



1672 Donlon Street  
Ventura, CA 93003  
Local 805.654.6977  
Fax 805.654.6979  
[www.jdscivil.com](http://www.jdscivil.com)

# DRAINAGE REPORT

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**SINGLE FAMILY RESIDENCE**

*for:* KEELEY MIRCETIC



County of Ventura  
Planning Commission Hearing  
Case No. PL23-0009  
Exhibit 1.8 - Drainage Report

# DRAINAGE REPORT

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## SINGLE FAMILY RESIDENCE

**11820 Topa Vista Road  
Ojai, CA 93060**

*prepared for:*

**Keeley Mircetic**

11820 Topa Vista Road  
Ojai, CA 93060

*prepared by:*

**Jensen Design & Survey, Inc.**

1672 Donlon St.  
Ventura, CA 93003

*Dalton Cunicelli*

Dalton Cunicelli, P.E.

September 11, 2023





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## 1.0 PROJECT OVERVIEW

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### 1.1. PROJECT DESCRIPTION & LOCATION

The proposed project site is a 5.66 acre parcel east of Topa Vista Road and south of Ojai Road (Highway 150) near the city of Ojai. Keeley Mircetic (Owner) is proposing to reconstruct a single-family residence. The previous residence was destroyed during the Thomas Fire. This drainage report will also address existing unpermitted structures on the property. This site is located outside Ventura County unincorporated urban areas and does not require permanent storm water treatment.

### 1.2. SITE CONDITIONS

#### 1.2.1. EXISTING DRAINAGE PATTERNS

The existing site is a 5.66 acre partially developed parcel. The property contains a driveway, a building pad from the previous residence, and a detached garage. The property drains to the north into a waterway on the property. The waterway goes from the western property through the site property and into the northeastern adjacent property.

#### 1.2.2. PROPOSED DRAINAGE PATTERNS

The proposed plan will add a single-family residence and includes the currently unpermitted existing structures. The structures include animal structures, sheds, and shipping containers. There is no site grading proposed. The proposed drainage pattern is the same as the existing drainage pattern. The proposed residence will be located in the same footprint of the previous residence and will not increase the impervious area. The animal shade structure #6 is located on existing hardscape and does not increase the impervious area. There is no runoff from adjacent properties onto the parcel.

### 1.3. REPORT OBJECTIVE

The intent of this report is to meet the current Ventura County requirements. Due to the small increase in the impervious area, there is no additional runoff due the proposed conditions and does not have a significant impact downstream. Therefore, no detention will be necessary for the proposed improvements.

## 2.0 DESIGN METHODOLOGY

### 2.1. EXISTING ON-SITE CONDITIONS

The runoff was calculated using the rational method with the information and exhibits of the Ventura Technical Guidance Manual (TGM). The property runoff was calculated as one drainage area. The project is in the Upper Santa Paula Creek (Upper Sta Paula Ck) rainfall zone. The site has a mixture of Soil Types #1, 2, and 3 per Appendix B-15 of the TGM. The time of concentration is assumed to be less than 5 min given the size and the slope on the property. The soil type #2 was used for this analysis based on the majority of the development on the property is in the soil type #2 region. The intensity for the 10 year, 50, year, and 100 year was determined using Exhibits 4A, 4B, and 4D of the Hydrology Manual. The impervious area consists of compacted dirt, concrete driveway, and structures. The existing impervious area is 53,454 square feet, which is 22 percent of the site. See the Existing Drainage Exhibit in Appendix A. The Runoff C coefficient was determined using the TGM Exhibit 5B. See Table 1 for a summary of results.

