Cherne, Curtis

From: Cherne, Curtis
Sent: Friday, June 08, 2012 2:20 PM
To: 'Sheldon Greer'; Biazar, Shahab
Cc: 'Joe Waid'
Subject: RE: Sequoia Ct. minimum Curb and Gutter Grade

Sheldon,
I think it may be acceptable, but you have to show us street depth and that it doesn't go through private property on the east side of Sequoia Ct. You should have a profile for the entire street.

Curtis

From: Sheldon Greer [mailto:segreer@swcp.com]
Sent: Thursday, June 07, 2012 8:32 AM
To: Cherne, Curtis ; Biazar, Shahab
Cc: 'Joe Waid'
Subject: Sequoia Ct. minimum Curb and Gutter Grade

Gentlemen, per our discussion yesterday, due to the extraordinary conditions that exist on Sequoia Court I requested that the minimum allowable slope for curb and gutter along the east side of the roadway and sloping toward Sequoia be 0.2% grade. You indicated that given the minimal flow and the existing conditions that this would be acceptable. Can you please respond in the affirmative so that I may proceed with the final construction drawings for the Sequoia Ct. modifications.

Also, does transportation, Nilo or Kristal, need to concur with this decision and if so can you please discuss/explain the reasoning to him/her to obtain this concurrence if required.

Your assistance is very much appreciated.

Thank you,
Sheldon Greer P.E.

GND, LLC Consulting Engineers
10224 Green River Place. NW. Albuquerque, NM 87114
Cell: (505) 264-0472

6/8/2012

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT
DEVELOPMENT AND BUILDING SERVICES
HYDROLOGY DEVELOPMENT SECTION

DEVELOPMENT REVIEW BOARD – SPEED MEMO

DRB CASE NO/PROJECT NO: 1005094 **AGENDA ITEM NO: 19**

SUBJECT:

Sketch Plat

ACTION REQUESTED:

REV/CMT: (X) APPROVAL: ( ) SIGN-OFF: ( ) EXTN: ( ) AMEND: ( )

ENGINEERING COMMENTS:

An approved grading and drainage plan must be on file prior to Preliminary Plat approval.
All earthwork and ponding must be completed and certified prior to final plat approval.

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

RESOLUTION:

APPROVED ___; DENIED ___; DEFERRED ___; COMMENTS PROVIDED X discussed; WITHDRAWN ___

DELEGATED: **(SEC-PLN) (SP-SUB) (SP-BP) (FP)** TO: **(UD) (CE) (TRANS) (PRKS) (PLNG)**

SIGNED: Bradley L. Bingham
City Engineer / AMAFCA Designee

DATE: NOVEMBER 15, 2006


TUCSON
YUCCA
ALAMOGORDO
SEQUOIA
SEQUOIA
SEQUOIA
SEQUOIA
SEQUOIA
SEQUOIA
WARD
RUIZ
CORONA
CORONA
ABBEY
NOVA
ALPHA
ALPHA
ALPHA
POLARIS
ARGUS
ARGUS
GRANDE
19

Cherne, Curtis

From: Dourte, Richard H.
Sent: Tuesday, April 24, 2012 4:47 PM
To: Stover, Debbie L.; Westbrook, Sara; Romero, Elaine T.
Cc: Cherne, Curtis
Subject: RE: Sequoia Court - Sequoia and Coors

Deborah, Sara, Elaine,

Development of this site creates substantial downstream drainage problems. It would likely cause flooding problems for lots 18 or 17a and we don't want to see this happen. To allow this site to develop without drainage mitigation is in violation of the City Drainage Ordinance, otherwise this would not be an issue. Our Hydrology Engineer is actively working with Mr. Waid's engineer to come up with a viable low cost solution.

Thank you..hope this helps,

Richard

From: Stover, Debbie L.
Sent: Tuesday, April 24, 2012 4:35 PM
To: Dourte, Richard H.
Subject: FW: Sequoia Court - Sequoia and Coors

Can you respond to this please?

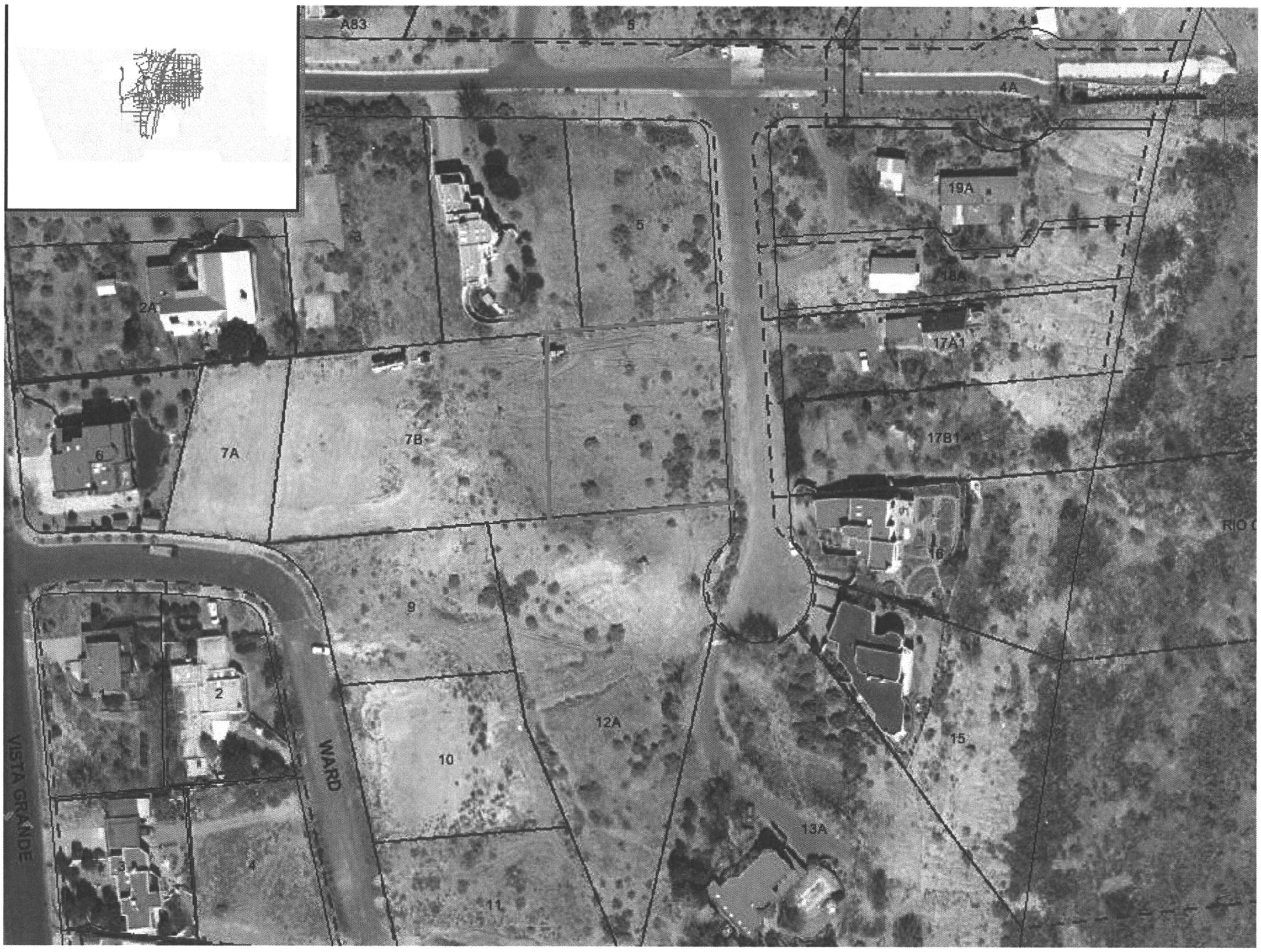
From: Westbrook, Sara
Sent: Tuesday, April 24, 2012 3:28 PM
To: Stover, Debbie L.
Cc: Romero, Elaine T.
Subject: Sequoia Court - Sequoia and Coors

Hi Debbie,

Councilor Lewis received a call from Mr. Joe Waid, 220-5059, who owns the property outlined in red. He would like to put a home on it (this is off of Sequoia and Coors, on Sequoia Court – right next to the river) but is being told that before he can develop the property he is required to put in storm drainage and street improvements (which he said the other homes were not required to). Since the redistricting process, this area is technically in Councilor Sanchez's district but Elaine and I have been working together on issues such as this as we transition to the new districts. Is there someone in the Planning Department who can help us with this concern?

