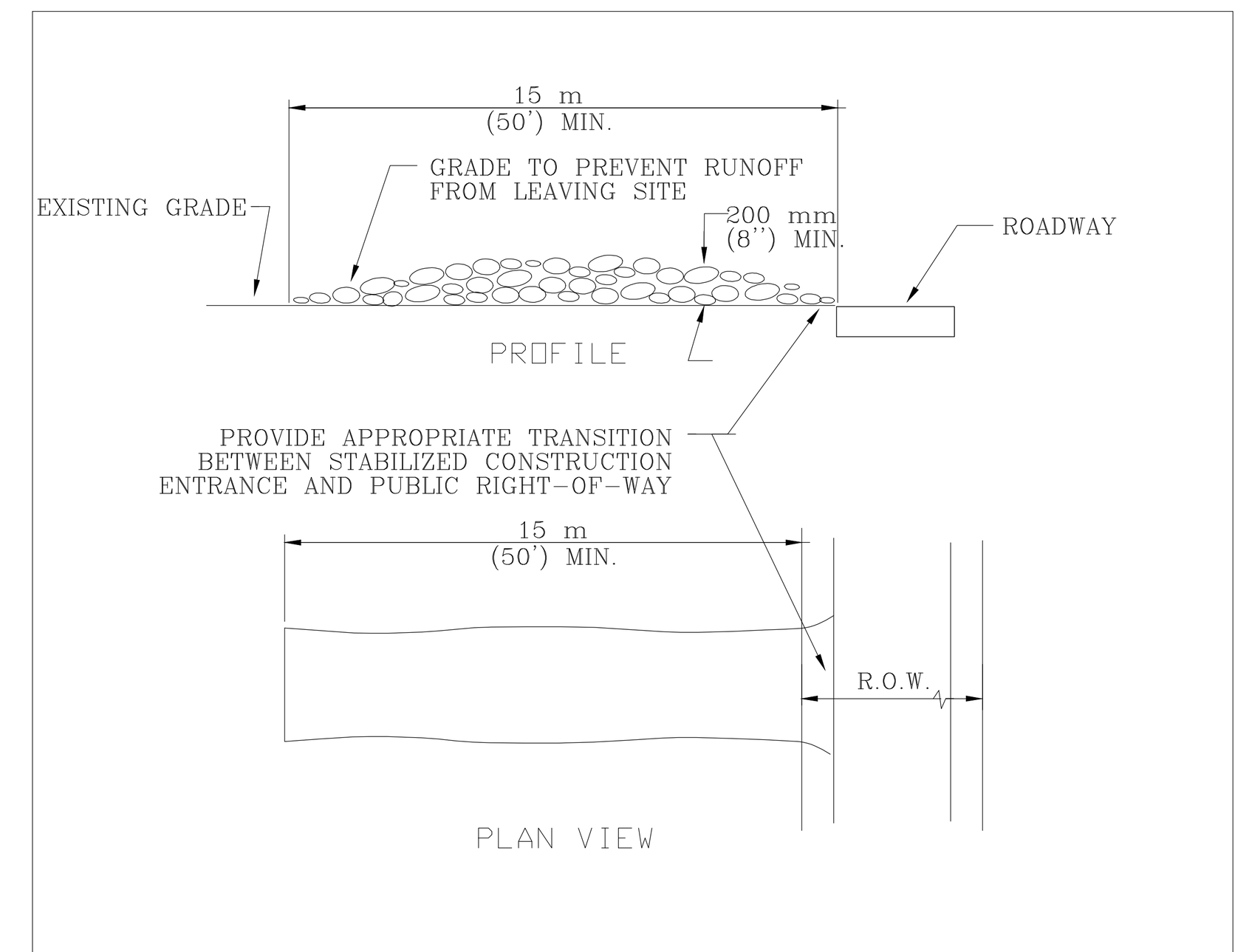
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

ROCK BERM

RECORD COPY SIGNED BY MORGAN BYARS — 8/24/2010 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 639S-1



NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

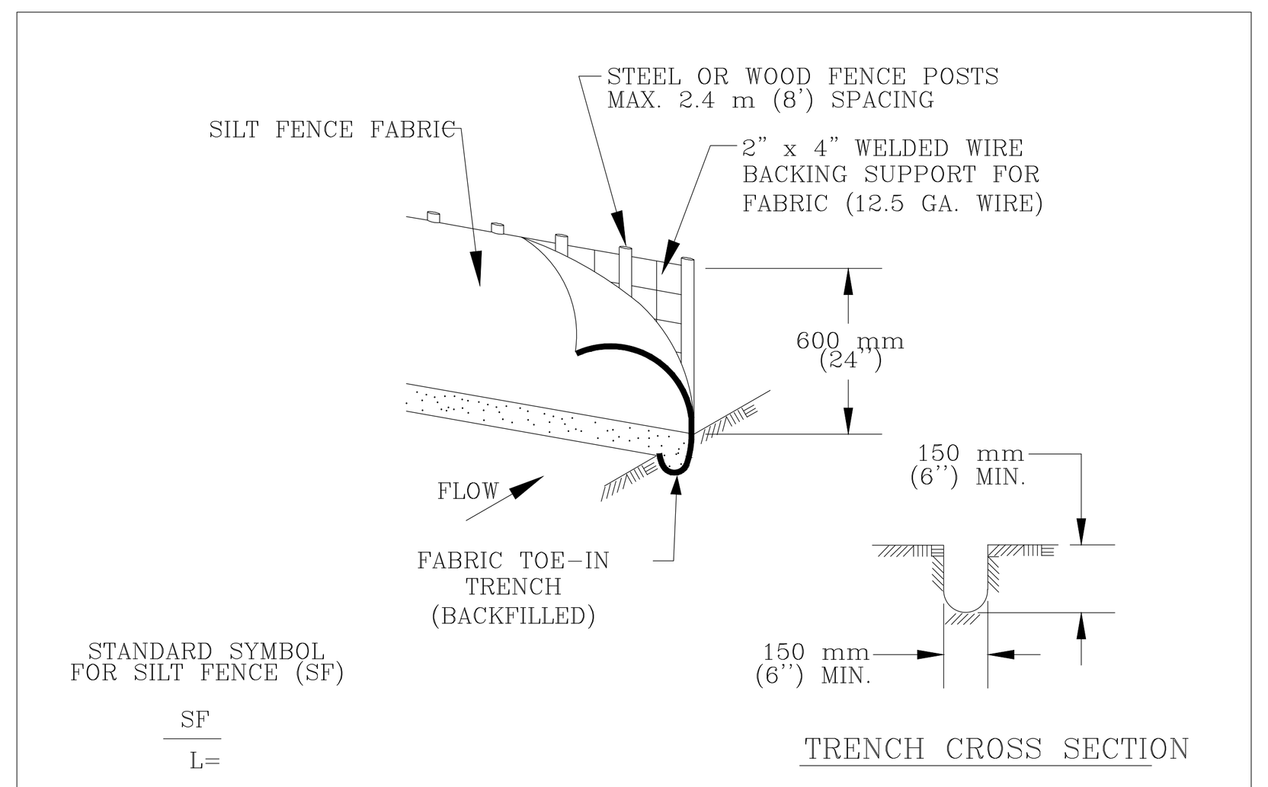
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

STABILIZED CONSTRUCTION ENTRANCE

RECORD COPY SIGNED BY J. PATRICK MURPHY — *5/23/00* ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 641S-1



1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

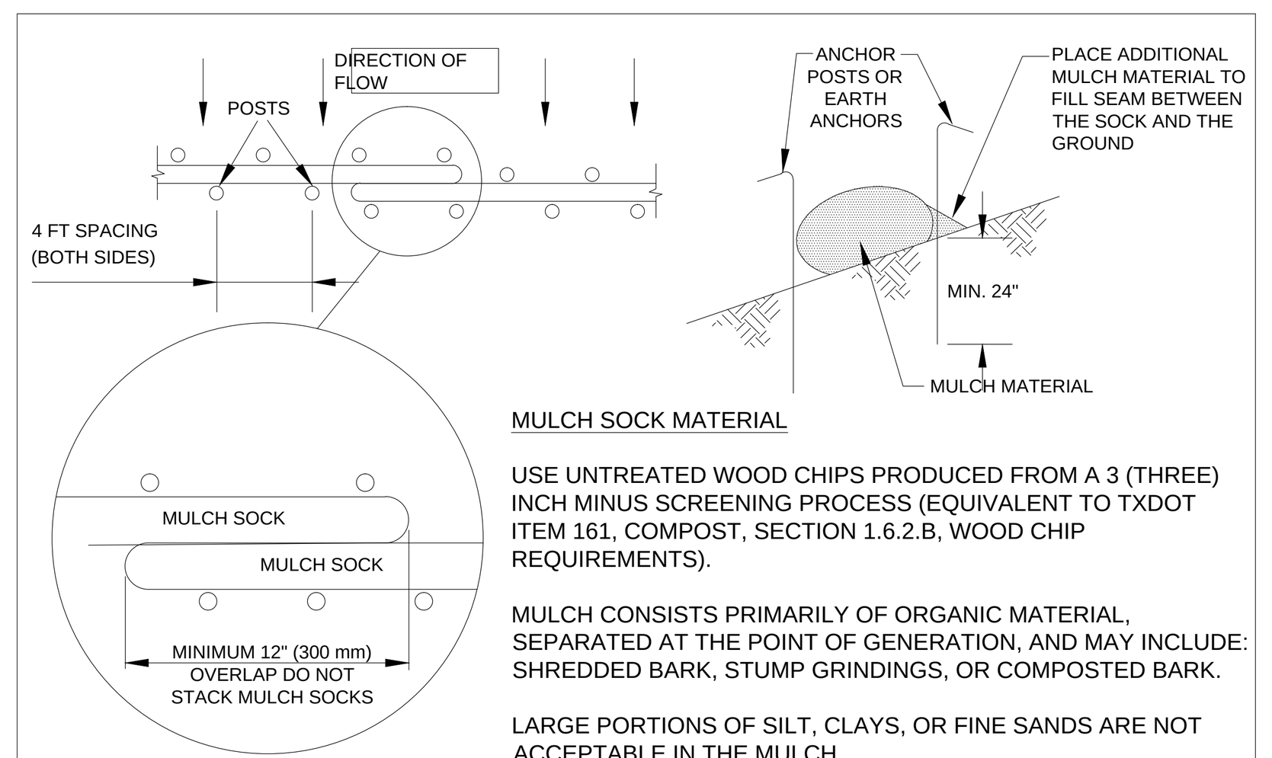
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

SILT FENCE

RECORD COPY SIGNED BY MORGAN BYARS — *09/01/2011* ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 642S-1



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.

2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).

3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.

4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.

5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.

6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

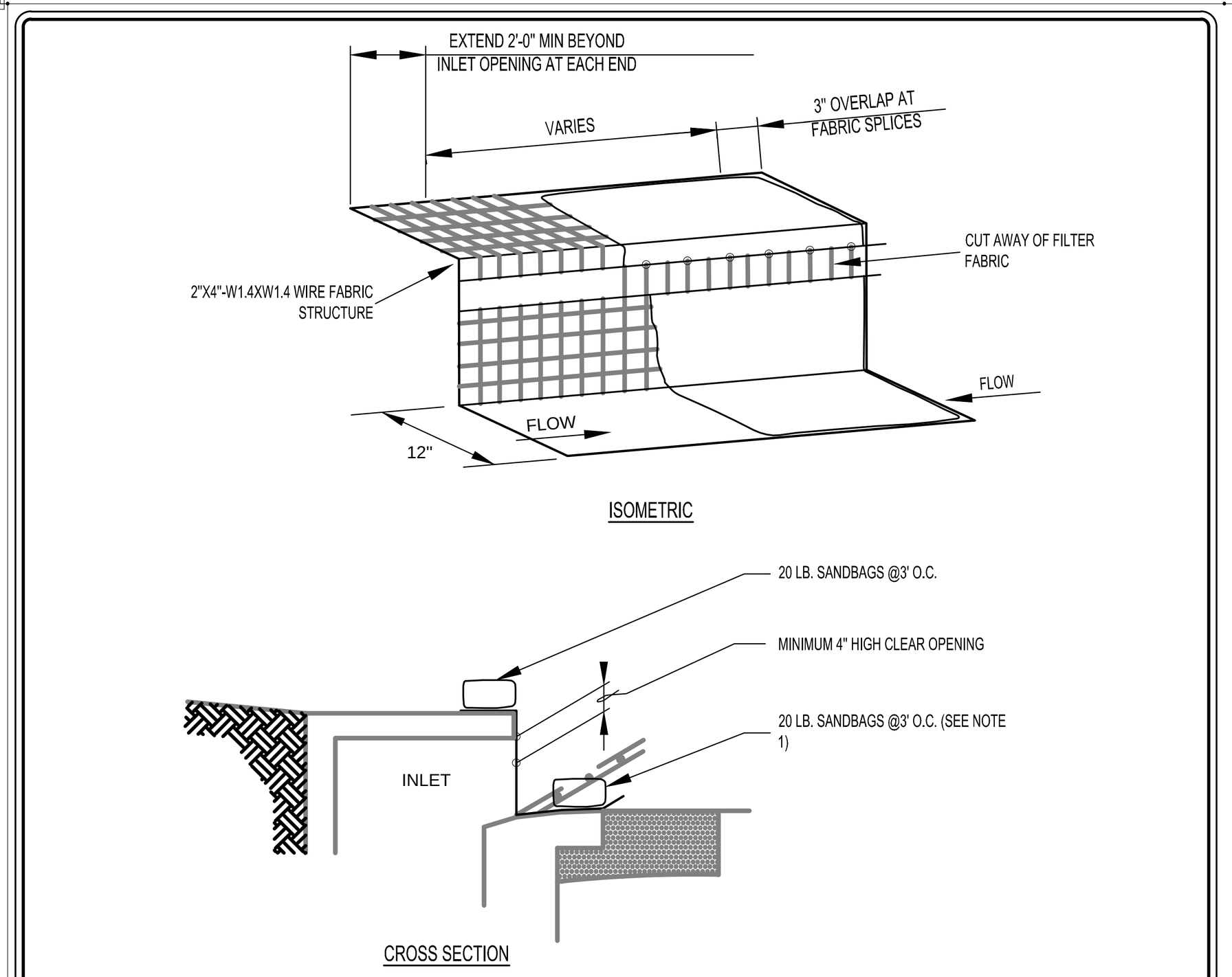
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

MULCH SOCK

RECORD COPY SIGNED BY MORGAN BYARS — 08/24/2010 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 648S-1



NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

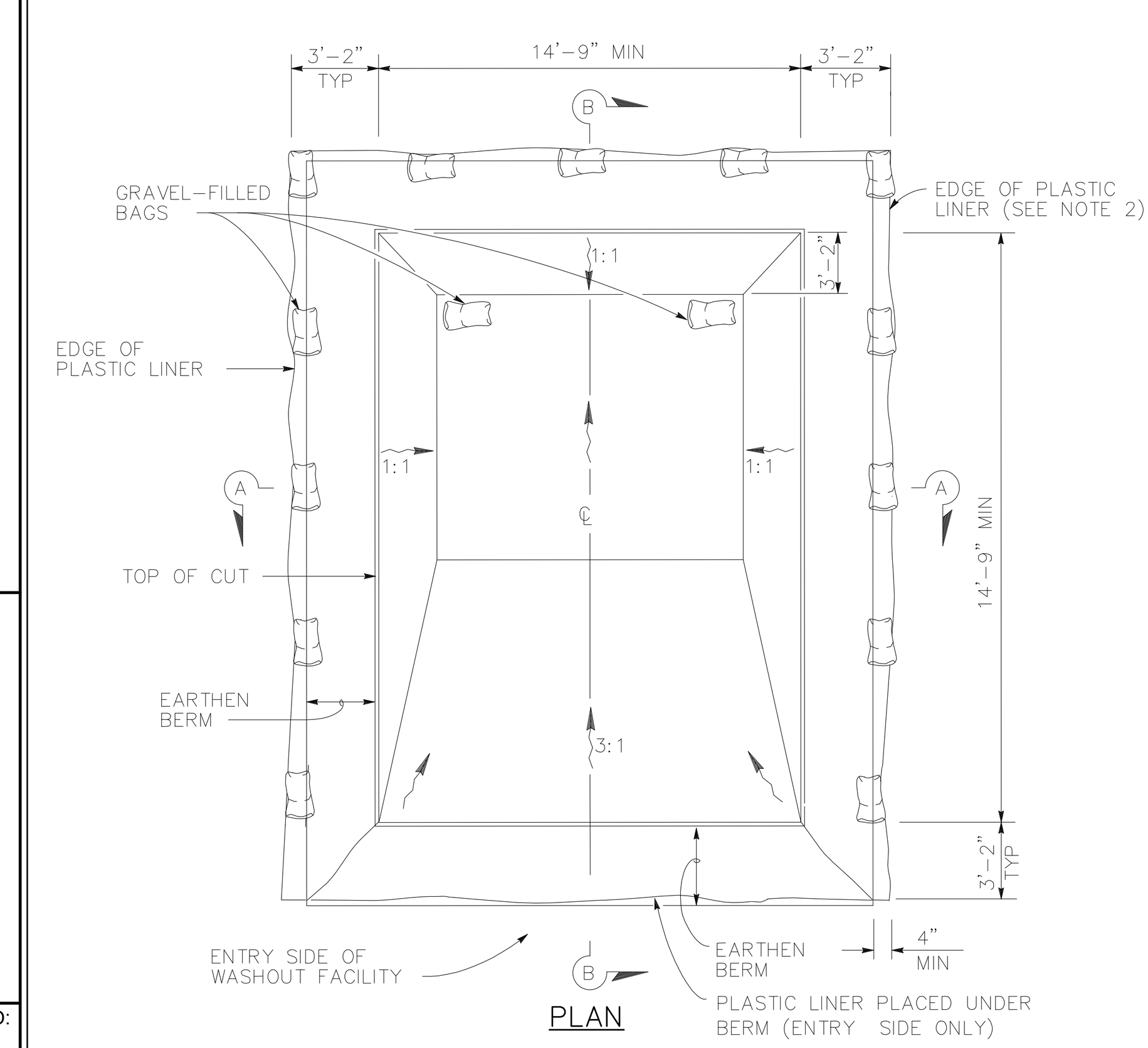
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS
APPROVED
03-25-11
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

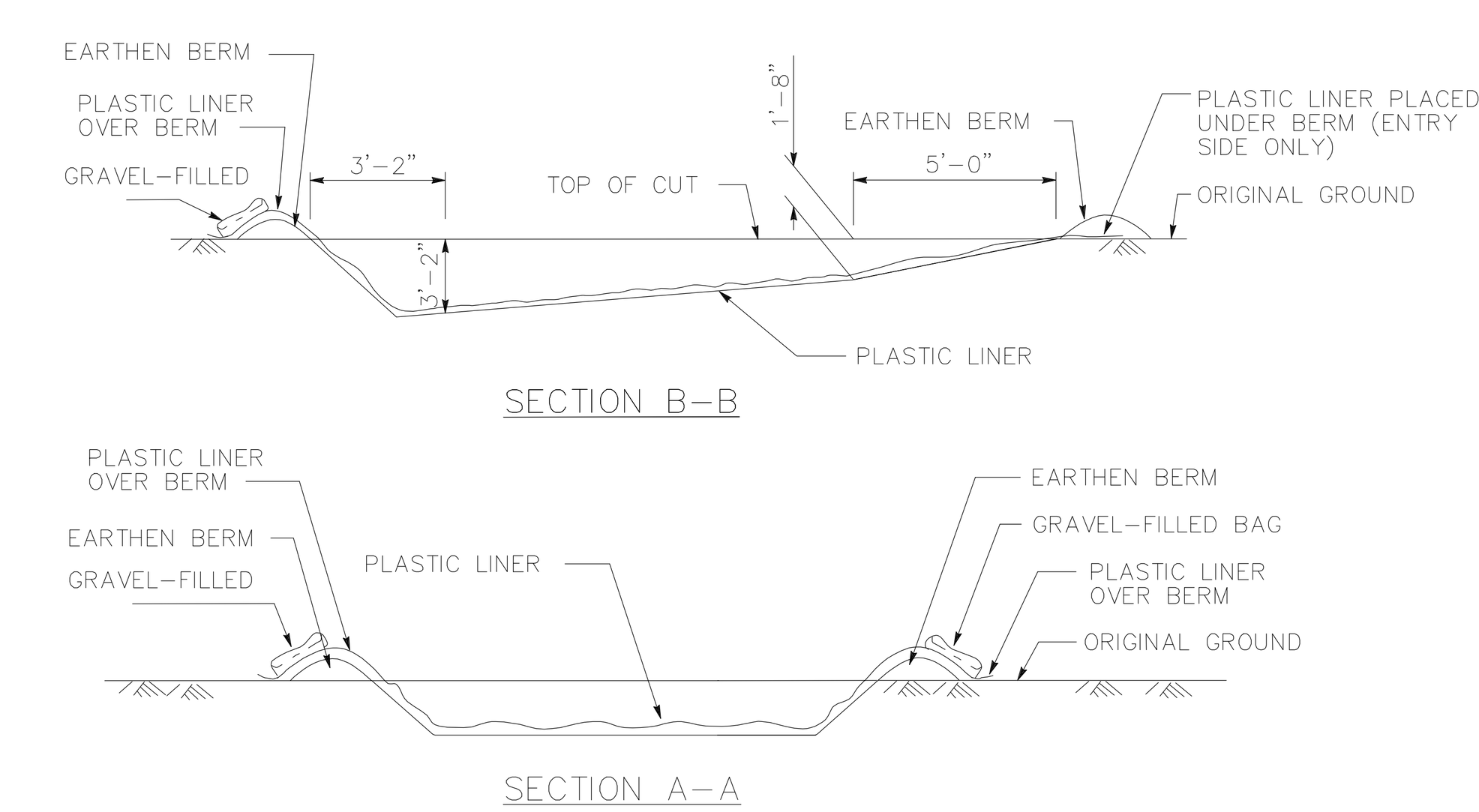
CURB INLET PROTECTION DETAIL

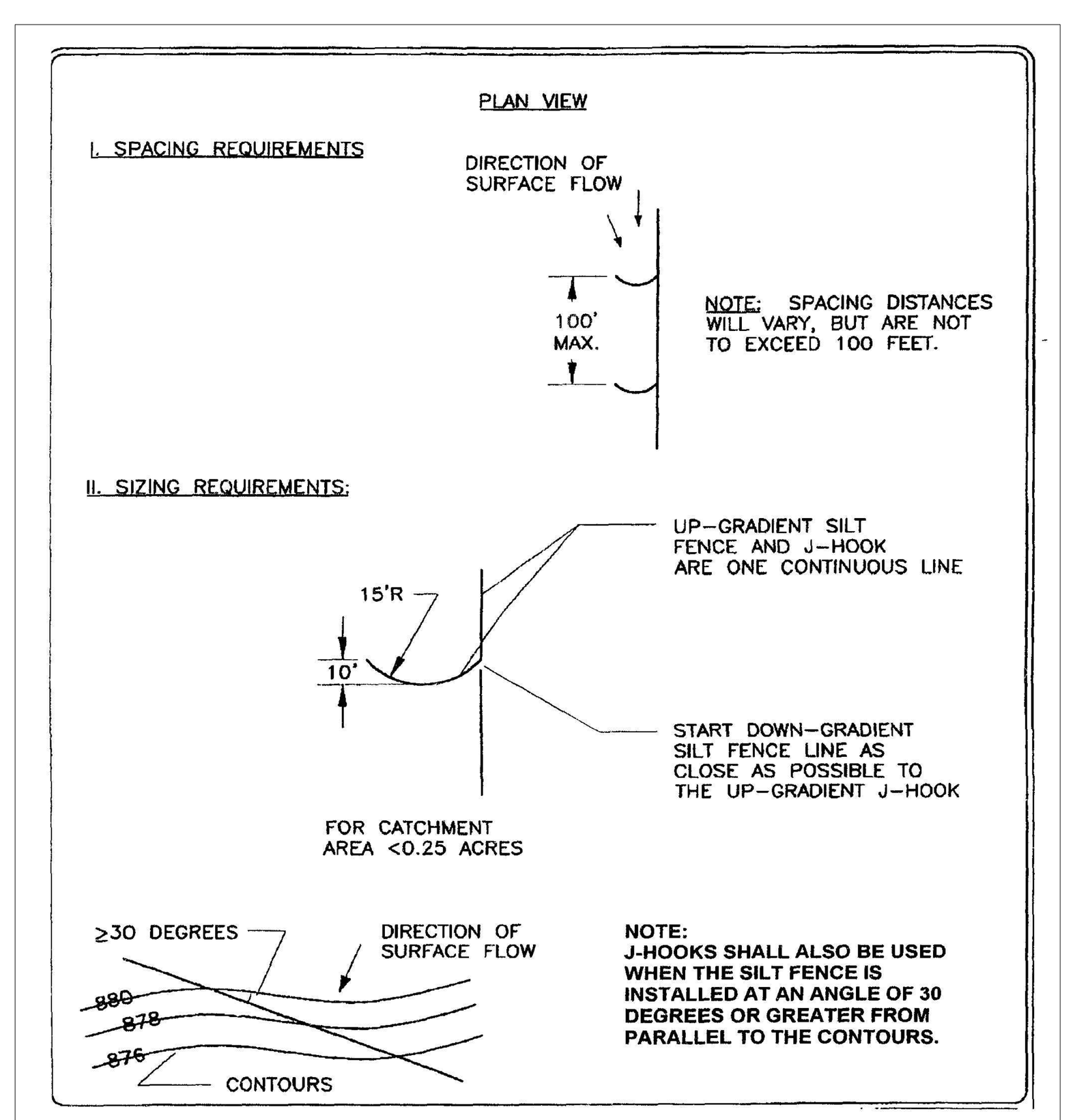
DRAWING NO: EC-14

ROUND ROCK, TEXAS
PURPOSE. PASSION. PROSPERITY.



TEMPORARY CONCRETE WASHOUT FACILITY
(BELOW GRADE) - NTS





SILT FENCE J-HOOK DETAIL

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

#	Date	Description

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AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER — 11/08/2017

811 Know what's below. Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

Sheet Name

EROSION & SEDIMENTATION CONTROL DETAILS

21607
2017-11-08
C010

FOR CONSTRUCTION

30 0 30 60

ORIGINAL SCALE: 1" = 30'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPERTY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- CURB & GUTTER
- RIBBON CURB
- PROPOSED WATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED MANHOLE
- EXISTING FENCE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING FORCE MAIN
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING TELEPHONE LINE
- EXISTING WASTEWATER LINE
- EXISTING WATER LINE
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- DRAINAGE FLOW ARROW

NOTES:

1. MINIMAL FILL MATERIAL SHALL BE PLACED OVER TREE ROOT SYSTEM TO ALLOW PROPER DRAINAGE OF AREA TO ACCESSIBLE RAMP. FILL IN THIS AREA SHALL BE HIGH QUALITY SOIL MIXTURE TO AID IN THE PRESERVATION OF THIS TREE. THIS AREA SHOULD BE GRADED TO DRAIN BACK TO THE PAVEMENT.
2. NEW PAVEMENT SHALL MATCH EXISTING ELEVATIONS.
3. ALL MANHOLE COVERS, VALVE BOXES, METER BOXES, FIRE HYDRANTS ETC. SHALL BE ADJUSTED TO FINISHED GRADES.
4. CONTRACTOR SHALL VERIFY ACCESSIBLE FEATURES MEET THE TEXAS DEPARTMENT OF LICENSING AND REGISTRATION'S ARCHITECTURAL BARRIERS ACT AND TEXAS ACCESSIBILITY STANDARDS (CURRENT AT THE TIME OF CONSTRUCTION) PRIOR TO POURING CONCRETE.

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BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
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MEP: Hendrix Consulting Engineers (512) 218-0040
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS
SITE
3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

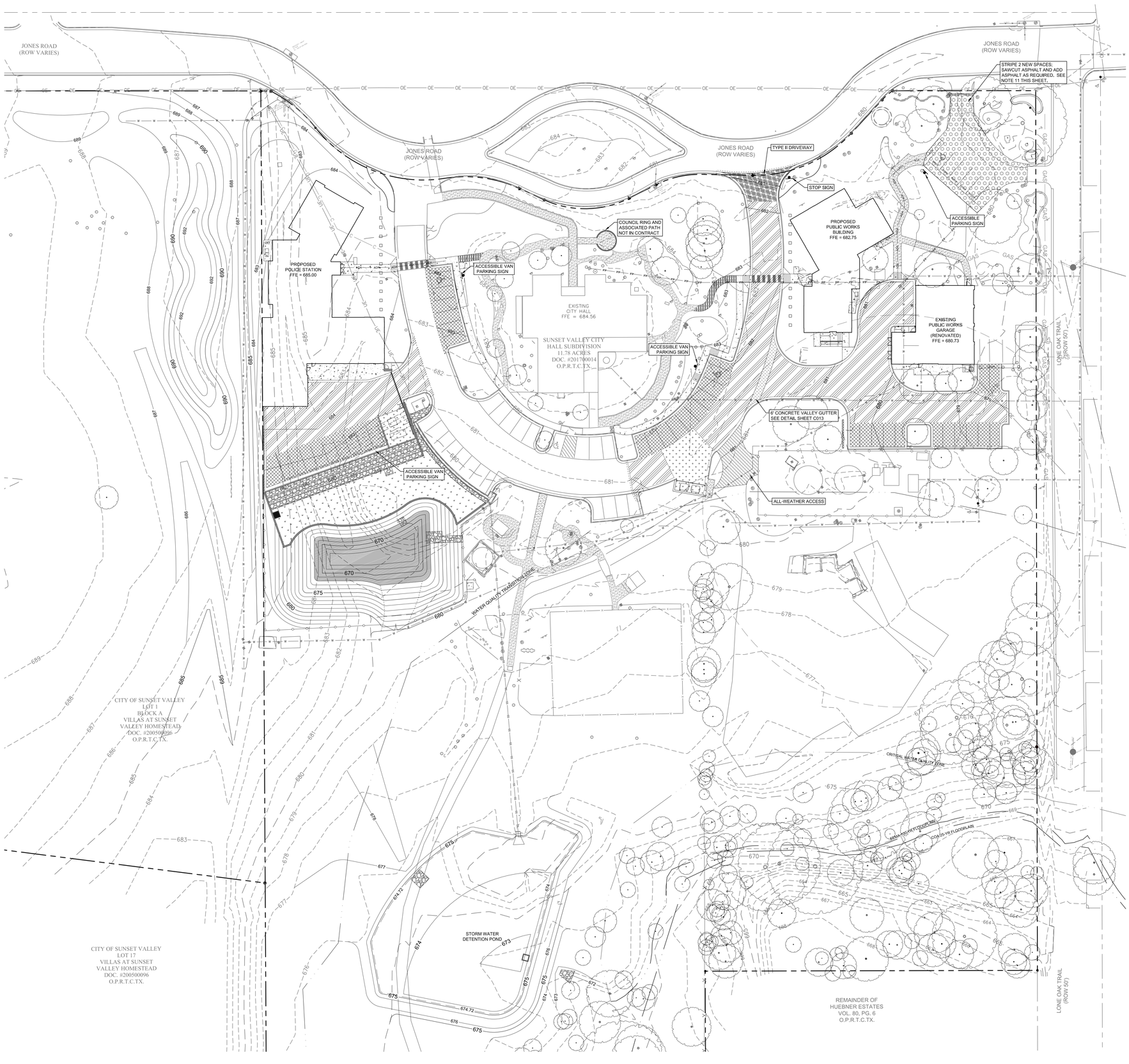
#	Date	Description
1	01/04/18	SI-02

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER — 01/04/2018

Sheet Name: OVERALL GRADING PLAN

21607
2018-01-04
C011

FOR CONSTRUCTION



30 0 30 60

ORIGINAL SCALE: 1" = 30'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
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- RIBBON CURB
- PROPOSED WATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED MANHOLE
- PROPOSED 10' CURB INLET
- OVERHEAD ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING FORCE MAIN
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING TELEPHONE LINE
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- EXISTING LIGHT POLE
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- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- 2.5" HMAC, OVER 10" CRUSHED LIMESTONE BASE, OVER SELECT FILL AS NECESSARY TO MAKE GRADE, OVER 6" MOISTURE CONDITIONED SUBGRADE
- 2" HMAC, OVER 9" CRUSHED LIMESTONE BASE, OVER SELECT FILL AS NECESSARY TO MAKE GRADE, OVER 6" MOISTURE CONDITIONED SUBGRADE
- 6" OF 3,500 PSI CONCRETE REINFORCED W/ #3 BARS 18" O.C.E.W., OVER SELECT FILL AS NECESSARY TO MAKE GRADE, OVER 6" MOISTURE CONDITIONED SUBGRADE
- TYPE II DRIVEWAY PER CITY OF AUSTIN DETAIL
- EXISTING ASPHALT PAVEMENT TO BE RESURFACED - SEE NOTE 9
- CONCRETE SIDEWALK PER CITY OF AUSTIN DETAIL
- CONCRETE VALLEY GUTTER PER DETAIL
- CALICHE ALL-WEATHER ACCESS
- DECOMPOSED GRANITE
- DECOMPOSED GRANITE WITH STABILIZED SOIL AGGREGATE

NOTES:

1. ANY DAMAGE TO EXISTING PAVEMENT, DRAINAGE OR EXISTING STRUCTURES SHALL BE REPAIRED TO PRECONSTRUCTION CONDITION AT CONTRACTOR'S EXPENSE.
2. ALL SPOIL MATERIAL AND DEBRIS SHALL BE DISPOSED OFFSITE BY CONTRACTOR IN A LEGAL MANNER. FURNISHING AND TRANSPORTATION OF ALL OFFSITE MATERIAL TO BE AT CONTRACTOR'S EXPENSE.
3. ALL STRUCTURES TO BE ADJUSTED BY THE CONTRACTOR TO MEET FINAL GRADES. A MAXIMUM OF 2 FEET OF THROAT RINGS WILL BE ALLOWED. MANHOLES RIMS IN UNPAVED AREAS SHALL BE 4 INCHES ABOVE FINAL GRADE.
4. ALL WATER PIPE SHALL BE C900 DR14 PVC OR CLASS 350 DUCTILE IRON. DOMESTIC WATER SERVICE LINES SHALL BE 2" SCH 40 PVC OR COPPER.
5. ALL WASTEWATER PIPE SHALL BE SCH 26 (6" AND LARGER) OR SCH 40 PVC (4"). A MINIMUM SEPARTION OF 2 FEET SHALL BE MAINTAINED AT WATERLINE CROSSINGS. LOWER WATERLINES IN CROSSING AREAS AS REQUIRED.
6. ALL WATER PIPE SHALL HAVE MINIMUM OF 36-INCHES OF COVER BELOW FINISH GRADE.
7. WATER PIPE WILL REQUIRE SLEEVES IF THE JOINT CANNOT BE CENTERED OVER THE WASTEWATER LINE.
8. CONTRACTOR SHALL UTILIZE EXISTING 6" ORIFICE, CORE AND REWORK TO 8" DIAMETER. CONTRACTOR SHALL RECOAT MANHOLE TO CITY SPEICIFICATIONS.
9. CONTRACTOR SHALL PROVIDE, AT A MINIMUM, 2" OF HMAC PAVEMENT THICKNESS AS THE FINISHED SECTION. EXISTING SECTION OF PAVEMENT IS UNKNOWN. FINISHED GRADE SHALL EQUAL EXISTING GRADES WITH TOLERANCES OF NO MORE THAN 0.05 FEET. HANDICAP ACCESSIBLE PARKING SHALL BE MAX. 2% IN ANY DIRECTION. RESURFACING MAY BE ACCOMPLISHED VIA MILLING A MINIMUM OF 1" OF ASPHALT, PLACING BINDER COAT, AND PLACING A NEW 1" SECTION OF PAVEMENT, ASSUMING 2" EXISTS. RESTRIPING SHALL BE INCLUDED AS SHOWN ON DRAWINGS.
10. STABILIZED SOIL AGGREGATE IS A PRODUCT MANUFACTURED BY STABILIZER SOLUTIONS, INC. SPECIFICALLY REQUESTED BY THE CITY OF SUNSET VALLEY. SEE WWW.STABILIZERSOLUTIONS.COM FOR MORE INFORMATION AND DISTRIBUTERS IN CENTRAL TEXAS.
11. MINOR AMOUNTS OF FLOWABLE FILL MATERIAL MAY BE UTILIZED, IN LIEU OF BASE MATERIAL, TO PROVIDE FULL DEPTH OF ADDED ASPHALTIC PAVEMENT SECTION AT THE NORTHEASTERN-MOST PARKING LOT, COVERED WITH THE SAME DEPTH OF ASPHALT AS THE RESURFACED AREAS. DEPTH OF FLOWABLE FILL SHALL BE AT LEAST AS DEEP AS EXISTING PAVEMENT SECTION, AND NOT LESS THAN 6 INCHES BELOW ASPHALT OVERLAY DEPTH.
12. ALL PAVEMENT MARKINGS/STRIPING SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 860S. GLASS BEADS FOR REFLECTORIZED PAINT ARE NOT REQUIRED FOR ONSITE PAVEMENT MARKINGS OR STRIPING. ⚠1

