### CITY OF ALBUQUERQUE

*Planning Department* Brennon Williams, Interim Director



Mayor Timothy M. Keller

August 5, 2019

Philip Clark Clark Consulting Engineers 19 Ryan Road Edgewood, NM 87015

#### RE: 323 Jefferson Apartments 323 Jefferson SE Grading Plan Stamp Date: 7/23/19 Hydrology File: K17D116

Dear Mr. Clark:

PO Box 1293Based on the submittal received on 7/29/19 the above-referenced Grading Plan is approved for<br/>Building Permit and SO-19.Prior to Certificate of Occupancy (For Information):Albuquerque1. Engineer's Certification, per the DPM Chapter 22.7: Engineer's Certification Checklist For<br/>Non-Subdivision is required.NM 871032. The sidewalk culverts must be inspected and approved by Storm Drain Maintenance (Augie<br/>Armijo at (505) 857-8607).

A Bernalillo County Recorded <u>Drainage Covenant (No Public Easement)</u> is required for the stormwater control pond. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee (\$25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

If you have any questions, I can be contacted at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson Senior Engineer, Planning Dept. Development Review Services

3" ASPHALT PAVEMENT -OVER 8" COMPACTED BASE



I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

## **GRADING & DRAINAGE PLAN**

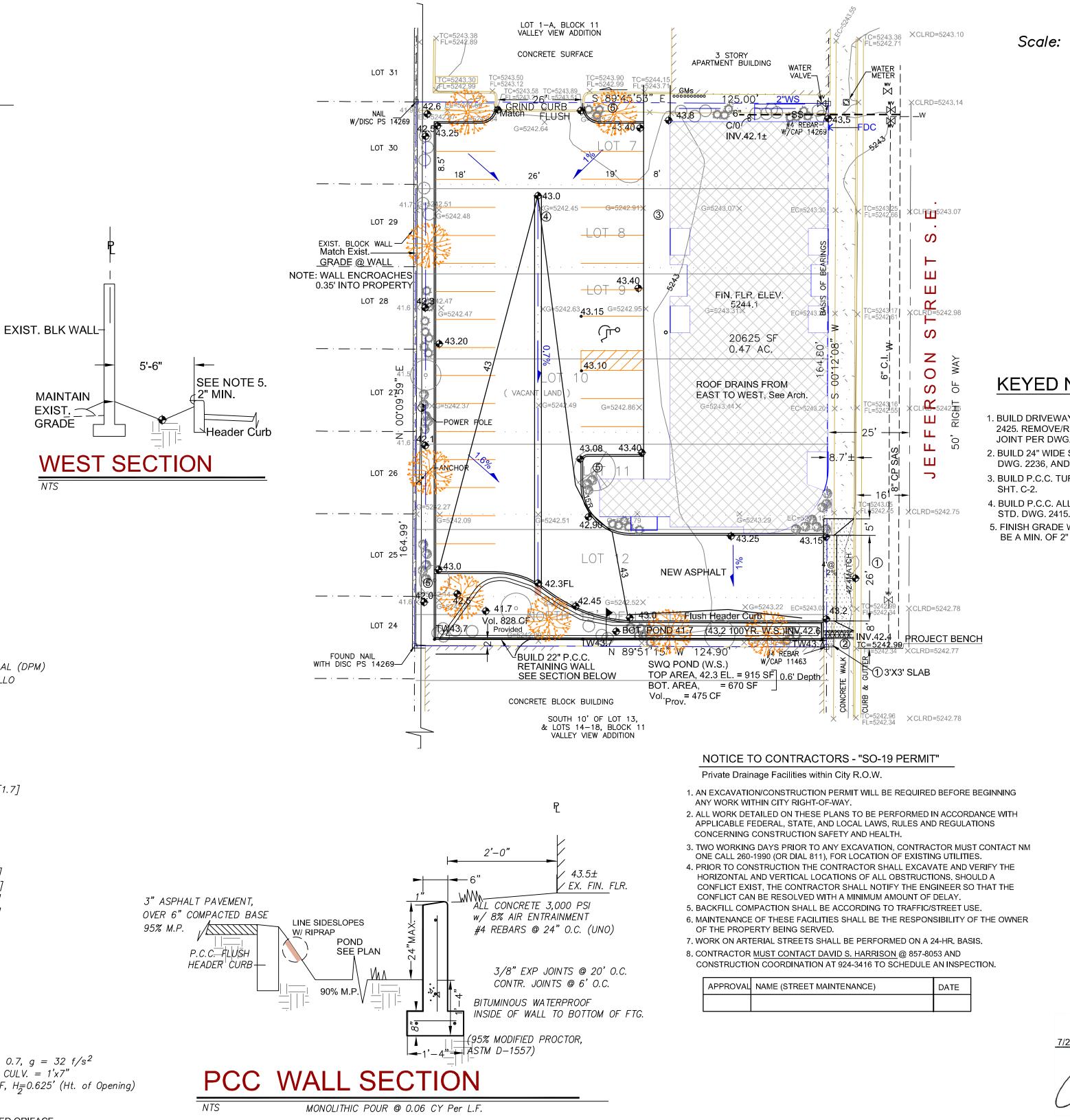
THE RESIDENTIAL APARTMENT BUILDING PROJECT IS LOCATED IN THE KNOB HILL AREA OF ALBUQUERQUE APPROXIMATELY 3 MILES EAST OF THE DOWNTOWN CORE. THE GRADING & DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY FLOOD HAZARD ORDINANCE, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS AND EXISTING IMPROVEMENTS: INCLUDING EXISTING SIDEWALK, AND STREET IMPROVEMENTS. 2. PROPOSED IMPROVEMENTS: 5735 SQUARE FOOT BUILDING

