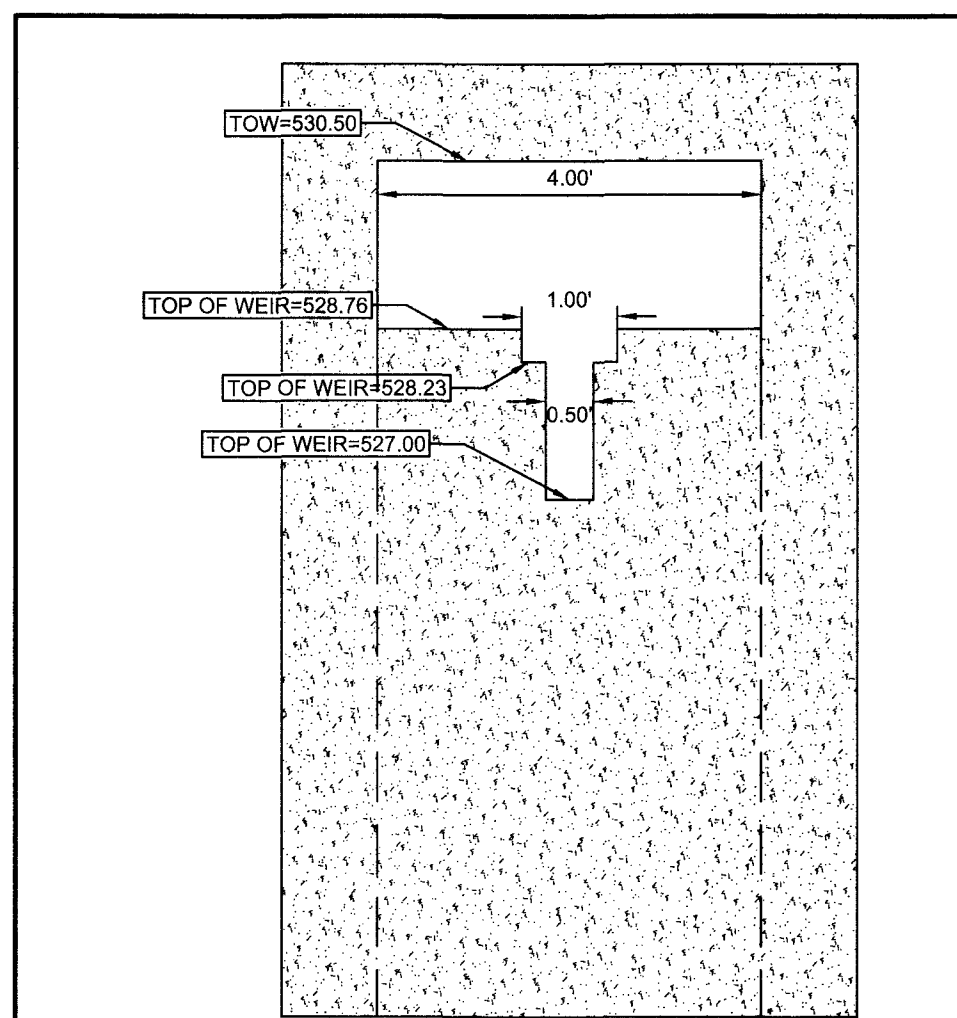
