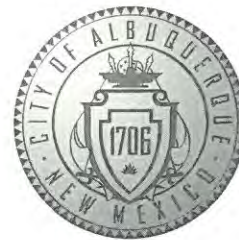


# CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

November 7, 2017

Richard Dourte, P.E.  
RHD Engineering, LLC  
4305 Purple Sage Ave NW  
Albuquerque, NM, 87120

**RE: Burger King – 5508 4<sup>th</sup> Street NW**  
**Grading and Drainage Plan**  
**Stamp Date: 10/30/17**  
**Hydrology File: F14D055**

Dear Mr. Dourte:

PO Box 1293

Based upon the information provided in your submittal received 10/30//2017, the Grading Plan **is not** approved for Building and SO-19 Permit. The following comments need to be addressed for approval of the above referenced project:

Albuquerque

1. Please darken the property line or make the proposed basin boundary go around the property line. It is hard to tell what is within the site.

NM 87103

2. Please provide the weir calculations for the curb cuts and sidewalk culverts.

[www.cabq.gov](http://www.cabq.gov)

3. The sidewalk culverts will need a SO-19 Permit. Please mark the DTIS in your re-submittal and add the standard SO-19 notes (See below).



Richard J. Berry, Mayor

## S.O.19 : NOTICE TO CONTRACTORS

1	AN EXCAVATION / CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
2	ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #8.
3	TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (CALL '811') FOR LOCATION OF EXISTING UTILITIES.
4	PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. 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 THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7	WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
8	THE WORK IN THE CITY ROW MUST BE INSPECTED AND ACCEPTED. THE CONTRACTOR MUST CONTACT JASON RODRIGUEZ AT 235-8016 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE INSPECTIONS.

PO Box 1293

Albuquerque

NM 87103

If you have any questions, please contact me at 924-3995 or [rbrissette@cabq.gov](mailto:rbrissette@cabq.gov).

[www.cabq.gov](http://www.cabq.gov)

Sincerely,

*Renée C. Brissette*

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





# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Burger King Restruant Building Permit #: \_\_\_\_\_ City Drainage #: \_\_\_\_\_  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_  
Legal Description: Lot 19-A Linda Vista Addition  
City Address: 5508 4th Street NW

Engineering Firm: RHD Engineering, LLC Contact: - Richard Dourte  
Address: 4305 Purple Sage Ave. NW Alb. NM, 87120  
Phone#: 505-288-1621 Fax#: \_\_\_\_\_ E-mail: rhdengineering@outlook.com

Owner: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: Joe Simons Architecture Contact: Joe Simons  
Address: PO Box 67408, Albuquerque NM, 87193-7408  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: joe@simonsarchitecture.com

Surveyor: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Contractor: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

### TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT
- ☒ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) \_\_\_\_\_

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) \_\_\_\_\_

WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes ☒ No \_\_\_\_\_ Copy Provided

DATE SUBMITTED: 10-30-17 By: Richard Dourte

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

# Drainage Report

For

Burger King on 4<sup>th</sup>-Montano

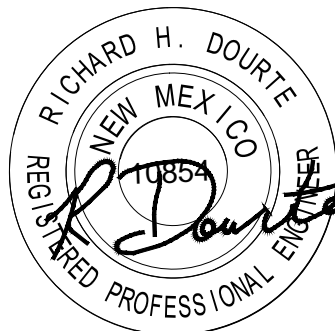
Lot 9-A Linda Vista Addition

Albuquerque, New Mexico

Prepared by

RHD Engineering, LLC  
Albuquerque, New Mexico

October 2017



10-30-17

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Vicinity Map..... page 4

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Proposed Conditions.....page 6

Summary.....page 6

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Site Grading and Drainage Plan..... Appendix A

