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Universal

Universal Design and Home Modification

Comfortable, safe, convenient living.



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AARP is the nation's leading organization for people age 50 and older. It serves their needs and interests through information and education, advocacy, and community services which are provided by a network of local chapters and experienced volunteers throughout the country. The organization also offers members a wide range of special benefits and services, including *Modern Maturity* magazine and the monthly *Bulletin*.

Hayden Homes

1417 Williamsburg Rd.
Richmond VA 23237
(804) 275-4720

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2016 CONG. PATO

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FIRST FLOOR PLAN

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Introduction

Both universal design and home modifications can make your home safer and more comfortable. They increase the useability of the home by people of all ages, sizes, and abilities, enhancing the ability of all residents to live independently in their homes for as long as they wish.

When most people purchase a home, they don't think about growing old in it. As a result, when they begin to experience problems, they think that their difficulty is due to physical deficiencies and/or the aging process. People are often reluctant to admit that their home does not work for them; they fear being stigmatized as frail older persons who are unable to cope. To avoid this stigma, they adapt their personal behavior in response to the deficiencies and obstacles in their homes. By doing so, in most cases, they are making themselves even more vulnerable; minor situations that are ignored or undetected can escalate into major expenses and greater safety hazards as one continues to age.

Even when people become aware of the deficiencies, barriers, and obstacles in their homes, many do not know what universal design is and have never seen universal design features in a home. When they attempt to modify or improve their homes, they make many of the same mistakes again because neither they nor their contractors are aware of the benefits of using universal design features to modify existing homes.



Introduction

NOTES:
SEE SHEET 1 RE: APPL.
VENT. W/DOWNS
FLOOR LVL.
C/PT. HALL
DATE

When people see how universal design features make a home pleasing to the eye, comfortable, and conducive to independent living, they come to understand that the current design of their house is the cause of their discomfort. Realizing this, they can then take steps to purchase and install universal design features in their existing homes and request that these features be included when they purchase new homes. By increasing consumer demand for universal design products, we eventually motivate architects, builders, contractors, and remodelers to use universal design features to modify existing homes and to build new homes. Doing so will help prevent accidents, increase comfort and safety, and enhance the independence of residents.

To raise awareness among consumers, designers, architects, remodelers, and builders, AARP recently co-sponsored the building of a universally designed house to serve as a showcase for universal design features. Highlights of that house and its features are included in this booklet. The products and design features in the house are attractive and accommodate continually changing needs as residents grow older. They are also designed to be attractive and to serve people of all ages and abilities. This house was completed in January 1998 and was open for touring by the media and the general public until it was sold in November 1998. For more information about the house, contact:

Leon Harper, Senior Housing Specialist
AARP
Consumer Issues Section
601 E Street, NW
Washington, DC 20049
www.aarp.org



Features

Features

Demonstration House Features

This section focuses on universal design features in the AARP demonstration home. They show that a safe, comfortable, and convenient home can be built in which people of all ages, sizes, and capabilities can live independently for as long as they wish.

Exterior

- ▶ Lot selection and landscaping provide slope and grading to create a level entry at the first floor front entrance and all other entrances on the first floor.
- ▶ Smooth, stable driveway
- ▶ Textured-surface sidewalks for stability and safety
- ▶ Low-maintenance exterior
 - vinyl siding
 - brick
 - aluminum gutters
 - shrubs and plants
 - mulch islands



Entryway and Approach to Main Entrance

- ▶ Covered entryway leading to front door
- ▶ No steps or barriers at the front door
- ▶ Wide 35-inch doorway
- ▶ Sidelights with glass vision panels to provide the right amount of privacy combined with the safety of seeing who is near the doorway before opening it
- ▶ Lever door handle (easier to operate with an arm full of packages)
- ▶ Non-slip tile in foyer (avoids the need for area rugs)
- ▶ Rocker-type light switches (easy to use)



Living Room

- ▶ High ceiling and plenty of windows for natural light
- ▶ Raised electrical outlets (easier to reach without bending)
- ▶ Easy-to-reach light switches
- ▶ Lowered windows with easy operation

