HYDROLOGY C15/D1 ONE PLAN

C15-D1

1 Plan

ESTRELLITA ESTATES

A SUBDIVISION IN
SECTIONS 16 AND 17,
TOWNSHIP 11 NORTH, RANGE 3 EAST
BERNALILLO, NEW MEXICO

DISCLOSURE STATEMENT
WATER SUPPLY PLAN
WATER QUALITY PLAN
LIQUID WASTE MANAGEMENT PLAN
SOLID WASTE MANAGEMENT PLAN
TERRAIN MANAGEMENT PLAN

Tom Mann Associates Inc.
911 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110
ENGINEERS

SC5-82-2

PLEASE READ THIS DISCLOSURE STATEMENT

BEFORE YOU

SIGN ANY DOCUMENT OR AGREE TO ANYTHING

DISCLOSURE STATEMENT

This disclosure statement is intended to provide you with enough information to permit you to make an informed decision on the purchase or lease of property described in this statement. You should read carefully all of the information contained in this statement before you decide to buy or lease the described property.

The Planning Commission and Board of County Commissioners have examined this disclosure statement to determine whether the subdivider can satisfy what he has said in this disclosure statement. However, the Planning Commission and the Board of County Commissioners do not vouch for the accuracy of what is said in this disclosure statement. Further, this disclosure statement is not a recommendation or endorsement of the subdivision by either the County or the State. It is informative only.

Finally, the Planning Commission and the Board of County Commissioners recommend that you see the property before buying or leasing it. However, if you do not see the property prior to purchasing or leasing it, you have six months from the time of purchase or lease to inspect the property. Upon inspecting the property, you have three days from the date of inspection to rescind the transaction and receive all of your money back from the subdivider. You must give the subdivider notice of your intent to rescind within three days of your inspection of the property.

1. NAME OF SUBDIVISION

Estrellita Estates

2. NAME AND ADDRESS OF SUBDIVIDER

James W. Findley
812 Charleston N.E.
Albuquerque, New Mexico 87110

3. NAME AND ADDRESS OF PERSON IN CHARGE OF SALES OR LEASING IN NEW MEXICO

James W. Findley
812 Charleston N.E.
Albuquerque, New Mexico 87110

4. WATER USE

Water will be provided from and by the City of Albuquerque water system. There are no limitations to the use of water.

5. AMOUNT OF WATER

The City of Albuquerque does not impose any restrictions on the amount of water used. Water will be available prior to the occupancy of the first residence to be constructed. Water users will be billed on a monthly basis by the City for water usage.

6. WATER DELIVERY

Water will be provided to the subdivision by a 6-inch water line conforming to the standards of the City of Albuquerque Water Resources Department. Each lot will have a 1-inch service connection with a 5/8" meter.

7. WATER SYSTEM EXTENSION

The water system will be provided by the developer. Prospective owners cannot be given water before the whole system is accepted and approved by the City of Albuquerque.

8. LIFE EXPECTANCY OF THE WATER SUPPLY

The City of Albuquerque will provide water to the subdivision.

9. WELLS

Not applicable.

10. SURFACE WATER

Not applicable.

11. WATER QUALITY

The water quality will be the same as that provided to all users of the City of Albuquerque water system. The City system meets all standards established by the State.

12. LIQUID WASTE DISPOSAL

Individual liquid waste disposal systems will be used. Disposal systems must conform to the requirements of Appendix C of the Bernalillo County Subdivision Ordinance and the New Mexico Environmental Improvement Division.

13. SOLID WASTE DISPOSAL

There will be no solid waste disposal site within the boundaries of the subdivision. Solid waste collection is available through a private refuse company where residents can haul their own solid waste to the Bernalillo County Sanitary Land Fill on South Broadway or the City of Albuquerque Sanitary Land Fill at Los Angeles Avenue and Washington Street.

14. TERRAIN MANAGEMENT

The subdivision is located on land that is currently being used for agricultural purposes. The land is essentially flat. There is one foot of fall in approximately one quarter of a mile. The site is composed of sand or silty sand type soil. The soils report indicates that percolation rates vary from 3.3 minutes per inch to 8.0 minutes per inch. The Soil Conservation Service report on Bernalillo County soil indicates that the soil is of the Gila formation; however, a more detailed soils report indicates that the soils are more granular than are normally found in the Gila series. Rainfall falling on the site will be allowed to percolate directly since the slope of the land is so flat. There will be no runoff from the site. Ditches adjacent to the road will hold the water that runs off from the road during a storm. The site is not affected by offsite runoff.

15. SUBDIVISION ACCESS

Access to the subdivision is via Rio Grande Boulevard N.E. Estrellita Lane lies approximately 0.6 of a mile south of Corrales Road and 0.1 of a mile north of Ortego Road. Estrellita Lane runs east from Rio Grande. Rio Grande Boulevard is a paved street and Estrellita Lane will be paved with the development of the project.

WATER SUPPLY PLAN

WATER SUPPLY PLAN

The following information is presented in accordance with Appendix A, Section 1, Subsection C, of the Bernalillo County Subdivision Ordinance:

1. NAME AND ADDRESS OF SUBDIVIDER

   James W. Findley
   812 Charleston N.E.
   Albuquerque, New Mexico 87110

2. DATE PLAN IS SUBMITTED

   December 1981

3. DISCLOSURE STATEMENT

   The subdivider's disclosure statement relating to Water Supply is included with this submittal.

4. WATER SUPPLY PLAN

   The Estrellita Estates Subdivision will be provided water services by the City of Albuquerque. The letter of availability is included on the following pages.

JUL 2 7 1981

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 22, 1981

Mr. Tom Mann, Jr., President
Tom Mann Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: WATER AVAILABILITY TO COUNTRY SIDE ESTATES (C-14)

Dear Mr. Mann:

The Engineering Division of the Water Resources Department has reviewed your request for water availability to the subject proposed subdivision. You propose extending the existing 6" water line to the subject lots for water service.

Water service is available contingent upon the extension you have proposed. The extension must be made to the proposed cul-de-sac at the east end of the lots. The utility expansion charge will be assessed against water service. The design and construction of the proposed extension must be coordinated with and approved by the City Engineer. The developer will be responsible for all costs of the design and construction.

A minimum 20' easement must extend the full length of the proposed waterline and must continue to the west bank of the Albuquerque Main Canal. An easement of minimum 20' width must also be provided along the west bank of the canal the full width of the referenced property. The easement must be for the exclusive use of water lines. The purpose of the extended easement along the canal is for eventual looping of waterlines in the area. All fire hydrants and domestic water meters must fall within the above 20' easement or additional easements must be provided.

The County Fire Marshall should be consulted concerning fire requirements. However, the Water Resources Department will require at least two (2) fire hydrants at a spacing similar to that shown on the plans sent to this office (±380' spacing). All hydrants should be placed on the north side of the road right-of-way.

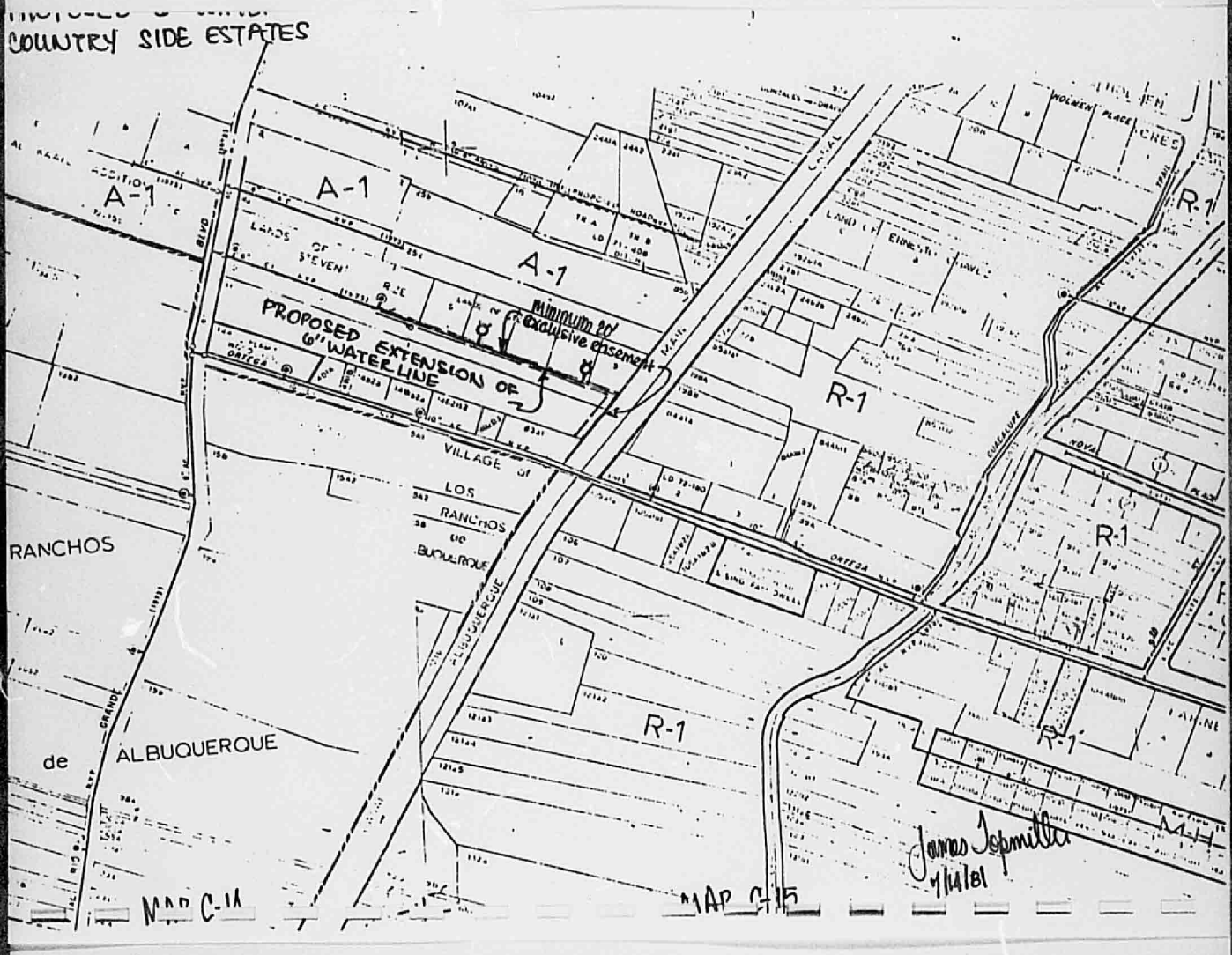
This statement of availability is valid only for a period of one year after issuance and applies only to the proposed development. If you should have any questions, please contact me.

Sincerely,

James Topmiller

James Topmiller, Asst. Design Engineer
Water Resources Department

xc: Jim Findley 8-3-81


COUNTRY SIDE ESTATES
A-1
A-1
A-1
LANDS OF STEVEN
PROPOSED EXTENSION OF 6" WATER LINE
minimum 20' exclusive easement
R-1
R-1
R-1
R-1
R-1
VILLAGE OF LOS RANCHOS DE ALBUQUERQUE
RANCHOS
de ALBUQUERQUE
ORTEGA
GUADALUPE
MAP C-14
MAP C-15
James Jopmitter
7/14/81

WATER QUALITY PLAN

WATER QUALITY PLAN

1. NAME AND ADDRESS OF SUBDIVIDER

James W. Findley
812 Charleston N.E.
Albuquerque, New Mexico 87110

2. DATE PLAN IS SUBMITTED

3. DISCLOSURE STATEMENT

The subdivider's disclosrue statement relating to Water Quality is included with this submittal.

4. WATER QUALITY PLAN

The Estrellita Estates Subdivision will have City of Albuquerque water service. The water quality will be in compliance with the minimum standards of the State of New Mexico and will be supplied by the City of Albuquerque.

LIQUID WASTE MANAGEMENT PLAN

LIQUID WASTE MANAGEMENT PLAN

The following information is presented in accordance with Appendix C, Section2, Subsection C, of the Bernalillo County Subdivision Ordinance.

1. NAME AND ADDRESS OF SUBDIVIDER

James W. Findley
812 Charleston N.E.
Albuquerque, New Mexico 87110

2. DATE PLAN IS SUBMITTED

December 1981

3. DISCLOSURE STATEMENT

The subdivider's disclosure statement relating to Liquid Waste management is included with this submittal.

4. EXISTING WATER AND SEWER SYSTEMS

There are no existing wells on the subdivision site. This area is serviced by the City of Albuquerque water system. There is a liquid waste disposal system associated with Lot 1. The existing house on that lot utilizes a septic tank and leach field system.

5. ARROYOS, DRAINAGE AREAS AND SURFACE WATER

The subdivision is bordered on the east by the Albuquerque Main Canal. Other than that, there are no arroyos or any other surface water bodies associated with the site or within 300 feet of the subdivision.

6-8. SOIL DEPTH, SOIL CLASSIFICATION, PERCOLATION, AND HIGH WATER TABLE

Attached hereto is a soils report prepared by Albuquerque Testing Laboratory. Two test borings were taken on the site and analyzed. The soil is of the sand or silty sand material. According to the Uniform Classification System, the soils are SM, SC or SP type materials. The water table was encountered at from 9 to 13 feet below the ground surface. Percolation tests were run and indicate rates of 3.3 and 8.0 minutes per inch.

9. GROUND SLOPE

The ground within the subdivision slopes from east to west. There is approximately one foot of fall in one quarter of a mile. The site is essentially flat.

10. FLOOD FREQUENCY

The subdivision does not lie within a designated flood plain as determined by the "Flood Hazard Boundary Map" for Bernalillo County, New Mexico published by the U.S. Department of Housing and Urban Development as part of the national flood insurance program.

11. LIQUID WASTE DISPOSAL SYSTEM

The system of individual liquid waste disposal that is proposed for use by prospective purchasers is a standard septic tank drain field system. Each system proposed for construction by future land owners will require approval by the Bernalillo County Environmental Health Department prior to construction. A standard detail of a septic tank system is included for reference. Any system will also need to conform to the latest New Mexico Uniform Building Code-Uniform Plumbing Code that is adminstered by the New Mexico Mechanical Board.

12. PROJECTED POPULATION

The projected population of the subdivision is 40 people. This figure is based on 4 people per dwelling, 1 dwelling per lot, and 10 lots.

13. SUPPLEMENTAL INFORMATION

The Bernalillo County Subdivision Ordinance requires that the depth to the seasonal water table be more than 12 feet. In this subdivision, the water table lies 9 to 13 feet below the ground surface. Therefore, septic tanks and leach fields may have to be raised in order to meet the ordinance.

Septic Tank Construction Guidelines

General

A. Septic tank plans subittted to the Administrative Authority for review and approval shall be certified by an independent laboratory and/or a New Mexico Registered Engineer. In addition to these specifications, septic tanks shall conform to applicable provisions of the latest New Mexico Mechanical Board's revision of the Uniform Plumbing Code.

Structural

A. Concrete Septic Tanks

1. Precast (to be monolithic)

   a. Minimum concrete thickness and reinforcement.

      (1) Walls: 2 1/2 inches in thickness with 6 by 6 by 10-10 Remesh, 2,500 #PSI

      (2) Floors: 3 inches in thickness with 6 by 6 10-10 Remesh, 2,500 #PSI

      (3) Covers: 3 inches in thickness with 6 by 6 10-10 Remesh, 3,000 #PSI and #4 Rebars spaced at one-foot intervals across the width of the tank.

      (4) Unreinforced concrete shall be at least 5 inches thick, and have the compressive strength as shown in (1), (2) and (3) above.

   b. Floors must be an integral part of the tank.

   c. Where sections are used, tongue and groove joints shall be used and shall be provided with an approved sealer.

2. Poured-in-place tanks must be designed and certified by a New Mexico Registered Architect or Engineer.

3. Concrete Block

   a. Minimum concrete thickness and reinforcement.

      (1) Walls: 8-inch block filled with concrete, sealed internally with an approved sealer. Walls to be tied to floor at each wall joint with #4 Rebars

      (2) Floors: 4 inches in thickness with 6 by 6 by 10-10 Remesh and 12 #4, with one bar 8 inches from each side of all corners, with at least 10 inches embeded in the floor and with a

90-foot bend to extend at least 10 inches into the wall.

(3) Covers: 5 inches in thickness with 6 by 6 by 10-10 Remesh, 3,000 PSI.

B. Septic Tanks; Fiberglass, Reinforced Plastic.

1. The septic tank shell, including the ends, shall have a minimum thickness of three sixteenths inch (0.188 inch).

2. Access and Inspection Hole Covers: Approved fasteners not subject to deterioration by liquids or gases normally present in septic tank systems, shall be provided for each access and inspection hole cover to assure that the covers will remain in place. All covers shall overlap the hole at least two inches (2 inches) in all directions.

3. Visual Defects: Each tank shall be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, air bubbles (particularly near the surface), pimples and delamination. The inner and outer surfaces of the tanks shall be free from cracks and crazing or other defects likely to affect service adversely, and shall have a smooth continuous finish with no exposed fibers. For maximum durability, it is important that both inner and outer surfaces have a continuous resin rich surface and that no fibers be exposed either directly from cracks, porosity or holes, or indirectly through bubbles that may break and expose fibers.