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0040
Landscape: HALFF Associates, Inc. (512) 777-4600

History		
#	Date	Description
⚠1	11/08/17	CONSTRUCTION ISSUE

STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER

11/08/2017

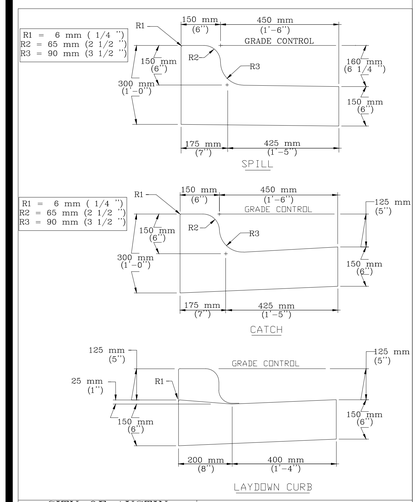
FOR CONSTRUCTION

Sheet Name

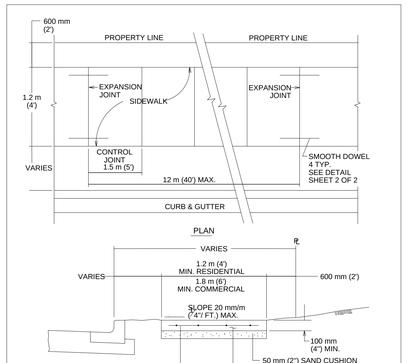
PAVING & SIGNAGE PLAN

21607
2017-11-08

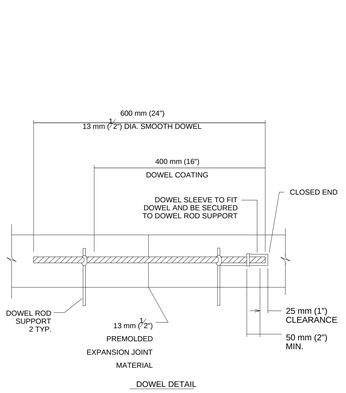
C012



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	CURB AND GUTTER SECTION	
RECORD COPY SIGNED BY LINO RIVERA 9/29/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-1

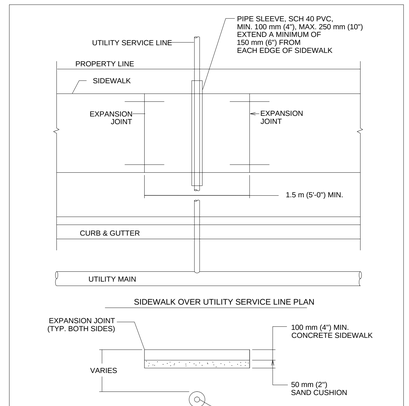


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER 03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3



DOWEL DETAIL

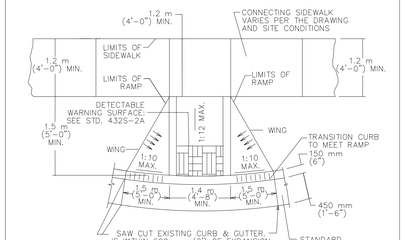
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER 03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3



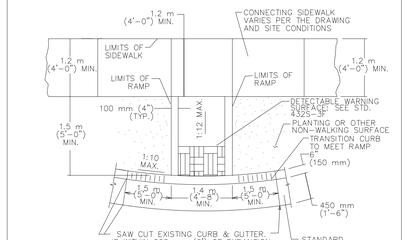
SECTION OF SIDEWALK OVER UTILITY SERVICE LINES

NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

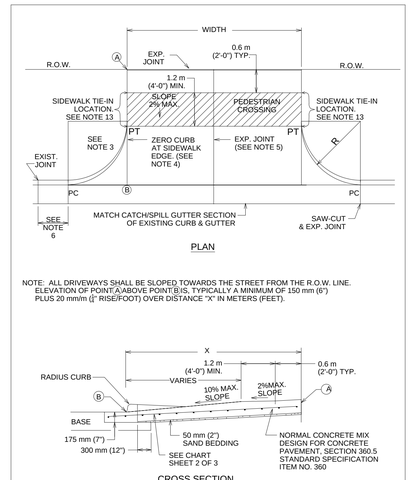
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER 03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 SIDEWALK CURB RAMP	
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-5



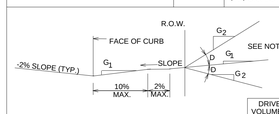
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1B SIDEWALK CURB RAMP	
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-5B



NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT A ABOVE POINT B IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
RECORD COPY SIGNED BY CUONG TRAN 02/24/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS

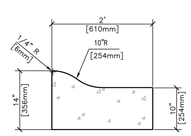


ALLOWABLE GRADES

DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE STD.	MAX
>1500	0%	3%
500-1500	3%	6%
< 500	6%	15%

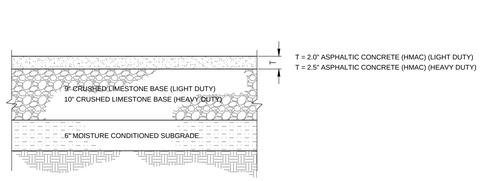
NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET) WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND "G2 IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
RECORD COPY SIGNED BY CUONG TRAN 02/24/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2



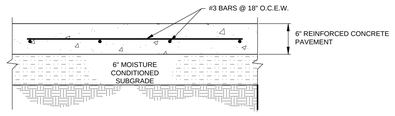
NOTE: CROSS SLOPE OF GUTTER SAME AS PAVEMENT.

MOUNTABLE CONCRETE CURB AND GUTTER
NTS



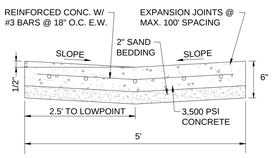
NOTES:
1. PAVEMENT SECTION IS BASED ON THE GEOTECHNICAL ENGINEERING SURVEY PREPARED BY TERRACON CONSULTANTS, INC. ON JANUARY 30, 2017.
2. CONTRACTOR SHALL VERIFY PAVEMENT SECTION WITH OWNER PRIOR TO CONSTRUCTION.

ASPHALT PAVING SECTION
N.T.S.



NOTES:
1. JOINTING AND SPACING SHOULD CONFORM TO THE AMERICAN CONCRETE INSTITUTE GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS, ACI REPORT 330. CONTRACTOR SHALL SUBMIT JOINT PLAN FOR EXPANSION JOINTS, CONTRACTION JOINTS, AND ISOLATION JOINTS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION OF CONCRETE PAVEMENT. ALLOW 1 WEEK FOR REVIEW AND APPROVAL.
2. ALL EXPANSION JOINTS, CONTRACTION JOINTS, AND ISOLATION JOINTS SHALL BE FILLED WITH A BACKER ROD AND SELF-LEVELING JOINT SEALANT APPROVED BY THE ENGINEER DUE TO SITE DRAINAGE CONDITIONS AND INDUSTRIAL USES ONSITE. EXPANSION JOINTS AND ISOLATION JOINTS SHALL BE FILLED WITH EXPANSION MATERIAL BELOW THE BACKER ROD. CONTRACTION JOINTS SHALL BE SAWCUT TO A DEPTH OF 1½ INCHES BELOW SURFACE AND ½-INCH WIDE. JOINT SEALANT MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.
3. PAVEMENT SECTION IS BASED ON THE GEOTECHNICAL ENGINEERING SURVEY PREPARED BY TERRACON CONSULTANTS, INC. ON JANUARY 30, 2017. ALL RECOMMENDATIONS SHALL BE FOLLOWED FOR PAVEMENT WITH NOTES AND DETAIL ABOVE SUPERCEDING WHERE APPROPRIATE. WELDED WIRE FABRIC WILL NOT BE ACCEPTABLE FOR REINFORCEMENT. JOINT SEALANT IS NOT OPTIONAL.

CONCRETE PAVING SECTION
N.T.S.



CONCRETE VALLEY GUTTER
SCALE: NTS

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TBPE FIRM #F-312

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BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

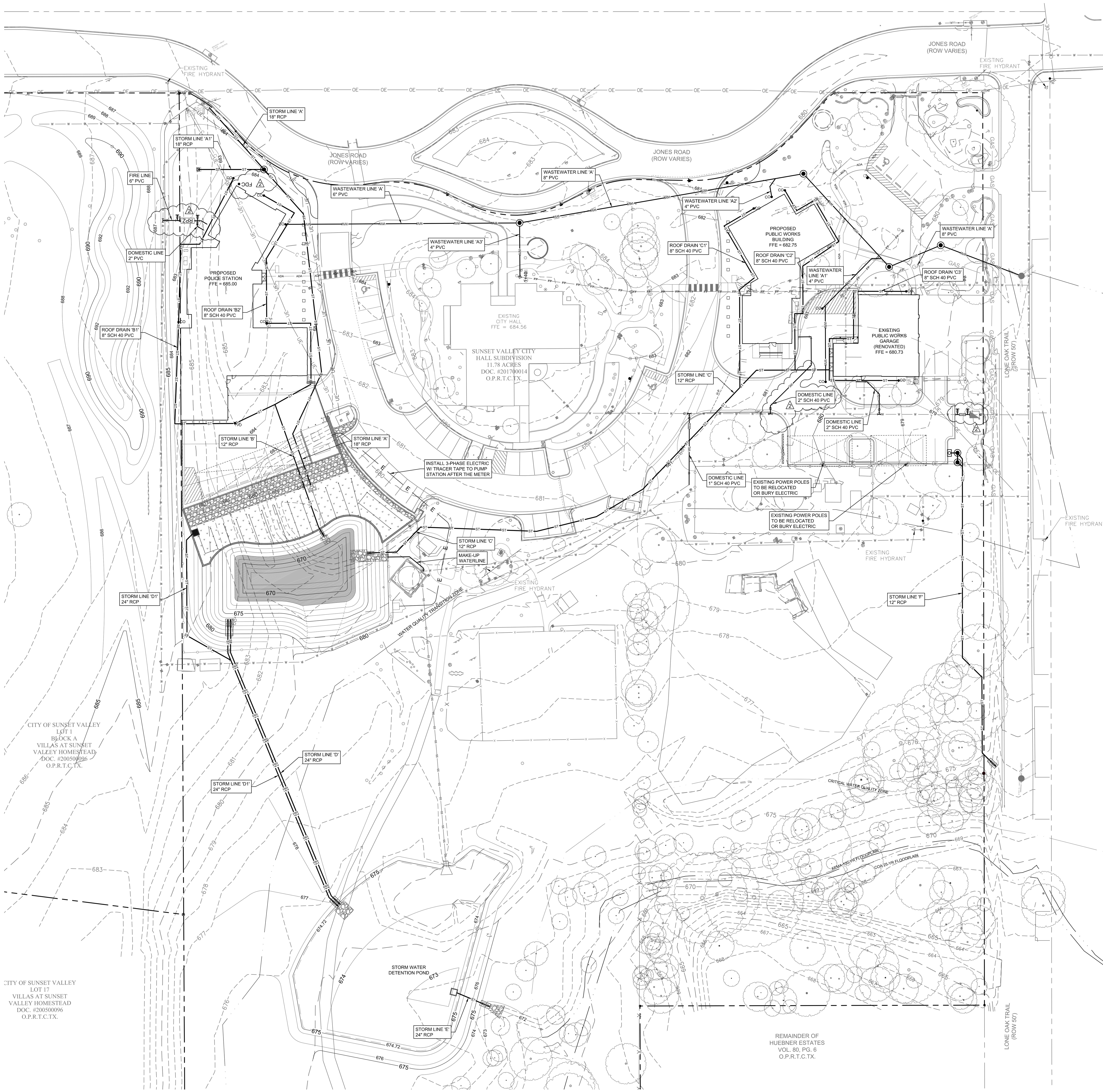
History

#	Date	Description

ROBERT W. SCHULZ 91151 LICENSED PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
GRADING & PAVING DETAILS

21607
2017-11-08
C013



30 0 30 60

ORIGINAL SCALE: 1" = 30'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPERTY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMNT
- CURB & GUTTER
- RIBBON CURB
- WL PROPOSED WATER LINE
- WW PROPOSED WASTEWATER LINE
- ST PROPOSED STORM SEWER LINE
- PROPOSED MANHOLE
- PROPOSED 10' CURB INLET
- OHE OVERHEAD ELECTRIC LINE
- X EXISTING FENCE LINE
- FO EXISTING FIBER OPTIC LINE
- FM EXISTING FORCE MAIN
- GAS EXISTING GAS LINE
- ST EXISTING STORM SEWER LINE
- T EXISTING TELEPHONE LINE
- WW EXISTING WASTEWATER LINE
- WL EXISTING WATER LINE
- EXISTING TELEPHONE JBOX
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- EXISTING STORM MANHOLE
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- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- XXX EXISTING TREE TO REMAIN

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

BRINKLEY SARGENT WIGINTON ARCHITECTS

History

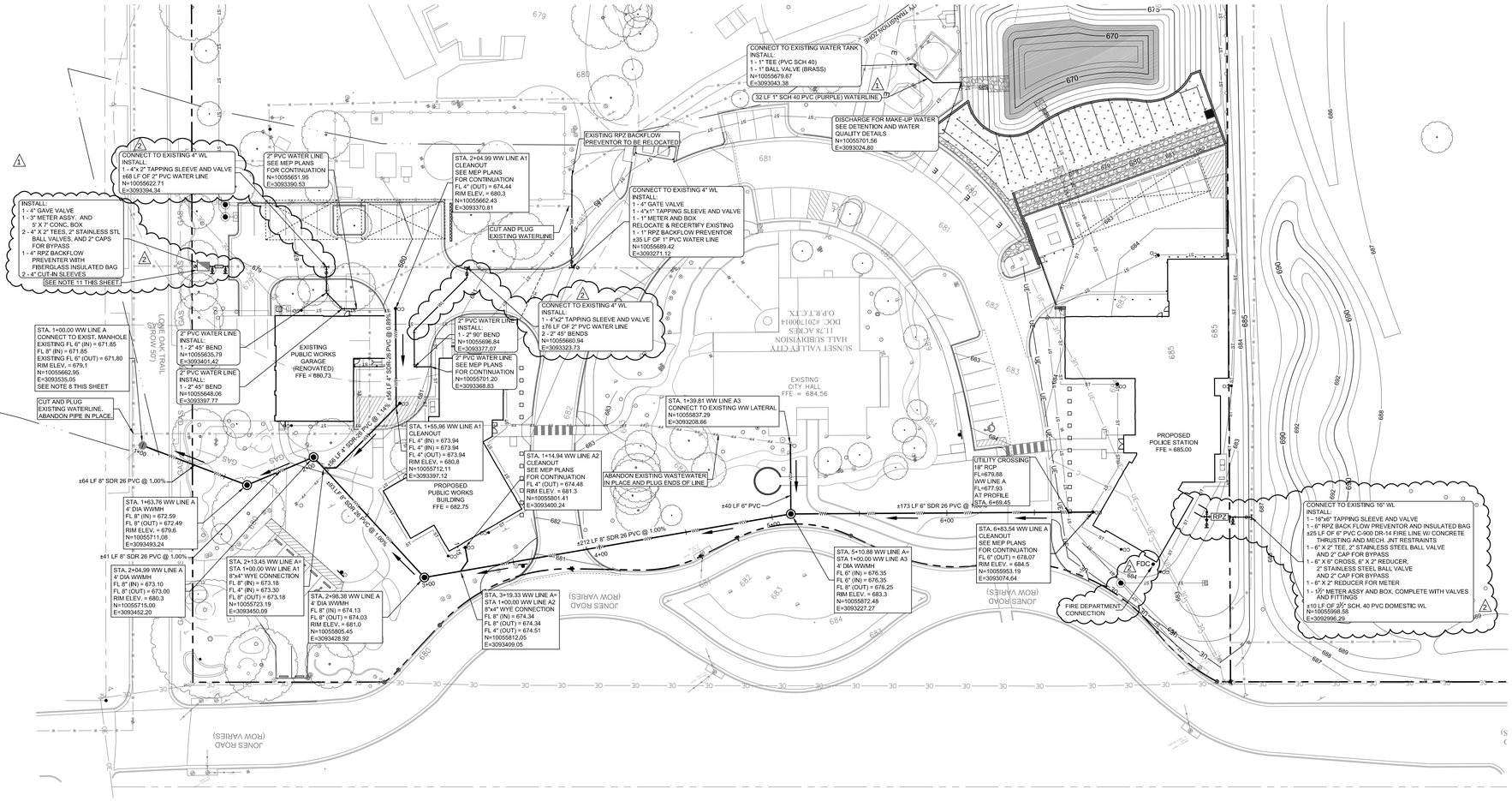
#	Date	Description
2	01/04/18	SI-02

STATE OF TEXAS
ROBERT W. SCHULZ
91151
LICENSED
01/04/2018

Sheet Name
OVERALL UTILITY PLAN

21607
2018-01-04
C014

FOR CONSTRUCTION



LEGEND

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- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- PROPOSED WASTEWATER FLOW DIRECTION

WW LINE A
STA. 0+75.00 - STA. 7+00.00
SCALE:
1" = 30' (HOR.)
1" = 3' (VERT.)

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7. WATER PIPE WILL REQUIRE SLEEVES IF THE JOINT CANNOT BE CENTERED OVER THE WASTEWATER LINE.
8. CONTRACTOR SHALL UTILIZE EXISTING 6" ORIFICE, CORE AND REWORK TO 8" DIAMETER. CONTRACTOR SHALL RECOAT MANHOLE TO CITY SPECIFICATIONS.
9. ALL CUT-IN SLEEVES AND TAPPING SLEEVES SHALL BE DUCTILE IRON. PVC SLEEVES ARE NOT ALLOWED.
10. UNDERGROUND MAINS FEEDING NFPA 12 SPRINKLER SYSTEMS MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA 13 AND THE FIRE CODE, BY A LICENSED SPRINKLER CONTRACTOR WITH A PLUMBING PERMIT. THE ENTIRE MAIN MUST BE HYDROSTATICALLY TESTED AT ONE TIME, UNLESS VALVES ARE PROVIDED BETWEEN TESTED SECTIONS.
11. CONTRACTOR SHALL COORDINATE LOCATION OF 3-INCH METER, RPZ BACKFLOW PREVENTER AND BYPASS FITTINGS AND VALVES WITH CITY OF SUNSET VALLEY PUBLIC WORKS SO AS TO MINIMIZE DISTURBANCE OF EXISTING TREES.
12. ALL FITTINGS ON FIRE LINES SHALL BE RESTRAINED WITH THRUST BLOCKING OR MECHANICAL THRUST RESTRAINTS IN COMPLIANCE WITH NFPA 24 SECTION 10.8.1. SEE WATER AND WASTEWATER DETAILS SHEET FOR THRUST BLOCKING DETAILS.

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Landscape:	HALFF Associates, Inc.	(512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

#	Date	Description
1	11/08/17	CONSTRUCTION ISSUE
2	01/04/18	SI-02

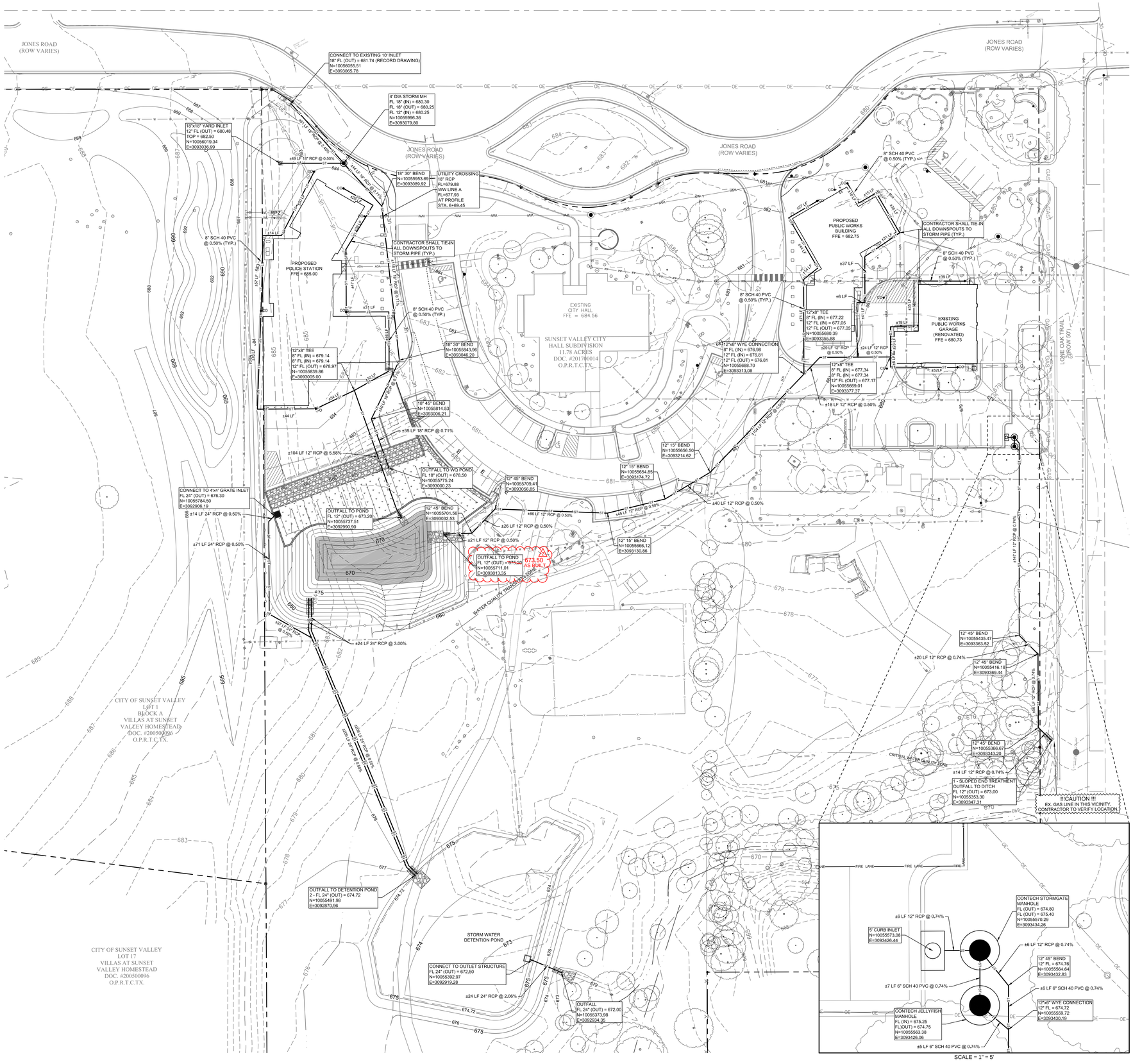
ROBERT W. SCHOLZ
91151
RWScholz
01/04/2018

Sheet Name

WATER & WASTEWATER PLAN

21607
2018–01–04
C015

FOR CONSTRUCTION



30 0 30 60

ORIGINAL SCALE: 1" = 30'

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8. A MINIMUM OF FIVE (5) - FOOT SEPARATION SHALL BE REQUIRED BETWEEN ELECTRIC AND STORM SEWER WHERE THE TWO RUN PARALLEL, BUT ELECTRICAL REQUIREMENTS MAY BE MORE STRINGENT. REFER TO MEP PLANS AND AUSTIN ENERGY REGULATIONS FOR MINIMUM SEPARATION DISTANCES. ALL ELECTRICAL SHALL HAVE TRACER TAPE INSTALLED ON TOP OF THE CONDUITS. THE FINAL LOCATIONS OF UTILITIES SHALL BE SURVEYED BY CONTRACTOR AND PROVIDED TO ENGINEER IN CAD DRAWING TO DOCUMENT CLEARLY ON RECORD DRAWINGS.

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

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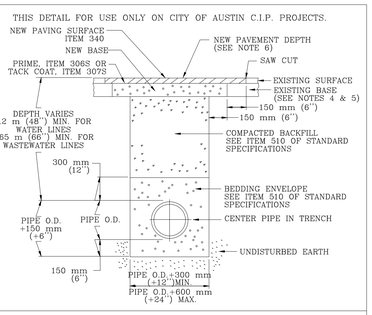
History		
#	Date	Description
R1	5/24/24	MODIFIED FLOWLINE FROM AS-BUILT

STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER
11/08/2017

FOR CONSTRUCTION

Sheet Name
STORM SEWER PLAN

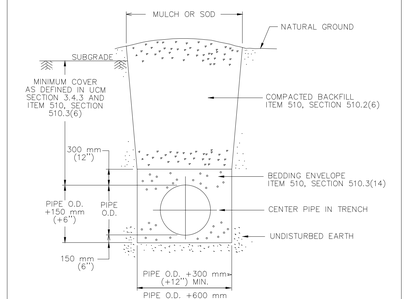
21607
2017-11-08
C016



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

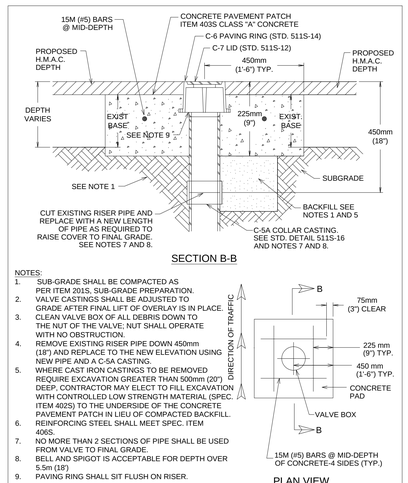
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE	
RECORD COPY SIGNED BY KATHI L. FLOWERS 8/19/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-3



REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

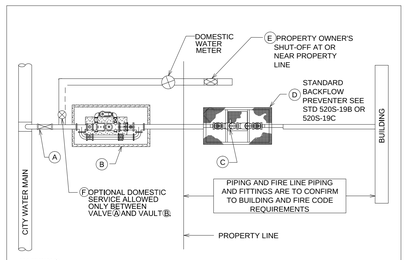
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-5



NOTES:

1. SUB-GRADE SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE; NUT SHALL OPERATE WITH NO OBSTRUCTION.
4. REMOVE EXISTING RISER PIPE DOWN 450mm (18") AND REPLACE TO THE NEW ELEVATION USING NEW PIPE AND A C-5A CASTING.
5. WHERE CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 500mm (20") DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL (SPEC. ITEM 402S) TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
6. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.
7. NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
8. BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 5.5m (18').
9. PAVING RING SHALL SIT FLUSH ON RISER.

CITY OF AUSTIN AUSTIN WATER UTILITY	WATER VALVE BOX ADJUSTMENT TO GRADE W/CONCRETE AND H.M.A.C.	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511S-13B



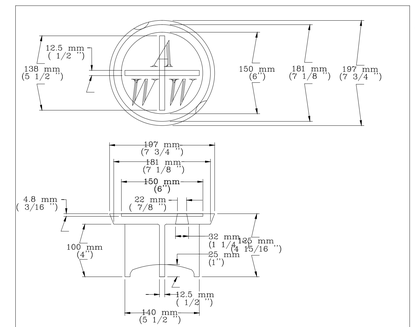
MATERIALS:

(A) TAPPING, RESTRAINED OR FLANGED VALVE (GATE, IRON BODY WITH MJ OUTLET). SEE SPL WW-243, WW-27, WW-27A, AND/OR WW-27B.
(B) FIRELINE OR MASTER METER. SEE STD. DETAIL 520S-17.
(C) CUSTOMER'S BACKFLOW PREVENTION ASSEMBLY AS REQUIRED BY CROSS CONNECTION ORDINANCES. SEE SPL WW-293 OR APPROVEL EQUAL.
(D) VAULT AND ACCESS DOOR SHALL BE PER SPL WW-298 OR SPL WW-614, RESPECTIVELY, OR APPROVED EQUAL. SEE STD. DETAIL 520S-19B OR 19C. VAULT SHALL NOT BE LOCATED IN A TRAFFIC AREA.
(E) CUSTOMER'S SHUT-OFF VALVE ON DOMESTIC WATER LINE.
(F) DOMESTIC WATER SERVICE LINE VALVE.

NOTES:

1. FIRE LINE SHALL BE A MINIMUM OF 150 mm (6") & GREATER THAN OR EQUAL TO METER SIZE IN THE STREET RIGHT-OF-WAY. PLANS SHALL BE PREPARED BY A LICENSED ENGINEER.
2. ALL BURIED PIPE SHALL BE WRAPPED COMPLETELY WITH A MINIMUM OF 0.2 mm (8 MIL) POLYETHYLENE FILM.
3. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
4. FOR STD. DETAILS 520S-19A, 19B, AND 19C, MASTER METER MEANS METER FOR FIRE AND DOMESTIC SERVICE.
5. THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT. ADDITIONAL DRAINAGE CONSIDERATION SUCH AS CONNECTION OF VAULT TO STORM SEWER, LATERAL DRAIN LINES FROM GRAVEL BED OR OTHER MEANS SHALL BE REQUIRED IF CONDITIONS CAUSE WATER TO COLLECT IN VAULT.

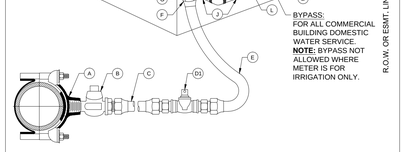
CITY OF AUSTIN AUSTIN WATER UTILITY	STANDARD FIRE LINE INSTALLATION WITH OR WITHOUT MASTER METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-19A



NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. TYPICAL FILLET IS 4.8 mm (3/16 ") RADIUS
3. LETTERING SHALL BE 38 mm (1 1/2 ") HEIGHT AND LOCATED AS SHOWN.
4. THIS LID REQUIRES TWO (2) PICK SLOTS.
5. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
8. WEIGHT: APPROXIMATELY 6 kg (13 lbs).

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	VALVE BOX CASTING C-7 LID	
RECORD COPY SIGNED BY KATHI L. PAYNE 4/5/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511S-12



CITY OF AUSTIN AUSTIN WATER	1 ½" - 2" METER INSTALLATION SHOWING OPTIONAL BYPASS	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-04 1 OF 2

MATERIALS LIST:

A. 2" SERVICE CLAMP
B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT
D1. 2" BALL VALVE, SPL WW-27S
D2. 2" BALL VALVE, SPL WW-27S
E. 2" COPPER SERVICE TUBING
F. 2" BRASS COUPLING - COMPRESSION TO MALE IPT
G. 2" BRASS TEE
H. 2" BRASS CLOSE-NIPPLE
I. 2" ANGLE METER STOP; SERVICE TUBING INLET x FLANGED OUTLET
J. 2" BRASS NIPPLE
K. 2" BRASS ELBOW
L. 2" LOCKABLE CURB STOP - FEMALE IPT INLET BY COMPRESSION OUTLET
M. 2" BRASS COUPLING - SERVICE TUBING TO MALE IPT
N. RECTANGULAR METER BOX AND COVER, SPL WW-145A
O. BRASS ADAPTER (2" x 1 ½") FOR 1 ½" METER ONLY
P. WATER METER. LENGTH 13", (PURCHASED FROM AUSTIN WATER)
Q. 2" COPPER SERVICE TUBING (PRIVATE PLUMBING PER CODE)
R. CUSTOMER CUT-OFF VALVE
S. CUSTOMER VALVE BOX AND LID

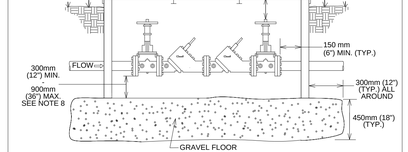
NOTES:

1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
6. BALL VALVE "D1" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.
7. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

RECLAIMED WATER:

FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE **"RECLAIMED WATER"** CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	1 ½" - 2" METER INSTALLATION SHOWING OPTIONAL BYPASS	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-04 2 OF 2

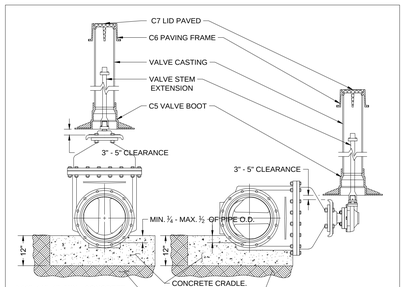


CITY OF AUSTIN AUSTIN WATER UTILITY	STANDARD BACKFLOW PREVENTER ON FIRE LINE WITH MASTER METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-19B 1 OF 2

NOTES:

1. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL HAVE LAB AND FIELD APPROVAL FROM THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.
2. ALL TEST PORTS SHALL BE DIRECTED UPWARD AND PLUGGED. TEST PORTS ARE LOCATED ON SERVICE SIDE. PLUGS SHALL BE NON-FERROUS.
3. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN THE UPRIGHT HORIZONTAL POSITION, UNLESS OTHERWISE APPROVED. BACKFLOW PREVENTION ASSEMBLIES SHALL NOT BE ROTATED ON THEIR AXIS.
4. CLEARANCE SHALL BE AS INDICATED,AND IN THE STANDARD CROSS CONNECTION ORDINANCES AND UCM.
5. ACCESS OPENING MUST BE LARGE ENOUGH TO REMOVE LARGEST PORTION OF BACKFLOW PREVENTER, BUT NOT LESS THAN 750 mm (30") IN LEAST DIMENSION.
6. TEST AND MAINTENANCE REPORT SHALL BE RECEIVED BY AUSTIN WATER UTILITY'S SPECIAL SERVICE DIVISION WITHIN 5 DAYS AFTER BEING INSTALLED.
7. VAULT SHALL NOT BE INSTALLED IN TRAFFIC AREA.
8. VAULT DEPTH MAY NOT EXCEED 1.8m (72"), BOTTOM OF LID TO TOP OF FLOOR.
9. HAND WHEELS SHALL BE HORIZONTALLY LOCATED WITHIN 300mm (12") OF ACCESS OPENING.
10. FOR ACCESS DOORS SEE SPL WW-614 OR APPROVED EQUAL (H20 LOADING REQUIRED).
11. FOR VAULT SEE SPL WW-298 OR APPROVED EQUAL (H20 LOADING REQUIRED).
12. VAULT PIPE WALL VOIDS SHALL BE SEALED WITH NON-SHRINK GROUT OR SEALANT PER SPL WW-146A OR APPROVED EQUAL.
13. THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT. ADDITIONAL DRAINAGE CONSIDERATION SUCH AS CONNECTION OF VAULT TO STORM SEWER, LATERAL DRAIN LINES FROM GRAVEL BED OR OTHER MEANS SHALL BE REQUIRED IF CONDITIONS CAUSE WATER TO COLLECT IN VAULT.

CITY OF AUSTIN AUSTIN WATER UTILITY	STANDARD BACKFLOW PREVENTER ON FIRE LINE WITH MASTER METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-19B 2 OF 2

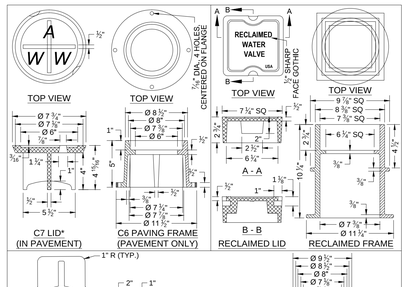


NOTES:

1. WELD SOCKET 2½" x 2" DEEP TO 1" SCH. 40 CARBON STEEL ROUND STEM EXTENSION, FITTED ON OPERATING NUT, [SCH. 80 FOR LENGTHS OVER 10']
2. VALVE CASTING SHALL BE 6" DI PIPE WITH BELL OR COLLAR CENTERED OVER VALVE BOOT.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 12" AND 18" FROM FINISHED GRADE.

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE **"RECLAIMED WATER"** CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 1 OF 4



NOTES:

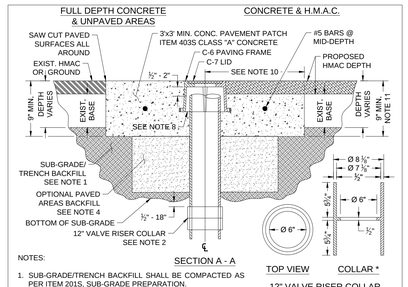
1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID, FRAME, COLLAR AND BASE.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. CASTING FINISH BY MANUFACTURER SHALL INCLUDE REMOVAL OF FINS AND FLASHING, AND PAINT WITH BLACK ASPHALT COATING.

