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File 1989-0055

Name: Ptarmigan Estates – Final Plat/ Plan

	S c a n n e d	<p>A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the in some instances, not all entries designated to be scanned by the department are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been provided.</p> <p>Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.</p> <p>Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.</p>			
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<u>DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:</u>					
X	X	Action Sheet	X	X	Letter from Karl G. Metzner to John Siegfried re: to confirm a gravity flow system supplying adequate irrigation water to a property line – 2/6/90
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X		Development Application – 7/8/89, 9/20/89	X	X	Termination of Easement - to erect, construct, operate, and maintain an electric line or lines for the transmission or distribution of electricity – 4/13/90
X		City Council Workshop Minutes – 7/1/8/94	X	X	Letter from Bonnie M. Kinney to City Planning re: letter of credit
X	X	Handwritten Memo from Don Newton to Karl Metzner and Jim Shanks – 1/8/90	X	X	Letter from Don Newton to John Siegfried re: improvements have not been done – 10/20/93
X	X	Review of Final Plans & Plat from Don Newton – 12/1/89	X	X	Letter from Bonnie M. Kinney to City re: irrevocable letter of credit – 12/31/93
X	X	Protective Covenants	X	X	Letter from John H. Wright, John H. Wright, C.P.G. & Assoc. to John Siegfried re: soil reports – 11/289
X		Transamerica Title Services – 10/16/89	X	X	Letter from Karl Metzner to John Siegfried re: irrigation system adequate to each lot in subdivision – 2/6/90
X	X	Planning Commission Minutes – ** - 12/5/89, 1/9/90			Signed petition from property owners in Ptarmigan Estates re: needing assurance that developer is responsible for adequate supply of water – 3/20/92

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IMPACT STATEMENT / PROJECT NARRATIVE

Ptarmigan Estates is a project designed to create 24 lots on 18½ acres presently zoned RSF4 (eligible as zoned for 74 residences). It is located on the S.E. corner of the intersection of 27½ Road and G Road.

The property is presently approximately 2/3 apple orchard in an area of developed subdivision and open land, little of which is in agricultural use.

It is the intention of the designers to retain much of the rural character of the property, both to the adjacent developments Partee Heights to the north and Crown Heights 1st filing to the southeast, and to passersby on 27½ Road, G Road, and Cortland. We also wish to create a strong sense of neighborhood within Ptarmigan Heights.

Both of these desires are reflected, not just in the obvious down-zoning and increased lot sizes, but in the careful citing of approximate homesites before lot lines and the use of vegetation buffers created through the greater-than-normal setbacks and density graduation from the existing neighborhoods. We believe the care taken as to views and variations in terrain and vegetation will result in a good neighborhood and a quality project.

The primary area to be impacted is the 1st filing of Crown Heights, our neighbors to the southeast, which is in the process of being built out, and Partee Heights to the north, an established neighborhood. The First

Presbyterian Church is planning to build soon on a property to the southwest. Largely vacant land lies to the east and west with zoning of PR-8 and RSF-4.

We believe Ptarmigan Estates, as proposed, is not only compatible to existing land uses but to potential future development as zoned. In fact, we see it existing as a visual enclave of diversity with its proposed low density.

Ptarmigan Estates will utilize Ute Water for domestic purposes, internal irrigation for lawns and landscaping, existing city streets with proposed improvements, one stretch of approximately 350 of new street, city sewer, Public Service gas and electricity, and standard phone and cable T.V. services. Appropriate easements have been designated.

The developer of Ptarmigan Estates originally asked for the abandonment of G Road east from Putter Drive to the end of the subject property. This final plat approval request is not conditional upon that action as City Planning and Engineering are in the process of reviewing this with no immediate plans to extend G Road. As the subject property has no proposed ingress or egress on the above mentioned G Road easement, it is not logical to require improvement of this R.O.W. as a condition for approval. Also, as G Road's status may change in the future in one of several ways, it is not logical to require inconsistent improvements to the westerly extension of G Road other than to alleviate the potential dangerous area presently at G Road's continuance into Putter Drive. Applicant's engineering reflects this logic. Should it be abandoned in the future, emergency R.O.W. has been provided to the east of East Piazza Way.

In addition, the junctures of East Piazza and South Piazza have been redesigned to provide a cleaner design without landscape areas which otherwise must be jointly maintained by two separate homeowners associations, a cumbersome burden for both entities.

LANDSCAPING/OPEN SPACE/SETBACKS

All setbacks which are unique to this project and all greenery easements and shared driveway easements are shown on the Ptarmigan Estates site plan.

Required replantings within the greenery easement are addressed in the protective covenants.

DRAINAGE/GRADING

The final drainage report indicates that a T pipe needs to be placed at the intersection of the major drainage and 27½ Road. Other than this, no further drainage or grading is anticipated. Drainage influence areas have been excluded from the building envelopes on the site plan so not building is permitted therein.

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PTARMIGAN ESTATES
DEVELOPMENT SCHEDULE

All development within Ptarmigan Estates is scheduled to begin between January 1, 1990 and June 1, 1990 weather permitting. The exception being Lots 10, 11, 12, and 13 of Block One which will be designated Phase Two of Ptarmigan Estates and which requires approximately 582 feet of six (6) inch sewer. The excrowing or guaranteeing of these improvements and the beginning of construction of same is anticipated on or before September 1, 1990. It is understood that a building permit hold will be placed on these lots (10, 11, 12, and 13 of Block One) until such time as these guarantees are in place.

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PROTECTIVE COVENANTS
Ptarmigan Estates Subdivision
Mesa County, Colorado

These covenants are meant to help establish and continue a strong sense of neighborhood and quality within Ptarmigan Estates.

1. All lots shall be used for one single family dwelling per lot and shall not be further subdivided with the exception of lot #1 which may be further subdivided into no more than 4 lots total and lot #9 which may be divided into no more than 2 lots.

2. No animals other than household pets shall be allowed and these will be confined by the owners to their lot. No animals shall be kept, bred, or maintained for commercial purposes. No horses, cattle, sheep, goats or donkeys will be allowed to be kept on a Ptarmigan Estates lot.

3. Each single family dwelling shall be constructed so that the dwelling space on the first floor, excluding decks, patios, porches, carports and garages, shall be not less than the following minimum square footages for both single story and two (2) story structures. If the structure is a tri-level, or the main living area is spread over two continuous and adjacent levels, the combination of such levels shall be construed to be the first floor.

	<u>1 story</u>	<u>2 story</u>
Lots under .40 acres in area	1500 min.	800 min. first floor
Lots under .55 acres in area	1600 min.	900 min. first floor
Lots over .55 acres in area	1800 min.	1000 min. first floor

4. All building set back requirements are shown on the site plan which shows building envelopes. Also shown is the greenery easement - this is established to maintain the character of the orchard as it has existed for years. Trees cut or removed within this area, except for the construction of driveways, private or shared, are to be replaced by a deciduous tree of no less than 10 feet in height as planted or a conifer tree of no less than 6 feet in height.

5. Outbuildings for storage or other use incidental to and compatible with residential use are permitted including up to a 3 car garage on lots less than .55 acres or a 4 car garage on lots above .55 acres. All such structures are to require review by the Architectural Control Committee.

6. All foundation plans shall be engineered by a licensed Colorado engineer and bear the stamp of same.

7. Invalidation of any one of these covenants by judgment, statute, or court order shall in no way effect any of the other covenants. These covenants are binding upon all purchasers of a lot or lots in Ptarmigan now and in the future.

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8. No trailer, basement, tent, barn or other outbuilding or temporary structure shall be used as a residence, temporary or permanent.

9. Only persons holding title to land in Ptarmigan Estates shall have the right to seek remedy at law or in equity against any person or persons violating or attempting to violate any of these covenants.

10. The developer shall cause to be formed a Ptarmigan Estates Architectural Control Committee consisting of three (3) persons who must approve any construction, remodeling, alteration, or additions, to any private drive, building, fence, wall, or structure within the subdivision. The majority of the Committee may act for the whole of the Committee, and any of the above activities must be approved by a majority vote.

11. The developer shall cause to be formed a Ptarmigan Estates Homeowners Association under the Non-Profit Corporation Act of the State of Colorado with each lot owner being a member and receiving one vote per lot.

12. The above covenants may be modified and/or amended by a vote of members of the Homeowners Association with approval by no less than 80% of the members.

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Grand Junction, CO 81506-8497

2945-012-48-011
Harris & Thurza Hamlin
3600 Ridge Dr.
Grand Junction, CO 81506-8497

2945-012-58-004
Robert & Virginia Scott, Trustees
3979 S Piazza Pl.
Grand Junction, CO 81506-8503

2945-012-48-012
Frank & Wanda Beran
P.O. Box 60284
Grand Junction, CO 81506-8758

2945-012-63-003
Guy & Debbie Thomas
723 35 8/10 Rd.
Palisade, CO 81526

2945-012-59-002
Dwain McClelland
3321 C Road
Palisade, CO 81526-9531

PROPERTY OWNERS - PTARMIGAN ESTATES

BLOCK 1

BLK	LOT	TELEPHONE	RESIDENT NON-RESIDENT
1	2	Peter J. and Teri Siegmund 4030 Ptarmigan Piazza 241-3102	R
1	3	LeRoy and Beverly Coleman Vacant Lot, Ptarmigan Piazza 554 Normandy Dr., Grand Junction 242-6977	NR
1	4	Timothy Michael McGinn Vacant Lot, Ptarmigan Piazza 1161 Lowell Ct., Grand Junction 241-0211	NR
1	5	R. Arnold and Karen Butler 4060 Ptarmigan Piazza 242-1803	R
1	6	Phil N. and Diana L. McCowen Vacant Lot, 4031 Ptarmigan Piazza 2412½ Hidden Valle Dr., #1, Grand Junction 242-5867	NR
1	7	Thomas J. Ralsar Vacant Lot, G Road 1443 Elm Ave., Grand Junction 242-3525	NR
1	8	Richard G. Hammond Vacant Lot, G Road 120 Rupertus, San Clemente, CA 92672	NR
1	9	Ptarmigan Investments Vacant Lot, 27½ Rd. or G Road 241-7025	NR
1	10	Ptarmigan Investments Vacant Lot, 27½ Road 241-7025	NR
1	11	Keith E. and Jo A. Koler Vacant Lot, 27½ Road 2531 Pheasant Run Cir., Grand Junction 241-9538	NR
1	12	Ptarmigan Investments Vacant Lot, 27½ Road 241-7025	NR
1	13	Ptarmigan Investments Vacant Lot, 27½ Road 241-7025	NR
1	14	Ronald K. and Bonnie M. Jennings 4021 Ptarmigan Piazza	R
1	15	Rick and Delia Ferguson 4011 Ptarmigan Piazza 242-3016	R
1	16	Betty J. Schuman 3986 Ptarmigan Piazza 243-7013	R
1	17	Warren and Margorie Bystedt 4010 Ptarmigan Piazza 242-2797	R

BLK	LOT		TELEPHONE	RESIDENT NON-RESIDENT
1	18	Ronald D. and Martha Ridgely 2288 E. Piazza Place	242-2797	R
1	19	Vacant Lot, 2290 Piazza Pl.		NR
1	20	Robert W. and Jeannette Funk 2306 E. Piazza Pl.	243-8986	R
1	21	Gilbert and Marian Gallegos 2350 E. Piazza Pl.	243-9353	R

REPLAT OF BLK 1, LOT 1 - PTARMIGAN ESTATES

1	1	Ptarmigan Investments Vacant Lot, 2374 E. Piazza Pl.	241-7025	NR
1	2	Lawrence Capps and T. L. Benson Vacant Lot, 2366 E. Piazza Pl.	243-4958	NR
1	3	T. L. and Mern Benson 2370 E. Piazza Pl.	241-0233	R
1	4	Edward C. and Joan M. Olson 2380 E. Piazza Pl.	245-7915	R

BLOCK 2

2	1	Ralph W. and LaVonne A. Knapp 2368 E. Piazza Pl.	241-1854	R
2	2	Tania Sudduth 2360 E. Piazza Pl.	243-6236	R

Review of Final Plans & Plat
Ptarmigan Estates

By: J. Don Newton, City Engineer

12-1-89

Final Plat (Sheet 1 of 1):

What is the difference between easements labeled "Ingress and Egress" and those labeled "Access"? Labeling and dimensioning of easements and rights-of-way are confusing and incomplete. No units are shown of some widths. Property lines, easement lines, etc. need to be identified in the legend.

Original
Do NOT Remove
From Office

Areas shown "To be Vacated" should not be on this plat.

Right-of-way north of Cul-de-Sac
at end of East Piazza Place should
not be labeled "proposed right-of-way".

Site Plan and Building Envelope (sheet 1 of 1):

Ingress and Egress Easements, utility easements
and road rights-of-way should be labeled.

Need north arrow on plan.

Road Plan (sheet 1 of 3)

Original
Do NOT Remove
From Office

* On cross-section for Parmigan Piazza and E. Piazza
show dimensions
and cross-slopes for both sides of the street pavement.

Transition from detached sidewalk to attached
sidewalk on west side of S. Piazza Lane
should be no more than 10' long. The sidewalk
transition at the east end of East Piazza
Place should be made gradually in 10'.

~~No parking signs shall be furnished and
installed along the west side of
Parmigan Piazza.~~ A. Public Service Co.
street light will be required at each

cul-de-sac and at the intersection
of Parmigan Piazza and East Piazza
Place.

Road Plan & Profile (sheet 3 of 3) West end

Pavement cross-slope for north half of
E. Piazza Place appears to vary but
is not shown. How does the cross-slope
vary to the east and west of
the 5' valley pan? Does the

existing pavement slope match that
of the valley pan? The plan should show
the area of
existing street pavement will to be removed.

Need to show crown line locations and elevations at the three way intersection of S. Piazza, Parmigan Piazza and E. Piazza.

The gutter grade from station 0+36 to 1+02.37 calculates to be 0.23%.

This gutter will be too flat to drain the valley pan may have to be moved further west to increase gutter slope.

Need to show station and offset or radial geometry for the beginning and end of all curves in curb, gutter

and sidewalk. The existing irrigation line and riser manhole in the intersection of E. Piazza and S. Piazza is not shown on the plans. Will this system function without the riser manhole?

Road and Sewer Plan for 27 1/2 Rd and G Rd,
(Sheet 2 of 3)

The final Drainage Report dated August 20, 1989 shows all drainage from the development being conveyed west from E. Piazza in an open ditch to a detention area and an existing 16" CMP crossing 27 1/2 Rd.

The final plans now show the drainage from E. Piazza and Plover Piazza being routed down South Piazza with no on site detention provided. How will the existing drainage facilities and properties be affected by the changed drainage routing. How will on site detention be accomplished? The Final Drainage Report need to be revised.

Original
Do NOT Remove
From Office

The petitioner has requested that he not be required to install a public sidewalk along the south side of G. Road from 27 $\frac{1}{2}$ Rd to Putter Drive and that he not be required to provide or pay for improvements to G. Road east of Putter Dr.

Although these improvements may not be necessary for the successful completion of this development, they would normally be required and can be waived only by the City Council.

Original Remove
Do NOT Remove
From Office

MEMORANDUM

January 8, 1990

To: Karl Metzner

From: Don Newton

Subject: Ptarmigan Estates

I have reviewed two revised drawings (received 12-20-89) including the final plat and sheet 3 of the Road Plan and Profile East Piazza & Ptarmigan Piazza, and have the following comments:

The intersection of East Piazza Place and Ptarmigan Piazza has been redesigned as a traffic circle, matching the original plan for Crown Heights Subdivision.

The petitioner and/or home owners will be responsible for landscaping and

maintaining the common area inside the traffic circle. Irrigation water should be made available to the common area (not shown on plans). The petitioner shall furnish and install "One Way" signs (counter clockwise ^{direction}) opposite each street approaching the traffic circle. Stop sign shall be install at the traffic circle on East Piazza Place and on Parmigan Piazza. A yield sign will be required where South Piazza Lane intersects the traffic circle.

The longitudinal grade on Parmigan Piazza has been reversed and now slopes to the north.

This will prevent any drainage from the development from flowing down South Piazza Lane. All runoff from the development will be routed to the proposed detention basin (between lots 9 + 10) in accordance with the Final Drainage Report dated August 20, 1989. I have no objection to the current drainage plan.

Issues which remain unresolved are as follows:

1. Source of irrigation water is not clear. No irrigation line shown to lots 3, 4, 5, 6, 7, 8, 9, 10 and common area; No details of irrigation system shown.

2. Petitioner's request to delete sidewalk on south side of G. Road from 27 1/2 Rd to Putter Dr.

3. Petitioners
3. Request to delete improvements on
C. Rd east of Putter Dr. 6

KC. Jim Shanks



Grand Junction Planning Department
 250 North Fifth Street
 Grand Junction, Colorado 81501-2688
 (303) 249-4300

February 6, 1990

BOOK 1776 PAGE 69

1535274 02:41 PM 02/03/90
 E. SAWYER, CLK&REC MESA COUNTY CO

Mr. John A. Siegfried
 Box 60214
 Grand Junction, Colorado 81506

RE: Ptarmigan Estates Irrigation System.

Dear Mr. Siegfried:

This letter is to confirm that a gravity flow irrigation system supplying adequate irrigation water to a property line of each lot in Ptarmigan Estates Subdivision. The estimated cost of this system is \$7,800.

You understand that this system is a requirement of the subdivision approval, and that a licensed engineer must certify that the system has been properly installed and tested prior to a release from your improvements guarantee.

Thank you for your cooperation.

Sincerely,

Karl G. Metzner
 Karl G. Metzner
 Director of Planning

I understand and agree to the terms of the above referenced irrigation system and will provide the required engineer's certification as part of the release of the improvements guarantee process specified in the Grand Junction Zoning and Development Code.

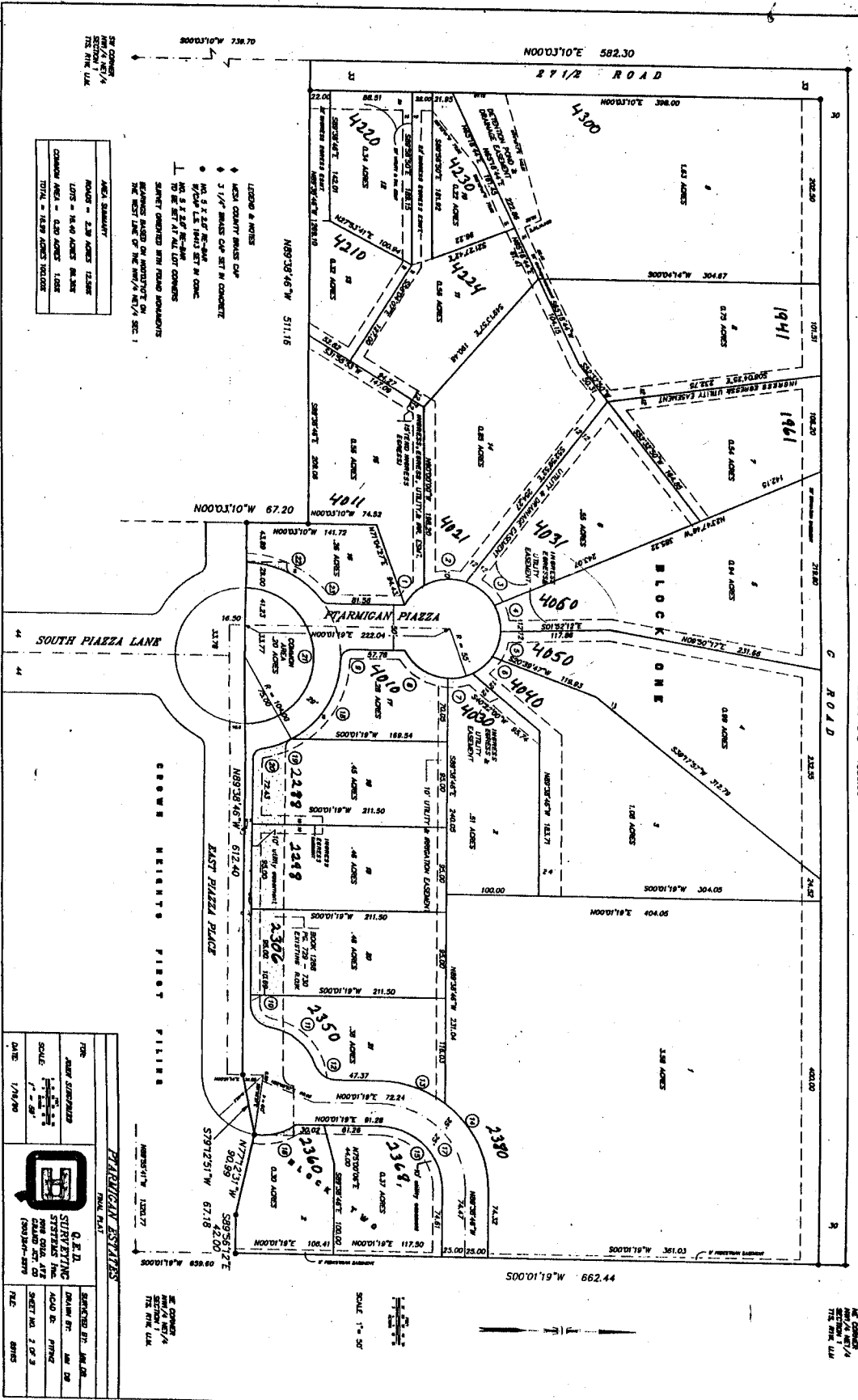
Feb 6, 90
 Date

John A. Siegfried
 John A. Siegfried

N/A CONFORM
N/A CONFORM
N/A CONFORM

S89°55'46"E 1320.05

N/A CONFORM
N/A CONFORM
N/A CONFORM



LENDING & NOTES

- LOCAL COUNTY BRIDGE CAP
- ◆ 3/4" BRIDGE CAP SET IN CONCRETE
- W/S & X/T RE-INFORC.
- W/S & X/T RE-INFORC. WITH CONC.
- NO SET AT ALL BUT CONCRETE

MARKET ORIGINATED WITH GRANT INFORMATION
 SEE REVISIONS OF PLAT SHEET ON P. 2
 SEE REVISIONS OF PLAT SHEET ON P. 2

AREA	QUALITY
ROADS	2.50 ACRES 12.500
LOTS	16.40 ACRES 81.200
COMMON AREA	4.50 ACRES 22.500
TOTAL	23.40 ACRES 117.200

PARMIGAN PLAZA

FILED MAY 20 2010

Q.E.D. SURVEYING

SCALE 1" = 50'

DATE 1/24/09

PREPARED BY	DRAWN BY
JAMES KIMBERLIN	J.M.L.B.
CHECKED BY	DATE
J.M.L.B.	MAY 20 2010
DATE	BY
1/24/09	J.M.L.B.

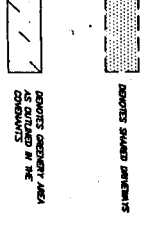
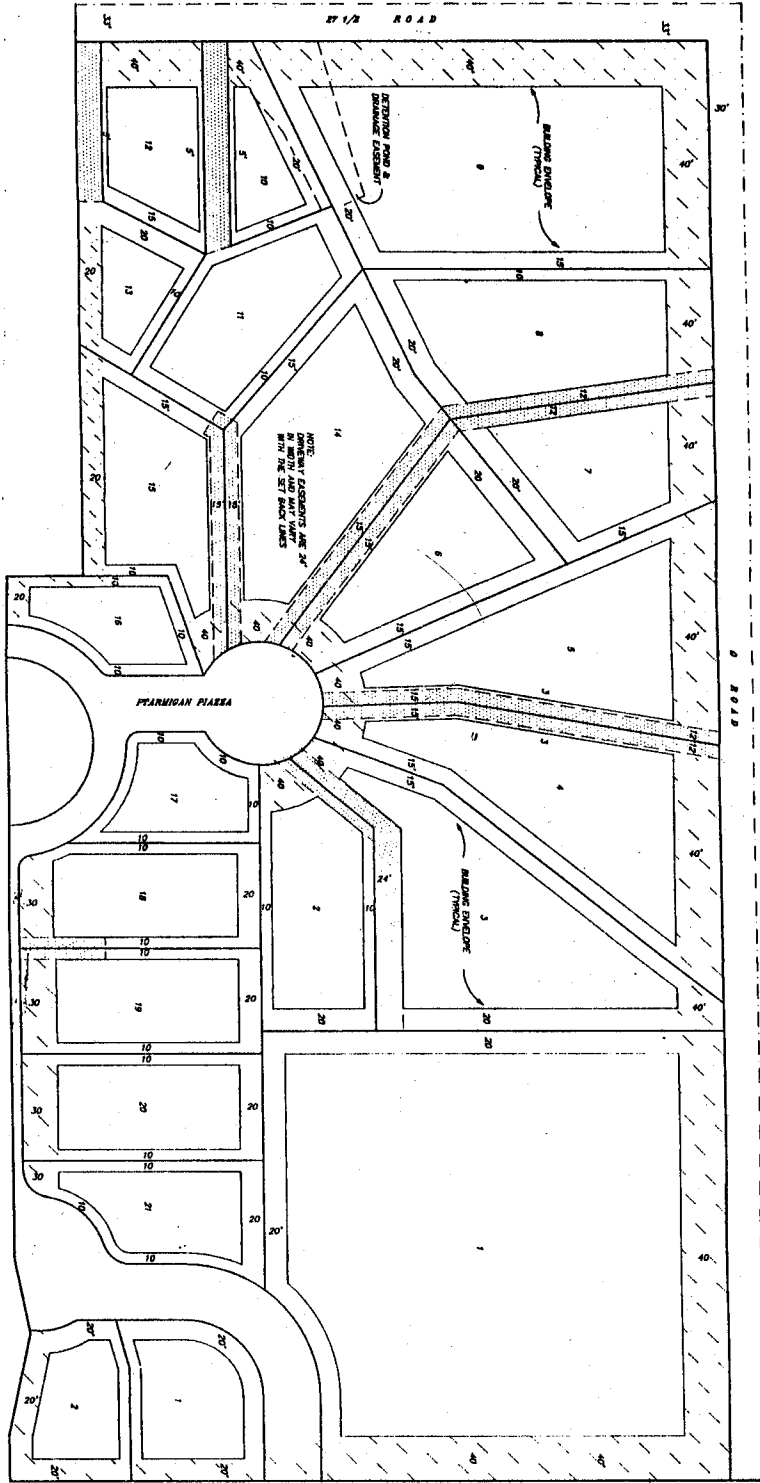
SHEET NO. 2 OF 3

500°19'W 662.44



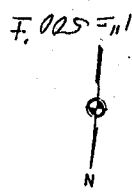
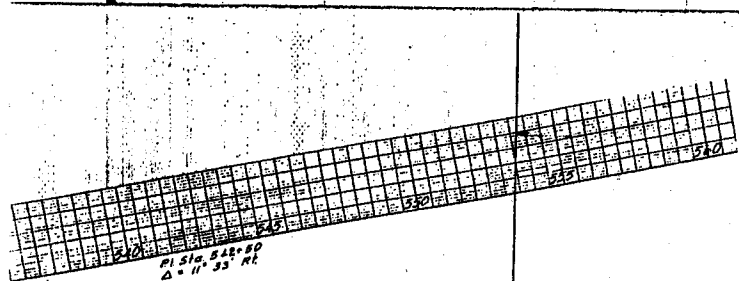
1/4 SECTION
SECTION 1
7.5 AC. G.A.

