CITY OF ALBUQUERQUE

Hydrology Section Planning Department David S. Campbell, Director



Timothy M. Keller, Mayor

March 13, 2019

Arverd Taylor Anderson Wahlen & Associates 2010 N Redwood Road Salt Lake City, Utah 84116

RE: LHM Hyundai - 9820 Coors Blvd NW Grading Plan and Drainage Report Engineer's Stamp Date: 02/04/2019 Hydrology File: B14D017

Mr. Miller,

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 2/12/2019, the Grading and Drainage Plan cannot be approved for Grading Permit or Paving Permit until the following comments are addressed.

Prior to Conceptual G&D approval for Site Plan and Grading Permit:

- 1. An Engineer's stamp and signature are required on all engineering calculations including the G&D Plan and the Drainage Report.
- 2. The lot line between the City and County should be clearly identified on the G&D Plan. A note should be added identifying the different jurisdictions and separate approvals are required for construction in each:
 - a. Grading Permit, Paving Permit, Erosion Control Permit and Topsoil Disturbance Permits required prior to work on private property within the City of Albuquerque,
 - b. An Excavation and Barricading permit is required from the City Of Albuquerque prior to any work in the City Public Right of Way. The limits of construction should be revised to avoid any work in the City ROW.
 - c. An NMDOT Permit is required prior to any work in the NMDOT Public Right-ofway.
 - d. Bernalillo County approval is required for any work on the parcels that are in Bernalillo County's Jurisdiction. It is recommended that a separate plan be developed for the County portion of this site and processed separately for approval in which case this plan should clearly state that it is for the portion of the work within the City limits only and the adjoining information is shown for information only. Two separate permits, City and County, are required.

- 3. A drainage narrative needs to be added to the G&D Plan. It should describe the two different Drainage Management Plans for the City and the County
 - a. The City Drainage Management Plan is to provide the required Stormwater Quality Volume (SWQV) in onsite Best Management Practice (BMP) ponds and to freely discharge the peak 100 year flow rate into the existing storm drains constructed during earlier phases of this development in the adjacent Public ROWs west and south of the City portion of this site. None of the runoff from Tract B-1 Lands of Black Development is allowed into the County. The legal description of the City portion of this site is Tract B-1.
 - b. The legal description for the County portion of this site is Tract 1-A Windmill Estates. The County portion of this site drains east and does not drain into the City portion of this site.
- 4. Please label the Stormwater Quality Volume (SWQV) required, the SWQV provided, the BMP elevation, and the 100 Year elevation on the plan view of each BMP Pond.
 - a. Basins boundaries need to be shown on the G&D Plan around the area draining to each BMP, and the BMP should be sized for the required SWQV of the area draining to it.
 - b. Credit in excess of the required SWQV for the area draining to each BMP is not allowed. Additional BMPs may be required for 100% site coverage or the owner may elect "Payment in lieu" of construction of the required SWQV.
 - c. The 100 year elevation of each BMP pond should be far enough below the top of dam elevation to allow freeboard for construction tolerances and settlement.
 - d. The crest elevation of the overflow spillway should be set far enough above the required BMP elevation to allow freeboard for construction tolerances and settlement.
 - e. Calculations are required for the overflow spillway from each BMP pond to determine the 100 year elevation and to demonstrate the adequacy of the pond outfall structures.
 - f. Please specify the width and depth of each structure along with the peak 100 year flow rate and the weir depth calculation for each spillway and rundown into the ponds.
 - g. Please provide details of the pond outfall structures.
- 5. Please show the existing and proposed storm drain pipes on the G&D Plan and on the plan view details of the ponds. Differentiate between existing and proposed. Include profiles of the new pipes showing Q and V. Please provide HGL calculations following the DPM procedures applying minor losses to the EGL using Bernoulli's and show the EGL in the calculations. If any of the planned storm drain construction is in any public right of way then an approved Work Order will be required.
- 6. The valley gutter through the north half of the site does not have sufficient capacity. Please modify the design to include typical sections and capacity calculations that contain the energy depth.

CITY OF ALBUQUERQUE

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Timothy M. Keller, Mayor

- 7. Previously approved plans do not account for any part of Tract B-1 drainage to go east into Bernalillo County. Please correct the grading and drainage plan to insure compliance with the previously approved plan.
- 8. A written approval from the City Transportation Development Services must be provided either approving a Traffic Circulation Layout (TCL) or a waiver of the TCL requirement.

Prior to approval for Grading Permit, and Paving Permit:

9. Please provide a Drainage Covenant for the private storm drains, valley gutter, and BMP Ponds prior to Certificate of Occupancy. Please submit this on the 4th floor of Plaza de Sol with a \$25 check payable to Bernalillo County.

If you have any questions, please contact me at 924-3986 or e-mail jhughes@cabq.gov.

Sincerely,

PO Box 1293

James D. Hughes, P.E. Principal Engineer, Planning Dept. Development and Review Services

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title:	Building	Permit #: Hydrology File #:
DRB#:	EPC#:	Work Order#:
Legal Description:		
City Address:		
Applicant:		Contact:
Address:		
Phone#:	Fax#:	E-mail:
Owner:		Contact:
Address:		
Phone#:	Fax#:	E-mail:
TYPE OF SUBMITTAL: PLAT (_# OF LOTS)	RESIDENCE DRB SITE ADMIN SITE
IS THIS A RESUBMITTAL?:	Yes	No
DEPARTMENT: TRAFFIC/ TRAN	SPORTATION _	HYDROLOGY/ DRAINAGE
Check all that Apply: TYPE OF SUBMITTAL: ENGINEER/ARCHITECT CERTIFICA PAD CERTIFICATION CONCEPTUAL G & D PLAN GRADING PLAN DRAINAGE MASTER_PLAN	ATION	TYPE OF APPROVAL/ACCEPTANCE SOUGHT: BUILDING PERMIT APPROVAL CERTIFICATE OF OCCUPANCY PRELIMINARY PLAT APPROVAL SITE PLAN FOR SUB'D APPROVAL SITE PLAN FOR BLDG. PERMIT APPROVAL ENAL PLAT APPROVAL
DRAINAGE MASTER PLAN DRAINAGE REPORT FLOODPLAIN DEVELOPMENT PER ELEVATION CERTIFICATE CLOMR/LOMR TRAFFIC CIRCULATION LAYOUT TRAFFIC IMPACT STUDY (TIS) OTHER (SPECIFY) PRE-DESIGN MEETING?	MIT APPLIC (TCL)	FINAL PLAT APPROVAL SIA/ RELEASE OF FINANCIAL GUARANTEE FOUNDATION PERMIT APPROVAL GRADING PERMIT APPROVAL SO-19 APPROVAL PAVING PERMIT APPROVAL GRADING/ PAD CERTIFICATION WORK ORDER APPROVAL CLOMR/LOMR FLOODPLAIN DEVELOPMENT PERMIT OTHER (SPECIFY)
DATE SUBMITTED	Bu-	

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED:

FEE PAID:

Drainage Submittal

for

LHM Hyundai Albuquerque

9820 Coors Blvd. NW Albuquerque, NM February 7, 2019

Prepared for: Miller Family Real Estate L.L.C. 9350 S. 150 E. Salt Lake City, UT 84070



2010 North Redwood Road • P.O. Box 16747 • Salt Lake City, Utah 84116 (801) 521-8529 • (801) 394-7288 • Fax (801) 521-9551

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Vicinity Map

FEMA Flood Insurance Rate Map

Conceptual Demolition Plan

Conceptual Grading & Drainage Plan

 Peak Runoff Calculations per City of Albuquerque Development Process Manual (DPM)

Introduction

Larry H Miller Hyundai at 9820 Coors Blvd NW is proposing expanding their existing auto display area to the northwest. With the relocation of the Coors Blvd bypass, the area between the existing Hyundai Dealership and the new road increased. This is the area for the proposed expansion. The purpose of this report is to:

- Determine the peak flows that will result by the expansion into the proposed site.
- Describe on-site surface improvements that will convey flows to the existing storm drain system.

