

EMERGENCY HOME PROTECTION**Homeowner's Guide for Emergency Flood Control****Contents**

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INTRODUCTION

The Salt Lake Basin has in recent years been subject to several devastating floods resulting in substantial property damage. During floods, the prime responsibility of your Engineering Division is the control of flood waters in the major rivers and channels throughout the Basin. Therefore, assistance to individual property owners from our experienced flood control personnel is not always immediately possible.

The Engineering Division has compiled this bulletin to assist you in the installation of inexpensive protection at a fraction of the cost necessary to repair flood and debris damage.

The following discussion stresses solutions to problems of particular residents adjacent to waterways with flood potential.

When the storm season arrives and flooding and debris flows occur, it is more difficult to start emergency work; therefore, it is recommended that you initiate your preparation during periods of highest flooding potential, as shown in the table one.

To find out if you live in a floodplain, call Salt Lake County Public Works Engineering at 468-2711.

3**TABLE ONE****POTENTIAL FLOODING PERIODS**

	HIGH	MODERATE	LOW	FLASH-FLOOD*
January			X	
February			X	

March		X		X
April		X		X
May	X			X
June	X			
July		X		
August		X		X
September		X		X
October			X	
November			X	
December			X	

**Flash floods in the basin are caused from rapid snowmelt during high temperatures (often mixed with thunder showers), or intense, short duration storms in the mountains.*

DO IT YOURSELF DEBRIS CONTROL AIDS

Water and debris control aids are not expensive when compared to the protection received, and can be installed with normal household tools. They consist of materials readily available at your local lumber yard, or from Salt Lake County. Call 562-6400 for information on obtaining aids.



SANDBAGS



SAND



LUMBER



PLYWOOD

TYPICAL MATERIALS

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Each situation differs; however, basic rules can be followed in all cases involving debris movement.

- NEVER underrate the power of debris flows.
- TRY to direct debris flows away from improvements.
- AVOID trying to confine the flows more than is absolutely required.
 - CLEAR a path for the debris.
 - USE your house or building as a deflector if necessary.
 - ALWAYS place protection to deflect debris, not to dam it.
- DEBRIS will often enter a building through windows -- Board them up!
- REMEMBER to protect your most valuable property, first -- your home.
- THEN consider what time and money are available to protect other less valuable objects, such as swimming pools or planting.
 - TRY to work with adjacent affected property owners.
- BE prepared to sacrifice the use of portions of your property to achieve good protection.

The following pages cover typical installations of sandbags, timber and plywood to protect buildings and grounds.

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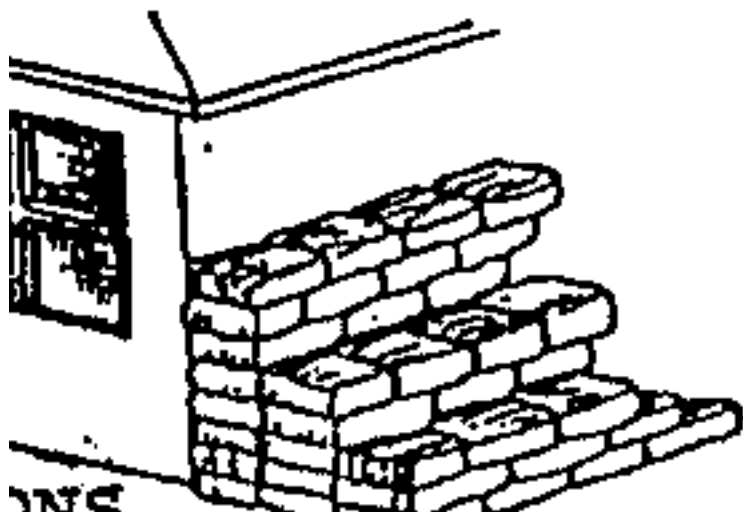
SANDBAGS

Sandbags, when properly placed, will re-direct storm and debris flows away from property improvements. They can be obtained from:

Salt Lake County Public Works--Operations Division.

