



MEMORANDUM

TO: Marisa Perales, Chairperson and Members of the Environmental Commission
FROM: Taylor Horton, Environmental Review Specialist Senior
Development Services Department
DATE: July 7, 2016
SUBJECT: Bob Johnson Gas Station SP-2015-0328D

On your July 20, 2016 agenda is a request for consideration and recommended disapproval of one variance to allow the construction of a driveway on a slope with a gradient of more than 15 percent.

Description of Property

The subject property is a 9.162 acre platted lot located in the 2 Mile ETJ and is within the Bear Creek Watershed which is subject to Suburban watershed regulations. According to City of Austin GIS, the site is not located over the Edwards Aquifer Recharge Zone.

Existing Topography/Soil Characteristics/Vegetation

Topographic elevations range between 640 and 698 feet above mean sea level. Slopes along the eastern and southern extents of the site are medium to relatively steep while the remainder of the property is gently sloping. The northern half of the property lies within the 100 year floodplain and a Water Quality Transition Zone associated with Bear Creek exists within the property.

According the Environmental Resource Inventory the tract is underlain by Quaternary Terrace and Alluvial deposits and the Buda formation. The southern, central and northern portions of the tract have relatively thick soils. The eastern property boundary has abundant geologic outcrops and represents Buda limestone along medium to steep topographic slope breaks. The ERI states: "The outcrops occur as both intact limestone beds and as loose fragments/boulders, many of which have collapsed down topographic slope." Vegetation consists of a relatively dense, mature, high canopy of large trees. The dominate species are cedar elm and hackberry but chinaberry, pecan, live oak, honey mesquite and ash juniper are also present.

Critical Environmental Features/CWQZ

A wetland CEF consisting of predominately hydrophilic plant species along Bear Creek.

Project Background

The site plan under review was submitted on July 23, 2015 and proposes the construction of a 5,000 square foot convenience store, 1,500 square feet of general retail, gas dispensers and associated parking and driveways.

Environmental Code Variance Request

The variance request is to allow the construction of a driveway on a slope with a gradient of more than 15 percent. LDC 25-8-301 CONSTRUCTION OF A ROADWAY OR DRIVEWAY.

Staff Recommendation

Staff does not recommend approval of the variance because the findings of fact have not been met and for the following reasons:

1. The site plan could be adjusted to accommodate the proposed use within the developable portion of the property without constructing a drive from Bob Johnson Rd. This would completely avoid the need to construct the driveway on a slope with gradient of more than 15 percent.
2. Although staff requested supporting documentation from an Emergency Reviewing authority to indicate a second entry is required for emergency service, the applicant did not provide such documentation.



**Development Services Department
Staff Recommendations Concerning Required Findings
Water Quality Variances**

Project: Bob Johnson Gas Station SP-2015-0328D

Ordinance Standard: Land Development Code Section LDC 25-8-301 CONSTRUCTION OF A ROADWAY OR DRIVEWAY.

Variance Request: To allow the construction of a driveway on a slope with a gradient of more than 15 percent.

Findings:

A. Land Use Commission variance determinations from Chapter 25-8-42 Subchapter A – Water Quality of the City Code:

1. The requirement will deprive the applicant of a privilege or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.

No, the requirement will not deprive the applicant of a privilege or the safety of property given to owners of similarly situated property owners. The property is accessible from FM1626 where the primary driveway is fully permitted by TxDOT. The site has adequate developable acreage to accommodate a site plan that will allow the necessary truck movements required of emergency services and standard transportation requirements with the approved access on FM1626.

2. The variance:
 - a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;

No, the variance is required because the applicant wishes to provide a (secondary) access to the site from a road which is generally parallel to slopes of 36 percent gradient or greater. In doing so, the secondary access road must traverse slopes greater than 15 percent.

- b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;

No, reasonable use of the property could be achieved without the secondary access from Bob Johnson Road. The proposed site plan could be adjusted slightly to eliminate the secondary access and accommodate vehicular circulation requirements within the developable area of the site. The secondary access from FM Bob Johnson Road is not required for the proposed use of this site.

c) Does not create a significant probability of harmful environmental consequences; and

No; initial disturbance of the existing slopes required to construct the road will require considerable alteration and potential degradation of the slopes. Furthermore, operation and maintenance of the road will likely lead to degradation of steep slopes at this site and set precedent for future similar requests.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

No. Disturbance of the slopes will increase erosion and sedimentation risks on site both during construction and with ongoing use and maintenance of the driveway.

B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):

1. The above criteria for granting a variance are met;
No, staff does not find the above criteria to be met.

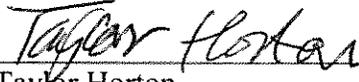
2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

No, reasonable, economic use of the entire property can be achieved without the construction of the driveway on a slope with a gradient of more than 15 percent.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

No; the proposed site plan can be adjusted to function within the requirements of the Land Development Code by eliminating the secondary driveway proposed on a slope with a gradient of more than 15 percent.

Environmental Reviewer:


Taylor Horton

Environmental Program Coordinator:


Sue Barnett

Environmental Officer:


Chuck Leshiak

Date: July 7, 2016

Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).

**VARIANCE REQUEST NO: 1
LDC 25-8-301**

June 1, 2016

Development Services Department
City of Austin
505 Barton Spring Road, 4th. Floor
Austin, Texas

Reference: **Variance Request: Driveway on Slope 15%**
Bob Johnson Gas Station, 2051 FM 1626, Austin, Texas 78652

Case Number: SP-2015-0328D

This correspondence is in reference to a variance from LDC 25-8-302(A)(1) regarding a driveway on a slope greater than 15%. The steep topography at certain locations of the development does not allow ingress or egress for the structure along Bob Johnson Road. Refer to Exhibit No: 1 for the location of slope categories on this site.

