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File FPP-1995-182
Date 1/8/99

Present	Scanned	
		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the ISYS retrieval system. In some instances, not all entries designated to be scanned, are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been included. **Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.** **Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.**
X	X	***Summary Sheet – Table of Contents**
X		Application form
X		Receipts for fees paid for anything
X	X	***Submittal checklist**
X	X	***General project report**
		Reduced copy of final plans or drawings
		Reduction of assessor's map
		Evidence of title, deeds
X	X	***Mailing list**
		Public notice cards
		Record of certified mail
X		Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		***Final reports for drainage and soils (geotechnical reports)**
		Other bound or nonbound reports
		Traffic studies
X		Individual review comments from agencies
X	X	***Consolidated review comments list**
X	X	***Petitioner's response to comments**
X	X	***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**
		***Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date)**

DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

X	X	Letter from Trent Prall to Steve Colony – 6/30 99	X	X	Grading and Stormwater Management Plan
X	X	Letter from Michael Drollinger to Steven Colony – 11/27/95	X	X	Water and Sewer Plan and Profile
X	X	Letter from Glen Vancil to Vista Del Rio – Filing #2 – 11/1/95	X	X	Roadway Plan and Profile
X		Fill Density Test Daily Report	X		Letter from Steven Colony to Michael Drollinger – 10/3/95
X		E-mail from Tim Woodmansee to Jody K., Michael D. – 1/19/96	X	X	Treasurer's Certificate of Taxes Due – 9/20/95
X	X	Letter from Steven Colony to Jodi Kliska – 1/12/96	X	X	Amended Prelim-Phase 4
X	X	Letter from Eric Marquez to Steve Colony – 1/10/96	X	X	Location Map
X	X	Vista Del Rio Site Distance Design	X	X	Row and Easement Vacation
X	X	Ordinance No. 2890	X	X	Grant of Easement
X		Letter from Rick Dorris to Kathy – no date	X		Memo from Michael Drollinger to John Shaver – 7/24/96
X	X	Planning Clearance - **	X		Memo from Michael Drollinger to Steve Colony – 5/13/96
X	X	Development Improvements Agreement, Disbursement Agreement, Release of Improvements Agreement	X		Letter from James Shanks to Udell Williams re: monumentation of street centerlines - 4/1/96
X	X	Letter from Trent Prall and Kerrie Ashbeck to Steve Colony - 6/30/99	X		Letter from Udell Williams to James Shanks – 3/25/96
X		Covenants	X		Letter from James Shanks to Udell Williams re: monumentation - 3/22/96
X	X	Final Drainage Report	X	X	Letter from Udell Williams to Terry Nichols - 3/15/96
X	X	Traffic Study	X		Letter from Doralyn Genova to Terry Nichols re: Final Plat Regulations – 3/6/96
X	X	Subdivision Plat	X	X	City Council Minutes - ** - 1/17/96, 2/7/96
X	X	Building Setbacks	X		Letter from Michael Drollinger to Eriq Marquez – 1/6/96

X	X	Composite Plan	X		E-mail from J Kliska to Michael Drollinger re: breakdown of costs – 12/
X	X	Planning Commission Hearing - ** - 11/7/95	X	X	Letter from Eric Marquez to Michael Drollinger
					Memos from Michael Drollinger to Jim Shanks re: TCP credit – 11/15/96
X	X	Resolution No. MCM 94-145, MCM94-118	X		Posting of Public Notice Signs
			X	X	Letter from Kevin Nourse to Matt Osborne re: bike path-2/27/95
			X		Personal Representative's Deed

SUBMITTAL CHECKLIST

MAJOR SUBDIVISION: FINAL

Location: RIO LINDA LANE & REDLANDS PKWY Project Name: VISTA DEL RIO FILING #3

Date Received _____

Receipt # 2987

File # FPP-95-182

DESCRIPTION	SSID REFERENCE	● City Community Development	● City Dev. Eng.	● City Utility Eng.	● City Property Agent	● City Parks/Recreation	● City Fire Department	● City Attorney	● City G.J.P.C. (8 sets)	O City Downtown Dev. Auth.	● City Police	● County Planning	O County Building Department	● County Surveyor	O Walker Field	● School Dist. #51	O Irrigation District	● Drainage District – REDLANDS	● Water District – UTE	O Sewer District	● U.S. West	● Public Service	O GVRP	O CDOT	O Corps of Engineers	O Colorado Geologic Survey	O U.S. Postal Service	● Persigo WWTF	● TCI Cable			TOTAL REQ'D.
● Application Fee	VII-1	1																														
● Submittal Checklist*	VII-3	1																														
● Review Agency Cover Sheet*	VII-3	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
● Application Form*	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
● Reduction of Assessor's Map	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
● Evidence of Title	VII-2	1			1			1																								
O Appraisal of Raw Land	VII-1	1			1	1																										
● Names and Addresses*	VII-2	1																														
● Legal Description*	VII-2	1			1																											
O Deeds	VII-1	1			1			1																								
O Easements	VII-2	1	1	1	1			1													1	1	1						1			
O Avigation Easement	VII-1	1			1			1							1																	
O ROW	VII-2	1	1	1	1			1													1	1	1						1			
● Covenants, Conditions & Restrictions	VII-1	1	1					1																								
O Common Space Agreements	VII-1	1	1					1																								
● County Treasurer's Tax Cert.	VII-1	1																														
● Improvements Agreement/Guarantee*	VII-2	1	1	1				1																								
O CDOT Access Permit	VII-3	1	1																													
O 404 Permit	VII-3	1	1																													
O Floodplain Permit*	VII-4	1	1																													
● General Project Report	X-7	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1			
● Composite Plan	IX-10	1	2	1	1																											
● 11"x17" Reduction Composite Plan	IX-10	1				1	1	1	8	1	1	1	1				1	1	1	1	1	1	1	1	1		1	1				
● Final Plat	IX-15	1	2	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
O 11"X17" Reduction of Final Plat	IX-15	1							8	1	1	1			1	1	1	1	1	1	1	1	1				1		1			
● Cover Sheet	IX-11	1	2																													
● Grading & Stormwater Mgmt Plan	IX-17	1	2															1							1	1			1			
O Storm Drainage Plan and Profile	IX-30	1	2															1			1	1	1						1			
● Water and Sewer Plan and Profile	IX-34	1	2	1			1												1	1	1	1	1					1	1			
● Roadway Plan and Profile	IX-28	1	2															1														
O Road Cross-sections	IX-27	1	2																													
● Detail Sheet	IX-12	1	2																													
O Landscape Plan	IX-20	2	1	1					8																							
● Geotechnical Report Recorded with	X-8	1	1	Document																					1							
O Phase I & II Environmental Report	X-10,11	1	1																													
● Final Drainage Report	X-5,6	1	2															1														
O Stormwater Management Plan	X-14	1	2															1							1							
O Sewer System Design Report	X-13	1	2	1																1												
O Water System Design Report	X-16	1	2	1															1													
O Traffic Impact Study	X-15	1	2																					1								
O Site Plan	IX-29	1	2	1	1		1		8																							

NOTES: * An asterisk in the item description column indicates that a form is supplied by the City.

DEVELOPMENT APPLICATION

Community Development Department
250 North 5th Street, Grand Junction, CO 81501
(303) 244-1430

Receipt _____
Date _____
Rec'd By _____
File No. FPP-95-182

We, the undersigned, being the owners of property situated in Mesa County, State of Colorado, as described herein do hereby petition this:

PETITION	PHASE	SIZE	LOCATION	ZONE	LAND USE
☒ Subdivision Plat/Plan	☐ Minor ☒ Major ☐ Resub	11.4 ac	REDLANDS PKWY. AT RIO LINDA LN	MESA COUNTY R-2	RESIDENTIAL
☐ Rezone				From: To:	
☒ Planned Development	☐ ODP ☐ Prelim ☒ Final	11.4 ac	REDLANDS PKWY. AT RIO LINDA LN	MESA COUNTY R-2	RESIDENTIAL
☐ Conditional Use					
☐ Zone of Annex					
☐ Variance					
☐ Special Use					
☐ Vacation					☐ Right-of Way ☐ Easement
☐ Revocable Permit					

☒ PROPERTY OWNER	☒ DEVELOPER	☒ REPRESENTATIVE
B & P DEVELOPMENT CO., LLC	ALPINE C.M., INC.	NICHOLS ASSOCIATES, INC
Name	Name	Name
702 GOLFMORE DRIVE	1111 S. 12TH STREET	751 HORIZON COURT
Address	Address	Address
GRAND JUNCTION, CO 81506	GRAND JUNCTION, CO 81501	GRAND JUNCTION, CO 81
City/State/Zip	City/State/Zip	City/State/Zip
245-2505	245-2505	245-7101
Business Phone No.	Business Phone No.	Business Phone No.

NOTE: Legal property owner is owner of record on date of submittal.

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the forego information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the rev comments. We recognize that we or our representative(s) must be present at all required hearings. In the event that the petitioner is not represented, the i will be dropped from the agenda, and an additional fee charged to cover rescheduling expenses before it can again be placed on the agenda.

X _____ 9/27/95
Signature of Person Completing Application — Date

X _____ POA for B&P Develop. 9-27-95
Signature of Property Owner(s) - attach additional sheets if necessary — Date

PROJECT NARRATIVE
VISTA DEL RIO SUBDIVISION
FILING THREE

GENERAL

The proposed Vista Del Rio Subdivision is vacant land on a site adjacent to the west side of the Redlands Parkway, along the south bluff of the Colorado River and abuts Filing One, Filing Two and existing residential development on the west. A smaller portion of the site is located on the east side of the Parkway and is bounded on the east by existing residential and open areas on the south and east. The entire property underwent the development process in 1984 and was accepted as a single family and condominium-type project, but the final plat was never recorded. Filings One and Two of Vista Del Rio Subdivision, approved by Mesa County, were started in 1994 with construction completed in 1995. Several lots are sold and homes are constructed or are being constructed.

The existing county zoning was R-2, which allows 3.5 residential units per acre. The recorded and approved ODP for the county contained 54 residential units (53 proposed single family lots and one existing unit). The original proposed density was approximately 1.86 units/acre.

The proposed filings will lower the approved density. The breakdown is as follows: Filing One - (9) units on 4.5 acres = 2.0 units/acre; Filing Two - (10) units on 6.9 acres = 1.45 units/acre; Filing Three - (23) units on 11.4 acres = 2.02 units/acre; Filing Four (Future Filing east of the Parkway) - (2) units on 3 acres = 0.67 units/acre; and the existing unit - (1) unit on 2.4 acres = 0.42 units/acre.

Several acres of the site will be left as Private Open Space. Areas adjacent to the Redlands Parkway access and along Rio Linda Lane have been or will be irrigated. These areas will be owned and maintained by the homeowners association. Other open areas will be left in their native condition with existing natural vegetation.

PROJECT DESIGN/LAYOUT

The layout and design of roads and lots in all filings in the Subdivision have been predominately dictated by existing internal and external forces.

Rio Linda Lane was installed by the County in the early 1980's as a second (and now primary) access to Loma Rio and adjacent subdivisions. Rio Linda Lane serves as the primary access to Vista Del Rio Subdivision as well.

It was determined early in the project to utilize the existing sewer lines on the site, rather than bear the expense to re-do them. The lines were video taped and found to be serviceable, once they were cleaned. The existing road crossing of the sewer line at Rio Linda Lane was

maintained, as well as the existing curb cuts to minimize disruptions to the traffic for the existing neighborhoods.

The existing Public Service easement for the distribution line roughly bisects the property and must be maintained.

Some irrigation and storm water run-off from Loma Rio Subdivision has been flowing east down Rio Linda Lane for the past 12-14 years. The water collected in a low area that was cut as a road bed for the proposed development in 1984. Since that time, trees and vegetation have grown, and the spot is now being classified as a wetland. The area is located in our Filing Three. We are not developing the area, but rather are leaving it as a conservation easement attached to two lots.

The forces listed above have all shaped the development that has occurred in Filings One and Two and continues to dictate lot layouts in this proposed third filing.

BENEFICIAL USE

When we started this project, the property was vacant ground located between existing residential subdivisions and was not suited for agricultural or commercial uses. We felt its highest and best use was as a residential development, closely matching the existing neighborhoods.

We feel in-fill projects such as this should be encouraged by local governing bodies. They can be tied to existing utilities and are within established service districts for police, fire, sanitation, and education and slow down the growth of 'urban sprawl'. Our lot sizes and amenities closely mirror the surrounding developments.

ELECTRICAL DISTRIBUTION LINE

A Public Service Company (PSCO) overhead transmission line previously crossed the site from east to west, bisecting our proposed Phase Three. During 1995 the line was downloaded from a 69-KV transmission line to a 13-KV distribution line. We always felt the overhead line was visually objectionable and wanted to bury it. When it was downloaded this became financially feasible and, in August 1995, we coordinated with PSCO to trench the line. The line is now buried and the easement was changed from 30' to 10'. We feel the improvements this created for the quality of our project far outweigh the costs.

SOILS/GEOLOGIC CONSIDERATIONS

A subsurface soils investigation for the site was performed by Lincoln-DeVore, Inc. in early 1994. Boring locations were included in the previous two filings as well as the proposed Filing Three. The soils report was referenced in and recorded with the Covenants. We require engineered foundations for all homes as well as submittals for grading, drainage, irrigation and landscaping to, hopefully, insure one home doesn't impact another.

PROPOSED STRUCTURES

The structures proposed for this filing will be single family homes on individual lots. Homes may be one or two stories (exclusive of walk-out basements) and will be limited to 35' in height. Minimum heated living space will be a minimum of 1,600 square feet. Exteriors must be sided with at least 30% stucco or masonry. Roof coverings will be architectural grade shingles or better.

The rear elevations of homes on lots that abut the Redlands Parkway require added 'curb appeal' when viewed from behind.

'Zeroscape' or low water plantings will be encouraged, as well as limited amounts of irrigated areas on geologically sensitive portions of the site.

Please refer to the recorded Covenants for the project for more specific information.

SEWERS

Most of the sewers on the project were constructed in 1984 when the property underwent a previous development proposal. Filings One and Two were connected to these lines. After the lines were cleaned and easements written where they crossed through our proposed Filing Three, the City of Grand Junction accepted the sewers. Filing Three will utilize portions of these existing lines, as well as new lines to be constructed into the additional cul-de-sacs.

REQUIRED IMPROVEMENTS

Mesa County required numerous off-site and on-site improvements during the development process for Filings One and Two and are itemized as follows:

Dedicate an additional 20' R.O.W. on the west side of the Redlands Parkway for possible future expansion of the road to four lanes. If after the Parkway was widened and the additional R.O.W. was not used, it could be vacated and returned to the adjacent lots. The additional R.O.W. is included in Filing One and the three plats.

Cut back the existing west bank of the Parkway south of Rio Linda Lane in the road R.O.W. to create a longer sight distance for traffic on Rio Linda Lane turning north. This work was completed in early 1995.

Install an approximately 20 lineal foot extension of El Rio Court off the southwest corner of Filing One that had not previously been completed. This work included curbs, gutters, base course and asphalt paving, as well as drainage structures and easements to convey storm water runoff from El Rio Court across our project and down to the catch basin at the intersection of Rio Linda Lane and the Parkway. This work was completed in early 1995.

The point on Rio Linda Lane where it turns due west up toward Loma Rio Subdivision used to be a 3-way intersection. When Rio Linda Lane was constructed in the early 1980's, it was assumed a future road would go north from the intersection. The north extension was never constructed and Loma Rio runoff ran off the north end of the intersection for years creating the wetlands. Mesa County Planning staff didn't want any new Vista Del Rio roads going north out the 3-way intersection because the northbound road would look like the main road, not the road heading west into Loma Rio, which was the main thoroughfare. They feared people wouldn't know the main road turned left and would go north. They instead required us to access lots north of the 3-way intersection via a cul-de-sac coming in from the east and take out the intersection altogether and put in a curve in the road. We were also required to install catch basins and direct Loma Rio runoff into the wetlands. This work was completed in the spring of 1995.

A traffic study was required. We were to study the impact our 50+ lots would have on the Redlands Parkway from the intersection at Broadway to the next intersection (the interchange by Mesa Mall). The study showed our subdivision would have a negligible impact on the Parkway and a traffic light at Rio Linda Lane was not warranted. This study was completed in the spring of 1994.

To date, we have spent approximately $39,200.00 on the above outlined improvements plus the value of the land at the additional right-of-ways which lost two building lots. We request that the City of Grand Junction review the additional improvements we have completed and that those monies already expended be credited towards the required fees.

BICYCLE PATH

At the County Commissioners hearing for the Filing One approval, the subject of applying our Development Impact Fees (DIF) towards the construction of a bicycle path was discussed. The proposed path was to parallel the west side of the Redlands Parkway from Rio Linda Lane south to Greenbelt Drive. The purpose of the path was for pedestrians and cyclists to be able to travel south to a stop light and cross the Parkway to reach the main bike path on the east side of the Parkway. Neighbors to the west of Vista Del Rio considered the Parkway too hard and dangerous to cross on foot or bicycle without a stop light. (The traffic study we commissioned said a stop light was not warranted.)

At the end of the discussion the Commissioners requested us to start cost estimates. At this time, everyone thought a bike path would be constructed.

At the County Commissioners hearing for the Filing Two approval, we presented the cost of the bike path, as well as some design constraints and safety concerns it posed. Discussions at the meeting then centered on reasons not to build the path, as the money would be more effective if spent on other improvements. The bike path was almost nixed, when Commissioner Spehar noted, "We promised a bike path to the neighbors in an open meeting last month, and it would not be fair to those people to change what they are expecting, even though it doesn't make as

much sense anymore".

At the end of the meeting we were wondering what we were supposed to do about the bike path. We listened to the tape transcripts of both meetings and still we were unclear as to the direction we should take. Meanwhile, County staff were telling us "Don't forget the bike path". When we asked them what we should provide, we were not given clear direction or designs.

During the course of the project, we were required to provide additional improvements. (See section above - Required Improvements) We felt our expenditure on these items more than satisfied our DIF requirements, but County staff still make occasional references to the bike path.

IRRIGATION SYSTEMS

The subdivision has excellent water rights on Goat Wash and the Colorado River. Water from either source is adequate to supply the entire subdivision. We have installed underground pressurized irrigation lines to all lots in Phases One and Two and will do the same for Filing Three. Open space at the entrance on Rio Linda Lane and the Parkway is irrigated and planted. More irrigated and landscaped areas are planned for the road entrance to Filing Three.

At present, one 7-1/2 HP pump in Goat Wash supplies water to Filing One and the common areas. When water is needed in Filing Two (up on the hill) an additional 30 HP will be installed. It was designed to handle the entire subdivision. Should water ever dry up in Goat Wash, the system is designed so the pump can be moved to the Colorado River and still supply the whole project.

FIRE PROTECTION

We requested fire hydrant flow tests from the City of Grand Junction Fire Department for fire hydrants in Filings One and Two. The hydrants tested to be more than adequate to meet fire department standards. Mr. Hank Masterson said no further test would be required for lower filings due to the good flows in Filing Two, the highest point in the subdivision.

DEVELOPMENT SCHEDULE

We anticipate completing the development approval process for Filing Three by the end of 1995. Construction on Filing Three is expected to start in the spring of 1996 when the weather warms, with completion by late summer of 1996.

PHASE FOUR

Our original ODP to the County included five proposed phases. Phase One and Two became Filing One and Two; Phase Three and Four became Filing Three; and Phase Five is now Phase Four.

Our proposed Phase Four is an approximately (3) acre parcel on the east side of the

Redlands Parkway and is accessed from 23 Road. With the Filing Three final submittal, we are submitting an amended preliminary plan of Phase Four for approval.

Goat Wash runs the length of this parcel near the edge of the Redlands Parkway right-of-way. Irrigation water for Vista Del Rio is drawn from the wash. We would expect to plat the wash bottom as private open space with access to it for the homeowners association. The buildable portion of the site is a knoll on the east side of the site.

We would anticipate Phase Four will not be governed by the covenants of Filings One, Two and Three, and may not be part of the homeowners association, due to being located in an entirely different neighborhood. These items, though, will be resolved when it is submitted for final approval in 1996.

DRAINAGE

Vista Del Rio Subdivision is adjacent to the Colorado River. The majority of our runoff will be channeled directly into the river, and a smaller portion runs into Goat Wash and then directly into the river. (We are also collecting the neighbors runoff on Rio Linda Lane and El Rio Court, and these are channeled through our structures.)

We feel that no drainage fees or detention/retention structures should be required for this project because our water is routed directly to the Colorado River and has no impact on downstream properties.

In as much as this was also the opinion of the Mesa County Development Engineer no provisions have been made to do any more than discharge directly to the Colorado River.

BLM
GRAND JUNCTION, CO 81501

JAMES L./BARBARA J. COMSTOCK
552 RIO OSO LANE
GRAND JUNCTION, CO 81503

JOANNE S. ATKINSON
DENNIS W. LOHSE
554 RIO OSO LANE
GRAND JUNCTION, CO 81503

JAMES F./ESTHER M. FOSTER
556 RIO OSO LANE
GRAND JUNCTION, CO 81503

KENNETH J./JUDITH A. BROTSKY
558 RIO OSO LANE
GRAND JUNCTION, CO 81503

PAUL A./JUDY L. BAUMAN
560 RIO OSO LANE
GRAND JUNCTION, CO 81503

GEORGE E./CAROL M. NARVAES
562 RIO OSO LANE
GRAND JUNCTION, CO 81503

JOHN R./PATRICIA V. GRIEST
564 RIO OSO LANE
GRAND JUNCTION, CO 81503

DEAN G./GLORIA J. REES
566 RIO OSO LANE
GRAND JUNCTION, CO 81503

JEFFERY B. BURWELL
2282 RIO LINDA LANE
GRAND JUNCTION, CO 81503

RANDY O./JANE M. SCHADE
2284 RIO LINDA LANE
GRAND JUNCTION, CO 81503

STANLEY L. SELIGMAN
3032 I-70 BUSINESS LOOP
GRAND JUNCTION, CO 81504

DARREL E./TERRI CARLSON
2283 EL MONTE COURT
GRAND JUNCTION, CO 81503

HENRY G./JUDITH K. DRAKE
555 BLUFF COURT
GRAND JUNCTION, CO 81503

DOUGLAS/RAMONA L. OSBORN
562 BLUFF COURT
GRAND JUNCTION, CO 81503

STEVEN P. COLONY
P.O. BOX 177
GRAND JUNCTION, CO 81502

CLAUDE/DEBORAH U-REN
2261 BROADWAY
GRAND JUNCTION, CO 81503

MARLIN/JANET SCOTTING
2907½ HERMOSA COURT
GRAND JUNCTION, CO 81504

ARNOLD L./MARY L. BROWN
1006 21 ROAD
FRUITA, CO 81521

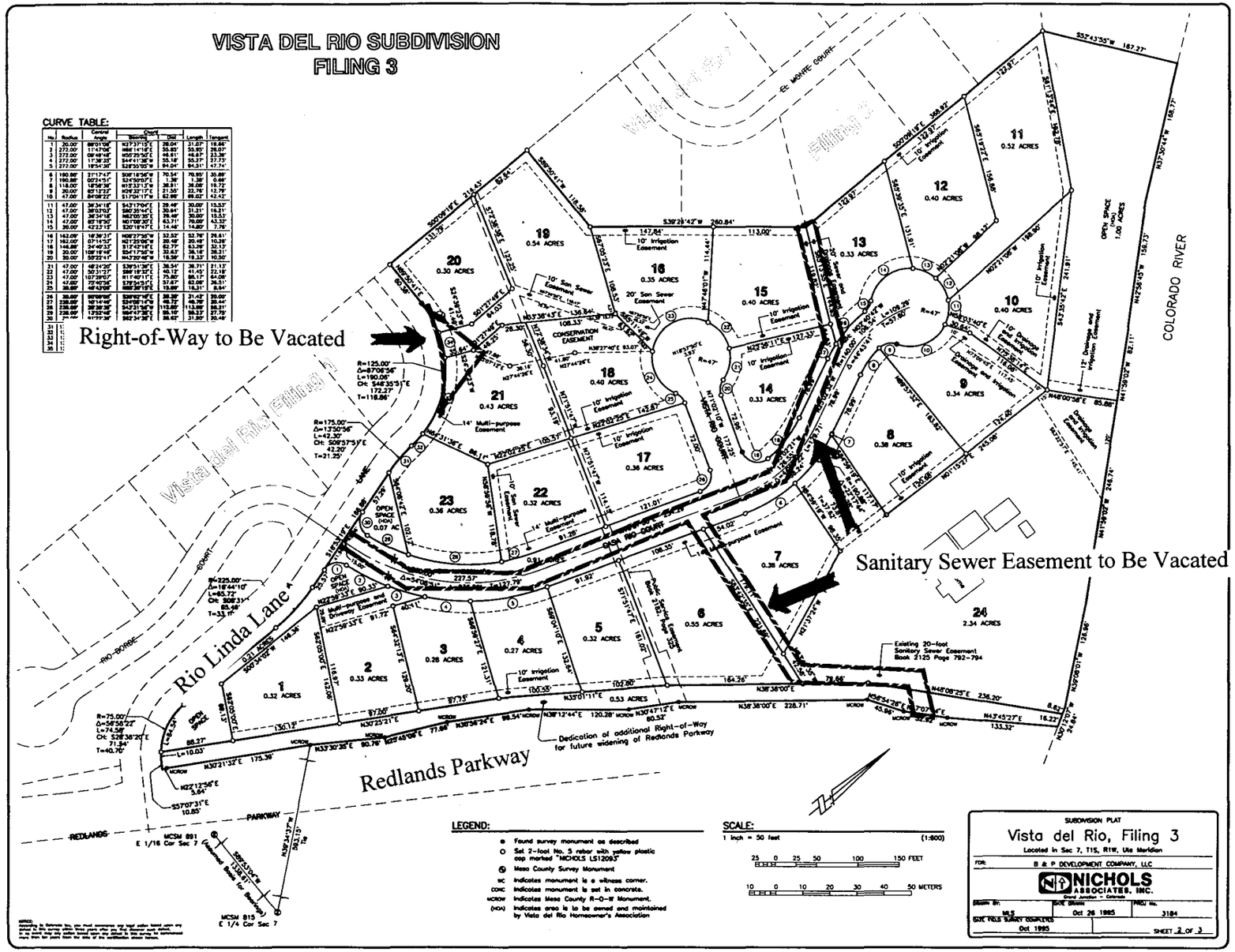
JAMES R./LINDA S. PRINGLE
9266 QUAIL RUN DRIVE
SANDY, UT 84093

B & P DEVELOPMENT CO.
702 GOLFMORE DRIVE
GRAND JUNCTION, CO 81506

Alpine C.M. Inc.
1111 S. 12th Street
Grand Junction, CO 81501

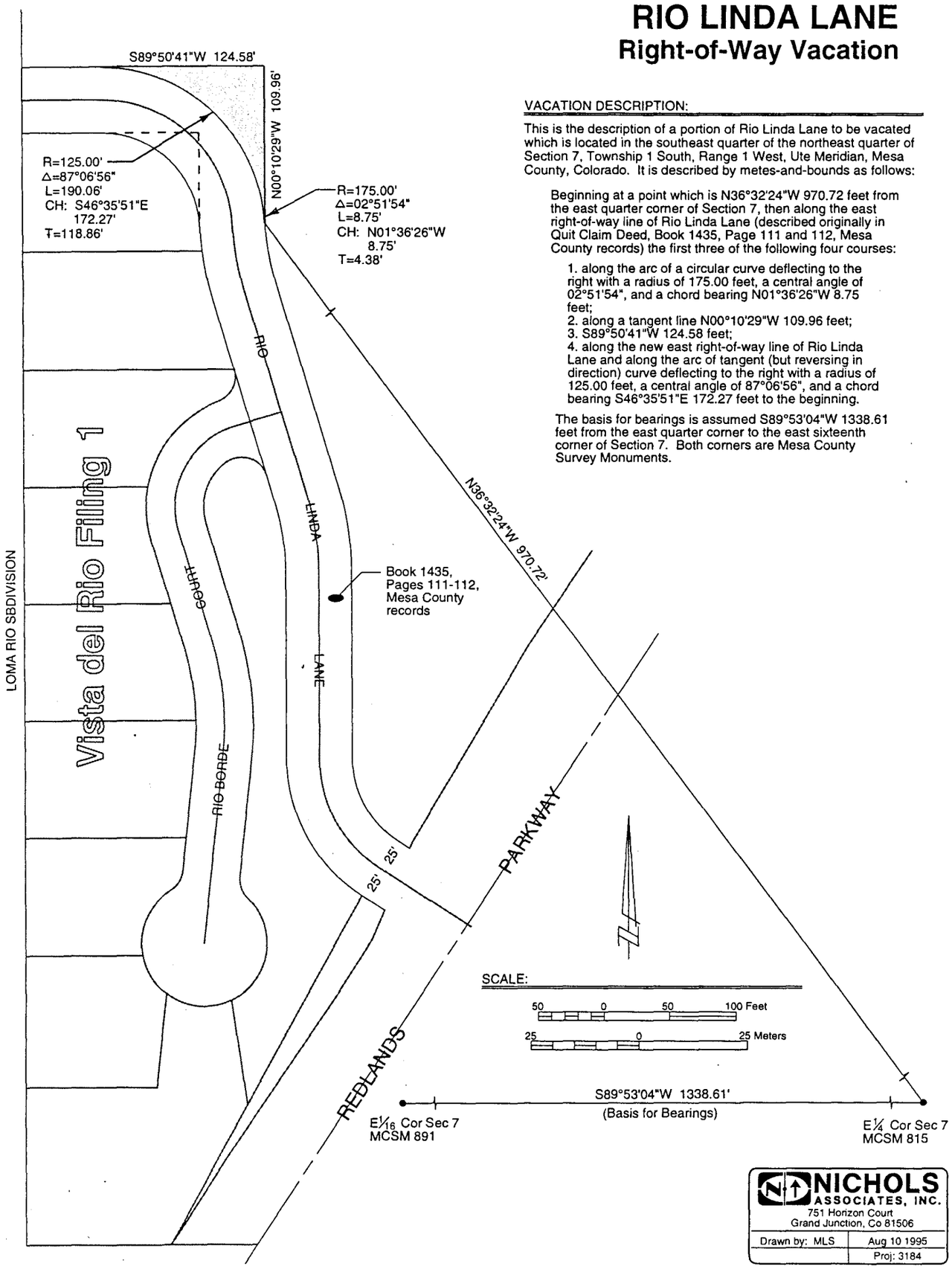
Nichols Associates
751 Horizon Ct.
Grand Junction, CO 81505

City of Grand Junction
Community Development Dept.
250 N 5th St.
Grand Junction, CO 81501



ROW AND EASEMENT VACATION
VISTA DEL RIO FILING #3
FPP-95-182

RIO LINDA LANE
Right-of-Way Vacation



VACATION DESCRIPTION:

This is the description of a portion of Rio Linda Lane to be vacated which is located in the southeast quarter of the northeast quarter of Section 7, Township 1 South, Range 1 West, Ute Meridian, Mesa County, Colorado. It is described by metes-and-bounds as follows:

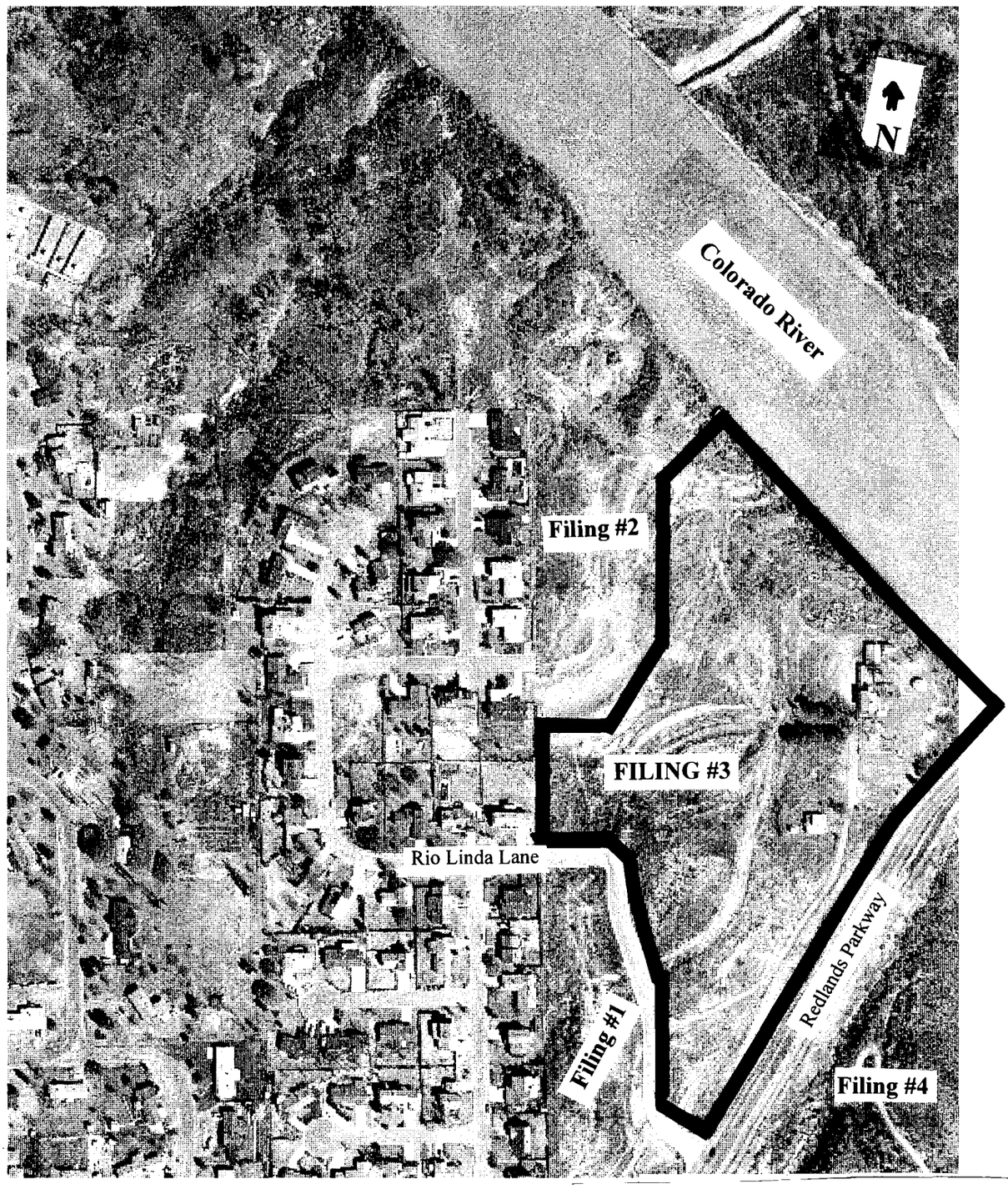
Beginning at a point which is N36°32'24"W 970.72 feet from the east quarter corner of Section 7, then along the east right-of-way line of Rio Linda Lane (described originally in Quit Claim Deed, Book 1435, Page 111 and 112, Mesa County records) the first three of the following four courses:

1. along the arc of a circular curve deflecting to the right with a radius of 175.00 feet, a central angle of 02°51'54", and a chord bearing N01°36'26"W 8.75 feet;
2. along a tangent line N00°10'29"W 109.96 feet;
3. S89°50'41"W 124.58 feet;
4. along the new east right-of-way line of Rio Linda Lane and along the arc of tangent (but reversing in direction) curve deflecting to the right with a radius of 125.00 feet, a central angle of 87°06'56", and a chord bearing S46°35'51"E 172.27 feet to the beginning.

