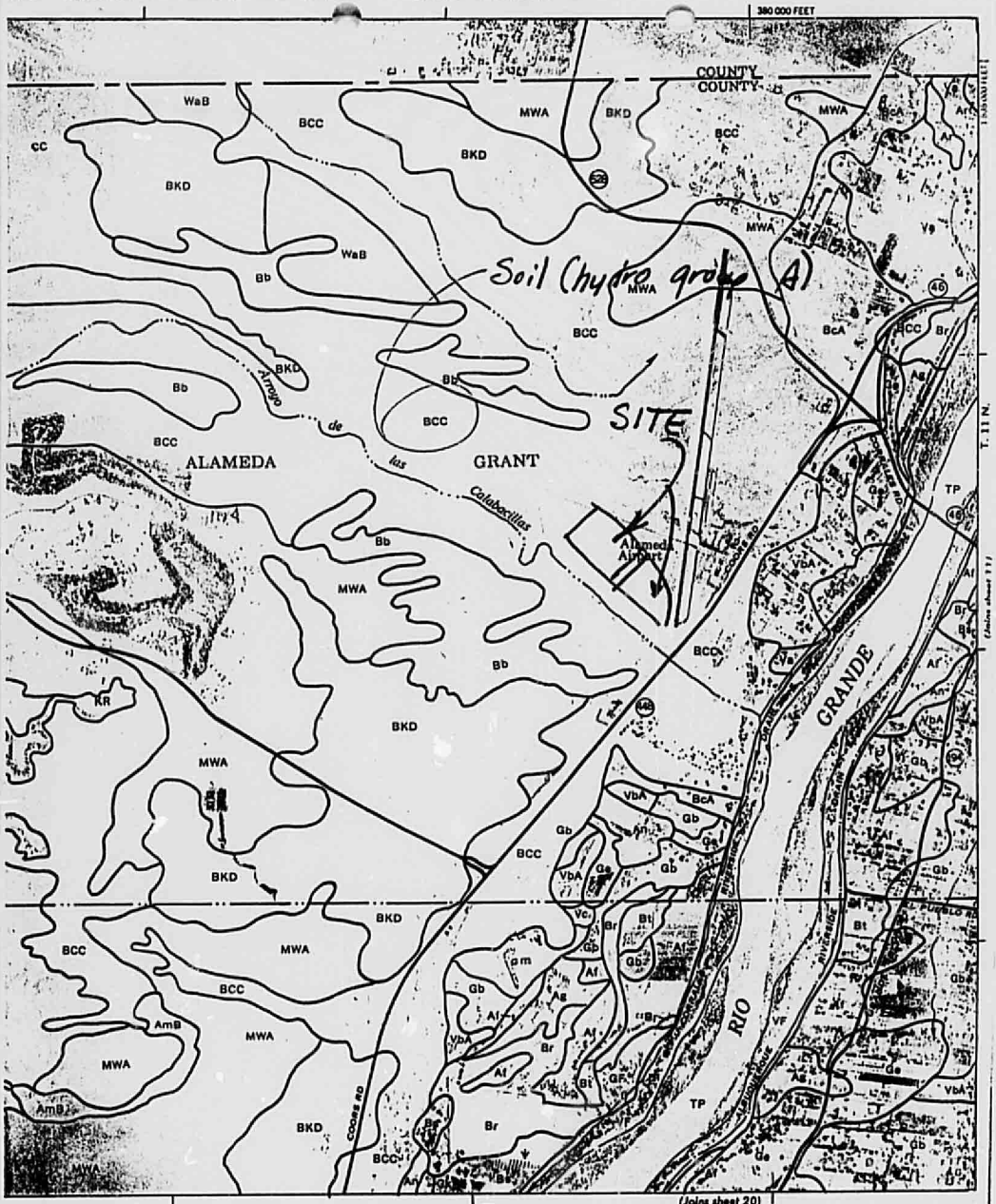
HYDROLOGY B13/D3 1 of 2 3 PLANS

B13/D3

3 Plans

AND VALENCIA COUNTIES, NEW MEXICO — SHEET NUMBER 10



SOILS MAP

ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: B13 DATE: 9-4-85

PLANNING DIVISION NOS: EPL: _____ DRB: _____

SUBJECT: Westside Auto Parks

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: 7 BAR SECTOR PLAN (Unplatted land)

APPROVAL REQUESTED:

____	PRELIMINARY PLAT	____	FINAL PLAT
✓	SITE DEVELOPMENT PLAN	____	BUILDING PERMIT
____	OTHER	____	ROUGH GRADING

ATTENDANCE:	WHO	REPRESENTING
	Tom Isaacson	
	Fred J Aguirre	

FINDINGS:

1. Resolution regarding phasing of infrastructures needed for the "Seven Bar Sector Plan" is required prior to any subdivision/site pl approval

2. An approved conceptual grading & drainage plan is appropriate for site approval if the following conditions are satisfied:
   A. Resolution of item 1 above
   B. No significant on-site infrastructures are required for development

3. Recommend another pre-design meeting to identify requirements for building permit process.

4. Bank protection is not required if no development encroaches within the prudent line established by the Simons & Li Study.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	Fred Aguirre	SIGNED:	Tom Isaacson
TITLE:		TITLE:	
DATE:	9/4/85	DATE:	9-4-85

NOTE: PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

B13/D3

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR KEN SCHULTZ | CHIEF ADMINISTRATIVE OFFICER GENE ROMO | DEPUTY CAO PUBLIC SERVICES FRANK MARTINEZ | DEPUTY CAO PLANNING/DEVELOPMENT BILL MUELLER

RECEIVED MAY 14 1987 HYDROLOGY SECTION

May 13, 1987

Mr. Cecil Van Tuyl
V.T., Inc.
c/o John Myers, Jr.
Johnson & Lanphere, PC
Attorneys and Conunselors at Law
6400 Uptown Blvd., NE 200 West
Albuquerque, NM 87190

RE: PROJECT #3040 & 3082 - V.T. INC. AUTO PARK OFFSITE IMPROVEMENTS

Dear Mr. Tuyl:

Enclosed are executed copies of the Agreement to Construct Subdivision Improvements (2 separate agreements), and Letters of Credit for the above noted projects.

Please call me if I may be of further assistance.

Sincerely,

Della Gallegos

Della Gallegos
Administrative Assistant

Enclosures

cc: Fred Aguirre, Hydrology, Utility Dev., Div.,Engineering Group/PWS
Bohannan-Huston, Inc.
Project File #3042 & 3082

DG/mr(2582E)

~~MAR 31 1987~~

(Procedure "B")
"Modified" #3041
#3082

816

08748199

AGREEMENT TO CONSTRUCT
SUBDIVISION IMPROVEMENTS
(Water and Waste Water)

THIS AGREEMENT made this 5th day of May, 1982, by and between the City of Albuquerque, New Mexico (hereinafter referred to as "City") and V.T. Inc., a Missouri Corporation (hereinafter referred to as "Developer") pursuant to Section 6 of the City's Subdivision Ordinance (Enactment No. 56-1983, effective June 29, 1983).

WHEREAS, the Developer is developing certain lands within the City of Albuquerque, County of Bernalillo, State of New Mexico known as Tract N-1, Seven Bar Ranch, as the same is shown and designated on the plat entitled "TRACTS N-1, N-2 AND H-1, SEVEN BAR RANCH (hereinafter referred to as the "Subdivision"); filed in the Office of the County Clerk of Bernalillo County, New Mexico, on November 13, 1986; and

WHEREAS, the Developer has submitted and the City has approved a preliminary plat identified as TRACTS N-1A AND N-1B, SEVEN BAR RANCH", City of Albuquerque, Bernalillo County, New Mexico" describing the Subdivision; and

WHEREAS, Section 6 of the City's Subdivision Ordinance requires the Developer to install and construct certain public improvements at no cost to the City; and

WHEREAS, the Water and Wastewater Improvements which are the subject of this agreement will be installed within the franchise area granted to New Mexico Utilites, Inc. by the City; and

WHEREAS, the preliminary plat submitted by the Developer proposes public infrastructure improvements within the Subdivision: and

WHEREAS, the City requires the execution of an Agreement to construct said public improvements, together with actual satisfactory construction or acceptable guarantees of construction as specified below, as a prerequisite to approval of a Final Plat of the Subdivision; and

WHEREAS, the Developer must obtain City approval of construction plans, specifications, and cost estimates for the improvements; and

WHEREAS, the Developer has divided its obligation to construct the improvements into two (2) Subdivision Improvement Agreements, this Agreement for water and waste water and a second agreement (the "Second Agreement") for streets and storm drainage; and

WHEREAS, the Developer financially guarantees the satisfactory completion of the infrastructure construction required herein and the payment of all labor and material costs and charges, all as set forth and specified in Exhibit "C", which is attached hereto and incorporated herein as if fully set forth in this Agreement;

NOW, THEREFORE, in consideration of the above, the City and the Developer hereby agree as follows:

1. The Developer shall, on or before the 23rd day of November, 1987, complete to the reasonable satisfaction of the City the improvements required for the Subdivision as set forth, specified and referenced in Exhibit "A" attached hereto. The improvements which the Developer shall satisfactorily complete within the time limitation stated above are described and identified in Exhibit "D", which is attached hereto and incorporated herein as fully set forth in this Agreement. The Developer shall also be responsible for the construction of the improvements listed under the headings Transportation and Drainage in Exhibit "D", however, these obligations shall be performed pursuant to the terms of the Second Agreement.

The time limitation stated above may be extended by the City Engineer for a period not to exceed twelve (12) months if the Developer shows adequate reasons for said extension.

2. After execution of this Agreement, payment of all fees as specified in Exhibit "A" attached hereto, and, if applicable, delivery of the financial guarantee specified in Exhibit "C" attached hereto, the Developer shall be issued a Construction Permit by New Mexico Utilities, Inc., (hereinafter referred to as "NMU"). The Developer shall advise the City Engineer in advance of the actual start of construction and arrange for all inspections required and specified in Exhibit "B" attached hereto. The Developer shall permit the City or other participating agencies to make such tests and inspections during the construction of the improvements and upon completion of the improvements as are necessary or desirable.

3. Prior to final approval of the completed public improvements by the City, the Developer shall furnish to the City Engineer all documentation of the completion of construction as set forth and specified in Exhibit "A" attached hereto.

4. Until approval of the improvements by the City, the Developer shall be solely responsible for maintaining the premises being subdivided in a safe condition. The Developer agrees to defend, indemnify and hold harmless the City and its officers, agents and employees from and against all suits, actions or claims of any character brought because of any injury or damage arising out of the design or construction of the improvements or by reason of any act or omission, or misconduct of the Developer, his agents, employees or the Engineer or Contractor or their agents or employees. The indemnity required hereunder shall not be limited by reason of the specifications of any particular insurance coverage in this Agreement. Nothing herein is intended to impair any right or indemnity under the laws of the State of New Mexico.

5. If the Developer has requested Final Plat approval by the City prior to the actual construction of the improvements, the City will approve the Final Plat for recordation upon execution of this Agreement, payment of all fees specified in Exhibit "A" attached hereto, delivery of the financial guarantee specified in Exhibit "C" attached hereto and full compliance with the City's Subdivision Ordinance, and execution of the Second Agreement and performance of all of its requirements.

6. This Agreement shall not be assigned except with the written consent of the parties hereto and the express written concurrence of any surety who has undertaken to guarantee the completion of the Improvements. If so assigned, this Agreement shall extend to and be binding upon the successors and assigns of the parties hereto.

7. In the event of the sale, conveyance, or assignment of the Subdivision or any portion thereof, the City will not release the Developer from its obligations under this Agreement and will continue to hold the Developer responsible for all Improvements until a successor in interest to the Developer has posted a suitable guarantee and entered into a Subdivision Improvement Agreement with the City. At such time as acceptable security has been posted by the Developer's successor in interest and the Agreement executed, the City will release the guarantee.

8. Should there be a conflict between the terms and conditions of this Agreement (with Exhibits A, B, C, and D) and the terms and conditions of any other document referred to herein, the terms and conditions of this Agreement (with Exhibits A, B, C, and D) shall govern.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

DEVELOPER

Signed

Cecil Van Tuyl
Name

Pres.
Title

CITY OF ALBUQUERQUE, NEW MEXICO

Walter H. Nickerson, Jr., City Engineer
Utility Development Division/Design Review
Engineering Group-Public Works Dept.

Gene Romo
Chief Administrative Officer

ATTEST:

City Clerk

REVIEWED BY:

Assistant City Attorney

City Attorney

STATE OF KANSAS)
) ss.
COUNTY OF JOHNSON)

The foregoing instrument was acknowledged before me this 10th day of April, 19 87, by Cecil Van Tuyl of V.T., INC. a Missouri Corporation.

Notary Public

NONA P. MARTIN
My Appt. Exp. _____

My Commission Expires:

May 4, 1989

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 5th day of May, 19 87, by Gene Romo, Chief Administrative Officer of the City of Albuquerque.

Notary Public

My Commission Expires:

3-17-90

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD
87 MAY -8 PM 4:03
BK M5484A PG 816-836
GLADYS M. DAVIS
CO.CLERK & RECORDER
DEPUTY

Rev. 3/87

-5-

EXHIBIT "A"

TO SUBDIVISION IMPROVEMENT AGREEMENT
EXECUTED BY AND BETWEEN V.T., INC. (DEVELOPER)
AND CITY OF ALBUQUERQUE, NEW MEXICO (CITY) ON
THE 5th DAY OF May, 1987.

1. COMMITMENT TO CONSTRUCT IMPROVEMENTS.

The Developer shall construct in a manner reasonably satisfactory to the City the improvements listed in Exhibit "D" under the headings Water and Sewer to the Subdivision Improvement Agreement and which are shown in greater detail on the Developer's proposed and approved Subdivision Improvements Plan, which was filed with the office of the City Engineer and identified as Project No. 3082.

2. DESIGN AND CONSTRUCTION METHODS.

As soon as reasonably practical after approval of the Developer's Preliminary Plat of the Subdivision, the Developer shall submit to the City Engineer final construction plans, specifications, and cost estimates for the proposed public improvements. At this time, the Developer shall pay all fees required under Section 12.D of the City's Subdivision Ordinance and Paragraph 4 of this Exhibit.

The Developer has engaged Isaacson & Arfman as Engineer(s) for the construction project, who are Registered Professional Engineers in the State of New Mexico. The Developer shall ensure that the Engineer(s), in such capacity, shall provide the following services prior to construction of the improvements:

a. Design of the improvements;

b. Preparation of final working drawings; and

c. Coordination through plan approval process.

The Developer shall ensure that the Engineer(s) perform all of the above services in a reasonably satisfactory manner and submit to the City Engineer any reports required by the City Engineer.

