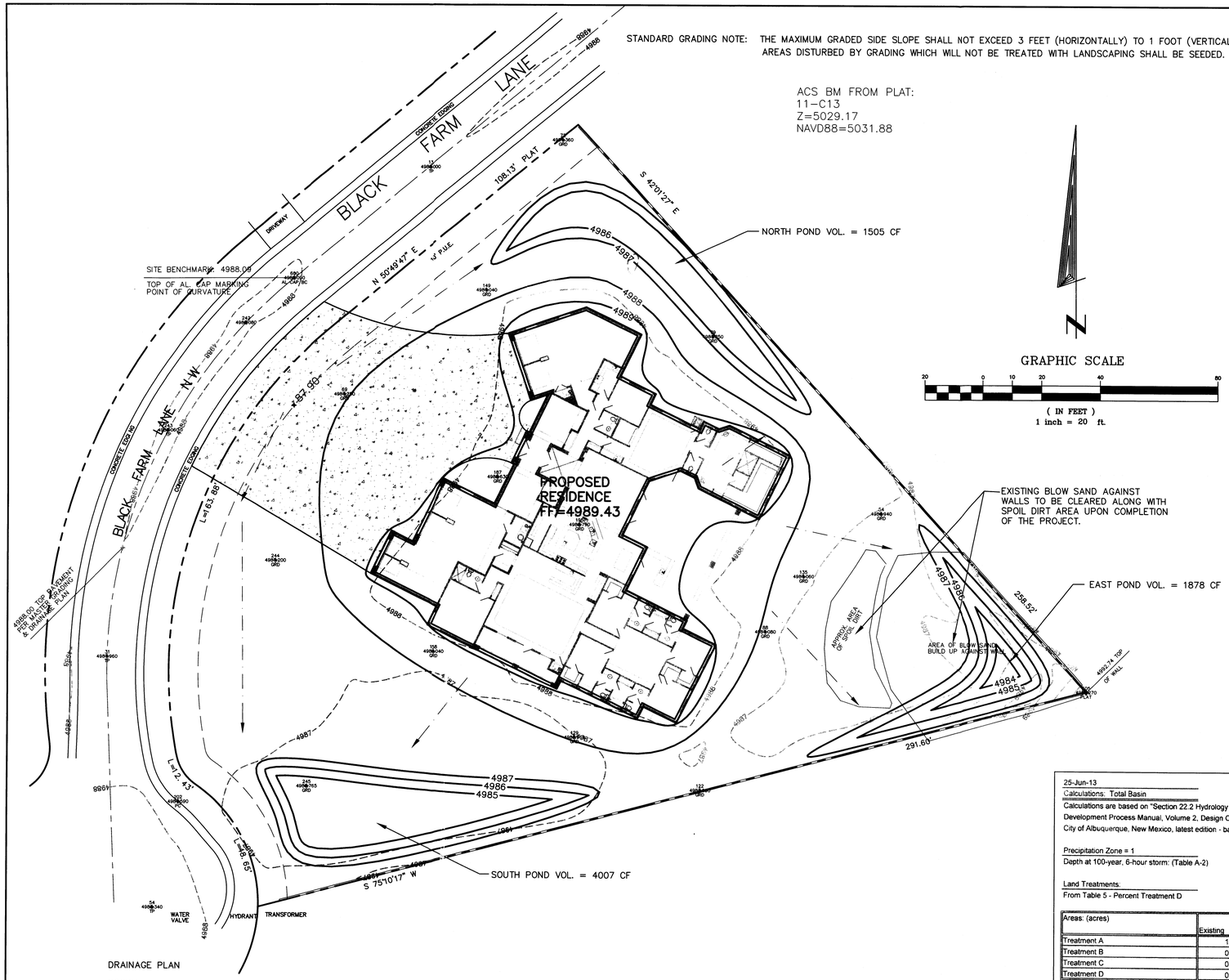
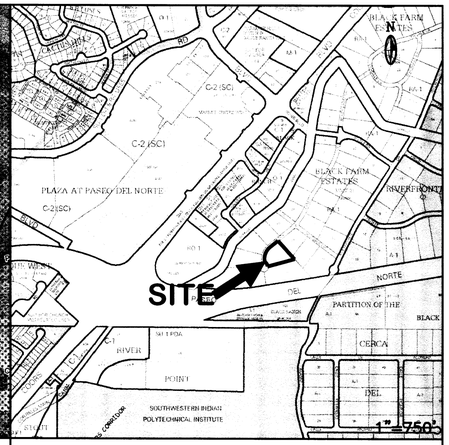
STANDARD GRADING NOTE: THE MAXIMUM GRADED SIDE SLOPE SHALL NOT EXCEED 3 FEET (HORIZONTALLY) TO 1 FOOT (VERTICALLY). AREAS DISTURBED BY GRADING WHICH WILL NOT BE TREATED WITH LANDSCAPING SHALL BE SEEDED.



