Table of Contents

File **FPP-1996-020** Name: Country Crossing – Filing 1 and 2-Final Plat Plan-Se Corner Of 25 & G Rd

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, items are found on the list but are not present in the scanned electronic development file because they are already scanned elsewhere on the system. These scanned documents are denoted with (**) and will be found on the ISYS query system in their designated categories. Documents specific to certain files, not found in the standard checklist materials, are listed at the bottom of the page. Remaining items, (not selected for scanning), will be listed and marked present. This index can serve as a quick guide for the contents of each file.
X	X	**Table of Contents**
		***Review Sheet Summary**
X	X	***Application form**
X		Review Sheets
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, easements
X	X	***Mailing list to adjacent property owners**
		Public notice cards
		Record of certified mail
X	X	Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		***Final reports for drainage and soils (geotechnical reports)**
		Other bound or non-bound reports
		Traffic studies
X	X	***Review Comments**
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**

DOCUMENT DESCRIPTION:

X		DIA – not signed – scanned with file – Approved with conditions – not constructed until 2000	X		Articles of Incorporation – not recorded
X	X	Geotechnical Report – 5/27/81	X	X	Development Schedule
X		Statutory Deed – Bk 2191 / Pg 577	X	X	Utility Composite
X		Notes to file	X	X	Aerial Map
X	X	Pavement Section Design – 9/24/82	X	X	Zoning Map
X	X	Correspondence	X		Planning Commission Notice of Public Hearing-sent 2/23/96
X	X	Stormwater Management Plan – 1/95	X	X	Final Approval Checklist
X		Statutory Deed – Bk 2191/Pg 577	X		Location Map
X		Treasurer's Certificate of Taxes Due – 1/31/96	X		Cover Sheet
X		Posting of Public Notice Signs – 2/23/96	X		Subdivision Map – Filing 1 – GIS Historical Maps-**
X	X	Planning Commission Minutes – 3/5/96	X		Subdivision Map – Filing 2 – GIS Historical Maps-**
X	X	City Council Minutes – 4/3/96 - **	X		Official Development Plan - GIS Historical Maps-**
X	X	Ordinance No. 2907 - **	X		Site Plan

X		Covenants, Conditions, Restrictions and Easements – not recorded	X		Landscaping Plan – Filing 1 and Filing 2
X		Street Plan and Profile – Filing 1 & 2	X		Utility Composite
X		Sewer and Water Plan	X		Storm Sewer and Profile & Grading Plan
X		Water and Sewer Details	X		Standard City Details
X		Grading Plan	X		North Drainage Plan
X		South Drainage Plan	X		Local Street Standards – Exhibit B
X		Erosion Control Detail	X		Standard Utilities Locations and Multi-Purpose Easement Details – Exhibit C
X		Standard Ute Water Details	X		Cul-De-Sac Details – Exhibit D
X		Standard Concrete Details – Exhibit E	X		Standard Storm Drain Details – Exhibit F
X		Ramp in Monolithic Curb, Gutter and Sidewalk with Concrete Fillet	X		Standard Sanitary Sewer Details – Exhibit I
X		Final Drainage Study – 1/95			

DEVELOPMENT APPLICATION

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

Receipt _____
Date _____
Rec'd By _____
File No. FPP-96-20

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	46.3 AC.	25 ½ G ROADS	PLANNED DEVELOPMENT	RESIDENTIAL
☐ Rezone				From: To:	
☐ Planned Development	☐ ODP ☐ Prelim ☐ Final				
☐ Conditional Use					
☐ Zone of Annex					
☐ Variance					
☐ Special Use					
☐ Vacation					☐ Right-of Way ☐ Easement
☐ Revocable Permit					

☒ PROPERTY OWNER	☒ DEVELOPER	☒ REPRESENTATIVE
Columbia Housing LLC An Arizona Limited Liability Co.	Country Crossing L.L.C	LANDESIGN
Name	Name	Name
2999 N. 44th St. Ste. 600	759 Horizon Dr.	259 GRAND
Address	Address	Address
Phoenix, Az. 85018	Grand Jct. Co. 81506	GRAND JCT. CO 81501
City/State/Zip	City/State/Zip	City/State/Zip
	970-243-4890	245-4099
Business Phone No.	Business Phone No. Denny Granum	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 foregoing 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 review 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 item will be dropped from the agenda, and an additional fee charged to cover rescheduling expenses before it can again be placed on the agenda.

Denny Granum 2-1-96

Signature of Person Completing Application — Date

Signature of Property Owner(s) - attach additional sheets if necessary — Date

SUBMITTAL CHECKLIST

MAJOR SUBDIVISION: FINAL PLAT / PLAN

Location: SE CORNER 25 Rd & G Road Project Name: COUNTRY CROSSING FILING #1

Date Received 2-1-96

Receipt # 3449

File # FPP-96-20

ITEMS 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	O County Planning	O County Building Department	● County Surveyor	O Walker Field	● School Dist. #51	● Irrigation District - GVIC	● Drainage District - GJDD	● Water District - UTE	O Sewer District	● U.S. West	● Public Service	O GVRP	O CDOT	O Corps of Engineers	● Colorado Geologic Survey	● 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	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																													
● Landscape Plan- for open space	IX-20	2	1	1					8																	1						
● Geotechnical Report	X-8	1	1																							1						
O Phase I & II Environmental Report	X-10,11	1	1																													
● Final Drainage Report	X-5,6	1	2															1														
● 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								
● Site Plan w/bldg. envelopes	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.

FPP-96-20

Leemon Reynolds
695 25 Road
Grand Junction, CO 81505

Gary Johnson
693 25 Road
Grand Junction, CO 81505

Robert Van Doozer
685 25 Road
Grand Junction, CO 81505

Robert Hilgenfeld
683 25 Road
Grand Junction, CO 81505

Sandra Pierce
681 25 Road
Grand Junction, CO 81505

Vern Wood
2533 Q Road
Cedaredge, CO 81413

Raedene Basinger
679 25 Road
Grand Junction, CO 81505

Mary States
675 25 Road
Grand Junction, CO 81505

Michael Melgoza
11514 Lindale Street
Norwalk, CA 90650

Cosmo Fazio
669 25 Road
Grand Junction, CO 81505

Gertrude Soencer
667 25 Road
Grand Junction, CO 81505

Herman Crist
145 Willow Brook Road
Grand Junction, CO 81506

Edward Dry
655 25 Road
Grand Junction, CO 81505

Leroy McKee
652 25 Road
Grand Junction, CO 81505

Delbert Wanzer
2520 F 1/2 Road
Grand Junction, CO 81505

Herbert High
2524 F 1/2 Road
Grand Junction, CO 81505

David Christensen
3330 Norwalk Street
Grand Junction, CO 81506

Richard Watson
653 26 Road
Grand Junction, CO 81506

Moonridge Falls LTD
Liability Company
677 25 1/2 Road
Grand Junction, CO 81505

Marieta Hockett
2527 G Road
Grand Junction, CO 81505

Steve Gaudio
2485 E Harbor Cir.
Grand Junction, CO 81505

James Parker
2487 E Harbor Cir.
Grand Junction, CO 81505

Kenneth Simons
2489 E Harbor Cir.
Grand Junction, CO 81505

J Quentin Jones
2491 E Harbor
Grand Junction, CO 81505

Sharon Patrick
2493 E Harbor Cir.
Grand Junction, CO 81505

Chester Elder
2495 E Harbor Cir.
Grand Junction, CO 81504

Alfred Reeder
2497 E Harbor Cir.
Grand Junction, CO 81505

John Foreman
2499 E. Harbor Cir.
Grand Junction, CO 81505

Stephen Miller
702 E. Harbor
Grand Junction, CO 81505

Phyllis Mcclellan
2532 G Road
Grand Junction, CO 81505

FPP-96-20

Nancy Eaton
2526 G Road
Grand Junction, CO 81505

Wayde Dockery
2524 G Road
Grand Junction, CO 81505

Heather Walton
702 25 Road
Grand Junction, CO 81505

Just Companies INC
1716 N 18th Street
Grand Junction, CO 81501

Patricia Davis
1023 24 Road
Grand Junction, CO 81505

Columbia Housing LLC
2999 N 44th St., Suite 600
Phoenix, AZ 85018

Country Crossing LLC
ATTN: Denny Granum
759 Horizon Drive
Grand Junction, CO 81506

LANDesign
259 Grand Ave.
Grand Junction, CO 81501

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

GEO TESTING LABORATORIES, INC.

Geotechnical Engineering and Materials Testing

Copy of this should be on file with City or County

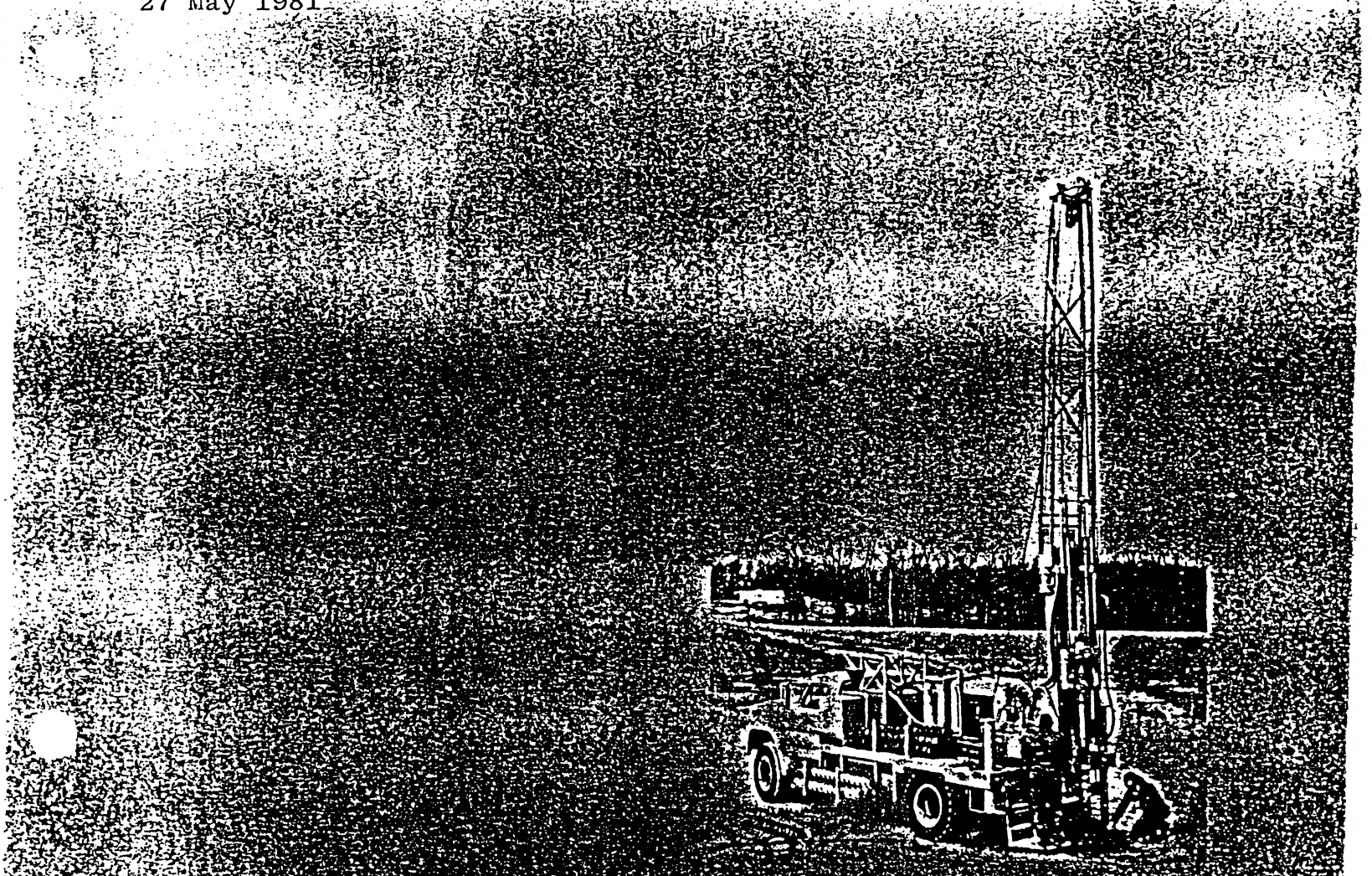
PH Management
P.O. Box 363
Grand Junction, Colorado 81502

Preliminary Geotechnical report for Planned Multi-family residence

Attention: Ken Shrum

Job 999-78

27 May 1981



P.O. Box 3142 · 3224 Highway 6 & 24 · No. 3 · Grand Junction, Colorado 81502 · 303 — 434 9873

GEO TESTING
Geotechnical Engineering and Materials Testing
LABORATORIES, INC.

27 May 1981

PH Management
P.O. Box 363
Grand Junction, Colorado 81502

Attention: Ken Shrum

Re: Preliminary Geotechnical report for planned Multi-family Residences; Job 999-78.

Gentlemen:

We have completed our preliminary geotechnical studies of the proposed Multi-family housing. Data from our field and laboratory studies, along with our preliminary analyses and recommended design criteria have been summarized and are presented in the attached report. If you have any questions, please call.

Yours truly,

GEO TESTING LABORATORIES, INC.

Stephen G. Rice

Stephen G. Rice
Secretary/Treasurer

SGR/dldl

TABLE OF CONTENTS

INTRODUCTION 1

PROPOSED CONSTRUCTION 1

SITE CONDITIONS 1

SUB SOILS 2

FOUNDATIONS 2

FLOOR SLABS 2

WETTING OF FOUNDATION SOILS 3

GENERAL INFORMATION 3

INTRODUCTION

We made this preliminary study to assist in determining the best types and depths of foundations for the structures and design criteria for them. Data from our field and laboratory work are summarized on Figures #1 through 5, attached.

PROPOSED CONSTRUCTION

We understand the proposed structures planned at this time will be 2 story wood frame multi-family units and will consist of approximately 24 units per structure.

For the purpose of our analyses, we assumed maximum column loads on the order of 15 Kips and wall loads of 2½ Kips/Ft.

If final designs vary from these assumptions, we should be advised to permit re-evaluation of our recommendations and conclusions.

SITE CONDITIONS

The site contains 48 acres on the southeast corner of G Road and 25 Road. Grand Valley Canal runs along the east property line and Leach Creek borders along the north property line. At the time of our observations water was present in both locations.

The site was abandoned pasture consisting of grasses and weeds. Drainage was generally towards 25 Road to the west and southwest, however the northwest corner of the property, water has been known to "pond" at times during high periods of seasonal irrigation or runoff.

There are farm houses adjacent to the property, on both G Road and 25 Road. Most are wood frame single story and 2 story with no basements. No apparent damage to the foundation systems was noted.

No bodies of water or bedrock outcroppings were observed on the site.

SUB SOILS

Our test holes showed about 54.0 to as much as 70 feet of medium dense silts, soft silts, clays and medium dense clays overlying dense sands, gravels and cobbles which were encountered in test holes 1,3,6,8,11,13,14,16 and 18.

Groundwater was encountered in test holes 1,7,11,13,14,16 and 18 ranging in depth from 8.0 feet to 15.0 feet, caving had occurred in all test holes drilled. Due to the groundwater conditions we do not suggest basement type construction.

FOUNDATIONS

We have considered one type of foundation for the proposed buildings. Founding the building with spread footings on the natural upper silts involves a "normal" risk of foundation movement. Founding the building with driven piling would reduce the risk of foundation movement, however due to the depths of gravel encountered it would not be economical for the proposed structures to bear on piles. We believe considering safety, economy, and the ever present risk of movement involved in any type of foundation, spread footings on the natural silts would be the most practical. The preliminary foundation criteria included herein is for spread footings only. However, should you decide upon a lower risk alternative, such as driven piling, we would be happy to discuss the criteria for them with you.

Spread footings placed below frost depth of about 3.0 feet should be designed for a maximum soil bearing pressure of 1000 PSF.

FLOOR SLABS

We believe the most practical type of floor used in conjunction with spread footing foundations would be a floating slab-on-grade.

For slab-on-grade construction, we suggest the following:

1. Place a minimum of 4" of gravel beneath the compacted to a minimum of 70% relative density (ASTM D-2049) or 95% of Proctor density (ASTM D-698) whichever applies to the chosen material.

2. Provide moderate slab reinforcement and carry the reinforcement through the interior slab joints, but not to foundation walls or load bearing walls.

3. Omit under slab plumbing. Where such plumbing is unavoidable, pressure test it during construction to minimize the possibility of leaks that result in foundation wetting. Utility trenches should be compacted to a minimum of 95% maximum dry density as determined by ASTM D-698.

WETTING OF FOUNDATION SOILS

Wetting of foundation soils always causes some degree of volume change in the soils and should be prevented during and after construction. Methods of doing this include compaction of "impervious" backfill around the structure, provision of an adequate grade for rapid runoff of surface water away from the structure, and discharge of roof downspouts and other water collection systems well beyond the limits of the backfill.

GENERAL INFORMATION

Our exploratory test holes were spaced as closely as feasible in order to obtain a preliminary comprehensive picture of the sub soil conditions; however, erratic soil conditions may occur between test holes. When more design information is known it is advisable that we be notified to perform a more detailed analysis of the

soils encountered. This preliminary report is not intended to be used for design purposes.

GEO TESTING LABORATORIES, INC.

Stephen G. Rice

Drafted by:
Stephen G. Rice
Secretary/Treasurer

Andrew A. Porter

Reviewed by:
Andrew A. Porter, P.E.
President

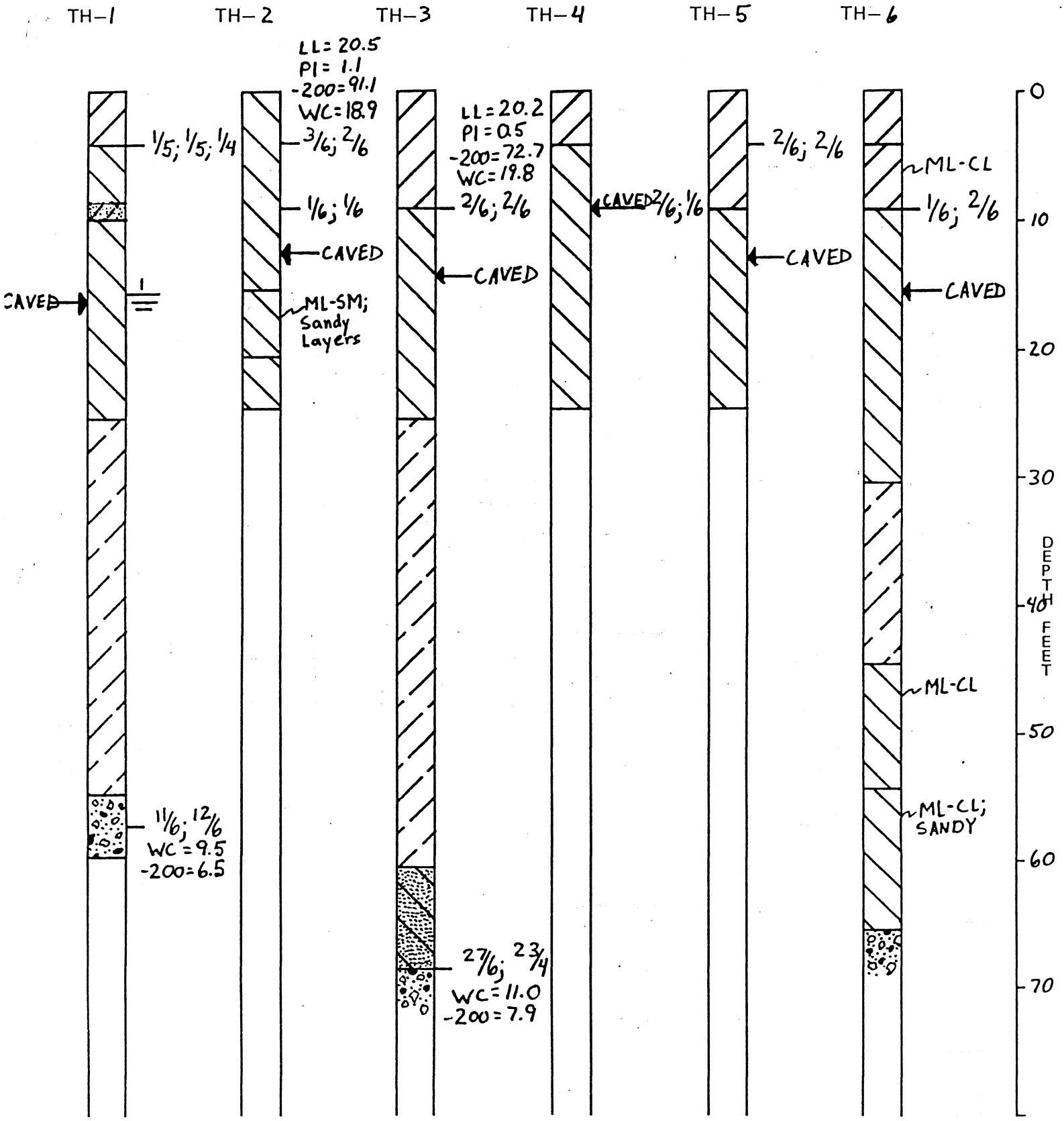
PROFESSIONAL ENGINEER
STATE OF COLORADO

SGR/dldl

DRILL NOTES:

1) THESE TEST HOLES WERE DRILLED ON APRIL 17, 20, 21, 22 & 23 POWERED BY A CME-55 DRILL RIG WITH 4" SOLID AUGER.
2) THESE TEST HOLES WERE LOCATED BY PARAGON ENGINEERS.
3) THIS DRAWING WAS REDUCED FROM

GTL GEO TESTING
Geotechnical Engineering and Materials Testing
LABORATORIES, INC.
P-H MANAGEMENT JOB #999-78
LOCATION OF TEST HOLES

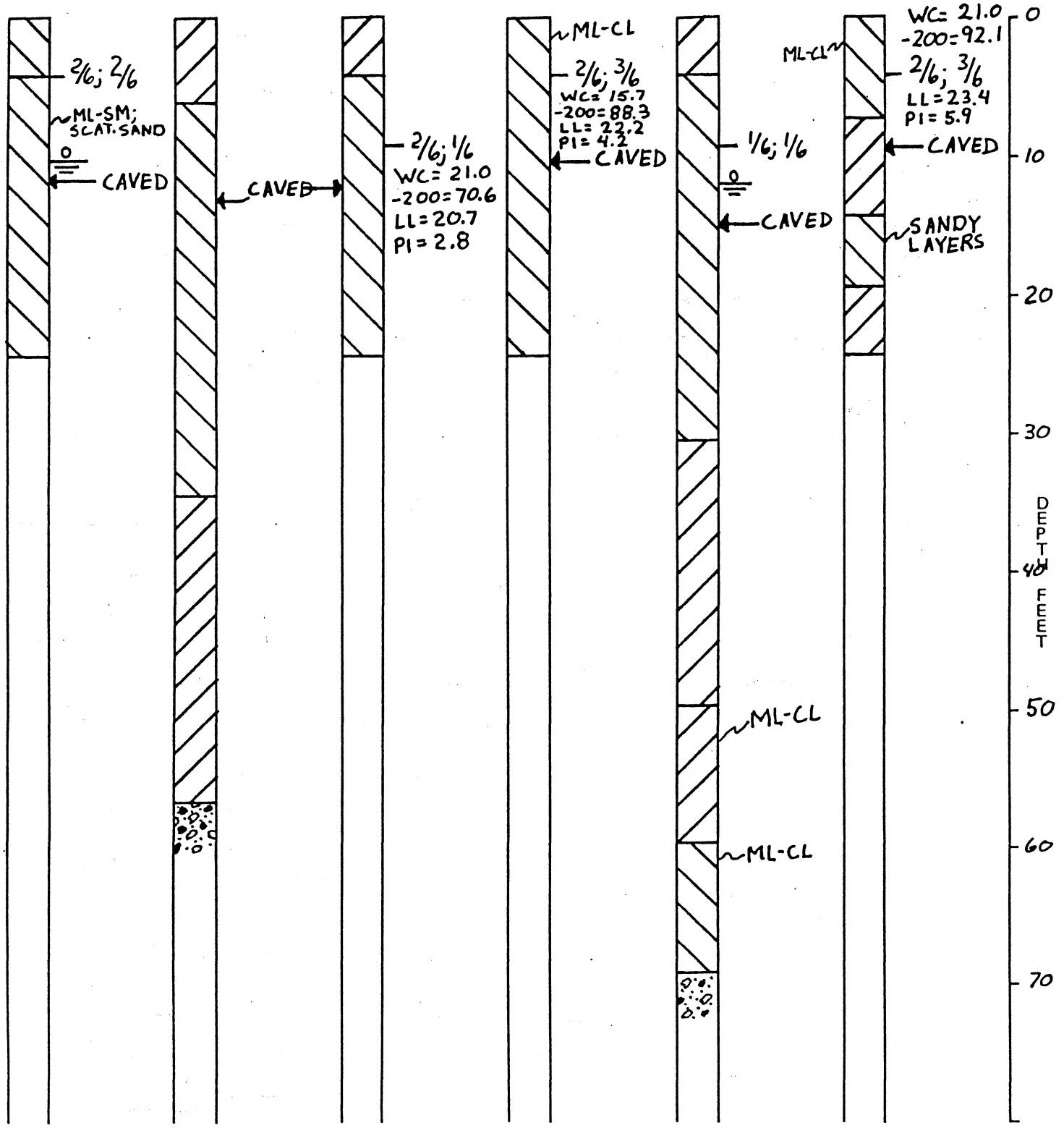


GTL GEO TESTING LABORATORIES, INC.
Geotechnical Engineering and Materials Testing

P-H MANAGEMENT JOB #999-78

SUMMARY LOGS OF TESTS AND TEST HOLES

Fig. 2A

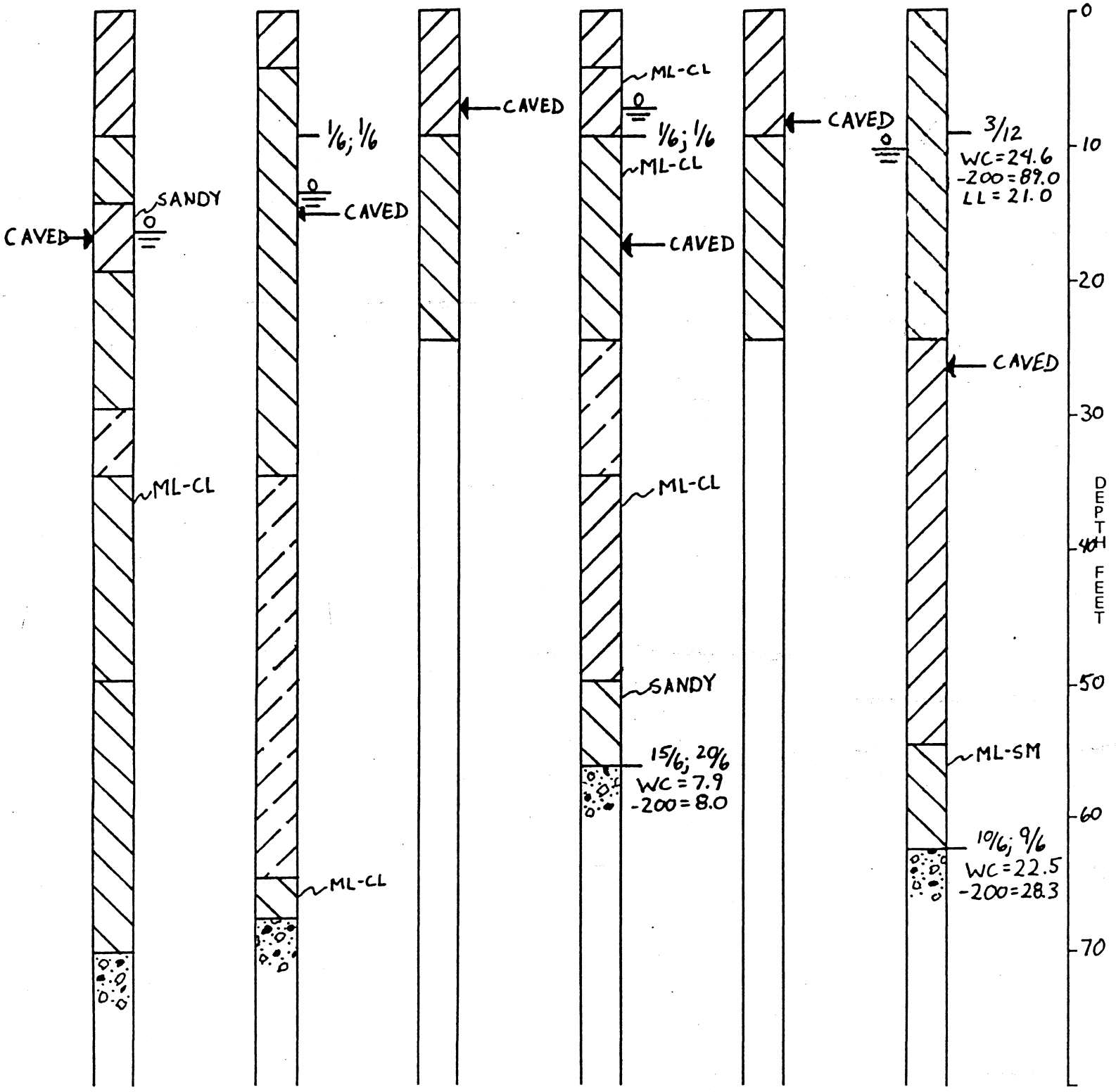


GTL GEO TESTING LABORATORIES, INC.
Geotechnical Engineering and Materials Testing

P-H MANAGEMENT JOB #999-78

SUMMARY LOGS OF TESTS AND TEST HOLES

Fig. 2B



GTL GEO TESTING
Geotechnical Engineering and Materials Testing
LABORATORIES, INC.
PH MANAGEMENT JOB #999-78
SUMMARY LOGS OF TESTS AND TEST HOLES

CL, CL-CH, CH
CLAY, medium stiff to very stiff

CL, CL-CH, CH
CLAY, soft to very soft

SP, SW, SP-SW, SP-SC, SP-SM, SW-SC, SW-SM
SAND, medium to very dense, clean to slightly dirty

SP, SW, SP-SW, SP-SC, SP-SM, SW-SC, SW-SM
SAND, loose to medium dense, clean to slightly dirty

SC, SC-SM
SAND, clayey, ~~loose~~ dense to ~~medium~~ very dense

SC, SC-SM
SAND, clayey loose to medium dense

ML, ML-CL
SILT, dense to very dense

ML, ML-CL
SILT, loose to medium dense

SM, SM-SC
SAND, silty, dense to very dense

SM, SM-SC
SAND, silty, loose to medium dense

GW-SW, GP-SP, GW, GP, SW-GW, SP-GP, GW-GC, GW-GM
GRAVEL and SAND, clean to slightly dirty, dense to very dense

GRAVEL and SAND, clean, loose to medium dense

GC-CL, GC
GRAVEL and SAND, very clayey, dense to very dense

GC-CL, GC
GRAVEL and SAND, very clayey, loose to medium dense

GM-ML
GRAVEL and SAND, very silty, dense to very dense

GM-ML
GRAVEL and SAND, very silty, loose to medium dense

CL-CH, CH, CL
CLAY (highly weathered claystone) or SHALE

SP, SM, SC, SW
SAND (highly weathered sandstone)

CLAYSTONE or SHALE firm to medium hard

SANDSTONE, firm to medium hard

SANDSTONE, CLAYSTONE, SHALE, or SILTSTONE, hard to very hard

CLAYSTONE, SHALE, or SILTSTONE, layered, firm to medium hard

SILTSTONE, firm to medium hard

CONCRETE or ASPHALT PAVING and BASECOURSE, etc.

TOPSOIL

FILL, man made, loose or unknown

FILL, man made, dense, controlled

GRANITE or similar hard competent rock

Gradual change in materials. Exact strata change not located.

Undisturbed sample taken by Shelby, Denison, Pitcher, etc.

Indicates practical Rig Refusal. More than one such symbol indicated depth in adjacent hole attempted at same location

0 Free water level and number of days after drilling that measurement was taken.

9/12 Indicated that 9 blows of a 140 pound hammer falling 30 inches were required to drive a 2-inch diameter sample 12 inches.

WC = Water content percent

DD = Dry density, PCF

UC = Unconfined compression strength, PSF

LL = Liquid limit, percent

PI = Plasticity index, percent

SS = Shear Stress, direct shear, torvane, etc. PSF

-200 = Percent passing number 200 sieve

GTL GEO TESTING LABORATORIES, INC.
Geotechnical Engineering and Materials Testing

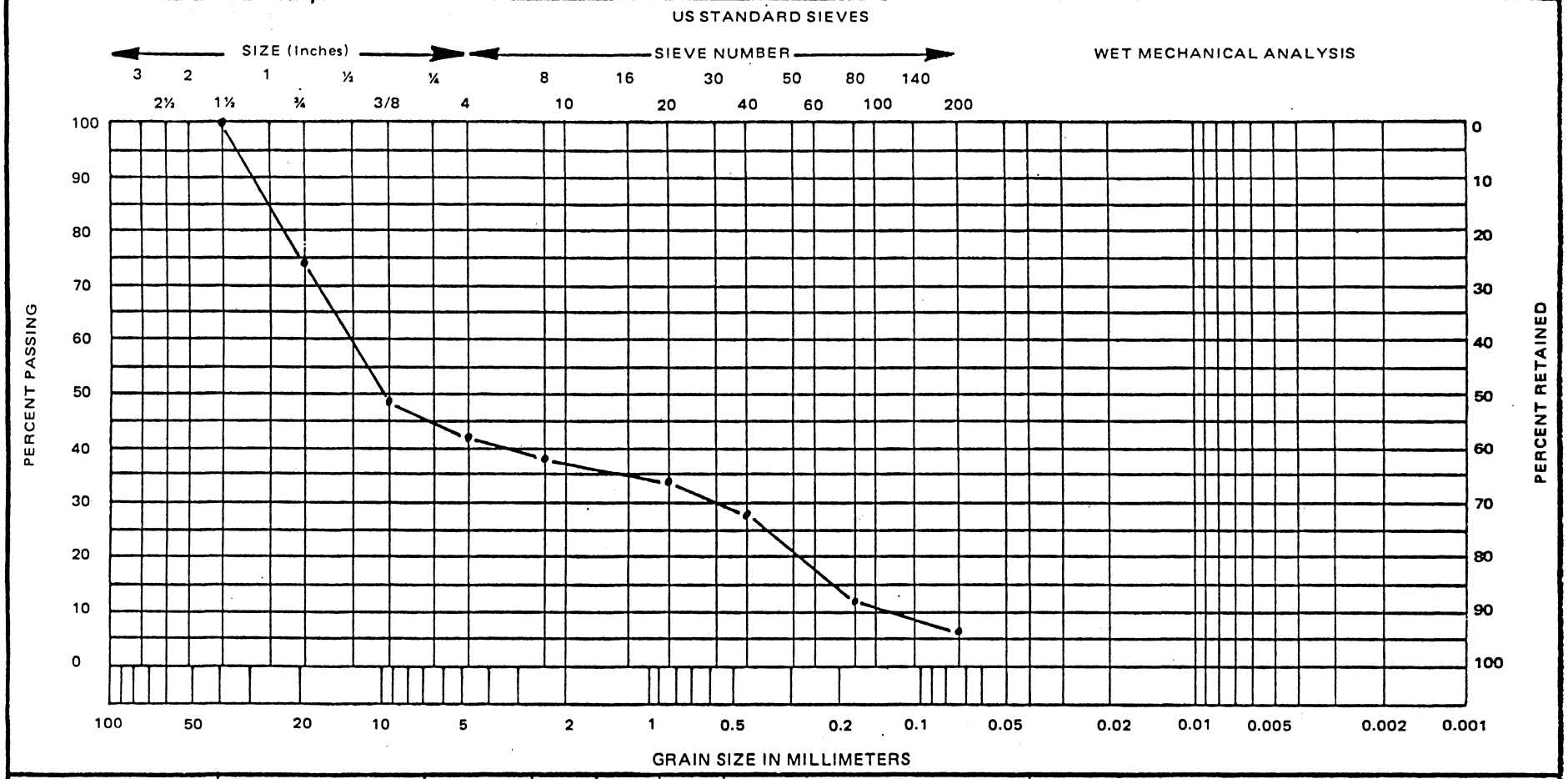
SUMMARY LOGS LEGEND

GTL GEO TESTING LABORATORIES, INC.
Geotechnical Engineering and Materials Testing

GRAIN SIZE DISTRIBUTION GRAPH AGGREGATE GRADING CHART

DATE: 4/28/81

PROJECT: P-H Management 999-78



EXCAVATION NUMBER	SAMPLE NUMBER	NATURAL % MOISTURE	W_L	W_P	I_P	CLASSIFICATION	REMARKS
1 @ 59'-0		9.5	—	—	—	GP-GM	Gravel - 57.7 %, Sands - 35.9 %, fines - 6.4 %

TECHNICIAN (Signature): Conny Thelps

PLOTTED BY (Signature): Conny Thelps

CHECKED BY (Signature): C. D. Hoster

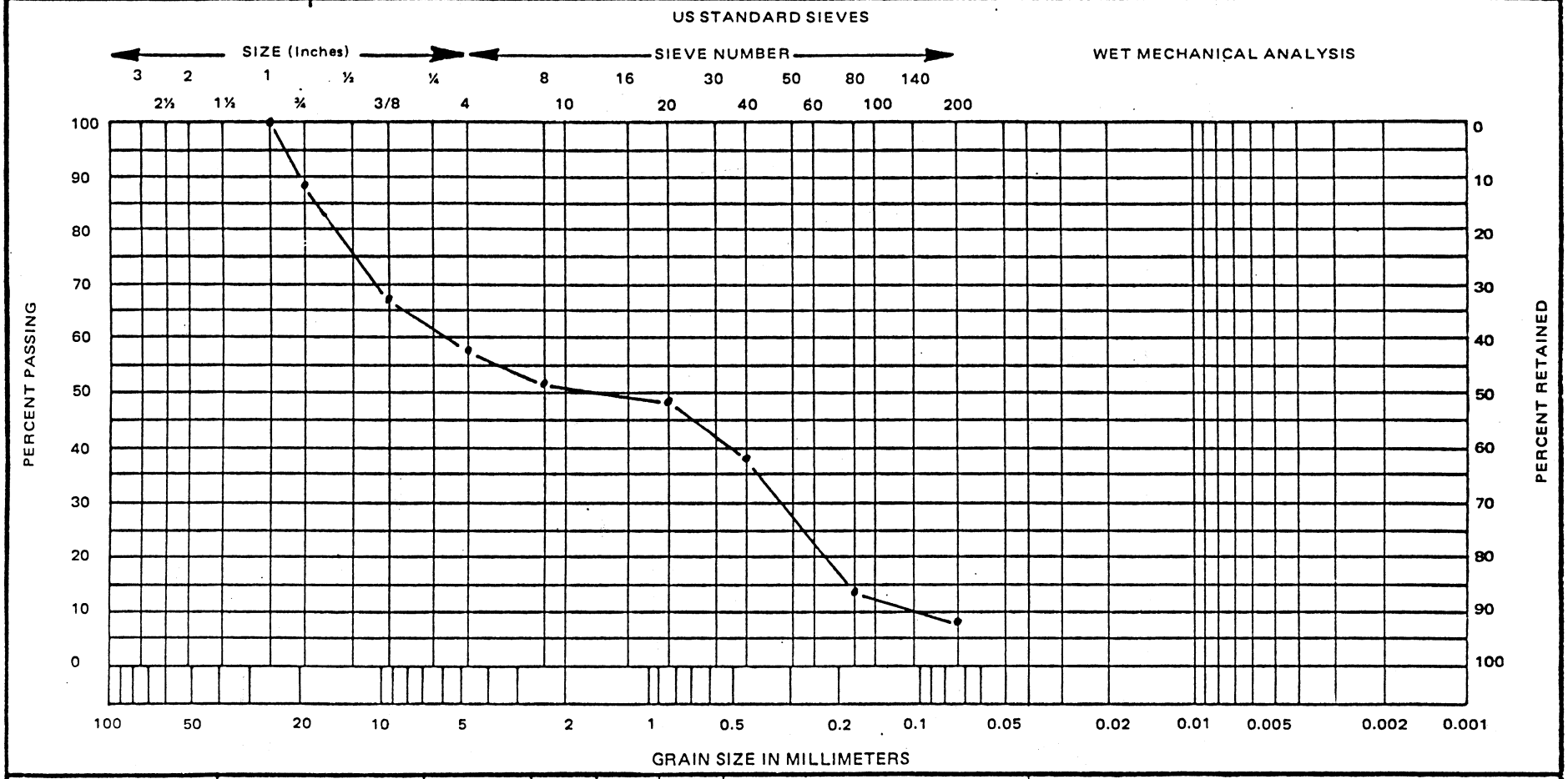
Fig. 4

GTL GEO TESTING LABORATORIES, INC. Geotechnical Engineering and Materials Testing

GRAIN SIZE DISTRIBUTION GRAPH AGGREGATE GRADING CHART

DATE: 4/28/81

PROJECT: P-H Management 999-78



EXCAVATION NUMBER	SAMPLE NUMBER	NATURAL % MOISTURE	W_L	W_P	I_P	CLASSIFICATION	REMARKS
3 @ 68'-0		11.0	—	—	—	SP-SM (gravelly)	Gravel - 42.4%, Sands -
							49.7%, Fines - 7.9%

TECHNICIAN (Signature): Lonny Thelps

PLOTTED BY (Signature): Lonny Thelps

CHECKED BY (Signature): [illegible]

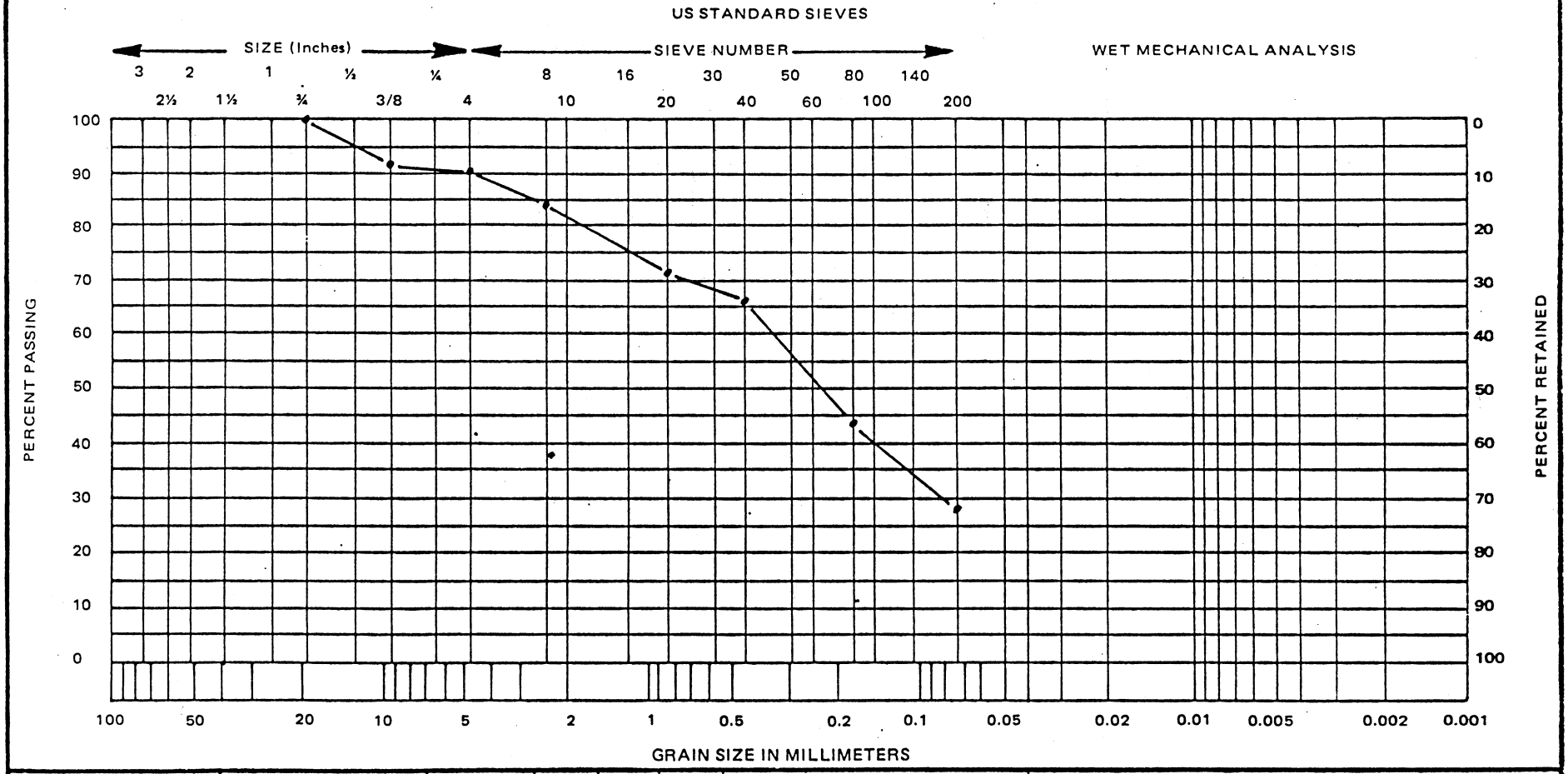
FIG. 5

GTL GEO TESTING LABORATORIES, INC. Geotechnical Engineering and Materials Testing

GRAIN SIZE DISTRIBUTION GRAPH AGGREGATE GRADING CHART

DATE: 4/28/81

PROJECT: P-H Management 999-78



EXCAVATION NUMBER	SAMPLE NUMBER	NATURAL % MOISTURE	W_L	W_P	I_P	CLASSIFICATION	REMARKS
18@62'-0		22.5	—	—	—	SM	Gravel - 9.7%, Sands - 62.0%, Fines - 28.3%

TECHNICIAN (Signature): Lonny Thelps

PLOTTED BY (Signature): Lonny Thelps

CHECKED BY (Signature): A Hatter

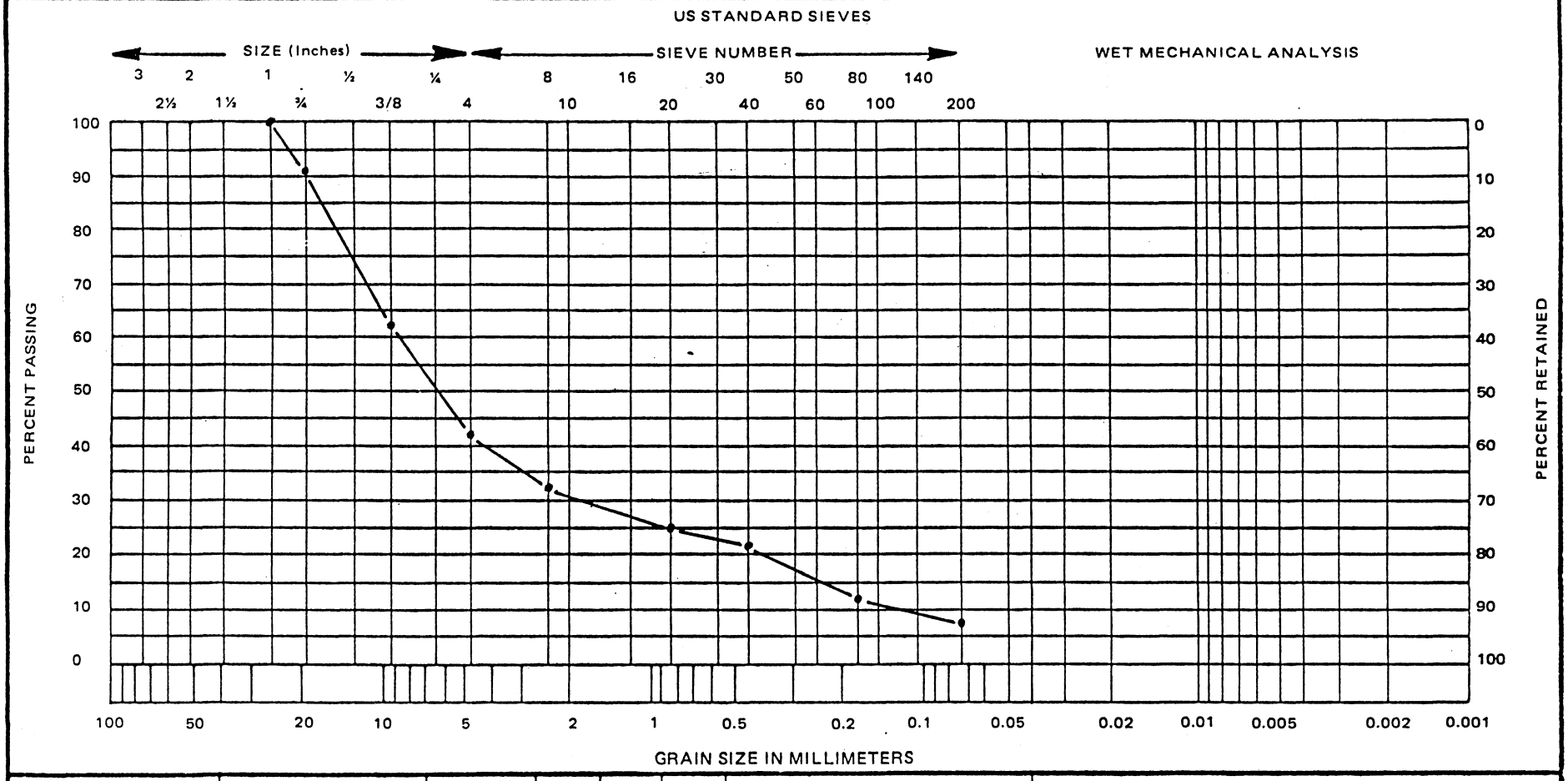
Fig. 7

GTL GEO TESTING LABORATORIES, INC. Geotechnical Engineering and Materials Testing

GRAIN SIZE DISTRIBUTION GRAPH AGGREGATE GRADING CHART

DATE: 4/28/81

PROJECT: P-H Management 999-78



EXCAVATION NUMBER	SAMPLE NUMBER	NATURAL % MOISTURE	W_L	W_P	I_P	CLASSIFICATION	REMARKS
16 @ 55.5'		7.9	—	—	—	GP-GM	Gravel - 56.4%, Sands - 35.6%, Fines - 8.0%

TECHNICIAN (Signature): Lonny Thelps

PLOTTED BY (Signature): Lonny Thelps

CHECKED BY (Signature): C Hooton

Fig. 6

Pavement Section Design

Persigo Village
25 Rd. & G Road
Grand Junction, CO

24 September 1982

WESTERN TECHNOLOGIES, INC.