Family Room

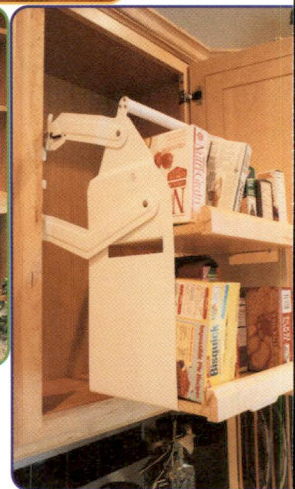
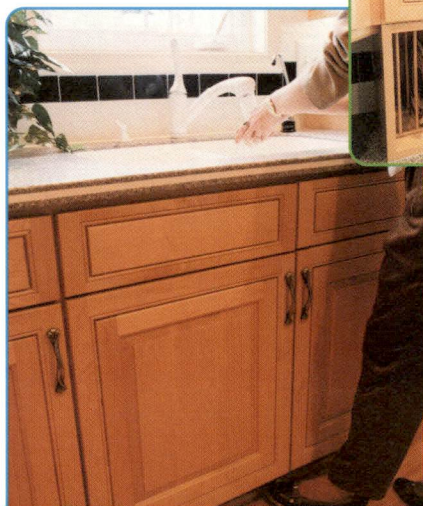
- ▶ Spacious entertainment area with open fireplace, which also can be enjoyed from the dining room and the kitchen area
- ▶ Large sliding doors to provide a noise barrier and privacy to the dining room/kitchen area

Kitchen

- ▶ Two separate work triangles to provide comfortable work areas for more than one cook
- ▶ Multi-level work areas to accommodate children, and sitting or standing adults
- ▶ Open under-counter seated work areas to accommodate wheelchairs
- ▶ Island with eat-at bar for socializing or dining
- ▶ Placement of task lighting in appropriate work areas
- ▶ Contrasting color bands on countertops to provide visual orientation to the workspace

Cabinetry

- Lowered three inches from conventional height
- U-shaped cabinet handles for easy grip and pull
- Pull-out shelving and drawers
- Pull-down shelving
- Glass-front cabinet doors (easy to view cabinet contents)
- Open shelving for easy access to frequently used items



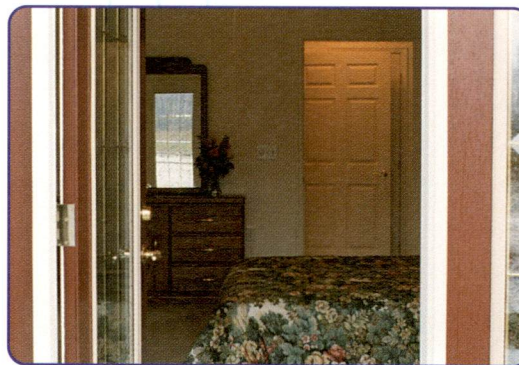
Appliances

- Frigidaire side-swing oven (low maintenance, easy to access and operate)
- General Electric dishwasher (pushbutton control, quiet operation, installed eight inches higher than usual to reduce bending)
- General Electric cooktop (level burners for safety in transferring between burners, front controls, and downdraft feature to pull heat away from user)
- General Electric side-by-side refrigerator (allows for more storage within a comfortable reaching range)
- Corian vegetable sink (convenient location enables children, shorter persons, and seated individuals to work comfortably in the kitchen)
- Kohler pull-out spray faucet with lever handles
- Dupont Corian countertops throughout
- Foot pedal on primary kitchen sink to activate water flow when hands are full



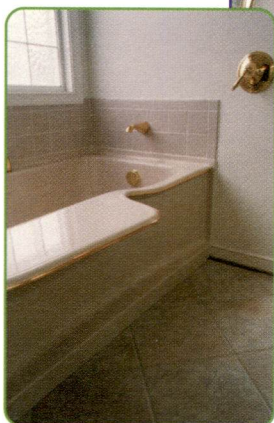
Master Bedroom on First Floor

- ▶ Open, spacious, natural lighting. Easy exit from the bedroom to the outside and away from the home in case of emergency
- ▶ Built-in intercom/music system easy to reach from the bed
- ▶ Spacious, well lighted closet that features pull-out drawers, bins, and baskets, with adjustable height clothes rod and adjustable shelving system
- ▶ Smoke detector that can be converted to a visual strobe for the hearing impaired