The minimum change is necessary to avoid the deprivation of a privilege because of the following reasons:

- (i) The proposed development to be compatible with the site's existing topography.
- (ii) The proposed development to comply with required emergency service district IFC 2012.

Our request is not based on the method chosen to develop the property, as we are encouraging greater overall environmental protection by proposing to keep / save several of the trees on site with minimal impact and attempting to observe natural character of the sloping land and is the minimum change necessary to allow reasonable use of the property. We also feel that this does not create a significant probability of harmful environmental consequence and will allow the development to achieve equal water quality of other similarly situated properties.

Therefore; we request a formal variance to section 25-8-301 development of a driveway on a slope category greater than 15%.

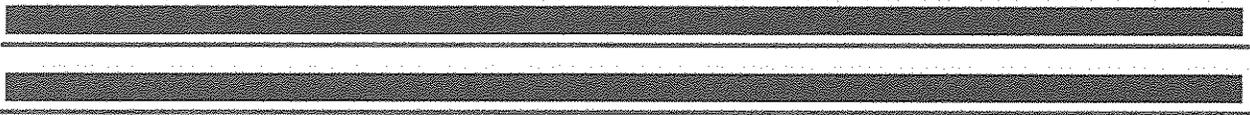
If you have any question, please call my office at 512-238-6422.

Sincerely,





ENVIRONMENTAL COMMISSION VARIANCE APPLICATION FORM



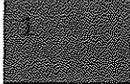
PROJECT DESCRIPTION

Applicant Contact Information

Name of Applicant	Moncada Enterprises LLC
Street Address	1301 S IH 35, Ste 204
City State ZIP Code	Austin, TX 78741
Work Phone	512-627-8815
E-Mail Address	moncadataz@sbcglobal.net

Variance Case Information

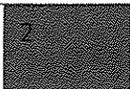
Case Name	Bob Johnson Gas Station
Case Number	SP-2015-0328D
Address or Location	2051 W FM 1626 RD
Environmental Reviewer Name	Taylor Horton
Applicable Ordinance	LDC 25-8-301, ECM 1.12.0
Watershed Name	Bear Creek
Watershed Classification	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban <input type="checkbox"/> Water Supply Suburban <input type="checkbox"/> Water Supply Rural <input type="checkbox"/> Barton Springs Zone
Edwards Aquifer Recharge Zone	<input type="checkbox"/> Barton Springs Segment <input type="checkbox"/> Northern Edwards Segment <input type="checkbox"/> Not in Edwards Aquifer Zones



Edwards Aquifer Contributing Zone	Not in the EACZ
Distance to Nearest Classified Waterway	Greater than 300 feet South of Bear Creek
Water and Waste Water service to be provided by	City of Austin
Request	The variance request is as follows (Cite code references: Variance #1: Formal Variance is requested from LDC 25-8-301, to allow a driveway on a slope greater than 15%.

Impervious cover	Existing	Proposed
square footage:	<u>0.00</u>	<u>42,022.96</u>
acreage:	<u>0.00</u>	<u>2.54 Acres</u>
percentage:	<u>0.00</u>	<u>10.529%</u>

Provide general description of the property (slope range, elevation range, summary of vegetation / trees, summary of the geology, CWQZ, WQTZ, CEFs, floodplain, heritage trees, any other notable or outstanding characteristics of the property)	<p>The proposed development includes site development of one lot for a commercial gas station with associated drive aisles, parking and driveways.</p> <p>This project is located in the Bear Creek watershed, and has a Suburban classification by the LDC.</p> <p>The slope range for this property is greater than 15% for the some portions of the site, specifically where driveways are proposed.</p> <p>The elevation range for this property begins at 645 feet to 655 feet in the undeveloped portions and 655 feet to 690 feet where development is proposed</p> <p>There are trees within the area proposed for development of this commercial lot. Several trees are proposed to be kept / saved as an added benefit to the site.</p> <p>A portion of this property is within the WQTZ and the CWQZ. Development is proposed outside of these areas. A small portion of the project lies within the Edwards Aquifer Recharge Zone. No development is proposed in this area.</p> <p>There is one CEF identified on this project: Wetland (CEF #1) is located at the north-northwestern part of the property. The CEF occupies most components of the creek bed as well as small off-channel pool areas along the low bank/terrace of the creek. The zone perimeter corresponds to approximately the 645-ft. topographic elevation along both creek low banks. Floodplain is located on the property and contains the aforementioned creek.</p>
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Clearly indicate in what way the proposed project does not comply with current Code (include maps and exhibits)

Proposed development does not comply with LDC 25-8-301. We are requesting the allowance of a driveway access only on slope greater than 15% (Category 25-35% Refer to Exhibit NO: 1 for the location of this variance.)

FINDINGS OF FACT

As required in LDC Section 25-8-41, in order to grant a variance the Land Use Commission must make the following findings of fact:

Include an explanation with each applicable finding of fact.

Project: Bob Johnson Gas Station

Ordinance Standard: LDC 25-8-301

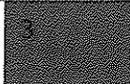
A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

- 1. The requirement will deprive the applicant of a privilege or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.

Yes / No The proposed development will need to be compatible with the site's existing topography.

2. The variance:

- a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;



Yes/No

- Minimally disturbing the site for the commercial development and requesting grade modification in areas to meet the applicable Travis County Fire Marshal, International Fire Code grade levels for driveways
- Several trees are to remain on the site to maintain the natural and traditional characteristics of the land. Additionally, the CEF is maintained to observe the natural and traditional characteristics of the waterway.

b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;

Yes/No

topography.