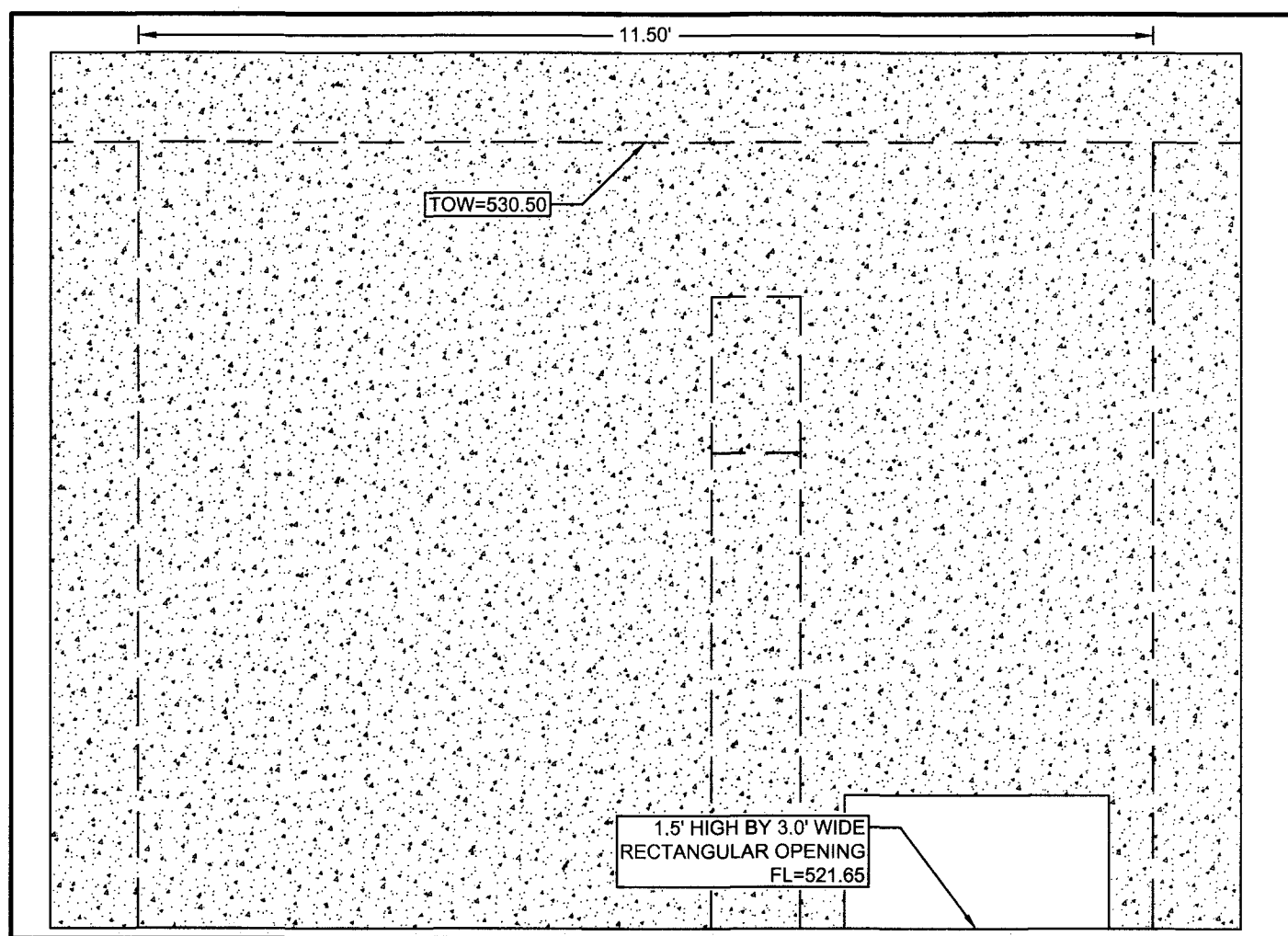
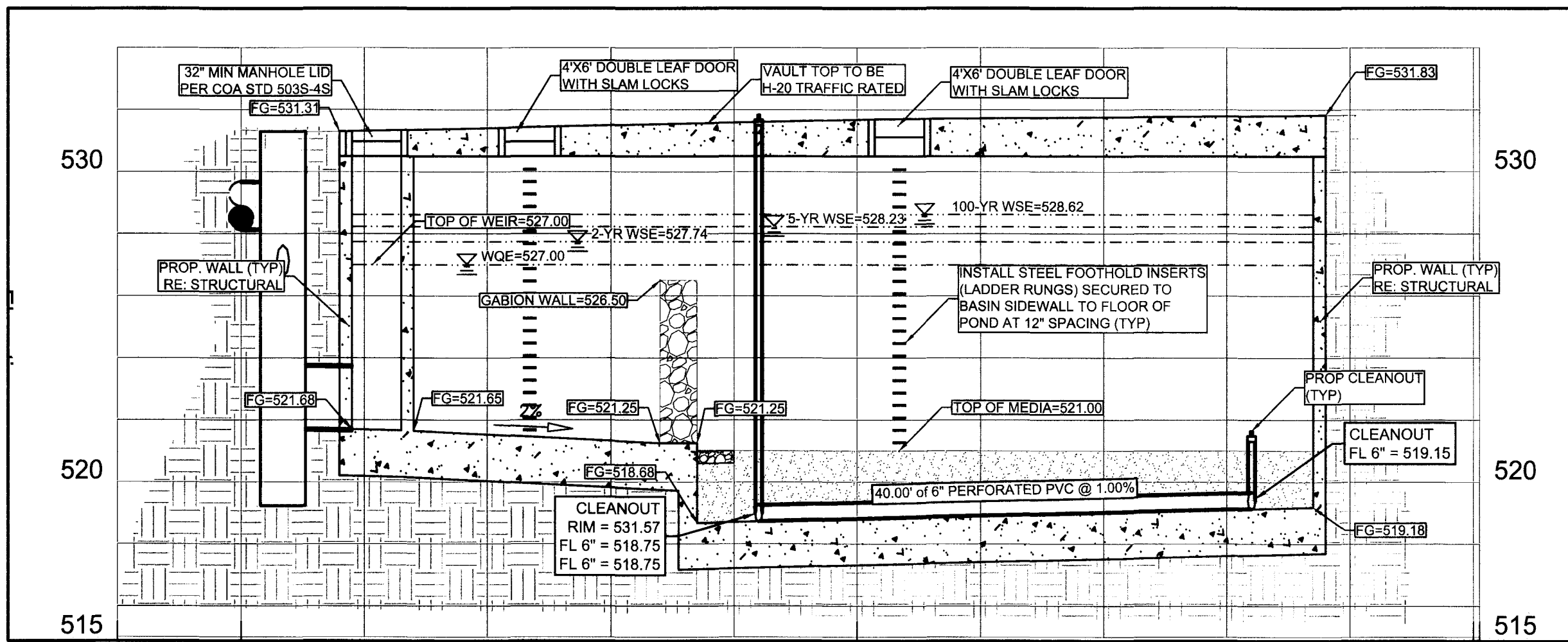