Flood Hazard Certification

Floodplain information published for the site in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Bernalillo County, New Mexico and Incorporated Areas, Panels 108 & 109 of 825, Map Number 35001C0109H and 35001C0108H, dated August 16, 2012 (See Appendix) provides flood zone designation information. The subject site is located in Zone X Other Flood Areas. Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. (Area with Reduced Flood Risk due to Levee.) Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system shown as providing protection for areas on this panel. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

Hydrologic Analysis

Design Storm: The site is located within Precipitation Zone 1 being in the area lying west of the Rio Grande, as specified in Chapter 22, Section 2(A.1 & A.2) of the City of Albuquerque Development Process Manual (DPM). The principal design storm is the 100-year 6 hour event defined by the National Oceanic and Atmospheric Administration (NOAA) Atlas 2, Precipitation-Frequency Atlas of the Western United States, Vol. IV – New Mexico. Detention basin designs are not proposed and therefore longer duration design storms are not considered in this analysis. Accordingly, the rainfall depths of interest for design purposes are the 10-Year, 6-Hour storm with a design depth of 1.47 inches and the 100-Year, 6-Hour storm with a design depth of 2.20 inches.

Land Treatments: The proposed expansion contains 104,116 square feet (2.39 acres) of commercial designated land uses constructed with a portion of pervious surface being primarily landscape rock mulch with some trees and shrubs upon 25,090 square feet (0.58 acres) with the remainder of the site being impervious concrete and asphalt paved surfaces over 79,026 square feet (1.81 acres). On-site existing Land Treatments defined in Chapter 22, Section 2(A.3) of the City of Albuquerque DPM are 100% Land Treatment Type C for soil compacted by human activity. Minimal vegetation. Unpaved

parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D. The proposed site conditions will consist of roughly 24 percent pervious landscaped areas (Land Treatment Type B) and 76 percent impervious surfaces (Land Treatment Type D).

Excess Precipitation & Volumetric Runoff: Excess precipitation (runoff) is the depth of precipitation discharged after the initial volume of rainfall retained on the ground surface as depression storage and infiltration have been subtracted from the design storm unit hydrograph. The site is covered by Land Treatment C and is projected to generate 0.44 inches of excess precipitation for a 10-Year, 6-Hour Storm and 0.99 inches of excess precipitation for a 100-Year, 6-Hour Storm within Precipitation Zone 1.

The volume of runoff or excess precipitation has been calculated by summing the depth of rainfall over the established land treatment type. The excess precipitation depth, volume and peak discharge generated by the existing developed and proposed developed site conditions are summarized in Table 1.

	Excess Precipitation	Volumetric Run-off (Acre-Feet)	Peak Discharge (cfs)
	(Inches)		
Existing Developed			
10-Year, 6-Hour	0.44	0.09	3.56
100-Year, 6-Hour	0.99	0.20	6.86
Proposed Developed			
10-Year, 6-Hour	0.99	0.20	5.68
100-Year, 6-Hour	1.65	0.33	9.10

Table 1 - Existing Developed and Proposed Developed Excess Precipitation Volumes &Peak Discharge Rates.

A Conceptual Demolition Plan and Grading & Drainage Plan for the subject site have been provided for further review and consideration in the Appendix.

Proposed Conditions

Proposed site conditions involve including the excess area generated by the relocation of the Coors Bypass Road to the existing dealership. The Hyundai Dealership will expand their display area and landscaping to the westerly edge of the relocated Coors Blvd. Bypass Road. The differences in volumes of runoff and peak discharge are depicted in Table 1.

Site runoff will be conveyed as surface flow to three on-site water quality ponds. The northeasterly area will flow to two water quality ponds with the excess being piped in a 12-inch pipe to the storm drain system installed as part of the Coors Blvd. Bypass Road phase. The southwesterly area will flow to a water quality pond with the excess being piped in a 12-inch pipe which will tie into the existing 24-inch storm drain in the north side of the bridge. This existing 24-inch storm drain releases flows directly into the Calabacillas Arroyo.

2-Year Storm On-Site Retention

Proposed site storm water improvements include storm water quality ponds for the management of the 90th Percentile Storm Event by retaining the volume of water generated by this event on-site. These water quality ponds retain the "first flush" and control runoff generated by contributing impervious surfaces. First Flush is defined by the City of Albuquerque as the storm water runoff during the early stages of a storm equal to or less than runoff from the 90th Percentile Storm Event that can deliver a potentially high concentration of pollutants due to the washing effect of runoff from impervious areas directly connected to the storm drainage system. The method of determining this volume to be retained is determined by the Rational Method as described in the City of Albuquerque, New Mexico Development Process Manual Volume-II Design Process, Chapter 22 Drainage, Flood Control and Erosion Control, Section 2 Hydrology.

Proposed Site Impervious Area 90 th Percentile (2-Year) Storm Initial Abstraction – Treatment	a = 79,026 sf Depth = 0.44 inches Type D – impervious = 0.1 inches	b	
Depth of Direct Runoff = $[(0.$	44 inches – 0.10 inches)*(1 ft/12 inc	ches)]	= 0.028 ft
Volume of Direct Runoff = (0)	0.028 ft (79,026 sf) = $2,239 cubic$	<u>feet</u>	
First Flush Retention Facility:	With 64% in the northeast area = $\underline{1}$, And 36% in the southwest area = $\underline{8}$	<u>424 cu</u> 15 cubi	bic feet ic feet
Volume Provided:	Northeast area North Water Quality Pond volume South Water Quality Pond volume Provided:	=	491cf <u>935 cf</u> 1,426 cf
	Southwest area Water Quality Pond Volume	=	1,131 cf

A copy of the Grading & Drainage Plan has been provided in the Appendix for more information regarding the configuration of the piping, storm drain structures and Water Quality Ponds.

Conclusion

The basis for this report were from previous studies, that this site would be allowed free discharge providing that the existing 24-inch diameter pipe has capacity and that the water quality requirements are met.

The northeast area is designed to surface flow into two water quality ponds with the excess being piped to the inlet structure installed as part of the Coors Blvd. Bypass Road phase which flows into the existing 24-inch storm drain pipe. The southwest area surface flows to a water quality pond with the excess flows piped to the existing 24-inch drain in the north side of the bridge that releases directly into the Calabacillas Arroyo.

APPENDIX

Vicinity Map





FEMA Flood Insurance Rate Map

National Flood Hazard Layer FIRMette



Legend



250

1,000

1,500

2,000

Demolition Plan



- are to include all areas shown within demolition limits or by note.

- capped according to city, county and utility
- granular material compacted to 95% of D 1557–78. (Test results to be given to owner) Excavated areas should be backfilled per the geotechnical report prepared for the project.
- within construction limits, disposal to be off-site except where noted otherwise.
- operations from the site and dispose of in a
- utilities as shown on these plans is based on records of the various utility companies and,

- Provide erosion control as needed to prevent
- approved site for such material. Burning onsite is not permitted.
- removal, curb cuts, and any restoration required for utility line removal.
- Federal Agencies as required.
- foundations.)
- the Asbestos must be removed in a legal manner by a contractor licensed to handle
- materials or contaminated soils he shall





Grading & Drainage Plan

- geotechnical report.

- permitee

- matter prior to grading.
- prepared for the project.

- soils he shall immediately contact the project engineer to provide notification and obtain direction before proceeding with disturbance of said materials or contaminated soil.





Peak Runoff Calculations per City of Albuquerque Development Process Manual (DPM)



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Project Name LHM HYULIDAI (9820 Cases BLUD) ALBO, Date 12/14/2018 Kores BLOD NW 98.20 SITE ADDRESS (PERCIPITIONI ZONE 1) EXISTING SITE CONDITIONS TYPE C - 104114 SE = 239AC (1000) PROPOSED WITE CONDITIONS: PERVIOUS AREA : 25 090 SE = 0.5BAC (24%) TYPE 3 14 PER VIDUS AREA 19,026 5F = 1.81 AR (76%) TYPE D TOTAL AREA 104,114 3= = 2.39 nd EXCESS RECIPITETON 7 VOUMETER RUNDEE EXISTING COMPITIONS : EXCERS PRECIP - TABLE A-S ZOUE / + 10 YR 64R er A 0,44" TREATMENT TYPE C EDLIE 1 - 100 YR. LAHR 6.991 TREATMENT TYPEC 10YR GHR EW = 0.44 3 10-10 0.44 (104,114) (743520) (-12) * 360-10 4000 1400 0.09 AC-FT









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LHM Hyundai Coors Boulevard 9820 Coors Boulevard NW Albuquerque, New Mexico