The basis for bearings is assumed S89°53'04"W 1338.61 feet from the east quarter corner to the east sixteenth corner of Section 7. Both corners are Mesa County Survey Monuments.

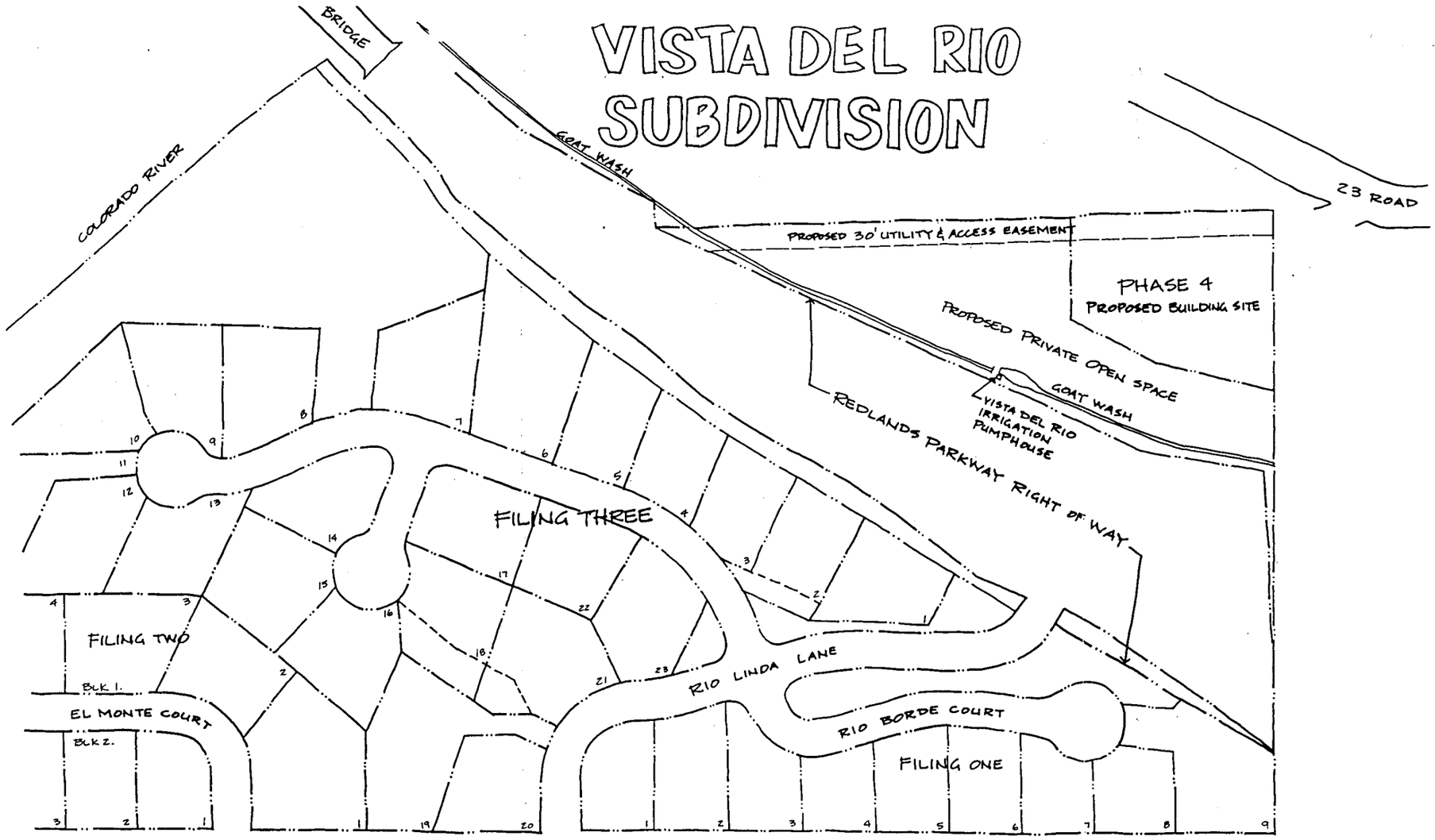
NICHOLS ASSOCIATES, INC.
751 Horizon Court
Grand Junction, Co 81506

Drawn by: MLS	Aug 10 1995
	Proj: 3184



LOCATION MAP
VISTA DEL RIO FILING #3
FPP-95-182

VISTA DEL RIO SUBDIVISION

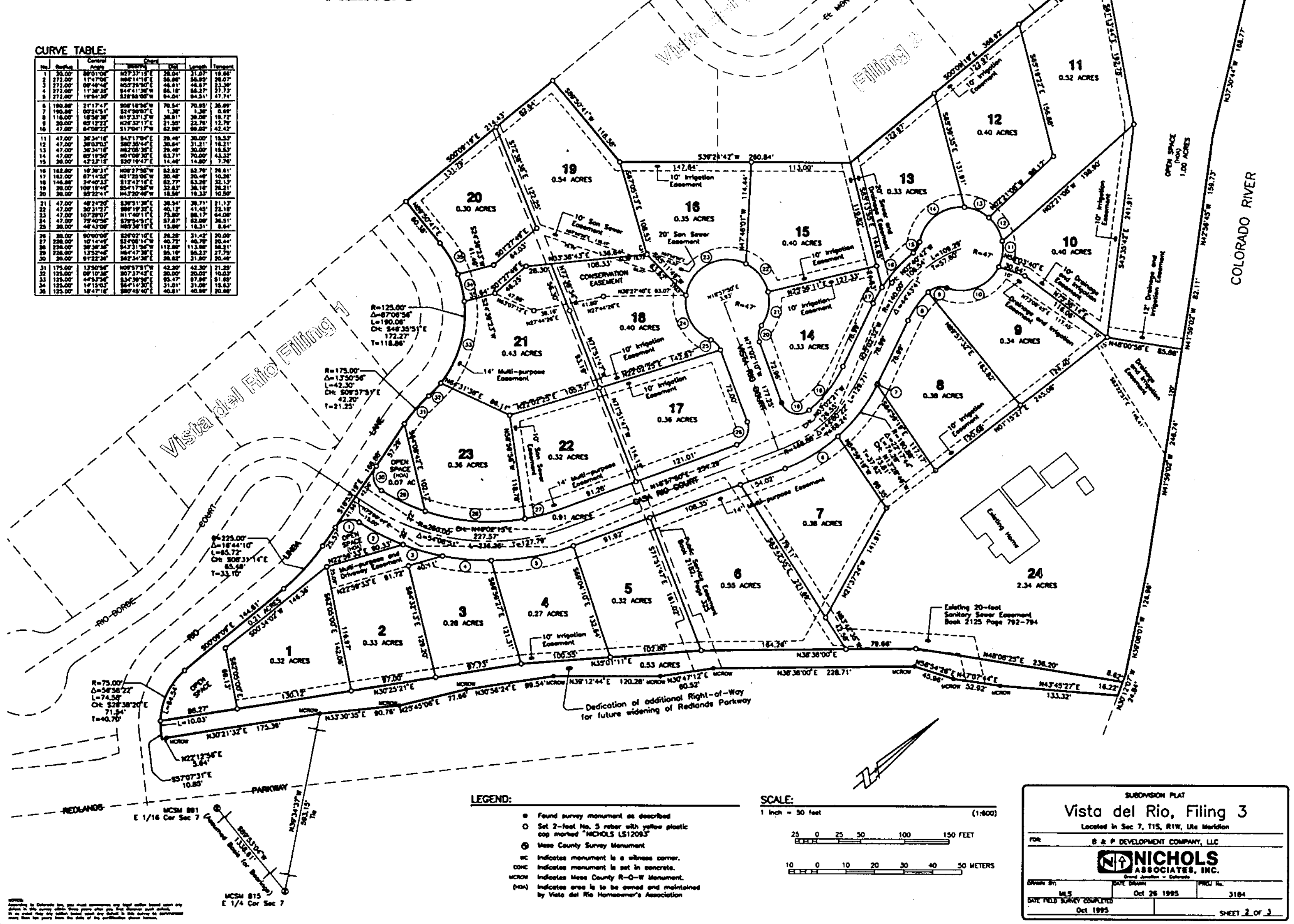


AMENDED PRELIM-PHASE 4 N 9/28/95 1" = 50' ALPINE C.M.

VISTA DEL RIO SUBDIVISION
FILING 3

CURVE TABLE:

No.	Radius	Central Angle	Chord Bearing	Chord Dist	Length	Tangent
1	20.00'	88°01'06"	N27°37'15"E	28.04'	31.07'	19.66'
2	272.00'	11°47'06"	N06°14'16"E	55.86'	55.95'	28.07'
3	272.00'	09°48'46"	N05°29'50"E	46.61'	46.67'	23.39'
4	272.00'	11°38'35"	S44°41'38"W	55.16'	55.27'	27.73'
5	272.00'	19°54'30"	S28°55'06"W	94.04'	94.51'	47.74'
6	190.88'	21°17'47"	S06°18'36"W	70.54'	70.95'	35.89'
7	190.88'	00°24'51"	S24°30'07"E	1.38'	1.38'	0.69'
8	118.00'	18°56'36"	N15°33'13"W	38.81'	39.00'	19.72'
9	20.00'	65°12'22"	N26°32'17"E	21.55'	22.76'	12.79'
10	47.00'	84°08'22"	S17°04'17"W	62.98'	69.02'	42.42'
11	47.00'	36°34'16"	S43°17'04"E	29.49'	30.00'	15.53'
12	47.00'	38°03'03"	S80°35'44"E	30.64'	31.21'	16.21'
13	47.00'	36°34'16"	N62°05'35"E	29.49'	30.00'	15.53'
14	47.00'	85°19'50"	N01°08'30"E	63.71'	70.00'	43.32'
15	20.00'	42°23'15"	S20°19'47"E	14.46'	14.80'	7.76'
16	162.00'	18°38'31"	N08°27'36"W	52.52'	52.76'	26.61'
17	162.00'	07°14'53"	N21°25'06"W	20.48'	20.49'	10.26'
18	146.88'	24°40'33"	S12°42'16"E	62.77'	63.26'	32.13'
19	20.00'	108°19'46"	S54°17'36"W	32.43'	38.16'	28.21'
20	20.00'	55°22'41"	N43°20'46"W	18.58'	19.33'	10.50'
21	47.00'	48°24'20"	S36°31'38"E	38.54'	39.71'	21.13'
22	47.00'	50°31'27"	S86°19'32"E	40.12'	41.45'	22.18'
23	47.00'	107°29'07"	N11°40'11"E	75.80'	88.17'	64.08'
24	47.00'	75°40'56"	S79°34'31"E	57.67'	62.08'	36.51'
25	20.00'	46°43'08"	N85°36'15"E	15.86'	16.31'	8.64'
26	20.00'	90°00'00"	S28°02'10"E	28.28'	31.42'	20.00'
27	228.00'	10°14'49"	S24°08'14"W	40.72'	40.78'	20.44'
28	228.00'	28°38'36"	S43°31'36"W	112.80'	113.98'	58.21'
29	228.00'	13°52'46"	N64°47'30"E	55.10'	55.23'	27.75'
30	20.00'	91°22'38"	S62°34'38"E	28.62'	31.90'	20.49'
31	175.00'	13°50'56"	N09°57'51"W	42.20'	42.30'	21.25'
32	125.00'	09°10'38"	S07°37'42"E	20.00'	20.02'	10.03'
33	125.00'	44°53'58"	S34°39'56"E	95.47'	97.96'	51.65'
34	125.00'	14°15'03"	S64°14'33"E	31.01'	31.09'	15.63'
35	125.00'	18°47'16"	S80°45'40"E	40.81'	40.99'	20.68'



LEGEND:

- ● Found survey monument as described
- ○ Set 2-foot No. 5 rebar with yellow plastic cap marked "NICHOLS LS12093"
- ⊕ Mesa County Survey Monument
- WC Indicates monument is a witness corner.
- CONC Indicates monument is set in concrete.
- MCROW Indicates Mesa County R-O-W Monument.
- (HOA) Indicates area is to be owned and maintained by Vista del Rio Homeowner's Association

SCALE:

1 inch = 50 feet (1:600)

25 0 25 50 100 150 FEET

10 0 10 20 30 40 50 METERS

SUBDIVISION PLAT

Vista del Rio, Filing 3

Located in Sec 7, T1S, R1W, Ute Meridian

FOR: B & P DEVELOPMENT COMPANY, LLC

NICHOLS ASSOCIATES, INC.

Grand Junction - Colorado

DRAWN BY:	DATE DRAWN	PROJ No.
MLS	Oct 26 1995	3184
DATE FIELD SURVEY COMPLETED		
Oct 1995		SHEET 2 OF 3

BUILDING SETBACKS

VISTA DEL RIO SUBDIVISION
FILING 3

AREA SUMMARY:

DESC	AREA (ac)	% of TOTAL
Streets	0.99	7.21
Open Space	1.17	8.54
Add'l R-O-W	0.53	3.88
1	0.33	2.33
2	0.33	2.40
3	0.33	2.06
4	0.27	1.97
5	0.32	2.33
6	0.55	4.00
7	0.38	2.77
8	0.38	2.77
9	0.34	2.47
10	0.40	2.91
11	0.52	3.78
12	0.40	2.81
13	0.33	2.40
14	0.33	2.40
15	0.32	2.81
16	0.40	2.81
17	0.33	2.85
18	0.34	2.62
19	0.40	2.91
20	0.30	2.18
21	0.33	2.13
22	0.33	2.33
23	0.34	2.62
24	2.34	17.03
TOTAL:	13.74	100.00

SETBACKS:

Lot	Front	Left	Right	Rear
1	25	10	15	25
2	25	10	10	25
3	25	10	10	25
4	25	10	10	25
5	25	20	20	25
6	25	15	20	25
7	25	15	10	25
8	20	10	15	25
9	20	15	10	25
10	20	15	15	25
11	20	15	15	25
12	20	15	15	25
13	20	15	15	25
14	20	15	20	25
15	20	15	10	20/25
16	20	15	10	25
17	20	15	10	25
18	20	15	10	25
19	20	15	10	25
20	25	15	10	25
21	25	15/20	10	20
22	25	15	15	20
23	25	15	10	25/20
24	n/a	n/a	n/a	n/a

LEGEND:

- Building Envelope
- Multi-purpose and Utility Easement
- Public Service Easement

SCALE:

1 inch = 50 feet (1:600)

25 0 25 50 100 150 FEET

10 0 10 20 30 40 50 METERS

BUILDING SETBACKS

Vista del Rio, Filing 3

Located in Sec 7 & 8, T1S, R1W, Ute Meridian

FOR: B & P DEVELOPMENT COMPANY, LLC

NICHOLS ENGINEERING ASSOCIATES, INC. Grand Junction – Colorado

DRAWN BY:	DATE DRAWN:	PROJ No.
MLS	Oct 26 1995	3184

DATE FIELD SURVEY COMPLETED: Oct 1995

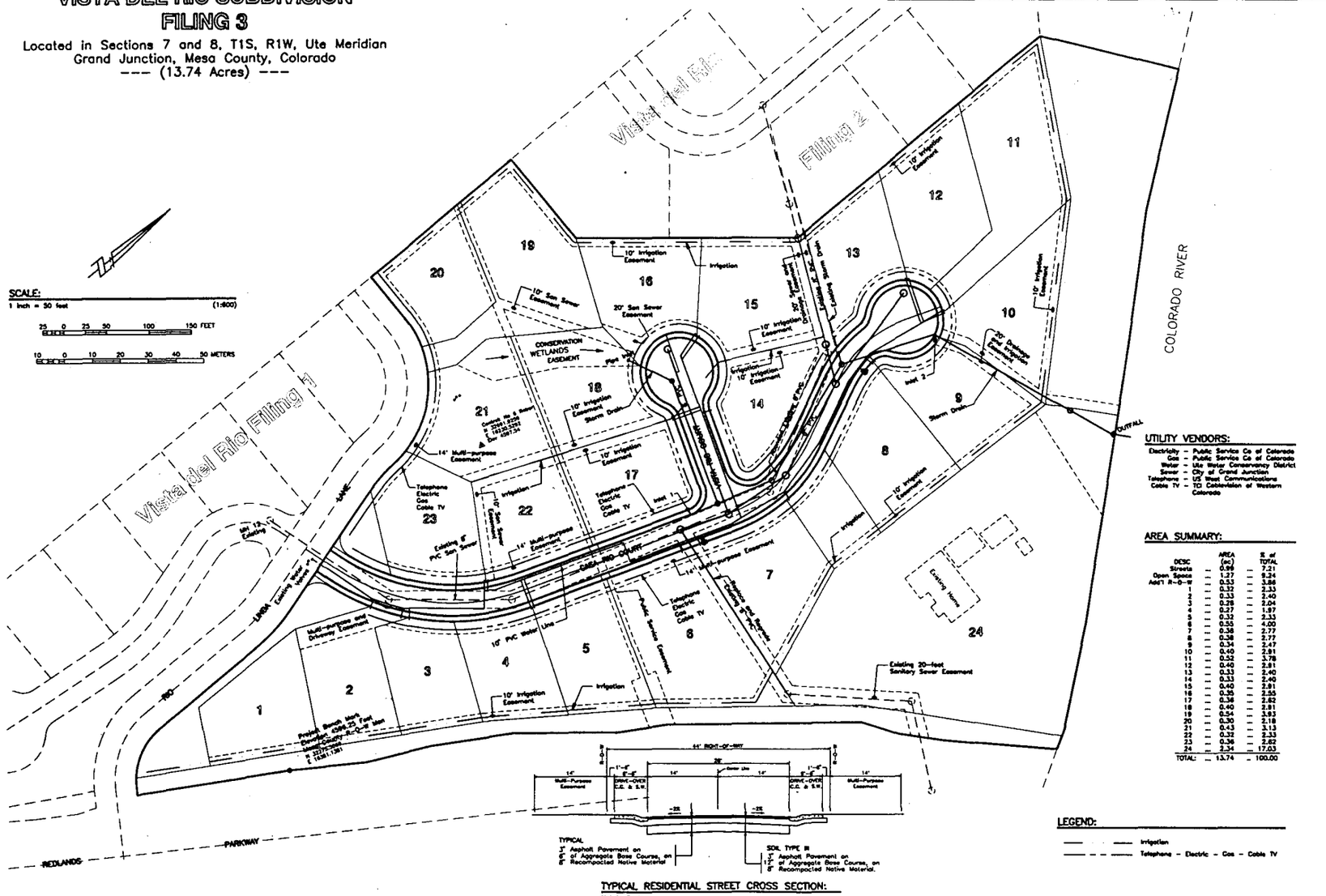
SHEET 3 OF 3

VISTA DEL RIO SUBDIVISION
FILING 3

Located in Sections 7 and 8, T1S, R1W, Ute Meridian
Grand Junction, Mesa County, Colorado
--- (13.74 Acres) ---

APPROVED FOR CONSTRUCTION
CITY OF GRAND JUNCTION — DATE

INITIAL ACCEPTANCE
CITY OF GRAND JUNCTION — DATE



TYPICAL RESIDENTIAL STREET CROSS SECTION:
Not to Scale

UTILITY VENDORS:

Electricity	– Public Service Co of Colorado
Gas	– Public Service Co of Colorado
Water	– Ute Water Conservancy District
Sewer	– City of Grand Junction
Telephone	– US West Communications
Cable TV	– TCI Cablevision of Western Colorado

AREA SUMMARY:

DESC		AREA (Ac)		% of TOTAL
Streets	–	0.98	–	7.21
Open Space	–	1.27	–	9.24
Add'l R-O-W	–	0.55	–	3.86
1	–	0.33	–	2.33
2	–	0.33	–	2.40
3	–	0.28	–	2.06
4	–	0.27	–	1.97
5	–	0.33	–	2.33
6	–	0.56	–	4.00
7	–	0.38	–	2.77
8	–	0.38	–	2.77
9	–	0.34	–	2.47
10	–	0.40	–	2.91
11	–	0.39	–	2.78
12	–	0.40	–	2.81
13	–	0.33	–	2.40
14	–	0.33	–	2.40
15	–	0.40	–	2.91
16	–	0.39	–	2.81
17	–	0.38	–	2.82
18	–	0.40	–	2.91
19	–	0.34	–	2.52
20	–	0.30	–	2.18
21	–	0.33	–	2.13
22	–	0.33	–	2.33
23	–	0.38	–	2.82
24	–	2.34	–	17.03
TOTAL:	–	13.74	–	100.00

LEGEND:

Irrigation
Telephone – Electric – Gas – Cable TV

DESIGNED BY MKS
DRAWN BY MKS
SURVEY DATE

REVISIONS

NO.	DATE	REMARKS	BY

COMPOSITE PLAN
VISTA DEL RIO SUBDIVISION - FILING 3

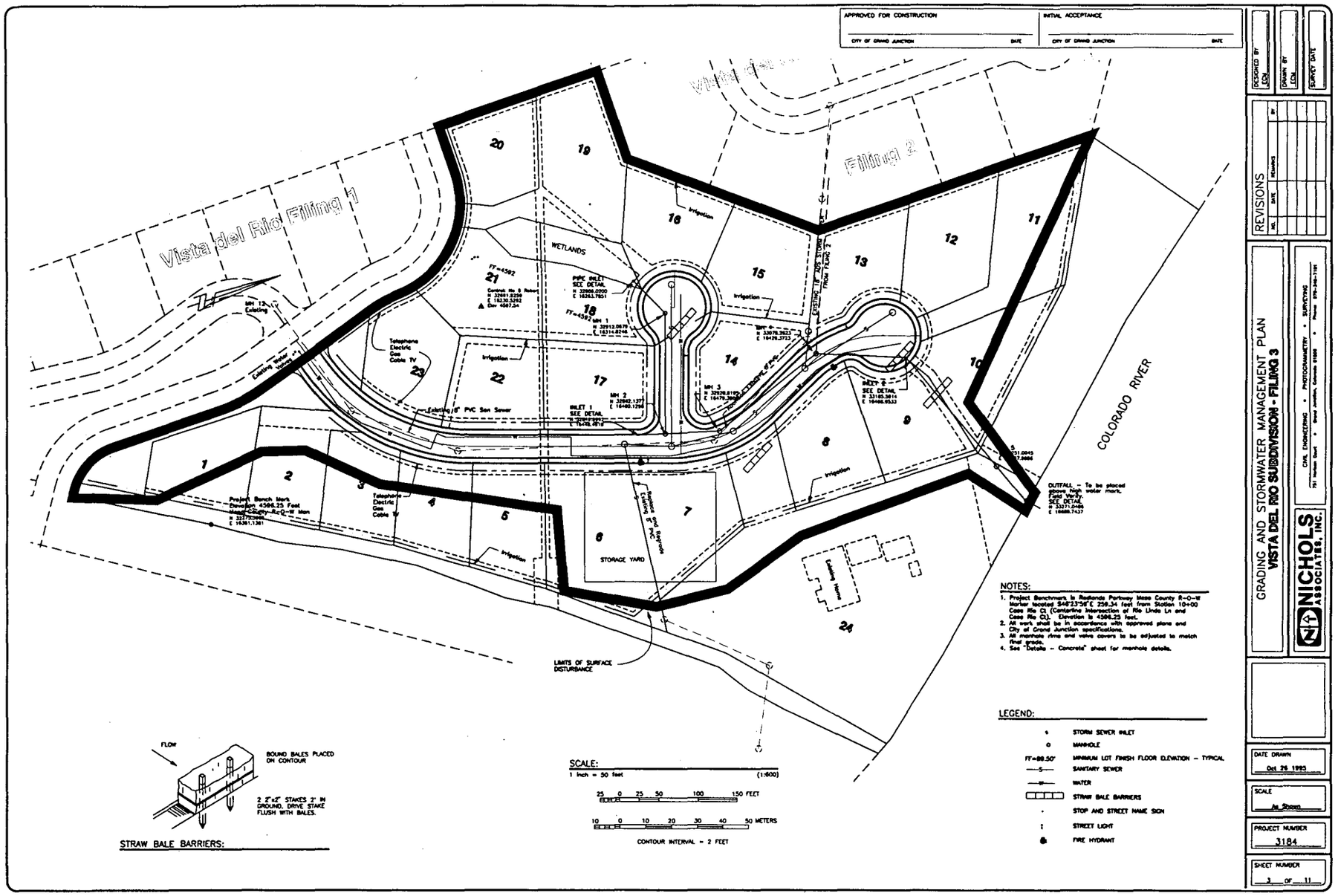
NICHOLS ASSOCIATES, INC.
CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING
761 Horizon Court • Grand Junction, Colorado 81506 • Phone 970-245-7101

DATE DRAWN
Oct 26 1995

SCALE
1 inch = 50 feet

PROJECT NUMBER
3184

SHEET NUMBER
2 OF 11



APPROVED FOR CONSTRUCTION

CITY OF GRAND JUNCTION DATE

INITIAL ACCEPTANCE

CITY OF GRAND JUNCTION DATE

NOTES:

1. Project Benchmark is Redlands Parkway Mesa County R-O-W Marker located S42°23'58"E 258.34 feet from Station 10+00 Case Rlo Ct (Centerline intersection of Rio Linda Ln and Case Rlo Ct). Elevation is 4586.25 feet.
2. All work shall be in accordance with approved plans and City of Grand Junction specifications.
3. All manhole rims and valve covers to be adjusted to match final grade.
4. See "Details - Concrete" sheet for manhole details.

LEGEND:

- STORM SEWER INLET
- MANHOLE
- FF=88.50' MINIMUM LOT FINISH FLOOR ELEVATION - TYPICAL
- SANITARY SEWER
- WATER
- STRAW BALE BARRIERS
- STOP AND STREET NAME SIGN
- STREET LIGHT
- FIRE HYDRANT

DESIGNED BY LCM

DRAWN BY LCM

SURVEY DATE

REVISIONS

NO.	DATE	REVISIONS	BY

GRADING AND STORMWATER MANAGEMENT PLAN

VISTA DEL RIO SUBDIVISION - FILING 3

NICHOLS ASSOCIATES, INC.

CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING

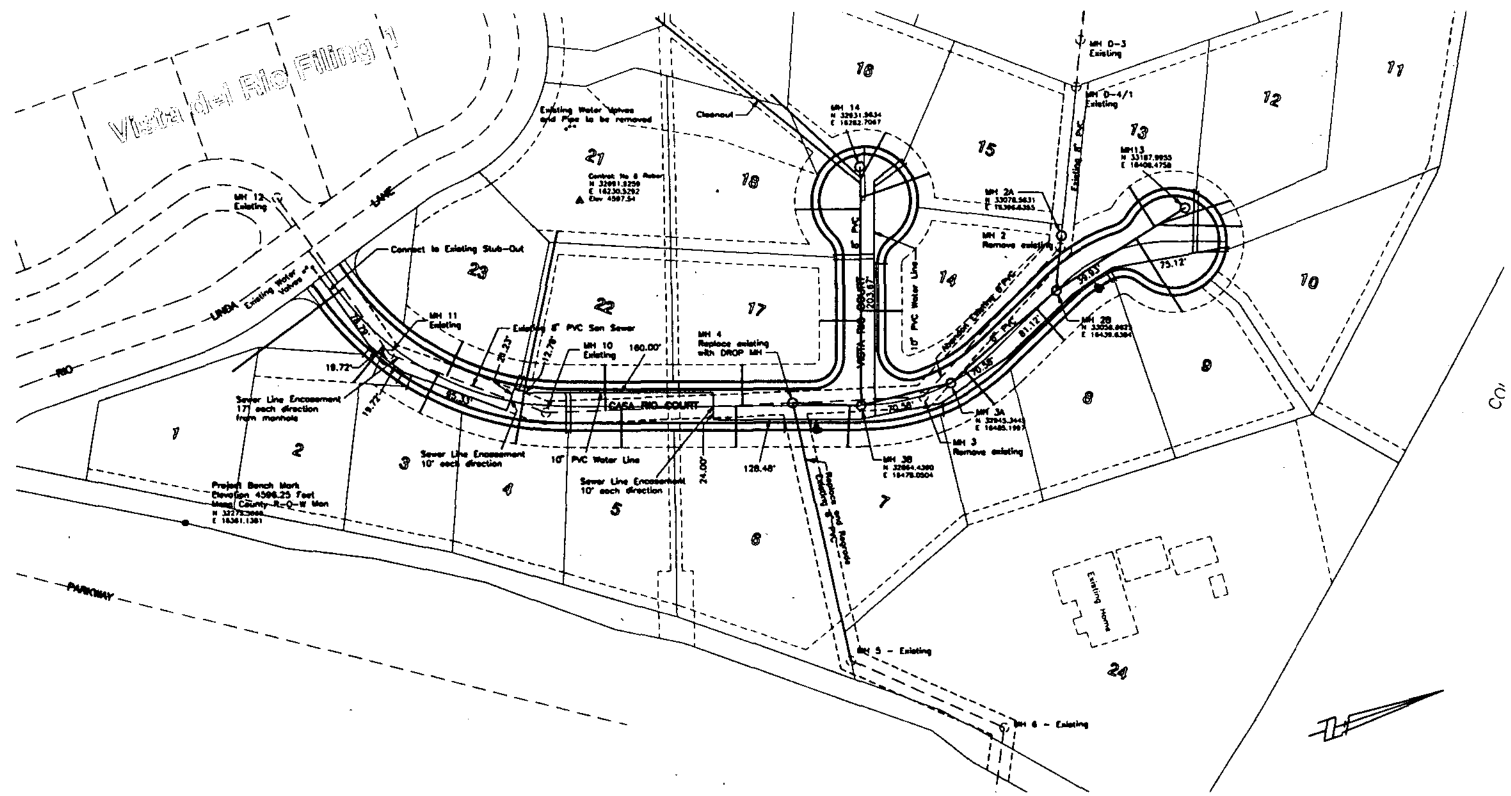
DATE DRAWN: Oct 26 1995

SCALE: As Shown

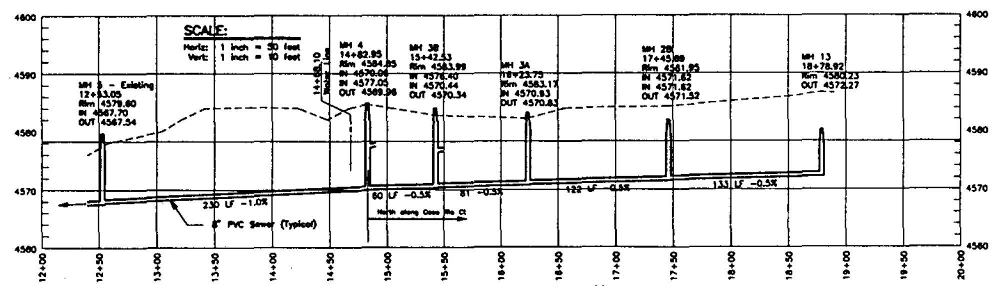
PROJECT NUMBER: 3184

SHEET NUMBER: 3 OF 11

APPROVED FOR CONSTRUCTION		INITIAL ACCEPTANCE	
CITY OF GRAND JUNCTION	DATE	CITY OF GRAND JUNCTION	DATE



SCALE:
Horiz: 1 inch = 50 feet
Vert: 1 inch = 10 feet



SANITARY SEWER: Line 1 - West from Redlands Parkway then north along Casa Rio Ct

SCALE:
1 inch = 50 feet (1:600)

25 0 25 50 100 150 FEET

10 0 10 20 30 40 50 METERS

NOTES:

CITY OF GRAND JUNCTION
1. All work shall be in accordance with approved plans and City of Grand Junction specifications.
2. Concrete thrust blocks to be placed at all pipe bends, tees, pipe-ends, and other locations as specified by City of Grand Junction engineering and construction specifications.