7125 South 600 West

Phone number 562-6400



FILLINGS

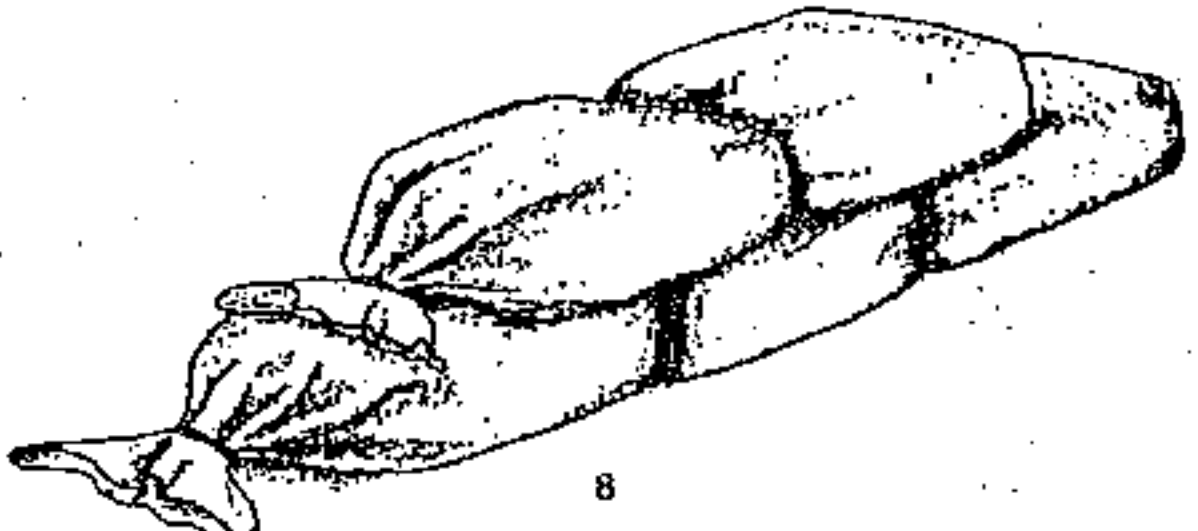
1. Fill sandbags one half full. Sand is suggested if readily available; however, it is not mandatory, and local soil may be used.
2. Gather top of sandbag and tie securely with heavy string.

PLACING

Care should be taken to stack sandbags in accordance with the illustrations. Stamp each sandbag into place, completing each layer prior to starting the next layer. Limit placement to three layers unless a building is used as a backing or sandbags are pyramided as shown below.

LIMITATIONS

1. Sandbags will not seal out water.
2. Sandbags deteriorate when exposed for several months to continued wetting and drying.