Abbreviations

BCR	Begin Curb Return	PVC
BOL	Bollard	PVI
BRW	Finish Grade – Bottom of Retaining Wall	RCF
CATV	Cable Television Box	RD
CB	Catch Basin	SB
CMP	Corrugated Metal Box	SD
COB	Cleanout Box	SDN
COTG	Cleanout to Grade	SMF
EA	Edge of Asphalt	SP
EB	Electrical Box	SS
EC	End of Curve	SVZ
ECR	End Curb Return	SW
GB	Grade Break	TA
GM	Gas Meter	TB
HB	Hose Bib	TBC
HP	High Point	TG
/	Irrigation Line	TMH
ICB	Irrigation Control Box	TP
Lip	Lip of Gutter	TRW
LP	Light Pole	TW
МН	Manhole	VC
Mon	Monument	VPC
PC	Point of Curvature	VPT
PCC	Point of Compound Curvatur e	WL
PM	Power Meter	WP
PP	Power Pole	WV
PT	Point of Tangency	

Polyv	inyl Chloride
Point	of Vertical Intersection
Reinf	orced Concrete Pipe
Roof	Drain
Signo	l Box
Storn	n Drain
Storn	n Drain Manhole
Sewe	r Manhole
Signo	il Pole
Sanit	ary Sewer
Sight	Visibility Zone
Seco	ndary Water
Тор с	of Asphalt
Telep	hone Box
Top I	Back of Curb
Тор с	of Grate
Telep	hone Manhole
Тор с	of Concrete
Finisl	h Grade — Top of Retaining Wall
Тор с	of Walk
Vertic	al Curve
Vertic	al Point of Curve
Vertic	al Point of Tangency
Water	rline
Worki	ing Point
Water	r Valve

Legend				
Proposed Curb & Gutter		Existing Improvements	===	
Proposed Open Face C & G		Existing Asphalt		
Proposed Asphalt		Existing Concrete		
Proposed Concrete		Existing Inlet Box		
Proposed Truncated Domes	68888	Existing Catch Basin		
Proposed Inlet Box		Existing Manhole	$\overline{\bigcirc}$	
Proposed Catch Basin		Existing Fire Hydrant	Q FH	
Proposed Manhole	Ō	Existing Water Valve	\bowtie WV	
Proposed Transformer	Ē	Existing Overhead Power Line	— — M///— —	
Proposed Meter Box		Existing Water	W	
Proposed Water Meter	o	Existing Secondary Water	- <i>-SW</i>	
Proposed Combo Box	IO	Existing Sewer	S	
Proposed Fire Hvdrant	 & 	Existing Storm Drain	- <i>-SD</i>	
Proposed Water Valve	-0-	Existing Gas	G	
Proposed Water Line	<i>w</i>	Existing Power	<i>P</i>	
Proposed Sanitary Sewer	<u>—s</u> —	Existing Telephone	T	
Proposed Storm Drain		Existing rence Flowline	$$ λ $$ $$	
Proposed Conduit Line	—c—	Centerline	é	
Proposed Power Line	—P—	Existing Contour	78	
Proposed Gas Line	—G—	Existing Spot	∘ <i>(78.00TA)</i>	
Proposed Secondary Water Line	—sw—	Existing Light Pole	× ×	
Proposed Roof Drain	—RD—	Existing Street Light		
Proposed Fence	—x—	Existing Building	<u> </u>	
Ridge line	— — <i>—R</i> — — —	Existing Telephone Box	с <i>ТВ</i>	
Grade Break	– – – <i>GB</i> — —	Existing Power Meter	$\Box PM$	
Proposed Contour	78	Existing Electrical Box	() <i>EB</i>	
Direction of Drainage		Existing Electrical Cabinet	\Box ECAB	
Proposed Spot	• 78.00TA	Existing Gas Meter	$\Box GM$	
ADA Accessible Route		Existing Water Meter	∘ WM	
Property Line		Existing Irrig. Control Box	o ICB	
Sawcut Line	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Existing Bollard	•BOL	
Proposed Light Pole		Existing Hose Bib	• <i>HB</i>	
Proposed Street Light		working Point		
Proposed Building		Existing Deciduous Tree	{•}	
Existing Power Pole	۲			
Existing Power Pole w/ Guy		Existing Coniferous Tree	で 2	
Existing Utility Marker			XX	
EXISTING POST	•	Detail Number	+ (XX)	
		Sheet Number	- (xx)	





Civil Sheet Index

CV	Cover Sheet
	Topographic and Boundary Survey
<i>C0.1</i>	Demolition Plan
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<i>C2.2</i>	Grading Details
<i>C3.1</i>	Utility Plan
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<i>C4.2</i>	Details
<i>C4.3</i>	Details - NM Standards
<i>C5.1</i>	Erosion Control Plan - Phase 1
<i>C5.2</i>	Erosion Control Plan - Phase 2
<i>C5.3</i>	Erosion Control Plan Details
L1.1	Landscape Plan
L1.2	Landscape Plan
L2.1	Irrigation Plan
L2.2	Irrigation Plan
L3.1	Landscape & Irrigation Details



Flood Zone

The subject property (as shown hereon) appears to lie within ZONE X" (areas determined to be outside 0.2% annual chance flood lain) and "zone x" [shaded] (Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than pot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood) as shown on National Flood Insurance Program Flood Insurancé Rate Maps Number 35001C0108G, map revised September 26, 2008, and Number 35001C0109H, map revised August 16, 2012.

NOTE: THE FOLLOWING NOTE APPEARS ON SAID FLOOD INSURANCE RATE MAPS AND APPLIES TO "ZONE X" [SHADED]:

WARNING! THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1-PERCENT ANNUAL CHANCE FLOOD HAZARD BY LEVEE, DIKE, OR OTHER STRUCTURE. OVERTOPPING OR FAILURE OF THIS STRUCTURE IS POSSIBLE WHICH COULD RESULT IN DESTRUCTIVE FLOOD ELEVATIONS AND WATER VELOCITIES. PROPER PROTECTION, FLOOD INSURANCE, AND ADHERENCE TO EVACUATION PROCEDURES ARE STRONGLY RECOMMENDED. FOR ADDITIONAL INFORMATION, SEE THE NOTES TO USERS.

NOTE: ON SAID FLOOD INSURANCE RATE MAP NUMBER 35001C0108G, THE GRAPHIC "SHADING" APPEARS TO BE MISSING FROM DESIGNATED "ZONE X" [SHADED].

NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1—PERCENT—ANNUAL—CHANCE OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM. OVERTOPPING OR FAILURE OF ANY LEVEE SYSTEM IS — POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE "ACCREDITED LEVEE NOTE" IN NOTES TO USERS.

NOTE: FLOOD ZONE LINES, AS SHOWN HEREON, ARE TRANSCRIBED AND/OR DERIVED FROM SAID FLOOD INSURANCE RATE MAPS.)

Benchmark

Brass Cap Monument for the xxx of Section xx, Txx, Rxx, SLB&M Elevation = xxxx.xx (NAVD 88, xxxx Meters) County Surveyor Tie Sheet, Published (Date) Observed (Date)

Legal Description

Tract "B-1" of Lands of Black Development One, as the same is shown and designated on the plat entitled "Plat of Tracts A-1 and B-1, Lands of Black Development One (Being a Replat of Tracts A and B, Lands of Black Development One), Situate within the Town of Alameda Grant in Projected Section 8, Township 11 North, Range 3 East, New Mexico Principal Meridian, City of Albuquerque, Bernalillo County, New Mexico," filed in the office of the County Clerk of Bernalillo County, New Mexico, on September 13, 2016, in Plat Book 2016C, Page 114.

AND A PORTION OF

Tract "1-A" of Windmill Estates Subdivision, as the same is shown and designated on the plat entitled "Plat of Tract 1-A, Windmill Estates Subdivision, Town of Alameda Grant, Bernalillo County, New Mexico," filed in the office of the County Clerk of Bernalillo County, New Mexico, on September 26, 1996, in Plat Book 96C, Page 402.



