Table of Contents

File **FPP-1996-048** Name: Moonrise East / Sunset Village – NE Corner of 25 ½ Road / F ¾ Road

Present	Scanned	
		A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the ISYS retrieval system. In some instances, items are found on the list but are not present in the scanned electronic development file because they are already scanned elsewhere on the system. These scanned documents are denoted with (**) and will be found on the ISYS query system in their designated categories. Documents specific to certain files, not found in the standard checklist materials, are listed at the bottom of the page. Remaining items, (not selected for scanning), will be listed and marked present. This index can serve as a quick guide for the contents of each file.
X	X	**Table of Contents**
		***Review Sheet Summary**
X	X	***Application form**
		Review Sheets
		Receipts for fees paid for anything
X	X	***Submittal checklist**
		***General project report**
		Reduced copy of final plans or drawings
X		Reduction of assessor's map.
		Evidence of title, deeds, easements
X	X	***Mailing list to adjacent property owners**
		Public notice cards
		Record of certified mail
X	X	Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		***Final reports for drainage and soils (geotechnical reports)**
		Other bound or non-bound reports
		Traffic studies
X	X	***Review Comments**
X		***Petitioner's response to comments**
		***Staff Reports**
		***Planning Commission staff report and exhibits**
		***City Council staff report and exhibits**
		***Summary sheet of final conditions**

DOCUMENT DESCRIPTION:

		Project Withdrawn			
X	X	Planning Commission Minutes – 7/2/96 - ** - **PULLED**			
X		Development Improvements Agreement – not signed – not scanned with file			
X		Planning Commission Notice of Public Hearing mail-out sent 6/24/96			
X		Grand Junction Board of Realtors Deed of Trust – 7/31/92			
X		Commitment to Insure – 7/27/96			
X		Preliminary Drainage Report – 11/29/95			
X	X	Correspondence			
X	X	Drainage Report – 2/1/96			
X	X	General Project Report			
X		Warranty Deed – Bk 1915 / Pg 242 - not conveyed to City			
X	X	Grayscale Maps			
X	X	Composite Drawing			
X	X	Geotechnical Investigation – 2/20/96			

DEVELOPMENT APPLICATION

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

Receipt _____
Date _____
Rec'd By _____
File No. FPP-96-48

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

PETITION	PHASE	SIZE	LOCATION	ZONE	LAND USE
☒ Subdivision Plat/Plan	☐ Minor ☒ Major ☐ Resub	3.4 AC	25 1/2 RD & F 3/4 RD	RSF 4	
☐ Rezone				From: To:	
☐ Planned Development	☐ ODP ☐ Prelim ☐ Final				
☐ Conditional Use					
☐ Zone of Annex					
☐ Variance					
☐ Special Use					
☐ Vacation					☐ Right-of Way ☐ Easement
☐ Revocable Permit					

☒ PROPERTY OWNER	☐ DEVELOPER	☒ REPRESENTATIVE
MARC S. LAIRD		BARRY L. HAAG
Name	Name	Name
686 25 1/2 ROAD		3004 BOOKCLIFF AV
Address	Address	Address
GRAND JUNCTION CO 81505		GRAND JUNCTION CO 81504
City/State/Zip	City/State/Zip	City/State/Zip
245-2886		434-4679
Business Phone No.	Business Phone No.	Business Phone No.

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

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

Barry L Haag — 7-1-96
Signature of ~~Person~~ Completing Application — Date

Marc S. Laird — 7-1-96
Signature of Property Owner(s) - attach ~~additional sheets~~ if necessary — Date

SUBMITTAL CHECKLIST

MAJOR SUBDIVISION: FINAL

Location: 25½ RD Project Name: SUNSET VILLAGE

Date Received 2-29-96

Receipt # 4949

File # FPP-96-48

ITEMS		DISTRIBUTION																												
DESCRIPTION	SSID REFERENCE	● City Community Development	● City Dev. Eng.	● City Utility Eng.	● City Property Agent	● City Parks/Recreation	● City Fire Department	● City Attorney	● City G.J.P.C. (8 sets)	O City Downtown Dev. Auth.	● City Police	● County Planning	O County Building Department	● County Surveyor	O Walker Field	O School Dist. #51	● Irrigation District (6 Ditch Rider)	● Drainage District 6J	● Water District UTE	O Sewer District	● U.S. West	● Public Service	O GVRP	O CDOT	O Corps of Engineers	O Colorado Geologic Survey	O U.S. Postal Service	● ~~Persigo WWTF~~	● TCI Cable			TOTAL REQ'D.
● Application Fee $20 + $15/AC	VII-1	1																												1
● Submittal Checklist*	VII-3	1																												1
● Review Agency Cover Sheet*	VII-3	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
● Application Form*	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
● Reduction of Assessor's Map	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
● Evidence of Title	VII-2	1			1			1																						3
O Appraisal of Raw Land	VII-1	1			1	1																								3
● Names and Addresses*	VII-2	1																												1
● Legal Description*	VII-2	1			1																									2
O Deeds	VII-1	1			1			1																						3
O Easements	VII-2	1	1	1	1			1													1	1	1						1	8
O Avigation Easement	VII-1	1			1			1							1															4
O ROW	VII-2	1	1	1	1			1													1	1	1						1	8
O Covenants, Conditions & Restrictions	VII-1	1	1					1																						3
O Common Space Agreements	VII-1	1	1					1																						3
● County Treasurer's Tax Cert.	VII-1	1																												1
● Improvements Agreement/Guarantee*	VII-2	1	1	1				1																						4
O CDOT Access Permit	VII-3	1	1																											2
O 404 Permit	VII-3	1	1																											2
O Floodplain Permit*	VII-4	1	1																											2
● General Project Report	X-7	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	23
● Composite Plan	IX-10	1	2	1	1																									5
● 11"x17" Reduction Composite Plan	IX-10	1				1	1	1	8	1	1	1	1				1	1	1	1	1	1	1	1	1		1	1	1	19
● Final Plat	IX-15	1	2	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	23
O 11"X17" Reduction of Final Plat	IX-15	1							8	1	1	1			1	1	1	1	1	1	1	1	1				1		1	15
● Cover Sheet	IX-11	1	2																											3
● Grading & Stormwater Mgmt Plan	IX-17	1	2															1							1	1			1	7
O Storm Drainage Plan and Profile	IX-30	1	2															1			1	1	1						1	8
● Water and Sewer Plan and Profile	IX-34	1	2	1			1												1	1	1	1	1					1	1	11
● Roadway Plan and Profile	IX-28	1	2															1												4
● Road Cross-sections	IX-27	1	2																											4
O Detail Sheet	IX-12	1	2																											4
O Landscape Plan	IX-20	2	1	1					8																					13
● Geotechnical Report	X-8	1	1																						1					4
O Phase I & II Environmental Report	X-10,11	1	1																											3
● Final Drainage Report	X-5,6	1	2															1												5
O Stormwater Management Plan	X-14	1	2															1							1					6
O Sewer System Design Report	X-13	1	2	1																1										5
O Water System Design Report	X-16	1	2	1															1											5
O Traffic Impact Study	X-15	1	2																					1						4
● Site Plan SHOW SETBACKS FROM STRUCTURES THAT WON'T BE REMOVED	IX-29	1	2	1	1		1		8																					14

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

PRE-APPLICATION CONFERENCE

Date: 1-24-96
Conference Attendance: BILL NEBEKER BARRY HAAG
Proposal: SUNSET VILLAGE FILING
Location: 25 1/2 + F 3/4 RD
Tax Parcel Number: 51.720 ± 15 ACRE
Review Fee: 2945-031-00-124
(Fee is due at the time of submittal. Make check payable to the City of Grand Junction.)

Additional ROW required? YES - 25 1/2 RD
Adjacent road improvements required? YES
Area identified as a need in the Master Plan of Parks and Recreation? —
Parks and Open Space fees required? YES Estimated Amount: 225/LOT
Recording fees required? YES Estimated Amount: _____
Half street improvement fees/TCP required? YES Estimated Amount: _____
Revocable Permit required? —
State Highway Access Permit required? —
On-site detention/retention or Drainage fee required? _____

Applicable Plans, Policies and Guidelines _____

Located in identified floodplain? FIRM panel # _____
Located in other geohazard area? _____

Located in established Airport Zone? Clear Zone, Critical Zone, Area of Influence? _____
Avigation Easement required? _____

While all factors in a development proposal require careful thought, preparation and design, the following "checked" items are brought to the petitioner's attention as needing special attention or consideration. Other items of special concern may be identified during the review process.

O Access/Parking	O Screening/Buffering	O Land Use Compatibility
O Drainage	O Landscaping	O Traffic Generation
O Floodplain/Wetlands Mitigation	O Availability of Utilities	O Geologic Hazards/Soils

O Other _____
Related Files: _____

It is recommended that the applicant inform the neighboring property owners and tenants of the proposal prior to the public hearing and preferably prior to submittal to the City.

PRE-APPLICATION CONFERENCE

WE RECOGNIZE that we, ourselves, or our representative(s) must be present at all hearings relative to this proposal and it is our responsibility to know when and where those hearings are.

In the event that the petitioner is not represented, the proposed item will be dropped from the agenda, and an additional fee shall be charged to cover rescheduling expenses. Such fee must be paid before the proposed item can again be placed on the agenda. Any changes to the approved plan will require a re-review and approval by the Community Development Department prior to those changes being accepted.

WE UNDERSTAND that incomplete submittals will not be accepted and submittals with insufficient information, identified in the review process, which has not been addressed by the applicant, may be withdrawn from the agenda.

WE FURTHER UNDERSTAND that failure to meet any deadlines as identified by the Community Development Department for the review process may result in the project not being scheduled for hearing or being pulled from the agenda.

_____ _____
Signature(s) of Petitioner(s) Signature(s) of Representative(s)

SUNSET VILLAGE SUB.

DRAWING STANDARDS CHECKLIST

WATER & SEWER PLAN & PROFILE

ITEM		GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: 1" = 20', 30', 40', or 50' H: 1" = 2', 3', 4', or 5' V		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of proposed water and sewer facilities		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Existing and proposed benchmarks on U.S.G.S. datum		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

ITEM		FEATURES	Plan	Profile	OK	NA
WATER & SEWER DESIGN INFO	1	Use the Composite or Site Plan as a base map, or otherwise provide similar information	X			
	2	Segmentize plan view as required to provide profiles below plan views	X			
	3	Show all ~~existing~~ and proposed sewer facilities in profile LABEL EXISTING		X		
	4	Show all existing and proposed buried facilities that cross the sewer		X		
	5	Show water mains at dips or crossings with other buried facilities		X		
	6	Dimension separation between water and sanitary or storm sewers	X	X		
	7	Show and identify encasement or structural pipe where applicable	X	X		
	8	Add water and sewer services	X			
	9	Station and label al manholes, add rim and invert elevations		X		
	10	Add sewer main slopes and distances between manholes (centerline to centerline) MISSING	MH-1	X	MH-2	
	11	Add existing and proposed surface profile		X		
	12	Call out water and sewer pipe type in notes				
	13	Call out minimum cover over water and sewer in notes NO NOTES PROVIDED				
	14	Provide all necessary details or reference detail sheet(s)				
	15	Systems shown conform to water and sewer report, if any	X	X		
	16	Provide note regarding separation of water and sewer mains				
	17	Provide note regarding service line markers and endpoint locations	X	X		
	18	Space for approval signature by City Engineering with date and title				
	19	Provide note requiring all Ute water lines be tested in accordance with City standards prior to street construction	X			

COMMENTS

SUNSET VILLAGE

DRAWING STANDARDS CHECKLIST

GRADING AND DRAINAGE PLAN

	ITEM	GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: Match the Site Plan scale		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of proposed grading and drainage facilities		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Benchmarks on U.S.G.S. datum if public facilities other than SW are proposed		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

	ITEM	FEATURES	OK	NA
ADDITIONAL INFORMATION	1	Use the Site Plan as a base map or otherwise provide the same information		
	2	Add existing contours		
	3	Add proposed contours. Do not show them under buildings or at concrete and asphalt pavement locations		
	4	Finish floor elevations are provided and are at least 1.0 foot above 100-year flood level, and 0.5 foot above the site outfall		
	5	Show grades at all points of curvature, angle, tangency, grade breaks and changes, swales, channels, pipes, inlets, and other primary features, and also existing grades at tie-in locations		
	6	Provide grade slopes between elevations provided in (5) above		
	7	Show detention/retention basins with contours (off pavement) or delineation(on pavement)		
	8	Indicate 2- and 100-year runoff storage volumes and ponded water surface elevation		
	9	If the site involves 5 acres or more that will be disturbed, then: a. Show or identify limits of surface disturbance due to construction b. Identify areas to be used for storage of building materials, fuels, or wastes c. Show location, type, and extent of BMP and erosion control practices		
	10	Space for approval signature by City Engineering with date and title		

COMMENTS

1 This plan may also have full horizontal control on it if not provided on the Site Plan

SUNSET VILLAGE

DRAWING STANDARDS CHECKLIST

ROADWAY PLAN & PROFILE

ITEM		GRAPHIC STANDARDS	OK	NA
SECTION VIII	A	Scale: 1" = 20', 30', 40', or 50' H: 1" = 2', 3', 4', or 5' V		
	B	Sheet size: 24" x 36"		
	C	Primary features consist only of lighting and traffic features		
	D	Notation: All non-construction text, and also construction notation for all primary features		
	E	Line weights of existing and proposed (secondary and primary) features per City standards		
	F	Location: All primary facilities are fully located horizontally and vertically		
	G	Horizontal control: Subdivisions and all public utilities (final drawings) tied to Section aliquot corners		
	H	Vertical control: Existing and proposed benchmarks on U.S.G.S. datum		
	I	Orientation and north arrow		
	J	Stamped and sealed drawings by registered professional competent in the work		
	K	Title block with names, titles, preparation and revision dates		
	L	Reference to City Standard Drawings and Specifications		
	M	Legend of symbols used		
	N	List of abbreviations used		
	P	Multiple sheets provided with overall graphical key and match lines		
	Q	Contouring interval and extent		
	R	Neatness and legibility		

ITEM		FEATURES	Plan	Profile	OK	NA
	1	Use the Composite or Site Plan as a base map or otherwise provide similar information	X			
	2	Segmentize plan view as required to provide profiles below plan views	X			
	3	Show all existing and proposed profiles at C_L and right and left FIs. Provide slopes with "+" or "-"		X		
	4	Show existing and proposed profiles at edge of pavement if there is no gutter		X		
	5	Note adjustment of all MH rims and valve covers for final grade	X			
	6	Elevation of F_L at fillet/valley pan interface	X			
	7	Station & elevation of F_L at BCRs, ECRs, and handicap ramps	X			
	8	Station & elevation of pavement C_L and F_L at endpoints, BCRs, ECRs, PCs, PTs, PRCs, and PCCs		X		
	9	Station & elevation at all grade changes and C_L and F_L VPIs, VPCs, VPTs and high & low points.		X		
	10	Station & elevation at all grade changes and C_L pavement warp at valley pans		X		
	11	Provide pavement, base, and subgrade specifications HAND WRITTEN ON TYPICAL STD.				
	12	Barricades, turn-arounds, tapers, delineators, driveways	X			
	13	Street lights, signals, signing, and other traffic controls	X			
	14	Show future road extension alignment to support current design, where applicable	X	X		
	15	Provide all necessary details or reference detail and/or cross-section sheets				
	16	Show proposed permanent benchmark (for new subdivisions) and all proposed horizontal control survey markers and street intersections, offset if required	X			
	17	Space for approval signature by City Engineering with date and title.				