The Developer will engage Contractors who are properly licensed in the State of New Mexico and will notify the City Engineer of selection in writing prior to issuance of a work order. The Developer shall ensure that the Contractors, in such capacity, shall in a manner reasonably satisfactory to the City construct the improvements as shown on Developer's proposed Subdivision Improvements Plan (Project No. 3082), incorporating any change orders approved by the New Mexico Utilities, Inc. ("NMU") and/or the City Engineer, City of Albuquerque Interim Standard Specifications for Public Works Construction, 1985, and all other applicable laws, regulations, and policies. Construction surveying and testing shall be performed as set forth in Exhibit "B" of the Subdivision Improvement Agreement between Developer and the City.

3. COMPLETION OF CONSTRUCTION.

The Developer shall report the completion of construction in writing to the City Engineer and/or NMU. Upon receipt of the report, the City Engineer, NMU or their respective representative shall visually inspect the public improvements to verify completion of construction according to plan. Subsequent to verification, the Developer shall submit to NMU or the City Engineer a "final acceptance package", which shall consist of the following documents·

a. "As-built" drawings of reproducible quality, depicting all construction of the public improvements as actually accomplished in the field and certified by a New Mexico Registered Professional Engineer or Land Surveyor, as appropriate,

b. A list of quantities of contract items in place, using the bid items in the City Engineer Standard Estimated Unit Prices. This list shall be divided into the following categories as applicable:

(1) Sanitary sewer items and quantities;

(2) Water service items and quantities;

(3) Street paving quantities;

(4) Street curb and gutter quantities; and

(5) Storm drainage improvements and quantities.

The City or NMU shall concurrently provide a written certification from the City Engineer or the President of NMU that the construction has been performed in substantial compliance with the City of Albuquerque Interim Standard Specifications for Public Works Construction, 1985, and with the approved final plans and specifications for public improvements. If the City is acting as the Contractor for all or a portion of the improvements constructed pursuant to this Agreement, the City shall prepare its own final acceptance package documents for those improvements actually constructed by the City.

Upon receipt of the Developer's "final acceptance package", the City Engineer or NMU shall review it for completeness and accuracy. If the documentation has been satisfactorily completed, the City Engineer or NMU shall approve the package and issue a Certificate of Completion and Acceptance. Any financial guarantee provided by the Developer in accordance with Section 6.D.2 of the City's Subdivision Ordinance and as described in Exhibit "C" to the Subdivision Improvement Agreement between the Developer and

the City shall be released as soon as possible after the City's or NMU's approval of the final acceptance package by the City Engineer or NMU, but in any event, no later than sixty (60) days after such approval. The Developer shall provide the City with copies of "as built" drawings and copies of all permits for the improvements.

4. PAYMENT OF FEES.

Prior to issuance of a Work Order, the Developer shall pay to the City and NMU the following fees:

Type of Fee	Amount
Engineering Fee	6% of actual const. cost for improv. (to N.M. Utilities)
City Review	~~1% of actual const. cost for improv. (to City)~~ All
Excavation Ordinance Fee	As required per City approved engineer's estimate

Prior to final acceptance of the improvements by the City or NMU, the Developer shall pay any other City or NUM fees which may have been incurred during the course of construction.

EXHIBIT "B"
TO SUBDIVISION IMPROVEMENT AGREEMENT
EXECUTED BETWEEN V.T. INC. (DEVELOPER)
AND THE CITY OF ALBUQUERQUE (CITY)
ON THE 5th DAY OF May, 1987.

1. CONSTRUCTION INSPECTION METHODS.

Inspection of the subdivision improvement construction shall be performed by NMU, in accordance with all applicable laws, ordinances and regulations. If said inspection is performed by an entity other than the City, the City may monitor said inspection and the Developer shall ensure that the inspecting entity provides all inspection results, reports and related data to the City as required for review. The City retains the right to perform its own general overall inspection of the construction project at any time prior to final acceptance of the improvements if deemed necessary or advisable by the City Engineer. For any inspections performed by the City, the Developer shall pay to the City a reasonable fee therefor.

2. CONSTRUCTION SURVEYING.

Construction surveying for the subdivision improvement project shall be performed by Contractors who are properly licensed in the State of New Mexico and Developer will notify NMU and the City Engineer of selection in writing prior to issuance of construction permit by NMU in accordance with all applicable laws, ordinances and regulations. If said construction surveying is performed by an entity other than the City, the City may monitor said construction surveying and the Developer shall ensure that the construction surveying entity provides all construction surveying field notes, plats, reports and related data to the City as required for review. If any construction surveying is performed by the City, the Developer shall pay to the City a reasonable fee therefor.

3. FIELD TESTING.

Field testing of the subdivision improvement construction shall be performed by a certified testing laboratory under the supervision of a New Mexico Registered Professional Engineer, in accordance with the technical standards contained in the applicable contract documents and all applicable laws, ordinances and regulations and Developer will notify City Engineer and NMU of selection in writing prior to issuance of work order by NMU. If any field testing is performed by an entity other than the City, the City may monitor said field testing and the Developer shall ensure that the field testing entity provides all field testing results, reports and related data to the City as required for review. If any field testing is performed by the City, the Developer shall pay to the City a reasonable fee therefor.

4. RECORD TESTING.

Notwithstanding the provisions of Paragraph 3 above, the City retains the right to perform any and all record testing which may be deemed necessary or advisable by the City Engineer at the expense of the Developer.

EXHIBIT "C"
TO SUBDIVISION IMPROVEMENT AGREEMENT
EXECUTED BETWEEN V. T. Inc. (DEVELOPER)
AND THE CITY OF ALBUQUERQUE (CITY) ON
THE 5th DAY OF May, 1987.

827

1. PLAT APPROVAL STATUS

The Developer has requested final plat approval by the City prior to construction of the Subdivision Improvements described in Exhibit "D" to the Subdivision Improvement Agreement. If the Developer has not requested final plat approval prior to construction of the improvements, no financial guarantee is required by the City. However, the Developer understands and agrees that the City will not approve the Developer's proposed plat until the improvements are completed in accordance with the Agreement to which this document is attached as an Exhibit and in accordance with the Second Agreement.

If the Developer has requested final plat approval prior to the construction of the improvements, a financial guarantee in an amount equal to 125 percent of the costs of completing the improvements (as estimated by the City Engineer) is required pursuant to the City's Subdivision Ordinance. Said financial guarantee must be irrevocable in form and may be effected by a bond, letter of credit, escrow deposit, or other acceptable pledge of liquid assets payable to New Mexico Utilities, Inc. ("NMU") and secondarily to the City in the event of Developer's default under the Subdivision Improvement Agreement.

2. FINANCIAL GUARANTEE

With respect to the Subdivision Improvement Agreement to which this document is attached as an Exhibit, the Developer has acquired or is able to acquire the following described financial guarantee (described fully, indicating amount, identification number, names of bank or bonding entity, inclusive dates of guarantee, and all other relevant information):

Letter of Credit from the First Continental Bank and Trust, Overland Park, Kansas No. 00480 in the amount of $493,101.00, effective for the period from November 23, 1987 to Janaury 23, 1988.

The Developer understands and agrees that the original executed financial guarantee described above must be delivered to the City simultaneously with the City's execution of the Subdivision Improvement Agreement between Developer and the City; and must be in an amount of not less than 125 percent of the cost of completing the improvements, as estimated by the City Engineer.

In the event the Developer shall fail or neglect to fulfill his obligations under this Agreement, NMU first, then the City second, shall have the right to construct or cause to be constructed the Improvements specified herein, as shown on the Final Plat and in the plans and specifications as approved, and the Developer as Principal and the surety or sureties shall be jointly and severally liable to pay to and indemnify NMU or the City, the total cost to the City thereof, including but not limited to, engineering, legal, and contingent costs together with any damages, either direct or consequential, which the City may sustain on account of the failure of the Developer to carry out and execute all of the provisions of the Agreement to which this document is attached as an Exhibit. NMU first, the the City second, shall have the unconditional right to call upon the financial guarantee provided by the Developer described in this paragraph for the purposes specified and in the amounts enumerated in such guarantee.

3. PROCEDURES FOR REDUCTION OF FINANCIAL GUARANTEE UPON PARTIAL COMPLETION OF IMPROVEMENTS.

The Developer may request a reduction in the amount of financial guarantee upon partial completion of the subdivision improvements. To qualify for a financial guarantee reduction, the completed improvements must be of a free-standing nature, functionally independent of any uncompleted improvements, and completed in substantial compliance with the subdivision improvement construction plans as determined by an inspection conducted by the City or NMU.

If the completed improvements meet the above requirements, the City Engineer or NMU will then estimate the cost of completing the remaining improvements. The Developer may then submit the following documents to the City for review and approval:

a) A revised financial guarantee in an amount of not less than 125 percent of the City Engineer's estimated cost of completing the remaining improvements;

b) A release of the original financial guarantee for execution by the City and NMU;

c) Documentation that the completed improvements and the land in which the completed improvements are located are subject to no liens, claims or other encumbrances;

d) A bond or other suitable instrument guaranteeing the completed improvements against defective materials, workmanship and design for a period of three (3) years as set forth in Paragraph 7 of the Subdivision Improvement Agreement between the Developer and the City.

Upon receipt of the above-described documents in forms acceptable to the City and/or NMU, the City and NMU shall issue a Certificate of Completion and Acceptance for the completed improvements and shall accept the revised financial guarantee tendered by the Developer.

D.R.C. Case No. S-86-53
DRB-86-527
D.R.C. Project No.
Date Submitted 11-5-86

830

EXHIBIT "D"
to Subdivision Improvements Agreement

D.R.B. REQUIRED INFRASTRUCTURE LISTING
for
V.T. Inc. Auto park Offsite Infrastructure Improvements

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development.

TRANSPORTATION

Size	Type Improvement	Location	From	To
613 LF	3-Lane temporary pavement/ 44' wide at Coors Blvd. transitioning to 24' wide 613 LF west of Coors Blvd. Note: Asphalt curb will be provided for approximately 210 LF. Pavement thickness to be 3" over 12" compacted subgrade (in place).	By-Pass Rd.	Coors Blvd	Point 613 LF West of Coors Blvd.
1725 LF	24' arterial pavement, concrete curb & gutter, 6' sidewalk, asphalt median curb. Permanent cross-section widens to temporary pavement for approximately 952 LF to provide left hand turning movement at Eagle Ranch. Maximum width of this temporary pavement will be 12'. Deceleration lane into auto park property will be provided east of the By-Pass Road/Eagle Ranch Road intersection. A channelized entrance will also be provided at this entrance. A deceleration lane (right hand turn lane for east bound movement) from By-Pass Road onto Eagle Ranch Road will be provided.	By-Pass Rd.	Point 600 LF West of Coors Blvd.	West Boundary of Tract N-1B
2865 LF	24' wide temporary pavement connection. Flaring will be provided at Ellison Road for required turning movements. Pavement thickness to be 3" over 12" compacted subgrade (in place). Note: Pavement design thickness shall conform to DRC requirements.	By-Pass Rd.	West boundary of Tract N-1B	Existing Ellison Rd.

1060 LF	24' wide temporary connection at existing Ellison Road. Pavement thickness to be 3" over 12" compacted subgrade (in place). Note: Pavement design thickness shall conform to DRC requirements.	Existing Ellison Rd.	400' West of existing Ellison Rd/ By-Pass Rd. intersection	860' north of intersection of temporary By-Pess Rd. & Ellison Road
800 LF	4-lane divided arterial pavement, 2- 6' sidewalks, 2- concrete curb & gutters, 2- 24' arterial pavement, asphalt median curb, each side, 2- turn bays for entrance into auto park projects.	Eagle Ranch Rd.	By-Pass Rd.	800' South of By-Pass Rd.
975 LF	24' arterial pavement, concrete curb & gutter, 6' sidewalk, asphalt median curb. Note: These improvements will be bonded for construction in future.	By-Pass Road	Coors Blvd.	Point 613 LF west of Coors Boulevard

DRAINAGE

Size	Type Improvement	Location	From	To
1	Concrete outlet structure	Calabacillas Arroyo		
390 LF	84" RCP outlet structure	Adjacent to Coors Blvd.		
2	84" x 45° bends	84" RCP outlet structure		
1444 LF	42" RCP	By-Pass Road		
450 LF	36" RCP	By-Pass Road		
603 LF	30" RCP	By-Pass Road		
120 LF	24" RCP	By-Pass Road		
627	18" RCP	By-Pass Road		
5	Drop Inlets	By-Pass Road		
12	Manholes	By-Pass Road		

WATER (Note: Separate agreement with N.M. Utilities, Inc. and the developer will be negotiated for these improvements. Financial guarantees satisfactory to the City of Albuquerque will be part of this agreement).

2515	20" DIP	By-Pass Rd.	Directly west of Coors Blvd R-O-W in By-Pass Rd. R-O-W	2515 west of Coors Blvd R-O-W in By-Rd. R-O-W
175 LF	8" PVC	By-Pass Rd.		
857 LF	10" PVC	By-Pass Rd/ Eagle Ranch Rd.		
4530 LB	MJ Fittings	By-Pass Rd.	Along entire system.	
1	Pressure Connection	By-Pass Rd.		

SEWER (Note: Separate agreement with N.M. Utilities, Inc. and the developer will be negociated for these improvements. Financial guarantees satisfactory to the City of Albuquerque will be part of this agreement).

330 LF	18" PVCP	North of Calabacillas Arroyo	Existing Intel sewer line	330 LF west of existing Intel sewer line
334 LF	24" PVCP	North of Calabacillas Arroyo	330 LF west of existing Intel sewer line	East boundary of Coors Blvd. R-O-W
196 LF	24" PVCP	Coors Blvd.	East boundary of Coors Blvd. R-O-W	196 LF north
175 LF	24" PVCP	Bore under Coors Blvd.	East boundary of Coors Blvd. R-O-W	35' west of of Coors Blvd. R-O-W in By-Pass Rd. R-O-W
2565 LF	24" PVCP	By-Pass Rd.	35' west of Coors Blvd. R-O-W in By-Pass Rd R-O-W	2600 LF west of Coors Blvd R-O-W in By-Pass Rd. R-O-W
535 LF	8" PVCP	Eagle Ranch Road	By-Pass Rd/ Eagle Ranch Rd. inter-section	35 LF south of By-Pass Rd Eagle Ranch Rd. inter-section

14 EA	Manholes	System east & west of Coors Boulevard		
1 EA	Wet Connection	By-Pass Road (connect existing 12" SAD to new MH)		
4100 In-LF	Boring	Under Coors Boulevard	East of Coors Boulevard	West of Coors Boulevard
420 LF	6" PVCP	Service taps along By-Pass Rd/Eagle Ranch Rd. system		

Prepared by: Brian G. Burnett
Print Name BRIAN G. BURNETT
Firm Bohannan-Huston, Inc.