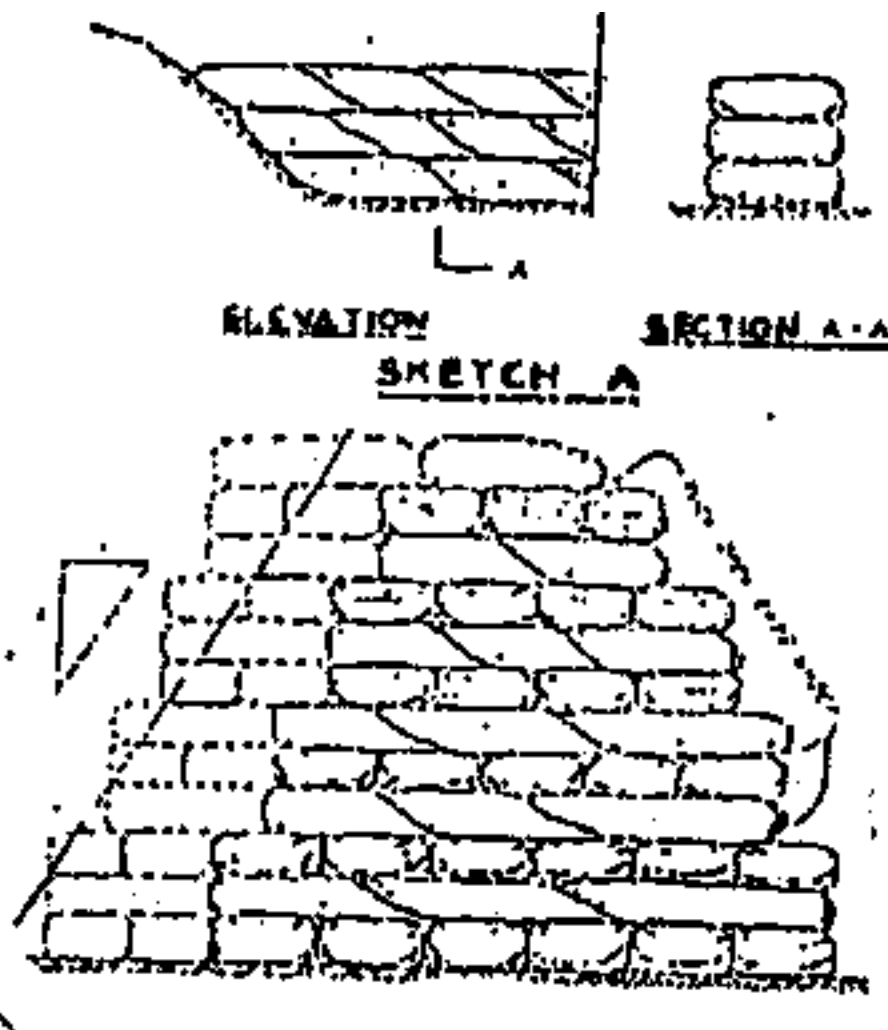
SANDBAG FILLING AND PLACING

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SANDBAGGING USED TO PREVENT OVERTOPPING OF EXISTING LEVEES AND FOR RETAINING FLOOD WATERS WHERE NO BACK-UP MATERIAL IS AVAILABLE.

INSTRUCTIONS

1. Fill sandbags 1/2 to 2/3 full but leave enough flap to turn under. Ends can be left open.
2. For heights of 1 foot and less, lay 3 single courses with sacks lengthwise as shown in sketch "A" below.
3. For heights greater than 1 foot, place as indicated in sketch "B" below.
4. When bags are placed, flatten out and fill voids by mashing bags with feet and vigorously tramp each course of the levee section. This is an extremely important operation for providing a levee which will be as impervious to water as possible and to insure stability of section. Loosely placed sandbags improperly keyed together may result in failure and cause serious damage.



LEVEE SECTION

For heights in excess of the above (approx. 3'-6') hold same batter and build on the side as indicated by dashed lines above. Alternate header course (bags placed crosswise) and stretcher courses (bags placed lengthwise)

ESTIMATING DATA:

1. Average weight of each filled sandbag, approx. 50 lbs. and approx. 1000 sandbags are required for each 100 sq. ft. of surface (height multiplied by distance).

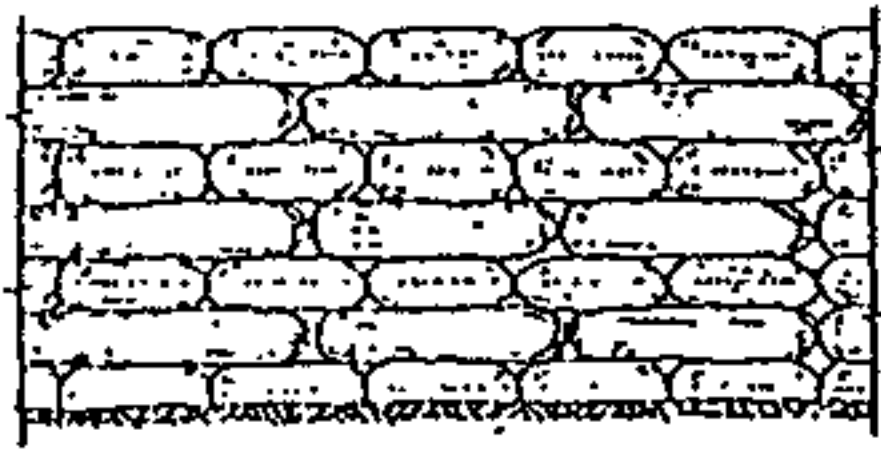
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REVETMENTS