Table 1. Existing Drainage Condition

| Pre-Development Runoff (Area "A") |       |       |       |
|-----------------------------------|-------|-------|-------|
|                                   | Q10   | Q50   | Q100  |
| C (Runoff Coefficient)            | 0.60  | 0.61  | 0.61  |
| I (Intensity) in/hr               | 4.104 | 6.048 | 6.948 |
| Q=CIA (cfs)                       | 13.96 | 20.91 | 24.02 |
| q=cfs/acre                        | 2.46  | 3.69  | 4.24  |

### 2.2. PROPOSED ON-SITE CONDITIONS

See Proposed Drainage Area Exhibit in Appendix A, which shows the impervious area on the site. The proposed condition adds 3,677 square feet of impervious area. The intensity and soil type remain unchanged from the existing conditions. The runoff coefficient is determined by the impervious area percentage and the intensity. The proposed impervious percentage is twenty three percent. The runoff coefficient from the TGM Exhibit 5B is about the same as the existing conditions. Therefore, the proposed runoff and existing runoff is the same and no detention is required. See the Table 2 for a summary of results. Table 3 shows a summary of the existing and proposed runoff values.

Table 2. Proposed Drainage Condition

| Post-Development Runoff (Area "A") |       |       |       |
|------------------------------------|-------|-------|-------|
|                                    | Q10   | Q50   | Q100  |
| C (Runoff Coefficient)             | 0.60  | 0.61  | 0.61  |
| I (Intensity) in/hr                | 4.104 | 6.048 | 6.948 |
| Q=CIA (cfs)                        | 13.96 | 20.91 | 24.02 |
| q=cfs/acre                         | 2.46  | 3.69  | 4.24  |



Table 3. Summary of Runoff

| Site Runoff (Area "A") |       |       |       |
|------------------------|-------|-------|-------|
|                        | Q10   | Q50   | Q100  |
| Pre-Development (cfs)  | 13.96 | 20.91 | 24.02 |
| Post-Development (cfs) | 13.96 | 20.91 | 24.02 |
| Delta (cfs)            | 0.00  | 0.00  | 0.00  |

### 3.0 CONCLUSIONS

The Ventura Hydrology Manual Exhibits were used to calculate the existing and proposed runoff values. Ventura County requires the developed runoff to be equal or less than the existing runoff. The proposed drainage conditions match the existing drainage conditions without significantly increasing the runoff. No detention is required. The site is in unincorporated Ventura County and does not require permanent storm water treatment.

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## **4.0 APPENDICES**

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### **APPENDIX A: HYDROLOGY EXHIBITS**



Site Runoff Calculations

Project Information

Soil Type: 2  
Rainfall Zone: Upper Santa Paula Creek (Upper Sta Paula Ck)  
T<sub>c</sub> (min): 5 min (assumed for both existing and proposed)

Rainfall Intensities

Per VCWPD Design Hydrology Manual. Exhibits 4A, 4B, 4D-Upper Sta Paula Ck

| Storm Year | T <sub>c</sub> (min) | Intensity (in/hr) |
|------------|----------------------|-------------------|
| 10         | 5                    | 4.104             |
| 50         | 5                    | 6.048             |
| 100        | 5                    | 6.948             |

Existing Drainage Areas

Drainage Area "A"

Total Area: 246,884 ft<sup>2</sup> 53,454 ft<sup>2</sup> impervious  
Total Area: 5.67 acre  
Imp. %: 22

Runoff C, per VCWPD Design Hydrology Manual - Exhibit 5B (Soil 2)

| Storm Year | Intensity (in/hr) | Imp. % | Runoff C |
|------------|-------------------|--------|----------|
| 10         | 4.104             | 22     | 0.60     |
| 50         | 6.048             | 22     | 0.61     |
| 100        | 6.948             | 22     | 0.61     |

| Pre-Development Runoff (Area "A") |       |       |       |
|-----------------------------------|-------|-------|-------|
|                                   | Q10   | Q50   | Q100  |
| C (Runoff Coefficient)            | 0.60  | 0.61  | 0.61  |
| I (Intensity) in/hr               | 4.104 | 6.048 | 6.948 |
| Q=CIA (cfs)                       | 13.96 | 20.91 | 24.02 |
| q=cfs/acre                        | 2.46  | 3.69  | 4.24  |

Proposed Drainage Areas

Drainage Area "A"

Total Area: 246,884 ft<sup>2</sup> 57,131 ft<sup>2</sup> impervious  
Total Area: 5.67 acre  
Imp. %: 23