****

Development Review Board Approvals

Traffic — Date 11-12-86
MRD — 11/12/86 Date
Parks & Rec. — Date 11-12-84
C.E., AMAFCA — 11/12/86
DRB Chairman, — Date 11/12/86.
New Mexico Utilities, Inc. — Date 11/10/86

COORS CONNECTION

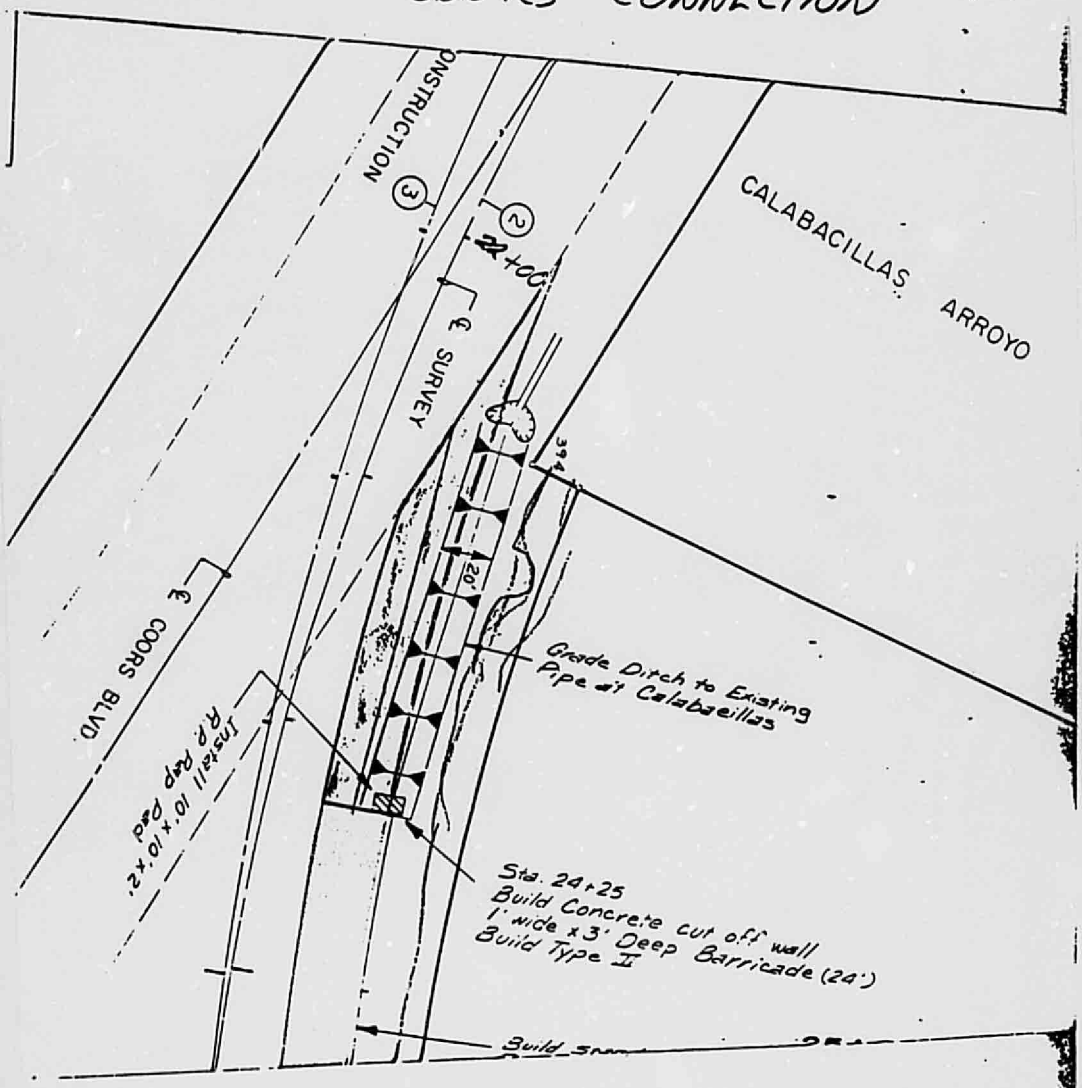


EXHIBIT E
Page 1 of 2

WEST CONNECTION

835

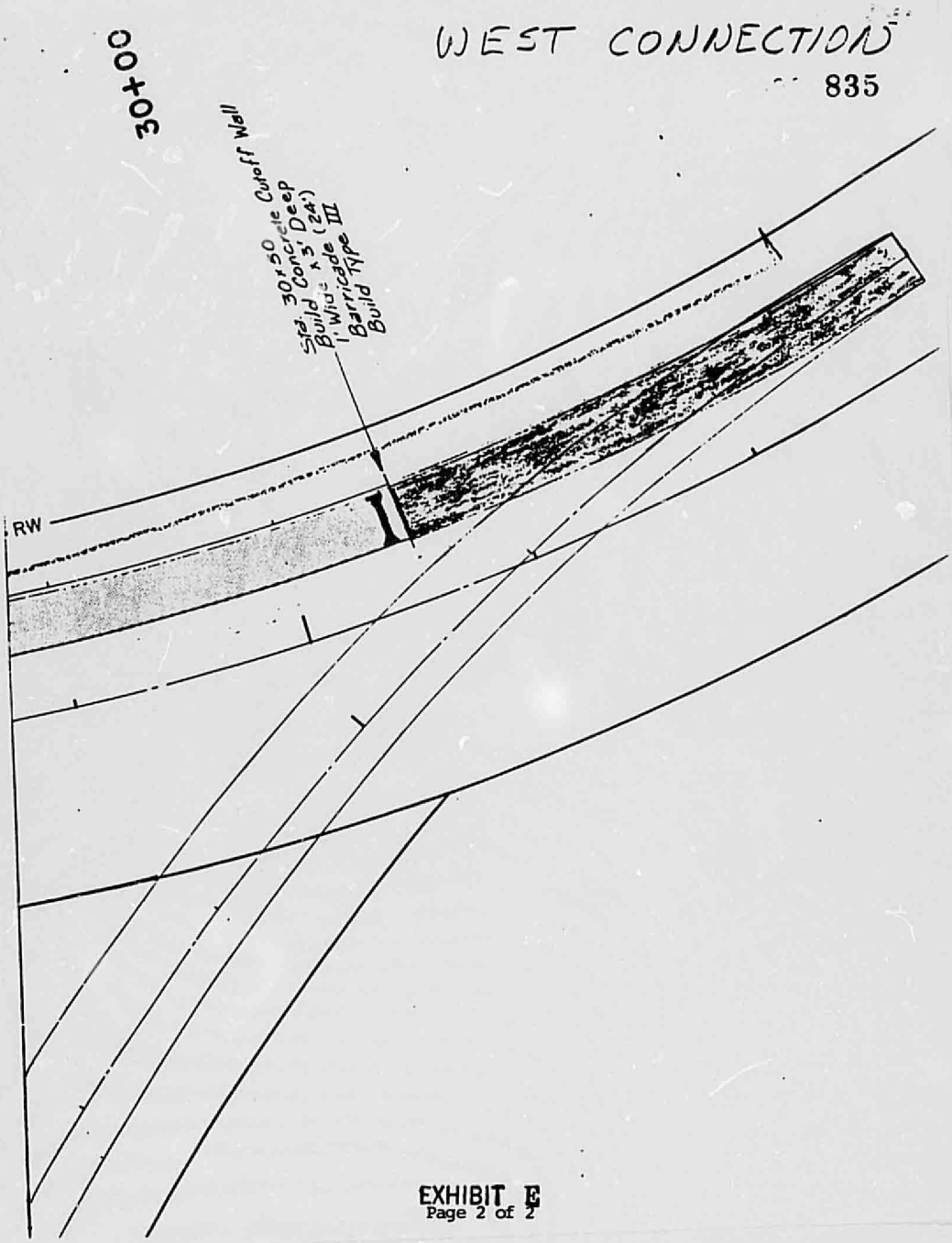


EXHIBIT E
Page 2 of 2

Instead of asphalt curb standard median concrete curb and gutter - 617' beginning at Station 24 + 25 ends at Station 30 + 50

Asphalt for 3rd east bound lane of Coors-By Pass - 614' lineal ft. x 12' wide beginning at Station 24 + 25 ends at Station 30 + 50

EXHIBIT F

FILED WITH CITY CLERK'S OFFICE

5/11/87

#3082

FIRST CONTINENTAL
BANK & TRUST

January 23, 1987

IRREVOCABLE LETTER OF CREDIT AND AGREEMENT NO. 00480

AMOUNT: $493,101.00

Gene Romo
Chief Administrative Officer
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Jim Williams
Executive Director
New Mexico Utilities, Inc.
10001-A Coors Road N.W.
Albuquerque, NM 87114

Dear Mr. Romo and Mr. Williams:

At the request of V.T., Inc., a Missouri Corporation, we establish our Irrevocable Letter of Credit in your favor for the account of V.T., Inc., to the extent of and not exceeding FOUR HUNDRED NINETY-THREE THOUSAND ONE HUNDRED ONE AND 00/100 DOLLARS ($493,101.00).

This Letter of Credit has been astablished to insure the completion of certain water and waste water facilities, as provided by the Agreement between V.T., Inc, and the CITY OF ALBUQUERQUE (the "City"), which Agreement is recorded in Book Misc. 484A, at pages 816 to 836, of the records of the County of Bernalillo, State of New Mexico (the "Agreement"). A Draft or Drafts for any amount up to, but not in excess of FOUR HUNDRED NINETY-THREE THOUSAND ONE HUNDRED ONE AND 00/100 DOLLARS ($493,101.00) is/are available at sight at First Continental Bank & Trust, Overland Park, Kansas (the"Bank") between November 23, 1987 and January 23, 1988, subject to the following:

1. New Mexico Utilities, Inc. ("NMU") may draw upon this Letter of Credit from November 23, 1987 until December 23, 1987, inclusive, but not after December 23, 1987, then;

2. The City may draw upon this Letter of Credit from December 23, 1987 until January 23, 1988, but not after January 23, 1988, only upon delivery to the Bank and to V.T., Inc., an affidavit from the City stating that NMU has refused to draw upon this Letter of Credit.

When presented for negotiation, the Draft(s) is/are to be accompanied by the following document:

The City's notarized certification stating that V.T., Inc., has failed to comply with the terms of the Agreement, and also certifying that "the undersigned is Chief Administrative Officer of the City of Albuquerque and is authorized to sign this statement," and also certifying that the amount of the Draft does not exceed 125% of the cost of completing the improvements specified in the Agreement.

We hereby agree with the drawer of the Draft(s) drawn and under and in compliance with the terms of this credit that such Draft(s) will be duly honored on the presentation to the appropriate drawee if negotiated between November 23, 1987 and January 23, 1988.

The Draft(s) drawn under this credit must be endorsed and contain the clause: "Drawn under Letter of Credit and Agreement No. 00480 of First Continental Bank & Trust, Overland Park, Kansas, dated January 23, 1987"; the amount of such Draft(s) must be endorsed on the reverse side thereof, and this Letter of Credit must be attached to that Draft which exhausts this credit.

This credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision), International Chamber of Commerce, Publication No. 400.

This credit terminates January 23, 1988 at 12:00 p.m., New Mexico time, January 23, 1988.

FIRST CONTINENTAL BANK & TRUST

Graham G. Giblin
Executive Vice President

APPROVED AS TO FORM:

CITY OF ALBUQUERQUE

City Attorney

Assistant City Attorney

Area B_2 Volume of Runoff = 6250 ft^3 peak runoff = 3.6 cfs

$T_c = 10$ min Duration = $\frac{2\,Vol}{q_p} = \frac{(2)(6250)}{3.6}\,\frac{ft^3\text{-sec}}{ft^3} = 3{,}472$ sec

= 57.9 min

Available ponding = 4125 ft^3

ratio $\frac{q_p}{D}$ $\frac{3.6}{57.9} = 0.062\ \frac{ft^3}{sec\text{-}min}$ $Vol = \frac{(q_p)(D)}{2}$

