CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

October 26, 2018

Jean J. Bordenave, PE
PO Box 91194
Albuquerque, NM, 87199

RE: Lead Ave. SW Condominiums
Grading Plan
Stamp Date: 7/10/17
Hydrology File: K13D075

Dear Mr. Bordenave:

Based upon the information provided in your re-submittal received 7/7/2017, the Grading Plan is approved for Building Permit and SO-19 Permit. For the SO-19 Permit, please follow the attached SO-19 Notes.

Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter. Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

Please provide Drainage Covenant per Chapter 17 of the DPM prior to Permanent Release of Occupancy for the retention ponds. Please submit these to the 4th floor of Plaza de Sol. A $25 fee for each will be required.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov .

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

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Private Drainage Facilities within City Right-of-Way
Notice to Contractor
(Special Order 19 ~ "SO-19")

1. An excavation permit will be required before beginning any work within City Right-Of-Way.
2. 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.
3. Two working days prior to any excavation, the contractor must contact **New Mexico One Call, dial "811"** [or (505) 260-1990] for the location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
5. Backfill compaction shall be according to traffic/street use.
6. Maintenance of the facility shall be the responsibility of the owner of the property being served.
7. Work on arterial streets may be required on a 24-hour basis.
8. Contractor must contact Jason Rodriguez at 235-8016 and Construction Coordination at 924-3416 to schedule an inspection.

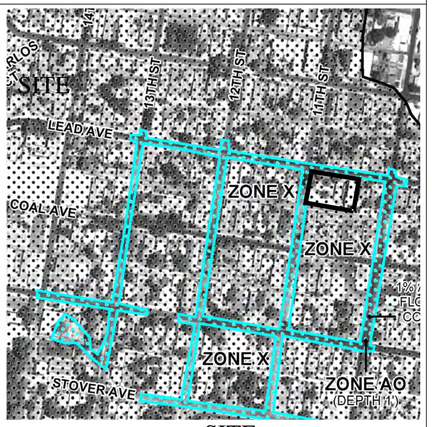
GRADING NOTE:
FINISHED GRADES SHOWN ARE FOR THE FINAL SURFACE, AFTER LANDSCAPING.

KEYED NOTES

1. EXISTING LIVING UNITS, GARAGES, SIDEWALKS AND LANDSCAPING.
2. NEW LIVING UNITS (B1–B4 & C1–C4) w/ ATTACHED GARAGES. SEE ARCHITECTURAL.
3. NEW 4' WIDE CONCRETE SIDEWALK. SEE DETAIL SHEET C2–2.
4. NEW 5' WIDE CONCRETE SIDEWALK.
5. NEW VALLEY GUTTER PER DETAIL SEE SHT. C2–2 FOR DETAILS.
6. NEW HEADER CURB. SEE SHEET C2–2 FOR DETAILS.
7. NEW ASPHALT ACCESS DRIVE. SEE SECTION SHEET C2–2 FOR DETAILS.
8. NEW CONCRETE DRIVE PAD. CONSTRUCT PER PLAN DIMENSIONS AND ELEVATIONS SHOWN ON THIS SHEET AND CROSS SECTION PER COA STD. DWG. 2425.
9. 2' WIDE X 4" HIGH ASPHALT RIDGE.
10. WATER HARVESTING POND w/ 6" CONCRETE CHANNEL OUTLET.
11. COMBINATION WATER HARVESTING/DETENTION POND. SEE POND SECTION ON SHEET C2–2. GRAVEL LAYER 14" THICK. INSTALL 2–6" PVC PIPES FROM POND 11 TO POND 12. INSTALL CONTINUOUS IMPERMEABLE POND LINER ON SOUTH SIDE OF POND. SEE POND SECTION SHEET C2–2.
12. COMBINATION WATER HARVESTING/DETENTION POND. GRAVEL LAYER 14" THICK. INSTALL 4" PVC PIPE TO SIDEWALK CULVERT. INLET END OF 4" PVC OUTLET PIPE TO BE CAPPED WITH A X" DRILLED HOLE AT CAP INVERT TO CONTROL DISCHARGE RATE. INSTALL IMPERMEABLE POND LINER ON SOUTH SIDE OF POND. SEE POND SECTION SHEET C2–2.
13. COMBINATION WATER HARVESTING/DETENTION POND. GRAVEL LAYER 20" THICK. INSTALL 4" PVC PIPE TO SIDEWALK CULVERT. INSTALL IMPERMEABLE POND LINER ON SOUTH SIDE OF POND. SEE POND SECTION SHEET C2–2.

