



City of Albuquerque

October 18, 1999

Tom Mann, P.E.
Engineering & Surveying Associates, Inc.
5312 Noreen Drive NE
Albuquerque, New Mexico 87111

***RE: Grading and Drainage Certification Plan for Shadow Mountain Subdivision
(K21/D3B) Submitted for Release of Financial Guarantees, Engineer's Certification
Stamp Dated 10/12/99.***

Dear Mr. Mann:

Based on the information provided, the above referenced plan is adequate to satisfy the Grading and Drainage Certification requirement per the Infrastructure List dated February 2, 1999 for the release of Financial Guarantees for the Shadow Mountain Subdivision.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

A handwritten signature in cursive script, reading 'Susan M. Calongne', is positioned above the typed name.

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Terri Martin, DRB-98-224
Charles Bacheller, Owner
File

DRAINAGE INFORMATION SHEET

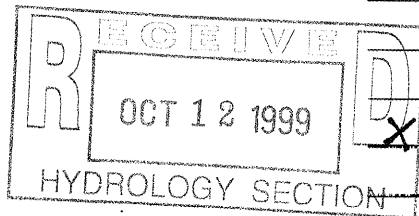
PROJECT TITLE: Shadow Mountain ZONE ATLAS/DRNG. FILE #: K-21/03B
 DRB #: 98-224 EPC #: 98-75 WORK ORDER #: _____
 LEGAL DESCRIPTION: Lots 6-18, Blk 13 & Lots 16-20 Blk 15 Rhodes Sandia Vista
 CITY ADDRESS: Domingo Rd NE between Grette st & Jane St.
 ENGINEERING FIRM: Engineering & Surveying Assoc CONTACT: Tom Mann
 ADDRESS: 5312 Noreen NE PHONE: 298-4651
 OWNER: Charles Bachelier CONTACT: Charles Bachelier
 ADDRESS: 4616 Paddington NE PHONE: 858-0781
 ARCHITECT: N/A CONTACT: _____
 ADDRESS: _____ PHONE: Tom Harris
 SURVEYOR: Harris Surveying Inc CONTACT: 889 8056
 ADDRESS: 2412-D Monroe NE PHONE: _____
 CONTRACTOR: Hydro Systems CONTACT: Lee Smith.
 ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- DRAINAGE PLAN
- CONCEPTUAL GRADING & DRAINAGE PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- ENGINEER'S CERTIFICATION
- OTHER _____

CHECK TYPE OF APPROVAL SOUGHT:

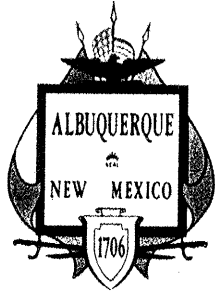
- SKETCH PLAT APPROVAL
- PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D. APPROVAL
- S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
- FINAL PLAT APPROVAL
- FOUNDATION PERMIT APPROVAL
- BUILDING PERMIT APPROVAL
- CERTIFICATE OF OCCUPANCY APPROVAL
- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- S.A.D. DRAINAGE REPORT
- DRAINAGE REQUIREMENTS
- SUBDIVISION CERTIFICATION
- OTHER _____ (SPECIFY)



PRE-DESIGN MEETING:

- YES
- NO
- COPY PROVIDED

DATE SUBMITTED: 10/12/99
 BY: Tom Mann



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 2, 1999

Thomas T. Mann, P.E. & P.S.
Engineering & Surveying Associates, Inc.
5312 Noreen Drive NE
Albuquerque, New Mexico 87111

**RE: Revised Grading and Drainage Plan for Shadow Mountain Subdivision (K21/D3B)
Submitted for Preliminary Plat Approval, Engineer's Stamp Dated 1/21/99.**

Dear Mr. Mann:

Based on the information provided with the submittal of January 22, 1999, the above referenced plan is approved for Preliminary Plat action.

The above referenced plan is also approved for Rough Grading. As you are aware, a top-soil disturbance permit must be obtained before any grading may occur on this site.

As the engineer, you must determine whether the block walls are retaining walls or not. All retaining walls must be shown on the grading plan that is approved by the DRB. Unless this plan is revised and resubmitted to City Hydrology and the DRB, the retaining walls shown by the darker lines on this plan must be certified.

