

# Table of Contents

File PP-1995-214  
Date 10/28/99

P	S	<b>A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the ISYS retrieval system. In some instances, not all entries designated to be scanned, are present in the file. There are also documents specific to certain files, not found on the standard list. For this reason, a checklist has been included.</b>
	d	<b>Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.</b>
		<b>Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.</b>
X	X	<b>*Summary Sheet – Table of Contents</b>
X	X	Application form
X		Receipts for fees paid for anything
X	X	<b>*Submittal checklist</b>
		<b>*General project report</b>
		Reduced copy of final plans or drawings
X	X	Reduction of assessor's map
		Evidence of title, deeds
X	X	<b>*Mailing list</b>
		Public notice cards
		Record of certified mail
X	X	Legal description
		Appraisal of raw land
		Reduction of any maps – final copy
		<b>*Final reports for drainage and soils (geotechnical reports)</b>
		Other bound or nonbound reports
		Traffic studies
X		Individual review comments from agencies
X	X	<b>*Consolidated review comments list</b>
X	X	<b>*Petitioner's response to comments</b>
X	X	<b>*Staff Reports</b>
		<b>*Planning Commission staff report and exhibits</b>
		<b>*City Council staff report and exhibits</b>
		<b>*Summary sheet of final conditions</b>
		<b>*Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date)</b>
<b>DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:</b>		
X	X	Resolution No. 2-96 - **
X	X	Letter from Brian Hart to Richard Watson - 12/22/95
X	X	Letter from Brian Hart to Phil Bertrand - 12/22/95
X	X	Planning Commission Minutes - ** - 1/16/96
X	X	Letter from Bill Nebeker to Barry Haag - 2/5/96
X	X	Aerial Photo
X		Posting of Public Notice Signs
X	X	Preliminary Plan
X	X	Final Decision
X	X	Revised Staff Recommendation - 1/16/95
X		Memo from Mike Moran to Bill Nebeker - 1/9/96
X		Letter from Brian to Bill Nebeker - 12/22/95
X	X	Memo to File from Bill Nebeker - 12/13/95
X		Abstract & Title Co. - Commitment to Insure
X	X	Location Map
X	X	Concept Plan
X	X	Preliminary Drainage Report

# SUBMITTAL CHECKLIST

## MAJOR SUBDIVISION: PRELIMINARY

Location: 686 25 1/2 RD

Project Name: SUNSET VILLAGE

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)	○ City Downtown Dev. Auth.	● City Police	● County Planning	○ Walker Field	● School District #51	● Irrigation District <u>G.J.</u>	● Drainage District <u>WTC</u>	● Water District <u>G.J.</u>	● Sewer District <u>G.J.</u>	● U.S. West	● Public Service	○ GVRP	○ CDOT	○ Corps of Engineers	○ Colorado Geological Survey	○ U.S. Postal Service	○ Persigo WWTF	● TCI Cable	TOTAL REQ'D.
● Application Fee	VII-1	1																										
● Submittal Checklist*	VII-3	1																										
● Review Agency Cover Sheet*	VII-3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
● Application Form*	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
● 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
● Evidence of Title	VII-2	1		1			1																					
● Names and Addresses	VII-2	1																										
● Legal Description	VII-2	1		1																								
● General Project Report	X-7	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
● Location Map	IX-21	1																										
● Preliminary Plan	IX-26	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
● 11"x17" Reduction of Prelim. Plan	IX-26	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
● Preliminary Drainage Report	X-12	1	2																									

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



# DEVELOPMENT APPLICATION

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

Receipt \_\_\_\_\_

Date \_\_\_\_\_

Rec'd By \_\_\_\_\_

File No. PP-95-214

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
<input checked="" type="checkbox"/> Subdivision Plat/Plan <b>PRELIMINARY</b>	<input type="checkbox"/> Minor <input checked="" type="checkbox"/> Major <input type="checkbox"/> Resub	3.4 AC.	686 25 1/2 RD.	MESA COUNTY AFT	AFT.
<input type="checkbox"/> Rezone				From: To:	
<input type="checkbox"/> Planned Development	<input type="checkbox"/> ODP <input type="checkbox"/> Prelim <input type="checkbox"/> Final				
<input type="checkbox"/> Conditional Use					
<input type="checkbox"/> Zone of Annex					
<input type="checkbox"/> Variance					
<input type="checkbox"/> Special Use					
<input type="checkbox"/> Vacation					<input type="checkbox"/> Right-of Way <input type="checkbox"/> Easement
<input type="checkbox"/> Revocable Permit					

PROPERTY OWNER

DEVELOPER

REPRESENTATIVE

MARK LAIRD  
Name

-SAME-  
Name

LANDESIGN  
Name

686 25 1/2 ROAD  
Address

Address

259 GRAND AVE.  
Address

GRAND JUNCTWN CO 81505  
City/State/Zip

City/State/Zip

GRAND JCT. CO 81501  
City/State/Zip

250-0677 245-2886  
Business Phone No.

Business Phone No.

245-4099  
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.

Brian C. Hess  
Signature of Person Completing Application

11/30/95  
Date

Mark Laird  
Signature of Property Owner(s) - attach additional sheets if necessary

Date

PP-95-214

2945-031-00-123  
PATRICIA L MORAN  
ETAL C/O MIKE MORAN  
655 COUNCIL CREST CT  
KALAMA, WA 98625

2945-031-00-155  
RICHARD L WATSON  
ETAL  
653 26 RD  
GRAND JUNCTION, CO 81506-1418

2945-031-26-003  
JAMES RAYMOND GRISIER  
G LENE E GRISIER  
645 26 RD  
GRAND JUNCTION, CO 81506

2945-032-00-092  
JERALD L SUTTON  
RONDA S  
689 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-00-174  
WALID BOU-MATAR  
TERESA T  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-001  
LENNIE J JOHNS  
CLARECE JOHNS  
2549 MOONRIDGE DR  
GRAND JUNCTION, CO 81505

2945-032-19-004  
THERESE A TRABER  
915 BOOKCLIFF AVE  
GRAND JUNCTION, CO 81501

2945-032-19-005  
KENNETH K CHRISTENSEN  
RENEE L CHRISTENSEN  
147 VISTA GRANDE DR  
GRAND JUNCTION, CO 81503-1450

2945-032-19-001  
LENNIE J JOHNS  
CLARECE JOHNS  
2549 MOONRIDGE DR  
GRAND JUNCTION, CO 81505

2945-032-19-002  
CARROLL W OMAN  
MARY OMAN  
2547 MOONRIDGE DR  
GRAND JUNCTION, CO 81505

2945-032-19-003  
STEPHEN G BLAIR  
MARJORIE J BLAIR  
2545 MOON RIDGE DR  
GRAND JUNCTION, CO 81505

2945-032-19-007  
DONALD J BORGMAN  
ANN D BORGMAN  
2484 G RD  
GRAND JUNCTION, CO 81505

2945-032-19-008  
MOONRIDGE FALLS LTD LIABILITY CO  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-009  
MOONRIDGE FALLS LTD LIABILITY CO.  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-010  
MOONRIDGE FALLS LTD LIABILITY CO.  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-011  
MOONRIDGE FALLS LTD LIABILITY CO.  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-012  
MOONRIDGE FALLS LTD LIABILITY CO.  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-013  
MOONRIDGE FALLS LTD LIABILITY CO.  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-014  
MOONRIDGE FALLS LTD LIABILITY CO.  
677 25 1/2 RD  
GRAND JUNCTION, CO 81505-1001

2945-032-19-006  
TERRY L NEWTON  
DEBORAH J NEWTON  
3321 NORTHRIDGE DR  
GRAND JUNCTION, CO 81506-1925

Mark Laird  
686 25 1/2 Road  
Grand Junction, CO 81505

Landesign LLC  
259 Grand Ave.  
Grand Junction, CO 81501

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

# REVIEW COMMENTS

Page 1 of 2

FILE #PP-95-214

TITLE HEADING: Preliminary Plan - Sunset Village  
Subdivision

LOCATION: 686 25 1/2 Road

PETITIONER: Mark Laird

PETITIONER'S ADDRESS/TELEPHONE: 686 25 1/2 Road  
Grand Junction, CO 81505  
250-0677 / 245-2886

PETITIONER'S REPRESENTATIVE: Landesign, LLC

STAFF REPRESENTATIVE: Bill Nebeker

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**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., DECEMBER 27, 1995.**

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**CITY POLICE DEPARTMENT** 12/11/95  
**Dave Stassen** 244-3587

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This project poses no undue concerns for the Police Department. The proposed layout follows current CPTED design concepts and I cannot see any conflict between this location and surrounding uses that would create an increase in law enforcement activities.

**CITY DEVELOPMENT ENGINEER** 12/12/95  
**Jody Kliska** 244-1591

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1. Submitted plan does not conform to SSID requirements for a Preliminary Plan (checklist attached).
2. Is the ownership of the ditch into which runoff will be discharged known?

**GRAND JUNCTION FIRE DEPARTMENT** 12/12/95  
**Hank Masterson** 244-1414

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The Fire Department has no problems with this preliminary plan.

**PUBLIC SERVICE COMPANY** 12/12/95  
**Jon Price** 244-2693

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14' utility easements along front properties of lots/or facing any street right-of-way.

**COMMUNITY DEVELOPMENT DEPARTMENT** 12/13/95  
**Bill Nebeker** 244-1447

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See attached comments

**GRAND JUNCTION DRAINAGE DISTRICT**

12/15/95

**John L. Ballagh**

242-4343

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1. No present of planned Grand Junction Drainage District facilities to or within the site.
2. The closest facility is a 6" tile line in the F 1/2 Road right-of-way. That 6" line cannot accept any additional flows.
3. The route and destination (i.e. Grand Valley Irrigation Company mainline???) if the surface runoff from this development needs to be shown prior to final plat approval. Some document in the permanent files of the City should show who or which agency is responsible for the "existing ditch which historically drains to the Grand Valley Canal" as shown on the concept plan.

**UTE WATER**

12/15/95

**Gary R. Mathews**

242-7491

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1. Ute Water has an 8" main line on the West side of 25 1/2 Road. This line is a contract protected line and requires an assessment.
2. A utility composite is required for review before approval of this project.
3. Policies and fees in effect at the time of application will apply.

**CITY PROPERTY AGENT**

12/17/95

**Steve Pace**

244-1452

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No final plat to review.

**CITY UTILITY ENGINEER**

12/18/95

**Trent Prall**

244-1590

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Preliminary Plan failed to present any proposed utility locations.

**TO DATE, COMMENTS NOT RECEIVED FROM:**

- City Attorney
- Mesa County Planning
- Mesa County School District #51
- Grand Valley Irrigation
- U.S. West
- ~~Public Service Company~~
- TCI Cablevision

FILE: PP-95-214

Page 1 of 2

DATE: December 13, 1995

STAFF: Bill Nebeker

REQUEST: Preliminary Plat to subdivide a 3.4 acre parcel into 12 residential lots in a proposed RSF-4 zone.

Review Comments:

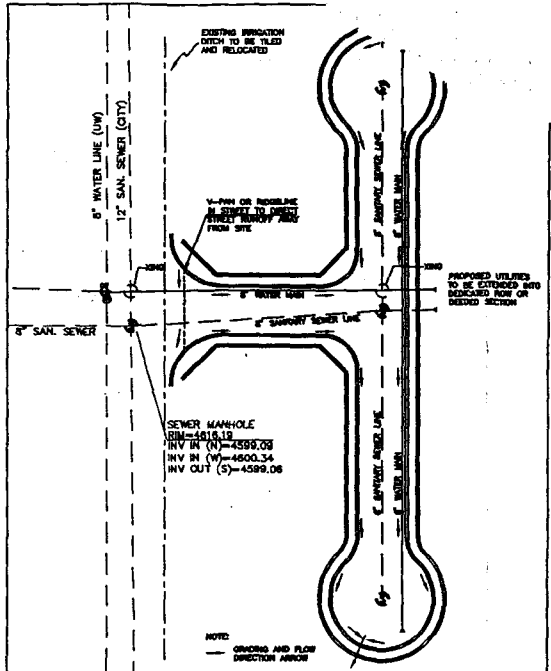
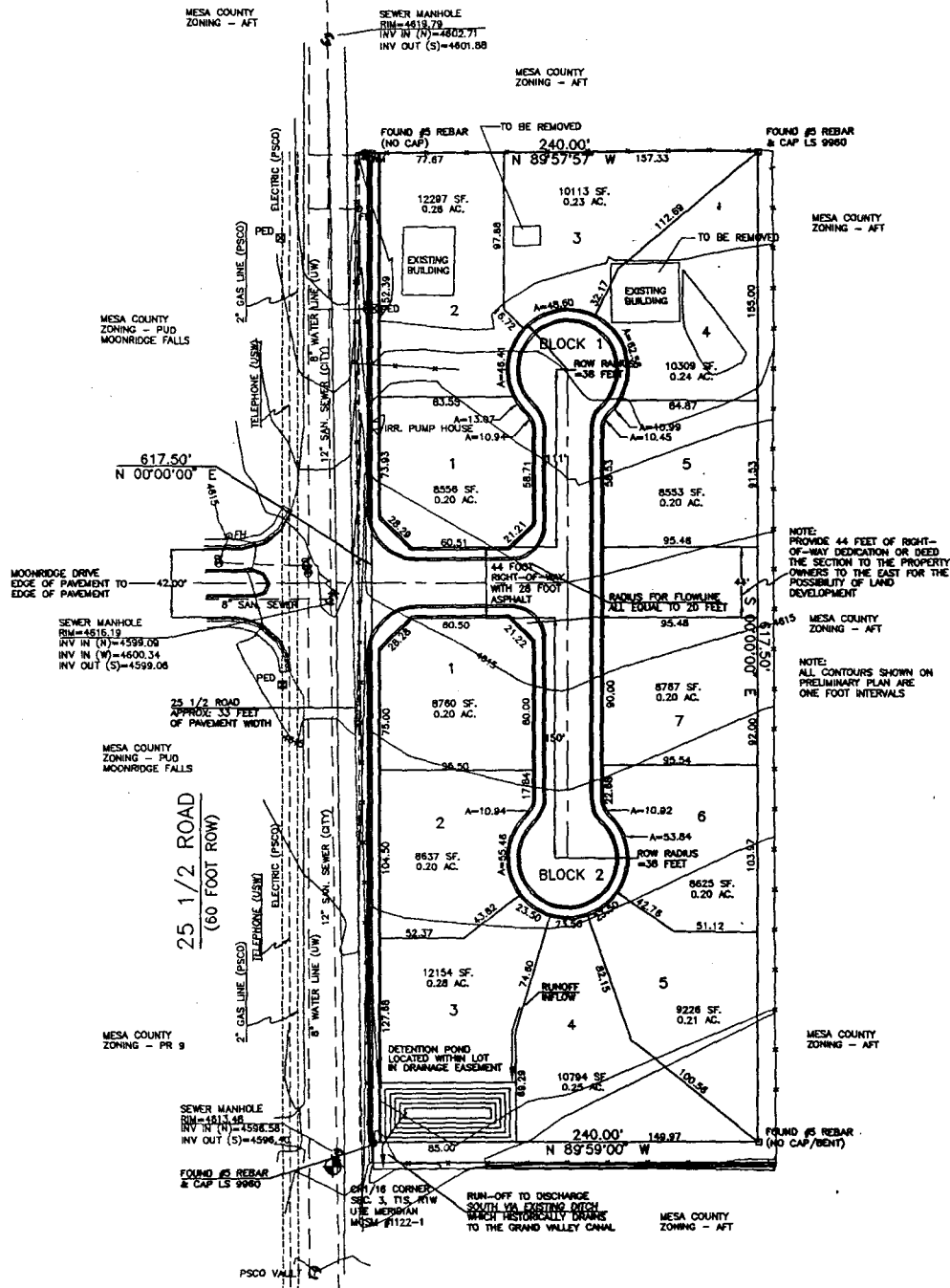
Preliminary plan does not comply with SSID manual.

1. No perimeter boundaries shown.
2. Is detention pond located within the lot or is it a separate tract?
3. WHERE IS PRELIMINARY PLAN? More information is needed on "concept plan." Relabel it as "preliminary plan."
  - a. number lots consecutively
  - b. dimension lot and tract boundaries and street
  - c. street extension to the east is not properly shown as a street; owner/developer will be required to dedicate this area as a street and install full street improvements; the parcel to the east does not have adequate access for future development (see note below)
  - d. show centerline of Moonridge Drive to the west and line up proposed street with Moonridge Drive if it is not aligned already
  - e. lot with existing building must be reconfigured to provide a 30' rear yard setback.
4. It's not necessary, nor desirable to show trees on the preliminary plan.
5. Only lot with existing building will have access to 25 1/2 Road. A note will be required to be placed on the final plat restricting access for all other lots.
6. Lot at south end of cul-de-sac has a very small building envelope.

- Note:
- a. It may be desirable to reconfigure the lot with the existing building to provide no access to the cul-de-sac. The cul-de-sac could be shortened (reducing development costs) and the other two lots become flag lots, more similar to the lot to the south end of the cul-de-sac. (Describing lots would be much easier if they were numbered, as required in the SSID Manual for preliminary plats.)
  - b. It would be to the benefit of the owner/developer to negotiate a trade of some sort with the property owner to the east for the 15' strip of land directly south of this subdivision.

- c. Refer to Drawings Standard Checklist - Preliminary Plan, SSID manual page IX-26 for additional information. It is very helpful if all of this information is shown on the Preliminary Plan, rather than just described in the project narrative.
- d. The Zone of Annexation for this parcel will be heard by the Planning Commission the same night as this plat.

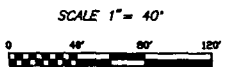




PROPOSED UTILITY AND GRADING DETAIL

- ABBREVIATIONS:
- CITY --- CITY OF GRAND JUNCTION
  - PSCO --- PUBLIC SERVICE COMPANY
  - USW --- US WEST
  - UW --- UTE WATER

NOTE:  
NO MAJOR CHANGES TO THE EXISTING CONTOURS IS ANTICIPATED. THE GRADING WILL FOLLOW THE EXISTING GROUND LEVEL AS CLOSE AS POSSIBLE.



LAND USE SUMMARY		
	ACRES	PERCENT
LOTS	2.60	76.5%
STREETS	0.73	21.44%
DETENTION	0.07	2.06%
TOTAL	3.40	100%
TOTAL LOTS	12	
DENSITY:	3.53 dv/ac	

PHILIP M. HART  
REGISTERED PROFESSIONAL ENGINEER  
P.E. NO. 10040

**PRELIMINARY PLAN**  
**SUNSET VILLAGE**  
**SUBDIVISION**

**LAND DESIGN**  
ENGINEERS, SURVEYORS, PLANNERS

200 NORTH 4TH STREET, SUITE 400  
GRAND JUNCTION, COLORADO 81501 (970) 244-9100

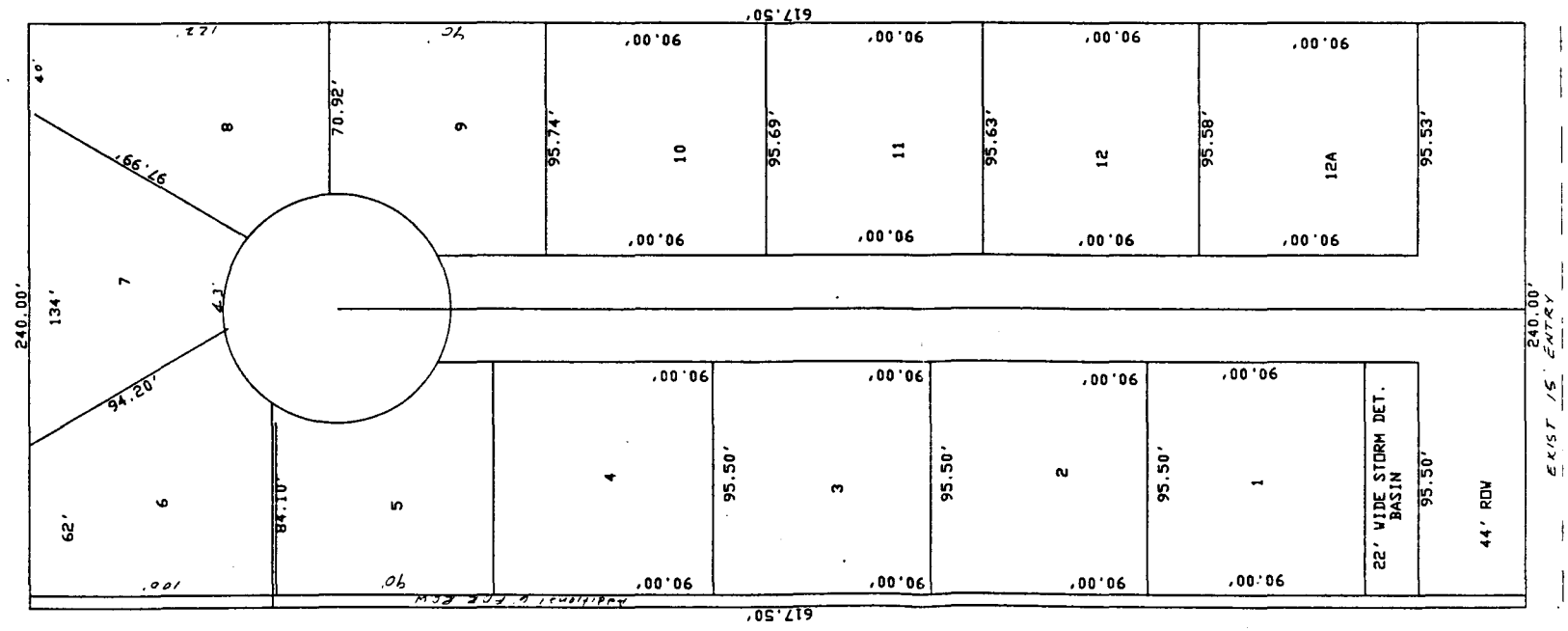
PROJECT NO. 08107    SHEET 08    DATE NOV 28, 1988

DESIGNED	CHECKED	DATE
DRAWN		
BY		
DATE		

SUBMITTED AT  
 HONOLULU 1-16-96. NAL  
 PLAT CAN FOLLOW THIS DESIGN SUBJECT  
 TO STAFF REVIEW. BSN



SCALE: 1" = 30'

