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County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

December 18, 1996

Federal Emergency Management Agency
Office of Risk Assessment
500 C Street SW, Room 422
Washington, D.C. 20472

Case Number: 96-06-141R
Community: Bernalillo County, New Mexico
Community No.: 350001

Attention: Mr. Michael K. Buckley, P. E., Chief
Hazard Identification Branch
Mitigation Directorate

Dear Mr. Buckley:

This submittal is in response to the letter from the Federal Emergency Management Agency (FEMA) to Bernalillo County dated February 13, 1996 requesting additional data in order for FEMA to prepare a Letter of Map Revision for the removal of the Special Flood Hazard Area within the Rio Bravo Estates subdivision.

FEMA's letter requested the As-built plans certified by a registered professional engineer, an officially adopted operation and maintenance plan, and certification of compaction of the fill material. These have been enclosed with this submittal along with the initial review fee of $225.00, which was also requested in FEMA's letter.

Your prompt response and approval for this Letter of Map Revision would be greatly appreciated. If you should have any questions concerning this submittal, please call me at (505) 768-2666.

Sincerely,

Susan Calongne

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

Attachments

c: Mr. Frank Pagano, Branch Chief, FEMA Region VI (letter only)
Roger A. Paul, P.E., Bernalillo County Public Works Division (letter only)
Jeffrey G. Mortensen, P.E., Jeff Mortensen & Assoc. (letter only)
File P14/D1; PWD-94-229) (letter only)

Jusson's Copy

County of Bernalillo

State of New Mexico

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PUBLIC WORKS (505) 848-1500

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JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

Date: 04-DEC-96

Subject: Resubmittal

Case No.: PWD-94-229

Zone Map No.: P-14

Street Address: PRINCE SR SE

Legal Description: LTS 1-119 RIO BRAVO ESTATES

Name of Applicant: Rio Bravo Estates

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.

The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any variance or violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized County representative or County inspector form thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.

Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, Land Divider, Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the contract; the proper fitting and construction for the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

REV 4-22-91 BR

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

Please complete pages one and two of this application for review of your case. **Submit THREE bluelines of plat, drawings, or information with case submittals and THREE bluelines of plat, drawings, or information along with the original mylar for final sign-off applications. Submit a County Zone Atlas Map with subject property marked on the map.** If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photcopy of a USGS quad map with the subject property superimposed.

NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**

a. Applicant is(check one):

__X_OWNER ____SURVEYOR ____AGENT
____ENGINEER ____DRAINAGE ENGINEER

b. Date of this application: 06-NOV-96

c. Signature of applicant:
(print)_____ (sign)_____

d. OWNER: Rio Bravo Estates PHONE: 293-7826
11209 Paris NE
Albuquerque, NM 87111

e. AGENT: Jeff Mortensen & Assoc PHONE: 505-345-4250
6010-B Midway Park NE
Albuquerque, NM 87109

f. OTHER(specify): Jeff Mortensen & Assoc PHONE: 505-345-4250
6010-B Midway Park NE
Albuquerque, NM 87109

2. **TYPE OF SUBMITTAL (check one):**

_____REPLAT
_____LAND DIVISION (MINOR SUBDIVISION)
_____MAJOR SUBDIVISION
_____CONSTRUCTION DRAWINGS
_____GRADING/DRAINAGE PLAN
__X__AS-CONSTRUCTED GRADING/DRAINAGE PLAN
_____VARIANCE REQUEST
_____TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
_____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
_____OTHER (specify):_____

County of Bernalillo
Floodplain

Your: ___ submittal of drainage information
X resubmittal of drainage information

is: ___ approved.
X approved with comments/conditions.
___ disapproved.
___ deferred to County Floodplain Administrator

TO BE FILLED OUT BY COUNTY PUBLIC WORKS DIVISION ONLY

Case review comments are:

X attached.
___ not attached.
___ not attached. See remarks below.

Resubmittal is:

X not required.
___ required. When resubmitting, please use Resubmittal Form.

Please submit:

___ grading/drainage plan with revisions.
X as-constructed grading/drainage plan.
___ other: _____

It is required that:

___ Bernalillo County Public Works Division inspect improvements prior to final sign-off of plat.
___ Bernalillo County Public Works Division signature line be placed on plat.

Remarks: _____

R A Paul, PE 12/3/96

* See attached memo for AMAFCA Concurrence

Roger A. Paul, P.E
Development Review Section Manager
Bernalillo County Public Works Division

cc: ___ Sandia Heights Homeowners Association
X Owner: Rio Bravo Estates, Ltd.
X Agent: Jeff Mortensen + Assoc.
X Case File: PWD - 94 - 229
___ AMAFCA
X Susan Calongne, County Floodplain Administrator, COA
X Molzen-Corbin & Associates
___ Other: _____

pb-wrks 1

GENEIVA MEEKER, CHAIR
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MICHAEL MURPHY, ASST. SECRETARY-TREASURER
TIM EICHENBERG, DIRECTOR

LARRY A. BLAIR
EXECUTIVE ENGINEER

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

2600 PROSPECT N.E. - ALBUQUERQUE, N.M. 87107
TELEPHONE (505) 884-2215

July 30, 1996

TO: Roger Paul, P.E.
Bernalillo County Public Works Department

FR: Kurt Browning, P.E.
AMAFCA

For grading and drainage submittals that are located in the floodplain, it is not necessary for AMAFCA to sign the County approval/disapproval form. AMAFCA's comments are coordinated with the City/County Floodplain Administrator and are included in the written response.

You may include this memo with the signature sheet as needed, for the closing of floodplain cases.

End

BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT
CASE FILE COMMENTS

CASE NO: PWD-94-229

ZONE MAP NO.: P-14

REFERENCE CASES:

DRB-94-10
DRB-84-516
V-94-113
SV-94-57
SC5-94-43
CON-96-70

STREET ADDRESS: PRINCE SR SE

LEGAL DESCRIPTION: LTS 1-119 RIO BRAVO ESTATES

COMMENTS OF:

04-OCT-94 DRAN: A portion of this property appears to be within a designated 100 year flood plain as shown on the National Flood Insurance Program's Flood Insurance Rate Map. Defer approval to the County Floodplain Administrator.

14-NOV-94 DRE:
1. Will need T.I.A. (warrant study should be part of).
2. Trips generated should not be based on Single Family Detached Housing for a mobile home development. (use Land Use240 Or 270)
3. Traffic values for Prince used in the warrant analysis must be based on approach traffic (northbound) Traffic turning on to Prince from Rio Bravo does not count.
4. What are the distancs from the proposed signal on Prince to the existing signals at 2nd and Broadway? What are the impacts of the signal to Rio Bravo?
5. Preliminary infrastructure list approved for submittal to DRE.

06-DEC-94 DRAN:
1. Coordination with the MRGCD will be needed prior to construction of the discharge facilities into the San Jose Drain.
2. The engineer must demonstrate that the San Jose Drain will not have a capacity problem downstream using new hydrology methods. Since the City maintains the San Jose Drain, their Storm Drain Maintenance division may require additional improvements to the drain either adjacent to or downstream from this development.
3. With repect to the LOMR required by FEMA, it is strongly recommended that the engineer apply for a Conditional Letter of Map Revision (CLOMR) as soon as the drainage plan is approved. That way, any additional improvements required by FEMA may be incorporated into the plans before construction is complete. The County will withhold all financial guarantees for this project until after the LOMR is obtained, therefore it is in the developer's best interest to get this process started.
4. Is there any perimeter or internal fencing proposed by this plan that may adversely affect the overall drainage scheme of this plan? If so, please address this concern. If not, provide a statement on the plan which

states that no fencing is proposed by this plan and that any future fencing will be approved through Bernalillo County Public Works via a revised grading and drainge plan.

5. It appears that access is being taken from both Prince Street and King Road. Please include language stating that these roads are currently maintained by Bernalillo County.
6. If the intention of this plan is to provide one grading and drainage plan for the entire subdivision, please include details for pad elevations and dwelling locations along with the general grading scheme of the lots. This type of information might possibly be shown on (a) typical lot layout(s).
7. Provide details and calculations for the storm drains.
8. Is there any erosion protection proposed for the discharge point of the storm drain into the San Jose Lateral? Will this discharge affect (i.e. degradation) the current condition of the arroyo bed at the point of discharge or at any downstream?

03-MAY-95 DRAN:

1. This submittal has been approved on a conceptual basis only, a detailed grading and drainage plan will need to be submitted, reviewed, and accepted by Bernalillo County Public Works, AMAFCA, and the Floodplain Administrator prior to final approval.
2. A letter from the Floodplain Administrator, dated May 22, 1995, details several issues raised by her office and COA Hydrology.
3. What is the size of the "bleed" pipe shown on sheet 2 of the supplemental drawings? Is there a need for backflow prevention on this pipe?
4. Recommend elimination of the dead storage. Please investigate providing a positive drop from the 36" discharge pipe to the outlet bleed pipe.
5. Due to the anticipated depth of flow in the San Jose Drain, will the weir function as proposed and will the weir discharge cause hydraulic problems in the San Jose Drain?
6. As of this date, we understand that the homeowner's association is proposing to maintain this pond.
7. For the drainage basins upstream of the pond, will the proposed street street sections carry the projected 112 cfs? Will the cattle guard inlet intercept these flows?

29-JUN-95 DRAN:

1. Based on the information provided on the grading and drainage plan, with engineer's seal dated 06/28/95, this plan appears to meet the requirements established for this area and is therefore acceptable.
2. Development of this property must conform to this plan. Any proposed changes will require a revision to the plan prior to initiating the proposed change.
3. An "As-constructed" grading and drainage plan, with engineer's compliance with this plan, will be required prior to County Building and certification that the constructed improvements are in substantial Zoning issuing an occupancy permit.
4. A letter from the Floodplain Administrator, dated July 26, 1995, incorporates several issues related to her office and the City of Albuquerque. Please address these issues appropriately.
5. We understand that the homeowner's association will be responsible for the maintenance of the storm drainage facilities for the subdivision. The Subdivision Improvement Agreement will formalize this concept.
6. A revised layout for Rosson Court was provided to BCPWD subsequent to the submittal of this grading and drainage plan. All future submittals must incorporate this modification.
7. We question the use of a rock-filled perforated pipe to drain the oil separator. However, we understand that the detail used in this plan is based on MRGCD standard drawings. Please verify the intent of this design detail and provide a copy of the MRGCD standard.
8. This plan utilizes the concept of cross-lot drainage in several

locations. Please investigate the use of retaining walls to eliminate the need for cross-lot drainage or incorporate the appropriate clauses on the plat and in the subdivision covenants.

9. In the calculation of the storm drainage capacity for the 2-36" pipes, the result should read 1.90 feet instead of 190 feet.
10. The following items need to be addressed on the construction plans for the subdivision:
    a. Verify and adjust the T.C. elevation of 32.84 near Lot 90. It appears that the elevation should be 34.84.
    b. There appears to be a low spot in the knuckle at Lots 15 and 16. Please verify the indicated elevations and the grading scheme in this area.
    c. The contour numbering scheme on the west side of the ponding area is in error. All details that contain this information should be revised.
    d. A review of the riprap computations indicate that the length of the pad is too short and should be 3' - 4' longer. Please verify the length calculation and revise the length as appropriate on the construction plans.

*** Inspection required, applicant required to obtain permits from G.J. Foster at Bernalillo County Public Works Department.
Phone (505) 848 - 1523

ENGA: Paving & grading permit issued 28-Aug-95 #11848

08-SEP-95 DRE:
1. T.I.A. as submitted Oct. 18, 1995 is approved.
2. Provision needs to be made with infrstructure financial guarantees to provide $22,050.00 for future traffic signals at Rio Bravo/ Prince intersection.

06-SEP-96 DRAN: The Floodplain Administrator has completed review of this case and comments are as follows:
Based on the information provided on the "as-constructed" grading and drainage plan, it appears to be in substantial compliance with the approved plan with exception to work uncompleted in the San Jose Drain. Revised as constructed drawings are required to be resubmitted at the time of completion of all work.

06-NOV-96 DRAN:
1. Based on the information provided on the "as-constructed" grading and drainage plan, with engineer's seal dated 11-05-96, this plan appears to be in substantial compliance with the approved grading and drainage plan, with approval date 06-28-95, and is therefore acceptable.

DF
12-4-96

RECEIVED
NOV 2 2 1996
Bernalillo County
Public Works

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State of New Mexico

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JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

November 18, 1996

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Division
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: ENGINEER'S CERTIFICATION FOR RIO BRAVO ESTATES, (P14/D1) (PWD-94-229), ENGINEER'S STAMP DATE 11/5/96.

Dear Mr. Paul:

Based on the information provided in the submittal of November 12, 1996, the above referenced plan is acceptable for the Subdivision Certification requirement.

Since all construction is complete, the engineer must complete the LOMR forms and submit them along with the As-Built plans to my office so that I may submit them to FEMA. Per the CLOMR dated February 13, 1996, FEMA also requires the certification of the fill placement, the maintenance plan for the pond and an initial review fee of $225. I have since received the revised fee schedule from FEMA which I have attached for the Engineer's and Owner's information.

If you should have any questions, or if I may be of further assistance to you, please call me at 768-2666.

Sincerely,

Susan Calongne

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

c: Michele F. Delilla, Jeff Mortensen & Assoc. (w/ attachment)
Jimmie Glenn, Owner (w/ attachment)
File (letter only)

FEDERAL EMERGENCY MANAGEMENT AGENCY

Fee Schedule for Processing Requests for Map Changes and for Flood Insurance Study Backup Data for FY 1997

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Notice.

SUMMARY: This notice contains the revised fee schedules for processing certain requests for changes to National Flood Insurance Program (NFIP) maps and for processing requests for Flood Insurance Study (FIS) backup data. The changes in the fee schedules will allow FEMA to reduce further the expenses to the NFIP by recovering more fully the costs associated with (1) processing conditional and final map change requests and (2) retrieving, reproducing, and distributing technical and administrative support data related to FIS analyses and mapping.

DATES: The revised fee schedules are effective October 1, 1996.

FOR FURTHER INFORMATION CONTACT: Michael K. Buckley, P.E., Chief, Hazard Identification Branch, 500 C Street SW., Washington, DC 20472; (202) 646–2756 or by facsimile at (202) 646–4596 (not toll-free calls).

SUPPLEMENTARY INFORMATION: This notice contains the revised fee schedules for processing certain requests for changes to National Flood Insurance Program (NFIP) maps and for processing requests for Flood Insurance Study (FIS) backup data. The revised fee schedule for map changes is effective October 1, 1996, in accordance with the rule for changes to 44 CFR parts 65, 70, and 72, published elsewhere in this edition of the **Federal Register**, and supersedes the current fee schedule established on June 30, 1992.

The revised fee schedule for requests for FIS backup data also is effective October 1, 1996, and supersedes the current fee schedule, also published in the **Federal Register**.

The basis for the initial fees, flat user fees, and hourly rates for requests for Conditional Letters of Map Amendment (CLOMAs), Conditional Letters of Map Revision Based on Fill (CLOMR–Fs), Conditional Letters of Map Revision (CLOMRs), Letters of Map Revision Based on Fill (LOMR–Fs), Letters of Map Revision (LOMRs), and Physical Map Revisions and requests for FIS backup data received by FEMA on or after October 1, 1996 are provided in the separately published rule.

A primary component of the fees is the prevailing private-sector rates charged to FEMA for labor and materials. Because these rates and the actual review and processing costs may vary from year to year, FEMA will publish revised fee schedules periodically, when needed, as notices in the **Federal Register**.

Simplification of Fee Schedule for Conditional and Final Map Changes

The existing fee collection process is complex and its administration requires time-intensive efforts on the part of FEMA. It also increases the time required to provide requesters with the product they require. The current system requires requesters to submit an initial fee that is not intended to cover the full review and processing costs or the cartographic production costs. Requesters subsequently receive invoices for the balance. The current system is complicated further by the pre-authorized spending limits placed on each product. When FEMA determines that these limits will be exceeded, written authorization must be obtained before proceeding with their review. Processing the request is delayed until the written authorization is received.

FEMA has streamlined the process by (1) charging flat user fees for most map change products and services; (2) requiring full payment of fees before work is begun on most map change requests; (3) consolidating similar products or services into a limited number of user fee categories; and (4) limiting the number of products for which requesters may receive exemptions from payment of fees. As a result, requesters and FEMA know the cost of providing a product or service before any work is begun.

The initial fee for requests for LOMRs and CLOMRs based on structural measures on alluvial fans has been maintained because (1) such requests are rare, (2) the FEMA review for these requests is usually very complex, and (3) the costs involved in processing the requests can fluctuate significantly.

Fees for Conditional and Final Map Revisions Based on Structural Measures on Alluvial Fans

Based on a review of actual cost data for Fiscal Year 1995, FEMA established $5,000 as the initial fee for requests for LOMRs and CLOMRs based on structural measures on alluvial fans. The remainder of the review and costs is to be recovered by invoicing the requester before FEMA issues a determination letter, consistent with current practice. The prevailing private-sector labor rate charged to FEMA ($50/hour) shall be used to calculate the total fees that must be reimbursed.

Fee Schedule for Conditional Letters of Map Amendment and Conditional and Final Letters of Map Revision Based on Fill

Based on a review of actual cost data for Fiscal Year 1995, FEMA established the following flat user fees, which are to be submitted by requesters with requests received by FEMA on and after October 1, 1996:

Single-lot/single-structure CLOMA, CLOMR–F, and LOMR–F $400
Multiple-lot/multiple-structure CLOMA $700
Multiple-lot/multiple-structure CLOMR–F and LOMR–F $800

Fee Schedule for Map Revisions

Unless the request is otherwise exempted under 44 CFR 72.5, the flat user fees shown below are to be submitted by requesters with requests for LOMRs and Physical Map Revisions that are not based on structural measures on alluvial fans that are received by FEMA on and after October 1, 1996. These fees are based on a review of actual cost data for Fiscal Year 1995.

Request based on bridge, culvert, channel, or combination thereof $3,700
Request based on levee, berm, or other structural measure $4,300
Request submitted as followup to CLOMR. Request based solely on submission of more detailed data $2,300

Fee Schedule for Conditional Map Revisions

Unless the request is otherwise exempted under 44 CFR 72.5, the flat user fees shown below are to be submitted by requesters with requests for CLOMRs that are not based on structural measures on alluvial fans that are received by FEMA on and after October 1, 1996. These fees are based on a review of actual cost data for Fiscal Year 1995.

Request based on new hydrology, bridge, culvert, channel, or combination $3,100
Request based on levee, berm, or other structural measure $3,300

Fee Schedule for Requests for Flood Insurance Study Backup Data

The user fees shown below are to be submitted by requesters with requests for FIS backup data that are received by FEMA on and after October 1, 1996. These fees are based on a review of actual cost data for Fiscal Year 1995. They are based on the complete recovery of FEMA's costs for retrieving, reproducing, and distributing the data, as well as a pro rata share of the costs

for maintaining the data and operating the fee reimbursement system.

As under the previous fee schedule, all entities except FEMA's Study Contractors, FEMA's Technical Evaluation Contractors, and the Federal agencies involved in performing FISs (i.e., U.S. Army Corps of Engineers, U.S. Geological Survey, Natural Resources Conservation Service, National Oceanic and Atmospheric Administration, and Tennessee Valley Authority) will be charged for requests for FIS backup data. The only exception is that one copy of the FIS backup data will be provided to a community free of charge if the data are requested during the statutory 90-day appeal period for an FIS.

FEMA has established seven categories into which requests for FIS backup data are separated. These categories are:

(1) Category 1—Paper copies or microfiche of hydrologic and hydraulic backup data for current FIS

(2) Category 2—Paper copies of topographic mapping developed during FIS process

(3) Category 3—Paper copies of survey notes developed during FIS process

(4) Category 4—Paper copies of individual Letters of Map Change

(5) Category 5—Paper copies of preliminary map panels

(6) Category 6—Computer tapes of Digital Line Graph files

(7) Category 7—Computer diskettes and user's manuals for FEMA programs

The costs of processing requests in Categories 1, 2, and 3 above will vary based on the complexity of the research involved in retrieving the data and the volume and medium of data to be reproduced and distributed. For these categories of requests, FEMA will require the payment of an initial minimum fee, shown below, to cover the preliminary costs of research and retrieval. This fee will then be applied against the total labor costs, and the requester will be invoiced for the remainder of the fees. No data will be provided to a requester until all required fees have been paid.

The costs for processing requests under Categories 4 through 7 above will not vary. Therefore, FEMA has established flat user fees for these categories of requests.

Initial Fee for Requests in Categories 1, 2, and 3 (per request) $90

Labor Fee for Requests in Categories 1, 2, and 3 (per hour) $33

Library Maintenance Fee for Requests in Categories 1, 2, and 3 (per request) $28

Microfiche Production Fee for Requests in Categories 1, 2, and 3 (per request) $22

Overhead Fee for Requests in Categories 1, 2, and 3 (per request) $43

Total Fee for Category 4 Requests (per letter) $40

Total Fee for Category 5 Requests (first panel) $35

Total Fee for Category 5 Requests (additional panels) $2

Total Fee for Category 6 Requests (per community) $150

Total Fee for Category 7 Requests (per copy) $25

Payment Submission Requirements

Fee payments must be made in advance of services being rendered. These payments are to be in the form of a check or money order or by credit card payment. Checks and money orders are to be made payable, in U.S. funds, to the National Flood Insurance Program. FEMA will provide receipts to requesters for their records or billing purposes.

The fees collected will be deposited to the National Flood Insurance Fund, which is the source of funding for providing these services.

Dated: August 23, 1996.

Richard W. Krimm,

Acting Associate Director, Mitigation Directorate.

[FR Doc. 96–22076 Filed 8–29–96; 8:45 am]

BILLING CODE 6718–04–P

BOARD OF COUNTY COMMISSIONERS
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November 18, 1996

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Division
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: ENGINEER'S CERTIFICATION FOR RIO BRAVO ESTATES, (P14/D1) (PWD-94-229), ENGINEER'S STAMP DATE 11/5/96.

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If you should have any questions, or if I may be of further assistance to you, please call me at 768-2666.

Sincerely,

Susan Calongne

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

c: Michele F. Delilla, Jeff Mortensen & Assoc. (w/ attachment)
Jimmie Glenn, Owner (w/ attachment)
File (letter only)

Greiner

DRAINAGE REPORT

for

SCHWARTZMAN INDUSTRIAL PARK
TRACTS 4A, 4B & 4C

Prepared By: **Greiner, Inc.**
5971 Jefferson Blvd., NE
Suite 101
Albuquerque, New Mexico 87109

John Block, E.I.

Dale Morehead, P.E.

DANIEL L. MOREHEAD
NEW MEXICO
6294
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
AUG 14 1990
HYDROLOGY DIVISION

REPORT AMENDED AUGUST 1990

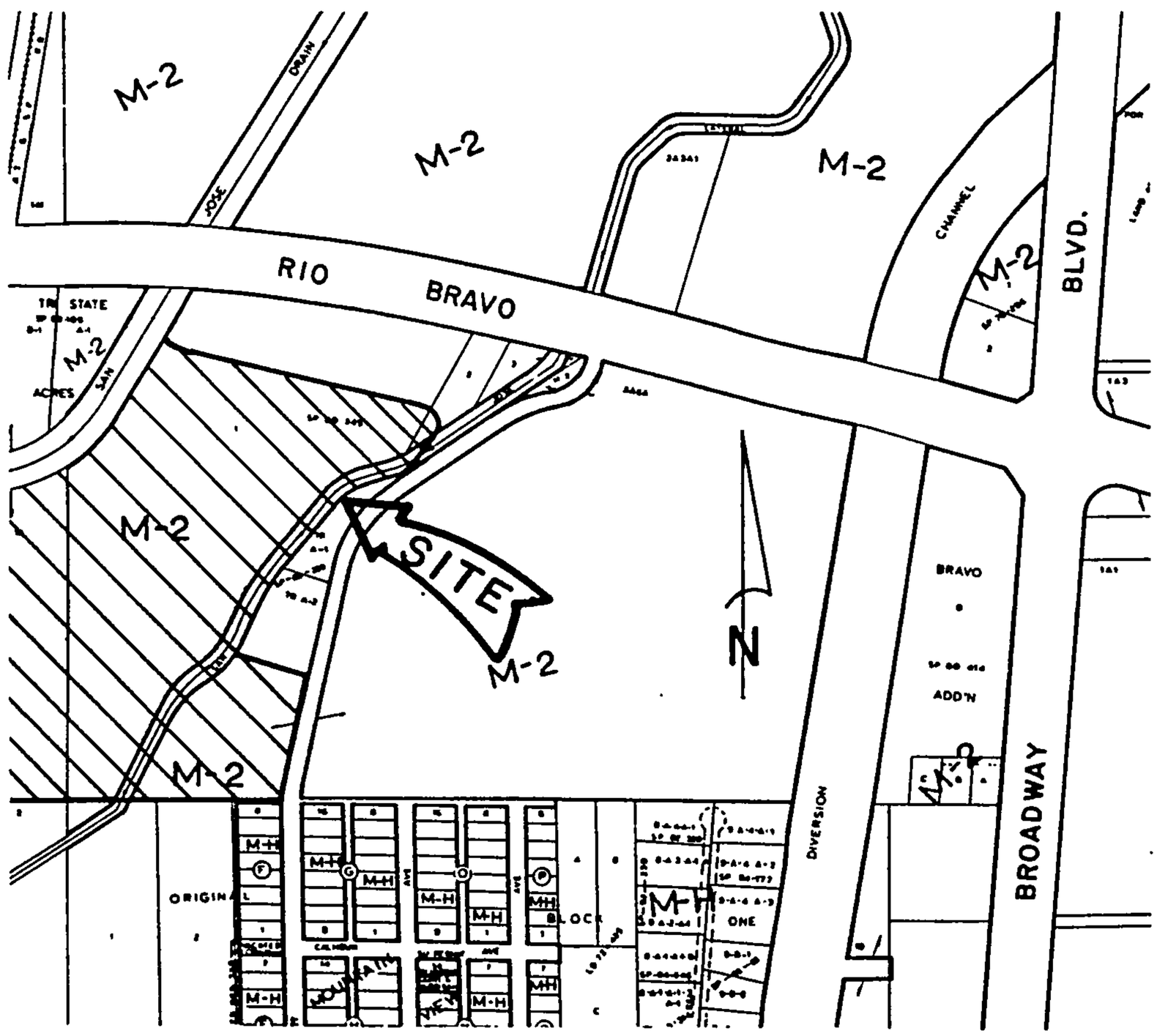
General information

The property is located in Albuquerque's south valley between Second and Prince streets and approximately 300 feet south of Rio Bravo Boulevard.

This parcel was a portion of the old Schwartzman Packing property. Until recently the property was used for agricultural purposes. The ground is very flat and humus from years of farming. Alfalfa still grows unattended over most of the property.

In March of 1990 a subdivision plat was filed for the property and this parcel became Tract 4 of Schwartzman Industrial Tract Unit 1. A condition of approval for that plat was that a drainage report be filed prior to any further development. Also, development of this tract will require approval by the County Flood Plain Administrator.

Concurrently to approving the Schwartzman Industrial plat a conceptual grading and drainage plan was approved for this property. The conceptual drainage plan identified the general nature of future grading and drainage and concepts for which this report will follow.

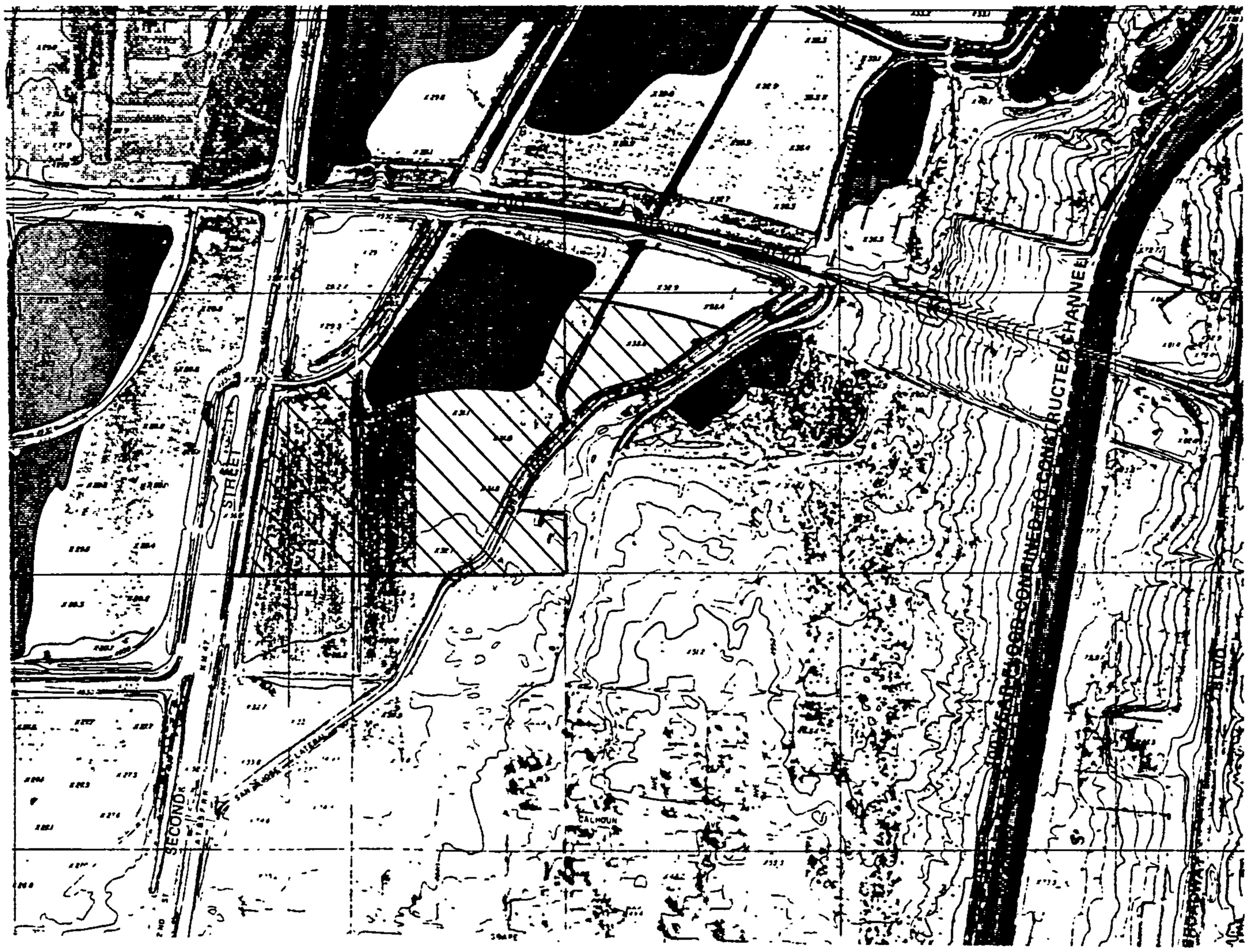


BERNALILLO COUNTY ZONE ATLAS P-14

Flood hazard information.

A portion of this property falls with in the flood hazard boundary as identified on panel 350002 0040 of the Flood Boundary and Floodway Map, City of Albuquerque, New Mexico, Bernalillo County as prepared by the Federal Emergency Management Agency (FEMA). The site does not have a drainage outfall, therefore, all runoff remains on the property, resulting in the inundation.

It will be necessary to file an amendment to the "Flood Boundary and Floodway Map" for the proposed rearrangement of inundated areas.



FEMA PANEL 350002-40

Soils Information

The site is predominately made up of the Glendale clay loam (Gm) soil. The east portion of the property has strips of Gila loam (Gb), Gila complex (Gf), and a very narrow strip of Bluepoint loamy fine sand (BcA) adjacent to Prince street.

The Gm soil tends to have a very slow runoff and the hazard of water erosion is slight. The Gb soil tends to have a slow runoff and the hazard of water erosion is slight. The Gf soil tend to have a medium runoff (due primarily to slope) and a moderate water erosion. The BaC soil generally has a slow runoff and is more likely to erode due to wind.

The (BcA) soil is classified in the "A" hydrologic soils group. All of the other soils are considered to be in the "B" hydrologic soils group as identified by the SCS Soils Survey of Bernalillo County.

The Gm and BcA soils have a permeability of 6 to 20 inches/hour. The Gb and Gf soils have a permeability of .6 to 2 inches/hour. Generally the soils are well drained with the seasonal high water table grater than 5ft deep. The area where retention ponds are proposed would be in the Gm soils area.

BERNALILLO COUNTY SOILS MAP 40

Existing conditions

Currently the site is vacant land with no structures or garden walls within 25 feet of the property. Also, there are no active drainage facilities on site. A portion of the "old" abandoned San Jose Lateral crosses the site. That (abandoned) facility along with an abandoned irrigation swale are to be graded for further development.

The site does not have a drainage outfall, therefore, no drainage is discharged into the public right-of-way or easements adjacent to the site.

Up stream (offsite) flows are located on the east and south sides of the property. Offsite flows east of Prince Street were calculated for a 10day 100yr storm and determined to be intercepted by Prince Street and pond on the east side of the road. There is one property between the subject site and Prince st. (identified as the Church of Jesus Christ of Latter day Saints Tract A) that will generate runoff entering the site. This runoff sheets across a paved area and runs directly into tracts 4B and 4C. Offsite flows from the south are negligible due to the extremely flat slopes and the numerous locations for entrapment and infiltration.

Currently runoff could reach the site from the north. King Road (on the north boundary) is plated as a reservation for street use. Per the approved Conceptual grading and drainage plan King Road is to have "bar ditches" on both sides of the road to prevent drainage in the right-of-way from flowing on to private property. At this time King Road is planned to slope to Prince St. at a rate of 0.3 ft. per 100 feet. In reality the drainage in the bar ditches will be poor at best. For this reason the bar ditches are designed to hold twice the volume of a 6 hr. 100 yr. event. For this report it will be assumed that the improvements to King Road will be in place prior to the proposed development of tracts 4A, 4B, AND 4C. The current Conceptual Grading and Drainage Plan identifies the drainage area as the site its self and the adjacent Latter Day Saints Tract A. For this report We concur with the drainage areas as identified in the Conceptual plan.

Proposed conditions

The site is proposed to be divided into three tracts comprising a 5 acre, a 11.918 acre, and a 15 acre tract. As such the drainage criteria will be the Interim Drainage Design Criteria for Bernalillo County April 1990 (IDDC) part "A."

The site is located in zone 2 per table 1 of the IDDC. For the purposes of this report it was assumed that the property would be developed with a light industrial use resulting in 70% impervious area. The land treatment will be "A" for the existing and ponding areas and "D" for the proposed developed areas per table 4 IDDC.

Because the site is in a sumped condition there is no drainage outfall. Therefore, it is not possible to have an emergency spill way. As such this report does not contain emergency spill way calculations per Ord. 0-90-6, sec 5.H.

The proposed ponds store less than 2.0 acre feet of storage therefore are considered "Minor Facilities" per Ord 0-90-6. These ponds will be located on the individual tracts and considered private. Maintenance of the individual ponds will be the responsibility of the individual tract owners.

At this time only land subdivision is proposed therefore, drainage will sheet flow across each tract to drainage swales or directly to the retention pond on the individual tract. Because the flows are sheet flows traveling a short distance to ponding areas this report will not address the peek flow of a particular design storm. However, ponding calculations are provided as a part of this report.

Calculations for the pond volumes are per Ord. 0-90-6 sec. G.3. Pond volumes were reviewed for one 10day 100yr storm, two 6hr 100yr storms and verified that the volume was at least one 24hr 100yr storm volume. In all cases the volume was determined to be an amount equal to consecutive 6hr 100yr storms.

As actual development takes place individual drainage plans will be necessary to verify that impervious areas do not exceed the assumptions made in this report. Should the impervious areas be greater than identified in this report the ponding volumes will need to be increased.

Greiner

Job Schwartzman Industrial Computed By Sheila Date 24 May 90
Description Park 0641131 Checked By JJB Date 6-1-90
Drainage Calculations - Volume Sheet 1 of 2

Tract 4A 5.000 ac Use Part A Drainage Des. Criteria for Bern. County April 1990 (less than 30 ac)

Tract 4B 11.918 ac

Tract 4C 15.000 ac

Zone 2 - (Btwn Rio Grande + San Mateo)

LAND TREATMENT - EXISTING A - Croplands

PROPOSED D 70% developed
A 30%

$P_{360} = 2.35''$

$P_{10\,day} = 3.95''$ $P_{1440} = 2.75''$

Volume of Runoff

excess precip (Table 8) Zone 2 A = .53" 100 YR FREQ 6 HR
D = 2.02" 100 YR FREQ 6 HR

4A existing volume $\frac{.53''}{12} \times 5.00\,ac \times 43560 = 9619.5$ c.f.

proposed volume weighted $E = \frac{(.53)(1.5) + (2.02)(3.5)}{5}$

$= 1.57''$

$\frac{1.57}{12} \times 5(43560) = 28,496$ c.f. 100 YR FREQ. 6 HR

Greiner

Job 0641131 Computed By S J [illegible] Date 24 Mar 90
Description Swartzman Checked By JJB Date 6-1-90
Drainage Calcs - Volume Sheet 2 of 2

(4B) existing $\frac{.53}{12} \times 11.918(43560) = 22,929.0$ c.f.

proposed weighted E $= \frac{(.53)(3.575) + 2.02(8.343)}{11.918}$

$= 1.57$

$\frac{1.57}{12} \times 11.918(43560) = 67,922$ cf 100 YR FREQ GWR

(4C) existing $\frac{.53}{12} \times 15.000(43560) = 28,859$ c.f.

proposed weighted E $\frac{(.53)(4.5) + (2.02)(10.5)}{15}$

$= 1.57$

$\frac{1.57}{12} \times 15(43560) = 85,487$ c.f. 100 YR FREQ GWR

OFF SITE

area = 2.709 ac (from previous report)
0.5 ac drain to tract 4C 100% impervious
2.209 ac " " " 4B 30% impervious
(.6543 ac imp, 1.5547 dirt)
E = 2.02 E = .53

Volume E × Area

$\frac{2.02''}{12}$ 0.5(43560) = 3,666 c.f. to 4C

$\frac{0.97''}{12}$ 2.209(43560) = 7,778 cf to 4B

Greiner

Job Schwartzman 0641131 Computed By [illegible] Date 24 May 90

Description Volume for Pond + Pond Sizes Checked By JJB Date 6-1-90

Sheet 1 of 3

(4A) 28,496 c.f. x 2 = 56,992 use larger

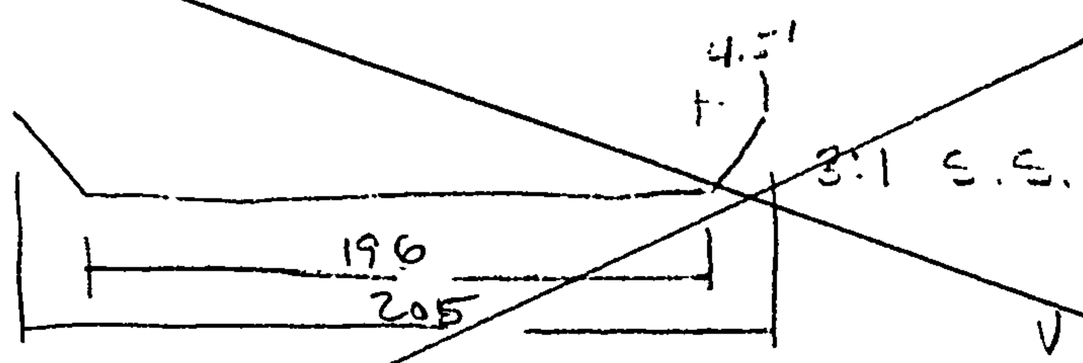
$V_{360} + A_{dev} \cdot (P_{10\,day} - P_{360})/12$ (10-day 100 yr storm)

$28{,}496 + \left(3.5(43560)\left(\frac{3.95'' - 2.35''}{12}\right)\right) = 48{,}824$ c.f.

(20,328)

req'd volume - use 56,992 c.f

~~pond 1.5' deep 200 x 200~~



~~square~~

~~volume = 60,300 cf~~

~~surplus = 3308 c.f~~

~~Note max width = 235'~~

---

check - will ponds hold 100 yr 24 hr storm

$V_{1440} = V_{360} + \left(A_D * (P_{1440} - P_{360})/12\right)$

4A (ok) $28{,}496 + \left((3.5(43560)) * \frac{2.75'' - 2.35''}{12}\right) = 33{,}508$ c.f

4B + offsite (ok) $75{,}700 + \left((3.997(43560)) * \frac{2.75'' - 2.35''}{12}\right) = 88{,}764$ c.f

4C + offsite (ok) $89{,}153 + \left((11.0(43560)) * \frac{2.75'' - 2.35''}{12}\right) = 105{,}125$ c.f

Greiner

Job Schwartzman 0641131 Computed By S Johnson Date 24 May 90

Description Checked By JJB Date 6-1-90

Sheet 2 of 3

(4B) 100 yr volume = 67,922 + 7778 = 75,700 c.f.

2-100 yr storms = 151,400 c.f.