COMMENTS

1. For a definition of abbreviations used above, see page VIII-4.

SUNSET VILLAGE

REPORT CHECKLIST AND OUTLINE

FINAL DRAINAGE REPORT

CHECKLIST	OK	NA
Typed Text (appendices may be handwritten)		
Bound with staple, bar binder, spiral binder or other method (not a notebook)		
Title Page: a. Name of report and preparer, date of preparation and revision (if any) b. Professional's seal and signature		
Table of Contents: For text and appendices, if any (appendices shall be paged)		
Exhibits: Folded to 8½"x11" size		
Maps attached to or contained in the report: Preliminary Major Basin Drainage Map — Pre-development Drainage Map Final Major Basin Drainage Map — Post-development Drainage Map		

OUTLINE

I to IV. Same as for the Preliminary Drainage Report (see X-12) — REFERENCED, BUT NOT INCLUDED WITH THIS REPORT.

V RESULTS AND CONCLUSIONS
- A. Runoff Rates for 2 and 100 Year Storm (use tabular format)
  1. Existing total site runoff rates
  2. Existing runoff rates to individual private properties
  3. Proposed total site runoff rates (after detention/retention)
  4. Proposed runoff rates to individual private properties (after detention/retention)
- B. Overall Compliance
  1. Policy
  2. Criteria
  3. Constraints

VI REFERENCES

VII APPENDICES
- A. Existing Runoff (2 and 100 year)
  1. Precipitation (if different than shown in SWMM)
  2. Runoff coefficients
  3. Times of concentration or lag times
  4. Intensities or other parameters
  5. Runoff calculations (individual sub-basins and combined at all design points)
  6. Tabular summary of runoff rates
- B. Proposed Runoff (2 and 100 year)
  1. Precipitation (if different than shown in SWMM)
  2. Runoff coefficients
  3. Times of concentration or lag times
  4. Intensities or other parameters
  5. Runoff calculations (individual sub-basins and combined at all design points)
  6. Tabular summary of runoff rates
- C. Detention Basin Calculations (2 and 100 year)
  1. If Rational & Modified Rational methods are used
     a. Average release rate
     b. Critical durations and intensities
     c. Volume required
     d. Volume available
     e. Storage - depth - discharge
     f. Lower stage outlet
     g. Upper stage outlet
     h. Erosion protection
  2. If Computer or other method of analysis is used
     a. Provide discharge parameters
     b. Provide basin parameters
     c. Provide inflow/outflow information
     d. Erosion protection

SUNSET VILLAGE

REPORT CHECKLIST AND OUTLINE

FINAL DRAINAGE REPORT (continued)

OUTLINE

D. Retention Basin Calculations (100 year)
   1. Basin Feasibility
      a. Groundwater depths
      b. Soil percolation results
      c. Letter from geotechnical Engr.
   2. If Rational Method is used
      a. Volume to be retained
      b. Volume available
   3. If computer or other analysis is used
      a. Provide basin parameters
      Provide inflow information

E. Street Flow
   1. Rate
   2. Depth and velocity

F. Inlets
   1. Rate
   2. Interception
   3. Bypass and to where

G. Storm Drains
   1. Rate
   2. Size and "n" value
   3. Capacity
   4. Hydraulic gradient (if pipe is surcharged or if frictional slope is greater than the pipe slope)

H. Open Channel Flow
   1. Channel geometrics
   2. "n" values and velocities
   3. Erosion protection
   4. Freeboard

I. Culverts
   1. Completed HDS-5 nomographs

J. Miscellaneous Hydraulic calculations

COMMENTS

1. It may not be necessary to cover all of the above topics, but the report should address all concerns applicable to the proposed project, even issues not identified above.

SUNSET VILLAGE

REPORT CHECKLIST AND OUTLINE

PRELIMINARY DRAINAGE REPORT

CHECKLIST	OK	NA
Typed text		
Size: 8½ x 11" format		
Bound: Use bar or spiral binder or staple. Do not use a notebook.		
Title Page: Name of report and preparer, date of preparation and revision (if any)		
Exhibits: Maximum 11" high and 32" wide, bound in report and folded as required to 8½"x11" size		
Maps attached to or contained in the report: Vicinity Map and Preliminary Major Basin Drainage Map		

OUTLINE

I. GENERAL LOCATION AND DESCRIPTION
- A. Site and Major Basin Location
  1. Streets in the vicinity
  2. Development in the vicinity
- B. Site and Major Basin Description
  1. Acreage
  2. Ground cover types
  3. Hydrologic soil types

II. EXISTING DRAINAGE CONDITIONS
- A. Major Basin
  1. General topography, drainage patterns and features, canals, ditches, wetlands
  2. Previously determined 100-year floodplains
- B. Site
  1. Historic drainage patterns
  2. Inflow characteristics from upstream
  3. Discharge characteristics to downstream sub-basins

III. PROPOSED DRAINAGE CONDITIONS
- A. Changes in Drainage Patterns
  1. Major basin
  2. Site
- B. Maintenance Issues
  1. Access
  2. Ownership and responsibility

IV. DESIGN CRITERIA & APPROACH
- A. General Considerations
  1. Previous drainage studies performed for the area
  2. Master planning issues (large scale considerations)
  3. Constraints imposed by site and other proposed development
- B. Hydrology
  1. Design storms and precipitation
  2. Runoff calculation method
  3. Detention/retention basin design method
  4. Parameter selection procedures
  5. Analysis and design procedures
  6. Justification of proposed methods not presented or referenced in SWMM
- C. Hydraulics
  1. Hydraulic calculation methods
  2. Parameter selection procedures
  3. Analysis and design procedures
  4. Justification of proposed methods not presented or referenced in SWMM

COMMENTS

1. No calculations are required for the Preliminary Drainage Report.
2. It may not be necessary to cover all of the above topics, but the report should address all concerns applicable to the proposed project, even issues not identified above.

PP-96-111

FRANK A DIEHL
4011 APPLEWOOD ST
GRAND JUNCTION, CO 81506-8405

MARY CHRISTINE HEIMBURGER
3935 APPLEWOOD ST
GRAND JUNCTION, CO 81506-8407

HAROLD E CRUSON
3925 APPLEWOOD ST
GRAND JUNCTION, CO 81506-8407

KAREN TURNER
3915 APPLEWOOD ST
GRAND JUNCTION, CO 81506-8407

JEROME F PALMER
3910 APPLEWOOD ST
GRAND JUNCTION, CO 81506-8408

ALLEN R JOHNSON
2424 CORTLAND AVE
GRAND JUNCTION, CO 81506-8434

DONALD E LOVERN
2421 APPLEWOOD PL
GRAND JUNCTION, CO 81506-8480

TOMMY DALE PETTY
3920 APPLEWOOD ST
GRAND JUNCTION, CO 81506-8408

VIRGINIA JOHNSON
2285 S SEVILLE CIR
GRAND JUNCTION, CO 81506-8493

E WILLIAM TRAINOR
2297 SEVILLE CIR
GRAND JUNCTION, CO 81506

ROBERT R SPROWELL
2311 S SEVILLE CIR
GRAND JUNCTION, CO 81506-8494

THOMAS G SARMO
2325 S SEVILLE CIR
GRAND JUNCTION, CO 81506-8494

THOMAS F SHEA
2335 S SEVILLE CIR
GRAND JUNCTION, CO 81506-8494

COLORADO NATIONAL BANK - TRUSTEE
PO BOX 608
GRAND JUNCTION, CO 81502-0608

HAROLD L GRAFE
510 TIARA DR
GRAND JUNCTION, CO 81503-9747

JAMES M FLYNN
3918 S SEVILLE CIR
GRAND JUNCTION, CO 81506-8472

DAVID L DOTY
3934 S SEVILLE CIR
GRAND JUNCTION, CO 81506-8472

PATRICE HOWEY
3936 S PIAZZA PL
GRAND JUNCTION, CO 81506-8440

COLORADO NATIONAL BANK
PO BOX 5168
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3940 27 1/2 RD
GRAND JUNCTION, CO 81506-4185

ST MATTHEWS PARISH
PO BOX 776
GRAND JUNCTION, CO 81502-0776

JACK A BROWN
681 27 1/2 RD
GRAND JUNCTION, CO 81506-4138

ESTHER E STAATS
1801 CORTLAND CT
GRAND JUNCTION, CO 81506-5248

GAIL PALMER
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RUDY HERRERA
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LAWRENCE R RYDIGER
3950 E BRAMBLING CIR
GRAND JUNCTION, CO 81506-5242

SUMRALL CORP
5479 E MINERAL CIR
LITTLETON, CO 80122-3895

RUFUS JONES
3612 N BELL RIDGE CT
GRAND JUNCTION, CO 81506-4077

R LEON MOORE
3745 CHRISTENSON CT
GRAND JUNCTION, CO 81506-5250

SUMRALL CORP
5479 E MINERAL CIR
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ELEANOR J EUBANKS
3731 CHRISTENSON CT
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ERNEST C HUNT
1624 CRESTVIEW CT
GRAND JUNCTION, CO 81506-4078

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GRAND JUNCTION, CO 81506-4077

STEVE C VOYTILLA
2631 CENTRAL DR
GRAND JUNCTION, CO 81506-8325

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LORI A NELSON
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HERBERT M WHEELER
3625 27 1/2 RD
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M L RAY SMITH
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DOROTHY B GULLEY
1820 RIDGE DR
GRAND JUNCTION, CO 81506-4070

MAX CLIFFORD KENDALL
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GRAND JUNCTION, CO 81506-4009

WILLIAM K JOHNSON
3636 BELL CT
GRAND JUNCTION, CO 81506-4009

BARBARA A LACY
3644 BELL CT
GRAND JUNCTION, CO 81506-4009

HOWARD A RUDOLPH
3648 BELL CT
GRAND JUNCTION, CO 81506-4009

GERALD R MILLER
3645 BELL CT
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GREGORY A GUTH
3635 BELL CT
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LOUIS A FRASSETTI
3621 BELL CT
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GRAND JUNCTION, CO 81506-4032

LARRY R TIMM
1804 BELL RIDGE CT
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KENNETH E GREGORY
1820 BELL RIDGE CT
GRAND JUNCTION, CO 81506-4011

MICHAEL J DEBUONO
1828 BELL RIDGE CT
GRAND JUNCTION, CO 81506-4011

LAWRENCE W BROZOVICH
1830 BELL RIDGE CT
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ALAN L GLOVER
1815 BELL RIDGE CT
GRAND JUNCTION, CO 81506-4069

ELIZABETH ANN WILLIS
1825 BELL RIDGE CT
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2945-031-26-003
James R. and G. Lenee Grisier
690 25 1/2 Road
Grand Junction CO 81506

2945-031-00-123
Patricia L. Moran et al c/o Mike Moran
655 Council Crest Court
Kalama WA 98625

2945-031-00-155
Richard L. Watson et al
653 26 Road
Grand Junction CO 81506

2945-032-00-174
Wald and Teresa T. Bou-Matar
677 25 1/2 Road
Grand Junction CO 81505

2945-032-19-001
Lennie J. and Clarece Johns
2549 Moonridge Drive
Grand Junction CO 81505

2945-032-19-002
Carroll W. and Mary Oman
2547 Moonridge Drive
Grand Junction CO 81505

2945-032-19-010 to 014
Moonridge Falls LTD. Liability Co.
677 25 1/2 Road
Grand Junction CO 81505

2945-032-25-003
Michael L. and Denise R. Tomsic
672 Uintah Court
Grand Junction CO 81505

2945-032-25-004
L. O. Griffith
3094 C Road
Grand Junction CO 81503

2945-032-25-005
Jack J and Judith A. Lofland
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FPP-96-48
Sunset Village

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W.H. LIZER & ASSOCIATES
Engineering Consulting and Land Surveying
576 25 road, Unit #8
Grand Junction, Colorado 81505
(970) 241-1129

February 1, 1996

Jody Kliska, P.E.
Development Engineer
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

RE: Sunset Village Subdivision Drainage Report
Part of the NE 1/4 of Section 3, T1S, R1W, U.M.
Grand Junction, Mesa County, Colorado

Dear Ms. Kliska,

Please find attached the drainage report for the above-referenced project.

Upon completion of your review, please advise me of any questions or comments you may have.

Sincerely yours,

Wayne H. Lizer

Wayne H. Lizer, P.E., P.L.S.

WHL/sl

Attachment

W.H. LIZER & ASSOCIATES
Engineering Consulting and Land Surveying
576 25 road, Unit #8
Grand Junction, Colorado 81505
(970) 241-1129

February 1, 1996

DRAINAGE REPORT
FOR
SUNSET VILLAGE SUBDIVISION
Part of the NE 1/4 of Section 3, T1S, R1W, U.M.
Grand Junction, Mesa County, Colorado

CERTIFICATION OF DOCUMENTS

I, Wayne H. Lizer, a registered Professional Engineer in the State of Colorado, hereby certify that this report was prepared by me.

Wayne H. Lizer, P.E., P.L.S. 14113

W.H. LIZER & ASSOCIATES
Engineering Consulting and Land Surveying
576 25 road, Unit #8
Grand Junction, Colorado 81505
(970) 241-1129

February 1, 1996

DRAINAGE REPORT
FOR
SUNSET VILLAGE SUBDIVISION
Part of the NE 1/4 of Section 3, T1S, R1W, U.M.
Grand Junction, Mesa County, Colorado

GENERAL

Sunset Village is located at the Northeast corner of 25 1/2 Road and F 3/4 line.

The site historically drains from North to South at approximately 1% grade.

The site contains approximately 3.4 acres.

A preliminary drainage design was completed recently by LANDesign and is on file at the City of Grand Junction.

METHOD OF ANALYSIS

The Rational Method was used to determine the amount of storm runoff, using the formula Q = CIA since this is a very small area,

where Q = runoff in cfs
C = runoff coefficient
I = rainfall intensity (in./hr.)
A = area in acres

The City of Grand Junction Drainage Manual was used for the analysis.

Historical

A value of 0.18 was used for "C" for a 2-year event and 0.24 for a 100-year event, based on 5 units per acre, Soil Groups A and C, Table B-1.

After-Development

A value of 0.40 was used for a 2-year event and 0.48 for a 100-year event.

A storm detention basin is designed at the Southwest corner of the site which will drain into a waste ditch that flows South along the East side of 25 1/2 Road.