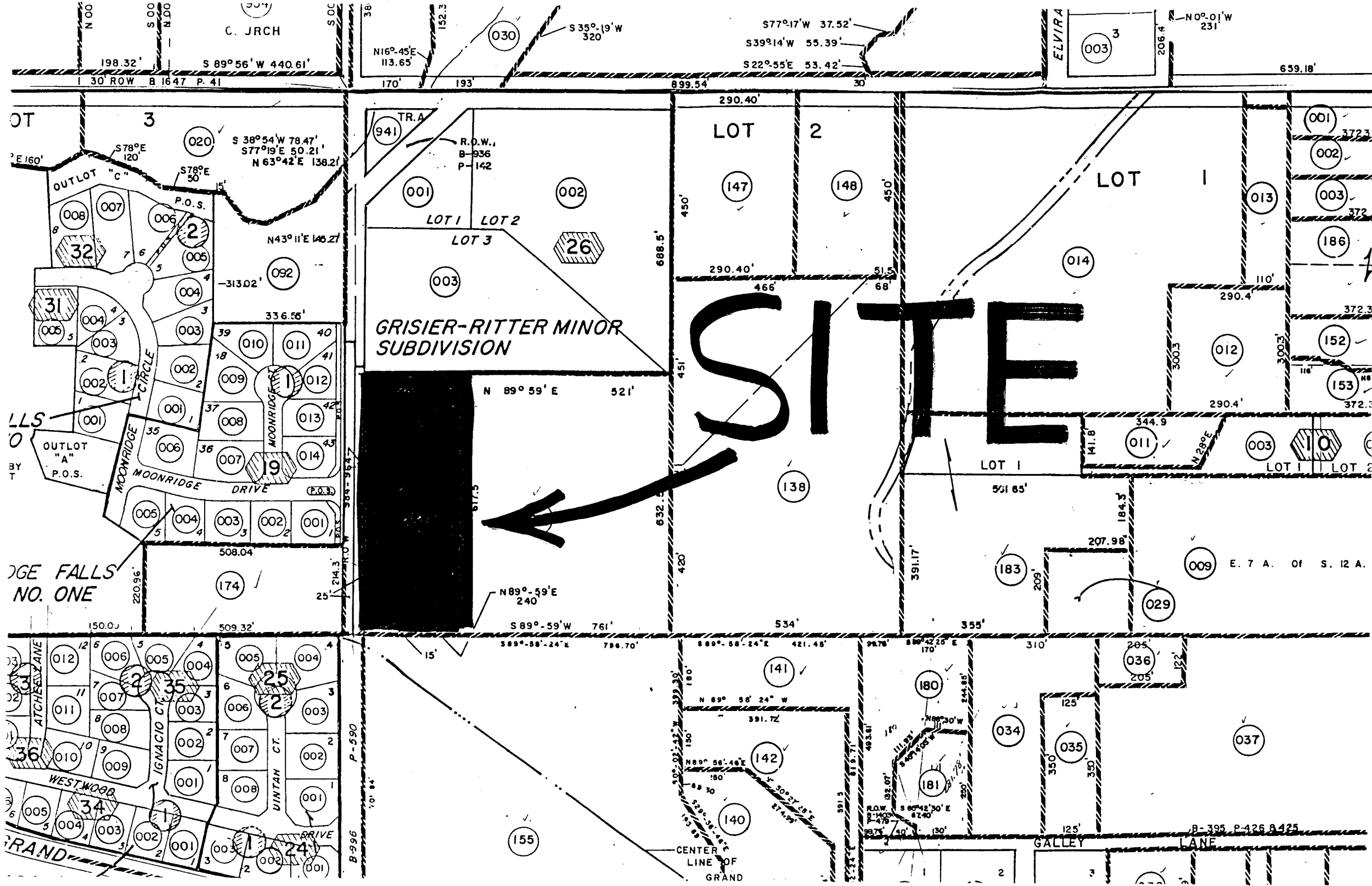


25 1/2 ROAD

240.00'  
 EXIST 1/5' ENTRY

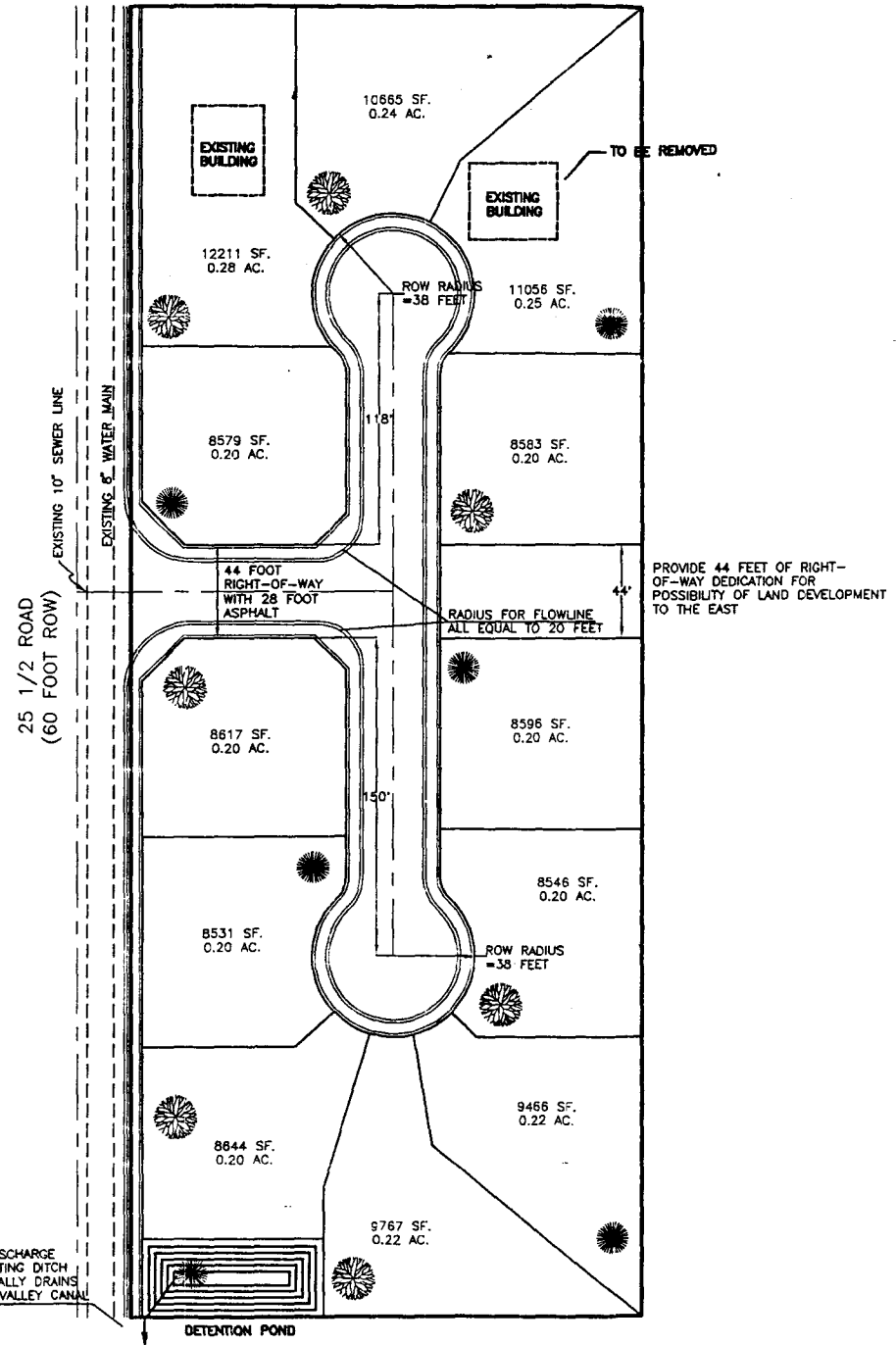
# SITE

## GRISIER-RITTER MINOR SUBDIVISION

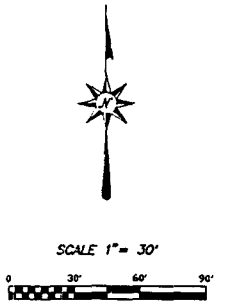


11-11-10 17:35:03 1910

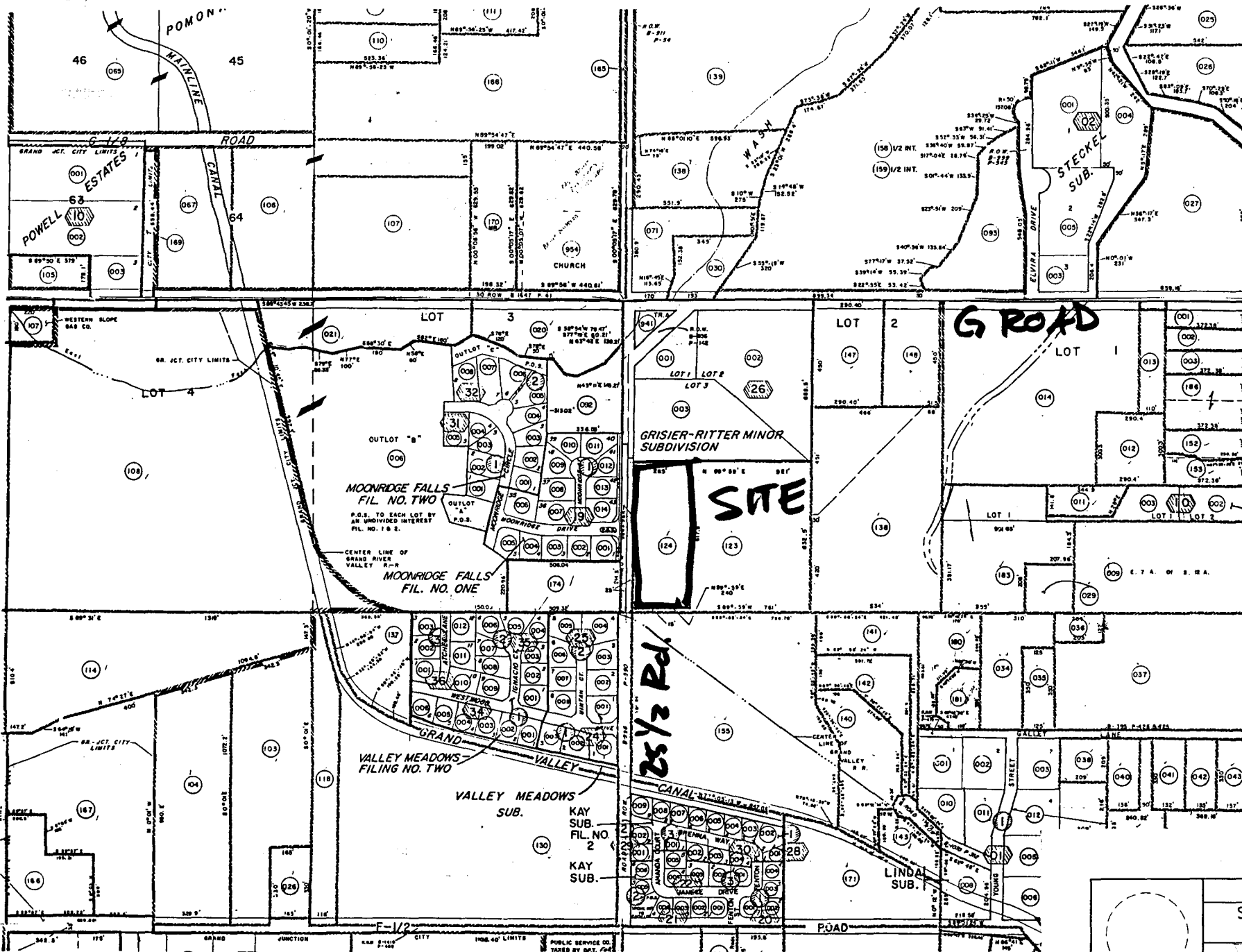
RUN-OFF TO DISCHARGE SOUTH VIA EXISTING DITCH WHICH HISTORICALLY DRAINS TO THE GRAND VALLEY CANAL



LAND USE SUMMARY		
	ACRES	PERCENT
LOTS	2.60	76.5%
STREETS	0.73	21.44%
DETENTION	0.07	2.06
TOTAL	3.40	100%
TOTAL LOTS	12	
DENSITY:	3.53 dv/ac	



	<b>CONCEPT PLAN</b>			
	<b>SUNSET VILLAGE SUBDIVISION</b>			
<small>ENGINEERS, SURVEYORS, PLANNERS 300 NORTH 2ND STREET, SUITE 102 GRAND JUNCTION, COLORADO 81507 (970) 244-6180</small>				
<small>PHILIP M. HART REGISTERED PROFESSIONAL ENGINEER P.E. NO. 19346</small>	<small>PROJECT NO. 15167</small>	<small>DESIGNED (mmh)</small>	<small>CHECKED (mmh)</small>	<small>SHEET 04</small>
<small>DATE: NOV 26, 1982</small>		<small>DR</small>	<small>SR</small>	<small>TR</small>



	LOCATION MAP	
	SUNSET VILLAGE SUBDIVISION	
	<b>LAND DESIGN</b> ENGINEERS SURVEYORS PLANNERS	
	305 NORTH 4TH STREET, SUITE 102 GRAND JUNCTION, COLORADO 81501 (970) 744-8180	
PHILIP M. HART REGISTERED PROFESSIONAL ENGINEER P. E. NO. 19348	PROJECT NO. 93187 DATE: NOVEMBER 1993	DESIGNED: [ ] DRAWN: [ ] CHECKED: [ ] SHEET: [ ] OF [ ]

December 22, 1995

Mr. William Nebeker  
City of Grand Junction  
Community Development Department  
250 North 5th Street  
Grand Junction, CO 81501

RE: Response to Comments, Sunset Village Subdivision

Dear Mr. Nebeker:

This letter is in response to comments regarding the above mentioned project, dated December 13, 1995.

1. Perimeter boundaries have been added to the revised preliminary plan.
2. The detention pond will be located within Lot Three, Block Two by way of a drainage easement.
3. The Concept Plan provided at the December 1 submittal date was labeled incorrectly and did not include all of the necessary information. The Preliminary Plan provided along with this letter has been modified to include all the necessary information.
  - a. Lots have been numbered consecutively.
  - b. Lot dimensions and tract boundaries are provided.
  - c. The petitioner has expressed his desire to avoid building the entrance street to the property boundary. Mr. Laird would like to deed that necessary section to the property owners to the east as an alternative, or leave the decision up to the Planning Commission at the January 16th hearing.
  - d. The entrance drive is now shown as being aligned exactly with Moonridge Drive to the west, this has changed the lot lines to a small degree.
  - e. Lot Two, Block One has been realigned with a 30 foot setback.
4. All landscaping has been removed from the Preliminary Plan.
5. It is the desire of the petitioner to remove the access onto 25 1/2 Road for the lot with the existing house, and provide access onto the proposed cul-de-sac.

6. The lots at the south end of the project have increased in size with the realignment of the entrance road.

7. All the suggestions and information provided after comment 6 are appreciated and will be investigated.

8. In response to comment number 2, from Jody Kliska, the owner of the ditch is Mr. Richard Watson. A letter has been forwarded to Mr. Watson informing him of the preliminary drainage plan which would involve the ditch in question. A letter to Mr. Phil Bertrand of the Grand Valley Irrigation Company has been sent to his office informing him of the preliminary drainage plan as well. A copy of each letter is included with this correspondence.

9. In response to the comment from Mr. Trent Prall, utility locations have been added, without services, to the revised preliminary plan, as required in the SSID manual.

I hope this letter answers any questions that you may have regarding this project. If any other questions arise, please feel free to contact me at our office.

Sincerely,

A handwritten signature in cursive script that reads "Brian C. Hart".

Brian C. Hart, EI

encl: Preliminary Plan (revised), Letter (Watson), Letter (Bertrand)  
xc: Mr. Mark Laird, Petitioner

December 22, 1995

Mr. Richard Watson  
653 26 Road  
Grand Junction, CO 81506-1418

RE: Sunset Village Subdivision

Dear Mr. Watson:

This letter is to inform you of Mr. Mark Laird's desire to subdivide his property on 25 1/2 Road which is directly north of your property. We are working with the City of Grand Junction Community Development Department located at 250 North 5th Street. William Nebeker is handling the project in their department.

For your information, the subdivision is approximately 3.4 acres and is proposed to have 12 lots created. This corresponds into an overall density of 3.53 units per acre. This is a similar density compared to recent development in the area surrounding Mr. Laird's property. The most important item of concern is the ditch that runs along the west boundary of your property parallel to 25 1/2 Road. This is historically where stormwater runoff from Mr. Laird's property has discharged. Eventually the ditch discharges into the Grand Valley Canal.

It is the intent of this letter to inform you that the historic drainage patterns from Mr. Laird's property will not be altered. The preliminary plan for the development is to build a detention pond at the southwest corner of the property, where a drainage control structure will detain and release stormwater runoff at historic levels. The detention pond and drainage control structures will all be designed and built to the City standards.