4. Materials of Construction: Each tank shall be constructed of reinforced polyester or other approved resin. Reinforcement may be fiberglass woven fabric, chopped strand mat, loose filament, roving or rope. Fiberglass reinforcement shall be treated with a coupling agent that will provide a compatible bond between the resin and the fiberglass.

   Reinforcement may be applied continuously during the spray application procedure by the spray equipment being utilized, or by a hand laminating procedure between spray applications. There shall be no less than 30 percent (30%) fiberglass reinforcement materials and no less than 70 percent (70%) resin by weight used in the construction of each tank. This provision is intended to allow up to 5 percent (5%) variation in the use of resin and reinforcement to obtain maximum strength at minimum cost. If filler material is to be used, the type, and the percentage of total tank composition it will represent, shall

be approved in advance of tank fabrication. The use of approved filler material shall not exceed 30 percent (30%) by weight.

Each manufacturer shall submit, for review and approval to the Administrative Authority, the following:

a. Manufacturer's data sheets covering all characteristics and properties of the resin, catalyst fiberglass reinforcement material he proposes to use.

b. Complete information on the type of filler materials, if any, he proposes to use.

c. The percentages, by weight, of resin, reinforcement and filler to be incorporated into the septic tanks supplied under these specifications.

The completed tank shall be watertight below the high water level and shall remain watertight under the maximum conditions of stress produced under the loads described in Section Five (5) below.

5. Minimum Strength and Test Requirements: Each tank shall be so constructed that the following requirements will be met. (All tests are to be conducted with the tank at a temperature between sixty-five (65) and eighty (80) degrees Fahrenheit.)

a. Hardness: The Barcol hardness of tanks shall not be less than thirty-five (35) units or exceed fifty-five (55) units determined by use of a "Barcol Impressor" (Barber Colman Model GYZJ 934-*) following the procedures set forth in ASTM - 2583 and any revisions.

b. Vacuum: There shall be no permanent distortion or failure when tanks are sealed and evacuated to a vacuum of V inches of mercury, where V is equal to the maximum depth of earth cover in feet recommended by the manufacturer but not less than three feet (3').

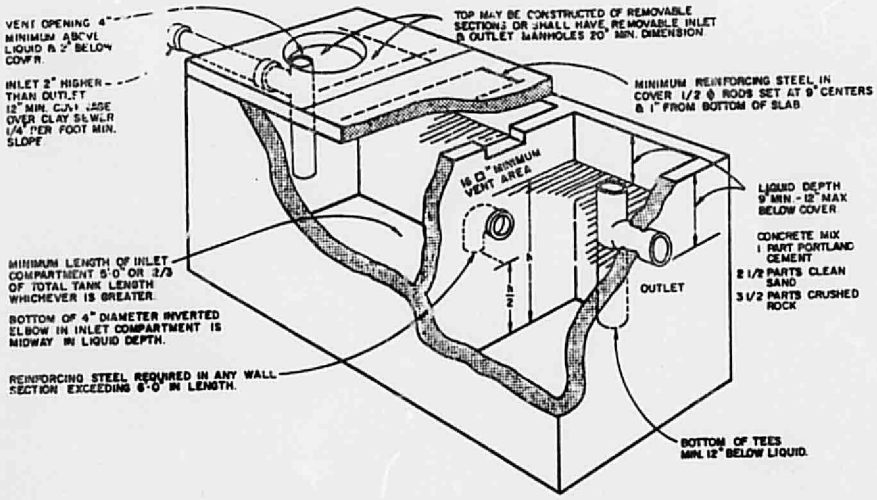
c. Statis Pressure: There shall be no permanent distortion or failure when tanks are statically loaded in accordance with the following procedure:

Bed the top of an empty tank in dry sand to a depth not exceeding four inches (4") below ground level. The tank shall be oriented as for service. Determine the maximum plan cross-section area and load the top segment of the tank with sand bags to a total weight in pounds equal to: 420 x A.

Where A is the plan cross-section area in square feet, the bags should be distributed as uniformly as possible over all the surface of the tank above the plane of maximum area, with the exception of the manhole cover, which should be left unloaded.

d. Number of Tanks to be Tested: It is not the intention of these guidelines that each tank manufactured under these guidelines be tested. Testing of representative samples of the tanks delivered is required. A statement certifying the gross weight of each tank tested shall be included. Testing shall be accomplished by an approved materials testing laboratory, and all test results shall be certified by a registered engineer.

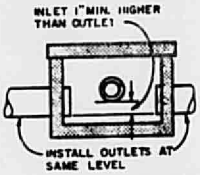
No tank delivered shall differ in gross weight by more than 10 or -5 percent, from the weight of tanks which have been subjected to the tests required above.



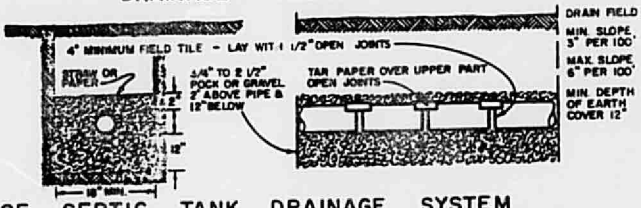
RECOMMENDED SIZES OF SEPTIC TANK

NUMBER OF			INSIDE DIMENSIONS			THICKNESS OF CONCRETE				STEEL
BEDRMS	FIX UNITS	GALS.	LENGTH	WIDTH	DEPTH	SIDES	ENDS	FLOOR	TOP	TOP
1 OR 2	15	750	8'-0"	3'-6"	5'-0"	5"	5"	5"	4"	1/2 ϕ @ 9" o.c.
3	20	1000	10'-0"	3'-6"	5'-0"	5"	5"	5"	4"	1/2 ϕ @ 9" o.c.
4	25	1200	12'-0"	3'-6"	5'-0"	5"	5"	5"	4"	1/2 ϕ @ 3" o.c.

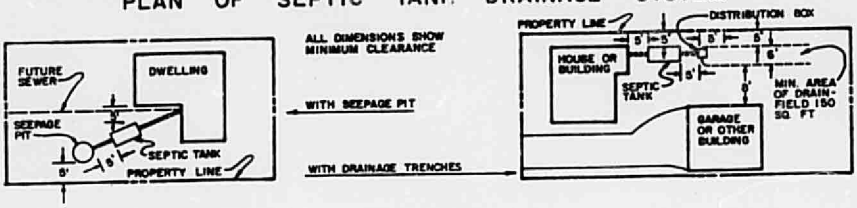
DISTRIBUTION BOX



DRAINAGE TRENCH DETAILS



PLAN OF SEPTIC TANK DRAINAGE SYSTEM



SEPTIC TANK DETAILS

SOLID WASTE MANAGEMENT PLAN

SOLID WASTE MANAGEMENT PLAN

The following information is presented in accordance with Appendix D, Section 2, Subsection B, of the Bernalillo County Subdivision Ordinance.

1. NAME AND ADDRESS OF SUBDIVIDER

James W. Findley
812 Charleston N.E.
Albuquerque, New Mexico 87110

2. DATE PLAN IS SUBMITTED

December 1981

3. DISCLOSURE STATEMENT

The subdivider's disclosure statement relating to Solid Waste management is included with this submittal.

4. DISPOSAL SITE

The owners can either contract with a private refuse company to haul their solid waste or they can haul their own. There are two sanitary landfill sites where owners can haul their solid wastes. One is the Bernalillo County Sanitary Landfill located just off Broadway south of Rio Bravo Boulevard. The other is the City of Albuquerque Sanitary Landfill located at Los Angeles Avenue and Washington Street N.E.

The American Waste Disposal, Inc. at 506 Rio Rancho Road S.E., Telephone 897-2218, will provide service for this subdivision. They dump solid waste at the Sanitary Landfill on Los Angeles Avenue.

5. COLLECTION AND DISPOSAL EQUIPMENT

The American Waste Disposal, Inc. has both curbside and dump vehicles. Schedules for pickup must be arranged. If property owners choose to haul their solid waste to the Bernalillo County Sanitary Landfill on South Broadway, it operates seven days a week from 8:00 a.m. to 6:00 p.m. The City of Albuquerque Sanitary Landfill at Los Angeles and Washington Street N.E. operates seven days a week from 7:00 a.m. to 7:00 p.m.

6. REFUSE COLLECTION WORK FORCE

It is assumed that the private refuse company employs an adequate number of employees to serve their clients.

7. WATER TABLE

Since all disposal sites that would be used are operated under the authority of a public governing body, their operations should meet all standards imposed by the appropriate regulations within each jursidiction.

8. ACCESS

Access to either the Bernalillo County or City of Albuquerque Sanitary Landfill is by paved public roads.

9. PROJECTED POPULATION

The projected population is 4 times 10 equals 40.

10-12.

Since disposal sites that would be used are public and are managed by an appropriate governing body, the regulations enforced by each jurisdiction pertaining to their locations and methods of operation would apply.

TERRAIN MANAGEMENT PLAN

TERRAIN MANAGEMENT PLAN

The following information is presented in accordance with Apprendix E, Section 2, Subsection C, of the Bernalillo County Subdivision Ordinance.

1. NAME AND ADDRESS OF SUBDIVIDER

James W. Findley
812 Charleston N.E.
Albuquerque, New Mexico 87110

2. DATE PLAN IS SUBMITTED

December 1981

3. DISCLOSURE STATEMENT

The subdivider's disclosure statement relating to Terrain Management is included with this submittal.

4. TERRAIN MANAGEMENT PLAN

The Estrellita Estates Subdivision qualifies as a Type 3 subdivision containing 10 lots which are less than 10 acres in size.

a. Maps

1) Figure 1 shows the Vicinity Map with a scale of 1" = 2000'. Contours are shown at 20 foot intervals. The external boundary of the subdivision is shown.

2) Figure 2 is a subdivision map containing the following:

a) subdivision boundary
b) contours at 1 foot intervals
c) location of proposed lots, roads and easements
d) location of all existing drainage courses

No grading is proposed other than for the construction of roads and house pads. The house pads will be constructed by each homeowner's contractor. The road will be constructed by the developer. Cuts and fills will be less than 1 foot deep. The natural vegetation consists of the remnants of agricultural use. Therefore, the disruption of that vegetation will not be harmful. All future property owners will be encouraged to preserve any trees of any substantial size that exist today. No major revegetation is planned. All landscaping wil be up to each property owner.

LOS GRIEGOS, N. MEX.

N3507.5—W10637.5/7.5

1960

PHOTOREVISED 1967 AND 1972

FIGURE 2

VICINITY MAP

b. Soils Survey

A soils report was prepared by Albuquerque Testing Laboratory. That report indicates that the soils on site are silty sand of a fine grain nature going to a clean fine grained sand. The soils are classified as SM and SP utilizing the unified soils classification chart. The soils reports indicate that the soil has a percolation rate of from 3.3 to 8.0 minutes per inch. The ground water was found to be 9 to 13 feet below the ground surface. A copy of the soils report is attached.

c. Surface Drainage

Any rainfall that falls on the proposed subdivision will be essentially contained within the subdivision. Due to the high percolation rates, the stormwater will be allowed to percolate directly into the soil. The slope of the land is so slight that it is virtually impossible to drain the water in any direction. Ditches will be constructed adjacent to the road to allow the runoff from the road to collect in the ditches and percolate. The land is bordered on the east by the Albuquerque Main Canal which essentially cuts off all flows from the east. The lands to the north, south and west of the project site are essentially level with the site and therefore contribute no [illegible] site runoff. Figure 2 shows the subdivision la[illegible] and contours at 1 foot intervals.

d. Subsurface Drainage

The shallow groundwater aquifer that is characteristic of the Rio Grande Valley lies 9 to 13 feet below the ground surface. That aquifer generally slopes from east to west and does not pose a problem to this subdivision.

e. Grading

The only earthwork to be done by the developer will be the construction of Estrellita Lane along the north edge of the subdivision. All cuts and fills will be less than 1 foot in depth. Therefore, there will be very little disruption of vegetation. All grading within individual lots will be left to the prospective land owners. It is recommended that the finish floor of all houses be constructed at least 1 foot above the existing ground elevation.

f. Road Development

Estrellita Lane will be constructed by the developer. It will meet the minimum standards as established by the Bernalillo County Road Department. The road will be completed when 50 percent of the lots have been sold.

g. Legal Description

The legal description for Estrellita Estates is as follows:

A certain tract of land located within Bernalillo County, New Mexico within Sections 16 and 17, Township 11 North, Range 3 East N.M.P.M. and comprising Tracts 10 and 11 shown on the Middle Rio Grande Conservancy District Map No. 25 and being more particularly described as follows: beginning at a point whence the northeast corner of Section 17, Township 11 North, Range 3 East bears N 60°17'00" E a distance of 873.00 feet; thence S 69°24'00" E a distance of 1044.25 feet; thence S 38°53'19" W along the west right-of-way of the Albuquerque Main Canal a distance of 211.76 feet; thence N 69°58'37" W a distance of 1345.79 feet; thence N 12°06'06" E along the east right-of-way of Rio Grande Boulevard N.W. a distance of 207.00 feet to the point of beginning and containing 6.6533 acres more or less.

h. Number of Parcels

The number of parcels within the subdivision is 10. The smallest lot will be 0.5 acres.

ATL ENGINEERING SERVICES

Albuquerque Testing Laboratory, Inc.
532 Jefferson, N.E. (87108)
P.O. Box 4101 (87196)
Albuquerque, New Mexico
(505) 268-4537

Lab No. 3705 Date July 15, 1981

Report to Ashcraft

Submitted By Don Ashcraft Sampled By Leroy Gonzales, ATL Representative

Project Helen Dow Land - Rio Grande Boulevard

Source of Material Two (2) shallow depth percolation tests and two (2) test borings to determine Water Table at site. Tests performed on July 15, 1981.

TEST RESULTS

TEST DATA: The percolation tests were run in accordance with the procedures set forth in the U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 526, "Manual of Septic Tank Practice". The tests were run in 6" ± diameter holes at the depth of 3' ± beneath the existing ground surface. The holes were allowed to saturate with water prior to running the tests.

TEST RESULTS:

	Test No. 1	Test No. 2
*Percolation Rate	8	3.3

*Time in minutes required for water level to drop one inch, the drop occuring during the final 10 minute time period being used to calculate the percolation rate.

GRADATION TESTS:

Test No.	Gravel	PERCENT Sand	Silt/Clay	Unified Soils Classification
1. (2½ to 3' depth)	0	71	29	SAND, Silty, fine grained (SM)
2. (3' depth)	4	93	3	SAND, "clean", medium to fine grained (SP)

See page 2 for Unified Soils Classification Chart and page 3 for test locations and "Logs of Subsoils".

Respectfully Submitted,
ALBUQUERQUE TESTING LAB.
Original Signed By:
Robert K. Lloyd
Registered Professional Engineer

RKL/co

NOTES AND DEFINITIONS

1. **Penetration Resistance** - Blows per foot using "A" rod, 140 lb. hammer with 30-inch guided free fall unless otherwise noted.
   - N - Standard Penetration Resistance (ASTM: D-1586), 2" O.D. split barrel sampler
   - C - Continuous Penetration Resistance, 2½" O.D., conical, steel drive point
   - R - Penetration Resistance, 3" O.D. Modified Dames & Moore Split Ring Sampler
2. **Sample Type**
   - S - Standard Split barrel; 2" O.D. x 1-3/8" I.D.
   - C - California Sampler; 2-3/8" O.D. equipped with 2" I.D. x 4" high brass liners
   - R - Modified Dames & Moore Sampler; 3" O.D. equipped with 2.42" I.D. x 1" high brass liners
   - T - Shelby Tube
3. **Soil Index Properties**
   - M - Moisture Content, % of dry soil weight
   - D - Density, lbs per cubic foot computed either by volumetric or displacement methods. Soils Classifications are visual unless accompanied by grain size analysis and Atterberg Limits.
4. **Water Table** - If encountered is noted on Log Graphs as ⏚.