UTE WATER CONSERVANCY DISTRICT
3. Water mains shall be C-900, Class 150. Installation of pipe fittings, valves and services including testing and disinfection shall be in accordance with Ute Water standard specifications and drawings.
4. Developer is responsible for installing meter pit and yokes. Ute Water will furnish meter pits and yokes.
5. Blowoff to be installed at all pipe-ends and terminations as required by Ute Water.

DESIGNED BY MLS
DRAWN BY MLS
SURVEY DATE

REVISIONS
NO.	DATE	REMARKS	BY

WATER AND SEWER PLAN AND PROFILE
VISTA DEL RIO SUBDIVISION - FILING 3

NICHOLS ASSOCIATES, INC.
CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING
751 Horizon Court • Grand Junction, Colorado 81506 • Phone: 970-245-7101

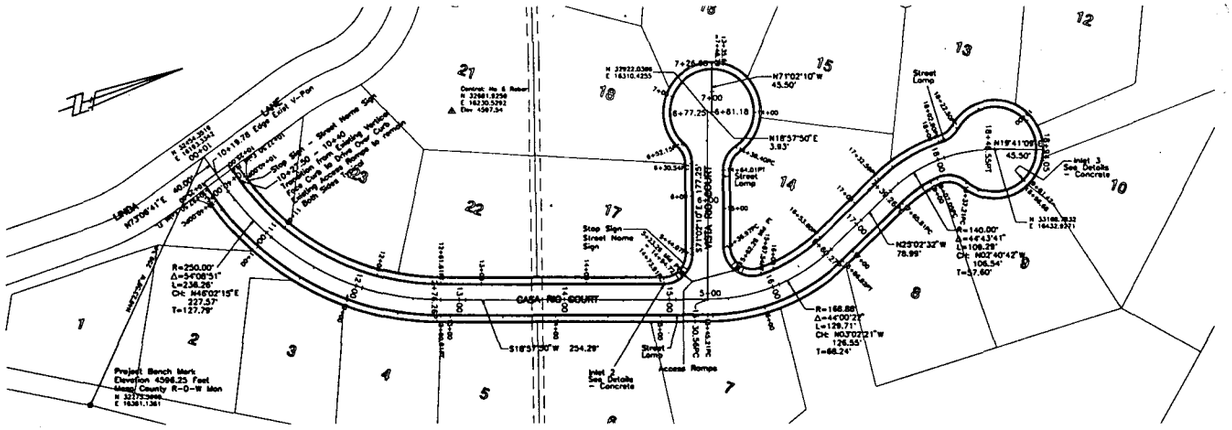
DATE DRAWN: Oct 26 1995
SCALE: As Shown
PROJECT NUMBER: 3184
SHEET NUMBER: 4 OF 11

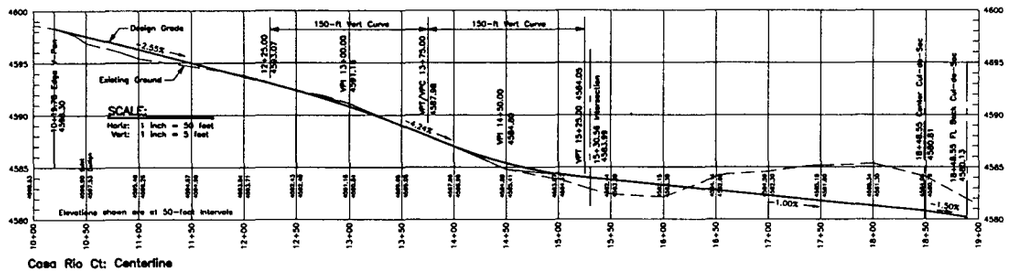
APPROVED FOR CONSTRUCTION

CITY OF GRAND JUNCTION — DATE

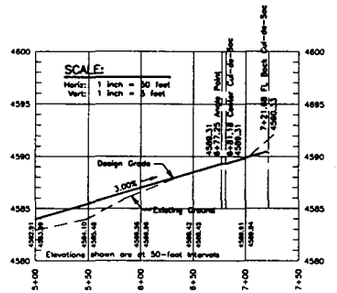
INITIAL ACCEPTANCE

CITY OF GRAND JUNCTION — DATE

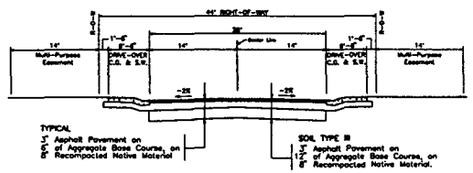




Casa Rio Ct: Centerline



Vista Rio Ct: Centerline



TYPICAL RESIDENTIAL STREET CROSS SECTION:

Not to Scale

SCALE:

1 inch = 50 feet (1:600)

25 0 25 50 100 150 FEET

10 0 10 20 30 40 50 METERS

NOTES:

1. Project Benchmark is Redlands Parkway Mesa County R-O-W Monument located S46°23'56"E 258.34 feet from Station 10+00 Casa Rio Ct (Centerline intersection of Rio Linda Ln and Casa Rio Ct). Elevation is 4598.25 feet.
2. All work shall be in accordance with approved plans and City of Grand Junction specifications.
3. All manhole rims and valve covers to be adjusted to match final grade.
4. See "Details - Concrete" sheet for concrete details.

DESIGNED BY MLS

DRAWN BY MLS

SURVEY DATE

REVISIONS

NO.	DATE	REMARKS	BY

ROADWAY PLAN AND PROFILE

VISTA DEL RIO SUBDIVISION - FILING 3

NICHOLS ASSOCIATES, INC.

CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING

701 Horizon Court • Grand Junction, Colorado 81506 • Phone 970-245-7101

DATE DRAWN

Oct 26 1995

SCALE

As Shown

PROJECT NUMBER

3184

SHEET NUMBER

8 OF 11

FINAL DRAINAGE REPORT

VISTA DEL RIO SUBDIVISION
FILING 3

Mesa County, CO

Prepared for:

Alpine C.M., Inc.
Grand Junction, CO

Prepared by:

NICHOLS ASSOCIATES, INC.
751 Horizon Ct, Suite 102
Grand Junction, CO

October 6, 1995

Certification Sheet

2 October, 1995

Development Staff
City of Grand Junction, Colorado

Ladies and Gentlemen:

A storm drainage system for Vista del Rio, Filing 3 has been designed to collect and convey storm water and discharge it to the Colorado River. The drainage system has been designed to accept historical offsite inflow through an existing wetlands area on the proposed site.

Detention for the increased peak flow rate was not considered since the outfall will continue to be the Colorado River.

I certify this report for the final drainage design of Vista del Rio, Filing 3 was prepared under my direct supervision.

Prepared by:
Terry Nichols
State of Colorado, Number 12093
Registered Professional Engineer

Final Drainage Report

VISTA DEL RIO, FILING 3

Mesa County, CO

Contents

I. GENERAL DESCRIPTION AND LOCATION

A. Site and Major Basin Location

Vista del Rio Subdivision, Filing 3 is the final phase of the Vista del Rio Subdivision located in the northeast quarter of section 7, Township 1 South, Range 1 West, Ute Meridian. The subdivision is approximately three and a half miles west of downtown Grand Junction, is bounded on the north by the Colorado River, on the east by the Redlands Parkway and on the west by Loma Rio Subdivision. Rio Linda Lane crosses through the subdivision and is the primary access to the parkway for residents of Rio Linda Subdivision.

Other developments in the vicinity include El Rio Villas to the south and The Bluffs on the north side of the Redlands Parkway. The neighboring developments consist of single family dwellings on lots in the 0.2 to 0.5 acre range. The property across the river to the north is currently undeveloped and used for agricultural and light industrial operations.

B. Site and Major Basin Description

Filing 3 has an area of 13.7 acres. The site was partially developed in the early 80's with rough grading and sanitary sewer main installation. As a result, the historical site properties may not be typical of existing site conditions. Existing vegetation consists of less than 10% cover of native grasses and forbes in most of the property. Inspection of nearby undeveloped, non-irrigated properties indicate site historical conditions may have been as much as 25% ground cover. A observed wetland area of approximately 0.18 acres is located within the Filing 3 boundary. The wetland area is a product of excess lawn irrigation water flowing onto the property from Rio Linda Subdivision.

The major basin has an area of 34.3 acres encompassing Vista del Rio Subdivision and most of Loma Rio Subdivision. Most of the major basin has been developed, therefore existing ground cover is mostly landscaped lawns and impervious areas.

Soils at the site consist of Mesa Clay Loam the and Mesa Cobbly Clay Loam. Both soils are classified as hydrologic soil type "B" by the U.S. Natural Resources Conservation Service.

II. EXISTING DRAINAGE CONDITIONS

A. Major Basin

The topography of the major basin is a series of terraces separated above the Colorado River with moderate to steep hillsides and natural gullies into the river. The general topography drops to the northeast, toward the Colorado River. Within the developed portions of the major basin, stormwater is diverted to gutters adjacent to the existing streets. Storm water is then routed through the site and outfalls at the Colorado River.

The property as well as the major basin are zoned X (i.e. outside of the 500-year floodplain) by the National Flood Insurance Program. Though the Flood Insurance Rate Maps (FIRMs) do not necessarily identify all areas subject to flooding, no local features have been identified to suggest the FIRM is incorrect.

B. Site

Current drainage patterns at the site are a consequence of partial development of the site in the early 1980's and the inflow from Loma Rio Subdivision to the west. The general topography is similar to the major basin and slopes to the northeast. Runoff from the site collects in mild sloping natural drainage paths that proceed to the edge of the terrace where they quickly increase up to 50% slopes and outfall into the river.

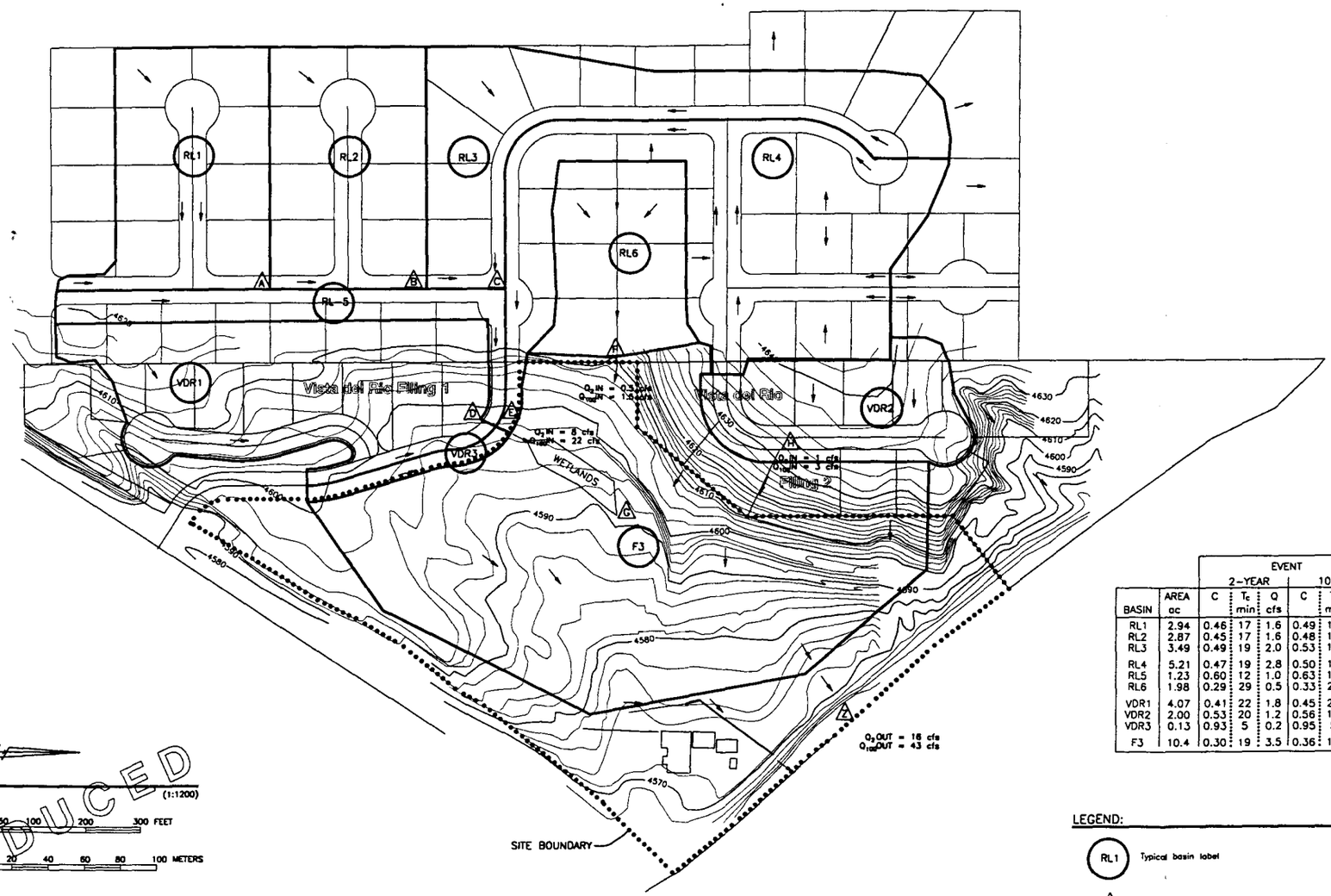
There is one major source of offsite inflow where runoff from Loma Rio Subdivision is routed into the site from Rio Linda Lane. Runoff within Loma Rio Subdivision is routed to concrete gutters adjacent to the streets and travels quickly through the subdivisions 2-5% street grades. Inflow is routed from Rio Linda Lane to the wetlands area of the proposed Vista del Rio Filing 3 where the runoff spreads out into the wetlands area. A much smaller amount of water enters the site from a small, poorly defined drainage labeled outfall "F" on the Historic Conditions exhibit.

Runoff water outfalls the site through a system of gullies on the north side of the terrace. The gullies drop up to 100 feet from the edge of the terrace to the bank of the river.

FINAL MAJOR BASIN DRAINAGE MAP

VISTA DEL RIO SUBDIVISION – FILING 3

HISTORIC CONDITIONS



BASIN	AREA ac	EVENT 2-YEAR C	2-YEAR T_c min	2-YEAR Q cfs	100-YR C	100-YR T_c min	100-YR Q cfs
RL1	2.94	0.46	17	1.6	0.49	16	4.5
RL2	2.87	0.45	17	1.6	0.48	16	4.4
RL3	3.49	0.49	19	2.0	0.53	17	5.6
RL4	5.21	0.47	19	2.8	0.50	19	7.8
RL5	1.23	0.60	12	1.0	0.63	12	2.7
RL6	1.98	0.29	29	0.5	0.33	28	1.5
VDR1	4.07	0.41	22	1.8	0.45	22	5.2
VDR2	2.00	0.53	20	1.2	0.56	19	3.3
VDR3	0.13	0.93	5	0.2	0.95	5	0.6
F3	10.4	0.30	19	3.5	0.36	18	11

SCALE:
1 inch = 100 feet (1:1200)

50 0 50 100 200 300 FEET

20 0 20 40 60 80 100 METERS

REDUCED

LEGEND:

RL1 Typical basin label

A Typical basin outfall label

Direction of flow

DESIGNED BY EDM

DRAWN BY EDM

SURVEY DATE

REVISIONS

NO.	DATE	REMARKS	BY

FINAL MAJOR BASIN DRAINAGE MAP
VISTA DEL RIO SUBDIVISION – FILING 3

NICHOLS ASSOCIATES, INC.
CIVIL ENGINEERING • PHOTOGRAMMETRY • SURVEYING
751 Horizon Court • Grand Junction, Colorado 81506 • Phone: 970-245-7101

DATE DRAWN
Oct 2, 1995

SCALE
As Shown

PROJECT NUMBER
3184

SHEET NUMBER
OF

III.PROPOSED DRAINAGE CONDITIONS

A. Changes in Drainage Patterns

Drainage patterns in the major basin will be effected at the outfalls into the river. The smaller basins on the north side of the terrace that comprise the outfall basins will be altered and runoff flows will be decreased in some basins. Consequently, the proposed outfall will drain a larger area.

The property for the proposed development currently drains to the northeast, toward the Colorado River. The development will not alter the general slope direction and the current offsite inflow will be accepted into the site. Inflow will be routed through the wetlands area and then into a storm sewer at the wetlands outfall.

The storm sewer is designed to convey the 100 year event. Storm water generated on the site will be routed with street gutters to inlet grates leading into the storm sewer. The storm sewer will extend to the north end north-south street and will not collect runoff beyond this point. The storm sewer will remain buried and follow a natural drainage down to a stilling basin at the river high water mark.

B. Maintenance Issues

The drainage system will be located within dedicated easements to insure access to all parts of the system. A homeowners association will be formed and will accept responsibility of maintenance of the drainage system. Maintenance of the system will include:

clearing debris from the inlets,
inspecting for obstructions, and
inspecting for structural integrity.

IV. DESIGN CRITERIA & APPROACH

A. General Considerations

Master planning issues are limited in scope due to the planned discharge into the river and the absence of developed downstream subbasins. The criteria affecting master planning are the same criteria driving the requirements to submit a drainage report.

The most significant site consideration was accepting the large amount of uncontrolled inflow from upstream.

B. Hydrology

Design storm durations conform with Table VI-2 of the City of Grand Junction Storm Water Management Manual, June 1994 (SWMM). Rainfall intensity information was also obtained from the SWMM without adjustment for basin area. Input parameters for the modeling methods were chosen in accordance with the procedures as outlined in the SWMM.

The Rational Method was used to determine storm water quantities using the equation:

$$Q = CiA$$

Where:

C = Runoff coefficient
A = Area in acres
i = Intensity at the time of concentration;
Q = Runoff rate, cfs;

C. Hydraulics

Hydraulic calculations and methods followed those recommended in the SWMM. Mannings Equation was used for pipes and the Modified Mannings Equation was used to determine flows in gutters. The energy and momentum equations were used to examine surcharge in curb boxes and manholes as well as flow velocities Input parameters were selected in accordance with standard engineering practices for the materials chosen for inlets, conveyance, and outlets

V. RESULTS AND CONCLUSIONS

A. Existing and Proposed Runoff Rates (2- and 100-year storm)

	Runoff Rates	
	2-Year Event (cfs)	100-Year Event (cfs)
Existing total site	3.5	11
Existing discharging to Colorado River	16	43
Proposed total site	3.9	11
Proposed discharging to Colorado River	17	46

B. Overall Compliance

The design of the proposed drainage system conforms to the requirements of the Grand Junction Stormwater Management Manual. The methods used to analyze stormwater quantities, rates, and volumes have been used in accordance with policy in Sections I through V of the SWMM. Criteria for approved methods were followed as outlined in Tables I-1, and I-2 of the SWMM.

VI. REFERENCES

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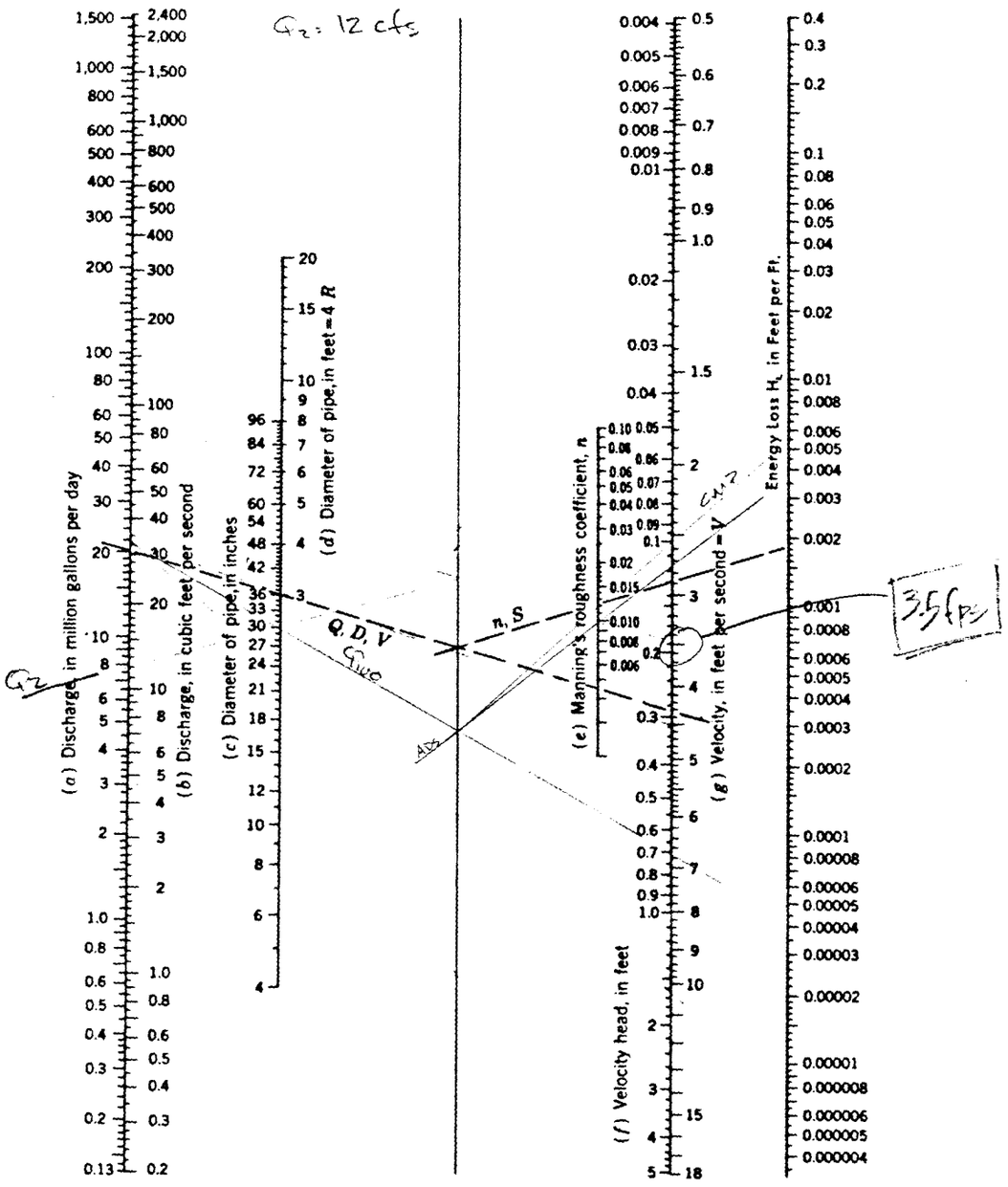
VII. APPENDICES

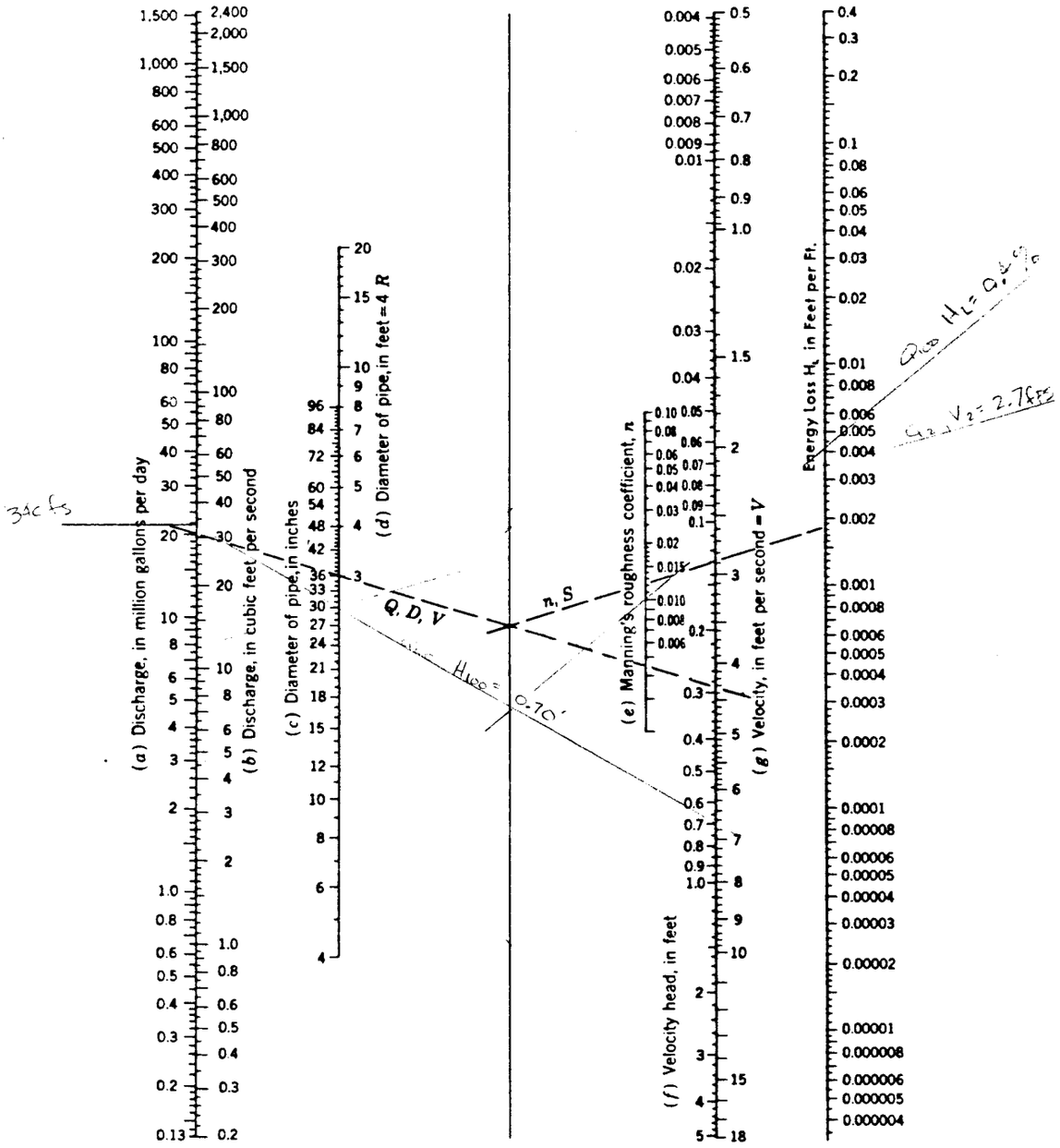
Although the friction slope S_f appears as a second order term in the expression for 'C' the resulting discharge is not sensitive to this term. Table 4.11 shows the difference (%) in discharge computed using the Kutter equation compared with that obtained by Manning. The table gives the relationship between the diameter (D) and the hydraulic radius (R) assuming full flow in a circular pipe. The values in Table 4.11 are also valid for noncircular pipes flowing partially full.



Alignment chart for energy loss in pipes, for Manning's formula.
Note: Use chart for flow computations, $H_L = S$

Figure 4.8 Nomograph for solution of Manning's formula.

Although the friction slope S_f appears as a second order term in the expression for 'C' the resulting discharge is not sensitive to this term. Table 4.11 shows the difference (%) in discharge computed using the Kutter equation compared with that obtained by Manning. The table gives the relationship between the diameter (D) and the hydraulic radius (R) assuming full flow in a circular pipe. The values in Table 4.11 are also valid for noncircular pipes flowing partially full.

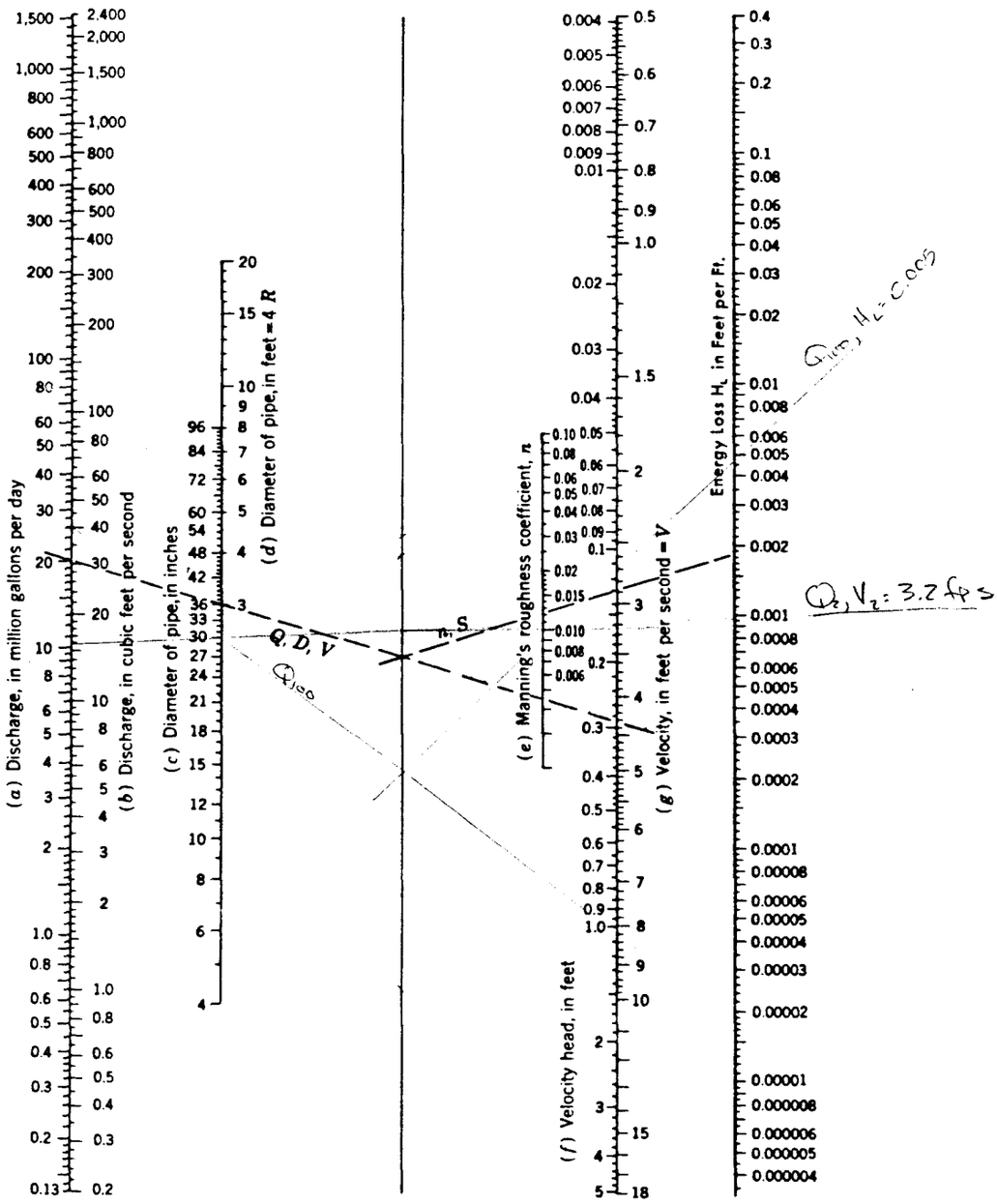


Alignment chart for energy loss in pipes, for Manning's formula.
Note: Use chart for flow computations, $H_L = S$

Figure 4.8 Nomograph for solution of Manning's formula.