FOOTPRINT, PARKING, ASPHALT DRIVES, NEW GRADE ELEVATIONS, ADA ACCESS AND LANDSCAPING.

3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS. 4. QUANTIFICATION AND ACCEPTANCE OF ALL ON-SITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE NORTH AND SOUTH BY DEVELOPED MX-T PROPERTY. JEFFERSON ST. ON THE EAST IS PAVED WITH CURB AND SIDEWALK, AND MAINTAINED BY THE CITY OF ALBUQUERQUE. THE SITE CURRENTLY DRAINS AT 1% FROM EAST TO WEST. HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED. ONLY MINIMAL GRADING (DRIVEWAY CONSTRUCTION) IS PROPOSED WITHIN THE CITY R.O.W. THE SITE IS NOT IMPACTED ADVERSELY BY ANY OFF-SITE DRAINAGE FLOWS.



# CALCULATIONS

### DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERUQUE ADOPTED BY THE COUNTY OF BERNALILLO DISCHARGE RATE: Q=QPEAK x AREA.."Peak Discharge Rates For Small Watersheds" VOLUMETRIC DISCHARGE: VOLUME = EWeighted x AREA P100 = 2.35 Inches, Zone 2 Time of Concentration, TC = 12 Minutes

DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [ ] = 10 YEAR VALUES

#### EXISTING CONDITIONS

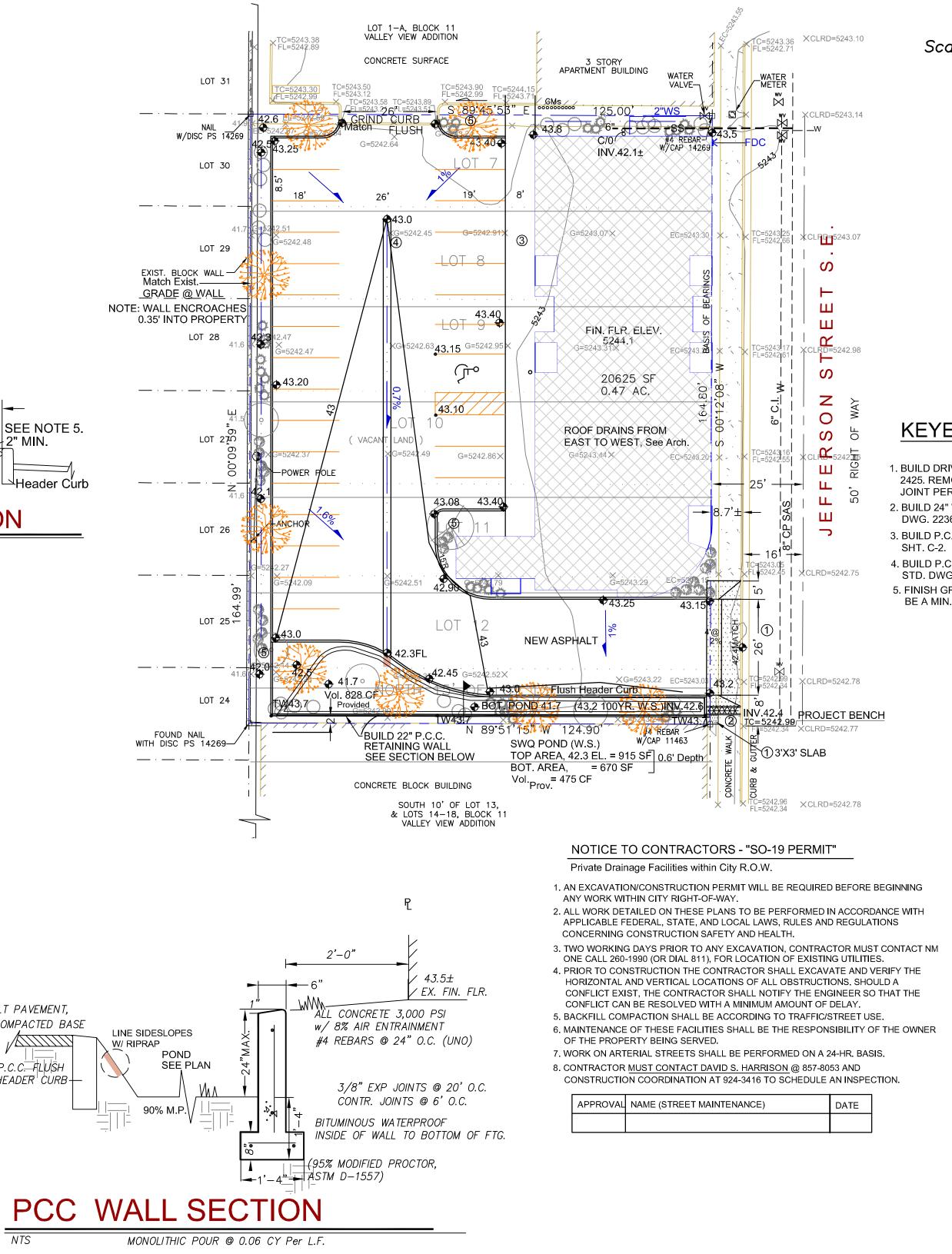
LOT AREA = 0.47 ACRES, WHERE EXCESS PRECIP. 'C' = 1.13 In. [0.52]PEAK DISCHARGE, Q100 = 1.5 CFS [0.8], WHERE UNIT PEAK DISCHARGE 'C' = 3.1 CFS/AC. [1.7] THEREFORE: VOLUME 100 = 1928 CF [887]