VICINITY MAP K-13

FEMA FIRM MAP 333



SITE

LEGAL DESCRIPTION

LOTS 10–A, 11–A & 12–A, BLOCK 33, RAYNOLDS ADDITION

PERMANENT BENCHMARK

COA STATION 6–K13 ELEVATION 4959.622 (NAVD 1988)

designed	date	drawn	date

no.	date	remarks	by

REVISIONS

GRADING AND DRAINAGE LEAD AVE. SW CONDOMINIUMS

ALBUQUERQUE, NEW MEXICO

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 9 JEAN J. BORDENAVE NEW MEXICO

07/07/17

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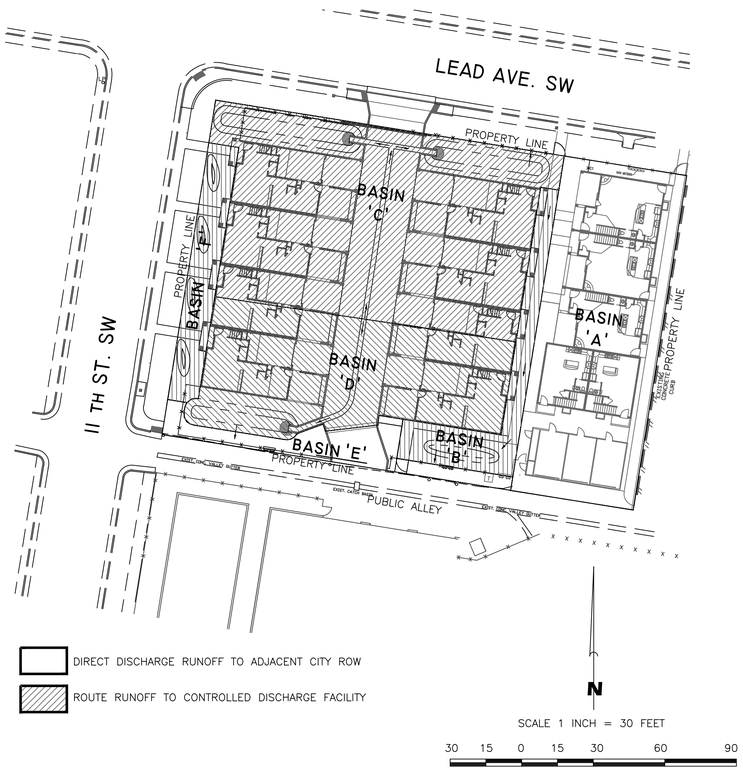
design	drawn
JJB	METO

SHEET C1-2

SITE DRAINAGE BASINS



GRADING NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE NEW MEXICO ONE CALL SYSTEM AT 260-1990 FOR LOCATION OF EXISTING UTILITIES.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY THE CONSTRUCTION OF TEMPORARY SOIL BERMS OR SILT FENCES AT PROPERTY LINES AND WETTING SOIL TO PREVENT IT FROM BLOWING. IF THE SITE IS CONTROLLED BY A SWPPP PLAN, EROSION CONTROL SHALL BE ACCOMPLISHED ACCORDING TO THE PLAN.

2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

3. THE CONTRACTOR SHALL SECURE THE APPROPRIATE BARRICADING, TOP SOIL DISTURBANCE AND EXCAVATION PERMITS FROM THE CITY PRIOR TO BEGINNING CONSTRUCTION.

