Harmon Rita T.

To: 'Richard Dourte'
Cc: Wolfenbarger, Jeanne; Archuleta, Rudolph P.; Biazar, Shahab; Abiel X. Carrillo; Cherne, Curtis
Subject: Noah's Event Center and related DRC construction plans

Richard,

While on the Final Inspection for the DRC Construction related to Noah's Event Center the following issues were brought to my attention:

1) See below the Comment 1 on letter from Amy Niese to David Soule dated Sept 30, 2014, the response on letter dated Feb 18, 2015 and the calculations below. During inspection, it was found that a Single A inlet on the North side was installed as oppossed to the Double grated inlet called for in the report. Please justify the change from the report to the plan.

COMMENT:

1. As we discussed, the area provided for Vista Fuente Road should be the full lengt the road before the proposed inlets which was your original intention. The area provided is not accurate which will impact the sizing of the inlets. Provide the revised area and associated calculations.

RESPONSE:

1. The entire length of Vista Fuente Road is included in the calculation for the str the addendum (attached). The new calculations for the street flow is 9.17 cfs o side of the street and 1.65 cfs on the south side of the street. The total street flo 10.82cfs, refer to sheet 1 and sheet 2.

At a depth of 0.39ft - grate capacity is 8 cfs

Since the flow on the north side of the street is 9.17cfs, thus a double gr type "A" catch basin will be needed.

2) The Fountain Hills Grading and Drainage Management Plan, Stamp dated 6-4-07 by Yolanda Padilla-Moyer, called for (2) Type A, double grated inlets at the intersection of Educational Place and the newly constructed Vista Fuente Rd. The inlets were to capture a total of 27.6 cfs. During inspection it was shown that both existing inlets were removed and a single A inlet with a single grate replaced both inlets. Please show justification for replacing the 2 existing inlets with a Single A.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology Section
City of Albuquerque Planning Department
Development & Review Services Division
600 2nd St. NW, Suite 201
Albuquerque, NM 87102
t 505-924-3695

CITY OF ALBUQUERQUE

June 24, 2015

Richard Dourte, P.E.
RHD Engineering
4305 Purple Sage Ave NW
Albuquerque, New Mexico 87120

RE: **Noah's Event Center**
Vista Fuentes Rd NW
Grading and Drainage Plan
Engineers Stamp Date 6/15/15 (C12D003B4)

Dear Mr. Dourte,

Based upon the information provided in your submittal received 6/15/15, this plan is approved for Grading Permit and Building Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2013)

Project Title: Noah's Event Center **Building Permit #:** _____ **City Drainage #:** C12D00334
DRB#: 1003445 **EPC#:** _____ **Work Order#:** _____
Legal Description: Tract A-1, Fountain Hills Subdivision
City Address: 4591 Vista Fuente Road, NW

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

Owner: Noah's Event Center **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Architect: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Surveyor: Construction Survey Technologies, Inc **Contact:** John Gallegos
Address: _____
Phone#: 505-917-8721 **Fax#:** _____ **E-mail:** _____

Contractor: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- X 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. POR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ____ FOUNDATION PERMIT APPROVAL
- X 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)

As verified

RECEIVED
JUN 15 2015
LAND DEVELOPMENT SECTION

Paid $50.00

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided
DATE SUBMITTED: June 15, 2015 **By:** _____

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 followin

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

Noah's Event Center
8700 sf Building
4591 Vista Fuente Road NW
Albuquerque, New Mexico

Prepared by

RHD Engineering, LLC
Albuquerque, New Mexico

June 2015

RICHARD H. DOURTE
NEW MEXICO
10
REGISTERED PROFESSIONAL ENGINEER
6-15-15

RECEIVED
JUN 15 2015
LAND DEVELOPMENT SECTION

Table of Contents

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Proposed Conditions..... page 1

Summary..... page 1

Vicinity Map..... page 2

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Site Hydrology/hydraulic Calculations..... Appendix A

Site Grading and Grading Plan..... Appendix B

Drainage Subbasin Comparison ..... Appendix C

Purpose: The purpose of this drainage report is provide updated information regarding the Noah's Event Center. The drainage report approved by the City on May 20, 2015 (copy of letter enclosed) provided by Mr. David Soule, PE, stamp dated 4-15-15 included a 10,000 sf building. Recently and prior to the construction of this building, the owners decided to reduce the square footage of the building to 8700sf. Minor changes to the building area were also included in this revision, please see the building area comparison exhibit (enclosed), thus the reason for this drainage report.

Introduction: The project site is located between Paseo del Norte, Paradise blvd., Eagle Ranch Road and Golf Course Road on zone atlas C-12 (enclosed). This site is located in a Zone X, as shown on the FEMA firm Map 3501C0116G. This site is part of the Fountain Hills Plaza drainage masterplan.

Existing Conditions: Presently the site is undeveloped and the runoff generated by this site flows in a southeastern direction. The site to the west of this site is developed, the flows from that site are managed onsite, thus no flows from that site enter the project site. The slopes are in a southeast direction.

Proposed Conditions: The original 10,000 sf building as shown on the approved drainage report by Mr. David Soule, PE referenced above is being replaced with an 8700 sf building. The building area as shown on the enclosure is also being altered. This change is minor, and the supporting information/calculation will show that the overall change, with respect to drainage is negligible.

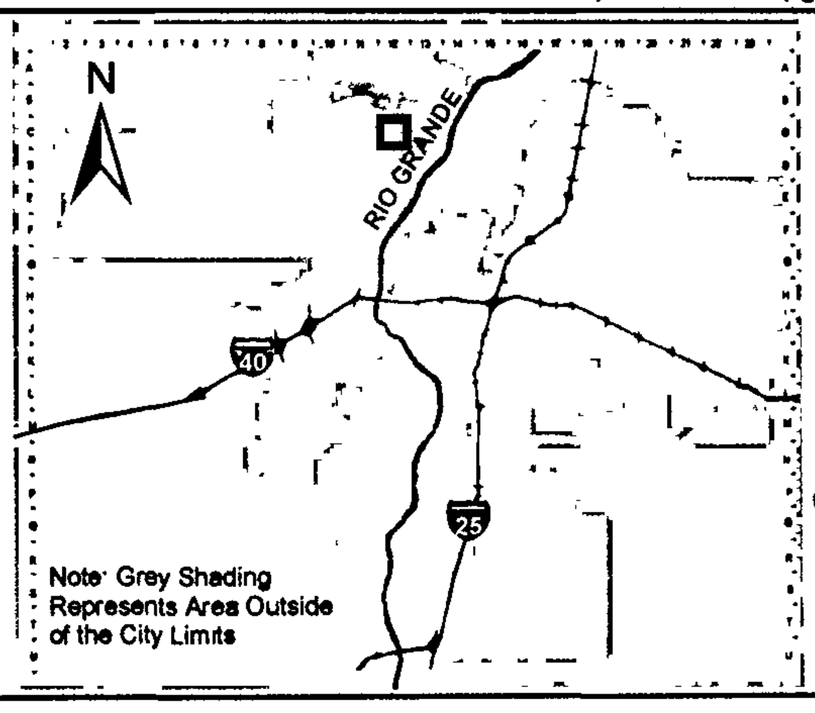
Summary:

In conclusion, the changes to the flows with respect for the 100 year, 6 hour event and this site are approximately 0.11 cfs less and .004 ac-ft less than the original plan that incorporated the 10,000 sf building. The first flush calculations show that the capacity of the first flush ponds (3132 cf) are greater than the required volume for the first flush (2435cf) requirements. Thus the revisions generate a little less than the originally approved drainage plan for the 10,000 sf building.

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

Albuquerque Geographic Information System

Map amended through: 9/2/2014



Zone Atlas Page:

C-12-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

Appendix A
Hydraulic Calculations

Existing Conditions for the 10,000 sf building area (refer to Appendix C)....

Basin B(a) – Impervious area
Roof area = 2025 sf
Sidewalk = 1110 sf
Pavers = 520 sf
Total = 3655 sf

Basin C(a) – Impervious area
Roof area = 1575 sf
Sidewalk = 330 sf
Pavers = 0 sf
Total = 1905 sf

Basin D(a) – Impervious area
Roof area = 2025 sf
Sidewalk = 360 sf
Pavers = 260 sf
Total = 2645 sf

Basin E(a) – Impervious area
Roof area = 4425 sf
Sidewalk = 750 sf
Pavers = 2235 sf
Total = 7410 sf

Proposed Conditions for the 8700 sf building area (refer to Appendix C)....

Basin B(b) – Impervious area
Roof area = 1800 sf
Sidewalk = 1080 sf
Pavers = 875 sf
Total = 3755 sf

Basin C(b) – Impervious area
Roof area = 1400 sf
Sidewalk = 390 sf
Pavers = 0 sf
Total = 1790 sf

Basin D(b) – Impervious area
Roof area = 1800 sf
Sidewalk = 330 sf
Pavers = 220 sf
Total = 2350 sf

Basin E(b) – Impervious area
Roof area = 3825 sf
Sidewalk = 1290 sf
Pavers = 1500 sf
Total = 6615 sf

Comparison of basins
B(a) vs B(b) = 3655 sf - 3755 sf = -100 sf (.002 ac) (increase in impervious area)
C(a) vs C(b) = 1905 sf - 1790 sf = 115 sf (.003 ac)
D(a) vs D(b) = 2645 sf - 2350 sf = 295 sf (.007 ac)
E(a) vs E(b) = 7410 sf - 6615 sf = 795 sf (.018 ac)
Total **1105 sf less impervious area for the site**

Approved flows from Mr. David Soule's drainage report as previously indicated above:
100yr 6hr event

Basin A = 1.12 cfs .039 ac-ft
Basin B = 2.43 cfs .087 ac-ft
Basin C = 0.60 cfs .021 ac-ft
Basin D = 1.05 cfs .039 ac-ft
Basin E = 1.46 cfs .049 ac-ft
Basin F = 0.71 cfs .022 ac-ft
Basin G = 0.15 cfs .006 ac-ft

The required first flush volume – 2466 cf

This site is located in Zone 1, Q100, 6 hr
Land treatment A = 1.29 cfs/ac .44 in
Land treatment B = 2.03 cfs/ac .67 in
Land treatment C = 2.67 cfs/ac .99 in
Land treatment D = 4.37 cfs/ac 1.97 in

Change in flows from the original drainage plan that incorporated the 10,000 sf building

Basin B
There is an increase in flows .002 ac x 4.37 cfs/ac = .01 cfs
100 sf x 1.97in x 1ft/12 in = 16cf <.001ac-ft

Basin C
There is a decrease in flows .003 ac x 4.37 cfs/ac = .01 cfs
115 sf x 1.97in x 1ft/12 in = 19cf <.001ac-ft
Basin D
There is a decrease in flows .007 ac x 4.37 cfs/ac = .03 cfs
295 sf x 1.97in x 1ft/12 in = 16cf =.001ac-ft
Basin E
There is a decrease in flows .018 ac x 4.37 cfs/ac = .08 cfs
795 sf x 1.97in x 1ft/12 in = 16cf = .003ac-ft

Summary of flows in Basins:

Basin A = 1.12 cfs	.039 ac-ft (no change)
Basin B = 2.43 cfs +.01 cfs = 2.44 cfs	.087 ac-ft (no significant change)
Basin C = 0.60 cfs - .01 cfs = 0.59 cfs	.021 ac-ft (no significant change)
Basin D = 1.05 cfs - .03 cfs = 1.02 cfs	.039 ac-ft - .001 ac-ft = .038 ac-ft
Basin E = 1.46 cfs - .08 cfs = 1.38 cfs	.049 ac-ft - .003 ac-ft = .046 ac-ft
Basin F = 0.71 cfs	.022 ac-ft (no change)
Basin G = 0.15 cfs	.006 ac-ft (no change)

Total change = -0.11 cfs and -0.004 ac-ft

In conclusion, the changes to the flows with respect to this site are approximately 0.11 cfs less and .004 ac-ft less than the original plan that incorporated the 10,000 sf building.

First flush requirements:

Since there is a decrease in the overall impervious areas by approximately 1105sf, the reduction in the amount of flows required to be retained onsite is:
1105 sf x 0.34 in x 1 ft/12 in = 31 cf.
Thus the required first flush requirement is 2466 cf – 31 cf = 2435 cf.

The first flush pond capacity:
Pond A = 1024cf
Pond B = 380 cf
Pond C = 684 cf
Pond D = 26 cf
Pond E = 1018 cf
Total = 3132 cf

Thus the capacity of the first flush pond are greater than the required volume for the first flush requirements.

CITY OF ALBUQUERQUE

May 20, 2015

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

RE: **Noah's Event Center**
Vista Fuentes Rd NW
Grading and Drainage Plan
Engineers Stamp Date 4/14/15 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received 4/15/15, this plan is approved for Grading Permit and Building Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

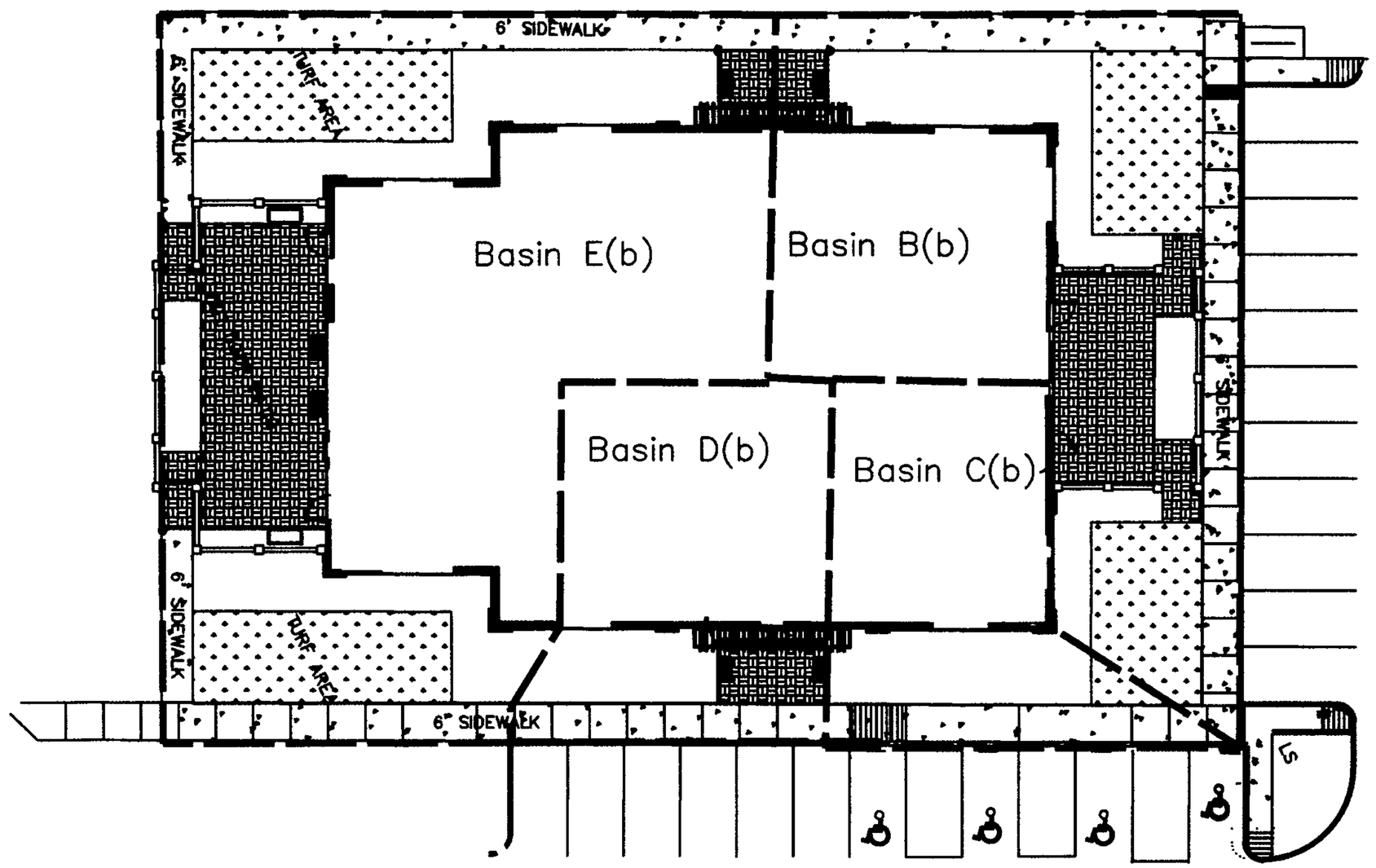
RR/RH
C: File

PO Box 1293

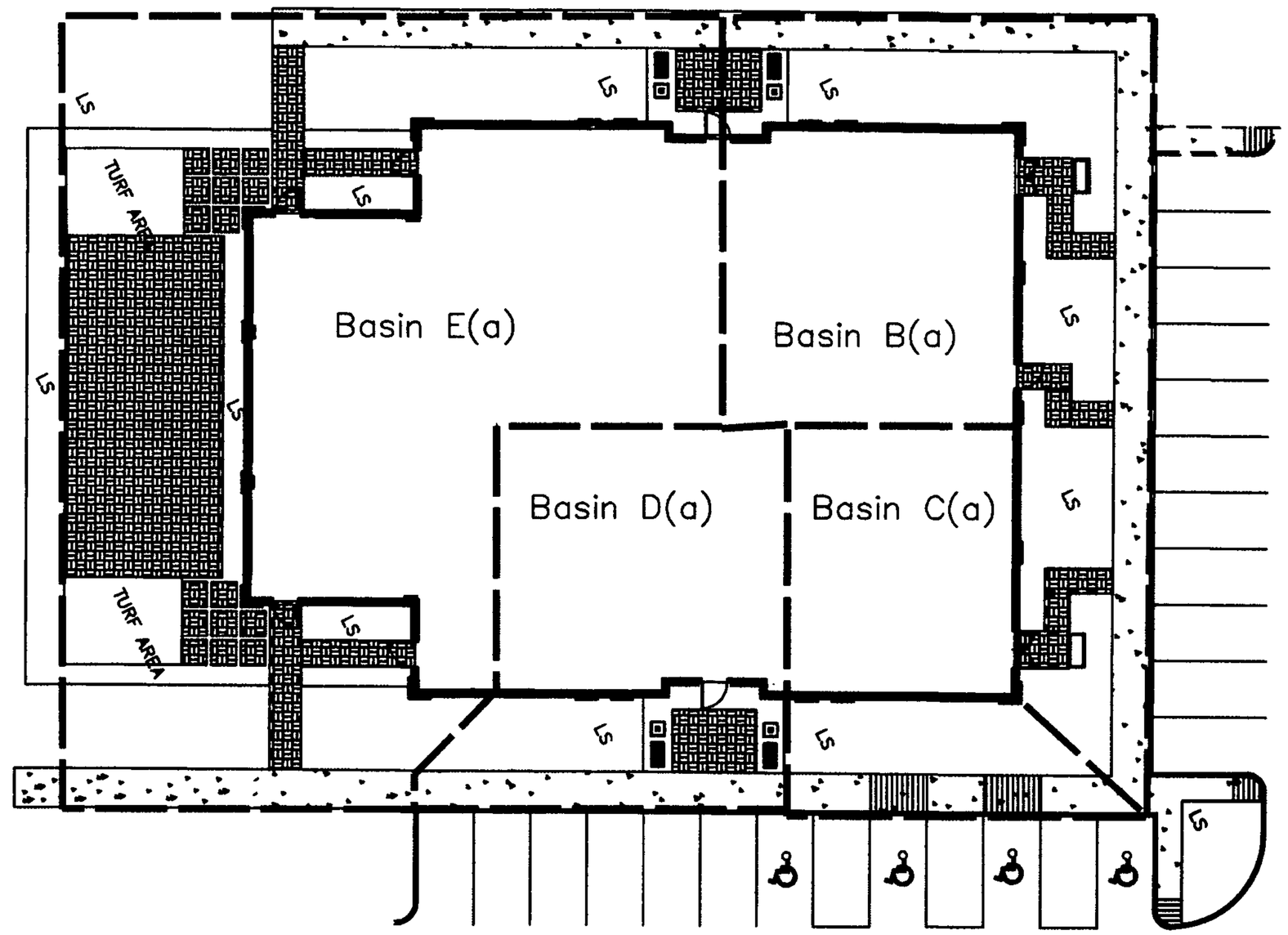
Albuquerque

New Mexico 87103

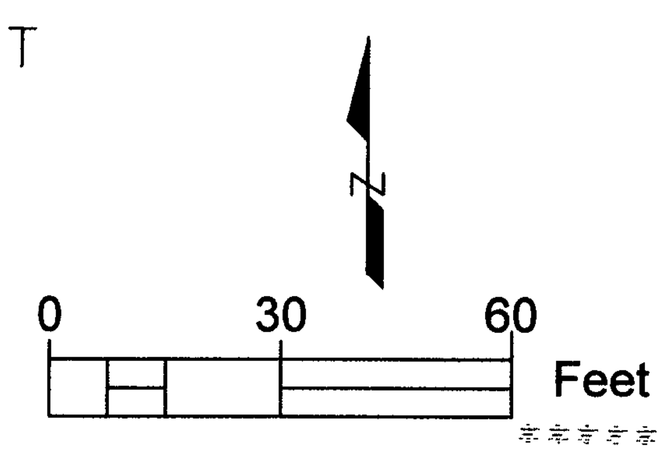
www.cabq.gov



PROPOSED BUILDING LAYOUT



ORIGINAL BUILDING LAYOUT



Drainage Subbasin Comparison

APPENDIX C

CITY OF ALBUQUERQUE

May 20, 2015

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

RE: **Noah's Event Center**
Vista Fuentes Rd NW
Grading and Drainage Plan
Engineers Stamp Date 4/14/15 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received 4/15/15, this plan is approved for Grading Permit and Building Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

C12D003B4

Project Title: Noahs at Fountain Plaza Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: LOT 1A FOUNTIAN HILLS PLAZA

City Address: VISTA FUENTES ROAD NW

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: FOUNTAIN HILLS LLC Contact: _____

Address: PO BOX 920798 EL PASO TX 79902

Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: JOE SIMONS

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS

Address: _____

Phone#: 917.8921 Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL
- X DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- X 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)

RECEIVED APR 14 2015 LAND DEVELOPMENT SECTION

RECEIVED APR 15 2015 LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided

DATE SUBMITTED: April 15, 2015 By: _____

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 followin

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

Rio Grande Engineering of NM, LLC

April 14, 2015

Ms. Rita Harmon, PE
Hydrology Division
Planning Department
City of Albuquerque

Re: Noah's at Fountain Plaza Grading and Drainage Plan (C12/D003B4)

Dear Ms. Harmon,

Thank you for your letter (attached) dated April 6, 2015 regarding the above referenced project. Please note that your letter references a grading and drainage plan dated 9-15-14, the plan that was submitted 3-13-15 had a stamp date of 2-25-15 so some of the issues you had were incorporated in that 2-25-15 grading plan.

The following is in response to your letter.

1. The build notes for this site have been added to the grading and drainage plan.
2. The information regarding the berms have been added.
3. The elevation issues have been addressed and the ponds are now identified as being "first flush ponds".
4. A cross-section for the retaining walls have been added to the grading plan.
5. A cross-section for the earthen swale has been added to the grading plan.
6. Curb cuts have been added to the grading plan.
7. Existing and proposed contours have been added to the grading plan.
8. Roof flows have been added to the grading plan.
9. The flow capacity for the 3-6 pipes under the sidewalk are on the exhibit A, attached to this letter.
10. The patio on the south end of this building is contained within a wall. A note indicating that blocks at grade will need to be turned, as to leave an opening for the stormwater that falls within this patio area.
11. An electronic submittal is included.

Thank you for your consideration.

Sincerely,

David Soule, PE
Rio Grande Engineering of NM, LLC

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LAND DEVELOPMENT SECTION

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APR 15 2015
LAND DEVELOPMENT SECTION

Exhibit A

Capacity of 3 - 6 inch diameter pipes under the sidewalk

Q = A x C x (2gh)^1/2

A = area of opening = 0.79sf
C = Coefficient of velocity = 0.82
g = 32.2 ft/s^2
h = 0.25ft

Q = 0.79 x 0.82 x (2 x 32.2 x 0.25)^1/2

Q = 2.6 cfs per pipe

Thus 3 pipes = 7.8 cfs, The drainage basin "E" generates 1.46 cfs , therefor 3 pipes have more than adequate capacity....

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APR 14 2015
LAND DEVELOPMENT SECTION

RECEIVED
APR 15 2015
LAND DEVELOPMENT SECTION

Rio Grande Engineering of NM, LLC

February 18, 2015

Hydrology Division
Planning Department
City of Albuquerque

Re: Noah's at Fountain Plaza Grading and Drainage Plan (C12/D003B4)

The following is in response to Ms. Amy L.D. Niese comments dated September 30, 2014.

1. The entire length of Vista Fuente Road is included in the calculation for the street flows on the addendum (attached). The new calculations for the street flow is 9.17 cfs on the north side of the street and 1.65 cfs on the south side of the street. The total street flows are 10.82cfs, refer to sheet 1 and sheet 2.

2. The ponding capacity provided for the first flush ponds is larger than required, as mentioned in the above referenced letter. It is desired to retain the ponds as shown on the grading plan.

3. The elevation contours for the first flush ponds have been corrected.

4. Elevation contours have been added to address the concern regarding how this site will tie into the adjoining property to the east. There are proposed retaining walls on the other two sides, the top of wall and bottom of wall elevations are included.

5. Bottom of wall elevations are included on the grading plan where sidewalk elevations are called out.

6. Calculations showing the 18in laterals are sufficiently sized are included, refer to sheet 3.

7. An electronic submittal is included.

Thank you for your consideration.

Sincerely,

David Soule, PE
Rio Grande Engineering of NM, LLC

Addendum 1

Vista Fuente street flows

823lf x 40ft = 32920sf = 0.756ac

Peak flows for street(zone 1) = 4.37cfs/ac x 0.756ac = 3.30 cfs

Each half of the street generates 3.30cfs/2 = 1.65cfs

North half of the street retains:

1- flows generated by Noah's event center = 7.52cfs
2- flows generated by Vista Fuente road = 1.65cfs
Total = 9.17cfs

South half of the street = 1.65cfs

Depth of flow on north side of Vista Fuente is approx. = 0.39 ft (see sheet 5 of 5)

Depth of flow on south side of Vista Fuente is approx. = 0.24ft (see sheet 5 of 5)

M

Catch Basin Capacities

For north side of Vista Fuente - from plate 22.3 D-5

At a depth of 0.39ft - grate capacity is 8 cfs

Since the flow on the north side of the street is 9.17cfs, thus a double grate type "A" catch basin will be needed.

For north side of Vista Fuente - from plate 22.3 D-5

At a depth of 0.24 - grate capacity is 3 cfs

Since the flow on the south half of Vista Fuente is 1.65cfs - 1 grate is sufficient, thus a single type "A" catch basin is needed.

M

Catch Basin Lateral Capacities

For 18 inch laterals at a slope of 3.09%.

Orafice capacity

Q= CA(sqrt(2gh))

C= 0.82
A = 1.767sf
h= (18in/(12in/ft))/2 = 0.75ft
g= 32.2ft/s^2

thus Q= (0.82 x 1.67) x (sqrt(2 x 32.2 x 0.75) = 10.1 cfs

therefor since 10.1 cfs is greater than 9.17cfs or 1.67 cfs the orafice has capacity with respect to these street flows.

18 inch pipe capacities

Q = (1.49/n) x (A x R^2/3 x s^1/2)

n = .013
A = 1.167 sf
R= A/P = 1.767sf/4.71ft = 0.375
s = 0.0309

Q= (1.49/.013) x (1.767 x 0.375^.67 x 0.0309^.5) = 18.45cfs

Thus since 18.45cfs is greater than 9.17 cfs or 1.67 cfs the laterals have capacity with respect to these street flows.

a1

DRAINAGE REPORT

For

Noah's Event Center at Fountain Hills

Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

September 2014

DAVID SOULE
NEW MEXICO
14522
REGISTERED PROFESSIONAL ENGINEER
9/24/14

David Soule P.E. No. 14522

RECEIVED
SEP 24 2014
LAND DEVELOPMENT SECTION

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Introduction 3
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Summary 5

Appendix

Site Hydrology/Hydraulic Calculations ..... A
Excerpts from Fountain Hills Master Drainage Plan ..... B

Map

Site Grading and Drainage Plan

PURPOSE

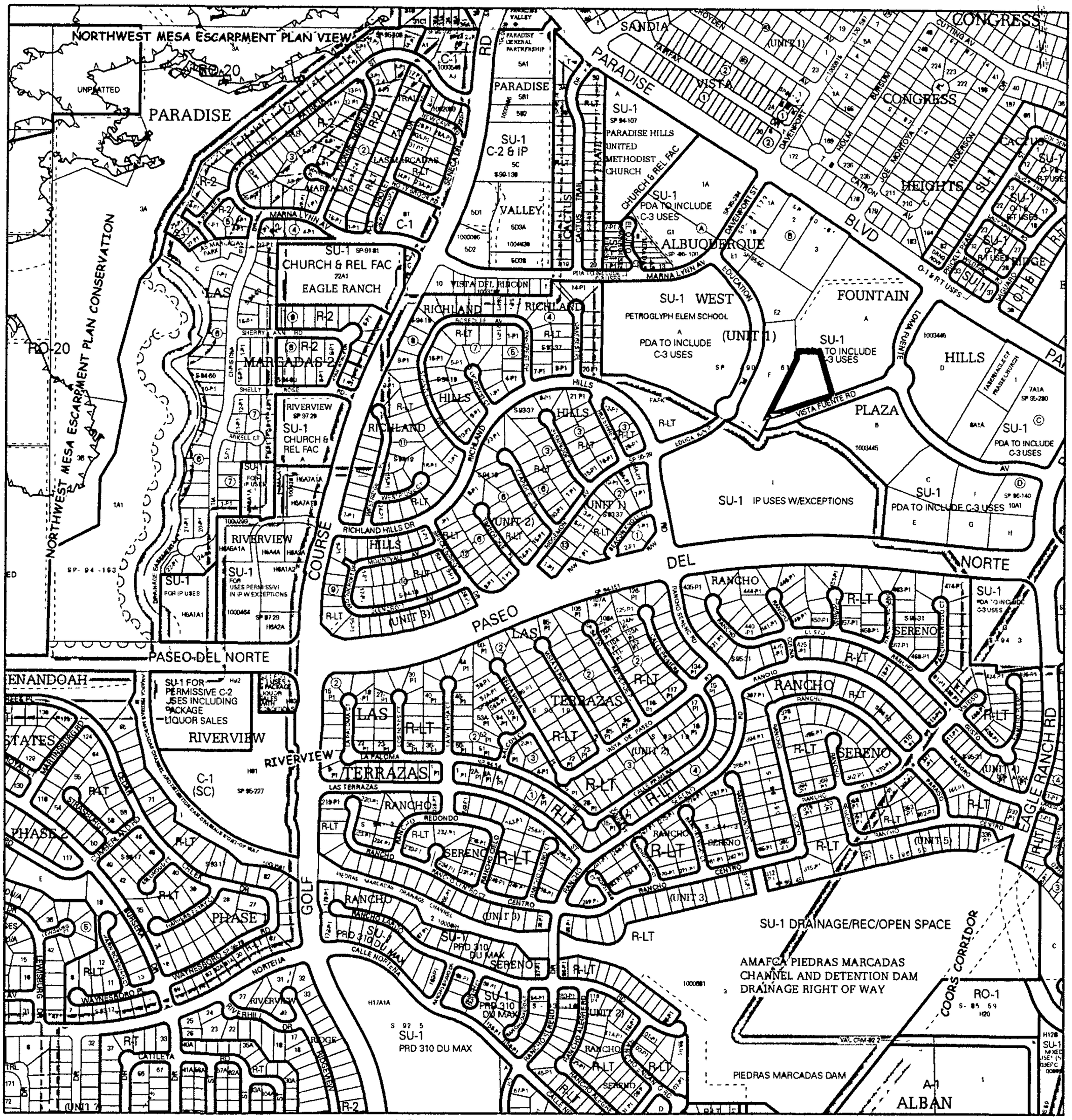
The purpose of this report is to provide the Drainage Management Plan for the development of a 2 acre lot located on Vista Fuentes Road between Education Place and Loma Fuentes Drive NW. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the lot development and grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 1.99-acre parcel of land located on the north side of Vista Fuentes Road between Education Place and Loma Fuentes Drive NW. The legal description of this site is Lot 1-A Fountain Hills Plaza. As shown on FIRM map3501C0116G, the entire site is located within Flood Zone X. The site is part of the Fountain Hills plaza master drainage plan. As part of this development Vista Fuentes Road will be constructed from Education place to Loma Fuentes Road

EXISTING CONDITIONS

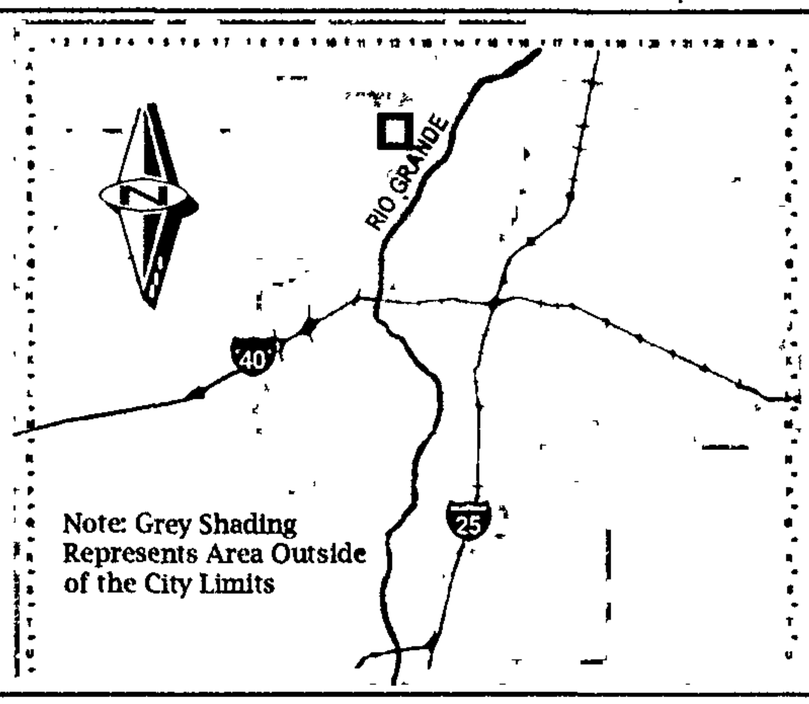
The site appears to be in a native condition. Due to a large channelization and storm drain on the adjacent upstream lot, the site is not impacted by any upland flows. The site generally slopes from the northwest to the north east with average 6% grade. Currently discharges all of its flow to the south east.



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

Albuquerque Geographic Information System

Map amended through: 2/4/2010



Zone Atlas Page:

C-12-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

PROPOSED CONDITIONS

The proposed improvements consist of a new 9000 square foot building and associated parking field. The scope of this project includes the construction of the Vista Fuentes roadway. The lot has been designed to retain on site 2982 cubic feet of water. The water quality volume based upon .34 Inches is 2466 cubic feet. As shown on the drainage hydraulic calculation sheet, each contributing basin generated enough flow to fill the shallow ponds. The site is part of basin B-1A of the fountain hills master drainage plan. This basin assumes a peak discharge rate of 4.18 cfs per acres. The developed conditions for this site will produce 7.52 cfs or 3.78 cfs per acre. The flow leaving the site will flow down vista Fuentes road and be captured by new inlets located at the round about intersection with Loma Fuentes. As shown on the street capacity spread sheet the combined onsite and roadway flows of 8.29 cfs will flow at a depth of .38' and will remain on the north half of the road. The inlets consist of a double A inlet on the north and a singe A on the south. As show each grate has a capacity of 8 cfs so the inlets on the north side can handle the flow. Once the flow enters the existing storm drain it is conveyed to a regional detention pond for the fountain hills development.

SUMMARY AND RECOMMENDATIONS

This project is a development of a commercial lot within the fountain hills plaza master plan. The development is allowed to discharge 8.32 cfs. Our discharge rate of 7.52 is less than allowed. Our site is graded such than the required water quality holding capacity of 2466 is exceeded. The site has been designed such than most paved areas drain thru these water quality ponds. The offsite roadway is being constructed with this development and has the capacity to convey all the flows generated by the development. The site has been designed in accordance with City of Albuquerque Drainage ordinance. This drainage plan and report conforms to the governing drainage regulations of the City. Since the effected area site encompasses more than 1 acre, a NPDES permit will be required prior to any construction activity.