FEMA FLOODWAY MAP PANEL #116



VICINITY MAP ZONE ATLAS C-13

LEGEND

	EXISTING	PROPOSED
CONTOUR	6045	6045
PROPERTY LINE		
ROAD		
SETBACK		
WALL		
SPOT ELEVATION	244 4988.200 GRD	+XXX

DRAINAGE PLAN

SCOPE:

Pursuant to the latest Bernalillo County Ordinance, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. One single family home is proposed for the subject property, with associated access, landscaping, and utility improvements.

EXISTING CONDITIONS:

Presently, the 1.07 acre site is undeveloped. The site is bounded on the northeast and southeast by private property and on the northwest by Black Farm Lane NW. The site is not vegetated and is level. As shown on FEMA Panel #116 the site is not located in a 100 year flood plain. This plan follows the approved Drainage Report for Black Farms prepared by Tierra West, LLC, dated June 2004. The approved drainage study calls for all storm drainage from each lot to be retained on-site. The pond volume required is the 100-year, 10-day storm.

PROPOSED CONDITIONS:

As shown by the plan, the building is located within the center of the lot. There are no off-site flows entering the site with the exception of the roadway that fronts the property and will continue to drain into the site per the approved report.. On site flows will drain around the structure via sheet flow and swales, and flow to one of the 3 proposed retention ponds. All roof drainage will discharge from the roof to the lot and be directed around the structure to drainage paths. Access will be taken from Black Farm Lane NW. This road is currently improved.

Supplemental calculations are shown as part of this Grading and Drainage plan.

CALCULATIONS:

The calculations shown hereon define the 100 year-6 hour design storm falling within the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, New Mexico in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority.

PROPERTY ADDRESS:

9204 Black Farm Lane NW

TOPOGRAPHY:

Topographic information provided by Mike Shook dated June 24, 2013.

GRADING
6-21-13
1=20
DEB0113L

25-Jun-13

DEBASSIGE LOT #32

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, latest edition - basins < 40 acres".

P(360) = 2.20 inches
P(10 day) = 3.67 inches

Precipitation Zone = 1

Depth at 100-year, 6-hour storm: (Table A-2)

Land Treatments:

From Table 5 - Percent Treatment D

Areas: (acres)	Existing	Proposed
Treatment A	1.07	0.00
Treatment B	0.00	0.75
Treatment C	0.00	0.00
Treatment D	0.00	0.32
Total (acres) =	1.07	1.07

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.039	0.094	0.007	0.047	0.000	0.020
Volume (cubic feet) =	1,709	4,112	311	2,039	0	864

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	1.38	0.00	0.26	0.00	0.00	0.00
Treatment B	0.00	1.52	0.00	0.57	0.00	0.02
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	1.40	0.00	0.92	0.00	0.54
Total Q (cfs) =	1.38	2.92	0.26	1.49	0.00	0.56

V (10 day) = V (360) + A (D) * (P10day-P360)/12 in/ft = 0.1336 ac-ft
= 5820 cu-ft = Regd Pond Volume