Thanks,

Sara and Elaine



Sara Westbrook
Policy Analyst - Councilor Dan Lewis
City Council District 5
(505) 768-3189 (w)
(505) 768-3227 (f)
swestbrook@cabq.gov (e-mail)

CITY OF ALBUQUERQUE

September 29, 2009

Tucker H. Green, P.E.
Per Se Engineering
2116 Lead Ave SE
Albuquerque, NM 87106

Re: Lots 7B and 8 Grande Heights Addition, Grading and Drainage Plan
Engineer's Stamp date 9-17-09 (G11/D068)

Dear Mr. Green,

Based upon the information provided in your submittal received 9-18-09, the above referenced plan cannot be approved for Preliminary Plat action by the DRB until the following comments are addressed:

- How will driveways be constructed on Lots 8A and 8B with a channel running across the front of the lot?
- Demonstrate that the flow in the channel will remain in the channel at the 90 degree corners.
- A channel built on the outside of Lots 8A and 8B may address the two comments above.
- Provide proposed pads on Lots 8A and 8B.
- How high is the hydraulic jump at the bottom of the channel near the ROW and what is the velocity? Provide calculations.
- The proposed double flume in the ROW will not be ADA accessible.
- Hydrology is concerned about the properties at the north east end of Sequoia Ct. To mitigate this, an asphalt swale could be built on the west side of Sequoia Ct to Sequoia Rd or curb and gutter could be built on the east side of Sequoia Ct.
- It seems that Lot 7C could be graded to drain without storm drain.
- On Sheet C2, the note to "Maintain wall 0.67' above existing grade" should be changed to "Maintain wall to 0.67 feet above new grade" to prevent runoff from running over the wall.
- Provide Hydrology calculations for proposed Lots 7C, D, and E.
- The splash block/rundown from Lot 7C will not be acceptable if a sidewalk is required.
- There area calculations for a storm drain from Lot 7C to Lot 7D, but there does not appear to be one.
- Provide the correct Legal Description on the Drainage Information Sheet.

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Albuquerque

NM 87103

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CITY OF ALBUQUERQUE

- Rather than stating the slope is greater than 20% (Sheet 7), provide the approximate/average slope.
- The soil underneath the channels should be compacted.
- Provide a scale on Sheet C3.
- On Detail G/D5 one of the channels is referenced incorrectly (E5 rather then D5).

If you have any questions, you can contact me at 924-3695 or schedule a meeting.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file
Brad Bingham

PO Box 1293

Albuquerque

NM 87103

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ALAMOGORDO
SEQUOIA
G11D045
G11D068
MONICA
VISTA GRANDE
VISTA SANDIA
RUIZ
CANONCITO
WARD
34
60

CITY OF ALBUQUERQUE

September 29, 2009

Tucker H. Green, P.E.
Per Se Engineering
2116 Lead Ave SE
Albuquerque, NM 87106

Re: Lots 7B and 8 Grande Heights Addition, Grading and Drainage Plan Engineer's Stamp date 9-17-09 (G11/D068)

Dear Mr. Green,

Based upon the information provided in your submittal received 9-18-09, the above referenced plan cannot be approved for Preliminary Plat action by the DRB until the following comments are addressed:

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NM 87103

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- How will driveways be constructed on Lots 8A and 8B with a channel running across the front of the lot? steel plate - approx 5% to 6%
- Demonstrate that the flow in the channel will remain in the channel at the 90 degree corners.
- A channel built on the outside of Lots 8A and 8B may address the two comments above.
- Provide proposed pads on Lots 8A and 8B.
- How high is the hydraulic jump at the bottom of the channel near the ROW and what is the velocity? Provide calculations. no sequence depth
- The proposed double flume in the ROW will not be ADA accessible.
- Hydrology is concerned about the properties at the north east end of Sequoia Ct. To mitigate this, an asphalt swale could be built on the west side of Sequoia Ct to Sequoia Rd or curb and gutter could be built on the east side of Sequoia Ct.
- It seems that Lot 7C could be graded to drain without storm drain.
- On Sheet C2, the note to "Maintain wall 0.67' above existing grade" should be changed to "Maintain wall to 0.67 feet above new grade" to prevent runoff from running over the wall.
- Provide Hydrology calculations for proposed Lots 7C, D, and E.
- The splash block/rundown from Lot 7C will not be acceptable if a sidewalk is required.
- There area calculations for a storm drain from Lot 7C to Lot 7D, but there does not appear to be one.
- Provide the correct Legal Description on the Drainage Information Sheet.

8" high in ROW

CITY OF ALBUQUERQUE

- Rather than ~~stating the slope is greater than 20% (Sheet 7)~~, provide the approximate/average slope.
- The soil underneath the channels should be compacted.
- ~~Provide a scale on Sheet~~ C3.
- On Detail G/D5 one of the channels is referenced incorrectly (E5 rather then D5).

If you have any questions, you can contact me at 924-3695 or schedule a meeting.

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file
Brad Bingham

PO Box 1293

Albuquerque

NM 87103

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DRAINAGE INFORMATION SHEET

PROJECT TITLE: ~~Lots 7a & 7B~~ 7B & 8 Grande Heights Subdiv. AP/DRG. FILE: G-11/ D068

DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: ~~Lot 7, Block 2, Airport Industrial Park, Albuquerque, Bernalillo County, NM~~

CITY ADDRESS: ~~2411 Central Ave NW, Albuquerque NM 87102~~

ENGINEERING FIRM: Per Se Engineering
ADDRESS: 2116 Lead Ave SE
CITY, STATE: Albuquerque, NM

CONTACT: Tucker Green
PHONE : 232-9394
ZIP CODE: 87106

OWNER: Estrella Vista Development, Inc
ADDRESS: 2700 Vista Grande NW #79
CITY, STATE Albuquerque, NM

CONTACT: Joe Waid or Antonio Bilotti
PHONE: 220-5059
ZIP CODE 87120

ARCHITECT: N/A
ADDRESS:
CITY, STATE:

CONTACT:
PHONE:
ZIP CODE:

SURVEYOR: Rhombus PA
ADDRESS 2620 San Mateo NE Suite B
CITY, STATE: Albuquerque, NM

CONTACT: Clyde King
PHONE: 881-6690, 970.570-9329
ZIP CODE: 87110

CONTRACTOR: N/A
ADDRESS : _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- DRAINAGE PLAN RESUBMITTAL
- CONCEPTUAL G & D PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION (HYDROLOGY)
- CLOMR/LOMR
- X TRAFFIC CIRCULATION LAYOUT (TCL)
- ENGINEER/ARCHITECT CERT (TCL)
- ENGINEER/ARCHITECT CERT (DRB S.P.)
- ENGINEER/ARCHITECT CERT (AA)
- OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

- SIA / FINANCIAL GUARANTEE RELEASE
- X PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D. APPROVAL
- S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
- X FINAL PLAT APPROVAL
- FOUNDATION PERMIT APPROVAL
- BUILDING PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY (PERM
- CERTIFICATE OF OCCUPANCY (TEMP.)
- X GRADING PERMIT APROVAL
- X PAVING PERMIT APPROVAL
- WORK ORDER APPROVAL
- OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED? YES___ COPY PROVIDED No

$50.00

DATE SUBMITTED: September 18, 2009 BY: Tucker Green

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

(1) **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

ENGINEER'S NOTE:
DRAINAGE REPORT W/ CALCULATIONS IS SHT C7.

RECEIVED
SEP 18 2009
HYDROLOGY SECTION

CITY OF ALBUQUERQUE

January 11, 2010

Tucker H. Green, P.E.
Per Se Engineering
2116 Lead Ave SE
Albuquerque, NM 87106

Re: Lots 7B and 8 Grande Heights Addition, Grading and Drainage Plan Engineer's Stamp date 12-22-09 (G11/D068)

Dear Mr. Green,

Based upon the information provided in your submittal received 12-22-09, the above referenced plan cannot be approved for Preliminary Plat action by the DRB until the following comments are addressed:

- The proposed flume in the City ROW may cause transportation problems. Hydrology is requiring that curb and gutter be constructed along the frontage of this property on Sequoia Ct with the site discharging to the ROW through a sidewalk culvert(s). The channel could widen to 4 feet or similar to spread out the flow prior to entering the street. The grading plan should reflect the standard curb and gutter as well as a 2% slope up from the top of curb to the property line.
- Building curb and gutter on Sequoia Ct would alleviate the need for the north-south channel on lots 8A and 8B.
- Provide calculations for the channels on Lot 7D as well as east-west channel on Lot 8A.
- Provide the Froude number, including calculations, for the east-west Channel on Lot 8A and whether there will be a significant hydraulic jump.
- Provide an Infrastructure List, which must include all items for this development to be built (e.g. curb and gutter, retaining walls, earth work, etc)
- The invert for the rundown from Lot 7C is higher than the invert from the storm drain (94.33 vs. 87.60).
- It appears a retaining wall may be required on Lot 7C at the southwest corner of the lot, where there is a grade change from 99 to 96.
- The retaining wall at the west side of Lot 7D should remain close to the easement rather than angling south.
- Show the location of the driveways.
- The Note on Sheet C2 stating to maintain the tw 0.67 min above ex. grade should state to maintain the tw 0.67 min above new grade.