SUMMARY

	Q_2 CFS	Q_{100} CFS
Historical	0.54	1.9
After Development	1.4	4.6

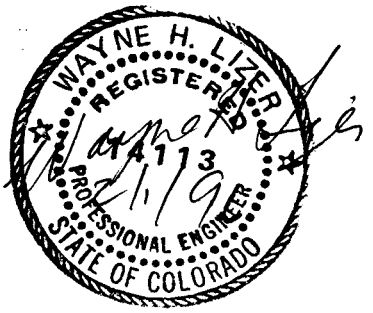
Calculations and data from the Grand Junction Drainage Manual are attached.

Respectfully submitted,

Wayne H. Lizer, P.E., P.L.S.

WHL/sl

Attachments



Sunset Village 1/

Historical

$A = 3.4$ Ac, $S \approx 1\%$
Soil Group A, C ; $C_2 = 0.18$, $C_{100} = 0.24$

$$T_c = \frac{1.87(1.1 - C)(d)^{1/2}}{S^{1/3}}, \quad d = 300 \text{ mas}$$

$$T_{c_2} = \frac{1.87(1.1 - 0.18)(300)^{1/2}}{1^{1/3}} = 30 \text{ min}$$

$$T_{c_{100}} = \frac{1.87(1.1 - 0.24)(300)^{1/2}}{1^{1/3}} = 28 \text{ min}$$

From Table A-1

$I_2 = 0.88$, $I_{100} = 2.36$

$Q_2 = CIA = (0.18)(0.88)(3.4) = 0.54$ CFS

$Q_{100} = CIA = (0.24)(2.36)(3.4) = 1.9$ CFS

AFTER DEVELOPMENT - 1/5 Unit/Ac.

$C_2 = 0.40$, $C_{100} = 0.48$

$$T_{c_2} = \frac{1.87(1.1 - 0.40)(300)^{1/2}}{1^{1/3}} = 23 \text{ min}$$

$$T_{c_{100}} = \frac{1.87(1.1 - 0.48)(300)^{1/2}}{1^{1/3}} = 20 \text{ min}$$

From Table A-1

$I_2 = 1.03$, $I_{100} = 2.84$

$Q_2 = CIA = (0.40)(1.03)(3.4) = 1.4$ CFS

$Q_{100} = CIA = (0.48)(2.84)(3.4) = 4.6$ CFS

$$T_{d_2} = \left\{ \frac{633.4\, C_d A}{Q_r - \frac{Q_r^2\, T_{c_d}}{81.2\, C_d A}} \right\}^{1/2} - 15.6$$

$$T_{d_2} = \left\{ \frac{633.4\,(0.40)(3.4)}{0.5 - \frac{(0.5)^2(23)}{81.2(0.40)(3.4)}} \right\}^{1/2} - 15.6$$

81.24 and 0.45

$$= 43.74 - 15.6 = 28.1$$

$$T_{d_{100}} = \left\{ \frac{1832\, C_d A}{Q_r - \frac{Q_r^2\, T_{c_d}}{213\, C_d A}} \right\}^{1/2} - 17.2$$

$$= \left\{ \frac{1832(0.48)(3.4)}{1.9 - \frac{(1.9)^2(20)}{213(0.48)3.4}} \right\}^{1/2} - 17.2$$

2989.8 and 1.69

$$= 42.1 - 17.2 = 24.9$$

Sunset Village

$$I_{d\,2} = \frac{40.6}{T_{d\,2} + 15.6} = \frac{40.6}{28.1 + 15.6} = 0.92$$

$$I_{d\,100} = \frac{106.5}{T_{d,100} + 17.2} = \frac{106.5}{24.9 + 15.6} = 2.6$$

$$Q_d = C_d A I_d$$

$$Q_{d2} = (0.40)(3.4)(0.92) = 1.25$$

$$Q_{d100} = (0.48)(3.4)(2.6 = 4.2$$

$$K = \frac{T_{ch}}{T_{cd}}$$

$$K_2 = \frac{30}{23} = 1.30$$

$$K_{100} = \frac{28}{20} = 1.40$$

$$V_t = 60\left[Q_d T_d - Q_r T_d - Q_r T_{cd} + \frac{K Q_r T_{cd}}{2} + \frac{Q_r^2 T_{cd}}{2 Q_d}\right]$$

$$V_2 = 60\left[\underset{35.1}{(1.25)(28.1)} - \underset{14.0}{(0.5)(28.1)} - \underset{11.5}{(0.5)(23)} + \underset{7.5}{\frac{(1.3)(0.5)(23)}{2}} + \underset{2.3}{\frac{(0.5)^2(23)}{2(1.25)}}\right]$$

$$= 60[19.4) = 1164\ FT^3$$

Sunset Village 4/

$$V_{100} = 60\left[\underbrace{(4.2)(24.9)}_{104.5} - \underbrace{(1.9)(24.7)}_{47.3} - \underbrace{(1.9)(20)}_{38} + \underbrace{\frac{(1.4)(1.9)(20)}{2}}_{26.6} + \underbrace{\frac{(1.9)^2(20)}{(2)(4.2)}}_{8.6}\right]$$

$$= 60\,[(54.4)] = 3264$$

The ominous looking but simple equations, modified to incorporate Grand Valley IDF data prepared by Henz Meteorological Services (Mesa County 1991), are presented below.

$$T_{d2} = \left(\frac{633.4\, C_d A}{Q_r - \frac{Qr^2 Tc_d}{81.2\, C_d A}} \right)^{0.5} - 15.6$$

$$T_{d100} = \left(\frac{1832\, C_d A}{Qr - \frac{Qr^2\, Tc_d}{213\, C_d A}} \right)^{0.5} - 17.2$$

I_{d2} = Intensity at T_{d2} (approximately $40.6/(T_{d2} + 15.6)$

I_{d100} = Intensity at T_{d100} (approximately $106.5/(T_{d100} + 17.2)$

$Q_d = C_d A I_d$

$K = Tc_h/Tc_d$

$V = 60\,[Q_d T_d - Qr T_d - Qr Tc_d + KQr Tc_d/2 + Qr^2 Tc_d/(2Q_d)]$

Where:

T_d = Time of critical storm duration, minutes;
C = Runoff coefficient;
A = Area in acres;
Qr = Detention pond average release rate, cfs (Note that this will not likely be the historic rate Qh; nor even Qmax);
Tc = Time of concentration, minutes;
I_d = Intensity at T_d, inches per hour;
Q_d = Runoff rate at T_d, cfs;
K = Ratio of pre- and post-development Tc; and
V = Storage volume in ft^3.

The meaning of subscripts used are as follows:

2 = 2-year storm condition;
100 = 100-year storm condition;
h = historic condition; and
d = developed condition.

TABLE "A-1"
INTENSITY-DURATION-FREQUENCY (IDF) TABLE

Time (min)	2-Year Intensity (in/hr)	100-Year Intensity (in/hr)	Time (min)	2-Year Intensity (in/hr)	100-Year Intensity (in/hr)
5	1.95	4.95	33	0.83	2.15
6	1.83	4.65	34	0.82	2.12
7	1.74	4.40	35	0.81	2.09
8	1.66	4.19	36	0.80	2.06
9	1.59	3.99	37	0.79	2.03
10	1.52	3.80	38	0.78	2.00
11	1.46	3.66	39	0.77	1.97
12	1.41	3.54	40	0.76	1.94
13	1.36	3.43	41	0.75	1.91
14	1.32	3.33	42	0.74	1.88
15	1.28	3.24	43	0.73	1.85
16	1.24	3.15	44	0.72	1.82
17	1.21	3.07	45	0.71	1.79
18	1.17	2.99	46	0.70	1.76
19	1.14	2.91	47	0.69	1.73
20	1.11	2.84	48	0.68	1.70
21	1.08	2.77	49	0.67	1.67
22	1.05	2.70	50	0.66	1.64
23	1.02	2.63	51	0.65	1.61
24	1.00	2.57	52	0.64	1.59
25	0.98	2.51	53	0.63	1.57
26	0.96	2.46	54	0.62	1.55
27	0.94	2.41	55	0.61	1.53
28	0.92	2.36	56	0.60	1.51
29	0.90	2.31	57	0.59	1.49
30	0.88	2.27	58	0.58	1.47
31	0.86	2.23	59	0.57	1.45
32	0.84	2.19	60	0.56	1.43

Source: Mesa County 1991

LAND USE OR SURFACE CHARACTERISTICS	SCS HYDROLOGIC SOIL GROUP (SEE APPENDIX "C" FOR DESCRIPTIONS)											
	A			B			C			D		
	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+
UNDEVELOPED AREAS Bare ground	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .28 - .36	.30 - .38 .37 - .45	.20 - .28 .26 - .34	.28 - .36 .35 - .43	.36 - .44 .40 - .48	.24 - .32 .30 - .38	.30 - .38 .40 - .48	.40 - .48 .50 - .58
Cultivated/Agricultural	.08 - .18 .14 - .24	.13 - .23 .18 - .28	.16 - .26 .22 - .32	.11 - .19 .16 - .24	.15 - .23 .21 - .29	.21 - .29 .28 - .36	.14 - .22 .20 - .28	.19 - .27 .25 - .33	.26 - .34 .34 - .42	.18 - .26 .24 - .32	.23 - .31 .29 - .37	.31 - .39 .41 - .49
Pasture	.12 - .22 .15 - .25	.20 - .30 .25 - .35	.30 - .40 .37 - .47	.18 - .26 .23 - .31	.28 - .36 .34 - .42	.37 - .45 .45 - .53	.24 - .32 .30 - .38	.34 - .42 .42 - .50	.44 - .52 .52 - .60	.30 - .38 .37 - .45	.40 - .48 .50 - .58	.50 - .58 .62 - .70
Meadow	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .28 - .36	.30 - .38 .37 - .45	.20 - .28 .26 - .34	.28 - .36 .35 - .43	.36 - .44 .44 - .52	.24 - .32 .30 - .38	.30 - .38 .40 - .48	.40 - .48 .50 - .58
Forest	.05 - .15 .08 - .18	.08 - .18 .11 - .21	.11 - .21 .14 - .24	.08 - .16 .10 - .18	.11 - .19 .14 - .22	.14 - .22 .18 - .26	.10 - .18 .12 - .20	.13 - .21 .16 - .24	.16 - .24 .20 - .28	.12 - .20 .15 - .23	.16 - .24 .20 - .28	.20 - .28 .25 - .33
RESIDENTIAL AREAS 1/8 acre per unit	.40 - .50 .48 - .58	.43 - .53 .52 - .62	.46 - .56 .55 - .65	.42 - .50 .50 - .58	.45 - .53 .54 - .62	.50 - .58 .59 - .67	.45 - .53 .53 - .61	.48 - .56 .57 - .65	.53 - .61 .64 - .72	.48 - .56 .56 - .64	.51 - .59 .60 - .68	.57 - .65 .69 - .77
1/4 acre per unit	.27 - .37 .35 - .45	.31 - .41 .39 - .49	.34 - .44 .42 - .52	.29 - .37 .38 - .46	.34 - .42 .42 - .50	.38 - .46 .47 - .55	.32 - .40 .41 - .49	.36 - .44 .45 - .53	.41 - .49 .52 - .60	.35 - .43 .43 - .51	.39 - .47 .47 - .55	.45 - .53 .57 - .65
1/3 acre per unit	.22 - .32 .31 - .41	.26 - .36 .35 - .45	.29 - .39 .38 - .48	.25 - .33 .33 - .41	.29 - .37 .38 - .46	.33 - .41 .42 - .50	.28 - .36 .36 - .44	.32 - .40 .41 - .49	.37 - .45 .48 - .56	.31 - .39 .39 - .47	.35 - .43 .43 - .51	.42 - .50 .53 - .61
1/2 acre per unit	.16 - .26 .25 - .35	.20 - .30 .29 - .39	.24 - .34 .32 - .42	.19 - .27 .28 - .36	.23 - .31 .32 - .40	.28 - .36 .36 - .44	.22 - .30 .31 - .39	.27 - .35 .35 - .43	.32 - .40 .42 - .50	.26 - .34 .34 - .42	.30 - .38 .38 - .46	.37 - .45 .48 - .56
1 acre per unit	.14 - .24 .22 - .32	.19 - .29 .26 - .36	.22 - .32 .29 - .39	.17 - .25 .24 - .32	.21 - .29 .28 - .36	.26 - .34 .34 - .42	.20 - .28 .28 - .36	.25 - .33 .32 - .40	.31 - .39 .40 - .48	.24 - .32 .31 - .39	.29 - .37 .35 - .43	.35 - .43 .46 - .54
MISC. SURFACES Pavement and roofs	.93 .95	.94 .96	.95 .97	.93 .95	.94 .96	.95 .97	.93 .95	.94 .96	.95 .97	.93 .95	.94 .96	.95 .97
Traffic areas (soil and gravel)	.55 - .65 .65 - .70	.60 - .70 .70 - .75	.64 - .74 .74 - .79	.60 - .68 .68 - .76	.64 - .72 .72 - .80	.67 - .75 .75 - .83	.64 - .72 .72 - .80	.67 - .75 .75 - .83	.69 - .77 .77 - .85	.72 - .80 .79 - .87	.75 - .83 .82 - .90	.77 - .85 .84 - .92
Green landscaping (lawns, parks)	.10 - .20 .14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	.14 - .22 .20 - .28	.22 - .30 .28 - .36	.30 - .38 .37 - .45	.20 - .28 .26 - .34	.28 - .36 .35 - .43	.36 - .44 .42 - .52	.24 - .32 .30 - .38	.30 - .38 .40 - .48	.40 - .48 .50 - .58
Non-green and gravel landscaping	.30 - .40 .34 - .44	.36 - .46 .42 - .52	.45 - .55 .50 - .60	.45 - .55 .50 - .60	.42 - .50 .48 - .56	.50 - .58 .57 - .65	.40 - .48 .46 - .54	.48 - .56 .55 - .63	.56 - .64 .64 - .72	.44 - .52 .50 - .58	.50 - .58 .60 - .68	.60 - .68 .70 - .78
Cemeteries, playgrounds	.20 - .30 .24 - .34	.26 - .36 .32 - .42	.35 - .45 .40 - .50	.35 - .45 .40 - .50	.32 - .40 .38 - .46	.40 - .48 .47 - .55	.30 - .38 .36 - .44	.38 - .44 .45 - .53	.46 - .54 .54 - .62	.34 - .42 .40 - .48	.40 - .48 .50 - .58	.50 - .58 .60 - .68

NOTES:
1. Values above and below pertain to the 2-year and 100-year storms, respectively.
2. The range of values provided allows for engineering judgement of site conditions such as basic shape, homogeneity of surface type, surface depression storage, and storm duration. In general, during shorter duration storms (Tc ≤ 10 minutes), infiltration capacity is higher, allowing use of a "C" value in the low range. Conversely, for longer duration storms (Tc ≥ 30 minutes), use a ""C value in the higher range.
3. For residential development at less than 1/8 acre per unit or greater than 1 acre per unit, and also for commercial and industrial areas, use values under MISC SURFACES to estimate "C" value ranges for use.