WEIGHTS:

C7 LID: 13 LBS
RECLAIMED LID: 15 LBS
C6 FRAME: 23 LBS
RECLAIMED FRAME: 33 LBS
C5 BASE: 78 LBS

* LETTERING SHALL BE 1 ½" 2 PICK BAR SLOTS REQUIRED

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 2 OF 4



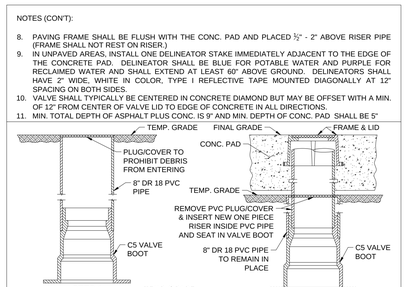
NOTES:

1. SUB-GRADE/TRENCH BACKFILL SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. TO ADJUST VALVE CASTINGS TO FINAL GRADE, REMOVE RISER PIPE BELOW SUB-GRADE AND INSTALL APPROPRIATE LENGTH OF NEW RISER PIPE TO ACHIEVE FINAL GRADE. CONNECT THE TWO PIECES OF RISER PIPE WITH A 6" COLLAR MIN. 12" LENGTH APPROXIMATELY CENTERED ON THE JOINT WITH THE TOP OF SLEEVE LOCATED ½" - 18" BELOW SUB-GRADE. THE INSIDE "LIP" OF COLLAR TO BE PAINTED WITH FLUORESCENT WHITE PAINT OR COVERED WITH FLUORESCENT WHITE TAPE. ALTERNATE: FOR OPTIONAL SINGLE PIECE RISER INSTALLATION SEE SHEET 4 OF 4.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE; NUT SHALL OPERATE WITH NO OBSTRUCTION.
4. WHERE CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL (SPEC. ITEM 402S) TO THE UNDERSIDE OF THE CONCRETE. PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
5. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.7.
6. NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
7. BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 18'.

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 3 OF 4

NOTES (CONT):

8. PAVING FRAME SHALL BE FLUSH WITH THE CONC. PAD AND PLACED ½" - 2" ABOVE RISER PIPE (FRAME SHALL NOT REST ON RISER.)
9. IN UNPAVED AREAS, INSTALL ONE DELINEATOR STAKE IMMEDIATELY ADJACENT TO THE EDGE OF THE CONCRETE PAD. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES.
10. VALVE SHALL TYPICALLY BE CENTERED IN CONCRETE DIAMOND BUT MAY BE OFFSET WITH A MIN. OF 12" FROM CENTER OF VALVE LID TO EDGE OF CONCRETE IN ALL DIRECTIONS.
11. MIN. TOTAL DEPTH OF ASPHALT PLUS CONC. IS 9" AND MIN. DEPTH OF CONC. PAD SHALL BE 5"



OPTIONAL ONE PIECE VALVE CASTING INSTALLATION

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 4 OF 4

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9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-9141
TBPE FIRM #F-312

811 Know what's below. Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

SUNSET VALLEY POLICE & PUBLIC WORKS

3205 JONES ROAD, SUNSET VALLEY, TX 78745

SITE

BRINKLEY SARGENT WIGGINTON ARCHITECTS

Architect: Brinkley Sargent Wigginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

History

#	Date	Description

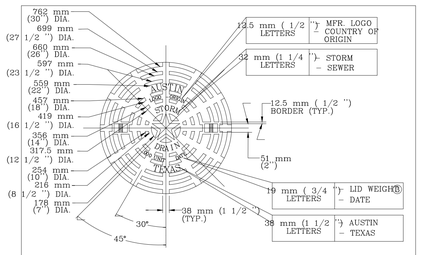
STATE OF TEXAS — ROBERT W. SCHOLL — 91151 — LICENSED PROFESSIONAL ENGINEER — FINAL
11/08/2017

FOR CONSTRUCTION

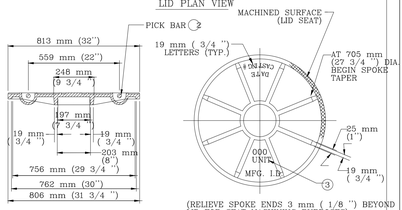
Sheet Name

UTILITY DETAILS SHEET 1 OF 3

21607
2017-11-08
C017



LID PLAN VIEW

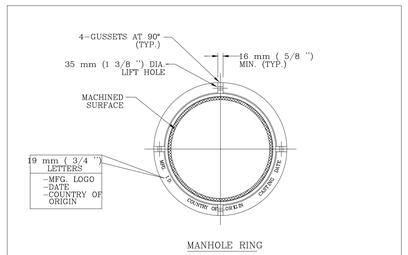


LID SECTION VIEW

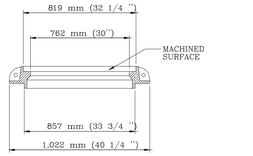
(RELIEVE SPOKE ENDS 3 mm (1/8 ") BEYOND LID FOR SEAT MACHINING PURPOSES)

LID SECTION VIEW

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE RING AND 813 mm (32") COVER	
RECORD COPY SIGNED BY GEORGE E. OSWALD 2/14/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-4S 1 OF 3

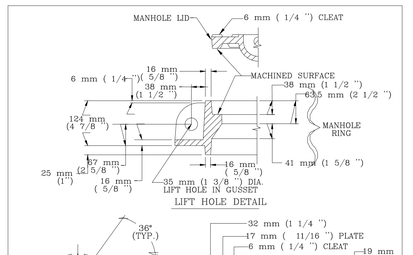


MANHOLE RING

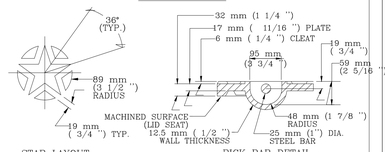


RING SECTION

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE RING AND 813 mm (32") COVER	
RECORD COPY SIGNED BY GEORGE E. OSWALD 2/14/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-4S 2 OF 3



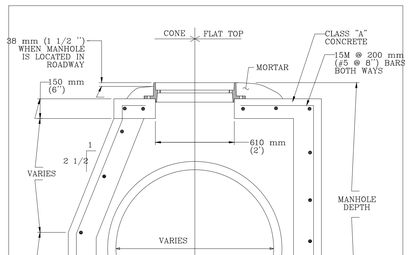
LIFT HOLE DETAIL



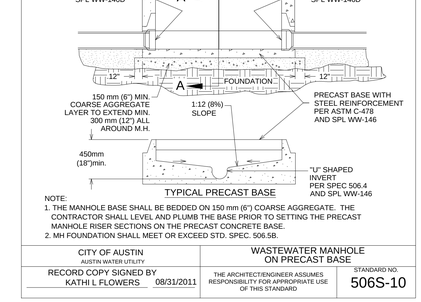
STAR LAYOUT PICK BAR DETAIL

NOTES:
① ALL CORNERS AND EDGES SHALL HAVE A 1.5 mm (1/16 ") MINIMUM RADIUS.
② LIDS SHALL BE CAST WITH TWO 25 mm (1") DIA. STEEL PICK BARS.
③ LID WEIGHTS SHALL BE 935 N (210 LBS.) FOR CAST IRON OR 779 N (175 LBS.) FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF LID.
④ MANUFACTURER SHALL PROVIDE INDEPENDENT TESTING LABORATORY REPORT ON 25,000 POUND PROOF LOAD TEST CONDUCTED ACCORDING TO AASHTO M-306.
⑤ FILLETS SHALL BE 6 mm (1/4 ") RADIUS UNLESS OTHERWISE SPECIFIED.
⑥ MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
⑦ MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.

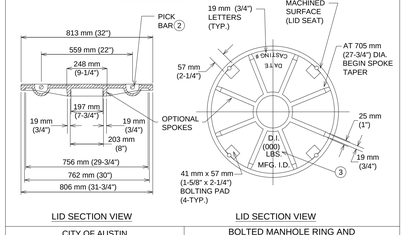
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE RING AND 813 mm (32") COVER	
RECORD COPY SIGNED BY GEORGE E. OSWALD 2/14/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-4S 3 OF 3



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE DETAIL	
RECORD COPY SIGNED BY GEORGE E. OSWALD 2/14/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-11



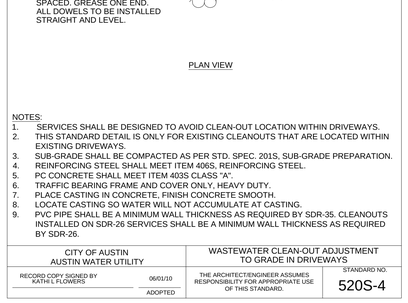
LID PLAN VIEW



LID SECTION VIEW

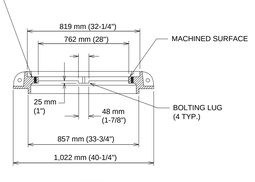
LID SECTION VIEW

CITY OF AUSTIN AUSTIN WATER UTILITY	BOLTED MANHOLE RING AND 813 mm 32" COVER	
RECORD COPY SIGNED BY KATHI L FLOWERS 09/23/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-5W 1 OF 3



MANHOLE RING

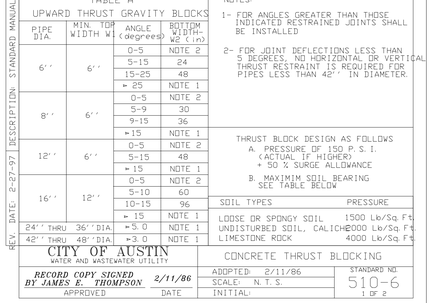
NOTE: ALL MANHOLES NOT LOCATED IN PAVED AREAS SHALL HAVE BOLTED COVERS AS PER SPEC. 506.



RING SECTION

NOTE: ALL MANHOLES NOT LOCATED IN PAVED AREAS SHALL HAVE BOLTED COVERS AS PER SPEC. 506.

CITY OF AUSTIN AUSTIN WATER UTILITY	BOLTED MANHOLE RING AND 813 mm 32" COVER	
RECORD COPY SIGNED BY KATHI L FLOWERS 09/23/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-5W 2 OF 3

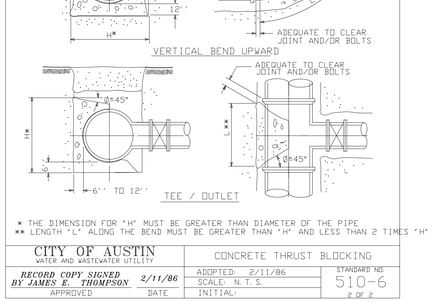


LIFT HOLE DETAIL

STAR LAYOUT PICK BAR DETAIL

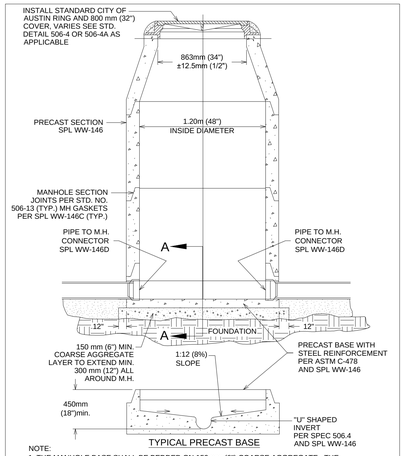
NOTES:
① ALL CORNERS AND EDGES SHALL HAVE A 1.5 mm (1/16") MINIMUM RADIUS.
② LIDS SHALL BE CAST WITH TWO 25 mm (1") DIA. STEEL PICK BARS.
③ LID WEIGHTS SHALL BE 779 N (175 LBS.) FOR DUCTILE IRON WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF LID.
④ MANUFACTURER SHALL PROVIDE INDEPENDENT TESTING LABORATORY REPORT ON 40,000 POUND PROOF LOAD TEST CONDUCTED ACCORDING TO AASHTO M-306.
⑤ FILLETS SHALL BE 6 mm (1/4") RADIUS UNLESS OTHERWISE SPECIFIED.
⑥ MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
⑦ BOLTS SHALL BE 16 mm x 44 mm (5/8" x 1-3/4" x 11 N.C.) STAINLESS STEEL HEX HEAD (TYPE 316).

CITY OF AUSTIN AUSTIN WATER UTILITY	BOLTED MANHOLE RING AND 813 mm 32" COVER	
RECORD COPY SIGNED BY KATHI L FLOWERS 09/23/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-5W 3 OF 3



NOTES:
1. HEAVY DUTY.
2. SEE SPL WW-622 FOR MORE INFORMATION.

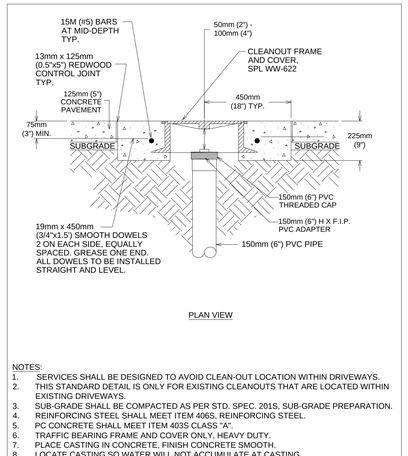
CITY OF AUSTIN AUSTIN WATER UTILITY	CLEANOUT RING AND COVER	
RECORD COPY SIGNED BY KATHI L. FLOWERS 06/01/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 503S-7W



TYPICAL PRECAST BASE

NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MH FOUNDATION SHALL MEET OR EXCEED STD. SPEC. 506.5B.

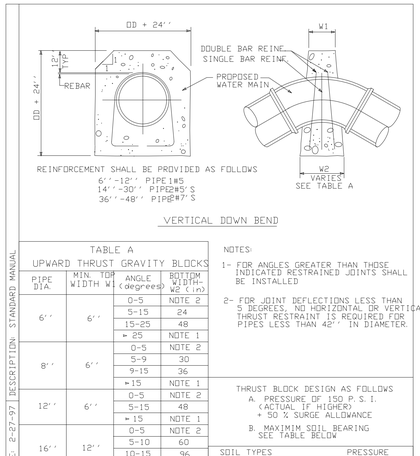
CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER MANHOLE ON PRECAST BASE	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	STANDARD NO. 506S-10



PLAN VIEW

NOTES:
1. SERVICES SHALL BE DESIGNED TO AVOID CLEAN-OUT LOCATION WITHIN DRIVEWAYS.
2. THIS STANDARD DETAIL IS ONLY FOR EXISTING CLEANOUTS THAT ARE LOCATED WITHIN EXISTING DRIVEWAYS.
3. SUB-GRADE SHALL BE COMPACTED AS PER STD. SPEC. 201S, SUB-GRADE PREPARATION.
4. REINFORCING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
5. PC CONCRETE SHALL MEET ITEM 403S CLASS "A".
6. TRAFFIC BEARING FRAME AND COVER ONLY, HEAVY DUTY.
7. PLACE CASTING IN CONCRETE, FINISH CONCRETE SMOOTH.
8. LOCATE CASTING SO WATER WILL NOT ACCUMULATE AT CASTING.
9. PVC PIPE SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-35. CLEANOUTS INSTALLED ON SDR-26 SERVICES SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26.

CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER CLEAN-OUT ADJUSTMENT TO GRADE IN DRIVEWAYS	
RECORD COPY SIGNED BY KATHI L FLOWERS 06/01/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-4



REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS
6"-12" PIPE 1#5
14"-30" PIPE 2#5'S
36"-48" PIPE #7'S

VERTICAL DOWN BEND

TABLE A
UPWARD THRUST GRAVITY BLOCKS

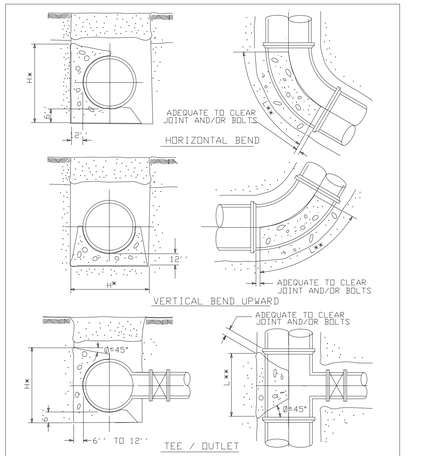
PIPE DIA.	MIN. TOP WIDTH W1	ANGLE (degrees)	BOTTOM WIDTH-W2 (in)
6"	6"	0-5	NOTE 2
		5-15	24
		15-25	48
		⇐ 25	NOTE 1
8"	6"	0-5	NOTE 2
		5-9	30
		9-15	36
		⇐ 15	NOTE 1
12"	6"	0-5	NOTE 2
		5-15	48
		⇐ 15	NOTE 1
16"	12"	0-5	NOTE 2
		5-10	60
		10-15	96
		⇐ 15	NOTE 1
24" THRU 36" DIA		⇐ 5.0	NOTE 1
42" THRU 48" DIA		⇐ 3.0	NOTE 1

NOTES:
1- FOR ANGLES GREATER THAN THOSE INDICATED RESTRAINED JOINTS SHALL BE INSTALLED
2- FOR JOINT DEFLECTIONS LESS THAN 5 DEGREES, NO HORIZONTAL OR VERTICAL THRUST RESTRAINT IS REQUIRED FOR PIPES LESS THAN 42" IN DIAMETER.

THRUST BLOCK DESIGN AS FOLLOWS
A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50 % SURGE ALLOWANCE
B. MAXIMUM SOIL BEARING SEE TABLE BELOW

SOIL TYPES	PRESSURE
LOOSE OR SPONGY SOIL	1500 Lb/Sq Ft
UNDISTURBED SOIL, CALICHE	2000 Lb/Sq Ft
LIMESTONE ROCK	4000 Lb/Sq Ft

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	CONCRETE THRUST BLOCKING	
RECORD COPY SIGNED BY JAMES E. THOMPSON 2/11/86 APPROVED DATE	ADOPTED: 2/11/86 SCALE: N.T.S. INITIAL:	STANDARD NO. 510-6 1 OF 2



× THE DIMENSION FOR "H" MUST BE GREATER THAN DIAMETER OF THE PIPE
×× LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THAN 2 TIMES "H"

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	CONCRETE THRUST BLOCKING	
RECORD COPY SIGNED BY JAMES E. THOMPSON 2/11/86 APPROVED DATE	ADOPTED: 2/11/86 SCALE: N.T.S. INITIAL:	STANDARD NO. 510-6 2 OF 2

STANDARD MANUAL
REV. DATE: 2-27-97 DESCRIPTION:

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JG & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

History

#	Date	Description

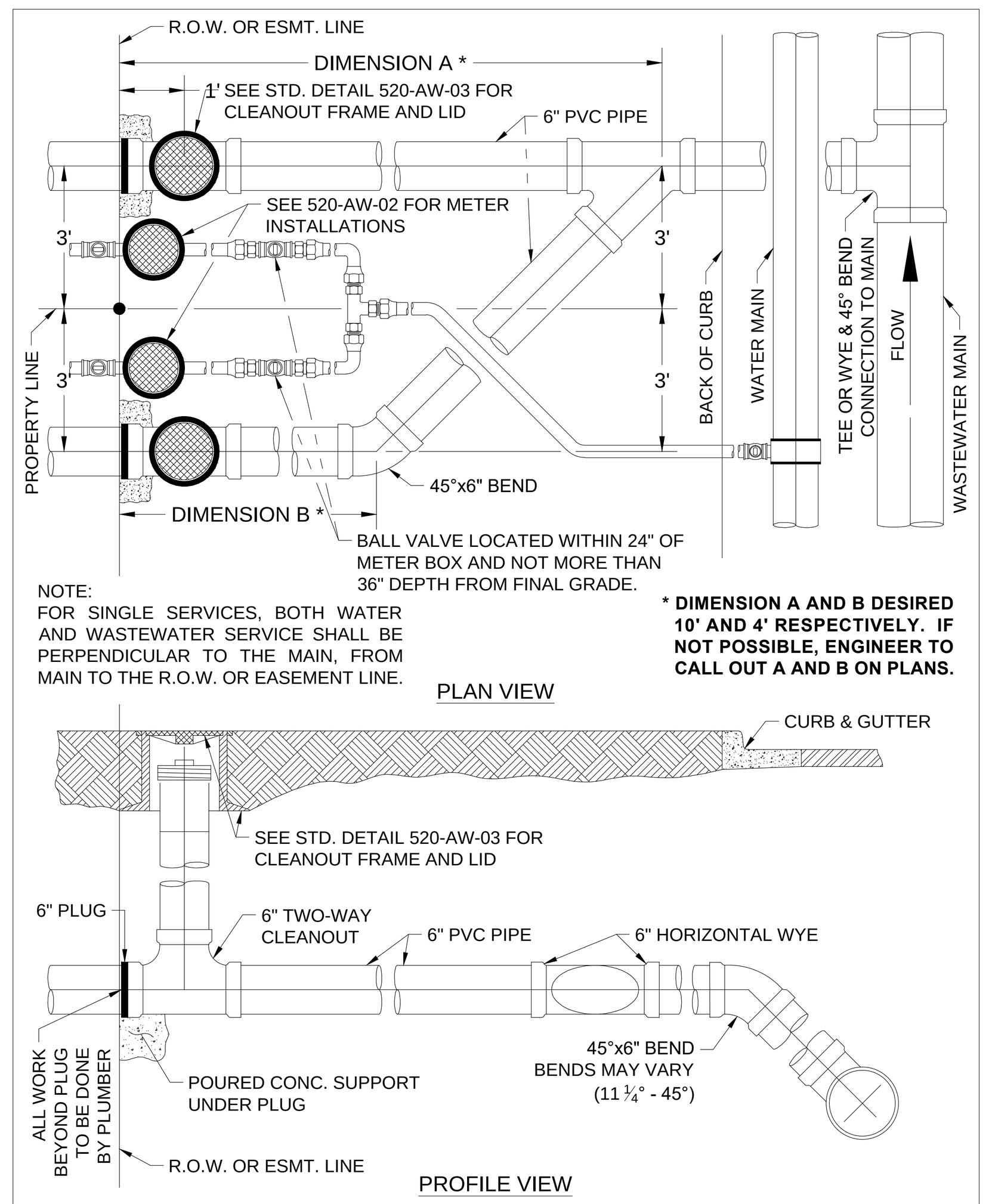
HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER

11/08/2017

Sheet Name
UTILITY DETAILS SHEET 2 OF 3

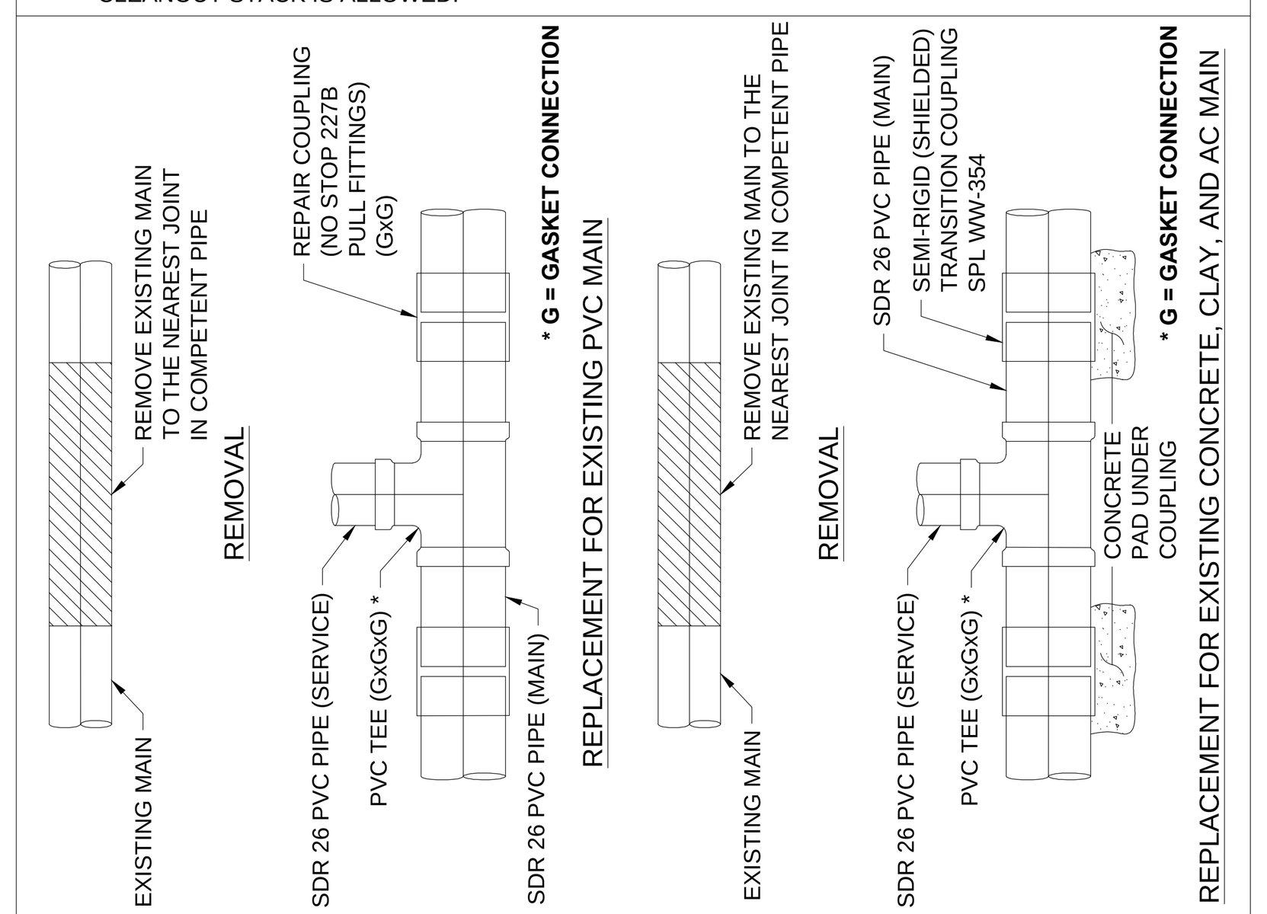
21607
2017-11-08
C018



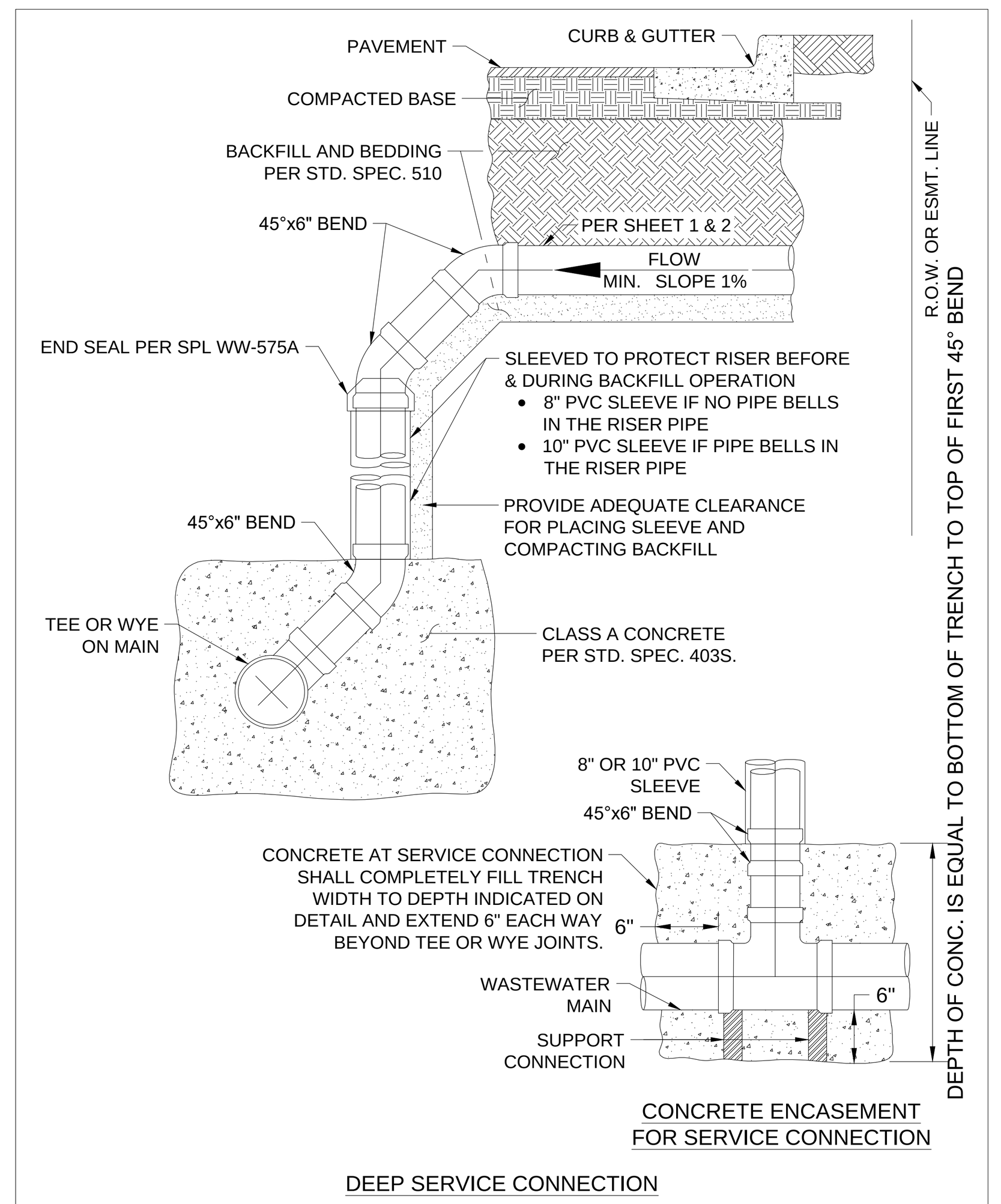
CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & WASTEWATER SERVICE CONNECTION	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 1 OF 4

NOTES:

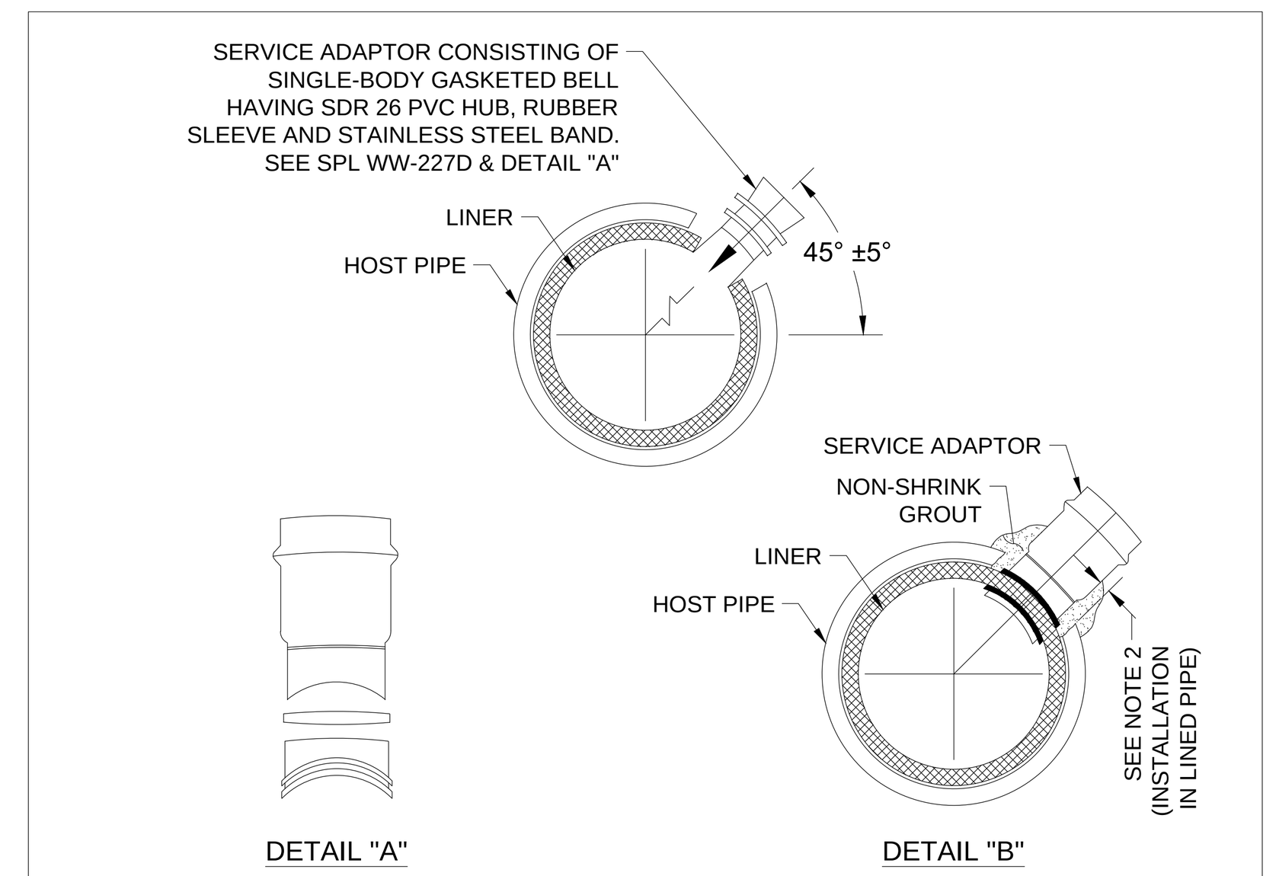
1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 6" STUB, HORIZONTAL WYE FOR DOUBLE SERVICES, 6" SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER, FRAME, AND COVER CLEANOUT(S) PLUGGED AT PROPERTY LINE OR EASEMENT LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MIN. TO 45° MAX. DEPTH OF SERVICE AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4', OTHERWISE THE INSTALLED DEPTH WILL BE 4' MIN. AND 6' MAX. AT PROPERTY LINE. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, SEE SHEET 3 OF 4. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE. REFER TO DETAIL 520-AW-02.
2. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MIN. COVER BELOW FINAL STREET GRADE OF 42".
3. NO METER BOX, BALL VALVE OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA AND SHALL BE A MINIMUM OF 6" FROM ALL PAVED AREAS.
4. PLUMBER SHALL REMOVE PLUG AND CONNECT TO 2-WAY CLEANOUT. NO CONNECTION TO CLEANOUT STACK IS ALLOWED.



CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & WASTEWATER SERVICE CONNECTION	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 2 OF 4



CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & WASTEWATER SERVICE CONNECTION	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 3 OF 4



INSTALLATION IN LINED PIPE:

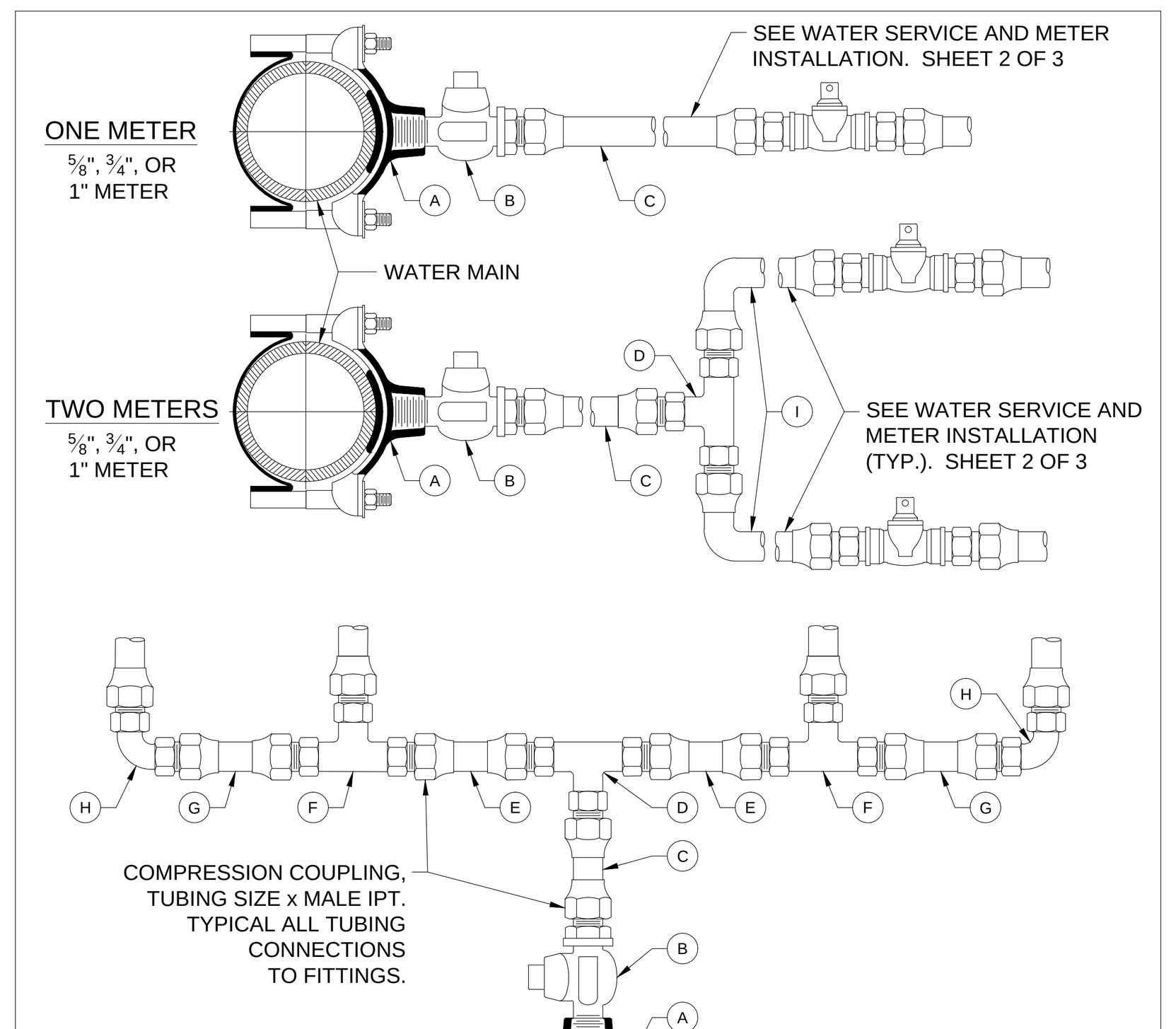
1. MARK LOCATION OF TAP.
2. BREAK & REMOVE HOST PIPE SO THAT OPENING IS AT LEAST 2" BUT NO MORE THAN 3" WIDER THAN DIAMETER OF THE SERVICE ADAPTOR.
3. DO NOT DAMAGE LINER.
4. CORE HOLE THROUGH LINER USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
5. INSTALL SERVICE ADAPTOR.
6. HOLES CUT IN HOST PIPE SHALL BE PACKED WITH NON-SHRINK GROUT (ASTM C1107 GRADE). SEE DETAIL "B"

NOTES:

1. USE ONLY TO TAP EXISTING LINED PIPE.
2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.
3. THE EDGE OF THE CORE HOLE MUST BE AT LEAST 3' FROM THE ENDS OF THE PIPE, ANY OTHER CORE SERVICE CONNECTIONS, AND ANY FITTINGS.
4. FOR DEEP SERVICE APPLICATIONS SEE SHEET 3 OF 4, EXCEPT SUBSTITUTE A CORED HOLE, AND SERVICE ADAPTOR FOR THE TEE OR WYE.
5. SERVICE CONNECTIONS TO MANHOLES MUST BE MADE USING A PIPE-TO-MANHOLE CONNECTOR WHICH LIMITS THE PIPE SLOPE INTO THE MANHOLE TO 12% MAX.

6" WASTEWATER CONNECTION TO EXISTING LINED MAIN

CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & WASTEWATER SERVICE CONNECTION	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 4 OF 4



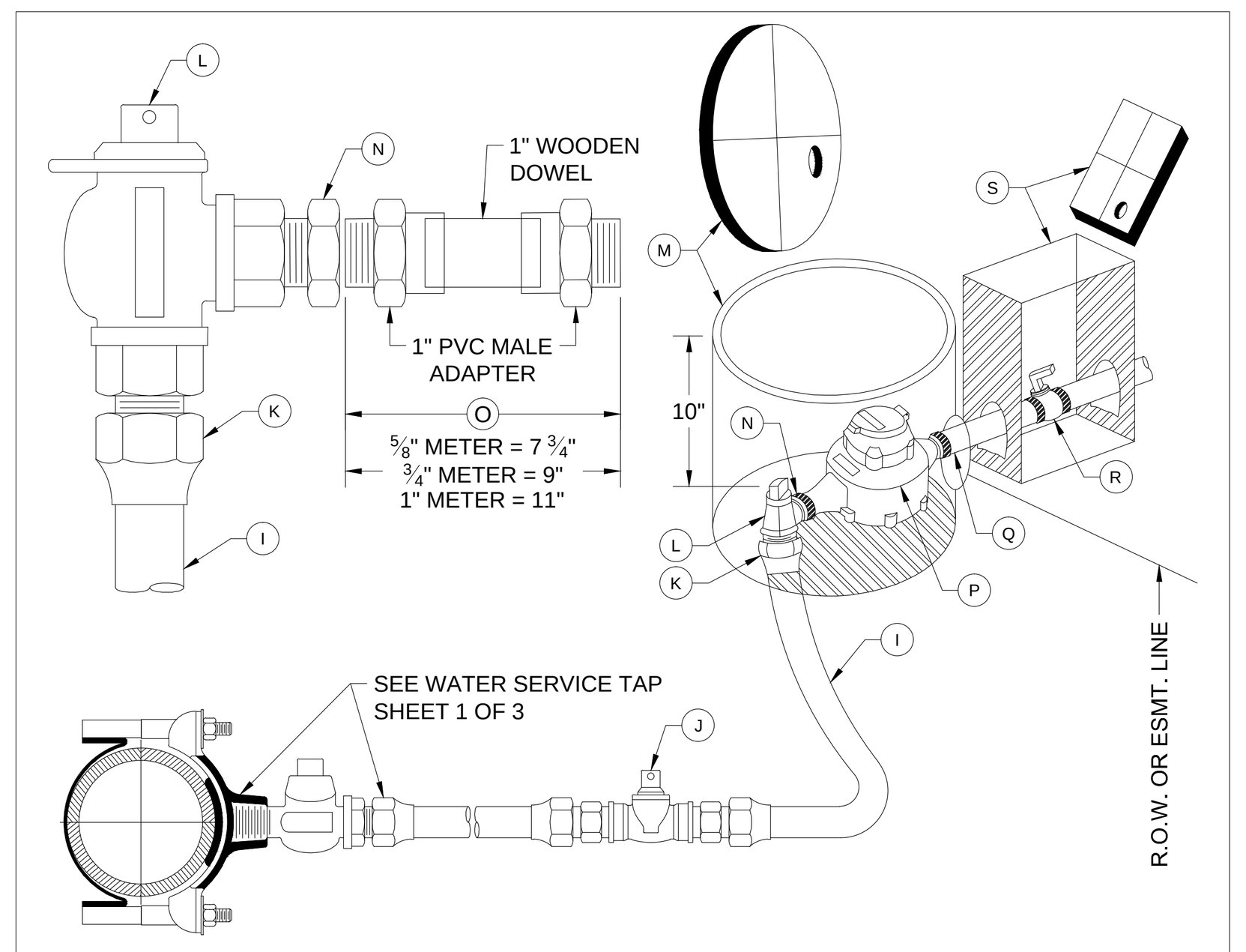
THREE OR FOUR METERS

⅝" OR ¾" METER
3 METERS: MAX. THREE ¾" METERS
4 METERS: MAX. TWO ⅝" METERS AND TWO ¾" METERS

MATERIALS LIST:
A. 2" SERVICE CLAMP
B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET.
C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT.
D. TEE FOR THREE OR FOUR METERS ON WATER TAP. TEE OR WYE FOR TWO METERS ON WATER TAP. (2" x SERVICE TUBING SIZE "E") FOR THREE OR FOUR METERS. 2" TUBING BY SIZE "I" FOR TWO METERS.
(MATERIALS LIST CONT ON SHEET 2 OF 3)

WATER SERVICE TAP

CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 1 OF 3



MATERIALS LIST CONT:
E. SERVICE TUBING, (1 ½" COPPER OR 2" HDPE)
F. BRONZE TEE, (SIZE EQUAL TO "E")
G. SERVICE TUBING 1 ½" COPPER OR 1 ½" HDPE FOR ¾" METER, 1" COPPER OR 1 ½" HDPE FOR ⅝" METER. METER SIZES TO BE SHOWN ON PLANS.
H. BRONZE ELBOW, (SIZE EQUAL TO "G"). ALL BRONZE FITTINGS PER SPL WW-68.
I. SERVICE TUBING FOR SINGLE METER, 1 ½" COPPER OR 2" HDPE FOR 1" METER. MIN. 1 ½" COPPER OR 1 ½" HDPE FOR ¾" METER. MIN. 1" COPPER OR 1 ½" HDPE FOR ⅝" METER. METER SIZES TO BE SHOWN ON PLANS.
J. BALL VALVE, SPL WW-275 (SIZE EQUAL TO "I")
K. COUPLING - COMPRESSION TO MALE IPT (SIZE "I" x SIZE "I")
L. ANGLE METER STOP; SERVICE TUBING INLET x SWIVEL COUPLING NUT OUTLET
M. METER BOX AND COVER, SPL WW-145A

TO BE INSTALLED BY PLUMBER:
N. BRASS METER BUSHING - SIZE AS NEEDED TO CONNECT ANGLE STOP TO METER
O. TEMPORARY METER SPACER (REQUIRED TO ASSURE METER WILL FIT APPROPRIATELY)
P. WATER METER PURCHASED FROM AUSTIN WATER (MAY BE INSTALLED BY AUSTIN WATER FOR NEW RESIDENTIAL SERVICE)
Q. BRASS WATER METER COUPLING MALE IPT x SWIVEL COUPLING NUT 8 ½" LONG. ¾" DIA. FOR ⅝" AND ¾" METER OR 1" DIA. FOR 1" METER
R. CUSTOMER CUT-OFF VALVE
S. CUSTOMER VALVE BOX AND LID

WATER SERVICE AND METER INSTALLATION

CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 2 OF 3

NOTES:

1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
6. BALL VALVE "J" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.

COPPER:

C1. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

HDPE:

H1. INSTALL METALLIC WARNING TAPE MIN. 1' ABOVE HDPE TUBING FROM TAP CONNECTION TO METER.

H2. TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.

H3. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1.

H4. IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.

H5. INSERT STIFFENERS FOR HDPE TUBING PER SPL WW-65B TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

TABLE 1 (SEE NOTE H3)

NOMINAL TUBING DIA.	BEND RADIUS OF AT LEAST
1"	3'
1 ½"	4'
2"	5'

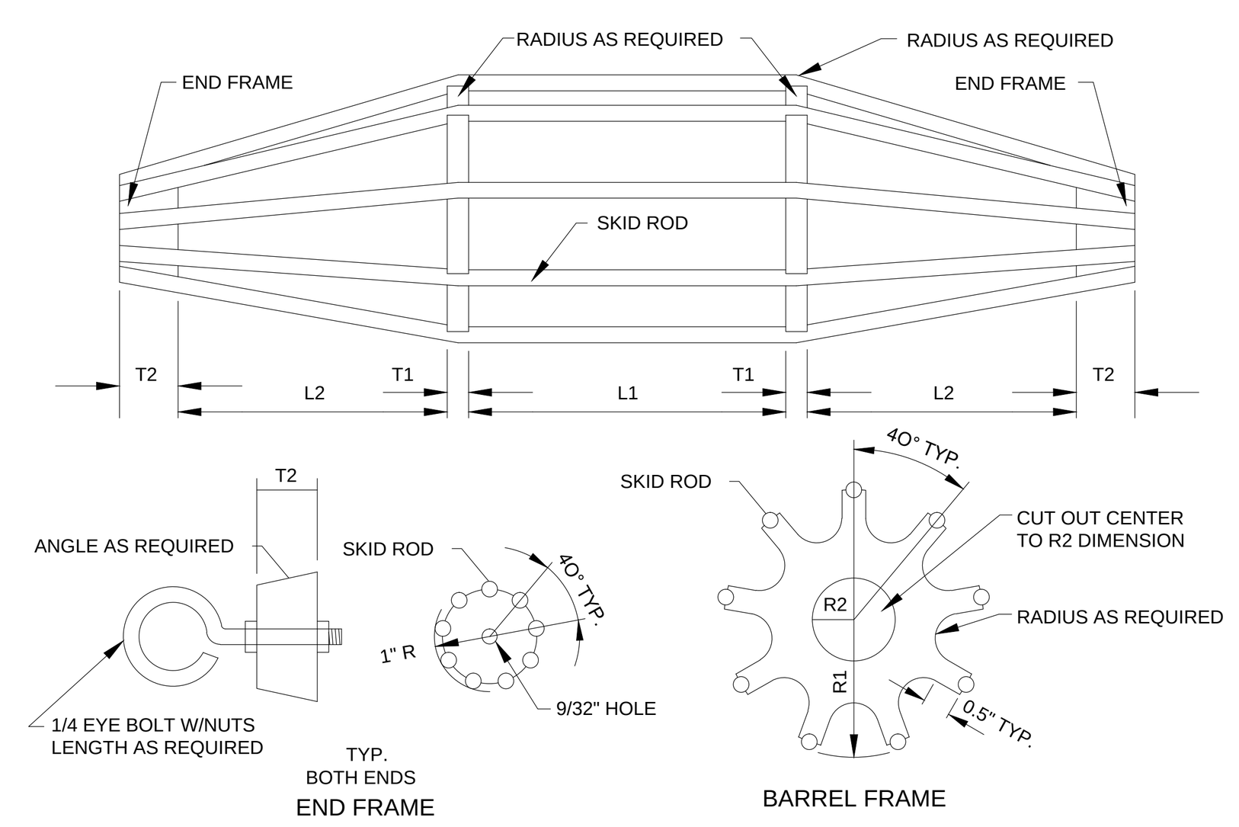
TABLE 2 (SEE NOTE H4)

NOMINAL TUBING DIA.	BEND RADIUS OF AT LEAST
1"	12'
1 ½"	16'
2"	20'

RECLAIMED WATER:

R1. FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. HDPE TUBING SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE **"RECLAIMED WATER"** CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER		WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS	*05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 3 OF 3



Notes:
1. MANDREL SHALL BE CONSTRUCTED OF METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200PSI WITHOUT BEING BECOMING DEFORMED.
2. MANDREL O.D. MUST BE EQUAL TO 95% OF I.D. OF THE PIPE
3. AFTER WELDING IS COMPLETED TRUE THE OUTSIDE DIAMETER DIMENSION FOR THE FULL LENGTH OF "L1" TO 0.010"
4. MANDREL BARREL LENGTH "L1" MUST BE EQUAL TO 75% OF THE I.D. OF THE PIPE
5. A PROVING RING SHALL BE PROVIDED AND USED FOR EACH SIZE MANDREL IN USE
6. ADJUSTABLE MANDREL IS NOT ACCEPTABLE

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SUNSET VALLEY POLICE & PUBLIC WORKS

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3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

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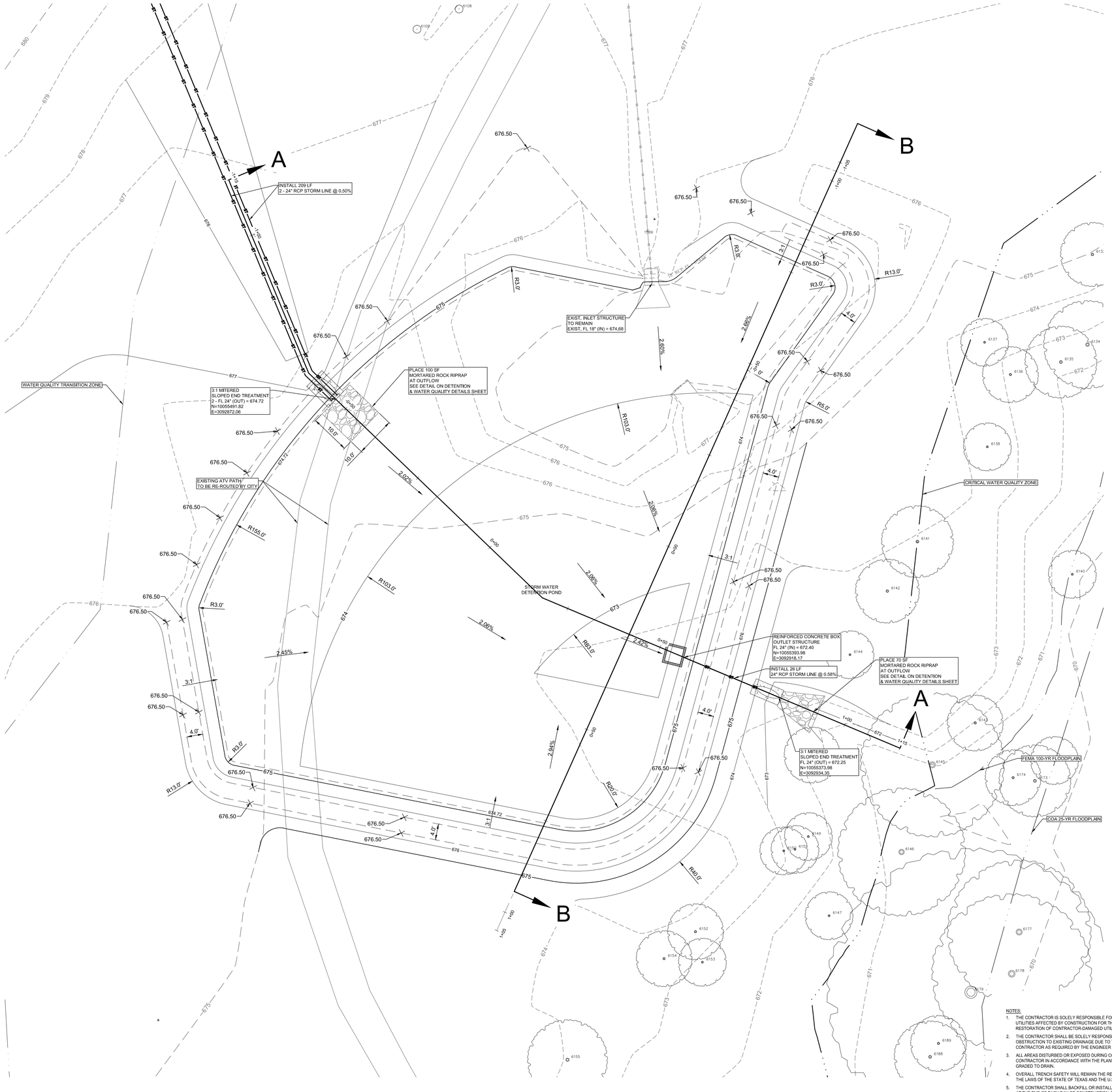
STATE OF TEXAS ROBERT W. SCHULZ 91151 LICENSED PROFESSIONAL ENGINEER 11/08/2017

Sheet Name

UTILITY DETAILS SHEET 3 OF 3

21607
2017-11-08
C019

FOR CONSTRUCTION

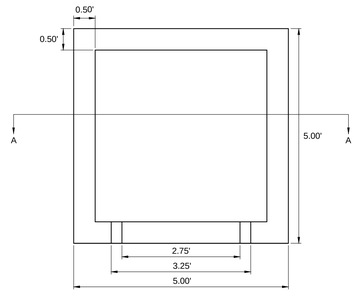


10 0 10 20

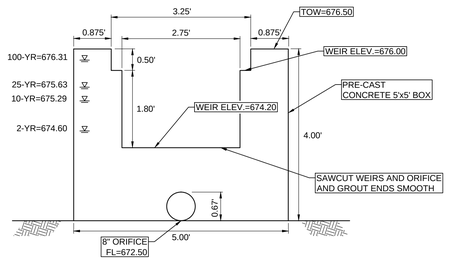
ORIGINAL SCALE: 1" = 10'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- BOUNDARY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMNT
- CURB & GUTTER
- RIBBON CURB
- PROPOSED WATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED MANHOLE
- OVERHEAD ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING FORCE MAIN
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING TELEPHONE LINE
- EXISTING WASTEWATER LINE
- EXISTING WATER LINE
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING ELECTRIC MANHOLE
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED



PLAN



SECTION A-A

REINFORCED CONCRETE OUTLET STRUCTURE
WEIR DETAIL
NTS

NOTES:

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TEMPORARY DRAINAGE DURING CONSTRUCTION. ANY OBSTRUCTION TO EXISTING DRAINAGE DUE TO THE CONTRACTOR'S OPERATIONS WILL BE REMOVED BY THE CONTRACTOR AS REQUIRED BY THE ENGINEER AT THE CONTRACTOR'S ENTIRE EXPENSE.
3. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RESTORED AND/OR REVEGETATED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER AND GRADED TO DRAIN.
4. OVERALL TRENCH SAFETY WILL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
5. THE CONTRACTOR SHALL BACKFILL OR INSTALL AND MAINTAIN STEEL PLATES OVER ALL OPEN TRENCHES AS REQUIRED AT THE END OF EACH DAY OF CONSTRUCTION. THERE SHALL BE NO TRENCHES LEFT OPEN DURING NON-WORKING HOURS, WEEKENDS, OR HOLIDAYS UNLESS APPROVED BY THE OWNER.
6. DETENTION POND SHALL BE 100% REVEGETATED PRIOR TO ENGINEER'S CONCURRENCE LETTER BEING WRITTEN.
7. CONTRACTOR SHALL NOT ENTER INTO CRITICAL WATER QUALITY ZONE.

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History

#	Date	Description

STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER

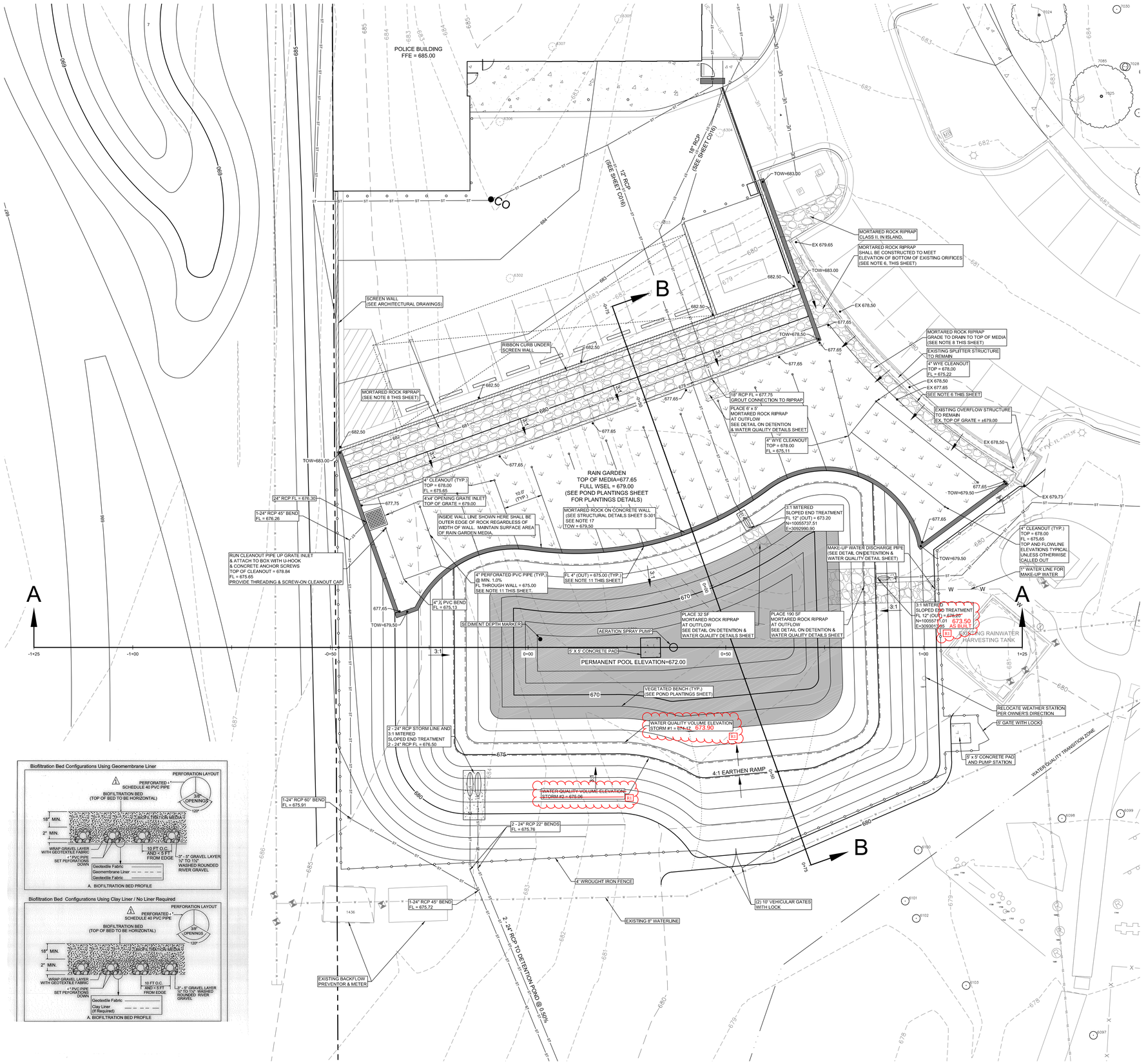
11/08/2017

Sheet Name

DETENTION POND PLAN

21607
2017-11-08
C020

FOR CONSTRUCTION



10 0 20

ORIGINAL SCALE: 1" = 10'

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPERTY LINE
- LOT LINE
- BUILDING SETBACK LINE
- EASEMENT LINE
- EXISTING EDGE OF PAVEMNT
- CURB & GUTTER
- RIBBON CURB
- PROPOSED WATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED STORM SEWER LINE
- 4' WROUGHT IRON FENCE
- OVERHEAD ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING FORCE MAIN
- EXISTING GAS LINE
- EXISTING STORM SEWER LINE
- EXISTING TELEPHONE LINE
- EXISTING WASTEWATER LINE
- EXISTING WATER LINE
- EXISTING TELEPHONE JBOX
- EXISTING TRANSFORMER
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- EXISTING STORM MANHOLE
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- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING SIGN - DOUBLE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EX. UNDERGROUND GAS MARKER
- EXISTING GROUND LIGHT
- EXISTING HVAC UNIT
- EXISTING BOLLARD
- EXISTING ROCK
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED

Table 3-6 Clay Liner Specifications (COA, 2004)

Property	Test Method	Unit	Specification
Permeability	ASTM D-2434	cm/sec	1×10^{-6}
Plasticity Index of Clay	ASTM D-423 & D-424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30
Clay Particles Passing	ASTM D-422	%	Not less than 30
Clay Compaction	ASTM D-2216	%	95% of Standard Proctor Density

Table 3-7 Geotextile Fabric Specifications (COA, 2004)

Property	Test Method	Unit	Specification (min)
Unit Weight		oz/yd²	8
Filtration Rate		in/sec	0.08
Puncture Strength	ASTM D-751*	lb	125
Mullen Burst Strength	ASTM D-751	psi	400
Tensile Strength	ASTM D-1682	lb	200
Equiv. Opening Size	US Standard Sieve	No.	80

*modified

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6. CONTRACTOR SHALL CLEAN OUT EXISTING SQUARE ORIFICES TO ENSURE PROPER DRAINAGE TO RAIN GARDEN.
7. CONTRACTOR SHALL INSTALL CLAY LINER WITH A MINIMUM OF 12" THICKNESS AND 12" OF GOOD CLEAN SOIL COVER. IT MUST BE DESIGNED BY A GEOTECHNICAL ENGINEER, SUBMITTED TO CIVIL ENGINEER OF RECORD FOR REVIEW, MONITORED, TESTED, AND CERTIFIED BY GEOTECHNICAL ENGINEER.
8. MORTARED ROCK RIPRAP SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 591S - RIPRAP FOR SLOPE PROTECTION, CLASS III, D_{50} = 12 INCHES UNLESS OTHERWISE NOTED.
9. POND SHALL BE A MINIMUM OF 95% REVEGETATED PRIOR TO ENGINEER'S FINAL CONCURRENCE LETTER.
10. AERATION SPRAY FOUNTAIN SHALL BE MINIMUM 1 HP, 550 GPM FLOATING FOUNTAIN RATED FOR SHALLOW PONDS, CORROSION RESISTANT AND COME WITH A MANUFACTURER'S WARRANTY OF A MINIMUM OF 5 YEARS. OTTERBINE GEMINI SERIES OR APPROVED EQUAL.
11. ALL 4-INCH PVC PIPES EXITING THROUGH MORTARED ROCK WALL IN POND SHALL HAVE SPRING-LOADED FLAPPER CHECK VALVES OR WATER CHECK VALVES CAPABLE OF DISCHARGING STORM WATER FROM THE RAIN GARDEN UNDER MINIMAL PRESSURE, BUT SEALING THE PIPES TO PREVENT BACKFLOW FROM THE RAIN WATER HARVESTING POND DURING LARGER STORM EVENTS. SUBMIT PRODUCT TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
12. EXISTING PVC DRAIN PIPE (APPROXIMATE SIZE 6 INCHES) WITH FLAPPER CHECK VALVE FROM EXISTING RAIN WATER HARVESTING TANK MUST BE RELOCATED TO DRAIN TO NEW POND. CONTRACTOR TO INCLUDE ALL COSTS ASSOCIATED FOR REMOVAL AND REPLACEMENT IN KIND WITHIN BID.
13. A FIXED VERTICAL SEDIMENT DEPTH MARKER SHALL BE PLACED WITHIN THE WET POND AND RAIN WATER HARVESTING POND TO MEASURE SEDIMENT ACCUMULATION.
14. A 5'X5' CONCRETE PAD HAS BEEN PROVIDED IN THE WET POND FOR TEMPORARY SUBMERSIBLE PUMP DURING LONG TERM DRAINING AND MAINTENANCE OF THE POND.
15. AFTER POND LINER IS COMPLETED, THE BASIN MUST FILL UP WITH WELL WATER WITHIN ONE WEEK.
16. THE WET POND SHALL BE STOCKED WITH LOCAL NATIVE FISH SPECIES GAMBUSIA AFFINIS TO SERVE AS A BIOLOGICAL CONTROL FOR MOSQUITOS. THIS POND SHOULD BE STOCKED WITH AN INITIAL DENSITY OF SEVENTEEN (17) INDIVIDUALS.
17. THE ROCK WALL AND ROCK RIPRAP SHALL BE CLADDED / MORTARED BY A SKILLED MASON TO PRODUCE AN AETHETICALLY APPEALING WALL, SIMILAR TO THE FINISH ON A NEWLY CONSTRUCTED ROCK WALL FOR A HOME. THE THICKNESS OF MORTAR BETWEEN ROCKS SHALL BE NO MORE THAN 1 INCH IN WIDTH IN ANY LOCATION. THE SURFACE SHALL BE AS FLAT AS POSSIBLE, MEANING THAT THE MASON SHALL CHIP ROCKS AS NECESSARY TO ARRIVE AT AN EVENLY DISTRIBUTED AVERAGE DIAMETER OF ROCK SPECIFIED. UNDER NO CIRCUMSTANCES SHALL THE CONCRETE BE LAID AND ROCKS "DUMPED" INTO THE CONCRETE AND SPREAD OUT. THE FINISHED SURFACE OF ROCK SHALL BE CLEANED OF ALL MORTAR SUCH THAT MORTAR ONLY EXISTS BETWEEN THE ROCKS. NON-COMPLIANCE WITH THIS NOTE SHALL LEAD TO REJECTION OF THE FINAL PRODUCT BY THE ENGINEER AND/OR CITY OF SUNSET VALLEY.
18. THE SURFACE AREA OF THE MEDIA WITHIN THE RAIN GARDEN SHALL BE MAINTAINED REGARDLESS OF WIDTH OF RETAINING WALL SEPARATING THE RAIN GARDEN FROM THE WET POND. THE WIDTH OF THE RETAINING WALL MAY ENCROACH INTO THE WET POND.
19. MAKE-UP WATER SOURCE PIPING SHALL BE PURPLE PIPE. ⚠

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

History

#	Date	Description
⚠	11/08/17	CONSTRUCTION ISSUE
R1	5/24/24	MODIFIED PROVIDED WATER QUALITY POND ELEVATION

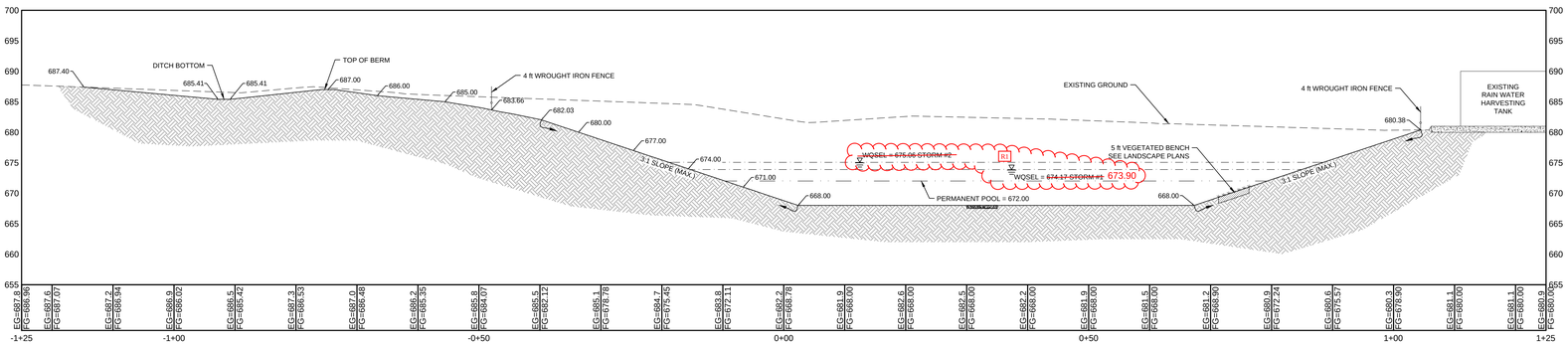
STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER
11/08/2017

Sheet Name

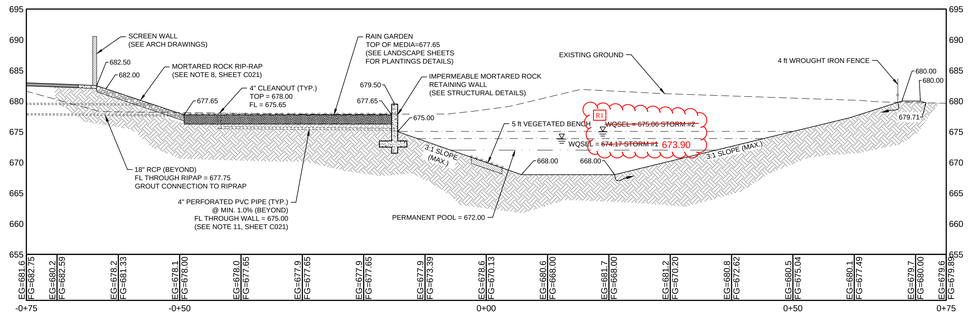
WATER QUALITY POND PLAN

21607
2017-11-08

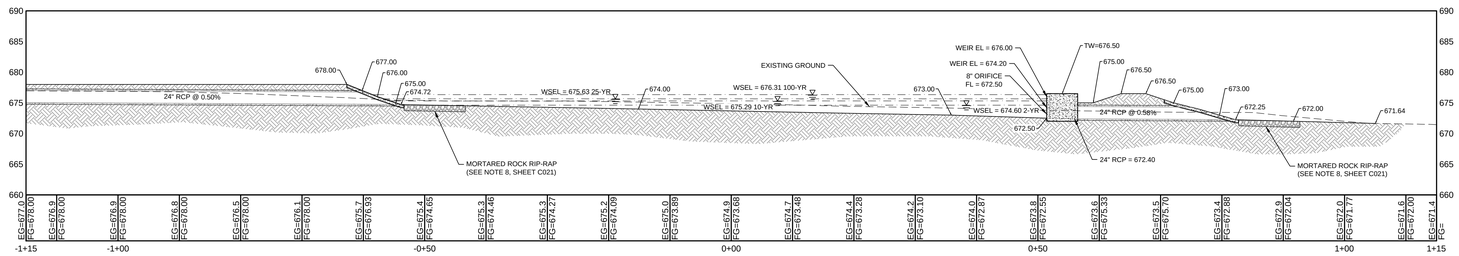
C021



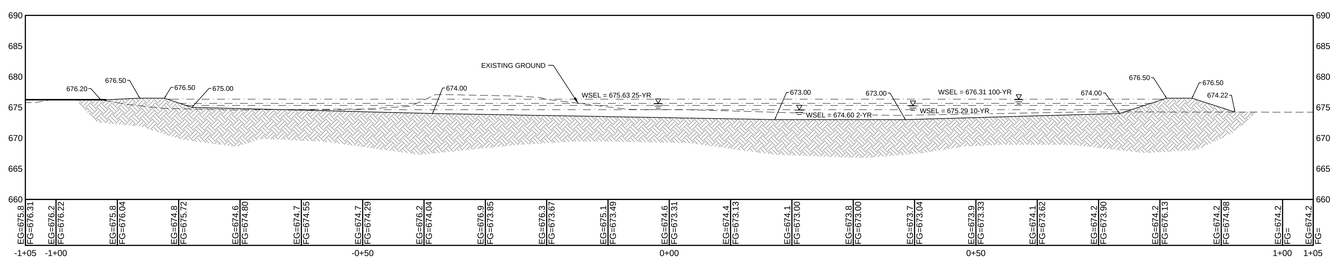
WATER QUALITY SECTION A-A
STA. -1+25.00 - STA. 1+25.00
SCALE: 1" = 10' H
SCALE: 1" = 10' V