1-10 day-100 yr storm

$V_{3:1} + A_{dev}\left(\left(P_{10\,day} - P_{100\,yr}\right)/12\right)$

$75{,}700 + \left(3.1997 \times 43{,}560 \times \frac{(3.95 - 2.35)}{12}\right) = 127{,}955$

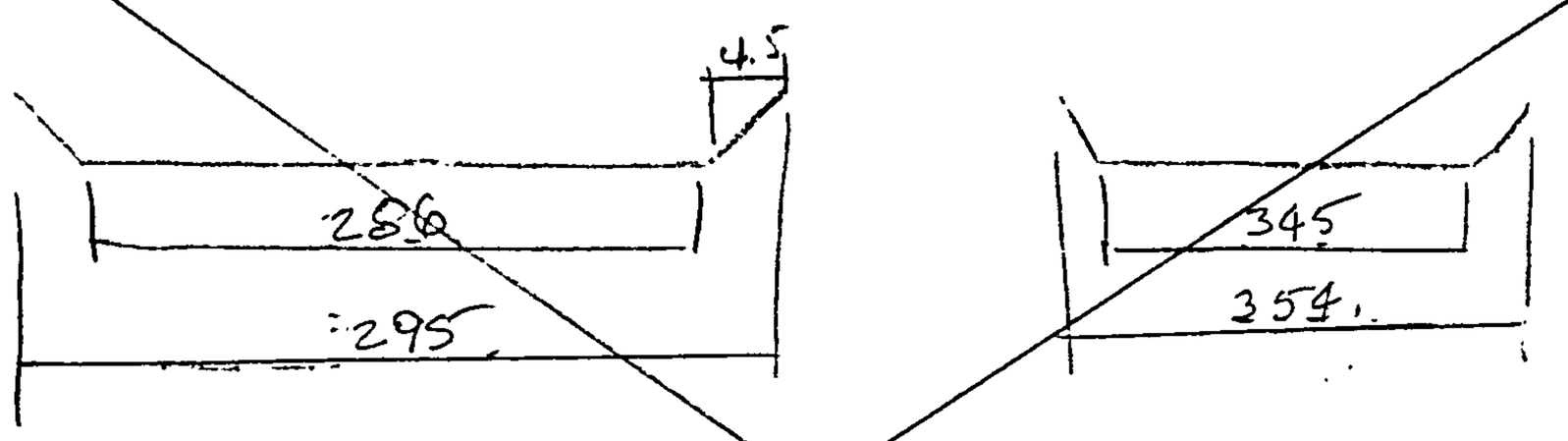
52,255

reqd. volume

use larger 151,400 c.f.

1.5' deep 300.5 wide x 332.5 long.

max width = 300 3:1 s.s.



total volume = 152294 c.f.

surplus = 894 c.f.

Greiner

Job Schwartzman 0641131 Computed By Johnson Date 24 May 90

Description Checked By JB Date 6-1-90

Sheet 3 of 3

(4c) 100 yr volume 85437 + 3,666 = 89,153 c.f.

2-100 yr storms - 178,306 c.f.

1- 10 day 100 yr storm

$V_{100} + (A_{dev} * P_{100} - P_{6hr} / 12))$

$89,153 + \left(11(43560)\left(\frac{3.95 - 2.35}{12}\right)\right) = 153,041$ c.f.

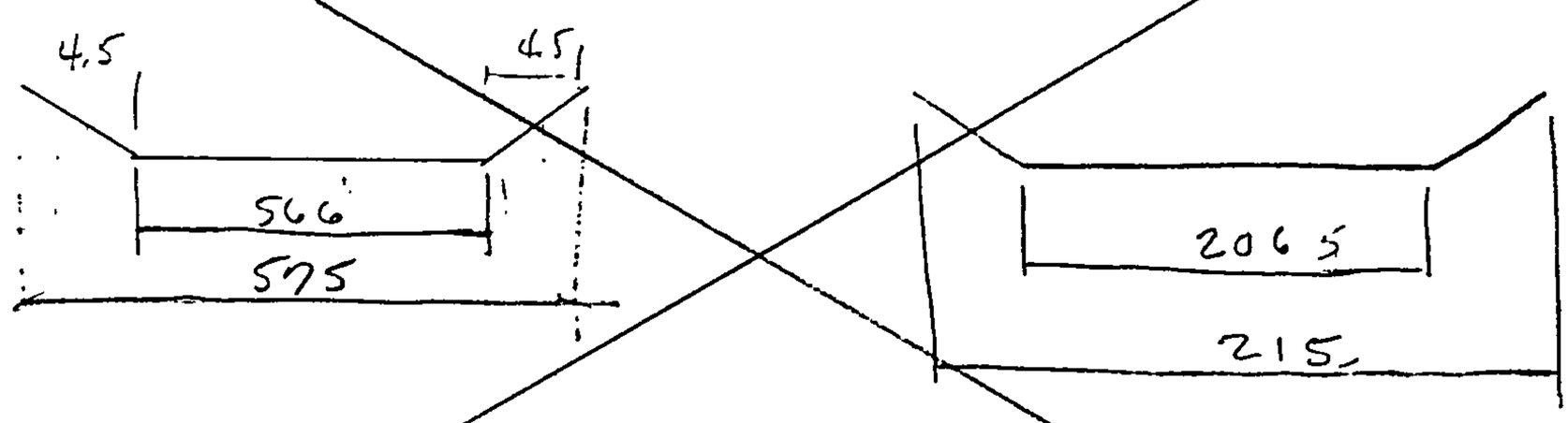
63,333

reqd volume

use larger - 178,306 c.f.

depth = 1.5'

max width = 610'



total volume 180135 c.f.

surplus 1829 c.f.

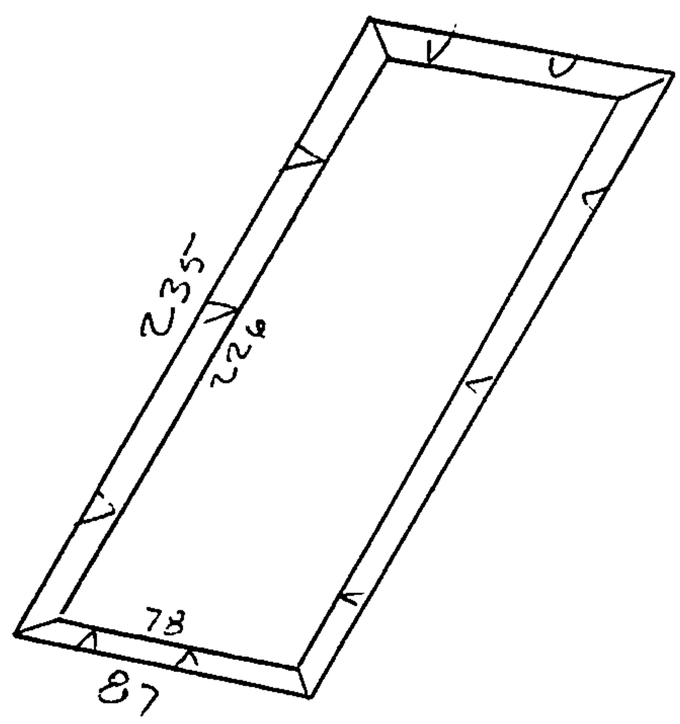
Greiner

Job SCHWARTZMAN Computed By JJB Date 8-2-90

Description NEW POND CONFIGURATIONS Checked By _____ Date _____

Sheet ___ of ___

PONDING AREA FOR TRACT 4-A



BOTTOM 226 X 78 = 17628

TOP 235 X 87 = 20445

VOLUME $\frac{17628 + 20445}{2} \times 3 = 57,110$

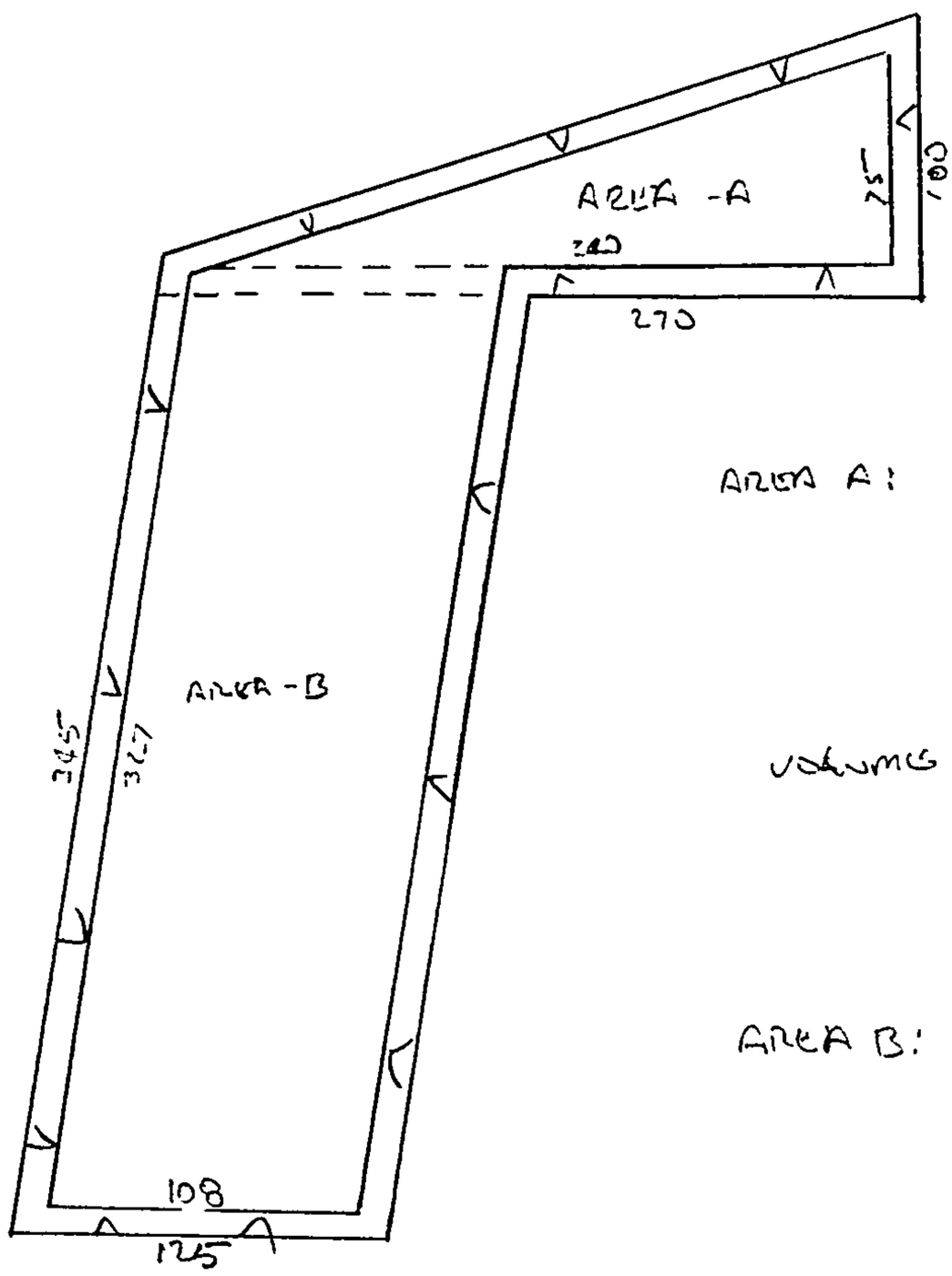
Greiner

Job _____ Computed By JJB Date 8-2-90

Description NEW PONDS Checked By _____ Date _____

Sheet 2 of 2

PONDING AREA FOR TRACT 4-B



AREA A: BOTTOM = $\frac{240 \times 75}{2}$ = 9000

TOP $\frac{275 \times 100}{2}$ = 13,500

VOLUME = $\frac{9000 + 13,500}{2} \times 3$ = 33,750

AREA B: BOTTOM = 108 × 327 = 35,316

TOP = 345 × 125 = 43,125

VOLUME = $\frac{35,316 + 43,125}{2} \times 3$ = 117661

TOTAL VOLUME = 151,411 CF

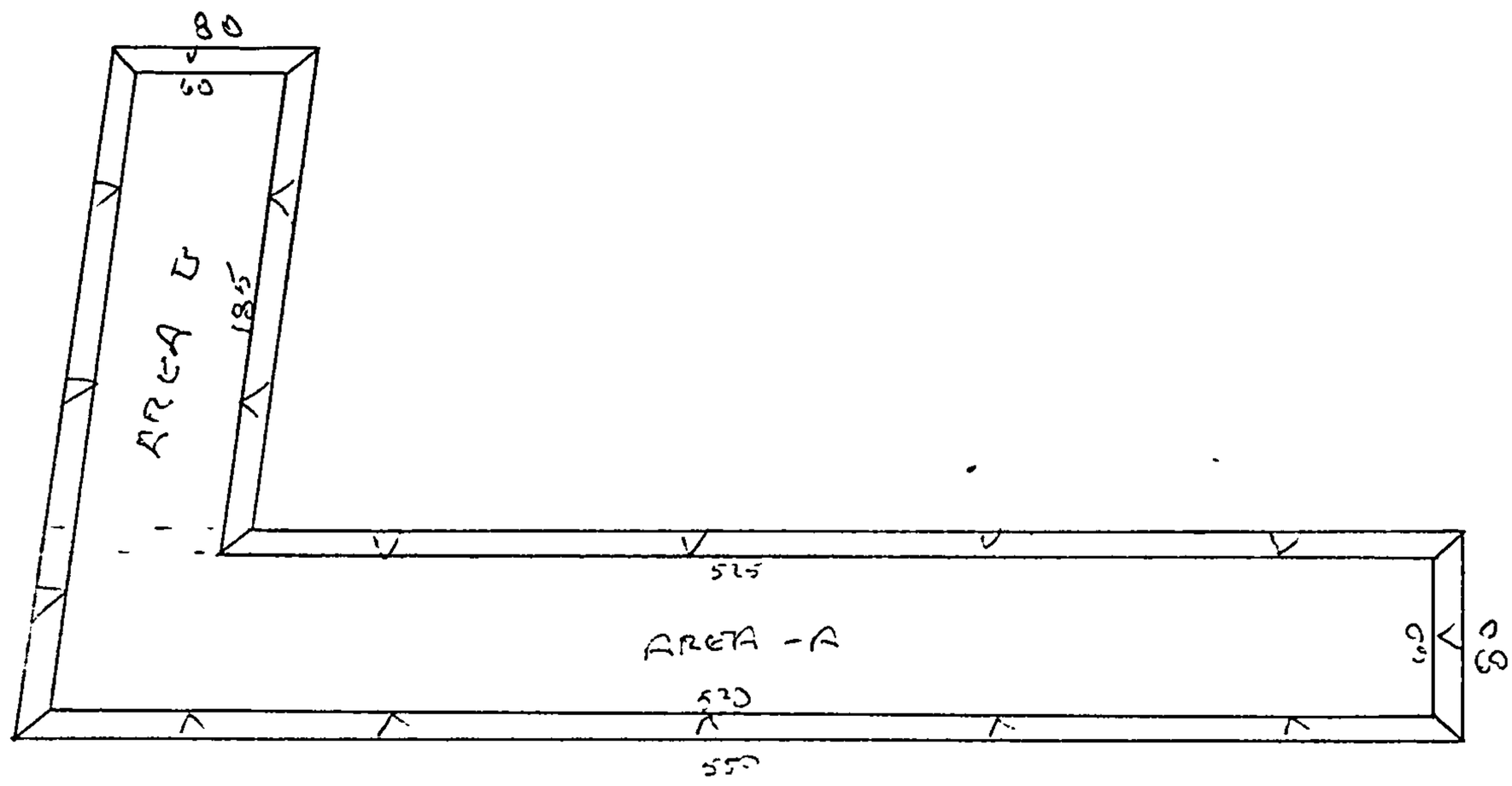
Greiner

Job _____ Computed By JJB Date 8-2-90

Description NEW POND Checked By _____ Date _____

Sheet ___ of ___

PONDING AREA FOR TRACT 4-C



AREA - A BOTTOM 527.5 X 60 = 31,650

TOP 547.5 X 80 = 43,800

VOLUME = $\frac{31650 + 43800}{2} \times 3.5$ = 132,037

AREA - B BOTTOM 185 X 60 = 11100

TOP 195 X 80 = 15,600

VOLUME $\frac{11100 + 15600}{2} \times 3.5$ = 46725

TOTAL VOLUME = 178,762

Greiner

Job Schwartzman 0641131 Computed By S Johnson Date 31 May 90

Description Checked By JJB Date 6-1-90

Sheet 1 of 1

OFF SITE BASIN - CHECK IF PRINCE STREET IS OVERTOPPED

AREA = 72.3 ac Zone 2

LAND TREATMENT =	A	95%	E = .53	68.685
	D	5%	E = 2.02	3.615

Composite E = .60

$P_{360} = 2.35''$

$P_{10\,day} = 3.95''$

$$V_{360} = \frac{E * Area}{12} = \frac{.60}{12} * (72.3(43560)) = 157,469 \text{ c.f.}$$

$$V_{10\,day} = 157,469 + \left(3.615(43560) * \left(\frac{3.95 - 2.35}{12}\right)\right)$$

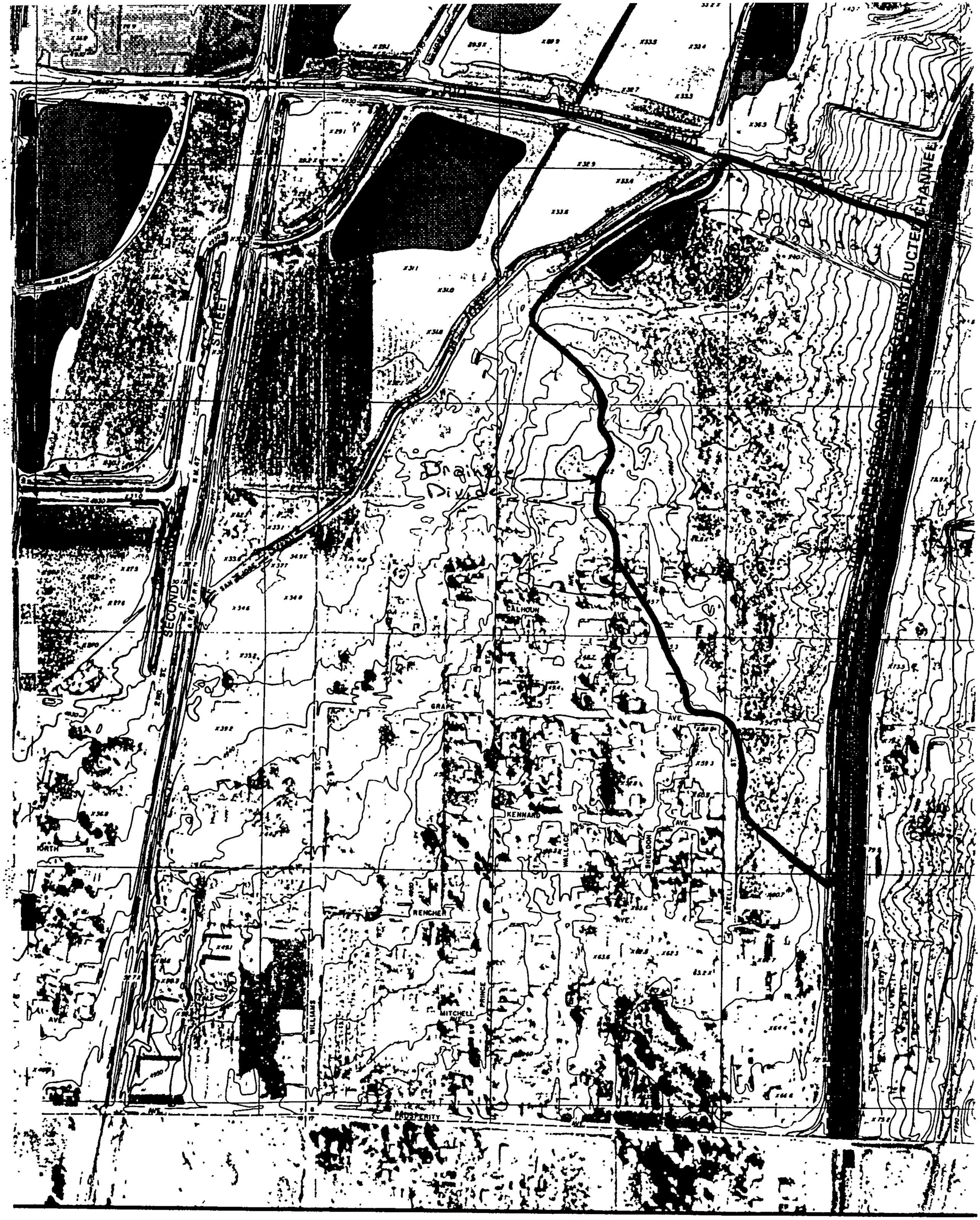
.1333

= 178,465 c.f. total volume

available pond size 800' x 200' top 3' deep elev 38

300' x 50' bottom elev 35

available volume = 262,500 c.f.



REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION	REFERENCE MARK
BM 75	1035.66		

Greiner

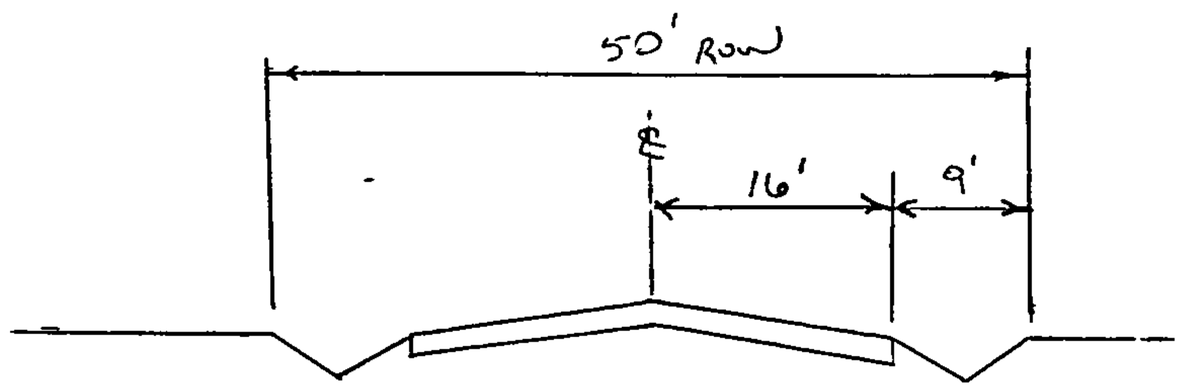
Job _____ Computed By JJB Date 8-6-90

Description KING ROAD STORAGE VOLUME Checked By _____ Date _____

Sheet ___ of ___

PER TABLE 8 - EXCESS PRECIPITATION

ZONE 2	TREATMENT	C	D
100 YR 6 HR		0.94"	2.02"

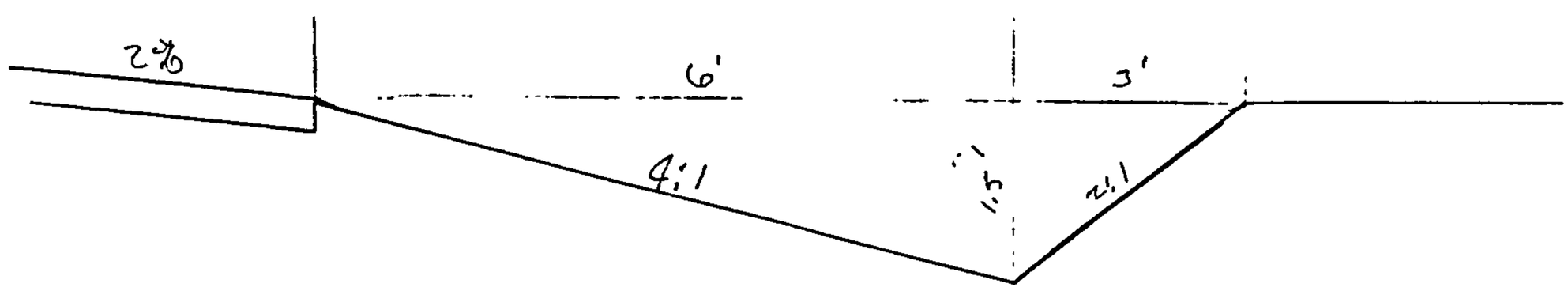


$$\text{WEIGHTED } E = \frac{(32)(2.02) + (18)(0.94)}{50} = 1.63''$$

PER FOOT OF ROADWAY LENGTH $V = 50 \times 1.63/12 = 6.8$ CF.

STORE 1/2 PER SIDE = 3.4 CF - EACH SIDE

BAR DITCH VOLUME



$$\frac{6 \times 1.5}{2} + \frac{3 \times 1.5}{2} = 6.75 \text{ CF}$$

∴ KING ROAD CAPABLE OF HOLDING 2X 6HR 100yr EVENT NOT COUNTING LONGITUDINAL RUNOFF

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County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

DAVID K. ANDERSON ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

October 11, 1996

Rick Roybal, P. E., City Engineer
City of Albuquerque Public Works Department
400 Marquette
Albuquerque, New Mexico 87103

RE: RELEASE OF FINANCIAL GUARANTEES FOR RIO BRAVO ESTATES SUBDIVISION

Dear Rick:

I have reviewed the Engineer's Grading and Drainage Certification for the above referenced subdivision with the Bernalillo County Public Works Division. We have found that the work is complete except for minor grading within the San Jose Drain. This work must be complete in order for the Federal Emergency Management Agency to issue the Letter of Map Revision (LOMR).

It is my understanding that the City has accepted the construction of the water and sanitary sewer facilities for this subdivision. The County has agreed to withhold $20,000.00 of the financial guarantees for this project in order to insure that the LOMR will be obtained. This amount is more that adequate for the completion of the LOMR process.

In this case, the entire subdivision is located within the County. Therefore, I recommend that the City release the financial guarantees for Rio Bravo Estates with the provision that the County withhold the $20,000.00 for the LOMR.

Please let me know, by your signature below, if you concur with this recommendation. If you should have any questions regarding this matter, please call me.

Sincerely,

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

Concurrence,

Rick Roybal, P.E.
City Engineer

c: Terri Martin
Roger Paul, Bernalillo County Public Works Division
Graeme Means, Jeff Mortensen & Associates
File P14/D1

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JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

September 18, 1996

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Division
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: ENGINEER'S CERTIFICATION FOR RIO BRAVO ESTATES, (P14/D1), (PWD-94-229), ENGINEER'S STAMP DATED 9/5/96.

Dear Mr. Paul:

The Engineer's Certification for Rio Bravo Estates Subdivision is not complete, and therefore cannot be approved at this time. After the outstanding work within the San Jose Drain is complete, the final Engineer's Certification must be submitted to and approved by this office.

The As-Built plans, along with the compaction tests, must be submitted with the Letter of Map Revision (LOMR) request. The LOMR request must be made to my office, and I will forward it to FEMA.

With respect to the existing grading in the subdivision, it appears that there are five lots in the existing floodplain which were not filled higher than the base flood elevation of 4931. These are lots 55, 56, 57, 58, and 119. Prior to the placement of homes on these lots, an Elevation Certificate will be required for each lot until the LOMR is received from FEMA. Each Elevation Certificate must be submitted to my office.

If you should have any questions regarding these comments, please call me at 768-2666.

Sincerely,

Susan Calongne

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

c: Graeme Means, Jeff Mortensen & Assoc.
Jimmie Glenn, Owner
File

Gluson's Copy

County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
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JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

Date:

Subject: Submittal

Case No.: PWD-94-229

Zone Map No.: P-14

Street Address: KING RD BETWEEN A.T.&S.F. PRINCE ST

Legal Description: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

Name of Applicant: Michele F De Lilla

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.
The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any variance or violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized County representative or County inspector form thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.
Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, Land Divider, Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the contract; the proper fitting and construction for the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

REV 4-22-91 BR

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

Please complete pages one and two of this application for review of your case. **Submit THREE bluelines of plat, drawings, or information with case submittals and THREE bluelines of plat, drawings, or information along with the original mylar for final sign-off applications. Submit a County Zone Atlas Map with subject property marked on the map.** If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photcopy of a USGS quad map with the subject property superimposed.

NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**
   a. Applicant is(check one):
   ____OWNER ____SURVEYOR __X_AGENT
   ____ENGINEER ____DRAINAGE ENGINEER

   b. Date of this application: 06-SEP-96

   c. Signature of applicant:
   (print)_____ (sign)_____

   d. OWNER: Space Homes Inc. PHONE: 505-988-9615
   11209 Paris NE
   Albuquerque, NM

   e. AGENT: Jeff Mortensen & Assoc PHONE: 505-345-4250
   6010-B Midway Park NE
   Albuquerque, NM 87109

   f. OTHER(specify): Jeff Mortensen & Assoc PHONE: 505-345-4250
   6010-B Midway Park NE
   Albuquerque, NM 87109

2. **TYPE OF SUBMITTAL (check one):**
   _____REPLAT
   _____LAND DIVISION (MINOR SUBDIVISION)
   _____MAJOR SUBDIVISION
   _____CONSTRUCTION DRAWINGS
   _____GRADING/DRAINAGE PLAN
   __X__AS-CONSTRUCTED GRADING/DRAINAGE PLAN
   _____VARIANCE REQUEST
   _____TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
   _____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
   _____OTHER (specify):_____

County of Bernalillo

Your: ___ submittal _ rainage information
X resubmittal of drainage information

is: ___ approved.
X approved with comments/conditions.
___ disapproved.
___ deferred to County Floodplain Administrator

TO BE FILLED OUT BY COUNTY PUBLIC WORKS DEPARTMENT ONLY

Case review comments are:

X attached.
___ not attached.
___ not attached. See remarks below.

Resubmittal is:

___ not required.
X required. When resubmitting, please use Resubmittal Form.

Please submit:

___ grading/drainage plan with revisions.
X as-constructed grading/drainage plan.
___ other: _____

It is required that:

___ Bernalillo County Public Works Department inspect improvements prior to final sign-off of plat.
___ Bernalillo County Public Works Department signature line be placed on plat.

Remarks: _____

R J Rand, PE 9/19/96

Molzen-Corbin & Assoc., for
County Surface Water Hydrologist
Bernalillo County Public Works Department

cc: ___ Sandia Heights Homeowners Association
X Owner: Rio Bravo Estates
X Agent: Jeff Mortensen - Assoc.
X Case File: PWD-94-229
X Susan Calongne, County Floodplain Administrator, COA
X Molzen-Corbin & Associates
___ Other: _____

pb-wrks.4

BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT
CASE FILE COMMENTS

CASE NO: PWD-94-229

ZONE MAP NO.: P-14

REFERENCE CASES:

DRB-94-10
DRB-84-516
V-94-113
SV-94-57
SC5-94-63
CON-96-70

STREET ADDRESS: KING RD BETWEEN A.T.&S.F. PRINCE ST

LEGAL DESCRIPTION: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

COMMENTS OF:

04-OCT-94 DRAN: A portion of this property appears to be within a designated 100 year flood plain as shown on the National Flood Insurance Program's Flood Insurance Rate Map. Defer approval to the County Floodplain Administrator.

14-NOV-94 DRE:
1. Will need T.I.A. (warrant study should be part of).
2. Trips generated should not be based on Single Family Detached Housing for a mobile home development. (use Land Use240 Or 270)
3. Traffic values for Prince used in the warrant analysis must be based on approach traffic (northbound) Traffic turning on to Prince from Rio Bravo does not count.
4. What are the distancs from the proposed signal on Prince to the existing signals at 2nd and Broadway? What are the impacts of the signal to Rio Bravo?
5. Preliminary infrastructure list approved for submittal to DRE.

06-DEC-94 DRAN:
1. Coordination with the MRGCD will be needed prior to construction of the discharge facilities into the San Jose Drain.
2. The engineer must demonstrate that the San Jose Drain will not have a capacity problem downstream using new hydrology methods. Since the City maintains the San Jose Drain, their Storm Drain Maintenance division may require additional improvements to the drain either adjacent to or downstream from this development.
3. With repect to the LOMR required by FEMA, it is strongly recommended that the engineer apply for a Conditional Letter of Map Revision (CLOMR) as soon as the drainage plan is approved. That way, any additional improvements required by FEMA may be incorporated into the plans before construction is complete. The County will withhold all financial guarantees for this project until after the LOMR is obtained, therefore it is in the developer's best interest to get this process started.
4. Is there any perimeter or internal fencing proposed by this plan that may adversely affect the overall drainage scheme of this plan? If so, please address this concern. If not, provide a statement on the plan which states that no fencing is proposed by this plan and that any future

fencing 11 be approved through Bernali County Public Works via a revised grading and drainge plan.

5. It appears that access is being taken from both Prince Street and King Road. Please include language stating that these roads are currently maintained by Bernalillo County.
6. If the intention of this plan is to provide one grading and drainage plan for the entire subdivision, please include details for pad elevations and dwelling locations along with the general grading scheme of the lots. This type of information might possibly be shown on (a) typical lot layout(s).
7. Provide details and calculations for the storm drains.
8. Is there any erosion protection proposed for the discharge point of the storm drain into the San Jose Lateral? Will this discharge affect (i.e. degradation) the current condition of the arroyo bed at the point of discharge or at any downstream?

03-MAY-95 DRAN:

1. This submittal has been approved on a conceptual basis only, a detailed grading and drainage plan will need to be submitted, reviewed, and accepted by Bernalillo County Public Works, AMAFCA, and the Floodplain Administrator prior to final approval.
2. A letter from the Floodplain Administrator, dated May 22, 1995, details several issues raised by her office and COA Hydrology.
3. What is the size of the "bleed" pipe shown on sheet 2 of the supplemental drawings? Is there a need for backflow prevention on this pipe?
4. Recommend elimination of the dead storage. Please investigate providing a positive drop from the 36" discharge pipe to the outlet bleed pipe.
5. Due to the anticipated depth of flow in the San Jose Drain, will the weir function as proposed and will the weir discharge cause hydraulic problems in the San Jose Drain?
6. As of this date, we understand that the homeowner's association is proposing to maintain this pond.
7. For the drainage basins upstream of the pond, will the proposed street street sections carry the projected 112 cfs? Will the cattle guard inlet intercept these flows?

29-JUN-95 DRAN:

1. Based on the information provided on the grading and drainage plan, with engineer's seal dated 06/28/95, this plan appears to meet the requirements established for this area and is therefore acceptable.
2. Development of this property must conform to this plan. Any proposed changes will require a revision to the plan prior to initiating the proposed change.
3. An "As-constructed" grading and drainage plan, with engineer's compliance with this plan, will be required prior to County Building and certification that the constructed improvements are in substantial Zoning issuing an occupancy permit.
4. A letter from the Floodplain Administrator, dated July 26, 1995, incorporates several issues related to her office and the City of Albuquerque. Please address these issues appropriately.
5. We understand that the homeowner's association will be responsible for the maintenance of the storm drainage facilities for the subdivision. The Subdivision Improvement Agreement will formalize this concept.
6. A revised layout for Rosson Court was provided to BCPWD subsequent to the submittal of this grading and drainage plan. All future submittals must incorporate this modification.
7. We question the use of a rock-filled perforated pipe to drain the oil separator. However, we understand that the detail used in this plan is based on MRGCD standard drawings. Please verify the intent of this design detail and provide a copy of the MRGCD standard.
8. This plan utilizes the concept of cross-lot drainage in several locations. Please investigate the use of retaining walls to eliminate

the nee_ _or cross-lot drainage or incorp_ate the appropriate clauses on the plat and in the subdivision covenants.

9. In the calculation of the storm drainage capacity for the 2-36" pipes, the result should read 1.90 feet instead of 190 feet.
10. The following items need to be addressed on the construction plans for the subdivision:
    a. Verify and adjust the T.C. elevation of 32.84 near Lot 90. It appears that the elevation should be 34.84.
    b. There appears to be a low spot in the knuckle at Lots 15 and 16. Please verify the indicated elevations and the grading scheme in this area.
    c. The contour numbering scheme on the west side of the ponding area is in error. All details that contain this information should be revised.
    d. A review of the riprap computations indicate that the length of the pad is too short and should be 3' - 4' longer. Please verify the length calculation and revise the length as appropriate on the construction plans.

*** Inspection required, applicant required to obtain permits from G.J. Foster at Bernalillo County Public Works Department.
Phone (505) 848 - 1523

ENGA: Paving & grading permit issued 28-Aug-95 #11848

08-SEP-95 DRE:
1. T.I.A. as submitted Oct. 18, 1995 is approved.
2. Provision needs to be made with infrstructure financial guarantees to provide $22,050.00 for future traffic signals at Rio Bravo/ Prince intersection.

06-SEP-96 DRAN: The Floodplain Administrator has completed review of this case and comments are as follows:
Based on the information provided on the "as-constructed" grading and drainage plan, it appears to be in substantial compliance with the approved plan with exception to work uncompleted in the San Jose Drain. Revised as constructed drawings are required to be resubmitted at the time of completion of all work.

DRAINAGE INFORMATION SHEET

7608 11

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: P14/D1

DRB #: 94-10 EPC #: WORK ORDER #: 5270.90

LEGAL DESCRIPTION: LOTS 1-119, RIO BRAVO ESTATES

CITY ADDRESS: PRINCE ST. NE

ENGINEERING FIRM: JMA CONTACT: GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: RIO BRAVO ESTATES, LTD CONTACT: JIMMIE GLENN

ADDRESS: 11209 PARKS, NE PHONE: 293-7826

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: JMA CONTACT: CHUCK CALA

ADDRESS: PHONE:

CONTRACTOR: SPARLING CONSTRUCTION CONTACT: PAT WYLIE

ADDRESS: PHONE: 821-1034

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

X ENGINEER'S CERTIFICATION

___ OTHER

PRE-DESIGN MEETING:

___ YES

X NO

___ COPY PROVIDED

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

X DRAINAGE REQUIREMENTS

X OTHER CERTIFICATION (SPECIFY)

RECEIVED
SEP 10 1996
HYDROLOGY DIVISION

DATE SUBMITTED: 09-06-96

BY: J. Graeme Means

XC: JIMMIE GLENN

96068154

Rio Bravo Estates Ltd.

A DECLARATION OF RESTRICTIVE COVENANTS AND BUILDING RESTRICTIONS IN BERNALILLO COUNTY, NEW MEXICO

Rio Bravo Estates hereby establishes a general plan for the improvement, development and restriction of sell property to be sold. All the reservations and restrictions hereinafter set forth are made for the benefit of each and every subsequent owner of the land in said subdivision and shall insure to and bind all subsequent owners thereof. The purpose of the restrictive covenants is to establish a well-maintained uniformity of purpose in a suburban style of living.

No structure shall be erected, altered, placed or permitted to remain on any residential lot other than one detached single family dwelling or manufactured home and building related thereto.

1. COVENANTS DURATION - These covenants are to run with the land and shall be binding on all parties and all persons claiming under them until January 1, 2006, at which time said covenants shall be automatically extended for successive periods of ten years.

2. VALIDITY - Invalidation of any of these covenants shall in no way affect the validity of the provisions, which shall remain in full force and effect.

3. ENFORCEMENT- If there shall be a violation or threatened or attempted violation of any of said covenants, it shall be to prosecute proceedings at law or in equity against all persons violating or attempting to violate or threatening to violate any such restrictions, covenants conditions or stipulations

4. EASEMENTS - Easements for ingress, egress installation and maintenance of utilities are reserved as shown on the recorded plat. Within all these easements, no structure, planting or other materials shall be placed or permitted to remain which may interfere with the purpose for which these easements have been reserved.

5. MANUFACTURED HOUSING- No manufactured housing will be allowed to be moved into the subdivision which are not new and shall be kept up at all times. All manufactured homes must fit the generally accepted description "double-wide" with a minimum square footage of 1120 square feet. All manufactured homes must be placed on a state specified foundation. MAINTENANCE - Skirting, porches, awnings, and other additions, as well as the manufactured home site, shall be maintained in good repair and in an orderly condition. Watering and maintaining grass, trees and shrubs, and mowing of grass is the responsibility of the owner.

6. NO STRUCTURE - of a temporary character travel trailer, tent, shack, garage, barn or other outbuilding shall be used on any lot at any time as a residence, either temporarily or permanently.

shall anything be done the n which be or may become an annoy : or nuisance to the neighborhood.

5061 ~~986~~

PEDDLING OR SOLICITING - No peddling, soliciting or commercial enterprise is permitted in the Community. No garage, porch, lawn or similar sales shall be conducted in the subdivision.

8. GARBAGE AND REFUSE DISPOSAL - Trash, garbage or other waste shall be kept in sanitary containers until such time as they are placed in the trash collection bins throughout the community.

9. DESTRUCTION OF STRUCTURE - In the event a structure is destroyed, either wholly or partially by fire or any other casualty, said structure shall be totally removed from the lot within thirty (30) days from said occurrence.

10. MAINTENANCE, HOUSING, AND GENERAL CARE OF ANIMALS AND POULTRY - No animals, livestock or poultry shall be kept, bred or maintained. A reasonable number of the customary domestic household pets may be kept or permitted on any lot. No such pet or animal shall be allowed to make an unreasonable amount of noise or otherwise to become a nuisance No more than two (2) pets, of size and temperament will be allowed in each home. When outside, pets must be contained within a fenced area or on a leash under personal control of a responsible person. Pets are not allowed to roam in the subdivision. Pet owners are responsible for keeping their pets under control at all times, so the pets do not become a danger threat or disturbance to other owners, and do not damage or destroy property.

11. INOPERATIVE VEHICLES PROHIBITED - Inoperable vehicles, motorcycles, etc., are not permitted on the street or on the mobile home lots. Vehicles on blocks are prohibited. Major mechanical work within the subdivision is prohibited.

12. SIGNS - No sign of any kind shall be displayed to the public view on any lot except one professional sign of not more than two (2) square feet, one sign not more than five (5) square feet during the construction and sales period.

ADVERTISING, SELLING, LEASING - No advertising or selling will be permitted. The name and/or address of this subdivision shall not be used for any purposes of advertising or selling of any commercial nature whatsoever.