The proposed development to be compatible with the site's existing

c) Does not create a significant probability of harmful environmental consequences; and

Yes/No

This development preserves all the environmental features, and does not create a significant probability of harmful environmental consequences. In order to achieve these goals, the proposed development has been moved away from environmental features such as the wet weather seep. Also the development provides CEF#1 with more than a 150 ft. buffer.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

Yes/No

Impervious cover is 42,022.96 sq.ft. and is less than 20% of the site, therefore the site complies with the City Ordinance regarding water quality

B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):

1. The criteria for granting a variance in Section A are met;

Yes/No

June 24, 2016

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

Yes/No

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

Yes/No

**Variance approval requires all above affirmative findings.

IMPERVIOUS COVER TABLE

IMPERVIOUS COVER				
TOTAL LOT AREA	39,909.72 SQ.FT.	9.162	ACRES	
BUILDING	6,500.0 SQ.FT.	0.149	ACRES	(1.628%)
SIDEWALK	2,053.00 SQ.FT.	0.047	ACRES	(0.514%)
PARKING	33,459.96 SQ.FT.	0.769	ACRES	(8.386%)
TOTAL I.C.	42,022.96 SQ.FT.	0.9647	ACRES	(10.529%)

LIMIT OF CONSTRUCTION 2.54 ACRES

BUILDING TABLE

TOTAL BUILDING FLOOR AREA	6,500.00 SQ.FT.	(1.628%)
TOTAL GROSS BLDG. FLR. AREA	6,500.00 SQ.FT.	(1.628%)
MAXIMUM ALLOWABLE BUILDING COVERAGE	75%	
FLOOR AREA RATIO=0.016:1		
ALLOWABLE FLOOR AREA RATIO=1:1		
PROPOSED USE	GENERAL RETAIL, GAS STATION, C-STORE	
ZONING USE		

BOB JOHNSON ROAD GAS STATION

2051 FM 1626 ROAD
AUSTIN, TEXAS 78652

2 MILES E.T.J

PROTECTED STREETS

THE ENGINEER OF RECORD ACKNOWLEDGES AND CONFIRMS THE PROTECTED STREETS STATUS AS DETERMINED BY THE STREET AND BRIDGE DIVISION AS OF THE DATE OF THE ENGINEER'S SIGNATURE. PROTECTED STREET STATUS IS SUBJECT TO CHANGE OVER TIME. IT IS THE OWNER'S/OWNER'S OF RECORD'S RESPONSIBILITY TO CONFIRM THE STREET STATUS PRIOR TO CONSTRUCTION AS PROTECTED STREET STATUS WILL DIRECTLY IMPACT THE CONSTRUCTION COSTS. IF PROTECTED STREETS ARE PROPOSED TO BE DISTURBED, APPROVAL OF THE STREET AND BRIDGE DIVISION IS REQUIRED.

AWJ CCN NOTES:

PER POCKET NO: 45181, A PORTION OF AQUA UTILITIES CCN #11157 HAS BEEN CERTIFIED AND AMENDED AS AUSTIN WATERS CCN #11322 PER CASE #45181-18

CLIENT
SHAKEEL BADARPURA
401 CISCO COVE, CEDAR PARK, TEXAS 78613
480-221-7689

CONSULTING ENGINEERS

PROFESSIONAL StruCIVIL ENGINEERS
CONSULTING CIVIL AND STRUCTURAL ENGINEERS
12710 RESEARCH BLVD, SUITE 390, AUSTIN, TX 78759
(512) 238-6422 (512) 258-8095

JAMES E. GARON & ASSOCIATES
PROFESSIONAL LAND SURVEYORS
P.O. BOX 1917 BASTROP, TEXAS 78602
(512) 313-4185

Inspector Notice: Please call Development Services Department, 311 and Subdivision Inspection Division at 787-6240 for arrangements for payment of inspection fees and for approval for inspection of the public utilities in the site. Inspection fees must be paid before any pre-construction meeting can be held.

REVIEWED BY THE AUSTIN WATER UTILITY APPLIES ONLY TO FACILITIES WITHIN PUBLIC STREETS OR PUBLIC UTILITY EASEMENTS. ALL OTHER WATER AND WASTEWATER FACILITIES INSIDE PRIVATE PROPERTY ARE UNDER THE JURISDICTION OF BUILDING INSPECTION.

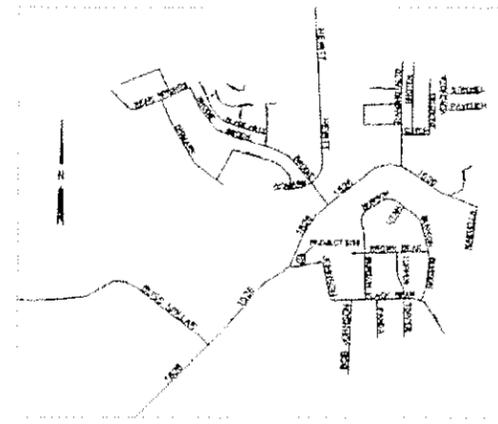
ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER. APPROVAL OF THESE PLANS BY THE CITY OF AUSTIN DOES NOT REMOVE THESE RESPONSIBILITIES.

AUSTIN WATER UTILITY EXPIRATION DATE
JUN 15 2019



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MIRZA TAHIR BAIG, P.E., LICENSED ON 02/28/2014 PER REGISTRATION P-4851

ENGINEER'S IDENTIFICATION
I, MIRZA TAHIR BAIG, PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THE PLANS ARE COMPLETE, ACCURATE AND IN COMPLIANCE WITH CHAPTER 26-6 SUBCHAPTER 6-A OF THE LAND DEVELOPMENT CODE.