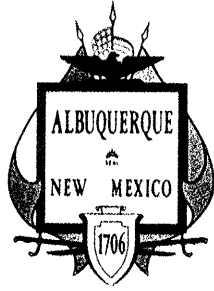
Prior to Final Plat sign-off, the SIA must be in place. The Grading and Drainage Certification is required prior to the release of Financial Guarantees for this subdivision.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Charles Bacheller, Owner
File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 8, 1999

Thomas T. Mann, P.E. & P.S.
Engineering & Surveying Associates, Inc.
5312 Noreen Drive NE
Albuquerque, New Mexico 87111

**RE: *Revised Grading and Drainage Plan for Shadow Mountain Subdivision (K21/D3B)
Submitted for Preliminary Plat Approval, Engineer's Stamp Dated 12/3/98.***

Dear Mr. Mann:

Prior to approval for Preliminary Plat action, the above referenced plan must be revised to address the following comments:

1. After careful examination of the grading plan, it appears that retaining walls are needed to absorb the differences in elevations between some of the Lots. Also, provide a section for the typical Lot grading detail to show the proposed slopes on the side yards.
2. It appears by the topography provided that retaining walls are also needed along the east and west property lines.
3. Lots 24 - 33 must be revised to drain toward the front of the Lots, i.e., to Shadow Mountain Road.
4. An off-site drainage easement is required for the proposed ditch shown to the east of the site. The Quitclaim Deed is not acceptable in lieu of this document. Also show elevations along this ditch on the plan.
5. As requested in my previous comments, please show the locations of each street cross-section on the plan.

If you have any questions regarding these comments, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: File

QUITCLAIM DEED

BUD LEWIS COMPANY, INC., a New Mexico corporation (Grantor), for consideration paid, quitclaims an undivided one-half (1/2) interest as tenants in common to Edward G. Otero or Carol J. Otero, his wife, (Grantee) whose address is 5028 Pheasant Ave. NW, Albuquerque, New Mexico 87120, to the following described real estate in Bernalillo County, New Mexico:

The west thirty feet (30') of Jane St. NE from the south right-of-way line of ISR-40 to the north right-of-way line of Dorothy Road, which vacated right-of-way is east of Block 15 of Rhodes Sandia Vista, as filed in the Office of the County Clerk of Bernalillo County, New Mexico on March 24, 1950.

SUBJECT TO: Restrictions, reservations and easements of record and to taxes for the year 1998 and subsequent years.

Grantor reserves an easement for the passage of storm drainage waters ("Reserved Easement") from Grantor's property located west of the conveyed property (the "Grantor's Retained Property") pursuant to a grading and drainage plan approved by the City of Albuquerque. It shall be the Grantor's obligation to construct and to maintain any required drainage facilities. This Reserved Easement shall benefit and be appurtenant to and run with the Grantor's Retained Property.

10/27
ADDED
BY
JOHN
MYERS

Witness my hand and seal this _____ day of October, 1998.

BUD LEWIS COMPANY, INC.

By _____
VELMA G. LEWIS, President



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 30, 1998

Thomas T. Mann, P.E. & P.S.
Engineering & Surveying Associates, Inc.
5312 Noreen Drive NE
Albuquerque, New Mexico 87111

RE: *Grading and Drainage Plan for Shadow Mountain Subdivision (K21/D3B) Submitted for Preliminary Plat Approval, Engineer's Stamp Dated 10/27/98.*

Dear Mr. Mann:

This letter is in response to your submittal of October 27, 1998. Prior to Preliminary Plat approval the following comments must be addressed:

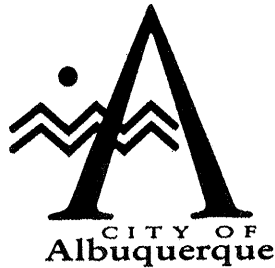
1. You state that the off-site flows from Basin A will be conveyed to Domingo Road by a proposed ditch. This ditch must be designed and be on the Infrastructure List. An off-site easement will also be required. Please provide a section for this ditch. Does Domingo have curb and gutter on the north side? Is a sidewalk culvert required?
2. The off-site drainage basin map does not show the north edge of the basin boundaries. Does the area north of the fence line drain to the north? This is not clear. The plan must show the on-site and Domingo road drainage basin boundaries.
3. The street capacity calculations are not complete. What is the depth of flow for the developed runoff at each section? You may wish to plot the 100-year water surface and EGL on each section. Show the location of the cross-sections on the plan. The sections do not include the elevations to the right-of-way. Is the EGL contained within the right-of-way on Domingo and Morris?
4. With respect to the downstream channel, concurrence must be obtained from the downstream property owner, or his agent, regarding their acceptance of your proposed developed runoff.