$\frac{Vol}{D^2} = \frac{q_p}{D2}$ $\frac{q_p}{D} = \frac{2\,Vol}{D^2} = 0.062$

$\frac{(2)(4125)}{D^2} = .062\ \frac{ft^3}{min^2} = \frac{ft^3}{sec\text{-}min}$

$D^2 = \frac{(2)(4125)}{3.72}$

$D = \sqrt{2217.74}$

D 47.093

$\frac{q_p}{47.093} = .062 \Rightarrow q_p = 2.9$ cfs

$\frac{3.6 - 2.9}{3.6} = 19.4\ \%$

$\Rightarrow 80.6\ \%$ reduction

Area = $\frac{(2.9)(47.1)}{2}(60)\ \frac{ft^3\ min}{sec}$

= 4097.7 ft^3

≈ 4125 ft^3 ∴ OK

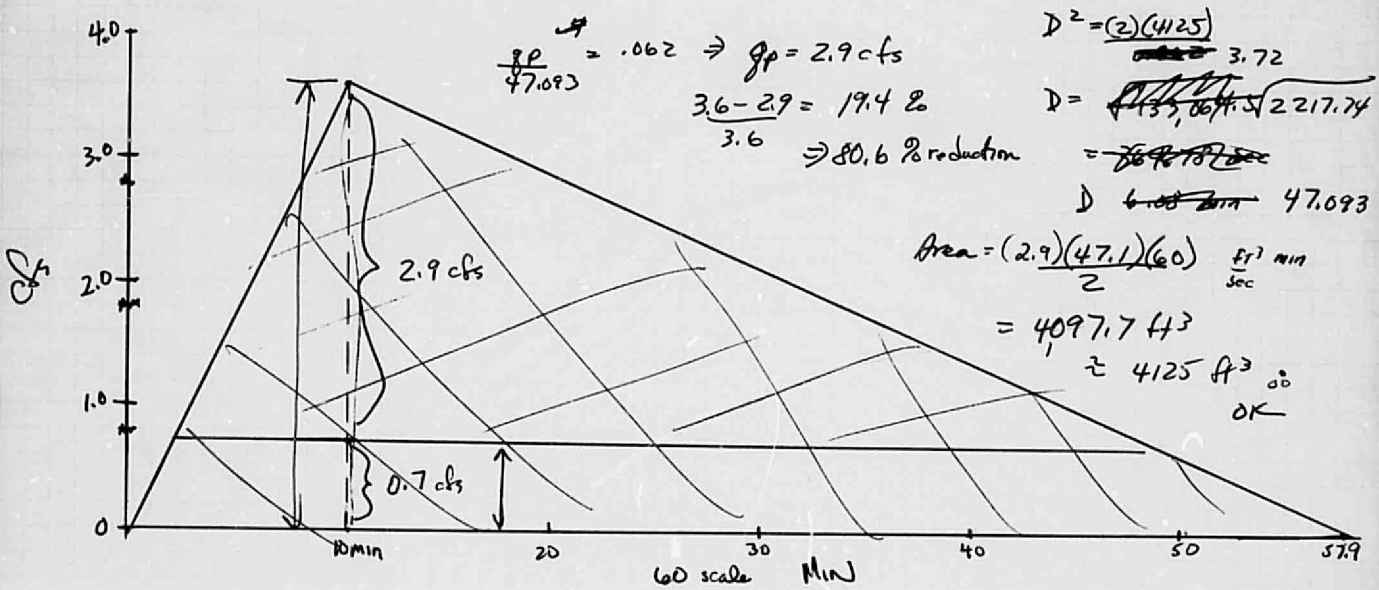
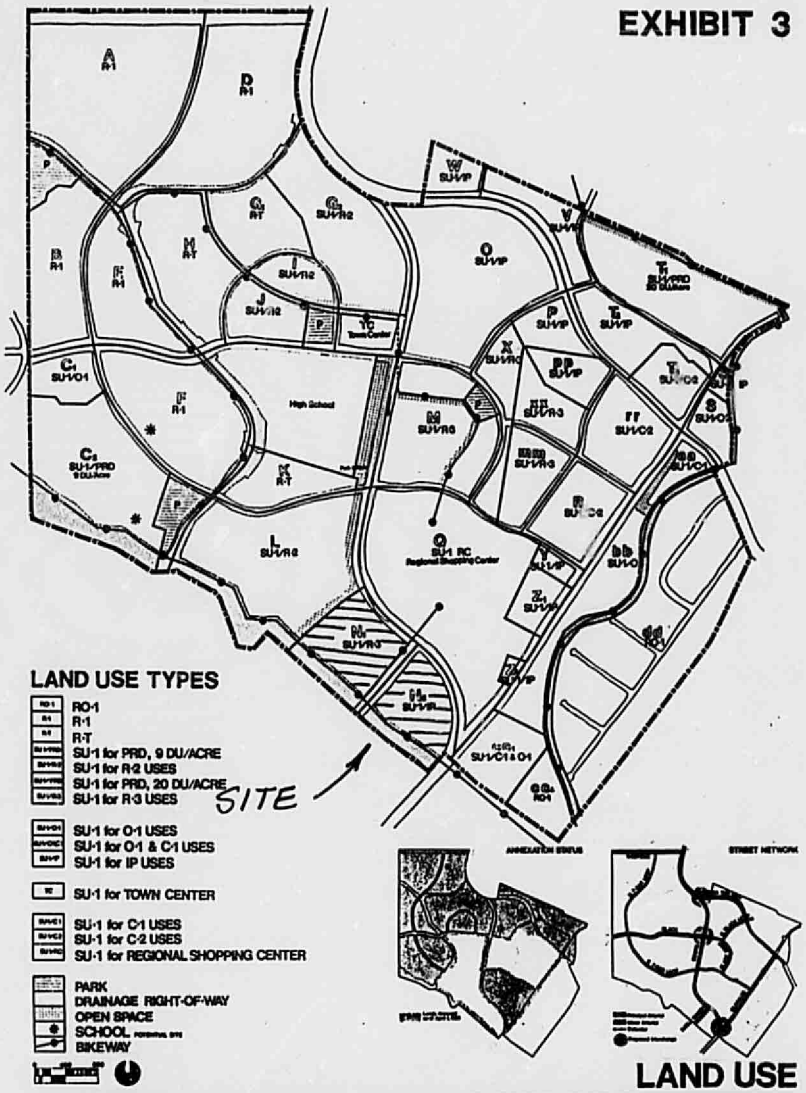


EXHIBIT 3



LAND USE

SEVEN-BAR RANCH SECTOR DEVELOPMENT PLAN

April 1, 1985 Revision

VICINITY MAP

RECEIVED
MAR 09 1987
HYDROLOGY SECTION

DESIGN CALCULATIONS
for
CONCEPTUAL GRADING & DRAINAGE PLAN

V.T. INC AUTOPARK

RUNOFF CALCULATIONS

(Undeveloped Condition)

PROJECT: Autopark **Analysis Point#** 0.

DRAINAGE AREA:

Planimeter Rdg. 2125 x .015

x Map Scale 50 2 ÷ 43,560 A = 1.83 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = 510 ft., fall = 10 ft., slope = .02 ft/ft

☒ Overland Flow:
v = .85 ft/sec (Pl 22.2 B-1)
Tc = 600 sec. = 10 min. Tc = 10 min.

☐ Street Flow:
v = _____ ft/sec. (Pl 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:
$Tc = 0.0078 \frac{L0.77}{S0.385}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min.

RUNOFF COEFFICIENT:

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95				
Roofs	.90				
Lawns & Landscaping	.25				
Undeveloped	.40		100		
				=	

C = .40

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)
Intensity Factor = 2.11 (Pl.22.2 D-2)
Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .40 x 4.64 x 1.83 Q_{100} = 3.4 cfs
x 0.657 = Q_{10} = 2.2 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D
CN (Pervious) = 39 (Pl 22.2 C-2)
Percent Impervious = 0 %
CN (Composite) = 40 (Pl 22.2 C-3)
Direct Runoff, q_{100} = _____ " (Pl 22.2 C-4)
$V_{100} = \frac{q\ A}{12}$ = _____ x _____ ac x 43,560 = 40 cu. ft.

* Percent of Total Area
** C Value Component

DEVELOPED FLOWS: Per 7 Bar Ranch Drainage Masterplan, Developed flows to be limited to 1.9 cfs/acre for this area.
1.9 x 1.83 = 3.5 cfs

(11/86)

RUNOFF CALCULATIONS
(Undeveloped Flows)

PROJECT: Autoparic Analysis Point# O2

DRAINAGE AREA:

Planimeter Rdg. 3770 x .015

x Map Scale 50 2 ÷ 43,560 A = 3.25 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = 520 ft., fall = 10 ft., slope = .02 ft/ft

☒ Overland Flow:
v = .85 ft/sec (Pl 22.2 B-1)
Tc = 612 sec. = 10.2 min. Tc = 10 min.

☐ Street Flow:
v = _____ ft/sec. (Pl 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:
Tc = 0.0078 $\frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min.

RUNOFF COEFFICIENT:

Development	C	x A*	÷ 100	Cc**
Streets, Drives & Walks	.95			
Roofs	.90			
Lawns & Landscaping	.25			
Undeveloped	.40	100		
			=	

C = .40

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)
Intensity Factor = 2.11 (Pl.22.2 D-2)
Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .40 x 4.64 x 3.25 Q_{100} = 6.0 cfs

x 0.657 = Q_{10} = 4.0 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D
CN (Pervious) = 39 (Pl 22.2 C-2)
Percent Impervious = 0 %
CN (Composite) = ±0 (Pl 22.2 C-3)
Direct Runoff, q_{100} = _____ " (Pl 22.2 C-4)
V_{100} = q A = $\frac{____}{12}$ x _____ ac x 43,560 = ±0 cu. ft.

Developed Flows: Per 7 Bar Ranch Drainage Master Plan, Developed flows to be limited to 1.9 cfs per acre.
1.9 x 3.25 = 6.2 cfs

* Percent of Total Area
** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark Analysis Point# A1

DRAINAGE AREA:

Planimeter Rdg. 1253 x .015

x Map Scale 50 2 ÷ 43,560 A = 1.08 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:
v = _____ ft/sec (Pl 22.2 B-1)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:
v = _____ ft/sec. (Pl 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:
$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min. (By Inspection)

RUNOFF COEFFICIENT:

Development	C	x A*	÷ 100 Cc**
Streets, Drives & Walks	.95	90	.86
Roofs	.90		
Lawns & Landscaping	.25	10	.03
Undeveloped	.40		
			= .89

C = .89

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)
Intensity Factor = 2.11 (Pl.22.2 D-2)
Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .89 x 4.64 x 1.08 Q_{100} = 4.5 cfs

x 0.657 = Q_{10} = 2.9 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D
CN (Pervious) = 39 (Pl 22.2 C-2)
Percent Impervious = 90 %
CN (Composite) = 97 (Pl 22.2 C-3)
Direct Runoff, q_{100} = 1.9 " (Pl 22.2 C-4)
V_{100} = q A = $\frac{1.9}{12}$ x 1.1 ac x 43,560 = 7590 cu. ft.

* Percent of Total Area
** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark Analysis Point# A2

DRAINAGE AREA:

Planimeter Rdg. 645 x .015

x Map Scale 50 2 ÷ 43,560 A = 0.56 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:

v = _____ ft/sec (Pl 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:

v = _____ ft/sec. (Pl 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:

Tc = 0.0078 $\frac{L0.77}{S0.385}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min. (By Inspection)

RUNOFF COEFFICIENT:

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95				
Roofs	.90		100		
Lawns & Landscaping	.25				
Undeveloped	.40				

= C = .90

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)

Intensity Factor = 2.11 (Pl.22.2 D-2)

Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .90 x 4.64 x 0.56 Q_{100} = 2.3 cfs

x 0.657 = Q_{10} = 1.5 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D

CN (Pervious) = 100 (Pl 22.2 C-2)

Percent Impervious = 39 %

CN (Composite) = 100 (Pl 22.2 C-3)

Direct Runoff, q_{100} = 2.2 " (Pl 22.2 C-4)

V_{100} = q A = $\frac{2.2}{12}$ x 0.56 ac x 43,560 = 4470 cu. ft.

* Percent of Total Area

** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** A_3

DRAINAGE AREA:
Planimeter Rdg. 225 x .015

x Map Scale 50 2 ÷ 43,560 A = .19 acres

TIME OF CONCENTRATION:
Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:
v = _____ ft/sec (Pl 22.2 B-1)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:
v = _____ ft/sec. (Pl 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:
$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min.
By Inspection

RUNOFF COEFFICIENT:

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95		70		.67
Roofs	.90				
Lawns & Landscaping	.25		30		.08
Undeveloped	.40				
				=	.75

C = .75

RAINFALL INTENSITY:
100 year depth = 2.2 " (Pl. 22.2 D-1)
Intensity Factor = 2.11 (Pl.22.2 D-2)
Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:
Q = CIA = .75 x 4.64 x .19 Q_{100} = 0.2 cfs
x 0.657 = Q_{10} = 0.1 cfs

VOLUME OF RUNOFF:
Soil Group (A) B C D
CN (Pervious) = 39 (Pl 22.2 C-2)
Percent Impervious = 70 %
CN (Composite) = 80 (Pl 22.2 C-3)
Direct Runoff, q_{100} = .70 " (Pl 22.2 C-4)
$V_{100} = q\,A = \frac{.70}{12} \times .19$ ac x 43,560 = 480 cu. ft.

* Percent of Total Area
** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** B1 ✓

DRAINAGE AREA:

Planimeter Rdg. 120 x .015

x Map Scale 50 2 ÷ 43,560 A = .10 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:

v = _____ ft/sec (Pl 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:

v = _____ ft/sec. (Pl 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:

$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min. (By Inspection)

RUNOFF COEFFICIENT:

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95				
Roofs	.90		100		
Lawns & Landscaping	.25				
Undeveloped	.40				
				=	

C = .90

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)

Intensity Factor = 2.11 (Pl.22.2 D-2)

Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .90 x 4.64 x .10 Q_{100} = 0.4 cfs

x 0.657 = Q_{10} = 0.3 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D

CN (Pervious) = 39 (Pl 22.2 C-2)

Percent Impervious = 100 %

CN (Composite) = 100 (Pl 22.2 C-3)

Direct Runoff, q_{100} = 2.2 " (Pl 22.2 C-4)

V_{100} = q A = $\frac{2.2}{12}$ x .10 ac x 43,560 = 800 cu. ft.

* Percent of Total Area

** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** B_2 ✓

DRAINAGE AREA:

Planimeter Rdg. 512 x .015

x Map Scale 50 2 ÷ 43,560 **A =** 0.44 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:

v = _____ ft/sec (Pl 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:

v = _____ ft/sec. (Pl 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:

$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min.

By Inspection

RUNOFF COEFFICIENT:

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95				
Roofs	.90		100		
Lawns & Landscaping	.25				
Undeveloped	.40				
				=	

C = .90

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)

Intensity Factor = 2.11 (Pl.22.2 D-2)

Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .90 x 4.64 x 0.44 Q_{100} = 1.8 cfs

x 0.657 = Q_{10} = 1.2 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D

CN (Pervious) = 39 (Pl 22.2 C-2)

Percent Impervious = 100 %

CN (Composite) = 100 (Pl 22.2 C-3)

Direct Runoff, q_{100} = 2.2 " (Pl 22.2 C-4)

$V_{100} = q\,A = \frac{2.2}{12} \times .44$ ac x 43,560 = 3510 cu. ft. ✓

* Percent of Total Area

** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** C ✓

DRAINAGE AREA:
Planimeter Rdg. 5185 x .015

x Map Scale 50 2 ÷ 43,560 A = 4.46 acres

TIME OF CONCENTRATION:
Drainage Basin Data:

L = 550*/300** ft., fall = 9*/2** ft., slope = .016*/.007** ft/ft

☒ Overland Flow:
v = 1.7 ft/sec (Pl 22.2 B-1)
Tc = 324 sec. = 5.4 min. Tc = 5.4 min.

☒ Street Flow:
v = 2.25 ft/sec. (Pl 22.2 B-2)
Tc = 133 sec. = 2.2 min. Tc = 2.2 min.

☐ Arroyo Flow:
Tc = 0.0078 $\frac{L0.77}{S0.385}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 7.6 min.

RUNOFF COEFFICIENT: Use 10 min

Development	C	x A*	÷ 100 Cc**
Streets, Drives & Walks	.95	84	.80
Roofs	.90		
Lawns & Landscaping	.25	16	.04
Undeveloped	.40		
			= .84

C = .84

RAINFALL INTENSITY:
100 year depth = 2.2 " (Pl. 22.2 D-1)
Intensity Factor = 2.11 (Pl.22.2 D-2)
Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:
Q = CIA = .84 x 4.64 x 4.46 Q_{100} = 17.4 cfs
x 0.657 = Q_{10} = 11.4 cfs

VOLUME OF RUNOFF:
Soil Group (A) B C D
CN (Pervious) = 39 (Pl 22.2 C-2)
Percent Impervious = 84 %
CN (Composite) = 88 (Pl 22.2 C-3)
Direct Runoff, q_{100} = 1.2 " (Pl 22.2 C-4)
V_{100} = q A = $\frac{1.2}{12}$ x 4.46 ac x 43,560 = 19,400 cu. ft.