Phoenix
3737 East Broadway Road
P.O. Box 21387
Phoenix, Arizona 85036
(602) 268-1381

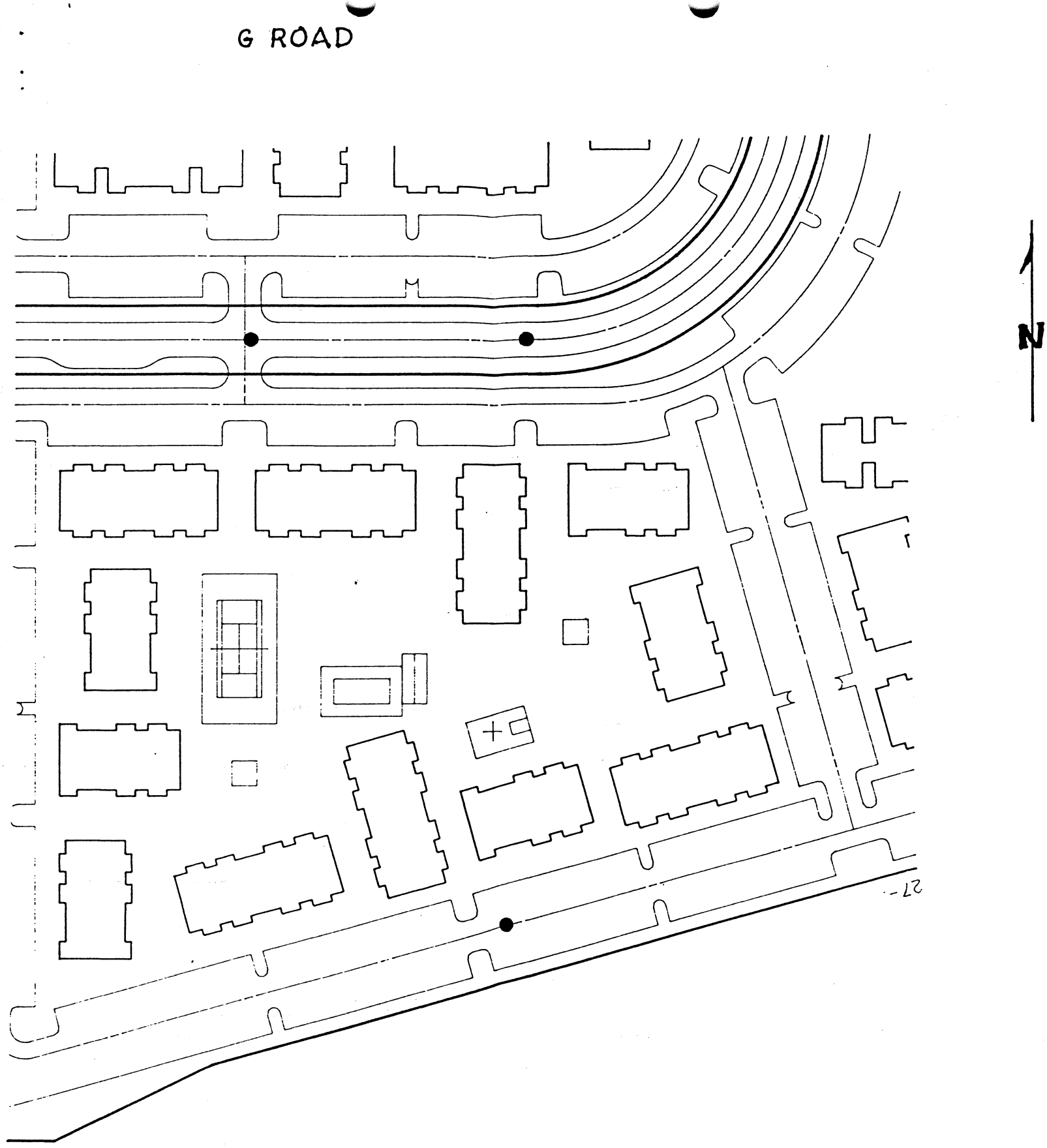
Flagstaff
2400 East Huntington Drive
Flagstaff, Arizona 86001
(602) 774-8708

Tucson
423 South Olsen Avenue
Tucson, Arizona 85719
(602) 624-8894

Farmington
400 South Lorena
Farmington, New Mexico 87401
(505) 327-4966

Las Vegas
300 West Boston Avenue
Las Vegas, Nevada 89102
(702) 382-7483

Grand Junction
P.O. Box 177
3224 Highway 6 & 24, No. 3
Clifton, Colorado 81520
(303) 434-9873


G ROAD
N

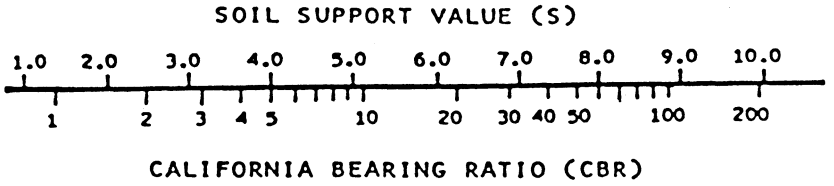
Persigo Village
Job No. 6142J077

ALTERNATE PAVEMENT SECTIONS

Description		CBR	DTN	BCS	ABC	SBC	TOTAL
Residential Streets	A	4	40	8			8
(2650 trips/day)	B			3	10		13
	C			3	4	8	15
	D			3	14		17
	E			3	4	16	23
Parking Areas	A	4	8	6			6
(800 trips/day)	B			3	6		9
	C			3	4	3	10
	D			3	9		12
	E			3	4	7	14

CBR = California Bearing Ratio Value
DTN = Equivalent 18K Daily Traffic Number
BCS = Bituminous Concrete Surface
ABC = Aggregate Base Course
SBC = Subbase Course

A = Bituminous Concrete Pavement
B = Bituminous Concrete Pavement + Aggregate Base Course (Replacement Method)
C = Bituminous Concrete Pavement + Aggregate Base Course + Subbase Course (Replacement Method)
D = Bituminous Concrete Pavement + Aggregate Base Course (Colorado Highway Department Method)
E = Bituminous Concrete Pavement + Aggregate Base Course + Subbase Course (Colorado Highway Department Method)



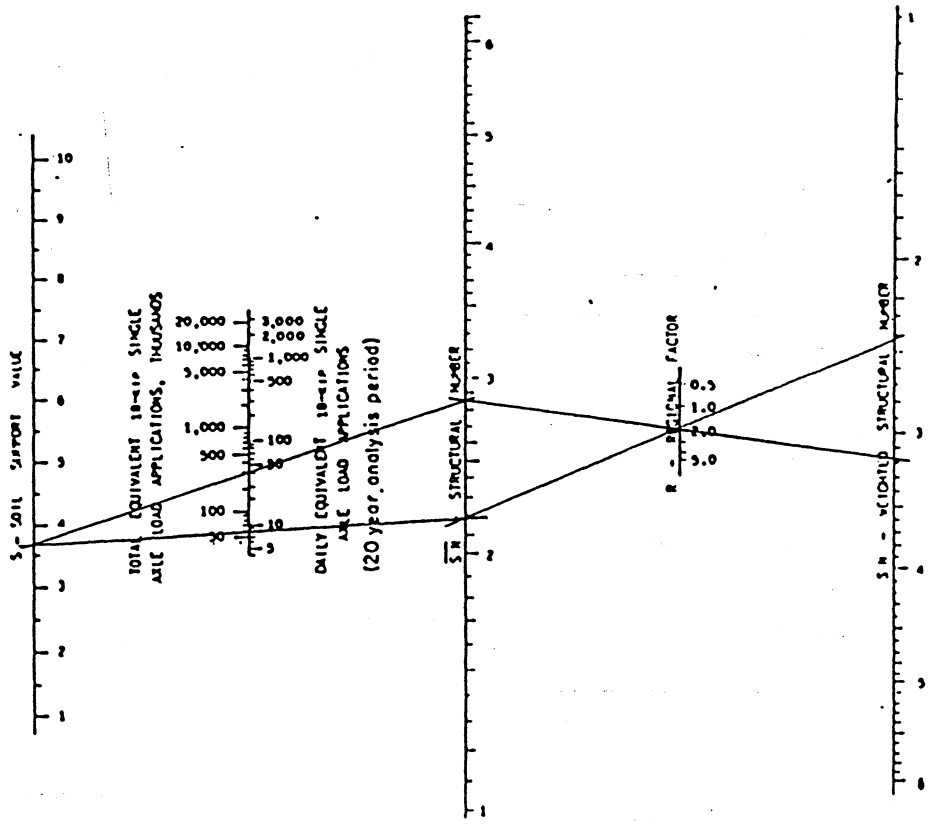


Figure II-2 Design Chart for Flexible Pavements, p_t = 2.0

WESTERN TECHNOLOGIES, INC.

P.O. Box 177
322 Highway 6 & 24, No. 3
Clifton, Colorado 81520
(303) 434-9873

Turner Collie & Braden, Inc.
P.O. Box 3944
Grand Junction, CO 81501

24 September 1982

Job No. 6142J077
Invoice No. 61420158

ATTENTION: Jim Langford

PROJECT: Persigo Village
25 Rd. & G Road
Grand Junction, CO

The following report presents the pavement section design on the roads within the above referenced project limits. The design was performed using the Asphalt Institute's Replacement Method and the Colorado State Highway Department Method. Traffic criteria was provided by Turner Collie and Braden. The recommended pavement sections were calculated for a twenty year design life.

If you have any questions concerning this information or if we may be of any additional service, please do not hesitate to contact us.

Sincerely yours,
WESTERN TECHNOLOGIES, INC.

Jim Fife

Jim Fife

Reviewed by:

COLORADO REGISTERED CRAIG P. WIEDEMAN 19564 PROFESSIONAL ENGINEER

Craig P. Wiedeman, P.E.
Division Manager

JF/jf

Copies: Addressee (2)

Persigo Villag
Job No. 6142J077

Introduction

This report presents the results of our field investigation, laboratory testing and pavement section design for residential streets in Persigo Village near the interesection of 25 Rd. and G Rd. in Grand Junction, Colorado.

Field Investigation

Seven subgrade samples were obtained by hand methods on 17 September 1982, at the locations shown on the accompanying site plan. All samples were a composite of material from existing grade to a depth of approximately 18 inches. No groundwater was encountered at any sample location at the time of this exploration. All samples were returned to the laboratoary for testing to determine their physical properties. Any vegetation or debris recovered was removed prior to testing.

Laboratory Testing

Visual classification was performed on all samples obtained. Four samples were then chosen for laboratory testing. The samples were classified using both the Unified and the AASHTO Classification Systems, with group indices calculated according to the United States Bureau of Public Roads Method.

Results indicated that the soils were relatively uniform and consisted of clays, silts and fine sands. For design purposes a composite of the clays and silts was used. The composite sample of these soils was tested for CBR values in the soaked condition with the following results:

Soil Group	CBR Value*
Clays & Silts	4

*Value in the soaked condition at 95% of maximum density as determined in accordance with ASTM D698.

Test results are enclosed in the summary data sheets and include initial compaction data, CBR value and swell results at four days. Due to the limited extent of the sandy silt material encountered during our field investigation, the CBR value obtained on the clayey material was used for design purposes.

Design Recommendations

Several alternate pavement sections are tabulated and included hereinafter. Based on a total evaluation of existing and projected future conditions, the following pavement section appears to be the most feasible for the proposed streets and parking areas:

Proposed Streets

3 inches - asphaltic concrete pavement
4 inches - aggregate base course
8 inches - aggregate subbase course

Proposed Parking Areas

3 inches - asphaltic concrete pavement
6 inches - aggregate base course

Construction Recommendations

It is recommended that all materials conform with Colorado Highway Department Specifications. Aggregate subbase material should conform with Class 1 specifications. Aggregate base course should conform with Class 6 specifications. Asphaltic concrete pavement should conform with Grading E specifications and consist of an approved mix design giving required Marshall properties, optimum asphalt content, job mix tolerances, and recommended mixing and placement temperatures. Asphaltic concrete should be compacted to a minimum of 95 percent of maximum density as determined using the 75 blow Marshall method. The compaction of all subgrade and fill materials should be performed to the following recommended percent compaction and moisture content:

Material	Test Method	Minimum Percent Compaction	Moisture Content
Existing Subgrade	AASHTO T-99	95	Optimum ± 2%
Subbase Fill	ASSHTO T-99	95	Optimum ± 2%
Subbase Course	ASSHTO T-180	95	Optimum ± 3%
Base Course	ASSHTO T-180	95	Optimum ± 3%

Acceptance testing of fill materials and mineral aggregates should be performed prior to construction to assess compliance with project requirements. Positive drainage should be provided during construction and maintained throughout the life of the proposed streets. Adequate drainage is essential for continuing performance of these streets.

Persigo Village
Job No. 6142J077

Construction Procedure

The following procedure is recommended for preparation of all alignments:

- Strip and remove existing vegetation, debris, rubble and excavate to the subgrade level. Clean and widen depressions, pits and ditches to accommodate compaction equipment.
- Rework, moisten or dry as required, and compact all subgrade soils to a minimum depth of 8 inches. Reworking may be accomplished by scarification, discing, removal and replacement or other methods which will result in uniform moisture contents and densities.
- Place and compact required fill in horizontal lifts at thicknesses consistent with compaction equipment used to achieve uniform densities throughout lift thickness.

It is recommended that all excavation, subgrade preparation, fill placement and asphalt laydown be accomplished under observation and testing directed by the geotechnical/materials engineer to assess compliance with the project requirements.

Sincerely yours,
WESTERN TECHNOLOGIES, INC.

Jim Fife

Reviewed by:

Craig P. Wiedeman, P.E.
Division Manager

Persigo Village
Job No. 6142J077

CALIFORNIA BEARING RATIO RESULTS

Soil: Composite of Clays & Silts

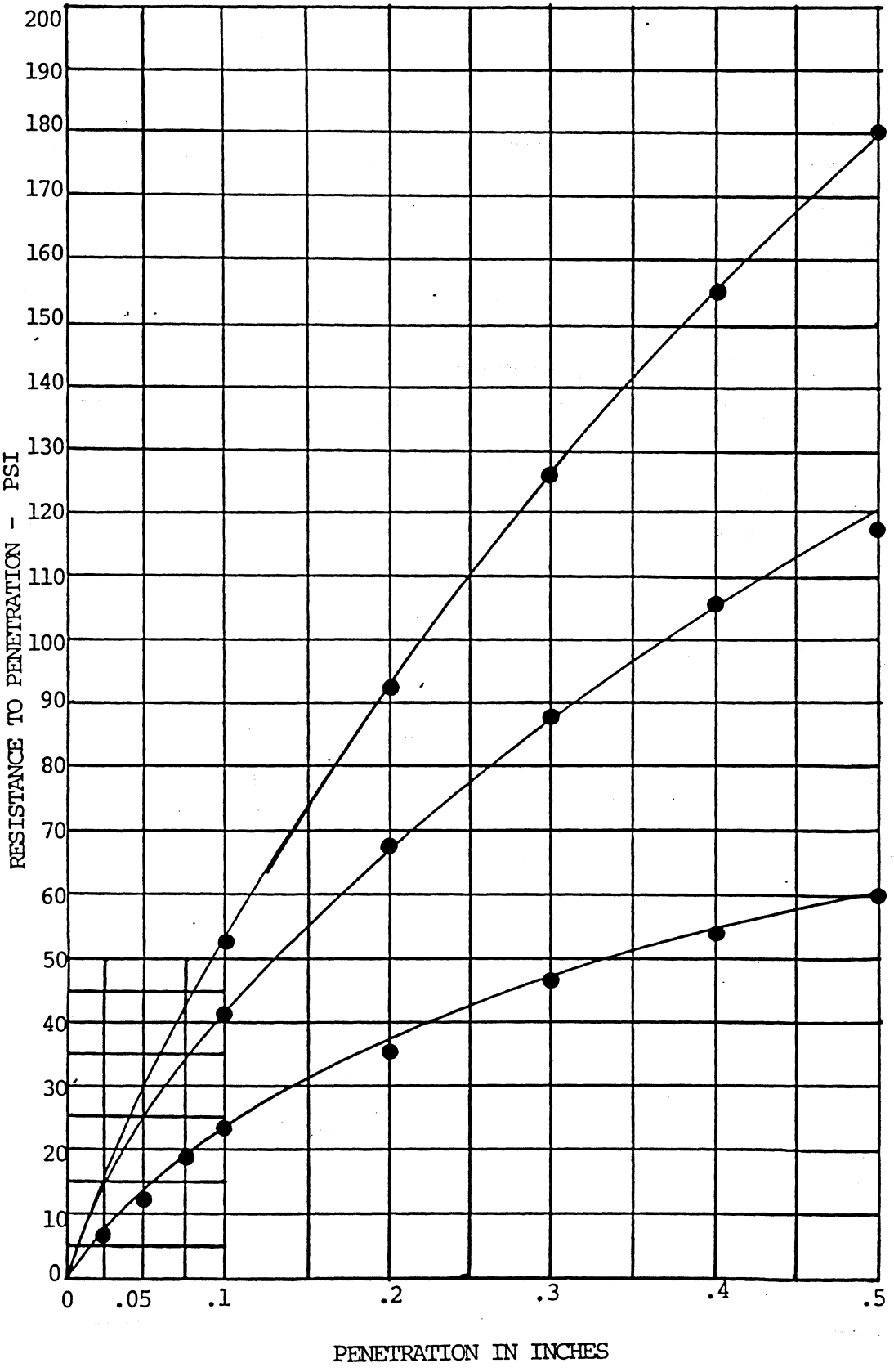
INITIAL COMPACTION DATA	Point 1	Point 2	Point 3
Number of Blows per Layer	15	26	56
Initial Wet Density (PCF)	115.6	126.4	129.3
Initial Moisture Content (%)	14.7	17.1	16.1
Initial Dry Density (PCF)	100.8	105.3	109.4
Initial Compaction (%) (Proctor - 110.7 pcf @ 14.0)	91	95	99
SWELL RESULT (4 Days)			
Swell (inches)	.035	.036	.046
Swell (%)	.8	.8	1.0
Soaked Wet Density (PCF)	121.3	126.4	129.3
Soaked Moisture Content (%)	20.1	18.6	17.3
Soaked Dry Density Divided by Original M.C.	105.7	107.9	111.4
Soaked Dry Density Divided by Soaked M.C.	101.0	106.6	110.2
PENETRATION TEST RESULTS			
Surcharge Weight (lbs)	12.5	12.5	12.5
Piston Seating Pressure (lbs)	10	10	10
Load for Penetration-Inches	lbs/PSI	lbs/PSI	lbs/PSI
0.025	6.1	12.1	12.1
0.050	12.7	25.8	25.8
0.075	18.5	34.8	37.9
0.100	24.2	42.4	51.5
0.200	34.5	68.2	90.9
0.300	45.8	87.9	127.3
0.400	53.0	105.8	154.5
0.500	60.0	116.7	180.6

Corrected Pressure for Penetration-Inches

	CBR	CBR	CBR
0.10	2.4	4.2	5.2
0.20	2.3	4.5	6.1
0.30	2.4	4.6	6.7
0.40	2.3	4.6	6.7
0.50	2.3	4.5	6.9

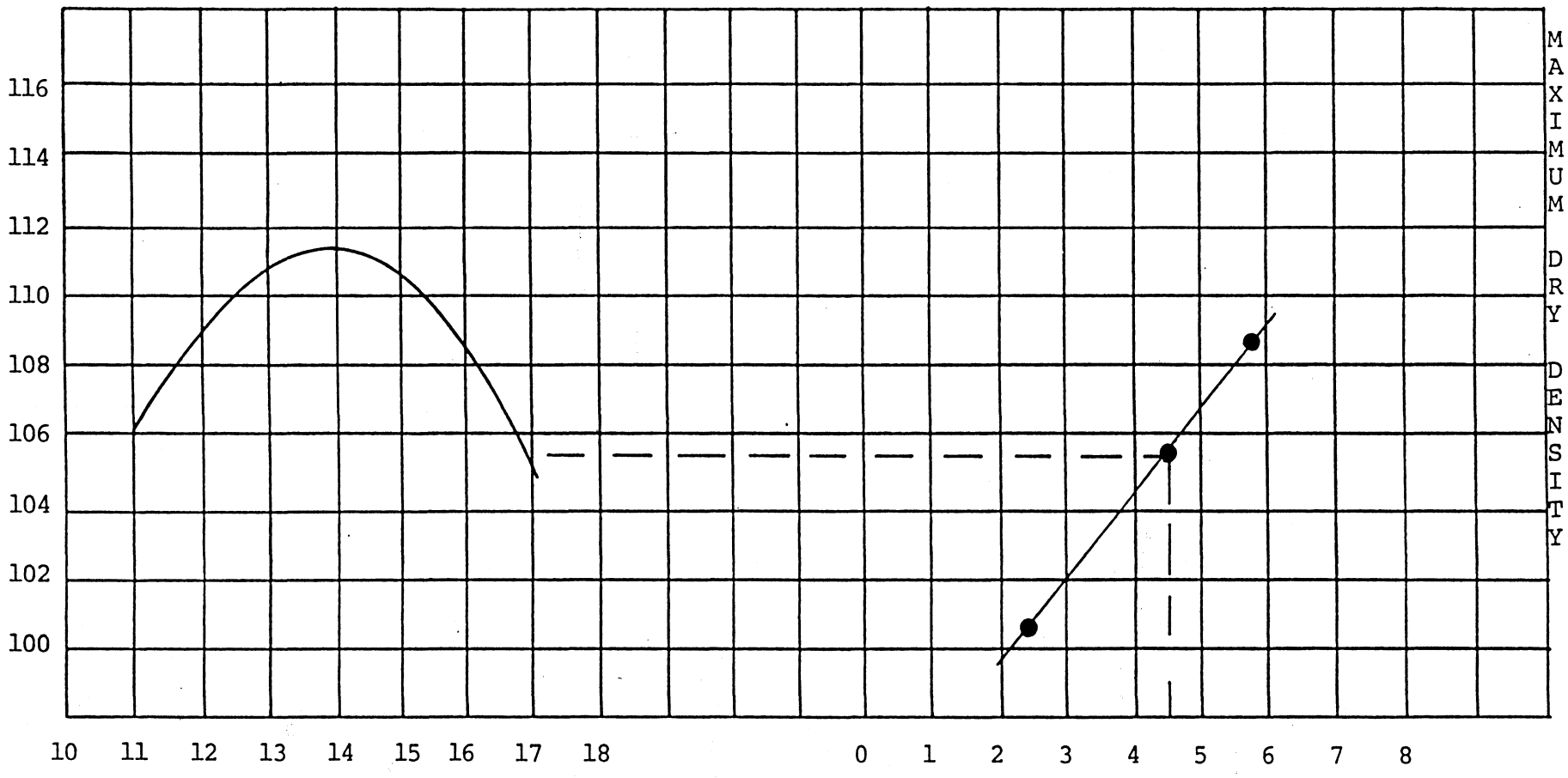
Persigo Village
Job No. 6142J077

CBR STRESS - STRAIN RESULTS



Persigo Village
Job No. 6142J077

MOISTURE DENSITY CBR CURVES



CBR = 4.5
Adjusted = 4

Pavement Section Design

Persigo Village
25 Rd. & G Road
Grand Junction, CO

24 September 1982

WESTERN TECHNOLOGIES, INC.

Phoenix
3737 East Broadway Road
P.O. Box 21387
Phoenix, Arizona 85036
(602) 268-1381

Flagstaff
2400 East Huntington Drive
Flagstaff, Arizona 86001
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(602) 624-8894

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Farmington, New Mexico 87401
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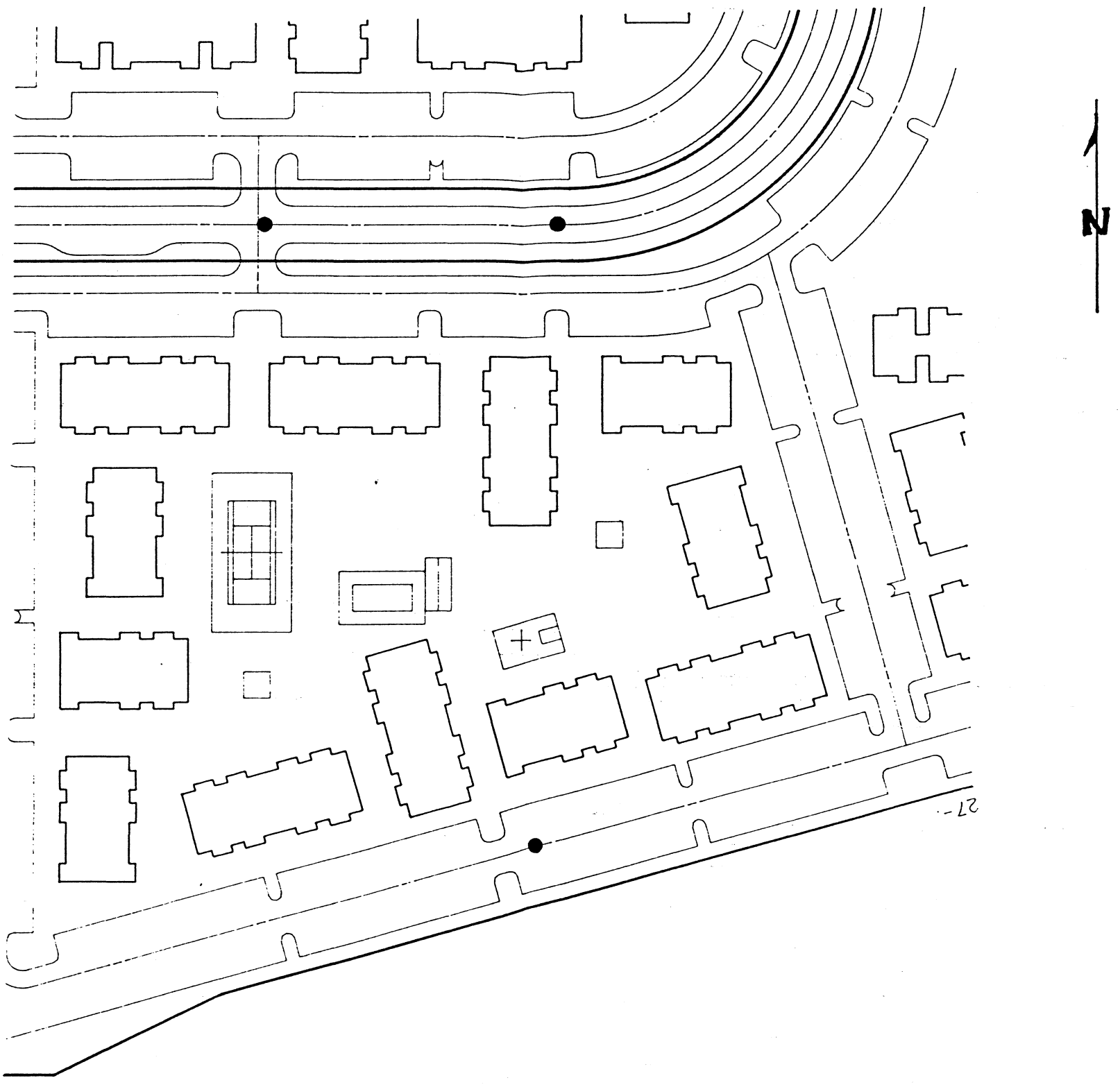
G ROAD
N

Persigo Village
Job No. 6142J077

ALTERNATE PAVEMENT SECTIONS

Description		CBR	DTN	BCS	ABC	SBC	TOTAL
Residential Streets	A	4	40	8			8
(2650 trips/day)	B			3	10		13
	C			3	4	8	15
	D			3	14		17
	E			3	4	16	23
Parking Areas	A	4	8	6			6
(800 trips/day)	B			3	6		9
	C			3	4	3	10
	D			3	9		12
	E			3	4	7	14

CBR = California Bearing Ratio Value
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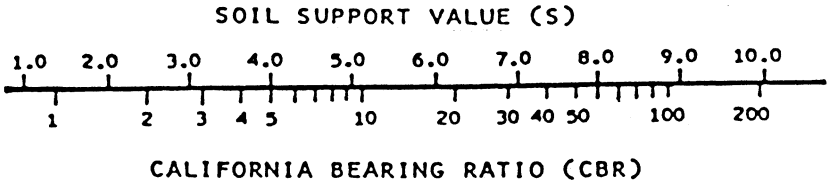

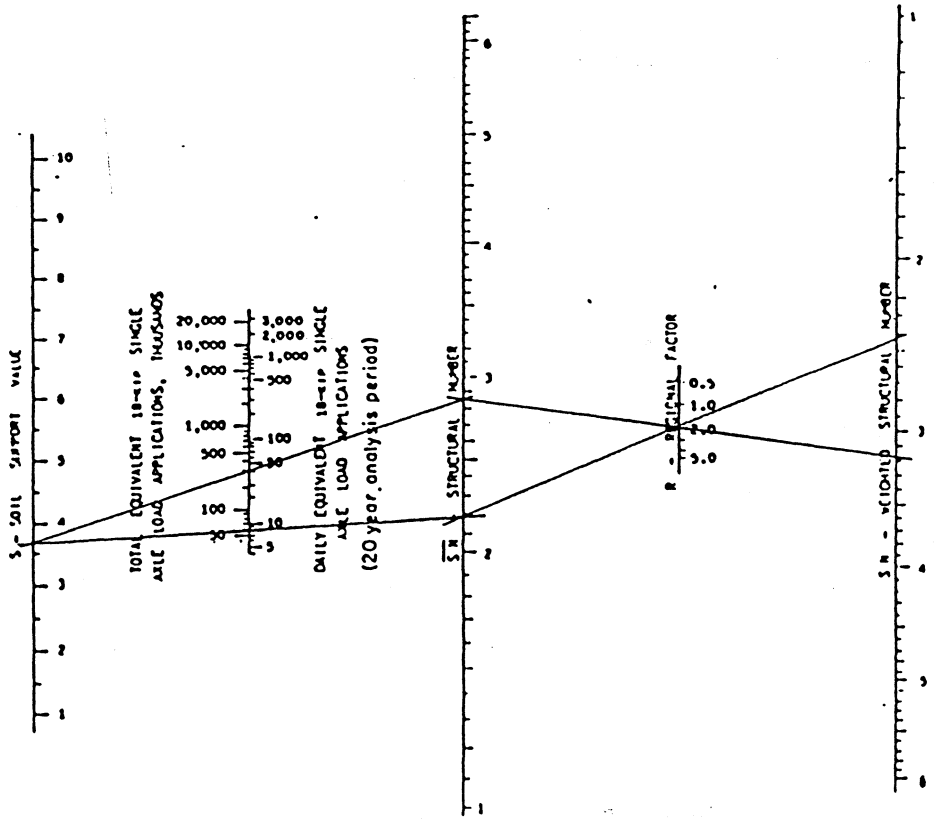

Figure II-2 Design Chart for Flexible Pavements, p_t = 2.0

WESTERN TECHNOLOGIES, INC.

P.O. Box 177
322 Highway 6 & 24, No. 3
Clifton, Colorado 81520
(303) 434-9873

Turner Collie & Braden, Inc.
P.O. Box 3944
Grand Junction, CO 81501

24 September 1982

Job No. 6142J077
Invoice No. 61420158

ATTENTION: Jim Langford

PROJECT: Persigo Village
25 Rd. & G Road
Grand Junction, CO

The following report presents the pavement section design on the roads within the above referenced project limits. The design was performed using the Asphalt Institute's Replacement Method and the Colorado State Highway Department Method. Traffic criteria was provided by Turner Collie and Braden. The recommended pavement sections were calculated for a twenty year design life.

If you have any questions concerning this information or if we may be of any additional service, please do not hesitate to contact us.

Sincerely yours,
WESTERN TECHNOLOGIES, INC.

Jim Fife

Jim Fife

Reviewed by:

COLORADO REGISTERED CRAIG P. WIEDEMAN 19567 PROFESSIONAL ENGINEER

Craig P. Wiedeman, P.E.
Division Manager

JF/jf

Copies: Addressee (2)

Persigo Village
Job No. 6142J077

Introduction

This report presents the results of our field investigation, laboratory testing and pavement section design for residential streets in Persigo Village near the interesection of 25 Rd. and G Rd. in Grand Junction, Colorado.

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Several alternate pavement sections are tabulated and included hereinafter. Based on a total evaluation of existing and projected future conditions, the following pavement section appears to be the most feasible for the proposed streets and parking areas:

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8 inches - aggregate subbase course

Proposed Parking Areas

3 inches - asphaltic concrete pavement
6 inches - aggregate base course

Construction Recommendations

It is recommended that all materials conform with Colorado Highway Department Specifications. Aggregate subbase material should conform with Class 1 specifications. Aggregate base course should conform with Class 6 specifications. Asphaltic concrete pavement should conform with Grading E specifications and consist of an approved mix design giving required Marshall properties, optimum asphalt content, job mix tolerances, and recommended mixing and placement temperatures. Asphaltic concrete should be compacted to a minimum of 95 percent of maximum density as determined using the 75 blow Marshall method. The compaction of all subgrade and fill materials should be performed to the following recommended percent compaction and moisture content:

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Persigo Village
Job No. 6142J077

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- Place and compact required fill in horizontal lifts at thicknesses consistent with compaction equipment used to achieve uniform densities throughout lift thickness.

It is recommended that all excavation, subgrade preparation, fill placement and asphalt laydown be accomplished under observation and testing directed by the geotechnical/materials engineer to assess compliance with the project requirements.

Sincerely yours,
WESTERN TECHNOLOGIES, INC.

Jim Fife

Reviewed by:

Craig P. Wiedeman, P.E.
Division Manager

Persigo Village
Job No. 6142J077

CALIFORNIA BEARING RATIO RESULTS

Soil: Composite of Clays & Silts

INITIAL COMPACTION DATA	Point 1	Point 2	Point 3
Number of Blows per Layer	15	26	56
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Initial Moisture Content (%)	14.7	17.1	16.1
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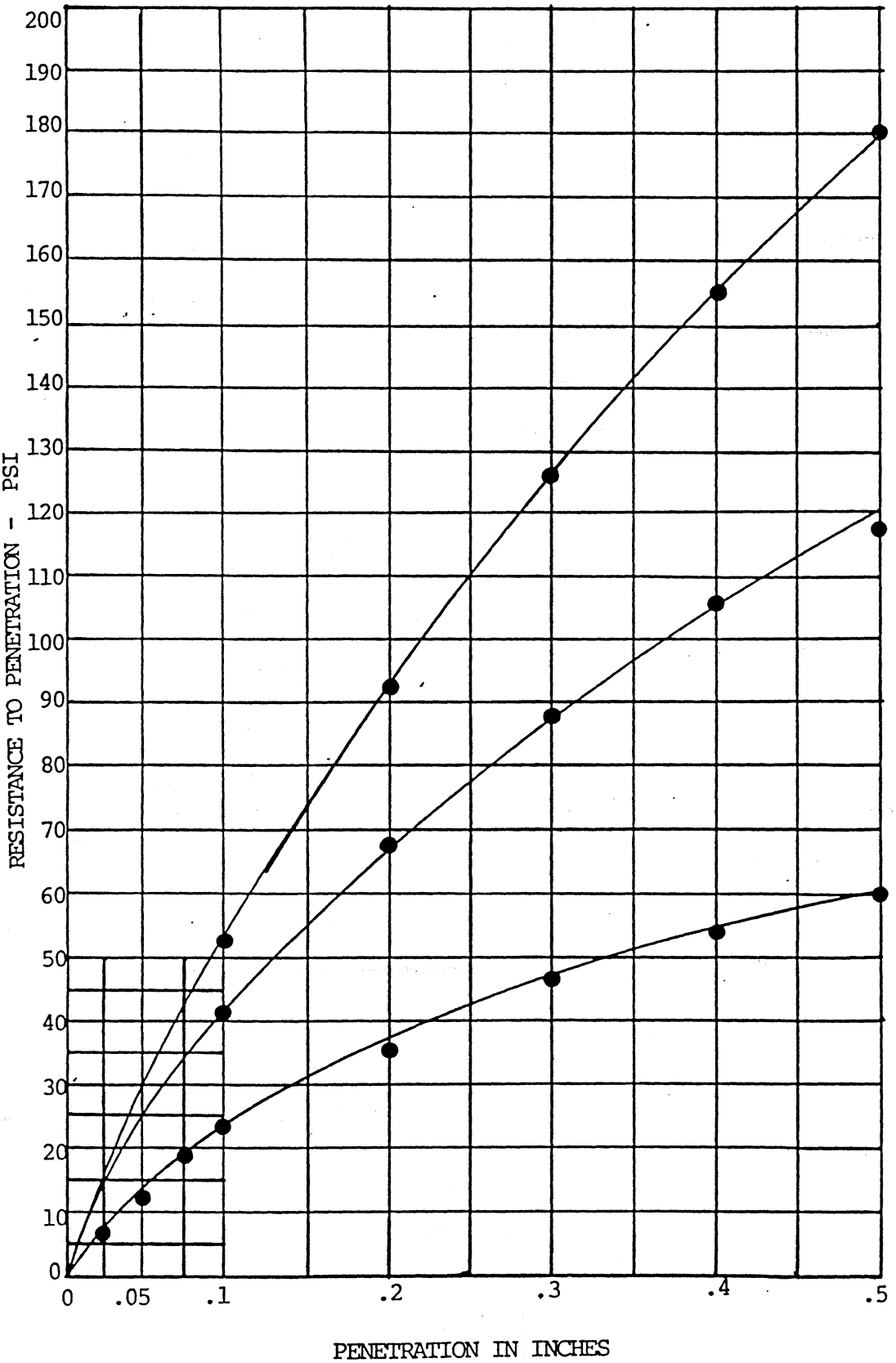
Initial Compaction (%) (Proctor - 110.7 pcf @ 14.0)	91	95	99
SWELL RESULT (4 Days)			
Swell (inches)	.035	.036	.046
Swell (%)	.8	.8	1.0
Soaked Wet Density (PCF)	121.3	126.4	129.3
Soaked Moisture Content (%)	20.1	18.6	17.3
Soaked Dry Density			
Divided by Original M.C.	105.7	107.9	111.4
Divided by Soaked M.C.	101.0	106.6	110.2
PENETRATION TEST RESULTS			
Surcharge Weight (lbs)	12.5	12.5	12.5
Piston Seating Pressure (lbs)	10	10	10
Load for Penetration-Inches	lbs/PSI	lbs/PSI	lbs/PSI
0.025	6.1	12.1	12.1
0.050	12.7	25.8	25.8
0.075	18.5	34.8	37.9
0.100	24.2	42.4	51.5
0.200	34.5	68.2	90.9
0.300	45.8	87.9	127.3
0.400	53.0	105.8	154.5
0.500	60.0	116.7	180.6

Corrected Pressure for Penetration-Inches

	CBR	CBR	CBR
0.10	2.4	4.2	5.2
0.20	2.3	4.5	6.1
0.30	2.4	4.6	6.7
0.40	2.3	4.6	6.7
0.50	2.3	4.5	6.9

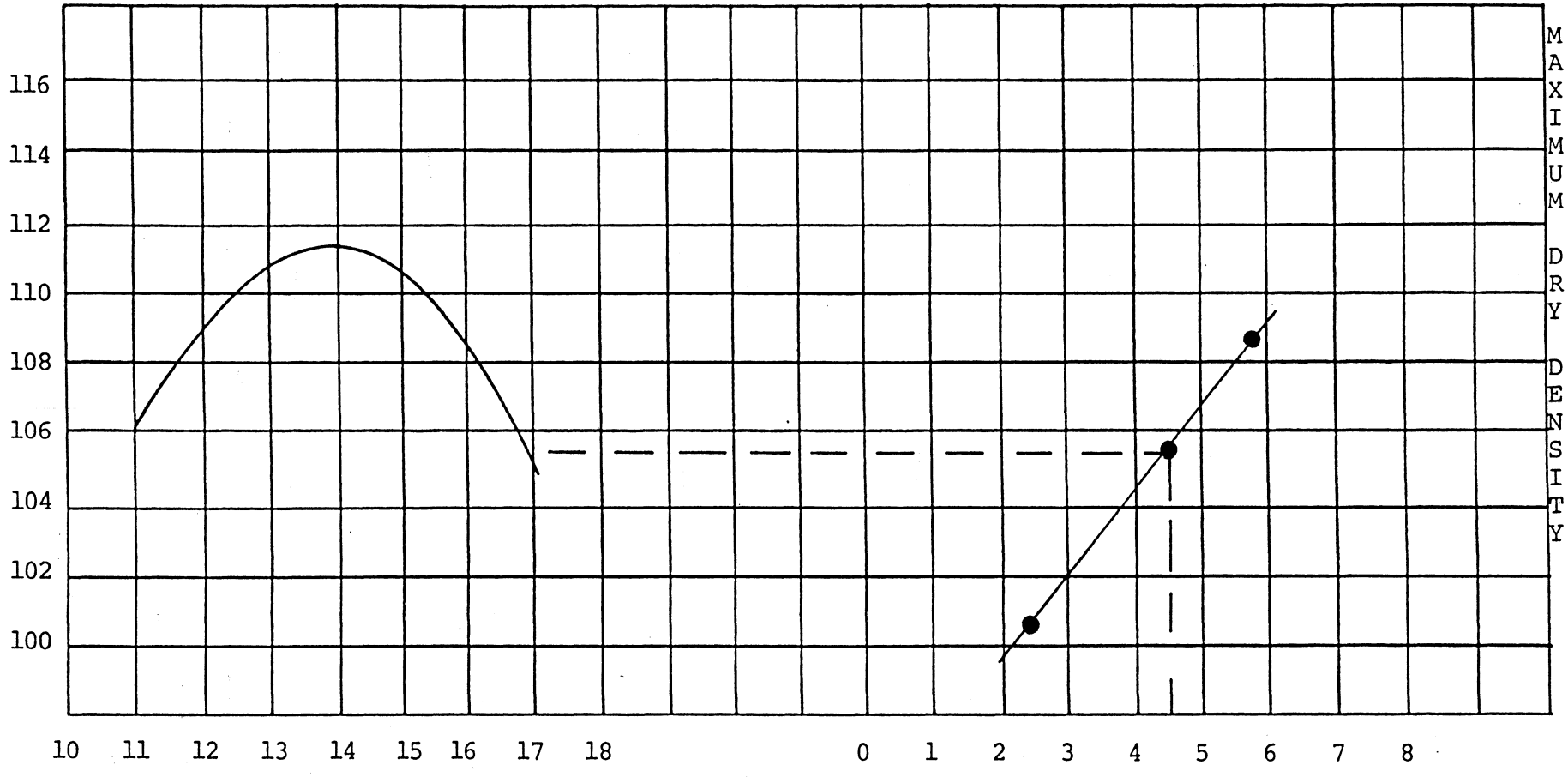
Persigo Village
Job No. 6142J077

CBR STRESS - STRAIN RESULTS



Persigo Village
Job No. 6142J077

MOISTURE DENSITY CBR CURVES



CBR = 4.5
Adjusted = 4

Eagle Crest
COUNTRY CROSSING

STATE OF COLORADO

COLORADO GEOLOGICAL SURVEY
Division of Minerals and Geology

Department of Natural Resources
1313 Sherman Street, Room 715
Denver, Colorado 80203
Phone (303) 866-2611
FAX (303) 866-2461

RECEIVED GRAND JUNCTION PLANNING DEPARTMENT
FAXED 12/15/94 RECD

DEPARTMENT OF NATURAL RESOURCES

Roy Romer
Governor

James S. Lochhead
Executive Director

Michael B. Long
Division Director

Vicki Cowart
State Geologist
and Director

Post-it™ brand fax transmittal memo 7671 | # of pages ▸

To MICHAEL DRILLINGER	From BRIAN
Co.	Co.
Dept.	Phone # 245-4099
Fax # 244-1599	Fax #

December 9, 1994 MA-95-0018

Mr. Tom Dixon
City of Grand Junction Community Development Department
250 North 5th Street
Grand Junction, Colorado 81501

Re: Proposed Country Crossing Subdivision -- Southeast of the Intersection of G Road and 25 Road, Grand Junction

Dear Mr. Dixon:

At your request, we have reviewed the materials submitted for and made a field inspection of the site of the proposed residential subdivision indicated above. We apologize for the delay in our response which has been caused by the large numbers of review requests which we have received lately. The following comments summarize our findings.

(1) The surficial geology of this site is characterized by a clayey residual sandy and silty soil with gravel clasts. The clasts are derived from ancient stream gravels of the ancestral Colorado River and the soil was ultimately derived from the Mancos Shale bedrock and/or stream alluvium. *In situ* gravels are also found at depth in lenses beneath the soil cover. The soils appear to be low density (no data regarding this are presented in the submitted geotechnical report) and are probably susceptible to settlement if subjected to relatively heavy or concentrated loads. The site has a shallow ground-water table caused by infiltration from irrigation-ditch leakage and the its proximity to Leach Creek. The surface drainage is fair to poor because it is nearly level and flat and the soils have slow percolation rates. There is surface evidence of shallow flooding in places on the parcel, especially toward its north end.

(2) Because of the conditions indicated above, the most serious geologic constraints to development of this parcel as planned relate to soils and drainage. Relatively light structures, without basements and founded on shallow spread footings probably will be the

most satisfactory type, structurally, for this area. The surface drainage needs to be improved and the recommendations presented in the submitted drainage plan, if followed, are adequate to do this. Individual building sites should be positively graded so that surface water cannot infiltrate beneath building foundations. If this occurs, foundation damage caused by settlement and possibly soil expansivity and corrosivity could occur. On-lot landscaping irrigation should be kept to a minimum. We strongly recommend that all building sites be investigated by a qualified soils and foundation engineer and that the engineer supervise construction of all foundations. Pavements (concrete and asphalt) that are to receive wheel loads should be placed on properly precompacted subgrades of (preferably) free draining, non-expansive fill materials.

(3) The existing, partially completed townhomes, on the parcel appear to have no damages caused by geologic conditions. However, since they have never been occupied, they have not been adversely affected by common homeowner practices such as landscaping irrigation.

If the recommendations made above and in the submitted geotechnical and drainage reports are followed and made conditions of approval of this revised project, then we have no geology-related objection to it.

Sincerely,

James M. Soule

James M. Soule
Engineering Geologist

STORMWATER MANAGEMENT PLAN

FOR

COUNTRY CROSSING FILINGS NO. 1 AND 2

January , 1995

Prepared For:

Denny Granum
Prudential Monument Realty
759 Horizon Drive, Suite A
Grand Junction, Colorado 81506

Prepared By:

LANDesign LTD.
200 North 6th. Street, Suite 102
Grand Junction, Colorado 81501
(303) 245-4099

Stormwater Management Plan for Country Crossing Filings No. 1 and 2.

Prepared By: _____ 01/05/95
Monty D. Stroup

Reviewed By: _____
Philip M. Hart, P.E.
State of Colorado, #19346

A. Site and Project Description

1. Site Location:

The Country Crossing Filings No. 1 and 2 are located in the City of Grand Junction, State of Colorado, more particularly in the NW 1/4, NW 1/4 of Section 3, Township One South, Range One West, of the Ute Meridian, 39-06-07 Latitude, 108-35 -20 Longitude, (Tax I.D. #2945-03-108 and 114).

Streets in the vicinity include 25 Road running from the south to the north defining the west boundary line of the property. G Road runs from the east to west and defines the north boundary line of the project.

Development in the vicinity and surrounding the site is rural in nature. To the north, south and west are single family residential dwellings on acreage sized parcels. These parcels are typically put to pasture and agricultural uses. To the east is the main line of the Grand Valley Canal with Moon Ridge Falls Subdivision a new single family development beyond.

2. Description of Property:

The entire Country Crossing site contains approximately 46.34 acres and is planned for single family residential lots, duplex townhomes, a multi-family parcel, RV storage area and open space. The total number of residential units planned for the site is 174. Country Crossing Filing No. 1 (3.41 Ac.) is planned for a multi-family tract and 4 single family residential lots. Country Crossing Filing No. 2 (3.78 Ac.) is planned for 21 single family residential lots. Both of the proposed filings are located is the south portion of the Country Crossing development.

Presently there is one single family dwelling, two out-buildings and one multi-family structure on the subject property. The multi-family structure was constructed as part of the original Persigo Village project in 1982 and has never been occupied. Agricultural use of the property has been limited to pasture land and is currently in a fallow state.

3. Description of Proposed Construction Activity:

Activity shall include the construction of roadway, water, sanitary sewer, storm sewer, irrigation, dry utility infrastructures followed by the construction of 25 single family residential structures, 3 multi-family building structures and associated landscaping.

4. Proposed Sequence of Major Construction Activities:

Phase I Clearing and grubbing of proposed roadway alignments and disposal of construction debris.

Phase II Construction of roadways to proposed subgrade elevations including cut and fill activities as required. Excess embankment material to be stockpiled in designated areas.

Phase III Utility infrastructures to be installed including storm sewers and culverts, swales and permanent erosion control features.

Phase IV Curb, gutter and sidewalks installed.

Phase V Clearing, Grubbing and overlot grading of single or multiple lots as sales and market conditions allow.

Phase VI Construction of single or multiple building structures as sales and market conditions allow.

Phase VII Final landscaping of individual lots as required by the project Covenants, Conditions and Restrictions.