West line NE 1/4 Section 1
ROAD



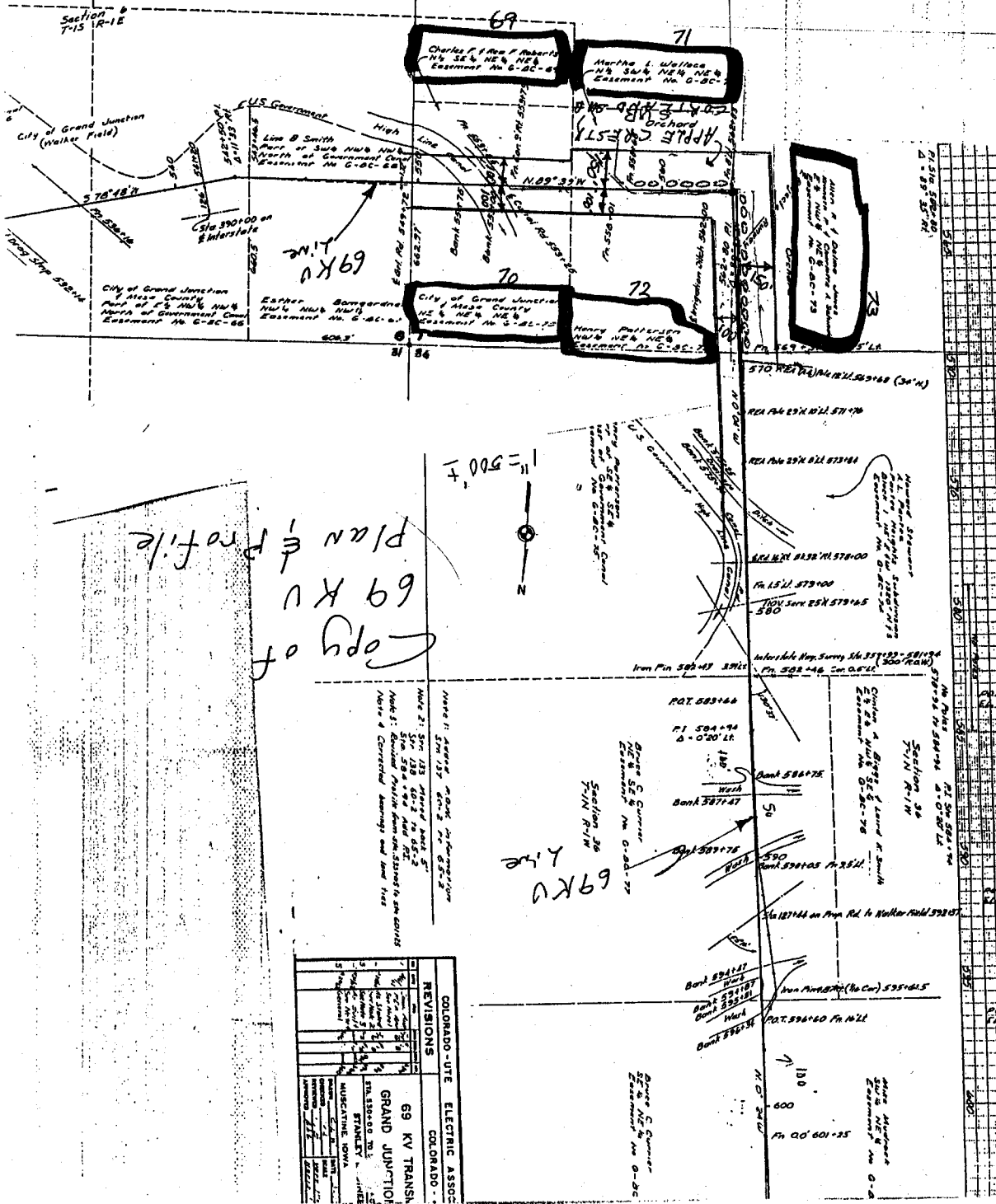
<p>PYRAMIDON ESTATES SITE PLAN AND BLUE PRINTS</p>	
<p>FOR: JAMES C. BROWN</p>	<p>DATE: 1/23/70</p>
<p>SCALE: 1" = 40'</p>	<p>PREPARED BY: J. W. LEE</p>
<p>DRAWN BY: J. W. LEE</p>	<p>CHECKED BY: J. W. LEE</p>
<p>DATE: 1/23/70</p>	<p>PROJECT: PYRAMIDON ESTATES</p>
<p>DATE: 1/23/70</p>	<p>SHEET NO. 3 OF 3</p>
<p>DATE: 1/23/70</p>	<p>DATE: 1/23/70</p>

100
Jan 1970

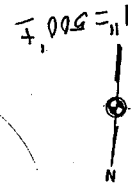


Section 1
7-15 R-1W

Section 8
7-15 R-1E

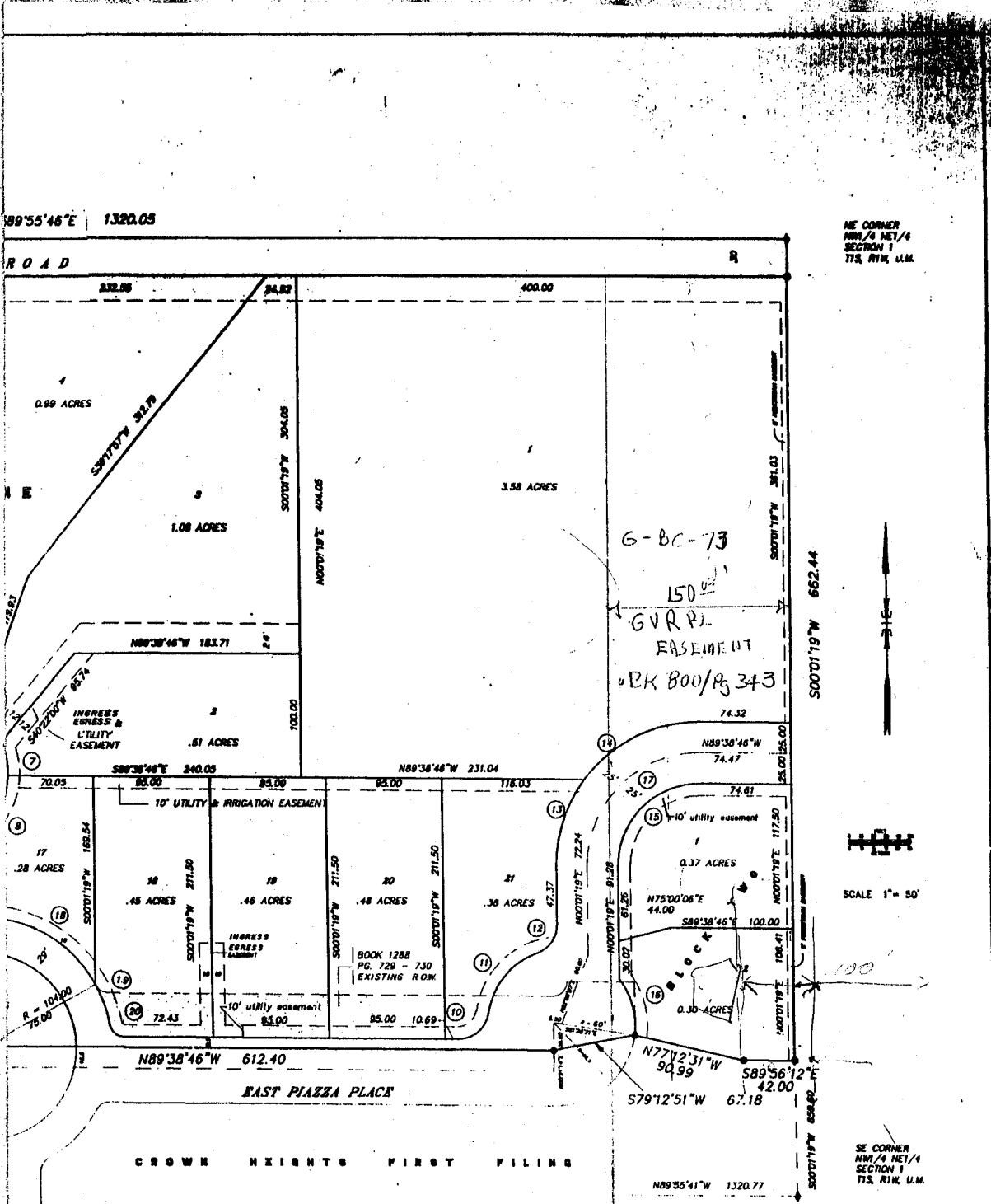


Copy of
69 KV
Plan & Profile



REVISIONS	
1	Original
2	As shown
3	As shown
4	As shown
5	As shown
6	As shown
7	As shown
8	As shown
9	As shown
10	As shown

69 KV TRANS.
GRAND JUNCTION
 STANLEY - JONES
 MURKIN, IOWA
 IN 1930
 COLORADO - UTE ELECTRIC ASSOC.
 COLORADO




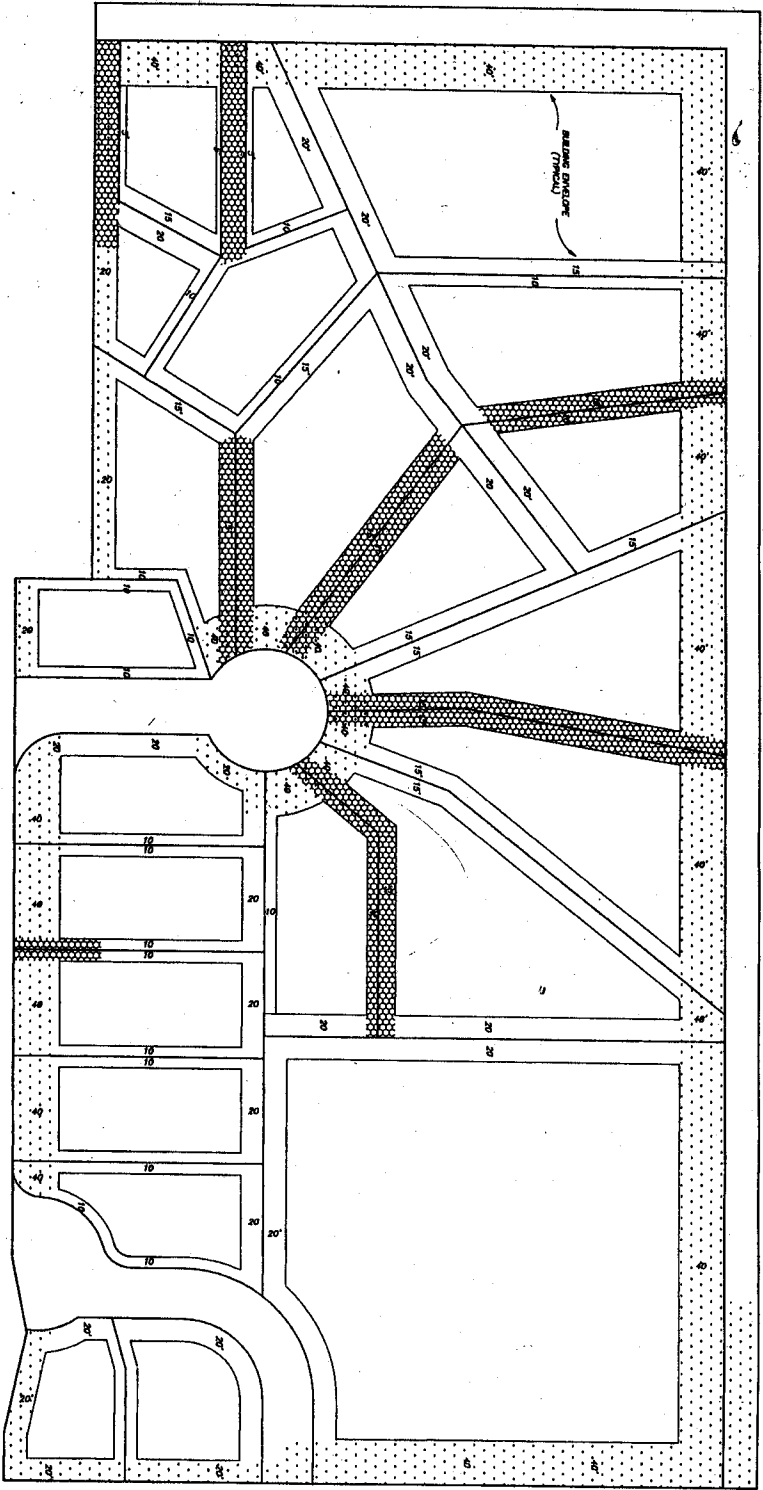
NE CORNER
NW/4 NE/4
SECTION 1
T15, R1W, U.M.

SCALE 1" = 50'

SE CORNER
NW/4 NE/4
SECTION 1
T15, R1W, U.M.

PTARMICAN ESTATES
FINAL PLAT

FOR: JOHN SINDRIFIED	 <p>Q. E. D. SURVEYING SYSTEMS Inc. 8118 GOLD AVE GRAND ST. CO (303)841-2370</p>	SURVEYED BY: MM LH
SCALE: 1" = 50'		DRAWN BY: MM DB
DATE: 1/16/90		ACAD ID: PFWZ
		SHEET NO. 2 OF 3
		FILE: 89185



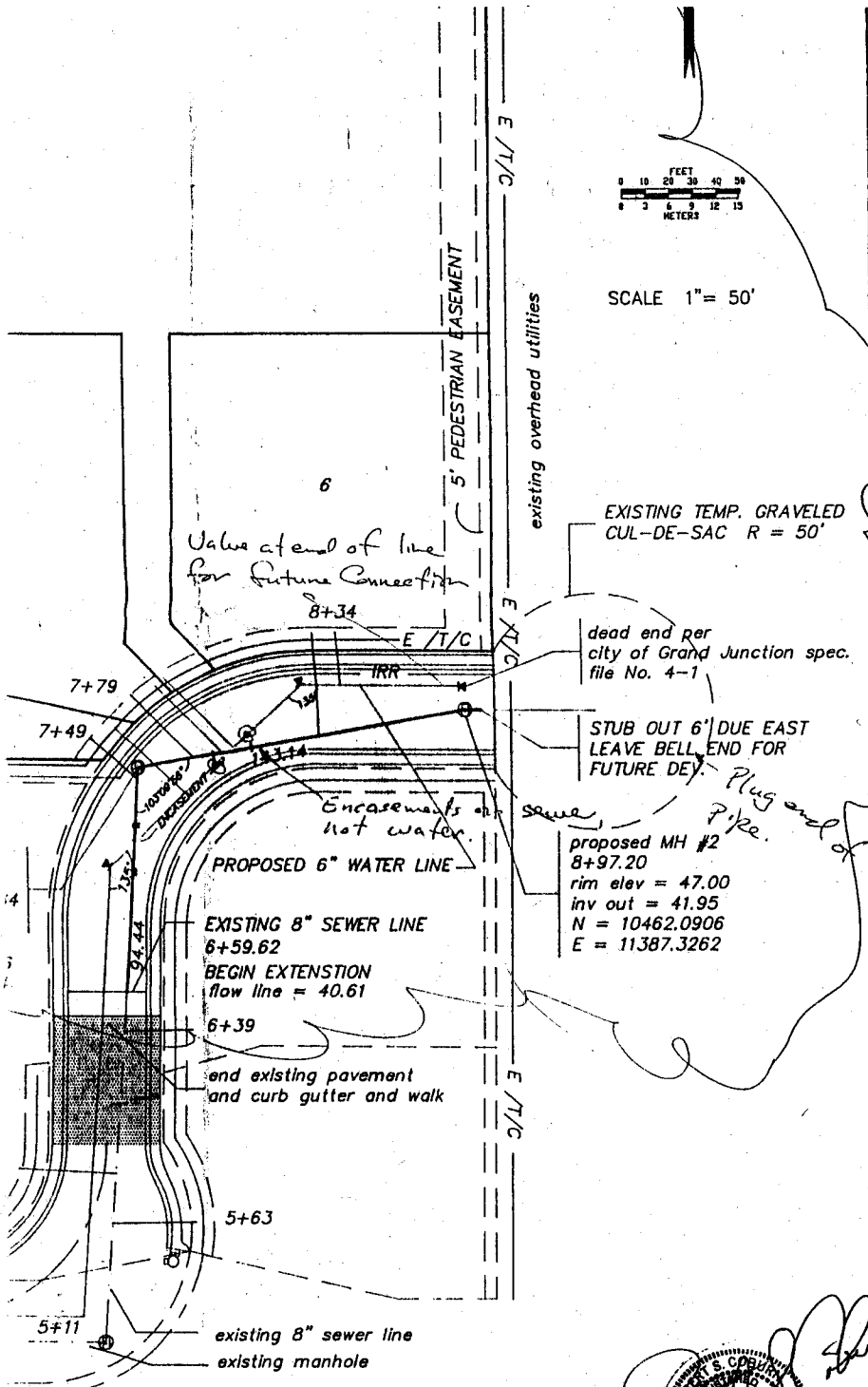
Original
Do NOT Remove
From Office

#55 89

NOV 0 6 1989

PATRIOTIC ESTATES
SEE PLAN AND LOTS ELEVATIONS

FOR	DATE	APPROVED BY
JOHN CORREIA	11/01/89	
SCALE		
1" = 40'		
Q.E.D. SURVEYING SYSTEMS, INC. 1000 W. 10th St. Suite 100 Omaha, NE 68104 (402) 441-2877		
DRAWN BY	CHECKED BY	
APPROVED BY		
SHEET NO.		
DATE		

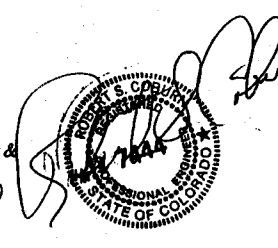


SCALE 1" = 50'

- ① Need street light on the ~~ex~~ horizontal curve @ 7+80 $\frac{1}{2}$.
- ② Minimum pavement thickness shall be 3"
- ③ Need dedicated right-of-way for temporary cul-de-sac.
- ④ Need horizontal curve info on plans.
- ⑤ Need street gradient profiles with existing ground lines.
- ⑥ Need to know who will inspect & test construction of Don Newton 7-3-91

SEWER LINES SHALL BE LOCATED A MINIMUM OF 10' HORIZONTALLY & VERTICALLY FROM ALL WATER LINES. AT CROSSINGS WITH LESS THAN 18" VERTICAL SPACING A SINGLE LENGTH OF PIPE (18' MIN.) SHALL BE CENTERED AT THE CROSSING. THE JOINTS SHALL BE PLACED IN A CONCRETE COLLAR 6" THICK AND EXTENDING AT LEAST 6" EITHER SIDE OF THE JOINT.

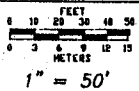
WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF GRAND JUNCTION STANDARD DETAILS AND SPECIFICATIONS FOR SANITARY SEWER AND IRRIGATION SYSTEMS



cell size damaged plan in Public Works Ptarmigan Estate file

REPLAT LOT 1, BLOCK ONE PTARMIGAN ESTATES

SEWER PLAN AND UTILITY COMPOSITE

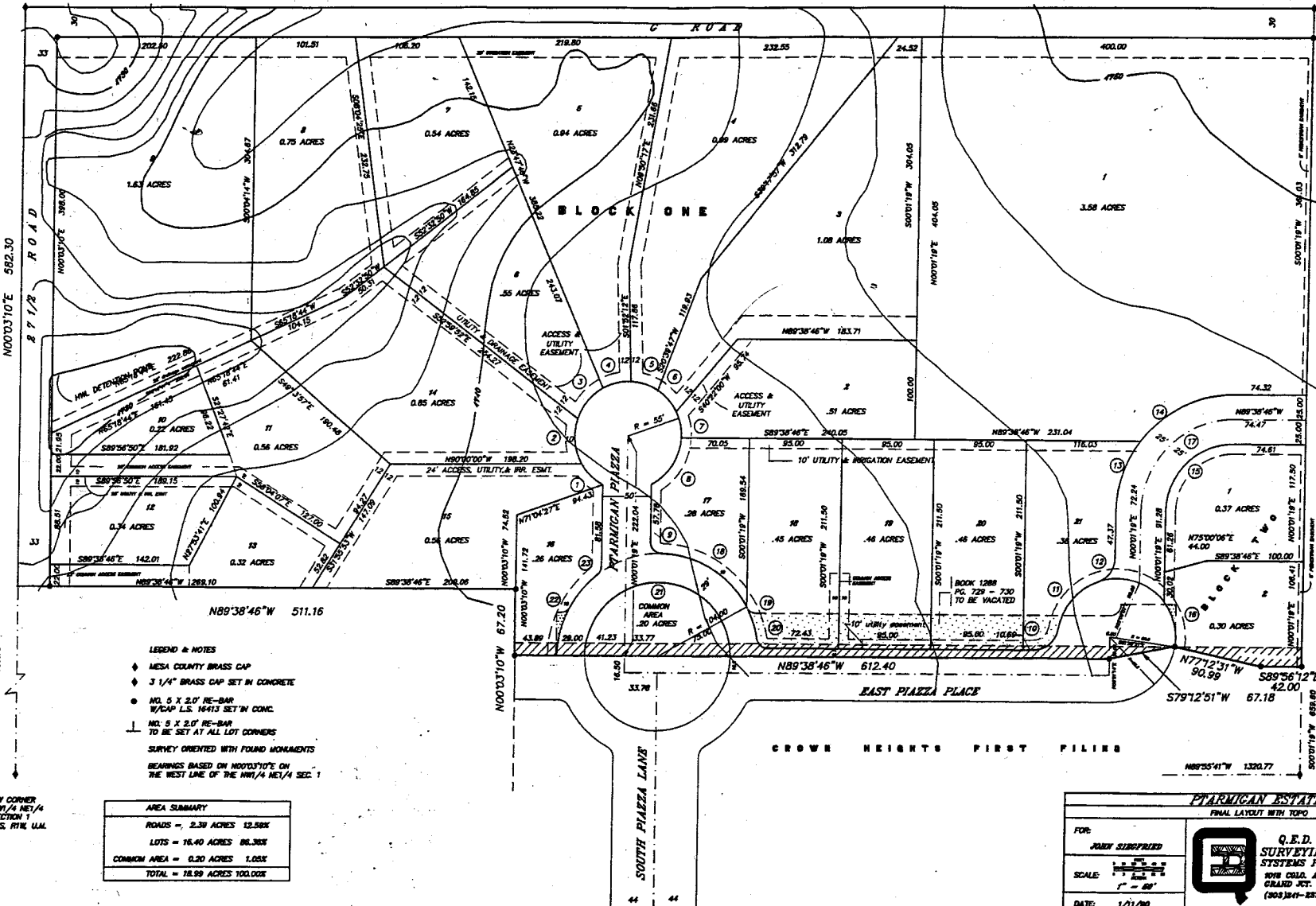
JOHN SIEGFRIED	 <p>Q.E.D. SURVEYING SYSTEMS Inc. 1018 COLO. AVE GRAND JCT. CO (303)241-2370</p>	SURVEYED BY: MEM DKB
		DRAWN BY: MEM
 <p>1" = 50'</p>		ACAD ID.: PTUTL2A
6/18/91		SHEET NO. 1 OF 1
		FILE: 89165

REVISED 7/3/91

N1/4 CORNER
SECTION 1
T15S, R14E, U1M

S89°55'46"E 1320.05

NE CORNER
NW1/4 NE1/4
SECTION 1
T15S, R14E, U1M



LEGEND & NOTES

- ◆ MESA COUNTY BRASS CAP
- ◆ 3 1/4" BRASS CAP SET IN CONCRETE
- NO. 5 X 2.0' RE-BAR
- 1/2" DIA. L.S. 16411 SET IN CONC.
- ┆ NO. 5 X 2.0' RE-BAR TO BE SET AT ALL LOT CORNERS

SURVEY ORIENTED WITH FOUND MONUMENTS
BEARINGS BASED ON N00°03'10"E ON THE WEST LINE OF THE NW1/4 NE1/4 SEC. 1

AREA SUMMARY	
ROADS =	2.39 ACRES 12.58K
LOTS =	16.40 ACRES 86.36K
COMMON AREA =	0.20 ACRES 1.05K
TOTAL =	18.99 ACRES 100.00K

SW CORNER
NW1/4 NE1/4
SECTION 1
T15S, R14E, U1M

SE CORNER
NW1/4 NE1/4
SECTION 1
T15S, R14E, U1M

PIARMIGAN ESTATES		
FINAL LAYOUT WITH TOPO		
FOR:		SURVEYED BY: MM DB
DATE: 1/11/90		DRAWN BY: MM DB
SCALE:	1" = 50'	ACAD ID: P7SALE
		SHEET NO. 1 OF 1
		(303)841-2270

A Final Drainage Report
for
Ptarmigan Estates

August 20, 1989

Prepared for:

JOHN SIEGFRIED
P. O. Box 60214
Grand Junction, CO 81506
Ph. 241-5331

Prepared by:

J. E. Langford & Associates, Inc.
2764 Compass Drive, Suite 101
Grand Junction, CO 81506
Ph. 243-4148

Engineer's Certification

I hereby certify that this plan and report was prepared by me or under my direct supervision for the Owner's hereof.

James E. Langford 8/24/89
James E. Langford, PE & LS
Reg. No. 14847



Introduction

This study has been prepared to address the potential storm water runoff as could be generated by the development of Ptarmigan Estates as approved at the Preliminary Plat hearing. Though historic and post development flows have been investigated, the emphasis of the recommendations of this report is the safe conveyance from the site of whatever flows are generated equaling or exceeding the 100 year event, and detention of that portion of the developed condition flow which exceeds the historic 10 year flow rate, releasing it at a rate approximately equal to the 10 year rate.

The site is located in the northwest quarter of the northeast quarter of Section 1, Township 1 South, Range 1 West of the Ute Meridian, and contains approximately 18 acres. The property is bounded by Partee Heights Subdivision to the north, presently undeveloped land to the east, Crown Heights Subdivision Filing No. 1 to the south and 27 1/2 Road to the west.