WATER QUALITY SECTION B-B
STA. -0+75.00 - STA. 0+75.00
SCALE: 1" = 10' H
SCALE: 1" = 10' V



DETENTION SECTION A-A
STA. -1+15.00 - STA. 1+15.00
SCALE: 1" = 10' H
SCALE: 1" = 10' V



DETENTION SECTION B-B
STA. -1+05.00 - STA. 1+05.00
SCALE: 1" = 10' H
SCALE: 1" = 10' V

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History

#	Date	Description
R1	5/24/24	MODIFIED PROVIDED WATER QUALITY POND ELEVATION

STATE OF TEXAS — ROBERT W. SCHOLZ — 91151 — LICENSED PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
WATER QUALITY & DETENTION PONDS SECTIONS

21607
2017-11-08
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FOR CONSTRUCTION

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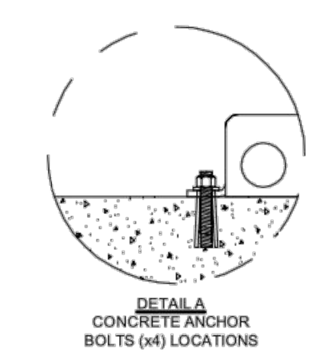
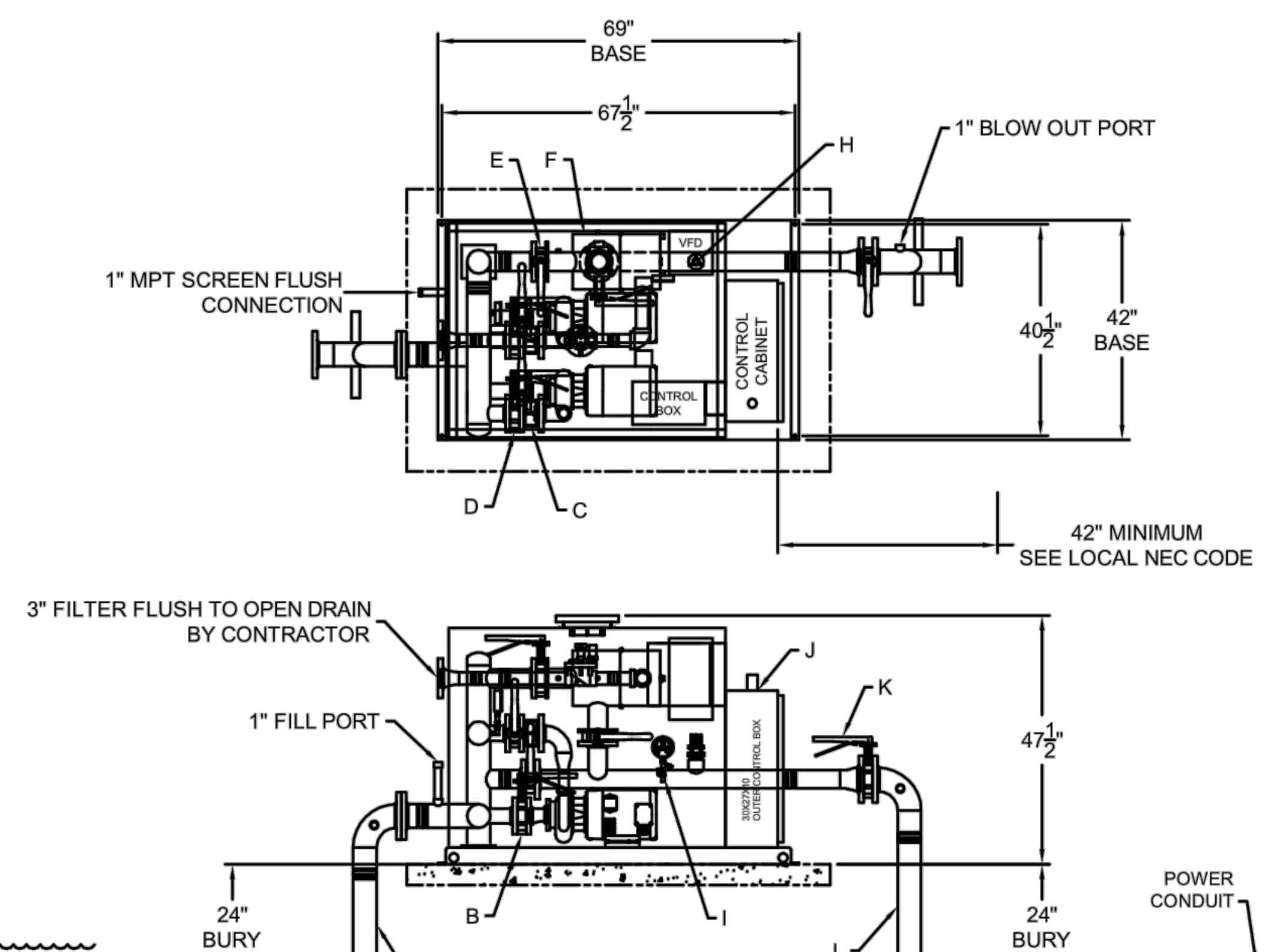
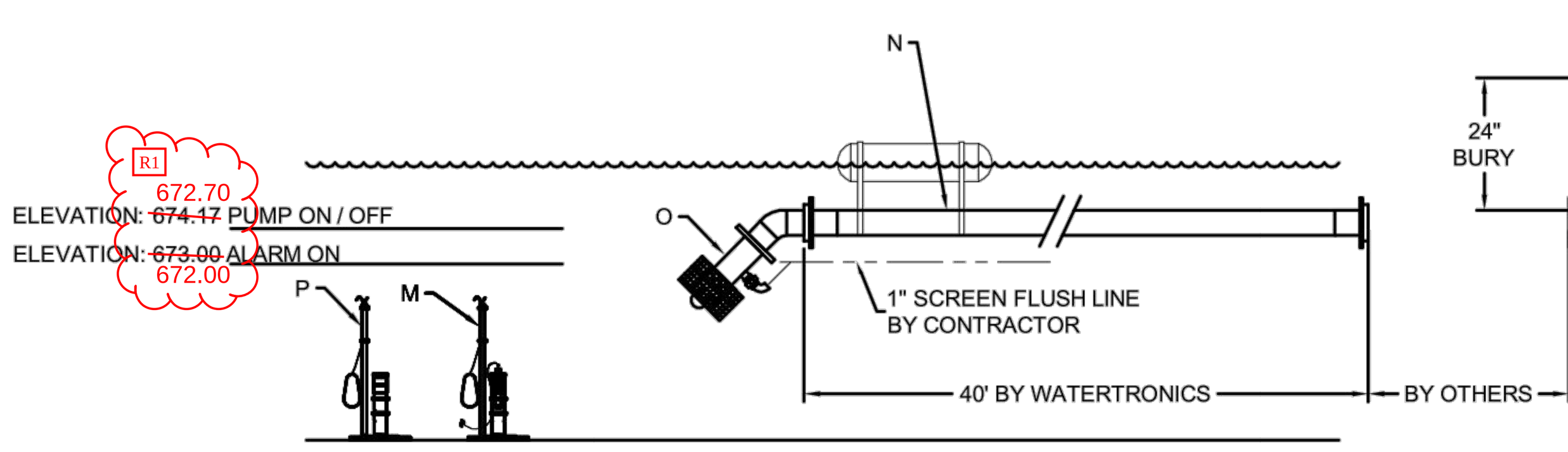
PUMP STATION SPECIFICATIONS
NAME: SUNSET VALLEY
STATION MODEL: SHLV-7000-1-7.5x2-208-3-50-60
STATION TOTAL PERFORMANCE: 50 GPM @ 60 PSI
PUMP HORSEPOWER:
PUMP NO.1~2: 7.5 HP - ALTERNATING
CHECK VALVE SIZE
PUMP NO.1~2: 2"
ISOLATION VALVE SIZES:
PUMP NO.1~2: 2"
DISCHARGE ISOLATION VALVE: 3"
POWER REQUIREMENTS: 208 V, 60 HZ, 3 PH, 30 FLA

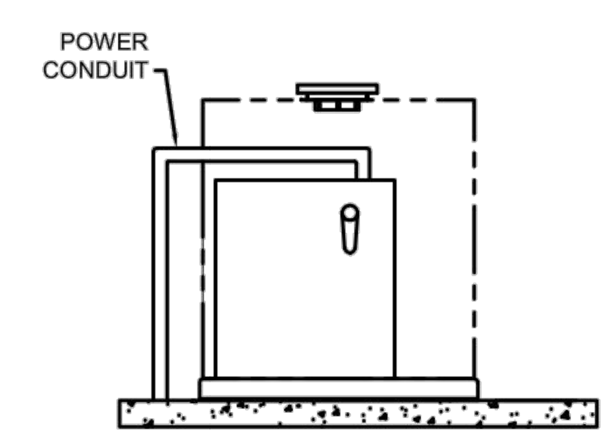
1



STATION COMPONENTS
A PUMP AND MOTOR
B PUMP INTAKE ISOLATION VALVE
C CHECK VALVE
D PUMP DISCHARGE ISOLATION VALVE
E FILTER ISOLATION VALVE
F MTF AUTOMATIC FILTER W/ BY-PASS
G FILTER BY-PASS VALVE
H FLOW SENSOR
I PRESSURE TRANSDUCER W/ GAUGE
J CONTROL CABINET W/ EXTERNAL RED ALARM LIGHT
K STATION ISOLATION VALVE
L DISCHARGE DROP PIPE
M LEVEL TRANSDUCER ASSEMBLY
N 3" HDPE FLOATING INTAKE ASSEMBLY
O SELF-CLEANING INTAKE SCREEN
P FLOAT SWITCH







☐ APPROVED AS SUBMITTED	7				DRAWN BY:	DATE:
	6				CHECKED BY:	DATE:
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☐ REVISE AND RESUBMIT	4					
	3					
SIGNATURE: ____________	2	09/28/2017	RWS	Updated Model number/ 208v		
NAME: ____________ DATE: ________	1	03/27/2017	PJB	MODEL, WATER LEVEL UPDATES		
	NO.	DATE	BY	DESCRIPTION		

TITLE: SUNSET VALLEY
IRRIGATION BOOSTER PUMP STATION

WATERTRONICS
A LINDSAY COMPANY

SCALE: NTS	SHEET 1 OF 1 SHEETS
JOB NO.: .	DRAWING NO. PRST13241

THE CONTRACTOR MAY SUBMIT FOR APPROVAL AN ALTERNATIVE PUMPING SYSTEM EQUAL TO OR BETTER THAN THE SYSTEM SHOWN IN THESE DRAWINGS AND ON THE SPECIFICATIONS. ALL NECESSARY INFORMATION MUST BE PROVIDED BY CONTRACTOR. AN ALTERNATIVE METHOD WILL BE SUBJECT TO REVIEW BY THE ENGINEER AND CITY OF SUNSET VALLEY PUBLIC WORKS DEPARTMENT AND THEIR DESIGNATED REVIEWER(S). TO BE CONSIDERED FOR APPROVAL, ALL APPLICABLE CODES AND ORDINANCES MUST BE MET.

PUMP AND IRRIGATION NOTES:

R1

1. PUMP ON SIGNAL – ELEVATION ~~674.17~~ 672.70 – ONCE THE WATER SURFACE ELEVATION WITHIN THE POND RISES ABOVE ~~674.17~~ 672.70 AND THE RAIN EVENT ENDS, A SIGNAL SHOULD BE SENT FROM THE SENSOR CONTROLLER TO PROGRAMMABLE LOGIC CONTROLLER (PLC) FOR THE PUMPS INDICATING THAT THEY SHOULD TURN ON AFTER A 12-HOUR DELAY. THE IRRIGATION SHOULD INCLUDE A CYCLING FACTOR OF ½, SO THAT EACH PORTION OF THE AREA WILL BE IRRIGATED FOR ONLY 30 HOURS. CONTINUOUS APPLICATION OF ANY AREAS SHOULD NOT EXCEED 2 HOURS. THE IRRIGATION AREAS SHALL ONLY IRRIGATE THE AREAS DESIGNATED ON THE "RE-IRRIGATION AREAS PLAN". THE AREAS SHALL BE SPLIT UP INTO AT LEAST TWO SECTION SUCH THAT IRRIGATION OCCURS ALTERNATELY. IF THE RAIN SENSOR DETECTS ANOTHER RAIN EVENT, THE IRRIGATION SHALL CEASE AND THE PROCESS SHALL START OVER AGAIN WITH A NEW 12-HOUR DELAY. THE PUMPS MUST ALTERNATE ON START UP. THE CONTROL LOGIC MUST ALLOW THE SYSTEM TO OPERATE NORMALLY WITH ONLY ONE PUMP IN SERVICE.
2. PUMP OFF – THE PUMP SHALL TURN OFF ONCE THE WATER LEVEL WITHIN THE POND DRAINS TO ELEVATION ~~674.17~~ 672.70. BACK UP SHUT-OFF SHALL BE AT ~~673.00~~. 672.00
3. ALARM ON – ELEVATION ~~673.00~~ 672.00 – AN ALARM SHALL SOUND WHEN 1) THE WATER LEVEL IS BELOW THE SHUT OFF POINT AND THE PUMP HAS NOT TURNED OFF; 2) WHEN THE HIGH WATER LEVEL HAS BEEN MAINTAINTED IN EXCESS OF 72 HOURS; AND 3) WHEN THE HIGH/LOW-PRESSURE PUMP SHUT OFF SWITCH HAS BEEN DEACTIVATED.
4. A MANUAL CONTROL MUST BE PROVIDED SO BOTH PUMPS CAN BE TURNED ON IF NECESSARY.
5. ALL IRRIGATION SYSTEM DISTRIBUTION AND LATERAL PIPING MUST BE SCHEDULE 40 PURPLE PVC. ALL PIPES AND ELECTRICAL BUNDLES PASSING BENEATH PAVED AREAS SHALL BE SLEEVED WITH PVC CLASS 200 PIPE WITH SOLVENT WELDED JOINTS. SLEEVE DIAMETER MUST EQUAL TWICE THAT OF THE PIPE OR ELECTRICAL BUNDLE. ALL PIPES AND VALVES SHALL BE MARKED TO INDICATED NON-POTABLE WATER. EXISTING IRRIGATION LINES ON THE SITE THAT ARE BEING RE-USED AS RE-IRRIGATION PIPING SHALL BE MARKED WITH SMALL SIGNS INTERMITTENTLY TO INDICATE NON-POTABLE WATER.
6. ALL VALVES SHALL BE DESIGNED SPECIFICALLY FOR SEDIMENT BEARING WATER AND BE OF APPROPRIATE DESIGN FOR THE INTENDED PURPOSE. ALL REMOTE CONTROL, GATE, AND QUICK COUPLING VALVES SHALL BE LOCATED IN 10-INCH OR LARGER PLASTIC VALVE BOXES.
7. ALL SPRINKLER HEADS SHALL HAVE FULL OR PARTIAL CIRCLE ROTOR POP-UP HEADS AND MUST BE CAPABLE FO DELIVERING THE REQUIRED RATE OF IRRIGATION OVER THE DESIGNATED AREA IN A UNIFORM MANNER. PARTIAL CIRCLE SPRINKLER HEADS CAN BE USED AS NECESSARY TO PREVENT IRRIGATION BEYOND DESIGNATED LIMITS. SPRINKLER HEADS SHALL BE CAPABLE OF PASSING SOLIDS THAT MAY PASS THROUGH THE INTAKE AND FILTERS.

1

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THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

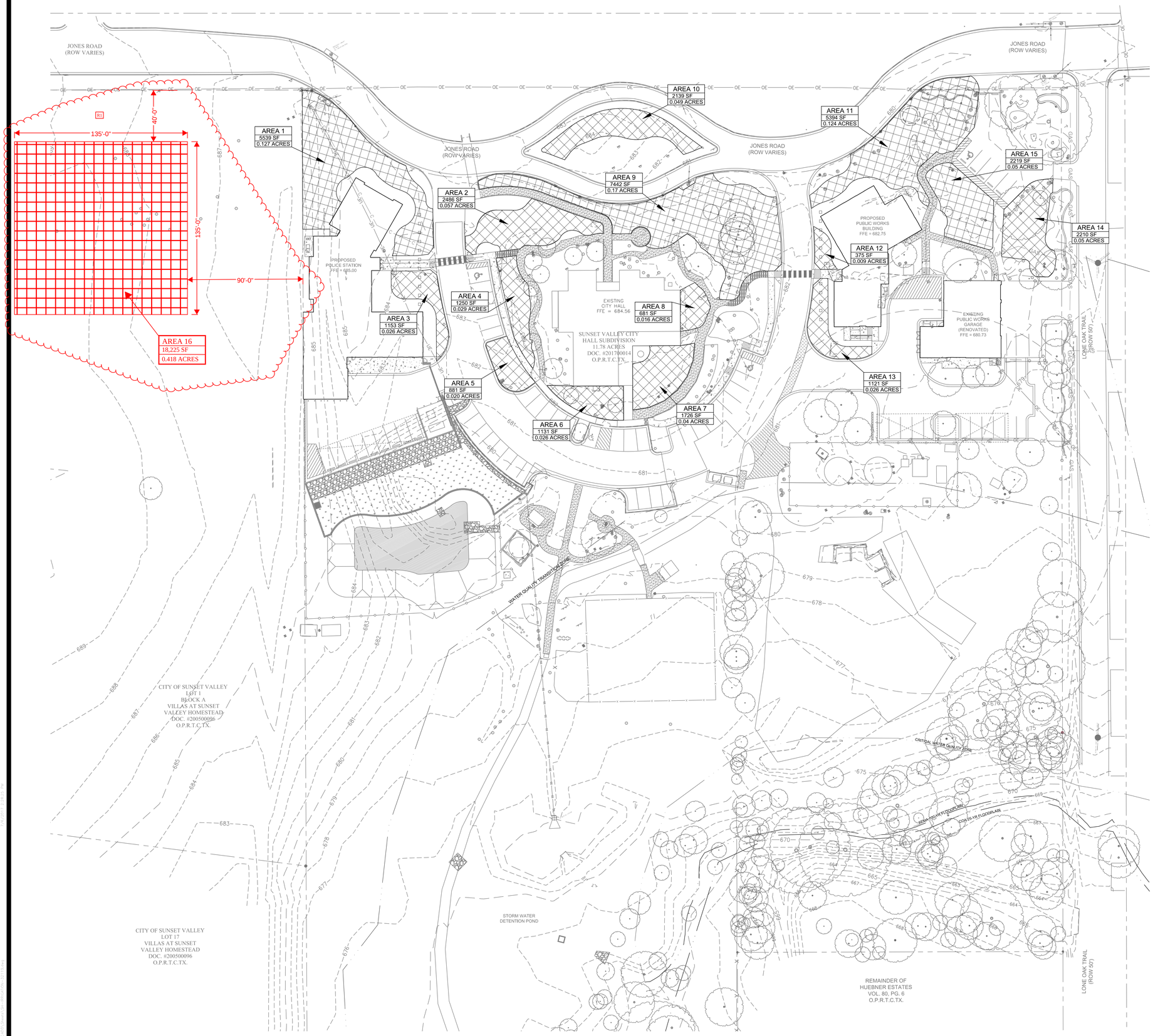
#	Date	Description
1	9/27/2017	POST BID ADD. "C"
R1	5/24/24	MODIFIED PUMP ON & OFF ELEVATIONS

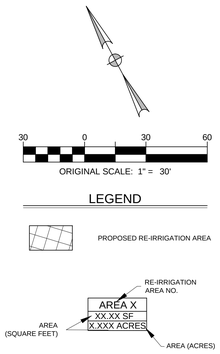
STATE OF TEXAS
ROBERT W. SCHOLZ
91151
LICENSED
PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
IRRIGATION PUMP PLAN

21607
2017–11–08
C023

FOR CONSTRUCTION





Re-Irrigation Areas		
	Total Area (sf)	Total Area (ac)
Area 1	5539	0.127
Area 2	2486	0.057
Area 3	1153	0.026
Area 4	1250	0.029
Area 5	881	0.020
Area 6	1131	0.026
Area 7	1726	0.040
Area 8	681	0.016
Area 9	7442	0.171
Area 10	2139	0.049
Area 11	5394	0.124
Area 12	375	0.009
Area 13	1121	0.026
Area 14	2210	0.051
Area 15	2219	0.051
~~AREA 16~~ Total Area (Provided)	18,225 ~~35747~~ 53,972	0.418 ~~0.821~~ 1.239
Total Area (Required)	30928	0.710

R1

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

FOR CONSTRUCTION

History		
#	Date	Description
R1	5/24/24	ADDED IRRIGATION AREA

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FAX (512) 252-8141
TBPE FIRM #F-312

STATE OF TEXAS ROBERT W. SCHOLZ 91151 LICENSED PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
RE–IRRIGATION AREAS PLAN

21607
2017–11–08
C024

RETENTION/IRRIGATION
~~RAIN GARDEN (PARTIAL SEDIMENTATION / FILTRATION)~~
CALCULATIONS: R1

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: City of Sunset Valley
Date Prepared: 6/27/2017

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 — Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	11.78	acres
Predevelopment impervious area within the limits of the plan * =	0.45	acres
Total post-development impervious area within the limits of the plan* =	2.32	acres
Total post-development impervious cover fraction * =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1628	lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 5

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A

Total drainage basin/outfall area =	3.10	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.49	acres
Post-development impervious fraction within drainage basin/outfall area =	0.48	
$L_{M\ THIS\ BASIN}$ =	1297	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Retention / Irrigation
Removal efficiency = 100 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	3.10	acres
A_I =	1.49	acres
A_P =	1.61	acres
L_R =	1678	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 1391 lbs.
F = 0.83

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 — Pages 3-34 to 3-36

Rainfall Depth =	1.20	inches
Post Development Runoff Coefficient =	0.35	
On-site Water Quality Volume =	4687	cubic feet

Calculations from RG-348 — Pages 3-36 to 3-37

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	937	
Total Capture Volume (required water quality volume(s) x 1.20) =	5624	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Irrigation System Designed as Required in RG-348 — Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = 5624 cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate =	0.2	in/hr	Enter determined permeability rate or assumed value of 0.1
Irrigation area =	11248	square feet	
	0.26	acres	

CONTECH JELLYFISH SYSTEM
CALCULATIONS:

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: City of Sunset Valley Police Department and Public Works
Date Prepared: 6/28/2017

1. The Required Load Reduction for the total project:

Calculations from RG-348 — Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan * =	11.780	acres
Predevelopment impervious area within the limits of the plan * =	0.45	acres
Total post-development impervious area within the limits of the plan* =	2.320	acres
Total post-development impervious cover fraction * =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	1628	lbs.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.313	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.258	acres
Post-development impervious fraction within drainage basin/outfall area =	0.82	
$L_{M\ THIS\ BASIN}$ =	225	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	JF	abbreviation
Removal efficiency =	86	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
LR = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	0.313	acres
A_I =	0.258	acres
A_P =	0.06	acres
L_R =	246	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 237 lbs.
F = 0.96

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	0.00	acres
Offsite impervious cover draining to BMP =	0.00	acres

Calculations from RG-348
Pages Section 3.2.22

Rainfall Intensity =	1.80	inches per hour
Effective Area =	0.23	acres
Cartridge Length =	54	inches
Peak Treatment Flow Required =	0.42	cubic feet per second

7. Jellyfish
Designed as Required in RG-348
Section 3.2.22

Flow Through Jellyfish Size

Jellyfish Size for Flow-Based Configuration =	JF4-2-1	
Jellyfish Treatment Flow Rate =	0.45	cfs

RETENTION POND PARAMETERS
PROVIDED: R1

Pond Holds Water to Elevation 673.90'
Per the Stage-Storage Table below, the volume that will be retained for the City's use of Irrigation is interpolated to be 8,394 c.f.

Stage-Storage Curve:

Notation	Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)	Cum. Vol. (gal)	
	677	7791	7433.5	28910.5	216251	
Freeboard	676.5			25194	188449	
	676	7076	6722.5	21477	160648	
Old WQV Capture Storm #2	675.06			15580	116538	
	675	6369	5870	14754.5	110364	
Old WQV Capture Storm #1	674.17			9906	74097	
	674	5371	4899	8884.5	66456	
Max Pond Holding (from Test)	673.9			8394.6	62792	WQV ELEVATION PROVIDED
Required volume from bottom of retention	673.33			5624	42068	WQV Required
	673	4427	3985.5	3985.5	29812	
New Max Allowable Pond Elev.	672.7			2770.6	20724	Pump On/Off
Bottom of Retention Elev.	672	3544			0	

Bottom of Retention Elevation = 672.00 ft-msl
Max Pond Holding (from Test) Elevation = 673.9 @ 8,394 c.f.
New Max Pond Elevation = 672.7 @ 2,770 c.f.
Difference between 8394 and 2770 = 5,624 c.f. required by TCEQ.
Extra volume provided to City for additional rainwater harvesting = 2,770 c.f. = 20,719 gallons

RAIN GARDEN (PARTIAL SEDIMENTATION / FILTRATION)
POND PARAMETERS PROVIDED:

Rain Garden:

	REQUIRED	PROVIDED
WATER QUALITY VOLUME (CF)	5,940	6,000
MIN. FILTER BASIN (SF)	495	4,439
MIN.SEDIMENTATION BASIN (SF)*	4,439	4,439

*RAIN GARDENS USE APPROX. 1' OF DEPTH; PROVIDING 1.35 FT.

RETENTION POND PARAMETERS
PROVIDED:

Stage-Storage Curve:

Notation	Elevation (FT-MSL)	Area (SF)	Volume (CF)	Cum. Vol. (CF)		
	677	7791	7433.5	28910.5		
Freeboard	676.5			25194		
	676	7076	6722.5	21477		
WQV Capture Storm #2	675.06			15580	116538	gallons
	675	6369	5870	14754.5		
WQV Capture Storm #1	674.17			9906	74097	gallons
	674	5371	4899	8884.5		
	673	4427	3985.5	3985.5		
Permanent Pool	672	3544				

R1

Top of Permanent Pool Elevation = 672.00 ft-msl
1st Capture Volume Elevation = 674.17 ft-msl @ 9,906 ft³ volume
2nd Capture Volume Elevation = 675.06 ft-msl @ 15,580 ft³ volume
Difference between 15580 cf and 9906 cf = 5,684 c.f. > 5,624 c.f. required by TCEQ.

DETENTION POND SUMMARY

Hec-HMS 2-year Existing Condition Calculations

Drainage Area	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
EX 1	6.058	7.93	0.801
EX 2	5.993	6.97	0.791
EX 3	0.448	0.80	0.072
EX OS	0.181	0.53	0.052
Design Point	12.681	15.25	1.716

HEC-HMS 2-year Proposed Condition Calculations

Hydrologic Element	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
DA 1	2.974	6.69	0.615
DA 1A	0.071	0.21	0.020
DA 2	2.249	3.18	0.300
DA OS	0.181	0.53	0.052
Pond Discharge	5.475	4.33	0.988
DA 3	1.781	2.82	0.282
DA 4	0.313	0.84	0.081
DA 5	1.013	1.43	0.140
DA 6	3.797	5.50	0.503
DA 7	0.618	1.13	0.103
Design Point	12.997	14.18	2.097

Hec-HMS 10-year Existing Condition Calculations

Drainage Area	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
EX 1	6.058	19.51	1.952
EX 2	5.993	17.13	1.929
EX 3	0.448	1.79	0.160
EX OS	0.181	0.94	0.092
Design Point	12.681	37.46	4.132

HEC-HMS 10-year Proposed Condition Calculations

Hydrologic Element	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
DA 1	2.974	13.49	1.226
DA 1A	0.071	0.37	0.036
DA 2	2.249	7.63	0.728
DA OS	0.181	0.94	0.092
Pond Discharge	5.475	11.97	2.083
DA 3	1.781	6.35	0.629
DA 4	0.313	1.55	0.149
DA 5	1.013	3.42	0.334
DA 6	3.797	13.60	1.225
DA 7	0.618	2.50	0.225
Design Point	12.997	36.37	4.645

Hec-HMS 25-year Existing Condition Calculations

Drainage Area	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
EX 1	6.058	26.47	2.666
EX 2	5.993	23.23	2.635
EX 3	0.448	2.39	0.214
EX OS	0.181	1.17	0.115
Design Point	12.681	50.83	5.629

HEC-HMS 25-year Proposed Condition Calculations

Hydrologic Element	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
DA 1	2.974	17.49	1.592
DA 1A	0.071	0.46	0.045
DA 2	2.249	10.29	0.994
DA OS	0.181	1.17	0.115
Pond Discharge	5.475	16.95	2.747
DA 3	1.781	8.44	0.843
DA 4	0.313	1.97	0.189
DA 5	1.013	4.61	0.454
DA 6	3.797	18.46	1.673
DA 7	0.618	3.32	0.299
Design Point	12.997	49.90	6.204

Hec-HMS 100-year Existing Condition Calculations

Drainage Area	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
EX 1	6.058	38.06	3.888
EX 2	5.993	33.40	3.843
EX 3	0.448	3.38	0.305
EX OS	0.181	1.57	0.154
Design Point	12.681	73.16	8.190

HEC-HMS 100-year Proposed Condition Calculations

Hydrologic Element	Drainage Area (ac)	Peak Discharge (cfs)	Volume (ac-ft)
DA 1	2.974	24.15	2.209
DA 1A	0.071	0.61	0.060
DA 2	2.249	14.74	1.448
DA OS	0.181	1.57	0.154
Pond Discharge	5.475	25.99	3.872
DA 3	1.781	11.92	1.205
DA 4	0.313	2.66	0.255
DA 5	1.013	6.60	0.659
DA 6	3.797	26.57	2.439
DA 7	0.618	4.68	0.425
Design Point	12.997	72.97	8.856

DETENTION POND STAGE - STORAGE TABLE

Stage Storage Detention Total Pond

ELEV (FT)	AREA (SF)	AVG AREA	VOL (CF)	TOTAL VOL (AC-FT)	TOTAL VOL (CF)
672.49	0				
		296	151		
673	591			0.003	151
		4191	4191		
674	7791			0.100	4342
		11269	8114		
674.72	14748			0.286	12455
		14954	4187		
675	15161			0.382	16643
		15916	15916		
676	16672			0.747	32559
		17060	8530		
676.50	17449			0.943	41089

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BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

#	Date	Description
R1	5/24/24	MODIFIED PROVIDED WATER QUALITY STAGE-STORAGE TABLE; CORRECT ERROR ON TITLE OF CALCS

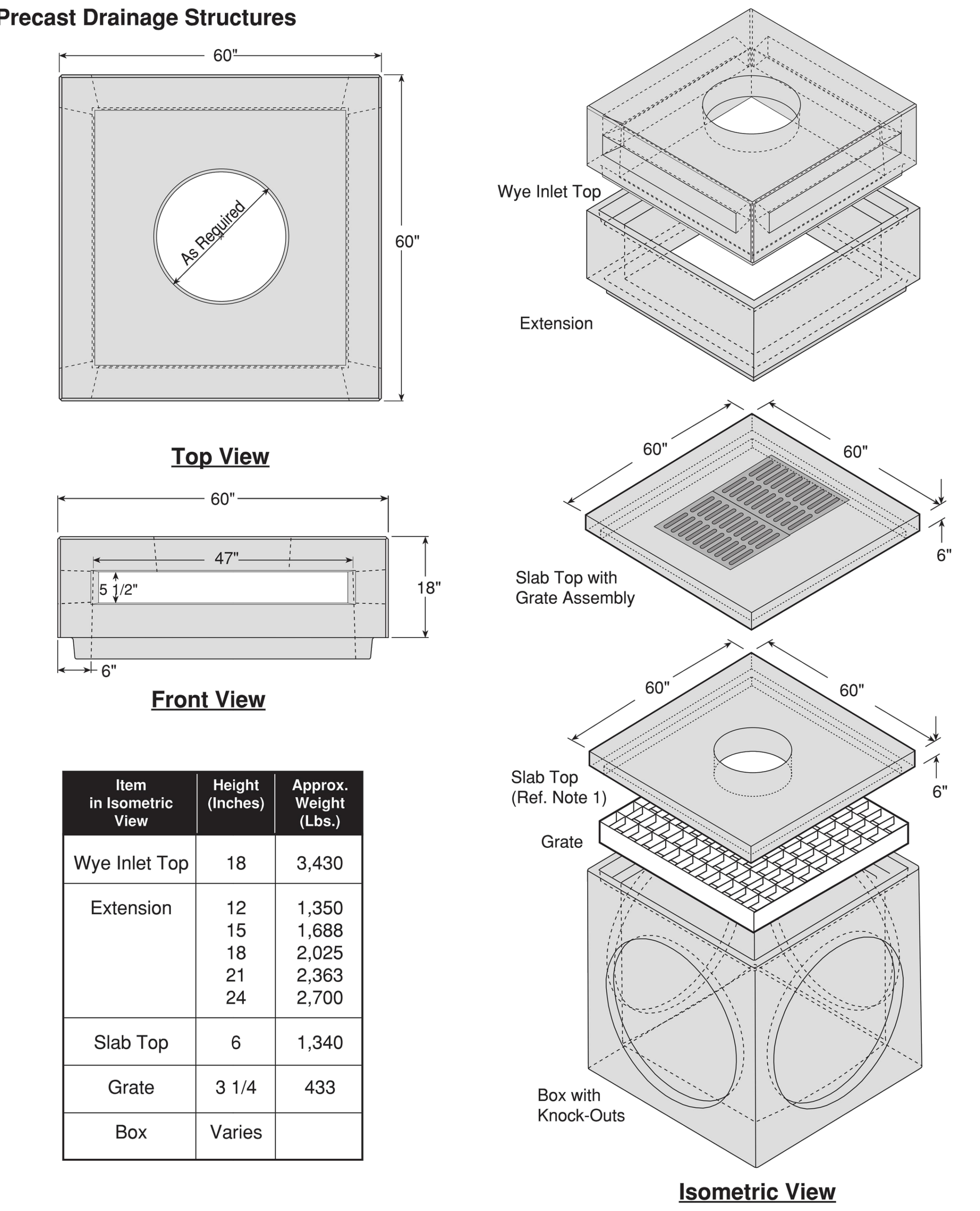
STATE OF TEXAS
ROBERT W. SCHULZ
91151
LICENSED PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
DETENTION & WATER QUALITY CALCULATIONS

21607
2017-11-08
C025

FOR CONSTRUCTION

Precast Drainage Structures

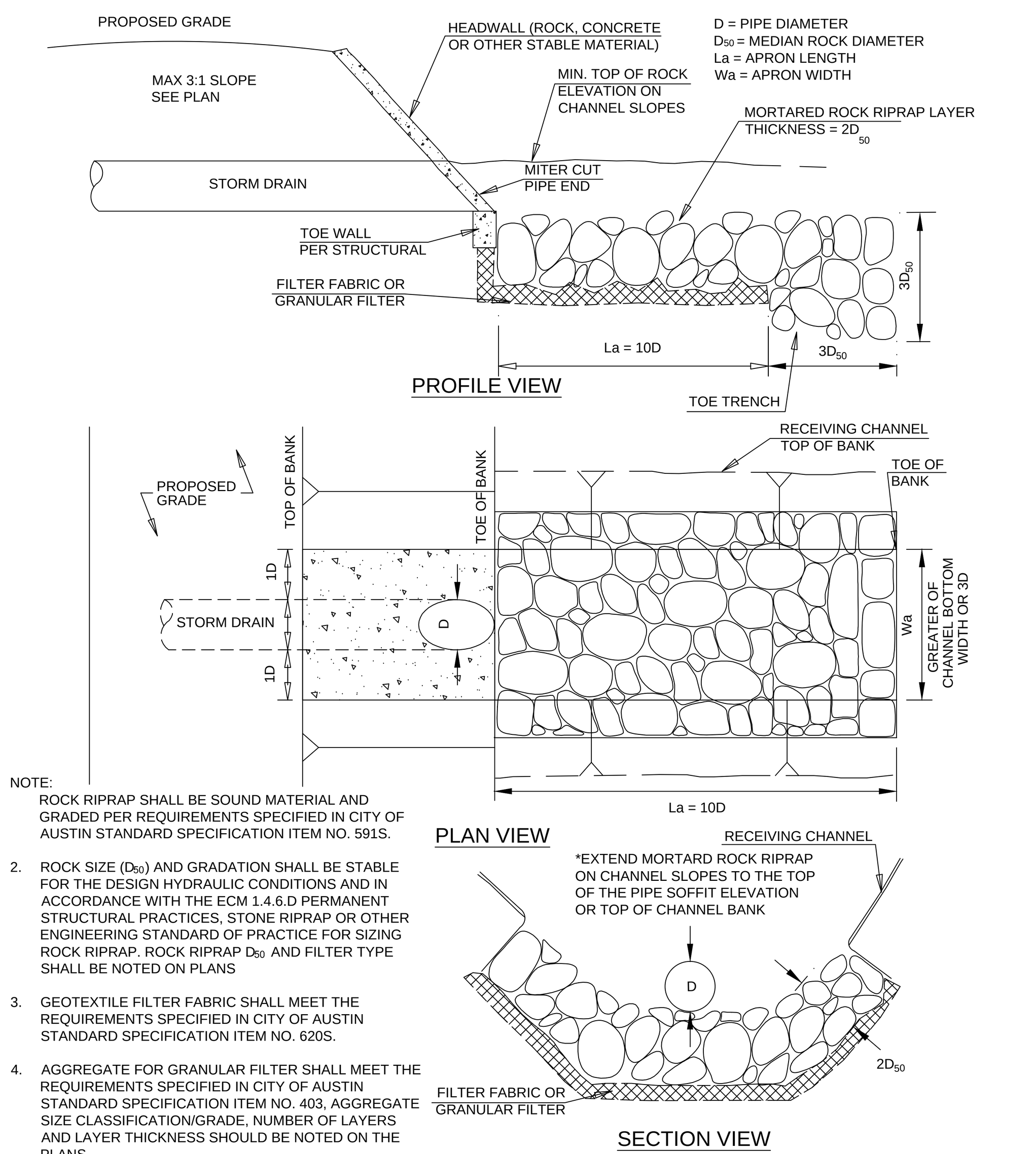


Item in Isometric View	Height (Inches)	Approx. Weight (Lbs.)
Wye Inlet Top	18	3,430
Extension	12 15 18 21 24	1,350 1,688 2,025 2,363 2,700
Slab Top	6	1,340
Grate	3 1/4	433
Box	Varies	

Note:
1.) Customer to specify opening size or cast iron ring and cover.