13. FLOOD LIGHTS - No unshaded floodlights shall be maintained which causes light to shine directly into the residence of other residents.

14. SKIRTING - Skirting will be placed around the mobile home within forty five (45) days after arrival. An acceptable skirt must be of the same material (except metal) of the mobile home.

PORCHES - Porches within a minimum of 20 square feet of platform must be installed at each exterior door, with the level of the porch no more than one step below the threshold of the mobile home, within forty five (45) days after move-in. Porches must be enclosed by skirting.

AIR CONDITIONERS - Window air conditioners shall be braced to the home with metal angle braces or chain braces. No wooden bracing or bracing to the ground will be allowed.

HOME MAINTENANCE - Home and accessories, including sheds, must be kept clean, neat, washed, painted and in good repair and kept free of any fire hazard, this includes broken windows and storm doors They must be repaired immediately. FOREIGN MATERIALS,

SUCH AS TIRES AND OTHER WEIGHTED OBJECTS, ARE NOT PERMITTED ON ROOFS OF HOMES OR C CANOPIES OR PORCH ROOFS.

5062 ~~0896~~

15. **STORAGE OF EQUIPMENT AND MATERIAL** - Bicycles, lawn care equipment, firewood, toys, and similar items may not be stored outside where such items would be visible from the street.

16. **FENCING** - Front yard fencing, other than small decorative fencing under 24 inches in height, is not allowed.

17. **BOATS, CAMPERS, ETC.** - Boats, travel trailers, or campers are allowed to be stored at the mobile home site.

18. **No one or legal entities can purchase a lot for the purpose of subleasing a lot to another party.** (Exception: If the owner of the lot has purchased and put a manufactured housing unit on the lot, and owns both the lot and unit, and for some reason has to leave the Albuquerque area, a unit could be subleased for one year only with approval of the Board of Directors of the Rio Bravo Homeowner Association).

19. Each lot owner will be required to furnish $20.00 per year to the Rio Bravo Estates Homeowner Association to provide the following:

* Legal Fees for Legal Enforcement of the Covenants
* General Appearance of the Area
* Maintenance of the Drainage Pond
* Maintenance of the Parameter Fence for Repair and Cleanliness
  (See Rio Bravo Estates Homeowner Association for details of Election of Officers and their Duties. Will be furnished at Closing of Purchase of a Rio Bravo Lot).
* Within 30 days after closing of lot, new owners must make arrangements for trash pick-up at the lot.

20. All Manufactured Housing Units will have front of the unit facing the street.

I have read the above Covenants and will comply.

Jimmie W Glenn

Rio Bravo Estates, Ltd.
Jimmie W. Glenn
Managing Partner

STATE OF NEW MEXICO COUNTY OF BERNALILLO FILED
96 JUN 19 PM 3:58
92-1-884

Sworn and Subscribed before me on this 19th day of June, 1996.

Bernalillo County
New Mexico

Notary Public _____

My Commission expires _____

OFFICIAL SEAL
RICHARD P. JACOBS
NOTARY PUBLIC - NEW MEXICO
My Commission Expires 8/13/97

ADDENDUM
TO
Rio Bravo Estates Ltd.
A DECLARATION OF RESTRICTIVE COVENANTS AND BUILDING RESTRICTIONS IN BERNALLIO COUNTY, NEW MEXICO

21. CROSS LOT DRAINAGE- Cross-lot drainage shall be permitted in accordance with the concept established by the approved Grading and Drainage Plan (PWD-94-229).

22. FENCING- Front yard fencing, other than small decorative fencing, under 24 inches in height, is allowed. Cross-lot drainage shall not be impeded by fencing. Where cross-lot exists, any fence which is constructed must allow the flows to pass.

23. BOATS, CAMPERS, ETC.- Boats, travel trailers, or campers are allowed to be stored at the mobile home site.

Jimmie W Glenn

Rio Bravo Estates, Ltd.
Jimmie W. Glenn
Manager Partner

Sworn and Subscribed before me on this 5th day of August, 1996.

Bernalillo County
New Mexico

Notary Public Raye Ann Lucero

My Commission expires _____

OFFICIAL SEAL
RAYE ANN LUCERO
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 5/10/97

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1996 AUG -5 PM 2:08

96 BK 21 PG 5060-5063
JUDY WARD
CO. CLERK RECORDER

JEFF MORTENSEN & ASSOCIA , INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109

(505) 345-4250

Memo
LETTER

Date 08-14-96

To Susan Calongne
C.O.A. HYDROLOGY

Subject /Job No. ~~[illegible]~~ 960871
RIO BRAVO ESTATES

Transmitted Herewith per your request is a copy of the infrastructure list for the Subject project.

☐ Please reply ☐ No reply necessary

SIGNED J. Graeme Means

10% Pre-Consumer Content • 10% Post-Consumer Content

JMA No. 931075
D.R.B. Case No. -10
D.R.C. Project No.
Date Submitted 12-09-94
Prelim. Plat Approved
Prelim. Plat Expires

EXHIBIT "A"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LISTING
for RIO BRAVO ESTATES

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development. This summary is not necessarily a complete listing. During CPC, BCC, the design process and/or in the preparation of the construction drawings, if the City, County, and/or AMAFCA determines that appurtenant items have not been included in the summary, those items will be included in the listing and related financial guarantee, if the items normally are Subdivider responsibility. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility are the responsibility of the Subdivider and will be included in the financial guarantee provided to the City.

Location	Size	Type Improvement	From	To
CITY IMPROVEMENTS				
Fentiman Ave SE	6"	Waterline	Silver Fox Drive S.E.	Fentiman Ave SE Cul-De-Sac
	8"	Sanitary Sewerline	Silver Fox Drive S.E.	Fentiman Ave SE Cul-De-Sac
Silver Fox Drive S.E.			King Road SE	Gore Ave. SE
	8"	Waterline		
	8"	Sanitary Sewerline	King Road SE	Gore Ave. SE
Zorro Loop S.E.	8"	Waterline	Silver Fox Drive S.E.	Gore Ave. SE
	8"	Sanitary Sewerline	Silver Fox Drive S.E.	Gore Ave. SE
Gore Ave. S.E.	8"	Waterline	Zorro Loop SE	Prince St SE
	8"	Sanitary Sewerline	Zorro Loop SE	Prince St SE
Glenn Drive S.E.	6"	Waterline	King Road SE	Gore Ave SE
	8"	Sanitary Sewerline	King Road SE	Gore Ave SE
Chamaigne Ct SE	6"	Waterline	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
	8"	Sanitary Sewerline	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
Rosson Ct SE	6"	Waterline	Glenn Dr. SE	Rosson Ct SE Cul-de-Sac
	8"	Sanitary Sewerline	Glenn Dr. SE	Rosson Ct SE Cul-de-Sac

King Road SE	8"	:erline	Glen r. SE	Prince Rd. SE
Prince St SE (Excluding Frontage of the Church of Jesus Christ of Latter Day Saints (Tract "A")	8"	Waterline	Rio Bravo Blvd. S.E.	Northern Bdry of East Mtn. Subdivision
San Jose Drain	*	Lining of drain to reasonable design standards consistent with current policies	King Road S.E.	BARR JGM ~~[illegible]~~ CANAL

* To be determined by further study at DRC/CRC levels.

COUNTY IMPROVEMENTS

Fentiman Ave SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Silver Fox Drive S.E.	Fentiman Ave SE Cul-De-Sac
	28' FF	Res. Street Paving	Silver Fox Blvd. S.E.	Fentiman Ave SE Cul-De-Sac
North End Silver Fox Drive S.E.	Type III	Vehicular Barricades	N/A	N/A
Silver Fox Drive S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	King Road SE	Gore Ave. SE
	28' FF	Res. Street Paving	King Road SE	Gore Ave. SE
Zorro Loop S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Silver Fox Drive S.E.	Gore Ave. SE
	28' FF	Res. Street Paving	Silver Fox Drive S.E.	Gore Ave. SE
Gore Ave. S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Zorro Loop SE	Prince St SE
	28' FF	Res. Street Paving	Zorro Loop SE	Prince St SE
Glenn Drive S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	King Road SE	Gore Ave SE
	28' FF	Res. Street Paving	King Road SE	Gore Ave SE
Chamaigne Ct SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
	28' FF	Res. Street Paving	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
Rosson Ct SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Glenn Dr. SE	Rosson Ct. SE Cul-de-Sac
	28' FF	Res. Street Paving	Glenn Dr. SE	Rosson Ct. SE Cul-de-Sac

ing Road SE	32'- 40' F-F	urb & Gutter and Res. Street Paving	Silver Fox Drive S.E.	Prince St. S.E.
Prince St. SE	N/A	Median and Std. Curb and Gutter (Both Sides)	King Rd. SE	Rio Bravo Blvd. SE
	27' FF	Art.Street Paving (Both Sides)		
	4'	Sidewalk (Both Sides)	King Rd. SE	Tract "A"
Silver Fox Drive SE Near SW Cor Lot 119	48"	RCP Storm Drain, Inlets and Appurtenances	SW of Lot 119	San Jose Drain
Zorro Loop S.E.	48"	RCP Storm Drain, Inlets and Appurtenances	S of Lot 26	San Jose Drain
As Required	N/A	Street Lights		
N/A	N/A	Letter of Map Revision From F.E.M.A. REQUIRED FOR FINANCIAL GUARANTEE RELEASE		
San Jose Drain	N/A	License and/or approval of M.R.G.C.D. to discharge into the San Jose Drain.		

Prepared by:
Print Name: Jeffrey G. Mortensen, P.E.
Firm: Jeff Mortensen & Associates, Inc.

****

Development Review Board Member Approval

12-12-94
Transportation Dev. Date

Robert W. Kane 12-13-94
Utility Dev. Date

12-13-94
~~Cultural~~ PARKS and GENERAL ~~Recreational~~ Services Date

12-13-94
City Engineer/AMAFCA Date

12-9-94
BCPWD DRE Date

12-13-94
DRB Chairman Date

, PE 12/12/94
BCPWD DRAN Date

A MEMBER OF CONSULTING
GINEERS COUNCIL OF NEW MEXICO

P14/D1

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931078
August 12, 1996

Mr. Kevin J. Curran, Attorney
Legal Department
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Irrevocable Letter of Credit - Rio Bravo Estates
C.O.A. Project No. 5270.90, DRB 94-10

Dear Kevin:

The City Work Order portion of the subject project has been completed. I submitted the closeout package to Russell Givler for final acceptance on Tuesday, August 6, 1996.

Upon City acceptance of Project No. 5270.90, I will request that the City "relinquish all rights to (the) Letter of Credit as a beneficiary". You may recall that this project was guaranteed through the Bernalillo County Public Works Department, with the City of Albuquerque named as an additionally insured party for 125% of the estimated cost for the water and sanitary sewer portions of the project.

The City Surveyor has accepted the Centerline Monumentation for the project (see attached copy). The Drainage Certification for this project will be submitted to Roger Paul of the Bernalillo County Public Works Department, who, along with Eddie Losinski, will administer the final Financial Guarantee Release pending County Drainage Certification and approval of floodplain issues from Susan Calongne, City/County Floodplain Administrator.

I recall the difficulties we had putting this agreement together last December and would like to see that this project is completed and closed out smoothly. I request that you review this letter and let me know if I have made any misunderstandings, or if there are any other City requirements prior to Financial Guarantee Release.

Jeffrey G. Mortensen, P.E. **Juan M. Cala** **Charles G. Cala, Jr., P.S.**

If you should have any questions or comments regarding this information, or if we can be of further assistance to you, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means

J. Graeme Means, E.I.T.

JGM:dsj
Enclosure
xc: Terri Martin (w/enclosure)
Eddie Losinski
Roger Paul
Susan Calongne
Russell Givler
Jimmie Glenn (w/enclosure)

931076

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

August 2, 1995

Space Homes
c/o Jeff Mortensen & Associates
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

RE: License Application - Space Homes
San Jose Drain, Station 35+40±

Dear Mr. Mortensen:

Enclosed please find a license application to install and maintain a 24" Diameter Storm Drain outlet pipe within the San Jose Drain Right-of-Way, Station 35+40±.

We have completed the application. For further processing, please forward this package together with the required fee of $200.00 to:

Mr. Garry M. Rowe
Bureau of Reclamation
505 Marquette N.W.
Suite 1313
Albuquerque, NM 87102-2162

If you have any questions, please feel free to contact Ray Gomez of our Engineering Department at 247-0234 or Ralph Nau of the Bureau at 766-3381.

Sincerely,

Subhas K. Shah
Chief Engineer

SKS:wam

Enclosures

P.O Box 581
87103-0581
1931 Second St. SW
Albuquerque, NM
87102-4515
505-247-0234
Fax # 505-243-7308

MIDDLE RIO GRANDE PRO

LICENSE APPLICATION FORM

DATE July 07, 1995

APPLICANT: Space Homes Attn: Jimmie Olem	ADDRESS: 11209 Parks N.E. Albuquerque, NM 87111	PHONE: (505) 889-8906
REPRESENTOR: Jeff Mortenson and Associates, Inc.	ADDRESS: 6010-B Midway Park Blvd. N.E. Albuquerque, NM 87109	PHONE: (505) 345-4250

LOCATION OF INSTALLATION

A. MRGCD MAP & TRACT (LOT OR BLOCK): Tract 4, Schwartzman Industrial Park, Unit 1 MRGCD Map 49/50

B. NAME OF DITCH (CANAL, LATERAL ACEQUIA, DRAIN, DITCH): San Jose Drain

C. OWNERSHIP (EASEMENT) ON ADJACENT LANDS: Applicant

D. EXISTING CONDITIONS: Existing Drain

NOTE: THE INFORMATION ABOVE SHOULD BE INCLUDED ON A GENERAL MAP OF THE AREA

CONSTRUCTION DATA

- ___ BRIDGE
- ___ CONCRETE BOX CULVERT
- xx CONCRETE PIPE CULVERT OR SIPHON
- ___ CMP CULVERT
- UTILITY CROSSING, BURIED
- ___ UTILITY CROSSING, AERIAL
- ___ UTILITY, PARALLEL
- ___ GATES
- xx OTHER Side Inlet Construction and Grading to Widen the Drain

WIDTH OF CROSSING: n/a CONSTRUCTION SCHEDULE: August - November 1995

RESTORATION PLANS FOR DISTURBED LAND: Regrade and Revegetate

STARTING DATE: August 1995 COMPLETION DATE: November 1995

REQUESTOR'S SIGNATURE: J. Graeme Morris

FOR MRGCD USE ONLY

A. SECTION, TOWNSHIP, RANGE: SEC. 7 T.9N., R3E.

B. STATIONING OF DITCH: 35+40±

C. DITCH GRADE (DESIGN OR OPERATING): 0.0002'/FT

D. DITCH CAPACITY: PER PLANS PREPARED BY JEFF MORTENSEN

E. ELEVATION OF CENTERLINE OF INSTALLATION: 4970.71

F. DITCH RIGHT OF WAY WIDTH: 120'

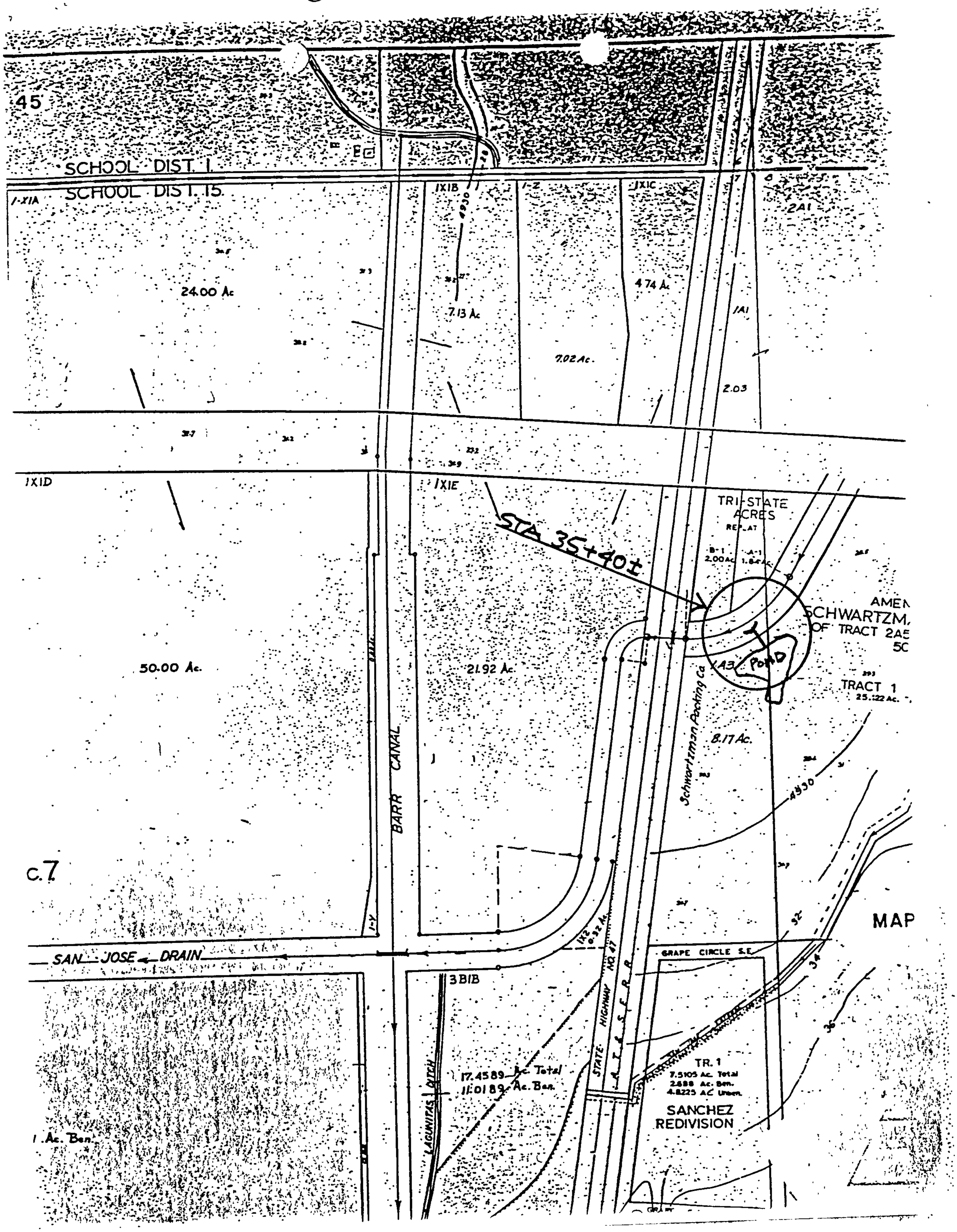
G. WEED PROBLEM CRITERIA:

H. REMARKS OR SPECIAL CONDITIONS:

DATE LOGGED: 8.2.95

REQUEST NO. DDC-220-095

DISTRICT ENGINEER


45
SCHOOL DIST. 1
SCHOOL DIST. 15
1-XIA
24.00 Ac
1XIB
7.13 Ac
1-Z
7.02 Ac.
1XIC
4.74 Ac
2.03
1A1
2A1
1XID
50.00 Ac.
1XIE
STA 35+40±
TRI-STATE ACRES
REPLAT
B-1 2.00 Ac
A-1 1.84 Ac
AMEN
SCHWARTZM
OF TRACT 2A
5C
TRACT 1
25.122 Ac.
1A3
POND
21.92 Ac.
Schwartzman Packing Co
8.17 Ac.
BARR CANAL
SAN JOSE DRAIN
1-Y
1X2 0.32 Ac.
GRAPE CIRCLE S.E.
3BIB
STATE HIGHWAY NO. 47
A.T.&S.F.R.R.
LAGUNITAS DITCH
17.4589 Ac. Total
11.0189 Ac. Ben.
TR. 1
7.5105 Ac. Total
2.688 Ac. Ben.
4.8225 AC Urban
SANCHEZ REDIVISION
1 Ac. Ben.
MAP

c.7

A MEMBER OF CONSULTING ENGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
July 07, 1995

Mr. Subhas Shah
Middle Rio Grande Conservancy District
1930 Second Street S.W.
P. O. Box 581
Albuquerque, NM 87103

Re: Rio Bravo Estates (Tract 4, Schwartzman Industrial Park, Unit 1)

Dear Mr. Shah:

In accordance with our meeting of July 3, 1995, requested herewith is a License to discharge stormwater runoff into the San Jose Drain from the above referenced subdivision. To assist in your review, we enclose a copy of the Concept Plan as approved by the City/County Floodplain Administrator, and a copy of the approval letter.

The Plan has been modified to include an oil and water separator per our meeting. The design of the oil and water separator will follow the details provided by your office. The final design will refine those details and adapt them to this specific project. Final design will be submitted to both the City and the Middle Rio Grande Conservancy District for construction approval.

We now wish to initiate the License process so as not to delay the project and so as to satisfy the City that this discharge is acceptable to the M.R.G.C.D.

If you should have any questions or comments concerning this request, or any other aspect of this project, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

Jeffrey G. Mortensen, P.E.
President

JGM dsj
Enclosure
xc: Jimmie Glenn
Dan Silva
Sue Calongne
Roger Paul

Jeffrey G. Mortensen, P.E. Juan M. Cala Charles G. Cala, Jr., P.S.

BOARD OF COUNTY COMMISSIONERS
ALBERT "AL" VALDEZ, CHAIRMAN
DISTRICT 2
KEN SANCHEZ, VICE CHAIR
DISTRICT 1
EUGENE M. GILBERT, MEMBER
DISTRICT 3
BARBARA J. SEWARD, MEMBER
DISTRICT 4
TIM HOUSTON, MEMBER
DISTRICT 5
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768 4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINC, TREASURER

May 22, 1995

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Dept.
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: CONCEPTUAL PLAN FOR RIO BRAVO ESTATES, (P14/D1) (PWD-94-229)
SUBMITTED FOR CONCEPTUAL APPROVAL, ENGINEER'S STAMP DATED 5/2/95.

Dear Mr. Paul:

The City of Albuquerque will accept the concepts presented in the above referenced submittal provided that approval is granted by the Middle Rio Grande Conservancy District (MRGCD). Prior to approval of the grading and drainage plan, the following issues must be addressed:

1. By an agreement with the MRGCD, the City maintains the San Jose Drain adjacent to this site. This area is within the County, however, therefore the City will not maintain the detention pond which is proposed for this subdivision.

2. As stated before, I strongly recommend that the engineer request a Conditional Letter of Map Revision from FEMA as soon as the drainage plan is approved. The County will withhold financial guarantees for this project until after the Letter of Map Revision is obtained, therefore it is to the developer's best interest to get this process started.

3. The details for the outlet structure into the San Jose Drain must be approved by both MRGCD and the City. It is suggested that the width of the concrete lining extend from 10' upstream to 30' downstream of the pipe outlet. Details for this structure will be included on the plans which must go through the City's DRC process.

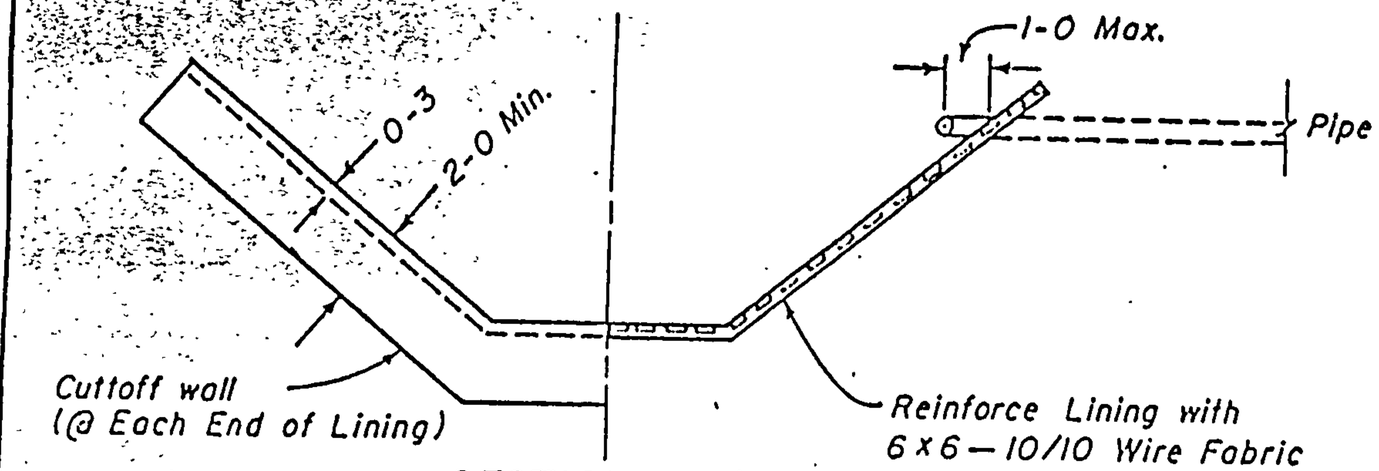
If you should have any questions, please do not hesitate to call me.

Sincerely,

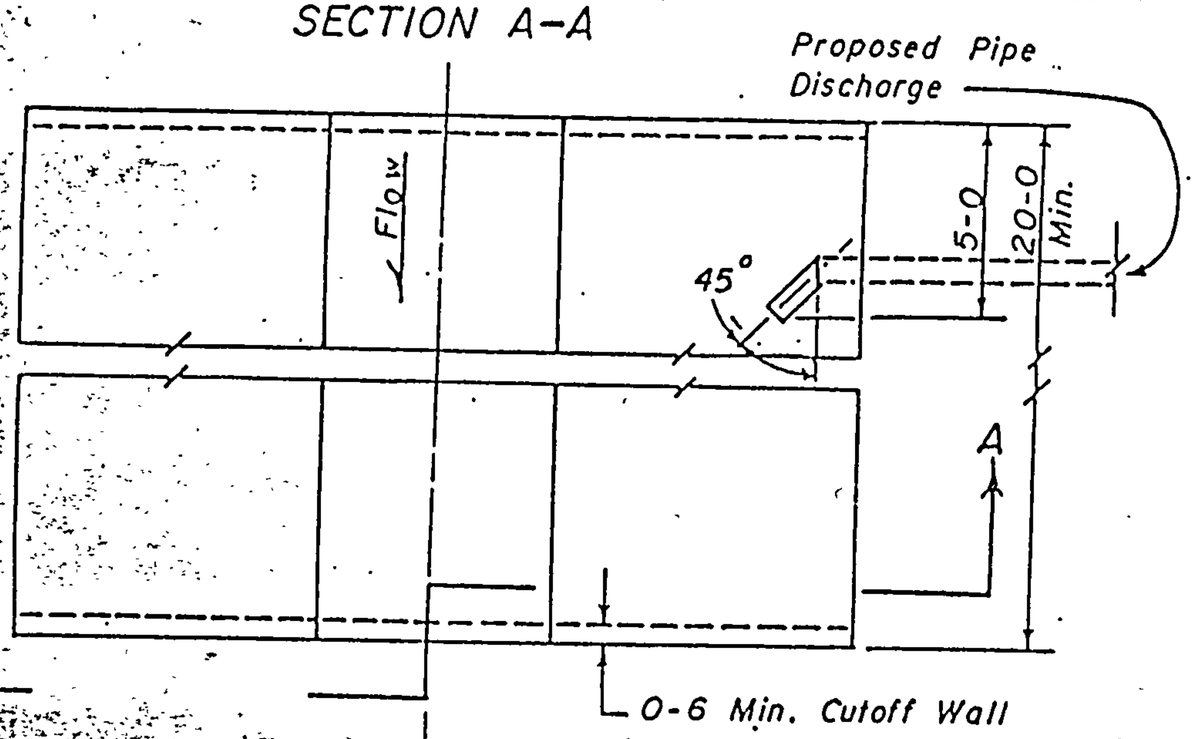
Susan Calongne

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

c: Graeme Means, Jeff Mortensen & Assoc.
Jimmie Glenn, Owner
File



SECTION A–A



PLAN

NOTES

Discharge structure shall conform to the minimum standards of paragraph 5.0, Design Criteria.
Bottom width to match design channel.
Side slopes to match design slope.
Invert to be at design grade or existing bottom, whichever is lower.
3000 psi concrete to be used.
Top of lining to be a minimum of 12" above high water but not less 12" above top of discharge pipe.
Pipe shall not extend more than 12" beyond face of lining.

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
MINIMUM STANDARDS

STORM SEWER DISCHARGE STRUCTURE
DRAINS

DESIGNED _____ FIELD APPROVAL _____
DRAWN EH & GRE TECHNICAL APPROVAL _____
CHECKED _____ APPROVED _____

163-518-4955

5.0 Storm Sewer Discharge Structures

5.1 Minimum Standards. - Drains required to accommodate surface runoff shall receive structures conforming to the requirements shown on Drawing 163-518-4955, Storm Sewer Discharge Structure and Drawing 163-518-4956, Storm Sewer Discharge Structure - Alternate.

5.2 Side Slope Discharge. - Storm sewer discharge onto the side slopes of the drain prism shall conform to the requirements shown on Drawing 163-518-4955, Storm Sewer Discharge Structure. The concrete lining shall meet the requirements of Paragraph 4.14 Reinforced Concrete Lining.

5.3 Bottom Discharge. - Storm sewer discharge at the bottom of the drain prism shall conform to the requirements shown on Drawing 163-518-4956, Storm Sewer Discharge Structure- Alternate.

5.4 Compacted Backfill. - Backfill for cuts or excavation in drains shall be thoroughly compacted to the satisfaction of the Bureau of Reclamation. To meet this requirement, compaction density (dry) of the soil fraction in the compacted material shall be not less than 90 percent of laboratory standard soil density as determined by the ASTM Proctor Compaction Test.

GENERAL CONSTRUCTION NOTES

1. Any work to be performed within the Middle Rio Grande Conservancy District Right-of-way shall be closely coordinated with the Middle Rio Grande Conservancy District; Engineering Department at 247-0234.

2. No work is to be done on facilities or structures belonging to, or operated by, the Middle Rio Grande Conservancy District, (M.R.G.C.D.) between March 1 and October 31 inclusive. However, work may be permitted by the M.R.G.C.D. if it can be shown that the work will not interfere with operations of the M.R.G.C.D. facility. All Work to be done within the M.R.G.C.D. facilities must be approved by the M.R.G.C.D. Engineer prior to commencing work.

3. The Contractor shall not store equipment, new materials or debris within District right-of-way which may interfere with operations and maintenance of the M.R.G.C.D. facility.

4. The Contractor shall not service vehicles or equipment within District right-of-way.

5. Seeding of disturbed areas within District Right-of-Ways is required per the attached seeding specifications.

6. The Contractor must maintain a minimum cover of 3' over all culvert crossings used for access to the project site.

7. The Contractor is responsible for repairing and/or replacement of damaged structure/structures within District Right-of-Ways that may occur due to the Contractors activities.

8. All damaged culvert crossings must be restored and/or replaced to the satisfaction of the Middle Rio Grande Conservancy District.

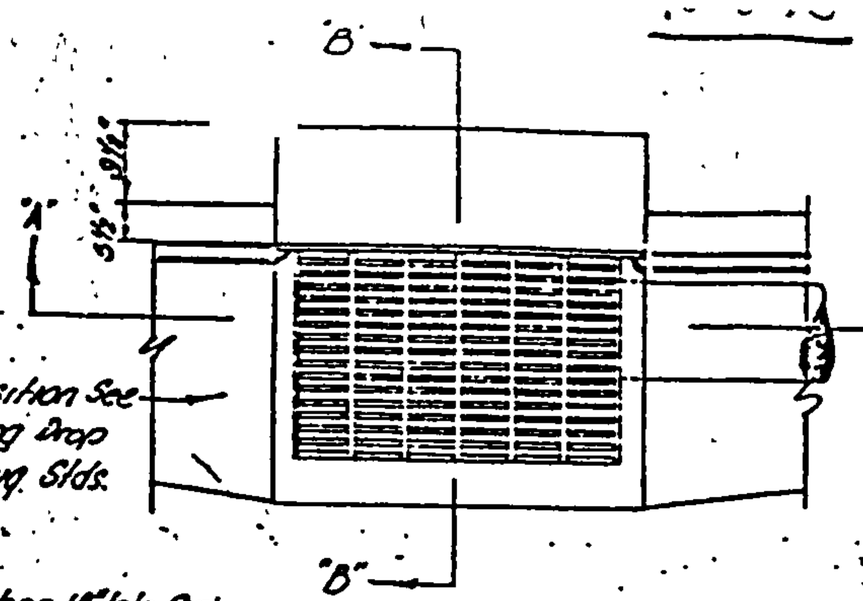
9. All salvageable culverts, irrigation gates, etc. must be returned to the District.

10. The Contractor is responsible for executing a Special Use License Agreement with the District prior to construction.

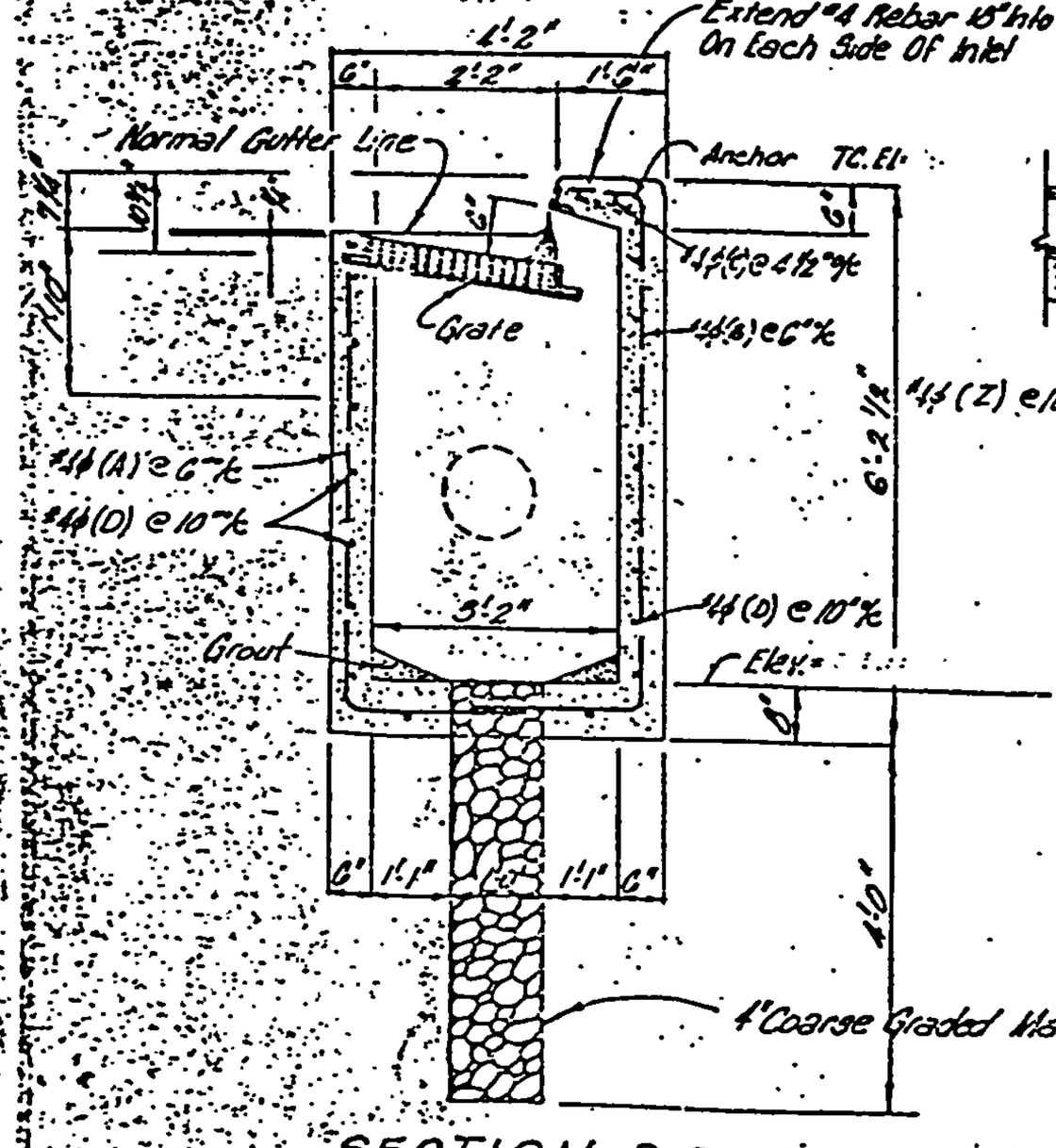
DROP INLET

(Storm Sewer & Skimmer)

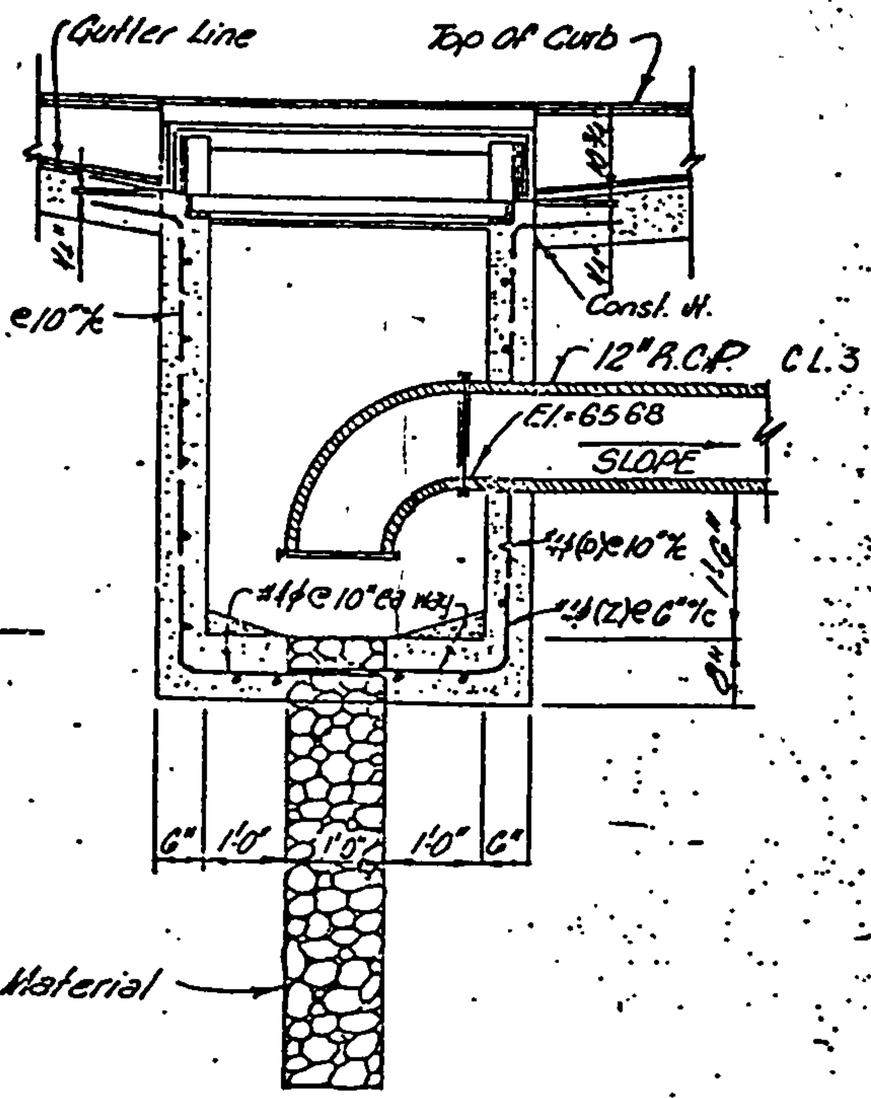
Design as suggested by M.R.C.D. for study & evaluation of effectiveness and maintanence.