Since the City of Grand Junction did not have specific report preparation criteria, this report has been prepared using Mesa County's "Design Guidelines for Storm Water Management", and Mesa County Land Development Code, Section 4.1.7 which states that drainage facilities shall be designed to "adequately carry and discharge accumulated run-off into drainage channels, storm sewers, or natural watercourses so that storm water does not cause increased damage or increased flooding downstream...". An analysis of the runoff characteristics of the site and estimates of the impact of surface flows generated, has been carried out to determine the size and location of facilities required to handle the runoff.

Presented herein are the results of the analysis, conclusions and recommendations as to improvements by which potential runoff can be safely conducted from the site.

Site Conditions

The site being proposed for development is presently an active orchard gently sloping at between 1.0% and 3.0% from the northeast to the southwest. The "Geologic Investigation" of the site identified the surface soils as being comprised of "Fruita clay loam", further defined as a calcareous soil with slow surface runoff properties, medium internal drainage and "slight" erosion hazard potential. Existing vegetation is comprised of a

moderate to dense ground cover of grass as well as cultivated fruit trees. The existing channel which bisects the westerly 1/3 of the site originates on the site and serves to collect and direct irrigation waste water and storm water runoff generated on-site thru a 16-inch culvert beneath 27 1/2 Road. The drainage continues down this unnamed drainage to a culvert crossing Horizon Drive, and dumps into an existing major drainage, and in some areas, improved drainage channel which runs adjacent to Horizon Drive.

Based on the topography surrounding the site, and field investigations, it is assumed that this drainage is not crucial to the collection of any other off-site or upstream flows other than those identified on "Drainage Exhibit A". The flows presently found in this drainage are suspected to be entirely from the broken stand pipe on an irrigation line leading from the Highline Canal, and not on ground water. The "Geologic Investigation" states that "...high groundwater levels are not anticipated to exist on this site,....".

Design Criteria and Methodology

Given that the site is much less than 100 acres, the Rational Method, as outlined in Chapter 2 of the "Design Guidelines for Storm Water Management in Mesa County, Colorado", was employed to determine the magnitude of "pre" and "post" development runoff discharges. Rainfall intensities were derived from the "Intensity Duration Curves" furnished by the Grand Junction Engineering Department, developed specifically for the Grand Junction Area. The report entitled "Geologic Investigation, Ptarmigan Orchards Minor Subdivision", dated June 20, 1989, prepared by John H. Wright, C.P.G. & Associates, was consulted to identify surface soil attributes, ground water conditions and to aid in the initial selection of runoff coefficients to best represent the existing site conditions.

Drainage Analysis

The drainage basins and their respective post development flows, 10 year (minor) storm and the 100 year (major) storm events have been recorded on "Drainage Exhibit A", and associated calculation sheets as can be seen in the Appendix of this report.

The time of concentration (T_c) in each instance was set equal to the travel time, being the summation of overland flow times plus flow times in curbs and gutters arrived at by dividing the length of the flow path by the velocity as calculated by the "Mannings Equation". Overland flow velocities were determine by use of the graph "Average Velocities for Estimating Travel Time for Overland Flow, (From: USDA, Soil Conservation Service, 1980)". This

travel time, set equal to the time of concentration, was used in the "Intensity Duration Curves" graph for the Grand Junction area to arrive at the intensity (I) for use in the Rational Formula.

The "Preliminary Report" based the selection of runoff coefficients on the more conservative characterization of the development as "Single-family Residential", having a range of coefficients of 0.30 to 0.50. From this range, a value of 0.45 was selected as a reasonable value pending preliminary design approval by the City of Grand Junction. The process of obtaining Preliminary plat approval has given further definition to the specific site improvements, enabling the selection of more site specific coefficients. Ptarmigan Estates has now been better characterized as "Residential (Suburban)". With this in mind, a more representative "C" value of 0.35 has been selected from the listed range of 0.25 to 0.40 as the coefficient most representative of the final design product.

The runoff coefficient "C" for various land uses was selected as follows:

C - 0.15 for undeveloped areas with "slow runoff" type soils and heavy ground cover.

C - 0.35 for suburban developed areas having single family detached residential structures.

All drainage basins were digitized to determine the area of each (in acres) which contributes runoff to various design points as depicted on "Drainage Exhibit A".

The Rational Method for determination of runoff during the 100 year (major) storm event was modified by a frequency factor (Cf-1.25) as specified in the aforementioned Mesa County guidelines.

The above values were tabulated as found on the calculation sheets in the Appendix and the discharges were calculated using the Rational formula ($Q=CIA$). the discharges were summed at each design point and displayed on "Drainage Exhibit A".

Drainage Basins:

Basin "A" : contains 3.56 acres of off-site area, which has been assumed to discharge to this site at historic rates only, and 8.11 acres of on-site area which will discharge based on the coefficients selected above for suburban development, for a total basin area

of 11.67 acres. The north and northeast boundaries of this basin are defined by an existing irrigation ditch flowing east to west and adjacent to Partee Heights Subdivision, and the Highline Canal to the northeast. The southerly boundary is defined assuming that it runs along the sough boundary line of the project. The westerly boundary of this basin is defined by the proposed extension of S. Piazza Lane.

Basin "B": contains 6.97 acres of on-site area. The boundaries of this basin are defined by the aforementioned irrigation ditch to the north, the extension of S. Piazza Lane to the east, the project boundary to the south and 27 1/2 Road to the west. The northwest boundary of this basin is define as being along the flowline of the existing drainage which bisects the westerly 1/3 of the project.

Basin "C": contains 2.93 acres of on-site area. The boundaries of this basin are defined by the aforementioned irrigation ditch to the north, the aforementioned existing channel to the southeast and 27 1/2 Road to the west. The northwest boundary of this basin is define as being along the crest of a small knoll.

Basin "D": contains 0.98 acres of on-site area. The boundaries of this basin are defined by the aforementioned irrigation ditch to the north, the aforementioned knoll to the the southeast and 27 1/2 Road to the west.

Proposed Collection System

With the widening of E. Piazza, drainage from basin "A" will be able to southwesterly overland to collect in the new curb and gutter. This drainage will then flow westerly to meet the drainage collected in the curb and gutter of the extension of S. Piazza. The combined flows will then surface flow across the street extension in a concrete cross pan. This flow will continue westerly and combine with runoff from basin "B" where it will collectively flow in a surface swale along the south property boundary to the existing ponding area and 16-inch culvert under 27 1/2 Road. The present ponding area at 27 1/2 Road will serve as a detention area for flows in excess of the 10 year historic event. Detention will be accomplished by placing a modified inlet on the existing 16-inch CMP running beneath 27 1/2 road.

Given the maximum headwater depth above the invert of the existing 16-inch CMP to the crest of 27 1/2 Road of 6.85 feet, the maximum discharge

thru the 16-inch CMP of 14.2 cfs as taken from the attached nomograph, and the 100 year discharge as calculated in this report of 14.4 cfs, it is deduced that water will pond to the elevation of the roadway during the 100 year storm, but not overtop it. Since detention is being considered for the 10 year event only, it is recommended that a 4.5 foot stand pipe be place on the upstream end of the existing culvert. The standpipe should have a 7 1/4 inch orifice cut into the pipe at the invert. The orifice has been sized to discharge at the historic 10-year rate of 2.94 cfs when the accumulated runoff has ponded to the 4.5 foot depth, or just before spillage into the standpipe occurs.

Runoff from basin "D" will be overland sheet flow in a northwesterly direction to 27 1/2 Road.

Conclusions and Recommendations

The proposed site improvements will not significantly alter historic drainage patterns. The proper installation of curb and gutter in the widening of E. Piazza adjacent and parallel to the south property line will direct developed flows westerly and away from Crown Heights Subdivision to the south. Capacity calculations indicate that the 10-year (minor) storm event will be contained within E. Piazza with no curb overtopping, and the 100-year (major) storm event will be well below the 18-inch maximum depth above the flow line. The summation of flows from basins A, B & C, are to be collected at the existing ponding area at 27 1/2 Road and routed through the existing 16-inch diameter culvert under 27 1/2 Road where they will travel westerly along an un-named drainage to a crossing under Horizon Drive. From this point, the flows will combine with other off-site drainage and flow in the major drainage way running parallel to Horizon Drive.

References

City of Grand Junction; "Intensity Duration Curves"

Mesa County, "Design Guidelines for Storm Water Management in Mesa County, Colorado" (undated)

"Geologic Investigations Ptarmigan Orchards Minor Subdivision", Dated June 20, 1989, by John H. Wright, C.P.G. & Associates.

Urban Drainage and Flood Control District, "Urban Storm Drainage Criteria Manual, Wright-Mclaughlin Engineers, Denver, Colorado, March 1969

American Iron and Steel Institute, "Handbook of Steel Drainage & Highway Construction Products", Second Edition, 1971

STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA													PTARMIGAN ORCHARDS MINOR SUBDIVISION									
Location of Design Point	Basins	Length ft.	Inlet Time min.	Flow Time		Time of Concentration min.	Coefficient "C"	Intensity "i" in./hr.	Area "A" acre	Direct Runoff cfs	Other Runoff cfs	Summation Runoff cfs	Street		Pipe		Street		Pipe		10 YEAR STORM 100 YEAR STORM Remarks HISTORIC COND.	
				Street min.	Pipe min.								Slope %	Allowable Capacity cfs	Slope %	Size in.	Capacity cfs	Design cfs	Velocity fps	Design cfs		Velocity fps
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
△	A, B, & C	1360		45.77																		OVERLAND SHEET FLOW @ 1.15% V=0.50 FPS
		290		12.72																		OVERLAND SHEET FLOW @ 0.70% V=0.38 FPS
		115		3.31																		OVERLAND SHEET FLOW @ 1.57% V=0.58
		170		3.15																		OVERLAND SHEET FLOW @ 3.65% V=0.90 FPS
				TOTAL		64.51																
				USE		60.0	0.15	0.91	21.57	2.94												10 YEAR STORM
△	D	300		4.55																		OVERLAND SHEET FLOW TO NW CORNER OF SUBD. @ 2 1/2 ROAD.
				USE		10.0	0.15	2.46	0.98	0.36												
△	A, B, & C			USE		60.0	0.19	1.43	21.57	5.86												100 YEAR STORM
△	D			USE		10.0	0.19	3.84	0.98	0.72												100 YEAR STORM

Wright-McLaughlin Engineers

FIGURE 6-1. TYPICAL FORM FOR STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA

STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA Final Ptarmigan Orchards Subdivision																							
Location of Design Point	Basins	Length ft.	Inlet Time min.	Flow Time		Time of Concentration min.	Coefficient "C"	Intensity "i" in./hr.	Area "A" acre	Direct Runoff cfs	Other Runoff cfs	Summation Runoff cfs	Street		Pipe		Street		Pipe		10 year Storm Remarks		
				Street min.	Pipe min.								Slope %	Allowable Capacity cfs	Slope %	Size in.	Capacity cfs	Design cfs	Velocity fps	Design cfs		Velocity fps	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
A	A ₁	310	0.49	10.54					3.56													Opposite area flow @ 1.15% (fallow) - Site area overland flow @ 1.15% (Forested with meadow grass) Street flow Extension of S. Piazza Run flow	
	A ₂	745	0.38	32.68					8.11														
		310		1.88										0.65	8.86	1.0K		8.86	2.75				
		28		0.16																			
		Total			45.26		45.26	0.29	1.14	11.67	3.86	0.45											
B	A+B			45.26																			
		190		1.06																			
		290		1.86																			
		115		0.50																			
		170		0.57																			
	Total			49.25		49.25	0.31	1.06	18.64	6.13	0.45												
	A+B+C			49.25																			
				49.25		49.25	0.32	1.06	21.57	7.32	0.45												
C	D	300		4.55																			
				1/2 in. at	10		0.35	2.46	0.98	0.84	0.45												

Wright-McLaughlin Engineers

FIGURE 6-1. TYPICAL FORM FOR STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA

STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA																								
Location of Design Point	Basins	Length ft.	Inlet Time min.	Flow Time		Time of Concentration min.	Coefficient "C"	Intensity "i" in./hr.	Area "A" acre	Direct Runoff cfs	Other Runoff cfs	Summation Runoff cfs	Street		Pipe		Street		Pipe		Remarks			
				Street min.	Pipe min.								Slope %	Allowable Capacity cfs	Slope %	Size in.	Capacity cfs	Design cfs	Velocity fps	Design cfs		Velocity fps		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
A	A ₁	310	0.49	10.59					3.56													10 year Storm Developed Condition		
	A ₂	745	0.38	32.68					8.11															
		310		1.88										0.65	8.86	1.0K		8.86	2.75					
		28		0.16																				
		Total			45.26		45.26	0.29	1.14	11.67	3.86	cfs												
B	A+B			45.26																				
		190		1.06																				
		290		1.86																				
		115		0.50																				
		170		0.57																				
	Total			49.25		49.25	0.31	1.06	18.64	6.13	cfs													
C	A+B+C			49.25																				
D		300		4.55																				
				Use map of	10		0.35	2.46	0.98	0.84	cfs													

Wright-McLaughlin Engineers

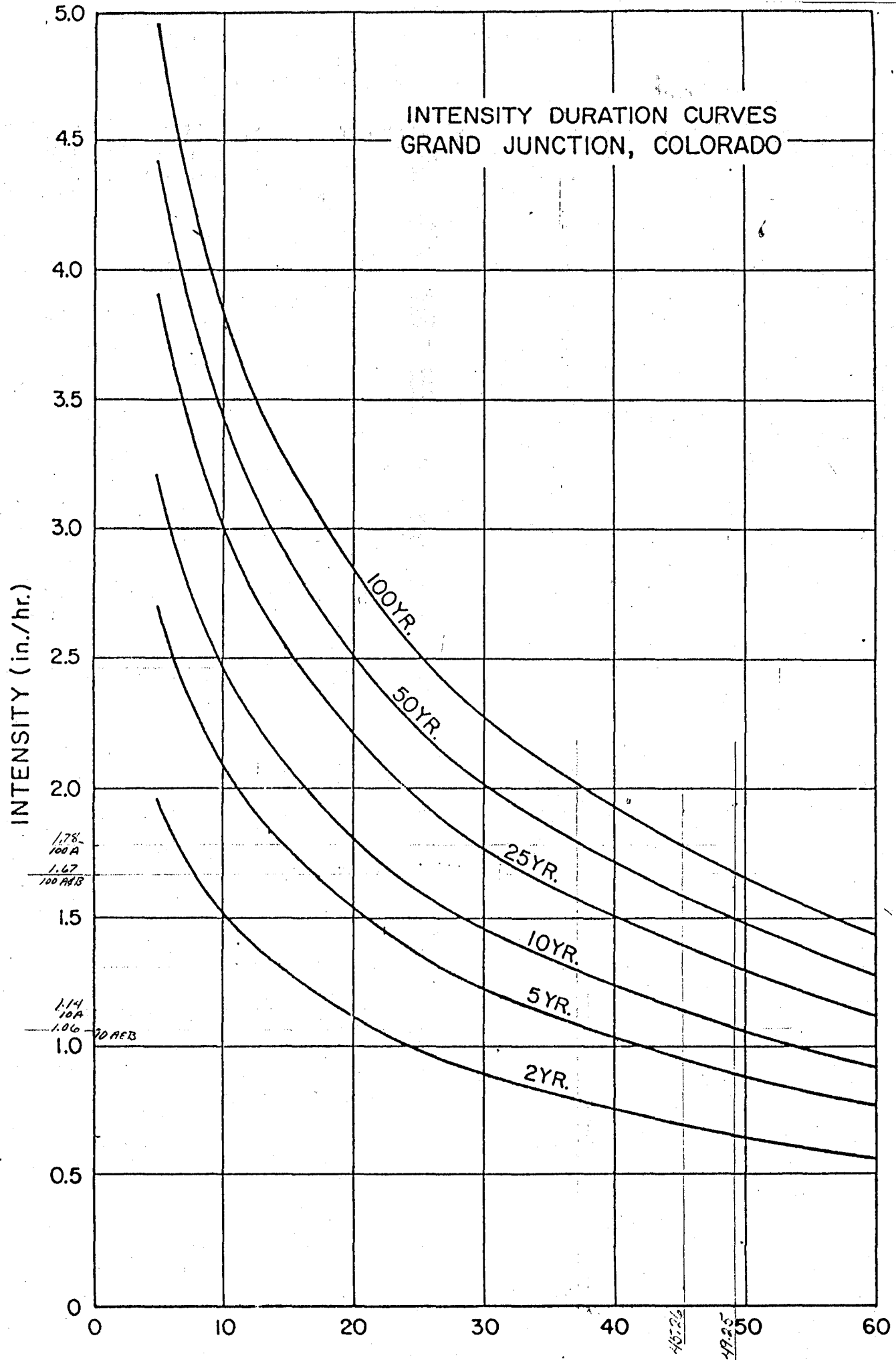
FIGURE 6-1. TYPICAL FORM FOR STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA

STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA <i>Final Ptarmigan Orchards Subdivision</i>																						
Location of Design Point	Basins	Length ft.	Inlet Time min.	Flow Time		Time of Concentration min.	Coefficient "C"	Intensity "i" in./hr.	Area "A" acre	Direct Runoff cfs	Other Runoff cfs	Summation Runoff cfs	Street		Pipe		Street		Pipe		Remarks	
				Street min.	Pipe min.								Slope %	Allowable Capacity cfs	Slope %	Size in.	Capacity cfs	Design cfs	Velocity fps	Design cfs		Velocity fps
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
<i>▲</i>	<i>ABA</i>						<i>* Corrected "C" = 0.29 x 1.25 = 0.36</i>					<i>7.48 cfs</i>										<i>100 year Storm</i> <i>Developed Condition</i>
<i>▲</i>	<i>ABB</i>						<i>* Corrected "C" = 0.32 x 1.25 = 0.40</i>					<i>12.45 cfs</i>										
<i>▲</i>	<i>ABC</i>						<i>* Corrected "C" = 0.35 x 1.25 = 0.44</i>					<i>14.40 cfs</i>										
<i>▲</i>	<i>D</i>					<i>Use min. of 10</i>	<i>0.44</i>	<i>3.84</i>	<i>0.98</i>			<i>1.66 cfs</i>										

Wright-McLaughlin Engineers

FIGURE 6-1. TYPICAL FORM FOR STORM DRAINAGE SYSTEM PRELIMINARY DESIGN DATA

INTENSITY DURATION CURVES
GRAND JUNCTION, COLORADO



1. Runoff coefficient

The values for the coefficient of runoff for use in the Rational Method within Mesa County are as shown in Table 2-2, RECOMMENDED RUNOFF COEFFICIENTS (C). The design engineers judgment must be used to select the runoff coefficient that will best represent the end result of the development.

TABLE 2-2
RECOMMENDED RUNOFF COEFFICIENTS
(C)

<u>Description of Area or Surface Areas</u>	<u>Runoff Coefficients</u>
Business	
Downtown	0.70 to 0.95
Neighborhood	0.50 to 0.70
<u>Residential</u>	
Single-family	<u>0.30 to 0.50</u>
Multi-units, detached	0.40 to 0.60
Multi-units, attached	0.60 to 0.75
Residential (suburban)	0.25 to 0.40
Apartment	0.50 to 0.70
Industrial	
Light	0.50 to 0.80
Heavy	0.60 to 0.90
Parks, cemeteries	0.10 to 0.25
Playgrounds	0.20 to 0.35
Railroad yard	0.20 to 0.35
<u>Unimproved</u>	<u>0.10 to 0.30</u>
<u>Surfaces</u>	
Pavement	
Asphalt and Concrete	0.70 to 0.95
Brick	0.70 to 0.85
Roofs	0.75 to 0.95
Lawns, sandy soil	
Flat, 2 percent	0.13 to 0.17
Average 2 to 7 percent	0.18 to 0.22
Steep, 7 percent	0.25 to 0.35

USE 0.45 FOR SINGLE FAMILY RESIDENTIAL HAVING TURF GROUND COVER.

USE 0.15 FOR SLOW RUNOFF TYPE SOILS WITH DENSE GROUND COVER.

Final Drainage Report - Additional Calculations

Modifications to overland flow velocity

Area A₁ - Velocity held the same @ 0.49 fgs based on "Fallow or Minimum Tillage Cultivation" and ground slope of 1.15%

Area A₂ - Ground slope held same @ 1.15%, but velocity selection modified by assumption that developed area will retain most of the fruit trees in the large lots thus justifying a selection 1/2 way between "Forested with meadow grass" and "Fallow...".

$$V_{A_1} = 0.49 \text{ fgs} \quad V_{A_2} = \left(\frac{0.26 + 0.49}{2} \right) = 0.38 \text{ fgs}$$

Orifice sizing

$$Q = C' A (2gH)^{1/2}$$

$$2.94 = 0.62(A) [2(32.2)(4.5)]^{1/2}$$

$$A = 0.28 \text{ ft}^2$$

$$A = \frac{\pi D^2}{4} = \frac{3.1416 D^2}{4}$$

$$D = \left[\frac{4(0.28)}{3.1416} \right]^{1/2}$$

$$D = 0.597 \text{ ft} = 7.17 \text{ inches} \quad \text{USE } \underline{7\frac{1}{4} \text{ inches}}$$

C' = discharge coefficient = 0.62

A = orifice area (ft²)

g = accel. due to grav. = 32.2 fgs²

H = head above orifice (ft)

Q = discharge = 2.94 cfs

25 SHEETS 3 SQUARE
 50 SHEETS 3 SQUARE
 75 SHEETS 3 SQUARE
 100 SHEETS 3 SQUARE
 125 SHEETS 3 SQUARE
 150 SHEETS 3 SQUARE
 NATIONAL

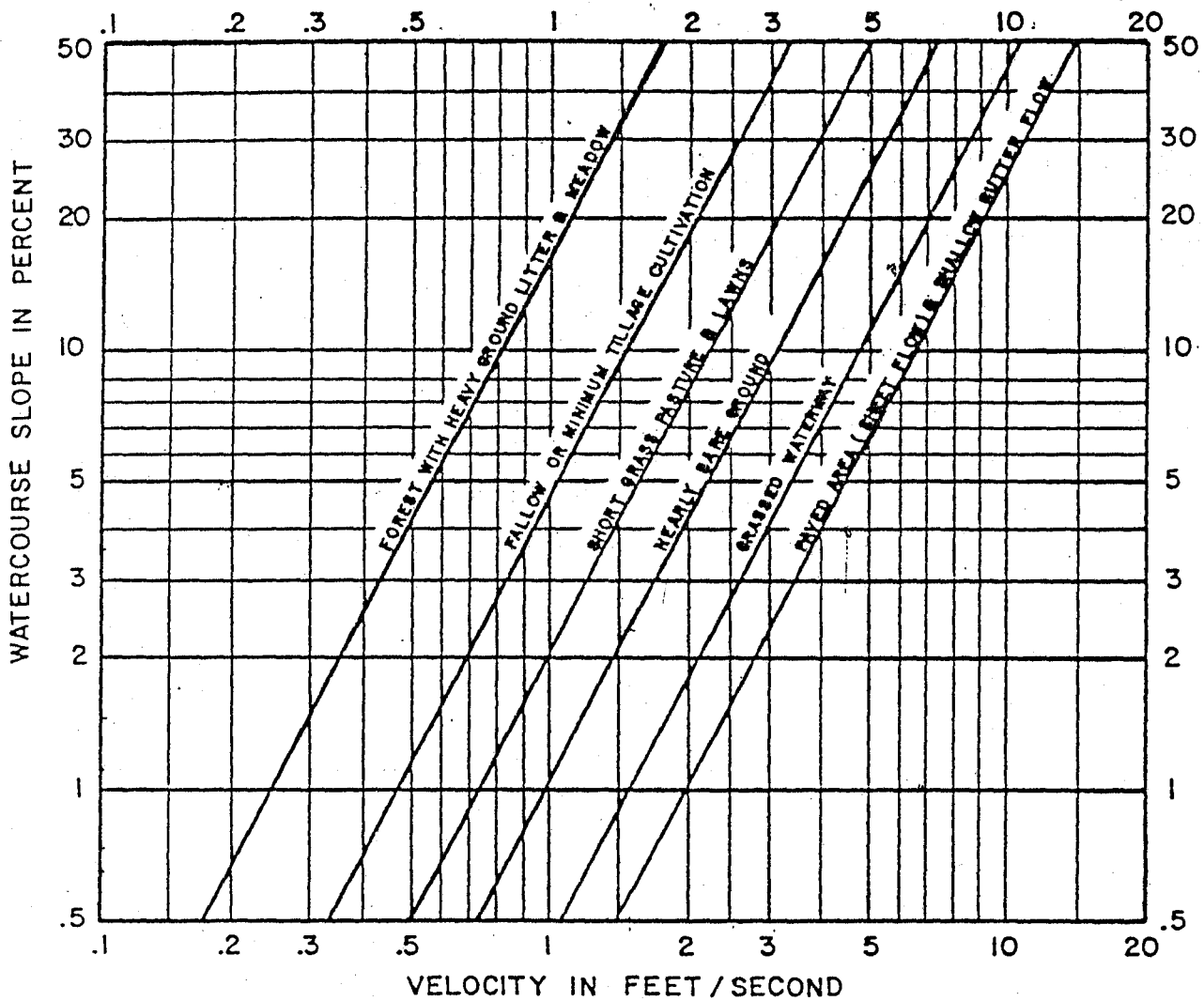


Figure 2-2 AVERAGE VELOCITIES FOR ESTIMATING TRAVEL TIME FOR OVERLAND FLOW..
 (From: USDA, Soil Conservation Service, 1980)

Time of concentration is obtained by determining the average velocity for overland flow then dividing the length of the overland flow by the average velocity.