UNIFIED SOIL CLASSIFICATION SYSTEM
ASTM: D2487

COARSE-GRAINED SOIL

MORE THAN 50% LARGER THAN 200 SIEVE SIZE

Symbol	Letter	Description	Major Divisions
	GW	WELL-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LESS THAN 5% - 200 FINES	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size
	GP	POORLY-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LESS THAN 5% - 200 FINES	
	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, MORE THAN 12% - 200 FINES	
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, MORE THAN 12% - 200 FINES	
	SW	WELL-GRADED SANDS OR GRAVELLY SANDS, LESS THAN 5% - 200 FINES	SANDS More than half of coarse fraction is smaller than No. 4 sieve size.
	SP	POORLY-GRADED SANDS OR GRAVELLY SANDS, LESS THAN 5% - 200 FINES	
	SM	SILTY SANDS, SAND-SILT MIXTURES MORE THAN 12% - 200 FINES	
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES MORE THAN 12% - 200 FINES	

NOTE - Soils with 5 to 12 percent minus 200 fines should be classified with dual symbols

FINE-GRAINED SOIL

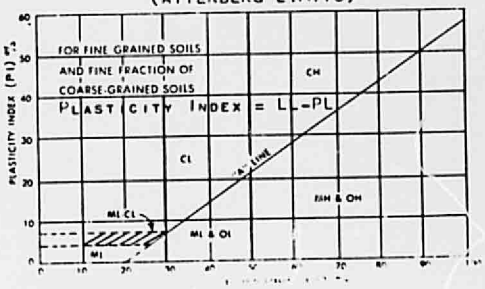
MORE THAN 50% SMALLER THAN 200 SIEVE SIZE

Symbol	Letter	Description	Major Divisions
	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	SILTS AND CLAYS Liquid limit less than 50
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
	OL	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY	
	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	SILTS AND CLAYS Liquid limit greater than 50
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
	Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS	

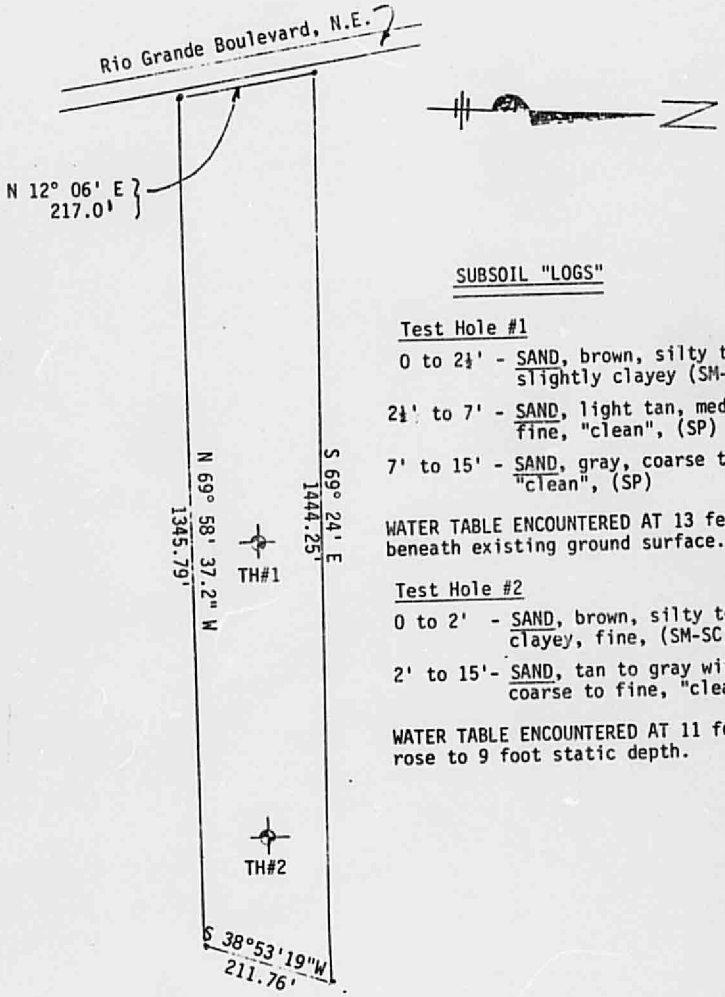
SOIL FRACTIONS

Component			Size Range
Boulders			Above 12 in.
Cobbles			3 in. to 12 in.
Gravel			3 in. to No. 4 sieve
Coarse Gravel			3 in. to ¾ in.
Fine gravel	G		¾ in. to No. 4 sieve
Sand			No. 4 to No. 200
Coarse	CS	TS	No. 4 to No. 10
Medium	MS	TS	No. 10 to No. 40
Fine	FS	TS	No. 40 to No. 200
Fines (silt or clay)	S/C		Below No. 200 sieve

PLASTICITY CHART
(ATTERBERG LIMITS)



ALBUQUERQUE TESTING LABORATORY



TEST LOCATIONS

Scale: 1" = 200'

SUBSOIL "LOGS"

Test Hole #1

0 to 2½' - SAND, brown, silty to slightly clayey (SM-SC)

2½' to 7' - SAND, light tan, medium to fine, "clean", (SP)

7' to 15' - SAND, gray, coarse to fine, "clean", (SP)

WATER TABLE ENCOUNTERED AT 13 feet ± beneath existing ground surface.

Test Hole #2

0 to 2' - SAND, brown, silty to clayey, fine, (SM-SC)

2' to 15'- SAND, tan to gray with depth, coarse to fine, "clean", (SP)

WATER TABLE ENCOUNTERED AT 11 foot depth rose to 9 foot static depth.

HYDROLOGY D15/D1 2 of 2 8 PLANS

b. You will also need to show the highwater level on the Alameda Drain.

c. Please include the invert elevations of the inlet and outlet pipes in the drop inlets.

d. Spillway hydraulics will be required for incase the inlets are plugged.

6. Plan Drawings:

a. Site Description:

1. Vicinity map showing location of the development in relation to well-known landmarks, municipal boundaries and zone atlas map index number.

b. You will need to show contours and spot elevations extending a minimum of 25' beyond property lines.

c. Identification of all existing structures located on-site or on adjacent property extending a minimum of 25' beyond the property line.

d. Location and direction of all downspouts.

e. Internal contributory drainage areas, including roof areas, outlined on plan.

f. The 24 foot wide street with 40 foot R/W will need to reflect the City standard detail for street construction.

g. Details of emergency spillways, drain outlets, and other significant drainage structures with contours, and cross-sections, spot elevations and supporting calculations when appropriate.

7. If the proposed project is planned to be constructed in phases, we will need a phase development plan and an erosion control plan.

If you have any questions regarding the above comments, please feel free to call me at 766-7544.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya
Hydrologic Engineering Technician, Jr.

BJM:mrk

BOARD OF COUNTY COMMISSIONERS
LENTON MALRY, CHAIRMAN
DISTRICT 3
ORLANDO VIGIL, MEMBER
DISTRICT 2
PATRICK J. PADILLA, MEMBER
DISTRICT 1
MARION M. CUTTRELL, MEMBER
DISTRICT 5
WRAY L. SIMMONS, MEMBER
DISTRICT 4
ALEX ABEYTA, JR., COUNTY MANAGER

County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102

BOB V. STOVER, SHERIFF
JAMES B. LEWIS, TREASURER
DOLORES C. WALLER, COUNTY CLERK
EDWARD M. MURPHY, ASSESSOR
GERARD W. THOMSON,
PROBATE JUDGE

March 30, 1984

Mr. Ben Horton
406 San Mateo N.E.
Albuquerque, New Mexico 87106

Dear Mr. Horton:

Bernalillo County Road Department has no objection to the final road grades and sections in Vista Ranchitos Subdivision, as shown on the attached plans. Curb and gutters may be required at a future date should the city annex this area.

Sincerely,

John Ramsey, Jr.
Road Superintendent

JR:ll

cc: Rex King, County Planner

Enclosure

MIDDLE RIO GRANDE CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

March 29, 1984

Benjamin K. Horton & Associates
406 San Mateo SE, Suite 7
Albuquerque, NM 87108

Gentlemen:

This is to acknowledge that a license is in process for your drain inlet into the Alameda Drain from tract 3, map 27, now Vista Ranchitos.

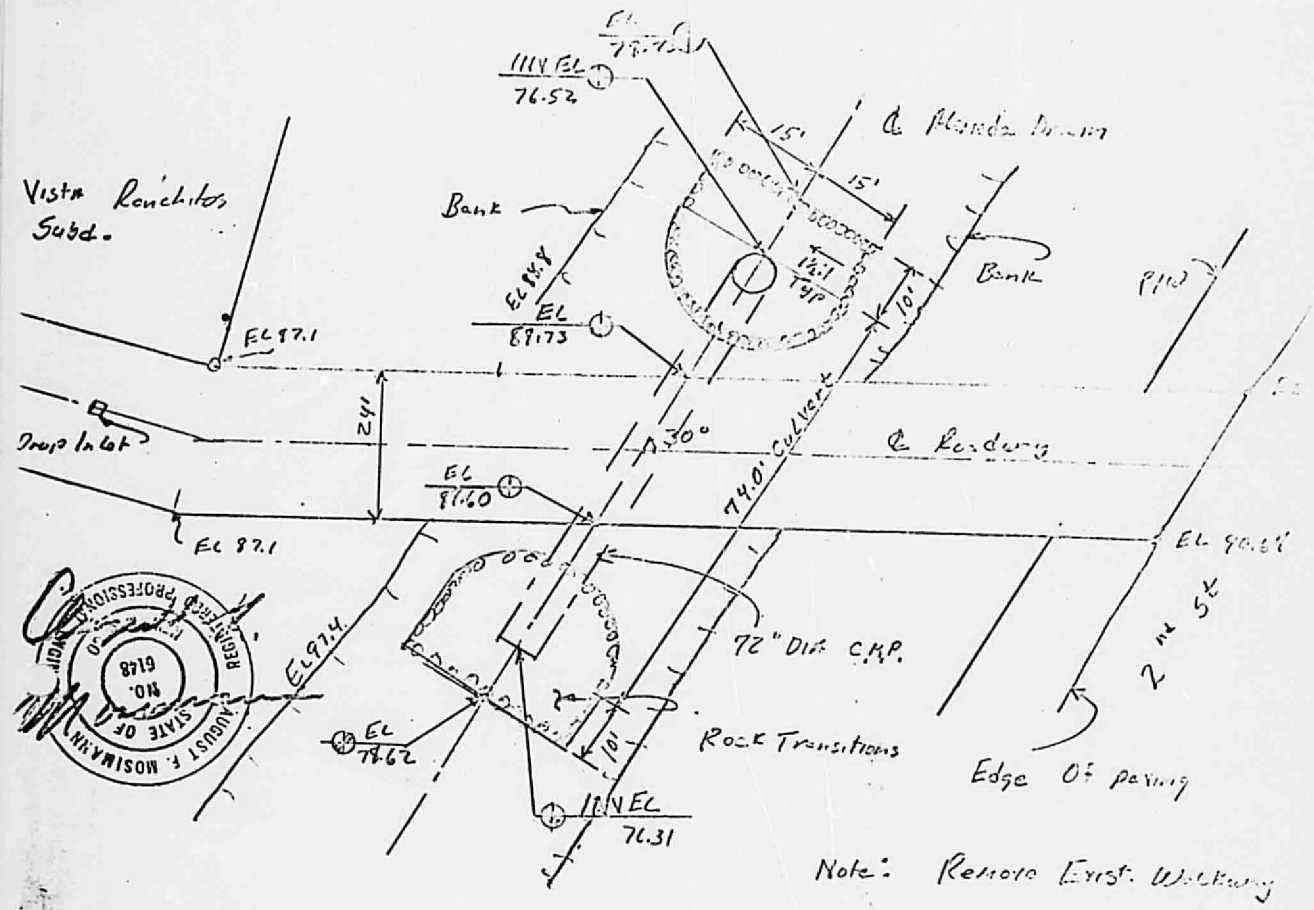
You can be assured that the submitted drawings meet with our requirements and those of the Bureau of Reclamation.

You may use this letter as authority to proceed with your project, pending issuance of the necessary licenses.

Sincerely,

Charles R. Martinez
General Manager

CRM:cj



Engineering Assoc Inc
194 Jones N.E.
Albuq. N. M.

Feb 2, 1984

SARAH RD CROSSING
AT
ALAMEDA DRAIN

MIDDLE RIO GRANDE CONSERVANCY DISTRICT LICENSE

1. The Middle Rio Grande Conservancy District, with the approval of the Bureau of Reclamation, whose approval is noted heron, hereby licenses and permits the undersigned Licensee, who hereby accepts this license and agrees to be bound by its terms and conditions to

install and maintain a 6'0" ø x 64' cmp for a public road crossing at the Alameda Interior Drain, station 404+76±.

at Alameda Interior Drain, Sec. 21, T.11 N, R.3 E, Map 27, station 404+76±

2. Licensee shall at its own expense, locate, construct, maintain and repair any structures or accessories permitted by this License and shall, at its own expense, bear all costs incurred by reason of the exercise of the privilege conferred by this License.

3. In the exercise of the privilege conferred by this license and the erection of any permitted structures or accessories, the following specifications and conditions must be complied with:

a. Installation shall be in accordance with attached drawing and shall be subject to inspection and acceptance by the Middle Rio Grande Conservancy District.

b. Any permitted installation must be completed within six months.

c. Two signed copies of the license must be returned to Middle Rio Grande Conservancy District.

4. The Licensee shall be liable for any and all damages to the property of the Middle Rio Grande Conservancy District, United States or any third party or parties by reason of the construction, maintenance or repair of any structures or accessories authorized by this license or by the exercise of the privilege conferred by this License. In addition, the Licensee agrees to indemnify and hold harmless the Middle Rio Grande Conservancy District and/or the United States, their agents and employees from any and all claims, demands, actions, or suits of any nature which arise as a result of this License including, but not limited to those which result from the construction, maintenance, use, state of repair, presence of any structures, accessories or exercise of the privilege conferred by this license.

5. This License shall continue so long as in the opinion of the Middle Rio Grande Conservancy District, it is considered to be expedient or not detrimental to the public interest or the interest of the Middle Rio Grande Conservancy District. This license shall be revocable by the Middle Rio Grande Conservancy District for any reason upon ten days written notice to the Licensee. Upon such revocation all structures and accessories shall be removed by the Licensee without delay at the expense of the Licensee and any rights which Licensee may have under this License are revoked. Revocation shall not release Licensee from any liability or obligation, whether of indemnity or otherwise, which may have attached, accrued, or was accruing at the time of such revocation. Notice of revocation shall be sufficient if mailed to Licensee at B. K. Horton, 406 San Mateo NE, Albuquerque, NM 87108

6. The privilege granted by this License shall not be exercised, nor shall any structure or accessory be constructed or maintained so as to obstruct in any manner the flow of water in the canals, laterals, ditches, or drains of the Middle Rio Grande Conservancy District or to interfere in any manner whatsoever with the construction, operation, maintenance and functions of the Middle Rio Grande Conservancy District. Removal, relocation, or protection of this installation (structure) necessitated by operation and maintenance of District works by the District shall be the responsibility of Licensee."

7. In order to allow the Middle Rio Grande Conservancy District to inspect the installation of any structures provided for in this License, the Licensee shall contact Mr. Robert White, Albuquerque Division Manager, telephone 243-6796 at the time construction is begun.

8. The Licensee hereby releases the Middle Rio Grande Conservancy District and the United States, their agents and employees from any and all claims for damage to property, personal injury, or death that may arise as a result of the location, erection, maintenance, repair, use, or presence of the structures or accessories provided for herein or as a result of the exercise of the privilege conferred by this license.

9. If, at any time, the Licensee shall in the judgment of the Middle Rio Grande Conservancy District, fail to properly perform any of its obligations or covenants under this agreement, the Middle Rio Grande Conservancy District may, at its option, perform or have performed such work as it deems necessary for the safe operation of the works of the Middle Rio Grande Conservancy District or to protect the property of the Middle Rio Grande Conservancy District, the United States, any third party, or the public, in such event, licensee agrees to pay the cost incurred plus the cost of supervision and handling within thirty (30) days after a bill is rendered. The failure of the Middle Rio Grande Conservancy District to elect to perform the obligations of the Licensee shall not release the Licensee from liability for any loss or damage occasioned thereby. By giving the Middle Rio Grande Conservancy District the right to perform any of the obligations or covenants of Licensee under this License, it is not the intent of the parties to confer any rights on the Licensee or any third party or to create any additional liability on the Middle Rio Grande Conservancy District.

LICENSE VOID IF 2 COPIES NOT RETURNED TO MIDDLE RIO GRANDE CONSERVANCY DISTRICT

Hydroconduit
Armco Steel

10. If the Middle Rio Grande Conservancy District is required to bring suit in any court for the purposes of enforcing this agreement or any provision or portions thereof, the Licensee shall be liable for all costs incurred and for reasonable attorney's fees.

11. The licensee upon completion of the work, shall advise the Middle Rio Grande Conservancy District and the license issued to him shall be signed and approved by the District signifying final construction approved.