APPENDIX A

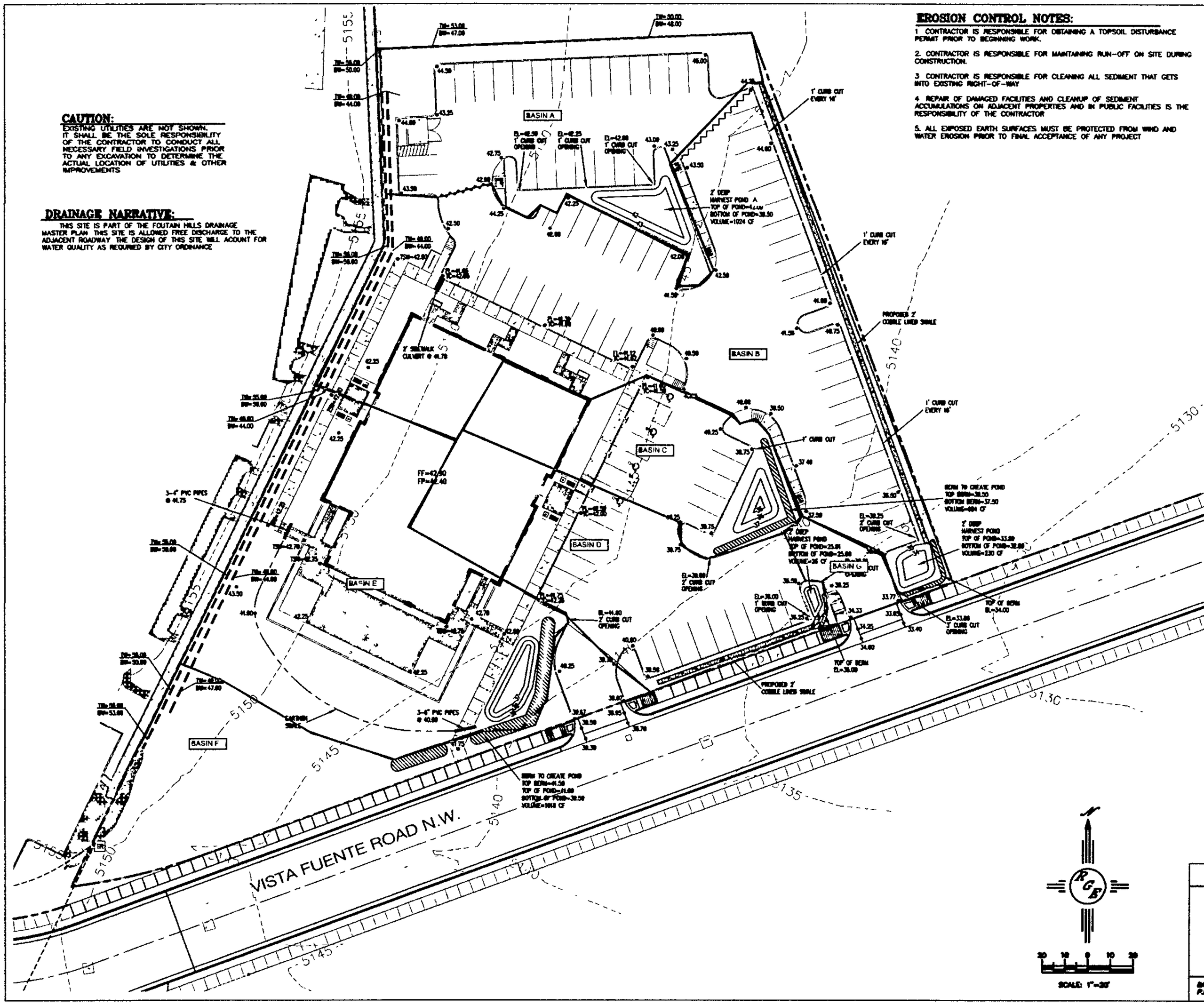
SITE HYDROLOGY

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

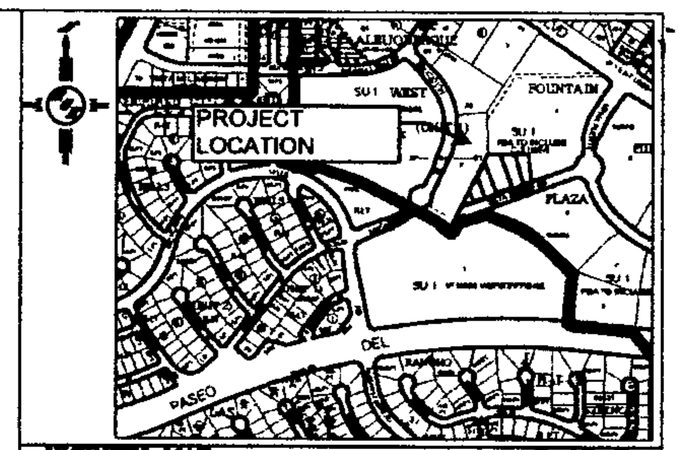
DRAINAGE NARRATIVE:

THIS SITE IS PART OF THE FOUTAIN HILLS DRAINAGE MASTER PLAN THIS SITE IS ALLOWED FREE DISCHARGE TO THE ADJACENT ROADWAY THE DESIGN OF THIS SITE WILL ACOUNT FOR WATER QUALITY AS REQUIRED BY CITY ORDINANCE

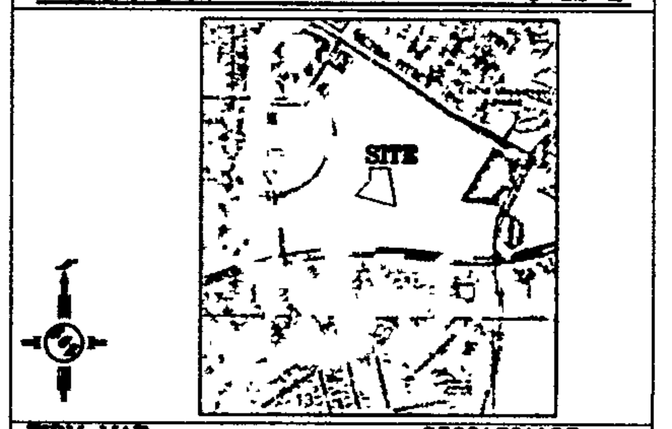


EROSION CONTROL NOTES:

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



VICINITY MAP: C-12-Z



FIRM MAP: 35001C0116G

LEGAL DESCRIPTION:

LOT 1A FOUNTAIN HILLS
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. SITE IS PART OF THE FOUNTAIN HILLS MASTER DRAINAGE PLAN. THE REGIONAL POND WILL BE MODIFIED BY THE EXTENSION OF THE DISCHARGE PIPE OUTFALL TO RETAIN THE FIRST .34" OF STORM RUNOFF FROM ENTIRE DEVELOPMENT TO CONFORM TO THE WATER QUALITY REQUIREMENTS

LEGEND

- 46.00 — PROPOSED SPOT ELEVATION
- TW=44.00 / BW=38.00 — TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION
- EXISTING CONTOUR
- 5400 — EXISTING INDEX CONTOUR
- 5401 — PROPOSED CONTOUR
- 5400 — PROPOSED INDEX CONTOUR
- LOT LINE
- CENTERLINE
- RIGHT-OF-WAY
- PROPOSED RETAINING WALL
- PROPOSED ROCK FACE WALL
- EXISTING CURB AND GUTTER
- PROPOSED EDGE OF CONCRETE
- PROPOSED FLOWLINE
- EXISTING WALL
- PROPOSED 22 WIDE COBBLE SWALE

I DAVID SOULE, HAVE PERSONALLY INSPECTED THE PROPERTY ON X-XX-13. NO EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTENT WITH THE TOPO SHOWN.

DAVID SOULE P.E. #14522 — DATE

SCALE: 1"=20'

ENGINEER'S SEAL	NOAH'S EVENT CENTER	DRAWN BY BEH
		DATE 5-2014
	CONCEPTUAL GRADING AND DRAINAGE PLAN	
	Rio Grande Engineering	SHEET # 3 of 6
DAVID SOULE P.E. #14522		JOB # 100001

Weighted E Method

EAGLE CREST

Existing Developed Basins

											100-Year, 6-hr.			10-day
Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
BASIN A1	12387	0.284	0%	0	15.0%	0.043	35.0%	0.09953	60%	0.171	1.629	0.039	1.12	0.061
BASIN B	26848	0.616	0%	0	5.0%	0.031	21.0%	0.12943	74%	0.456	1.699	0.087	2.43	0.148
BASIN C	7335	0.168	0%	0	12.0%	0.020	34.0%	0.05725	54%	0.091	1.481	0.021	0.60	0.033
BASIN D	10952	0.251	0%	0	3.0%	0.008	8.0%	0.02011	89%	0.224	1.853	0.039	1.05	0.069
BASIN E	17871	0.410	0%	0	8.0%	0.033	45.0%	0.18462	48%	0.197	1.445	0.049	1.46	0.076
BASIN F	10165	0.233	0%	0	10.0%	0.023	72.0%	0.16802	18%	0.042	1.134	0.022	0.71	0.028
BASIN G	1475	0.034	0%	0	0.0%	0.000	0.0%	0	100%	0.034	1.970	0.006	0.15	0.010
TOTAL	87033	1.998	0%	0	34.0%	0.157	16.0%	0.659	50%	1.214	1.576	0.262	7.52	0.424
VISTA FUENTE RD	7968	0.183	0%	0	0.0%	0.000	10.0%	0.01829	90%	0.165	1.872	0.029	0.77	0.050

40 x 199 ← STOLEN RE
1025 − 202 = 823

NOT RIGHT

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Where for 100-year, 6-hour storm (zone 1)

Ea= 0.44	Qa= 1.29
Eb= 0.67	Qb= 2.03
Ec= 0.99	Qc= 2.87
Ed= 1.97	Qd= 4.37

FLOW SUMMARY

LEAVING SITE	7.52	CFS
FLOW AT INLET	8.29	
~~WATER HARVEST~~ REQUIREMENT	2465.94	CUBIT FEET

FIRST FLUSH

	VOLUME	CONTRIBUTING BASIN
POND A	1024 CF	1681.54 CF
POND B	230 CF	3802 CF
POND C	684	905.14 CF
POND D	26	1690.806 CF
POND E	1018	2151.519 CF
TOTAL	2982	
REQUIRED	2466	

Street Capacity Calculations

VISTA FUENTE

40' F-F Street Section with 8" curb

Slope= 0.04

For water depths less than 0.125 feet

Y= Water depth
Area = 8*Y^2
P= SQRT(257*Y^2) + Y
n= 0.017

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.01	0.0008	0.1703	0.0047	0.0004	0.0008	0.4903	0.0049	0.8641	0.0082
0.02	0.0032	0.3406	0.0094	0.0025	0.0050	0.7784	0.0156	0.9699	0.0192
0.04	0.0128	0.6812	0.0188	0.0158	0.0316	1.2356	0.0494	1.0887	0.0448
0.06	0.0288	1.0219	0.0282	0.0466	0.0933	1.6191	0.0971	1.1648	0.0733
0.08	0.0512	1.3625	0.0376	0.1004	0.2008	1.9614	0.1569	1.2220	0.1039
0.1	0.0800	1.7031	0.0470	0.1821	0.3642	2.2759	0.2276	1.2683	0.1362
0.12	0.1152	2.0437	0.0564	0.2961	0.5922	2.5701	0.3084	1.3075	0.1699
0.125	0.1250	2.1289	0.0587	0.3301	0.6603	2.6410	0.3301	1.3164	0.1785

For water depths greater than 0.125 ft but less than 0.405 ft

Y1= Y-0.125
A2= A1 + 2*Y1 + 25*Y1^2
P2= P1 + SQRT(2501*Y1^2)

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.13	0.1356	2.3840	0.0569	0.3507	0.7015	2.5860	0.3362	1.2639	0.1763
0.16	0.2256	3.9143	0.0576	0.5886	1.1772	2.6087	0.4174	1.1493	0.1921
0.2	0.4156	5.9547	0.0698	1.2318	2.4636	2.9637	0.5927	1.1679	0.2451
0.24	0.6856	7.9951	0.0858	2.3309	4.6619	3.3997	0.8159	1.2230	0.3121
0.28	1.0356	10.0355	0.1032	3.9833	7.9667	3.8463	1.0770	1.2810	0.3862
0.32	1.4656	12.0759	0.1214	6.2810	12.5619	4.2855	1.3714	1.3351	0.4650
0.3464	1.7932	13.4225	0.1336	8.1930	16.3861	4.5688	1.5826	1.3680	0.5190
0.39	**2.4106**	**15.6466**	**0.1541**	**12.1117**	**24.2233**	**5.0243**	**1.9595**	**1.4178**	**0.6109** ✓
0.405	2.6450	16.4117	0.1612	13.6943	27.3886	5.1774	2.0969	1.4337	0.6433

For water depths greater than 0.405 ft but less than 0.667 ft

Y2= Y - 0.405
A3= A2 + Y2*20
P3= P2 + Y2

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.41	2.7250	16.4167	0.1660	14.3887	28.7773	5.2802	2.1649	1.4532	0.6622
0.44	3.2050	16.4467	0.1949	18.8333	37.6667	5.8762	2.5855	1.5612	0.7760
0.47	3.6850	16.4767	0.2236	23.7364	47.4729	6.4414	3.0274	1.6558	0.8904
0.5	4.1650	16.5067	0.2523	29.0749	58.1498	6.9808	3.4904	1.7398	1.0053
0.55	4.9650	16.5567	0.2999	38.8880	77.7761	7.8324	4.3078	1.8612	1.1985
0.5945	5.6770	16.6012	0.3420	48.5331	97.0663	8.5491	5.0824	1.9540	1.3722
0.63	6.2450	16.6367	0.3754	56.8123	113.6246	9.0972	5.7313	2.0198	1.5119
0.667	6.8370	16.6737	0.4100	65.9712	131.9424	9.6491	6.4360	2.0821	1.6586

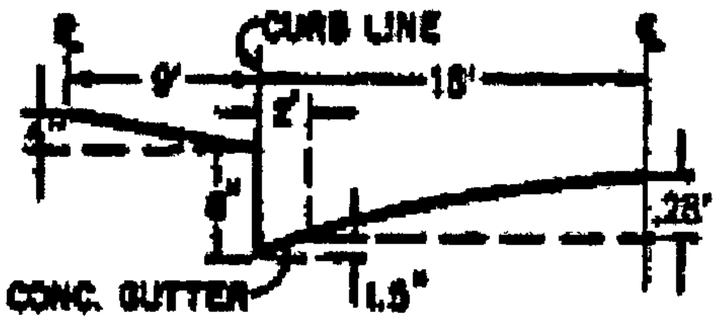
For water depths greater than 0.667 ft but less than 0.847 ft

Y3= Y - 0.667
A4= A3 + 16 * Y3 + 25 * Y3^2
P4= P3 + SQRT(2501 * Y3^2)

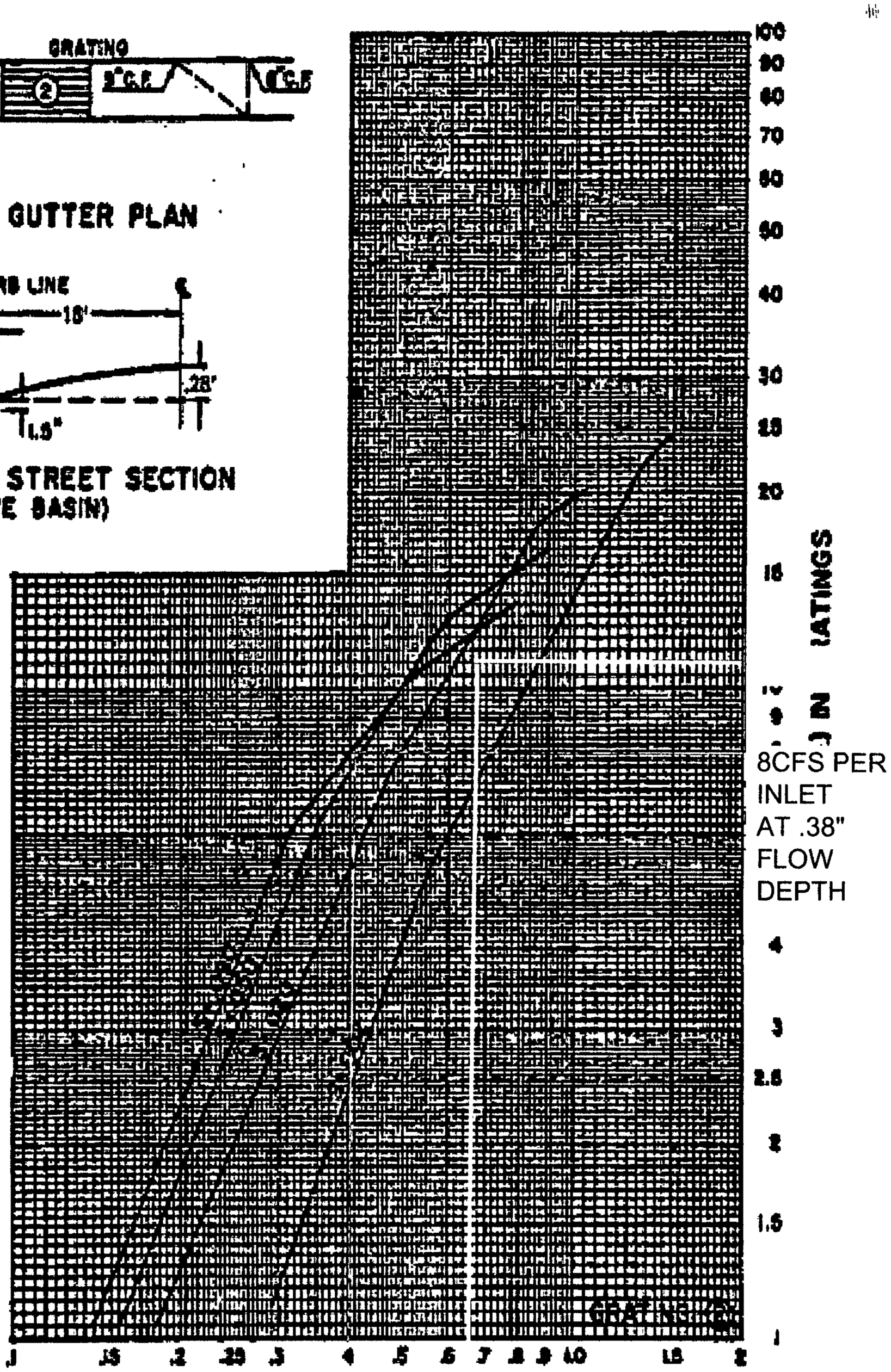
Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.7	7.3922	18.3240	0.4034	70.5577	141.1154	9.5449	6.6814	2.0104	1.6708
0.73	7.9442	19.8243	0.4007	75.4895	150.9791	9.5024	6.9368	1.9600	1.6911
0.75	8.3372	20.8245	0.4004	79.1745	158.3491	9.4965	7.1224	1.9324	1.7087
0.77	8.7502	21.8247	0.4009	83.1762	166.3525	9.5056	7.3193	1.9090	1.7292
0.8	9.4072	23.3250	0.4033	89.7748	179.5495	9.5432	7.6345	1.8803	1.7646
0.82	9.8702	24.3252	0.4058	94.5744	189.1488	9.5818	7.8571	1.8647	1.7909
0.85	10.6022	25.8255	0.4105	102.3832	204.7664	9.6568	8.2083	1.8458	1.8342

GRATING CAPACITIES FOR TYPE 'A', 'C' and 'D'

GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)



Catch Basin Lateral Capacities

For 18 inch laterals at a slope of 3.09%.

Orafice capacity

Q= CA(sqrt(2gh))

C= 0.82
A = 1.767sf
h= (18in/(12in/ft))/2 = 0.75ft
g= 32.2ft/s^2

thus Q= (0.82 x 1.67) x (sqrt(2 x 32.2 x 0.75) = 10.1 cfs

therefor since 10.1 cfs is greater than 9.17cfs or 1.67 cfs the orafice has capacity with respect to these street flows.

18 inch pipe capacities

Q = (1.49/n) x (A x R^2/3 x s^1/2)

n = .013
A = 1.167 sf
R= A/P = 1.767sf/4.71ft = 0.375
s = 0.0309

Q= (1.49/.013) x (1.767 x 0.375^.67 x 0.0309^.5) = 18.45cfs

Thus since 18.45cfs is greater than 9.17 cfs or 1.67 cfs the laterals have capacity with respect to these street flows.

a1

CITY OF ALBUQUERQUE

September 30, 2014

Mr. David Soule
Rio Grande Engineering
PO Box 93924
Albuquerque, NM 87199

Re: Noah's at Fountain Plaza
Grading and Drainage Plan
Engineer's Stamp Date 9-15-14 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received September 24, 2014, the above referenced plan cannot be approved for Grading Permit nor Building Permit until the following comments are addressed:

1. As we discussed, the area provided for Vista Fuente Road should be the full length of the road before the proposed inlets which was your original intention. The area provided is not accurate which will impact the sizing of the inlets. Provide the revised area and associated calculations.
2. Calculations were provided for the First Flush. (Please note, use "First Flush" instead of "Water Harvesting".) Your design was for the area of the site times 0.34 inches. The ponds can be sized for the impervious area times 0.34 inches.
3. The contour elevations of the First Flush ponds do not match what is being called out in the text for the ponds. Please revise.
4. How is the site tying into exiting grades along the perimeter? Provide contours or spot elevations showing how that is being accomplished.
5. Provide bottom of wall elevations where sidewalk elevations are called out.
6. Include calculations showing the 18 inch laterals are sufficiently sized.
7. For the electronic submittal, include all attachments to the report such as the grading and drainage plan, previous report exhibits, and the DTIS.

If you have any questions, you can contact me at 924-3994.

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

C: e-mail

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

CITY OF ALBUQUERQUE

April 6, 2015

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

RE: **Noah's at Fountain Plaza**
Vista Fuentes Rd.
Grading and Drainage Plan
Engineers Stamp Date 9/15/14 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received 3/13/15, this plan cannot be approved for Grading Permit and Building Permit until the following comments are addressed.

- Provide build notes on the G&D plan.
- Provide the materials of the berms? What are the slopes? What are the heights?
- The ponds do not match the elevations provided, such as bottom of pond and top of pond. How are flows leaving the ponds? In the notes section change the statement water quality to first flush.
- Provide cross sections of the retaining walls.
- Provide a cross section of the earthen swale.
- Provide curb cuts at various other locations.
- Provide existing and proposed contours.
- Provide roof flows.
- Provide the flow capacity for the three 6" pvc pipes under the sidewalk. A sidewalk culvert may be the preferred option for this location to avoid clogging unless the swale is made of a non erosive material.
- The south end of the building appears to have a patio with brick pavers, does this area contain a wall also or is the double line a curb? If either case how are flows leaving this area?

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2013)

C12D003B4

Project Title: Noahs at Fountain Plaza Building Permit #: _____ City Drainage #: _____
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: LOT 1A FOUNTIAN HILLS PLAZA
City Address: VISTA FUENTES ROAD NW

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE
Address: PO BOX 93924, ALBUQUERQUE, NM 87199
Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: FOUNTAIN HILLS LLC Contact: _____
Address: PO BOX 920798 EL PASO TX 79902
Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: JOE SIMONS
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS
Address: _____
Phone#: 917.8921 Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL
X DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
X 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 X No ____ Copy Provided
DATE SUBMITTED: 3/3/15 By: JAM

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 followin

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
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CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director

Mayor Richard J. Berry

March 18, 2016

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

RE: **Noah's Event Center**
4591 Vista Fountain Rd. NW
Request Permanent C.O. - Approved
Engineers Stamp Date 6/15/15 (C12D003B4)
Certification Dated: 3/8/16

Dear Mr. Dourte,

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Based on the Certification received 3/8/2016, the above site is acceptable for release of Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3686 or Totten Elliott at 924-3982.

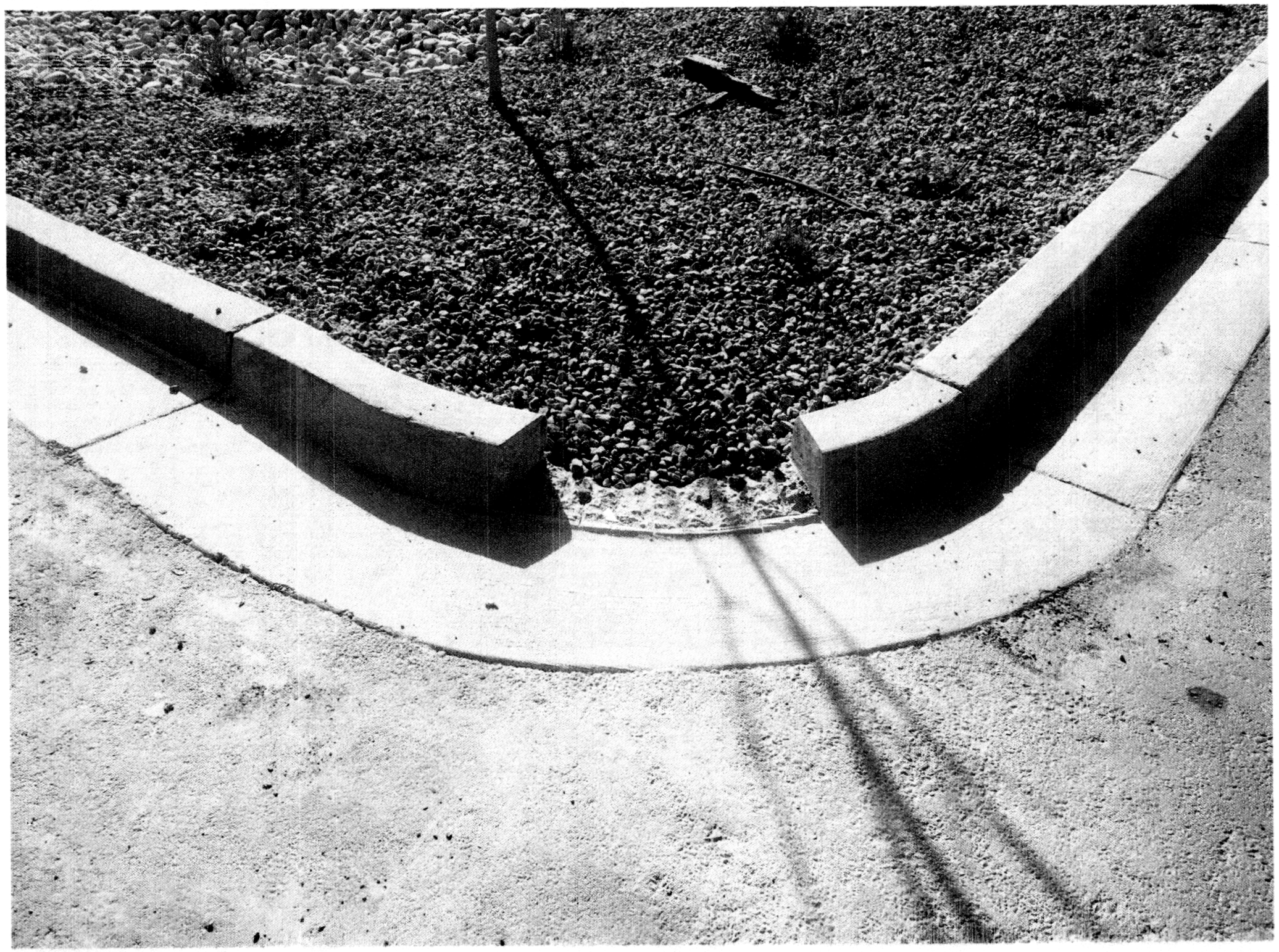
Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Department
Development and Review Services

TE/AC
C: E-Mail Cordova, Camille C.; Connor, Miranda, Rachel; Sandoval, Darlene M.; Blocker, Lois

Ms. Elliott -
Not sure if
these made it
to you via
email -
Thanks
Richard Dourte

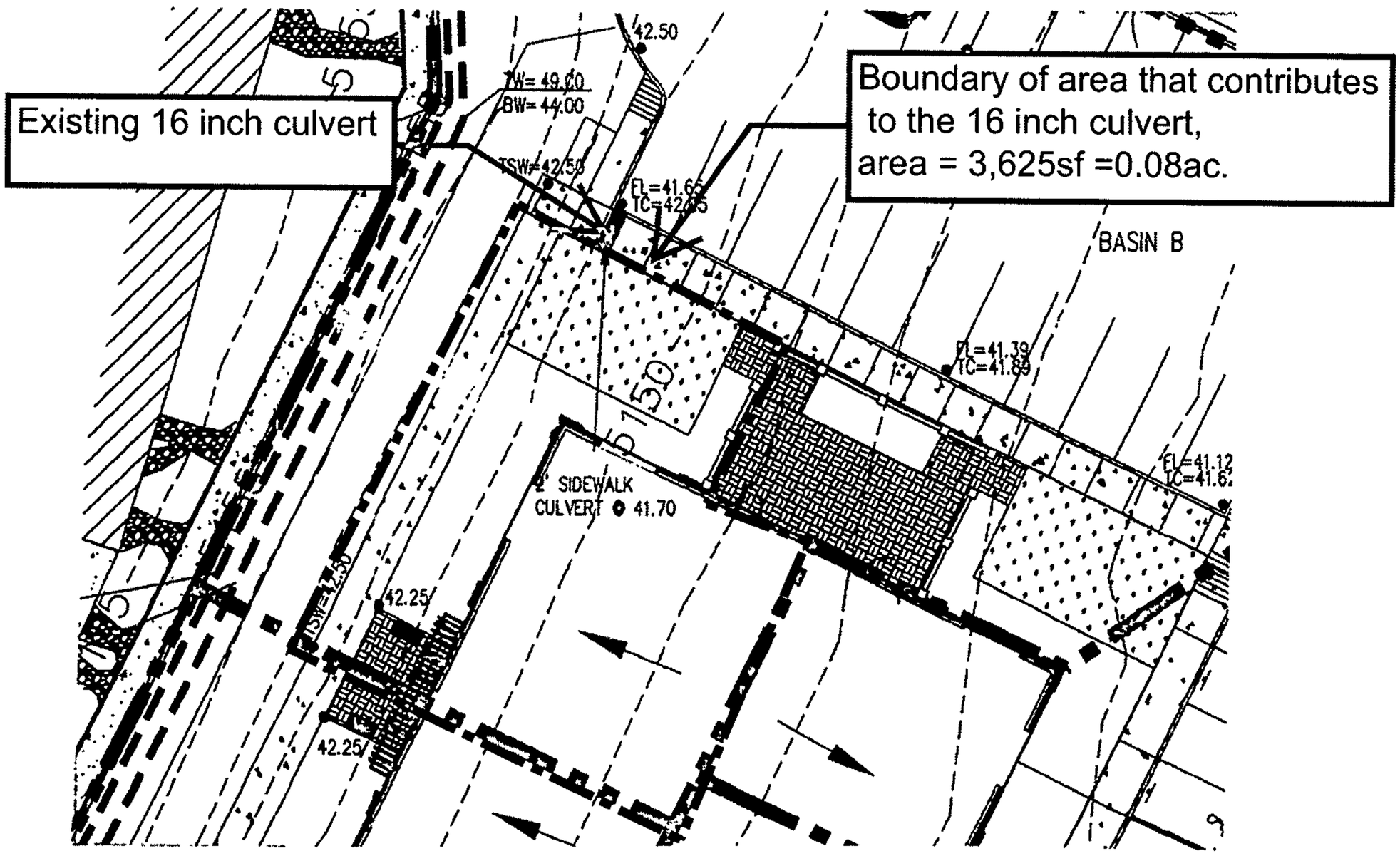
POND 'C'
NOAH'S Event Center
File No. C12D00384



Pond 'E'

NOAH'S EVENT CENTER
File No. C12D003B4

Noah's Event Center C12D003B4 sidewalk culvert size verification



Excerpt taken from approved drainage plan date 6-15-15 scale 1"=30'

Peak discharge from area for the 100yr 6hr event = 4.37cfs/ac. (land treatment D)
Q= 4.37cfs/ac x 0.08ac = 0.36cfs

Capacity of the culvert at 0.5ft depth (weir equation)

Q=CLH^3/2
C=1.46 (Hydraulics- Brater and King, 7th edition)
L=1.33ft
H=0.5ft

Q=(1.46)x(1.33)x(0.5^3/2) = 0.7cfs

Thus the capacity of the culvert is greater than the peak discharge.

Richard Dourte,PE
RHD Engineering, LLC
3-16-16

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2013)

Project Title: Noah's Event Center **Building Permit #:** _____ **City Drainage #:** C12D003B4
DRB#: 1003445 **EPC#:** _____ **Work Order#:** _____
Legal Description: Tract A-1, Fountain Hills Subdivision
City Address: 4591 Vista Fuente Road, NW

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

Owner: Noah's Event Center **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Architect: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Surveyor: Construction Survey Technologies, Inc **Contact:** John Gallegos
Address: _____
Phone#: 505-917-8721 **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)
- X 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
- X CERTIFICATE OF OCCUPANCY (PERM)
- ___ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ___ FOUNDATION PERMIT APPROVAL
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- ___ ESC PERMIT APPROVAL
- ___ ESC CERT. ACCEPTANCE
- ___ OTHER (SPECIFY)

RECEIVED
MAR 08 2016
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: ___ Yes X No ___ Copy Provided
DATE SUBMITTED: March 8, 2016 **By:** _____

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 followin

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CITY OF ALBUQUERQUE

September 30, 2014

Mr. David Soule
Rio Grande Engineering
PO Box 93924
Albuquerque, NM 87199

Re: Noah's at Fountain Plaza
Grading and Drainage Plan
Engineer's Stamp Date 9-15-14 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received September 24, 2014, the above referenced plan cannot be approved for Grading Permit nor Building Permit until the following comments are addressed:

1. As we discussed, the area provided for Vista Fuente Road should be the full length of the road before the proposed inlets which was your original intention. The area provided is not accurate which will impact the sizing of the inlets. Provide the revised area and associated calculations.
2. Calculations were provided for the First Flush. (Please note, use "First Flush" instead of "Water Harvesting".) Your design was for the area of the site times 0.34 inches. The ponds can be sized for the impervious area times 0.34 inches.
3. The contour elevations of the First Flush ponds do not match what is being called out in the text for the ponds. Please revise.
4. How is the site tying into exiting grades along the perimeter? Provide contours or spot elevations showing how that is being accomplished.
5. Provide bottom of wall elevations where sidewalk elevations are called out.
6. Include calculations showing the 18 inch laterals are sufficiently sized.
7. For the electronic submittal, include all attachments to the report such as the grading and drainage plan, previous report exhibits, and the DTIS.

If you have any questions, you can contact me at 924-3994.