POND VOL. PROVIDED:

NORTH POND
Elev. Area Vol
4987 1922 > 1505 CF
4986 1088
Tot = 1505

SOUTH POND
Elev. Area Vol.
4987 2749 > 2305
4986 1981 > 1642
4985 1302
Tot = 4007

EAST POND
Elev. Area Vol
4987 1517 > 1149
4986 781 > 541
4985 301 > 188
4984 79
Tot = 1878

TOTAL = 7390 CF. ✓ OK

LOT 32
WITHIN
UNIT 2
BLACK FARM ESTATES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
9204 Black Farm Lane NW

JACKIE S. McDOWELL NEW MEXICO REGISTERED PROFESS'NAL ENGINEER

6-25-13

RECEIVED JUN 27 2013

ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on June 17, 2013 and as of that date it appeared that no filling, grading, or excavation had occurred thereon since completion of the topographic survey used to prepare this plan.

BERNALILLO COUNTY NEW MEXICO

LOT 32, UNIT 2,
BLACK FARM ESTATES

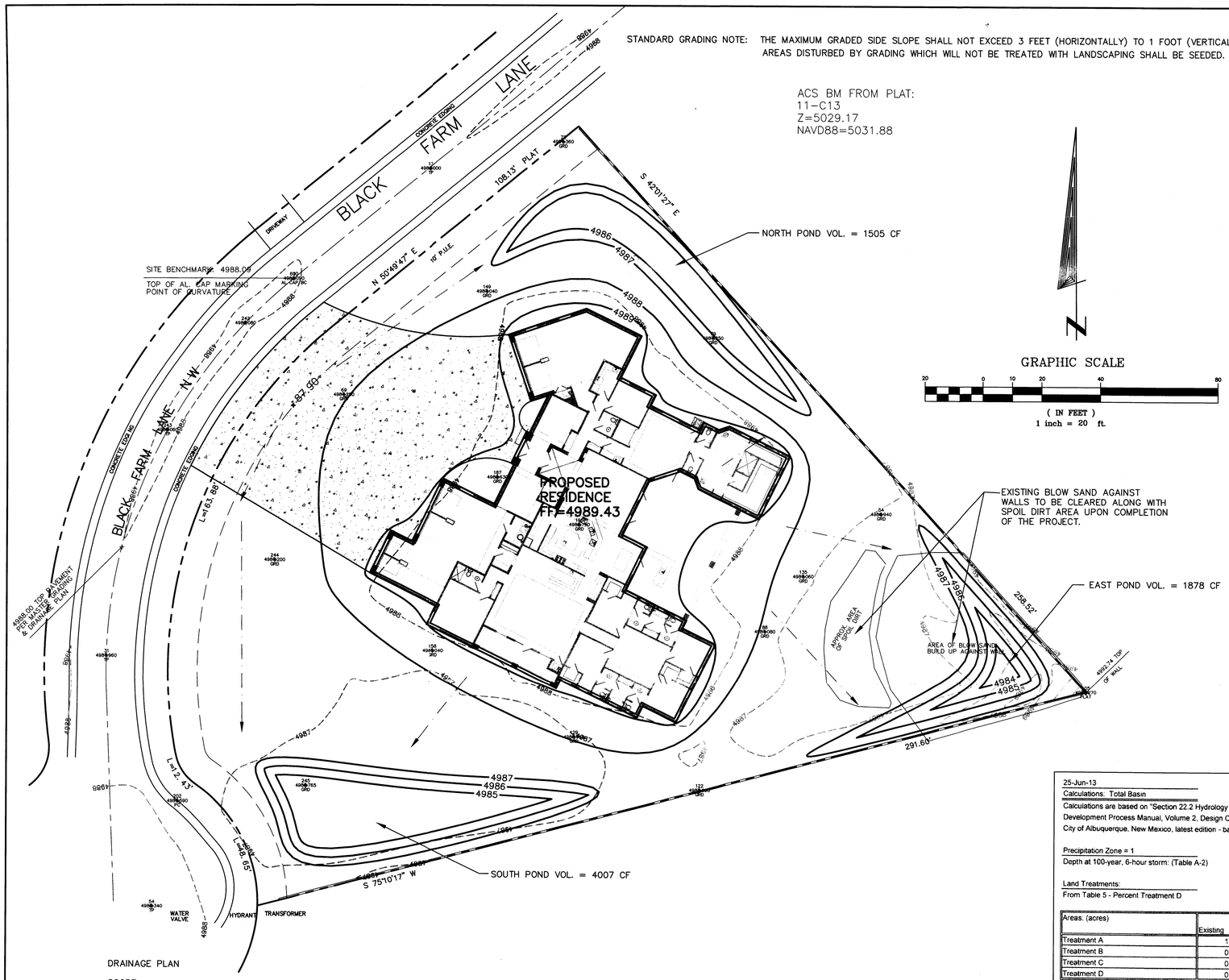
DEBASSIGE CUSTOM HOME – GRADING & DRAINAGE PLAN

McDowell Engineering, Inc.
7820 BEVERLY HILLS AVE. NE • ALBUQUERQUE, NM 87122
TELE: 505-828-2430 • FAX: 505-821-4857

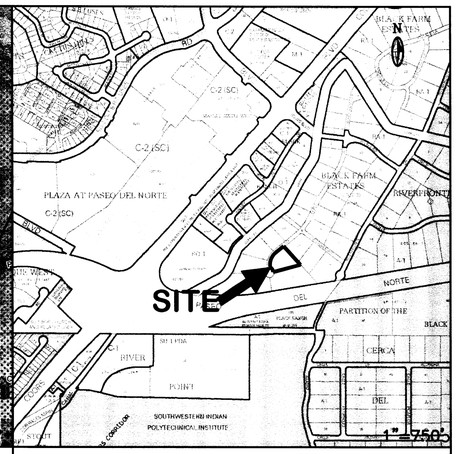
Designed	Drawn	Checked	Sheet	of
JSM	STAFF	JSM	1	1

File DEB0113L Date JUNE,2013

STANDARD GRADING NOTE: THE MAXIMUM GRADED SIDE SLOPE SHALL NOT EXCEED 3 FEET (HORIZONTALLY) TO 1 FOOT (VERTICALLY). AREAS DISTURBED BY GRADING WHICH WILL NOT BE TREATED WITH LANDSCAPING SHALL BE SEEDED.



FEMA FLOODWAY MAP PANEL #116



VICINITY MAP ZONE ATLAS C-13

LEGEND

	EXISTING	PROPOSED
CONTOUR	6045	6045
PROPERTY LINE		
ROAD		
SETBACK		
WALL		
SPOT ELEVATION	244 4988.00 GRD	+XX.X

DRAINAGE PLAN

SCOPE:

Pursuant to the latest Bernalillo County Ordinance, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. One single family home is proposed for the subject property, with associated access, landscaping, and utility improvements.

EXISTING CONDITIONS:

Presently, the 1.07 acre site is undeveloped. The site is bounded on the northeast and southeast by private property and on the northwest by Black Farm Lane NW. The site is not vegetated and is level. As shown on FEMA Panel #116 the site is not located in a 100 year flood plain. This plan follows the approved Drainage Report for Black Farms prepared by Tierra West, LLC, dated June 2004. The approved drainage study calls for all storm drainage from each lot to be retained on-site. The pond volume required is the 100-year, 10-day storm.

PROPOSED CONDITIONS:

As shown by the plan, the building is located within the center of the lot. There are no off-site flows entering the site with the exception of the roadway that fronts the property and will continue to drain into the site per the approved report.. On site flows will drain around the structure via sheet flow and swales, and flow to one of the 3 proposed retention ponds. All roof drainage will discharge from the roof to the lot and be directed around the structure to drainage paths. Access will be taken from Black Farm Lane NW. This road is currently improved.