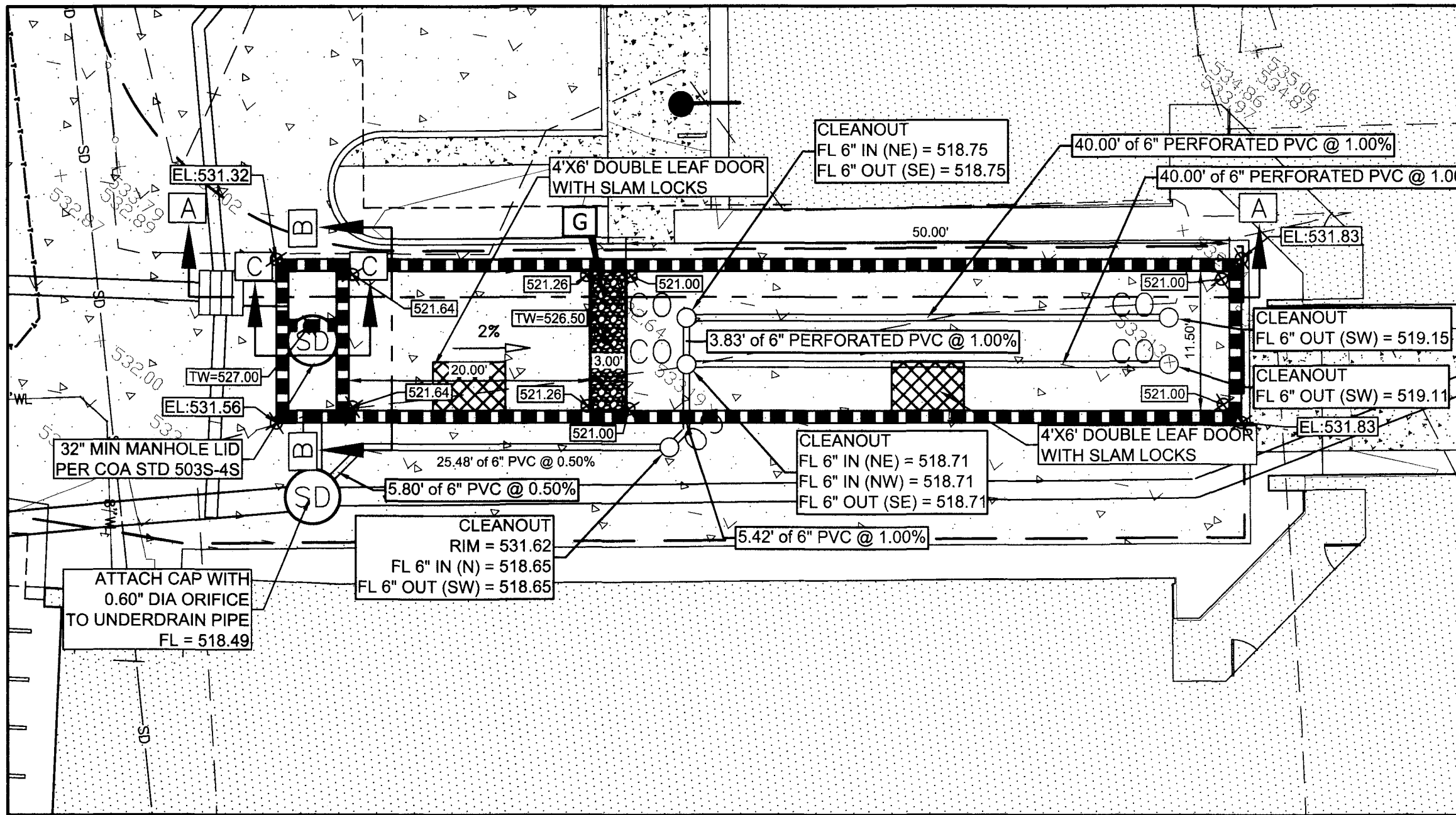