TABLE 3-2

PERMISSIBLE VELOCITIES FOR ROADSIDE DRAINAGE DITCHES

Roadside channels with erodible linings (earth; no vegetation):

Minor and Major Design Storm

<u>Soil type or lining</u>	<u>Slope range (%)</u>	<u>Permissible velocity (fps)</u>
Fine sand (noncolloidal)	--	2.5
Sandy loam (noncolloidal)	--	2.5
Silt loam (noncolloidal)	--	3.0
Ordinary firm loam	--	3.5
Fine gravel	--	5.0
Stiff clay (very colloidal)	--	5.0
Graded, loam to cobbles (noncolloidal)	--	5.0
Graded, silt to cobbles (noncolloidal)	--	5.5
Alluvial silts (noncolloidal)	--	3.5
Alluvial silts (colloidal)	--	5.0
Coarse gravel (noncolloidal)	--	6.0
Cobbles and shingles	--	5.5
Shales and hard pans	--	6.0

Roadside channels, lined with various grass covers (uniform stand; well maintained):

Soils that are Erosion resistant Easily eroded

<u>Cover</u>			
Bermuda grass	(
Crested wheatgrass	(
Buffalo grass	(0- 5	6.0	5.0
Kentucky bluegrass	(5-10	5.0	4.0
Smooth brome	(Over 10	4.0	3.0
Blue grama	(
Grass mixture	(
	(0- 5	4.0	3.0
	(5-10	3.0	2.5
Lespedeza sericea	(
Weeping lovegrass	(
Yellow bluestem	(
Alfalfa	(0- 5	3.0	2.0
Crabgrass	(
Common lespedeza	(
Sudan grass	(

Top of pavement on 27 1/2 Rd = EL. = 100.00

Top of culvert (East) = EL. = 94.48

Top of culvert (West) = EL. = 93.48

Length of 16" Culvert = 58 feet

∴ S = 7.72%

Max HW = (100.00 - 94.48) + 16" = 6.85 ft

$$\frac{HW}{D_{max}} = \frac{6.85'}{1.33'} = 5.15$$

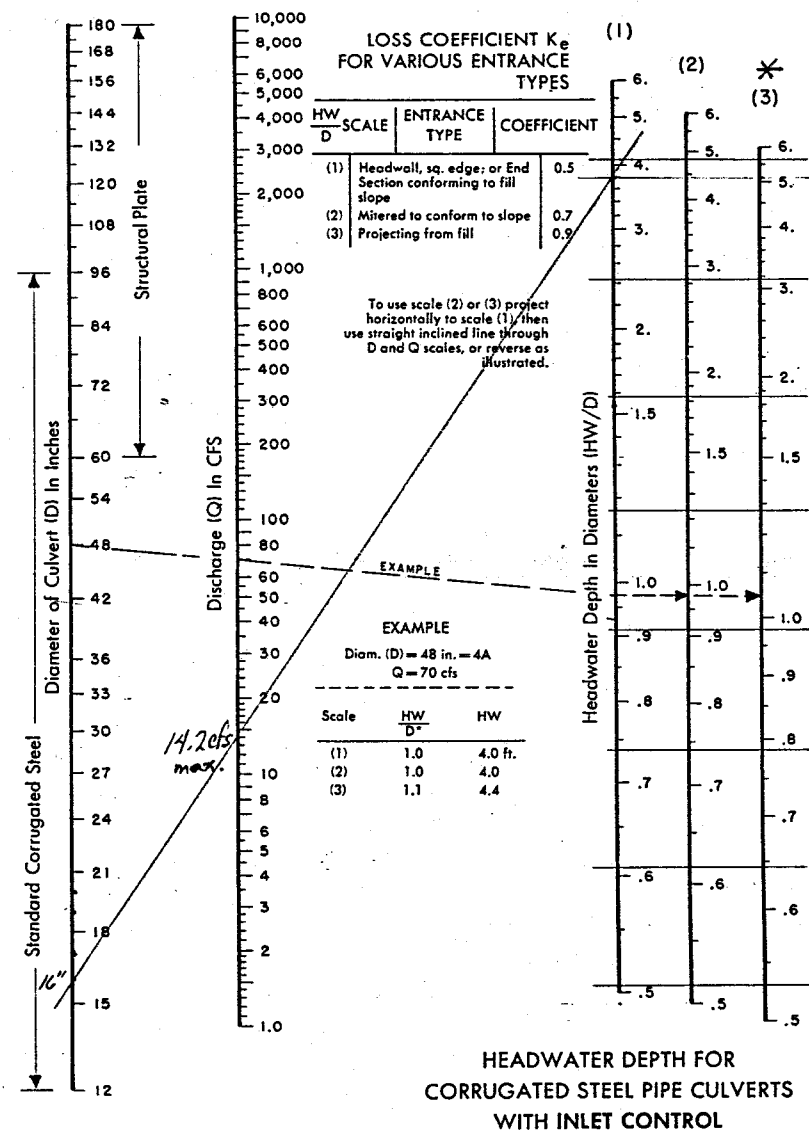
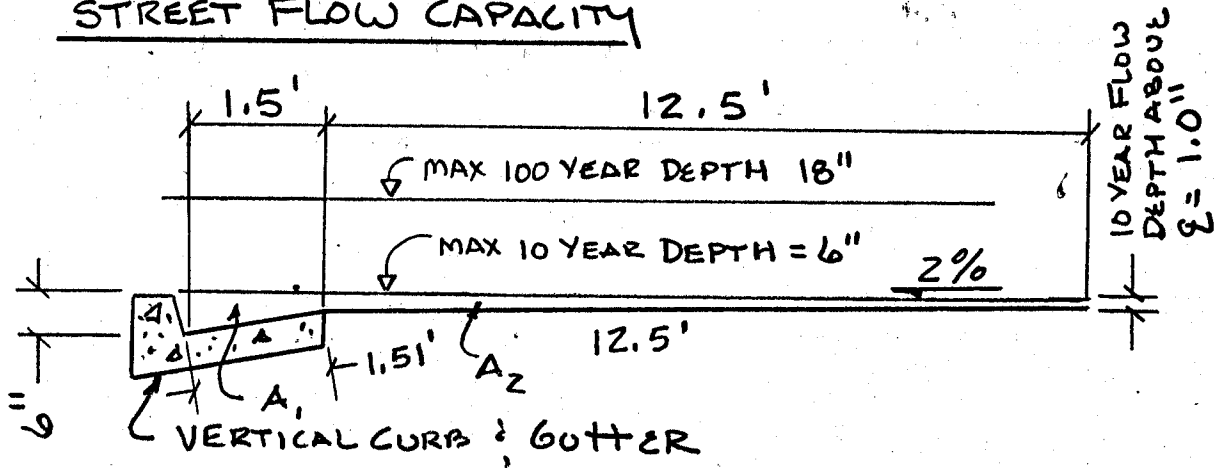


Fig. 4-18. Inlet control nomograph for corrugated steel pipe culverts. The manufacturers recommend keeping HW/D to a maximum of 1.5 and preferably to no more than 1.0.

STREET FLOW CAPACITY



$$A_1 = \frac{2" \times 18"}{2} + 4" \times 18" / 144 \text{ IN}^2/\text{FT}^2 = 0.625 \text{ \#}$$

$$A_2 = \frac{3" \times 150"}{2} + 1" \times 150" / 144 \text{ IN}^2/\text{FT}^2 = 2.60 \text{ \#}$$

$$WP = 0.5' + 1.51' + 12.5' = 14.51'$$

$$A_3 = 12" \times 168" / 144 \text{ IN}^2/\text{FT}^2 = 14.0 \text{ \#}$$

MANNING'S eq: $Q_c = \frac{1.49}{N} \times (R^{2/3} \times S^{1/2}) A$

Q_c = CAPACITY N = ROUGHNESS FACTOR = 0.016

R = HYDRAULIC RADIUS = A/WP : AREA / WETTED PERIMETER

S = SLOPE OF STREET FT./FT.
= 0.65% \pm

10 YEAR CAPACITY
1/2 SECTION

$$R = 3.225 \text{ \#} / 14.51 \text{ FT} = 0.2223'$$

$$S = 0.65\%$$

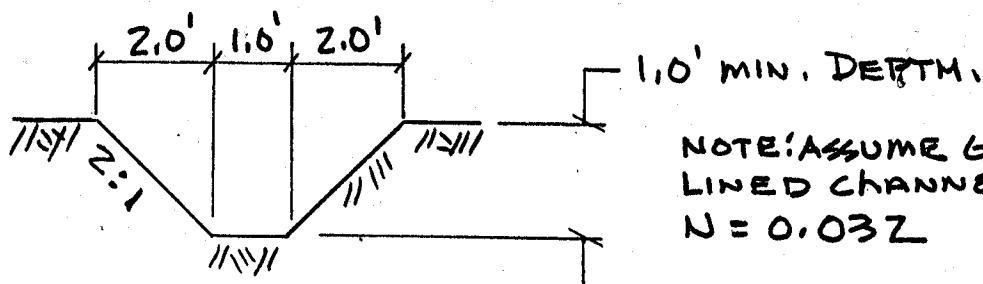
$$Q_c = \underline{\underline{8.86 \text{ CFS}}} \quad V = 2.75 \text{ FPS}$$

100 YEAR CAPACITY
1/2 SECTION

$$R = 17.225 \text{ \#} / 14.51 \text{ FT} = 1.1871'$$

$$S = 0.65\%$$

$$Q_c = \underline{\underline{144.60 \text{ CFS}}} \quad V = 8.39 \text{ FPS}$$

SWALE FLOW CAPACITY

NOTE: ASSUME GRASS
LINED CHANNEL
 $N = 0.032$

3" DEPTH

$$A = 3'' \times 12'' + \left(\frac{3'' \times 6''}{2} \right) 2 / 144 \text{ IN}^2/\text{FT}^2 = 0.375 \text{ \#}$$

$$\text{WP} = 25.42'' \\ = 2.12'$$

6" DEPTH

$$A = 6'' \times 12'' + \left(\frac{6'' \times 12''}{2} \right) 2 / 144 \text{ IN}^2/\text{FT}^2 = 1.0 \text{ \#}$$

$$\text{WP} = 38.83'' \\ = 3.24'$$

9" DEPTH

$$A = 9'' \times 12'' + \left(\frac{9'' \times 18''}{2} \right) 2 / 144 \text{ IN}^2/\text{FT}^2 = 1.875 \text{ \#}$$

$$\text{WP} = 52.25'' \\ = 4.35'$$

12" DEPTH

$$A = 12'' \times 12'' + \left(\frac{12'' \times 24''}{2} \right) 2 / 144 \text{ IN}^2/\text{FT}^2 = 3.0 \text{ \#}$$

$$\text{WP} = 65.67'' \\ = 5.47'$$

USE MANNINGS Eq. FOR OPEN CHANNEL FLOW

$$Q_c = \frac{1.49}{N} (R^{2/3} \times S^{1/2}) A$$

PLEASE SEE NEXT PAGE →

42,381 50 SHEETS 5 SQUARE
42,382 100 SHEETS 5 SQUARE
42,389 200 SHEETS 5 SQUARE
NATIONAL

SWALE FLOW CAPACITY CONT:

3" DEPTH $R = 0.375 \text{ \#} / 2.12 \text{ FT} = 0.1769 \text{ FT.}$

$S = 0.70\%$ $Q_c = 0.46 \text{ CFS}$ $V = 1.22 \text{ FPS}$

$S = 1.0\%$ $Q_c = 0.55 \text{ CFS}$ $V = 1.47 \text{ FPS}$

$S = 1.50\%$ $Q_c = 0.67 \text{ CFS}$ $V = 1.79 \text{ FPS}$

6" DEPTH $R = 1.0 \text{ \#} / 3.24 \text{ FT.} = 0.3086 \text{ FT.}$

$S = 0.70\%$ $Q_c = 1.77 \text{ CFS}$ $V = 1.77 \text{ FPS}$

$S = 1.0\%$ $Q_c = 2.12 \text{ CFS}$ $V = 2.12 \text{ FPS}$

$S = 1.50\%$ $Q_c = 2.60 \text{ CFS}$ $V = 2.60 \text{ FPS}$

9" DEPTH $R = 1.875 \text{ \#} / 4.35 \text{ FT.} = 0.4310 \text{ FT.}$

$S = 0.70\%$ $Q_c = 4.16 \text{ CFS}$ $V = 2.22 \text{ FPS}$

$S = 1.0\%$ $Q_c = 4.97 \text{ CFS}$ $V = 2.65 \text{ FPS}$

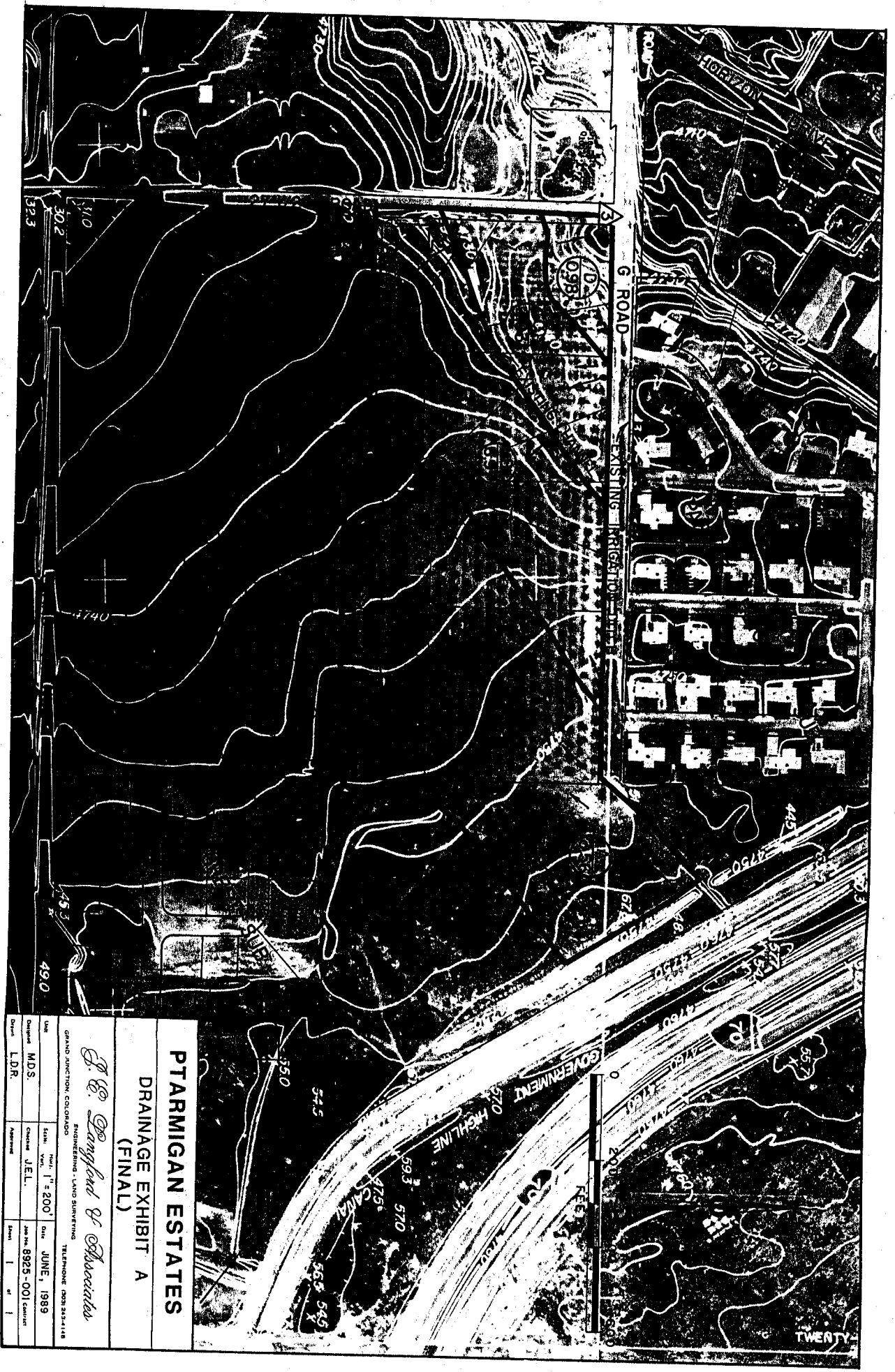
$S = 1.50\%$ $Q_c = 6.09 \text{ CFS}$ $V = 3.25 \text{ FPS}$

12" DEPTH $R = 3.0 \text{ \#} / 5.47 \text{ FT.} = 0.5484 \text{ FT.}$

$S = 0.70\%$ $Q_c = 7.81 \text{ CFS}$ $V = 2.6 \text{ FPS}$

$S = 1.0\%$ $Q_c = 9.33 \text{ CFS}$ $V = 3.11 \text{ FPS}$

$S = 1.50\%$ $Q_c = 11.43 \text{ CFS}$ $V = 3.81 \text{ FPS}$



PTARMIGAN ESTATES
DRAINAGE EXHIBIT A
(FINAL)

P. E. Langford & Associates
 ENGINEERING - LAND SURVEYING

GRAND JUNCTION, COLORADO
 TELEPHONE: (303) 243-4148

DATE	NO.	BY	DATE
DESIGNED	M.D.S.	SCALE	1" = 200'
CHECKED	L.D.R.	DATE	JUNE, 1989
APPROVED		PROJECT	PTARMIGAN ESTATES
		NO. OF SHEETS	1 OF 1

**GEOLOGIC INVESTIGATION
PTARMIGAN ORCHARDS
MINOR SUBDIVISION**

**Mesa County, Colorado
June 20, 1989**

Original
Do NOT Remove
From Office

#39 89

John H. Wright, C.P.G.
& Associates

(303) 241-6619
336 Main St., Suite 201

P.O. Box 2355
Grand Junction, CO 81502

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Conclusions and Recommendations

Scope

Geology

 Geologic Hazards

 Mineral Resources

Site Conditions

 Surface Features

 Drainage

 Construction Factors

Water

Soils

References

Radiation Examination

Geologic Plan

**GEOLOGIC INVESTIGATION
PTARMIGAN ORCHARD
MINOR SUBDIVISION**

Mesa County, Colorado
June 20, 1989

INTRODUCTION

The proposed Ptarmigan Orchard minor subdivision is being developed by John Siegfried and Tom Ralser, P.O. Box 60214, Grand Junction, CO 81506. The property consists of approximately 18 acres to be subdivided into an as yet undetermined number of residential lots. It is located in a portion of Section 1, T 1 S, R 1 W, Ute P.M. in Mesa County, Colorado just southeast of the intersection of G Road and 27 1/2 Road. (See location map).

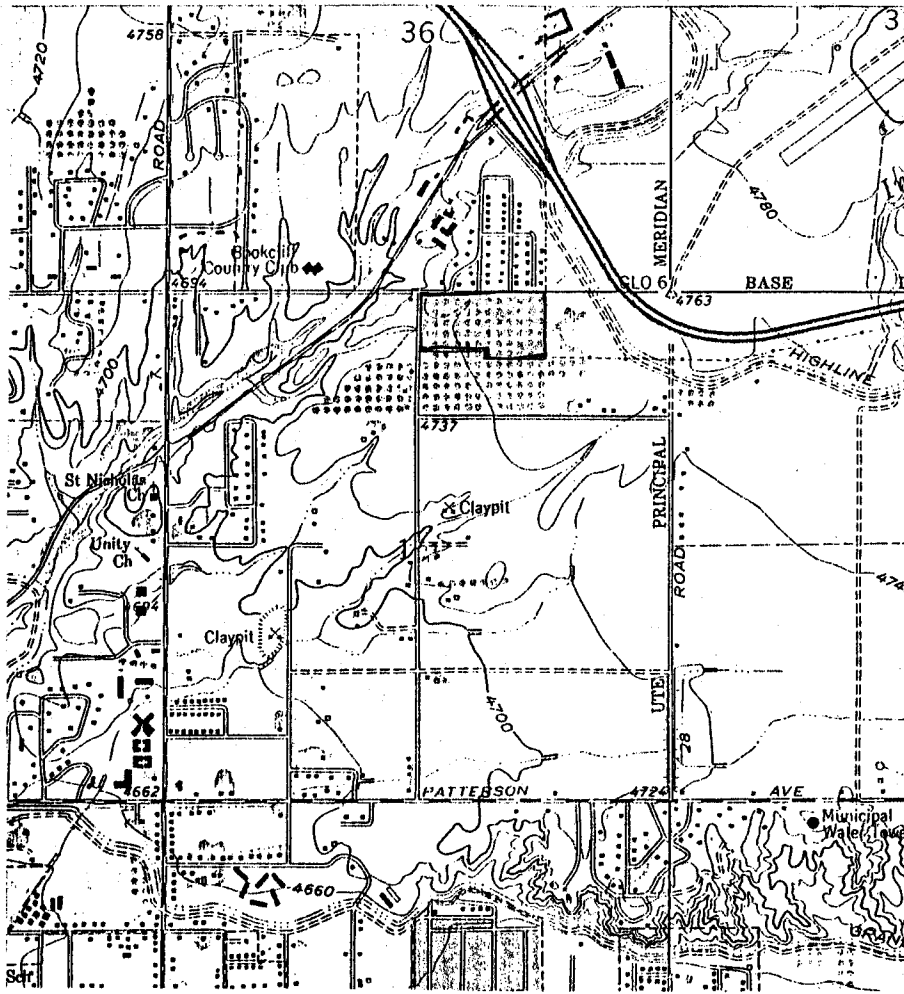
CONCLUSIONS AND RECOMMENDATIONS

1. The site is free of significant geologic hazards.
2. Construction and development of the property may be affected by wetted soils. Moisture in these soils is thought to originate with a leaking existing irrigation system which is drained on the surface and somewhat impounded at the inlet of a culvert under 27 1/2 Road. At that point, marshy conditions are created. It is recommended that the irrigation system be repaired to stop the leakage. If the marshy conditions are not then diminished, improved grading leading to improved drainage may be required.
3. Although subsurface water is not suspected as the source of the marshy conditions, subsurface soils testing is recommended to test for a water table and other soil properties to guide foundation and other construction design. This testing can be done on an individual construction basis. But unless otherwise demonstrated feasible by such tests, basement structures should be avoided.

SCOPE

This report represents the results of a geologic investigation of the proposed Ptarmigan Orchard Minor Subdivision as required by Colorado S.B. 35 and local regulations. The investigation included a field examination as well as a review of available geologic literature.

A copy of a preliminary property map (1"=50' with 2' contour topography) was provided by the developers. Monumentation from the survey was not precisely located in the field, nor have



PROPERTY LOCATION MAP (From U.S.G.S. 7.5 min.
quadrangle: Grand Junction, Colorado)
Scale: 1"= 2,000'

individual lot lines been shown. This map was used as the base for plotting geologic features which are reproduced on a 1"=200' scale map accompanying this report.

The conclusions of this investigation are based solely on the site conditions at the time of investigation. They do not reflect hazards which might develop from improper design or construction methods.

GEOLOGY

The property lies entirely upon a soil horizon developed on top of Cretaceous Mancos shale (Km). The Mancos Shale is weathered sufficiently on the site so that no outcrops of formational material exist. However, in the northwest corner of the property, an excavation of surficial and shallow subsurface material shows angular chips of light brown sandstone. Bedding is presumed to be nearly flat.

A geologic plan and hazards map (1"= 200') accompanies this report

Geologic Hazards

No significant geologic hazards exist on the site. However, certain factors relating to construction problems may arise due to drainage and soil conditions (discussed more fully under those headings below). These derive from a leaking irrigation system and its possible effect on underlying unweathered Mancos Shale which has a tendency to swell when wetted.

No other geologic hazards, including radiation hazard (see attached Radiation Examination), are apparent.

Mineral Resources

No developable valuable mineral resources are known to occur on the property. Material borrowed from the excavation in the northwest corner of the property does not "possess a distinct, special economic value for ... use over and above the normal uses of the general run of such deposits" (43 CFR 3711.1 {b}).

SITE CONDITIONS

Surface Features

Natural topography is gentle, grading 1 1/2% to 3% westerly.

The surface consists largely of a well furrowed old apple orchard, most of whose trees remain in place. Other vegetation consists of thick grasses and legumes growing in the furrows, while sparse russian olives, cat-tails, and marsh grasses grow in the channel bottom on the western portion of the property. The ground around this channel has not been cultivated.

individual lot lines been shown. This map was used as the base for plotting geologic features which are reproduced on a 1"=200' scale map accompanying this report.

The conclusions of this investigation are based solely on the site conditions at the time of investigation. They do not reflect hazards which might develop from improper design or construction methods.

GEOLOGY

The property lies entirely upon a soil horizon developed on top of Cretaceous Mancos shale (Km). The Mancos Shale is weathered sufficiently on the site so that no outcrops of formational material exist. However, in the northwest corner of the property, an excavation of surficial and shallow subsurface material shows angular chips of light brown sandstone. Bedding is presumed to be nearly flat.

A geologic plan and hazards map (1"= 200') accompanies this report

Geologic Hazards

No significant geologic hazards exist on the site. However, certain factors relating to construction problems may arise due to drainage and soil conditions (discussed more fully under those headings below). These derive from a leaking irrigation system and its possible effect on underlying unweathered Mancos Shale which has a tendency to swell when wetted.

No other geologic hazards, including radiation hazard (see attached Radiation Examination), are apparent.

Mineral Resources

No developable valuable mineral resources are known to occur on the property. Material borrowed from the excavation in the northwest corner of the property does not "possess a distinct, special economic value for ... use over and above the normal uses of the general run of such deposits" (43 CFR 3711.1 {b}).

SITE CONDITIONS

Surface Features

Natural topography is gentle, grading 1 1/2% to 3% westerly.

The surface consists largely of a well furrowed old apple orchard, most of whose trees remain in place. Other vegetation consists of thick grasses and legumes growing in the furrows, while sparse russian olives, cat-tails, and marsh grasses grow in the channel bottom on the western portion of the property. The ground around this channel has not been cultivated.

Three wooden buildings and one wind machine stand on the property. All are expected to be razed with development.

Drainage

The property contains an incipient stream channel which originates on the property and drains to the southwest. It is tributary to an un-named channel which in turn flows southwest into the Grand Valley Canal. The source and discharge of the Canal is the Colorado River.

The incipient stream channel, at the time of this investigation, contained a few inches of slowly running water. The investigation showed that this water was derived from surface leakage of an irrigation system apparently buried along the northern and eastern periphery of the property. (The exact design of the buried system was not known to the investigator. However, several gate type valves were observed along the periphery whose apparent function was to flood the east-west running furrows of the orchard when opened. Some of those valves leaked significant water.) The channel captured all of this water and conveyed it off site through a 16" culvert under 27 1/2 Road. The ground just upstream from the culvert was sufficiently flat so as to drain poorly and create marshy conditions (see geologic plan and hazards map).

It felt that the marsh is generated by poor surface drainage around the area of the culvert, rather than by day-lighting of a shallow water table. Evidence supporting this conclusion, beyond the observation of leakage in the irrigation system, is the absence of water in the nearby excavation previously cited in the northwest corner of the property. That excavation is at and lower than the elevation of the cited marsh.

Construction Factors

No hard or resistant outcrops of rock occur on the property. Surficial materials are easily rippable with conventional means.

Given the results following from the recommendations given above, subsurface water may or may not be a problem in construction.

WATER

Potable water will be obtained from Ute Water Conservancy.

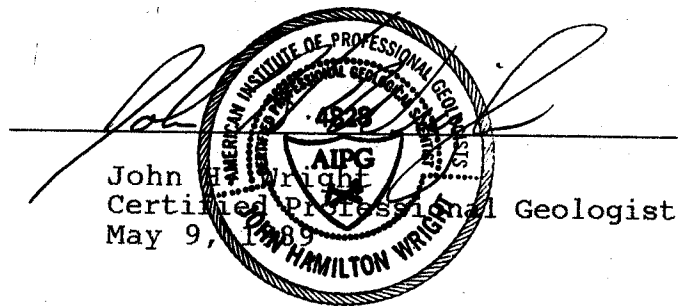
Irrigation water will be derived from Grand Valley Water User's Association.

Sewage will be conveyed off property by the City of Grand Junction systems.