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

C: e-mail

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

DRAINAGE REPORT

For

Noah's Event Center at Fountain Hills

Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

September 2014

DAVID SOULE
NEW MEXICO
14522
REGISTERED PROFESSIONAL ENGINEER
9/24/14

David Soule P.E. No. 14522

RECEIVED
SEP 24 2014
LAND DEVELOPMENT SECTION

TABLE OF CONTENTS

Purpose 3
Introduction 3
Existing Conditions 3
Exhibit A-Vicinity Map 4
Proposed Conditions 5
Summary 5

Appendix

Site Hydrology/Hydraulic Calculations ..... A
Excerpts from Fountain Hills Master Drainage Plan ..... B

Map
Site Grading and Drainage Plan

PURPOSE

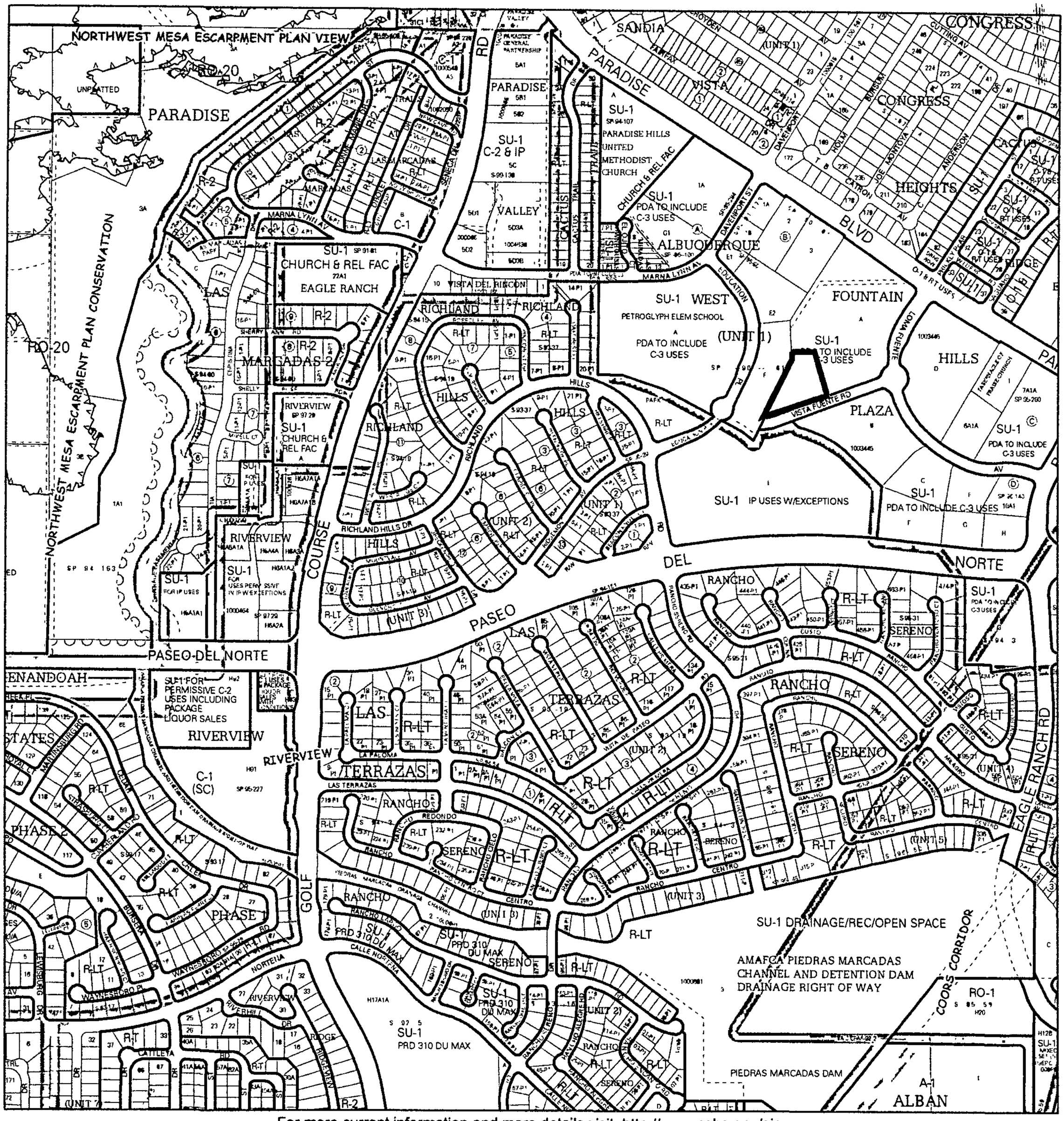
The purpose of this report is to provide the Drainage Management Plan for the development of a 2 acre lot located on Vista Fuentes Road between Education Place and Loma Fuentes Drive NW. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the lot development and grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 1.99-acre parcel of land located on the north side of Vista Fuentes Road between Education Place and Loma Fuentes Drive NW. The legal description of this site is Lot 1-A Fountain Hills Plaza. As shown on FIRM map3501C0116G, the entire site is located within Flood Zone X. The site is part of the Fountain Hills plaza master drainage plan. As part of this development Vista Fuentes Road will be constructed from Education place to Loma Fuentes Road

EXISTING CONDITIONS

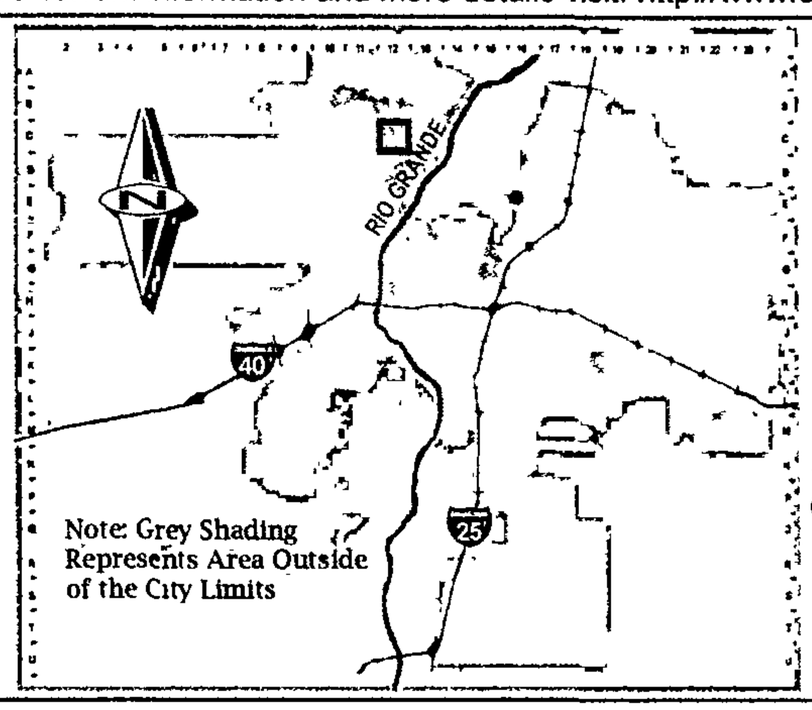
The site appears to be in a native condition. Due to a large channelization and storm drain on the adjacent upstream lot, the site is not impacted by any upland flows. The site generally slopes from the northwest to the north east with average 6% grade. Currently discharges all of its flow to the south east.



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

Albuquerque Geographic Information System

Map amended through: 2/4/2010



Zone Atlas Page:

C-12-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

PROPOSED CONDITIONS

The proposed improvements consist of a new 9000 square foot building and associated parking field. The scope of this project includes the construction of the Vista Fuentes roadway. The lot has been designed to retain on site 2982 cubic feet of water. The water quality volume based upon .34 Inches is 2466 cubic feet. As shown on the drainage hydraulic calculation sheet, each contributing basin generated enough flow to fill the shallow ponds. The site is part of basin B-1A of the fountain hills master drainage plan. This basin assumes a peak discharge rate of 4.18 cfs per acres. The developed conditions for this site will produce 7.52 cfs or 3.78 cfs per acre. The flow leaving the site will flow down vista Fuentes road and be captured by new inlets located at the round about intersection with Loma Fuentes. As shown on the street capacity spread sheet the combined onsite and roadway flows of 8.29 cfs will flow at a depth of .38' and will remain on the north half of the road. The inlets consist of a double A inlet on the north and a single A on the south. As show each grate has a capacity of 8 cfs so the inlets on the north side can handle the flow. Once the flow enters the existing storm drain it is conveyed to a regional detention pond for the fountain hills development.

SUMMARY AND RECOMMENDATIONS

This project is a development of a commercial lot within the fountain hills plaza master plan. The development is allowed to discharge 8.32 cfs. Our discharge rate of 7.52 is less than allowed. Our site is graded such than the required water quality holding capacity of 2466 is exceeded. The site has been designed such than most paved areas drain thru these water quality ponds. The offsite roadway is being constructed with this development and has the capacity to convey all the flows generated by the development. The site has been designed in accordance with City of Albuquerque Drainage ordinance. This drainage plan and report conforms to the governing drainage regulations of the City. Since the effected area site encompasses more than 1 acre, a NPDES permit will be required prior to any construction activity.

APPENDIX A

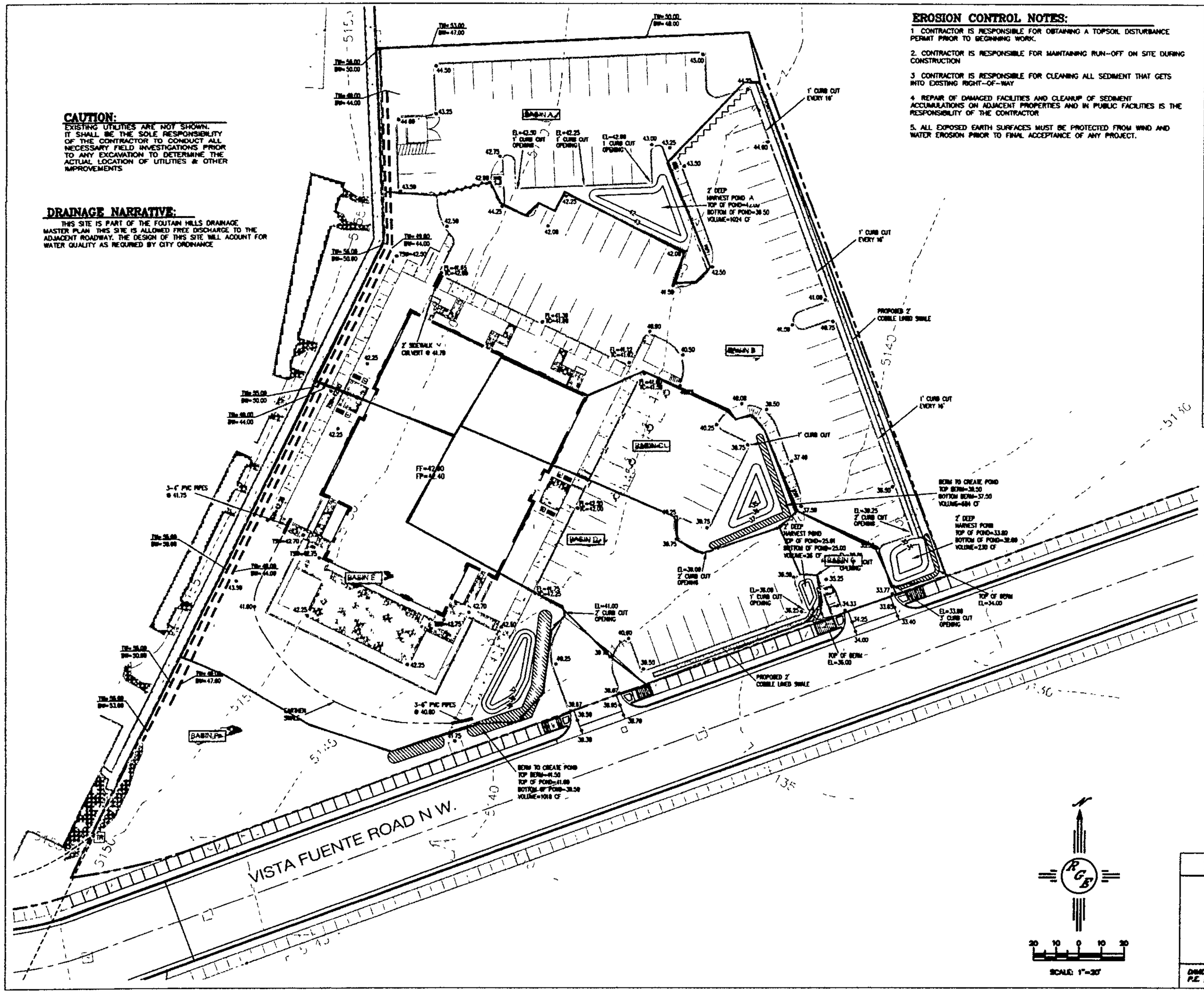
SITE HYDROLOGY

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:

THIS SITE IS PART OF THE FOUTAIN HILLS DRAINAGE MASTER PLAN. THIS SITE IS ALLOWED FREE DISCHARGE TO THE ADJACENT ROADWAY. THE DESIGN OF THIS SITE WILL ACOUNT FOR WATER QUALITY AS REQUIRED BY CITY ORDINANCE



EROSION CONTROL NOTES:

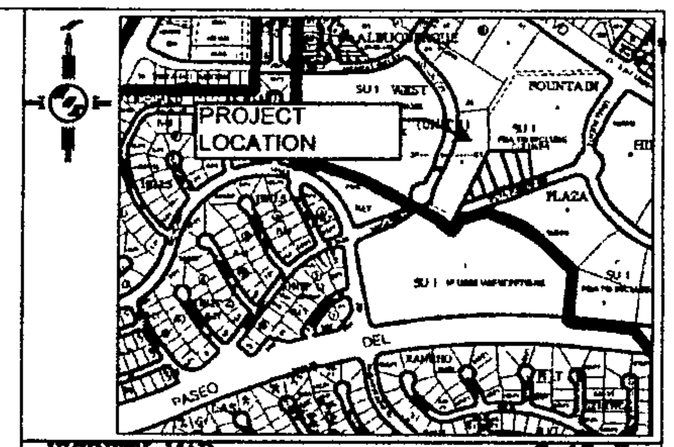
1 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION

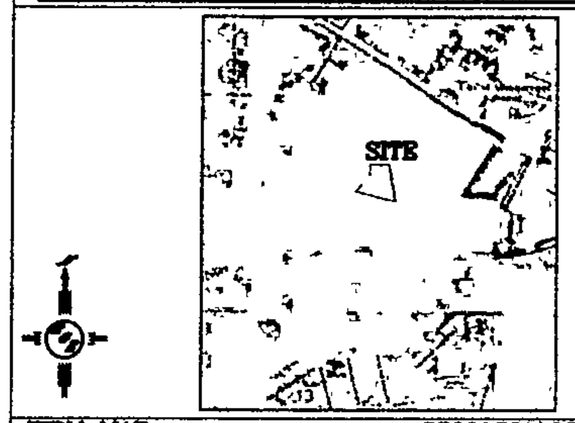
3 CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY

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.



VICINITY MAP: C-12-Z



FIRM MAP: 35001C0116G

LEGAL DESCRIPTION:

LOT 1A FOUNTAIN HILLS
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED

2. SITE IS PART OF THE FOUNTAIN HILLS MASTER DRAINAGE PLAN. THE REGIONAL POND WILL BE MODIFIED BY THE EXTENSION OF THE DISCHARGE PIPE OUTFALL TO RETAIN THE FIRST 34" OF STORM RUNOFF FROM ENTIRE DEVELOPMENT TO CONFORM TO THE WATER QUALITY REQUIREMENTS

LEGEND

46.00	PROPOSED SPOT ELEVATION
TW=44.00 / BW=38.00	TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION
	EXISTING CONTOUR
5400	EXISTING INDEX CONTOUR
5441	PROPOSED CONTOUR
5440	PROPOSED INDEX CONTOUR
	LOT LINE
	CENTERLINE
	RIGHT-OF-WAY
	PROPOSED RETAINING WALL
	PROPOSED ROCK FACE WALL
	EXISTING CURB AND GUTTER
	PROPOSED EDGE OF CONCRETE
	PROPOSED FLOWLINE
	EXISTING WALL
	PROPOSED 22 WIDE COBBLE SWALE

I DAVID SOULE, HAVE PERSONALLY INSPECTED THE PROPERTY ON X-XX-13. NO EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTENT WITH THE TOPO SHOWN

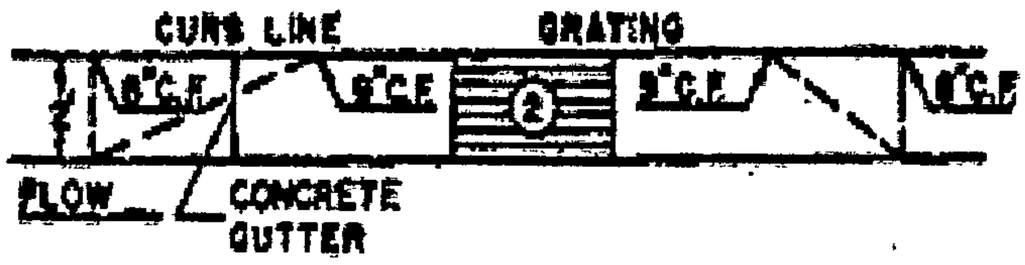
DAVID SOULE P.E. #14522 DATE

N

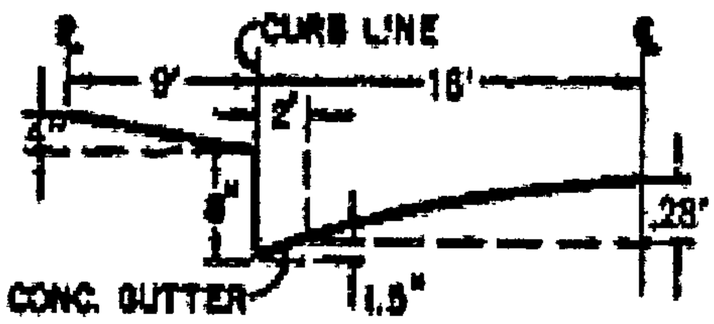
SCALE: 1"=20'

ENGINEER'S SEAL	NOAH'S EVENT CENTER	DRAWN BY DDM
		DATE 5-2014
	CONCEPTUAL GRADING AND DRAINAGE PLAN	
	Rio Grande Engineering	SHEET # 3 of 6
DAVID SOULE P.E. #14522		JOB # 10000X

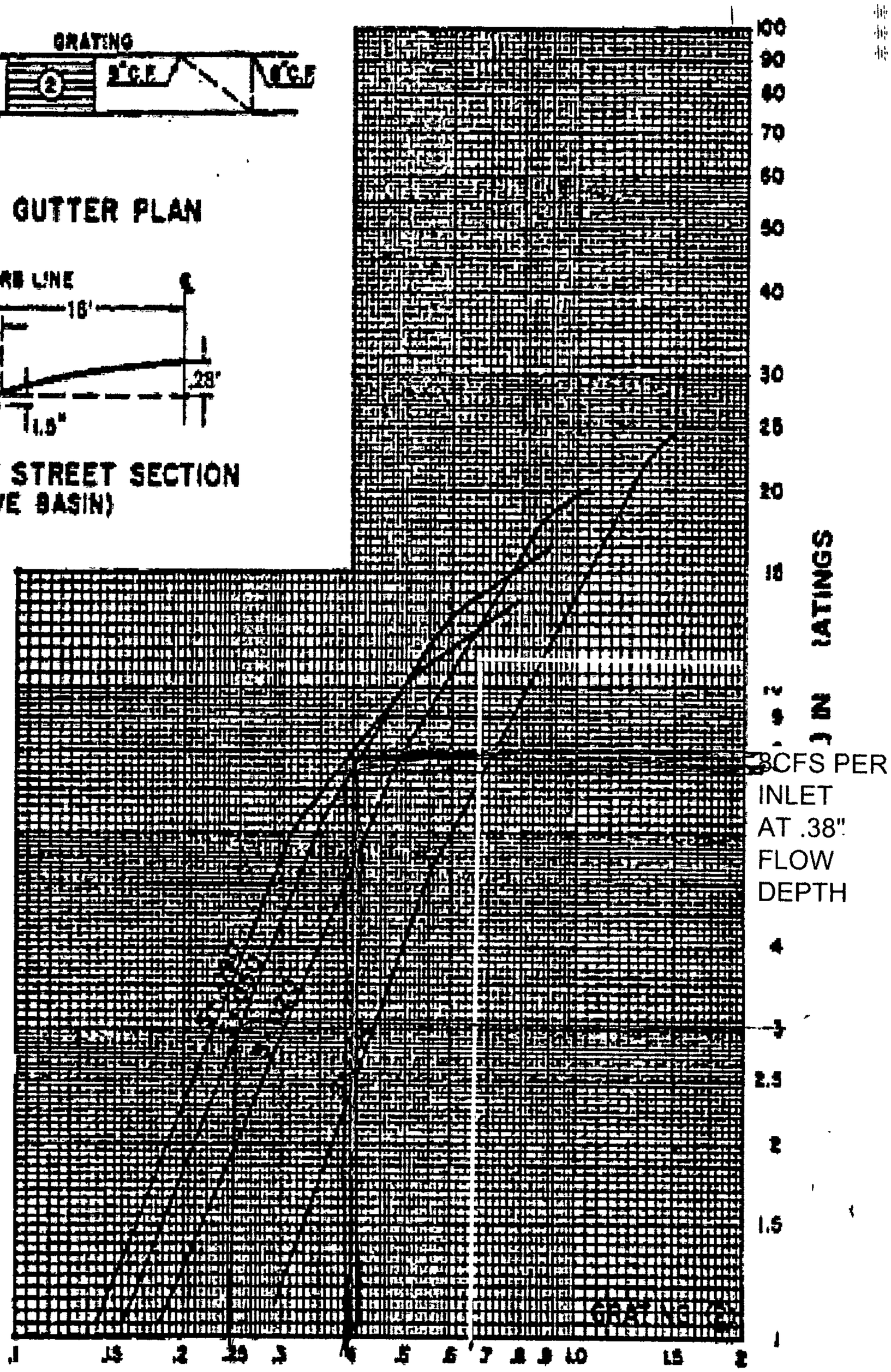
GRATING CAPACITIES FOR TYPE 'A', 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)



Weighted E Method

EAGLE CREST

Existing Developed Basins

											100-Year, 6-hr.			10-day
Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
BASIN A1	12387	0.284	0%	0	15.0%	0.043	35.0%	0.09953	60%	0.171	1.629	0.039	1.12	0.061
BASIN B	26848	0.616	0%	0	5.0%	0.031	21.0%	0.12943	74%	0.456	1.699	0.087	2.43	0.148
BASIN C	7335	0.168	0%	0	12.0%	0.020	34.0%	0.05725	54%	0.091	1.481	0.021	0.60	0.033
BASIN D	10952	0.251	0%	0	3.0%	0.008	8.0%	0.02011	89%	0.224	1.853	0.039	1.05	0.069
BASIN E	17871	0.410	0%	0	8.0%	0.033	45.0%	0.18462	48%	0.197	1.445	0.049	1.46	0.076
BASIN F	10165	0.233	0%	0	10.0%	0.023	72.0%	0.16802	18%	0.042	1.134	0.022	0.71	0.028
BASIN G	1475	0.034	0%	0	0.0%	0.000	0.0%	0	100%	0.034	1.970	0.006	0.15	0.010
TOTAL	87033	1.998	0%	0	34.0%	0.157	16.0%	0.659	50%	1.214	1.576	0.262	7.52	0.424
VISTA FUENTE RD	7968	0.183	0%	0	0.0%	0.000	10.0%	0.01829	90%	0.165	1.872	0.029	0.77	0.050

40 x 199 ← STORED RE
1025 − 202 = 823

NOT RIGHT

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Where for 100-year, 6-hour storm (zone 1)

Ea= 0.44	Qa= 1.29
Eb= 0.67	Qb= 2.03
Ec= 0.99	Qc= 2.87
Ed= 1.97	Qd= 4.37

FLOW SUMMARY

LEAVING SITE	7.52	CFS
FLOW AT INLET	8.29	
~~WATER HARVEST~~ FIRST FLUSH REQUIREMENT	2465.94	CUBIC FEET

FIRST FLUSH

	VOLUME	CONTRIBUTING BASIN
POND A	1024 CF	1681.54 CF
POND B	230 CF	3802 CF
POND C	684	905.14 CF
POND D	26	1690.806 CF
POND E	1018	2151.519 CF
TOTAL	2982	
REQUIRED	2466	

Street Capacity Calculations

VISTA FUENTE

40' F-F Street Section with 8" curb

Slope= 0.04

For water depths less than 0.125 feet

Y= Water depth
Area = 8*Y^2
P= SQRT(257*Y^2) + Y
n= 0.017

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.01	0.0008	0.1703	0.0047	0.0004	0.0008	0.4903	0.0049	0.8641	0.0082
0.02	0.0032	0.3406	0.0094	0.0025	0.0050	0.7784	0.0156	0.9699	0.0192
0.04	0.0128	0.6812	0.0188	0.0158	0.0316	1.2356	0.0494	1.0887	0.0448
0.06	0.0288	1.0219	0.0282	0.0466	0.0933	1.6191	0.0971	1.1648	0.0733
0.08	0.0512	1.3625	0.0376	0.1004	0.2008	1.9614	0.1569	1.2220	0.1039
0.1	0.0800	1.7031	0.0470	0.1821	0.3642	2.2759	0.2276	1.2683	0.1362
0.12	0.1152	2.0437	0.0564	0.2961	0.5922	2.5701	0.3084	1.3075	0.1699
0.125	0.1250	2.1289	0.0587	0.3301	0.6603	2.6410	0.3301	1.3164	0.1785

For water depths greater than 0.125 ft but less than 0.405 ft

Y1= Y-0.125
A2= A1 + 2*Y1 + 25*Y1^2
P2= P1 + SQRT(2501*Y1^2)

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.13	0.1356	2.3840	0.0569	0.3507	0.7015	2.5860	0.3362	1.2639	0.1763
0.16	0.2256	3.9143	0.0576	0.5886	1.1772	2.6087	0.4174	1.1493	0.1921
0.2	0.4156	5.9547	0.0698	1.2318	2.4636	2.9637	0.5927	1.1679	0.2451
0.24	0.6856	7.9951	0.0858	2.3309	4.6619	3.3997	0.8159	1.2230	0.3121
0.28	1.0356	10.0355	0.1032	3.9833	7.9667	3.8463	1.0770	1.2810	0.3862
0.32	1.4656	12.0759	0.1214	6.2810	12.5619	4.2855	1.3714	1.3351	0.4650
0.3464	1.7932	13.4225	0.1336	8.1930	16.3861	4.5688	1.5826	1.3680	0.5190
0.39	**2.4106**	**15.6466**	**0.1541**	**12.1117**	**24.2233**	**5.0243**	**1.9595**	**1.4178**	**0.6109**
0.405	2.6450	16.4117	0.1612	13.6943	27.3886	5.1774	2.0969	1.4337	0.6433

For water depths greater than 0.405 ft but less than 0.667 ft

Y2= Y - 0.405
A3= A2 + Y2*20
P3= P2 + Y2

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.41	2.7250	16.4167	0.1660	14.3887	28.7773	5.2802	2.1649	1.4532	0.6622
0.44	3.2050	16.4467	0.1949	18.8333	37.6667	5.8762	2.5855	1.5612	0.7760
0.47	3.6850	16.4767	0.2236	23.7364	47.4729	6.4414	3.0274	1.6558	0.8904
0.5	4.1650	16.5067	0.2523	29.0749	58.1498	6.9808	3.4904	1.7398	1.0053
0.55	4.9650	16.5567	0.2999	38.8880	77.7761	7.8324	4.3078	1.8612	1.1985
0.5945	5.6770	16.6012	0.3420	48.5331	97.0663	8.5491	5.0824	1.9540	1.3722
0.63	6.2450	16.6367	0.3754	56.8123	113.6246	9.0972	5.7313	2.0198	1.5119
0.667	6.8370	16.6737	0.4100	65.9712	131.9424	9.6491	6.4360	2.0821	1.6586

For water depths greater than 0.667 ft but less than 0.847 ft

Y3= Y - 0.667
A4= A3 + 16 * Y3 + 25 * Y3^2
P4= P3 + SQRT(2501 * Y3^2)

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.7	7.3922	18.3240	0.4034	70.5577	141.1154	9.5449	6.6814	2.0104	1.6708
0.73	7.9442	19.8243	0.4007	75.4895	150.9791	9.5024	6.9368	1.9600	1.6911
0.75	8.3372	20.8245	0.4004	79.1745	158.3491	9.4965	7.1224	1.9324	1.7087
0.77	8.7502	21.8247	0.4009	83.1762	166.3525	9.5056	7.3193	1.9090	1.7292
0.8	9.4072	23.3250	0.4033	89.7748	179.5495	9.5432	7.6345	1.8803	1.7646
0.82	9.8702	24.3252	0.4058	94.5744	189.1488	9.5818	7.8571	1.8647	1.7909
0.85	10.6022	25.8255	0.4105	102.3832	204.7664	9.6568	8.2083	1.8458	1.8342

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

C12D003B4

Project Title: Noahs at Fountain Plaza Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: LOT 1A FOUNTIAN HILLS PLAZA

City Address: VISTA FUENTES ROAD NW

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: FOUNTAIN HILLS LLC Contact: _____

Address: PO BOX 920798 EL PASO TX 79902

Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: JOE SIMONS

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS

Address: _____

Phone#: 917.8921 Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- X 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
- X BUILDING PERMIT APPROVAL
- X GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ GRADING CERTIFICATION
- ____ SO-19 APPROVAL
- ____ ESC PERMIT APPROVAL
- ____ ESC CERT. ACCEPTANCE
- ____ OTHER (SPECIFY)

RECEIVED SEP 24 2014 LAND DEVELOPMENT SECTION

Paid $50.00

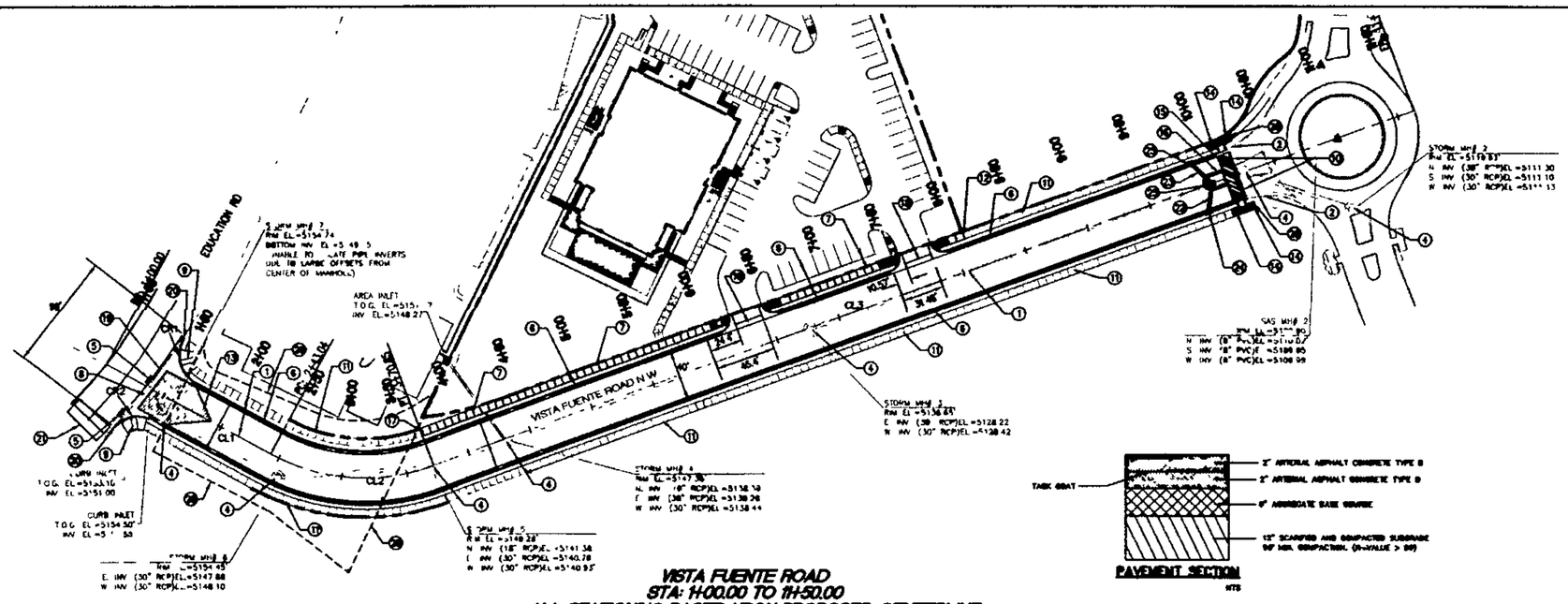
WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided

DATE SUBMITTED: 9/24/14 By: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, anc 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 followin

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

$A_D = 1.21$ FREE



VISTA FUENTE ROAD
STA: 11+00.00 TO 11+50.00
*-ALL STATIONING BASED UPON PROPOSED CENTERLINE

CURVE DATA TABLE

CURVE #	DELTA	RADIUS	TAN	LENGTH
CR1	94°41'52"	25.00	36.77	41.32
CR2	75°38'38"	25.00	30.67	33.01

CENTERLINE CURVE DATA

CURVE #	DELTA	RADIUS	TAN	LENGTH
CL2	58° 41' 28"	150'	123.98'	127.81'

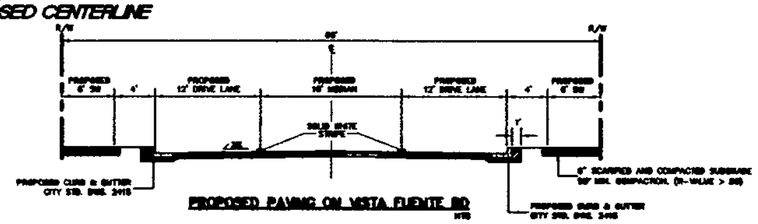
CENTERLINE TANGET DATA

CURVE #	DELTA	LENGTH
CL1	S 61° 19' 48" E	143.04'
CL3	N 69° 53' 54" E	791.90'

KEYED NOTES

1. PROPOSED CENTER LINE
2. EXISTING CURB AND GUTTER
3. EXISTING STORM DRAIN
4. EXISTING STORM DRAIN MANHOLE
5. EXISTING STORM DRAIN INLETS TO BE REMOVED AND REPLACED WITH TYPE "D" INLETS W/HEAVY DUTY GRATES ADJUST GRATES TO GRADE
6. PROPOSED STANDARD CMG PER COA STD DWG 2415
7. PROPOSED 6' SIDEWALK PER COA STD DWG
8. PROPOSED 6' VALLEY GUTTER PER COA STD DWG
9. PROPOSED WHEEL CHAIR RAMP PER COA STD DWG
10. STA. 10+12.54', 0.09 MATCH TO EXISTING PAVEMENT REMOVE OUT OFF WALL
11. FUTURE 6' SIDEWALK
12. STA. 8+00.93', 24.00' LT END OF PROPOSED 6' SIDEWALK
13. STA. 14+38.52' TO STA. 14+88.52 CROWN TRANSITION
14. DIRECTIONAL HANDICAP RAMP W/TURNCAPED DOWES PER COA STD DWG 2426 SEE DETAIL SHEET OF THIS PLANSET
15. INSTALL WHITE CROSS WALK MARKINGS SEE DETAIL SHEET OF THIS PLANSET
16. STA. 9+91.38 TO STA. 10+10.88 BUILD 38 LF OF MEDIAN CURB AND GUTTER SEE DETAIL SHEET OF THIS PLANSET
17. STA. 3+72.84', 24.00' LT BEGIN OF PROPOSED 6' SIDEWALK
18. INLET VALLEY GUTTER AND HANDICAP RAMP PER COA STD DWG 2426
19. REMOVE AND DISPOSE 30 LF OF EXISTING CURB AND GUTTER, CUT NICE NEAT LINE ALONG LIP OF CURB FOR VALLEY GUTTER
20. MATCH TO EXISTING GRADE
21. EXISTING SPEED HUMP TO REMAIN
22. PROPOSED 22 LF OF 18" SD S=3.00%
23. PROPOSED 22 LF OF 18" SD S=3.00%
24. STA. 9+98.00, 20.00' RT INSTALL TYPE "A" INLET GRATE= 5123.74 18" INV. (OUT)=5119.38
25. STA. 9+98.00, 20.00' LT. INSTALL TYPE "A" INLET GRATE= 5123.74 18" INV (OUT)=5119.38
26. STA. 10+08.00, 0.08 INSTALL (1)-6' DIA STORM DRAIN MANHOLE RIM= 5124.24 INV. 32" (IN)=5115.28 INV 32" (OUT)=5115.18 INV. 18" LT & RT =5118.68 DEPTH= 8.08'
27. EXISTING ACCESS EASEMENT PER PLAT DATED XX-XX-XX

PAVEMENT SECTION
NTS



PROPOSED PAVING ON VISTA FUENTE RD
NTS

CR1

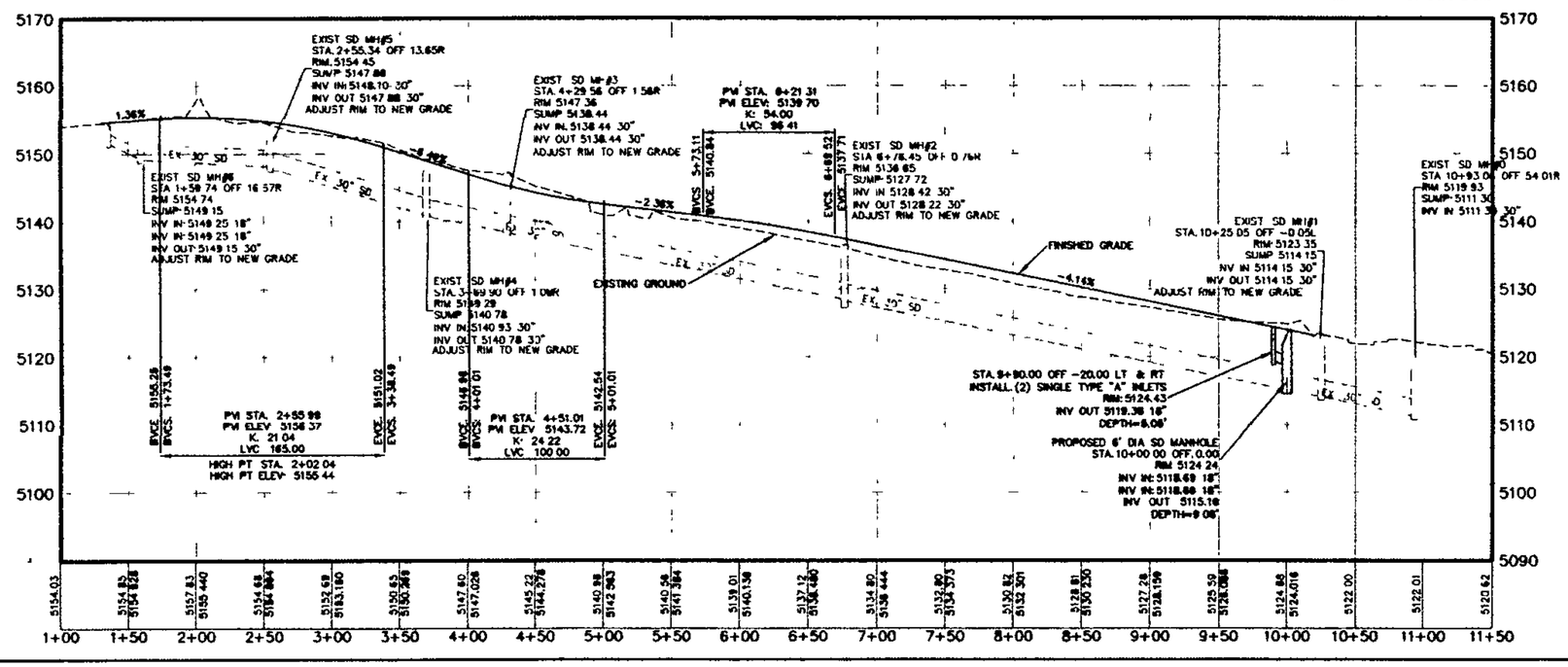
	TC	FL	STATION @ FL
PC			1+67.68, 20.00' LT
1			1/4 ARC
2			1/2 ARC
3			3/4 ARC
PT			1+42.77, 47.05' LT.