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Albuquerque

NM 87103

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CITY OF ALBUQUERQUE

- What is to prevent sediment from entering the north-south channel on Lot 7D?
- Detail B5 depicts the rundown is 19 inches high, yet there is about 7 feet of grade difference. It would also be beneficial to show the entire construction of this rundown in one detail rather than referencing Detail I/C5.
- Detail G/C5 specifies that the north-south channel is per Detail E/C5, while Sheet C2 specifies Detail D/C5 for the same channel.

If you have any questions, you can contact me at 924-3695 or schedule a meeting.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file
Brad Bingham

PO Box 1293

Albuquerque

NM 87103

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G11D068
WARD

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Lots 7C-7E , 8A, 8B, Grande Heights Subdiv. AP/DRG. FILE: G-11 / D-068

DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: Lots 7C, 7D, 7E, 8A, & 8B (formerly lots 7B & 8)
Grande Heights Subdivision, Albuquerque, Bernalillo County, NM

CITY ADDRESS: Lot 7B is 3420 Ward Dr NW; Lot 8 is 511 Sequoia Ct NW

ENGINEERING FIRM: Per Se Engineering — CONTACT: Tucker Green
ADDRESS: 2116 Lead Ave SE — PHONE : 232-9394
CITY, STATE: Albuquerque, NM — ZIP CODE: 87106

OWNER: Estrella Vista Development, Inc — CONTACT: Joe Waid or Antonio Bilotti
ADDRESS: 2700 Vista Grande NW #79 — PHONE: 220-5059
CITY, STATE Albuquerque, NM — ZIP CODE 87120

ARCHITECT: N/A — CONTACT:
ADDRESS: — PHONE:
CITY, STATE: — ZIP CODE:

SURVEYOR: Rhombus PA — CONTACT: Clyde King
ADDRESS 2620 San Mateo NE Suite B — PHONE: 881-6690, 970.570-9329
CITY, STATE: Albuquerque, NM — ZIP CODE: 87110
CONTRACTOR: N/A — CONTACT: _____
ADDRESS : _____ — PHONE: _____
CITY, STATE: _____ — ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- DRAINAGE PLAN 1st SUBMITTAL
- X DRAINAGE PLAN RESUBMITTAL
- CONCEPTUAL G & D PLAN
- GRADING PLAN
- X EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION (HYDROLOGY)
- CLOMR/LOMR
- X TRAFFIC CIRCULATION LAYOUT (TCL)
- ENGINEER/ARCHITECT CERT (TCL)
- ENGINEER/ARCHITECT CERT (DRB S.P.)
- ENGINEER/ARCHITECT CERT (AA)
- OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

- SIA / FINANCIAL GUARANTEE RELEASE
- X PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D. APPROVAL
- S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
- X FINAL PLAT APPROVAL __
- FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL **(Site Wk + Utils)**
- CERTIFICATE OF OCCUPANCY (PERM
- CERTIFICATE OF OCCUPANCY (TEMP.)
- X GRADING PERMIT APROVAL
- X PAVING PERMIT APPROVAL
- WORK ORDER APPROVAL
- OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED? YES___ COPY PROVIDED No

DATE SUBMITTED: December 22, 2009 BY: Tucker Green

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

(1) **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

RECEIVED
DEC 22 2009
HYDROLOGY SECTION

ENGINEER'S NOTE:

DRAINAGE REPORT W/ CALCULATIONS IS SHT. C7.

C:\0prj\Waid\WaidInfoSht-3.doc


SEQUOIA
PLATEAU
VISTA GRANDE
WARD
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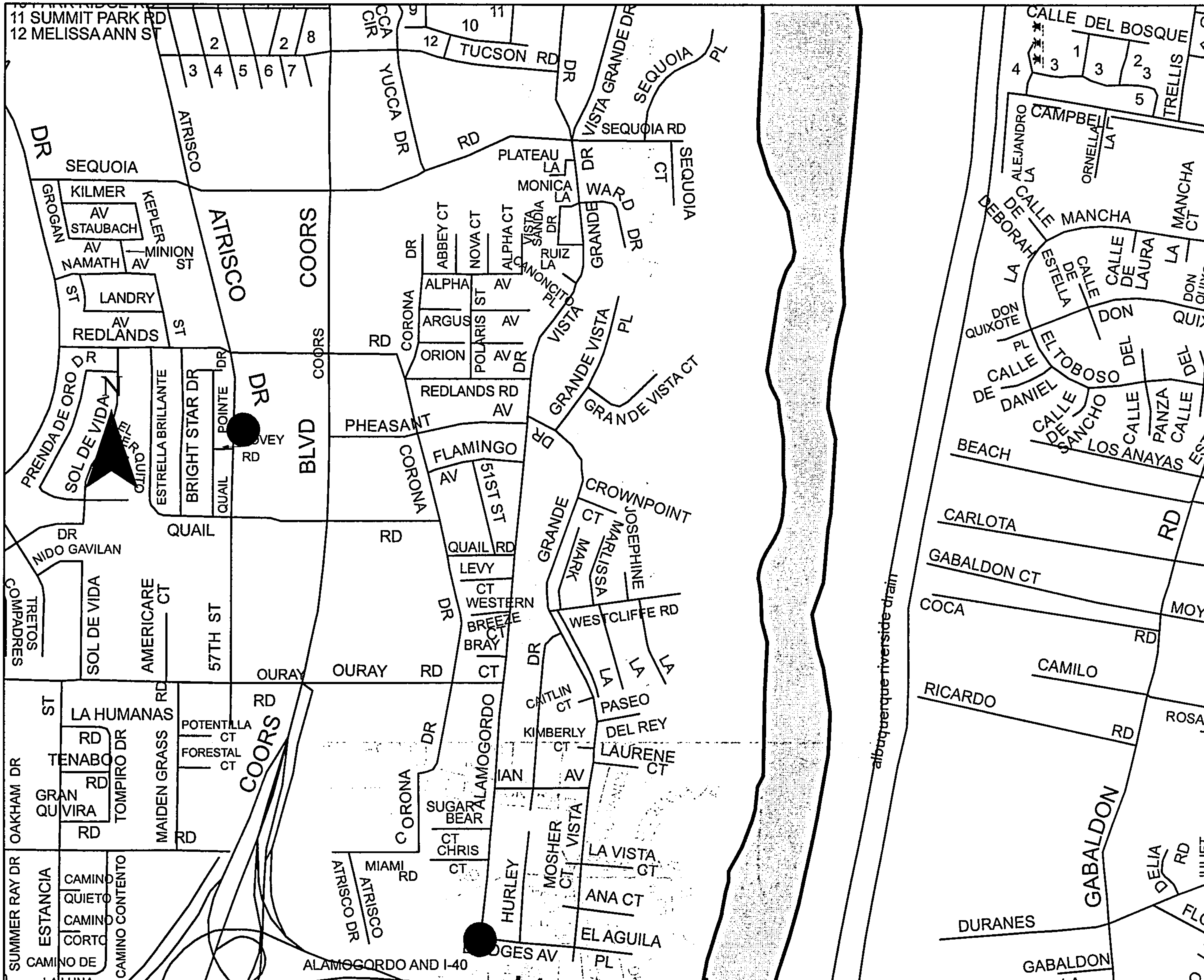
11 SUMMIT PARK RD
12 MELISSA ANN ST
TUCSON RD
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VISTA GRANDE DR
SEQUOIA PL
SEQUOIA RD
SEQUOIA CT
PLATEAU LA
MONICA LA
WARD DR
ATRISCO
SEQUOIA DR
KILMER
STAUBACH AV
GROGAN
KEPLER
NAMATH AV
MINION ST
LANDRY
REDLANDS AV
ATRISCO
COORS
ABBEY CT
NOVA CT
ALPHA CT
VISTA SANDIA DR
RUIZ LA
CANONCITO PL
ALPHA AV
ARGUS AV
ORION AV
POLARIS ST
CORONA
REDLANDS RD
PHEASANT AV
FLAMINGO AV
51ST ST
GRANDE VISTA PL
GRANDE VISTA CT
PRENDA DE ORO DR
SOL DE VIDA
EL ARQUITO
ESTRELLA BRILLANTE
BRIGHT STAR DR
POINTE
LOVEY RD
QUAIL
COORS BLVD
QUAIL RD
CROWNPOINT
MARK CT
MARLISSA
JOSEPHINE
NIDO GAVILAN DR
LEVY
WESTERN CT
BREEZE CT
BRAY
WESTCLIFFE RD
TRETOS COMPADRES
AMERICARE CT
57TH ST
OURAY RD
CAITLIN CT
PASEO DEL REY
LA HUMANAS
POTENTILLA CT
FORESTAL CT
TENABO RD
TOMPIRO DR
GRAN QUIVIRA RD
MAIDEN GRASS RD
OAKHAM DR
KIMBERLY CT
LAURENE CT
IAN AV
ALAMOGORDO
SUGAR BEAR
CHRIS CT
MIAMI RD
ATRISCO DR
HURLEY
MOSHER CT
LA VISTA CT
ANA CT
EL AGUILA
HODGES AV
PL
ALAMOGORDO AND I-40
SUMMER RAY DR
ESTANCIA
CAMINO QUIETO
CAMINO CORTO
CAMINO DE LA LUNA
CAMINO CONTENTO
CALLE DEL BOSQUE
TRELLIS
CAMPBELL
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ORNELLA LA
DEBORAH LA
CALLE DE MANCHA
MANCHA CT
CALLE DE ESTELLA
CALLE DE LAURA
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DON QUIXOTE PL
CALLE EL TOBOSO
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CALLE DE DANIEL
CALLE DE SANCHO
CALLE PANZA
LOS ANAYAS
ESTANCIA
BEACH
CARLOTA
RD
GABALDON CT
COCA
MOYA
CAMILO
RICARDO
ROSA
albuquerque riverside drain
GABALDON
DELIA RD
JULIET
DURANES
FLO
GABALDON LA