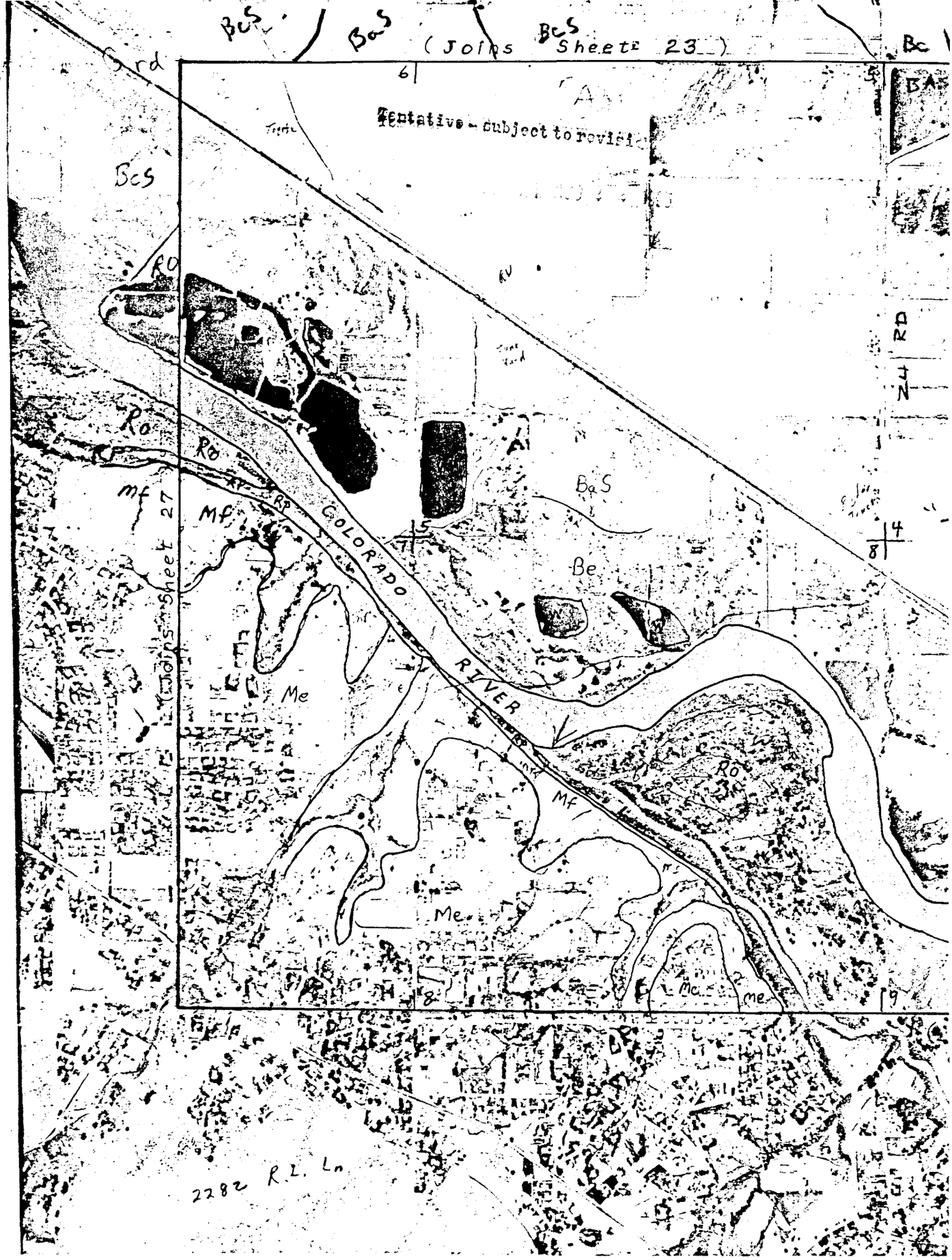
30" N12 FROM MH2 → MH3

Although the friction slope S_f appears as a second order term in the expression for 'C' the resulting discharge is not sensitive to this term. Table 4.11 shows the difference (%) in discharge computed using the Kutter equation compared with that obtained by Manning. The table gives the relationship between the diameter (D) and the hydraulic radius (R) assuming full flow in a circular pipe. The values in Table 4.11 are also valid for noncircular pipes flowing partially full.



Alignment chart for energy loss in pipes, for Manning's formula.
Note: Use chart for flow computations, $H_L = S$

Figure 4.8 Nomograph for solution of Manning's formula.


(Johns Sheet 23)
Tentative - subject to revisi
BcS
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mf
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COLORADO
RIVER
(Johns Sheet 27)
6
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2282 R.L. Ln

VISTA DEL RIO - FILING 3

2 - YEAR EVENT - HISTORICAL CONDITIONS

		RL1	RL2		RL3		RL5		VDR1		RL4	VDR3		RL6		VDR2	F3	
Surface Type 1 - Landscaped	C	0.2	0.2		0.2		0.2		0.2		0.2	0.2		0.2		0.2	0.3	
Surface Type 1 area	(ac)	1.91	1.88		2.08		0.56		2.88		3.31	0		1.73		1.1	10.37	
Surface Type 2 - Paved	C	0.93	0.93		0.93		0.93		0.93		0.93	0.93		0.93		0.93	0.93	
Surface Type 2 area	(ac)	1.03	0.99		1.41		0.67		1.19		1.9	0.13		0.25		0.9	0	
Average Coffecient	C	0.455748	0.451812		0.494928		0.597642		0.41344		0.466219	0.93		0.292172		0.5285	0.3	
overland travel length	(ft)	90	90		90		30		120		100	375		300		120	300	
overland Slope	(%)	1	1		1		1		1		1	0.5		1		1	3	
T=1.8*(1.1-C)*L^0.5*S^-0.3333		15.36867	15.36867		15.36867		8.873105		17.74621		16.2			28.05922		17.746211	17.2941255	
Channel Shape		parabola	parabola		parabola		parabola		gutter		parabola	parabola	culvert	parabola		gutter	parabola	
width, T	(ft)	2	2	3	2	3.5	2	3.5	1.405188		3	3	3.5	2		1.2933308	2	
depth, d	(ft)	0.2	0.2	0.3	0.22	0.33	0.15	0.33	0.162286		0.23	0.23	0.33	0.2		0.1377555	0.2	
Cross-sectional flow area, a	(ft^2)	0.266667	0.266667	0.6	0.293333	0.77	0.2	0.77	0.152029		0.46	0.46	0.77	0.266667		0.1187756	0.26666667	
wetted perimeter, Pw	(ft)	2.052121	2.052121	3.078182	2.062778	3.581285	2.029607	3.581285	1.453679		3.04638	3.0463802	3.581285	2.052121		1.331456	2.05212126	
Hydraulic Radius, r= a/Pw	(ft)	0.129947	0.129947	0.19492	0.142203	0.215007	0.098541	0.215007	0.104582		0.150999	0.1509989	0.215007	0.129947		0.0892073	0.12994684	
Channel slope, S	(ft/ft)	0.06	0.06	0.03	0.04	0.03	0.03	0.05	0.01		0.04	0.04	0.05	0.06		0.01	0.02	
Mannings Roughness Coefficient, n		0.013	0.013	0.015	0.013	0.015	0.013	0.015	0.016		0.013	0.013	0.015	0.013		0.016	0.013	
V = 1.49r^(2/3)S^(1/2) / n	(fps)	7.197808	7.197808	5.780831	6.241129	6.171646	4.23201	7.96756	2.06559		6.496035	6.4960355	7.96756	7.197808		1.8577338	4.15565652	
Assumed velocity	(fps)	4	4		4		4		3		2	4		4		3	4	
Reach		**RL1 - A**	**RL2 - B**	**A - B**	**RL3 - C**	**B - C**	**RL5 - D**	**C - D**	**VDR1-D**	**D**	**RL4 - E**	**VDR3-E**	**D - E**	**F - G**	**G**	**VDR2-H**	**VDR4-Z**	**Z**
flow length, L	(ft)	494	494	283	1010	111	825	150	600		1010	1010	150	300		320	350	
Travel time L/(60V)	(min)	1.143867	1.143867	0.815915	2.697161	0.299758	3.249047	0.313772	3.333333		2.591324	2.5913241	0.313772	0.694656		1.7777778	1.40370921	
Overland Travel Time	(min)	15.36867	15.36867	0	15.36867	0	8.873105	0	17.74621		16.2	0	0	28.05922		17.746211	17.2941255	
Time of concentration (5 minimum)	(min)	16.51	16.51	0.82	18.07	0.30	12.12	0.31	21.08		18.79	5.00	0.31	28.75		19.52	18.70	
Intensity	(in/hr)	1.21	1.21	1.21	1.17	1.17	1.41	1.41	1.08		1.14	1.95	1.14	0.9		1.11	1.14	
total area	(ac)	2.94	2.87	0	3.49	0	1.23	0	4.07	14.6	5.21	0.13	0	1.98	21.92	2	10.37	34.29
Q=Va	(cfs)	1.919416	1.919416	3.468498	1.830731	4.752167	0.846402	6.135021	0.314029		2.988176	2.9881763	6.135021	1.919416		0.2206535	1.10817507	
Q=Cia	(cfs)	1.621279	1.569007	3.190286	2.020941	5.211227	1.036491	6.247718	1.817316	8.065034	2.76906	0.235755	8.065034	0.52065	11.5905	1.17327	3.54654	16.31031

2 - YEAR EVENT - DEVELOPED CONDITIONS

		F3.1	INFLOW	F3.2	INFLOW	F3.3	F3.4	
Surface Type 1 - Landscaped	C	0.2	TO	0.2	TO	0.2	0.2	
Surface Type 1 area	(ac)	2.23	OUTFALL	1.01	REACH	2.85	2.21	
Surface Type 2 - Paved	C	0.93	G	0.93	I-J	0.93	0.93	
Surface Type 2 area	(ac)	0.25	FROM	0.48	FROM	0.72	0.62	
Average Coffecient	C	0.273589	OUTFALLS	0.435168	OUTFALL	0.347227	0.359929	
overland travel length	(ft)	300	D,E,F	120	H	100	100	
overland Slope	(%)	1	COMBINED	1	COMBINED	1	1	
T=1.8*(1.1-C)*L^0.5*S^-0.3333		28.05922	WITH FLOW	17.74621	WITH FLOW	16.2	16.2	
Channel Shape		parabola	FROM	gutter	FROM	gutter	gutter	
width, T	(ft)	2	F3.1	1.057429	I	1.195117	1.214808	
depth, d	(ft)	0.2		0.092431		0.117821	0.121697	
Cross-sectional flow area, a	(ft^2)	0.266667		0.065159		0.093873	0.098559	
wetted perimeter, Pw	(ft)	2.052121		1.078595		1.225406	1.246577	
Hydraulic Radius, r= a/Pw	(ft)	0.129947		0.060411		0.076606	0.079064	
Channel slope, S	(ft/ft)	0.02		0.03		0.03	0.02	
Mannings Roughness Coefficient, n		0.013		0.016		0.016	0.016	
V = 1.49r^(2/3)S^(1/2) / n	(fps)	4.155657		2.481032		2.906901	2.423998	
Assumed velocity	(fps)	4		3		3	3	
Reach		**F3.1-G**	**G**	**F3.2-I**	**I-J**	**F3.3-J**	**F3.4-J**	**Z**
flow length, L	(ft)	200		500		940	360	
Travel time L/(60V)	(min)	0.833333		2.777778		5.222222	2	
Overland Travel Time	(min)	28.05922		17.74621		16.2	16.2	
Time of concentration (5 minimum)	(min)	28.89		20.52		21.42	18.20	
Intensity	(in/hr)	0.9		1.08		1.08	1.17	
total area	(ac)	2.48	24.4	1.49	27.89	3.57	2.83	34.29
Q=Va	(cfs)	1.108175		0.161662		0.272881	0.238907	
Q=Cia	(cfs)	0.61065	12.201149	0.700272	14.074691	1.338768	1.191762	16.60522

100 - YEAR EVENT - HISTORICAL CONDITIONS

		RL1	RL2		RL3		RL5		VDR1		RL4	VDR3		RL6		VDR2	F3	
Surface Type 1 - Landscaped	C	0.24	0.24		0.24		0.24		0.24		0.24	0.24		0.24		0.24	0.36	
Surface Type 1 area	(ac)	1.91	1.88		2.08		0.56		2.88		3.31	0		1.73		1.1	10.37	
Surface Type 2 - Paved	C	0.95	0.95		0.95		0.95		0.95		0.95	0.95		0.95		0.95	0.95	
Surface Type 2 area	(ac)	1.03	0.99		1.41		0.67		1.19		1.9	0.13		0.25		0.9	0	
Average Coffecient	C	0.488741	0.484913		0.526848		0.626748		0.447592		0.498925	0.95		0.329646		0.5595	0.36	
overland travel length	(ft)	90	90		90		30		120		100	375		300		120	300	
overland Slope	(%)	1	1		1		1		1		1	0.5		1		1	3	
=1.8*(1.1-C)*L^0.5*S^-0.3333		14.68562	14.68562		14.68562		8.478745		16.95749		15.48			26.81215		16.95749	15.9970661	
Channel Shape		parabola	parabola		parabola		parabola		gutter		parabola	parabola	culvert	parabola		gutter	parabola	
width, T	(ft)	2	2	3	2	3.5	2	3.5	1.405188		3	3	3.5	2		1.2933308	2	
depth, d	(ft)	0.2	0.2	0.3	0.22	0.33	0.15	0.33	0.162286		0.23	0.23	0.33	0.2		0.1377555	0.2	
Cross-sectional flow area, a	(ft^2)	0.266667	0.266667	0.6	0.293333	0.77	0.2	0.77	0.152029		0.46	0.46	0.77	0.266667		0.1187756	0.26666667	
wetted perimeter, Pw	(ft)	2.052121	2.052121	3.078182	2.062778	3.581285	2.029607	3.581285	1.453679		3.04638	3.0463802	3.581285	2.052121		1.331456	2.05212126	
Hydraulic Radius, r= a/Pw	(ft)	0.129947	0.129947	0.19492	0.142203	0.215007	0.098541	0.215007	0.104582		0.150999	0.1509989	0.215007	0.129947		0.0892073	0.12994684	
Channel slope, S	(ft/ft)	0.06	0.06	0.03	0.04	0.03	0.03	0.05	0.01		0.04	0.04	0.05	0.06		0.01	0.02	
Mannings Roughness Coefficient, n		0.013	0.013	0.015	0.013	0.015	0.013	0.015	0.016		0.013	0.013	0.015	0.013		0.016	0.013	
V = 1.49r^(2/3)S^(1/2) / n	(fps)	7.197808	7.197808	5.780831	6.241129	6.171646	4.23201	7.96756	2.06559		6.496035	6.4960355	7.96756	7.197808		1.8577338	4.15565652	
Assumed velocity	(fps)	4	4		4		4		3		2	4		4		3	4	
Reach		**RL1 - A**	**RL2 - B**	**A - B**	**RL3 - C**	**B - C**	**RL5 - D**	**C - D**	**VDR1 - D**	**D**	**RL4 - E**	**VDR3-E**	**D - E**	**F - G**	**G**	**VDR2 - H**	**VDR4-Z**	**Z**
flow length, L	(ft)	494	494	283	1010	111	825	150	600		1010	1010	150	300		320	350	
Travel time L/(60V)	(min)	1.143867	1.143867	0.815915	2.697161	0.299758	3.249047	0.313772	3.333333		2.591324	2.5913241	0.313772	0.694656		1.7777778	1.40370921	
Overland Travel Time	(min)	14.68562	14.68562	0	14.68562	0	8.478745	0	16.95749		15.48	0	0	26.81215		16.95749	15.9970661	
Time of concentration	(min)	15.83	15.83	0.82	17.38	0.30	11.73	0.31	20.29		18.07	5.00	0.31	27.51		18.74	17.40	
Intensity	(in/hr)	3.15	3.15	3.07	3.07	2.99	3.54	3.54	2.84		2.99	4.95	2.99	2.36		2.91	3.07	
total area	(ac)	2.94	2.87	0	3.49	0	1.23	0	4.07	14.6	5.21	0.13	0	1.98	21.92	2	10.37	34.29
Q=Va	(cfs)	1.919416	1.919416	3.468498	1.830731	4.752167	0.846402	6.135021	0.314029		2.988176	2.9881763	6.135021	1.919416		0.2206535	1.10817507	
Q=Cia	(cfs)	4.526235	4.383855	8.798754	5.644809	14.29647	2.728986	17.02545	5.173628	22.19908	7.772206	0.611325	22.19908	1.540372	32.12298	3.25629	11.460924	43.58391

100 - YEAR EVENT - DEVELOPED CONDITIONS

		F3.1	INFLOW	F3.2	INFLOW	F3.3	F3.4	
Surface Type 1 - Landscaped	C	0.24	TO	0.24	TO	0.24	0.24	
Surface Type 1 area	(ac)	2.23	OUTFALL	1.01	REACH	2.85	2.21	
Surface Type 2 - Paved	C	0.95	G	0.95	I-J	0.95	0.95	
Surface Type 2 area	(ac)	0.25	FROM	0.48	FROM	0.72	0.62	
Average Coffecient	C	0.311573	OUTFALLS	0.468725	OUTFALL	0.383193	0.395548	
overland travel length	(ft)	300	D,E,F	120	H	100	100	
overland Slope	(%)	1	COMBINED	1	COMBINED	1	1	
=1.8*(1.1-C)*L^0.5*S^-0.3333		26.81215	WITH FLOW	16.95749	WITH FLOW	15.48	15.48	
Channel Shape		parabola	FROM	gutter	FROM	gutter	gutter	
width, T	(ft)	2	F3.1	1.057429	I	1.195117	1.214808	
depth, d	(ft)	0.2		0.092431		0.117821	0.121697	
Cross-sectional flow area, a	(ft^2)	0.266667		0.065159		0.093873	0.098559	
wetted perimeter, Pw	(ft)	2.052121		1.078595		1.225406	1.246577	
Hydraulic Radius, r= a/Pw	(ft)	0.129947		0.060411		0.076606	0.079064	
Channel slope, S	(ft/ft)	0.02		0.03		0.03	0.02	
Mannings Roughness Coefficient, n		0.013		0.016		0.016	0.016	
V = 1.49r^(2/3)S^(1/2) / n	(fps)	4.155657		2.481032		2.906901	2.423998	
Assumed velocity	(fps)	4		3		3	3	
Reach		**F3.1-G**	**G**	**F3.2-I**	**I-J**	**F3.3-J**	**F3.4-J**	**Z**
flow length, L	(ft)	200		500		940	360	
Travel time L/(60V)	(min)	0.833333		2.777778		5.222222	2	
Overland Travel Time	(min)	26.81215		16.95749		15.48	15.48	
Time of concentration	(min)	27.65		19.74		20.70	17.48	
Intensity	(in/hr)	2.36		2.84		2.77	3.07	
total area	(ac)	2.48	24.4	1.49	27.89	3.57	2.83	34.29
Q=Va	(cfs)	1.108175		0.161662		0.272881	0.238907	
Q=Cia	(cfs)	1.823572	33.946556	1.983456	39.186302	3.78936	3.436558	46.41222

NICHOLS ASSOCIATES, INC.
751 Horizon Court - Suite 102
Grand Junction, Colorado 81506

19-Oct-95

Vista Del Rio

Street flow depth at the gutter for critical sections.

Flow Through Street, Curb & Gutter
Discharge quantity is calculated by the following formula:
Q=0.56*(Z/n)*S^.5*d^2.67

Where:

Q = Discharge in CFS (Cubic Feet per Second)
Z = Inverse pavement cross slope
n = Manning roughness coefficient
S = Longitudinal slope of the street or gutter
d = Depth of gutter flow in feet

Solving for maximum depth at gutter
Manning Roughness Coefficient= 0.016

Capacity For Storm Drain Inlets
curb opening length = grate length
Ponding Q= .6 A (2gH)^.5]
Clogging factors: grate=0.5, box=0.0
H2 = 0.5 Ft. H100 = 1.0 Ft.

Drainge Basin(s) see Exhibit 2	Street Locn. ID	Inverse Pave. x slope 1/ft/ft	Min. Long. Slope S ft/ft	Required 2 Year Capacity Q CFS	2 year Water Depth d Ft.	100 Yr Capacity Q CFS	100 Yr Water Depth d Ft.	Grate Type NEENAH	Open Area Sq. Ft.	Capacity 2 Yr CFS	Required 2 Yr CFS	Capacity 100 Yr CFS	Required 100 Yr CFS
F3.2	I	66.67	0.005	0.70	0.13	1.98	0.19	R-3246 C	2.08	7.08	0.70	10.01	1.98
F3.3 & F3.4	J	66.67	0.005	2.53	0.21	7.23	0.31	R-3246 C	2.08	7.08	2.53	10.01	7.23

Tony Nichols

STATE OF COLORADO

VISTA DEL RIO SUBDIVISION

Alpine CM

CLIENT: Alpine CM

PROJECT: Vista del Rio

LOCATION:

REPORT No. 1
DATE of TEST: 12-11-96
TEST BY: RSW/MS
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
1	Sewer main 25' E of MH #5 @ -16' BSG	90	90	11.7	+-2	115.5 @ 13.6	C
2	Sewer main 27' E of MH #5 @ -14' BSG	89*	90	11.9	+-2	115.5 @ 13.6	C
3	Sewer main 30' E of MH #5 @ -12' BSG	99	90	8.1**	+-2	115.5 @ 13.6	C
4	Sewer main 34' E of MH #5 @ -10' BSG	87*	90	8.8**	+-2	115.5 @ 13.6	C
5	Sewer main 40' E of MH #5 @ -8' BSG	92	90	9.8**	+-2	115.5 @ 13.6	C
6	Sewer main 80' E of MH #5 @ -6' BSG	98	90	11.6	+-2	115.5 @ 13.6	C
7	Sewer main 85' E of MH #5 @ -4' BSG	100	90	11.6	+-2	115.5 @ 13.6	C
2A	RETEST #2	91	90	13.0	+-2	115.5 @ 13.6	C
3A	RETEST #3	92	90	12.3	+-2	115.5 @ 13.6	C
4A	RETEST #4	93	90	15.4	+-2	115.5 @ 13.6	C
5A	RETEST #5	93	90	15.3	+-2	115.5 @ 13.6	C
8	SS, Lot 1 @ FG	100	95	13.2	+-2	115.5 @ 13.6	C

Distribution:
2-Client
1-Subdiv. Env.
1-LD/CS

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY: Ed Morris

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 2

DATE of TEST: 12-12-96

TEST BY: RSW

LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
9	SS, Lot 3 @ FSG	100	95	8.8	+-2	125.8 @ 9.5	C
10	SS, Lot 23 @ FSG	100	95	8.9	+-2	125.8 @ 9.5	C

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

Distribution:
2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 3
DATE of TEST: 12-13-96
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
11	SS, Lot 2 @ FSG	95	95	10.1	+-2	125.8 @ 9.5	C
12	SS, Lot 4 @ FSG	100	95	9.0	+-2	125.8 @ 9.5	C
13	SS, Lot 22 @ FSG	100	95	8.3	+-2	125.8 @ 9.5	C
14	SS, Lot 5 @ FSG	95	95	12.7	+-2	116.9 @ 11.5	C
15	SS, Lot 21 @ FSG	96	95	11.6	+-2	116.9 @ 11.5	C
16	SS, Lot 6 @ 1' BSG	98	95	9.6	+-2	116.9 @ 11.5	C
17	SS, Lot 17 @ 1' BSG	95	95	9.5	+-2	125.8 @ 9.5	C
18	SS, Lot 6 @ FSG	95	95	11.7	+-2	116.9 @ 11.5	C
19	SS, Lot 17 @ FSG	99	95	10.0	+-2	125.8 @ 9.5	C

Distribution:
2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 4

DATE of TEST: 12-19-96

TEST BY: RSW/LRS

LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
20	Sewer main 60' NW of MH 3A @ FSG	97	95	12.5	+-2	122.0 @ 10.5	C
21	Sewer main 10' NW of MH 3A @ 8' BSG	97	95	14.7	+-2	115.5 @ 13.6	C
22	Sewer main 20' NW of MH 3A @ 6' BSG	98	95	12.7	+-2	115.5 @ 13.6	C
23	Sewer main 30' NW of MH 3A @ 4' BSG	96	95	14.3	+-2	115.5 @ 13.6	C
24	Sewer main 40' NW of MH 3A @ 2' BSG	96	95	12.4	+-2	115.5 @ 13.6	C

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

Distribution:
2-Client
1-LD/CS
1-Subdiv Eng
1-Ute water

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 5

DATE of TEST: 1-8-97

TEST BY: RSW

LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
25	WS, Lots 12 & 13 @ 2' BSG	90*	95	10.8**	+-2	115.5 @ 13.6	C
26	WS, Lots 10 & 11 @ 2' BSG	98	95	15.5	+-2	115.5 @ 13.6	C
27	WS, Lots 10 & 11 @ FSG	95	95	14.1	+-2	115.5 @ 13.6	C
28	SS, Lot 10 @ 2' BSG	98	95	12.6	+-2	115.5 @ 13.6	C
29	SS, Lot 10 @ FSG	100	95	13.3	+-2	115.5 @ 13.6	C
30	SS, Lots 11 & 12 @ 2' BSG	96	95	10.0	+-2	121.8 @ 10.8	C
31	SS, Lots 11 & 12 @ FSG	98	95	9.6	+-2	121.8 @ 10.8	C
32	MH # 13 @ 2' BSG	99	95	9.6	+-2	121.8 @ 10.8	C
33	MH # 13 @ FSG	97	95	10.0	+-2	121.8 @ 10.8	C
34	Sewer main 20' SE of MH 13 @ 2' BSG	97	95	9.5	+-2	121.8 @ 10.8	C
25A	RETEST, WS, Lots 12 & 13 @ 2' BSG	99	95	10.7	+-2	116.9 @ 11.5	C
35	Water main corner of lots 9 & 10 @ FSG	99	95	14.4	+-2	115.5 @ 13.6	C
36	Water main corner of lots 9 & 10 @ 2' BSG	100	95	11.4	+-2	116.7 @ 11.5	C
37	WS, Lot 9 @ 2' BSG	98	95	12.1	+-2	116.7 @ 11.5	C
38	WS, Lot 8 @ 2' BSG	99	95	11.1	+-2	121.8 @ 10.8	C

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

Distribution:
2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 6
DATE of TEST: 1-9-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
39	WS, Lots 12 & 13 @ FSG	97	95	12.8	+-2	115.5 @ 13.6	C
40	SS, Lot 13 @ 2' BSG	97	95	12.7	+-2	115.5 @ 13.6	C
41	SS, Lot 13 @ FSG	97	95	13.6	+-2	115.5 @ 13.6	C
42	SS, Lot 9 @ 2' BSG	100	95	12.2	+-2	115.5 @ 13.6	C
43	SS, Lot 9 @ FSG	100	95	12.5	+-2	115.5 @ 13.6	C
44	WS, Lot 9 @ FSG	100	95	12.1	+-2	116.9 @ 11.5	C
45	WS, Lot 8 @ FSG	96	95	13.2	+-2	115.5 @ 13.6	C
46	Sewer main 20' NW of MH 2B @ 2' BSG	99	95	10.7	+-2	116.9 @ 11.5	C
47	Sewer main 20' NW OF MH 2B @ FSG	96	95	9.5	+-2	116.9 @ 11.5	C
48	MH 2B @ 3' BSG	97	95	9.5	+-2	121.8 @ 10.8	C
49	MH 2B @ 1' BSG	97	95	8.7**	+-2	121.8 @ 10.8	C
50	MH 2B @ FSG	100	95	10.0	+-2	121.8 @ 10.8	C
51	SS, Lot 8 @ 4' BSG	99	95	10.2	+-2	121.8 @ 10.8	C
52	SS, Lot 8 @ 2' BSG	97	95	9.7	+-2	116.9 @ 11.5	C
53	SS, Lot 8 @ FSG	100	95	13.9**	+-2	116.9 @ 11.5	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: • Fails Compaction SPEC. C = Cohesive
•• Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 6
DATE of TEST: 1-9-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
54	WS, Lot 7 @ 2' BSG	96	95	14.2	+-2	115.5 @ 13.6	C
55	WS, Lot 7 @ FSG	100	95	11.3	+-2	116.9 @ 11.5	C
56	MH 3A @ 4' BSG	100	95	13.5	+-2	116.9 @ 11.5	C
57	MH 3A @ 2' BSG	98	95	12.1	+-2	116.9 @ 11.5	C
58	MH 3A @ FSG	96	95	9.5	+-2	116.9 @ 11.5	C
59	Sewer main 15' SE of MH 3A @ 6' BSG	99	95	12.3	+-2	115.5 @ 13.6	C
60	Sewer main 15' SE of MH 3A @ 4' BSG	97	95	14.4	+-2	115.5 @ 13.6	C
61	Sewer main 15' SE of MH 3A @ 2' BSG	97	95	13.3	+-2	115.5 @ 13.6	C
62	Sewer main 15' SE of MH 3A @ FSG	99	95	13.7	+-2	115.5 @ 13.6	C
63	Sewer main 20' W of MH 3B @ 4' BSG	98	95	14.0	+-2	115.5 @ 13.6	C
64	Sewer main 25' W of MH 3B @ 2' BSG	100	95	13.8	+-2	115.5 @ 13.6	C
65	Sewer mian 25' W of MH 3B @ FSG	100	95	14.7	+-2	115.5 @ 13.6	C
66	MH 3B @ 4' BSG	98	95	15.3	+-2	115.5 @ 13.6	C
67	MH 3B @ 2' BSG	99	95	14.9	+-2	115.5 @ 13.6	C
68	MH 3B @ FSG	98	95	15.1	+-2	115.5 @ 13.6	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 7
DATE of TEST: 1-10-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
83	Water main @ corner of lots 5 & 6 @ 2' BSG	100	95	9.6	+-2	125.8 @ 10.8	C
84	Water main @ corner of lots 4 & 5 @ FSG	98	95	10.6	+-2	116.7 @ 11.5	C

KEY: * Fails Compaction SPEC. ** Fails Moisture SPEC. S = Standard Proctor M = Modified Proctor C = Cohesive NC = NonCohesive ABC = Aggregate Base PR = Pit Run

Distribution:
2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 8
DATE of TEST: 1-15-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
85	WS, Lots 4 & 5 @ 2' BSG	95	95	12.9	+-2	115.5 @ 13.6	C
86	WS, Lots 4 & 5 @ FSG	96	95	12.6	+-2	115.5 @ 13.6	C
87	WS, Lot 6 @ 2' BSG	100	95	9.4	+-2	125.8 @ 9.5	C
88	WS, Lot 6 @ FSG	100	95	10.5	+-2	125.8 @ 9.5	C
89	FH corner of Lots 6 & 7 @ 2' BSG	96	95	9.5	+-2	122.0 @ 10.5	C
90	FH corner of Lots 6 & 7 @ FSG	97	95	9.5	+-2	122.0 @ 10.5	C
91	FH corner of Lots 8 & 9 @ 2' BSG	96	95	12.2	+-2	115.5 @ 13.6	C
92	FH corner of Lots 8 & 9 @ FSG	100	95	12.9	+-2	115.5 @ 13.6	C
93	Water main corner of Lots 17 & 18 @ 2' BSG	99	95	10.5	+-2	125.8 @ 9.5	C
94	Water main corner of Lots 17 & 18 @ FSG	100	95	9.0	+-2	125.8 @ 9.5	C
95	WS, Lots 17 & 18 @ 2' BSG	98	95	11.3	+-2	116.9 @ 11.5	C
96	WS, Lots 17 & 18 @ FSG	95	95	12.7	+-2	116.9 @ 11.5	C
97	WS, Lot 14 @ 2' BSG	99	95	11.5	+-2	116.9 @ 11.5	C
98	WS, Lot 14 @ FSG	100	95	10.3	+-2	116.9 @ 11.5	C
99	WS, Lots 15 & 16 @ 2' BSG	98	95	12.4	+-2	116.9 @ 11.5	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 8
DATE of TEST: 1-15-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
100	WS, Lots 15 & 16 @ FSG	100	95	10.6	+-2	116.9 @ 11.5	C
101	WS, Lot 22 @ 2' BSG	99	95	11.9	+-2	116.9 @ 11.5	C
102	WS, Lot 22 @ FSG	95	95	13.4	+-2	116.9 @ 11.5	C
103	WS, Lot 23 @ 2' BSG	95	95	12.7	+-2	116.9 @ 11.5	C
104	WS, Lot 23 @ FSG	97	95	12.6	+-2	116.9 @ 11.5	C
105	WS, Lot 3 @ 2' BSG	98	95	12.1	+-2	116.9 @ 11.5	C
106	WS, Lot 3 @ FSG	96	95	12.5	+-2	116.9 @ 11.5	C
107	WS, Lot 2 @ 2' BSG	97	95	12.7	+-2	116.9 @ 11.5	C
108	WS, Lot 2 @ FSG	98	95	12.6	+-2	116.9 @ 11.5	C
109	WS, Lot 1 @ 2' BSG	95	95	13.1	+-2	116.9 @ 11.5	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: • Fails Compaction SPEC. C = Cohesive
•• Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 9

DATE of TEST: 1-29-97

TEST BY: MS

LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
110	Storm drain main line between MH4 & MH3 @ FSG	100	95	12.9	+-2	115.5 @ 13.6	C
111	Storm drain main line MH4 & S side curb box @ FSG	100	95	9.9	+-2	121.8 @ 10.8	C
112	Storm drain S side circle curb & MH5 @ FSG	100	95	12.2	+-2	115.5 @ 13.6	C
113	Storm drain between MH 2 & 3 @ FSG	100	95	13.3	+-2	115.5 @ 13.6	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY: [signature]

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 10
DATE of TEST: 2-7-97
TEST BY: Matt
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
114	Storm drain, next to Lot 16 @ FSG	92*	95	14.6	+-2	115.5 @ 13.6	C
115	Storm drain, next to Lot 7 @ FSG	100	95	11.2	+-2	122.0 @ 10.8	C
116	Storm drain, next to Lot 14 @ FSG	100	95	9.2	+-2	122.0 @ 10.8	C
117	Storm drain, next to Lot 8 @ FSG	94*	95	6.7	+-2	115.5 @ 13.6	C
118	Inlet box , next to Lot 10 @ FSG	97	95	10.2	+-2	122.0 @ 10.8	C
119	Inlet box, next to Lot 6 @ FSG	96	95	9.0	+-2	122.0 @ 10.8	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 11
DATE of TEST: 2-21-97
TEST BY: RL/RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
120	Sidewalk sta 18+15 E side @ FSG	96	95	7.9	+-2	125.8 @ 9.5	C
121	Sidewalk sta 18+15 W side @ FSG	100	95	10.7	+-2	125.8 @ 9.5	C
122	Street sta 18+00 Center line @ FSG	96	95	9.4	+-2	125.8 @ 9.5	C
123	Street sta 17+30 W lane @ FSG	96	95	9.5	+-2	121.8 @ 10.8	C
124	Sidewalk 16+00 W side @ FSG	96	95	8.4	+-2	125.8 @ 9.5	C
125	Street sta 12+00, W lane @ FSG	96	95	9.4	+-2	133.0 @ 7.5	C
126	Sidewalk sta 13+00 W side @ FSG	95	95	9.5	+-2	133.0 @ 7.5	C
127	Street sta 13+00 E side @ FSG	100	95	9.6	+-2	121.8 @ 10.8	C
128	Sidewalk sta 13+00 E side @ FSG	96	95	9.0	+-2	121.8 @ 10.8	C
129	Street sta 14+00 W lane @ FSG	100	95	8.8	+-2	133.0 @ 7.5	C
130	Sidewalk sta 16+20 E side @ FSG	98	95	9.8	+-2	121.8 @ 10.8	C
131	Street sta 16+00 E side @ FSG	97	95	10.5	+-2	121.8 @ 10.8	C
132	Sidewalk sta 11+00 E side @ FSG	98	95	8.3	+-2	133.0 @ 7.5	C
133	Street sta 11+00 E side @ FSG	98	95	7.3	+-2	133.0 @ 7.5	C
134	Sidewalk sta 11+00 W side @ FSG	95	95	8.6	+-2	133.0 @ 7.5	C

KEY: * Fails Compaction SPEC. C = Cohesive
** Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY: Ed Morgan

Distribution:
2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

Tests 125, 129 & 132 have a rock correction.