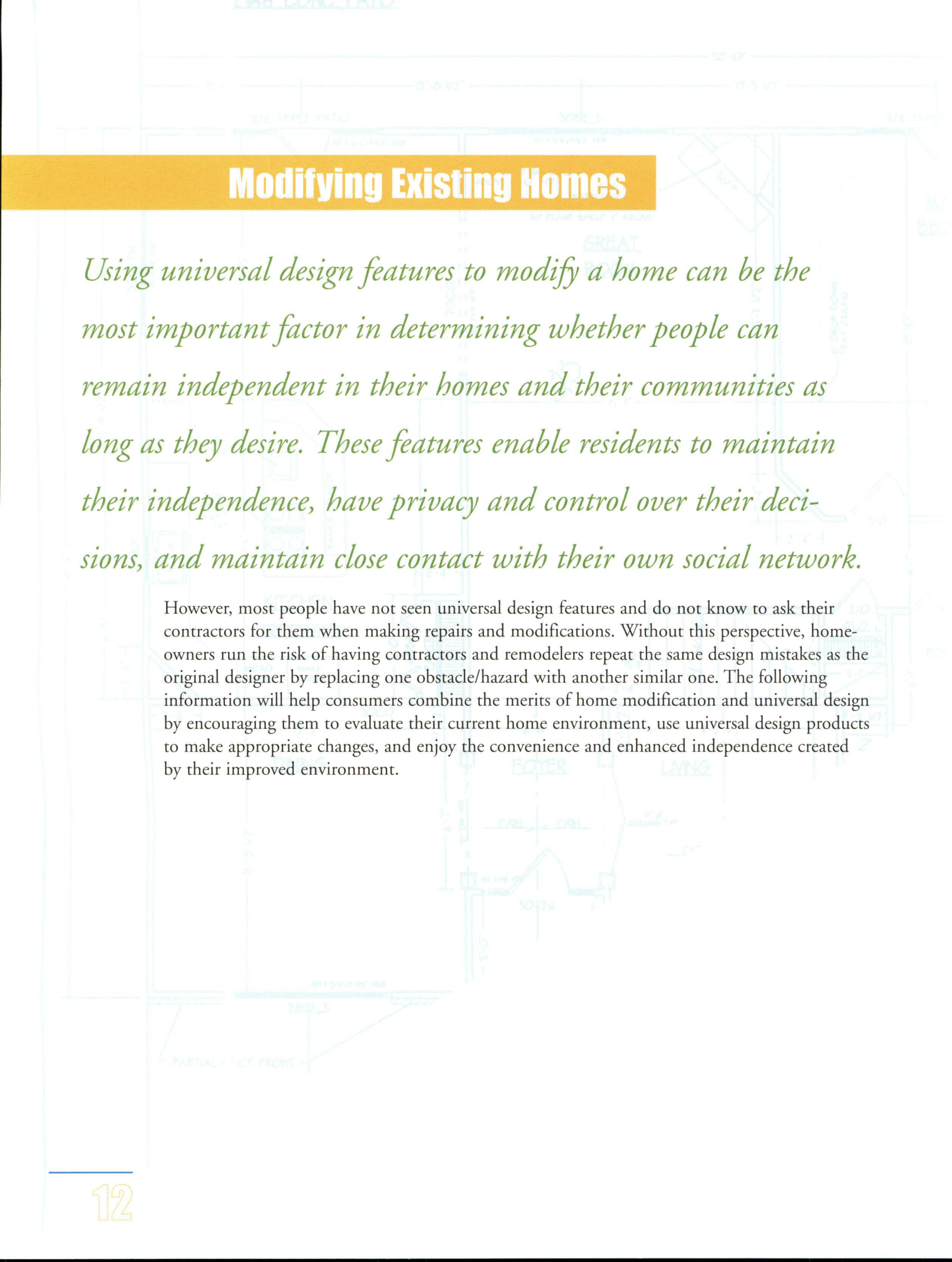
Master Bath

- ▶ Comfortable, safe, and spacious
- ▶ Plenty of natural light
- ▶ Large sliding pocket door for easy access
- ▶ Slip-resistant flooring in room and shower





Modifications



Modifying Existing Homes

Using universal design features to modify a home can be the most important factor in determining whether people can remain independent in their homes and their communities as long as they desire. These features enable residents to maintain their independence, have privacy and control over their decisions, and maintain close contact with their own social network.