ALAMOGORDO
SEQUOIA
PLATEAU
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VISTA SANDIA
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SUNRAY RD
KESWICK PL
TUTON PL
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ROCA
PASTORCITO
LLANO
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TOMPIRO DR
MAIDEN GRASS
RD
FORESTAL CT
POTENTILLA CT
57TH ST
COORS RD
SOL DE VIDA
AMERICARE CT
NIDO GAVILAN DR
QUAIL
PRENDA DE ORO DR
SOL DE VIDA
EL CERQUITO CT
ESTRELLA BRILLANTE
BRIGHT STAR DR
QUAIL POINTE DR
COVEY RD
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NAMATH AV
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STAUBACH AV
GROGAN
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MINION ST
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SEQUOIA
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OURAY RD
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CHRIS CT
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ALAMOGORDO
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BREEZE CT
WESTERN CT
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51ST ST
FLAMINGO AV
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REDLANDS RD
ORION AV
ARGUS AV
ALPHA AV
ABBEY CT
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KIMBERLY CT
CAITLIN CT
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MOSHER CT
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MARK CT
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WESTCLIFFE RD
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LAURENE CT
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GRANDE VISTA PL
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MONICA LA
PLATEAU LA
GRANDE
WARD
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DR
CT
SEQUOIA
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VISTA GRANDE DR
DR
SEQUOIA PL

* * *

albuquerque riverside drain
RICARDO
COCA
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CALLE DE DAN
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SEQUOIA
VISTA GRANDE
WARD
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CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development & Building Services

December 5, 2008

Mr. Tucker Green, P.E.
Per Se Engineering
2116 Lead Avenue S.E.
Albuquerque, New Mexico 87106

RE: **Lots 7A & 7B Vista Grande Addition** File: **G11-D 068**
Drainage Report & Plan for Platting, Grading & paving PE Stamp [illegible]

Dear Mr. Green:

Based upon the information provided in your submittal received 11-03-08, the above referenced Drainage Report & Plan **cannot be approved** for Preliminary/Final Plat, Grading Permit nor Paving Permit until the following comments are addressed:

1. The conceptual grading plan is acceptable as presented, with following specific issues needing to be addressed.

2. On your resubmittal, on the Drainage Information Sheet provide the correct Legal Description and Site Address for this site (*not "Airport Industrial Park"*).

3. Although the grading plan proposes development of only the proposed Lot 7A. drainage for proposed Lot 7B must be addressed with this plan. Mr. Bingham has had recent discussions with the owner (Joe Wade) regarding the need to dedicate a storm drainage easement across Lot 8 for the benefit of Lot 7B. This easement will be required as a condition of replat of Lot 7 to Lots 7A & 7B, and should be reflected on your resubmitted Grading Plan.

4. On C-101 and in the Drainage Report, Section "Grading and Drainage" clarify with references to proposed Lots 7A and 7B where they are discussed.

5. On C-101, clearly show and label the location of the proposed boundary between Lots 7A & 7B on the Grading Plan and on the Utility and Driveway Plans.

6. On the Grading Plan, verify and correct the spot elevations on the swales around the pad on the western portion of proposed Lot 7A. Provide a spot elevation near the NW corner of the pad and check the ones around the east and south side of the pad, which do not coincide with the 1% grade shown.

7. Provide a spot elevation on the existing gutter flowline west of the sidewalk plate to verify that site runoff will flow west on Ward Avenue. pr

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development & Building Services

Mr. Tucker Green, P.E.
RE: Lots 7A & 7B Vista Grande Addition
December 5, 2008

If you have any questions or would like to schedule a meeting to discuss this, you may contact me at 924-3981.

Sincerely,

Gregory R. Olson, P.E.
Hydrology Section

XC: Bradley Bingham, COA-PLN/Hydrology
Drainage file: **G11-D 068**

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Lots 7a & 7B Grande Heights Subdiv. AP/DRG. FILE: G-11/D68

DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: Lot 7, Block 2, Airport Industrial Park, Albuquerque, Bernalillo County, NM

CITY ADDRESS: 2411 Central Ave NW, Albuquerque NM 87102 Paving: S.F.

ENGINEERING FIRM: Per Se Engineering
ADDRESS: 2116 Lead Ave SE
CITY, STATE: Albuquerque, NM

CONTACT: Tucker Green
PHONE : 232-9394
ZIP CODE: 87106

OWNER: Estrella Vista Development, Inc
ADDRESS: 2700 Vista Grande NW #79
CITY, STATE Albuquerque, NM

CONTACT: Joe Waid or Antonio Bilotti
PHONE: 220-5059
ZIP CODE 87120

ARCHITECT: N/A
ADDRESS:
CITY, STATE:

CONTACT:
PHONE:
ZIP CODE:

SURVEYOR: Rhombus PA
ADDRESS 2620 San Mateo NE Suite B
CITY, STATE: Albuquerque, NM

CONTACT: Clyde King
PHONE: 881-6690
ZIP CODE: 87110

CONTRACTOR: N/A
ADDRESS : _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- DRAINAGE PLAN RESUBMITTAL
- CONCEPTUAL G & D PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION (HYDROLOGY)
- CLOMR/LOMR
- TRAFFIC CIRCULATION LAYOUT (TCL)
- ENGINEER/ARCHITECT CERT (TCL)
- ENGINEER/ARCHITECT CERT (DRB S.P.)
- ENGINEER/ARCHITECT CERT (AA)
- OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:

- SIA / FINANCIAL GUARANTEE RELEASE
- X PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D. APPROVAL
- S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
- X FINAL PLAT APPROVAL __
- FOUNDATION PERMIT APPROVAL
- BUILDING PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY (PERM
- CERTIFICATE OF OCCUPANCY (TEMP.)
- X GRADING PERMIT APROVAL
- X PAVING PERMIT APPROVAL
- WORK ORDER APPROVAL
- OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED? YES___ COPY PROVIDED No

$50.