SOILS

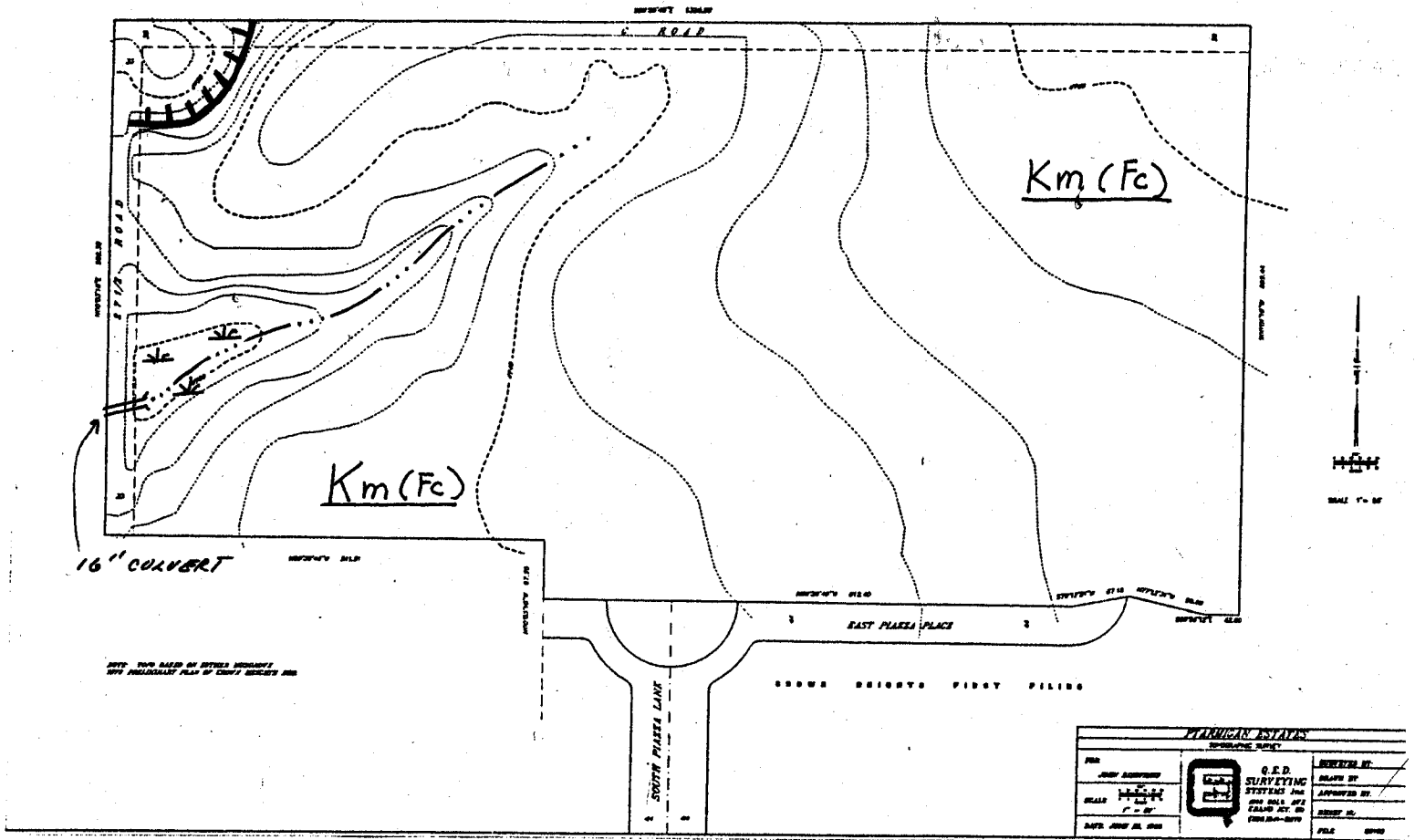
Surface soils are comprised entirely of soil type: "Fruita clay loam". This is a light brown to reddish brown, somewhat calcareous soil. It typically exhibits the following properties: slow surface runoff, medium internal drainage, "slight" erosion hazard, easy rippability, and low to absent alkalinity. (These properties are confirmed by field observations at the site.) County wide, the soil type shows a low shrink-swell potential. However, the unweathered Mancos Shale lying immediately beneath it has a higher such potential.

Subsurface soils tests are not required for minor subdivisions by Mesa County. However, it is recommended that a subsurface soils interpretation be conducted by a Professional Engineer prior to building construction. The soils characteristics thus determined should be considered in foundation and road design.





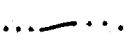
REFERENCES

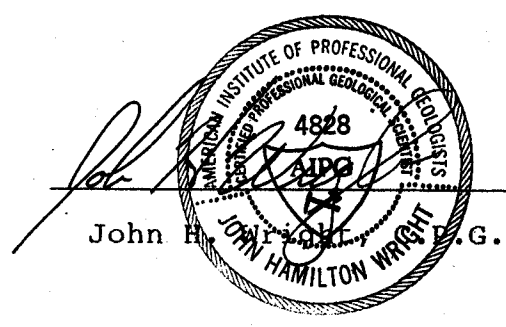
1. Soil Conservation Service; Soil Survey of the Grand Junction Area, CO; Series 1940, No. 19; 1955.
2. Soil Conservation Service; Soil Survey of Mesa County; 1978.
3. Lohman, S.A.; Geology and Artesian Water Supply, Grand Junction Area, Colorado; U.S. Geological Survey P.P. 451; 1965.



GEOLOGIC PLAN & HAZARDS MAP
 PTARMIGAN ORCHARDS MINOR SUBDIVISION
 Mesa County, CO June 20, 1989
 Scale: 1" = 200' (Contour interval: 2')

Explanation of Symbols

- $Km (Fc)$ Cretaceous Mancos Shale (Fruita clay loam)
-  Excavation
-  Marshy ground
-  Incipient stream



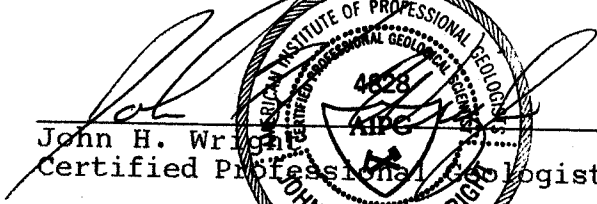
RADIATION EXAMINATION
PTARMIGAN ORCHARDS MINOR SUBDIVISION

Mesa County, Colorado
June 20, 1989

The Ptarmigan Orchards minor subdivision, being developed by John Siegfried and Tom Ralser, P.O.Box 60214, Grand Junction, CO 81506, was examined for potential radiation hazard. The property is located in a portion of Section 1, T 1 S, R 1 W, Ute P.M. in Mesa County, Colorado. Conditions at the site at the time of this investigation indicate the site is free of radiation hazard.

The examination of the site was carried out according to the requirements of Colorado SB 35, and of local regulations which require radiation examinations for minor subdivisions. The field examination was carried out in conjunction with the foregoing geologic field investigation, using a Urinco Scintillation Counter Model #720N. The surface was thoroughly traversed on foot and the man-made structures were checked. Background radiation was 50 counts per second, +/- 10cps. No where on the property was found a reading higher than background.

As all readings were well below Colorado Health Department standards of 250 counts per second, there is no apparent reason for more detailed radiation survey work.


John H. Wright
Certified Professional Geologist





Grand Junction Planning Department
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(303) 244-1430
BOOK 1776 PAGE 89

February 6, 1990

BOOK 1776 PAGE 69

Mr. John A. Siegfried
Box 60214
Grand Junction, Colorado 81506

1535274 02:41 PM 02/08/90
E.SAWYER: CLK&REC MESA COUNTY CO

RE: Ptarmigan Estates Irrigation System

Dear Mr. Siegfried:

This letter is to confirm that a gravity flow irrigation system supplying adequate irrigation water to a property line of each lot in Ptarmigan Estates Subdivision. The estimated cost of this system is \$7,800.

You understand that this system is a requirement of the subdivision approval, and that a licensed engineer must certify that the system has been properly installed and tested prior to a release from your improvements guarantee.

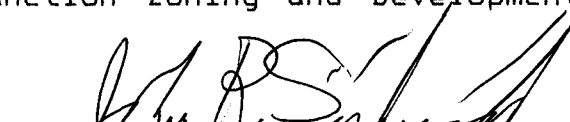
Thank you for your cooperation.

Sincerely,


Karl G. Metzner
Director of Planning

I understand and agree to the terms of the above referenced irrigation system and will provide the required engineer's certification as part of the release of the improvements guarantee process specified in the Grand Junction Zoning and Development Code.

Feb 6, 90
Date


John A. Siegfried

CITY OF GRAND JUNCTION IMPROVEMENTS AGREEMENT

RE: PTARMIGAN ESTATES COOR 27 1/2' on G ROAD
 Name of Subdivision or Other Improvement Location

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of PTARMIGAN ESTATES date FEB 6 1990, the following improvements to City of Grand Junction standards and to furnish an Improvements Guarantee in the form acceptable to the City for these improvements.

G ROAD

BOOK 1776 PAGE 70

Improvements	Quantity and Unit Costs	Estimated Cost	Estimated Completion Date
Street Grading	1500' @ \$.25	375	N.A.
Street Base	1500' @ .31	465	
Street Paving	1500' @ .45	675	
Curbs and Gutters	300' @ 8.30	2490	
Sidewalks	-		
Storm Sewer Facilities	-		
Sanitary Sewers	-		
Mains	-		
Laterals/House Connections	-		
On-site Sewage Treatment	-		
Water Mains	-		
Fire Hydrants	-		
On-site Water Supply	-		
Survey Monuments	dump Survey	250	
Street Lights	-		
Street Name Signs	relocate	100	
Construction Administration	570	250	
Utility Relocation Costs	-		
Design Costs	570	250	
SUB TOTAL		\$4855	

Supervision of all installations (should not normally exceed 4% of subtotal) in above figures

TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION: \$ \$4855

The above improvements will be constructed in accordance with the specifications and requirements of the City or appropriate utility agency and in accordance with detailed construction plans, based on the City Council approved plan, and submitted to the City Engineer for review and approval prior to start of construction. The improvements will be constructed in reasonable conformance with the time schedule shown above. An Improvements Guarantee will be furnished to the City prior to recording the subdivision plat.

John W. Smith
 Signature of Subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

1535275 02:41 PM 02/08/90
 E.SAWYER, CLK&REC MESA COUNTY CO

DATE: February 6 1990

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.

J. Don Newton
 City Engineer

CITY OF GRAND JUNCTION IMPROVEMENT AGREEMENT

RE: PTARMIGAN ESTATES COR. 27 1/2 and Grand
 Name of Subdivision or Other Improvement Location

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of PTarmigan Estates date Feb 6 1990, the following improvements to City of Grand Junction standards and to furnish an Improvements Guarantee in the form acceptable to the City for these improvements.

27 1/2 road

BOOK 1776 PAGE 71

Improvements	Quantity and Unit Costs	Estimated Cost	Estimated Completion Date
Street Grading	13,095 @ .25	3,274	N.A.
Street Base	13,095 @ .31	4,059	
Street Paving	13,095 @ .60	7,857	
Curbs and Gutters	582 @ 15.60	9,126	
Sidewalks	NA, <i>compliance</i>		
Storm Sewer Facilities	NA		
Sanitary Sewers	NA		
Mains <i>Carb Cuts</i>	3 @ 37.50	113	
Laterals/House Connections	NA		
On-site Sewage Treatment	NA		
Water Mains	NA		
Fire Hydrants	NA		
On-site Water Supply	NA		
Survey Monuments <i>surveying</i>	<i>lump sum</i>	375	
Street Lights	NA		
Street Name Signs	<i>relocate</i>	100	
Construction Administration	5%	1250	
Utility Relocation Costs	N.A.		
Design Costs	5%	1250	
SUB TOTAL		27,404	

Supervision of all installations (should not normally exceed 4% of subtotal) in above figures

TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION: \$ 27,404

The above improvements will be constructed in accordance with the specifications and requirements of the City or appropriate utility agency and in accordance with detailed construction plans, based on the City Council approved plan, and submitted to the City Engineer for review and approval prior to start of construction. The improvements will be constructed in reasonable conformance with the time schedule shown above. An Improvements Guarantee will be furnished to the City prior to recording the subdivision plat.

John D. Stewart
 Signature of Subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

DATE: February 6 1990

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.

J. Don Stewart
 City Engineer

CITY GRAND JUNCTION IMPROVEMENTS AGREEMENT

RE: PTARMIGAN ESTATES COR: 27 1/2 and Broad
 Name of Subdivision or Other Improvement Location

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of PTARMIGAN ESTATES date FEB 6 1990, the following improvements to City of Grand Junction standards and to furnish an Improvements Guarantee in the form acceptable to the City for these improvements.

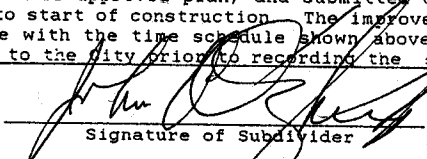
BOOK 1776 PAGE 72

Improvements	Quantity and Unit Costs	Estimated Cost	Estimated Completion Date
Street Grading <u>PTARMIGAN PLAZA #</u>	16,150 @ .206	3327	July 1, 1990
Street Base	" " @ .61	9852	as before
Street Paving	" " @ .38	6137	
Curbs and Gutters	680 @ 8.50	5780	
Sidewalks	" " @ 7.50	5100	
Storm Sewer Facilities			
Sanitary Sewers	280 @ 20	5600	
Mains			
Laterals/House Connections			
On-site Sewage Treatment			
Water Mains	280 @ 18	5040	
Fire Hydrants	1 @ 1000	1000	
On-site Water Supply			
Survey Monuments			
Street Lights	1 @ 750	750	
Street Name Signs	2 @ 50	100	
Construction Administration			
Utility Relocation Costs			
Design Costs			
SUB TOTAL		42,686	

Supervision of all installations (should not normally exceed 4% of subtotal) in above figures

TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION: \$ 42,686

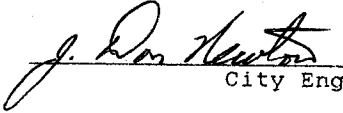
The above improvements will be constructed in accordance with the specifications and requirements of the City or appropriate utility agency and in accordance with detailed construction plans, based on the City Council approved plan, and submitted to the City Engineer for review and approval prior to start of construction. The improvements will be constructed in reasonable conformance with the time schedule shown above. An Improvements Guarantee will be furnished to the City prior to recording the subdivision plat.


 Signature of Subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

DATE: February 6 1990

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

CITY OF GRAND JUNCTION IMPROVEMENTS AGREEMENT

RE: Pharmigan Estates Cor. 27 1/2 and G road
 Name of Subdivision or Other Improvement Location

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of Pharmigan Estates date Feb 6 1990 the following improvements to City of Grand Junction standards and to furnish an Improvements Guarantee in the form acceptable to the City for these improvements.

BOOK 1776 PAGE 73

Improvements	Quantity and Unit Costs	Estimated Cost	Estimated Completion Date
Street Grading <u>E. P. AZZA</u>	<u>4000 @ .206</u>	<u>825</u>	
Street Base	<u>4000 @ .61</u>	<u>2440</u>	
Street Paving	<u>4000 @ .38</u>	<u>1520</u>	
Curbs and Gutters	<u>6500 @ .50</u>	<u>5525</u>	
Sidewalks	<u>650 @ 7.50</u>	<u>4875</u>	
Storm Sewer Facilities			
Sanitary Sewers	<u>50' @ \$20</u>	<u>1000</u>	
Mains			
Laterals/House Connections			
On-site Sewage Treatment			
Water Mains	<u>50 @ \$18</u>	<u>900</u>	
Fire Hydrants			
On-site Water Supply			
Survey Monuments			
Street Lights	<u>1 @ 750</u>	<u>750</u>	
Street Name Signs	<u>2 @ 50</u>	<u>100</u>	
Construction Administration			
Utility Relocation Costs	<u>45' of steel street @ \$110</u>	<u>4950</u>	
Design Costs			
SUB TOTAL		<u>22,885</u>	

Supervision of all installations (should not normally exceed 4% of subtotal) including
in above figures
 TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION: \$ 22,885

The above improvements will be constructed in accordance with the specifications and requirements of the City or appropriate utility agency and in accordance with detailed construction plans, based on the City Council approved plan, and submitted to the City Engineer for review and approval prior to start of construction. The improvements will be constructed in reasonable conformance with the time schedule shown above. An Improvements Guarantee will be furnished to the City prior to recording the subdivision plat.

John D. Newton
 Signature of Subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

DATE: February 6 1990

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.

J. Don Newton
 City Engineer



Don Newton

1548670 09:01 AM 08/10/90
MESA CO. CLK & REC MESA COUNTY CO

RELEASE FROM IMPROVEMENTS AGREEMENT/GUARANTEE

Development Name PTARMIGAN ESTATES File # 55-84
Location 27 1/2 and G road

THE FOLLOWING SIGNATURES INDICATE ACCEPTANCE OF IMPROVEMENTS REQUIRED FOR THIS DEVELOPMENT. ONLY AN AUTHORIZED REPRESENTATIVE OF THE ENTITIES LISTED BELOW MAY SIGN THIS DOCUMENT.

CITY ENGINEER

J. Don Newton 8-3-90
Signature & Date
J. Don Newton 8-3-90
Print Name & Title

WATER (NON-CITY)

Don George
Signature & Date
Don George Supt.
Print Name & Title

CITY UTILITIES MANAGER

Greg Trautman 8/7/90
Signature & Date
GREG TRAUTMAN 8/7/90
Print Name & Title

IRRIGATION

Irrigation systems must be signed off by a professional engineer.

I have personally inspected the completed system. It has been properly designed and installed and is fully operational.

FIRE DEPARTMENT

George Bennett 8-9-90
Signature & Date
George Bennett Inspector
Print Name & Title

Under separate cover (ll)
Signature & Date

Print Name & P.E. Number

DRAINAGE

J. Don Newton 8-3-90
Signature & Date
J. Don Newton 8-3-90
Print Name & Title

P.E. Stamp

I hereby certify that the improvements required by the Improvements Agreement recorded in the records of the County Clerk and Recorder of the County of Mesa, Colorado, in Book 1776, at pages 71, 72, 73 and supported by the Improvements Guarantee recorded in Book N/A, at pages N/A have been completed and accepted by the above signatures.

In accordance with the provisions of the Grand Junction Zoning and Development Code, the above referenced agreement and guarantee are hereby released.

Marty Lammie 8/10/90
Signature & Date
Director of Planning

CITY OF GRAND JUNCTION IMPROVEMENTS AGREEMENT

RE: Ptarmigan Estates Corner of 27 1/2 and G Road
 Name of Subdivision or Other Improvement Location

BOOK 1821 PAGE 434

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of Ptarmigan Estates date January 18 1991, the following improvements to City of Grand Junction standards and to furnish an Improvements Guarantee in the form acceptable to the City for these improvements.

G Road

1561478 02:05 PM 01/22/91
 MONIKA TODD CLK&REC MESA COUNTY CO

Improvements	Quantity and Unit Costs	Estimated Cost	Estimated Completion Date
Street Grading	1500sf @ \$.25	375	N.A.
Street Base	1500sf @ .31	465	
Street Paving	1500sf @ .45	675	
Curbs and Gutters	300' @ 8.30	2490	
Sidewalks	---		
Storm Sewer Facilities	---		
Sanitary Sewers	---		
Mains	---		
Laterals/House Connections	---		
On-site Sewage Treatment	---		
Water Mains	---		
Fire Hydrants	---		
On-site Water Supply	---		
Survey Monuments	Lump Sum	250	
Street Lights	---		
Street Name Signs	Relocate	100	
Construction Administration	5%	250	
Utility Relocation Costs			
Design Costs	5%	250	
SUB TOTAL		\$ 4855	

Supervision of all installations (should not normally exceed 4% of subtotal) in above figures

TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION: \$ 4,855

The above improvements will be constructed in accordance with the specifications and requirements of the City or appropriate utility agency and in accordance with detailed construction plans, based on the City Council approved plan, and submitted to the City Engineer for review and approval prior to start of construction. The improvements will be constructed in reasonable conformance with the time schedule shown above. An Improvements Guarantee will be furnished to the City prior to recording the subdivision plat.

*To replace Improvements Agreement
 recorded in Book 1776, Page 70
 released in error
 KP
 1/22/91*

[Signature]
 Signature of Subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

Recorder's Note: Poor Legibility On Document Provided For Recording.

DATE: January 18 1991

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.

[Signature]
 City Engineer

CITY OF GRAND JUNCTION IMPROVEMENTS AGREEMENT

RE: Ptarmigan Estates Corner of 27 1/2 and G Road
 Name of Subdivision or Other Improvement Location

BOOK 1821 PAGE 435

Intending to be legally bound, the undersigned subdivider hereby agrees to provide throughout this subdivision and as shown on the subdivision plat of Ptarmigan Estates date January 18 1991, the following improvements to City of Grand Junction standards and to furnish an Improvements Guarantee in the form acceptable to the City for these improvements.

27 1/2 Road

1561479 02:05 PM 01/22/91
 MONIKA TODD CLK® MESA COUNTY CO

Improvements	Quantity and Unit Costs	Estimated Cost	Estimated Completion Date
Street Grading	13,095 @ .25	3,274	N.A.
Street Base	13,095 @ .31	4,059	
Street Paving	13,095 @ .60	7,857	
Curbs and Gutters	582 @ 15.60	9,126	
Sidewalks	N.A. Combine above		
Storm Sewer Facilities	N.A.		
Sanitary Sewers	N.A.		
Mains Curb Cuts	3 @ 37.50	113	
Laterals/House Connections	N.A.		
On-site Sewage Treatment	N.A.		
Water Mains	N.A.		
Fire Hydrants	N.A.		
On-site Water Supply	N.A.		
Survey Monuments Surveying	lump sum	375	
Street Lights	N.A.		
Street Name Signs	Relocate	100	
Construction Administration	5%	1250	
Utility Relocation Costs	N.A.		
Design Costs	5%	1250	
SUB TOTAL		27,404	

Supervision of all installations (should not normally exceed 4% of subtotal) In above figures

TOTAL ESTIMATED COST OF IMPROVEMENTS AND SUPERVISION: \$ 27,404

The above improvements will be constructed in accordance with the specifications and requirements of the City or appropriate utility agency and in accordance with detailed construction plans, based on the City Council approved plan, and submitted to the City Engineer for review and approval prior to start of construction. The improvements will be constructed in reasonable conformance with the time schedule shown above. An Improvements Guarantee will be furnished to the City prior to recording the subdivision plat.

To replace Improvements Agreement recorded in Book 1776, Page 71 released in error.

*RP
1/22/91*

[Signature]
 Signature of Subdivider

(If corporation, to be signed by President and attested to by Secretary, together with the corporate seal.)

Recorder's Note: Poor Legibility On Document Provided For Recording.

DATE: January 18 1991

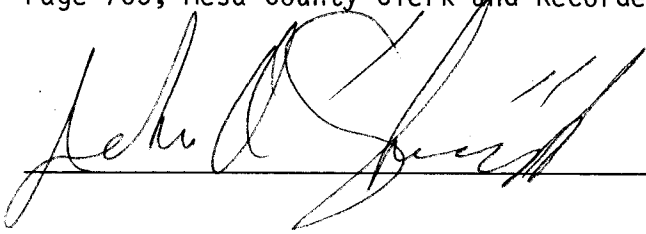
I have reviewed the estimated costs and time schedule shown above and, based on the plan layouts submitted to date and the current costs of construction, I take no exception to the above.

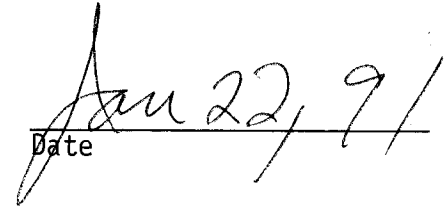
[Signature]
 City Engineer



Grand Junction Planning Department
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(303) 244-1430

The below signed acknowledges receipt of the original Irrevocable Letter of Credit, Drawn under Credit No. 1693-5, in the amount of \$65,000.00 (issued by Burns National Bank, Durango, CO, expiration date of 1/31/91). The Improvements to Ptarmigan Estates Subdivision guaranteed by this letter of credit have been completed and released by the City of Grand Junction as recorded in Book 1798, Page 765, Mesa County Clerk and Recorder.




Date _____

Need \$32,259 for
57 1/2 Rd & G Rd
\$2741 remaining

\$169,395.00
for filing #2
expans 4/30/93

REVIEW SHEET SUMMARY

FILE NO. 55-89 TITLE/HEADING Ptarmigan Estates DUE DATE _____

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES Rezone, Final Subdivision Plat & Plan,
and a R.O.W. Vacation.

Petitioner: John A Siegfried

Location: 27 1/2 and G Roads

PETITIONER ADDRESS Box 9088, Grand Junction, CO 81501

ENGINEER Ptarmigan Design

DATE REC. _____ AGENCY _____ COMMENTS _____

NOTE: WRITTEN RESPONSE BY THE PETITIONER TO THE REVIEW COMMENTS IS REQUIRED
A MINIMUM OF 48 HOURS PRIOR TO THE FIRST SCHEDULED PUBLIC HEARING.

01/08/90 City Engineer
(Don Newton)

I have reviewed two revised drawings (received 12/20/89) including the final plat and sheet 3 of the Road Plan and profile East Piazza and Ptarmigan Piazza, and have the following comments:

The intersection of East Piazza Place and Ptarmigan Piazza has been redesigned as a traffic circle, matching the original plan for Crown Heights Subdivision.

The petitioner and/or homeowners will be responsible for landscaping and maintaining the common area inside the traffic circle. Irrigation water should be made available to the common area (not shown on plans). The petitioner shall furnish and install "One Way" signs (counter clockwise direction) opposite each street approaching the traffic circle. Stop sign shall be intalled at the traffic circle on East Piazza Place and on Ptarmigan Piazza. A yield sign will be required where South Piazza Lane intersects the traffic circle.

The longitudinal grade on Ptarmigan Piazza has been reversed and now slopes to the north. This will prevent any drainage from the development from flowing down South Piazza Lane. All runoff from the development will be routed to the proposed detention basin (between Lots 9 & 10) in accordance with the Final Drainage Report dated August 20, 1989. I have no objection to the current drainage plan.

