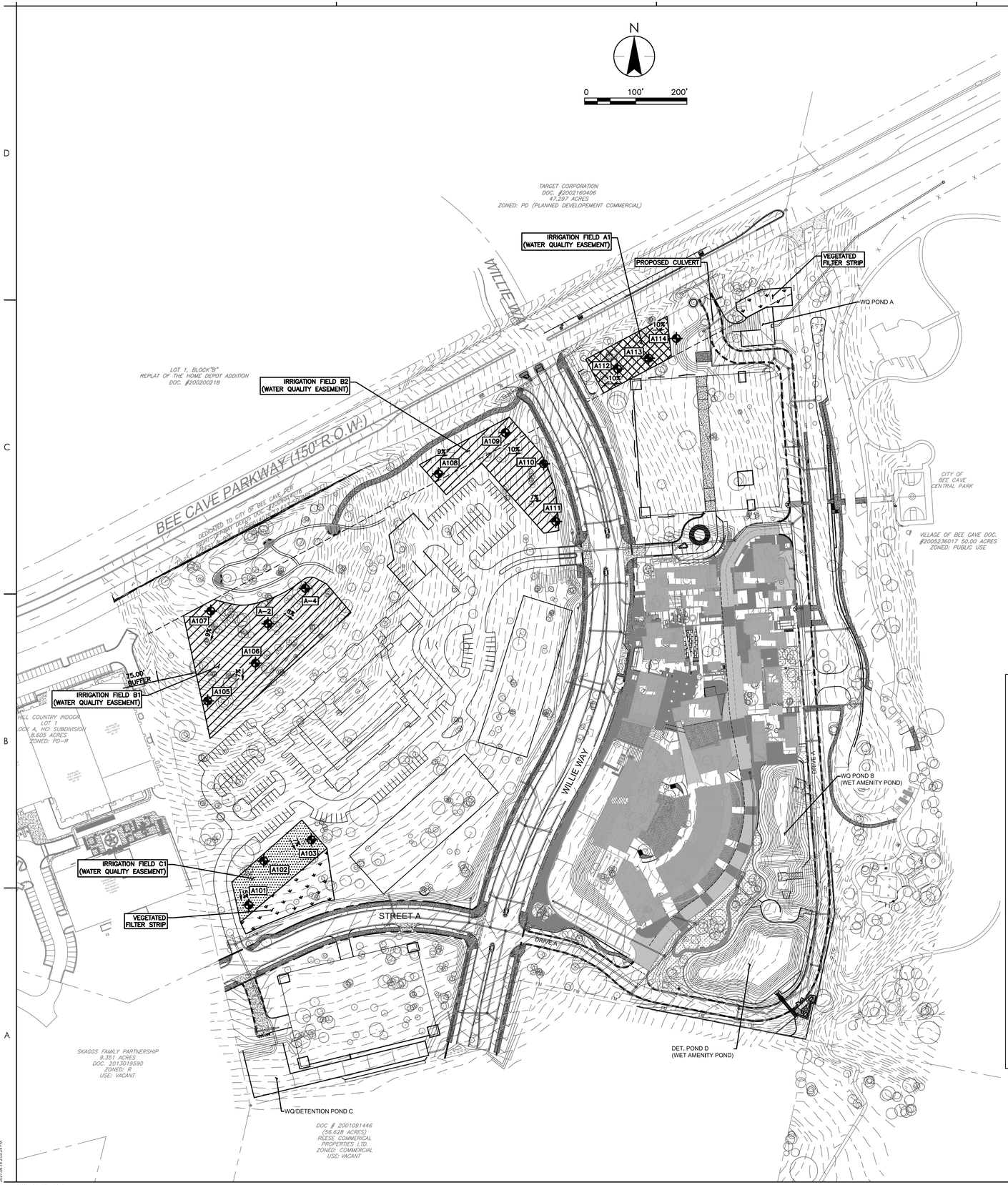

IRRIGATION FIELDS

IRRIGATION FIELD A1
A112 = 1.4 IN/HR
A113 = 7.1 IN/HR
A114 = 0.2 IN/HR

GEOMETRIC MEAN = 1.26 IN/HR WITH SAFETY FACTOR OF 2.0, USE 0.63 IN/HR

IRRIGATION FIELD B1
A2 = 0.2 IN/HR
A4 = 1.6 IN/HR
A105 = 2.0 IN/HR
A106 = 2.1 IN/HR
A107 = 5.2 IN/HR

GEOMETRIC MEAN = 1.48 IN/HR WITH SAFETY FACTOR OF 2.0, USE 0.74 IN/HR

IRRIGATION FIELD B2
A108 = 0.5 IN/HR
A109 = 0.3 IN/HR
A110 = 13.8 IN/HR
A111 = 0.5 IN/HR

GEOMETRIC MEAN = 1.01 IN/HR WITH SAFETY FACTOR OF 2.0, USE 0.51 IN/HR

IRRIGATION FIELD C1
A101 = 1.2 IN/HR
A102 = 2.7 IN/HR
A103 = 2.6 IN/HR

GEOMETRIC MEAN = 2.03 IN/HR WITH SAFETY FACTOR OF 2.0, USE 1.02 IN/HR

In addition to conducting the CCHP test on soils at the test location, samples were collected from each test location. Moisture content, Atterberg limits, and grain size analysis were performed on the selected samples in order to classify the soils. The following table presents the results of the in-situ CCHP tests and laboratory tests.

Location	GPS Coordinates		Material Description	Measured Infiltration Rate (inches/hour)	Surficial Soil Properties at Test Location		
	North	West			Moisture Content, %	Plasticity Index	Percent Fines, %
A-1	30.3132	-97.9566	Sandy lean clay (CL)	0.75	15	14	54
A-2	30.3133	-97.9561	Fat clay (CH)	0.2	36	68	93
A-3	30.3137	-97.9557	Silty Sand (SM)	0.4	19	15	36
A-4	30.3149	-97.9559	Silty gravel with sand (GM)	1.6	28	15	47
A-5	30.3111	-97.955	Elastic silt with sand (MH)	1.5	34	20	77