5. Estimate of Areas Subject to Clearing, Grubbing and Excavation:

Country Crossing Filing No. 1 and 2 combined contain a total of 7.19 acres. Construction Phases I through IV will consist of approximately 1.72 acres. Phases V through VII will consist of the residual area of 5.47 acres.

6. Preconstruction and Postconstruction Runoff Coefficients:

The historic runoff coefficients ("C") for the 2 year and 100 year storm events respectively are 0.22 and 0.27.

With the construction of proposed roadways coefficients are expected to increase as follows per Reference 12:

Basin I.D.	2 Year "C"	100 Year "C"
A1	0.37	0.44
A2	0.70	0.73
A3	0.70	0.74
A4	0.45	0.50
A5	0.42	0.50
A6	0.42	0.50
A7	0.93	0.95

Note that Basin A1 contains area to be included with future phases of the Country Crossing development.

7. Soil Erosion Potential:

Based on the "Soil Survey, Grand Junction Area" (Reference 8) on and off-site soils are defined as (Bc), Billings silty clay loam, 0 to 2 percent slopes, hydrological soil group "C" (10% of the site) and (Rf), Ravola very fine sandy loam, 0 to 2 percent slopes, hydrological soils group "B" (90% of the site).

Erosion hazard for (Bc) is defined as being "none to slight". Erosion hazard for (Rf) is defined "slight" (Reference 8).

8. Existing Vegetation:

Field inspection of the site reveals various types of plant life indigenous to wetlands on the site within the Leach Creek waterway. These areas are confined to the existing channel area of Leach Creek.

Ground cover on upland areas above Leach Creek includes native and pasture grasses. The estimated existing ground cover for Filing No. 1 and 2 is 80 to 90 percent.

9. Storage of Fuel Oils, Chemicals, Fertilizers or Other Potential Pollution Sources:

The storage of fuel oils, chemicals, fertilizers or other potential pollutants is prohibited without prior written notice to the owner by the contractor, subcontractor or other persons doing work on the site. In the event in becomes necessary to store such items, storage areas shall be designated. Storage areas shall be located above and away from drainages, waterways and other apparent conveyance elements. Appropriate measures shall be taken to protect such areas from spills or vandalism including but not limited to spill control berms and fencing.

10. Anticipated Non-Stormwater Components of Discharge:

Future irrigation facilities include a pressurized under ground system supplied by a storage pond to be located southeast of to Filing 2 in a future phase of the overall development. The irrigation storage pond will serve to water open-space only. Individual lots shall be irrigated with potable water. Tailwater discharge from and through the pond shall be routed via the proposed storm sewer system to Leach Creek.

11. Name and Location of Receiving Waters:

The overall project site is bounded to the north by Leach Creek the flowing from the east to the west, ultimately discharging to the Colorado River.

Leach Creek serves to convey return irrigation water, storm water runoff and ground water from areas northeast of the site.

As defined in the Flood Insurance Study, City of Grand Junction, Colorado (Reference 4), Country Crossing Filings No. 1 and 2 are not within the designated floodway nor the 100 Year Floodplain. A small portion of Filing No. 1 adjacent to 25 Road is within the 500 Year Floodplain, designated as Zone X. This area runs north and south adjacent to 25 Road and is approximately 130 feet wide as measured from the center of 25 Road.

B. Management During Construction

1. Anticipated Problems and Corrective (BMPs) Best Management Practices:

Structural Erosion Control Areas below the toe of fill slopes shall be isolated from fill areas by the installation of prefabricated silt fences as shown on the Drainage and Grading Plan and as detailed on the Erosion Control Plan. Straw bales shall be installed along side and rear yard swales at the locations shown on the plans. Straw bale outlet barriers shall be installed immediately below discharge points and pipe outlets in the locations as designated on the plans.

Non-Structural Erosion Control Disturbed areas not designated for immediate construction or permanent landscaping shall be temporarily re-vegetated. In the event construction activity ceases for a period of 60 calendar days disturbed areas including cut and fill slopes shall be re-vegetated with a annual and perennial seed mixture as indicated on the Erosion Control Plan.

Dust Abatement The contractor shall be required to provide a consistent and reliable source of construction water. Watering to prevent dust shall be ongoing for the duration of the project. In the event high winds and heavy traffic loads create a situation where watering by itself is not sufficient the contractor is to apply an approved dust palliative other than or in addition to water.

Soil Tracking Access to Filing No. 1 and 2 shall be from Country Circle. Where construction traffic enters or exits unimproved areas onto asphalted public roadways a crushed rock construction staging pad shall be installed to minimize soil tracking.

Waste Disposal Construction debris shall be stockpiled in a central location. Debris shall be removed from the site and disposed of at appropriate locations secured by the contractor.

Sedimentation Control The contractor shall be responsible for inspecting the entire site on a weekly basis to ensure compliance and identify existing or potential sedimentation problems. The Final Drainage Study For Country Crossing Filing No. 1 and 2 (Reference 12) identifies one major waterway (Leach Creek) which receives stormwater runoff from the site. This natural drainage is heavily vegetated with dense pockets of brush, willows, trees and native grasses. Based on field investigations the mannings (N) value for each approaches 0.08. This drainage will provide an excellent sediment control and filtering

effect and are to be maintained in their natural state.

A local major drainage channel (Outfall Drainage Channel) is to be constructed onsite to convey developed runoff to Leach Creek. Because all site drainage is to be routed to and along the channel it shall serve as the primary sediment control element for the entire development. Straw Bail Check Structures shall be installed along the channel at minimum 200 foot intervals. Where the outfall channel discharges to Leach Creek a Outlet Straw Bail Barrier shall be constructed. This barrier shall be augmented by the placement of Rip-Rap, size, quantity and location as directed by the engineer.

Final Stabilization and Long Term Management

The project's Covenants Conditions and Restrictions shall obligate each lot owner to fully landscape front yard within 90 days and the rear yard within 1 year from the issuance of a Certificate of Occupancy. Other areas including open-space are to be landscaped by the developer and maintained by the Homeowners Association.

Permanent structural BMP's include pipe outlet protection, rip-rap over filter fabric and grassed and concrete swales as shown on the Drainage and Grading Plan.

Inspection and Maintenance

The Contractor shall be ultimately responsible for compliance and maintenance during construction. The owners representative and the contractor shall make weekly inspections of the site to assure compliance and implementation of the proposed BMPs.

Conclusion

The information contained herein is augmented by the information, calculations and requirements as presented in the Final Drainage Study For Country Crossing Filings No. 1 and 2 (Reference 12). A copy of this report shall accompany the CDPS General Permit application for Stormwater Discharges Associated With Construction Activity.

V. References

1. Stormwater Management Manual, (SWMM), Public Works Department, City of Grand Junction, Co., June 1994.

2. Mesa County Storm Drainage Criteria Manual, Final Draft, Mesa County, Colorado, March, 1992.

3. Flood Hazard Information, Colorado River and Tributaries, Grand Junction, Colorado, prepared for the City of Grand Junction and Mesa County, by The Department Of The Army, Sacramento District, Corps Of Engineers, Sacramento, California, November, 1976.

4. Flood Insurance Study, City of Grand Junction, Colorado, Mesa County, Community Number 080117, Federal Emergency Management Agency, Revised July 15th, 1992.

5. Flood Insurance Study, Mesa County, Colorado (Unincorporated Areas), Community Number 080115, Federal Emergency Management Agency, Revised July 15th, 1992.

6. Flood Insurance Rate Map, City of Grand Junction, Colorado, Mesa County, Community-Panel Number 080117 0003 E, Federal Emergency Management Agency, Map Revised July 15th, 1992.

7. Flood Insurance Rate Map, Mesa County, Colorado, (Unincorporated Areas), Community Panel Number 080115 0460 B, Federal Emergency Management Agency, Map Revised July 15th, 1992.

8. Soil Survey, Grand Junction Area, Colorado, Series 1940, No. 19, U.S. Department of Agriculture, issued November, 1955.

9. Urban Storm Drainage Criteria Manual, Urban Drainage and Flood Control District, prepared by Wright-McLaughlin Engineers, March 1969, Revised May, 1984.

10. Douglas County Storm Drainage Design and Technical Criteria, Addendum A, Erosion Control Criteria, prepared by HydroDynamics Incorporated, Parker, Colorado, October, 1992.

11. Colorado Department of Transportation, Erosion Control and Stormwater Quality Guide, Draft version, November 27, 1992.

12. Final Drainage Study For Country Crossing Filings No. 1 and 2. Prepared By: LANDesign LTD., Grand Junction, Colorado, January 1995.

Seeding

Planting of temporary or permanent vegetation on all disturbed area.

I. Application

Disturbed areas not designated for immediate construction or permanent landscaping shall be temporarily re-vegetated. In the event construction activity ceases for a period of sixty (60) calendar days, disturbed areas including cut and fill slopes shall be re-vegetated with an annual and perennial seed mixture as indicated on the Erosion Control Plan.

II. Site Seed Mixture

15% Annual Rye Grass
25% Perennial Rye Grass
12% Nordan Crested Wheatgrass
12% Fairway Crested Wheatgrass
12% Blue Gramma
12% Red Fescue
12% Buffalo Grass

A minimum of 5 lbs/acre shall be used and planted using drill seeding methods and 10 lbs/acre when using a broadcast method.

III. Construction Guidelines

Seeding in areas that are unirrigated or that are not provided with sprinkling or watering systems, shall be restricted to the seasons described in Table S-1.

Table S-1
Seeding Seasons

ZONE	SPRING SEEDING	FALL SEEDING
Below 6000'	Spring thaw - June 15th	Sept. 1st - Consistent ground freeze
6000' - 7000'	Spring thaw - July 1st	Aug. 15th - Consistent ground freeze
7000' - 8000'	Spring thaw - July 15th	Aug. 1st - Consistent ground freeze
Above 8000'	Spring thaw (starts)	Consistent ground freeze (ends)

For the purpose of Table S-1 "spring thaw" is the earliest date when seed can be buried 1/2 inch into the soil through normal drill seeding methods. "Consistent ground freeze" is that latest date when seed can no longer be buried 1/2 into the soil through normal drill seeding methods. During permanent seeding, apply topsoil prior to applying seed.

When use of fertilizers and herbicides is required, apply according to the manufacturer's recommended rates.

All seeding operations shall be performed at right angles to the slope.

When needed to improve germination of seeds, apply mulching immediately after seeding. Use soil retention blankets on steep slopes (2:1 and steeper). Some locations with 3:1 slopes facing south or west or 20 feet or more high may also require soil retention blankets.

Seeded areas shall be inspected frequently. Areas with failures shall be repaired and reseeded within the planting season.

Mulching

Application of plant residues or other suitable material to the soil surface. Typical mulching material includes straw, hay, and wood cellulose fiber.

I. Application

Used to provide temporary protection for exposed soils against erosion where temporary or permanent seeding operations are not feasible, especially during adverse growing seasons.

Used as part of seeding practices to protect newly seeded areas.

Used to protect soil stockpiles.

II. Use Limitations

Use only on disturbed areas as a temporary cover.

Hydraulic mulching with wood cellulose fibers shall be limited to slopes steeper than 3:1 or where access is limited.

III. Construction Guidelines

Material

Hay shall consist of native grasses free of noxious weed seeds.

Straw shall consist of clean cereal grain.

Wood cellulose fiber shall consist of virgin wood cellulose processed into a uniform fibrous physical state.

Tackifiers (for anchoring) shall consist of a free flowing non-corrosive powder produced from the natural plant gum of Plantago Insularis (Desert Indianwheat). This material shall not contain any mineral filler, recycled cellulose fiber, clays, or other substances which may inhibit germination or growth of plants.

Spreading Procedure

Hay and straw mulch shall be spread at a rate of two tons per acre.

At a minimum, 50% of the mulch, by weight, shall be 10 inches or more than two inches.

Applied mulch shall reach a uniform distribution so that no more than 10% of the soil surface shall be exposed.

Hay and straw mulch shall be anchored to the soil surface using Tackifiers, blankets, or nets, or with a mulch crimping machine., Mechanical anchoring is preferred and recommended for slopes flatter than 3:1. When using blankets or nets, these may need to be anchored to the soil with staples, or as required by the manufacturer's specifications.

Wood cellulose fiber mulch shall be mixed with water (maximum 50 lbs. of wood cellulose per 100 gallons of water) and a tackifying agent. Application shall be at a rate of 1500 pounds per acre with a hydraulic seeder or mulcher.

Tackifiers (for anchoring) shall be applied in a slurry with water and wood fiber (100 lbs. of powder and 150 lbs. of fiber per 700 gallons of water). Application rate of the powder shall be 100 lbs. per acre.

Erosion Bale

A temporary sediment barrier consisting of a row of entrenched and anchored straw, or hay bales.

I. Application

Use as filters along the toe of fills.

Use as erosion checks in ditches.

Use for diversions and filters in unfinished drop inlets, culvert inlets, and outlets.

II. Use Limitations

Do not use if size of the drainage area is greater than 1/4 acre per 100 feet of barrier length.

Maximum slope length behind the barrier is 100 feet.

Maximum slope gradient behind the barrier is 50%.

In minor swales or ditch lines where the maximum contributing drainage area is no greater than one acre.

Where effectiveness is required for less than 3 months.

Under no circumstances should erosion bale barriers be constructed in active streams or in swales where there is the possibility of a washout.

Should be used only in areas of sheet flow or very low flow.

Not to be used where the control of sediment is critical or in high risk areas.

Not to be used where it cannot be entrenched as required and firmly anchored. Useful life of erosion bale barriers is relatively short; the barrier may have to be replaced one or more times during construction.

III. Construction Guidelines

All bales shall be either wire-bound or string-tied. Erosion bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of bindings).

The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built up to 4 inches against the uphill side of the barrier.

Each base shall be securely anchored by at least two 2"X2" stakes or #4 rebars driven toward the previously laid bale to force the bales together. Stakes or rebars shall be driven 12 inches minimum into the ground to securely anchor the bales.

The gaps between bales shall be filled by wedging with straw to prevent water from escaping between the bales. The main consideration is to obtain tight joints. Erosion bales will not filter sediment out of the water if the water is allowed to flow between, around, or under the bales. Loose straw or hay scattered over the area immediately uphill from an erosion bale barrier tends to increase barrier efficiency.

Since erosion bales deteriorate quickly, the inspection during construction shall be frequent and repair or replacement shall be made promptly as needed.

Erosion bales shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

Trenches where erosion bales were located shall be graded and stabilized.

Sheet Flow Applications

Bales shall be placed in a single row, lengthwise on the contour with ends of adjacent bales tightly abutting.

Channel Flow Applications

Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.

The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

Silt Fence

A temporary vertical barrier of filter fabric attached and supported by posts and entrenched to the ground.

I. Application

Used to intercept and detain small amounts of sediment from disturbed areas during construction operations to prevent sediment from leaving the site.

Used to decrease the velocity of sheet flows and low-to-moderate level channel flows.

Typically used along the toe of fills, in transition areas between cut and fills, adjacent to streams and along private property.

Also used around median and yard inlets as applicable, and behind curb and gutter to prevent silting of the pavement.

II. Use Limitations

Where the size of the drainage areas is no more than 1/4 acre per 100 feet of silt fence length; the maximum slope length behind the barrier is 100 feet; and the maximum gradient behind the barrier is 50% (2:1).

On steep slopes care should be given to placing alignment of fence perpendicular to the general direction of the flow.

Should not be used in areas where rocky soils will prevent keying in the filter fabric.

III. Construction Guidelines

Materials

The synthetic filter fabric shall conform to the requirements described in CDOT's Standard Specifications for Road and Bridge Construction.

The Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

If a burlap is used, it shall be purchased in a continuous roll and cut to the length of the barrier to avoid than use of joints and thus improve the strength and efficiency of the barrier.

Posts for silt fences shall be metal or hardwood with a minimum length of 42 inches. Pine wood shall not be used. Wood posts shall have a minimum diameter or cross section of 1.25 inches. Metal posts shall be "studded tee" or "U" type with minimum weight of 1.33 lbs/lin. ft., and they shall be protected against corrosion. Metal posts should also have projections for fastening wire to them.

Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.

Installation

Silt fences must be located along a terrain contour and the area below the fence must be undisturbed or stabilized.

The posts shall be driven vertically into the ground to a minimum depth of 18 inches.

A trench shall be excavated approximately 6 inches wide and 6 inches deep along the line of posts and upslope from the barrier; the bottom one foot of the filter fabric shall be buried into this trench.

The trench shall be backfield and the soil compacted.

The filter materials shall be fastened securely to metal or wood posts using wire ties, or to the wood posts with 3/4 inches long #9 heavy duty staples. Filter material shall not be stapled to existing trees.

If a filter barrier is to be constructed across a ditch line or swale, the barrier shall be of sufficient length to eliminate end flow, and the plan configuration shall resemble an arc or horseshoe with the ends oriented upslope.

When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.

When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 3/4 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.

When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of the above item applying.

Silt fences shall be periodically maintained to prevent sediment from passing over or under the fence. Sediments shall be removed from behind the silt fence when it accumulates to one-half the exposed fabric height.

Filter barriers shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Sheet Flow Applications

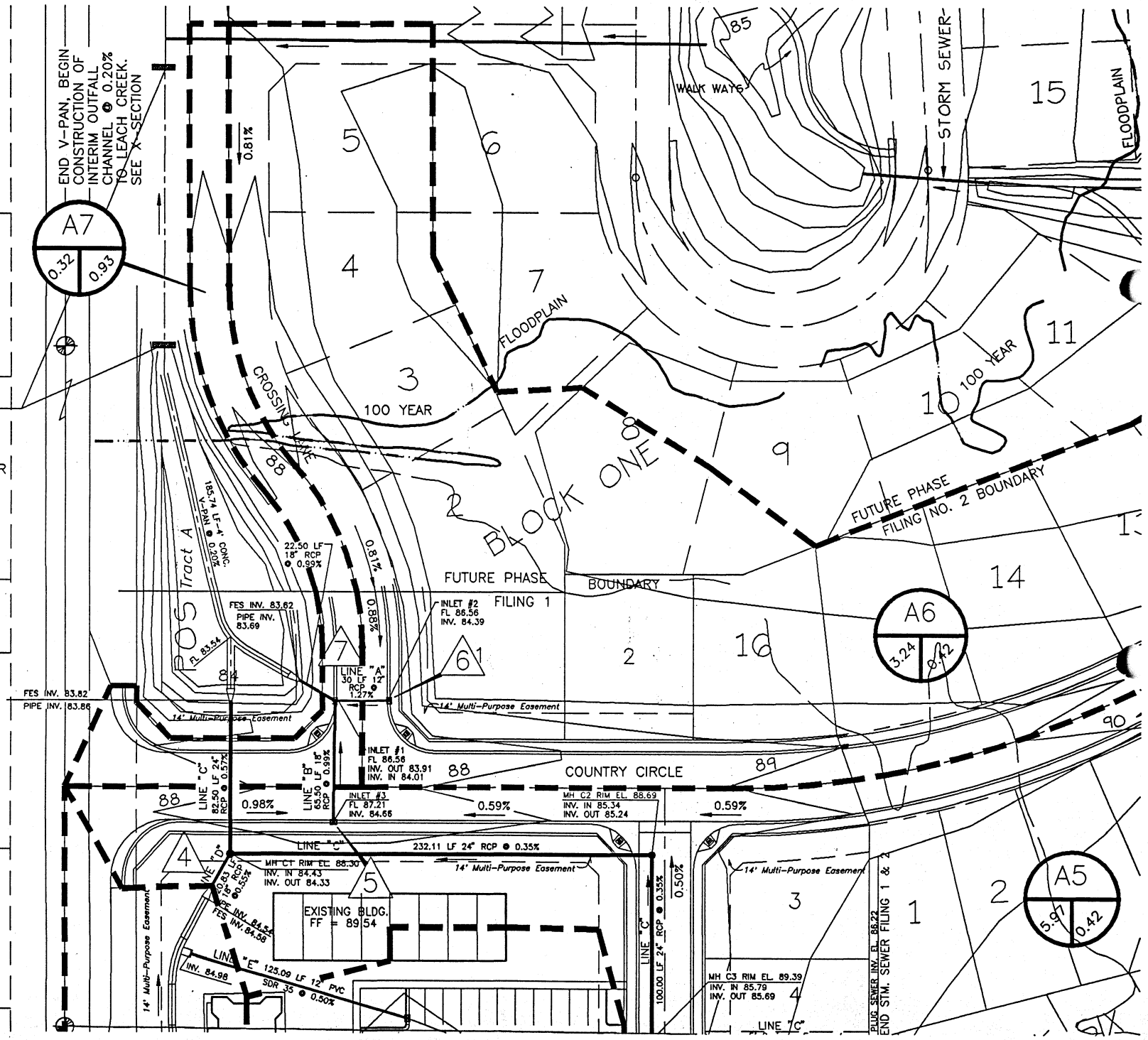
The height of the silt fence shall be minimum 22 inches and shall not exceed 36 inches; higher fences may impound volumes of water sufficient to cause failure of the structure.

Posts shall be spaced a maximum of 10 feet apart. If an extra strength filter fabric without the wire support fence is used, maximum space shall not exceed 6 feet.

Channel Flow Applications

The height of the silt fence shall be a minimum of 15 inches and shall not exceed 18 inches.

Posts shall be spaced a maximum of 3 feet apart.



STRAW BAIL CHECK STRUCTURES TO BE INSTALLED ALONG OUTFALL CHANNEL AT MIN 150 FOOT INTERVALS TO LEACH CREEK. INSTALL OUTLET STRAW BAIL BAARIER AT LEACH CREEK AS DIRECTED BY THE ENGINEER

EXHIBIT 1.0

GENERAL PERMIT APPLICATION

STORMWATER DISCHARGES ASSOCIATED WITH:

CONSTRUCTION ACTIVITY

(Permit No. COR-030000)

FOR AGENCY USE ONLY									
Certification Number									
C	O	R	-	0	3				

Date Received	Fee Category
Year Month Day	

Please print or type. All items must be completed accurately and in their entirety or the application will be deemed incomplete and processing of the permit will not begin until all information is received. Please refer to the instructions for information about the required items. An original signature of the applicant is **required.**

1. **Name and address of the permit applicant:**

Name Denny Granum

Mailing Address C/O Monument Realty, 759 Horizon Dr., Ste. A

City, State and Zip Code Grand Junction, CO 81506

Phone Number (303) 243-4890 Taxpayer (or Employer) ID 84-0632741

Who is applying? Owner ☐ Developer ☒ Contractor ☐

Entity Type: Private ☒ Federal ☐ State ☐ County ☐ City ☐ Other: _____

Local Contact Thomas Logue, LANDesign LTD, 200 N. 6th St., Grand Junction, CO 81501

Title General Partner Phone Number (303) 245-4099

2. **Location of the construction site:**

Street Address 25 Road and G Road

City, State and Zip Code Grand Junction, CO 81505

County Mesa Name of plan of development Country Crossin Filing No. 1 and 2

Township, Range, section, 1/4 section T.1S.,R.1W., U.M., Section 3, NW 1/4

Latitude and Longitude 39-06-07 Latitude, 108-35-20 Longitude

3. **Briefly describe the nature of the construction activity:**

Single family and multi-family residential construction including associated sewer, waterline, storm sewer, roadways and dry utilities.

4. **Anticipated construction schedule:**

Commencement date: February 1, 1995 Completion date: July 30, 1995

5. **Area of the construction site:** Total area 7.19 AC.

Area to undergo excavation or grading: 7.19 AC., Phased

6. **The name of the receiving stream(s). (If discharge is to a ditch or storm sewer, also include the name of the ultimate receiving water):** Leach Creek and subsequently the Colorado River.

7. **Other environmental permits held for this construction activity (include permit number):**

None

8. **Stormwater Management Plan Certification:**

I certify under penalty of law that a complete Stormwater Management Plan, as described in Appendix A of this application, has been prepared for my facility. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations.

Signature of Applicant — Date Signed: 1-5-95

Denny Granum, President

Name (printed) — Title

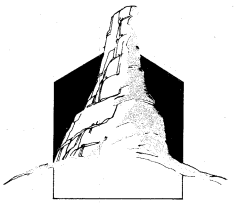
9. **Signature of applicant:**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Signature of Applicant — Date Signed: 1-5-95

Denny Granum, President

Name (printed) — Title



Monument Homes
Development, Inc.

November 22, 1995

Larry Timms
Community Development Dept.
250 North 5th Street
Grand Junction, Colorado

Re: Country Crossing final approval extension

Dear Larry,

As we are nearing the deadline for having Filing One (December 6, 1995) completed with all conditions met; we are experiencing certain delays brought upon us due to the holidays, and the availabiltiy of certain persons. Final approval for Filing Two, with disbursement agreement and all other conditions being met is scheduled for a deadline in late January or early February.

Since we are planning to do the improvements and actually construct homes in both Filings One and Two right from the start; we would like to request that the deadline for Filing One be extended to the Filing Two deadline date. At that time, we would anticipate that we would have our Disbursement Agreement in place and have met the balance of all other conditions.

We would appreciate your consideration in this matter Larry. Should you require further information, please feel free to call me.

Respectfully,

Denny Granum

759 Horizon Drive, Suite A Grand Junction, CO 81506 (303) 243-4890 FAX (303) 241-6743

GENERAL PROJECT REPORT FOR:

COUNTRY CROSSING SUBDIVISION

January 31, 1996

INTRODUCTION:

The accompanying narrative and maps will provide sufficient data to assess the merits of the requested Final Plat/Plan for a Major Subdivision. Information gained as a result of the review process will be utilized in the preparation of Final Construction drawings for each filing of the project. This project was formerly known as "Persigo Village" and later as "Trolley Gate". The prior development proposal gained a change in zoning (PR 17) and Preliminary Plan approval from the City of Grand Junction in 1981. This is the second Final Plat/Plan submittal for Country Crossing which was originally approved in late part of 1994 and the early part of 1995.

PROJECT DESCRIPTION:

Country Crossing Subdivision is located at the intersection of 25 Road and G Road, more specifically the southeast corner, adjacent to the Grand Valley Canal. The subject property contains approximately 46.3 acres. The current zoning for this property is Planned Development (overall density = 3.75), which was changed from PR 17 approximately 14 months ago through the last submittal of this project. The project can be described as in part of the NW 1/4, NW 1/4 of Section 3, Township One South, Range One West, of the Ute Meridian.

The proposed project calls for the ultimate development of 95 single family dwellings, 31 duplex/multi-family dwellings and 48 townhome/multi-family dwellings. This will yield an overall density of 3.75 units per acre for the development. The accompanying Final Plat/Plan depicts the relationship of each dwelling unit to the property boundary, filing boundaries, surrounding subdivisions and roadway access.

Other developments in the area include, Moonridge Falls Subdivision and Valley Meadows Subdivision, as well as a number of proposed subdivisions.

Located at the end of this report, a zoning map is provided to show the zoning of land around the proposed development. This shows the relationship of the subject property to the surrounding land and accompanying zoning of each

parcel. The following Land Use Chart outlines the project and the specific uses under developed conditions:

LAND USE CHART			
USE	UNITS	AREA (AC)	% OF TOTAL
SINGLE FAMILY UNITS	95	17.2	37.1
TOWNHOME UNITS	48	3.7	8.0
DUPLEX UNITS	31	3.3	7.1
ROAD R.O.W.	-	7.2	15.6
R.V. STORAGE	-	0.7	1.5
PRIVATE OPEN SPACE	-	4.8	10.4
PUBLIC OPEN SPACE	-	4.9	10.6
OUTLOT "A"	-	0.8	1.7
LEACH CREEK OPEN SPACE	-	3.7	8.0
TOTAL	174	46.3	100

EXISTING LAND USE:

The subject property contains approximately 46.3 acres, and is currently occupied by an unfinished eight unit townhome structure. This structure will be rehabilitated and completed in Filing Four of this project. The most dominate feature of the property is Leach Creek which lies along the north portion of the site. Other than Leach Creek, the topography of the site is considered to be "flat" in nature, and generally slopes to the northwest at a rate of one percent. Grazing activity has occurred in the past on the property, but not in recent years. Several small groves of cottonwood trees are located on the property.

PUBLIC BENEFIT:

The proposed Country Crossing Subdivision will provide the residents of the area to a quality land development product which will be designed, constructed and maintained in accordance with the City of Grand Junction's standards. The immediate area near the subdivision is an area which has recently seen similar developments. Fountainhead, Moonridge Falls and Valley Meadows are all subdivisions which are similar in impact to Country Crossing. There are also a number of proposed subdivisions which are similar to Country Crossing. This project will enhance the area and provide single family and multi-family homes which coincide with the surrounding land use.

PROJECT COMPLIANCE, COMPATIBILITY AND IMPACT:

Zoning -- As stated earlier, this is the second Final Plat/Plan submittal for this project. The zoning for this property is Planned Development, with a resulting density of 3.75 units per acre for the overall project.

Surrounding Land Use -- The surrounding land use consists of a number of recently built subdivisions. Moonridge Falls and Valley Meadows are located to the east, with densities of 2.3 to 3.8. Located to the northwest, Fountainhead Subdivision is built on smaller sized lots. Sunset Village, proposed development has recently been annexed by the City to zone RSF-4. "Country Village" located directly south of the project, is a large parcel zoned for up to 21 units per acre, although there are no current plans for development. From the surrounding developments, Country Crossing Subdivision is similar in density, therefore it is compatible with nearby developments.

Site Access and Traffic Patterns -- Primary site access will be gained from 25 Road, shown on the Site Plan and Outline Development Plan for this submittal. The roads which will convey traffic through the project will be either a "Urban Residential Street" or a "Urban Residential Collector". The overall plan calls for two access points from 25 Road. There are no other access points provided due to Leach Creek to the north, Grand Valley Canal to the east and private land to the south. Patterson Road is located 1/2 mile to the south of the project and serves as a major east/west arterial in Grand Junction. G road is located to the north of the project and provides access to U.S. Highway 50 to the west. Interstate I-70 is located near the project approximately 1 1/2 mile to the northwest. According to the City of Grand Junction's, *Trip Generator*, 1429 average daily trips will be realized once Country Crossing is completed.

Utility Service -- With recent development in the area, all major utilities are located near the subject property.

Domestic Water -- All dwellings within Country Crossing Subdivision will be served by a publicly owned domestic water distribution system. Existing 6 and 12 inch water mains are located within 25 Road and will be used to provide water service. New 8, 6 and 4 inch lines will be extended within the property. The existing water mains are owned and maintained by Ute water Conservancy District. Fire hydrants will be placed throughout the development, and sufficient flows and pressure exist to provide adequate water supply for fire protection.

Sanitary Sewer -- A new sanitary sewage collection system will be constructed throughout the development. Sewer service will be extended from an existing line, owned and maintained by the City, located in 25 Road. It is estimated that peak sewage flows generated by the lots within the development will be 52,500 gallons per day.

Electric, Gas, Phone & CATV -- All other utilities will be extended from adjacent properties and provided to each lot.

Irrigation Water -- Irrigation water will be provided by a zoned pressurized delivery system. A central pumping station will be constructed within the Private Open Space near the southeast corner of the property, where water rights are located.

Drainage -- A Final Drainage Report is also being submitted for review.

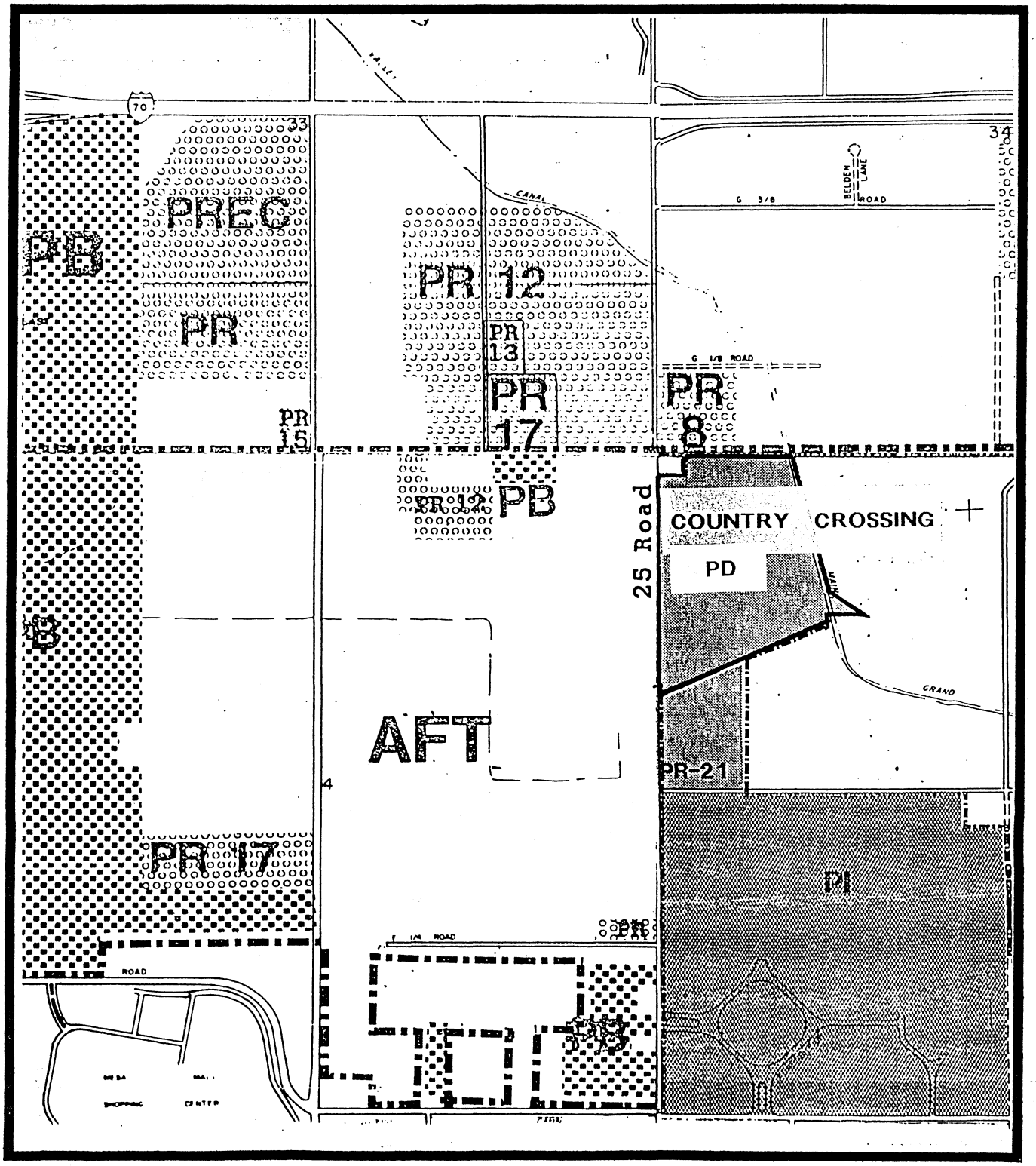
SITE SOILS AND GEOLOGY:

There is no known geologic hazards within Country Crossing Subdivision. A Geotechnical Report has been submitted for review. This report does not identify any limitations located on the subject property.

DEVELOPMENT SCHEDULE:

The rate at which development of Country Crossing Subdivision will occur is dependent on the City's future housing needs. It is expected that site development will occur in phases, and will occur when Final Construction Drawings have been approved.

SURROUNDING ZONING MAP



LANDesign
ENGINEERING • SURVEYING • PLANNING

February 1, 1996

Michael Drollinger
City of Grand Junction
Community Development Department
Grand Junction, CO 81501

Re: Country Crossing Subdivision

Dear Michael:

This letter is to inform you of the reasons surrounding the accompanying Final Plat/Plan submittal for Country Crossing. A submittal package for all entities involved has been prepared along with this correspondence.

Because of development schedules and market demand, Denny Granum, the developer of the project, has decided to change Filings One and Two. The townhome units in Filing One, as well as some of the lots in Filing Two directly across the street will now be located in Filing Four. All the pertinent drawings have been changed to reflect these changes.

Please do not hesitate to contact our office if there are any questions regarding the change in plans.

Sincerely,

Brian C. Hart

Brian C. Hart, E.I.

259 Grand Ave. • GRAND JUNCTION, CO 81501 • (970) 245-4099 • FAX (970) 245-3076

REVIEW COMMENTS

FILE #FPP-96-20

TITLE HEADING: Revised Preliminary & Final for Filings #1 & #2 - Country Crossing

LOCATION: SE corner 25 & G Roads

PETITIONER: Country Crossing LLC

PETITIONER'S ADDRESS/TELEPHONE: 759 Horizon Drive, Suite A
Grand Junction, CO 81506
243-4890

PETITIONER'S REPRESENTATIVE: Brian Hart, LANDesign

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., FEBRUARY 23, 1996.

GRAND VALLEY IRRIGATION **2/5/96**
Phil Bertrand **242-2762**

1. See comment sheets dated 11/11/94 and 01/12/95.
2. Clarification of canal right-of-way must be declared.
3. Single point of delivery must be declared and established.
4. What are your plans for Lot D and Lot E. We need to know.

CITY UTILITY ENGINEER **2/8/96**
Trent Prall **244-1590**

SEWER - CITY

1. Please include Exhibit "I" of the City of Grand Junction Standard Sanitary Sewer Details on construction set of plans.
2. Locations of manholes need to be identified either by coordinates, bearings, or offsets from property lines.
3. At the end of Crossing Circle and Crossing Street, please correct spelling of "Stub" of inform me of the definition of "Sutb".

WATER - UTE

1. Please provide a sign-off block for Ute Water on final construction plans.

PUBLIC SERVICE COMPANY **2/8/96**
Jon Price **244-2693**

Electric transformers and/or pedestals may need to be installed in center of lots due to water pits being located next to lot lines. This will increase cost of electric facilities that will be passed on to developer.

CITY POLICE DEPARTMENT **2/8/96**
Dave Stassen **244-3587**

Is there going to be a fence on 25 Road? If so, I would recommend some type of transparent fencing. This proposal does not appear to pose any other problems for the Police Department.

UTE WATER **2/9/96**
Gary R. Mathews **242-7491**

1. This project will connect to the 12" main located on the West side of 25 Road. Contact with Ute Water is needed to discuss the water valve locations and some additions.
2. The proposed 8" water main for Crossing Street needs extended to the far south end of Lot 5.
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 will install meter pits and yokes for a complete installation. Ute Water will furnish the meter pits and yokes.
5. Policies and fees in effect at the time of application will apply.

TCI CABLEVISION **2/9/96**
Glen Vancil **245-8777**

See attached comments.

GRAND JUNCTION FIRE DEPARTMENT ***2/9/96***
Duncan Brown ***244-1414***

1. FILING #1 & #2 - Hydrant spacing is adequate with appropriate underground service. Plans do, however, show the 8" water service connected to a 6" feeder on 25 Road. General project report states that existing 6" and 12" water mains on 25 Road to be used for water service. The Fire Department is requiring that the 8" water service in the subdivision be hooked up to the 12" feeder on 25 Road instead of the 6" feeder.
2. Road widths and turnarounds are acceptable for emergency vehicle access.
3. GENERAL - Plans with utility composites must be submitted for future development of Filings #3 & #4 and any future filings. Previous comments of loop water line still apply for entire project (FPP-95-10),

U.S. WEST **2/9/96**
Max Ward **244-4721**

For timely telephone service, as soon as you have a plat and power drawing for your housing development, please:

MAIL COPY TO:
U.S. West Communications
Developer Contact Group
P.O. Box 1720
Denver, CO 80201

AND

CALL:
Developer Contact Group
1-800-526-3557

WE NEED TO HEAR FROM YOU AT LEAST 60 DAYS PRIOR TO TRENCHING.

CITY DEVELOPMENT ENGINEER **2/14/95**
Jody Kliska **244-1591**

1. The improvements agreement does not appear to match the submitted plans. Please see the attached marked-up, highlighted estimate of costs.
2. The pavement design as submitted is rejected. The design recommended in 1982 was designed according to the Asphalt Institute replacement method. City requires design in accordance with CDOT methods. Alternate sections A, D or E as shown in the report will be acceptable as these appear to be designed with the CDOT criteria or a new pavement design report can be submitted. An updated pavement report was required in the comments on 1-18-95 but was ignored. The improvements agreement estimate did not include any sub-base material.
3. The right turn lane on 25 Road needs to be designed in accordance with the TEDS manual requirements. A straight taper to the intersection is not acceptable.
4. Has the stormwater management plan been submitted to the State Health Department.
5. Lot E shown on the plat appears to become a landlocked parcel with this plat. What is its disposition?

U.S. POSTAL SERVICE **2/14/96**
Mary Barnett **244-3434**

Repetition of street names will always be a problem for delivery of mail to the customer. Crossing Street, Lane and Circle are problems. Any **similar** street addresses on theses streets will delay mail service.

CITY PARKS & RECREATION DEPARTMENT **2/12/96**
Shawn Cooper **244-3869**

Need to consider park land adjacent to south easterly property corner in order to serve a larger future population, also might be possible to provide access and additional land in the future from other developments. What is proposed locations for land uses stated on Page 2 of Project Report? What happens at Leach Creek and canal easement?

Open Space Fees - 174 units x $225 = $39,150.00.

CITY PROPERTY AGENT **2/15/96**
Steve Pace **256-4003**

SHEET 1 of 3

1. Multi-purpose utility, pedestrian and drainage easements are addressed in the dedication but are not shown on the plat.
2. On the easterly boundary: 1) should there be a monument at the NE corner and b) what type of monument was found at P.C. of curve.
3. There is a one second discrepancy in the bearing N00°00'50"E (plat) N00°00'51"E (description).

SHEET 2 of 3

1. Is all of Outlot "A" a drainage easement?
2. Utility easements are addressed in the dedication, but are not shown on the plat.
3. Need to fill in the book and page for the original warranty deed in the dedication.

SHEET 3 of 3

1. Utility and drainage easements are addressed in the dedication, but are not shown on the plat.
2. Need to fill in the book and page for the original warranty deed in the dedication.

COMMUNITY DEVELOPMENT DEPARTMENT **2/15/96**
Michael Drollinger **244-1439**

1. Please provide a development schedule (including number of phases, expected completion dates) for the entire project to be reviewed and acted on the Planning Commission as part of the amended preliminary plan request.
2. A new development phasing map is required which reflects the modifications proposed.

GRAND JUNCTION DRAINAGE DISTRICT **2/15/96**
Donna Garlitz **242-4343**

There is an existing drainage ditch along the southwesterly side of the Grand Valley Irrigation Company Canal known as the Rice Drain. It is located within an area indicated as "Lot D" of Country Crossing Subdivision, dated February 1996, Sheet 1 of 3. The District will need the property owner to grant an easement for this existing open drain by a separated document and identified by Book and page on the plans. The document can be prepared by the District and signed by the property owner before this plat is recorded. A portion of the Rice Drain has been piped and the easement for the piped portion is recorded at Book 973, Pages 889-890. The existing easement should be identified on the plat and the Book and Page noted. These easements should be granted before the District can approve this subdivision plan.

TO DATE, COMMENTS NOT RECEIVED FROM:
City Attorney
Mesa County Surveyor
Persigo Wash Wastewater Treatment Facility

We're taking television into tomorrow.

TCI Cablevision of Western Colorado, Inc.

February 9, 1996

Country Crossing Sub.
Denny Granum
% Community Development Department
250 North 5th Street
Grand Junction, CO 81501

Ref. No. CON19603

Dear Mr. Granum;

We are in receipt of the plat map for your new subdivision, **Country Crossing Sub.**. 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 and when a roadbore is required, that too must be provided by the developer. The trench and/or roadbore may be the same one used by other utilities so long as there is enough room to accommodate all necessary lines.

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

Glen Vancil,
Construction Supervisor 245-8777

2502 Foresight Circle
Grand Junction, CO 81505
(970) 245-8750

STAFF REVIEW

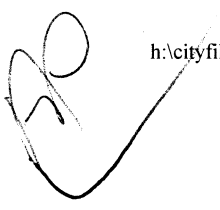
FILE: #FPP-96-020
DATE: February 15, 1996
STAFF: Michael Drollinger
REQUEST: Amended Preliminary Plan, Final Plan/Plat Filing #2 & Rezone - Country Crossing
LOCATION: SE Corner 25 Road and G Road
ZONING: PR-17

STAFF COMMENTS:

1. Please provide a development schedule (including number of phases, expected completion dates) for the entire project to be reviewed and acted on by the Planning Commission as part of the amended preliminary plan request.

2. A new development phasing map is required which reflects the modifications proposed.

Please contact the Community Development Department if you have any questions or require further explanation of any item.



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February 23, 1996

Michael Drollinger
City of Grand Junction
Community Development Department
Grand Junction, CO 81501

Re: Country Crossing, Response to Comments

Dear Mr. Drollinger:

This letter is in response to review comments on Country Crossing Subdivision.

GRAND VALLEY IRRIGATION COMPANY:

1. Past comments are taken under consideration.

2. The right-of-way dedication on the plat shows a dimension of 80 feet of right-of-way for the canal.

3. A single point of delivery will be declared at a time when future filings are planned and scheduled.

4. Lot D is being allocated for open space which will not interfere with the right-of-way for the canal. Lot E will not be improved during any stage of development because of the secluded and irregular nature of the lot.

CITY UTILITY ENGINEER:

1. Exhibit "I" is included in the drawing set under the title "Sewer and Water Details", which is sheet 15 of 16.

2. Locations of manholes have been identified by coordinates, as requested.

3. The text "Sutb" is a spelling error and has been changed to "Stub".

4. A sign-off block was provided for Ute Water Conservancy District.

PUBLIC SERVICE COMPANY:

Ute Water requires that water services be located on either side of a lot line between two lots. This leaves the other lot line for electric transformers or pedestals.

CITY POLICE DEPARTMENT:

It is not anticipated that a fence will be installed on 25 Road.

UTE WATER CONSERVANCY DISTRICT:

1. The water connection for the project will be via the 12" water line in 25 Road, and the plans have been changed accordingly.

2. After consulting with Gary Mathews from Ute Water, it was decided that the 8" water line stub location in Crossing Street will not be altered in length, but a valve shall be installed at the end of the stub for future filings. Plans have been changed accordingly.

Comments 3 - 5 are common and are taken under consideration.

TCI CABLE:

The comments from Glen Vancil are typical for subdivision projects and are taken under consideration.

GRAND JUNCTION FIRE DEPARTMENT:

1. Water service will be connected to the 12" water line in 25 Road instead of the 6" line located on the east side of the road.

2. No Comment.

3. Utility Composites will be compiled for future filings of Country Crossing Subdivision, and a looped water line will be constructed with future filings.

U. S. WEST:

No Comment.

CITY DEVELOPMENT ENGINEER:

1. A revised improvements guarantee is included with this letter addressing all of the highlighted items.

2. Alternate pavement section "E" suggested by Jody Kliska has been chosen as the pavement section for the street improvements. The plans and improvements guarantee have been revised to reflect the change.

3. The right turn has been changed on the plans to reflect a design consistent with the TEDS manual. A lane 12 feet wide with a stacking distance 100 feet, and a taper of 13:1 to the existing pavement has been provided.

4. The Stormwater Management Plan will be submitted a minimum of 30 days prior to construction.

5. Because of the secluded and irregular nature of Lot E, no improvements are planned for the lot during any phase of development of Country Crossing.

U. S. Postal Service:

The comment made by Mary Barnett is taken under consideration.

City Parks and Recreation Department:

The Outline Development Plan has already been approved and major changes to the plans would result in modifying the Open Space. There are no plans for improvements to Lot "E" across the canal. Public Open Space consists of the land west and directly adjacent to the Grand Valley Canal, and the Private Open Space consists the remaining land devoted to Open Space. Leach Creek will be left in its current state and the canal right-of-way is 80 feet, shown on the Plat.

City Property Agent:

All the comments presented by the City Property Agent have been addressed as shown on the face of the plat.

Community Development Department:

1. A revised development schedule with anticipated starting and completion dates has been included with this letter.

2. A development phasing map has also been included with this letter which reflects the future filing locations as well as the modified Filings One and Two.

Grand Junction Drainage District:

The Plat has been revised to reflect the Rice Drain easement and the existing easement for the section of Rice Drain which has been piped.

I hope this answers any question and comments that have arisen regarding Country Crossing Subdivision. Please feel free to contact me at our office if there are any other questions that surface.

Sincerely,

Brian C. Hart

Brian C. Hart, E.I.

encl.: Revised Plans, Development Schedule, Revised Phasing Map

STAFF REVIEW

FILE: FPP-96-020

DATE: February 28, 1996

STAFF: Michael T. Drollinger

REQUEST: Rezone
Amended Preliminary Plan
Final Major Subdivision Plan/Plat Filing #1 & #2
COUNTRY CROSSING SUBDIVISION

LOCATION: SE Corner 25 Road and G Road

APPLICANT: Country Crossing, LLC
759 Horizon Drive
Grand Junction CO 81506

EXECUTIVE SUMMARY:

A request for rezone, amended preliminary plan, and final plat/plan (Filings #1 & #2) approval of Country Crossing Subdivision located at the SE corner of 25 Road and G Road. Filing #1 consists of three new building lots while Filing #2 contains 21 lots. The petitioner is also platting a number of outlots for private open space and future filings. The preliminary plan is being amended to reflect a new phasing schedule. The rezone is being processed to bring the zoning in conformance with the proposed density. All major technical issues regarding the development have been resolved and staff recommends approval of this application wit conditions.

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Single Family/Multifamily Residential

SURROUNDING LAND USE:

NORTH:	Single Family Residential
SOUTH:	Vacant
EAST:	Single Family Residential
WEST:	Single Family Residential

EXISTING ZONING: PR-17

PROPOSED ZONING: PR-3.8

SURROUNDING ZONING:

NORTH:	RSF-R
SOUTH:	PR-21
EAST:	PR-2.3
WEST:	RSF-R

RELATIONSHIP TO COMPREHENSIVE PLAN:

No adopted comprehensive plan exists for this area. The preferred alternative of the draft Grand Junction Growth Plan classifies this site in the "Residential Medium: 4 - 7.9 d.u./acre" land use category.

STAFF ANALYSIS:

The Country Crossing Subdivision is located on the east side of 25 Road just south of G Road. Country Crossing previously received preliminary approval and final approval for Filings #1 & #2 in 1994. The final plan/plat approvals have expired.