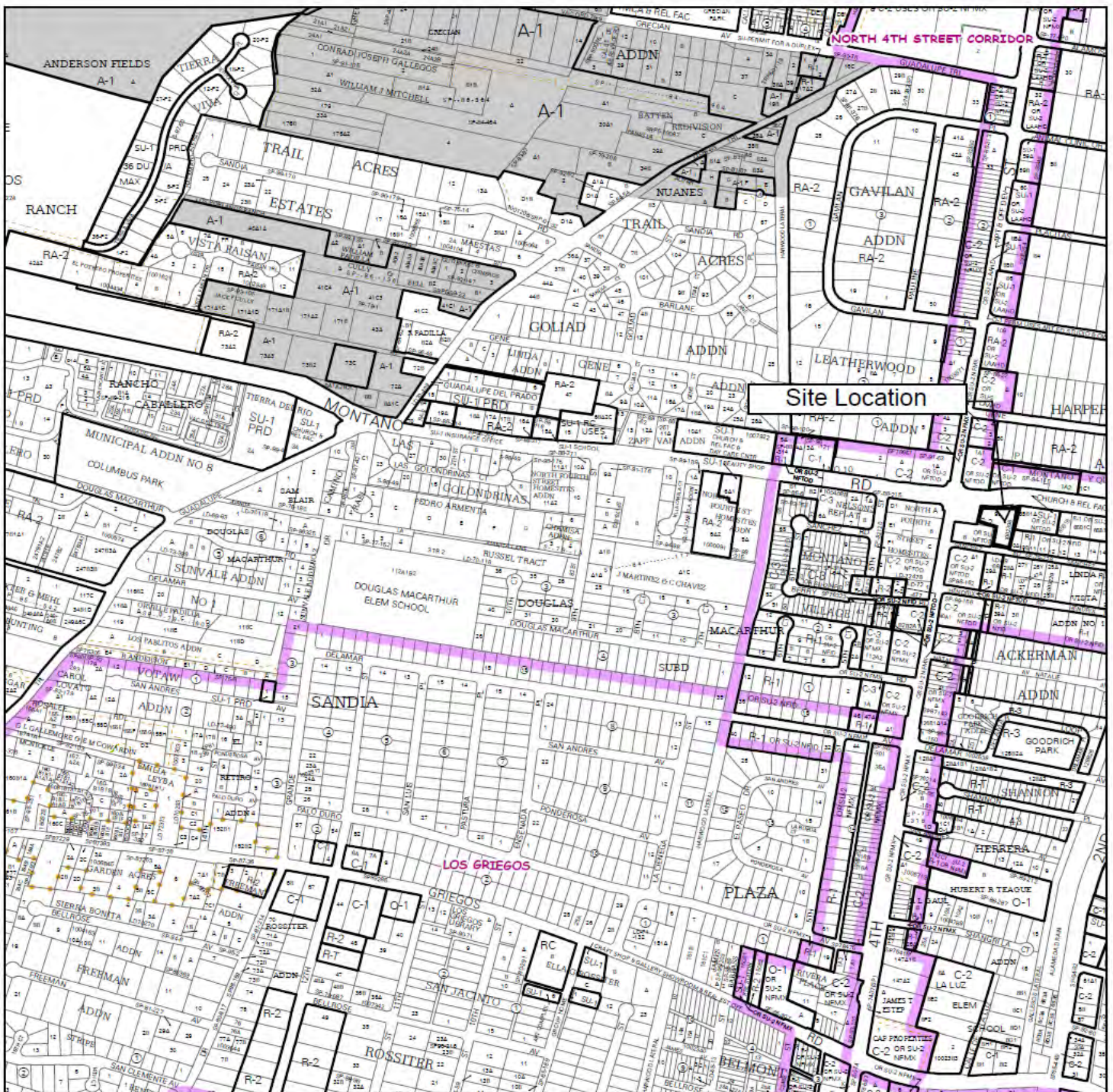
**Introduction:**

This site is located on Montano Road, east of 4<sup>th</sup> Street. The legal description for this site is lot 9-A Linda Vista Addition. The entire site is 0.0.71 acres in size. This site is located in a zone x flood zone, (FM35001C0119G). One restaurant along with the parking lot associated with this site is proposed. This area is presently in a free discharge classification.

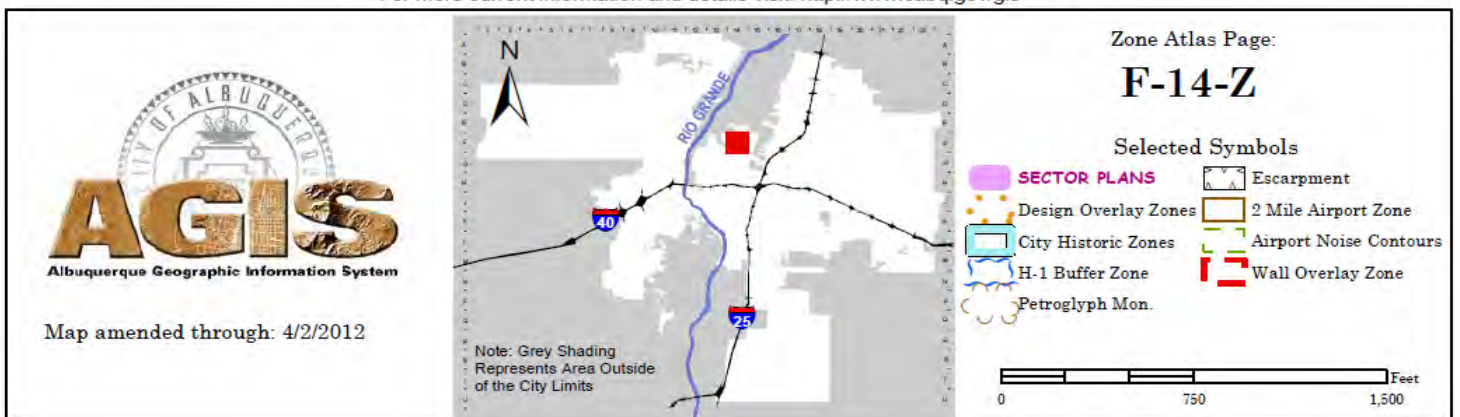
**Existing Conditions:**

This site presently has a self serve car wash and the associated appurtenances on it. Most of the site (approx. 81%) of the site is impervious area. This site has free discharge for the stormwater onto the adjacent streets. Currently this site discharges approximately 3.15cfs.