However, most people have not seen universal design features and do not know to ask their contractors for them when making repairs and modifications. Without this perspective, homeowners run the risk of having contractors and remodelers repeat the same design mistakes as the original designer by replacing one obstacle/hazard with another similar one. The following information will help consumers combine the merits of home modification and universal design by encouraging them to evaluate their current home environment, use universal design products to make appropriate changes, and enjoy the convenience and enhanced independence created by their improved environment.



Home Modifications Can Promote Independence and Prevent Accidents

- ▶ Many persons are living in older structures that are deteriorating to the point that they are hazardous and contribute to falls and injuries.
- ▶ Home modification and repair can help prevent accidents and falls. Research by the National Centers for Disease Control (CDC) suggests that one-third of home accidents can be prevented by modification and repair.
- ▶ Modification to the home environment can be a key factor in increasing the likelihood of older persons remaining independent and injury-free in their homes and active in their communities as long as they desire.
- ▶ Home modifications can enhance comfort, increase safety, prevent injuries, and facilitate ongoing access to community social, recreational, and supportive activities and services.
- ▶ Removing barriers and safety hazards also helps reduce the stresses associated with the reduction in physical capabilities as people age.

Simple Home Modifications

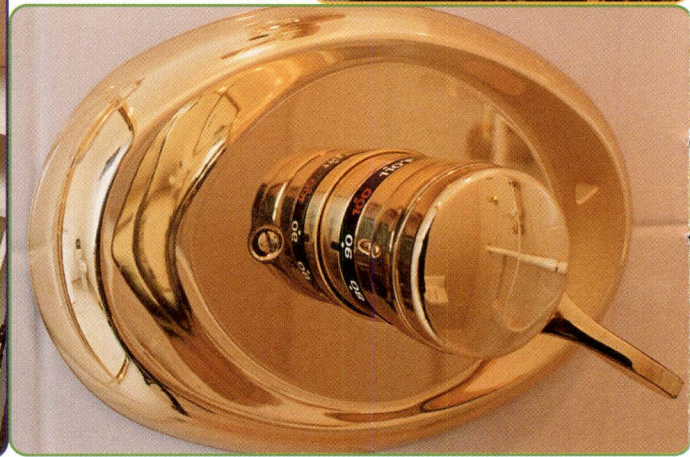
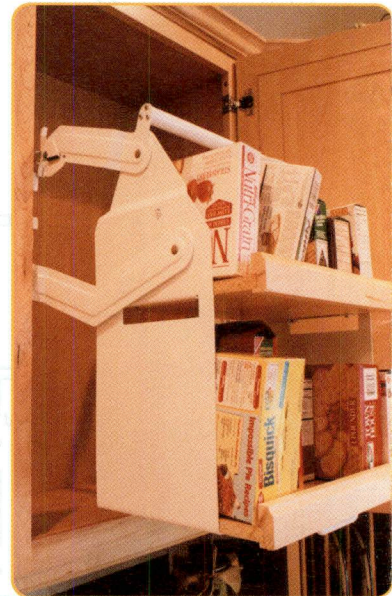
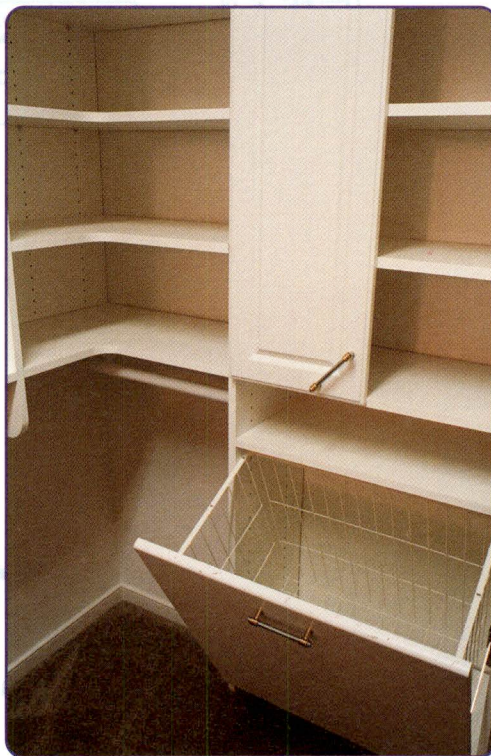
There are many simple and/or inexpensive home modifications that can greatly enhance the comfort, safety, and accessibility of a home.