Runoff C, per VCWPD Design Hydrology Manual - Exhibit 5B (Soil 2)

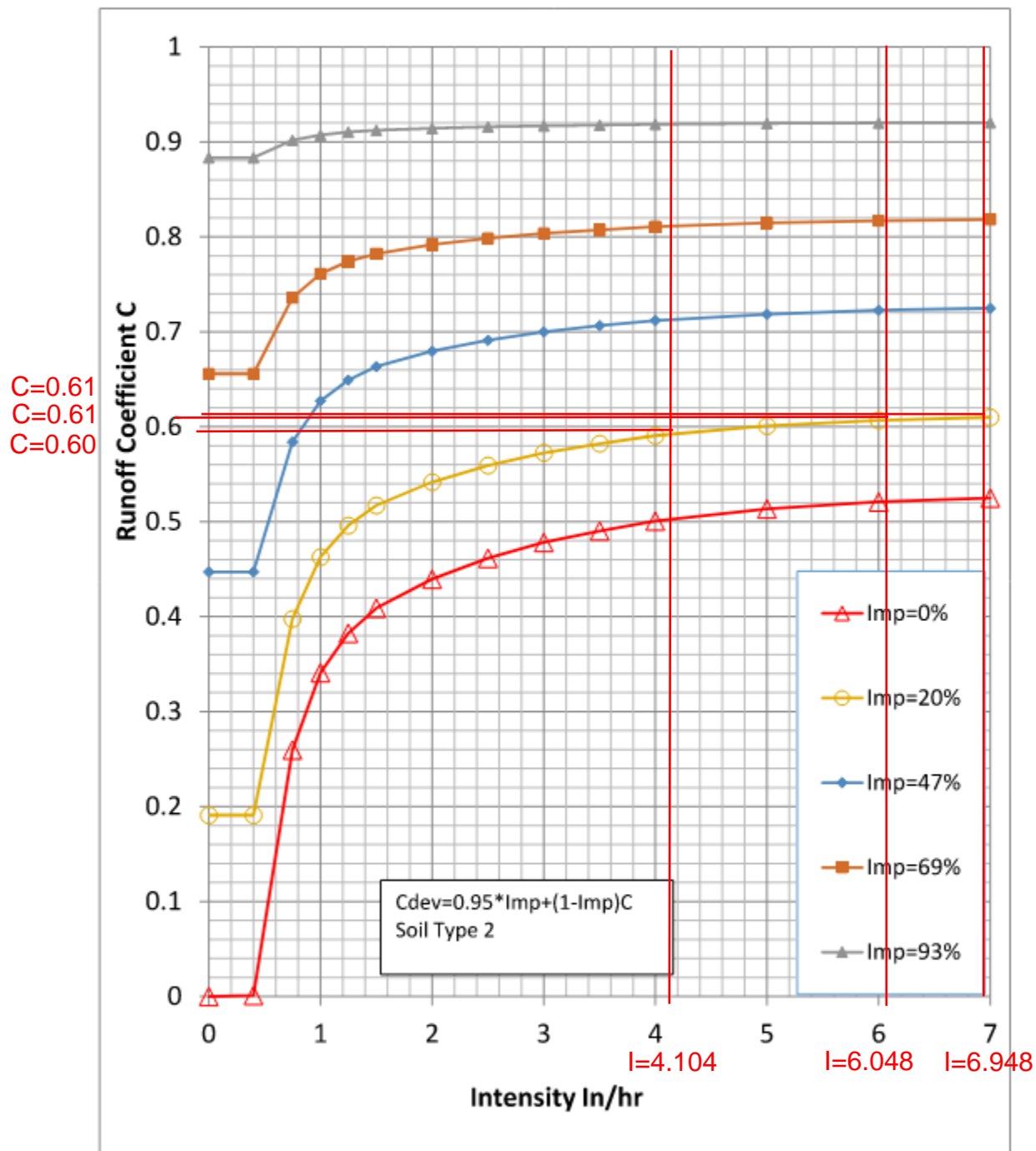
| Storm Year | Intensity (in/hr) | Imp. % | Runoff C |
|------------|-------------------|--------|----------|
| 10         | 4.104             | 23     | 0.60     |
| 50         | 6.048             | 23     | 0.61     |
| 100        | 6.948             | 23     | 0.61     |

