

GRADING PLAN

ENGINEER'S CERTIFICATION

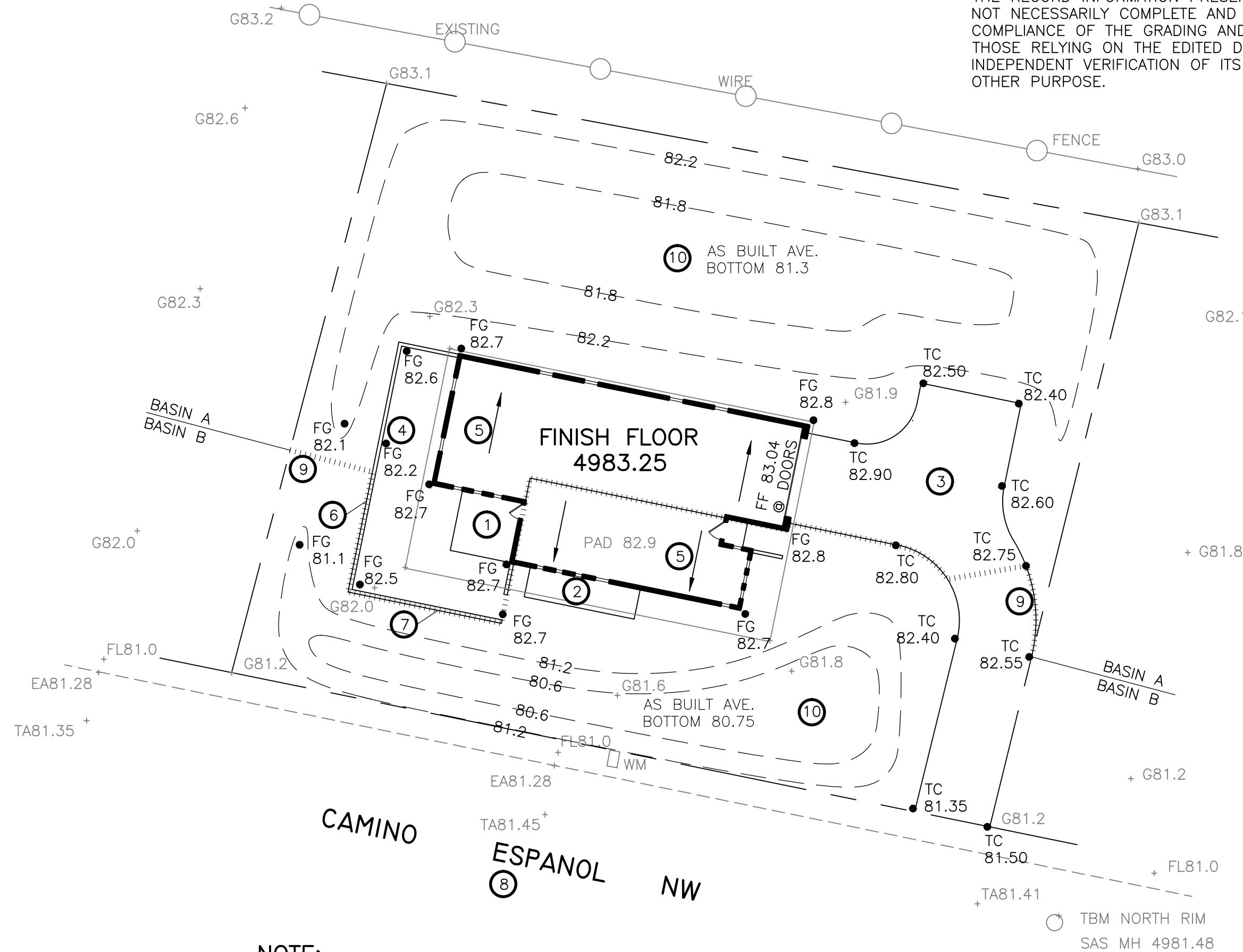
I, JEAN J. BORDENAVE, NMPE&LS NO. 5110, OF THE FIRM BORDENAVE DESIGNS, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN STAMP DATED MARCH 21, 2011. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATE OF OCCUPANCY.