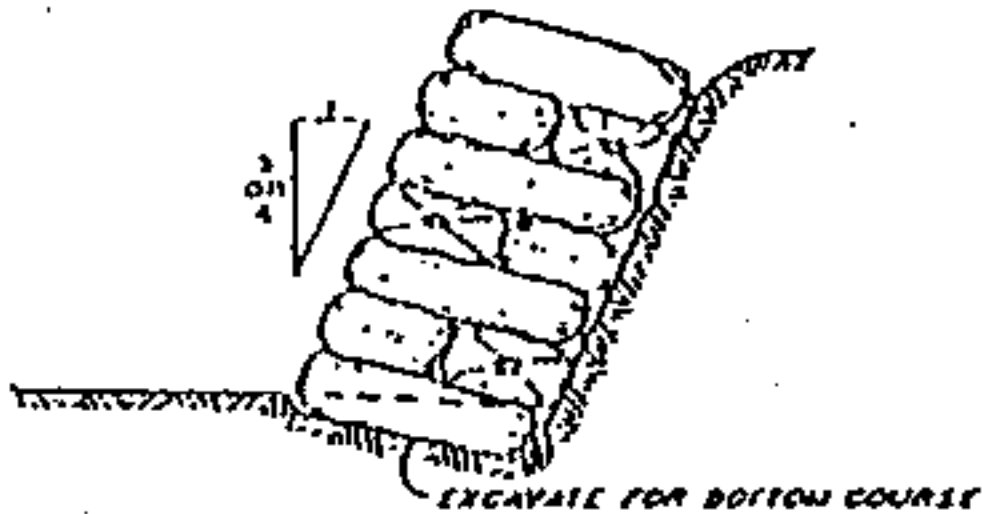
Used for emergency bank protection to prevent under cutting and control of course of flood channels.

INSTRUCTIONS:

1. Fill sandbags 2/3 full and tie open end.
2. Tuck in bottom corner of bag after filling.
3. Place bags perpendicular to slope.
4. Lay stretcher and header courses with choke and side seams in thus:



ELEVATION



SECTION

ESTIMATING DATA:

1. Average weight of each filled sandbag approximately 65 pounds.
2. Approximately 320 sandbags are required for each 100 square foot of surface to be revetted.

FILL MATERIAL:

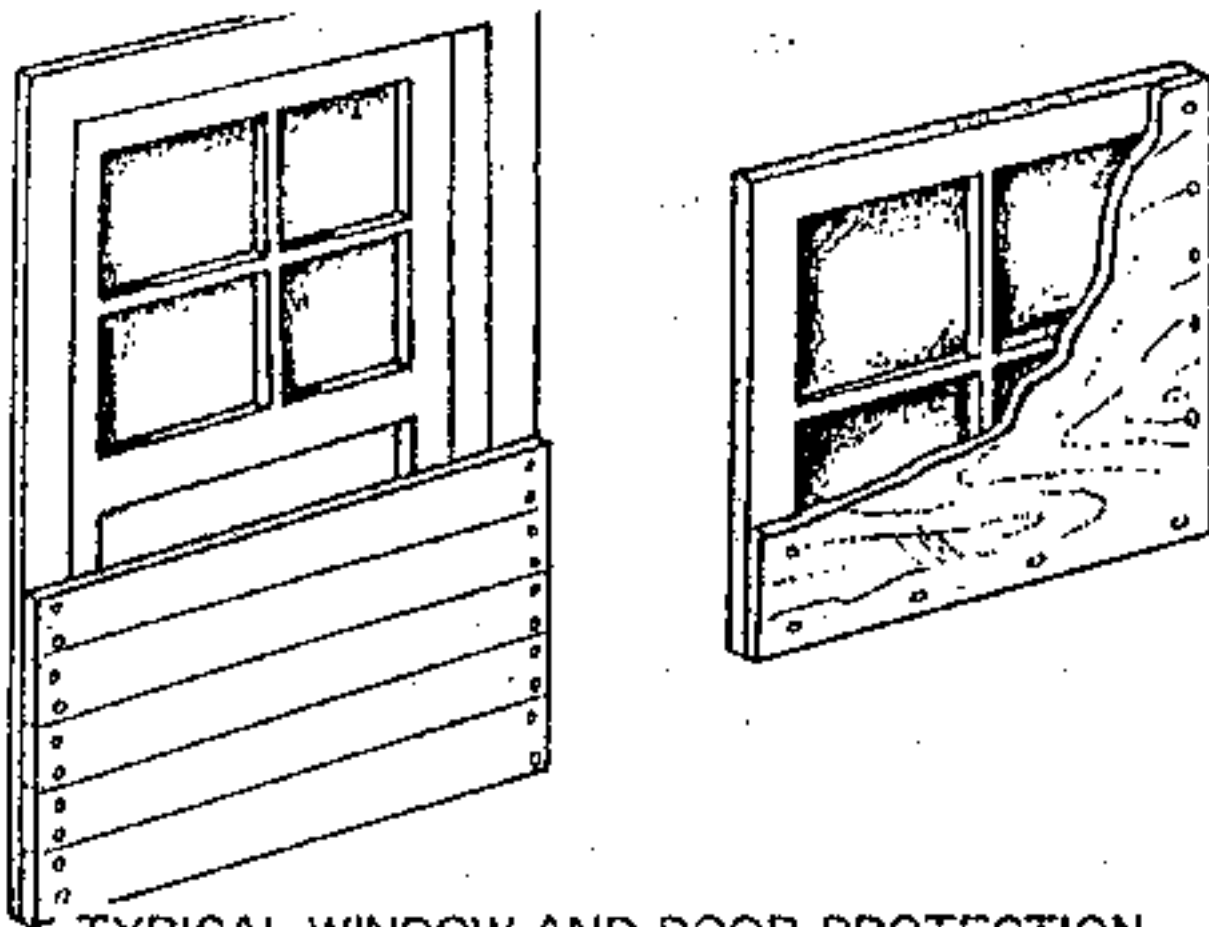
The ideal material for filling sand bags is a fine sand or course silt. Avoid, as much as possible, the use of coarse gravel and heavy clays.