A-6	30.311	-97.9559	Fat clay with sand (CH)	2.1	34	29	82
A-8	30.3147	-97.9533	Clayey sand with gravel (SC)	0.05	19	11	36
A-101	30.3117	-97.9561		1.2			
A-102	30.3119	-97.956		2.7			
A-103	30.312	-97.9557		2.6			
A-105	30.3128	-97.9563		2.0			
A-106	30.313	-97.956		2.1			
A-107	30.3133	-97.9563		5.2			

Location	GPS Coordinates		Material Description	Measured Infiltration Rate (inches/hour)	Surficial Soil Properties at Test Location		
	North	West			Moisture Content, %	Plasticity Index	Percent Fines, %
A-108	30.314	-97.9548		0.5			
A-109	30.3142	-97.9544		0.3			
A-110	30.314	-97.9542		13.8			
A-111	30.3137	-97.9541		0.5			
A-112	30.3145	-97.9537		1.4			
A-113	30.3146	-97.9535		7.1			
A-114	30.3148	-97.9531		0.2			
A-115	30.3149	-97.9528		1.4			

1. The GPS coordinates were recorded using a handheld GPS unit and rounded to the nearest .0001.
2. The reported values of moisture content, plasticity index, and fines content (percent of silt and clay content in the soil sample) are for the upper few inches of soil after removed of topsoil.
3. An average infiltration rate, PI, and percent fines of about 2.3 in/hr, XX, and XX percent were recorded for the soils, respectively.
4. Locations A-7 and A-104 were omitted after several attempts were made to auger a hole that was at least 15 centimeters of depth.

RE-IRRIGATION CALCULATIONS

RE-IRRIGATION AREAS				
Water Quality Pond	Required Re-Irrigation Area		Provided Re-Irrigation	
	(sf)	(ac)	(sf)	(ac)
A	8,121	0.19	12,348	0.28
B	58,480	1.34	76,494	1.76
C	9,575	0.22	14,630	0.34

