

# Table of Contents

File 1994-0124

Name: Sleep n Aire Expansion - 2482 F Road - Site Plan Review

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

**DOCUMENT DESCRIPTION:**

X	X	Planning Clearance - issued 8/9/94, 8/29/94, 5/3/95 - **			
		Hydrologic Analysis			
X	X	DIA /Release of DIA - to City Clerk for scanning /retention			
X	X	Correspondence			
X		Posting of Public Notice Signs - 7/22/94			
X	X	Planning Commission Minutes - 8/2/94, 9/7/94 - **			
X		E-mails			
X	X	Ordinance No. 2773 - **			
X	X	Temporary Use Permit - 11/15/99			
X	X	Site Plan			
X	X	Grading and Drainage Plan -			
X		Lighting Plan			
X	X	Landscape Plan			
X		Planning Commission Notice of Public Hearing mail-out- 7/22/94			



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

Receipt 1392  
 Date 7-13-94  
 Rec'd By [Signature]  
 File No. 124-94

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

124 94

PETITION	PHASE	SIZE	LOCATION	ZONE	LAND USE
<input type="checkbox"/> Subdivision Plat/Plan	<input type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> Resub				
<input type="checkbox"/> Rezone				From: To:	
<input checked="" type="checkbox"/> Planned Development	<input type="checkbox"/> ODP <input type="checkbox"/> Prelim <input checked="" type="checkbox"/> Final <i>Revised</i>		2482 FRd	PC	Retail/Warehouse Manufacturing
<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 checked="" type="checkbox"/> PROPERTY OWNER	<input checked="" type="checkbox"/> DEVELOPER	<input checked="" type="checkbox"/> REPRESENTATIVE
Don Damron Name	Don Damron Name	Ford Construction Comp., Inc. Name
2482 F Road Address	2482 F Road Address	584 25 Road Address
Grand Junction, CO 81505 City/State/Zip	Grand Junction, CO 81505 City/State/Zip	Grand Junction, CO 81505 City/State/Zip
303-245-8426 Business Phone No.	303-245-8426 Business Phone No.	303-245-9343 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.

*Kelly Ford*  
 Signature of Person Completing Application  
 Date 7-12-94

*Kenneth J. Damron*  
 Signature of Property Owner(s) - Attach Additional Sheets if Necessary  
 Vice President

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City Office

124 94

Clarice, S.J.  
2109 Lakeshore Dr. #A6  
Zapata, TX 78076-4416

Jarvis William  
236 Arroyo Dr.  
Grand Junction, CO 81503-1706

Kern, Paul  
2479 F 1/4 Rd. Rt 3  
Grand Junction, CO 81505

Hoefner Family Trust  
636 S. Surrey Ct.  
Grand Junction, CO 81503-9751

Carnes, Ben  
P.O. Box 3117  
Grand Junction, CO 81502-3117

Ford Construction Co.  
P.O. Box 55065  
Grand Junction, CO 81505

Pinger, James  
624 Broken Spoke Rd.  
Grand Junction, CO 81504-5270

Don Damron  
2482 F Road  
Grand Junction, CO 81505

Abrahamson, Jon  
2240 State Rd. 44  
Martinsville, IN 46151-7413

City of Grand Junction  
250 N. 5th St.  
Grand Junction, CO 81501  
Attn: Community Devel. Dept.

Brazos River Leasing L.P.  
c/o Diamond Shamrock #1124  
P.O. Box 696000  
San Antonio, TX 78269-6000

Gamble, Mark  
P.O. Box 2906  
Grand Junction, CO 81502

Capp, Randall  
835 26 Rd.  
Grand Junction, CO 81506-8609

Ramirez, Robert  
2488 Commerce Blvd.  
Grand Junction, CO 81502-1214

**ORIGINAL**

# SUBMITTAL CHECKLIST 124 94

## PLANNED DEVELOPMENT REVIEW

Location: 2482 E Rd

Project Name: Steep-n-rill

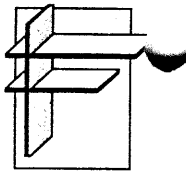
ITEMS	DISTRIBUTION																							
DESCRIPTION	SS/REFERENCE	City Community Development	City Dev. Eng.	City Utility Eng.	City Property Agent	City Parks/Recreation	City Fire Department	City Attorney	City G.J.P.C. (B sets)	City Downtown Dev. Auth.	County Planning	County Bldg. Dept.	Irrigation District	Drainage District	Water District	Sewer District	U.S. West	Public Service	GVPP	CDOT	Corps of Engineers	Walker Field		
● Application Fee <u>\$205.00</u>	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
● Application Form	VII-1	1	1	1	1	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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
● Evidence of Title	VII-2	1		1		1																		
● Accraisal of Raw Land	VII-1	1		1	1																			
● Names and Addresses	VII-3	1																						
● Local Description	VII-2	1																						
○ Deced.	VII-1	1		1																				
○ Easements	VII-2	1	1	1	1		1										1	1	1					
○ Avigation Easement	VII-1	1		1																				
○ ROW	VII-3	1	1	1	1												1	1	1					
○ Improvements Agreement/Guarantee	VII-2	1	1	1																				
○ CDOT	VII-3	1	1																					
○ Industrial Pretreatment Sign-off	VII-4	1		1																				
● General Project Report	X-7	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
○ Elevation Drawing	IX-13	1	1																					
● Site Plan	IX-29	2	2	1	1																			
● 11"x17" Reduction of Site Plan	IX-29				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
● Grading and Drainage Plan	IX-16	1	2																					
○ Storm Drainage Plan and Profile	IX-30	1	2															1	1	1				
○ Water and Sewer Plan and Profile	IX-34	1	2	1		1								1	1	1	1	1						
○ Roadway Plan and Profile	IX-28	1	2																					
○ Road Cross-Sections	IX-27	1	2																					
○ Detail Sheet	IX-12	1	2																					
● Landscape Plan	IX-20	2	1	1																				
○ Geotechnical Report	X-3	1								1														
● Final Drainage Report <i>Calculations</i>	X-5,6	1	2										1											
○ Stormwater Management Plan	X-14	1	2											1										
○ Phase I and II Environmental Report	X-10,11	1	1																					
○ Traffic Impact Study	X-15	1	2																					

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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.



# FORD CONSTRUCTION COMPANY, INC.

24 94

To: Planning Department  
City of Grand Junction  
250 N. Fifth Street  
Grand Junction, CO 81501-2643

Date: July 12, 1994

Project: Sleep-N-Aire  
2482 F Road

Attn: Kathy Portner

## LETTER OF TRANSMITTAL

*5/12/94*  
*10/1/94*  
*10/1/94*

<u>Number of Copies</u>	<u>Description</u>
1	Check for \$205.00
8	Submittals

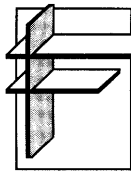
Enclosed per your request are 8 submittals regarding the Sleep-N-Aire project. The Final Drainage Report with calculations is forthcoming from Ed Morris, Lincoln Devore, Inc. The raw land appraisal is also forthcoming from Mary Broom, B & B Appraisal. Please notify us of any errors or discrepancies at your earliest convenience.

Submitted by;

Danace Carlson  
Administrative Assistant

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090



# FORD CONSTRUCTION COMPANY, INC.

General Project Report

124 94

July, 12, 1994

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Ms. Kathy Portner

The subject property is located at 2482 F Road Grand Junction, CO. The total lot size is approximately 3.72 acres. This proposed use will be for the expansion of their existing facility consisting of the addition of a 100' x 100' warehouse and sewing area and parking to accommodate their growing business.

The public will benefit from this expansion by increasing plant area for production and warehousing needs, which in turn will generate more product for the public to choose from and purchase. Some additional employees would be added as the demand for the mattresses grows. A larger sales floor will allow for the display of more merchandise and giving better selection to the public.

Our adopted plans and policies for the building addition will be the same as the business's current usage. All aspects of the current usage will remain the same, just with a larger physical facility. The proposed expansion appears to comply with all zoning and development codes which are currently in affect for this parcel.

The land use in the surrounding area of this F Road corridor are of similar and compatible businesses. All though the corridor is not yet built out, the current land usage of primarily retail facilities are an asset to this shopping area.

The site access and traffic patterns are in place and will remain intact. A slight increase in customer traffic is anticipated. With the majority of the expansion being manufacturing and warehouse facility, a modest 10% to 20% traffic increase is anticipated.

All utilities are currently available and on site. The existing service laterals from the F Road appear to be adequate for this expansion. An existing 12" water main currently exists on the north side of F Road and will facilitate a required private fire hydrant which will be installed toward the back of the proposed expansion. Please see the enclosed site plan, GS1.

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090

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124 4

There will be no special or unusual demands on utilities for this project. One additional employees toilet room will be the only water and sewer demands added.

The effects on public facilities will not increase substantially from the current building and its usage. The additional warehouse and sewing areas expansion will add only a few employees.

The site soils are decomposed micaceous shale of ancient sedimentary deposit. The impact of the project on the site geology will be that of simple grading to drainage basin #2, with detention and metered release of storm waters per enclosed hydrological analyses.


The hours of operation are to remain intact. Those hours are from 9:00am to 6:00pm Monday thru Saturday and 1:00am to 5:00pm on Sunday.

The signage for this facility is to remain intact. No additional signage is planned.

The development schedule and phasing for this proposed project will consist of a Phase II start yet this summer. Construction for Phase II will take around 90 days. Later on this winter the show room floor area will be increased to the Phase I warehouse area as indicated on the drawings. Future plans anticipate adding a 90' x 200' Phase III building again, to increase plant area for future manufacturing and warehouse needs. Given the history of this Sleep-N-Aire facility and projecting future sales and trends, we would anticipate some 2 to 5 years before the onset of Phase III.

I thank you for your attention in the matters of this proposed expansion. I look forward to the continued community service and the support that has been faithfully demonstrated by SNA throughout their history.

Thank you,



Kelly Ford  
Owner's Representative

# REVIEW COMMENTS

Page 1 of 2

FILE # 124-94

TITLE HEADING: Final Plan -  
Sleep-n-aire Expansion

LOCATION: 2482 F Road

PETITIONER: Don Damron

PETITIONER'S ADDRESS/TELEPHONE: 2482 F Road  
Grand Junction, CO 81505  
245-8426

PETITIONER'S REPRESENTATIVE: Ford Construction Company

STAFF REPRESENTATIVE: Kathy Portner

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**NOTE: WRITTEN RESPONSE BY THE PETITIONER TO THE REVIEW COMMENTS IS  
REQUIRED ON OR BEFORE 5:00 P.M., JULY 26, 1994.**

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**CITY FIRE DEPARTMENT**  
**H. Masterson**

**7/15/94**  
**244-1400**

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The entire existing and new structure may require sprinkler system. The proposed fire hydrant location should be moved east and be away from proposed structures a distance of 1.5 times the height of the buildings.

**CITY UTILITY ENGINEER**  
**Bill Cheney**

**7/18/94**  
**244-1590**

---

Water: Ute water.

Sewer: Total number of employees will need to be known to calculate any changes in the Plant Investment Fee.

**CITY DEVELOPMENT ENGINEER**  
**Jody Kliska**

**7/21/94**  
**244-1591**

---

Transportation Capacity Payment will be paid when existing warehouse is converted to retail space.

I need the drainage calculations and a detail of the meter outlet.

One additional handicap space is required.



**MESA COUNTY BUILDING DEPT.**  
**Bob Lee**

**7/14/95**  
**244-1656**

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No comments at this time. We have not performed a plan review on this project.

**COMMUNITY DEVELOPMENT DEPT.**  
**Kathy Portner**

**7/22/94**  
**244-1446**

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See attached comments.

STAFF REVIEW

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FILE: #124-94  
DATE: July 22, 1994  
STAFF: Kathy Portner  
REQUEST: Final Plan--Sleep-n-aire Mattress  
LOCATION: 2482 F Road  
APPLICANT: Don Damron

---

EXISTING LAND USE: Manufacturing/Retail Outlet

PROPOSED LAND USE: Same

SURROUNDING LAND USE:

NORTH: Vacant  
SOUTH: Vacant  
EAST: Vacant  
WEST: Vacant

EXISTING ZONING: PC (Planned Commercial)

PROPOSED ZONING: Same

SURROUNDING ZONING:

NORTH: PR-17 (Planned Residential, 17 units per acre)  
SOUTH: C-2 (Heavy Commercial)  
EAST: PC  
WEST: PB (Planned Business)

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RELATIONSHIP TO COMPREHENSIVE PLAN:

The Patterson Road Corridor Guidelines state that commercial and mixed-use development is appropriate along this section of the Patterson Road corridor. The guideline also stresses the importance of landscaping and streetscape along Patterson Road.

## STAFF ANALYSIS:

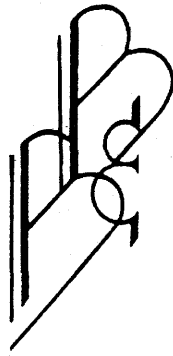
A rezone and final development plan for Phase I of the Sleep-n-Aire Mattress store was approved by Mesa County in 1989 (File #C72-89). Subsequently the City annexed the property and zoned it PC (Planned Commercial) accepting the Phase I plan. Specific development and design standards were not specified in the original approval for future expansions. The owner is now proposing an expansion of the existing 11,250 sq.ft. of retail and warehouse space with an additional 10,000 sq.ft. warehouse.

The following comments must be addressed:

1. Specify planting type, size and numbers in those areas with landscaping to be restored.
2. Additional trees and shrub area should be provided, especially along the parking lot frontage.
3. An appraisal is required for the vacant land value of the area needed for the expanded building and parking. Parks and Open space fees of 5% of the appraised value must be paid prior to issuance of a Planning Clearance.
4. The Transportation Capacity Payment (TCP) as calculated by the City Engineer must be paid prior to issuance of the Planning Clearance.
5. An inventory of the size, type and location of all signs on the property must be submitted.

## STAFF RECOMMENDATION:

715 Horizon Drive, Suite 330  
Grand Junction, Colorado 81506  
303-243-0250 Fax 243-1721



APPRAISAL, Inc.

July 25, 1994

Mr. Don Damron  
c/o Sleep-n-Aire  
2482 F Road  
Grand Junction, Colorado 81505

RE: 5% City of Grand Junction Parks Fee  
Tim Woodmansee, City Representative

Dear Mr. Damron:

As you requested, I have completed a limited, restricted appraisal report of a 100' X 264' parcel just north of the building at 2482 F Road in Grand Junction, Colorado. This 100 foot depth parcel is the proposed location for a new 10,000 square foot warehouse and parking area for Sleep-n-Aire. The "Site" is 100 feet in depth and has a width of 264 feet. It has no frontage on F Road. It is adjacent to the existing Sleep-n-Aire retail store and factory, noting it is just north of the existing improvements and parking lot. To the north of the proposed addition, there is vacant, unimproved land. As of the date of this limited, restricted appraisal report, the Subject is also vacant, unimproved land.

The property rights appraised in this report are those rights of Fee Simple Estate Ownership. It is defined as "absolute ownership unencumbered by any other interest or estate subject only to the limitations of eminent domain, escheat, police power, and taxation." [AIREA, *The Dictionary of Real Estate Appraisal*, 1984, P. 123.] The limited, restricted appraisal report assumes the Subject to be free and clear of any leases, liens, or encumbrances other than ordinary mortgage financing.

No personal property is included herein. The appraisal considered real estate only. Real estate includes the land, buildings, and permanently attached fixtures. The Subject is vacant land, as is.

The Function or Use of this limited, restricted appraisal report is to present only the final value, NOT all the appraiser's data, logic, and reasoning used in arriving at an opinion of value. It will provide a means of analyzing the property for the City's 5% of the total value for the unimproved land, parks and recreation fee. This limited, restricted appraisal report has been done in conformance with the Departure Provision of USPAP. Tim Woodmansee has stated clearly to me that this limited, restricted appraisal report is adequate for his purposes. This report cannot be understood properly without the additional information that is in my work file. I recommend if you have any questions regarding this limited, restricted appraisal report that you call me.

Limited, Restricted Appraisal of 2482 F Road, Grand Junction, Colorado

The effective date of this limited, restricted appraisal report is July 17, 1994. This is the date of inspection by Mary Jane Broom and the date to which any estimation of "as is" value apply. This limited, restricted appraisal assignment and the reporting format were at your request and that of the City of Grand Junction.

Regarding data collection, the date range searched was 1993 to present. The geographical limits of the search was west Grand Junction. The land that was searched was anything that was close to F Road or the I-70 Business Loop, but not actually fronting it. It would have a zoning of Planned Business, Planned Commercial, or perhaps straight Business or Commercial zoning. It would be less than several acres. Anything with the highest and best use similar to the Subject within those parameters was considered.

The limited, restricted appraisal report is a document conforming to my understanding of the Departure Provision of Uniform Standard of Professional Practice (USPAP) and is intended to arrive at an opinion of Market Value for the Subject. The methodology used in arriving at this value is based upon three traditional approaches to value: The Cost, Income, and Comparative Sales Analysis Approaches were considered. Only the Comparative Sales Analysis was determined to be applicable because this is vacant land that does not have any improvements and does not have any income attributable to it at this time. In verifying the data used in this analysis, I have discussed details of the sales at length with one or more of the parties to the transactions (the seller, buyer, seller's agent, lessor, lessee, or lessor's agent). These conversations, combined with inspections whenever possible, have given me a perspective relative to the condition of the properties, the terms of the sale, personal property when included, and highest and best use. In addition, data is confirmed whenever possible in the records of the County Clerk and Recorder's office. Competitive land sales follow.

The appraiser has the competence and appropriate knowledge and experience to complete the appraisal assignment.

The Subject is vacant land measuring 100 feet in depth and with a width of 264 feet. It is roughly 125 feet north of F Road. The Site contains a total of 26,400 square feet. It is zoned PC, Planned Commercial, by the City of Grand Junction. It does not have its own separate tax schedule number and it does not have its own separate legal description. It was not listed for sale in MLS. The current owners of record are the Damron's. The real property taxes are not separated from the rest of the parcel known as 2482 F Road.

The Subject is vacant and unimproved.

The purpose of this limited, restricted appraisal report was to estimate the market value of the property as of the effective date, according to the instruction provided by the client. I have included ONLY the final market value with the permission of the client. Market value, as used in this limited, restricted appraisal report, is defined as:

"The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair

Limited, Restricted Appraisal of 2482 F Road, Grand Junction, Colorado

sale, with the buyer and seller acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue address. (*The Appraisal of Real Estate*, 10th ed., published in 1992 by the Appraisal Institute).

The Highest and Best Use of the Subject is its potential for development. Lack of visibility from F Road is detriment. Access is assumed through the south portion of 2482 F Road. Highest and Best Use is defined as:

"The reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum profitability.

Highest and Best Use of land or a site as though vacant is: Among all reasonable, alternative uses the use that yields the highest present land value, after payments are made for labor, capital, and coordination. The use of a property is based on the assumption that the parcel of land is vacant or can be made vacant by demolishing any improvements.

Highest and Best Use of property as improved is: The use that should be made of a property as it exists. An existing property should be renovated or retained as is, so long as it continues to contribute to the total market value of the property, or until the return from a new improvement would more than offset the cost of demolishing the existing building and constructing a new one."

[Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 3rd Edition, 1983, page 171.]

Competitive land sales follow:

**Abstract of Comparable Land Sales**

Sale No.	Parties	Bk-Pg Sale Date Sales Price	Size	Financing	Price per SF	Location and Comments	Zoning
1	Veterans of Foreign Wars of the US Inc. to Wingo	2012-468 9-93 \$22,000	44,096 SF	Cash	\$.50	2534 W. Pinyon Ave. Just south of the Moose Lodge. Listed for \$23,000 for 104 days.	C-2
2	Arnold to Oropoco Limited Liability Co.	2026-406 11-93 \$115,000	3.72 acs	OWC \$75,000 at 6% due 11-18-2000	\$.71	2384 F Road, just west of Mesa Mall. Not a high traffic area. Sewer, water & other utilities are available at the site.	C Cnty
3	Binkley to	5-94 \$52,500	1.36 acs	Cash	\$.72	554 25 Rd. Just north of I-70 Business Loop.	C-2
4	Smith to Rennols	2005-373 9-93 \$35,000	42,000 SF	OWC \$300,000 at 9% due 9-95	\$.83	2472 Industrial Blvd. Not on major throughfare. Fenced. No taps paid.	C-2
5	Shirly to WilcoxINNs Inc.	2015-953 9-93 \$15,250	1.08 acs	OWC	\$.32	Lot 11, Block 5 in Sellars Sub on Sanford Drive. Listed for \$16,499 for 233 days.	C-2
6	IBX Inc. to Superior Contracting	2030-970 11-93 \$29,500	71,003 SF	OWC	\$.41	640 W. Gunnison Ave. Located west of Gene Taylors and south of the I-70 Business. Loop.	C-1

Limited, Restricted Appraisal of 2482 F Road, Grand Junction, Colorado

Marketing time for the Subject is estimated at between one and two years. If priced competitively it should sell within this time period. This limited, restricted appraisal does assume that there is access from the south portion of the Site that borders F Road.

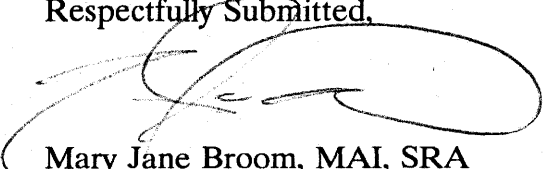
The sales all indicate a value of less than \$1.00 per square foot. Noting that the Subject's zoning is Planned Commercial, it has more restrictions on it than a straight Commercial zoning would have. This reduces its value. Also noting that it has no street frontage reduces its value to the comparables that have very minimal street access. Those would be the comparables that sell for less than \$.50 per square foot. F Road frontage properties aren't comparable. The Subject would be worth more if I considered it a part of the Site bordering F Road. The Site contains a total of 26,400 square feet or roughly .61 acres.

Based on my research and analysis, it is my opinion that, as of July 17, 1994, the "as is" market value of the Subject without any F Road frontage was \$0.40 per square foot, subject to the contingent limiting conditions attached to and made a part of this limited, restricted appraisal report. \$0.40 per square foot multiplied by 26,400 square feet equals \$10,560.00. Hence, the indicated value is:

TEN THOUSAND FIVE HUNDRED SIXTY DOLLARS  
(\$10,560)

In this limited, restricted appraisal report, there has been no investigating of any lien's which may or may not exist. My work has to do only with an estimate of value. The Property has no apparent natural, recreational, cultural, or scientific value. The scope of the work does not include possible impacts or price controls, energy or licensing requirements, environmental regulations, or other restrictions except where brought to my attention and clearly disclosed in the limited, restricted appraisal report.

Respectfully Submitted,



Mary Jane Broom, MAI, SRA  
Colorado License #CG01313418  
Certified General Appraiser

**CERTIFICATE OF LIMITED, RESTRICTED APPRAISAL**

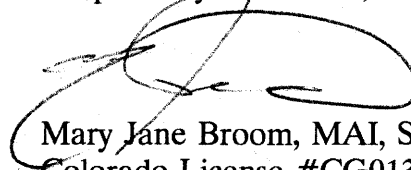
This limited, restricted appraisal report was prepared in conformance with the Departure Provision of USPAP. It certifies that, to the best of my knowledge and belief:

- a. The statements of fact contained in this limited, restricted appraisal report are true and correct.

Limited, Restricted Appraisal of 2482 F Road, Grand Junction, Colorado

- b. The reported analyses, opinion, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses and conclusions.
- c. I have no present or prospective interest in the property that is the subject of this limited, restricted appraisal, and I have no personal interest or bias with respect to the parties involved.
- d. My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of value or direction in value that favors the cause of the client, the amount of value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event. The report complies with all statutes, rules, and regulations prohibiting discrimination on the basis of race, color, religion, national origin, sex, marital status, age, or location of property. The limited, restricted appraisal assignment was not based on a requested minimum value, or specific valuation, or the approval of a loan in the determination of Market Value range.
- e. My analyses, and opinions, and conclusions were developed, and this limited, restricted appraisal report has been prepared in conformity with the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute.
- f. The use of this limited, restricted appraisal report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- g. Mary Jane Broom has made a personal inspection of the property that is the subject of this limited, restricted appraisal. She is licensed to appraise real estate in Colorado.
- h. No one provided significant professional assistance to the person signing this limited, restricted appraisal report.
- i. This limited, restricted appraisal report is subject to all the contingent and limiting conditions attached to and made a part of this report.

Respectfully Submitted,



Mary Jane Broom, MAI, SRA  
Colorado License #CG01313418



## GENERAL ASSUMPTIONS

This limited, restricted appraisal report has been made with the following general assumptions:

1. No responsibility is assumed for the legal description of, or matters including legal or title considerations. Title to the property is assumed to be good and marketable unless otherwise stated.
2. The property is appraised free and clear of any or all liens or encumbrances unless otherwise stated.
3. Responsible ownership and competent property management are assumed.
4. The information furnished by others is believed to be reliable. However, no warranty is given for its accuracy.
5. All engineering is assumed to be correct. The plot plans and illustrative material in this limited, restricted appraisal report are included only to assist the reader in visualizing the property.
6. It is assumed that there are no hidden or inapparent conditions of the property, subsoil, or structures that render it more or less valuable. No responsibility is assumed for such condition or for arranging for engineering studies that may be required to recover them.
7. It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in the appraisal report update.
8. It is assumed that all applicable zoning and use regulations and restrictions have been complied with, unless a nonconformity has been stated, defined, and considered in the appraisal report update.
9. It is assumed that all required licenses, certificate of occupancy, consents, or other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate contained in this limited, restricted appraisal report is based.
10. It is assumed that the utilization of the land improvements is within the boundaries of property lines of the property described and that there is no encroachment or trespass unless noted in this report.

# REVIEW COMMENTS

Page 1 of 2

FILE # 124-94

TITLE HEADING: Final Plan -  
Sleep-n-aire Expansion

LOCATION: 2482 F Road

PETITIONER: Don Damron

PETITIONER'S ADDRESS/TELEPHONE: 2482 F Road  
Grand Junction, CO 81505  
245-8426

PETITIONER'S REPRESENTATIVE: Ford Construction Company

STAFF REPRESENTATIVE: Kathy Portner

---

**NOTE: WRITTEN RESPONSE BY THE PETITIONER TO THE REVIEW COMMENTS IS  
REQUIRED ON OR BEFORE 5:00 P.M., JULY 26, 1994.**

---

**CITY FIRE DEPARTMENT**  
**H. Masterson**

**7/15/94**  
**244-1400**

---

The entire existing and new structure may require sprinkler system. The proposed fire hydrant location should be moved east and be away from proposed structures a distance of 1.5 times the height of the buildings.

**CITY UTILITY ENGINEER**  
**Bill Cheney**

**7/18/94**  
**244-1590**

---

Water: Ute water.

Sewer: Total number of employees will need to be known to calculate any changes in the Plant Investment Fee.

**CITY DEVELOPMENT ENGINEER**  
**Jody Kliska**

**7/21/94**  
**244-1591**

---

Transportation Capacity Payment will be paid when existing warehouse is converted to retail space.

I need the drainage calculations and a detail of the meter outlet.

One additional handicap space is required.

**MESA COUNTY BUILDING DEPT.**  
**Bob Lee**

**7/14/95**  
**244-1656**

---

No comments at this time. We have not performed a plan review on this project.

**COMMUNITY DEVELOPMENT DEPT.**  
**Kathy Portner**

**7/22/94**  
**244-1446**

---

See attached comments.

## STAFF REVIEW

---

FILE: #124-94  
DATE: July 22, 1994  
STAFF: Kathy Portner  
REQUEST: Final Plan--Sleep-n-aire Mattress  
LOCATION: 2482 F Road  
APPLICANT: Don Damron

---

EXISTING LAND USE: Manufacturing/Retail Outlet

PROPOSED LAND USE: Same

### SURROUNDING LAND USE:

NORTH: Vacant  
SOUTH: Vacant  
EAST: Vacant  
WEST: Vacant

EXISTING ZONING: PC (Planned Commercial)

PROPOSED ZONING: Same

### SURROUNDING ZONING:

NORTH: PR-17 (Planned Residential, 17 units per acre)  
SOUTH: C-2 (Heavy Commercial)  
EAST: PC  
WEST: PB (Planned Business)

---

### RELATIONSHIP TO COMPREHENSIVE PLAN:

The Patterson Road Corridor Guidelines state that commercial and mixed-use development is appropriate along this section of the Patterson Road corridor. The guideline also stresses the importance of landscaping and streetscape along Patterson Road.

## STAFF ANALYSIS:

A rezone and final development plan for Phase I of the Sleep-n-Aire Mattress store was approved by Mesa County in 1989 (File #C72-89). Subsequently the City annexed the property and zoned it PC (Planned Commercial) accepting the Phase I plan. Specific development and design standards were not specified in the original approval for future expansions. The owner is now proposing an expansion of the existing 11,250 sq.ft. of retail and warehouse space with an additional 10,000 sq.ft. warehouse.

The following comments must be addressed:

1. Specify planting type, size and numbers in those areas with landscaping to be restored.
2. Additional trees and shrub area should be provided, especially along the parking lot frontage.
3. An appraisal is required for the vacant land value of the area needed for the expanded building and parking. Parks and Open space fees of 5% of the appraised value must be paid prior to issuance of a Planning Clearance.
4. The Transportation Capacity Payment (TCP) as calculated by the City Engineer must be paid prior to issuance of the Planning Clearance.
5. An inventory of the size, type and location of all signs on the property must be submitted.

## STAFF RECOMMENDATION:

## STAFF REVIEW

---

FILE: #124-94  
DATE: July 27, 1994  
STAFF: Kathy Portner  
REQUEST: Final Plan--Sleep-n-aire Mattress  
LOCATION: 2482 F Road  
APPLICANT: Don Damron

---

EXISTING LAND USE: Manufacturing/Retail Outlet

PROPOSED LAND USE: Same

### SURROUNDING LAND USE:

NORTH: Vacant  
SOUTH: Vacant  
EAST: Vacant  
WEST: Vacant

EXISTING ZONING: PC (Planned Commercial)

PROPOSED ZONING: Same

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## STAFF ANALYSIS:

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The proposal before Planning Commission is for approval of uses and design standards for this Planned Commercial zone rather than the specific site plan. Upon approval of design standards for this site, the specifics of the proposed plan will be reviewed administratively through the site plan review process.

Staff proposes the following permitted uses, densities and design standards for the site:

1. **Permitted Uses:** permitted uses will be limited to:
  - a. retail sales
  - b. warehousing/manufacturing related to the retail sales on site
  - c. offices
2. **Density:** Total square footage of structures on the site shall not exceed 40,000 sq.ft.
3. **Setbacks:** the required setbacks shall be:
  - a. sideyard setback--5'
  - b. rearyard setback--10'
  - c. frontyard setback--20'
4. **Parking:** The parking regulations of the Zoning and Development Code shall apply.
5. **Landscaping:** The existing 4,900 sq.ft. of landscaped area along Patterson Road shall be retained. Eight trees must be provided on site. 1,000 sq.ft. of the landscaped area must be in shrubs.  
Interior landscaping of future expansions of the parking lot must meet the standards for parking lot landscaping in effect at the time of the expansion.
6. **Signage:** Total square footage, number and type of signs shall not exceed that which is in existence as of July 27, 1994 (Inventory to be included in the file) or the sign code allowance for a commercial zone in this location that is in effect at the time of a sign permit request, whichever is more restrictive.
7. **Review Procedure:** Future proposals on the site which meet the above criteria will be reviewed administratively through the site plan review process. Proposals which do not meet the above criteria and/or put the total square footage of structures on the site over the 40,000 sq.ft. limit must be reviewed and approved through the Planning Commission public hearing process.

8. **Other Requirements:** Transportation Capacity Payment, drainage requirements and any other development requirements will be determined through site plan review. An appraisal will be required for the land involved in any additions to determine the Parks and Open Space fee.

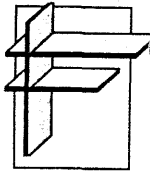
**STAFF RECOMMENDATION:**

Staff recommends approval of the above conditions for the PC zone.

**RECOMMENDED PLANNING COMMISSION MOTION:**

Mr. Chairman, on item #124-94, a request for design standards for a PC zone at 2482 F Road, I move we approve this with the stated staff conditions.





# FORD CONSTRUCTION COMPANY, INC.

To: Community Development  
250 North Fifth Street  
Grand Junction, CO 81501-2643

Date: July 28, 1994  
Project: Sleep-n-air  
Phase II

Attn: Kathy Portner

## LETTER OF TRANSMITTAL

For your use:

Number of Copies

Description

1

Response to Review Comments

5

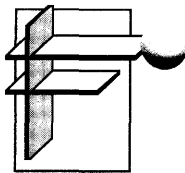
Landscaping Plans  
GS1 Revised 7/22/94

Submitted by:

*Danace Carlson*  
Danace Carlson  
Administrative Assistant

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090



# FORD CONSTRUCTION COMPANY, INC.

JULY, 27, 1994

COMMUNITY DEVELOPMENT DEPT.  
250 NORTH FIFTH STREET  
GRAND JUNCTION, CO 81501-2643

FILE # 124-94                      TITLE HEADING: Final Plan-  
Sleep-n-aire Expansion

LOCATION:    2482 F Road

PETITIONER:    Don Damron

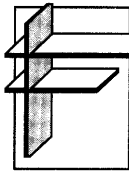
PETITIONER'S ADDRESS/TELEPHONE:                      2482 F Road  
Grand Junction, CO 81505  
245-8426

PETITIONER'S REPRESENTATIVE:                      Ford Construction Co., Inc.  
Attn: Kelly Ford

STAFF REPRESENTATIVE:    Kathy Portner

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090



# FORD CONSTRUCTION COMPANY, INC.

## RESPONSE TO REVIEW COMMENTS

### CITY FIRE DEPARTMENT:

H.MASTERSON

The entire existing and new structure, do indeed exceed the allowable floor area for a none sprinkled building per the U.B.C. A two hour area separation wall with rated fire door has been incorporated into the design of the building, per U.B.C. section 4304.

The proposed fire hydrant location shall be moved to approximately 64' east of the proposed Phase II expansion, and approximately 35' from the future Phase III expansion. The proposed building heights of Phase II and III are 18'.

### CITY UTILITY ENGINEER:

BILL CHENEY

SEWER: The total number of employees are currently and shall remain through the operation of Phase II at (8) employees.

### CITY DEVELOPMENT ENGINEER:

JODY KLISKA

We understand that the Transporting Capacity Payment will be paid when the existing warehouse is converted into retail space we will need a seperate permitt at that time. This will allow for collection of the fee at that time.

The drainage calculations and details of meter outlet are in final review and scheduled for delivery to your office as soon as possible.

One additional handicap space has been incorporated into the sight plan. Please see the revised sheet GS1, revision date 07/27/94.

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090

COMMUNITY DEVELOPMENT DEPT:

KATHY PORTNER

The planting type, size, and numbers of the landscape addition and restoration have been indicated on sheet GS1 revision date /07/27/94. Please advise if this landscaping is not in compliance.

The appraisal for the vacant land value is nearing completion. It is understood that this fee will be due and payable prior to the issuance of planning clearance.

The Transportation Capacity Payment for the 10,000' square foot building warehouse has been ruled by Jody Kliska to not be due and payable for the clearance of this building permit. The TCP will be paid when existing warehouse is converted to retail space which will require a separate building permit and planning clearance.

There are currently two signs on the Sleep-n-aire property. One is a pole sign which measures 10' x 16' and is visible from both the east and west bound lanes of Patterson Road and located on the southwest corner of the lot. The second sign is an individual lit letter sign measuring 3' x 26' and located on the building facade facing east on the south east corner of the building. These signs are intended to remain intact with no additional signage being requested by the petitioner.

END OF RESPONSE TO REVIEW COMMENTS.

STAFF REVIEW

---

FILE: #124-94  
DATE: August 11, 1994  
STAFF: Kathy Portner  
REQUEST: Final Plan--Sleep-n-aire Mattress  
LOCATION: 2482 F Road  
APPLICANT: Don Damron

---

EXECUTIVE SUMMARY: Request for approval of uses and design standards for a Planned Commercial zone located at 2482 F Road.

EXISTING LAND USE: Manufacturing/Retail Outlet

PROPOSED LAND USE: Same

SURROUNDING LAND USE:

NORTH: Vacant  
SOUTH: Vacant  
EAST: Vacant  
WEST: Vacant

EXISTING ZONING: PC (Planned Commercial)

PROPOSED ZONING: Same

SURROUNDING ZONING:

NORTH: PR-17 (Planned Residential, 17 units per acre)  
SOUTH: C-2 (Heavy Commercial)  
EAST: PC  
WEST: PB (Planned Business)

---

RELATIONSHIP TO COMPREHENSIVE PLAN:

The Patterson Road Corridor Guidelines state that commercial and mixed-use development is appropriate along this section of the Patterson Road corridor. The guideline also stresses the importance of landscaping and streetscape along Patterson Road.

## STAFF ANALYSIS:

A rezone and final development plan for Phase I of the Sleep-n-Aire Mattress store was approved by Mesa County in 1989 (File #C72-89). Subsequently the City annexed the property and zoned it PC (Planned Commercial) accepting the Phase I plan. Specific development and design standards were not specified in the original approval for future expansions. The owner is now proposing an expansion of the existing 11,250 sq.ft. of retail and warehouse space with an additional 10,000 sq.ft. warehouse.

The proposal before Planning Commission is for approval of uses and design standards for this Planned Commercial zone rather than the specific site plan. Upon approval of design standards for this site, the specifics of the proposed plan will be reviewed administratively through the site plan review process.

Staff proposes the following permitted uses, densities and design standards for the site:

1. **Permitted Uses:** permitted uses will be limited to:
  - a. retail sales
  - b. warehousing/manufacturing related to the retail sales on site
  - c. offices
2. **Density:** Total square footage of structures on the site shall not exceed 40,000 sq.ft.
3. **Setbacks:** the required setbacks shall be:
  - a. sideyard setback--5'
  - b. rearyard setback--10'
  - c. frontyard setback--20'
4. **Parking:** The parking regulations of the Zoning and Development Code shall apply.
5. **Landscaping:** The existing 4,900 sq.ft. of landscaped area along Patterson Road shall be retained. Eight trees must be provided on site. 1,000 sq.ft. of the landscaped area must be in shrubs.  
Interior landscaping of future expansions of the parking lot must meet the standards for parking lot landscaping in effect at the time of the expansion.
6. **Signage:** Total square footage, number and type of signs shall not exceed that which is in existence as of July 27, 1994 (Inventory to be included in the file) or the sign code allowance for a commercial zone in this location that is in effect at the time of a sign permit request, whichever is more restrictive.
7. **Review Procedure:** Future proposals on the site which meet the above criteria will be reviewed administratively through the site plan review process. Proposals which do not meet the above criteria and/or put the total square footage of structures on the site over

the 40,000 sq.ft. limit must be reviewed and approved through the Planning Commission public hearing process.

8. **Other Requirements:** Transportation Capacity Payment, drainage requirements and any other development requirements will be determined through site plan review. An appraisal will be required for the land involved in any additions to determine the Parks and Open Space fee.

**STAFF RECOMMENDATION:**

Staff recommends approval of the above conditions for the PC zone.

**PLANNING COMMISSION RECOMMENDATION:**

Planning Commission at their August 2, 1994 hearing recommended approval.



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

August 22, 1994

Kelly Ford  
Ford Construction Company, Inc.  
P.O. Box 55065  
Grand Junction, CO 81505

Dear Kelly:

The final development plan for Sleep-n-Aire at 2482 F Road was approved by the Planning Commission at their August 2, 1994 hearing. To accommodate future expansion of the facility, the final development plan was proposed as an amendment to the zoning ordinance to define setbacks and design standards for the lot. In this way the site plan for this addition and future additions can be reviewed and approved by staff if the proposal falls within the defined standards. Because it was proposed as an ordinance, it must receive final approval by the City Council. The ordinance was approved on first reading on August 17, 1994. The final hearing on the ordinance will be at the City Council's September 7, 1994 hearing.

The following are required prior to issuance of a Planning Clearance for Building Permit:

1. Based on the appraisal value of \$10,560, the 5% parks and open space fee is \$528.
2. A drainage plan and report must be reviewed and approved. On-site drainage facilities must be included on an improvements agreement and a financial guarantee must be provided (see attached).
3. Final approval by Fire Department (I've sent a copy of the response to comments to Hank Masterson).
4. Confirmation from the City Utility Engineer that no additional Plant Investment Fee will be required based on the petitioner's response that there would be no additional employees (I have requested that written response from Bill Cheney, City Utility Engineer).
5. Specific species of dwarf trees to be planted must be identified. Recommendations can be made by local nurseries. Any deciduous trees must be one and one-half inch caliper (measured one foot above ground level) at planting.

Based on the Planning Commission approval of the final plan, I will issue a foundation only permit for the construction once all of the above comments are resolved. Upon final approval by the City Council of the ordinance, the Planning Clearance for the remainder



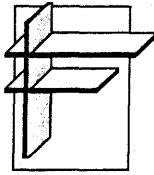
of the structure and site improvements will be issued. The owner should be aware that any future expansions that result in parking for over 50 cars, the existing parking lot must be brought into conformance with the recent ordinance requiring interior landscaped islands for larger lots.

If you have any questions you can call me at 244-1446.

Sincerely,



Katherine M. Portner  
Planning Supervisor



# FORD CONSTRUCTION COMPANY, INC.

To: Community Development Dept.  
250 North Fifth Street  
Grand Junction, CO 81505

Date: August 23, 1994  
Project: Sleep-N-Aire  
Phase II A

RECEIVED GRAND JUNCTION  
PLANNING DEPARTMENT

AUG 23 1994

Attn: Kathy Portner

## LETTER OF TRANSMITTAL

For your use:

Number of Copies

1

Description

Hydrological Report

The tree specifications are forthcoming shortly. Please notify us of the Fire Martial and the Sewer Plant investment fee as soon as you have word.

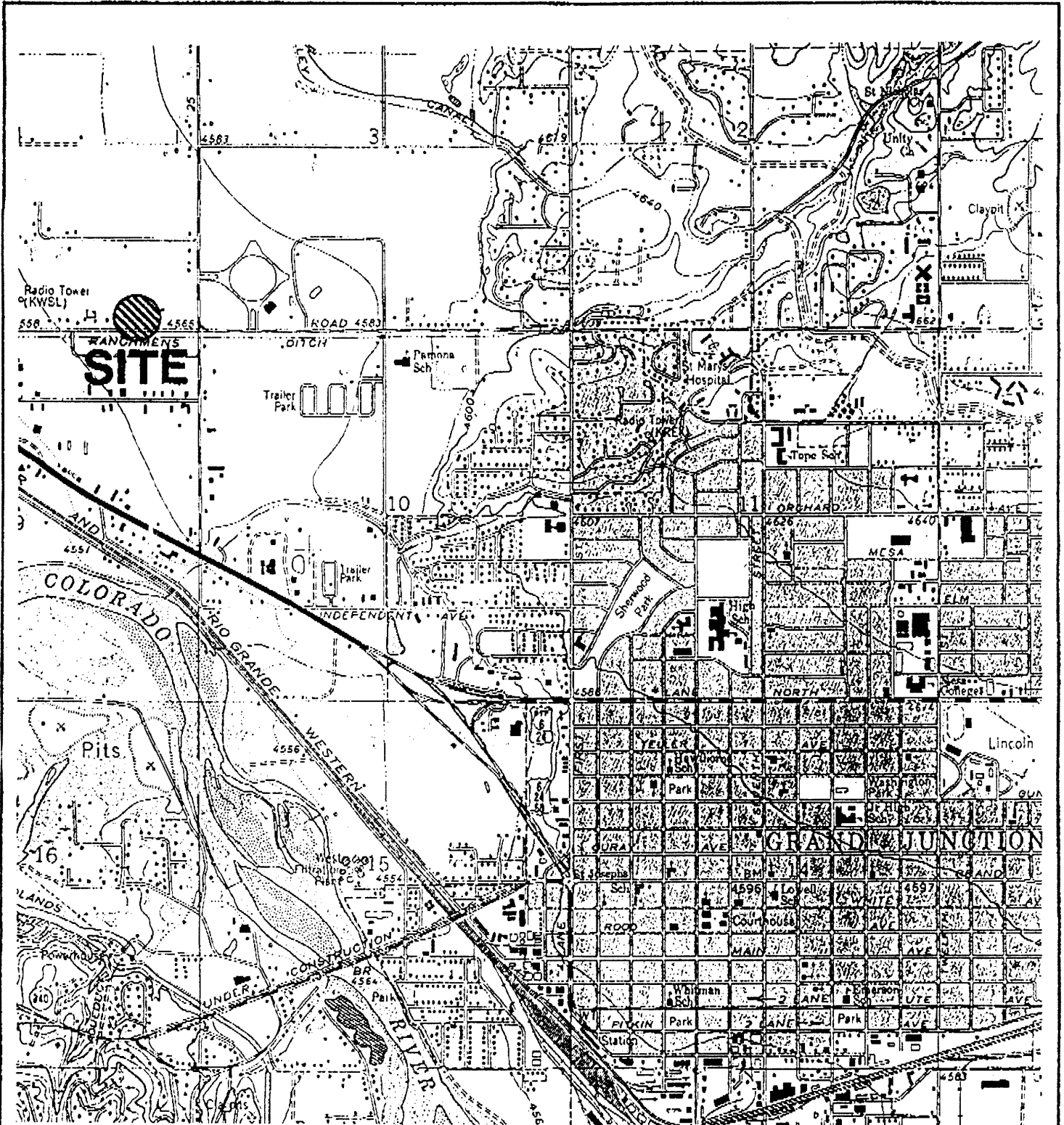
Submitted by:

Danace Carlson  
Administrative Assistant

*Jody received a copy 8/23/94 KP*

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090



Courtesy U.S.G.S.

NORTH

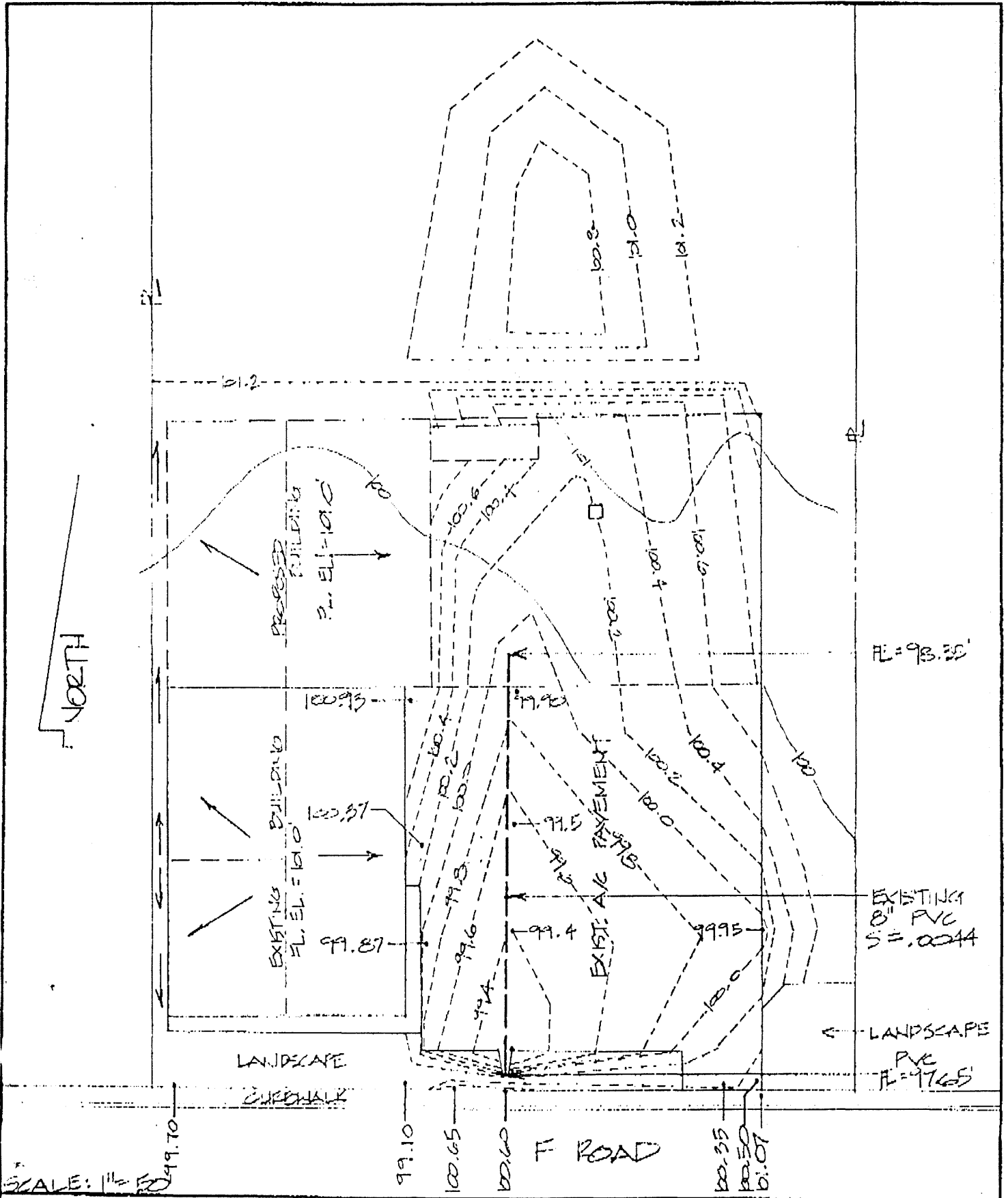
Scale: 1"=2000'



Vicinity Map

Ford Construction Company

DATE 8/94



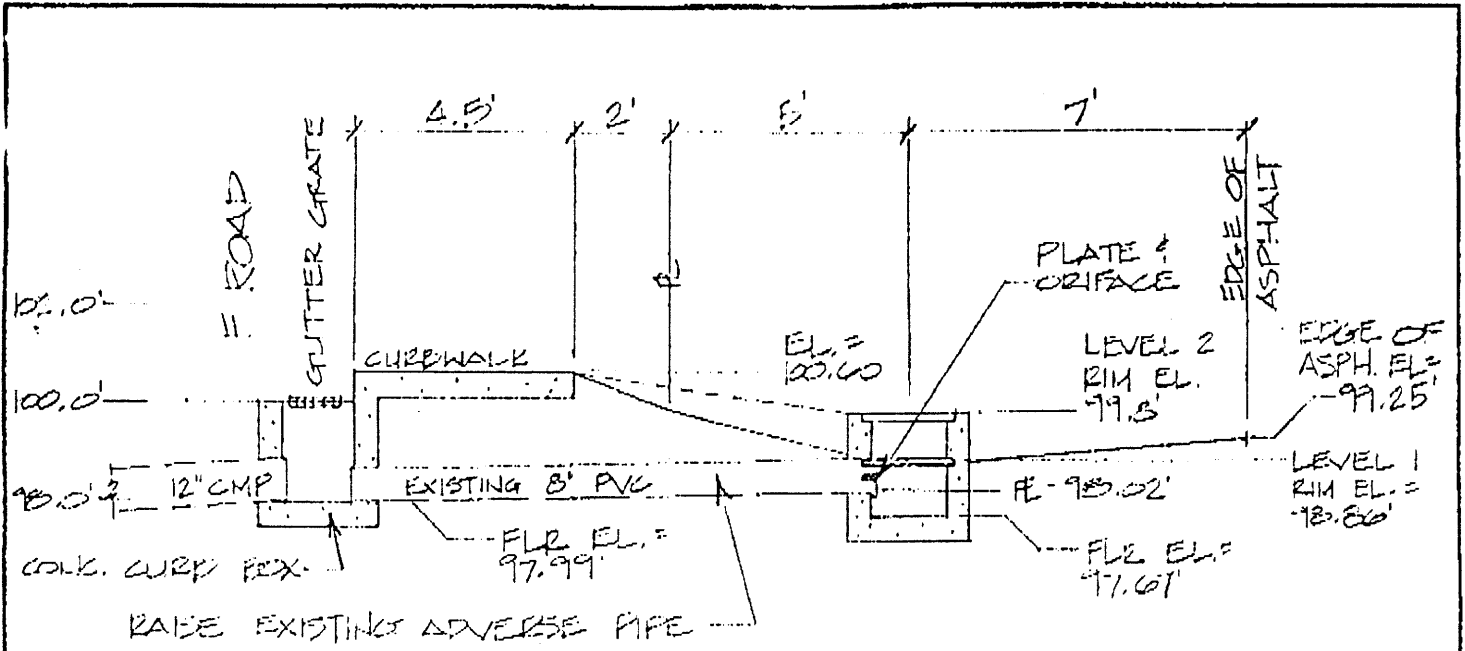
SCALE: 1" = 50'



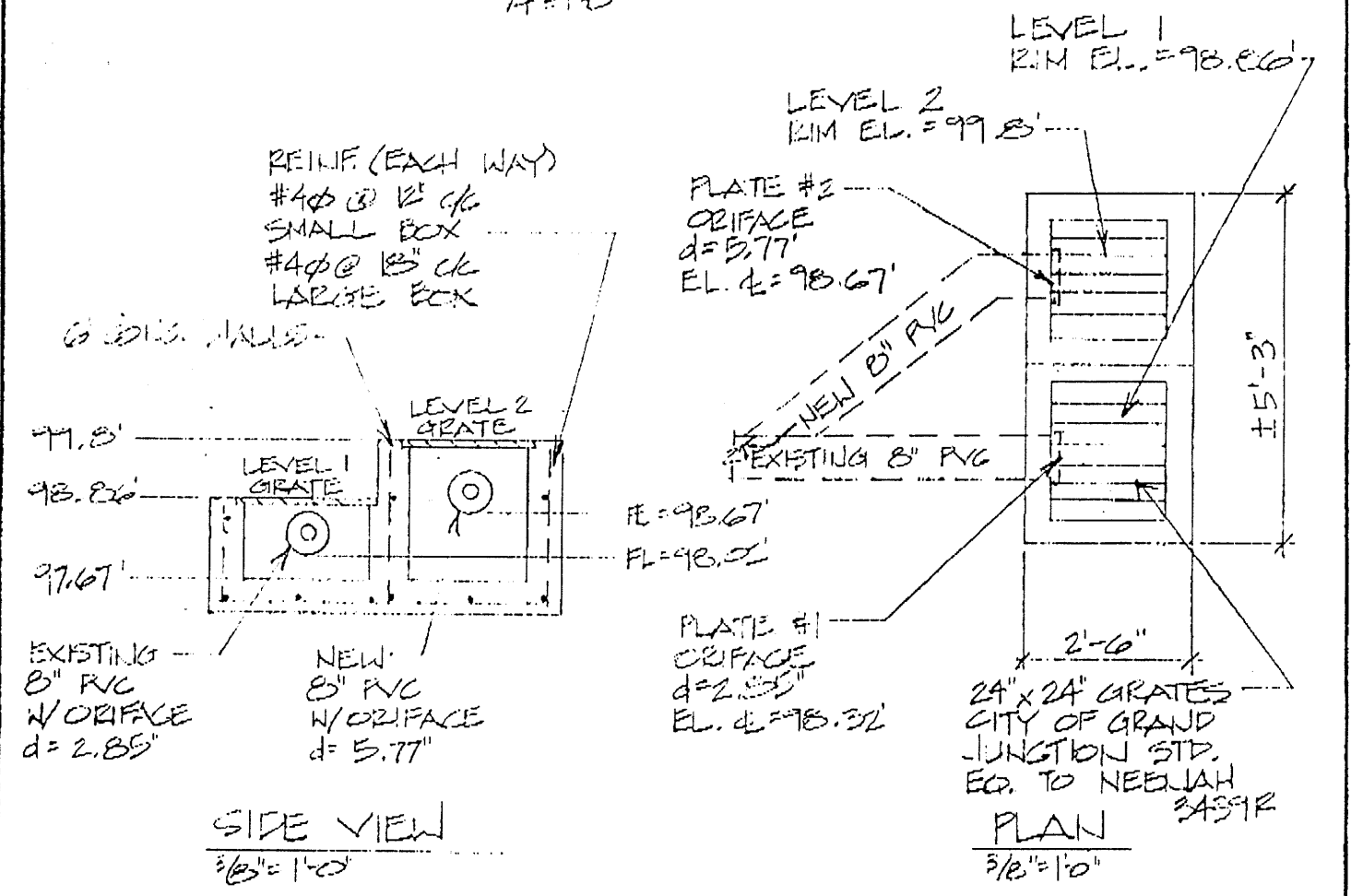
Site Grading Plan - 2482 F Road

Ford Construction Company

DATE 8/94



ELEVATION  
1/4" = 1'-0"



SIDE VIEW  
3/8" = 1'-0"

PLAN  
3/8" = 1'-0"



Outfall Details - 2482 F Road

Ford Construction Company

DATE 8/94

APPENDIX**Soils Data:**

1978 SCS Grand Junction Area soils and 1958 SCS inside City Limits Report.

Site soils listed as BC with minor Rt in area.

Bc - Billings Silty Clay Loam (0-2%), moderate expansion, lean clay (CL), low permeability, moderately alkaline, prone to piping and frost heave, Hydro Class C and D. Not listed as hydric.

**Runoff Notes:**

The site is located on a low, relatively smooth slope down to the southwest. The general slope has been cut in the past by numerous small drainage and possibly irrigation ditches. These are along property lines specifically the property lines around this site. The presence of these ditches has recently turned off-site runoff away from the site. The on-site runoff is therefore the defining runoff.

Historic flow across the site therefore appears to have consisted of runoff caused by on-site rainfall only. Developed flow is also to be restricted to on-site rainfall. The developed area of the site is relatively small. It consists of the existing building and paved area at the south end of the site, facing F Road (Patterson). The proposal is to add a building and paved area of approximately the same size to the southern portion of the site. The north portion of the site is to remain in the native state for the time being.

This type of development is such that the full tract cannot really be considered since it may develop in the same progression or entirely differently. It therefore appears to be most efficient to store the north area historic flow in a storage area with no outfall. The developed runoff will be stored in the parking area and outletted to the City sewer system in F Road.

**Summary of Areas:**

Roof Area 1 - drains to landscaped Area, then to outlet	2,700 ft <sup>2</sup> = 0.06 acre
Roof Area 2 - drains to north, then to parking area	7,425 ft <sup>2</sup> = 0.17 acre
Roof Area 3 and pavement - collects all water eventually	43,000 ft <sup>2</sup> = 1.01 acre
Landscaped Area - mostly along F Road	4,138 ft <sup>2</sup> = 0.095 acre
Bare traffic area, but unpaved	8,059 ft <sup>2</sup> = 0.185 acre
 Total to be developed (including already developed)	 = 1.52 acres
 North Tract - Undeveloped	 161,100 ft <sup>2</sup> = 3.70 acres

**Historic Flow:****Assumptions**

1. Primary parking must be combined with existing parking for total storage.
2. Undeveloped area prevented from flowing onto the developed area by no outlet storage.

By Grand Junction SWMM:

Historic flow rates calculated by:  $C_2 = 0.20$  and  $C_{100} = 0.35$ .

Front area (developed and to be developed): L to drain = 280' - predevelopment (final)  
City Max = 300'

$$To_2 = 1.81 (1.1 - 0.2) \times 280^{.5} \times .66 = 31 \text{ min. and } I = .86$$

$$To_{100} = 1.8 (1.1 - .35) \times 280^{.5} \times .66^{.33} = 26 \text{ min. and } I = 2.46$$

$$\text{Then: } Qh_2 = .20 \times .86 \times 1.52 = 0.26 \text{ cfs}$$

$$Qh_{100} = .35 \times 2.46 \times 1.52 = 1.31 \text{ cfs}$$

For checking purposes, the north undeveloped tract alone provides the following values (Historic):

Area = 3.70 ac., L = 610' - City of Grand Junction Max. = 300' - assume storage on/tract.

$$\text{Then: } To_2 = 1.8 (1.1 - .2) \times 300^{.5} \times .66^{.33} + 310/.95 = 32.2 + 5.4 = 37.6, \text{ use } 38 \text{ min.}$$

$$I_2 = 0.78$$

$$To_{100} = 1.8 (1.1 - .35) \times 300^{.5} \times .66^{.33} + 310/.95 = 26.8 + 5.4 = 32.2, \text{ use } 33 \text{ min.}$$

$$I_{100} = 2.15$$

$$Qh_2 = .20 \times .78 \times 3.70 = 0.58 \text{ cfs}$$

$$Qh_{100} = .35 \times 2.15 \times 3.70 = 2.78 \text{ cfs}$$

**Developed Flow, Total Area:**

for Total Area L = 861' (300' = 561')

$$To_2 = 32.2 + 561/1.25 = 39.7, \text{ use } 40 \text{ min. } I = 0.76$$

$$To_{100} = 26.8 + 561/1.25 = 34.3, \text{ use } 35 \text{ min. } I = 2.09$$

Check combining all areas: Composite C - Total Tract

	Size	$C_2$	$C_{100}$
Roof and Pavement	1.24 ac.	0.93	0.95
Landscaped Area	.095 ac.	0.45	0.52
Bare Traffic Area	.185 ac.	0.75	0.82
Undeveloped	<u>3.70</u> ac.	0.36	0.46
Totals	5.22 ac.		

$$C_2 = 1.24 \times .93 + .095 \times .45 + .185 \times .75 + .36 \times 3.70/5.22 = 0.51$$

$$C_{100} = 1.24 \times .95 + .095 \times .52 + .185 \times .82 + 3.70 \times .46/5.22 = 0.59$$

$$Q_{TOT2} = .51 \times 0.76 \times 5.22 = 2.02 \text{ cfs}$$

$$Q_{TOT100} = .59 \times 2.09 \times 5.22 = 6.44 \text{ cfs}$$

For Total Tract, Composite C = Developed Condition in Front:

	<u>Size</u>	<u>C<sub>2</sub></u>	<u>C<sub>100</sub></u>
Roof and Pavement	1.24 ac.	0.93	0.95
Landscaped Area	.095 ac.	0.45	0.52
Bare Traffic Area	.185 ac.	0.75	0.82

$$C_2 = (.93 \times 1.24 + .45 \times .095 + .75 \times .185)/1.52 = .878 - \text{use } .88$$

$$C_{100} = (.95 \times 1.24 + .52 \times .095 + .82 \times .185)/1.52 = .907 - \text{use } .91$$

Longest L for travel to outfall = 370' > 300' (G.I. City Max.), so must use A/C ditch.

$$Tc_2 = 1.8 (1.1 - .88) \times 300^{.5} \times .66^{-.33} + 60/2.9 = 8.4 \text{ min.}, \text{ use } 9 \text{ min.}, I = 1.59$$

$$Tc_{100} = 1.8 (1.1 - .91) \times 300^{.5} \times .66^{-.33} + 60/2.9 = 7.2 \text{ min.}, \text{ use } 8 \text{ min.}, I = 4.19$$

Theoretically, Max qp is then:  $qp_2 = .88 \times 1.59 \times 1.52 = 2.13 \text{ cfs}$

$$qp_{100} = .91 \times 4.19 \times 1.52 = 5.80 \text{ cfs}$$

By Appendix N, Grand Junction SWMM:

2-year Storm Data:  $Q_r = .82 \times .26 = .213$

and:  $Td_2 = [633.4 \times .88 \times 1.52 / (.213 - (.213^2 \times 9) / (81.2 \times .88 \times 1.52))]^{.5} - 15.6 = 48 \text{ min.}$

$$Id_2 = 40.6/63.6 = 0.638 \text{ "/hr.}$$

$$Qd_2 = .88 \times 1.52 \times .638 = .853 \text{ cfs}$$

$$K_2 = 38/9 = 4.22$$

$$V_2 = 60 [1.853 \times 48 - .213 \times 48 - .213 \times 9 + 4.22 \times .213 \times 9/2 + .213^2 \times 9 / (2 \times .853)] = 1944.93 \text{ ft}^3$$

See page 4 for volume, Max. Elev. = 99.80'.

100-year Storm Data:  $Q_r = .82 \times 1.31 = 1.074$

and:  $Td_{100} = [1832 \times .91 \times 1.52 / (1.074 - (1.074^2 \times 8) / (213 \times .91 \times 1.52))]^{.5} - 17.2 = 32 \text{ min.}$

$$Id_{100} = 106.5/49.3 = 2.16 \text{ "/hr.}$$

$$Qd_{100} = .91 \times 1.52 \times 2.16 = 2.99 \text{ cfs}$$

$$K_{100} = 26/8 = 3.25$$

$$V_{100} = 60 [2.99 \times 32.1 - 1.074 \times 32.1 - 1.074 \times 8 + 3.25 \times 1.074 \times 8/2 + 1.074^2 \times 8 / (2 \times 2.99)] = 3648 \text{ ft}^3$$

See page 4 for volume, Max. Elev. = 99.96'.



Manhole - orifice must be at least radius above flow line of curb box.

This = 97.99 + 4" for 8" PVC = 98.32 -  $\bar{C}$  orifice for 2-year storm.

Top of outlet and grate = 98.86 start with this elev. for major storage.

98.86 - 98.32 = 0.54' - Top of grate to  $\bar{C}$  orifice. OK - assume CB = 30" pipe.

So:

Location	Elev.	Formula	Cum. Volume
Flow Line			
Curb Outlet	97.99	--	--
$\bar{C}$ pipe & orifice	98.32	--	--
Top outlet & grate	98.86	start with volume of box above orifice	3 ft. <sup>3</sup>
(edge A/C=99.25)	99.40	$.54/3 [8 + 981 + (8 \times 981)^{.5}]$	197 ft. <sup>3</sup>
	99.60	$.2/3 [981+4325 + (981 \times 4325)^{.5}]$	688 ft. <sup>3</sup>
	99.80	$.2/3 [4325+8506 + (4325 \times 8506)^{.5}]$	1948 ft. <sup>3</sup>
	100.00	$.2/3 [8506+13232 + (8506 \times 13232)^{.5}]$	4104 ft. <sup>3</sup>
	100.20	$.2/3 [13232+18912 + (13232 \times 18912)^{.5}]$	7302 ft. <sup>3</sup>
Max. possible	100.40	$.2/3 [18912+25189 + (18912 \times 25189)^{.5}]$	11697 ft. <sup>3</sup>

Now: 2-year storm -  $\bar{C}$  orifice elev. = 98.32. Max 2-year storm level = 99.80

Then 99.80 - 98.32 = 1.48' head

$$Q = C A (2gH)^{.5}$$

$$.26 = .6A 9.7628$$

$$A = .0444 \text{ ft}^2 \text{ or } 6.3916 \text{ in}^2 \quad d = 2.85" \text{ orifice}$$

OK for 100-year storm, top of entry must be set at 99.80. Could be at Point A or at Point B, cost would be comparable. For now, put it at Point A.

Then grate and rim elev. = 99.80,  $\bar{C}$  pipe = 98.23,  $\bar{C}$  pipe (orifice) = 98.56

Theoretical outlet 2 head (in outlet) = 99.80 - 98.23 = 1.57 then storage is actually 8 ft.<sup>3</sup> but difference is insignificant.

So: Theoretical high water elev. = 99.6

$$99.96 - 98.32 = 1.64' \text{ head in Outlet 1}$$

$$99.96 - 98.56 = 1.40' \text{ head in Outlet 2}$$

Outlet 1:  $Q = .6 \times .0444 \times 10.277 = 0.274 \text{ cfs}$  and  $1.31 - .274 = 1.036 \text{ cfs}$  for #2  
then Outlet 2:  $1.036 = .6 \times A \times 9.495$ ,  $A = 0.1819 \text{ ft}^2 = 26.1864 \text{ in}^2$ ,  $d = 5.77"$

## Storage Area for Undeveloped Area:

100.6 - 1600 ft<sup>2</sup>  
 100.8 - 5400 ft<sup>2</sup>  
 101.0 - 9500 ft<sup>2</sup>  
 101.2 - 15600 ft<sup>2</sup>

## Pond:

Elev.	Formula	Cum. Volume
100.8	$.2/3 [1600+5400+ (1600 \times 5400)^{.5}]$	663 ft. <sup>3</sup>
101.0	$.2/3 [5400+9500+ (5400 \times 9500)^{.5}]$	1471 ft. <sup>3</sup>
101.2	$.2/3 [9500+15600+ (9500 \times 15600)^{.5}]$	2485 ft. <sup>3</sup>

$$Q_{p2} = 0.58 \text{ cfs}$$

$$Q_{r100} = 2.78 \text{ cfs}$$

Trial  $Q_{p2} \sim Q_r = .82 \times .58 = .476$   
 and 2-year storm

$$T_{d2} = [663.4 \times .2 \times 3.70 / (.476 - (.476^2 \times 38) / (81.2 \times .2 \times 3.70))]^{.5} - 15.6 = 21.93, \text{ use } 22 \text{ min.}$$

$$I_{d2} = 40.6 / 37.6 = 1.08 \text{ "/hr.}$$

$$Q_{d2} = .2 \times 3.70 \times 1.08 = .80 \text{ cfs}$$

$$K_2 = 38 / 38 = 1.00$$

$$V_2 = 60 [.80 \times 22 - .476 \times 22 - .476 \times 38 + 1 \times .476 \times 38 / 2 + .476^2 \times 38 / (2 \times .80)] = 208 \text{ ft}^3$$

$$\text{Elev.} = 100.66'$$

Trial  $Q_{p100} \sim Q_r = .82 \times 2.78 = 2.280$   
 and 100-year storm

$$T_{d100} = [1832 \times .35 \times 3.70 / (2.28 - (2.28^2 \times 33) / (213 \times .35 \times 3.70))]^{.5} - 17.2 = 20.63, \text{ use } 21 \text{ min.}$$

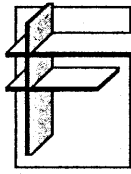
$$I_{d100} = 106.5 / 38.2 = 2.79 \text{ "/hr.}$$

$$Q_{d100} = .35 \times 3.70 \times 2.79 = 3.61 \text{ cfs}$$

$$K_{100} = 33 / 33 = 1.00$$

$$V_{100} = 60 [3.61 \times 21 - 2.28 \times 21 - 2.28 \times 33 + 1 \times 2.28 \times 33 / 2 + 2.28^2 \times 33 / (2 \times 3.61)] = 844 \text{ ft}^3$$

$$\text{Elev.} = 100.85'$$



# FORD CONSTRUCTION COMPANY, INC.

To: Community Development Dept.  
250 North Fifth Street  
Grand Junction, CO 81501-2643

Date: August 26, 1994  
Project: Sleep-N-Aire  
Phase II A

Attn: Kathy Portner

## LETTER OF TRANSMITTAL

For your use:

Number of Copies

Description

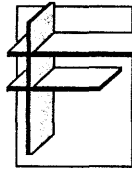
1	Check # 2665 \$1,480.00 (Improvements Deposit)
1	Check # 5238 \$528.00 (5% of the Parks & open space fee)
4	Revised site plans
1	Executed Improvements Agreement

Submitted by;

*Danace Carlson*  
Danace Carlson  
Administrative Assistant

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090



# FORD CONSTRUCTION COMPANY, INC.

To: Community Development Dept.  
205 N. Fifth Street  
Grand Junction, CO 81501-2643

Date: August 31, 1994  
Project: Sleep-N-Aire

Attn: Kathy

## LETTER OF TRANSMITTAL

For your use:

Number of Copies

1

Description

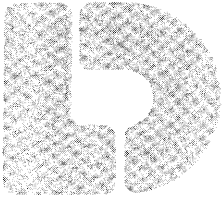
Hydrologic Analysis  
(Signed and Sealed)

Submitted by;

Danace Carlson  
Administrative Assistant

Formerly Kelco General Contractors

P.O. Box 55065 • Grand Junction, CO 81505 • (303) 245-9343 • FAX: (303) 245-5090



Lincoln DeVore, Inc.  
Geotechnical Consultants  
1000 West Fillmore St.  
Colorado Springs, CO 80907

August 22, 1994

TEL: (719) 632-3593  
FAX: (719) 632-2648

Ford Construction Co.  
P. O. Box 55065  
Grand Junction, CO 81505

Attn: Mr. Kelly Ford

Re: Hydrologic Analysis, Sleep-N-Aire Addition,  
2482 F Road, Grand Junction, Colorado

Dear Mr. Ford:

As requested, Lincoln DeVore has investigated runoff conditions at the proposed Sleep-N-Aire site at 2482 F Road (Patterson) in Grand Junction, Colorado. This analysis was completed in August, 1994, and consisted of analyzing the historic 2-year and 100-year runoff at the site outlet, together with the developed 2-year and 100-year runoff at the site outfall. The proposed internal drainage and parking area storage was computed to determine the holding capacity and means to allow after-development runoff from the site which will not exceed historic rates.

Scope and Sources:

The purpose of the analysis was to locate and size proposed outlets from the site which restrict outflow runoff to the equivalent historic rates. The analysis was based on the "Stormwater Management Manual", Public Works Department, City of Grand Junction, Colorado. We understand that this Stormwater Management Manual (SWMM) is in its final form, although some sections appear not to have been completed at this time. The results obtained following the Grand Junction criteria were checked using methods outlined in the Urban Storm Drainage Criteria Manual (UDFC), Vols. 1 and 2. Information concerning soil drainage characteristics was taken from Soil Conservation Service and U. S. Geological Survey publications, and was corroborated by information from geotechnical work performed in the area by Lincoln DeVore.

Coefficients for the Rational Method, n values and Intensity, Duration, Frequency Values used herein were taken from Appendices attached to the Interim Grading and Drainage Criteria, Grand Junction, Colorado. We understand that the Criteria requires design of outlets for the 2-year runoff and the 100-year runoff so that the equivalent "historic" flow is not exceeded through

this range. The project site and contributing basin areas are small. Therefore, the modified Rational Formula method was used for these calculations.

Site Description:

The site is located in the western part of the City of Grand Junction, Colorado, approximately one-quarter mile east of the Mesa Mall. More specifically, the site is located on the north side of F Road (Patterson) with an address of 2482. This is in the Southeast Quarter of Section 4, Township 1 South, Range 1 West of the Ute Principal Meridian. The project site consists of a 5 plus acre tract on a mild, low gradient slope down toward the southwest, into F Road. The area was originally fed by rainfall over a relatively large area. Most of this area is cut off by larger canals northeast of the site. Drainage on the smooth slope around the project site is diverted by a number of smaller ditches placed along property lines. Predevelopment topography forced runoff into overland sheet flow and numerous shallow swales. Concentration time for drainage in the area is historically slow.

Past development of the area has placed small ditches along property lines for a number of purposes. These ditches tend to direct flow in the area. Specifically on the project site, these ditches prevent the entry of off-site origin water. Therefore, runoff derived only from rainfall on the 5 plus acre project site was considered in the attached calculations. The topography is such that the project site is a single runoff basin and the tract can be easily divided into developed and undeveloped portions.

The site consists of a tract approximately 861 feet long (north to south) and 264 feet wide (east to west). The tract faces on F Road along its south property line. The south 150.625 feet of the tract has been developed in the past by placing a building, a paved parking area and planted areas on this portion of the tract. It is now proposed that a tract 100 feet deep (north to south) be placed immediately north of the previously developed area. This combined development will leave the north 610 feet of the total tract undeveloped. Observations indicate that a drainage pipe was originally placed in the developed area. It can be noted that this drainage pipe construction does not appear to have been designed to fit present SWMM, Grand Junction criteria. Therefore, it will require change.

**Soil Conditions:**

The soils on the site are described by the U.S.G.S. as residually weathered clays derived from the Mancos Shale, occasionally covered with Piedmont deposits consisting of clayey sands and gravels. The Soil Conservation Service describe the soils as being variations of Billings Silty Clay Loam (BC) (0-2%) with some very minor Ravola Loams in the area of the project site. Their classification shows these soils on the project site as being in Hydrologic Group C. Coefficients for use in both the "historic" analysis and in the developed analysis were taken from the Grand Junction SWMM Criteria based on the S.C.S hydrologic classification of "C". The proposed development on site will cover most of the south 250 feet of the site with roof areas, paved areas and landscaped areas. The north 610 feet of the tract is not proposed for development at this time, and will remain in the undeveloped condition. Coefficients for each of these conditions were taken from the Grand Junction SWMM Criteria.

**Historic Runoff:**

The time of concentration for each area of the project site was calculated based on overland flow not to exceed 300 feet, added to swale flow times to the outfall point at Patterson. In the case of the undeveloped area, the concentration time was also calculated on the distance to developed areas. Examination of the site indicated that most runoff has been either sheet flow (overland) or concentrated flow in shallow, relatively wide swales on the shallow slope. Therefore, the time of concentration for "historic" flow was relatively long to the point of outfall. The historic peak flow as found by the modified Rational Formula varied from 0.58 cfs for the 2-year runoff to 2.78 cfs for the 100-year runoff.

**Developed Runoff:**

The time of concentration for the project site runoff in the developed condition is relatively short, since most of the area will be paved or roofed. In addition, the pavement gradients have been increased in places. In this manner, the time of concentration is reduced in the developed and to be developed areas. The coefficients for the formula were increased to fit the paved and landscaped conditions, and were taken from the Grand Junction SWMM. The developed peak flows produced by the areas presently developed and to be developed, found by the modified Rational Formula, varied from 2.13 cfs for the 2-year runoff to 5.80 cfs for the 100-year runoff.

The geometry of the project site was maintained as close to that existing and planned as possible. This proposed plan was given to Lincoln DeVore for our use in developing the proper sizes for runoff systems. Other than some minor changes in grade, the plan was used as given to us. In this manner, the desired site layout may be preserved with few changes.

As designed, the parking area is now constructed as a basin, and will be added to as an addition to the basin. This "basin" is graded to a subsurface pipe outfall system leading to the City drainage system beneath F Road. The pipe system is presently constructed as an 8-inch PVC outlet pipe. It is proposed that this pipe be entered at two levels, with one opening covered by a plate orifice sized for the 2-year flow and the second covered with a plate orifice sized for a 100-year flow minus the existing 2-year flow. The runoff will collect in the parking area and be carried by surface grades to a drop inlet near the sidewalk along F Road, covered with a City Standard "street strength" grated cover, then entering the City sewer system. The volumetric capacity of the parking lot was computed at ascending elevations of 0.2 feet, from the grate at elevation 98.32 to the high point maximum elevation of 100.20 feet. These elevations are based on the existing floor elevation on the site of 101.0 feet.

The drop inlet must be constructed as a two-level grated inlet to function properly. The lower grate will act as the 2-year runoff outfall while a second, higher grate will act as the 100-year runoff outfall. The existing catch basin and grate cannot, in our opinion, be adapted to such split usage. Therefore, we recommend that a new collection drop inlet box be constructed to meet the necessary conditions. While this box is being removed and rebuilt, we recommend that the adverse section of drain extending to the City system be replaced so that a positive flow line exists.

The required size of the plate orifice to cover the pipe system outfall was found to be a round orifice with a diameter of 2.85 inches. This will provide "historic" discharge at the 2-year runoff level (or less) until water level in the parking lot reaches the critical elevation of 99.8 feet. The second level of the outfall box shall be placed at the elevation of 99.8 feet. A pipe in this section, entering the main outfall pipe, shall be covered with a plate containing an orifice 5.77 inches in diameter. This will allow the 100-year flow from the project site, together with the first orifice described. The double orifice system will maintain runoff from the site to the historic levels between the 2-year and 100-year runoffs.



Conclusions:

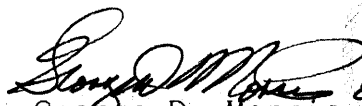
In our opinion, the system described in the report above will maintain the "historic" runoff from the site for storms ranging from very small to a 100-year runoff, and will fit the geometry of the site.


Also, in our opinion, the developed site as shown on the attached map is capable of storing the runoff for the required range of storms with overflow only at the points designated and sized.

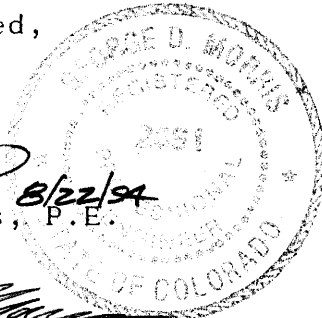
This opportunity to be of professional service is sincerely appreciated. If you have any questions or require additional information, please feel free to contact the undersigned engineer at your convenience.

Respectfully submitted,

LINCOLN DeVORE, INC.

  
By: George D. Morris, P.E. 8/22/94

  
Reviewed by: Edward M. Morris



GDM/lab  
LD Job No. 81321-J  
Enclosures  
cc: Lincoln DeVore, Grand Junction

APPENDIX

**Soils Data:**

1978 SCS Grand Junction Area soils and 1958 SCS inside City Limits Report.

Site soils listed as BC with minor Rf in area.

Bc - Billings Silty Clay Loam (0-2%), moderate expansion, lean clay (CL), low permeability, moderately alkaline, prone to piping and frost heave, Hydro Class C and D. Not listed as hydric.

**Runoff Notes:**

The site is located on a low, relatively smooth slope down to the southwest. The general slope has been cut in the past by numerous small drainage and possibly irrigation ditches. These are along property lines--specifically the property lines around this site. The presence of these ditches has recently turned off-site runoff away from the site. The on-site runoff is therefore the defining runoff.

Historic flow across the site therefore appears to have consisted of runoff caused by on-site rainfall only. Developed flow is also to be restricted to on-site rainfall. The developed area of the site is relatively small. It consists of the existing building and paved area at the south end of the site, facing F Road (Patterson). The proposal is to add a building and paved area of approximately the same size to the southern portion of the site. The north portion of the site is to remain in the native state for the time being.

This type of development is such that the full tract cannot really be considered since it may develop in the same progression or entirely differently. It therefore appears to be most efficient to store the north area historic flow in a storage area with no outfall. The developed runoff will be stored in the parking area and outletted to the City sewer system in F Road.

**Summary of Areas:**

Roof Area 1 - drains to Landscaped Area, then to outlet	- 2,700 ft <sup>2</sup> = 0.06 acre
Roof Area 2 - drains to north, then to parking area	- 7,425 ft <sup>2</sup> = 0.17 acre
Roof Area 3 and pavement - collects all water eventually	- 43,996 ft <sup>2</sup> = 1.01 acre
Landscaped Area - mostly along F Road	- 4,138 ft <sup>2</sup> = 0.095 acre
Bare traffic area, but unpaved	- 8,059 ft <sup>2</sup> = 0.185 acre
Total to be developed (including already developed)	= 1.52 acres
North Tract - Undeveloped	- 161,100 ft <sup>2</sup> = 3.70 acres

**Historic Flow:**

Assumptions

1. Primary parking must be combined with existing parking for total storage.
2. Undeveloped area prevented from flowing onto the developed area by no outlet storage.

By Grand Junction SWMM:

Historic flow rates calculated by:  $C_2 = 0.20$  and  $C_{100} = 0.35$ .

Front area (developed and to be developed): L to drain = 280' - predevelopment (final)  
City Max = 300'

$$To_2 = 1.81 (1.1-0.2) \times 280^{.5} \times .66 = 31 \text{ min. and } I = .86$$

$$To_{100} = 1.8 (1.1-.35) \times 280^{.5} \times .66^{-.33} = 26 \text{ min. and } I = 2.46$$

$$\text{Then: } Qh_2 = .20 \times .86 \times 1.52 = 0.26 \text{ cfs}$$

$$Qh_{100} = .35 \times 2.46 \times 1.52 = 1.31 \text{ cfs}$$

For checking purposes, the north undeveloped tract along provides the following values (Historic):

Area = 3.70 ac., L = 610' - City of Grand Junction Max. = 300' - assume storage on/tract.

$$\text{Then: } To_2 = 1.8 (1.1-.2) \times 300^{.5} \times .66^{-.33} + 310/.95 = 32.2 + 5.4 = 37.6, \text{ use } 38 \text{ min.}$$

$$I_2 = 0.78$$

$$To_{100} = 1.8 (1.1-.35) \times 300^{.5} \times .66^{-.33} + 310/.95 = 26.8 + 5.4 = 32.2, \text{ use } 33 \text{ min.}$$

$$I_{100} = 2.15$$

$$Qh_2 = .20 \times .78 \times 3.70 = 0.58 \text{ cfs}$$

$$Qh_{100} = .35 \times 2.15 \times 3.70 = 2.78 \text{ cfs}$$

**Developed Flow, Total Area:**

for Total Area L = 861' (300' = 561')

$$To_2 = 32.2 + 561/1.25 = 39.7, \text{ use } 40 \text{ min. } I = 0.76$$

$$To_{100} = 26.8 + 561/1.25 = 34.3, \text{ use } 35 \text{ min. } I = 2.09$$

Check combining all areas: Composite C - Total Tract

	<u>Size</u>	<u>C<sub>2</sub></u>	<u>C<sub>100</sub></u>
Roof and Pavement	1.24 ac.	0.93	0.95
Landscaped Area	.095 ac.	0.45	0.52
Bare Traffic Area	.185 ac.	0.75	0.82
Undeveloped	<u>3.70</u> ac.	0.36	0.46
Totals	5.22 ac.		

$$C_2 = 1.24 \times .93 + .095 \times .45 + .185 \times .75 + .36 \times 3.70/5.22 = 0.51$$

$$C_{100} = 1.24 \times .95 + .095 \times .52 + .185 \times .82 + 3.70 \times .46/5.22 = 0.59$$

$$Q_{TOT2} = .51 \times 0.76 \times 5.22 = 2.02 \text{ cfs}$$

$$Q_{TOT100} = .59 \times 2.09 \times 5.22 = 6.44 \text{ cfs}$$

For Total Tract, Composite C = Developed Condition in Front:

	<u>Size</u>	<u>C<sub>2</sub></u>	<u>C<sub>100</sub></u>
Roof and Pavement	1.24 ac.	0.93	0.95
Landscaped Area	.095 ac.	0.45	0.52
Bare Traffic Area	.185 ac.	0.75	0.82

$$C_2 = (.93 \times 1.24 + .45 \times .095 + .75 \times .185)/1.52 = .878 - \text{use } .88$$

$$C_{100} = (.95 \times 1.24 + .52 \times .095 + .82 \times .185)/1.52 = .907 - \text{use } .91$$

Longest L for travel to outfall = 370' > 300' (G.J. City Max.), so must use A/C ditch.

$$Tc_2 = 1.8 (1.1 - .88) \times 300^{.5} \times .66^{-.33} + 60/2.9 = 8.4 \text{ min.}, \text{ use } 9 \text{ min. } I = 1.59$$

$$Tc_{100} = 1.8 (1.1 - .91) \times 300^{.5} \times .66^{-.33} + 60/2.9 = 7.2+ \text{ min.}, \text{ use } 8 \text{ min. } I = 4.19$$

$$\text{Theoretically, Max qp is then: } qp_2 = .88 \times 1.59 \times 1.52 = 2.13 \text{ cfs}$$

$$qp_{100} = .91 \times 4.19 \times 1.52 = 5.80 \text{ cfs}$$

By Appendix N, Grand Junction SWMM:

$$\text{2-year Storm Data: } Q_r = .82 \times .26 = .213$$

$$\text{and: } Td_2 = [633.4 \times .88 \times 1.52 / (.213 - (.213^2 \times 9) / (81.2 \times .88 \times 1.52))]^{.5} - 15.6 = 48 \text{ min.}$$

$$Id_2 = 40.6/63.6 = 0.638 \text{ "/hr.}$$

$$Qd_2 = .88 \times 1.52 \times .638 = .853 \text{ cfs}$$

$$K_2 = 38/9 = 4.22$$

$$V_2 = 60 [.853 \times 48 - .213 \times 48 - .213 \times 9 + 4.22 \times .213 \times 9 / 2 + .213^2 \times 9 / (2 \times .853)] = 1944.93 \text{ ft}^3$$

See page 4 for volume, Max. Elev. = 99.80'.

$$\text{100-year Storm Data: } Q_r = .82 \times 1.31 = 1.074$$

$$\text{and: } Td_{100} = [1832 \times .91 \times 1.52 / (1.074 - (1.074^2 \times 8) / (213 \times .91 \times 1.52))]^{.5} - 17.2 = 32 \text{ min.}$$

$$Id_{100} = 106.5/49.3 = 2.16 \text{ "/hr.}$$

$$Qd_{100} = .91 \times 1.52 \times 2.16 = 2.99 \text{ cfs}$$

$$K_{100} = 26/8 = 3.25$$

$$V_{100} = 60 [2.99 \times 32.1 - 1.074 \times 32.1 - 1.074 \times 8 + 3.25 \times 1.074 \times 8 / 2 + 1.074^2 \times 8 / (2 \times 2.99)] = 3648 \text{ ft}^3$$

See page 4 for volume, Max. Elev. = 99.96'.

Manhole - orifice must be at least radius above flow line of curb box.

This = 97.99 + 4" for 1/8" PVC = 98.32 -  $\bar{C}$  orifice for 2-year storm.

Top of outlet and grate = 98.86 start with this elev. for major storage.

98.86 - 98.32 = 0.54' - Top of grate to  $\bar{C}$  orifice. OK - assume CB = 30" pipe.

So:

Location	Elev.	Formula	Cum. Volume
Flow Line			
Curb Outlet	97.99	--	--
$\bar{C}$ pipe & orifice	98.32	--	--
Top outlet & grate	98.86	start with volume of box above orifice	3 ft. <sup>3</sup>
(edge A/C=99.25)	99.40	.54/3 [8 + 981 + (8 x 981) <sup>.5</sup> ]	197 ft. <sup>3</sup>
	99.60	.2/3 [981+4325 + (981 x 4325) <sup>.5</sup> ]	688 ft. <sup>3</sup>
	99.80	.2/3 [4325+8506 + (4325x8506) <sup>.5</sup> ]	1948 ft. <sup>3</sup>
	100.00	.2/3 [8506+13232 + (8506x13232) <sup>.5</sup> ]	4104 ft. <sup>3</sup>
	100.20	.2/3 [13232+18912 + (13232x18912) <sup>.5</sup> ]	7302 ft. <sup>3</sup>
Max. possible	100.40	.2/3 [18912+25189 + (18912x25189) <sup>.5</sup> ]	11697 ft. <sup>3</sup>

Now: 2-year storm -  $\bar{C}$  orifice elev. = 98.32, Max 2-year storm level = 99.80

Then 99.80 - 98.32 = 1.48' head

$$Q = C A (2gH)^{.5}$$

$$.26 = .6A 9.7628$$

$$A = .0444 \text{ ft}^2 \text{ or } 6.3916 \text{ in}^2 \quad d = 2.85" \text{ orifice}$$

OK for 100-year storm, top of entry must be set at 99.80. Could be at Point A or at Point B, cost would be comparable. For now, put it at Point A.

Then grate and rim elev. = 99.80,  $\bar{C}$  pipe = 98.23,  $\bar{C}$  pipe (orifice) = 98.56

Theoretical outlet 2 head (in outlet) = 99.80-98.23 = 1.57 then storage is actually 8 ft<sup>3</sup> but difference is insignificant.

So: Theoretical high water elev. = 99.6

$$99.96 - 98.32 = 1.64' \text{ head in Outlet 1}$$

$$99.96 - 98.56 = 1.40' \text{ head in Outlet 2}$$

$$\text{Outlet 1: } Q = .6 \times .0444 \times 10.277 = 0.274 \text{ cfs and } 1.31 - .274 = 1.036 \text{ cfs for \#2}$$

$$\text{then Outlet 2: } 1.036 = .6 \times A \times 9.495, \quad A = 0.1819 \text{ ft}^2 = 26.1864 \text{ in}^2, \quad d = 5.77"$$

**Storage Area for Undeveloped Area:**

- 100.6 - 1600 ft<sup>2</sup>
- 100.8 - 5400 ft<sup>2</sup>
- 101.0 - 9500 ft<sup>2</sup>
- 101.2 - 15600 ft<sup>2</sup>

Pond:

Elev.	Formula	Cum. Volume
100.8	$.2/3 [1600+5400+ (1600 \times 5400)^{.5}]$	663 ft. <sup>3</sup>
101.0	$.2/3 [5400+9500+ (5400 \times 9500)^{.5}]$	1471 ft. <sup>3</sup>
101.2	$.2/3 [9500+15600+ (9500 \times 15600)^{.5}]$	2485 ft. <sup>3</sup>

$Q_{P_2} = 0.58$  cfs

$Q_{P_{100}} = 2.78$  cfs

Trial  $Q_{P_2} \sim Q_r = .82 \times .58 = .476$   
and 2-year storm

$T_{d_2} = [633.4 \times .2 \times 3.70 / (.476 - (.476^2 \times 38) / (81.2 \times .2 \times 3.70))]^{.5} - 15.6 = 21.93$ , use 22 min.

$I_{d_2} = 40.6 / 37.6 = 1.08$ "/hr.

$Q_{d_2} = .2 \times 3.70 \times 1.08 = .80$  cfs

$K_2 = 38 / 38 = 1.00$

$V_2 = 60 [.80 \times 22 - .476 \times 22 - .476 \times 38 + 1 \times .476 \times 38 / 2 + .476^2 \times 38 / (2 \times .80)] = 208$  ft<sup>3</sup>  
Elev. = 100.66'

Trial  $Q_{P_{100}} \sim Q_r = .82 \times 2.78 = 2.280$   
and 100-year storm

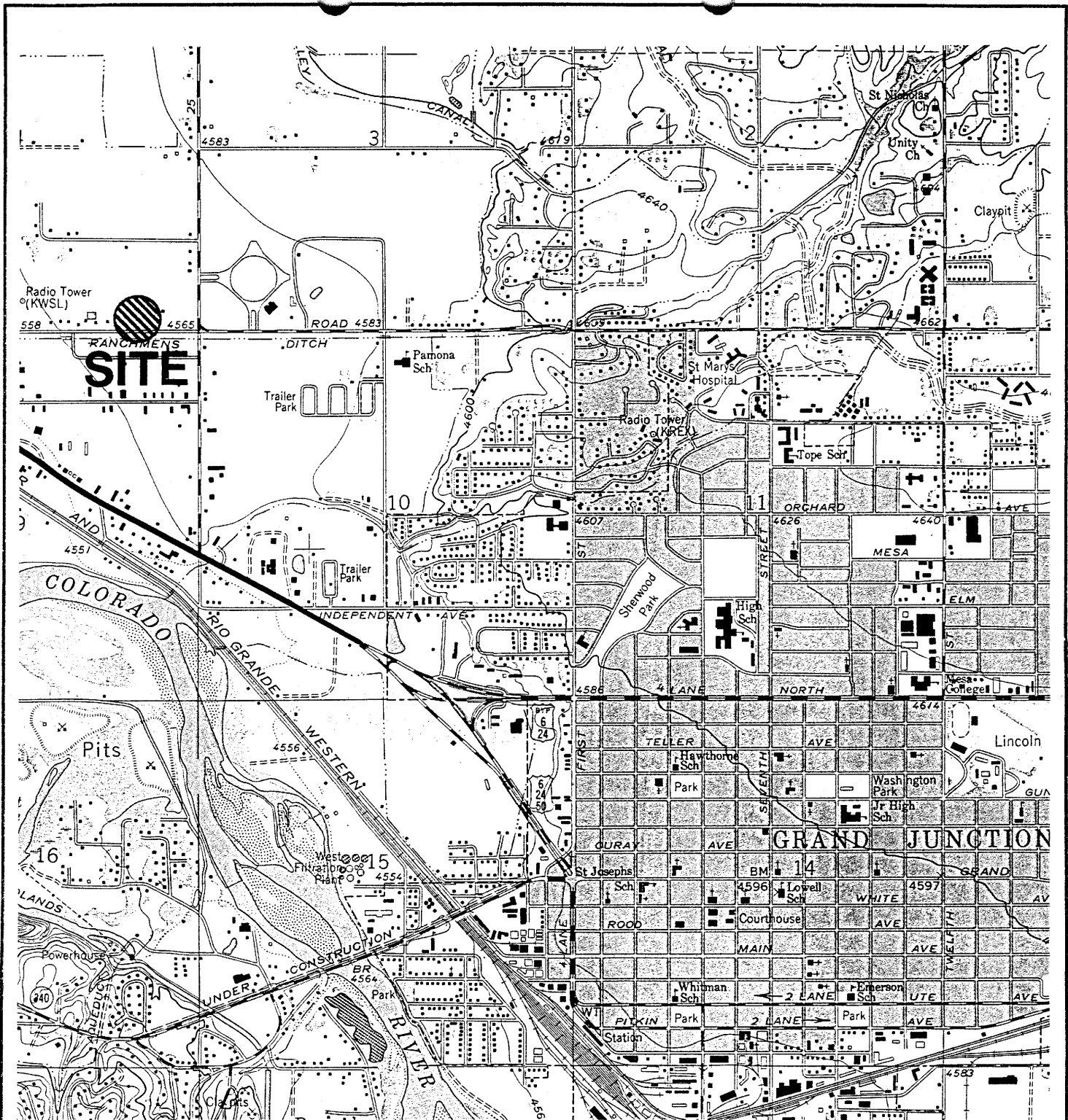
$T_{d_{100}} = [1832 \times .35 \times 3.70 / (2.28 - (2.28^2 \times 33) / (213 \times .35 \times 3.70))]^{.5} - 17.2 = 20.63$ , use 21 min.

$I_{d_{100}} = 106.5 / 38.2 = 2.79$ "/hr.

$Q_{d_{100}} = .35 \times 3.70 \times 2.79 = 3.61$  cfs

$K_{100} = 33 / 33 = 1.00$

$V_{100} = 60 [3.61 \times 21 - 2.28 \times 21 - 2.28 \times 33 + 1 \times 2.28 \times 33 / 2 + 2.28^2 \times 33 / (2 \times 3.61)] = 844$  ft<sup>3</sup>  
Elev. = 100.85'



Courtesy U.S.G.S.

NORTH

Scale: 1"=2000'



Lincoln DeVore, Inc.  
Geotechnical Consultants

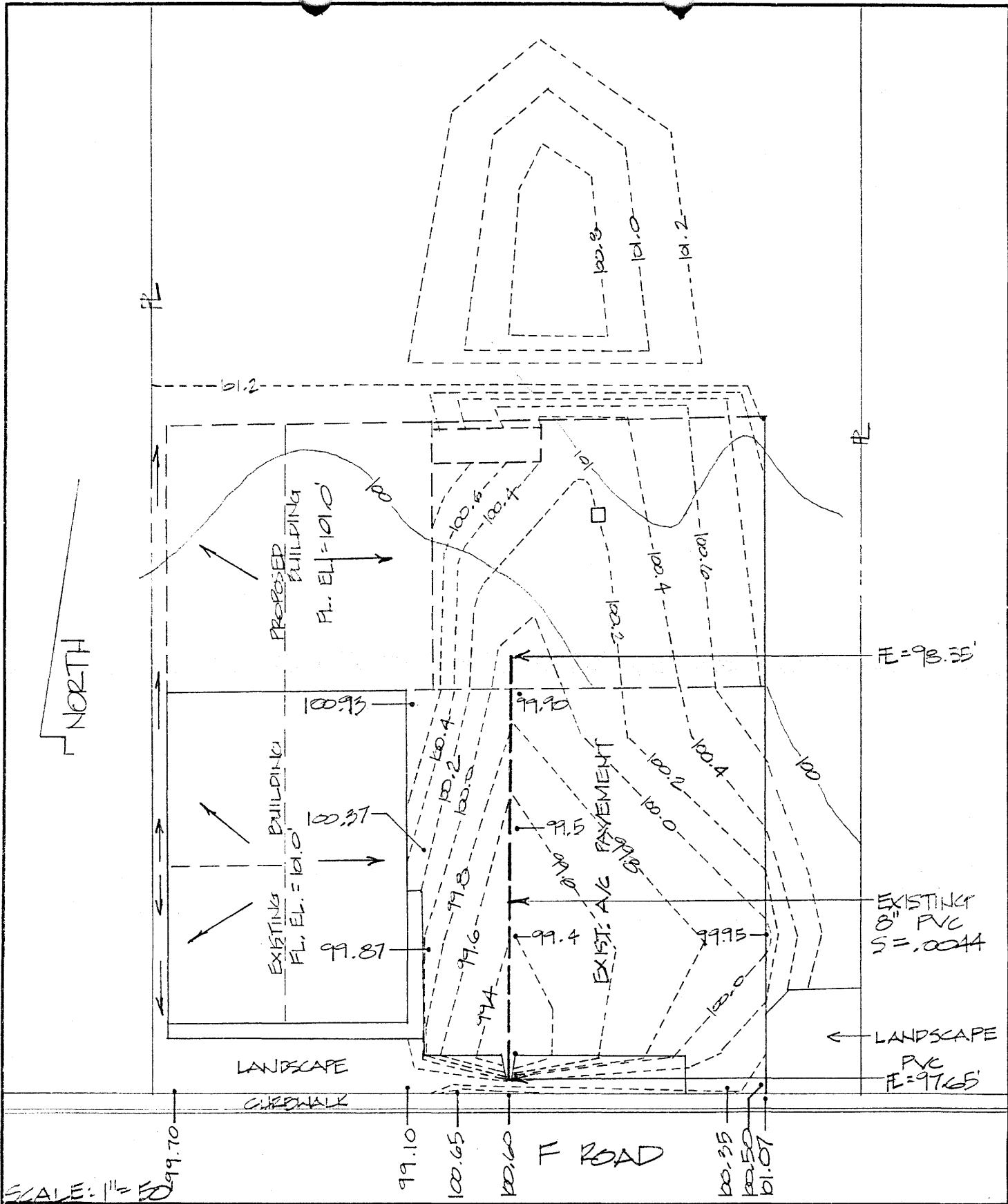
Vicinity Map

Ford Construction Company

DATE 8/94

JOB NO. 81321-J

DRAWN KD



SCALE: 1" = 10'



Lincoln DeVore, Inc.  
Geotechnical Consultants

Site Grading Plan - 2482 F Road

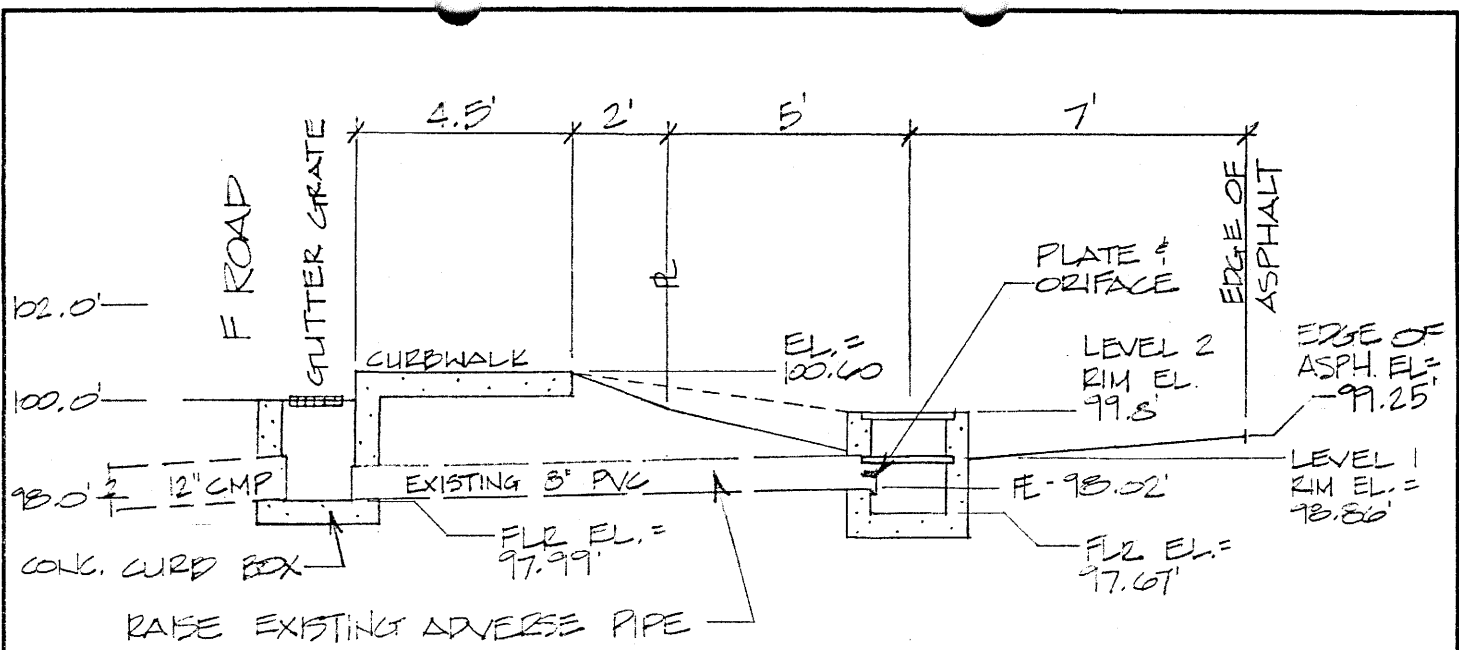
Ford Construction Company

DATE 8/94

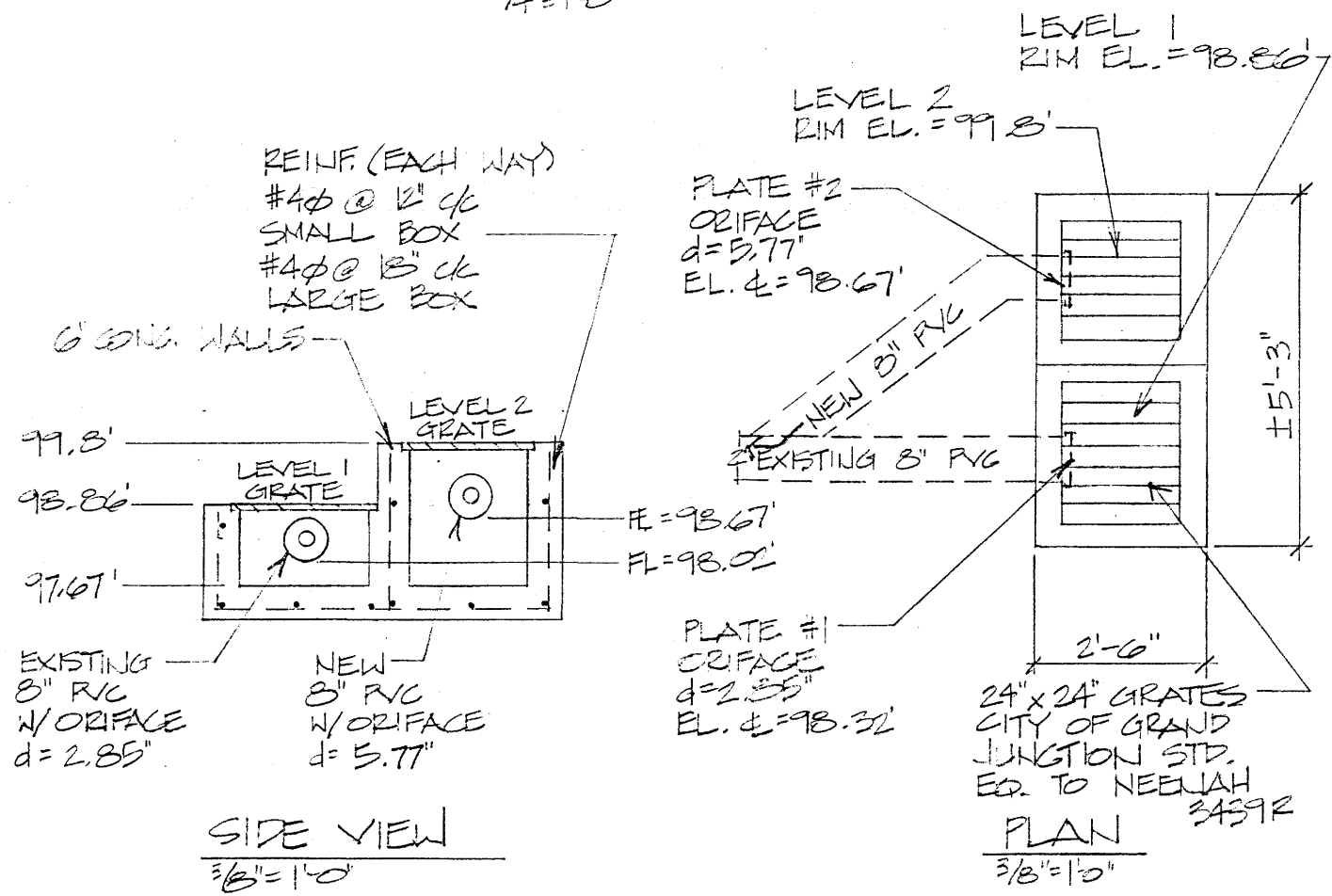
JOB NO. 81321-J

DRAWN KD





ELEVATION  
1/4" = 1'-0"



SIDE VIEW  
3/8" = 1'-0"

PLAN  
3/8" = 1'-0"



Lincoln DeVore, Inc.  
Geotechnical Consultants

Outfall Details - 2482 F Road		
Ford Construction Company	DATE 8/94	
JOB NO. 81321-J	DRAWN KD	

MEMORANDUM

TO: Randy Booth  
FROM: Kathy Portner *VP*  
DATE: Oct. 28, 1994  
RE: Improvement guarantee for Sleep-n-Aire

The developers of Sleep-n-Aire have met all the requirements of the Improvements Agreement for drainage. Please refund Ford Construction's deposit of \$1,480.00. The check can be mailed to Ford Construction Company, Inc., P.O. Box 55065, Grand Junction, CO 81505.

SPR-1994-124

✓H site  
on 11-15-99  
Trailer gone.  
4B

file copies

# TEMPORARY USE PERMIT

USES UNDER 500 SQUARE FEET IN SIZE AND/OR DISPLAY AREA

Community Development Department  
250 North 5th Street  
Grand Junction, CO 81501  
(970) 244-1430 FAX (970) 244-1599

Permit # \_\_\_\_\_  
Fee \$10.00 pd cash  
4B

PROPERTY OWNER: Sleep n Aire Mattress Co.  
 ADDRESS: 2482 F RD Grand Junction, Co 81505  
 PHONE: 245-8426  
 APPLICANT'S NAME: Michelle Damans  
 ADDRESS: 2278 Greenbriar Ct. GJ Co 81503  
 PHONE: 970-241-2433  
 LOCATION OF PROPERTY: 2482 F RD GJ Co 81505  
 TAX PARCEL #: \_\_\_\_\_  
 TYPE OF USE: Semi truck-trailers for truck load sale  
 PERIOD OF TIME FOR WHICH PERMIT IS REQUESTED: 10-12-99 THRU 11-12-99  
 DAILY HOURS OF OPERATION: 9-6 Mon-SAT 1-5 Sun  
 OTHER: N/A

\*\*\*\*\*

### FOR OFFICE USE ONLY

ZONE: H.O. SETBACKS: F 65' S 15' R 15'  
 SPECIAL CONDITIONS: \_\_\_\_\_

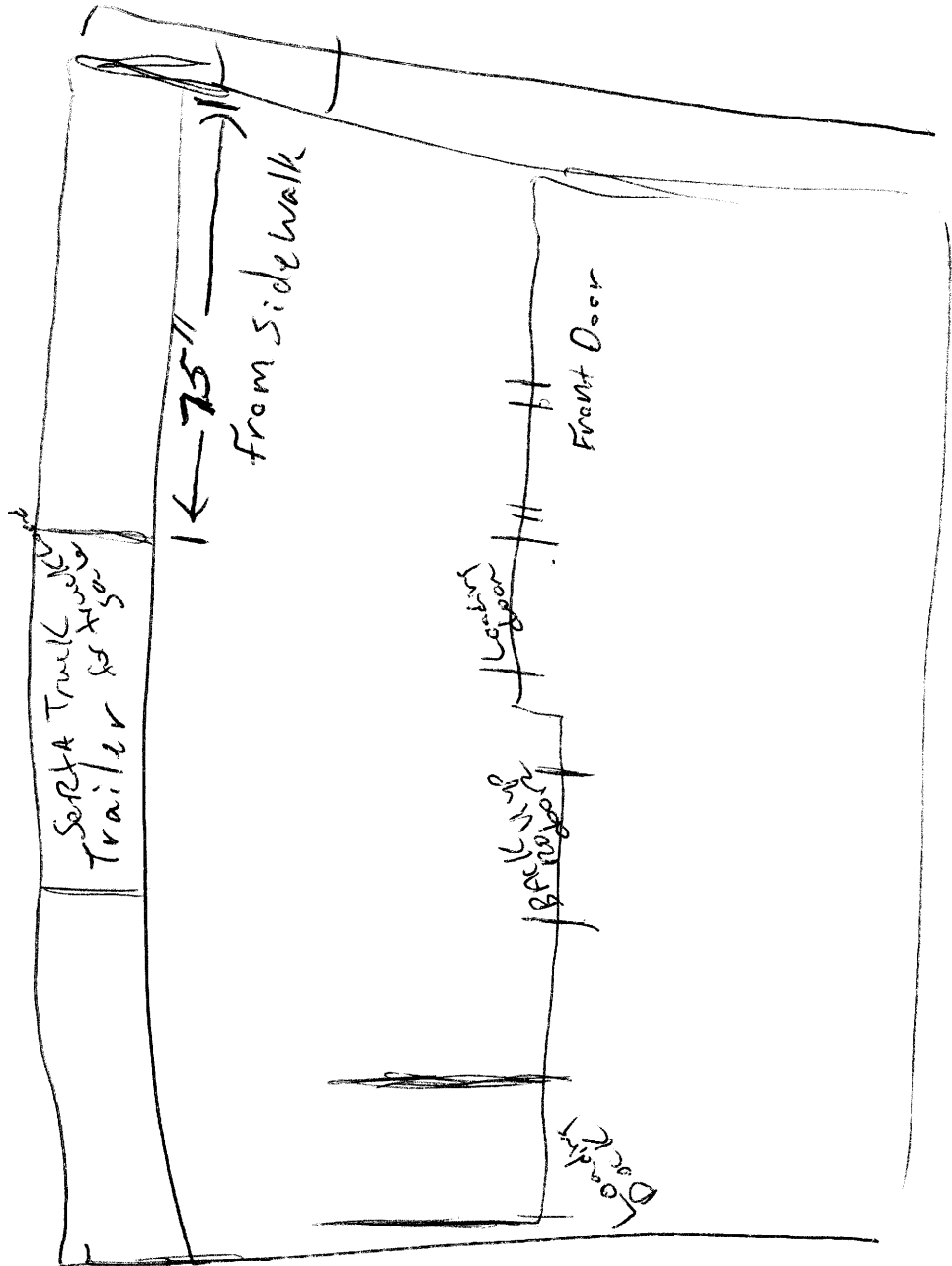
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**Temporary Use or Structure Definition:** Any use or structure placed on a parcel of land for a period exceeding forty-eight (48) hours and less than four months and as further specified in Section 4-13. Temporary uses and associated temporary structures shall have no permanent hook-ups to utility services. See temporary use criteria in Section 4-13.

The Temporary Use Permit is a mechanism by which the City may allow a use to locate within the City on a short-term basis and by which seasonal or transient uses can be allowed. Prior to conducting or establishing a temporary use or structure, approval of a Temporary Use Permit by the Community Development Department is required.

4-13-1 Uses Permitted - An allowed use in all non-residential zone districts or as indicated in Section 4-3-4, may be a Temporary Use, provided that:

A. Compatibility with Surrounding Area. The allowance of a Temporary Use and/or Temporary Structure shall not be detrimental to the public health, safety and general welfare, and the use shall be consistent with the purpose and intent of this Code and the specific zoning district in which it will be located and the use shall be compatible in intensity, characteristics and appearance with existing land uses in the immediate vicinity of the temporary use; and the use, value and qualities of the neighborhood surrounding the temporary use shall not be adversely affected by the use or activities associated with it. In addition to those listed herein, factors such as location, noise, odor, light, dust control and hours of operation may be considered; and



A handwritten signature or set of initials, possibly "M/T", written in dark ink.

TELEPHONE (970) 245-8426  
2482 F ROAD • GRAND JUNCTION, CO 81505

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

\*\*\*\*\*

Original  
Do NOT Remove  
From Office  
Q24 94

West 4 acres of East 3/4ths of S $\frac{1}{2}$  SE $\frac{1}{4}$  SE $\frac{1}{4}$  of Section 4, Township 1 South, Range 1 West of the Ute Meridian, Except road right of way granted to City of Grand Junction, a Municipal Corporation by instrument recorded July 28, 1988 in Book 1703 at page 350, Mesa County, Colorado

ORIGINAL