If you have any questions, please feel free to contact me at my office, or call the Community Development Department at 244-1430.

Sincerely,



Brian C. Hart, EI



December 22, 1995

Mr. Phil Bertrand  
Grand Valley Irrigation Company  
688 26 Road  
Grand Junction, CO 81505

RE: Sunset Village Subdivision

Dear Mr. Bertrand:

This letter is to inform you of the preliminary drainage plans for the subdivision stated above. The proposed subdivision is located on 25 1/2 Road directly across from Moonridge Falls Subdivision.

Historically, the stormwater runoff from the subject property has discharged into a small ditch that runs directly south of the southwest corner of the property. The ditch eventually discharges into the Grand Valley Canal several hundred feet to the south. Our concern regarding this preliminary drainage plan is to be sure that this plan would be permitted by your office, and if there are any issues that need to be addressed.

You should have received or will be receiving the proposal from the City of Grand Junction Community Development Department. If you have any questions or concerns regarding this proposed subdivision, please feel free to contact me at our office.

Sincerely,



Brian C. Hart, EI

STAFF REVIEW

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FILE: #ANX-95-223 SUNSET VILLAGE ZONE OF ANNEXATION

DATE: January 16, 1995

STAFF: David Thornton, Senior Planner  
Bill Nebeker, Senior Planner

LOCATION: 686 25 1/2 Road

APPLICANTS: Marc and Christy Laird

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**EXECUTIVE SUMMARY:** The Sunset Village Annexation is being considered by City Council. The City is required to zone all property annexed into the City within 90 days of the annexation. Staff recommends approval of the proposed zoning of RSF-4 for this annexation because it is consistent with the preferred alternative of the City's proposed Growth Plan and the majority of surrounding land uses that have developed in the city.

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EXISTING LAND USE: Residential and Vacant

PROPOSED LAND USE: Residential

SURROUNDING LAND USE

NORTH: Residential (Grisier-Ritter Sub)

SOUTH: Agricultural/Vacant/Residential (Kay Sub & Cimmaron North Sub)

EAST: Residential/Agricultural/vacant

WEST: Residential (Moonridge Falls Sub)

EXISTING COUNTY ZONING: AFT

PROPOSED CITY ZONING: RSF-4

SURROUNDING ZONING

NORTH: RSF-1 - Grisier-Ritter Sub (City)

SOUTH: AFT (Mesa County)

Planned Residential (PR-3.8) - Kay Sub (City)

Planned Residential (PR-3.7) Cimmaron North Sub (City)

EAST: AFT (Mesa County)

WEST: Planned Residential (PR-2.3) - Moonridge Falls Sub (City)

Planned Residential (PR-9.9) (City)

Planned Residential (PR-7.8) (City)

Planned Residential (PR-2.8) - Valley Meadows Sub (City)

**STAFF ANALYSIS:** Existing zoning in the County for this parcel is AFT which allows 1 unit per 5 acres. The most equivalent straight zone in the City for AFT is Residential Single Family - Rural (RSF-R) with a maximum of 1 unit per 5 acres. Standard practice is for the City to rezone to the most equivalent zoning district. However, as part of the request for annexation, the petitioner is requesting City approval for a 12 lot major subdivision (Sunset Village) on this 3.4 acre parcel. RSF-4 zoning is required before the subdivision can be approved.

Developed land uses near this parcel have been zoned for densities higher than the County ATF allows. The average density in surrounding developed or approved developments is 4 dwellings per acre. The lowest density subdivision, located directly to the north in the Grisier-Ritter Subdivision, zoned RSF-1, but developed at a density of approximately 1 dwelling per 3.5 acres. However it is unknown whether these lots will be further subdivided in the future.

The preferred alternative of the City's proposed Growth Plan shows the proposed Sunset Village annexation at 4-8 dwellings per acre. The Grisier-Ritter Subdivision to the north is designated 2-4 dwellings per acre. Rather than rezone this parcel to an equivalent zoning, it is recommended that the zone be consistent with land use patterns in the area and the proposed Growth Plan alternative. The actual proposed density for Sunset Village is 3.6 dwellings per acre.

INCLUDES  
PR  
w/SE  
HOME

**CRITERIA FOR A REZONE**  
Section 4-4-4

SUNSET VILLAGE ZONE OF ANNEXATION

- A. Was the existing zone an error at the time of adoption?  
No. Mesa County AFT zoning at the time of County adoption was appropriate for this property. This is the first zone to be adopted by the City for this property.
  
- B. Has there been a change in character in the area due to installation of public facilities, other zone changes, new growth trends, deterioration, development transitions, etc.?  
Yes. Properties to the north and west were rezoned from AFT to RSF-1 and Planned Residential 2.3 units per acre by Mesa County. In addition, there are 3 residential developments to the south and southwest within 420 feet of this property zoned with densities of 2.8, 3.8 and 3.7 units per acre respectively which also received zone changes in the County during the past few years. There are two undeveloped parcels with a Mesa County zoning of PR 7.8 and PR 9.9 also to the west of this property. Both of these rezonings were approved by the County during the past 15 years.

- C. **Is there a community need for the proposed rezone?**  
Yes. The Grand Junction community is experiencing a high rate of growth and new homes are needed to provide housing for that growth. Vacancy rates for rentals were at about one percent at the end of this summer. Although rentals are not proposed for this subdivision, there is a direct relationship between them and the amount of housing available in the community. Also there is a need for additional residential development on property within close proximity to City services. Other residential growth occurring in this area makes this property a good infill candidate.
- D. **Is the proposed rezone compatible with the surrounding area or will there be adverse impacts?**  
Yes. This property is residential as well as all adjacent properties. Proposed densities are similar to other residential densities along 25 1/2 Road between G Road and F 1/2 Road.
- E. **Will there be benefits derived by the community, or area, by granting the proposed rezone?**  
Yes. One benefit to the community and the neighborhood is that this zoning is consistent with recent development of the neighborhood. This development will help pay for the associated costs of providing urban services to this area of the City.
- F. **Is the proposal in conformance with the policies, intents and requirements of this code, with the City Master Plan (Comprehensive Plan), and other adopted plans and policies?**  
Currently the preferred alternative for the City's Growth plan identifies this area as residential with average densities between 4 and 8 units per acre. The actual proposed density for this site is 3.6 units per acre.
- G. **Are adequate facilities available to serve development for the type and scope suggested by the proposed zone? If utilities are not available, could they be reasonably extended?**  
Yes. Water and sewer is available to serve the proposed development. 25 1/2 Road is paved and the applicant will likely include sidewalk, curb and gutter as a condition of approval of the proposed subdivision.

**STAFF RECOMMENDATIONS:**

Staff recommends that the proposed zone district of RSF-4 be applied to the Sunset Village Annexation.

**PLANNING COMMISSION MOTION:**

Mr. Chairman, on item #ANX-95-223, I move that we forward the zoning of RSF-4 for the Sunset Village Zone of Annexation on to City Council with recommendation of approval.

(svzone.rpt)

LOT 2  
AFT  
290.40'  
466'

TR.A  
R.O.W.  
B-936  
P-142  
LOT 1 LOT 2  
RSF-1  
GRISIER-RITTER MINOR  
SUBDIVISION

SUNSET  
Village  
AFT  
N 89° 59' E 521'  
S 89° 59' W 761'

AFT (141)  
AFT (142)  
AFT (140)  
CENTER LINE OF  
GRAND VALLEY  
R.R.

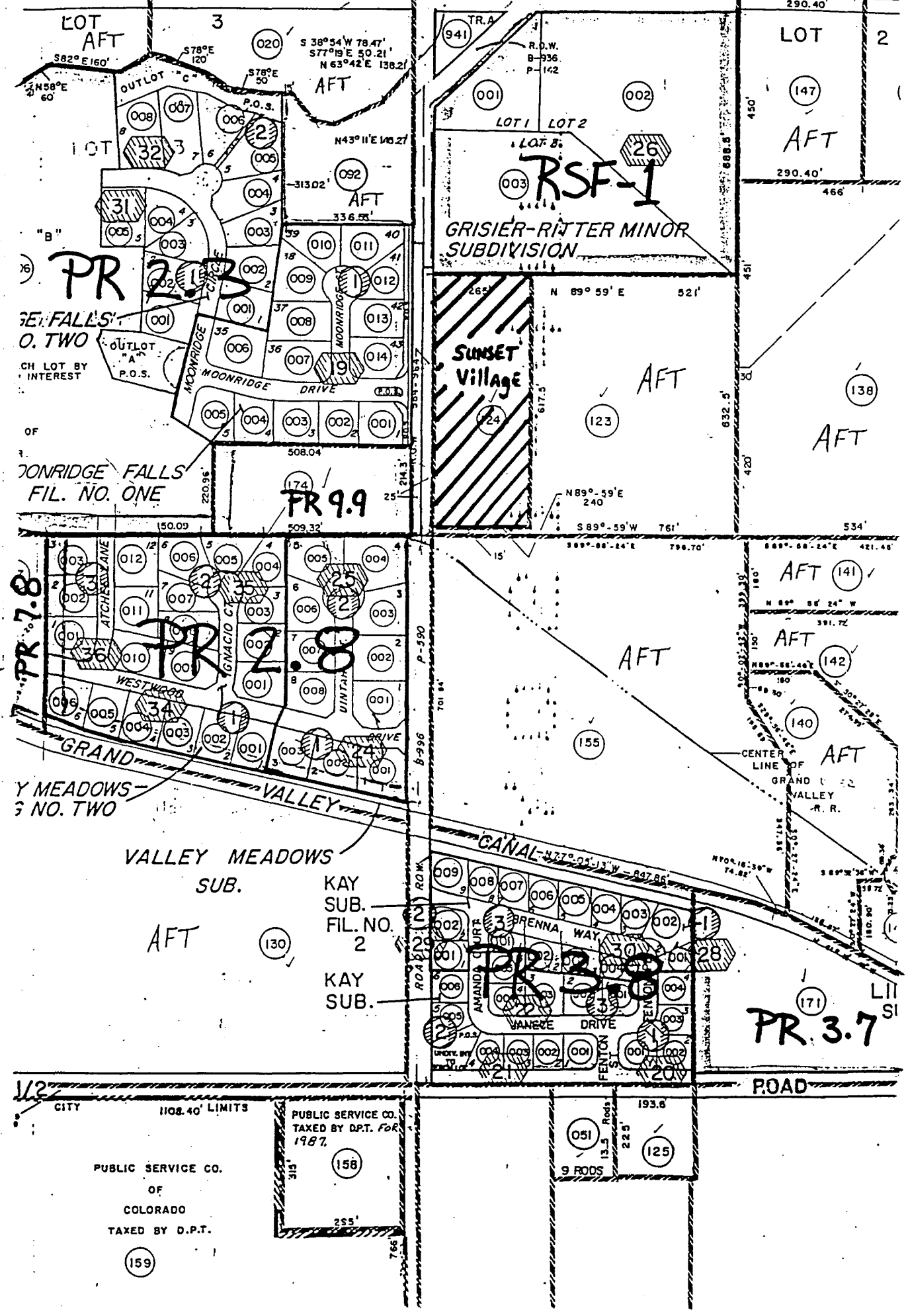
PR 3.7  
AMANDA CURR  
VANESSA DRIVE  
FELTON

LOT AFT  
3  
S 38° 54' W 78.47'  
S 77° 19' E 50.21'  
N 63° 42' E 138.21'  
AFT  
N 43° 11' E 146.27'  
AFT  
PR 2.8  
MOONRIDGE FALLS  
FIL. NO. ONE  
MOONRIDGE DRIVE  
AFT  
PR 9.9

PR 7.8  
VALLEY MEADOWS  
SUB.  
AFT (130)

KAY SUB.  
FIL. NO. 2  
AFT (158)

PUBLIC SERVICE CO.  
TAXED BY D.P.T. FOR  
1987  
CITY LIMITS  
P.S. CO. OF COLORADO  
TAXED BY D.P.T.  
AFT (159)



SUNSET VILLAGE - PP-214-95  
Revised Staff Recommendation  
January 16, 1996

Zoning - S-O  
SUBDIVISION S-O

**Additions are in bold type.**

Staff recommends approval with the following conditions.

1. Final approval of the proposed subdivision is contingent upon approval of the annexation and zone of annexation for this parcel.
2. The final plat shall include an ~~fully~~ improved street extension to the east.
3. No access shall be allowed to 25 1/2 Road from any of the lots in the subdivision. No access to the east/west entrance road into the subdivision shall be allowed from ~~Lot 1, Block 1 and Lot 1, Block 2~~ **the lots fronting that street.**
4. A six foot high privacy fence may be allowed in the front yard along 25 1/2 Road, outside of the sight triangle at intersections, if desired by the applicant.
5. Half street improvements will be required on 25 1/2 Road.

ADD THE FOLLOWING:

6. **The applicant may submit a final plat showing the entrance road and extension to the east along the southern property line, subject to staff review.**

RECOMMENDED PLANNING COMMISSION MOTION:

Mr. Chairman, on item 95-214, I move that we approve a preliminary plat ~~for 12 residential lots in the~~ Sunset Village Subdivision subject to the revised conditions outlined in staff's recommendation.