RATIONAL METHOD RUNOFF COEFFICIENTS
(Modified from Table 4, UC-Davis, which appears to be a modification of work done by Rawls)

TABLE "B-1"

GENERAL PROJECT REPORT
SUNSET VILLAGE SUBDIVISION

Sunset Village Subdivision is located in the Northwest 1/4 of the Northeast 1/4 of Section 3, T. 1 S., R. 1 W., U. M., at the North east corner of 25 1/2 Road and F 3/4 Road (29 feet of which is dedicated on this Plat). It is on a 3.40 acre parcel which is being developed into 13 lots. The current tax parcel number is 2945-031-00-124.

The benefit to the public in this project is the completion of right-of-way acquisition along this portion of 25 1/2 Road as well as the construction of curb and sidewalk along the East side of this street. Furthermore the North 2/3 of F 3/4 Road will be constructed, including making sanitary sewer and water available to the parcel to the East.

This parcel is to be annexed into the City with a zoning of RSF 4. The current zoning on this parcel, Lot 3 of the Grisier-Ritter Minor Subdivision which adjoins this parcel to the north, and the adjoining parcels on the east and south, is AFT. Lot 3 of the Grisier-Ritter Minor Subdivision is an improved lot with agricultural uses for those portions that adjoin Sunset Village Subdivision. The adjoiners to the east and south are vacant land that are currently being used for pasture. Moonridge Falls PUD is across 25 1/2 Road.

The site is accessed from 25 1/2 Road. Access to 25 1/2 Road is limited to F 1/2 Road and G Road. Access to the subdivision will be via F 3/4 Road. There will be a single 470 foot cul-de-sac in the subdivision which we are calling Sunset Court. Moonridge Drive enters Moonridge Falls PUD 350 feet north of F 3/4 Road.

Due to the developement of Moonridge Falls and Valley Meadows Subdivision there are utility lines that are in place along the west side of 25 1/2 Road. Public Service owns the electric and gas lines. There is an 8 inch water line owned and maintained by Ute Water. The Paradise Hills Interceptor sewer line runs down the center of 25 1/2 Road. We will be connecting to Manhole #19 on this line. There is an existing fire hydrant on the north side of Moonridge Drive at the intersection with 25 1/2 Road. In addition it proposed to locate a fire hydrant at the intersection of F 3/4 Road and Sunset Drive. There will be no unusual affects or special demands on these or any other public facilities.

According to the U.S. Department of Agriculture Soil Survey of 1955, 70% of the land contains Ravola Very Fine Silty Loam (Rf) at slopes of 0-2% and the remaining 30% of land contains Billings Silty Clay Loam (Bc) at slopes of 0-2%. These soils are common to the Grand Junction area and are not expected to create any problems with drainage or construction.

There are no special plans for scheduling and phasing on this subdivision. It is anticipated that development will commence upon final approval by the City.

GEOTECHNICAL INVESTIGATION FOR SUNSET VILLAGE SUBDIVISION A PORTION OF SECTION 3, T1S, R1E, UTE MERIDIAN MESA COUNTY, COLORADO

Prepared For:

Great Homes LTD
686 25 1/2 Road
Grand Junction, Colorado 81505

Prepared by:

Western Colorado Testing, Inc.
529 25½ Road, Suite B101
Grand Junction, Colorado 81505
(970) 241-7700

February 20, 1996
Job No. 201096

WESTERN
COLORADO
TESTING,
INC.

GEOTECHNICAL INVESTIGATION FOR SUNSET VILLAGE SUBDIVISION A PORTION OF SECTION 3, T1S, R1E, UTE MERIDIAN MESA COUNTY, COLORADO

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TABLE OF CONTENTS

INTRODUCTION

This report presents the results of the geotechnical investigation performed at the site of a proposed approximate 3.5 acre, 12 lot, single family housing project to be located in a portion of Section 3, Township 1 South, Range 1 East of the Ute Meridian, Mesa County Colorado. This investigation was authorized by Mr. Stan Seligman of Great Homes LTD on February 14, 1996.

Included in this investigation were test borings and a report of our conclusions and recommendations. The scope of our report was limited to the following:

- Evaluating the engineering properties of the subsoils encountered.
- Recommending types and depths of foundation elements.
- Evaluating soil bearing capacity and estimated settlement.
- Presenting recommendations for earthwork and soils related construction with respect to the subsoils encountered.
- Presenting recommended alternative pavement sections.

This report was prepared by the firm of Western Colorado Testing, Inc. (**WCT**) under the supervision of a professional engineer registered in the state of Colorado. Recommendations are based on the applicable standards of the profession at the time of this report within this geographic area. This report has been prepared for the exclusive use of **Great Homes LTD** for the specific application to the proposed project in accordance with generally accepted geotechnical engineering practices.

The scope of this investigation did not include any environmental assessment for the presence of hazardous or toxic materials in the soil or groundwater on or near this site. If contamination is a concern, it is recommended an environmental assessment be performed.

SITE CONDITIONS

The site is currently vacant with a ground coverage of native grasses and is being used to run cattle on. The site is relatively level with a slight slope to the south, southwest. Mr. Lairds house, out buildings and equipment storage exists on lots 6, 7 and 8. The project site is bounded on the west with 25 1/5 Road followed by a new subdivision. To the north is residential housing on acreages. To the east and south is vacant ground. A new subdivision was being surveyed at the time of the field investigation on the land to the south. The site will need to be graded to provide good surface drainage around and away from the proposed structures.

PROPOSED CONSTRUCTION

The proposed construction will consist of single family dwellings. The proposed residences will be of conventional wood framing with siding or brick veneer. The structures are planned to be built over reinforced concrete foundations, without basements. Light foundation loads are anticipated.

FIELD EXPLORATION

The field investigation was conducted on February 15, 1996. The exploratory program consisted of nine (9) soil borings as shown on the Boring Location Plan (Appendix, Figure 1). Borings were located in the field by pacing distances from features shown on the boring location plan. The location of the borings should be considered accurate only to the degree implied by the method used.

Test borings were advanced to a depth of from 5 to 28 feet with a truck-mounted Diedrich D-50 soil sampling rig using four inch continuous flight augers and a Bobcat with a six inch continuous flight auger. Soil samples were obtained at the sampling intervals shown on the Boring Logs (Appendix, Figures 2 through 10). Recovered samples were placed in a bullk sample bags or extracted in the field, sealed in plastic or brass containers, labeled and protected for transportation to the laboratory for testing. Dames and Moore ring barrel and split barrel samples were obtained while performing Standard Penetration Tests (SPT) driven in general accordance with ASTM D-1586, "Penetration Test and Split Barrel Sampling of Soils". The N-Value, reported in blows per foot, equals the number of blows required to drive the sampler over the last 12 inches of the sample interval.

Stratification lines represent the approximate boundary between soil types, and the transition may be gradual.

LABORATORY TESTING

The field boring logs were reviewed to outline the depths, thickness, and extent of the soil strata, and a testing program was established to evaluate the engineering properties of the recovered samples. Specific tests that were performed include moisture contents, density determinations, particle size analysis, Atterberg

limits and a swell-consolidation test. These tests were performed in general accordance with current ASTM or state-of-the-art test procedures. An R-value test was also performed. The R-value was determined according to the Colorado Department of Transportation (CDOT) procedures which is a modification to ASTM D-2844. The test results are presented on Figures 11 through 14.

Based on the results of this testing program the field logs were reviewed and supplemented as presented in the Appendix, Figures 2 through 10. These final logs represent our interpretation of the field logs, and reflect the additional information gained in the laboratory testing program.

SUBSURFACE CONDITIONS

As shown on the boring logs, Appendix, Figures 2 through 10, the subsurface conditions encountered at the site are fairly uniform. Generally, the soils encountered in the borings consisted of silty clay material followed by a sand and gravel layer and underlain by either a clayey sand or sandy clay. Water was encountered in the deep borings at the time of drilling and were measured approximately 24 hours following drilling at depths ranging from 11'-11" to 13'-10" in borings TH-1 through TH-4.

The surface material was a slightly sandy silty, clay which was slightly moist to moist and light brown to brown in color. Penetration tests indicate the slightly sandy, silty clays are medium stiff to stiff. Below the silty clay in most cases was a layer of clayey sand and gravels which were loose, moist to very moist and light brown to brown in color. Underlaying the sand and gravel materials at depths of 6 1/2 to 8 feet were a sandy clay which was very moist to wet and brown in color. Penetration tests indicate the sandy clay material is soft to medium stiff. The sandy clay material extended to the maximum depth explored, 28 feet.

CONCLUSIONS AND RECOMMENDATIONS

FOUNDATIONS

Based on the subsurface conditions encountered and the nature of the proposed construction, we recommend the residential structures be founded on shallow spread footings bearing on the natural undisturbed soils or new structural fill. Habitable space construction below grade is not recommended for this site due to the very moist conditions and relatively high groundwater condition. The clays encountered in the borings are non-swelling or have low swell potential at there present moisture contents. However, the clay soils have a moderate plasticity and if moisture contents are allowed to fluctuate, the clays may undergo some shrink-swell potential.

The following design and construction details should be observed for spread footing foundation systems.

- Footings placed on the natural soils, below any top soil, or on new structural fill should be designed for an allowable soil bearing pressure of 1,500 pounds per square foot.

- The top 6 to 8 inches of the bearing soils should be moisture conditioned to (±)2% of optimum moisture and compacted to a minimum of 95% of ASTM D-698 prior to placing footings. Moisture contents should be maintained until covered. All footings should be proportioned as much as practicable to minimize differential settlement.

- Structural fill placed for support of footings should consist of a granular, non-expansive, non-free draining, material compacted to a minimum 95% of the maximum Standard Proctor density (ASTM D-698) at a moisture content (±) 2% of optimum. Structural fill should extend down from the bottom of the footings at a one horizontal to one vertical projection.

- We estimate total settlement for footings designed and constructed as discussed in this section will be one inch or less, which is generally considered acceptable and was used in our analysis.

- Exterior footings and footings in unheated areas should extend to below the frost depth. The local building codes should be consulted, however we would recommend a minimum depth of 24 inches.

- Continuous foundation walls should be reinforced top and bottom to span an unsupported length of at least twelve (12) feet. A sulfate resistant concrete should be used for all concrete exposed to the on site soils.

- All loose or disturbed material encountered at the foundation bearing level should be removed or compacted to a minimum 95% of ASTM D-698.

- The risk of foundation movement can be reduced by removing all clay or soft soils encountered within 3 feet below the footings and replacing it with non-expansive structural fill.

- A representative of the geotechnical engineer should observe all foundation excavations prior to the placement of fill and/or concrete.

FLOOR SLABS

Slab-on-grade construction presents a problem where expansive materials are present near floor slab elevation because sufficient dead load cannot be imposed on them to resist the uplift pressure generated when the materials are wetted and expand. The only way to prevent damage as a result of slab movement is to construct a structural floor above a well ventilated crawl space. The floor

should be supported on the foundation walls same as the main structure.

Slab-on-grade construction may be considered as an alternate for the floor slabs provided the risk of distress resulting from floor slab movement is accepted by the owner and the following measures are taken to reduce the effects of movement.

- Floor slabs should be separated from all bearing walls, columns and utility lines with an expansion join which allows unrestrained vertical movement.

- Interior nonbearing partitions resting on the floor slabs should be provided with slip joints at the bottom so that, if the slab moves, the movement cannot be transmitted to the upper structure. This detail is also important for wallboards, stairways and door frames. Slip joints which will allow at least 1 1/2 inches of vertical movement are recommended.

- Floor slabs should be provided with control joints to reduce damage due to shrinkage cracking.

- The top 6 to 8 inches of subgrade soils should be moisture conditioned to (±)2% of optimum and recompacted to minimum 95% of ASTM D-698. The moisture content should be maintained until the slabs are placed.

- All plumbing lines should be tested before operation. Where plumbing lines enter the floor, a positive bond break should be provided. Flexible connections should be provided for slab-bearing mechanical equipment.

- The risk of floor slab curling due to differential cure can be reduced by placing a 4 inch layer of free draining gravel

beneath the slabs. The gravel layer is also desirable if the slabs will have a moisture sensitive covering such as tile. If used, the gravel should consist of minus 2 inch aggregate with less than 20% passing the No. 4 sieve and less than 5% passing the No. 200 sieve.

- The risk of slab movement can be reduced by removing all clay encountered within 3 feet below the slabs and replacing it with structural fill.

- All fill placed below the slabs should consist of non-expansive, non free draining, granular material compacted to at least 95 percent of the maximum standard Proctor density at a moisture content (±)2% of optimum.

PERIMETER DRAIN SYSTEM

Water was encountered at a depth that should not affect the proposed construction. However, the water table may fluctuate during wetter seasons of the year and the foundations will extend into or near the clayey soils which are relatively impervious and tend to trap water creating a perched water table. Another source of water is from excessive irrigation and poor surface drainage. For these reasons a drain system should be provided around exterior foundation walls. The perimeter drain system should be placed at or below the footing level and typically consist of a perforated 4 inch diameter drain pipe surrounded by at least one pipe diameter of free draining gravel. The gravel should extend to the top of the footing or above and should be completely wrapped in a filter fabric. The drain lines should be graded to daylight or to a sump where the water can be removed by pumping. A minimum slope of 1 percent should be used for all drain pipe. The gravel used in the drain system should be minus 2 inch material having less than 20 percent passing the No. 4 sieve and less than 5 percent passing the No. 200 sieve.

SURFACE DRAINAGE AND LANDSCAPING

The success of shallow foundation and slab-on-grade floor systems is contingent upon keeping the subgrade soils at a more or less constant moisture content, and by not allowing surface drainage a path to the subsurface. Positive surface drainage away from structures must be maintained at all times. Landscaped areas should be designed and built such that irrigation and other surface water will be collected and carried away from foundation elements.

The final grade of the foundations backfill and any overlying concrete slabs or sidewalks should have a positive slope away from foundation walls on all sides. We recommend a minimum slope of 8 inches in the first 10 feet; however, the slope can be decreased to 3 inches in 10 feet if the ground surface adjacent to foundations is covered with concrete slabs or sidewalks.

Backfill material should be placed near optimum moisture content and compacted to at least 90% of maximum standard Proctor density in landscaped areas and to at least 95% maximum standard Proctor density beneath structural areas (sidewalks, patios, driveways, etc.). All roof downspouts and faucets should discharge well beyond the limits of all backfill. Irrigation within ten (10) feet of foundations should be carefully controlled and minimized.

STREET PAVEMENTS

The pavement section thickness needed at the site is dependent mainly on the subgrade conditions and the traffic loadings. The pavement subgrade soils are indicated to be slightly sandy silty clays. The clayey soils were tested for Atterberg limits and size distribution with the results used to classify the soil using both the Unified and AASHTO classification systems. The soil was then tested to determine the R-Value according to the Colorado Department of Transportation procedure which is a modification to ASTM D-2844.