If you have any questions regarding these comments, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: File



October 2, 1998

Thomas T. Mann, P.E. & P.S.
Engineering & Surveying Associates, Inc.
5312 Noreen Drive NE
Albuquerque, New Mexico 87111

**RE: *Conceptual Grading and Drainage Plan for Shadow Mountain Subdivision (K21/D3B)
Submitted for Preliminary Plat Approval, Engineer's Stamp Dated 9/17/98.***

Dear Mr. Mann:

In my letter of September 9, 1998, I indicated that a comprehensive drainage report was required for the above referenced subdivision. The information provided was not complete. Prior to Preliminary Plat approval the following comments must be addressed:

1. The plan states that the off-site basin to the east drains to Domingo Road, however, the contours on the maps show that these lots drain to the west which may impact this subdivision.
2. Please provide a better off-site drainage basin map with current contours. The basin boundaries must be clearly delineated.
3. The runoff calculations for the off-site basin use only 24% land treatment "D." Is this for the fully developed condition? Why does the Domingo Road basin have only 68% land treatment "D?"
4. Provide cross-sections for the streets with the capacity calculations. Since the energy grade lines overtop the curbs on some of the streets, provide elevations for the adjacent lots to show that the existing residences will not be adversely impacted by the street flow.
5. Provide the proposed street grades for Shadow Mountain Road. Where the street flows go over the curbs, will the proposed residences be impacted?
6. Provide an analysis for the 90° turn at Domingo and Morris. It appears that this water will jump over the west curb in Morris onto the Lenkurt Site.



Tom Mann, P.E.
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October 2, 1998

7. Downstream capacity was not adequately addressed. A complete analysis is required for the existing earth channel. What is the velocity? How much runoff is the channel carrying? Provide elevations and cross-sections. Is this channel within a public easement or right-of-way?

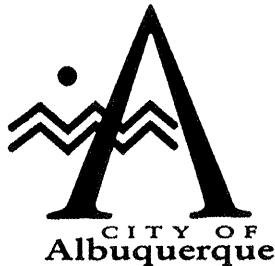
If you have any questions regarding these comments, please call me at 924-3982.

Sincerely,



Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: File



September 9, 1998

Tom Mann, P.E.
Engineering & Surveying Associates, Inc.
5312 Noreen Drive NE
Albuquerque, New Mexico 87111

**RE: *Conceptual Grading and Drainage Plan for Shadow Mountain Subdivision (K21/D3B)
Submitted for Preliminary Plat Approval, Engineer's Stamp Dated 8/11/98.***

Dear Mr. Mann:

Prior to Preliminary Plat approval for the above referenced subdivision, a comprehensive drainage report is required. The Report and Grading and Drainage Plan must address the following comments:

1. Downstream capacity was not fully addressed. Your plan proposes that the runoff will go west on Domingo, then turn north on Morris. Please analyze how the water makes this 90° turn. Does any runoff from Gretta join these flows at the Domingo/Morris intersection? Is a storm drain required in Morris? After the runoff reaches the north end of Morris, where does it go? It is not clear how this runoff enters the existing channel on the Lenkurt Site. The capacity and stability of this channel must be examined. It appears that the Lenkurt Site is proposing a storm drain system in the near future. You may wish to contact Tom Isaacson regarding the design and status of this proposed system. If your subdivision develops before that system goes in, will interim improvements be proposed?
2. Please provide a copy of the proposed Plat. It appears that right-of-way and/or easements may need to be vacated as well as the old Lot lines. Is the 30' strip of land just east of the site an easement or right-of-way? Please label this.
3. Clearly show the basin boundaries on the off-site drainage basin map. It is unclear whether Lots A-D drain directly to Domingo Road, or if they drain to the adjacent right-of-way or easement. How does your off-site basin map compare with the one prepared for the Lenkurt site?
4. A complete Grading and drainage plan is required. The plan must show all existing and proposed street grades. Spot elevations, as well as pad elevations, must be provided on each Lot. If any retaining walls are proposed, these must be shown on the plan. Provide a typical lot layout to demonstrate that cross-lot drainage is not proposed. Also show the existing contours adjacent to the subdivision on the north side.

Good for You, Albuquerque!



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September 9, 1998

5. It appears that 17.66 cfs exits Shadow Mountain Road onto Domingo Road. Since this water will probably jump over the crown in Domingo, is there an existing standard curb on the south side of the street to prevent this water from entering private property?

If you have any questions regarding these comments, please call me at 924-3982.

Sincerely,



Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: File

DRAINAGE PLAN

THE PROPOSED MOUNTAIN SHADOW SUBDIVISION IS LOCATED ADJACENT TO AND SOUTH OF I-40, NORTH OF DOMINGO ROAD NE BETWEEN JANE STREET NE AND GRETTA STREET NE. THE SITE IS UNDEVELOPED IT WAS PLATTED IN THE 1950'S AS A SINGLE FAMILY RESIDENTIAL SUBDIVISION, BUT I-40 WAS ROUTED THROUGH THIS AREA AND THIS PARTICULAR PORTION OF THE ORIGINAL SUBDIVISION DID NOT DEVELOP DUE TO THE ODD REMNANTS OF LAND AFTER THE I-40 CONSTRUCTION. THE LAND SLOPES FROM EAST TO WEST WITH A CROSS SLOPE TO THE SOUTH.