DATE SUBMITTED: Nov 3, 2008 BY: Tucker Green

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

(1) **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

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NOV 03 2008
HYDROLOGY
SECTION

C:\0prj\Waid\WaidInfoSht1.doc

Drainage Report for:
Lots 7A and 7B, Block A, Grande Heights Subdivision, Albuquerque, NM (COA MAP G-11)

Project Address / Location: 3420 Ward Dr, between Sequoia Ct. and Ward Dr. NW (east of Coors & Sequoia Rd)

Legal Description: Lots 7-A and 7-B, Block A, Grande Heights Subdivision, Albuquerque, Bernalillo County, NM

Flood Zone: None, per FEMA panel 35001-c037g, September 2008

Project Description:

The owners propose to replat Lot 7 into 2 lots. The upper, westerly, lot will contain about 1/4 acre and will be developed as a residential lot. The remaining area, roughly 3/4 acre, is not proposed to be developed at this time except as needed to (1) develop the upper lot (borrow dirt to raise the upper lot); (2) prevent sediment and erosion problems; and (3) provide utility stubs to accommodate a future division of the remainder. In the near future, but not now, the owners will develop the rest of 8ot 7 and Lot 8, which they also own.

Site Existing Conditions / History:

The project site, accessed from a bend in Ward Ct, is currently undeveloped, contains slightly over 1 acre, and has 2 distinctly different parts roughly equal in size: a fairly level upper half and a steep lower half. Lot 8 lies downhill from Lot 7 and fronts on Sequoia Ct., which is the 1st street west of the Rio Grande. Lot 8, containing slightly over 0.5 acres, is also steep, is also currently undeveloped. The land south of the site is undeveloped. There is existing residential development directly west of the site, northwest of the site, and on 2 of the lots directly north of the site. The views, across the river and toward the mountains, are magnificent.

Project History:

Grande Heights Subdivision was created in approximately 1960. In August 2007 the owners made a Sketch Plat submittal to the City and received comments. Since then there have been several discussions with City of Albuquerque staff (particularly Brad Bingham of Hydrology) about how to develop both Lots 7 and Lot 8 into an eventual total of 6 residential lots. This submittal draws on those discussions.

Grading and Drainage:

The new residential lot will be raised and graded to drain to Ward Dr. with free discharge. Immediately east of this new lot is an area roughly equal in size with slopes under 3% and bounded downhill by a low chainlink fence. Borrow to raise the upper lot will be taken from this area. The borrow area will be left low to trap any sediment arising from construction operations, but hydrology design will not count on storage there. The east side of the borrow area will be graded to as to avoid concentrated flow. East of the fence the site steepens.

Hydrology calculations are per COA DPM (City of Albuquerque Development Process Manual) Chapter 22 methods for small watersheds. No credit is claimed for water harvesting or onsite ponding. The project will have no adverse drainage effect on neighboring or downstream properties.

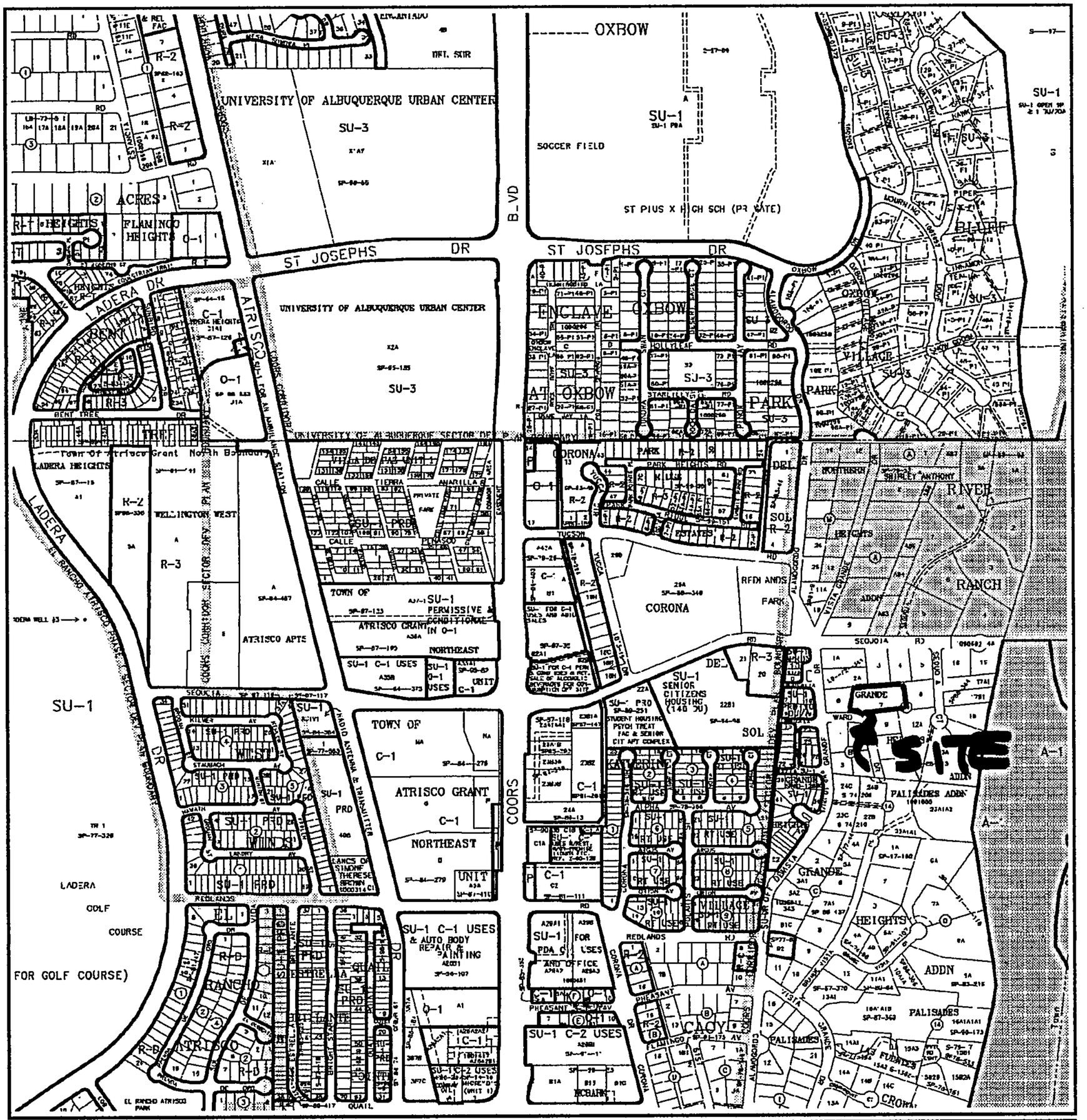
END OF REPORT TEXT

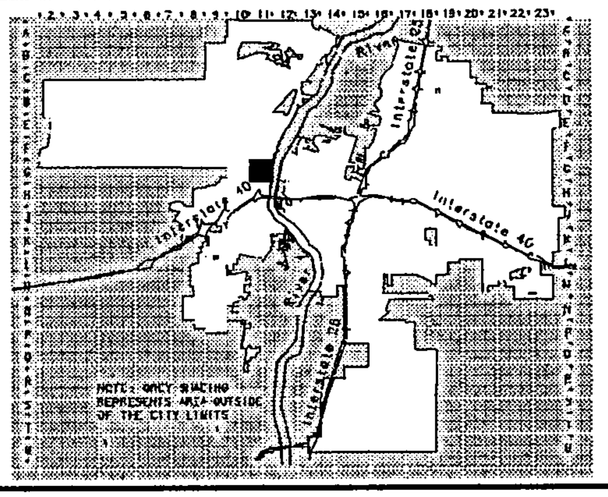
See full report for calculations and maps.

TUCKER H. GREEN
10731
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

11-3-08

RECEIVED
NOV 3 : 08
HYDROLOGY
SECTION





GRAPHIC SCALE IN FEET

250 0 750 1000

Zone Atlas Page

G-11-Z

Map Amended through November 01, 2003

Albuquerque Geographic Information System
PLANNING DEPARTMENT

MAP SCALE 1" = 500'

0 0 500 1000 FEET

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0327G

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 327 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE CITY OF	350002	0327	G
BERNALILLO COUNTY			
UNINCORPORATED AREAS	350001	0327	G