An "R" value test was performed on the subsurface soils from boring TH-9. The "R" value test had a result of 34. Based on the test results, design manual procedures, freeze/thaw conditions and experience with similar projects, the following pavement section alternatives are indicated:

PAVEMENT ALTERNATIVE SECTIONS									
Street	DESIGN CRITERIA				Alternative	PAVEMENT SECTIONS - INCHES			
	R-value	EDLA	RF	WSN		HBP	ABC	ASC	TOTAL
Cul-de-sac roadway & south 240' of roadway	34	5	2.0	2.16*	A	3	6		9
					B	3	4	4	11
					C	5			5
Extra lane along 25 1/2 Road	34	26	2.0	2.30	A	3	7		10
					B	3	4	4	11
					C	5 1/2			5 1/2

* *Minimum required section*

R-Value - CDOH Procedures
EDLA - Equivalent Daily Load Application
RF - Regional Factors
WSN - Weighted Structural Number

HBP - Hot Bituminous Pavement
ABC - Aggregate Base Course (Class 6)
ASC - Aggregate Subbase Course (Class 2)

Once the cut and fill operation for the roadways has been determined and/or a better traffic count determined the above section should be re-evaluated prior to construction.

Aggregate base course material should conform with Class 6 (minus 3/4 inch) specifications of the Colorado Department of Transportation (CDOT) and be compacted to a minimum 95% of AASHTO T-180 at (±)2% of optimum moisture content. The aggregate subbase course material should conform with Class 2 CDOT specifications and

be compacted to a minimum 90% of AASHTO T-180 at (±)2% of optimum moisture content.

Pavement performance is directly affected by the degree of compaction, uniformity, and the stability of the subgrade. It is recommended that the top 6 to 8 inches of the subgrade be compacted to a minimum of 95% of the maximum dry density as determined by ASTM D-698 "Standard Proctor Moisture-Density Relationship". The moisture content should also be controlled to between (-)2% and (+)3% of optimum. The final subgrade should be proofrolled immediately prior to placement of the subbase or base course materials to detect any localized areas of instability. Unstable areas should be reworked to provide a uniform subgrade.

Positive drainage should be provided during construction and maintained throughout the life of the pavement. Adequate drainage is essential for continuing performance.

GENERAL

In the event that any changes in the nature, design, or location of the structures are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

The analysis and recommendations submitted in this report are based in part upon the data obtained from the nine (9) soil borings. The nature and extent of variation between the borings may not become evident until construction. If variations then appear, it will be necessary to reevaluate the recommendations in this report.

It is recommended that the geotechnical engineer be provided the opportunity for general review of the final designs and

specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the designs and specifications. It is also recommended that the geotechnical engineer be retained to provide continuous engineering services during construction of the foundations, excavations, and earthwork phases of the work. This is to observe compliance with the design concepts, specifications, or recommendations and to modify these recommendations in the event that subsurface conditions differ from those anticipated.

Respectfully Submitted,
WESTERN COLORADO TESTING, INC.

Gary L. Hamacher

Gary L. Hamacher, P.E.
Senior Geotechnical Engineer

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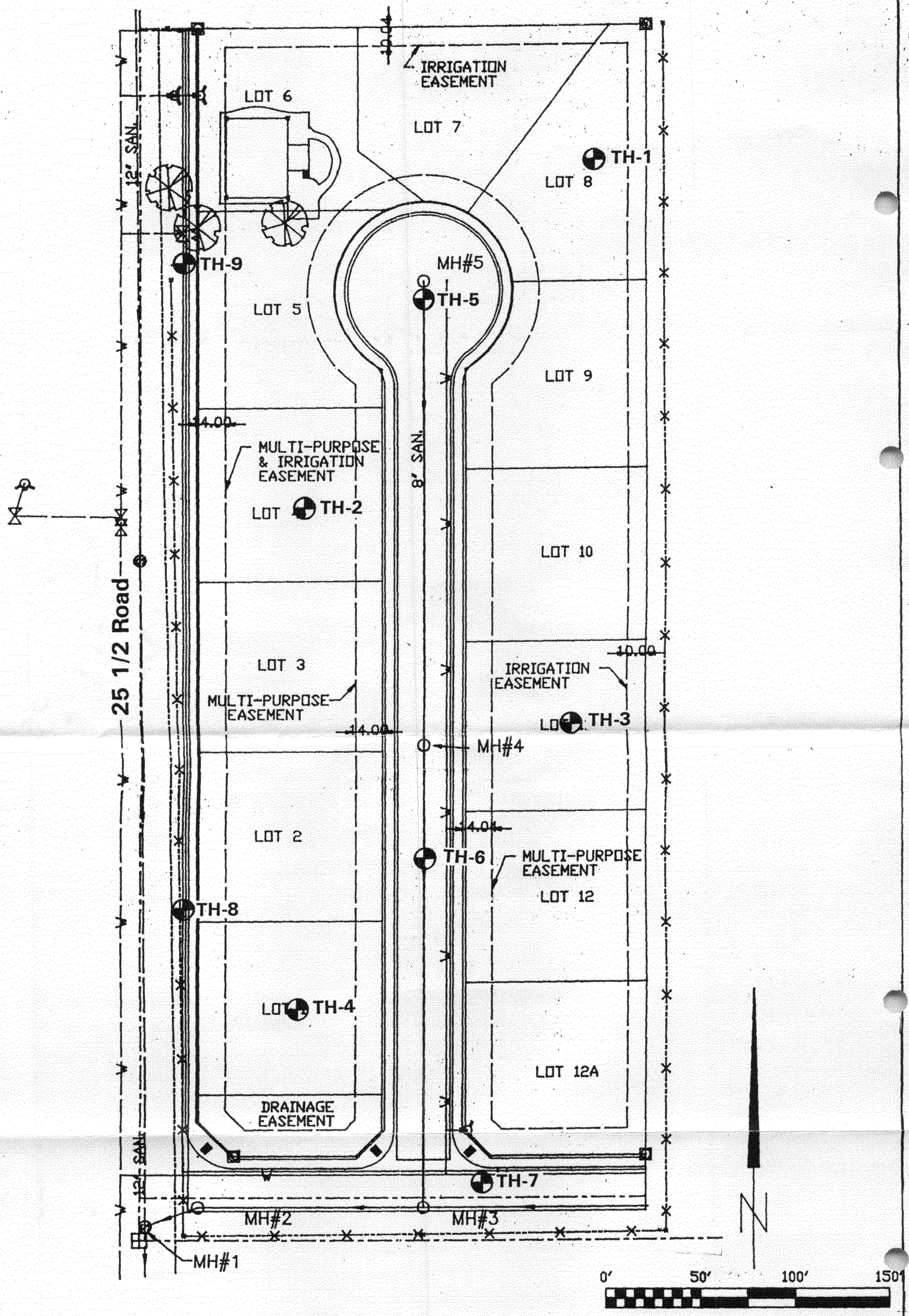
APPENDIX



SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'

WESTERN COLORADO TESTING, INC.

BORING LOCATION PLAN

Project	Sunset Village Subdivision
Location	Mesa County, Colorado
Job No.	201096
Date	2-20-96

Figure 1

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-1	See Boring Location Plan	2-15-96	-	-	R. Lancaster	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Gravel	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
15'		13' - 3"		4" Cont. Flight Augers	22 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				brown	moist	medium stiff	CLAY, silty, slightly sandy, fine sand					
	D-1	7	50					18.5	99.6			
5				light brown	moist	loose	SAND & GRAVEL, clayey					5
	D-2	7	50	brown	moist		SAND, fine to medium grained clayey					
10							6" lense of gravel @ 10'					10
					wet							
15												15
20												20
							B.O.H. @ 22 1/2'					
25												25

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Figure 2

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-2	See Boring Location Plan	2-15-96	-	-	R. Lancaster	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
13'		12' - 10"		4" Cont. Flight Augers	22 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				brown	moist	medium stiff	CLAY, silty, slightly sandy,					
	D-1	5	50					20.7	102.3			
5												5
				brown	very moist	loose	SAND & GRAVEL, clayey					
	C-1	4	50									
				brown	very moist	medium stiff to soft	CLAY, sandy, fine grained					
10												10
					wet	soft						
15												15
20												20
							B.O.H. @22 1/2'					
25												25

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Figure 3

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-3	See Boring Location Plan	2-15-96	-	-	R. Lancaster	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
10'		11' - 11"		4" Cont. Flight Augers	17'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				brown	moist	stiff	CLAY, silty, slightly sandy					
	C-1	5	50	brown	moist	loose	SAND, fine to medium grained, clayey					
5				light brown	moist	loose	SAND, & GRAVEL, clayey					5
	D-1	5	100	brown	wet	soft	CLAY, sandy, fine to medium grained					
10												10
15												15
							B.O.H. @17'					
20												20
25												25

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Figure 4

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-4	See Boring Location Plan	2-15-96	-	-	R. Lancaster	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Diedrich D-50
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
8'		Caved @ 13'-10"		4" Cont. Flight Augers	28'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
	D-1	9	50	light brown	slightly moist to moist	stiff	CLAY, silty, slightly sandy	21.2			LL = 45 PI = 26 CL	
5				brown	moist to very moist	medium stiff	CLAY, sandy, fine to medium grained					5
	D-2	5	25									
				brown	wet	medium stiff to soft	CLAY, sandy, fine grained					
10												10
	D-3	5	100									
15												15
20												20
25												25
							B.O.H. @ 28'					

wpb c:201096f.05

Figure 5

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-5	See Boring Location Plan	2-15-96	-	-	M. Laird	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Bobcat
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None			6" Cont. Flight Augers	6'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
0	B-1			brown	moist	medium stiff	CLAY, silty, slightly sandy					0
5							B.O.H. @6'					5
10												10
15												15
20												20
25												25

wpb c:201096f.06

Figure 6

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-6	See Boring Location Plan	2-15-96	-	-	M. Laird	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Bobcat
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None			6" Cont. Flight Augers	5 1/2'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
				dk. brown	moist	loose	Top Soil, clay, silty, organics					
				light brown	moist	loose	SAND & GRAVEL clayey					
	B-1											
5							B.O.H. @5 1/2'					5
10												10
15												15
20												20
25												25

wpb c:201096f.07

Figure 7

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-7	See Boring Location Plan	2-15-96	-	-	M. Laird	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Bobcat
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None			6" Cont. Flight Augers	5'

DEP. FT	SAMPLE DATA: SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	SOIL DESCRIPTION: COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	LABORATORY DATA: % MC	DRY DENS pcf	qu tsf	CLASS	DEP. FT
				dk brown	moist	loose	Top Soil, clay, silty, organics					
				brown	moist	medium stiff	CLAY, silty, slightly sandy					
	B-1						lense of clayey sand & gravel @ 2'-3'					
5												5
							B.O.H. @ 5'					
10												10
15												15
20												20
25												25

wpb c:201096f.08

Figure 8

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-8	See Boring Location Plan	2-15-96	-	-	M. Laird	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Bobcat
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None			6" Cont. Flight Augers	5'

DEP. FT	SAMPLE DATA			SOIL DESCRIPTION				LABORATORY DATA				DEP. FT
	SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	% MC	DRY DENS pcf	qu tsf	CLASS	
	B-1			brown	moist / very moist	medium stiff	CLAY, silty, slightly sandy					
5							B.O.H. @ 5'					5
10												10
15												15
20												20
25												25

wpb c:201096f.09

Figure 9

WESTERN COLORADO TESTING, INC.

Project Sunset Village Subdivision

Location Mesa County, Colorado

Job No 201096 Date 2-20-96

BORING LOG

DRILL HOLE NO.	LOCATION OF DRILL HOLE	DATE DRILLED	ELEVATION	DATUM	DRILLER	LOGGER
TH-9	See Boring Location Plan	2-15-96	-	-	M. Laird	K. Alpha

WATER LEVEL OBSERVATIONS				TYPE OF SURFACE	DRILL RIG
				Native Grasses	Bobcat
WHILE DRILLING	END OF DRILLING	24 HOURS AFTER DRILLING	___ HOURS	DRILLING METHOD	TOTAL DEPTH
None	None			6" Cont. Flight Augers	5'

DEP. FT	SAMPLE DATA: SAMPLE NO. & TYPE	"N" BLOWS /FT	% REC.	SOIL DESCRIPTION: COLOR	MOIST	CONS.	GEOLOGIC DESCRIPTION & OTHER REMARKS	LABORATORY DATA: % MC	DRY DENS pcf	qu tsf	CLASS	DEP. FT
				dk brown	moist	loose	Top Soil, clay, organics					
				brown	moist	medium stiff	CLAY, silty, slightly sandy					
	B-1							16.9			LL = 30 PI = 13 CL	
5							B.O.H. @ 5'					5
10												10
15												15
20												20
25												25

wpb c:201096f.10

Figure 10

WESTERN COLORADO TESTING, INC.

PHYSICAL PROPERTIES OF SOILS

Job No.: 201096

Lab/Invoice No.:

Date of Report: 2-20-96

Reviewed By:

Client: Great Homes LTD | Project: Sunset Village Subdivision

Location: Mesa County, Colorado | Sampled By: K. Alpha | Date: 2-15-96

Type of Material: Clay, silty, slightly sandy | Submitted By: K. Alpha | Date: 2-15-96

Source of Material: TH-9 @ 1.0' - 5.0' | Authorized By: Client | Date: 2-14-96

Sieve Analysis, ASTM D422-

Sieve Size	% Passing Accumulative	Specification
3"		
2 1/2"		
2"		
1 1/2"		
1"		
3/4"		
1/2"		
3/8"	100	
1/4"	-	
No. 4	99	
8	99	
10	99	
16	98	
30	98	
40	97	
50	97	
100	94	
Finer than 200 ASTM D1140-	86.7	

Soil Classification:	Unified CL	AASHTO A-6 (9)
Liquid Limit and Plasticity of Soils: ASTM D424-		LL= 30 PI= 13
Moisture - Density Relations ☐ ASTM D698- ☐ ASTM D1557- Method:		Maximum Dry Density, pcf : Optimum Moisture, % :
Specific Gravity of Soils (minus No. 4 material) ASTM D854-		Specific Gravity:
Resistance 'R' Value of Compacted Soils ASTM D2844-		'R' Value: 34
Other:		

Copies:

Figure 11

msa:2010fg11.doc

SWELL CONSOLIDATION TEST

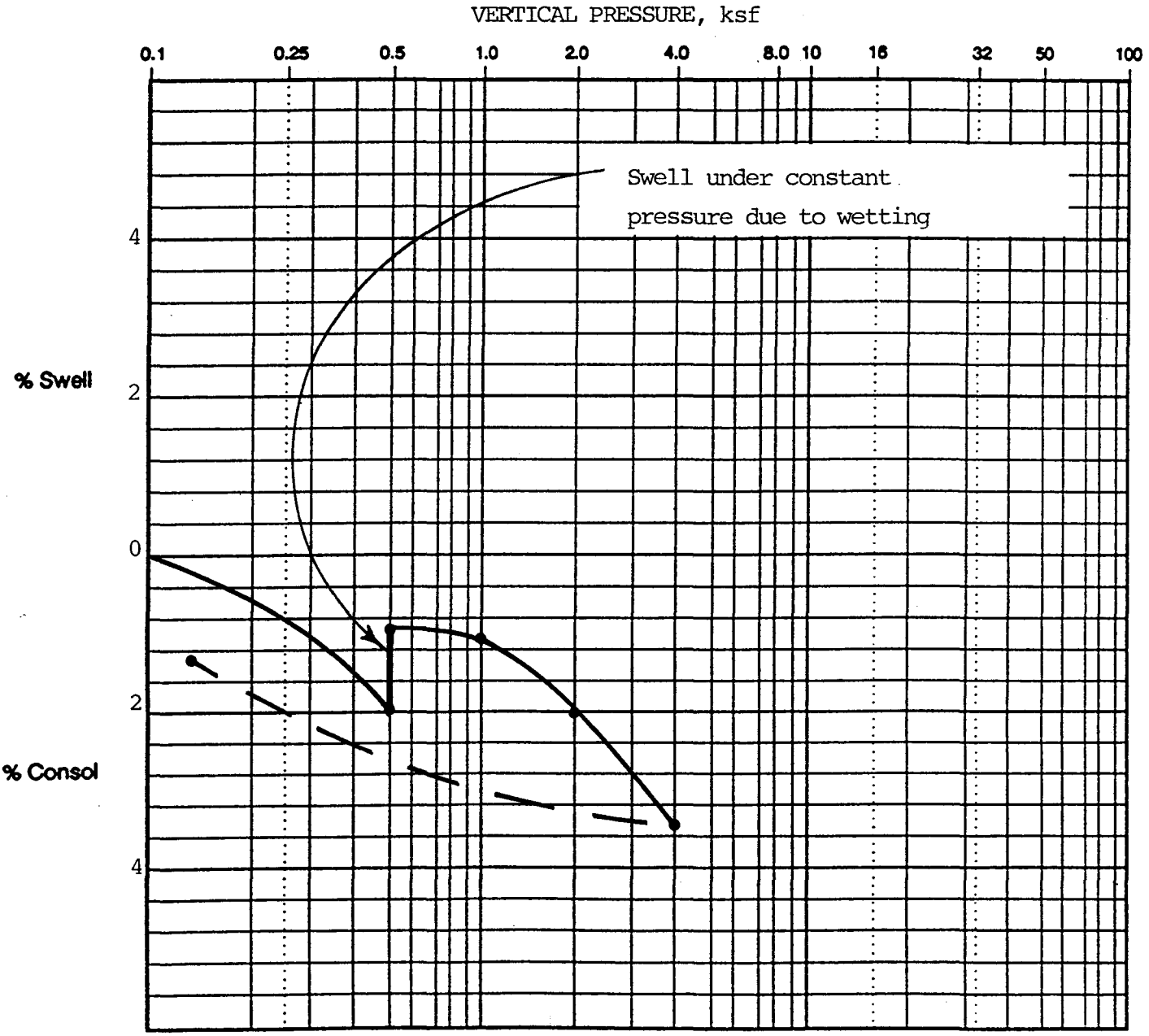
Drill Hole No. TH-4 **Sample No.** D-1 **Sample Depth Interval** 2.0' - 3.0'

Sample Description CLAY, slightly sandy

Initial Water Content 25.4 **Dry Unit Weight** 95.1 pcf **Initial Saturation**

Final Water Content 26.1 **Specific Gravity** ☐ **Assumed**

Liquid Limit 45 **Plastic Limit** 19 **Plasticity Index** 26 **Classification** CL



WESTERN COLORADO TESTING, INC.	529 25½ Road, Suite B-101 Grand Junction, CO 81505 (303) 241-7700
Project	Sunset Village Subdivision
Location	Mesa County, Colorado
Job No.	201096
Date	2-20-96

Figure 12

WESTERN COLORADO TESTING, INC.

Job No. 201096

Lab./Invoice No.

Date 2-20-96

Reviewed by

RESISTANCE 'R' VALUE AND EXPANSION PRESSURE

Client Great Homes LTD Project Sunset Village Subdivision

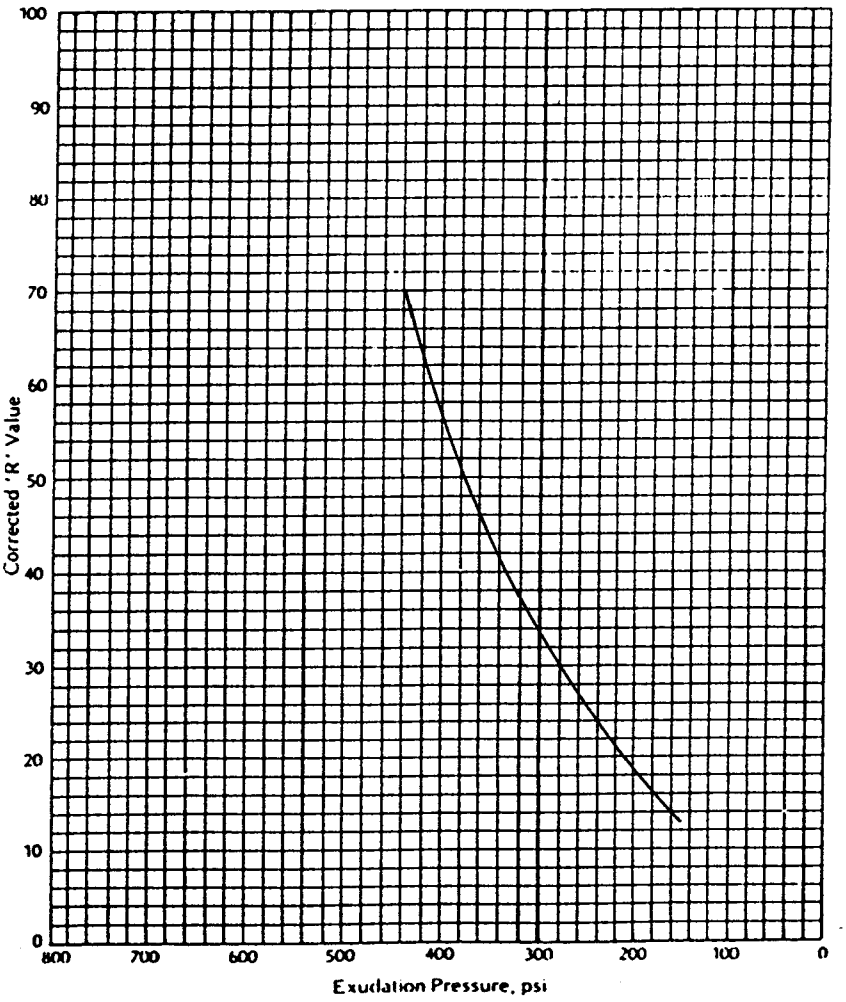
Location Mesa County, Colorado Sampled By K. Alpha Date 2-15-96

Type of Material Clay, silty, slightly sandy Submitted By K. Alpha Date 2-15-96

Source of Material TH-9 @ 1.0' - 5.0' Authorized By Client Date 2-14-96

ASTM D2844-	Specimen		
	A	B	C
Compactor Pressure, psi	150	300	350
Exudation Pressure, psi	159	219	430
Moisture at Compaction, %	16.2	14.9	13.3
Dry Density at Compaction, pcf	118.4	120.3	124.1
Corrected 'R' Value	14	21	67
Expansion Dial Read, $x10^{-4}$			
Expansion, psf			
Atterberg Limits, ASTM D424-	LL= 30	PI= 13	

Corrected 'R' Value at 300 psi 34



Sieve Analysis, ASTM D422-

Sieve Size	% Passing Accumulative	Specification	As Tested Grading
3"			
2½"			
2"			
1½"			
1"			
¾"			
½"			
⅜"	100		
¼"	–		
No. 4	99		
No. 8	99		
No. 10	99		
No. 16	98		
No. 30	98		
No. 40	97		
No. 50	97		
No. 100	94		
Finer than 200 ASTM D1140-	86.7		

Figure 13

WESTERN COLORADO TESTING, INC.

Job No.: 201096
Client: Gread Homes LTD
Project.: Sunset Village Subdivision
Location: Mesa County, Colorado

SUMMARY OF SOIL TESTS

Test Hole No.	Sample No.	Sample Depth (ft)	Sample Dia. (in)	Sample Hgt. (in)	Water Content (%)	Density		Void Ratio (e)	Unconfined Compression		Atterberg Limits			Cons Test	% Pass #200 Sieve	Classification or Remarks
						Wet (pcf)	Dry (pcf)		QU (tsf)	Strain (%)	LL	PL	PI			
TH-1	D-1	2.0-3.0	2.42		18.5	118.0	99.6									
TH-2	D-1	2.5-3.5	2.42		20.7	123.5	102.3									
TH-4	D-1	2.0-3.0	2.42		25.4	119.3	95.1				45	19	26	*	94.3	CL
TH-9	B-1	1.0-5.0	Bulk		16.9						30	17	13		86.7	CL R-value = 34

Figure 14

msa:2010fg14.doc

Stan Seligman

REVIEW COMMENTS

FILE #FPP-96-48 **TITLE HEADING:** Sunset Village

LOCATION: NE corner of 25 1/2 & F 3/4 Roads

PETITIONER: Mark Laird

PETITIONER'S ADDRESS/TELEPHONE: 686 25 1/2 Road
Grand Junction, CO 81505
245-2886

PETITIONER'S REPRESENTATIVE: Barry L. Haag

STAFF REPRESENTATIVE: Bill Nebeker

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS ON OR BEFORE 5:00 P.M., MARCH 22, 1996.

U.S. WEST **3/5/96**
Max Ward **244-4721**

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

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

AND

CALL THE TOLL-FREE NUMBER FOR:
Developer Contact Group
1-800-526-3557

We need to hear from you at least 60 days prior to trenching.

GRAND JUNCTION DRAINAGE DISTRICT **3/7/96**
John L. Ballagh **242-4343**

The site is wholly within the Drainage District. The surface water probably flows into the Grand Valley Irrigation Company canal south of the site. The drainage report prepared by Mr. Lizer does not state exactly where the surface waters go past "to connect to existing waste ditch". The effect of the proposed discharge on the existing waste ditch is not evaluated in the report.

The plat has a drainage easement shown but no dedication language addressing that easement. To what agency or homeowners association will the maintenance of the detention easement fall?

CITY PROPERTY AGENT **3/12/96**
Steve Pace **256-4003**

Lien holder certificate, if needed.

COMMUNITY DEVELOPMENT DEPARTMENT **3/12/96**
Bill Nebeker **244-1447**

1. Place a note on the plat that states that, "No vehicular access to 25 1/2 Road or F 3/4 Road allowed from any lots in this subdivision."
2. Is there a reason why Lot 12A isn't designated Lot 13?
3. Minimum lot size in RSF-4 zoning is 8,500 square feet. Lots 2-4 and Lots 10-12 are only 8,499.5 square feet. Correct accordingly and show the sizes of all new lots on a separate sheet.
4. The drainage easement on Lot 1 is unacceptable. It must be in a separate tract, dedicated to all lots within the subdivision. There must be a homeowner's association to maintain it. Once the drainage easement is taken out of Lot 1, it will be only 7,831 square feet in size. Correct accordingly.

PUBLIC SERVICE COMPANY **3/12/96**
Jon Price **244-2693**

Public Service Company has no objections or additional requirements.

CITY DEVELOPMENT ENGINEER **3/14/96**
Jody Kliska **244-1591**

1. Submitted plans and reports were deficient, so redlined plans and SSID checklists are being returned with these comments. Acceptable plans and report must be submitted by the response to comments date or the project will be pulled from the Planning Commission agenda.
2. The proposed detention area needs to be dedicated as a separate tract owned by the homeowners. A drainage easement is not acceptable.
3. No street plans were submitted for the required 25 1/2 Road improvements. The cross-section shown is incorrect, as the City Standard for collector streets is 44 feet of pavement width. The waste irrigation ditch must be shown on these plans as well as its treatment if it is within the roadway cross-section or immediately adjacent to the sidewalk.

CITY POLICE DEPARTMENT **3/14/96**
Dave Stassen **244-3587**

The Police Department has no concerns with this project. The use of cul-de-sac follows current crime prevention (C.P.T.E.D.) design standards.

TCI CABLEVISION **3/11/96**
Glen Vancil **245-8777**

See attached comments.

CITY FIRE DEPARTMENT **3/14/96**
Hank Masterson **244-1414**

The Fire Department has no problems with this proposal.

UTE WATER **3/14/96**
Gary R. Mathews **242-7491**

1. The one fire plug need relocated to Lots 10 & 11 property line.
2. This project is required to participate in an assessment cost on the 8" main in 25 1/2 Road.
3. Water mains shall be c-900, class 150. Installation of pipe fittings, valves and services including testing and disinfection shall be in accordance with Ute Water standard specifications and drawings.

4. Developer is responsible for installing the meter pits and yokes. Ute will furnish the meter pits and yokes.
5. POLICIES AND FEES IN EFFECT AT THE TIME OF APPLICATION WILL APPLY.

CITY UTILITY ENGINEER **3/15/96**
Trent Prall **244-1590**

SEWER - CITY

1. Sewer stub out to east shall have a steel fence post buried above plug and cap for future identification.
2. PLEASE SEE PAGE IX-35 (DRAWING STANDARDS CHECKLIST) OF THE SSID MANUAL. IN THE BEST INTEREST OF THE PETITIONER'S AS WELL AS CITY STAFF'S TIME, PLEASE VERIFY EACH ITEM HAS BEEN ADEQUATELY ADDRESSED PRIOR TO RESUBMITTAL.
3. Please also add the following general notes to the sewer plan and profile.
   A. Contractor shall have one signed copy of plans and a copy of the City of Grand Junction's Standard Specifications at the job site at all times.
   B. All sewer mains shall be PVC SDR 35 (ASTM 3034) unless otherwise noted.
   C. All sewer mains shall be laid to grade utilizing a pipe laser.
   D. All service line connections to the new main shall be accomplished with full body wyes or tees. Tapping saddles will not be allowed.
   E. No 4" services shall be connected directly into manholes. 6" service connections with the mainline will a manhole.
   F. The contractor shall notify the City inspection 48 hours prior to commencement of construction.
   G. The Contractor is responsible for all required sewer line testing to be completed in the presence of the City Inspector. Pressure testing will be performed after all compaction of street subgrade and prior to street paving. Final lamping will also be accomplished after paving is completed. These tests shall be the basis for issuing initial acceptance of the sewer line extension.
   H. The Contractor shall obtain City of Grand Junction Street Cut Permit for all work within existing City road right-of-way prior to construction.
   I. A clay cut-off wall shall be placed 10 feet upstream from all new manholes unless otherwise noted. The cut-off wall shall extend from 6 inches below to 6 inches above granular backfill material and shall be 2 feet wide. If native material is not suitable, the contractor shall import material approved by the engineer.
   J. Benchmark _____

WATER - UTE

1. Fire hydrant required on north end of cul-de-sac.

CITY PARKS & RECREATION **3/15/96**
Shawn Cooper **244-3869**

Parks & Open Space Fees - 13 dwelling units @ $225 = $2,925.00.

We're taking television into tomorrow.

TCI Cablevision of Western Colorado, Inc.

