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File MS-1995-042

Date 8/19/99

| | | |
|---|---------------------------------|--|
| P r e s e n t | S c a n n e d | <p>A few items are denoted with an asterisk (*), which means they are to be scanned for permanent record on the 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.</p> <p>Remaining items, (not selected for scanning), will be marked present on the checklist. This index can serve as a quick guide for the contents of each file.</p> <p>Files denoted with (**) are to be located using the ISYS Query System. Planning Clearance will need to be typed in full, as well as other entries such as Ordinances, Resolutions, Board of Appeals, and etc.</p> |
| X | X | *Summary Sheet – Table of Contents |
| X | X | Application form |
| | | Receipts for fees paid for anything |
| X | X | *Submittal checklist |
| X | X | *General project report |
| | | Reduced copy of final plans or drawings |
| X | X | 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 |
| X | X | *Final reports for drainage and soils (geotechnical reports) |
| | | Other bound or nonbound reports |
| | | Traffic studies |
| | | Individual review comments from agencies |
| | | *Consolidated review comments list |
| X | X | *Petitioner's response to comments |
| X | X | *Staff Reports |
| | | *Planning Commission staff report and exhibits |
| | | *City Council staff report and exhibits |
| | | *Summary sheet of final conditions |
| | | *Letters and correspondence dated after the date of final approval (pertaining to change in conditions or expiration date) |
| DOCUMENTS SPECIFIC TO THIS DEVELOPMENT FILE: | | |
| X | | Irrevocable Letter of Credit – 11/10/95 - ** |
| X | | Deed of Trust – 11/9/95 - ** |
| X | | Recording of Plats – signatures & dates |
| X | X | Status of North Mall Subdivision – 10/18/95 |
| X | X | Letter from Mark Hermundstad to Dan Wilson – 7/26/95 - ** |
| X | X | Planning Commission Minutes - ** - 4/4/95 |
| X | X | Letter from Kathy Portner from Richard Scariano - 7/21/95 |
| X | X | Letter from James Langford to Kathy Portner - 4/7/95 |
| X | | Posting of Public Notice Signs |
| X | X | Letter from James Langford to Jodi Kliska - 5/24/95 |
| X | X | Letter from Gertrude Smith - 4/19/95 |
| X | | Treasurer's Certificate of Taxes Due – 2/28/95 |
| X | | Abstract & Title Co. of Mesa County, Inc. |
| X | X | Final Drainage Report – 2/23/95 |
| X | X | Letter from Jody Kliska to Jim Langford – 5/19/95 |
| X | X | City Council Minutes - ** - 4/19/95 |
| X | X | North Mall – Presentation to City Council on Appeal – 4/20/95 |
| X | | Notes to file |
| X | X | North Mall – North Mall - resubdivision |

2945-043-00-051
I RSCORED
PO BOX 654
GRAND JUNCTION, CO 81502-0654

2945-043-00-144
BANK OF GRAND JUNCTION
2415 F RD
GRAND JUNCTION, CO 81505-1209

2945-043-00-163
EQUITABLE LIFE ASSURANCE SOCIETY OF IOWA
C/O GGMC AGENT-EQUITABLE
PO BOX 1536
DES MOINES, IA 50306-1536

2945-043-01-001
THE EQUITABLE LIFE ASSURANCE SOCIETY OF IOWA
C/O GGMC AGENT - EQUITABLE
PO BOX 1536
DES MOINES, IA 50306-1536

2945-043-01-015
WAYNE A FISHER
1041 24 RD
GRAND JUNCTION, CO 81505-9637

2945-043-01-017
WAYNE A FISHER
1041 24 RD
GRAND JUNCTION, CO 81505-9637

2945-043-04-001
GRAND JUNCTION COMMERCIAL PARTNERSHIP
PO BOX 40
GRAND JUNCTION, CO 81502-0040

2945-043-04-005
JACK D ELLIOTT
BARBARA G
3730 ELDERBERRY CIR
GRAND JUNCTION, CO 81506-8475

2945-043-03-006
DAYTON-HUDSON CORPORATION
C/O PROP TAX DEPT #93
777 NICOLLET MALL
MINNEAPOLIS, MN 55402-2004

2945-043-03-011
EQUITABLE LIFE ASSURANCE SOC OF US
C/O GGMC AGENT-EQUITABLE
PO BOX 1536
DES MOINES IOWA 50306-1536

2945-043-03-010
EQUITABLE LIFE ASSURANCE SOCIETY OF IOWA
C/O GGMC AGENT - PROP TAX ADMIN
PO BOX 1536
DES MOINES, IA 50306-1536

SUBMITTAL CHECKLIST

MINOR SUBDIVISION

Location: North side of F Road

Project Name: Fisher Re-plat

| ITEMS | | DISTRIBUTION | | | | | | | | | | | | | | | | | | | | TOTAL REQ'D. | | | | | | | |
|---|----------------|----------------------------|----------------|-------------------|---------------------|-----------------------|----------------------|---------------|------------------------|--------------------------|-------------|-----------------|-----------------|--------------|------------------|---------------------|-------------------|----------------|----------------|-----------|----------------|--------------|------|------|--------------------|----------------------------|---------------------|---------------|--|
| Date Received | 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 Surveyor | Walker Field | School Dist. #51 | Irrigation District | Drainage District | Water District | Sewer District | U.S. West | Public Service | | GVRP | CDOT | Corps of Engineers | Colorado Geological Survey | U.S. Postal Service | Parishoo WWTF | |
| 3-1-95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2078 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS 95-42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ● 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 | |
| ● 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 | |
| ● 11"x17" 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 | | | | | | | | | | | | | | | | | | | | | | |
| ○ 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 | 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 | 1 | | |
| ● Final Plat ✓ | IX-15 | 1 | 2 | 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 | | | | 1 | | | |
| ○ Cover Sheet | IX-11 | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ○ Grading & Stormwater Mgmt Plan | IX-17 | 1 | 2 | | | | | | | | | | | | | | 1 | | | | | | | 1 | 1 | | | | |
| ○ Storm Drainage Plan and Profile | IX-30 | 1 | 2 | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | | | | |

NOTES: 1) An asterisk in the item description column indicates that a form is supplied by the City.
 2) Required submittal items and distribution are indicated by filled in circles, some of which may be filled in during the pre-application conference. Additional items or copies may be subsequently requested in the review process.
 3) Each submitted item must be labeled, named, or otherwise identified as described above in the description column.



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

Receipt _____
 Date _____
 Rec'd By _____
 File No. _____

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 | <input type="checkbox"/> Minor <input type="checkbox"/> Major <input checked="" type="checkbox"/> Resub | 6.5 acres | SW1/4 Sec.4 Township 1S Range 1W of Ute Meridian | H.O. | Vacant |
| <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"/> Text Amendment | | | | | |
| <input type="checkbox"/> Special Use | | | | | |
| <input type="checkbox"/> Vacation | | | | | <input type="checkbox"/> Right-of-Way <input type="checkbox"/> Easement |
| <input type="checkbox"/> PROPERTY OWNER | | <input type="checkbox"/> DEVELOPER | | <input type="checkbox"/> REPRESENTATIVE | |

| | | |
|---------------------------------|---------------------------------|-----------------------------------|
| <u>Gertrude Fisher Smith</u> | <u>Richard Scariano</u> | <u>Thompson-Langford Corp.</u> |
| Name | Name | Name |
| <u>667 25 Road</u> | <u>1048 Independence Ave.</u> | <u>529 25 1/2 Road, Ste. B210</u> |
| Address | Address | Address |
| <u>Grand Junction, CO 81505</u> | <u>Grand Junction, CO 81505</u> | <u>Grand Junction, CO 81505</u> |
| City/State/Zip | City/State/Zip | City/State/Zip |
| <u>(303) 242-4709</u> | <u>(303) 245-7571</u> | <u>(303) 243-6067</u> |
| Business Phone No. | Business Phone No. | Business Phone No. |

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

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the review comments. We recognize that we or our representative(s) must be present at all 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.

| | |
|--|-----------------------|
| <u>Richard Scariano</u> | <u>March 1, 1995</u> |
| Signature of Person Completing Application | Date |
| <u>Gertrude Smith</u> | <u>March 16, 1995</u> |
| Signature of Property Owner | Date |

Mark Additional Sheets if Necessary

Minor Subdivision
General Project Report

**North Mall Subdivision
a Resubdivision of Lot 2
FISHER SUBDIVISION**

February 1995

Prepared for:

**Richard Scariano
Omega Realty
1048 Independence Ave., Suite A-201
Grand Junction, CO 81505**

Prepared by:

**THOMPSON-LANGFORD CORPORATION
529 251/2 RD., SUITE B-210
Grand Junction, CO 81505
PH. 243-6067**

Job. No. 0183-011

NORTH MALL SUBDIVISION

A. Project Description:

1. Location:

Fisher Subdivision is located in the South 1/2 Southwest 1/4, Section 4, Township 1 South, Range 1 West of the Ute Meridian. In more local terms, it is located north of and immediately adjacent to F Road as it swings around the north side of the Mall.

2. Acreage: Lot 2 of Fisher Sub. = 6.50 Acres

3. Proposed Use: Within this developing major commercial corridor, the applicant is proposing to subdivide the 6.50 acres of Lot 2 into 5 smaller commercial sites; a density recommended by City Planning.

B. Public Benefit:

Lot 2 of Fisher Subdivision, having been platted in February of 1979, has set vacant for over 16 years. Even during the "boom" years of oil shale development, this site did not sell whereas the other sites on either side of this singularly large lot did sell. Because there is apparently no market for a lot of this size in this area, the owner feels the only way to fill out this existing development is to create parcel sizes that fit the market.

The Present owner is in her mid 70's and has not been able to sell this as a larger parcel. The smaller parcel size will allow a sale at reasonable market value within her lifetime.

The public benefit in seeing this proposal approved is that existing public facilities (roads, water and sewer) will be more fully utilized. The area will be benefited by a further concentration of retail and service businesses in a pre-planned commercial area.

C. Project Compliance, Compatibility, and Impact:

1. Adopted plans and/or policies: Lot 2 of Fisher Subdivision is a part of an approved commercial subdivision. "In-fill" is an oft stated priority

in the developed areas in and around Grand Junction.

2. Land use in the surrounding area: The lots on either side of Lot 2 are already developed into commercial uses. Directly across F Road is the Mall.

3. Site access and traffic patterns: The site, bordering on F Road has excellent access. Traffic in the area usually comes from the downtown area heading west to the main entrance to the Mall. Unlike the Mall, vehicles wanting to enter these sites will not have to wait for oncoming traffic to pass before making their turn. We do not anticipate that the right turn movements into these lots from the normally slower moving right lane will cause any traffic problems.

To serve the five lots we are requesting three entrances as depicted on the attached site plan. This does not seem excessive in that the two commercial tracts to the west share three entrances, whereas the car wash to the east has two alone. The three entrances we are requesting, similar in configuration with the example site plan shown in the Landscape Guidelines for Development in Grand Junction (see attached drawing) will be connected internally by a common access easement much as is depicted on this City exhibit. Each lot will be required to sign an access agreement to ensure a right for traffic flow between accesses. The westerly most access has been aligned directly across from the main entrance to the Mall as suggested by Tom Dixon of City Planning.

4. Availability of utilities:

a) Water: Eight inch potable water lines have been extended to each end of the site terminating at fire hydrants; one at the Sears repair center, and one at the car wash. No line exists along the frontage of this site. To develop this site, the 8-inch main will have to be extended along the project frontage. Extension of this line may be part of the City of Grand Junction's fire upgrade plan. If so, the developer will participate with the City and Ute Water to extend this line. If not, the developer will extend this line at his own expense. Fire hydrants will be placed on this extension at intervals not exceeding 300 feet.

b) Sewer: An 8-inch sewer presently exists near the southwest corner of this site. The developer is proposing to extend a line from an existing manhole on the Sears site to the east as shown on the plans accompanying this submittal.

c) Power: Public Service Company has 3-phase power transformers at each end of the project and would connect between them to serve these five lots.

d) Gas: A 4-inch gas main runs along the north side of F Road/Patterson Road in front of the site.

e) Telephone: Telephone service lines run along the south right-of-way line of F Road/Patterson Road. The line has been extended across the road west of the site to serve the Sears repair center. Adequate facilities also exist in 24 1/2 Road and can be brought in along the back property line of this development.

f) Drainage: The owner wished to make payment of the drainage fee in lieu of providing on-site detention. A drainage report, prepared in accordance with the SIDD Manual, has been included as part of this submittal.

5. Special or unusual demands on utilities: Each of the respective utilities were contacted and made aware of our plans. None expressed any concern about our proposed land use.

6. Effects on public facilities: Being an infill parcel within a recognized commercial developing area, public facilities will be more efficiently utilized by completing the development of this area.

7. Site Soils and geology: According to the Soil Survey, Grand Junction Area, Colorado, prepared by the Soil Conservation Service as Series 1940, No. 19, Issued November 1955. The dominant soils type found on the westerly half of the property is Billings silty clay loam, 0 to 2 percent slopes (Bc). It is probably the most common soil found in the Grand Valley area, commonly referred to as adobe.

The easterly half of the project is said to be dominated by the Ravola very fine sandy loam, 0 to

2 percent slopes (Rf). This is very similar to the Billings loam, but has sand from decomposed sandstone blended into the matrix.

8. Impact of project on site geology and geological hazards: No geological hazards have been identified on this site.

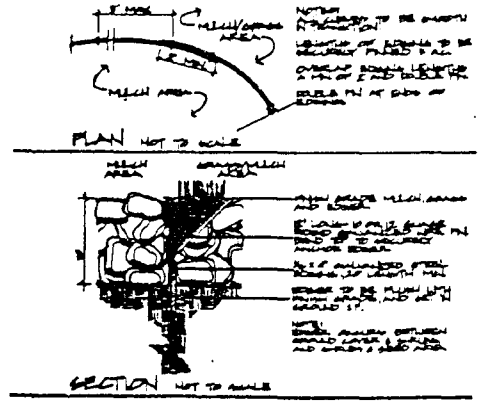
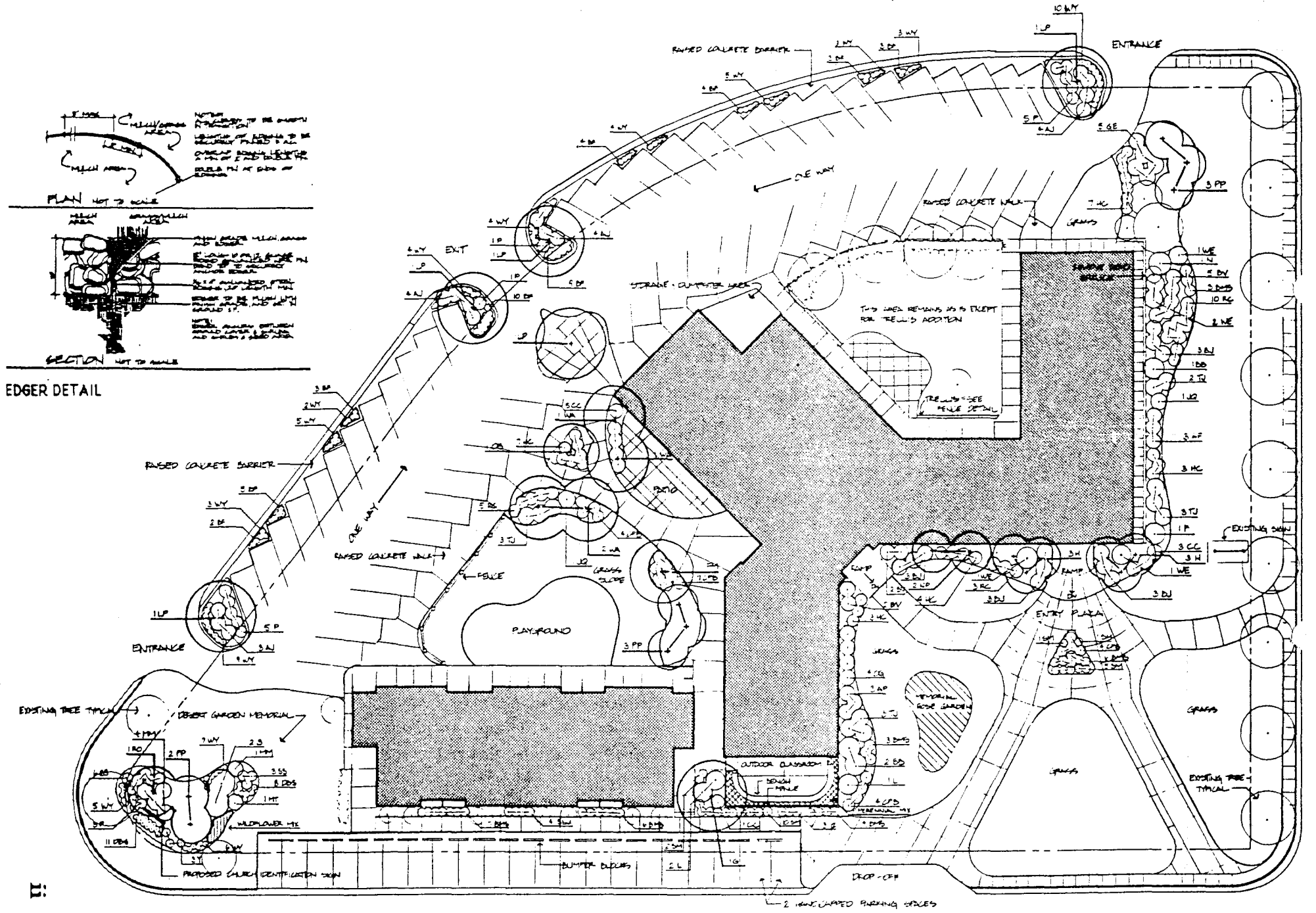
9. Hours of operation: The commercial enterprises planned for this area are anticipated to be similar to that of the surrounding businesses; the Mall, Sears Repair Center, the car wash etc. This should span the hours from 8:00 in the morning to 10:00 in the evening.

10. Signage plans: Since it is unknown at this time just what businesses will locate here, we cannot give you signage plans. Signage will conform to the current standards of the City of Grand Junction.

Should be in the final plat for approval

D. Development Schedule and Phasing:

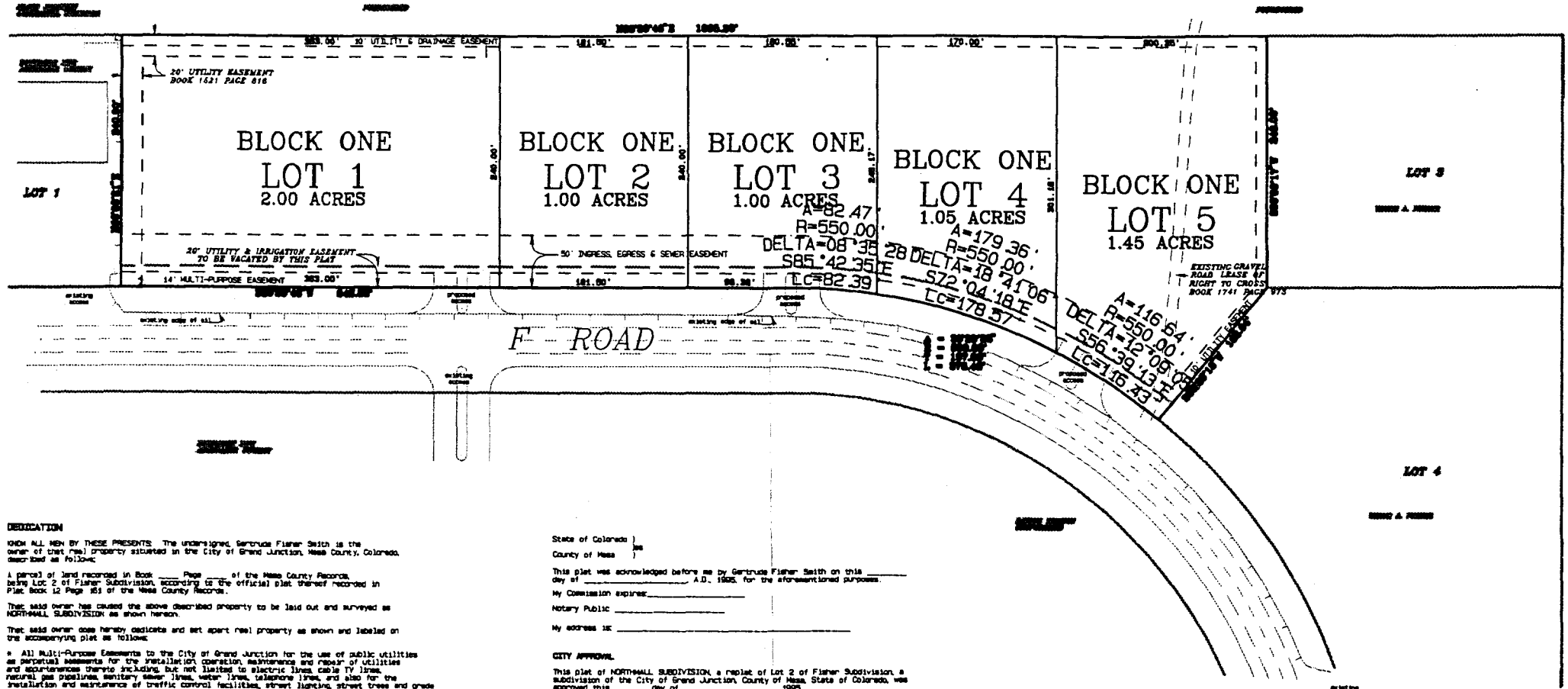
Installation of the utilities needed to service Lot 1 will be scheduled for construction upon approval of the final plat. Installation of the utilities needed to service additional lots will be scheduled for construction as required by the sales of said lots.



EDGER DETAIL

NORTHMALL SUBDIVISION

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



24 1/2 ROAD

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 _____ Page _____ of the Mesa County Records, being Lot 2 of Fisher Subdivision, according to the official plat thereof recorded in Plat Book 12 Page 153 of the Mesa County Records.

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

This 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 therein 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 therein 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/Owners 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 obstruct 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 _____ day of _____, 1995.

Gertrude Fisher Smith _____

State of Colorado)
County of Mesa)

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

My Commission expires _____
Notary Public _____

My address is: _____

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 _____ day of _____, 1995.

City Manager 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 _____ o'clock _____ M., this _____ day of _____, 1995, and is duly recorded in Plat Book No. _____ Page _____ as Reception No. _____

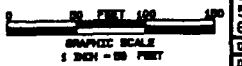
Clerk and Recorder of Mesa County

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 P.L.S. 18480 Date _____

- LEGEND**
- SET 1/2 REBAR N/A/L/M. CAP 1/2" DIA.
 - SET 1/2 REBAR N/A/L/M. CAP 1/2" DIA. IN CONC.
 - FOUND PIN C CAP AS NOTED



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 shurba case set on 1/2 rebar in concrete is N89°39'40"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 8/2 8/4 8/4 THOMPSON & LANGFORD LTD
THOMPSON-LANGFORD CORPORATION
529 25 1/2 ROAD - # B-210
Grand Junction CO 81505 (303) 243-8057

Designed by EBT Checked by GMS Job No.: 0283-011
Drawn by TEPANCOL Date: February 24, 1995 Sheet 1 of 1

Final Drainage Report

**North Mall Subdivision
a Resubdivision of Lot 2
FISHER SUBDIVISION**

February 23, 1995

Prepared for:

**Richard Scariano
Omega Realty
1048 Independence Ave., Suite A-201
Grand Junction, CO 81505**

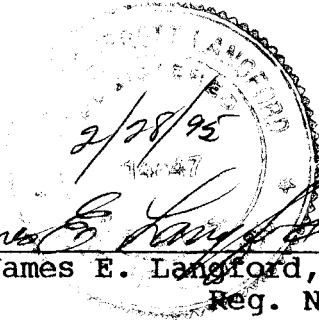
Prepared by:

**THOMPSON-LANGFORD CORPORATION
529 251/2 RD., SUITE B-210
Grand Junction, CO 81505
PH. 243-6067**

Job No. 0183-011

Engineer's Certification

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


James E. Langford
James E. Langford, PE & LS
Reg. No. 14847

Introduction

I. GENERAL LOCATION AND DESCRIPTION:

A. Site and Major Basin Location:

Lot 2 of Fisher Subdivision is located in the South 1/2 of the Southwest 1/4 of Section 4, Township 1 South, Range 1 West of the Ute Meridian. In more local terms, it is located north of and immediately adjacent to F Road as it swings around the north side of the Mall.

B. Site and Major Basin Description:

The major drainage basin extends from the site just north of Mesa Mall to I-70 on the North and 24 1/2 Road to the east. Ranchmans Ditch along F Road borders the basin on the south where Leech Creek adjacent to 24 Road borders the basin on the west. The basin gently slopes to the southwest at between 0 and 2 percent.

II. EXISTING DRAINAGE CONDITIONS:

A. Major Basin:

The major basin drains to the southwest over terrain sloping at less than 2 percent. The north half of the basin has been successfully farmed, but the lower half, even though it is much closer to Ranchmans Ditch and Leech Creek is evidently so flat and poorly drained that attempts at farming have been largely unsuccessful.

B. Site:

The site, like the major basin, drains to the south and west. The site has been recently irrigated as farm land. The site has been graded such that the waste water from irrigation left the site at its' northwest corner and traveled west in a graded ditch to Leech Creek.

III PROPOSED DRAINAGE CONDITIONS:

The applicant does not wish to encumber the sites with individual on-site detention or retention ponds, but instead would like to pay the drainage fee in lieu of making these improvements. It is proposed that each site directly flow their respective stormwater flows to the swale adjacent to F Road/Patterson Road where these combined flows will be carried west to Leech Creek.

A. Changes in Drainage Patterns:

We do not anticipate any changes in the present drainage patterns. Stormwater flows will still be directed from the sites towards the west and Leech Creek. The quantity of flow will be increased because the use of the land will change from cultivated farmland to the impervious surfaces indicative of paved parking lots and building roof tops.

B. Maintenance Issues:

The on-site collection facilities will be the responsibility of the individual site owners.

IV DESIGN CRITERIA AND APPROACH:

A. GENERAL CONSIDERATIONS:

Fisher Subdivision was originally platted in 1979 in Mesa County. City Planning could not find any of the old platting files on the project so it could not be determined whether or not any drainage reports had been prepared for the initial platting effort. Field conditions would indicate that no drainage improvements were installed during the initial platting effort. There is a roadside swale running west along the north side of F Road/Patterson Road heading towards Leech Creek. This appears to be the outfall for the Sears site and the small commercial complex immediately west of Sears.

Constraints to drainage design and implementation for this area center primarily around the natural conditions found throughout the major basin and the fact that the area has developed without a collective drainage plan. Natural conditions such as the tight adobe soils, high water table and the extremely flat slopes have historically made the area difficult to drain.

B. Hydrology:

Stormwater runoff for the 100-year event was quantified using the Rational Method as detailed in Section VI "Hydrology" of the City of Grand Junction's Stormwater Management Manual dated June 1994.

The City of Grand Junction requires that 10% of the lot area be landscaped, and if the parking lot will have over 15 spaces, an additional 5% of the parking area must be landscaped. Based on the assumption that 60% of the impervious area will be parking, this would equate to 3% of the lot area. For the purposes of this report, we have

developed our composite "C" value assuming that 13% of the lot area is to be landscaped.

Historic Landuse area draining to Leech Creek:

Cultivated farmland 6.50 Ac. C=0.28

Developed Landuse area draining to Leech Creek:

Buildings/Parking 5.65 Ac. C=0.95
Landscape requirement 0.85 Ac. C=0.34
Total: 6.5 Ac.

Rational "C" Values:

Values were taken from Appendix "B" of the SWMM. The SCS Billings soil group found in this area is normally classified as being in hydrologic soil group "C". Given the nearly flat existing ground conditions, the high clay content of the site soils, and the high groundwater table, I have taken the hydrologic soil group to be "D".

Composite Developed Condition "C" Value:

5.65 @ 0.95 = 5.37
0.85 @ 0.34 = 0.29
Total 5.66
Composite = 5.66/6.5 = 0.87

Historic Runoff to Leech Creek:

$$Q_h = C_{100d} * I_{100d} * A$$
$$= 0.28 * 3.43 * 6.50 = \underline{6.24 \text{ cfs}}$$

Developed Runoff to Leech Creek:

$$Q_h = C_{100d} * I_{100d} * A$$
$$= 0.87 * 4.95 * 6.50 = \underline{28.00 \text{ cfs}}$$

Payment in Lieu:

$$\text{Payment} = \$10,000(C_{100d} - C_{100h})A^{0.7}$$
$$\text{Payment} = \$10,000(0.87 - 0.28)6.50^{0.7}$$
$$= \underline{\$21,872.14}$$

The applicant proposes that the above fee be divided proportionally on a lot square footage basis, to be paid at

the time each respective lot owner applies for a building clearance.

| | | |
|-------|----------|------------|
| Lot 1 | 2.00 Ac. | \$6,729.89 |
| Lot 2 | 1.00 Ac. | \$3,364.94 |
| Lot 3 | 1.00 Ac. | \$3,364.94 |
| Lot 4 | 1.05 Ac. | \$3,533.19 |
| Lot 5 | 1.45 Ac. | \$4,879.18 |

References

"STORMWATER MANAGEMENT MANUAL (SWMM)", City of Grand Junction,
June 1994

"MESA COUNTY STORM DRAINAGE CRITERIA MANUAL", Mesa County,
Colorado, Final Draft March 1992.

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

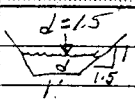
| Time (min) | 2-Year Intensity (in/hr) | 100-Year Intensity (in/hr) | Time (min) | 2-Year Intensity (in/hr) | 100-Year Intensity (in/hr) |
|------------|--------------------------|----------------------------|------------|--------------------------|----------------------------|
| 5 | 1.95 | 4.95 | 33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

Source: Mesa County 1991

PROJECT: _____ JOB NO. _____ CALCULATED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

(THE TABLE BELOW IS AN ADAPTATION OF A WORKSHEET PROVIDED IN THE SCS TR-55)
 THIS TABLE MAY BE USED IN SUBBASIN Tc CALCULATION, OR FOR TRAVEL TIME OF SUBBASIN RUNOFF THROUGH A LOWER SUBBASIN REACH (Tr).
 USE ONLY CHANNEL FLOW FOR Tr CALCULATIONS.

| | | | | | | |
|---------------------------|--|--------------------|---|-------------------------|----------|--|
| REACH | AREA IDENTIFIER | | Historic | Developed | | |
| | SEGMENT IDENTIFICATION | | | | | |
| | Tc OR Tr THROUGH BASIN REACH | | | | | |
| OVERLAND FLOW | SURFACE DESCRIPTION (TABLE 'E-1') | | Comp. T.I.-NR | Asph/Conc. | | |
| | 'N' VALUE (TABLE 'E-1') | | 0.09 | 0.05 | | |
| | FLOW LENGTH, L (TOTAL ≤ 300 FT.) (ft.) | | 300 | 300 | | |
| | LAND SLOPE, S (ft./ft.) | | 0.9% | 0.9% | | |
| | To ₂ = 0.50 (NL) ² /S ⁴ 0.50(2.12) (min.) | | 1.06 min | 0.50(1.33) | 0.66 min | |
| | To ₁₀₀ = 0.30 (NL) ² /S ⁴ 0.30(2.12) (min.) | | 0.64 min | 0.30(1.33) | 0.40 | |
| SHALLOW CONCENTRATED FLOW | SURFACE DESCRIPTION (FIGURE 'E-3') | | | | | |
| | FLOW LENGTH, L (ft.) | | N/A | N/A | | |
| | FLOW SLOPE, S (ft./ft.) | | N/A | N/A | | |
| | FLOW VELOCITY, V (FIGURE 'E-3') (fps.) | | | | | |
| | TRAVEL TIME = L/(60V) (min.) | | | | | |
| CHANNEL FLOW | CROSS-SECTIONAL FLOW AREA, a (ft. ²) | |  | "Hacksacks" | | |
| | WETTED PERIMETER, Pw (ft.) | | | | | |
| | HYDRAULIC RADIUS, r = a/Pw (ft.) | | | | | |
| | CHANNEL SLOPE, S (ft./ft.) | | 0.9% | 0.9% | | |
| | MANNING'S COEFFICIENT, n (APPENDIX F) | | 0.10 | 0.028 | | |
| | V = 1.49r ⁴⁹ S ⁴⁹ /n (fps.) | | 1.17 fps | 4.20 fps | | |
| | ASSUMED VELOCITY (fps.) | | n/a | n/a | | |
| | FLOW LENGTH, L (ft.) | | 900' | 900' | | |
| | TRAVEL TIME L/(60V) (min.) | | 12.8 min | 3.6 min | | |
| | Tc&Tr | Tc = To + Ts + Tch | 2 YEAR (min.) | | | |
| Tr = Tch | | 100 YEAR (min.) | Σ = 13.4 min | Σ = 4.0 ∴ Use min 5 min | | |
| Tt | Tt = 0.6Tc or | 2 YEAR (min.) | | | | |
| | FROM FIGURE 'E-4' | 100 YEAR (min.) | | | | |

TRAVEL TIME WORKSHEET: TR-55 METHOD

TABLE "E-3"

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: 0183-011h

Comment: Roadside swale runoff velocity (historic)

Solve For Discharge

Given Input Data:

| | |
|-------------------|--------------|
| Bottom Width..... | 1.00 ft |
| Left Side Slope.. | 1.50:1 (H:V) |
| Right Side Slope. | 1.50:1 (H:V) |
| Manning's n..... | 0.100 |
| Channel Slope.... | 0.0090 ft/ft |
| Depth..... | 1.50 ft |

Computed Results:

| | |
|-------------------|----------------------------|
| Discharge..... | 5.73 cfs |
| Velocity..... | 1.17 fps |
| Flow Area..... | 4.88 sf |
| Flow Top Width... | 5.50 ft |
| Wetted Perimeter. | 6.41 ft |
| Critical Depth... | 0.71 ft |
| Critical Slope... | 0.2228 ft/ft |
| Froude Number.... | 0.22 (flow is Subcritical) |

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: 0183-011d

Comment: Roadside swale runoff velocity (developed)

Solve For Discharge

Given Input Data:

| | |
|-------------------|--------------|
| Bottom Width..... | 1.00 ft |
| Left Side Slope.. | 1.50:1 (H:V) |
| Right Side Slope. | 1.50:1 (H:V) |
| Manning's n..... | 0.028 |
| Channel Slope.... | 0.0090 ft/ft |
| Depth..... | 1.50 ft |

Computed Results:

| | |
|-------------------|----------------------------|
| Discharge..... | 20.45 cfs |
| Velocity..... | 4.20 fps |
| Flow Area..... | 4.88 sf |
| Flow Top Width... | 5.50 ft |
| Wetted Perimeter. | 6.41 ft |
| Critical Depth... | 1.34 ft |
| Critical Slope... | 0.0150 ft/ft |
| Froude Number.... | 0.79 (flow is Subcritical) |

REPRODUCED FROM TABLE 2, LECTURE 2, DAY 2, ACOE 1990

| SURFACE | N VALUE | SOURCE |
|--|--------------------------|--------------------------------|
| ASPHALT/CONCRETE | 0.05 - 0.15 | Developed |
| BARE PACKED SOIL FREE OF STONE | 0.10 | C |
| FALLOW - NO RESIDUE | 0.008 - 0.012 | B |
| CONVENTIONAL TILLAGE - NO RESIDUE | 0.06 - 0.12 | Use 0.07 ^B Historic |
| CONVENTIONAL TILLAGE - WITH RESIDUE | 0.16 - 0.22 | B |
| CHISEL PLOW - NO RESIDUE | 0.06 - 0.12 | B |
| CHISEL PLOW - WITH RESIDUE | 0.10 - 0.16 | B |
| FALL DISKING - WITH RESIDUE | 0.30 - 0.50 | B |
| NO TILL - NO RESIDUE | 0.04 - 0.10 | B |
| NO TILL (20-40 PERCENT RESIDUE COVER) | 0.07 - 0.17 | B |
| NO TILL (60-100 PERCENT RESIDUE COVER) | 0.17 - 0.47 | B |
| SPARSE RANGELAND WITH DEBRIS: | | |
| 0 PERCENT COVER | 0.09 - 0.34 | B |
| 20 PERCENT COVER | 0.05 - 0.25 | B |
| SPARSE VEGETATION | 0.053 - 0.13 | F |
| SHORT GRASS PRAIRIE | 0.10 - 0.20 | F |
| POOR GRASS COVER ON MODERATELY ROUGH BARE SURFACE | 0.30 | C |
| LIGHT TURF | 0.20 | A |
| AVERAGE GRASS COVER | 0.4 | C |
| DENSE TURF | 0.17 - 0.80 | A, C, E, F |
| DENSE GRASS | 0.17 - 0.30 | D |
| BERMUDA GRASS | 0.30 - 0.48 | D |
| DENSE SHRUBBERY AND FOREST LITTER | 0.4 | A |

- A) CRAWFORD AND LINSLEY (1966).
- B) ENGMAN (1986).
- C) HATHAWAY (1945).
- D) PALMER (1946).
- E) RAGAN AND DURU (1972).
- F) WOOLHISER (1975).

"N" values provided in this table pertain to both the SCS TR-55 "To" and FHWA 1984 HEC-12 "To" methods

OVERLAND FLOW RESISTANCE FACTOR (N)

TABLE "E-1"

NOTE: THIS IS A REPRODUCTION OF TABLE I, APPENDIX A,
"DESIGN CHARTS FOR OPEN CHANNEL FLOW", (HDS #3)

| | Manning's n range ¹ | | Manning's n range ¹ |
|--|-----------------------------------|--|-----------------------------------|
| I. Closed conduits: | | IV. Highway channels and swales with maintained vegetation^{1,2} (values shown are for velocities of 2 and 6 f.p.s.): | |
| A. Concrete pipe..... | 0.011-0.013 | A. Depth of flow up to 0.7 foot: | |
| B. Corrugated-metal pipe or pipe-arch: | | 1. Bermudagrass, Kentucky bluegrass, buffalograss: | 0.07-0.043 |
| 1. 2 1/4 by 1/4-in. corrugation (riveted pipe): ³ | | a. Mowed to 2 inches..... | 0.09-0.05 |
| a. Plain or fully coated..... | 0.024 | b. Length 4-8 inches..... | 0.18-0.09 |
| b. Paved invert (range values are for 25 and 50 percent of circumference paved): | | 2. Good stand, any grass: | 0.30-0.15 |
| (1) Flow full depth..... | 0.021-0.018 | a. Length about 12 inches..... | 0.14-0.08 |
| (2) Flow 0.8 depth..... | 0.021-0.016 | b. Length about 24 inches..... | 0.25-0.13 |
| (3) Flow 0.6 depth..... | 0.019-0.013 | 3. Fair stand, any grass: | |
| 2. 6 by 2-in. corrugation (field bolted)..... | 0.03 | a. Length about 12 inches..... | 0.14-0.08 |
| C. Vitrified clay pipe..... | 0.012-0.014 | b. Length about 24 inches..... | 0.25-0.13 |
| D. Cast-iron pipe, uncoated..... | 0.013 | B. Depth of flow 0.7-1.5 feet: | |
| E. Steel pipe..... | 0.009-0.011 | 1. Bermudagrass, Kentucky bluegrass, buffalograss: | 0.05-0.035 |
| F. Brick..... | 0.014-0.017 | a. Mowed to 2 inches..... | 0.06-0.04 |
| G. Monolithic concrete: | | b. Length 4 to 6 inches..... | 0.12-0.07 |
| 1. Wood forms, rough..... | 0.015-0.017 | 2. Good stand, any grass: | 0.20-0.10 |
| 2. Wood forms, smooth..... | 0.012-0.014 | a. Length about 12 inches..... | 0.10-0.06 |
| 3. Steel forms..... | 0.012-0.013 | b. Length about 24 inches..... | 0.17-0.09 |
| H. Cemented rubble masonry walls: | | V. Street and expressway gutters: | |
| 1. Concrete floor and top..... | 0.017-0.022 | A. Concrete gutter, troweled finish..... | 0.012 |
| 2. Natural floor..... | 0.019-0.023 | B. Asphalt pavement: | |
| I. Laminated treated wood..... | 0.015-0.017 | 1. Smooth texture..... | 0.013 |
| J. Vitrified clay liner plates..... | 0.015 | 2. Rough texture..... | 0.016 |
| II. Open channels, lined⁴ (straight alignment):⁴ | | C. Concrete gutter with asphalt pavement: | 0.013 |
| A. Concrete, with surfaces as indicated: | | 1. Smooth..... | 0.013 |
| 1. Formed, no finish..... | 0.013-0.017 | 2. Rough..... | 0.015 |
| 2. Trowel finish..... | 0.012-0.014 | D. Concrete pavement: | |
| 3. Float finish..... | 0.013-0.016 | 1. Float finish..... | 0.014 |
| 4. Float finish, some gravel on bottom..... | 0.015-0.017 | 2. Broom finish..... | 0.016 |
| 5. Gunite, good section..... | 0.016-0.019 | E. For gutters with small slope, where sediment may accu- mulate, increase above values of n by..... | 0.002 |
| 6. Gunite, wavy section..... | 0.018-0.022 | VI. Natural stream channels:¹ | |
| B. Concrete, bottom float finished, sides as indicated: | | A. Minor streams ⁵ (surface width at flood stage less than 100 ft.): | |
| 1. Dressed stone in mortar..... | 0.015-0.017 | 1. Fairly regular section: | |
| 2. Random stone in mortar..... | 0.017-0.020 | a. Some grass and weeds, little or no brush..... | 0.030-0.035 |
| 3. Cement rubble masonry..... | 0.020-0.025 | b. Dense growth of weeds, depth of flow materially greater than weed height..... | 0.035-0.05 |
| 4. Cement rubble masonry, plastered..... | 0.016-0.020 | c. Some weeds, light brush on banks..... | 0.035-0.05 |
| 5. Dry rubble (riprap)..... | 0.020-0.030 | d. Some weeds, heavy brush on banks..... | 0.05-0.07 |
| C. Gravel bottom, sides as indicated: | | e. Some weeds, dense willows on banks..... | 0.06-0.08 |
| 1. Formed concrete..... | 0.017-0.020 | f. For trees within channel, with branches submerged at high stage, increase all above values by..... | 0.01-0.02 |
| 2. Random stone in mortar..... | 0.020-0.023 | 2. Irregular sections, with pools, slight channel meander; increase values given in 1a-e about..... | 0.01-0.02 |
| 3. Dry rubble (riprap)..... | 0.023-0.033 | 3. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks sub- merged at high stage: | |
| D. Brick..... | 0.014-0.017 | a. Bottom of gravel, cobbles, and few boulders..... | 0.04-0.05 |
| E. Asphalt: | | b. Bottom of cobbles, with large boulders..... | 0.05-0.07 |
| 1. Smooth..... | 0.013 | B. Flood plains (adjacent to natural streams): | |
| 2. Rough..... | 0.016 | 1. Pasture, no brush: | |
| F. Wood, planed, clean..... | 0.011-0.013 | a. Short grass..... | 0.030-0.035 |
| G. Concrete-lined excavated rock: | | b. High grass..... | 0.035-0.05 |
| 1. Good section..... | 0.017-0.020 | 2. Cultivated areas: | |
| 2. Irregular section..... | 0.022-0.027 | a. No crop..... | 0.03-0.04 |
| III. Open channels, excavated⁴ (straight alignment,⁴ natural lining): | | b. Mature row crops..... | 0.035-0.045 |
| A. Earth, uniform section: | | c. Mature field crops..... | 0.04-0.05 |
| 1. Clean, recently completed..... | 0.016-0.018 | 3. Heavy weeds, scattered brush..... | 0.05-0.07 |
| 2. Clean, after weathering..... | 0.018-0.020 | 4. Light brush and trees: ¹⁰ | |
| 3. With short grass, few weeds..... | 0.022-0.027 | a. Winter..... | 0.05-0.06 |
| 4. In gravelly soil, uniform section, clean..... | 0.022-0.025 | b. Summer..... | 0.06-0.08 |
| B. Earth, fairly uniform section: | | 5. Medium to dense brush: ¹⁰ | |
| 1. No vegetation..... | 0.022-0.025 | a. Winter..... | 0.07-0.11 |
| 2. Grass, some weeds..... | 0.025-0.030 | b. Summer..... | 0.10-0.16 |
| 3. Dense weeds or aquatic plants in deep channels..... | 0.030-0.035 | 6. Dense willows, summer, not bent over by current..... | 0.15-0.20 |
| 4. Sides clean, gravel bottom..... | 0.025-0.030 | 7. Cleared land with tree stumps, 100-150 per acre: | |
| 5. Sides clean, cobble bottom..... | 0.030-0.040 | a. No sprouts..... | 0.04-0.05 |
| C. Dragline excavated or dredged: | | b. With heavy growth of sprouts..... | 0.06-0.08 |
| 1. No vegetation..... | 0.028-0.033 | 8. Heavy stand of timber, a few down trees, little under- growth: | |
| 2. Light brush on banks..... | 0.035-0.050 | a. Flood depth below branches..... | 0.10-0.12 |
| D. Rock: | | b. Flood depth reaches branches..... | 0.12-0.16 |
| 1. Based on design section..... | 0.035 | C. Major streams (surface width at flood stage more than 100 ft.): Roughness coefficient is usually less than for minor streams of similar description on account of less effective resistance offered by irregular banks or vege- tation on banks. Values of n may be somewhat re- duced. Follow recommendation in publication cited. ⁸ If possible. The value of n for larger streams of most regular section, with no boulders or brush, may be in the range of..... | 0.028-0.033 |
| 2. Based on actual mean section: | | | |
| a. Smooth and uniform..... | 0.035-0.040 | | |
| b. Jagged and irregular..... | 0.040-0.045 | | |
| E. Channels not maintained, weeds and brush uncut: | | | |
| 1. Dense weeds, high as flow depth..... | 0.08-0.12 | | |
| 2. Clean bottom, brush on sides..... | 0.05-0.08 | | |
| 3. Clean bottom, brush on sides, highest stage of flow..... | 0.07-0.11 | | |
| 4. Dense brush, high stage..... | 0.10-0.14 | | |

TYPICAL MANNING "n" VALUES

TABLE "F-1a"

| LAND USE OR SURFACE CHARACTERISTICS | SCS HYDROLOGIC SOIL GROUP (SEE APPENDIX "C" FOR DESCRIPTIONS) | | | | | | | | | | | |
|--|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|------------------------|------------------------|
| | A | | | B | | | C | | | D | | |
| | 0-2% | 2-6% | 6%+ | 0-2% | 2-6% | 6%+ | 0-2% | 2-6% | 6%+ | 0-2% | 2-6% | 6%+ |
| UNDEVELOPED AREAS | | | | | | | | | | | | |
| Bare ground | 10 - 20 14 - 24 | 16 - 26 22 - 32 | 25 - 35 30 - 40 | 14 - 22 20 - 28 | 22 - 30 28 - 36 | 30 - 38 37 - 45 | 20 - 28 26 - 34 | 28 - 36 35 - 43 | 36 - 44 40 - 48 | 24 - 32 30 - 38 | 30 - 38 40 - 48 | 40 - 48 50 - 58 |
| Cultivated/Agricultural | .08 - .18 14 - 24 | .13 - .23 18 - 28 | .16 - .26 22 - 32 | .11 - .19 16 - 24 | .15 - .23 21 - 29 | .21 - .29 28 - 36 | .14 - .22 20 - 28 | .19 - .27 25 - 33 | .26 - .34 34 - 42 | .18 - .26 24 - 32 | .23 - .31 29 - 37 | .31 - .39 41 - 49 |
| Pasture | .12 - .22 15 - 25 | .20 - .30 25 - 35 | .30 - .40 37 - 47 | .18 - .26 23 - 31 | .28 - .36 34 - 42 | .37 - .45 45 - 53 | .24 - .32 30 - 38 | .34 - .42 42 - 50 | .44 - .52 52 - 60 | .30 - .38 37 - 45 | .40 - .48 50 - 58 | .50 - .58 62 - 70 |
| Meadow | .10 - .20 14 - 24 | .16 - .26 22 - 32 | .25 - .35 30 - 40 | .14 - .22 20 - 28 | .22 - .30 28 - 36 | .30 - .38 37 - 45 | .20 - .28 26 - 34 | .28 - .36 35 - 43 | .36 - 44 44 - 52 | 24 - 32 30 - 38 | 30 - 38 40 - 48 | 40 - 48 50 - 58 |
| Forest | .05 - .15 .08 - .18 | .08 - .18 .11 - .21 | .11 - .21 .14 - .24 | .08 - .16 .10 - .18 | .11 - .19 .14 - .22 | .14 - .22 .18 - .26 | .10 - .18 .12 - .20 | .13 - .21 .16 - .24 | .16 - .24 .20 - .28 | .12 - .20 .15 - .23 | .16 - .24 .20 - .28 | .20 - .28 .25 - .33 |
| RESIDENTIAL AREAS | | | | | | | | | | | | |
| 1/8 acre per unit | 40 - 50 48 - 58 | 43 - 53 52 - 62 | 46 - 56 55 - 65 | 42 - 50 50 - 58 | 45 - 53 54 - 62 | 50 - 58 59 - 67 | 45 - 53 53 - 61 | 48 - 56 57 - 65 | 53 - 61 64 - 72 | 48 - 56 56 - 64 | 51 - 59 60 - 68 | 57 - 65 69 - 77 |
| 1/4 acre per unit | 27 - 37 35 - 45 | 31 - 41 39 - 49 | 34 - 44 42 - 52 | 29 - 37 38 - 46 | 34 - 42 42 - 50 | 38 - 46 47 - 55 | 32 - 40 41 - 49 | 36 - 44 45 - 53 | 41 - 49 52 - 60 | 35 - 43 43 - 51 | 39 - 47 47 - 55 | 45 - 53 57 - 65 |
| 1/3 acre per unit | 22 - 32 31 - 41 | 26 - 36 35 - 45 | 29 - 39 38 - 48 | 25 - 33 33 - 41 | 29 - 37 38 - 46 | 33 - 41 42 - 50 | 28 - 36 36 - 44 | 32 - 40 41 - 49 | 37 - 45 48 - 56 | 31 - 39 39 - 47 | 35 - 43 43 - 51 | 42 - 50 53 - 61 |
| 1/2 acre per unit | 16 - 26 25 - 35 | 20 - 30 29 - 39 | 24 - 34 32 - 42 | 19 - 27 28 - 36 | 23 - 31 32 - 40 | 28 - 36 36 - 44 | 22 - 30 31 - 39 | 27 - 35 35 - 43 | 32 - 40 42 - 50 | 26 - 34 34 - 42 | 30 - 38 38 - 46 | 37 - 45 48 - 56 |
| 1 acre per unit | 14 - 24 22 - 32 | 19 - 29 26 - 36 | 22 - 32 29 - 39 | 17 - 25 24 - 32 | 21 - 29 28 - 36 | 26 - 34 34 - 42 | 20 - 28 28 - 36 | 25 - 33 32 - 40 | 31 - 39 40 - 48 | 24 - 32 31 - 39 | 29 - 37 35 - 43 | 35 - 43 46 - 54 |
| MISC. SURFACES | | | | | | | | | | | | |
| Pavement and roofs | .93 .95 | .94 .96 | .95 .97 | .93 .95 | .94 .96 | .95 .97 | .93 .95 | .94 .96 | .95 .97 | .93 .95 | .94 .96 | .95 .97 |
| Traffic areas (soil and gravel) | 55 - 65 65 - 70 | 60 - 70 70 - 75 | 64 - 74 74 - 79 | 60 - 68 68 - 76 | 64 - 72 72 - 80 | 67 - 75 75 - 83 | 64 - 72 72 - 80 | 67 - 75 75 - 83 | 69 - 77 77 - 85 | 72 - 80 79 - 87 | 75 - 83 82 - 90 | 77 - 85 84 - 92 |
| Green landscaping (lawns, parks) | .10 - .20 14 - 24 | .16 - .26 22 - 32 | .25 - .35 30 - 40 | .14 - .22 20 - 28 | .22 - .30 28 - 36 | .30 - .38 37 - 45 | .20 - .28 26 - 34 | .28 - .36 35 - 43 | .36 - 44 42 - 52 | .24 - 32 30 - 38 | .30 - 38 40 - 48 | .40 - 48 50 - 58 |
| Non-green and gravel landscaping | .30 - .40 34 - 44 | .36 - .46 42 - 52 | .45 - .55 50 - 60 | .45 - .55 50 - 60 | .42 - .50 48 - 56 | .50 - .58 57 - 65 | .40 - .48 46 - 54 | .48 - .56 55 - 63 | .56 - 64 64 - 72 | .44 - 52 50 - 58 | .50 - 58 60 - 68 | .60 - 68 70 - 78 |
| Cemeteries, playgrounds | .20 - .30 24 - 34 | .26 - .36 32 - 42 | .35 - .45 40 - 50 | .35 - .45 40 - 50 | .32 - .40 38 - 46 | .40 - .48 47 - 55 | .30 - .38 36 - 44 | .38 - 44 45 - 53 | .46 - 54 54 - 62 | .34 - 42 40 - 48 | .40 - 48 50 - 58 | .50 - 58 60 - 68 |
| <p>NOTES: 1. Values above and below pertain to the 2-year and 100-year storms, respectively. 2. The range of values provided allows for engineering judgement of site conditions such as basic shape, homogeneity of surface type, surface depression storage, and storm duration. In general, during shorter duration storms ($T_c \leq 10$ minutes), infiltration capacity is higher, allowing use of a "C" value in the low range. Conversely, for longer duration storms ($T_c > 30$ minutes), use a "C" value in the higher range. 3. For residential development at less than 1/8 acre per unit or greater than 1 acre per unit, and also for commercial and industrial areas, use values under MISC SURFACES to estimate "C" value ranges for use.</p> | | | | | | | | | | | | |
| <p>RATIONAL METHOD RUNOFF COEFFICIENTS (Modified from Table 4, UC-Davis, which appears to be a modification of work done by Rawls)</p> | | | | | | | | | | <p>TABLE "B-1"</p> | | |

United States
Department of
Agriculture

Soil
Conservation
Service

Engineering
Division

Technical
Release 55

June 1986

Urban Hydrology for Small Watersheds



Appendix A: Hydrologic soil groups

Soils are classified into hydrologic soil groups (HSG's) to indicate the minimum rate of infiltration obtained for bare soil after prolonged wetting. The HSG's, which are A, B, C, and D, are one element used in determining runoff curve numbers (see chapter 2). For the convenience of TR-55 users, exhibit A-1 lists the HSG classification of United States soils.

The infiltration rate is the rate at which water enters the soil at the soil surface. It is controlled by surface conditions. HSG also indicates the transmission rate—the rate at which the water moves within the soil. This rate is controlled by the soil profile. Approximate numerical ranges for transmission rates shown in the HSG definitions were first published by Musgrave (USDA 1955). The four groups are defined by SCS soil scientists as follows:

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravels and have a high rate of water transmission (greater than 0.30 in/hr).

Group B soils have moderate infiltration rates when thoroughly wetted and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission (0.15-0.30 in/hr).

Group C soils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. These soils have a low rate of water transmission (0.05-0.15 in/hr).

Group D soils have high runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission (0-0.05 in/hr).

In exhibit A-1, some of the listed soils have an added modifier; for example, "Abrazo, gravelly." This refers to a gravelly phase of the Abrazo series that is found in SCS soil map legends.

Disturbed soil profiles

As a result of urbanization, the soil profile may be considerably altered and the listed group classification may no longer apply. In these circumstances, use the following to determine HSG according to the texture of the new surface soil, provided that significant compaction has not occurred (Brakensiek and Rawls 1983):

| HSG | Soil textures |
|-----|---|
| A | Sand, loamy sand, or sandy loam |
| B | Silt loam or loam |
| C | Sandy clay loam |
| D | Clay loam, silty clay loam, sandy clay, silty clay, or clay |

Drainage and group D soils

Some soils in the list are in group D because of a high water table that creates a drainage problem. Once these soils are effectively drained, they are placed in a different group. For example, Ackerman soil is classified as A/D. This indicates that the drained Ackerman soil is in group A and the undrained soil is in group D.

Exhibit A-1, continued: Hydrologic soil groups for United States soils

| | | | | | | | | | | | | | |
|------------------|-----|--|-------------------|-----|--|--------------------|-----|--|-----------------|-----|--|--------------------|-----|
| BELMONT | B | | BERTRAM | B | | BILLINGS. | B | | BLACKNOLL | C | | BLUE LAKE | A |
| BELMORE | B | | BERTRAND | B | | MODERATELY SLOW | B | | BLACKOAR | B/D | | BLUE STAR | B |
| BELPRE | C | | BERVILLE | B/D | | PERM | B/D | | BLACKPIPE | C | | BLUEBELL | C |
| BELSAC | B | | BERVOLF | B | | BILLYCREEK | B | | BLACKPRINCE | C | | BLUECHIEF | C |
| BELTED | D | | BERYL | B | | BILLYHAM | D | | BLACKPOCK | D | | BLUECREEK | D |
| BELTON | C | | BERZATIC | D | | BILTMORE | D | | BLACKSAN | A | | BLUEDOME | C |
| BELTRAMI | B | | BESEMAN | A/D | | BIMMER | A/D | | BLACKSPAR | D | | BLUEFLAT | C |
| BELTSVILLE | C | | BESHERM | C | | PINCO | C | | BLACKSPOT | D | | BLUEGROVE | C |
| BELUGA | D | | BESNER | B | | BINDLE | B | | BLACKSTON | P | | BLUEGULCH | B |
| BELUGA, DRAINED. | C | | BESSEMER | C | | BINFORD | B | | BLACKTHORN | B | | BLUEHILL | C |
| SLOPING | C | | BESSIE | D | | BINGER | D | | BLACKTOP | B | | BLUEHON | C |
| BELVOIR | C | | BESTROM | C | | BINGHAM | C | | BLACKWATER | B | | BLUEJOINT | B |
| BELZAR | C | | BETHANY | C | | BINGHAMPTON | B | | BLACKWELL | B | | BLUENOSE | A |
| BEMIDJI | A | | BETHEL | B | | BINGHAMVILLE | B | | BLADEN | D | | BLUEPOINT | B |
| BEN LOMOND | B | | BETHERA | D | | BINNA | B | | BLAG | B | | BLUERIM | C |
| BENCHLEY | C | | BETHE SDA | C | | BINNSVILLE | C | | BLAGO | D | | BLUESLIDE | D |
| DENCLARE | C | | BETHLEHEM | B | | BINS | B | | BLAINE | B | | BLUESPRIN | C |
| BENCO | B | | BETTS | A | | BINTON | A | | BLAIR | C | | BLUESTONE | C |
| BENDER | B | | BETONNIE | B | | BINTON, RECLAIMED | B | | BLAIRTON | B | | BLUEWING | A |
| BENDIRE | C | | BETHA | C | | BIOYA | C | | BLAKABIN | B | | BLUFF | D |
| BENEVOLA | C | | BETTERAVIA | C | | BIPPUS | C | | BLAKE | B | | BLUFFDALE | C |
| BENEWAH | D | | BETTS | B | | BIRCHBAY | B | | BLAKELAND | C | | BLUFFTON | C/D |
| BENFIELD | C | | BEULAH | B | | BIRCHFIELD | B | | BLAKENEY | D | | BLUFORD | C |
| BENGAL | C | | BEVENY | A | | BIRCHWOOD | A | | BLAKEWELL | C | | BLUM | C |
| BENGE | B | | BEVERIDGE | D | | BIRDOS | B | | BLALOCK | B | | BLV | B |
| BENHAM | B | | BEVERLY | B | | BIRDS | B | | BLAMER | C/D | | BLYBURG | B |
| BENIH | D | | BEVERLY, GRAVELLY | A | | BIRDSALL | A | | BLANCA | D | | BLYTHE | D |
| BENITO | D | | BEW | C | | BIRDSBORD | C | | BLANCHARD | F | | BOARDMAN | D |
| BENJAMIN | D | | BEWLEYVILLE | D | | BIRDSLEY | D | | BLANCHE | D | | BOARDTREE | C |
| BENKLIN | C | | BEXAR | D | | BIRDSVIE | D | | BLANCHESTER | A | | BOASH | D |
| BENMAN | C | | BEZO | D | | BIRKBECK | D | | BLANCOT | B | | BOAZ | D |
| BENNDALE | B | | BEZZANT | B | | BIRMINGHAM | B | | BLAND | B | | BOBBITT | C |
| BENNINGTON | C | | BIBB | C | | BIRNEY | C | | BLANDING | B | | BOBBILLO | C |
| BENRIDGE | B | | BIBLESPRINGS | B | | BIROME | B | | BLANEY | C | | BOBNBOB | A |
| BENSLEY | B | | BICE | B | | BISBEE | B | | BLANKET | A | | BOBS | D |
| BENSON | D | | BICKERDYKE | D | | BISCARO | D | | BLANTON | D | | BOBTAIL | C |
| BENTEEN | C | | BICKETT | D | | BISCAY | D | | BLANTON, | B/D | | BOBTOWN | B |
| BENVY | B | | BICKLETON | B | | BISGANI, | B | | MODERATELY WET | B | | BOCA | B/D |
| BENZ | D | | BICKMORE | C | | MODERATELY WET | C | | BLANYON | C | | BOCA, DEPRESSIONAL | D |
| BEOR | D | | BICONDOA | D | | BISGANI, FLOODED | D | | BLAPPERT | C | | BOCA, TIDAL | D |
| BEOSKA | B | | BICONDOA, DRAINED | C | | BISHOP | C | | BLAQUIERE | D | | BOCK | B |
| BEOTIA | B | | BIDDEFORD | D | | BISHARCK | D | | BLASDELL | D | | BOCKER | D |
| BEOWAVE | B | | BIDDLEMAN | B | | BISODDI | B | | BLASE | D | | BOCKSTON | B |
| BEQUINN | B | | BIDMAN | C | | BISPING | C | | BLASINGAME | P | | BODE | B |
| BERCUMB | B | | BIDWELL | B | | BISSELL | B | | BLAYDEN | E | | BODECKER | A |
| BERDA | B | | BIEBER | D | | BISSONNET | D | | BLAZBIRD | D | | BODELL | D |
| BEREA | C | | BIEDELL | D | | BIT | D | | BLAZON | C | | BODEN | C |
| BERENICETON | B | | BIEDSAV | C | | BITTER | C | | BLEAKWOOD | B | | BODENBURG | C |
| BERGHOLZ | C | | BIEENVILLE | A | | BITTER SPRING | A | | BLEDSOE | B | | BODINE | B |
| BERGLAND | D | | BIG BLUE | D | | BITTERROOT | D | | BLEIBLERVILLE | C | | BODORUMPE | C |
| BERGQUIST | B | | BIG HORN | B | | BITTERWATER | B | | BLENCOE | D | | BODOT | C |
| BERGSTROM | B | | BIG TIMBER | D | | BITTON | D | | BLEND | B | | BOEL | A |
| BERGSVIK | D | | BIGARM | B | | BIVANS | B | | BLENDON | D | | BOEL, OVERWASH | C |
| BERINO | B | | BIGBEE | A | | BIXBY | A | | BLETHEN | B | | BOELUS | A |
| BERIT | D | | BIGBEND | B | | BIXLER | B | | BLEVINS | C | | BOERNE | B |
| BERKS | C | | BIGBROWN | C | | BJORK | C | | BLEVINTON | C | | BOESEL | C |
| BERKSHIRE | B | | BIGELOW | B | | BLACHLY | B | | BLEWETT | B | | BOESEL, PROTECTED | B |
| BERLAKE | B | | BIGETTY | B | | BLACK BUTTE | B | | BLIGHTON | B | | BOETTCHER | C |
| BERLIN | C | | BIGFLAT | D | | BLACK CANYON | D | | BLICKENSTAFF | D | | BOGAN | C |
| BERMESA | C | | BIGFOOT | C | | BLACK CANYON, | C | | BLIMO | C | | BOGART | B |
| BERMUDIAN | B | | BIGFORK | C | | DRAINED | C | | BLINSTER | B | | BOGGS | C |
| BERNAL | D | | BIGHAMS | B | | BLACK RIDGE | B | | BLINN | D | | BOGGY | C |
| BERNALDO | B | | BIGHILL | B | | BLACKA | B | | BLISS | C | | BOGRAP | B |
| BERNARD | D | | BIGLAKE | A | | BLACKSURN | A | | BLITZEN | B | | BOGUE | D |
| BERNARDINO | C | | BIGMEADOW | C | | BLACKDRAW | C | | BLOCKHOUSE | D | | BOGUS | C |
| BERNARDSTON | C | | BIGNELL | C | | BLACKETT | C | | BLOMFORD | B | | BOHANNON | B/D |
| BERNHILL | B | | BIGRIVER | B | | BLACKFOOT | B | | BLOOM | C | | BOHEMIAN | B |
| BERNICE | A | | BIGSHEEP | B | | BLACKFOOT, DRAINED | B | | BLOOMFIELD | B | | BOHICKET | D |
| BERNING | C | | BIGSPRING | D | | BLACKHALL | D | | BLOOMING | D | | BOHNA | B |
| BERNOW | B | | BIGWIN | C | | BLACKHALL, WARM | C | | BLOOMSDALE | C | | BOHNLY | D |
| BERRYLAND | B/D | | BIGWINDER | D | | BLACKHAMMER | D | | BLOOR | B | | BOHNSACK | B |
| BERRYMAN | C | | BIJORJA | C | | BLACKHAWK | C | | BLOOR, GRAVELLY | D | | BOISTFORT | B |
| BERSON | B | | BIJOU | B | | BLACKHOOF | B | | SUBSTRATUM | D | | BOJAC | B |
| BERTAG | C | | BILBO | C | | BLACKHORSE | C | | BLOUNT | C | | BOJO | D |
| BERTELSON | B | | BILGER | D | | BLACKLEED | D | | BLOWERS | B | | BOLAN | B |
| BERTHOUD | B | | BILLETT | B | | BLACKLEG | B | | BLUCHER | C | | BOLAR | C |
| BERTIE | B | | BILLINGS | C | | BLACKLOCK | C | | BLUE EARTH | D | | BOLD | B |
| BERTO | D | | | | | BLACKMAN | C | | BLUE EARTH, | C | | BOLENT | A |
| BERTCLOTTI | B | | | | | BLACKMOUNT | B | | SLOPING | B | | BOLES | C |

NOTES: TWO HYDROLOGIC SOIL GROUPS SUCH AS B/C INDICATES THE DRAINED/UNDRAINED SITUATION. MODIFIERS SHOWN, E.G., BEDROCK SUBSTRATUM, REFER TO A SPECIFIC SOIL SERIES PHASE FOUND IN SOIL MAP LEGEND.

REVIEW COMMENTS

Page 1 of 2

FILE #MS-95-42

TITLE HEADING: North Mall Minor Subdivision - A
Replat of Fisher Subdivision

LOCATION: North of F Road between 24 Road & 24 1/2 Road

PETITIONER: Richard Scariano

PETITIONER'S ADDRESS/TELEPHONE: 1048 Independence Ave., Suite A201
Grand Junction, CO 81505
245-7571

PETITIONER'S REPRESENTATIVE: Thompson-Langford Corp.

STAFF REPRESENTATIVE: Tom Dixon

NOTE: THE PETITIONER IS REQUIRED TO SUBMIT FOUR (4) COPIES OF WRITTEN RESPONSE AND REVISED DRAWINGS ADDRESSING ALL REVIEW COMMENTS ON OR BEFORE 5:00 P.M., MARCH 24, 1995.

GRAND JUNCTION POLICE DEPARTMENT
Dave Stassen

3/9/95
244-3587

The only concern this project, at this stage, gives me is the easternmost ingress/egress. Given it's location on the curve and the speeds that cars use at this location, I would be concerned for traffic safety when cars slow to turn in here.

CITY UTILITY ENGINEER
Bill Cheney

3/10/95
244-1590

WATER - Ute Water
SEWER

1. Are these stubouts to the north for manholes A-3 and A-4 or are the lines shown dimension lines?
2. Reduce grade of sewer to 0.4% and eliminate flowable fill when cover exceeds 3 1/2'.
3. Run pipe through manholes where possible and eliminate 0.2' fall through manhole, thereby picking up additional cover for service extensions to the north.
4. C-900 pipe is not required if a flowable fill cap is placed over the pipe - SDR 35 pipe is acceptable.

GRAND JUNCTION FIRE DEPARTMENT
Hank Masterson

3/14/95
244-1414

This proposal is acceptable to the Fire Department as presented. The plans to extend the 8" water line and place hydrants at 300' intervals is adequate.

GRAND JUNCTION DRAINAGE DISTRICT
John L. Ballagh

3/13/95
242-4343

1. The natural drain is Leach Creek not Leech Creek.
2. The irrigated tract does drain to the southwest corner and along Patterson to Leach Creek where there is only a poorly defined unmaintained waste ditch which allows water to fall into Leach Creek uncontrolled. The uncontrolled, waste water flows are causing bank failure to the left bank of Leach Creek north of Patterson Road. Additional flows - which are predicted, see final drainage report, will exacerbate the bank failure if no corrective action is taken.
3. The correctly identified minor drainage channel, the "ditch" on the north side of Patterson was not evaluated for capacity. Perhaps the drainage payment in lieu will cover the cost of pipe upsizing and driveway replacement. These last two items are city street items.

UTE WATER DISTRICT
Gary R. Mathews

3/15/95
242-7491

The 8" water main in F Road will be extended as proposed for North Mall Subdivision at the developers expense. Ute Water will not participate in the cost of the extension. Ute Water requires all lots be stubbed for water service.

Policies and fees in effect at the time of application will apply....C-900 Water Main.

COMMUNITY DEVELOPMENT DEPARTMENT
Tom Dixon

3/16/95
244-1447

See attached comments.

CITY DEVELOPMENT ENGINEER
Jody Kliska

3/16/95
244-1591

See attached comments.

TO DATE, COMMENTS HAVE NOT BEEN RECEIVED FROM THE FOLLOWING:

City Property Agent
City Attorney
Mesa County Planning
Mesa County Surveyor
U.S. West
Public Service Company
Grand Valley Irrigation

March 23, 1995

**North Mall Minor Subdivision,
a replat of Fisher Subdivision**

File #MS-95-42

RESPONSE TO REVIEW COMMENTS

Police Department:

I can appreciate Mr. Stassen's concerns about traffic safety given the turning movements along this section of Patterson Road, but the condition already exists and another entrance will be added to this section with or without this development. Lot 4 of Fisher Subdivision is under separate ownership and will surely be given one access. For this reason we would like to pursue the third entrance, but do so later in our comments under the heading of City Development Engineer.

City Utility Engineer:

All the changes suggested will be made.

Grand Junction Fire Department:

No comment required

Grand Junction Drainage District:

The outfall to Leach Creek will be evaluated and appropriate improvements will be proposed to ensure conveyance of our flows safely to the receiving channel. We have spoken with Jodi Kliska about the size of storm event they would like us to use for design purposes. Once this is received, we can size a facility adequate to handle this event.

Ute Water District:

The developer will extend the 8-inch waterline at his expense and make the service connections as depicted on the revised Utility Composite.

Community Development:

1. Mr. Dixon states that the present 6.5 acre parcel is entitled to 1-access. Does the City have an access code that states that one site is entitled to one access. If so, then why was the car wash given two; why does Sears have two. If the owners, who have been holding this lot since the "boom" days had forseen a market where only smaller parcels would sell, we wouldn't be here today. The site would have been split into smaller sites each having a right to one access. As it is, there is no market for a site this large therefore we are before you asking for more density, but fewer access points than what we would have had if the area had all been laid out in 1-acre plus sized lots.

2. I believe Mr. Dixon's comments concerning site layout with the parking in the rear are inappropriate for retail development. I have never seen retail establishments laid out in this manner. Retail businesses depend on the traveling public being able to see their store fronts and to see activity. This is not a new concept. People like to be where other people are. New stores try to give the appearance of vitality by putting streamers in front (American Furniture on North Avenue), parking a car or two near their entrances, and putting merchandise out front to draw in the curious. To develop a retail area as Mr. Dixon suggests would condemn it to low sales, high turnover and possible bankruptcy.

3. Drainage will be addressed as an engineering issue below.

4. Turn lanes will be addressed as an engineering issue below.

5. A Development Improvements Agreement for installation of the required site improvements will be executed prior to platting.

6. It is understood that the open space fees in the amount of 5% of the unimproved land value will be due and payable prior to platting.

City Development Engineer:

Drainage:

All drainage from the site would be routed to Leach Creek. None would be routed to Ranchmans Ditch. As mentioned above, we have been in communication with Jodi Kliska concerning the design storm event to use in sizing outfall facilities. When we receive this information we will size an outfall of adequate capacity. It is our understanding that our costs for design and construction of this outfall will be credited against our drainage impact fee.

Access and Street Improvements:

Concerning the number of accesses that will be premitted, we would suggest a compromise that would seem to us to be no worse than what City Engineering and Planning are proposing. We would put in the two westerly entrances as requested by City Engineering, but would ask that the third be allowed if we put it on the lotline between our parcel and Lot 4. Lot 4 will get an access in the future anyway, so if we were to fix it's location now, the City would be no worse off.

The package being submitted does not include designs for the entries nor the internal circulation mentioned in your comments. The entries have been shown schematically only so that we may gain approval for specific entry points, and may or may not be of the width shown or have dividing island. Entry designs and internal circulation designs have been specifically omitted because we do not know what will be built on each of the five sites. Though we have proposed horizontal locations for the entrances, the vertical alignments of each entrance need to be coordinated with the specific site designs. Internal circulation design is even more critical and on sites this small we feel they should be left for design at the time of site plan submittal.

North Mall--Presentation to City Council on Appeal

4/20/95

The proposal is for a replat of one 6.5 acre lot of Fisher Subdivision into 5 commercial lots.

The Planning Commission approved the subdivision at their April 4th hearing. Conditions of approval included the requirement for open space fees and construction of a center left turn lane in F Road the length of this property. The petitioner is appealing those 2 conditions.

Further review of the County Development File for Fisher Subdivision (file #C22-79) revealed that open space fees had been paid at the time of the original subdivision. The fee was based on the appraised value of the acreage. Therefore, open space fees will not be required for the replat.

Section 5-4-1.H.6 of the Zoning and Development Code concerning TCP states if a development abuts an underimproved street, the City may require construction of 1/2 street improvements of abutting street, if it's determined it's needed for safe ingress/egress of traffic to the development. The cost of those improvements will be credited to the TCP.

Patterson Road is classified as a major arterial, requiring 5 lanes and curb, gutter and sidewalk. Engineering has determined that a left turn lane is needed for safe ingress and egress to this development.

Fisher Subdivision was approved in 1979 by Mesa County. The file indicates improvements to F Road were existing at that time. The developer of Fisher Subdivision was only required to do a POA for 24 1/2 Road improvements and a Development Improvements Agreement for utilities.

F Road improvements were required with the approvals of Mesa Mall in 1977 (File #C48-77 and C206-79).

Council Action

At their April 19, 1995 hearing City Council approved the appeal. Therefore, improvements to F Road will not be required prior to recording the plat. TCP will be collected from each development at the time of Planning Clearance.

STAFF REVIEW (Preliminary comments)

FILE: #MS-95-42

DATE: March 16, 1995

STAFF: Tom Dixon, AICP

REQUEST: 5-lot commercial subdivision

LOCATION: North side of Patterson Road

APPLICANT: Richard Scariano

EXISTING LAND USE: Undeveloped

SURROUNDING LAND USE:

NORTH: Undeveloped
SOUTH: Commercial
EAST: Commercial
WEST: Commercial

EXISTING ZONING: HO (Highway-Oriented)

SURROUNDING ZONING:

NORTH: PB (Mesa County)
SOUTH: HO
EAST: HO
WEST: HO

ISSUES TO BE RESOLVED: The petitioner needs to address the following issues or problems involving this proposed subdivision:

- 1) The proposal must reduce the number of access points onto Patterson Road from three to two. The present 6.5-acre parcel is entitled to one access. The City does have the ability to control access connections in the subdivision process. The Patterson (F) Road Corridor Guidelines state the need for limiting and consolidating access points onto Patterson Road.
- 2) The proposed circulation and common parking areas should be located on the rear portion of the proposed lots. In addition to providing safe and adequate stacking distance from the public right-of-way, this will allow for the portion of the site developed with structures to be located closer to Patterson Road which would be an aesthetic enhancement to the site's development. The Patterson (F) Road Corridor Guidelines encourage developments that includes buffering, landscape elements, pedestrian accommodations, and setbacks that support an attractive streetscape.
- 3) The proposed drainage from the site may not be feasible or workable. The Public Works staff is evaluating the drainage issue

and will provide comments on it.

4) The traffic demands generated by this proposal justify the requirement of additional turn lanes to safely serve the site. Improvements made in the public right-of-way can be credited toward the Transportation Capacity Payment (TCP).

5) A Development Improvement Agreement (DIA) for the private access and circulation system is necessary prior to the platting of this subdivision. The DIA is a guarantee that a continuous on-site circulation system will be provided to serve all the lots.

6) Open space fees are required to be paid at the time of platting. The fees are 5% of the fair market value of the unimproved land. The fair market value is to be determined by an accredited real estate appraiser not otherwise involved in the development.

STAFF REVIEW (Final)

FILE: #MS-95-42

DATE: March 29, 1995

STAFF: Tom Dixon, AICP

REQUEST: Final plat for Northmall, 5-lot commercial subdivision

LOCATION: North side of Patterson Road

APPLICANT: Richard Scariano

EXISTING LAND USE: Undeveloped

SURROUNDING LAND USE:

NORTH: Undeveloped

SOUTH: Commercial

EAST: Commercial

WEST: Commercial

EXISTING ZONING: HO (Highway-Oriented)

SURROUNDING ZONING:

NORTH: PB (Mesa County)

SOUTH: HO

EAST: HO

WEST: HO

RELATIONSHIP TO COMPREHENSIVE PLAN/POLICIES/GUIDELINES: The Patterson (F) Road Corridor Guidelines apply to this site. These guidelines recognize that this portion of Patterson Road is appropriate for commercial development, that access points should be designed to serve more than one lot by placing ingress/egress points at joint property lines, and that meandering pedestrian walks can be considered as an alternative to standard City sidewalk requirements.

STAFF ANALYSIS: The existing site is a 6.5-acre undeveloped parcel of commercially zoned land north of Mesa Mall. The proposed minor subdivision would create five separate lots for potential commercial development. As proposed, a shared access easement across the front portions (south side) of each lot will allow vehicular traffic to pass nearly the full length of the present site. Access onto Patterson Road is proposed at three separate ingress/egress points, the west one aligning with the north entry into Mesa Mall.

In order for this common access and cross easement circulation to function adequately and separately from Patterson Road, which is classified as a principal arterial, the portion of the site between Patterson and the frontage road should be landscaped with

a mixture of groundcover, shrubs and trees. There will also need to be common cross-access and parking easements on all the proposed lots as well as a common maintenance agreement to ensure that the access road is maintained at an adequate level.

The HO zone allows a range of retail and office uses. Mesa Mall to the south is zoned HO so the types of potential uses that will occur on these proposed lots will have to conform with this zoning. The HO zone also has the following development standards that will apply to each lot as it develops:

| | |
|----------------------------------|------------------------------------|
| Maximum height of structures: | 65 feet |
| Maximum coverage by structures: | 35% |
| Minimum side/rear yard setbacks: | 15 feet |
| Minimum front yard setbacks: | 65 from centerline of ROW |
| Minimum front yard landscaping: | 75% of required front yard setback |

DEVELOPMENT ISSUES:

1) The proposal must reduce the number of access points onto Patterson Road from three to two. The present 6.5-acre parcel is entitled to one access. The City does have the ability to control access connections in the subdivision process. The Patterson (F) Road Corridor Guidelines state the need for limiting and consolidating access points onto Patterson Road.

2) The proposed circulation and common parking areas shall be located on the rear portion of the proposed lots. In addition to providing safe and adequate stacking distance from the public right-of-way, this will allow for the portion of the site developed with structures to be located closer to Patterson Road which would be an aesthetic enhancement to the site's development. The Patterson (F) Road Corridor Guidelines encourage developments that includes buffering, landscape elements, pedestrian accommodations, and setbacks that support an attractive streetscape. The proposed circulation system may cause stacking and traffic conflicts and safety problems if the parking is not located in the back portion of the site.

3) The proposed drainage from the site is subject to City Engineering approval.

4) The traffic demands generated by this proposal justify the requirement of additional turn lanes on Patterson Road to safely serve the site. Improvements made in the public right-of-way can be credited toward the Transportation Capacity Payment (TCP).

5) A Development Improvement Agreement (DIA) for the private access and circulation system is necessary prior to the platting of this subdivision. The DIA will guarantee that a continuous on-site circulation system will be provided to serve all the lots. The DIA shall also include the required improvements to Patterson Road.

6) Open space fees are required to be paid at the time of platting. The fees are 5% of the fair market value of the unimproved land. The fair market value is to be determined by an accredited real estate appraiser not otherwise involved in the development.

STAFF RECOMMENDATION: Approval of the proposed 5-lot minor subdivision with issues 1 through 6, above, adopted as conditions of approval.

SUGGESTED PLANNING COMMISSION MOTION: Mr. Chairman, on item #MP-95-42, I move that we approve the proposed 5-lot Northmall Subdivision as recommended by staff.

STAFF REPORT FOR APPEAL TO CITY COUNCIL

FILE: #MS-95-42

DATE: April 6, 1995

STAFF: Tom Dixon, AICP

APPEAL: Conditions imposed on the Final plat approval for
Northmall, 5-lot commercial subdivision

LOCATION: North side of Patterson Road approximately midway
between 24 and 24 1/2 Roads and north of Mesa Mall

APPLICANT: Richard Scariano

EXISTING LAND USE: Undeveloped

SURROUNDING LAND USE:

NORTH: Undeveloped

SOUTH: Commercial

EAST: Commercial

WEST: Commercial

EXISTING ZONING: HO (Highway-Oriented)

SURROUNDING ZONING:

NORTH: PB (Mesa County)

SOUTH: HO

EAST: HO

WEST: HO

RELATIONSHIP TO COMPREHENSIVE PLAN/POLICIES/GUIDELINES: The Patterson (F) Road Corridor Guidelines apply to this site. These guidelines recognize that this portion of Patterson Road is appropriate for commercial development, that access points should be designed to serve more than one lot by placing ingress/egress points at joint property lines, and that meandering pedestrian walks can be considered as an alternative to standard City sidewalk requirements.

SUBJECT OF APPEAL: The petitioner appeals two conditions of approval of a Planning Commission decision:

1) Open space fees. These are assessed at 5% of the fair market value of the unimproved land and is payable at the time of platting.

2) The requirement of additional turn lanes on Patterson Road to safely serve the site. Improvements made in the public right-of-way can be credited toward the Transportation Capacity Payment (TCP).

SITE INFORMATION: The existing site is a 6.5-acre undeveloped parcel of commercially zoned land north of Mesa Mall. The proposed minor subdivision would create five separate lots for future commercial development. The petitioner has not indicated what specific uses or tenants may locate on these lots. As proposed, a shared access easement across the front portions (south side) of each lot will allow vehicular traffic to circulate the full length of the present site. Access onto Patterson Road was approved at three separate ingress/egress points, the west one aligning with the north entry into Mesa Mall.

STAFF ANALYSIS: The two items being appealed are reviewed and discussed as follows:

1) Parks and open space fees are assessed for all properties that are subdivided. In the case of commercially-zoned properties, the fees are 5% of the fair market value of the unimproved land. The fair market value is to be determined by an accredited real estate appraiser not otherwise involved in the development.

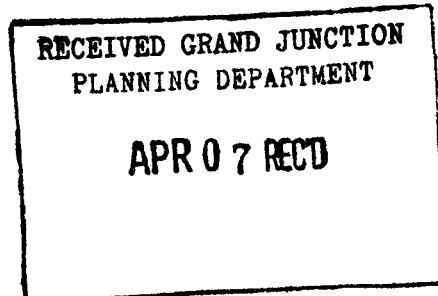
Finding: The petitioner has not stated a basis for being exempt from this fee which is a standard development assessment within the City. Neither has the petitioner presented evidence that such fees were previously paid when the Fisher Subdivision was approved. The petitioner has not cited a hardship or inability to pay. In fact, the objective of the subdivision is to actively market the individual lots. Staff finds no substantive basis to waiving the parks and open space fees.

2) The requirement for turning lanes as part of the approval and development of the site. The traffic demands generated by this proposal justify the requirement of additional turn lanes on Patterson Road to safely serve the site. Improvements made in the public right-of-way can be credited toward the Transportation Capacity Payment (TCP).

Finding: The proposed commercial subdivision will create the potential for an increase in traffic generation on this portion of Patterson Road. Lacking clearly identified commercial uses, staff must assume a use that will create a worst case scenario from a traffic generation standpoint. The basis of requiring turn lanes on Patterson Road is to ensure an adequate level of service and to maintain the safety of the road. This is best achieved by creating the turn lanes in conjunction with this approval. Improvements to the public right-of-way will be credited to the TCP. The TCP is a standard development fee reserved for future improvements to the public right-of-way system. Staff finds that public safety is best served with the inclusion of turn lanes onto this site as part of the site's improvement.

STAFF RECOMMENDATION: Uphold the Planning Commission's decision with all conditions.

THOMPSON-LANGFORD CORPORATION
ENGINEERING AND LAND SURVEYING
Independence Plaza
529 25 1/2 Rd., Suite B 210
Grand Junction, CO 81505
PH. 243-6067



April 7, 1995

Ms. Kathy Portner
City of Grand Junction
Community Development Department
250 North 5th Street
Grand Junction, CO 81501

Re: #MS-95-42 - Northmall Subdivision

Dear Kathy:

I spoke with Tom Dixon yesterday concerning our desire to appeal some elements of the decision of the Planning Commission to the City Council. Tom indicated that he would be out of town until after the Council session on the 19th, which we would like to make, and that I should coordinate our appeal through you.

We were told at the hearing that we had three days to appeal their decision. Unfortunately I learned yesterday, that the official motion would not be available for a couple of weeks. We think we know what we heard, but as we both know, that frequently isn't the case. All the utility issues aside, which we know we must do, we believe we were granted two entrances totally to ourselves, and a additionally gained a third which we must share with the owners to our east. We also believe that we will not be required at the time of platting nor in the Development Improvements Agreement to design or put up security for the construction of an internal circulation system, that adequate circulation will have to be worked out at the time we seek specific site plan approvals. We further believe we heard that the concept of buildings to the front with parking in the rear was not made mandatory, that site designs would be reviewed and approved on a site by site basis.

If our understandings of the above issues are correct, we take no exception to those elements of the Commission's motion. The two items that did concern us were the issues concerning improvements to Patterson Road and the Open Space fees. As we understand the the Commission's motion, our client will be required to make the Traffic Capacity Payment (TCP) and will be required to widen the Patterson Road as well. I was told prior to the hearing and believe I also heard it mentioned in the hearing that any costs we would incurred for widening the road would apply as a credit

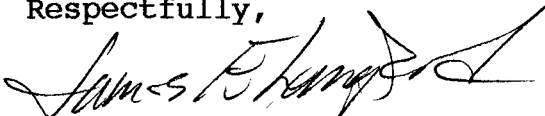
towards the TCP. We tried to make the point in the hearing that we felt the present value of the excess improvements that our client paid for in 1979 should be her "TCP", and should be credited towards today's obligations thus partially or hopefully totally eliminating any payment for road improvements today. We were not successful, and this is the primary issue we want to appeal.

My rational for what I have expressed above is that I cannot see how this differs from overbuilding a sewer line. I have been required by many municipalities over the years to overbuild facilities such as sewers or as in this case, roads. But the fact that my clients were being asked to build more than what they needed was recognized and we were always given rights-of-recovery. That couldn't be the case here, but I didn't expect the debt to be forgotten and a second demand to pay be made. The area residents, the City, the County and the Mall have jointly used up this excess capacity which my client paid for and now that none exists, the City wants her to pay more. I don't see the justice in this.

As far as the Open Space fees are concerned, we feel less strongly about this issue. We do feel our client met all the requirements of platting in 1979 and shouldn't have to revisit these issues today. If we are again unsuccessful in convincing the City of our position, we would at least like to be able to phase the payment of open space fees by sale of lots; such as a lien against each lot.

Please accept this letter as our request to appeal the decision of the Planning Commission. We request that we be placed on the agenda for the City Council meeting scheduled for April 19, 1995. If there is anything further I need to furnish you, please give me a call.

Respectfully,



James E. Langford, PE & LS

JEL/iml

each year. How can the planners determine that special accesses are required on this property since there is not another access, such as the one they propose, in the whole stretch of F Road in the 9 miles from here to Clifton? If I have to do this I am again making improvements that are not in balance with the impact or even the potential impact of even the grandest development on the property.

I have wondered about the open space fees. I've been told by my engineers that it is doubtful whether this can be waived. I am not asking for a waiver. What I am asking for is the ability to pay the open space fees or any other fees against the property as I sell the lots. I have waited almost 20 years to receive some income from this property. If I am required to pay all the fees that you request I will not see any income until I sell more than a small portion of the property. I think it is fairer to pay the open space fees each time one of the lots is sold. I would be happy to provide a financial statement showing that I simply do not have the money to pay for the fees that you are requiring all at once.

I am 73 years old and hope to see some income from the farm before I die. I have waited over twenty years to have the opportunity to finally realize something from the farm.

Thank you for your consideration of this letter.

Respectfully,

Gertrude Smith
Gertrude Smith



May 19, 1995

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

Jim Langford
Thompson-Langford Corporation
529 25 1/2 Road
Grand Junction, Colorado 81505

RE: Northmall Off-Site Drainage Improvements

Dear Jim,

I have reviewed the plans you submitted for the offsite drainage improvements and am ready to sign of for construction approval of the plans with the completion of an improvements agreement for this work.

Please submit three more sets of plans for signature along with the estimate for the improvements agreement. Recordation of the improvements agreement is handled through the City Community Development Department.

The contractor for this project will be required to obtain a permit from the City Engineer's office. One of the requirements of the permit is submission of a traffic control plan.

Please call if you have questions.

Sincerely,


Jody Kliska

cc: Tom Dixon

THOMPSON-LANGFORD CORPORATION

ENGINEERING AND LAND SURVEYING

Independence Plaza
529 25 1/2 Rd., Suite B 210
Grand Junction, CO 81505
PH. 243-6067

24, 1995

Jodi Kliska
City and Planning
Engineering Department
250 North 5th Street
Grand Junction, CO 81501

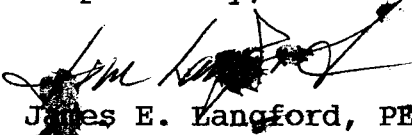
Re: Site development plans

Dear Jodi:

Please find attached 3 copies of the plans you requested in your May 19th letter and the Exhibit that needs to go with the Development Improvements Agreement. In order to make a package which the owners can use to go out for bids, we have combined the off-site drainage plans which you just reviewed, with the on-site water and sewer plan previously reviewed by Bill Cheney. This also makes the plans better tie with the Development Improvements Agreement.

I will by this letter be making Dick Scariano aware that these materials have been delivered to you and he or the owners need to meet with the Community Development Department to formalize the Development Improvements Agreement. Further, this letter acknowledges and will serve to make the owners aware of the fact that they need to get a permit from your office before construction can begin.

Respectfully,



James E. Langford, PE & LS

JEL/iml

EXHIBIT "B"

DATE: 5/15/95
NAME OF DEVELOPMENT: **Northmall Subdivision**
LOCATION: Lot 2 Fisher Subdivision as recorded in the Mesa
County Clerk and recorders records in Book 12,
page 161.

PRINTED NAME OF PERSON PREPARING James E. Langford

CONSTRUCTION COST ESTIMATE:

| | | Units | Quantity | Unit Price | Total Price |
|-------------|---|-------|----------|---------------------------|-----------------|
| I. | <u>Sanitary Sewer:</u> | | | | |
| | 1 8-inch C900 PVC Sewer w/flowable fill | LF | 960 | 19.50 | 18720.00 |
| | 2 San. Sew. Manholes | EA | 4 | 1,250.00 | 5000.00 |
| | 3 Connection to Existing Manhole | EA | 1 | 325.00 | 325.00 |
| | 4 Asphalt removal and replacement | SY | 32 | 25.00 | 800.00 |
| | | | | | |
| | | | | Sub-total Sanitary Sewer: | 24845.00 |
| II. | <u>Domestic Water:</u> | | | | |
| | 1 8" Waterline | LF | 1298 | 15.50 | 20119.00 |
| | 2 Fire Hydrant Assemblies (tee, valve, spool & hydr.) | EA | 3 | 1,150.00 | 3450.00 |
| | 3 8" Gate Valve and Box | LS | 1 | 550.00 | 550.00 |
| | 4 Connection to existing main | EA | 2 | 450.00 | 900.00 |
| | | | | | |
| | | | | Sub-total Domestic Water: | 25019.00 |
| III. | <u>Drainage Channel</u> | | | | |
| | 1 Clear and Grubb (Incl. trees, brush & stumps) | AC | 1.25 | 1,500.00 | 1875.00 |
| | 2 Asphalt Removal and Disposal | SY | 275 | 2.50 | 687.50 |
| | 3 Drainage pipe removal and disposal | LF | 184 | 2.50 | 460.00 |
| | 4 Roadside swale grading | LF | 1930 | 7.50 | 14475.00 |
| | 5 Double 18" CMP w/flowable backfill | LF | 193 | 48.00 | 9264.00 |
| | 6 6" Asphalt Patching over new culverts | ton | 81 | 30.00 | 2439.00 |
| | 7 36" CMP, Flared End Section, Riprap, connection to multi-plate | LS | 1 | 2,400.00 | 2400.00 |
| | 8 Seeding and Mulching in front of Mesa Villa | SF | 3400 | 0.19 | 646.00 |
| | 9 Remove and reconstruct 4' drainage pan | LF | 117 | 16.50 | 1930.50 |
| | 10 Remove and replace signs | LS | 1 | 600.00 | 600.00 |
| | | | | | |
| | | | | Sub-total Drainage: | 34777.00 |

| IV. MISCELLANEOUS: | Units | Quantity | Unit Price | Total Price |
|---|-------|----------|--------------------------|-------------|
| 1 Construction Inspection (by Consultant) | LS | 1 | 500.00 | 500.00 |
| 2 Construction Inspection (by City) | LS | 1 | 500.00 | 500.00 |
| 3 Construction Surveys | LS | 1 | 650.00 | 650.00 |
| 4 Quality Control Testing | LS | 1 | 2,800.00 | 2800.00 |
| | | | Sub-total Miscellaneous: | 4450.00 |

TOTAL ESTIMATED COST OF IMPROVEMENTS: \$89,091.00

SIGNATURE OF DEVELOPER

DATE

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

CITY ENGINEER

DATE

COMMUNITY DEVELOPMENT

DATE

7/21/95 - Draft being reviewed by judge.

Original Mylar in bin by K.P.'s desk.
Copy of plat being reviewed by Steve Pace.

July 21, 1995

Richard Scariano
1048 Independence Avenue
Grand Junction, CO 81505

RE: File #MS-95-42--North Mall Minor Subdivision

Dear Mr. Scariano:

This is to summarize the approval of the North Mall Minor Subdivision and identify what needs to be done prior to recording the plat.

At their April 4, 1995 hearing the City Planning Commission approved the Subdivision with the following conditions:

1. The number of access points to Patterson Road must be reduced from 3 to 2, with one additional access to be allowed at the east side of lot 5 to be recorded as a shared access with lot 4 of Fisher's Subdivision.
2. The proposed drainage from the site is subject to City Engineering approval.
3. The requirement for turn lanes onto Patterson Road to safely serve the site. Improvements made in the public right-of-way will be credited toward future Transportation Capacity Payments.
4. A note to the plat shall be added stating that at time of site plan review, access, circulation, common access circulation and parking arrangements must be reviewed and approved by City staff.
5. Open space fees are required to be paid at the time of platting.

Since ~~then~~ City staff has found evidence that the open space fees were paid on this property at the time of the original platting, therefore, requirement number 5 has been deleted. Further, the petitioner's appeal to City Council to delete the requirement for turn lanes on Patterson Road was successful and that conditions ~~will not be required.~~ Transportation Capacity Payments will be required at the time each property develops.

has also been deleted

The plat must be recorded within one year of the approval. Prior to recording the plat the following items must be addressed:

1. The plat must be revised to show all technical requirements (see attached).
2. Four sets of final construction drawings for all public improvements, including utilities and drainage improvements,

must be submitted for Engineering's review and approval.

3. A development improvements agreement for all of the above improvements must be submitted and approved by the City. An acceptable form of guarantee must also be provided.
4. The balance of the drainage fee (less the credited amount for the required drainage improvements) must be paid.
5. Once the final plat has City signatures, two full-size mylar copies and one 11" x 17" reduced mylar copy must be submitted.
6. A computer disk with the plat information must be submitted.

If you have any questions on the above requirements please give me a call at 244-1446. Thank you.

Sincerely,

Katherine M. Portner
Planning Supervisor

xc: Gertrude Fisher Smith
Thompson-Langford Corp.
Jody Kliska, City Development Engineer

Kathy

WILLIAMS, TURNER & HOLMES, P.C.

ATTORNEYS AT LAW

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT
AUG 10 RECD

RECEIVED
NORTHMALL SUBDIVISION

July 26, 1995

ALL ATTORNEYS ADMITTED
IN COLORADO
ANTHONY W. WILLIAMS
BERNDT C. HOLMES
J. D. SNODGRASS
WILLIAM D. PRAKKEN
DAVID J. TURNER -
ALSO ADMITTED IN UTAH
MARK A. HERMUNDSTAD -
ALSO ADMITTED IN UTAH
SUSAN M. CORLE
MARK E. HAMILTON
OF COUNSEL
WARREN L. TURNER
BERNARD A. BUESCHER

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

John: the "staged" concept
has been agreed to in
concept.

Re: Northmall Subdivision

Please see what you
think + call Mark H
w/ your thoughts.
JHX
Dan

Dear Dan:

A couple of weeks ago, Dick Scariano and I sat down with you to discuss a Development Improvements Agreement for the Northmall Subdivision. You gave me a form Development Improvements Agreement that we could modify for use with the Northmall Subdivision.

Okay in
concept

I have prepared the Development Improvements Agreement in accordance with the matters that we discussed at our meeting. A copy of that Development Improvements Agreement is enclosed herewith. The provisions that we discussed are contained on Exhibit C to the Development Improvements Agreement. As you will recall, my client, Jack Walker, is proposing to purchase Lot 1 of Northmall Subdivision. Pursuant to the Exhibit C, a letter of credit and/or disbursement agreement will be provided prior to the closing of the sale of Lot 1, which documents will secure the development costs attributable to Lot 1 plus the cost of constructing the drainage channel which will serve all of the lots. The development obligations for the remaining lots will be secured by a deed of trust which will come due upon the sale of any of the remaining lots or upon the commencement of any construction or other development on any of the remaining lots. You indicated in our conversation that you thought that such an approach would be acceptable to the City.

I would appreciate it if you would review the enclosed Development Improvements Agreement and let me know whether it looks satisfactory to you. If there are matters which I did not properly address, please let me know.

I was not sure how to fill in Paragraph 2 of the Development Improvements Agreement. I assume that the blank needs to be filled in with the words "final plat", but I was not sure of this. Please let me know what goes in that blank.

Also, you will notice that the blank in Paragraph 7, dealing with the completion period for the improvements, has not been filled in. We are not sure when the development of any of these lots will occur. As you are aware, the Northmall Subdivision is a replat of one of the lots of a previously platted subdivision, the Fisher

COURTHOUSE PLACE BUILDING
200 N. 6TH STREET
PO BOX 338
GRAND JUNCTION, COLORADO
81502-0338
PHONE 303/242-6262
FAX 303/241-3026

MOAB OFFICE:
94 EAST GRAND AVENUE
MOAB, UTAH 84532-2830
PHONE 801/259-4381

Dan Wilson
July 26, 1995
Page 2

Subdivision. That subdivision was platted back in 1979, and development has still not occurred on the lot that will now be known as Northmall Subdivision. Hopefully, such development will occur in the relatively near future, but there is no assurance that this will happen. Accordingly, we would like to insert a relatively long period of time in Paragraph 7, such as twelve years, so that the parties have ample opportunity to develop the property. Please let me know your thoughts on this.

I will wait to hear your comments on the enclosed Development Improvements Agreement. Thank you for your help and assistance.

Very truly yours,

WILLIAMS, TURNER & HOLMES, P.C.



Mark A. Hermundstad

MAH/sr
Enclosures

xc: Jack Walker
Dick Scariano
Rich Livingston

October 18, 1995

Status of North Mall Subdivision

1. A note must be added to the plat stating that at the time of site plan review, access, circulation, common access circulation and parking arrangements must be reviewed and approved by City staff.
2. Original mylar plat needs owner's signature and the Surveyor's Statement signed and sealed.
3. City signatures needed on the plat.
4. The following copies of the fully signed plat must be submitted: 2 full size mylar copies (in addition to the original) and 1 11"x17" reduced mylar copy of the plat.
5. A computer disk with the final plat information must be submitted.
6. The fully executed Development Improvements Agreement/Guarantee, etc. as agreed upon by the City Attorney.