CR2

	TC	FL	STATION @ FL
PC			1+28.67, 38.96' RT
1			1/4 ARC
2			1/2 ARC
3			3/4 ARC
PT			1+52.30, 20.00' RT.

GENERAL NOTE:

ALL VALVES, FIRE HYDRANTS AND MANHOLE RIMS TO BE ADJUSTED TO NEW GRADE.



SCALE HORIZ. 1"=50'
VERT 1"=10'

Rio Grande Engineering

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
ENGINEERING GROUP

TITLE: *VISTA FUENTE ROAD IMPROVEMENTS*
PAVING IMPROVEMENTS
VISTA FUENTE RD

DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | LAST DESIGN UPDATE | MO./DAY/YR. | MO./DAY/YR.

CITY PROJECT NO. XXXXX | ZONE MAP NO C-12-Z | SHEET 4 OF 6

AS BUILT INFORMATION
CONTRACTOR | DATE
WORK STAKED BY | DATE
FIELD VERIFIED BY | DATE
MARKUPS PREPARED BY | DATE
MICRO-FILM INFORMATION
RECORDED BY | DATE
NO.

BENCH MARKS
MONUMENT 9-C12
N=1521648.218
E=1512571.253
ELEV=5127.376
NAD 83-NAVD 88
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999677

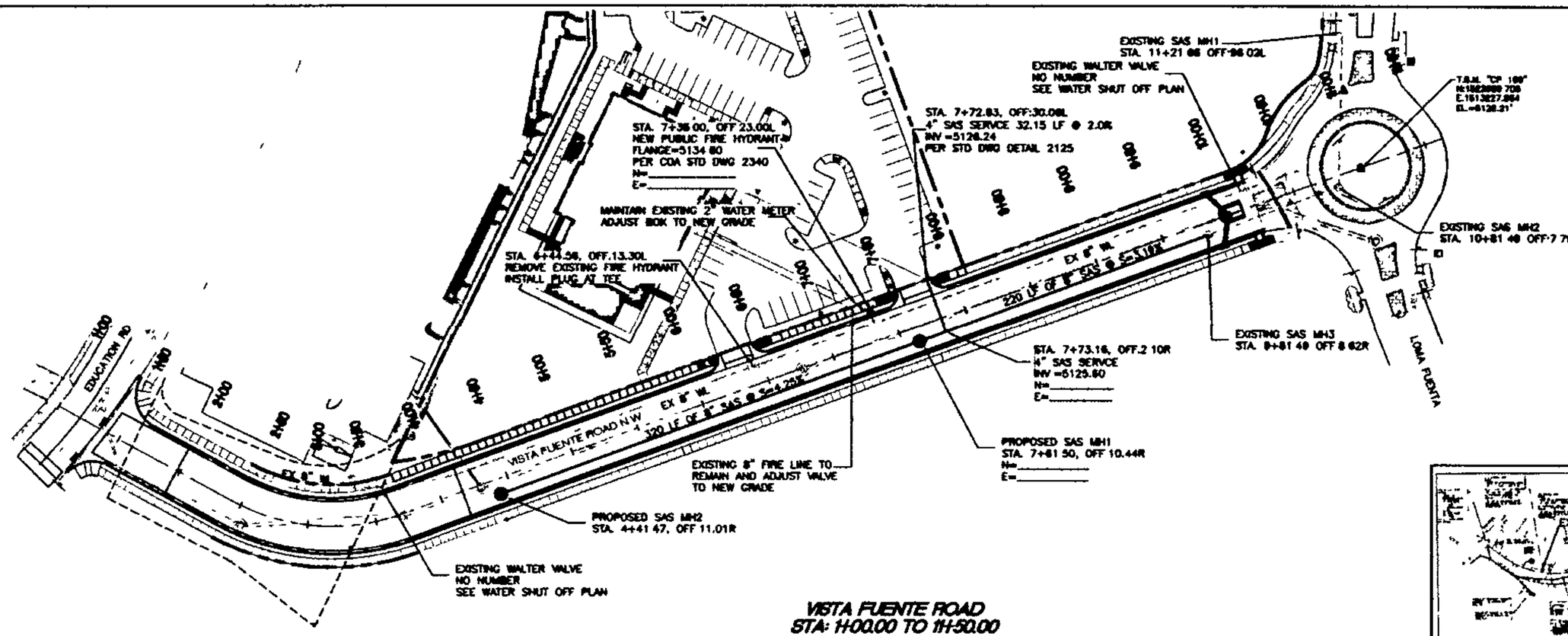
SURVEY INFORMATION
FIELD NOTES

NO	BY	DATE

ENGINEER'S SEAL
DAVID SOULE NEW MEXICO 14652 REGISTERED PROFESSIONAL ENGINEER
9/15/14

NO	DATE	REMARKS	BY
		REVISIONS	

DESIGN
DESIGNED BY: DGM DATE: 9-14
DRAWN BY: DGM DATE: 9-14
DRAWN NAME: VISTA FUENTE RD IMPROVEMENTS.dwg JOB NO
CHECKED BY: DS DATE: 9-14



VISTA FUENTE ROAD
STA: 11+00.00 TO 11+50.00
**-ALL STATIONING BASED UPON PROPOSED CENTERLINE*

UTILITY NOTES:

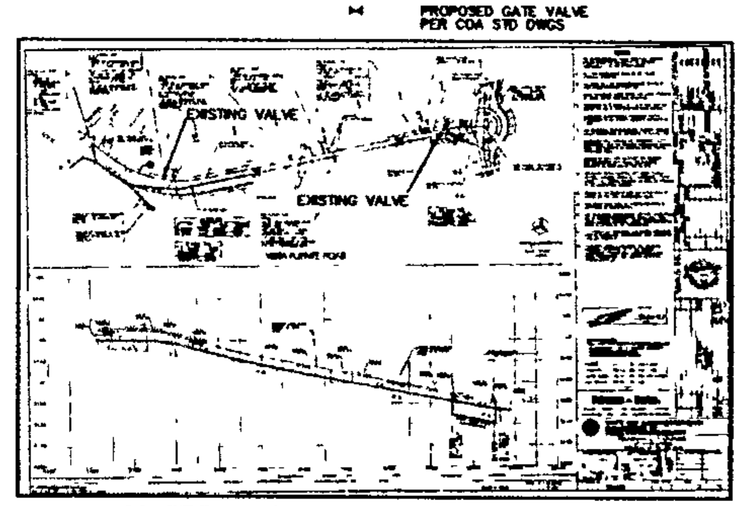
1. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL EXISTING UTILITIES PRIOR TO WORK.
2. EXISTING 8" WL HAS 3' MIN. COVER
3. ALL PROPOSED MANHOLE LIDS TO MATCH WITH PROPOSED PAVEMENT
4. CITY STANDARDS TO BE USED ON ALL UTILITIES, UPDATE & AMMENDEMENT 1
5. DO NOT INSTALL STEPS IN SAS MANHOLES.

LEGEND

- EXISTING SAS MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM DRAIN MANHOLE
- EXISTING WATER LINE
- EXISTING SAS LINE
- PROPOSED SANITARY SEWER
- PROPOSED SAS MANHOLE PER COA STD DWG 2102
- PROPOSED SANITARY SEWER SERVICE LINE PER COA STD DWGS
- PROPOSED FIRE HYDRANT PER COA STD DWG 2340
- PROPOSED GATE VALVE PER COA STD DWGS

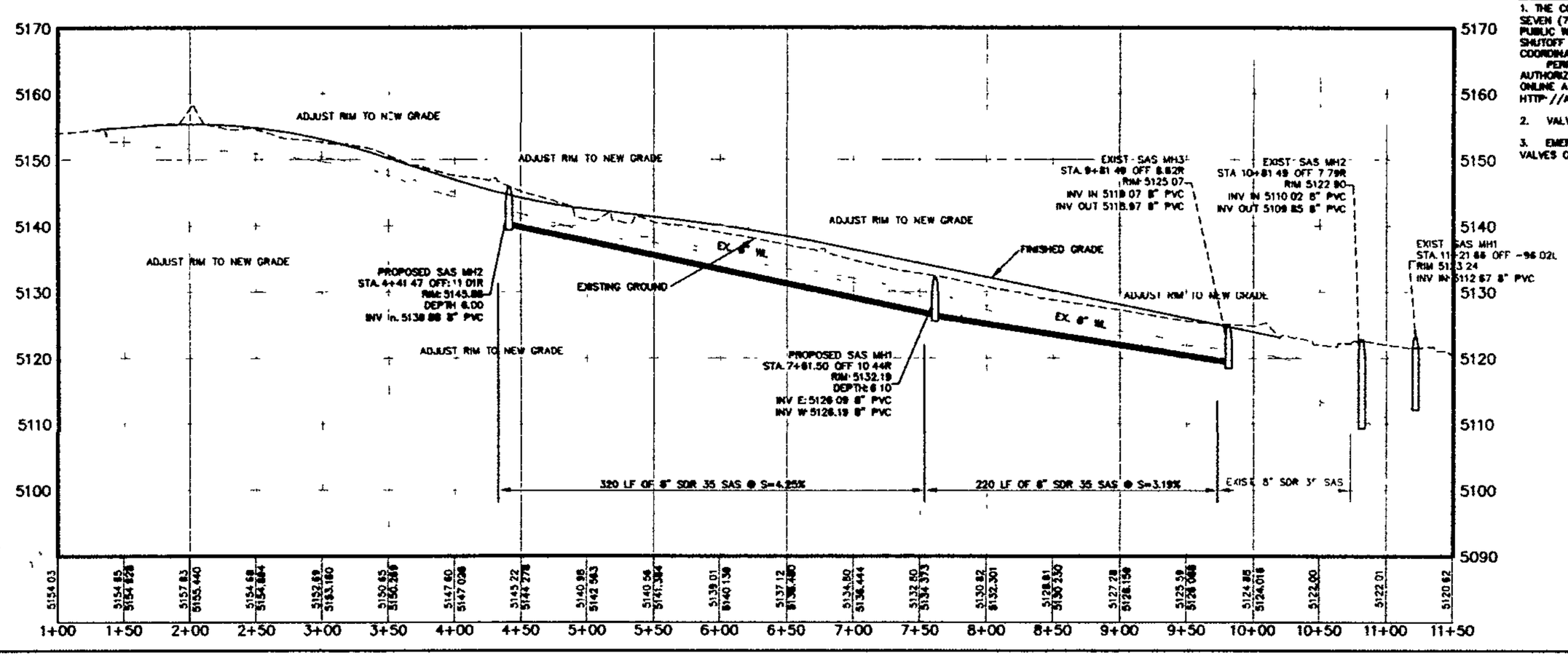
GENERAL NOTE:

1. ALL MANHOLE RIMS TO BE ADJUSTED TO NEW GRADE.
2. ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE AND REPAIRS SHALL BE SOLE RESPONSIBILITY OF THE CONTRACTOR.



WATER SHUTOFF NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE WATER UTILITY AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUT OFF REQUEST MUST BE MADE ONLINE AT HTTP://ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.
2. VALVES SHALL BE OPERATED BY ABCWUA EMPLOYEES ONLY
3. EMERGENCY SHUT-OFF PLAN INVOLVES SHUTTING OFF EXISTING GATE VALVES ON 8" WATER LINE ON VISTA FUENTE ROAD.



SCALE. HORIZ. 1"=50'
VERT 1"= 5'

Rio Grande Engineering

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
ENGINEERING GROUP

TITLE. *VISTA FUENTE ROAD IMPROVEMENTS*
UTILITY IMPROVEMENTS
VISTA FUENTE RD

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.	ZONE MAP NO	SHEET	OF
XXXXX	C-12-Z	5	6

AS BUILT INFORMATION
CONTRACTOR — DATE
REVISIONS BY — DATE
MARKED BY — DATE
INSPECTOR BY — DATE
CHECKED BY — DATE
MICRO-FILM INFORMATION
RECORDED BY — DATE
NO.

BENCH MARKS
MONUMENT 9-C12
N=1521648.218
E=1512571.253
ELEV=5127.376
NAD 83-NAVD 88
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999677

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

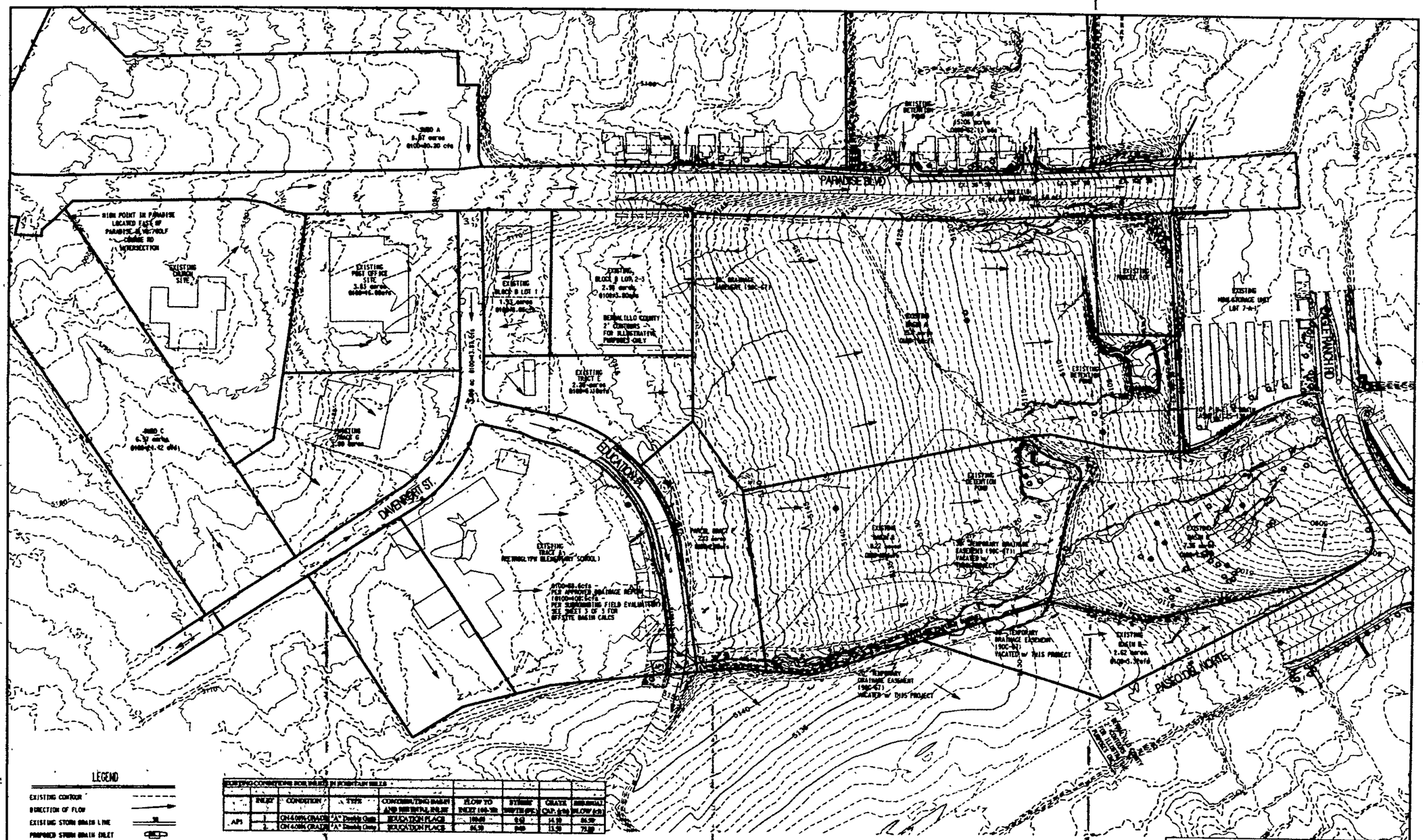
ENGINEER'S SEAL
DAVID SQUIER
NEW MEXICO
14832
PROFESSIONAL ENGINEER
9/15/14

NO.	DATE	REMARKS REVISIONS	BY

DESIGN
DESIGNED BY: DGM — DATE: 8-14
DRAWN BY: DGM — DATE: 8-14
DRAWN NAME: VISTA FUENTE RD IMPROVEMENTS.dwg — JOB NO. ____
CHECKED BY: DS — DATE: 9-14

APPENDIX B

Excerpts of Fountain Hills Master Drainage Plan



	INLET	CONDITION	TYPE	CONTRIBUTING BASIN AND DISTRIBUTION	FLOW TO INLET (cfs)	STREET DEPTH (ft)	GRATE CAP. (cfs)	BYPASS FLOW (cfs)
AP1	1	ON 4.00% GRADE	"A" Double Grate	EDUCATION PLACE	[illegible]	0.92	14.10	66.90
	2	ON 4.00% GRADE	"A" Double Grate	EDUCATION PLACE	66.30	[illegible]	13.50	75.80

FOUNTAIN HILLS

GRADING & DRAINAGE MANAGEMENT PLAN

EXISTING BASINS MAP

ALBUQUERQUE, NEW MEXICO

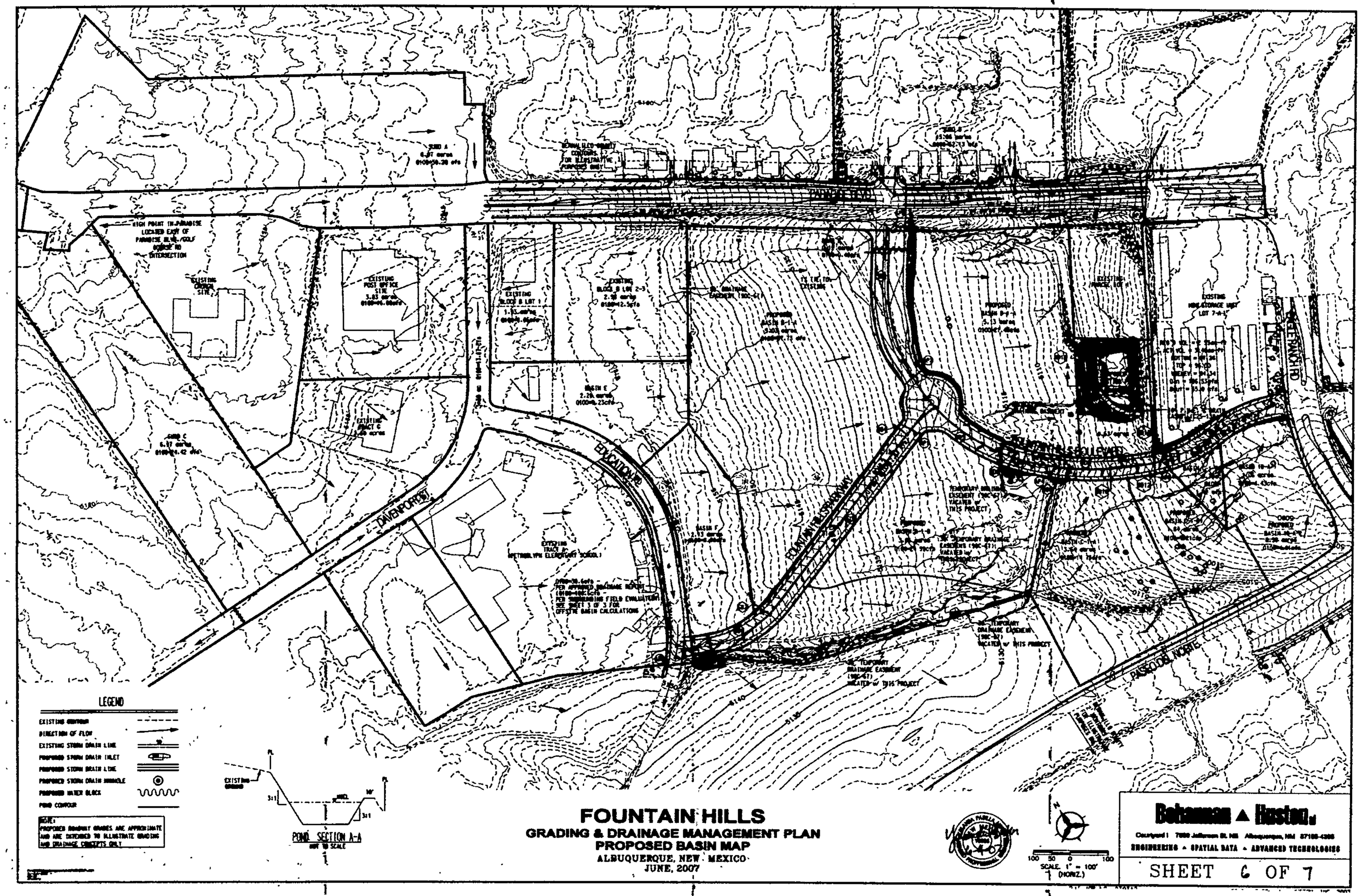
JUNE, 2007

Bohannan ▲ Huston

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

SHEET 5 OF 7



FOUNTAIN HILLS

GRADING & DRAINAGE MANAGEMENT PLAN
PROPOSED BASIN MAP

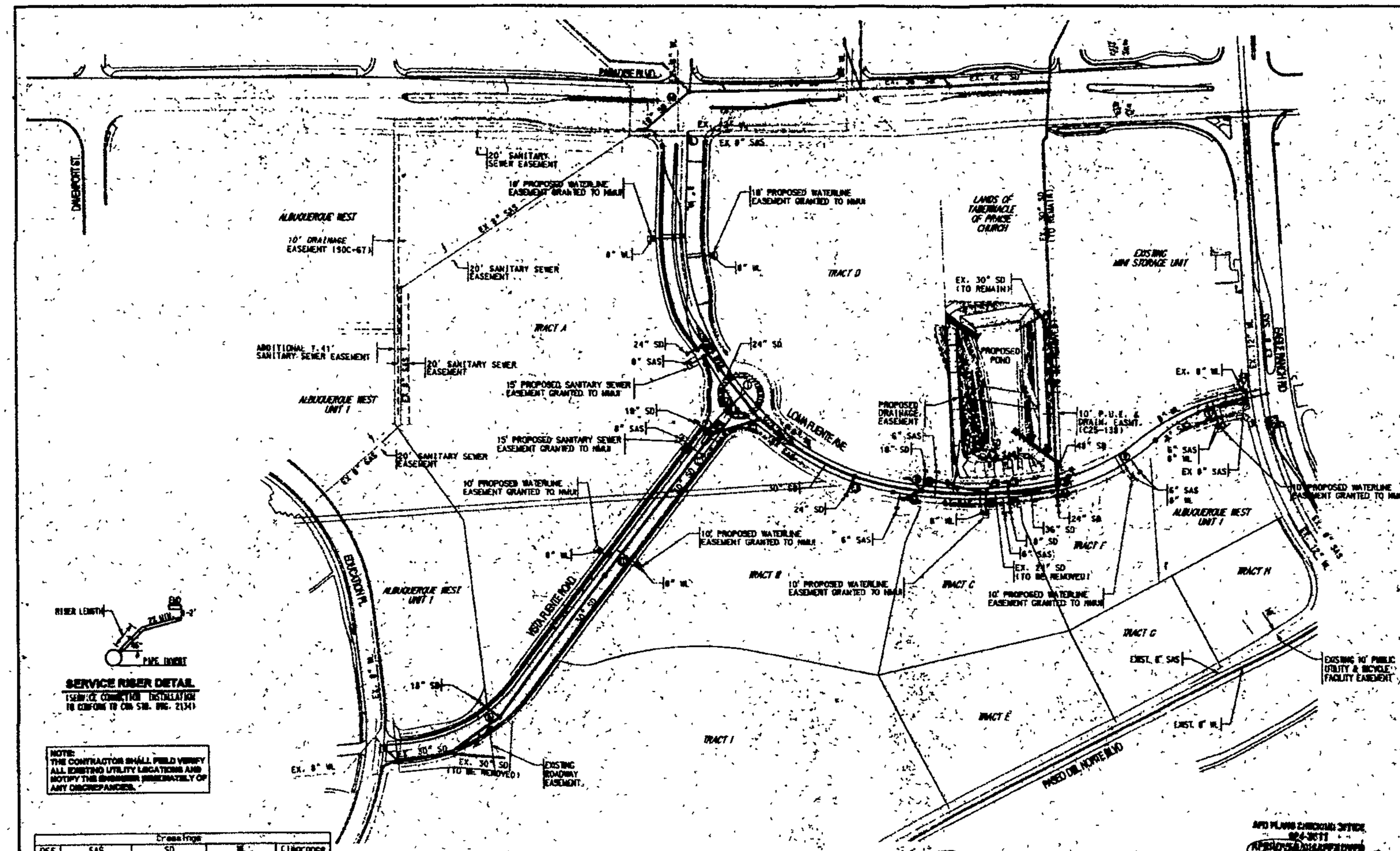
ALBUQUERQUE, NEW MEXICO
JUNE, 2007

Bohannan ▲ Huston

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4398

ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

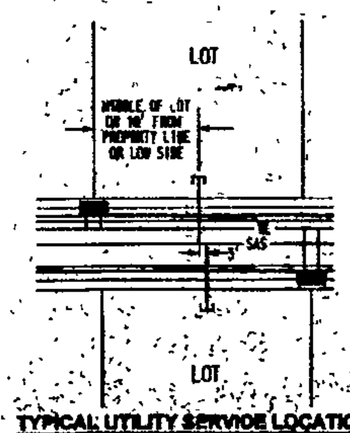
SHEET 6 OF 7



SERVICE RISER DETAIL
(SERVICE CONNECTION INSTALLATION TO CONFORM TO CBA STD. DWG. 2434)

NOTE:
THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

Crossings							
DES	SAS		SD		WL		Clearance
A			18" TP	43.79	8" BP	46.56	2.77
B			30" TP	28.65	8" BP	29.60	==0.95
C	8" TP	15.08	30" BP	16.80			1.71
D	8" TP	15.20			8" BP	20.88	5.68
E	8" TP	12.84	30" BP	14.55			1.71
F			18" TP	18.38	8" BP	19.29	==0.91
G	8" TP	09.75	30" BP	11.51			1.77
H	8" TP	11.09			8" BP	16.81	5.72
I			24" TP	14.81	8" BP	16.37	1.56
J	8" TP	03.54	24" BP	08.53			5.00
L	8" TP	19.95			8" BP	22.57	2.61
M			18" TP	20.50	8" BP	23.12	2.62
N	8" TP	99.24	18" BP	05.61			6.37
O	8" TP	91.70			8" BP	98.86	7.16
P	8" TP	89.28	18" BP	93.48			4.20
Q			18" BP	05.50	8" TP	00.93	4.57
R			18" BP	03.08	8" TP	00.12	2.96
S			36" TP	98.06	8" BP	98.86	0.81
U			18" TP	94.08	8" BP	95.44	1.36
V	8" TP	84.51	24" BP	88.80			4.29
W	8" TP	80.39			8" BP	84.69	4.30
X			48" BP	88.28	8" TP	86.79	1.47
Y	8" TP	72.60			8" BP	75.53	2.93



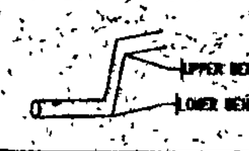
TYPICAL UTILITY SERVICE LOCATION
NOT TO SCALE

RESTRAINING JOINT TABLE

MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS		
	6"	8"	10"
6" X 6" TEE	1	–	–
8" X 8" TEE	–	1	–
90° HORIZ. BEND	18	20	24
45° HORIZ. BEND	7	8	10
22.5° HORIZ. BEND	4	4	5
11.25° HORIZ. BEND	2	2	2
GATE VALVE/CAP	42	56	66
22.5° VERT. BEND (UPPER)	8	7	6
(LOWER)	3	2	3
11.25° VERT. BEND (UPPER)	6	3	4
(LOWER)	2	1	1

* NOTE:
6" WL, 8" WL & 10" WL TO BE PVC (C-900)
12" WL & 14" WL TO BE DUCTILE IRON PIPE

NOTE:
1. ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS. ALL PIPE JOINTS WITHIN 20 LF OF (A) SHALL BE RESTRAINED AT THE CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS IN THE SPECIFIED DISTANCE LISTED IN THE TABLE ABOVE. (SEE NOTE 2 ABOVE).
4. THE CONTRACTOR SHALL RESTRAIN ALL FIRE HYDRANT JOINTS FROM THE TEE ON THE MAIN TO THE FIRE HYDRANT FLANGE.
5. ALL CAPS SHALL UTILIZE PCC BLOCKING, UNLESS OTHERWISE NOTED.
6. RESTRAINED LENGTH IS ON LARGE SIDE OF ALL REDUCERS
7. RESTRAIN ALL JOINTS BETWEEN UPPER AND LOWER VERTICAL BENDS.



BM JOB NO. 678312

APD PLANS CHECKING OFFICE
924-3611
APPROVED/DISAPPROVED
9/30/07
REGISTERED ENGINEER

N
100 50 0 100
SCALE: 1"=100'
(HORIZ.)

LEGEND

PROPOSED CURB AND GUTTER	
EXISTING CURB AND GUTTER	
FUTURE CURB AND GUTTER	
PROPOSED STORM DRAIN MANHOLE	
EXISTING STORM DRAIN MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER MANHOLE	
PROPOSED FIRE HYDRANT	
PROPOSED GATE VALVE	
EXISTING GATE VALVE	
PROPOSED STORM DRAIN	SD
PROPOSED SANITARY SEWER	SAS
PROPOSED WATER LINE	W
STORM DRAIN INLET	
STORM DRAIN CULVERT	
EXISTING STORM DRAIN	SD
EXISTING SANITARY SEWER	SAS
EXISTING WATER LINE	W

APPROVED FOR MAP DATE

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4315
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

FOUNTAIN HILLS PLAZA PHASE I
OVERALL UTILITY PLAN

RECOMMENDED FOR APPROVAL
CITY ENGINEER
LAST DESIGN UPDATE

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
584480	C-12	9	18

AS-BUILT INFORMATION
CONTRACTOR / WORK STAKED BY / INSPECTED BY / STAKING CHECKED BY / DATA ENTERED BY / DATA CHECKED BY / DATE
MICRO-FILM INFORMATION
RECORDED BY / DATE

BENCH MARKS
USGS: BRASS DISK STAMPED "N4418-N10" — DELTA ALPHA = 0074.06' — NAVD29 ELEVATION = 5045.87
GEOGRAPHIC POSITION (NAD 27) — FULL STATE PLANE COORDINATES (CENTRAL ZONE) — X=577,788.84 Y=1,524,161.52 — COMBINED GROUND TO GRID = 0.999873563

SURVEY INFORMATION
FIELD NOTES

NO	BY	DATE

ENGINEER'S SEAL

NO	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY YPM / JML DATE 07/2007
DRAWN BY ARR / SJM DATE 07/2007
CHECKED BY YPM DATE 07/2007

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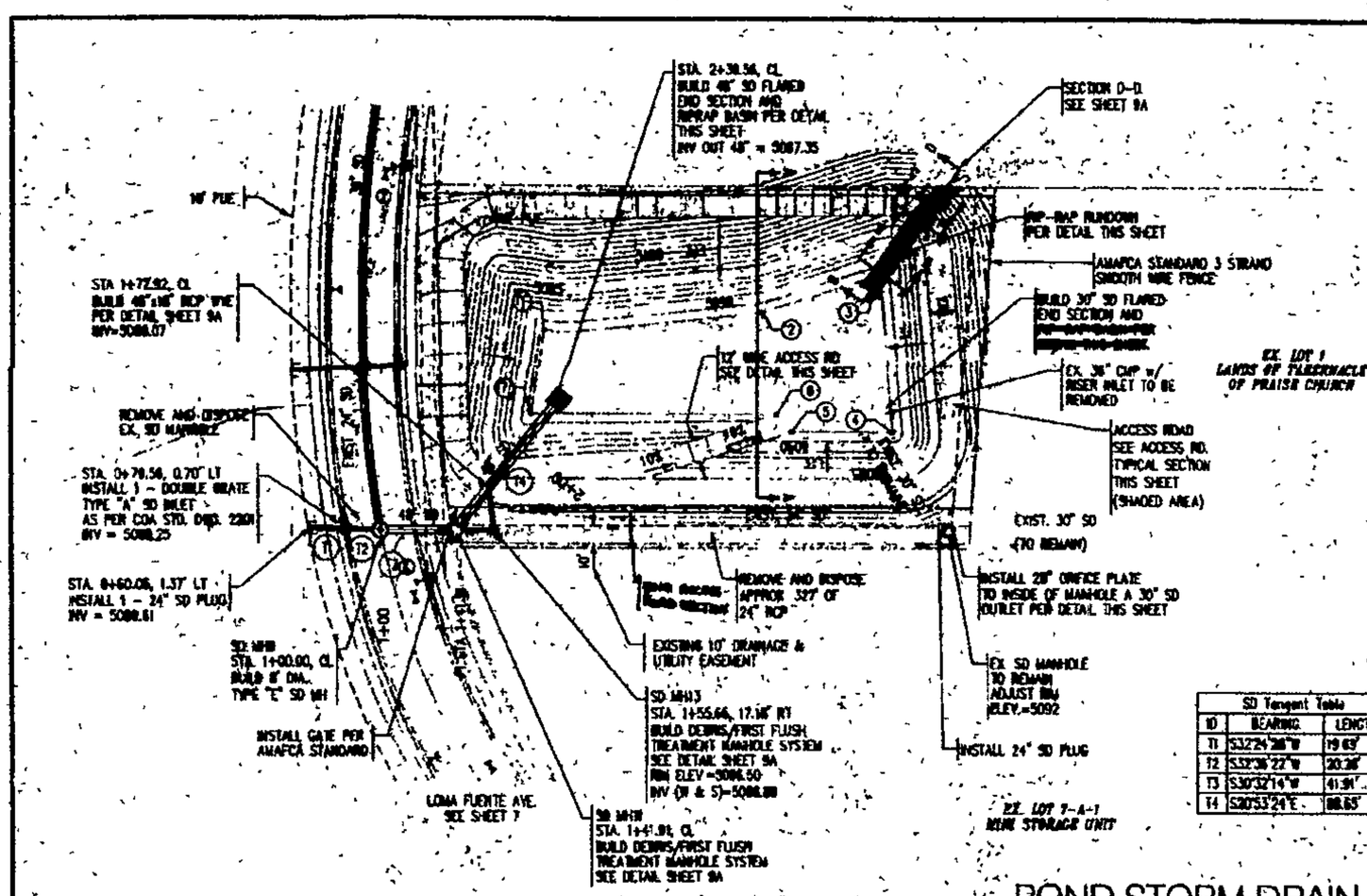
Tue, 30-AUG-2007 - 08:27AM, Plotted by: ernmore



POND STORM DRAIN

RESERVOIR FLOW

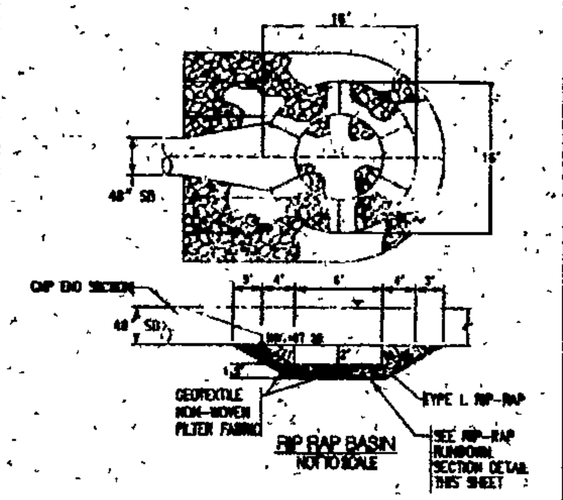
OUTFLOW (cfs)	STORAGE (ac-ft)	ELEVATION (ft)
0	0.0000	5087.25
3.000	0.0468	5087.5
5.000	0.0874	5088
6.142	0.2574	5088.5
16.249	0.5173	5089
22.194	0.8426	5089.5
26.770	0.8668	5090
30.709	1.2570	5090.5
34.184	1.2576	5091
37.357	1.6889	5091.5
40.273	1.6811	5092
42.981	1.9243	5092.5
45.547	2.1688	5093
47.987	2.4247	5093.5
50.276	2.6922	5094
52.473	2.9715	5094.5
54.587	3.2628	5095
56.622	3.5661	5095.5
58.588	3.8803	5096

RESERVOIR BOTTOM POINT TABLE

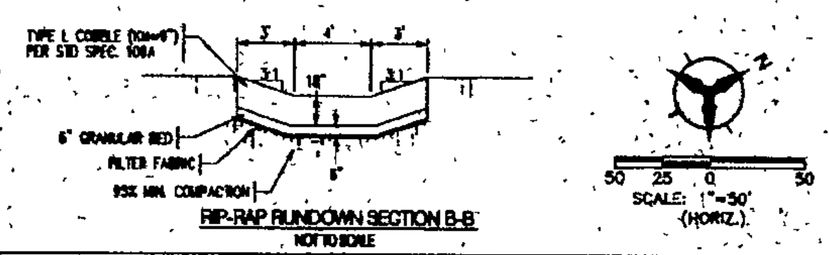
	NORTHING	EASTING
1	1522698.43	372967.37
2	1522740.38	373020.88
3	1522785.28	373036.45
4	1522747.56	373115.78
5	1522688.88	373088.79
6	1522666.74	373074.02
7	1522578.06	373004.23