DRAINAGE NOTES

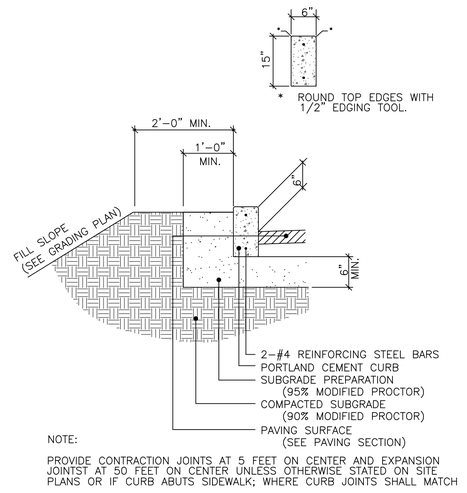
1. THE SITE WAS PREVIOUSLY DEVELOPED. ALL BUT ONE OF THE ORIGINAL STRUCTURES WERE RAZED. THE REMAINING STRUCTURE (BUILDING A) HAS BEEN COMPLETELY REMODELED UNDER A PREVIOUS BUILDING PERMIT. THE GARAGES SOUTH OF BUILDING A WERE CONSTRUCTED UNDER THAT SAME BUILDING PERMIT. THE BALANCE OF THE SITE IS VACANT.

THE PRIVATE PROPERTY IS LOCATED IN ZONE 'X' AND THE STREETS (LEAD AVE. AND 11th ST. ARE LOCATED IN A DESIGNATED FLOOD HAZARD AREA (AO LESS THAN 1 FOOT) PER FEMA FIRM MAP 333H DATED AUGUST, 2012.

2. THE SITE IS LOCATED IN RAINFALL ZONE 2. DUE TO INADEQUATE STORM DRAINAGE FACILITIES IN THE AREA THE SITE HAS AN ALLOWABLE PEAK DISCHARGE RATE OF 2.75 CFS/ACRE PER COA HYDROLOGY PRE DESIGN MEETING. THE EXCESS FLOW WILL BE DETAINED IN SURFACE PONDS WITH CONTROLLED DISCHARGES TO PUBLIC RIGHTS-OF-WAY. RUNOFF FROM BASIN 'A' WAS ALLOWED TO DIRECT DISCHARGE TO THE ALLEY IN THE PREVIOUS BUILDING PERMIT AS AN EXISTING CONDITION. RUNOFF FROM BASIN 'B' IS ROUTED THROUGH A RETENTION POND WHICH RETAINS WATER HARVESTED FLOWS. RUNOFF FROM BASINS 'C' AND 'D' IS ROUTED TO PONDS WITH CONTROLLED DISCHARGE OUTLETS. RETENTION OF WATER HARVESTING (0.44" FROM IMPERVIOUS AREAS) IS PROVIDED IN THE BASE OF THESE PONDS. BASIN 'E' IS DIRECT DISCHARGED TO THE ALLEY DUE TO GRADE RESTRAINTS. BASIN 'F' WATER HARVESTED FLOW WILL BE RETAINED IN SHALLOW FRONT YARD PONDS.

3. TOPO SURVEY DATA SHOWN ON THIS DRAWING WAS OBTAINED BY HARRIS SURVEYING, INC. DATED OCTOBER, 2013.

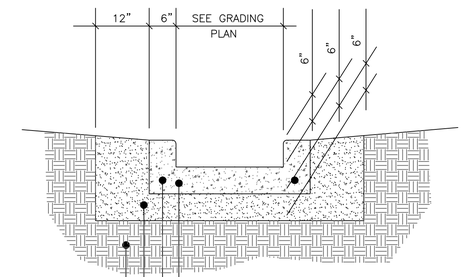
HEADER CURB



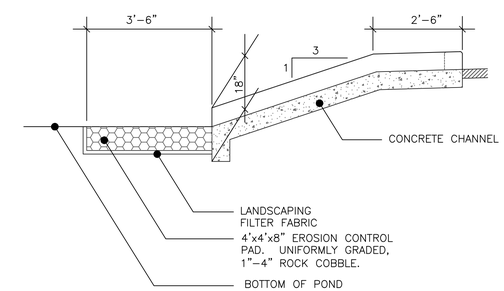
NOTE:

PROVIDE CONTRACTION JOINTS AT 5 FEET ON CENTER AND EXPANSION JOINTST AT 50 FEET ON CENTER UNLESS OTHERWISE STATED ON SITE PLANS OR IF CURB ABUTS SIDEWALK; WHERE CURB JOINTS SHALL MATCH