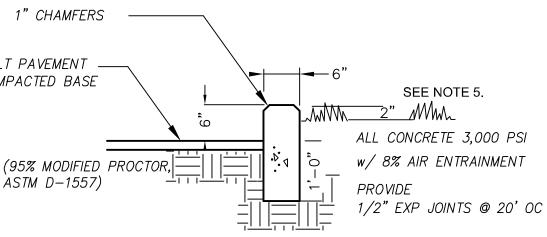
#### **DEVELOPED CONDITIONS**

DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA ARFA IAND TREATM'T Q Deal

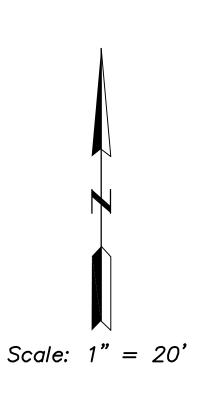
FOR STUDY AREA	<u>AREA</u>	<u>LAND TREATM'T</u>	Q Peak	<u>E</u>			
UNDEVELOPED	0.00 Ac.(0%)	A	1.56[0.38]	0.53[0.13]			
LANDSCAPING/POND	0.09 Ac.(19%)	B .	2.28[0.95]	0.78[0.28]			
GRAVEL & COMPACTED SOIL	0.00 Ac.(0%)	С	3.14[1.71]	1.13[0.52]			
ROOF – PAVEMENT	<u>    0.38  Ac.(8</u> 1%)	D	4.70[3.14]	2.12[1.34]			
	0.47 Ac.						
THEREFORE: $E_{Weighted} = 1.86 \text{ ln.}[0.xx]$ & $VOLUME 100 = 3173 \text{ CF}$ $Q100 = 1.99 \text{ CFS}$ $Q10 = xx \text{ CFS}$ $VOLUME 100 = xx.x$ $Q10 = xx \text{ CFS}$ $VOLUME 10 = xx.x$ INCREASE IN DISCHARGE Q = 0.4 CFS $DEVELOPMENT INCREASE IN VOLUME - 1245 \text{ CF}$							
SIZE REQUIRED STORM WATER QUALITY POND							
1.) HARVEST DEVELOPED POINT RAINFALL, THROUGH SOFT, DEPRESSED LANDSCAPING 3-AREAS TOTAL AREA X 1-INCH = 400 CF±, SEE KEYED NOTE #5. Where: $C = 0.7$ , $g = 32 f/s^2$							

2.) CHECK REQUIRED "FIRST FLUSH" VOLUME OF... SIZE OUTLET: Q = CA $\sqrt{2gH}$  1' W. SDWK. CULV. = 1'x7" 0.34 INCHES X 0.38 AC.(43560 SF)/12 = 469 CF SDWK CULVERT Q = 2.6 CFS A = 0.58 SF, H = 0.625' (Ht. of Opening) USE 2' WIDE FOR Q100 2X CHECK "HANDBOOK OF HYDRAULICS", BRATER KING EQ. (4.17) & Fig. 4.4, RECTANGULAR SHARP-EDGED ORIFACE CHECK W/ Q = CLH w/ LOW HÈAD where: C = 2.7, L = 2',  $Q = 2/3\sqrt{2g} \times LH_2^{3/2}$ ...When  $H_1 = 0$ . THEN: Q = 2.64 CFS....OK THEN: Q = 2.96 CFS...OK