THE SITE IS HIGHER THAN DOMINGO ROAD TO THE SOUTH AND THE LAND TO THE WEST. IT IS PARALLEL WITH I-40 TO THE NORTH AND LOWER THAN THE LAND TO THE EAST. I-40 HAS BEEN GRADED TO CONTAIN THE RUNOFF WITHIN THE RIGHT-OF-WAY. THE LAND TO THE EAST HAS BEEN GRADED TO DIRECT THE RUNOFF INTO DOMINGO ROAD. THEREFORE, RUNOFF FROM OFFSITE IS MINIMAL.

THE DRAINAGE BASIN FOR THE OFFSITE FLOWS FROM THE EAST IS SHOWN ON THE ATTACHED COPIES OF AN AERIAL PHOTO AND SUPPLEMENTAL TOPOGRAPHY. THE I-40 RIGHT-OF-WAY WAS INCREASED TO ALLOW THE RECONSTRUCTION OF THE JUAN TABO OFF RAMP. THE OFF RAMP DIVERTS THE MAJORITY OF THE OFF SITE FLOW INTO THE INTERSTATE RIGHT-OF-WAY. THE REMAINING AREA IS DIVIDED INTO BASINS A, B AND C. BASIN A DRAINS INTO THE PROJECT AND BASINS B AND C DRAIN INTO JANE STREET AND AWAY FROM THE PROJECT. DOROTHY STREET, MARTHA STREET AND JANE STREET CONTAIN WATER BLOCKS THAT CONVEY THE FLOWS SOUTH AWAY FROM DOMINGO ROAD. GRETTA STREET TO THE WEST OF THE PROJECT CONTRIBUTES FLOWS TO DOMINGO ROAD.

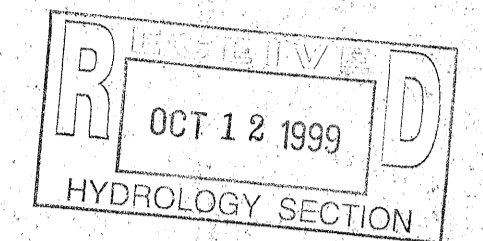
THE SUBDIVISION WILL BE GRADED TO DRAIN TO MOUNTAIN SHADOW ROAD. MOUNTAIN SHADOW WILL DRAIN INTO DOMINGO ROAD AT THE WEST END OF THE PROJECT SITE. THE COMBINED FLOWS FROM THE OFF SITE BASIN, THE PROJECT, DOMINGO ROAD AND GRETTA STREET WILL FLOW WEST IN DOMINGO TO MORRIS STREET AND THEN NORTH INTO THE CHANNEL THAT FLOWS WEST ALONG THE SOUTH RIGHT-OF-WAY OF I-40.

THE CALCULATIONS, WHICH APPEAR BELOW, ANALYZE THE EXISTING AND PROPOSED CONDITIONS FOR THE 6-HOUR, 100-YEAR RAINFALL EVENT. THE ANALYSIS IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME II. AS SHOWN BY THE CALCULATIONS, THE RATE OF RUNOFF AND THE VOLUME OF RUNOFF WILL INCREASE AS A RESULT OF THE PROPOSED DEVELOPMENT. HOWEVER, THE PERCENT OF INCREASE IS SMALL WHEN COMPARED TO THE EXISTING RUNOFF AND THE FLOWS ARE CONTAINED WITHIN THE STREET RIGHT-OF-WAYS AND MEET THE DPM STANDARDS.