SD Tangent Table

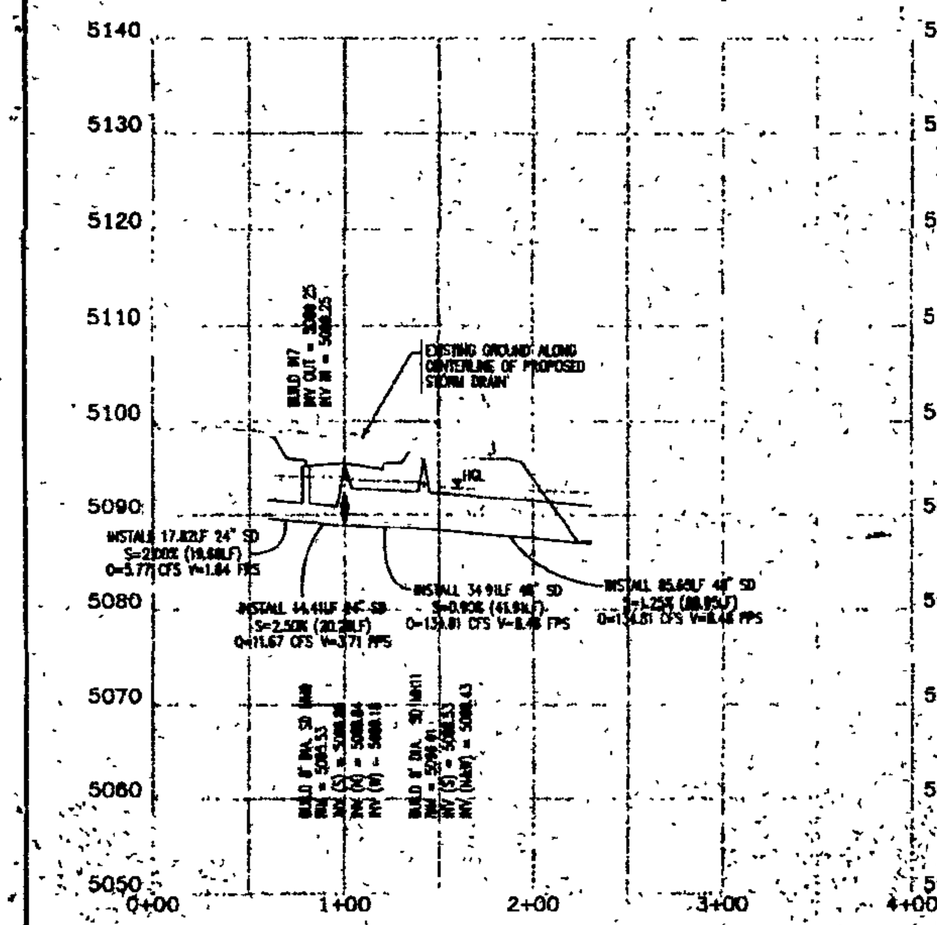
ID	BEARING	LENGTH
T1	S32°24'28"W	19.63'
T2	S33°36'22"W	20.36'
T3	S30°32'14"W	41.91'
T4	S20°53'24"E	88.65'

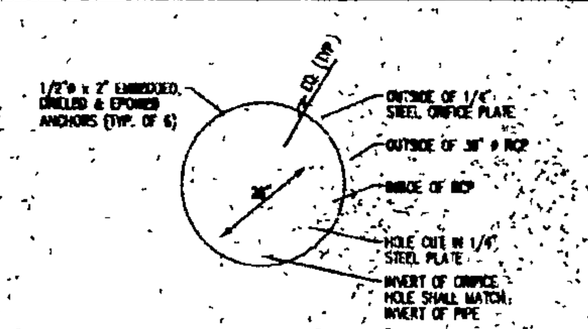


RIP RAP BASIN
NOT TO SCALE

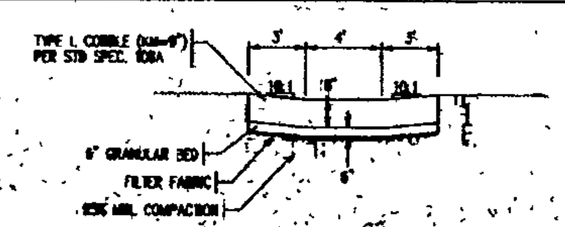


RIP-RAP RUNDOWN SECTION B-B
NOT TO SCALE





ORIFICE PLATE DETAIL
NOT TO SCALE



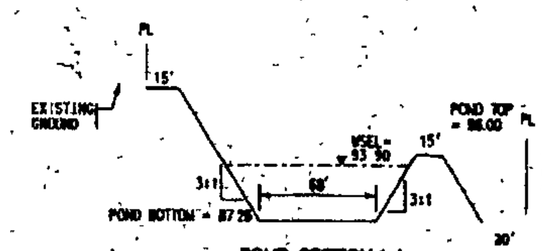
RIP-RAP RUNDOWN SECTION C-C
NOT TO SCALE

NOTES for WORK IN AMAFCA R/W OR EASEMENT

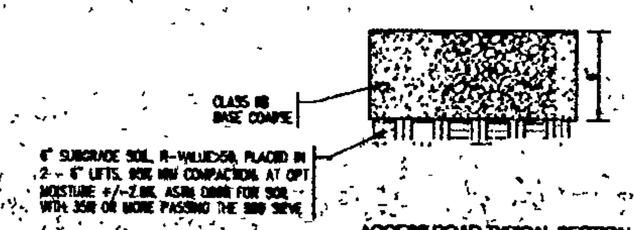
1. AMAFCA Field Engineer shall be notified 48-hours prior to any work within the AMAFCA R/W at 884-2215.
2. No work will be performed in the AMAFCA R/W between May 15 and October 15 without written permission from AMAFCA.
3. All subgrade, backfill and embankment shall be compacted to 95% (modified proctor) within the AMAFCA R/W. Testing reports shall be provided to AMAFCA Field Engineer.
4. AMAFCA Field Engineer will be notified 48-hours prior to final inspection of any facilities within the AMAFCA R/W.
5. All disturbed ground areas shall be revegetated in accordance with City of Albuquerque Standard Specifications for Public Works Construction, Section 1012 Native Grass Seeding, as currently updated.
6. Any existing survey control monuments that are moved or destroyed as a result of the construction shall be replaced by a registered surveyor at the owner's expense.

APPROVED FOR CONSTRUCTION WITHIN AMAFCA RIGHT-OF-WAY / EASEMENT:

(for AMAFCA) Date 8-31-07



POND SECTION A-A
NOT TO SCALE



ACCESS ROAD TYPICAL SECTION
NOT TO SCALE

NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. ALL CURB RETURN RADII SHALL BE 25' UNLESS OTHERWISE SPECIFIED.
3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.
4. GRADE ELEVATIONS, WHERE NOTED, ARE ALONG FLOWLINE OF CURB UNLESS OTHERWISE SPECIFIED.
5. CONTRACTOR IS TO INSTALL A 4" X 4" X 5' POST AND END AT THE END OF EACH SANITARY SEWER SERVICE.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.
7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.
8. CONTRACTOR SHALL PROVIDE THE INSPECTORS, (CITY AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.
9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.
10. ANY DAMAGE TO THE EXISTING FACILITIES (CURB & GUTTER), PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS' EXPENSE.
11. REMOVAL OF THE EXISTING CURB AND GUTTER SHALL BE AS PER COA STD. DWG. 2415 (SAWCUT ONLY).
12. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB & GUTTER.
13. FOR STORM DRAIN CONSTRUCTION, RCP PIPE JOINTS SHALL NOT BE GROUTED PRIOR TO FINAL INSPECTION. FINAL INSPECTION WILL DETERMINE JOINTS TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION.
14. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P
15. ELECTRONIC MARKER DISKS (EMD) WILL BE PLACED ACCORDING TO SECTION 170 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7

NO GRADING WILL BE ALLOWED ON TRACT 6-A-1 UNTIL A TURNKEY CONSTRUCTION AGREEMENT IS EXECUTED WITH AMAFCA.

GENERAL NOTE:
*ALL SANITARY SEWER MANHOLES SHALL BE 4' DIAMETER TYPE "F" AS PER MRGCD AND AMAFCA STANDARD DRAWING 2102 UNLESS OTHERWISE NOTED.

VALVES	PER STD. DWG.	2329 & 2328
MANHOLES	PER STD. DWG.	2101 & 2102
WATER SERVICE	PER STD. DWG.	2361, 2362 & 2366
SAS SERVICE	PER STD. DWG.	2125

Bohannan Huston

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING SPATIAL DATA ADVANCED TECHNOLOGIES

AS-BUILT INFORMATION
CONTRACTOR BY DATE
REVIEWED BY DATE
ENGINEER BY DATE

BENCH MARKS
USGS BRASS DISK STAMPED "N8448-H10"
GEOGRAPHIC POSITION (NAD 27)

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

N.M. STATE PLANE COORDINATES (CENTRAL ZONE)
X=377,786.84 Y=1,524,161.32
COMBINED GROUND TO GRID = 0.9996753
DELTA ALPHA = 00°14'06"
NAVD29 ELEVATION = 5045.51

MICRO-FILM INFORMATION
FILMED BY DATE
CHECKED BY DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN

		DATE
DESIGNED BY	JAL	DATE 07/2007
DRAWN BY	AKR	DATE 07/2007
CHECKED BY	TPM	DATE 07/2007

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

FOUNTAIN HILLS PLAZA PHASE I
STORM DRAIN PLAN & PROFILE
POND STORM DRAIN

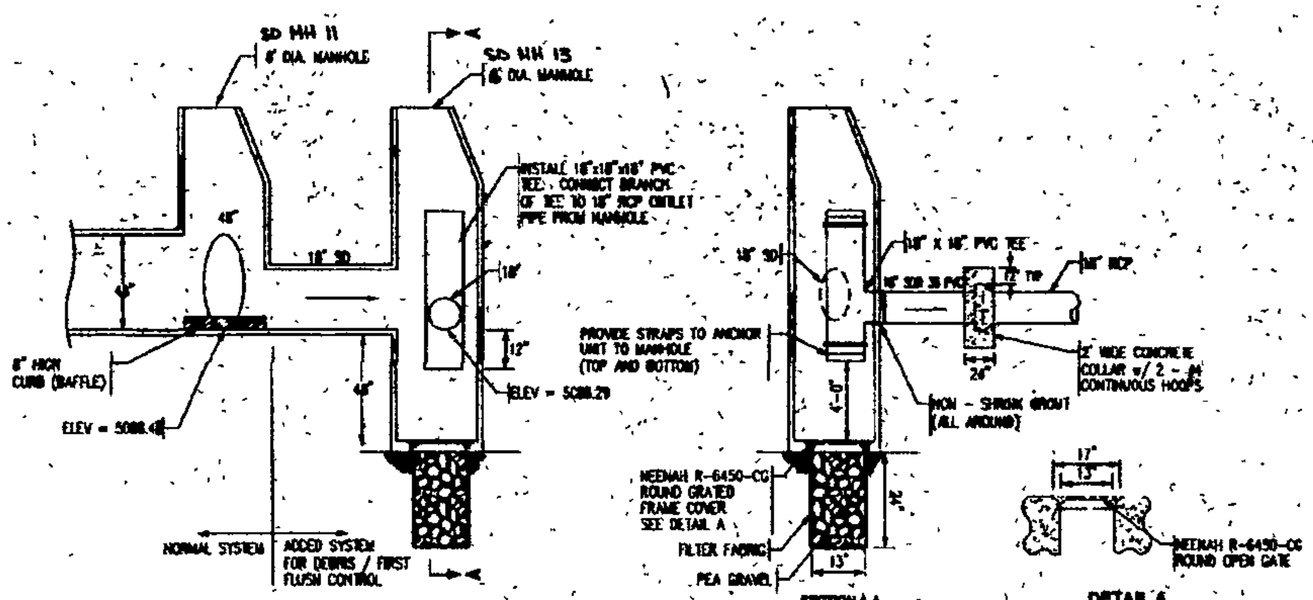
DESIGN REVIEW COMMITTEE
CITY ENGINEER
LAST DESIGN UPDATE
NO. DATE/INL NO. DATE/TYE

CITY PROJECT NO. 584480
ZONE MAP NO. C-12
SHEET 14 OF 18

P:\070312\cdp\prg\070312pp07.dgn
Fri, 31-AUG-2007 - 10:57AM, Plotted by aramos

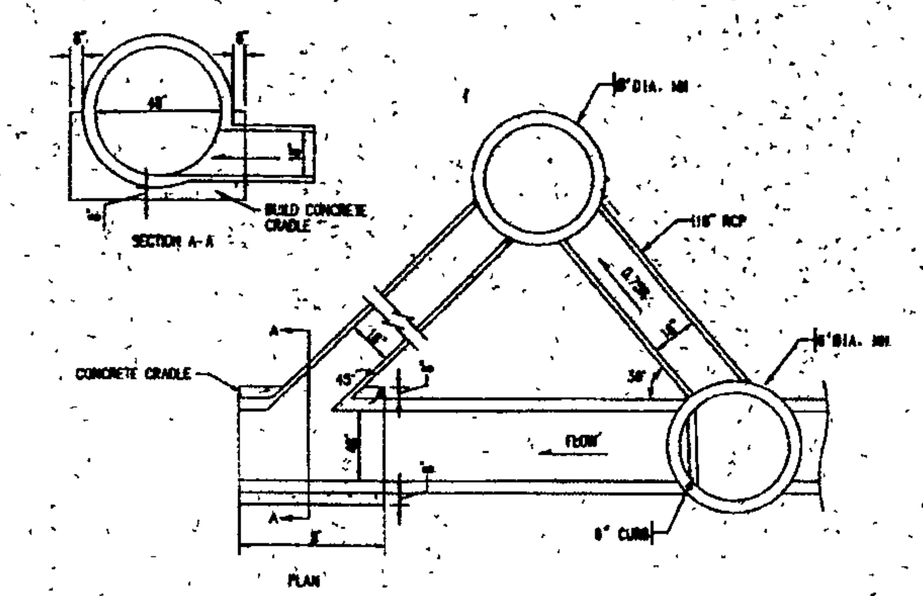
BHI JOB NO. 070312

SCALE: 1" = 50' (HORZ.) 1" = 10' (VERT.)

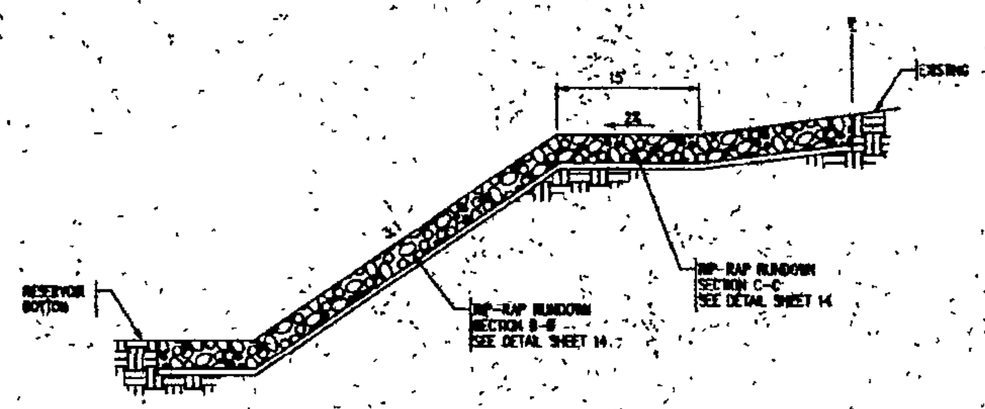


DEBRIS/FIRST FLUSH TREATMENT
MANHOLE SYSTEM
NO SCALE

DETAIL A
ROUND GRATED FRAME COVER
NO SCALE



ECCENTRIC WYE DETAIL
NO SCALE



RIP-RAP RUNDOWN PROFILE D-D
NOT TO SCALE

AS-BUILT INFORMATION
CONTRACTOR — DATE
REVIEWED BY — DATE
ENGINEER — DATE
CITY CONSTRUCTION ENGINEER — DATE
CITY SURVEYOR — DATE

BENCH MARKS
USGS BRASS DISK STAMPED "N44-49-H10"
GEOGRAPHIC POSITION (NAD 27)
N.M. STATE PLANE COORDINATES (CENTRAL ZONE)
X=577,788.84 Y=1,524,161.52
COMBINED GROUND TO GRID = 0.999967563
DELTA ALPHA = 00°14'08"
NAVD88 ELEVATION = 5045.81

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY YPM / JML DATE 07/2007
DRAWN BY AHK / SAR DATE 07/2007
CHECKED BY YPM DATE 07/2007

Bohannan Huston
ENGINEERING · SPATIAL DATA · ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

FOUNTAIN HILLS PLAZA PHASE I
POND STORM DRAIN DETAILS

DESIGN REVIEW COMMITTEE — DATE
CITY ENGINEER — DATE
APPROVED — CITY ENGINEER
LAST DESIGN UPDATE

CITY PROJECT NO. 584480
ZONE MAP NO. C-12
SHEET 9A OF 18

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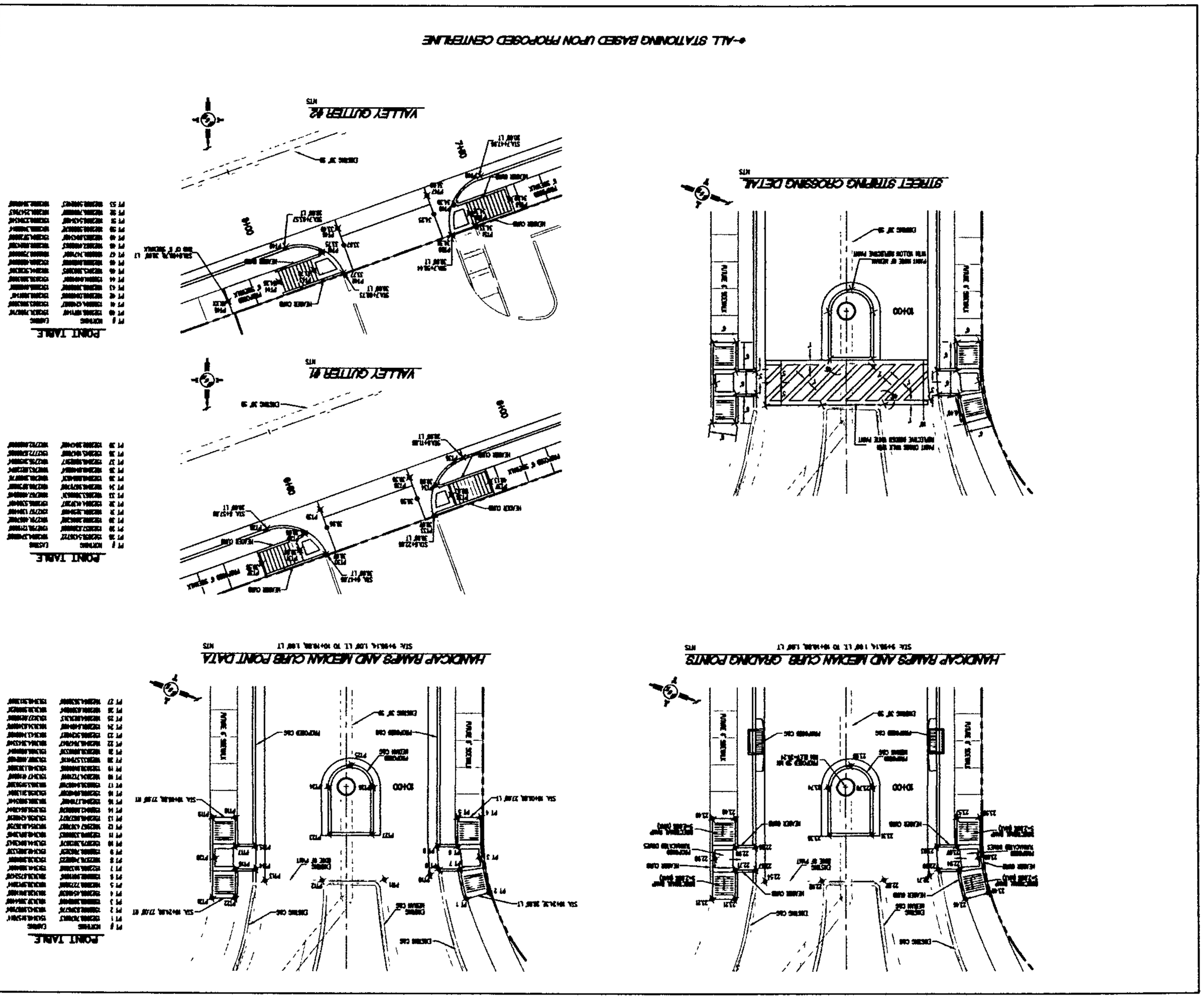
Fri, 31-AUG-2007 - 10:46AM, Plotted by: brosson

BHI JOB NO. 070312



CITY PROJECT NO	XXXXX	ZONE MAP NO	C-12-Z
SHEET 6 OF 6			

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
ENGINEERING GROUP

TITLE: VISTA FUENTE ROAD IMPROVEMENTS
DETAILS

DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | DATE | REVISION | APP. REVISION DATE

NO	DATE	REMARKS	BY

REVISIONS

DESIGN
DESIGNED BY: DCM DATE: 9-14
DRAWN BY: DCM DATE: 9-14
DRAWN NAME: VISTA FUENTE RD IMPROVEMENTS dwg JOB NO
CHECKED BY: DS DATE: 9-14

ENGINEER'S SEAL
DAVID C. SCHOLL
9/15/14

SURVEY INFORMATION
FIELD NOTES

NO	BY	DATE

BENCH MARKS
MONUMENT 9-C12
N=1521848.218
E=1512571.253
ELEV=5127.376
NAD 83-NAVD 88
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999677

AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO

C12D003B4 NORTH'S CVENT CTR - SOUTH 9/29/14

INLET SIZED?

2.5 AC DET POND?

FF } - USE THIS WORDING - JUST NEED A_D NOT WHOLE SITE

$1.214 \text{ ACD} \frac{43560 \text{ SF}}{\text{AC}} \frac{.34 \text{ IN}}{12 \text{ IN}} \frac{\text{FT}}{} = 1498 \text{ CF}$

$1.3790 \times 43560 \times .34/12 = 1701 \text{ CF}$

2466 → 1.998

4.18 CFS/AC x 1.99 AC = 8.31 CFS ALLOW

7.52 CFS ACTUAL ✓

~~SF~~ 852 x 40 = 34080 SF = .78 AC

852 x 24 = 20448 SF = .46 AC

823 x 40 = 32,920 = .76

~~IT WAS SUPPOSED TO BE VISTA FALLS~~ 40' x 199

8.29 CFS FOR - ~~E~~ + SITE BUT RD AREA NOT RIGHT

STUBBING INTO TRACK TO EAST SO THAT

SHOULD USE THAT.

$Q = \frac{1.49 A R^{2/3} S^{1/2}}{n} = \frac{1.49 (1.77) (.38)^{2/3} \sqrt{.04}}{.013} = 21.3 \text{ CFS}$ FOR 18"

$A = \frac{\pi \cdot 1.5^2}{4} = 1.77$ $R = \frac{1.5'}{4} = .38$ $S = .04$ $n = .013$

SUBMIT ALL PAGES OF REPORT ELEC + GR PLAN

HGL

LA PW HILLS

584480 GIS → STORM DRAIN → HGL

SITE TO EAST DISCHARGE TO 18"

IS THE 30" PIPE BIG ENOUGH.
SHOULD HAVE BEEN SIZED TO HANDLE THIS
SITE + OTHERS ADJACENT.
FTN HILLS REPORT DOES NOT HAVE 30"
ONLY 24, 36, + 36
BASIN MAP IS SHOWING EAST LOT TO
VISTA FUENTE
→ MAKE SURE FTN HILLS PLAN SAYS
DISCHARGE IS 4.18 CFS/AC

CITY OF ALBUQUERQUE

THREE HUNDRED YEARS 1706 • 2006
ALBUQUERQUE
Making History

January 23, 2006

Martin J. Garcia, P.E.
ABQ Engineering, Inc.
6739 Academy Rd. NE. Suite 130
Albuquerque, NM 87109

Re: Fountain Hills office Buildings, Tract E-2 and Tract F Alb. West
Grading and Drainage Plan
Engineer's Stamp dated 1-13-06 (C12-D3B)

Dear Mr. Garcia,

Based upon the information provided in your submittal received 1-13-06, the above referenced plan is approved for Site Development Plan for Building Permit action by DRB. However, this plan cannot be approved for building permit until all questions given on April 7, 2005 are addressed for the overall site.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rudy E. Rael Associate Engineer
Planning Department.
Development and Building Services

C: File

MISSING EXCERPTS

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

DRAINAGE REPORT

FOR

FOUNTAIN HILLS

Prepared By:

ABQ ENGINEERING, INCORPORATED
6739 Academy Road, NE – Suite 130
Albuquerque, NM 87109
Ph: (505) 255-7802
FAX:(505) 255-7902

RECEIVED
JAN 2 2 2005
HYDROLOGY SECTION

MARTIN J. GARCIA
NEW MEXICO
11767
REGISTERED PROFESSIONAL ENGINEER

1/21/05

Martin Garcia, P.E.

Table of Contents

1. Purpose and Scope 1

2. Site Description/Existing Drainage Conditions 1

3. Design Criteria/Land Treatments 1

4. Drainage Management Plan 2

5. Conclusion 2

Appendix A
Zone Atlas Maps 1
Firm Map 2

Appendix B
Existing Condition AHYMO Calculations
Developed Condition AHYMO Calculations

Appendix C
Storm Drain Calculations & Profiles

Plates
Conceptual Grading Plan by Isaacson & Arfman
Proposed Drainage / Grading Plans
Basin Map
Road Profile

1. Purpose and Scope

This parcel is proposed to be developed as a Neighborhood Commercial Zone (Fountain Hills). The offsite parcel to the South along Paseo del Norte is also a Neighborhood Commercial Zone. The existing Development to the North is Residential along Paradise Blvd. To the West, is a commercial area with a School and Post-office. To the East is a self-storage facility.

This report presents an overall drainage management plan of the site and adjacent contributing flows. Approval by the City of Albuquerque is requested in order that the subsequent development may proceed.

2. Site Description/Existing Drainage Conditions

This Neighborhood Commercial Zone development is located off Paseo del Norte and Eagle Ranch Road. The site is currently undeveloped with native vegetation comprising of 36.2 acres. The topography slopes to the East at approximately 3% to 5% grade with a steep drop to Eagle Ranch Road.

There are two offsite drainage areas that flow to and from the site. Drainage from Paradise Blvd. is transported to an existing AMAFCA pond located on the site. The offsite drainage from Education Blvd. is transported via open channel to a detention pond that outfalls to the AMAFCA pond. There is presently a standpipe that releases approximately 56 CFS from the existing AMAFCA pond through a 30" standpipe. These flows have been quantified by the drainage reports of Isaacson and Arfman "Paseo Crossing". The property is within the "North Coors Drainage management Plan" by Smith Engineering, and affected by the "Drainage Report for Richland Hills Unit 1" by Community Sciences Corporation, and the "Drainage Calculations for Circle K-Nunzio" by Mark Goodwin & Associates.

3. Design Criteria/Land Treatments

The drainage plan presented in this report has been prepared in accordance with the City of Albuquerque Drainage Ordinances and Chapter 22 of the Development Process Manual (DPM). The drainage will be routed via conduit to the AMAFCA pond. The pond will be enlarged from its current volume or 2.2 ac. ft. to a final volume of 3.97 ac. ft.

The 24 Hr- 100 YR pond volume required is 3.73 ac. ft. Output from pond is restricted to the 30" down stream storm drain system.

Rainfall intensities per this report are as follows:

Zone	P_{60}	P_{360}	P_{1440}
2	1.87	2.20	2.66

Land Treatment (DPM Pg. 22-11)

Treatment Type	A	B	C	D
Commercial	0	0	10	90
Existing	0	100	0	0

See AHYMO Calculations for Basin Summaries, Inputs and Output Files

4. Drainage Management Plan

Basins will drain to a catchment point that will enter the storm drain systems outlined in the attached Hydraulic calculations. The system has been designed to accommodate the 100-yr., 6-hr. storm. The discharge from the area will be restricted to the 30" downstream storm drain drainage system and the existing standpipe in the AMAFCA pond.

5. Conclusion

Per the overall plan, no adverse downstream impact will result from this development. The proposed system will, in fact, greatly improve the local drainage situation in this area. The pond will shift peak flows in that the flows generated from neighboring communities will have discharged downstream before the peak flows generated from this site enter the existing 36" storm drain system.

Hydraflow Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	Dns line No.
1		26.88	36 c	76.0	5088.00	5088.76	1.000	5095.00*	5095.12*	0.16	End
2		22.02	36 c	303.0	5088.86	5091.89	1.000	5095.28*	5095.61*	0.15	1
3		10.28	24 c	180.0	5091.99	5092.24	0.139	5095.76*	5096.13*	0.17	2

Project File: FountainHills3.stm	I-D-F File: SAMPLE.IDF	Total No. Lines: 3	Run Date: 01-06-2005

NOTES: c = circular; e = elliptical; b = box; Return period = 2 Yrs.; * Indicates surcharge condition.

Hydraflow Inlet Report

Line No	Line ID	A (ac)	Inlet time (min)	I (in/hr)	C	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q byp (cfs)	Junc type	Curb Inlet Ht (in)	Curb Inlet L (ft)	Grate Inlet area (sqft)	Grate Inlet L (ft)	Grate Inlet W (ft)	Gutter So (ft/ft)	Gutter W (ft)	Gutter Sw (ft/ft)	Gutter Sx (ft/ft)	Flow depth (ft)	Flow spread (ft)	Byp line No
1		0.00	0.0	0.00	0.00	4.86*	18.65	16.49	7.02	Genr	0.0	0.00	0.00	0.00	0.00	0.040	50.00	0.040	0.040	0.48	12.00	Offsite
2		0.00	0.0	0.00	0.00	11.74*	6.91	0.00	18.65	MH	0.0	0.00	0.00	0.00	0.00	0.000	0.00	0.000	0.000	0.00	0.00	1
3		0.00	0.0	0.00	0.00	10.28*	0.00	3.37	6.91	Curb	8.0	12.00	0.00	0.00	0.00	0.080	2.00	0.062	0.020	0.31	11.30	2

Project File: FountainHills3.stm	I-D-F File: SAMPLE.IDF	Total number of lines: 3	Run Date: 01-06-2005

NOTES: Inlet N-Values = 0.016 ; Design depth for grate(s) = 0.3 (ft); Intensity = 0.00 / (Inlet time + 0.00) ^ 0.00; Return period = 2 Yrs. ; * Indicates Known Q added

Hydraflow Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)	(K)	(ft)
1	36	26.88	5088.00	5095.00	3.00	7.07	3.80	0.22	5095.23	0.163	76.0	5088.76	5095.12	3.00	7.07	3.80	0.22	5095.35	0.162	0.162	0.123	0.70	0.16
2	36	22.02	5088.86	5095.28	3.00	7.07	3.12	0.15	5095.43	0.109	303	5091.89	5095.61	3.00	7.07	3.12	0.15	5095.76	0.109	0.109	0.330	1.00	0.15
3	24	10.28	5091.99	5095.76	2.00	3.14	3.27	0.17	5095.93	0.207	180	5092.24	5096.13	2.00	3.14	3.27	0.17	5096.30	0.207	0.207	0.372	1.00	0.17

Project File: FountainHills3.stm	I-D-F File: SAMPLE.IDF	Total number of lines: 3	Run Date: 01-06-2005

NOTES: Initial tailwater elevation = 5095 (ft) , * Normal depth assumed., ** Critical depth assumed.

C12/D3B

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

RECEIVED
AUG 29 1991
ENGINEERING DIVISION

August 27, 1991

PROJECT ACCEPTANCE LETTER

Sundance Mechanical & Utility Contractors
5920 Midway Park Boulevard N.E.
Albuquerque, NM 87109

RE: ALBUQUERQUE WEST, UNIT 1, TRACT A, PROJECT NO. 3791.90

Dear Mr. Spiess:

The above referenced project has been completed according to the plans and specifications. The project consisted of construction of Davenport Street south of Paradise Boulevard and installation of a 12" water line and 8" sanitary sewer line in Marna Lynn/Davenport south of Paradise Hills to end of Marna Lynn. Also poured curb and gutter on east side of Marna Lynn/Davenport and paved east side of Marna Lynn/Davenport 22 feet from center line to curb. Four (4) drop structures were not built under this project but will be constructed as part of the Phase II Education Place Project.

The City of Albuquerque accepts the referenced project as a whole and the contractual correction period begins August 27, 1991. The correction period on this project is for one (1) year.

Sincerely,

Brian L. Speicher, P.E.
Chief Construction Engineer
Public Works Department

BLS:kt

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 16, 1991

Jeffrey G. Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Boulevard, NE
Albuquerque, New Mexico 87109

RE: DRAINAGE PLAN FOR EDUCATION PLACE, (C-12/D3B)
WORK ORDER NO. 3791.91, ENGINEER'S STAMP DATED APRIL 25, 1991

Dear Mr. Mortensen:

Based on the information provided on the referenced submittal received April 26, 1991, the plan is approved for work order.

Please be advised that the maximum discharge rate for Tract A per the master plan is as follows:

Q cfs (Tract A) = (38.4 cfs) - (Free Discharge for Education Place & Davenport Street) - (0.5 cfs/acre for Lot 1 & Tract G)

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
Civil Engineer/Hydrology

GA
WP+1650

C-12/D003B

DRAINAGE REPORT

FOR

ALBUQUERQUE WEST UNIT ONE

OCTOBER 22, 1990

FRED C. ARFMAN
NEW MEXICO
7322
REGISTERED PROFESSIONAL ENGINEER

10-22-90

RECEIVED
OCT 24 1990
HYDROLOGY DIVISION

PREPARED BY: ISAACSON & ARFMAN, P.A.
128 MONROE STREET, N.E.
ALBUQUERQUE, NM 87108
(505) 268-8828

ATTN: FRED C. ARFMAN, P.E.

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Introduction and Scope 1-2

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Existing Drainage Characteristics 5-6

Storm Runoff Analysis 6-7

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Appendices

Conceptual Drainage Study Approval Letter: February 20, 1990

Conceptual Drainage Submittal

Existing Terminus: Eagle Ranch Storm Drain

Hydrograph & Worksheet for Detention/Desiltation Pond

Runoff Calculation Sheets

Pond Outflow Analysis

Eagle Ranch Storm Drain Hydraulic Summary

Details

Temporary Drop Structures

Temporary Earthen Rundowns

Pond Layout & Capacity Calculations

Pond Outlet Control Structure

DRAINAGE STUDY
FOR
ALBUQUERQUE WEST UNIT ONE

INTRODUCTION & SCOPE

This offered comprehensive drainage study was prepared as a subsequent study to the "Conceptual Drainage Plan for Albuquerque West Unit 1," dated January 28, 1990, and approved by the City's Hydrology Section on February 20, 1990. This plan shall pertain to those initial infrastructure improvements required for the partial development of Davenport Street and Marna Lynn Avenue and the extension of the Eagle Ranch Storm Drain southerly to Nunzio Avenue's southern right-of-way line.

Those mentioned improvements were waived by the City as part of the bulk-land platting process which reconfigured the Albuquerque West Subdivision from its original 1984 platting. As a condition of the bulk-land sale of Tract 'A' to the Albuquerque Board of Education, the construction of certain improvements were agreed upon and included into the Purchase Agreement. Those improvements consist of the following:

- Davenport Street--24 ft. paving, water & sanitary sewer
- Marna Lynn Avenue--24 ft. paving, water & sanitary sewer
- Tracts B & F--temporary earthen drainage channel
- Tract B--temporary detention & desiltation basin
- Eagle Ranch Storm Drain--extension to the south to Nunzio Ave. then west to temporary basin
- Miscellaneous underground utility lines

It is understood that additional public and private infrastructure improvements shall be required as a condition of approval of the individual tract's site development plans. The previously mentioned improvements are scheduled for construction as a result of a private co-improvement agreement and not tied to any governmental policy. The remaining public improvements required for the future development of Tract A (APS school site) or any of the surrounding tracts shall be identified by each tract's infrastructure listing at the time those parcels are developed.

This study has been prepared to investigate the existing conditions and downstream drainage facilities, the overall site drainage characteristics and runoff potential. The interim and permanent facilities shall be identified for the Phase One improvements. The following tracts' land development scenario was used to create the greatest runoff potential where temporary downstream facilities exist.

Fully Developed Parcels	Undeveloped Parcels
Tr. A	Tr. B
Tr. G	Tr. D
Tr. E	Tr. C
Tr. F	Lot 1, 2, 3; Blk. B
Lots 1 & 2; Blk. A	

SITE CONDITIONS & EXISTING FACILITIES

--Previous Study:

This 49.3-acre parcel was included in the September 10, 1984, "Grading and Drainage Plan for Albuquerque West" prepared by

Leverton-Easterling. This study covered the entire 95 acres of Albuquerque West. Due to limited down stream storm-drain capacity in Eagle Ranch Road, those upper drainage basins were recommended to have controlled discharge by ultimate individual lot ponding.