LATE

Issues which remain unresolved are as follows:

1. Source of irrigation water is not clear. No irrigation line shown to lots 3, 4, 5, 6, 7, 8, 9, 16 and common area; No details of irrigation system shown.
2. Petitioner's request to delete sidewalk on south side of G Road from 27 1/2 Road to Putter Drive.
3. Petitioner's request to delete improvements on G Road east of Putter Drive.

xc: Jim Shanks

REVIEW SHEET SUMMARY

FILE NO. 55-89 TITLE/HEADING Ptarmigan Estates DUE DATE DEC 1 1989

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES Rezone, Final Subdivision Plat & Plan, and a R.O.W. Vacation. - Petitioner: John A. Siegfried - Location: 27 1/2 & G Roads

PETITIONER ADDRESS Box 9088, Grand Junction, CO 81501

ENGINEER Ptarmigan Design

DATE REC. AGENCY COMMENTS

NOTE: WRITTEN RESPONSE BY THE PETITIONER TO THE REVIEW COMMENTS IS REQUIRED A MINIMUM OF 48 HOURS PRIOR TO THE FIRST SCHEDULED PUBLIC HEARING.

11/27/89	City Planning	The reduction in density is appropriate since this development is in the airport area of influence. Staff has requested the rezone accompanying this proposal to allow better future control of the petitioners desired building envelopes. Although the G Road right-of-way is being retained, there are currently no plans to improve that right-of-way. Staff supports petitioner's request to waive one half of the street improvements for the unimproved portion of G Road since future extension of this road is uncertain. Common driveways should be shown as ingress/egress easements on the final plat.
11/22/89	City Engineer	I met with Mr. Siegfried and his Engineer on 11/21/89 to discuss a number of revisions that need to be made to the final plans and plat. I will withhold my review comments until the petitioner has made the necessary revisions and resubmits the drawings.
11/07/89	Parks/Rec.	Open space fee based on total units will be required - Fee = \$225 per dwelling unit x 24 units = \$5,400.
11/16/89	Walker Field	Walker Field Airport Authority supports the reduction in density over the original plan. The current RSF-4 zone restricts structure heights to 32', which should create no problems for aircraft using runway 4/22. Variances to that height should not be allowed. The proposed subdivision lies within the airport Area of Influence, so an Avigation Easement must be recorded for the entire property prior to filing of the final plan.
11/14/89	Ute Water	--- NO OBJECTIONS --- In order for Ute Water to maintain a looped system with a 6" water main, East Piazza Place and Applewood Street would have to be tied together. Applewood Street has a 8" and East Piazza Place has a 6". Tie in is possible through the proposed road way at the end of East Piazza Place.
11/14/89	Public Service	GAS: No objections. C.B. 11/8/89. ELECTRIC: Needs additional easement as indicated on sketch. F.B. 11/9/89.

RESPONSE NECESSARY

DEC 1 1989

by _____

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- 11/13/89 Utility Engineer
- A. Water: Supplied by Ute Water.
 - B. Sewer:
 - 1. A manhole will be required at Station 5+61 on the line terminating at the cul-de-sac on East Piazza Place.
 - 2. Sewer service will need to be shown for lots 6, 10, and 11.
 - 3. Minimum depth of sewer in Ptarmigan Piazza may require pumps to be utilized for lots 6, 12, and 13.
 - C. Improvements Agreement Draft.
 - 1. Unit costs shown for water and sewer appear to be approximately 30% below actual completed costs when all appurtenances are included.
- 11/20/89 City Attorney NONE.
- 11/22/89 Mtn. Bell
- Please add 10' wide utility easements as shown on final plat with red ink. (sic)
- New or additional telephone facilities necessitated by this project may result in a "contract" and up-front monies required from developer prior to ordering or placing of said facilities. For more information, please call.
- 11/20/89 Police Dept. No problems noted.
- 11/27/89 Grand Valley Water Users
- Same as submitted in July, 1989. (see attached)
- 11/27/89 Fire Dept.
- The following requirements are to be met prior to our office approving this subdivision:
- 1. Access to all lots shall be provided in accordance with the 1985 Uniform Fire Code Sec. 10.207.
 - The surface shall be so as to provide all-weather driving capabilities, be a minimum of 20 feet clear and unobstructed, and all access in excess of 150 feet shall provide adequate turnarounds for fire apparatus.
 - 2. Adequate water for fire protection shall be provided in accordance with the 1985 Uniform Fire Code Sec. 10.301 (c).
 - A minimum of one fire hydrant is required on a minimum of a 6 inch supply line to be located at corner of 27 1/2 Road and G Road. A second fire hydrant is required but placement will depend on where the access roads is placed for lot ONE.
- Please contact our office for further information or if you have any questions.

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12/04/89 City Public Works

The following items need to be included on the Final Plat:

- Greenery Easements as shown on the Site Plan.
- The north-south dimension for the west line of Lot 13.
- The distance for the westerly line of Lot 11.
- The common access easement shown to encroach onto Lot 2 on the Site Plan is omitted from the Final Plat.
- Rights-of-ways to be vacated in Crown Heights should not be shown on the Final Plat.
- Access and utility easements should be labeled ingress, egress, and utilities easement.

12/01/89 City Engineer

Final Plat (sheet 1 of 1):

What is the difference between easements labeled "Ingress and Egress" and those labeled "Access"? Labeling and dimensioning of easements and rights-of-way are confusing and incomplete. No units are shown of some widths. Property lines, easement lines, etc. need to be identified in the legend.

Areas shown "To be Vacated" should not be on this plat. Right-of-way north of cul-de-sac at end of East Piazza Place should not be labeled "proposed right-of-way".

Site Plan and Building Envelope (sheet 1 of 1):

Ingress and Egress Easements, utility easements and road rights-of-way should be labeled. Need North arrow on plan.

Road Plan (sheet 1 of 3):

On cross-section for Ptarmigan Piazza and East Piazza show dimensions and cross-slopes for both sides of the street pavement.

Transition from detached sidewalk to attached sidewalk on west side of South Piazza Lane should be no more than 10' long. The sidewalk transition at the east end of East Piazza Place should be made gradually in 10'. A Public Service Co. street light will be required at each cul-de-sac and at the intersection of Ptarmigan Piazza and East Piazza Place.

Road Plan and Profile (sheet 3 of 3):

West end pavement cross-slope for north half of East Piazza Place appears to vary but is not shown. How does the cross-slope vary to the east and west of the 5' valley pan? Does the existing pavement slope match that of the valley pan? The plan should show the area of existing street pavement will be removed.

Need to show crown line locations and elevations at the three-way intersection of South Piazza, Ptarmigan Piazza and East Piazza.

The gutter grade from station 0 + 36 to 1 + 02.37 calculates to be 0.23%. This gutter will be too flat to drain. The valley pan may have to be moved further west to increase gutter slope.

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(City Engineer cont'd)

Need to show station and offset or radial geometry for the beginning and end of all curves in curb, gutter and sidewalk. The existing irrigation line and riser manhole in the intersection of East Piazza and South Piazza is not shown on the plans. Will this system function without the riser manhole?

Road & Sewer Plan for 27 1/2 Rd and G Rd. (sheet 2 of 3):

The final drainage report dated August 20, 1989 shows all drainage from the development being conveyed west from East Piazza in an open ditch to a detention area and an existing 16" CMP crossing 27 1/2 Rd. The final plans now show the drainage from East Piazza and Ptarmigan Piazza being routed down South Piazza with no on site detention provided. How will the existing drainage facilities and properties be affected by the changed drainage routing? How will on site detention be accomplished? The final drainage report needs to be revised.

The petitioner has requested that he not be required to install a public sidewalk along the south side of G Road from 27 1/2 Road to Putter Drive and that he not be required to provide or pay for improvements to G Road east of Putter Drive. Although these improvements may not be necessary for the successful completion of this development, they would normally be required and can be waived only by the City Council.

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OFF ACTION SHEET

Acres 18.53 Do NOT Remove From Office REZONE & ROW Vacation File No. _____
 Units 2113 **FINAL PLAN & PLAT** Zone RSF-4
 Density _____ From form RSF-4 Tax Parcel Number 2945-011-00-101
 Activity Final Plat & ROW Vacations - Farmington Subdivision
 Phase Final
 Common Location SE Corner of 27 1/2 Rd & G Rd

Date Submitted _____ Date Mailed Out _____ Date Posted _____
 _____ day Review Period Return by _____
 Open Space Dedication (acreage) _____ Open Space Fee Required \$ _____ Paid Receipt # _____
 Recording Fee Required \$ _____ Paid (Date) _____ Date Recorded _____

review agencies

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG			
1 Development Dept.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
2 City Public Works	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
3 City Engineer	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
4 Transportation Engineer	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
5 City Parks/Recreation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
6 City Fire Dept.																																				
7 City Police Dept.																																				
8 County Planning																																				
9 County Engineer																																				
10 County Health																																				
11 County Parks/Recreation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
12 Comprehensive Planning	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
13 Floodplain Administration	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
14 G.J. Dept. of Energy	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
15 Walker Field	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
16 School District																																				
17 Irrigation <u>CV Water Users Association</u>																																				
18 Drainage <u>Association</u>																																				
19 Water (Ute, Clifton)																																				
20 Sewer Dist. (FV, CGV, OM)																																				
21 Mountain Bell	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
22 Public Service (2 sets)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
23 State Highway Dept.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
24 State Geological	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
25 State Health Dept.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
26 GJPC (7 packets)																																				
27 CIC (2 packets) <u>11</u>																																				
28 OTHER <u>City Engineer</u>																																				
29 Utility Engineer <u>1</u>																																				

2 Review
 39 packets
 for review sheets

totals

BOARDS

P.C. DATE 12/5/89 Table for January etc. meeting to create unanswered questions.
 NOTE! NO SPECIFIC DATE WAS MENTIONED
 WILL REQUIRE READ & RE NOTIFICATION

P.C. 1/9/90 Rezone - Recommend approval, with waiving improvements to G road east of putter drive.

STAFF

PLAN - Approve
PLAT - Approve subject to review sheet comments
VACATION - Recommend, approval,
 CIC 1/17/90 Approved C.A.

APPLICATION FEE REQUIREMENTS

\$500 plus \$5 per lot
\$425 payable to City of G.J. at time of submittal



development summary



File # 55-89 Name Ptarmigan Estates Sub. Date 01/11/90

PROJECT LOCATION: Southeast of 27 1/2 and G Roads.

PROJECT DESCRIPTION:

Rezoning from RSF-4 to PR-4 and a Final Plat & Plan of 23 lots on 18.53 acres.

REVIEW SUMMARY (Major Concerns)

POLICIES COMPLIANCE	YES	NO *	TECHNICAL REQUIREMENTS	
			SATISFIED	NOT SATISFIED *
Complies with adopted policies	X		Streets/Rights Of Way	X
Complies with adopted criteria	X		Water/Sewer	X
Meets guidelines of Comprehensive Plan	X		Irrigation/Drainage	X
			Landscaping/Screening	X
			Other: _____	

* See explanation below

STATUS & RECOMMENDATIONS:

Staff requested the applicant to rezone from RSF-4 to PR-4 in order to accommodate increased setbacks and green belt easements. The project is intended for single family residential development. The applicant has satisfactorily responded to all review agency technical requirements. The applicant has requested that the standard requirement for 1/2 street improvements for G Road east of Putter Drive be waived due to the uncertainty of any future improvement. Engineering, Planning Staff, and Planning Commission support their request.

Planning Commission Action

Recommend approval subject to review sheet comments and recommend waiver of improvement requirements for G Road east of Putter Drive.

John H. Wright, C.P.G.

& Associates

P.O. Box 2355
Grand Junction, CO 81502
(303) 241-6619

5/5 89

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From Office

November 2, 1989

John Siegfried
Box 9088
Grand junction, CO 81501

RE: Ptarmigan Orchard Subdivision

Dear Mr. Siegfried:

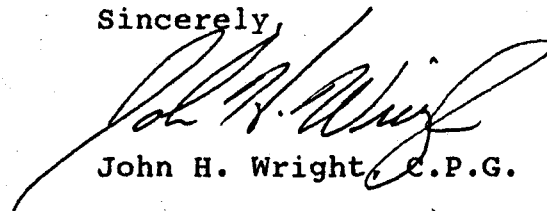
I have reviewed the Western Engineers, Inc. soils report on tests conducted at Crown Heights Subdivision on July 28, 1980. Ptarmigan Orchard Subdivision was formerly included as part of the Crown Heights Subdivision.

Two of the five holes drilled by Western Engineers actually were collared on ground now within the Ptarmigan Orchard Subdivision; the other three holes surround the Ptarmigan Orchard Subdivision.

Consistent with the geologic subdivision report I prepared for you concerning an investigation at Ptarmigan Orchards, the Western Engineers soils report describes subsurface soils conditions as rather uniform across the property. Subsurface soils investigations were not required by Mesa County for the work I did on your behalf, however the older Western Engineers work will serve as additional and useful information for your subdivision planning. Of particular note, I find that each of the five holes drilled encountered water at depths of 9 to 11 feet. This is a seasonal water table that is easily controlled through control of the existing irrigation system.

Given the proximity of the holes to your proposed subdivision, and the uniform characteristics of the material drilled, the findings and conclusions, and recommendations of the Western Engineers work cited above should in every way apply to Ptarmigan Orchards.

Sincerely,



John H. Wright, C.P.G.



ESTERN ENGINEERS, INC.

CONSULTING ENGINEERS / LAND SURVEYORS

#55 89

July 28, 1980

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From Office

Mr. Bob Coburn
33 1/2 Road
Whitewater, Colorado 81527

Re: Crown Heights Subdivision

Dear Bob:

As requested, during June, we performed the following soil investigation items at the above site:

- 1.) Drill 5 holes to various depths.
- 2.) Visually classify the soil profile.
- 3.) One consolidations curve.
- 4.) One moisture density curve, surface soils.
- 5.) One CBR, surface soils.

Enclosed are the results of the above items along with a test hole location map.

Examination of the test holes and analysis of the test results led to the following conclusions:

- 1.) The soil profile with regard to type and classification was relatively uniform throughout the subdivision consisting of a silt-clay material lensed with some sands and coarse gravels. The water table was found uniformly at 9 to 11 feet.
- 2.) Only one consolidation test was performed at the site. As is typical throughout the valley, isolated soft spots may be found and must be watched for. A rough analysis of the consolidation data indicated a soil bearing capacity of over 2000 psf. for light residential construction. However, due to the heterogeneous nature and unpredictability of the soil, footing width should be no less than 12 inches. It should be noted that this analysis was based on a single isolated consolidation test, which may or may not be indicative of conditions throughout the site. This data is also limited to footings founded within the upper 4 feet of the soil profile. The bearing characteristics of the soil below that depth were not determined.

Letter to Bob Coburn
July 28, 1980
Page Two

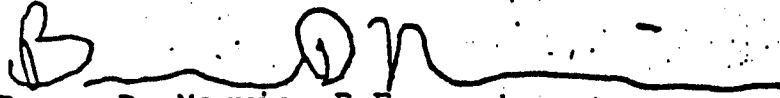
#55 89

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3.) The CBR test results indicated a negligible swell potential. The test revealed a relatively low soaked CBR results of 2.5. It is therefore important to assure good roadway drainage.

Very truly yours,

WESTERN ENGINEERS, INC.

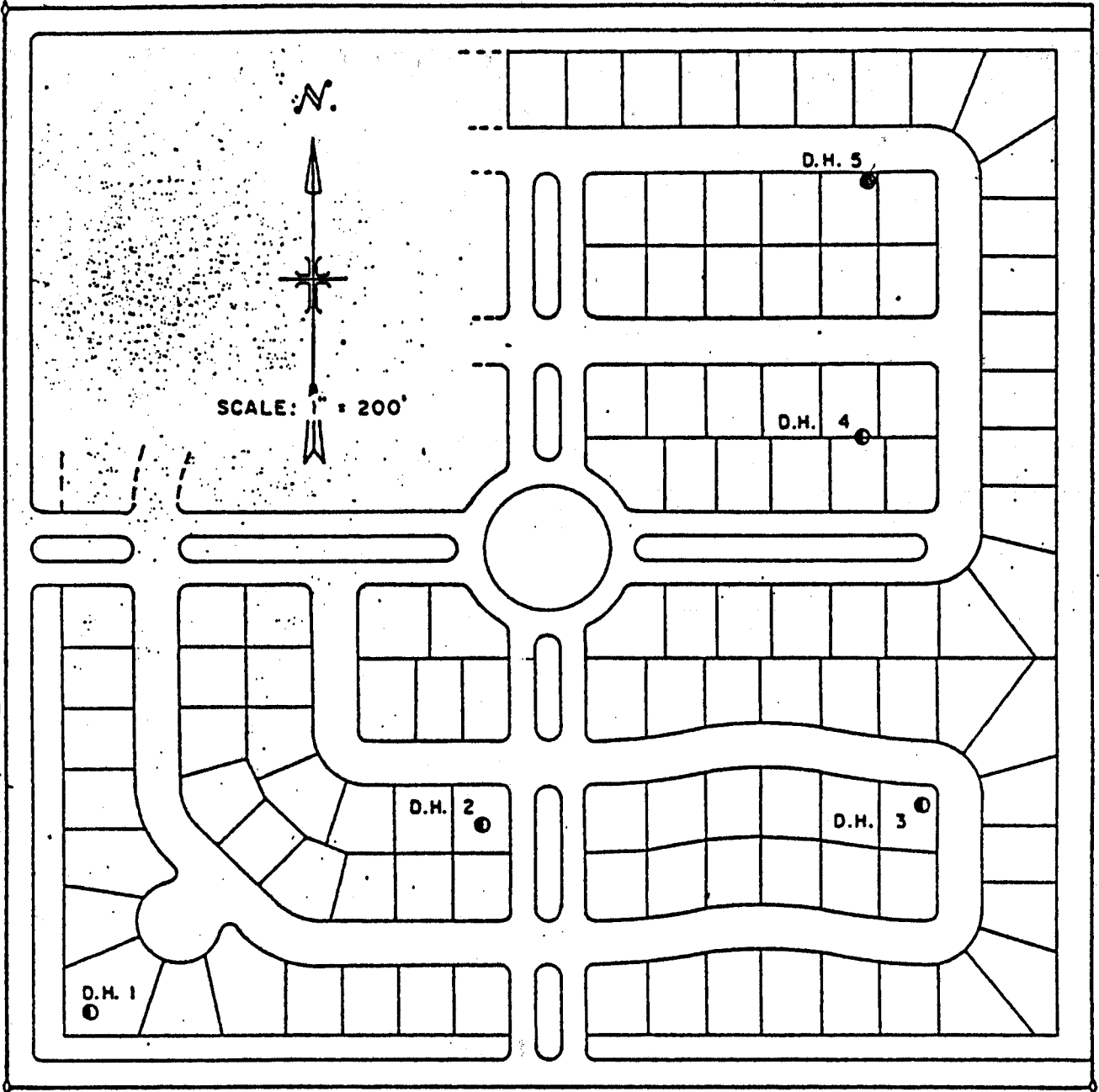
A handwritten signature in black ink, appearing to read "B. Marvin", written over a horizontal line.

Bruce D. Marvin, P.E.

BDM:kms

G ROAD

27 1/2 ROAD



CORTLAND AVE.

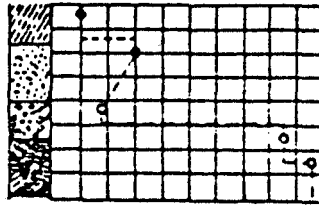
DRILL HOLE LOCATION
CROWN HEIGHTS SUBDIVISION
WESTERN ENGINEERS, INC.

WORK ORDER NUMBER _____ SUBSURFACE EXPLORATION PAGE _____ OF _____ PAGES
 DRILL HOLE LOG AND PENETRATION RESISTANCE HOLE NO. _____
 Project: Crown Heights Subdivision Ground Elev. _____
 Location: 27 1/2 and G Road Depth to Water Table (Ft) 9.0
 Drill Contract Western Engineers Foreman _____ Date Water Table Gaged 6/15/79
 Hole Logged by BVG Hammer Weight _____ Height of Drop _____ Date 6/15/79

NOTES TYPE & SIZE OF HOLE TYPE OF BIT OR SPOON LOSS OF DRILLING WATER	CORE RECOVERY %	NO. BLOWS	MOISTURE %	SAMPLES FOR TESTING	DESCRIPTION AND CLASSIFICATION OF MATERIAL	DEPTH	LOG	PENETRATION RESISTANCE (BLOWS PER FOOT)						
								20	40	60	80			
Water Table == - Hole collapsed at 10 feet Refusal to augering at 12 feet					Silt, clayey, some sand and gravels, moist on top to saturated below water table, quite variable in grain size composition and consistency. (ML-CL)	2								
						4								
							6							
							8							
						Same as above material with higher percentage of coarse gravel and cobbles (SM-GM)	10							
							12							
						Bottom of Hole								

EXPLANATION


No. OF BLOWS RECORD NUMBER OF BLOWS REQUIRED FOR ONE FOOT PENETRATION IF 50 BLOWS RESULT IN LESS THAN 1 FOOT PENETRATION, RECORD DEPTH PENETRATED, THUS, 50/4 INDICATES 4 INCHS PENETRATION WITH 50 BLOWS.
 DESCRIPTION AND DESCRIBE SOIL TYPE, WITH EMPHASIS ON INPLACE OR NATURAL CONDITION. INCLUDE SOIL CLASSIFICATION GROUP SYMBOL. EXAMPLE: SAND, MEDIUM, CLEAN, MOIST, FIRM, DENSE, UNCEMENTED, (SP)
 CLASSIFICATION OF MATERIAL
 PENETRATION PLOT AS SHOWN AT RIGHT, WITH DASHED LINES SHOWING THE MATERIALS RESISTANCE CONSIDERED TO BE REPRESENTED BY EACH PENETRATION VALUE.



WESTERN ENGINEERS, INC.
 Soil Mechanics Engineers

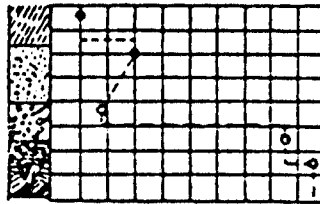
PLATE

WORK ORDER NUMBER _____ SUBSURFACE EXPLORATION PAGE ____ OF ____ PAGES
 DRILL HOLE LOG AND PENETRATION RESISTANCE HOLE NO. 2
 Project Crown Heights Subdivision Ground Elev _____
 Location 27 1/2 and G Road Depth to Water Table (Fl.) 10.5
 Drill Contract Western Engineers Foreman _____ Date Water Table gaged 6/18/79
 Hole Logged by BVG Hammer Weight _____ Height of Drop _____ Date 6/18/79

NOTES TYPE & SIZE OF HOLE TYPE OF BIT OR SPOON LOSS OF DRILLING WATER	CORE RECOVERY %	NO. BLOWS	MOISTURE %	SAMPLES FOR TESTING	DESCRIPTION AND CLASSIFICATION OF MATERIAL	DEPTH FOOT	PENETRATION RESISTANCE (BLOWS PER FOOT)			
							○ ACTUAL ○ EXTRAPOLATED 20 40 60 80			
							20	40	60	80
Water Table  Hole collapsed at 11 feet					Silt, clayey, some sand and gravels, lensed with granular material. Buff to red-brown moist at top to saturated near water table. (ML-SM)	2				
						4				
						6				
						8				
						10				
						12				
						14	Bottom of Hole			

EXPLANATION

No. OF BLOWS..... RECORD NUMBER OF BLOWS REQUIRED FOR ONE FOOT PENETRATION IF 50 BLOWS RESULT IN LESS THAN 1 FOOT PENETRATION, RECORD DEPTH PENETRATED, THUS, 50/4 INDICATES 4 INCHS PENETRATION WITH 50 BLOWS.
 DESCRIPTION AND..... DESCRIBE SOIL TYPE, WITH EMPHASIS ON INPLACE OR NATURAL CONDITION. CLASSIFICATION OF MATERIAL INCLUDE SOIL CLASSIFICATION GROUP SYMBOL. EXAMPLE: SAND, MEDIUM, CLEAN, MOIST, FIRM, DENSE, UNCEMENTED, (SP)
 PENETRATION..... PLOT AS SHOWN AT RIGHT, WITH DASHED LINES SHOWING THE MATERIALS RESISTANCE CONSIDERED TO BE REPRESENTED BY EACH PENETRATION VALUE.



WESTERN ENGINEERS, INC.
 Soil Mechanics Engineers

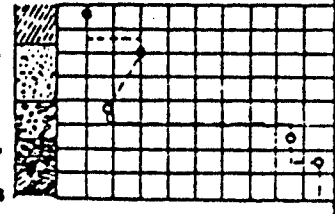
PLATE

WORK ORDER NUMBER _____ SUBSURFACE EXPLORATION PAGE _____ OF _____ PAGES
 DRILL HOLE LOG AND PENETRATION RESISTANCE HOLE NO. 3
 Project Crown Heights Subdivision Ground Elev. _____
 Location 27 1/2 and G Road Depth to Water Table (Ft) NF
 Drill Contract Western Engineers Foreman _____ Date Water Table gaged 6/18/79
 Hole Logged by BVG Hammer Weight _____ Height of Drop _____ Date 6/18/79

NOTES TYPE & SIZE OF HOLE TYPE OF BIT OR SPOON LOSS OF DRILLING WATER	CORE RECOVERY %	NO. BLOWS	MOISTURE %	SAMPLES FOR TESTING	DESCRIPTION AND CLASSIFICATION OF MATERIAL	DEPTH	JOB	PENETRATION RESISTANCE (BLOWS PER FOOT)							
								20	40	60	80				
Hole collapsed at 9.5 feet					Silt, clayey, some sand and gravels; moist on top to saturated below water table, quite variable in grain size composition and consistency. (ML-CL)	2									
						4									
							6								
							8								
							10								
							Same as above material with higher percentage of coarse gravel and cobbles (SM-GM)	12							
								14							
							Bottom of Hole	14							

EXPLANATION

No. OF BLOWS..... RECORD NUMBER OF BLOWS REQUIRED FOR ONE FOOT PENETRATION IF 30 BLOWS RESULT IN LESS THAN 1 FOOT PENETRATION, RECORD DEPTH PENETRATED, THUS, 30/4 INDICATES 4 INCHS PENETRATION WITH 30 BLOWS.
 DESCRIPTION AND..... DESCRIBE SOIL TYPE, WITH EMPHASIS ON INPLACE OR NATURAL CONDITION.
 CLASSIFICATION OF MATERIAL..... INCLUDE SOIL CLASSIFICATION GROUP SYMBOL. EXAMPLE: SAND, MEDIUM, CLEAN, MOIST, FIRM, DENSE, UNCEMENTED, (SP)
 PENETRATION..... PLOT AS SHOWN AT RIGHT, WITH DASHED LINES SHOWING THE MATERIALS RESISTANCE CONSIDERED TO BE REPRESENTED BY EACH PENETRATION VALUE.