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 12

DATE of TEST: 2-24-97

TEST BY: RL/RSW

LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
135	Sidewalk @ W end of cul-de-sac @ FSG	100	95	13.0	+-2	115.5 @ 13.6	C
136	Street sta 6+70 N lane @ FSG	100	95	13.6	+-2	115.5 @ 13.6	C
137	Sidewalk S side sta 6+25 @ FSG	100	95	14.0	+-2	115.5 @ 13.6	C
138	Sidewalk N side sta 6+25 @ FSG	100	95	15.6	+-2	115.5 @ 13.6	C
139	Street sta 6+00 S lane @ FSG	97	95	15.0	+-2	115.5 @ 13.6	C
140	Street sta 15+50 W lane @ FSG	100	95	13.2	+-2	115.5 @ 13.6	C

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: • Fails Compaction SPEC. C = Cohesive
•• Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 14
DATE of TEST: 2-26-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
144	Sidewalk Casa Rio Ct E side sta 11+00 @ BCG	94	90M	7.0	+-2	136.8 @ 7.1	BC
145	Sidewalk Casa Rio Ct E side sta 13+00 @ BCG	92	90M	5.4	+-2	136.8 @ 7.1	BC
146	Sidewalk Casa Rio Ct E side sta 15+00 @ BCG	94	90M	7.9	+-2	136.8 @ 7.1	BC
147	Sidewalk Casa Rio Ct E side sta 17+00 @ BCG	96	90M	6.1	+-2	136.8 @ 7.1	BC
148	Sidewalk Casa Rio Ct W side sta 17+00 @ BCG	97	90M	6.8	+-2	136.8 @ 7.1	BC

Distribution:
2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: • Fails Compaction SPEC. C = Cohesive
•• Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 15
DATE of TEST: 2-27-97
TEST BY: RSW
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
149	Sidewalk end of Casa Rio Ct sta 18+97 @ BCG	95	90M	6.7	+-2	136.8 @ 7.1	BC
150	Sidewalk Vista Rio Ct N side sta 5+00 @ BCG	94	90M	5.9	+-2	136.8 @ 7.1	BC
151	Sidewalk Vista Rio Ct S side sta 6+00 @ BCG	94	90M	6.6	+-2	136.8 @ 7.1	BC
152	Sidewalk end of Vista Rio Ct sta 7+50 @ BCG	97	90M	8.3	+-2	136.8 @ 7.1	BC

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water

KEY: • Fails Compaction SPEC. C = Cohesive
•• Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

FILL DENSITY TEST DAILY REPORT

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

CLIENT: Alpine CM

PROJECT: Vista Del Rio

LOCATION:

REPORT No. 16
DATE of TEST: 4-30-97
TEST BY: RF/RL
LD JOB No.: 85853-1403

TEST TYPE: Nuclear Backscatter ___ Nuclear Direct Trans. X

SPECIFICATIONS: Project: ___ City: X County: ___ State: ___

Test No.	Location of Test	COMPACTION %	COMPAC. SPEC. %	MOISTURE CONT %	MOISTURE SPEC. %	PROCTOR VALUE	SOIL TYPE
49A	RETEST - MH 2B @ -1' BSG	100	95	8.2	+-2	125.8 @ 9.5	C
53A	RETEST - SS, Lot 8 @ FSG	98	95	8.6	+-2	125.8 @ 9.5	C
117A	RETEST - Storm drain, Lot 8 @ FSG	100	95	8.0	+-2	125.8 @ 9.5	C
114A	RETEST - Storm drain, Lot 16 @ FSG	98	95	8.7	+-2	125.8 @ 9.5	C

KEY: • Fails Compaction SPEC. C = Cohesive
•• Fails Moisture SPEC. NC = NonCohesive
S = Standard Proctor ABC = Aggregate Base
M = Modified Proctor PR = Pit Run

GRAND JUNCTION LINCOLN-DeVORE, Inc.

BY:

Distribution:

2-Client
1-LD/CS
1-Subdiv Env
1-Ute Water
1-Nichols & Assoc. 1-City of GJ

NOTE: Results indicate in-place Soil densities at the locations and depths identified above. Grand Junction Lincoln-DeVore has relied on the contractor to provide uniform mix placement and compactive effort throughout the fill area.

FILL DENSITY TEST DAILY REPORT

GRAND JUNCTION
LINCOLN-DeVORE, Inc.
GEOTECHNICAL ENGINEERS-GEOLOGISTS

PROJECT Vista Del Rio

CLIENT Alpine CM

SAMPLE LOCATION Alpine CM

SOIL TYPE Silty gravel with sand

TEST NO. 1

DATE 12-10-96

TEST BY LRS

TYPE TEST D 698 B

MAX. DRY DENSITY 115.7 pcf

OPTIMUM MOISTURE 13.6 %

FRACTION USED -3/8

MOLD SIZE _____ cu. ft.

SIEVE SIZE	% PASSING
2½	100
2	87
1	83
3/4	77
½	76
3/8	74
#4	71
#10	68
#20	65
#40	62
#100	51
#200	40.6

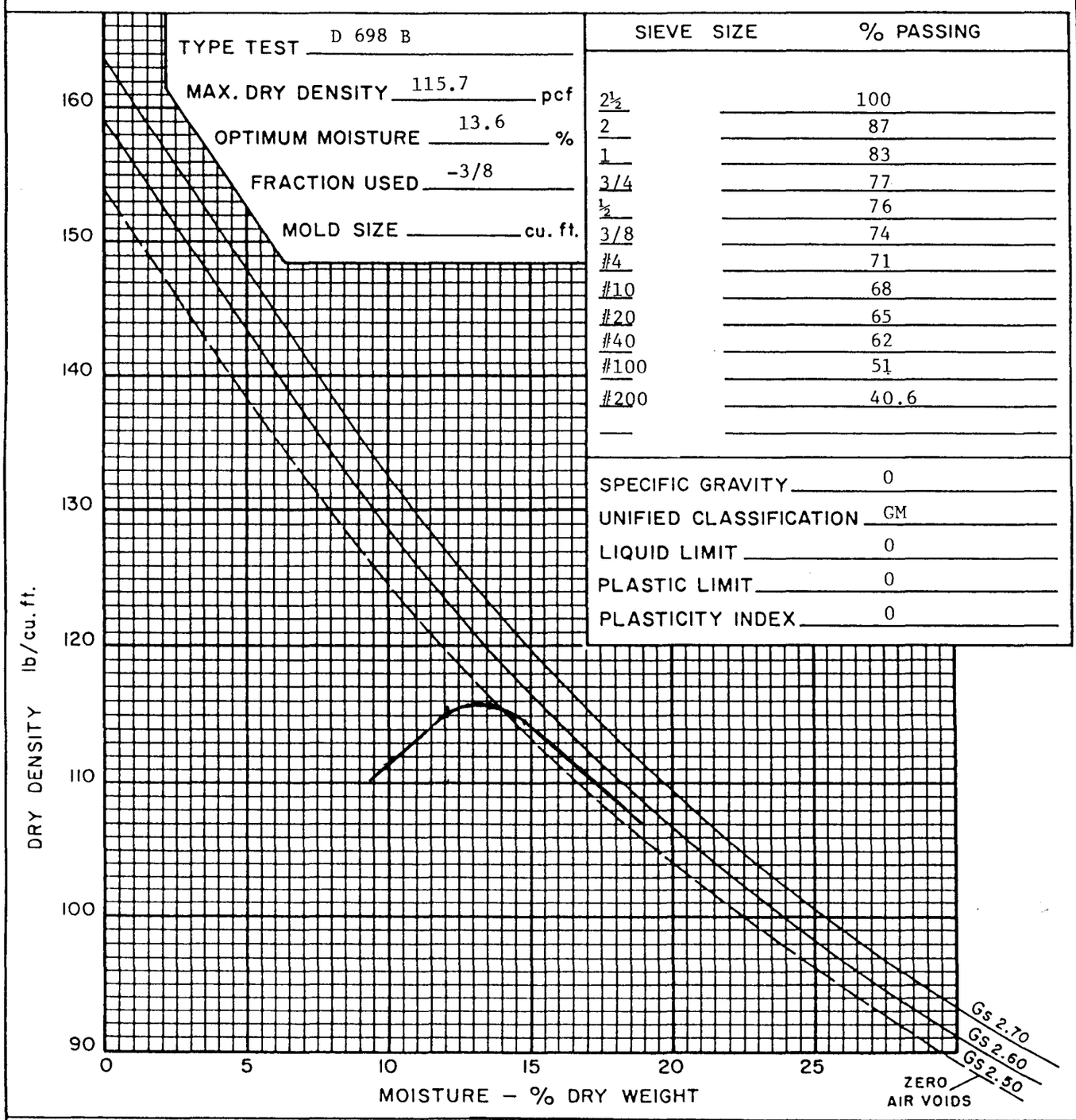
SPECIFIC GRAVITY 0

UNIFIED CLASSIFICATION GM

LIQUID LIMIT 0

PLASTIC LIMIT 0

PLASTICITY INDEX 0



MOISTURE — DENSITY RELATION

LINCOLN DeVORE ENGINEERS GEOLOGISTS

COLORADO: COLORADO SPRINGS
GRAND JUNCTION, PUEBLO,

Client Alpine CM

Project Vista del Rio

Job No. 85853-1403

Test By RSW

Location of Test

Concrete Supplier GJRM
Truck No. 27
Ticket No. 13123
Date of Test 3-5-97
Mix, Proportions
28-day Required Strength 4000 psi

Cement Type 651 CG
Slump (ASTM C 143) 1¼ inches
Air Content (ASTM C 231) 5.4 %
Temperature (ASTM C 1064) 73 ° F.
Test @ chute 65 cu yds.
Water Added 3 gallons

6" x 12" Cylinder No.	Avg. Cyl. Diameter (in.)	Cross-Sectional Area (in.²)	Unit Weight (pcf)	Total Load (lbs.)	Unit Stress (psi)	Break Type	Break Date	Age (days)
1	6.09	29.13	148	129,000	4430	CM	3-12	7
2	6.10	29.22	148	172,000	5890	CM	4-2	28
3	6.10	29.22	148	163,000	5580	CM	4-2	28
4	6.08	29.03						Reserve

Remarks:

Specimen or cap defects:

Distribution:

1-Client
1-Subdiv Env
1-Ute Water
1-LD/CS
1-Nichols & Assoc. 1-City of GJ

* Does not meet required strength (if applicable)

Break Types:
CM - Conical Mortar Break
CA - Conical Aggregate Break
V - Shear Break

Date Issued: 4-2-97

Lincoln DeVore requires a minimum of 1 working day's notice to schedule personnel for any field tests and observations. Compressive strength test performed according to ASTM C-39. Final report will include data for all cylinders, and will be sent after the 28-day break. This laboratory cannot be responsible for any interpretation of the test results by other than laboratory personnel.

LINCOLN DeVORE, INC.

By:

CONCRETE TEST REPORT

LINCOLN DeVORE ENGINEERS GEOLOGISTS

COLORADO: COLORADO SPRINGS
GRAND JUNCTION, PUEBLO

Client Alpine CM

Project Vista del Rio

Job No. 85853-1403

Test By RSW

Location of Test Sidewalk on E side of job

Concrete Supplier GJRM
Truck No. 24
Ticket No. 13219
Date of Test 3-10-97
Mix, Proportions
28-day Required Strength 4000 psi

Cement Type 651 CG
Slump (ASTM C 143) 1½ inches
Air Content (ASTM C 231) 4.5 %
Temperature (ASTM C 1064) ° F.
Test @ chute 6 cu yds.
Water Added 4 gallons

6" x 12" Cylinder No.	Avg. Cyl. Diameter (in.)	Cross-Sectional Area (in.²)	Unit Weight (pcf)	Total Load (lbs.)	Unit Stress (psi)	Break Type	Break Date	Age (days)
5	6.02	28.46	146	103,000	3620	CM	3-17	7
6	6.03	28.56	146	134,500	4710	CM	4-7	28
7	6.02	28.46	146	124,500	4380	CM	4-7	28
8	6.02	28.46	146					Reserve

Remarks:

Specimen or cap defects:

Distribution:
1-Client
1-Subdiv Env
1-Ute Water
1-LD/CS
1-Nichols & Assoc. 1-City of GJ

* Does not meet required strength (if applicable)

Break Types:
CM - Conical Mortar Break
CA - Conical Aggregate Break
V - Shear Break

Date Issued: 4-7-97

Lincoln DeVore requires a minimum of 1 working day's notice to schedule personnel for any field tests and observations. Compressive strength test performed according to ASTM C-39. Final report will include data for all cylinders, and will be sent after the 28-day break. This laboratory cannot be responsible for any interpretation of the test results by other than laboratory personnel.

LINCOLN DeVORE, INC.

By:

CONCRETE TEST REPORT

LINCOLN DeVORE ENGINEERS GEOLOGISTS

COLORADO: COLORADO SPRINGS GRAND JUNCTION, PUEBLO

Client: Alpine CM

Project: Vista del Rio

Job No. 85853-1403

Test By JD

Location of Test: Valley pan & partial sidewalk/curve, corner of Rio Linda Ave. & Rio Borde

Concrete Supplier: GJRM
Truck No.: 24
Ticket No.: 14527
Date of Test: 4-30-97
Mix, Proportions: ____ ____
28-day Required Strength: 3500 psi

Cement Type: 601-B
Slump (ASTM C 143): 3 3/4 inches
Air Content (ASTM C 231): 5.5 %
Temperature (ASTM C 1064): 70 ° F.
Test @: chute yds.
Water Added: 0 gallons

6" x 12" Cylinder No.	Avg. Cyl. Diameter (in.)	Cross-Sectional Area (in.²)	Unit Weight (pcf)	Total Load (lbs.)	Unit Stress (psi)	Break Type	Break Date	Age (days)
13	6.05	28.75	146.6	85,500	2970	CM	5-7	7
14	6.05	28.75	146.4	119,900	4170	CM	5-28	28
15	6.05	28.75	146.4	121,000	4230	CM	5-28	28
16	6.05	28.75	146.4					Reserve

Remarks:

Specimen or cap defects:

Distribution:
1-Client
1-Subdiv Env
1-Ute Water
1-LD/CS
1-GJRM
1-Nichols & Assoc.
1-City of GJ

* Does not meet required strength (if applicable)

Break Types:
CM - Conical Mortar Break
CA - Conical Aggregate Break
V - Shear Break

Lincoln DeVore requires a minimum of 1 working day's notice to schedule personnel for any field tests and observations. Compressive strength test performed according to ASTM C-39. Final report will include data for all cylinders, and will be sent after the 28-day break. This laboratory cannot be responsible for any interpretation of the test results by other than laboratory personnel.

LINCOLN DeVORE, INC.

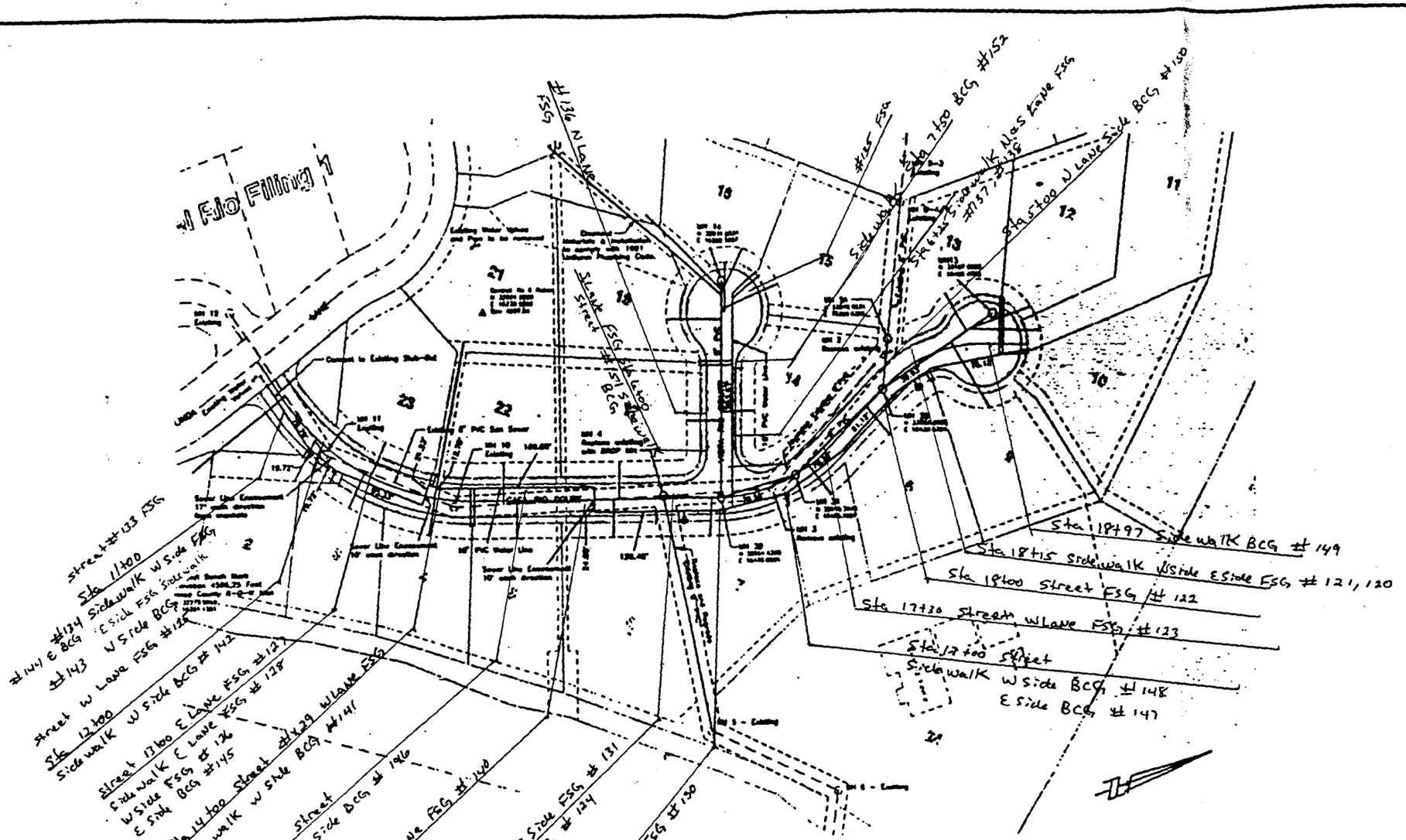
Date Issued: 5-28-97

By:

CONCRETE TEST REPORT

LINCOLN DeVORE ENGINEERS GEOLOGISTS

COLORADO: COLORADO SPRINGS
GRAND JUNCTION, PUEBLO



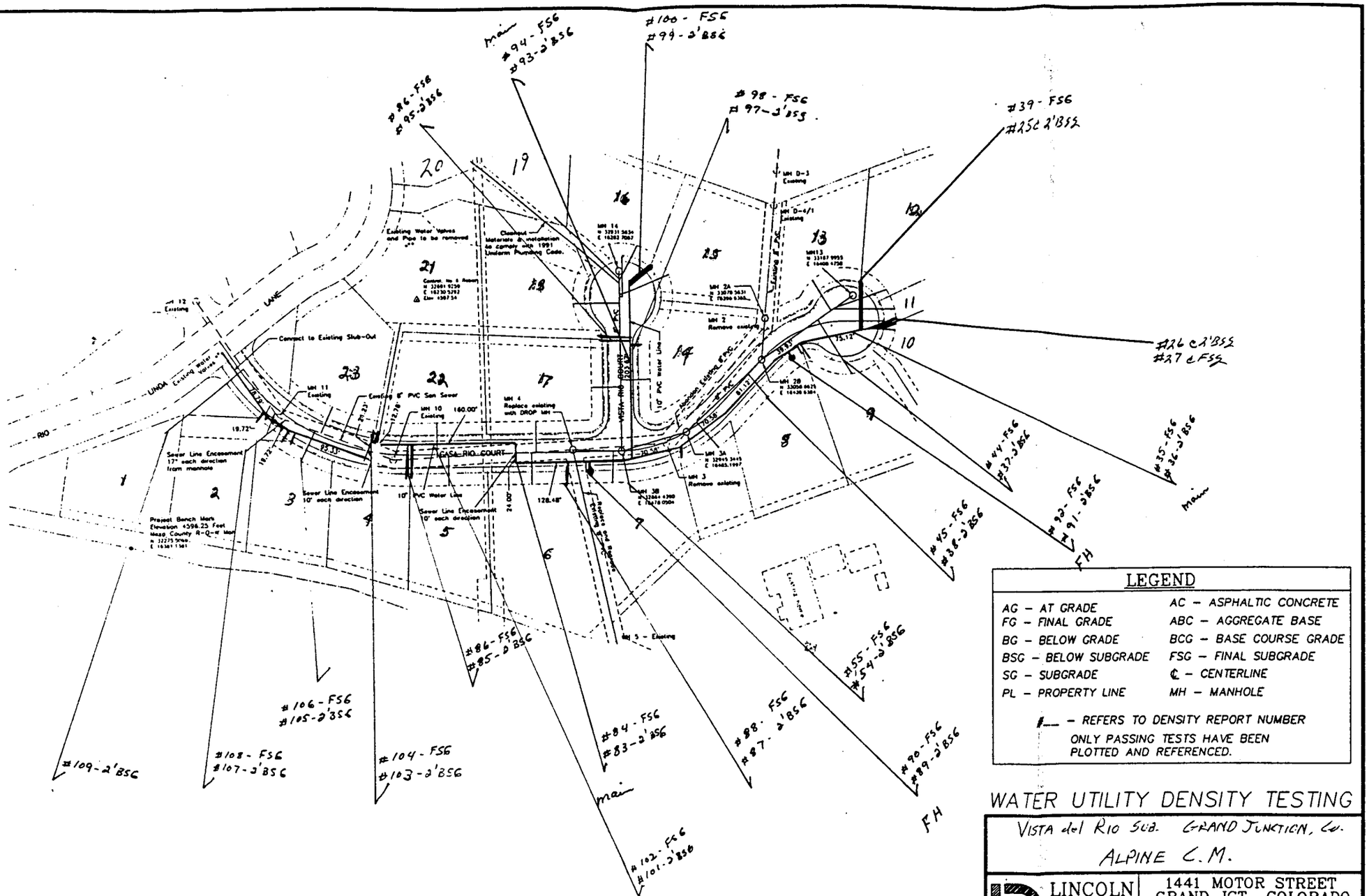
LEGEND

AG – AT GRADE	AC – ASPHALTIC CONCRETE
FG – FINAL GRADE	ABC – AGGREGATE BASE
BG – BELOW GRADE	BCG – BASE COURSE GRADE
BSG – BELOW SUBGRADE	FSG – FINAL SUBGRADE
SG – SUBGRADE	℄ – CENTERLINE
PL – PROPERTY LINE	MH – MANHOLE

#___ – REFERS TO DENSITY REPORT NUMBER ONLY PASSING TESTS HAVE BEEN

STREET DENSITY TESTING

LINCOLN DeVORE ENGINEERS
1441 MOTOR STREET
GRAND JCT., COLORADO
COLO. SPRINGS–PUEBLO



LEGEND

AG – AT GRADE	AC – ASPHALTIC CONCRETE
FG – FINAL GRADE	ABC – AGGREGATE BASE
BG – BELOW GRADE	BCG – BASE COURSE GRADE
BSG – BELOW SUBGRADE	FSG – FINAL SUBGRADE
SG – SUBGRADE	℄ – CENTERLINE
PL – PROPERTY LINE	MH – MANHOLE

#___ – REFERS TO DENSITY REPORT NUMBER
ONLY PASSING TESTS HAVE BEEN PLOTTED AND REFERENCED.

WATER UTILITY DENSITY TESTING

VISTA del RIO SUB. GRAND JUNCTION, CO.

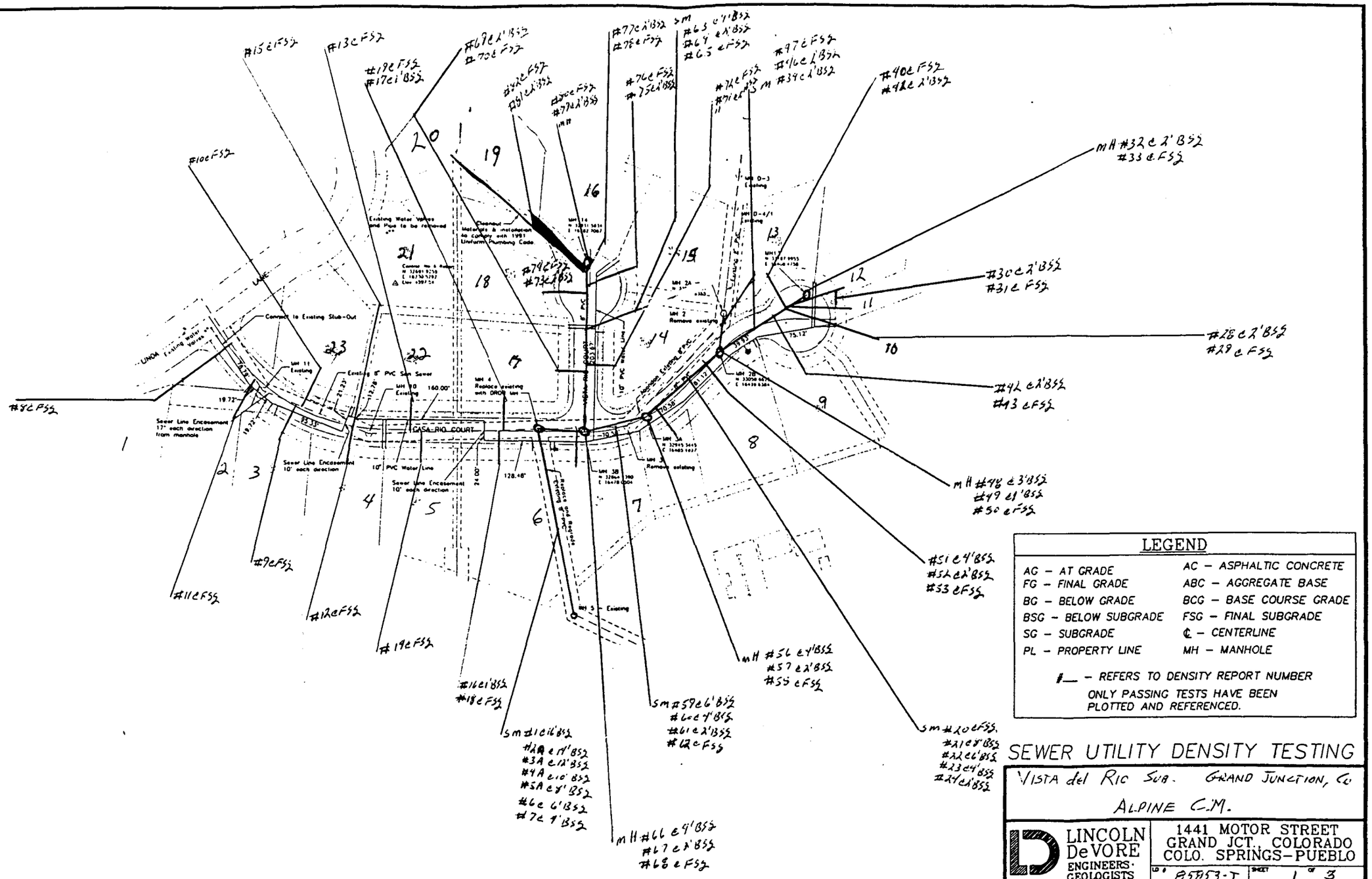
ALPINE C.M.

LINCOLN DeVORE ENGINEERS · GEOLOGISTS

1441 MOTOR STREET
GRAND JCT., COLORADO
COLO. SPRINGS – PUEBLO

LD # 95557-J | SHEET 2 OF 3

DRAWN BY: E. M. MORRIS | SCALE: | DATE: 1-20-97



LEGEND

AG – AT GRADE	AC – ASPHALTIC CONCRETE
FG – FINAL GRADE	ABC – AGGREGATE BASE
BG – BELOW GRADE	BCG – BASE COURSE GRADE
BSG – BELOW SUBGRADE	FSG – FINAL SUBGRADE
SG – SUBGRADE	℄ – CENTERLINE
PL – PROPERTY LINE	MH – MANHOLE

#___ – REFERS TO DENSITY REPORT NUMBER
ONLY PASSING TESTS HAVE BEEN PLOTTED AND REFERENCED.

SEWER UTILITY DENSITY TESTING

VISTA del RIO SUB. GRAND JUNCTION, CO.

ALPINE C.M.

LINCOLN DeVORE ENGINEERS · GEOLOGISTS

1441 MOTOR STREET
GRAND JCT., COLORADO
COLO. SPRINGS–PUEBLO

LO # 85853-J | SHEET 1 OF 3

DRAWN BY: E. M. MORRIS | SCALE: | DATE: 1-20-97

Traffic Study

VISTA DEL RIO SUBDIVISION
MESA COUNTY, COLORADO

Prepared for:

ALPINE C.M., INC.
GRAND JUNCTION, COLORADO

Prepared by:

RG CONSULTING ENGINEERS, INC.
DENVER, COLORADO

August 1994

rg consulting engineers, inc.

August 1, 1994

Mr. V. Kevin Nourse
Alpine C.M., Inc.
1111 South 12th Street
Grand Junction, Colorado 81501

RE: Vista Del Rio Subdivision
Mesa County, Colorado

Dear Mr. Nourse:

RG Consulting Engineers, Inc. is very pleased to submit this traffic study of the proposed Vista Del Rio Subdivision.

As you will note in our report, we find that traffic generated by the Vista Del Rio Subdivision will have minor effect on the area street network. We trust this report will be useful in implementing this project.

We have enjoyed working with you and the Mesa County traffic engineering staff during this study. If you have any questions or comments concerning our report, please do not hesitate to call.

Very truly yours,

RG CONSULTING ENGINEERS, INC.

Mark C. Schaefer, P.E.
Transportation Engineering Manager

MCS:dm

Enclosure

MCS\VISTADEL.RIO

1331 17th street • suite 710 • denver, colorado 80202 • (303) 293-8107
fax (303) 293-8106

TRAFFIC STUDY

VISTA DEL RIO SUBDIVISION
MESA COUNTY, COLORADO

Prepared for:

ALPINE C.M., INC.
Grand Junction, Colorado

Prepared by:

RG CONSULTING ENGINEERS, INC.
Denver, Colorado

August 1994

TRAFFIC STUDY

VISTA DEL RIO SUBDIVISION
MESA COUNTY, COLORADO

CONTENTS

TRAFFIC STUDY

VISTA DEL RIO SUBDIVISION
MESA COUNTY, COLORADO

1.0 INTRODUCTION

This report details an evaluation of the traffic impacts of the proposed development of the Vista Del Rio Subdivision. The proposed 50 dwelling unit subdivision is located northwest of the City of Grand Junction in Mesa County (see Figure 1). The primary access point to the development will be the intersection of Redlands Parkway and Vista Del Rio Drive.