EXCEPTIONS AND/OR QUALIFICATIONS: 1) ROOF GUTTERS AT EAVES WITH DOWNSPOUTS TO 2 RAIN BARRELS (300 GAL. REAR YARD, 150 GAL. FRONT YARD) WERE ADDED DURING CONSTRUCTION. 2) POND B IS APPROXIMATELY 2 FEET WIDER THAN DESIGNED.

THE RECORD INFORMATION PRESENTED ON THE EDITED DESIGN DOCUMENT IS NOT NECESSARILY COMPLETE AND IS INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THE EDITED DESIGN DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

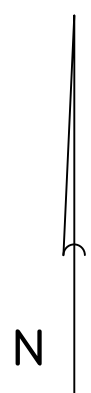


08/27/12



NOTE:

PONDS SHOWN ARE SCHEMATIC. SIZE AND SHAPE MAY BE ALTERED TO CONFORM TO LANDSCAPING. VOLUME OF EACH POND MUST BE IN EXCESS OF VALUES SHOWN IN THE DRAINAGE DATA CALCULATIONS AND MUST ACCEPT RUNOFF FROM THE BASIN AREAS SHOWN ON THE GRADING PLAN ABOVE. IT IS THE RESPONSIBILITY OF THE LOT OWNER(S) TO MAINTAIN THE RUNOFF ACCESS AND THE CAPACITY OF THE PONDS.



SCALE 1 INCH = 20 FEET



○ KEYED NOTES

1. UNCOVERED CONCRETE PATIO. SLOPE CONCRETE TO DRAIN.
2. COVERED CONCRETE PORCH. SLOPE CONCRETE TO DRAIN.
3. CONCRETE DRIVEWAY.
4. TURN CMU ON EDGE OR PLACE 2-3" PVC PIPE DRAINS THRU WALL TO PROVIDE DRAINAGE.
5. ROOF SLOPE.
6. 6 FOOT CMU WALL.
7. STEPPED CMU WALL. SEE SITE PLAN FOR STEPS AND WALL HEIGHTS.
8. EXISTING ASPHALT STREET.
9. DRAINAGE BASIN BOUNDARY.
10. RETENTION POND.

DRAINAGE NOTES

1. THE SITE IS PRESENTLY VACANT WITH A GRADED PAD. THE SURROUNDING PROPERTIES OUTSIDE THE 5 LOT SUBDIVISION IN WHICH THE SITE IS LOCATED ARE DEVELOPED. THERE ARE NO DRAINAGE FACILITIES IN THE AREA AND THE SITE IS REASONABLY FLAT. THE STREET IS BELOW THE LEVEL OF MOST OF THE LOT. THESE PARAMETERS REQUIRE THAT EACH LOT BE DESIGNED TO CONTAIN THE RUNOFF GENERATED BY STORMS. PER THE CITY HYDROLOGIST, THE SITE WILL BE DESIGNED TO PROVIDE PONDING FOR THE ENTIRE 100 YEAR, 6 HOUR RAINFALL TIME FOR THE LOT AS WELL AS THE NORTHERLY HALF OF THE STREET. THE GRADING DESIGN HAS LARGE FLAT BOTTOMED PONDS IN THE FRONT AND REAR YARDS TO BEST MEET THE STATED PARAMETERS AND FIT THE EXISTING TOPOGRAPHY.
2. THE SITE IS LOCATED IN RAINFALL ZONE 2. THERE IS A INCREASE, DUE TO DEVELOPMENT, IN THE 6 HOUR RUNOFF VOLUMES FOR THE 10 YEAR AND 100 YEAR STORMS OF 681 AND 963 CUBIC FEET RESPECTIVELY. THIS INCREASE, AS WELL AS THE BASE RUNOFF, IS PONDED ONSITE.
3. THE SITE IS LOCATED IN A 'ZONE X' PER FEMA FIRM MAP NO. 119, DATED SEPTEMBER, 2008.
4. TOPO SURVEY DATA SHOWN ON THIS DRAWING WAS OBTAINED BY PROFESSIONAL CONTRACTING SERVICES DATED FEBRUARY 21, 2012.