For more current information and details visit: <http://www.cabq.gov/gis>





Project: Burger King on Montano/4th
Drainage Calculations - Zone 2

Depth (inches) at 100yr Storm					
Zone	P60	P360	P1440	P4days	P10days
1	1.87	2.20	2.66	3.12	3.67
2	2.01	2.35	2.75	3.30	3.95
3	2.14	2.60	3.10	3.95	4.90
4	2.23	2.90	3.65	4.70	5.95

Excess Precipitation, E(inches) - 6 HR				
Zone	Treatment			
	A	B	C	D
1	0.44	0.67	0.99	1.97
2	0.53	0.78	1.13	2.12
3	0.66	0.92	1.29	2.36
4	0.80	1.08	1.46	2.64

Weighted E= ((EA*AA)+(EB*AB)+(EC*AC)+(ED*AD))/(AA+AB+AC+AD)					
V360=(Weighted E *P360)/12 in/ft					
V1440= V360+AD*(P1440-P360)/12in/ft					
V4days=V360+AD*(P4day-P360)/12in/ft					
V10days=V360+AD*(P10days-P360)/12in/ft					

Peak Discharge (CFS/ACRE) 100 YR				
Zone	Treatment			
	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.70
3	1.87	2.60	3.45	5.02
4	2.20	2.92	3.73	5.25

*****EXISTING CONDITIONS*****
-------------------------------

Area	SQ. FT	Acres
A=	0	0.000
B=	0	0.000
C=	5918	0.136
D=	25200	0.579
Total	31118	0.714
Weighted E=		1.932

Design Flows (100YR)			
Area	SQ. FT	Acres	Peak Discharge (CFS)
A=	0	0.000	0.00
B=	0	0.000	0.00
C=	5918	0.136	0.43
D=	25200	0.579	2.72
Total (CFS)			3.15

	V360	V1440	V4days	V10days
Cubic feet	5009.3	5849.3	7004.3	8369.3
Acre-ft	0.11	0.13	0.16	0.19

*****PROPOSED CONDITIONS*****
-------------------------------

Area	SQ. FT	Acres
A=	0	0.000
B=	0	0.000
C=	8880	0.204
D=	22238	0.511
Total	31118	0.714
Weighted E=		1.837

Design Flows (100YR)			
Area	SQ. FT	Acres	Peak Discharge (CFS)
A=	0	0.000	0.00
B=	0	0.000	0.00
C=	8880	0.204	0.64
D=	22238	0.511	2.40
Total (CFS)			3.04

	V360	V1440	V4days	V10days
Cubic feet	4764.9	5506.2	6525.4	7730.0
Acre-ft	0.11	0.13	0.15	0.18

The 100 year peak flows for this developed site is 3 CFS and the existing flows are 3.1 CFS for an increase of -0.1 CFS. The 100 year 6 hr volume increase is 5506-5849 = -343CF.

First Flush Ponding Reqmt - Imp. Area =71% , per Table 1, DPM Chapter 22.9, 1011cfs/ac x .714ac= 720cf



**Proposed Conditions:**

This proposed site generates 0.1cfs less than the existing conditions, and 343cf less than the existing conditions.

The entire site is 0.71 acres and has 71% impervious area. With respect to the first flush requirements, interpolating the Table 1 of Chapter 22, Section 9, 60% impervious is 980 cf/ac and 80% is 1037cf/ac, thus 71% is 1011cf/ac. Since the site is 0.71ac, the first flush requirement is  $0.71\text{ac} \times 1011\text{cf/ac} = 720\text{cf}$ .

The site is in three drainage basins, the northeast (NE), the northwest (NW) and the south (S) drainage basins.

Basin NW is 11,010sf or 35% of the site.

Basin NE is 6,460sf or 21% of the site.

Basin S is 13,648sf or 44% of the site.

**First Flush Pond Volume Requirements:**

The first flush pond for Basin NW-  $.35 \times 720 = 252\text{cf}$

The first flush pond for Basin NE-  $.21 \times 720 = 151\text{cf}$

The first flush pond for Basin S -  $.44 \times 720 = 317\text{cf}$

**Total.....720cf**

**First Flush Pond Volume Provided:**

The volume of pond NW = 380cf

The volume of pond NE = 180cf

The volume of pond S = 340cf

**Total.....900cf**

Thus the first flush ponding provided is greater than that required.