IRRIGATION NOTES:
1. REFERENCE WATER QUALITY POND SHEETS FOR REQUIRED RE-IRRIGATION AREA CALCULATIONS.
2. REFERENCE GEOTECHNICAL REPORT FOR INFILTRATION RATE MEASUREMENTS TAKEN AT THE PROPOSED IRRIGATION FIELD LOCATIONS.
3. SEE SHEETS IRR01-IRR04 FOR SPRINKLER LOCATIONS, PIPE LAYOUTS AND WET WELL DESIGN ASSOCIATED WITH EACH WATER QUALITY POND AND RE-IRRIGATION FIELD.
4. RE-IRRIGATION FIELDS SHALL BE SET BACK 50' MINIMUM FROM ADJACENT PROPERTIES, IF A 50' SETBACK CANNOT BE ACCOMPLISHED, THEN AREA INLETS SHALL BE INSTALLED TO CAPTURE AND RE-CIRCULATE IRRIGATION WATER THAT HAS NOT INFILTRATED IN ORDER TO PREVENT DISCHARGE ACROSS THE PROPERTY LINE.
5. RE-IRRIGATION AREAS SHALL NOT RECEIVE FERTILIZERS, PESTICIDES OR HERBICIDES.
6. DURING INSTALLATION OF IRRIGATION FIELDS, CONTRACTOR SHALL CONSULT WITH GEOTECHNICAL ENGINEER TO ENSURE THAT THE SPECIFIED INFILTRATION RATES ARE ACHIEVED. A MINIMUM INFILTRATION RATE OF 0.20 IN/HR IS REQUIRED AT ALL RE-IRRIGATION FIELDS. IF NECESSARY, 12" (MINIMUM) OF ENHANCED SOIL SHALL BE UTILIZED TO ACHIEVE PROPER INFILTRATION AS DIRECTED BY GEOTECHNICAL ENGINEER. ADDITION OF ENHANCED SOIL AROUND EXISTING TREES MUST BE APPROVED BY LANDSCAPE ARCHITECT.
7. EACH RE-IRRIGATION AREA SHALL HAVE SIGNAGE IDENTIFYING THE AREA AS A RE-IRRIGATION FIELD, WITH WARNINGS NOT TO DRINK THE WATER.
8. RE-IRRIGATION FIELDS SHALL NOT BE COMPACTED BY CONSTRUCTION EQUIPMENT/VEHICLES. CONTRACTOR TO PROTECT AREAS AS NECESSARY.

LEGEND

- POND A RE-IRRIGATION AREA (WATER QUALITY EASEMENT)
- POND B RE-IRRIGATION EASEMENT (WATER QUALITY EASEMENT)
- POND C RE-IRRIGATION EASEMENT (WATER QUALITY EASEMENT)
- VEGETATIVE FILTER STRIPS
- EXISTING AMOOZEMETER LOCATION

VEGETATIVE FILTER STRIP MAINTENANCE AND CONSTRUCTION REQUIREMENTS

1. FILTER STRIPS SHALL BE MANAGED SO THAT A DENSE, HEALTHY VEGETATIVE COVER IS PRESERVED.
2. UNMOWED VEGETATIVE FILTER STRIPS ARE PREFERRED. IF MOWED, THE CUTTING HEIGHT SHALL BE SET TO A MINIMUM OF FOUR (FOUR) INCHES FOR TURFGRASS AND A MINIMUM OF EIGHTEEN (18) INCHES FOR BUNCHGRASS. GRASS CLIPPINGS MUST BE REMOVED FROM THE VS IN ORDER TO PREVENT EXPORT OF NUTRIENTS.
3. BARE SPOTS AND AREAS OF EROSION IDENTIFIED DURING INSPECTIONS MUST BE REPLANTED AND RESTORED TO MEET SPECIFICATION.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED.
5. ANY DISTURBANCE TO THE FILTER STRIP AS A RESULT OF MAINTENANCE PROCEDURES OF OTHER REASONS SHALL BE REPAIRED, INCLUDING RE-ESTABLISHMENT OF THE VEGETATION.
6. CORRECTIVE MAINTENANCE IS REQUIRED IF THERE IS EVIDENCE OF PREFERENTIAL FLOW PATHS AROUND OR THROUGH THE VFS (E.G. UPSTREAM "LIP IS SILTED IN OR INSTALLED TOO LOW).
7. IF SOIL IS ENHANCED, TOPSOIL OR AMENDED TOPSOIL SHALL MEET THE REQUIREMENTS OF CITY OF AUSTIN STANDARD SPEC 601S.

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

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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Consultant

No.	Revision	By	Appd	YYYY.MM.DD
0	Issued			

Permit/Seal
STATE OF TEXAS
LANCE RICHARD ORITI
98173
LICENSED PROFESSIONAL ENGINEER
06/18/2021

Client/Project
BACKYARD MANAGEMENT, LLC

THE BACKYARD
PRELIMINARY PLAT

13801 BEE CAVE PARKWAY
AUSTIN, TEXAS 78738

Project No.: 222011642
File Name: 11642_C00_102_RAM

Scale:

???	???	???	6.18.2021
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Title
REIRRIGATION AREA MAP

Revision:0

Drawing No.
12 of 12

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