SITE LOCATION MAP
GRID #D-11 & MAPSCO PAGE #702L / 702D

BUILDING & SITE INFORMATION

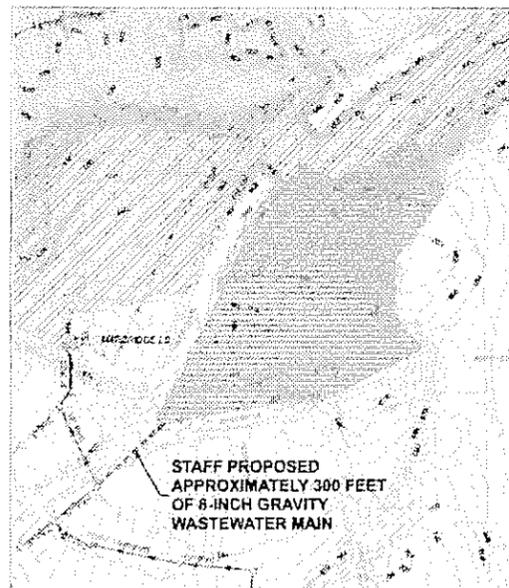
BUILDING NO.	STORIES	TOTAL AREA	HEIGHT FT.	FINISH FLOOR	REMARKS
1	1	6,500.00 SQ.FT.	22.00	885.85	PROPOSED

PARKING DATA

BUILDING NO.	FUNCTION (ROOM TYPE)	NUMBERS / SQ.FT.	PARKING REQUIREMENT SPACES / SF. FUNCTION	SUBTOTAL SPACES
1	C-STORE	3,000 SQ.FT.	1/275	10
1	RETAIL STORE	1,500 SQ.FT.	1/275	5

PARKING TABLE

TOTAL REQUIRED	24	FIRE FLOW DEMAND PER AFD	2,250 GPM
TOTAL PROVIDED ON SITE	29	AVAILABLE FIRE FLOW RATE	3444 GPM @ 20 PSI
SUMMARY: COMPACT PARKING	0	BUILDING CONSTRUCTION TYPE	V-B
STANDARD PARKING	27	BUILDING SIZE	6,500 SQ.FT.
HANDICAP PARKING	2	WATER PRESSURE	
ON STREET PARKING	0	ZONE	SOUTHWEST ASHWAY
REQUIRED BICYCLE PARKING	5	STATIC PRESSURE	80 PSI
PROVIDED BICYCLE PARKING	5	NOTE: TOTAL WATER FLOWERS UNITS 30 (DOMESTIC DEMAND) 20 (GPM)	



W.W.S.E.R. Name: Bob Johnson
W.W.S.E.R. Number: 3754
244% E.T.J.

LIST OF DRAWINGS

- COVER SHEET
- GENERAL NOTES
- EXISTING SURVEY
- OVERALL SITE PLAN
- DIMENSIONAL SITE PLAN
- GRADING SITE PLAN
- EROSION/SEDIMENTATION/ T.P. PLAN
- UTILITY SITE PLAN
- WASTEWATER PLAN AND PROFILE
- FIRE LANE SITE PLAN
- GENERAL DETAILS
- GENERAL DETAILS
- GENERAL DETAILS
- DETENTION & WATER QUALITY POND
- WATER QUALITY DETAIL
- DRAINAGE CALCULATIONS
- DRAINAGE AREA MAP
- FINAL PLAN
- TRAFFIC CONTROL DETAILS
- TRAFFIC CONTROL DETAILS
- TxDOT DRIVEWAY DETAILS
- TxDOT DRIVEWAY DETAILS
- TxDOT CULVERT DETAILS
- SLOPE MAP

WATER AND WASTEWATER SERVICE ESTIMATION STUDY CONSIDERATIONS

DATE: 06/15/2016
PROJECT: BOB JOHNSON ROAD GAS STATION
DRAWN BY: J. E. Garon
CHECKED BY: J. E. Garon
APPROVED BY: J. E. Garon

DATE OF SUBMITTAL: JULY 23, 2015
PROJECT TITLE: BOB JOHNSON ROAD GAS STATION
STREET ADDRESS: 2051 W FM 1626 ROAD, AUSTIN, TEXAS 78652
PROPERTY OWNER: LEE EXA L ESTATE
3209 SILVERLEAF DR. AUSTIN, TX 78757
CONTACT: SHAKEEL BADARPURA 480-221-7689
DESIGNER COMPANY: PROFESSIONAL StruCIVIL ENGINEERS, INC.
12710 RESEARCH BLVD., SUITE 390, AUSTIN, TEXAS 78759
(512) 238-6422
CONTACT: MIRZA TAHIR BAIG
NAME OF WATERSHED: BEAR CREEK
CLASSIFICATION: SUBURBAN
100-YEAR FLOOD PLAN: THIS PROPERTY IS LOCATED IN 100 YEARS FLOOD PLAN AS (ZONE "A & X") SHOWN ON THE FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, PANEL NO. 48453C0590H, SEPTEMBER 26, 2008.
LEGAL DESCRIPTION OF LOT: LOT 7 BLK A EXA PRESLAR SUBDIVISION, TRAVIS COUNTY TEXAS AS RECORDED IN THE TRAVIS COUNTY RECORDS, DOCUMENT NO.: 00049054.
RECHARGE ZONE: THE SITE IS NOT OVER THE EDWARDS AQUIFER RECHARGE ZONE.

REVIEWED BY:		DATE:	
FOR DIRECTOR, DEVELOPMENT SERVICES DEPARTMENT			
REVIEWED BY:	<i>Angie W. Moore</i>	DATE:	5/19/2016
TxDOT APPROVAL	AUS# 006-16-3507-DP		
APPROVED BY:		DATE:	
TRAVIS COUNTY EMERGENCY SERVICES DISTRICT			
APPROVED BY:		DATE:	
INDUSTRIAL WASTE			
REVIEWED BY:	<i>Briffon Foban</i>	DATE:	6/15/16
AUSTIN WATER UTILITY			
REVIEWED BY:		DATE:	
TRAVIS COUNTY TRANSPORTATION & NATURAL RESOURCES			
TRAVIS COUNTY DEVELOPMENT PERMIT NUMBER			
APPROVED BY:		DATE:	
TxDOT AUS#			