Bathroom

- Walk-in shower
- Grab bars in the shower, by the toilet, and by the tub
- Hand-held, flexible shower head
- Portable shower seat
- Lever-handled faucets that are easy to turn on and off
- Telephone in the bathroom, reachable from the floor
- Non-skid surface for bathtub and shower floor

Kitchen

- Sliding shelves and lazy susan in corner cabinet
- C or D ring handles on cabinet doors and drawers for easy gripping

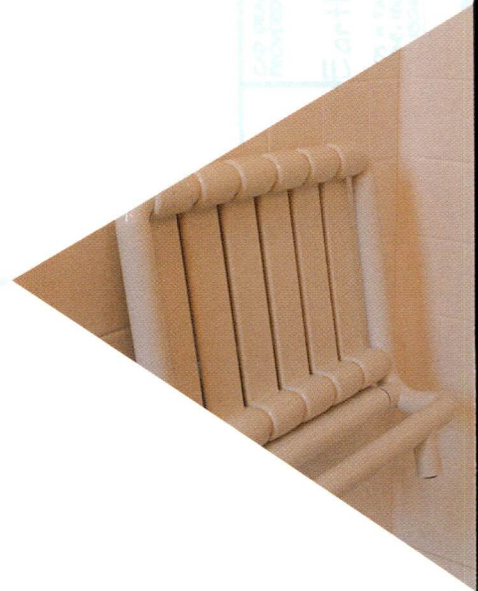


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Earth Smart Serv

General

- Lever door handles that operate easily with a push
- Handrails on both sides of staircase and outside steps
- Package shelf next to outside door
- Brighter staircase and hallway lighting
- Large rocker light switches that turn on with a push
- Electric outlets 27 inches above the floor
- Night lights
- Rubber strips in bathtub to prevent slipping
- Double-sided tape to secure throw rugs



Home Modification and Repair Programs

There are several ways to modify and repair your home. You can:

- 1) do it yourself, and possibly get a friend or relative to help,
- 2) hire a contractor, or
- 3) contact a home modification and repair program.

Programs can be located through the following:

- ▶ Local Area Agency On Aging
- ▶ State Department On Aging
- ▶ State Housing Finance Agency
- ▶ Department of Public Welfare
- ▶ Department of Community Development
- ▶ Independent Living Center
- ▶ Christmas in April Program
- ▶ Habitat for Humanity

Using a Contractor

Know what you want done

Before talking to any contractors, list the specific things you want to have done. Find out about differences in types and prices of materials you want used.

Get recommendations

Talk to your family and neighbors about their experiences with contractors. Are they satisfied with the work, the price, and the time it took to get the job done? Ask local suppliers of materials, appliances, or fixtures about workers they respect. Ask workers you have used in the past for recommendations.

Check out the recommendations

Once you have a preliminary list of names, check them out. Contact your local Better Business Bureau

and consumer protection office to find out if any complaints have been filed against the firms. Check to see if they are licensed or registered by calling the state licensing board or department of consumer protection. Half the states require contractors to be licensed or registered. While licensing doesn't guarantee reliability, it is a minimum qualification to expect.