K 3/4 RW

STAFF REVIEW

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FILE: PP-95-214  
DATE: January 16, 1995  
STAFF: Bill Nebeker  
REQUEST: Preliminary Plat to subdivide a 3.4 acre parcel into 12 residential lots in a proposed RSF-4 zone.  
LOCATION: East side of 25 1/2 Road, 650 feet south of G Road  
APPLICANT: Marc Laird

---

EXECUTIVE SUMMARY: Staff recommends approval of this request for a 12 lot residential subdivision with a proposed density of 3.5 dwellings per acre. The parcel is in the annexation process, which must be completed prior to final recording of the plat. A fully improved street extension is recommended for future development to the east.

---

EXISTING LAND USE: One single family home

PROPOSED LAND USE: 12 single family homes

SURROUNDING LAND USE:

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

EXISTING ZONING: County AFT (Proposed City RSF-4)

SURROUNDING ZONING:

NORTH: City RSF-1  
SOUTH: County ATF  
EAST: County ATF  
WEST: City PR 2.3 & PR 9.9

---

RELATIONSHIP TO COMPREHENSIVE PLAN: The preferred alternative for the Growth Plan (Concentrated Urban Growth ) recommends that this area develop at 4-8 dwelling units per acre.

STAFF ANALYSIS: The applicant proposes to develop a 12 lot residential single family subdivision on a lot with an existing home and several accessory buildings. The home at 686 25 1/2 Road will remain and be incorporated into the subdivision, while the other accessory buildings will be removed.

The parcel is currently not within City limits but a petition for annexation by the owner was referred to the City Council at their January 3, 1996 hearing. The zone of annexation for this subdivision, from County AFT to City RSF-4 will be considered prior to the subdivision request at the January 16, 1996 Planning Commission hearing.

The size and shape of this parcel in relation to surrounding platted and undeveloped property makes it difficult to develop. The 7.6 acre parcel to the east is virtually landlocked except for a 15 foot wide, 240 foot long flagpole along the south boundary of this parcel. A street extension through Sunset Village is necessary to provide access for future development to this parcel. Although a street connection with Moonridge Drive on the opposite side of 25 1/2 Road is desirable, if this proposed subdivision could be redesigned to utilize the location of the flagpole for the entrance road into the subdivision and further east to serve the rear parcel, it would eliminate traffic funneling through the middle of Sunset Village to access 25 1/2 Road. This future traffic may make development on Lots 1 and 5, Block 1 and Lots 1 and 7, Block 2, less desirable.

The subdivision is designed with a street off 25 1/2 Road at the same alignment as Moonridge Drive. A street stub is necessary to serve future development to the east. The applicant is willing to dedicate the extension but has requested that paving be the responsibility of the developer of the property to the east since it only benefits that property. The applicant has proposed to extend water and sewer to the east property line, but also to construct curb, gutter and sidewalk over the entrance to the future street - requiring the future developer to remove these improvements and install curb returns and full street improvements once the eastern property develops.

Staff recommends that the street be paved at this time so adjacent property owners within this subdivision are fully aware that a street is located here that will serve potential future development to the east. Historically the city requires fully improved street stubs to areas of future development, paid for by the developer requesting to subdivided. The City has no payback provisions for street stubs.

The narrowness of the parcel to be subdivided requires five double frontage lots along 25 1/2 Road. For safety considerations, no access will be allowed to 25 1/2 Road from any of the lots. The applicant has requested to remove the access onto 25 1/2 Road for the lot with the existing house. Two cul-de-sacs will serve all lots in the subdivision. Lot 1, Block 1 and Lot 1, Block 2 will also be restricted to access on the north/south cul-de-sac streets only. Up to a six foot high fence will be allowed along 25 1/2 Road to provide privacy in the rear yards of the homes backing up to this street.

A detention pond will be provided on Lot 3, Block 2, within a drainage easement for drainage purposes. Historic runoff will be carried through a privately owned ditch from the subdivision to the Grand Valley Canal. The applicant is in the process of gaining approval to use this ditch.



Lots sizes range from 8,553 to 12,297 square feet, with average size being 9,734 square feet. The minimum lot size in RSF-4 is 8500 square feet. Overall density in the subdivision is 3.5 dwellings per acre. Proposed lots meet the minimum street frontage and lot width requirements of the RSF-4 zone although there are some limited building envelopes on lots 4 and 5 in the south cul-de-sac.

**STAFF RECOMMENDATION:** Staff recommends approval with the following conditions.

1. Final approval of the proposed subdivision is contingent upon approval of the annexation and zone of annexation for this parcel.
2. The final plat shall include a fully improved street extension to the east.
3. No access shall be allowed to 25 1/2 Road from any of the lots in the subdivision. No access to the east/west entrance road into the subdivision shall be allowed from Lot 1, Block 1 and Lot 1, Block 2.
4. A six foot high privacy fence may be allowed in the front yard along 25 1/2 Road, outside of the sight triangle at intersections, if desired by the applicant.
5. Half street improvements will be required on 25 1/2 Road.

**NOTE:** The front yard setback for the home at 686 25 1/2 Road will remain legal nonconforming.

**RECOMMENDED PLANNING COMMISSION MOTION:**

Mr. Chairman, on item 95-214, I move that we approve a preliminary plat for 12 residential lots in the Sunset Village Subdivision subject to the conditions outlined in staff's recommendation.



CITY OF GRAND JUNCTION PLANNING COMMISSION  
GRAND JUNCTION, COLORADO

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

\_\_\_\_\_  
FOR )  
 )  
 )  
Marc Laird )  
686 25 1/2 Road )  
Grand Junction, CO 81505 )

FINAL DECISION

PP-95-214

An application by Marc Laird, requesting preliminary approval for "Sunset Village," a residential subdivision in a proposed RSF-4 zone, affecting the real property described below, was considered by the Planning Commission of the City of Grand Junction on January 16, 1996.

The real property affected by said application is described as a part of the South 632.50 feet of the West 786.00 feet of the NW1/4, NE1/4 of Section 3, T1S., R1W, Ute Meridian; tax parcel #2945-031-00-124. The address is 686 25 1/2 Road.

After considering all the pertinent testimony and reviewing various data, the Planning Commission approved the preliminary plan upon a finding that the proposal complies with Section 6-7-3 of the city's zoning and development code, subject to the conditions listed below:

1. Final approval of the proposed subdivision is contingent upon approval of the annexation and zone of annexation for this parcel.
2. The final plat shall include an improved street extension to the east.
3. No access shall be allowed to 25 1/2 Road from any of the lots in the subdivision. No access to the east/west entrance road into the subdivision shall be allowed from the lots fronting that street.
4. A six foot high privacy fence may be allowed in the front yard along 25 1/2 Road, outside of the sight triangle at intersections, if desired by the applicant.
5. Half street improvements will be required on 25 1/2 Road.
6. The applicant may submit a final plat showing the entrance road and extension to the east along the southern property line, subject to staff review.

NOTE: The front yard setback for the home at 686 25 1/2 Road will remain legal nonconforming.

The undersigned does hereby declare that the said Planning Commission reached its decision as heretofore noted.

Dated this 19th day of January, 1996.



---

Bill Nebeker  
Senior Planner



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

February 5, 1996

Barry L. Haag  
3004 Bookcliff Avenue  
Grand Junction, CO 81504

Re: Sunset Village Final Subdivision Submittal

Dear Barry:

We have reviewed your submittal for Final Plan review for Sunset Village subdivision and find it to be incomplete. A grading and drainage plan, 25 1/2 Road roadway cross-sections and plans and a geotechnical report were not submitted by the February 1, 1996 deadline.

Section 6-7-1.A of the Zoning and Development Code states that, "no submittal shall be accepted unless it is complete". With the large number of submittals we received and the relatively short review time, we cannot review incomplete submittals nor allow extensions to the submittal deadline. Therefore your submittal cannot be reviewed and processed for the March Planning Commission hearing. A complete submittal must be received by March 1, 1996 at 5:00 p.m. for this development proposal to be scheduled for the April Planning Commission hearing. I suggest that you submit at least one week in advance of that date to allow the department to review your application for completeness. Then if there are any deficiencies you will have time to add the needed items.

Your packets are available for pick up at our department at any time. If you have any questions please call Kathy Portner at 244-1446.

Sincerely,

A handwritten signature in cursive script that reads "Bill Nebeker".

Bill Nebeker  
Senior Planner

c: Marc Laird  
Wayne Lizer

25 1/2 ROAD

HOME  
to remain

GARAGE/BARN  
to be removed

PROPOSED  
SUBDIVISION  
SITE

2945-031-00-124

**PRELIMINARY DRAINAGE REPORT**

**FOR:**

**SUNSET VILLAGE**

November 29, 1995

**Prepared For:**

Mr. Mark Laird  
686 25 1/2 Road  
Grand Junction, CO 81505  
(970) 245-2886 (970) 250-0677

**Prepared By:**

**LANDesign LLC.**  
259 Grand Avenue, Grand Junction, CO 81501  
(970) 245-4099

Prepared by: \_\_\_\_\_  
Brian C. Hart, E.I.

"I hereby certify that this report for the preliminary drainage design of Sunset Village was prepared under my direct supervision."

Reviewed by: \_\_\_\_\_  
Philip M. Hart, P.E.  
State of Colorado, #19346

## **I. GENERAL LOCATION AND DESCRIPTION**

### **A. Site and Major Basin Location**

Sunset Village Subdivision is located south of the G Road and 25 1/2 Road intersection, directly east of Moonridge Falls Subdivision, and contains approximately 3.40 acres. The property can otherwise be described as; a part of the South 632.50 feet of the west 786.00 feet of the NW1/4 NE1/4 of Section 3, Township 1 South, Range 1 West of the Ute Meridian. The property tax parcel number is 2945-031-00-124.

Developments in the area around Sunset Village include, Moonridge Falls Subdivision and Valley Meadows Subdivision.

### **B. Site and Major Basin Description**

The subject property is located in the Leach Creek major drainage basin. Leach Creek lies north of the property approximately 1/8 mile, at the intersection of G Road and 25 1/2 Road. Major streets in the major basin around the property include; G Road which defines the north boundary of the basin and 25 1/2 Road which defines the west boundary of the basin. Natural topography defines the remaining area of the major basin.

Sunset Village contains approximately 3.4 acres. The topography of the property can be described as "flat" in nature and historically slopes to the south at an average rate of 1.0 to 1.5 percent. Ground Cover can be described as agricultural in nature as the property has been used for this purpose historically. As provided in Reference 3.0 and Exhibit 4.0, approximately 80% of the land contains Ravola very fine silty loam, which is hydrologic soil type "B", while the remaining 20% of the land contains Billings silty clay loam, which is hydrologic soil type "C". Off-site areas are defined as Ravola very fine silty loam, soil type "B".

## **II. EXISTING DRAINAGE CONDITIONS**

### **A. Major Basin**

There are three major waterways within a short distance of the subject property. The Grand Valley Main Line Canal lies south of the property approximately one-eighth of a mile, and the Grand Valley High Line Canal lies approximately one-half mile to the east. Leach Creek lies approximately 550 feet to the north of the property. The only waterway which is effected by the drainage of Sunset Village is the Grand Valley Main Line Canal, which is where drainage water ultimately discharges. These three waterways also form somewhat of a major basin in the



area, acting as the boundaries. The basin historically drains south or southwest at an average rate of approximately 1.0%.

The entire project is defined as being in Zone X and is not within the 100 year flood plain as shown on the, "Flood Insurance Rate Map, Mesa County Colorado" (Reference 4.0 and Exhibit 5.0).

## **B. Project Site**

Historically the property drains in a sheetflow fashion from the north to the south at approximately 1.0 to 1.5 percent, eventually discharging into the Grand Valley Main Line Canal.

The property is bounded to the north by agricultural land which will contribute flow to the site, as shown in Exhibit 3.0. Past this land, G Road and Leach Creek are located to the north. The land to the north of the subject property will be designated as offsite basin OS1 (6.75 acres). The inflow characteristics of the offsite basin into the property are sheetflow fashion. The discharge of runoff from the property to the south is via a low point in the natural topography, where the runoff enters a small ditch. From here the runoff is conveyed to the south, ultimately discharging into the Grand Valley Main Line Canal. There is a concrete ditch currently located on the south boundary of the site which has been non-functional for a number of years.

The areas south, west and east of the property drain away from the site and will not contribute runoff to the site.

## **III. PROPOSED DRAINAGE CONDITIONS**

### **A. Changes in Drainage Patterns**

Based on the proposed land use plan, significant changes in the existing drainage patterns are not anticipated, either to the site or the major basin.

### **B. Maintenance Issues**

It is expected that the storm drainage such as inlets, piping and the roadway systems will be the publicly owned and maintained. The detention pond and outlet works will be owned and maintained by an established homeowners association for the development.

## **IV. DESIGN CRITERIA AND APPROACH**

### **A. General Considerations**

There has been a drainage study performed for area near the subject property by the Federal Emergency Management Agency, Reference 4.0. This study was revised July 15, 1992, and it's purpose was to establish the Flood Insurance Rate Maps for Mesa County, Colorado shown on Exhibit 5.0.