This report was prepared in accordance with Article VII of the Mesa County Standard Specifications for Road and Bridge Construction, adopted March 1, 1994.

2.0 TRAFFIC ANALYSIS

2.1 Traffic Data

Peak hour intersection turning movement counts were collected by Alpine C.M., Inc. during the week of July 18, 1994 (see Figure 2). Counts were made at the intersections of Redlands Parkway/Vista Del Rio Drive and Redlands Parkway/S.H. 340 (Broadway).

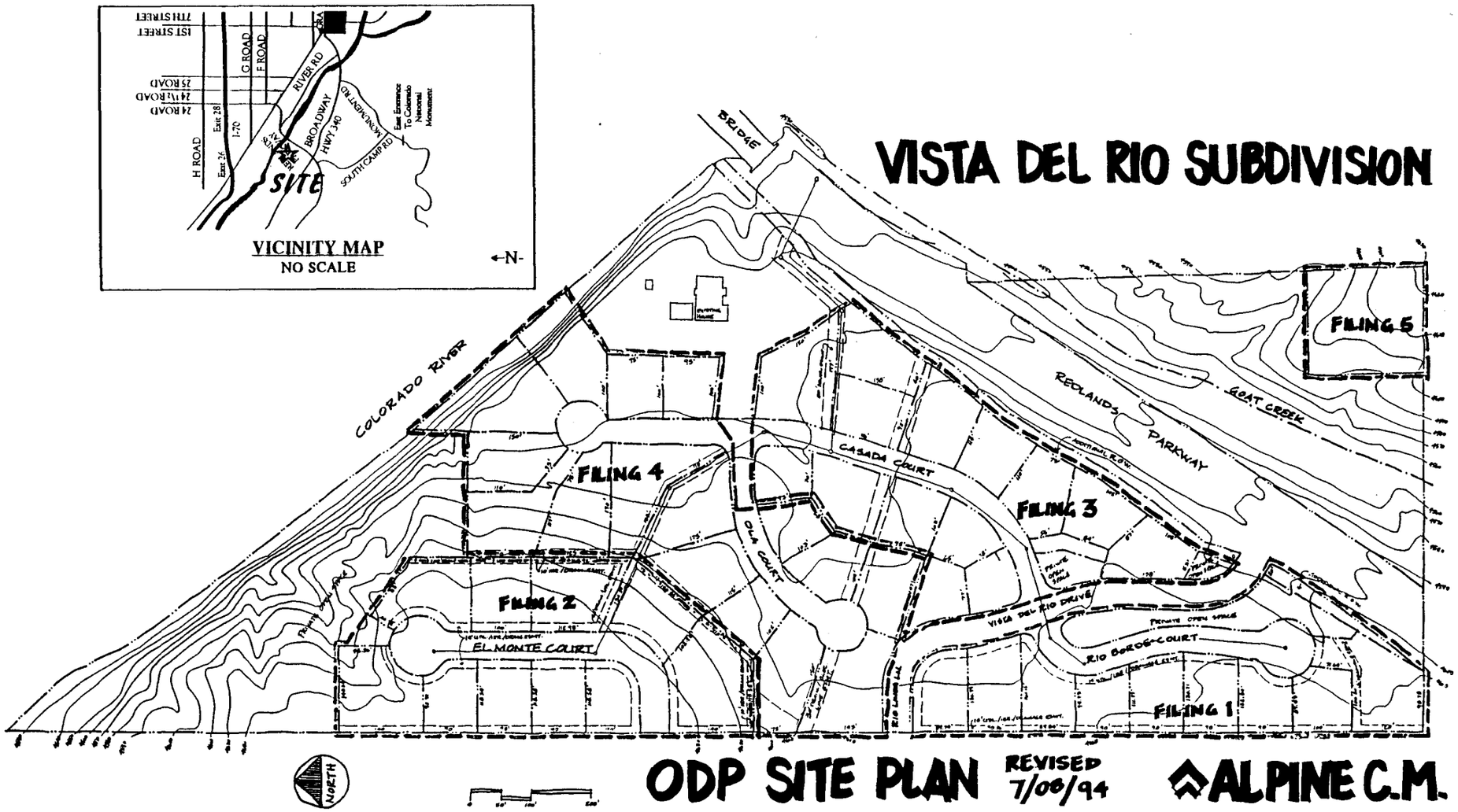
Year 2015 daily traffic forecasts for the Redlands Parkway corridor were obtained from the Mesa County Department of Public Works. In the vicinity of Vista Del Rio Drive, four-lane Redlands Parkway is forecast to carry 29,850 vehicles/day (see Appendix A).

2.2 Trip Generation

Trip generation estimates were based on the latest trip generation rates compiled in the Institute of Transportation Engineers' report, Trip Generation, for "Single-Family Detached Housing" (Land Use Code 210). The resulting trip estimates are shown below:

	A.M. Peak	P.M. Peak	Daily
Trip Rate (trips/d.u.)	0.74	1.01	9.55
Entering	26%	64%	50%
Exiting	74%	36%	50%
Total Trips from 50 d.u. Development	37	51	478
Entering	10	33	239
Exiting	27	18	239

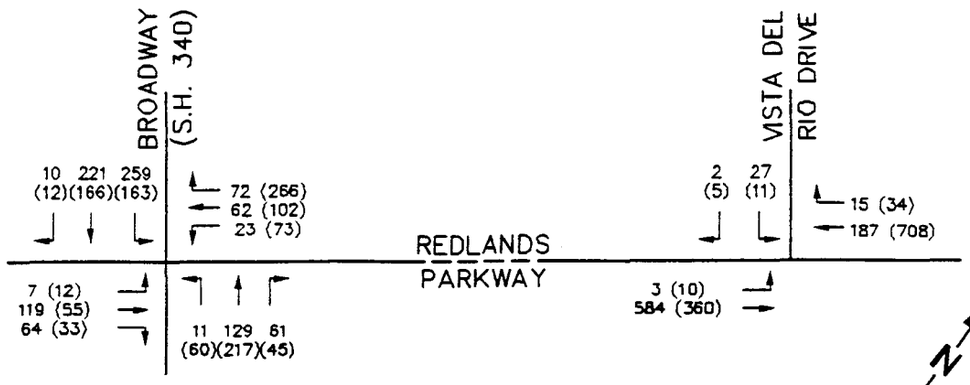
d.u. = dwelling unit.



VISTA DEL RIO SUBDIVISION
TRAFFIC STUDY

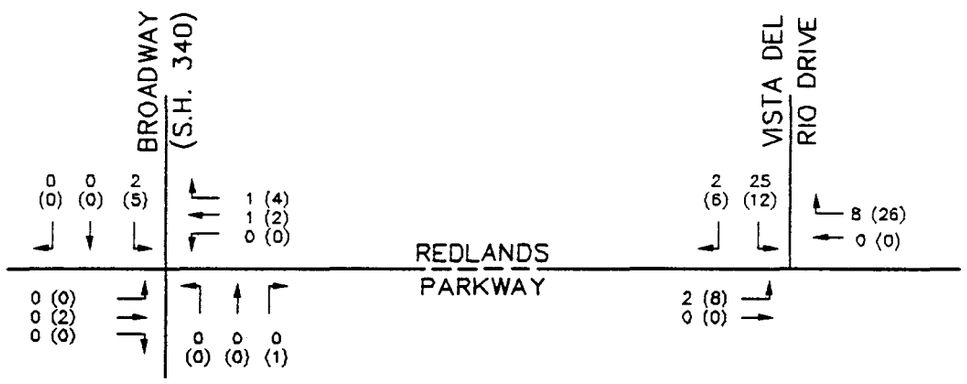
RG CONSULTING ENGINEERS, INC.

FIGURE 1
SITE PLAN AND
VICINITY MAP

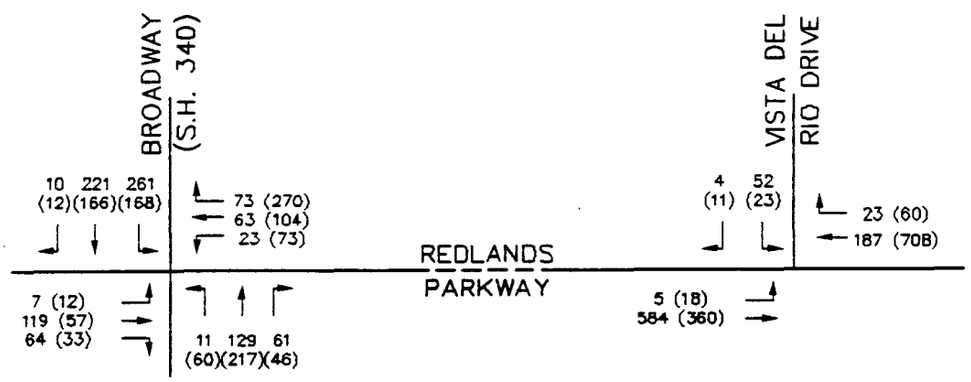


EXISTING TRAFFIC (7/20-21/94)

NO SCALE



SITE-GENERATED TRAFFIC



EXISTING + SITE-GENERATED TRAFFIC

LEGEND: AM (PM) PEAK HOUR

VISTA DEL RIO SUBDIVISION
TRAFFIC STUDY

FIGURE 2
TRAFFIC DATA

RG CONSULTING ENGINEERS, INC.

2.3 Trip Assignment and Distribution

Site-generated intersection turning movements were assumed for this analysis to follow existing traffic patterns. The traffic patterns during the July 18 count period may be somewhat skewed from typical traffic patterns at this intersection due to construction on S.H. 340. We would expect that one effect of this skewed pattern would be greater proportion of eastbound left turns from Vista Del Rio Drive.

The traffic assignment for this analysis is shown in Figure 2.

2.4 Level-of-Service Analysis

Level-of-service (LOS) estimates for the intersections of Redlands Parkway/Vista Del Rio Drive and Redlands Parkway/S.H. 340 (Broadway) were made using the procedures described in the Highway Capacity Manual, 1985. Computer printouts of the analyses are attached as Appendix B to this report.

Level-of-service estimates for the unsignalized intersection of Redlands Parkway/Vista Del Rio Rive are summarized in the following table. As shown, there is no significant change in the level-of-service when site-generated traffic is added to existing volumes.

	Level-of-Service			
	A.M. Peak Hour		P.M. Peak Hour	
Turning Movement	Existing	with Site	Existing	with Site
Eastbound Left	D	D	E	E
Eastbound Right	A	A	A	A
Northbound Left	A	A	A	B

Since LOS "E" operations were estimated for the Redlands Parkway/Vista Del Rio Drive intersection, it is appropriate to make some comment on the Highway Capacity Manual (HCM) analysis procedures for evaluating unsignalized intersection capacity. As noted in Interim Materials on Unsignalized Intersection Capacity, Transportation Research Circular 373 (July 1991), the "reserve capacity" computation of the HCM has not gained extensive acceptance by the U.S. user community. Circular 373 indicates "Some research has indicated that the TWSC [two-way stop controlled] technique consistently underestimates Reserve Capacity and thus yields a poorer level of service than actually occurs" (p. 9). Further, Circular 373 states "The movements which yielded poorer levels of service than actually observed in the field were the through movements and left turns from the minor street" (p. 7). Referring to unpublished field surveys which attempted to relate calculated Reserved Capacity to observed average vehicle delay, Circular 373 reports "This limited data collection effort indicated that Levels of Service

E or F (as determined using the analysis procedures contained in Chapter 10 of the 1985 HCM) correlated with average vehicle delays of between 15 and 35 seconds" (p. 7).

Specific to the Redlands Parkway/Vista Del Rio Drive intersection analysis, we believe the most appropriate conclusion that can be drawn is that there is no appreciable change in the level-of-service between the "existing" and "with site" scenarios.

Mesa County's traffic forecasts of the Redlands Parkway corridors shows a near tripling of daily traffic on Redlands Parkway by 2015. As expected, predicted service levels at the Redlands Parkway/Vista Del Rio Drive drop to LOS "F" levels (using the "reserve capacity" method) when existing trip distribution patterns are held constant (although it could be reasonably argued that local traffic patterns — specifically, the eastbound left turning movement, will change as delay levels increase). In addition to expected changes in traffic patterns, planning for the four-laning of Redlands Parkway should incorporate geometric design improvements (such as a median acceleration lane) to help facilitate the eastbound left-turn movement.

The signalized intersection of Redlands Parkway/S.H. 340 (Broadway) currently operates at LOS "B" during the weekday a.m. and p.m. peak hours. There is no change in the level-of-service when site-generated traffic is added to existing volumes.

Although a level-of-service analysis was not conducted for the signalized Redlands Parkway/I-70 Business Loop intersection, we would anticipate a conclusion consistent with the analysis of the previous two intersections — no change in level-of-service.

2.5 Traffic Signal Warrant Analysis

The need for a traffic signal at the Redlands Parkway/Vista Del Rio Drive intersection was reviewed against the traffic signal warrants described in the Manual on Uniform Traffic Control Devices (MUTCD) (see Appendix C). With peak hour approach volumes of less than 60 vehicles on Vista Del Rio Drive, intersection volumes do not meet the volume-based traffic signal warrants described in the MUTCD. Further, since the land uses served by Vista Del Rio Drive will have been substantially built-out with the Vista Del Rio Subdivision, we can anticipate that, barring unforeseen development, traffic volumes on Vista Del Rio Drive will never reach sufficient magnitude to meet the traffic volume-based warrants of the MUTCD.

Mesa County has not recorded any accidents at this intersection in the last five years; therefore, Warrant 6 "Accident Experience" is not presently met.

The MUTCD does consider several other conditions, besides traffic volume and accident history, under which a traffic signal installation may be warranted. As an example, locations with significant pedestrian traffic may warrant a signal, even if traffic volumes on the area street system are not high enough to meet the traffic volume-based warrants of the MUTCD. A pedestrian signal has been installed on Redlands Parkway one-third of a mile south of the Redlands Parkway/Vista Del Rio Drive intersection. There is not sufficient data within this present traffic study to judge whether pedestrian volumes presently, or will in the future, warrant

a signal at the Redlands Parkway/Vista Del Rio Drive intersection, or whether pedestrian traffic in the Redlands Parkway corridor would be best served by either relocating the present pedestrian signal or providing some alternative means for pedestrian crossings of Redlands Parkway.

2.6 Intersection Sight Distance Analysis

Using available topographic mapping of the Vista Del Rio Subdivision site and Mesa County design plans for Redlands Parkway, sight distance at the Redlands Parkway/Vista Del Rio Drive intersection was estimated in accordance with Article 4.7.5 of the Mesa County Standard Specifications for Road and Bridge Construction. Sight distance requirements were estimated for a 50 mph running speed (500 feet), adjusted by an additional 47 feet in consideration of the grade on Redlands Parkway.

As shown on the graphic in Appendix D, roadside grades obstruct the sight line by approximately 0.5 foot. Proposed construction of the Vista Del Rio Subdivision will not create any additional impediment to intersection sight distance.

Consistent with the requirements of the Mesa County standards, the sight distance analysis was based on the "driver's eye" located 15 feet from the edge of pavement on Redlands Parkway. The intersection of Redlands Parkway/Vista Del Rio Drive, however, has right turn accel/decel lanes, and drivers exiting Vista Del Rio Drive can safely move further into the intersection to improve their line of sight prior to initiating a turn. The existing intersection sight distance was apparently deemed sufficient for Mesa County to increase the posted speed on Redlands Parkway to 50 mph. As noted previously, Mesa County has not reported any accidents at the Redlands Parkway/Vista Del Rio Drive intersection in the past five years.

The future four-laning of Redlands Parkway should improve the available sight distance at the Redlands Parkway/Vista Del Rio Drive intersection since the angle of the sight line will be increased.

2.7 Local Street Cross-Section Issues

Mesa County has adopted a number of standard street sections corresponding to the functional roadway classification system adopted by the County.

Vista Del Rio Drive, an existing street, was constructed with a 28 foot roadway width. On-street parking is not allowed. This cross-section corresponds to the "Urban Residential Subcollector" classification of the Mesa County standards. This street section typically serves traffic demand in the range of 250 to 1000 vehicles/day. Within the Mesa County roadway system, the next highest residential roadway cross-section which is designed for "no-parking" operation is the "Collector Street" which allows for a 44 roadway width which accommodates a center left turn lane.

With full development of the Vista Del Rio Subdivision, traffic volumes on Vista Del Rio Drive are forecast at approximately 1150 vehicles/day. While this traffic level slightly exceeds the desirable range of the "Urban Residential Subcollector", the limited left turn demand to the cul-de-sac streets intersecting Vista Del Rio Drive would not warrant the reconstruction of Vista Del Rio Drive to the "Collector Street" standard.

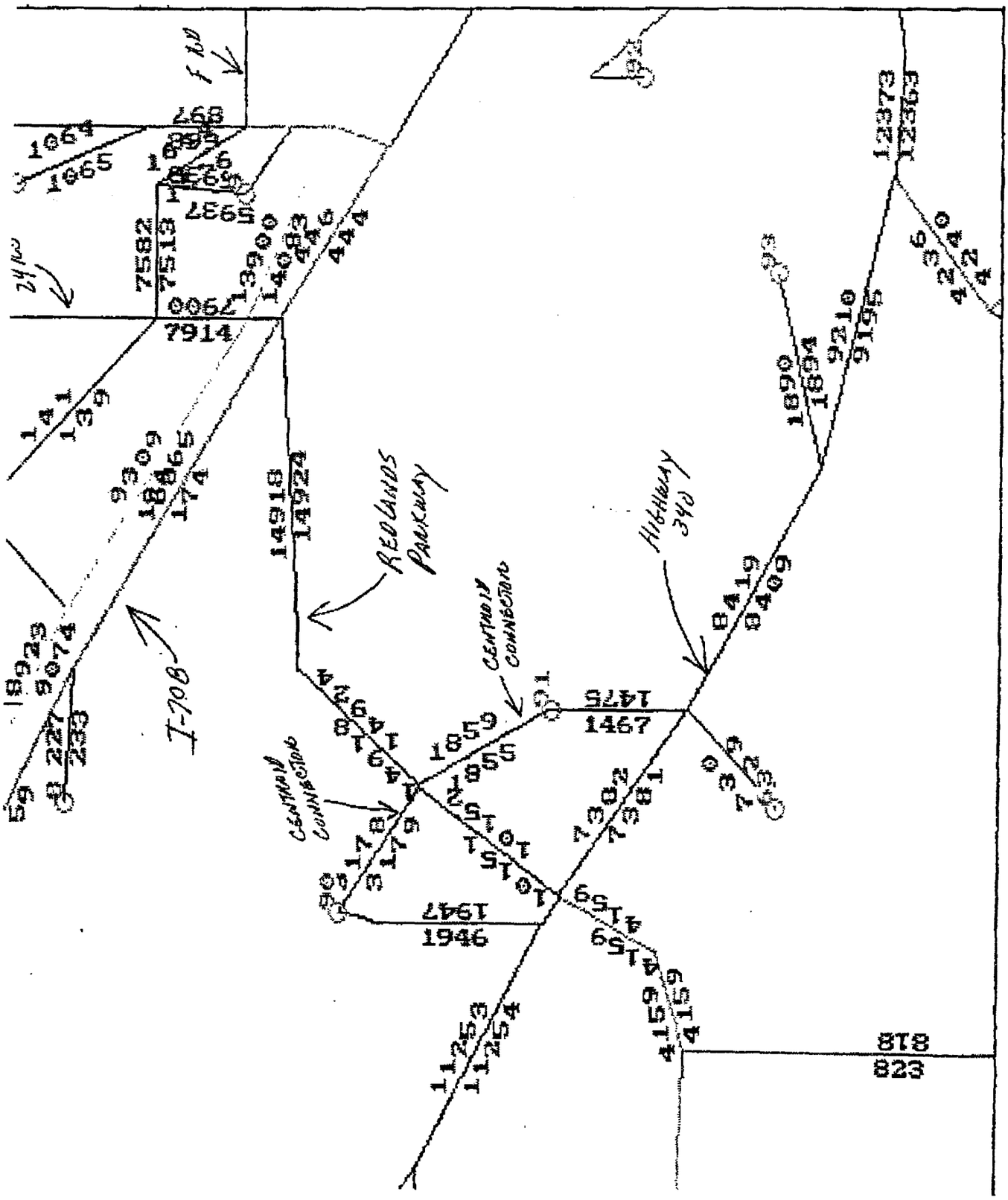
3.0 CONCLUSIONS

It is evident from this analysis that the traffic generated by the Vista Del Rio Subdivision will have a very minor effect on the area street network. Specifically:

- Area intersection levels-of-service are not significantly affected by traffic from the proposed development.
- Traffic volume-based signal warrants are not met for the Redlands Parkway/Vista Del Rio Drive intersection.
- Sight distance at the Redlands Parkway/Vista Del Rio Drive intersection sight distance, while slightly below County standards, is not further impeded by the proposed development.
- The existing Vista Del Rio Drive roadway cross-section is adequate and appropriate for existing and proposed traffic volumes.

APPENDIX A

YEAR 2015 TRAFFIC FORECASTS


I-70B
REDLANDS PARKWAY
HIGHWAY 340
CENTENNIAL CONNECTION
CENTENNIAL CONNECTION
24 RD
F RD

APPENDIX B

INTERSECTION LEVEL-OF-SERVICE ANALYSIS

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 50

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr

NAME OF THE NORTH/SOUTH STREET..... Redlands Pkwy

NAME OF THE ANALYST..... MC Schaefer

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-25-1994

TIME PERIOD ANALYZED..... AM Peak

OTHER INFORMATION.... Existing

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	27	--	3	0
THRU	0	--	584	187
RIGHT	2	--	0	15

NUMBER OF LANES

	EB	WB	NB	SB
LANES	2	--	1	1

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	Y
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	6.30	5.30	0.00	5.30
MAJOR LEFTS	NB	5.40	5.40	0.00	5.40
MINOR LEFTS	EB	7.70	7.70	0.00	7.70

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; AM Peak
OTHER INFORMATION.... Existing

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
EB LEFT	33	198	198	198	165	D
RIGHT	2	912	912	912	910	A
MAJOR STREET						
NB LEFT	4	885	885	885	881	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; AM Peak
OTHER INFORMATION.... Existing

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 50

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr

NAME OF THE NORTH/SOUTH STREET..... Redlands Pkwy

NAME OF THE ANALYST..... MC Schaefer

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-25-1994

TIME PERIOD ANALYZED..... AM Peak

OTHER INFORMATION.... Existing + Site

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	52	--	5	0
THRU	0	--	584	187
RIGHT	4	--	0	23

NUMBER OF LANES

	EB	WB	NB	SB
LANES	2	--	1	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	Y
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	6.30	5.30	0.00	5.30
MAJOR LEFTS	NB	5.40	5.40	0.00	5.40
MINOR LEFTS	EB	7.70	7.70	0.00	7.70

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; AM Peak
OTHER INFORMATION.... Existing + Site

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
MINOR STREET						
EB LEFT	64	196	195	195	131	D
RIGHT	5	908	908	908	903	A
MAJOR STREET						
NB LEFT	6	876	876	876	870	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; AM Peak
OTHER INFORMATION.... Existing + Site

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 50

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr

NAME OF THE NORTH/SOUTH STREET..... Redlands Pkwy

NAME OF THE ANALYST..... MC Schaefer

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-25-1994

TIME PERIOD ANALYZED..... AM Peak

OTHER INFORMATION.... 2015 + Site

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	52	--	5	0
THRU	0	--	1709	547
RIGHT	4	--	0	23

NUMBER OF LANES

	EB	WB	NB	SB
LANES	2	--	2	2

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	Y
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	6.30	5.30	0.00	5.30
MAJOR LEFTS	NB	5.90	5.90	0.00	5.90
MINOR LEFTS	EB	8.20	8.20	0.00	8.20

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; AM Peak
OTHER INFORMATION.... 2015 + Site

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
MINOR STREET						
EB LEFT	64	41	41	41	-23	F
RIGHT	5	815	815	815	810	A
MAJOR STREET						
NB LEFT	6	475	475	475	469	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; AM Peak
OTHER INFORMATION.... 2015 + Site

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 50

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr

NAME OF THE NORTH/SOUTH STREET..... Redlands Pkwy

NAME OF THE ANALYST..... MC Schaefer

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-25-1994

TIME PERIOD ANALYZED..... PM Peak

OTHER INFORMATION.... Existing

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	11	--	10	0
THRU	0	--	360	708
RIGHT	5	--	0	34

NUMBER OF LANES

	EB	WB	NB	SB
LANES	2	--	1	1

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	Y
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	6.30	5.30	0.00	5.30
MAJOR LEFTS	NB	5.40	5.40	0.00	5.40
MINOR LEFTS	EB	7.70	7.70	0.00	7.70

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; PM Peak
OTHER INFORMATION.... Existing

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c (pcph) p	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v R SH	LOS
MINOR STREET						
EB LEFT	13	102	101	101	87	E
RIGHT	6	452	452	452	446	A
MAJOR STREET						
NB LEFT	12	428	428	428	416	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; PM Peak
OTHER INFORMATION.... Existing

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 50

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr

NAME OF THE NORTH/SOUTH STREET..... Redlands Pkwy

NAME OF THE ANALYST..... MC Schaefer

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-25-1994

TIME PERIOD ANALYZED..... PM Peak

OTHER INFORMATION.... Existing + Site

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	23	--	18	0
THRU	0	--	360	708
RIGHT	11	--	0	60

NUMBER OF LANES

	EB	WB	NB	SB
LANES	2	--	1	1

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	Y
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	6.30	5.30	0.00	5.30
MAJOR LEFTS	NB	5.40	5.40	0.00	5.40
MINOR LEFTS	EB	7.70	7.70	0.00	7.70

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; PM Peak
OTHER INFORMATION.... Existing + Site

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 50

PEAK HOUR FACTOR..... .9

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr

NAME OF THE NORTH/SOUTH STREET..... Redlands Pkwy

NAME OF THE ANALYST..... MC Schaefer

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-25-1994

TIME PERIOD ANALYZED..... PM Peak

OTHER INFORMATION.... 2015 + Site

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: NORTH/SOUTH

CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	23	--	18	0
THRU	0	--	1053	2071
RIGHT	11	--	0	60

NUMBER OF LANES

	EB	WB	NB	SB
LANES	2	--	2	2

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	Y
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	EB	6.30	5.30	0.00	5.30
MAJOR LEFTS	NB	5.90	5.90	0.00	5.90
MINOR LEFTS	EB	8.20	8.20	0.00	8.20

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; PM Peak
OTHER INFORMATION.... 2015 + Site

MOVEMENT	FLOW-RATE v(pcph)	POTEN-TIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
EB LEFT	28	41	36	36	8	E
RIGHT	13	283	283	283	270	C
MAJOR STREET						
NB LEFT	22	121	121	121	99	E

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Vista Del Rio Dr
NAME OF THE NORTH/SOUTH STREET.... Redlands Pkwy
DATE AND TIME OF THE ANALYSIS..... 07-25-1994 ; PM Peak
OTHER INFORMATION.... 2015 + Site

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SH 340/REDLANDS PKWY
AREA TYPE.....OTHER
ANALYST.....MC SCHAEFER
DATE.....07-25-1994
TIME.....AM PEAK
COMMENT.....EXISTING

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	259	11	7	23	: L	12.0	L	12.0	L	12.0	L	12.0	
TH	221	129	119	62	: T	12.0	T	12.0	T	12.0	T	12.0	
RT	0	0	0	0	:	12.0		12.0		12.0		12.0	
RR	0	0	0	0	:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
WB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
NB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
SB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
WB	LT	X				SB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
GREEN		50.0	0.0	0.0	0.0	GREEN		32.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.370	0.567	8.3	B	7.9	B
	T	0.230	0.567	7.4	B		
WB	L	0.018	0.567	6.5	B	6.9	B
	T	0.134	0.567	7.0	B		
NB	L	0.014	0.367	13.8	B	14.7	B
	T	0.192	0.367	14.8	B		
SB	L	0.051	0.367	14.0	B	14.2	B
	T	0.100	0.367	14.2	B		

INTERSECTION: Delay = 9.4 (sec/veh) V/C = 0.300 LOS = B

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SH 340/REDLANDS PKWY
AREA TYPE.....OTHER
ANALYST.....MC SCHAEFER
DATE.....07-25-1994
TIME.....AM PEAK
COMMENT.....EXISTING + SITE

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	261	11	7	23	: L	12.0	L	12.0	L	12.0	L	12.0	
TH	221	129	119	63	: T	12.0	T	12.0	T	12.0	T	12.0	
RT	0	0	0	0	:	12.0		12.0		12.0		12.0	
RR	0	0	0	0	:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
WB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
NB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
SB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
WB	LT	X				SB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
GREEN		50.0	0.0	0.0	0.0	GREEN		32.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.373	0.567	8.3	B	7.9	B
	T	0.230	0.567	7.4	B		
WB	L	0.018	0.567	6.5	B	6.9	B
	T	0.134	0.567	7.0	B		
NB	L	0.014	0.367	13.8	B	14.7	B
	T	0.192	0.367	14.8	B		
SB	L	0.051	0.367	14.0	B	14.2	B
	T	0.101	0.367	14.3	B		

INTERSECTION: Delay = 9.4 (sec/veh) V/C = 0.301 LOS = B

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SH 340/REDLANDS PKWY
AREA TYPE.....OTHER
ANALYST.....MC SCHAEFER
DATE.....07-25-1994
TIME.....PM PEAK
COMMENT.....EXISTING

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	163	60	12	73	: L	12.0	L	12.0	L	12.0	L	12.0	
TH	166	217	55	102	: T	12.0	T	12.0	T	12.0	T	12.0	
RT	0	0	0	0	:	12.0		12.0		12.0		12.0	
RR	0	0	0	0	:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
WB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
NB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
SB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3

SIGNAL SETTINGS CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
WB	LT	X				SB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
GREEN		41.0	0.0	0.0	0.0	GREEN		41.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.330	0.467	11.6	B	11.2	B
	T	0.210	0.467	10.8	B		
WB	L	0.111	0.467	10.3	B	11.0	B
	T	0.275	0.467	11.2	B		
NB	L	0.020	0.467	9.8	B	10.0	B
	T	0.070	0.467	10.1	B		
SB	L	0.114	0.467	10.3	B	10.3	B
	T	0.129	0.467	10.4	B		

INTERSECTION: Delay = 10.9 (sec/veh) V/C = 0.230 LOS = B

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SH 340/REDLANDS PKWY
AREA TYPE.....OTHER
ANALYST.....MC SCHAEFER
DATE.....07-25-1994
TIME.....PM PEAK
COMMENT.....EXISTING + SITE

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	168	60	12	73	: L	12.0	L	12.0	L	12.0	L	12.0	
TH	166	217	57	104	: T	12.0	T	12.0	T	12.0	T	12.0	
RT	0	0	0	0	:	12.0		12.0		12.0		12.0	
RR	0	0	0	0	:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
WB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
NB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3
SB	0.00	2.00	N	0	0	0.90	50	Y	19.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
WB	LT	X				SB	LT	X			
	TH	X					TH	X			
	RT						RT				
	PD						PD				
GREEN		41.0	0.0	0.0	0.0	GREEN		41.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.340	0.467	11.7	B	11.3	B
	T	0.210	0.467	10.8	B		
WB	L	0.111	0.467	10.3	B	11.0	B
	T	0.275	0.467	11.2	B		
NB	L	0.020	0.467	9.8	B	10.0	B
	T	0.072	0.467	10.1	B		
SB	L	0.115	0.467	10.3	B	10.3	B
	T	0.132	0.467	10.4	B		

INTERSECTION: Delay = 10.9 (sec/veh) V/C = 0.236 LOS = B

APPENDIX C

TRAFFIC SIGNAL WARRANT ANALYSIS

RG CONSULTING ENGINEERS, INC.
TRAFFIC SIGNAL VEHICLE VOLUME WARRANTS

PROJECT: VISTA DEL RIO SUBDIVISION CALC MCS DATE 7/25/94

PROJECT NUMBER: 149001 CHK _____ DATE _____

Major St: REDLANDS PKWY Critical Approach Speed 50 mph

Minor St: VISTA DEL RIO DR Critical Approach Speed _____ mph

Critical speed of major street traffic ≥ 40 mph ---------- ☒
OR
In built up area of isolated community of ≤ 10,000 pop. ---------- ☐

(RURAL (R)) ☐ URBAN (U)

TRAFFIC VOLUMES

Approach	✓ = major street	Volumes ADT	AM Peak	PM Peak	8th Hr Factor*	8th Hr Volume	4th Hr Volume**
Eastbound		$\frac{680+478}{2}$: 579	56	34	.0571	33	41
Westbound		579					
Northbound	✓	5000	589	378	.0543	272	340
Southbound	✓	5200	187	708	.0514	267	334

* Refer to attached table ** Assume 125% of 8th hour volume

WARRANT 1 - Minimum Vehicular Volume

100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)					
	U	R		U	R	
APPROACH LANES	1			2 or more		8th Hour Volume
Both Apprchs. Major Street	500 (400)	350 (280)		600 (480)	420 (336)	539
Highest Apprch. Minor Street*	150 (120)	105 (84)		200 (160)	140 (112)	33

* *NOTE: Heavier left turn movement from Major Street included when LT-phasing is proposed* ☐

WARRANT 2 - Interruption of Continuous Traffic

100% SATISFIED YES ☐ NO ☒
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)					
	U	R		U	R	
APPROACH LANES	1			2 or more		8th Hour Volume
Both Apprchs. Major Street	750 (600)	525 (420)		900 (720)	630 (504)	539
Highest Apprch. Minor Street*	75 (60)	53 (42)		100 (80)	70 (56)	33

* *NOTE: Heavier left turn movement from Major Street included when LT-phasing is proposed* ☐

(Continued)

RG CONSULTING ENGINEERS, INC.
TRAFFIC SIGNAL VEHICLE VOLUME WARRANTS (Continued)

WARRANT 8 - Combination of Warrants SATISFIED YES ☐ NO ☒

REQUIREMENT	WARRANT	✓	FULFILLED
TWO WARRANTS	1 - MINIMUM VEHICULAR VOLUME		
SATISFIED	2 - INTERRUPTION OF CONTINUOUS TRAFFIC		
80%			YES ☐ NO ☒

WARRANT 9 - Four Hour Volume SATISFIED* YES ☐ NO ☒

Approach Lanes	One	2 or more	4th Hour Volume
Both Approaches , Major Street			674
Highest Approaches , Minor Street			41

* Refer to attached graph to determine if this warrant is satisfied.