**Summary:**

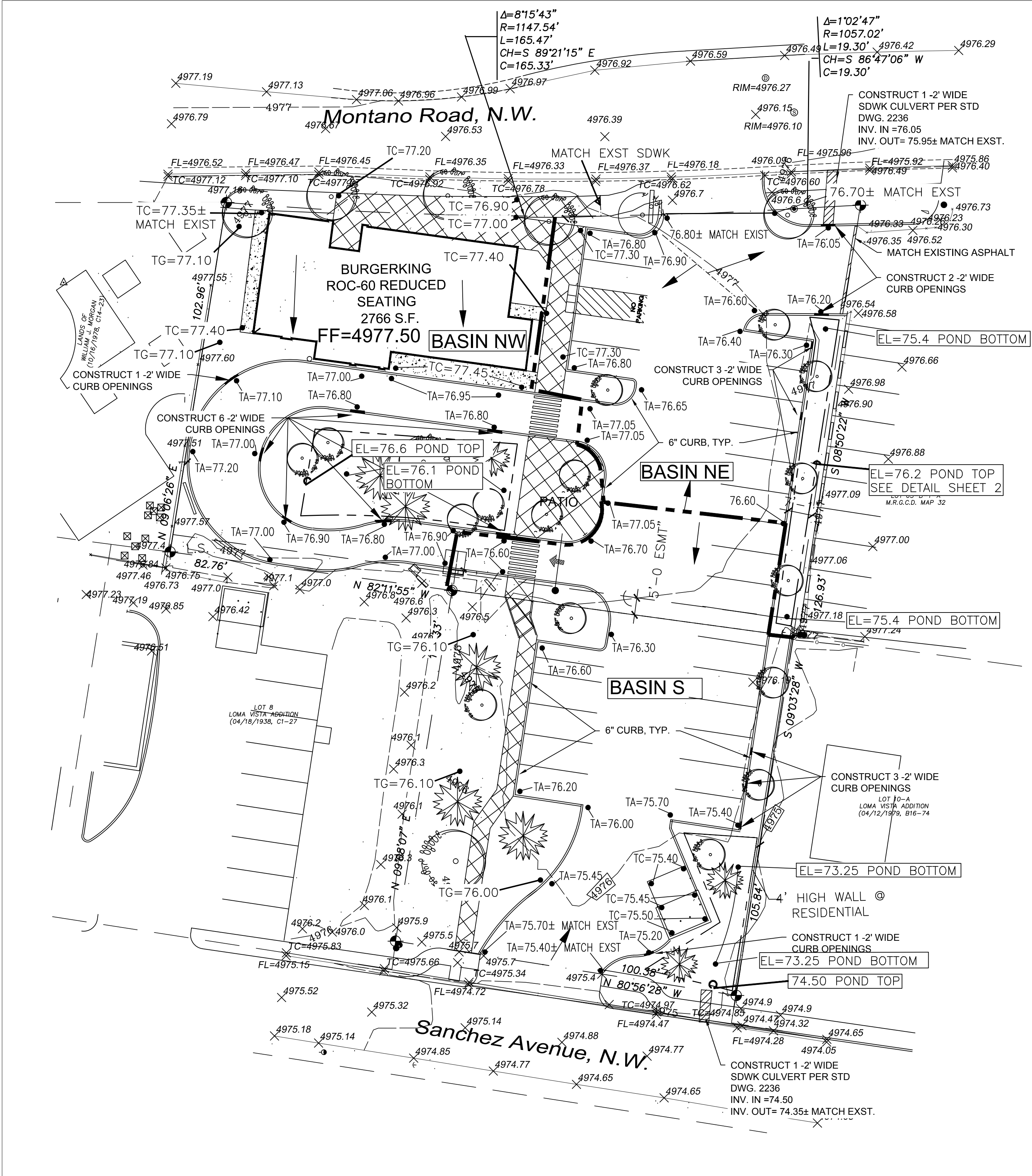
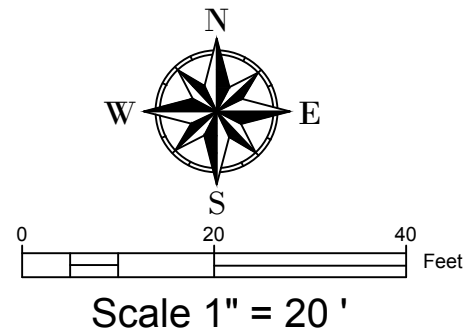
This project is in a free discharge area, the first flush ponding that is provided is greater than that the first flush ponding that is required.



CAUTION:  
EXISTING UTILITIES ARE NOT SHOWN.  
IT SHALL BE THE SOLE RESPONSIBILITY  
OF THE CONTRACTOR TO CONDUCT ALL  
NECESSARY FIELD INVESTIGATIONS PRIOR  
TO ANY EXCAVATION TO DETERMINE THE  
ACTUAL LOCATION OF UTILITIES & OTHER  
IMPROVEMENTS.

DRAINAGE NARRATIVE:

1. THIS SITE IS NOT LOCATED IN A FEMA FLOOD HAZARD ZONE ( REFER  
TO THE FIRM MAP 35043C1700D, EXCERPT ATTACHED).
2. RHD ENGINEERING, LLC RECOMMENDS THAT THE OWNER OBTAIN A GEOTECHNICAL  
REPORT PRIOR TO DESIGN OF BUILDING FOOTING/FOUNDATION.