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

BY: Charles R. Martinez
General Manager

DATE: August 26, 1983

BY: [illegible] developer + owner
Licensee

DATE: 1-25-84

APPROVED:

BUREAU OF RECLAMATION

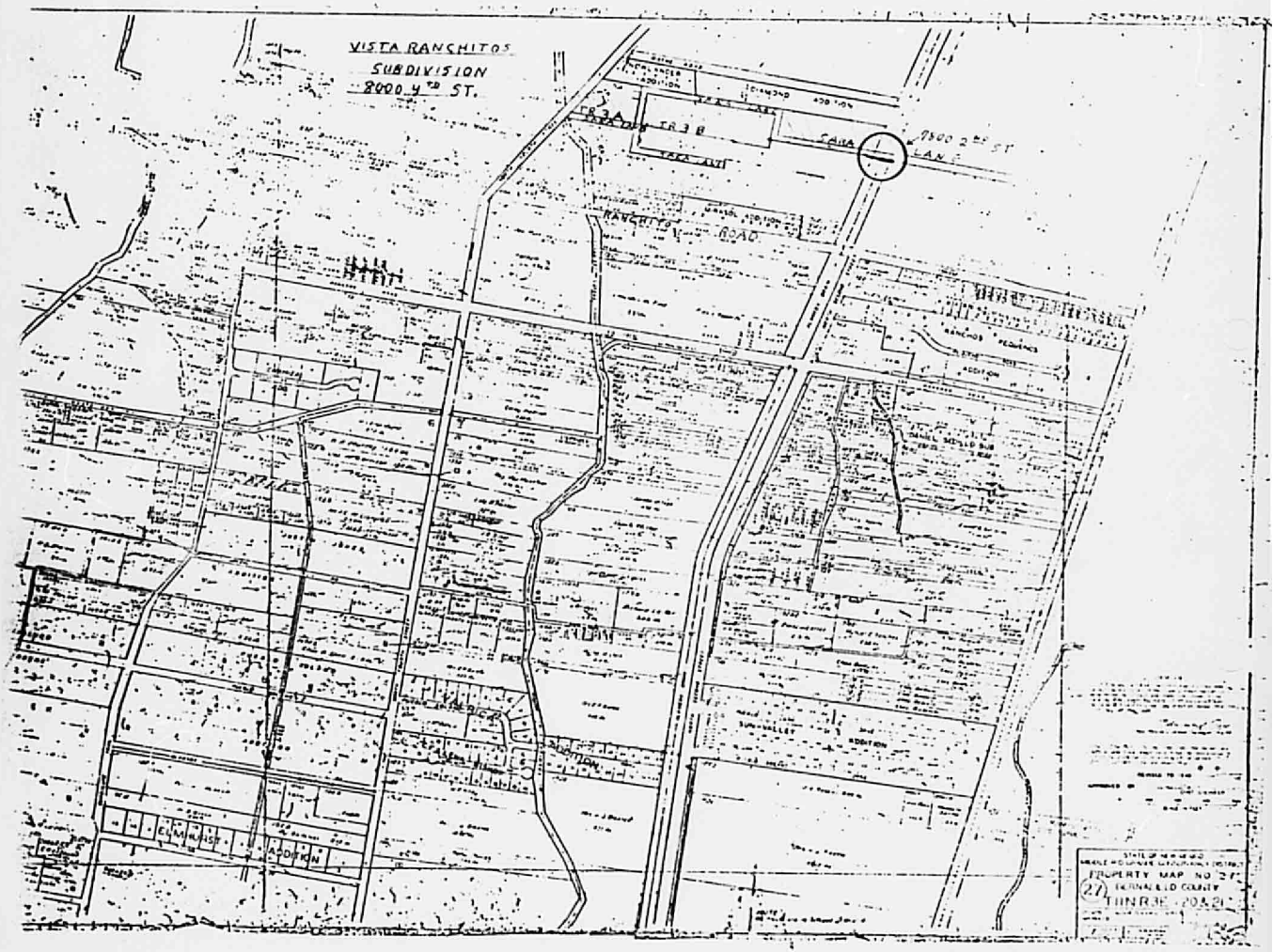
BY: Harlan W. Rowe

DATE: 10/6/83

FINAL CONSTRUCTION APPROVED:

BY: _____

DATE: _____


VISTA RANCHITOS
SUBDIVISION
8000 4TH ST.
RANCHITOS ROAD
PROPERTY MAP NO. 27
27
DONALD COUNTY

MIDDLE RIO GRANDE CONSERVANCY DISTRICT
POST OFFICE BOX 531
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

PROCEDURE TO BE FOLLOWED IN INSTALLING
OR ERECTING STRUCTURES

All grades and elevations shall be furnished by the Middle Rio Grande Conservancy District. Contact the District Engineer, Telephone No. 243-6796. The request for grades or elevations should be made at least five days before the beginning of construction. Inspection of construction shall be performed by the Middle Rio Grande Conservancy District.

IMPORTANT

If the structure is not installed in accordance with furnished grades, elevations and conformance with furnished plans, said license will be revoked in accordance with Clause 3a which provides for removal of structure at the expense of the licensee upon a 30-day written notice.

APPENDIX G

DISCLOSURE STATEMENT FORM FOR ALL SUBDIVISIONS CONTAINING FIVE OR MORE LOTS OR PARCELS OF LAND BUT NOT MORE THAN TWENTY-FOUR PARCELS

PLEASE READ THIS DISCLOSURE STATEMENT

BEFORE YOU

SIGN ANY DOCUMENTS OR AGREE TO ANYTHING

DISCLOSURE STATEMENT

This disclosure statement is intended to provide you with enough information to permit you to make an informed decision on the purchase or lease of property described in this statement. You should read carefully all of the information contained in this statement before you decide to buy or lease the described property.

The Planning Commission and Board of County Commissioners have examined this disclosure statement to determine whether the subdivider can satisfy what he has said in this disclosure statement. However, the Planning Commission and the Board of County Commissioners do not vouch for the accuracy of what is said in this disclosure statement. Further, this disclosure statement is not a recommendation or endorsement of the subdivision by either the County or the State. It is informative only.

Finally, the Planning Commission and the Board of County Commissioners recommend that you see the property before buying or leasing it. However, if you do not see the property prior to purchasing or leasing it, you have six months from the time of purchase or lease to inspect the property. Upon inspecting the property, you have three days from the date of inspection to rescind the transaction and receive all of your money back from the subdivider. You must give the subdivider notice of your intent to rescind within three days of your inspection of the property.

1. NAME OF SUBDIVISION

Vista Ranchitos Subdivision

2. NAME AND ADDRESS OF SUBDIVIDER

Ben Horton - 406 San Mateo, NE, Albuquerque, New Mexico 87108

3. NAME AND ADDRESS OF PERSON IN CHARGE OF SALES OR LEASING IN NEW MEXICO

(name)

(address)

4. WATER USE

Include here whether or not there will be water for domestic use, commercial use or recreational use and include any limitation, physical or legal, anticipated for each use indicated.

Domestic use water will be provided by means of an extension from the City of Albuquerque water system. There are no limitations

5. AMOUNT OF WATER

If the subdivider is to provide water for any use, he shall provide the following information;

Water is not provided by the subdivider

6. WATER DELIVERY*

Water will be conveyed within the street right of way through a 4 in. PVC line.

7. WATER SYSTEM EXTENSION*

Hook ups will be provided by the subdivider

8. LIFE EXPECTANCY OF THE WATER SUPPLY

N - A

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

9. WELLS ** NOTE: PROSPECTIVE OWNERS MUST PROVIDE THEIR OWN

N/A

10. SURFACE WATER**

*Not applicable if the subdivider does not intend to provide water for domestic use

**Not applicable if the subdivider intends to provide water for domestic use.

11. WATER QUALITY

N/A

12. LIQUID WASTE DISPOSAL

One 1500 gal. septic tank with two 7'-0" deep x 12' diameter drain pits will be constructed for each pair of townhouses.

NOTE: NO OTHER LIQUID WASTE DISPOSAL SYSTEM MAY BE USED IN A SUBDIVISION OTHER THAN THE SYSTEM APPROVED BY THE BOARD OF COUNTY COMMISSIONERS.

13. SOLID WASTE DISPOSAL

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

14. TERRAIN MANAGEMENT

Clay surface and sandy subsurface soils are suitable for building support. A soil investigation report is available. Storm runoff is conveyed through the street and drainage easement in an easterly direction to the Alameda drain. The site is not located within any floodways, flood fringes, or flood plains

15. SUBDIVISION ACCESS

Roadways will be paved with 4 in. of asphalt and 4 in of gravel beneath. Pavement width is 24' and will be completed before the townhouses are sold.

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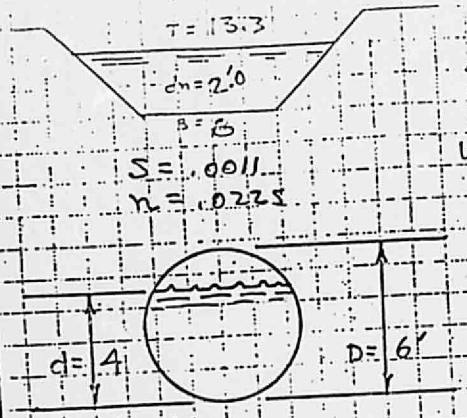
MIDDLE RIO GRANDE CONSERVANCY DISTRICT
POST OFFICE BOX 581
1000 CENTRAL RD., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

WORK SUBMITTED TO CROSSING
CANAL ALBUQUERQUE INTERCEPTOR DRAIN
STATION 404+76 SHEET 1 OF 3
CALCULATED BY M.J. CHAVEZ DATE 8/83

SURVEYED X-SECTION



S = .0011
n = .0225

$A = \left[\frac{T+B}{2}\right] dn = 21.30$

$WP = 2\sqrt{\left[\frac{T-B}{2}\right]^2 + dn^2} + B = 14.64$

$R = A/WP = 1.45$

$V = \frac{1.486\, S^{1/2} R^{2/3}}{n} = 2.80$

$Q = VA = 59.64$

$hv_c = V^2/2g = .12$

d/D = .67

$A = D^2(.5594) = 20.14$

$R = D(.2917) = 1.75$

$V = Q/A = 2.96$

$hvp = V^2/2g = .14$

AREA OF PIPE NEEDED

$Q/V_{MAX} = 17.04$

LOSSES THRU PIPE

$hc = .5(hvp - hvc) = .01$

$ho = 1.(hvp - hvc) = .02$

$h_f = L\frac{(V_p)^2 (n_p)^2}{2.2\,(R_p)^{4/3}} = .08$

TOTAL LOSSES = .11

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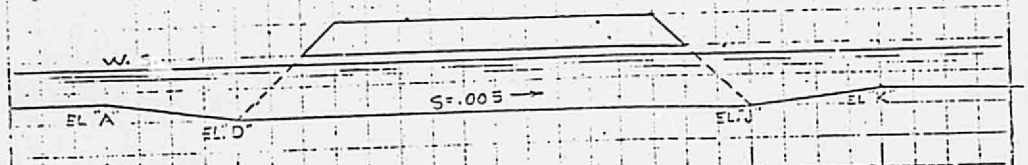
CONSERVATION DIST
POST OFFICE BOX 561
1030 SHOOP ST., S.E. PHONE 243-5795
ALBUQUERQUE, NEW MEXICO 87103

CANAL A MEDA INT DRAIN
STATION 404+76 SHEET 2 OF 3
CALCULATED BY M. J. CHAVEZ DATE 8/2



EL "A" FROM REHAB PROFILE = 497.73

W.S. EL @ "A" = EL "A" + dn = 498.73

W.S. EL @ "K" = W.S. @ "A" − L (Sc) = 498.62

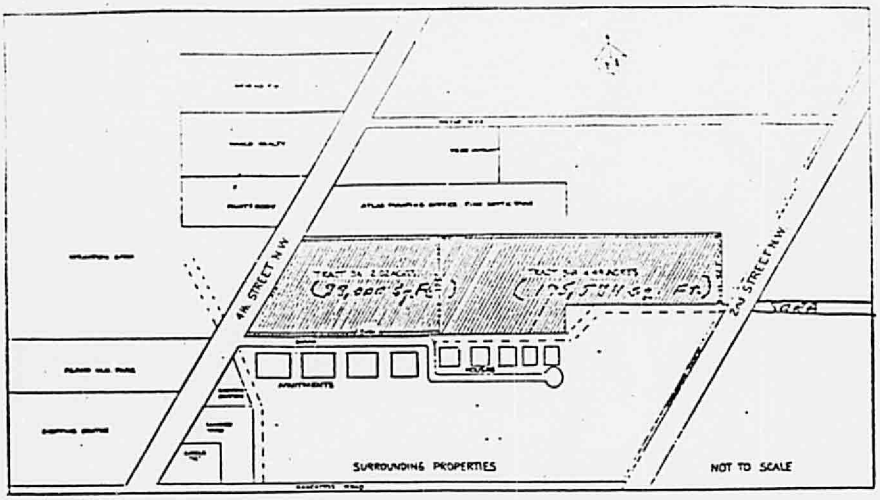
$h_A = .11$

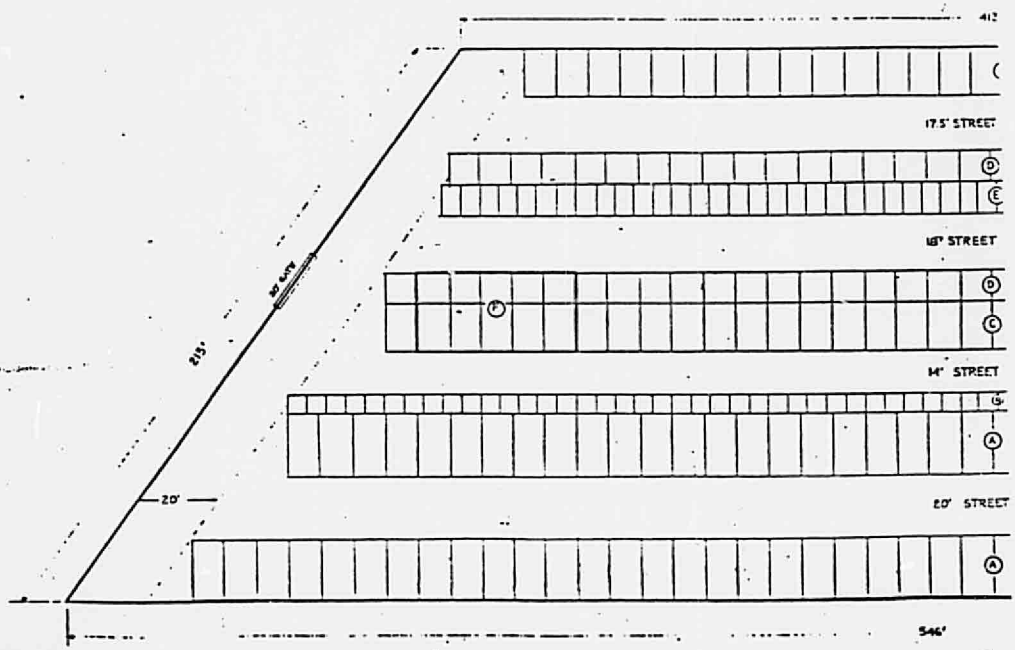
EL "D" = W.S. @ "A" − d + 1.5 (h_{vp}) = 497.52

EL "J" = EL "D" − .005 (L_p) = 497.31

EL "K" = EL "A" − h_A = 497.62

BACKED WATER AT "A" = $h_4 - h_A$ = .11 − .11 = Ø


4th STREET N.W.
2nd STREET N.W.
APARTMENTS
SURROUNDING PROPERTIES
NOT TO SCALE


412
17.5' STREET
18' STREET
14' STREET
20' STREET
215'
20'
546'

MIDDLE RIO GRANDE CONSERVANCY DISTRICT LICENSE

1. The Middle Rio Grande Conservancy District, with the approval of the Bureau of Reclamation, whose approval is noted heron, hereby licenses and permits the undersigned Licensee, who hereby accepts this license and agrees to be bound by its terms and conditions to

install and maintain a 4'0" Ø x 59' cmp for a public road crossing at the Alameda Interior Drain, station 404+76±.

at Alameda Interior Drain, Sec. 21, T.11 N, R.3 E, Map 27, station 404+76±

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a. Installation shall be in accordance with attached drawing and shall be subject to inspection and acceptance by the Middle Rio Grande Conservancy District.

b. Any permitted installation must be completed within six months.

c. Two signed copies of the license must be returned to Middle Rio Grande Conservancy District.

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6. The privilege granted by this License shall not be exercised, nor shall any structure or accessory be constructed or maintained so as to obstruct in any manner the flow of water in the canals, laterals, ditches, or drains of the Middle Rio Grande Conservancy District or to interfere in any manner whatsoever with the construction, operation, maintenance and functions of the Middle Rio Grande Conservancy District. Removal, relocation, or protection of this installation (structure) necessitated by operation and maintenance of District works by the District shall be the responsibility of Licensee."

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LICENSE VOID IF 2 COPIES NOT RETURNED TO MIDDLE RIO GRANDE CONSERVANCY DISTRICT

Hydroconduit
Armco Steel

10. If the Middle Rio Grande Conservancy District is required to bring suit in any court for the purposes of enforcing this agreement or any provisions or portions thereof, the Licensee shall be liable for all costs incurred and for reasonable attorney's fees.

11. The Licensee upon completion of the work, shall advise the Middle Rio Grande Conservancy District and the license issued to him shall be signed and approved by the District signifying final construction approved.