KEYED EASEMENTS

- (A) 40' Sewerline Easement Filed December 15, 1986 in Book 429A, Pages 616-620 as shown on plat filed Sept. 26, 1996 in Vol. 96C, Folio 402. (B) 7' Public Utility Easement granted by plat filed November 15, 1995 in Volume 91C, Folio 256 as shown on plat filed Sept. 26, 1996 in Vol. 96C, Folio 402.
- © 30' AMAFCA Drainage Easement granted by plat filed September 26, 1996 in Volume 96C, Folio 402.
- (D) 50' Emergency, Ingress/Egress, Utility & Drainage Easement granted by plat filed November 15, 1995 in Volume 91C, Folio 256 as shown on plat filed Sept. 26, 1996 in Vol. 96C, Folio 402.
- (E) 7' Public Utility Easement granted by plat filed November 15, 1995 in Volume 91C, Folio 256 as shown on plat filed Sept. 26, 1996 in Vol. 96C, Folio 402.
- (F) 20' Wide Sewerline Easement as shown on plat filed November 15, 1995 in Volume 91C, Folio 256 (Book. Misc. 879, Page 974, 9/21/81)
- (c) 25' Public Service Company of New Mexico Overhead Transmission Line Easement granted by plat filed December 3, 2014, Plat Book 2014C, Page 131
- (H) Public Sidewalk Easement granted by plat filed December 3, 2014, Plat Book 2014C, Page 131
- 20' Public Sanitary Sewer Easement granted by plat filed December 3, 2014, Plat Book 2014C, Page 131
- K 10' New Mexico Gas Company Easement granted by plat filed December 3, 2014, Plat Book 2014C, Page 131
- (L) 10'x10' Utility Easement granted by plat filed November 15, 1995 in Volume 91C, Folio 256 as shown on plat filed Sept. 26, 1996 in Vol. 96C, Folio 402.
- (M) Private Access Easement granted by plat filed September 13, 2016, Plat Book 2016C, Page 114 for the benefit of Tract 1-A, Windmill Estates.
- (N) 7' CenturyLink Underground Easement granted by plat filed September 13, 2016, Plat Book 2016C, Page 114 P 7' Public Utility Easement granted by plat filed September 13, 2016, Plat Book 2016C, Page 114
- (a) 30' A.M.A.F.C.A. Drainage Easement, filed March 21, 1973, Misc. Vol. 304, Folio 128–131, as shown on plat filed November 15, 1991 in Vol. 91C, Folio 128–131, as shown on plat filed November 26, 1996 in Vol. 96C, Folio 402.
- (R) Approximate location 20' Water Line Easement granted to New Mexico Utilities, Inc. by document filed June 9, 1997 in Book 97–15, Page 5961.
- (S) Approximate location 10' Public Service Company Of New Mexico Underground Easement granted by document filed September 8, 1997 in Book 97-24, Page 7580.
- (T) Easement to be granted to NMDOT for future realignment of connection road if necessary as shown in document filed September 28, 2016 in Doc.# 2016091694.

<u>LEGEND</u>

- Storm Drain Manhole Sanitary Sewer Manhole
- Manhole Unknown Utility
- Power Pole High Voltage Tower
- \bigcirc
- –) Guy Wire
 <u>—.GHW</u> Overhead Wires
- Sanitary Sewer Clean-out Water Meter å
- Water Meter Water Valve Hydrant Fire Dept. Connection
- A
- Cable Pedatal Electric Pedatal
- \boxtimes Electric Transforme
- Traffic Box Telephone Pedesta
- Utility Box
- ----- Metal Post Fence ¢ Light Pole Bollard
- Concrete Symbo
- Gas Meter A
- <u>____</u>Sign _____Sign ______Ho___Handicap Parking Sign ______Wall
- Monitoring Well
- Ø Utility Manhole Water Manhole
- Handicap Parking Space
- MB Mail Box
- R.T.D.M. Raised Trunca Cable Pedstal Utilty Vault
- Control Poin

GENERAL NOTES

- Bearings are New Mexico State Plane Grid Bearings, Central Zone NAD83. 2. Distances are ground.
- Distances along curved lines are arc lengths.
- Record Plat or Deed bearings and distances, where they differ from those established by this field survey, are shown in parenthesis ().
- All corners found in place and held were tagged with a brass disk stamped "HUGG L.S. 9750" unless otherwise indicated hereon.
- All corners that were set are either a 5/8" rebar with cap stamped "HUGG L.S. 9750" or a concrete nail with brass disk stamped "HUGG L.S. 9750" unless so indicated hereon.
- Field surveys were performed during the month of September, 2018. Vertical Datum is based upon the Albuquerque Control Survey Monument "7-B13", Elevation = 5049.611' (NAVD 1988).
- 9. Contour interval is one foot.
- 10. The word Certify or Certification as used herein is understood to be an expression of professional opinion by the surveyor, based upon his best knowledge, information and belief, as such, and does not constitute a guarantee, nor a warranty, expressed or implied.
- A current title report was not provided for this property. Any possible easements, conditions or restrictions that may be disclosed by such a report are not shown on this survey.
- 12. Documents used in the preparation of this survey are as follows Documents used in the preparation of this survey are as follows: Picit entitled PLAT OF TRACTS A-1 AND S-1, LANDS OF BLACK DEVELOPMENT ONE (BEING A REPLAT OF TRACTS A AND B, LANDS OF BLACK DEVELOPMENT ONE; STUATE WITHIN THE TOWN OF ALAMEDA GRANT IN PROJECTED SECTION 8, TOUMSHIP JI NORTH, RANGES 3 EAST, NEW MEXICO PRINCIPAL MEMDIAN, CITY OF ALBUCURRUE, BERNALLLO COUNTY, NEW MEMOLO Bennallic County, New Mexico on September 13, 2016, IN PICE Book 2016G, Page 114.
- Book 2010C, Fage 114. Plat entitled "PLAT OF TRACT 1-A, WINDMILL ESTATES SUBDIVISION, TOWN OF ALAMEDA GRANT, BERNALILO COUNTY, NEW MEXICO, AUGUST 1986", filed in the office of the County Clerk of Bernolillo County, New Mexico on September 26, 1996, in vOLUME 96C, FOLIO 402.

- <u>KEYED</u> INVERT DATE 1 Sanitary Sewer Mr Rim= 5043.96' Rim rusted shut
- 2 Sanitary Sewer MH shown on provided plans Not Found 3 Storm Drain MH Rim= 5049.29' Standing Water Botton elev.= 5030.4'±
- 4 Storm Drain MH Rim= 5048.10' Offset pipes Bottom elev.= 5033.4'± 5 Storm Drain MH Rim= 5046.38' Inv.= 5036.3' (NW) Inv.= 5036.7' (SE) Inv.= 5036.6'± (NE)

6 Storm Drain Inlet Top of Grate= 5044.36' Inv.= 5037.3' (N) Inv.= 5038.8' (S)









Tract "B-1" of Lands of Black Development One, as the same be and B-1, Lands of Black Development One, as the same be and B-1, Lands of Black Development One (Being o Repist of Tracts A and B, Lands of Black Development One), Studies within the Toem of Alameda Grant in Projected Section 8, Township 11 Abuquergue, Berndillo County, New Mexico, Tied in the office of the County Clerk of Berndillo County, New Mexico, on September 13, 2016, in Poil Boox 2016C, Page 114. AND A PORTION OF

Tract "1-A" of Windmill Estates Subdivision, as the same is shown and designated on the plat entitled "Plat of Tract 1-A, Windmill Estates Subdivion, Town of Alameda Grant Bernalillo Courty, New Mexico, filed in the office of the Courty Clerk of Bernalillo Gage 402.

FLOOD ZONE DETERMINATION

The subject property (as shown hereon) appears to lie within "ZONE X" (areas determined to be outside 0.2% annual chance fload plain) and annual chance fload with average depths of less than 1. foot or with drainage areas less than 1 square milie; and areas protected by levees from 1% annual chance fload as shown on Notional Fload Insurance September 28, 2008, and Number 35001C0109H, Map revised August 16, 2012.

NOTE: THE FOLLOWING NOTE APPEARS ON SAID FLOOD INSURANCE RATE MAPS AND APPLIES TO "ZONE X" [SHADED]:

MANINGUE THIS AREA IS SHOWN AS BUING PROTECTED FROM THE IN-PERCENT NOWLAL CHANGE FOOD HAZNED BY LEVEE ON OTHER STRUCTURE. OVERTOPHING OR FAILURE OF THIS STRUCTURE IS POSSIBLE WHCH COLL RESULT IN DESTRUCTURE FLOOD ELEVATIONS AND WATER AUTOMATION FROCEDURES ARE STRUCTURE RECOMMENDED. FOR ADDITIONAL INFORMATION, SEE THE NOTES TO USERS.