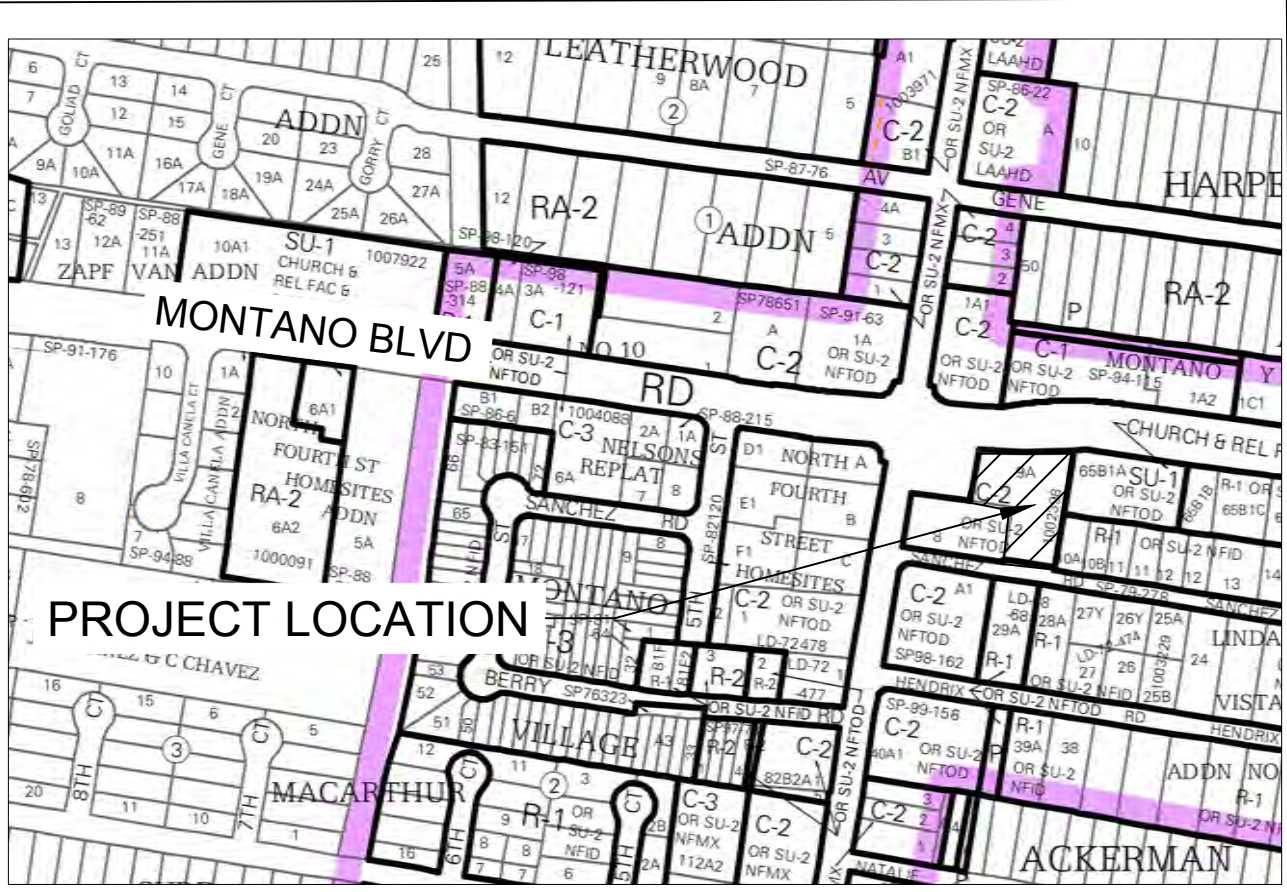


EROSION CONTROL NOTES:

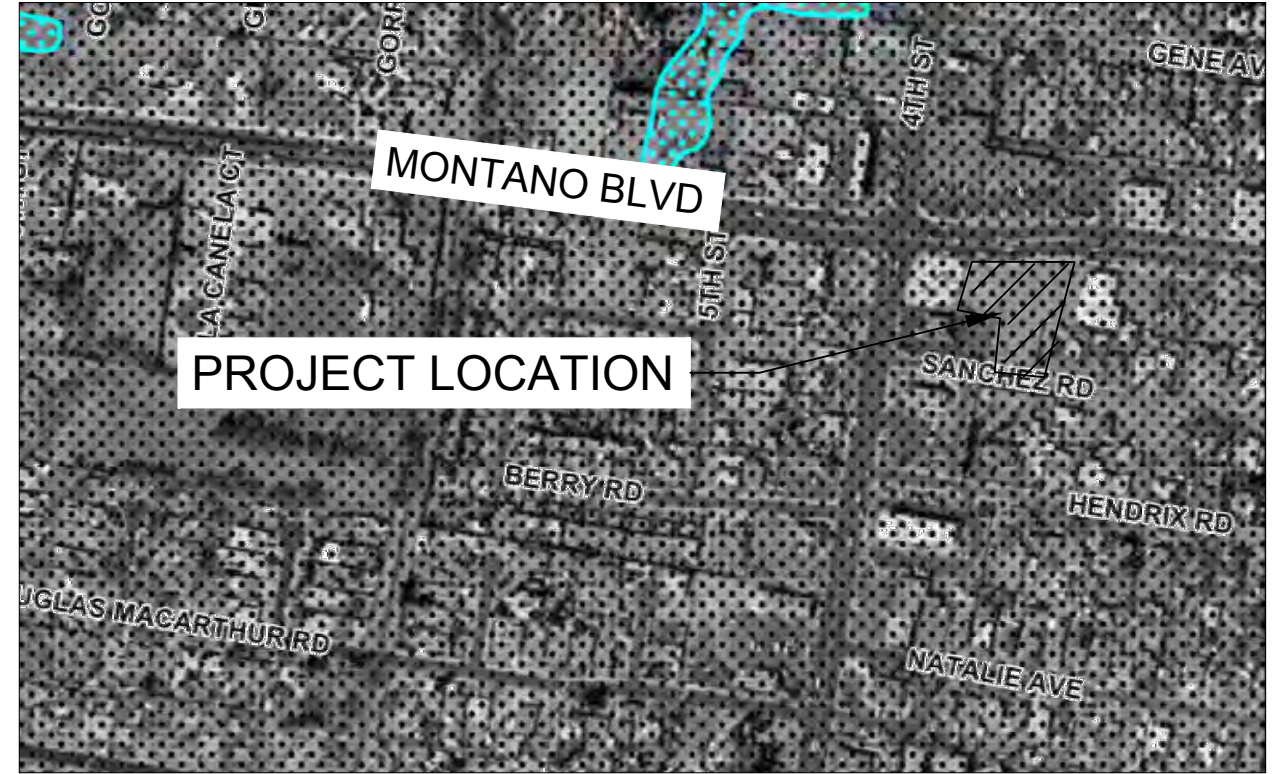
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE  
PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING  
CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS  
INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT  
ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE  
RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND  
WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