The previously mentioned February 1990 Conceptual Drainage Plan redefined the individual tracts' controlled discharge potential and identified those improvements necessary due to the reconfiguration of the roadways and tract boundaries.

--Topography:

The subject site was included in the Riverview Mass Grading Project in 1988. Therefore, the existing site drainage patterns and characteristics have changed. The result of the altered topography is that the previous drainage basin feeding into the Piedras Marcadas Arroyo has been added to the adjacent basin which discharges into the Calabasillas Arroyo. In addition, the existing area's soils have been blended and compacted. The entire site was revegetated with native grasses.

--Drainage Improvement:

As part of the Riverview Mass Grading, a detention/desiltation pond was placed at the easterly edge of the subject property adjacent to Paradise Boulevard and at the terminus of the Eagle Ranch Storm Drain (36" diameter). This temporary facility has been operating for three years and was capable of handling the 100-year event as was evident by the major storm on July 9, 1988.

--Soils:

There are two soil types previously blended by the mass grading which now cover the site and the minor offsite contributing watershed.

BKD--Bluepoint-Kokan Association--loamy fine sand and gravelly sand, SCS Hydrologic Group A.

MWA--Madurez-Wink Association--fine sandy loam, SCS Hydrologic Group B.

--Rational Formula 'C' Factor:

From Leverton-Easterling's 1984 Plan, a weighted 'C' Factor for the combined soils was 0.24. Due to the disturbance of the native soils and their compaction and revegetation, an existing 'C' Factor of 0.40 shall be used to determine those existing runoff characteristics.

--Rainfall:

From DPM Plate 22.2, D-1, the 6-hour rainfall volumes are:

100 yr. = 2.2 in.

10 yr. = 1.45 in.

--Eagle Ranch Storm Drain:

As mentioned in the narrative on Drainage Improvements above, the majority of the storm waters generated from this site are accepted

by the Eagle Ranch Storm Drain. A portion of the construction plans for this facility have been reduced and placed in the Appendix of this study. While the constructed 36" dia. RCP has a carrying capacity of 90 CFS, its allowed acceptance is limited to 55 cfs. This controlled rate of flow has necessitated upland detention or lengthening the time of concentration or a combination of the two.

EXISTING DRAINAGE CHARACTERISTICS

BASIN A: Storm-water runoff from this basin is captured by an earth ditch/berm facility along the easterly property line of the adjacent Lot 1 of Land of Taberbacle of Praise Church and Lot 6, Block C. All storm waters generated within Basin A are desilted and allowed to enter into the public 36" diameter storm drain system of Eagle Ranch Road.

BASIN B: Storm waters generated from this basin are currently allowed to discharge onto the paving of Eagle Ranch Road. Flows are then conveyed to the north within the right-of-way to the intersection of Eagle Ranch Road and Paradise Boulevard. Flows are then turned to the east and conveyed towards Coors within the southerly bar ditch of Paradise Boulevard. All storm waters are finally accepted by the New Mexico State Highway & Transportation Department storm drain inlet along the northerly right-of-way line of Paseo del Norte.

STORM WATER RUNOFF (Existing Conditions): From the previously defined drainage basins and from the attached Runoff Calculation Sheets 1 and 2, the following storm water runoff valves were computed:

Basin	Area	Anal. Pt.	Q_{100}	Q_{10}	V_{100}
A	45.2 Ac.	Ext-1	53.2 CFS	34.9 CFS	106,650 CF
B	14.86 Ac.	Ext-2	20.4 CFS	13.4 CFS	35,062 CF

(See Appendix for Runoff Calculation Sheets.)

STORM RUNOFF ANALYSIS

METHODOLOGY: Runoff analysis conforms to the methods outlined in the Development Process Manual (DPM), Chapter 22. The Rational Formula was used to calculate 100-year runoff rates at various "Analysis Points" (AP) in the project area. This is in accordance with the DPM since the tributary drainage areas involved are less than 320 acres.

The runoff coefficient, 'C', in the Rational Formula was developed for three land uses and a developed street classification. Specific runoff coefficient values for drainage subareas were determined by measuring the areas of each of the land use classification types within the contributing area and calculating the corresponding composite C value. Existing vacant lands west of Tract B was analyzed for the fully developed condition according to its land use classification.

All of the upland parcels with the exception of Tract A (APS school site) were analyzed using their net effective areas. Reduced areas were used due to the previously established storm water detention requirements.

RUNOFF RATES: Runoff rates were calculated at various key locations along the public right-of way and the temporary earthen channel alignment. The analysis points for these calculation points are labeled AP-1 through AP-9 as found on the drainage exhibit of the original Conceptual Drainage Plan. Calculations for AP-4 and AP-5* are found in the Appendix of this report.

PROPOSED SITE RUNOFF CHARACTERISTICS

As stated earlier in the scope of this study, those tracts being accessed by the proposed improved roadways of Davenport Street, Marna Lynn Avenue and Education Place were analyzed as being fully developed with runoff constraints. Detained storm water flows are allowed to enter onto the public roadways and are then routed to the southerly terminus of Education Place.

Storm water flows were analyzed at two critical points; AP-2 located at the low point of the three-way intersection and AP-4, located at the southerly and narrowest cross-section of Education Place. While this analyzed the ultimate built-out conditions, the initial phase of development does not improve Education Place. A temporary earthen swale shall be excavated within the easterly portion of Education Place's right-of-way. Those storm water

flows then enter into the temporary drainage rundown situated along the southerly boundary of the subdivision. The analysis of the temporary rundown is found in the Appendix of this report and the conclusions are presented below:

1. The natural grade along the channel's alignment ranges from 1.0% to 5.3%. Velocities created by a slope greater than 1.2% would create an overly erosive flow velocity for an unlined channel.

2. Temporary drop structures are programmed to be constructed in the channel/rundown. These structures effectively create a slope of 0.012 ft./ft. This corresponds to A Q_{100} velocity of approximately 4 fps. Considering the fact that this is a temporary facility releasing its storm waters into an oversized detention/desiltation pond, an analysis of the 10-year storm was undertaken to determine the velocity of the 10-year event. This yielded a reduced velocity of 3.8 fps and therefore less erosive.

3. The forementioned drop structures are situated to create a relative slope of 0.012 ft./ft. and are designed with a 6-foot center opening capable of conveying the 10-year flow (see preliminary design in the Appendix). The 100-year flow is confined to the drop structure but will flow over the entire width.

4. The freeboard is computed to be over 2 ft. with a corresponding depth of flow ranging from 9 to 11 inches for the 10-year event.

The previous storm water characteristics were for the fully developed westerly portion of the subdivision. An interim drainage solution to handle those undeveloped storm water flows from the proposed A.P.S. site and those undeveloped tracts to the west of Davenport and Marna Lynn must be constructed. It must handle those previously mentioned undeveloped storm waters intercepted by the public improvements of Marna Lynn and Davenport as well as what is projected to be generated by those two streets. This solution must be maintained by the surrounding property owners until such time that Education Place is constructed.

The solution consists of a temporary earthen swale within the easterly right-of-way of Education Place from the point of storm water discharge from the intersection of Davenport and Education to the southerly terminus of Education Place. At this point, all storm water flows enter into the previously described temporary earthen drainage rundown with temp. drop structures.

A typical section of this earthen swale with the hydraulic data is found in the Appendix of this report.

SITE DETENTION/DESILTATION POND

This temporary facility serves three functions. First, it accepts those storm water flows from the southerly subdivision property line rundown. Secondly, it serves as a detention pond, taking the peak off the flow allowing a flow rate entering into the Eagle Ranch Storm Drain Extension to be lowered to a rate of flow compatible with the down stream flow limitations. Thirdly, this facility was designed with a sacrificial volume for sediment accumulation. This feature allows partial filling of sediment while still leaving the required storage capacity for the storm waters in the 100-year event. A preliminary design of this facility is found in the Appendix of the report along with the pond's calculations for detention of storm water volumes.

EAGLE RANCH STORM DRAIN EXTENSION

The existing storm drain ends at the southerly right-of-way line of Paradise Boulevard, being approximately at the northwest corner of Lot 7-A-1 of the Albuquerque West Subdivision. It terminates as a 36-inch diameter R.C.P. at a modified storm drain manhole which acts as an inlet for those flows within the bar ditch along the southerly edge of pavement. See the Appendix of this report for a partial photocopy of the existing storm drain's design.

The proposed storm drain extension proceeds to the south as a 30-inch and then 24-inch dia. R.C.P., paralleling the westerly lot line of Lot 7-A-1 approximately 7.5 feet to the west. This offset alignment provides the required depth of bury over the conduit due

to the steep cross slope existing across the drainage easement. Refer to the Appendix for a cross-sectional drawing of this condition. The alignment angles to the west 45° at Nunzio Avenue's right-of-way line and then again after it crosses the street's centerline. The storm drain continues to the west as a 24-inch diameter R.C.P. to the last manhole. A 21-inch diameter R.C.P. extends 85 feet to serve as the discharge line of the previously mentioned detention/desiltation pond.

Future site developments to Tract 'B' may relocate the previously mentioned desiltation pond. The 21-inch diameter stub may be extended further into Tract 'B' as a private extension.

The hydraulic data sheets for the public extension of the storm drain as well as the inlet control measures are found in the Appendix of this report.

SUMMARY

The programmed improvements are the first of several stages of development. The public improvements which generate storm water runoff consist of the half sections of Marna Lynn Avenue and Davenport Street, NW. These two streets also accept undeveloped storm water runoff from those undeveloped tracts to the west. All flows are then discharged to the temporary drainage swale within the right-of-way of Education Place.

The concentrate storm waters are then accepted by the southerly rundown with temporary drop structures. This facility is designed to handle the 100-year event when the westerly portion (all tracts west of Tract 'B') is 100% developed. Storm waters are then discharged into the subdivision desiltation/detention pond prior to acceptance into the planned extension of the Eagle Ranch Storm Drain.

Storm waters discharge from the temporary pond at a controlled rate such that the subdivision's overall discharge into the storm drain located at the southerly right-of-way line of Paradise Boulevard does not exceed 56 cfs.

OWNER'S MAINTENANCE RESPONSIBILITY

The developer of Albuquerque West Unit One shall undertake the maintenance responsibility of the temporary drainage facilities described in this report. If required, he shall have prepared the proper Drainage Covenant which will bind him to perform the required maintenance on those temporary facilities until such time that others have taken his ownership interest or until permanent facilities have been constructed to replace those that are temporary.

CITY OF
Albuquerque

October 25, 1996

Martin J. Chávez, Mayor

Fred Arfman
Isaacson & Arfman
128 Monroe St. NE
Albuquerque, NM 87108

RE: REVISED ENGINEER CERTIFICATION FOR TRUJILLO CAR WASH (C12-D3B4) CERTIFICATION REVISION DATE OF 10/1/96.

Dear Mr. Arfman:

Based on the information provided on your October 2, 1996 resubmittal, the above referenced site is acceptable for Engineer Certification.

Please be advised that the permanent Certificate of Occupancy will not be released until the work within the City Right-of-Way has been permitted and accepted.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
Roger Trujillo
File

Date 1-30-97 Permit No. 984482

Contractor Banes

Location 9000 Davenport NW

Time 3:30

Side walk & Drive pad → 985468

Soil Drain OK → 984482

ATTN:

BERNIE MONTOYA

PER OUR CONVERSATION —

THIS IS ALL WE NEED FOR C.O.

THANKS

RICH

BANES SOUTHWEST

PUBLIC WORKS DEPARTMENT

SIDEWALK & DRIVEPAD INSPECTION

APPROVED

Victor Zamora

Inspector

	Permits	Dispatch	Insp. Office
Phone:	768-2551	857-8025	857-8036

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 5, 1995

Fred Arfman, PE
Isaacson & Arfman
128 Monroe St NE
Albuquerque, NM 87108

RE: GRADING & DRAINAGE PLAN FOR TRUJILLO CARWASH (C-12/D3B4)
RECEIVED MARCH 10 & APRIL 5, 1995 FOR SITE DEV PLAN & BLDG PRMT
ENGINEER'S STAMP DATED 04-05-95

Dear Mr. Arfman:

Based on the information included in the submittal referenced above, City Hydrology accepts this Grading & Drainage Plan for Site Development Plan & Building Permit.

Include a copy of the approved Grading & Drainage Plan, dated 04-05-95, in the set of construction documents that will be submitted to Code Administration for the Building Permit.

A separate permit is required for construction of private drainage facilities within the City right of way. A copy of this letter must be on hand when applying for the excavation permit.

Engineer's Certification of grading & drainage per DPM checklist must be approved before any Certificate of Occupancy will be released.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, PE
Civil Engineer/Hydrology

c: Andrew Garcia
Arlene Portillo
Fred Aguirre, DRB 95-69
Roger Trujillo, c/o RJ Schaefer Realty & Inv., 5854 Osuna Rd NE 87109

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 10, 1995

Fred Arfman
Isaacson & Arfman
128 Monroe St. NE
Albuquerque, NM 87108

RE: TRUJILLO CAR WASH (C-12/D3B4) ENGINEER'S STAMP DATED 1/26/95

Dear Mr. Arfman:

Based upon the informantion included in your 1/30/95 submittal, the referenced project is approved for Site Development Plan and Building Permit approval. Please be advised that Engineer's Certification will be required.

If I can be of further assistance, I can be reached at 768-3622.

Sincerely,

Scott Davis
PWD, Hydrology Division

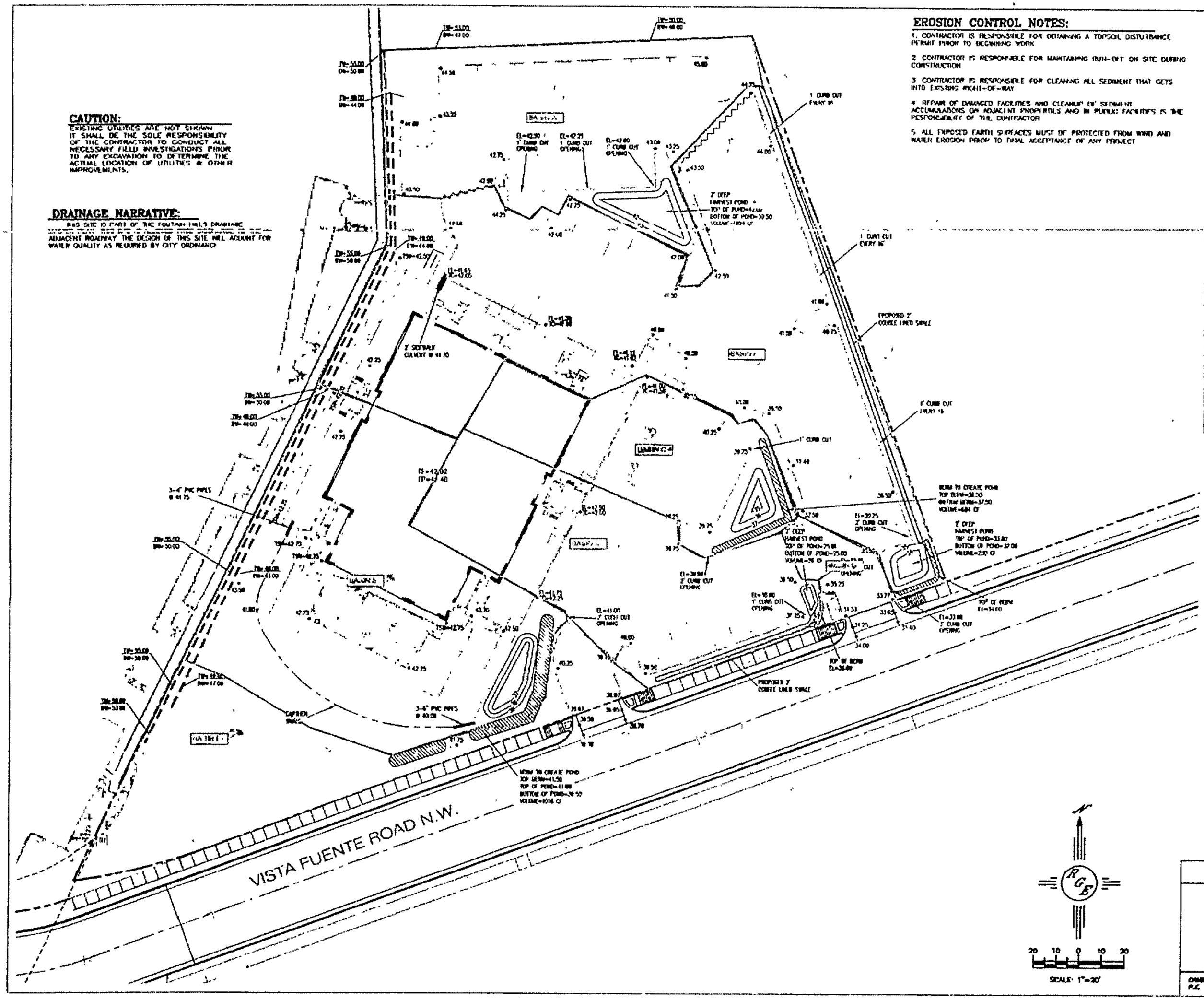
c: Andrew Garcia
File -

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.

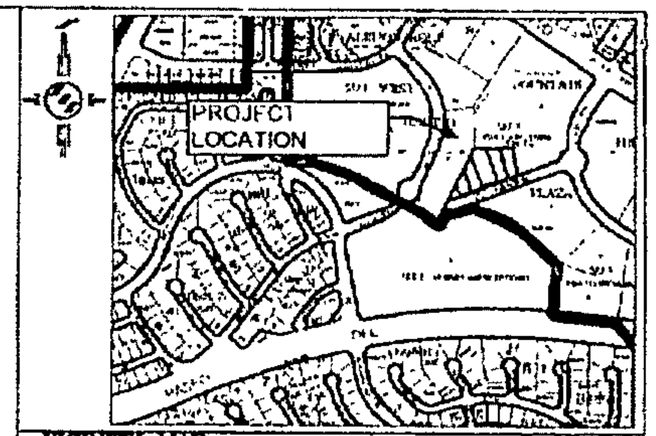
DRAINAGE NARRATIVE:

THIS SITE IS PART OF THE FOUNTAIN HILLS DRAINAGE [illegible] ADJACENT ROADWAY. THE DESIGN OF THIS SITE WILL ADJUST FOR WATER QUALITY AS REQUIRED BY CITY ORDINANCE.



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.



VICINITY MAP: C-12-Z

FIRM MAP: 35001C0116G

LEGAL DESCRIPTION:

LOT 1A FOUNTAIN HILLS
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. SITE IS PART OF THE FOUNTAIN HILLS MASTER DRAINAGE PLAN. THE REGIONAL POND WILL BE MODIFIED BY THE EXTENSION OF THE DISCHARGE PIPE OUTFALL TO RETAIN THE FIRST .34" OF STORM RUNOFF FROM ENTIRE DEVELOPMENT TO CONFORM TO THE WATER QUALITY REQUIREMENTS.

LEGEND

- PROPOSED SPOT ELEVATION
- TOP OF WALL ELEVATION / BOTTOM OF WALL 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 EDGE OF CONCRETE
- PROPOSED FLOWLINE
- EXISTING WALL
- PROPOSED 22' WIDE COBBLE SWALE

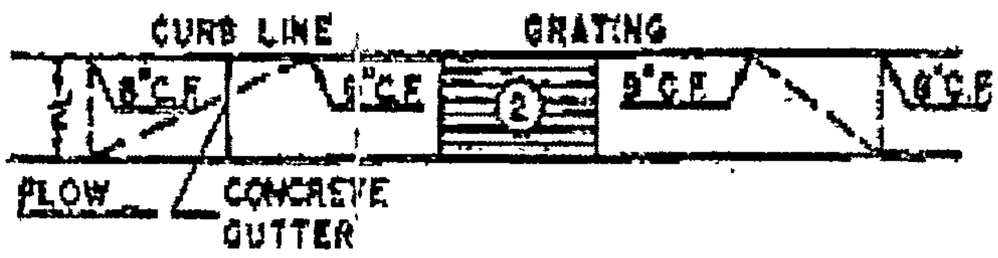
I DAVID SOULE, HAVE PERSONALLY INSPECTED THE PROPERTY ON X-XX-13. NO EARTHWORK HAS BEEN PERFORMED AND THE SITE IS CONSISTENT WITH THE TOPO SHOWN.

DAVID SOULE P.E. #14522 — DATE

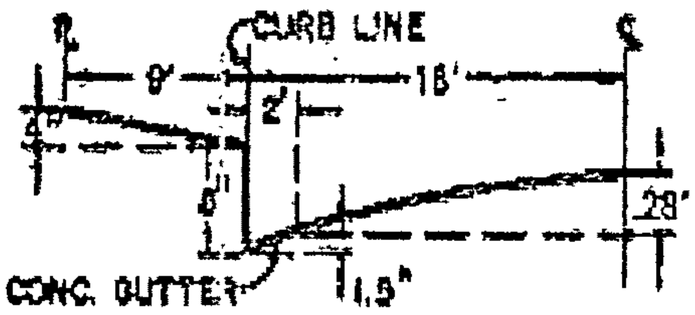
SCALE: 1"=20'

ENGINEER'S SEAL	NOAH'S EVENT CENTER	DRAWN BY DCM
	CONCEPTUAL GRADING AND DRAINAGE PLAN	DATE 6-30-14
	Rio Grande Engineering	SHEET # 3 of 6
DAVID SOULE P.E. #14522		JOB # 10000

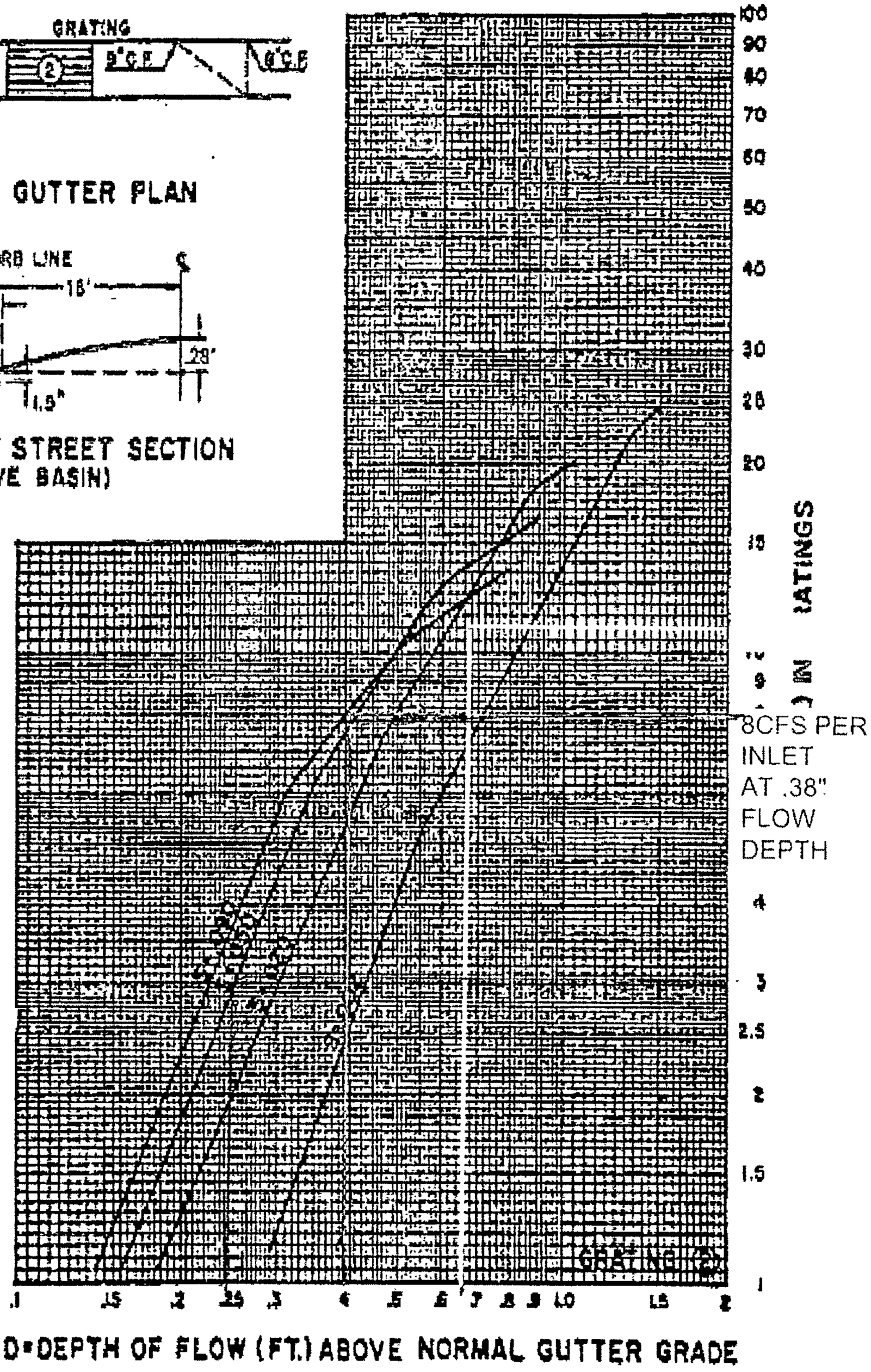
GRATING CAPACITIES FOR TYPE 'A', 'C' and 'D'



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)



Rio Grande Engineering of NM, LLC

February 18, 2015

Hydrology Division
Planning Department
City of Albuquerque

Re: Noah's at Fountain Plaza Grading and Drainage Plan (C12/D003B4)

The following is in response to Ms. Amy L.D. Niese comments dated September 30, 2014.

1. The entire length of Vista Fuente Road is included in the calculation for the street flows on the addendum (attached). The new calculations for the street flow is 9.17 cfs on the north side of the street and 1.65 cfs on the south side of the street. The total street flows are 10.82cfs, refer to sheet 1 and sheet 2.

2. The ponding capacity provided for the first flush ponds is larger than required, as mentioned in the above referenced letter. It is desired to retain the ponds as shown on the grading plan.

3. The elevation contours for the first flush ponds have been corrected.

4. Elevation contours have been added to address the concern regarding how this site will tie into the adjoining property to the east. There are proposed retaining walls on the other two sides, the top of wall and bottom of wall elevations are included.

5. Bottom of wall elevations are included on the grading plan where sidewalk elevations are called out.

6. Calculations showing the 18in laterals are sufficiently sized are included, refer to sheet 3.

7. An electronic submittal is included.

Thank you for your consideration.

Sincerely,

David Soule, PE
Rio Grande Engineering of NM, LLC

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MAY 0 3 2015
LAND DEVELOPMENT SECTION

CITY OF ALBUQUERQUE

September 30, 2014

Mr. David Soule
Rio Grande Engineering
PO Box 93924
Albuquerque, NM 87199

Re: Noah's at Fountain Plaza
Grading and Drainage Plan
Engineer's Stamp Date 9-15-14 (C12D003B4)

Dear Mr. Soule,

Based upon the information provided in your submittal received September 24, 2014, the above referenced plan cannot be approved for Grading Permit nor Building Permit until the following comments are addressed:

1. As we discussed, the area provided for Vista Fuente Road should be the full length of the road before the proposed inlets which was your original intention. The area provided is not accurate which will impact the sizing of the inlets. Provide the revised area and associated calculations.
2. Calculations were provided for the First Flush. (Please note, use "First Flush" instead of "Water Harvesting".) Your design was for the area of the site times 0.34 inches. The ponds can be sized for the impervious area times 0.34 inches.
3. The contour elevations of the First Flush ponds do not match what is being called out in the text for the ponds. Please revise.
4. How is the site tying into exiting grades along the perimeter? Provide contours or spot elevations showing how that is being accomplished.
5. Provide bottom of wall elevations where sidewalk elevations are called out.
6. Include calculations showing the 18 inch laterals are sufficiently sized.
7. For the electronic submittal, include all attachments to the report such as the grading and drainage plan, previous report exhibits, and the DTIS.

If you have any questions, you can contact me at 924-3994.

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

C: e-mail

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PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

C12D003B4

Project Title: Noahs at Fountain Plaza Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: LOT 1A FOUNTIAN HILLS PLAZA

City Address: VISTA FUENTES ROAD NW

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: FOUNTAIN HILLS LLC Contact: _____

Address: PO BOX 920798 EL PASO TX 79902

Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: JOE SIMONS

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS

Address: _____

Phone#: 917.8921 Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL
- X DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- X 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
- X 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)

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WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided

DATE SUBMITTED: 3/3/15 By: DAM

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 followin

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

Addendum 1

Vista Fuente street flows

823lf x 40ft = 32920sf = 0.756ac

Peak flows for street(zone 1) = 4.37cfs/ac x 0.756ac = 3.30 cfs

Each half of the street generates 3.30cfs/2 = 1.65cfs

North half of the street retains:

1- flows generated by Noah's event center = 7.52cfs

2- flows generated by Vista Fuente road = 1.65cfs

Total = 9.17cfs — N

South half of the street = 1.65cfs

STD.

Depth of flow on north side of Vista Fuente is approx. = 0.39 ft (see sheet 5 of 5)

Depth of flow on south side of Vista Fuente is approx. = 0.24ft (see sheet 5 of 5) STD

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01

Catch Basin Capacities

For north side of Vista Fuente - from plate 22.3 D-5

At a depth of 0.39ft - grate capacity is 8 cfs

Since the flow on the north side of the street is 9.17cfs, thus a double grate type "A" catch basin will be needed.

For ~~north~~ south side of Vista Fuente - from plate 22.3 D-5

At a depth of 0.24 - grate capacity is 3 cfs

Since the flow on the south half of Vista Fuente is 1.65cfs - 1 grate is sufficient, thus a single type "A" catch basin is needed.

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M

Catch Basin Lateral Capacities

For 18 inch laterals at a slope of 3.09%.

Orafice capacity

Q= CA(sqrt(2gh))

C= 0.82
A = 1.767sf
h= (18in/(12in/ft))/2 = 0.75ft
g= 32.2ft/s^2

thus Q= (0.82 x 1.67) x (sqrt(2 x 32.2 x 0.75) = 10.1 cfs

therefor since 10.1 cfs is greater than 9.17cfs or 1.67 cfs the orafice has capacity with respect to these street flows.

18 inch pipe capacities

Q = (1.49/n) x (A x R^2/3 x s^1/2)

n = .013
A = 1.167 sf
R= A/P = 1.767sf/4.71ft = 0.375
s = 0.0309

Q= (1.49/.013) x (1.767 x 0.375^.67 x 0.0309^.5) = 18.45cfs

Thus since 18.45cfs is greater than 9.17 cfs or 1.67 cfs the laterals have capacity with respect to these street flows.

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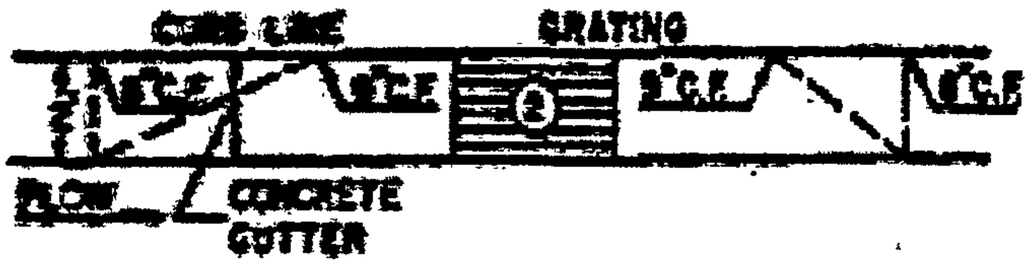
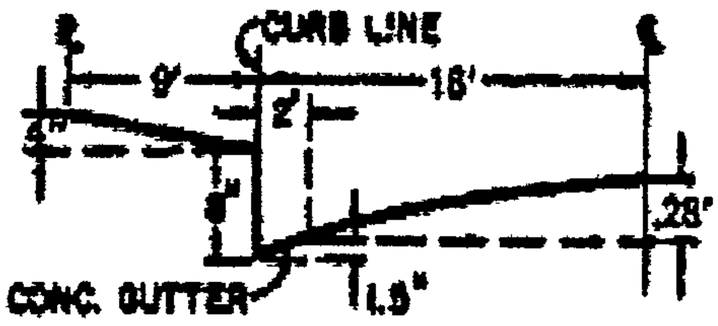
a1

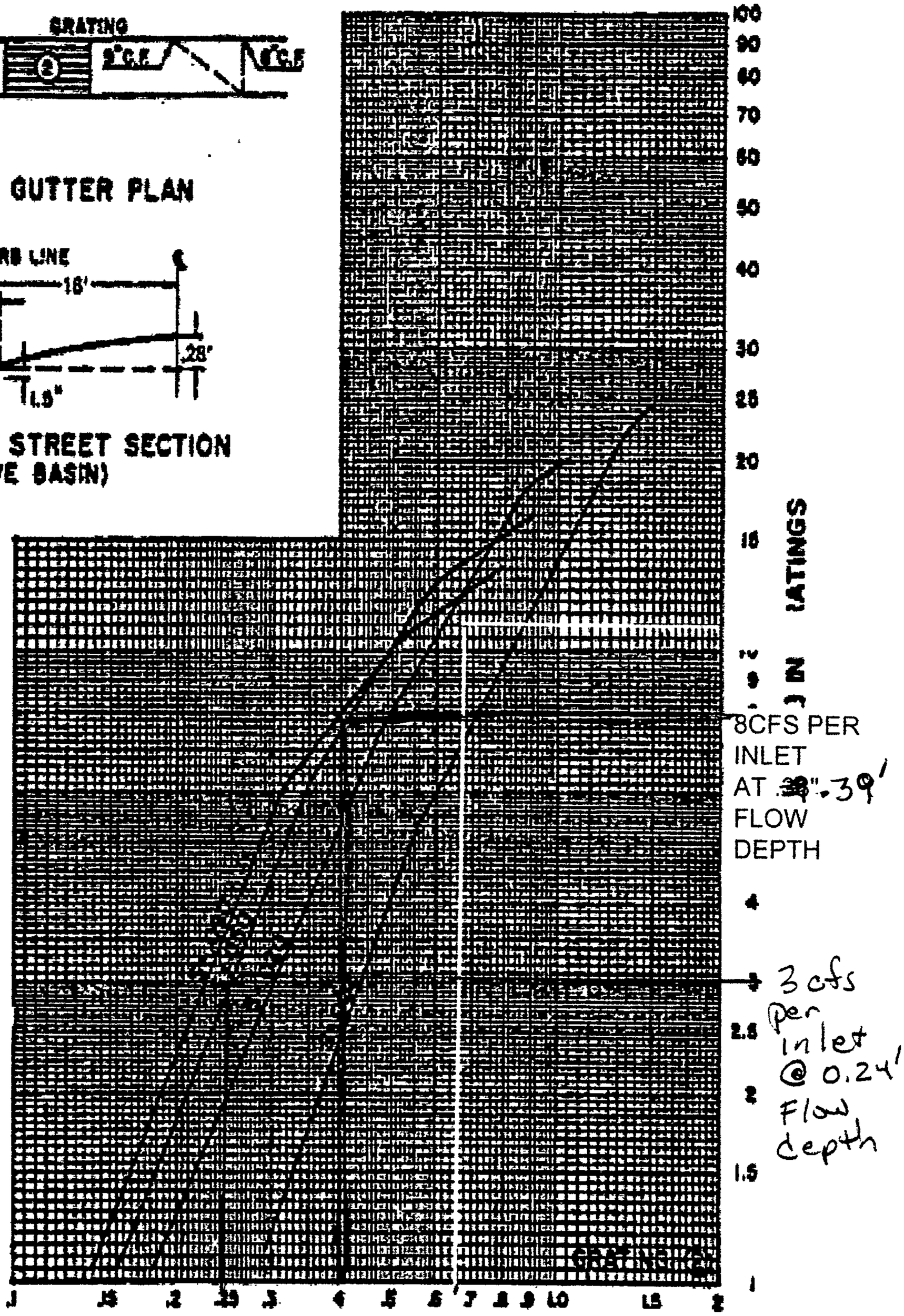
2-17-15



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)



D=DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

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PLATE 22.3 D-5

Street Capacity Calculations

2-17-15

VISTA FUENTE

40' F-F Street Section with 8" curb

Slope= 0.04

For water depths less than 0.125 feet

Y= Water depth

Area = Y*2

P= SQRT(257*Y^2) + Y

R= 0.017

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.01	0.0008	0.1703	0.0047	0.0004	0.0008	0.4903	0.0049	0.8641	0.0082
0.02	0.0032	0.3406	0.0094	0.0025	0.0050	0.7784	0.0156	0.9699	0.0192
0.04	0.0128	0.6812	0.0188	0.0158	0.0316	1.2356	0.0494	1.0887	0.0448
0.06	0.0288	1.0219	0.0282	0.0466	0.0933	1.6191	0.0971	1.1648	0.0733
0.08	0.0512	1.3625	0.0376	0.1004	0.2008	1.9614	0.1569	1.2220	0.1039
0.1	0.0800	1.7031	0.0470	0.1821	0.3642	2.2759	0.2276	1.2683	0.1362
0.12	0.1152	2.0437	0.0564	0.2961	0.5922	2.5701	0.3084	1.3075	0.1699
0.125	0.1250	2.1289	0.0587	0.3301	0.6603	2.6410	0.3301	1.3164	0.1785