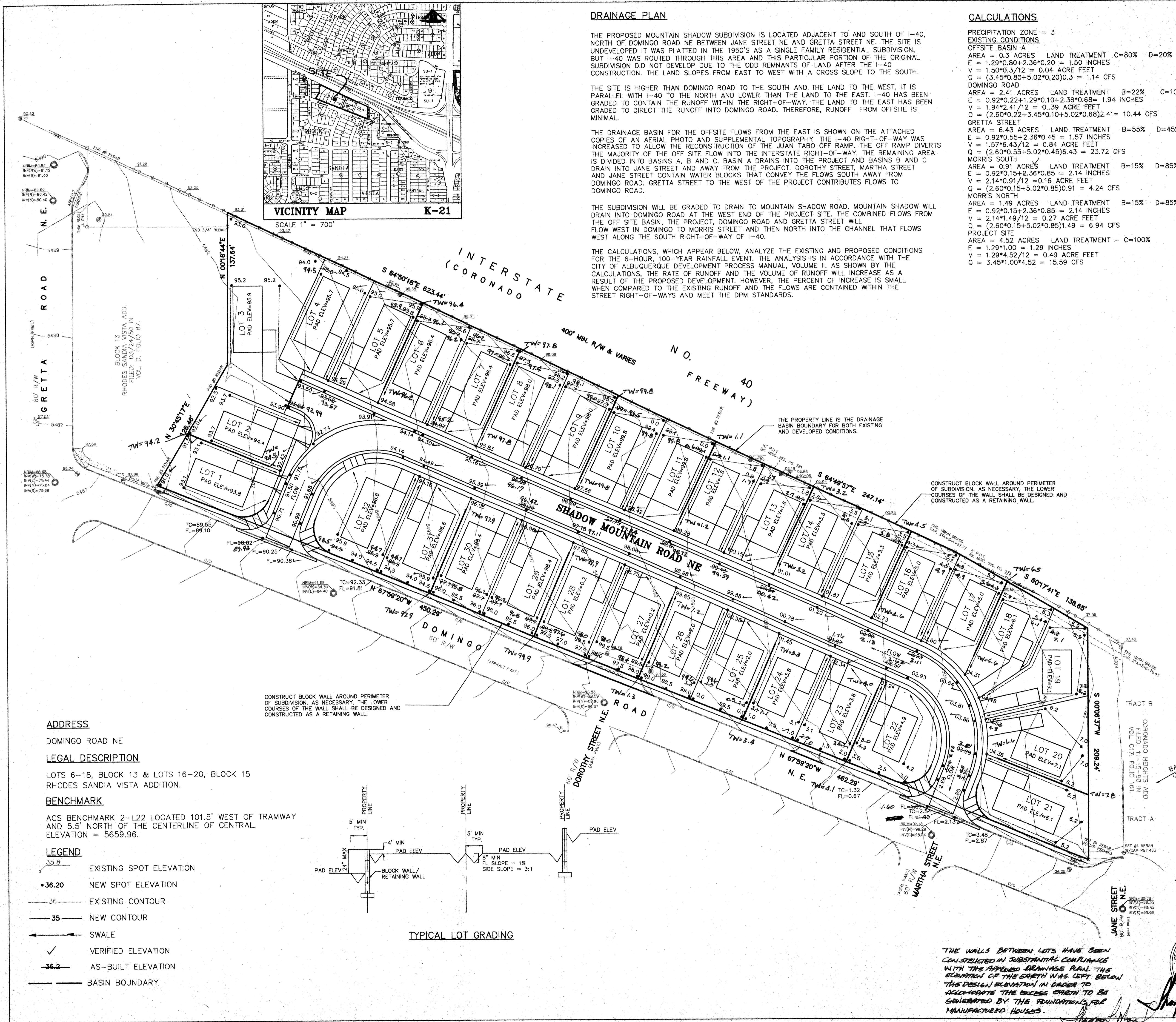
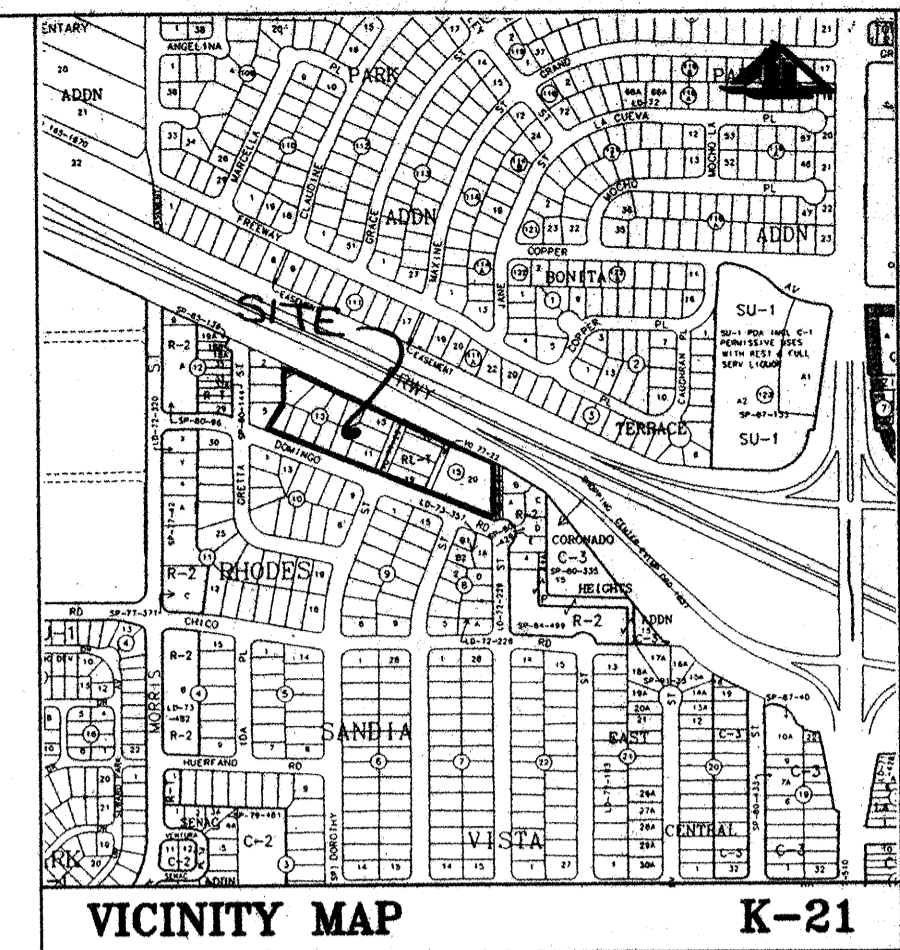
CALCULATIONS

