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File RP-1995-200

Date 12/6/99

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

DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE:

		THIS FILE IS DEAD - PLAT RECORDED BUT SITE PLAN REVIEW WILL NOT BE FOLLOWED THROUGH	X		PARKING / LIGHTING PLAN
X		E-mail from Jody Kliska to Kristen Ashbeck re: drainage-12/28/95	X		LANDSCAPING PLAN
X	X	Resubdivision of Lot 2 - Fisher Subdivision	X		TURNING LANE DESIGN
X		Declaration of Restrictions and Grant of Easements	X		SEWER MAIN EXTENSION
X	X	Drainage Plan	X		WATER MAIN EXTENSION
X		UCC sign-off			
X		D. I. A. – unsigned by Comm. Dev.			
X		Letter from Stephen Love, Bank of CO to Comm. Dev. – 1/18/96			
X		Reciprocal Easement Agreement			
X		Letter from Dan Tonello to Bob Lee – 10/9/95			
X		Deed of Trust			
X		Treasurer's Certificate of Taxes Due			
X		SITE PLAN			
X		UTILITY COMPOSITE			

SUBMITTAL CHECKLIST

RESUBDIVISION / SITE PLAN REVIEW

Location: [illegible] Project Name: _____

Date Received _____

Receipt # [illegible]

File # [illegible]

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	● County Bldg. Dept.	● County Surveyor	○ Walker Field	○ School Dist. #51	● Irrigation District - GVIC	● Drainage District - GTDD	● Water District - DTE	○ Sewer District	● 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 - see fee sheet	VII-1	1																													
● Submittal Checklist*	VII-3	1																													
● Review Agency Cover Sheet*	VII-3	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
● Application Form*	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
● Reduction of Assessor's Map	VII-1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
● Evidence of Title	VII-2	1			1			1																								
○ Appraisal of Raw Land	VII-1	1			1	1																										
● Names and Addresses*	VII-2	1																														
● Legal Description*	VII-2	1			1																											
○ Deeds	VII-1	1			1			1																								
○ Easements	VII-2	1	1	1	1			1													1	1	1									
○ Avigation Easement	VII-1	1			1			1							1																	
○ ROW	VII-3	1	1	1	1			1													1	1	1									
○ Covenants, Conditions, & Restrictions	VII-1	1	1					1																								
○ Common Space Agreements	VII-1	1	1					1																								
● County Treasurer's Tax Cert.	VII-1	1																														
● Improvements Agreement/Guarantee*	VII-2	1	1	1				1																								
○ CDOT, 404, or Floodplain Permit	VII-3,4	1	1																													
● General Project Report	X-7	1	1	1	1	1	1	1	8	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
○ Location Map	IX-21	1																														
○ Composite Plan	IX-10	1	2	1	1																											
○ 11"x17" Reduction Composite Plan	IX-10	1				1	1	1	8	1	1	1	1				1	1	1	1	1	1	1	1	1	1		1	1			
● Final Plat	IX-15	1	2	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
○ 11"x17"Reduction of Final Plat	IX-15	1							8	1	1	1			1	1	1	1	1	1	1	1	1				1					
● Cover Sheet	IX-11	1	2																													
● Grading& Stormwater Mgmt Plan	IX-17	1	2															1							1							
○ Storm Drainage Plan and Profile	IX-30	1	2															1			1	1	1						1			
○ Water and Sewer Plan and Profile	IX-34	1	2	1															1	1	1	1	1					1	1			
○ Roadway Plan and Profile	IX-28	1	2															1														
○ Road Cross-sections	IX-27	1	2																													
○ Detail Sheet	IX-12	1	2																													
● Landscape Plan	IX-20	2	1	1																												
○ Geotechnical Report	X-8	1	1										1													1						
○ Phase I & II Environmental Report	X-10,11	1	1																													
● Final Drainage Report	X-5,6	1	2															1														
○ Stormwater Management Plan	X-14	1	2															1							1							
○ Sewer System Design Report	X-13	1	2	1																1												
○ Water System Design Report	X-16	1	2	1															1													
● Traffic Impact Study	X-15	1	2																					1								
● Site Plan	IX-29	1	2	1	1		1		8																							
● Industrial Pre-Treatment Sign-Off		1		1																												
● Elevation Drawing Also Planning Clearance to Comm. Dev.		1	1																													

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

GENERAL PROJECT REPORT

FISHER RESUBDIVISION/SITE PLAN REVIEW

Project Description

The project proposes a resubdivision of Lots 3 and 4 of Fisher Subdivision. Lot 3 currently consists of 1.54 acres; Lot 4 consists of 2.25 acres. The subject parcels are bounded by 24-1/2 Road to the east and F Road (Patterson Road) to the southwest.

The resubdivision will reconfigure Lot 3 to 1.24 acres and Lot 4 to 2.55 acres. Proposed use of Lot 3 is a Bennett's BBQ restaurant (6,500 square feet, 300 seats). Lot 4 will contain Fisher's Liquor Barn (8,500 square feet) on the southern end of the parcel and a retail sales building (14,000 square feet) on the northern end of the parcel.

Project Compliance, Compatibility, and Impact

The parcel is currently zoned H.O. Highway Oriented. Adjacent uses include the Mall Car Wash to the south, vacant land to the west, Sticks and Stones landscaping business to the north, and vacant land to the east. All adjacent parcels are zoned H.O.

The proposal will have one access on F Road and two accesses on 24-1/2 Road. Two-way traffic will circulate throughout the site. Petitioner proposes a left-turn lane on F Road in lieu of a Traffic Impact Study.

Telephone service and a 1-1/4" MW gas line are currently available adjacent to the parcel in 24-1/2 Road. An 8" sanitary sewer line is currently available to the southern edge of the parcel in 24-1/2 Road and will be extended to service the proposal. An 8" Ute water line is located in F Road. Fire hydrants will be located as shown on the accompanying utility plan. Underground electric power is available in F Road.

Utility providers to the parcel are as follows: Public Service Company, gas and electric; Ute Water Company, water; U.S. West, telephone; City of Grand Junction, sewer and drainage.

The restaurant will provide a two-compartment, 1000-gallon oil and grease separator to meet City pre-treatment requirements.

The Natural Conservation Service identifies soils on the parcel as Bc Sagers Silty Clay Loam. Slope on the parcel is 0.5% to the southwest. The project will have no adverse impact on site geology and no geological hazards or constraints have been identified.

Expected hours of operation for the restaurant are 10:00 a.m. to 10:00 p.m. Expected hours of operation for the liquor store are 8:00 a.m. to 10:00 p.m. Expected hours of operation for the retail sales units are 9:00 a.m. to 9:00 p.m. The liquor store will have two free-standing signs, one facing 24-1/2 Road and one facing F Road. The restaurant will have a free-standing

RP-95-200

Wayne Fisher
1041 24 Road
Grand Junction, CO 81505

Cronk Construction
1129 24 Road
Grand Junction, CO 81505

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

2945-043-00-051
Fourscored
PO Box 654
Grand Junction, CO 81502

2945-043-01-002
Gertrude Fisher
667 -25 Road
Grand Junction, CO 81505

2945-043-01-012
C&A Enterprises
c/o First South Bank
PO Box 14099
Macon, GA 31203-0499

Marjean Moses
722 Hemlock Dr.
Grand Junction, CO 81506
2945-043-01-018

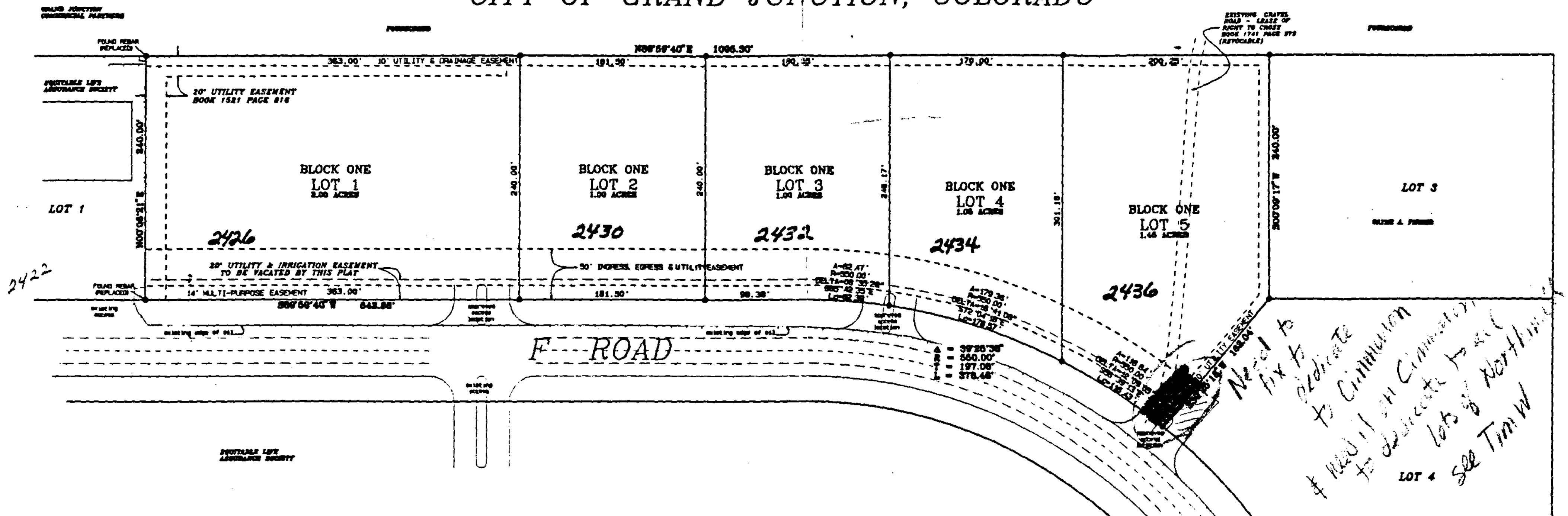
2945-043-03-006
Dayton-Hudson Corp.
c/o Prop. Tax Dept. #93
777 Nicollet Mall
Minneapolis, MN 55402-2004

2945-044-00-058
Mustang Broadcasting Co.
715 Horizon Dr. Ste. 430
Grand Junction, CO 81506

2945-044-00-117
Denver G. Cherry
Etal C/O Michael Bussey
2150 Shenandoah Dr.
Grand Juction, CO 81503-1065

NORTHMALL SUBDIVISION

A RESUBDIVISION OF LOT 2
FISHER SUBDIVISION
CITY OF GRAND JUNCTION, COLORADO



DEDICATION

KNOW ALL MEN BY THESE PRESENTS: The undersigned, Gertrude Fisher Smith is the owner of that real property situated in the City of Grand Junction, Mesa County, Colorado, described as follows:

A parcel of land recorded in Book 1818 Page 858 of the Mesa County Records, being Lot 2 of Fisher Subdivision according to the official plat thereof recorded in Plat Book 12 Page 161 of the Mesa County Records.

That said owner has caused the above described property to be laid out and surveyed as NORTHMALL SUBDIVISION as shown hereon.

That said owner does hereby dedicate and set apart real property as shown and labeled on the accompanying plat as follows:

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

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

- All Drainage Easements to the owners (Property/Homeowners Association) of lots and tracts hereby platted as perpetual easements for the conveyance of runoff water which originates within the area hereby platted or from upstream areas, through natural or man-made facilities above or below ground.

- All Ingress/Egress Easements to the owners of lots or tracts specifically identified on the plat as perpetual easements for ingress and egress purposes for the use by said lot or tract owners, their guests, and invitees, and also for use by public services, including but not limited to, postal service, trash collection, fire, police, emergency vehicles, and the City of Grand Junction.

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

IN WITNESS WHEREOF said owner has caused her name to be hereto subscribed this 26 day of October 1995.

Gertrude Fisher Smith (signature)
Gertrude Fisher Smith

State of Colorado)
) ss
County of Mesa)

This plat was acknowledged before me by Gertrude Fisher Smith on this 26th day of October A.D. 1995, for the aforementioned purposes.

My Commission expires: 03/01/95

Notary Public Melanie A. Slaughter (signature)

My address is: 529 25 1/2 Rd Grand Jct CO 81505

CITY APPROVAL

This plat of NORTHMALL SUBDIVISION, a replat of Lot 2 of Fisher Subdivision, a subdivision of the City of Grand Junction, County of Mesa, State of Colorado, was approved this 7th day of November 1995.

(signature) City Manager — (signature) Mayor

COUNTY CLERK AND RECORDER'S CERTIFICATE

I hereby certify that this instrument was filed in the office of the Clerk and Recorder of Mesa County, Colorado, at 4:29 o'clock P M., this 9th day of Nov 1995, and is duly recorded in Plat Book No. 15 Page 1 as Reception No. 1735932

Clerk and Recorder of Mesa County

SURVEYOR'S STATEMENT:

I, Kenneth Scott Thompson, being a registered Professional Land Surveyor in the State of Colorado, do hereby state that this subdivision plat and survey of NORTHMALL SUBDIVISION, a replat of Lot 2 of Fisher Subdivision, were made by me and/or under my direct supervision and that to the best of my knowledge, belief, and information both are accurate and conform to all applicable laws and regulations of the State of Colorado and to all applicable requirements of the zoning and development code of the City of Grand Junction.

Kenneth Scott Thompson (signature) — October 24, 1995
Kenneth Scott Thompson P.L.S. 18480 — Date

NOTE: At the time of site plan review, common access circulation, circulation and parking arrangements must be reviewed by City staff.

LEGEND

- ● SET #5 REBAR W/ALUM. CAP #18480
- ● SET #5 REBAR W/ALUM. CAP #18480 IN CONC.
- ○ FOUND PIN & CAP AS NOTED

0 50 FEET 100 150
GRAPHIC SCALE

BASIS OF BEARINGS: The bearings on this plat are based on the original plat of Fisher Subdivision. The bearing along the north line of this subdivision, between Thompson-Langford Corporation aluminum caps set on #5 rebar in concrete is N89°59'40"E.

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

NORTHMALL SUBDIVISION
A RESUBDIVISION OF LOT 2
FISHER SUBDIVISION
CITY OF GRAND JUNCTION, COLORADO

SECTION: S/2 SW/4 S.4	TOWNSHIP: 1S	RANGE: 1W	MERIDIAN: UTE

THOMPSON-LANGFORD CORPORATION
529 25 1/2 ROAD - # B-210
Grand Junction CO 81505 (303) 243-6067

DRAINAGE PLAN

October 16, 1995
REVISED - December 19, 1995

FISHER SUBDIVISION
24-1/2 Road and F Road
GRAND JUNCTION, CO 81505

Prepared For:
Wayne Fisher
Fisher's Liquor Barn
2448 -F- Road
Grand Junction, CO 81505

Prepared By:
Cronk Construction Inc.
1129 -24- Road
Grand Junction, CO 81505
303-245-0577

Table of Contents

I. General Location and Description

The Fisher subdivision is located within the Grand Junction City limits northwest of the intersection of 24.5 Road and Patterson Road. The east boundary of the development fronts along approximately 556' of 24.5 Road. The property also fronts along approximately 240' of Patterson Road just north of Mesa Mall on the southwest boundary. Commercial property (a car wash and a landscape material supply) borders the subject property to the north and south. Vacant land borders the property to the west.

The development consists of 3.7 acres of tilled native soils. The site was formerly farmed but has been fallow for some time. The soil at the site is classified as SCS type "D" soil, being sandy clay and silty clay loam.

II. Existing Drainage Conditions

Historically drainage was directed to the southwest boundary of the property and entered the Ranchman's ditch which now runs under the parking lot of Mesa Mall as piped subsurface flow. The Ranchman's ditch drains west to 24 Road and then south under the Rio Grande Railroad tracks to the Colorado River located approximately 1000' to the south. The property has remained fallow for the past several years and all drainage has ponded on the property and evaporated or infiltrated. No existing drainage concerns are apparent.

III. Drainage Design Criteria

Drainage design criteria are taken from the *Stormwater Management Manual* (Public Works Department, City of Grand Junction, CO; June, 1994). Reference is also made to the Appendices in the *Stormwater Management Manual* for development of several constitutive design parameters. The Rational Method is used to develop Peak runoff estimate (cfs) for both pre- and post-development conditions. Peak runoff is developed for the 2 year and 100 year

precipitation events for the Mesa County urbanized area. The SCS Type II-A hydrograph (HEC-1, Corps of Engineers - U.S. Army) is used to develop the *time of critical storm duration,* T_d, for detention basin storage sizing. Orifices are used to control detention basin outflow for the 2 year design discharge while the 100 year design discharge is controlled by the size of the outflow piping diameter.

IV. Drainage Design (developed conditions)

The historic drainage outflow is located at the southwest corner of the property and will be changed by development. As shown on the Grading and Drainage Plan, post-development drainage will consist of channeling surface flows from the eastern 84% of the property to four detention basins located in the paved parking areas. Drainage from the remaining 16% of the property (consisting of the common access road with the adjoining property to the west) will be directed west along the northern barrow ditch of F Road. The western drainage is proposed to provide a favorable surface elevation transition across the common access between the subject property and the adjoining parcel to the west.

Each detention basin associated with the majority of drainage to the southeast will employ a single-stage outflow control orifice to limit the cumulative discharge from all detention areas to the design discharge rate. The City of Grand Junction Stormwater Management Manual (Public Works Department, City of Grand Junction, CO, June, 1994) allows use of two-stage outflow control with design discharge rates correlated to the 2 year and 100 year historic flows from the site. Two-stage outflow control is not utilized in detention design because existing downgradient drainage channels (12" dia. PVC) are of insufficient size to carry the larger second-stage outflows (e.g., corresponding to the 100 year historic flows for the drainage basin of concern).

The first-stage cumulative design discharge rate from the four detention areas (as limited by the down-gradient drainage channel capacity) is chosen as 1.0 cfs. Each of the four detention areas

will thus be limited to a design discharge of 0.25 cfs to facilitate a cumulative discharge rate from the four detention areas of 1.0 cfs. Orifice sizing for a design discharge rate of 0.25 cfs is developed in Appendix C. The design discharge rate is slightly more than the 2 year historic discharge rate of 0.87 cfs and substantially less than the 100 year historic discharge rate of 3.39 cfs (Appendix B). In accordance with the use of single stage outlet control, the detention basin is sized to retain the larger volumes of stormwater generated from the 100 year storm event under developed conditions (Appendix E).

Both historic and developed peak runoff flows are estimated using the *Rational Method*. Peak runoff flows for four site scenarios are calculated. The four scenarios investigated include both historic and developed peak runoff flow for precipitation event frequencies of 2 years and 100 years.

The time of concentration, T_c, worksheet for each of the 4 scenarios investigated is included for reference as Appendix A. The *Rational Method* worksheet used to calculate peak flow runoff is included for reference as Appendix B. Individual detention basin outflow design considerations (i.e., design outflow for each of the four detention areas taken as 1/4 of the cumulative design outflow) are addressed in Appendix C. The SCS Type II-A hydrograph for the area (HEC-1) is used to develop the time of critical storm duration, T_d, as shown in Appendix D. The detention basin sizing worksheet is included for reference as Appendix E.

V. Results and Conclusions

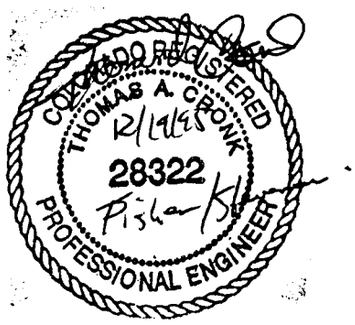
The historic peak flow runoff is estimated at 0.87 cfs (2 year event) and 3.39 cfs (100 year event). As shown in Appendix C, the single stage outlet control will limit developed peak outflow discharge from each detention area to 0.25 cfs (1.0 cfs cumulative total from the four detention areas). Under developed conditions, the 100 yr precipitation event will result in a maximum storage volume of approximately 14,575 cubic feet (Appendix E). A 12" PVC (C-900) pipe is proposed to channel storm flow from the detention areas to the existing

irrigation/stormwater drainage channel located at the southeast corner of the property. Under maximum free-flow conditions (i.e., full pipe flow at a slope of 0.4%), the maximum flow capacity of the outflow channel is 2.45 cfs. The design maximum flow capacity of the outflow piping (both existing and design) is thus in excess of the design peak discharge rate of 1.0 cfs under developed site conditions.

VI. Certification

I, Thomas A. Cronk, hereby certify this report was completed by myself or under my direct supervision and has been prepared in accordance with good engineering practices.

Seal



Thomas A. Cronk

Date

December 12, 1995.

APPENDIX A

Time of Concentration, T_c, Worksheet

Time of Concentration, T_c, Worksheet

Project: Fisher Subdivision
Site Condition: Pre-development
Prepared by: Tom A. Cronk
Date: September 28, 1995

(The table below is an adaption of a worksheet provided in the SCS TR-55)
This table may be used in subbasin T_c calculations, or for travel time of subbasin runoff through a lower subbasin reach (T_t).
Use only channel flow for T_t calculations

STORM FREQUENCY		2 YEAR	100 YEAR
REACH	AREA IDENTIFIER		
	SEGMENT IDENTIFICATION		
	T_c OR T_t THROUGH BASIN REACH		
OVERLAND FLOW	SURFACE DESCRIPTION (TABLE E-1)	no till - no residue	no till - no residue
	"N" VALUE (TABLE E-1)	0.04 - 0.10 (assume 0.07)	0.04 - 0.10 (assume 0.07)
	FLOW LENGTH, L (TOTAL < 300 FT.) (ft.)	300	300
	LAND SLOPE, S (ft./ft.)	0.006	0.006
	To (min.) (TABLE E-2, OR FIGURE E-1)	28	17
SHALLOW CONCENTRATED FLOW	SURFACE DESCRIPTION (FIGURE E-3)	nearly bare/untilled	nearly bare/untilled
	FLOW LENGTH, L (ft.)	285	285
	FLOW SLOPE, S (ft./ft.)	0.006	0.006
	FLOW VELOCITY, V (FIGURE E-3) (fps)	0.78	0.78
	TRAVEL TIME T_t = L/(60V) (min.)	6.1	6.1
CHANNEL FLOW	CROSS-SECTIONAL FLOW AREA, a (ft^2)	no channel	no channel
	WETTED PERIMETER, Pw (ft.)		
	HYDRAULIC RADIUS, r = a/Pw (ft.)		
	CHANNEL SLOPE, S (ft./ft.)		
	MANNINGS COEFFICIENT, n (APPENDIX F)		
	$V = 1.49r^{2/3}S^{1/2}/n$ (fps)		
	ASSUMED VELOCITY (fps)		
	FLOW LENGTH, L (ft.)		
	TRAVEL TIME T_a = L/(60V) (min.)		
T_c	$T_c = T_s + T_t + T_a$ (min.)	34	23
T_t	$T_t = T_a$ (min.)		
T_l	$T_l = 0.6(T_c)$ OR FROM FIGURE E-4		

NOTE - Table and all referenced tables, figures, and appendices from Stormwater Management Manual, Public Works Department, City of Grand Junction, June, 1994

Time of Concentration, T_c, Worksheet

Project: Fisher Subdivision
Site Condition: Post-development
Prepared by: Tom A. Cronk
Date: September 28, 1995

(The table below is an adaption of a worksheet provided in the SCS TR-55)
This table may be used in subbasin T_c calculations, or for travel time of subbasin runoff through a lower subbasin reach (T_r).
Use only channel flow for T_r calculations

STORM FREQUENCY		2 YEAR	100 YEAR
REACH	AREA IDENTIFIER		
	SEGMENT IDENTIFICATION		
	T_c OR T_t THROUGH BASIN REACH		
OVERLAND FLOW	SURFACE DESCRIPTION (TABLE E-1)	pavement	pavement
	"N" VALUE (TABLE E-1)	0.05	0.05
	FLOW LENGTH, L (TOTAL < 300 FT.) (ft.)	100	100
	LAND SLOPE, S (ft./ft.)	0.01	0.01
	To (min.) (TABLE E-2, OR FIGURE E-1)	8	5
SHALLOW CONCENTRATED FLOW	SURFACE DESCRIPTION (FIGURE E-3)	paved area	paved area
	FLOW LENGTH, L (ft.)	100	100
	FLOW SLOPE, S (ft./ft.)	0.005	0.005
	FLOW VELOCITY, V (FIGURE E-3) (fps)	1.4	1.4
	TRAVEL TIME T_t = L/(60V) (min.)	1.2	1.2
CHANNEL FLOW	CROSS-SECTIONAL FLOW AREA, a (ft^2)	0.0569	0.1745
	WETTED PERIMETER, Pw (ft.)	0.6509	1.047
	HYDRAULIC RADIUS, r = a/Pw (ft.)	0.0875	0.1667
	CHANNEL SLOPE, S (ft./ft.)	0.004	0.004
	MANNINGS COEFFICIENT, n (APPENDIX F)	0.012	0.012
	$V = 1.49r^{2/3}S^{1/2}/n$ (fps)	1.55	2.38
	ASSUMED VELOCITY (fps)	1.6	2.4
	FLOW LENGTH, L (ft.)	500	500
	TRAVEL TIME T_{ch} = L/(60V) (min.)	5.2	3.5
T_c	$T_c=T_o+T_t+T_{ch}$ (min.)	14.4	9.7
T_r	$T_r=T_{ch}$ (min.)		
T_t	$T_t=0.6(T_c)$ OR FROM FIGURE E-4		

NOTE - Table and all referenced tables, figures, and appendices from Stormwater Management Manual, Public Works Department, City of Grand Junction, June, 1994

APPENDIX B

RATIONAL METHOD PEAK FLOW RUNOFF WORKSHEET

Rational Method Peak Flow Runoff Worksheet

Project: Fisher Subdivision
Prepared by: Tom A. Cronk
Date: September 28, 1995

SITE CONDITION: PRE-DEVELOPMENT

BASIN	AREA			RUNOFF COEFFICIENT[1], C	
	SURFACE TYPE	SCS GROUP	ACREAGE, A	C_{02}	C_{100}
All	bare ground	D	3.79	0.28	0.34

TOTAL ACREAGE, A_T	WEIGHTED RUNOFF COEFFICIENT, C_w		CONCENTRATION TIME[2], T_c (min.)		INTENSITY[3], i (in./hr.)		PEAK RUNOFF $Q = C_w i A_T$ (cfs)	
	C_{02}	C_{100}	T_{C02}	T_{C100}	i_{02}	i_{100}	Q_{02}	Q_{100}
3.79	0.28	0.34	34	23	0.82	2.63	0.87	3.39

[1] - *Rational Method* runoff coefficients taken from Table B-1, Stormwater Management Manual, Public Works Department, City of Grand Junction, June, 1994

[2] - Time of Concentration as derived in attached Appendix A worksheet

[3] - Intensity taken from Table A-1, Stormwater Management Manual, Public Works Department, City of Grand Junction, June, 1994

Rational Method Peak Flow Runoff Worksheet

Project: Fisher Subdivision
Prepared by: Tom A. Cronk
Date: September 28, 1995

SITE CONDITION: POST-DEVELOPMENT

BASIN	AREA			RUNOFF COEFFICIENT[1], C	
	SURFACE TYPE	SCS GROUP	ACREAGE, A	C_{02}	C_{100}
	pavement/roof	D	3.19	0.93	0.95
	landscape	D	0.60	0.28	0.34

TOTAL ACREAGE, A_T	WEIGHTED RUNOFF COEFFICIENT, C_w		CONCENTRATION TIME[2], T_c (min.)		INTENSITY[3], i (in./hr.)		PEAK RUNOFF $Q=C_wiA_T$ (cfs)	
	C_{02}	C_{100}	T_{c02}	T_{c100}	i_{02}	i_{100}	Q_{02}	Q_{100}
3.79	0.83	0.85	14.4	9.7	1.32	3.80	4.15	12.24

[1] - *Rational Method* runoff coefficients taken from Table B-1, Stormwater Management Manual, Public Works Department, City of Grand Junction, June, 1994

[2] - Time of Concentration as derived in attached Appendix A worksheet

[3] - Intensity taken from Table A-1, Stormwater Management Manual, Public Works Department, City of Grand Junction, June, 1994

APPENDIX C
DETENTION BASIN OUTFLOW DESIGN WORKSHEET

DETENTION BASIN OUTFLOW DESIGN WORKSHEET
DISCHARGE PIPING ORIFICE CONTROL

Project: Fisher Subdivision
Prepared by: Tom A. Cronk
Date: September 28, 1995

Detention Basin A					Detention Basin B (cumulative discharge from Basin A)				
head difference, h[1], (ft.)	design discharge, Q[2], (cfs)	design orifice diameter[3] (in.)	actual orifice diameter[4] (in.)	actual discharge, Q_a[5], (cfs)	head difference, h[1], (ft.)	design discharge, Q[2], (cfs)	design orifice diameter[3] (in.)	actual orifice diameter[4] (in.)	actual discharge, Q_a[5], (cfs)
1.7	0.25	2.67	2.50	0.22	2.1	0.50	3.57	3.50	0.48

[1] Difference in inlet and outlet waterlevel elevation at maximum detention capacity (ft.)

[2] Design discharge = 1/4 of cumulative design discharge, Q_h (cfs) less other discharge sources (i.e., lower stage discharge and/or sheetflows)

[3] Design diameter (assuming submerged inlet and outlet, full orifice flow, negligible head loss across orifice) calculated from:

$$Q = C_d A\sqrt{2gh}\text{, where,}$$

Q = *design discharge, (cfs)*

C_d = *coefficient of discharge* = 0.62 *for sharp edge transition*

A = *cross-sectional area of pipe* (ft^2)

g = *gravitational acceleration* = 32 ft/sec^2

h = *head difference, (ft)*

[4] Actual orifice diameter based on construction feasibility not exceed design diameter

[5] Actual discharge as based on actual orifice diameter, to be used in determining average discharge rate Q_r for detention basin sizing

DETENTION BASIN OUTFLOW DESIGN WORKSHEET
DISCHARGE PIPING ORIFICE CONTROL

Project: Fisher Subdivision
Prepared by: Tom A. Cronk
Date: September 28, 1995

Detention Basin C (cumulative discharge from Basins A and B)					Detention Basin D				
head difference, h[1], (ft.)	design discharge, Q[2], (cfs)	design orifice diameter[3] (in.)	actual orifice diameter[4] (in.)	actual discharge, Q_a[5], (cfs)	head difference, h[1], (ft.)	design discharge, Q[2], (cfs)	design orifice diameter[3] (in.)	actual orifice diameter[4] (in.)	actual discharge, Q_a[5], (cfs)
1.32	0.75	4.90	5.0	0.78	1.59	0.25	2.70	2.50	0.21

[1] Difference in inlet and outlet waterlevel elevation at maximum detention capacity (ft.)

[2] Design discharge = 1/4 of cumulative design discharge, Q_h (cfs) less other discharge sources (i.e., lower stage discharge and/or sheetflows)

[3] Design diameter (assuming submerged inlet and outlet, full orifice flow, negligible head loss across orifice) calculated from:

$$Q = C_d A\sqrt{2gh}, \text{ where,}$$

Q = *design discharge, (cfs)*

C_d = *coefficient of discharge* = 0.62 *for sharp edge transition*

A = *cross-sectional area of pipe* (ft^2)

g = *gravitational acceleration* = 32 ft/sec^2

h = *head difference, (ft)*

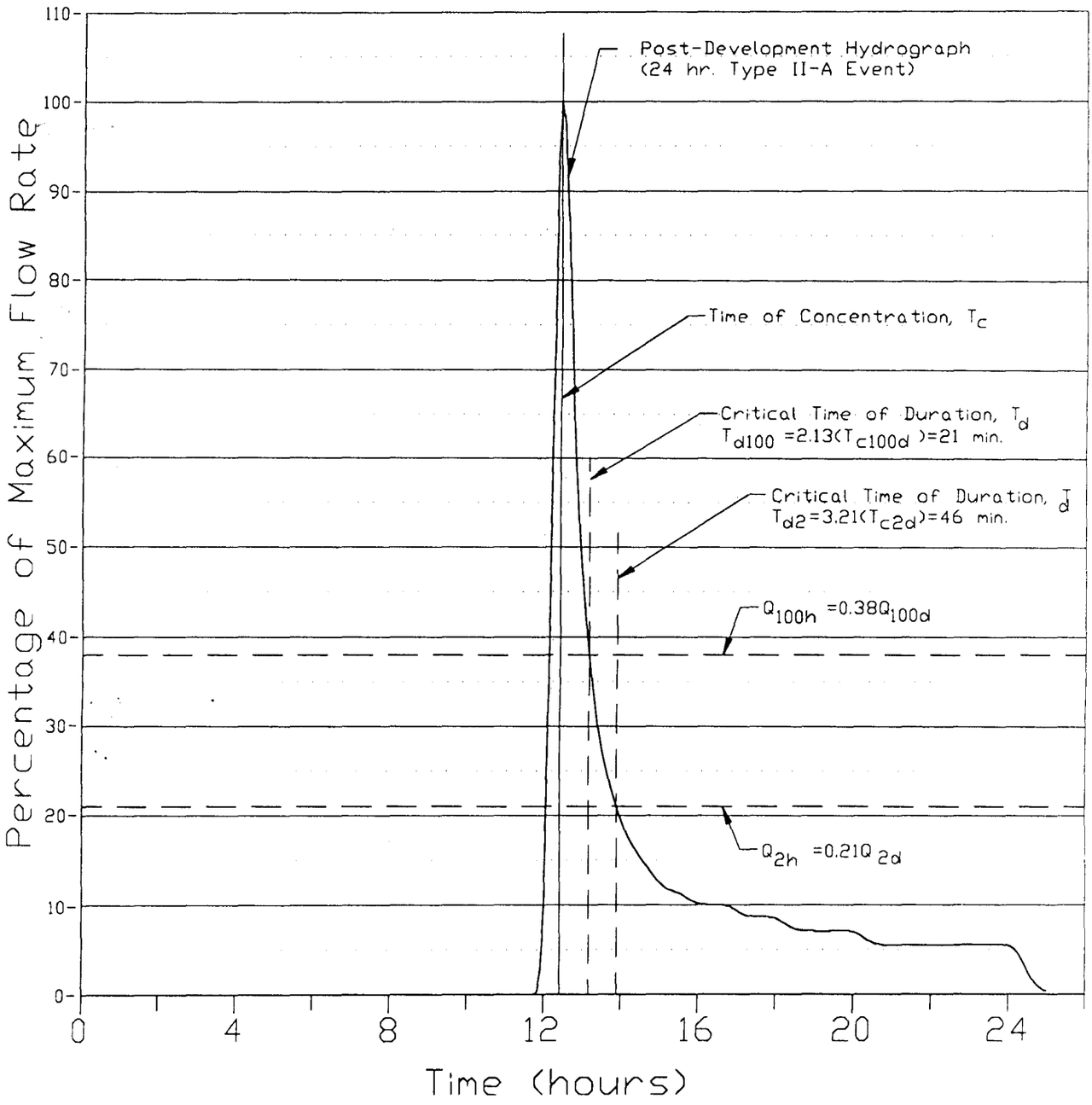
[4] Actual orifice diameter based on construction feasibility not exceed design diameter

[5] Actual discharge as based on actual orifice diameter, to be used in determining average discharge rate Q_r for detention basin sizing

APPENDIX D

TIME OF CRITICAL DURATION, T_d, WORKSHEET

Runoff Hydrograph
Post-Construction (Fisher Subdivision)
SCS Type II-A Unit Hydrograph (24 hr. event)



APPENDIX E

MODIFIED RATIONAL METHOD DETENTION BASIN SIZING WORKSHEET

MODIFIED RATIONAL METHOD DETENTION BASIN SIZING WORKSHEET

Project: Fisher Subdivision
Prepared by: Tom A. Cronk
Date: September 28, 1995

Basin	Site Hydrology								Detention Basin Sizing					
	Site Condition		2 year event			100 year event			2 year event			100 year event		
			C_{2d}	T_{c2d} (min.)	Q_{2d} (cfs)	C_{100d}	T_{c100d} (min.)	Q_{100d} (cfs)	T_{d2}[1] (min.)	Q_{r2}[2] (cfs)	Storage Volume, V_2[3], (ft^3)	T_{d100}[1] (min.)	Q_{r100}[2] (cfs)	Storage Volume, V_{100}[3], (ft^3)
All	Pre-developed		0.28	34	0.87	0.34	23	3.39						
	Post-developed		0.83	14.4	4.15	0.85	9.7	12.24	46	0.75	9,560	21	0.75	14,575
	Development Impact	quantity			+3.28			+8.85						
		percent			+377%			+261%						

[1] Time of critical duration, T_d, from Appendix D worksheet

[2] Average rate of discharge, Q_r, = 55% of actual discharge, Q_a, taken from Appendix C plus other discharge sources (i.e., lower stage discharge and/or sheetflows)

[3] Storage volume required, V (ft^3), calculated from:

$$V = 60\left[Q_d T_d - Q_r T_d - Q_r T_{Cd} + \frac{K Q_r T_{Cd}}{2} + \frac{Q_r^2 T_{Cd}}{2 Q_d}\right], \text{ where,}$$

K = *Ratio of pre- and post-development* T_{Cd}

REVIEW COMMENTS

FILE #RP-95-200 **TITLE HEADING:** Replat & Site Plan Review - Cimmaron North Minor Subdivision

LOCATION: 24 1/2 & F Roads

PETITIONER: Wayne Fisher

PETITIONER'S ADDRESS/TELEPHONE: 1041 24 Road
Grand Junction, CO 81505
242-0999 / 242-4226

PETITIONER'S REPRESENTATIVE: Cronk Construction

STAFF REPRESENTATIVE: Kristen Ashbeck

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS .

CITY ATTORNEY **11/11/95**
Dan Wilson **244-1505**

1. What happened to the S 100' of Lot 4? This part of lot needs to be shown and dealt with as part of this replat, until applicant explains/shows how it is that such 100' has already been property split off.
2. Need consent of the holder of the Deed of Trust, or evidence that a release has been recorded.
3. My packet did not contain adequate title information to evaluate. This needs to be done to make the application complete
4. The plat note suggests a drainage easement; applicant needs to provide a copy of the recorded instrument for review.

U.S. WEST **11/13/95**
Max Ward **244-4721**

Okay.

CITY UTILITY ENGINEER **11/13/95**
Trent Prall **244-1590**

SEWER - CITY

1. Sewer extension will require an engineered plan and profile drawing stamped by a Registered Civil Engineer. City review of plans required prior to construction. An improvements agreement will be required to cover the cost of construction and inspection for the sewer line.
2. Please contact Utility Billing (244-1580) for more information regarding plant investment fees for sewer. The following information will be requested by Utility Billing: 1) hours of operation, 2) number of employees, 3) what food will be served on (paper plates or washable plates), 4) seating capacity (differentiate between lounge and dining).

3. Grease interceptor O.K. per letter from Dan Tonello dated 10/9/95.

WATER -UTE

Please contact Gary Mathews at 242-7491 for Ute requirements for this proposal.

CITY PROPERTY AGENT **11/13/95**
Steve Pace **256-4003**

1. The description as written seems confusing - since the property being replatted is referenced by Book & Page in the caption, then the metes and bounds portion should describe the entire parcel being re-platted.
2. I the east 10' exception for road right-of-way shown?
3. All easements should be addressed in the dedication using City Standards for Dedications. If easements are existing then they should be labeled existing with only new easements or rights-of-way being addressed in the dedication.
4. No interior lot corner monumentation is shown.
5. Should the outer monumentation be reset in concrete?

MESA COUNTY BUILDING DEPARTMENT **11/13/95**
Bob Lee **244-1656**

No comments.

CITY FIRE DEPARTMENT **11/15/95**
Hank Masterson **244-1414**

1. The minimum number of fire hydrants required for Phase One is two. Locate one at the Patterson Road entrance. The second hydrant must be located along 24 1/2 Road at the south entrance. It will be acceptable to the Fire Department to locate this hydrant along the east side of 24 1/2 Road.
2. For Phase Two, one additional fire hydrant is required and it must be located along 24 1/2 Road at the north entrance. Location along the east side of 24 1/2 Road is acceptable.
3. For both hydrants along 24 1/2 Road, the existing 12" line which ends about 100' north of Patterson must be extended north along 24 1/2 Road to serve these hydrants. Contact Ute Water for details regarding the extension of this line. The Fire Department requires this line to be a minimum of 8" in size.
4. Fire Department access is adequate as shown.

CITY DEVELOPMENT ENGINEER **11/16/95**
Jody Kliska **244-1591**

1. Use the City's Guide to Plat Dedications for the plat. Each easement needs to be labeled on the plat and have a corresponding dedication in the dedication language. It appears the plat lacks easements and dedications for the common ingress/egress, parking, drainage.
2. How does the restaurant get deliveries? It appears surrounded by parking.
3. In lieu of the traffic study requirement, off-site improvements to 24 1/2 Road in the form of a continuous two-way left turn lane was the option discussed. Judging from a quick look at potential traffic distribution, it seems the 24 1/2 Road driveways will attract the majority of the traffic to the site. Improvements to Patterson Road would certainly be welcomed but may not be required of this project. Determination of the need for improvements was the reason for requirements of a traffic study originally.

4. Off-site improvements need to be detailed on a separate plan sheet. A traffic plan checklist was added to the most recent edition of the SSID Manual and should be used to prepare plans. This plan should include the extent of the improvements, a typical cross-section with a pavement design, any relocation of drainage facilities such as the roadside ditch, striping, lane widths, tapers.
5. The drainage study and plan proposes to tie into an existing irrigation/drainage structure. Please provide additional information on the existing structure, who it belongs to, and provide a detail on the plans showing how the proposed system ties into it. The plan show this structure on an adjacent property. Is it located in an easement? If not, one may need to be obtained in order to tie in and use it.

COMMUNITY DEVELOPMENT DEPARTMENT **11/16/95**
Kristen Ashbeck **244-1437**
See attached comments and attachments.

GRAND JUNCTION DRAINAGE DISTRICT **11/16/95**
John L. Ballagh **242-4343**
The drainage ditches described in the report are not GJDD facilities. The conditions and/or capacities of the drains to which this site will discharge surface runoff are not know to the District. The Grand Valley Irrigation Company does have some authority over the "pipe under the mall".

TO DATE, COMMENTS NOT RECEIVED FROM:
City Police Department
Mesa County Surveyor
Grand Valley Irrigation
Ute Water
Public Service Company
Persigo Sewer Treatment Facility

RP 95-200 REPLAT & SITE PLAN REVIEW - CIMMARON NORTH (24.5 & F RDS)
Community Development - Kristen Ashbeck 244-1437 11/15/95

FINAL PLAT

Common access easement with North Mall not shown
Blanket drainage easement statement not adequate
Common easement for parking not indicated
Show building setbacks on plat
See attached standard dedication language & Final Plat checklist

SITE PLAN

A separate Planning Clearance is required for each building. Once this project is approved and Community Development is ready to issue a Planning Clearance for any one of the buildings, the petitioner is advised that Planning Clearances for all of the buildings must be obtained within 6 months of the approval. A Site Plan Review (re-review) will be required for those not issued a Planning Clearance by that date.

Building setbacks are 15 feet from property line along F Road, 25 feet from property line along 24-1/2 Road, and 15 feet from side and rear property lines. Need to check setback of liquor store from 24-1/2 -- it appears to be just short of 25 feet. Also need to indicate centerlines of rights-of-way.

Dimensions of liquor store footprint on site plan do not match dimensions shown on elevations. Need to correct--this may affect landscape areas around the building.

Provide details of screening to be provided around each of the dumpster sites.

Label streets.

PARKING/CIRCULATION/LIGHTING

Narrative states that there will be two access points on 24-1/2 Road and two-way circulation on the site, yet plan indicates 3 access points, one of which is one-way?

Amount of parking is adequate as shown and as phased; however, changes may need to be made per comments below for Landscape Plan.

Lighting has several gaps that could be filled if landscaped/parking islands were added in the large vacant triangular areas and lights were placed on the islands (see red-lined plan). Also, a building light on the northwest facade of the restaurant may help fill the gap in lighting on that side of the building. Such islands would also help facilitate better traffic flow in these areas that are otherwise a "free-for-all".

LANDSCAPE PLAN

The Highway Oriented (HO) zone requires that a minimum of seventy-five percent (75%) of the required front yard setback be landscaped. This has not been met in the 25-foot front yard setback along 24-1/2.

The landscape plan must distinguish which species of trees will be placed where rather than lumping all trees under one symbol -- this is primarily to be able to review placement of coniferous trees so as not block sight distance.

Minimum planting size of coniferous trees is 6 feet rather than the 1-1/2" caliper indicated on the plan.

The intent of the Highway Oriented (HO) zone is to achieve higher quality, more aesthetically pleasing commercial and business development. In this regard, gravel is not acceptable to meet the requirement for landscaping in the right-of-way. At a minimum, it should be living groundcover or grass as an extension of the grassed areas to be proposed on site.

Provide a detail showing parking island to meet standards of section 5-5-1 F.2.c.(2) of the Zoning and Development Code regarding pavement for door swing and overhangs. Detail should also indicate that all landscaped areas shall have curbing (scale of drawing is too difficult to tell what is proposed).

GENERAL

Provide narrative information regarding percent of gross sales receipts anticipated to be from the sale of alcoholic beverages at the proposed Bennett's Restaurant and Saloon. If gross sales receipts are anticipated to exceed 25%, a Conditional Use Permit for the use is required.

Narrative and plan indicates that the liquor store will have a freestanding sign along 24-1/2 Road and that a freestanding sign for the retail outlets is not proposed at this time. Be advised that a second freestanding sign along 24-1/2 Road is not allowed by code.

For your information, total sign allowance for Lot 1 is 248 square feet, of which a maximum of 134 square feet may be on the facade(s) of the proposed building. Total sign allowance for Lot 2 is based on street and building frontages and must be distributed throughout the site (both liquor store and retail outlets). Exact allowance can be calculated once signs are proposed.

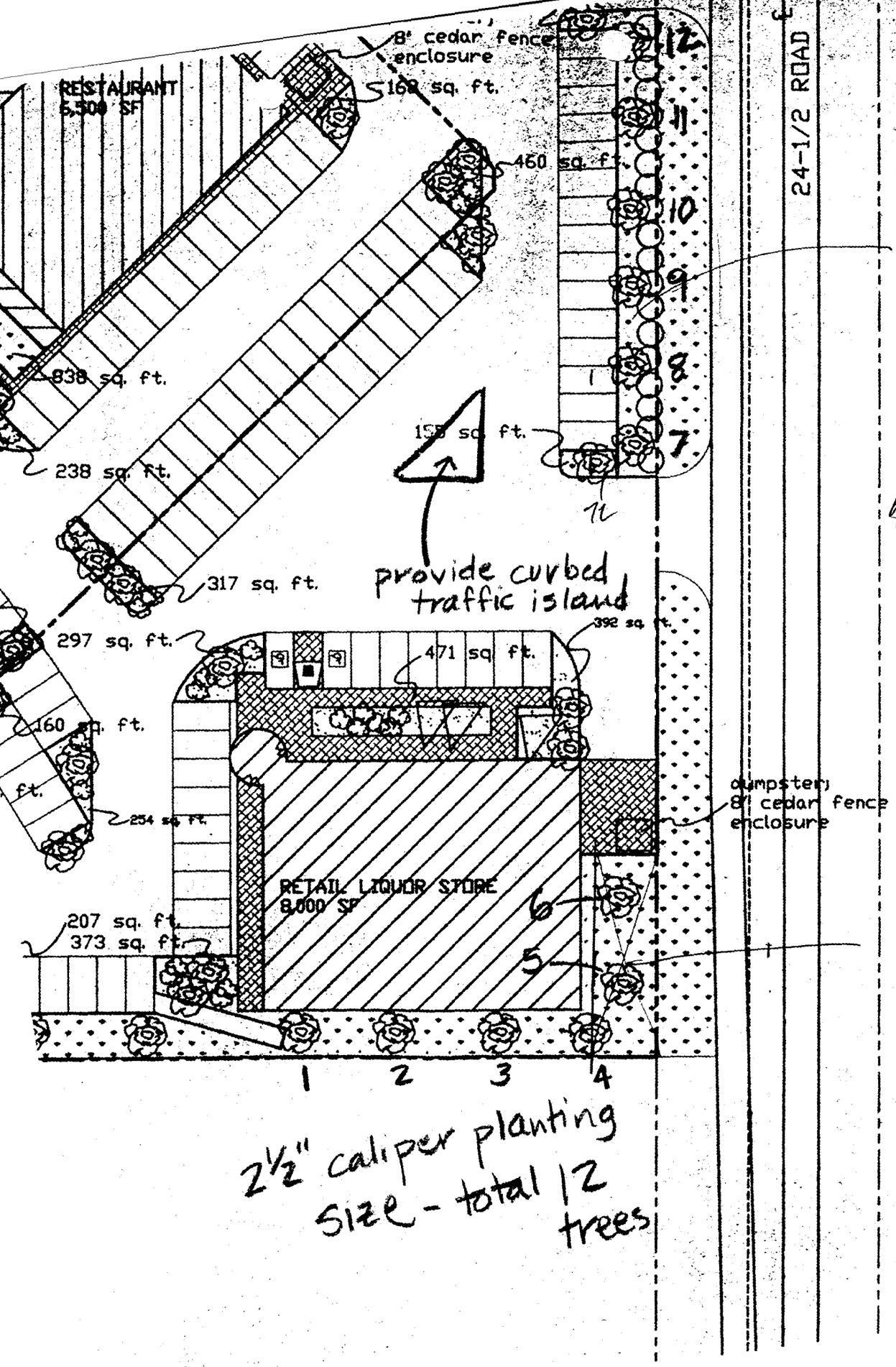
RP 95-200 REPLAT & SITE PLAN REVIEW - CIMMARON NORTH (24.5 & F RDS)
Community Development - Kristen Ashbeck 244-1437 1/8/96

Per our phone conversation of 1/8/96, staff has the following comments regarding the landscape/site plan (refer to attached drawing for clarification):

1. Do not need to provide a physical triangle at the northern 24-1/2 Road entrance.

2. For circulation purposes, do need to provide the a physical triangle (no striping) at the southerly 24-1/2 Road entrance. The southern curb of the triangle should align with the northerly curb of the southern entrance.

3. In lieu of meeting the landscape requirement for 24-1/2 Road setback (75% of 15'), the Administrator has determined that the requirement may be varied if the perimeter trees provided are larger at planting than the minimum required planting size. Please provide 2-1/2" caliper trees along the perimter rather than 1-1/2" caliper trees. Please revise landscape plan to indicate this requirement.



12x150 + 144

~~8,333~~ 10,250

20x65 = 1,30

2½" caliper planting size - total 12 trees

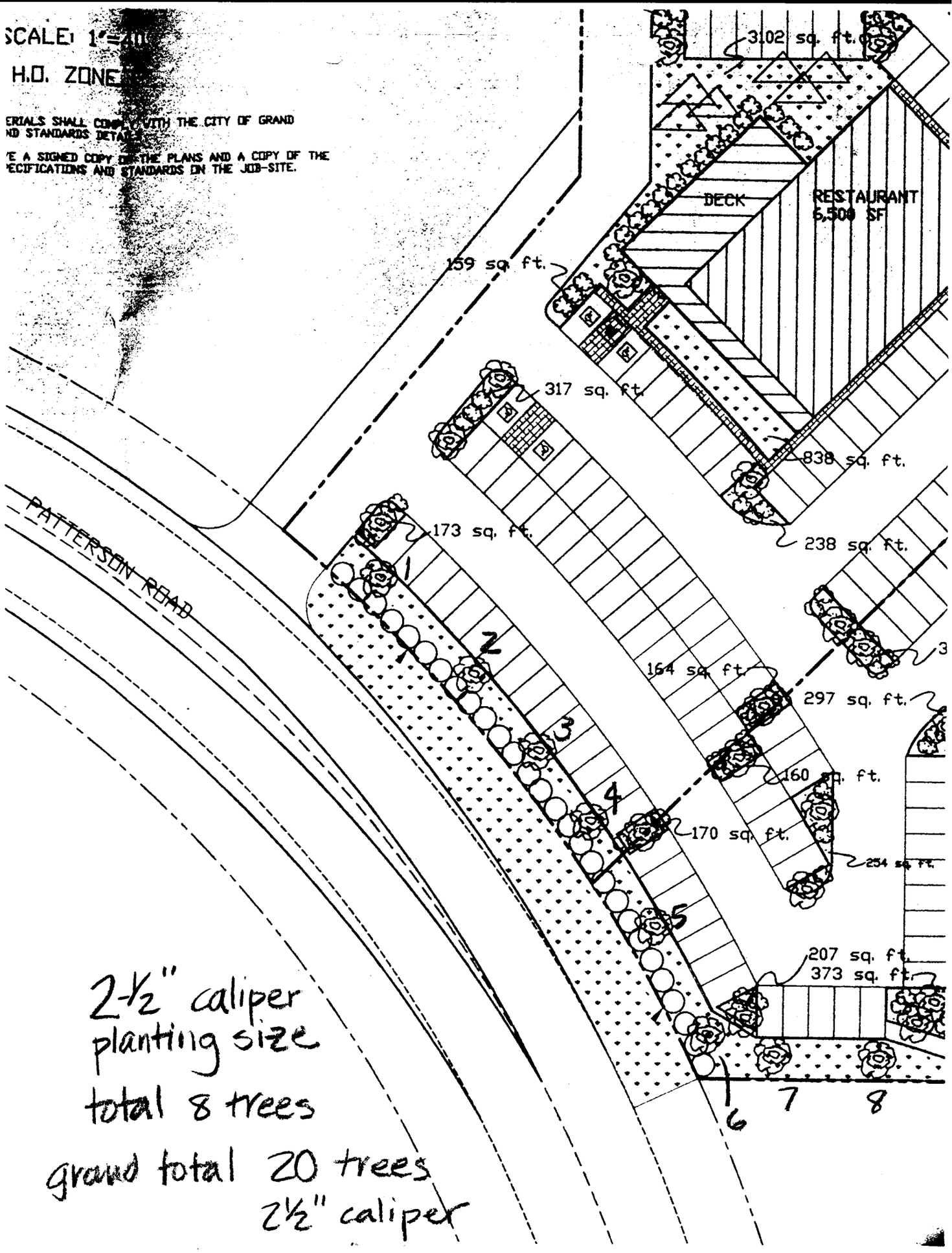
20' x 555.57 x .75

SCALE: 1"=40'

H.O. ZONE

ERIALS SHALL COMPLY WITH THE CITY OF GRAND
ND STANDARDS DETAILS.

'E A SIGNED COPY OF THE PLANS AND A COPY OF THE
ECIFICATIONS AND STANDARDS ON THE JOB-SITE.



2-½" caliper
planting size

total 8 trees

grand total 20 trees
2½" caliper