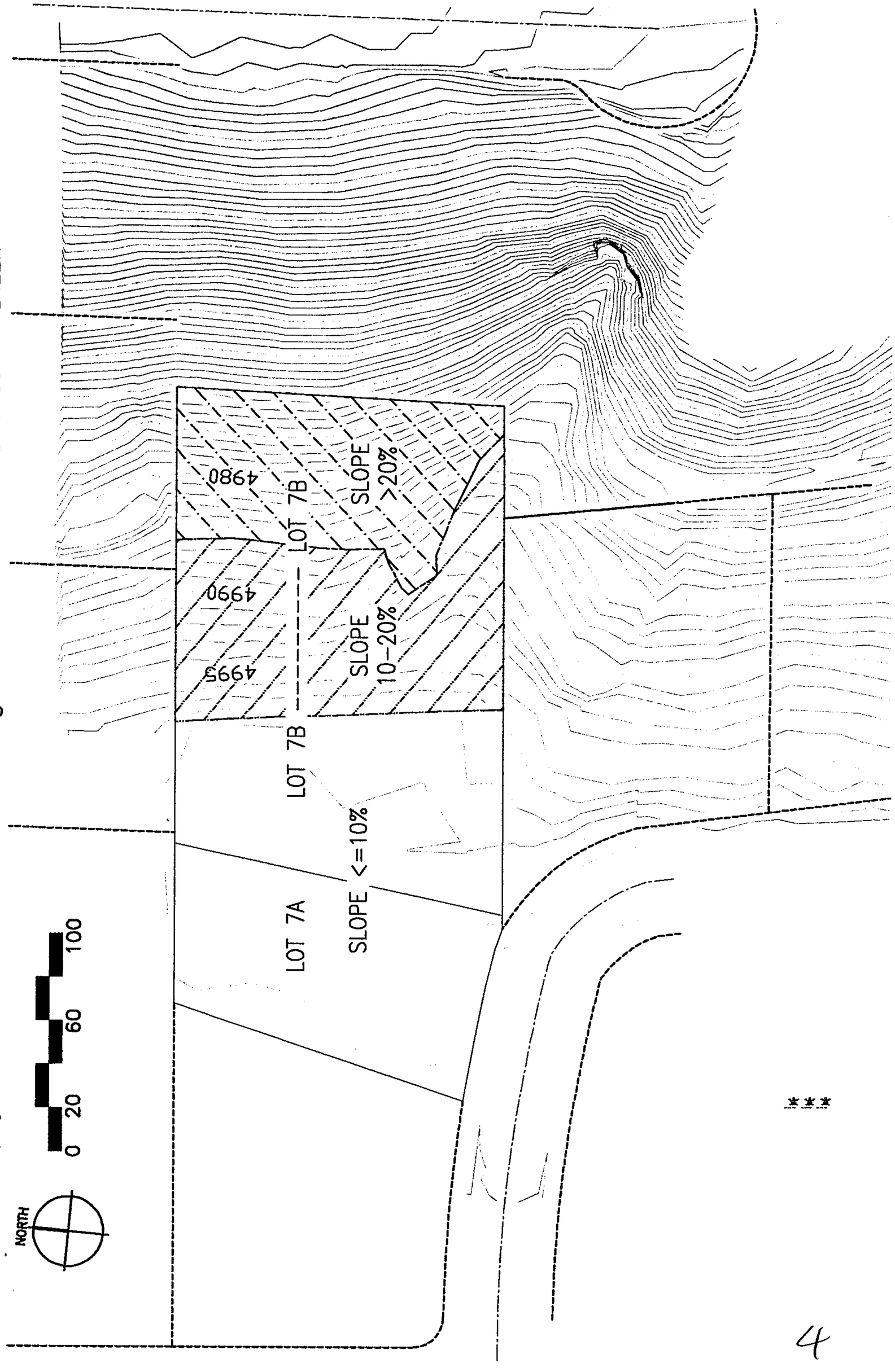
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
35001C0327G

MAP REVISED
SEPTEMBER 26, 2008

Federal Emergency Management Agency

C:\Oprj\Wald\VISTA GRANDE SUBD TOPO.dwg DATE: 11/03/08 TIME: 04:53 T. GREEN



4

PROJECT: Carrasco site - 29th St, Rio Rancho NM

ALBUQUERQUE, NM (1/93) CRITERIA - D.P.M. SIMPLE PROCEDURE FOR <= 40 ACRES (ASSUMES Tc=0.2hr =12min)

BASIC TREATMENT CLASSES: A=UNDISTURBED, B=LAWNS, C=UNPAVED ROADS or STEEP B, D=ROOFS,PAVEMENT: SEE DPM 22.2 P A-5

PX100-6 = PRECIPITATION EXCESS FROM 100-YEAR 6-HOUR STORM; PX10-6 =SAME FOR 10-YEAR STORM

VOL10D = VOLUME OF RUNOFF FROM 10-DAY STORM; APPROXIMATE "6-HR" HYDRGRAPH PER DPM 22.2 SECTION A.8

PROPOSED CONDITIONS: LOT 7A (WEST, TO BE DEVELOPED) 42% "D" per DPM TABLE A-5

Storm,yr 100	Zone 1			Qp6,cfs 2.18			VOL1D,cf 2,688			SF,total 33066.0
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX100-6 INCHES	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D AC-FT	TRTMT PERCENT
0.2 hr 0.94	A	33,066.0	0.7591	0.44	1.29	0.979	1,212	1,212	1,212	1,212	60.24
1 hr 1.87	B	12,190.0	0.2798	0.67	2.03	0.568	681	681	681	681	22.21
6 hr 2.20	C	9,637.0	0.2212	0.99	2.87	0.635	795	795	795	795	17.56
1 day 2.66	D	0.0	0.0000	1.97	4.37	0.000	0	0	0	0	0.00
4 day 3.12	TOTAL	54,893.0	1.2602	0.588	1.732	2.182	2,688	2,688	2,688	2,688	100.00
10 day 3.67		SQ MI>	0.0019690	^Average	per acre^	AC-FT>	0.0617	0.0617	0.0617	0.0617	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.71		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.78		

PROPOSED WEST PART OF LOT 7B; NOT DEVELOPED USED FOR BORROW FOR BORROW (RESEEDED)
ESTIMATE TREATMENT %'s FOR B, C

Storm,yr 100	Zone 1			Qp6,cfs 0.59			VOL1D,cf 717			SF,total 11239.0
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX100-6 INCHES	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.94	A	0.0	0.0000	0.44	1.29	0.000	0	0	0	0	0.00
1 hr 1.87	B	7,867.3	0.1806	0.67	2.03	0.367	439	439	439	439	70.00
6 hr 2.20	C	3,371.7	0.0774	0.99	2.87	0.222	278	278	278	278	30.00
1 day 2.66	D	0.0	0.0000	1.97	4.37	0.000	0	0	0	0	0.00
4 day 3.12	TOTAL	11,239.0	0.2580	0.766	2.282	0.589	717	717	717	717	100.00
10 day 3.67		SQ MI>	0.0004031	^Average	per acre^	AC-FT>	0.0165	0.0165	0.0165	0.0165	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.71		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.21		

PROPOSED: REMAINDER (EAST) PART OF LOT 7B; REMAINS NATURAL

Storm,yr 100	Zone 1			Qp6,cfs 0.65			VOL1D,cf 800			SF,total 21827.0
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX100-6 INCHES	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.94	A	21,827.0	0.5011	0.44	1.29	0.646	800	800	800	800	100.00
1 hr 1.87	B	0.0	0.0000	0.67	2.03	0.000	0	0	0	0	0.00
6 hr 2.20	C	0.0	0.0000	0.99	2.87	0.000	0	0	0	0	0.00
1 day 2.66	D	0.0	0.0000	1.97	4.37	0.000	0	0	0	0	0.00
4 day 3.12	TOTAL	21,827.0	0.5011	0.440	1.290	0.646	800	800	800	800	100.00
10 day 3.67		SQ MI>	0.0007829	^Average	per acre^	AC-FT>	0.0184	0.0184	0.0184	0.0184	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.72		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.23		

PROPOSED: TOTAL OF LOT 7B	Qp6,cfs 1.24	VOL1 D,cf 1,518	VOL10 D,cf 1,518

***

5

PROJECT: Carrasco site - 29th St, Rio Rancho NM

ALBUQUERQUE, NM (1/93) CRITERIA - D.P.M. SIMPLE PROCEDURE FOR <= 40 ACRES (ASSUMES Tc=0.2hr =12min)