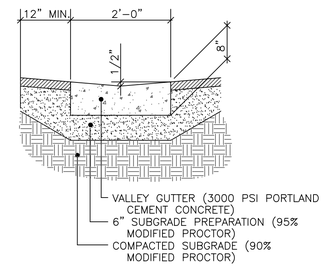
CONCRETE CHANNEL



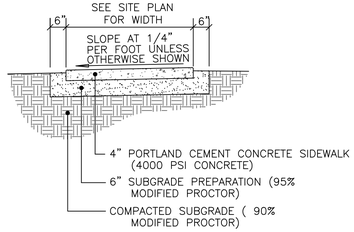
POND INLET



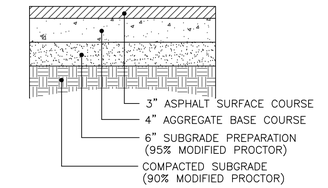
VALLEY GUTTER



SIDEWALK



ASPHALT PAVEMENT (LIGHT DUTY)



1. ASPHALT MIX DESIGN TO USE CITY OF ALBUQUERQUE AGGREGATE CLASS TYPE 'C' AND HAVE A MARSHALL STABILITY GREATER THAN 1800 LBS.

2. ASPHALT CONCRETE COURSES GREATER THAN 3" IN THICKNESS SHALL BE PLACED WITH MULTIPLE LIFTS. MINIMUM LIFT THICKNESS SHALL BE 1-1/2".

SITE DRAINAGE CALCULATIONS

CONDITION	BASIN	STORM RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	RUNOFF RATE
			(table 4)		(table 8)	(table 9)		
-	-	year	-	sq. ft.	in.	cfs/acre	cu. ft.	cfs
EXISTING	SITE	10	A	28400	0.13	0.38	308	0.25
			B	0	0.28	0.95	0	0.00
			C	0	0.52	1.71	0	0.00
			D	0	1.34	3.14	0	0.00
			TOTAL	28400			308	0.25
		100	A	28400	0.53	1.56	1254	1.02
			B	0	0.78	2.28	0	0.00
			C	0	1.13	3.14	0	0.00
			D	0	2.12	4.7	0	0.00
			TOTAL	28400			1254	1.02
DEVELOPED	SITE	10	A	0	0.13	0.38	0	0.00
			B	6236	0.28	0.95	146	0.14
			C	1025	0.52	1.71	44	0.04
			D	21139	1.34	3.14	2361	1.52
			TOTAL	28400			2550	1.70
		100	A	0	0.53	1.56	0	0.00
			B	6236	0.78	2.28	405	0.33
			C	1025	1.13	3.14	97	0.07
			D	21139	2.12	4.7	3735	2.28
			TOTAL	28400			4236	2.68
	A	100	A	0	0.53	1.56	0	0.00
			B	1329	0.78	2.28	86	0.07
			C	0	1.13	3.14	0	0.00
			D	5879	2.12	4.7	1039	0.63
			TOTAL	7208			1125	0.70
	B	100	A	0	0.53	1.56	0	0.00
			B	1028	0.78	2.28	67	0.05
			C	0	1.13	3.14	0	0.00
			D	974	2.12	4.7	172	0.11
			TOTAL	2002			239	0.16
	C	100	A	0	0.53	1.56	0	0.00
			B	1913	0.78	2.28	124	0.10
			C	0	1.13	3.14	0	0.00
			D	8536	2.12	4.7	1508	0.92
			TOTAL	10449			1632	1.02
	D	100	A	0	0.53	1.56	0	0.00
			B	905	0.78	2.28	59	0.05
			C	0	1.13	3.14	0	0.00
			D	5050	2.12	4.7	892	0.54
			TOTAL	5955			951	0.59
	E	100	A	0	0.53	1.56	0	0.00
			B	0	0.78	2.28	0	0.00
			C	1025	1.13	3.14	97	0.07
			D	390	2.12	4.7	69	0.04
			TOTAL	1415			165	0.12
	F	100	A	0	0.53	1.56	0	0.00
			B	1061	0.78	2.28	69	0.06
			C	0	1.13	3.14	0	0.00
			D	310	2.12	4.7	55	0.03
			TOTAL	1371			124	0.09

WATER HARVESTING CALCULATIONS:

BASIN A
Not Applicable- existing site

BASIN B
(0.44-0.10)(974)/12 = 24.4 c.f.
Provide 3" deep pond w/ minimum volume of 30 c.f.
Volume shown is for the entire basin (construct a communal pond near alley).

BASIN C
(0.44-0.10)(8536)/12= 213.4 c.f.
Provide 1" uncrushed aggregate filled pond w/ a minimum bulk aggregate volume of 640 c.f.