* Percent of Total Area * Overland Flow
** C Value Component ** Street Flow

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** D ✓

DRAINAGE AREA:
Planimeter Rdg. 1150 x .015

x Map Scale 50 2 ÷ 43,560 A = 0.99 acres

TIME OF CONCENTRATION:
Drainage Basin Data:

L = 800 ft., fall = 12 ft., slope = .015 ft/ft

☐ Overland Flow:
v = _____ ft/sec (Pl 22.2 B-1)
Tc = _____ sec. = 4.0 min. Tc = 4.0 min.

☒ Street Flow:
v = 3.3 ft/sec. (Pl 22.2 B-2)
Tc = 242 sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:
$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 4.0 min.
Use 10 min.

RUNOFF COEFFICIENT:

Development	C	x A*	÷ 100	Cc**
Streets, Drives & Walks	.95	82		.78
Roofs	.90			
Lawns & Landscaping	.25	18		.05
Undeveloped	.40			
			=	.83

C = .83

RAINFALL INTENSITY:
100 year depth = 2.2 " (Pl. 22.2 D-1)
Intensity Factor = 2.11 (Pl.22.2 D-2)
Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:
Q = CIA = .83 x 4.64 x 0.99 Q_{100} = 3.8 ✓ cfs
x 0.657 = Q_{10} = 2.5 cfs

VOLUME OF RUNOFF:
Soil Group (A) B C D
CN (Pervious) = 39 (Pl 22.2 C-2)
Percent Impervious = 82 %
CN (Composite) = 87 (Pl 22.2 C-3)
Direct Runoff, q_{100} = 1.1 " (Pl 22.2 C-4)
$V_{100} = q\,A = \frac{1.1}{12} \times 0.99$ ac x 43,560 = 4310 cu. ft.

1.9 x 1 ac = 1.9 cfs
allowable

* Percent of Total Area
** C Value Component

(11/86)

Sheet No. 10 of 16

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** E ✓

DRAINAGE AREA:

Planimeter Rdg. 365 x .015

x Map Scale 50 2 ÷ 43,560 **A =** .31 **acres**

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:

v = _____ ft/sec (Pl 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:

v = _____ ft/sec. (Pl 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:

$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min.

RUNOFF COEFFICIENT: By Inspection

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95				
Roofs	.90				
Lawns & Landscaping	.25		100		
Undeveloped	.40				
				=	

c = .25

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)

Intensity Factor = 2.11 (Pl.22.2 D-2)

Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .25 x 4.64 x .31 Q_{100} = 0.4 cfs

x 0.657 = Q_{10} = 0.2 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D

CN (Pervious) = 39 (Pl 22.2 C-2)

Percent Impervious = 0 %

CN (Composite) = 39 (Pl 22.2 C-3)

Direct Runoff, q_{100} = ±0 " (Pl 22.2 C-4)

$V_{100} = \frac{q\ A}{12}$ = _____ x _____ ac x 43,560 = ±0 cu. ft.

* Percent of Total Area

** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark **Analysis Point#** F ✓

DRAINAGE AREA:

Planimeter Rdg. 30 x .015

x Map Scale 50 2 ÷ 43,560 A = .03 acres

TIME OF CONCENTRATION:

Drainage Basin Data:

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:

v = _____ ft/sec (Pl 22.2 B-1)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:

v = _____ ft/sec. (Pl 22.2 B-2)

Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:

$Tc = 0.0078 \frac{L^{0.77}}{S^{0.385}}$ = _____ min. Tc = _____ min.

$\sum$ Tc = 10 min.

RUNOFF COEFFICIENT: By Inspection

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95		70		.67
Roofs	.90				
Lawns & Landscaping	.25		30		.08
Undeveloped	.40				
				=	.75

C = .75

RAINFALL INTENSITY:

100 year depth = 2.2 " (Pl. 22.2 D-1)

Intensity Factor = 2.11 (Pl.22.2 D-2)

Intensity = depth x factor I = 4.64 "/hr.

PEAK RUNOFF RATE:

Q = CIA = .75 x 4.64 x .03 Q_{100} = 0.1 ✓ cfs

x 0.657 = Q_{10} = 0.07 cfs

VOLUME OF RUNOFF:

Soil Group (A) B C D

CN (Pervious) = 39 (Pl 22.2 C-2)

Percent Impervious = 70 %

CN (Composite) = 80 (Pl 22.2 C-3)

Direct Runoff, q_{100} = 0.7 " (Pl 22.2 C-4)

$V_{100} = q\,A = \frac{.7}{12} \times .03$ ac x 43,560 = 80 cu. ft.

* Percent of Total Area

** C Value Component

(11/86)

RUNOFF CALCULATIONS

PROJECT: Autopark Analysis Point# Lot 7

DRAINAGE AREA:

Planimeter Rdg. 1610 x .015

x Map Scale 100 2 ÷ 43,560 A = 5.54 acres
(not of street)

TIME OF CONCENTRATION:

Drainage Basin Data: @ 1.9 cfs/ac = 10.5 cfs

L = _____ ft., fall = _____ ft., slope = _____ ft/ft

☐ Overland Flow:
v = _____ ft/sec (Pl 22.2 B-1)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Street Flow:
v = _____ ft/sec. (Pl 22.2 B-2)
Tc = _____ sec. = _____ min. Tc = _____ min.

☐ Arroyo Flow:
Tc = 0.0078 $\frac{L0.77}{S0.385}$ = _____ min. Tc = _____ min.

$\sum$ Tc = _____ min.

RUNOFF COEFFICIENT:

Development	C	x	A*	÷ 100	Cc**
Streets, Drives & Walks	.95		___		___
Roofs	.90		___		___
Lawns & Landscaping	.25		___		___
Undeveloped	.40		___		___
				=	___

C = _____

RAINFALL INTENSITY:

100 year depth = _____" (Pl. 22.2 D-1)
Intensity Factor = _____ (Pl.22.2 D-2)
Intensity = depth x factor I = _____"/hr.

PEAK RUNOFF RATE:

Q = CIA = _____ x _____ x _____ Q_{100} = _____ cfs

x 0.657 = Q_{10} = _____ cfs

VOLUME OF RUNOFF:

Soil Group A B C D
CN (Pervious) = _____ (Pl 22.2 C-2)
Percent Impervious = _____ %
CN (Composite) = _____ (Pl 22.2 C-3)
Direct Runoff, q_{100} = _____" (Pl 22.2 C-4)
V_{100} = q A = $\frac{____}{12}$ x _____ ac x 43,560 = _____ cu. ft.

* Percent of Total Area
** C Value Component

(11/86)

COMPUTE DETENTION POND SIZING for DRAINAGE AREA D

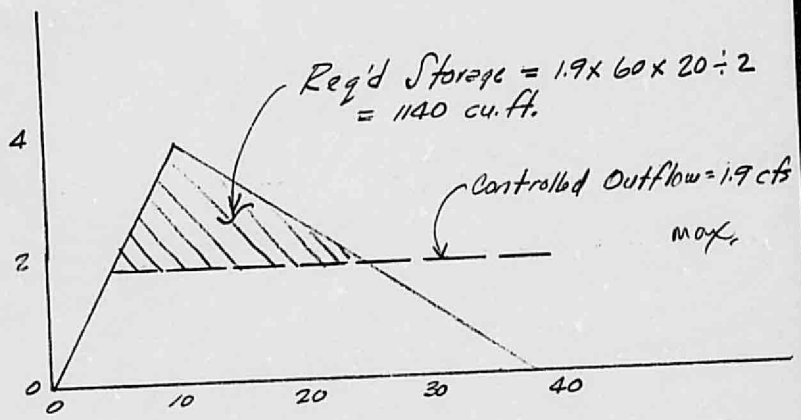
Contour	Area (sf)	Avg Area	Depth (ft)	Vol (cu. ft.)
44	1125			
		1875	2	3750
46	2625			

Isaacson & Arfman, P.A.

SUBJECT V.T. Inc Airport JOB NO
BY TOI DATE 3/2/87 SHEET NO.

CONTROLLED OUTFLOW - DRAINAGE AREA D:

Q_{100} = 3.8 cfs
V_{100} = 4310 c.f.
$T = 2V \div Q_{100} \div 60$ = 38 min
Detention Ponding Available = 3750 cu.ft.



Isaacson & Arfman, P.A.

SUBJECT Autopark JOB NO.
BY TOI DATE 3/2/87 SHEET NO. 15 OF 16

STORM DRAIN LINE SIZING

LINE No	Drainage Basin	Q (cfs)	Slope (%)	Pipe Dia	Pipe Capacity	Remarks
A_1	O_1	3.5	1.00	12"	3.6 cfs	OK
A_2	A_1	4.5	1.6	12"	4.5 cfs	OK
A_3	O_1, A_1, A_2, A_3	9.7 (10.4)	2.30	15"	9.8 cfs	OK
B_1	O_2	6.2	1.00	15"	6.5	OK
B_2	O_2, B_1, B_2	8.4	1.8	15"	8.7	OK
C_1	C	17.4	2.8	18"	17.6	OK
D_1	D ÷ 2	1.9	0.5	12"	2.5	OK
D_2	D	3.8	3.0	12"	6.2	OK
D_3	D	1.9	1.0	12"	3.5	OK

(will need orifice or riser control)

Isaacson & Arfman, P.A.

SUBJECT V.T. Inc Autopark JOB NO. ___
BY TOI DATE 3/2/87 SHEET NO. 16 OF 16

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

B-13/D3

RECEIVED
FEB 13 1987
HYDROLOGY SECTION

DESIGN REVIEW COMMITTEE MEETING 2/11/87 3:30 p.m.

PROJECT: V.T. Inc. Auto Park, Paving & S.D. Project #3040

CONSULTANT: Bohannan-Huston, Inc.

IN ATTENDANCE: Andre Houle, DRC Chairman/Design Review Section
Bill Westmoreland, Project Engineer/PWD-Utilities
Dave Harmon, Traffic Engineering
Steve Heth, Bohannan-Huston, Inc.

The above project was submitted to the DRC for final signature. Plans were signed by Mr. Westmoreland. However, plans were not approved by other DRC members do to the following comments:

Andre Houle:

1. Sheet 8 - What is the 25% design on the first section?
2. Sheet 9 - Appears to be a conflict with the new road being built relative to the temporary section in that the new road will be in the temporary section.
3. Sheet 9 - Would not be opposed to allowing corregated metal pipe for the culvert crossing.
4. Sheet 9 - Call out the width of pavement. Provide detail of Type III barricade. Also, specify on the plans number of panels of Type III barricade.
5. Sheet 10 - Need to indicate depressed gutter from Station 37+50 to Station 35+33.
6. Show catch basin at Station 33+00.
7. Sheet 12 - Corregated metal pipe can be used for culvert.
8. Sheet 15 - Same comment as above.
9. Sheet 16 - Specify the grade of Eagle Ranch Road with 7-Bar By-pass Road from Station 10+43 north.
10. Sheet 18 - Indicate stations and offsets for the foundation.
11. Change pole box dimensions to 19 x 32.
12. Sheet 25 - Show the sewer crossing in profile.

Originals were returned to Steve Heth for correction. Plans will be signed by Mr. Harmon and Mr. Houle after the above mentioned comments are incorporated. Mr. Houle will acquire Fred Aquirre's, Utility Development-Hydrology, signature and Kevin Broderick of Traffic Engineering will need to sign Sheet 32 of the plans for traffic control.

AH/tar

cc: Attendees
Walter Nickerson, City Engineer/Utility Development
Fred Aquirre, Utility Development/Hydrology Section
Kevin Broderick, Traffic Engineering/Operations

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

February 6, 1987
DATE

CITY ENGINEERS PROJECT NO. 3040

SHEET 1 of 1

STANDARD REVIEW COMMENT SHEET

TO: DRC Committee
(USER DEPT./DIVISION)

FROM: Roger Green, PWD/Engineering-Utility Development/Hydrology
(REVIEWER/REVIEW DEPT./DIVISION)

PROJECT: V.T., INC. AUTO PARK

PROJECT DESCRIPTION TYPE: [ ]Report/Study, [ ]Plans, [ ]Specs, [ ] East.
STATUS: [ ]Prel, [ ]Final, [ ]Check

PAGE NO.	COM NO.	COMMENTS	USER DEPT. A/D	REMARK
24,25 26 & 27	1	Show hydraulic grade line and the Q and V values used for the storm drain design.		

RG/tar
(7246E)

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

July 1, 1987

Jesse May, P.E.
Easterling & Associates, Inc.
5643 Paradise Boulevard, NW
Albuquerque, New Mexico 87114

RE: V.T. AUTO PARK GRADING & DRAINAGE PLAN SUBMITTED FOR BUILDING PERMIT APPROVAL - RECEIVED JUNE 30, 1987 (B-13/D3)

Dear Mr. May:

The submittal referred to above, your job number 703703, with a revised date of June 29, 1987, and received by us on June 30, 1987, is approved for Building Permit sign-off by Hydrology.

If you have any questions, please call me at 768-2650.

Cordially,

Stuart Reeder

G. Stuart Reeder, P.E.
C.E./Hydrology Section

GSR/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: V.T. AUTO PARK ZONE ATLAS/DRNG. FILE #: B-13/D-3

LEGAL DESCRIPTION: A PORTION OF TRACT N1-A OF SEVEN BAR RANCH

CITY ADDRESS: COORS ROAD & COORS BY-PASS ROAD.

ENGINEERING FIRM: EASTERLING & ASSOC. CONTACT: JESSE MAY.

ADDRESS: 5643 PARADISE BLVD. N.W. PHONE: 898-8021

OWNER: V.T. INC. CONTACT: DUANE DEAN

ADDRESS: 10131 COORS RD. N.W. D6 184 PHONE: 898-9650

ARCHITECT: PATRICK MCCLERNON CONTACT: PATRICK MCCLERNON

ADDRESS: 1401 5TH ST. N.W. 87102 PHONE: 242-5219

SURVEYOR: HUGG SURVEYING CONTACT: GARRY HUGG

ADDRESS: 4100 SOUTHERN BLVD SE. RIO RANCHO PHONE: 892-8800

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

RECEIVED JUN 1987 HYDROLOGY SECTION

DATE SUBMITTED: 7TH, 1987

BY: David A. Smith

LETTER OF TRANSMITTAL

EASTERLING & ASSOCIATES, INC.
5643 Paradise Blvd. NW
ALBUQUERQUE, NEW MEXICO 87114

(505) 898-8021

TO HYDROLOGY

DATE 6-30-87 JOB NO. 703703
ATTENTION G. STUART REEDER
RE: V.T. AUTO PARK
GRADING & DRAINAGE
PLAN
RESUBMITTAL

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☒ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
2		1 OF 2	G & D PLAN
2		2 OF 2	HYDROLOGY & INFO.
1			CONFERENCE RECAP SHEET
1			DRAINAGE INFO. SHEET

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit ____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit ____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return ____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

RECEIVED
JUN 30 1987
HYDROLOGY SECTION

Daniel G. Smith

COPY TO G S Reeder

SIGNED: _____

If enclosures are not as noted, kindly notify us at once.