Supplemental calculations are shown as part of this Grading and Drainage plan.

CALCULATIONS:

The calculations shown hereon define the 100 year-6 hour design storm falling within the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, New Mexico in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority.

PROPERTY ADDRESS:

9204 Black Farm Lane NW

TOPOGRAPHY:

Topographic information provided by Mike Shook dated June 24, 2013.

GRADING
6-21-13
1=20
DEB0113L

25-Jun-13

DEBASSIGE LOT #32

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, latest edition - basins < 40 acres".

P(360) = 2.20 inches
P(10 day) = 3.67 inches

Precipitation Zone = 1

Depth at 100-year, 6-hour storm: (Table A-2)

Land Treatments:

From Table 5 - Percent Treatment D

Areas: (acres)	Existing	Proposed
Treatment A	1.07	0.00
Treatment B	0.00	0.75
Treatment C	0.00	0.00
Treatment D	0.00	0.32
Total (acres) =	1.07	1.07

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.039	0.094	0.007	0.047	0.000	0.020
Volume (cubic feet) =	1,709	4,112	311	2,039	0	864

Total Q(p), cfs.	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	1.38	0.00	0.26	0.00	0.00	0.00
Treatment B	0.00	1.52	0.00	0.57	0.00	0.02
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	1.40	0.00	0.92	0.00	0.54
Total Q (cfs) =	1.38	2.92	0.26	1.49	0.00	0.56

V (10 day) = V (360) + A (D) * (P10day-P360)/12 in/ft = 0.1336 ac-ft
= 5820 cu-ft = Regd Pond Volume

POND VOL. PROVIDED:

NORTH POND
Elev. Area Vol
4987 1922 1505 CF
4986 1088
TOT = 1505

SOUTH POND
Elev. Area Vol.
4987 2749 2365
4986 1981 1042
4985 1302
TOT = 4007

EAST POND
Elev. Area Vol
4987 1517 1149
4986 781 541
4985 301 188
4984 79
TOT = 1878

TOTAL = 7390 CF ✓ OK

LOT 32
WITHIN
UNIT 2
BLACK FARM ESTATES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
9204 Black Farm Lane NW

JACKIE S. McDOWELL NEW MEXICO 9317 REGISTERED PROFESS. ENGR.

6-25-13

RECEIVED
JUN 27 2013

ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on June 17, 2013 and as of that date it appeared that no filling, grading, or excavation had occurred thereon since completion of the topographic survey used to prepare this plan.

BERNALILLO COUNTY NEW MEXICO

LOT 32, UNIT 2,
BLACK FARM ESTATES

DEBASSIGE CUSTOM HOME - GRADING & DRAINAGE PLAN

McDowell Engineering, Inc.
7820 BEVERLY HILLS AVE. NE • ALBUQUERQUE, NM 87122
TELE: 505-828-2430 • FAX: 505-821-4857