YES ☐ NO ☐

WARRANT 11 - Peak Hour Volume SATISFIED* YES ☐ NO ☒

Approach Lanes	One	2 or more	AM Peak Hour Volume	PM
Both Approaches , Major Street			776	1086
Highest Approaches , Minor Street			56	34

* Refer to attached graph to determine if this warrant is satisfied.

SUMMARY

Warrant	Checked ?	Satisfied ?	Comments
1	Y	N	
2	Y	N	
8	Y	N	
9	Y	N	
11	Y	N	

SIGNAL WARRANTED? YES ☐ NO ☒

8TH HOUR FACTORS

% Peak Hour	Factor to Obtain 8th Hour
7	0.0614
8	0.0600
9	0.0586
10	0.0571
11	0.0557
12	0.0543
13	0.0529
14	0.0514
15	0.0500

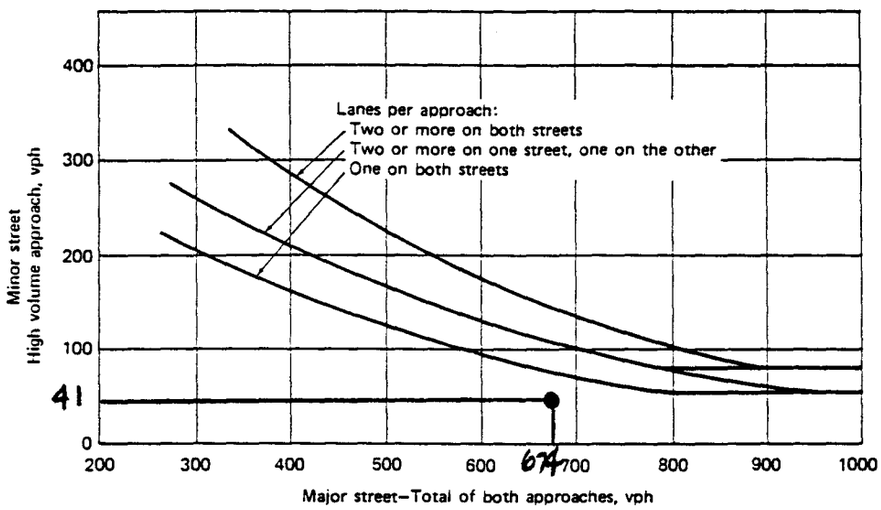
Source: Missouri Highway Department

DATE _____ PROJECT _____

JOB NO. _____ TASK _____

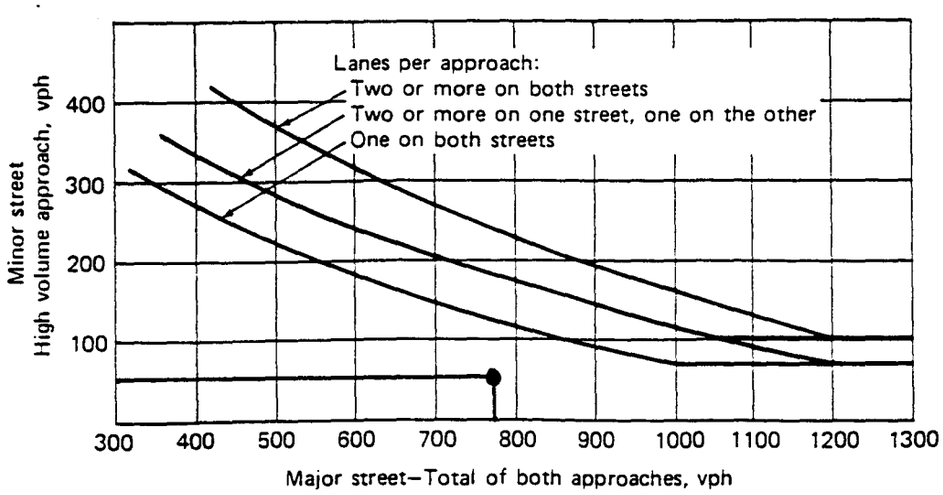
BY _____

CHK'D _____ SHEET _____



Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor street approach with one lane

Figure 2-6 Four-hour volume warrant—rural locations. (Source: National Committee on Uniform Traffic Control Devices)

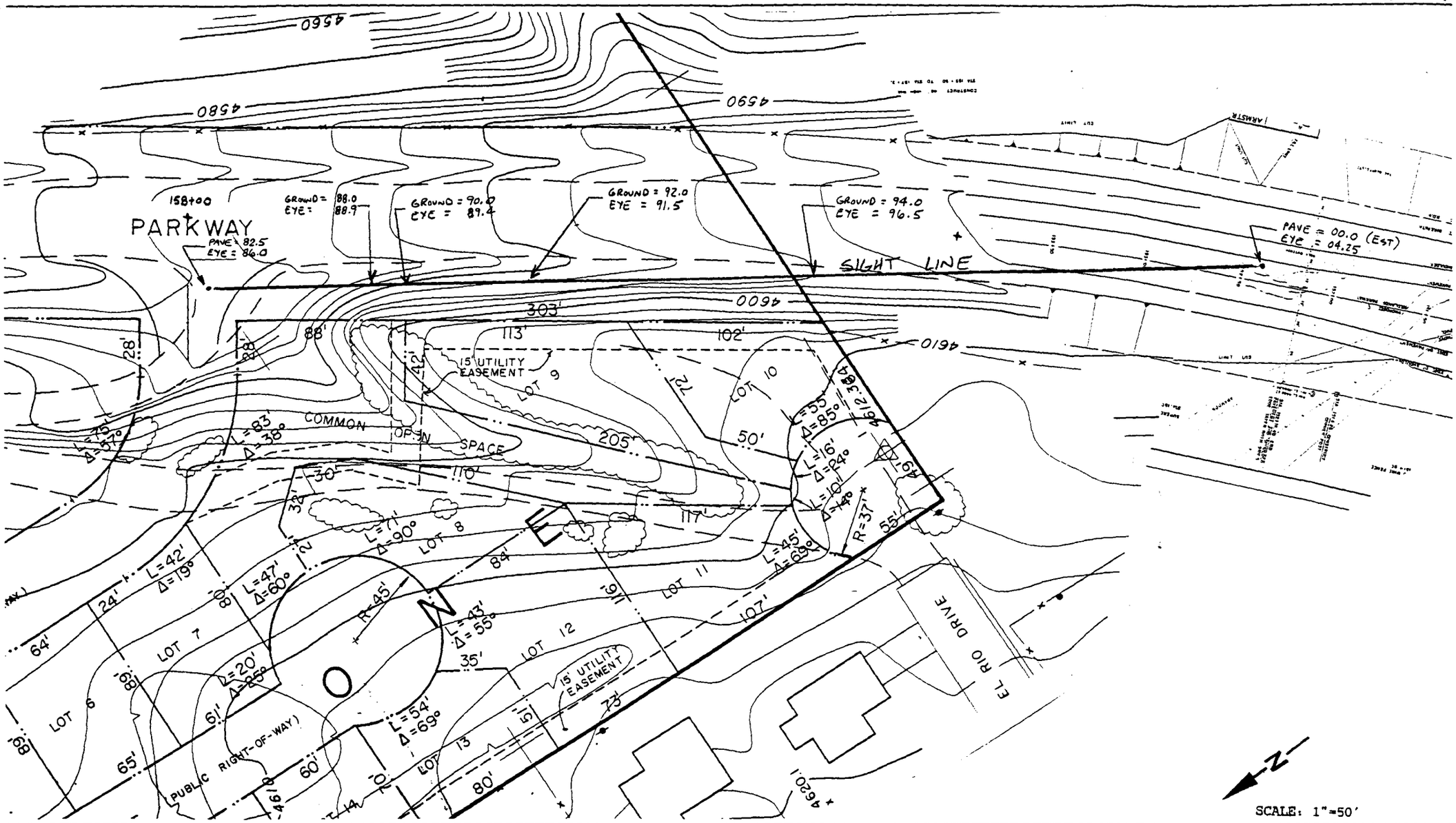


Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane

Figure 2-8 Peak hour volume warrant—rural conditions. (Source: National Committee on Uniform Traffic Control Devices)

APPENDIX D

INTERSECTION SIGHT DISTANCE ANALYSIS



VISTA DEL RIO SUBDIVISION
TRAFFIC STUDY

RG CONSULTING ENGINEERS, INC.

FIGURE D
INTERSECTION SIGHT DISTANCE

REVIEW COMMENTS

FILE #FPP-95-182 **TITLE HEADING:** Vista Del Rio Subdivision, Filing #3

LOCATION: Rio Linda Lane & Redlands Parkway

PETITIONER: Alpine C.M., Inc.

PETITIONER'S ADDRESS/TELEPHONE: 1111 South 12th Street
Grand Junction, CO 81501
242-2505

PETITIONER'S REPRESENTATIVE: Nichols Associate

STAFF REPRESENTATIVE: Michael Drollinger

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS ON OR BEFORE 5:00 P.M., OCTOBER 26, 1995.

U.S. WEST **10/4/95**
Max Ward **244-4721**

New or additional telephone facilities necessitated by this project may result in a "contract" and up-front monies required from developer, prior to ordering or placing of said facilities. For more information, please call 1-800-526-3557.

GRAND JUNCTION FIRE DEPARTMENT **10/10/95**
Hank Masterson **244-1414**

The Fire Department has no problems with this proposal.

CITY DEVELOPMENT ENGINEER **10/11/95**
Jody Kliska **244-1591**

DRAINAGE REPORT

1. Needs to include sizing of storm drain inlets and check flows in the street.

COMPOSITE PLAN

1. Storm sewer is shown outside of the easement.

GRADING AND STORMWATER MANAGEMENT PLAN

1. Need to provide contours.
2. Identify surface disturbance area - if no Colorado Dept. of Health permit has previously been acquired, one must be applied for. Section IX of SWMM contains the state regulations and phone numbers for contacts.
3. A Storm Drainage Plan and Profile is necessary - SSID IX-30. Please identify type and sizes of storm drain inlets, detail of erosion protection at pipe inlet from wetlands, outlet at outfall.

ROADWAY PLANS

1. The street name signs can be mounted above the stop signs on the same post.
2. Identify the type and size of storm drain inlets on the plan view.

PLAT

1. The dedication language needs to contain a dedication for each specific easement, right of way or open space parcel shown on the plat. A copy of the City's Guide to Plat Dedications is attached.

PUBLIC SERVICE COMPANY **10/11/95**
G. Lewis **244-2698**

Existing Public Service Company easement across property will be quit claimed to match easement as shown on plat with petitioner supplying information on existing easement per prior agreement.

CITY PROPERTY AGENT **10/11/95**
Steve Pace **244-1452**

1. Should reference monuments be set along the south edge of the Colorado River?
2. The monumentation for the outer boundary of Filing 3 should be set in concrete.
3. The City format for addressing individual easements in the dedication should be followed.
4. The P.O.B. tie should show a N.W. direction to match the description.
5. This filing is not within the City yet but will be in the near future, so we may need City signature blocks.
6. What about the area south and east of the Redlands Parkway - is it part of this Filing 3?

MESA COUNTY SCHOOL DISTRICT #51 **10/16/95**
Lou Grasso **242-8500**

SCHOOL - ENROLLMENT / CAPACITY - IMPACT
Broadway Elementary - 274 / 400 - 6
Redlands Middle School - 552 / 650 - 3
Fruita Monument High School - 1337 / 1100 - 4

REDLANDS WATER & POWER **10/13/95**
Gregg Strong **243-2173**

No impact to our facilities.

UTE WATER **10/16/95**
Gary R. Mathews **242-7491**

1. Water mains are installed 2' from curb and gutter, in the oil.
2. An 8" C-900 water line is sufficient for El Quevin Court unless the Fire Department requires a 10" line.
3. Water mains shall be c-900, class 150. Installation of pipe fittings, valves and services including testing and disinfection shall be in accordance with Ute Water standard specifications and drawings.
4. Developer is responsible for installing meter pits and yokes. Ute Water will furnish the meter pits and yokes.
5. Policies and fees in effect at the time of application will apply.

COMMUNITY DEVELOPMENT DEPARTMENT **10/12/95**
Michael Drollinger **244-1439**

See attached comments.

revised 10/26/95

CITY UTILITY ENGINEER **10/18/95**
Trent Prall **244-1590**

GENERAL

1. Final plans have not been stamped by a Registered Professional Engineer as required.

SEWER - CITY OF GRAND JUNCTION

1. Easement required for sewer line between MH4 and MH5 across lots 6, 7 & 24.
2. How are existing sewer to be abandoned?
3. Construction notes referring to City Standard Drawings and Specifications are missing.
4. Sewer service line to lot 2 appears to tap centerline rather than existing sewer line.
5. Long service line to Lot 20 should have a cleanout added.
6. Show on profile where water lines intersect sewer lines such as on sewer Line 3 between MH3A and MH14. Also show special construction if needed.
7. 0.2' drop is required across manholes rather than the proposed 0.1' drop.
8. Add existing profile as required in SSID manual IX-35.
9. Please ensure all items specified in SSID manual IX-35 are adhered to.
10. No "Exhibit I" was included in the packet for review.

WATER - UTE

1. Please provide bend information for waterline.

CITY PARKS & RECREATION DEPARTMENT **10/17/95**
Shawn Cooper **244-3869**

1. Maintain the additional right-of-way on west side of parkway as possible trail easement. Provide 15' pedestrian easement between lots 10 & 11 or 9 & 10 for public access to designated open-space. The issue of bike and pedestrian access in the area and from the subdivision needs to be discussed.
2. Areas to be owned and maintained by HOA in perpetuity need to be indicated on documents and plats.
3. Parks & Open Space Fees - 23 @ $225 = $5,175.

CITY POLICE DEPARTMENT **10/17/95**
Dave Stassen **244-3587**

This development causes no problems for the Police Department. The use of cul-de-sacs follows currently accepted crime prevention techniques by limiting unwanted access.

MESA COUNTY PLANNING DEPT. **10/20/95**
Matt Osborn **244-1724**

As a Mesa County requirement of approval for the ODP and Filing 1 of Vista Del Rio, the petitioner was to design and construct a bike path along the west side of Redlands Parkway from Rio Linda Lane to Greenbelt Drive. The petitioner was waived the Development Impact Fee for Filings 1 & 2. If the cost of the bike path exceeded the total D.I.F. for the entire project, the petitioner would be reimbursed. Approval of the second filing reiterated the need for the bike path. If the bike path is not constructed, the D.I.F. for filings 1 & 2 should be paid to the County.

TO DATE, COMMENTS HAVE NOT BEEN RECEIVED FROM:

City Attorney
Mesa County Surveyor
Persigo Wastewater Treatment Plant
TCI Cablevision

Vista Del Rio - Filing 3: Response to Final Plat/Plan Comments

Michael Drollinger

Amended Preliminary Plan

1. Please label Filing #4 to indicate the number of units proposed with this filing.

   To be evaluated at a future date. Please see comments in project narrative.

Final Plan Filing #3

General Note: Street names have been changed from El Quevin Ct. and El Quolony Ct. to Casa Rio Ct. and Vista Rio Ct. respectively.

1. Spelling error on cover sheet should be corrected to read Loma Rio "Subdivision", not "Subdivion".

   Spelling error corrected

2. Composite Plan does not clearly identify easement locations, it appears that some existing/proposed utilities are outside of the proposed easements. This office will perform a complete review once these deficiencies have been corrected.

   Existing Sanitary Sewer Easement Added
   Easements Annotated

3. Grading and Drainage Plan shows no grading information; please use the SSID manual checklist to ensure that complete information is provided for review. This office will perform a complete review once these deficiencies are adequately corrected.

   See comment Jody Kliska, Item 1

4. Grammatical error on Grading and Drainage Plan: detail on lower left corner should read "Straw Bale Barriers", not "Bales Barriers".

   Text revised to read "Straw Bale Barriers"

5. Please indicate on Roadway Plan and Profile whether handicapped ramps at corner of Rio Linda Lane and "El Quevin Court" are provided; are they existing?

   Access ramps exist - notation has been added to plan sheet

6. A signed and sealed copy of the Drainage Report must be provided to this office; the unsigned/unsealed copy on file is unacceptable.

   The certification sheet has been signed and sealed

7. The Building Setbacks sheet must be modified to include a table indicating the setbacks by lot (or group of lots if setbacks are the same).

   Table has been added to sheet.

8. The legend on the Building Setbacks table is confusing - the lines are difficult to distinguish on the drawing. What is a "Multipurpose Utility and Easement"?

   "Multipurpose Utility and Easement" has been changed to "Multi-purpose and Utility Easement."
   On all drawings we have and have looked at we have had no difficulty distinguishing setback or easement lines.

9. Larger setbacks from Redlands Parkway will be required for lots 1-6; we recommend a minimum of 30

feet from property line.

Per agreement between Mike Drollinger and Steve Colony (Oct. 20, 1995), rear setbacks for lots 1 to 5 abutting Redlands Parkway are increased from 20 to 25 feet. Rear setback for lot 6 remains at 25 feet.

10.

Please correct plat cover sheet to include City signature blocks, not County signature blocks. Also, all setback and area summary information must be transferred to Building Setbacks sheet which will be recorded with the plat. Dedication language for the open space and the conservation easement appears to be missing; please verify and correct accordingly.

1. City signature blocks have been added. County blocks have been removed.
2. Setback Table added to Setbacks Sheet.
3. Area Summary moved to Setbacks Sheet.

11.

A landscaping plan for the entrance feature, if proposed, must be prepared and submitted for review. Landscaping for the common open space must be guaranteed as part of the development improvements agreement for the project.

Landscape Plan sheet has been added to submittal package.

12.

The easement between Lots 13 & 15 should be labeled as a "drainage and utility easement; please verify that all other easements are labeled appropriately to reflect the types of utilities or use anticipated.

Annotation has been added.

13.

Please refer to SSID Manual regarding folding and securing of plans for resubmittal.

US West - Max Ward

1. New or additional telephone facilities necessitated by this project may result in a "contract" and up-front monies required from developer, prior to ordering or placing of said facilities. For more information, please call 1-800-526-3557

Application for facilities will be made

Grand Junction Fire Department - Hank Masterson

1. The Fire Department has no problems with this proposal.

City Development Engineer - Jody Kliska

Drainage Report

1. Needs to include sizing of storm drain inlets and check flows in the street.

A Storm Drainage Plan and Profile Sheet has been added to the construction plans.

Composite Plan

1. Storm sewer is shown outside of the easement.

Vista Del Rio - Filing 3: Response to Final Plat/Plan Comments

Storm sewer and easement have been modified

Grading and Stormwater Management Plan

1. Need to provide contours.

   Contours to be provided as per discussion with Jody Kliska 4:12 pm Oct. 20, 1995.

2. Identify surface disturbance area-if no Colorado Department of Health permit has previously been acquired, one must be applied for. Section IX of SWMM contains the state regulations and phone numbers for contacts.

   Surface disturbance area is shown and labeled

3. A Storm Drainage Plan and Profile is necessary - SSID IX-30. Please identify type and sizes of storm drain inlets, detail of erosion protection at pipe inlet from wetlands, outlet at outfall.

   A Storm Drainage Plan and Profile Sheet has been added to the construction plans.

Roadway Plans

1. The street name signs can be mounted above the stop signs on the same post.

   Plan sheet modified to include street name signs with stop signs.

2. Identify the type and size of storm drain inlets on the plan view.

   Plan sheet modified to identify inlets.

Plat

1. The dedication language needs to contain a dedication for each specific easement, right of way or open space parcel shown on the plat. A copy of the City's Guide to Plat Dedications is attached.

   See response to Michael Drollinger comment Item 10.

Public Service Company - G. Lewis

1. Existing Public Service Company easement across property will be quit claimed to match easement as shown on plat with petitioner supplying information on existing easement per prior agreement.

   The existing lines are on a revocable license. We will record a new easement.

City Property Agent - Steve Pace

1. Should reference monuments be set along the south edge of the Colorado River?

   Lot corner monuments and plat dimensions suffice to locate the meander line along the Colorado River. Also, it is impractical to set monuments on the steep bank.

2. The monumentation for the outer boundary of Filing 3 should be set in concrete.

   Filing 3 boundary monuments will be set in concrete as required by city and county. Once set, appropriate notations will be added to subdivision plat.

3. The City format for addressing individual easements in the dedication should be followed.

   City easement dedications have been incorporated.

4. The P.O.B. tie should show a N.W. direction to match the description.

Annotation has been changed

5. This filing is not within the City yet but will be in the near future, so we may need City signature blocks.

   See response to Michael Drollinger's comment item 10.

6. What about the area south and east of the Redlands Parkway - is it part of this Filing 3?

   Area south and east of Redlands Parkway is not part of Filing 3.

Mesa County School District #51 - Lou Grasso

School - Enrollment/capacity - Impact

Broadway Elementary - 274/400 - 6
Redlands Middle School - 552/650 - 3
Fruita Monument High School - 1337/1100 - 4

Ute Water District - Gary Matthews

1. Water mains are installed 2' from curb and gutter, in the oil.

   Water lines have been rerouted on plans. Sanitary sewer line encasements have been added appropriately.

2. A 8" C-900 water line is sufficient for El Quevin Court unless the fire Department requires a 10" inch line.

   10-in water main required by City Fire Department.

3. Water mains shall be C-900, Class 150. Installation of pipe fittings, valves and services including testing and disinfection shall be in accordance with Ute Water standard specifications and drawings.

   10-in water main required by City Fire Department.
   Notes added to plans to include Ute Water requirements and specifications.

4. .Developer is responsible for installing meter pits and yokes. Ute Water will furnish the meter pits and yokes.

   Notes added to plans to include Ute Water requirements and specifications.

5. Policies and fees in effect at the time of application will apply.

   Policies will be adhered to and fees will be paid.

City Utility Engineer - Trent Prall

General

1. Final plans have not been stamped by a Registered Professional Engineer as required.

   Plans submitted for approval and acceptance will be stamped by PE.

Sewer - City of Grand Junction

1. Easement required for sewer line between MH4 and MH5 across lots 6, 7 & 24.

   Existing sewer easement (Book 2125, Pages 792-794) has been added to Composite Plan, Water and Sewer Plans, and Subdivision Plat.

Vista Del Rio - Filing 3: Response to Final Plat/Plan Comments

2. How are existing sewer to be abandoned?

   Sewer lines not in way of construction will be left in place.

3. Construction notes referring to City Standard Drawings and Specifications are missing.

   Note added to Water and Sewer Plan sheets

4. Sewer service line to lot 2 appears to tap centerline rather than existing sewer line.

   Corrected.

5. Long service line to Lot 20 should have a cleanout added.

   Cleanout added.

6. Show on profile where water lines intersect sewer lines such as on sewer line 3 between MH3A and MH14. Also show special construction if needed.

7. 0.2' drop is required across manholes rather than the proposed 0.1' drop.

   Item discussed by M. Schumann and T. Prall 2:22pm Oct. 20, 1995. T. Prall said he'd allow 0.1 - foot drop.

8. Add existing profile as required in SSID manual IX-35.

   Exiisting ground profile added

9. Please ensure all items specified in SSID manual IX-35 are adhered to.

10.

   No "Exhibit I" was included in the packet for review.

   City Details for Water and Sewer are on sheet 9 of 11 "Details - Water and Sewer".

Water - Ute

1. Please provide bend information for waterline.

City Parks and Recreation Department - Shawn Cooper

1. Maintain the additional right-of-way on west side of parkway as possible trail easement Provide 15' pedestrian easement between lots 10 & 11 or 9 & 10 for public access to designated open-space. The issue of bike and pedestrian access in the area and from the subdivision needs to be discussed.

   After walking the site with City of Grand Junction Engineering, Community Development, and Parks and Recreation staff, it was decided trail and pedestrian easements were impractical due to topography, etc.

2. Areas to be owned and maintained by HOA in perpetuity need to be indicated on documents and plats.

   Added to documents.

3. Parks & Open Space fees - 23 @ $225 = $5,175.

   Fees will be paid.

Vista Del Rio - Filing 3: Response to Final Plat/Plan Comments

Mesa County Planning Dept. - Matt Osborn

1. As a Mesa County requirement of approval for Filing 1 of Vista Del Rio, the petitioner was to design and construct a bike path along the west side of Redlands Parkway from Rio Linda Lane to Greenbelt Drive. The petitioner was waived the Development Impact Fee for Fillings 1 & 2. If the cost of the bike path exceeded the total D.I.F. for the entire project, the petitioner would be reimbursed, Approval of the second filing reiterated the need for the bike path. If the bike path is not constructed, the D.I.f. for filings 1 & 2 should be paid to the County..

   Refeer to the following excert from the Project Narrative which was prepaired by the petitioner:

   BICYCLE PATH

   At the County Commissioner hearing for Filing One approval, the subject of applying our Development Impact Fees (DIF) towards the construction of a bicycle path was discussed. The proposed path was to parallel the west side of the Redlands Parkway from Rio Linda Lane south to Greenbelt Drive The purpose of the path was for pedestrians and cyclists to be able to travel south to a stop light and cross the Parkway to reach the main bike path on the east side of the Parkway. Neighbors to the west of Vista Del Rio considered the Parkway too hard and dangerous to cross on foot or bicycle without a stop light. (The traffic study w commissioned said a stop light was not warranted.)

   At the end of the discussion the Commissioners requested us to start cost estimates. At this time, everyone thought a bike path would be constructed.

   At the County Commissioners hearing for the Filling Two approval, we presented the cost of the bike path, as well as some design constraints and safety concerns it posed. Discussions at the meeting then centered on reasons not build the path, as the money would be more effective if spent on other improvements. The bike path was almost nixed, when Commissioner Spehar noted, "We promised a bike path to the neighbors in an open meeting last month, and it would not be fair to those people to change what they are expecting, even though it doesn't make as much sense anymore".

   At the end of the meeting we were wondering what we were supposed to do about the bike path. We listened to the tape transcripts of both meetings and still we were unclear as to the direction we should take. Meanwhile, County staff were telling us "Don't forget the bike path". When we asked them what we should provide, we were not given clear direction or designs.

   During the course of the project, we were required to provide additional improvements. (See section above - Required Improvements) We felt our expenditure on these items more than satisfied our DIF requirement, but County staff still make occasional references, to the bike path.

• Send set to State

MTP COPY

• Amended Prelim
• Final

Vista Del Rio - Filing 3
Response to Comments

prepared October 26, 1995

Adel Mekk comments:

- stationing on sheet 4 & 5 is missing from plan view

NICHOLS ASSOCIATES, INC.
CIVIL ENGINEERING & SURVEYING

October 26, 1995

Development Staff
City of Grand Junction, Colorado

Ladies and Gentlemen:

The Review Comments for the Final Plat/Plan - Vista Del Rio, Filing 3 have been received and the Response to Comments are enclosed.

Prepared by:
Maurice L. Schumann
State of Colorado, Number 15698
Registered Professional Engineer

Eric C. Marquez
State of Colorado, Number 19097
Engineer in Training

P.O. BOX 60010
751 HORIZON CT
SUITE 102
GRAND JUNCTION
COLORADO 81506
TELEPHONE
970-245-7101
FACSIMILE
970-245-3251

Michael Drollinger

Amended Preliminary Plan

1. Please label Filing #4 to indicate the number of units proposed with this filing. Clarify

NO To be evaluated at a future date. Please see comments in project narrative.

Final Plan Filing #3

General Note: Street names have been changed from El Quevin Ct. and El Quolony Ct. to Casa Rio Ct. and Vista Rio Ct. respectively.

1. Spelling error on cover sheet should be corrected to read Loma Rio "Subdivision", not "Subdivion".

OK Spelling error corrected

2. Composite Plan does not clearly identify easement locations, it appears that some existing/proposed utilities are outside of the proposed easements. This office will perform a complete review once these deficiencies have been corrected. OK

STILL NOT CLEAR

Existing Sanitary Sewer Easement Added
Easements Annotated

3. Grading and Drainage Plan shows no grading information; please use the SSID manual checklist to ensure that complete information is provided for review. This office will perform a complete review once these deficiencies are adequately corrected.

?

See comment Jody Kliska, Item 1

4. Grammatical error on Grading and Drainage Plan: detail on lower left corner should read "Straw Bale Barriers", not "Bales Barriers".

OK Text revised to read "Straw Bale Barriers"

5. Please indicate on Roadway Plan and Profile whether handicapped ramps at corner of Rio Linda Lane and "El Quevin Court" are provided; are they existing?

OK Access ramps exist - notation has been added to plan sheet

6. A signed and sealed copy of the Drainage Report must be provided to this office; the unsigned/unsealed copy on file is unacceptable.

OK The certification sheet has been signed and sealed

7. The Building Setbacks sheet must be modified to include a table indicating the setbacks by lot (or group of lots if setbacks are the same).

OK Table has been added to sheet.

8. The legend on the Building Setbacks table is confusing - the lines are difficult to distinguish on the drawing. What is a "Multipurpose Utility and Easement"?

"Multipurpose Utility and Easement" has been changed to "Multi-purpose and Utility Easement."
NO On all drawings we have and have looked at we have had no difficulty distinguishing setback or easement lines.

9. Larger setbacks from Redlands Parkway will be required for lots 1-6; we recommend a minimum of 30

feet from property line.

Michael

OK Per agreement between ~~Mike~~ Drollinger and Steve Colony (Oct. 20, 1995), rear setbacks for lots 1 to 5 abutting Redlands Parkway are increased from 20 to 25 feet. Rear setback for lot 6 remains at 25 feet.

10.

Please correct plat cover sheet to include City signature blocks, not County signature blocks. Also, all setback and area summary information must be transferred to Building Setbacks sheet which will be recorded with the plat. Dedication language for the open space and the conservation easement appears to be missing; please verify and correct accordingly. NOT ADDRESSED

1. City signature blocks have been added. County blocks have been removed.
2. Setback Table added to Setbacks Sheet.
3. Area Summary moved to Setbacks Sheet.

11.

A landscaping plan for the entrance feature, if proposed, must be prepared and submitted for review. Landscaping for the common open space must be guaranteed as part of the development improvements agreement for the project.

Landscape Plan sheet has been added to submittal package.

12.

dedication language not complete The easement between Lots 13 & 15 should be labeled as a "drainage and utility easement; please verify that all other easements are labeled appropriately to reflect the types of utilities or use anticipated.

Annotation has been added.

13.

Please refer to SSID Manual regarding folding and securing of plans for resubmittal.

US West - Max Ward

1. New or additional telephone facilities necessitated by this project may result in a "contract" and up-front monies required from developer, prior to ordering or placing of said facilities. For more information, please call 1-800-526-3557

Application for facilities will be made.

Grand Junction Fire Department - Hank Masterson

1. The Fire Department has no problems with this proposal.

City Development Engineer - Jody Kliska

Drainage Report

OK 1. Needs to include sizing of storm drain inlets and check flows in the street.

A Storm Drainage Plan and Profile Sheet has been added to the construction plans.

Composite Plan

OK 1. Storm sewer is shown outside of the easement.

Storm sewer and easement have been modified.

Grading and Stormwater Management Plan

1. Need to provide contours.

NO

Contours to be provided as per discussion with Jody Kliska 4:12 pm Oct. 20, 1995.

2. Identify surface disturbance area-if no Colorado Department of Health permit has previously been acquired, one must be applied for. Section IX of SWMM contains the state regulations and phone numbers for contacts.

. will send set to State

Surface disturbance area is shown and labeled.

3. A Storm Drainage Plan and Profile is necessary - SSID IX-30. Please identify type and sizes of storm drain inlets, detail of erosion protection at pipe inlet from wetlands, outlet at outfall.

A Storm Drainage Plan and Profile Sheet has been added to the construction plans.

How will it be if below 30%

Roadway Plans

except?

1. The street name signs can be mounted above the stop signs on the same post.

Plan sheet modified to include street name signs with stop signs.