It is expected that the land to the north and east of the subject property will be developed in the future. This would be the only concern for large scale considerations, in that, how a development to the north or east would design and direct the run-off around the proposed development.

There are no apparent constraints imposed by the proposed site which would effect the historic or developed drainage patterns.

## **B. Hydrology**

The "Stormwater Management Manual, City of Grand Junction, Colorado" (Reference 1) will be used and followed for the drainage report. As the project is a residential development encompassing approximately 3.4 acres, the "Rational Method" will be used for the final drainage report. The minor storm event is described as the 2 year storm and the major storm event is described as the 100 year event. It is expected that detention will be required for the 100 year storage value.

Runoff coefficients to be used in calculations are based on the most recent City of Grand Junction criteria as defined in Reference 1.0 and shown on Exhibit 7.0. An average pro-rated historic "C" values for the project site are; 0.20 for the 2 year event and 0.25 for the 100 year event, with a land surface characteristic of agricultural. The offsite area to the north can be described as a pasture or meadow, revealing "C" values of 0.26 and 0.31 for the 2 and 100 year storm events respectively.

As the project is located within the Grand Junction Urbanized area, the Intensity Duration Frequency Curves (IDFC) as provided in Reference 2.0 shown on Exhibit 7.0 will be used for design and analysis.

Times of Concentration are calculated based on the Average Velocities For Overland Flow and Overland Flow Curves as provided in Reference 1 and shown on Exhibits 8.0 and 9.0.

## **C. Hydraulics**

All site facilities and conveyance elements will be designed in accordance with the City of Grand Junction guidelines as provided in Reference 1.0.

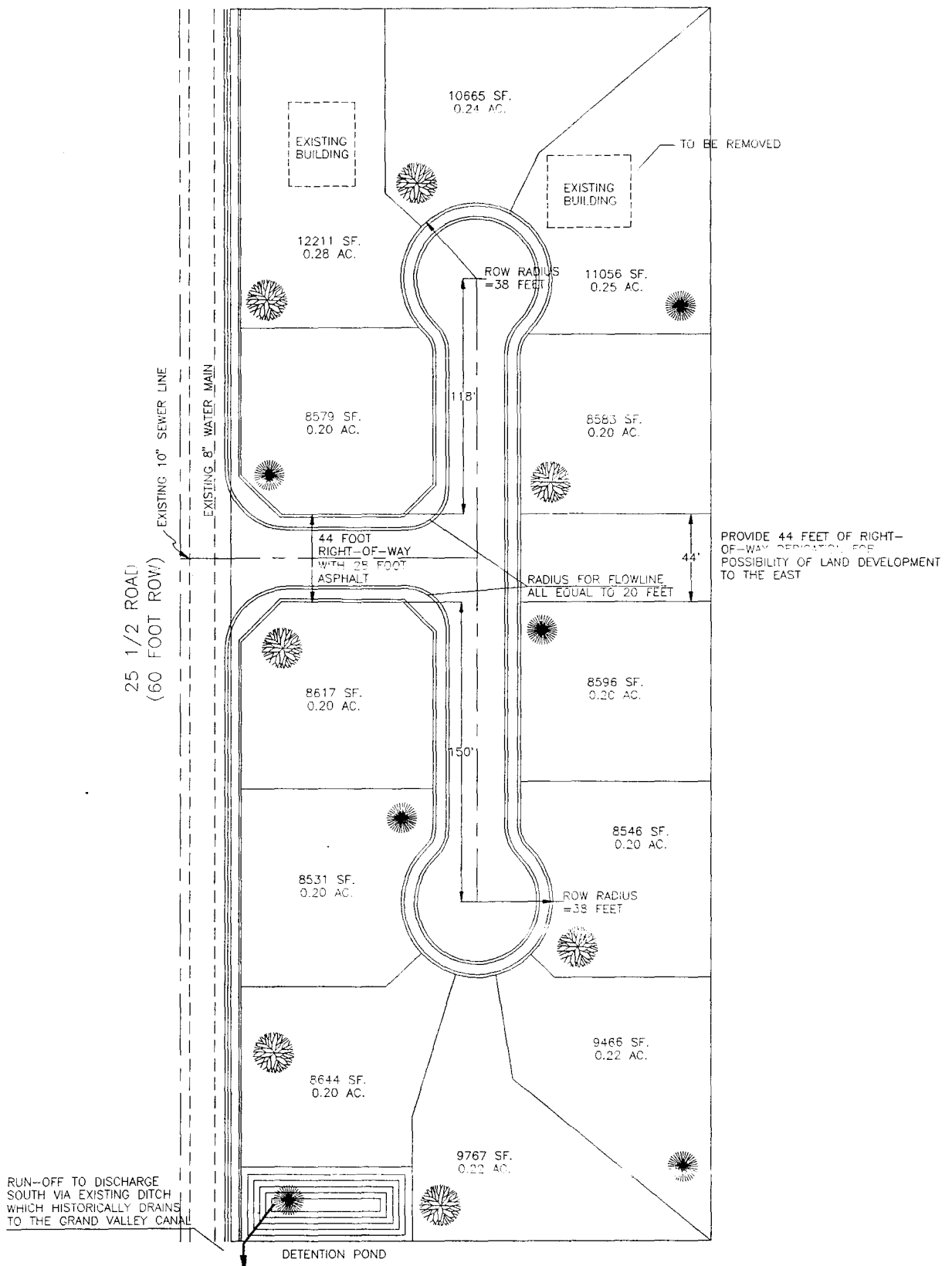
## **VI. CONCLUSION**

A Preliminary Plan has been included in this report to represent what this proposed development will entail, Exhibit 1.0. Exhibit 2.0 shows the Grand Junction Urbanized area obtained from Reference 2.0, and shows the relationship of the proposed development to the road system and City of Grand Junction.

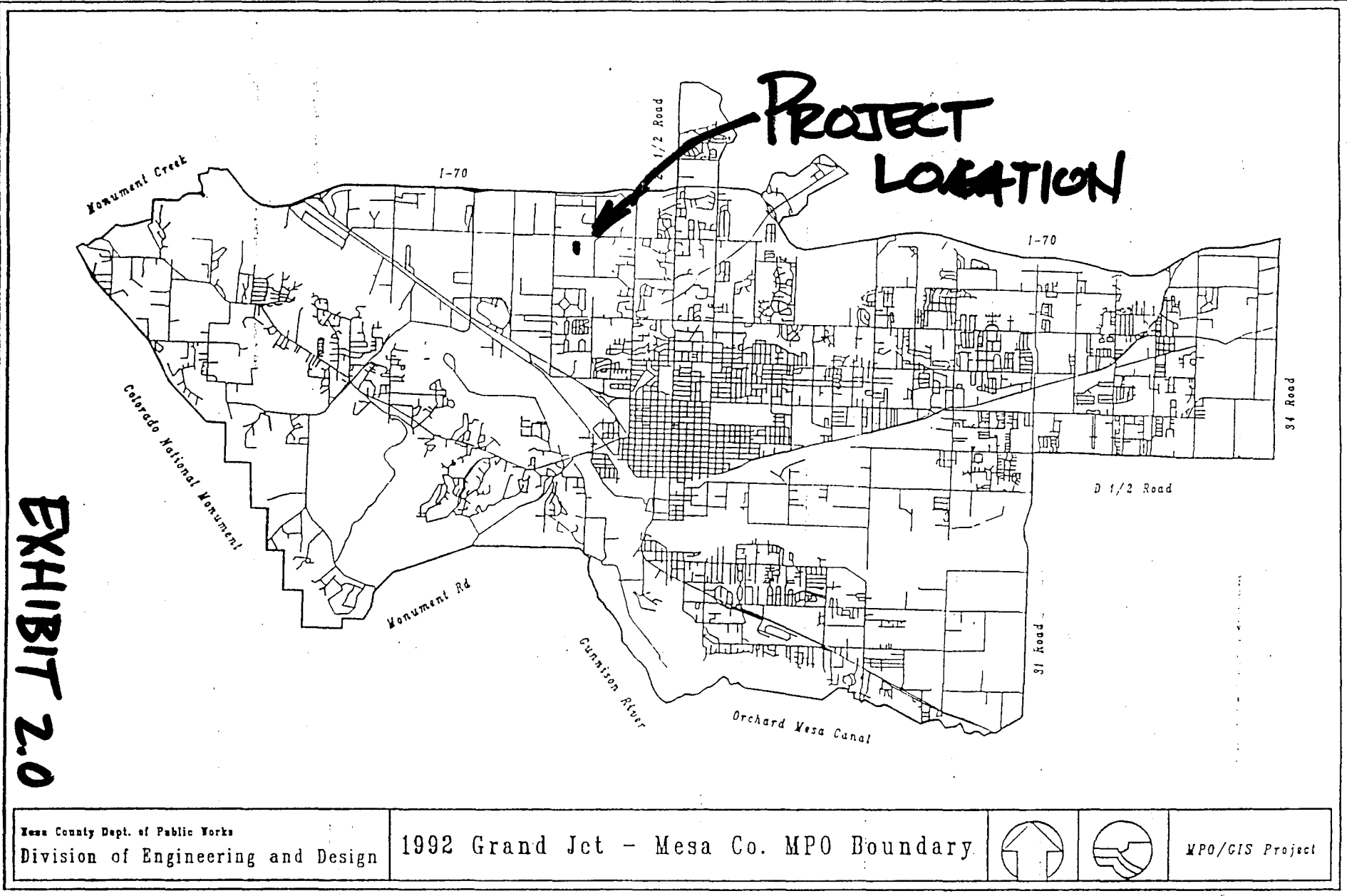
Upon Preliminary approval from the City of Grand Junction Planning Commission and the City of Grand Junction City Council, a final drainage report will be submitted during the next review phase. This report will address site specific drainage concerns in accordance with the requirements of the City of Grand Junction, Colorado.

## **VII. REFERENCES**

1. Stormwater Management Manual (SWMM), City of Grand Junction, Colorado, Department of Public Works, June 1994.
2. Mesa County Storm Drainage Criteria Manual, Final Draft, Mesa County Colorado, March 1992.
3. Soil Survey. Mesa County Area, Colorado, U.S. Department of Agriculture, issued November, 1955.
4. Flood Insurance Rate Map, Mesa County, Colorado, (Unincorporated Areas), Community Panel Number 080115 0460 B, Federal Emergency Management Agency, Map revised July 15, 1992.