NOTE: ON SAID FLOOD INSURANCE RATE MAP NUMBER 35001C010BG, THE GRAPHIC "SHADING" APPEARS TO BE MISSING FROM DESIGNATED "ZONE X" [SHADED].

NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE I-PERCENT-ANNUAL-CHANCE OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM. OVERTOPPING OR FALURE OF ANY LEVEE SYSTEM IS – POSSBLE. FOR ADDITIONAL INFORMATION, SEE THE "ACCREDITED LEVEE NOTE" IN NOTE TO USERS.

NOTE: FLOOD ZONE LINES, AS SHOWN HEREON, ARE TRANSCRIBED AND/OR DERIVED FROM SAID FLOOD INSURANCE RATE MAPS.

SURVEYORS CERTIFICATION

I. Russ P. Hugg, New Mexico Professional Surveyor Number 9750, hereby certify that this Topographic and Boundary Survey Plat was under my direct supervision, that I am reportable for this survey, that this survey is true and correct to the best of my knowledge and beilaf, and that this Topographic and Boundary Survey Plat was and beilaf, and that this Topographic and Boundary Survey Plat and beilaf, and that this report of the survey is survey in the survey is survey in the survey is survey in the survey is survey of the survey is survey of the survey is survey in the survey is survey. The survey is survey in the survey is survey in the survey is survey in the survey in the survey is survey in the survey in the survey is survey in the survey in the survey is survey in the survey in the survey in the survey in the survey is survey in the survey in the

Russ P. Hugg NMPS No. 9750 September 24, 2018

	SURV TEK, INC.		
180536.dwg	Consuling Surveyors	Phone:	505-897-3366
	9354 Valley View Drive, N.W. Albuquerque, New Mexico	87114 Pax:	505-897-3377

- are to include all areas shown within demolition limits or by note.
- flatwork, asphalt, waterlines and meters, gas lines, sewer lines, light poles, buried cables, storm drain piping and structures to be
- capped according to city, county and utility
- granular material compacted to 95% of maximum lab density as determined by ASTM D 1557–78. (Test results to be given to owner) Excavated areas should be backfilled per the geotechnical report prepared for the project.
- off-site except where noted otherwise.
- resulting from the demolition and site clearing operations from the site and dispose of in a
- utilities as shown on these plans is based on records of the various utility companies and,

- Provide erosion control as needed to prevent sediment transport to adjacent drainage ways.
- onsite is not permitted.

- Federal Agencies as required.
- foundations.)
- the Asbestos must be removed in a legal
- immediately contact the project engineer to

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- geotechnical report.

- permitee

- matter prior to grading.
- prepared for the project.

- soils he shall immediately contact the project engineer to provide notification and obtain direction before proceeding with disturbance of said materials or contaminated soil.





Cors Bypass 24SD -Boulevard 16/2 C4.2 -Adjust to Grade-1 Ch:2 A E 🖂 Contractor Existing Irrigation P.O.C. & Components Shall be Relocated to New Parking Island; Match Existing Pipe Size & Material Locate Utility Lines ¥ 0 0 00 0 0

Erosion Control Notes

- 1. Storm water will be discharged into an existing drainage system. Existing Lines shall be inspected prior to Certificate of Occupancy and cleaned if necessary.
- 2. The Storm Water Prevention Plan shall conform to all State Division of Environmental Protection Regulations.
- 3. All Construction equipment will enter thru Designated Construction Entrances.
- 4. Coordinate Entrance locations with the local jurisdiction.
- 5. Inlet Protection Devices and Barriers shall be Repaired or Replaced if they Show Signs of Undermining or Deterioration.
- 6. Silt Fences shall be Repaired to their Original Conditions if Damaged, Sediment shall be Removed from Silt Fences when it Reaches one—half the Height of the Silt Fence.
- 7. The Construction Entrances shall be Maintained in a Condition which will Prevent Tracking or Flow of Mud onto Public Right—of—Way. This may Require Periodic Top Dressing of the Construction Entrances as Conditions Demand.
- 8. All Materials Spilled, Dropped, Washed or Tracked from Vehicles onto Roadways or into Storm Drains must be Removed Immediately.
- 9. Due to the Grade Changes During the Development of the Project, the Contractor shall be Responsible for Adjusting the Erosion Control Measures (Silt Fences, Inlet Protection, Etc...) to Prevent Erosion.
- 10. Contractor shall use Vehicle Tracking Control at all Locations where Vehicles will Enter or Exit the Site. Control Facilities will be Maintained while Construction is in Progress, Moved when Necessary and Removed when the Site is Paved.
- 11. Inlet Protection Devices shall be Installed Immediately upon Individual Inlets becoming Functional.
- 12. This Document is Fluid Allowing for Changes, Modifications, Updates and Alternatives. It is the Responsibility of the Contractor to Keep Record of all Alterations made to the Erosion Control Measures Implemented for the Project on this Plan and in the Storm Water Pollution Prevention Plan.
- 13. Cover Exposed stockpiles of soils, construction and landscaping materials with heavy plastic sheeting.
- 14. Re-vegetate areas where landscaping has died or not taken hold.
- 15. Divert storm water runoff around disturbed soils with berms or dirt swales.
- 16. Contractor to provide permanent stabilization to any areas disturbed by construction by hydroseeding native vegetation (if not otherwise stabilized).
- 17. Contractor is responsible for obtaining a fugitive dust control permit through the Division of Air Quality. All responsibilities relating to the production of the dust control plan shall be the responsibility of the Contractor.

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Legend

Place Inlet Protection at all Inlet Locations to prevent boxes from silting. Silt Fence Limit of Disturbance Construction Entrance / Truck Wash (50'x24' Min.)

Concrete Washout Area Portable Toilet

Gravel Sock Existing Contour Existing Spot Proposed Contour

A CONTRACT OF A

LHM

Hyundai

-30,861 s.f.

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Legend

Place Inlet Protection at all Inlet Locations to prevent boxes from silting. Silt Fence Limit of Disturbance Construction Entrance / Truck Wash (50'x24' Min.)

Concrete Washout Area Portable Toilet

Gravel Sock Existing Contour Existing Spot Proposed Contour

LHM

Hyundai

30,861 s.f.

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1 New Shrub Planter w/ Decorative Stone #1 2 Water Quality Pond w/ Decorative Stone #2 w/ Plant Material $\langle \overline{\mathcal{Z}} \rangle$ Existing Landscape to Remain (4) Rock Retaining Wall See Civil Plans for More Detail; Dirt Shall be Cleaned Out Between Rocks & Decorative Stone #1 Added; Rock Shall be Washed Off After the Completion of Landscape Installation $\left< 5 \right>$ New or Existing Light Pole $\left< \begin{array}{c} 6 \end{array} \right>$ New Bollard Chain Stock Fence **7** Native Landscape 8 Curb Cut for Water Quality Pond; Verify that the Top of Stone is Slightly Below the Lip of the Curb to Allow the Water to Freely Dump into Pond & Not Pond Up 9 Relocated LHM Monument Sign; Verify Exact Location w/ LHM (10) Existing Transmission Power Pole (11) Preserve as Much Plant Material as Possible; Adjust Plant Quantities as Needed & Location to Provide City Required Plant Coverage (12) Irrigation Backflow Preventer

General Landscape Notes:

- Layout & Sheet L3.1 for Details.
- 3. All New Landscaping Shall be in Compliance w/ The Water Conservation Landscaping and Water Waste Ordinance of the City of Albuquerque.
- 4. <u>75% of Living Ground Cover is Provided at 5 Year</u> <u>Maturity. Coverage Includes Tree Canopies at Mature Size</u>.
- 5. Adjust Plant Layout as Needed to Provide Adequate Access to Existing and New Utilities.
- 7. All Landscaping Shall be Completed Prior to Building Occupancy.