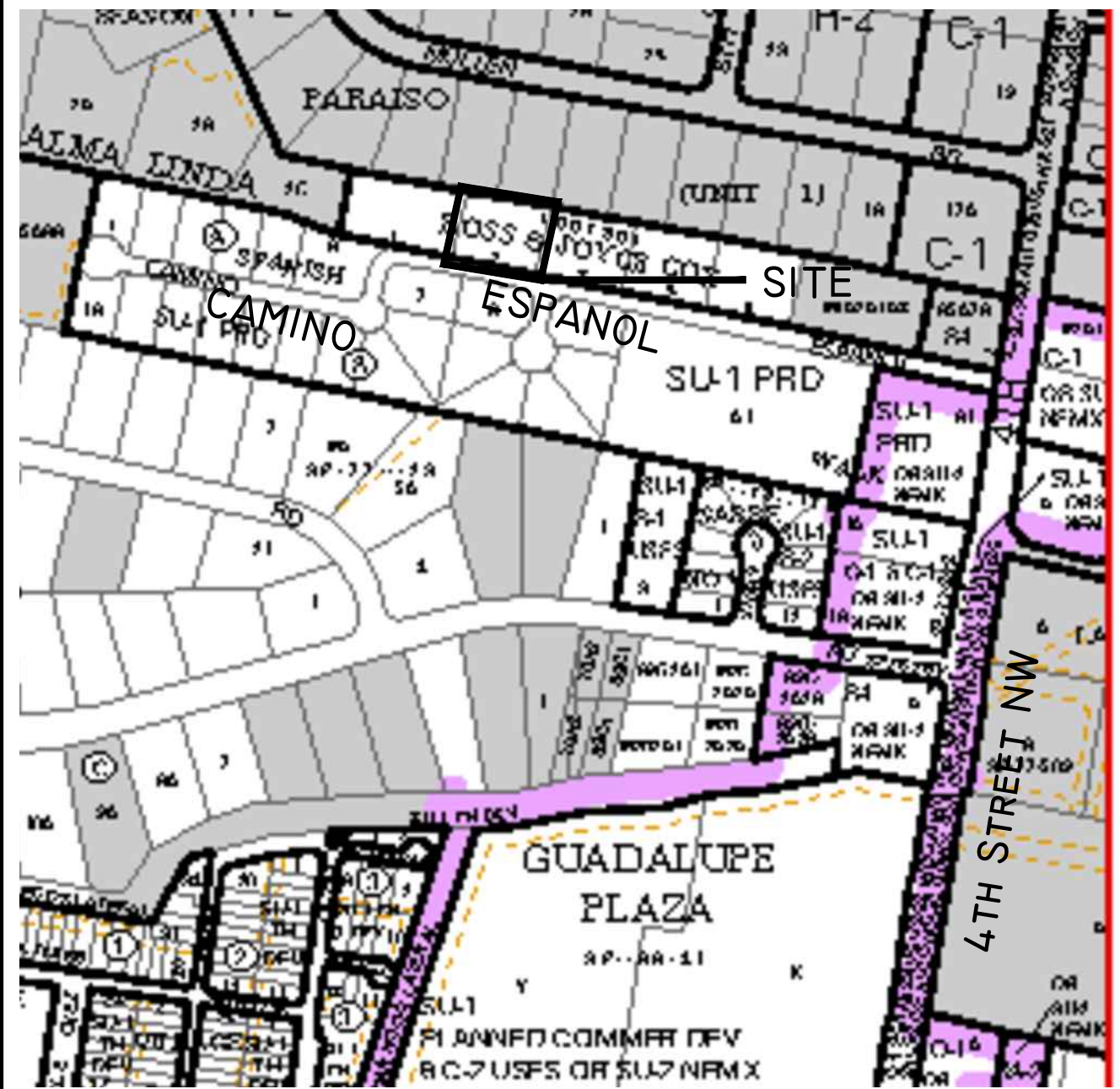
GRADING NOTES

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 ANY 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.