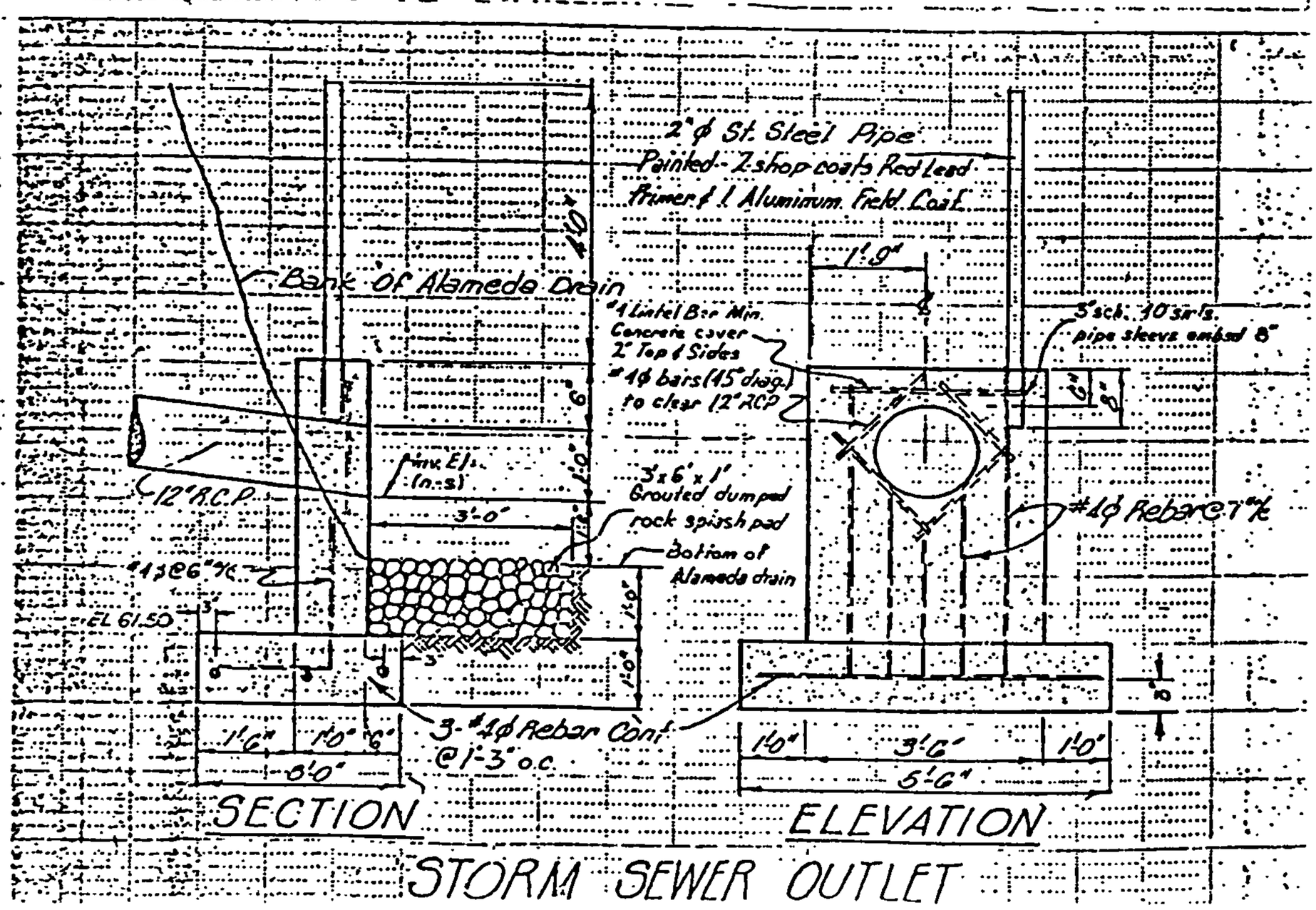
PLAN



SECTION B-B



SECTION A-A



SECTION

ELEVATION

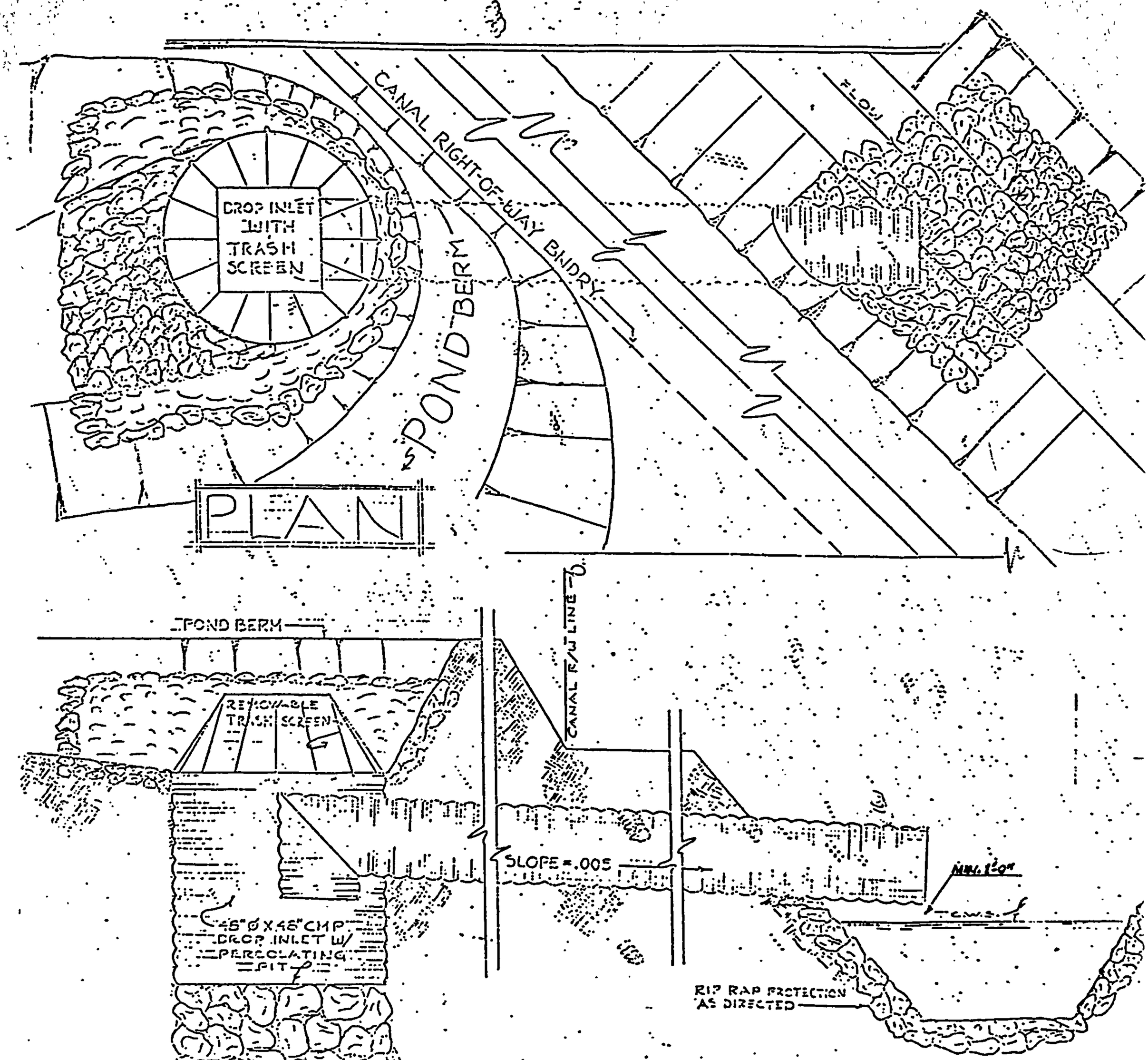
STORM SEWER OUTLET

Filter 9 Sized 1:1

(A-5)

under splash pad, fill of 12" Storm % of max. density TM designation factor)

M.R.G.C.D.
TYPICAL SEPARATOR TYPE DROP INLET AND DRAIN INLET



931076

DRAINAGE INFORMATION SHEET

(PWD-94-229)

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: P14/D1

DRB #: 94-10 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK, UNIT 1

CITY ADDRESS: KING RD S.E. BETWEEN AT & S.F. RR. AND PRINCE ST. SE.

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: SPACE HOMES CONTACT: JIMMIE GLENN

ADDRESS: 11209 PARIS NE PHONE: 988-9615

ARCHITECT: — CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JMA CONTACT: CHUCK CALA

ADDRESS: 6010-B MIDWAY PARK BLVD PHONE: 345-4250

CONTRACTOR: NOT YET SELECTED CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
X DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

____ YES
X NO
____ COPY PROVIDED

RECEIVED
JUL - 5 1995
DRAINAGE DIVISION

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
X GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 06-29-95

BY: J. GRAEME MEANS

A MEMBER OF CONSULTING
GINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
June 29, 1995

Mr. Roger Paul
% Bernalillo County Public Works Department
2400 Broadway S.E.
Albuquerque, NM 87102

Re: Grading and Drainage Plan - Rio Bravo Estates
(PWD 94-229), (C.O.A. Hydrology File No. P14/D1)

Dear Roger:

Transmitted herewith for review are four (4) sets of the subject Grading and Drainage Plan. The purpose of this submittal is to obtain grading approval. Once Grading and Drainage Plan approval is obtained, we will submit public infrastructure construction plans for City and County review.

We have not yet met with the M.R.G.C.D. to discuss the proposed work in the San Jose Drain. We recognize that any approvals forthcoming from B.C.P.W.D. would be contingent upon M.R.G.C.D. approval. We will provide to you any pertinent information concerning our correspondence with the M.R.G.C.D.

If you should have any questions or comments, or should you require any additional information concerning this submittal or any other portion of this project, please do not hesitate to call either Jeff Mortensen or me.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means

J. Graeme Means, E.I.T.

JGM:dsj
Enclosures
xc: Sue Calongne
Jimmie Glenn

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-4250 FAX (505) 345-4254

JOB 931076 RIO BRAVO ESTATES
SHEET NO _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____

RIO BRAVO ESTATES DETENTION POND

SECTIONS, DETAILS AND CALCULATIONS

TABLE OF CONTENTS

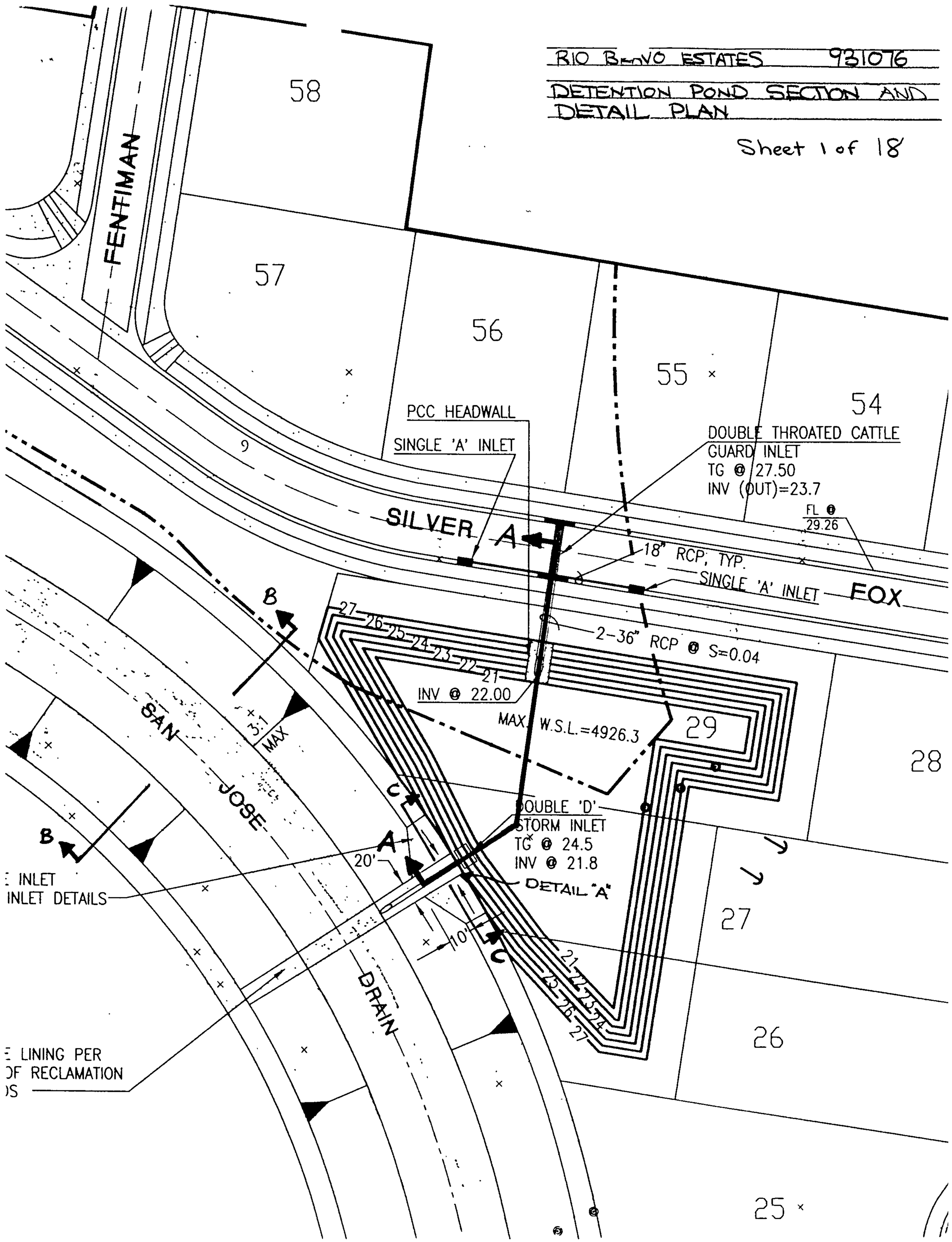
1) SECTION AND DETAIL PLAN
2) SECTION A-A
3) SECTION B-B
4) DETAIL A, SECTION C-C
5) POND VOLUME CALCULATIONS
7) WILSON & CO. HYMO OUTPUT
8) WILSON & CO. BASIN MAP
9) FLOWMASTER OUTPUT
10) OUTFLOW CALCULATIONS
12) CULVERT NOMOGRAPH
13) DEPTH-DISCHARGE TABLE
14) AHYMO INPUT AND OUTPUT

JEFFREY G. MORTENSEN
NEW MEXICO
8547
REGISTERED PROFESSIONAL ENGINEER
MAY - 5 1995

RIO BRAVO ESTATES 931076

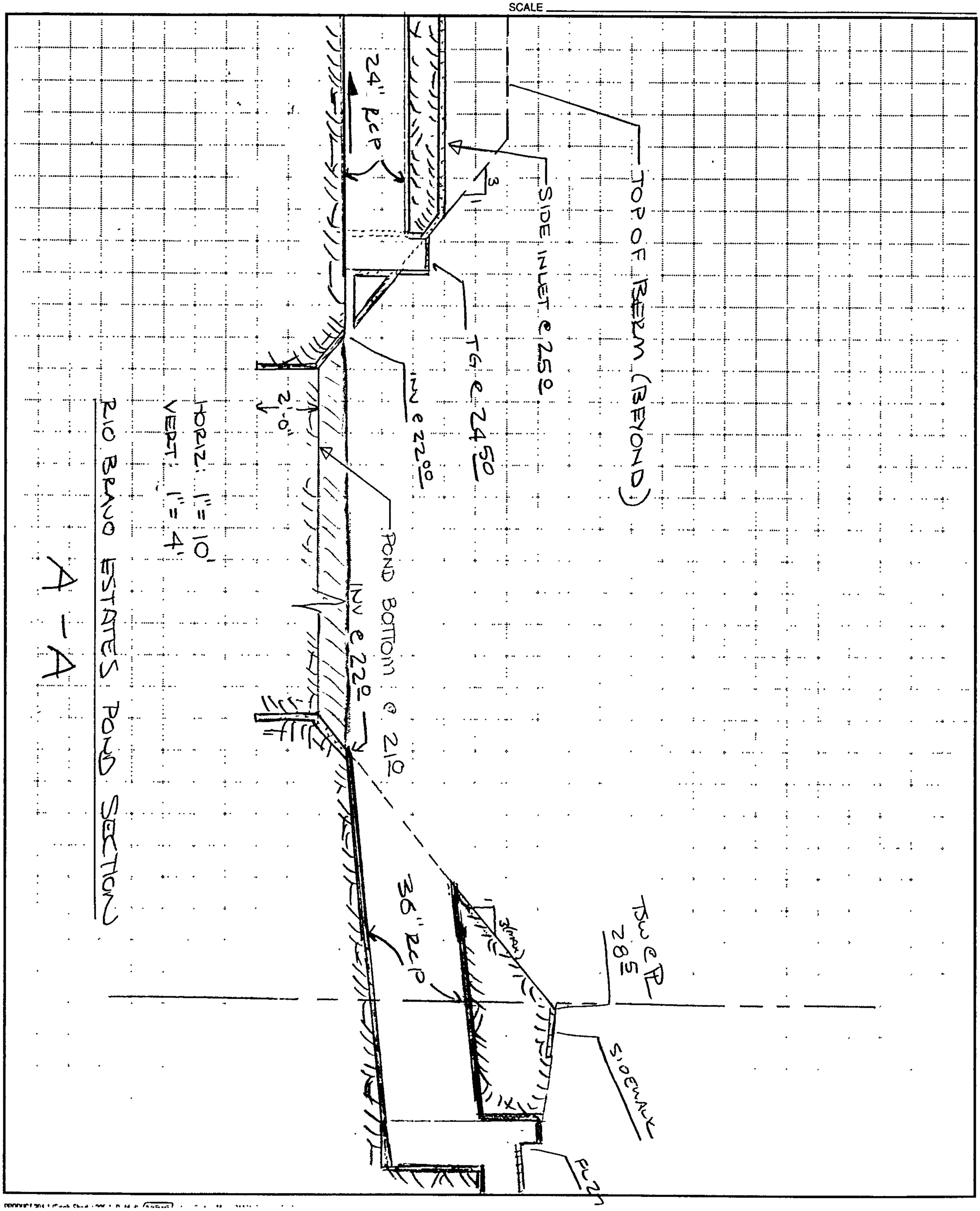
DETENTION POND SECTION AND DETAIL PLAN

Sheet 1 of 18



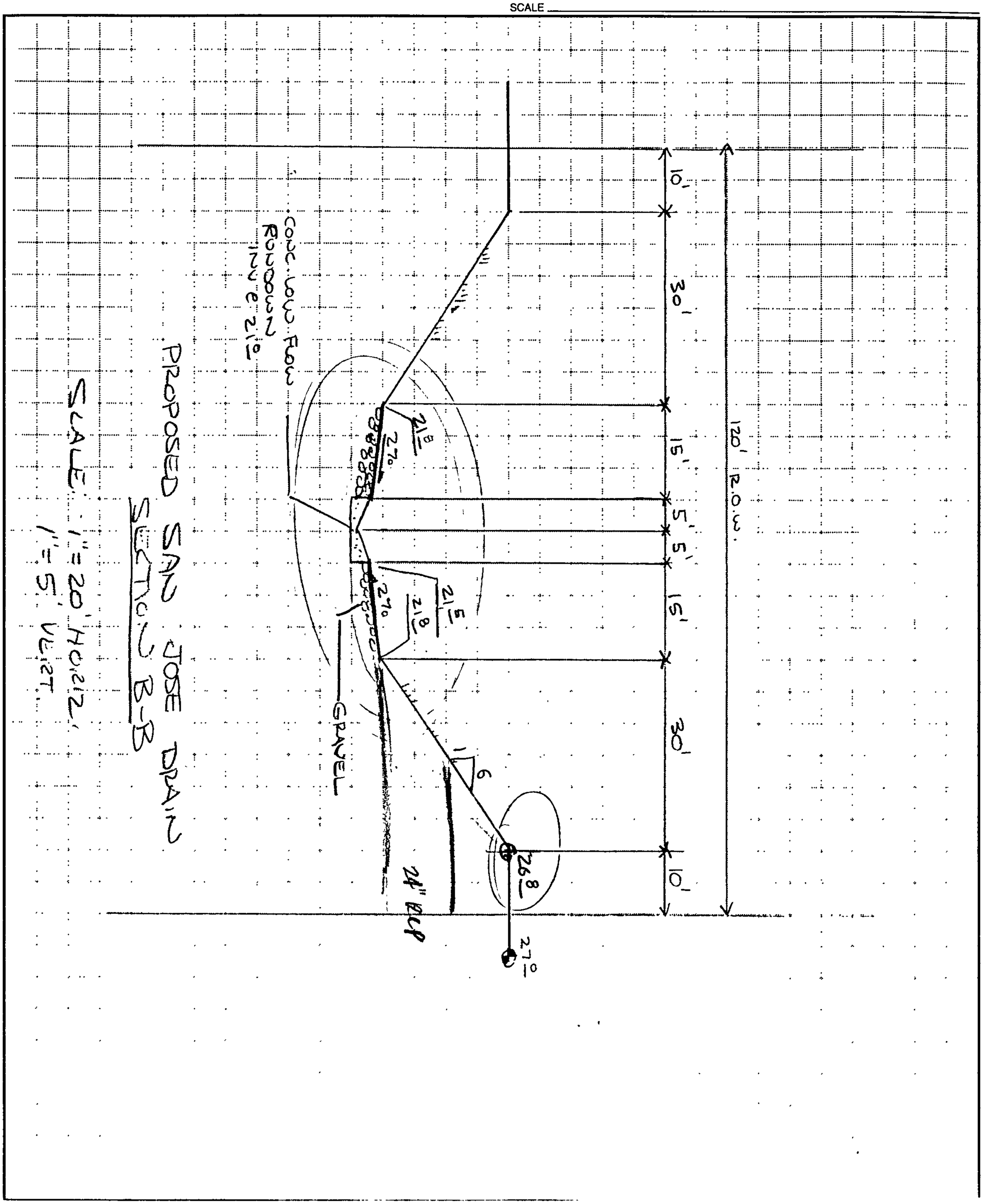
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-4250 FAX (505) 345-4254

JOB 93107 RIO BRAVO ESTATES
SHEET NO 2 OF 18
CALCULATED BY G.M. DATE 04/27/95
CHECKED BY _____ DATE _____
SCALE _____



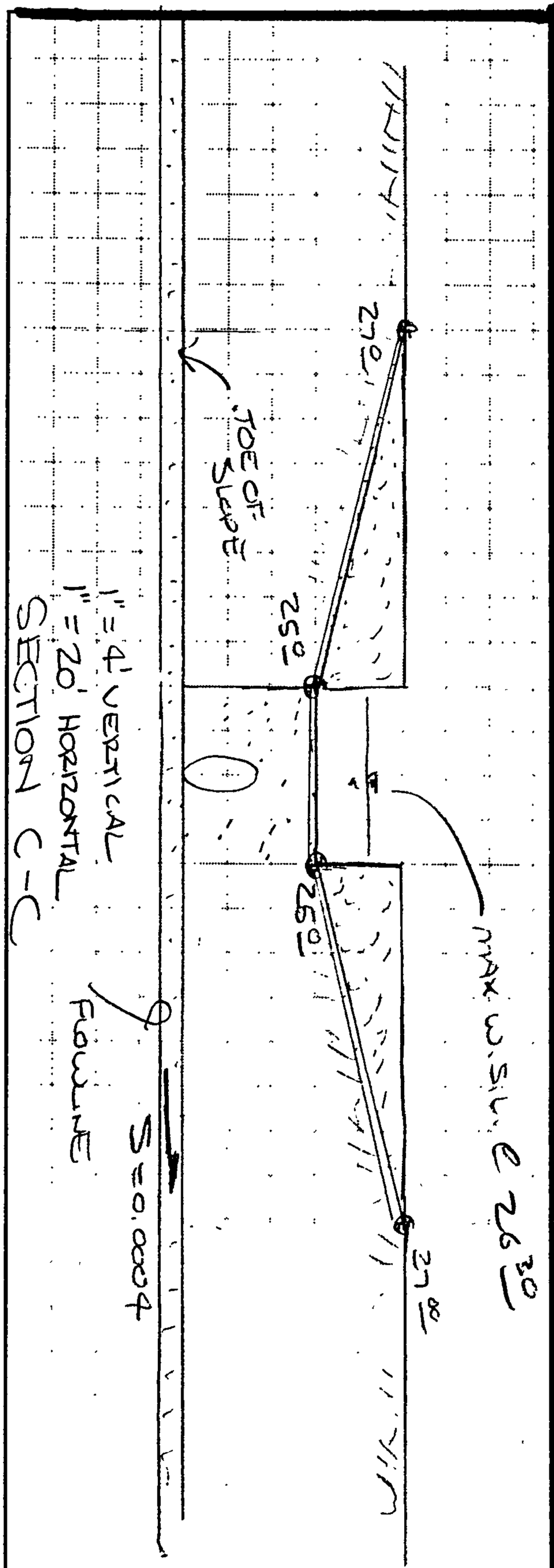
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-4250 FAX (505) 345-4254

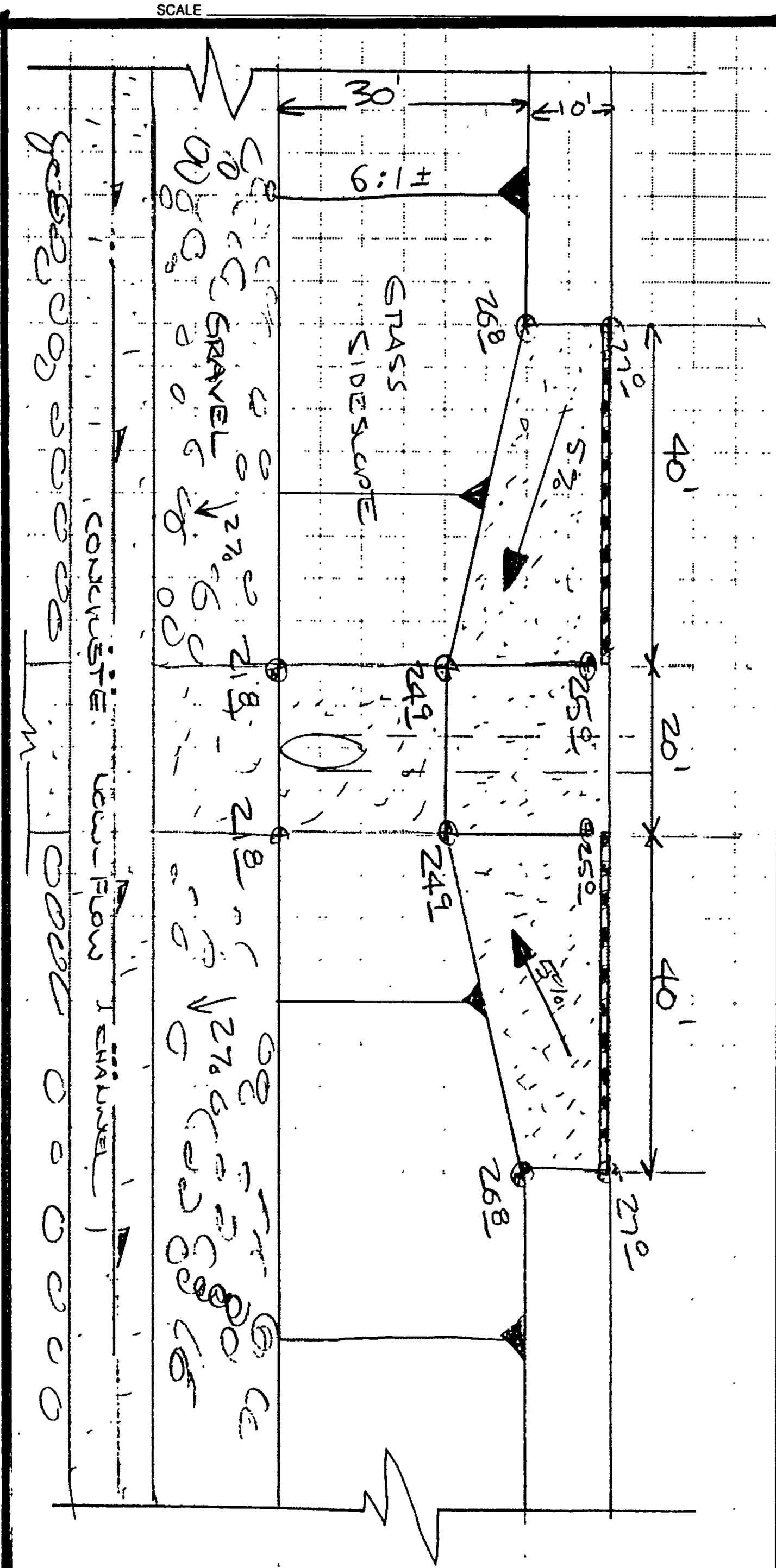
JOB 931 6 RIO BRAVO ESTATES
SHEET NO. 3 OF 18
CALCULATED BY G.M. DATE 04/27/95
CHECKED BY _____ DATE _____
SCALE _____



JEFF MORTENSEN & ASSOCIATES, INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-4250 FAX (505) 345-4254

JOB 931C ; RIO BRAVO ESTATES
SHEET NO 4 OF 18
CALCULATED BY G.M. DATE 04/27/95
CHECKED BY _____ DATE _____
SCALE _____





JEFF MORTENSEN & ASSOCIATES, INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-4250 FAX (505) 345-4254

JOB 931 5 RIO BRAVO ESTATES
SHEET NO. 5 OF 18
CALCULATED BY G.M. DATE 04/27/95
CHECKED BY DATE
SCALE

POND VOLUME CALCULATIONS
(AVERAGE END AREA METHOD)

ELEVATION (MSL) — 4900	AREA (AC)	VOL (AC-FT)	ΣVOL (AC-FT)
21	0.2310		
		0.2496	0.2496
22	0.2681		
		0.2877	0.5373
23	0.3072		
		0.3277	0.8650
24	0.3481		
		0.3693	1.2343
25	0.3905		
		0.4113	1.6456
26	0.4320		
		0.4524	2.0980
27	0.4727		

ELEVATION - AREA REPORT

4-27-95

SET #223 27 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
675.4168	20590.8557	.4727

SET #224 26 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
652.8595	18817.8382	.4320

SET #225 25 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
630.5359	17011.3072	.3905

SET #226 24 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
607.9777	15161.8902	.3481

SET #227 23 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
583.8309	13381.1863	.3072

SET #228 22 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
556.5294	11679.9054	.2681

SET #229 21 CONT

PERIMETER	AREA (sq ft)	AREA (acres)
526.8962	10063.3255	.2310

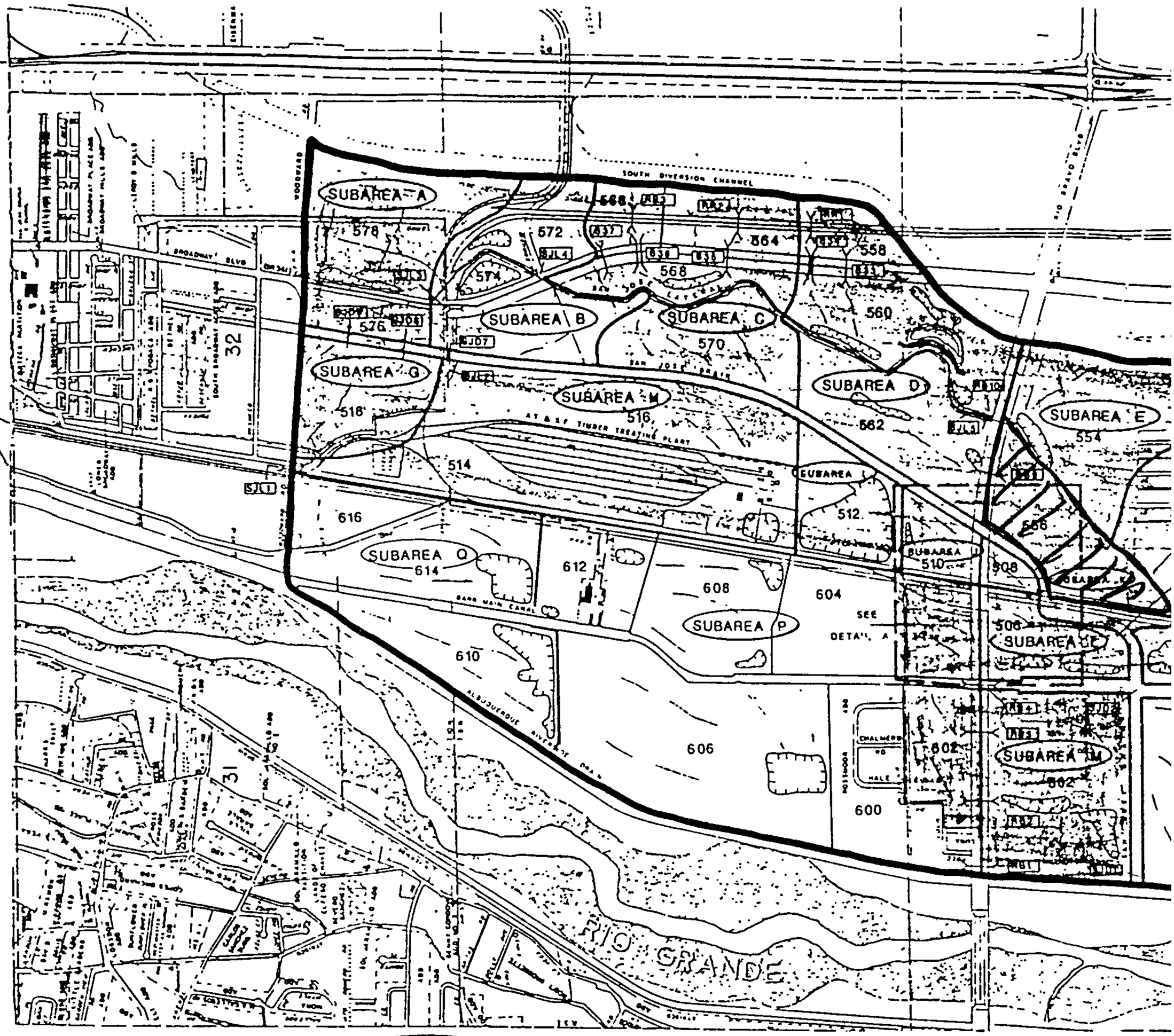
TOTAL FOR SETS 223 THRU 229

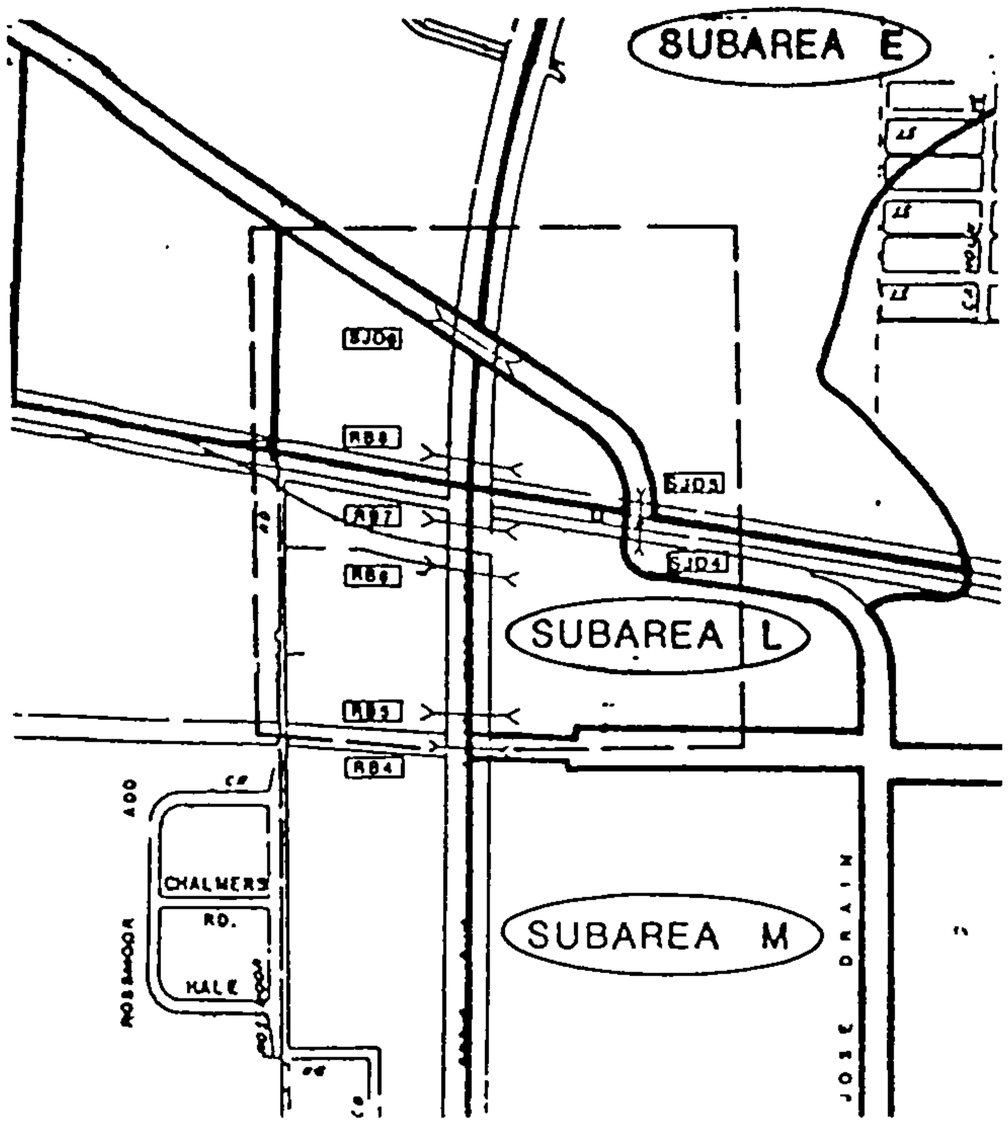
PERIMETER	AREA (sq ft)	AREA (acres)
0.0000	106706.3085	2.4496

```
*****************************************************************************
*       COMPUTE RATING CURVE FOR REACH 6, ADD DISCHARGE FROM
*       SUBAREAS "E" & "K" AT STA. 95+00
*       HYDRO. 556.3/ID=11 IS THE FINAL OUTFLOW FROM SUBAREA "E"
*       HYDRO. 508.3/ID=17 IS THE FINAL OUTFLOW FROM SUBAREA "K"
*
PRINT HYD          ID=11   CODE=1

                        OUTFLOW HYDROGRAPH RESERVOIR   556.30

    RUNOFF VOLUME =      .96303 INCHES     =      11.7617 ACRE-FEET
     PEAK DISCHARGE RATE =     231.11 CFS    AT      .280 HOURS

PRINT HYD          ID=17   CODE=1

                        OUTFLOW HYDROGRAPH RESERVOIR   508.30

    RUNOFF VOLUME =      .96303 INCHES     =       .5650 ACRE-FEET
     PEAK DISCHARGE RATE =      18.41 CFS    AT      .160 HOURS

ADD HYD            ID=1    HYD=124.1   ID I=11   ID II=2
ADD HYD            ID=1    HYD=130.1   ID I=17   ID II=1
PRINT HYD          ID=1    CODE=1

                        PARTIAL HYDROGRAPH   130.10

    RUNOFF VOLUME =      .56450 INCHES     =     129.9707 ACRE-FEET
     PEAK DISCHARGE RATE =     550.02 CFS    AT      .280 HOURS

*
COMPUTE RATING CURVE  RC=1    VS NO=1     NSEGS=1
                      MIN ELEV=0.0        MAX ELEV=9.5
                     .0007   .0007
                     N=.017               DIST=100
                      DIST    ELEV    DIST    ELEV    DIST    ELEV
                       0      9.5      30      0       70      0
                     100      9.5
```

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS
.00	.0	.0
.50	20.8	29.5
1.00	43.2	94.8
1.50	67.1	189.0
2.00	92.6	309.9
2.50	119.7	456.5
3.00	148.4	628.7
3.50	178.7	826.4


INTERSTATE 25
SOUTH DIVERSION CHANNEL
SUBAREA A
SUBAREA B
SUBAREA C
SUBAREA D
SUBAREA E
SUBAREA G
SUBAREA M
SUBAREA Q
SUBAREA P
SUBAREA L
SEE DETAIL A
BROADWAY BLVD
SAN JOSE LATERAL
SAN JOSE DRAIN
AT & SF TIMBER TREATING PLANT
SAN MAIN CANAL
ALBUQUERQUE RIVERSIDE DRAIN
RIO GRANDE
578
572
564
558
574
568
560
576
570
518
516
562
554
514
616
512
510
508
614
612
608
604
506
610
606
602
600
32
31


SUBAREA E
SUBAREA L
SUBAREA M
CHALMERS RD.
HALE
ROSEMOOR ADD
JOSE DRAIN

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: SAN JOSE DRAIN

Comment: RIO BRAVO ESTATES 931076

Solve For Depth

Given Input Data:

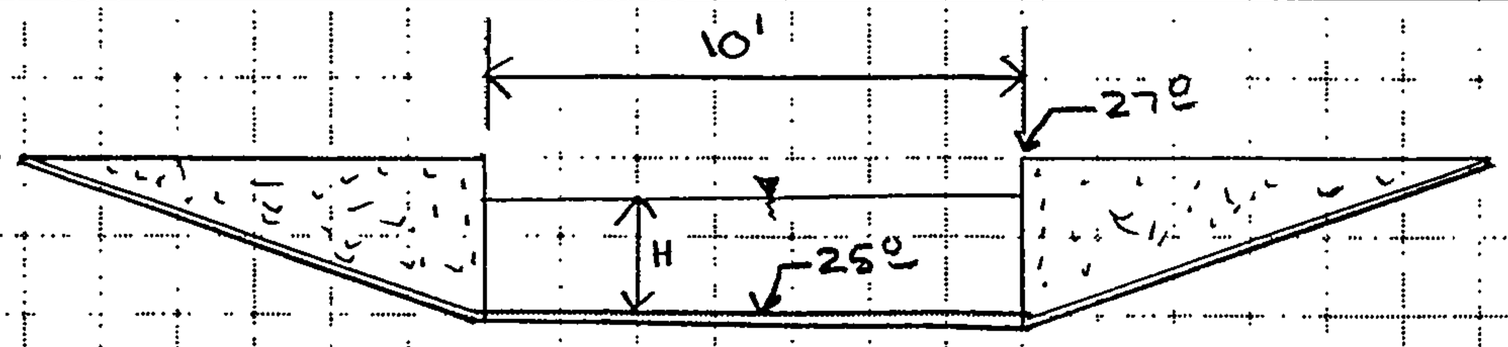
Bottom Width.....	40.00 ft
Left Side Slope..	6.00:1 (H:V)
Right Side Slope.	6.00:1 (H:V)
Manning's n.....	0.022
Channel Slope....	0.0004 ft/ft
Discharge.....	550.00 cfs ⇒ FROM WILSON & COMPANY PLAN - STA 95+00

Computed Results:

Depth.....	3.52 ft
Velocity.....	2.55 fps
Flow Area.....	215.36 sf
Flow Top Width...	82.27 ft
Wetted Perimeter.	82.86 ft
Critical Depth...	1.65 ft
Critical Slope...	0.0064 ft/ft
Froude Number....	0.28 (flow is Subcritical)

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B Midway Park Blvd. NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 345-4250 FAX (505) 345-4254

JOB 931076 RIO BRAVO ESTATES
SHEET NO. 10 OF 18
CALCULATED BY G.M. DATE 05/02/95
CHECKED BY _____ DATE _____
SCALE _____



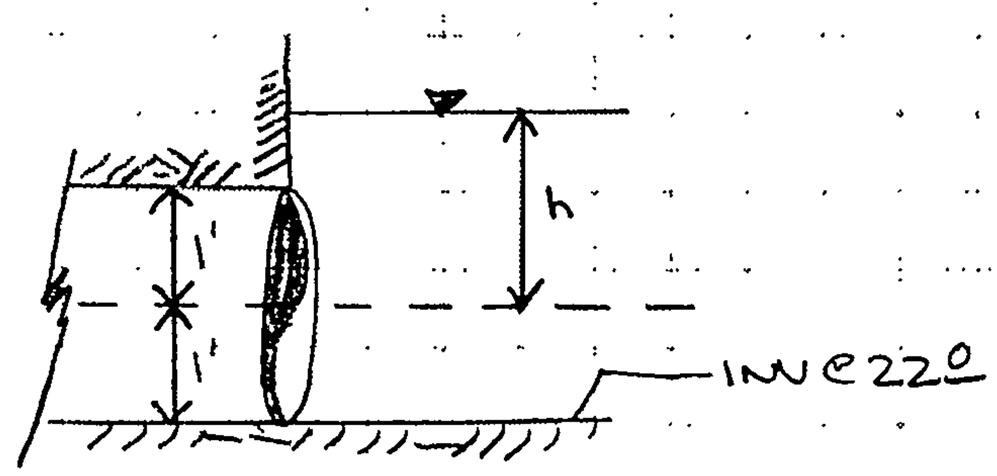
OUTFLOW FROM RECTANGULAR WEIR: $Q = CLH^{3/2}$

ELEV	C*	L	H	Q
25.5	2.63	10'	0.5'	9.3 cfs
26.0	2.68	10'	1.0'	26.8 cfs
26.5	2.65	10'	1.5'	48.7 cfs
27.0	2.64	10'	2.0'	74.7 cfs

* C VALUES TAKEN FROM KING & BRATER, "HANDBOOK OF HYDRAULICS"

ENTRANCE CONDITION FOR 24" ORIFICE: $Q = CA\sqrt{2gh}$

$A = \pi r^2$; $r = 1'$ $A = \pi = 3.14$ sf
$g = 32.2$ ft/s^2
$C = 0.6$



ELEV	h	Q
24.5	1.5'	18.5 cfs
25.0	2.0'	21.4 cfs
25.5	2.5'	23.9 cfs
26.0	3.0'	26.2 cfs
26.5	3.5'	28.3 cfs
27.0	4.0'	30.2 cfs

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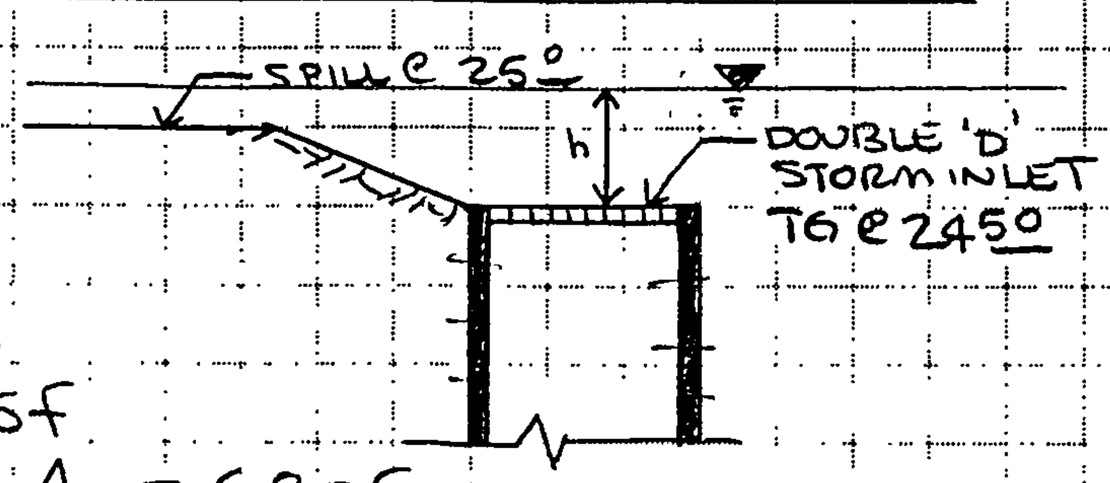
JOB 931076 210 BRAVO ESTATES
SHEET NO. 11 OF 18
CALCULATED BY G.M. DATE 05/02/95
CHECKED BY _____ DATE _____
SCALE _____

GRATE CAPACITY CALCULATIONS - ORIFICE EQN.