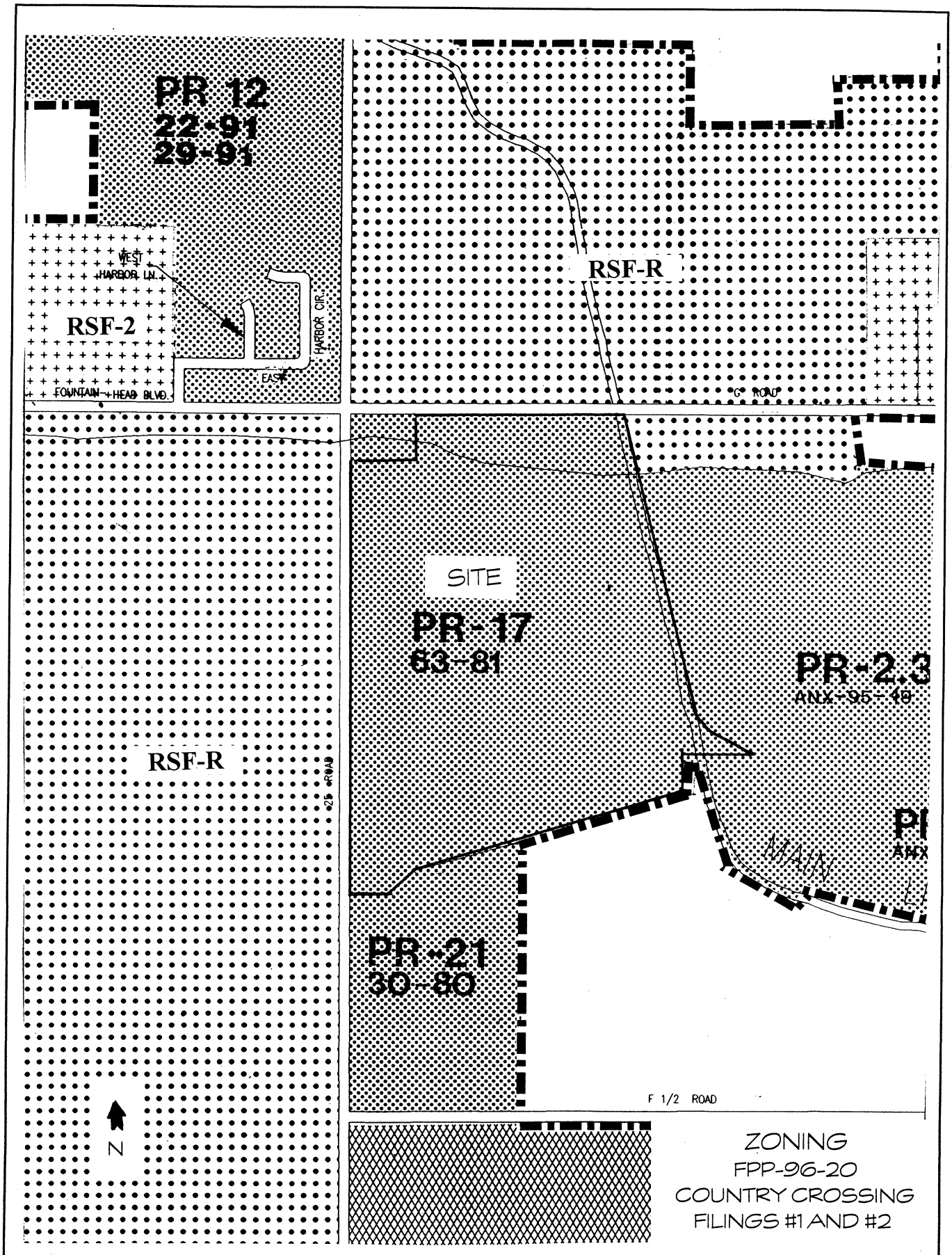
The number of units proposed in Filings #1 & #2 are summarized below:

Filing #1	3 lots
Filing #2	21 lots
TOTAL	24 lots

The development as proposed will ultimately contain 95 single family detached dwellings, 31 single family attached (duplex) dwellings, and 48 townhome (multifamily) dwellings. An RV storage area is proposed along with a network of private open space. The entire project contains approximately 46.3 acres.

For reference, copies of the proposed plats, roadway and utility plans and the amended preliminary plan have been included for reference along with the attached aerial photograph.

All major technical issues with the petitioner have been resolved. There remain a number of minor



ZONING
FPP-96-20
COUNTRY CROSSING
FILINGS #1 AND #2

AERIAL MAP
FPP-96-20
COUNTRY CROSSING
FILINGS #1 AND #2

items that need to be resolved prior to recording of the Filing #1 plat which are detailed below.

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

1. The petitioner must provide a copy of the deed which conveys the subject parcel to the applicant (previously requested).

2. The plat must be modified to provide a multi-use path easement along the Grand Valley Canal dedicated to the City. The remainder of the area may be retained in private open space. The dedication must be acceptable to the Parks Department.

3. A pavement design report which is acceptable to the Development Engineer must be provided.

4. The petitioner must clarify the future use of proposed Lot E. If the lot is to be used for other than private open space then access to a public street must be provided.

STAFF RECOMMENDATION:

Staff recommends approval of the rezone, amended preliminary plan and the final plan for Filings #1 & #2.

SUGGESTED PLANNING COMMISSION MOTION:

Mr. Chairman, on item #FPP-96-20, a request for amended preliminary plan and final plat/plan approval for Filing #1 & #2, I move that the plans be approved subject to staff conditions in the staff report dated February 28, 1996.

Mr. Chairman, on item FPP-96-20, a request for rezone from PR-17 to PR-3.8, I move we forward this item to City Council with a recommendation of approval.

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COUNTRY CROSSING SUBDIVISION
FILING ONE & TWO

PLAN INDEX

Sheet	Page
Cover Sheet	1
Overall Plat	2
Filing One Plat	3
Filing Two Plat	4
Official Development Plan	5
Site Plan	6
Landscape Plan Filing One and Two	7
Street Plan and Profile Filing One	8
Street Plan and Profile Filing Two	9
Sewer and Water Plan and Profile Filing One and Two	10
Utility Composite	11
Storm Sewer Plan, Profile & Grading Plan Filing One and Two	12

REVIEW AGENCY COMMENTS AND PETITIONER'S RESPONSE

February 23, 1996

Michael Drollinger
City of Grand Junction
Community Development Department
Grand Junction, CO 81501

Re: Country Crossing, Response to Comments

Dear Mr. Drollinger:

This letter is in response to review comments on Country Crossing Subdivision.

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CITY UTILITY ENGINEER:

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Grand Junction Drainage District:

The Plat has been revised to reflect the Rice Drain easement and the existing easement for the section of Rice Drain which has been piped.

I hope this answers any question and comments that have arisen regarding Country Crossing Subdivision. Please feel free to contact me at our office if there are any other questions that surface.

Sincerely,

Brian C. Hart

Brian C. Hart, E.I.

encl.: Revised Plans, Development Schedule, Revised Phasing Map

COUNTRY CROSSING SUBDIVISION

Projected Development Schedule:

FILING NUMBER	STARTING DATE	COMPLETION DATE
1	March 1996	February 1997
2	March 1996	February 1997
3	July 1996	July 1997
4	August 1997	July 1998
5	April 1997	October 1998
6	June 1998	October 1999
7	September 1997	November 1998
8	September 1998	May 2000

REVIEW COMMENTS

FILE #FPP-96-20

TITLE HEADING: Revised Preliminary & Final for Filings #1 & #2 - Country Crossing

LOCATION: SE corner 25 & G Roads

PETITIONER: Country Crossing LLC

PETITIONER'S ADDRESS/TELEPHONE: 759 Horizon Drive, Suite A
Grand Junction, CO 81506
243-4890

PETITIONER'S REPRESENTATIVE: Brian Hart, LANDesign

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., FEBRUARY 23, 1996.

GRAND VALLEY IRRIGATION **2/5/96**
Phil Bertrand **242-2762**

1. See comment sheets dated 11/11/94 and 01/12/95.
2. Clarification of canal right-of-way must be declared.
3. Single point of delivery must be declared and established.
4. What are your plans for Lot D and Lot E. We need to know.

CITY UTILITY ENGINEER **2/8/96**
Trent Prall **244-1590**

SEWER - CITY

1. Please include Exhibit "I" of the City of Grand Junction Standard Sanitary Sewer Details on construction set of plans.
2. Locations of manholes need to be identified either by coordinates, bearings, or offsets from property lines.
3. At the end of Crossing Circle and Crossing Street, please correct spelling of "Stub" of inform me of the definition of "Sutb".

WATER - UTE

1. Please provide a sign-off block for Ute Water on final construction plans.

PUBLIC SERVICE COMPANY **2/8/96**
Jon Price **244-2693**

Electric transformers and/or pedestals may need to be installed in center of lots due to water pits being located next to lot lines. This will increase cost of electric facilities that will be passed on to developer.

CITY POLICE DEPARTMENT 2/8/96
Dave Stassen 244-3587

Is there going to be a fence on 25 Road? If so, I would recommend some type of transparent fencing. This proposal does not appear to pose any other problems for the Police Department.

UTE WATER 2/9/96
Gary R. Mathews 242-7491

1. This project will connect to the 12" main located on the West side of 25 Road. Contact with Ute Water is needed to discuss the water valve locations and some additions.
2. The proposed 8" water main for Crossing Street needs extended to the far south end of Lot 5.
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 will install meter pits and yokes for a complete installation. Ute Water will furnish the meter pits and yokes.
5. Policies and fees in effect at the time of application will apply.

TCI CABLEVISION 2/9/96
Glen Vancil 245-8777

See attached comments.

GRAND JUNCTION FIRE DEPARTMENT *2/9/96*
Duncan Brown 244-1414

1. FILING #1 & #2 - Hydrant spacing is adequate with appropriate underground service. Plans do, however, show the 8" water service connected to a 6" feeder on 25 Road. General project report states that existing 6" and 12" water mains on 25 Road to be used for water service. The Fire Department is requiring that the 8" water service in the subdivision be hooked up to the 12" feeder on 25 Road instead of the 6" feeder.
2. Road widths and turnarounds are acceptable for emergency vehicle access.
3. GENERAL - Plans with utility composites must be submitted for future development of Filings #3 & #4 and any future filings. Previous comments of loop water line still apply for entire project (FPP-95-10),

U.S. WEST 2/9/96
Max Ward 244-4721

For timely telephone service, as soon as you have a plat and power drawing for your housing development, please:

MAIL COPY TO:
U.S. West Communications
Developer Contact Group
P.O. Box 1720
Denver, CO 80201

AND

CALL:
Developer Contact Group
1-800-526-3557

WE NEED TO HEAR FROM YOU AT LEAST 60 DAYS PRIOR TO TRENCHING.

CITY DEVELOPMENT ENGINEER 2/14/95
Jody Kliska 244-1591

1. The improvements agreement does not appear to match the submitted plans. Please see the attached marked-up, highlighted estimate of costs.
2. The pavement design as submitted is rejected. The design recommended in 1982 was designed according to the Asphalt Institute replacement method. City requires design in accordance with CDOT methods. Alternate sections A, D or E as shown in the report will be acceptable as these appear to be designed with the CDOT criteria or a new pavement design report can be submitted. An updated pavement report was required in the comments on 1-18-95 but was ignored. The improvements agreement estimate did not include any sub-base material.
3. The right turn lane on 25 Road needs to be designed in accordance with the TEDS manual requirements. A straight taper to the intersection is not acceptable.
4. Has the stormwater management plan been submitted to the State Health Department.
5. Lot E shown on the plat appears to become a landlocked parcel with this plat. What is its disposition?

U.S. POSTAL SERVICE 2/14/96
Mary Barnett 244-3434

Repetition of street names will always be a problem for delivery of mail to the customer. Crossing Street, Lane and Circle are problems. Any **similar** street addresses on theses streets will delay mail service.

CITY PARKS & RECREATION DEPARTMENT 2/12/96
Shawn Cooper 244-3869

Need to consider park land adjacent to south easterly property corner in order to serve a larger future population, also might be possible to provide access and additional land in the future from other developments. What is proposed locations for land uses stated on Page 2 of Project Report? What happens at Leach Creek and canal easement?

Open Space Fees - 174 units x $225 = $39,150.00.

CITY PROPERTY AGENT 2/15/96
Steve Pace 256-4003

SHEET 1 of 3

1. Multi-purpose utility, pedestrian and drainage easements are addressed in the dedication but are not shown on the plat.
2. On the easterly boundary: 1) should there be a monument at the NE corner and b) what type of monument was found at P.C. of curve.
3. There is a one second discrepancy in the bearing N00°00'50"E (plat) N00°00'51"E (description).

SHEET 2 of 3

1. Is all of Outlot "A" a drainage easement?
2. Utility easements are addressed in the dedication, but are not shown on the plat.
3. Need to fill in the book and page for the original warranty deed in the dedication.

SHEET 3 of 3

1. Utility and drainage easements are addressed in the dedication, but are not shown on the plat.
2. Need to fill in the book and page for the original warranty deed in the dedication.

COMMUNITY DEVELOPMENT DEPARTMENT **2/15/96**
Michael Drollinger **244-1439**

1. Please provide a development schedule (including number of phases, expected completion dates) for the entire project to be reviewed and acted on the Planning Commission as part of the amended preliminary plan request.
2. A new development phasing map is required which reflects the modifications proposed.

GRAND JUNCTION DRAINAGE DISTRICT **2/15/96**
Donna Garlitz **242-4343**

There is an existing drainage ditch along the southwesterly side of the Grand Valley Irrigation Company Canal known as the Rice Drain. It is located within an area indicated as "Lot D" of Country Crossing Subdivision, dated February 1996, Sheet 1 of 3. The District will need the property owner to grant an easement for this existing open drain by a separated document and identified by Book and page on the plans. The document can be prepared by the District and signed by the property owner before this plat is recorded. A portion of the Rice Drain has been piped and the easement for the piped portion is recorded at Book 973, Pages 889-890. The existing easement should be identified on the plat and the Book and Page noted. These easements should be granted before the District can approve this subdivision plan.

TO DATE, COMMENTS NOT RECEIVED FROM:
City Attorney
Mesa County Surveyor
Persigo Wash Wastewater Treatment Facility

MATERIALS SUPPLIED BY PETITIONER

LANDesign
ENGINEERING • SURVEYING • PLANNING

February 1, 1996

Michael Drollinger
City of Grand Junction
Community Development Department
Grand Junction, CO 81501

Re: Country Crossing Subdivision

Dear Michael:

This letter is to inform you of the reasons surrounding the accompanying Final Plat/Plan submittal for Country Crossing. A submittal package for all entities involved has been prepared along with this correspondence.

Because of development schedules and market demand, Denny Granum, the developer of the project, has decided to change Filings One and Two. The townhome units in Filing One, as well as some of the lots in Filing Two directly across the street will now be located in Filing Four. All the pertinent drawings have been changed to reflect these changes.

Please do not hesitate to contact our office if there are any questions regarding the change in plans.

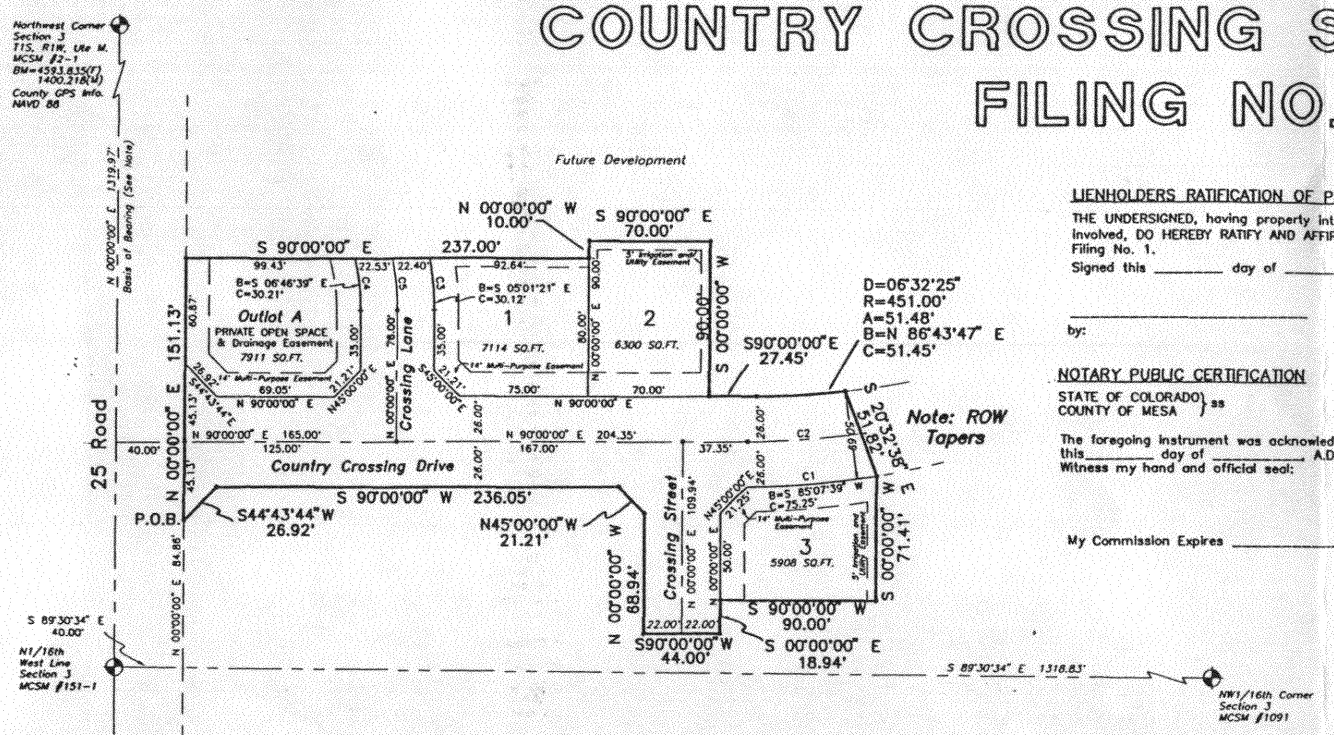
Sincerely,

Brian C. Hart

Brian C. Hart, E.I.

259 Grand Ave. • GRAND JUNCTION, CO 81501 • (970) 245-4099 • FAX (970) 245-3076

COUNTRY CROSSING SUBDIVISION
FILING NO. 1



CURVE TABLE

CURVE #	DELTA ANGLE	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD
C1	08°38'54"	498.00'	75.32'	37.73'	N 85°07'39" E	75.25'
C2	07°56'21"	475.00'	65.82'	32.96'	N 86°01'50" E	65.76'
C3	10°02'41"	172.00'	30.15'	15.12'	S 05°01'21" E	30.12'
C4	13°33'17"	128.00'	30.28'	15.21'	S 06°46'39" E	30.21'
C5	11°32'13"	150.00'	30.20'	15.15'	S 05°46'07" E	30.15'

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, having property interests in or encumberances upon the real property involved, DO HEREBY RATIFY AND AFFIRM the Plat of Country Crossing Subdivision, Filing No. 1.

Signed this _____ day of _____, 1996.

_____ by:

_____ by:

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO } ss
COUNTY OF MESA }

The foregoing instrument was acknowledged before me by _____ this _____ day of _____, A.D., 1996.
Witness my hand and official seal:

_____ Notary Public

My Commission Expires _____

CITY OF GRAND JUNCTION APPROVAL

This plat of COUNTRY CROSSING SUBDIVISION, FILING NO. 1, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this _____ day of _____, A.D., 1996.

_____ City Manager

_____ President of City Council

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO) ss
COUNTY OF MESA)
I hereby certify that this instrument was filed in my office at _____ o'clock _____M., _____, A.D., 1996, and was duly recorded in Plat Book No._____ Page No._____, Reception No. _____.

_____ Drawer No.

_____ Clerk and Recorder

STATE OF COLORADO } ss
COUNTY OF MESA }

The foregoing instrument was acknowledged before me this _____ day of _____, A.D., 1996. Witness my hand and official seal:

My Commission Expires _____

_____ Notary Public

Area Summary

Lots =	0.444 Acres	34.69%
ROW =	0.654 Acres	51.09%
Open Space =	0.182 Acres	14.22%
TOTAL =	1.280 Acres	100.00%

LEGEND

- MESA COUNTY OR BLM SURVEY MARKER
- • SET ALUMINUM CAP ON No. 5 REBAR, PLS 16835 IN CONCRETE
- (R) RECORD MEASUREMENT
- ⊡ FOUND REBAR, AS NOTED

SET ALUMINUM CAP ON No.5 REBAR, PLS 16835, AT ALL LOT CORNERS

Basis of bearings assume the West line of the NW1/4 NW1/4 of Section 3 to bear N 00°00'00" E, 1319.97 feet. Both monuments on this line are Mesa Co. Survey Markers.

Note: Property corners located during this survey that were within 0.25± feet of the calculated point were accepted as being "in position".

Easement and Title Information provided by Western Colorado Title Company, Policy No. 93-11-105K.

SURVEYOR'S CERTIFICATION

I, DENNIS W. JOHNSON, DO HEREBY CERTIFY THAT THE ACCOMPANYING PLAT OF COUNTRY CROSSING SUBDIVISION, FILING NO. 1, A SUBDIVISION OF A PART OF THE CITY OF GRAND JUNCTION, COLORADO HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION AND REPRESENTS A FIELD SURVEY OF SAME. THIS PLAT CONFORMS TO THE REQUIREMENTS FOR SUBDIVISION PLATS SPECIFIED IN THE APPLICABLE LAWS OF THE STATE OF COLORADO.

_____ DATE

DENNIS W. JOHNSON, PLS
COLORADO PROFESSIONAL LAND SURVEYOR
P.L.S. NO. 16835

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That COLUMBIA HOUSING, L.L.C., an Arizona Limited Liability Co., is the owner of that real property located in part of the NW 1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado, being more particularly described as follows: (Original Warranty Deed Book 2191, Page 577.)

Commencing at the North 1/16th Corner on the West Line of Section 3, Township 1 South, Range 1 West of the Ute Meridian, whence the Northwest corner of Section 3 bears North 00 degrees 00 minutes 00 seconds East, a distance of 1319.97 feet for a basis of bearings, with all bearings contained herein relative thereto; thence South 89 degrees 30 minutes 34 seconds East, a distance of 40.00 feet to a point on the East right-of-way of 25 Road; thence North 00 degrees 00 minutes 00 seconds East, a distance of 84.86 feet along said East right-of-way to the POINT OF BEGINNING; thence North 00 degrees 00 minutes 00 seconds East, a distance of 151.13 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 237.00 feet; thence North 00 degrees 00 minutes 00 seconds East, a distance of 10.00 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 70.00 feet; thence South 00 degrees 00 minutes 00 seconds West, a distance of 90.00 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 27.45 feet; thence with a curve to the left with a delta angle of 06°32'25", with a radius of 451.00 feet, with an arc length of 51.48 feet, with a chord bearing of North 86 degrees 43 minutes 47 seconds East, and a chord length of 51.45 feet; thence South 20 degrees 32 minutes 38 seconds East, a distance of 51.82 feet; thence South 00 degrees 00 minutes 00 seconds West, a distance of 71.41 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 90.00 feet; thence South 00 degrees 00 minutes 00 seconds East, a distance of 18.94 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 44.00 feet; thence North 00 degrees 00 minutes 00 seconds West, a distance of 68.94 feet; thence North 45 degrees 00 minutes 00 seconds West, a distance of 21.21 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 236.05 feet; thence South 44 degrees 43 minutes 44 seconds West, a distance of 26.92 feet to the POINT OF BEGINNING.
Said parcel containing 1.280 Acres, as described.

That said owner has caused the real property to be laid out and platted as COUNTRY CROSSING FILING No. 1, a subdivision of a part of the City of Grand Junction, Colorado, That said owner does hereby dedicate and set apart real property as shown and labeled as the accompanying plat of COUNTRY CROSSING, FILING NO. 1 as follows:

All Streets and Rights-of-way to the City of Grand Junction for the use of the public forever;

All Private Open Space (Outlot A) to the Country Crossing Homeowners Association, a Colorado non-profit corporation, for the purposes of the Association, including but not limited to landscaping and signs.

All Multi-Purpose and utility easements to the City of Grand Junction for the use of the public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, telephone lines, and also for the installation and maintenance of traffic control facilities, street lighting, street trees and grade structures;

All Utility Easements to the City of Grand Junction for the use of public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, and telephone lines.

All Irrigation Easements as set forth on this plat to the Country Crossing Homeowners Association, as perpetual non-exclusive easements for the installation, operation, maintenance and repair of private irrigation systems;

All Drainage Easements hereby platted to the Country Crossing Homeowners Association Inc., as perpetual non-exclusive easements for the conveyance of runoff water which originates within the area hereby platted or from upstream areas, through natural or man-made facilities above or below ground;

All easements include the right of ingress and egress on, along, over, under, and through and across by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush. Provided, however, that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted shall not burden nor overburden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easement.

IN WITNESS WHEREOF, said owner, COLUMBIA HOUSING, L.L.C., has caused their names to be hereunto subscribed this _____ day of _____, A.D. 1996.

by:_____
Columbia Housing, L.L.C.
an Arizona Limited Liability Company

Title:_____

The Declaration of Covenants and Restrictions are recorded at Book_____, Page_____, Mesa County Records.

SCALE: 1"=50'

50 25 0 50

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

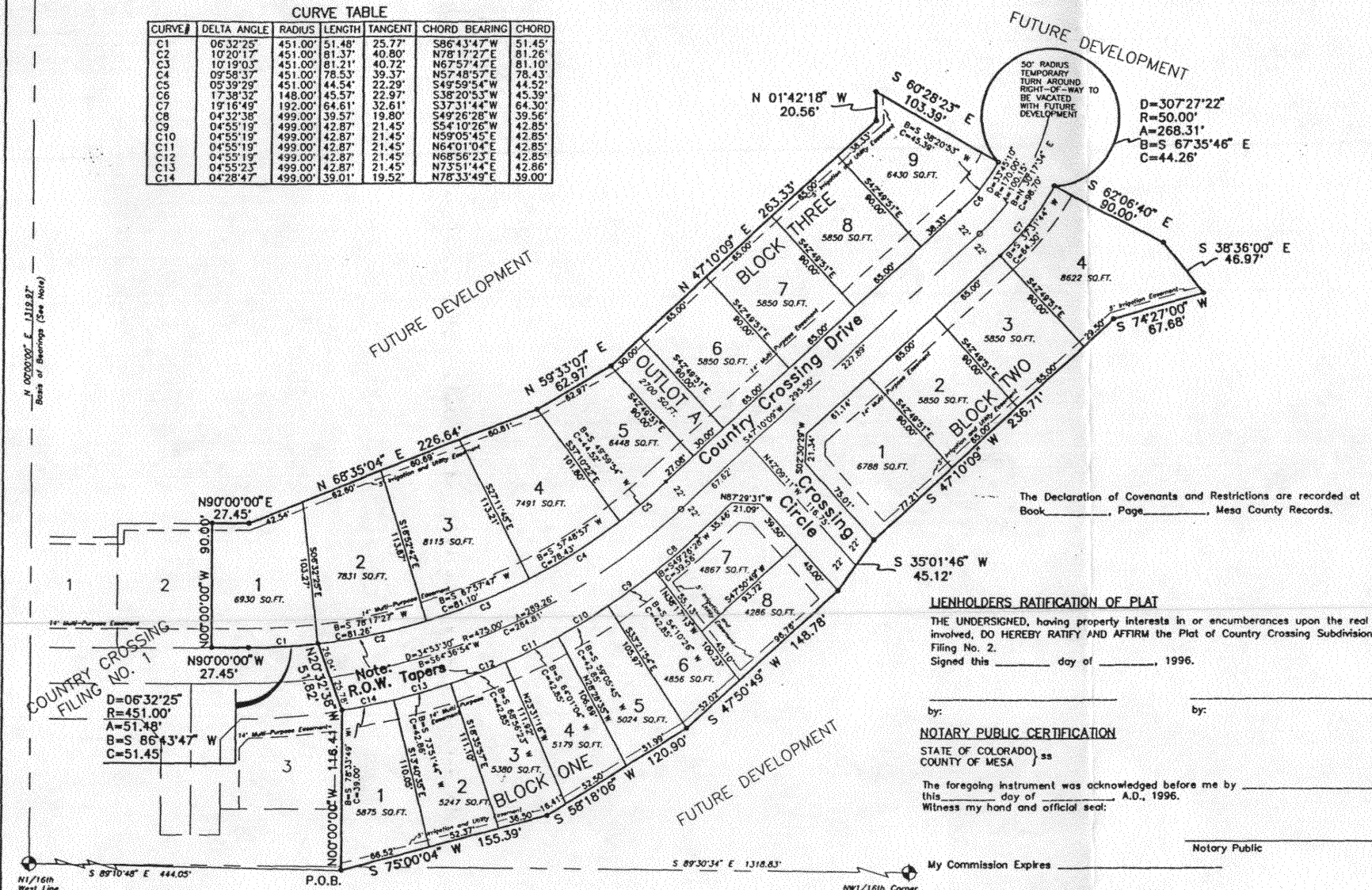
COUNTRY CROSSING SUBDIVISION
FILING NO. 1
NW1/4 SECTION 3
T1S, R1W, UTE MERIDIAN
MESA COUNTY, COLORADO

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 244-9180

PROJECT NO. 93086	SUR. BY:	DRAWN	CHECKED	SHEET	OF
DATE: Jan., 1996	LD/JA	DWJ/RSK		2	3

C:\SC12\WORK\93086\93086PL1 Thu Feb 22 13:26:53 1996

COUNTRY CROSSING SUBDIVISION
FILING NO. 2



CURVE TABLE

CURVE #	DELTA ANGLE	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD
C1	06°32'25"	451.00'	51.48'	25.77'	S86°43'47"W	51.45'
C2	10°20'17"	451.00'	81.37'	40.80'	N78°17'27"E	81.26'
C3	10°19'03"	451.00'	81.21'	40.72'	N67°57'47"E	81.10'
C4	09°58'37"	451.00'	78.53'	39.37'	N57°48'57"E	78.43'
C5	05°39'29"	451.00'	44.54'	22.29'	S49°59'54"W	44.52'
C6	17°38'32"	148.00'	45.57'	22.97'	S38°20'53"W	45.39'
C7	19°16'49"	192.00'	64.61'	32.61'	S37°31'44"W	64.30'
C8	04°32'38"	499.00'	39.57'	19.80'	S49°26'26"W	39.56'
C9	04°55'19"	499.00'	42.87'	21.45'	S54°10'26"W	42.85'
C10	04°55'19"	499.00'	42.87'	21.45'	N59°05'45"E	42.85'
C11	04°55'19"	499.00'	42.87'	21.45'	N64°01'04"E	42.85'
C12	04°55'19"	499.00'	42.87'	21.45'	N68°56'23"E	42.85'
C13	04°55'23"	499.00'	42.87'	21.45'	N73°51'44"E	42.86'
C14	04°28'47"	499.00'	39.01'	19.52'	N78°33'49"E	39.00'

The Declaration of Covenants and Restrictions are recorded at Book_____, Page_____, Mesa County Records.

Area Summary

Lots	=	2.952 Acres	74.54%
ROW	=	0.946 Acres	23.89%
Open Space	=	0.062 Acres	1.57%
TOTAL	=	3.960 Acres	100.00%

Project Benchmark: North Edge Manhole Rim in 25 Road Elev. = 4581.98

Basis of bearings assume the West line of the NW1/4 NW1/4 of Section 3 to bear N 00°00'00" E, 1319.97 feet, as referenced on the Final Plat of Country Crossing, Filing No. 1. Both monuments on this line are Mesa County Survey Markers.

Note: Property corners located during this survey that were within 0.25± feet of the calculated point were accepted as being "in position".

Easement and Title Information provided by Western Colorado Title Company, Policy No. 93-11-105K.

LEGEND

- MESA COUNTY OR BLM SURVEY MARKER
- SET ALUMINUM CAP ON No. 5 REBAR, PLS 16835 IN CONCRETE
- (R) RECORD MEASUREMENT
- FOUND REBAR, AS NOTED

SET ALUMINUM CAP ON No. 5 REBAR, PLS 16835, AT ALL LOT CORNERS

SCALE: 1"=50'

50 25 0 50

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, having property interests in or encumberances upon the real property involved, DO HEREBY RATIFY AND AFFIRM the Plat of Country Crossing Subdivision, Filing No. 2.
Signed this _____ day of _____, 1996.

by: _____ by: _____

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO } ss
COUNTY OF MESA }

The foregoing instrument was acknowledged before me by _____ this_____ day of _____, A.D., 1996.
Witness my hand and official seal:

_____ Notary Public

My Commission Expires _____

CITY OF GRAND JUNCTION APPROVAL

This plat of COUNTRY CROSSING SUBDIVISION, FILING NO. 2, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this _____ day of _____A.D., 1996.

_____ City Manager

_____ President of City Council

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO)ss
COUNTY OF MESA)

I hereby certify that this instrument was filed in my office at _____ o'clock _____M., _____,
A.D., 1996, and was duly recorded in Plat Book No._____ Page No._____, Reception No._____, Drawer No._____.

_____ Clerk and Recorder

SURVEYOR'S CERTIFICATION

I, DENNIS W. JOHNSON, DO HEREBY CERTIFY THAT THE ACCOMPANYING PLAT OF COUNTRY CROSSING SUBDIVISION, FILING NO. 2, A SUBDIVISION OF A PART OF THE CITY OF GRAND JUNCTION, COLORADO HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION AND REPRESENTS A FIELD SURVEY OF SAME. THIS PLAT CONFORMS TO THE REQUIREMENTS FOR SUBDIVISION PLATS SPECIFIED IN THE APPLICABLE LAWS OF THE STATE OF COLORADO.

_____ DATE

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That Columbia Housing, L.L.C., an Arizona Limited Liability Co., is the owner of that real property located in part of the NW 1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado, being more particularly described as follows: (Original Warranty Deed Book 2191, Page 577.)

COMMENCING at a Mesa County Survey Marker at the North 1/16th Corner on the West Line of Section 3, Township 1 South, Range 1 West, of the Ute Meridian, whence the Northwest Corner of said Section 3 bears North 00 degrees 00 minutes 00 seconds East, a distance of 1319.97 feet with all bearings herein contained relative thereto; thence South 89 degrees 10 minutes 48 seconds East, a distance of 444.05 feet to the POINT OF BEGINNING; thence North 00 degrees 00 minutes 00 seconds West, a distance of 116.41 feet; thence North 20 degrees 32 minutes 38 seconds West, a distance of 51.82 feet; thence along a non-tangent curve to the right, having a delta angle of 06°32'35", with a radius of 451.00 feet, with an arc length of 51.48 feet, with a chord bearing of South 86 degrees 43 minutes 47 seconds West, and a chord length of 51.45 feet; thence North 90 degrees 00 minutes 00 seconds West, a distance of 27.45 feet; thence North 00 degrees 00 minutes 00 seconds West, a distance of 90.00 feet; thence North 90 degrees 00 minutes 00 seconds East, a distance of 27.45 feet; thence North 68 degrees 35 minutes 04 seconds East, a distance of 226.64 feet; thence North 59 degrees 33 minutes 07 seconds East, a distance of 62.97 feet; thence North 47 degrees 10 minutes 09 seconds East, a distance of 263.33 feet; thence North 01 degrees 42 minutes 18 seconds West, a distance of 20.56 feet; thence South 60 degrees 28 minutes 23 seconds East, a distance of 103.39 feet; thence along a non-tangent curve to the right, having a delta angle of 307°27'22", with a radius of 50.00 feet, with an arc length of 268.31 feet, with a chord bearing of South 67 degrees 35 minutes 46 seconds East, and a chord length of 44.26 feet; thence South 62 degrees 06 minutes 40 seconds East, a distance of 90.00 feet; thence South 38 degrees 36 minutes 00 seconds East, a distance of 46.97 feet; thence South 74 degrees 27 minutes 00 seconds West, a distance of 67.68 feet; thence South 47 degrees 10 minutes 09 seconds West, a distance of 236.71 feet; thence South 35 degrees 01 minutes 46 seconds West, a distance of 45.12 feet; thence South 47 degrees 50 minutes 49 seconds West, a distance of 148.78 feet; thence South 58 degrees 18 minutes 06 seconds West, a distance of 120.90 feet; thence South 75 degrees 00 minutes 04 seconds West, a distance of 155.39 feet to the POINT OF BEGINNING. Said parcel containing 3.960 Acres, as described.

That said owner has caused the real property to be laid out and platted as COUNTRY CROSSING SUBDIVISION, FILING NO. 2, a subdivision of a part of the City of Grand Junction, Colorado, That said owner does hereby dedicate and set apart real property as shown and labeled as the accompanying plat of COUNTRY CROSSING SUBDIVISION, FILING NO. 2 as follows:

All Streets and Rights-of-way to the City of Grand Junction for the use of the public forever;

All Private Open Space (Outlot A) to the Country Crossing Homeowners Association, a Colorado non-profit corporation, for the purposes of the Association, including but not limited to landscaping and signs.

All Multi-Purpose and utility easements to the City of Grand Junction for the use of the public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, telephone lines, and also for the installation and maintenance of traffic control facilities, street lighting, street lighting, street trees and grade structures;

All Utility Easements to the City of Grand Junction for the use of public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, and telephone lines.

All Irrigation Easements as set forth on this plat to the Country Crossing Homeowners Association, as perpetual non-exclusive easements for the installation, operation, maintenance and repair of private irrigation systems;

All easements include the right of ingress and egress on, along, over, under, and through and across by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush. Provided, however, that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted shall not burden nor overburden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easement.

IN WITNESS WHEREOF, said owner, Columbia Housing, L.L.C., has caused their name to be hereunto subscribed this _____ day of _____A.D. 1996.

by:_____
Columbia Housing, L.L.C.
an Arizona Limited Liability Company

Title:_____

STATE OF COLORADO } ss
COUNTY OF MESA }

The foregoing instrument was acknowledged before me this _____ day of _____, A.D., 1996. Witness my hand and official seal:

My Commission Expires _____ _____ Notary Public

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, ANY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

DENNIS W. JOHNSON, PLS
COLORADO PROFESSIONAL LAND SURVEYOR
P.L.S. NO. 16835

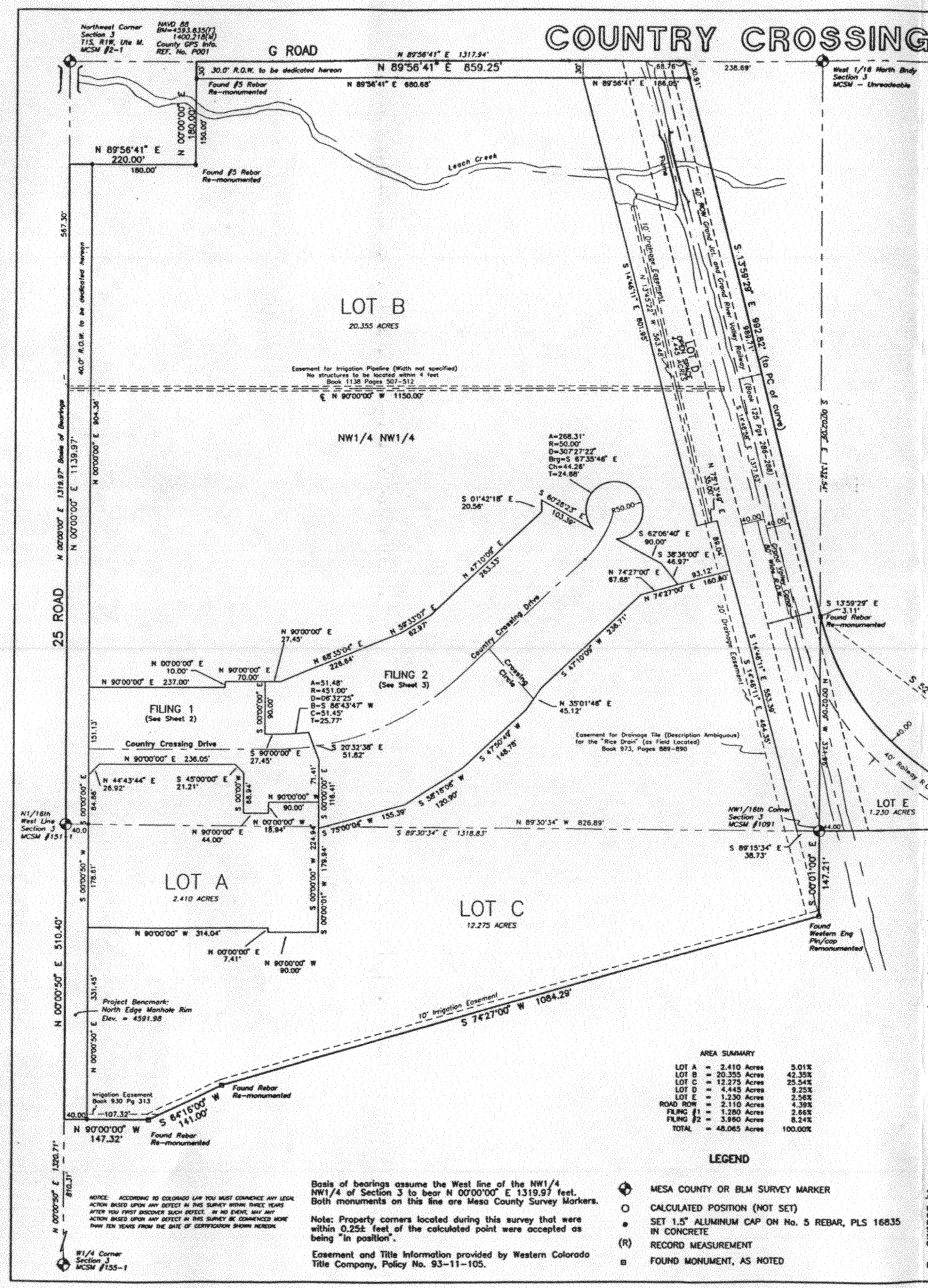
COUNTRY CROSSING SUBDIVISION
FILING NO. 2
NW1/4 SECTION 3
T1S, R1W, UTE MERIDIAN
MESA COUNTY, COLORADO

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 244-9180

PROJECT NO. 93086	SUR. BY:	DRAWN	CHECKED	SHEET	OF
DATE: Jan., 1996	JCJ/LD	RSK		3	3

C:\SC12\WORK\93086\93086PL2 Thu Feb 22 13:40:28 1996

COUNTRY CROSSING SUBDIVISION



AREA SUMMARY		
LOT A	2.410 Acres	5.01%
LOT B	20.355 Acres	42.35%
LOT C	12.275 Acres	25.54%
LOT D	4.445 Acres	9.25%
LOT E	1.230 Acres	2.56%
ROAD ROW	2.110 Acres	4.39%
FILING #1	1.280 Acres	2.66%
FILING #2	3.960 Acres	8.24%
TOTAL	48.065 Acres	100.00%

LEGEND

- MESA COUNTY OR BLM SURVEY MARKER
- O CALCULATED POSITION (NOT SET)
- • SET 1.5" ALUMINUM CAP ON No. 5 REBAR, PLS 16835 IN CONCRETE
- (R) RECORD MEASUREMENT
- ▣ FOUND MONUMENT, AS NOTED

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

Basis of bearings assume the West line of the NW1/4 NW1/4 of Section 3 to bear N 00°00'00" E 1319.97 feet. Both monuments on this line are Mesa County Surveyors.

Note: Property corners located during this survey that were within 0.25± feet of the calculated point were accepted as being "in position".

Easement and Title Information provided by Western Colorado Title Company, Policy No. 93-11-105.

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That Columbia Housing, LLC is the owner of that real property located in part of the NW1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado, being more particularly described as follows: (Original Warranty Deed Book 2191, Page 577.)

BEGINNING at the Mesa County Survey Marker at the Southwest corner of the NW1/4 NW1/4 of Section 3, whence the Mesa County Survey Marker at the Northwest corner of Section 3 bears N 00°00'00" E a distance of 1319.97 feet for a basis of bearings, with all bearings contained herein relative thereto; thence along the West line of the NW1/4 NW1/4 North 00 degrees 00 minutes 00 seconds East (N 00°00'00" E), a distance of 1139.97 feet; thence North 89 degrees 56 minutes 41 seconds East (N 89°56'41" E), a distance of 220.00 feet; thence North 00 degrees 00 minutes 00 seconds East (N 00°00'00" E), a distance of 180.00 feet to the North line of the NW1/4 NW1/4; thence along said line North 89 degrees 56 minutes 41 seconds East (N 89°56'41" E), a distance of 859.25 feet to a point on the Easterly right of way of the Grand Junction and Grand River Valley Railway (as described in Book 125 at pages 286-288); thence following along the Easterly and Northerly line of said right of way the following three (3) courses: (1) South 13 degrees 59 minutes 29 seconds East (S 13°59'29" E), a distance of 992.52 feet; (2) along a curve to the left having a radius of 454.82 feet, arc length of 807.44 feet, delta angle of 75 degrees 33 minutes 20 seconds (75°33'20"), a chord bearing of South 52 degrees 16 minutes 09 seconds East (S 52°16'09" E), and a chord length of 583.25 feet; (3) North 89 degrees 27 minutes 11 seconds East (N 89°27'11" E), a distance of 213.18 feet to a point on the East line of the W1/2 NE1/4 NW1/4; thence South 00 degrees 03 minutes 24 seconds East (S 00°03'24" E), a distance of 20.00 feet to the South line of the W1/2 NE1/4 NW1/4; thence along said line South 89 degrees 27 minutes 11 seconds West (S 89°27'11" W), a distance of 659.21 feet to the Mesa County Survey Marker at the Southeast corner of the NW1/4 NW1/4; thence South 00 degrees 01 minutes 00 seconds East (S 00°01'00" E), a distance of 147.21 feet; thence South 74 degrees 27 minutes 00 seconds West (S 74°27'00" W), a distance of 1084.29 feet; thence South 84 degrees 16 minutes 00 seconds West (S 84°16'00" W), a distance of 141.00 feet; thence South 90 degrees 00 minutes 00 seconds West (S 90°00'00" W), a distance of 147.32 feet to a point on the West line of the SW1/4 NW1/4 of Section 3; thence along said line North 00 degrees 00 minutes 50 seconds East (N 00°00'50" E), a distance of 510.40 feet to the POINT OF BEGINNING;

Said parcel containing 48.065 acres, as described.

That said owners have caused the real property to be laid out and platted as COUNTRY CROSSING SUBDIVISION, a subdivision of a part of the City of Grand Junction, Colorado, That said owner does hereby dedicate and set apart real property as shown and labeled as the accompanying plat of COUNTRY CROSSING SUBDIVISION as follows:

All Streets and Rights-of-way to the City of Grand Junction for the use of the public forever;

All Private Open Space to the Country Crossing Homeowners Association, a Colo. non-profit corporation, for the purposes of the Association, including but not limited to landscaping and signs.

All Irrigation Easements a set forth on this plat to the Country Crossing Homeowners Association, as perpetual easements for the installation, operation, maintenance and repair of private irrigation systems;

All Drainage Easements hereby platted to the Country Crossing Homeowners Association Inc., as perpetual non-exclusive easements for the conveyance of runoff water which originates within the area hereby platted or from upstream areas, through natural or man-made facilities above or below ground;

All easements include the right of ingress and egress on, along, over, under, and through and across by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush. Provided, however, that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted shall not burden nor overburden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easement.

IN WITNESS WHEREOF, said owners, Columbia Housing, LLC, an Arizona Limited Liability Co. has caused their names to be hereunto subscribed this _____ day of _____ A.D. 1996.

by: _____ by: _____

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO } ss
COUNTY OF MESA }

The foregoing instrument was acknowledged before me by _____ this _____ day of _____ A.D., 1996.
Witness my hand and official seal:

_____
Notary Public

My Commission Expires _____

Declaration of Covenants and Restrictions are recorded at Book _____, Page_____ Mesa County Records.

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, having property interests in or encumberances upon the real property involved, DO HEREBY RATIFY AND AFFIRM the Plat of Country Crossing Subdivision. Signed this _____ day of _____, 1996.

by: David G. Rice, Jr. by: William L. Rice

by: Robert J. Rice

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO } ss
COUNTY OF MESA }

The foregoing instrument was acknowledged before me by David G. Rice, Jr., William L. Rice, and Robert J. Rice this_____ day of _____, A.D., 1996.
Witness my hand and official seal:

_____
Notary Public

My Commission Expires _____

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO } ss
COUNTY OF MESA }

I hereby certify that this instrument was filed in my office at _____ o'clock _____ M., _____.
A.D., 1996, and was duly recorded in Plat Book No._____ Page No._____, Reception No._____ Drawer No._____.

_____
Clerk and Recorder

CITY OF GRAND JUNCTION APPROVAL

This plat of COUNTRY CROSSING SUBDIVISION, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this _____ day of _____ A.D., 1996.

_____ _____
City Manager President of City Council

SURVEYOR'S CERTIFICATION

I, DENNIS W. JOHNSON, DO HEREBY CERTIFY THAT THE ACCOMPANYING PLAT OF COUNTRY CROSSING, A SUBDIVISION OF A PART OF THE CITY OF GRAND JUNCTION, COLORADO HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION AND REPRESENTS A FIELD SURVEY OF SAME. THIS PLAT CONFORMS TO THE REQUIREMENTS FOR SUBDIVISION PLATS SPECIFIED IN THE CITY OF GRAND JUNCTION DEVELOPMENT CODE AND THE APPLICABLE LAWS OF THE STATE OF COLORADO.