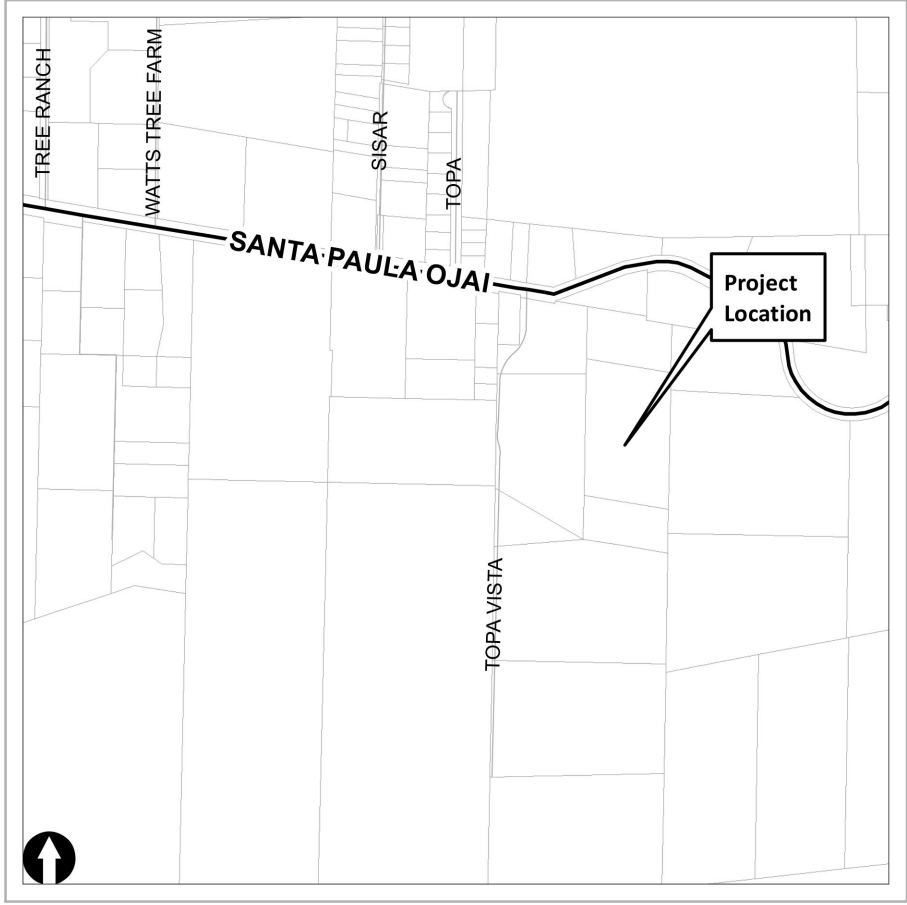
| Post-Development Runoff (Area "A") |       |       |       |
|------------------------------------|-------|-------|-------|
|                                    | Q10   | Q50   | Q100  |
| C (Runoff Coefficient)             | 0.60  | 0.61  | 0.61  |
| I (Intensity) in/hr                | 4.104 | 6.048 | 6.948 |
| Q=CIA (cfs)                        | 13.96 | 20.91 | 24.02 |
| q=cfs/acre                         | 2.46  | 3.69  | 4.24  |

Summary

| Site Runoff (Area "A") |       |       |       |
|------------------------|-------|-------|-------|
|                        | Q10   | Q50   | Q100  |
| Pre-Development (cfs)  | 13.96 | 20.91 | 24.02 |
| Post-Development (cfs) | 13.96 | 20.91 | 24.02 |
| Delta (cfs)            | 0.00  | 0.00  | 0.00  |