# **CONCRETE HEADER CURB**

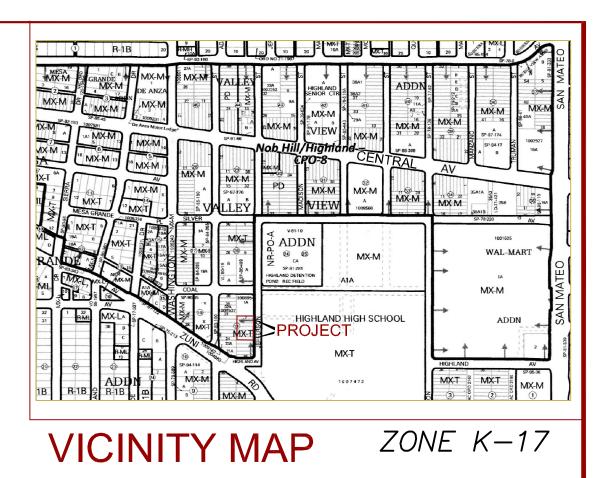


### **KEYED NOTES**

1. BUILD DRIVEWAY PER COA STD. DWG 2425. REMOVE/REPLACE SDWK. TO NEAREST JOINT PER DWG. 2430. 2. BUILD 24" WIDE SIDEWALK CULVERT PER COA ST'D DWG. 2236, AND S.O. 19 NOTICE.

3. BUILD P.C.C. TURNED DOWN SLAB PER DETAIL

4. BUILD P.C.C. ALLEY GUTTER SIMILAR TO COA 5. FINISH GRADE WITHIN PLANTER AREAS SHALL BE A MIN. OF 2" BELOW TOP OF CURB.



### NOTES

- 1. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 1986, 9TH UPDATE.
- 2. AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
- 3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 4. ALL LANDSCAPING AREA SHALL BE SOFT-LINED WITH NATIVE VEGETATION AND/OR GRAVEL/GRAVEL CRUSHER FINES.
- 5. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
- 6. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1012, NATIVE SEED MIX.
- 7. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1 FOR HEIGHTS > THAN 3 FT. DIMENSIONS ARE TO FACE OF CURB, UNLESS NOTED OTHERWISE

## LEGEND

EXIST. SPOT ELEVATION	X 5242.0			
EXIST. CONTOUR	10			
NEW SPOT ELEVATION	<b>€</b> 42.0			
NEW CONTOUR	<u> </u>			
NEW SWALE -				
DRAINAGE DIRECTION, EXISTING				
NEW CONCRETE CURB (0.5' HEIGHT)				
NEW P.C.C., CONCRETE				
FLOWLINE	FL			
FLOWLINE EXISTING POWER POLE	FL O P.P.			
EXISTING POWER POLE	0 P.P.			
EXISTING POWER POLE EDGE OF ASPHALT TYPE 'VVL' RIPRAP, 6" BURY	0 P.P.			
EXISTING POWER POLE EDGE OF ASPHALT TYPE 'VVL' RIPRAP, 6" BURY (AVG. DIA. 4", )	o P.P. EA			

# **PROJECT DATA**

### LEGAL DESCRIPTION

LOTS 7-13, BLOCK 11, VALLEY VIEW ADDITION ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

PROJECT BENCHMARK

TOP OF CURB, PROJECTED SE CORNER: ELEVATION = 5242.99, SEE PLAN. NGVD88. TIED FROM ACS "6-K18-A" (5249.99).

TOPOGRAPHIC DESIGN SURVEY

PROVIDED BY THE SURVEY OFFICE. DATED MARCH 2018, TONY HARRIS, PLS 11463.



Clark Consulting Engineers 19 Ryan Road Edgewood, New Mexico 87015								
Tele: (505) 281-2444			Cell: (505) 264-6042					
DATE	REVISI	ON	LOTS 7–13, BLOCK 11, VALLEY VIEW ADDITION ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO					
12/24/18	Addr. COA Com.		323 JEFFERSON ST., SE					
2/28/19	Remove Refuse		3-STORY APARTMENTS					
	Re-Grade							
4/12/19 7/23/19	ADD'L		GRADING & DRAINAGE PLAN					
DESIGNED BY: PWC DRAWN		BY: CCE	JOB #: GRUN	M_JEFF				
CHECKED BY: PWC DATE:		NOV 2018	FILE #: G/D	)	C-1 OF 1			