APPENDIX R-3 PARTIAL SEDIMENTATION-FILTRATION POND CALCULATIONS FOR DEVELOPMENT PERMITS

Project Name: Austin South Lamar Apartments
Address: 1515 South Lamar Blvd, Austin, TX
Project No.: 0881.10.001
Date: July 26, 2018

DRAINAGE AREA DATA
Drainage Area to Control 1.02
Drainage Area Impervious Cover (IC) 97.10 %
Capture Depth (CD) = 0.5"*((IC-20)/10)*0.1 1.27 in.

WATER QUALITY CONTROL CALCULATIONS
The Water Quality Control is to be Partial Sedimentation/Filtration
25-year Peak Flow Rate to Control (Q25) 6.85 cfs
100-year Peak Flow Rate to Control (Q100) 9.17 cfs

Water Quality Volume (WQV = CD*DA*3630) 4,701 cf
Maximum Ponding Depth above Sand Bed (H) 6.00 ft
Sedimentation Pond Area 230 sf
Sedimentation Pond Volume (min. of 20% of WQV) 1,380 cf
Filtration Pond Area [WQV/((4+1.33*H))] 392 sf
Filtration Pond Volume 3,450 cf

Water Quality Elevation 527.00 ft msl
Elevation of Splitter/Overflow Weir 529.11 ft msl
Height of Gabion Wall 526.50 ft msl

Length of Weir 4.00 ft
Required Head to Pass Q100 Max. 1.0 ft
Pond Freeboard Provided to Pass Q100 Min. 0.25 ft
Top of Pond 0.00 ft
Drawdown Time 530.50 ft
Underdrain Orifice Size (Dia.) 48.00 hr
Underdrain Orifice Size (Area) 0.60 in
0.29 sq in

Sedimentation Basin:		
Stage (ft msl)*	Area (sf)	Storage (cf)
521.00	230.00	0.00
522.00	230.00	230.00
523.00	230.00	460.00
524.00	230.00	690.00
525.00	230.00	920.00
526.00	230.00	1,150.00
527.00	230.00	1,380.00