EXHIBIT 5B. UPDATED RUNOFF COEFFICIENT CURVE- SOIL 2 (NRCS TYPE C)





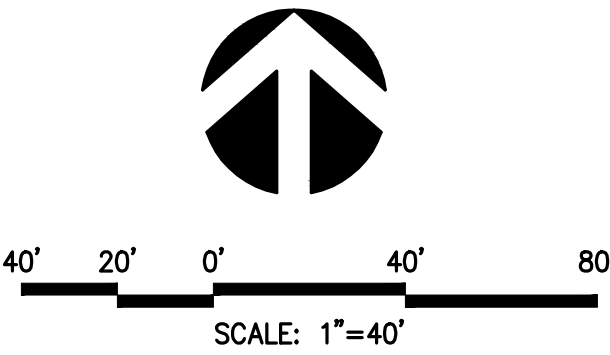
VICINITY MAP  
NOT TO SCALE

LAND USE DATA

|                           |                                                       |
|---------------------------|-------------------------------------------------------|
| APN:                      | 037-0-080-115                                         |
| ADDRESS:                  | 11820 TOPA VISTA ROAD<br>OJAI, CA 93060               |
| LOT SIZE:                 | 5.66 ACRES (246,884 S.F.)                             |
| APPLICANT/OWNER:          | KEELEY MIRCETIC                                       |
| CONTACT:                  | ERIK NAGY<br>JENSEN DESIGN & SURVEY<br>(805) 654-6977 |
| ZONING:                   | RE-5 AC/ HCWC                                         |
| GENERAL PLAN DESIGNATION: | RURAL                                                 |
| EXISTING IMPERVIOUS AREA: | 53,454 S.F.                                           |
| TOTAL LOT COVERAGE:       | 21.65%                                                |

LEGEND

|  |                          |
|--|--------------------------|
|  | PROPERTY BOUNDARY        |
|  | FENCE                    |
|  | DIRT ROAD                |
|  | LANDSCAPE AREA           |
|  | CONCRETE                 |
|  | EXISTING IMPERVIOUS AREA |
|  | DRAINAGE ARROW           |



NOTE:  
INFORMATION SHOWN HEREON, SUCH AS ASSESSOR'S PARCEL LINES & NUMBERS ARE PROVIDED BY THE COUNTY OF VENTURA GEOGRAPHIC INFORMATION SYSTEMS AND IS NOT BASED ON A FIELD SURVEY. ADDITIONAL EASEMENTS OF RECORD NOT SHOWN ON THIS MAP MAY EXIST AS A TITLE REPORT WAS NOT PROVIDED FOR THIS PROJECT. THIS DATA IS FOR CONCEPTUAL AND VISUAL PURPOSES ONLY AND IS NOT TO BE USED FOR MAPPING AND/OR FINAL DESIGN.