Date certified _____

DENNIS W. JOHNSON, PLS
COLORADO PROFESSIONAL LAND SURVEYOR
P.L.S. NO. 16835

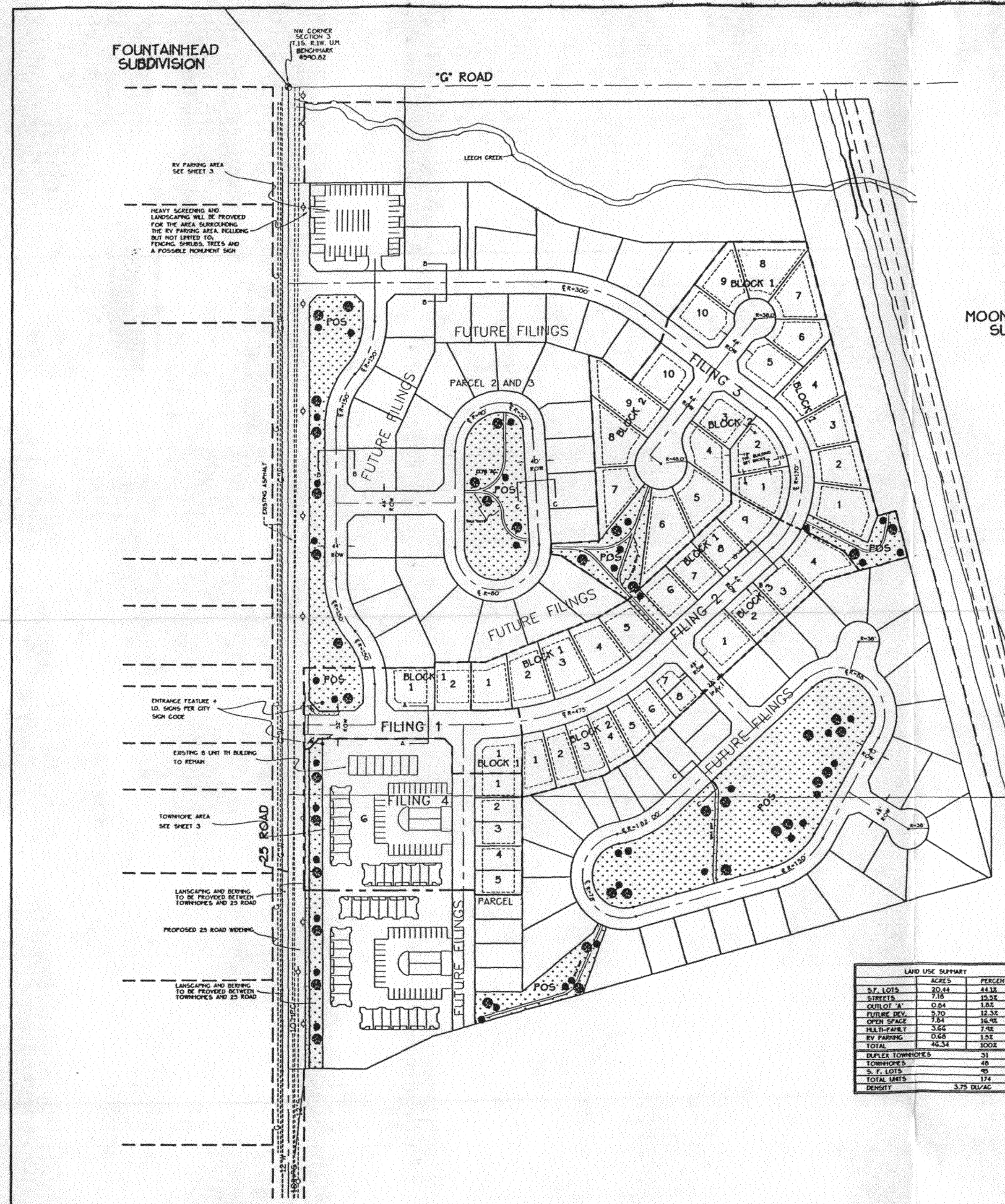
COUNTRY CROSSING

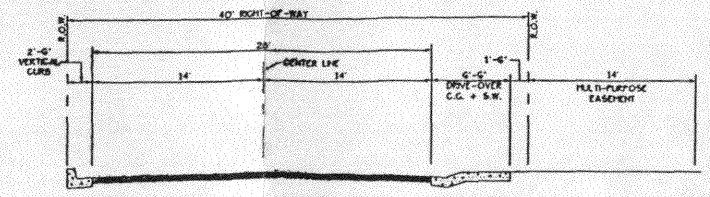
NW1/4 SECTION 3
T1S, R1W, UTE MERIDIAN
MESA COUNTY, COLORADO

LANDesign
ENGINEERS + SURVEYORS + PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 244-9180

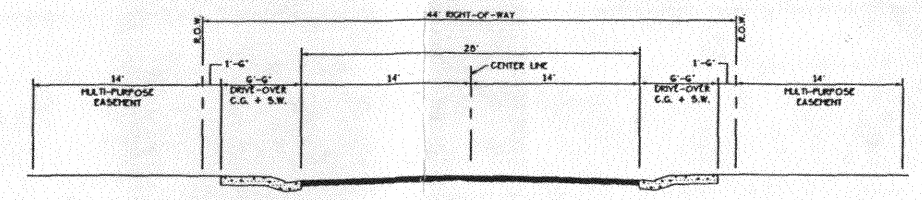
PROJECT NO. 93066-1	SUR. BY:	DRAWN	CHECKED	SHEET	OF
DATE: FEB., 1996	LD/JF	RSK/DWL		1	3

C:\SC\2\WORK\93066\93066-1 Thu Feb 22 13:45:44 1996

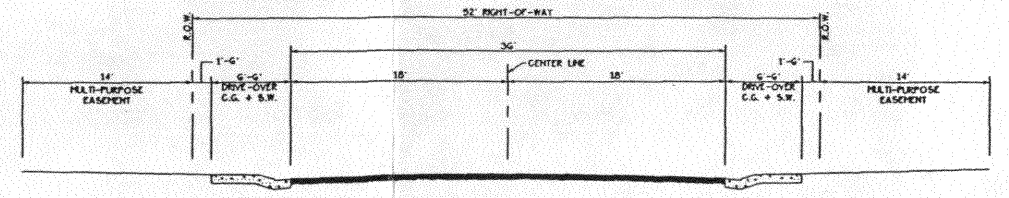




SECTION C-C



SECTION B-B



SECTION A-A

N

SCALE 1"= 100'

100' 0' 100' 200'

LAND USE SUMMARY		
	ACRES	PERCENT
S.F. LOTS	20.44	44.1%
STREETS	7.18	15.5%
OUTLOT 'A'	0.84	1.8%
FUTURE DEV.	5.70	12.3%
OPEN SPACE	7.84	16.9%
MULTI-FAMILY	3.64	7.9%
RV PARKING	0.68	1.5%
TOTAL	46.34	100%
DUPLEX TOWNHOMES		31
TOWNHOMES		48
S. F. LOTS		95
TOTAL UNITS		174
DENSITY		3.75 DU/AC

S. F. FAMILY SETBACK REQUIREMENTS	
FRONT	15 FT. (20 FT. GARAGES)
SIDE	5 FT.
REAR	15 FT.
DUPLEX SETBACK REQUIREMENTS	
FRONT	20 FT.
SIDE	5 FT. 0 FT. OTHER
REAR	15 FT.
MAXIMUM BUILDING HEIGHT	32 FT.

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

BY: _____ DATE: _____

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19348

DATE:	NO:	REVISIONS:	By:
12/05/95	1		BH

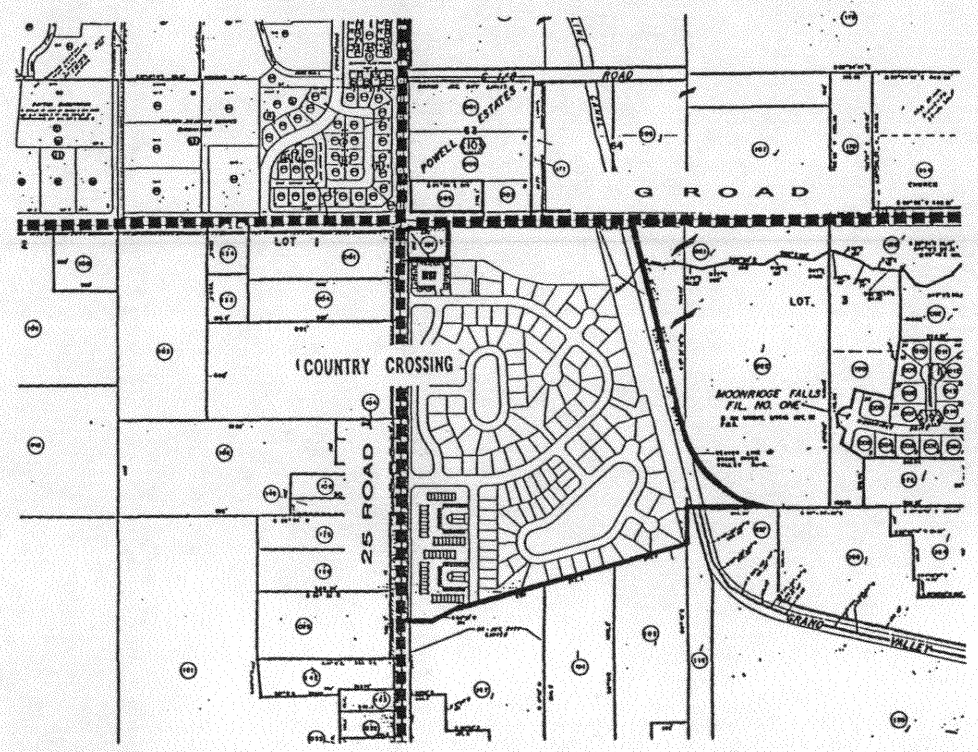
OFFICIAL DEVELOPMENT PLAN
COUNTRY CROSSING SUBDIVISION

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: OCTOBER 1994	JOS/BPA	JOS/BPA		5	16

COUNTRY CROSSING SUBDIVISION
FILING ONE & TWO

VICINITY MAP



SHEET INDEX

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FILING ONE PLAT	3
FILING TWO PLAT	4
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SITE PLAN	6
LANDSCAPE PLAN FILING ONE AND FILING TWO	7
STREET PLAN & PROFILE FILING ONE	8
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SEWER & WATER PLAN & PROFILE FILING ONE AND TWO	10
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STREET DETAILS - SHEET TWO	14
SEWER & WATER DETAILS	15
STORM SEWER DETAILS	16

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

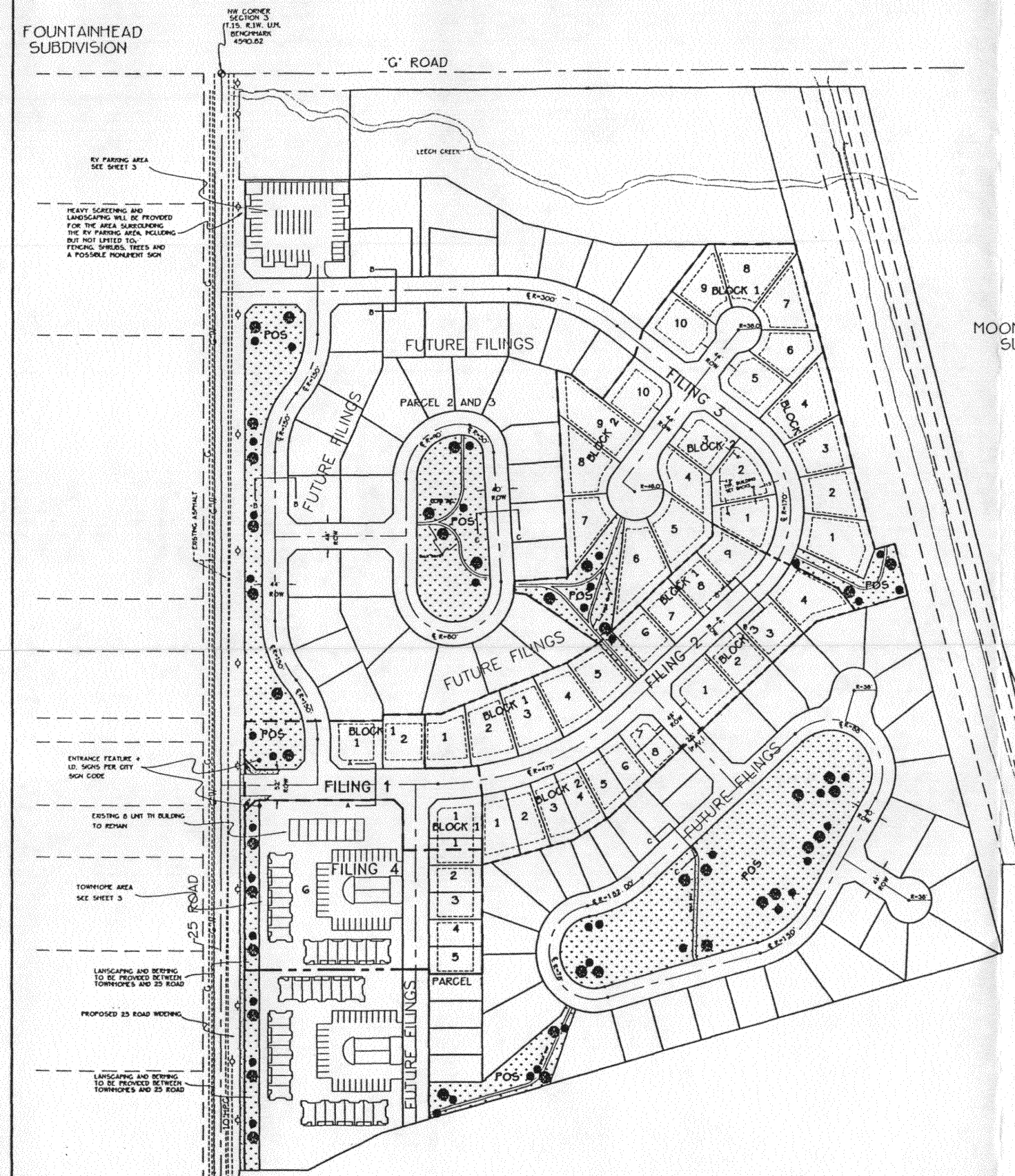
BY: _____ DATE: _____

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

COVER SHEET
COUNTRY CROSSING SUBDIVISION

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: 01/29/96				1	16



SCALE 1"= 100'

100' 0' 100' 200'

S. F. FAMILY SETBACK REQUIREMENTS	
FRONT	15 FT. (20 FT. GARAGES)
SIDE	5 FT.
REAR	15 FT.
DUPLEX SETBACK REQUIREMENTS	
FRONT	20 FT.
SIDE	5 FT. 0 FT. OTHER
REAR	15 FT.
MAXIMUM BUILDING HEIGHT	32 FT.

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

BY: _____ DATE: _____

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

DATE:	NO:	REVISIONS:	By:
12/05/95	1		BH
01/27/96	2	FILING REVISIONS	JOS

SITE PLAN
COUNTRY CROSSING SUBDIVISION

LANDesign
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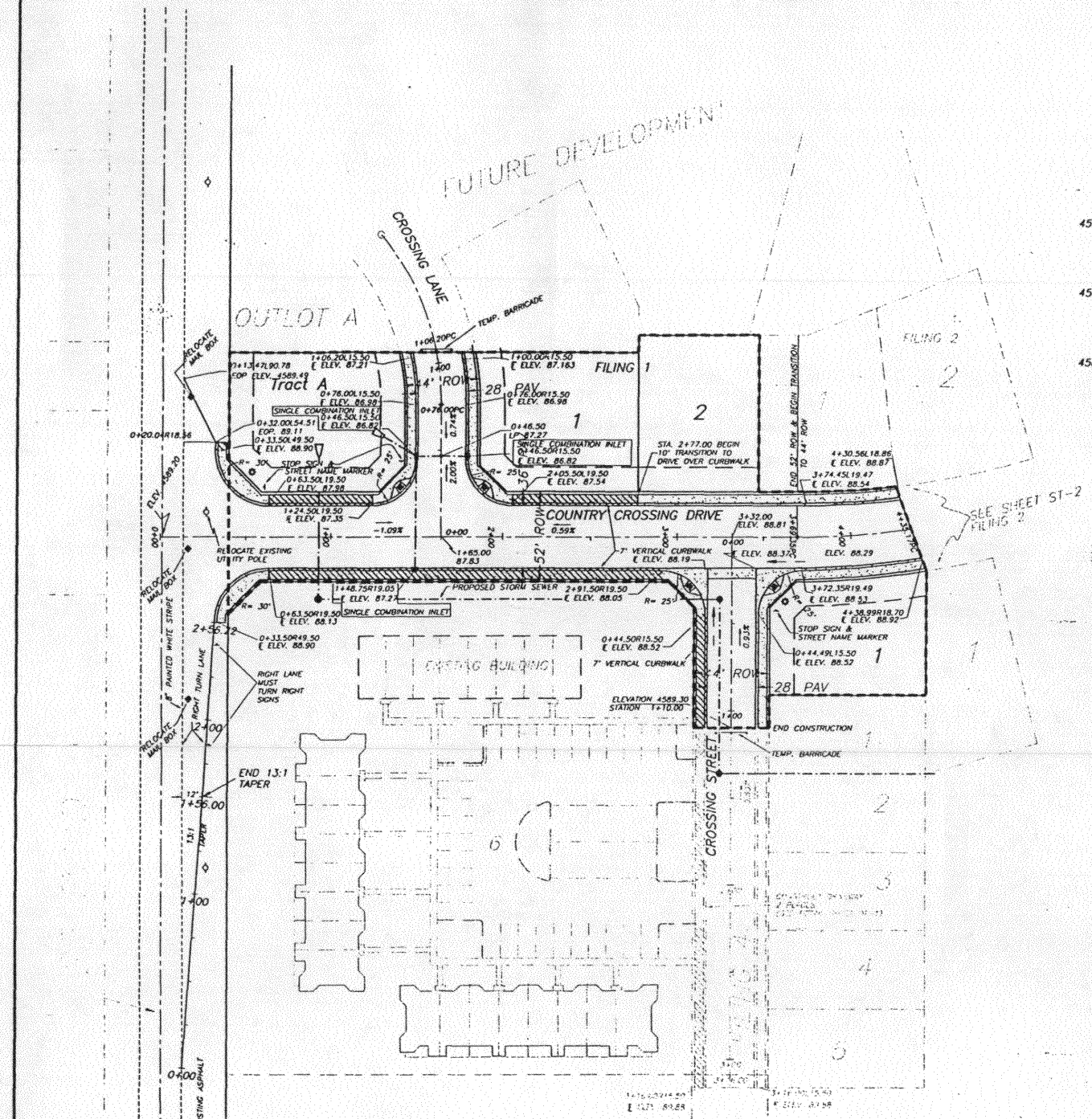
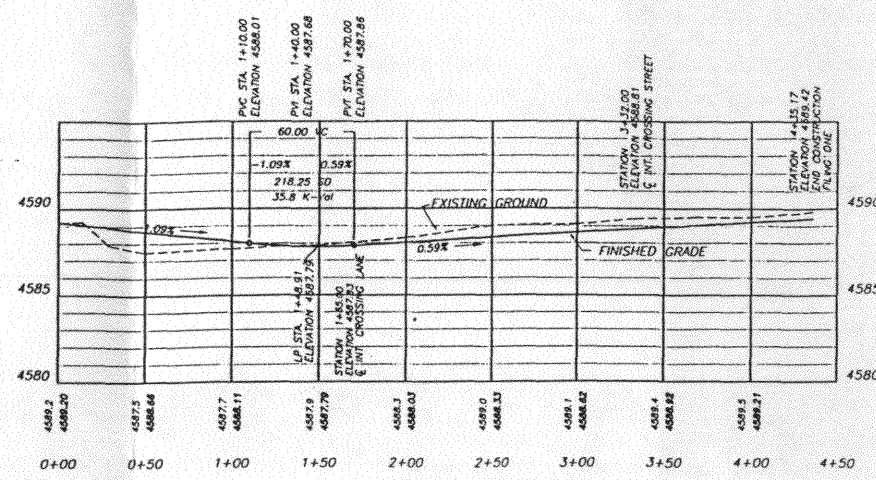
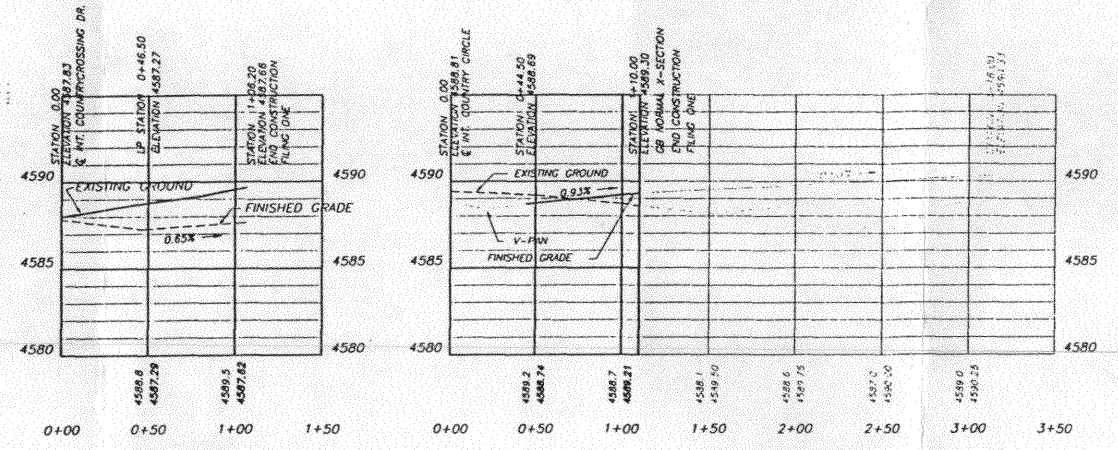
259 GRAND AVENUE GRAND JUNCTION, COLORADO 81501 (970) 245-4099

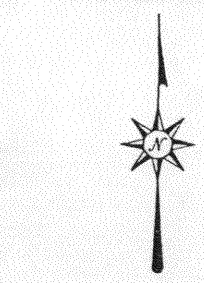
PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: OCTOBER 1994	JOS/BPR	JOS/BPR		6	16







HORIZONTAL SCALE = 50'
VERTICAL SCALE = 5'



SCALE 1" = 40'

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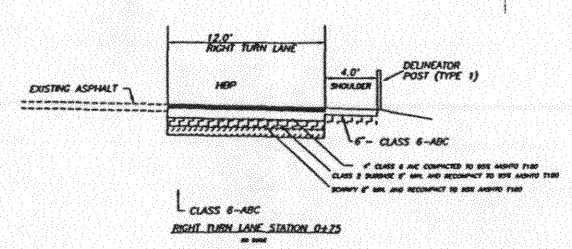
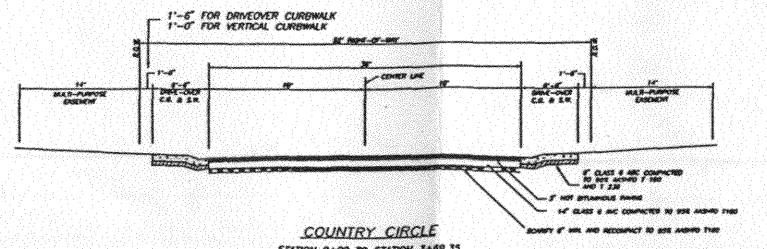
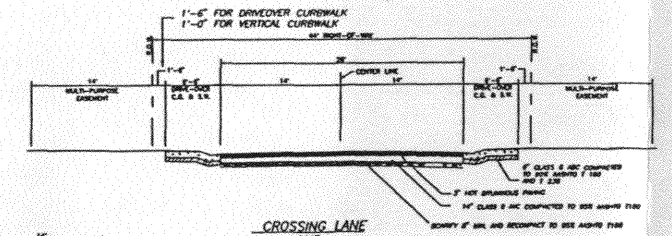




COUNTRY CIRCLE
STATION 0+00 TO STATION 3+69.35



CROSSING LANE AND CROSSING STREET

CROSSING CIRCLE
FROM STATION 3+69.35 TO STATION 10+75.03

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: DATE:

ACCEPTED AS CONSTRUCTED

BY: DATE:

DATE:	NO:	REVISIONS:	By:
01/13/95	1		JOS
01/24/96	2	REVISE FILINGS	JOS
02/23/96	3	REVISE TAPER, STREET SECTIONS	JOS

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

STREET PLAN AND PROFILE
COUNTRY CROSSING SUBDIVISION

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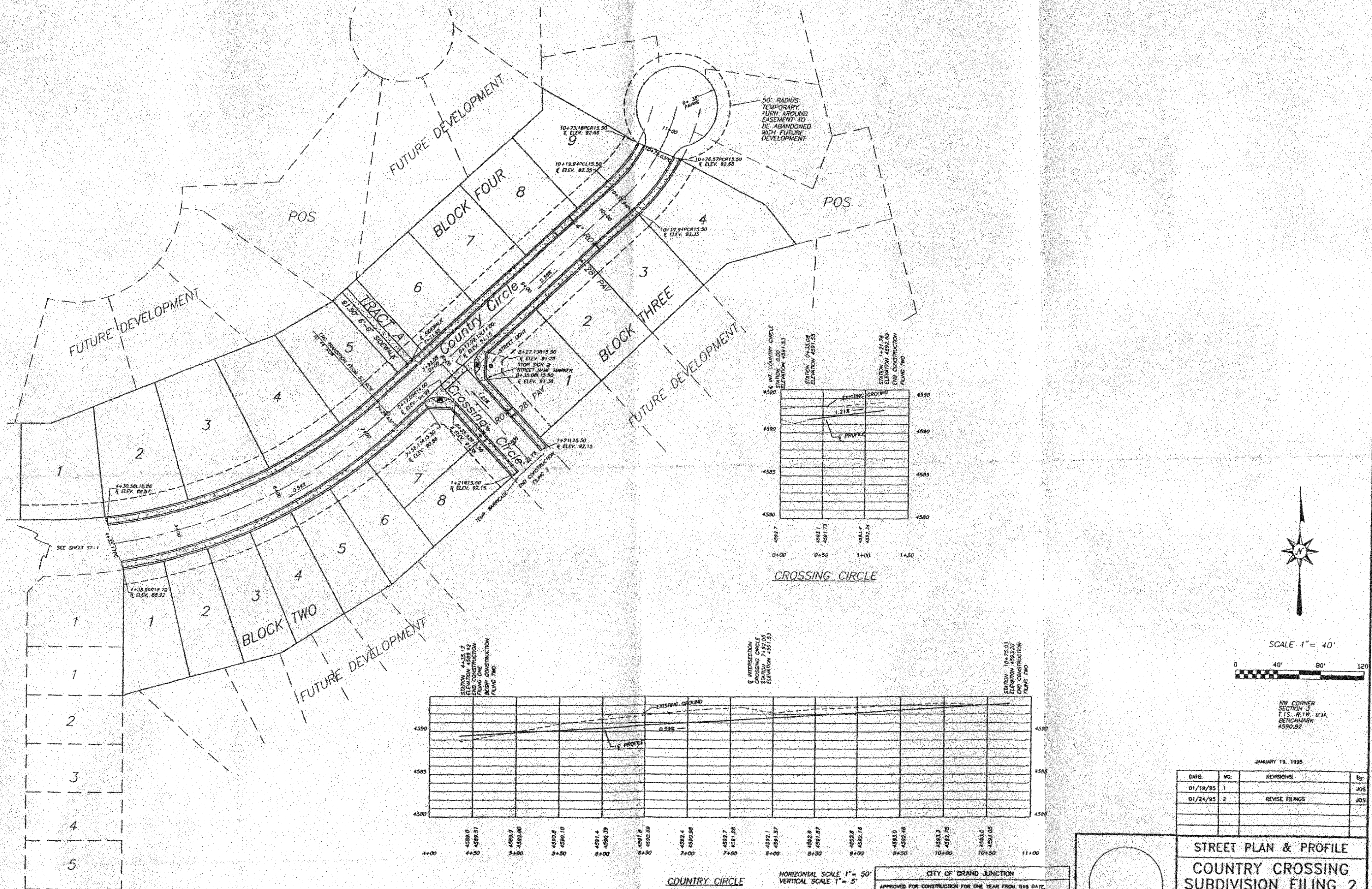
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: DECEMBER, 1994	JOS	JOS		8	16



JANUARY 19, 1995

DATE:	NO:	REVISIONS:	By:
01/19/95	1		JOS
01/24/95	2	REVISE FILINGS	JOS

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: ____________ DATE: ____________

ACCEPTED AS CONSTRUCTED

BY: ____________ DATE: ____________

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

STREET PLAN & PROFILE

COUNTRY CROSSING SUBDIVISION FILING 2

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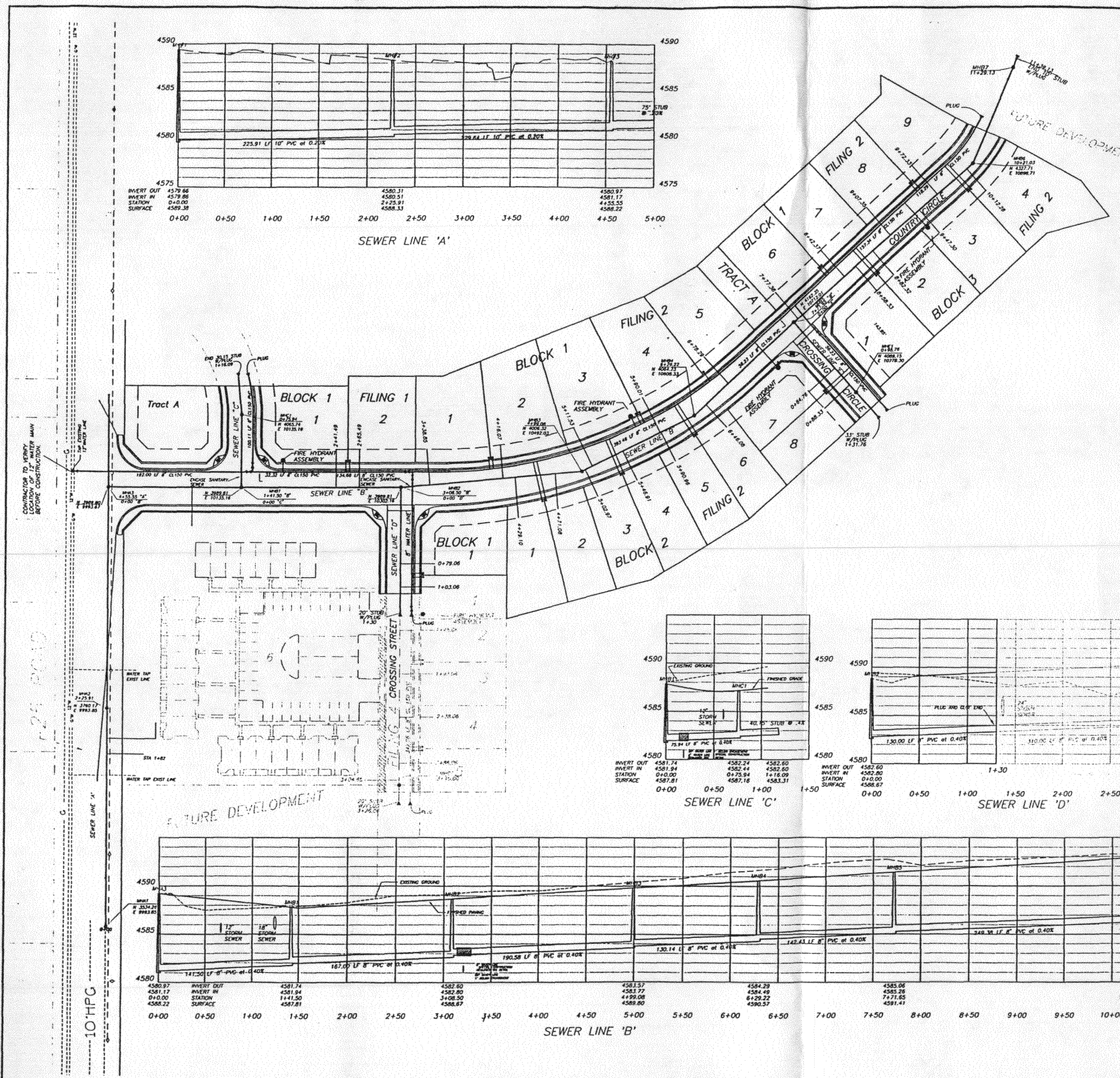
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93066	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: DECEMBER, 1994	JOS	JOS		9	16



CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

BY: _____ DATE: _____

UTE WATER CONSERVANCY DISTRICT

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

BY: _____ DATE: _____

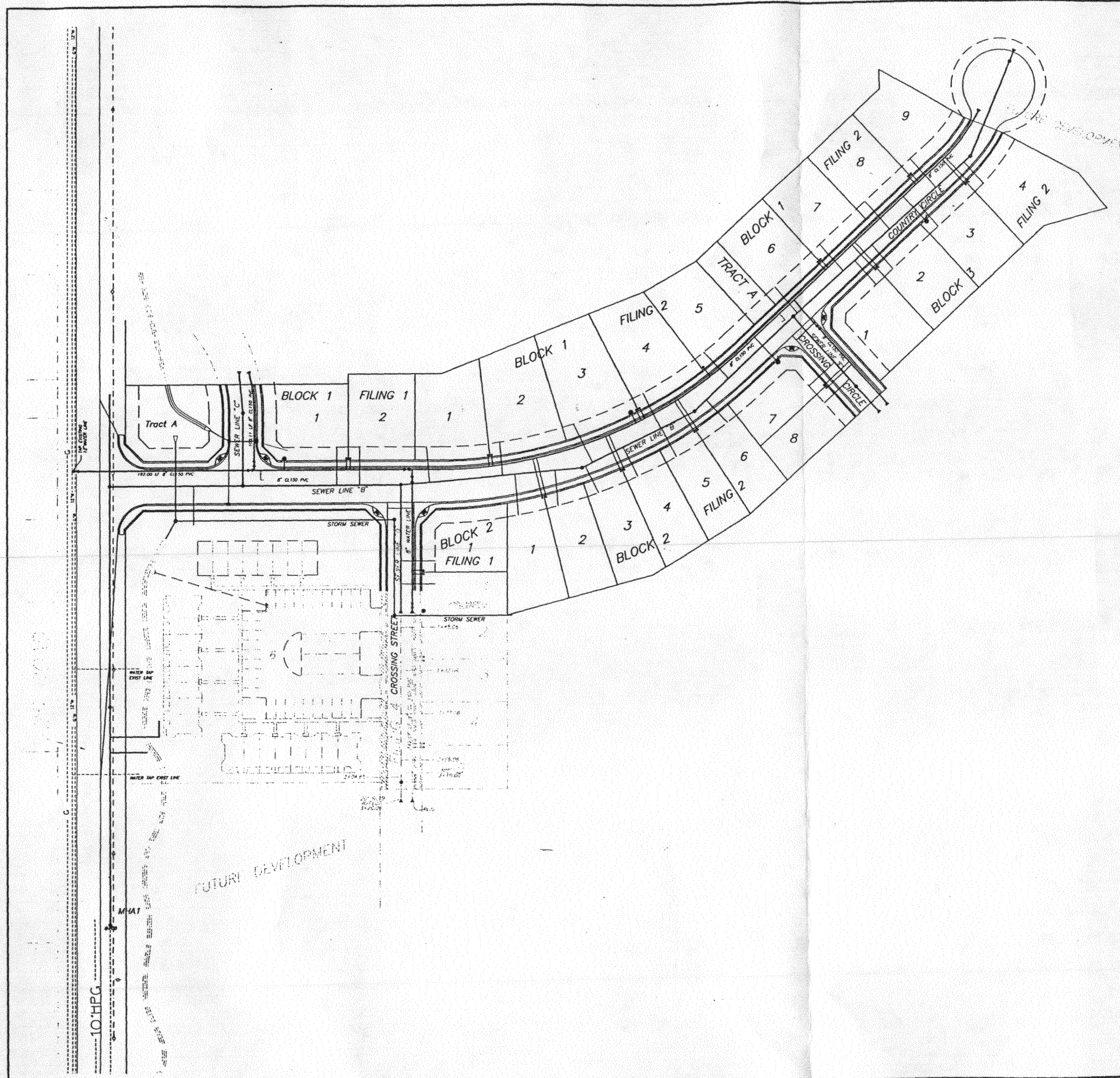
DATE:	NO:	REVISIONS:	By:
01/24/96	1	FILING CHANGES	JOS
02/22/96	2	ADJUST WATER	JOS

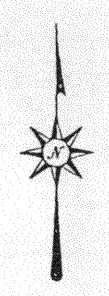
PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19348

SEWER AND WATER PLAN
COUNTRY CROSSING SUBDIVISION

LANDesign
ENGINEERS + SURVEYORS + PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: DECEMBER 1995	PMH	PMH		10	16





SCALE 1"= 50'

0 50 100 150

CITY OF GRAND JUNCTION
APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.
BY: _____ DATE: _____
ACCEPTED AS CONSTRUCTED
BY: _____ DATE: _____

DATE:	NO:	REVISIONS:	By:
01/24/96	1	FILING CHANGES	JOS
02/22/96	2	WATER EDIT	JOS

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

UTILITY COMPOSITE PLAN
COUNTRY CROSSING SUBDIVISION

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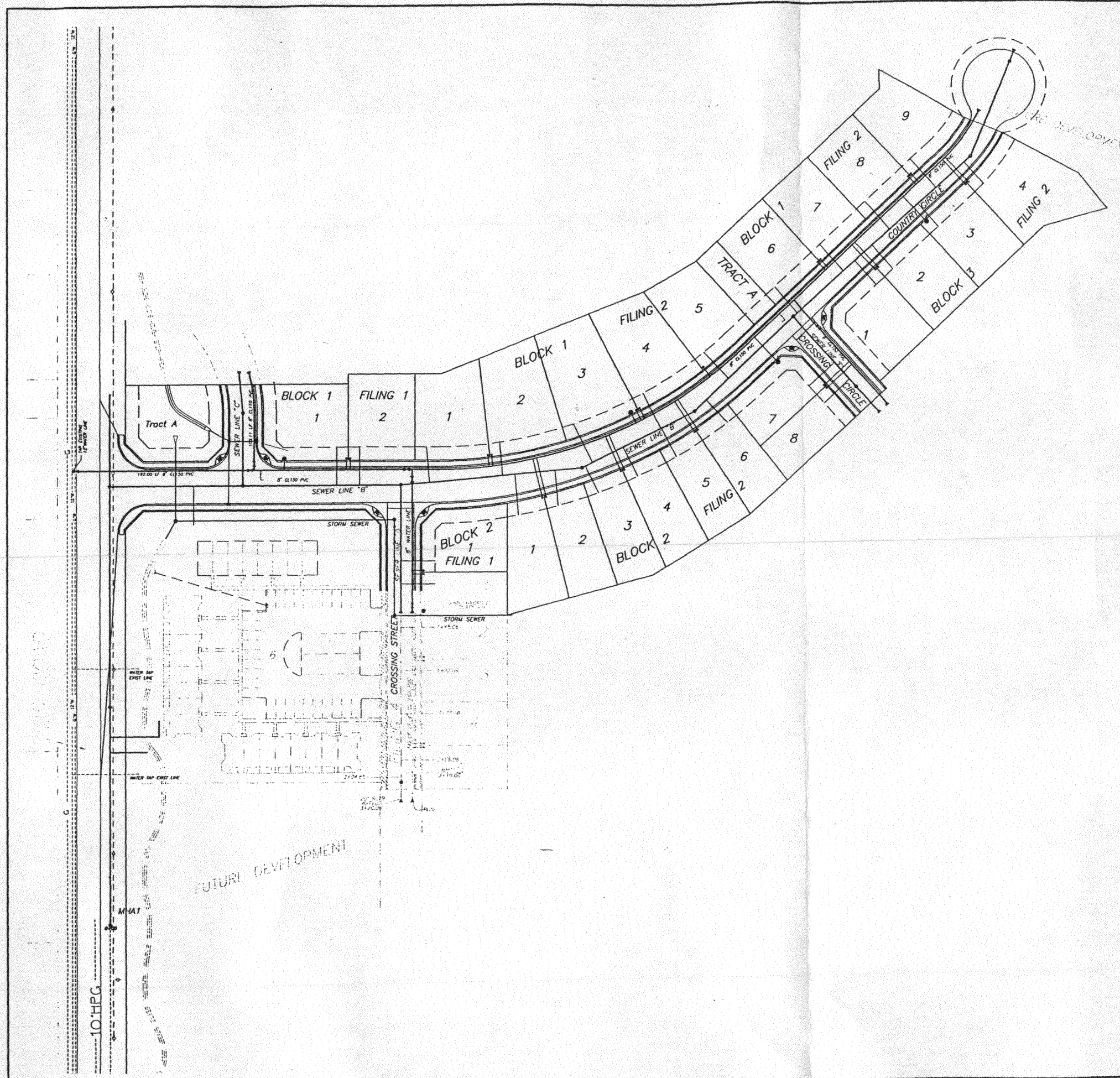
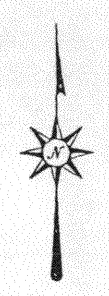
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: DECEMBER 1995	PMH	PMH		11	16





SCALE 1"= 50'

0 50 100 150

CITY OF GRAND JUNCTION
APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.
BY: _____ DATE: _____
ACCEPTED AS CONSTRUCTED
BY: _____ DATE: _____

DATE:	NO:	REVISIONS:	By:
01/24/96	1	FILING CHANGES	JOS
02/22/96	2	WATER EDIT	JOS

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

UTILITY COMPOSITE PLAN
COUNTRY CROSSING SUBDIVISION

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: DECEMBER 1995	PMH	PMH		11	16

STAFF REVIEW (City Council)

FILE: FPP-96-020

DATE: March 14, 1995

STAFF: Michael T. Drollinger

REQUEST: Rezone
COUNTRY CROSSING SUBDIVISION

LOCATION: SE Corner 25 Road and G Road

APPLICANT: Country Crossing, LLC
759 Horizon Drive
Grand Junction CO 81506

EXECUTIVE SUMMARY:

A request for rezone from PR-17 to PR-3.8 of the Country Crossing Subdivision located at the SE corner of 25 Road and G Road . An amended preliminary plan, and final plat/plan for Filings #1 & #2 were approved at the March 5, 1996 Planning Commission meeting. Filing #1 consists of three new building lots while Filing #2 contains 21 lots. The petitioner is also platting a number of outlots for private open space and future filings. The preliminary plan was amended to reflect a new phasing schedule. The rezone is being processed to bring the zoning in conformance with the proposed density.

EXISTING LAND USE: Vacant

PROPOSED LAND USE: Single Family/Multifamily Residential

SURROUNDING LAND USE:

NORTH:	Single Family Residential
SOUTH:	Vacant
EAST:	Single Family Residential
WEST:	Single Family Residential

EXISTING ZONING: PR-17

PROPOSED ZONING: PR-3.8

SURROUNDING ZONING:

NORTH:	RSF-R
SOUTH:	PR-21
EAST:	PR-2.3
WEST:	RSF-R

RELATIONSHIP TO COMPREHENSIVE PLAN:

No adopted comprehensive plan exists for this area. The preferred alternative of the draft Grand Junction Growth Plan classifies this site in the "Residential Medium: 4 - 7.9 d.u./acre" land use category.

STAFF ANALYSIS:

The staff analysis is divided into three sections (1) an overview of the development proposal, (2) an analysis of the rezone criteria, and (3) recommended conditions of approval.

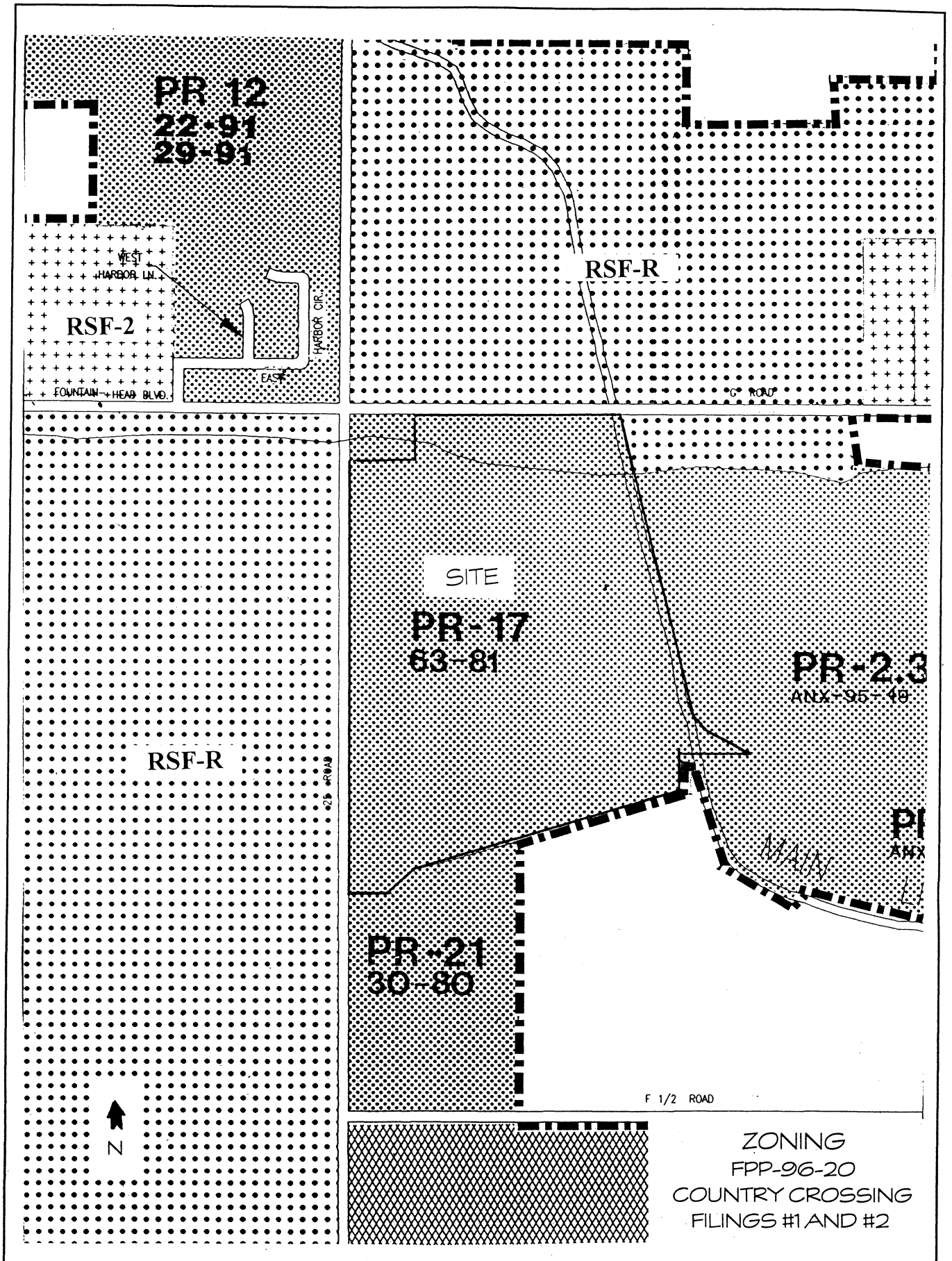
The Development Proposal

The Country Crossing Subdivision is located on the east side of 25 Road just south of G Road. Country Crossing previously first received preliminary approval and final approval for Filings #1 & #2 in 1994 which expired. Planning Commission approved an amended preliminary plan/plat and a Final Plan/Plat for Filings #1 & #2 (which were amended to reflect a new phasing schedule) at their March 6, 1996 meeting

The number of units proposed in Filings #1 & #2 are summarized below:

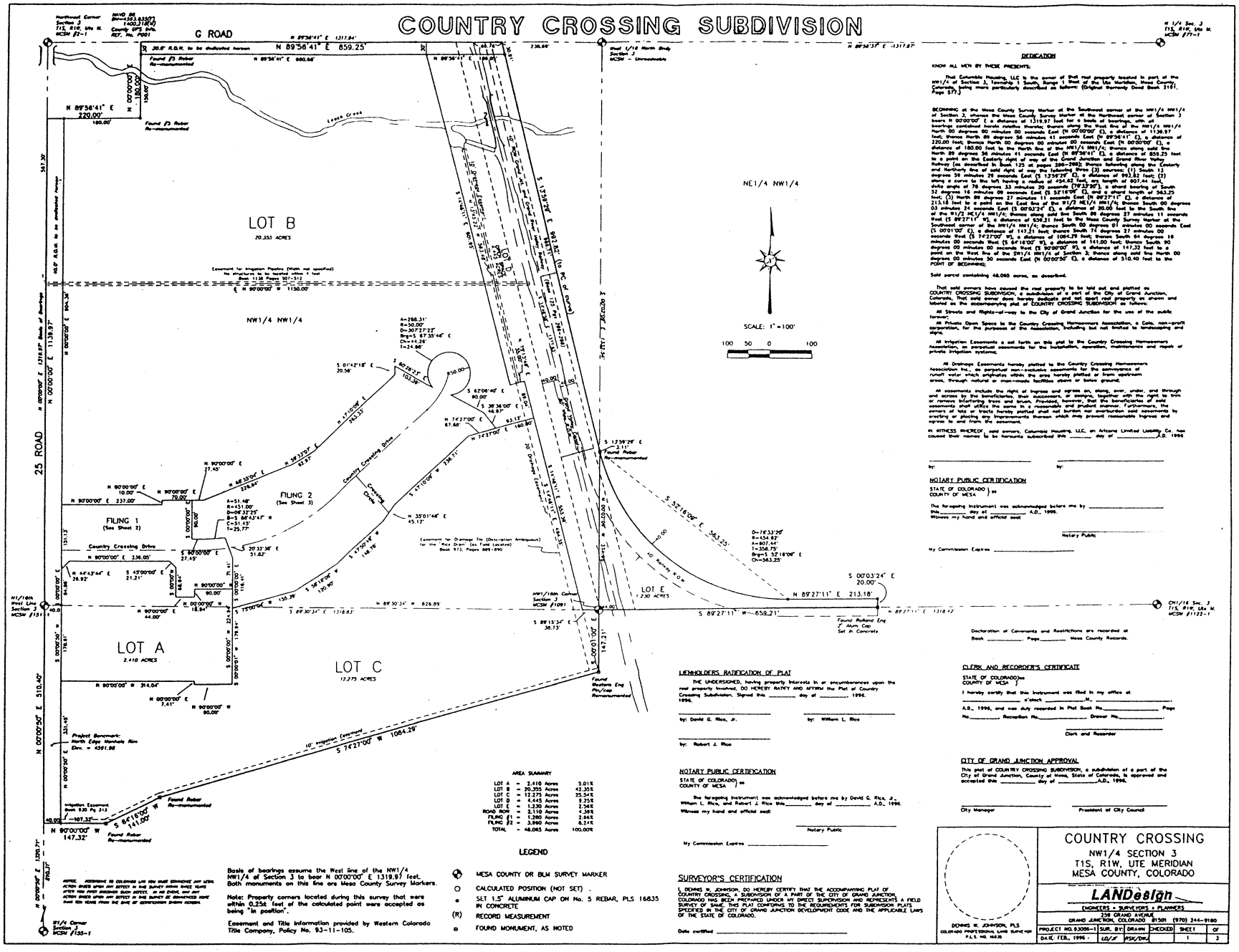
Filing #1	3 lots
Filing #2	21 lots
TOTAL	24 lots

The development as proposed will ultimately contain 95 single family detached dwellings, 31 single family attached (duplex) dwellings, and 48 townhome (multifamily) dwellings. An RV storage area is proposed along with a network of private open space. The entire project contains approximately 46.3 acres.