Make comparisons

Call each of the firms. Find out if they do the type of work you want. How long have they been in business? Get copies of proof that they are licensed, bonded, and covered by workers' compensation and liability insurance. Check out references of satisfied customers. Go on a job site to see the prospective contractor at work. Also get references of banks, suppliers, and subcontractors to make sure the contractor is financially reliable.

Get three estimates

Have a face-to-face meeting with at least three contractors to talk about your specifications. You and the contractor need to have a clear understanding of the work to be done. You want to feel comfortable dealing with the people who will be working in your home. Get written estimates that detail the specifications of the materials to be used, the labor charges, and the start and completion dates.

Take your time

Go over the estimates carefully. The lowest bid may not be the best choice. Get explanations if the bids vary widely. The low bidder may be taking shortcuts on quality. Don't be rushed into signing quickly. Get a second opinion before you sign anything. Any genuine deal will still be there tomorrow.

Put it in writing!

A well written and detailed contract is very important. Be sure that everything you agreed to is in writing. Ask a lawyer to review the contract if you don't understand some of the provisions. Don't

approve any plans or blueprints unless you understand them. Never sign a contract with any blanks and get a copy of everything you sign. Be sure you know whether you or the contractor will apply for any necessary building permits.

Financing the work

Be cautious if the contractor offers to arrange financing for the project. You may get better loan terms at your bank or credit union. Be sure you understand all terms and how much interest you will have to pay. Don't hand over the deed to your home or enter into a second mortgage unless you understand everything about the agreement. Any financing agreement must comply with the federal Truth-in-Lending Act. This law requires the lender to give you a very accurate disclosure of credit terms and your right to cancel. Another federal law allows you to cancel any contracts made in your home by giving written notice (usually within three business days) to the contractor.

Now the job is done!

Sign the completion certification and make the final payment only after you and any necessary local building authorities have inspected the work and everything is completed the way you want it. Get in writing that your contractor has paid all subcontractors and suppliers.

Reverse Mortgages as a Financial Tool to Pay for Home Modifications

Reverse mortgages (RMs) are a relatively new financial instrument designed for older homeowners who are "house rich but cash poor." These new loans enable eligible older homeowners to tap the equity in their home without having to sell or move. Now available in every state but Texas, RMs are an important solution for some people. They provide the cash necessary for homeowners to remain in their homes

and communities as they wish to do. RMs don't have to be repaid until the last surviving homeowner dies, sells the house, or moves permanently away from the property. While the majority of reverse mortgages do not provide any restrictions on how the cash advances may be used, many older homeowners are using these funds to pay for needed home repairs or deferred maintenance. When many older homeowners find themselves strapped for cash, they may let things deteriorate around the house. The RM provides resources to update the home and make it safer and more comfortable.

Several types of reverse mortgages are now available in the marketplace. The Home Equity Conversion Mortgage (HECM), which is insured by the U.S. Department of Housing and Urban Development (HUD), is the most widely available reverse mortgage. HUD requires, as part of its appraisal process, that the property's health and safety code violations be noted and repaired using funds from the HECM. Other RM lenders are not as strict about requiring home improvements to be made. The HUD program also requires that homeowners meet with independent housing counselors to explore a variety of alternatives and to better understand the RM's inner workings before they apply to a lender.

AARP publishes a Home Equity Conversion Information Kit (D15601), which includes a 47-page consumer guide about reverse mortgages called "Home-Made Money" and several useful fact sheets. For a free copy of this kit, write to:

AARP Fulfillment EEO1363
601 E St. NW
Washington, DC 20049

You can also access valuable information on the Internet from the nonprofit National Center for Home Equity Conversion (<http://www.reverse.org>)



1-1/4" CONC. PATO

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CONSTRUCTION

DATE REVISION
PROPOSED BY
Earth Structures Service
NOT A MODIFIED OR ALTERNATE SET
THIS SET MUST BE USED IN FULL
NO PARTS MAY BE USED INDIVIDUALLY