$Q = CA\sqrt{2gh}$ $C = 0.6$
$g = 32.2$



AREA OF DOUBLE GRATE =
$6'-4\frac{3}{4}'' \times 2'-11\frac{1}{2}'' = 13.6$ sf
EFFECTIVE AREA = $A_{eff} = \frac{1}{2}A = 6.8$ sf

ELEV	h	Q
25.0	0.5'	23.2 cfs
25.5	1.0'	32.7 cfs
26.0	1.5'	40.1 cfs
26.5	2.0'	46.3 cfs
27.0	2.5'	51.8 cfs

24" CULVERT CAPACITY TABLE (SEE NOMOGRAPH ON SHEET 12)

W.S.L IN DRAIN (MAX) = 21.1 (channel invert)
+ 3.5 (depth from Sheet 9)
24.6 (MAX W.S.L. IN DRAIN)

USE W.S.L. = 25.0 FOR PRESSURE CALCULATIONS

$K_e = 0.5$
$L = 50'$
$D = 24''$

POND ELEV	ΔH	Q
25.0	0	0
25.5	0.5	12.0 cfs
26.0	1.0	17.0 cfs
26.5	1.5	21.5 cfs
27.0	2.0	24.0 cfs

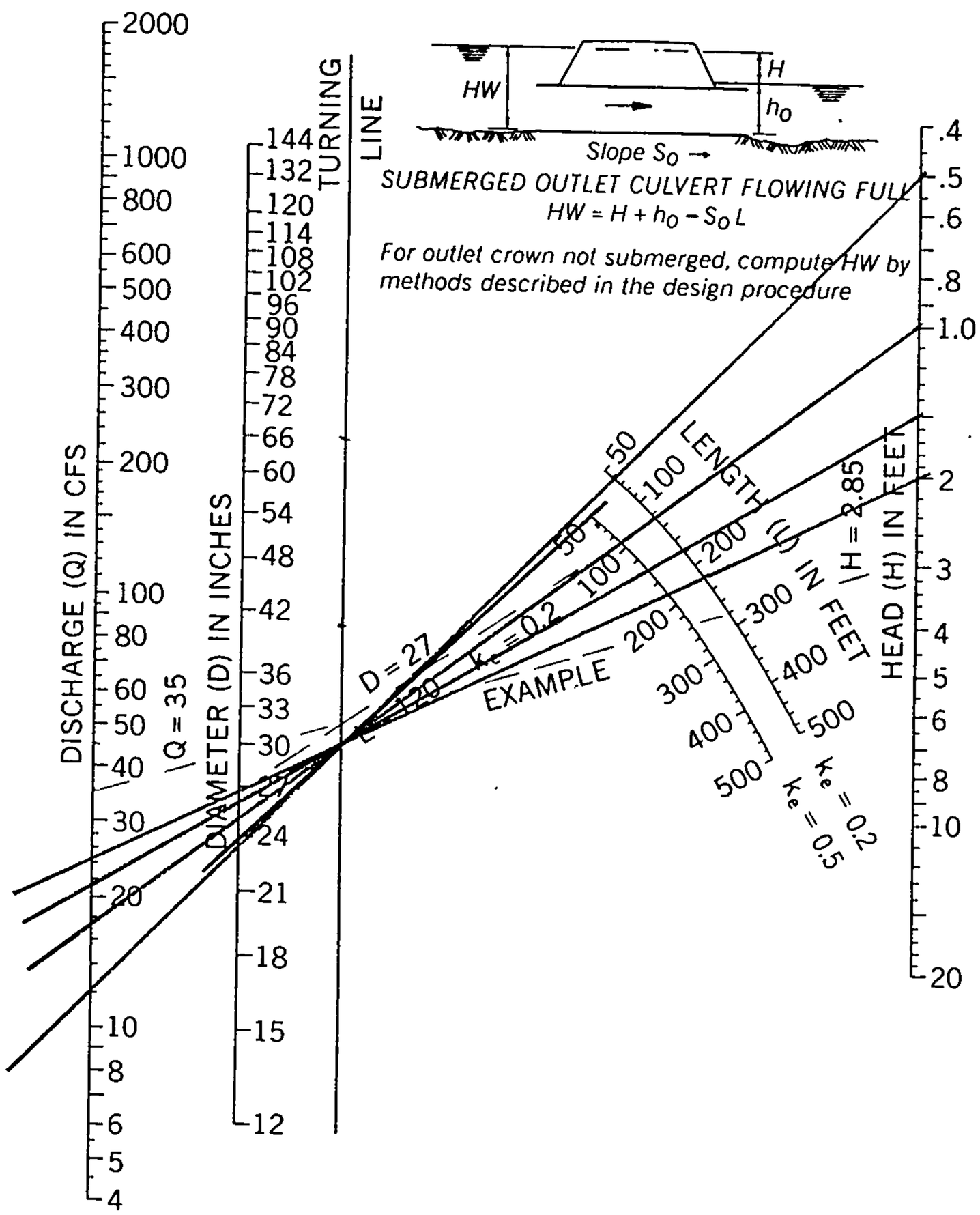
WHEN CULVERT CAPACITY, GRATE CAPACITY AND ORIFICE ENTRANCE CAPACITY ARE COMPARED, THE CULVERT CAPACITY IS THE LIMITING CONDITION
∴ USE CULVERT CAPACITY

931075

SHEET 12 of 18

FIGURE 38

HEAD FOR CIRCULAR CONCRETE PIPE CULVERTS FLOWING FULL
n = 0.012



FROM "CONCRETE PIPE DESIGN MANUAL"
BUREAU OF PUBLIC ROADS JAN. 1963 PREPARED BY THE
AMERICAN CONCRETE PIPE ASSOCIATION

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(505) 345-4250 FAX (505) 345-4254

JOB 9310 RIO BRAVO ESTATES
SHEET NO. 13 OF 18
CALCULATED BY G.M. DATE 05/02/95
CHECKED BY _____ DATE _____
SCALE _____

DEPTH-DISCHARGE TABLE

ELEVATION	Q WEIR	Q CULVERT	Q TOTAL	
25	0	0	0	
25.5	9.3 cfs	12.0 cfs	21.3 cfs	
26.0	26.8 cfs	17.0 cfs	43.8 cfs	@ 59 cfs San Jose does not overtop
26.5	48.7 cfs	21.5 cfs	70.2 cfs	
27.0	74.7 cfs	24.0 cfs	98.7 cfs	

```
*23456789012345678 90
*
*    THIS MODEL SIMULATES THE INFLOW/OUTFLOW RELATIONSHIP FOR THE
*    PROPOSED OUTFALL SYSTEM FOR RIO BRAVO ESTATES.
*
*    HYDROGRAPH 101.1 IS THE DEVELOPED CONDITIONS HYDROGRAPH FOR THE
*    SUBDIVISION.   HYDROGRAPH 101.3 IS THE EXISTING CONDITIONS HYDROGRAPH.
*    HYDROGRAPH 101.2 IS THE DEVELOPED HYDROGRAPH ROUTED THROUGH THE
*    PROPOSED OUTFALL DETENTION FACILITY.
*
*
START                   TIME = 0.0  PUNCH CODE = 0  PRINT LINES = -1
RAINFALL                TYPE = 1  RAIN QUARTER = 0.0
                        RAIN ONE = 2.01 IN RAIN SIX = 2.35 IN
                        RAIN DAY = 2.80 IN DT = 0.02
*
*    RIO BRAVO ESTATES DEVELOPED BASIN
*
COMPUTE NM HYD          ID=1 HYD NO = 101.1  AREA = 0.049875 SQ MI
                        PER A = 0  PER B=30 PER C=30  PER D = 40
                        TP = -0.13333333 HR  MASS RAIN = -1

PRINT HYD               ID=1  CODE =1

*    RIO BRAVO ESTATES EXISTING BASIN
*
COMPUTE NM HYD          ID=3 HYD NO = 101.3  AREA = 0.049875 SQ MI
                        PER A = 0  PER B=100 PER C=0  PER D = 0
                        TP = -0.13333333 HR  MASS RAIN = -1

PRINT HYD               ID=3  CODE =1
*
*    ROUTE RESERVOIR WITH 24" PIPE
*
ROUTE RESERVOIR         ID = 2  HYD NO = 101.2  INFLOW ID = 1  CODE = 10
                        OUTFLOW (CFS)     STORAGE (AC-FT)     ELEV (FT)
                        0                 0.0000                21
                        0.01              0.2496                22
                        0.02              0.5373                23
                        0.03              0.8650                24
                        0.04              1.2343                25
                        21.3              1.4061                25.5
                        43.8              1.6456                26
                        70.2              1.8278                26.5
                        98.7              2.0980                27

PRINT HYD               ID = 2  CODE = 1

FINISH
```

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =05/02/1995
INPUT FILE = 931075B.INP USER NO.= J_MORTEN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
RAINFALL TYPE= 1										RAIN6= 2.350
COMPUTE NM HYD	101.10	-	1	.04988	112.16	3.748	1.40884	1.520	3.514	PER IMP= 40.00
COMPUTE NM HYD	101.30	-	3	.04988	73.89	2.071	.77874	1.520	2.315	PER IMP= .00
ROUTE RESERVOIR	101.20	1	2	.04988	58.78	2.531	.95144	1.680	1.842	AC-FT= 1.749
FINISH										

```
*234567890123456789 0
*
*
*     THIS MODEL SIMULATES THE CONDITIONS THE ORIGINAL WILSON & COMPANY
*     ANALYSIS OF THE SAN JOSE DRAIN SYSTEM.  HYDROGRAPH 556.1 IS
*     THE SAME AS HYDROGRAPH 556.1 FROM THE PREVIOUS STUDY.
*     HYDROGRAPH RIOBRAVO1 IS THE DEVELOPED HYDROGRAPH OF RIO BRAVO ESTATES, AS
*     CALCULATED USING WILSON'S ORIGINAL RAINFALL DISTRIBUTION AND CURVE NUMBER
*     THE TIME TO PEAK FOR HYD RIOBRAVO1 IS 10 MINUTES IN ACCORDANCE WITH
*     THE CITY HYDROLOGY CRITERIA IN PLACE AT THAT TIME.
*     THE PURPOSE OF THE SECOND HYDROGRAPH IS TO DETERMINE THE PEAK RATE OF
*     RUNOFF GENERATED BY RIO BRAVO ESTATES UNDER THE OLD CRITERIA.
*

START                    TIME = 0.0  PUNCH CODE = 0  PRINT LINES = -1

*  RAINFALL DISTRIBUTION USED IN WILSON AND COMPANY'S ORIGINAL ANALYSIS
*
COMPUTE HYD              ID = 3  HYD NO = 556.1  DT = 0.02  DA = 0.089
                         CN = 84  K = -0.11  TP = -0.21  MR =
                         0.0000  1.3720  1.4608  1.5155  1.5554  1.5872  1.6136
                         1.6363  1.6562  1.6739  1.6900  1.7046  1.7181  1.7306
                         1.7422  1.7531  1.7634  1.7731  1.7823  1.7911  1.7994
                         1.8074  1.8150  1.8223  1.8293  1.8361  1.8426  1.8489
                         1.8550  1.8609  1.8667  1.8722  1.8776  1.8828  1.8879
                         1.8929  1.8977  1.9024  1.9070  1.9115  1.9159  1.9202
                         1.9244  1.9285  1.9325  1.9364  1.9403  1.9441  1.9478
                         1.9514  1.9550  1.9585  1.9620  1.9653  1.9687  1.9719
                         1.9752  1.9783  1.9814  1.9845  1.9875  1.9905  1.9934
                         1.9963  1.9992  2.0020  2.0048  2.0075  2.0102  2.0128
                         2.0155  2.0181  2.0206  2.0231  2.0256  2.0281  2.0305
                         2.0329  2.0353  2.0376  2.0400  2.0423  2.0445  2.0468
                         2.0490  2.0512  2.0534  2.0555  2.0576  2.0598  2.0618
                         2.0639  2.0659  2.0680  2.0700  2.0720  2.0739  2.0759
                         2.0778  2.0797  2.0816  2.0835  2.0853  2.0872  2.0890
                         2.0908  2.0924  2.0944  2.0961  2.0979  2.0996  2.1014
                         2.1031  2.1048  2.1064  2.1081  2.1098  2.1114  2.1130
                         2.1146  2.1162  2.1178  2.1194  2.1210  2.1225  2.1241
                         2.1256  2.1271  2.1286  2.1301  2.1316  2.1331  2.1346
                         2.1360  2.1375  2.1389  2.1403  2.1418  2.1432  2.1446
                         2.1460  2.1474  2.1487  2.1501  2.1515  2.1528  2.1541
                         2.1555  2.1568  2.1581  2.1594  2.1607  2.1620  2.1633
                         2.1646  2.1658  2.1671  2.1683  2.1696  2.1708  2.1721
                         2.1733  2.1745  2.1757  2.1769  2.1781  2.1793  2.1805
                         2.1817  2.1829  2.1840  2.1852  2.1863  2.1875  2.1886
                         2.1898  2.1909  2.1920  2.1931  2.1942  2.1954  2.1965
                         2.1975  2.1986  2.1997  2.2008  2.2019  2.2029  2.2040
                         2.2051  2.2061  2.2072  2.2082  2.2093  2.2103  2.2113
                         2.2123  2.2134  2.2144  2.2154  2.2164  2.2174  2.2184
                         2.2194  2.2204  2.2213  2.2223  2.2233  2.2243  2.2252
                         2.2262  2.2272  2.2281  2.2291  2.2300  2.2309  2.2319
                         2.2328  2.2337  2.2347  2.2356  2.2365  2.2374  2.2383
                         2.2392  2.2401  2.2410  2.2419  2.2428  2.2437  2.2446
                         2.2455  2.2464  2.2472  2.2481  2.2490  2.2498  2.2507
                         2.2516  2.2524  2.2533  2.2541  2.2550  2.2558  2.2566
                         2.2575  2.2583  2.2591  2.2600  2.2608  2.2616  2.2624
                         2.2632  2.2641  2.2649  2.2657  2.2665  2.2673  2.2681
                         2.2689  2.2697  2.2704  2.2712  2.2720  2.2728  2.2736
```

```
                    2.2743  2.2751  2.2759  2.2767  2.2774  2.2782  2.2789
                    2.2797  2.2805  2.2812  2.2820  2.2827  2.2835  2.2842
                    2.2849  2.2857  2.2864  2.2871  2.2879  2.2886  2.2893
                    2.2900  2.2908  2.2915  2.2922  2.2929  2.2936  2.2943
                    2.2950  2.2958  2.2965  2.2972  2.2979  2.2986  2.2992
                    2.2999

PRINT HYD           ID = 3  CODE = 1

COMPUTE HYD         ID = 4 HYD NO = RIOBRAVO1 DT = 0.02  DA = 0.05
                    CN = 84  K = -0.05555556 TP = -0.11111111  MR = -1

PRINT HYD           ID = 4  CODE = 1

FINISH
```

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =05/02/1995
INPUT FILE = 931076.INP USER NO.= J_MORTEN.I01

PAGE = 1

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
START										TIME= .00
COMPUTE HYD	556.10	-	3	.08900	106.61	4.571	.96303	.240	1.872	CN= 84.00
COMPUTE HYD	RIOBRAV01	-	4	.05000	105.40	2.568	.96303	.120	3.294	CN= 84.00
FINISH										

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

April 25, 1995

Graeme Means
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Blvd.
Albuquerque, New Mexico

RE: RIO BRAVO ESTATES (P14/D1) (PWD-94-229)

Dear Mr. Means:

This letter is in response to Jeff's letter to Fred Aguirre dated March 8, 1995. The analysis of the downstream capacity of the San Jose drain should be submitted as part of the drainage plan.

As a result of the meeting we had in the field, I have had several discussions in-house regarding the treatment of the San Jose drain which is a City maintained facility. We feel that lining the entire stretch of the drain adjacent to the subdivision is unnecessary, however, all of the trash and weeds in the channel should be removed. The drain may be left in its natural condition except where the two storm drain lines outfall into the channel. It is recommended that Bureau of Reclamation standard concrete lining be used at the two pipe outlets for erosion protection. This lining should be on both sides and along the bottom of the channel for a length per the Bureau of Reclamation standard, and should include cutoff walls. Details for these outfall structures must be approved by both the City (through DRC) and MRGCD.

An approved drainage plan is required prior to Preliminary Plat approval. Please be aware that before the drainage plan can be approved, we must receive concurrence from MRGCD that free discharge into the San Jose drain will be allowed. Also, all previous comments must be addressed. If you should have any questions, please call me at 768-2650.

Sincerely,

Susan Calongne

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

c: Chris Rivera, City Hydrology
Roger Paul, County PWD
Leonard Utter, MRGCD
Jimmie Glenn, Owner
File

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

A MEMBER OF CONSULTING
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JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931075
March 8, 1995

Mr. Fred J. Aguirre
Hydrology Section
Public Works Department
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Rio Bravo Estates (DRB-94-10, BCPWD 94-229)

Dear Fred:

On February 15, 1995, a meeting was held at the above referenced project site. In attendance were Ms. Sue Calongne, City/County Floodplain Administrator, Mr. Glenn Jurgensen, Storm Drain Maintenance, Mr. J. Graeme Means, Jeff Mortensen & Associates, Inc., and myself. The purpose for the meeting was to review the existing condition of the San Jose Drain adjacent to and downstream from Rio Bravo Estates. You and I have previously discussed types of treatment which may be used to develop this section of the drain. Per the Southeast Valley Drainage Management Plan; San Jose Drain & Vicinity, this section of the Drain is owned by the MRGCD, but to be maintained by the City of Albuquerque. It is because of this that you suggested that Mr. Jurgensen participate in the review as it will be his responsibility to maintain the improvements. A decision was not forthcoming from our meeting. It is because of this, that we request your assistance and involvement in the review of this aspect of the project. We wish to proceed with the design of the project from downstream to upstream. In doing so, we must first address improvements to the San Jose Drain.

Our research to date indicates that capacity exists in this section of the San Jose Drain. It was determined during our site visit that the capacity of the Drain is regulated by the existing crossing structures. Crossing structures exist at the Barr Canal (2 - 72" RCP culverts), Second Street S.W. (2 - 72" culverts, one CMP, one RCP), the AT & SF Railroad Crossing, (2 - 108" CMP Culverts), and Rio Bravo Boulevard S.E. (2 - 60" RCP culverts). The attached analysis demonstrates that the discharge from upstream contributing areas is regulated by the Rio Bravo Boulevard S.E. Crossing. The downstream capacity, regulated by the Second Street Crossing, is appreciably greater than that determined for the Rio Bravo Crossing. The excess capacity in that reach is greater than the discharge from the proposed subdivision, combined with the partially developed properties which lie to the north and west of the Drain. In making this analysis, we have considered the property across the Drain to be fully developed. In conclusion, we feel that capacity currently exists to receive the developed discharge from the proposed subdivision. This is consistent in concept with the above referenced Drainage Management Plan. That Plan allows for free discharge to the Drain. We have previously addressed, by separate correspondence, that the "new" hydrology has not had an adverse impact on this overall situation. This is due to the fact that this area has been down-zoned from M-1 to MH.

Jeffrey G. Mortensen, P.E. **Juan M. Cala** **Charles G. Cala, Jr., P.S.**

The lands which lie downstream from the site (west of Second Street S.W.) along the San Jose Drain are currently developed agriculturally. These lands are historically flood irrigated. Because of this, those sites lie topographically lower than the Drain and do not discharge to the Drain. Upon further development, these lands can be filled, thereby allowing discharge to the Drain. At that time, the capacity of the Drain will probably require an upgrade. We propose that the sections of the Drain downstream from Rio Bravo Estates be upgraded as a condition for the development of the adjacent properties. An upgrade to the capacity of that section of the Drain is not necessary to support the development of the Rio Bravo Estates subdivision.

The section of the San Jose Drain between the AT & SF Railroad Crossing and the King Road intersection should be improved as part of the infrastructure requirements for the Rio Bravo Estates subdivision. The method of lining/channel treatment has yet to be determined. Preliminary discussions suggest that perhaps soil cement would be appropriate. Mr. Jurgensen did not endorse this suggestion, however, was not vehemently opposed. We propose that the Drain be improved in accordance with the treatment recommended in the Southeast Valley Drainage Management Plan San Jose Drain & Vicinity. A copy of that section is enclosed for your review. This solution does not require any desilting of developed discharge into the Drain, other than that which would be required during construction. Regardless, we propose to pass the developed runoff from the Rio Bravo Estates site through a small detention pond which would "bleed" the low flows into the bottom of the Drain and spill the larger events via a concrete side inlet incorporated into the maintenance road. We feel that this treatment of the stormwater will serve to improve the quality of discharge from the site into the Drain. The grass-lined side slopes of the Drain will further enhance the removal of particulates suspended in the discharge.

We submit this information to you for consideration. We would appreciate the opportunity to meet with you to further discuss this matter after you have had sufficient time to complete your preliminary review. At that time, we should perhaps conduct a formal pre-design meeting, hence laying the ground work for this project to proceed into the design stage. Please review this proposal at your earliest convenience. We look forward to meeting with you to work collectively toward an appropriate solution to the treatment of this section of the San Jose Drain. If you should have any questions or comments regarding this information, please do not hesitate to call. Once again, we look forward to scheduling a formal pre-design meeting for this project.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

Jeffrey G. Mortensen, P.E.
President

JGM:dsj
Enclosures
xc: Jimmie Glenn w/enclosures

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JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
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RIO BRAVO ESTATES

San Jose Drain Crossing Structure Analysis

The San Jose Drain has four crossing structures between Rio Bravo Boulevard S.E. and the outfall at the Rio Grande. They are as follows:

1) Rio Bravo Blvd S.E. - 2-60" R.C.P. Culverts approximately 240 feet long

2) A.T. & S.F. Railroad Crossing - 2-108" C.M.P. Culverts

3) Second Street S.W. Crossing - 2-72" culverts, one C.M.P., one R.C.P., approximately 60' long

4) Barr Canal Crossing - 2-72" R.C.P. culverts approximately 60 feet long

Between the Rio Bravo Blvd and Second Street crossings, there are two properties which are physically able to drain into the San Jose Drain. The two properties are; the proposed Rio Bravo Estates, and Tri-State Acres which lies to the northwest of Rio Bravo Estates.

Currently, there are no properties draining into the San Jose Drain downstream of Second Street. According to the "Southeast Valley Drainage Management Plan; San Jose Drain and Vicinity," There are two drainage areas which may discharge to the San Jose Drain in the future. The Plan recommends that the area north of Rio Bravo Blvd, west of the A.T. & S.F. Railroad, and east of the Barr Main Canal discharge to the San Jose Drain by a recommended storm drain within Second Street. The area south of Rio Bravo Blvd., west of Second Street and east of the Barr Canal is currently used for agriculture and retains all runoff. This area would discharge to the San Jose Drain if it were to develop.

The maximum storm flow contained within the San Jose Drain at any given reach is limited to the sum of the flow rate through the last upstream crossing and the flow rate into the drain from adjacent properties downstream of that crossing. Since the San Jose Drain has very little grade, all culvert crossings exhibit outlet control and require a head buildup to pass significant flows. To provide a common basis for comparison, we will use a headwater depth to diameter ratio of 1.5:1 in our existing capacity analysis of the crossing structures immediately upstream of, and downstream of Rio Bravo Estates.

Using figure 38 of the Concrete Pipe Design Manual prepared by the American Concrete Pipe Association, one 60" concrete culvert 240 feet in length can carry up to 162 cfs with HW/D = 1.5 and an entrance condition of $K_e = 0.5$ (pipe projecting from fill). The total discharge that can pass under Rio Bravo is therefore (2)(162) = 324 cfs.

As previously stated, at this time there are only two properties which can discharge in the San Jose Drain between Rio Bravo Blvd. and the Drain's outfall into the Rio Grande. The Terrain Management Plan for Rio Bravo Estates (C.O.A. Hydrology File P14/D1, BCPWD #94-229) identifies the developed peak 100-year flow rate from the subdivision to be 111.8 cfs. The maximum discharge from Tri-State Acres has been determined as follows:

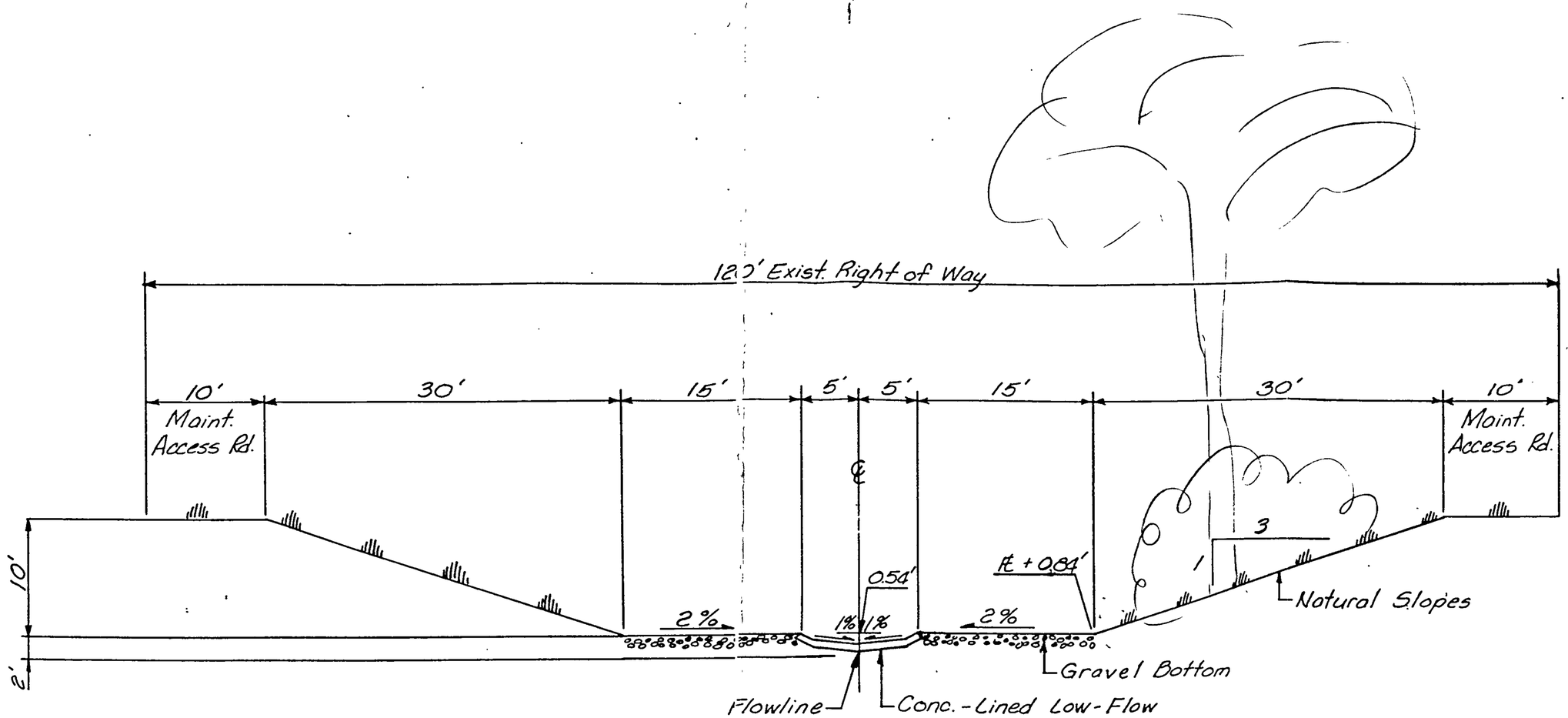
Total Area: 3.84 ac (Plat B17 pg 136)
Zoning: M-2; Heavy industrial (BCPWD Zone Atlas)
Treatment D: 80% (DPM 22.2, Table A-5, Heavy Industrial)
Treatment C: 20% (The most conservative assumption)
Precipitation Zone: Zone 2 (D.P.M. 22.2, Figure A-1)
Q_{100}: [(3.14)(0.20) + (4.70)(0.80)](3.84) = 16.8 cfs

Assuming free discharge, the total flow which must then pass through the subsequent downstream crossing structures is 111.8 + 16.8 + 324 = 453 cfs

The crossing of the A.T. & S.F. Railroad through two 92 inch C.M.P. culverts, as subsequent calculations indicate, need not be analyzed for hydraulic capacity as it is not the limiting crossing. The Second Street and Barr Canal crossings are both through two 72" culverts, the latter crossing being two R.C.P. culverts while the former consists of one R.C.P. and one C.M.P. culvert. The 2nd Street crossing is therefore the limiting point between Rio Bravo Blvd. and the Rio Grande due to the higher roughness coefficient of C.M.P. when compared to R.C.P.

Using figure 38 of the Concrete Pipe Design Manual, one 72" concrete culvert 60 feet in length can carry a maximum of 305 cfs with HW/D = 1.5 and K_e = 0.5 (vertical headwall with wingwalls). Using figure 4.32 of the Handbook of Steel Drainage & Highway Construction Products published by the American Iron and Steel Institute, one 72" C.M.P. culvert 60 feet in length can carry a maximum of 275 cfs with HW/D = 1.5 and K_e = 0.5. This total capacity of 305 cfs + 275 cfs = 580 cfs which exceeds the required 453 cfs by 127 cfs. The capacity at the Barr Canal crossing is (305 cfs)(2) = 610 cfs.

The preceding Calculations demonstrate that the existing crossing structures downstream of Rio Bravo Blvd have sufficient capacity to accommodate the free discharge of developed runoff from Rio Bravo Estates.



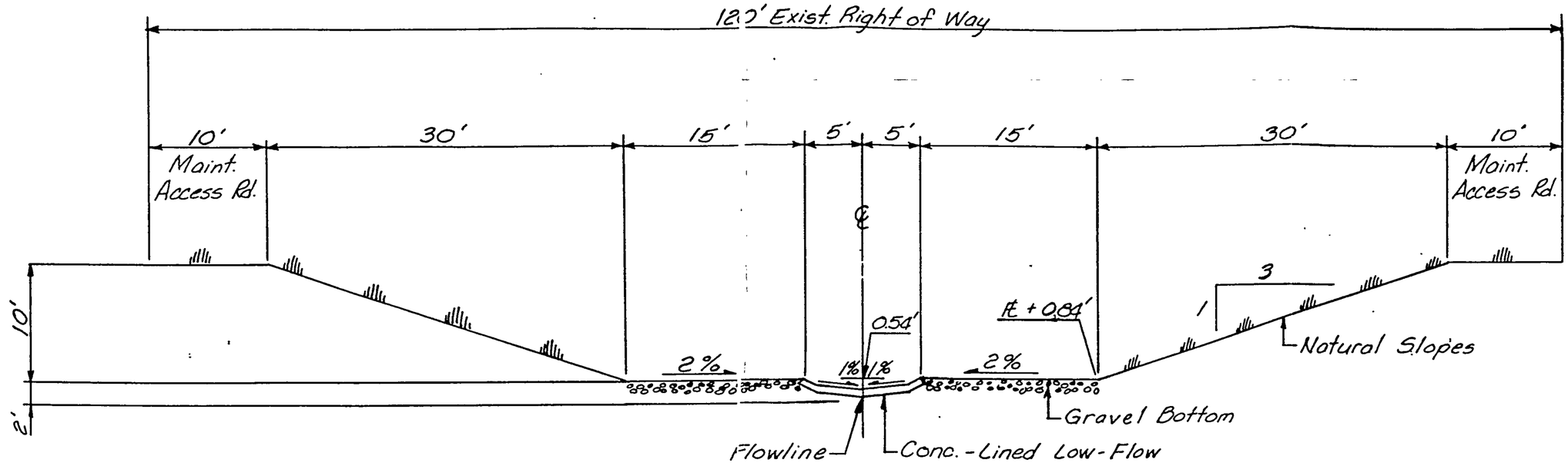
DITCH SECTION

FIGURE 5A

WILSON & COMPANY
ENGINEERS
ARCHITECTS

SAN JOSE DRAIN
GRASS SIDE SLOPE
SECTION

DSGN. SJM	DR. MDJJ	CK. SJ
FILE 86-527	DATE 7/87	SHEET FIG



DITCH SECTION

FIGURE 5A

WILSON & COMPANY
ENGINEERS
ARCHITECTS

SAN JOSE DRAIN
GRASS SIDE SLOPE
SECTION

DSGN. SJM	DR. MDJJ	CK. SJ
FILE 86-527	DATE 7/87	SHEET FIG

SOUTHEAST VALLEY
DRAINAGE MANAGEMENT PLAN
SAN JOSE DRAIN AND VICINITY

FOR

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

BY

WILSON & COMPANY, ENGINEERS & ARCHITECTS

DECEMBER 1987
(86-527)

WILSON
& COMPANY
ENGINEERS
ARCHITECTS

EXECUTIVE SUMMARY

The purpose of this study is to prepare a Drainage Management Plan for the "San Jose Drain & Vicinity" in Albuquerque's southeast valley. The study area is bounded by Woodward Road on the north, the Rio Grande on the west and the South Diversion Channel on the south and east (see Figure 1 - Location Map).

The study area has an area of 4.0 square miles with the San Jose Drain and the Albuquerque Riverside Drain, the existing major drainage facilities. Currently the study area is approximately 30 percent developed with the future land use primarily being industrial. The existing drainage in the area is poor with the AT & SF Railroad, the San Jose Lateral and the Barr Main Canal obstructing overland flow.

The San Jose Drain drains approximately 80 percent of the study area and an area of about three square miles north of Woodward Road.

It is recommended 1) to construct an outlet for the San Jose Drain by-passing the Albuquerque Riverside Drain and 2) to improve the existing San Jose Drain to carry the design flows.

The San Jose Drain currently discharges to the Albuquerque Riverside Drain which has limited capacity due to the Isleta Indian's concerns over the water quality and quantity. The City of Albuquerque's Rain and Drainage Simulation (RADS) model of the Albuquerque Riverside Drain indicates that the design flow in the Riverside Drain nearly doubles at the confluence with the San Jose Drain. To relieve the Riverside Drain and to provide a free-flow outlet for the San Jose Drain, it is recommended to discharge the San Jose Drain to the Rio Grande via an old, heavily wooded channel between the river levee and the Riverside Drain discharging at the City of Albuquerque's Sewage Treatment Plant effluent outlet to the river. An environmental assessment prepared by Marron & Associates under a separate cover indicates the work in the wooded area can be mitigated to preserve the wildlife habitat and natural feeling of this area. Two alternative channel sections were evaluated for the existing San Jose Drain: 1) a concrete lined section and 2) a section with a concrete low flow channel, gravel bottom and grass side slopes. The grass sideslope channel section is recommended because of: 1) cost, 2) the ability to function as a drain, and 3) the wider channel section reduces the design peak flows due to the increased channel storage. The estimated project cost for the recommended San Jose Drain improvements is $1.7 million.

A recommended additional feature was developed to provide an overflow structure for the Albuquerque Riverside Drain at the San Jose Drain crossing. This feature (shown on Figure 6) will provide a control structure in the Riverside Drain allowing the base flow of approximately 120 cfs to flow south in the drain with the excess flow (380 cfs for the 100-year storm) discharging to the San Jose Drain outlet thence to the Rio Grande. This feature increases the estimated construction cost of the San Jose Drain improvements by approximately $63,000. This feature will increase the water surface in the Riverside Drain for intermittent periods when the base flow

Barr Main Canal

The Barr Main Canal in this area is perched and bisects the area west of 2nd Street causing ponding. These areas blocked by the Barr Main Canal currently retain the storm water runoff. Areas west of the Barr Main Canal drain to the Albuquerque Riverside Drain.

City of Albuquerque Sewage Treatment Plant

The City of Albuquerque Sewage Treatment Plant currently discharges its runoff to the Albuquerque Riverside Drain.

Subarea O (Basin No. 800)

Subarea O, bounded by the AT & SF Railroad on the west and the South Diversion Channel on the south, drains to the South Diversion Channel - see Figure 3. The land use for this area is industrial. Currently storm water runoff from this area ponds along the railroad tracks and an improved collection system is needed to discharge the storm water to the South Diversion Channel inlet. This work is currently being designed by the industry in the area in conjuction with the AT & SF Railroad.

FUTURE CONDITIONS

The study area future conditions are based on the Southwest Area Plan (SWAP). The proposed land uses as per SWAP are: 1) industrial north and south of Prosperity Road, east of Second Street, 2) industrial north of Prosperity Road, west of Second Street, and 3) low density residential (one dwelling unit per acre), west of Second Street and south of Prosperity Road. The Southwest Area Plan is currently in a review stage, but it is the best information available at this time for future land use in this area. Therefore, the future land used in this study will be similar to Figure 2 - Existing Conditions, with the agricultural land use replaced with an industrial use, except for south of Prosperity Road and west of Second Street. Storm water runoff was estimated from this area based on the future land use and a free discharge condition, except for areas discharging to the Albuquerque Riverside Drain.