ZONING
FPP-96-20
COUNTRY CROSSING
FILINGS #1 AND #2

COUNTRY CROSSING SUBDIVISION



AREA SUMMARY

LOT A	=	2.410 Acres	5.01%
LOT B	=	20.355 Acres	42.35%
LOT C	=	12.275 Acres	25.54%
LOT D	=	4.445 Acres	9.25%
LOT E	=	1.230 Acres	2.56%
ROAD ROW	=	2.110 Acres	4.39%
FILING #1	=	1.280 Acres	2.66%
FILING #2	=	1.980 Acres	4.12%
TOTAL	=	48.085 Acres	100.00%

LEGEND

- MESA COUNTY OR BLM SURVEY MARKER
- CALCULATED POSITION (NOT SET)
- SET 1.5" ALUMINUM CAP ON No. 5 REBAR, PLS 16835 IN CONCRETE
- (R) RECORD MEASUREMENT
- FOUND MONUMENT, AS NOTED

Basis of bearings assume the West line of the NW1/4 NW1/4 of Section 3 to bear N 00°00'00" E 1319.97 feet. Both monuments on this line are Mesa County Survey Markers.

Note: Property corners located during this survey that were within 0.25± feet of the calculated point were accepted as being "in position".

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That Columbia Housing, LLC is the owner of that real property located in part of the NW1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado being more particularly described as follows: (Original Warranty Deed Book 2121, Page 57.)

BEGINNING at the Mesa County Survey Marker at the Southwest corner of the NW1/4 NW1/4 of Section 3, whence the Mesa County Survey Marker at the Northwest corner of Section 3 bears N 00°00'00" E (a distance of 1319.97 feet for a basis of bearings); thence from said point of beginning continuing South 00°00'00" E, along the West line of the NW1/4 NW1/4 a distance of 180.00 feet; thence North 89 degrees 56 minutes 41 seconds East (N 89°56'41" E), a distance of 1136.97 feet; thence North 89 degrees 56 minutes 41 seconds East (N 89°56'41" E), a distance of 220.00 feet; thence North 00 degrees 00 minutes 00 seconds East (N 00°00'00" E), a distance of 180.00 feet to the North line of the NW1/4 NW1/4; thence along said line North 89 degrees 56 minutes 41 seconds East (N 89°56'41" E), a distance of 859.25 feet to a point on the Easterly right of way of the Grand Junction and Grand River Valley Railway (as described in Book 125 at pages 286-288); thence following along the Easterly and Northerly line of said right of way the following (3) courses: (1) South 13 degrees 59 minutes 29 seconds East (S 13°59'29" E), a distance of 993.83 feet; (2) along a curve to the left having a radius of 954.82 feet, an length of 807.44 feet, delta angle of 78 degrees 33 minutes 20 seconds (78°33'20"), a chord bearing of South 52 degrees 18 minutes 06 seconds East (S 52°18'06" E), and a chord length of 363.25 feet; (3) North 89 degrees 27 minutes 11 seconds East (N 89°27'11" E), a distance of 213.18 feet to a point on the East line of the W1/2 NE1/4 NW1/4; thence South 00 degrees 03 minutes 24 seconds East (S 00°03'24" E), a distance of 20.00 feet to the South line of the W1/2 NE1/4 NW1/4; thence North 89 degrees 27 minutes 11 seconds West (N 89°27'11" W), a distance of 659.21 feet to the Mesa County Survey Marker at the Southwest corner of the NW1/4 NW1/4; thence South 00 degrees 01 minutes 00 seconds East (S 00°01'00" E), a distance of 147.21 feet; thence South 74 degrees 27 minutes 00 seconds West (S 74°27'00" W), a distance of 1064.29 feet; thence South 84 degrees 18 minutes 00 seconds West (S 84°18'00" W), a distance of 141.00 feet; thence South 90 degrees 00 minutes 00 seconds West (S 90°00'00" W), a distance of 147.32 feet to a point on the West line of the SW1/4 NW1/4 of Section 3; thence along said line North 00 degrees 00 minutes 50 seconds East (N 00°00'50" E), a distance of 510.40 feet to the POINT OF BEGINNING;

Said parcel containing 48.085 acres, as described.

That said owners have caused the real property to be laid out and platted as COUNTRY CROSSING SUBDIVISION, a subdivision of a part of the City of Grand Junction, Colorado. That said owner does hereby dedicate and set apart said property as shown and labeled on the accompanying plat of COUNTRY CROSSING SUBDIVISION as follows:

All Streets and Rights-of-way to the City of Grand Junction for the use of the public forever;

All Private Open Space to the Country Crossing Homeowners Association, a Colo. non-profit corporation, for the purposes of the Association, including but not limited to landscaping and signs;

All Irrigation Easements as set forth on this plat to the Country Crossing Homeowners Association, as perpetual easements for the installation, operation, maintenance and repair of private irrigation systems;

All Drainage Easements hereby platted to the Country Crossing Homeowners Association Inc. as perpetual non-exclusive easements for the conveyance of runoff water which enlightens within the area hereby platted or from upstream areas, through natural or man-made facilities, open or below ground;

All easements include the right of ingress and egress on, along, over, under, and through and across by the beneficiaries, their successors and assigns, together with the right to trim or remove interfering trees and brush, (having first notified the owner) that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted shall not burden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easements.

IN WITNESS WHEREOF, said owners, Columbia Housing, LLC, an Arizona Limited Liability Co., has caused their names to be hereunto subscribed this _____ day of _____ A.D. 1996.

by: _____ by: _____

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO)ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me by _____
this _____ day of _____ A.D., 1996.
Witness my hand and official seal.

Notary Public

My Commission Expires _____

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, having property interests in or encumbrances upon the real property involved, DO HEREBY RATIFY AND AFFIRM the Plat of Country Crossing Subdivision. Signed this _____ day of _____ 1996.

by: David G. Rice, Jr. by: William L. Rice

by: Robert J. Rice

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO)ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me by David G. Rice, Jr., William L. Rice, and Robert J. Rice this _____ day of _____ A.D., 1996.
Witness my hand and official seal.

Notary Public

My Commission Expires _____

SURVEYOR'S CERTIFICATION

I, DENNIS W. JOHNSON, DO HEREBY CERTIFY THAT THE ACCOMPANYING PLAT OF COUNTRY CROSSING, A SUBDIVISION OF A PART OF THE CITY OF GRAND JUNCTION, COLORADO HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION AND REPRESENTS A FIELD SURVEY OF SAME. THIS PLAT CONFORMS TO THE REQUIREMENTS FOR SUBDIVISION PLATS SPECIFIED IN THE CITY OF GRAND JUNCTION DEVELOPMENT CODE AND THE APPLICABLE LAWS OF THE STATE OF COLORADO.

Date certified _____

DENNIS W. JOHNSON, PLS
COLORADO PROFESSIONAL LAND SURVEYOR
P.L.S. NO. 16835

Declaration of Covenants and Restrictions are recorded at Book _____ Page _____ Mesa County Records.

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO)ss
COUNTY OF MESA)

I hereby certify that this instrument was filed in my office at _____ o'clock _____ M., this _____ day of _____ A.D., 1996, and was duly recorded in Plat Book No._____ Page No._____ Reception No._____ Drawer No._____.

Clerk and Recorder

CITY OF GRAND JUNCTION APPROVAL

This plat of COUNTRY CROSSING SUBDIVISION, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this _____ day of _____ A.D., 1996.

City Manager

President of City Council

COUNTRY CROSSING

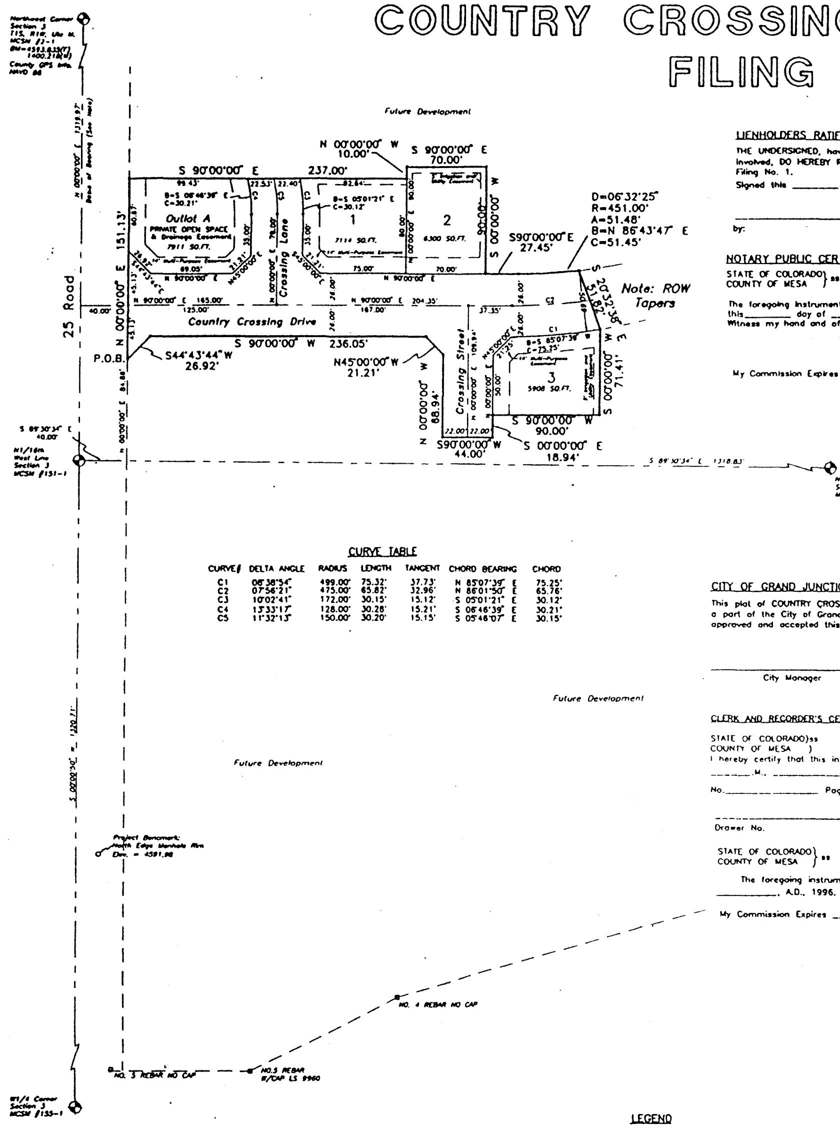
NW1/4 SECTION 3
T1S, R1W, UTE MERIDIAN
MESA COUNTY, COLORADO

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 244-9180

PROJECT NO. 93006-1	SUR. BY:	DRAWN	CHECKED	SHEET	OF
DATE: FEB., 1996	LD/JF	PSK/DWL		1	3

C:\SC12\WORK\93006\93006-1 Thu Feb 22 13:46:44 1996

COUNTRY CROSSING SUBDIVISION
FILING NO. 1



CURVE TABLE

CURVE#	DELTA ANGLE	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD
C1	06°38'54"	499.00'	75.32'	37.73'	N 85°07'39" E	75.25'
C2	07°56'21"	475.00'	65.82'	32.96'	N 86°01'50" E	65.76'
C3	10°02'41"	172.00'	30.15'	15.12'	S 05°01'21" E	30.12'
C4	13°33'17"	128.00'	30.28'	15.21'	S 06°46'39" E	30.21'
C5	11°32'13"	150.00'	30.20'	15.15'	S 05°46'07" E	30.15'

Basis of bearings assume the West line of the NW1/4 NW1/4 of Section 3 to bear N 00°00'00" E, 1319.97 feet. Both monuments on this line are Mesa Co. Survey Markers.

Note: Property corners located during this survey that were within 0.25± feet of the calculated point were accepted as being "in position".

Easement and Title information provided by Western Colorado Title Company, Policy No. 93-11-105K.

LEGEND

- ⊕ MESA COUNTY OR BLM SURVEY MARKER
- • SET ALUMINUM CAP ON No. 5 REBAR, PLS 16835 IN CONCRETE
- (R) RECORD MEASUREMENT
- ▫ FOUND REBAR, AS NOTED

SET ALUMINUM CAP ON No.5 REBAR, PLS 16835, AT ALL LOT CORNERS

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, having property interests in or encumbrances upon the real property involved, DO HEREBY RATIFY AND AFFIRM the Plat of Country Crossing Subdivision, Filing No. 1.

Signed this ________ day of ________, 1996.

by: ____________________ by: ____________________

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO) ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me by ____________________ this ________ day of ____________ A.D., 1996.
Witness my hand and official seal:

____
Notary Public

My Commission Expires ____________________

CITY OF GRAND JUNCTION APPROVAL

This plat of COUNTRY CROSSING SUBDIVISION, FILING NO. 1, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this ________ day of ____________ A.D., 1996.

____________________ City Manager

____________________ President of City Council

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO) ss
COUNTY OF MESA)

I hereby certify that this instrument was filed in my office at ________ o'clock ____.M., ____________, A.D., 1996, and was duly recorded in Plat Book

No.____________ Page No.__________, Reception No ____________

____________________ Drawer No.

____________________ Clerk and Recorder

STATE OF COLORADO) ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me this ________ day of ____________, A.D., 1996. Witness my hand and official seal:

My Commission Expires ________ ____________________ Notary Public

Area Summary			
Lots	=	0.444 Acres	34.69%
ROW	=	0.654 Acres	51.09%
Open Space	=	0.182 Acres	14.22%
TOTAL	=	1.280 Acres	100.00%

SURVEYOR'S CERTIFICATION

I, DENNIS W. JOHNSON, DO HEREBY CERTIFY THAT THE ACCOMPANYING PLAT OF COUNTRY CROSSING SUBDIVISION, FILING NO. 1, A SUBDIVISION OF A PART OF THE CITY OF GRAND JUNCTION, COLORADO HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION AND REPRESENTS A FIELD SURVEY OF SAME. THIS PLAT CONFORMS TO THE REQUIREMENTS FOR SUBDIVISION PLATS SPECIFIED IN THE APPLICABLE LAWS OF THE STATE OF COLORADO.

____
DATE

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That COLUMBIA HOUSING, L.L.C., an Arizona Limited Liability Co., is the owner of that real property located in part of the NW 1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado, being more particularly described as follows: (Original Warranty Deed Book 2191, Page 577.)

Commencing at the North 1/16th Corner on the West Line of Section 3, Township 1 South, Range 1 West of the Ute Meridian, whence the Northwest corner of Section 3 bears North 00 degrees 00 minutes 00 seconds East, a distance of 1319.97 feet for a basis of bearings, with all bearings contained herein relative thereto: thence South 89 degrees 30 minutes 34 seconds East, a distance of 40.00 feet to a point on the East right-of-way of 25 Road; thence North 00 degrees 00 minutes 00 seconds East, a distance of 84.86 feet along said East right-of-way to the POINT OF BEGINNING; thence North 00 degrees 00 minutes 00 seconds East, a distance of 151.13 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 237.00 feet; thence North 00 degrees 00 minutes 00 seconds West, a distance of 10.00 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 70.00 feet; thence South 00 degrees 00 minutes 00 seconds West, a distance of 90.00 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 27.45 feet; thence with a curve to the left with a delta angle of 06°32'25", with a radius of 451.00 feet, with an arc length of 51.48 feet, with a chord bearing of North 86 degrees 43 minutes 47 seconds East, and a chord length of 51.45 feet; thence South 20 degrees 32 minutes 38 seconds East, a distance of 51.82 feet; thence South 00 degrees 00 minutes 00 seconds West, a distance of 71.41 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 90.00 feet; thence South 00 degrees 00 minutes 00 seconds East, a distance of 18.94 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 44.00 feet; thence North 00 degrees 00 minutes 00 seconds West, a distance of 68.94 feet; thence North 45 degrees 00 minutes 00 seconds West, a distance of 21.21 feet; thence South 90 degrees 00 minutes 00 seconds West, a distance of 236.05 feet; thence South 44 degrees 43 minutes 44 seconds West, a distance of 26.92 feet to the POINT OF BEGINNING.
Said parcel containing 1.280 Acres, as described.

That said owner has caused the real property to be laid out and platted as COUNTRY CROSSING FILING No. 1, a subdivision of a part of the City of Grand Junction, Colorado. That said owner does hereby dedicate and set apart real property as shown and labeled as the accompanying plat of COUNTRY CROSSING, FILING NO. 1 as follows:

All Streets and Rights-of-way to the City of Grand Junction for the use of the public forever;

All Private Open Space (Outlot A) to the Country Crossing Homeowners Association, a Colorado non-profit corporation, for the purposes of the Association, including but not limited to landscaping and signs.

All Multi-Purpose and utility easements to the City of Grand Junction for the use of the public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, telephone lines, and also for the installation and maintenance of traffic control facilities, street lighting, street lighting, street trees and grade structures;

All Utility Easements to the City of Grand Junction for the use of public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, and telephone lines.

All Irrigation Easements as set forth on this plat to the Country Crossing Homeowners Association, as perpetual non-exclusive easements for the installation, operation, maintenance and repair of private irrigation systems;

All Drainage Easements hereby platted to the Country Crossing Homeowners Association Inc., as perpetual non-exclusive easements for the conveyance of runoff water which originates within the area hereby platted or from upstream areas, through natural or man-made facilities above or below ground;

All easements include the right of ingress and egress on, along, over, under, and through and across by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush. Provided, however, that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted shall not burden nor overburden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easement.

IN WITNESS WHEREOF, said owner, COLUMBIA HOUSING, L.L.C., has caused their names to be hereunto subscribed this ________ day of ____________ A.D. 1996.

by: ____________________
Columbia Housing, L.L.C.
an Arizona Limited Liability Company

Title: ____________________

The Declaration of Covenants and Restrictions are recorded at Book________, Page__________, Mesa County Records.

SCALE: 1" = 50'

50 25 0 50

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

DENNIS W. JOHNSON, PLS
COLORADO PROFESSIONAL LAND SURVEYOR
P.L.S. NO. 16835

COUNTRY CROSSING SUBDIVISION
FILING NO. 1
NW1/4 SECTION 3
T1S, R1W, UTE MERIDIAN
MESA COUNTY, COLORADO

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 244-9180

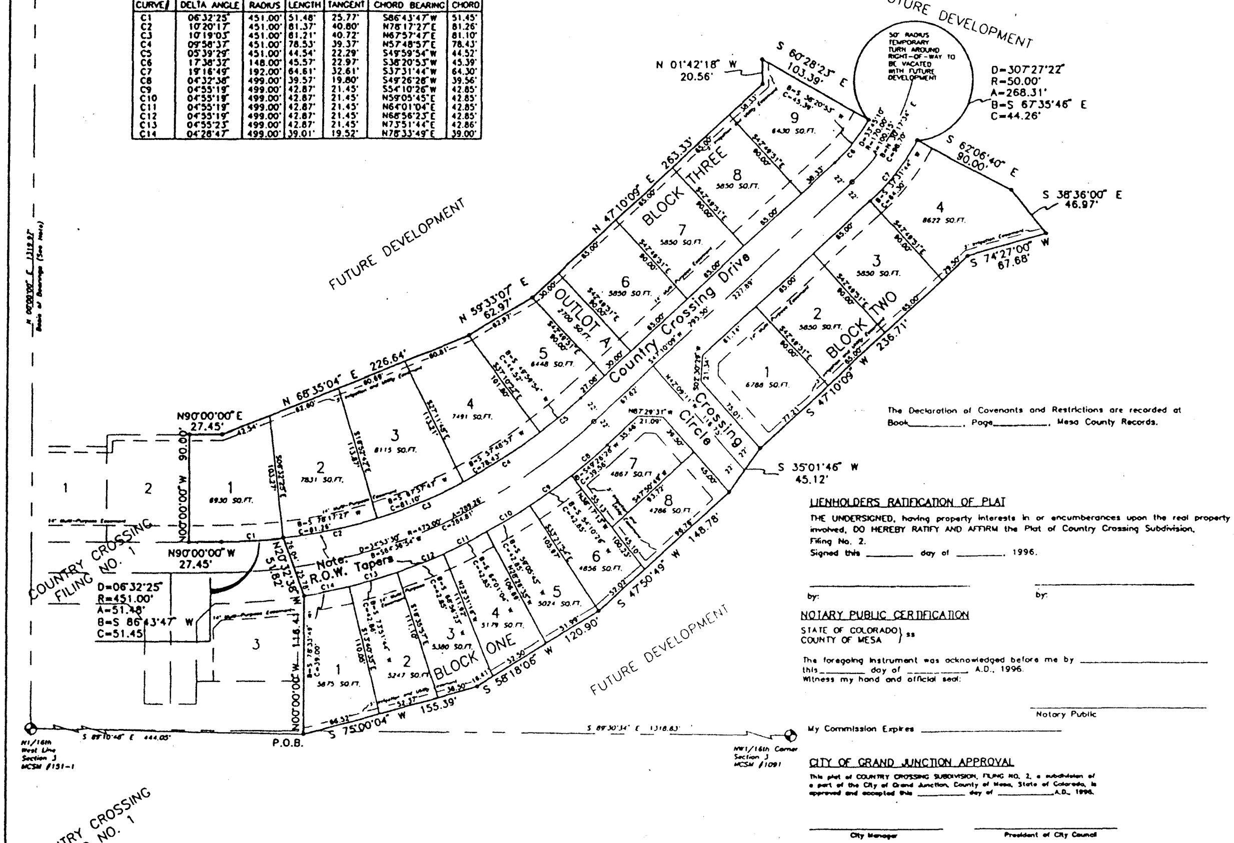
PROJECT NO. 93086	SUR. BY	DRAWN	CHECKED	SHEET	OF
DATE: Jan., 1996	LO/JA	DWJ/RSK		2	3

C:\SC12\WORK\93086\93086PL1 Thu Feb 22 13:26:53 1996

COUNTRY CROSSING SUBDIVISION FILING NO. 2

CURVE TABLE

CURVE#	DELTA ANGLE	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD
C1	06°32'25"	451.00'	51.48'	25.77'	S86°43'47"W	51.45'
C2	10°20'17"	451.00'	81.37'	40.80'	N78°17'27"E	81.26'
C3	10°19'05"	451.00'	81.21'	40.72'	N67°57'47"E	81.10'
C4	09°58'37"	451.00'	78.53'	39.37'	N57°48'57"E	78.43'
C5	05°39'29"	451.00'	44.54'	22.29'	S49°59'54"W	44.52'
C6	17°38'32"	148.00'	45.57'	22.97'	S38°20'53"W	45.39'
C7	19°16'49"	192.00'	64.61'	32.61'	S37°31'44"W	64.30'
C8	04°32'38"	499.00'	39.57'	19.80'	S49°26'28"W	39.56'
C9	04°55'19"	499.00'	42.87'	21.45'	S54°10'26"W	42.85'
C10	04°55'19"	499.00'	42.87'	21.45'	N59°05'45"E	42.85'
C11	04°55'19"	499.00'	42.87'	21.45'	N64°01'04"E	42.85'
C12	04°55'19"	499.00'	42.87'	21.45'	N68°56'23"E	42.85'
C13	04°55'25"	499.00'	42.87'	21.45'	N73°51'44"E	42.86'
C14	04°28'47"	499.00'	39.01'	19.52'	N78°33'49"E	39.00'



The Declaration of Covenants and Restrictions are recorded at Book________, Page________, Mesa County Records.

COUNTRY CROSSING FILING NO. 1

Project Benchmark:
North Edge Manhole Rim
In 25 Road
Elev. = 4581.96

Area Summary

Lots	=	2.952 Acres	74.54%
ROW	=	0.946 Acres	23.89%
Open Space	=	0.062 Acres	1.57%
TOTAL	=	3.960 Acres	100.00%

Basis of bearings assume the West line of the NW1/4 NW1/4 of Section 3 to bear N 00°00'00" E, 1319.97 feet, as referenced on the Final Plat of Country Crossing, Filing No. 1. Both monuments on this line are Mesa County Survey Markers.

Note: Property corners located during this survey that were within 0.25± feet of the calculated point were accepted as being "in position".

Easement and Title Information provided by Western Colorado Title Company, Policy No. 93-11-105K.

LEGEND

- MESA COUNTY OR BLM SURVEY MARKER
- SET ALUMINUM CAP ON No. 5 REBAR, PLS 16835 IN CONCRETE
- (R) RECORD MEASUREMENT
- FOUND REBAR, AS NOTED

SET ALUMINUM CAP ON No. 5 REBAR, PLS 16835, AT ALL LOT CORNERS

SCALE: 1" = 50'

50 25 0 50

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, having property interests in or encumberances upon the real property involved, DO HEREBY RATIFY AND AFFIRM the Plat of Country Crossing Subdivision, Filing No. 2.
Signed this ________ day of ________, 1996.

by: ________________ by: ________________

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO) ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me by ________________
this ________ day of ________ A.D., 1996.
Witness my hand and official seal:

____
Notary Public

My Commission Expires ________________

CITY OF GRAND JUNCTION APPROVAL

This plat of COUNTRY CROSSING SUBDIVISION, FILING NO. 2, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this ________ day of ________ A.D., 1996.

________________ City Manager

________________ President of City Council

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO) ss
COUNTY OF MESA)

I hereby certify that this instrument was filed in my office at ________ o'clock ____.M., ________________.
A.D., 1996, and was duly recorded in Plat Book No.________ Page No.________, Reception No.________, Drawer No.________.

____
Clerk and Recorder

SURVEYOR'S CERTIFICATION

I, DENNIS W. JOHNSON, DO HEREBY CERTIFY THAT THE ACCOMPANYING PLAT OF COUNTRY CROSSING SUBDIVISION, FILING NO. 2, A SUBDIVISION OF A PART OF THE CITY OF GRAND JUNCTION, COLORADO HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION AND REPRESENTS A FIELD SURVEY OF SAME. THIS PLAT CONFORMS TO THE REQUIREMENTS FOR SUBDIVISION PLATS SPECIFIED IN THE APPLICABLE LAWS OF THE STATE OF COLORADO.

____
DATE

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That Columbia Housing, L.L.C., an Arizona Limited Liability Co., is the owner of that real property located in part of the NW 1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado, being more particularly described as follows: (Original Warranty Deed Book 2191, Page 577.)

COMMENCING at a Mesa County Survey Marker at the North 1/16th Corner on the West Line of Section 3, Township 1 South, Range 1 West, of the Ute Meridian, whence the Northwest Corner of said Section 3 bears North 00 degrees 00 minutes 00 seconds East, a distance of 1319.97 feet with all bearings herein contained relative thereto; thence South 89 degrees 10 minutes 48 seconds East, a distance of 444.05 feet to the POINT OF BEGINNING; thence North 00 degrees 00 minutes 00 seconds West, a distance of 116.41 feet; thence North 20 degrees 32 minutes 38 seconds West, a distance of 51.82 feet; thence along a non-tangent curve to the right, having a delta angle of 06°32'35", with a radius of 451.00 feet, with an arc length of 51.48 feet, with a chord bearing of South 86 degrees 43 minutes 47 seconds West, and a chord length of 51.45 feet; thence North 90 degrees 00 minutes 00 seconds West, a distance of 27.45 feet; thence North 00 degrees 00 minutes 00 seconds West, a distance of 90.00 feet; thence North 90 degrees 00 minutes 00 seconds East, a distance of 27.45 feet; thence North 68 degrees 35 minutes 04 seconds East, a distance of 226.64 feet; thence North 59 degrees 33 minutes 07 seconds East, a distance of 62.97 feet; thence North 47 degrees 10 minutes 09 seconds East, a distance of 263.33 feet; thence North 01 degrees 42 minutes 18 seconds West, a distance of 20.56 feet; thence South 60 degrees 28 minutes 23 seconds East, a distance of 103.39 feet; thence along a non-tangent curve to the right, having a delta angle of 307°27'22", with a radius of 50.00 feet, with an arc length of 268.31 feet, with a chord bearing of South 67 degrees 35 minutes 46 seconds East, and a chord length of 44.26 feet; thence South 62 degrees 06 minutes 40 seconds East, a distance of 90.00 feet; thence South 38 degrees 36 minutes 00 seconds East, a distance of 46.97 feet; thence South 74 degrees 27 minutes 00 seconds West, a distance of 67.68 feet; thence South 47 degrees 10 minutes 09 seconds West, a distance of 236.71 feet; thence South 35 degrees 01 minutes 46 seconds West, a distance of 45.12 feet; thence South 47 degrees 50 minutes 49 seconds West, a distance of 148.78 feet; thence South 58 degrees 18 minutes 06 seconds West, a distance of 120.90 feet; thence South 75 degrees 00 minutes 04 seconds West, a distance of 155.39 feet to the POINT OF BEGINNING. Said parcel containing 3.960 Acres, as described.

That said owner has caused the real property to be laid out and platted as COUNTRY CROSSING SUBDIVISION, FILING NO. 2, a subdivision of a part of the City of Grand Junction, Colorado. That said owner does hereby dedicate and set apart real property as shown and labeled as the accompanying plat of COUNTRY CROSSING SUBDIVISION, FILING NO. 2 as follows:

All Streets and Rights-of-way to the City of Grand Junction for the use of the public forever;

All Private Open Space (Outlot A) to the Country Crossing Homeowners Association, a Colorado non-profit corporation, for the purposes of the Association, including but not limited to landscaping and signs.

All Multi-Purpose and utility easements to the City of Grand Junction for the use of the public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, telephone lines, and also for the installation and maintenance of traffic control facilities, street lighting, street lighting, street trees and grade structures;

All Utility Easements to the City of Grand Junction for the use of public utilities as perpetual non-exclusive easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including, but not limited to electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, water lines, and telephone lines.

All Irrigation Easements as set forth on this plat to the Country Crossing Homeowners Association, as perpetual non-exclusive easements for the installation, operation, maintenance and repair of private irrigation systems;

All easements include the right of ingress and egress on, along, over, under, and through and across by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush. Provided, however, that the beneficiaries of said easements shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of lots or tracts hereby platted shall not burden nor overburden said easements by erecting or placing any improvements thereon which may prevent reasonable ingress and egress to and from the easement.

IN WITNESS WHEREOF, said owner, Columbia Housing, L.L.C., has caused their name to be hereunto subscribed this ________ day of ________ A.D. 1996.

by________________
Columbia Housing, L.L.C.
an Arizona Limited Liability Company

Title:________________

STATE OF COLORADO) ss
COUNTY OF MESA)

The foregoing instrument was acknowledged before me this ________ day of ________ A.D., 1996. Witness my hand and official seal:

My Commission Expires ________ ________________ Notary Public

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

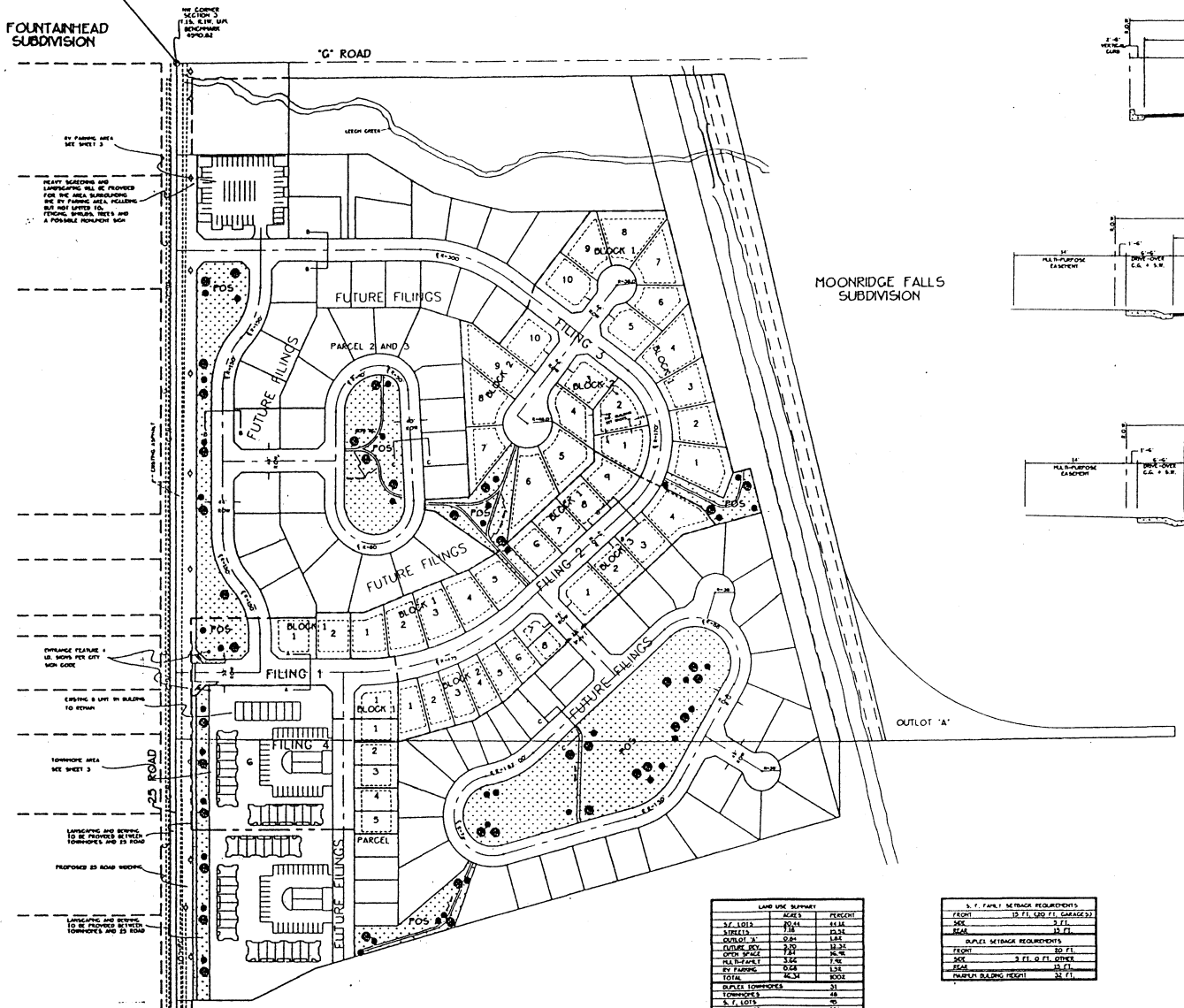
DENNIS W. JOHNSON, PLS
COLORADO PROFESSIONAL LAND SURVEYOR
P.L.S. NO. 16835

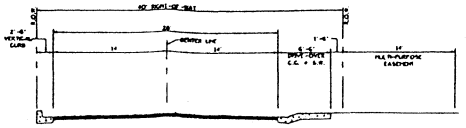
COUNTRY CROSSING SUBDIVISION
FILING NO. 2
NW1/4 SECTION 3
T1S, R1W, UTE MERIDIAN
MESA COUNTY, COLORADO

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 244-9180

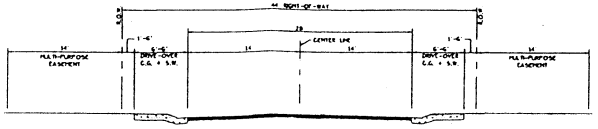
PROJECT NO. 83066	SUR. BY:	DRAWN	CHECKED	SHEET	OF
DATE: Jan., 1996	JCF/LD	RSK		3	3

G:\SC12\HORN\93086\93086PL2 Thu Feb 22 12:40:28 1996

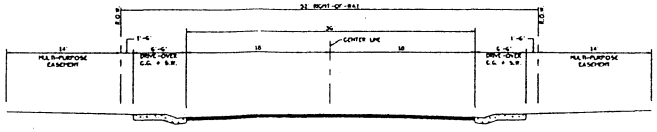




SECTION C-C



SECTION B-B



SECTION A-A

SCALE 1" = 100'

100' 0' 100' 200'

LAND USE SUMMARY		
	ACRES	PERCENT
S.F. LOTS	20.44	44.36
STREETS	7.18	15.58
OUTLOT 'A'	0.84	1.82
FUTURE DEV.	7.70	16.71
OPEN SPACE	7.87	16.98
MULTI-FAMILY	3.66	7.94
RV PARKING	0.68	1.56
TOTAL	46.34	100.0
DUPLEX TOWNHOMES		31
TOWNHOMES		48
S. F. LOTS		90
TOTAL UNITS		174
DENSITY		3.75 DU/AC

S. F. FAMILY SETBACK REQUIREMENTS	
FRONT	15 FT. (20 FT. GARAGE)
SIDE	3 FT.
REAR	15 FT.
DUPLEX SETBACK REQUIREMENTS	
FRONT	20 FT.
SIDE	3 FT. & 0 FT. OTHER
REAR	15 FT.
MAXIMUM BUILDING HEIGHT	32 FT.

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

BY: _____ DATE: _____

PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

DATE:	NO:	REVISIONS:	BY:
12/05/95	1		BH

OFFICIAL DEVELOPMENT PLAN

COUNTRY CROSSING SUBDIVISION

LANDesign
ENGINEERS + SURVEYORS + PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: OCTOBER 1994	JDL/BH	JDL/BH		5	16

For reference, copies of the proposed plats and the amended preliminary plan have been included for reference along with the attached aerial photograph.

Rezone Criteria

Section 4-4-4 of the Zoning and Development Code contains criteria which must be considered in the review of a rezone request. To minimize repetition, references are made to the previous section where applicable.

A. **Was the existing zone an error at the time of adoption?**
There is no evidence that the existing zone was an error at the time of adoption.

B. **Has there been a change of character in the area due to installation of public facilities, other zone changes, new growth trends, deterioration, development transitions, etc?**
The proposed development is located in an area which is still predominantly low-density residential or vacant, however, medium density residential exists to the east while high density zoning exists abutting the development to the south.

C. **Is there an area of community need for the proposed rezone?**
The proposed use provides for single-family and multi-family housing sites. The development plan also addresses a recognized need in the community for higher density residential development.

D. **Is the proposed rezone compatible with the surrounding area or will there be adverse impacts?**
The proposed residential development is located in close proximity to services and is compatible with surrounding uses.

E. **Will there be benefits derived by the community, or area, by granting the proposed rezone?**
The development will provided needed sites for the location of single- and multi- family housing.

F. **Is the proposal in conformance with the policies, intents and requirements of this Code, with the City Master Plan, and other adopted plans and policies?**
The proposal represents a significant decrease in zoning from what was approved in 1981 but is consistent with the draft Grand Junction Growth Plan.

G. **Are adequate facilities available to serve development for the type and scope suggested for the proposed zone?**
Adequate facilities are available to serve the proposed development.

Staff feels that the rezone request is supported by the rezone criteria.

Conditions of Approval

The petitioner has agreed to the conditions of approval with regard to the Preliminary Plan. Staff has no specific conditions regarding the rezone application.

STAFF RECOMMENDATION:

Staff recommends approval of the rezone to PR-3.8 for the Country Crossing subdivision.

PLANNING COMMISSION RECOMMENDATION:

At their March 6, 1996 meeting Planning Commission recommended approval of the rezone.

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CITY OF GRAND JUNCTION, COLORADO

Ordinance No. _____

REZONING LAND LOCATED ON 25 ROAD SOUTH OF G ROAD

Recitals:

A rezone from PR-17 (Planned Residential - 17 units per acre) to PR-3.8 (Planned Residential - 3.8 units per acre) located on 25 Road to allow for residential development. The Planning Commission at their March 5th hearing and the City Council find that the requirements for a rezone as set forth in Section 4-4-4 of the Zoning and Development Code have been satisfied and recommended approval of the rezoning.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION, COLORADO:

That the land described below is hereby rezoned from PR-17 (Planned Residential - 17 units per acre) to PR-3.8 (Planned Residential - 3.8 units per acre):

A parcel of land being a part of the NW1/4 of Sec 3, T1S, R1W, U.M., Mesa County, Colorado, being more particularly described as follows: Beg at the Mesa County Survey Marker at the SW cor of the NW1/4 NW1/4 of Sec 3, whence the Mesa County Survey Marker at the NW cor of Sec 3 bears N00°00'00"E 1319.97ft for a basis of bearings, with all bearings contained herein relative thereto; thence along the W line of the NW1/4 NW1/4 N00°00'00"E 1139.97ft; thence N89°56'41"E 220.00ft; thence N00°00'00"E 179.79ft to the N line of the NW1/4 NW1/4; thence along said line N89°55'49"E 859.25ft to a pt on the easterly R-O-W of the Grand Junction and Grand River Valley Railway (as described in B-125 at P-286-288); thence following along the easterly and northerly line of said R-O-W the following three courses: 1) S13°59'29"E 992.82ft; 2) along a curve to the left having a radius of 454.62ft, arc length of 607.44ft, delta angle of 76°33'20", a chord bearing of S52°16'09"E, and a chord length of 563.25ft; 3) N89°27'11"E 213.81ft to a pt on the E line of the W1/2 NE1/4 NW1/4; thence S00°03'24"E 20.00ft to the S line of the W1/2 NE1/4 NW1/4; thence along said line S89°27'11"W 659.21ft to the Mesa County Survey Marker at the SE cor of the NW1/4 NW1/4; thence S00°01'00"E 147.21ft; thence S74°27'00"W 1084.29ft; thence S64°16'00"W 141.00ft; thence S90°00'00"W 147.32ft to a pt on the W line of the SW1/4 NW1/4 of Sec 3; thence along said line N00°00'51"E 510.40ft to the POB; and containing 48.066 acres more or less.

INTRODUCED for FIRST READING and PUBLICATION this ____ day of March, 1996.

PASSED on SECOND READING this _____ day of _____, 1996.

ATTEST:

City Clerk

President of City Council

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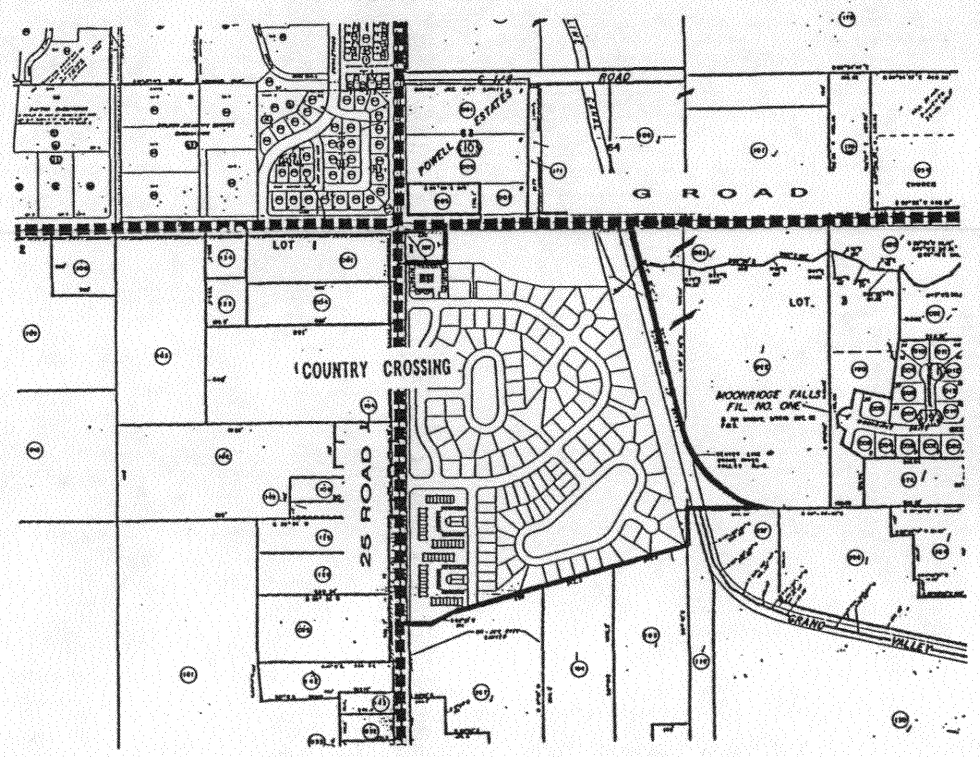
COUNTRY CROSSING SUBDIVISION

FILING ONE & TWO

VICINITY MAP



SHEET INDEX

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SEWER & WATER DETAILS	15
STORM SEWER DETAILS	16

CITY OF GRAND JUNCTION

APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.

BY: _____ DATE: _____

ACCEPTED AS CONSTRUCTED

BY: _____ DATE: _____

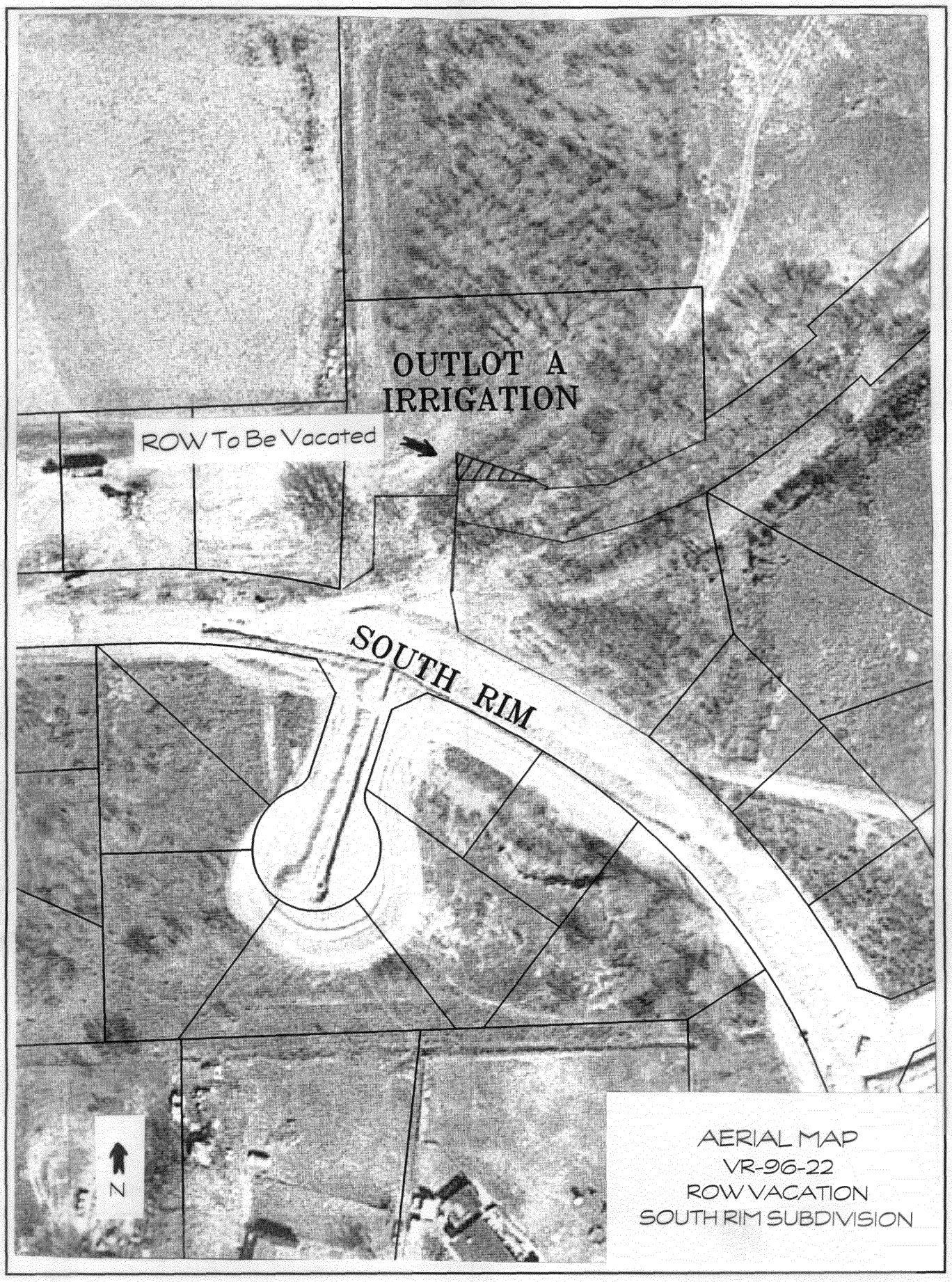
PHILIP M. HART
REGISTERED PROFESSIONAL ENGINEER
P.E. NO. 19346

COVER SHEET

COUNTRY CROSSING SUBDIVISION

LANDesign
ENGINEERS • SURVEYORS • PLANNERS
259 GRAND AVENUE
GRAND JUNCTION, COLORADO 81501 (970) 245-4099

PROJECT NO. 93086	DESIGNED	DRAWN	CHECKED	SHEET	OF
DATE: 01/29/96				1	16



AERIAL MAP
VR-96-22
ROW VACATION
SOUTH RIM SUBDIVISION

TYPE LEGAL DESCRIPTION(S) BELOW, USING ADDITIONAL SHEETS AS NECESSARY. USE SINGLE SPACING WITH A ONE INCH MARGIN ON EACH SIDE.