For water depths greater than 0.125 ft but less than 0.405 ft

Y1= Y-0.125

A2= A1 + 2*Y1 + 25*Y1^2

P2= P1 + SQRT(2501*Y1^2)

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.13	0.1356	2.3840	0.0569	0.3507	0.7015	2.5860	0.3362	1.2639	0.1763
0.16	0.2256	3.9143	0.0576	0.5886	1.1772	2.6087	0.4174	1.1493	0.1921
0.2	0.4156	5.9547	0.0698	1.2318	2.4636	2.9637	0.5927	1.1679	0.2451
0.24	0.6856	7.9951	0.0858	2.3309	4.6619	3.3997	0.8159	1.2230	0.3121
0.28	1.0356	10.0355	0.1032	3.9833	7.9667	3.8463	1.0770	1.2810	0.3862
0.32	1.4656	12.0759	0.1214	6.2810	12.5619	4.2855	1.3714	1.3351	0.4650
0.3464	1.7932	13.4225	0.1336	8.1930	16.3861	4.5688	1.5826	1.3680	0.5190
0.39	2.4106	15.6466	0.1541	12.1117	24.2233	5.0243	1.9595	1.4178	0.6109
0.405	2.6450	16.4117	0.1612	13.6943	27.3886	5.1774	2.0969	1.4337	0.6433

← Q= 1.65 cfs

← Q = 9.17 cfs

For water depths greater than 0.405 ft but less than 0.667 ft

Y2= Y - 0.405

A3= A2 + Y2*20

P3= P2 + Y2

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.41	2.7250	16.4167	0.1660	14.3887	28.7773	5.2802	2.1649	1.4532	0.6622
0.44	3.2050	16.4467	0.1949	18.8333	37.6667	5.8762	2.5855	1.5612	0.7760
0.47	3.6850	16.4767	0.2236	23.7364	47.4729	6.4414	3.0274	1.6558	0.8904
0 5	4.1650	16.5067	0.2523	29.0749	58.1498	6.9808	3.4904	1.7398	1.0053
0.55	4.9650	16.5567	0.2999	38.8880	77.7761	7.8324	4.3078	1.8612	1.1985
0.5945	5.6770	16.6012	0.3420	48.5331	97.0663	8.5491	5.0824	1.9540	1.3722
0.63	6.2450	16.6367	0.3754	56.8123	113.6246	9.0972	5.7313	2.0198	1.5119
0.667	6.8370	16.6737	0.4100	65.9712	131.9424	9.6491	6.4360	2.0821	1.6586

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For water depths greater than 0.667 ft but less than 0.847 ft

Y3= Y - 0.667

A4= A3 + 16 * Y3 + 25 * Y3^2

P4= P3 + SQRT(2501 * Y3^2)

Depth (ft)	Area (ft^2	P (ft)	R (A/P)	Q (cfs)	2Q (cfs)	Vel (ft/s)	D*V	Fr	D2 (ft)
0.7	7.3922	18.3240	0.4034	70.5577	141.1154	9.5449	6.6814	2.0104	1.6708
0.73	7.9442	19.8243	0.4007	75.4895	150.9791	9.5024	6.9368	1.9600	1.6911
0.75	8.3372	20.8245	0.4004	79.1745	158.3491	9.4965	7.1224	1.9324	1.7087
0.77	8.7502	21.8247	0.4009	83.1762	166.3525	9.5056	7.3193	1.9090	1.7292
0.8	9.4072	23.3250	0.4033	89.7748	179.5495	9.5432	7.6345	1.8803	1.7646
0.82	9.8702	24.3252	0.4058	94.5744	189.1488	9.5818	7.8571	1.8647	1.7909
0.85	10.6022	25.8255	0.4105	102.3832	204.7664	9.6568	8.2083	1.8458	1.8342

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

C12D003B4

Project Title: Noahs at Fountain Plaza Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: LOT 1A FOUNTIAN HILLS PLAZA

City Address: VISTA FUENTES ROAD NW

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: FOUNTAIN HILLS LLC Contact: _____

Address: PO BOX 920798 EL PASO TX 79902

Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: JOE SIMONS

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: CONSTRUCTION SLRVEY TECHNOLOGIES Contact: JOHN GALLEGOS

Address: _____

Phone#: 917.8921 Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- X 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
- X BUILDING PERMIT APPROVAL
- X GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ GRADING CERTIFICATION
- ____ SO-19 APPROVAL
- ____ ESC PERMIT APPROVAL
- ____ ESC CERT. ACCEPTANCE
- ____ OTHER (SPECIFY)

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Paid $50.00

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided

DATE SUBMITTED: 9/24/14 By: DM

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 followin

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
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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

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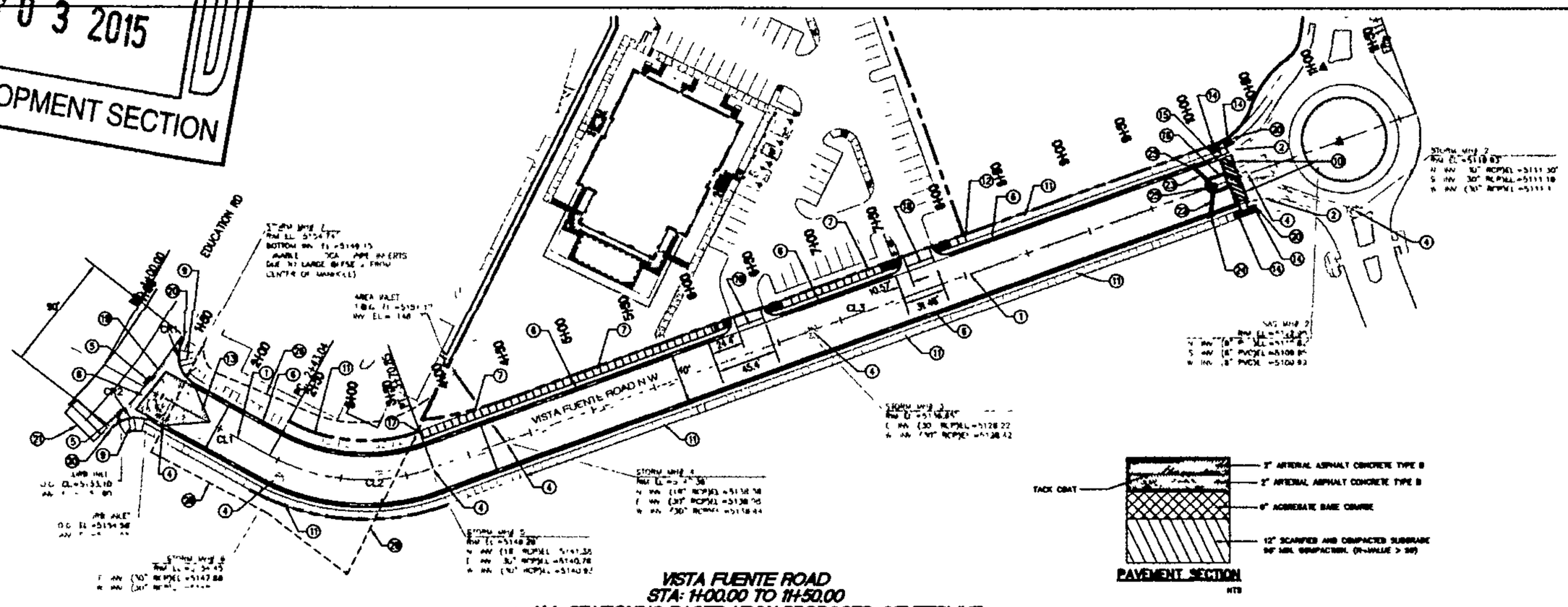


VISTA FUENTE ROAD
STA: 11+00.00 TO 11+50.00
℄-ALL STATIONING BASED UPON PROPOSED CENTERLINE

CR1

	TC	FL	STATION @ FL
PC			1+67.68, 20.00' LT.
1			1/4 ARC
2			1/2 ARC
3			3/4 ARC
PT			1+42.77, 47.05' LT.

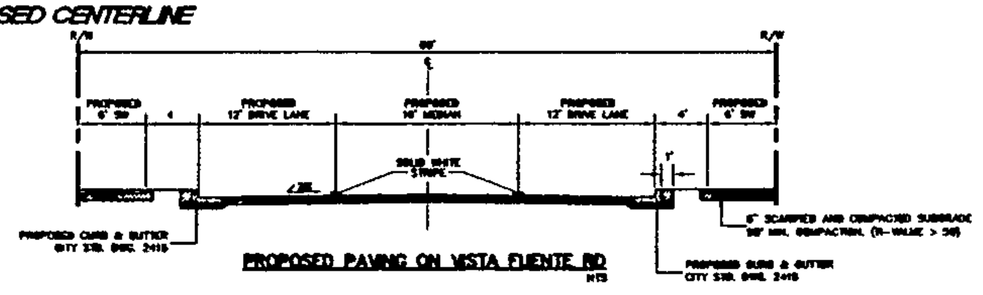
CR2

	TC	FL	STATION @ FL
PC			1+28.67, 38.96' RT.
1			1/4 ARC
2			1/2 ARC
3			3/4 ARC
PT			1+52.30, 20.00' RT.

GENERAL NOTE:

ALL VALVES, FIRE HYDRANTS AND MANHOLE RIMS TO BE ADJUSTED TO NEW GRADE.

PAVEMENT SECTION
NTS



PROPOSED PAVING ON VISTA FUENTE RD
NTS

CURVE DATA TABLE

CURVE #	DELTA	RADIUS	TAN	LENGTH
CR1	94°41'52"	25.00	36.77	41.32
CR2	75°38'38"	25.00	30.67	33.01

CENTERLINE CURVE DATA

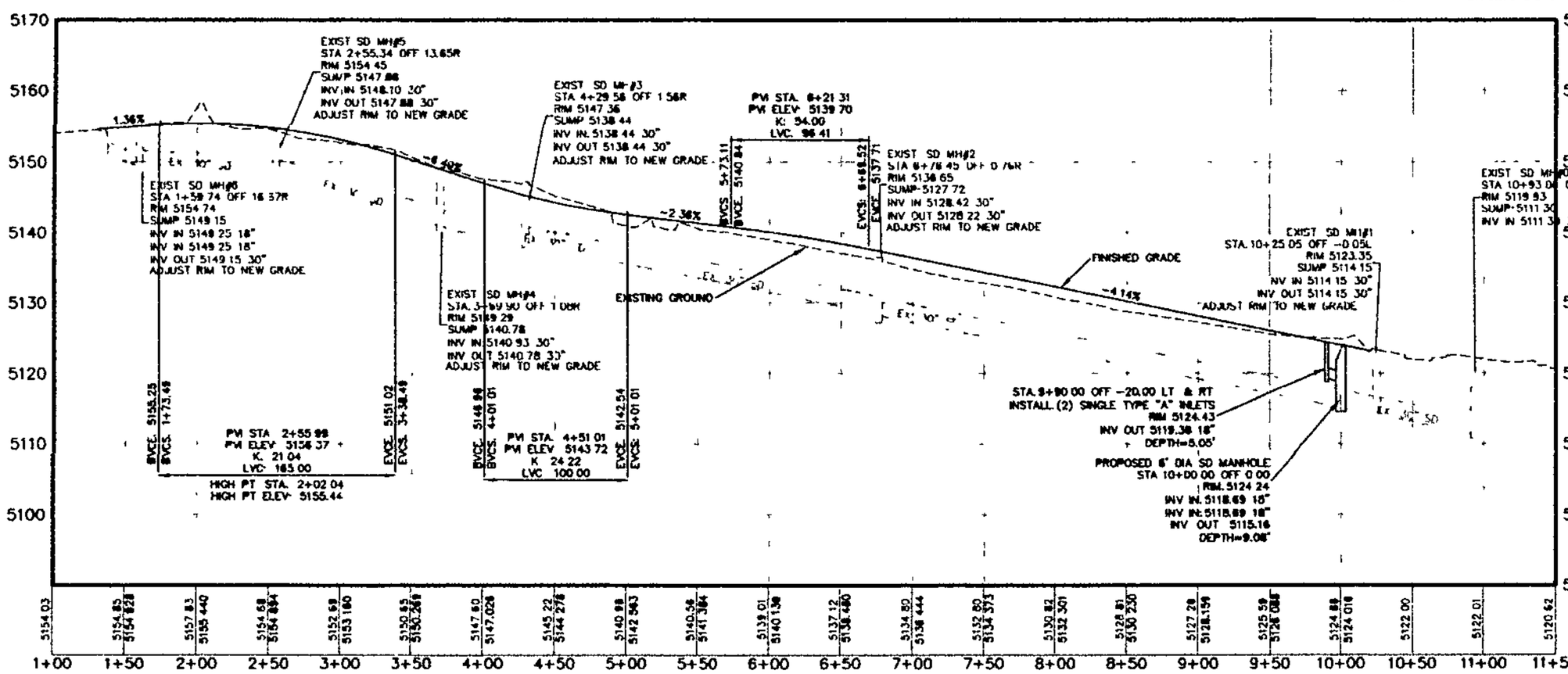
CURVE #	DELTA	RADIUS	TAN	LENGTH
CL2	58° 41' 28"	150'	123.98'	127.81'

CENTERLINE TANGET DATA

CURVE #	DELTA	LENGTH
CL1	S 61° 16' 49" E	143.04'
CL3	N 69° 53' 54" E	791.90'

KEYED NOTES

1. PROPOSED CENTER LINE
2. EXISTING CURB AND GUTTER
3. EXISTING STORM DRAIN
4. EXISTING STORM DRAIN MANHOLE
5. EXISTING STORM DRAIN INLETS TO BE REMOVED AND REPLACED WITH TYPE "D" INLETS W/HEAVY DUTY GRATES ADJUST GRATES TO GRADE
6. PROPOSED STANDARD CMG PER COA STD DWG 2415
7. PROPOSED 6' SIDEWALK PER COA STD DWG
8. PROPOSED 6' VALLEY GUTTER PER COA STD DWG
9. PROPOSED WHEEL CHAIR RAMP PER COA STD DWG
10. STA. 10+12.54', 0.00 MATCH TO EXISTING PAVEMENT REMOVE CUT OFF WALL
11. FUTURE 6' SIDEWALK
12. STA. 8+00.93', 24.00' LT END OF PROPOSED 6' SIDEWALK
13. STA. 11+39.52' TO STA. 11+89.52 CROWN TRANSITION
14. DIRECTIONAL HANDICAP RAMP W/TRUNCATED DOMES PER COA STD DWG 2426 SEE DETAIL SHEET OF THIS PLANSET
15. INSTALL WHITE CROSS WALK MARKINGS SEE DETAIL SHEET OF THIS PLANSET
16. STA. 9+91.38 TO STA. 10+10.88 BUILD 56 LF OF MEDIAN CURB AND GUTTER SEE DETAIL SHEET OF THIS PLANSET
17. STA. 3+72.04', 24.00' LT BEGIN OF PROPOSED 6' SIDEWALK
18. FILLET VALLEY GUTTER AND HANDICAP RAMP PER COA STD DWG 2426
19. REMOVE AND DISPOSE 80 LF OF EXISTING CURB AND GUTTER CUT NICE NEAT LINE ALONG LIP OF CURB FOR VALLEY GUTTER
20. MATCH TO EXISTING GRADE
21. EXISTING SPEED HUMP TO REMAIN
22. PROPOSED 22 LF OF 18" SD S=3.08%
23. PROPOSED 22 LF OF 18" SD S=3.08%
24. STA. 9+90.00, 20.00' RT INSTALL TYPE "A" INLET GRATE= 5123.74 18" INV (OUT)=5119.38
25. STA. 9+90.00, 20.00' LT INSTALL TYPE "A" INLET GRATE= 5123.74 18" INV (OUT)=5119.38
26. STA. 10+00.00, 0.00 INSTALL (1)-9' DIA STORM DRAIN MANHOLE RIM= 5124.24 INV 30" (IN)=5115.20 INV 30" (OUT)=5115.10 INV 18" LT & RT=5118.69 DEPTH= 9.08'
27. EXISTING ACCESS EASEMENT PER PLAT DATED XX-XX-XX



AS BUILT INFORMATION
CONTRACTOR
WORK STAKED BY DATE
INSPECTED BY DATE
FIELD VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
MONUMENT 9-C12
N=1521648.218
E=1512571.253
ELEV=5127.376
NAD 83-NAVD 88
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999677

SURVEY INFORMATION
FIELD NOTES
NO | BY | DATE

ENGINEER'S SEAL
DAVID SOULE
NEW MEXICO
14527
REGISTERED PROFESSIONAL ENGINEER
9/15/14

NO	DATE	REMARKS	BY
		REVISIONS	

DESIGN
DESIGNED BY DCM DATE 8-14
DRAWN BY DCM DATE 8-14
DRAWN NAME: VISTA FUENTE RD IMPROVEMENTS.dwg JOB NO
CHECKED BY DS DATE 8-14

SCALE HORIZ. 1"=50'
VERT 1"=10'

Rio Grande Engineering

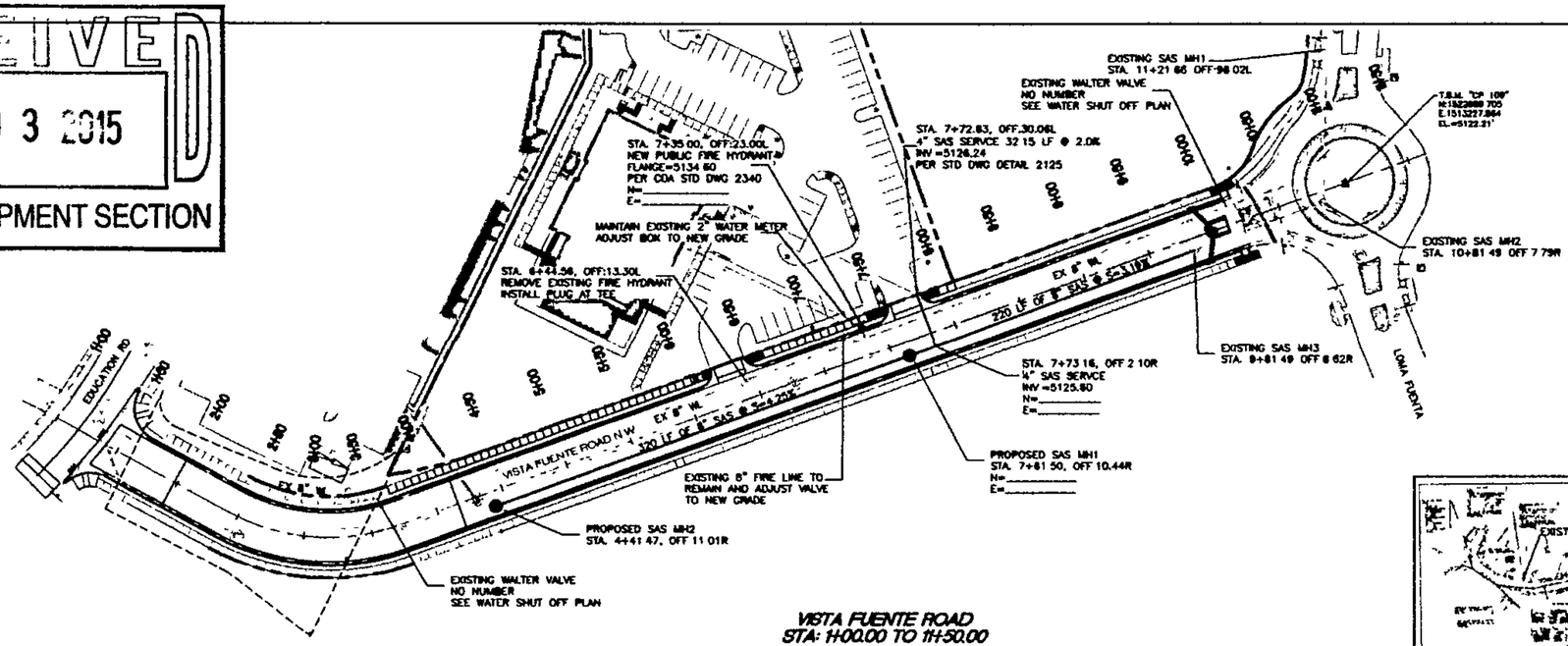
BERNALILLO COUNTY
PUBLIC WORKS DIVISION
ENGINEERING GROUP

TITLE: VISTA FUENTE ROAD IMPROVEMENTS
PAVING IMPROVEMENTS
VISTA FUENTE RD

DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | LAST DESIGN UPDATE | MO./DAY/YR. | MO./DAY/YR.

CITY PROJECT NO XXXXX | ZONE MAP NO C-12-Z | SHEET 4 OF 6

RECEIVED
MAR 0 3 2015
LAND DEVELOPMENT SECTION



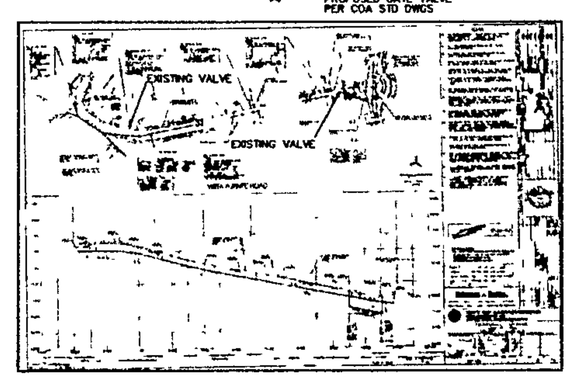
VISTA FUENTE ROAD
STA: 1+00.00 TO 11+50.00
**-ALL STATIONING BASED UPON PROPOSED CENTERLINE*

UTILITY NOTES:

1. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL EXISTING UTILITIES PRIOR TO WORK.
2. EXISTING 8" WL HAS 3' MIN COVER
3. ALL PROPOSED MANHOLE LIDS TO MATCH WITH PROPOSED PAVEMENT
4. CITY STANDARDS TO BE USED ON ALL UTILITIES, UPDATE 8, AMMENDEMENT 1
5. DO NOT INSTALL STEPS IN SAS MANHOLES.

LEGEND

- EXISTING SAS MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM DRAIN MANHOLE
- EXISTING WATER LINE
- EXISTING SAS LINE
- PROPOSED SANITARY SEWER
- PROPOSED SAS MANHOLE PER COA STD DWG 2102
- PROPOSED SANITARY SEWER SERVICE LINE PER COA STD DWGS
- PROPOSED FIRE HYDRANT PER COA STD DWG 2340
- PROPOSED GATE VALVE PER COA STD DWGS

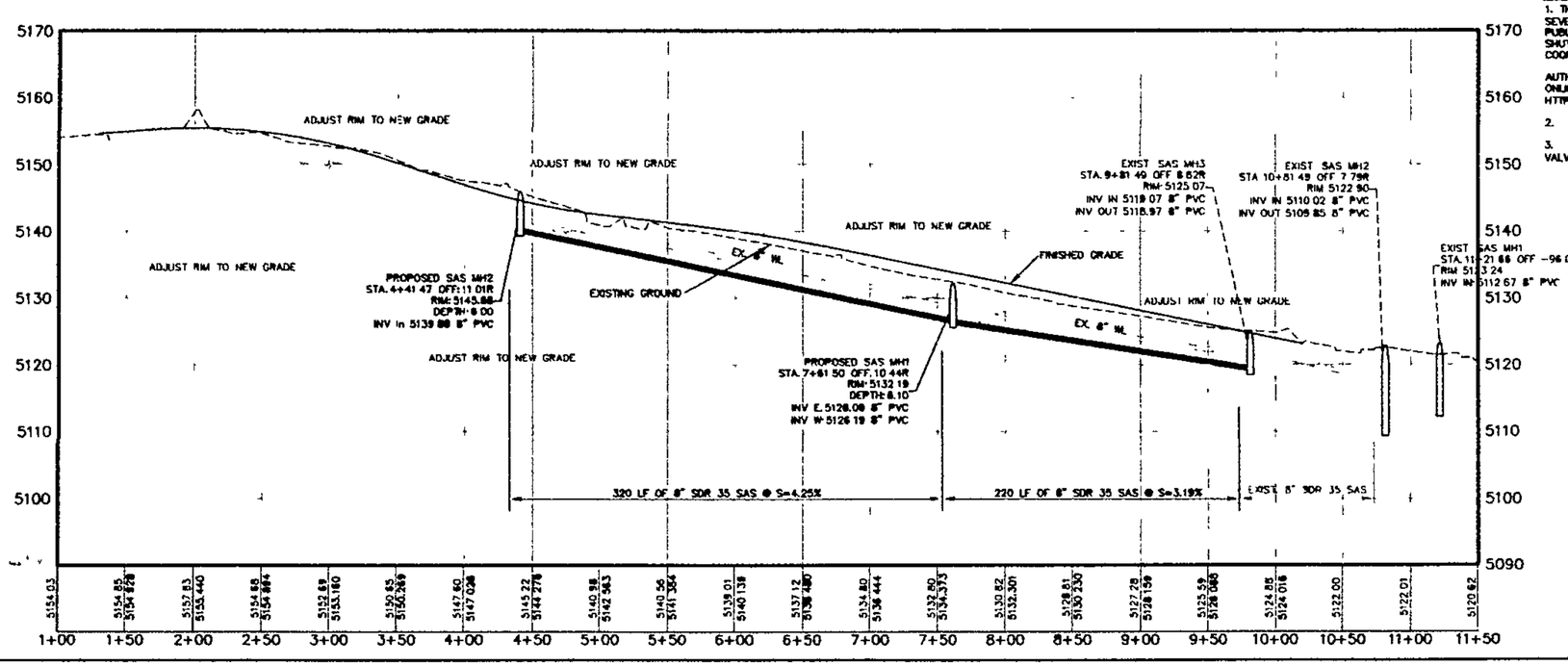


GENERAL NOTE:

1. ALL MANHOLE RIMS TO BE ADJUSTED TO NEW GRADE.
2. ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION. ANY DAMAGE AND REPAIRS SHALL BE SOLE RESPONSIBILITY OF THE CONTRACTOR.

WATER SHUTOFF NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE WATER UTILITY AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUT OFF REQUEST MUST BE MADE ONLINE AT HTTP://ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.
2. VALVES SHALL BE OPERATED BY ABCWUA EMPLOYEES ONLY
3. EMERGENCY SHUT-OFF PLAN INVOLVES SHUTTING OFF EXISTING GATE VALVES ON 8" WATER LINE ON VISTA FUENTE ROAD.



SCALE HORIZ 1"=50'
VERT 1"= 5'

Rio Grande Engineering

BERNALILLO COUNTY
PUBLIC WORKS DIVISION
ENGINEERING GROUP

TITLE: *VISTA FUENTE ROAD IMPROVEMENTS*
UTILITY IMPROVEMENTS
VISTA FUENTE RD

DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | LAST REVISION UPDATE | MO./DAY/YR. | MO./DAY/YR.

CITY PROJECT NO XXXXX | ZONE MAP NO C-12-Z | SHEET 5 OF 6

AS BUILT INFORMATION
CONTRACTOR
DATE
DRAWN BY
REVIEWED BY
DATE
VERIFIED BY
DATE
CHECKED BY
DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
MONUMENT 9-C12
N=1521648.218
E=1512571.253
ELEV=5127.376
NAD 83-NAVD 88
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999677

SURVEY INFORMATION
FIELD NOTES
NO | BY | DATE

ENGINEER'S SEAL
DAVID SQUIER
NEW MEXICO
14831
PROFESSIONAL ENGINEER
9/15/14

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN
DESIGNED BY DEM DATE 8-14
DRAWN BY DEM DATE 8-14
DRAWN NAME VISTA FUENTE RD IMPROVEMENTS.dwg JOB NO
CHECKED BY DS DATE 9-14

APPENDIX B

Excerpts of Fountain Hills Master Drainage Plan

Parcel 4 of 6

HIGH POINT IN PARADISE LOCATED EAST OF PARADISE BLVD./GOLF COURSE RD INTERSECTION

EXISTING CHURCH SITE

EXISTING POST OFFICE SITE 3.81 acres Q100=16.00cfs

EXISTING BLOCK B LOT 1 1.51 acres Q100=8.96cfs

EXISTING BLOCK B LOT 2-3 2.98 acres Q100=12.5cfs

EXISTING TRACT C 1.20 acres

SUBD A 6.97 acres Q100=30.20 cfs

SUBD C 6.97 acres Q100=21.42 cfs

BASIN E 2.26 acres Q100=9.23cfs

BASIN F 2.13 acres Q100=8.69cfs

EXISTING TRACT A (METROLYTH ELEMENTARY SCHOOL)

Q100=38.6cfs PER APPROVED DRAINAGE REPORT (Q100=109.6cfs PER SURROUNDING FIELD EVALUATION) SEE SHEET 3 OF 3 FOR OFFSITE BASIN CALCULATIONS

DAVENPORT ST

EDUCATION RD

FOUNTAIN HILLS BLVD

PASEO DEL NORTE

PROPOSED BASIN B-1-1 5.03 acres Q100=17.73 cfs

PROPOSED BASIN B-1-2 5.13 acres Q100=17.46cfs

PROPOSED BASIN C-1-1 3.34 acres Q100=11.19cfs

PROPOSED BASIN C-1-2 2.98 acres Q100=10.01cfs

PROPOSED BASIN D-1-1 2.13 acres Q100=7.16cfs

EXISTING BASIN C-1-1 3.34 acres Q100=11.19cfs

EXISTING PARCEL LOT 1

EXISTING NINE STORAGE UNIT LOT 7-4-1

POND VOL. = 2.55ac-ft
PCR VOL. = 3.46ac-ft
BOTTOM = 5126
TOP = 5130
WEIRE = 5134
Qin = 166.53cfs
Qout = 55.0 cfs

PROPOSED POND

PROPOSED BASIN D-1-2 2.98 acres Q100=10.01cfs

PROPOSED BASIN D-1-3 2.13 acres Q100=7.16cfs

EXISTING BASIN D-1-1 2.98 acres Q100=10.01cfs

EXISTING BASIN D-1-2 2.13 acres Q100=7.16cfs

TEMPORARY DRAINAGE EASEMENT (90C-67) VACATED w/ THIS PROJECT

TEMPORARY DRAINAGE EASEMENT (90C-67) VACATED w/ THIS PROJECT

TEMPORARY DRAINAGE EASEMENT (90C-67) VACATED w/ THIS PROJECT

TEMPORARY DRAINAGE EASEMENT (90C-67) VACATED w/ THIS PROJECT

5130

5140

5135

LEGEND

- EXISTING CONTOUR
- DIRECTION OF FLOW
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN INLET
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED WATER BLOCK
- POND CONTOUR

NOTE: PROPOSED ROADWAY GRADES ARE APPROXIMATE AND ARE INTENDED TO ILLUSTRATE GRADING AND DRAINAGE CONCEPTS ONLY

EXISTING GROUND

3:1 PSD. 10' 3:1

POND SECTION A-A

NOT TO SCALE

FOUNTAIN HILLS

GRADING & DRAINAGE MANAGEMENT PLAN

PROPOSED BASIN MAP

ALBUQUERQUE, NEW MEXICO

JUNE, 2007

100 50 0 100

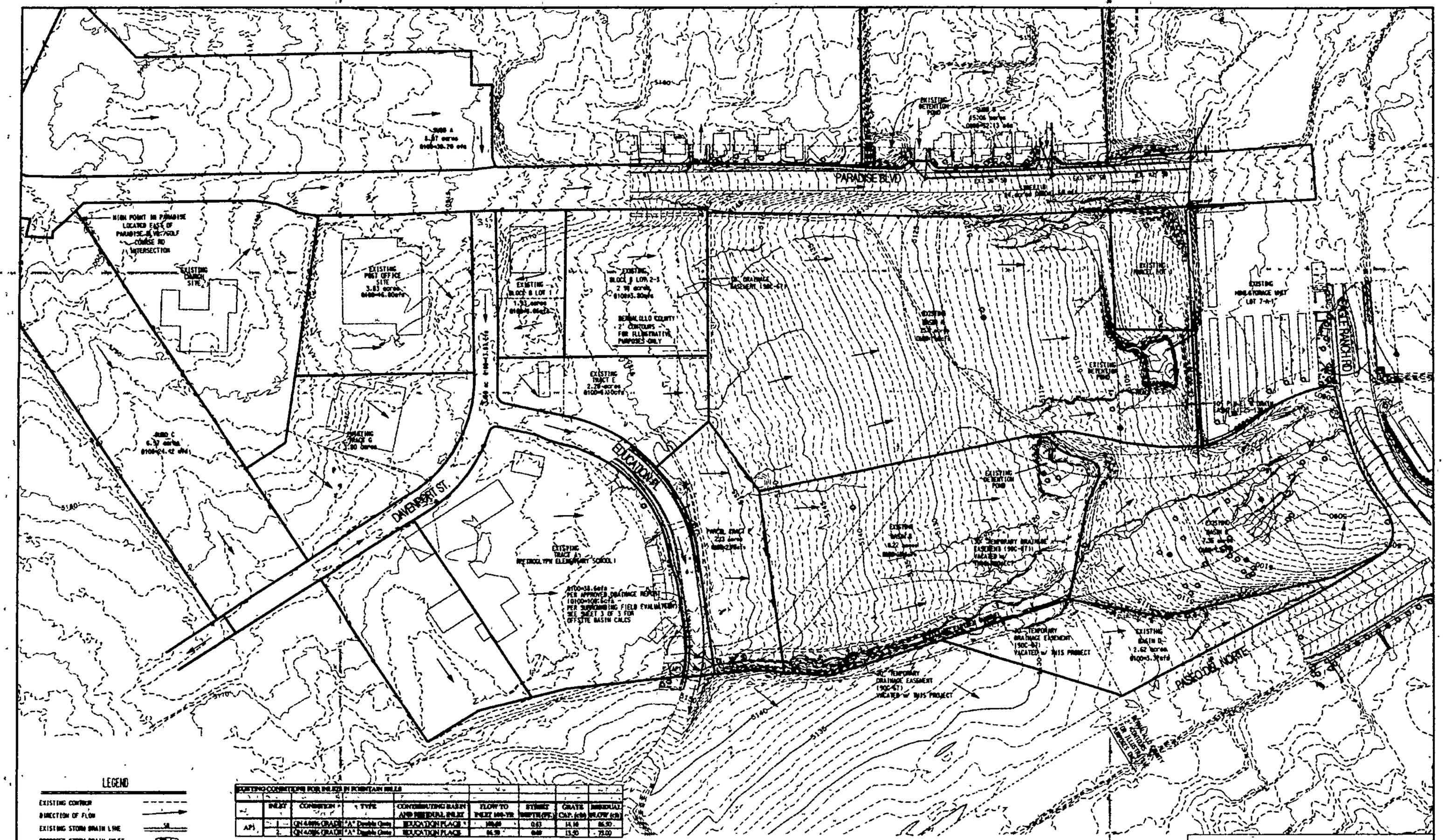
SCALE: 1" = 100' (HORIZ.)