TRAVIS COUNTY REVISION BLOCK

NO.	REVISION DESCRIPTION	REVISION DESCRIPTION	DATE

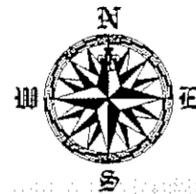
REVISIONS / CORRECTIONS

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NOS.	TOTAL NO OF SHEETS IN PLAN SET	NET CHANGE IMP. COVER SQ.FT.	TOTAL SITE IMP. COVER SQ.FT. / %	CITY OF AUSTIN APPROVAL / DATE	DATE IMAGED

PUBLIC SIDEWALKS (BLY TO THE CITY OF AUSTIN STANDARDS, ARE REQUIRED ALONG BOB JOHNSON LANE. THE SIDEWALKS ARE REQUIRED TO BE CONSTRUCTED BY THE PROPERTY OWNER AFTER THE ADJUTING ROADWAY IS IMPROVED AND CONCRETE CURBS ARE IN PLACE. FAILURE TO CONSTRUCT THE REQUIRED SIDEWALKS MAY RESULT IN THE WITHDRAWAL OF CERTIFICATES OF OCCUPANCY, BUILDING PERMITS, OR UTILITY CONNECTIONS BY THE GOVERNING BODY OR UTILITY COMPANY.

AN ADMINISTRATIVE ENVIRONMENTAL VARIANCE WAS GRANTED PER SECTION 26-6-42(B)(7) OF THE LCD FOR CUT/FILL UP TO 5.25 FT.

CASE NUMBER : SP-2015-0328D



SCALE 1"=40'

OIL/GREASE TRAP DESIGN

Professional Seal: Bob Johnson, 3051 FM 1626 Austin, Texas

PROJECT: Bob Johnson, 3051 FM 1626 Austin, Texas

DRAINAGE AREA DATA

Drainage Area to Control	$A_c = 5241.70 \text{ ft}^2$
Drainage Area Impervious Cover	$A_i = 4154.7 \text{ ft}^2$
Runoff Coefficient	8 month event: $C_p = 0.72$ 25 year event: $C_p = 0.93$
Rainfall Intensity	8 month event: $I_p = 2.6 \text{ in/hr}$ 25 year event: $I_p = 9.84 \text{ in/hr}$
Flow Rate	8 month event: $Q_{8m} = 1.4 \text{ cfs}$ 25 year event: $Q_{25y} = 4.9 \text{ cfs}$

OIL/GREASE/SAND TRAP DATA & CALCULATIONS

Surface Area	$A_s = 25.6 \text{ ft}^2$	Use 1000 Gallons HMI
Gross Sectional Area	$A_g = 3.0 \text{ ft}^2$	Surface Area $A_s = 44.24 \text{ ft}^2$
Depth	$D = 3.0 \text{ ft}$	Gross Sectional Area $A_g = 113.74 \text{ ft}^2$
Width	$W = 1.0 \text{ ft}$	Depth provided 3.0 ft
Length	$L = 1.0 \text{ ft}$	Width provided 4.58 ft
		Length provided $L_{req} = 9.74 \text{ ft}$

1-PIPE DATA

Pipe Diameter	$D = 4 \text{ in}$
Gross Inlet Elevation	$H_{in} = 814.10 \text{ ft}$
6 month velocity through trap	$V_{6m} = 1.71 \text{ ft/s}$
4" Pipe Velocity	$V_{4"} = 1.88 \text{ ft/s}$
Outlet Elevation	$H_o = 814.1 \text{ ft}$
25 yrs. WSEL Elevation	$H_{25y} = 813.5 \text{ ft}$
6 month Elevation	$H_{6m} = 813.1 \text{ ft}$
6 month Velocity	$V_{6m} = 1.71 \text{ ft/s}$

MICRO DESIGN 3

OVER FLOW WEIR DATA

Length of Weir	$L_w = 3.0 \text{ ft}$
25 yrs. WSEL	$H_{25y} = 813.5 \text{ ft}$
25 yrs. Velocity through trap	$V_{25y} = 2.56 \text{ ft/s}$

METAL GRATE R-4990-AA, TYPE-A BY NEENAH

Grate Length	$L_g = 3.0 \text{ ft}$
Grate Perimeter	$P_g = 2.0 \text{ ft}$
Grate Area	$A_g = 0.5 \text{ ft}^2$
Grate Head	$H_g = 1 \text{ in}$

Weir Flow Calculations

$$Q_{weir} = 3.1 \sqrt{2g} H^{1.5} L_w = 0.1199 \text{ cfs} \cdot \text{sec}^2$$

Office Flow Calculations

$$Q_{office} = 0.1199 \sqrt{2g} H^{1.5} L_w = 0.1199 \text{ cfs} \cdot \text{sec}^2$$

- NOTE (1) USE 1000 gallons HMI
 (2) GRATE INLET OPENINGS SIZE 1/2" NOMINAL METAL GRATE R-4990-AA, TYPE-A BY NEENAH

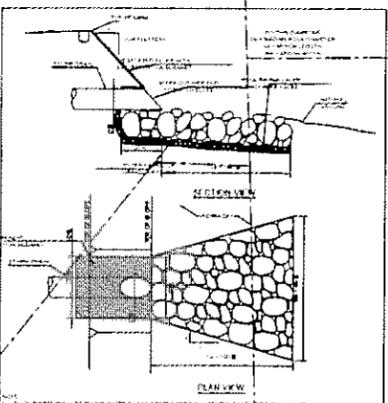
HMI 25YRS. OVERFLOW PLAN

SCALE 1/4"=1'-0"