PRODUCT 240-2 NEBS Inc., Groton, Mass. 01471

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

June 18, 1987

Jesse May, P.E.
Easterling & Associates, Inc.
5643 Paradise Boulevard, NW
Albuquerque, New Mexico 87114

RE: V.T. AUTO PARK GRADING & DRAINAGE PLAN SUBMITTED FOR BUILDING PERMIT APPROVAL - RECEIVED MAY 28, 1987 (B-13/D3)

Dear Mr. May:

I have reviewed the submittal on the job referred to above (job number 703703, dated May, 1987), and have the following comments:

1. The legal description identifies this area as "a portion of Tract N1-A . . ." however, there is a property line shown on Sheet 1 of 2 which separates Area E-2, the undeveloped area to the northwest, from the Auto Park area.

   Is the Auto Park all of Tract N1-A? If so, please change the legal description, and provide a drainage easement and a maintenance covenant for the swale and drainage facility which serves Area E-2. If not, then kindly move the property line to its proper position.

2. Please add the Calabacillas Arroyo Prudent Line to the plat, and identify it as such.

If you have any questions, please call me at 768-2650.

Cordially,

Stuart Reeder

G. Stuart Reeder, III, P.E.
C.E./Hydrology Section

GSR/bsj

B. H. SWINBURNE, CHAIRMAN
WILLIAM V. HEREFORD, VICE-CHAIRMAN
FRANCES McCOY, SECRETARY-TREASURER
R. WARD HUNNICUTT, DIRECTOR
REX FUNK, DIRECTOR

RICHARD E. LEONARD
EXECUTIVE ENGINEER

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

P. O. BOX 25851 - ALBUQUERQUE, N. M. 87125
TELEPHONE 884-2219

RECEIVED
JUN 05 1987
HYDROLOGY SECTION

June 3, 1987

Jesse A. May, III
Easterling & Associates
5343 Paradise Blvd. NE
Albuquerque, NM 87114

Subject: V.T. Auto Park Grading & Drainage
Plan sheets 1 & 2 May 1987

The proposed inlet to the Calabacillas from Area E-2 is approved as to location and type. Please add to sheets 1 & 2 notes delineating property line and prudent line (AMAFCA Easement). Please send me 2 prints of the revised sheets.

Sincerely,

Dan Sabo

Dan Sabo
Drainage Engineer

cc: Fred Aguirre
Anne McLaughlin - City Planning
Larry Blair (with prints)

RECEIVED
JUN 30 1987
HYDROLOGY SECTION

DRAINAGE INFORMATION SHEET

PROJECT TITLE: V.T. AUTO PARK ZONE ATLAS/DRNG. FILE #: ~~B-13/B-14~~ B13/D3

LEGAL DESCRIPTION: A PORTION OF TRACT N1-A OF SEVEN BAR RANCH.

CITY ADDRESS: COOR'S ROAD @ COORS BY-PASS ROAD.

ENGINEERING FIRM: EASTERLING & ASSOC. CONTACT: JESSE MAY

ADDRESS: 5643 PARADISE BLVD. N.W. PHONE: 898-8021

OWNER: V.T. INC. CONTACT: DUANE DEAN

ADDRESS: 10131 COORS RD. N.W. D-6 '84 PHONE: 898-9650

ARCHITECT: PATRICK MCGERNON CONTACT: PATRICK MCGERNON

ADDRESS: 1401 5TH ST. N.W. 87102 PHONE: 242-5219

SURVEYOR: HUGG SURVEYING CONTACT: GARRY HUGG

ADDRESS: 4100 SOUTHERN BLVD. S.E. R.R. PHONE: 892-8800

CONTRACTOR: — CONTACT: —

ADDRESS: — PHONE: —

RECEIVED MAY 1 0 1987 HYDROLOGY SECTION

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: MAY 28TH, 1987

BY: David G. Smith

LETTER OF TRANSMITTAL

EASTERLING & ASSOCIATES, INC.
5643 Paradise Blvd. NW
ALBUQUERQUE, NEW MEXICO 87114

(505) 898-8021

DATE 5-28-87 JOB NO 703703

ATTENTION ROGER GREEN

RE V.T. AUTOPARK GRADING & DRAINAGE PLAN.

TO CITY OF ALBUQUERQUE "HYDROLOGY"

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☒ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
2		1 OF 2	GRADING & DRAINAGE PLAN
2		2 OF 2	INFORMATION SHEET.
1			DRAINAGE INFORMATION SHEET
1			CONFERENCE RECAP SHEET.

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

RECEIVED
MAY 28 1987
HYDROLOGY SECTION

REMARKS _____

COPY TO Letter Box 5/28/87 Mary Lou Crowell

SIGNED: Daniel L. Lutz

If enclosures are not as noted, kindly notify us at once.

PRODUCT 240-2 NEBS Inc. Groton, Mass. 01471

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: B ~~14~~-13/D 3 DATE: 4-22-87

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: VT INC AUTO PARK

STREET ADDRESS (IF KNOWN): COORS BY-PASS ROAD & COORS

SUBDIVISION NAME: Tract ~~[illegible]~~ N-1A 7 BAR RANCH

APPROVAL REQUESTED:

____	PRELIMINARY PLAT	____	FINAL PLAT
____	SITE DEVELOPMENT PLAN	X	BUILDING PERMIT
____	OTHER	____	ROUGH GRADING

RECEIVED MAY 18 1987 HYDROLOGY SECTION

ATTENDANCE:	WHO	REPRESENTING
	Jesse May	Easterling & Assoc.
	Roger Green	City Hydrology

FINDINGS:

1. Need AMAFCA Approval to Divert Lot 8 (Phase II) directly to the Calabacillas Arroyo in lieu of to Lot 9 and storm drain.
2. Design Discharge can not exceed rates established by the Conceptual Grading and Drainage Plan, unless plan is revised and meets restrictions of the 7-Bar Ranch Master Plan.
3. Undeveloped offsite flows must be accepted unless other diversion improvements are made, including necessary easements and covenants.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	Roger A. Green	SIGNED:	Jesse R. May II
TITLE:	Civil Engineer	TITLE:	Engr. Mgr.
DATE:	4-22-87	DATE:	4-22-87

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

March 17, 1987

Tom Isaacson, P.E.
Isaacson & Arfman, P.A.
128 Monroe, NE
Albuquerque, New Mexico 87108

RE: REVISED CONCEPTUAL GRADING & DRAINAGE PLAN SUBMITTAL OF AUTO PARK, TRACT N-1A, RECEIVED MARCH 9, 1987 FOR SITE DEVELOPMENT PLAN APPROVAL (B-13/D3)

Dear Tom:

The above referenced submittal dated March 9, 1987, is approved for Site Development Plan sign-off by the City Engineer.

A detailed Grading and Drainage Plan will be required prior to Building Permit request.

If you have any questions, call me at 768-2650.

Cordially,

Roger A. Green, P.E.

Roger A. Green, P.E.
C.E./Hydrology Section

RAG/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: V.T. Inc Autopark ZONE ATLAS/DRAINAGE FILE # B-13/D3

LEGAL DESCRIPTION: Tract N-1A, Seven Bar Ranch

CITY ADDRESS: –

ENGINEERING FIRM: Isaacson & Arfman, PA CONTACT: T. Isaacson

ADDRESS: 128 Monroe NE, 87108 PHONE: 268-8828

OWNER: V.T. Inc CONTACT: Cecil Ventyle

ADDRESS: Shawnee Mission, Kansas PHONE: –

ARCHITECT: Patrick McClernon CONTACT: Pat McClernon

ADDRESS: 1401 5th NW PHONE: 242-5210

SURVEYOR: Gary Hugg CONTACT: G. Hugg

ADDRESS: 1701 Grande, SE, Rio Rancho PHONE: 892-8800

CONTRACTOR: – CONTACT: –

ADDRESS: – PHONE:

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED MAR 09 1987 HYDROLOGY SECTION

DRB NO. 86-527

EPC NO. Z-85-79-2

PROJECT NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAIN PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SECTOR PLAN APPROVAL

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

X SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 3/9/87

BY: Tom Isaacson

REV. 6/85
25130

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Autopark ZONE ATLAS/DRAINAGE FILE # B-13/D3

LEGAL DESCRIPTION: Tract N-1A, Seven Bar Ranch

CITY ADDRESS: —

ENGINEERING FIRM: Isaacson & Arfman PA CONTACT: T. Isaacson

ADDRESS: 128 Monroe NE 87108 PHONE: 268-8828

OWNER: V.T. Inc. CONTACT: Cecil VanTuyl

ADDRESS: Shawnee Mission, Kansas PHONE: Dale Dekker

ARCHITECT: Dekker & Associates CONTACT: 247-2888

ADDRESS: 600 1st St., East Wing PHONE: 247-2888

SURVEYOR: Gary Hugg CONTACT: Gary Hugg

ADDRESS: 1701 Grande SE, Rio Rancho PHONE: 892-8800

CONTRACTOR: — CONTACT: —

ADDRESS: — PHONE: —

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED NOV 26 1986 HYDROLOGY SECTION

DRB NO. 86-527

EPC NO. Z-85-79-2

PROJECT NO. —

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAIN PLAN

X GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SECTOR PLAN APPROVAL

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

X ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECI

DATE SUBMITTED: 11/26/86

BY: Jim Fuerson

REV. 6/85
2513D

HYDROLOGY B13/D3 2 of 2 3 PLANS

Isaacson & Arfman, P.A.

Consulting Engineering Associates

RECEIVED MAR 09 1987 HYDROLOGY SECTION

Letter of Transmittal

To City of Albuquerque Design Hydrology Section

Date 3/9/87

Job No.

Attn: Roger Green

Reference V.T. Inc. Autopark

Gentlemen:

We transmit to you 1 copy(ies) of the following

- ☐ Plats
- ☐ Plans
- ☐ Specifications
- ☐ Report
- ☐ Shop Drawings
- ☐ Submittals
- ☐ Material Specifications
- ☐ Copy of Letter
- ☒ Conceptual Grading, Drainage & Utility Plan - for Subd.
- ☒ " " & " Plan - for Site Development Plan

This information is transmitted:

- ☐ As per your request
- ☒ For your review & approval
- ☐ For your information
- ☐ For your attention
- ☐ For your signature
- ☐ For your files
- ☐ For your use
- ☐ Please review & return
- ☐ For return to your files
- ☐ Please advise
- ☐
- ☐

Remarks: This submittal covers redesign of Lots 7, 8 & 9 for Subdivision and for Site Development Plan

By: Tom Isaacson

Copies To Pat McClenna

128 Monroe, NE • Albuquerque, NM 87108 • (505) 268-8828

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

December 10, 1986

Tom Isaacson, P.E.
Isaacson & Coffman, P.A.
128 Monroe, NE
Albuquerque, New Mexico 87108

RE: GRADING & DRAINAGE PLAN SUBMITTAL OF V.T., INC AUTOPARK - RECEIVED NOVEMBER 26, 1986 FOR ROUGH GRADING PERMIT APPROVAL (B-13/D3)

Dear Tom:

The above referenced submittal, dated November 26, 1986, is approved for Rough Grading, provided an addition note to the contractor is added on Sheet 2 of 2 requiring that a Topsoil Disturbance Permit be obtained prior to grading. Bring in the mylars for approval signature with this note added.

If you have any questions, call me at 768-2650.

Cordially,

For Roger A. Green, P.E.
C.E./Hydrology Section

cc: Dale Dekker

RAG/bsj

Isaacson &
Arfman, P.A.

Consulting Engineering
Associates

RECEIVED
NOV 26 1986
HYDROLOGY SECTION

November 26, 1986

Mr. Roger A. Green, P.E.
Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, N.M. 87103

Re: Rough Grading Plan Submittal for the Westside Autopark (B-13/D3)

Dear Roger:

Transmitted for your review is a Grading and Drainage Plan for the rough grading phase of the Autopark development. I'm addressing this letter to you since you reviewed the conceptual grading and drainage plan.

In response to your comments in your letter of October 20, 1986 we offer the following responses. Drainage easement for 84"SD - we will show this on the final grading and drainage plan. Private drainage easements and access/utility easements - as per my discussion with you, Tract N-1A will not be subdivided at this time; consequently, the development of the Tract should be considered as a 'Phased' development. "Lot 9" discharge rate - we have shown the discharged rates in the "undeveloped" condition but will show them at the "developed" condition on the final grading and drainage plan. Volume of runoff calculations - we have revised our computation form and have computed runoff volumes using the SCS method. Connection at the southeast corner of the site-we have revised the private storm drain configuration so that the connections are made into a manhole as you and I discussed.

I hope this letter will satisfy your concerns. As we are in the process of bidding the rough grading phase of the work, your early review of this submittal will be appreciated.

Very truly yours,

Thomas O. Isaacson

TOI/aq

cc: Brian Burnett

128 Monroe, NE • Albuquerque, NM 87108 • (505) 268-8828

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

October 20, 1986

Tom Isaacson, P.E.
Isaacson & Arfman, P.A.
128 Monroe, NE
Albuquerque, New Mexico 87108

RE: CONCEPTUAL GRADING & DRAINAGE PLAN SUBMITTAL OF AUTOPARK RECEIVED OCTOBER 3, 1986 FOR SITE DEVELOPMENT PLAN APPROVAL (B-13/D3)

Dear Tom:

The drainage scheme of the above referenced submittal, dated September 26, 1986, is approved.

The Site Development Plan is approved for sign-off by the City Engineer, provided that the following items are included on the Site Plan:

1. The Public Drainage Easement limits required for the proposed 84" RCP storm drain across the southeast corner of project site.

2. The Private Drainage Easements limits required for the storm drains accepting off-site flows from proposed Lot 8.

3. The proposed access and utility easements.

Prior to approval of a Final Plat for subsequent subdivision of Tract N-1A or Building Permit, the following items must be addressed:

1. Lot 9 must accept discharge rates from Lot 8 for the developed condition, up to the maximum discharge rate of 2.47 cfs per acre, as identified in the approved Master Plan. Your present hydrologic calculations and private storm drain design only assume the undeveloped condition.

2. The DPM does not recognize volumes of runoff being calculated using a Rational Method "C" value. Plates 22.2 C-2, C-3 and C-4 are provided in the DPM for volume of runoff calculations. The Master Plan for Seven Bar Ranch uses this method (SCS) in determining detention and allowable peak discharge allowances, and your designs need to follow the same methodology for consistancy. A revision to your "Runoff Calculations" form would be appropriate for hydrology calculations submitted for the City's review and approval. You will find that using the SCS method usually requires smaller ponding areas or a reduction in peak outflow when routed.