Designed	Drawn	Checked	Sheet	of
JSM	STAFF	JSM	1	1
File DEB0113L	Date JUNE,2013			

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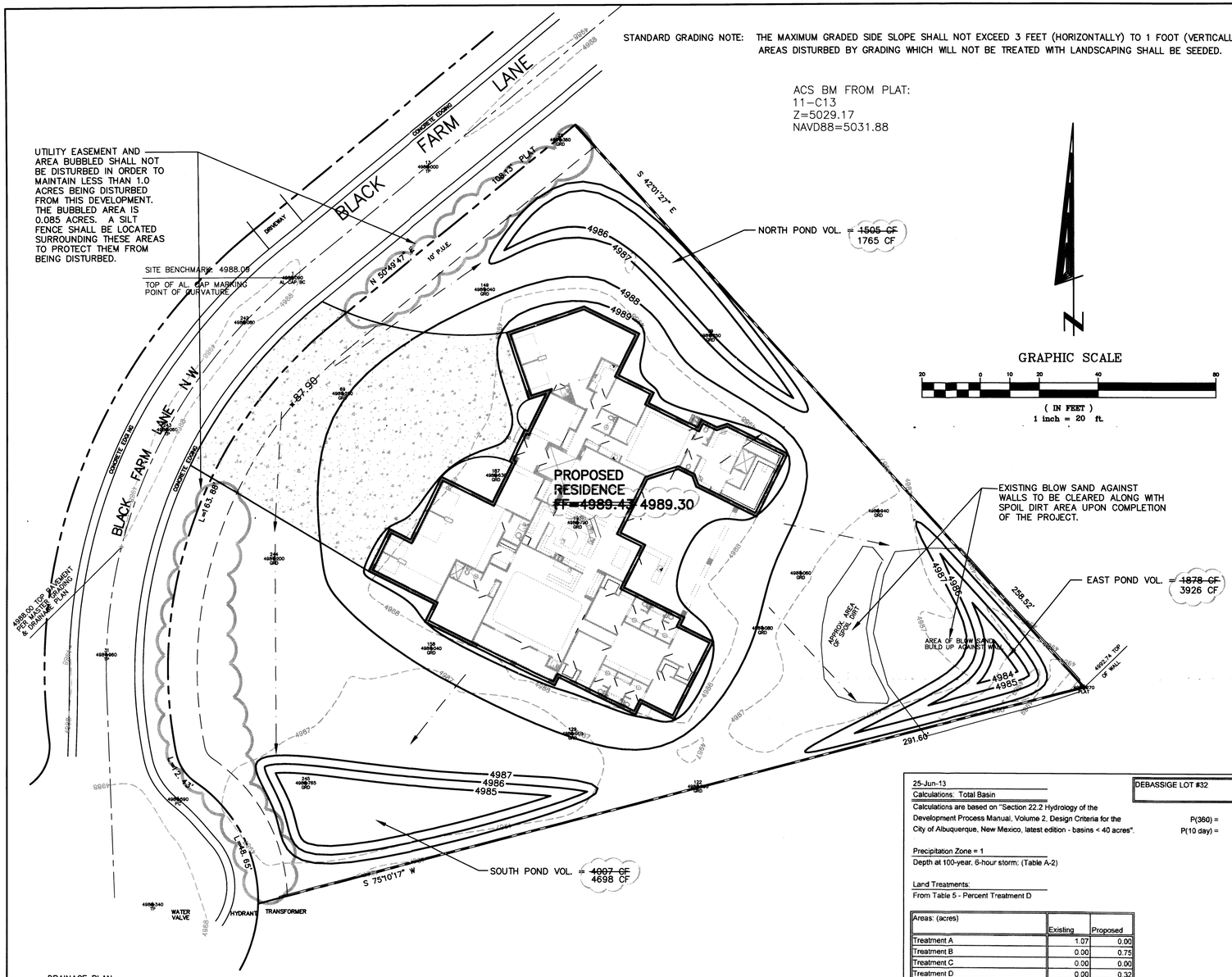
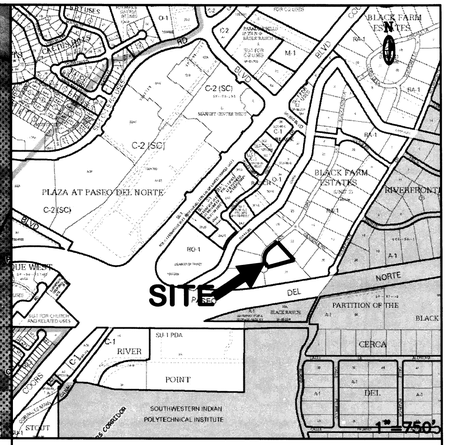