PLANT SCHEDULE

<u>TREES</u>	<u>QTY</u>
	8
	25
$\left(\cdot \right)$	13
- }	15
$\overline{\mathbf{O}}$	2
<u>SHRUBS</u>	QTY
	21
for the second s	14
K	22
£.3	34
\mathcal{D}	29
(\cdot)	15
+	13
	30
\bigotimes	38
ORNAMENTAL GRASSES	<u>QTY</u>
$\langle + \rangle$	93
PERENNIALS	<u>QTY</u>
\times	41
MAIEKIAI	
Deservet	· · ·

Decorative Stone #1 – Install a (3) Three Inch Depth over Dewitt Pro5 Weed Barrier or Equal. Stone Shall be Used in all Planting Areas Specified by Keynote #1. Field Verify & Match Existing Stone Used in Adjacent LHM Landscape. Stone Shall be Washed Prior to Installation; No Cobble Stone.	3/L3.1
Decorative Stone #2 – Install over Dewitt Pro5 Weed Barrier; Stone Shall be Used in all Water Harvesting Retention Areas & Cover Weed Barrier; Stone Shall be Crushed, Angular and 4–6" Diameter; Match Color of Decorative Stone #2: No Cobble Stone: See Keynote 2	3/L3.1

Landscape Keynotes

1. All Landscape Material Shall be Fully Irrigated by an Automatic Irrigation System. Drip Irrigation Shall be Used for Plant Material. See Sheet L2.1 & L2.2 for Irrigation 2. See Sheet L3.1 for Landscape Details.

6. It Shall be the Responsibility of the Property Owner to Maintain all Landscaping and Irrigation Facilities After Construction at the End of the Contractor Warranty Period. Any Landscape Which Dies Shall be Replaced by the Owner as Expeditiously as Possible, but in no Case Longer than 60 Days After Notification.

8. All plant Material Has been Selected From the Albuquerque Plant Palette and Sizing List of Low Water Use, Drought Tolerant, or Xeric Species.

BOTANICAL NAME / COMMON NAME

Scale: 1" = 20'

Landscape Data

Overall Site Area = 376,308 s.f. (8.64 ac.) Overall Landscape Area Required = 56,446 s.f. (15%) Overall Landscape Area = 78,939 s.f. (21%) Existing/Native Landscape = 59,851 s.f. New/Modified Landscape Provided = 19,088 s.f. Street Frontage = 811 l.f. (1 Tree per 25 l.f.) Street Trees Required = 32 Trees (32 Provided) New/Modified Parking Lot Area = 36,086 s.f. Parking Lot Landscape Required = 5,413 s.f. (15%) Parking Landscape Provided = 7,037 s.f. (19.5%) Parking Stalls = 215 stalls (1 Tree per 10 stalls) Parking Lot Trees Required = 23 Trees (23 Provided)

<u>SIZE</u>

<u>REMARKS</u>

Cercis canadensis 'Oklahoma' / Oklahoma Redbud	24" Box; Multi-Trunk	Detail: 2/L3.1
Koelreuteria paniculata / Golden Rain Tree	2" Cal. / 6-8' Ht.	Detail: 2/L3.1
Pistacia x 'Red Push' / Pistache	24" Box; 6–8' Ht.	Detail: 2/L3.1
Syringa reticulata 'Ivory Silk' / Ivory Silk Japanese Tree Lilac	2" Cal. / 6-8' Ht.	Detail: 2/L3.1
Vitex agnus—castus / Chaste Tree	24" Box; Multi–Trunk	Detail: 2/L3.1
BOTANICAL NAME / COMMON NAME	SIZE	<u>REMARKS</u>
Baccharis x 'Starn' / Thompson Broom	5 gal	Detail: 1/L3.1
Caesalpinia gilliesii / Yellow Bird of Paradise	5 gal	Detail: 1/L3.1
Cornus alba 'Variegata' / Dwarf Variegated Dogwood	5 gal	Detail: 1/L3.1
Juniperus sabina 'Broadmoor' / Broadmoor Juniper	5 gal	Detail: 1/L3.1
Leucophyllum langmaniae 'Rio Bravo' / Rio Bravo Texas Ranger	5 gal	Detail: 1/L3.1
Mirabilis multiflora / Native Four O'Clock	5 gal	Detail: 1/L3.1
Photinia x fraseri / Photinia	5 gal	Detail: 1/L3.1
Rhaphiolepis indica 'Pink Lady' / Pink Lady Indian Hawthorn	5 gal	Detail: 1/L3.1
Rosmarinus officinalis 'Huntington Carpet' / Huntington Carpet Rosemary	5 gal	Detail: 1/L3.1
BOTANICAL NAME / COMMON NAME	<u>SIZE</u>	<u>REMARKS</u>
Helictotrichon sempervirens 'Sapphire' / Blue Oat Grass	5 gal	Detail: 1/L3.1
BOTANICAL NAME / COMMON NAME	<u>SIZE</u>	<u>REMARKS</u>

Designed of Drafted by Client Nam	by: AT - 136 L - 136 L		REV DATE DESCRIPTION				
		2010 North Redwood Road, Salt Lake City. Utah 84116	801 521–8529 – AWAengineering.net				
Landscape Plan	LHM Hyundai Coors Boulevard	9820 Coors Blvd NW	Albuquerque, New Mexico				
Submittel nöt for Construction							