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

BY: Charles R. Martinez
General Manager

DATE: August 26, 1983

BY: [illegible] dredger + [illegible]
Licensee

DATE: 1-25-84

APPROVED:

BUREAU OF RECLAMATION

BY: Harley M. Bowe

DATE: 10/6/83

FINAL CONSTRUCTION APPROVED:

BY: _____

DATE: _____

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

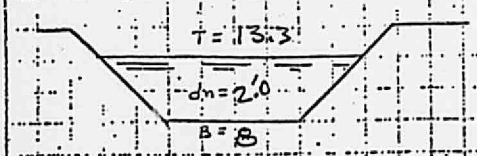
THE RIO GRANDE
CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

CANAL ALAMEDA INTERIOR DRAIN

STATION 404+76 SHEET 1 OF 3

CALCULATED BY M. J. CHAVEZ DATE 8/83

SURVEYED X-SECTION



$S = .0011$

$n = .0225$

$d/D = .67$

$A = D^2(.5594) = 20.14$

$R = D(.2917) = 1.75$

$V = Q/A = 2.96$

$hvp = V^2/2g = .14$

$A = \left[\frac{T+B}{2}\right] dn = 22.30$

$WP = \sqrt{\left[\frac{T-B}{2}\right]^2 + dn^2} + B = 14.64$

$R = A/WP = 1.45$

$V = \frac{1.486\ S^{1/2}\ R^{2/3}}{n} = 2.80$

$Q = VA = 59.64$

$hvc = V^2/2g = .12$

AREA OF PIPE NEEDED

$Q/V_{MAX} = 17.04$

LOSSES THRU PIPE

$hi = .5(hvp - hvc) = .01$

$ho = 1.(hvp - hvc) = .02$

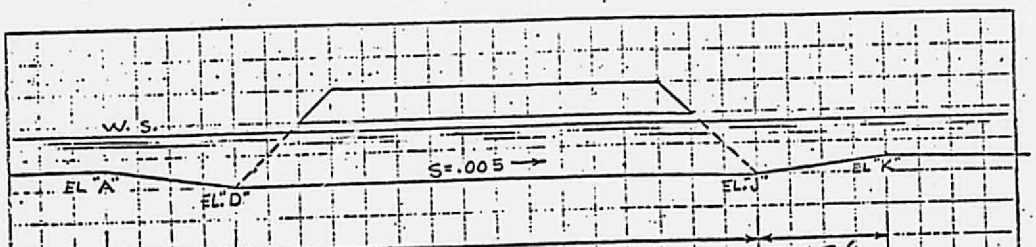
$hf = L\frac{(V_p)^2(n_p)^2}{2.2\ (R_p)^{4/3}} = .08$

TOTAL LOSSES = .11

IS MICROIMAGE IS THE BEST POSSIBLE
PRODUCTION DUE TO THE POOR QUALITY
THE ORIGINAL DOCUMENT

CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

CANAL ALAMEDA INT. DRAIN
STATION 404+76 SHEET 2 OF 3
CALCULATED BY M. J. CHAVEZ DATE 8/83



EL "A" FROM REHAB PROFILE ___ = 497.873

W.S. EL @ "A" = EL "A" + dm _____ = 498.073

W.S. EL @ "K" = W.S. @ "A" − L (Sc) ___ = 498.062

$h_A = .11$

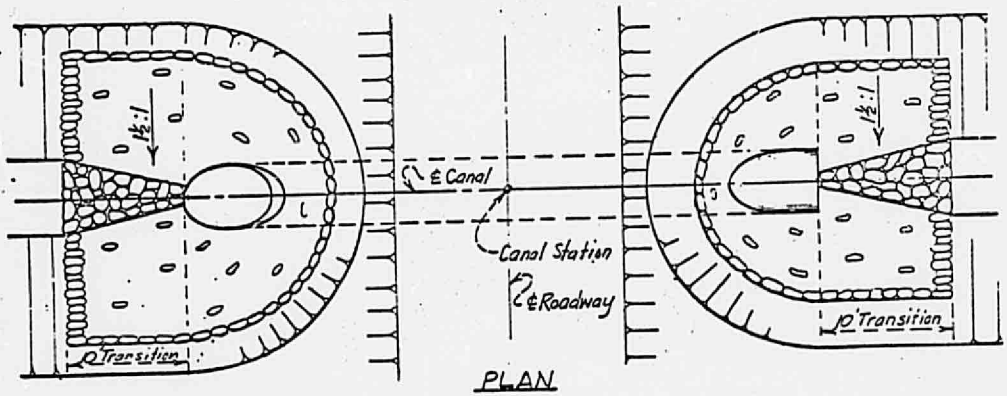
EL "D" = W.S. @ "A" − d + 1.5 (h_{cp}) _____ = 497.852

EL "J" = EL "D" − .005 (L_p) _____ = 497.631

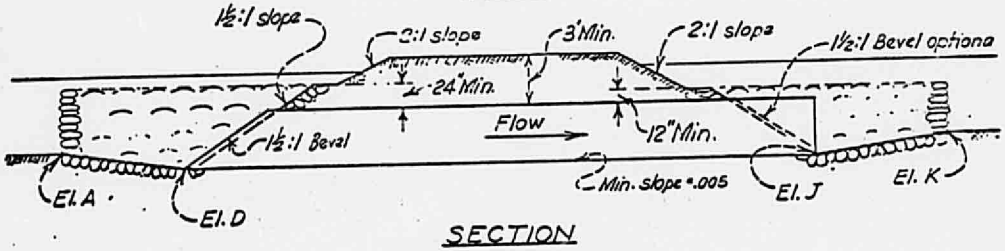
EL "K" = EL "A" − h_A _____ = 497.862

BACKED WATER AT "A" = $h_f - h_A$ = .11 − .11 = Ø

MINIMUM STANDARDS (U.S.B.R.)
CROSSINGS BY OTHERS
DRAINS



PLAN



SECTION

PIPE CULVERT

Drain : ALAMEDA INTERIOR DRAIN Station: 404+76
Highway: SARAH ROAD Station: ----------

El. A = 4978.73 Pipe Diam. = 72" Pipe Length = 64'

El. D = 4976.52 El. J = 4976.31 El. K = 4978.63

Note: Pipes to be placed by others may be concrete culvert pipe or corrugated metal pipe. Maintenance of the pipe crossing shall be the responsibility of the person placing same, and if pipe becomes broken, battered, or generally insufficient to pass irrigation or drainage flows it will be removed by Bureau and/or District O & M forces.

DRAWN W.A.B. 6-21-56	SHEET 3 OF 3

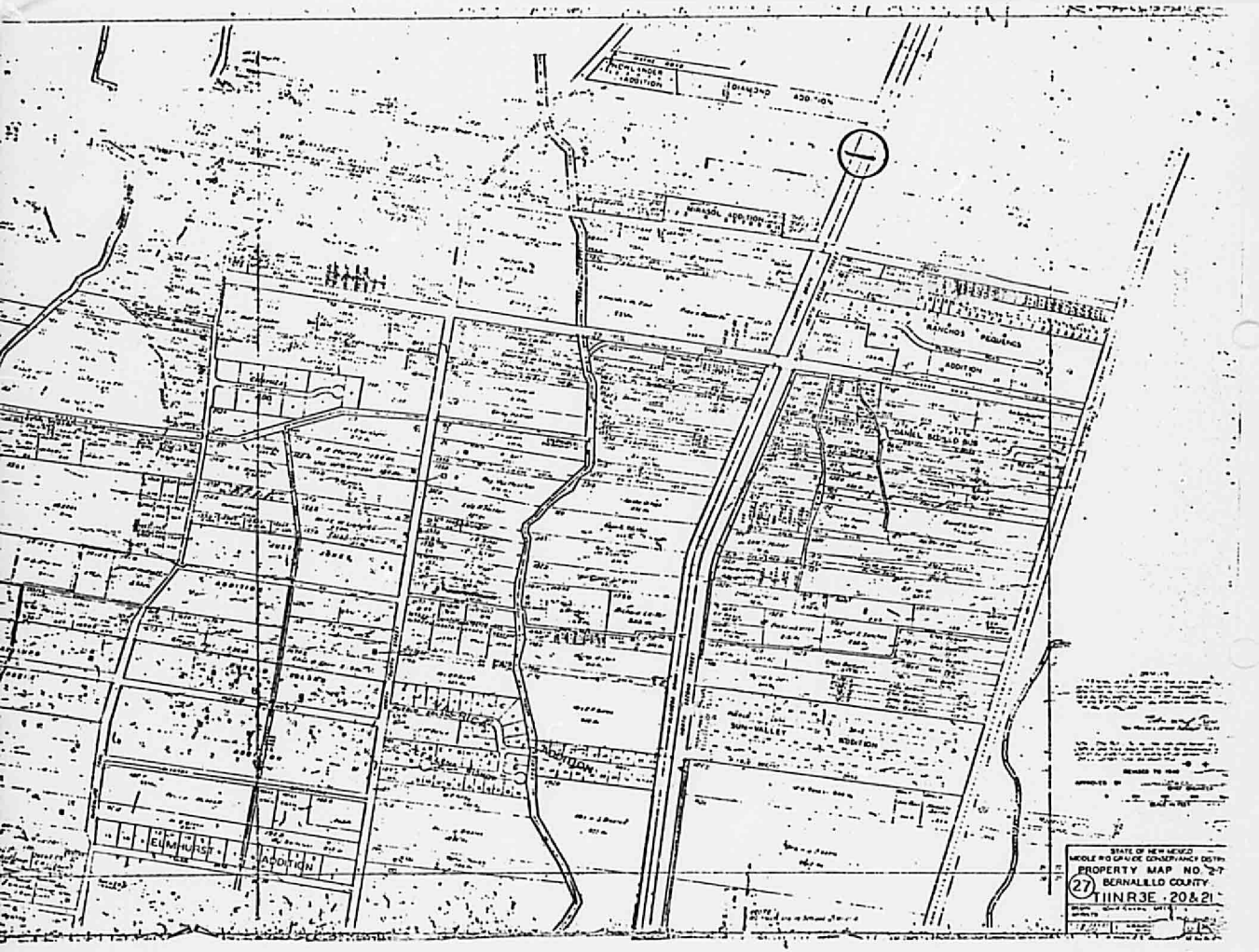
MIDDLE RIO GRANDE CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

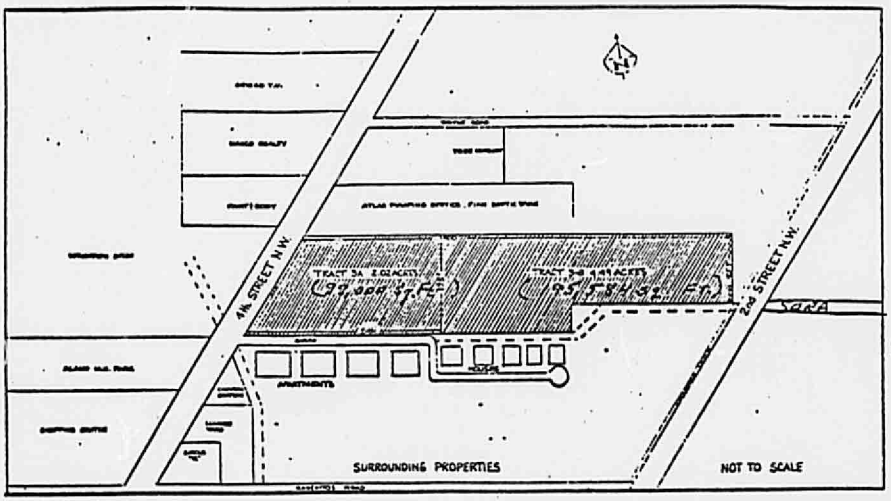
PROCEDURE TO BE FOLLOWED IN INSTALLING OR ERECTING STRUCTURES

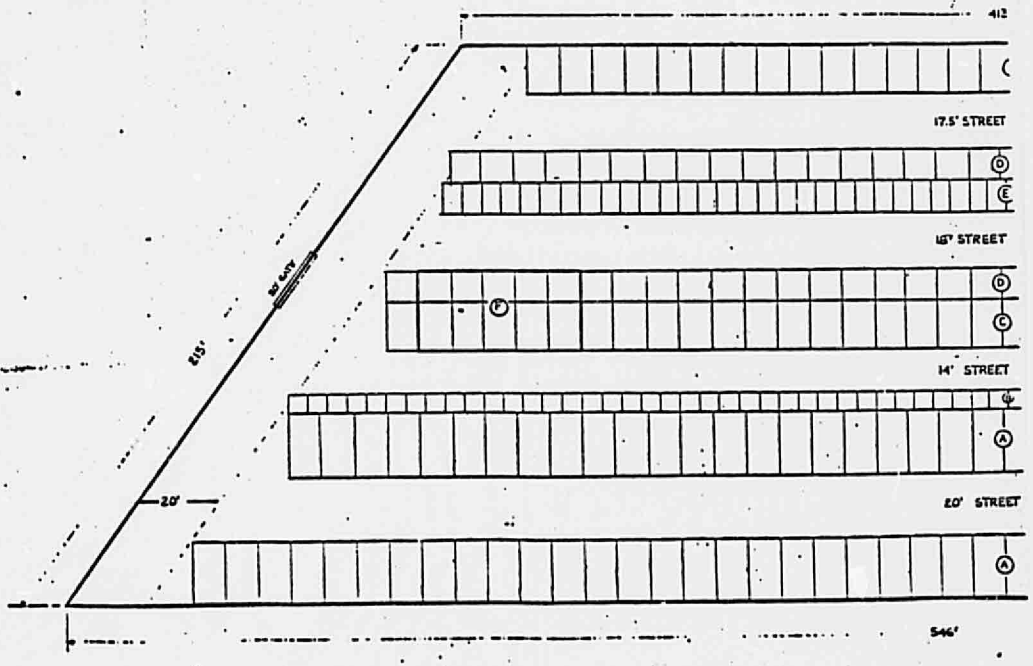
All grades and elevations shall be furnished by the Middle Rio Grande Conservancy District. Contact the District Engineer, Telephone No. 243-6796. The request for grades or elevations should be made at least five days before the beginning of construction. Inspection of construction shall be performed by the Middle Rio Grande Conservancy District.

IMPORTANT

If the structure is not installed in accordance with furnished grades, elevations and conformance with furnished plans, said license will be revoked in accordance with Clause 3a which provides for removal of structure at the expense of the licensee upon a 30-day written notice.


STATE OF NEW MEXICO
NICOLE RODGAUDE CONSERVANCY DISTRICT
PROPERTY MAP NO. 27
27
BERNALILLO COUNTY
T11N R3E · 20 & 21
ELMHURST
ADDITION
RANCHOS
ADDITION
SUN VALLEY
ADDITION


4th STREET N.W.
2nd STREET N.W.
APARTMENTS
SURROUNDING PROPERTIES
NOT TO SCALE


412
17.5' STREET
16' STREET
14' STREET
20' STREET
215'
20'
546'

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 3, 1985

August F. Mosiman
Engineering Associates
532 Adams, NE
Albuquerque, New Mexico 87108

RE: PEQUITO RANCHITOS SUBDIVISION (D-15/D1)

Dear Mr. Mosiman:

Based on the information provided on your December 7, 1984 resubmittal, the referenced drainage plan is approved.

If you have any questions or comments, please call me at 766-7644.

Cordially,

Bernie J. Montoya

Bernie J. Montoya
Engineering Assistant, C.E.

BJM/bsj

BOARD OF COUNTY COMMISSIONERS
LENTON MALRY, CHAIRMAN
DISTRICT 3
ORLANDO VIGIL, MEMBER
DISTRICT 2
PATRICK J. PADILLA, MEMBER
DISTRICT 1
MARION M. COTTRELL, MEMBER
DISTRICT 5
WRAY L. SIMMONS, MEMBER
DISTRICT 4
ALEX ABEYTA, JR., COUNTY MANAGER

County of Bernalillo

State of New Mexico

620 LOMAS, N.W.
ALBUQUERQUE, NEW MEXICO 87102

BOB V. STOVER, SHERIFF
JAMES B. LEWIS, TREASURER
DOLORES C. WALLER, COUNTY CLERK
EDWARD M. MURPHY, ASSESSOR
HUNTER L. GEER, PROBATE JUDGE

November 29, 1984

Mr. August F. Mosiman
Engineering Associates
532 Adams NE
Albuquerque, New Mexico 87108

REF: PEQUITO RANCHITOS SUBDIVISION (D-15)

Dear Mr. Mosiman:

Based on the information provided on your November 14, 1984 resubmittal, listed below you will find certain items that will need to be addressed before final approval is granted:

1. Engineer's stamp with signature and revised dated included on the drawing.

2. Orginally it was proposed that an additional 30' of right-of-way would be dedicated to the State Highway Dept. has it now changed to 13', please qualify.

If you have any questions or comments, please feel free to contact me at 766-7644.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya,
Engineering Assistant CE

BJM/cl

INSTRUCTIONS

PRINT OR TYPE IN BLACK INK ONLY. Use additional sheets if necessary. The completed application is to be submitted to the Planning Division by the applicant or agent. Each application must be accompanied by the filing fee (checks are preferred and made payable to the City of Albuquerque). All attachments must be submitted with the application and, after filing, shall not exceed 8 1/2 x 14 inches. Additional information may be obtained from the Planning Division (505) 766-7422.

APPLICATION FOR:

SUBDIVISION

____ Sketch Plat

X Preliminary Plat

____ Final Plat

VACATION

____ Public Right-of-way

____ Private Way

____ Easement

1. APPLICANT INFORMATION

a. Applicant: Benj K Harton Telephone: 268 2030

Mailing Address: 406 San Mateo NE

Albuq NM Zip Code: 87108

Applicant's Proprietary Interest in the Property: Owner / Developer

b. Agent (if any): None Telephone: ____

Mailing Address: ____

Zip Code: ____

c. Signature of applicant/agent: [signature] Date: 2-6-84

2. LOCATION OF REQUEST

a. Street Address (if any): 8000 4th N.W. Albuq NM.

b. Legal Description of the Property:

(1) Lot(s)/Tract(s): Tract 3 Map 27 MRGCD.