3. At the southeast corner of the project site (A.P.-A_3) the private storm drain and surface water inlet should be combined into one connection into the 84" RCP public storm drain.

If you have any questions, call me at 768-2650.

Cordially,

Roger A Green, PE

Roger A. Green, P.E.
C.E./Hydrology Section

cc: Brian Burnett, P.E.

RAG/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Autopark ZONE ATLAS/DRAINAGE FILE # B-13 / D3

LEGAL DESCRIPTION: Tracts N-1A & N-1B, Seven-Bar Ranch

CITY ADDRESS: -

ENGINEERING FIRM: Isaacson & Arfman PA CONTACT: T. Isaacson

ADDRESS: 128 Monroe NE PHONE: 268-8828

OWNER: V.T. Inc. CONTACT: C. Van Tyle

ADDRESS: Shawnee Mission, Kansas PHONE:

ARCHITECT: DeKker & Associates CONTACT: D. DeKker

ADDRESS: 600 First St, East Wing PHONE: 247-2888

SURVEYOR: Hugg Surveying CONTACT: G. Hugg

ADDRESS: 1701 Grande SE PHONE: 892-8800

CONTRACTOR: - CONTACT: -

ADDRESS: - PHONE: -

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PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJECT NO. ___

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAIN PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SECTOR PLAN APPROVAL

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

X SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: 10/3/86

BY: Jim Graeme

REV. 10/85

BOHANNAN-HUSTON INC.
COURTYARD I, 7500 JEFFERSON STREET, N.E. ALBUQUERQUE, NEW MEXICO 87109 (505) 823-1000
UNIVERSITY PLAZA, SUITE 104, 330 GARFIELD SANTA FE, NEW MEXICO 87501 (505) 988-7671
6713 VISCOUNT BLVD EL PASO, TEXAS 79925 (915) 778-4491
ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS

September 3, 1986

RECEIVED
SEP 04 1986
HYDROLOGY SECTION

B-13/D3

Mr. Fred Aguirre
City of Albuquerque
Hydrology Section
Box 1293
Albuquerque, NM 87103

Re: V.T., Inc. Auto Park Drainage Infrastructure

Dear Fred:

I am writing to summarize our discussion of August 28, 1986 regarding drainage infrastructure for the V.T., Inc. Auto Park project. Highlights of our discussions are as follows:

1. I described the scope of the analysis that will support the infrastructure design. I made it clear that the analysis will incorporate the entire watershed which drains to this outfall system.

2. I reviewed the infrastructure that will be constructed in conjunction with the first phase of the Auto Park development. Again, I reiterated that this infrastructure will support runoff from the ultimate development in the watershed.

3. We reviewed the four (4) drainage reports that will be submitted to support this development:

   - A conceptual grading and drainage plan for the 40 acre site submitted with the EPC package on September 26, 1986.

   - A detailed drainage report supporting the infrastructure that will be constructed for the site's first phase.

   - An amendment to the "7-Bar Drainage Management Plan" to describe changes to criteria previously established for the watershed.

   - A detailed grading plan for the final condition on the project's first phase.

   Isaacson-Arfman, P.A. will be submitting plans 1 and 4, while Bohannan-Huston, Inc. will submit plans 2 and 3.

4. You requested that Resources Technology, Inc. be advised of our plans, since this firm is preparing an overall management plan for the Calabacillas Arroyo. I agreed to write Mr. Elvidio Diniz at Resources Technology informing him of our project.

PRINCIPALS
LARRY W. HUSTON
MICHAL M. EMERY, P.E.
DANA C. WOOD, P.E.
ANDRES ARAGON VIAMONTE
DARRELL L. WADE, P.E.
JAMES V. DOMENICK, P.E.
BRIAN G. BURNETT, P.E.

5. I noted that Mike Emery and I had met with Larry Blair, AMAFCA, and Roger Green of your office, to discuss the storm drain outfall at the Calabacillas Arroyo.

6. We reviewed the fact that the site's second plat will be supported with an approved infrastructure list, drainage analysis, subdivision improvements agreement, and financial guarantees.

Based on our discussion, you agreed that the "First Plat" (bulk land plat) can be signed after the City Council approves the annexation and zoning for the property. Your signature on the "second plat" will be contingent on the approval of the detailed reports, agreements and guarantees.

Fred, all of us associated with this project certainly appreciate your input and support. We will continue to keep you informed of our progress and if you should have any questions, please do not hesitate to call.

Truly yours,

Brian G. Burnett, P.E.
Vice President

cc: Mr. Cecil Van Tuyl
Mr. Bill Dean
Mr. John Myers
Mr. John Black
Mr. John Salazar
Ms. Karen Marcotte
Mr. Matt Spangler
Ms. Joan Hill
Mr. Jorge de la Torre
Mr. Chuck Easterling
Mr. Tom Isaacson
Mr. Dale Dekker
Mr. Gary Hugg

BGB/mls
Job No. 6 308 8

HERBERT M. DENISH
AND ASSOCIATES INC.
CONSULTANTS TO DEVELOPERS

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JUL 29 1986
HYDROLOGY SECTION

July 24, 1986

Anne McLaughlin, Staff Planner
Planning Department
City of Albuquerque

Barbara Baca, Open Space
City of Albuquerque
P.O. 1293
Albuquerque, NM 87103

RE: Calabacillas Bike Path - Auto Park Site

Dear Anne & Barbara:

I certainly enjoyed our field trip to the Calabacillas Wednesday morning. I am writing this letter to confirm our discussions concerning the acceptability of the right-of-way for the proposed bike trail along the Calabacillas adjacent to the proposed auto park. After our field survey, I understand that, at least as far as the auto park site is concerned, a right-of-way line 16 feet north of the Hugg/Plat line will be adequate and acceptable to the City. The Hugg/Plat line represents the current platted boundary of the Calabacillas. This right-of-way will be sufficient to allow the City to construct a bike trail and still provide a landscape buffer between the bike trail and the south property line of the proposed auto park.

The only stretch of right-of-way remaining in question is that area immediately adjacent to Coors Blvd. The location and configuration of the bike trail in this area will need to be reviewed with reference to the right-of-way of the Coors Road by-pass. We all recognize that the grades in this area may have to be modified depending on alignment of the by-pass road, the drainage outlet into the Calabacillas and the Seven Bar Ranch entry sign.

As per our discussions, I will instruct Gary Hugg to restake the Hugg line as well as the bike path right-of-way line so that all interested parties can view this if they so desire. Mr. Hugg will also be submitting a plat for review and approval by the Development Review Board which will reflect the bikeway right-of-way and the Coors by-pass right-of-way. That plat will specifically locate the bike path adjacent to the auto park site and dedicate the same to the City of Albuquerque.

As far as the bike trail is concerned west of the auto park site, the plat will identify the need for a bike trail but will not specifically locate the same.

215 Central Avenue N.W. Suite 270 • Post Office Box 2001 • Albuquerque, New Mexico 87103 • Tel. 505-842-6461

Thank you for your cooperation on this matter. If you have any questions, please feel free to contract me.

Sincerely,

WILLIAM L. KRAEMER, Esquire

WLK/tdm

cc: John Myers
John Black
John Salazar
Joan Hill
Matt Spangler
Dale Dekker
Cecil Van Tuyl
Fred Aguirre
Rich Leonard
Gary Hugg
Janet Saiers

B. H. SWINBURNE, CHAIRMAN
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R. WARD HUNNICUTT, DIRECTOR
REX FUNK, DIRECTOR

RICHARD E. LEONARD
EXECUTIVE ENGINEER

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

P. O. BOX 25951 - ALBUQUERQUE, N. M. 87125
TELEPHONE 884-2215

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JUL 25 1986
HYDROLOGY SECTION

July 23, 1986

William L. Kraemer
Herbert M. Denish & Associates
P.O. Box 2001
Albuquerque, New Mexico 87103

Ref: Drainage Easement and Bike Path Calabacillas Arroyo, Seven Bar Ranch Auto Park

Dear Mr. Kraemer:

Thank you for summarizing our July 3 meeting. Here are a few comments:

Par 1. AMAFCA will accept the Hugg-plus - 16 feet line from Coors Road westerly approximately 2000 feet. However, we need to stay with the prudent line commencing at a point approximately 310 feet east of the boundary between Tract N-1 and Tract N-2.

Par 5. AMAFCA's position is that a portion but not all, of the property between the prudent line and the "Hugg - plus - 16" line may be used for certain purposes. In the absence of bank protection, uses other than landscaping and recreation are inappropriate at some locations, notably near the S curve.

I propose that AMAFCA and the owner/developer of each tract enter into separate agreements regarding appropriate uses for the land between the prudent line and the Hugg-plus-16 line. The agreements could be tailored for each tract and the use planned for that tract. AMAFCA would require a hold harmless and an indemnification clause. Jeff Baker is prepared now to negotiate such an agreement for the auto park.

Par 6. Either fee simple or easement is acceptable to AMAFCA.

Please do not overlook granting an easement for the arroyo proper.

Thanks again for the summary. I agree that we are approaching final resolution.

Sincerely,

Richard E. Leonard

Richard E. Leonard,
Executive Engineer

REL:cb

cc: Anne McLaughlin
Susan Montgomery
Fred Aguirre
Jeff Baker
Matt Spangler
John Myers
Dale Dekker
John Salazar
Joan Hill
John Black

B. H. SWINBURNE, CHAIRMAN
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R. WARD HUNNICUTT, DIRECTOR
REX FUNK, DIRECTOR

RICHARD E. LEONARD
EXECUTIVE ENGINEER

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TELEPHONE 884-2215

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HYDROLOGY SECTION

July 23, 1986

Matthew M. Spangler
Rodey, Dickason, Sloan, Akin & Robb, P.A.
P.O. Box 1888
Albuquerque, New Mexico 87103

Dear Mr. Spangler:

Reference your July 10 letter, Re: Calabacillas Arroyo - Bulk Land Plat, and our subsequent telephone discussion.

AMAFCA will accept the Hugg-plus - 16 feet line from Coors Road westerly approximately 2000 feet. However, we need to stay with the prudent line commencing at a point approximately 310 feet east of the boundary between Tract N-1 and Tract N-2.

We are willing to consider parking, landscaping and fences within portions of the area between the prudent line and the "Hugg - plus - 16" line. However in the absence of bank protection, development other than landscaping and recreation are inappropriate at some locations, notably near the S curve.

I propose that AMAFCA and the owner/developer of each tract enter into separate agreements regarding appropriate uses for the land between the prudent line and the Hugg-plus-16 line. The agreements could be tailored for each tract and the use planned for that tract. AMAFCA would require a hold harmless and an indemnification clause. Jeff Baker is prepared now to negotiate such an agreement for the auto park.

Please do not overlook granting an easement for the arroyo proper.

Stay in touch.

Sincerely,

Richard E Leonard

Richard E. Leonard,
Executive Engineer

REL:cb

cc: J. Black
J. Myers
W. Kraemer
F. Aguirre
A. McLaughlin
J. Baker

B13/D3

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

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

July 17, 1986

Matthew M. Spangler
Rodey, Dickason, Sloan, Akin & Robb, P.A.
20 First Plaza, Suite 700
Post Office Box 1888
Albuquerque, New Mexico 87103

RE: CALABACILLAS ARROYO, BULK LAND PLAT PROPOSED TRACT N-1

Dear Mr. Spangler:

In response to your letter dated July 10, 1986, I forward these following concerns in regards to the acceptability of leaving only a 16 foot wide strip for use by AMAFCA and the City.

Background data from the Simons & Li Report dated April 11, 1986, which established the Prudent Line, applies to Tract N-1. The reach of arroyo adjacent to Tract N-1 potentially can have the bottom elevation degrade up to 20 feet for a 100 year runoff event. Between 1972 and 1980, the arroyo flow line degraded up to 3 feet in this area. The reach of arroyo analyzed adjacent to Tract N-1 is 1700 feet long, with the following amount of soil predicted to be eroded away for this reach:

Flood Frequency	Degradation Volume (FT^3)	Peak Flow Rate Q-1(cfs)
2 yr.	7,500	400
10 yr.	270,000	2,700
25 yr.	430,000	5,400
100 yr.	2,900,000	12,700

To determine the extent of allowed encroachment beyond the Prudent Line with private development, the additional following information is required:

1. Existing cross sections at the west end of Tract N-1 and 400 feet downstream showing the following:

   a. Arroyo elevations including bottom, side slopes and banks.

   b. Prudent line location.

   c. Water surface elevation for the two year thru 100 year storms.

   d. Existing property lines.

   e. Depths of predicted degradation for the 100 year storm.

2. Determine the amount of bank failure with the following information:

   a. Slip circle failure location.

   b. On site soils testing to determine cohesion, angle of friction, soil type, etc.

   c. Include loading caused by new development to determine slope failure locations.

   d. Show factors of safety for slope failures using the prudent line limits and proposed development within the prudent line area.

An assessment by this office concerning Tract N-1 cannot be made until adequate field information is provided to support the proposed encroachment beyond the established prudent line.

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

Cordially,

Billy J. Goolsby

Billy J. Goolsby, P.E.
C.E./Hydrology Section

BJG/baj

HERBERT M. DENISH AND ASSOCIATES INC.
CONSULTANTS TO DEVELOPERS

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JUL 16 1986
HYDROLOGY SECTION

July 11, 1986

Mr. Richard E. Leonard
Executive Engineer
Albuquerque Metropolitan Arroya Flood Control Authority
P.O. Box 25851
Albuquerque, NM 87125

RE: Drainage Easement and Bike Path Calabacillas Arroyo,
Seven Bar Ranch Auto Park

Dear Mr. Leonard:

The purpose of this letter is to summarize the discussion held in your office on Thursday, July 3, 1986. In attendance at that meeting were Anne McLaughlin, City Planning Division, Susan Montgomery, City Planning Division, Fred Aguirre, City Hydrologist, Jeff Baker, General Counsel of AMAFCA, Matt Spangler, Rodey Law Firm, Bill Kraemer, Herbert M. Denish & Associates, and Richard Leonard, AMAFCA Executive Engineer.

This meeting was held to attempt to resolve the location and extent of the public dedications and easements that will be required along the Calabacillas to accommodate the proposed City bikeway and drainage right-of-way needed by AMAFCA as well as the nature and extent of the interests that will be retained for private use.

Although the meeting was not conclusive regarding these issues, there seemed to be a consensus that was reached between the participants involved. I will try to summarize important points.