DRAINAGE AREAS

The drainage areas and their basins were identified based on existing barriers such as roads and drains (see Figure 3 - Drainage Area Map). Some of the smaller basins were combined to reduce the detail and bulk of the report, yet maintain the accuracy needed to develop the drainage concepts. The data and methodology used for the drainage computations are described in Section IV - Hydrology & Hydraulics. The computer printouts for the study area are under a separate cover. Table 1 - Drainage Basins Summary summarizes the subareas and their associated basins for the study area.

The study area "Subareas" are designated by letter from A to O and they represent a larger drainage basin generally discharging to a major outlet. Each "Subarea" is divided into "basins" which are designated by a number. The numbering scheme used to identify these basins is shown in Table 1.

TABLE 1
DRAINAGE BASINS SUMMARY

Basin	Area (mi^2)	100-Year Existing Conditions CN	Runoff ac-ft	Peak Discharge cfs	100-Year Future Conditions CN	Runoff ac-ft	Peak Discharge cfs
Basins Draining to the San Jose Drain:							
Subarea AA							
577	3.0	70	58.1	304	70	58.1	304*
Subarea A							
578	0.970	-	-	-	84	4.9	188
576	0.032	-	-	-	84	1.6	90
Subarea B							
575	0.057	-	-	-	84	2.8	36
574	0.019	-	-	-	84	0.9	15
572	0.052	-	-	-	84	2.6	142
Subarea C							
570	0.077	-	-	-	84	3.9	106
568	0.038	-	-	-	84	1.9	148
566	0.017	-	-	-	84	0.8	66
564	0.043	-	-	-	84	2.2	220
Subarea D							
562	0.099	-	-	-	84	5.1	192
560	0.092	-	-	-	84	4.7	322
558	0.037	-	-	-	84	1.9	184
Subarea E							
556	0.089	-	-	-	84	4.5	106
554	0.140	-	-	-	84	7.2	156
Subarea F							
552	0.387	-	-	-	84	19.8	252
550	0.074	-	-	-	84	3.7	86
504	0.049	-	-	-	84	2.5	58
Subarea G							
518	0.060	-	-	-	84	3.8	128
Subarea H							
516	0.100	-	-	-	88	6.3	65
514	0.177	-	-	-	88	11.3	112

*Drains area north of Woodward outside the study area via the San Jose Drain.

TABLE 1 (cont.)

Basin	Area (mi^2)	100-Year Existing Conditions CN	Runoff ac-ft	Peak Discharge cfs	100-Year Future Conditions CN	Runoff ac-ft	Peak Discharge cfs
Subareas I thru M							
512	0.050	-	-	-	84	2.5	38
510	0.030	-	-	-	84	1.5	59
508	0.011	-	-	-	84	0.5	18
506	0.040	-	-	-	84	2.0	40
502	0.140	-	-	-	84	7.1	166
Basins Draining to the Albuquerque Riverside Drain							
Subarea Q							
616*	0.040	68	0.6	9			
614*	0.080	68	1.3	9			
610	0.096	68	1.5	12			
Subarea I							
704	0.104	68	1.7	13			
702	0.144	88	9.2	118			
700	0.416	75	22.7	198			
Subarea P							
612*	0.050	68	0.8	14	84	2.5	84
608*	0.080	68	1.3	16	84	4.0	84
606	0.204	68	3.3	22	84	10.0	104
604*	0.061	68	1.0	9	84	3.0	43
602	0.056	75	1.6	20	84	2.8	45
600	0.077	68	1.2	9	84	3.9	44
Basins Draining to the South Diversion Channel							
800	0.179	-	-	-	84	9.1	175

*Basins recommended to discharge to the San Jose Drain when developed.

ALTERNATIVE DRAINAGE CONCEPTS

The San Jose Drain currently provides an outlet for the majority of the North Area. The remaining areas discharge to the Albuquerque Riverside Drain and the South Diversion channel. In reviewing the study area, the future outlets considered included 1) an improved San Jose Drain, 2) the Albuquerque Riverside Drain, 3) a Rio Bravo Outlet, and 4) the South Diversion Channel, as discussed on the following pages.

SECTION III

RECOMMENDATIONS

SAN JOSE DRAIN

It is recommended that the San Jose Drain be improved to carry the design flows to the Rio Grande, bypassing the Albuquerque Riverside Drain - see Plate 1. The San Jose Drain will cross over the Albuquerque Riverside Drain and discharge to the river via an old, heavily wooded channel.

The recommended channel section for the San Jose Drain is a channel with a 10 foot concrete low flow channel, gravel bottom and grass side slopes (see Figures 5 and 5A). This section has the following advantages: 1) cost - $1.7 million, 2) allows channel to function as a drain, and 3) reduces the peak flows in the channel due to channel storage. Other channel sections evaluated included concrete lined channels with a 4-inch to 8-inch concrete thickness. The costs for these alternative sections ranged from $3.0 million to $3.9 million. Other channel lining options such as riprap could not meet the hydraulic requirements for the channel due to the flat grade.

The Southwest Area Plan recommends a trail along the San Jose Drain to the Riverside Drain. The access roads on the gravel bottom may serve this purpose. In conjunction with the trail concept, the trees and brush cleared from the channel west of the Albuquerque Riverside Drain should be minimized to preserve the wildlife habitat and natural feeling in the area.

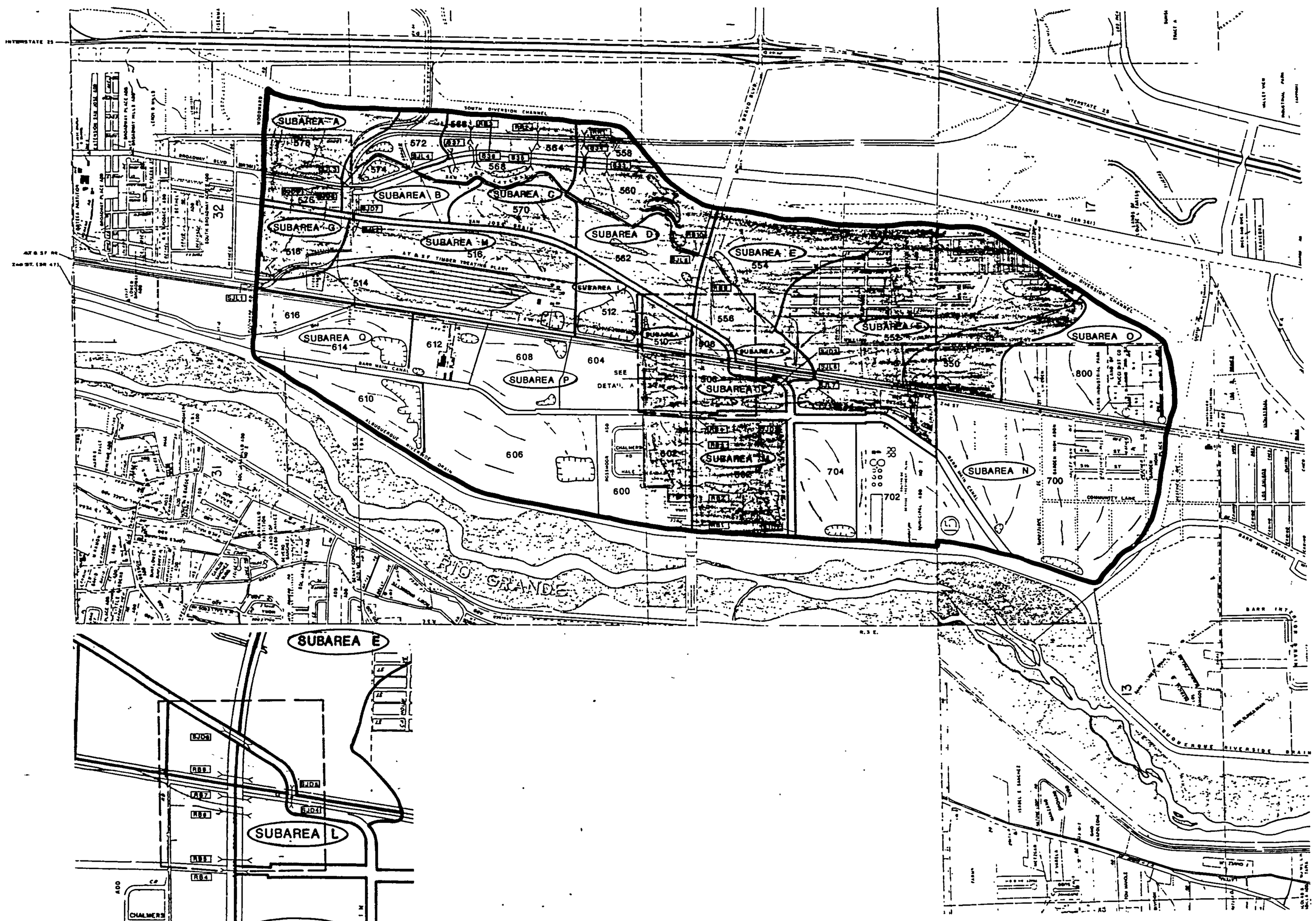
Two alternative concepts were evaluated for the Riverside Drain crossing: 1) with the San Jose Drain crossing over the Riverside Drain with no connection to the Riverside Drain, and 2) with the San Jose Drain crossing over the Riverside Drain with an overflow structure provided on the Riverside Drain (see Figure 6). The overflow structure alternative has the advantages of providing an outlet for the Riverside Drain to the river for major storm events. The overflow concept costs approximately $79,000 more than the concept with no overflow (see cost estimates). It is recommended that the concept with the Riverside Drain overflow structure be constructed to provide a control structure for the Riverside Drain.

Methods of discharging to the San Jose Drain may be either pipe or surface inlets to be determined during the design phases.

It is recommended the San Jose Drain be implemented in two phases.

Phase 1

Construct the San Jose Drain from the outlet to the river to the downstream end of the Barr Main Canal structures. This improvement would include the Albuquerque Riverside Drain overflow structure and control structure. The estimated 1987 construction cost for this phase is $568,000 (project cost $710,000). No private right-of-way is required for this construction; however, approvals and/or licenses will be required from M.R.G.C.D., the Bureau of Reclamation and the Corps of Engineers.



ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
SOUTHEAST VALLEY DRAINAGE - PHASE A

DRAINAGE AREA MAP

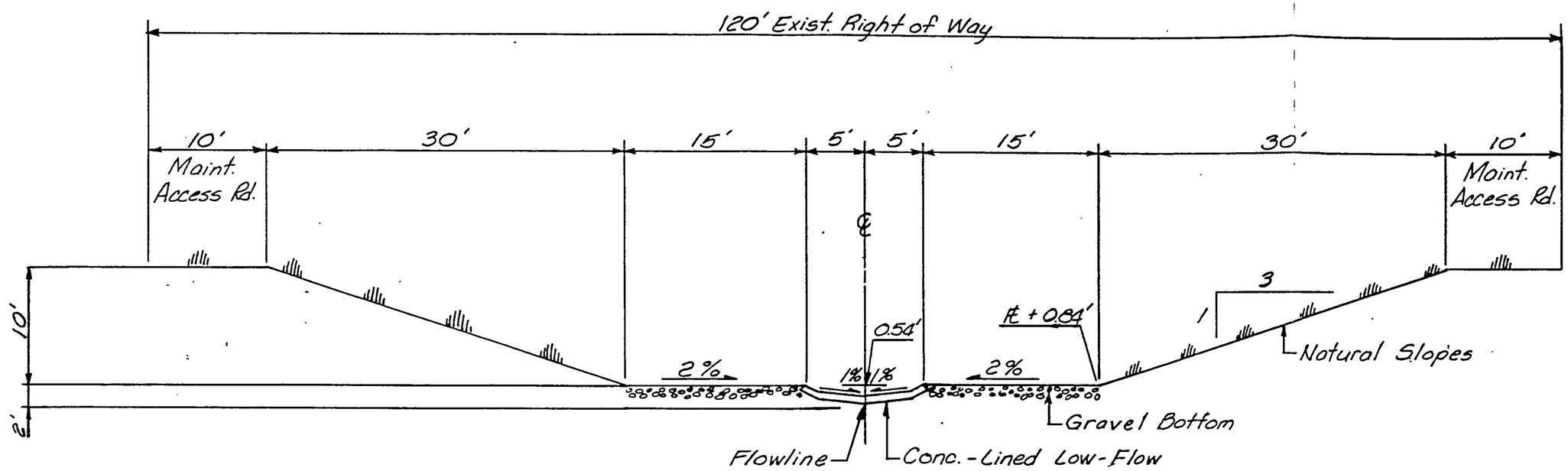
DESIGN	DRAWN

WILSON & COMPANY
ENGINEERS' ARCHITECTS
ALBUQUERQUE, NEW MEXICO

DATE:
FILE NO.
SHEET NO.
OF

REVISION	DATE	BY

FIGURE 3



DITCH SECTION

FIGURE 5A

WILSON & COMPANY
ENGINEERS ARCHITECTS

SAN JOSE DRAIN
GRASS SIDE SLOPE
SECTION

DSGN. SJM	DR. MDJJ	CK. SJM
FILE 86-527	DATE 7/87	SHEET FIG 5A

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EUGENE M. GILBERT, MEMBER
DISTRICT 3
BARBARA J. SEWARD, MEMBER
DISTRICT 4
LES HOUSTON, MEMBER
DISTRICT 5
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

January 10, 1996

Frank Pagano, Branch Chief
Federal Emergency Management Agency
Region VI, Federal Center
800 North Loop 288
Denton, Texas 76201-3698

RE: REQUEST FOR CONDITIONAL LETTER OF MAP REVISION FOR THE AH ZONE AT RIO BRAVO ESTATES SUBDIVISION, BERNALILLO COUNTY, NEW MEXICO, COMMUNITY PANEL NUMBER 350002-0040.

Dear Mr. Pagano:

The purpose of this letter is to request a Conditional Letter of Map Revision for the above referenced project. This request consists of filling in the floodplain within the AH Zone and constructing a detention pond and storm drain system in conjunction with a residential subdivision.

Enclosed with this letter are the application and certification forms for requesting revisions to the National Flood Insurance Program (NFIP) maps. Along with the forms are a detailed technical analysis and NFIP-related information presented in an organized fashion to facilitate an efficient review. Also, enclosed is a check made out to the National Flood Insurance Program for the amount required to begin your review.

My office has reviewed and approved the hydrology and floodplain revision proposed with this project. Our Community would greatly appreciate your expeditious cursory review and the forwarding of this document to Headquarters for their technical review. If you have any questions regarding this submittal, please do not hesitate to call me at (505) 768-2666.

Sincerely,

Susan Calongne

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

c: Michael K. Buckley, Chief, Hazard Identification Branch, FEMA
Roger Paul, County Public Works Division
Graeme Means, Jeff Mortensen & Assoc.
File (P14/D1) (PWD-94-229)

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LES HOUSTON, MEMBER
DISTRICT 5
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

September 6, 1995

Graeme Means
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Blvd.
Albuquerque, New Mexico

RE: CONSTRUCTION PLANS FOR RIO BRAVO ESTATES (P14/D1) (PWD-94-229)

Dear Mr. Means:

Based on the information provided in the submittal of August 23, 1995, the above referenced plans are approved for Work Order release.

Please be advised that all fill material within the 100-year floodplain must be compacted to 95%. This is a FEMA requirement. This should be reflected on the Engineer's Certification, which must be submitted to and approved by this office.

If you have any questions, please do not hesitate to call me.

Sincerely,

Susan Calongne

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

c: Billy Goolsby, City DRC Chairman
Jimmie Glenn, Owner
File

A MEMBER OF CONSULTING
INEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
August 23, 1995

Mr. Jack Cloud
DRB Chairman
Planning Department
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Rio Bravo Estates, DRB 94-10, C.O.A. Project # 5270.90

Dear Jack:

Submitted herewith is an Application to the Development Review Board (DRB) for the subject project. The purpose for this application is to obtain approval of our amended preliminary plat. This plat differs from the previous submittal in that the location of Rosson Court S.E. has been changed. Rosson Court is now located off of Fentiman Place S.E. The reason for the change in location of Rosson Court was to reduce the required volume of imported fill necessary to accomplish surface drainage and gravity sewer.

The amended Infrastructure List accomplishes the following:

1) Shows the new location of Rosson Court S.E.

2) Refers to Fentiman Place S.E. which had been incorrectly named Fentiman Avenue S.E. on the previous Infrastructure List.

3) Omits reference to permanent lining of the San Jose Drain as recent drainage review has not required permanent Drain lining.

4) Refines/Updates the County drainage structures which were formerly located near Lots 119 and Lot 26. These improvements are now located within and adjacent to Lot 29 which is to be granted as a public drainage easement. The Infrastructure listing of those items has been changed to reflect the new location. The improvements within the San Jose Drain have been listed under Bernalillo County improvements. It has been determined by City and County reviewers that these items will be financially guaranteed through Bernalillo County.

RECEIVED
AUG 24 1995
HYDROLOGY DIV

5) Delete the 4' sidewalk on both sides of Prince Street S.E. because it is an offsite improvement adjacent to property which is not developing.

For your use, I have enclosed eight (8) copies of the amended infrastructure list with the changes highlighted.

If you should have any questions or comments regarding this information, or if we can be of further assistance to you, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means

J. Graeme Means, E.I.T.

JGM:dsj
Enclosures
xc: Jimmie Glenn
Eddie Losinski
Roger Paul
Billy Goolsby
Susan M. Calongne

JMA No. 931075
D.R.B. Case 94-10
D.R.C. Project
Date Submitted 12-09-94
Prelim. Plat Approved
Prelim. Plat Expires

EXHIBIT "A"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LISTING
for RIO BRAVO ESTATES

Following is a summary of Public/Private Infrastructure required to be constructed or financia guaranteed to be constructed for the above development. This summary is not necessarily a compl listing. During CPC, BCC, the design process and/or in the preparation of the construct drawings, if the City, County, and/or AMAFCA determines that appurtenant items have not b included in the summary, those items will be included in the listing and related financ guarantee, if the items normally are Subdivider responsibility. In addition, any unforeseen it which arise during construction which are necessary to complete the project and which normally the Subdivider's responsibility are the responsibility of the Subdivider and will be included the financial guarantee provided to the City.

Location	Size	Type Improvement	From	To
CITY IMPROVEMENTS				
Fentiman ~~Ave~~ Place SE	6"	Waterline	Silver Fox Drive S.E.	Fentiman ~~Ave~~ Place SE Cul-De-Sac
	8"	Sanitary Sewerline	Silver Fox Drive S.E.	Fentiman ~~Ave~~ Place SE Cul-De-Sac
Silver Fox Drive S.E.	8"	Waterline	King Road SE	Gore Ave. SE
	8"	Sanitary Sewerline	King Road SE	Gore Ave. SE
Zorro Loop S.E.	8"	Waterline	Silver Fox Drive S.E.	Gore Ave. SE
	8"	Sanitary Sewerline	Silver Fox Drive S.E.	Gore Ave. SE
Gore Ave. S.E.	8"	Waterline	Zorro Loop SE	Prince St SE
	8"	Sanitary Sewerline	Zorro Loop SE	Prince St SE
Glenn Drive S.E.	6"	Waterline	King Road SE	Gore Ave SE
	8"	Sanitary Sewerline	King Road SE	Gore Ave SE
Chamaigne Ct SE	6"	Waterline	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
	8"	Sanitary Sewerline	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
osson Ct SE	6"	Waterline	Fentiman Place ~~Glenn Dr.~~ SE	Rosson Ct SE Cul-de-Sac
	8"	Sanitary Sewerline	Fentiman Place ~~Glenn Dr.~~ SE	Rosson Ct SE Cul-de-Sac

King Road SE	8"	Waterline	~~Glenn~~ Dr. SE	Prince Rd. SE
Prince St SE (Excluding Frontage of the Church of Jesus Christ of Latter Day Saints (Tract "A")	8"	Waterline	Rio Bravo Blvd. S.E.	Northern Bdry of East Mtn. Subdivision
~~San Jose Drain~~	~~*~~	~~Lining of drain to reasonable design standards consistent with current policies~~	~~King Road S.E.~~	~~BARR~~ ~~[illegible]~~

~~* To be determined by further study at DRC/CRC levels.~~

COUNTY IMPROVEMENTS

Fentiman ~~Ave~~ Place SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Silver Fox Drive S.E.	Fentiman ~~Ave~~ Place SE Cul-De-Sac
	28' FF	Res. Street Paving	Silver Fox Blvd. S.E.	Fentiman ~~Ave~~ Place SE Cul-De-Sac
North End Silver Fox Drive S.E.	Type III	Vehicular Barricades	N/A	N/A
Silver Fox Drive S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	King Road SE	Gore Ave. SE
	28' FF	Res. Street Paving	King Road SE	Gore Ave. SE
Zorro Loop S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Silver Fox Drive S.E.	Gore Ave. SE
	28' FF	Res. Street Paving	Silver Fox Drive S.E.	Gore Ave. SE
Gore Ave. S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Zorro Loop SE	Prince St SE
	28' FF	Res. Street Paving	Zorro Loop SE	Prince St SE
Glenn Drive S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	King Road SE	Gore Ave SE
	28' FF	Res. Street Paving	King Road SE	Gore Ave SE
Chamaigne Ct SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
	28' FF	Res. Street Paving	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
Rosson Ct SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Fentiman Place ~~Glenn Dr.~~ SE	Rosson Ct. SE Cul-de-Sac
	28' FF	Res. Street Paving	Fentiman Place ~~Glenn Dr.~~ SE	Rosson Ct. SE Cul-de-Sac

King Road SE	32' - 40 F-F	Curb & Gutter and Res. Street Paving	Silver Fox Drive S.E.	Prince St. S.E.
Prince St. SE	N/A	Median and Std. Curb and Gutter (Both Sides)	King Rd. SE	Rio Bravo Blvd. SE
	27' FF	Art. Street Paving (Both Sides)		
East of and within lot 29	~~4'~~	~~Sidewalk (Both Sides)~~		
~~Silver Fox Drive SE~~	~~48"~~	RCP Storm Drain, Inlets ~~and~~ Appurtenances, and Detention Pond	~~King Rd. SE~~	~~Tract "A"~~
~~Near SW Cor Lot 119~~			~~SW of Lot 119~~	~~San Jose Drain~~
~~Zorro Loop S.E.~~	~~48"~~	~~RCP Storm Drain, Inlets and Appurtenances~~	~~S of Lot 26~~	~~San Jose Drain~~
As Required	N/A	Street Lights		
N/A	N/A	Letter of Map Revision From F.E.M.A. REQUIRED FOR FINANCIAL GUARANTEE RELEASE		
San Jose Drain	N/A	License and/or approval of M.R.G.C.D. to discharge into the San Jose Drain.		
San Jose Drain	N/A	Channel Widening, Side inlet and Channel Lining for outlet protection	KING RD SE	AT&SF RR CROSSING

Prepared by:
Print Name: Jeffrey G. Mortensen, P.E.
Firm: Jeff Mortensen & Associates, Inc.

****

Development Review Board Member Approval

Transportation Dev.	12-13-94 Date	Utility Dev.	Robert W. Kane 12-13-94 Date	~~Cultural~~ PARKS and Recreational Services	12-13-94 Date
City Engineer/AMAFCA	12-13-94 Date	BCPWD DRE	12-9-94 Date	DRB Chairman	12-13-9 Date
	8-23-95	BCPWD DRAN	RAP, PE 12/12/94 Date		
	8/23/95				

931076

RAINAGE INFORMATION SHEET

PWD-94-229

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: P14/D1

DRB #: 94-10 EPC #: _____ WORK ORDER #: 5270.90

LEGAL DESCRIPTION: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK, UNIT 1

CITY ADDRESS: KING ROAD SE BETWEEN AT & S.F. RR AND PRINCE ST SE

ENGINEERING FIRM: JMA CONTACT: J. GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: SPACE HOMES CONTACT: JIMMIE GLENN

ADDRESS: 11209 PARIS NE PHONE: 988-9615

ARCHITECT: — CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JMA CONTACT: CHUCK CALA

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

CONTRACTOR: SPARLING CONSTRUCTION CONTACT: PAT WYLIE

ADDRESS: BOX 90548 PHONE: 821-1034

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
X OTHER CONSTRUCTION PLANS

PRE-DESIGN MEETING:

____ YES
X NO
____ COPY PROVIDED

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
X OTHER WORK ORDER (SPECIFY)

RECEIVED
AUG 23 1995
HYDROLOGY DIV

DATE SUBMITTED: 08/23/95

BY: J. Graeme Means

A MEMBER OF CONSULTING
ENGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
August 23, 1995

Ms. Susan M. Calongne
City/County Floodplain Administrator
c/o Hydrology Section
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Rio Bravo Estates (PWD 94-229, COA Project No. 5270.90)

Dear Sue:

Transmitted herewith are Sheets 7 and 8 of the Construction Plans for the subject project. The purpose for this transmittal is to obtain your review and comment for the Design Review Committee of these drawings. Eddie Losinski of the Bernalillo County Public Works Department has indicated to me that he will also review these drawings with Roger Paul as part of the County Design Review process. Because all of the drainage structures lie within Bernalillo County, they will be financially guaranteed through Bernalillo County. These same drawings are being simultaneously submitted to Ray Gomez of the Middle Rio Grande Conservancy District for their review and comment.

Since we have already had a review and comment session with the DRC on August 04, 1995 to review the water and sewer designs, there will not be a formal DRC session to discuss any comments you may have for the drainage structures. Because you have requested that these structures be reviewed by the City Design Review Committee, Billy Goolsby has suggested that you provide comments directly to our office. Any comments you may have will be incorporated into our final design which will be routed for signature through all the appropriate City offices.

RECEIVED
AUG 23 1995

Jeffrey G. Mortensen, P.E. Juan M. Cala Charles G. Cala, Jr., P.S.

If you should have any questions or comments regarding this information, or if we can be of further assistance to you, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means, E.I.T.

JGM:dsj
Enclosures
xc: Jimmie Glenn
Billy Goolsby

BOARD OF COUNTY COMMISSIONERS
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DISTRICT 5
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

Date: 17-AUG-95

Subject: Resubmittal

Case No.: PWD-94-229

Zone Map No.: P-14

Street Address: KING RD BETWEEN A.T.&S.F. PRINCE ST

Legal Description: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

Name of Applicant: Michele F De Lilla

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.
The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any variance or violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized County representative or County inspector form thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.
Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, Land Divider, Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the contract; the proper fitting and construction for the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

REV 4-22-91 BR

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

Please complete pages one and two of this application for review of your case. **Submit THREE bluelines of plat, drawings, or information with case submittals and THREE bluelines of plat, drawings, or information along with the original mylar for final sign-off applications. Submit a County Zone Atlas Map with subject property marked on the map.** If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photcopy of a USGS quad map with the subject property superimposed.

NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**
   a. Applicant is(check one):
   ____OWNER ____SURVEYOR __X_AGENT
   ____ENGINEER ____DRAINAGE ENGINEER

   b. Date of this application: 29-JUN-95

   c. Signature of applicant:
   (print)_____ (sign)_____

   d. OWNER: Space Homes Inc. PHONE: 505-988-9615
   11209 Paris NE
   Albuquerque, NM

   e. AGENT: Jeff Mortensen & Assoc PHONE: 505-345-4250
   6010-B Midway Park NE
   Albuquerque, NM 87109

   f. OTHER(specify): Jeff Mortensen & Assoc PHONE: 505-345-4250
   6010-B Midway Park NE
   Albuquerque, NM 87109

2. **TYPE OF SUBMITTAL (check one):**
   _____REPLAT
   _____LAND DIVISION (MINOR SUBDIVISION)
   _____MAJOR SUBDIVISION
   _____CONSTRUCTION DRAWINGS
   __X__GRADING/DRAINAGE PLAN
   _____AS-CONSTRUCTED GRADING/DRAINAGE PLAN
   _____VARIANCE REQUEST
   _____TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
   _____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
   _____OTHER (specify):_____

County of Bernalillo

Your: ___ submittal drainage information
X resubmittal of drainage information

is: ___ approved.
X approved with comments/conditions.
___ disapproved.
___ deferred to County Floodplain Administrator

TO BE FILLED OUT BY COUNTY PUBLIC WORKS DEPARTMENT ONLY

Case review comments are:
X attached.
___ not attached.
___ not attached. See remarks below.

Resubmittal is:
___ not required.
X required. When resubmitting, please use Resubmittal Form.

Please submit:
___ three bluelines of corrected plat incorporating case review comments.
___ original mylar and three bluelines for final sign-off.
___ grading/drainage plan with revisions.
X as-constructed grading/drainage plan.
___ infrastructure list and/or improvements agreement.
___ design review fee. (payments accepted at county finance dept.)
___ schedule a CRC meeting with Public Works. Tel. 848-1500.
___ other: _____

It is required that:
___ Bernalillo County Public Works Department inspect improvements prior to final sign-off of plat.
___ Bernalillo County Public Works Department signature line be placed on plat.

Remarks: _____

R. A. Paul, PE 8/16/95
Roger A. Paul, P.E.
Molzen-Corbin & Assoc., for
County Surface Water Hydrologist
Bernalillo County Public Works Department

cc: ___ Jack Cloud, DRB
___ County Planning
___ Raymond Quintana, County Building and Zoning
X Owner: Space Homes
X Agent: Jeff Mortensen & Assoc.
X Case File: Pwd-95-229
X Susan Calongne, County Floodplain Administrator, COA
X Molzen-Corbin & Associates
___ Other: _____

pb-wrks.4

BERNA__LLO COUNTY PUBLIC WORKS D___RTMENT
CASE FILE COMMENTS

CASE NO: PWD-94-229

ZONE MAP NO.: P-14

REFERENCE CASES:

DRB-94-10
DRB-84-516
V-94-113
SV-94-57
SC5-94-63

STREET ADDRESS: KING RD BETWEEN A.T.&S.F. PRINCE ST

LEGAL DESCRIPTION: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

COMMENTS OF:

04-OCT-94 DRAN: A portion of this property appears to be within a designated 100 year flood plain as shown on the National Flood Insurance Program's Flood Insurance Rate Map. Defer approval to the County Floodplain Administrator.

14-NOV-94 DRE:
1. Will need T.I.A. (warrant study should be part of).
2. Trips generated should not be based on Single Family Detached Housing for a mobile home development. (use Land Use240 Or 270)
3. Traffic values for Prince used in the warrant analysis must be based on approach traffic (northbound) Traffic turning on to Prince from Rio Bravo does not count.
4. What are the distancs from the proposed signal on Prince to the existing signals at 2nd and Broadway? What are the impacts of the signal to Rio Bravo?
5. Preliminary infrastructure list approved for submittal to DRE.

06-DEC-94 DRAN:
1. Coordination with the MRGCD will be needed prior to construction of the discharge facilities into the San Jose Drain.
2. The engineer must demonstrate that the San Jose Drain will not have a capacity problem downstream using new hydrology methods. Since the City maintains the San Jose Drain, their Storm Drain Maintenance division may require additional improvements to the drain either adjacent to or downstream from this development.
3. With repect to the LOMR required by FEMA, it is strongly recommended that the engineer apply for a Conditional Letter of Map Revision (CLOMR) as soon as the drainage plan is approved. That way, any additional improvements required by FEMA may be incorporated into the plans before construction is complete. The County will withhold all financial guarantees for this project until after the LOMR is obtained, therefore it is in the developer's best interest to get this process started.
4. Is there any perimeter or internal fencing proposed by this plan that may adversely affect the overall drainage scheme of this plan? If so, please address this concern. If not, provide a statement on the plan which states that no fencing is proposed by this plan and that any future fencing will be approved through Bernalillo County Public Works via a revised grading and drainge plan.

5. It appe that access is being taken fr oth Prince Street and King Road. Please include language stating that these roads are currently maintained by Bernalillo County.
6. If the intention of this plan is to provide one grading and drainage plan for the entire subdivision, please include details for pad elevations and dwelling locations along with the general grading scheme of the lots. This type of information might possibly be shown on (a) typical lot layout(s).
7. Provide details and calculations for the storm drains.
8. Is there any erosion protection proposed for the discharge point of the storm drain into the San Jose Lateral? Will this discharge affect (i.e. degradation) the current condition of the arroyo bed at the point of discharge or at any downstream?

03-MAY-95 DRAN:
1. This submittal has been approved on a conceptual basis only, a detailed grading and drainage plan will need to be submitted, reviewed, and accepted by Bernalillo County Public Works, AMAFCA, and the Floodplain Administrator prior to final approval.
2. A letter from the Floodplain Administrator, dated May 22, 1995, details several issues raised by her office and COA Hydrology.
3. What is the size of the "bleed" pipe shown on sheet 2 of the supplemental drawings? Is there a need for backflow prevention on this pipe?
4. Recommend elimination of the dead storage. Please investigate providing a positive drop from the 36" discharge pipe to the outlet bleed pipe.
5. Due to the anticipated depth of flow in the San Jose Drain, will the weir function as proposed and will the weir discharge cause hydraulic problems in the San Jose Drain?
6. As of this date, we understand that the homeowner's association is proposing to maintain this pond.
7. For the drainage basins upstream of the pond, will the proposed street street sections carry the projected 112 cfs? Will the cattle guard inlet intercept these flows?

29-JUN-95 DRAN:
1. Based on the information provided on the grading and drainage plan, with engineer's seal dated 06/28/95, this plan appears to meet the requirements established for this area and is therefore acceptable.
2. Development of this property must conform to this plan. Any proposed changes will require a revision to the plan prior to initiating the proposed change.
3. An "As-constructed" grading and drainage plan, with engineer's compliance with this plan, will be required prior to County Building and certification that the constructed improvements are in substantial Zoning issuing an occupancy permit.
4. A letter from the Floodplain Administrator, dated July 26, 1995, incorporates several issues related to her office and the City of Albuquerque. Please address these issues appropriately.
5. We understand that the homeowner's association will be responsible for the maintenance of the storm drainage facilities for the subdivision. The Subdivision Improvement Agreement will formalize this concept.
6. A revised layout for Rosson Court was provided to BCPWD subsequent to the submittal of this grading and drainage plan. All future submittals must incorporate this modification.
7. We question the use of a rock-filled perforated pipe to drain the oil separator. However, we understand that the detail used in this plan is based on MRGCD standard drawings. Please verify the intent of this design detail and provide a copy of the MRGCD standard.
8. This plan utilizes the concept of cross-lot drainage in several locations. Please investigate the use of retaining walls to eliminate the need for cross-lot drainage or incorporate the appropriate clauses on the plat and in the subdivision covenants.

RAL for RAP 8/17/95

9. In the (:ulation of the storm drainage ›acity for the 2-36" pipes, the result should read 1.90 feet instead of 190 feet.
10. The following items need to be addressed on the construction plans for the subdivision:
    a. Verify and adjust the T.C. elevation of 32.84 near Lot 90. It appears that the elevation should be 34.84.
    b. There appears to be a low spot in the knuckle at Lots 15 and 16. Please verify the indicated elevations and the grading scheme in this area.
    c. The contour numbering scheme on the west side of the ponding area is in error. All details that contain this information should be revised.
    d. A review of the riprap computations indicate that the length of the pad is too short and should be 3' - 4' longer. Please verify the length calculation and revise the length as appropriate on the construction plans.

*** Inspection required, applicant required to obtain permits from G. J. Foster at Bernalillo County Public Works Department.
Phone (505) 848 - 1523

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County of Bernalillo

State of New Mexico

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ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

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THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

July 26, 1995

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Dept.
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: GRADING AND DRAINAGE PLAN FOR RIO BRAVO ESTATES, (P14/D1), (PWD-94-229), SUBMITTED FOR GRADING PERMIT APPROVAL, ENGINEER'S STAMP DATED 6/28/95.

Dear Mr. Paul:

Based on the information provided in the submittal of July 5, 1995, the above referenced plan is approved with respect to the floodplain issues. After receipt of approval from the Middle Rio Grande Conservancy District the grading permit for this subdivision may be released.

The engineer must submit the request for the Conditional Letter of Map Revision to my office. After my review, I will forward the request to FEMA. I recommend that the engineer begin this process as soon as possible. The latest FEMA forms, dated October 94, must be used. These are available at my office.

The DRC plans for the water, sewer and storm drainage improvements must be submitted to Billy Goolsby's office. I will represent Hydrology in the review of these plans.

If you have any questions, please do not hesitate to call me.

Sincerely,

Susan Calongne

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

c: Chris Rivera, City Hydrology
Graeme Means, Jeff Mortensen & Assoc.
Jimmie Glenn, Owner
File

A MEMBER OF CONSULTING
GINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
July 07, 1995

Mr. Subhas Shah
Middle Rio Grande Conservancy District
1930 Second Street S.W.
P. O. Box 581
Albuquerque, NM 87103

Re: Rio Bravo Estates (Tract 4, Schwartzman Industrial Park, Unit 1)

Dear Mr. Shah:

In accordance with our meeting of July 3, 1995, requested herewith is a License to discharge stormwater runoff into the San Jose Drain from the above referenced subdivision. To assist in your review, we enclose a copy of the Concept Plan as approved by the City/County Floodplain Administrator, and a copy of the approval letter.

The Plan has been modified to include an oil and water separator per our meeting. The design of the oil and water separator will follow the details provided by your office. The final design will refine those details and adapt them to this specific project. Final design will be submitted to both the City and the Middle Rio Grande Conservancy District for construction approval.

We now wish to initiate the License process so as not to delay the project and so as to satisfy the City that this discharge is acceptable to the M.R.G.C.D.

If you should have any questions or comments concerning this request, or any other aspect of this project, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

Jeffrey G. Mortensen, P.E.
President

JGM:dsj
Enclosure
xc: Jimmie Glenn
Dan Silva
Sue Calongne
Roger Paul

BUREAU OF RECLAMAITON
MIDDLE RIO GRANDE PROJECT

931076

LICENSE APPLICATION FORM

DATE July 07, 1995

APPLICANT: Space Homes Attn: Jimmie Glenn	ADDRESS: 11209 Paris N.E. Albuquerque, NM 87111	PHONE: (505) 889-8906
REQUESTOR: Jeff Mortensen and Associates, Inc.	ADDRESS: 6010-B Midway Park Blvd. N.E. Albuquerque, NM 87109	PHONE: (505) 345-4250

LOCATION OF INSTALLATION

A. MRGCD MAP & TRACT (LOT OR BLOCK): Tract 4, Schwartzman Industrial Park, Unit 1 MRGCD Map 49/50

B. NAME OF DITCH (CANAL, LATERAL ACEQUIA, DRAIN, DITCH): San Jose Drain

C. OWNERSHIP (EASEMENT) ON ADJACENT LANDS: Applicant

D. EXISTING CONDITIONS: Existing Drain

NOTE: THE INFORMATION ABOVE SHOULD BE INCLUDED ON A GENERAL MAP OF THE AREA

CONSTRUCTION DATA

___ BRIDGE

___ CONCRETE BOX CULVERT

xx CONCRETE PIPE CULVERT OR SIPHON

___ CMP CULVERT

___ UTILITY CROSSING, BURIED

___ UTILITY CROSSING, AERIAL

___ UTILITY, PARALLEL

___ GATES

xx OTHER Side Inlet Construction and Grading to Widen the Drain

WIDTH OF CROSSING: n/a CONSTRUCTION SCHEDULE: August - November 1995

RESTORATION PLANS FOR DISTURBED LAND Regrade and Revegetate

STARTING DATE August 1995 COMPLETION DATE November 1995

REQUESTOR'S SIGNATURE J. Graeme Means

J. Graeme Means

FOR MRGCD USE ONLY

A. SECTION, TOWNSHIP, RANGE	
B. STATIONING OF DITCH	
C. DITCH GRADE (DESIGN OR OPERATING)	
D. DITCH CAPACITY	
E. ELEVATION OF CENTERLINE OF INSTALLATION	
F. DITCH RIGHT OF WAY WIDTH	
G. WEED PROBLEM CRITERIA	
H. REMARKS OR SPECIAL CONDITIONS	
DATE LOGGED:	REQUEST NO.:

DISTRICT ENGINEER

431016

BOARD OF COUNTY COMMISSIONERS
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County of Bernalillo

State of New Mexico

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THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

May 22, 1995

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Dept.
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: CONCEPTUAL PLAN FOR RIO BRAVO ESTATES, (P14/D1) (PWD-94-229)
SUBMITTED FOR CONCEPTUAL APPROVAL, ENGINEER'S STAMP DATED 5/2/95.

Dear Mr. Paul:

The City of Albuquerque will accept the concepts presented in the above referenced submittal provided that approval is granted by the Middle Rio Grande Conservancy District (MRGCD). Prior to approval of the grading and drainage plan, the following issues must be addressed:

1. By an agreement with the MRGCD, the City maintains the San Jose Drain adjacent to this site. This area is within the County, however, therefore the City will not maintain the detention pond which is proposed for this subdivision.

2. As stated before, I strongly recommend that the engineer request a Conditional Letter of Map Revision from FEMA as soon as the drainage plan is approved. The County will withhold financial guarantees for this project until after the Letter of Map Revision is obtained, therefore it is to the developer's best interest to get this process started.

3. The details for the outlet structure into the San Jose Drain must be approved by both MRGCD and the City. It is suggested that the width of the concrete lining extend from 10' upstream to 30' downstream of the pipe outlet. Details for this structure will be included on the plans which must go through the City's DRC process.

If you should have any questions, please do not hesitate to call me.