PRECIPITATION ZONE = 3
 EXISTING CONDITIONS
 OFFSITE BASIN A
 AREA = 0.3 ACRES LAND TREATMENT C=80% D=20%
 $E = 1.29 \times 0.80 + 2.36 \times 0.20 = 1.50$ INCHES
 $V = 1.50 \times 0.3 / 12 = 0.04$ ACRE FEET
 $Q = (3.45 \times 0.80 + 5.02 \times 0.20) \times 0.3 = 1.14$ CFS
 DOMINGO ROAD
 AREA = 2.41 ACRES LAND TREATMENT B=22% C=10% D=68%
 $E = 0.92 \times 0.22 + 1.29 \times 0.10 + 2.36 \times 0.68 = 1.94$ INCHES
 $V = 1.94 \times 2.41 / 12 = 0.39$ ACRE FEET
 $Q = (2.60 \times 0.22 + 3.45 \times 0.10 + 5.02 \times 0.68) \times 2.41 = 10.44$ CFS
 GRETTA STREET
 AREA = 6.43 ACRES LAND TREATMENT B=55% D=45%
 $E = 0.92 \times 0.55 + 2.36 \times 0.45 = 1.57$ INCHES
 $V = 1.57 \times 6.43 / 12 = 0.84$ ACRE FEET
 $Q = (2.60 \times 0.55 + 5.02 \times 0.45) \times 6.43 = 23.72$ CFS
 MORRIS SOUTH
 AREA = 0.91 ACRES LAND TREATMENT B=15% D=85%
 $E = 0.92 \times 0.15 + 2.36 \times 0.85 = 2.14$ INCHES
 $V = 2.14 \times 0.91 / 12 = 0.16$ ACRE FEET
 $Q = (2.60 \times 0.15 + 5.02 \times 0.85) \times 0.91 = 4.24$ CFS
 MORRIS NORTH
 AREA = 1.49 ACRES LAND TREATMENT B=15% D=85%
 $E = 0.92 \times 0.15 + 2.36 \times 0.85 = 2.14$ INCHES
 $V = 2.14 \times 1.49 / 12 = 0.27$ ACRE FEET
 $Q = (2.60 \times 0.15 + 5.02 \times 0.85) \times 1.49 = 6.94$ CFS
 PROJECT SITE
 AREA = 4.52 ACRES LAND TREATMENT C=100%
 $E = 1.29 \times 1.00 = 1.29$ INCHES
 $V = 1.29 \times 4.52 / 12 = 0.49$ ACRE FEET
 $Q = 3.45 \times 1.00 \times 4.52 = 15.59$ CFS