2. Identify the type and size of storm drain inlets on the plan view.

How will pipe connection betw. inlet & MH 1 be designed?

Plan sheet modified to identify inlets.

Plat

NOT DONE

1. The dedication language needs to contain a dedication for each specific easement, right of way or open space parcel shown on the plat. A copy of the City's Guide to Plat Dedications is attached.

See response to Michael Drollinger comment Item 10.

Public Service Company - G. Lewis

1. Existing Public Service Company easement across property will be quit claimed to match easement as shown on plat with petitioner supplying information on existing easement per prior agreement.

The existing lines are on a revocable license. We will record a new easement.

City Property Agent - Steve Pace

forward to Steve

1. Should reference monuments be set along the south edge of the Colorado River?

Lot corner monuments and plat dimensions suffice to locate the meander line along the Colorado River. Also, it is impractical to set monuments on the steep bank.

2. The monumentation for the outer boundary of Filing 3 should be set in concrete.

Filing 3 boundary monuments will be set in concrete as required by city and county. Once set, appropriate notations will be added to subdivision plat.

3. The City format for addressing individual easements in the dedication should be followed.

City easement dedications have been incorporated.

4. The P.O.B. tie should show a N.W. direction to match the description.

Annotation has been changed

5. This filing is not within the City yet but will be in the near future, so we may need City signature blocks.

   See response to Michael Drollinger's comment Item 10.

6. What about the area south and east of the Redlands Parkway - is it part of this Filing 3?

   Area south and east of Redlands Parkway is not part of Filing 3.

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School - Enrollment/capacity - Impact

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6. Show on profile where water lines intersect sewer lines such as on sewer line 3 between MH3A and MH14. Also show special construction if needed.

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7. 0.2' drop is required across manholes rather than the proposed 0.1' drop.

   confirm w/ Trent Item discussed by M. Schumann and T. Prall 2:22pm Oct. 20, 1995. T. Prall said he'd allow 0.1 - foot drop.

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   Exiisting ground profile added

9. Please ensure all items specified in SSID manual IX-35 are adhered to.

   confirm w/ Trent No response

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1. Please provide bend information for waterline.

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   Added to documents.

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   During the course of the project, we were required to provide additional improvements. (See section above - Required Improvements) We felt our expenditure on these items more than satisfied our DIF requirement, but County staff still make occasional references, to the bike path.

STAFF REVIEW

FILE: #FPP- 95-182
DATE: October 12, 1995
STAFF: Michael Drollinger
REQUEST: Amended Preliminary Plan and Final Plan & Plat Filing #3 - Vista Del Rio
LOCATION: Rio Linda Lane & Redlands Parkway

STAFF COMMENTS:

Amended Preliminary Plan

1. Please label Filing #4 to indicate the number of units proposed with this filing.

Final Plan Filing #3

1. Spelling error on cover sheet should be corrected to read Loma Rio "Subdivision", not "Subdivion".

2. Composite Plan does not clearly identify easement locations, it appears that some existing/proposed utilities are outside of the proposed easements. This office will perform a complete review once these deficiencies have been corrected.

3. Grading and Drainage Plan shows no grading information; please use the SSID manual checklist to ensure that complete information is provided for review. This office will perform a complete review once these deficiencies are adequately corrected.

4. Grammatical error on Grading and Drainage Plan: detail on lower left corner should read "Straw Bale Barriers", not "Bales Barriers".

5. Please indicate on Roadway Plan and Profile whether handicapped ramps at corner of Rio Linda Lane and "El Quevin Court" are provided; are they existing?

6. A signed and sealed copy of the Drainage Report must be provided to this office; the unsigned/unsealed copy on file is unacceptable.

7. The Building Setbacks sheet must be modified to include a table indicating the setbacks by lot (or group of lots if setbacks are the same).

8. The legend on the Building Setbacks table is confusing - the lines are difficult to distinguish on the drawing. What is a "Multipurpose Utility and Easement"?

9. Larger setbacks from Redlands Parkway will be required for Lots 1-6; we recommend a

minimum of 30 feet from property line.

10. Please correct plat cover sheet to include City signature blocks, not County signature blocks. Also, all setback and area summary information must be transferred to Building Setbacks sheet which will be recorded with the plat. Dedication language for the open space and the conservation easement appears to be missing; please verify and correct accordingly.

11. A landscaping plan for the entrance feature, if proposed, must be prepared and submitted for review. Landscaping for the common open space must be guaranteed as part of the development improvements agreement for the project.

12. The easement between Lots 13 & 15 should be labeled as a "drainage and utility easement; please verify that all other easements are labeled appropriately to reflect the types of utilities or use anticipated.

13. Please refer to SSID Manual regarding folding and securing of plans for resubmittal.

You are urged to contact the Community Development Department should you have any questions or if you require further clarification of any of the above items. Resolution of the above comments/issues and those of all other review agencies is required by the response to comments deadline. Submittal of incomplete/incorrect information may require that the application be pulled from the Planning Commission hearing.

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STAFF REVIEW

FILE: #FPP-95-182

DATE: October 30, 1995

STAFF: Michael T. Drollinger

REQUEST: Final Major Subdivision Plan/Plat Filing #3
VISTA DEL RIO SUBDIVISION

LOCATION: West of Redlands Parkway/N of Rio Linda Lane (Redlands)

APPLICANT: B & P Development Inc.
702 Golfmore Drive
Grand Junction CO 81506

EXECUTIVE SUMMARY:

A request for amended preliminary plan approval of Vista del Rio Subdivision and final plat/plan approval for Filing #3 of Vista del Rio Subdivision located west of Redlands Parkway and south of the Colorado River. The subdivision is presently being annexed as part of the Loma Rio Annexation. Filing #3 consists of 23 new building lots and the platting of a lot which contains an existing residence. All major technical issues regarding the development have been resolved and staff recommends approval of this application.

EXISTING LAND USE: Vacant

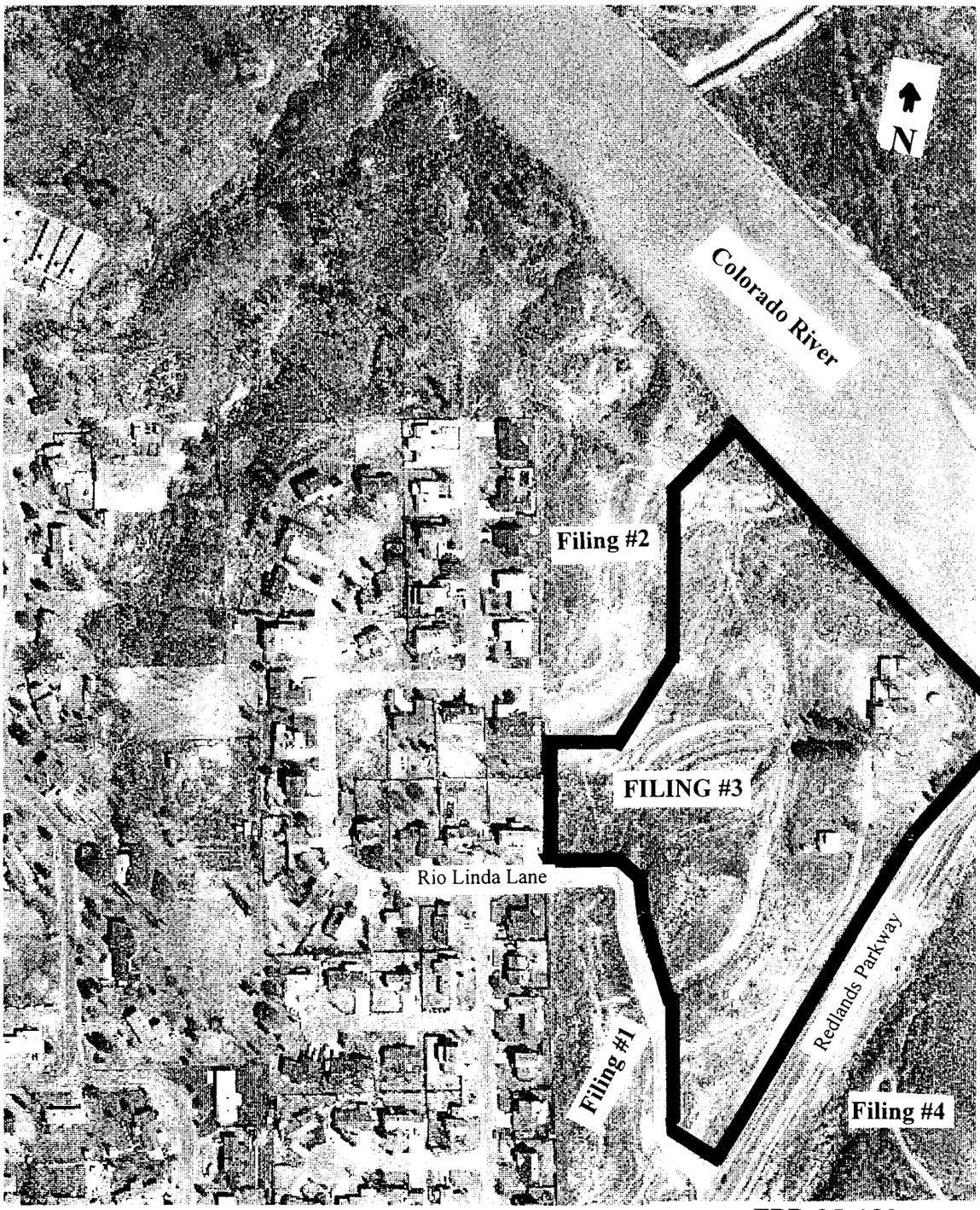
PROPOSED LAND USE: Single Family Residential

SURROUNDING LAND USE:

NORTH:	Colorado River
SOUTH:	Single Family Residential
EAST:	Single Family Residential
WEST:	Single Family Residential

EXISTING ZONING: PUD (1.86 units per acre)

PROPOSED ZONING: PR-1.86 (Proposed City Zoning)



FPP-95-182
Vista del Rio
Amended Preliminary Plan &
Final Plan/Plat Filing #3
AERIAL MAP

SURROUNDING ZONING:

NORTH:	AFT & R-2 (County)
SOUTH:	R-2 & PR-2 (County)
EAST:	PR-2
WEST:	R-2 (County)

RELATIONSHIP TO COMPREHENSIVE PLAN:

No comprehensive plan exists for this area.

STAFF ANALYSIS:

The Vista del Rio Subdivision is located on the west side of the Redlands Parkway and just north of the Colorado River. The project is presently being annexed by the City as part of the Loma Rio Annexation. Vista del Rio Subdivision has received County ODP approval and Filings #1 & #2 have been recorded in the County. As part this application, the petitioner is requesting an amended preliminary approval and a final plat/plan approval for Filing #3.

The number of units in each phase is summarized below:

Filing #1 (platted in County)	9 lots
Filing #2 (platted in County)	10 lots
Filing #3 (requesting final plat approval)	23 lots + platting of one existing residence
Filing #4 (future filing)	2 lots
TOTAL:	45 lots

Filing #4 is located in the east side of the Redlands Parkway with access from 23 Road. Each phase contains areas dedicated as Private Open Space, primarily along Rio Linda Lane, Redlands Parkway (including areas within Goat Wash), and along the Colorado River.

The Preliminary Plan has been amended to reflect the densities in the existing filings and the lot configuration in Filing #3. The location of proposed building lots in Filing #4 is also shown, although staff recommends that the map be modified to reflect the two (2) units proposed in the narrative for this filing.

For reference, copies of the proposed Plat, a Building Setbacks Plan and the Utility Composite Plan have been included for reference along with the attached aerial photograph.

All major technical issues with the petitioner have been resolved and revised final plans are presently being prepared by the petitioner's consultant. In their project narrative (attached to this staff report in the "materials supplied by petitioner" section), the petitioner documented a number of road improvements required by the County as part of the overall approval for the project. The petitioner is requesting that all or part of the cost of these improvements be credited to the required impact fees, in this case being the Transportation Capacity Payment (TCP). As per Zoning and Development Code Section 5-4-1H, the Public Works Director has the authority to determine which required improvements may be credited toward the TCP. Appeals of the Director's decisions may be made to the City Council. The Public Works Director has been advised of the petitioner's request.

Regarding the County's requirement for a bicycle path (actually a multi-use path) along Redlands Parkway from Rio Linda Lane to the existing traffic signal at Greenbelt Drive, City staff believes that this path would not be used by pedestrians/cyclists and others to access the multi-use path on the east side of the highway as was the intent since the distance involved is greater than the convenience to try to access the path directly across from Rio Linda Lane. In addition, while staff has not seen any formal plans for the path, there appear to be some physical constraints to construction of the path on the west side of the roadway, namely, significant cutting of slopes.

Staff recommends elimination of the multi-use path proposal as required by the County and that the following be required: connections from the existing multi-use path on the east side of the Redlands Parkway to the eastern edge of pavement of Redlands Parkway on both the north and south sides of Rio Linda Lane (aligning with the sidewalks and roadway edge). Presently there is a drainage swale which separates the existing multi-use path from the roadway. Since persons will attempt to make the crossing, this proposed improvement would expedite the crossing of the roadway and enhance user safety. Further improvements, such as striping or signing of the crossing, would in the opinion of the Public Works Department, offer little in the way of additional safety.

Construction of the proposed improvement would consist of piping of the swale, the provision of an adequate base course, and asphalt pavement (to a width of eight feet for each crossing). The developer would be eligible for a reduction in the required TCP for construction of the paths as allowed by Code.

Should the Planning Commission consider this item favorably, staff recommends approval with the following condition:

1. Elimination of the multi-use path proposal as required by the County replaced by the following: connections from the existing multi-use path on the east side of the Redlands Parkway to the eastern edge of pavement of Redlands Parkway on both the north and south sides of Rio Linda Lane (aligning with the sidewalks and roadway edge) as further described in the staff report.

2. Modification of the preliminary plan for the subdivision to indicate two proposed building lots in Filing #4.

STAFF RECOMMENDATION:

Staff recommends approval of the amended preliminary plan and the final plan for Filing #3.

SUGGESTED PLANNING COMMISSION MOTION:

Mr. Chairman, on item #FPP-95-182, a request for amended preliminary plan and final plat/plan approval for Filing #3, I move that the plans be approved subject to staff conditions #1& #2 in the staff report dated October 30,1995.

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STAFF REVIEW **(City Council)**

FILE: FPP-95-182

DATE: January 11, 1996

REQUEST: Right-of-Way (ROW) Vacation (portion of Rio Linda Lane)
Easement Vacation
VISTA DEL RIO SUBDIVISION FILING #3

LOCATION: Rio Linda Lane west of Redlands Parkway

STAFF: Michael T. Drollinger

APPLICANT: B&P Development, Inc.
702 Golfmore Drive
Grand Junction, CO 81506

EXECUTIVE SUMMARY:

A request to vacate a portion of Rio Linda Lane and an existing sanitary sewer easement as part of the development of Vista del Rio Filing #3, a 23 lot subdivision located west of the Redlands Parkway and south of the Colorado River.

STAFF ANALYSIS:

Vista del Rio Filing #3 is located west of the Redlands Parkway adjacent to Rio Linda Lane and consists of 23 building lots (see attached location maps). The property was recently annexed as part of the Loma Rio Annexation and is zoned PR-1.86. The Final Plat/Plan for Filing #3 was approved by the Planning Commission in November 1995. The platting of this filing will require a right-of-way (ROW) vacation for a small portion of Rio Linda Lane.

The easement vacation is requested to eliminate overlap and redundency which would occur with the platting of Filing #3. All sanitary lines for Filing #3 will be within either street ROW and/or easements which will be dedicated with the Filing #3 plat. The easement to be vacated presently contains a sanitary sewer line parts of which will be abandoned and relocated as part of Filing #3 construction.

STAFF RECOMMENDATION:

Staff recommends approval of the ROW vacation of a portion of Rio Linda Lane and the easement vacation.

PLANNING COMMISSION RECOMMENDATION:

At their November 7, 1995 meeting, the Planning Commission approved the Final Plan/Plat for Vista del Rio Filing #3.

h:\cityfil\1995\95-1827.wpd

19460

SKYLINE CONTRACTING, INC.
3189 MESA AVENUE
GRAND JUNCTION, COLORADO 81504

. Underground Utilities . Excavation . Site Work .

Invoice Number 2995
Customer Number 1110

November 23, 1994

ALPINE CM, INC.
1111 South 12th Street
Grand Junction, CO 81501

Billing for work performed at Vista Del Rio Phase I:

Additional excavation - cut slopes		9401 - Phase I
Equipment	$1,350.00	3100
Road preparation		9401 - Phase I
Labor	190.00	
Equipment	4,462.50	2600
TOTAL AMOUNT DUE	$6,002.50	

Respectfully Submitted,
SKYLINE CONTRACTING, INC.

SKYLINE CONTRACTING, INC.
3189 MESA AVENUE
GRAND JUNCTION, COLORADO 81504

. Underground Utilities . Excavation . Site Work .

Invoice Number 3014
Customer Number 1110

December 19, 1994

ALPINE CM, INC.
1111 South 12th Street
Grand Junction, CO 81501

Billing for work performed at Vista Del Rio:
PHASE I

Excavate terraces and compact slopes per Mesa County request	
11.5 hours excavator at $65.00	$747.50
3.0 hours labor at $20.00	60.00
Spread and roll base in street	
2.5 hours blade at $60.00	150.00
2.0 hours roller at $55.00	110.00
Site grading -Lot 5	
6.0 hours blade at $60.00	360.00
TOTAL AMOUNT DUE 9401-2100	$1,427.50

Respectfully Submitted,
SKYLINE CONTRACTING, INC.

CONDITIONS OF CO. APPROVAL

ALPINE C.M., INC.

1111 S. 12TH ST. • GRAND JUNCTION, CO 81501 • 303/245-2505 • FAX 303/245-2591

February 27, 1995

Matt Osborne
Mesa County Planning Department
750 Main Street
Grand Junction, CO 81501

Dear Matt,

Please allow this letter to serve as confirmation of our telephone conversation this day and ultimately as an agreement to construct a bike path as an off-site improvement in lieu of Development Impact Fees for the Vista Del Rio Subdivision.

More specifically, B & P Development Co. shall design, engineer and construct a bike path from the south side of Rio Linda to the north side of South Rim Drive on the west side of the Redlands Parkway, paralleling the Parkway. The design and engineering shall follow the guidelines set forth by Ken Simms and Joe Bielman of Mesa County Planning & Engineering. Approval of the final design by Mesa County shall be given prior to work commencing.

Any costs exceeding the amount of the Development Impact Fees (between $11,000 and $12,000, pending the final number of developed lots in Phase III and IV), shall be paid by Mesa County by means not known to B & P Development Co. at this time.

It is further understood that the design and construction of the bike path and as witnessed by this letter of agreement will in no way prevent the developer from recording the first two filings for the Vista Del Rio Subdivision.

If you have any questions or require additional information, please contact me at 245-2505.

Sincerely,

V. Kevin Nourse
Representative (P.O.A.)

ALPINE C.M., INC.

1111 S. 12TH ST. • GRAND JUNCTION, CO 81501 • 303/245-2505 • FAX 303/245-2591

October 3, 1995

Mr. Michael Drollinger, Sr. Planner
City of Grand Junction
Community Development Department
250 N. 5th Street
Grand Junction, CO 81501

RE: Vista Del Rio Subdivision, Filing Three

Dear Michael,

We would like to propose new building setbacks in Filing Three that are slightly different from Filings One and Two. The previously platted and constructed Filings One and Two had uniform 25' front and rear and 15' side yard setbacks. The attached plan shows our proposed new setbacks.

With the new plan, we have reduced the setbacks on most lots to 20' rear and 10' side yards. We have also increased the average lot size in Filing Three from the two previous. Given the constraints of topography and lot configurations, we feel the new setbacks will allow owners more options to fit their homes on their lots. Since the lots are larger and a home can be positioned close to one side, it will afford a larger open space on the other side, thus keeping home spacings on an average larger.

The setback document could be recorded with the plat, thus providing clear direction to planning staff and homeowners as to what the setbacks are on corner or other tricky shaped lots.

We request that the new setback proposal be considered with our Filing Three submittal, which is just beginning its way through the approval process.

We also inadvertently didn't change the names of the new streets in Filing Three from the rough working names they are shown with. We plan to correct this on the final plat to be recorded.

If you need additional information or clarification please feel free to call. Thank you for your consideration in these matters.

Sincerely,

Steven P. Colony, Architect
Project Manager

Attachment

We're taking television into tomorrow.

TCI Cablevision of Western Colorado, Inc.

November 1, 1995

Vista Del Rio Fil. 2
Alpine C.M., Inc.
% Community Development Department
250 North 5th Street
Grand Junction, CO 81501

Ref. No. TCICON.089

Dear Sir or Madame;

We are in receipt of the plat map for your new subdivision, **Vista Del Rio Fil. 2**. We will be working with the other utilities to provide service to this subdivision in a timely manner.

I would like to take this opportunity to bring to your attention a few details that will help both of us provide the services you wish available to the new home purchasers. These items are as follows:

1. We require the developers to provide, at no charge to TCI Cablevision, an open trench for cable service where underground service is needed. This trench may be the same one used by other utilities.

2. We require developers to provide, at no charge to TCI Cablevision, fill-in of the trench once cable has been installed in the trench.

3. We require developers to provide, at no charge to TCI Cablevision, a 4" PVC conduit at all utility road crossings where cable TV will be installed. This 4" conduit will be for the sole use of cable TV.

4. Should your subdivision contain cul-de-sac's the driveways and property lines (pins) must be clearly marked prior to the installation of underground cable. If this is not done, any need to relocate pedestals or lines will be billed directly back to your company.

5. TCI Cablevision will provide service to your subdivision so long as it is within the normal cable TV service area. Any subdivision that is out of the existing cable TV area may require a construction assist charge, paid by the developer, to TCI Cablevision in order to extend the cable TV service to that subdivision.

6. TCI will normally not activate cable service in a new subdivision until it is approximately 30% developed. Should you wish cable TV service to be available for the first home in your subdivision it will, in most cases, be necessary to have you provide a construction assist payment to cover the necessary electronics for that subdivision.

Should you have any other questions or concerns please feel free to contact me at any time. If I am out of the office when you call please leave your name and phone number with our office and I will get back in contact with you as soon as I can.

Sincerely,

Glen Vancil,
Construction Supervisor 245-8777

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT

NOV 13 RECD

~~2502~~ Foresight Circle
Grand Junction, CO 81505
(303) 245-8750

FILE

Grand Junction Community Development Department
Planning • Zoning • Code Enforcement
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(970) 244-1430 FAX (970) 244-1599

November 27, 1995

Steven Colony
Alpine C.M., Inc.
1111 S. 12th Street
Grand Junction, CO 81501

RE: Vista del Rio Filing #3 - Final Plat

Dear Mr. Colony:

As you know Vista del Rio Filing #3 received Final Plat/Plan approval on November 7th. The purposes of this letter are (1) to identify any remaining technical items to be addressed on the plans; and (2) to list the information required prior to approval of (a) construction drawings and (b) platting.

The remaining technical issues to be addressed are listed below and have for your convenience been organized by review agency:

City Community Development

We are still reviewing the Composite Plan and the Plat (including the dedication page) and will forward comments to you shortly under separate cover. All other plans are acceptable to this office.

City Development Engineer

All concerns have been addressed. Included for your information is a construction phase submittal chart, a construction approval and progression form, and submittal requirements for final acceptance. A pre-construction notice as detailed in Section VII-3 of SSID is required.

City Utility Engineer

The petitioner needs to identify the water line crossing and sewer encasements between MH 3A and MH 3B on the plans.

Once the necessary corrections have been made, please submit six (6) complete sets of plans for final

approval. You will be issued two sets and the City will keep four sets.

The documentation required prior to approval of the project for construction is as follows:

1. Six (6) sets of plans which address all applicable review agency comments and Planning Commission conditions. All sets must be stamped as required and must be rolled and secured with staples. I would suggest that you delay printing the final plans until we have finished review of the plat and Composite Plan should there be any changes that require adjustments in some or all of the drawings.

2. A Development Improvements Agreement (DIA) which is completed in accordance to the enclosed instructions.

3. An acceptable form of improvements guarantee as detailed in the DIA.

Once these steps have been completed the City Development Engineer will schedule a Pre-construction meeting and will identify additional information to be provided.

The plat approval period is one (1) year from date of Planning Commission approval. Prior to recording of the plat, the following items must be provided to and/or approved by the City:

1. Mylar of plat with required property owner signatures

2. Plat must receive Utility Coordinating Committee (UCC) approval

3. County Surveyor's certificate of approval must be obtained

4. Subdivision covenants must be provided for City review

5. The petitioner must supply proof of incorporation of the Homeowner's Association for the subdivision filing.

6. Mylar of "Building Setbacks" sheet must be provided for recording with the plat.

7. A Transportation Capacity Payment credit request must be provided and approved by the City prior to recording.

As a reminder, the petitioner is responsible for all recording fees associated with the project.

If you require additional information or have any questions please do not hesitate to contact me.

Sincerely yours,

Michael T. Drollinger
Senior Planner

Encls.

cc: Eric Marquez, Nichols Associates
Jody Kliska, City Development Engineer
Trenton Prall, City Utility Engineer
File #FPP-95-182

h:\cityfil\1995\5-1824.wpd

NICHOLS ASSOCIATES, INC.
CIVIL ENGINEERING & SURVEYING

29 November 1995

Michael Drollinger
City of Grand Junction
250 North 5th Street
Grand Junction, CO 81501

Dear Michael:

In your letter to Mr. Steven Colony dated November 27, 1995 regarding Vista del Rio Filing #3 - Final Plat, you listed a comment from the City Utility Engineer and requested changes be made to the plans to address the comment. The comment read "The petitioner needs to identify the water line crossing and sewer encasements between MH 3A and MH 3B on the plans." I spoke with Mr. Prall, the City Utility Engineer about the comment. I explained the crossing is shown in the profile and the vertical clear distance is greater than six feet therefore encasement would not be required. I asked Mr. Prall if we would need to make changes to the plan and he agreed that we would not need to make changes; that the plan was acceptable.

I am enclosing a reduction of the plan for your convenience.

Respectfully,

Eric C. Marquez

Encls.

Distribution: Steven Colony, Alpine C.M.
Trenton Prall, City Utility Engineer
File

P.O. BOX 60010
751 HORIZON CT
SUITE 102
GRAND JUNCTION
COLORADO 81506
TELEPHONE
970-245-7101
FACSIMILE
970-245-3251

NICHOLS ASSOCIATES, INC.
751 Horizon Court, Suite 102, Grand Junction, CO 81506
Phone 970-245-7101 • FAX 970-245-3251

CIVIL ENGINEERING • SURVEYING • PHOTOGRAMMETRY

Vista del Rio, Filing 3
Proj 3184

Maurice L. Schumann
Jan 9 1996

FAX MEMO

To: Michael Drollinger
FAX: 244-1599
From: Maurice L Schumann
Subject: Vista del Rio, Filing 3

Hello Michael,
This memo is in response to your comments on redlined blueprints and in letter dated Jan 6 1996, regarding the Vista del Rio, Filing 3 subdivision. It is our interpretation that you wish to eliminate Grand Junction street right-of-way overlap with existing Grand Junction sanitary sewer easement. Instead of vacating that part of the easement within the right-of-way(yellow highlighted), it is proposed that the entire easement (book 2125, page792) be entirely vacated immediately prior to recording of the subdivision plat. And on the plat, the easement as needed to satisfy requirements will be annotated and dimensioned accordingly. This will result in achieving two important objectives:

1. The plat will show explicity the easement as required. Confusion will be eliminated for anyone who may have to deal with the sewer easement in the future.
2. Work, time, and cost associated with making changes is reduced.

This is our proposed course of action. If there are concerns about handling the situation in this manner, please consult with John Shaver (244-1506) and then with owner's representative Steve Colony (245-2505).

Respectfully,

Maurice L Schumann

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT
JAN 0 9 REC'D

copy: Steve Colony
Alpine CM

NICHOLS ASSOCIATES INC.
CIVIL ENGINEERING & SURVEYING

10 January 1996

Steve Colony
Alpine C.M., Inc.
1111 South 12th Street
Grand Junction, CO 81501

Steve,

In response to your phone call January 10th, regarding the sight analysis and design of the cut-bank on the Redlands Parkway, I have reviewed our billing records in order to estimate the amount invoiced for engineering services directly associated with the cut-bank. Though our office does not track cost by task, I was able to review logbooks and timecard memo fields to reach a reliable estimated cost of $3,190. The tasks in preparing the cut-bank design included; a field survey, reducing survey data, numerous meetings and phone calls with the county engineer, drafting, engineers calculations, and construction staking.

I am enclosing 11x17 drawings of the plans accepted by the county engineer. If you have any questions please call.

Respectfully,

Eric C. Marquez

Encl.

P.O. BOX 60010
751 HORIZON CT
SUITE 102
GRAND JUNCTION
COLORADO 81506
TELEPHONE
970-245-7101
FACSIMILE
970-245-3251

ALPINE C.M., INC.

1111 S. 12TH ST. • GRAND JUNCTION, CO 81501 • 303/245-2505 • FAX 303/245-2591

January 12, 1996

Ms. Jodi Kliska, P.E., Development Engineer
Public Works Department
City of Grand Junction
250 N. Th Street
Grand Junction, CO 81501

RE: Vista del Rio Subdivision

Dear Ms. Kliska:

As requested, we have completed a more thorough review of our records to determine the costs associated with cutting back of the west road bank along the Redlands Parkway from Rio Linda Lane to our south property line. The work was required by Mesa County during the review process for Filings One and Two. The bank cut study and construction was intended to increase the site distances from Rio Linda Lane up the Parkway.

The costs breakdown as follows:

Engineering/Survey	$3,190.00
See attached letter and road cut plans from Nichols Associates	
Project Management	$500.00
Alpine C.M., Inc.	
Earthwork	$2,777.50
See attached invoices from Skyline Contracting	
Bank Stabilization/Erosion Control	$979.50
15% of attached invoice from Land Escapes	
Subtotal	$7,447.00
Alpine C.M., Inc. Overhead & Profit @ 16%	1,192.00
Total	$8,639.00

Per our previous discussions, we would like the costs of our work to be credited towards the City of Grand Junction fees for the project. Please advise us how this can be handled.

If you have any questions, please feel free to call.

Sincerely,

Steven P. Colony, Architect
Project Manager

MESA COUNTY SURVEYOR'S OFFICE

(970) 244-1821

544 Rood Avenue P.O. Box 20000 Grand Junction, Colorado 81502-5026

March 15, 1996

Terry Nichols, President
Nichols & Associates, Inc.
751 Horizon Ct.-Suite 137
Grand Junction, CO 81506

Re: Vista del Rio, Filing 3
Subdivision Final Plat Regulations

Dear Terry:

Yesterday, March 14, 1996, I met with the following representatives for the City of Grand Junction: Tim Woodmansee (Property Agent), Dan Wilson (City Attorney), Jim Shanks (Public Works Director) and Kathy Portner (Planner). We discussed the review issues pertaining to Vista del Rio Filing 3, and what should be done. Their decisions were as follows:

7.3.2.B Orientation--VARIANCE APPROVED
7.3.2.S Bearing and Distance--VARIANCE APPROVED
7.3.2.T Monumentation--VARIANCE DENIED
7.3.2.U(3)a Paved Surface--VARIANCE DENIED

Furthermore, all other review issues shall be complied with, except 7.3.2.J Addresses, and except 7.3.2.D Title Block (wherein it reads "In no case shall the name of a firm, association, or company be outstanding or larger than the name of the subdivision").

The City representatives authorized me to notify you of these decisions, which are final.

Thank you for your patience during this time consuming process. If there is anything this office can do to be of service, or if you have any additional questions, please call.

Sincerely,

Udell S. Williams, PLS
Mesa County Surveyor

cc: Kathy Hall, Doralyn Genova, John Crouch, Tim Woodmansee, Dan Wilson, Jim Shanks, Kathy Portner

June 30, 1999

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (970)244-1599

Steve Colony
Alpine C.M.
1111 S. 12th Street
Grand Junction, CO 81501

RE: Vista Del Rio Filing 3

Dear Mr. Colony:

"As Built" record drawings and required test results for the utilities and public streets in Vista Del Rio Filing 3 have been received from Nichols Associates. These documents have been reviewed and found to be acceptable. This completes the punch list items identified at the June 3, 1997 final inspection.

In light of the above, the public street and utility improvements within the public right-of-way are eligible to be accepted for future maintenance by the City of Grand Junction one year after the date of substantial completion. The date of substantial completion is June 1, 1999.

Your warranty obligation for all materials and workmanship for a period of one year beginning with the date of substantial completion will expire upon acceptance by the City.

If you are required to replace or correct any defects which are apparent during the period of the warranty, a new acceptance date and extended warranty period will be established by the City.

Thank you for your cooperation in the completion of the work on this project.

Sincerely,

Kerrie Ashbeck, P.E.
City Development Engineer

Sincerely,

Trent Prall, P.E.
City Utility Engineer

cc: Don Newton
Doug Cline
Walt Hoyt
Jerry-OBrien
Community Development File #FPP-1995-182