(2) Block: ____

(3) Subdivision-Addition Name/MRGCD Map: ____

c. Location of Property by Streets: ____

d. Uniform Property Code: ____

3. PROJECT DETAILS WITH AN SUP FOR Mini warehouses + Townhouses (20)

a. Present Zoning: R1+A1 [redacted] Proposed: [redacted]

b. Number of Lots Existing: 1 Proposed: [redacted] 21 [redacted]

c. Number of Dwelling Units Existing: 0 Proposed: [redacted] 20 Townhouses

d. Total Land Area Covered by Request: Acres: Approx 7 Acres Sq. Feet: 305,200 sq FT

4. (VACATION ONLY) REASON FOR REQUEST Use Separate Sheet: Why should the vacation be granted?

N/A

5. ATTACHMENTS AS REQUIRED IN SUBDIVISION ORDINANCE See appropriate checklist(s)

PLANNING DIVISION INTERNAL USE ONLY

Cross-references: ____ No. Signs Issued: ____

Application and Fee Received by [signature] Date: Feb. 6, 1984

Fee Paid: Dollars $ 140 Method of Payment: cash CREDIT: ____

TREASURER VALIDATION (2nd payment for DRB Subdivision)

MAP NO. D-15

HEARING DATE: 3/6/84

Distribution: Secretary-Orig./Case File
Applicant/Agent
Treasurer

CASE NUMBER 85-84-10
DRB-83-6

Rev. 1/11

COUNT

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
PLANNING DIVISION

AGENDA ITEM 7
DEVELOPMENT REVIEW BOARD D15
MARCH 6, 1984

SC5-84-10
(DRB-83-525)

Ben Horton requests Preliminary Plan approval of proposed Vista Ranchitos Subdivision containing 21 lots, zoned R-1 and A-1, being Tract 3, MRGCD Map 27, and located on the north side of Sarah Lane, N.W., between Fourth and Second Streets, N.W., containing approximately 7 acres. (D-15)

COMMENTS FROM OTHER DEPARTMENTS:

TRANSPORTATION DEPARTMENT

"A corridor study, which may include some type of access-control, is in progress for the adjacent segment to Second Street. Future access to Second Street may be via right-turn out. The proposed angle of the intersection of Sara Lane with Second Street is approximately 63 degrees; the DPM specifies a minimum angle of 80 degrees. Also, Sara Lane does not appear to align with Sara Lane across Second Street, according to the vicinity map. The proposed 40 foot right-of-way width and the 45 foot centerline radii on the curves of Sara Lane are of concern, especially when one considers the potential development of the lands to the south of Sara Lane and immediately west of the Alameda Drain. It also appears that a portion of this 40 foot steet is to serve as the major drainage for the entire subdivison. Who will be responsible for the construction of the bridge across the Alameda Drain?

We would also suggest that the name "Sara Lane" not be used for this street since there will be some confusion with residences on Sarah Lane, which will have the same range of address numbers. It appears from the site plan that some of the proposed storage buildings are to be build on the property line with no setback."

WATER RESOURCES DEPARTMENT

"The water service availability statement is being processed. Proposed platting is not contingent on decisions delineated in the availability letter; therefore, preliminary plat maybe approved. Final plat approval will be contigent on compliance to the provisions of the availability letter. City sewer service is not available."

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
PLANNING DIVISION

AGENDA ITEM 7
DEVELOPMENT REVIEW BOARD
MARCH 6, 1984

COMMENTS FROM OTHER DEPARTMENTS:	(Continued)
TRANSIT	"No comment."
REAL ESTATE OFFICER	"No adverse comment."
ZONING ENFORCEMENT OFFICER	"No comment."
PARKS AND RECREATION	"This is in the County. Therefore, the park policy does not pertain to this development."
MIDDLE RIO GRANDE COUNCIL OF GOVERNMENTS	"No adverse comment."
AIR POLLUTION CONTROL DIVISION	"No comment."
ALBUQUERQUE PUBLIC SCHOOLS	"No adverse comments."
ALBUQUERQUE FIRE DEPARTMENT	"All development proposals within the jurisdiction of the City of Albuquerque must comply with Fire Code Ordinance 30-1983, must provide required fire flow and fire hydrant distribution and must provide sufficient access for fire fighting equipment. This proposal must be submitted to the A.F.D.'s Plans Examination Division to determine compliance with the criteria noted above prior to acceptance by the A.F.D."
NEIGHBORHOOD COORDINATION	"No neighborhood association."

IT IS REQUESTED THAT THE APPLICANT/AGENT BE PRESENT AT THE HEARING.

cc: Ben Horton, 406 San Mateo, NE; 87108

APPLICATION FOR SUBDIVISION AND/OR VACATION

INSTRUCTIONS

PRINT OR TYPE IN BLACK INK ONLY. Use additional sheets if necessary. The completed application is to be submitted to the Planning Division by the applicant or agent. Each application must be accompanied by the filing fee (checks are preferred and made payable to the City of Albuquerque). All attachments must be submitted with the application and, after folding, shall not exceed 8 1/2 x 14 inches. Additional information may be obtained from the Planning Division (505) 766-7422.

APPLICATION FOR:

SUBDIVISION

___ Sketch Plat

X Preliminary Plat

___ Final Plat

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___ Public Right-of-Way

___ Private Way

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b. Agent (if any): None Telephone: ___

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(1) Lot(s)/Tract(s): Tract 3 Map 27 MRGCD,

(2) Block: ___

(3) Subdivision-Addition Name/MRGCD Map: ___

c. Location of Property by Streets: ___

d. Uniform Property Code: ___

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b. Number of Lots Existing: 1 Proposed: [redacted] 21 [redacted]

c. Number of Dwelling Units Existing: 0 Proposed: [redacted] 20 Townhouses

d. Total Land Area Covered by Request: Acres: Approx 7 Acres Sq. Feet: 305,200 sq Ft

4. (VACATION ONLY) REASON FOR REQUEST Use Separate Sheet: Why should the vacation be granted?

NA

5. ATTACHMENTS AS REQUIRED IN SUBDIVISION ORDINANCE See appropriate checklist(s).

PLANNING DIVISION INTERNAL USE ONLY

Cross-references: ___ No. Signs Issued: ___

Application and Fee Received by: Cynthia Jones Date: Feb. 6, 1984

Fee Paid: Dollars $ 140 Method of Payment: Eastick CREDIT: ___

TREASURER VALIDATION (2nd payment for DAB Subdivision)

MAP NO. D-15

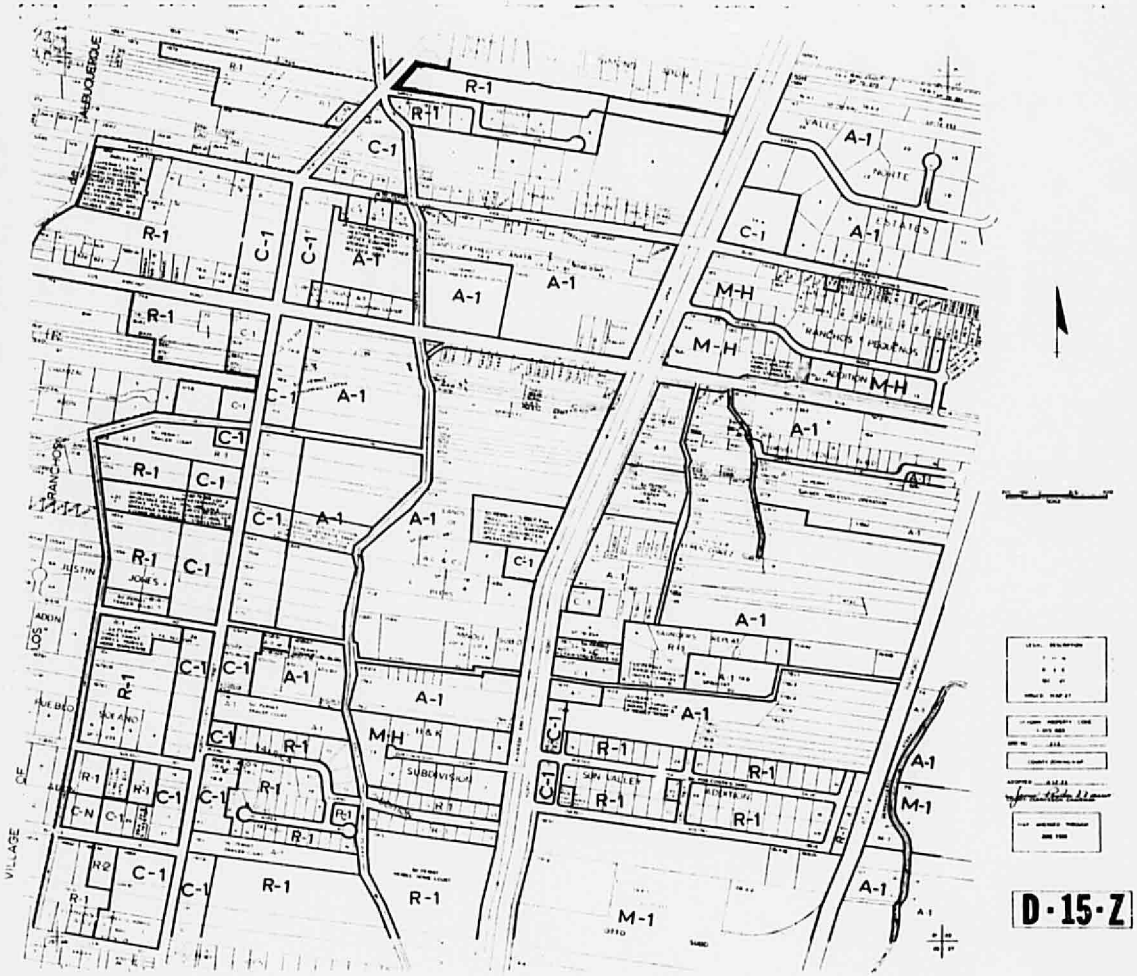
HEARING DATE: 3/6/84

Distribution: Secretary-Orig., Case File, Applicant/Agent, Treasurer

CASE NUMBER: 85-84-10

D-15-85-60

Rev. 1/83


R-1
C-1
A-1
M-H
M-1
R2
C-N
D-15-Z

INDEX

Re: Vista Ranchito, Sub Division ORB-93-600
8000 4th N.W. at Sara Lane SC-5-84-10
B.K. Horton 268-2030

A. Plot Plan (2 pages) (R. Bennett)
B. Final Building Plans (11 pages) (Rick Bennett)
C. Engineering Plans (Eng. Associates) (septic tanks, streets, bridge, flood plan, fire plan, drainage, topos, water soil tests, etc., 4 pages)
D. Final Sub Division Plat (Rodriquez)
E. Drainage Study Report and soil study (Moisman)
F. Developers Disclosure Statement (Horton)
G. Culvert and Bridge Permit and Plans
H. Approval of Bernalillo County Commission of this planned Project

D15

B. K. Horton and Associates
406 San Mateo Boulevard NE
Albuquerque, NM 87108

S P E C I A L U S E P E R M I T

No. 938.

At its meeting on November 15, 1983, the Board of County Commissioners, under the provisions of Section 16 of the Comprehensive Zoning Ordinance for Bernalillo County, authorized the location of a planned development area, on property described as Tract 3, MRGCD Map No. 27; zoned R-1/A-1 and located at 8000 Fourth Street NW.

The use of the property, described above, in the aforementioned manner and in conformance with the development plan as submitted and approved on February 8, 1984, is hereby authorized for the life of the use.

John R. Lucero
Building/Zoning/Planning Director
Bernalillo County
February 17, 1984.

Drainage Study

for

Vista Ranchitos Subdivision

Ben Horton, Developer

Engineering Associates, Inc.
1840 Lomas Blvd. N. E.
Albuquerque, New Mexico, 87106

PROJECT DESCRIPTION

The project is a subdivision which will include twenty townhouses on twenty lots, a paved extension of Sara Lane between fourth street and second street for access, and a mini storage warehouse building. A portion of the storm runoff from each lot will be retained on the lot with the remainder being discharged into the street. The street will convey the water to a storm facility as described in "DEVELOED SITE STUDY".

LOCATION AND LEGAL DESCRIPTION

The project address is 7900 Fourth St. N. W. The site extends from Fourth Street to Alemeda Drain and is currently used for agricultural purposes. The original legal description was Tract Three, Middle Rio Grande Conservancy District property map 27. The replatted legal description is Lots1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B, 6A, 6B, 7A, 7B, 8A, 8B, 9A, 9B, 10A, 10B, and Tract "A", Vista Ranchitos Subdivision. The county zone atlas page is D-15.

EXISTING SITE STUDY

The undeveloped use of the site is agricultural. It is irrigated and is used as a pasture. It slopes slightly from west to east with storm runoff being retained on the site. The drainage characteristics are as follows:

The area is 297610 Sq. Ft.(6.832 Acres)
The impervious portion is 0%
The soil classification is "B", VbA & Gb
(Soil Survey Sheet 11)
The "C" factor is 0.34
(Plate 22.2 C-1)
The runoff length is 2000 ft.
The slope is 0.19%
The Concentration time is .0078x(2000^.77)/(.0019^.385)=30 min
(10 min minimum)
The average velocity is 2000/(30x60)=1.1 ft/sec
The 100 year-6 hour precipitation amount is 2.2 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.2x0.657=1.45 in.
(Plate 22.2 D-1)
The 100 year intensity is 1.22x2.2=2.68 in/hr.
The 10 year intensity is 1.22x1.45=1.77 in/hr.
The 100 year flow rate is Q=CxIxA=0.34x2.68x6.832=6.23 cfs
The 10 year flow rate is Q=CxIxA=0.34x1.77x6.832=4.11 cfs.
The 100 year volume is V=CxPxA=0.34x2.20x297610/12=18551 cu. ft.
The 10 year volume is V=CxPxA=0.34x1.45x297610/12=12227 cu ft.

The entire runoff is detained on the site at the east end. It collects against the bank of the Alemeda drain.

OFFSITE FLOWS

A small offsite flow originating in Fourth Street enters the site at the west end. As it is currently constructed Fourth Street has no curb and gutter at this location. The westernmost 30 ft of the site has been designated as future right of way for Fourth Street. This strip will be graded to accept and detain the runoff from fourth street. The tributary area includes 4200 Sq. Ft. of paving and 8400 Sq. Ft. of natural ground.

The area is 12600 Sq. Ft.(0.289 Acres)
The impervious portion is 33%
The soil classification is "B", VbA & Gb
(Soil Survey Sheet 11)
The "C" factor is 0.49
(Plate 22.2 C-1)
The runoff length is 60 ft.
The slope is 1.0%
The Concentration time is .0078x(60^.77)/(.01^.385)=1.0 min
(10 min minimum)
The average velocity is 60/(10x60)=0.1 ft/sec
The 100 year-6 hour precipitation amount is 2.2 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.2x0.657=1.45 in.
(Plate 22.2 D-1)
The 100 year intensity is 2.15x2.2=4.73 in/hr.
The 10 year intensity is 2.15x1.45=3.12 in/hr.
The 100 year flow rate is Q=CxIxA=0.49x4.73x0.289=0.66 cfs
The 10 year flow rate is Q=CxIxA=0.49x3.12x0.289=0.44 cfs.
The 100 year volume is V=CxPxA=0.49x2.20x12600/12=1132 cu. ft.
The 10 year volume is V=CxPxA=0.49x1.45x12600/12=746 cu ft.

A depressed area in the future right of way will pond the 100 year volume.

DEVELOPED SITE STUDY

Developed Runoff will flow from west to east. Flow will be carried within the street which will have an inverted crown and drainage easements in drive areas. At the east end of the site it will be discharged into the Alameda Drain.

The governmental agency in charge of the Alemeda Drain is the Middle Rio Grande Conservancy District. In a review of Vista Ranchitos Mr. Subbas Shah of the Conservancy District indicated that their main concern was polution of the drain by oil and other material carried by the storm runoff. Water entering the drain is reused for irrigation downstream. He suggested the installation of a trap capable of intercepting and filtering the runoff. He also recommended that we obtain approval form the City of Albuquerque because it uses Alemeda Drain as a storm drain.

Mr. Jim Fink of the City of Albuquerque Engineers Office also reviewed our preliminary plans of Vista Ranchitos on Jan 3, 1984. He informed us that an extensive study of the pollution is currently underway. The study should be complete in approximately one year, and that if pollution due to storm runoff is found to be significant the City will install a large filter in Alemeda Drain at Tingley Lake. He did not feel that filters on individual sub-divisions were necessary. With regard to the runoff capacity of Alemeda Drain he informed us that the nearest inlet point is approximately three miles downstream. The peak flow at the inlet point from runoff originating in Vista Ranchitos would occur long after the peak inlet flow and therefore would not exceed the drains capacity.

The subdivision is designed so that runoff from the townhouse roofs and back yards of 14 of the lots will be retained on the site. All other runoff will be conveyed east and discharged into Alemeda Drain. Runoff originating in the Storage Units, driveways, streets, and front yards will be discharged into the drain.