- CEP AREA DISTANCE 1.4M BELT
 AREA OF PLANTING 1.820 BELT
 TWO ROWS OF PLANTS @ 34" O.C. STAGGERED
 (1) ONE MEALY (MELALBERGIA UNICOLOR) (1 GALLON)
 (2) STAGGERED SPINCH (SPOCHASTRA MUTANS) (1 GALLON)
 (3) TWO ROWS OF EACH OF THE GRASSES
- NOTES:
 (1) VEGETATION QUANTITY, SPECIES, SPACING AND COLLECTION SHALL MEET THE REQUIREMENTS FOR FILTRATION BASIN AS PROVIDED IN EGM SECTION 1.8.7.2
 (2) OTHER PLANTS CAN BE ADDED OR SUBSTITUTED AT A LATER DATE PROVIDED THEY ARE NOT ON THE LIST OF PLANTS PROHIBITED FOR USE IN PARK GRASSES BY THE CITY OF AUSTIN

48 HRS DRAWDOWN CALCULATIONS

$$T = \frac{V}{Q} = \frac{1.4 \text{ MGD} \times 24 \text{ HRS}}{1.71 \text{ cfs}} = 19.7 \text{ HRS}$$



CITY OF AUSTIN
 PROFESSIONAL ENGINEER
 BOB JOHNSON
 3051 FM 1626, AUSTIN, TEXAS 78752
 5085-17

HMI MAINTENANCE PLAN NOTES:

1. THE TRAPPED LIQUID AND SEDIMENT SHALL BE REMOVED AT LEAST ONCE PER YEAR. THE SEDIMENT LEVEL SHALL BE CHECKED EVERY SIX MONTHS. IF THE SEDIMENT LEVEL EXCEEDS ONE-FOURTH THE DEPTH OF THE TRAP, THEN THE LIQUID AND SEDIMENT SHALL BE REMOVED. THE OUTLET SHOULD BE CHECKED AND CLEANED WITH EACH CLEANING OF THE TRAP.
2. THE INLET SCREEN SHOULD BE CLEANED AFTER EVERY STORM. CLEANING OF THE SCREEN SHALL OCCUR MONTHLY AT A MINIMUM. DEBRIS FROM THE SCREEN SHALL BE PROPERLY DISPOSED OF WITH THE OTHER SOLID WASTE FROM THE FACILITY. THE DEBRIS FROM THE SCREEN SHALL NOT BE DISPOSED OF IN THE TRAP.
3. QUARTERLY INSPECTION TO ENSURE PROPER FLOW OF THE OUTLET IS REQUIRED. THIS CAN BE ACCOMPLISHED BY INSPECTING THE INLET DURING AND JUST AFTER A SMALL STORM. IF THE OUTLET IS CLOGGED, THE WATER SURFACE WILL STAY AT OR NEAR THE BY-PASS WEIR AND WILL NOT REcede DOWN TO THE NORMAL WATER SURFACE. IF CLOGGING IS APPARENT, THEN THE OUTLET SHALL BE CLEANED OUT.
4. IF A SPILL OCCURS THAT FLOWS INTO THE TRAP, THE SPILLED LIQUID SHOULD BE REMOVED AS SOON AS POSSIBLE, AND NO LATER THAN 18 HOURS AFTER THE SPILL OCCURRED.

CASE NUMBER : SP-2015-0328D

PROFESSIONAL SEAL: BOB JOHNSON, 3051 FM 1626, AUSTIN, TEXAS 78752, 5085-17

PROFESSIONAL STRUCTURAL ENGINEERS, INC.
 CONSULTING CIVIL AND STRUCTURAL ENGINEERS
 1118 RESEARCH BLVD. SUITE 300 AUSTIN, TEXAS 78741 TEL: 512.244.4022 FAX: 512.244.8011

PROJECT: BOB JOHNSON GAS STATION
 2051 W FM 1626 ROAD
 AUSTIN, TEXAS 78752

DATE: 08/18/2015

PRODUCT: 29896

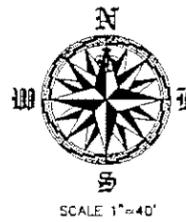
SKETCH: 6 OF 24

GRADING AND DRAINAGE SITE PLAN

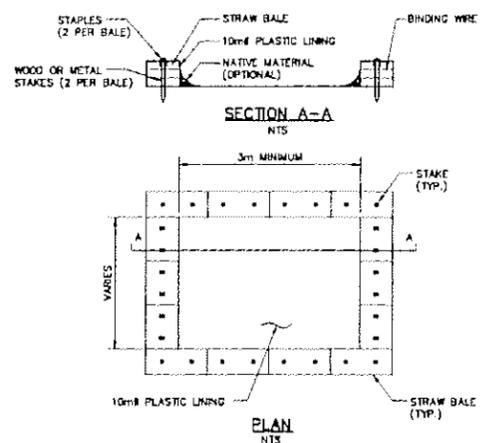
TRAVIS COUNTY CONSTRUCTION NOTES FOR SITE DEVELOPMENT AND TRAVIS COUNTY CONSTRUCTION NOTES FOR SUBDIVISION DEVELOPMENT STREETS, DRAINAGE, WATER AND WASTEWATER

THE FOLLOWING ITEMS APPLY TO EXHIBIT 82.301 (1) - 10. THE FOLLOWING ITEMS APPLY TO EXHIBIT 82.301 (1) - 23.