BASIC TREATMENT CLASSES: A=UNDISTURBED, B=LAWNS, C=UNPAVED ROADS or STEEP B, D=ROOFS,PAVEMENT: SEE DPM 22.2 P A-5

PX100-6 = PRECIPITATION EXCESS FROM 100-YEAR 6-HOUR STORM; PX10-6 =SAME FOR 10-YEAR STORM

VOL10D = VOLUME OF RUNOFF FROM 10-DAY STORM; APPROXIMATE "6-HR" HYDRGRAPH PER DPM 22.2 SECTION A.8

PROPOSED CONDITIONS: LOT 7A (WEST, TO BE DEVELOPED) 42% "D" per DPM TABLE A-5

Storm,yr 10	Zone 1			Qp6,cfs 0.72			VOL1D,cf 797			SF,total 33066.0
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX10-6 INCHES	QP10-6 CFS/AC	QP10-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D AC-FT	TRTMT PERCENT
0.2 hr 0.63	A	33,066.0	0.7591	0.08	0.24	0.182	220	220	220	220	60.24
1 hr 1.25	B	12,190.0	0.2798	0.22	0.76	0.213	223	223	223	223	22.21
6 hr 1.47	C	9,637.0	0.2212	0.44	1.49	0.330	353	353	353	353	17.56
1 day 1.77	D	0.0	0.0000	1.24	2.89	0.000	0	0	0	0	0.00
4 day 2.08	TOTAL	54,893.0	1.2602	0.174	0.575	0.725	797	797	797	797	100.00
10 day 2.45		SQ MI>	0.0019690	^ Average	per acre ^	AC-FT>	0.0183	0.0183	0.0183	0.0183	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.64		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.23		

PROPOSED WEST PART OF LOT 7B; NOT DEVELOPED USED FOR BORROW FOR BORROW (RESEEDED) ESTIMATE TREATMENT %'s FOR B, C

Storm,yr 10	Zone 1			Qp6,cfs 0.25			VOL1D,cf 268			SF,total 11239.0
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX10-6 INCHES	QP10-6 CFS/AC	QP10-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.63	A	0.0	0.0000	0.08	0.24	0.000	0	0	0	0	0.00
1 hr 1.25	B	7,867.3	0.1806	0.22	0.76	0.137	144	144	144	144	70.00
6 hr 1.47	C	3,371.7	0.0774	0.44	1.49	0.115	124	124	124	124	30.00
1 day 1.77	D	0.0	0.0000	1.24	2.89	0.000	0	0	0	0	0.00
4 day 2.08	TOTAL	11,239.0	0.2580	0.286	0.979	0.253	268	268	268	268	100.00
10 day 2.45		SQ MI>	0.0004031	^ Average	per acre ^	AC-FT>	0.0061	0.0061	0.0061	0.0061	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.62		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.08		

PROPOSED: REMAINDER (EAST) PART OF LOT 7B; REMAINS NATURAL

Storm,yr 10	Zone 1			Qp6,cfs 0.12			VOL1D,cf 146			SF,total 21827.0
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX10-6 INCHES	QP10-6 CFS/AC	QP10-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.63	A	21,827.0	0.5011	0.08	0.24	0.120	146	146	146	146	100.00
1 hr 1.25	B	0.0	0.0000	0.22	0.76	0.000	0	0	0	0	0.00
6 hr 1.47	C	0.0	0.0000	0.44	1.49	0.000	0	0	0	0	0.00
1 day 1.77	D	0.0	0.0000	1.24	2.89	0.000	0	0	0	0	0.00
4 day 2.08	TOTAL	21,827.0	0.5011	0.080	0.240	0.120	146	146	146	146	100.00
10 day 2.45		SQ MI>	0.0007829	^ Average	per acre ^	AC-FT>	0.0033	0.0033	0.0033	0.0033	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.70		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.04		

PROPOSED: TOTAL OF LOT 7B	Qp6,cfs 0.37	VOL1 D,cf 413	VOL10 D,cf 413

* * *

PROJECT: Carrasco site - 29th St, Rio Rancho NM

ALBUQUERQUE, NM (1/93) CRITERIA - D.P.M. SIMPLE PROCEDURE FOR <= 40 ACRES (ASSUMES Tc=0.2hr =12min)

BASIC TREATMENT CLASSES: A=UNDISTURBED, B=LAWNS, C=UNPAVED ROADS or STEEP B, D=ROOFS,PAVEMENT: SEE DPM 22.2 P A-5

PX100-6 = PRECIPITATION EXCESS FROM 100-YEAR 6-HOUR STORM; PX10-6 =SAME FOR 10-YEAR STORM

VOL10D = VOLUME OF RUNOFF FROM 10-DAY STORM; APPROXIMATE "6-HR" HYDRGRAPH PER DPM 22.2 SECTION A.8

EXISITNG CONDITIONS: ALL LOT 7 (7A + 7B)

All Undeveloped; Natural @ 10%<Slope<=20% +> "B", >20% => "C"

Storm,yr	100	Zone	1		Qp6,cfs	3.44		VOL1D,cf	5,963		SF,total	44552.0
Rain,	inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX100-6 INCHES	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr	0.94	A	0.0	0.0000	0.44	1.29	0.000	0	0	0	0	0.00
1 hr	1.87	B	12,970.0	0.2978	0.67	2.03	0.604	724	724	724	724	29.11
6 hr	2.20	C	9,637.0	0.2212	0.99	2.87	0.635	795	795	795	795	21.63
1 day	2.66	D	21,945.0	0.5038	1.97	4.37	2.202	3,603	4,444	5,285	6,291	49.26
4 day	3.12	TOTAL	44,552.0	1.0228	1.380	3.364	3.441	5,122	5,963	6,804	7,810	100.00
10 day	3.67		SQ MI>	0.0015981	^ Average	per acre ^	AC-FT>	0.1176	0.1369	0.1562	0.1793	<AC-FT
Apx. hydgrograph		Tconc 0.20		T Base 0.74		T Peak 0.23		Peak Lasts 0.12		Hydrograph Qavg, cfs 1.49		

EXISITNG CONDITIONS: LOT 7A (WEST, TO BE DEVELOPED)

Storm,yr	100	Zone	1		Qp6,cfs	0.34		VOL1D,cf	421		SF,total	11486.0
Rain,	inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX100-6 INCHES	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr	0.94	A	11,486.0	0.2637	0.44	1.29	0.340	421	421	421	421	100.00
1 hr	1.87	B	0.0	0.0000	0.67	2.03	0.000	0	0	0	0	0.00
6 hr	2.20	C	0.0	0.0000	0.99	2.87	0.000	0	0	0	0	0.00
1 day	2.66	D	0.0	0.0000	1.97	4.37	0.000	0	0	0	0	0.00
4 day	3.12	TOTAL	11,486.0	0.2637	0.440	1.290	0.340	421	421	421	421	100.00
10 day	3.67		SQ MI>	0.0004120	^ Average	per acre ^	AC-FT>	0.0097	0.0097	0.0097	0.0097	<AC-FT
Apx. hydgrograph		Tconc 0.20		T Base 0.72		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.12		

'EXISITNG CONDITIONS: LOT 7B (EAST, NOT DEVELOPED NOW EXCEPT FOR BORROW W/ RESEEDING

Storm,yr	100	Zone	1		Qp6,cfs	2.10		VOL1D,cf	3,369		SF,total	33066.0
Rain,	inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX100-6 INCHES	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr	0.94	A	11,239.0	0.2580	0.44	1.29	0.333	412	412	412	412	33.99
1 hr	1.87	B	0.0	0.0000	0.67	2.03	0.000	0	0	0	0	0.00
6 hr	2.20	C	12,190.0	0.2798	0.99	2.87	0.803	1,006	1,006	1,006	1,006	36.87
1 day	2.66	D	9,637.0	0.2212	1.97	4.37	0.967	1,582	1,951	2,321	2,763	29.14
4 day	3.12	TOTAL	33,066.0	0.7591	1.089	2.770	2.103	3,000	3,369	3,739	4,180	100.00
10 day	3.67		SQ MI>	0.0011861	^ Average	per acre ^	AC-FT>	0.0689	0.0773	0.0858	0.0960	<AC-FT
Apx. hydgrograph		Tconc 0.20		T Base 0.76		T Peak 0.25		Peak Lasts 0.07		Hydrograph Qavg, cfs 0.87		

7

PROJECT: Carrasco site - 29th St, Rio Rancho NM

ALBUQUERQUE, NM (1/93) CRITERIA - D.P.M. SIMPLE PROCEDURE FOR <= 40 ACRES (ASSUMES Tc=0.2hr =12min)

BASIC TREATMENT CLASSES: A=UNDISTURBED, B=LAWNS, C=UNPAVED ROADS or STEEP B, D=ROOFS,PAVEMENT: SEE DPM 22.2 P A-5

PX100-6 = PRECIPITATION EXCESS FROM 100-YEAR 6-HOUR STORM; PX10-6 =SAME FOR 10-YEAR STORM

VOL10D = VOLUME OF RUNOFF FROM 10-DAY STORM; APPROXIMATE "6-HR" HYDRGRAPH PER DPM 22.2 SECTION A.8

EXISITNG CONDITIONS: ALL LOT 7 (7A + 7B)