WINDOW AND DOOR PROTECTION

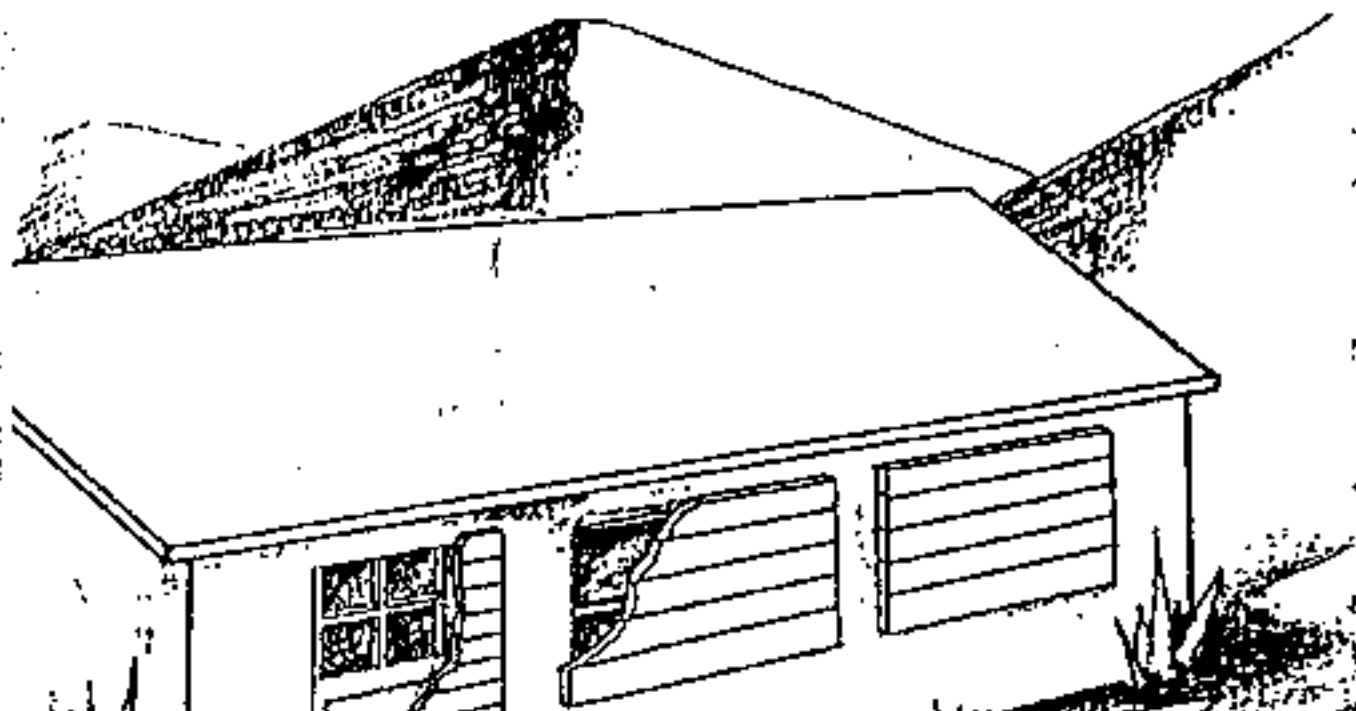
- PREVENT debris from entering doorways and windows by use of Baffle Boards.
- HAZARD may require complete closure of a door and necessitate the use of another entrance.
- MATERIALS can be dismantled after the storm season and stored year to year.

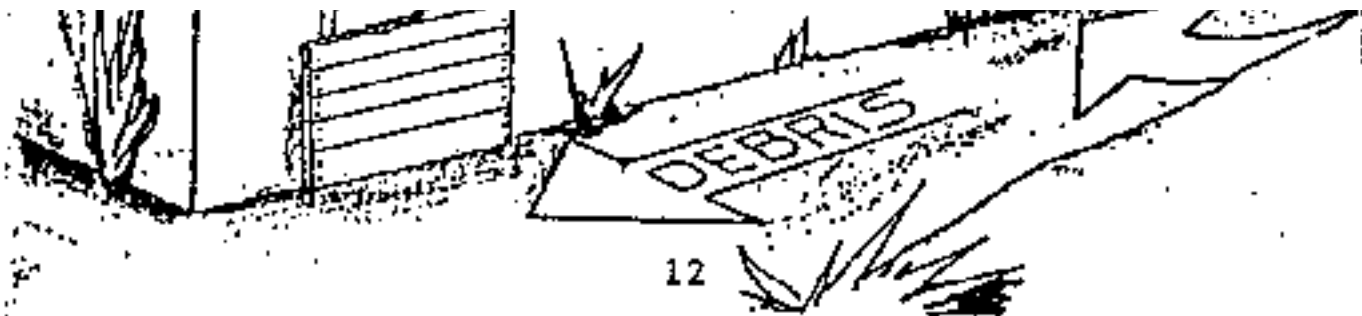
- USE low grade plywood, and overlap windows, vents or doors three to four inches on all sides.
- SECURE the plywood with four or more nails, screws or bolts; a stake and board may also be used to wedge boards in place.