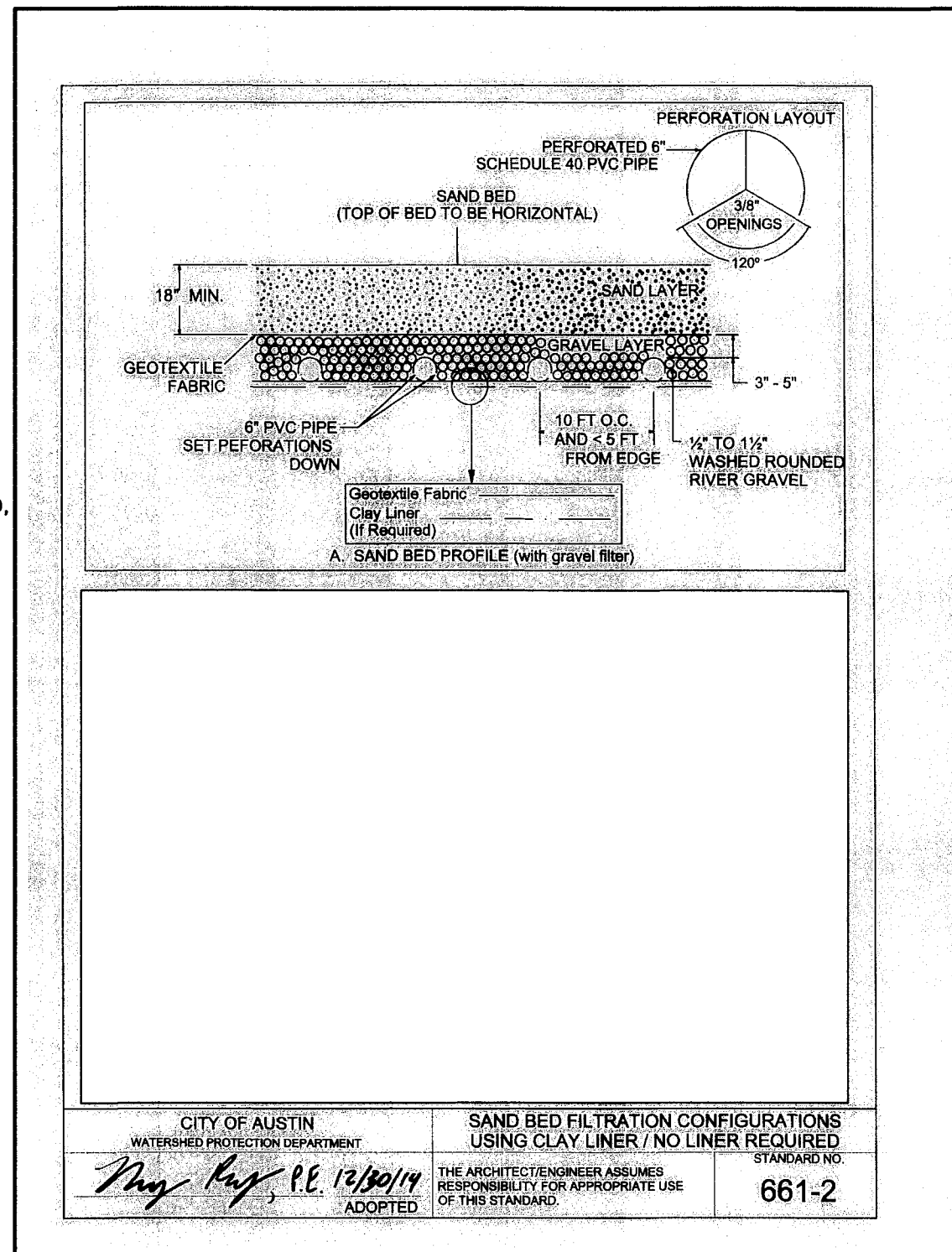
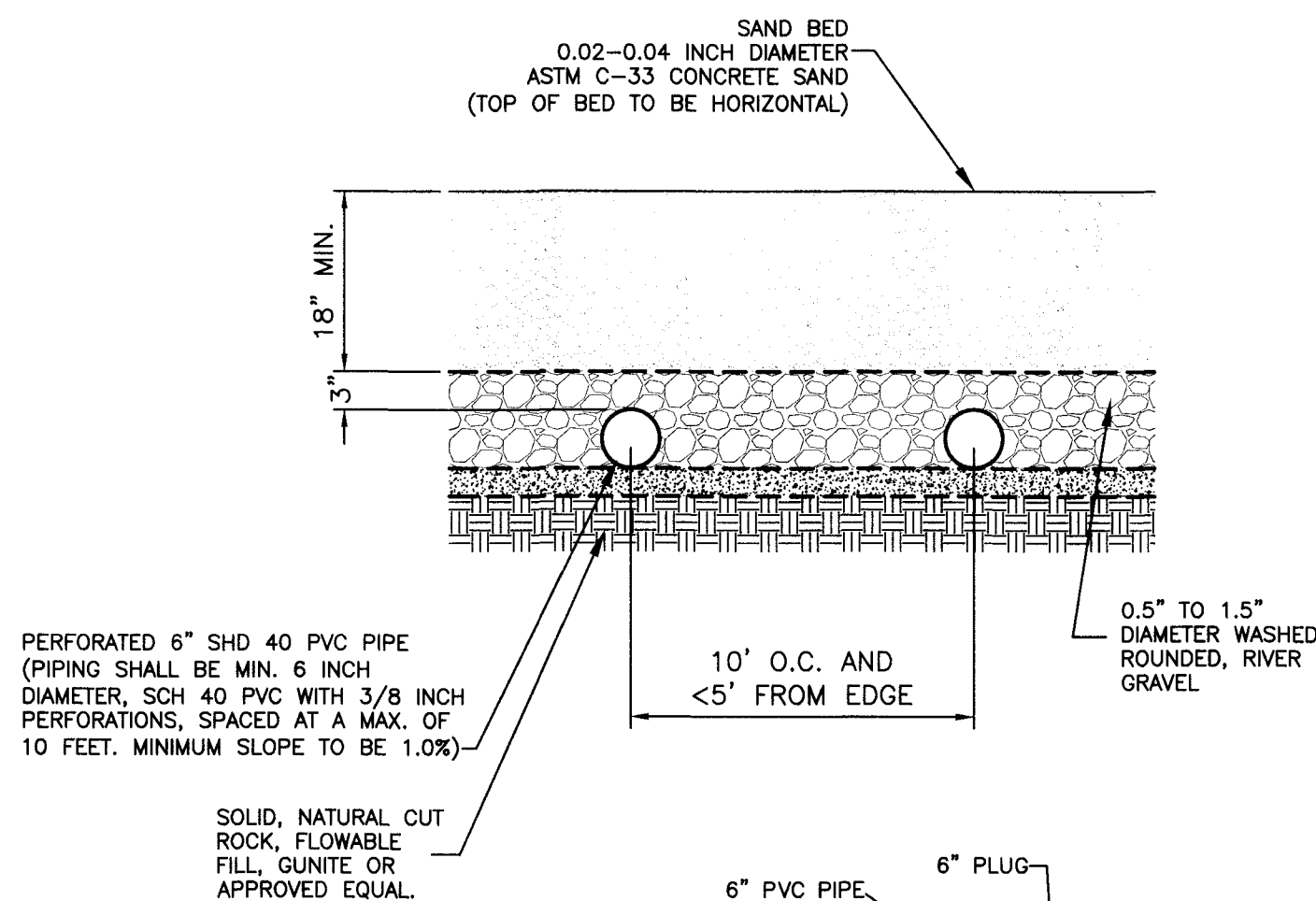
KNOCKOUT CALCULATION	
# of Knockouts	1
Knockout Area	4.5
Head to pass water	7.49
Max Flow (CFS)	59.3
Velocity (FPS)	1.52
Can Pass 25-YR Flow?	TRUE