March 14, 1996

Sunset Village
Marc S. Laird
% Community Development Department
250 North 5th Street
Grand Junction, CO 81501

Ref. No. CON19612

Dear Mr. Laird;

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

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

1. We require the developers to provide, at no charge to TCI Cablevision, an open trench for cable service where underground service is needed and when a roadbore is required, that too must be provided by the developer. The trench and/or roadbore may be the same one used by other utilities so long as there is enough room to accommodate all necessary lines.

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

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

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

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

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

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

Sincerely,

Glen Vancil

Glen Vancil,
Construction Supervisor 245-8777

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

RESPONSE
TO
REVIEW COMMENTS

FILE #FPP-96-48 TITLE HEADING: Sunset Village

LOCATION: NE corner of 25 1/2 & F 3/4 Roads

PETITIONER: Marc Laird

PETITIONER'S ADDRESS/TELEPHONE: 686 25 1/2 Road
Grand Junction, CO 81505
245-2886

PETITIONER'S REPRESENTATIVE: Barry L. Haag

STAFF REPRESENTATIVE: Bill Nebeker

NOTE: THE PETITIONER HEREWITH SUBMITS FOUR (4) COPIES OF THE WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS, THIS 22ND DAY OF MARCH, 1996.

✔ U.S. WEST: Upon approval of Planning Commission a full set of drawings, with payment as required will be forwarded to U.S. West.

✔ GRAND JUNCTION DRAINAGE DISTRICT: All requirements of Grand Junction Drainage District have been complied with. Revised drawings indicate the direction and effect of the proposed discharge.

Full dedication to the proposed Homeowner's Association including the requirement of maintenance and repair of the detention facility has been set forth in detail on the proposed plat submitted herewith.

✔ CITY PROPERTY AGENT: There are and will be no lien holders.

COMMUNITY DEVELOPMENT DEPARTMENT:

1. A note (#2) is inscribed upon the face of the plat that states "No vehicular access to 25 1/2 Road or F 3/4 Road allowed from any lots in this subdivision."
2. A lot numbered 13 inhibits the sale of said lot. For that reason the lot following Lot 12 has been designated "Lot 14". Should the Planning Department desire a different approach, said lot number will be changed.
3. Minimum lot sizes have been changed to 8500 sq. ft. as required. The square footage has been noted on each lot on the proposed plat and provided on a separate sheet.

4. Lot 1 has been corrected. The "Drainage Easement" for the detention facility has been eliminated. A separate tract has been created to be dedicated on the plat (see necessary language on face of the proposed plat). Additional language is provided requiring maintenance by the Homeowner's Association to be formed prior to recordation of the plat.

PUBLIC SERVICE COMPANY: No objections or additional requirements were noted.

CITY DEVELOPMENT ENGINEER:

1. All items on the "red-lined" drawings have been corrected in accordance with said drawings and SSID sheets.
2. Corrected and explained in #4 above.
3. Fully covered in new drawings submitted with this response.

CITY POLICE DEPARTMENT: No concerns or additional requirements noted.

TCI CABLEVISION: Comments will be complied with at time of installation. All standard.

CITY FIRE DEPARTMENT: No problems noted.

UTE WATER:

1. Fireplug has been relocated to Lots 10 & 11 property line.
2. Participation in assessment cost is noted and will be complied with.
3. Water mains will be c-900, class 150. Installation of pipe fittings, valves and services including testing and disinfection will be in accordance with Ute Water standard specifications and drawings.
4. Developer will install meter pits and yokes suppied by Ute Water.
5. Policies and fees in effect at time of application will apply.

CITY UTILITY ENGINEER:

SEWER: CITY

1. Sewer stub out to east with steel fence post will be provided.
2. Each item has been addressed prior to resubmittal.
3. Items "A. thru J." will be noted on the sewer plan and profile.

WATER: UTE

1. Fire hydrant has been relocated according to Ute Water's request.

To: Marcia Rabideaux
From: Jody Kliska
Subject: FPP-96-48 Sunset Village
Date: 3/14/96 Time: 10:17AM

1. Submitted plans and reports were deficient, so redlined plans and SSID checklists are being returned with these comments. Acceptable plans and report must be submitted by the response to comments date or the project will be pulled from the Planning Commission agenda.

2. The proposed detention area needs to be dedicated as a separate tract owned by the homeowners. A drainage easement is not acceptable.

3. No street plans were submitted for the required 25 1/2 Road improvements. The cross-section shown is incorrect, as the City Standard for collector streets is 44 feet of pavement width. The waste irrigation ditch must be shown on these plans as well as its treatment if it is within the roadway cross-section or immediately adjacent to the sidewalk.

Also Blue-line

March 27, 1996

Stan Seligman
Great Companies
3032 I-70 Business Loop
Grand Junction, CO 81504

Re: Sunset Village Final Plat

Dear Stan:

In accordance with Section 6-8-3 and 6-7-4 of the Grand Junction Zoning and Development Code, Sunset Village Final Plat has been withdrawn from the April 2, 1996 Planning Commission hearing. The reason for this withdrawal is numerous deficiencies with the engineering plans, including the street plan, grading and drainage plan and final drainage report. Larry Timm, the Community Development Director has reviewed your letter but agrees that the submitted plans are deficient. A list of these deficiencies are attached.

Please make necessary corrections and resubmit four sets of responses to our department no later than April 8, 1996. I suggest that you submit your corrected drawing before then to give sufficient time for review and correction if needed. A $50 readvertising fee is also required and must be paid by April 19th.

If you have any questions please call me at 244-1447.

Sincerely,

Bill Nebeker
Senior Planner

c: Wayne Lizer
Barry Haag

W.H. LIZER & ASSOCIATES
Engineering Consulting and Land Surveying
576 25 road, Unit #8
Grand Junction, Colorado 81505
(970) 241-1129

April 22, 1996

Jody Kliska, P.E.
City Development Engineer
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501

RE: Sunset Village - Drainage Analysis and Street Plans

Dear Ms. Kliska,

Please find attached revised plans for drainage and street design for the above-referenced subdivision, together with requested computations on street flow depth, sidewalk trough sizing, and waste ditch piping capacity.

On the Preliminary Major Basin Map (Exhibit 3.0) of the Preliminary Drainage Report prepared by LANDesign, dated Nov. 29, 1995, it is shown that 6.75 acres will contribute run-off to the site. However, from site reviews and the topographical map (Exhibit 3.0) for this off-site basin, it appears the contribution will be significantly less.

I would request an on-site review with you to see if you concur.

If so, it appears that most of the drainage would go into the 25 1/2 Road ROW and partially flow across 25 1/2 Road to the West as sheet flow with part of the run-off following the 25 1/2 Road East right-of-way to the South.

Sincerely yours,

Wayne H. Lizer

Wayne H. Lizer, P.E., P.L.S.

WHL/sl

Attachments

Rec 2 PM
4-22-96
BN

REVIEW COMMENTS

FILE #FPP-96-48 **TITLE HEADING:** Sunset Village

LOCATION:

PETITIONER: Stanley Seligman

PETITIONER'S ADDRESS/TELEPHONE: 3032 I-70 Business Loop
Grand Junction, CO 81504
434-2000

PETITIONER'S REPRESENTATIVE: Wayne Lizer

STAFF REPRESENTATIVE: Bill Nebeker

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS ON OR BEFORE 5:00 P.M., MAY 23, 1996.

CITY DEVELOPMENT ENGINEER **4/29/96**
Jody Kliska **244-1591**

1. A complete set of plans was not submitted with the latest package of Sunset Village plans. A complete set of plans is required.
2. A complete final drainage report in accordance with SSID X-05 has never been submitted and is required. Submission of single sheets of paper with calculations does not constitute a complete report.
3. Comments from Grand Junction Drainage District regarding "the effect of the proposed discharge on the existing waste ditch is not evaluated in the report" have not been addressed and must be included in the Final Drainage Report.
4. Item number 1 on the 3-25-96 comments from me regarding the vertical cub on F 3/4 Road has not been addressed. Vertical curb is required and must be shown on the typical street section.
5. Item number 3 has been addressed, with the exception of revising the drainage report and including pipe calculations as part of the complete report submittal.
6. Item 6 of the previous comments has not been adequately addressed. Again, a complete drainage report is required, along with any maps required to show the off-site drainage and its contribution.
7. Item number 8 regarding the pan across F 3/4 Road has not been addressed as to where the drainage from 25 ½ Road will go once it crosses F 3/4 Road. The adjacent property owners are currently piping the open ditch immediately to the south.
8. Item number 9 regarding the apparent waste ditch under the proposed F 3/4 Road has not been addressed.
9. Items 14, 16, 17 and 18 regarding the final drainage report need to be addressed in a complete final drainage report. Number 18 is still outstanding, as it was not addressed with this submittal, and was not properly calculated with the previous submittal. Loose sheets of paper with calculations do not constitute a complete drainage report.

SUBMITTED STREET PLANS

10. Sheet 1 of 2: The grade shown on F 3/4 Road exceeds the maximum 4% allowed in unsignalized intersections as per City Transportation Engineering Design Standards section 6.2.2, page 27.
11. The profile for F 3/4 Road does not show where an existing irrigation pipe crosses 25 ½ Road (indicated on 25 ½ Road profile).
12. The portion of irrigation pipe shown on the 25 ½ Road profile which crosses under F 3/4 Road must be constructed with C-900 pipe or equivalent because it has less than 4 feet of cover. Please not, if cover is 18" or less, new City specifications require backfill with flowable fill.
13. Street sheet 2 of 2: Vertical curb is required on F 3/4 Road.
14. Grading and Drainage plan: As noted above, C-900 pipe or equivalent is required under the F 3/4 Roadway.
15. The plan still shows what appears to be an existing ditch under the proposed F 3/4 Road. What is it and what will happen to it?
16. The property owners to the south are currently piping the existing irrigation ditch. The drainage plan needs to show that and how tie-ins will be made.
17. What is the L-shaped structure shown in the detention basin? Please label and size it (width, length, material).
18. I do not understand how the outlet structure will work in this pond. Are you intending to tie into the irrigation pipe? If so, a better detail is required showing a manhole. The previously submitted single sheet of calculations does not explain how the structure works or what it discharges to. Please be clear in the narrative of the complete final drainage report.
19. The irrigation waste ditch plan and profile does not include some essentials such as a north arrow and scale. Please refer to SSID IS-30 for a checklist for a similar drawing.
20. The plan view for the irrigation pipe appears as though the pipe terminates under the pavement of F 3/4 Road. Please show the tie-in detail with the pipe currently being installed by adjacent property owners.
21. As noted previously, C-900 pipe or equivalent is required under F 3/4 Road due to shallow pipe cover.
22. Where is the existing irrigation pipe crossing 25 ½ Road as noted on the profile in relation to F 3/4 Road?

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

May 10, 1996

Stan Steligman
Great Companies
3032 I-70 Business Loop
Grand Junction, CO 81504

RE: Sunset Village Final Plat

Dear Stan:

Attached are comments from Jody Kliska for required changes to Sunset Village Final Plan. I believe these comments have already been forwarded to you and Wayne Lizer. After corrections have been made, please submit a complete set of plans and a complete drainage report. Please also submit one 11" X 17" copy of the final plat for the Planning Commission notebooks. If this reduction is not legible, 10 full size copies will be required.

These plans must be submitted by May 23, 1996 at 5:00 p.m. to be scheduled for the June 4, 1996 Planning Commission hearing. Since a change of applicant and representative has occurred for this project since its initial submittal, please also complete the attached application form and submit it with your resubmittal. I've enclosed a copy of the previous application also.

If you have any questions please call me at 244-1447.

Sincerely,

Bill Nebeker
Senior Planner

c: Wayne Lizer

To: BILLN (Bill Nebeker)
From: Marcia Rabideaux
Subject: Re: Review Comments - Hill View Court Subdivision
Date: 6/24/96 Time: 10:38AM

Originated by: BILLN @ CITYHALL on 6/24/96 9:27AM
Replied by: MARCIAP @ CITYHALL on 6/24/96 10:38AM

By my best calculations, Sunset Village has been scheduled for hearing every month starting in April 1996. Stan paid one $50 re-advertising fee so at this point he would owe us an additional $100. This would bring him current. If we schedule, and advertise, for the August Planning Commission meeting add another $50 (total would then be $150).

Thanks,
Marcia

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

June 26, 1996

Stan Steligman
Great Companies
3032 I-70 Business Loop
Grand Junction, CO 81504

RE: Sunset Village Final Plat

Dear Stan:

Sunset Village Final Plat has been pulled from the July Planning Commission hearing because no revised plans were submitted. If revised plans are not submitted by July 22, 1996 for the August Planning Commission hearing this application will be considered withdrawn. Refiling of the plan will require an entirely new submittal with applicable fees.

If plans are submitted by July 22, 1996 please include $100 as payment for the two times that this item was advertised and then pulled from the agenda and $50 for the August Planning Commission advertising fee. (Total $150.) Please note that four copies of a full set of plans are required for submittal in July.

If you have any questions please call me at 244-1447.

Sincerely,

Bill Nebeker

Bill Nebeker
Senior Planner

c: Wayne Lizer

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

July 23, 1996

Stan Steligman
Great Companies
3032 I-70 Business Loop
Grand Junction, CO 81504

Dear Stan:

The final plat for Sunset Village (File #FP-96-48) has been withdrawn due to failure to submit complete plans in a timely manner. Future submittals for the final plat will require a new preapplication conference and full submittal requirements including fees.

If you have any questions please call me at 244-1447.