-No Scale-
All dimensions subject to allowable specification tolerances.

TITLE	PLANT	STATE	SECTION.PAGE	DATE	
Top Options for 4' x 4' Precast Box	Grand Prairie Houston	TX	9.2	01-25-10	Hanson HEIDELBERGCEMENT Group



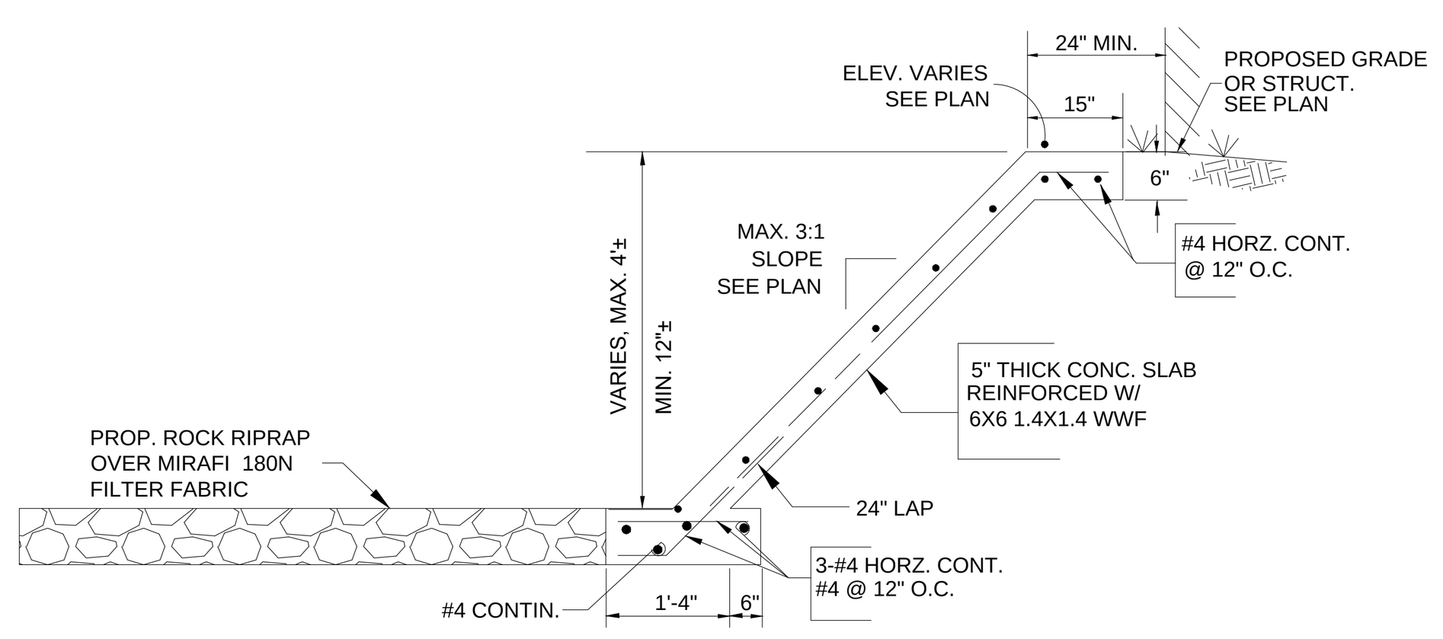
NOTE:
ROCK RIPRAP SHALL BE SOUND MATERIAL AND GRADED PER REQUIREMENTS SPECIFIED IN CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 591S.

2. ROCK SIZE (D_{50}) AND GRADATION SHALL BE STABLE FOR THE DESIGN HYDRAULIC CONDITIONS AND IN ACCORDANCE WITH THE ECM 1.4.6.D PERMANENT STRUCTURAL PRACTICES, STONE RIPRAP OR OTHER ENGINEERING STANDARD OF PRACTICE FOR SIZING ROCK RIPRAP. ROCK RIPRAP D_{50} AND FILTER TYPE SHALL BE NOTED ON PLANS

3. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS SPECIFIED IN CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 620S.

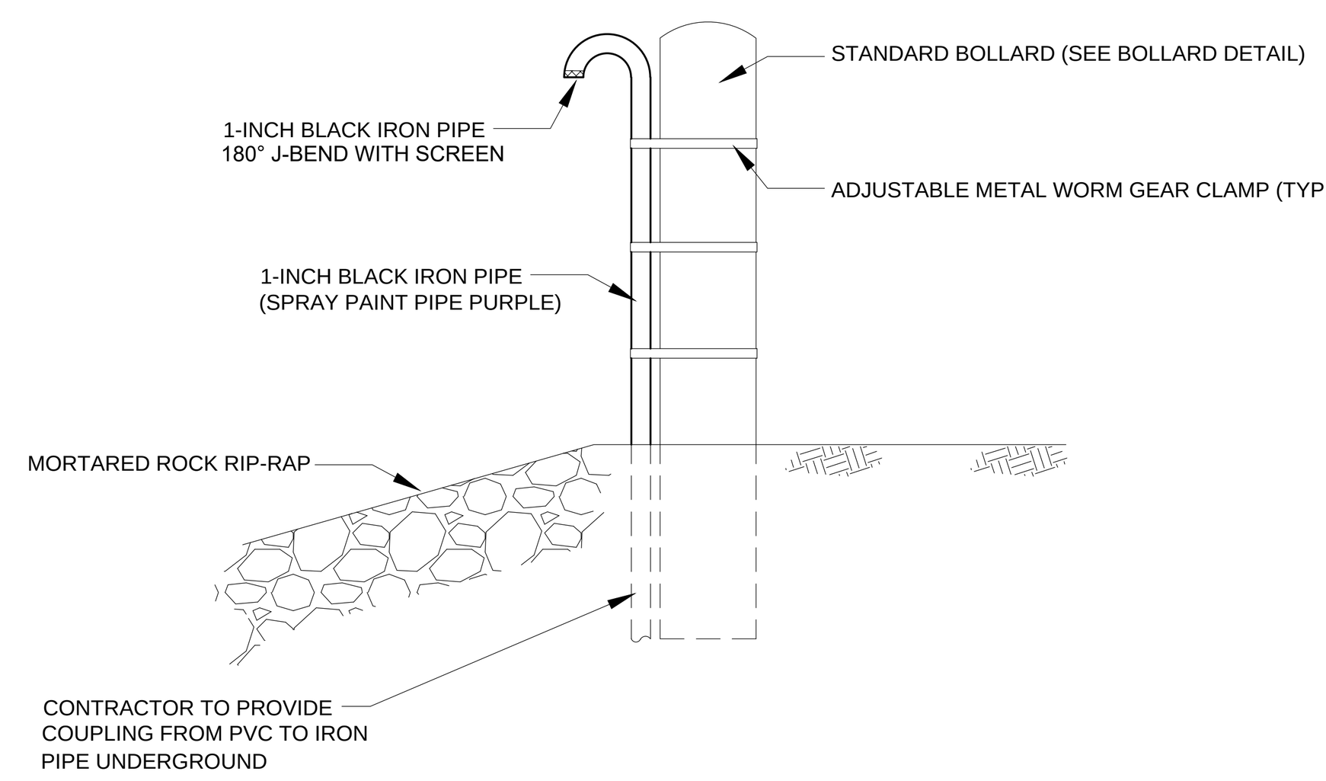
4. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 403, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

ROCK RIPRAP OUTFALL PROTECTION



SLOPED END TREATMENT

SCALE: NTS



1 MAKE-UP WATER DISCHARGE PIPE

SCALE: NTS

BRINKLEY SARGENT WIGINTON ARCHITECTS

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MEP:	Hendrix Consulting Engineers	(512) 218-0060
Landscape:	HALFF Associates, Inc.	(512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS 1

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

#	Date	Description
1	11/08/17	CONSTRUCTION ISSUE

HALFF
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

11/08/2017

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Sheet Name

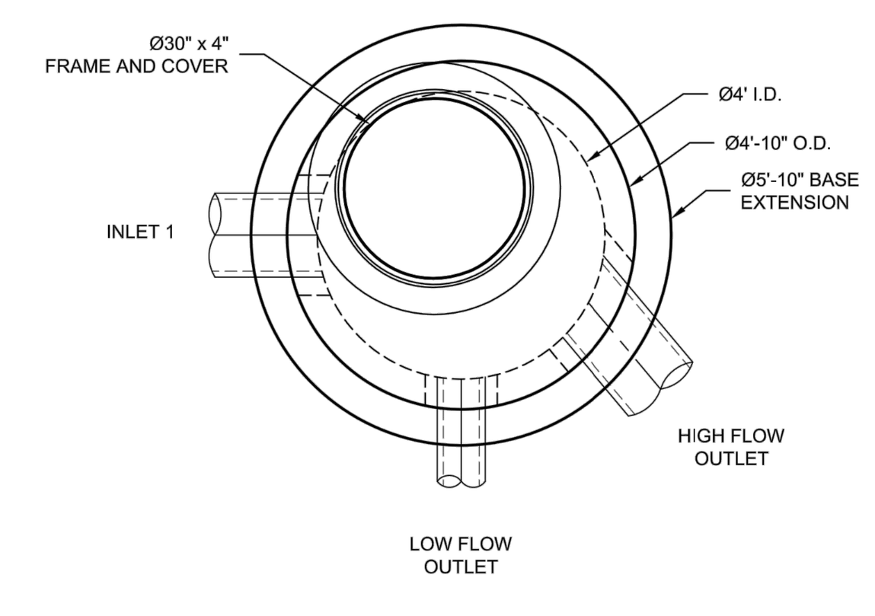
DRAINAGE & WATER QUALITY DETAILS

21607

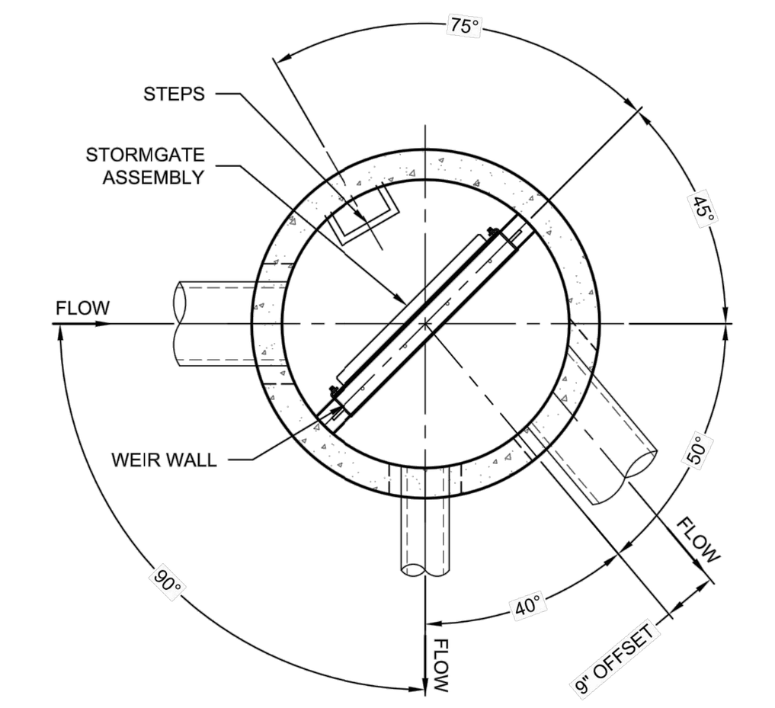
2017-11-08

C026

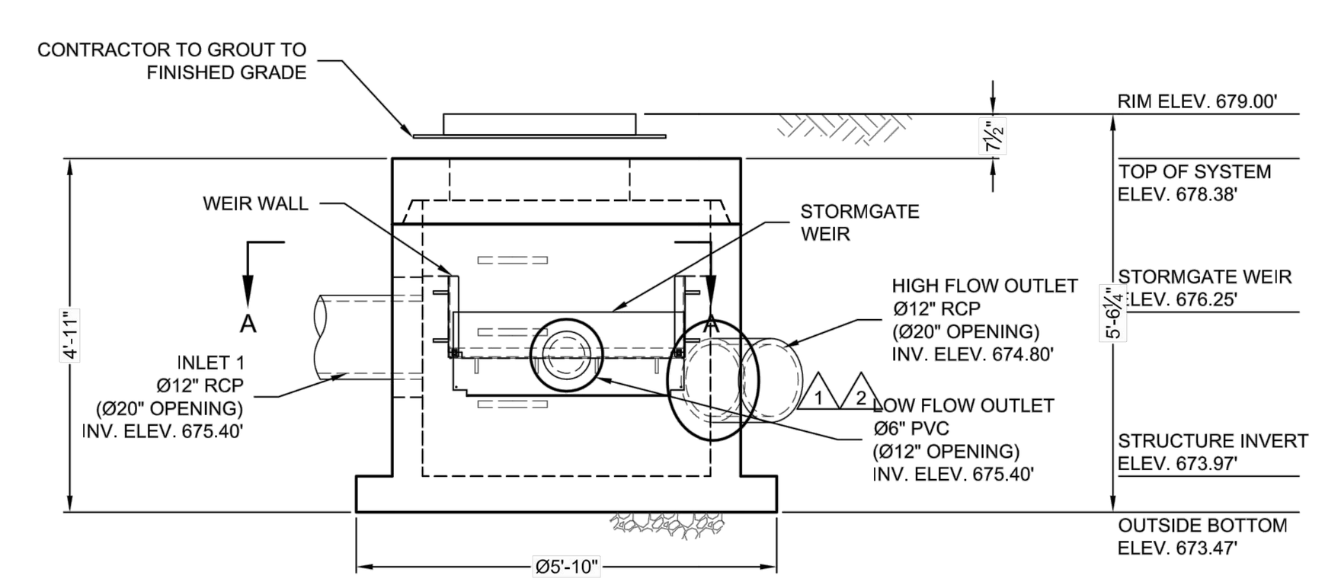
FOR CONSTRUCTION



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	STORMGATE WEIR ASSEMBLY	CONTECH
3	STEPS, P10CTS, LANE LADDER, OR EQUIV.	CONTECH
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1	Ø30" x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.26 CF
PEAK FLOW RATE	3.36 CFS
RETURN PERIOD OF PEAK FLOW	100 YRS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. BYPASS STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. BYPASS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S).
E. CONTRACTOR TO INSTALL GRADE RINGS/RISERS OR BLOCK REQUIRED BETWEEN THE TOP OF THE STRUCTURE AND THE BASE OF THE MANHOLE FRAMES.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 6000 LBS.
OF 2 PIECES

MAX FOOTPRINT = Ø5'-10"

CONTECH **PROPOSAL** DRAWING

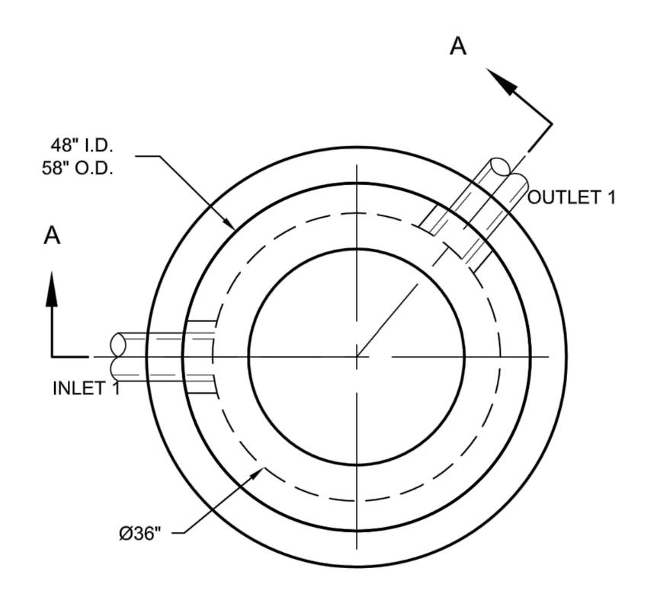
LB87598
LAYOUT 1A
1084 / TRNCO

DIVERSION BYPASS SGMH48 - 556519-10
CITY OF SUNSET VALLEY POLICE STATION
AUSTIN, TX
for SYSTEM: SG DIVERSION BYPASS

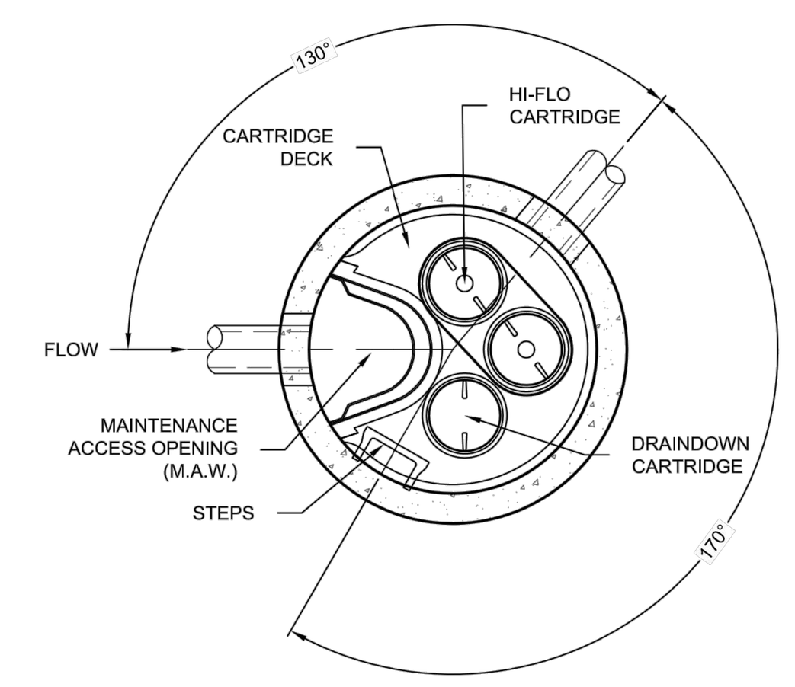
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

StormGate

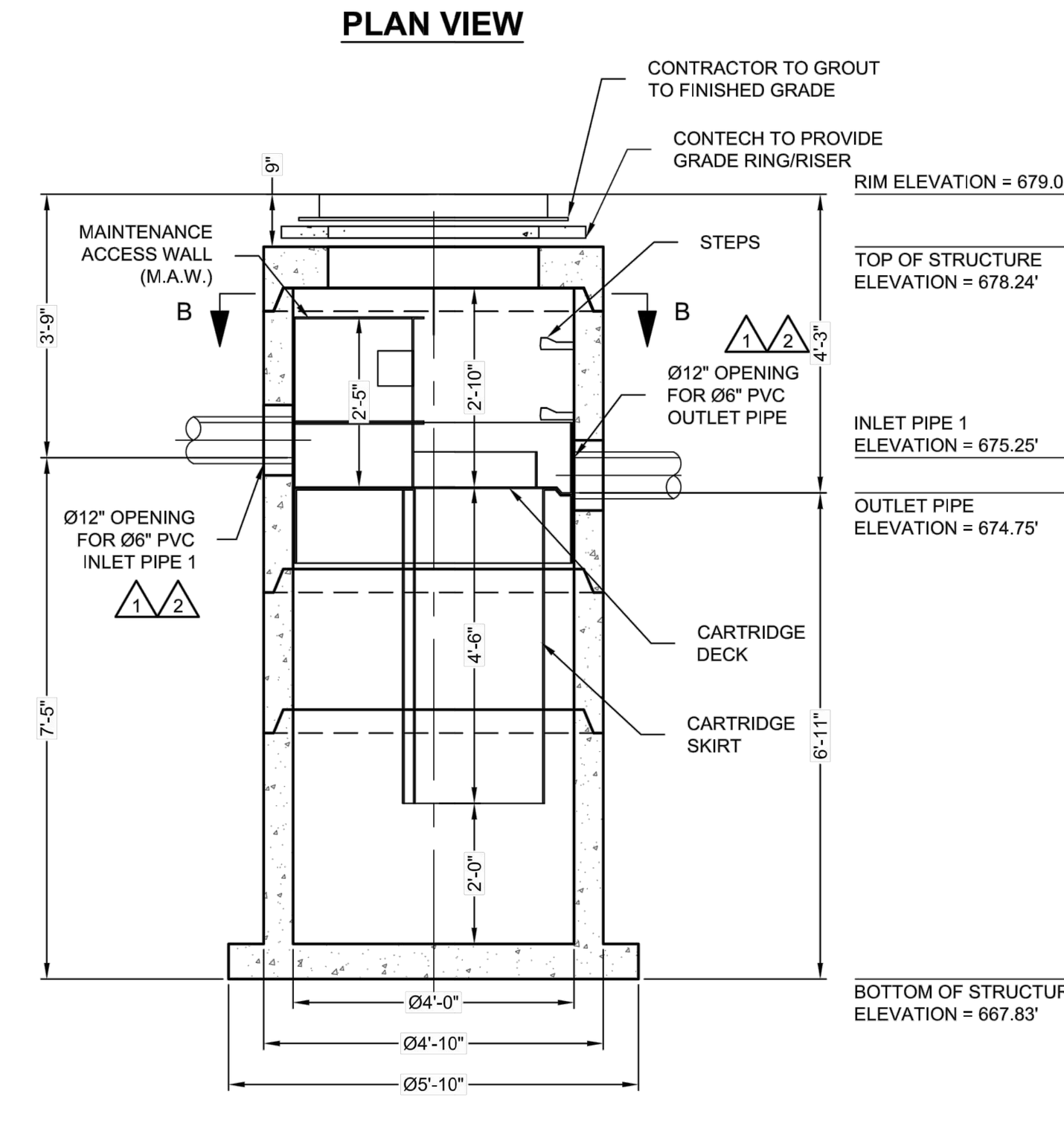
DATE: 02/02/17 SCALE: 3/8" = 1'-0"
DESIGNED: SDS DRAWN: SDS
CHECKED: APPROVED:
PROJECT No.: 556519 SEQUENCE No.: 10
SHEET: 1 OF 1



PLAN VIEW



SECTION B-B



SECTION A-A

MATERIAL LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	INSTALLED BY
2	54" HI-FLO CARTRIDGE (70 mm ORIFICE)	CONTECH
1	54" DRAINDOWN CARTRIDGE (35 mm ORIFICE)	CONTECH
1	OFFLINE MAINTENANCE ACCESS WALL (M.A.W.) EXTENSION	CONTECH
1	JF4 CARTRIDGE DECK WITH 54" SEPARATION SKIRT	CONTECH
1	JOINT SEALANT	CONTRACTOR
1	Ø36" x 4" FRAME & COVER, EJ#001580008A01	CONTRACTOR
1 PLCS	GRADE RING/RISER	CONTRACTOR
2	STEPS	CONTECH

SITE DESIGN DATA

WATER QUALITY FLOW RATE (4)	0.42 CFS
PEAK FLOW RATE	OFFLINE
RETURN PERIOD OF PEAK FLOW	N/A

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. WWW.ContechES.COM
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20, ASSUMING EARTH COVER OF 0' - 1', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK OF 4 PIECES = 5000 LBS.

CONTECH **PROPOSAL** DRAWING

TRNCO
LAYOUT 1A

JF4-2-1 (54")- 556519-20
CITY OF SUNSET VALLEY POLICE STATION AND PUBLIC WORKS BUILDING
AUSTIN, TX
FOR SYSTEM: CONTECH JELLYFISH MH

MARK	DATE	REVISION DESCRIPTION	BY
4	04/25/17	TREATMENT FLOW RATE	
3	02/10/17	WQ FLOW RATE	
2	02/09/17	PIPE MATERIAL	
1	02/07/17	PIPE MATERIAL	

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

Jellyfish® Filter

DATE: 02/02/17
DESIGNED: SDS DRAWN: SDS
CHECKED: ---- APPROVED: ----
PROJECT No.: 556519 SEQUENCE No.: 20
SHEET: 1 OF 1

NOTE: THE PROFESSIONAL ENGINEERING SEAL APPEARING ON THIS DRAWING IS FOR THE APPLICATION OF THE CONTECH JELLYFISH FILTRATION SYSTEM ONLY, INCLUDING THE DESIGN ELEVATIONS. THE SYSTEM ITSELF IS A PROPRIETARY SYSTEM DESIGNED AND MANUFACTURED BY OTHERS. ALL RESPONSIBILITY AND CREDIT FOR THE DESIGN OF THE ACTUAL FILTRATION SYSTEM SHALL BE ATTRIBUTED TO CONTECH.

HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

811 Know what's **below.** **Call** before you dig.

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BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect:	Brinkley Sargent Wiginton Architects	(972) 960-9970
Civil:	HALFF Associates, Inc.	(512) 777-4600
Structural:	JQ & Associates	(512) 474-9094
MEP:	Hendrix Consulting Engineers	(512) 218-0060
Landscape:	HALFF Associates, Inc.	(512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

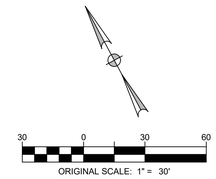
#	Date	Description

STATE OF TEXAS
ROBERT W. SCHOL
91151
LICENSED PROFESSIONAL ENGINEER
11/08/2017

Sheet Name
CONTECH STORM GATE & JELLYFISH FILTER

21607
2017-11-08
C027

FOR CONSTRUCTION



NOTES:

1) EXISTING IRRIGATION SYSTEM IS TO BE ONLY REMOVED WHERE NEW CONSTRUCTION HAS BEEN PLANNED.

2) REFER TO CIVIL DRAWINGS FOR LIMITS OF DEMOLITION AND NEW CONSTRUCTION.

3) EXISTING IRRIGATION SYSTEM THAT IS NOT DEMOLISHED MUST REMAIN FUNCTIONAL. IF DAMAGED DURING DEMOLITION OR NEW CONSTRUCTION THE SYSTEM MUST BE REPAIRED TO WORKING ORDER AT NO COST TO OWNER.

4) ALL EXISTING HEADS, VALVE BOXES, COVERS ARE TO BE EXCHANGED WITH EFFLUENT OPTION (PURPLE INDICTORS).

5) CONTRACTOR TO DISCONNECT ALL IRRIGATION WIRES AND PIPE FROM EXISTING CONTROLLER, BUILDING AND REMAINING IRRIGATION SYSTEM PRIOR TO DEMOLITION.

HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

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MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

BRINKLEY SARGENT WIGINTON ARCHITECTS

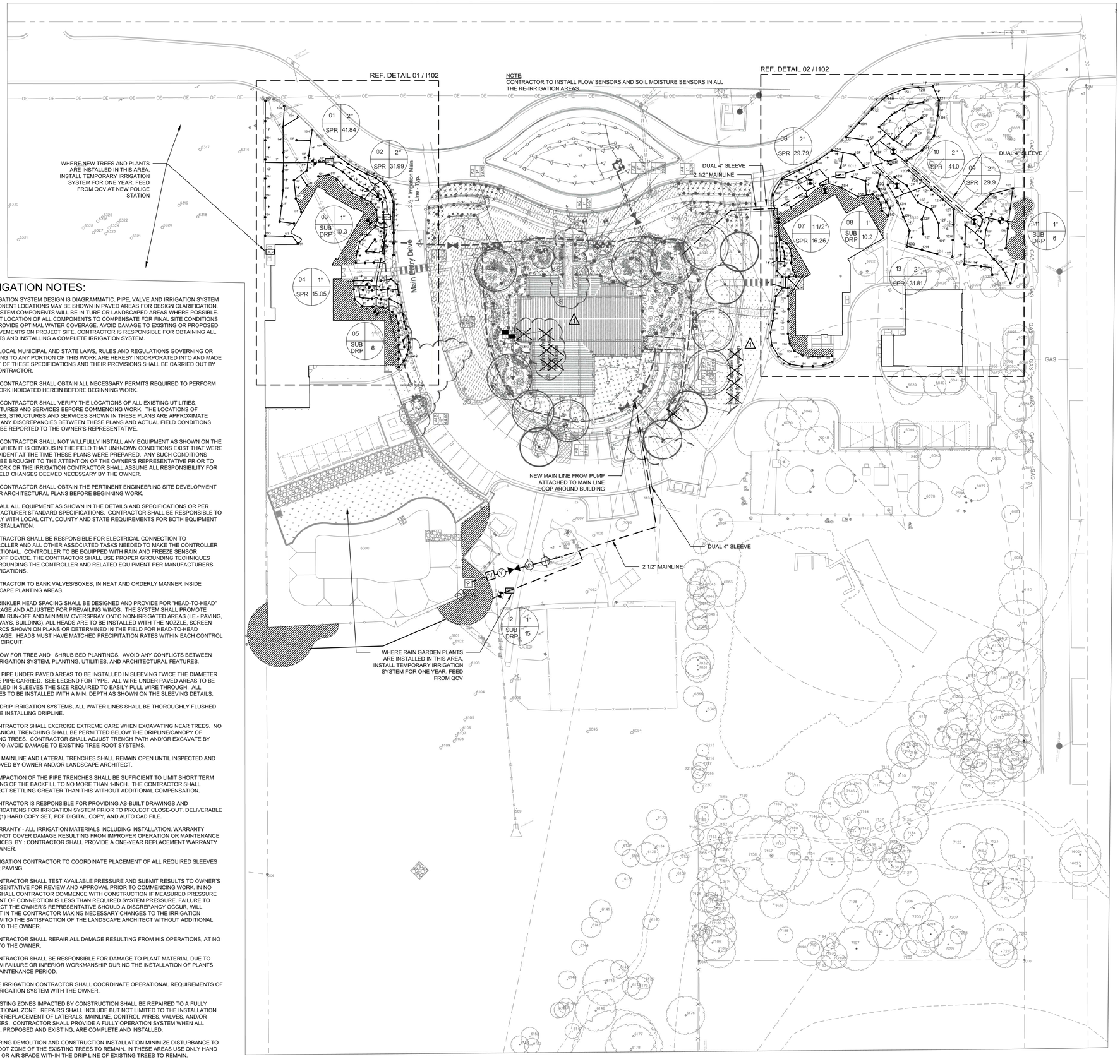
History		
#	Date	Description
1	09-27-17	P-BA "C"

STATE OF TEXAS
KRISTIN M. WILSON
18801
LICENSED ARCHITECT
11-08-17

Sheet Name
DEMO IRRIGATION PLAN

20805
2017-08-03
I100

CONSTRUCTION ISSUE



IRRIGATION NOTES:

1. IRRIGATION SYSTEM DESIGN IS DIAGRAMMATIC. PIPE, VALVE AND IRRIGATION SYSTEM COMPONENT LOCATIONS MAY BE SHOWN IN PAVED AREAS FOR DESIGN CLARIFICATION. ALL SYSTEM COMPONENTS WILL BE IN TURF OR LANDSCAPED AREAS WHERE POSSIBLE. ADJUST LOCATION OF ALL COMPONENTS TO COMPENSATE FOR FINAL SITE CONDITIONS AND PROVIDE OPTIMAL WATER COVERAGE. AVOID DAMAGE TO EXISTING OR PROPOSED IMPROVEMENTS ON PROJECT SITE. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSTALLING A COMPLETE IRRIGATION SYSTEM.

2. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.

3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.

4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.

5. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.

6. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING SITE DEVELOPMENT AND/OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.

7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS OR PER MANUFACTURER STANDARD SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR ELECTRICAL CONNECTION TO CONTROLLER AND ALL OTHER ASSOCIATED TASKS NEEDED TO MAKE THE CONTROLLER OPERATIONAL. CONTROLLER TO BE EQUIPPED WITH RAIN AND FREEZE SENSOR SHUT-OFF DEVICE. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.

9. CONTRACTOR TO BANK VALVES/BOXES, IN NEAT AND ORDERLY MANNER INSIDE LANDSCAPE PLANTING AREAS.

10. SPRINKLER HEAD SPACING SHALL BE DESIGNED AND PROVIDE FOR "HEAD-TO-HEAD" COVERAGE AND ADJUSTED FOR PREVAILING WINDS. THE SYSTEM SHALL PROMOTE MINIMUM RUN-OFF AND MINIMUM OVERSPRAY ONTO NON-IRRIGATED AREAS (I.E.- PAVING, WALKWAYS, BUILDING). ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON PLANS OR DETERMINED IN THE FIELD FOR HEAD-TO-HEAD COVERAGE. HEADS MUST HAVE MATCHED PRECIPITATION RATES WITHIN EACH CONTROL VALVE CIRCUIT.

11. ALLOW FOR TREE AND SHRUB BED PLANTINGS. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING, UTILITIES, AND ARCHITECTURAL FEATURES.

12. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVES THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MIN. DEPTH AS SHOWN ON THE SLEEVING DETAILS.

13. ON DRIP IRRIGATION SYSTEMS, ALL WATER LINES SHALL BE THOROUGHLY FLUSHED BEFORE INSTALLING DRIPLINE.

14. CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING NEAR TREES. NO MECHANICAL TRENCHING SHALL BE PERMITTED BELOW THE DRIPLINE/CANOPY OF EXISTING TREES. CONTRACTOR SHALL ADJUST TRENCH PATH AND/OR EXCAVATE BY HAND TO AVOID DAMAGE TO EXISTING TREE ROOT SYSTEMS.

15. ALL MAINLINE AND LATERAL TRENCHES SHALL REMAIN OPEN UNTIL INSPECTED AND APPROVED BY OWNER AND/OR LANDSCAPE ARCHITECT.

16. COMPACTION OF THE PIPE TRENCHES SHALL BE SUFFICIENT TO LIMIT SHORT TERM SETTLING OF THE BACKFILL TO NO MORE THAN 1-INCH. THE CONTRACTOR SHALL CORRECT SETTLING GREATER THAN THIS WITHOUT ADDITIONAL COMPENSATION.

17. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS AND SPECIFICATIONS FOR IRRIGATION SYSTEM PRIOR TO PROJECT CLOSE-OUT. DELIVERABLE TO BE (1) HARD COPY SET, PDF DIGITAL COPY, AND AUTO CAD FILE.

18. WARRANTY - ALL IRRIGATION MATERIALS INCLUDING INSTALLATION. WARRANTY SHALL NOT COVER DAMAGE RESULTING FROM IMPROPER OPERATION OR MAINTENANCE PRACTICES BY : CONTRACTOR SHALL PROVIDE A ONE-YEAR REPLACEMENT WARRANTY FOR OWNER.

19. IRRIGATION CONTRACTOR TO COORDINATE PLACEMENT OF ALL REQUIRED SLEEVES UNDER PAVING.

20. CONTRACTOR SHALL TEST AVAILABLE PRESSURE AND SUBMIT RESULTS TO OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WORK. IN NO CASE SHALL CONTRACTOR COMMENCE WITH CONSTRUCTION IF MEASURED PRESSURE AT POINT OF CONNECTION IS LESS THAN REQUIRED SYSTEM PRESSURE. FAILURE TO CONTACT THE OWNER'S REPRESENTATIVE SHOULD A DISCREPANCY OCCUR, WILL RESULT IN THE CONTRACTOR MAKING NECESSARY CHANGES TO THE IRRIGATION SYSTEM TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.