WESTERN ENGINEERS, INC.
Soil Mechanics Engineers

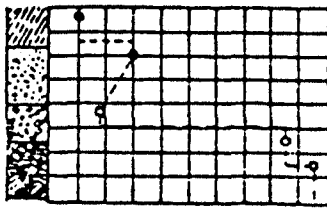
PLATE

WORK ORDER NUMBER _____ SUBSURFACE EXPLORATION PAGE _____ OF _____ PAGES
 DRILL HOLE LOG AND PENETRATION RESISTANCE HOLE NO. 4
 Project Crown Heights Subdivision Ground Elev _____
 Location 27 1/2 and G Road Depth to Water Table (Ft) 10.0
 Drill Contract Western Engineers Foreman _____ Date Water Table gaged 6/23/80
 Hole Logged by BVG Hammer Weight _____ Height of Drop _____ Date 6/23/80

NOTES TYPE & SIZE OF HOLE TYPE OF BIT OR SPOON LOSS OF DRILLING WATER	CORE RECOVERY %	NO. BLOWS	MOISTURE %	SAMPLES FOR TESTING	DESCRIPTION AND CLASSIFICATION OF MATERIAL	DEPTH FOOT	PENETRATION RESISTANCE (BLOWS PER FOOT)				
							● ACTUAL ○ EXTRAPOLATED				
							20	40	60	80	
Water Table 					Silt, clayey, some sand and gravels, moist on top to saturated below water table, quite variable in grain size composition and consistency. (ML-CL)	2					
						4					
						6					
						8					
						10					
						Same as above material with higher percentage of coarse gravel and cobbles. (SM-GM)	12				
							14				
							16				
							18				
						Bottom of Hole					

EXPLANATION

No. of BLOWS..... RECORD NUMBER OF BLOWS REQUIRED FOR ONE FOOT PENETRATION IF 50 BLOWS RESULT IN LESS THAN 1 FOOT PENETRATION, RECORD DEPTH PENETRATED; THUS, 50/4 INDICATES 4 INCHS PENETRATION WITH 50 BLOWS.
 DESCRIPTION AND..... DESCRIBE SOIL TYPE, WITH EMPHASIS ON INPLACE OR NATURAL CONDITION.
 CLASSIFICATION OF MATERIAL..... INCLUDE SOIL CLASSIFICATION GROUP SYMBOL. EXAMPLE: SAND, MEDIUM, CLEAN, MOIST, FIRM, DENSE, UNCEMENTED, (SP)
 PENETRATION..... PLOT AS SHOWN AT RIGHT, WITH DASHED LINES SHOWING THE MATERIALS RESISTANCE
 RESISTANCE..... CONSIDERED TO BE REPRESENTED BY EACH PENETRATION VALUE.



WESTERN ENGINEERS, INC.
 Soil Mechanics Engineers

WORK ORDER
NUMBER

SUBSURFACE EXPLORATION

5 89

PAGE OF PAGES
HOLE NO 5

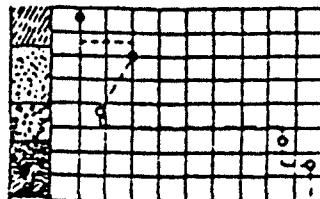
DRILL HOLE LOG AND PENETRATION RESISTANCE

Project Crown Heights Subdivision Ground Elev. _____
 Location 27 1/2 and G Road Depth to Water Table (Ft) 10.0
 Drill Contract Western Engineers Foreman _____ Date Water Table gaged 6/20/80
 Hole Logged by BVG Hammer Weight _____ Height of Drop _____ Date 6/20/80

NOTES TYPE & SIZE OF HOLE TYPE OF BIT OR SPOON LOSS OF DRILLING WATER	CORE RECOVERY %	NO. BLOWS	MOISTURE %	SAMPLES FOR TESTING	DESCRIPTION AND CLASSIFICATION OF MATERIAL	DEPTH	LOG	PENETRATION RESISTANCE (BLOWS PER FOOT)						
								0 ACTUAL 0 EXTRAPOLATED						
								20	40	60	80			
Water Table =====					Silt, clayey, some sand and gravels, moist on top to saturated below water table, quite variable in grain size composition and consistency. (ML-CL)	2								
						4								
						6								
						8								
						10								
						12								
						14	Same as above material with higher percentage of coarse gravel and cobbles (SM-GM)							
						16								
						18	Formational Mancos Shale, Weathered at top							

EXPLANATION

No. OF BLOWS..... RECORD NUMBER OF BLOWS REQUIRED FOR ONE FOOT PENETRATION IF 50 BLOWS RESULT IN LESS THAN 1 FOOT PENETRATION, RECORD DEPTH PENETRATED, THUS, 50/4 INDICATES 4 INCHS PENETRATION WITH 50 BLOWS.
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 CLASSIFICATION OF MATERIAL..... INCLUDE SOIL CLASSIFICATION GROUP SYMBOL. EXAMPLES: SAND, MEDIUM, CLEAN, MOIST, FIRM, DENSE, UNCEMENTED, (SP)
 PENETRATION..... PLOT AS SHOWN AT RIGHT, WITH DASHED LINES SHOWING THE MATERIALS RESISTANCE CONSIDERED TO BE REPRESENTED BY EACH PENETRATION VALUE.

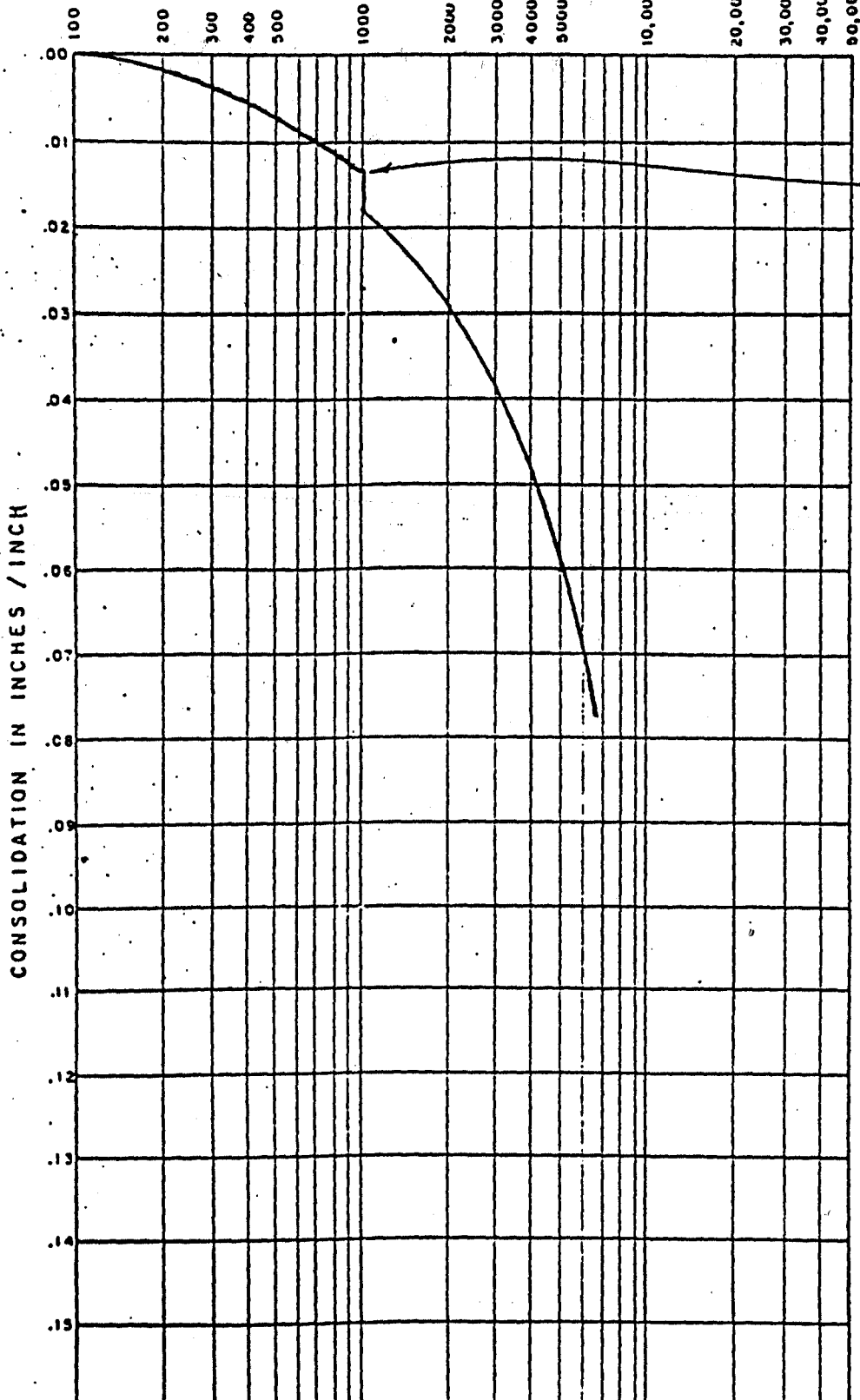


WESTERN ENGINEERS, INC.
Soil Mechanics Engineers

PLATE

PRESSURE IN LBS / SQ FT

55 89



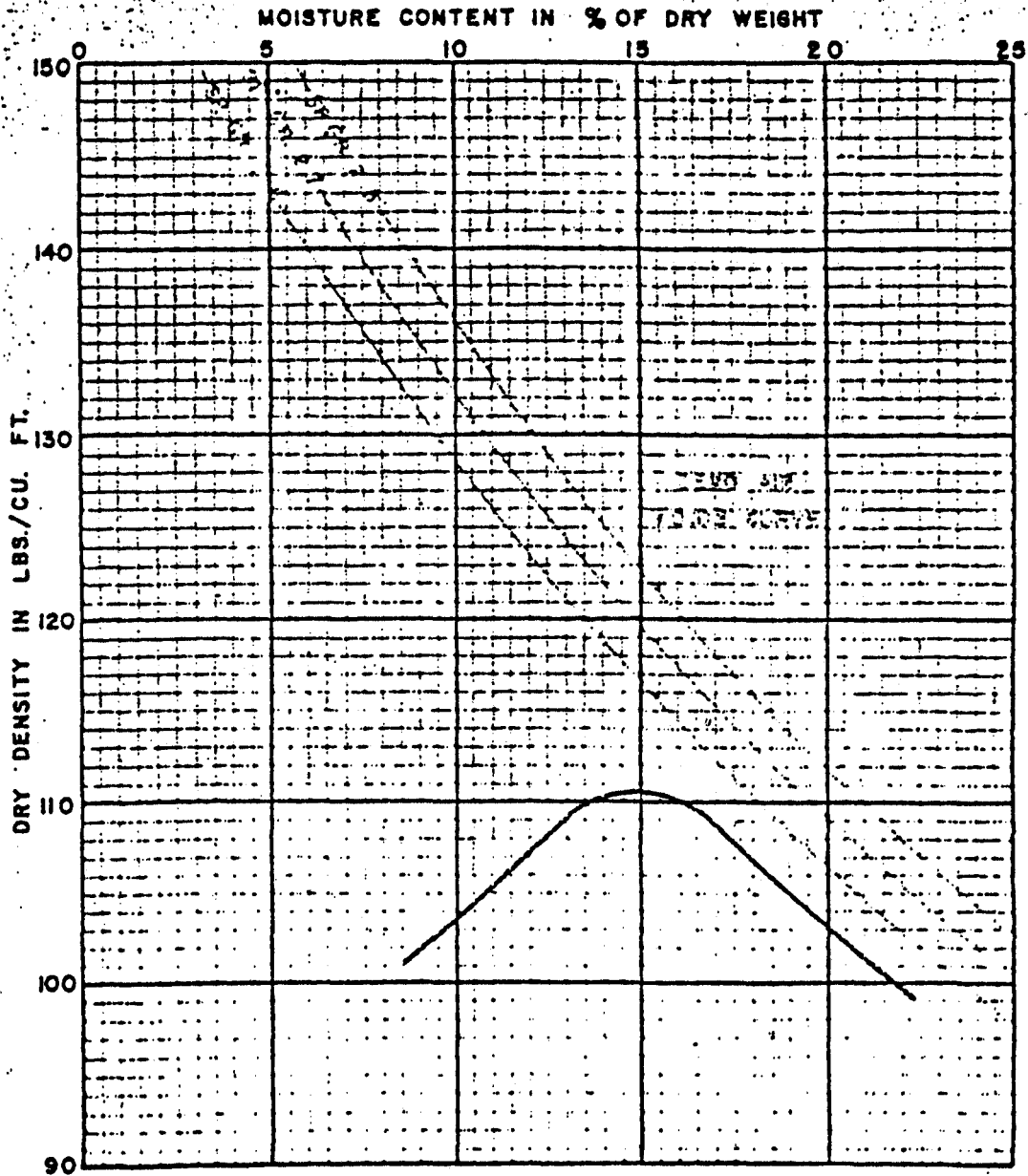
SAMPLE WETTED

BORING NO. AND DEPTH	SOIL TYPE	MOISTURE CONTENT		DRY DENSITY IN LBS/CU. FT.
		BEFORE	AFTER	
4P 3-4	SILTY CLAY	10.2	16.7	109.7

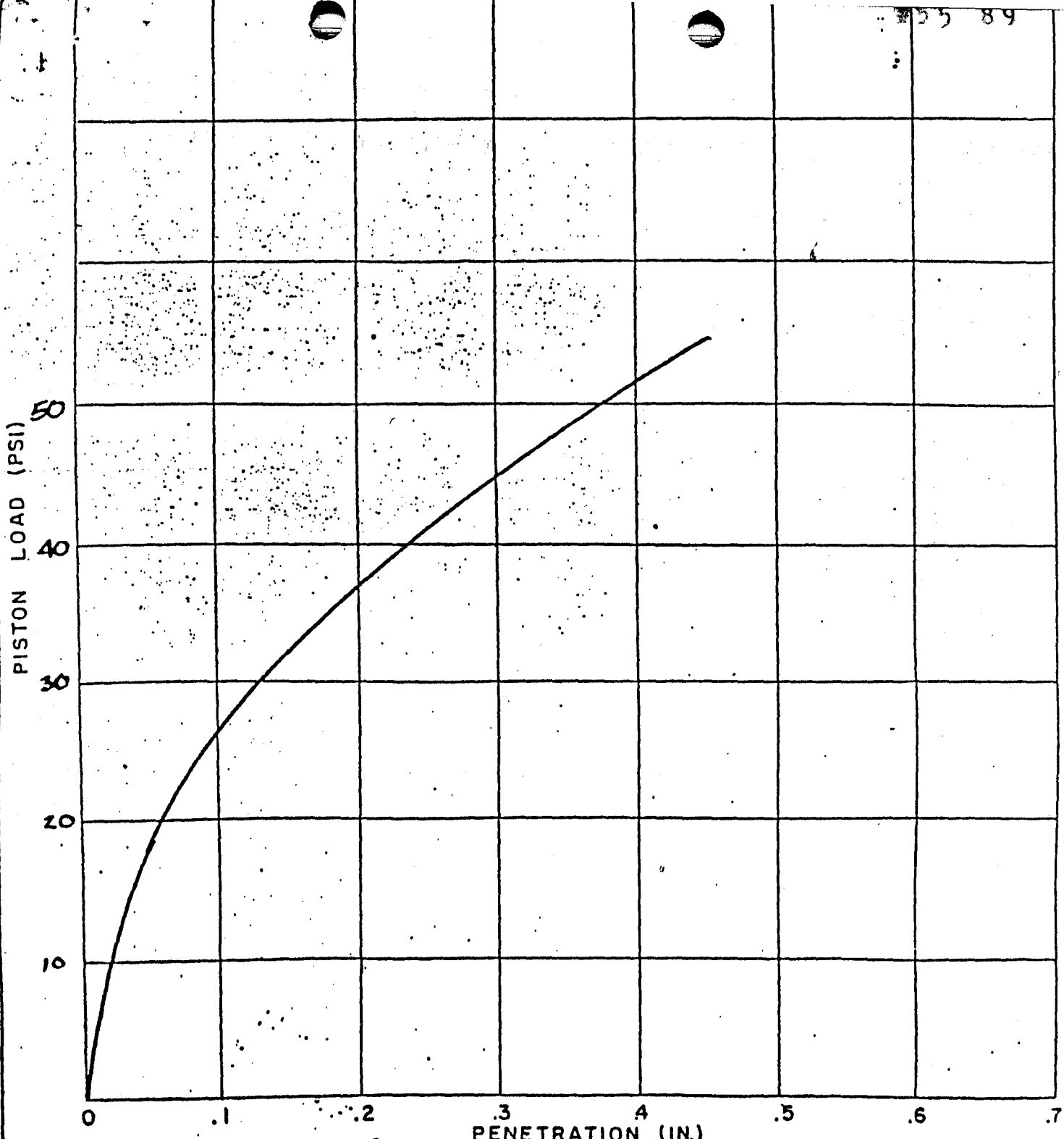
CROWN HEIGHTS
CONSOLIDATION DATA

WESTERN ENGINEERS INC.
GRAND JUNCTION COLORADO

SAMPLE NO. _____ DEPTH 1-2 ELEVATION _____
SOIL SILT - CLAY
LOCATION CROWN HEIGHTS SUBDIVISION
OPTIMUM MOISTURE CONTENT 15.0%
MAXIMUM DRY DENSITY 110.5 PCF
METHOD OF COMPACTION ASTM D 698



COMPACTION TEST DATA



SAMPLE: CROWN HEIGHTS SUBDIVISION

DENSITY: 95% ± ASTM D-695

CBR .1" PEN. = 2.7

CBR .2" PEN. = 2.5

BEFORE SOAKING:
MOISTURE CONTENT: 9.5%

DRY UNIT WEIGHT:

AFTER SOAKING:
MOISTURE CONTENT, TOP 1": 26.7%

AVG. MOISTURE CONTENT:

SWELL:

SURCHARGE WEIGHT: 20 lb

CALIFORNIA BEARING RATIO
(ASTM D-1883)

March 20, 1992 6

Mr. Bennett Boeschstein
Director, Community Development Dept.
250 N. Fifth Street
Grand Junction, CO 81501-2668

Dear Mr. Boeschstein,

The attached letter from the City of Grand Junction to the developer of Ptarmigan Estates indicates that the developer (Ptarmigan Investments, Inc., John A. Siegfried, President) is responsible for assuring an adequate supply of irrigation water to each lot in the development and that certification of the system is required. This has not been done and, as the irrigation season approaches is a cause of concern to the under-signed property owners, particularly in view of the additional requirements that will be placed upon the system when the First Presbyterian Church, now under construction, begins to use irrigation water.

We request that the City take the necessary steps to assure that the developer, Mr. Siegfried, meets this requirement and that we be informed of the action taken.

Ralph Knapp
Edward C. Olson
L. L. Benson
Lawrence D. Lappe
Janice Seppelt
Gilbert Dalley
Ron Ridgley
Warren Bystedt
Robert Hunt
Teri Siegmund
Mrs R. J. Jennings

Rick M. Ferguson

1. Common driveways have been designated ingress/egress easements.
2. Attached is Avigation easement.
3. A looped water system is not presently necessary and would be established when east piazza place is extended. This is not presently contemplated.
4. Additional electric and telephone easements will be provided as requested.
5. Sewer (and phasing for this line) for lots 10, 11, 12, and 13 is addressed in the narrative development schedule. Lot 6 sewers into the line in Ptarmigan Piazza. Actually the estimates used for sewer and water in the improvements agreement are 30 to 50% high according to new information from Elam Construction. As these lines are to be constructed by the developer, rather than escrowed, the as-bid price will establish this figure.
6. A fire hydrant at 27 1/2 and G road has been shown. Access to lot 1 will be designated before final plot filing and if necessary an additional hydrant installed.

Letter of Credit for \$35,000, guaranteeing half road improvements for G Road and 27½ Road deposited with the City Clerk in a "Letters of Credit" file.

Harry Postma

1/22/91



March 4, 1993

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (303) 244-1599

Mr. John Sigfried
P. O. Box 9088
Grand Junction, CO 81502

Re: Ptarmigan Estates Improvements

Dear John:

We have received several complaints about the completion of required improvements at Ptarmigan Estates Subdivision. The major complaint involves various facets of the irrigation system. Specifically the complaints are:

1. The irrigation system is not adequate to provide dependable water supply to the subdivision.
2. The irrigation system has not been inspected, tested, and approved by a licensed engineer as required by letter dated Feb. 6, 1990 and recorded in Book 1776 and Page 69.
3. The cement and orangeburg supply lines in the system are old, unreliable, and are leaking, causing flooding on some properties.
4. The 1993 irrigation water bill was sent to you and has not been paid or forwarded to owners.
5. Neither the homeowner's, nor any association, have been provided with plans for the irrigation system. If you expect someone other than yourself to maintain the system in the future, you need to supply as-built plans to identify line locations, sizes, etc.
6. The common area (traffic circle) landscaping has not been completed.

The City is concerned that these deficiencies be corrected in a timely manner. Please let me, or Karl Metzner, know your specific plans and timelines for correcting the problems. Failure to respond to these deficiencies may result in enforcement action by the City. Please copy all correspondence to: Ed Olson, 2380 East Piazza Place, Grand Junction, CO 81506.

Sincerely,

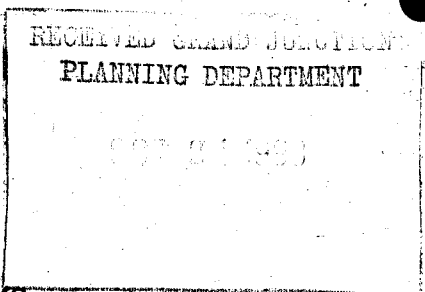
Dan E. Wilson
City Attorney

DEW/cl

WP:H:\PTARSIGF

C: Karl M
Ed Olson

Kathy



20 OCTOBER 1993

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (303) 244-1599

JOHN SIEGFRIED
c/o QED SURVEYING SYSTEMS
1018 COLORADO AVENUE
GRAND JUNCTION, COLORADO 81501

Re: Improvements to 27 1/2 and G

Dear John,

This letter is written to you pursuant to two improvements agreements recorded at Book 1821, Pages 434 and 435 of the Mesa County land records.

The improvements agreements and the irrevocable letter of credit in your favor, in the principal sum of \$35,000.00, issued on Burns National Bank of Durango, Colorado, to secure design and installation of improvements to 27 1/2 Road and G Road, were required as a condition of approval of Ptarmigan Estates subdivision.

Ptarmigan Estates subdivision has been completed for some time and the improvements, as detailed in the above referenced improvements agreements, have not been constructed. It is for this reason that the City hereby demands that the improvements to 27 1/2 and G Roads be designed and be constructed to City standards, in accordance with the improvements agreements, on or before November 30, 1993.

Should the improvements not be constructed on or before November 30, 1993, the City will have no option but to draw against the credit and complete the improvements.

Please provide engineered design and detail for my review on or before November 1, 1993. All design and detail must be in accordance with SSID.

If have questions call at your earliest convenience.

CITY OF GRAND JUNCTION
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

by: J. Don Newton
J. Don Newton, P.E.
City Engineer
250 North 5th Street
Grand Junction, CO 81501
(303) 244-1559

John Siegfried
page 2

pc: / Kathy Portner
Jim Shanks
Dan Wilson

AGREEMENT

1. **Parties:** The parties to this Agreement ("the Agreement") are Ptarmigan Estates, a Colorado General Partnership, by John A. Siegfried ("the Developer") and the City of Grand Junction, Colorado ("the City").

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

2. **Effective Date:** The effective date of this Agreement will be December 6, 1993.

RECITALS

The Developer has developed property within the City known as Ptarmigan Estates (the "development") and by this Agreement does convey to the City certain property to be held by the City as security for and to guarantee the payment of or construction of, improvements to the intersection of 27 1/2 Road and G Road all within the City of Grand Junction, Colorado.

The City seeks to protect the health, safety and general welfare of the community by requiring the completion of various road improvements and by limiting the harmful effects of substandard development.

The purpose of this Agreement is to protect the City from bearing the cost of completing necessary improvements and is not executed for the benefit of materialmen, laborers, or others providing work, services or material to the development, the Developer 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. By Ordinance, the Developer is legally obligated to design, construct and install, at its own expense, certain improvements to 27 1/2 Road and G Road, all as more particularly described on the attached exhibit A and B, incorporated herein by this reference as if fully set forth. The Developer has requested that his obligation to design, construct and install the improvements be delayed until June 1, 1994, and the City has agreed.

4. To secure the delayed performance of his obligations to design, construct and install the improvements, the Developer has entered into this Agreement with the City.

5. The Developer shall deliver to the City, acting by and through its City Attorney, general warranty deeds conveying lot 1 of the replat of lot 9 and lot 10, Ptarmigan Estates Subdivision, (hereinafter the "Lots"), to the City of Grand Junction, Colorado. The Lots and the deeds thereto, shall be conveyed to the City free and clear of all liens and encumbrances. The deeds shall be recorded in the land records of Mesa County, Colorado. The Developer shall pay any and all costs of recordation, release and conveyance. Conveyance of the Lots to the City shall secure the payment of \$26,600.00 to the City by the Developer.

6. If the Developer fails to pay \$26,600.00 in cash to the City on or before June 1, 1994, or fails to complete the Improvements, in accordance with City requirements, with completion defined as inspection and acceptance by the City, on or before June 1, 1994, the City may sell, offer to sell or retain the Lots, as determined in its sole and absolute discretion, without notice to, or recourse by, the Developer. Any value received by the City over and above \$26,600.00 shall first be deemed payment to the City of the transaction costs and second shall be deemed a penalty and shall be forfeited to the City. The City shall not sell or offer to sell the Lots prior to June 1, 1994.

7. The City will have the right to complete the improvements or it may hold and commingle the proceeds received under this Agreement or received from the sale of the Lots, if any. The Developer shall have no legal claim, vested right or expectation that the improvements must be designed, installed or completed by the City if the Developer pays for the improvements in lieu of their construction.

8. The Developer shall, for the term of this Agreement, continuously offer the Lots for sale and may sell the Lot(s) for whatever price and terms as he deems appropriate. If either or both of the Lots are contracted for sale, the Developer shall pay \$26,600.00 to the City. Any and all contracts for sale between the Developer and a purchaser(s) shall close, if at all, on or before May 31, 1994. Upon receipt of \$26,600.00 in cash or certified funds, plus closing costs, the City will convey the Lots to the Developer free and clear of liens and encumbrances by special warranty deed. The Developer shall be solely responsible for costs of contracting and sale of the Lot(s), if any, and for the payment of real estate commissions, title insurance, surveys and other costs.

9. 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. Such amendment or modification shall be properly notarized before it may be effective.

10. Should the City be required to resort to litigation to enforce the terms of this Agreement, the City, if successful in whole or in part, will be entitled to costs, including reasonable

attorney's fees, from the Developer. If the court awards relief to both parties, the attorney's fees otherwise payable to the City may be equitably reduced.

11. The City does not warrant by this Agreement that the Developer, his agent or agents or buyer or buyers are entitled to other approval(s) required by the City, if any, before the transfer of ownership or commencement of construction on the Lot(s).

12. No person or entity who or which is not a party to this Agreement will have any right of action under this Agreement.