The criteria and formulas used in calculating storm runoff is as follows:
The soil classification is "B", VbA & Gb
(Soil Survey Sheet 11)
The "C" factor varies with each lot
The Concentration time is 10 minutes.
The 100 year-6 hour precipitation amount is 2.2 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.2x0.657=1.45 in.
(Plate 22.2 D-1)
The 100 year intensity is 2.15x2.2=4.73 in/hr.
The 10 year intensity is 2.15x1.58=3.12 in/hr.
The flow rate is Q=CxIxA(Rational Formula)
The volume is V=CxPxA

A breakdown of the runoff retained on the site is as follows:

Lot	Imperv. Area	Grass Area	C	Volume Cu.Ft.
1A	2409	5493	0.48	695
1B	2435	3230	0.54	561
2A	2435	5625	0.48	709
2B	2409	4712	0.50	653
3A	1412	3672	0.47	438
3B	2409	5226	0.49	686
4A	2566	5075	0.50	700
4B	2566	5075	0.50	700
5A	2566	4995	0.50	693
5B	2566	4566	0.51	667
6B	2566	6273	0.47	762
7A	1412	2997	0.49	396
7B	1412	2324	0.51	368
10A	1412	4950	0.44	513
10B	1412	9432	0.40	795

Runoff which leaves the site is collected in the street and private drive areas and conveyed west to two drop inlets(a north inlet and a south inlet) at the west end of the property. Thise inlets are connected to Alemeda Drain by a 24 inch diameter pipe.

The runoff breakdown for the north inlet tributary is as follows:

Lot	Imperv. Area	Grass Area	C	V-100 Cu.Ft.	Q-100 CFS
Storage Units	66413	0	1.00	12176	6.641
1A	1364	4792	0.44	497	0.294
1B	2564	2921	0.56	563	0.56
2A	3206	2686	0.60	648	0.364
2B	2328	2891	0.55	526	0.312
3A	2636	2712	0.57	559	0.331
3B	2424	2822	0.56	539	0.319
4A	2544	3551	0.54	603	0.357
4B	2544	3551	0.54	603	0.357
5A	2544	3551	0.54	603	0.357
5B	2784	4649	0.51	695	0.412
6A	4905	4803	0.58	1032	0.611
6B	3168	2634	0.60	638	0.378
7A	1800	645	0.60	269	0.159
7B	1536	472	0.73	269	0.159
8A	1877	2067	0.55	398	0.235
8B	1778	1743	0.58	374	0.222
9A	1874	1767	0.58	387	0.58
9B	2108	2071	0.58	444	0.263

Between the storage units and lot 6B the runoff is carried by a 24 ft. wide roadway with a 6 inch inverted crown. It has a capacity of 11.42 CFS in accordance with the Manning Equation(See the attached calculation sheet). The cumulative runoff at this point is 11.166 CFS. Within the private driveway behind lots 7A, 7B, 8A, 8B, 9A, and 9B the cumulative runoff increases to 12.433 CFS. This driveway will be 20 ft. wide and have a depth of 8 in. Its capacity is 15.36 CFS(See the attached calculation sheet). At the drop inlet the flow rate of 12.433 CFS is carried by a 18 inch pipe which has a capacity of 14.90 CFS(see the attached calculation sheet).

A breakdown of the tributary area entering the south drop inlet is as follows:

Lot	Imperv. Area	Grass Area	C	V-100 Cu.Ft.	Q-100 CFS
Road	2520	264	0.87	444	0.263
7A	2340	2581	0.56	505	0.299
7B	2076	2028	0.58	436	0.258
8A	4067	2668	0.63	778	0.461
8B	3971	2620	0.63	761	0.451
9A	4067	2968	0.62	800	0.474
9B	4121	2970	0.62	806	0.477
10A	2172	2210	0.56	466	0.276
10B	2940	2016	0.63	572	0.339

The cumulative runoff of 3.298 CFS is carried by the 24 ft. wide street with 6 in. inverted crown. At this point it is picked up by the drop inlet. The street capacity is 11.24 CFS and the inlet capacity is 14.90 CFS.(see attached calculation sheets).

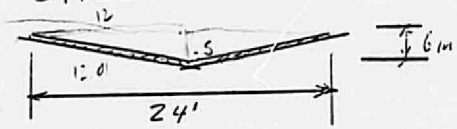
END OF REPORT

Q=(1.49/n)*Rh^(2/3)*S^(1/2)*A

SWALE

Width = 24.00 FT
Depth = .50 FT
n= .017
Area A= 6.00 SQ FT
Wetted Perimeter P=24.02 FT
Hydraulic Radius Rh=A/P= .25 FT
Slope S= .0030
Velocity V= 1.90 FPS
Flow Rate Q=11.42 CFS

STREET SECTION



MANNING EQUATION

Q=(1.49/n)*Rh^(2/3)*S^(1/2)*A

SWALE

Width = 20.00 FT
Depth = .67 FT
n= .017
Area A= 6.67 SQ FT
Wetted Perimeter P=20.04 FT
Hydraulic Radius Rh=A/P= .33 FT
Slope S= .0030
Velocity V= 2.30 FPS
Flow Rate Q=15.36 CFS

PRIVATE DRIVE SECTION

MANNING EQUATION

Q=(1.49/n)*Rh^(2/3)*S^(1/2)*A

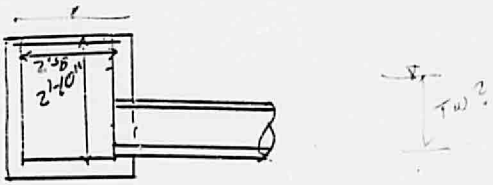
PIPE

DIAMETER = 18 IN

FLOWING FULL

n= .013
Area A= 1.77 SQ FT
Wetted Perimeter P= 4.71 FT
Hydraulic Radius Rh=A/P= .38 FT
Slope S= .0200
Velocity V= 8.43 FPS
Flow Rate Q=14.90 CFS

DROP INLET



Head loss at Entrance

$h_L = K_e V^2/2g = 0.5 \cdot 8.43^2/2 \cdot 32.2 = .56'$ head loss @ inlet

Freeboard 0.5' ⇒ water level = 1.81' from BOF

APPENDIX G

DISCLOSURE STATEMENT FORM FOR ALL SUBDIVISIONS CONTAINING FIVE OR MORE LOTS OR PARCELS OF LAND BUT NOT MORE THAN TWENTY-FOUR PARCELS

PLEASE READ THIS DISCLOSURE STATEMENT

BEFORE YOU

SIGN ANY DOCUMENTS OR AGREE TO ANYTHING

DISCLOSURE STATEMENT

This disclosure statement is intended to provide you with enough information to permit you to make an informed decision on the purchase or lease of property described in this statement. You should read carefully all of the information contained in this statement before you decide to buy or lease the described property.

The Planning Commission and Board of County Commissioners have examined this disclosure statement to determine whether the subdivider can satisfy what he has said in this disclosure statement. However, the Planning Commission and the Board of County Commissioners do not vouch for the accuracy of what is said in this disclosure statement. Further, this disclosure statement is not a recommendation or endorsement of the subdivision by either the County or the State. It is informative only.

Finally, the Planning Commission and the Board of County Commissioners recommend that you see the property before buying or leasing it. However, if you do not see the property prior to purchasing or leasing it, you have six months from the time of purchase or lease to inspect the property. Upon inspecting the property, you have three days from the date of inspection to rescind the transaction and receive all of your money back from the subdivider. You must give the subdivider notice of your intent to rescind within three days of your inspection of the property.

1. NAME OF SUBDIVISION

Vista Ranchitos Subdivision

2. NAME AND ADDRESS OF SUBDIVIDER

Ben Horton - 406 San Mateo, NE, Albuquerque, New Mexico 87108

3. NAME AND ADDRESS OF PERSON IN CHARGE OF SALES OR LEASING IN NEW MEXICO

(name)

(address)

4. WATER USE

Include here whether or not there will be water for domestic use, commercial use or recreational use and include any limitation, physical or legal, anticipated for each use indicated.

Domestic use water will be provided by means of an extension from the City of Albuquerque water system. There are no limitations

5. AMOUNT OF WATER

If the subdivider is to provide water for any use, he shall provide the following information:

Water is not provided by the subdivider

6. WATER DELIVERY*

Water will be conveyed within the street right of way through a 4 in. PVC line.

7. WATER SYSTEM EXTENSION*

Hook ups will be provided by the subdivider

8. LIFE EXPECTANCY OF THE WATER SUPPLY

N - A

9. WELLS ** NOTE: PROSPECTIVE OWNERS MUST PROVIDE THEIR OWN

N/A

10. SURFACE WATER**

*Not applicable if the subdivider does not intend to provide water for domestic use

**Not applicable if the subdivider intends to provide water for domestic use.

11. WATER QUALITY

N/A

12. LIQUID WASTE DISPOSAL

One 1500 gal. septic tank with two 7'-0" deep x 12' diameter drain pits will be constructed for each pair of townhouses.

NOTE: NO OTHER LIQUID WASTE DISPOSAL SYSTEM MAY BE USED IN A SUBDIVISION OTHER THAN THE SYSTEM APPROVED BY THE BOARD OF COUNTY COMMISSIONERS.

13. SOLID WASTE DISPOSAL

Garbage collection will be provided by subdivider. Disposel will be at a County approved dump site.

14. TERRAIN MANAGEMENT

~~Clay surface and~~ sandy subsurface soils are ~~suitable~~ for building support. A soil investigation report is available. Storm runoff is convayed through the street and drainage easement in an easterly direction to the Alameda drain. The site is not located within any floodways, flood fringes, or flood plains

15. SUBDIVISION ACCESS

Roadways will be paved with 4 in. of asphalt and 4 in of gravel beneath. Pavement width is 24' and will be completed before the townhouses are sold.

Owner/Developer

2-16-84

MIDDLE RIO GRANDE CONSERVANCY DISTRICT LICENSE

1. The Middle Rio Grande Conservancy District, with the approval of the Bureau of Reclamation, whose approval is noted heron, hereby licenses and permits the undersigned Licensee, who hereby accepts this license and agrees to be bound by its terms and conditions to

install and maintain a 6'0" Ø x 64' cmp for a public road crossing at the Alameda Interior Drain, station 404+76±.

at Alameda Interior Drain, Sec. 21, T.11 N, R.3 E, Map 27, station 404+76±

2. Licensee shall at its own expense, locate, construct, maintain and repair any structures or accessories permitted by this License and shall, at its own expense, bear all costs incurred by reason of the exercise of the privilege conferred by this License.

3. In the exercise of the privilege conferred by this license and the erection of any permitted structures or accessories, the following specifications and conditions must be complied with:

a. Installation shall be in accordance with attached drawing and shall be subject to inspection and acceptance by the Middle Rio Grande Conservancy District.

b. Any permitted installation must be completed within six months.

c. Two signed copies of the license must be returned to Middle Rio Grande Conservancy District.

4. The Licensee shall be liable for any and all damages to the property of the Middle Rio Grande Conservancy District, United States or any third party or parties by reason of the construction, maintenance or repair of any structures or accessories authorized by this license or by the exercise of the privilege conferred by this License. In addition, the Licensee agrees to indemnify and hold harmless the Middle Rio Grande Conservancy District and/or the United States, their agents and employees from any and all claims, demands, actions, or suits of any nature which arise as a result of this License including, but not limited to those which result from the construction, maintenance, use, state of repair, presence of any structures, accessories or exercise of the privilege conferred by this license.

5. This License shall continue so long as in the opinion of the Middle Rio Grande Conservancy District, it is considered to be expedient or not detrimental to the public interest or the interest of the Middle Rio Grande Conservancy District. This license shall be revocable by the Middle Rio Grande Conservancy District for any reason upon ten days written notice to the Licensee. Upon such revocation all structures and accessories shall be removed by the Licensee without delay at the expense of the Licensee and any rights which Licensee may have under this License are revoked. Revocation shall not release Licensee from any liability or obligation, whether of indemnity or otherwise, which may have attached, accrued, or was accruing at the time of such revocation. Notice of revocation shall be sufficient if mailed to Licensee at B. K. Horton, 406 San Mateo NE, Albuquerque, NM 87108

6. The privilege granted by this License shall not be exercised, nor shall any structure or accessory be constructed or maintained so as to obstruct in any manner the flow of water in the canals, laterals, ditches, or drains of the Middle Rio Grande Conservancy District or to interfere in any manner whatsoever with the construction, operation, maintenance and functions of the Middle Rio Grande Conservancy District. Removal, relocation, or protection of this installation (structure) necessitated by operation and maintenance of District works by the District shall be the responsibility of Licensee."

7. In order to allow the Middle Rio Grande Conservancy District to inspect the installation of any structures provided for in this License, the Licensee shall contact Mr. Robert White, Albuquerque Division Manager, telephone 243-6796 at the time construction is begun.

8. The Licensee hereby releases the Middle Rio Grande Conservancy District and the United States, their agents and employees from any and all claims for damage to property, personal injury, or death that may arise as a result of the location, erection, maintenance, repair, use, or presence of the structures or accessories provided for herein or as a result of the exercise of the privilege conferred by this license.

9. If, at any time, the Licensee shall in the judgment of the Middle Rio Grande Conservancy District, fail to properly perform any of its obligations or covenants under this agreement, the Middle Rio Grande Conservancy District may, at its option, perform or have performed such work as it deems necessary for the safe operation of the works of the Middle Rio Grande Conservancy District or to protect the property of the Middle Rio Grande Conservancy District, the United States, any third party, or the public, in such event, licensee agrees to pay the cost incurred plus the cost of supervision and handling within thirty (30) days after a bill is rendered. The failure of the Middle Rio Grande Conservancy District to elect to perform the obligations of the Licensee shall not release the Licensee from liability for any loss or damage occasioned thereby. By giving the Middle Rio Grande Conservancy District the right to perform any of the obligations or covenants of Licensee under this License, it is not the intent of the parties to confer any rights on the Licensee or any third party or to create any additional liability on the Middle Rio Grande Conservancy District.

LICENSE VOID IF 2 COPIES NOT RETURNED TO MIDDLE RIO GRANDE CONSERVANCY DISTRICT

Hydroseeded
Armco Steel
Corrugated metal Pipe

10. If the Middle Rio Grande Conservancy District is required to bring suit in any court for the purposes of enforcing this agreement or any provisions or portions thereof, the Licensee shall be liable for all costs incurred and for reasonable attorney's fees.

11. The Licensee upon completion of the work, shall advise the Middle Rio Grande Conservancy District and the license issued to him shall be signed and approved by the District signifying final construction approved.

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

BY: Charles R. Martinez
General Manager

DATE: August 26, 1983

BY: [illegible] dredger + dozer
Licensee

DATE: 1-25-84

APPROVED:

BUREAU OF RECLAMATION

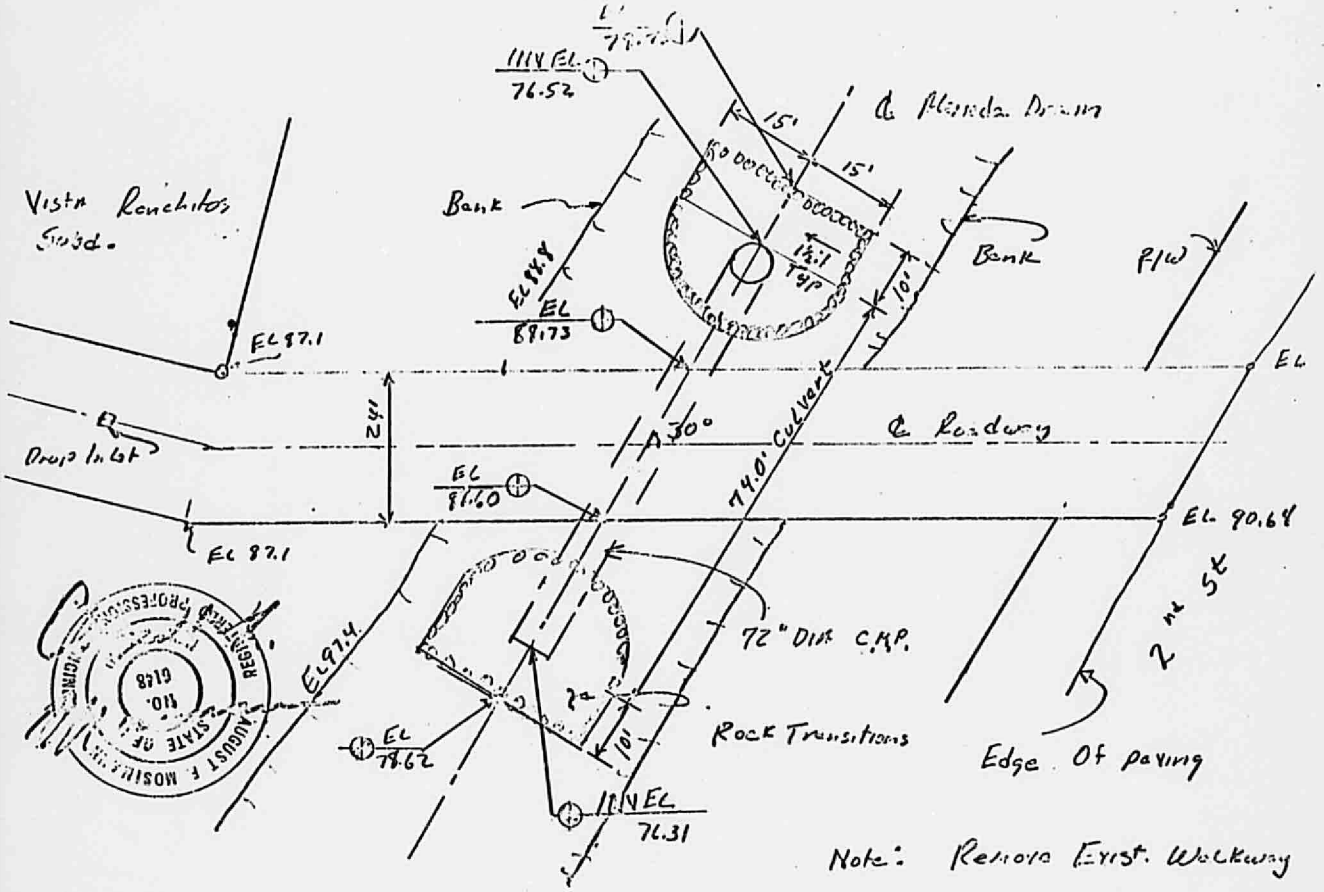
BY: Harley M. Bowe

DATE: 10/6/83

FINAL CONSTRUCTION APPROVED:

BY: _____

DATE: _____



Engineering Assoc. Inc.
Consulting Engs.
Alb. N.M.