FEMA FLOODWAY MAP PANEL #116



VICINITY MAP ZONE ATLAS C-13

AS BUILT POND VOLUME CALCS:			
	ELEV.	AREA	VOL.
NORTH POND			
	4986.50	99.00	
			1765.00
	4987.50	3431.00	
		TOTAL	**1765.00**
EAST POND			
	4985.50	83.00	
			550.00
	4986.50	1017.00	
			3375.50
	4987.50	5734.00	
		TOTAL	**3925.50**
SOUTH POND			
	4986.00	77.00	
			1658.00
	4987.00	3239.00	
			3039.50
	4987.50	8919.00	
		TOTAL	**4697.50**
TOTAL VOLUME			**10388.00**

LEGEND

	EXISTING	PROPOSED
CONTOUR	6045	6045
PROPERTY LINE		
ROAD		
SETBACK		
WALL		
SPOT ELEVATION	324 4988200 GRD	XX.X
AS BUILT	EAST POND VOL. = ~~1878 CF~~ 3926 CF	

DRAINAGE PLAN

SCOPE:

Pursuant to the latest Bernalillo County Ordinance, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. One single family home is proposed for the subject property, with associated access, landscaping, and utility improvements.

EXISTING CONDITIONS:

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PROPERTY ADDRESS:

9204 Black Farm Lane NW

TOPOGRAPHY:

Topographic information provided by Mike Shook dated June 24, 2013.

GRADING
6-21-13
1=20
DEB0113L

25-Jun-13
Calculations: Total Basin
DEBASSIGE LOT #32

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, latest edition - basins < 40 acres".

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P(10 day) = 3.67 inches

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Depth at 100-year, 6-hour storm: (Table A-2)

Land Treatments:
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Treatment C	0.00	0.00
Treatment D	0.00	0.32
Total (acres) =	1.07	1.07

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.039	0.094	0.007	0.047	0.000	0.020
Volume (cubic feet) =	1,709	4,112	311	2,039	0	864

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	1.38	0.00	0.26	0.00	0.00	0.00
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Treatment D	0.00	1.40	0.00	0.92	0.00	0.54
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V (10 day) = V (360) + A (D) * (P10day-P360)/12 in/ft = 0.1336 ac-ft
= 5820 cu-ft = Regd. Pond Volume

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Elev. Area Vol
4987 1922 > 1505 CF
4986 1088
TOT = 1505

SOUTH POND
Elev. Area Vol.
4987 2749 > 2305
4986 1931 > 1642
4985 1302
TOT = 4007

EAST POND
Elev. Area Vol
4987 1517 > 1149
4986 781 > 541
4985 301 > 188
4984 79
TOT = 1878

TOTAL = 7390 CF. ✓ OK

DRAINAGE CERTIFICATION

I, Jackie S. McDowell, NMPE 10903, of McDowell Engineering, Inc., 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 dated June 25, 2013. The record information edited onto the original/approved design document has been obtained by Mike Shook, NMPS #13240, of the firm Advantage Surveying. I further certify that I have personally visited the project site on February 27, 2014 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for a Certificate of Occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the Grading and Drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Jackie S. McDowell, NMPE #10903

3-20-14
Date

JACKIE S. McDOWELL NEW MEXICO 10903 REGISTERED PROFESS ENGR.

6-25-13
3-13-14 AS BUILT

RECEIVED
MAR 20 2014
LAND DEVELOPMENT SECTION

ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on June 17, 2013 and as of that date it appeared that no filling, grading, or excavation had occurred thereon since completion of the topographic survey used to prepare this plan.

BERNALILLO COUNTY NEW MEXICO

LOT 32, UNIT 2, BLACK FARM ESTATES

DEBASSIGE CUSTOM HOME - AS BUILT GRADING & DRAINAGE PLAN

McDowell Engineering, Inc.
7820 BEVERLY HILLS AVE. NE • ALBUQUERQUE, NM 87122
TELE: 505-828-2430 • FAX: 505-821-4857

Designed	Drawn	Checked	Sheet	of
JSM	STAFF	JSM	1	1
File DEB0113L	Date JUNE,2013			

LOT 32
WITHIN
UNIT 2
BLACK FARM ESTATES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
9204 Black Farm Lane NW