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TYPICAL WINDOW AND DOOR PROTECTION

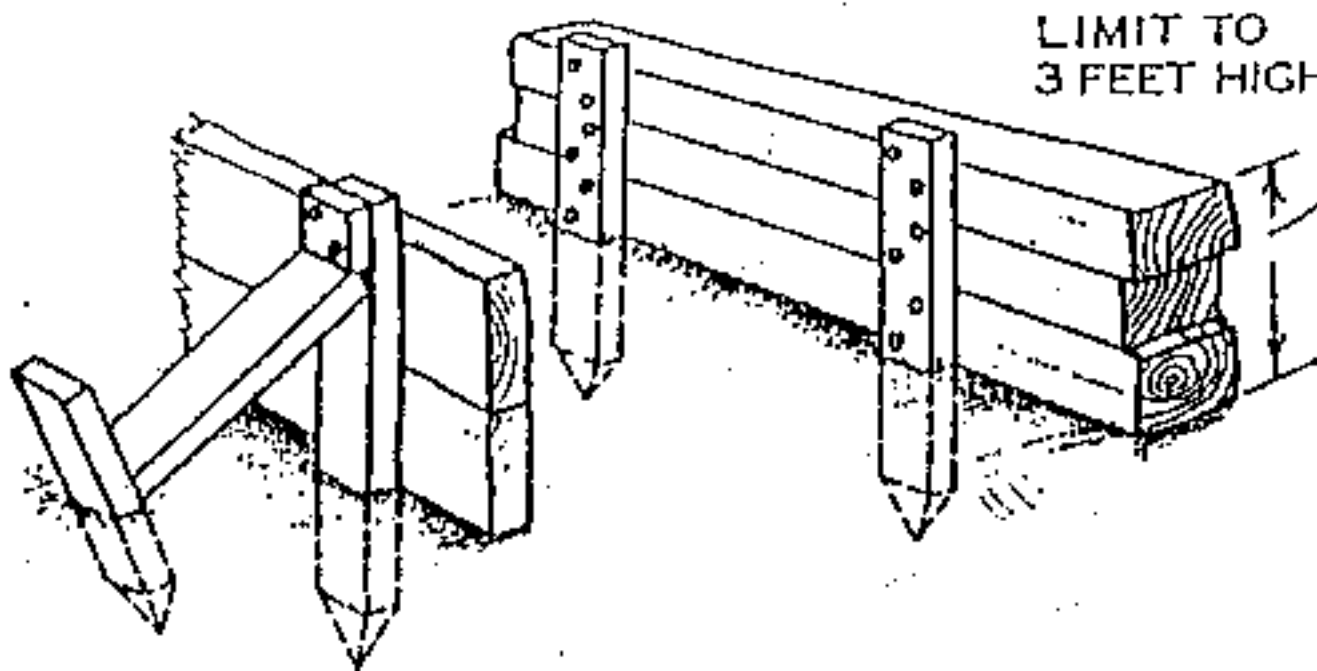




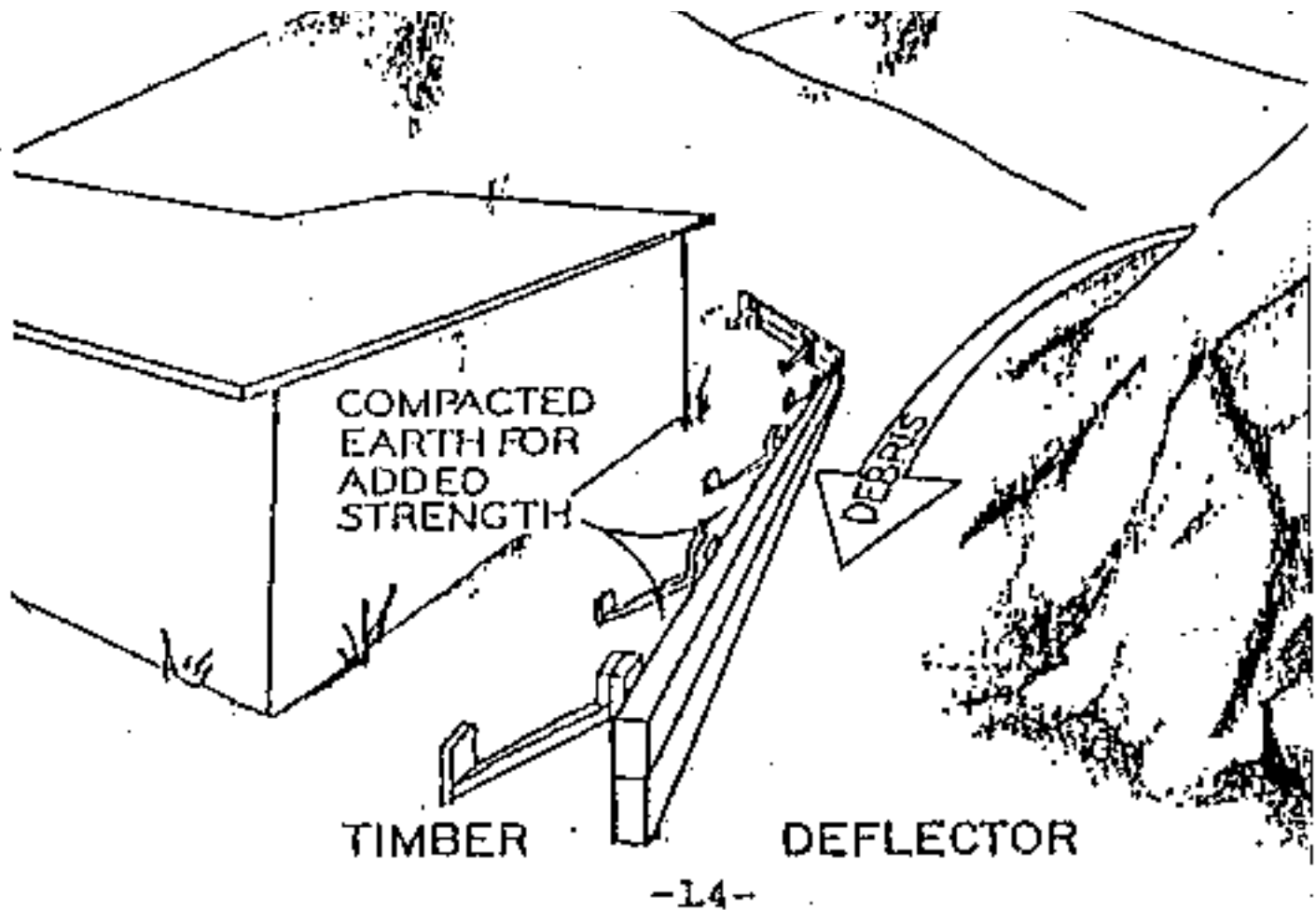
USE OF WINDOW AND DOOR PROTECTION

WOODEN DEFLECTORS

- USE low grade lumber and overlap section with protruding face downstream.
- DRIVE stakes to at least one half their length to insure proper anchorage.
- PLACE deflectors on solid level soil to reduce the hazard of undercutting.
 - DO NOT attempt to use the lumber as a dam.
- EARTH packed behind the deflector will provide needed additional strength.
- IF deflector required is more than three feet in height, house will have to be protected with sandbags and used as a deflector.



TYPICAL TIMBER INSTALLATION



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Salt Lake County greatly acknowledges the technical assistance of the following publication in the preparation of this bulletin; Los Angeles County Flood Control District, "Home Owners Guide for Flood and Erosion Control".