13. The benefits and obligations of this Agreement are personal and may not be assigned by the Developer without the express written approval of the City. Such approval may not be unreasonably withheld, but any unapproved assignment is void. There is no prohibition on the right of the City to assign its rights under this Agreement.

14. Personal jurisdiction and venue for any civil action commenced by either party to this Agreement whether arising out of or relating to the Agreement, improvements, or any action to collect against security will be deemed to be proper only if such action is commenced in Mesa County. The Developer expressly waives his right to bring such action in or to remove such action to any other court whether state or federal.

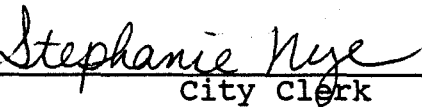
City of Grand Junction

By: _____



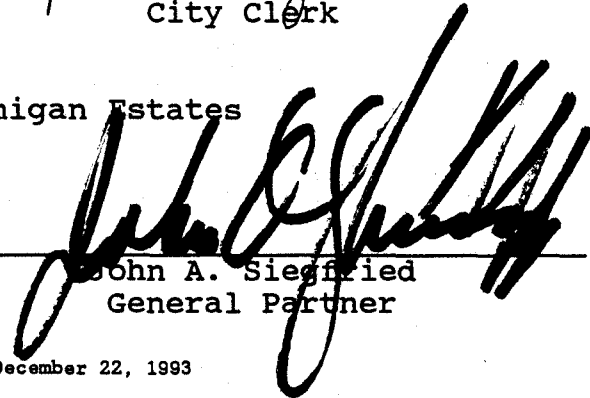
Mark K. Achen
City Manager

EST: _____


City Clerk

Ptarmigan Estates

By: _____



John A. Siegfried
General Partner

ptares:December 22, 1993





City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (303) 244-1599

January 24, 1994

Ralph W. Knapp
2368 E. Piazza Place
Grand Junction, CO 81506

RE: Ptarmigan Estates irrigation system

Dear Mr. Knapp:

I have researched the Community Development files on the Ptarmigan Estates Subdivision (files #39-89 and #55-89) to try to answer your questions regarding the irrigation system. The following information represents the results of my research. All of the following documents are contained in File #55-89.

1. A photocopy of a letter dated February 6, 1990 to John Siegfried from Karl Metzner states that a gravity flow irrigation system supplying adequate irrigation water is required. The cost estimate is detailed in the letter. The letter further states that a licensed engineer must certify that the system has been properly installed and tested prior to a release of the improvements guarantee.
2. The Release from Improvements Agreement/Guarantee for all required improvements for Ptarmigan Estates. The Release has been signed by all requisite service providers; however, that document has not been signed for irrigation approval. That signature line is noted "under separate cover (LW)". That note in all likelihood refers to the original utilities composite that was submitted to the City for review. That utility composite includes the Ptarmigan Estates irrigation system and is stamped by Robert S. Coburn, a licensed engineer.
3. A letter dated March 4, 1993 to John Siegfried from Dan Wilson listing the complaints of the property owners and requesting Mr. Siegfried respond to the deficiencies.

The Community Development files do not contain plans, specifications or estimates of cost to construct the irrigation system other than as detailed on the Utility Composite. I would suggest that if you need or desire that type of information that you contact Mr. Coburn or Mr. Siegfried.

At this point, it is the City's position that the deficiencies in the irrigation system are an issue between the property owners and the developer. Further inquiries or actions should be directed to Mr. Coburn and/or Mr. Siegfried.

Sincerely,



Katherine M. Portner
Planning Supervisor

xc: Larry Timm, Community Development Director
Jim Shanks, Public Works Director
Dan Wilson, City Attorney

**PTARMIGAN ESTATES HOA
P.O. BOX 3754
GRAND JUNCTION, CO 81502**

March 24, 1994

Ms. Katherine M. Portner
City of Grand Junction
250 North 5th Street
Grand Junction, CO 81501-1599

RE: Ptarmigan Estates Subdivision

Dear Ms. Portner,

We have finally completed the process of getting our HOA formalized. This allows us to spend more time on the other important issues facing the subdivision. One of the most critical issues we must deal with is the problem we continue to encounter with the irrigation system. We had plans and specifications developed for the repairs and bid the work. The low bid we received was for \$6,750. There are 27 lots in the subdivision. Of these 27 lots, 25 are members of the HOA. Some of the lots were sold prior to filing the covenants, so we have some lot owners that have chosen not to be involved in the HOA. This \$6,750 equates to \$270 per lot. So, as you may expect, this is very important to all the HOA members. Additional discussion of this issue can be found at the end of the irrigation discussion.

Your letter of January 24, 1994(attached) indicates that the City had in its possession an Improvements Agreement/Guarantee for the irrigation system. We believe this was for an amount of \$7,800.

Your letter of January 24, 1994 indicates that this money was released by the City even though no sign off was provided for the irrigation system. We do not understand the significance of your reference to "under separate cover (LW)". We do not understand why this release was granted. We have attached a letter from the City dated February 6, 1990 that says in part that the developer "will provide the required engineer's certification as part of the release of the improvements guarantee process specified in the Grand Junction Zoning and Development Code.". Without the engineering certification, the release should not have occurred. We have attached a letter from the City dated March 4, 1993 to the developer. Paragraph 2 states

" The irrigation system has not been inspected, tested, and approved by a licensed engineer as required by letter dated Feb. 6, 1990 and recorded in Book 1776 and Page 69."

It is our understanding that the City holds the deed to Lot 1, Replat Lot 9, Block 1 in Ptarmigan Estates. We request that the City pay for the repairs to our irrigation system and reimburse itself at the time this lot sells.

Earlier in this letter I indicated that some of the lots in this subdivision were sold prior to the recording of the CCRs. How does this happen? We are under the impression that the final plat and other documents were to be recorded together. I am not sure of the date the Plat was recorded, however it was signed by the City in late January, 1990. The CCRs are dated February 7, 1990 but were not recorded until October 5, 1990. During the interim between recording of the plat and recording of the CCRs, six lots were sold. These lots are not subject to the same requirements as the other 21 lots within the subdivision. I presume you can imagine the problems this creates for the HOA.

We are available to discuss this situation. However, time is becoming critical due to the arrival of the irrigation season.

Sincerely,
PTARMIGAN ESTATES HOA

Ralph W. Knapp, President



xc: Mark Achen
Jim Shanks
Dan Wilson

Enclosures-Letter of February 6, 1990
Letter of March 4, 1993
Letter of January 24, 1994

To: Kathy Portner
Cc: Dan Wilson
From: John Shaver
Subject: Letters
Date: 3/28/94 Time: 1:50p

Kathy,

This message will confirm our conversation of earlier today regarding the letters from the Ptarmigan HOA and Mark Gamble.

As we discussed, there is not much more that we can tell the Ptarmigan HOA about the irrigation. You may as a courtesy want to respond but other than telling them that there is an engineer signed and stamped drawing and that the City does not and will not enforce irrigation, there's not much to say on the topic. If the HOA doesn't want to pay the \$270.00 per lot then their only recourse is and remains, filing suit against Seigfried and/or his engineer. If that's what they choose to do they'll all be spending much more than \$270.00 a piece.

The reference to the City holding title to lot 9 is correct but the Lot was pledged as security for the completion of road improvements. (By the way I have sent Seigfried a demand letter for the balance of what he owes for the road improvements. The agreement says that when one lot sells the balance is due in full, lot 10 sold a few weeks ago.) There is no way that the security for the road improvements can be applied to the irrigation system.

Do you know how the CCR's failed to get recorded with the plat? Of the comments in Knapp's letter the failure to timely record the CCR's is most troubling. We have talked before about the need to ensure complete recordings, you may want to look into this and see what happened. This whole fiasco points out another needed text amendment, that is to require a HOA for all major subdivisions.

The letter from Gamble does not answer the question(s) that you asked. He needs to provide answers about locations, sizes and other details that we would ask if these came in as new billboards applications. For him to say that he wants to replace existing structures doesn't sufficiently answer what he has in mind/expects from the City under Karl's letter. I would advise that you send him a letter again asking for the specifics of the replacement proposal. I'll be happy to help if you need or want.

The original letters are on their way back to you. Give a call if I may be of assistance.

jps



Grand Junction Community Development Department
Planning • Zoning • Code Enforcement
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(303) 244-1430 FAX (303) 244-1599

April 5, 1994

Ralph W. Knapp
Ptarmigan Estates HOA
P.O. Box 3754
Grand Junction, CO 81502

Dear Mr. Knapp:

This letter is in response to your letter dated March 24, 1994.

As stated in our letter dated January 24, 1994, the City's position is that the claimed deficiencies in the irrigation system are an issue between the property owners and the developer. As referenced in your letter, the City does hold title to lot 9, block 1 Ptarmigan Estates. However, that lot is security for the completion of improvements to 27 1/2 Road and a portion of G Road only. It cannot be applied to any other improvements. Your only recourse is, and remains, to file suit against the developer and/or engineer, not the City.

Sincerely,

A handwritten signature in cursive script, appearing to read "Katherine M. Portner".

Katherine M. Portner
Planning Supervisor

xc: Mark Achen, City Manager
John Shaver, Assistant City Attorney

PTARMIGAN ESTATES HOA
P.O. BOX 3754
GRAND JUNCTION, CO 81502

~~Ptarmigan Investments
P.O. Box 9088
Grand Junction, CO 81502~~

City of Grand Junction

1994 Homeowner's Association Assessments
For
Lot 1 of Replat of Block 1, Lot 9

1994 Annual Assessment-	\$65.00
1994 Water Assessment -	\$18.07
1994 Special Assessment-	\$135.00

Total Amount Due	\$218.07

2ND Notice 4-8-94

Make checks payable to Ptarmigan Estates HOA

Please pay promptly

Payments are due April 1, 1994

Payments not received by the due date will be assessed a 1% per month late fee

PTARMIGAN ESTATES HOA
P.O. BOX 3754
GRAND JUNCTION, CO 81502

April 8, 1994

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT

APR 10 1994

Ms. Katherine M. Portner
City of Grand Junction
250 North 5th Street
Grand Junction, CO 81501-1599

RE: Ptarmigan Estates Subdivision

Dear Ms. Portner,

Thank you for clarifying the City's position on the "claimed deficiencies in the irrigation system" in our subdivision. We would appreciate the same clarity in your answers to the following:

- 1) Why was the \$7,800 released without the engineer's certification?
- 2) Why is the City holding title to Lot 1, Replatted Lot 9, Block 1 as "security for the completion of improvements to 27 1/2 Road and a portion of G Road" since the City has an Improvements Agreement/Guarantee for this work?
- 3) Why were the CCRs for our subdivision filed approximately 8 months after the plat?

We are available to discuss this situation.

Sincerely,
PTARMIGAN ESTATES HOA

Ralph W. Knapp
Ralph W. Knapp, President

xc: Mark Achen
John Shaver



Grand Junction Community Development Department
Planning • Zoning • Code Enforcement
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(303) 244-1430 FAX (303) 244-1599

June 17, 1994

Ralph W. Knapp
2368 E. Piazza Place
Grand Junction, CO 81506

RE: Ptarmigan Estates irrigation system

Dear Mr. Knapp:

I apologize for being so long in responding to your most recent letter. I will try to clarify the points you requested.

1. The only reference to \$7,800 I can find in the file is in a letter from Karl Metzner to Mr. Siegfried, dated Feb. 6, 1990, which indicates that to be the estimated cost of the irrigation system improvements. The City does not normally require that irrigation improvements be guaranteed. Consistent with that policy, I can find no evidence that the City ever actually had funds guaranteed for the irrigation system. It is the City's opinion that the utility composite, including the Ptarmigan Estates irrigation system, as stamped by Robert S. Coburn, a licensed engineer, suffices as the engineer's certification.
2. The City had been holding title to Lot 1 of the Replat of Lot 9, Ptarmigan Estates as security for the completion of improvements to 27 1/2 Road and a portion of G Road. The letter of credit the City had originally to guarantee those improvements has expired. Mr. Siegfried has given the City the funds for the required improvements and we are now in the process of transferring the deed for Lot 1 of the Replat of Lot 9 back to him.
3. CCRs are the developer's responsibility. I have no explanation why the CCRs for Ptarmigan Estates were filed so long after the recording of the plat. It is normal practice to record the covenants immediately after recording the plat.

I hope this further clarifies for you the City's position on the Ptarmigan Estates irrigation issues.

Sincerely,

A handwritten signature in cursive script, appearing to read "Katherine M. Portner".

Katherine M. Portner
Planning Supervisor

PTARMIGAN ESTATES HOA
P.O. BOX 3754
GRAND JUNCTION, CO 81502

June 22, 1994

Ms. Katherine Portner
City of Grand Junction
250 North 5th Street
Grand Junction, CO 81501-1599

RE: Ptarmigan Estates

Dear Ms. Portner,

Your letter of June 17, 1994 is appreciated but raises additional questions. You reference the February 6, 1990 letter from Metzner to Siegfried as containing the cost estimate for the irrigation system. Please note the second paragraph of that letter states "You understand that this system is a requirement of the subdivision approval, and that a licensed engineer must certify that the system has been properly installed and tested prior to a release from your improvements guarantee." In order to pursue the engineer we need this certification. If this certification was not given to the City, a release from the improvements agreement/guarantee should not have been granted.

We have reviewed the release from improvements agreement/guarantee and see that it does not have a signature, date or stamp of the PE that inspected the system. The form is quite clear that a PE must sign off on the form. Without this sign off, the release from improvements agreement/guarantee should not have been granted.

We have reviewed the improvements agreements for G Road and 27 1/2 Road dated January 18, 1991 which contain the handwritten note stating, "to replace improvements agreement recorded in Book 1776, Page 70(71) released in error. KP 1/22/91". Please explain the error that occurred in the release of the improvements agreement/guarantee.

You state that the CCRs are the developer's responsibility. We have reviewed the zoning and development code and our interpretation is that the CCRs are to be submitted with the final plat and the Administrator is to file the covenants as well as evidence of incorporation of homeowners association. This would seem to indicate some responsibility on the part of the City.

In summary, we request the following;

- 1) A copy of the utility composite.
- 2) A copy of the certification required by the February 6, 1990 letter from Metzner to Siegfried.
- 3) A copy of the sign off that is required by the release from improvements agreement/guarantee.
- 4) An explanation of the error that resulted in the release of the original improvements agreements for G Road and 27 1/2 Road.
- 5) An explanation of why the CCRs were not handled in accordance with the zoning and development code.

An early response to this request would be appreciated.

Sincerely,



Ralph W. Knapp, President

xc-Mark Achen
John Shaver



Grand Junction Community Development Department
Planning • Zoning • Code Enforcement
250 North Fifth Street
Grand Junction, Colorado 81501-2668
(303) 244-1430 FAX (303) 244-1599

July 13, 1994

Dear Property Owner:

On July 6, 1994, two residents of Ptarmigan Estates met with the City Council and expressed the Homeowner's Association's frustration in dealing with an inadequate irrigation system. They felt the developer had not met his responsibility to install an adequate functioning system and requested the City assure the necessary upgrades and repairs were done. Similar concerns have been raised informally by residents in Ptarmigan Ridge Subdivision.

Although the Council did not agree to take responsibility for the irrigation system problems, they did agree to allow the homeowners the opportunity to discuss further with Council the problems they are experiencing in the two subdivisions. Time has been scheduled on the July 18th City Council workshop for the homeowners to present the issues. The developer of these two subdivisions will also be invited to attend the work session. The workshop is at 7:00 p.m. at Two Rivers Convention Center. In the interest of time, it would be appreciated if a spokesperson could be identified for each of the subdivisions.

If you have questions you can contact Kathy Portner at 244-1446.
Thank you.

Sincerely,

A handwritten signature in black ink that reads "Larry Timm". The signature is written in a cursive style.

Larry Timm
Director of Community Development



Printed on recycled paper

To: Kathy Portner
Cc: Larry Timm, Dan Wilson
From: John Shaver
Subject: Ptarmigan irrigation
Date: 7/14/94 Time: 10:40a

Kathy,

Karl Metzner and I spoke yesterday regarding his involvement in this issue. Karl had a surprisingly good recollection of the facts. That recollection included the following information:

1. The last paragraph on the letter from Karl to Siegfried was added by and signed by John in an attempt to get/keep the approval moving.
2. Karl is "almost positive" that the city did receive a letter from Coburn stating that the system was engineered and operational. Karl's recollection is that it was a one paragraph letter.
3. Karl said that the reference to "under separate cover" on the improvements release was just the letter from Coburn. Karl did not recall a design or drawing of the system.

I did not request that Karl attend the workshop Monday night but did inform him that he may be asked to do so. He asked for some notice if he is to attend.

The statute of limitation may have run for a City contract claim based on the letter signed by Siegfried. The "may have" is dependant on when the cause of action accrued. I would suggest that the cause accrued in this case when the city was first made aware of the problems although there may be an argument that it was latter. As you can see the issue could be very difficult to determine and if determined adverse to the city could be very costly. The limitation period has not run for an action by the homeowners against "any architect, contractor, builder or builder vendor, engineer, or inspector..." on the project. 13-80-104 C.R.S. provides that an action must be commenced within two years after the claim arises or in any event not more than six years following "substantial completion of the improvements to the property." Unfortunately the case of Calvaresi v. National Development Co. stands for the proposition that real estate developers are not included in the class of persons listed in the statute.

I did some quick research and was unable to find any cases on point.

As I see it there are 3 legal theories on which to base a recovery. Certainly the theories are not exclusive and the best course of action may be to combine the actions. The first and the best is the HOA filing against Siegfried; the second is the city filing a contract action against Siegfried based on the letter and arguing that the statute of limitations has not run. The last theory is that the subdivision has never been fully and finally approved because of the breach of the letter conditions and the failure of the improvements release to be signed. This option could get quite messy. Setting a hearing to try and cajole Siegfried into doing the right thing will probably not work and the staff will likely be expected to find another solution. The best solution is to not get more deeply involved. That position may not be politically palatable but is most legally and practically expedient.

E.B. HAMILTON, JR.
Attorney At Law
Post Office Box 292
Durango, Colorado 81302
(303) 247-0916

July 18, 1994

Ptarmigan Estates Homeowners Association
City of Grand Junction Planning Staff
City of Grand Junction City Council

Re: Ptarmigan Estates Irrigation

Ladies and Gentlemen:

Ptarmigan Investments has made very effort, using qualified engineers and contractors, to support the Ptarmigan Estates system, long after it should have been maintained by the Association.

Irrigation water systems never satisfy all of the owners all of the time. Some of the more important problems are:

A. Colorado water law. When water is changed from agriculture to lawn watering, the use is limited to that historically available. This means people can't water all day every day. There have been conflicts with Applecrest and Crown Heights intercepting water that should have gone to Ptarmigan Estates. We largely solved this problem by constructing, in the spring of 1993, a new and better 8-inch supply line, but people can't expect water constantly to be available.

B. Silting. We believe the entire system has never been flushed. Silt can build up one to two inches a year, and the system could be clogged.

C. Homeowners Association changes. The Association has made changes in the system that are not under our control and were not done with our approval. Unnecessary concrete risers were installed (we had a choke installed, which accomplished the same back pressure). Our system was designed by competent engineers and contractors, and was adequate in their opinion and the opinion of Bill Klapwyck, Manager of Grand Valley Water Users' Association.

Handwritten notes:
Dave Turner
Bruce Phillips
C Council
Lamy T
Kathy P
MKA
Dave Vay

Handwritten notes:
file
7/20/94
CR

Ptarmigan Estates Homeowners Association
City of Grand Junction Planning Staff
City of Grand Junction City Council
July 18, 1994
Page 2

We have already participated in replacement of most of the concrete line along G Road, and it is time for other parties using the line to pay for any further repairs. A flushing may solve the problem.

Two or three years ago, at a meeting with homeowners, Mr. Siegfried was told that they had water 80% of the time. This is superior performance for any irrigation system in residential use.

In short, we feel we have gone beyond our legal obligations toward helping with the system, and we feel no moral or legal obligation to care for it forever.

Very truly yours,



E. B. Hamilton, Jr.
(303) 259-3615

EBH;JR/bdh



18 July 1994

Ralph W. Knapp
c/o Ptarmigan Estates Homeowners Association
P.O. Box 3754
Grand Junction, CO 81502

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (303) 244-1599

Re: Your letter of July 15, 1994

Dear Mr. Knapp,

This letter will confirm my receipt of a photocopy of a letter dated July 18, 1994 sent to City Manager Mark Achen by you.

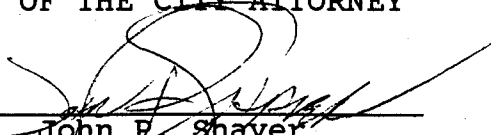
In that letter you say that during a discussion we had in Mr. Achen's office that I stated that a letter dated February 6, 1990 signed by Karl Metzner and John Siegfried, constitutes a contract. It is my distinct recollection of the meeting to which you refer, which was held on June 27, 1994, that you, Mr. Koler, Mr. Achen, Ms. Portner and I were discussing various legal and practical approaches to address the problems that you have experienced with the Ptarmigan Estates irrigation system. A contract theory was mentioned and briefly discussed as a possible avenue of recourse, but I did not and have not categorically concluded that the terms of the February 6, 1990 letter are enforceable. If my comments left you with that misimpression, I am sorry.

The City Council has not directed that the City Attorney initiate legal action based on the February 1990 letter and unless and until authorized, legal action will not occur. As you know, the Council will be considering the Ptarmigan Estates irrigation issue at the July 18, 1994 workshop session. If the Council directs further action be taken on the matter, then Mr. Wilson and I will fully advise the Council on the various legal issues.

If you should have any questions about this letter or if I may be of assistance to you, please call.

OFFICE OF THE CITY ATTORNEY

by: _____


John E. Shaver
Assistant City Attorney
250 N. 5th Street
Grand Junction, CO 81501
(303) 244-1501

pc: Mr. Mark Achen
Ms. Kathy Portner

**CITY OF GRAND JUNCTION
CITY COUNCIL WORKSHOP**

DATE: 7/18/94
STAFF: Kathy Portner
Community Development

ACTION REQUESTED: No formal action required.

EXECUTIVE SUMMARY: Council has agreed to hear the concerns of the residents of Ptarmigan Estates and Ptarmigan Ridge Subdivisions regarding problems with the irrigation systems.

FISCAL IMPACT: Not applicable at this time.

BACKGROUND/ISSUES/OPTIONS: On July 6th two residents of Ptarmigan Estates met with the City Council and expressed the Homeowner's Association's frustration in dealing with an inadequate irrigation system. They feel the developer has not met his responsibility to install an adequate functioning system and requested the City assure the necessary upgrades and repairs are done. Similar concerns have been raised informally by residents in Ptarmigan Ridge Subdivision. City staff sent out notification to property owners within these two subdivisions that they would have an opportunity to discuss the issues with Council on July 18th. Notification was also sent to the developer.

The Zoning and Development Code in effect at the time of the approval of Ptarmigan Estates and several filings of Ptarmigan Ridge stated that if irrigation water was to be provided that plans for such should be submitted to the City. The improvement agreements and guarantees do not include irrigation in the cost estimates; however, the improvement release forms at that time did include a space for the developer's engineer to sign off that the irrigation system was installed and functioning. At the time the SSID manual was adopted the issue of whether the City should get involved in the review of private irrigation systems was discussed. The Council ordinance adopting the SSID manual states "The Council, at present, determines that the City should not be reviewing details of irrigation systems, nor should the City be in the position of enforcing rights to irrigation water."

Attached are the correspondence and documents from the Ptarmigan Estates file referencing the irrigation system.

Kathy

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT

JUL 27 1994



25 July 1994

City of Grand Junction, Colorado
250 North Fifth Street
81501-2668
FAX: (303) 244-1599

E.B. Hamilton Jr.
c/o Ptarmigan Investments
P.O. Box 292
Durango, CO 81301

re: Ptarmigan Estates - Your letter of July 18, 1994

Dear Mr. Hamilton,

By this letter the City acknowledges receipt of your letter dated July 18, 1994.

As you are aware, representatives of the Ptarmigan Estates Homeowners Association have demanded that the City research purported problems with the Ptarmigan Estates irrigation system. This letter is an attempt to amicably solicit your cooperation to work toward a mutually satisfactory resolution of the issues.

Your letter of July 18, 1994 confirms that the system was designed by competent engineers and contractors and that it was accepted by the manager of the Grand Valley Water Users Association. Those representations are appreciated, but because of Ptarmigan Investments' failures to act in conformance with the Zoning and Development Code, as noted below, the City Council has directed me to contact you to request specific documentary support for the assertions made in paragraph C. of your July 18, 1994 letter.

It has recently come to the City's attention that the release of the improvements agreement pertaining to irrigation has not been signed and stamped by a registered professional engineer. Section 5-4-12 of the Zoning and Development Code, which pertains to the completion of improvements, provides that a developer shall submit a written request for a release from the improvement agreement once construction and approval of improvements has been completed. Implicit therein is a requirement that the appropriate person, in this case the engineer who designed and inspected the completed irrigation system, attest by his signature and stamp that the improvements have been completed as required. The Zoning and Development Code further requires that the developer's level of responsibility for the improvements shall be established by the agency accepting the improvements for maintenance.

In reviewing the Community Development Department files for Ptarmigan Estates, no written request for a release on the irrigation system was found, nor does the file contain a request for a certificate of completion and release of responsibility for the irrigation improvements. Given Ptarmigan Investments' failure to provide an engineer's certification in an appropriate and

Mr. E.B. Hamilton
25 July 1994
page 2

complete form, and its failure to secure a proper release in accordance with the provisions of the Zoning and Development Code, the City Council requires that written and documentary evidence be supplied to show that an engineer personally inspected the completed irrigation system and that the system was properly designed, installed and is fully operational. The required information must be received in my office on or before August 1, 1994.

A release of improvement agreement was recorded in Book 1798 at Page 765, but it is the City's position that such release is ineffective to discharge Ptarmigan Investments' obligations under the Zoning and Development Code. The Zoning and Development Code specifically provides that a release of an improvement agreement does not constitute a certificate of completion and release of responsibility.

If Ptarmigan Investments fails or refuses to provide sufficient written and/or documentary evidence to support the representations made in the July 18, 1994 letter, the City may initiate legal action pursuant to 11-4-2 of the Zoning and Development Code. Section 11-4-2 provides that any failure to comply with any provision of the Code shall be subject to a civil penalty up to \$300.00 per day, per offense, up to a maximum of \$5000.00. Criminal sanctions may also apply.

Please call if you should have any questions. An expedited delivery of the required documentation would be appreciated and will forestall the initiation of legal action.

OFFICE OF THE CITY ATTORNEY

by: _____


John P. Shaver

Assistant City Attorney
250 N. 5th Street
Grand Junction, CO 81501
(303) 244-1501

pc: Kathy Portner
Larry Timm