Feb 2 1984

SARAH RD CROSSING
AT
ALEMEDA DRAIN

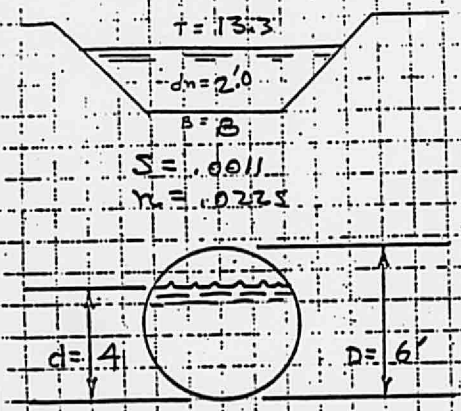
MIDDLE RIO GRANDE
CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6795
ALBUQUERQUE, NEW MEXICO 87103

CANAL ALAMEDA INTERIOR DRAIN

STATION 404+76 SHEET 1 OF 3

CALCULATED BY M. J. CHAVEZ DATE 8/83

SURVEYED X-SECTION



$S = .0011$

$n = .0225$

$A = \left[\frac{T+B}{2}\right] dn = 24.30$

$WP = \sqrt{\left[\frac{T-B}{2}\right]^2 + dn^2} + B = 14.64$

$R = A/WP = 1.65$

$V = \frac{1.486\, S^{1/2} R^{2/3}}{n} = 2.80$

$Q = VA = 59.64$

$hv_c = V^2/2g = .12$

$d/D = .67$

$A = D^2(.5594) = 20.14$

$R = D(.2917) = 1.75$

$V = Q/A = 2.96$

$hvp = V^2/2g = .14$

AREA OF PIPE NEEDED

$Q/V_{MAX} = 17.04$

LOSSES THRU PIPE

$hi = .5(hvp - hvc) = .01$

$ho = 1.(hvp - hvc) = .02$

$h_f = L\frac{(V_p)^2 (n_p)^2}{2.2\,(R_p)^{4/3}} = .08$

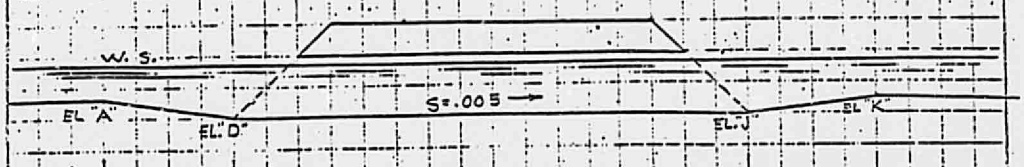
TOTAL LOSSES = .11

RIO GRANDE
CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

CANAL ALAMEDA INT. DRAIN

STATION 404+76 SHEET 2 OF 3

CALCULATED BY M. J. CHAVEZ DATE 8/3



EL "A" FROM REHAB PROFILE ___ = 497.873

W.S. EL @ "A" = EL "A" + dn _____ = 498.073

W.S. EL @ "K" = W.S. @ "A" − L (Sc) ___ = 498.062

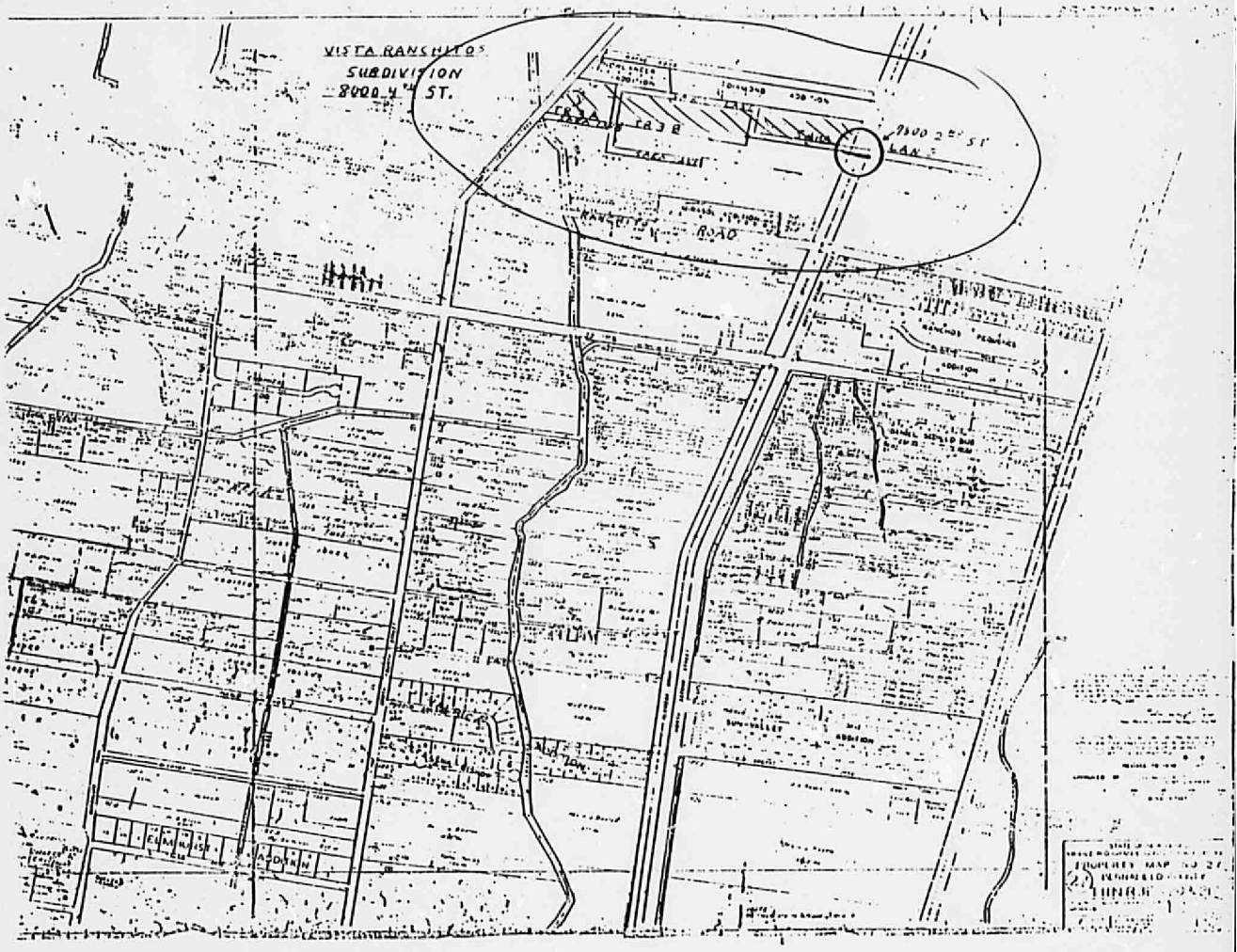
h_A = .11

EL "D" = W.S. @ "A" − d + 1.5 (h_{cp}) _____ = 497.852

EL "J" = EL "D" − .005 (L_p) _____ = 497.631

EL "K" = EL "A" − h_A _____ = 497.862

BACKED WATER AT "A" = h_f − h_A = .11 − .11 = Ø


VISTA RANCHITOS
SUBDIVISION
8000 4th ST.
RANCHITOS ROAD

MIDDLE RIO GRANDE CONSERVANCY DISTRICT
POST OFFICE BOX 581
1930 SECOND ST., S.W. PHONE 243-6796
ALBUQUERQUE, NEW MEXICO 87103

PROCEDURE TO BE FOLLOWED IN INSTALLING
OR ERECTING STRUCTURES

All grades and elevations shall be furnished by the Middle Rio Grande Conservancy District. Contact the District Engineer, Telephone No. 243-6796. The request for grades or elevations should be made at least five days before the beginning of construction. Inspection of construction shall be performed by the Middle Rio Grande Conservancy District.

IMPORTANT

If the structure is not installed in accordance with furnished grades, elevations and conformance with furnished plans, said license will be revoked in accordance with Clause 3a which provides for removal of structure at the expense of the licensee upon a 30-day written notice.

DRAINAGE CRITERIA

DETERMINATION OF RATIONAL FORMULA 'C' FACTOR

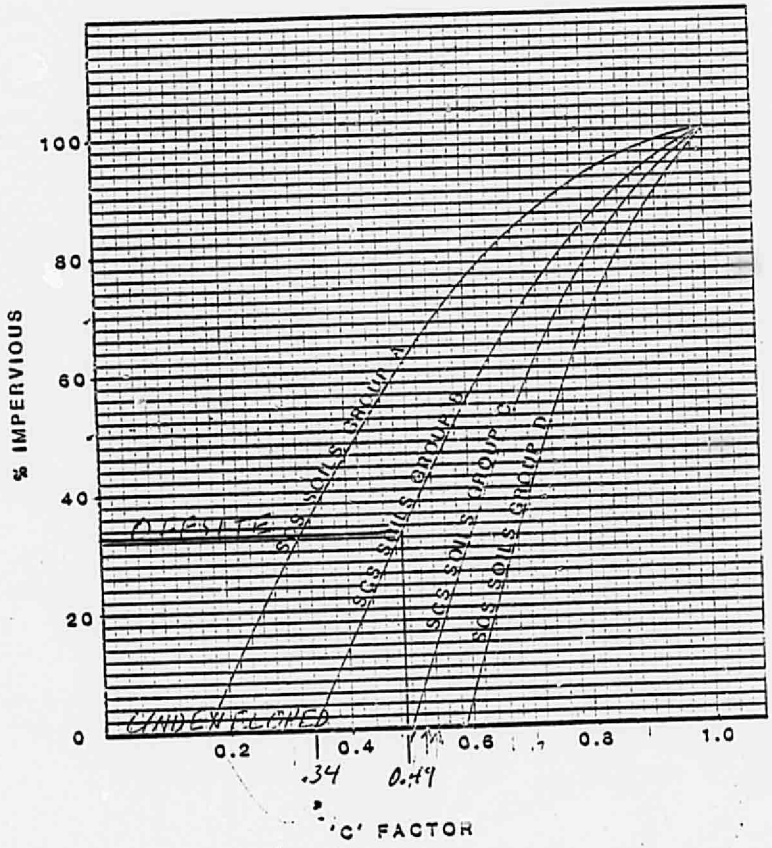
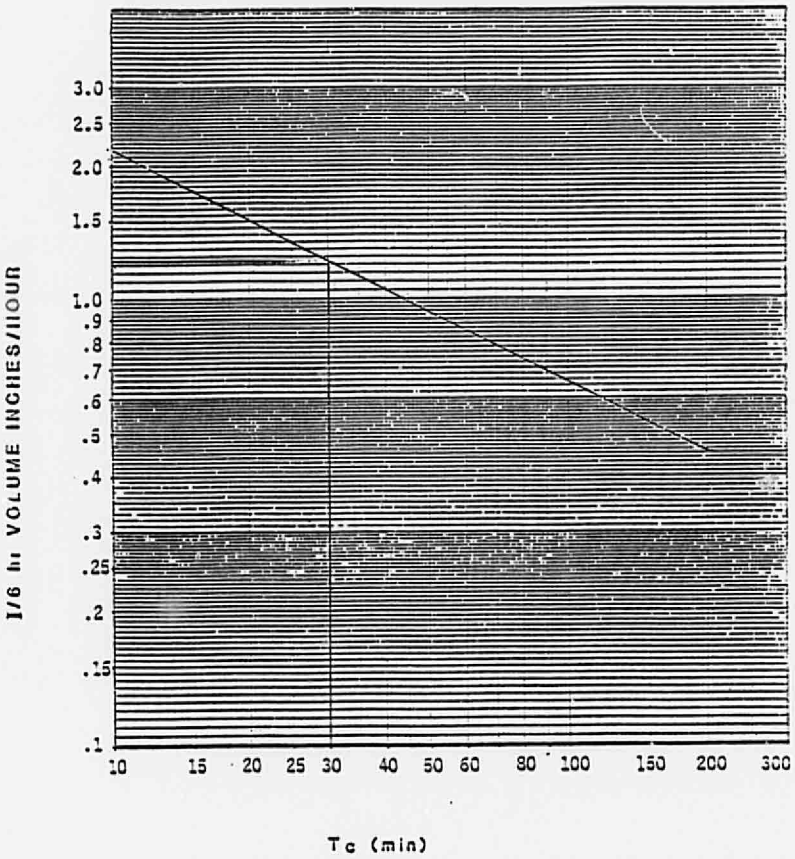


PLATE 22.2 C-1

4-82

DIMENSIONLESS RAINFALL INTENSITIES

$I=(\bar{a}\text{-hr. rain})3.84\ t_c^{-0.51}$



note: To get actual intensities, multiply rainfall volume from plate D-1 by value from curve. Use reduction factors on Plate D-1 for other than 100-yr.

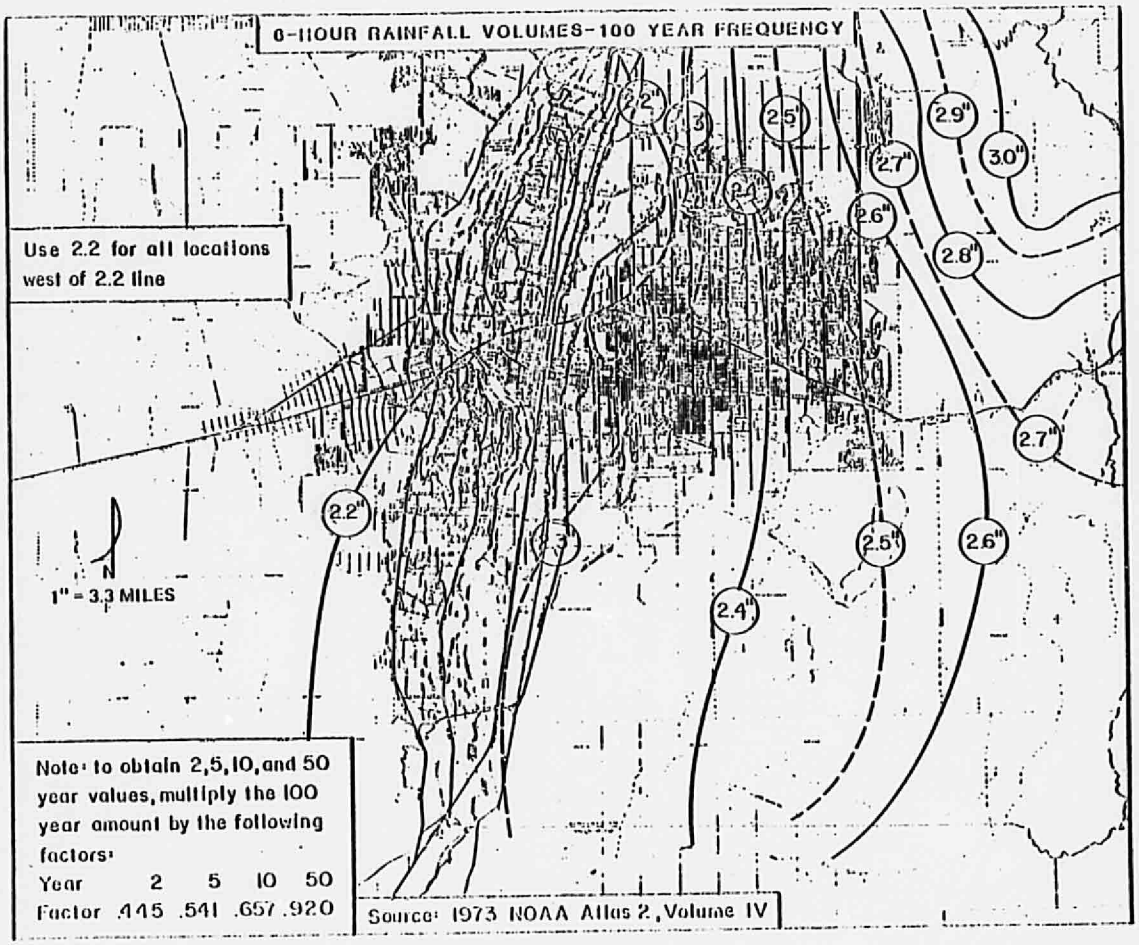


PLATE 22.2 D-1

22.2