# EXHIBIT 1.0



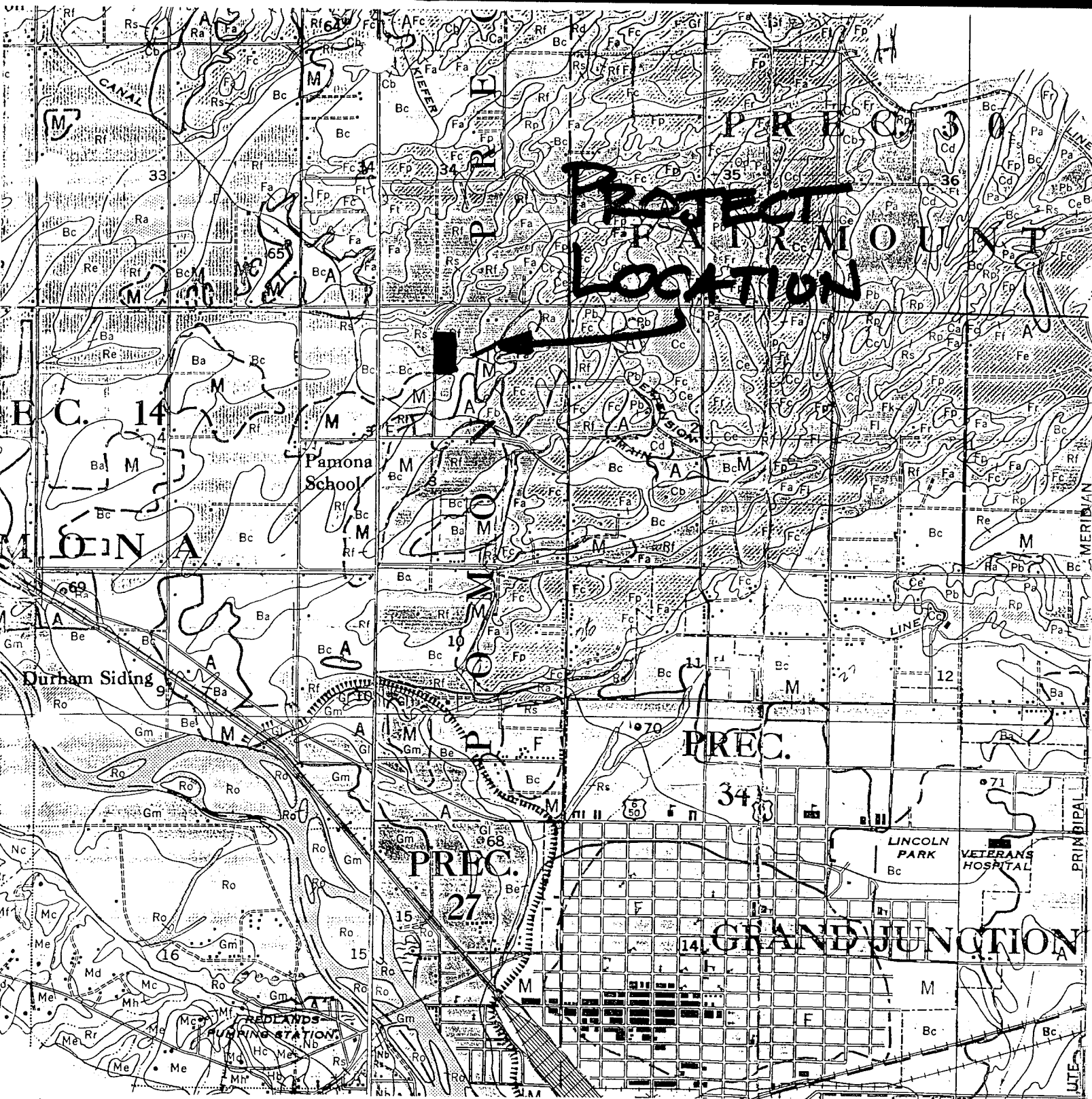
**EXHIBIT 2.0**

Yuma County Dept. of Public Works  
 Division of Engineering and Design

1992 Grand Jct - Mesa Co. MPO Boundary



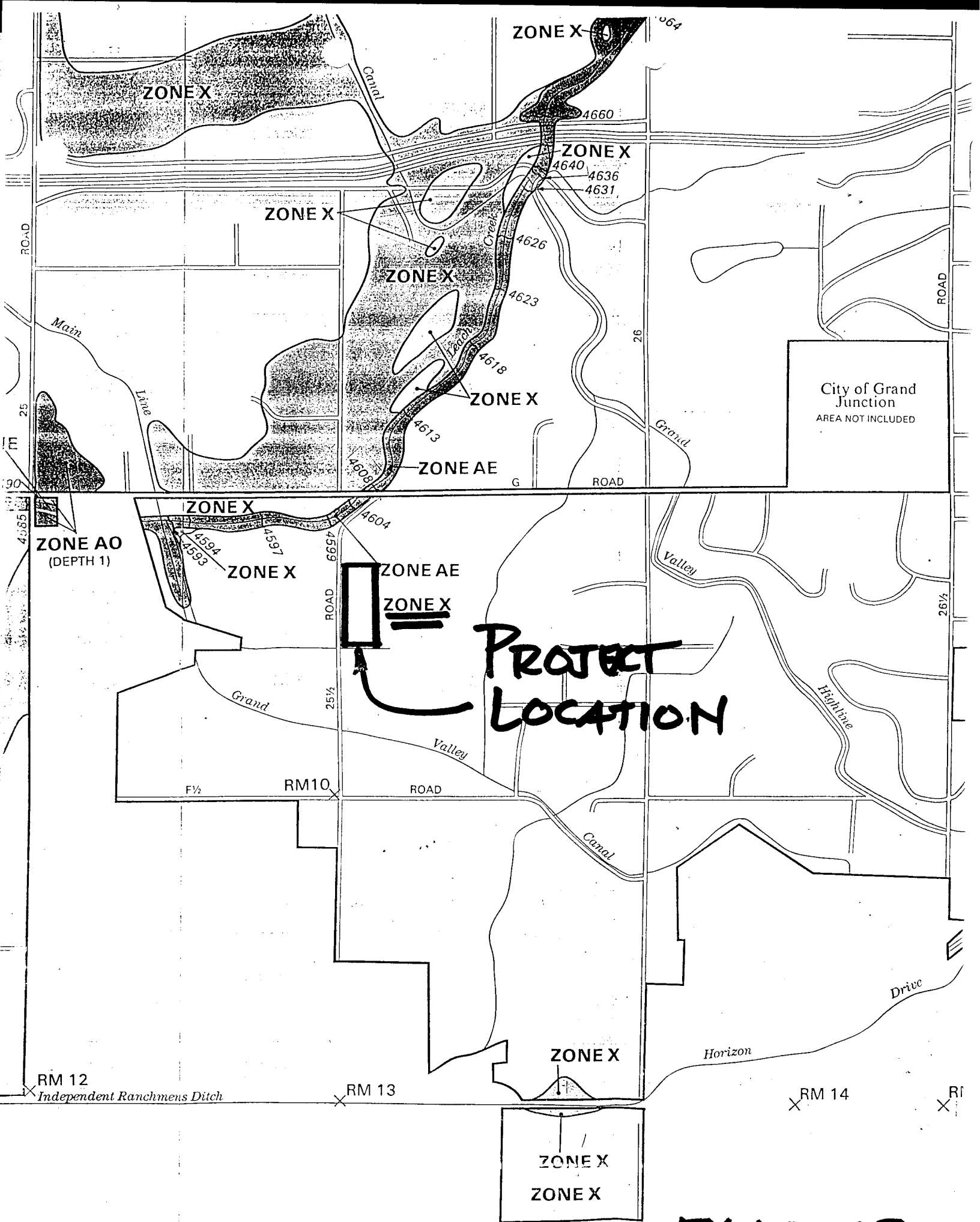
MPO/GIS Project



80% RAYOLA VERY FINE SILTY LOAM (Rf) 0-2% SLOPES  
 HYDRO-GROUP "B"

20% BILLINGS SILTY CLAY LOAM (Bc) 0-2% SLOPES  
 HYDRO-GROUP "C"

EXHIBIT 4.0



**EXHIBIT 5.0**

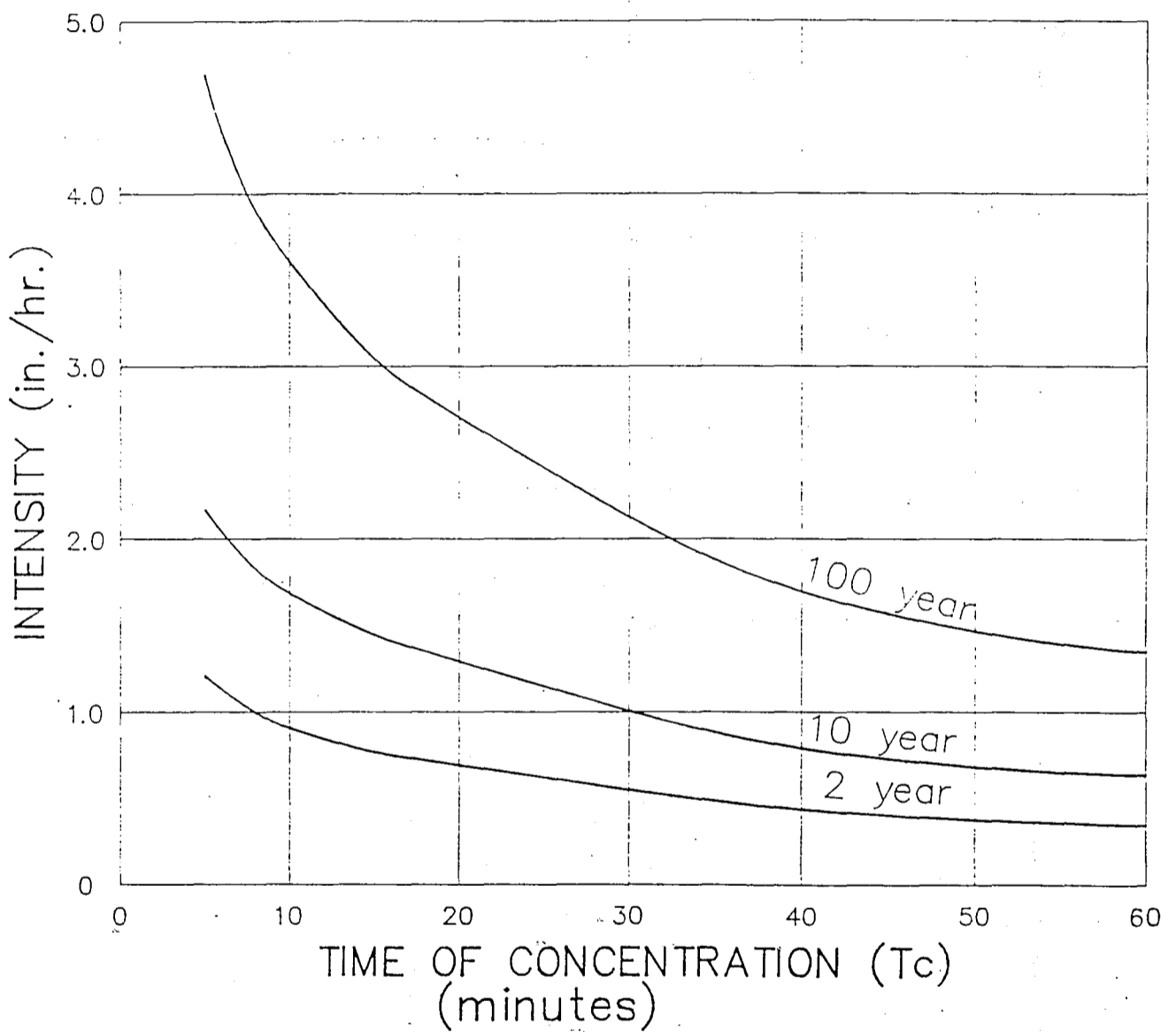
ELEVATION REFERENCE MARKS



EXHIBIT 6.0

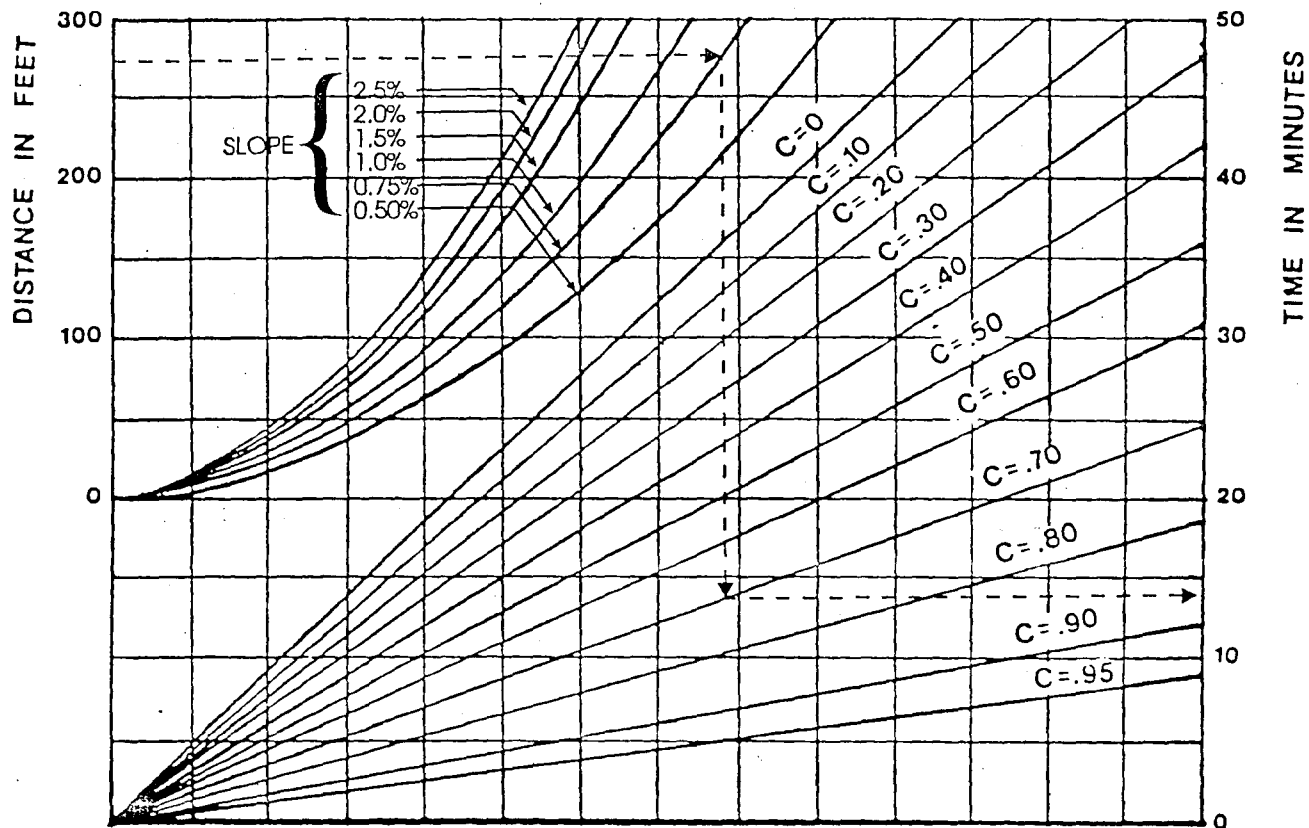
LAND USE OR SURFACE CHARACTERISTICS	SCS HYDROLOGIC SOIL GROUP (SEE APPENDIX "C" FOR DESCRIPTIONS)											
	A			B			C			D		
	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+	0-2%	2-6%	6%+
<b>UNDEVELOPED AREAS</b>												
Bare ground	10 - .20 14 - .24	.16 - .26 .22 - .32	.25 - .35 .30 - .40	14 - .22 20 - .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
<b>RESIDENTIAL AREAS</b>												
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
<b>MISC. SURFACES</b>												
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
<b>NOTES:</b>	<p>1. Values above and below pertain to the 2-year and 100-year storms, respectively.</p> <p>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 (<math>T_c \leq 10</math> minutes), infiltration capacity is higher, allowing use of a "C" value in the low range. Conversely, for longer duration storms (<math>T_c &gt; 30</math> minutes), use a "C" value in the higher range.</p> <p>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.</p>											
<b>RATIONAL METHOD RUNOFF COEFFICIENTS</b> (Modified from Table 4, UC-Davis, which appears to be a modification of work done by Rawls)								<b>TABLE "B-1"</b>				

INTENSITY DURATION FREQUENCY CURVES  
GRAND JUNCTION, COLORADO



**EXHIBIT 7.0**

MODIFIED FROM FIGURE 403, MESA COUNTY.