Bohannan ▲ Huston

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

SHEET 6 OF 7



EXISTING CONDITIONS FOR INLETS IN FOUNTAIN HILLS

	INLET	CONDITION	TYPE	CONTRIBUTING BASIN AND INDIVIDUAL INLET	FLOW TO INLET 100-YR	STREET DEPTH (FT.)	GRATE CAP. (cfs)	BYPASS FLOW (cfs)
AP1	1.	ON 4.98% GRADE	"A" Double Grate	EDUCATION PLACE	[illegible]	0.63	14.10	86.50
	2.	ON 4.98% GRADE	"A" Double Grate	EDUCATION PLACE	84.30	0.69	13.20	73.00

FOUNTAIN HILLS

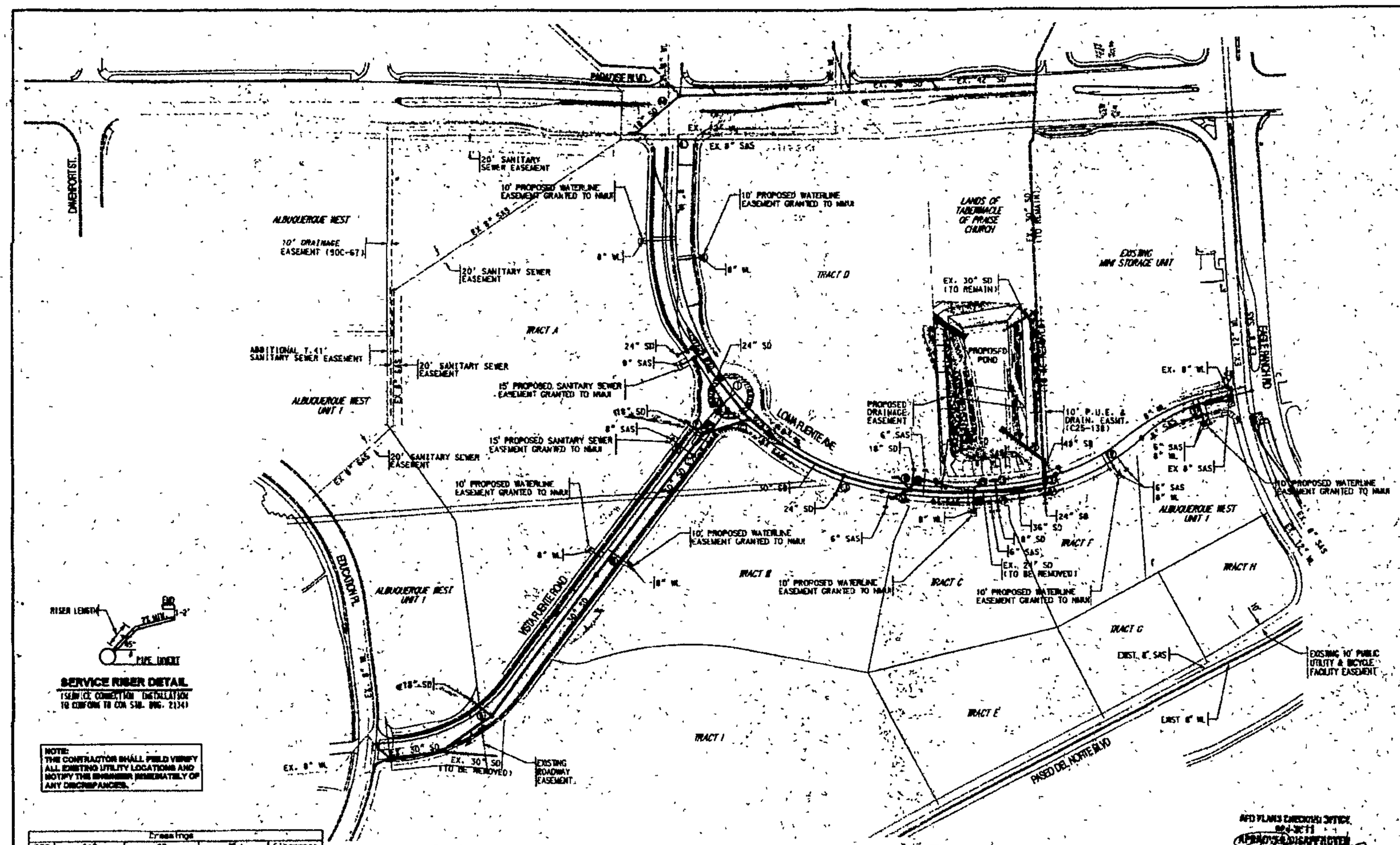
GRADING & DRAINAGE MANAGEMENT PLAN

EXISTING BASINS MAP

ALBUQUERQUE, NEW MEXICO

JUNE, 2007

SHEET 5 OF 7



LEGEND

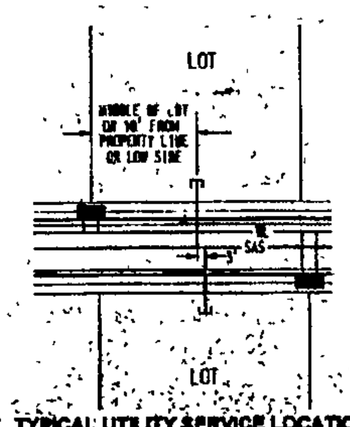
PROPOSED CURB AND GUTTER	
EXISTING CURB AND GUTTER	
FUTURE CURB AND GUTTER	
PROPOSED STORM DRAIN MANHOLE	
EXISTING STORM DRAIN MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER MANHOLE	
PROPOSED FIRE HYDRANT	
PROPOSED GATE VALVE	
EXISTING GATE VALVE	
PROPOSED STORM DRAIN	SD
PROPOSED SANITARY SEWER	SAS
PROPOSED WATER LINE	W
STORM DRAIN INLET	
STORM DRAIN CULVERT	
EXISTING STORM DRAIN	SD
EXISTING SANITARY SEWER	SS
EXISTING WATER LINE	W

SERVICE RISER DETAIL

(SERVICE CONNECTION INSTALLATION TO CONFORM TO CON STD. DWG. 2124)

NOTE:
THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

Crossings					
DES	SAS	SD	WL		Clearance
A		18" TP 43.79	8" BP 46.56		2.77
B		30" TP 28.65	8" BP 29.60		±40.95
C	8" TP 15.08	30" BP 16.80			1.71
D	8" TP 15.20		8" BP 20.88		5.68
E	8" TP 12.84	30" BP 14.55			1.71
F		18" TP 18.38	8" BP 19.29		±40.91
G	8" TP 09.75	30" BP 11.51			1.77
H	8" TP 11.09		8" BP 16.81		5.72
I		24" TP 14.81	8" BP 16.37		1.56
J	8" TP 03.54	24" BP 08.53			5.00
L	8" TP 19.95		8" BP 22.57		2.61
M		18" TP 20.50	8" BP 23.12		2.62
N	8" TP 99.24	18" BP 05.61			6.37
O	8" TP 91.70		8" BP 98.86		7.16
P	8" TP 89.28	18" BP 93.48			4.20
Q		18" BP 05.50	8" TP 00.93		4.57
R		18" BP 03.08	8" TP 00.12		2.96
S		36" TP 98.06	8" BP 98.85		0.81
U		18" TP 94.08	8" BP 95.44		1.36
V	8" TP 84.51	24" BP 88.80			4.29
W	8" TP 80.39		8" BP 84.69		4.30
X		48" BP 88.28	8" TP 86.79		1.47
Y	8" TP 72.68		8" BP 75.53		2.93



TYPICAL UTILITY SERVICE LOCATION
NOT TO SCALE

RESTRAINING JOINT TABLE

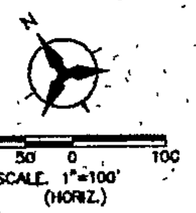
MECHANICAL JOINTS	LENGTH OF RESTRAINED JOINTS 6"	8"	10"
6" X 6" TEE	1	–	–
8" X 8" TEE	–	1	–
90° HORIZ. BEND	16	20	24
45° HORIZ. BEND	7	8	10
22.5° HORIZ. BEND	4	4	5
11.25° HORIZ. BEND	2	2	2
GATE VALVE/CAP	42	55	68
22.5° VERT. BEND (UPPER)	8	7	6
(LOWER)	3	2	3
11.25° VERT. BEND (UPPER)	6	3	4
(LOWER)	2	1	1

* NOTE:
6" WL, 8" WL, & 10" WL TO BE PVC (C-900)
12" WL & 14" WL TO BE DUCTILE IRON PIPE

NOTE:
1. ALL MECHANICAL JOINTS SHALL BE RESTRAINED AT THE FITTING.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM PIPE LENGTH OF 20 LF FROM ALL MECHANICAL JOINTS. ALL PIPE JOINTS WITHIN 20 LF OF MJ SHALL BE RESTRAINED AT THE CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS IN THE SPECIFIED DISTANCE LISTED IN THE TABLE ABOVE. (SEE NOTE 2 ABOVE).
4. THE CONTRACTOR SHALL RESTRAIN ALL FIRE HYDRANT JOINTS FROM THE TEE ON THE MAIN TO THE FIRE HYDRANT FLANGE.
5. ALL CAPS SHALL UTILIZE PCC BLOCKING, UNLESS OTHERWISE NOTED.
6. RESTRAINED LENGTH IS ON LARGE SIDE ON ALL REDUCERS
7. RESTRAIN ALL JOINTS BETWEEN UPPER AND LOWER VERTICAL BENDS.

AFD PLANS CHECKING OFFICE
8-4-2011
APPROVED DISTRIBUTION
8/30/07

APPROVED FOR NMUA — DATE: 7-26-07



BM JOB NO. 070312

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Thu, 30-AUG-2007 - 08:27AM, Plotted by: arawore

AS-BUILT INFORMATION
CONTRACTOR DATE
REVISED BY DATE
CORRECTIONS BY DATE
CORRECTIONS BY DATE
MICRO-FILM BY DATE
MICRO-FILM INFORMATION
PREPARED BY DATE
REVIEWED BY DATE

BENCH MARKS
USGS BRASS DISK STAMPED "N 448-H10"
GEOGRAPHIC POSITION (NAD 27)
N.M. STATE PLANE COORDINATES (CENTRAL ZONE)
X=377,796.84 Y=1,524,161.52
COMBINED GROUND TO GRID = 0.999675483
DELTA ALPHA = 00°14'06"
NAVD29 ELEVATION = 5545.51

SURVEY INFORMATION
FIELD NOTES
NO BK DATE

ENGINEER'S SEAL
YOLANDA PADILLA MARTINEZ 10035 NEW MEXICO PROFESSIONAL ENGINEER 8-30-07

NO	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY YPM / JML DATE 07/2007
DRAWN BY AMR / SJR DATE 07/2007
CHECKED BY YPM DATE 07/2007

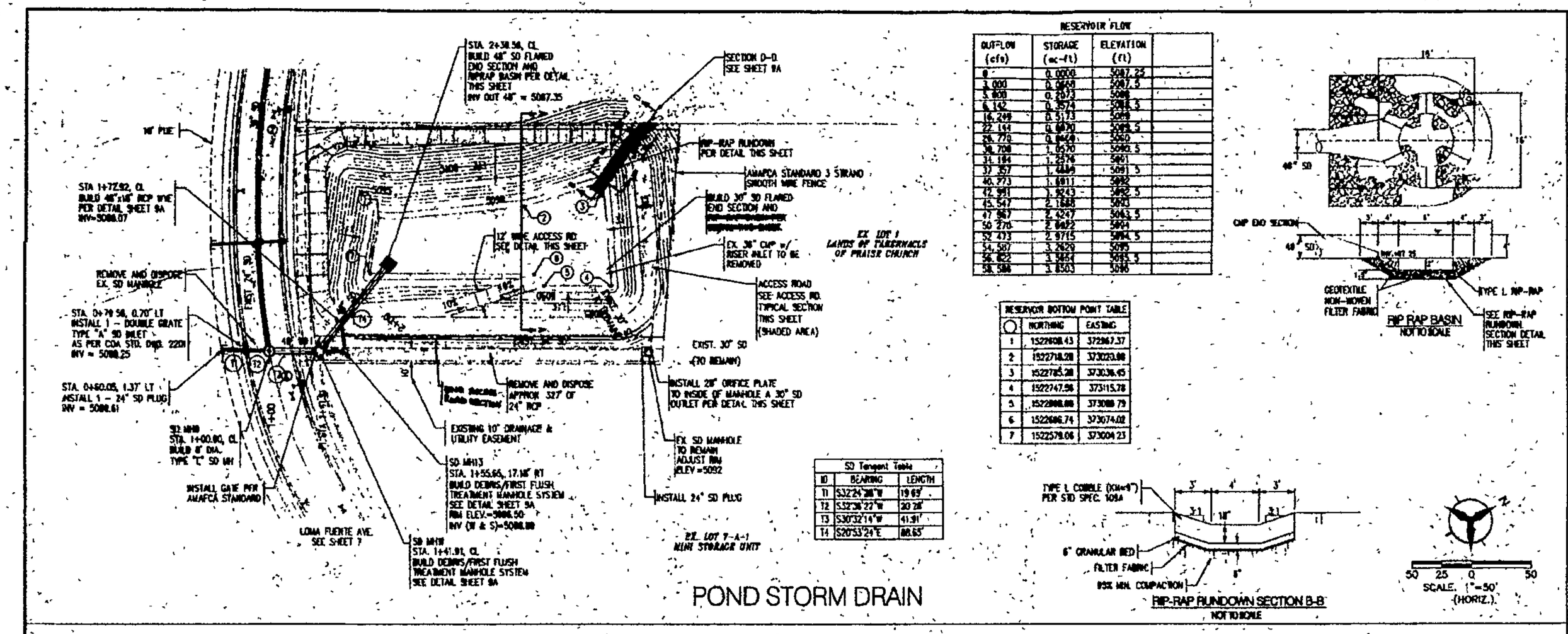
Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

FOUNTAIN HILLS PLAZA PHASE I
OVERALL UTILITY PLAN

DESIGN REVIEW COMMITTEE
CITY ENGINEER
LAST DESIGN UPDATE
NO. DATE/YR. NO. DATE/YR.

CITY PROJECT NO. 584480
ZONE MAP NO. C-12
SHEET 9 OF 18



POND STORM DRAIN

RESERVOIR FLOW

OUTFLOW (cfs)	STORAGE (ac-ft)	ELEVATION (ft)
0	0.0000	5087.25
3.000	0.0649	5087.5
5.800	0.2073	5088
6.142	0.3574	5088.5
16.249	0.5173	5089
22.141	0.6870	5089.5
26.770	0.8648	5090
30.708	1.0570	5090.5
34.194	1.2576	5091
37.257	1.4649	5091.5
40.273	1.6811	5092
42.991	1.9243	5092.5
45.547	2.1688	5093
47.987	2.4247	5093.5
50.276	2.6872	5094
52.433	2.9715	5094.5
54.587	3.2629	5095
56.822	3.5454	5095.5
58.588	3.8503	5096

RESERVOIR BOTTOM POINT TABLE

	NORTHING	EASTING
1	1522608.43	372967.37
2	1522718.28	373023.88
3	1522785.28	373036.45
4	1522747.58	373115.78
5	1522688.88	373088.79
6	1522686.74	373074.02
7	1522579.06	373004.23

SD Tangent Table

ID	BEARING	LENGTH
T1	S32°24'28"W	19.69'
T2	S32°36'27"W	20.28'
T3	S30°32'19"W	41.91'
T4	S20°53'24"E	88.65'

RIP RAP BASIN
NOT TO SCALE

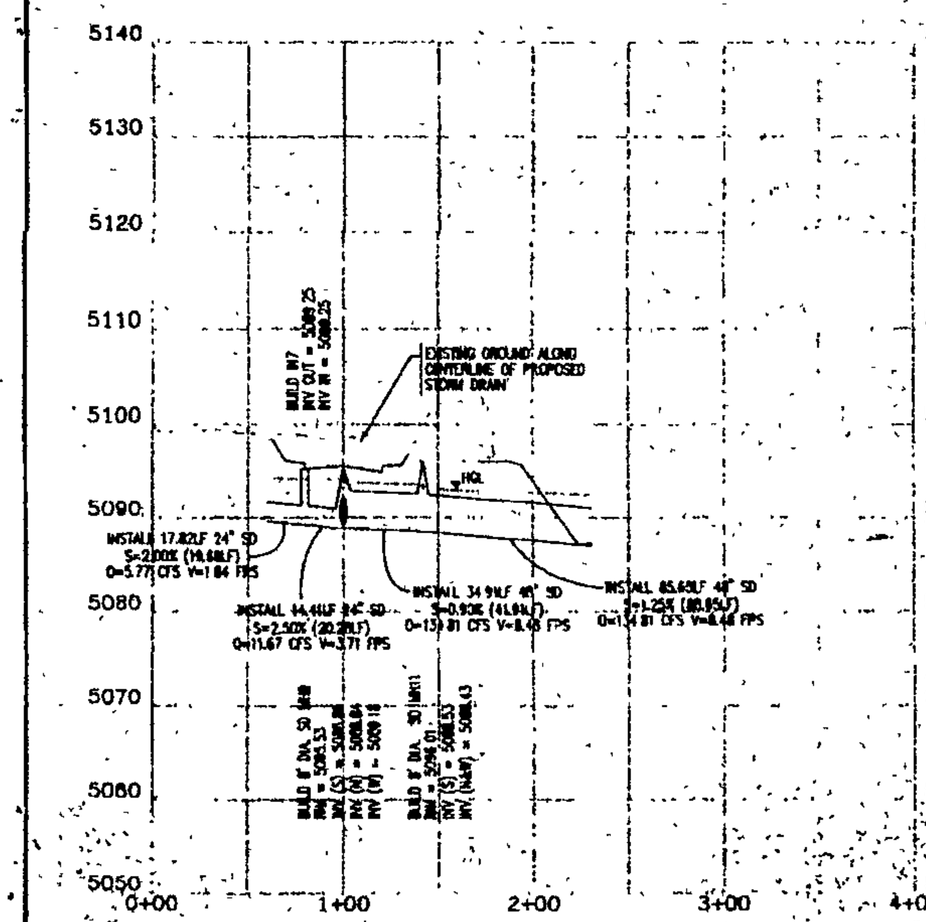
RIP-RAP RUNDOWN SECTION B-B
NOT TO SCALE

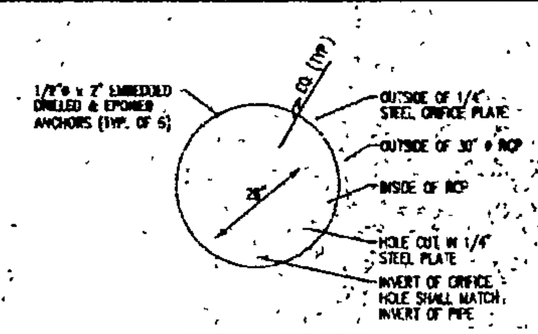
SCALE: 1"=50' (HORIZ.)

NOTES

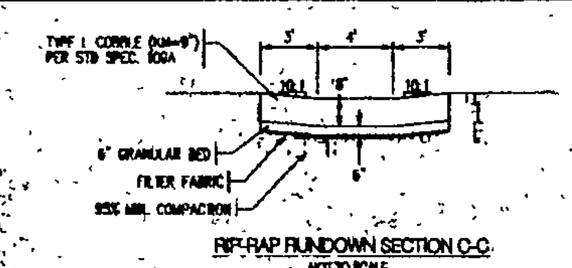
1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF OF ANY DISCREPANCIES.
2. ALL CURB RETURN RADII SHALL BE 25' UNLESS OTHERWISE SPECIFIED.
3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.
4. GRADE ELEVATIONS, WHERE NOTED, ARE ALONG FLOWLINE OF CURB UNLESS OTHERWISE SPECIFIED.
5. CONTRACTOR IS TO INSTALL A 4" X 4" X 8' POST AND END AT THE END OF EACH SANITARY SEWER SERVICE.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.
7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.
8. CONTRACTOR SHALL PROVIDE THE INSPECTORS, (CITY AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.
9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.
10. ANY DAMAGE TO THE EXISTING FACILITIES (CURB & GUTTER), PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS' EXPENSE.
11. REMOVAL OF THE EXISTING CURB AND GUTTER SHALL BE AS PER COA STD. DWG. 2415 (SAWCUT ONLY).
12. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB & GUTTER.
13. FOR STORM DRAIN CONSTRUCTION, RCP PIPE JOINTS SHALL NOT BE GROUTED PRIOR TO FINAL INSPECTION. FINAL INSPECTION WILL DETERMINE JOINTS TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION.
14. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P.
15. ELECTRONIC MARKER DISKS (END) WILL BE PLACED ACCORDING TO SECTION 170 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7

NO GRADING WILL BE ALLOWED ON TRACT 6-A-1 UNTIL A TURNKEY CONSTRUCTION AGREEMENT IS EXECUTED WITH AMAFCA.





ORIFICE PLATE DETAIL
NOT TO SCALE



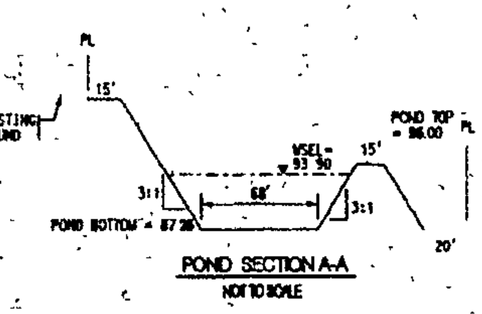
RIP-RAP RUNDOWN SECTION C-C
NOT TO SCALE

NOTES for WORK IN AMAFCA R/W OR EASEMENT

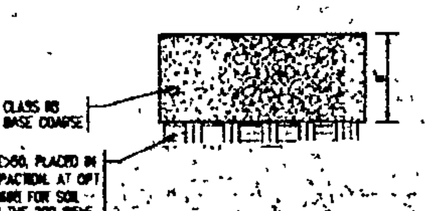
1. AMAFCA Field Engineer shall be notified 48-hours prior to any work within the AMAFCA R/W at 884-2215.
2. No work will be performed in the AMAFCA R/W between May 15 and October 15 without written permission from AMAFCA.
3. All subgrade, backfill and embankment shall be compacted to 95% (modified proctor) within the AMAFCA R/W. Testing reports shall be provided to AMAFCA Field Engineer.
4. AMAFCA Field Engineer will be notified 48-hours prior to final inspection of any facilities within the AMAFCA R/W.
5. All disturbed ground areas shall be revegetated in accordance with City of Albuquerque Standard Specifications for Public Works Construction, Section 1012 Native Grass Seeding, as currently updated.
6. Any existing survey control monuments that are moved or destroyed as a result of the construction shall be replaced by a registered surveyor at the owner's expense.

APPROVED FOR CONSTRUCTION WITHIN AMAFCA RIGHT-OF-WAY / EASEMENT:

(for AMAFCA) 8-31-07 Date



POND SECTION A-A
NOT TO SCALE



ACCESS ROAD TYPICAL SECTION
NOT TO SCALE

GENERAL NOTE:
ALL SANITARY SEWER MANHOLES SHALL BE 4' DIAMETER TYPE "S" AS PER NM AMCA STANDARD DRAWING 2102 UNLESS OTHERWISE NOTED.

VALVES	PER STD. DWG.	2326 & 2328
MANHOLES	PER STD. DWG.	2101 & 2102
WATER SERVICE	PER STD. DWG.	2361, 2362 & 2366
SAS SERVICE	PER STD. DWG.	2125

Bohannan Huston
Consultant: 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING SPATIAL DATA ADVANCED TECHNOLOGIES

AS-BUILT INFORMATION
CONTRACTOR DATE
WORK STAKED BY DATE
INSPECTOR'S REVIEW BY DATE
DRAWINGS REVIEWED BY DATE

BENCH MARKS
USGS BRASS DISK STAMPED "N4448-H10"
GEOGRAPHIC POSITION (NAD 27)
N.M. STATE PLANE COORDINATES (CENTRAL ZONE)
X=377,788.04 Y=1,524,161.52
COMBINED GROUND TO GRID = 0.999873583
MICRO-FILM INFORMATION
RECORDED BY DATE
DELTA ALPHA = 00°14'08"
NAVD88 ELEVATION = 5045.51

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGNED BY JAL DATE 07/2007
DRAWN BY ARR DATE 07/2007
CHECKED BY TPM DATE 07/2007

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

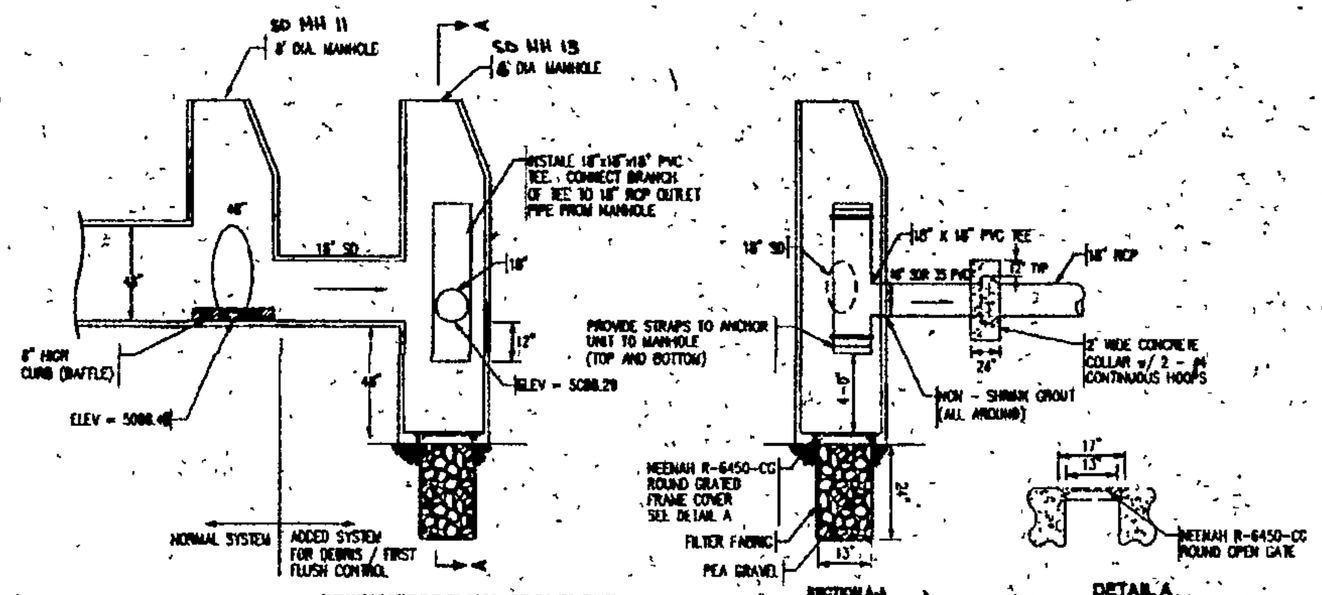
FOUNTAIN HILLS PLAZA PHASE I
STORM DRAIN PLAN & PROFILE
POND STORM DRAIN

DESIGN REVIEW COMMITTEE
CITY ENGINEER
LAST DESIGN UPDATE
NO./DAY/YR NO./DAY/YR

CITY PROJECT NO. 584480
ZONE MAP NO. C-12
SHEET 14 OF 18

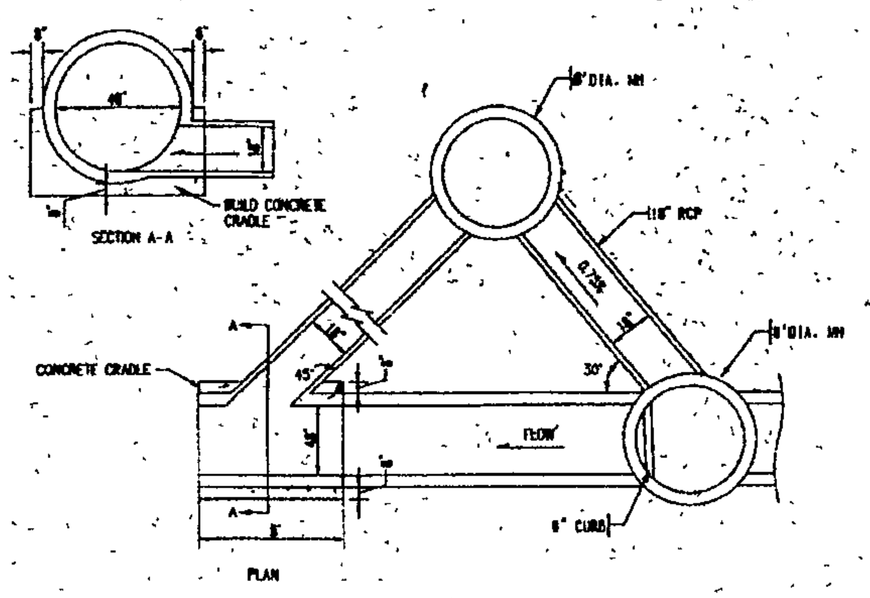
P:\070312\cdb\pnp\070312pnp07.dgn
Fri, 31-AUG-2007 - 10:57AM. Plotted by: aramero

DHI JOB NO. 070312
SCALE: 1" = 50' (HORIZ) 1" = 10' (VERT)

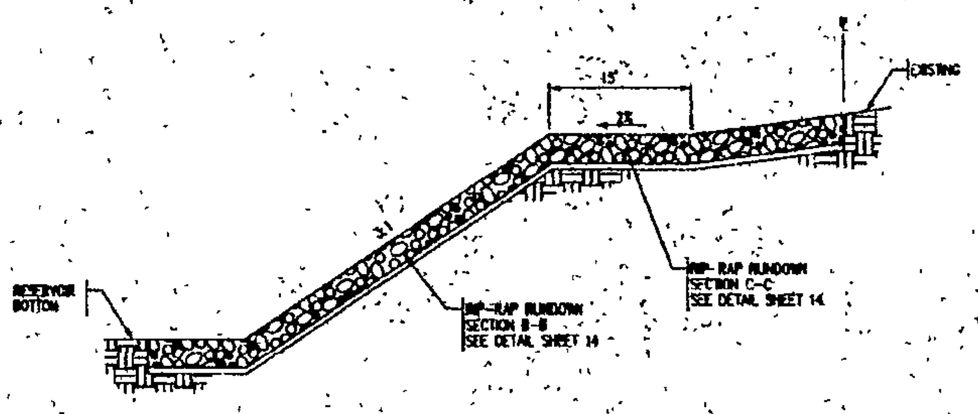


DEBRIS/FIRST FLUSH TREATMENT MANHOLE SYSTEM
NO SCALE

DETAIL A
ROUND GRATED FRAME COVER
NO SCALE



ECCENTRIC WYE DETAIL
NO SCALE



RIP-RAP RUNDOWN PROFILE D-D
NOT TO SCALE

AS-BUILT INFORMATION
CONTRACTOR — DATE
WORK STAKED BY — DATE
INSPECTOR'S FIELD TIME BY — DATE
AS-BUILT DRAWING BY — DATE
AS-BUILT REVIEWED BY — DATE

BENCH MARKS
USGS BRASS DISK STAMPED "N14-A8-N10"
GEOGRAPHIC POSITION (NAD 27)
N.M. STATE PLANE COORDINATES (CENTRAL ZONE)
X=377,798.84 Y=1,524,161.52
COMBINED GROUND TO GRID = 0.9996754.3
DELTA ALPHA = 00°14'06"
NAVD29 ELEVATION = 5045.51

MICRO-FILM INFORMATION
RECORDED BY — DATE
INDEX NO. — DATE

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

NO	DATE	REMARKS	BY

REVISIONS

		DATE
DESIGNED BY	TPM / JML	DATE 07/2007
DRAWN BY	ARR / SAR	DATE 07/2007
CHECKED BY	TPM	DATE 07/2007

Bohannan Huston
ENGINEERING · SPATIAL DATA · ADVANCED TECHNOLOGIES

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT

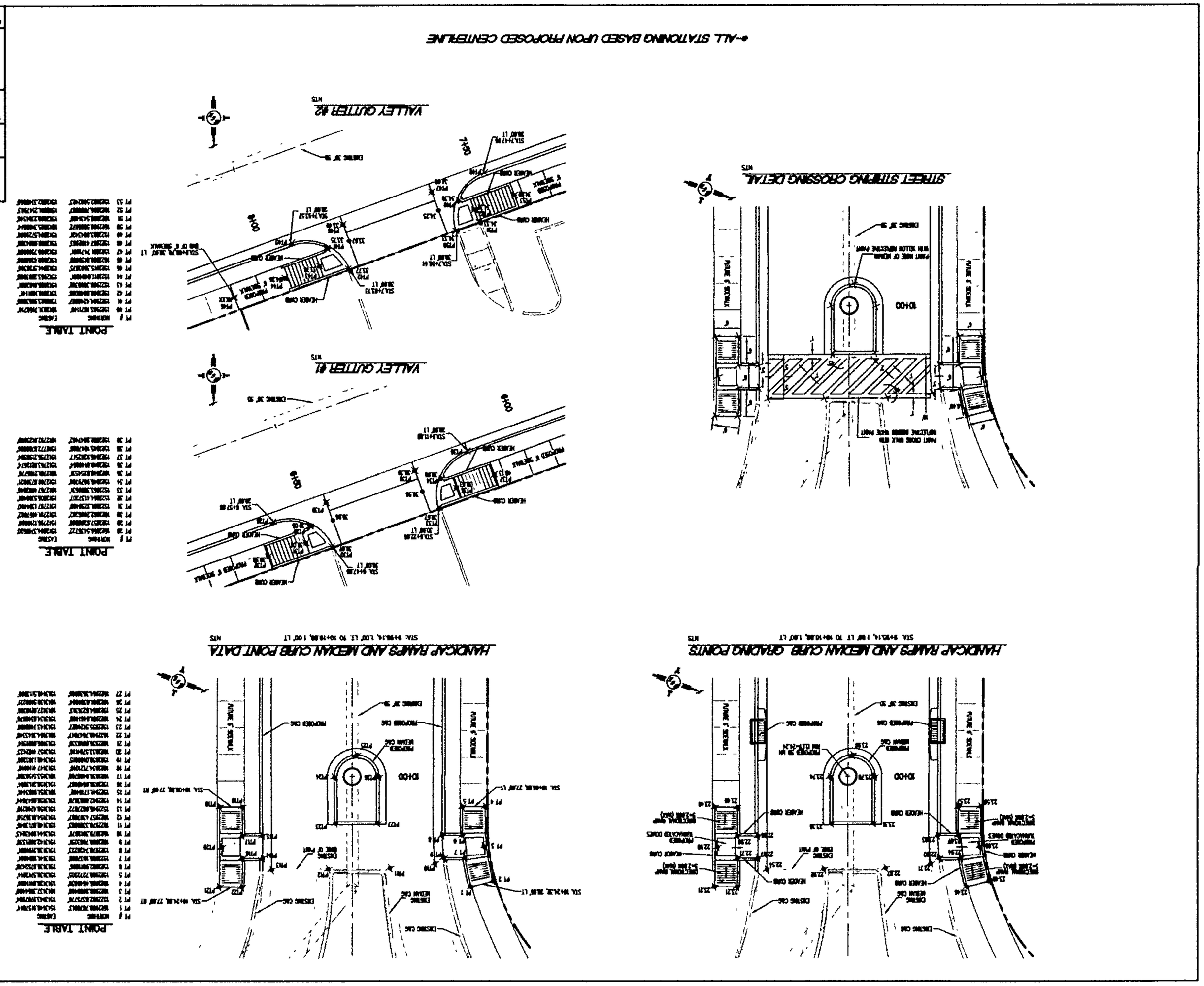
FOUNTAIN HILLS PLAZA PHASE I
POND STORM DRAIN DETAILS

DESIGN REVIEW COMMITTEE — DATE
CITY ENGINEER APPROVAL — APPROVED — CITY ENGINEER — DATE
1ST DESIGN SUBMITTAL — DATE
DRAINAGE MGR. — DATE
HYDROLOGY MGR. — DATE

CITY PROJECT NO. 584480 | ZONE MAP NO. C-12 | SHEET 9A OF 18

B+H JOB NO. 076312

P:\076312\cdp\general\076312RBTyDetails.dgn
Fri, 31-AUG-2007 - 10:46AM, Plotted by: brenore



DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	SIZE / LAND DESIGN UPDATE	NO./DW/YR.
			NO./DW/YR.
CITY PROJECT NO	ZONE MAP NO	SHEET	OF
XXXXX	C-12-Z	6	6

RA Gonzales Engineering
MERNALILLO COUNTY
PUBLIC WORKS DIVISION
ENGINEERING GROUP

TITLE VISTA FUENTE ROAD IMPROVEMENTS
DETAILS

NO	DATE	REMARKS	BY

REVISIONS

DESIGN
DESIGNED BY DGM DATE 9-14
DRAWN BY DGM DATE 9-14
DRAWN NAME VISTA FUENTE RD IMPROVEMENTS.dwg JOB NO.
CHECKED BY DG DATE 9-14

ENGINEER'S SEAL
DAVID GOODLE
9/15/14

SURVEY INFORMATION

FIELD NOTES	
BY	DATE

CITY OF ALBUQUERQUE

April 14, 2016

Richard Dourte, PE
RHD Engineering, LLC
4305 Purple Sage Ave NW
Albuquerque, NM 87120

Re: Noah's Event Center
4591 Vista Fuente Rd NW
Request for Certificate of Occupancy- Transportation Development
Engineer's/Architect's Stamp dated 8-19-15 (C12D003B4)
Certification dated 04-14-16

Dear Mr. Dourte,

Based upon the information provided in your submittal received 04-14-16, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact Monica Ortiz at (505) 924-3981 or me at (505)924-3991.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

mao via: email
C: CO Clerk, File

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department
Development & Building Services Division
DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 02/2013)

Project Title: Noah's Event Center **Building Permit #:** _____ **City Drainage #:** C12D003B4
DRB#: 1003445 **EPC#:** _____ **Work Order#:** _____
Legal Description: Tract A-1, Fountain Hills Subdivision
City Address: 4591 Vista Fuente Road, NW

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

Owner: Noah's Event Center **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Architect: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

Surveyor: Construction Survey Technologies, Inc **Contact:** John Gallegos
Address: _____
Phone#: 505-917-8721 **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)
- X 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
- X 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)

RECEIVED
MAR 11 2016
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided
DATE SUBMITTED: 3-11-16 **By:** _____

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 followin

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 any part of a larger common plan of development

CITY OF ALBUQUERQUE

March 15, 2016

Richard Dourte, PE
RHD Engineering, LLC
4305 Purple Sage Ave NW
Albuquerque, NM 87120

Re: Noah's Event Center
4591 Vista Fuente Rd NW
30-Day Temporary Certificate of Occupancy- Transportation Development
Engineer's Stamp dated 08-19-15 (C12D003B4)
Certification dated 03-11-16

Dear Mr. Dourte

Based upon the information provided in your submittal received 03-11-16, Transportation Development has no objection to the issuance of a 30-day Temporary Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a 30-day Temporary Certificate of Occupancy to be issued by the Building and Safety Division.

Prior to the issuance of a permanent Certificate of Occupancy, the following items must be addressed:

- The two adjacent parking spaces adjacent to the relocated parking lot light will need to be painted with the word "COMPACT".
- All construction dumpsters and porta-potties must be removed from the site prior to final Certificate of Occupancy.

Once corrections are complete resubmit acceptable package along with fully completed Drainage Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation. For digital submittal and minor comments and/or repairs, please submit photos to PLNDRS@cabq.gov prior to submittal. If you have any questions, please contact me at (505) 924-3991.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

mao via: email

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

C: CO Clerk, File