Filtration Basin:		
Stage (ft msl)*	Area (sf)	Storage (cf)
521.00	575.00	0.00
522.00	575.00	575.00
523.00	575.00	1,150.00
524.00	575.00	1,725.00
525.00	575.00	2,300.00
526.00	575.00	2,875.00
527.00	575.00	3,450.00

DRAWDOWN CALCULATION	
Surface Area	805.00
Orifice Coefficient	0.6
H ₁ (ft)	527.00
H ₂ (ft)	518.49
t(hr)	48.00
A _o (sf)	0.0020
Orifice Diameter (in.)	0.60

POND DETENTION ELEVATION STORAGE TABLE						
Stage (ft msl)	Depth (ft)	Area (sf)	Incr. Col (cf)	Storage (cf)	Notes	
524.35	0.00	839.50	0.00	0.00	24-hr Drawdown	
525.00	0.65	839.50	545.67	545.67		
526.00	1.65	839.50	839.50	1,385.17		
527.00	2.65	839.50	839.50	2,224.67	WQE	
528.00	3.65	839.50	839.50	3,064.17		
528.42	4.07	839.50	352.59	3,416.76	2-yr WSE	
528.76	4.41	839.50	285.43	3,702.19	5-yr WSE	
529.00	4.65	839.50	201.48	3,903.67		
529.13	4.78	840.50	109.20	4,012.87	100-yr WSE	
530.00	5.65	839.50	730.80	4,743.67		
530.50	6.15	839.50	419.75	5,163.42	Top of Wall	

LEGEND	
---	BOUNDARY / RIGHT OF WAY
---	EASEMENT / SETBACK
---	CURB / EDGE OF PAVEMENT
---	OU
---	OVERHEAD UTILITY LINE
---	RETAINING / SCREEN WALL
---	EXIST. GRADE ELEVATIONS
---	PROP. GRADE ELEVATIONS
---	EXIST. STORM DRAIN LINE
---	PROP. STORM DRAIN LINE
---	W
---	WATER LINE
---	WW
---	WASTEWATER LINE
---	DRAINAGE SWALE FLOW LINE
---	DIRECTION OF FLOW
---	###
---	TREE W/ TAG (TO REMAIN)
---	XXX.00
---	PROPOSED FINISHED GRADE
---	XXX.00
---	PROPOSED FINISHED GRADE
---	TC
---	TOP OF CURB ELEVATION
---	G
---	GUTTER ELEVATION
---	FL
---	FLOW LINE ELEVATION
---	HP
---	HIGH POINT ELEVATION
---	LP
---	LOW POINT ELEVATION
---	ME
---	MATCH EXISTING ELEVATION
---	PE
---	PAD ELEVATION
---	FF
---	FINISHED FLOOR ELEVATION
---	TW
---	TOP OF WALL ELEVATION
---	GW
---	FINISHED GRADE AT WALL
---	2% MAXIMUM CROSS SLOPE FOR ACCESSIBLE ROUTE IN THIS AREA



- NOTES:**
- REFERENCE "GRADING & DRAINAGE PLAN" SHEET(S) FOR CONTINUATION OF STORM DRAIN SYSTEM.
 - ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
 - ALL GRAVITY LINES ARE TO BE INSTALLED FROM 'DOWNSTREAM TO UPSTREAM'.
 - LIMITS OF CONSTRUCTION ARE SHOWN ON THE 'EROSION & SEDIMENTATION CONTROL PLAN' SHEET(S).
 - REFERENCE "WATER QUALITY & DETENTION POND DETAILS" SHEET FOR ADDITIONAL INFORMATION.
 - ALL POND BOTTOMS, SIDE SLOPES, AND EARTHEN EMBANKMENTS SHALL BE COMPACTED TO NINETY-FIVE (95) PERCENT MAXIMUM DENSITY, IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATIONS.
 - THE TOPS OF ALL CLEANOUTS OTHER THAN THE ACCESSIBLE CLEANOUTS MUST BE FLUSH WITH THE TOP OF THE SAND/BIOFILTRATION BED.

SITE PLAN APPROVAL Sheet 32 of 87
FILE NUMBER SP-2018-0296C APPLICATION DATE JULY 2, 2018
APPROVED BY COMMISSION ON N/A UNDER SECTION 112 OF CHAPTER 25-5 OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE (25-5-81, LDC) 12/14/19 CASE MANAGER ROSEMARY AVILA

Director, Development Services Department
RELEASED FOR GENERAL COMPLIANCE: 12/14/19 ZONING CS-V
Rev. 1 Correction 1
Rev. 2 Correction 2
Rev. 3 Correction 3

Final plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

AUSTIN SOUTH LAMAR APARTMENTS
1515 SOUTH LAMAR
AUSTIN, TRAVIS COUNTY, TEXAS

SHEET
CG501
32 OF 87
SP-2018-0296C