- DRIVEWAY AND DRAINAGE CONSTRUCTION STANDARDS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TRAVIS COUNTY STANDARDS UNLESS OTHERWISE SPECIFIED AND APPROVED BY TRAVIS COUNTY. SCHEDULE AND HOLD A PRECONSTRUCTION MEETING WITH THE CITY OF AUSTIN ENGINEERING DEPARTMENT.
- PRIOR TO BEGINNING ANY CONSTRUCTION, A TRAVIS COUNTY BASIC DEVELOPMENT PERMIT SHALL BE OBTAINED AND POSTED ON THE JOB SITE. DEVELOPMENT OUTSIDE OF APPROVED CONSTRUCTION BOUNDARIES IS PROHIBITED WITHOUT A REVISED PERMIT.
- PRIOR TO BEGINNING ANY CONSTRUCTION, THE TEMPORARY EROSION CONTROL ITEMS SHALL BE IN PLACE.
- A TRAFFIC CONTROL PLAN SHALL BE REVIEWED AND APPROVED BY TRAVIS COUNTY PRIOR TO BEGINNING CONSTRUCTION WITHIN COUNTY RIGHT-OF-WAY.
- THE CONTRACTOR SHALL NOTIFY TRAVIS COUNTY AT 512-854-8383 (PLANNING AND ENGINEERING SERVICES DIVISION) AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION AND TO SCHEDULE A MANDATORY PRECONSTRUCTION CONFERENCE.
- CONTOUR DATA SOURCE: PROFESSIONAL LAND SURVEYORS, C. RICHARD RALPH, R.P.L.S. NO. 4728.
- CONTRACTOR SHALL NOT STOCKPILE MATERIAL WITHIN THE 100-YEAR FLOOD PLAN OR AREAS OUTSIDE OF PERMIT BOUNDARIES. ANY REGULATORY PERMITS REQUIRED FOR DISPOSAL OF EXCESS EXCAVATED MATERIAL OFF THE PERMIT SITE MUST BE OBTAINED FROM THE APPLICABLE JURISDICTIONS. DISPOSAL OF SOLID WASTE MATERIALS, AS DEFINED BY STATE LAW (LITTER, TRASH, DECOMPOSABLE WASTES, ETC.) IS PROHIBITED IN PERMANENT FILL SITES.
- WITHIN TRAVIS COUNTY RIGHT-OF-WAY, DRIVEWAYS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF AUSTIN CRITERIA, EXCEPT AS NOTED IN 82.302 (1) OF THE STANDARDS.
- THE DESIGN ENGINEER IS RESPONSIBLE FOR THE ADEQUACY OF THE CONSTRUCTION PLANS. IN REVIEWING THE CONSTRUCTION PLANS, TRAVIS COUNTY WILL RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
- A MINIMUM OF TWO SURVEY BENCHMARKS SHALL BE SET AND DESCRIBED PER SUBDIVISION INCLUDING DESCRIPTION, LOCATION, AND ELEVATION. TIE TO TRAVIS COUNTY STANDARDS WHEN POSSIBLE.
- ANY EXISTING PAVEMENT, CURBS, SIDEWALKS, OR DRAINAGE STRUCTURES WITHIN COUNTY RIGHT-OF-WAY WHICH ARE DAMAGED, REMOVED, OR SLOTTED, WILL BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE BEFORE APPROVAL OF THE CONSTRUCTION.
- THE ONE-CALL UTILITY SYSTEM WILL BE USED: DIAL 811 AND THE TEXAS UNDERGROUND FACILITY NOTIFICATION CORPORATION AT LEAST 48 HOURS BEFORE YOU DIG.
- ALL STORM SEWER PIPES SHALL BE CLASS II RCP, UNLESS OTHERWISE NOTED.
- CONTRACTOR IS REQUIRED TO OBTAIN A TRAVIS COUNTY WORK IN RIGHT-OF-WAY (UTILITY INSTALLATION NOTICE) PERMIT PRIOR TO ANY CONSTRUCTION OF UTILITIES WITHIN ANY TRAVIS COUNTY RIGHT-OF-WAY.
- THIS PROJECT IS LOCATED ON FLOOD INSURANCE RATE MAP 48453 CD-242E.
- SOME DATA SOURCES: USDA NATURAL RESOURCES CONSERVATION SERVICE, JULY 2013.
- ALL TREES WITHIN THE RIGHT-OF-WAY AND DRAINAGE EASEMENTS SHALL BE SAVED OR REMOVED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.
- A PRECONSTRUCTION CONFERENCE IS REQUIRED WITH TNR PRIOR TO START OF ANY CONSTRUCTION IN TRAVIS COUNTY RIGHT-OF-WAY.
- THE UTILITY CONTRACTOR SHALL GIVE CITY OF AUSTIN AT LEAST 48 HOURS NOTICE PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL KEEP THE TNR PLANNING AND ENGINEERING SERVICES DIVISION (512-854-8383) CURRENT ON THE STATUS OF EACH STAGE OF CONSTRUCTION ACTIVITY.
- TNR APPROVAL OF THE CONSTRUCTION IS REQUIRED ON ALL WORK COMPLETED PRIOR TO ACCEPTANCE AND COMMENCEMENT OF ONE-YEAR PERFORMANCE PERIOD.
- THE CONTRACTOR SHALL INSTALL ALL TRAFFIC MARKING AND SIGNAGE PER CURRENT TxDOT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PRIOR TO TNR APPROVAL.



CITY AREA DISTRICT 1.481 SQ.FT.
AREA OF PLANTING 1.882 SQ.FT.
TWO ROWS OF PLANTS @ 24" O.C. STAGGERED
(1) BIG HAWLEY (MULCH/MEDICINA LINUM) (1 GALLON)
(2) STAGGERED BRUSH HEDGEHOGS (SOPHORA ALATA) (1 GALLON)
(3) TWO ROWS OF EACH OF THE GRASSES
NOTES:
(1) VEGETATION QUALITY, SIZE, SPACING AND SELECTION SHALL MEET THE REQUIREMENTS FOR FILTRATION BASIN AS PROVIDED IN ERM SECTION 1.8.7.
(2) OTHER PLANTS CAN BE ADDED OR SUBSTITUTED AT A LATER DATE PROVIDED THEY ARE NOT ON THE LIST OF PLANTS PROHIBITED FOR USE IN RAIN GARDENS BY THE CITY OF AUSTIN.