Sincerely,

Bill Nebeker
Senior Planner

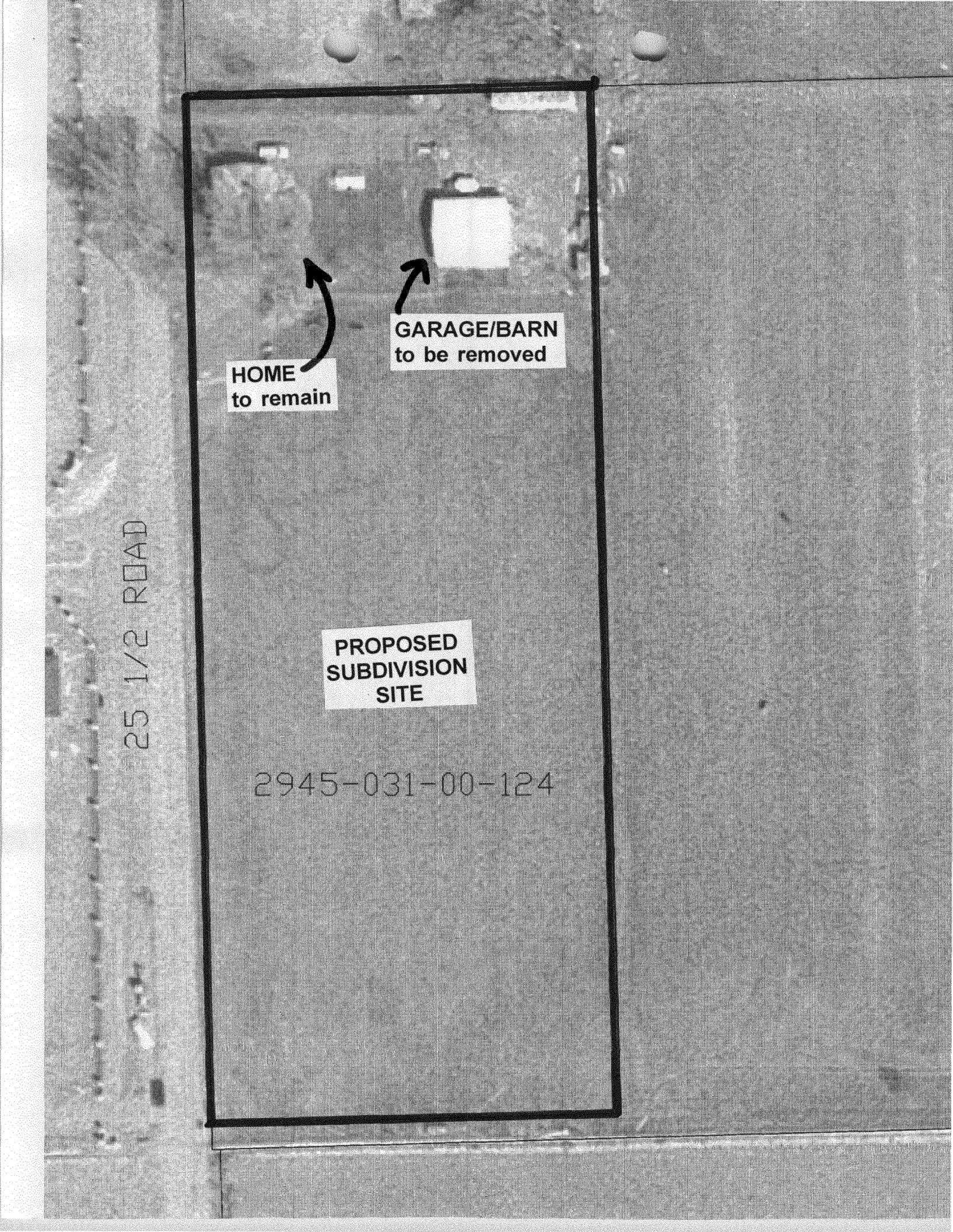
c: Wayne Lizer

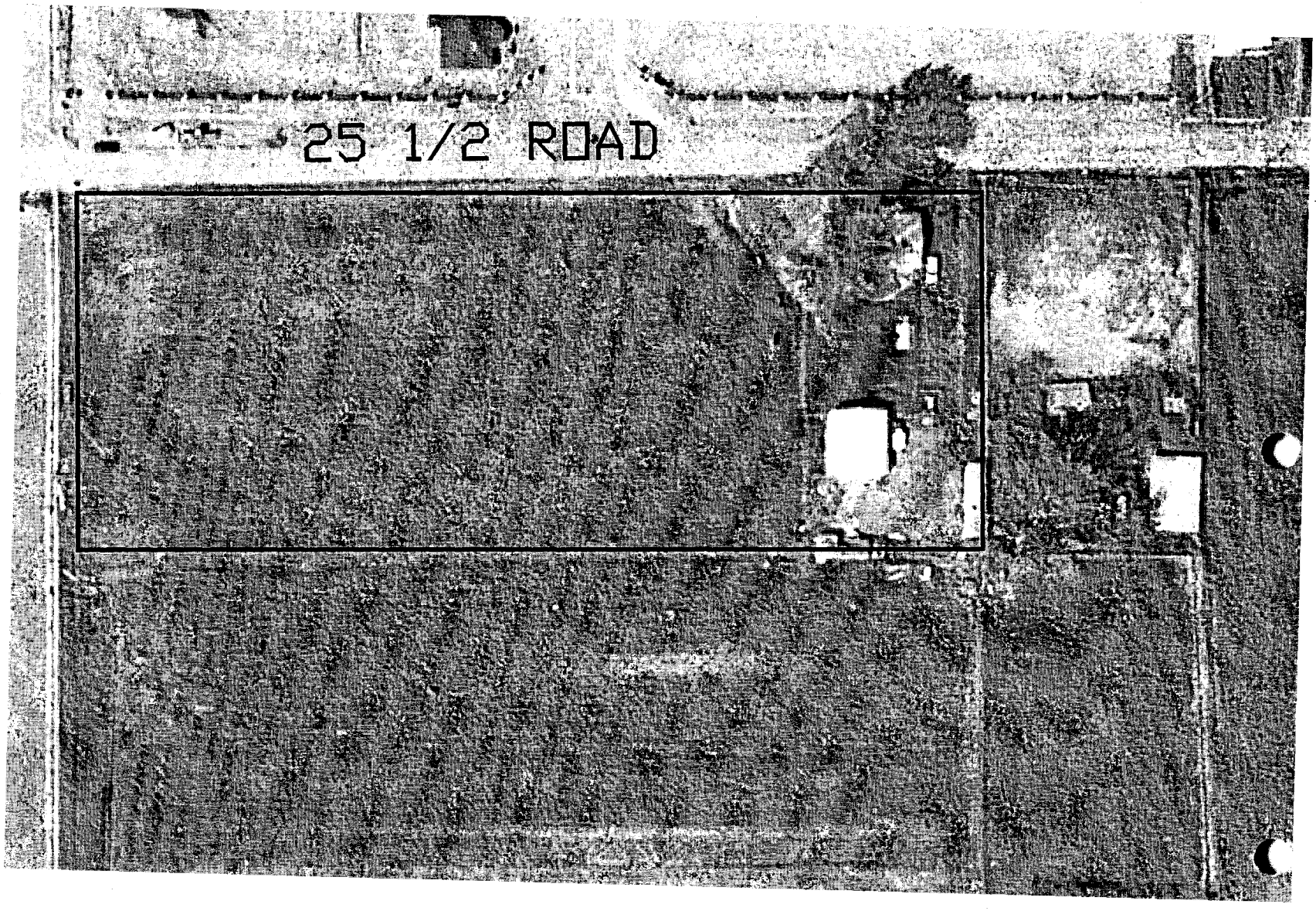
TYPE LEGAL DESCRIPTION BELOW, USING ADDITIONAL SHEETS AS NECESSARY.
USE SINGLE SPACING WITH A ONE (1) INCH MARGIN ON EACH SIDE.

****

A parcel of land in the NW 1/4 of the NE 1/4 of Section 3, Township 1 South, Range 1 West, Ute Meridian, Mesa County, Colorado, more particularly described as follows:

Beginning at a point from which the C-N 1/16 corner of said Section 3 bears S 89°44'37" W, 25.00 feet and S 00°16'55" E, 632.50 feet; thence N 89°44'37" E, 240.00 feet; thence S 00°16'55" E, 617.50 feet; thence S 89°44'37" W, 240.00 feet; thence N 00°16'55" W, 617.50 feet to the point of beginning.

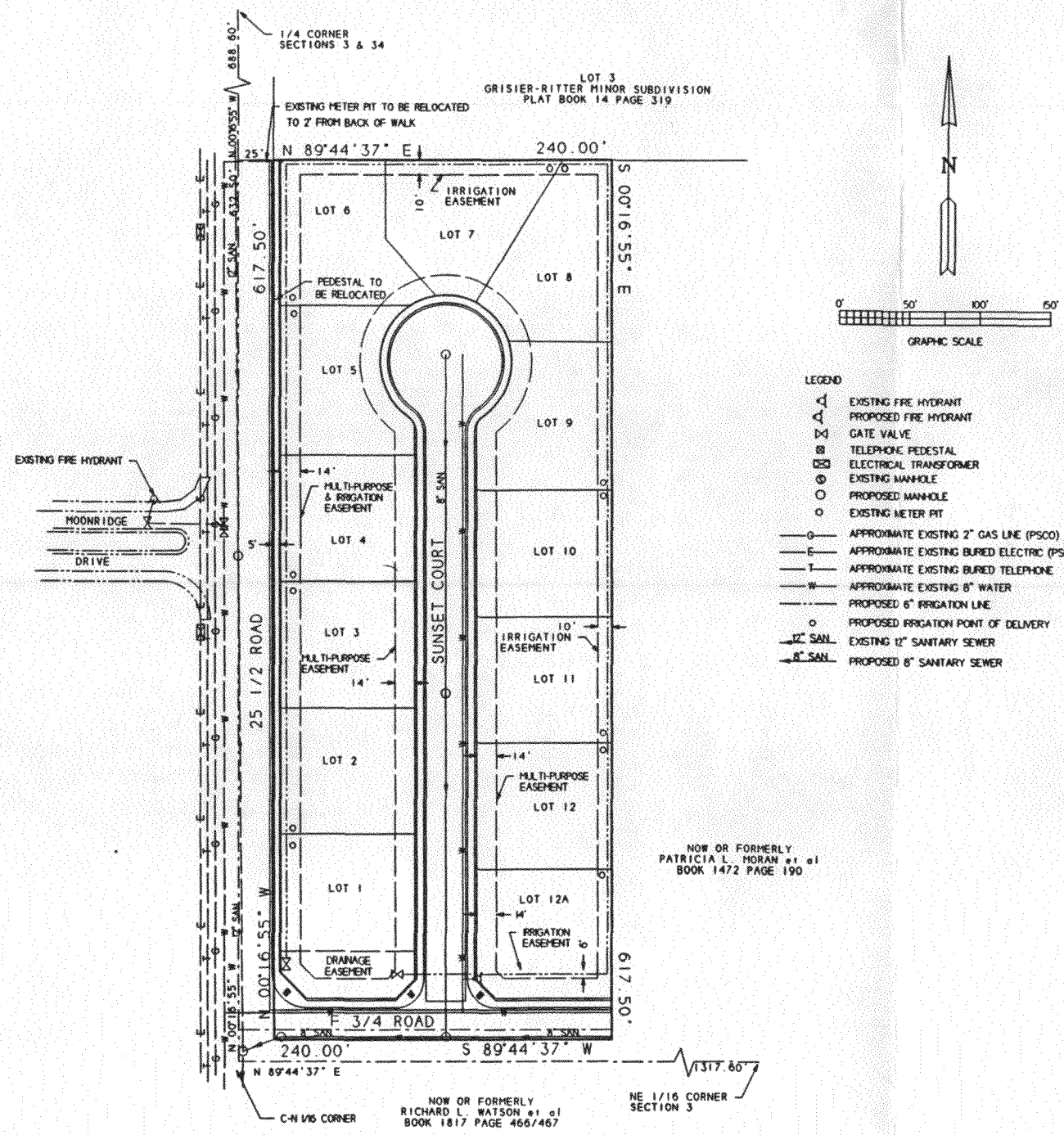

HOME
to remain
GARAGE/BARN
to be removed
PROPOSED
SUBDIVISION
SITE
2945-031-00-124
25 1/2 ROAD


25 1/2 ROAD

INITIAL ACCEPTANCE	CONSTRUCTION APPROVAL

SUNSET VILLAGE SUBDIVISION

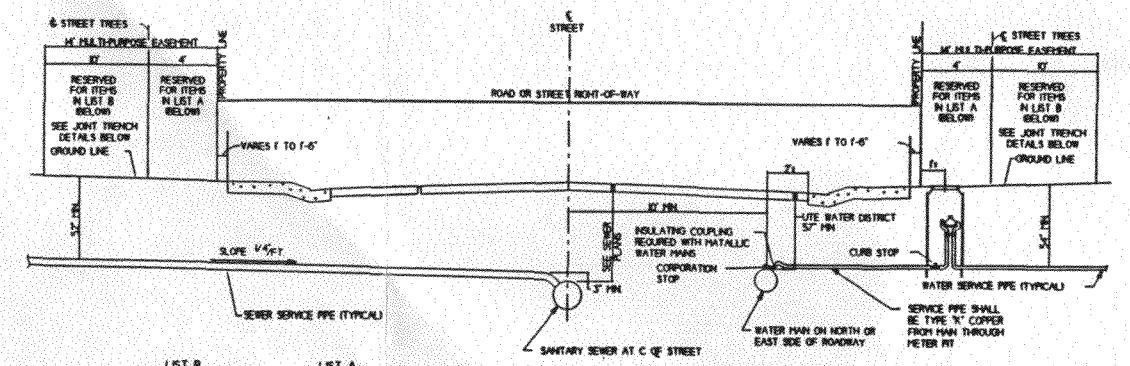
IN THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 3
TOWNSHIP 1 SOUTH, RANGE 1 WEST, UTE MERIDIAN
MESA COUNTY, COLORADO



LEGEND

- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- GATE VALVE
- TELEPHONE PEDESTAL
- ELECTRICAL TRANSFORMER
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING METER PIT
- —G— APPROXIMATE EXISTING 2" GAS LINE (PSCO)
- —E— APPROXIMATE EXISTING BURIED ELECTRIC (PSCO)
- —T— APPROXIMATE EXISTING BURIED TELEPHONE
- —W— APPROXIMATE EXISTING 8" WATER
- PROPOSED 6" IRRIGATION LINE
- PROPOSED IRRIGATION POINT OF DELIVERY
- 12" SAN EXISTING 12" SANITARY SEWER
- 8" SAN PROPOSED 8" SANITARY SEWER

TYPICAL STREET SECTION

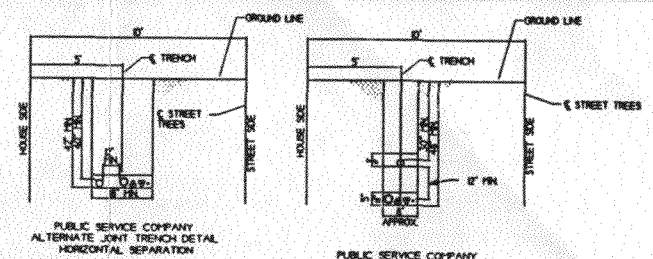


LIST B
UNDERGROUND GAS, ELECTRIC, CABLE TV, TELEPHONE, ELECTRICAL TRANSFORMERS AND UTILITY SERVICE PEDESTALS

LIST A
FIRE HYDRANTS, WATER METERS, TRAFFIC CONTROL SIGNS, TRAFFIC SIGNALS, STREET LIGHTS, OVER HEAD UTILITIES & EARTH RETAINING STRUCTURES

LEGEND FOR JOINT TRENCH DETAILS

- ELECTRIC PRIMARY
- ELECTRIC SECONDARY
- ELECTRIC SERVICE
- TELEPHONE AND/OR CABLE TV
- GAS PIPE



COMPOSITE DRAWING

SUNSET VILLAGE SUBDIVISION
SITUATE
NW 1/4 – NE 1/4 – SECTION 3
T. 1 S. – R. 1 W. – U.M.
MESA COUNTY COLORADO

PREPARED BY:

Barry L. Hoag
P.L.S. 27266
3004 Bookcliff Avenue
Grand Junction, Colorado 81504
Phone: (970) 434-4679

W. H. LIZER & ASSOCIATES
ENGINEERING CONSULTING & LAND SURVEYING
576 25 ROAD UNIT 8 241-1129
GRAND JUNCTION, COLORADO 81505

SCALE:	DATE:	PROJ. NO.	DRAWN BY: BLH
1" =50'	FEB. 1996		CHK'D BY: WHL