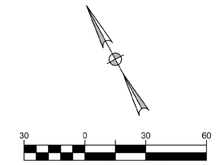
21. CONTRACTOR SHALL REPAIR ALL DAMAGE RESULTING FROM HIS OPERATIONS, AT NO COST TO THE OWNER.

22. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO PLANT MATERIAL DUE TO SYSTEM FAILURE OR INFERIOR WORKMANSHIP DURING THE INSTALLATION OF PLANTS AND MAINTENANCE PERIOD.

23. THE IRRIGATION CONTRACTOR SHALL COORDINATE OPERATIONAL REQUIREMENTS OF THE IRRIGATION SYSTEM WITH THE OWNER.

24. EXISTING ZONES IMPACTED BY CONSTRUCTION SHALL BE REPAIRED TO A FULLY OPERATIONAL ZONE. REPAIRS SHALL INCLUDE BUT NOT LIMITED TO THE INSTALLATION AND/OR REPLACEMENT OF LATERALS, MAINLINE, CONTROL WIRES, VALVES, AND/OR EMITTERS. CONTRACTOR SHALL PROVIDE A FULLY OPERATION SYSTEM WHEN ALL ZONES, PROPOSED AND EXISTING, ARE COMPLETE AND INSTALLED.

25. DURING DEMOLITION AND CONSTRUCTION INSTALLATION MINIMIZE DISTURBANCE TO THE ROOT ZONE OF THE EXISTING TREES TO REMAIN. IN THESE AREAS USE ONLY HAND TOOLS OR AIR SPADE WITHIN THE DRIP LINE OF EXISTING TREES TO REMAIN.

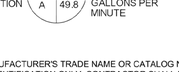


IRRIGATION LEGEND

SYMBOL	DESCRIPTION	SPECIFICATIONS
SPRAY #	SPRAY HEAD COLOR AND PATTERN 5' - RED 8' - GREEN 10'- BLUE 12'-BROWN 15'-BLACK	MANUFACTURER: TORO SPRAY: MPR PLUS NOZZLE: REF. PLAN INLET PRESSURE: 30 PSI PRESSURE COMPENSATION
	NOZZLE# Q = QUARTER PATTERN NOZZLE# T = ONE THIRD PATTERN NOZZLE# H = HALF PATTERN NOZZLE# TT = TWO THIRD PATTERN NOZZLE# TQ = THREE QUARTER PATTERN NOZZLE# F = FULL PATTERN	
SUB DRP	LANDSCAPE BED DRIP IRRIGATION	MANUFACTURER: TORO DRIPLINE: DL2000 INLET PRESSURE: 30 PSI INSTALL PRESSURE REGULATOR KIT
IV	ISOLATION VALVE	MANUFACTURERE: NIBCO MODEL: T-113-K SIZE: 2"
Y	Y-STRAINER	MANUFACTURER: WILKINS MODEL: SXL SIZE: 2"
	DOUBLE CHECK VALVE ASSEMBLY	MANUFACTURER: FEBCO MODEL: SERIES 850 SIZE: 2"
MV	MASTER VALVE	MANUFACTURER: TORO MODEL: ICV WITH DC LATCHING SOLENOID SIZE: 2"
	REMOTE CONTROL VALVE	MANUFACTURER: TORO MODEL: P-220 **STD. 24VAC SOLENOID** SIZE: PER PLAN NOTE: CONNECT TO EXISTING MAIN LINE UNLESS SHOWN OTHERWISE
L	LINE FLUSH VALVE	MANUFACTURER: TORO NOTE: INSTALL ONE (1) AT LOWEST POINT IN EACH ZONE AND ONE (1) FOR EACH TREE.
DI	DRIP OPERATION INDICATOR	MANUFACTURER: TORO MODEL: T-DL-MP9 POP OPERATION INDICATOR. NOTE: INSTALL ONE (1) IN EACH ZONE. TIGHTEN THROW SCREW ALL THE WAY DOWN FOR ZERO FLOW.
	CONTROLLER	MANUFACTURER: TORO TYPE: SENTINEL UNIT MODEL: SB36P-SU MOUNT: PEDESTAL, SS SECURITY. ADDITONAL: FLOW SENSORS, SOIL SENSING WIRELESS PUMP CONTROL
W	WEATHER SENSOR	MANUFACTURE: TORO SENSOR:PRECISION ET ON-SITE WEATHER STATION FOR DIRECT ET MEASUREMENTS.
P	PUMP	MANUFACTURE: WATERTRONICS STATION PERFORMANCE: 50GPM@60PSI REFER TO CIVIL DRAWINGS
PC	PUMP CONTROL	MANUFACTURE: TORO WIRELESS PUMP CONTROL MODULE
QCV	QUICK COUPLER VALVE	MANUFACTURE: TORO MODEL: 100-2SLLVC, 100-SLK
	LATERAL PIPING	SIZE: 1" UNLESS NOTE OTHERWISE TYPE: SCH 40 PVC PE PIPE
	MAIN LINE PIPING	SIZE: 2 1/2" TYPE: SCH 40 PVC PE PIPE
	PIPE SLEEVE	SIZE: TWICE LARGER THAN PIPE SIZE OR ELECTRICAL BUNDLE. TYPE: CLASS 200, SDR-21 PVC PIPE

NOTE: ALL PIPING, SPRAY HEADS, VALVES, BOXES, DRIP TUBING, ETC.TO HAVE THE EFFLUENT OPTIONS.

VALVE INDICATOR



NOTE:
REFERENCE TO MANUFACTURER'S TRADE NAME OR CATALOG NUMBER IS FOR THE PURPOSE OF IDENTIFICATION ONLY. CONTRACTOR SHALL BE PERMITTED TO FURNISH LIKE MATERIALS OF OTHER MANUFACTURERS PROVIDED THEY ARE OF EQUAL QUALITY AND COMPLY WITH THE SPECIFICATIONS FOR THIS PROJECT AND ARE APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL SUBMIT "EQUAL PRODUCTS" TO THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE NO LATER THAN (7) DAYS PRIOR TO BID OPENING DATE FOR REVIEW AND APPROVAL/DISAPPROVAL OF THE PROPOSED EQUAL."EQUAL PRODUCTS" SUBMITTED AFTER AWARD OF CONTRACT MAY BE DENIED AND THE CONTRACTOR MUST USE THE SPECIFIED PRODUCT/MATERIAL WITHOUT ADDITIONAL COMPENSATION.

HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

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BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JQ & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

3205 JONES ROAD, SUNSET VALLEY, TX 78745

History

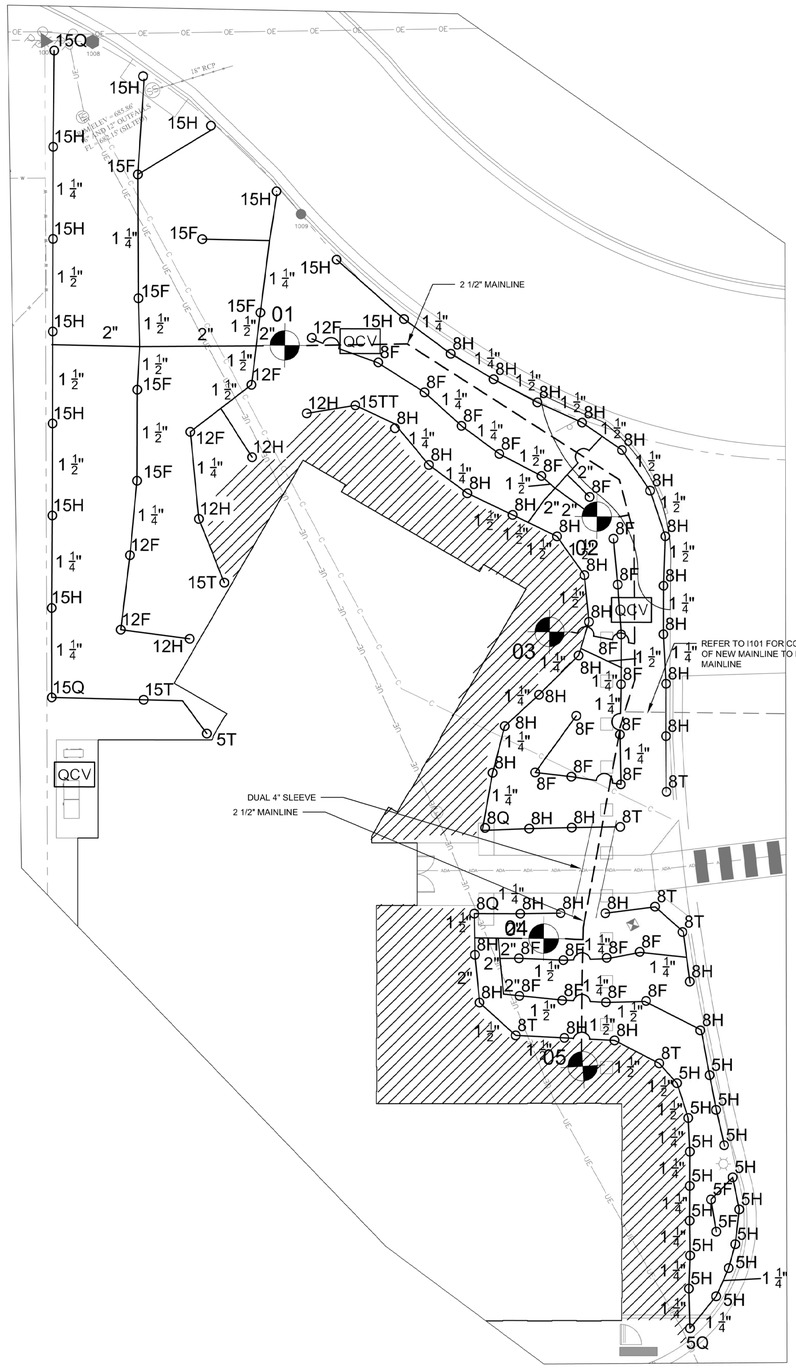
#	Date	Description
1	09-27-17	P-BA "C"

STATE OF TEXAS
KIRK M. WILSON
18801
LICENSED LANDSCAPE ARCHITECT
11-08-17

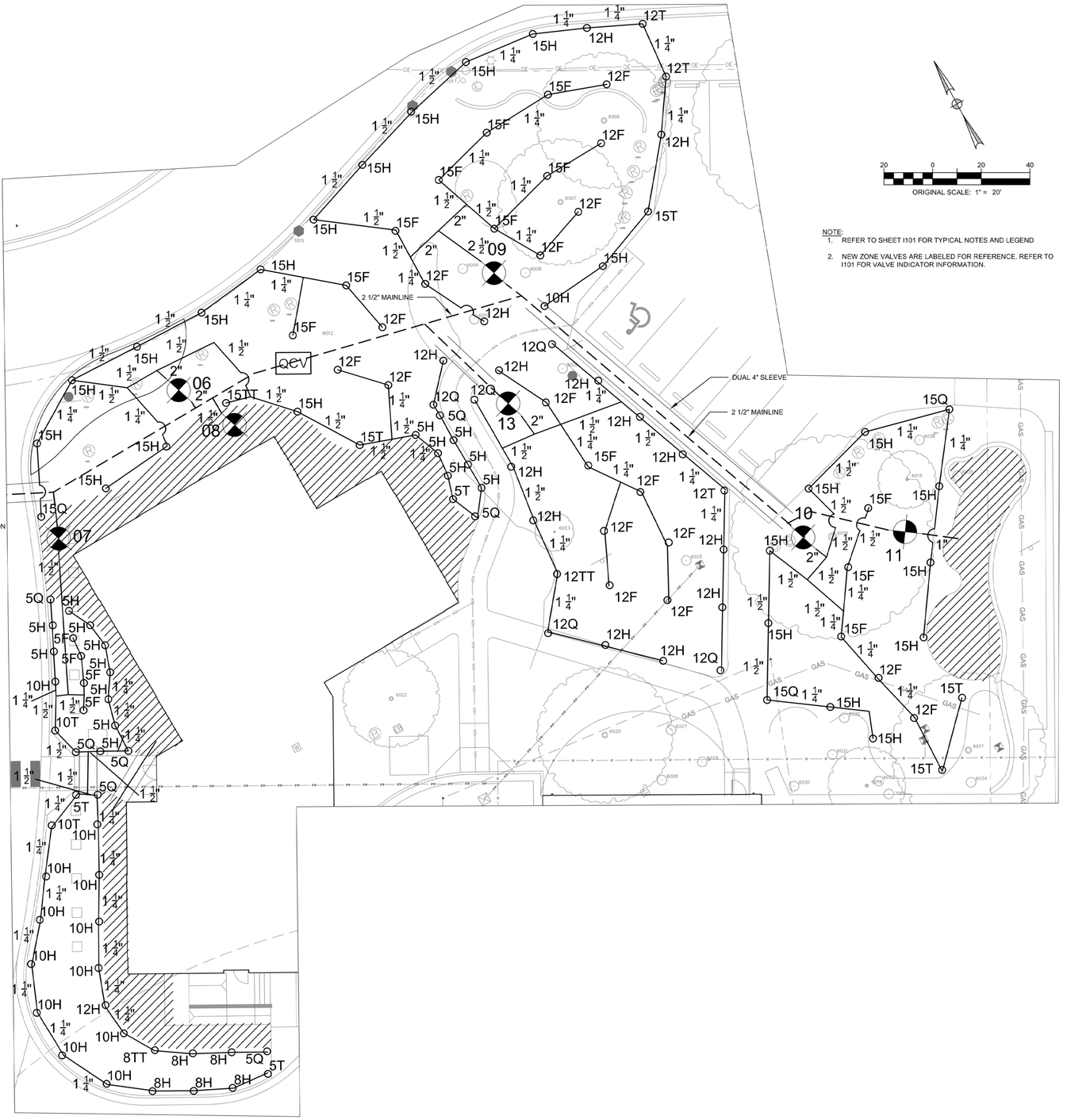
CONSTRUCTION ISSUE

Sheet Name
IRRIGATION PLAN

20805
2017-08-03
I101



01 WEST SECTION ENLARGED PLAN



02 EAST SECTION ENLARGED PLAN

NOTE:
1. REFER TO SHEET I101 FOR TYPICAL NOTES AND LEGEND
2. NEW ZONE VALVES ARE LABELED FOR REFERENCE. REFER TO I101 FOR VALVE INDICATOR INFORMATION.

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SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

CONSTRUCTION ISSUE

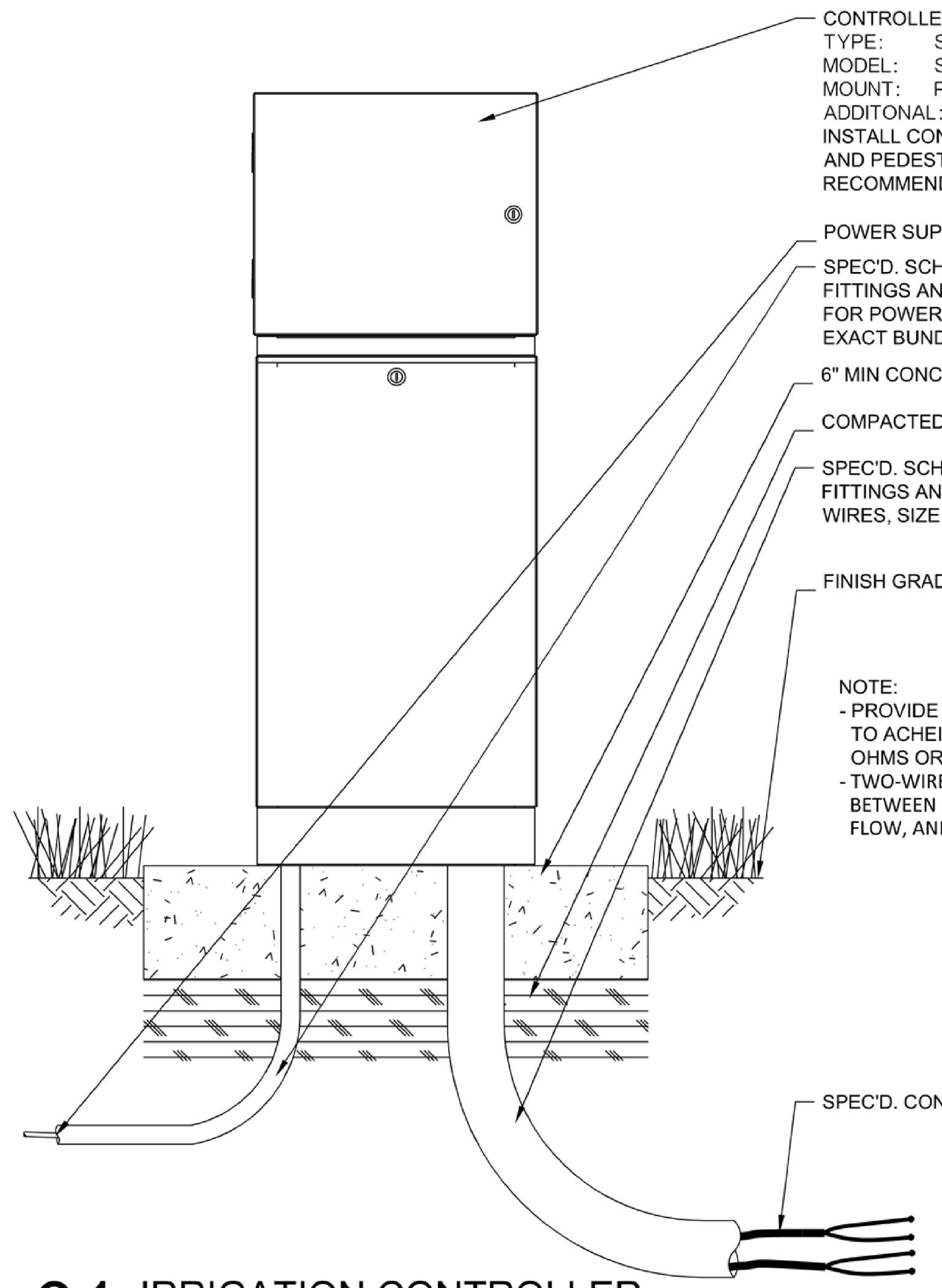
History

#	Date	Description

STATE OF TEXAS
KIRSTIN M. WILSON
18801
LICENSED
PROFESSIONAL ENGINEER
08/17

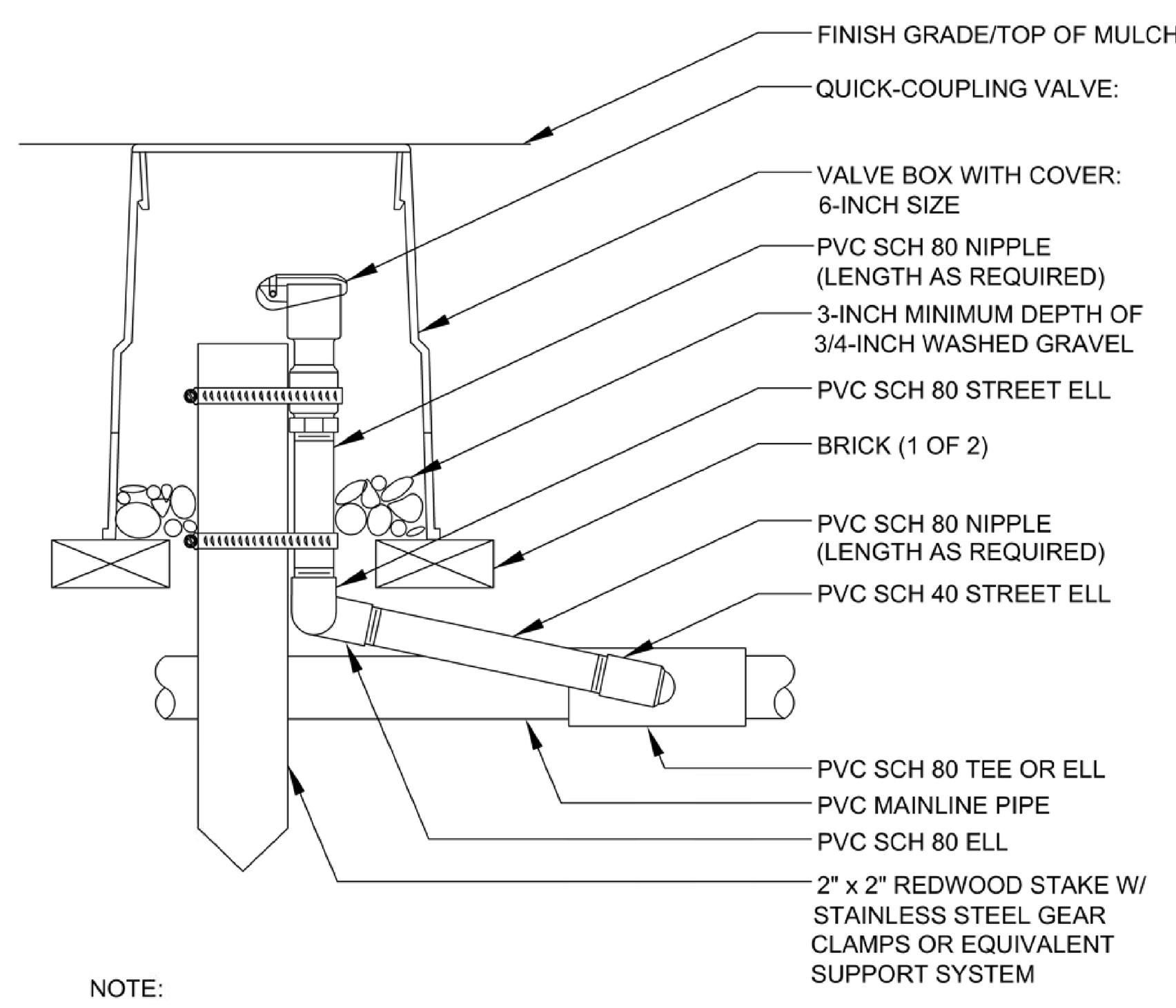
Sheet Name
ENLARGED IRRIGATION PLANS

20805
2017-08-03
I102



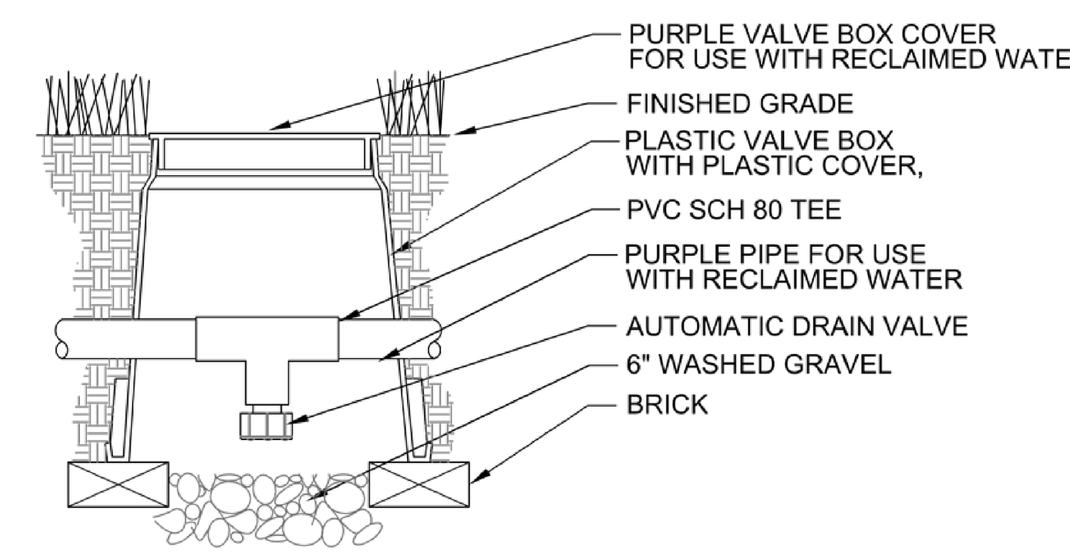
NOTE:
- PROVIDE PROPER GROUNDING COMPONENTS TO ACHEIVE GROUND RESISTANCE OF 10 OHMS OR LESS.
- TWO-WIRE CABLES WILL REQUIRED TO COMMUNICATE BETWEEN PUMP AND CONTROLLER AS WELL AS LAKE LEVEL, FLOW, AND RAIN SENSORS.

01 IRRIGATION CONTROLLER
SCALE: N.T.S



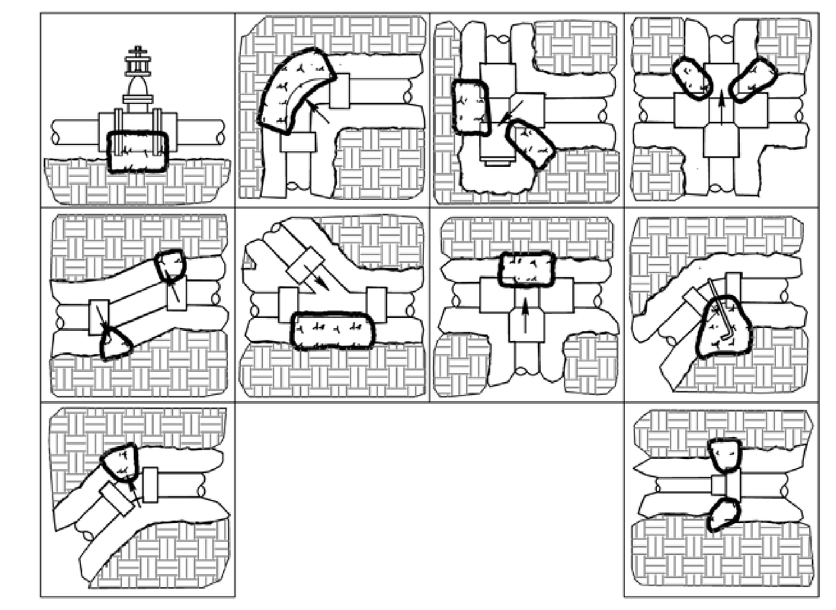
NOTE:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

02 QUICK COUPLER VALVE
SCALE: N.T.S



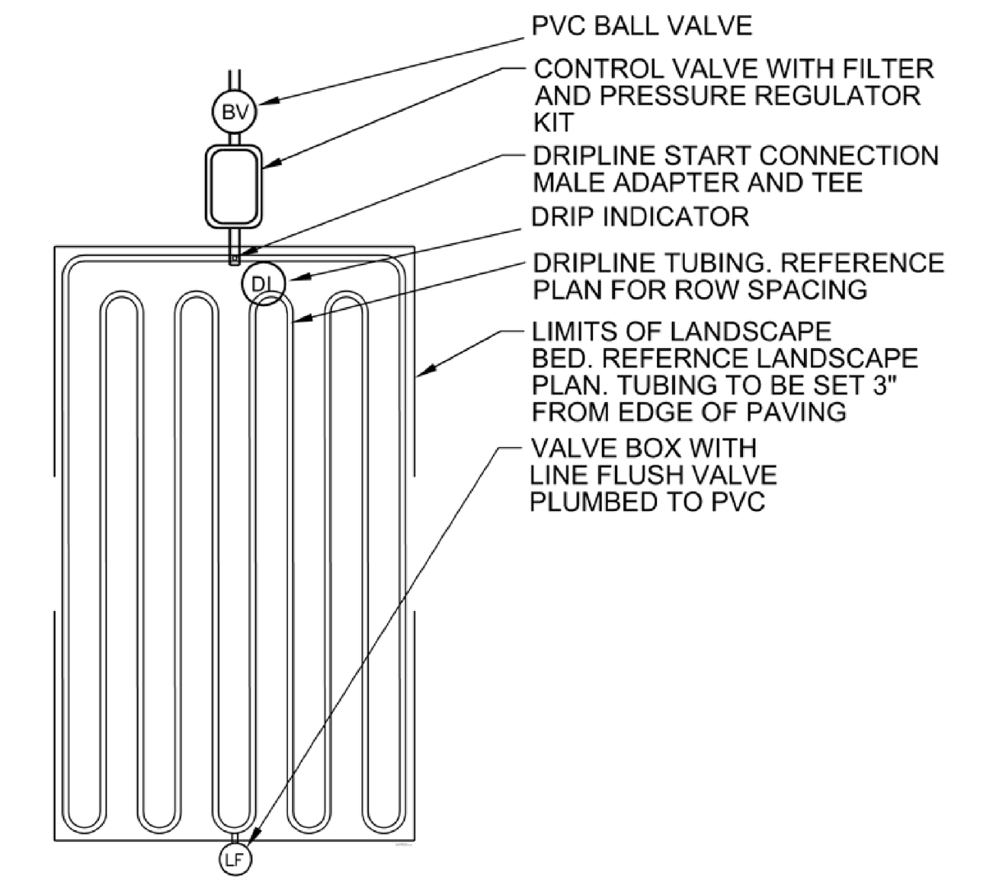
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. IRRIGATION CONTRACTOR TO INSTALL AUTOMATIC DRAIN VALVE AT LOWEST POINT OF EACH IRRIGATION ZONE.

03 AUTOMATIC DRAIN VALVE
SCALE: N.T.S

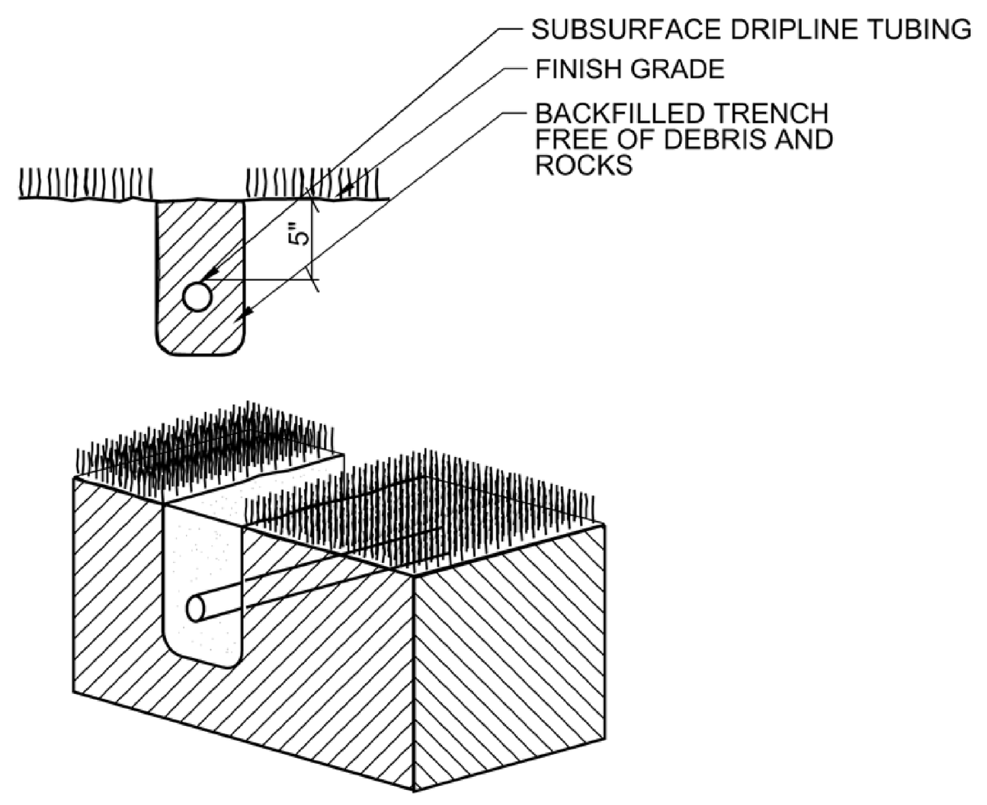


NOTES
1. ALL PVC PIPE 3" DIA. AND GREATER TO BE INSTALLED WITH THRUST BLOCKING.
2. ALL MAIN LINE TO BE INSTALLED AND TESTED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
3. CONCRETE SHALL BE 3000 PSI AT 28 DAYS.
4. PROVIDE CONCRETE THRUST BLOCKING IN STRICT ACCORDANCE WITH PIPE MANUFACTURER'S INSTRUCTIONS.