PRELIMINARY GRADING AND DRAINAGE PLAN FOR SHADOW MOUNTAIN



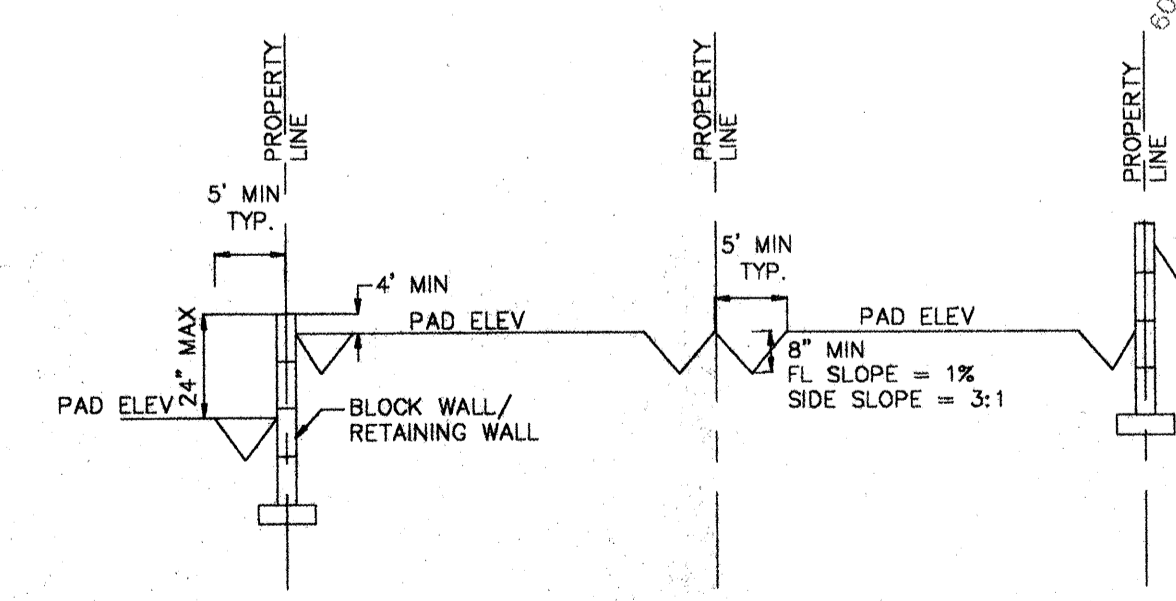
DEVELOPED CONDITIONS
 PROJECT SITE
 AREA = 4.52 ACRES LAND TREATMENT B=46% D=54%
 $E = 0.92 \times 0.46 + 2.36 \times 0.54 = 1.70$ INCHES
 $V = 1.70 \times 4.52 / 12 = 0.64$ ACRE FEET
 $Q = (2.60 \times 0.46 + 5.02 \times 0.54) \times 4.52 = 17.66$ CFS
 DOMINGO ROAD
 AREA = 2.41 ACRES LAND TREATMENT B=10% C=10% D=80%
 $E = 0.92 \times 0.10 + 1.29 \times 0.10 + 2.36 \times 0.80 = 2.11$ INCHES
 $V = 2.11 \times 2.41 / 12 = 0.42$ ACRE FEET
 $Q = (2.60 \times 0.10 + 3.45 \times 0.10 + 5.02 \times 0.80) \times 2.41 = 11.14$ CFS
 INCREASE IN RATE OF RUNOFF = $17.66 - 15.59 + 11.14 - 10.44 = 2.66$ CFS
 INCREASE IN VOLUME OF RUNOFF = $0.64 - 0.49 + 0.42 - 0.39 = 0.18$ ACRE FEET
STREET CAPACITIES
A. SHADOW MOUNTAIN ROAD JUST NORTH OF DOMINGO
 STREET WIDTH = 25' CURB HEIGHT = 0.33'
 STREET SLOPE = 1.76% CROWN HEIGHT = 0.25'
 $Q = 1.49 / n \times A \times R^{0.67} \times S^{0.5}$
 FOR FLOW DEPTH EQUAL TO THE TOP OF THE CURB
 $Q = 19.87$ CFS $V = 3.87$ FPS THEREFORE, THE STREET FLOWING FULL HAS A CAPACITY EXCEEDING THE DEVELOPED FLOW RATE AND THE ENERGY GRADE LINE = 0.57' WHICH IS WITHIN DPM STANDARDS.
B. DOMINGO UPSTREAM OF GRETTA
 RATE OF RUNOFF - EXISTING = $1.14 + 10.44 + 15.59 = 27.17$ CFS $E_{88.46} = 88.05$ $E_{88.14} = 88.14$
 RATE OF RUNOFF - DEVELOPED = $1.14 + 11.14 + 17.66 = 29.74$ CFS $E_{88.10} = 87.83$ $E_{87.87} = 87.99$
 RATE OF RUNOFF - PERCENT INCREASE = 10.2%
 STREET WIDTH = 40' STREET SLOPE = 1.7%
 $Q = 1.49 / n \times A \times R^{0.67} \times S^{0.5}$
 FOR FLOW DEPTH=CROWN+0.02, $Q = 30.60$ CFS AND $V = 3.79$ FPS.
 THEREFORE, THE TOTAL STREET AT 0.02' ABOVE THE CROWN HAS A CAPACITY EXCEEDING THE EXISTING AND DEVELOPED FLOW RATES AND THE ENERGY GRADE LINE=CROWN+0.24' WHICH EXCEEDS THE NORTH CURB BUT NOT THE SOUTH CURB.
C. DOMINGO DOWNSTREAM OF GRETTA
 RATE OF RUNOFF - EXISTING & DEVELOPED = 4.24 CFS $E_{86.06} = 85.94$ $E_{85.98} = 85.98$
 RATE OF RUNOFF - DEVELOPED = $29.94 + 23.72 = 53.66$ CFS $E_{85.87} = 85.58$ $E_{85.46} = 85.62$
 STREET PARAMETERS ARE THE SAME AS UPSTREAM OF GRETTA
 FOR A FLOW DEPTH=CROWN+0.12', $Q = 53.60$ AND $V = 4.79$ FPS
 THEREFORE, THE TOTAL STREET AT 0.12' ABOVE THE CROWN HAS A CAPACITY EXCEEDING THE EXISTING AND DEVELOPED FLOW RATES AND THE ENERGY GRADE LINE=CROWN+0.48' WHICH IS WITHIN DPM STANDARDS.
MORRIS SOUTH OF DOMINGO
 RATE OF RUNOFF - EXISTING & DEVELOPED = 4.24 CFS
D. MORRIS NORTH OF DOMINGO
 RATE OF RUNOFF - EXISTING = $6.94 + 4.24 + 50.89 = 62.07$ CFS $E_{83.12} = 82.94$ $E_{83.12} = 83.12$
 RATE OF RUNOFF - DEVELOPED = $6.94 + 4.24 + 53.66 = 64.84$ CFS $E_{82.59} = 82.78$ $E_{82.52} = 82.87$
 RATE OF RUNOFF - PERCENT INCREASE = 4.5%
 STREET WIDTH = 48' STREET SLOPE = 0.5%
 FOR A FLOW DEPTH=CROWN+0.26', $Q = 64.11$ CFS AND $V = 3.25$ FPS
 THEREFORE, THE TOTAL STREET AT 0.26' ABOVE THE CROWN HAS A CAPACITY EXCEEDING THE EXISTING AND DEVELOPED FLOW RATES AND THE ENERGY GRADE LINE = CROWN+0.42' WHICH IS BELOW THE WEST CURB AND WITHIN DPM STANDARDS AT THE EAST PROPERTY LINE.
E. EARTH CHANNEL @ LINKURT
 $Q = (1.49 / 0.03) (9) (0.95) (0.16) = 67.94$ CFS
 $V = 7.55$ FPS @ 1.50 FEET OF DEPTH.