SCHEDULE

Scale: 1" = 20' <u>General Landscape Notes:</u> Landscape Keynotes 1. All Landscape Material Shall be Fully Irrigated by an Automatic Irrigation System. Drip Irrigation Shall be Used for Plant Material. See Sheet L2.1 & L2.2 for Irrigation (1) New Shrub Planter w/ Decorative Stone #1 2 Water Quality Pond w/ Decorative Stone #2 w/ Plant Material Layout & Sheet L3.1 for Details. 2. See Sheet L3.1 for Landscape Details. $\langle \mathbf{3} \rangle$ Existing Landscape to Remain All New Landscaping Shall be in Compliance w/ The Rock Retaining Wall See Civil Plans for More Detail; Dirt Shall be Cleaned Out Water Conservation Landscaping and Water Waste Ordinance of the City of Albuquerque. Between Rocks & Decorative Stone #1 Added; Rock Shall be Washed Off After the 4. 75% of Living Ground Cover is Provided at 5 Year Completion of Landscape Installation Maturity. Coverage Includes Tree Canopies at Mature Size. $\langle 5 \rangle$ New or Existing Light Pole 5. Adjust Plant Layout as Needed to Provide Adequate Access to Existing and New Utilities. 6 New Bollard Chain Stock Fence 6. It Shall be the Responsibility of the Property Owner to Maintain all Landscaping and Irrigation Facilities After $\langle 7 \rangle$ Native Landscape Designed by: AT Construction at the End of the Contractor Warranty Period. Any Landscape Which Dies Shall be Replaced by the Owner as Expeditiously as Possible, but in no Case Drafted by: ALT 8 Curb Cut for Water Quality Pond; Verify that the Top of Stone is Slightly Below the Lip of the Curb to Allow the Water to Freely Client Name: Longer than 60 Days After Notification. LHM Dump into Pond & Not Pond Up 7. All Landscaping Shall be Completed Prior to Building Occupancy. 9 Relocated LHM Monument Sign; Verify Exact Location w/ LHM 18—136 LS 8. All plant Material Has been Selected From the Albuquerque Plant Palette and Sizing List of Low Water (10) Existing Transmission Power Pole Use, Drought Tolerant, or Xeric Species. (11) Preserve as Much Plant Material as Possible; Adjust Plant Quantities as Needed & Location to Provide City Required Plant Coverage (12) Irrigation Backflow Preventer Landscape Notes: 1. Plant material quantities are provided for bidding purposes only. It is the contractors responsibility to verify all quantities listed on the plans and the availability of all plant materials and their specified sizes prior to submitting a bid. The contractor must notify the Landscape Architect prior to submitting a bid if the contractor determines a quantity deficiency or availability problem with specified material. The contractor shall provide sufficient quantities of plants equal to the symbol count or to fill the area shown on the plan using the specified spacing. Plans take precedence over plant schedule quantities. 2. Contractor shall call New Mexico One Call before excavation for plant material. Prior to construction, the contractor shall be responsible for locating all underground utilities and shall avoid damage to all utilities during the course of the work. It shall be the responsibility of the contractor to protect all utility lines during the construction period, and repair any and all damage to utilities, structures, site appurtenances, etc. which occurs as a result of the landscape construction. 4. The landscape contractor shall examine the site conditions under which the work is to be performed and notify the general contractor in writing of unsatisfactory conditions. Do not proceed until conditions have been corrected. 5. The contractor shall provide all materials, labor and equipment required for the proper completion of all landscape work as specified and shown on the drawings. 6. See civil and architectural drawings for all structures, hardscape, grading, and drainage information. 7. Contractor safety and cleanup must meet OSHA standards at all times. All contractors must have adequate liability, personnel injury and property damage insurance. Clean-up must be performed daily, and all hardscape areas must be washed free of dirt and mud on final cleanup. Construction must occur in a timely manner. 8. All new plant material shall conform to the minimum guidelines established by the American Standard for Nursery Stock Published by the American Association of Nurseryman, Inc. In addition, all new plant material D shall be of specimen quality. Ø 9. The Owner/Landscape Architect has the right to reject any and all plant material not conforming to the plans and specifications. 10. Any proposed substitutions of plant species shall be made with plants of equivalent overall form, height, ule branching habit, flower, leaf, color, fruit and culture only as approved by the Landscape Architect. 11. It is the contractors responsibility to furnish all plant materials free of pests or plant diseases. It is the contractor's obligation to maintain and warranty all plant materials. BO 12. The contractor shall take all necessary scheduling and other precautions to avoid winter, climatic, wildlife, or other damage to plants. The contractor shall install the appropriate plants at the appropriate time to guarantee life of plants Plan 13. The contractor shall install all landscape material per plan, notes and details. Ś 14. All existing and relocated trees shall be properly protected. Trees damaged during construction shall be 000 replaced at no cost to the owner. 15. Plant names are abbreviated on the drawings, see plant schedule for symbols, abbreviations, botanical, common names, sizes, estimated quantities and remarks. ab U 16. No grading or soil placement shall be undertaken when soils are wet or frozen. 17. Existing topsoil to be stripped and stockpiled for landscape use. Contractor shall verify existing topsoil amounts and quality with the general contractor. The landscape contractor shall perform a soil test on existing & imported topsoil and amend per soil test recommendations. Soil test to be done by certified soil testing agency. Provide new imported topsoil as needed from a local source. Imported topsoil must be a premium quality dark <u>C</u> nda sandy loam, free of rocks, clods, roots, and plant matter. Topsoil to be installed in all landscaping areas. 18. Prior to placement of topsoil in all landscaping areas, all subgrade areas shall be loosened by scarifying the soil to a depth of 6 inches in order to create a transition layer between existing and new soils. 19. Provide an (8) eight inch depth of stockpiled or imported topsoil in all shrub areas. 20. All plant material holes shall be dug twice the diameter of the rootball and 6 inches deeper. Excavated material shall be removed from the site and replaced with plant backfill mixture. The top of the root balls, shall be planted flush with the finish grade. 21. Plant backfill mix shall be composed of 3 parts topsoil to 1 part soil conditioner, and shall be mixed at the planting hole. Deep water all plant material immediately after planting. Add backfill mixture to depressions as needed. Fine ground wood mulch shall be installed in the plant well and extend up near the base of the plant. Wood mulch shall be used around the base of the plant with the remainder of the planter in the specified decorative stone. 22. All new plants to be balled and burlapped or container grown, unless otherwise noted on plant schedule. 23. Upon completion of planting operations, all landscape areas with trees, shrubs, and perennials, shall receive a (4) four inch depth of specified stone over Dewitt Pro5 Weed Barrier or equal. Stone shall be evenly spread on a carefully prepared grade free of weeds. The top of stone should be slightly below finish grade and concrete areas. Stone shall be washed upon completion of installation. Submitt 24. All deciduous trees shall be double staked per tree staking details. It is the contractors responsibility to remove tree staking in a timely manner once staked trees have taken root. Deciduous tree ties to be V.I.T. Cinche Ties #CT32. hột tộr 25. The contractor shall comply with all warranties and guarantees set forth by the Owner, and in no case shall that period be less than one year following the date of completion and final acceptance. onstructio

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04 Feb, 2019

L1.2

SHEET NO.

1-800-321-ALERT

2019-02-08 08:16 Scale: 1" = 20 . 20.24 gpm <u>55.00 psi</u> 55.00 psi General Irrigation Notes: 1. See Sheet L1.1 & L1.2 for Plant Layout. See Sheet L3.1 for Details. 4.36 gpm <u>20.24 gpm</u> 15.88 gpm 2. <u>Main Service Line & Other Irrigation Components Are Shown In Paved Or Hardscape</u> Surfaced For Clarity Purposes ONLY! Install All Irrigation Components within Landscaped Areas. 2 30.00 psi 0.57 psi 0.06 psi 0.00 psi 3. Adjust Plant Material Location as Needed to Provide Easy Access to Irrigation Equipment. 4. The Existing Irrigation P.O.C. Shall be Relocated to New Parking Island. See Demo & Utility Plan for More Detail. Existing Irrigation System Shall Remain Functional & Continue to Provide Irrigation to The Site. The New Irrigation System Shall Tie into the Existing Irrigation Mainline as Shown on Plan & Irrigate New Plant Material. Field Verify Condition of Existing P.O.C. Components & Update as Needed to Provide a Reliable Irrigation System. See Plan for Proposed P.O.C. Components; Verify Size of Mainline & Pressure to See if it Will Function With New Irrigation. The System is Design for a Minimum of 50 psi. 3.25 psi 33.88 psi 0.20 psi 1.97 psi 0.00 psi 14.00 psi 5. A New Irrigation Controller in a Pedestal Shall be Installed for New Irrigation System in Shrub Planter. Field Locate Existing Irrigation Controller & Adjust Watering Times as Needed to Coincide With New Watering Times. Designed by: AT <u>55.00 psi</u> 4.95 psi Drafted by: ALT

1 Inch Drip Control Zone Kit; Install in Standard Valve Box w/ 3" Depth of Gravel over Weed Barrier; Install w/ Water Proof Wire Connectors	6/L3.1
Install in 10" Round Valve Box w/ 3" Depth of Gravel over Weed Barrier	7/L3.1
1/2" Inch Size; Install at End of Mainline in a 10" Round Valve Box w/ 6" Depth Sump of Gravel Over Weed Barrier	10/L3.;
Install 1" Feeder Line To All Drip Areas	11/L3.
ematic; Adjust as Needed b./Orn. Grass., 5 per Tree ne	9&14/L 3
1 Inch Size; Install in 10" Round Valve Box w/ Weed Barrier and Gravel Sump	4/L3 .1
1 Inch Size; Backflow Preventer shall be Properly Installed & Tested to Meet all State & Local Health & Safety Laws & Ordinances; Install in Artificial Rock Enclosure (110–ST from DekoRRa Products, LLC.); Rock Color to be Sandstone Tan; Install on Concrete Pad w/ Frost Bag (602–DT); Secure Enclosure by Anchoring Each Corner w/ a Bolt	13/L3.
1 Inch Size; Schedule 80 Fittings Shall be Used for Mainline Components	8/L3. :
See Plan for Pipe Sizes; Pipes Unmarked Shall be 1 Inch; Minimum Pipe Size Shall be 1 Inch for PVC Pipe	8/L3.
See Plan for Location of Controller; Coordinate Power Supply With Building Electrical Contractor	12/L3.
Mount on Outside of Bldg.; Install per Manufacturer's Recommendations	None
Contractor shall Coordinate the Installation of Sleeving with the Installation of Concrete Flatwork and Asphalt Paving. All Sleeving is by the Landscape Contractor unless otherwise noted.	5/L3.
, ,	standard valve Box w/ 3 Depth of Gravel over Weed Barrier; Install w/ Water Proof Wire Connectors Install in 10" Round Valve Box w/ 3" Depth of Gravel over Weed Barrier 1/2" Inch Size; Install at End of Mainline in a 10" Round Valve Box w/ 6" Depth Sump of Gravel Over Weed Barrier Install 1" Feeder Line To All Drip Areas rematic; Adjust as Needed b./Orn. Grass., 5 per Tree 1 Inch Size; Install in 10" Round Valve Box w/ Weed Barrier and Gravel Sump 1 Inch Size; Backflow Preventer shall be Properly Installed & Tested to Meet all State & Local Health & Safety Laws & Ordinances; Install in Artificial Rock Enclosure (110–ST from DekoRRa Products, LLC.); Rock Color to be Sandstone Tan; Install on Concrete Pad w/ Frost Bag (602–DT); Secure Enclosure by Anchoring Each Corner w/ a Bolt 1 Inch Size; Schedule 80 Fittings Shall be Used for Mainline Components See Plan for Pipe Sizes; Pipes Unmarked Shall be 1 Inch; Minimum Pipe Size Shall be 1 Inch for PVC Pipe See Plan for Location of Controller; Coordinate Power Supply With Building Electrical Contractor Mount on Outside of Bldg.; Install per Manufacturer's Recommendations