GENERAL NOTES:

1. THIS SITE IS LOCATED IN A ZONE X, FEMA FLOOD HAZARD ZONE ( REFER  
TO THE FIRM MAP 35041C0119G, EXCERPT ATTACHED).
2. RHD ENGINEERING, LLC RECOMMENDS THAT THE OWNER OBTAIN A GEOTECHNICAL  
REPORT PRIOR TO DESIGN OF BUILDING FOOTING/FOUNDATION.
3. ALL SWPPP REQUIREMENTS SHALL BE ADHERED TO.
7. ALL WORK ON THIS PLAN SHALL BE DONE IN ACCORDANCE WITH CITY OF ALBUQUERQUE  
STANDARDS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO WORK COMMENCING.
8. ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH CITY OF  
ALBUQUERQUE STANDARDS.
9. THE SURVEY INFORMATION WAS PROVIDED BY PRECISION SURVEYS.
10. THE RUNOFF FROM THE BUILDING SHALL DRAIN TO THE SOUTH.
11. LANDSCAPING WITHIN THE PONDING AREAS SHALL BE SUFFICIENT TO KEEP EROSION TO  
A MINIMUM.



VICINITY MAP: F-14-Z



FIRM MAP: FM35001C0119G

LEGAL DESCRIPTION:

LOT 9-A, LINDA VISTA ADDITION  
ALBUQUERQUE,  
BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE  
NOTED.

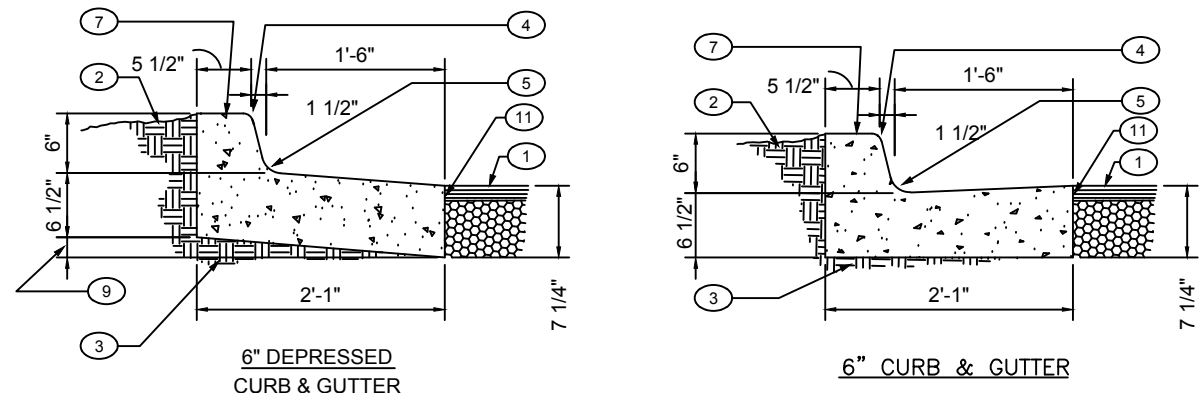
LEGEND

46.00	PROPOSED SPOT ELEVATION
x 44.00	EXISTING ELEVATION
---	EXISTING CONTOUR
---	EXISTING INDEX CONTOUR
---	PROPOSED CONTOUR
---	PROPOSED INDEX CONTOUR
---	LOT LINE
---	CENTERLINE
---	RIGHT-OF-WAY
---	PROPOSED RETAINING WALL
---	PROPOSED ROCK FACE WALL
---	EXISTING CURB AND GUTTER
---	PROPOSED CURB AND GUTTER
---	PROPOSED EDGE OF CONCRETE
---	PROPOSED FLOWLINE
---	EXISTING WALL
---	PROPOSED BASIN BOUNDARY

I HAVE PERSONALLY INSPECTED THE PROPERTY ON 10-30-17. NO  
EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTENT WITH THE  
TOPO SHOWN. *Richard Dourte* 10-30-17  
Richard Dourte P.E. #10854 DATE