****

COUNTRY CROSSING SUBDIVISION BOUNDARY

A parcel of land being a part of the Northwest quarter (NW1/4) of Section 3, Township 1 South, Range 1 West of the Ute Meridian, Mesa County, Colorado, being more particularly described as follows:

BEGINNING at the Mesa County Survey Marker at the Southwest corner of the NW1/4 NW1/4 of Section 3, whence the Mesa County Survey Marker at the Northwest corner of Section 3 bears N 00°00'00" E a distance of 1319.97 feet for a basis of bearings, with all bearings contained herein relative thereto; thence along the West line of the NW1/4 NW1/4 North 00 degrees 00 minutes 00 seconds East (N 00°00'00" E), a distance of 1139.97 feet; thence North 89 degrees 56 minutes 41 seconds East (N 89°56'41" E), a distance of 220.00 feet; thence North 00 degrees 00 minutes 00 seconds East (N 00°00'00" E), a distance of 179.79 feet to the North line of the NW1/4 NW1/4; thence along said line North 89 degrees 55 minutes 49 seconds East (N 89°55'49" E), a distance of 859.25 feet to a point on the Easterly right of way of the Grand Junction and Grand River Valley Railway (as described in Book 125 at pages 286-288); thence following along the Easterly and Northerly line of said right of way the following three (3) courses: (1) South 13 degrees 59 minutes 29 seconds East (S 13°59'29" E), a distance of 992.82 feet; (2) along a curve to the left having a radius of 454.62 feet, arc length of 607.44 feet, delta angle of 76 degrees 33 minutes 20 seconds (76°33'20"), a chord bearing of South 52 degrees 16 minutes 09 seconds East (S 52°16'09" E), and a chord length of 563.25 feet; (3) North 89 degrees 27 minutes 11 seconds East (N 89°27'11" E), a distance of 213.18 feet to a point on the East line of the W1/2 NE1/4 NW1/4; thence South 00 degrees 03 minutes 24 seconds East (S 00°03'24" E), a distance of 20.00 feet to the South line of the W1/2 NE1/4 NW1/4; thence along said line South 89 degrees 27 minutes 11 seconds West (S 89°27'11" W), a distance of 659.21 feet to the Mesa County Survey Marker at the Southeast corner of the NW1/4 NW1/4; thence South 00 degrees 01 minutes 00 seconds East (S 00°01'00" E), a distance of 147.21 feet; thence South 74 degrees 27 minutes 00 seconds West (S 74°27'00" W), a distance of 1084.29 feet; thence South 64 degrees 16 minutes 00 seconds West (S 64°16'00" W), a distance of 141.00 feet; thence South 90 degrees 00 minutes 00 seconds West (S 90°00'00" W), a distance of 147.32 feet to a point on the West line of the SW1/4 NW1/4 of Section 3; thence along said line North 00 degrees 00 minutes 51 seconds East (N 00°00'51" E), a distance of 510.40 feet to the POINT OF BEGINNING; and containing 48.066 acres, or 2093758 square feet.

93086-1.LGL

FINAL APPROVAL CHECKLIST

Country Crossing Filings #1 & #2

- o 1. Development Improvements Agreement (DIA) #
- o 2. Improvements Guarantee (type used: _____) #
- o 3. Final Plans #
- o 4. Articles of Incorporation of HOA
- o 5. CC&Rs
- o 6. Plat
- o 7. Disk of Plat
- o 8. UCC Approval
- o 9. TCP Credit Request
- o 10. City Surveyor Certificate
- o 11. N/A

: Minimum required for commencement of construction

FEES

Open Space Fees - $ 225 / unit

TCP - $ _____ /lot TBD

$500 detached SF
$400 duplex
$300 townhomes

School Impact Fee - $ 292 /lot

COUNTRY CROSSING

FINAL PLAN CHECKLIST

		SETS
☑	Applicant/Contractor (7 sets)	7
☑	City Community Development (2 sets)	2
☑	City Engineering (2 sets)	2
☑	Ute Water (2 sets)	2
☐	Fruitvale Sanitation District (sets)	
☐	Central Grand Valley Sanitation Dist. (sets)	
☐	Grand Junction Drainage District (sets)	
☐	Orchard Mesa Sanitation District (sets)	
☐	Other: _____	
	TOTAL NUMBER OF SETS REQUIRED	13

NOTE:

All required sets must be signed and sealed.

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DEVELOPMENT IMPROVEMENTS AGREEMENT

1. **Parties:** The parties to this Development Improvements Agreement ("the Agreement") are COUNTRY CROSSING, LLC ("the Developer") and **THE CITY OF GRAND JUNCTION,** Colorado ("the City").

THEREFORE, for valuable consideration, the receipt and adequacy of which is acknowledged, the Parties agree as follows:

2. **Effective Date:** The Effective Date of the Agreement will be the date that this agreement is recorded which is not sooner than recordation of the COUNTRY CROSSING FILING 1 & 2 PLATS.

RECITALS

The Developer seeks permission to develop property within the City to be known as COUNTRY CROSSING, which property is more particularly described on Exhibit "A" attached and incorporated by this reference (the "Property"). The City seeks to protect the health, safety and general welfare of the community by requiring the completion of various improvements in the development and limiting the harmful effects of substandard developments. The purpose of this Agreement is to protect the City from the cost of completing necessary improvements itself and is not executed for the benefit of materialmen, laborers, or others providing work, services or material to the development or for the benefit of the purchasers or users of the development. The mutual promises, covenants, and obligations contained in this Agreement are authorized by state law, the Colorado Constitution and the City's land development ordinances.

DEVELOPER'S OBLIGATION

3. **Improvements:** The Developer will design, construct and install, at its own expense, those on-site and off-site improvements listed on Exhibit "B" attached and incorporated by this reference. The Developer agrees to pay the City for inspection services performed by the City, in addition to amounts shown on Exhibit B. The Developer's obligation to complete the improvements is and will be independent of any obligations of the City contained herein.

4. **Security:** To secure the performance of its obligations under this Agreement (except its obligations for warranty under paragraph 6), the Developer will enter into an agreement which complies with either option identified in paragraph 28, or other written agreement between the City and the Developer.

5. **Standards:** The Developer shall construct the Improvements according to the standards and specifications required by the City Engineer or as adopted by the City.

6. **Warranty:** The Developer warrants that the Improvements, each and every one of them, will be free from defects for a period of twelve (12) months from the date that the City Engineer accepts or approves the improvements completed by the Developer.

7. **Commencement and Completion Periods:** The improvements, each and every one of them, will be completed within 120 DAYS from the Effective Date of this Agreement (the "Completion Period").

8. **Compliance with Law:** The developer shall comply with all relevant federal, state and local laws, ordinances, and regulations in effect at the time of final approval when fulfilling its obligations under this Agreement.

9. **Notice of Defect:** The Developer's Engineer shall provide timely notice to the Developer, contractor, issuer of security and the City Engineer whenever inspection reveals, or the Developer's Engineer otherwise has knowledge, that an improvement does not conform to City standards and any specifications approved in the

development application or is otherwise defective. The developer will have thirty (30) days from the issuance of such notice to correct the defect.

10. **Acceptance of Improvements:** The City's final acceptance and/or approval of improvements will not be given or obtained until the Developer presents a document or documents, for the benefit of the City, showing that the Developer owns the improvements in fee simple and that there are no liens, encumbrances, or other restrictions on the improvements. Approval and/or acceptance of any improvements does not constitute a waiver by the City of any rights it may have on account of any defect in or failure of the improvement that is detected or which occurs after approval and/or acceptance.

11. **Use of Proceeds:** The City will use funds deposited with it or drawn pursuant to any written disbursement agreement entered into between the parties only for the purpose of completing the Improvements or correcting defects in or failure of the Improvements.

12. **Events of Default:** The following conditions, occurrences or actions will constitute a default by the Developer during the Completion Period:

a. Developer's failure to complete each portion of the Improvements in conformance with the agreed upon time schedule; the City may not declare a default until a fourteen (14) calendar day notice has been given to the Developer;

b. Developer's failure to demonstrate reasonable intent to correct defective construction of any improvement within the applicable correction period; the City may not declare a default until a fourteen (14) calendar day notice has been given to the Developer;

c. Developer's insolvency, the appointment of a receiver for the Developer or the filing of a voluntary or involuntary petition in bankruptcy respecting the Developer; in such event the City may immediately declare a default without prior notification to the Developer;

d. Notification to the City, by any lender with a lien on the property, of a default on an obligation; the City may immediately declare a default without prior notification to the Developer;

e. Initiation of any foreclosure action of any lien or initiation of mechanics lien(s) procedure(s) against the Property or a portion of the Property or assignment or conveyance of the Property in lieu of foreclosure; the City may immediately declare a default without prior notification to the Developer.

13. **Measure of Damages:** The measure of damages for breach of this Agreement by the Developer will be the reasonable cost of satisfactorily completing the Improvements plus reasonable City administrative expenses. For improvements upon which construction has not begun, the estimated costs of the Improvements as shown on Exhibit "B" will be prima facie evidence of the minimum cost of completion; however, neither that amount nor the amount of a letter of credit, the subdivision improvements disbursement agreement or cash escrow establish the maximum amount of the Developer's liability.

14. **City's Rights Upon Default:** When any event of default occurs, the City may draw on the letter of credit, escrowed collateral, or proceed to collect any other security to the extent of the face amount of the credit or full amount of escrowed collateral, cash, or security less ninety percent (90%) of the estimated cost (as shown on Exhibit "B") of all improvements previously accepted by the City or may exercise its rights to disbursement of loan proceeds or other funds under the improvements disbursement agreement. The City will have the right to complete improvements itself or it may contract with a third party for completion, and the Developer grants to the City, its successors, assigns, agents, contractors, and employees, a nonexclusive right and easement to enter the Property for the purposes

of constructing, reconstructing, maintaining, and repairing such improvements. Alternatively, the City may assign the proceeds of the letter of credit, the improvements disbursement agreement, the escrowed collateral, cash, or other funds or assets to a subsequent developer (or a lender) who has acquired the development by purchase, foreclosure or otherwise who will then have the same rights of completion as the City if and only if the subsequent developer (or lender) agrees in writing to complete the unfinished improvements and provides reasonable security for the obligation. In addition, the City may also enjoin the sale, transfer, or conveyance of lots within the development, until the improvements are completed or accepted. These remedies are cumulative in nature and are in addition to any other remedies the City has at law or in equity.

15. **Indemnification:** The Developer expressly agrees to indemnify and hold the City, its officers, employees and assigns harmless from and against all claims, costs and liabilities of every kind and nature, for injury or damage received or sustained, or alleged to be received or sustained, by any person or entity in connection with, or on account of, any act or failure to act concerning the performance of work at the development or the Property pursuant to this Agreement. The Developer further agrees to aid and defend the City in the event that the City is named in an action concerning the performance of work or the failure to perform work pursuant to this Agreement. The Developer is not an agent or employee of the City.

16. **No Waiver:** No waiver of any provision of this Agreement by the City will be deemed or constitute a waiver of any other provision, nor will it be deemed or constitute a continuing waiver unless expressly provided for by a written amendment to this Agreement signed by both City and Developer; nor will the waiver of any default under this Agreement be deemed a waiver of any subsequent default or defaults of the same type. The City's failure to exercise any right under this Agreement will not constitute the approval of any wrongful act by the Developer or the acceptance of any improvement.

17. **Amendment or Modification:** The parties to this Agreement may amend or modify this Agreement only by written instrument executed on behalf of the City by the City Manager or his designee and by the Developer or his authorized officer. Such amendment or modification shall be properly notarized before it shall be deemed effective.

18. **Attorney's Fees:** Should either party be required to resort to litigation to enforce the terms of this Agreement, the prevailing party, plaintiff or defendant, will be entitled to costs, including reasonable attorney's fees and expert witness fees, from the opposing party; any City obligation under this section shall be subject to the overriding provisions of section 15, above. If the court awards relief to both parties, the attorney's fees may be equitably divided between the parties by the decision maker, subject to the overriding provisions of section 15, above.

19. **Vested Rights:** The City does not warrant by this Agreement that the Developer is entitled to any other approval(s) required by the City, if any, before the Developer is entitled to commence development or to transfer ownership of property in the development.

20. **Third Party Rights:** No person or entity who or which is not a party to this Agreement will have any right of action under this Agreement.

21. **Time:** For the purpose of computing the Abandonment and Completion Periods, and time periods for City action, such times in which war, civil disasters, or acts of God occur or exist will not be included if such times prevent the Developer or City from performing its obligations under the Agreement.

22. **Severability:** If any part, term, or provision of this Agreement is held by a court or courts of competent jurisdiction to be illegal or otherwise unenforceable, such illegality or unenforceability will not affect the validity of any other part, term, or provision and the rights of the parties will be construed as if the part, term, or provision was never part of the Agreement.

23. **Benefits/burdens:** The benefits of this Agreement to the Developer are personal and may not be assigned without the express written approval of the City. Such approval may not be unreasonably withheld, but any unapproved assignment is void. Notwithstanding the foregoing, the burdens of this Agreement are personal obligations of the Developer and also shall be binding on the heirs, successors, and assigns of the Developer, and shall be a covenant(s) running with the Property. There is no prohibition on the right of the City to assign its rights under this Agreement. The City will expressly release the original Developer's guarantee or obligations under the improvements disbursement agreement if it accepts new security from any developer or lender who obtains the Property. However, no other act of the City will constitute a release of the original Developer from his liability under this Agreement.

24. **Notice:** Any notice required or permitted by this Agreement will be deemed effective when personally delivered in writing or three (3) days after notice is deposited with the U.S. Postal Service, postage prepaid, certified, and return receipt requested, and addressed as follows:

If to Developer:

759 Horizon Dr
Grand Junction Co 81506

If to City:

City of Grand Junction
Community Development Director
250 N. 5th Street
Grand Junction, Colorado 81501

25. **Recordation:** Developer shall pay for all costs to record a copy of this Agreement in the Clerk and Recorder's Office of Mesa County, Colorado.

26. **Immunity:** Nothing contained in this Agreement constitutes a waiver of the City's immunity under any applicable law.

27. **Personal Jurisdiction and Venue:** Personal jurisdiction and venue for any civil action commenced by either party to this Agreement whether arising out of or relating to the Agreement, letter of credit, improvements disbursements agreement, or cash escrow agreement or any action to collect security will be deemed to be proper only if such action is commenced in Mesa County, Colorado. The Developer expressly waives his right to bring such action in or to remove such action to any other court whether state or federal.

28. **Improvements guarantee.** The improvements guarantee required by the City to ensure that the improvements described in the improvements agreement are constructed to City standards may be in one of the following forms: (If I or II, then attach as Exhibit C.)

____ (I) disbursement agreement between a bank doing business in Mesa County and the City, or

____ (II) a good and sufficient letter of credit acceptable to the City, or

____ (III) depositing with the City cash equivalent to the estimated cost of construction of the improvements under the following terms:

(a) The Finance Department of the City may act as disbursing agent for disbursements to Developer's contractor(s) as required improvements are completed and accepted if agreed to in writing pursuant to a disbursement agreement; and

(b) The Finance Department of the City will disburse any deposit or any portion thereof, with no more than three checks, at no charge. If disbursements are made in excess of three checks, the developer will be charged $100 per transaction for every transaction in excess of three.

29. **Conditions of Acceptance.**

a. The City shall have no responsibility or liability with respect to any street, or other improvement(s), notwithstanding the use of the same by the public, unless the street or other improvements shall have been accepted by the City. "Acceptance by the City" means a separate writing wherein the City specifies which improvements have been accepted and the date from which warranty(ies) shall run.

b. Prior to requesting final acceptance of any street, storm drainage facility, or other required improvement(s), the Developer shall: (i) furnish to the City Engineer as-built drawings in reproducible form, blueline stamped and sealed by a professional engineer and in computer disk form and copies of results of all construction control tests required by City specifications; (ii) provide written evidence to the City Engineer under signature of a qualified expert that the earth, soils, lands and surfaces upon, in and under which the improvements have been constructed, or which are necessary for the improvements, are free from toxic, hazardous or other regulated substances or materials; (iii) provide written evidence to the City Engineer that the title to lands underlying the improvements are merchantable and free and clear from all liens and encumbrances, except those liens and encumbrances which may be approved in writing by the City Engineer.

30. **Phased Development.** If the City allows a street to be constructed in stages, the Developer of the first one-half street opened for traffic shall construct the adjacent curb, gutter and sidewalk in the standard location and shall construct the required width of pavement from the edge of gutter on his side of the street to enable an initial two-way traffic operation without on-street parking. That Developer is also responsible for end-transitions, intersection paving, drainage facilities, and adjustments to existing utilities necessary to open the street to traffic.

_____

Director of Community Development Date

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

_____

Developer Date
(If Corporation, to be signed by President and attested to by Secretary together with the Corporate seals)

s:impagre2:6/22/95

EXHIBIT "A"

TYPE LEGAL DESCRIPTION BELOW, USING ADDITIONAL SHEETS AS NECESSARY. USE SINGLE SPACING WITH A ONE (1) INCH MARGIN ON EACH SIDE.

****

LEGAL DESCRIPTION PER ATTACHED SCHEDULE "A".

MEMORANDUM OF IMPROVEMENTS AGREEMENT & GUARANTEE
Grand Junction Community Development Department
File #

This memorandum relates to an improvements agreement and guarantee dated _____ 19___, by and between _____ (Developer) and the City of Grand Junction (City) pertaining to _____ (Project) in the City of Grand Junction.

Whereas, Developer is required to install and construct certain public and private improvements as a condition of approval of the Project, which completion is guaranteed by an improvements agreement and guarantee in the sum of $_____, and

Whereas, the City of Grand Junction and other agencies possessing regulatory authority over the Project and/or the improvements to be constructed, must inspect the improvements and accept the same before the improvements agreement and guarantee are released or if not constructed the City may use the proceeds or collateral of the guarantee to install the improvements, and

Whereas, the existence of the improvements agreement and guarantee may affect certain rights, responsibilities and actions of the Developer, the City or any other person or entity,

NOW THEREFORE, this memorandum is recorded to be notice to the world of the existence of said improvements agreement and guarantee. This memorandum is not a complete summary of the improvements agreement and guarantee. Provisions of this memorandum shall not be used to interpret the terms or provisions of the improvements agreement and/or guarantee. In the event of conflict between this memorandum and the unrecorded improvements agreement and/or guarantee, the unrecorded improvements agreement and guarantee shall control. The improvements agreement and guarantee may be inspected at the City of Grand Junction Community Development Department, 250 N. 5th Street, Grand Junction, CO.

CITY OF GRAND JUNCTION:

_____

Director of Community Development date

DEVELOPER:

_____

date

After recording mail to:

_____
c/o Community Development Department
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

COUNTRY CROSSING FILING 1 & 2 ESTIMATE 1-29-96

STREET IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	Remove Clear & Grub	LOAD	4	$100.00	$400.00
2	Excavation/Embankment	CY	2000	$3.10	$6,200.00
3	Subgrade Prep	CY	7678	$0.60	$4,606.80
4	Class 6 Base	TN	2860	$8.70	$24,882.00
5	3" Grade C HBP	TN	1000	$25.00	$25,000.00
6	Adjust MH's and Valves	EA	17	$75.00	$1,275.00
7	6.5" C & G S\W	LF	1788	$13.80	$24,674.40
8	7' C & G S/W	LF	400	$13.90	$5,560.00
9	8" Conc Pans & Fillets	SF	576	$3.70	$2,131.20
10	Handicap Ramps	SF	2718	$2.70	$7,338.60
11	6" Concrete Drain Pan	SF	1640	$4.40	$7,216.00
12	Mailbox Pads	EA	1	$200.00	$200.00
13	Road Barricades	EA	8	$30.00	$240.00
14	Street Signs	EA	4	$90.00	$360.00
15	Traffic Control	EA	1	$840.00	$840.00
16	Compliance Testing	LS	1	$2,000.00	$2,000.00
	TOTAL STREET IMPROVEMENTS				$112,924.00

CC 1 & 2 1-29-96

SANITARY SEWER IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	8" Sanitary Sewer Main	LF	1478	$12.00	$17,736.00
2	4" Sanitary Sewer Main	LF	884	$9.00	$7,956.00
3	Standard Manhole	EA	8	$900.00	$7,200.00
4	Service Connections	EA	25	$50.00	$1,250.00
5	10" Sanitary Sewer Main	LF	460	$16.00	$7,360.00
6	Deep Manhole	EA	2	$1,450.00	$2,900.00
7	Join Existing	EA	1	$200.00	$200.00
8	Compliance Testing	LS	1	$750.00	$750.00
	TOTAL SANITARY SEWER IMPROVEMENTS				$45,352.00

CC 1 & 2 1-29-96

DOMESTIC WATER IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	8" PVC Water Main	LF	1470	$11.00	$16,170.00
2	8" Gate Valve w/Box	EA	5	$500.00	$2,500.00
3	Fire Hydrant Assembly	EA	4	$1,480.00	$5,920.00
4	Trench Compaction	LF	1470	$2.00	$2,940.00
5	Service Connections	EA	25	$250.00	$6,250.00
6	Join Existing	EA	1	$200.00	$200.00
7	Compliance Testing	LS	1	$500.00	$500.00
	TOTAL DOMESTIC WATER IMPROVEMENTS				$34,480.00

GC 1 & 2 1-29-96

DRY UTILITY IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	Trenching, Backfill, & Testing	LF	1360	$3.80	$5,168.00
2	4" PVC Conduits	LF	1360	$1.50	$2,040.00
3	Compliance Testing	LS	1	$200.00	$200.00
	TOTAL DRY UTILTIY IMPROVEMENTS				$7,408.00

CC 1 & 2 1-29-96

EROSION CONTROL IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	Silt Fence	LF	1000	$2.00	$2,000.00
2	Rock Stagging Pad	LS	1	$300.00	$300.00
3	Bonterra Erosion Blanket	LF	0	$3.00	$0.00
4	Rip-Rap Check Dam	LS	0	$2,000.00	$0.00
	TOTAL EROSION CONTROL IMPROVEMENTS				$2,300.00

CC 1 & 2 1-29-96

IRRIGATION SYSTEM IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	4" PVC Irrigation Main	LF	3600	$4.10	$14,760.00
2	Service Connection	EA	25	$150.00	$3,750.00
3	4" Gate Valve w/ Box	EA	12	$350.00	$4,200.00
4	Trench Compaction	LF	200	$2.50	$500.00
5	Drainage Connections	EA	1	$200.00	$200.00
6	Join Exisiting	EA	0	$100.00	$0.00
7	Compliance Testing	LS	1	$250.00	$250.00
	TOTAL IRRIGATION WATER IMPROVEMENTS				$23,660.00

GC 1 & 2 1-29-96

STORM SEWER IMPROVEMENTS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	24" RCP Storm Sewer	LF	540	$29.00	$15,660.00
2	12" RCP Storm Sewer	LF	30	$24.50	$735.00
3	Type "C" Standard Inlet	EA	1	$890.00	$890.00
4	Standard Street Inlet	EA	3	$900.00	$2,700.00
5	12" PVC Storm Sewer	EA	125	$10.25	$1,281.25
6	Storm Sewer Manholes	EA	0	$820.00	$0.00
7	Trench Compaction	LS	225	$2.00	$450.00
8	Compliance Testing	LS	1	$300.00	$300.00
	TOTAL STORM SEWER IMPROVEMENTS				$22,016.25

GC 1 & 2 1-29-96

UTILITY DEPOSITS

ITEM	DESCRIPTION	UNIT	QUAN	UNIT PRICE	CONTRACT TOTAL
1	Gas and Electric Deposits	EA	25	$1,500.00	$37,500.00
2	Telephone Deposits	EA	25	$500.00	$12,500.00
3	Street Lights	EA	5	$1,250.00	$6,250.00
	TOTAL UTILITY DEPOSITS				$56,250.00

COUNTRY CROSSING FILING 1 & 2 COST ESTIMATE - 1-29-96

TOTAL STREET IMPROVEMENTS	$112,924.00
TOTAL SANITARY SEWER IMPROVEMENTS	$45,352.00
TOTAL DOMESTIC WATER IMPROVEMENTS	$34,480.00
TOTAL DRY UTILTIY IMPROVEMENTS	$7,408.00
TOTAL EROSION CONTROL IMPROVEMENTS	$2,300.00
TOTAL IRRIGATION WATER IMPROVEMENTS	$23,660.00
TOTAL STORM SEWER IMPROVEMENTS	$22,016.25
TOTAL UTILITY DEPOSITS	$56,250.00
TOTAL CONSTRUCTION COSTS	$304,390.25
CONTINGENCIES	$15,219.51
TOTAL	$319,609.76
GOVERNMENTAL FEES	$12,000.00
DESIGN ENGINEERING	$39,000.00
CONSTRUCTION MANAGEMENT	$16,000.00
STAKING	$16,000.00
TOTAL PROJECT	$402,609.76
COST PER UNIT (25 UNITS)	$16,104.39

Developer Date

I have reviewed the estimated costs and time schedule shown above and, based on the plan layouts submitted to date and the current costs of construction, I take no exception to the above.

City Engineer Date

Community Development Date

FINAL DRAINAGE STUDY

FOR

COUNTRY CROSSING FILINGS NO. 1 AND 2

January , 1995

Prepared For:

Denny Granum
Prudential Monument Realty
759 Horizon Drive, Suite A
Grand Junction, Colorado 81506

Prepared By:

LANDesign LTD.
200 North 6th. Street, Suite 102
Grand Junction, Colorado 81501
(303) 245-4099

Prepared By: 01/03/95
Monty D. Stroup

"I hereby certify that this Final Drainage Study for Country Crossing Filings No. 1 and 2 was prepared under my direct supervision."

Reviewed By:
Philip M. Hart, P.E.
State of Colorado, #19346

I. General Location and Description

A. Site and Major Basin Location:

The Country Crossing property contains approximately 46.34 acres. The project is located in the City of Grand Junction, State of Colorado, more particularly in the NW 1/4, NW 1/4 of Section 3, Township One South, Range One West, of the Ute Meridian. A Preliminary Plan was previously approved for the site by Mesa County in 1982 known as "Persigo Village". A Preliminary Master Drainage Study for Country Crossing Subdivision was prepared by this office in October, 1994 and is on file with the City of Grand Junction (Reference 12).

The Preliminary Drainage Study (Reference 12) addressed concerns regarding the 100 Year Flood Plain of Leach Creek. None of the proposed lots or areas included in Filings No. 1 and 2 are within the Designated Flood Plain, therefore the scope of this study shall be limited to those improvements associated with Filings No. 1 and 2 and the conveyance elements required to control stormwater runoff and discharge it safely to Leach Creek.

Streets in the vicinity include 25 Road running from the south to the north defining the west boundary line of the property. G Road runs from the east to west and defines the north boundary line of the project.

Development in the vicinity and surrounding the site is rural in nature. To the north, south and west are single family residential dwellings on acreage sized parcels. These parcels are typically put to pasture and agricultural uses. To the east is the main line of the Grand Valley Canal with Moon Ridge Falls Subdivision a new single family development beyond.

B. Site and Major Basin Description:

The entire Country Crossing site contains approximately 46.34 acres and is planned for single family residential lots, duplex townhomes, a multi-family parcel, RV storage area and open space. The total number of residential units planned for the site is 174. Country Crossing Filing No. 1 (3.41 Ac.) is planned for a multi-family tract and 4 single family residential lots. Country Crossing Filing No. 2 (3.78 Ac.) is planned for 21 single family residential lots. Both of the proposed filings are located is the south portion of the Country Crossing development.

Presently there is one single family dwelling, two out-buildings and one multi-family structure on the subject property. The multi-family structure was constructed as part of the original Persigo Village project in 1982 and has never been occupied. Agricultural use of the property has been limited to pasture land and is currently in a fallow state.

Based on the "Soil Survey, Grand Junction Area" (Reference 8, Exhibit 1.0) on and off-site soils are defined as (Bc), Billings silty clay loam, 0 to 2 percent slopes, hydrological soil group "C" (10% of the site) and (Rf), Ravola very fine sandy loam, 0 to 2 percent slopes, hydrological soils group "B" (90% of the site).

II. Existing Drainage Conditions

A. Major Basin:

The subject property is a small percentage of a much larger area wide basin defined as the Leach Creek Watershed (References 3, 4, 5 & 11) which drains from the northeast to the southwest and ultimately discharges to the Colorado River. The Leach Creek watershed originates approximately 8.85 miles northeast of the site at the crest of the "Book Cliffs" plateau. An estimate of the tributary area within the Leach Creek Watershed as defined by the 1982 report by Turner, Collie & Braden Inc. (Reference 11) is 26.4 square miles. The Flood Insurance Study (Reference 5) defines the tributary area as approximately 25 square miles.

Leach Creek is adjacent to the south right-of-way line of G Road flowing from the east to the west through the north portion of the site. The creek enters the site as it passes under large concrete flume conveying the Main Line of the Grand Valley canal. The creek continues west approximately 1,100-feet where it is conveyed under 25 Road via an existing bridge. The creek and it's overbanks vary in depth from 9 to 10 feet and in width from 80 to 130 feet as it traverses the site. An existing Public Service Company gas regulator station occupies an area immediately southeast of the bridge at 25 Road and is located within the floodway fringe.

Field inspection of the site reveals various types of plant life indigenous to wetlands on the site within the Leach Creek waterway. These areas are confined to the existing channel area of Leach Creek.

The northeast portion of the subject site, approximately 8.6 acres, located adjacent to 25 Road is within the Effective Floodplain and is classified as Zone "AO" as determined by the FIRM Flood Insurance Rate Map (Reference 6, Exhibit 1.1). Leach Creek and it's associated floodway are classified as Zone "AE". A long narrow backwater reel is apparent along the east boundary line of the site adjacent to the Grand Valley Canal and is subject to inundation, however it is not designated on the FIRM map.

The Effective Floodplain, floodway elevations and discharge to downstream properties from Leach Creek is governed in large part by the existing bridge at 25 Road and G Road. The Effective Floodplain at this location appears to be the result of backwater effects due to the existing bridge hydraulics and the subsidence of the south overbank for approximately 170 feet upstream of the bridge.

B. Site:

Historically the property drains in a sheet flow fashion from the east to the west at slopes of 0.7 to 1.2 percent towards 25 Road. At 25 Road the drainage from the north one-half of the site is conveyed via roadside ditches and swales north where it discharges to Leach Creek. The south one-half of the site is conveyed south along 25 Road where it is entrapped by the roadway embankment of 25 Road at 2 well defined low areas and does not exit the site. Country Crossing Filings No. 1 and 2 are located is the south portion of the site.

With the exception of the Leach Creek watershed there are no offsite tributary sub-basins which affect the subject property.

III. Proposed Drainage Conditions

A. Changes in Drainage Patterns:

Historic drainage patterns within the south 1/2 of the Country Crossing site will be altered. The development of Filings No. 1 and No. 2 will require that existing drainage patterns within the south portion of the site be changed to convey stormwater runoff north towards Leach Creek. The proposal calls for the development of a multi-family tract (1.75 Ac.) and 25 single family lots. The proposed site plan divides the south portion of the Country Crossing development into 7 sub-basins labeled as "A1" thru "A7".

Sub-basin "A1" (9.14 Ac.) is located south and east of Filings No. 1 and 2 and is planned as a future phase of the total development. This future phase shall consist of single family residential lots and a proposed irrigation storage pond. Developed runoff from this sub-basin shall be conveyed northwest through Filing No. 1 to a outfall channel originating at the northwest intersection of Country Circle and Crossing Lane and subsequently north to Leach Creek. The proposed storm sewer conveying this runoff is a 24-inch diameter RCP sized to carry the 100 year storm event.

Sub-Basin "A2" (0.87 Ac.) is situated south of and adjacent to Filing No. 1 and is planned as a future multi-family area. Developed runoff from this sub-basin shall be collected within a proposed parking lot and conveyed by a storm sewer west to a proposed v-pan. The v-pan shall convey this runoff north adjacent to 25 Road to proposed storm sewer line "D" a 18-inch diameter RCP. The storm sewer will discharge runoff directly to the proposed outfall channel and subsequently to Leach Creek.

Sub-Basin "A3" (0.88 Ac.) is situated within Filing No. 1 and is planned as a multi-family area. Developed runoff from this sub-basin shall be collected within a proposed parking lot and conveyed by a 12" diameter PVC storm sewer west to a proposed v-pan. The v-pan shall convey this runoff north adjacent to 25 Road to proposed storm sewer line

"D" a 18-inch diameter RCP. The storm sewer will discharge runoff directly to the proposed outfall channel and subsequently to Leach Creek.

Sub-basin "A4" (2.09 Ac.) is located adjacent to and includes the east 1/2 of 25 Road. Runoff from this sub-basin shall be collected and conveyed via a v-pan north to storm sewer line "D" and subsequently to the proposed outfall channel.

Sub-basins "A5" (5.97 Ac.) and "A6" (3.24 Ac.) include portions of Filings No. 1 and 2 as well as portions of future phases of the overall development. These sub-basins are made up of single family lots, associated roadway improvements and a small portion of the Filing No. 1 multi-family area. Runoff from these sub-basins shall be conveyed via roadway improvements to proposed storm sewer lines "A" and "B" located at the intersection of Country Circle and Crossing Lane. These lines shall convey runoff directly to the proposed outfall channel and subsequently north to Leach Creek.

Sub-basin "A7" (0.32 Ac.) consists entirely of the roadway improvements for Country Circle and Crossing Lane. Runoff from this sub-basin shall be conveyed via roadway improvements to storm sewer line "A" and subsequently to the proposed outfall channel.

The proposed storm sewer systems (lines A,B,C,D & E) are designed to collect and convey the 100 year storm event. The capacity of storm sewer line "A" between Inlet #1 and the outfall channel is exceeded by 4.32 cfs. This excess will overtop the back of walk along Crossing Lane and discharge directly to the proposed outfall channel. This discharge is not considered unacceptable.

B. Maintenance Issues:

Access to and through the site shall be by dedicated public R.O.W..

Ownership and responsibility for maintenance of the proposed drainage improvements within public R.O.W. shall be that of the City of Grand Junction.

Ownership and responsibility for maintenance of the proposed drainage improvements on private property shall be that of the homeowners association.

IV. Design Criteria & Approach

A. Hydrology:

The "Stormwater Management Manual, City of Grand Junction, Colorado" (Reference 1) and the "Mesa County Storm Drainage Criteria Manual" (Reference 2) were used as the basis for analysis and facility design.

Since the project is a residential development containing approximately 7.19 acres the "Rational Method" is used to calculate historic and developed flow rates. The minor storm is the 2 year frequency rainfall event and the major storm is the 100 year frequency rainfall event.

Runoff Coefficients used in the computations are based on the most recent City of Grand Junction criteria as defined in Reference 1 and shown on Exhibit 2.0. These coefficients were assigned based on land use and hydrological soils groups "B" and "C". Weighted coefficients were calculated where applicable and are shown on Exhibits 3.0 thru 9.0.

The project is located within the Grand Junction Urbanized area, therefore the Intensity Duration Frequency Curves (IDFC) shown on Exhibits 10.0 and 11.0 were used in the analysis and design.

Times of Concentration were calculated based on the Determination of Overland Flow Time and Average Velocities for Overland Flow Curves as provided in Reference 1.

Due to the project's proximity to Leach Creek, a major drainageway, the requirement for onsite detention is considered mitigated. This position has been previously presented to the City of Grand Junction Engineering Department.

Because offsite flows are directed away from the project site, compliance with offsite drainage considerations are mitigated.

B. Hydraulics:

All site facilities and conveyance elements are designed in accordance with the City of Grand Junction guidelines as provided in Reference 1.

V. Conclusions

The construction of the outfall drainage channel to Leach Creek is considered an interim measure and is to be replaced by storm sewer with the development of future phases of this project.

The drainage improvements, sub-basins and design points referenced herein are presented on the Grading and Drainage Plan Exhibit.

This Drainage Report has been prepared to address site-specific drainage concerns in accordance with the requirements of the City of Grand Junction, Colorado. The Appendix of this report includes criteria, exhibits, tables and calculations used in the design and analysis.

V. References

1. Stormwater Management Manual, (SWMM), Public Works Department, City of Grand Junction, Co., June 1994.

2. Mesa County Storm Drainage Criteria Manual, Final Draft, Mesa County, Colorado, March, 1992.

3. Flood Hazard Information, Colorado River and Tributaries, Grand Junction, Colorado, prepared for the City of Grand Junction and Mesa County, by The Department Of The Army, Sacramento District, Corps Of Engineers, Sacramento, California, November, 1976.

4. Flood Insurance Study, City of Grand Junction, Colorado, Mesa County, Community Number 080117, Federal Emergency Management Agency, Revised July 15th, 1992.

5. Flood Insurance Study, Mesa County, Colorado (Unincorporated Areas), Community Number 080115, Federal Emergency Management Agency, Revised July 15th, 1992.

6. Flood Insurance Rate Map, City of Grand Junction, Colorado, Mesa County, Community-Panel Number 080117 0003 E, Federal Emergency Management Agency, Map Revised July 15th, 1992.

7. Flood Insurance Rate Map, Mesa County, Colorado, (Unincorporated Areas), Community Panel Number 080115 0460 B, Federal Emergency Management Agency, Map Revised July 15th, 1992.

8. Soil Survey, Grand Junction Area, Colorado, Series 1940, No. 19, U.S. Department of Agriculture, issued November, 1955.

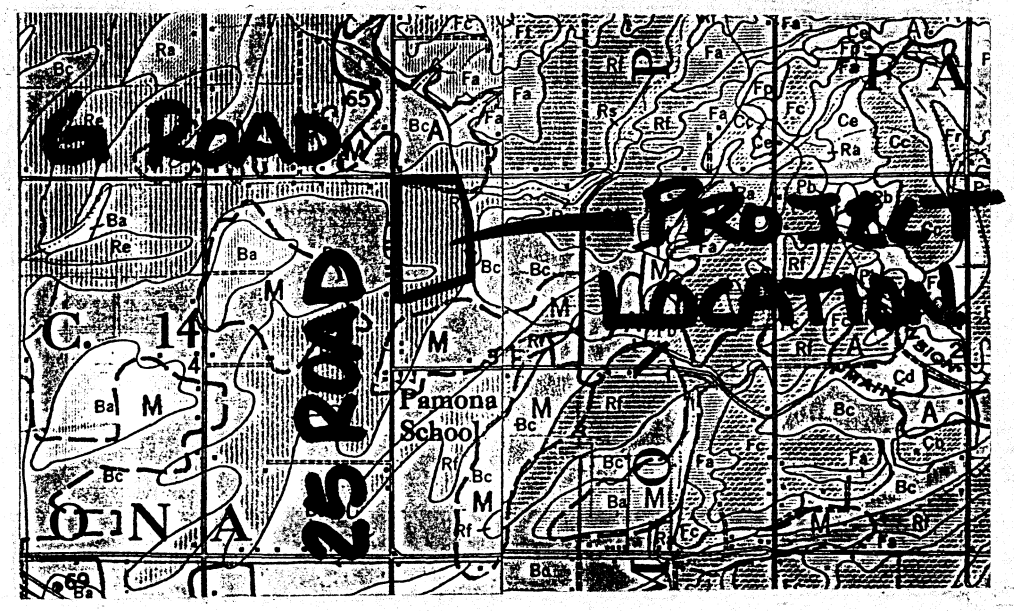
9. HEC 1, Flood Hydrograph Package, US Army Corps of Engineers, September, 1990.

10. HEC 2, Water Surface Profiles, US Army Corps of Engineers, September, 1990.

11. Persigo Village Drainage Report, Prepared By: Turner, Collie & Braden Inc., Grand Junction, Colorado, September, 1982.

12. Preliminary Master Drainage Study for Country Crossing Subdivision, Prepared By: LANDesign LTD., Grand Junction, Colorado, October, 1994.

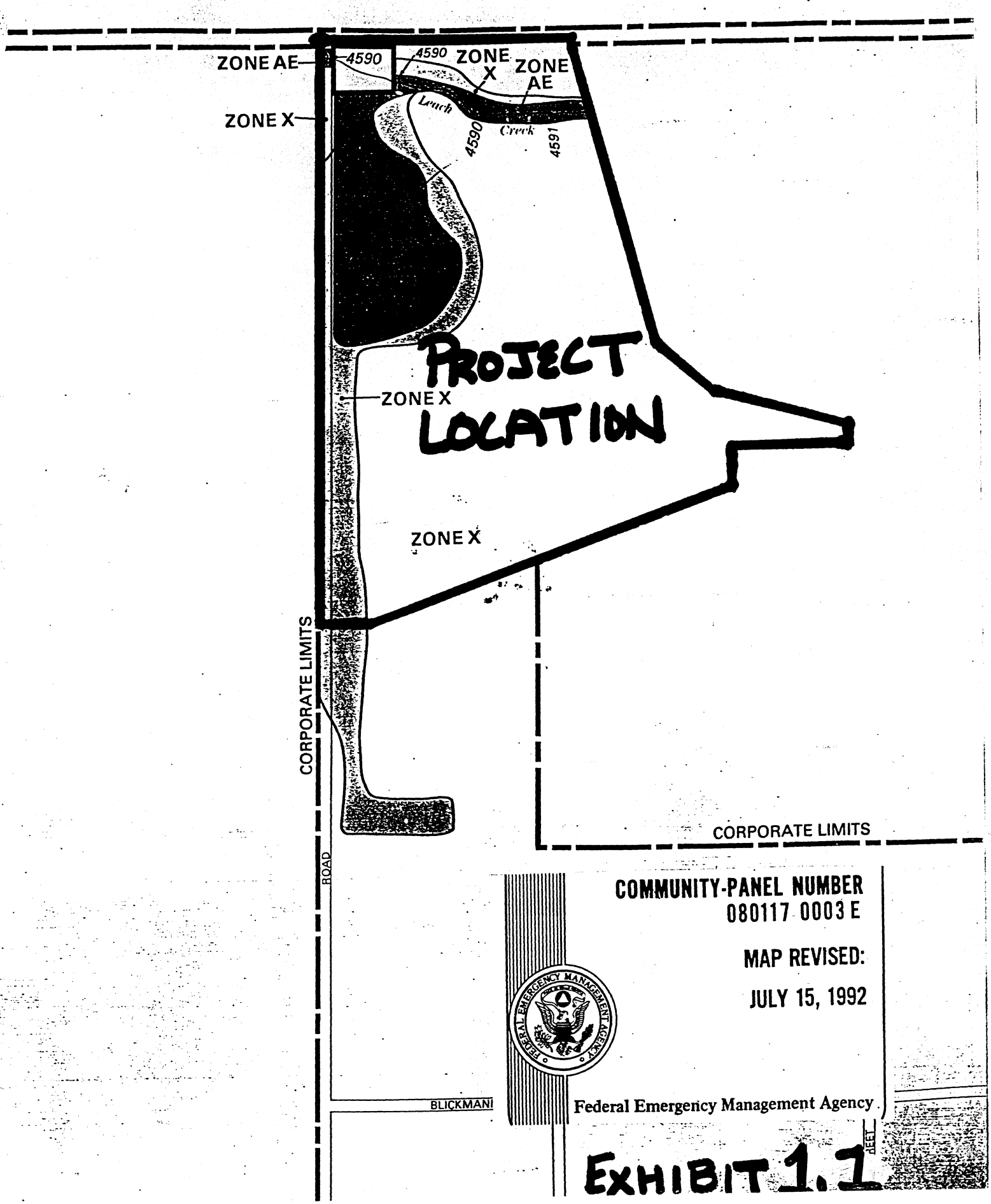
APPENDIX



(Rf) Ravola Very Fine Sandy Loam, 0 to 2 Percent Slopes. Group 'B'

(Bc) Billings Silty Clay Loam, 0 to 2 Percent Slopes. Group 'C'

SOILS MAP
EXHIBIT 1.0


ZONE AE
4590
4590
ZONE X
ZONE AE
Leach
Creek
4590
4591
ZONE X
PROJECT LOCATION
ZONE X
ZONE X
CORPORATE LIMITS
ROAD
CORPORATE LIMITS
BLICKMANI
COMMUNITY-PANEL NUMBER
080117 0003 E
MAP REVISED:
JULY 15, 1992
Federal Emergency Management Agency
EXHIBIT 1.1

LAND USE OR SURFACE CHARACTERISTICS	SCS HYDROLOGIC SOIL GROUP (SEE APPENDIX "C" FOR DESCRIPTIONS)											
	A			B			C			D		
	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+
UNDEVELOPED AREAS												
Bare ground	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .28 - .36	.30 - .38 .37 - .45	.20 - .28 .26 - .34	.28 - .36 .35 - .43	.36 - .44 .40 - .48	.24 - .32 .30 - .38	.30 - .38 .40 - .48	.40 - .48 .50 - .58
Cultivated/Agricultural	.08 - .18 .14 - .24	.13 - .23 .18 - .28	.16 - .26 .22 - .32	.11 - .19 .16 - .24	.15 - .23 .21 - .29	.21 - .29 .28 - .36	.14 - .22 .20 - .28	.19 - .27 .25 - .33	.26 - .34 .34 - .42	.18 - .26 .24 - .32	.23 - .31 .29 - .37	.31 - .39 .41 - .49
Pasture	.12 - .22 .15 - .25	.20 - .30 .25 - .35	.30 - .40 .37 - .47	.18 - .26 .23 - .31	.28 - .36 .34 - .42	.37 - .45 .45 - .53	.24 - .32 .30 - .38	.34 - .42 .42 - .50	.44 - .52 .52 - .60	.30 - .38 .37 - .45	.40 - .48 .50 - .58	.50 - .58 .62 - .70
Meadow	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .28 - .36	.30 - .38 .37 - .45	.20 - .28 .26 - .34	.28 - .36 .35 - .43	.36 - .44 .44 - .52	.24 - .32 .30 - .38	.30 - .38 .40 - .48	.40 - .48 .50 - .58
Forest	.05 - .15 .08 - .18	.08 - .18 .11 - .21	.11 - .21 .14 - .24	.08 - .16 .10 - .18	.11 - .19 .14 - .22	.14 - .22 .18 - .26	.10 - .18 .12 - .20	.13 - .21 .16 - .24	.16 - .24 .20 - .28	.12 - .20 .15 - .23	.16 - .24 .20 - .28	.20 - .28 .25 - .33
RESIDENTIAL AREAS												
1/8 acre per unit	.40 - .50 .48 - .58	.43 - .53 .52 - .62	.46 - .56 .55 - .65	.42 - .50 .50 - .58	.45 - .53 .54 - .62	.50 - .58 .59 - .67	.45 - .53 .53 - .61	.48 - .56 .57 - .65	.53 - .61 .64 - .72	.48 - .56 .56 - .64	.51 - .59 .60 - .68	.57 - .65 .69 - .77
1/4 acre per unit	.27 - .37 .35 - .45	.31 - .41 .39 - .49	.34 - .44 .42 - .52	.29 - .37 .38 - .46	.34 - .42 .42 - .50	.38 - .46 .47 - .55	.32 - .40 .41 - .49	.36 - .44 .45 - .53	.41 - .49 .52 - .60	.35 - .43 .43 - .51	.39 - .47 .47 - .55	.45 - .53 .57 - .65
1/3 acre per unit	.22 - .32 .31 - .41	.26 - .36 .35 - .45	.29 - .39 .38 - .48	.25 - .33 .33 - .41	.29 - .37 .38 - .46	.33 - .41 .42 - .50	.28 - .36 .36 - .44	.32 - .40 .41 - .49	.37 - .45 .48 - .56	.31 - .39 .39 - .47	.35 - .43 .43 - .51	.42 - .50 .53 - .61
1/2 acre per unit	.16 - .26 .25 - .35	.20 - .30 .29 - .39	.24 - .34 .32 - .42	.19 - .27 .28 - .36	.23 - .31 .32 - .40	.28 - .36 .36 - .44	.22 - .30 .31 - .39	.27 - .35 .35 - .43	.32 - .40 .42 - .50	.26 - .34 .34 - .42	.30 - .38 .38 - .46	.37 - .45 .48 - .56
1 acre per unit	.14 - .24 .22 - .32	.19 - .29 .26 - .36	.22 - .32 .29 - .39	.17 - .25 .24 - .32	.21 - .29 .28 - .36	.26 - .34 .34 - .42	.20 - .28 .28 - .36	.25 - .33 .32 - .40	.31 - .39 .40 - .48	.24 - .32 .31 - .39	.29 - .37 .35 - .43	.35 - .43 .46 - .54
MISC. SURFACES												
Pavement and roofs	.93 .95	.94 .96	.95 .97	.93 .95	.94 .96	.95 .97	.93 .95	.94 .96	.95 .97	.93 .95	.94 .96	.95 .97
Traffic areas (soil and gravel)	.55 - .65 .65 - .70	.60 - .70 .70 - .75	.64 - .74 .74 - .79	.60 - .68 .68 - .76	.64 - .72 .72 - .80	.67 - .75 .75 - .83	.64 - .72 .72 - .80	.67 - .75 .75 - .83	.69 - .77 .77 - .85	.72 - .80 .79 - .87	.75 - .83 .82 - .90	.77 - .85 .84 - .92
Green landscaping (lawns, parks)	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .28 - .36	.30 - .38 .37 - .45	.20 - .28 .26 - .34	.28 - .36 .35 - .43	.36 - .44 .42 - .52	.24 - .32 .30 - .38	.30 - .38 .40 - .48	.40 - .48 .50 - .58
Non-green and gravel landscaping	.30 - .40 .34 - .44	.36 - .46 .42 - .52	.45 - .55 .50 - .60	.45 - .55 .50 - .60	.42 - .50 .48 - .56	.50 - .58 .57 - .65	.40 - .48 .46 - .54	.48 - .56 .55 - .63	.56 - .64 .64 - .72	.44 - .52 .50 - .58	.50 - .58 .60 - .68	.60 - .68 .70 - .78
Cemeteries, playgrounds	.20 - .30 .24 - .34	.26 - .36 .32 - .42	.35 - .45 .40 - .50	.35 - .45 .40 - .50	.32 - .40 .38 - .46	.40 - .48 .47 - .55	.30 - .38 .36 - .44	.38 - .44 .45 - .53	.46 - .54 .54 - .62	.34 - .42 .40 - .48	.40 - .48 .50 - .58	.50 - .58 .60 - .68

NOTES:
1. Values above and below pertain to the 2-year and 100-year storms, respectively.
2. The range of values provided allows for engineering judgement of site conditions such as basic shape, homogeneity of surface type, surface depression storage, and storm duration. In general, during shorter duration storms (Tc ≤ 10 minutes), infiltration capacity is higher, allowing use of a "C" value in the low range. Conversely, for longer duration storms (Tc) 30 minutes), use a ""C value in the higher range.
3. For residential development at less than 1/8 acre per unit or greater than 1 acre per unit, and also for commercial and industrial areas, use values under MISC SURFACES to estimate "C" value ranges for use.