VALVE SCHEDULE

ALVE SIZE	IRRIGATION TYPE	FLOW (GPM)	PSI	PSI @ POC	PRECIP. RATE
1 "	Shrubs – Drip Emitters	4.36	33.64	49.88	0.24 in/h
1"	Shrubs – Drip Emitters	4.25	33.88	50.05	0.35 in/h
1 "	Shrubs – Drip Emitters	<i>3.72</i>	32.92	47.61	0.59 in/h
1 "	Shrubs – Drip Emitters	3.99	33.31	47.45	0.51 in/h
1 "	Shrubs – Drip Emitters	3.20	32.50	46.78	0.25 in/h
1 "	Shrubs – Drip Emitters	3.90	33.36	49.05	0.51 in/h
1 "	Shrubs – Drip Emitters	2.54	31.98	46.67	0.31 in/h
1 "	Shrubs – Drip Emitters	3.85	33.02	49.39	0.24 in/h

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Scale: 1" = 20'

Irrigation Notes:

- Prior to construction, the contractor shall be responsible for locating all underground utilities and shall avoid damage to all utilities during the course of the work. It shall be the responsibility of the contractor to protect all utility lines during the construction period, and repair any and all damage to utilities, structures, site appurtenances, etc. which occurs as a result of the landscape construction.
- The irrigation contractor shall examine the site conditions under which the work is to be performed and notify the general contractor in writing of unsatisfactory conditions. Do not proceed until conditions have been corrected.
- The contractor shall provide all materials, labor and equipment required for the proper completion of all irrigation work as specified and shown on the drawings.
 See civil and architectural drawings for all structures, hardscape, grading, and drainage information.
- 5. Contractor safety and cleanup must meet OSHA standards at all times. All contractors must have adequate liability, personnel injury and property damage insurance. Clean—up must be performed daily, and all hardscape areas must be washed free of dirt and mud on final cleanup. Construction must occur in a timely manner.
- 6. The Owner/Landscape Architect has the right to reject any and all irrigation material not conforming to the plans and specifications.
- 7. The contractor shall install all irrigation material per plan, notes and details.
- 8. Irrigation system components must be premium quality only and installed to Manufactures requirements and specifications. The contractor is responsible for checking state and local laws for all specified materials and workmanship. Substitutions must be approved by landscape architect. Provide owner and maintenance personnel with instruction manual and all products data to operate, check, winterize, repair, and adjust system.
- 9. Irrigation system guarantee for all materials and workmanship shall be one year from the time of branch opening or final project acceptance (whichever is longer). Guarantee will include, but is not limited to winterizing, spring activation, repair, trench setting, backfilling depressions, and repairing freeze damage. Contractor must contact Landscape Architect to schedule pre and post guarantee inspection meetings. Failure to do so will mean the official guarantee period has not been activated or de-activated.
- 10. Irrigation system check must be done before the system is backfilled. Irrigation mainline and each control valve section must be flushed and pressure checked. Assure the complete system has no documented problems and full head to head coverage with adequate pressure for system operation. Adjust system to avoid spray on building, hardscape, and adjacent property. Any problems or plan discrepancies must be reported to the landscape architect.
- 11. Irrigation laterals must be schedule 40 P.V.C. with schedule 40 fittings. one (1) inch minimum size. Solvent weld all joints as per manufactures specifications for measured static p.s.i. Teflon tape all threaded fittings. The minimum depth of lateral lines shall be twelve (12) inches. Adapt system to manual compression air blowout.
- 12. Irrigation mainline that are 2" and smaller mainlines shall be schedule 40 PVC pipe with schedule 80 fittings. Solvent weld all joints as per manufactures specifications for measured static pressure. Use teflon tape on all threaded joints. Line depth must be Twenty—four (24) inches minimum.
- 13. Install dielectric fittings whenever dissimilar metals are joined.
- 14. Design locations are approximate. Make minor adjustments neccessary to avoid plantings and obstructions such as signs and light standards. Maintain 100(%) percent irrigation coverage of areas indicated.
- 15. Controller valves to be grouped together wherever possible. Install valve boxes with long side perpendicular to walk, curb, lawn, building or landscape features. Valve boxes to conform with finish grades.
- 16. Control valve wire shall be #14 single conductor: white for common wire, red for hot wire and blue for the spare wire. Provide (2) two spare wire that runs the length of the mainline and to the controller. All wiring shall be UF-UL rated. All connections shall be made with water tight connectors (DBR/Y or equivalent) and contained in control valve boxes. Provide 36" extra wire length at each remote control valve in valve box. Install control wiring with main service line where possible. Provide slack in control wires at all changes in direction..
- 17. Control valve size, type, quantity, and location to be approved by landscape architect. install in heavy duty plastic vandal proof box. Size boxes according to valve type and size for ease of maintenance and repair. Install one (1) cubic feet of pea gravel for sump in base of boxes. Boxes shall be Carson Brooks or equal.
- 18. Quick couplers shall be a Rain Bird 44–RC with a 1 inch Lasco unitized swing joint assembly and 3/4" brass insert 90° ell outlet. Support with rebar in each retainer lug. Install where shown on the plans.
- 19. Irrigation system backfill must occur only after system check is completed as specified. Use only rock free clean fill around pipes, valves, drains, or any irrigation system components. Water settle all trenches and excavations.
- 20. All irrigation pipe running through walls, under sidewalk, asphalt, or other hard surface shall be sleeved prior to paving. It is the irrigation contractors responsibility to coordinate sleeving with concrete and pavement contractors. Sleeves will be schedule 40 P.V.C. The depth for mainline sleeves shall be twenty—four (24) inches minimum. Depth for lateral sleeves shall be sixteen (16) inches minimum. Sleeves shall be a minimum of two sizes larger than the pipe to be sleeved. All valve wiring shall be contained in separate sleeving.
- 21. Plans are diagrammatic and approximate due to scale. where possible, all piping is to be installed within the planting areas. No tees, ells, or changes in direction shall occur under hardscape.
- 22. It is the contractors responsibility to verify all quantities based upon the plan prior to completion of a construction cost estimate.
 23. The irrigation contractor shall flush and adjust all sprinkler heads for optimum performance and to
- prevent possible overspray onto walks, roadways, and/or buildings as much as possible.
- 24. This shall include selecting the best degree of arc to fit the site and to throttle the flow control of each valve to obtain the optimum operating pressure for each system. All mainlines shall be flushed prior to the installation of irrigation heads.
- 25. All sprinkler heads shall be set perpendicular to finish grade of the areas to be irrigated and shall be installed 6–8" from buildings walls, or within 4" of pavement, curbs, or header edges.
- 26. Drip system piping shall consist of a rigid schedule 40 PVC pipe distribution system connecting drip irrigated planter areas. Poly tubing or drip line shall be run off the rigid PVC in each planting area or island with a PVC to poly tubing adapter. No poly tubing shall run under pavement.
- 27. Electrical power source at the controller location shall be provided by electrical contractor. Contractor shall verify location of controller prior to installation with owner.
- 28. Provide and install all manufacturer's recommended surge and lighting protection equipment on all controllers.
- 29. All lines shall slope to manual drains (see details). If field conditions necessitate additional drains, these drains shall be installed for complete drainage of the entire system. Provide a gravel sump under each drain. All drains shall be a minimum of 6" below grade.
- 30. Upon completion and approval of irrigation system, irrigation contractor to provide the owner with two sets of drawings indicating actual location of piping, valves, sprinkler heads, wiring, and zones.
- 31. An irrigation zone map shall be provided in a protective jacket and be kept with the main irrigation controller. The map shall show all approved irrigation and include all zone valve locations.
- 32. It shall be the responsibility of the sprinkler contractor to demonstrate to the Owner the proper winterization and start-up procedures for the entire system prior to final payment.

Designed by: AT Drafted by: ALT Client Name: LHM 18—136 IR 0 ule BO Ś Pla 0 0 tion U da 1 apmi

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