All Undeveloped; Natural @ 10%<Slope<=20% +> "B", >20% => "C"

Storm,yr 10	Zone 1			Qp6,cfs 2.01			VOL1D,cf **3,407**			SF,total **44552.0**	
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX10-6 INCHES	QP10-6 CFS/AC	QP10-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.63	A	0.0	0.0000	0.08	0.24	0.000	0	0	0	0	0.00
1 hr 1.25	B	12,970.0	0.2978	0.22	0.76	0.226	238	238	238	238	29.11
6 hr 1.47	C	9,637.0	0.2212	0.44	1.49	0.330	353	353	353	353	21.63
1 day 1.77	D	21,945.0	0.5038	1.24	2.89	1.456	2,268	2,816	3,383	4,060	49.26
4 day 2.08	TOTAL	44,552.0	1.0228	0.770	1.967	2.012	2,859	3,407	3,974	4,651	100.00
10 day 2.45		SQ MI>	0.0015981	^ Average	per acre ^	AC-FT>	0.0656	0.0782	0.0912	0.1068	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.70		T Peak 0.23		Peak Lasts 0.12		Hydrograph Qavg, cfs 0.83		

EXISITNG CONDITIONS: LOT 7A (WEST, TO BE DEVELOPED)

Storm,yr 10	Zone 1			Qp6,cfs 0.06			VOL1D,cf **77**			SF,total **11486.0**	
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX10-6 INCHES	QP10-6 CFS/AC	QP10-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.63	A	11,486.0	0.2637	0.08	0.24	0.063	77	77	77	77	100.00
1 hr 1.25	B	0.0	0.0000	0.22	0.76	0.000	0	0	0	0	0.00
6 hr 1.47	C	0.0	0.0000	0.44	1.49	0.000	0	0	0	0	0.00
1 day 1.77	D	0.0	0.0000	1.24	2.89	0.000	0	0	0	0	0.00
4 day 2.08	TOTAL	11,486.0	0.2637	0.080	0.240	0.063	77	77	77	77	100.00
10 day 2.45		SQ MI>	0.0004120	^ Average	per acre ^	AC-FT>	0.0018	0.0018	0.0018	0.0018	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.70		T Peak 0.27		Peak Lasts 0.00		Hydrograph Qavg, cfs 0.02		

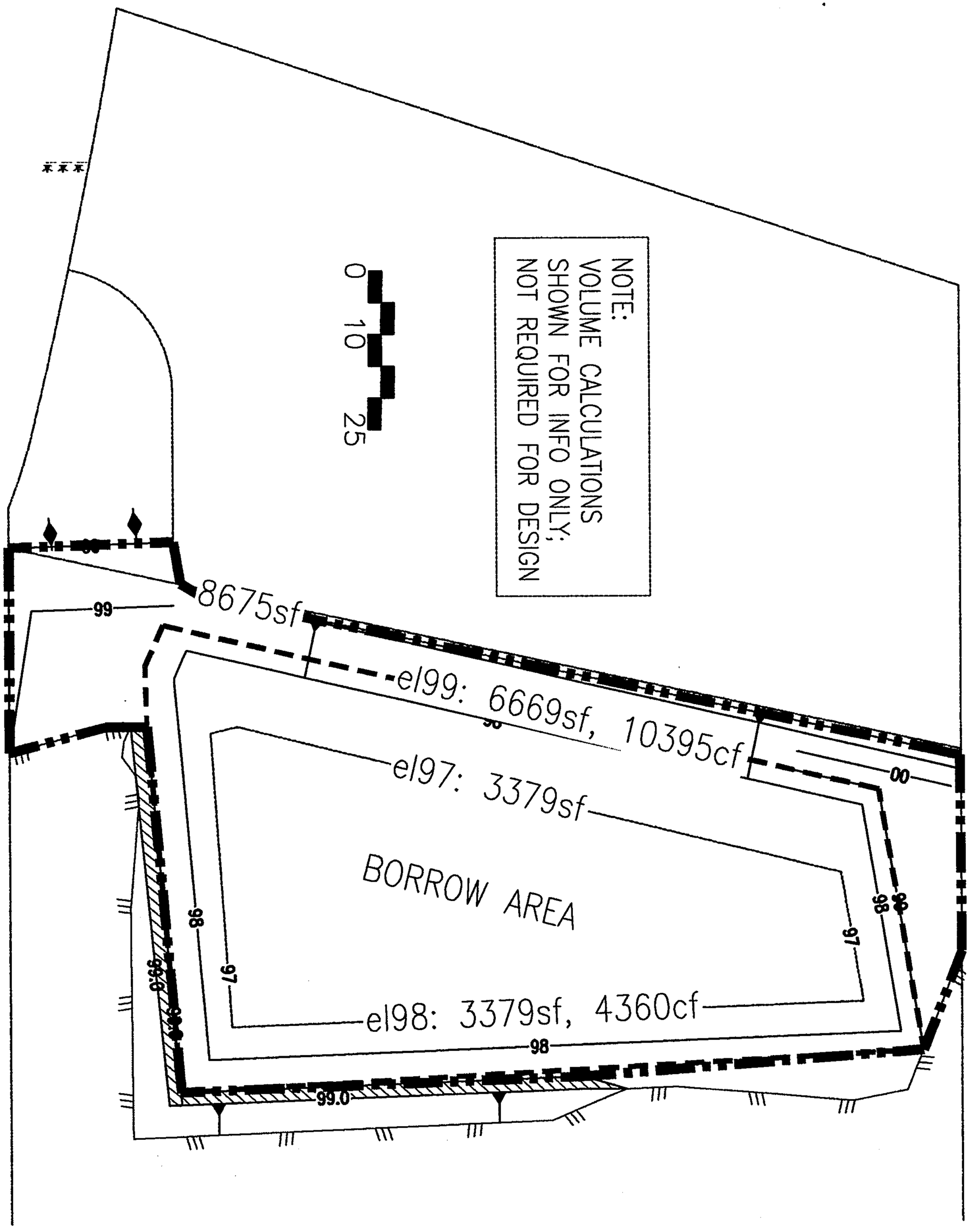
'EXISITNG CONDITIONS: LOT 7B (EAST, NOT DEVELOPED NOW EXCEPT FOR BORROW W/ RESEEDING

Storm,yr 10	Zone 1			Qp6,cfs 1.12			VOL1D,cf **1,759**			SF,total **33066.0**	
Rain, inches	TRTMT CLASS	AREA SQ FT	AREA ACRES	PX10-6 INCHES	QP10-6 CFS/AC	QP10-6 CFS	VOL6HR CU FT	VOL1D CU FT	VOL4D CU FT	VOL10D CU FT	TRTMT PERCENT
0.2 hr 0.63	A	11,239.0	0.2580	0.08	0.24	0.062	75	75	75	75	33.99
1 hr 1.25	B	0.0	0.0000	0.22	0.76	0.000	0	0	0	0	0.00
6 hr 1.47	C	12,190.0	0.2798	0.44	1.49	0.417	447	447	447	447	36.87
1 day 1.77	D	9,637.0	0.2212	1.24	2.89	0.639	996	1,237	1,486	1,783	29.14
4 day 2.08	TOTAL	33,066.0	0.7591	0.551	1.473	1.118	1,518	1,759	2,008	2,305	100.00
10 day 2.45		SQ MI>	0.0011861	^ Average	per acre ^	AC-FT>	0.0348	0.0404	0.0461	0.0529	<AC-FT
Apx. hydgrograph	Tconc 0.20		T Base 0.71		T Peak 0.25		Peak Lasts 0.07		Hydrograph Qavg, cfs 0.44		

***

b

C:\0prj\Waid\WaidPhoRef\WaidDrnPS-110308.dwg DATE: 11/03/08 TIME: 13:30 T. GREEN



Lots 7B Borrow Area
In Rain Zone 1 the 100-year 10-day rain is 3.67".which on the 8675 sf area affect apx equals 2653 cf

FLAT BOTTOM - ELEV 31.0 "CONE" FRUSTUM / GEOMETRIC MEAN AREA					AV END AREA			USE AVERAGE		Q, OUT
ELEV F	AREA	DVOL CONE	VOL FT^3	VOL AC-FT	DVOL AV ARE	VOL FT^3	VOL AC-FT	VOL FT^3	VOL AC-FT	CFS
99	6,669	6035	10395	0.238641	6046	10446	0.239807	10421	0.239224	1.266
98	5,422	4360	4360	0.100102	4401	4401	0.101022	4380	0.100562	0.617
97	3,379		0	0.000000		0	0.000000	0	0.000000	0.000