CONCRETE WASHOUT AREA DETAIL

APPENDIX Q-2
IMPERVIOUS COVER
SUBURBAN WATERSHEDS

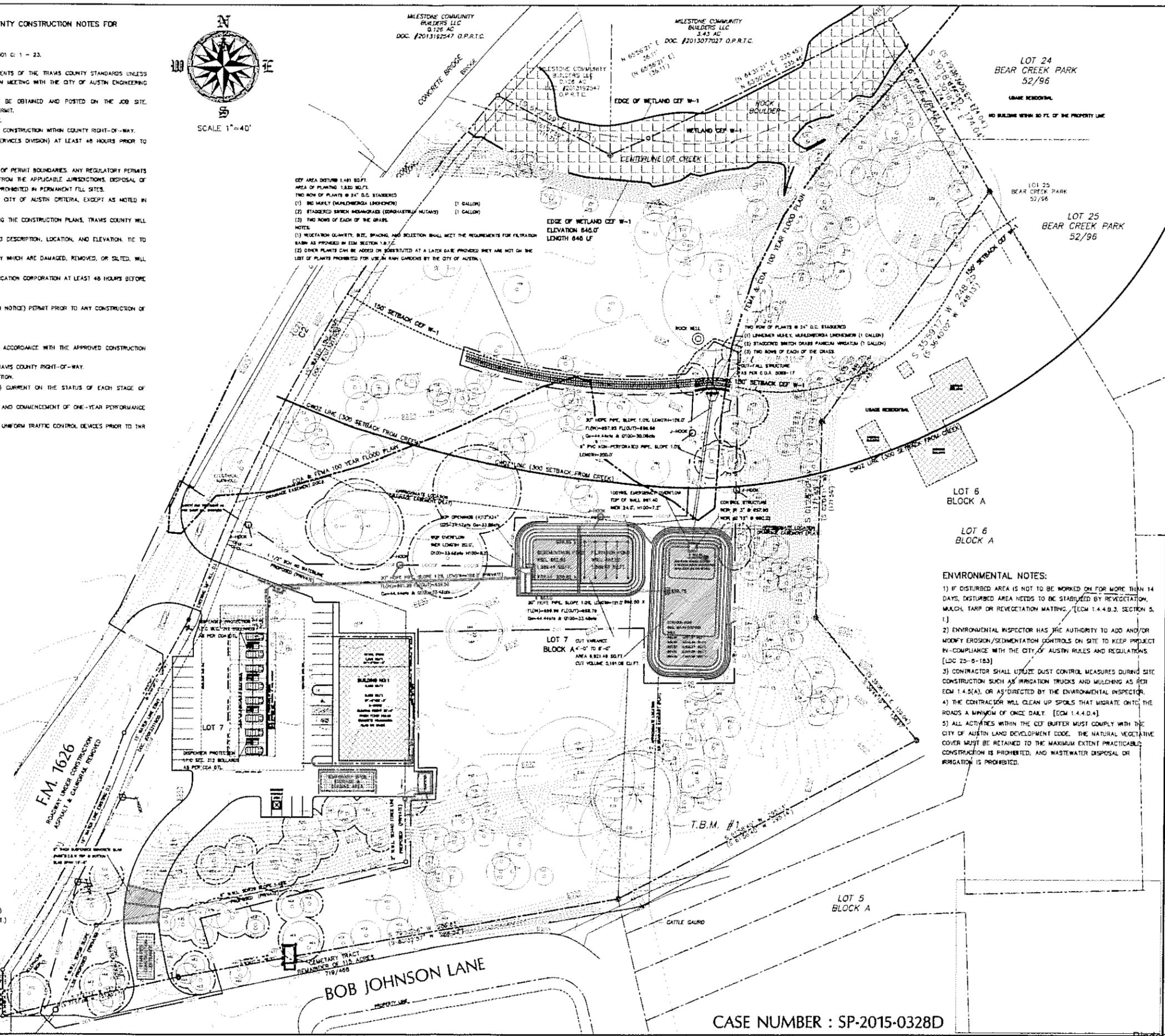
IMPERVIOUS COVER ALLOWED AT 65% X GROSS AREA=65% X 9.182=5.925 ACRES

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY
TOTAL ACREAGE 15-25% 0.44 ACRES X 10% 0.044 ACRES

PROPOSED TOTAL IMPERVIOUS COVER
TOTAL PROPOSED IMPERVIOUS COVER 0.9047 ACRES 10.53%

PROPOSED IMPERVIOUS COVER ON SLOPES		
SLOPE CATEGORIES	ACRES BUILDING/AND OTHERS	DRIVEWAYS/ROADWAYS
0-15%	0.7746 ACRES (8.45%)	
15-25%	0 0	0.0067 ACRES (0.073%) (392.95 SQ.FT.)
25-35%	0 0	0.0344 ACRES (0.375%) (1,499.56 SQ.FT.)
OVER 35%	0 0	0

TOTAL GROSS SITE AREA 9.182 ACRES



- ENVIRONMENTAL NOTES:
- 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. [ECM 1.4.4.3, SECTION 5.1]
 - ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS. [LIC 25-8-183]
 - CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS WETTING TRUCKS AND MULCHING AS PER ECM 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
 - THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY. [ECM 1.4.4.4]
 - ALL ACTIVITIES WITHIN THE CEF BUFFER MUST COMPLY WITH THE CITY OF AUSTIN LAND DEVELOPMENT CODE. THE NATURAL VEGETATIVE COVER MUST BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION IS PROHIBITED, AND WASTEWATER DISPOSAL OR IRRIGATION IS PROHIBITED.

PROFESSIONAL STRUCIVIL ENGINEERS, INC.
CONSULTING CIVIL AND STRUCTURAL ENGINEERS
12111 RESEARCH VLD. DATE: 08/14/2015. TEL: 512.338.8322/FAX: 512.228.8875

PROJECT: BOB JOHNSON GAS STATION
2051 W FM 1626 ROAD
AUSTIN, TEXAS 78652

DATE: EROSION & SEDIMENTATION SITE PLAN

29896

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