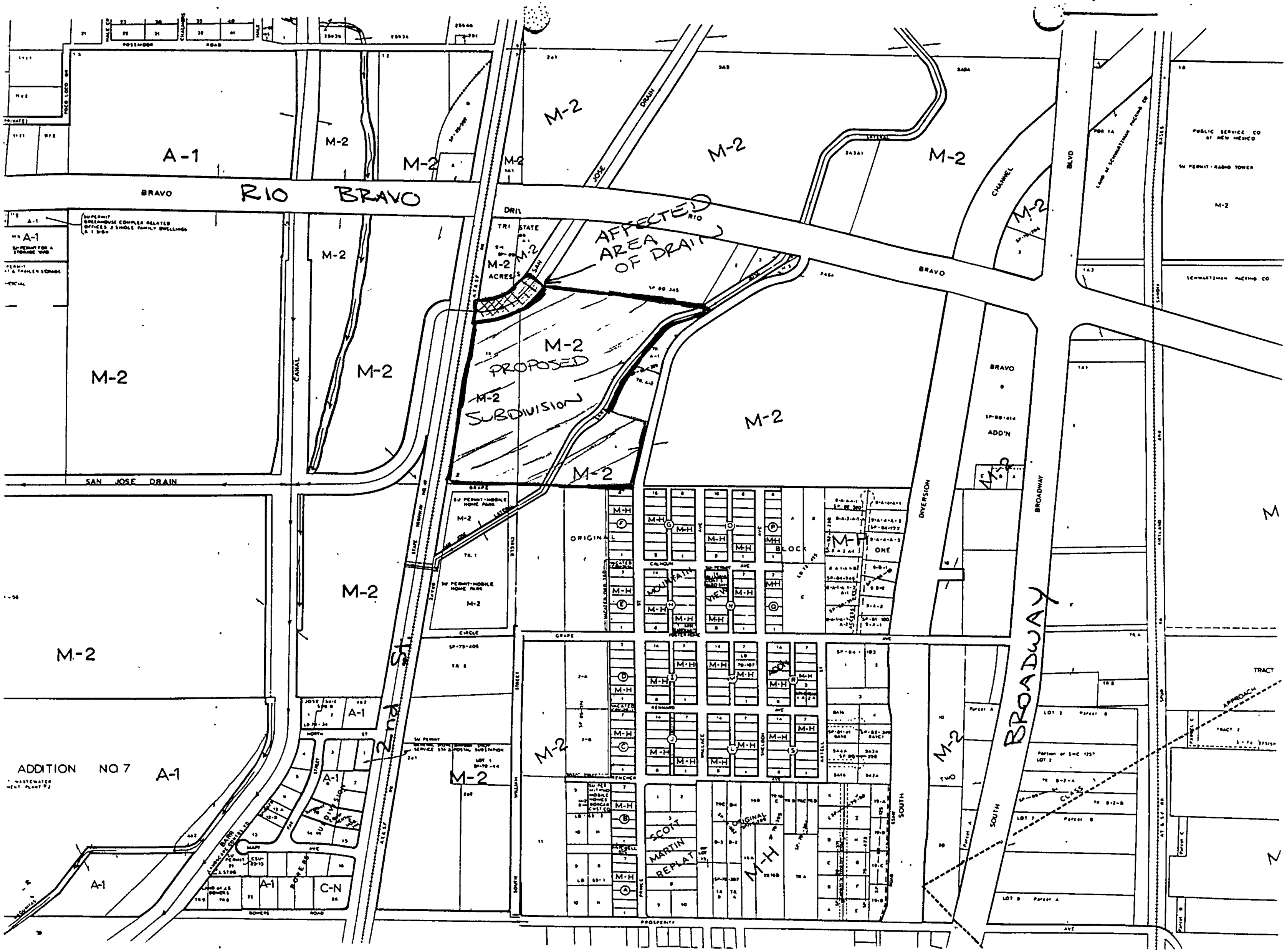
Sincerely,

Susan Calongne

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

c: Graeme Means, Jeff Mortensen & Assoc.
Jimmie Glenn, Owner
File

931076


RIO BRAVO
BRAVO
A-1
M-2
AFFECTED AREA OF DRAIN
PROPOSED SUBDIVISION
SAN JOSE DRAIN
CANAL
ADDITION NO 7
2nd St
BROADWAY
SOUTH
DIVERSION
ORIGINAL BLOCK ONE
SCOTT MARTIN REPLAT
M-H
C-N
PUBLIC SERVICE CO OF NEW MEXICO
SCHWARTZMAN PACKING CO
TRACT
APPROACH
CLASS
TWO
ADD'N
BOWERS ROAD
PROSPERITY AVE

A MEMBER OF CONSULTING
ENGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
June 29, 1995

Mr. Roger Paul
% Bernalillo County Public Works Department
2400 Broadway S.E.
Albuquerque, NM 87102

Re: Grading and Drainage Plan - Rio Bravo Estates
(PWD 94-229), (C.O.A. Hydrology File No. P14/D1)

Dear Roger:

Transmitted herewith for review are four (4) sets of the subject Grading and Drainage Plan. The purpose of this submittal is to obtain grading approval. Once Grading and Drainage Plan approval is obtained, we will submit public infrastructure construction plans for City and County review.

We have not yet met with the M.R.G.C.D. to discuss the proposed work in the San Jose Drain. We recognize that any approvals forthcoming from B.C.P.W.D. would be contingent upon M.R.G.C.D. approval. We will provide to you any pertinent information concerning our correspondence with the M.R.G.C.D.

If you should have any questions or comments, or should you require any additional information concerning this submittal or any other portion of this project, please do not hesitate to call either Jeff Mortensen or me.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means

J. Graeme Means, E.I.T.

JGM:dsj
Enclosures
xc: Sue Calongne
Jimmie Glenn

JUL - 5 1995

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

Please complete the following application for review of your case. **Submit THREE bluelines of plat, drawings, or information with case submittals and THREE bluelines of plat, drawings, or information with final sign-off applications. Submit a County Zone Atlas Map with subject property marked on the map.** If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photcopy of a USGS quad map with the subject property superimposed.

NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**
   a. Applicant is(check one):
   ____OWNER ____SURVEYOR X AGENT
   ____ENGINEER ____DRAINAGE ENGINEER

   b. Date of this application: 06-29-95

   c. Signature of applicant:
   (print) J. GRAEME MEANS (sign) J. Graeme Means

   d. OWNER: SPACE HOMES (JIMMIE GLENN) PHONE: 988-9615

   ADDRESS: 11209 PARIS NE ALBUQUERQUE, NM

   ZIP CODE: 87111

   e. AGENT: JEFF MORTENSEN & ASSOCIATES PHONE: 345-4250

   ADDRESS: 6010-B MIDWAY PARK BLVD. NE, ALBUQUERQUE, NM

   ZIP CODE: 87109

   f. OTHER(specify): _____ PHONE: _____

   ADDRESS: _____

   ZIP CODE: _____

2. **TYPE OF SUBMITTAL (check one):**
   ____REPLAT
   ____LAND DIVISION (MINOR SUBDIVISION)
   ____MAJOR SUBDIVISION
   ____CONSTRUCTION DRAWINGS
   X GRADING/DRAINAGE PLAN
   ____AS-CONSTRUCTED GRADING/DRAINAGE PLAN
   ____VARIANCE REQUEST
   ____TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
   ____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
   ____OTHER (specify): _____

JUL - 5 1995

931076

BOARD OF COUNTY COMMISSIONERS
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JACQUELYN SCHAEFER, VICE CHAIR
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DISTRICT 4
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY S.E.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217

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JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
RAY GALLAGHER, SHERIFF
H. R. FINE, TREASURER

INCOMPLETE APPLICATIONS WILL BE RETURNED BUT WILL NOT BE REVIEWED

Date: 06-29-95

Subject: Submittal X
Resubmittal ____
Final Sign-off ____

Case No.: PWD-94-229

Zone Map No.: P-14

RECEIVED
JUN 29 1995
BERNALILLO COUNTY
PUBLIC WORKS

Street Address: KING RD BETWEEN A.T. & S.F. AND PRINCE ST.

Legal Description: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK UNIT 1

Name of Applicant: J. GRAEME MEANS

JUL - 5 1995

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.

The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any variance or violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized County representative or County inspector form thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.

Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, Land Divider, Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the contract; the proper fitting and construction for the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

REV 1-25-91 MJG

P14 /D1

BOARD OF COUNTY COMMISSIONERS
ALBERT "AL" VALDEZ, CHAIRMAN
DISTRICT 2
KEN SANCHEZ, VICE CHAIR
DISTRICT 1
EUGENE M. GILBERT, MEMBER
DISTRICT 3
BARBARA J. SEWARD, MEMBER
DISTRICT 4
LES HOUSTON, MEMBER
DISTRICT 5
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

Date: 08-JUN-95

Subject: Resubmittal

Case No.: PWD-94-229

Zone Map No.: P-14

Street Address: KING RD BETWEEN A.T.&S.F. PRINCE ST

Legal Description: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

Name of Applicant: Michele F De Lilla

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.
The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any variance or violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized County representative or County inspector form thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.
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REV 4-22-91 BR

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

Please complete pages one and two of this application for review of your case. **Submit THREE bluelines of plat, drawings, or information with case submittals and THREE bluelines of plat, drawings, or information along with the original mylar for final sign-off applications. Submit a County Zone Atlas Map with subject property marked on the map.** If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photcopy of a USGS quad map with the subject property superimposed.

NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**

a. Applicant is(check one):

____OWNER ____SURVEYOR __X_AGENT
____ENGINEER ____DRAINAGE ENGINEER

b. Date of this application: 03-MAY-95

c. Signature of applicant:
(print)_____ (sign)_____

d. OWNER: Space Homes Inc. PHONE: 505-988-9615
11209 Paris NE
Albuquerque, NM

e. AGENT: Jeff Mortensen & Assoc PHONE: 505-345-4250
6010-B Midway Park NE
Albuquerque, NM 87109

f. OTHER(specify): Jeff Mortensen & Assoc PHONE: 505-345-4250
6010-B Midway Park NE
Albuquerque, NM 87109

2. **TYPE OF SUBMITTAL (check one):**

_____REPLAT
_____LAND DIVISION (MINOR SUBDIVISION)
_____MAJOR SUBDIVISION
_____CONSTRUCTION DRAWINGS
__X__GRADING/DRAINAGE PLAN
_____AS-CONSTRUCTED GRADING/DRAINAGE PLAN
_____VARIANCE REQUEST
_____TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
_____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
_____OTHER (specify):_____

County of Bernalillo

Your: ___ submittal of drainage information
X resubmittal of drainage information

is: ___ approved.
X approved with comments/conditions.
___ disapproved.
___ deferred to County Floodplain Administrator

TO BE FILLED OUT BY COUNTY PUBLIC WORKS DEPARTMENT ONLY

Case review comments are:
X attached.
___ not attached.
___ not attached. See remarks below.

Resubmittal is:
___ not required.
X required. When resubmitting, please use Resubmittal Form.

Please submit:
___ three bluelines of corrected plat incorporating case review comments.
___ original mylar and three bluelines for final sign-off.
X grading/drainage plan with revisions.
___ as-constructed grading/drainage plan.
___ infrastructure list and/or improvements agreement.
___ design review fee. (payments accepted at county finance dept.)
___ schedule a CRC meeting with Public Works. Tel. 848-1500.
___ other: _____

It is required that:
___ Bernalillo County Public Works Department inspect improvements prior to final sign-off of plat.
___ Bernalillo County Public Works Department signature line be placed on plat.

Remarks: _____

R A Paul, PE 6/6/95
Roger A. Paul, P.E.
Molzen-Corbin & Assoc., for
County Surface Water Hydrologist
Bernalillo County Public Works Department

cc: ___ Jack Cloud, DRB
___ County Planning
___ Raymond Quintana, County Building and Zoning
X Owner: SPACE HOMES, INC.
X Agent: JEFF MORTENSEN & ASSOC.
X Case File: PWD - 94 - 229
X Susan Calongne, County Floodplain Administrator, COA
___ Molzen-Corbin & Associates
___ Other: _____

pb-wrks.4

BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT
CASE FILE COMMENTS

CASE NO: PWD-94-229

ZONE MAP NO.: P-14

REFERENCE CASES:

DRB-94-10
DRB-84-516
V-94-113
SV-94-57
SC5-94-63

STREET ADDRESS: KING RD BETWEEN A.T.&S.F. PRINCE ST

LEGAL DESCRIPTION: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

COMMENTS OF:

04-OCT-94 DRAN: A portion of this property appears to be within a designated 100 year flood plain as shown on the National Flood Insurance Program's Flood Insurance Rate Map. Defer approval to the County Floodplain Administrator.

14-NOV-94 DRE:
1. Will need T.I.A. (warrant study should be part of).
2. Trips generated should not be based on Single Family Detached Housing for a mobile home development. (use Land Use240 Or 270)
3. Traffic values for Prince used in the warrant analysis must be based on approach traffic (northbound) Traffic turning on to Prince from Rio Bravo does not count.
4. What are the distancs from the proposed signal on Prince to the existing signals at 2nd and Broadway? What are the impacts of the signal to Rio Bravo?
5. Preliminary infrastructure list approved for submittal to DRE.

06-DEC-94 DRAN:
1. Coordination with the MRGCD will be needed prior to construction of the discharge facilities into the San Jose Drain.
2. The engineer must demonstrate that the San Jose Drain will not have a capacity problem downstream using new hydrology methods. Since the City maintains the San Jose Drain, their Storm Drain Maintenance division may require additional improvements to the drain either adjacent to or downstream from this development.
3. With repect to the LOMR required by FEMA, it is strongly recommended that the engineer apply for a Conditional Letter of Map Revision (CLOMR) as soon as the drainage plan is approved. That way, any additional improvements required by FEMA may be incorporated into the plans before construction is complete. The County will withhold all financial guarantees for this project until after the LOMR is obtained, therefore it is in the developer's best interest to get this process started.
4. Is there any perimeter or internal fencing proposed by this plan that may adversely affect the overall drainage scheme of this plan? If so, please address this concern. If not, provide a statement on the plan which states that no fencing is proposed by this plan and that any future fencing will be approved through Bernalillo County Public Works via a revised grading and drainge plan.

5. It appe that access is being taken fr both Prince Street and King Road. Please include language stating that these roads are currently maintained by Bernalillo County.
6. If the intention of this plan is to provide one grading and drainage plan for the entire subdivision, please include details for pad elevations and dwelling locations along with the general grading scheme of the lots. This type of information might possibly be shown on (a) typical lot layout(s).
7. Provide details and calculations for the storm drains.
8. Is there any erosion protection proposed for the discharge point of the storm drain into the San Jose Lateral? Will this discharge affect (i.e. degradation) the current condition of the arroyo bed at the point of discharge or at any downstream?

03-MAY-95 DRAN: 1. This submittal has been approved on a conceptual basis only, a detailed grading and drainage plan will need to be submitted, reviewed, and accepted by Bernalillo County Public Works, AMAFCA, and the Floodplain Administrator prior to final approval.

Rel
6/8/95

BOARD OF COUNTY COMMISSIONERS
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DISTRICT 4
LES HOUSTON, MEMBER
DISTRICT 5
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

DAVID K. ANDERSON, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
JOE BOWDICH, SHERIFF
H. R. FINE, TREASURER

May 22, 1995

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Dept.
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: CONCEPTUAL PLAN FOR RIO BRAVO ESTATES, (P14/D1) (PWD-94-229)
SUBMITTED FOR CONCEPTUAL APPROVAL, ENGINEER'S STAMP DATED 5/2/95.

Dear Mr. Paul:

The City of Albuquerque will accept the concepts presented in the above referenced submittal provided that approval is granted by the Middle Rio Grande Conservancy District (MRGCD). Prior to approval of the grading and drainage plan, the following issues must be addressed:

1. By an agreement with the MRGCD, the City maintains the San Jose Drain adjacent to this site. This area is within the County, however, therefore the City will not maintain the detention pond which is proposed for this subdivision.

2. As stated before, I strongly recommend that the engineer request a Conditional Letter of Map Revision from FEMA as soon as the drainage plan is approved. The County will withhold financial guarantees for this project until after the Letter of Map Revision is obtained, therefore it is to the developer's best interest to get this process started.

3. The details for the outlet structure into the San Jose Drain must be approved by both MRGCD and the City. It is suggested that the width of the concrete lining extend from 10' upstream to 30' downstream of the pipe outlet. Details for this structure will be included on the plans which must go through the City's DRC process.

If you should have any questions, please do not hesitate to call me.

Sincerely,

Susan Calongne

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

c: Graeme Means, Jeff Mortensen & Assoc.
Jimmie Glenn, Owner
File

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

FAX (505) 345-4254

FAX TRANSMITTAL

TO: SUE CALONGNE

FIRM: C.O.A. HYDROLOGY SECTION

FACSIMILE NUMBER: 768-3629

FROM: J. GRAEME MEANS

SUBJECT: PALO BRANO ESTATES

MESSAGE:

NUMBER OF PAGES: 2 (Including this page)

RECEIVED
MAY - 5 1995

If the transmission is incomplete or unclear, please notify us at once at (505) 345-4250.

3(576

AINAGE INFORMATION SHEET

PMS-94-289

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: P 14/D1

DRB #: 94-10 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK, UNIT 1

CITY ADDRESS: KING RD SE, BETWEEN AT. & S.F. RR AND PRINCE ST.

ENGINEERING FIRM: JMA CONTACT: GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD PHONE: 345-4250

OWNER: SPACE HOMES CONTACT: JIMMIE GLENN

ADDRESS: 11201 PARIS NE PHONE: 988-9615

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JMA CONTACT: CHUCK CALA

ADDRESS: _____ PHONE: 345-4250

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
X OTHER CONCEPT APPROVAL PLAN

PRE-DESIGN MEETING:

X YES
___ NO
___ COPY PROVIDED

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
X OTHER CONCEPT APPROVAL (SPECIFY)

DATE SUBMITTED: 05/05/95

BY: J. GRAEME MEANS

RECEIVED
MAY - 5 1995
HYDROLOGY DIVISION

5-8-95

- POND IN COUNTY
- CITY will NOT maintain per DH

931076

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JACQUELYN SCHAEFER, VICE CHAIR
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DISTRICT 3
BARBARA J. SEWARD, MEMBER
DISTRICT 4
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

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JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
RAY GALLAGHER, SHERIFF
H. R. FINE, TREASURER

INCOMPLETE APPLICATIONS WILL BE RETURNED BUT WILL NOT BE REVIEWED

Date: 05/03/95

Subject: Submittal X
Resubmittal ____
Final Sign-off ____

Case No.: PWD-94-229

Zone Map No.: P-14

Street Address: KING ROAD BETWEEN AT & ST.

Legal Description: TRACT 4 SCHWARTZMAN INDUSTRIAL PARK UNIT 6

Name of Applicant: J. GRAEME MEANS

RECEIVED
MAY 3 1995
BERNALILLO COUNTY
PUBLIC WORKS

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.
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REV 1-25-91 MJG

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

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NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**
   a. Applicant is(check one):
   ____OWNER ____SURVEYOR ____AGENT
   ____ENGINEER X DRAINAGE ENGINEER

   b. Date of this application: 05/02/95

   c. Signature of applicant:
   (print) J. GRAEME MEANS (sign) [signature]

   d. OWNER: SPACE HOMES INC. PHONE: 505-988-9615

   ADDRESS: 11209 PARIS NE, ALBUQUERQUE, NM

   ZIP CODE: 87110

   e. AGENT: JEFF MORTENSEN & ASSOC. PHONE: 505-345-4250

   ADDRESS: 6010-B MIDWAY PARK BLVD NE

   ZIP CODE: 87109

   f. OTHER(specify): _____ PHONE: _____

   ADDRESS: _____

   ZIP CODE: _____

2. **TYPE OF SUBMITTAL (check one):**
   ____REPLAT
   ____LAND DIVISION (MINOR SUBDIVISION)
   ____MAJOR SUBDIVISION
   ____CONSTRUCTION DRAWINGS
   ____GRADING/DRAINAGE PLAN
   ____AS-CONSTRUCTED GRADING/DRAINAGE PLAN
   ____VARIANCE REQUEST
   ____TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
   ____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
   X OTHER (specify): CONCEPTUAL DRAINAGE

A MEMBER OF CONSULTING
ENGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931076
May 3, 1995

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Department
2400 Broadway S.E.
Albuquerque, NM 87102

RE: Rio Bravo Estates (PWD-94-229)

Dear Roger:

Transmitted herewith for review is our conceptual plan for stormwater outfall into the San Jose Drain. We hereby request formal review of this concept. Approval of this concept will establish critical elevations at 1) the spillway, 2) the low-flow discharge, and 3) the adjacent street. Until this concept has been reviewed and approved, we cannot begin the design of the final grading and drainage plan for the subdivision which will be based upon the aforementioned critical elevations.

As you are aware, there are several agencies involved in this review. We have started our design process at the San Jose Drain and have obtained concurrence from the City of Albuquerque to use the Drain as an outfall. We are now directing our design efforts toward satisfying Bernalillo County, as we understand the County to be the "lead" reviewer for this project. Once we obtain concept approval, we will approach the M.R.G.C.D. in order to initiate the license process. Included in this submittal are the following:

1. Concept approval plan which shows the proposed outfall system in plan view relative to the surrounding areas.

2. A copy of the channel section proposed by Wilson & Company in their plan; "Southeast Valley Management Plan, San Jose Drain and Vicinity".

3. Sections, details and calculations concerning the proposed facility.

The third item shows several different details and sections of the proposed system. Calculations are presented which demonstrate the hydraulic characteristics of the system. A copy of the HYMO output from Wilson & Company has been provided which shows the design flow in the San Jose Drain at the point where Subareas "E" and "K" outfall to the Drain. As can be seen on Sheet 8, Rio Bravo Estates is part of Subarea "K". Sheet 9 shows the hydraulic calculations for the San Jose Drain where the design flow is introduced into our proposed drain section.

Two AHYMO runs are also included in Item 3. The first calculates the runoff and volume generated by Rio Bravo Estates under current hydraulic criteria. It also routes the developed runoff through the proposed detention facility. As shown on Sheet 15, the developed peak runoff rate is 112 cfs, the existing rate is 74 cfs, and the proposed peak rate would be 59 cfs.

The second AHYMO run calculates the allowed discharge of Rio Bravo Estates from the total discharge accounted for in the Wilson & Company plan. It was performed under the same criteria as the original. The output shown on Sheet 18 demonstrates that the property, now known as Rio Bravo Estates, is allowed to discharge at a rate of 105 cfs. As stated previously, we propose to release a peak rate of 59 cfs.

In addition, we propose to fence the ponding area, and provide a gate for maintenance access. We are unsure with whom the maintenance responsibility of this public drainage facility will lie. We recognize that a neighborhood association in an affordable housing development may not have the sophistication and financial means to maintain such a drainage facility. As the runoff originates from Bernalillo County public streets, we propose that the County should maintain the facility. We could also envision maintenance responsibility falling upon the City of Albuquerque as they will be maintaining the San Jose Drain. Any input or resolution you could provide to us concerning the maintenance would be helpful to us. We recognize that this is a relatively unique situation, hence we would like to present the question now rather than at the end of the project when we will be needing final signoff. This should afford you time to review the matter with the County and/or the City (Mr. Fred Aguirre).

Please review this submittal at your earliest convenience. We are eager to get this project out of planning stage, into final design and on to construction. Any suggestions or ideas you may provide to us would be greatly appreciated.

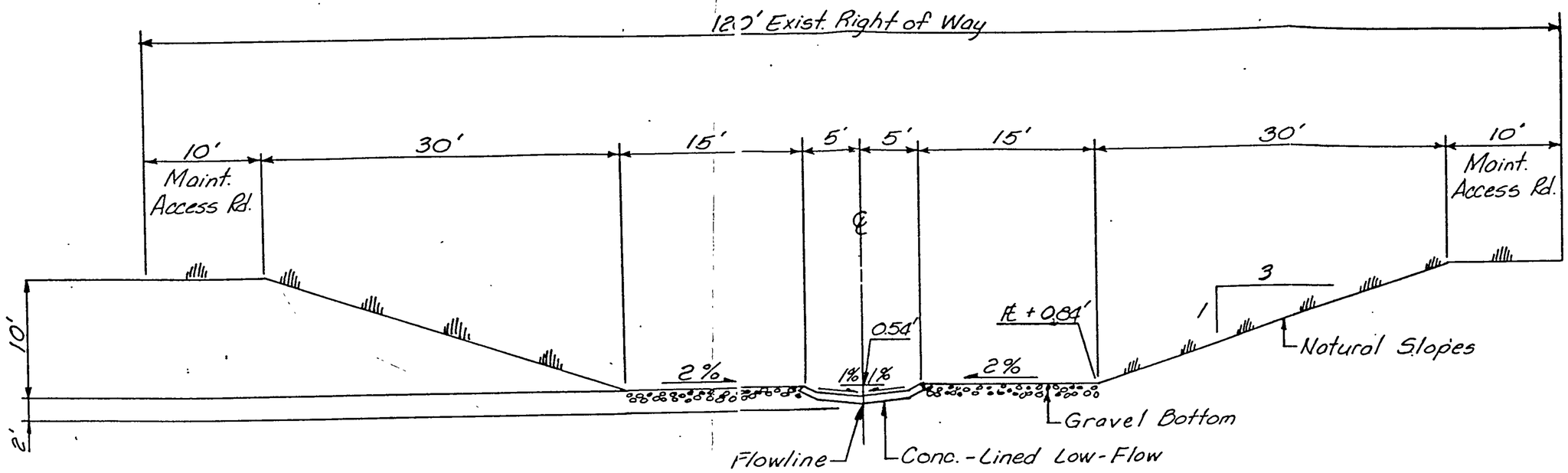
If you should have any questions or comments regarding this information, or if we can be of further assistance to you, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means, E.I.T.

JGM:dsj
xc: Jimmie Glenn w/encl.



DITCH SECTION

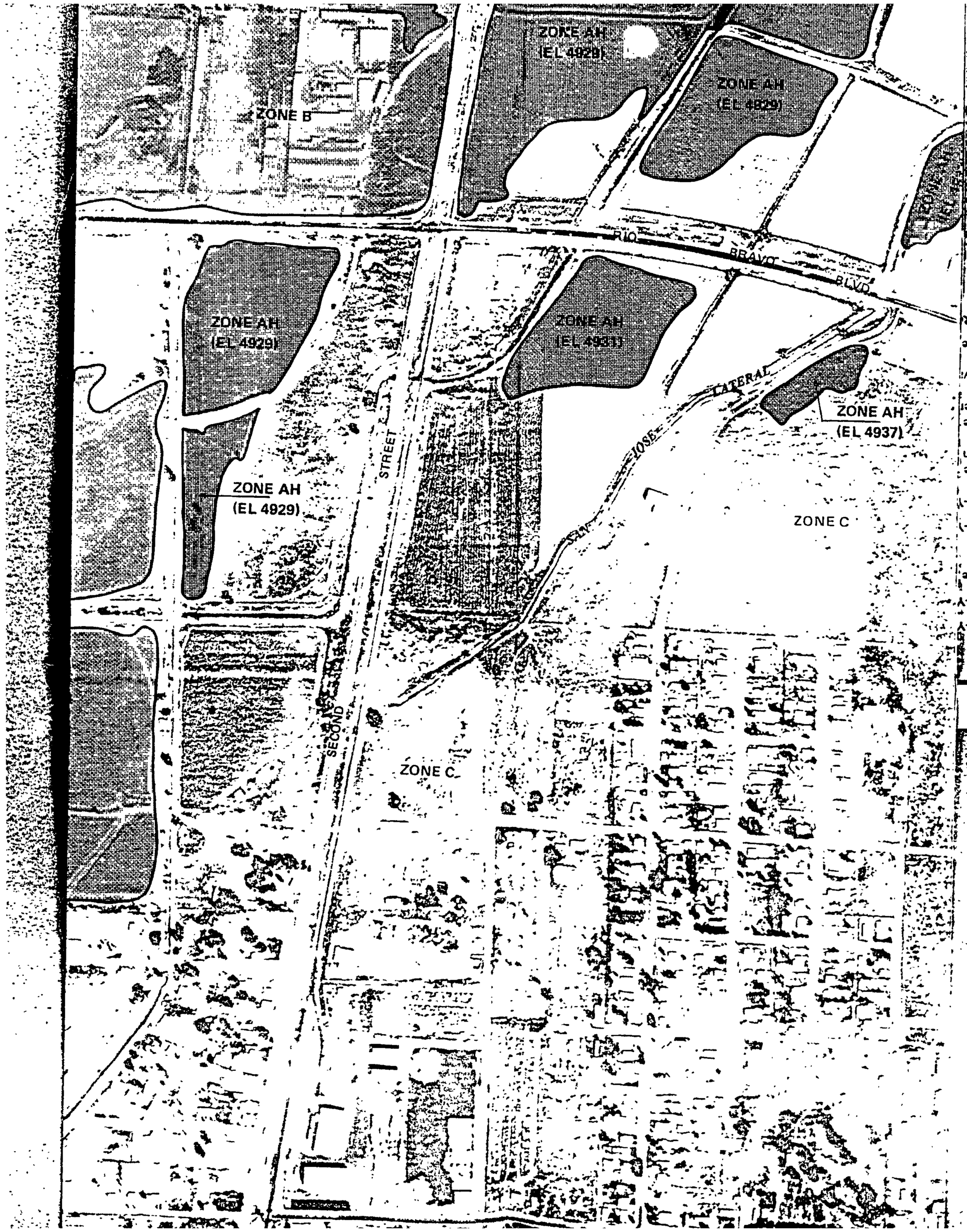
MAY - 5 1995

FIGURE 5A

WILSON & COMPANY
ENGINEERS
ARCHITECTS

SAN JOSE DRA
GRASS SIDE SL
SECTION

DSGN. SJM	DR. MDJJ	CK.
FILE 86-527	DATE 7/87	SHEE


ZONE AH
(EL 4929)
ZONE B
ZONE AH
(EL 4929)
RIO
BRAVO
BLVD.
ZONE AH
(EL 4929)
ZONE AH
(EL 4931)
LATERAL
ZONE AH
(EL 4937)
JOSE
STREET
ZONE AH
(EL 4929)
ZONE C
SECOND
ZONE C

5-1-95 JMA to make submittal for
drainage requirements or "other"
Will Co. or City take pond? easement
who will maintain?
Homeowners' association - not to maintain
Prelim. Plat approved

- in Co. engr. estimate adequate for infrastructure
list.
LOMR on original infra. list

P14/D1

BOARD OF COUNTY COMMISSIONERS

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BARBARA J. SEWARD, MEMBER
DISTRICT 4

JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY S E.
ALBUQUERQUE, NEW MEXICO 87102

MARK J. CARRILLO, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
RAY GALLAGHER, SHERIFF
H. R. FINE, TREASURER

Date: 19-DEC-94

Subject: Submittal

Case No.: PWD-94-229

Zone Map No.: P-14

Street Address: KING RD BETWEEN A.T.&S.F. PRINCE ST

Legal Description: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

Name of Applicant: Michele F De Lilla

Dear Applicant:

Bernalillo County Public Works Department will require **TWO WEEKS for review and comment of submittal and resubmittals, and ONE WEEK for final review and plat sign-off.** Major submittals may require more than two weeks for review and comment.

The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any variance or violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized County representative or County inspector form thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.

Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, Land Divider, Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the contract; the proper fitting and construction for the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

REV 4-22-91 BR

COUNTY OF BERNALILLO

APPLICATION FOR CASE REVIEW

Please complete pages one and two of this application for review of your case. **Submit THREE bluelines of plat, drawings, or information with case submittals and THREE bluelines of plat, drawings, or information along with the original mylar for final sign-off applications. Submit a County Zone Atlas Map with subject property marked on the map.** If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photcopy of a USGS quad map with the subject property superimposed.

NOTE: INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. **APPLICANT INFORMATION:**
   a. Applicant is(check one):
   ____OWNER ____SURVEYOR __X_AGENT
   ____ENGINEER ____DRAINAGE ENGINEER

   b. Date of this application: 06-DEC-94

   c. Signature of applicant:
   (print)_____ (sign)_____

   d. OWNER: Space Homes Inc. PHONE: 505-988-9615
   11209 Paris NE
   Albuquerque, NM

   e. AGENT: Jeff Mortensen & Assoc PHONE: 505-345-4250
   6010-B Midway Park NE
   Albuquerque, NM 87109

   f. OTHER(specify): Jeff Mortensen & Assoc PHONE: 505-345-4250
   6010-B Midway Park NE
   Albuquerque, NM 87109

2. **TYPE OF SUBMITTAL (check one):**
   _____REPLAT
   _____LAND DIVISION (MINOR SUBDIVISION)
   _____MAJOR SUBDIVISION
   _____CONSTRUCTION DRAWINGS
   _____GRADING/DRAINAGE PLAN
   _____AS-CONSTRUCTED GRADING/DRAINAGE PLAN
   _____VARIANCE REQUEST
   __X__TRAFFIC IMPACT ANALYSIS/TRAFFIC STUDY
   _____INFRASTRUCTURE LIST/DESIGN REVIEW FEE
   _____OTHER (specify):_____

County of Bernalillo

Your: ___ submittal of drainage information
_X_ resubmittal of drainage information

is: ___ approved.
___ approved with comments/conditions.
_X_ disapproved.
___ deferred to County Floodplain Administrator

TO BE FILLED OUT BY COUNTY PUBLIC WORKS DEPARTMENT ONLY

Case review comments are:
_X_ attached.
___ not attached.
___ not attached. See remarks below.

Resubmittal is:
___ not required.
_X_ required. When resubmitting, please use Resubmittal Form.

Please submit:
___ three bluelines of corrected plat incorporating case review comments.
___ original mylar and three bluelines for final sign-off.
_X_ grading/drainage plan with revisions.
___ as-constructed grading/drainage plan.
___ infrastructure list and/or improvements agreement.
___ design review fee. (payments accepted at county finance dept.)
___ schedule a CRC meeting with Public Works. Tel. 848-1500.
___ other: _____

It is required that:
___ Bernalillo County Public Works Department inspect improvements prior to final sign-off of plat.
___ Bernalillo County Public Works Department signature line be placed on plat.

Remarks: _____

R. A. Paul, PE 12/16/94

Roger A. Paul, P.E.
Molzen-Corbin & Assoc., for
County Surface Water Hydrologist
Bernalillo County Public Works Department

cc: ___ Jack Cloud, DRB
___ County Planning
___ Raymond Quintana, County Building and Zoning
_X_ Owner: SPACE HOMES INC.
___ Agent: _____
_X_ Case File: PWD-94-229
_X_ Susan Calongne, County Floodplain Administrator, COA
_X_ Molzen-Corbin & Associates
_X_ Other: JEFF MORTENSEN

pb-wrks.4

BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT
CASE FILE COMMENTS

CASE NO: PWD-94-229

ZONE MAP NO.: P-14

REFERENCE CASES:

DRB-94-10

STREET ADDRESS: KING RD BETWEEN A.T.&S.F. PRINCE ST

LEGAL DESCRIPTION: TRACT 4 SCHWARTZMAN INDUSTRAL PARK UNIT 6

COMMENTS OF:

04-OCT-94 DRAN: A portion of this property appears to be within a designated 100 year flood plain as shown on the National Flood Insurance Program's Flood Insurance Rate Map. Defer approval to the County Floodplain Administrator.

14-NOV-94 DRE:
1. Will need T.I.A. (warrant study should be part of).
2. Trips generated should not be based on Single Family Detached Housing for a mobile home development. (use Land Use240 0r 270)
3. Traffic values for Prince used in the warrant analysis must be based on approach traffic (northbound) Traffic turning on to Prince from Rio Bravo does not count.
4. What are the distancs from the proposed signal on Prince to the existing signals at 2nd and Broadway? What are the impacts of the signal to Rio Bravo?
5. Preliminary infrastructure list approved for submittal to DRE.

06-DEC-94 DRAN:
1. Coordination with the MRGCD will be needed prior to construction of the discharge facilities into the San Jose Drain.
2. The engineer must demonstrate that the San Jose Drain will not have a capacity problem downstream using new hydrology methods. Since the City maintains the San Jose Drain, their Storm Drain Maintenance division may require additional improvements to the drain either adjacent to or downstream from this development.
3. With repect to the LOMR required by FEMA, it is strongly recommended that the engineer apply for a Conditional Letter of Map Revision (CLOMR) as soon as the drainage plan is approved. That way, any additional improvements required by FEMA may be incorporated into the plans before construction is complete. The County will withhold all financial guarantees for this project until after the LOMR is obtained, therefore it is in the developer's best interest to get this process started.
4. Is there any perimeter or internal fencing proposed by this plan that may adversely affect the overall drainage scheme of this plan? If so, please address this concern. If not, provide a statement on the plan which states that no fencing is proposed by this plan and that any future fencing will be approved through Bernalillo County Public Works via a revised grading and drainge plan.
5. It appears that access is being taken from both Prince Street and King Road. Please include language stating that these roads are currently maintained by Bernalillo County.
6. If the intention of this plan to provide one approved grading and drainage

KWE
12-16-94

plan for the entire subdivision, please include details for pad elevations and dwelling locations along with the general grading scheme of the lots. This type of information might possibly be sitdown on (a) typical lot layout(s).

7. Provide details and calculations for the storm drains.
8. Is there any erosion protection proposed for the discharge point of the storm drain into the San Jose Lateral? Will this discharge affect (i.e. degradation) the current condition of the arroyo bed at the point of discharge or at any downstream?

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DISTRICT 1

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DISTRICT 2

BARBARA J. SEWARD, MEMBER
DISTRICT 4

JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102

ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

MARK J. CARRILLO, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
RAY GALLAGHER, SHERIFF
H. R. FINE, TREASURER

December 2, 1994

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Dept.
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: RIO BRAVO ESTATES, (P14/D1), (PWD-94-229), RESUBMITTED FOR PRELIMINARY PLAT APPROVAL, ENGINEER'S STAMP DATED 11/2/94; ADDITIONAL COMMENTS

Dear Roger:

In addition to the comments provided in my November 28, 1994 letter, the following issues must also be addressed prior to approval of the above referenced plan:

1. The engineer must demonstrate that the San Jose Drain will not have a capacity problem downstream using new hydrology methods. Since the City maintains the San Jose Drain, our Storm Drain Maintenance division may require additional improvements to the drain either adjacent to or downstream from this development. I will meet with staff from Storm Drain Maintenance and I will provide their comments to you as soon as possible.

2. With respect to the LOMR required by FEMA, I strongly recommend that the engineer apply for a Conditional Letter of Map Revision (CLOMR) as soon as the drainage plan is approved. That way, any additional improvements required by FEMA may be incorporated into the plans before construction is complete. The County will withhold all financial guarantees for this project until after the LOMR is obtained, therefore it is to the developer's best interest to get this process started.

When I have further comments on this subdivision, I will forward them to you.

Sincerely,

Susan Calongne

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

c: Chris Rivera, City Hydrology
Leonard Utter, MRGCD
Graeme Means, Jeff Mortensen & Assoc.
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: P13, 14

DRB #: 94-10 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK, UNIT 1

CITY ADDRESS: KING RD S.E, BETWEEN AT&SF R.R. AND PRINCE ST. S.E.

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: SPACE HOMES, INC. CONTACT: JIMMIE GLENN

ADDRESS: 11209 PARIS, N.E. PHONE: 988-9615

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JEFF MORTENSEN & ASSOC. CONTACT: CHUCK CALA

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
X OTHER SUPPLEMENTARY CALCULATIONS AND INFORMATION

PRE-DESIGN MEETING:

____ YES
X NO
____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL
X 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
____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 12/02/94

BY: J. GRAEME MEANS

RECEIVED DEC - 2 1994 COPY DIST.

file

A MEMBER OF CONSULTING
ENGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931075
December 1, 1994

Ms. Susan M. Calongne
City/County Floodplain Administrator
County of Bernalillo
One Civic Plaza N.W.
Albuquerque, NM 87102

Re: Rio Bravo Estates (P14/D1), (PWD-94-229)

Dear Sue:

In response to your comments of November 28, 1994, I present the following:

1. It would be premature to obtain a M.R.G.C.D. License or Permit as a requirement for preliminary plat approval. The M.R.G.C.D. requires final construction plans for their review prior to License or Permit issuance. We cannot begin construction plans until we obtain preliminary plat approval.

2. I have calculated the 100-year discharge per acre for an industrial use using the "old" hydrology and compared it to the discharge per acre for the proposed subdivision as calculated using the current hydrology. As the attached calculations show, the proposed subdivision will yield a lower peak runoff than that accounted for in the "Southeast Valley Drainage Management Plan, San Jose Drain and Vicinity".

3. We propose to protect the San Jose Drain from erosion by installing wire-tied rip-rap at all storm drain pipe outlets. The design of the outlet structures and rip-rap protection work will be in accordance with Section 5, Riprap, of A.M.A.F.C.A.'s "Drainage Criteria Manual", June 1981. The design and supporting calculations for erosion protection will be shown in the Grading and Drainage Plan for final plat and, more importantly, Work Order approval. These items have been accounted for on the Infrastructure List for preliminary plat approval as "appurtenances".

4. A Letter of Map Revision (L.O.M.R.) is on our Infrastructure List as a prerequisite for Bernalillo County Financial Guarantee release.

Jeffrey G. Mortensen, P.E. **Charles G. Cala, Jr., P.S.**

Please keep in mind that we are only requesting preliminary plat at this time. We cannot begin the lengthy C.P.C. process until we have preliminary plat approval. We anticipate subsequent submittals for final plat and Work Order which will be subject to further review at the appropriate levels.

In summary, we feel that we have addressed all of your comments to the extent that is required for preliminary plat approval. We anticipate comments from B.C.P.W.D. and, as they are now the lead agency in this review, will address them through Roger Paul.