RATIONAL METHOD RUNOFF COEFFICIENTS
(Modified from Table 4, UC-Davis, which appears to be a modification of work done by Rawls)

TABLE "B-1"

EXHIBIT 2.0

DATE: 01-Jan-95
PROJECT: COUNTRY CROSSING FILING 1 & 2
SUBJECT: FINAL DRAINAGE STUDY
BASIN I.D.: A1
HYDROLOGIC SOILS GROUP "B"

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	6.10	0.46	2.81
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	3.04	0.18	0.55
SUBTOTALS	9.14		3.35

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{3.35}{9.14} =$ **0.37**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	6.10	0.54	3.29
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	3.04	0.24	0.73
SUBTOTALS	9.14		4.02

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{4.02}{9.14} =$ **0.44**

EXHIBIT 3.0

DATE: 01-Jan-95
PROJECT: **COUNTRY CROSSING FILING 1 &**
SUBJECT: **FINAL DRAINAGE STUDY**
BASIN I.D.: **A2**
HYDROLOGIC SOILS GROUP **"C"**

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
BUILDINGS / PARKING AREA OR OTHER IMPERVIOUS SURFACES	0.58	0.93	0.54
GRASS OR LANDSCAPED AREAS	0.29	0.24	0.07
SUBTOTALS	0.87		0.61

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.61}{0.87} =$ **0.70**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
BUILDINGS / PARKING AREA OR OTHER IMPERVIOUS SURFACES	0.58	0.95	0.55
GRASS OR LANDSCAPED AREAS	0.29	0.30	0.09
SUBTOTALS	0.87		0.64

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.64}{0.87} =$ **0.73**

EXHIBIT 4.0

DATE: 01-Jan-95
PROJECT: **COUNTRY CROSSING FILING 1 &**
SUBJECT: **FINAL DRAINAGE STUDY**
BASIN I.D.: **A3**
HYDROLOGIC SOILS GROUP **"C"**

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
BUILINGS / PARKING AREA OR OTHER IMPERVIOUS SURFACE	0.59	0.93	0.55
GRASS OR LANDSCAPED AREAS	0.29	0.24	0.07
SUBTOTALS	0.88		0.62

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.62}{0.88} =$ **0.70**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
BUILINGS / PARKING AREA OR OTHER IMPERVIOUS SURFACE	0.59	0.95	0.56
GRASS OR LANDSCAPED AREAS	0.29	0.30	0.09
SUBTOTALS	0.88		0.65

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.65}{0.88} =$ **0.74**

EXHIBIT 5.0

DATE: 01-Jan-95
PROJECT: **COUNTRY CROSSING FILING 1 &**
SUBJECT: **FINAL DRAINAGE STUDY**
BASIN I.D.: **A4**
HYDROLOGIC SOILS GROUP **"C"**

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
BUILINGS / PARKING AREA OR OTHER IMPERVIOUS SURFACE	0.64	0.93	0.60
GRASS OR LANDSCAPED AREAS	1.45	0.24	0.35
SUBTOTALS	2.09		0.94

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.94}{2.09} =$ **0.45**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
BUILINGS / PARKING AREA OR OTHER IMPERVIOUS SURFACE	0.64	0.95	0.61
GRASS OR LANDSCAPED AREAS	1.45	0.30	0.44
SUBTOTALS	2.09		1.04

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{1.04}{2.09} =$ **0.50**

EXHIBIT 6.0

DATE: 01-Jan-95
PROJECT: **COUNTRY CROSSING FILING 1 &**
SUBJECT: **FINAL DRAINAGE STUDY**
BASIN I.D.: **A5**
HYDROLOGIC SOILS GROUP **"B"**

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	5.97	0.42	2.51
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	0.00	0.00	0.00
SUBTOTALS	5.97		2.51

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{2.51}{5.97} =$ **0.42**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	5.97	0.50	2.99
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	0.00	0.00	0.00
SUBTOTALS	5.97		2.99

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{2.99}{5.97} =$ **0.50**

EXHIBIT 7.0

DATE: 01-Jan-95
PROJECT: **COUNTRY CROSSING FILING 1 &**
SUBJECT: **FINAL DRAINAGE STUDY**
BASIN I.D.: **A6**
HYDROLOGIC SOILS GROUP **"B"**

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	3.24	0.42	1.36
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	0.00	0.00	0.00
SUBTOTALS	3.24		1.36

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{1.36}{3.24} =$ **0.42**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	3.24	0.50	1.62
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	0.00	0.00	0.00
SUBTOTALS	3.24		1.62

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{1.62}{3.24} =$ **0.50**

EXHIBIT 8.0

DATE: 01-Jan-95
PROJECT: **COUNTRY CROSSING FILING 1 &**
SUBJECT: **FINAL DRAINAGE STUDY**
BASIN I.D.: **A7**
HYDROLOGIC SOILS GROUP **"B"**

COMPOSITE 2 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	0.00	0.00	0.00
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	0.32	0.93	0.30
SUBTOTALS	0.32		0.30

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.30}{0.32} =$ **0.93**

COMPOSITE 100 YEAR "C" VALUE

DESCRIPTION	AREA AC.	"C"	"C" x "A"
RESIDENTIAL AREA 1/8 ACRE PER UNIT	0.00	0.00	0.00
GRASS OR LANDSCAPED AREAS INCLUDING OPENSPACE.	0.32	0.95	0.30
SUBTOTALS	0.32		0.30

COMPOSITE = $\frac{\text{"C" x "A"}}{\text{"A"}} = \frac{0.30}{0.32} =$ **0.95**

EXHIBIT 9.0

FIGURE 401a

INTENSITY DURATION FREQUENCY CURVES
MESA COUNTY, COLORADO

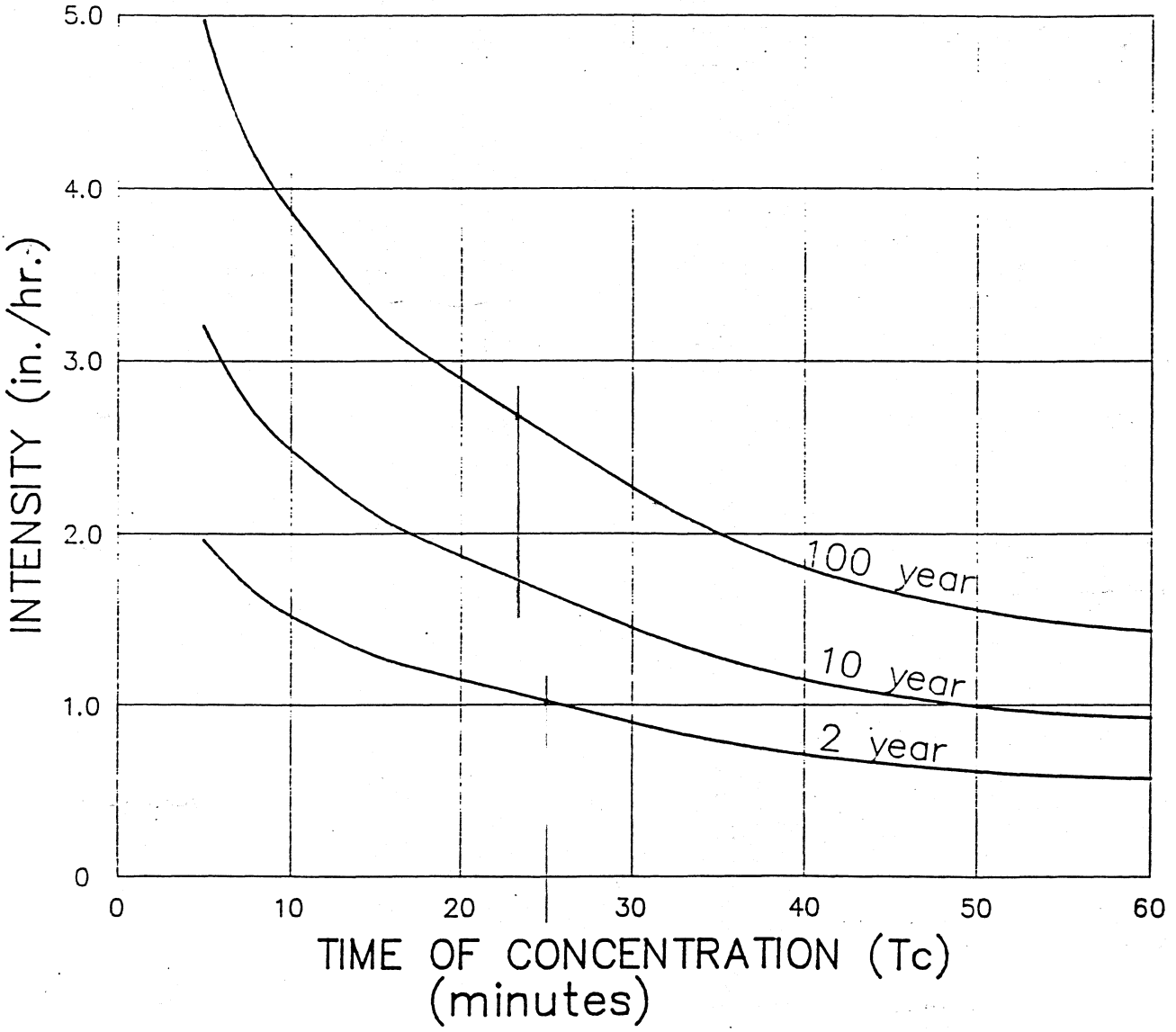


EXHIBIT 11.0

TIME OF CONCENTRATION CALCULATIONS

(2 YEAR STORM EVENT)
DEVELOPED CONDITION - CITY OF GRAND JUNCTION, COLORADO

PROJECT: **COUNTRY CROSSING FILING NO. 1 & 2**
JOB # 93086
LANDesign LTD.

DATE:
02-Jan-95

SUB-BASIN DATA			INITIAL / OVERLAND TIME (Ti)			TRAVEL TIME TIME (Tt)				INITIAL	Tc CHECK (URBANIZED BASINS)		FINAL	REMARKS
BASIN	C 2	AREA AC.	LENGTH FT.	SLOPE %	Ti MIN.	LENGTH FT.	SLOPE %	VEL F.P.S.	Tt MIN.	Tc MIN.	TOTAL LENGTH FT.	Tc = (L/180)+10 MIN.	Tc MIN.	
A1	0.37	9.14	138.0	0.67	17.64									OVERLAND FLOW RESIDENTIAL LOTS
						1008.0	0.62	2.30	7.30	24.94	1146.00	16.37	24.94	STREET FLOW TO FUTURE LINE "G"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A2	0.70	0.87	15.0	3.00	1.93									OVERLAND FLOW MULTIFAMILY AREA
						241.0	0.60	2.27	1.77	3.70	256.00	11.42	5.00	FLOW THRU PARKING LOT TO LINE "F"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A3	0.70	0.88	15.0	3.00	1.93									OVERLAND FLOW MULTIFAMILY AREA
						241.0	0.60	2.27	1.77	3.70	256.00	11.42	5.00	FLOW THRU PARKING LOT TO LINE "E"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A4	0.45	2.09	198.0	2.27	12.53									OVERLAND FLOW MULTIFAMILY AREA
						541.3	0.40	1.34	6.73	19.26	739.30	14.11	19.26	FLOW IN V-PAN TO LINE "D"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A5	0.42	5.97	180.0	2.22	12.59									OVERLAND FLOW RESIDENTIAL LOTS
						954.3	0.59	2.25	7.07	19.66	1134.30	16.30	19.66	FLOW IN COUNTRY CIRCLE TO LINE "B"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A6	0.42	3.24	68.0	1.00	10.09									OVERLAND FLOW RESIDENTIAL LOTS
						1006.0	0.59	2.25	7.45	17.55	1074.00	15.97	17.55	FLOW IN COUNTRY CIRCLE TO LINE "A"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A7	0.93	0.32	10.0	1.00	0.97									OVERLAND FLOW OPENSPACE
						390.0	0.81	2.63	2.47	3.44	400.00	12.22	5.00	FLOW IN CROSSING LANE TO LINE "A"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

FORMULAS

$$Ti = \frac{1.8(1.1-C)(L)^{1/2}}{1/3} \qquad Tt = \frac{(L)}{60 \text{ SEC/MIN. } (V \text{ F.P.S.})}$$

EXHIBIT 12.0

TIME OF CONCENTRATION CALCULATIONS

(100 YEAR STORM EVENT)
DEVELOPED CONDITION - CITY OF GRAND JUNCTION, COLORADO

PROJECT: **COUNTRY CROSSING FILING NO. 1 & 2**
JOB # 93086
LANDesign LTD.

DATE:
02-Jan-95

SUB-BASIN DATA			INITIAL / OVERLAND TIME (Ti)			TRAVEL TIME TIME (Tt)				INITIAL	Tc CHECK (URBANIZED BASINS)		FINAL	REMARKS
BASIN	C 10	AREA AC.	LENGTH FT.	SLOPE %	Ti MIN.	LENGTH FT.	SLOPE %	VEL F.P.S.	Tt MIN.	Tc MIN.	TOTAL LENGTH FT.	Tc = (L/180)+10 MIN.	Tc MIN.	
A1	0.44	9.14	138.0	0.67	15.95									OVERLAND FLOW RESIDENTIAL LOTS
						1008.0	0.62	2.30	7.30	23.25	1146.00	16.37	23.25	STREET FLOW TO FUTURE LINE "G"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
A2	0.73	0.87	15.0	3.00	1.79									OVERLAND FLOW MULTIFAMILY AREA
						241.0	0.60	2.27	1.77	3.56	256.00	11.42	5.00	FLOW THRU PARKING LOT TO LINE "F"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
A3	0.74	0.88	15.0	3.00	1.74									OVERLAND FLOW MULTIFAMILY AREA
						241.0	0.60	2.27	1.77	3.51	256.00	11.42	5.00	FLOW THRU PARKING LOT TO LINE "E"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
A4	0.50	2.09	198.0	2.27	11.56									OVERLAND FLOW MULTIFAMILY AREA
						541.3	0.40	1.34	6.73	18.30	739.30	14.11	18.30	FLOW IN V-PAN TO LINE "D"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
A5	0.50	5.97	180.0	2.22	11.11									OVERLAND FLOW RESIDENTIAL LOTS
						954.3	0.59	2.25	7.07	18.18	1134.30	16.30	18.18	FLOW IN COUNTRY CIRCLE TO LINE "B"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
A6	0.50	3.24	68.0	1.00	8.91									OVERLAND FLOW RESIDENTIAL LOTS
						1006.0	0.59	2.25	7.45	16.36	1074.00	15.97	16.36	FLOW IN COUNTRY CIRCLE TO LINE "A"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---
A7	0.95	0.32	10.0	1.00	0.85									OVERLAND FLOW OPENSPACE
						390.0	0.81	2.63	2.47	3.33	400.00	12.22	5.00	FLOW IN CROSSING LANE TO LINE "A"
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

FORMULAS

$$Ti = \frac{1.8(1.1-C)(L)^{1/2}}{1/3} \qquad Tt = \frac{(L)}{60 \text{ SEC/MIN. (V F.P.S.)}}$$

EXHIBIT 13.0

TABLE "A-1"
INTENSITY-DURATION-FREQUENCY (IDF) TABLE

Time (min)	2-Year Intensity (in/hr)	100-Year Intensity (in/hr)	Time (min)	2-Year Intensity (in/hr)	100-Year Intensity (in/hr)
5	1.95	4.95	33	0.83	2.15
6	1.83	4.65	34	0.82	2.12
7	1.74	4.40	35	0.81	2.09
8	1.66	4.19	36	0.80	2.06
9	1.59	3.99	37	0.79	2.03
10	1.52	3.80	38	0.78	2.00
11	1.46	3.66	39	0.77	1.97
12	1.41	3.54	40	0.76	1.94
13	1.36	3.43	41	0.75	1.91
14	1.32	3.33	42	0.74	1.88
15	1.28	3.24	43	0.73	1.85
16	1.24	3.15	44	0.72	1.82
17	1.21	3.07	45	0.71	1.79
18	1.17	2.99	46	0.70	1.76
19	1.14	2.91	47	0.69	1.73
20	1.11	2.84	48	0.68	1.70
21	1.08	2.77	49	0.67	1.67
22	1.05	2.70	50	0.66	1.64
23	1.02	2.63	51	0.65	1.61
24	1.00	2.57	52	0.64	1.59
25	0.98	2.51	53	0.63	1.57
26	0.96	2.46	54	0.62	1.55
27	0.94	2.41	55	0.61	1.53
28	0.92	2.36	56	0.60	1.51
29	0.90	2.31	57	0.59	1.49
30	0.88	2.27	58	0.58	1.47
31	0.86	2.23	59	0.57	1.45
32	0.84	2.19	60	0.56	1.43

Source: Mesa County 1991

EXHIBIT 10.0

STORM DRAINAGE SYSTEM DESIGN DATA

(2 YEAR STORM EVENT)
DEVELOPED CONDITION - CITY OF GRAND JUNCTION, COLORADO

DATE: 02-Jan-95

PROJECT: COUNTRY CROSSING FILING NO. 1 & 2
JOB # 93086
LANDesign LTD.

													STREET		PIPE			STREET			PIPE	
LOCATION OR NODE	BASINS	LENGTH FEET	INLET TIME min.	FLOW STREET	TIME PIPE	Tc min.	COEFF. "C"	INTENSITY "I"	AREA "A" AC	DIRECT RUNOFF C.F.S.	OTHER RUNOFF C.F.S.	SUM RUNOFF C.F.S.	SLOPE %	CAPACITY ALLOWED C.F.S.	SLOPE %	SIZE IN.	CAPACITY ALLOWED C.F.S.	DESIGN F.P.S.	VELOC. F.P.S.	DESIGN F.P.S.	VELOC. F.P.S.	REMARKS
1	A1					24.94	0.37	0.99	9.14	3.35		3.35	0.60	8.52	0.35	24	13.38					FLOW FROM FUTURE STORM SEWER LINE "G" TO STORM SEWER LINE "C"
2	A2					5.00	0.70	1.95	0.87	1.19		1.19	0.60	N/A	0.50	12	3.28					FUTURE MULTIFAMILY AREA TO FUTURE LINE "F"
3	A3					5.00	0.70	1.95	0.88	1.20		1.20	0.60	N/A	0.50	12	3.28					FILING NO. 1 MULTIFAMILY AREA TO LINE "E"
4	A2						0.70		0.87													PIPE FLOW FROM LINE "F" TO V-PAN
	A3						0.70		0.88													PIPE FLOW FROM LINE "E" TO V-PAN
	A4					19.26	0.45		2.09													FLOW IN V-PAN FROM BLDGS. & 25 ROAD
						19.26	0.56	1.13	3.84	2.43		2.43			0.55	18	7.79					SUM OF FLOW IN V-PAN TO LINE "D"
" "	A2						0.70		0.87													PIPE FLOW FROM LINE "F" TO V-PAN
	A3						0.70		0.88													PIPE FLOW FROM LINE "E" TO V-PAN
	A4						0.45		2.09													FLOW IN V-PAN FROM BLDGS. & 25 ROAD
	A1	456.1			2.15	24.94	0.37		9.14						0.35	24	13.38			3.54		PIPE FLOW IN LINE "C" TO MANHOLE "C1"
						27.09	0.43	0.94	12.98	5.25		5.25										FLOW IN LINE "C" FROM MH "C1" TO OUTLET
5	A5					19.66	0.42	1.12	5.97	2.81		2.81	0.59	8.45	0.99	18	10.45					STREET FLOW IN COUNTRY CIRCLE TO LINE "B"
6	A6					17.55	0.42	1.19	3.24	1.62		1.62	0.59	8.45	1.27	12	4.02					STREET FLOW IN COUNTRY CIRCLE TO LINE "A"
7	A7					5.00	0.93	1.95	0.32	0.58		0.58	0.88	10.32	0.99	18	10.45					STREET FLOW IN CROSSING LANE TO LINE "A"

EXHIBIT 14.0

STORM DRAINAGE SYSTEM DESIGN DATA

(100 YEAR STORM EVENT)
DEVELOPED CONDITION - CITY OF GRAND JUNCTION, COLORADO

DATE: 02-Jan-95

PROJECT: **COUNTRY CROSSING FILING NO. 1 & 2**
JOB # 93086
LANDesign LTD.

														STREET		PIPE			STREET			PIPE	
LOCATION OR NODE	BASINS	LENGTH FEET	INLET TIME min.	FLOW STREET	TIME PIPE	Tc min.	COEFF. "C"	INTENSITY "I"	AREA "A" AC	DIRECT RUNOFF C.F.S.	OTHER RUNOFF C.F.S.	SUM RUNOFF C.F.S.	SLOPE %	CAPACITY ALLOWED C.F.S.	SLOPE %	SIZE IN.	CAPACITY ALLOWED C.F.S.	DESIGN F.P.S.	VELOC. F.P.S.	DESIGN F.P.S.	VELOC. F.P.S.	REMARKS
1	A1					23.25	0.44	2.62	9.14	10.54		10.54	0.60	75.67		24						FLOW FROM FUTURE STORM SEWER LINE "G" TO STORM SEWER LINE "C"
2	A2					5.00	0.73	4.95	0.87	3.14		3.14	0.60	N/A	0.50	12	3.28					FUTURE MULTIFAMILY AREA TO FUTURE LINE "F"
3	A3					5.00	0.74	4.95	0.88	3.22		3.22	0.60	N/A	0.50	12	3.28					FILING NO. 1 MULTIFAMILY AREA TO LINE "E"
4	A2						0.73		0.87													PIPE FLOW FROM LINE "F" TO V-PAN
	A3						0.74		0.88													PIPE FLOW FROM LINE "E" TO V-PAN
	A4					18.30	0.50		2.09													FLOW IN V-PAN FROM BLDGS. & 25 ROAD
						18.30	0.61	2.97	3.84	6.96		6.96			0.55	18	7.79					SUM OF FLOW IN V-PAN TO LINE "D"
" "	A2						0.73		0.87													PIPE FLOW FROM LINE "F" TO V-PAN
	A3						0.74		0.88													PIPE FLOW FROM LINE "E" TO V-PAN
	A4						0.50		2.09													FLOW IN V-PAN FROM BLDGS. & 25 ROAD
	A1	456.1			1.61	23.25	0.44		9.14						0.35	24	13.38			4.72		PIPE FLOW IN LINE "C" TO MANHOLE "C1"
						24.86	0.49	2.52	12.98	16.03		16.03			0.57	24	17.08					FLOW IN LINE "C" FROM MH "C1" TO OUTLET
5	A5					18.18	0.50	2.98	5.97	8.90		8.90	0.59	75.03	0.99	18	10.45					STREET FLOW IN COUNTRY CIRCLE TO LINE "B"
6	A6					16.36	0.50	3.12	3.24	5.05		5.05	0.59	75.03	1.27	12	4.02	1.03 CFS BYPASS TO INLET #1				STREET FLOW IN COUNTRY CIRCLE TO LINE "A"
7	A7					5.00	0.95	4.95	0.32	1.50		1.50	0.88	91.64	0.99	18	10.45					STREET FLOW IN CROSSING LANE TO LINE "A"
" "	A5					18.18	0.50		5.97													PIPE FLOW IN LINE "B" TO OUTFALL
	A6						0.50		3.24													PIPE FLOW IN LINE "A" TO OUTFALL
	A7						0.95		0.32													STREET FLOW IN CROSSING LANE TO LINE "A"
						18.18	0.52	2.98	9.53	14.77		14.77			0.99	18	10.45	4.32 CFS OVERTOPS B.O.W. TO OUTFALL CHANNEL				FLOW IN LINE "A" FROM INLET #1 TO OUTLET

EXHIBIT 15.0

NOTE: THIS IS A REPRODUCTION OF TABLE I, APPENDIX A, "DESIGN CHARTS FOR OPEN CHANNEL FLOW", (HDS #3)

	Manning's *n* range [3]
I. Closed conduits:	
A. Concrete pipe	0.011–0.013
B. Corrugated-metal pipe or pipe-arch:	
1. 2⅔ by ½-in. corrugation (riveted pipe): [5]	
a. Plain or fully coated	0.024
b. Paved invert (range values are for 25 and 50 percent of circumference paved):	
(1) Flow full depth	0.021–0.018
(2) Flow 0.8 depth	0.021–0.016
(3) Flow 0.6 depth	0.019–0.013
2. 6 by 2-in. corrugation (field bolted)	0.03
C. Vitrified clay pipe	0.012–0.014
D. Cast-iron pipe, uncoated	0.013
E. Steel pipe	0.009–0.011
F. Brick	0.014–0.017
G. Monolithic concrete:	
1. Wood forms, rough	0.015–0.017
2. Wood forms, smooth	0.012–0.014
3. Steel forms	0.012–0.013
H. Cemented rubble masonry walls:	
1. Concrete floor and top	0.017–0.022
2. Natural floor	0.019–0.025
I. Laminated treated wood	0.015–0.017
J. Vitrified clay liner plates	0.015
II. Open channels, lined [4] (straight alinement): [5]	
A. Concrete, with surfaces as indicated:	
1. Formed, no finish	0.013–0.017
2. Trowel finish	0.012–0.014
3. Float finish	0.013–0.015
4. Float finish, some gravel on bottom	0.015–0.017
5. Gunite, good section	0.016–0.019
6. Gunite, wavy section	0.018–0.022
B. Concrete, bottom float finished, sides as indicated:	
1. Dressed stone in mortar	0.015–0.017
2. Random stone in mortar	0.017–0.020
3. Cement rubble masonry	0.020–0.025
4. Cement rubble masonry, plastered	0.016–0.020
5. Dry rubble (riprap)	0.020–0.030
C. Gravel bottom, sides as indicated:	
1. Formed concrete	0.017–0.020
2. Random stone in mortar	0.020–0.023
3. Dry rubble (riprap)	0.023–0.033
D. Brick	0.014–0.017
E. Asphalt:	
1. Smooth	0.013
2. Rough	0.016
F. Wood, planed, clean	0.011–0.013
G. Concrete-lined excavated rock:	
1. Good section	0.017–0.020
2. Irregular section	0.022–0.027
III. Open channels, excavated [4] (straight alinement,[5] natural lining):	
A. Earth, uniform section:	
1. Clean, recently completed	0.016–0.018
2. Clean, after weathering	0.018–0.020
3. With short grass, few weeds	0.022–0.027
4. In gravelly soil, uniform section, clean	0.022–0.025
B. Earth, fairly uniform section:	
1. No vegetation	0.022–0.025
2. Grass, some weeds	0.025–0.030
3. Dense weeds or aquatic plants in deep channels	0.030–0.035
4. Sides clean, gravel bottom	0.025–0.030
5. Sides clean, cobble bottom	0.030–0.040
C. Dragline excavated or dredged:	
1. No vegetation	0.028–0.033
2. Light brush on banks	0.035–0.050
D. Rock:	
1. Based on design section	0.035
2. Based on actual mean section:	
a. Smooth and uniform	0.035–0.040
b. Jagged and irregular	0.040–0.045
E. Channels not maintained, weeds and brush uncut:	
1. Dense weeds, high as flow depth	0.08–0.12
2. Clean bottom, brush on sides	0.05–0.08
3. Clean bottom, brush on sides, highest stage of flow	0.07–0.11
4. Dense brush, high stage	0.10–0.14
IV. Highway channels and swales with maintained vegetation [6 7] (values shown are for velocities of 2 and 6 f.p.s.):	
A. Depth of flow up to 0.7 foot:	
1. Bermudagrass, Kentucky bluegrass, buffalograss:	
a. Mowed to 2 inches	0.07–0.045
b. Length 4–6 inches	0.09–0.05
2. Good stand, any grass:	
a. Length about 12 inches	0.15–0.09
b. Length about 24 inches	0.30–0.15
3. Fair stand, any grass:	
a. Length about 12 inches	0.14–0.08
b. Length about 24 inches	0.25–0.13
B. Depth of flow 0.7–1.5 feet:	
1. Bermudagrass, Kentucky bluegrass, buffalograss:	
a. Mowed to 2 inches	0.05–0.035
b. Length 4 to 6 inches	0.06–0.04
2. Good stand, any grass:	
a. Length about 12 inches	0.12–0.07
b. Length about 24 inches	0.20–0.10
3. Fair stand, any grass:	
a. Length about 12 inches	0.10–0.06
b. Length about 24 inches	0.17–0.09
V. Street and expressway gutters:	
A. Concrete gutter, troweled finish	0.012
B. Asphalt pavement:	
1. Smooth texture	0.013
2. Rough texture	0.016
C. Concrete gutter with asphalt pavement:	
1. Smooth	0.013
2. Rough	0.015
D. Concrete pavement:	
1. Float finish	0.014
2. Broom finish	0.016
E. For gutters with small slope, where sediment may accumulate, increase above values of *n* by	*0.002*
VI. Natural stream channels: [5]	
A. Minor streams [8] (surface width at flood stage less than 100 ft.):	
1. Fairly regular section:	
a. Some grass and weeds, little or no brush	0.030–0.035
b. Dense growth of weeds, depth of flow materially greater than weed height	0.035–0.05
c. Some weeds, light brush on banks	0.035–0.05
d. Some weeds, heavy brush on banks	0.05–0.07
e. Some weeds, dense willows on banks	0.06–0.08
f. For trees within channel, with branches submerged at high stage, increase all above values by	*0.01–0.02*
2. Irregular sections, with pools, slight channel meander; increase values given in 1a–e about	*0.01–0.02*
3. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stage:	
a. Bottom of gravel, cobbles, and few boulders	0.04–0.05
b. Bottom of cobbles, with large boulders	0.05–0.07
B. Flood plains (adjacent to natural streams):	
1. Pasture, no brush:	
a. Short grass	0.030–0.035
b. High grass	0.035–0.05
2. Cultivated areas:	
a. No crop	0.03–0.04
b. Mature row crops	0.035–0.045
c. Mature field crops	0.04–0.05
3. Heavy weeds, scattered brush	0.05–0.07
4. Light brush and trees: [10]	
a. Winter	0.05–0.06
b. Summer	0.06–0.08
5. Medium to dense brush: [10]	
a. Winter	0.07–0.11
b. Summer	0.10–0.16
6. Dense willows, summer, not bent over by current	0.15–0.20
7. Cleared land with tree stumps, 100–150 per acre:	
a. No sprouts	0.04–0.05
b. With heavy growth of sprouts	0.06–0.08
8. Heavy stand of timber, a few down trees, little undergrowth:	
a. Flood depth below branches	0.10–0.12
b. Flood depth reaches branches	0.12–0.16
C. Major streams (surface width at flood stage more than 100 ft.): Roughness coefficient is usually less than for minor streams of similar description on account of less effective resistance offered by irregular banks or vegetation on banks. Values of *n* may be somewhat reduced. Follow recommendation in publication cited [8] if possible. The value of *n* for larger streams of most regular section, with no boulders or brush, may be in the range of	0.028–0.033

EXHIBIT 16.0

TYPICAL MANNING "n" VALUES | TABLE "F-1a"

NOTE: THIS IS A REPRODUCTION OF TABLE 3 IN HEC-15.

Lining Category	Lining Type	n - value: Flow Depth Ranges 0-0.5 ft	0.5-2.0 ft	>2.0 ft
Rigid	Concrete	0.015	0.013	0.013
	Grouted Riprap	0.040	0.030	0.028
	Stone Masonry	0.042	0.032	0.030
	Soil Cement	0.025	0.022	0.020
	Asphalt	0.018	0.016	0.016
Unlined	Bare Soil	0.023	0.020	0.020
	Rock Cut	0.045	0.035	0.025
Temporary*	Woven Paper Net	0.016	0.015	0.015
	Jute Net	0.028	0.022	0.019
	Fiberglass Roving	0.028	0.021	0.019
	Straw with Net	0.065	0.033	0.025
	Curled Wood Mat	0.066	0.035	0.028
	Synthetic Mat	0.036	0.025	0.021
Gravel Riprap	1-inch D_{50}	0.044	0.033	0.030
	2-inch D_{50}	0.066	0.041	0.034
Rock Riprap	6-inch D_{50}	0.104	0.069	0.035
	12-inch D_{50}	--	0.078	0.040

EXHIBIT 17.0

TYPICAL MANNING "n" VALUES | TABLE "F-1c"

STREET CARRING CAPACITY (2 YEAR)

PROJECT: **COUNTRY CROSSING FILINGS 1 & 2**
LOCATION: CITY OF GRAND JUNCTION, COLORADO
DATE: Jan-95

Street Information:				
	R.O.W. Width =	44.00	FT.	Flow Area = 3.76 SF.
	Flowline Width =	31.00	FT.	
	Classification =	URBAN		
	Mannings =	0.015		
	Max. Depth =	0.42	FT.	Above Gutter Flowline
	Str/ X-Slope =	1.00	%	
	Gutter Slope =	8.33	%	Drive Over Curb, Gutter and Walk
	Sidewalk Slope =	2.08	%	1/4" / FT.
	Roadside Slope =	2.08	%	1/4" / FT.

SLOPE OF STREET %	REDUCTION FACTOR FOR SLOPE	ALLOWABLE CAPACITY C.F.S.	VELOCITY F.P.S.
0.50	0.80	7.78	2.07
0.59	0.80	8.45	2.25
0.60	0.80	8.52	2.27
0.73	0.80	9.40	2.50
0.81	0.80	9.90	2.63
0.88	0.80	10.32	2.74
1.29	0.80	12.49	3.32

Formula: $Qa = F \times (1.49/N) \times R^{2/3} \times S^{1/2} \times A$

F = Reduction Factor For Slope
N = Mannings Coefficient = 0.0150
R = Hydraulic Radius = A/WP = 0.2234
A = Cross Sectional Area Sq.Ft. = 3.760
WP = Wetted Perimeter Ft. = 16.83
S = Street Slope FT./FT.

EXHIBIT 18.0

STREET CARRING CAPACITY (100 YEAR)

PROJECT: COUNTRY CROSSING FILINGS 1 & 2
LOCATION: CITY OF GRAND JUNCTION, COLORADO
DATE: Jan-95

Street Information:				
	R.O.W. Width =	44.00	FT.	Flow Area = 15.49 SF.
	Flowline Width =	31.00	FT.	
	Classification =	URBAN		
	Mannings =	0.015		
	Max. Depth =	1.00	FT.	Above Gutter Flowline
	Str/ X-Slope =	1.00	%	
	Gutter Slope =	8.33	%	Drive Over Curb, Gutter and Walk
	Sidewalk Slope =	2.08	%	1/4" / FT.
	Roadside Slope =	2.08	%	1/4" / FT.

SLOPE OF STREET %	REDUCTION FACTOR FOR SLOPE	ALLOWABLE CAPACITY C.F.S.	VELOCITY F.P.S.
0.50	0.80	69.08	4.46
0.59	0.80	75.03	4.84
0.60	0.80	75.67	4.88
0.73	0.80	83.46	5.39
0.81	0.80	87.92	5.68
0.88	0.80	91.64	5.92
1.29	0.80	110.95	7.16

Formula: $Qa = F \times (1.49/N) \times R^{2/3} \times S^{1/2} \times A$

F = Reduction Factor For Slope
N = Mannings Coefficient = 0.0150
R = Hydraulic Radius = A/WP = 0.7070
A = Cross Sectional Area Sq.Ft. = 15.490
WP = Wetted Perimeter Ft. = 21.91
S = Street Slope FT./FT.

EXHIBIT 19.0

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: 4' V-PAN

Comment: 4-FOOT CONCRETE V-PAN TO DESIGN POINT 4

Solve For Discharge

Given Input Data:

Left Side Slope..	12.00:1 (H:V)
Right Side Slope.	12.00:1 (H:V)
Manning's n.....	0.013
Channel Slope....	0.0038 ft/ft
Depth.....	0.17 ft

Computed Results:

Discharge.....	0.45 cfs
Velocity.....	1.34 fps — USE FOR TC CALCS.
Flow Area.....	0.33 sf
Flow Top Width...	4.00 ft
Wetted Perimeter.	4.01 ft
Critical Depth...	0.15 ft
Critical Slope...	0.0058 ft/ft
Froude Number....	0.82 (flow is Subcritical)

EXHIBIT 20.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE A

Comment: STORM SEWER LINE A INLET #2 TO INLET #1

Solve For Full Flow Capacity

Given Input Data:

Diameter.....	1.00 ft
Slope.....	0.0127 ft/ft
Manning's n.....	0.013 RCP
Discharge.....	4.02 cfs

Computed Results:

Full Flow Capacity.....	4.02 cfs
Full Flow Depth.....	1.00 ft
Velocity.....	5.11 fps
Flow Area.....	0.79 sf
Critical Depth....	0.85 ft
Critical Slope....	0.0120 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	4.02 cfs
QMAX @.94D.....	4.32 cfs
Froude Number.....	FULL

$Q_{100} = 5.05$ CFS
@ 4.02 CFS

1.03 CFS OVER TOPS CROWN AND IS INTERCEPTED BY INLET #1

Open Channel Flow Module, Version 3.16 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

EXHIBIT 21.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE A

Comment: STORM SEWER LINE A INLET #1 TO OUTLET

Solve For Full Flow Capacity

Given Input Data:

Diameter.....	1.50 ft
Slope.....	0.0099 ft/ft
Manning's n.....	0.013 RCP
Discharge.....	10.45 cfs

Computed Results:

Full Flow Capacity.....	10.45 cfs
Full Flow Depth.....	1.50 ft
Velocity.....	5.91 fps
Flow Area.....	1.77 sf
Critical Depth.....	1.24 ft
Critical Slope.....	0.0097 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	10.45 cfs
QMAX @.94D.....	11.24 cfs
Froude Number.....	FULL

Q_{100} = 14.77 CFS

(-) 10.45 CFS

4.32 CFS OVERTOPS BACK OF WALK AND CONTINUES ALONG OUTFALL CHANNEL.

Open Channel Flow Module, Version 3.16 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

EXHIBIT 22.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE B

Comment: STORM SEWER LINE "B" INLET #3 TO INLET #1

Solve For Actual Depth

Given Input Data:

Diameter.....	1.50 ft
Slope.....	0.0099 ft/ft
Manning's n.....	0.013 RCP
Discharge.....	8.90 cfs — 100 YEAR

Computed Results:

Depth.....	1.06 ft
Velocity.....	6.64 fps
Flow Area.....	1.34 sf
Critical Depth....	1.15 ft
Critical Slope....	0.0081 ft/ft
Percent Full.....	70.92 %
Full Capacity.....	10.45 cfs — CAPACITY OK
QMAX @.94D.....	11.24 cfs
Froude Number.....	1.18 (flow is Supercritical)

Open Channel Flow Module, Version 3.16 (c) 1990
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

EXHIBIT 23.0

2 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE C

Comment: STORM SEWER LINE "C" DESIGN POINT 1 TO 4

Solve For Actual Depth

Given Input Data:

Diameter.....	2.00 ft
Slope.....	0.0035 ft/ft
Manning's n.....	0.013 RCP
Discharge.....	3.35 cfs - 2 YEAR

Computed Results:

Depth.....	0.68 ft
Velocity.....	3.54 fps — USE FOR T_C CALCS.
Flow Area.....	0.95 sf
Critical Depth....	0.64 ft
Critical Slope....	0.0045 ft/ft
Percent Full.....	34.10 %
Full Capacity.....	13.38 cfs
QMAX @.94D.....	14.40 cfs
Froude Number.....	0.88 (flow is Subcritical)

EXHIBIT 24.0

Circular Channel Analysis & Design
Solved with Manning's Equation

100 YEAR

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE C

Comment: STORM SEWER LINE "C" DESIGN POINT 1 TO 4

Solve For Actual Depth

Given Input Data:

Diameter.....	2.00 ft
Slope.....	0.0035 ft/ft
Manning's n.....	0.013 RCP
Discharge.....	10.54 cfs - 100 YEAR

Computed Results:

Depth.....	1.34 ft
Velocity.....	4.72 fps
Flow Area.....	2.23 sf
Critical Depth....	1.16 ft
Critical Slope....	0.0053 ft/ft
Percent Full.....	66.89 %
Full Capacity.....	13.38 cfs
QMAX @.94D.....	14.40 cfs
Froude Number.....	0.76 (flow is Subcritical)

EXHIBIT 25.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE C

Comment: STORM SEWER LINE "C" DES. POINT 4 TO OUTFALL

Solve For Actual Depth

Given Input Data:

Diameter.....	2.00 ft	
Slope.....	0.0057 ft/ft	— MIN SLOPE
Manning's n.....	0.013	RCP
Discharge.....	16.03 cfs	— 100 YEAR

Computed Results:

Depth.....	1.54 ft	
Velocity.....	6.18 fps	
Flow Area.....	2.59 sf	
Critical Depth....	1.44 ft	
Critical Slope....	0.0066 ft/ft	
Percent Full.....	76.94 %	
Full Capacity.....	17.08 cfs	— CAPACITY OK
QMAX @.94D.....	18.37 cfs	
Froude Number.....	0.88 (flow is Subcritical)	

INLET CONTROL Q_c = 28.30 CFS
OK

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EXHIBIT 26.0

COUNTRY CROSSING 1 AND 2

LINE "C" 24 RCP

HW/D = 3.97/2.0

= 1.99

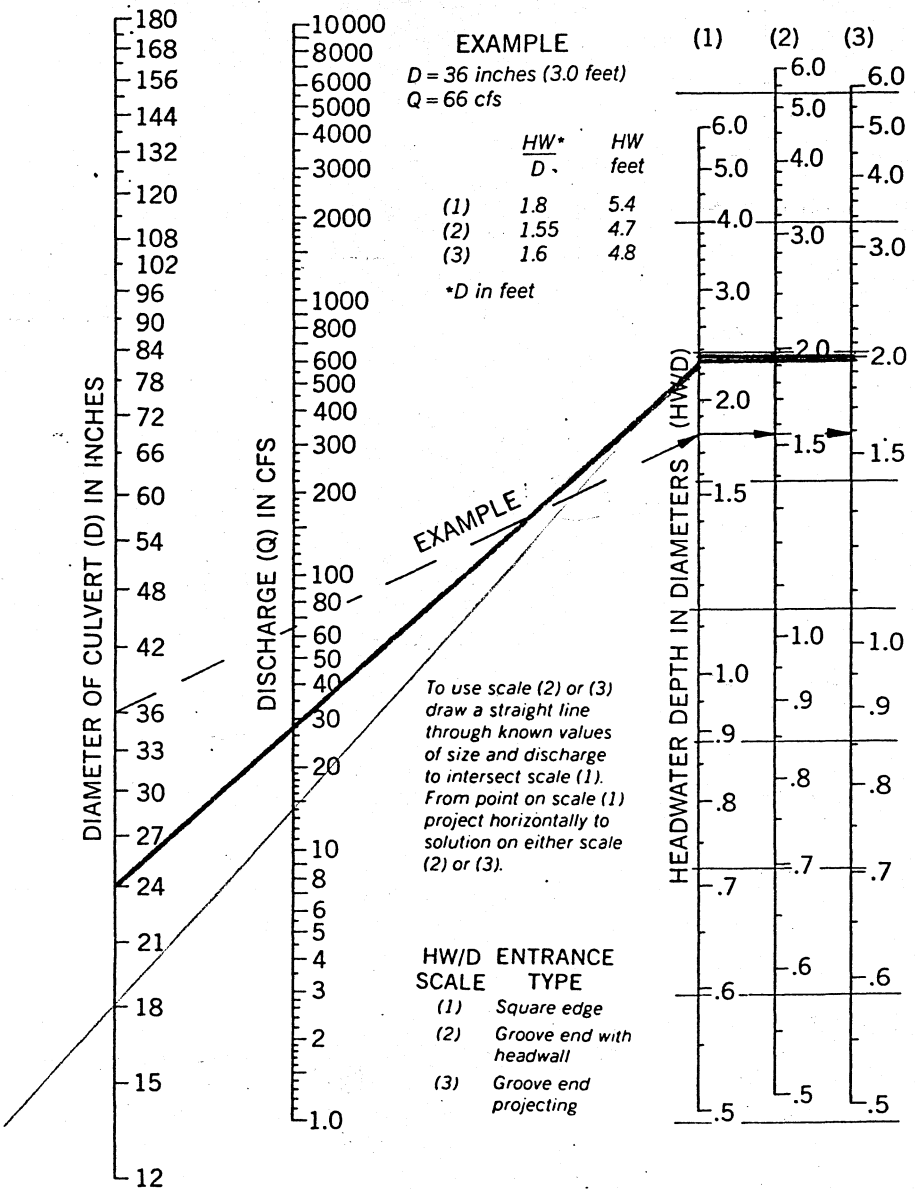
Q_C = 28.30 CFS

Q_{100} = 16.03 CFS

OK

FIGURE 33

HEADWATER DEPTH FOR CIRCULAR CONCRETE PIPE CULVERTS WITH INLET CONTROL



BUREAU OF PUBLIC ROADS JAN. 1963

HEADWATER SCALES 2&3
REVISED MAY 1964

EXHIBIT 27.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE D

Comment: STORM SEWER LINE "D" TO MH "C1"

Solve For Actual Depth

Given Input Data:

Diameter.....	1.50 ft
Slope.....	0.0055 ft/ft
Manning's n.....	0.013 RCP
Discharge.....	6.96 cfs - 100 YEAR

Computed Results:

Depth.....	1.11 ft
Velocity.....	4.98 fps
Flow Area.....	1.40 sf
Critical Depth....	1.02 ft
Critical Slope....	0.0067 ft/ft
Percent Full.....	73.71 %
Full Capacity.....	7.79 cfs - CAPACITY OK
QMAX @.94D.....	8.38 cfs
Froude Number.....	0.85 (flow is Subcritical)

EXHIBIT 28.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE E

Comment: STORM SEWER LINE "E" INLET TO V-PAN

Solve For Actual Depth

Given Input Data:

Diameter.....	1.00 ft
Slope.....	0.0050 ft/ft
Manning's n.....	0.010 PVC
Discharge.....	3.22 cfs — 100 YEAR

Computed Results:

Depth.....	0.80 ft
Velocity.....	4.75 fps
Flow Area.....	0.68 sf
Critical Depth....	0.77 ft
Critical Slope....	0.0055 ft/ft
Percent Full.....	80.48 %
Full Capacity.....	3.28 cfs — CAPACITY OK
QMAX @.94D.....	3.52 cfs
Froude Number.....	0.91 (flow is Subcritical)

EXHIBIT 29.0

100 YEAR

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: STORM SEWER LINE F

Comment: FUTURE STORM SEWER LINE "F"

Solve For Actual Depth

Given Input Data:

Diameter.....	1.00 ft
Slope.....	0.0050 ft/ft
Manning's n.....	0.010
Discharge.....	3.14 cfs — 100 YEAR

Computed Results:

Depth.....	0.78 ft
Velocity.....	4.75 fps
Flow Area.....	0.66 sf
Critical Depth....	0.76 ft
Critical Slope....	0.0054 ft/ft
Percent Full.....	78.49 %
Full Capacity.....	3.28 cfs — CAPACITY OK
QMAX @.94D.....	3.52 cfs
Froude Number.....	0.93 (flow is Subcritical)

EXHIBIT 30.0

100 YEAR

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: OUTFALL CHANNEL

Comment: INTERIM OUTFALL CHANNEL TO LEACH CREEK

Solve For Depth

Given Input Data:

Bottom Width.....	3.00 ft
Left Side Slope..	1.50:1 (H:V)
Right Side Slope.	1.50:1 (H:V)
Manning's n.....	0.035 - UNIMPROVED BARE EARTH
Channel Slope....	0.0020 ft/ft
Discharge.....	30.80 cfs 2 SUM OF FLOW FROM STORM SEWERS

Computed Results:

Depth.....	2.20 ft
Velocity.....	2.22 fps
Flow Area.....	13.85 sf
Flow Top Width...	9.60 ft
Wetted Perimeter.	10.93 ft
Critical Depth...	1.21 ft
Critical Slope...	0.0215 ft/ft
Froude Number....	0.33 (flow is Subcritical)

OK < 0.80

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EXHIBIT 31.0

COUNTRY CROSSING 1 AND 2

ROAD TYPE	COMBINATION INLET CAPACITY (CFS)					
	SINGLE		DOUBLE		TRIPLE	
	2-YR	100-YR	2-YR	100-YR	2-YR	100-YR
Urban Residential (local)	6.4	13	9.5	22	12.7	31
Residential Collector, Commercial and Industrial Streets	3.2	13	4.9	22	6.5	31
Collector Streets (3000 - 8000 ADT)	2.7	13	4.0	22	5.3	31
Principal and Minor Arterials	6.0	13	9.0	22	12.0	31

Inlet capacities shown above are based upon: 1) use of non-curved vane grates (similar to HEC-12 P-1⅞-4 grates; 2) HEC-12 procedures; 3) clogging factors per Section VI; and 4) City/County standard inlets with 2-inch radius on curb face and type C grates. Capacities shown for 2-year storms are based upon depths allowed by maximum street inundation per Figure "G-3". The 100-year capacities are based upon a ponded depth of 1.0 foot. Note that only combination inlets are allowed in sag or sump conditions.

MAXIMUM INLET CAPACITIES: SUMP OR SAG CONDITION — **TABLE "G-1"**

INLET #1 Q_{100} = 1.50 CFS

INLET #2 Q_{100} = 5.05 CFS

INLET #3 Q_{100} = 8.90 CFS

USE SINGLE COMBINATION INLETS.

EXHIBIT 32.0