1672 DONLON STREET  
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SCALE: 1"=40'  
DATE: 9/11/2023

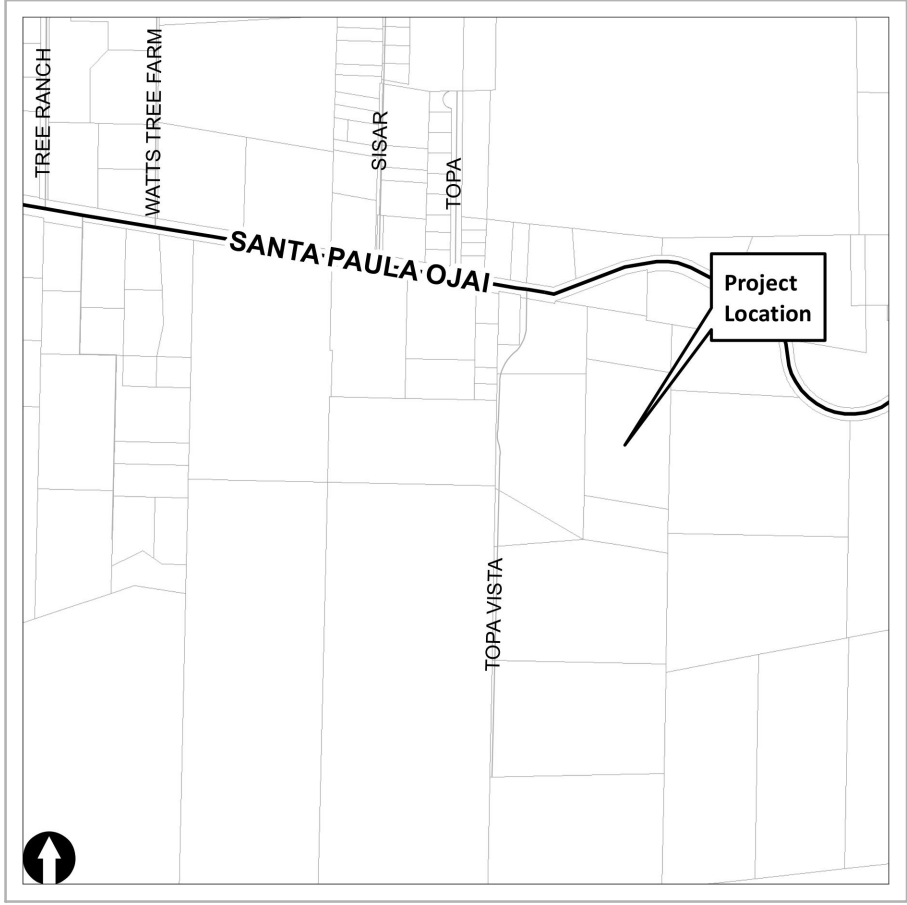
J.N.: MIR26483  
DWG. NAME: 6483 EX SITE PLAN.dwg

EXISTING DRAINAGE EXHIBIT  
FOR  
KEELEY MIRCETIC

11820 TOPA VISTA ROAD  
OJAI

COUNTY OF VENTURA STATE OF CALIFORNIA

SHEET  
1  
OF 1



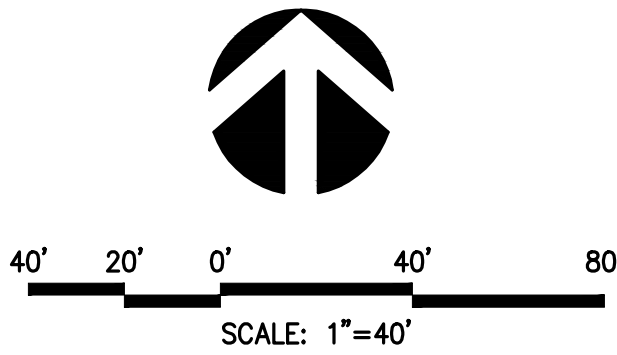
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| CONTACT:                  | ERIK NAGY<br>JENSEN DESIGN & SURVEY<br>(805) 654-6977 |
| ZONING:                   | RE-5 AC/ HCWC                                         |
| GENERAL PLAN DESIGNATION: | RURAL                                                 |
| TOTAL IMPERVIOUS AREA:    | 57,131 S.F.                                           |
| TOTAL LOT COVERAGE:       | 23.14%                                                |

LEGEND

|  |                                     |
|--|-------------------------------------|
|  | PROPERTY BOUNDARY/<br>DRAINAGE AREA |
|  | FENCE                               |
|  | DIRT ROAD                           |
|  | LANDSCAPE AREA                      |
|  | CONCRETE                            |
|  | EXISTING IMPERVIOUS AREA            |
|  | NEW IMPERVIOUS AREA                 |
|  | DRAINAGE ARROW                      |



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SCALE: 1"=40'  
DATE: 9/11/2023

J.N.: MIR26483  
DWG. NAME: 6483 SITE PLAN.dwg

PROPOSED DRAINAGE EXHIBIT  
FOR  
KEELEY MIRCETIC

11820 TOPA VISTA ROAD  
OJAI

COUNTY OF VENTURA STATE OF CALIFORNIA

SHEET  
1  
OF 1