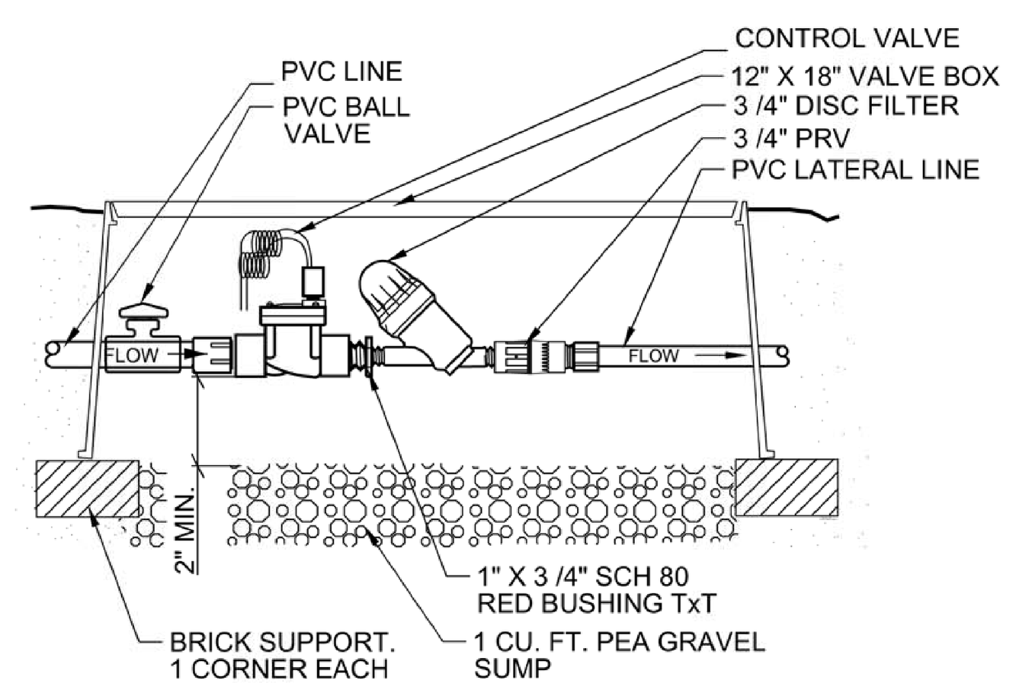
04 THURST BLOCKING DETAIL
SCALE: N.T.S



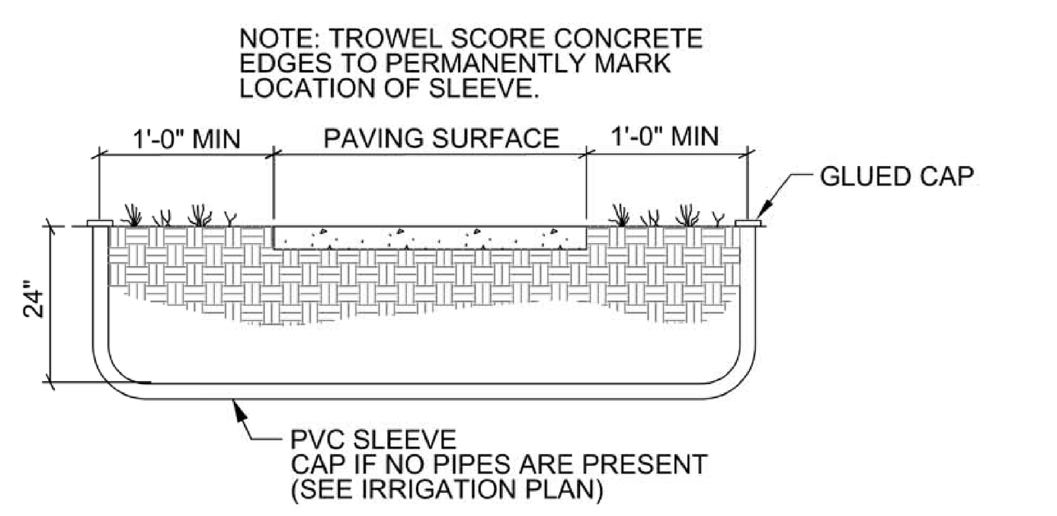
05 DRIP IRRIGATION - LANDSCAPE BEDS
SCALE: N.T.S



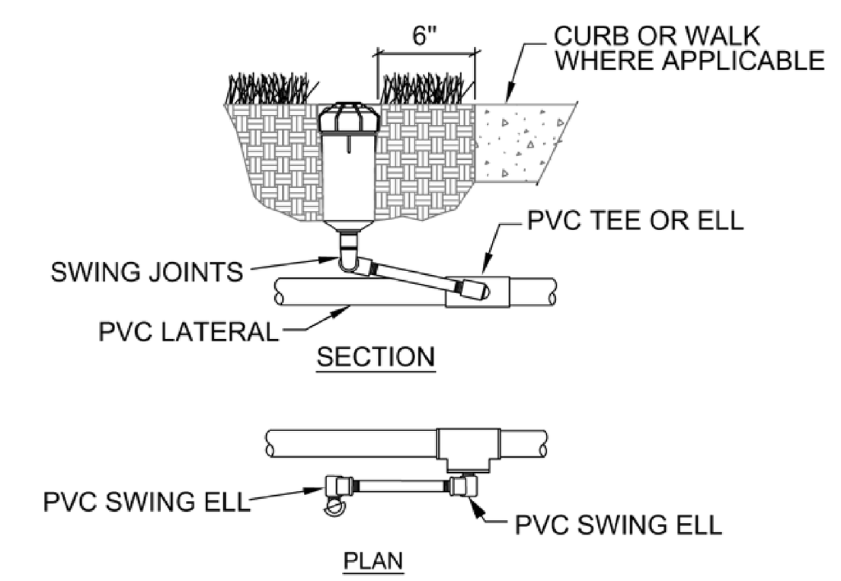
06 DRIP IRRIGATION - BELOW GROUND FOR LAWNS
SCALE: N.T.S



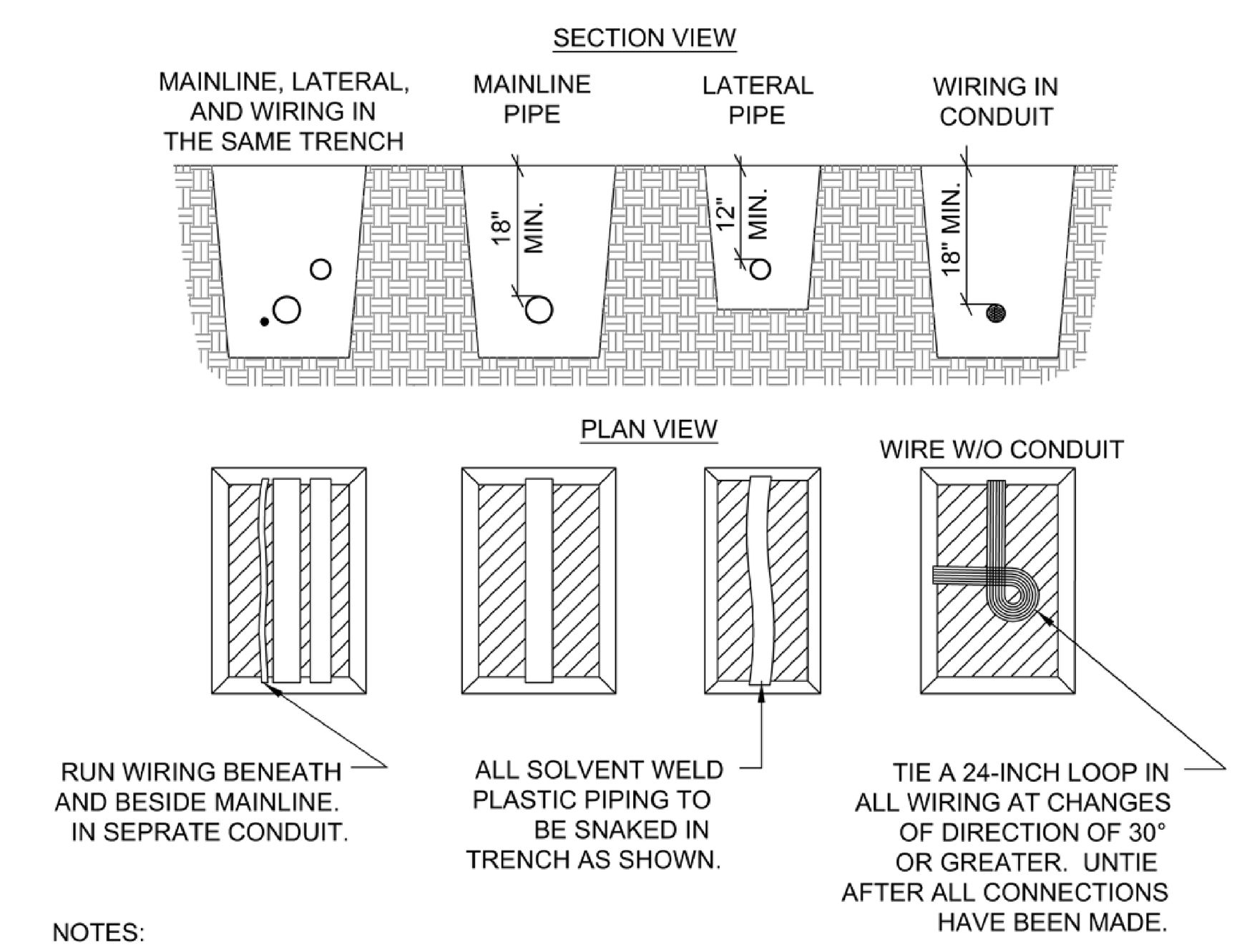
07 CONTROL VALVE with PRV
SCALE: N.T.S



08 IRRIGATION SLEEVE DETAIL
SCALE: N.T.S

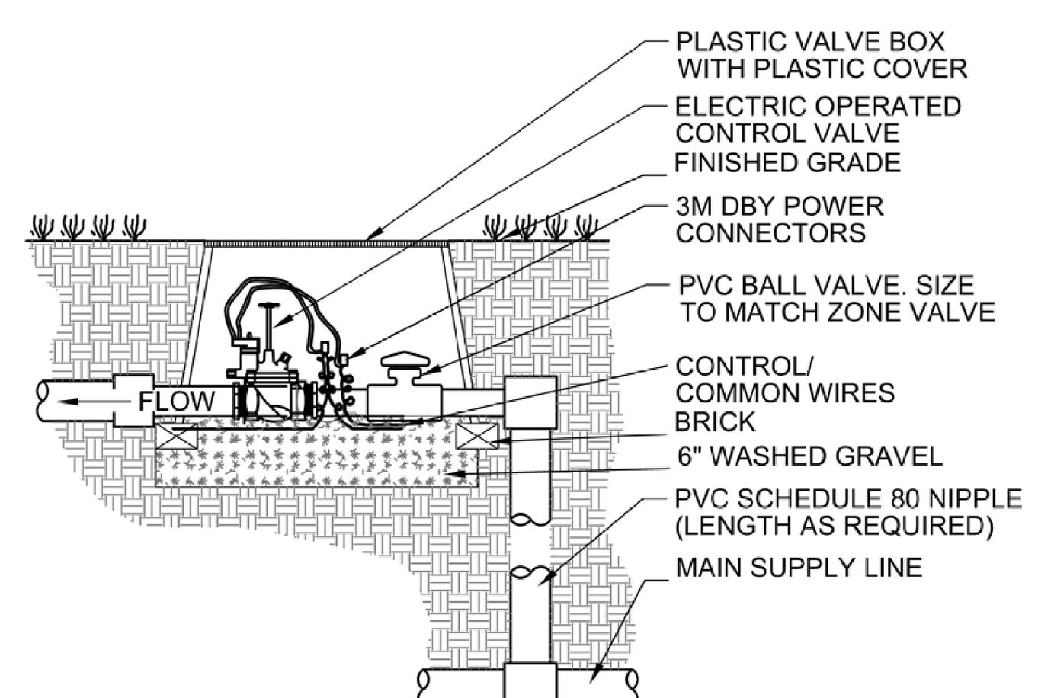


09 IRRIGATION FIXTURE - ROTOR HEAD
SCALE: N.T.S



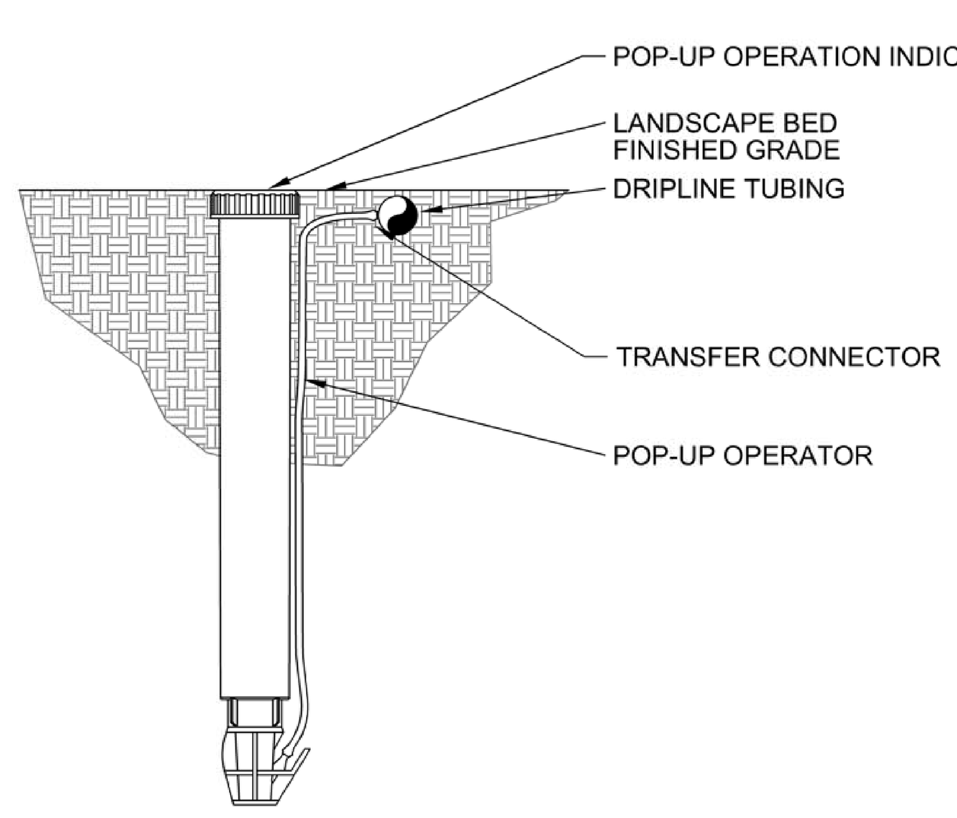
NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH CLASS 200 PVC, TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. ALL PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18" COVER.

10 TRENCHING DETAIL
SCALE: N.T.S

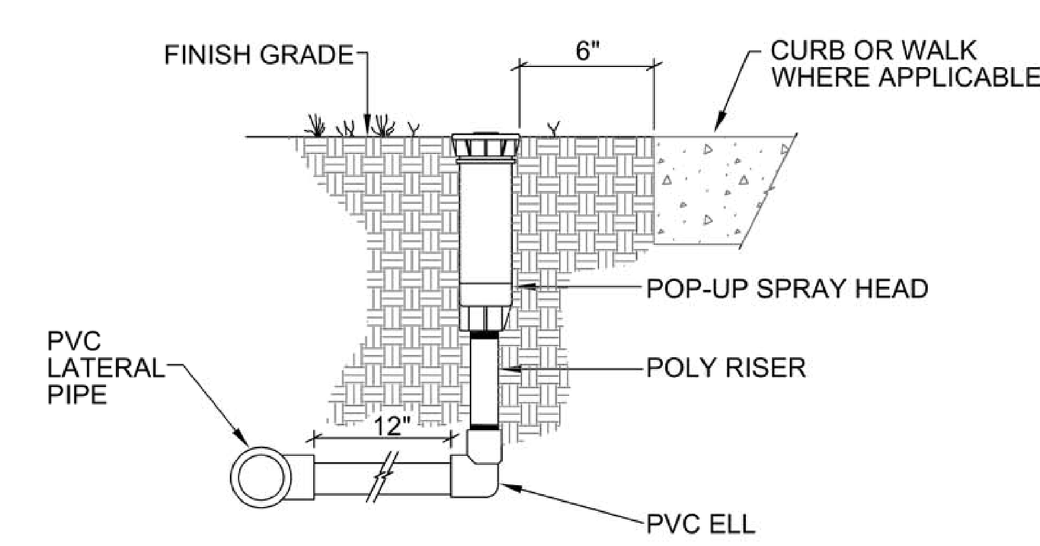


NOTES
1. ALL WIRE TO BE INSTALLED PER LOCAL CODE.
2. TAPE AND BUNDLE WIRE EVERY TEN FEET.
3. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX. (WRAP AROUND 1/ 2" PIPE 15 TIMES.
4. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS UNDISTURBED ADJ. SOIL.
5. INSTALL VALVES IN CLOSE PROXIMITY TO ADJACENT WALKS WHERE POSSIBLE.
6. ORIENT RECTANGULAR VALVE BOXES PARALLEL TO ADJACENT WALKS, CURBS, ETC.
7. INSTALLATION OF BALL VALVES WILL BE SIMILAR TO INSTALLATION FOR CONTROL VALVES.

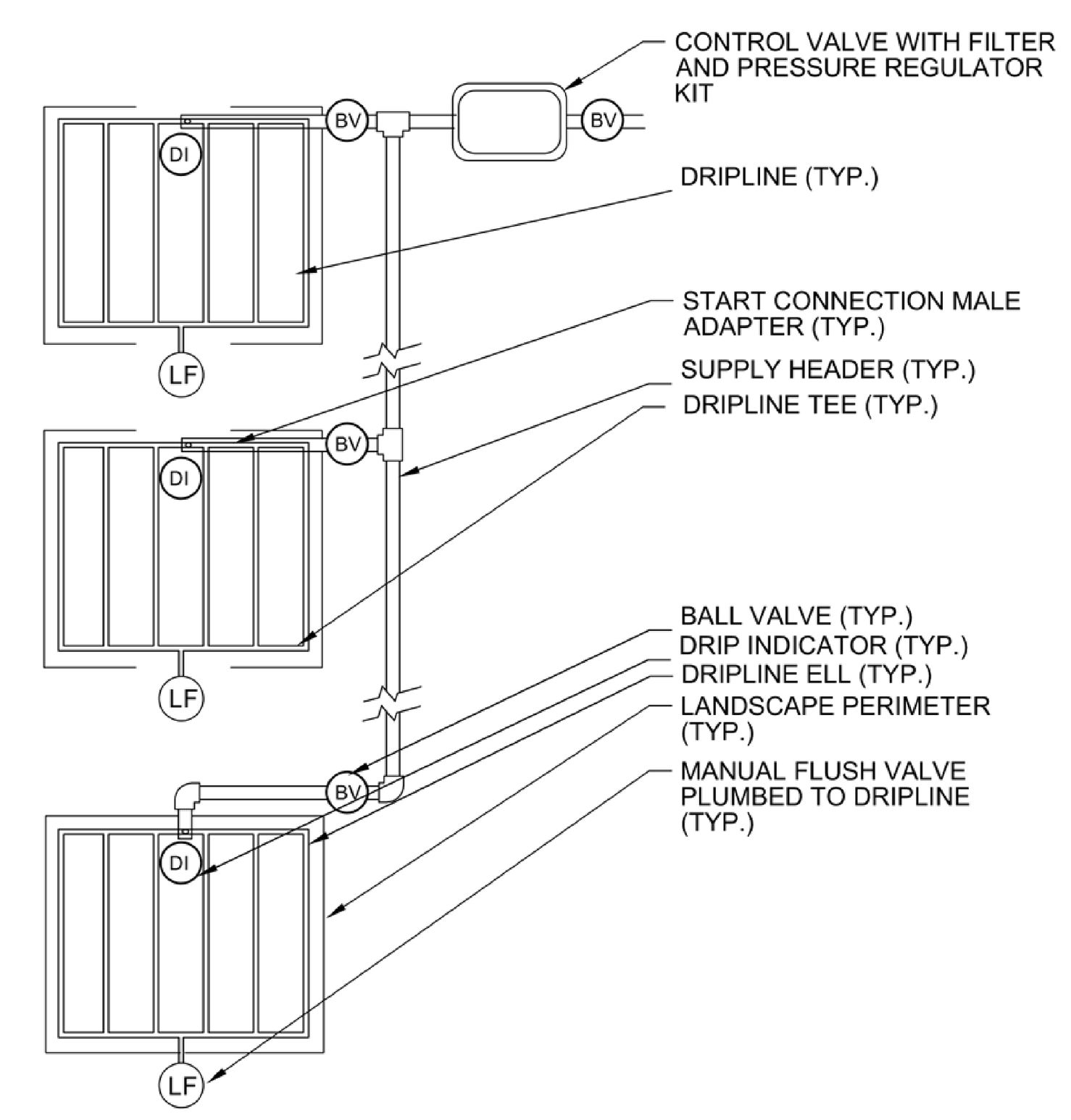
11 CONTROL VALVE DETAIL
SCALE: N.T.S



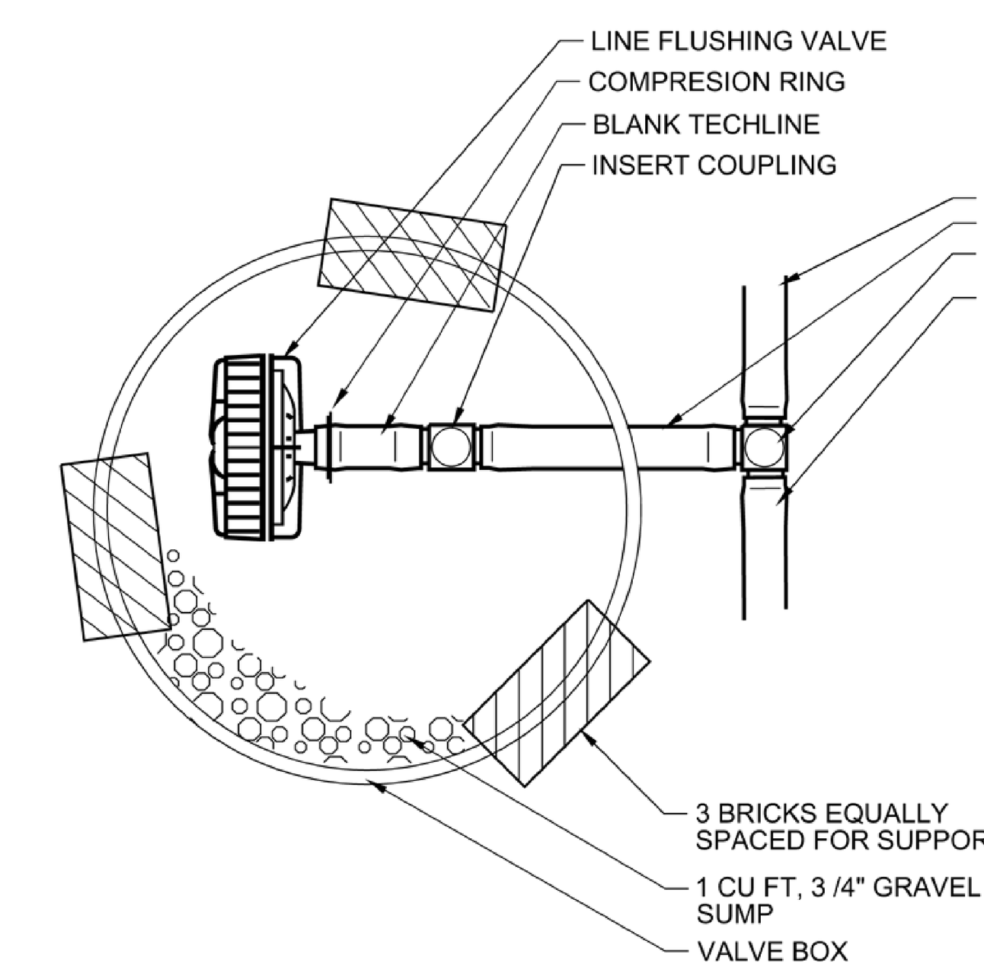
12 DRIP OPERATION INDICATOR
SCALE: N.T.S



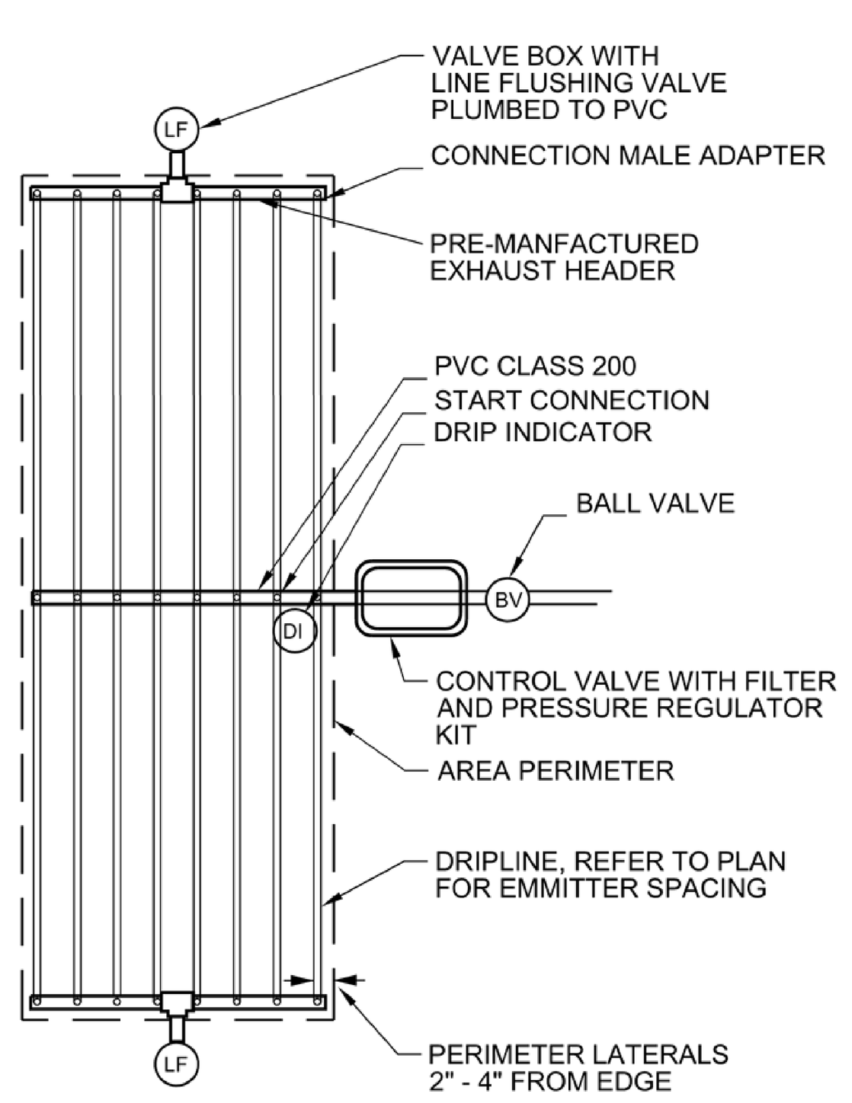
13 IRRIGATION FIXTURE - POP UP
SCALE: N.T.S



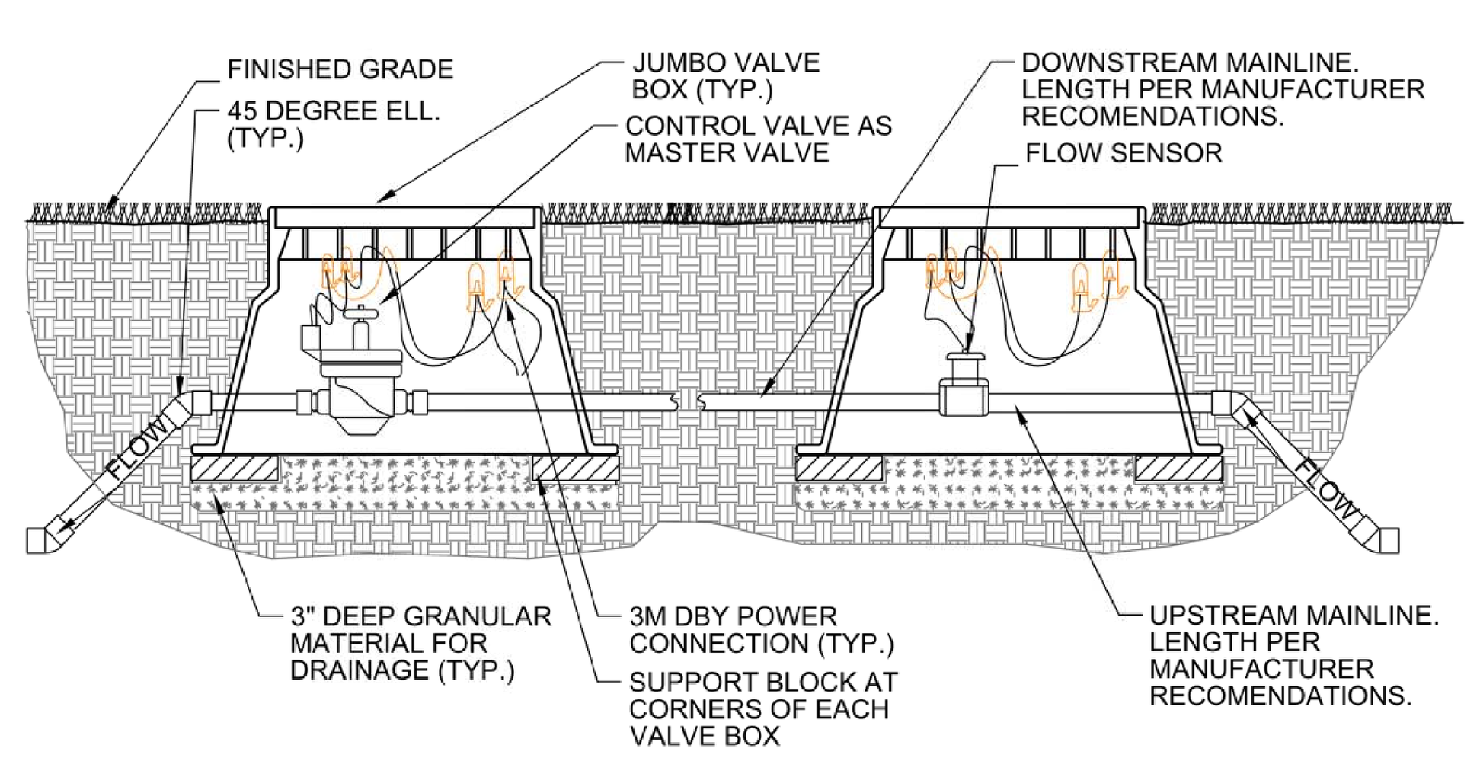
14 DRIP IRRIGATION - MULTIPLE BEDS
SCALE: N.T.S



15 LINE FLUSHING VALVE
SCALE: N.T.S



16 DRIP IRRIGATION - SHRUB BEDS
SCALE: N.T.S



NOTES
1. ALL WIRE TO BE INSTALLED PER LOCAL CODE.
2. TAPE AND BUNDLE WIRE EVERY TEN FEET
3. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX. (WRAP AROUND 1/ 2" PIPE 15 TIMES.
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6. ORIENT RECTANGULAR VALVE BOXES PARALLEL TO ADJACENT WALKS, CURBS, ETC.

17 MASTER VALVE & FLOW METER DETAIL
SCALE: N.T.S

NOTE:
MOUNT A SIGN IN EACH AREA OF IRRIGATION AND AT WATER QUALITY POND - TOTAL OF 10.
CONFIRM LOCATION WITH OWNER.

18 RECLAINED WATER USE SIGN
SCALE: N.T.S

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STATE OF TEXAS
KIRK M. WILSON
118801
11-08-17

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect:	Brinkley Sargent Wiginton Architects (972) 960-9970
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Structural:	JQ & Associates (512) 474-9094
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Landscape:	HALFF Associates, Inc. (512) 777-4600

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

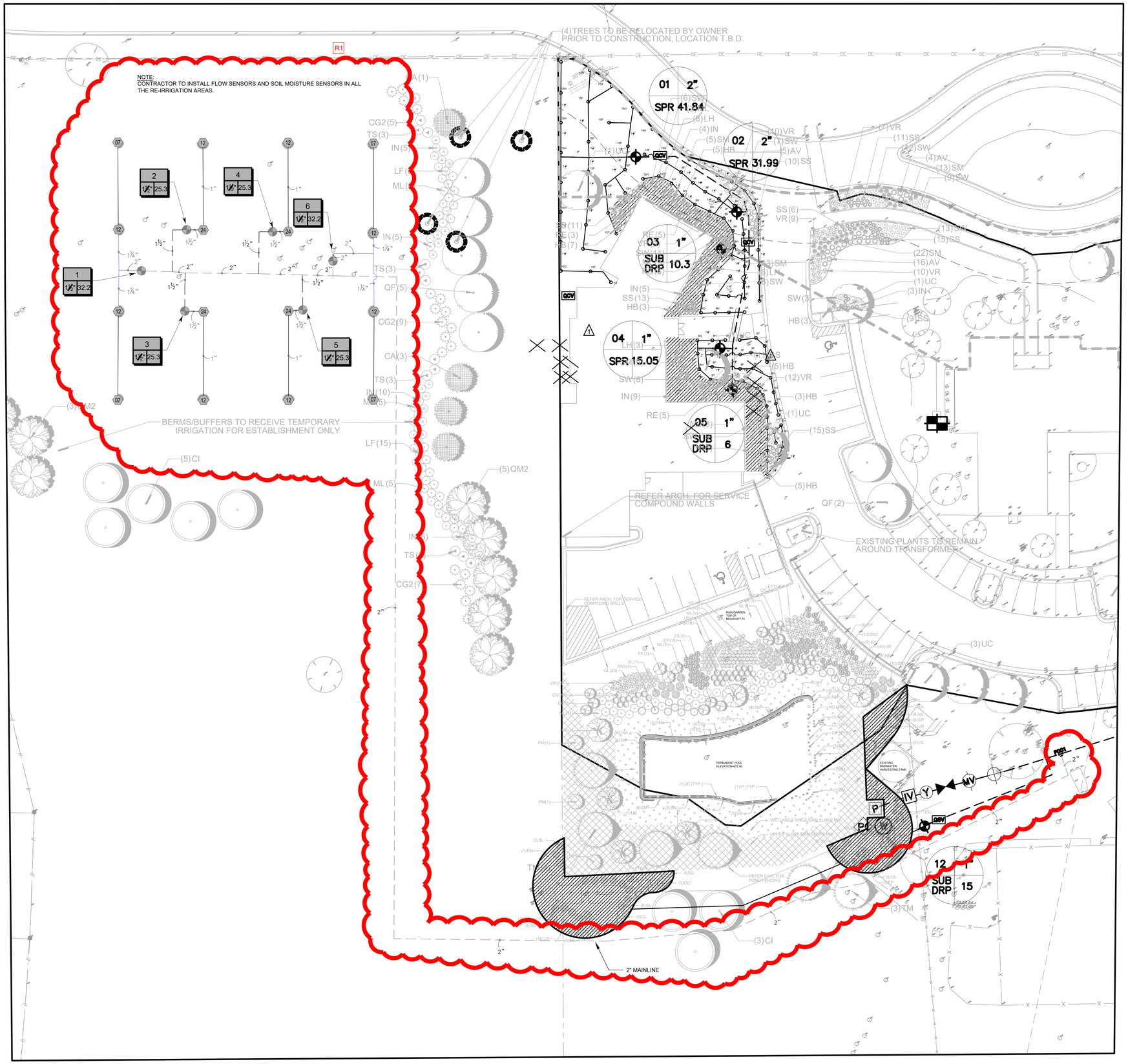
History

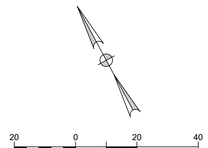
#	Date	Description

CONSTRUCTION ISSUE

Sheet Name
IRRIGATION DETAILS

20805
2017-08-03
I103





IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
07	Toro T7PSS-02 07 Turf Sports Rotor, 5in. Pop-Up, Adjustable Arc from 45-360, Vandal and Abuse Resistance. With Check Valve and Rugged Durability Features. 1in. Inlet Size, NPT. Stainless Steel Riser. Nozzle Flow 6.6-30.6 GPM	4
12	Toro T7PSS-02 12 Turf Sports Rotor, 5in. Pop-Up, Adjustable Arc from 45-360, Vandal and Abuse Resistance. With Check Valve and Rugged Durability Features. 1in. Inlet Size, NPT. Stainless Steel Riser. Nozzle Flow 6.6-30.6 GPM	8
24	Toro T7PSS-02 24 Turf Sports Rotor, 5in. Pop-Up, Adjustable Arc from 45-360, Vandal and Abuse Resistance. With Check Valve and Rugged Durability Features. 1in. Inlet Size, NPT. Stainless Steel Riser. Nozzle Flow 6.6-30.6 GPM	4
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Toro P220-26-0 GLOBE 1-1/2" Electric, 1in., 1-1/2in., 2in. and 3in. Plastic In-Line Remote Control Valve. Equipped to withstand pressure up to 220 PSI. Filter screen on 2in. and 3in. models. Standard Solenoid. Globe Body Style.	6
PGCI	Point of Connection 2 1/2"	1
	Irrigation Lateral Line: PVC Schedule 40-NP 3/4"	185.9 l.f.
	Irrigation Lateral Line: PVC Schedule 40-NP 1"	187.7 l.f.
	Irrigation Lateral Line: PVC Schedule 40-NP 1 1/4"	81.8 l.f.
	Irrigation Lateral Line: PVC Schedule 40-NP 1 1/2"	33.1 l.f.
	Irrigation Lateral Line: PVC Schedule 40-NP 2"	35.6 l.f.
	Irrigation Mainline: PVC Schedule 40-NP 1 1/2"	93.2 l.f.
	Irrigation Mainline: PVC Schedule 40-NP 2"	840.4 l.f.

Valve Callout
Valve Number
Valve Flow
Valve Size

CRITICAL ANALYSIS

Generated: 2024-04-23 09:58

P.O.C. NUMBER: 01
Water Source Information:

FLOW AVAILABLE
Point of Connection Size: 2 1/2"
Flow Available 109.89 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 60 PSI
Pressure Available: 60 PSI

DESIGN ANALYSIS
Maximum Station Flow: 32.2 GPM
Flow Available at POC: 109.89 GPM
Residual Flow Available: 77.69 GPM

Design Pressure:	40 PSI
Friction Loss:	2.34 PSI
Fittings Loss:	0.23 PSI
Elevation Loss:	0 PSI
Loss through Valve:	1.75 PSI
Pressure Req. at Critical Station:	44.3 PSI
Loss for Fittings:	0.68 PSI
Loss for Main Line:	6.78 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	0 PSI
Critical Station Pressure at POC:	51.8 PSI
Pressure Available:	60 PSI
Residual Pressure Available:	8.21 PSI

R1

NOTE:
REFERENCE TO MANUFACTURER'S TRADE NAME OR CATALOG NUMBER IS FOR THE PURPOSE OF IDENTIFICATION ONLY. CONTRACTOR SHALL BE PERMITTED TO FURNISH LIKE MATERIALS OF OTHER MANUFACTURERS PROVIDED THEY ARE OF EQUAL QUALITY AND COMPLY WITH THE SPECIFICATIONS FOR THIS PROJECT AND ARE APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL SUBMIT "EQUAL PRODUCTS" TO THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE NO LATER THAN (7) DAYS PRIOR TO BID OPENING DATE FOR REVIEW AND APPROVAL/DISAPPROVAL OF THE PROPOSED EQUAL "EQUAL PRODUCTS" SUBMITTED AFTER AWARD OF CONTRACT MAY BE DENIED AND THE CONTRACTOR MUST USE THE SPECIFIED PRODUCT/MATERIAL WITHOUT ADDITIONAL COMPENSATION.

HALFF®
9500 AMBERGLEN BLVD.
BUILDING F, SUITE 125
AUSTIN, TEXAS 78729
TEL (512) 777-4600
FAX (512) 252-8141
TBPE FIRM #F-312

Know what's below.
Call before you dig.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE SUNSET VALLEY AREA "ONE CALL" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR- DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.

SUNSET VALLEY POLICE & PUBLIC WORKS

SITE

3205 JONES ROAD, SUNSET VALLEY, TX 78745

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: HALFF Associates, Inc. (512) 777-4600
Structural: JG & Associates (512) 474-9094
MEP: Hendrix Consulting Engineers (512) 218-0060
Landscape: HALFF Associates, Inc. (512) 777-4600

History

#	Date	Description
R1	05-24-24	IRR. REUSE ADD.

STATE OF TEXAS
TOBIN T. FOX
14051
LICENSED IRRIGATOR
05/24/2024

Sheet Name
IRRIGATION REUSE ADDITION

20805
2017-08-03

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CONSTRUCTION ISSUE