ENGINEER'S SEAL  10-30-17 Richard Dourte P.E. #10854	Title BURGER KING 4TH ST. AND MONTANO RD 5508 4th Street NW GRADING AND DRAINAGE PLAN  <i>RHD Engineering, LLC</i> 4305 Purple Sage Ave. NW ALBUQUERQUE, NM 87120 (505) 288-1621	DRAWN BY DATE OCT. 2017  SHEET # 1 of 2  JOB #
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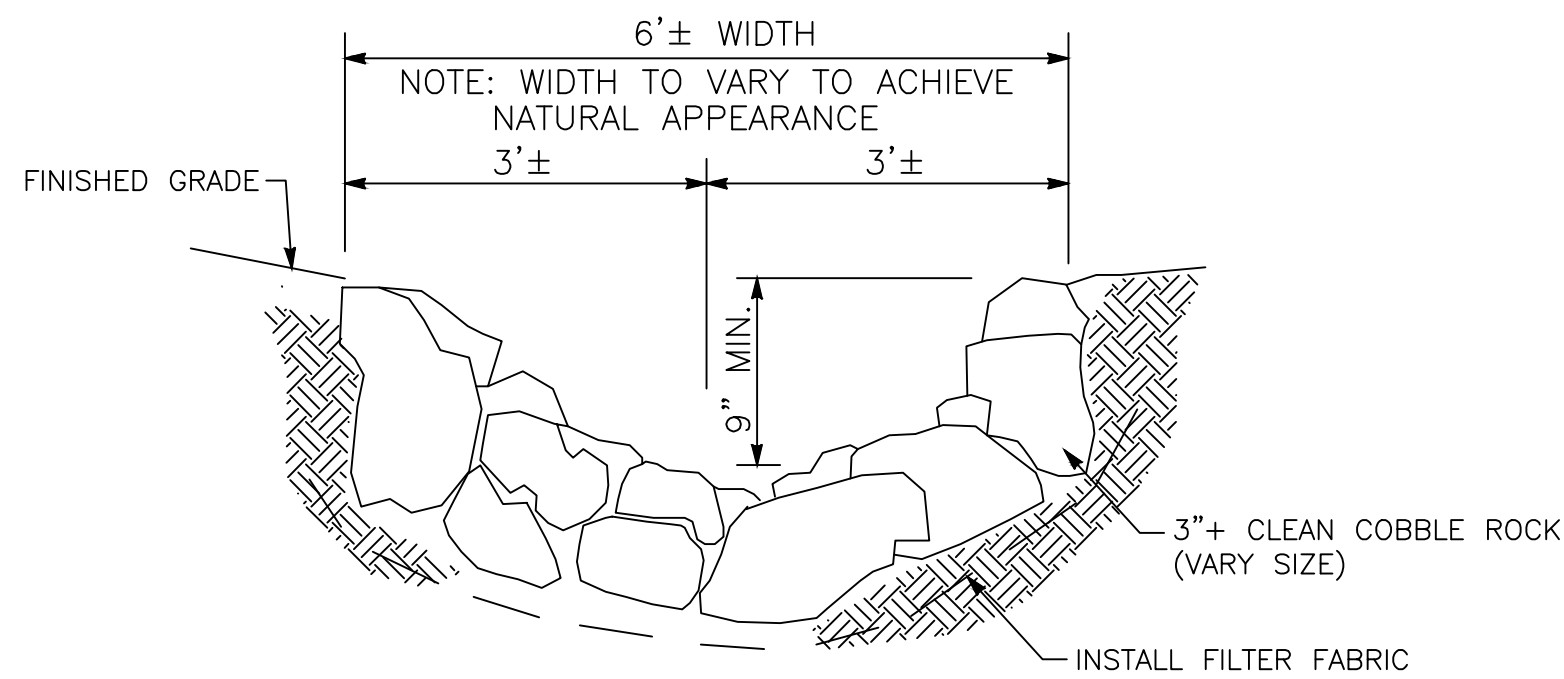
KEYED NOTES:

1. Pavement section per drawings and specs.
2. Finished grade.
3. Prepared subgrade.
4. 3/4" radius.
5. 1 1/2" radius.
6. Not used.
7. Concrete curb.
8. Not used.
9. Varies, depress as needed.
10. Not used.
11. Tack coat.