THE ABOVE CURVES ARE A SOLUTION OF THE FOLLOWING EQUATION:

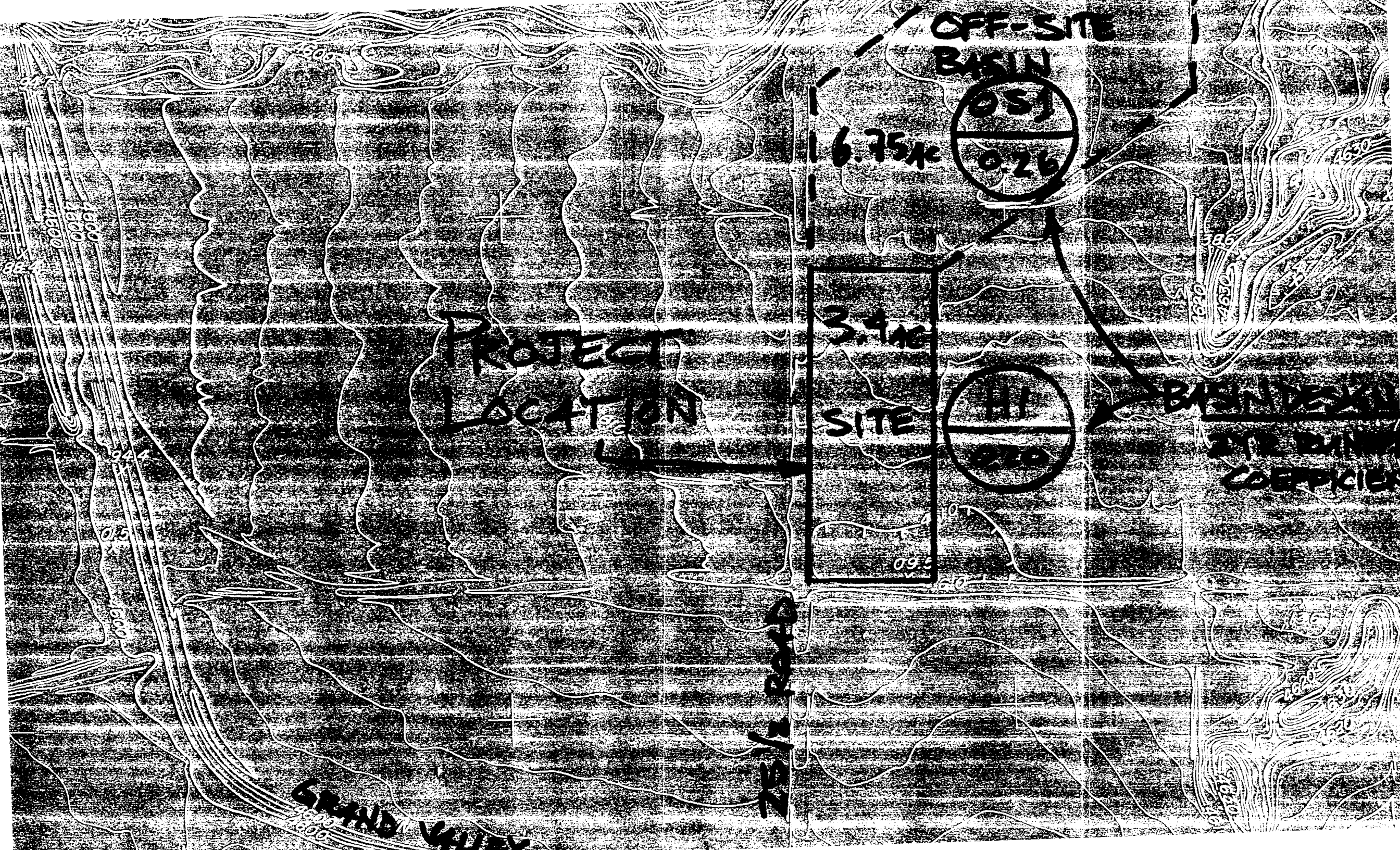
$$T_o = \frac{1.8 (1.1 - C) \sqrt{L}}{\sqrt[3]{S}}$$

WHERE:  $T_o$  = OVERLAND FLOW TIME (MIN.)  
 $S$  = SLOPE OF BASIN (%)  
 $C$  = RUNOFF COEFFICIENT (SEE TABLE "B-1" IN APPENDIX "B")  
 $L$  = LENGTH OF BASIN (ft)

**EXHIBIT B.0**

GRAPHICAL DETERMINATION OF "To:" FAA METHOD

FIGURE "E-2"



OFF-SITE  
BASIN



6.75ac

PROTECT  
LOCATION

3.4ac

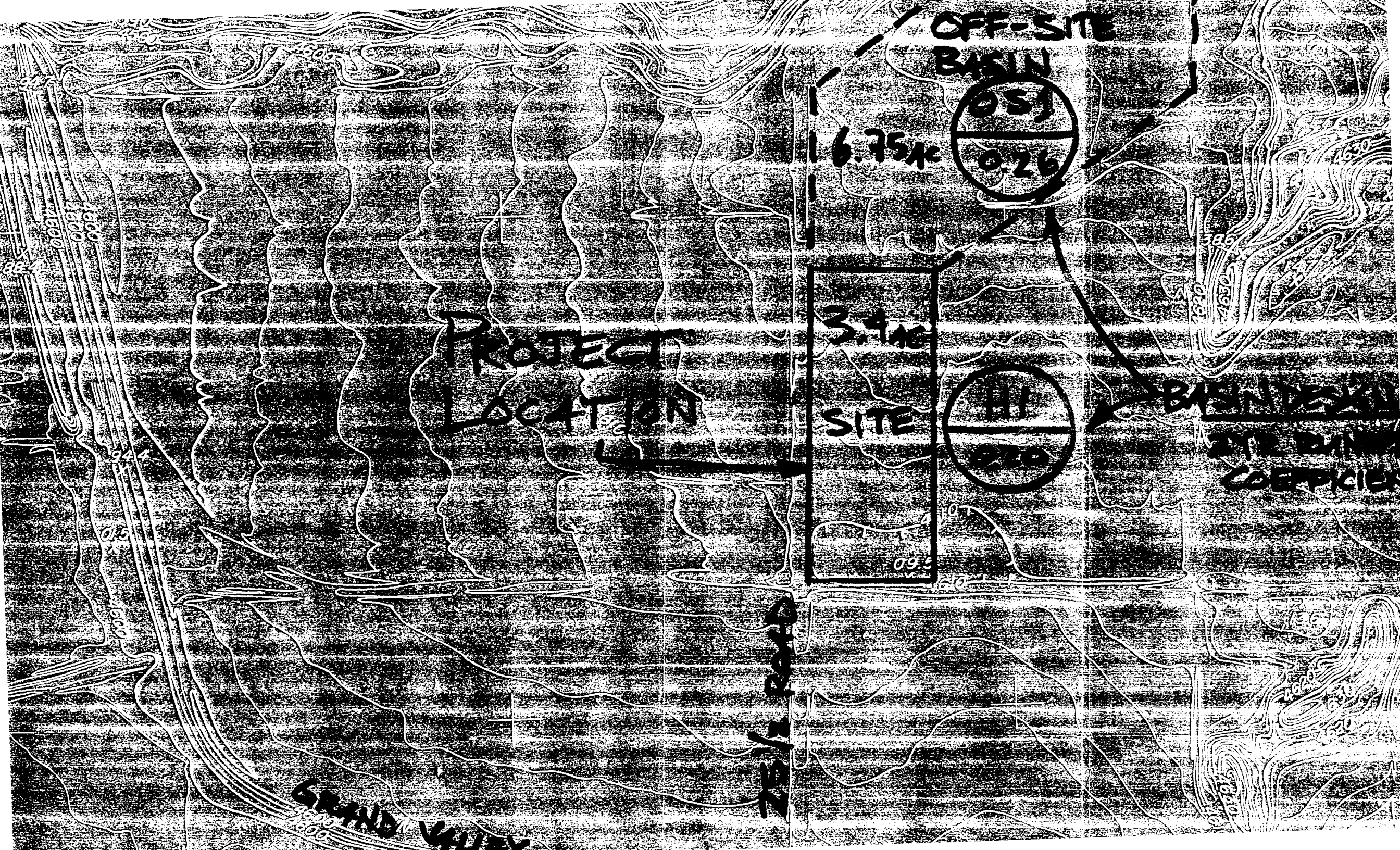
SITE



BASIN  
SITE  
COEFFICIENT

GRAND VALLEY

100



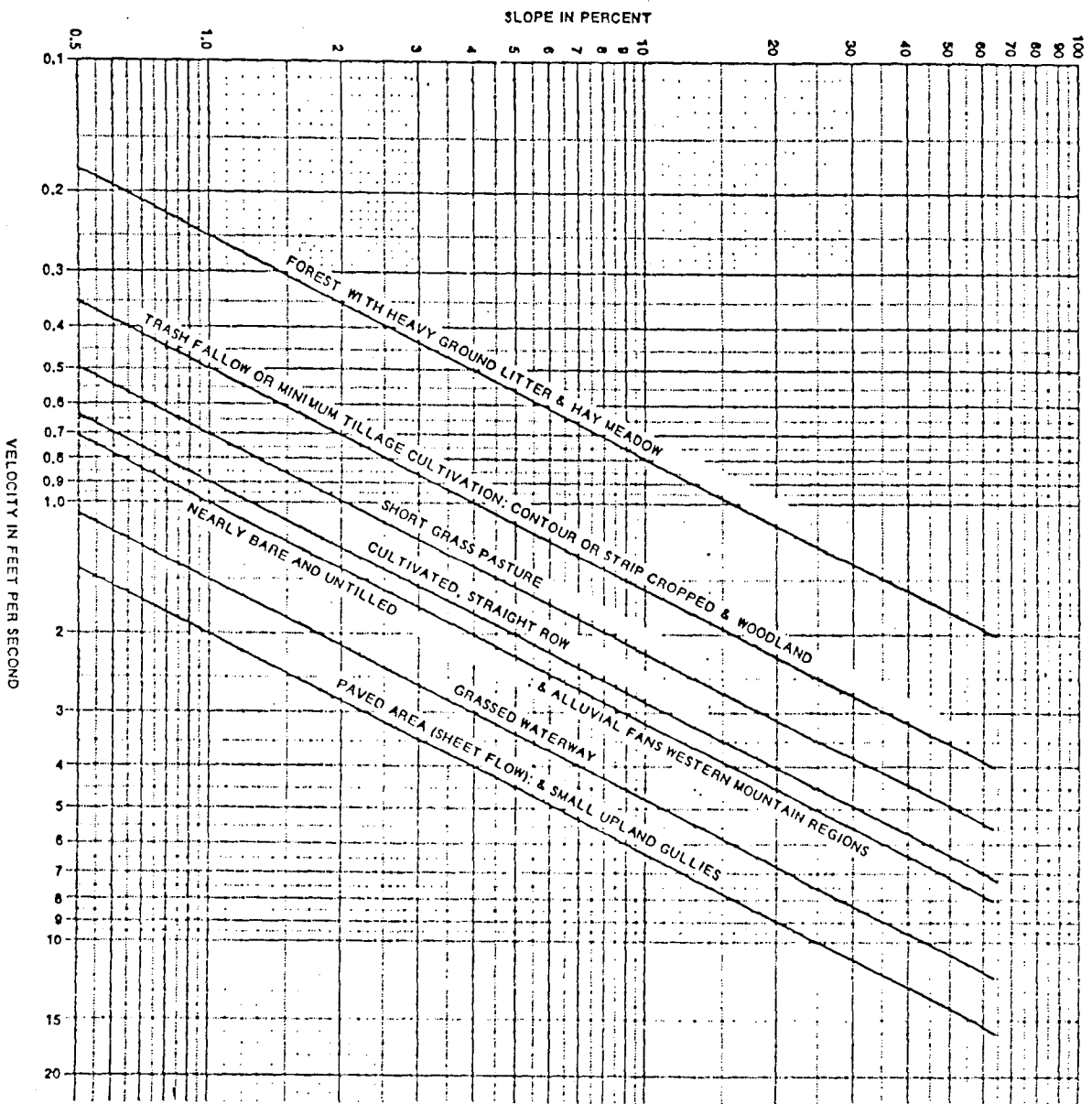


EXHIBIT 9.0

DETERMINATION OF "T<sub>s</sub>"

FIGURE "E-3"

JUNE 1994

F.O