VICINITY MAP E-14



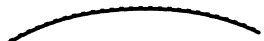




FEMA FIRM PANEL NO. 119



LEGAL DESCRIPTION

LOT 2, LANDS OF ROSS AND JOYCE COX

LEGEND

TBM	TEMPORARY BENCHMARK	GM	GAS METER
G	GROUND	GV	GAS VALVE
FF	FINISH FLOOR	LP	LIGHT POLE
FG	FINISH GRADE	PP	POWER POLE
FL	FLOWLINE	GW	GUY WIRE
TA	TOP OF ASPHALT	PED	ELEC. OR TEL. PEDESTAL
TC	TOP OF CONCRETE	RD ►	ROOF DRAINAGE POINT
BC	TOP OF CURB		FEMA FLOODPLAIN BOUNDARY
TP	TOP OF EARTH PAD		DRAINAGE BASIN BOUNDARY
TS	TOP OF SIDEWALK		EROSION SETBACK LINE
TW	TOP OF WALL		EXISTING CONTOUR
FH	FIRE HYDRANT		PROPOSED CONTOUR
WM	WATER METER	XX.XX	EXISTING SPOT ELEVATION
WV	WATER VALVE	XX.XX	PROPOSED SPOT ELEVATION
MH	MANHOLE	—XX.XX—	RECORD SPOT ELEVATION
CB	CATCH BASIN GRATE		

DRAINAGE DATA

CONDITION	BASIN	STORM RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	RUNOFF RATE
		N	(table 4)		(table 8)	(table 9)		
-	-	year	-	sq. ft.	in.	cfs/acre	cu. ft.	cfs
EXISTING	SITE	10	A	18143	0.13	0.38	197	0.16
			B	0	0.28	0.95	0	0.00
			C	758	0.52	1.71	33	0.03
			D	1516	1.34	3.14	169	0.11
			TOTAL	20417			399	0.30
		100	A	18143	0.53	1.56	801	0.65
			B	0	0.78	2.28	0	0.00
			C	758	1.13	3.14	71	0.05
			D	1516	2.12	4.7	268	0.16
			TOTAL	20417			1141	0.87
DEVELOPED	A	10	A	0	0.13	1.56	0	0.00
			B	7364	0.28	2.28	172	0.39
			C	1500	0.52	3.14	65	0.11
			D	2822	1.34	4.7	315	0.30
			TOTAL	11686			552	0.80
		100	A	0	0.53	1.56	0	0.00
			B	7364	0.78	2.28	479	0.39
			C	1500	1.13	3.14	141	0.11
			D	2822	2.12	4.7	499	0.30
			TOTAL	11686			1118	0.80

CONDITION	BASIN	STORM RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	ED RATE
-	-	year	(table 4)	sq. ft.	in.	cfs/acre	cu. ft.	cfs
DEVELOPED	B	10	A	0	0.13	0.38	0	0.00
			B	3313	0.28	0.95	77	0.07
			C	2258	0.52	1.71	98	0.09
			D	3160	1.34	3.14	353	0.23
			TOTAL	8731			528	0.39
		100	A	0	0.53	1.56	0	0.00
			B	3313	0.78	2.28	215	0.17
			C	2258	1.13	3.14	213	0.16
			D	3160	2.12	4.7	558	0.34
			TOTAL	8731			986	0.68

BASIN A POND

REQUIRED VOLUME = 1118 cu. ft. (from table)

ELEVATION	AREA (sq. ft.)	VOLUME (cu. ft.)
82.2	5205	1425
81.8	1922	

BASIN B POND

REQUIRED VOLUME — 986 cu. ft. (from table)

ELEVATION	AREA (sq. ft.)	VOLUME (cu. ft.)
81.2	2364	
80.6	1120	1044

PERMANENT BENCHMARK

ACS 12-E14 ELEVATION 4978.632 (NAVD 1988)

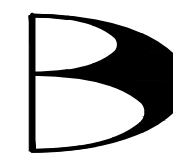
no.	date	remarks	by
REVISIONS			



project title	RICE/McGONAGIL RESIDENCE 505 CAMINO ESPANOL NW ALBUQUERQUE, NM
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sheet title	GRADING & DRAINAGE PLAN
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sheet date 03/23/12	design by JJB	project no. 1203
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sheet

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