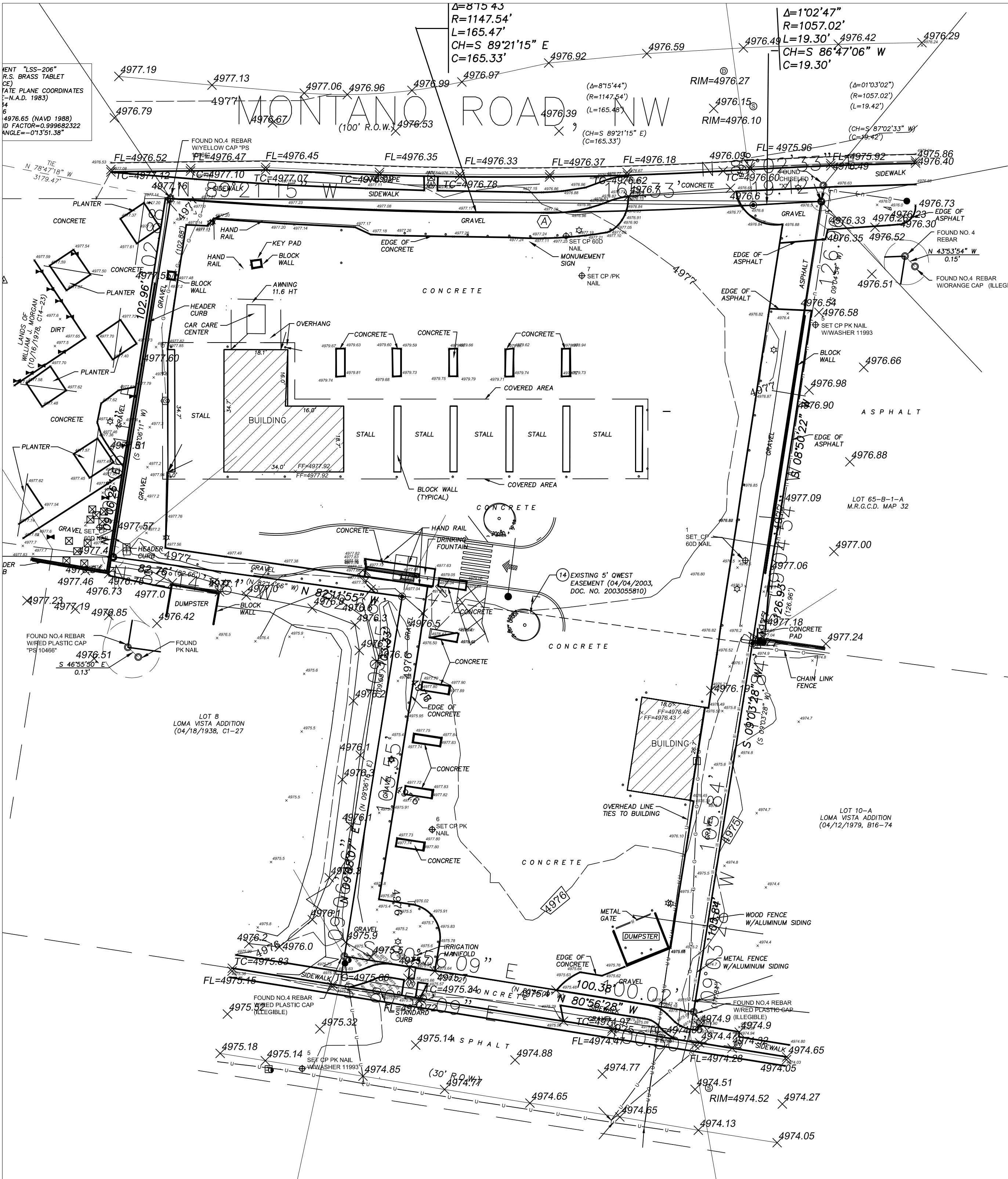
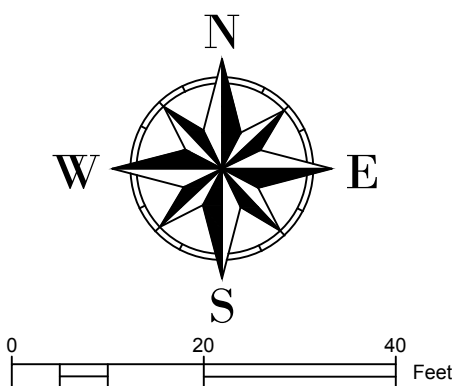
CURB & GUTTER CONSTRUCTION NOTES:

- A. Curbs, gutters & cut-off walls to be constructed of 3500 psi P.C.C. unless otherwise noted.
- B. Edges not specifically dimensioned shall be edged with a 3/8" edging tool.
- C. Remove & replace 12" wide strip of pavement beyond lip of gutter when constructing curb & gutter adjacent to existing a.c. pavement.
- D. Dimensions at rounded corners measured to intersection of straight lines.
- E. For 6" curb & gutter provide control jts. @ 6' o.c. max, also provide 1/2" expansion jts. at 30' o.c. max, at curb returns, & at each side of driveways.
- F. For all other curbing provide control jts. @ 10' o.c., provide expansion jts. @ 50' o.c. & adjacent to buildings and walls.

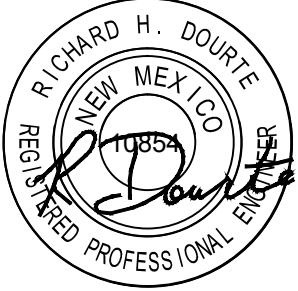
CURB AND GUTTER DETAILS



POND NE DETAILS



- NOTES:
1. EXISTING CONDITIONS SHOWN.
  2. EXISTING BUILDINGS AND APPURATENCES TO BE REMOVED FROM SUBJECT SITE.

<div>ENGINEER'S SEAL</div> <div></div> <div>10-30-17</div> <div>Richard Dourte P.E. #10854</div>	Title BURGER KING 4TH ST. AND MONTANO RD 5508 4th Street NW	DRAWN BY
		DATE
	DETAILS	SHEET #
	R.H.D Engineering, LLC 4305 Purple Sage Ave. NW ALBUQUERQUE, NM 87120 (505) 288-1621	2 of 2
		JOB # XXXX