CONSTRUCT BLOCK WALL AROUND PERIMETER OF SUBDIVISION, AS NECESSARY, THE LOWER COURSES OF THE WALL SHALL BE DESIGNED AND CONSTRUCTED AS A RETAINING WALL.

CONSTRUCT BLOCK WALL AROUND PERIMETER OF SUBDIVISION, AS NECESSARY, THE LOWER COURSES OF THE WALL SHALL BE DESIGNED AND CONSTRUCTED AS A RETAINING WALL.

THE PROPERTY LINE IS THE DRAINAGE BASIN BOUNDARY FOR BOTH EXISTING AND DEVELOPED CONDITIONS.



TYPICAL LOT GRADING

ADDRESS

DOMINGO ROAD NE

LEGAL DESCRIPTION

LOTS 6-18, BLOCK 13 & LOTS 16-20, BLOCK 15 RHODES SANDIA VISTA ADDITION.

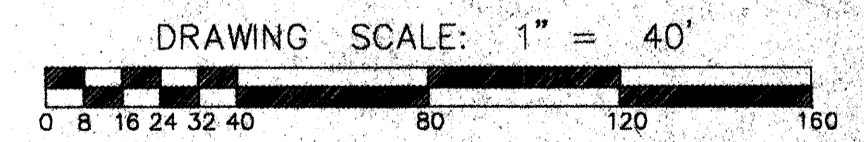
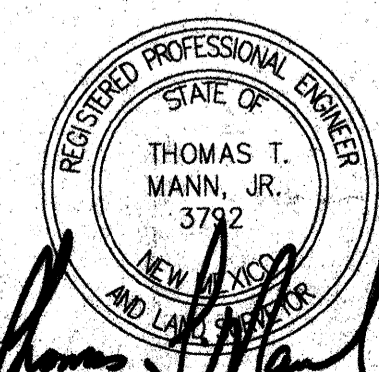
BENCHMARK

ACS BENCHMARK 2-L22 LOCATED 101.5' WEST OF TRAMWAY AND 5.5' NORTH OF THE CENTERLINE OF CENTRAL ELEVATION = 5659.96.

LEGEND

- 35.8 EXISTING SPOT ELEVATION
- 36.20 NEW SPOT ELEVATION
- 36--- EXISTING CONTOUR
- 35--- NEW CONTOUR
- SWALE
- ✓ VERIFIED ELEVATION
- 36.2 AS-BUILT ELEVATION
- BASIN BOUNDARY

THE WALLS BETWEEN LOTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN. THE ELEVATION OF THE EARTH WAS LEFT BELOW THE DESIGN ELEVATION IN ORDER TO ACCOMMODATE THE EXCESS EARTH TO BE GENERATED BY THE FOUNDATIONS FOR MANUFACTURED HOUSES.



Engineering & Surveying Associates, Inc.
 5312 Norcross Drive NE • Albuquerque, NM 87111
 (505) 298-4491

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