BASIN D
(0.44-0.10)(5050)/12= 126.3 c.f.
Provide 1" uncrushed aggregate filled pond w/ minimum bulk aggregate volume of 380 c.f.

BASIN F
(0.44-0.10)(390)/12= 9.7 c.f.
No type A or B surface available for ponds.

BASIN F
(0.44-0.10)(310)/12= 7.8 c.f.
area shown in calculation is for each unit
each unit to have a front yard pond
Provide 4-3" deep ponds with minimum volume 8.6 c.f. each

EMERGENCY OVERFLOW CALCULATIONS:
Sized as a Broad Crested Weir

BASIN B
Peak Discharge = 0.16 cfs (from table at left)
$Q = CLH^{*3/2}$, assume C=2.8, H=0.25'
Therefore L=0.45', use 6"

BASIN C
Peak Discharge = 1.02 cfs (from table at left)
$Q = CLH^{*3/2}$, assume C=2.8, H=0.25'
Therefore L=2.91', use 36"

BASIN D
Peak Discharge = 0.59 cfs (from table at left)
$Q = CLH^{*3/2}$, assume C=2.8, H=0.25'
Therefore L=1.68', use 20"

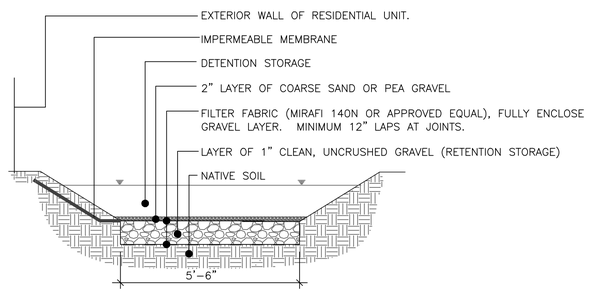
CONTROLLED DISCHARGE PER BASIN:
TOTAL DISCHARGE ALLOWED FROM SITE (2.75 cfs/acre)
(21192)(2.75)/43560=1.33 cfs

ACTUAL PEAK DISCHARGE PER BASIN

BASIN B*	0.06cfs
BASIN C**	0.46
BASIN D**	0.45
BASIN E*	0.12
BASIN F*	0.09
TOTAL	1.21 cfs<1.33 cfs ALLOWED

*see Table at left, **see AHYMO 8.5x11 sheets

TYPICAL SECTION OF PONDS (KEYED NOTE 11, 12 & 13)



NOTE: LENGTH OF RETENTION STORAGE LAYER TO MATCH BOTTOM LENGTH OF DETENTION POND. SEE KEYED NOTES 11, 12, & 13 SHT C1-2 FOR RETENTION STORAGE LAYER THICKNESS.

LEGEND

TBM	TEMPORARY BENCHMARK
G	GROUND
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOWLINE
TA	TOP OF ASPHALT
TC	TOP OF CONCRETE
BC	TOP OF CURB
TP	TOP OF EARTH PAD
TS	TOP OF SIDEWALK
TW	TOP OF WALL
FH	FIRE HYDRANT
WM	WATER METER
WV	WATER VALVE
MH	MANHOLE
CB	CATCH BASIN GRATE
GM	GAS MATER
GV	GAS VALVE
LP	LIGHT POLE
PP	POWER POLE
GW	GUY WIRE
PED	ELEC. OR TEL. PEDESTAL
RD ▶	SCUPPER OR CANALE
- - - - - - -	EXISTING TOPO OBJECT
———	PROPOSED TOPO OBJECT
	EXISTING 1' CONTOUR
	EXISTING 0.5' CONTOUR
XX.XX	EXISTING SPOT ELEVATION
● XX.XX	PROPOSED SPOT ELEVATION
~~XX.XX~~ XX.XX	RECORD SPOT ELEVATION
	INDICATES RECORD WITHIN CONSTRUCTION TOLERANCE

designed	date	drawn	date

no.	date	remarks	by

NOTES:

REVISIONS

DETAILS & DRAINAGE
CASITAS DE ALBUQUERQUE
ALBUQUERQUE, NEW MEXICO

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 9 NEW MEXICO JEAN J. BORDENAVE

Jean J. Bordenave

07/07/17

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design	drawn
JJB	METO

SHEET C2-2