Appendices

Appendices

KITCHEN
DISHWASHER

DINING

HALL

LIVING

BED

BATH

LAUNDRY

Appendix A: Manufacturers

Access Unlimited	804-285-3674
Broan Manufacturing	800-548-0790
C.D. Sparling	734-455-3121 800-322-8629 Fax
California Closets	800-274-6754
Dupont Corian	800-4CORIAN
Dal-Tile	800-933-TILE
Delta	317-848-1812
Frigidaire	800-FRIGIDAIRE
General Electric	502-452-3071
Grohe America	630-582-7711
Hafele	800-423-3531
HEWI, Inc.	717-293-1313
Kohler Co.	800-4KOHLER
Pedal Works	800-431-3668
Access Unlimited	804-285-3674
Rohl Corp. (Includes Rohl Inda, Cisal, Bossini)	714-557-1933
Seachrome	800-955-2476
Yorktown Inc.	800-777-0065
A&R Cabinet - Custom Vanity	804-261-4098
Hayden Homes	804-275-4720
Landscape Design: Nancy Dransfield of Land Design	804-261-6773

Disclaimer: The products in the universal design house were donated by the companies listed. Their mention here is not an endorsement, but an acknowledgment of their contributions. The prices are for 1998 "top of the line" products. These prices are subject to change, particularly if other products are used. Similar but less expensive products are available from most national and local hardware and home improvement stores.

Description**Product Number****Price****First Floor Bath**

Water Closet (White).....	Kohler K-3427	\$275.00
Seat (White)	Kohler K-4653-0BB	55.00
Trip Lever (Pol. Brass)	Kohler K-9404-L-PB	25.45
Lavatory (English Trellis).....	Kohler K-14192-FL-0	858.45
Shroud (White).....	Kohler K-2227-0	146.65
Faucet (Pol. Brass)	Kohler K-280-9B-PB	880.70
Faucet Handle Inserts (English Trellis)	Kohler K-258-FL-6	69.85
Grab Rail (White/Pol. Brass)	Seachrome GDA-32-Q-CR-2-PCI-BB	73.00
Towel Bar (Pol. Brass).....	Rohl/Inda 3218/60APB.....	230.00
Toilet Paper Holder (White)	Access Unlimited TPHWHT	15.00
Sensor Light/Vent Fan (White)	Broan MHS 120L	302.78
Switch (White)	Broan 77	30.30

First Floor Master Bath

Access Therapy (Innocent Blush Finish).....	APRJ-6034B.....	2,480.00
Bathtub (Pol. Brass) Trim	by Access Unlimited	

First Floor Master Bath Accessories

Tub Valve Body (Pol. Brass)	Kohler K-305K	125.90
Tub Valve Trim (Pol. Brass).....	Kohler K-T312-4M-PB.....	563.75
Master Shower (Innocent Blush)	RealTile 4PRS-6048BF.....	1,558.00

First Floor Master Bath and Shower Accessories

Thermostatic Control Valve (Pol. Brass)	Grohe-America 34.456-R	433.00
Volume Controls (Pol. Brass)	Grohe-America 29.268R	146.00
Wall Outlet	Grohe-America 28.627-L	46.00
Hand Shower Hose (White).....	Grohe-America 28.151-L	70.75
Glide Bar (Pol. Brass).....	Grohe-America 28.620-R	216.00
Soap Dish (White)	Grohe-America 28.631-L	44.00
Shower Head (Pol. Brass/White).....	Grohe-America 28.275-LR	142.00
Shower Arm (White).....	Grohe-America 28.465-L	101.00
Grab Bars (White/Pol. Brass)	Seachrome GDA18-Q-CR-2-PCI-BB	63.00
Grab Bars (White/Pol. Brass)	Seachrome GDA36-Q-CR-2-PCI-BB	77.00
Fold-up Shower Seat (White).....	HEWI 33.4019	595.00
Wall Protector (White)	HEWI BA40.4WF2	226.00
Shower Door (Pol. Brass/Summer Shade)	Kohler K-703018-P3	717.00
Water Closet (Innocent Blush).....	Kohler K-3427RA	357.50
Seat (Innocent Blush).....	Kohler K-4653-7	62.25
Trip Lever (Pol. Brass).....	Kohler K-9404-R-PB	25.45
Lavatory Faucets	Kohler K-310-4M-PB	461.25