If you should have any questions or comments regarding this information, or if we can be of further assistance to you, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means

J. Graeme Means, E.I.T.

JGM:dsj
xc: Roger Paul
Jimmie Glenn

The "Southeast Valley Drainage Management Plan, San Jose Drain and Vicinity" assumes an SCS Curve Number of 84 with an industrial land use. The peak flow rate, measured in discharge per acre, is calculated using the "old" hydrology as follows:

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate 40: Gm; Glendale Clay Loam
Hydrologic Soil Group: B

Point Rainfall

P_6 = 2.28 in. (D.P.M. Plate 22.2 D-1)

Developed Condition (Per Acre)

A_{total} = 43,560 sf = 1.00 ac
A_{imp} = 72% = 31,363 sf = 0.72 ac (D.P.M. Plate 22.2 C-2)
$A_{L.S.}$ = 28% = 12,197 sf = 0.28 ac (Assume remainder is landscaped)
Assume half of impervious area is roof, half is paved
C = Weighted Average per Emergency Rule, 1/14/86)
C = (0.36)(0.95)+(0.36)(0.90)+(0.28)(0.25) = 0.74

Rational Method

$Q_{100} = CiA$
Where: C = 0.74
$i = P_6(6.84)T_c^{-0.51}$ = 4.82 in/hr
T_c = 10 minutes (minimum)
P_6 = 2.28 in.
A = 1.00 acre

$Q_{100,\ Plan}$ = 3.6 cfs/acre (industrial development with "old" hydrology)

$Q_{100,\ Rio\ Bravo}$ = 111.8 cfs/31.92 acres = 3.5 cfs/acre
(From Drainage Plan for Rio Bravo Estates)

JEFFREY G. MORTENSEN
NEW MEXICO
8547
REGISTERED PROFESSIONAL ENGINEER

12-01-94

BOARD OF COUNTY COMMISSIONERS
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County of Bernalillo
State of New Mexico
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ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
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THOMAS J. MESCALL, PROBATE JUDGE
RAY GALLAGHER, SHERIFF
H. R. FINE, TREASURER

November 28, 1994

Roger Paul, P.E.
Development Review, Hydrology
Bernalillo County Public Works Dept.
2400 Broadway, SE
Albuquerque, New Mexico 87102

RE: RIO BRAVO ESTATES, (P14/D1), (PWD-94-229), RESUBMITTED FOR PRELIMINARY PLAT APPROVAL, ENGINEER'S STAMP DATED 11/2/94.

Dear Roger:

Because this project is a subdivision, the County will remain the lead agency, however, I have comments with respect to the San Jose Drain and the FEMA flood plain. Prior to Preliminary Plat approval, the engineer must address the following:

1. The "Southeast Valley Drainage Management Plan, San Jose Drain and Vicinity," dated December 1987, does assume free discharge into the San Jose Drain. It is my understanding that the City maintains this drain, however, the drain belongs to the Middle Rio Grande Conservancy District. Therefore, a license or permit from MRGCD will be required before free discharge will be allowed from the subdivision. The engineer must coordinate with MRGCD and provide a copy of the MRGCD license or permit to my office.

2. The Drainage Management Plan was done prior to adoption of the new hydrology methods. How does free discharge from this site affect the flow in the drain using the new hydrology?

3. The San Jose Drain has not been improved in the vicinity of this project. What type of erosion protection is proposed at the outlets of the storm drain pipes into the San Jose Drain? The engineer must provide calculations and details of the outlet structures and these must be approved by MRGCD and the City of Albuquerque.

4. A Letter of Map Revision (LOMR) will be required for this project in order to remove the existing floodplain from the lots. This is a requirement of the Federal Emergency Management Agency. FEMA requires that a Conditional Letter of Map Revision be obtained prior to construction. We may allow construction to proceed before receipt of the LOMR, however the County must not release the financial guarantees for the storm drainage improvements until the LOMR is obtained from FEMA. Please note that any additional improvements required by FEMA will be the responsibility of the developer. The LOMR application must be submitted to FEMA through my office.

Please provide me with a copy of the County's comments for my files. If you should have any questions, please do not hesitate to call me.

Sincerely,

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

c: Chris Rivera, City Hydrology
Leonard Utter, MRGCD
Graeme Means, Jeff Mortensen & Assoc.
File

931076

DR AGE INFORMATION SHEET

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: P13,14

DRB #: 94-10 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK, UNIT 1

CITY ADDRESS: KING RD S.E. BETWEEN AT & SF R.R. AND PRINCE ST. S.E.

ENGINEERING FIRM: JMA CONTACT: J. GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: SPACE HOMES, INC. CONTACT: JIMMIE GLENN

ADDRESS: 11209 PARIS, N.E. PHONE: 988-9615

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: JMA CONTACT: CHUCK CALA

ADDRESS: 6010-B MIDWAY PARK NE PHONE: 345-4250

CONTRACTOR: NONE SELECTED CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
X OTHER INFRASTRUCTURE LIST (FOR REVIEW AND COMMENT)

PRE-DESIGN MEETING:

____ YES
X NO
____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL
X 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
____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11/11/94

BY: J. GRAEME MEANS

JMA No. 931075
D.R.B. Case No. 94-10
D.R.C. Project No.
Date Submitted 11-10-94
Prelim. Plat Approved
Prelim. Plat Expires

EXHIBIT "A"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LISTING
for RIO BRAVO ESTATES

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development. This summary is not necessarily a complete listing. During the design process, if the City determines that appurtenant items have not been included in the summary, those items will be included in the listing and related financial guarantee, if the items normally are Subdivider responsibility. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility are the responsibility of the Subdivider and will be included in the financial guarantee provided to the City.

Location	Size	Type Improvement	From	To
CITY IMPROVEMENTS				
Fentiman Ave SE	6"	Waterline	Silver Fox Drive S.E.	Fentiman Ave SE Cul-De-Sac
	8"	Sanitary Sewerline	Silver Fox Drive S.E.	Fentiman Ave SE Cul-De-Sac
Silver Fox Drive S.E.	8"	Waterline	King Road SE	Gore Ave. SE
	8"	Sanitary Sewerline	King Road SE	Gore Ave. SE
Zorro Loop S.E.	8"	Waterline	Silver Fox Drive S.E.	Gore Ave. SE
	8"	Sanitary Sewerline	Silver Fox Drive S.E.	Gore Ave. SE
Gore Ave. S.E.	8"	Waterline	Zorro Loop SE	Prince St SE
	8"	Sanitary Sewerline	Zorro Loop SE	Prince St SE
Glenn Drive S.E.	6"	Waterline	King Road SE	Gore Ave SE
	8"	Sanitary Sewerline	King Road SE	Gore Ave SE
Chamaigne Ct SE	6"	Waterline	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
	8"	Sanitary Sewerline	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
Rosson Ct SE	6"	Waterline	Glenn Dr. SE	Rosson Ct SE Cul-de-Sac
	8"	Sanitary Sewerline	Glenn Dr. SE	Rosson Ct SE Cul-de-Sac
Prince St SE (Excluding Frontage of the Church of Jesus Christ of Latter Day Saints (Tract "A")	8"	Waterline	Rio Bravo Blvd. S.E.	Northern Bdry of East Mtn. Subdivision

IMPROVEMENTS

.timan Ave SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Silver Fox Drive S.E.	Fentiman Ave SE Cul-De-Sac
	28' FF	Res. Street Paving	Silver Fox Blvd. S.E.	Fentiman Ave SE Cul-De-Sac
North End Silver Fox Drive S.E.	Type III	Vehicular Barricades	N/A	N/A
Silver Fox Drive S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	King Road SE	Gore Ave. SE
	28' FF	Res. Street Paving	King Road SE	Gore Ave. SE
Zorro Loop S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Silver Fox Drive S.E.	Gore Ave. SE
	28' FF	Res. Street Paving	Silver Fox Drive S.E.	Gore Ave. SE
Gore Ave. S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Zorro Loop SE	Prince St SE
	28' FF	Res. Street Paving	Zorro Loop SE	Prince St SE
Glenn Drive S.E.	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	King Road SE	Gore Ave SE
	28' FF	Res. Street Paving	King Road SE	Gore Ave SE
Chamaigne Ct SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
	28' FF	Res. Street Paving	Glenn Dr. SE	Chamaigne Ct SE Cul-de-Sac
Rosson Ct SE	N/A 4'	Standard Curb & Gutter Sidewalk (Both Sides)	Glenn Dr. SE	Rosson Ct. SE Cul-de-Sac
	28' FF	Res. Street Paving	Glenn Dr. SE	Rosson Ct. SE Cul-de-Sac
King Road SE	32'- 40' F-F	Curb & Gutter and Res. Street Paving	Silver Fox Drive S.E.	Prince St. S.E.
Prince St. SE	N/A	Median and Std. Curb and Gutter (Both Sides)	King Rd. SE	Rio Bravo Blvd. SE
	27' FF	Art.Street Paving (Both Sides)		
	4'	Sidewalk (Both Sides)	King Rd. SE	Tract "A"
Silver Fox Drive SE Near SW Cor Lot 119	48"	RCP Storm Drain, Inlets and Appurtenances	SW of Lot 119	San Jose Drain
Zorro Loop S.E.	48"	RCP Storm Drain, Inlets and Appurtenances	S of Lot 26	San Jose Drain
As Required	N/A	Street Lights		
N/A	N/A	Letter of Map Revision From F.E.M.A.		

Prepared by: _____
Print Name: Jeffrey G. Mortensen, P.E.
Firm: Jeff Mortensen & Associates, Inc.

****

Development Review Board Member Approval

Transportation Dev. Date	Utility Dev. Date	Cultural and Recreational Services Date
City Engineer/AMAFCA Date	BCPWD Date	DRB Chairman Date

A MEMBER OF CONSULTING
NGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931075
November 1, 1994

Ms. Susan Calongne
City/County Floodplain Administrator
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Rio Bravo Estates

Dear Sue:

Transmitted herewith for review and comment are three (3) revised copies of the terrain management plan we have prepared for the subject project. Per your request, we have studied the "Southeast Valley Drainage Management Plan, San Jose Drain and Vicinity." This plan, and its developed scenario criteria which assume free discharge with an industrial land use, have been referenced in our updated narrative.

A portion of the site lies within a designated 100-year flood zone. We propose free discharge developed runoff from the site to the San Jose Drain, thereby effectively removing the floodplain from those lots. Regardless, the proposed mobile homes will sit above grade placing the finished floor elevations well above the maximum floodplain elevation. I anticipate that you will need to outline the appropriate procedures for dealing with the floodplain issues.

Requested at this time is Drainage Report review for preliminary plan approval. The plat will first go to the DRB before being referred on to the County Planning Commission. This is quite a lengthy process which begins at the DRB level. We anticipate subsequent submittals for Final Plat and for Work Order. As a designated flood hazard zone is involved, we will not be making a separate submittal to Bernalillo County Public Works Department, as it is our understanding that the City/County Floodplain Administrator will be the lead reviewer for a project of this nature. Please advise if this is not correct understanding.

NOV - 2 199

Jeffrey G. Mortensen, P.E. Charles G. Cala, Jr., P.S.

If you should have any questions or comments regarding this information, or if we can be of further assistance to you, please do not hesitate to call.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

J. Graeme Means

J. Graeme Means, E.I.T.

JGM:eeg

xc: Jimmie Glenn

931075

DI AGE INFORMATION SHEET

P14/A1

PROJECT TITLE: RIO BRAVO ESTATES ZONE ATLAS/DRNG. FILE #: ~~P13,14~~

DRB #: 94-10 EPC #: WORK ORDER #:

LEGAL DESCRIPTION: TRACT 4, SCHWARTZMAN INDUSTRIAL PARK, UNIT 1

CITY ADDRESS: KING RD S.E, BETWEEN AT&SF R.R. AND PRINCE ST. S.E.

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: GRAEME MEANS

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: SPACE HOMES, INC. CONTACT: JIMMIE GLENN

ADDRESS: 11209 PARIS, N.E. PHONE: 988-9615

ARCHITECT: N/A CONTACT:

ADDRESS: PHONE:

SURVEYOR: JEFF MORTENSEN & ASSOC. CONTACT: CHUCK CALA

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
X OTHER TERRAIN MANAGEMENT PLAN

PRE-DESIGN MEETING:

___ YES
X NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
X 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
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11/01/94

BY: J. GRAEME MEANS

OCT-2 1994

BOARD OF COUNTY COMMISSIONERS
PATRICK J. BACA, CHAIRMAN
DISTRICT 1
JACQUELYN SCHAEFER, VICE CHAIR
DISTRICT 5
ALBERT "AL" VALDEZ, MEMBER
DISTRICT 2
EUGENE M. GILBERT, MEMBER
DISTRICT 3
BARBARA J. SEWARD, MEMBER
DISTRICT 4
JUAN R. VIGIL, COUNTY MANAGER

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

MARK J. CARILLO, ASSESSOR
JUDY D. WOODWARD, CLERK
THOMAS J. MESCALL, PROBATE JUDGE
RAY GALLAGHER, SHERIFF
H. R. FINE, TREASURER

October 21, 1994

Graeme Means
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Blvd. NE
Albuquerque, New Mexico 87109

RE: DRAINAGE REPORT FOR RIO BRAVO ESTATES, (P14/D1), (PWD-94-229), SUBMITTED FOR PRELIMINARY PLAT APPROVAL, ENGINEER'S STAMP DATED 9/15/94.

Dear Graeme:

This letter incorporates my comments along with those of Bernalillo County. Prior to preliminary plat approval or approval of the Disclosure Statement, the following comments must be addressed:

1. The above referenced development should be in accordance with the "Southeast Valley Drainage Management Plan, San Jose Drain and Vicinity", which was finalized in 1987. Please provide documentation that the plan for Rio Bravo Estates conforms to this drainage management plan. If it does not conform, please revise your drainage plan accordingly.

2. Because of the ramifications of the first comment, no further review of the internal drainage will be done at this time.

3. Since the San Jose Drain outfalls directly into the river, several issues regarding NPDES compliance are apparent. Please contact the City's Stormwater NPDES Coordinator for specific requirements.

4. Is the Conditional Letter of Map Revision (CLOMR) for this site being prepared for the removal of the FEMA floodplain?

5. Additional comments may be generated by the review of the resubmittal of this plan.

Please contact Roger Paul at 242-5700 if you wish to set up a time to meet with us to discuss this project. If you have any questions about these comments, please call me at 768-2650.

Sincerely,

Susan Calongne

Susan M. Calongne
City/County Floodplain Administrator

c: Chris Rivera, City Hydrology
Roger Paul, Molzen-Corbin, County PWD
File

wphyd/8898

A MEMBER OF CONSULTING
ENGINEERS COUNCIL OF NEW MEXICO

JEFF MORTENSEN & ASSOCIATES, INC. ☐ ENGINEERS & SURVEYORS ☐ (505) 345-4250
6010-B MIDWAY PARK BLVD. N.E. ☐ ALBUQUERQUE ☐ NEW MEXICO 87109 ☐ FAX (505) 345-4254

931075
September 23, 1994

Ms. Susan Calongne
City/County Floodplain Administrator
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Rio Bravo Estates

Dear Sue:

Transmitted herewith for review and comment are three (3) copies of the Disclosure Statement we have prepared for the subject project. A Terrain Management Plan, which includes the Drainage Report, is included within the Disclosure Statement. The project is a mobile home subdivision proposed within Bernalillo County, hence we have followed the County format of presentation.

A portion of the site lies within a designated 100-year flood zone. We propose to drain the developed runoff from the site to the San Jose Drain, thereby effectively removing the floodplain from those lots. Regardless, the proposed mobile homes will sit above grade placing the finished floor elevations well above the maximum floodplain elevation. I anticipate that you will need to outline the appropriate procedures for dealing with the floodplain issues.

Requested at this time is Drainage Report review for preliminary plat approval. The plat will first go to the DRB before being referred on to the County Planning Commission. This is quite a lengthy process which begins at the DRB level. We anticipate subsequent approvals for Final Plat and Work Order. As a designated flood hazard zone is involved, we will not be making a separate submittal to Bernalillo County Public Works Department, as it is our understanding that the City/County Floodplain Administrator will be the lead reviewer for a project of this nature. Please advise if this is not a correct understanding.

26 1994

DRB-94-516

Jeffrey G. Mortensen, P.E. Charles G. Cala, Jr., P.S.

If you should have any questions or comments concerning this submittal, or any other aspect of this project, please do not hesitate to call. As always, your prompt attention to this matter will be greatly appreciated.

Sincerely,

JEFF MORTENSEN & ASSOCIATES, INC.

Jeffrey G. Mortensen, P.E.
President

JGM:dsj
Enclosures
xc: Jimmie Glenn

SEP 26

10/14/94

RAP

RIO BRAVO ESTATES

1) A DRAINAGE ~~REPORT~~ STUDY FOR THE SAN JOSE Drain & Vic. (Southeast Valley Drn. mai. Plan) DRAIN WAS ~~PREPARED~~ FINALIZED IN 12/87. PLEASE PROVIDE DOCUMENTATION THAT THIS PLAN IS IN ACCORDANCE WITH THIS PREVIOUS REPORT. IF NOT, REVISE THIS PLAN ACCORDINGLY.

2) BECAUSE OF THE RAMIFICATIONS OF THE PREVIOUS COMMENTS, NO FURTHER REVIEW OF THE INTERNAL DRAINAGE WILL BE DONE AT THIS TIME

3) BECAUSE THIS DRAIN OUTFALLS DIRECTLY TO THE RIVER, SEVERAL ISSUES REGARDING NPDES COMPLIANCE ARE APPARENT. PLEASE CONTACT THE CITY'S STORMWATER NPDES COORDINATOR FOR SPECIFIC REQT'S

4) IS THE CLOMR FOR THIS SITE IN PROGRESS FOR REMOVAL OF THE FLOODPLAIN ON THIS SITE?

5) ADDITIONAL COMMENTS MAY BE GENERATED BY THE REVIEW OF THE RESUBMITTAL OF THIS PLAN.

. . . . D NAGE INFORMATION SHEET 931075

PROJECT TITLE: Rio Bravo Estates ZONE ATLAS/DRNG. FILE #: P14/D1

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

LEGAL DESCRIPTION: Tract 4, Schwartzman Industrial Park Unit 1

CITY ADDRESS: King Road S.E. between A.T. & S.F. Railroad and Prince St. S.E.

ENGINEERING FIRM: Jeff Mortensen & Assoc. CONTACT: Michele (Mike) F. DeLilla

ADDRESS: 6010-B Midway Park Blvd. N.E. PHONE: 345-4250

OWNER: Space Homes Inc. CONTACT: Mr. Jimmie Glenn

ADDRESS: 11209 Paris N.E. PHONE: 988-9615

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: Jeff Mortensen & Assoc. CONTACT: Chuck Cala

ADDRESS: 6010-B Midway Park Blvd. N.E. PHONE: 345-4250

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- [X] DRAINAGE REPORT
- [ ] DRAINAGE PLAN
- [ ] CONCEPTUAL GRADING & DRAINAGE PLAN
- [ ] GRADING PLAN
- [ ] EROSION CONTROL PLAN
- [ ] ENGINEER'S CERTIFICATION
- [ ] OTHER

PRE-DESIGN MEETING:

- [ ] YES
- [X] NO
- [ ] COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- [ ] SKETCH PLAT APPROVAL
- [X] 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
- [ ] OTHER _____ (SPECIFY)

DATE SUBMITTED: 9/23/94

BY: Michele (Mike) F. DeLilla

SEP 26 1994

PWD-94-229

8898

RECEIVED
SEP 11 1990
HYDROLOGY DIV

RECEIVED
AUG 1990
BERNALILLO COUNTY
PUBLIC WORKS

BOARD OF COUNTY COMMISSIONERS
EUGENE M GILBERT, CHAIRMAN
DISTRICT 3
ALBERT "AL" VALDEZ, VICE CHAIRMAN
DISTRICT 2
HENRY GABALDON, MEMBER
DISTRICT 1
PATRICIA "PAT" CASSIDY, MEMBER
DISTRICT 4
JACQUELYN SCHAEFER, MEMBER
DISTRICT 5
VICKIE FISHER COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY S E
ALBUQUERQUE, NEW MEXICO 87102

ALVIN J CAMPBELL, SHERIFF
PATRICK J PADILLA, TREASURER
GLADYS M DAVIS, CLERK
SAM L PEREA, ASSESSOR
THOMAS E WESCALL, PROBATE JUDGE

INCOMPLETE APPLICATIONS WILL BE RETURNED BUT WILL NOT BE REVIEWED

P-14/D1

Date: 8-9-90

Subject: Submittal ____ Resubmittal ✓ Final Sign-Off ____

Case No.: DRB 90-192 SC 5-90-5

Zone Map No.: P-14

Street Address: NONE

Legal Description: TRACT 4, SCHWARTZMAN INDUSTRIAL TRACT UNIT 1

Name of Applicant: JIMMIE GLEN - GREINER INC., JOHN BLOCK

Name of Case Reviewer: GMUIA 9/7/90

Dear Applicant:

Bernalillo County Public Works Department will require TWO WEEKS for review and comment of submittal/resubmittal, and ONE WEEK for final review and plat sign-off. Major submittals may require more than two weeks for review and comment.

The issuance of a permit or a review or approval of plan, specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans specifications, computations, and shop drawings prevent any authorized County representative or County inspector from thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.

Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, /Land Divider/ Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the Contract; the proper fitting and construction of the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

REV 5/21/90 MJG

RECEIVED

AUG 9 1990

BERNALILLO COUNTY
PUBLIC WORKS

COUNTY OF BERNALILLO
APPLICATION FOR CASE REVIEW

Please complete the following application for review of your case. Submit **THREE** bluelines of plat, drawings, or information. Submit a County Zone Atlas Map with subject property marked on the map. If a Grading and Drainage plan is not included with a land division, replat, or conceptual plan, please submit one 8.5"x11" photocopy of a USGS quad map with the subject property superimposed.

INCOMPLETE APPLICATIONS WILL BE RETURNED WITHOUT REVIEW.

1. APPLICANT INFORMATION:
   a. APPLICANT IS (CHECK ONE):
      ___ OWNER ___ SURVEYOR ___ AGENT
      ✓ ARCHITECT/ENGINEER ___ DRAINAGE ENGINEER

   b. Date of this application: 8-9-90

   c. SIGNATURE OF APPLICANT:
      (PRINT): JOHN BLOCK (SIGN): J.K. for John Block

   d. OWNER: SPACE HOMES INC PHONE: ___
      ADDRESS: 5004 CARLISLE STE. Q ZIP CODE: 87107

   e. AGENT: ___ PHONE: ___
      ADDRESS: ___ ZIP CODE: ___

   f. ARCH./ENGINEER: GREINER, INC. PHONE: 345-3999
      ADDRESS: 5971 JEFFERSON NE STE 101 ZIP CODE: 87109

   g. SURVEYOR: ___ PHONE: ___
      ADDRESS: ___ ZIP CODE: ___

   i. DRAINAGE ENGINEER: GREINER, INC. PHONE: ___
      ADDRESS: ___ ZIP CODE: ___

2. TYPE OF SUBMITTAL (CHECK ONE):
   ___ REPLAT
   ___ LAND DIVISION (MINOR SUBDIVISION)
   ___ MAJOR SUBDIVISION
   ___ CONSTRUCTION DRAWING
   ✓ GRADING/DRAINAGE PLAN
   ___ AS-CONSTRUCTED GRADING/DRAINAGE PLAN
   ___ VARIANCE REQUEST
   ___ TRAFFIC IMPACT ANALYSIS
   ___ OTHER (SPECIFY): ___

REV 5/21/90 MJG

TO BE FILLED OUT BY
COUNTY PUBLIC WORKS DEPARTMENT ONLY

Your: ___ submittal of _____
X resubmittal of Drainage Report

is: ___ approved.
X approved with comments/conditions.
___ disapproved.

Case review comments are:
X attached
___ not attached
___ not attached. See Remarks below.

Resubmittal is:
X not required for Drainage Report
___ required. When resubmitting, please use Resubmittal Form.

Please submit:
___ Three bluelines of corrected plat incorporating case review comments.
___ Original and three bluelines for signature.
___ Grading/Drainage plan.
___ As-Constructed Grading/Drainage plan.
___ Infrastructure list and/or Improvements agreement.
___ Design Review Fee computation sheet.
___ other: _____

It is required that:
___ Bernalillo County Public Works Department inspect improvements prior to plat signoff.
___ Bernalillo County Public Works sign-off.

Remarks: _____

Boleslo A. Romero 9/7/95
Boleslo A. Romero, P.E., Engineering Manager
Bernalillo County Public Works Department

cc: ___ Jack Cloud, Development Review Board
___ County Planning
___ Raymond Quintana, County Building and Zoning
X Owner: Space Homes, Inc., 5004 Carlisle Suite D, 87107
X Agent: John Block, Greenleaf, Inc., 5971 Jefferson NE, 87109
X Case File: DRB 10-192
___ Clifford E. Anderson, AMAFCA
X Gilbert Aldaz, County Floodplain Administrator, COA
___ Fred Torrez, NMSHTD District Three
___ Other: _____

REV 5/21/90 MJG

CASE NO. DRB 90-192 9/5/90

TRACT 4, SCHWARTZMAN INDUSTRIAL TRACT UNIT 1 1 of 1

(1.) BASED on the information provided in the DRAINAGE Report, amended August 1990 with ENGINEERS SEAL dated 8/8/90, the report appears to meet the requirements established for this area and is therefore acceptable.

(2.) The plat for TRACT 4 must show either:

a.) The proposed drainage EASEMENT for the pond on TRACT 4C and the existing 100 year floodplain on TRACTS 4A & 4B dedicated as a floodplain EASEMENT, OR

b.) The proposed drainage EASEMENTS for the ponds on TRACTS 4A, 4B and 4C. This will require that appropriate information be transmitted to the County Flood Plain Administrator to obtain a conditional letter of map amendment from FEMA, and then the construction of the ponds on TRACTS 4A & 4B

If a.) is chosen, addition drainage information, acceptable to the County Floodplain Administrator & FEMA, will be required when TRACTS 4A & 4B are developed.

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 4, 1990

John Block, P.E.
Greiner, Inc.
5971 Jefferson Street, NE Suite #101
Albuquerque, New Mexico 87109

RE: LETTER OF MAP REVISION REQUEST FOR SCHWARTZMAN INDUSTRIAL PARK, UNIT 1, TRACTS 4A, 4B & 4C, (P-14/D1), ENGINEER'S STAMP DATED AUGUST 8, 1990

Dear Mr. Block:

Based on the information provided on the above referenced submittal received August 14, 1990, the drainage concept is approved. If you are ready to make a submittal to FEMA for a letter of map revision please submit the following:

1. One additional drainage report, assuming the concept remains the same.

2. Include two (2) FIRM maps that identify the floodplain which will be removed and where the new floodplain will be confined due to the improvements.

Prior to preliminary and final plat approval the ponds must be constructed in order to secure a letter of map revision, or dedicate the existing 100-year floodplain.

Please be advised that there may be some additional concerns by FEMA, which may include the following:

1. FEMA has not reviewed and accepted the new County Interim Drainage design standards, they may require the Hydrology to be revised.

2. FEMA may require a check for about $675.00 to initiate their review.

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

Cordially,

Gilbert Aldaz, P.E. & L.S.
City/County Floodplain Administrator

xc: Bob Fogelsong, County Public Works
GA
wp+2035

DRAINAGE INFORMATION SHEET

PROJECT TITLE: SCHWARTZMAN DRNG. PLAN ZONE ATLAS/DRAINAGE FILE # P-14 /D1

LEGAL DESCRIPTION: TRACTS 4A, 4B & 4C SCHWARTZMAN INDUSTRIAL PARK UNIT 1

CITY ADDRESS: NONE

ENGINEERING FIRM: GREINER, INC. CONTACT: JOHN BLOCK

ADDRESS: 5971 JEFFERSON NE, STE. 101 PHONE: 345-3999

OWNER: SPACE HOME INC. CONTACT: _____

ADDRESS: 5004 CARLISLE STE. Q PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

___ YES

✓ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. 90-192

EPC NO. _____

PROJECT NO. _____

TYPE OF SUBMITTAL:

✓ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAIN PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SECTOR PLAN APPROVAL

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

✓ OTHER PRELIMINARY COUNTY PLAT (SPECIFY).

RECEIVED
AUG 14 1990
HYDROLOGY DIVISION

DATE SUBMITTED: 8/14/90

BY: John Block

Greiner

Letter of Transmittal

To: COA - HYDROLOGY

From: JOHN BLOCK

Greiner, Inc.
5971 Jefferson Blvd., N.E.
Suite 101
Albuquerque, New Mexico 87109
(505) 345-3999
FAX: (505) 345-8393

Date: 8/9/90
Attention: GILBERT ALDEZ
Job Number:
Re: SCHWARTZMAN DRAINAGE REPORT

The following items are being sent ☑ attached ☐ under separate cover by _____

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications ☐ Copy of Letter

☐ _____

Copies	Date or Number	Description
1		SCHWARTZMAN DRAINAGE REPORT

Transmittals for reasons checked

☐ For Approval ☐ No Exceptions Taken ☐ Resubmit _____ copies for approval

☐ For Your Use ☐ Make Corrections Noted ☐ Submit _____ copies for distribution

☐ As Requested ☐ Amend and Resubmit ☐ Return _____ corrected prints

☐ For Review and Comment ☐ _____

Remarks

Copies

If enclosures are not as noted, kindly notify us at once.

RECEIVED
AUG 14 1990
HYDROLOGY DIVISION

Signed JOHN BLOCK

Equal Opportunity Employer M/F

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 17, 1990

John Block, P.E.
Greiner, Inc.
5971 Jefferson Street, NE Suite #101
Albuquerque, New Mexico 87109

RE: LETTER OF MAP REVISION REQUEST FOR SCHWARTZMAN INDUSTRIAL PARK, UNIT 1, TRACTS 4A, 4B & 4C, RECEIVED JUNE 21, 1990 (P-14/D1)

Dear Mr. Block:

Based on the information provided on the above referenced submittal, the following comments must be addressed prior to making a submittal to FEMA for a Letter of Map Revision:

1. The comments provided by County Public Works on June 26, 1990 must be addressed.

2. It appears a flat grading scheme is proposed to elevation 4932.0, how will these flows be diverted to the proposed ponds?

3. An engineering stamp and date is required on the Grading and Drainage Plan.

4. Include a FIRM panel that identifies the floodplain which will be removed and where the new floodplain will be confined, due to the new improvements.

5. Please be advised that all ponds are required to be built at the same time in order to secure a Letter of Map Revision.

6. Please be advised that FEMA has not reviewed and accepted the new County Interim Drainage design standards, they may require the hydrology to be revised.

PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

7. Once the above comments are addressed and we are ready to make a submittal to FEMA, a check for $675.00 will be required by FEMA in order for them to initiate their review.

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

Cordially,

Gilbert Aldaz, P.E. & L.S.
City/County Floodplain Administrator

xc: Bob Fogelsong, County Public Works

GA
wp+2035

Greiner

RECEIVED
JUN 21 1990
HYDROLOGY DIVISION

A Greiner Engineering, Inc. Company

Letter of Transmittal

To:	From:	Date: 6/21/90
FRED AGUIRRE PUBLIC WORKS	JOHN BLOCK	Attention: Job Number: Re: SCHWARTZMAN DRAINAGE REPORT

The following items are being sent ☑ attached ☐ under separate cover by _____

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications ☐ Copy of Letter

☐ _____

Copies	Date or Number	Description
3		DRAINAGE REPORT
1		DRAINAGE INFO SHEET
1		PRE-DESIGN CAP SHT.

Transmittals for reasons checked

☐ For Approval ☐ No Exceptions Taken ☐ Resubmit _____ copies for approval

☐ For Your Use ☐ Make Corrections Noted ☐ Submit _____ copies for distribution

☐ As Requested ☐ Amend and Resubmit ☐ Return _____ corrected prints

☐ For Review and Comment ☐ _____

Remarks

Copies

If enclosures are not as noted, kindly notify us at once.

Signed JK for JOHN BLOCK

Equal Opportunity Employer M/F

Case No: 3B 90-192, SC 5 Y-5 6/26/90
Tract 4, Schwartzman Industrial Tract, Unit 1 1 of 2

(1) As required by review comments of 5/25/90, the King Road R.O.W. must be improved or financially guaranteed. Therefore, this drainage and grading plan must include King Road and any ~~up~~ upland areas draining to King Road.

(2) As shown on this grading & drainage plan, King Road is proposed to drain to the west and discharge into the San Jose Drain. Is this portion of the San Jose Drain still an MRGCD facility? If this portion of the San Jose Drain is still under MRGCD jurisdiction, a license from the MRGCD will be required for this discharge. If the San Jose Drain is under ownership of another entity, their approval will be required. If the above cannot be obtained, an alternate method of providing drainage for King Road will be required.

(4) A drainage easement will be required on Tract 4B to allow offsite flows to drain through the property from the east.

(5) Drainage Covenants for the ponds and related drainage infrastructure will be required.

6. The ponds located on Tracts 4A, 4B & 4C and associated grading and drainage improvements required to deliver the runoff to the ponds must be constructed or financially guaranteed.

7. As stated in the drainage report, after approval of this plan, Flood Plain information meeting the requirements of the County Flood Plain Administrator & FEMA will be required. The owner will be required to pay all fees associated with the submittal to FEMA.

BOARD OF COUNTY COMMISSIONERS
EUGENE M GILBERT, CHAIRMAN
DISTRICT 3
ALBERT "AL" VALDEZ, VICE CHAIRMAN
DISTRICT 2
HENRY GABALDON, MEMBER
DISTRICT 1
PATRICIA "PAT" CASSIDY, MEMBER
DISTRICT 4
JACQUELYN SCHAEFER, MEMBER
DISTRICT 5
VICKIE FISHER, COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY S E
ALBUQUERQUE, NEW MEXICO 87102

ALVIN J CAMPBELL, SHERIFF
PATRICK J PADILLA, TREASURER
GLADYS M DAVIS, CLERK
SAM L. PEREA, ASSESSOR
THOMAS J MESCALL, PROBATE JUDGE

INCOMPLETE APPLICATIONS WILL BE RETURNED BUT WILL NOT BE REVIEWED

RECEIVED
JUN 12 1990
HYDROLOGY DIVISION

Date: JUNE 5,1990

Subject: Submittal ____ Resubmittal XXXXXXX Final Sign-Off ____

Case No.: DRB-90-192

Zone Map No.: P-13/14

Street Address: SOUTH SECOND

Legal Description: SCHAWRTZMAN INDUSTRIAL PARK UNIT 1 TRACTS 4A 4B 4C BEING REPLAT OF TRACT 4

Name of Applicant: JIM CHYNOWETH/ SPACE HOMES

Name of Case Reviewer: Fogelsong 5/6/90

Dear Applicant:

Bernalillo County Public Works Department will require TWO WEEKS for review and comment of submittal/resubmittal, and ONE WEEK for final review and plat sign-off. Major submittals may require more than two weeks for review and comment.

The issuance of a permit or a review or approval of plan, specifications, computations, and shop drawings shall not be interpreted to be a permit for or an approval of any violation of any of the provisions of any County or State codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans specifications, computations, and shop drawings prevent any authorized County representative or County inspector from thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any County or State codes, ordinances, standards, or policies.

Review of construction plans, specifications, computations, and shop drawings is only for general conformance with the design concept of the project and general compliance with the plans and specifications and shall not be construed as relieving the Contractor, /Land Divider/ Subdivider, Engineer/Surveyor, or applicant of the full responsibility for: providing materials, equipment, and work required by the Contract; the proper fitting and construction of the work; the accuracy and completeness of the submittal; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.

TO BE FILLED OUT BY
COUNTY PUBLIC WORKS DEPARTMENT ONLY

Your: X submittal of _____
___ resubmittal of _____

is: ___ approved.
X approved with comments/conditions.
___ disapproved.

Case review comments are:
X attached
___ not attached
___ not attached. See Remarks below.

Resubmittal is:
___ not required.
X required. When resubmitting, please use Resubmittal Form.

Please submit:
___ Three bluelines of corrected plat incorporating case review comments.
___ Original and three bluelines for signature.
X Grading/Drainage plan.
___ As-Constructed Grading/Drainage plan.
___ Infrastructure list and/or Improvements agreement.
___ Design Review Fee computation sheet.
X other: SEE ATTACHED COMMENTS

It is required that:
___ Bernalillo County Public Works Department inspect improvements prior to plat signoff.
X Bernalillo County Public Works sign-off.

Remarks: _____

for: Robert B. Tolan 5/6/90
Boleslo A. Romero, P.E., Engineering Manager
Bernalillo County Public Works Department

cc: XX Jack Cloud, Development Review Board
___ County Planning
___ Raymond Quintana, County Building and Zoning
XX Owner: JIM CHYNOWETH 500 4th NW SUITE 500 87102
XX Agent: SPACE HOMES 2700 CENTRAL SW 87100
XX Case File DRB-90-192
___ Clifford E. Anderson, AMAFCA
XX Gilbert Aldaz, County Floodplain Administrator,COA
___ Fred Torrez, NMSHTD District Three
___ Other: _____

REV 5/21/90 MJG

BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT
CASE FILE

TO: JACK CLOUD, DEVELOPMENT REVIEW BOARD

FROM: BOLESLO ROMERO, ENGINEERING MANAGER

HEARING DATE: CRC MEETING FROM 5/25/90

CASE: DRB-90-192
ZONE MAP #: P-13-Z & P-14-Z
REF CASE #: DRB-89-240
STREET NAME: SOUTH SECOND

AGENT/APPLICANT NAME/ADDRESS: JIM CHYNOWETH / SPACE HOMES

LEGAL DESCRIPTION: SCHAWRTZMAN INDUSTRIAL PARK UNIT 1 TRACTS 4A, 4B, 4C BEING REPLAT OF TRACT 4

COMMENTS OF: MINUTES OF CRC MEETING FROM 5/25/90

(SCHWARTZMAN PLAT)
1. A TEMPORARY LICENSE AGREEMENT WILL BE REQUIRED IN ORDER TO ACHIEVE ACCESS TO TRACT 4A,4B,AND 4C DIRECTLY OFF OF RIO BRAVO.2. APPROVAL OF "FLAG" LOT (LOT 4B) WILL BE REQUIRED THROUGH COUNTY PLANNING. 3. A TRAFFIC IMPACT ANALYSIS ADDRESSING THE IMPACTS OF THE PROPOSED DEVELOPMENT ON PRINCE ROAD AND RIO BRAVO IS REQUIRED PRIOR TO SIGNATURE ON PLAT. 4. KING ROAD SHALL BE IMPROVED TO COUNTY STANDARDS OR FINANCIAL GUARANTEE PROVIDED PRIOR TO PLAT SIGN-OFF. 5. 3% DESIGN FEE INFRASTRUCTURE LIST AND SUBDIVISION IMPROVEMENTS AGREEMENT IS REQUIRED PRIOR TO PLAT SIGN-OFF.6. A GRADING AND DRAINAGE PLAN IN COMPLIANCE WITH THE COUNTY STORM DRAINAGE ORDINANCE NO.90-6 IS REQUIRED.7. A 45' RADIUS CUL DE SAC WILL BE REQUIRED ON THE 50'PRIVATE EASEMENT ON TRACT 4-B. 8. ANY EXISTING OR NEWLY CREATED ACCESS EASEMENTS SHALL BE CONSTRUCTED TO COUNTY STANDARDS PRIOR TO PLAT SIGN-OFF OR FINANCIAL GUARANTEE PROVIDED.

ENGINEERING: SEE COMMENTS OF CRC MEETING OF 5-25-90.

DRAINAGE: A GRADING AND DRAINAGE PLAN IN COMPLIANCE WITH THE COUNTY STORM DRAINAGE ORDINANCE NO. 90-6, IS REQUIRED.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
UTILITY DEVELOPMENT DIVISION/HYDROLOGY SECTION

PRE-DESIGN CONFERENCE

DRAINAGE FILE/ZONE ATLAS PAGE NO.: P-14 DATE: 5-29-90

EPC NO.: _____ DRB NO.: _____ ZONE: _____

SUBJECT: _____

STREET ADDRESS: Rio Bravo / Second Street

LEGAL DESCRIPTION: Tracts 4A, 4B, & 4C - Schwartzman Industrial Park, Unit One

APPROVAL REQUESTED:

X	PRELIMINARY PLAT	____	FINAL PLAT
____	SITE DEVELOPMENT PLAN	____	BUILDING PERMIT
____	GRADING/PAVING PERMIT	____	OTHER

ATTENDANCE:	WHO	REPRESENTING
	John Block	Greiner Engr. Inc.
	Gilbert Aloaz	City of Albuq.

FINDINGS:

1. Portion of Subdivision Is In A FEMA 100yr. Floodplain.

2. A Drainage Report Will Be Required Per The Interim Drainage Design Criteria For Bernalillo County, To Relocate 100yr Floodplains

3. Bernalillo County Public Works Will Be The Lead Agency, & Approve Required Criteria & Infrastructure.

4. When The Report Is Approved & The Required Facilities Designed, Two Reports Will Be Required To Be Submitted To Floodplain Administrator For A Submittal To FEMA, For A Conditional Letter of Map Revision Request.

5. FEMA's Fee For Review May Be $675.00

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: _____ SIGNED: Gilbert Aloaz

TITLE: _____ TITLE: Floodplain Adm

DATE: _____ DATE: 6/1/90

NOTE PLEASE PROVIDE A COPY OF THIS PRE-DESIGN FORM WITH THE DRAINAGE SUBMITTAL.