1. Width of Bikeway Adjacent to Auto Park - Kraemer and Spangler told the group that the owner, Seven Bar Land and Cattle Company and the developer, V.T., Inc., have agreed and intend to convey either in fee simple or by easement a strip of land, sixteen feet wide immediately north of the plat or Hugg line. McLaughlin indicated that she thought the City's needs and desires for said bike path could be accomplished in that area, subject to field verification along the western stretch of the proposed auto park. Montgomery, Aguirre, Baker and Leonard saw no reason why this proposal would not meet their concerns. Consensus - the width proposed by Seven Bar should be sufficient.

2. Bikeway West of Auto Park to Section Line - Seven Bar proposed similar dedications in this area. McLaughlin was not ready to commit City to this portion. Consensus - Decision on this stretch of the Calabacillas can be deferred until the City has time to investigate the topography of the property.

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3. Relocation of Park Along the Bikeway - McLaughlin and Montgomery expressed an interest in obtaining an additional area for rest stop(s) along the bikeway particularly in areas where the prudent line varies substantially from the arroyo channel ie. bends in the Calabacillas. Kraemer and Spangler acknowledged this possibility and promised to explore this matter with their clients. This idea is contingent on the City's willingness to substitute these rest stops along the Calabacillas for a portion or all of one of the park sites included in the Seven Bar Sector Plan. The park site shown next to the school site proposed west of the Black arroyo appears to be the most logical park to use for substitution. McLaughlin agreed to check this out with Parks & Recreation. Consensus - if the details can be worked out the concept of park relocation seems workable.

4. Establishment of Common Line for Purposes Flood Control Purposes and Bikeway - Leonard proposed that the drainage easement and bikeway be defined by a common line. This line at any given point, would be either the Simons and Li Prudent Line or the line 16 feet north of the plat line whichever is further north. Kraemer and Spangler said that this proposal was not acceptable to their clients.

5. Improvements Allowed Within the Prudent Line - Leonard and Baker reiterated their position that AMAFCA would allow the property between the bikeway and the prudent line to be used by the owner or its successors for uses not involving permanent structures, provided that AMAFCA is able to approve specific plans for use. Aguirre said that, while he was not willing to give a general approval of uses within the prudent line area, that he thought he would be able to approve specific uses through the site plan approval process. Hold harmless or indemnification of City may be necessary. Consensus - the property should be platted with the southerly boundary as a line sixteen feet north of the Hugg line. City will review uses proposed within the prudent line area on a case by case basis.

6. Fee Simple vs. Easement - Seven Bar proposed that the bikeway be dedicated in fee to the City. City found this acceptable. AMAFCA wants to make sure that it's rights to this property are protected. Leonard and Baker asked Kraemer and Spangler to explore the possibility of conveying the Calabacillas itself to AMAFCA in fee simple with a reservation of the right to mine gravel. The prudent line area will need to be conveyed as an easement since private parties intend to use this area.

7. Barrier Between Bikeway and Auto Park - We discussed the possibility of using something other than a block wall or chain link fence along the south boundary of the auto park. It was suggested that Dekker & Associates be asked to look at barrier similar to that used north of Cabezon Channel.

8. Platting - Kraemer and Spangler stated that private property owners are ready to proceed with platting this property. The first plat will merely dedicate the by-pass road and create a parcel to be conveyed to V.T., Inc., the auto park developer. This plat will be processed simultaneously with a plat that will dedicate Eagle Ranch road and provide financial guarantees for infrastructure determined by DRB to be necessary for development of the auto park. Aguirre cautioned that a detailed master drainage plan was deferred at Sector Plan approval until time of platting. He wanted the property owner to be put on notice that DRB would need to see and approve the implementation of the drainage solution for this property before the plat could be approved.

I hope that these are fair summaries of our discussions on these topics. If anyone has any additions or corrections, I welcome hearing from you. I hope I'm not being overly optimistic in my belief that we finally have an acceptable solution in site for the complicated issues related to the Calabacillas Arroyo at least for the stretch adjacent to the proposed auto park.

Sincerely,

WILLIAM L. KRAEMER

WLK/tdm

cc: Anne McLaughlin
Susan Montgomery
Fred Aguirre
Jeff Baker
Matt Spangler
John Myers
Dale Dekker
John Salazar
Joan Hill
John Black

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P. O. BOX 25851 - ALBUQUERQUE, N. M. 87125
TELEPHONE 884-2215

B-13/D4

June 9, 1986

Mr. Brian Burnett
Bohannan-Huston, Inc.
Journal Center Courtyard I
7500 Jefferson Street NE
Albuquerque, New Mexico 87109

Subject: Revised Conceptual Grading and Drainage Plan for West Side Auto Park

Dear Brian:

The revised plan submitted June 4 satisfies AMAFCA's comment regarding the outfall structure at the northwest corner of Area B.

Bank protection will not be required for Area A & B if the developer grants AMAFCA a drainage easement to the "prudent" line.

Sincerely,

Dan Sabo

Dan Sabo
Drainage Engineer

DS:cn

cc: Roger Green, City Hydrology
cc: Susan Montgomery, City Planning

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JUN 09 1986
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BOHANNAN-HUSTON INC.
4125 CARLISLE BLVD., N. E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
UNIVERSITY PLAZA, 330 GARFIELD SUITE 104 SANTA FE, N. M. 87509 505 988-7671
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4491

February 4, 1986

RECEIVED
FEB 11 1986
HYDROLOGY SECTION
CITY ENGINEER

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

Re: Review of Conceptual Drainage Plan for Auto Park (Tracts N1 and N2 of 7-Bar Ranch) Located at Proposed By-Pass Road and Existing Coors Boulevard 613/03

Dear Fred:

On behalf of the 7-Bar Land and Cattle Company, I am forwarding some general remarks regarding the referenced plan. As you know, Bohannan-Huston, Inc. and Easterling and Associates have worked in concert to prepare the master plan for drainage. We believe the following should be thoroughly investigated and any outstanding issues resolved to our clients satisfaction prior to approval being granted:

Storm Sewer System from Shopping Center

As the drainage plan references, a large storm sewer is being proposed to drain the shopping center site north of the By-Pass Road. The eventual outfall for the system is the Calabacillas Arroyo. To date, this connection and alignment have not been detailed. We believe that this issue must be thoroughly investigated and coordinated with AMAFCA to insure that work on the Auto Park Site does not limit future options for making this connection.

Temporary Holding Ponds

The plan also indicates the location of temporary storage ponds in the By-Pass Road. Such an approach appears reasonable only if commitments are clearly established for funding future improvements to accept the flows from the site. To often temporary measures located in the street have become the financial responsibility of the City or other developments at the time the road improvements become permanent.

Calabacillas Arroyo Protection

We also believe that it is necessary at this time to establish requirements for downstream arroyo protection, if any. As you know, AMAFCA is currently working on a study to examine the impact of developed runoff on the arroyo system.

PRINCIPALS
LARRY W. HUSTON
MICHAL M. EMERY, P.E.

In summary, we believe that the above issues should be examined in more detail prior to site plan sign-off. We will be most happy to work with your staff and the Auto Park consultants to investigate the various items. Please contact me if you have any questions.

Truly yours,

Brian G. Burnett

Brian G. Burnett, P.E.
Vice President

RECEIVED
FEB 11 1986
HYDROLOGY SECTION

cc: Mr. John Black
Mr. Charles Easterling
Mr. Tom Isaacson

BGB/mls
Job No. 4 154 7

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

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

January 27, 1986

Thomas G. Isaacson, P.E.
Isaacson & Arfman, P.A.
128 Monroe, NE
Albuquerque, New Mexico 87108

RE: CONCEPTUAL GRADING AND DRAINAGE PLAN SUBMITTAL OF WESTSIDE AUTO PARK RECEIVED JANUARY 6, 1986 FOR SITE DEVELOPMENT PLAN APPROVAL (B-13/D3)

Dear Tom:

I have reviewed the referenced plan dated January 6, 1986, and have the following comments to be addressed before review can continue for Site Development Plan approval.

A. Report Text, Sheets 1 thru 36:

1. Sheet 1 - Since approved Master Plan assumes that Tract X drains into proposed by pass road along with Tracts L, N, and N_2, this plan must assume the same unless Master Plan is revised accordingly.

2. Sheet 2 - Since Master Plan calculated volumes of runoff, for ponding criteria, utilizing DPM plates 22.2 C-2 & 22.2 C-4. I feel it is appropriate to use the same method in this plan for consistency. Since the Rational Formula sometimes provides volumes considerably different from the SCS method, the same methods should be used to stay within the scope and intent of the approved Master Plan.

3. Sheet 3, 8, 12 & 16 - provide documentation on how the ponded and composite trapezoidal shaped hydrographs were determined. Also, is it appropriate to use a hydrograph determined by the Rational Method, (Tract L unponded), with a controlled release rate of 66 cfs from the Master Plan using the HYMO Method to calculate Qp.?

4. Sheet 6 and 10 - On the runoff calculations for the bypass road, why was a % impervious value of 72% used, when the developed condition is to be a 6 lane arterial road? A "C" value of 0.57 does not seem appropriate for this condition.

5. Sheet 13 - On the runoff calculations for the by-pass road at the east end of Tract N_2, why was a % impervious value of 35% used? (See comment 4 above.)

   Also for the Tc calculations, where did the slope = .001 ft/ft come from? If preliminary plans exist for the by-pass road, please provide copies or include elevations on your plan.

6. Sheet 17 - the approved Master Plan shows developed Shopping Center Flows as 145.4 cfs, not 338 cfs, which is correct?

7. Sheet 18 - Master Plan requires 50% ponding of developed runoff, which using your rational formula values amounts to 44, 475 ft^3 required ponding. 33,375 ft^3 is shown as provided. (See comment 2 above.) Another acceptable method of calculating required ponding volumes would be to limit developed site discharges to those shown in the Master Plan, and through routing methods determine required volumes of storage.

B. Site Development Plan Drawings:

1. Sheet 4 of 10:

   a. How will Tract L flows be diverted to Coors by-pass road along Tract N-1?

b. Future property lines must be same as the established "Prudent Line", per discussions with AMAFCA.

c. Drainage Plan Notes 1 - statement regarding ponding requirement is not consistent with report ext or Master Plan.

d. Provide a sketch plat with bearings and distances, per the DPM.

e. Suggest using standard City drawing sheets to avoid redrafting for DRC submittals, per the DPM.

f. Provide a Conceptual Erosion Control Plan, per the DPM.

2. Sheet 10 of 10:

a. See comment 1.b. above.

b. No encroachment of parking areas beyond "Prudent Line" will be allowed by City policy. AMAFCA's previous approval of this was when site was under County jurisdiction, but has since been, or proposed to be annexed into City.

c. See comment 1.c. above.

d. See comment 1.d. above.

e. See comment 1.e. above.

f. See comment i.f. above.

g. Are profile grades along Coors By-Pass proposed or existing? Legend is not specific.

If you have any questions regarding this project, call me at 766-7644.

Cordially,

Roger A. Green, PE

Roger A. Green, P.E.
C.E./Design Hydrology

cc: Brian Burnett, P.E.

Standard Letter to:
Dekker & Associates

RAG/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Westside Automobile Dealership Park ZONE ATLAS/DRAINAGE FILE # B-13/D3

LEGAL DESCRIPTION: Parcels N1 & N2, 7-Bar Sector Plan (Un-Platted)

CITY ADDRESS: N/A

ENGINEERING FIRM: Isaacson & Arfman, PA CONTACT: T. Isaacson

ADDRESS: 128 Monroe, NE (87108) PHONE: 268-8828

OWNER: V.T. Inc. CONTACT: Cecil Van Tyle

ADDRESS: Shawnee, Mo. PHONE: —

ARCHITECT: Dekker & Assoc. CONTACT: Dale Dekker

ADDRESS: 600 1st St. N.W., 87102 PHONE: 247-2887

SURVEYOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED JAN 06 1986 HYDROLOGY SECTION

DRB NO. DRB-85-614 9/10/85; DRB-85-413 6/25/85

EPC NO. SD-78-3-2; Z-85-79; AX-85-19 9/18/85

PROJECT NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAIN PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SECTOR PLAN APPROVAL

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

X SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

OTHER _____ (SPECIFY)

DATE SUBMITTED: 1-6-85 (resubmitted)

BY: T. Isaacson

REV. 6/85

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Westside Automobile Dealership Park ZONE ATLAS/DRAINAGE FILE # B-13

LEGAL DESCRIPTION: Parcels N₁ & N₂, 7-Bar Sector Plan (Un-Platted)

CITY ADDRESS: N/A

ENGINEERING FIRM: Isaacson & Arfman, PA CONTACT: T. Isaacson

ADDRESS: 128 Monroe, NE (87108) PHONE: 268-8828

OWNER: V.T. Inc. CONTACT: Cecil Van Tyle

ADDRESS: Shawnee, Mo. PHONE: —

ARCHITECT: Dekker & Assoc. CONTACT: Dale Dekker

ADDRESS: 600 1st St. N.W., 87102 PHONE: 247-2887

SURVEYOR: N/A CONTACT:

ADDRESS: PHONE:

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

X YES

__ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO.

EPC NO.

PROJECT NO.

RECEIVED DEC 30 1985 HYDROLOGY SECTION

TYPE OF SUBMITTAL:

__ DRAINAGE REPORT

__ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAIN PLAN

__ GRADING PLAN

__ EROSION CONTROL PLAN

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__ CERTIFICATE OF OCCUPANCY APPROVAL

__ ROUGH GRADING PERMIT APPROVAL

__ GRADING/PAVING PERMIT APPROVAL

OTHER _____ (SPECIFY)

DATE SUBMITTED: 12/30/85

BY: T. Isaacson

REV. 6/85

MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: B13 DATE: 2-4-85

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Westside Auto Parks

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: 7 BAR SECTOR PLAN (Unplatted Land)

APPROVAL REQUESTED:

____	PRELIMINARY PLAT	____	FINAL PLAT
✓	SITE DEVELOPMENT PLAN	____	BUILDING PERMIT
____	OTHER	____	ROUGH GRADING

ATTENDANCE:	WHO	REPRESENTING
	Tom Isaacson	
	Fred J. Aguiare	

FINDINGS:

1. Resolution regarding phasing of infrastructures needed for the "Seven Bar Sector Plan" is required prior to any subdivision/site approval.

2. An approved conceptual grading & drainage plan is appropriate for site approval if the following conditions are satisfied:
   A. Resolution of item 1 above
   B. No significant on-site infrastructures are required for development

3. Recommend another pre-design meeting to identify requirements for building permit process.

4. Bank protection is not required if no development encroaches within the prudent line established by the Simons & Li Study.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	Fred Aguiare	SIGNED:	Tom Isaacson
TITLE:		TITLE:	
DATE:	2/4/85	DATE:	2-4-85

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL