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File # 984 - 0007

Project Name Text Amendment – Conditional Use Definition

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 in some instances, not all entries designated to be scanned by the department 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 provided.</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>			
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PRELIMINARY PLAN
PROJECT NARRATIVE FOR
SUN CREST VILLAS
(FORMALLY SUNSET VALLEY VILLAGE)

I. INTRODUCTION

Sun Crest Villas is located north of F Road and between 24 1/2 Road and 25 Road. The project is proposed as a retirement community which will be marketed to serve existing residents as well as other individuals living outside of Mesa County. The objective of this phase of the project is to obtain preliminary plan approval from the City of Grand Junction.

II. OWNERSHIP AND PROJECT SIZE

The project is comprised of four separate parcels which are currently owned by the following three parties:

Table 1 - Ownership

- A. F Road Development Corporation
 Parcels 2945-044-00-061
 2945-044-00-055
- B. Professional Investors of Grand Junction
 Parcel 2945-044-00-065
- C. Paul and Frances Kern
 Parcel 2945-044-056

The property is currently being consolidated and will be developed by PH Management Services. The Preliminary Plan entails developing 27.2 acres exclusive of the required F Road and F 1/4 Road R-O-W and approximately one-half an acre will be retained by the Kern family. Table 2 illustrates the project size of the various parcels.

PROJECT SIZE

<u>ZONE</u>	<u>PARCEL</u>	<u>SIZE/ACRES</u>
PR-17	055	14.3415
	061	1.9836
	065-RV	.9657 With Street
	056-Without Kern	9.0143
	SUBTOTAL:	<u>26.3051</u>
PB	065	.8788 With Street
	TOTAL NET PROJECT SIZE:	27.1839
	(056-Kern Lot)	(.5464)
	(Public Streets)	(1.1321)
	<u>TOTAL GROSS PROJECT SIZE:</u>	28.62

III. THE PRELIMINARY DEVELOPMENT PLAN

The plan was prepared after undertaking extensive planning, design and marketing research of retirement complexes in other communities. A photo album has been prepared which illustrates similar projects and constitutes the framework for designing the project. The photo album will be used to portray the key design concepts to City officials as well as to other interested individuals.

The plan entails the following features:

A. LAND USE

1. Residential - A total of 354 residential units will be constructed on 26.3 acres for a net density of 13.5 units per acre. One story multi-plex and three story mid-rise buildings represent the two types of units being proposed for construction. The housing mix by type is illustrated in Table 3.

Table 3 - Housing Mix

Type of Construction: One Story - Multi-plex

Type of Units	Number of Structures	A 624SqFt	B 716SqFt	C 904SqFt	D 942SqFt	Total Units
Fourplex	6	0	6	6	12	24
Fiveplex	3	0	3	3	9	15
Sixplex	22	0	22	22	88	132
Sevenplex	1	0	1	2	4	7
<u>TOTALS:</u>	32	0	32	33	113	178

Type of Construction: Mid-Rise - 3 Stories

Type of Units	Number of Structures	A 624SqFt	B 716SqFt	C 904SqFt	D 942SqFt	Total Units
Bldg. A	1	9	5	5	25	44
Bldg. B	1	9	5	5	25	44
Bldg. C	1	9	5	5	25	44
Bldg. D	1	9	5	5	25	44
<u>TOTALS:</u>	4	36	20	20	100	176

Table 3 - Continued

Type of Units	Number of Structures	<u>TOTAL PROJECT</u>				Total Units
		A 624SqFt	B 716SqFt	C 904SqFt	D 942SqFt	
VARIES	36	36	52	53	213	354
<u>PERCENT OF</u>						
<u>TOTALS:</u>	100%	10%	15%	15%	60%	100%

As shown above, it is anticipated that four different units will be available for purchase ranging in size from 624 to 942 square feet. Preliminary floor plans of a typical six-plex are submitted for review.

Mid-rise buildings A and B as well as the C and D buildings will be connected together with a centralized corridor. The corridor area will house mechanical and electrical facilities, meeting rooms, sitting areas and provide elevator service. However, the units will be constructed in a manner that will allow all four of the mid-rise structures to be constructed separately in order to pursue phased construction.

In addition, 176 covered parking spaces will be provided to serve the mid-rise units. A key design concept is to provide covered pedestrian walkways from the covered parking areas into the four respective buildings whereby residents are protected from inclement weather. The four covered parking areas will be constructed in a manner that will allow passive and/or active recreation on the rooftops. In other words, the rooftop lounging/recreation areas will be accessible from the second story of each mid-rise building.

2. Business Area - The Plan also includes a planned business lot which will accommodate a 4,860 square foot building. The building will provide retail, office and business uses that will mainly be oriented to serving the subdivision residents. The City's parking standard of providing 25 spaces has been met. It is impossible to list every conceivable commercial use, although the following types of businesses are possible and compatible:

- a.) All professional types of offices.
- b.) Educational and recreational facilities.
- c.) Human care treatment facilities.
- d.) Financial institutions.
- e.) Service businesses; barbershops, pharmacies, self-service laundries, etc.
- f.) Retail businesses (limited for selling goods inside a building) clothing, general merchandise, etc.
- g.) Restaurants - (No Drive-Up)

3. R-V Parking Center - A fully enclosed R-V parking area is proposed on .59 acres to serve the residents.

4. Recreation Area - a 2,800 square foot clubhouse and an outdoor swimming pool will be provided for the use of residents and guests. In addition, over 10 acres will be used as open space for both passive and active recreation activities.

The following table summarizes the project's land use patterns:

Table 4 - Land Use

<u>ITEM</u>	<u>ACRES</u>	<u>PERCENT.</u>
Building Footprints	8.94	32.9
Multi-Plex**	(8.58)	
Midrise	(.36)	
Streets	4.45	16.3
Parking	2.55	9.4
R-V Area	.59	2.2
PB Lot	.68	2.5
Open Space	<u>9.97</u>	<u>36.7</u>
	27.18	100.0

**The Multi-plex footprints include yards, driveways, patios and structures. Consequently, the amount of open space surpasses 9.97 acres.

B. STREETS AND PARKING

Four points of ingress and egress to public streets are proposed. The major entrance will be on F Road and entails constructing several landscaped medians for aesthetic reasons. Another F Road access point is also proposed but it is intended to only serve exiting traffic. Of course, if the main entrance is blocked, then emergency vehicles would use this alternative access location. The one-way street's main function is to insure that the thirteen units in the southwest leg of the project are not impacted by heavy traffic volumes. In other words, the traffic will be encouraged to use the main F Road entrance.

The other two curb-cuts are on F 1/4 Road which provide direct access to the mid-rise buildings. The plan has attempted to provide efficient access while simultaneously insuring that vehicular traffic does not negatively impact pedestrian safety and movement.

At this point in time, it is contemplated that private streets will be constructed and maintained by a Homeowners Association. The typical Right-of-Way will be 38 feet, which includes the following:

1. 26' paved asphalt mat with the City's base course and asphalt standards, etc. being fully met.
2. 2' curb and gutter on each side of the street.
3. 4' concrete sidewalk on each side of the street.

On street parking will be prohibited and enforced by the Homeowners Association. The posted speed limit on all streets is anticipated not to exceed 20 to 25 miles an hour.

Based on a conversation with the City Engineer, it may prove to be possible to have the streets dedicated to the City. There appears to be a general understanding that Sun Crest Villas design cannot incorporate the standard 55 foot local street cross section. This is primarily due to the fact that the parking of vehicles on the street is practically impossible due to the location of multiple driveways.

The difference between the City's local street standards and the streets proposed for the project are as follows:

Table 5 - Street Comparison

<u>ITEM</u>	<u>CITY</u>	<u>PROPOSED</u>
1. Driving lanes	22'	26'
2. Curb and Gutter	4'	4'
3. On Street Parking	12'	--
4. Landscaping Strip between Sidewalk and Curb and Gutter	8'	--
5. Sidewalks	8'	8'
6. Distance between Sidewalk and Property Line	1'	--
	<u>55'</u>	<u>38'</u>
TOTAL R-O-W		

As shown above, on-street parking and landscaping strips are proposed to be eliminated throughout the project. The Petitioner is willing to work with the City Engineer to define a feasible cross section design that would allow the City to accept the streets.

The project is based on innovative design concepts which do not lend themselves to the City's 55' R-O-W Street Standards. Above all else, special attention has been directed toward designing a project that provides good circulation patterns and ample off-street parking without asphalt and concrete overwhelming the streetscape. Through research in other communities, a 26' mat without on-street parking is used frequently in attached dwelling unit projects.

According to the Institute of Traffic Engineers Manual, a low volume of traffic is generated by retirement communities on a per unit basis. It is projected that only three trips per unit per day will occur compared to the ten trips customary to standard single family detached units.

The City's parking standards for residential and business uses will be adhered to. Each multi-plex unit will be served by a two-car carport with off-street visitor parking located within a short, walking distance from each unit. As previously mentioned, the mid-rise building(s) will also be served by covered parking with the majority of the parking being well screened from the project streets. It is anticipated that approximately 2.5 acres of the net project size will be devoted to off-street parking not including the multi-plex carports.

Table 6 illustrates that the plan meets the City's parking standards.

Table 6 - Parking Analysis

<u>Type of Units</u>	<u>Number Of Units</u>	<u>City Standard</u>	<u>Spaces Provided</u>
Four-Plex or Less	24	48	68
Five-Plex or More	330	594	687
Business	<u>1</u>	<u>25</u>	<u>25</u>
TOTAL:	355	667	780
Multi-Plex Driveways	- 356		
Mid-Rise Covered	- 176		
Off-Street Parking Lots-	223		
Business	- <u>25</u>		
TOTAL:	780		

C. UTILITIES

There is good utility infra-structure in F Road which will be used to serve the project. A more detailed description of the proposed utility network is shown on the submitted utility composite. All areas other than the location of buildings will be platted as utility, drainage and irrigation easements.

D. OPEN SPACE AND IRRIGATION SYSTEM

The project will be served with an underground, pressurized irrigation system that will use existing shares of Grand Valley Irrigation Company and Pomona Lateral Ditch Company shares. The property owners currently own approximately 30 shares of water.

All the open space and landscaped areas will be maintained by a Homeowner's Association who will hire a maintenance supervisor to maintain the grounds. The entire irrigation system including the maintenance of the current gravity flow systems will be operated by the Homeowner's Association.

The irrigation system will be constructed in a manner that only particular zones will be watered based on an established maintenance schedule. According to the Grand Valley Irrigation Company, a centralized management approach is the best technique and lessens the amount of water required. For example, it is anticipated that 15 shares of water are more than adequate if the storage and distribution systems are constructed and managed properly.

A masonry or wood fence, six feet in height will be constructed around the entire perimeter to insure that the project is screened and buffered from surrounding properties.

E. PROJECT DEVELOPMENT SCHEDULE

It is anticipated that the project will be constructed in six to seven phases over a nine-year period. Construction will commence in the fall of 1984. A seven-phase project could pursue the following schedule:

- PHASE I - 50 Multi-Plex units including Clubhouse and R-V storage.
- PHASE II - 52 Multi-Plex units.
- PHASE III - 44 Mid-Rise units.
- PHASE IV - 42 Multi-Plex units and Business Facility.
- PHASE V - 18 Multi-Plex units.
- PHASE VI - 88 Mid-Rise units.
- PHASE VII - 44 Mid-Rise units and 16 Multi-Plex units.

BSA



· ENGINEERS · PLANNERS ·

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Thomas P. Beck, P.E.
Daryl K. Shrum, A.P.A.

PROJECT NARRATIVE FOR
SUNSET VALLEY VILLAGE

I. INTRODUCTION

Sunset Valley Village is located north of F Road and between 24 1/2 Road and 25 Road. The project is proposed as a retirement community which will be marketed to serve existing residents as well as other individuals living outside of Mesa County. The objective of this phase of the project is to obtain the appropriate zoning designations from the City of Grand Junction who has recently annexed the property.

The applicants also request that the City reviews the attached Outline Development Plan which is only intended to illustrate a general graphic display of the project. The applicants have recently obtained the services of engineering, planning, marketing, architecture and landscape architecture firms. These consultants will be submitting detailed preliminary plans to the City in the near future. The ODP should only be considered as a procedure to display concepts and ideas. In other words, the plan will be modified and refined as necessary during the course of preparing the preliminary plans.

II. OWNERSHIP AND PROJECT SIZE

The project is comprised of four separate parcels which are currently owned by the following three parties:

Table 1 - Ownership

- A. F Road Development Corporation -
Parcels 2945-044-00-061
2945-044-00-055
- B. Professional Investors of Grand Junction -
Parcel 2945-044-00-065
- C. Paul and Frances Kern
Parcel 2945-044-00-056

The property is currently being consolidated and will be developed by PH Management Services. The four respective parcels contain a total of approximately 28.88 acres which is further described in Table 2.

Table 2 - Project Size

	<u>Gross SqFt</u>	<u>Less SqFt</u>	<u>Net SqFt</u>
PARCEL 2945-044-00-061	86,950	1,300-F Road R-O-W	85,650
PARCEL 2945-044-00-065	83,160	2,640-F ROAD R-O-W	80,520
PARCEL 2945-044-00-055	652,410	27,225-F 1/4 Rd. Road R-O-W	625,185
PARCEL 2945-044-00-056	435,660	18,150-F 1/4 Rd. Road R-O-W & 23,800 Kern Parcel	393,710
TOTALS:	1,258,180	73,115	1,185,065
ACRES:	28.88	1.68	27.2

As shown above, approxiamtely 1.7 acres will not be utilized by the development as a result of public street dedication and .55 acres being retained by the Kern Family.

III. Zoning Changes Requested

The property was recently annexed by the City of Grand Junction and technically no zoning designations exist on the four parcels. However, the County's districts and the proposed City zoning districts are as follows:

Table 2 - Zoning Changes Requested

<u>Parcel 2945-044-00-061</u>	- County Planned Business to Planned Residential - 17 Units per Acre
<u>Parcel 2945-044-00-065</u>	- Segment 1 - South 340' of Parcel County AFT To Planned Business Segment 2 - North 320' of Parcel County AFT to Planned Residential- 17 Units per Acre
<u>Parcel 2945-044-00-055</u>	- County Planned Business to Planned Residential - 17 Units per Acre
<u>Parcel 2945-044-00-056</u>	- County AFT to Planned Residential 17 Units per Acre

As shown on the attached surrounding property zoning map, the area has been zoned Planned Business, Commercial, Planned Residential-17 and AFT by the County while properties in the City limits are zoned Planned Business and Highway Oriented. The applicants request for Planned Residential - 17 and Planned Business coincides and is compatible with the existing surrounding zones.

The Northwest Task Force Report, dated February 1979, recommends that the subject parcels be used for businesses with the area north of F 1/4 Road being developed at 12 residential units or more per acre. The applicants believe that the Retirement Subdivision request is currently the highest and best use of the land and will be compatible with surrounding properties regardless if they eventually develop in a business or residential fashion. Their request actually represents a down zoning since a less intensive land use pattern will prevail (i.e. business to residential). The proposed zoning changes have been discussed with both the City and County Planning Staffs who have indicated their support of the project and the zoning necessitated.

IV. EXISTING LAND USE

The majority of land surrounding the project is currently vacant. There are a few older, single family homes situated on large lots as well as scattered commercial development south of F Road. The project is located approximately a quarter of a mile from the Mesa Mall and the Grand Junction Athletic Club. In addition, St. Mary's Hospital and the City's other major medical complexes are located within a few driving minutes of the project.

V. THE OUTLINE DEVELOPMENT PLAN

The Plan was prepared after undertaking extensive planning, design and marketing research of retirement complexes in other communities. A photo album has been prepared which illustrates similar projects and constitutes the framework for designing Sunset Valley Village. The photo album will be used to portray the key design concepts to City officials as well as to other interested individuals.

The ODP Plan incorporates the following features:

1. Combination of single-story townhouse multi-plexes (3 to 6 units per structure) and mid-rise buildings. (3 to 4 stories in height)
2. A retail and service business complex along F Road to primarily serve residents. Types of possible uses include:
 - a.) Restaurant
 - b.) Convenience and Drug Store
 - c.) Medical Offices
 - c.) Cleaning Establishment, etc.
3. Recreational vehicle storage area
4. A centralized clubhouse and pool area
5. Three points of ingress and egress to public streets are proposed. The major entrance will be on F Road while two curb-cuts will occur on F 1/4 Road. The first access point constructed will be the F Road location with the F 1/4 ingress/egress locations being constructed in latter project filings. Above all else, the project is to be a quiet, residential neighborhood and through traffic will be discouraged.
6. Additional public R-O-W will be dedicated to the City for F Road and F 1/4 Roads.
7. Private streets will be utilized and maintained by a Homeowners Association. The typical street will have a 30 foot right-of-way including a 26 foot mat and curb and gutter on each side. On street parking will be prohibited and strictly enforced by the Homeowners. The posted speed limit on all streets will not exceed 20 miles per hour.
8. According to the Institute of Traffic Engineers Manual, a low volume of traffic is generated in retirement communities on a per unit basis. It is projected that only three trips per unit per day will occur compared to the ten trips customary to standard single family detached units.
9. The City's parking standards for residential and business uses will be adhered to. Each multi-plex unit will be served by a two-car carport with off-street visitor parking located within a short, walking distance from each unit. The mid-rise building(s) will also be served by covered parking with the majority of the parking being well screened from the project streets. It is anticipated that approximately 14% of the gross project acreage will be devoted to off-street parking not including the multi-plex carports.

10. All outer boundaries will be fenced to insure buffering from adjoining uses.
11. All open spaces, yards, courtyards, medians and easements will be extensively landscaped. Open space areas including the recreation complex will account for 30 to 40% of the total project area. The property will be maintained by a Homeowners Association with an underground irrigation system being installed. The property currently has Grand Valley Irrigation Company and Pomona Ditch Lateral water shares.
12. Pedestrian walking paths will be constructed throughout the project and will mainly be located behind the units.
13. At this earlier stage of the project, it is impossible to provide structural detail. It is contemplated to use a Spanish architectural style with the units ranging from 625 to 980 square feet. An architect is currently designing the midrise and multi-plex units and this information will be submitted to the City with the Preliminary Plan. Approximately 30% of the project area is expected to be used for building footprints.
14. Signage and lighting details will be submitted with the Preliminary Plan.
15. An excellent utility infrastructure is located in F Road, 25 Road and 24 1/2 Road. Therefore, off-site utility extensions are expected to be minimal.
16. It is anticipated that the project will be constructed in three to four phases over a five-year period. Construction will commence in the fall of 1984. A more definite development schedule will be submitted in conjunction with the Preliminary Plan.

GENERAL LANDSCAPE AND IRRIGATION NOTES

1. A professional landscape architect will be retained to prepare a final landscape plan. The final landscaping plans will be reviewed with the City staff. The landscape architect will supervise the construction/implementation of the landscape plan.

2. Location of plants may vary due to the landscape architect and nursery specifications and the developer's desire to maintain existing trees and shrubs where possible.

3. A masonry or wood fence will be constructed around the perimeter of the project to assist in buffering and screening the project. No other fences or walls will be constructed without the written permission of the Homeowners Association and/or Architectural Control Committee.

4. Open space areas will be treated with a bluegrass blend, ground cover, shrubs, flowers and trees. Weed growths will be controlled during and after construction.

5. Bluegrass areas shall be a blend of at least three improved varieties of bluegrass and be irrigated by automatic sprinkler system. If BB is to be seed, it shall be drilled or hydromulched at a rate of 2-1/2 pounds of pure live seed per 1,000 square feet.

6. Areas around all trees and shrubs and under bluegrass-blend grass shall have soil improved by spreading manure at a rate of two cubic yard per 1,000 square feet and ripped in two directions to a depth of eight inches.

7. All tree and shrub beds to be mulched with a two-inch deep layer of wood chips or pole peelings.

8. All trees and shrubs to be well watered once a month for the first 18 months, then watering to commence at one to two month intervals.

9. All areas planted to sedum shall be fine graded so that when 1 1/2 inch minimum layer of peat moss (or finely ground bark) mulch is applied around ground cover plants, top of mulch layer shall be one inch below top of adjacent curbs, walks or steel edging.

10. All shrub areas shall be graded so that when rock is installed in a minimum three-inch layer, top of rock layer is one inch below top of adjacent curbs, walks or edging.

11. Rock (3/4 inch river rock) shall be installed in a minimum three inch layer over 6-mil white polyethylene and shall cover the ground in all shrub areas. Plastic shall be omitted in the plant well area (18 inch diameter) of all shrubs and (24 inch diameter) of all trees, but rock shall be installed in the plant well areas.

12. Where trees and shrubs are planted along curbs and walks; shrubs shall be planted no closer than 18 inches to any curb, walk, edging, fire hydrant, electrical box, etc. Trees shall be planted no closer than three feet to any curb, walk or edging, but no closer than four feet to any electrical box, water meter, light pole, fire hydrant, etc.

13. All shrub areas and ground cover areas shall be watered by a conventional shrub spray system, using low gallonage and low angle spray heads on risers not more than three inches above finish grade.

14. Lawn areas to be watered by conventional pop-up type lawn spray heads installed flush to finish grade of grass.

15. Lawn areas to be watered separately from shrub and ground cover areas.

16. All systems to be automatically controlled.

17. Sleeves for piping and control wires to be installed prior to paving and must be coordinated with paving contractor.

18. Gate (shut-off) valves to be installed at every street crossing to separate systems for maintenance.

19. Contractor shall make provisions for winter blow-out of system.

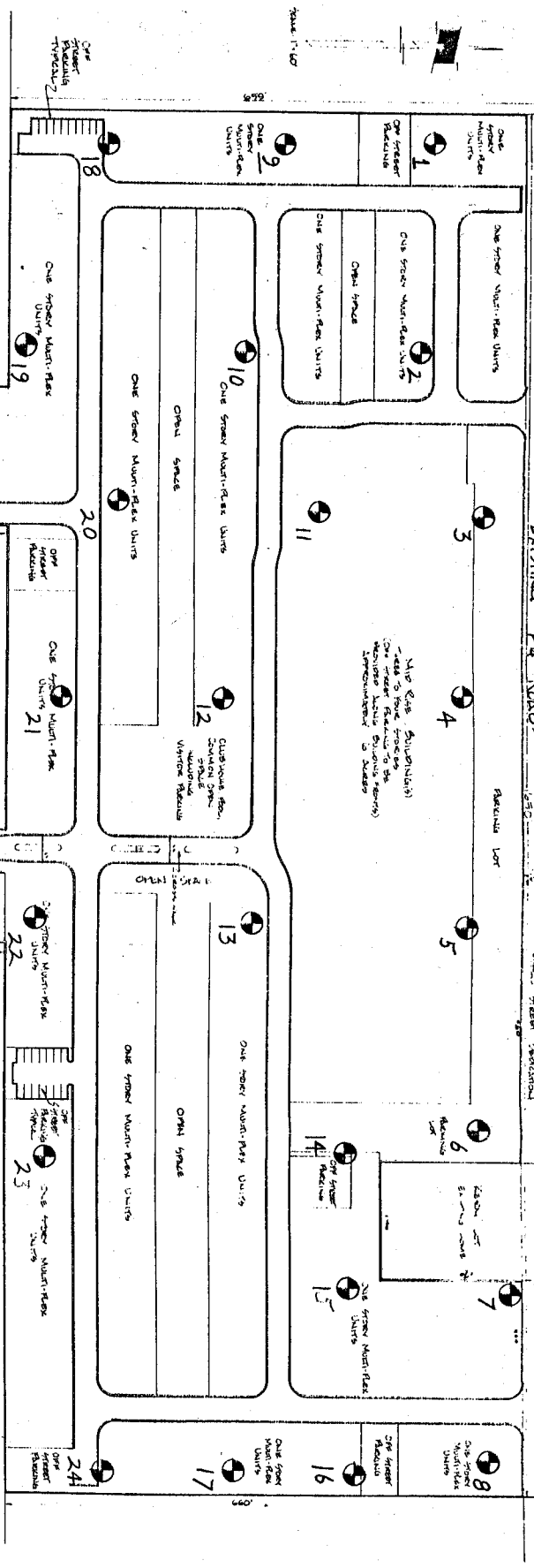
20. Contractor shall be responsible for complete and uniform coverage of all planted areas and shall guarantee system for two years or two seasons (whichever is longer) for coverage, maintenance and performance.

EXISTING 1/4" ROAD

EXISTING 1/2" ROAD

EXISTING 1/2" ROAD

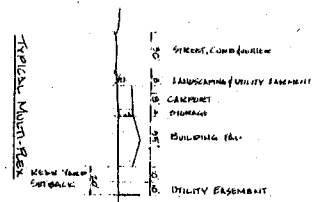
EXISTING 1/2" ROAD



ALLEGED NOTES

- 1 All other structures will be placed to insure appropriate front setbacks.
- 2 All other structures, landscaping, retaining, and hardscapes will be constructed in accordance with the City of San Jose's Ordinance 107.000.
- 3 Retain walls will be constructed and maintained by the Home Owners' Association. All streets and sidewalks will be constructed and maintained by the Home Owners' Association.
- 4 City of San Jose will be responsible for all utility easements and setbacks.
- 5 A Retain Wall will be constructed for the entire perimeter with retaining walls and concrete foundation.
- 6 A Spanish architectural style is currently proposed.
- 7 Multi-Res. will range from 1000 sq. ft. to 1500 sq. ft.

ONE STORY MULTI-RES. UNITS



APPROXIMATE GOR HISTORY

Zone	Year	Area	Area
Zoning	1980	100%	100%
City of San Jose	1981	100%	100%
Multi-Res	(8/1) (9/1)	(8/1)	(8/1)
Multi-Res	(10/1) (8/1)	(10/1)	(8/1)

NOTE: The City of San Jose will determine the scope of the proposed development and will have a plan to be submitted to the City of San Jose for review and approval.

20' R. LAND USE BREAKDOWN

Zone	Year	Area	Area
Zoning	1980	100%	100%
City of San Jose	1981	100%	100%
Multi-Res	(8/1) (9/1)	(8/1)	(8/1)
Multi-Res	(10/1) (8/1)	(10/1)	(8/1)

TYPICAL MULTI-RES. GARAGE AND EQUIPMENT

Feature	Height	Width	Depth
Garage	12 Feet	10 Feet	10 Feet
Equipment	24 Feet	8 Feet	10 Feet
Retain Wall	20 Feet	20 Feet	10 Feet
Service	20 Feet	20 Feet	10 Feet

TEST BORING LOCATION

"F" ROAD

SCALE: 1" = 40'

PROJECT NUMBER: 2024-001

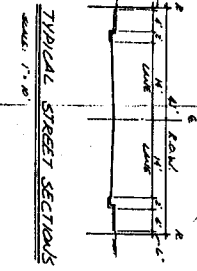
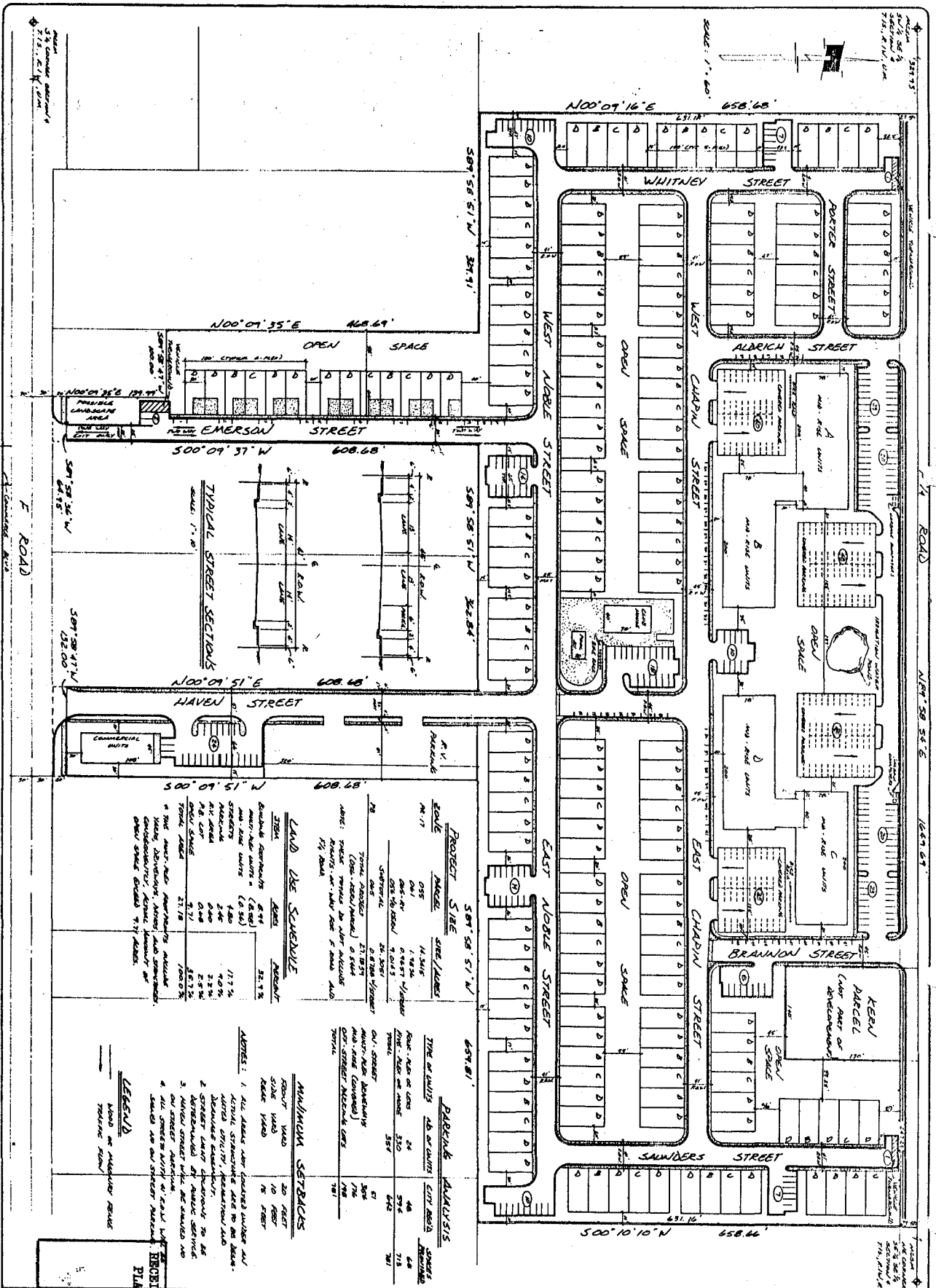
DATE: 10/20/24

SUNSET VALLEY VILLAGE
OUTLINE DEVELOPMENT PLAN

BECK, SHRUM and ASSOCIATES, INC.

REVISIONS

NO.	DATE	DESCRIPTION



LAND USE SCHEDULE

AREA	AREA (SQ. FT.)	PERCENT
Residential (Single-Family)	6,414	32.1%
Residential (Multi-Family)	11,772	58.1%
Commercial	2,376	11.7%
Open Space	1,000	4.9%
TOTAL	20,562	100.0%

PROJECT SIZE

SCALE	AREA	PERCENT
Overall	14,346	70.0%
Open Space	1,000	5.0%
Commercial	2,376	11.7%
Residential	11,772	58.1%
TOTAL	20,562	100.0%

PERCENTAGE ANALYSIS

TYPE OF CURBS	PERCENT
Front - 200 on Center	24
Front - 150 on Center	330
Front - 100 on Center	594
Front - 75 on Center	642
Front - 50 on Center	57
Front - 25 on Center	50
Front - 15 on Center	718
Front - 10 on Center	781
Front - 5 on Center	781

MINIMUM SETBACKS

FRONT YARD	REAR YARD	SIDE YARD
20 FEET	10 FEET	10 FEET
10 FEET	5 FEET	5 FEET

NOTES:

- All setbacks shown including subject lot.
- Setbacks shown are to be maintained.
- Setbacks shown are to be maintained.
- Setbacks shown are to be maintained.
- Setbacks shown are to be maintained.

LEGEND:

- Shaded area indicates subject lot.
- Other areas are shown for reference.

APR 25 1994

PRELIMINARY DEVELOPMENT PLAN

RECEIVED BOARD OF PLANNING DEPARTMENT

CREST VILLAS

BECK, SHRUM and ASSOCIATES, INC.

GRAND JUNCTION, COLORADO 81501

engineers 13031242-1237 planners

REVISIONS

NO.	DATE	BY	REVISION
1			
2			

OUTDATED

REVISED

Reeg and Company
P.O. Box 76
Brea, Calif. 92621
#7-84

Frank Lamm
2587 G $\frac{1}{2}$ Road
Grand Junction, CO. 81505
#7-84

Ben Carnes
444 White Avenue
Gr. Jct., CO. 81501
#7-84

Mesa Broadcasing CO.
P.O. Box 340
Gr. Jct., CO. 81502
#7-84

Tomichi Investments
Mike Bussey
2150 Shenandoah Dr.
Grand Junction, CO. 81503
#7-84

Charles Erickson
642 29 Road
Grand Junction, CO. 81504
#7-84

Charles Erickson
642 29 Road
Grand Junction, CO. 81504
#7-84

Henry Reast
2458 F $\frac{1}{2}$ Road
Grand Junction, CO. 81505
#7-84

Helen Davis
234 Teller Avenue
Gr. Junction, CO. 81501
#7-84

William Church
2460 F $\frac{1}{2}$ Road
Grand Junction, CO. 81505

Robert Schlosser
2464 F $\frac{1}{2}$ Road
Grand Junction, CO. 81505
#7-84

Pat Moran
623 26 Rd.
Gr. Jct., CO. 81505
#7-84

U.S. Bank
PO Box 908
Gr. Jct., CO. 81502
#7-84

Compark Ltd.
2944 Hwy 6 & 24
Gr. Jct., CO. 81504
#7-84

J & J Enterprises
520 W. Gunnison
Gr. Jct., CO. 81505

Hazel Caywood
PO Box 981
Gr. Jct., CO. 81502
#7-84

Beck, Shrum & Associates
215 Pitkin Suite 203
Gr. Jct., CO. 81501
#7-84

Rodney Huskey
184 Sunlight Drive
Gr. Jct., CO. 81503
#7-84

Muhr Real Estate Investments
1707 I-70 Business Loop
Gr. Jct., CO. 81504
#7-84

GRAND JUNCTION PLANNING DEPT.
559 White Ave., Room #60
Grand Junction, CO 81501
#7-84

Professional Investors of GJ
2754 Compass Dr.
Grand Jct. CO 81501
#7-84

Beck-Shrum & Assoc
215 Pitkin Ave #203
Grand Jct. CO 81501
#7-84



PETROS CONSULTING

393 HILLVIEW DRIVE
GRAND JUNCTION, CO 81503
303-243-2493

• WELL SITE GEOLOGY

• GEOTECHNICAL GEOLOGY

April 11, 1984

BECK, SHRUM & ASSOCIATES
215 Pitkin #203
Grand Junction, CO

Re: SUBSURFACE SOILS INVESTIGATION
 Sunset Valley Village
 Grand Junction, Colorado

Gentlemen;

Transmitted herewith are the results of a field investigation conducted in order to determine the Subsurface Soils conditions, as they relate to the construction of small, single story residences and heavier, multistory structures. The proposed Sunset Valley Village is located North of F Road south of F₁ Road and west of 25 Road, in Mesa County, Colo..

Respectfully submitted
PETROS CONSULTING


Edward M. Morris

GENERAL

Personnel of PETROS CONSULTING have completed an investigation of the site of the proposed Sunset Valley Village residential complex, in order to determine the Subsurface Soils Characteristics of the tract. This information is to be used for the construction of single story, multifamily residences and possibly a heavier, multistory type of structure. It is assumed that the single story structures will be quite light and generally of frame construction. Any heavy, multi-story buildings will probably require a deep type of foundation. This report includes information regarding the foundation recommendations, onsite drainage and basic road design and construction data.

The tract contains approximately 29 acres, located just outside the limits of the City of Grand Junction. The tract is bordered on the North by F $\frac{1}{4}$ Road and 2 parcels of the tract extend south to F Road. The tract is between 24 $\frac{1}{2}$ and 25 Roads. The tract is more accurately described as a portion of the S $\frac{1}{2}$, SE $\frac{1}{4}$, Sec 4, T1S, R1W of the Ute Meridian, Mesa County, Colorado.

Small irrigation ditches are present along the north and south portions of the property and the entire tract has been subject to onsite irrigation for various agricultural purposes. The general onsite drainage is to the South and is consistent with the general area drainage pattern, which is toward the Colorado River. The tract is not within any designated Floodplain or flood-prone area and no evidence of recent flooding is found or is suspected on this tract.

The topography is flat, graded for agriculture purposes and is on the lower outwash of ancient mudflows which originated in the Bookcliffs, to the north. This area is noted for high water-tables, associated with the area irrigation practices and large-scale irrigation practices to the north of the site.

GEOLOGY

The entire tract is underlain by the hard shales of the Mancos Formation. The Mancos Formation is considered to be bedrock for this portion of the valley. The Mancos Formation is quite thick and does not exhibit complicated structure in this area. The formation dips toward the northeast at a gentle angle of 4 to 15 degrees. The Grand Junction area is located between 3 primary structural features; the Uncompahgre Uplift, to the southwest, The Piceance Creek basin to the northeast and the GreenRiver basin to the northwest. The area structure has a profound effect on the present conditions of the valley. The development of the Colorado River Valley within the structural framework, produced the Book Cliffs, which have been and continue to be a source of small to medium sized mudflows. The activity of these mudflows has been greatly diminished for several hundred or even thousand years. These mudflows have provided the majority of the surface soils in the Grand Junction area and have essentially pushed the Colorado River to the southern part of the valley. The surface soils on this site are of mudflow origins and have not been reworked by flooding action of the Colorado River. These surface soils cover an ancient terrace deposit of the Colorado River.

The depth to bedrock, Mancos Shale, is 46 to 48 feet. The Mancos Shale is characterized as containing clays which expand upon the addition of water and shrink when dried. This characteristic can have a profound effect on any foundations which come into contact with this formation and any such foundations must be specifically designed to withstand these movements. If a deep foundation, such as driven piles or drilled piers are used, the expansive characteristics of the Mancos Shale must be taken into account.

The surface soils and the lower mudflow horizons are a complicated sequence of clays, silts, silty clays and sands. Inspection of the test logs indicates the complexity of the deposits. These deposits range from 25 to 30 feet thick. These deposits have not been consolidated and the large amounts of subsurface waters contribute to a low density, soft soils condition.

GENERAL SURFACE SOILS

Twentysix test borings and pits were placed on this tract and were used to determine the specific Engineering Characteristics of the soils. Samples were taken using Bulk methods, The Standard Split Spoon and Shelby Tubes. The information obtained was consistent with previous work in the area and the data is likely to be representative of the entire tract, however individual structures should be inspected to insure that proper bearing materials have been reached in the excavations.

The soils were found to be alluvial/mudflow in origin and were also found to be very soft and compressible. The deeper soils were also soft until the buried gravels and cobbles were reached. These cobbles and gravels are capable of supporting any anticipated heavy loads without appreciable settlement.

The tracts have been used for various agricultural purposes, which generally included irrigation onsite. The surface soils have been extensively reworked by the agricultural activity and are quite soft and of low density. The natural water table is quite variable across the site, but ranges from 3 to 12 feet, with the majority of the tract having the water table within 6 feet of the ground surface. This high water table should be considered as a permanent feature of the site. The general flow of the subsurface waters is south, toward the Colorado River.

Due to desiccation of the surface soils, a crust will form over the softer soils and the soils will take on the appearance of being quite strong and capable of supporting loads. This condition is illusionary unless measures are taken to physically increase the density of the soil layer. As the soils dry, the preexisting soil structure is maintained, that is the voids in the soil still exist. If the soils become saturated or even wetted significantly, the soils become soft and compressible.

TESTING AND CONCLUSIONS

Soil Type #1 is a lean clay, CL using the Unified Classification System, and is typical of all the surface soils found on this site. This soil type is sometimes found at depth, in the soil profile. This clay is fine grained, of low plasticity and is generally found in a low density condition. These soils have a distinct tendency to consolidate if the Maximum Allowable Bearing Capacity is exceeded, however the rate of consolidation can be quite slow. The surface soils tend to contain varying amounts of organic material, which is not considered as suitable for foundation bearing soils. In the present condition, these soils exhibit a Maximum Allowable Bearing capacity of 800 psf. A minimum Bearing of 200 psf is required beneath all structural portions founded on these soils because if compacted, these clays will tend to swell a small amount. These soils contain sulfates in quantities sufficient to react with concrete and certain metal products. More detailed information will be found on the Soil Analysis Sheets found at the end of this report.

Soil Type #2 is a lean clay and silt combination, a CL-ML using the Unified Classification System. These soils are typical of the mudflow deposits found throughout the valley. These soils are found in a low density and usually high moisture condition. These soils are slightly plastic and are soft. Consolidation of these soils will be a problem if the maximum Allowable Bearing is exceeded. These soils tend to require several years for consolidation to become apparent and this time lag tends to give a false sense of security. In the present condition, these soils exhibit a Maximum Allowable Bearing Capacity of 700 psf, assuming at least 2 feet of confinement is provided for these soils. If these soils are compacted, some increase of Bearing Capacity can be expected, but each case must be evaluated based on the individual merits. These soils do contain large amounts of Sulfates, and protection is required.

Soil Type #3 is a low plastic silt, a ML using the Unified Classification System. This soil is very fine grained

and tends to be of low density on this tract. These soils tend to consolidate fairly quickly when overloaded and exhibit very low shearing strengths. When found below the water table, these soils often flow into excavations and proved to be a hindrance during the field investigation for this report. These soils exhibit a Maximum Allowable Bearing Capacity of 500 psf in the natural conditions and tend to make a very poor foundation soil.

Soil Type #4 is estimated to be a gravel and clay mixture, a GC/CL by the Unified Classification system. This soil was only found near the bottom of the mudflow deposit, immediately above the gravels and cobbles of the ancient Colorado River Terrace. This soil appears to be of low density, plastic and poorly graded. The thickness of this deposit appears to be limited to only 2 or 3 feet, grading into the cleaner gravels. This soil should be penetrated by any deep foundation system and not be used for a bearing strata.

Soil Type #5 is fairly clean, silty, sandy gravel and cobble sequence which is quite stratified. This soil is classified as a GM-GP using the Unified Classification System. The fines of this deposit are nonplastic, however isolated lenses of clayey soils are present. This deposit is of medium to high density and exhibits a maximum Allowable Bearing Capacity of 7000 psf and due to the near proximity of the expansive Mancos Shales, a minimum bearing of 2000 psf is required. These values assume a drilled pier, bearing on these gravels. Due to the stratification of these soils and the possibility of thin, softer layers within the deposit, it is recommended that any drilled piers be continued to the underlying Mancos Shale, so that little question can be raised regarding the integrity of the bearing strata. If driven Piles are used, they should be driven to effective refusal, which with steel piles, an effective bearing of 70,000 to 140,000 psf is reasonable.

Soil Type #6 is the clays of the Mancos Shale. These clays are plastic, of high density and expansive. The Unified Classification System would generally rate these as a CL. Some zones of the formation are sandy and/or silty, but generally,

the basic characteristics, as related to the project, are as follows. The Mancos Shale is very dense and expansive. The Maximum Allowable Bearing Capacity can be taken as 160,000 psf for driven piles with a minimum 2 foot socket, driven to practical refusal and a minimum bearing of 11,000 psf is required at all times. For drilled piers, 60,000 psf Maximum and 12,000 Minimum Bearing can be assumed, assuming the drilling operation is inspected to insure that all piers end on a proper bearing strata. For any deep foundation, field inspection is required to insure that proper placement and sufficient penetration is achieved.

Free water was encountered in all borings and test pits and must be considered to be a permanent feature of this site. It is anticipated that the Water Level may drop a foot or two after the area is brought under development and irrigation is ceased and surrounding ditches are placed in conduits or lined. The presence of the free water will have a definite effect on the installation of utilities and foundations and will present some problems regarding the design and construction of the roads and other paved areas.

CONCLUSIONS AND RECOMMENDATIONS

The soft soils on this site present several problems for the construction of the light and the heavier structures. The light, one story structures can be built using either a footing and stemwall system or a properly reinforced monolithic slab. Both systems have advantages and disadvantages. The stemwall and footing system generally is subject to less deflection and less settlement and is easier to repair if differential movement should occur. The monolithic slab tends to deform quite a bit, is very difficult to repair and will experience a greater total amount of settlement. Generally speaking, we recommend the footing and stemwall system over the monolithic slab.

For design criteria, the stemwall should be well reinforced, with steel in the top and bottom, with the major steel being located in the bottom. The stemwall should be reinforced so as to span at least 12 feet, so to create a reasonably stiff wall. As the housing units are to be connected together, this will create some problem as inspection of the test holes indicate, the soils conditions change quite a bit and differential movement of the units must be anticipated. It is recommended that the units be built only as duplex units, so as to keep from 'stringing' the structures over a long distance.

The action of compacting the building site soils would help to reduce settlement and any differential movement, but the presence of the water table probably would hamper the large equipment required and may very well prove to be more trouble than it is worth. Individual site improvement, either by soils compaction or by fill importation may be more feasible and recommendations for this operation can be made, if desired.

The possibility of a shallow foundation for the multi-story structure is present only if very specific requirements are met. The structure must be built in a manner which will tolerate settlement, settlement on the order of 4 to 6 inches. The structure must not have any concentrated load points which exceed 16 kips and the wall or strip loads must not exceed 6 kips. The soils beneath the foundation area must be improved, using an imported fill of coarse granular, nonplastic material, properly placed and compacted to a minimum of 95% of maximum density, ASTM D-698. More recommendations can be presented if desired, but it is highly recommended that a deep system be used.

CONCLUSIONS AND RECOMMENDATIONS

Due to the existence of the soft, low density soils, the recommended foundation system be a deep type, either driven piles or drilled piers (caissons). This system would carry the weight of the proposed structures and would extend through the overlying soft soils and into the firm gravels and/or the Mancos Formation. In addition, a shallow foundation could be utilized on this site, but many restrictions would apply. Such a shallow system would entail a controlled structural fill as a part of the system. Driven piles, Drilled piers and the structural fill/slab foundation types will each have numerous advantages and disadvantages with respect to this site and the actual proposed structure. Therefore, the decision as to which foundation system is used is largely economic and will be left for the owner or his representative. Each of the foundation types will be discussed.

DRIVEN PILES

The piles should be driven to bear in the underlying firm gravel and/or Mancos Formation. Specific recommendations regarding pile type, and capacity cannot be made in a report of this nature, but several guidelines can be given. For example, a pile driven with a hammer having a rated energy of 15,000 ft-lbs per blow, to a resistance of 6 to 10 blows per inch should be capable of developing a capacity of 60 to 80 tons. Actual capacities should be determined when driving operations commence using a pile load test or by approximate means by using a suitable pile driving equation.

Piles should be used in groups to provide for eccentricities in loading and the group capacity will be less than the summation of the individual pile capacities. The relative spacing of the piles determine the amount of capacity reduction, however a conservative estimate would be on the order of 2/3 of the summation of the individual pile capacities.

Horizontal loads are present when rigid frame metal structures are used and may be present in other types of construction. These horizontal loads are not to be restrained by the use of Hairpins into the slab, but are to be resisted using either metal ties from pile to opposite pile or by the use of batter piles.

Minimum spacing of the piles should be twice the average pile diameter or 1.75 times the diagonal dimension pile cross section, but no less than 24 inches. The tops of the piles shall extend no less than 4

inches into the pile cap. No pile shall be less than 10 feet long. Vertical piles should not vary more than 2% from the plumb position.

A number of pile types are available for use. Typically timber, steel and concrete piles are used and each is associated with a number of advantages and disadvantages, the most notable being availability.

Generally steel and concrete piles are most commonly used in the Grand Junction area. Steel piles are easy to splice, making them suitable on a site where the final driving depth is not accurately known. Steel piles typically are suitable for design loads on the order of 40 to 120 tons. Concrete piles are precast and are difficult to splice, however they can be manufactured to meet a wide range of design modes.

Regardless of which pile type is chosen, the foundation system will require a reinforced, concrete grade beam to carry the exterior wall loads. Some types of construction, utilizing tiltup concrete walls or possibly metal walls may not require this gradebeam, but each case must be evaluated to determine the requirements of the structure and the stability of the individual piles. The grade beam should be designed to extend from bearing point to bearing point and not allowed to rest upon the ground. In the case of very long spans, the grade beam could be allowed to only span half the distance with some load transfer being allowed near midspan, but the limitations of the allowable soil bearing capacity must be recognized. In all cases the reinforcing should be such that the grade beam performs its function. The reinforcing should be horizontal and continuous around the structure, with no gaps or breaks unless they are specifically designed. Beams should be reinforced at the top and bottom with major reinforcement being placed in the bottom of the beam.

DRILLED PIERS

The use of drilled piers on this site is possible, however the difficulty with soft, caving soils and the high groundwater level will complicate the installation of the piers and will require the use of casing and dewatering procedures for construction. Piers should extend a minimum of 6 feet into the coarse gravel and cobble deposit or 4 feet into the Mancos Formation. At this penetration into the gravel and cobbles the maximum allowable bearing capacity may be taken as 7500 psf and a minimum bearing of 2500 psf should be maintained. These values are for endbearing only. The maximum allowable side friction may be taken as about 1200 psf for that portion of the shaft in either Soil Types #3 or #4.

If the piers are founded in the Mancos Formation, the allowable end bearing capacity may be taken as about 9000 psf with a minimum bearing of 3000 psf being required at all times. The maximum allowable side bearing capacity may be taken as 2500 psf and a minimum side bearing of 800 psf should be maintained. These values apply only to that portion of the pier which is within the Mancos Formation.

Due to the low density, wet characteristic of the overlying soils, a potential exists for the occurrence of a phenomenon known as negative skin friction. This will affect both the driven pile and the drilled pier. The actual degree of potential depends on the manner of pile or pier installation, the future ground water conditions, future vibratory or static loads in the area. We do not feel that the potential negative skin friction is likely to exceed a value on the order of 100 psf acting on the perimeter of the pile or pier. In this area, the affected area is the drier crust at the top of the soil profile, generally 2 to 5 feet in thickness. The occurrence of negative skin friction, to a measurable amount, is not anticipated on this site, but is possible.

The foundation installation for the piers or piles should be continuously inspected and an accurate record of this inspection should be kept. Any anomalies in the subsurface conditions can then be identified and proper corrective measures can be taken. This inspection is important for the driven pile system and absolutely imperative for the drilled piers.

SHALLOW FOUNDATION SYSTEM

If the shallow foundation system is considered, then we must recommend that it only be used in conjunction with a controlled structural fill. The foundation area should be overexcavated and the low density silt/clays being replaced with a coarse grained, imported fill. The thickness of this fill will depend on the actual fill material to be used, the actual building loads and the degree of building rigidity desired. The design of the structural fill should be such that a dimension equal to at least two times the width of the footing or footing/pad equivalent is provided beneath the footing or pad. The fill should extend laterally around the foundation so it is at least one times the footing width beyond the footing edge.

After the excavation has been completed and inspected, we recommend that the native soils be scarified and recompacted to at least 95% of its maximum Proctor Density, ASTM D-698. Coarse grained, imported fill could then be placed, in lifts not to exceed 6 inches in compacted thickness.

The coarse grained soil should be placed at approximately its Proctor Optimum Moisture +2% and be compacted to at least 95% of the soils maximum Proctor Density ASTM D-698. The fill should be inspected and tested for conformity. If the soils are prepared in the above manner, then design pressures on the order of 2100 psf maximum could be achieved. Foundations designed on the basis of this bearing capacity would be used to determine the proportioning of the footing and the amount of overexcavation required.

CONCRETE SLABS, GRADING AND DRAINAGE

It is recommended that all slabs on grade be constructed to act independently of the other structural portions of the building, unless special design considerations are made. The slabs should contain deep construction or contraction joints to facilitate even breakage which could result from differential movement. Slabs should be placed in sections no greater than 20 to 25 feet on a side. The slabs should not rest on any existing topsoil, organic or uncontrolled fill materials. Any such materials should be removed from the building area and replaced with a properly compacted fill of approved material.

Adequate drainage must be provided in the foundation area both during and after construction to prevent the ponding of water. The ground surface around the building should be graded so that surface water will be carried away from the structure as rapidly as possible. The minimum gradient away from the structure is as follows: Bare or paved areas 2%, landscaped areas require a minimum of 5%. Roof drains must be carried across all areas of backfill and discharge away from the structure. If sufficient surface drainage cannot be maintained, then a properly designed peripheral drain may be required. Dry wells should not be used on this site.

The soils on this site were found to contain sulfates in detrimental quantities. Therefore, a Type II Cement is recommended in all concrete in contact with the soil. Under no circumstances should calcium chloride ever be added to a Type II Cement.

ROAD AND PAVEMENT DESIGN DATA

The surface soils were sampled and tested to determine the R Value by the HVEEM-CARMANY Method. Following are our findings and recommendations.

Soil Type #1 and 2 mixed at interface

R Value	5
300 psi displacement	6.28
300 psi expansion	12.07

The above values imply several properties which will have a direct bearing on the design construction process of the road section. The soils are somewhat unstable and will be difficult to work with unless some care is taken. If the soils are saturated or near saturated, extreme rutting will occur and equipment will probably have a good deal of trouble working the site and traveling across the site. A large amount of traffic and vibratory action will cause the capillary water to rise and extreme pumping will occur. This pumping is a temporary 'quick' condition and will be very troublesome. It is highly recommended that high traffic road section design consider the use of a Geotextile reinforcement fabric. This will require the importation of additional fill material, but will improve the construction process and the longterm stability of the section.

It is recommended that construction be done in a manner which will allow the heavy equipment to NOT be concentrated along any particular road section, as this will cause early failure of the section. Compaction and fill importation and placement should proceed as rapidly as possible, to minimize traffic loads on the underlying soft soils.

If an area of severe pumping and therefore low compaction should occur, that area should be torn up and allowed to dry somewhat and no more traffic allowed in that area for at least 12 hours. Then the material can be replaced and recompacted as quickly as possible.

This office is available for consultation regarding the road construction, foundation inspection or any other part of this project which is addressed in this report. It is believed that all pertinent points have been addressed.

SOILS DESCRIPTIONS:

SYMBOL	USCS	DESCRIPTION
		Topsoil
		Man-made Fill
	GW	Well-graded Gravel
	GP	Poorly-graded Gravel
	GM	Silty Gravel
	GC	Clayey Gravel
	SW	Well-graded Sand
	SP	Poorly-graded Sand
	SM	Silty Sand
	SC	Clayey Sand
	ML	Low-plasticity Silt
	CL	Low-plasticity Clay
	OL	Low-plasticity Organic Silt and Clay
	MH	High-plasticity Silt
	CH	High-plasticity Clay
	OH	High-plasticity Organic Clay
	Pt	Peat
	GW/GM	Well-graded Gravel, Silty
	GW/GC	Well-graded Gravel, Clayey
	GP/GM	Poorly-graded Gravel, Silty
	GP/GC	Poorly-graded Gravel, Clayey
	GM/GC	Silty Gravel, Clayey
	GC/GM	Clayey Gravel, Silty
	SW/SM	Well-graded Sand, Silty
	SW/SC	Well-graded Sand, Clayey
	SP/SM	Poorly-graded Sand, Silty
	SP/SC	Poorly-graded Sand, Clayey
	SM/SC	Silty Sand, Clayey
	SC/SM	Clayey Sand, Silty
	CL/ML	Silty Clay

ROCK DESCRIPTIONS:

SYMBOL	DESCRIPTION
SEDIMENTARY ROCKS	
	CONGLOMERATE
	SANDSTONE
	SILTSTONE
	SHALE
	CLAYSTONE
	COAL
	LIMESTONE
	DOLOMITE
	MARLSTONE
	GYPHUM
Other Sedimentary Rocks	
IGNEOUS ROCKS	
	GRANITIC ROCKS
	DIORITIC ROCKS
	GABBRO
	RHYOLITE
	ANDESITE
	BASALT
	TUFF & ASH FLOWS
	BRECCIA & Other Volcanics
Other Igneous Rocks	
METAMORPHIC ROCKS	
	GNEISS
	SCHIST
	PHYLLITE
	SLATE
	METAQUARTZITE
	MARBLE
	HORNFELS
	SERPENTINE
Other Metamorphic Rocks	

SYMBOLS & NOTES:

SYMBOL	DESCRIPTION
	9/12 Standard penetration drive Numbers indicate 9 blows to drive the spoon 12" into ground.
	ST 2-1/2" Shelby thin wall sample
	W ₀ Natural Moisture Content
	W _x Weathered Material
	Free water Free water table
	γ _D Natural dry density
	T.B. - Disturbed Bulk Sample
	② Soil type related to samples in report
	15' W _x Form. Top of formation
	⊕ Test Boring Location
	⊠ Test Pit Location
	↔ Seismic or Resistivity Station. Lineation indicates approx. length & orientation of spread (S = Seismic, R = Resistivity)
<p>Standard Penetration Drives are made by driving a standard 1.4" split spoon sampler into the ground by dropping a 140 lb. weight 30". ASTM test des. D-1586.</p> <p>Samples may be bulk, standard split spoon (both disturbed) or 2-1/2" I.D. thin wall ("undisturbed") Shelby tube samples. See log for type.</p> <p>The boring logs show subsurface conditions at the dates and locations shown, and it is not warranted that they are representative of subsurface conditions at other locations and times.</p>	
<p>NOTE = γ = 900 psf FIELD SHEAR TEST</p>	

CLIENT SUNSET VALLEY VILLAGE

LOCATION SOUTH OF APPLETON, Co.

TEST HOLE#

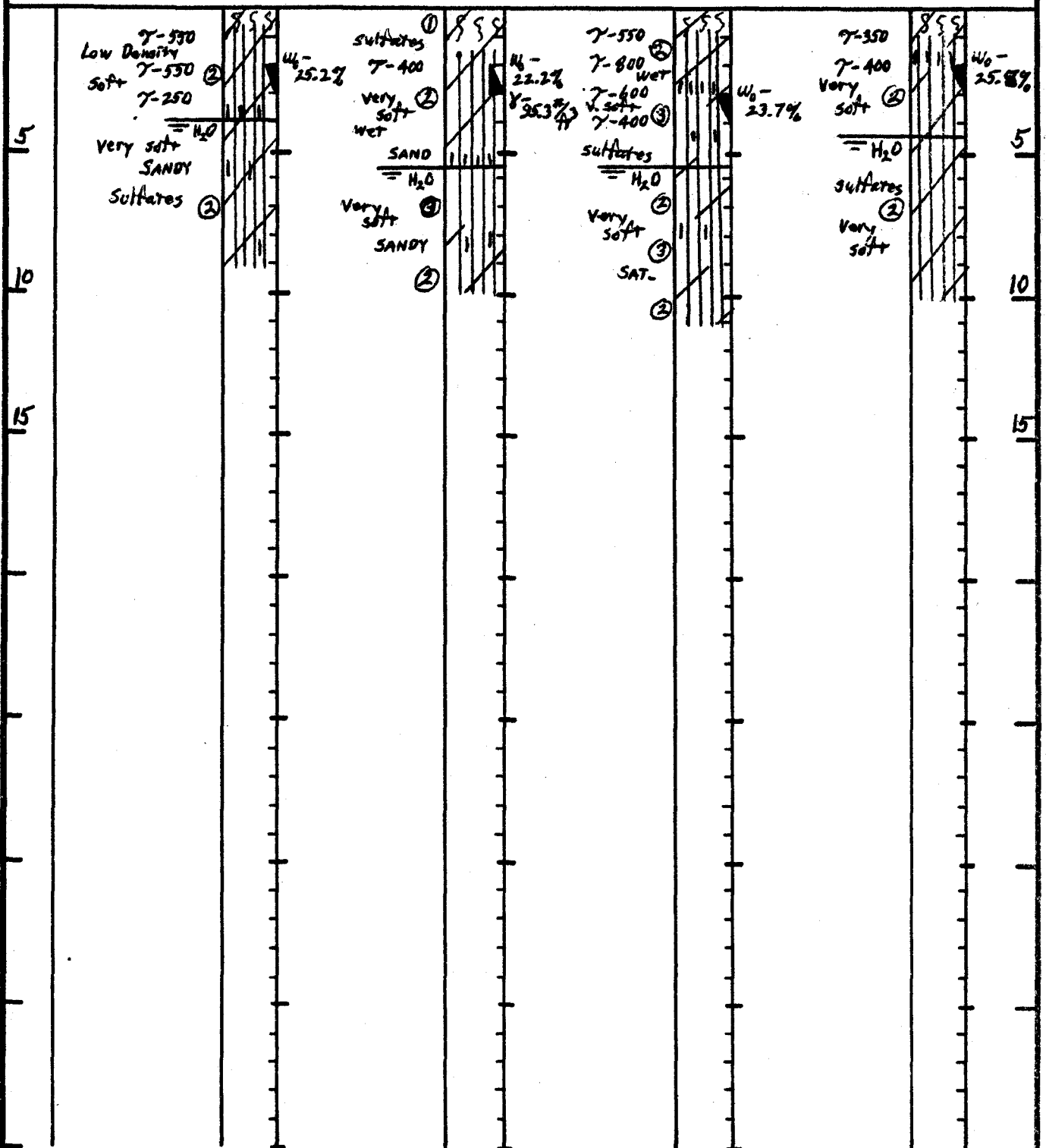
1

2

3

4

TOP ELEV.



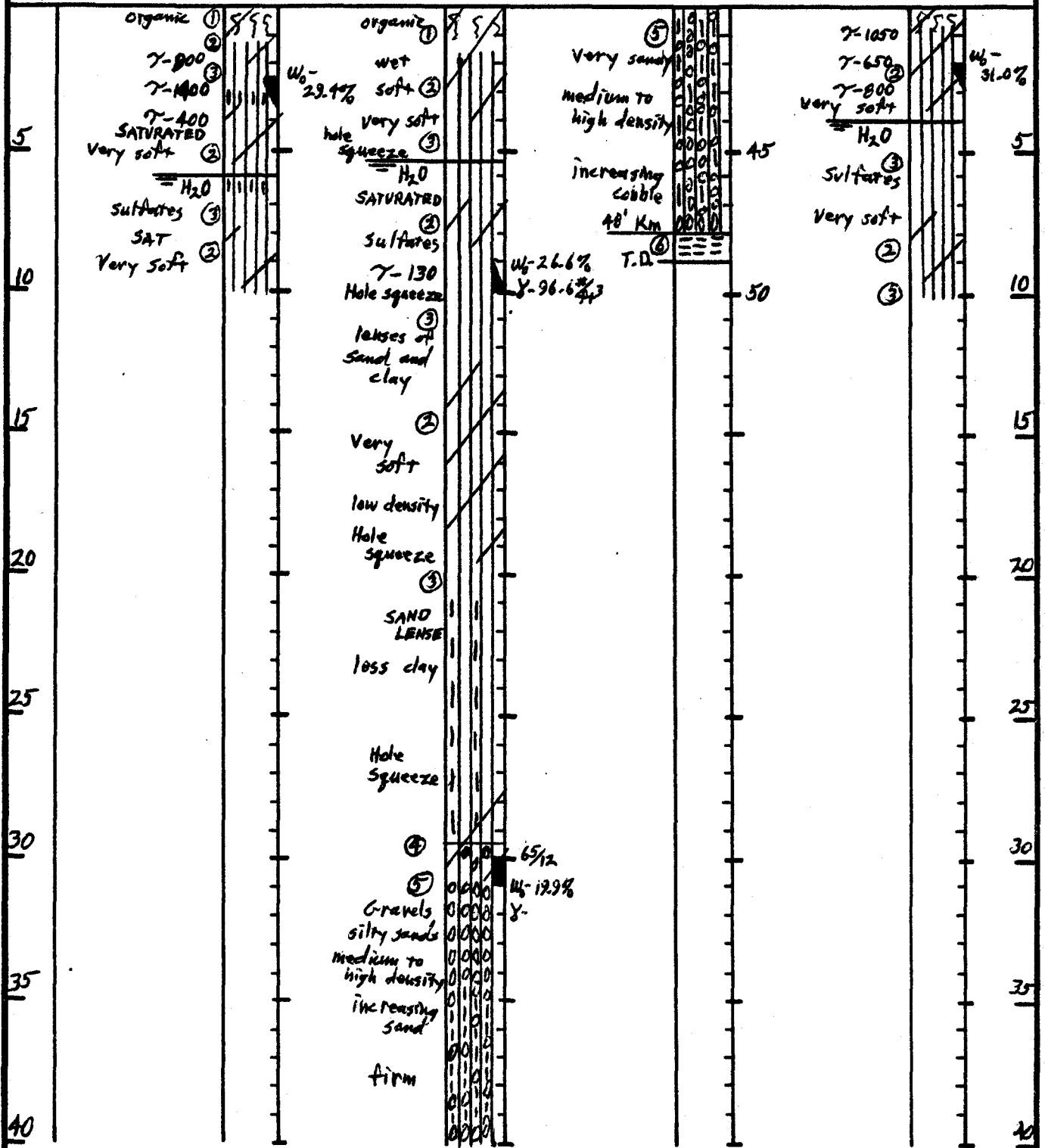
PETROS CONSULTING

GRAND JUNCTION
COLORADO

DRILLING LOGS

TEST HOLE# 5 6 6 CONTINUED 7

TOP ELEV.



PETROS CONSULTING

GRAND JUNCTION
COLORADO

DRILLING LOGS

CLIENT SUNSET VALLEY VILLAGE

LOCATION SOUTH OF APPLETON, Co

TEST HOLE#

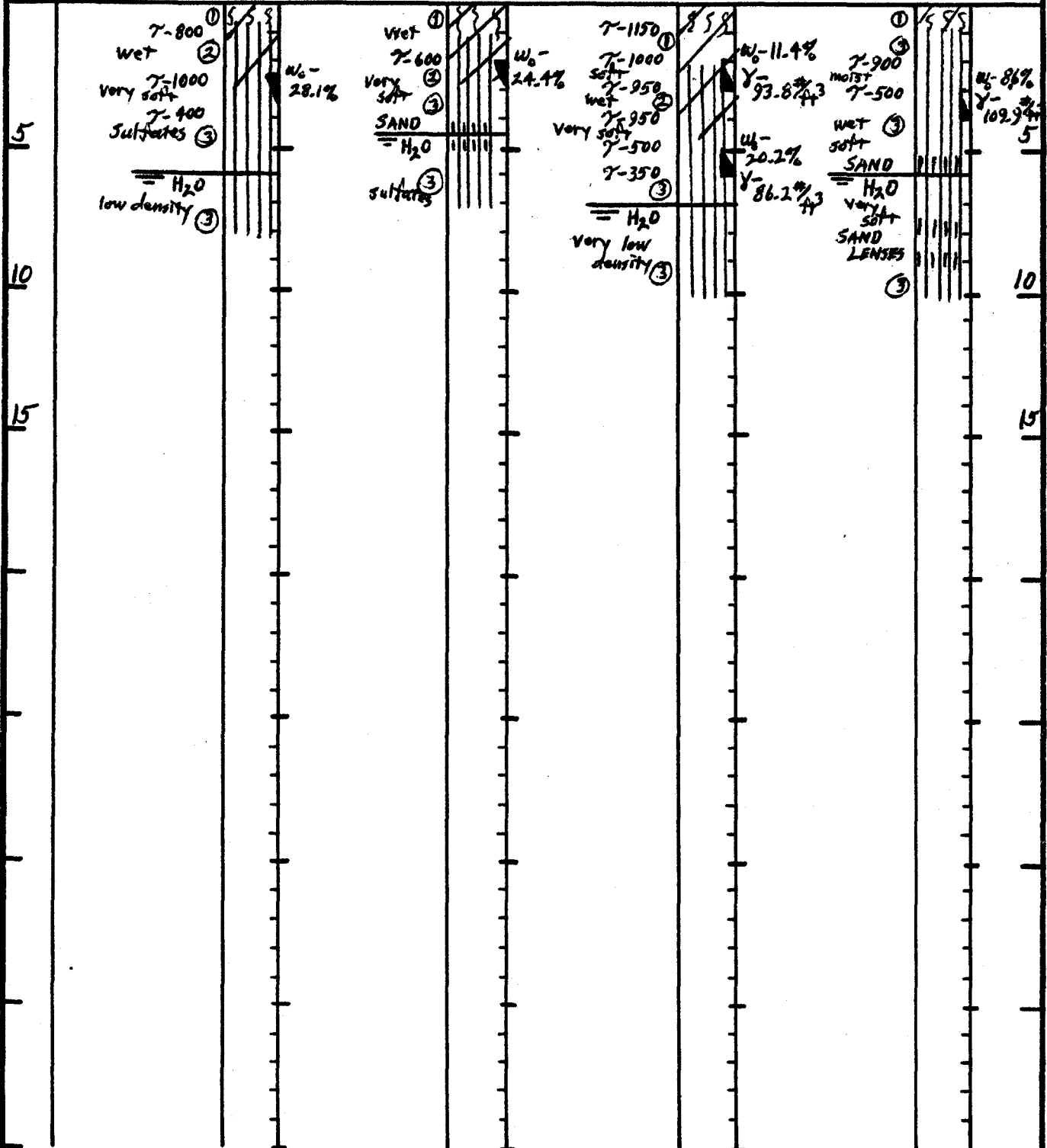
8

9

10

11

TOP ELEV.



PETROS CONSULTING

GRAND JUNCTION
COLORADO

DRILLING LOGS

CLIENT SUNSET VALLEY VILLAGE

LOCATION SOUTH OF APPLETON, CO.

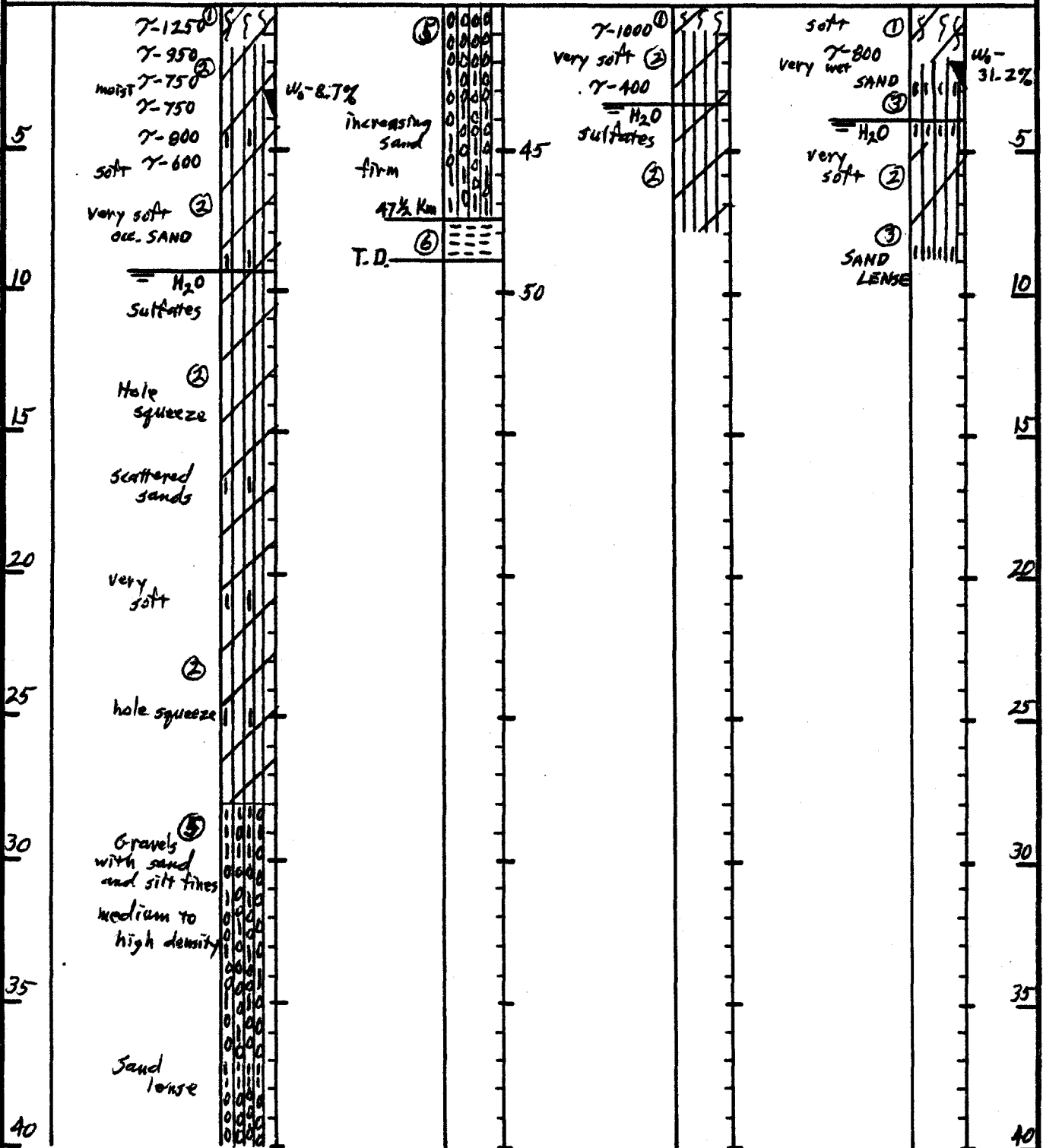
TEST HOLE# 12

12 CONTINUED

13

14

TOP ELEV.



PETROS CONSULTING

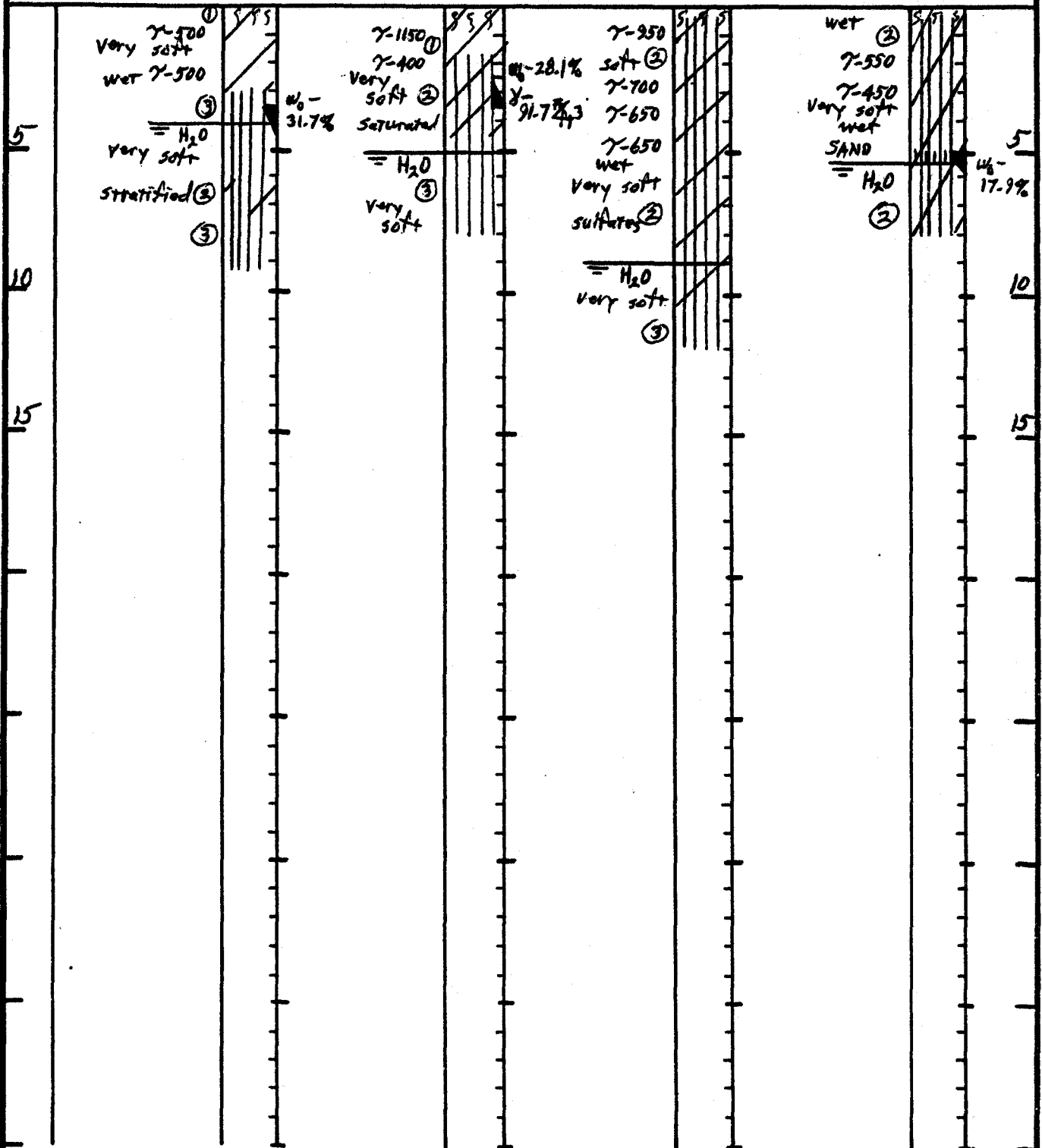
GRAND JUNCTION
COLORADO

DRILLING LOGS

CLIENT SUNSET VALLEY VILLAGE

LOCATION SOUTH OF APPLETON, Co.

TEST HOLE# 15 16 17 18
TOP ELEV.



CLIENT SUNSET VALLEY VILLAGE

LOCATION SOUTH OF APPLETON, CO

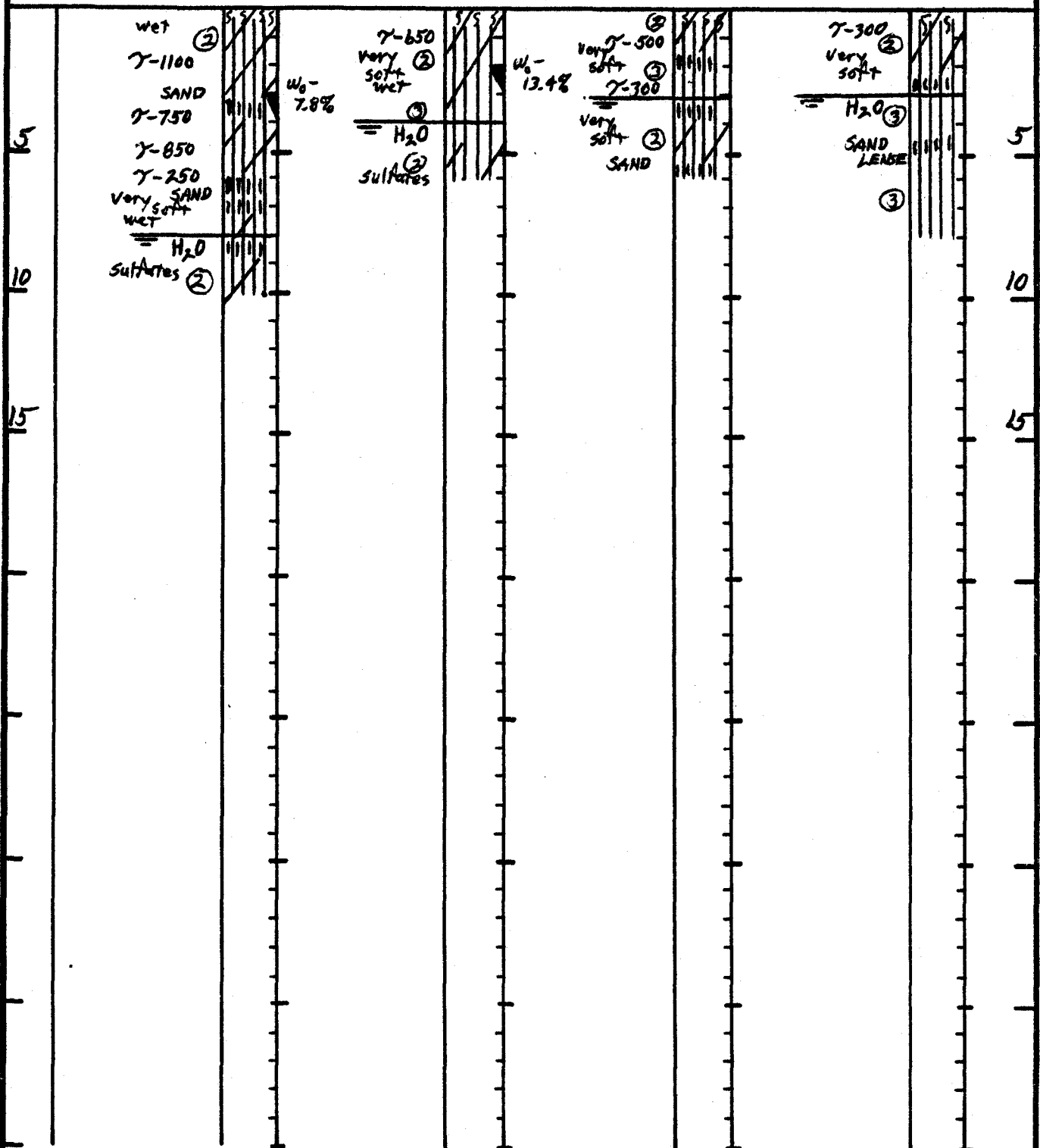
TEST HOLE# 19

20

21

22

TOP ELEV.



II *Sodas*

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GRAND JUNCTION
COLORADO

DRILLING LOGS

CLIENT SUNSET VALLEY VILLAGE

LOCATION SOUTH OF APPLETON, CO

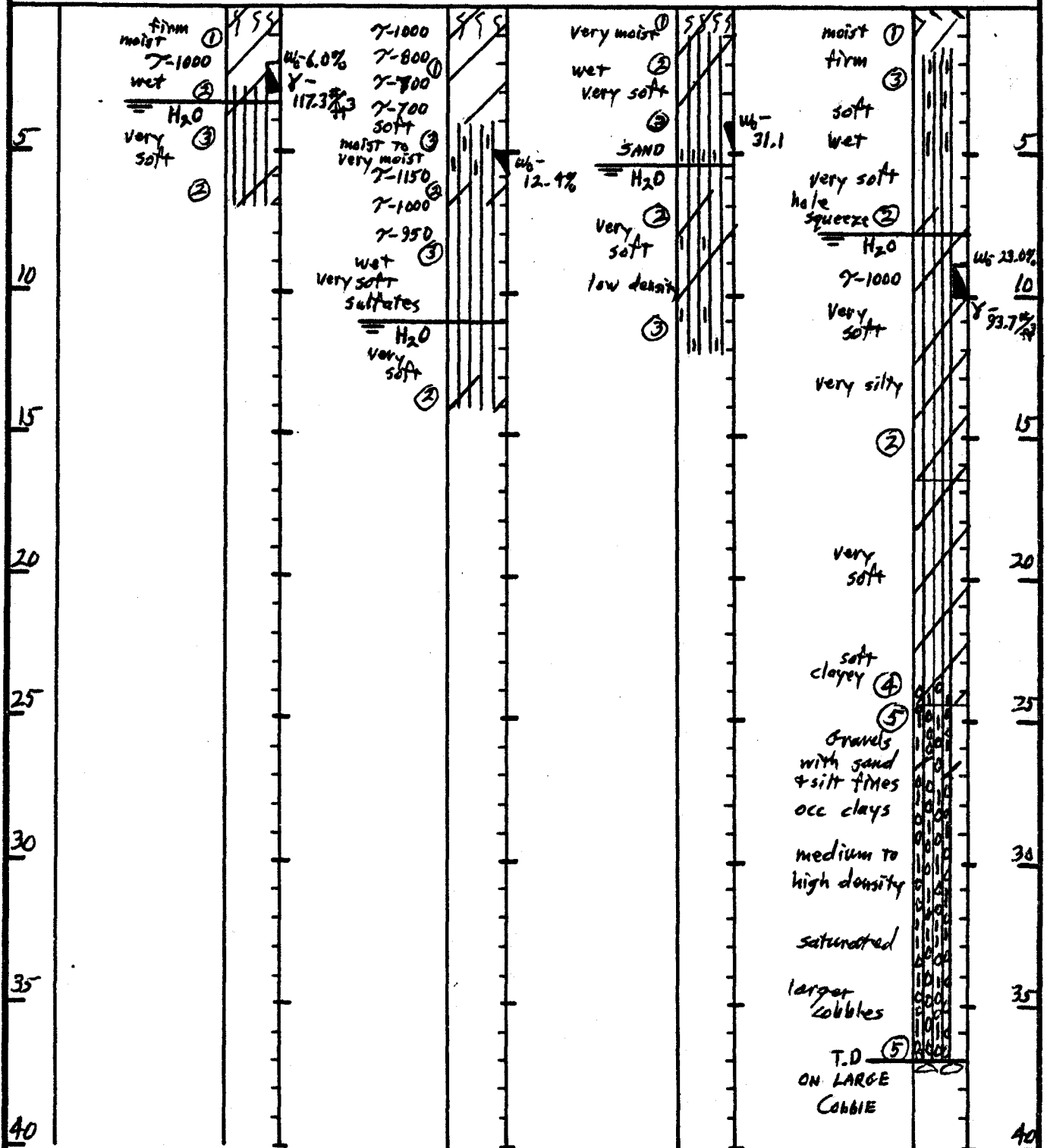
TEST HOLE# 23

24

25

26

TOP ELEV.



CLIENT SUNSET VALLEY VILLAGE

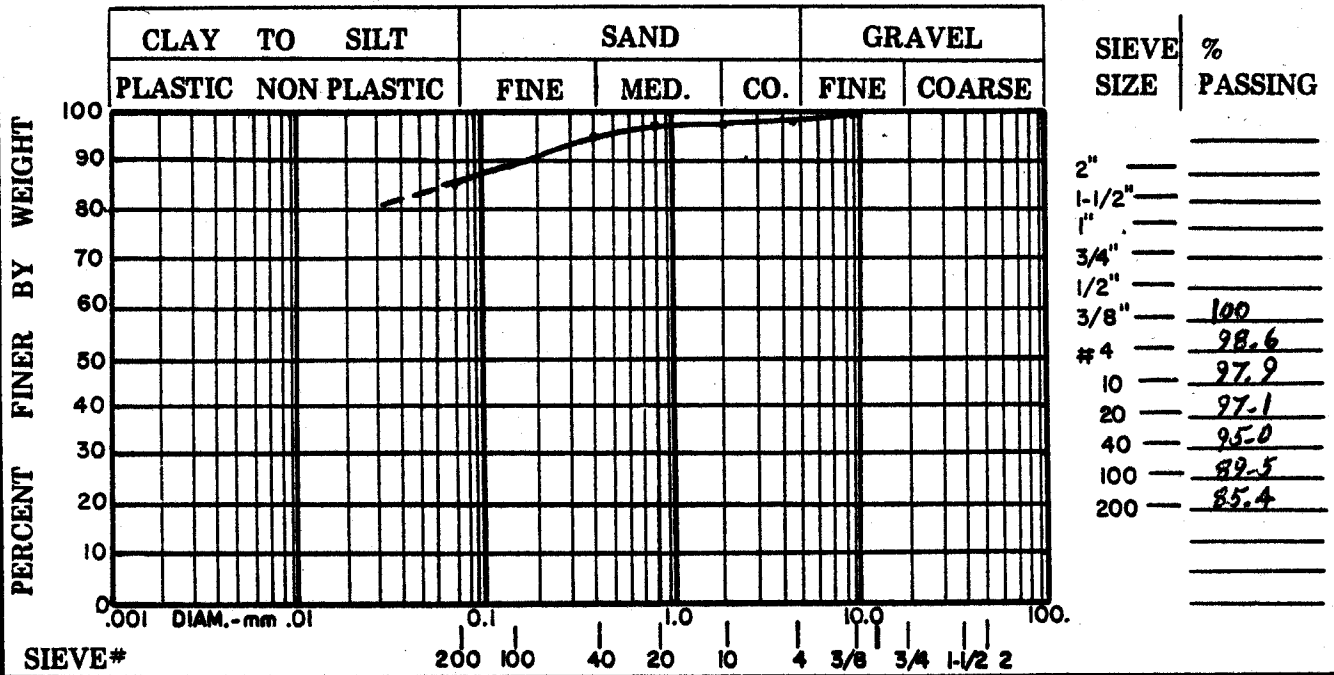
BORING# 10 DEPTH 2

LOCATION SOUTH OF APPLETON

DATE 4-10-84 TEST BY E.M.M.

SAMPLE # 1

CLASSIFICATION CL



INPLACE DENSITY 93.8 pcf

SPECIFIC GRAVITY _____

NATURAL WATER 11.4 %

SULFATES _____ ppm

EFFECTIVE SIZE _____ mm

PLASTIC LIMIT 15.8

Cc _____ Cu _____

LIQUID LIMIT 27.2

FINENESS MODULAS _____

SHRINKAGE LIMIT 11

PLASTIC INDEX 11.4

— INPLACE BEARING —

— MOISTURE DENSITY RELATIONSHIP —

PENETROMETER 800 psf

UNCONFINED COMPRESSION _____ psf

METHOD _____

CONSOLIDATION _____% UNDER _____ psf

SWELL _____% AGAINST _____ psf

OPTIMUM MOISTURE _____%

_____% WATER GAIN

MAXIMUM DRY DENSITY _____ pcf

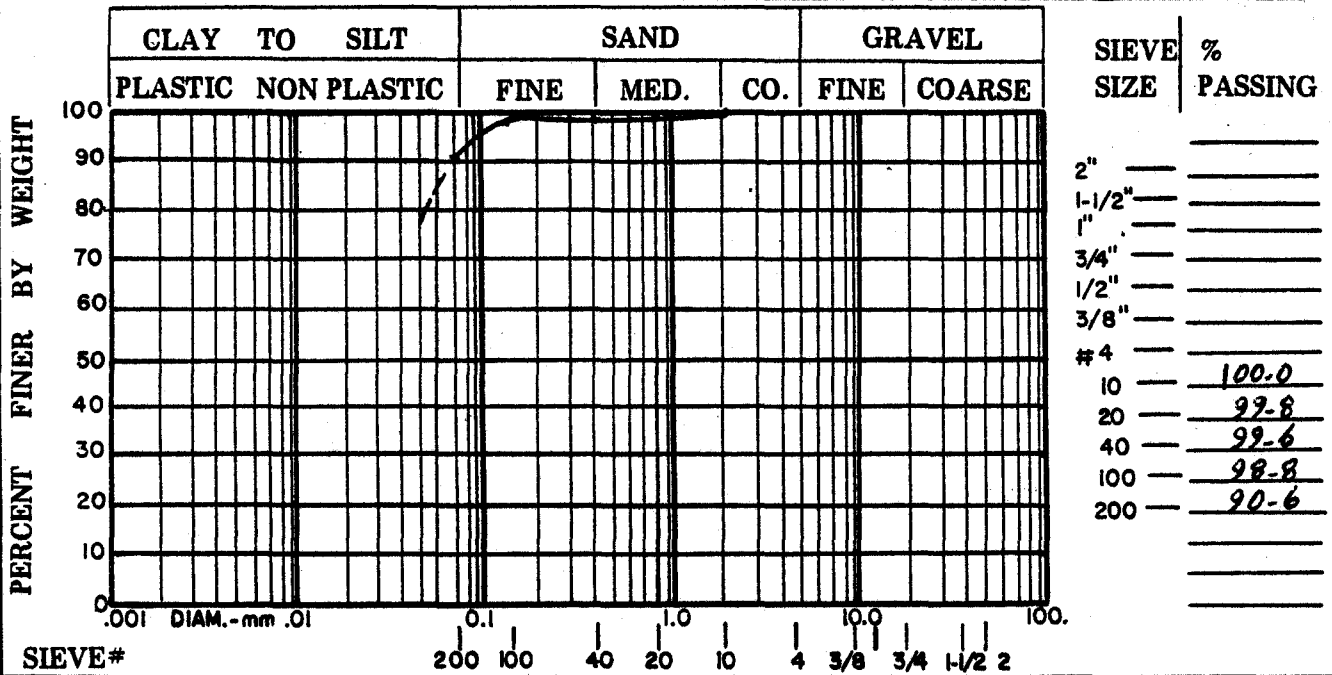
TEST TYPE _____

ALLOWABLE BEARING 800 psf MAXIMUM / 200 psf MINIMUM

NOTES AVERAGE VALUE, LOW DENSITY AREAS WILL REQUIRE COMPACTION

CLIENT SUNSET VALLEY VILLAGE
 LOCATION SOUTH OF APPLETON
 SAMPLE # 2

BORING# 16 DEPTH 2 1/2
 DATE 4-10-84 TEST BY EHH
 CLASSIFICATION CL-MH



INPLACE DENSITY 91.7 pcf
 NATURAL WATER 28.1 %
 EFFECTIVE SIZE _____ mm
 Cc _____ Cu _____
 FINENESS MODULAS _____

SPECIFIC GRAVITY _____
 SULFATES _____ ppm
 PLASTIC LIMIT 19.5
 LIQUID LIMIT 26.3
 SHRINKAGE LIMIT _____
 PLASTIC INDEX 6.8

— INPLACE BEARING —
 PENETROMETER 700 psf
 UNCONFINED COMPRESSION _____ psf
 CONSOLIDATION _____% UNDER _____ psf
 SWELL _____% AGAINST _____ psf
 _____% WATER GAIN
 TEST TYPE _____

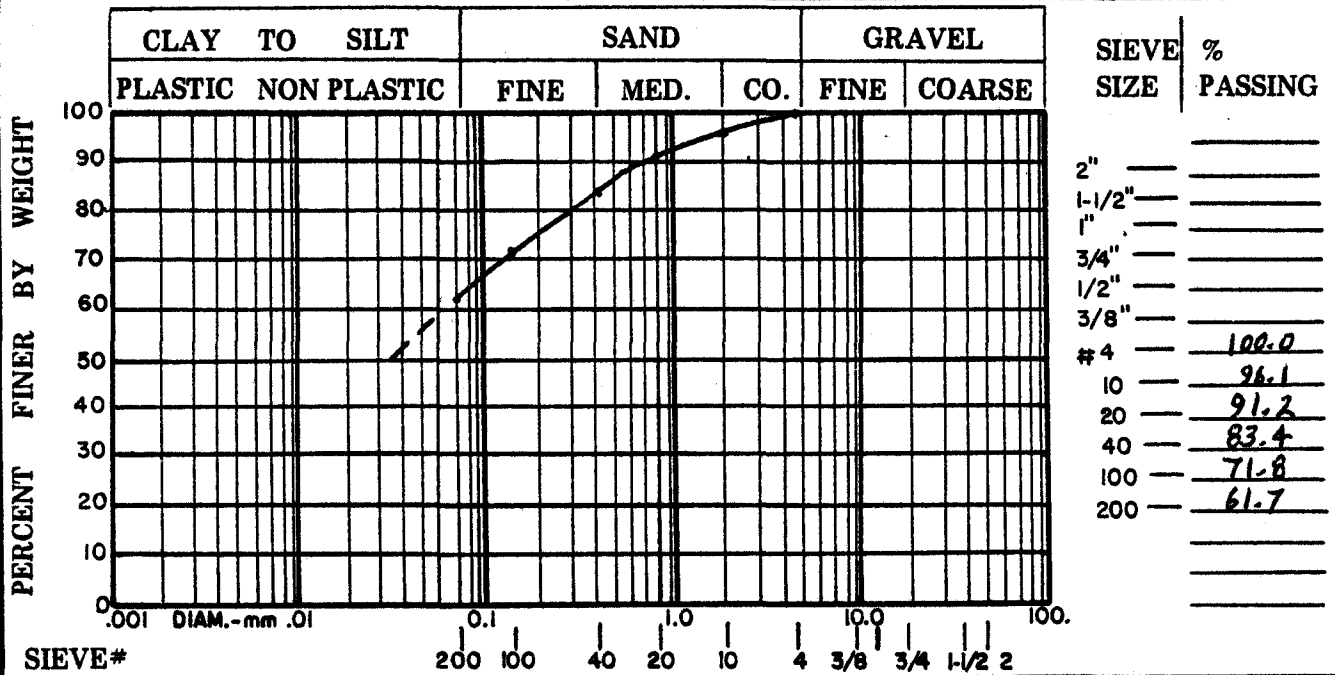
— MOISTURE DENSITY RELATIONSHIP —
 METHOD _____
 OPTIMUM MOISTURE _____ %
 MAXIMUM DRY DENSITY _____ pcf

ALLOWABLE BEARING 700 psf MAXIMUM / -0- psf MINIMUM

NOTES BEARING ASSUMES AT LEAST 2 FEET OF CONFINEMENT.
POINT OR WALL LOAD NOT TO EXCEED 1400 lbs (1/2 sq. ft.)

CLIENT SUNSET VALLEY VILLAGE
 LOCATION SOUTH OF APPLETON
 SAMPLE # 3

BORING# 10 DEPTH 5
 DATE 4-10-94 TEST BY EMM
 CLASSIFICATION ML



INPLACE DENSITY 86.2 pcf

SPECIFIC GRAVITY _____

NATURAL WATER 20.2 %

SULFATES _____ ppm

EFFECTIVE SIZE _____ mm

PLASTIC LIMIT 21.4

Cc _____ Cu _____

LIQUID LIMIT 24.1

FINENESS MODULAS _____

SHRINKAGE LIMIT _____

PLASTIC INDEX 2.7

— INPLACE BEARING —

PENETROMETER 500 psf

UNCONFINED COMPRESSION _____ psf

CONSOLIDATION _____% UNDER _____ psf

SWELL _____ % AGAINST _____ psf

_____ % WATER GAIN

TEST TYPE _____

— MOISTURE DENSITY RELATIONSHIP —

METHOD _____

OPTIMUM MOISTURE _____ %

MAXIMUM DRY DENSITY _____ pcf

ALLOWABLE BEARING 500 psf MAXIMUM / -0- psf MINIMUM

NOTES BEARING ASSUMES AT LEAST 3 FEET OF CONFINEMENT

POINT OR WALL LOAD NOT TO EXCEED 1000 lbs (lbs/lin. ft.)



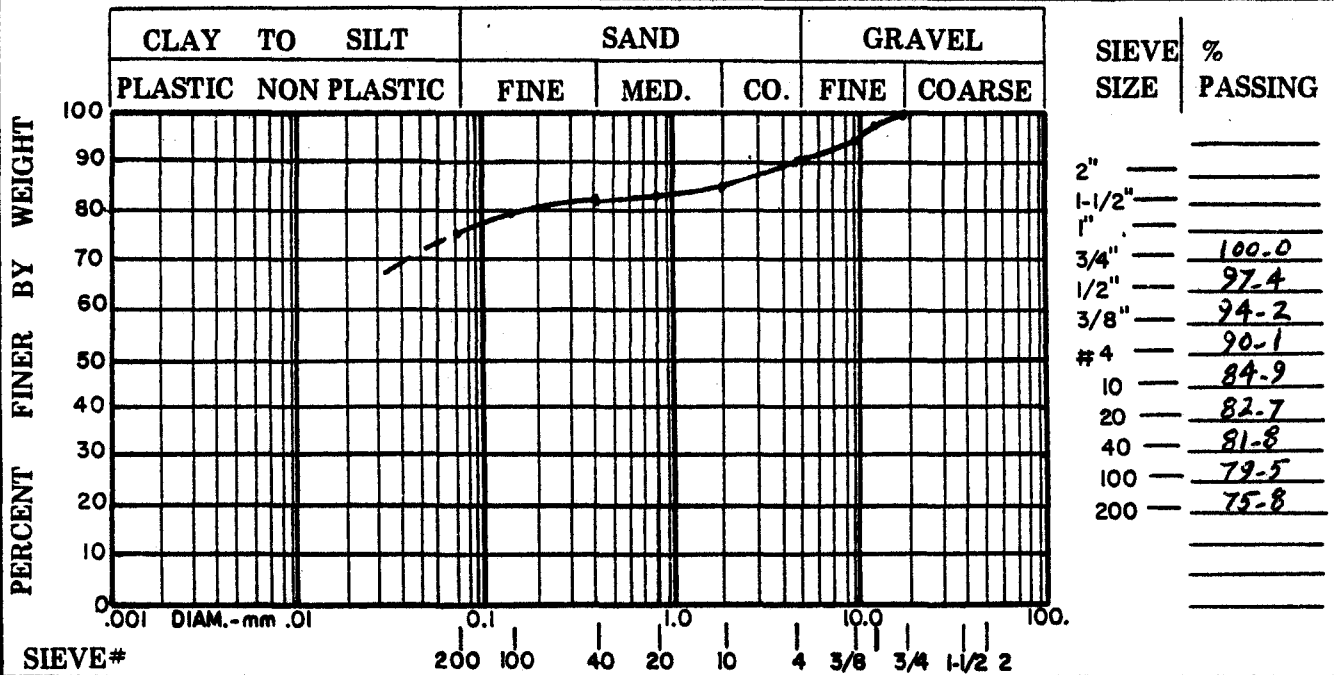
PETROS CONSULTING

GRAND JUNCTION
COLORADO

SOIL ANALYSIS

CLIENT SUNSET VALLEY VILLAGE
 LOCATION SOUTH of APPLETON
 SAMPLE # 4

BORING# 6 DEPTH 30
 DATE 4-10-84 TEST BY FHH
 CLASSIFICATION GC/CL (EST.)



INPLACE DENSITY _____ pcf
 NATURAL WATER _____ %
 EFFECTIVE SIZE _____ mm
 Cc _____ Cu _____
 FINENESS MODULAS _____

SPECIFIC GRAVITY _____
 SULFATES _____ ppm
 PLASTIC LIMIT _____
 LIQUID LIMIT _____
 SHRINKAGE LIMIT _____
 PLASTIC INDEX N.V.

CLAY PORTION
 NOTED TO BE
 QUITE PLASTIC

— INPLACE BEARING —
 PENETROMETER 1100 psf
 UNCONFINED COMPRESSION _____ psf
 CONSOLIDATION _____% UNDER _____ psf
 SWELL _____% AGAINST _____ psf
 _____% WATER GAIN
 TEST TYPE _____

— MOISTURE DENSITY RELATIONSHIP —
 METHOD _____
 OPTIMUM MOISTURE _____ %
 MAXIMUM DRY DENSITY _____ pcf

ALLOWABLE BEARING 1100 psf MAXIMUM / -0- psf MINIMUM

NOTES SMALL SAMPLE OBTAINED - NOT ENOUGH TO FULLY CLASSIFY
CLASSIFICATION IS ESTIMATED.



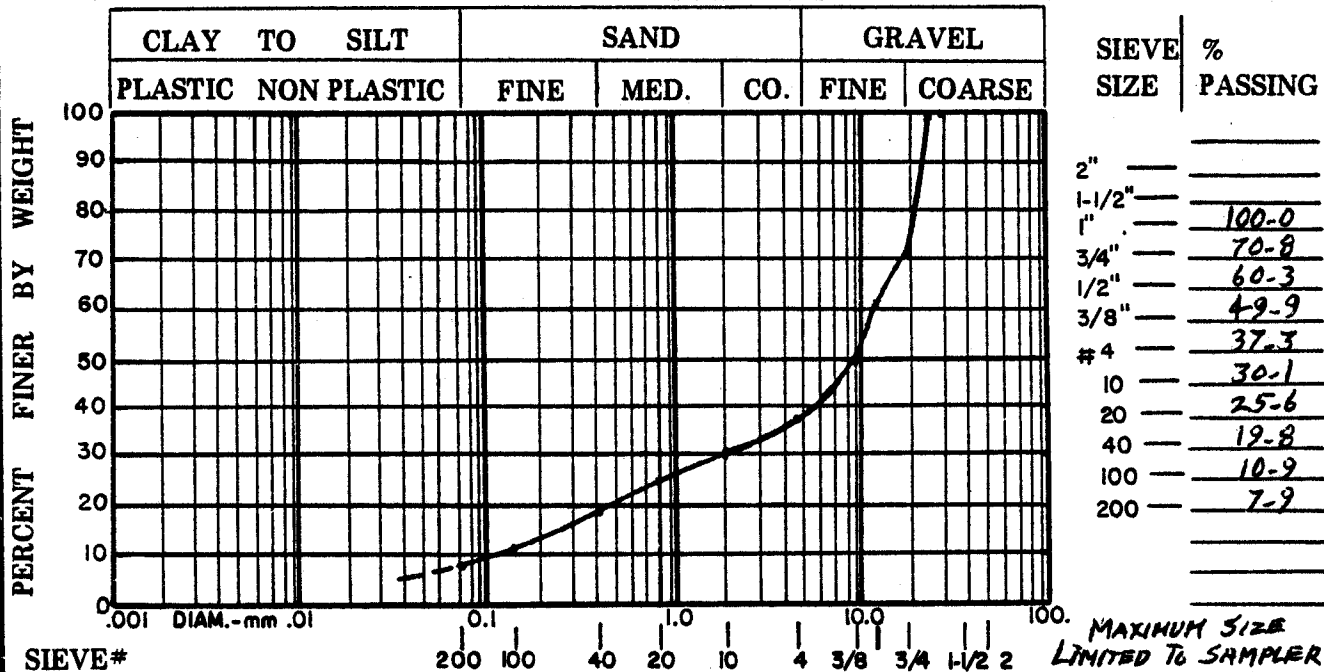
PETROS CONSULTING

GRAND JUNCTION
 COLORADO

SOIL ANALYSIS

CLIENT SUNSET VALLEY VILLAGE
 LOCATION SOUTH of APPLETON
 SAMPLE # 5

BORING# 6 DEPTH 31
 DATE 4-10-84 TEST BY EMH
 CLASSIFICATION GM-GP



INPLACE DENSITY _____ pcf

SPECIFIC GRAVITY _____

NATURAL WATER 19.9 %

SULFATES _____ ppm

EFFECTIVE SIZE 0.11 mm

PLASTIC LIMIT _____

Cc 109

Cu 3.1

LIQUID LIMIT _____

FINENESS MODULAS _____

SHRINKAGE LIMIT _____

PLASTIC INDEX N.P.

— INPLACE BEARING —

PENETROMETER 6400 psf

UNCONFINED COMPRESSION _____ psf

CONSOLIDATION _____% UNDER _____ psf

SWELL _____% AGAINST _____ psf

_____% WATER GAIN

TEST TYPE _____

— MOISTURE DENSITY RELATIONSHIP —

METHOD _____

OPTIMUM MOISTURE _____%

MAXIMUM DRY DENSITY _____ pcf

ALLOWABLE BEARING 7000 psf MAXIMUM / 2000 psf MINIMUM

NOTES VALUES ARE END BEARING - NO PENETRATION - IF PILES; DRIVE TO EFFECTIVE REFUSAL ≈ 70,000 to 140,000 psf



PETROS CONSULTING

GRAND JUNCTION
COLORADO

SOIL ANALYSIS

CLIENT SUNSET VALLEY VILLAGE

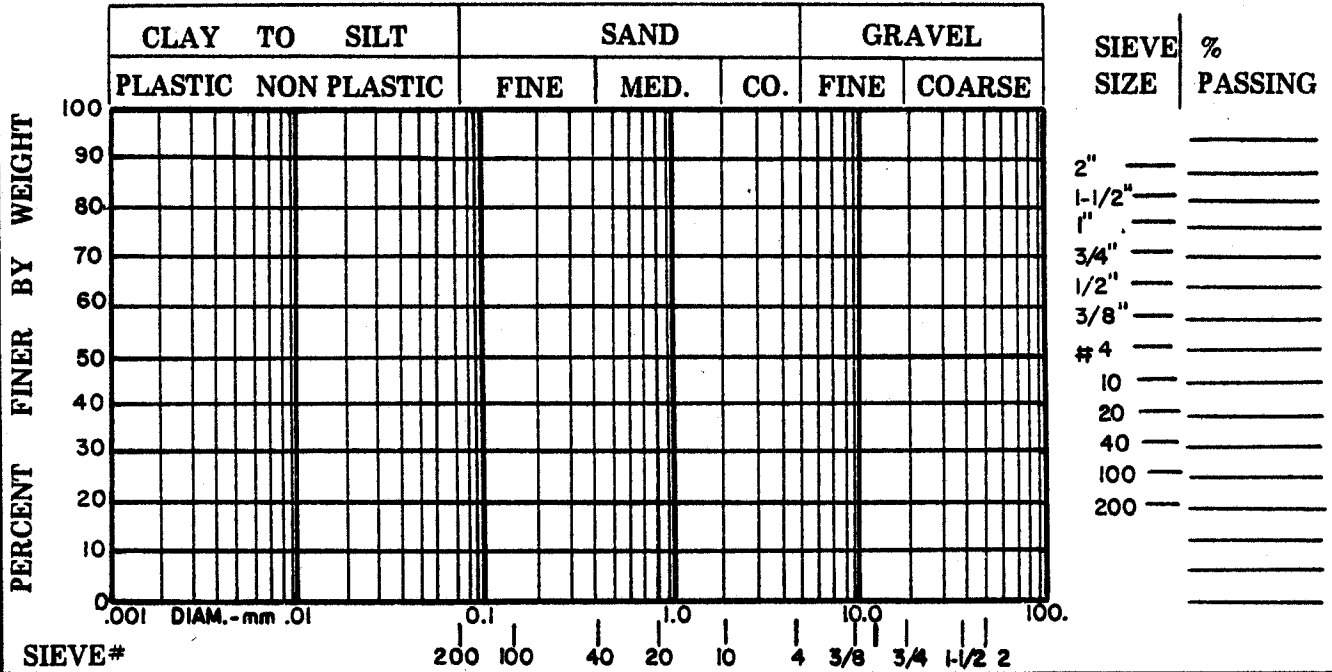
BORING# DEPTH

LOCATION SOUTH OF APPLETON

DATE TEST BY

SAMPLE # 6

CLASSIFICATION CL (MANCOS SH.)



INPLACE DENSITY _____ pcf

SPECIFIC GRAVITY _____

NATURAL WATER _____ %

SULFATES _____ ppm

EFFECTIVE SIZE _____ mm

PLASTIC LIMIT _____

Cc _____ Cu _____

LIQUID LIMIT _____

FINENESS MODULAS _____

SHRINKAGE LIMIT _____

VALUES ARE REPRESENTATIVE OF AREA

PLASTIC INDEX _____

— INPLACE BEARING —

PENETROMETER _____ psf

UNCONFINED COMPRESSION _____ psf

CONSOLIDATION _____% UNDER _____ psf

SWELL _____% AGAINST _____ psf

_____ % WATER GAIN

TEST TYPE _____

— MOISTURE DENSITY RELATIONSHIP —

METHOD _____

OPTIMUM MOISTURE _____ %

MAXIMUM DRY DENSITY _____ pcf

ALLOWABLE BEARING 160,000 psf MAXIMUM / 11,000 psf MINIMUM

NOTES ASSUMES DRIVEN PILES - DRIVEN TO PRACTICAL REFUSAL - (2' socket)

— DRILLED PRERS - 60,000 psf MAXIMUM + 12,000 psf MINIMUM —



PETROS CONSULTING

GRAND JUNCTION
COLORADO

SOIL ANALYSIS

REVIEW SHEET SUMMARY

FILE NO. #7-84 TITLE HEADING Zone of Annexation to PB & PR17 & Sunset Valley Village DUE DATE April 13, 1984

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES Location: North of F Road, Appx. 650'
west of 25 Road. Petitioner: Professional Investors of Grand Junction; Beck, Shrum &
Associates, Inc. Phase: Outline Development Plan

PETITIONER ADDRESS PIGJ: 2754 Compass Drive, Grand Jct., CO 81501
BSAI: 215 Pitkin, Suite 203, Grand Jct., CO 81501

ENGINEER N/A

<u>DATE REC.</u>	<u>AGENCY</u>	<u>COMMENTS</u>
4/6/84	Fire Dept.	The Fire Department has no objections to this rezone. Plans of structures, site plans showing type of construction, hydrant and water line size, must be submitted to the Fire Department. Street plans, width, and access must be provided. The street next to one story multi-plex units to connect to F Rd. to prevent dead end.
4/10/84	Public Works	Why not have public streets maintained by the City rather than putting Property Owners Association into street maintenance business?
4/11/84	Ute Water	No objections to ODP. The potential high density and relatively high fire flow requirements of the project would indicate the need for a looped water system. Each of the legs, which connect the bulk of the project to F Road, should be dedicated streets with 8" water tied directly to the existing 12" main along the N side of F Road. All project streets should contain 8" water lines with inter-connections at all intersections, creating internal loops. F $\frac{1}{4}$ Road should have an 8" line from the Project's W. property line to 25 Road with a connection to the existing 12" main along the W side of 25 Road. Future development of the property between this project and 24 $\frac{1}{2}$ Road should be required to provide additional dedication of F $\frac{1}{4}$ Road and install the necessary 8" water to tie to large lines in 24 $\frac{1}{2}$ Road. Policies and fees in effect at the time of application will apply.
4/13/84	Mtn. Bell	No comments.
4/12/84	Public Service (Gas & Elect.)	No objection to zoning and annexation. Will request easements when more detail plans are available. C.B D.M. 4/5/84
4/13/84	Parks/Rec.	Need appraisal for open space fee determination. Landscape plan will be needed as project progresses.
4/13/84	Transportation Engineer	Since we were asked to review this as a "general graphic display," my comments will be "general" and will be more specific when the plans are in detail. Standard City street cross-sections (including sidewalks) should be used even though they will be "private streets." Medians should be eliminated unless they serve a traffic engineering function. Dead end streets should have a standard cul-de-sac turnaround at the ends. On-street parking cannot be effectively enforced by the homeowners and the speed limit doesn't matter on "private streets," since it is unenforceable.

4/13/84 City Engineer

Developer shall be required to install a "Private Street" sign at the entry of each private street segment.

All drainage from site must be designed to reduce the peak flow from the site to not exceed the historic runoff rate prior to development. A hydrology report must be prepared by a registered engineer prior to construction showing the 2-year and 10-year hydrologic events and a plan for detention of peaks exceeding the 2-year historic flow up to the 10-year event must be developed. Use of open space is encouraged for detention area.

The developer should be required to escrow today's cost of improving F $\frac{1}{2}$ Road and Patterson on the frontage of the property to meet City standards (as per new City Council directive). Cost estimates shall be prepared by a professional engineer for those improvements and reviewed by this office prior to acceptance of final plan.

Drainage report should include analysis of proposed site improvement runoff on off-site drainage improvements downstream, including existing channels and pipings systems within 1/2 mile downstream.

Private streets are not viewed as appropriate by this office and even if approved, should meet minimum City standards for sidewalk, curb, gutter, minimum asphalt width, drainage requirements, etc.

4/13/84 Development Dept.

1. The zone of annexations requested seem reasonable. However, the PB uses anticipated in the impact statement will be site-specific. These uses listed will be the only uses allowed unless otherwise stated.
2. A detailed landscape plan with the design for your proposed irrigation system will be required with the preliminary.
3. The detailed parking layout will be required with the preliminary. The general layout seems reasonable, but without the exact layout, certain parking areas indicated in the ODP may not be acceptable.
4. If this site is to be serviced by City trash, contact Bill Reeves prior to preliminary for exact locations.
5. Access for a possible 475+ units on appx. 28 acres served by only one access point off F Road and one access "in the future" off an unimproved F $\frac{1}{2}$ Road east to 25 Road will have to be acceptable to the City Engineering Dept.

A recommendation by this Dept. is to try to negotiate access west on F $\frac{1}{2}$ Road to 24 $\frac{1}{2}$ Road. This would allow an Improvements District from 25 to 24 $\frac{1}{2}$ Road servicing this development and those in the future.

The divided median off F Road entry has been discouraged in the past at Hilltop, Community and other developments along F Road and throughout the City. You will need to have the City Engineering Dept. approve this even though it is a private street. This will also include internal circulation patterns.

6. All signage will have to meet City sign code regulations.
7. All buildings will have to meet City UBC and UFC regulations.
8. Drainage will have to addressed at preliminary.
9. R.O.W. and parks dedication will come with final submittal.

10. With all the maintenance of open space, private drives, service of utilities, etc. put on the homeowners association, an extensive set of covenants will be required with the preliminary to ensure the concept is acceptable at the final.
11. Screening detail will be required at preliminary.
12. Your note regarding flexibility will have to be done prior to submittal of preliminary or else you may face the possibility of a revised preliminary plan should your modifications exceed a minor change.

GJPC HEARING 4/2/84

- MOTION: motion; 9 commissioner o'
 (COMMISSIONER O'DWYER) "MR. CHAIRMAN, ON ITEM #7-84, I MOVE THAT WE RECOMMEND TO CITY COUNCIL TO PLACE A ZONE OF PLANNED BUSINESS (LOCATION DESCRIBED IN THE PACKET)."
- MOTION: (COMMISSIONER O'DWYER) "ON ITEM #7-84B I MOVE THAT WE FORWARD THIS TO CITY COUNCIL WITH RECOMMENDATION OF APPROVAL OF THE OUTLINE DEVELOPMENT PLAN ON THE PLANNED BUSINESS SUBJECT TO STAFF COMMENTS."
- MOTION: (COMMISSIONER O'DWYER) "MR. CHAIRMAN, I MOVE ON #7-84C THAT WE FORWARD TO CITY COUNCIL WITH RECOMMENDATION OF APPROVAL FOR THE ZONE OF P17."
- MOTION: (COMMISSIONER O'DWYER) "ON ITEM #7-84, ITEM D, I MOVE THAT WE FORWARD TO CITY COUNCIL WITH THE RECOMMENDATION OF APPROVAL IN CONSIDERATION OF THE OUTLINE DEVELOPMENT PLAN OF THE P17 ZONE WITH THE FOLLOWING SUGGESTION THAT MR. SHRUM AND MR. REEDY GET TOGETHER AND WORK OUT THESE CITY STREET STANDARD AND SUBJECT TO STAFF COMMENTS."

*Mailed comments
 on 4/16/84
 JJ*

RESPONSE TO REVIEW COMMENTS

City Parks - Will comply to comments at the final plan and plat stage.

City Public Works

City Engineer

City Traffic Engineer - Based on a meeting with the City Staff on May 21, 1984, it appears that the City will accept the streets. A new preliminary plan has been prepared which reflects a series of changes to the streets. The changes correspond to the staff recommendations.

The only area that still may be in question concerns Whitney and Saunders Streets which still dead end. These areas have been redesigned whereby a vehicle can easily turn around if necessary. The turnaround areas will be properly signed indicating "no parking" allowed. The key design objective for the dead end areas is to discourage thru-traffic through the single-story, multi-plex homes. Pedestrian safety is of a major concern to the Developers. In addition, the Petitioner believes that two curb-cuts on F 1/4 Road is sufficient and the cuts are properly located.

The rectangular area at F Road and Emerson will most likely be used as a landscaping area. The detail for this area will be shown on the Phase I - Final Plan.

Escrow funds for F Road will be paid prior to seeking building permits for Phase I.

Commerce Blvd. is located west of Emerson Street and making the two streets align is impossible.

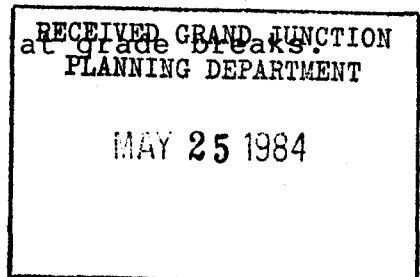
As recommended by the City Traffic Engineer, the location of crosswalks has been eliminated from the Preliminary Plan. The location of crosswalks will be determined by the City of Grand Junction.

Street lights will be located based on the standards utilized by Public Service. The location of the street lights will be shown on the Final Plans.

The Improvements Agreements as submitted depict the correct linear footages.

The ODP review comment by the City Engineer requested a hydrology report prior to construction. A hydrology report will be submitted with the Final Plan. *(for the entire project)*

Manholes, as requested, will be constructed at grade breaks.



The Petitioner does not object to the adjacent property obtaining direct access from Haven Street although the location of curb-cuts is not known. A masonry or wood fence is planned to be constructed along the western boundary of Haven Street. If the adjacent property owners development plans indicate access to Haven, then segments of the fence and concrete will need to be removed. It is difficult to address this issue since both the City and the Petitioner have no idea of what the property will be used for. The City or County would need to approve plans for the adjacent property. More importantly, the owners of the adjacent properties may desire direct access to F Road.

A fence is also planned along Emerson Street and it is hoped that access to this street will be discouraged. The design of the street and the configuration of the units makes a street intersection difficult. The Emerson Street area is planned to be a quiet and somewhat isolated segment of the development.

City Fire - Fire hydrants have been added. This information has been forwarded to Norm Noble.

City Planning - The project will be built out over a number of years. Consequently, as the economy changes, the Petitioner may desire at some point to submit a new Preliminary Plan showing increased density patterns for the undeveloped phases. Also, please refer to the ODP Project Narrative.

The Petitioner has not defined the phasing plan at this point in time. The lending institutions associated with the project are currently defining the boundaries of Phase I. This information will be submitted with the Final Plan application.

The clubhouse/pool area is the main active recreation area proposed.

The Petitioner has spoken with the irrigation company although further coordination and design will be necessary.

The Preliminary Plan was not inaccurately labelled concerning the width of the covered parking areas.

The bike racks shown are deemed to be more than adequate for retired residents. If a greater demand is generated, then bike racks will be added.

Curb blocks will be installed where necessary.

The Fire Department's only comment concerned fire hydrants.

Comments 2, 7, 8, 9, 10, 12, 13, 14 and 15 pertain to the Final Plan and Plat.

RESPONSE TO REVIEW COMMENTS

SUNSET VALLEY VILLAGE

OUTLINE DEVELOPMENT PLAN

1. Fire Department - The Department's support of the project is appreciated. Two access points will be provided onto F Road as requested.

2. Public Works - The Petitioners have no objections to all of the streets being dedicated to the public. However, this project would need permission to deviate from the City's design standard for a local residential street. Through research in other communities, the Petitioners have decided to incorporate the following street design features:

- a. A street mat of 24 to 26 feet for driving lanes is more than adequate. The City standard of 22' is surpassed.
- b. Curb and gutter is provided on all streets.
- c. On-street parking is discouraged for aesthetic and design reasons. In most cases, the parking of vehicles on the street is impossible due to the location of multiple driveways. Ample off-street parking is provided which surpasses the City's design standards.
- d. Sidewalk and/or walking paths will be provided throughout the project. A sidewalk will be constructed adjacent to the curb in most areas.
- e. The eight foot front yard utility easements will be landscaped to increase the aesthetic appeal of the streetscape.
- f. The Homeowners Administration through a management office and security patrol will strictly enforce no on-street parking.

Above all else, the project is based on innovative design concepts which do not lend themselves to the City's Public Street Standards. Special attention has been directed toward designing a project that provides good circulation patterns and parking without cars; asphalt and concrete overwhelming the site. The Petitioner is not aware of what is included in the City's street maintenance program for local streets.

RECEIVED GRAND JUNCTION
PLANNING DEPARTMENT

APR 20 1984

3. Ute Water - A looped water system will be examined at the preliminary stage of the project.

4. Mountain Bell - No Comments

5. Public Service - No Concerns Voiced

6. Parks - An appraisal will be submitted with the Final Plan

7. Traffic Engineer - Refer to Public Works Response. The medians are proposed for a scenic streetscape value and do not represent a traffic engineering function.

There are no dead-end streets, although there are dead-end driveways proposed. The driveways always terminate into a parking lot or series of parking stalls. The utilization of off-street parking lots, in corner areas is used extensively in other communities and represents good design practice. A series of cul-de-sacs would alter the entire concept of the project. (Less asphalt and more open space amenities). A good example of a dead-end driveway which serves as a parking area is located at Vintage 70's (southeast corner of the project). Photographs of other projects which have utilized dead-end driveway/parking area techniques will be displayed at the public hearings.

The project will post 20 mile an hour speed limit signs and hopefully the public will obey the traffic signs. If necessary, the private streets will include speed bumps to keep the traffic speed at a minimum. The project is to serve older citizens and all improvements and management techniques available will be utilized to foster a pedestrian-oriented community.

8. City Engineer - The Petitioner will post private street signs.

Drainage will be addressed through the course of preparing the Preliminary Plan submittal. Open space areas will be used for detention where possible. The drainage will be desposited into the Independent Ranchmens' Ditch which should have ample capacity to service peak flows. The Petitioner is not aware of the City previously requiring stormwater detention.

The Petitioner will adhere to the desires of the City Council concerning public street improvements and administrative procedures. The project will be constructed in phases and the escrowing of funds should pertain to public streets affected by a specific final plat.

9. Development Department - The Petitioner appreciates your support of the project. The Petitioners desire is to develop a retail and service business complex that will mainly cater to the needs of the subdivision residents. It would be impossible to list every conceivable commercial use, although the following types of businesses are possible and compatible:

- a. All professional types of offices.
- b. Educational and recreational facilities.
- c. Human care treatment facilities.
- d. Financial institutions.
- e. Service businesses; barbershops, pharmacies, self-service laundries, etc.
- f. Retail businesses (limited for selling goods inside a building) clothing, general merchandise, etc.
- g. Restaurants - (No Drive-up)

The Preliminary Plan will incorporate two curb-cuts on F Road and two curb-cuts on F 1/4 Road. The medians do not encroach into a public street R-O-W.

The Petitioner does not see the expansion of F 1/4 Road from 24 1/2 Road to 25 Road as being vital to the success of the project. The City may want to seek R-O-W and Improvement Agreements from the property owner which abuts 24 1/2 Road to extend F 1/4 Road.

Review Comments 2, 3, 4, 6, 7, 8, 9, 10, 11, and 12 pertain to Preliminary and/or Final Plan requirements.

REVIEW SHEET SUMMARY

FILE NO. #7-84 TITLE HEADING Sun Crest Villas DUE DATE 5/11/84

ACTIVITY - PETITIONER - LOCATION - PHASE - ACRES Sun Crest Villas - Preliminary Plan

Location: North of F Road, approximately 650 feet west of 25 Road. A request for a Preliminary Plan of 354 units in a planned residential zone at 17 units per acre and a Preliminary Plan on .68 acre in a planned business zone.

PETITIONER ADDRESS F Road Development Corp., P.O. Box 2066, Grand Junction, CO 81502

ENGINEER Beck, Shrum & Assoc., 215 Pitkin Avenue, Room #203, Grand Junction, CO 81501

DATE REC.	AGENCY	COMMENTS
5/3/84	City Parks	Will need appraisal for open space fee. Seed mixtures and final plant list should be based upon a soils test. We will need the final landscape plan for review.
5/8/84	County Planning	Our office supports the rezone application. The Preliminary Plans do not appear to be in conflict with County projects, however, the design does not appear very creative.
5/8/84	City Public Works	Medians are shown for aesthetic reasons. What type of landscaping will be provided? Will water services be provided to the medians? It is stated that the streets will be public if a design can be agreed upon between the developer and the City. Will the Homeowners Association still maintain the medians? The City Council discourages raised medians. It appears that a vehicle would have to back out of the two dead end streets to the north. Enforcing the one-way street will probably be a problem. This street and traffic control system would seem to severely limit the development options of the property located between the two streets off F Road. What is the purpose of the rectangular area at the corner of F Road and the one-way street?
5/9/84	Ute Water	The water system indicated is a satisfactory presentation for a "Utility Composite." When plans are submitted for Phase One "Final," a more detailed plan should be included. Single family units will be individually metered. Condo units (Bldgs. A, B, C, D) will be master metered with a meter on each building. The clubhouse and swimming pool will be served by a single, separate meter and the developer will be required to install a reduced pressure-principle-backflow prevention device in this service line. This project will be required to participate in the costs of water main extensions installed by others. Policies and fees in effect at the time of application will apply.
5/11/84	City Fire Dept.	The Fire Dept. will approve this Preliminary Plan with the re-submittal of utilities composite showing hydrant placement of approximately 300' spacing between hydrants. This was discussed with Daryl Shrum on 5/11/84 and he will send new utilities composite out.

sent 5/14/84
JS

5/11/84

Transportation
Engineer

The discussion of public streets vs. private streets should be renamed as a discussion of adequate street widths vs. inadequate street widths. It matters not who owns the street, but whether the streets are wide enough to safely accommodate regular traffic and emergency vehicles. The "project narrative" brought up several points concerning street widths and parking that should be discussed:

ENFORCEMENT:

Whether public or private effective parking (and speed) enforcement in an area like this is impossible. If private, there would be no legal enforcement authority. If public, the police would have much more important things to do than issue parking citations to vehicles parked on streets that are too narrow. Our experience in the Mesa College area vividly illustrates the problem.

MULTIPLE DRIVEWAYS:

Since we don't have a sketch of the drive locations, the driveways may or may not be located so as to discourage parking. The only street that driveways occur possibly opposite each other for any distance is Noble Street.

VISITOR PARKING LOTS:

I question whether the visitor parking lots, if they could be found by strangers to the project, would be used since the lots are some distance from some of the units.

OTHER COMMUNITIES EXPERIENCES:

As indicated in the attached article, we are not alone in trying to deal with the problems of narrow streets. Although the article refers to multi-family developments, it is obvious that narrow roads cause problems in all developments.

With the "possible" exception of Noble and Emerson Streets, the standard 34' pavement width should be required. Other items that merit discussion are:

MEDIANS:

All raised medians on these local streets should be eliminated. Their stated purpose is for "aesthetic reasons." There is no functional necessity from a traffic engineer's standpoint for the medians; in fact, they are a traffic hazard. If a vehicle is disabled on the street adjacent to one of the medians, the street would be blocked.

DEAD END STREETS:

The north end of Whitney and Saunders Streets end in three parking stalls. How do you turn around? How would a trash truck turn around? If you were parked in one of these spaces, you would have to back down the street to the nearest intersection to turn around. If these streets are to dead end, then a standard cul-de-sac should be provided.

SIDEWALKS/CROSS-WALKS:

Why is the sidewalk discontinued north of the clubhouse on W. Chapin Street? The mid-block cross-walks are very hazardous. The cross-walks should be located at intersections.

HAVEN PKWY/CHAPIN ST. INTERSECTION:

Unless there is a good reason for having a "jog" intersection such as this, it should be changed to a standard "tee" configuration. The stop sign should be on Haven Blvd.

Transportation
Engineer
(con't)

FENCE:

The perimeter fence and entrance signs should be located to ensure adequate sight distance for vehicles and pedestrians.

COMMERCE BLVD.:

How does the present alignment of Commerce Blvd. at Patterson Rd. fit with Emerson Street?

EMERSON STREET:

I see no reason for making Emerson Street one-way. I think it will be confusing and the residents will probably use it as a two-way street anyway.

5/11/84

City Engineer

STREETS--

Petitioner's project narrative indicates that on-street parking will not only be prohibited but "is practically impossible due to the location of multiple driveways." Close evaluation of the Preliminary Development Plan reveals that on Haven Parkway, Aldrich Street, and Brannon Street, no significant driveways exist and on Chapin, Saunders, Noble, and Whitney Streets, only driveways on one side are shown in many areas. Since no driveway locations are shown, the evaluation of "practically impossible" is not possible but with the proposed parking layout, it seems likely overflow parking on the streets will be a significant temptation.

If the Petitioner does not feel proper cul-de-sac treatment of Saunders and Whitney Streets are feasible then both streets should be extended in intersect F $\frac{1}{2}$ Rd. or redesigned so as to not terminate.

The one-way treatment of Emerson Street seems to have no function and should be aligned with Commerce Blvd. south of F Road as a two way street.

The misalignment of Chapin Street seems to serve no function but if intentional, should not occur at the intersection.

The Petitioner has not contacted this office to resolve cross-section design alternatives. It is my opinion that a standard street width of 34' of asphalt, 2' curb and gutter and 4' sidewalks both sides are needed on the main circulation streets. In areas where the designer can show that on-street parking is not likely such as Noble Street and Porter Street, a 28' mat with attached walk and curb and gutter section could be approved if the plans indicate a logical circulation pattern.

The improvements agreements included in the review package show only 330' of improvements on F $\frac{1}{2}$ Road. Escrowed funds should be provided for a full 1/2 street section along the 1,650' frontage not covered by the proposed improvements.

DRAINAGE--

A hydrology report was requested in the ODP review of this project. The Grading and Drainage Plan does address some of the information requested but does not give detailed information about off-site incoming water, detention area storage capacities, methods of calculation, etc. Please have Petitioner complete a detailed hydrology report addressing location of inflow and discharge of drainage, calculations of composite runoff coefficient, design of detention inlets, volume of discharge from each detention basin proposed, and the location of each point of discharge as well as the ownership of the downstream receiving waterway.

Permission to discharge drainage from intensified drainage basins should be received from owners of receiving waterways. The hydrology report should detail all culverts and structures within 1/2 mile downstream of a discharge point.

All public utilities to be maintained by the City of Grand Junction should be located in easements or rights of way with appropriate vehicular access for maintenance. Non-specific easements will not be acceptable for mainlines. All manholes should be located for reasonable access by maintenance vehicles. Sanitary sewers that are shown flowing two directions should be designed to terminate at least at minimum grade in a manhole (e.g. Noble, Chapin).

Design approval by irrigation association should be submitted for irrigation revisions.

5/11/84

City Planning

Project Narrative: Could you clarify the original request for 17 units per acre when in fact you are now proposing only 13.5 units. (This is just for the records?) In part B, the discussion regarding private drive widths are in conflict with the City Engineer, Transportation Engineer and City Public Works requests or requirements for public drives. The motion of the Grand Junction Planning Commission was to coordinate with the City Engineer to satisfy the intents of Petitioner and the City. The plan itself shows 11' and 24' minimum stds. in conflict with the typical 13' driving lanes (not including curb) as discussed on page 5 of the narrative. The Petitioner must work with the City Engineer to resolve these conflicts prior to approval of this plan. The traffic analysis is acceptable for the use proposed and should not overburden F Road.

The development phasing is projected over 9 years, however, the City would like to coordinate improvements for F Road in conjunction with the development. This would ensure all concerns resolved. (Especially with the business portion and those fronting on F Road.) Also, a breakdown of those areas included in each phase will be helpful.

Site Plan:

- 1) Within the open space will any other amenities be included, or is it just the clubhouse to serve all 354 units?
- 2) The open space fees will be due with final.
- 3) Good to see irrigation water used rather than domestic for landscaping. Have the drainage concerns been coordinated with the irrigation company?
- 4) Heights and dimensions seem adequate, thus, no structure will exceed three stories.
- 5) Parking will meet City standards (Note error in dimensions showing 12.5' for aisle--should be 25' in 40 and 48 parking lot.) More bike racks should be provided, especially in mid-rise. Will curb blocks be provided or raised curb to prevent overhang? Curb blocks are recommended where the overhang may encroach into the sidewalk (Haven Parkway).
- 6) Addressing/St. naming--All private drives will not have names nor will they be named on the plat. This area is using County addressing numbers, thus, if no streets are public, there may be only two numbers given for all F Road addresses. Also, Haven Parkway, if public, must be a "street" (since N/S) not "parkway" as per GJZDC, Sec. 5-3-4 Street Naming Requirements. Petitioner must check street index to ensure no duplication of private drives exists if they are to be public.
- 7) Trash locations, if City trash pickup, must be coordinated with Bill Reeves prior to final submittal.
- 8) All internal (not street) lighting should be directional and low-level as to not interfere with residents.
- 9) Since it's a retirement community, all curb cuts should be marked with cross-walk designations to help alleviate pedestrian hazard.

City Planning (con't)

- 10) All signage and landscaping at entries will not re-create any sight distance problems and signs will need separate sign permit, conforming to current City sign code.
- 11) Fire access will need to be resolved with Grand Jct. Fire Department for turnarounds and emergency access prior to approval of this phase.
- 12) Drainage concerns on-site and off will need City Engineer's approval.
- 13) All rights of way for F and F $\frac{1}{4}$ will be required at first final phase either through platting or quit claim deed or both depending on development.
- 14) Escrow only for road improvements for that land adjacent to public right of way at time of platting.
- 15) Covenants with final will be required to ensure private maintenance of open space.
- 16) Good to see amenities going in with first phase.

5/29/84

LITTLE/O'DWYER PASSED 6-0 A MOTION CONCERNING SUNCREST VILLAS PRELIMINARY PLAN IN A PLANNED RESIDENTIAL ZONE, THAT IT BE FORWARDED TO CITY COUNCIL WITH RECOMMENDATION OF APPROVAL CONTINGENT UPON THE PETITIONER AND CITY ENGINEER GETTING TOGETHER TO RESOLVE THE QUESTION OF THE VEHICLE TURNAROUND AREAS AT THE F 1/4 ROAD POINT AND OTHER STAFF COMMENTS.

LITTLE/O'DWYER PASSED 6-0 A MOTION CONCERNING SUNCREST VILLAS PRELIMINARY PLAN FOR PLANNED BUSINESS ZONE, THAT IT BE FORWARDED TO CITY COUNCIL WITH RECOMMENDATION OF APPROVAL CONTINGENT UPON THE CITY ENGINEER AND TRAFFIC ENGINEER RESOLVING THE QUESTION OF THE TWO PARKING SPACES ON EMERSON STREET AND ANY OTHER STAFF COMMENTS.