Toilet Paper Holder (White)	Access TPH WHT (Snap Load Type)	15.00
Vanity - Custom (White)	A&R Cabinet	
Vanity Top	Corian - Sierra Beach/Champagne	
Sensor Light/Vent-Fan (White)	Broan MHS 120L	302.78
Switch (White)	Broan 77	30.30

Second Floor Master Bath

Tub (White)	Kohler K-721	779.30
Tub Valve (Rough Brass)	Rohl-Cisal RPC-1	145.00
Tub Valve Trim (Chrome)	Rohl-Cisal AC200L	150.00
Tub Spout	Rohl-Cisal AC24	110.00
Shower (White w/Black Accent)	RealTile 4PRS-4834 Groutless Tile	1,326.00
Shower Valve (Rough Brass)	Rohl-Cisal RPC-1	145.00
Valve Trim	Rohl-Cisal AC100L	150.00
Slide Guide Set (Chrome)	Rohl-Bossini D-800	170.00
Hose Outlet (White)	Rohl-Bossini F-824	32.00
60" Hose (White)	Rohl-Bossini A95/1	36.00
Soap Holder (Chrome)	Rohl-Bossini C443	13.00
Hand Shower (White)	Rohl-Bossini B250	56.00
Shower Seat (White)	HEWI 33.4019	595.00
Wall Protector (White)	HEWI BA 40.4WP2	226.00
Grab Bars (White w/ Chrome Trim)	C.D. Sparling PQC-32-W-CH	65.70
Grab Bars (White w/ Chrome Trim)	C.D. Sparling PQC-18-W-CH	45.70
Shower Door (Chrome)	Kohler K-704016-P2-5H	726.00
Towel Bar (Chrome)	Rohl/Inda 3218/60APC	125.00
Robe Hook	Rohl/Inda 3220APC	82.00
Water Closet (White)	Kohler K-3429-0	328.05
Seat (White)	Kohler K-4653-0	55.00
Vanity Faucet	Rohl/Cisal AC102L-ADC	398.00
Pedal Valve (Black)	Pedal Works PC945A	279.95
Vanity Top (White)	Corian/Glacier White	
Toilet Paper Holder (White)	Access Unlimited TPHWHT	15.00

Kitchen

General Electric Dishwasher	GSD4930	604.00
General Electric Cooktop	JP389/JXDR50	1,104.00
Frigidaire Side-Swing Oven	FEB786CESA	1,189.00
General Electric Refrigerator	TPX24PRY	2,030.00
Solid Surface Counter Top	Corian - Magna Platinum	
Seamless Double Bowl Sink	Corian - Glacier White	
Seamless Vegetable Sink	Corian - Glacier White	
Faucets (White)	Kohler K-15162-0	322.90
Pedal Valve (Corian)	Pedal Works PC945A	279.95

Laundry Room

Frigidaire Washer	FWT445GE51	768.00
Frigidaire Dryer	FSE747GES	468.00
Laundry Sink	Kohler K-6550 (white)	157.95
(Must include Metal Frame)	K-6593	40.20
Faucet (Chrome)	Delta 750	159.05
Pedal Valve (White)	Pedal Works PC945A	279.95
Counter Tops	Laminate	
Vent Fan (White)	Broan S80LU	159.90
Fold-down Ironing Board (Natural)	Broan	
Wall Cabinets	California Closets	

Appendix B: List of Resources

Universal Design Resources

Adaptive Environments
374 Congress Street, Suite 301
Boston, MA 02210
617-695-1225
Fax: 617-482-8099
www.adaptenv.org

Association for Safe & Accessible Products
1511 K Street, NW, Suite 600
Washington, DC 20005
202-347-8200

BJAC Architecture, P.A.
811 W. Hargett Street
Raleigh, NC 27603
919-833-8818
Fax 919-833-6898
www.bjac.com

The Center For Universal Design
NC State University, Box 8613
Raleigh, NC 27695-8613
800-647-6777 (v/tty)
Fax 919-515-3023
www.design.ncsu.edu/cud

IDEA - Center For Inclusive Design &
Environmental Access
School of Architecture & Planning - State
University of New York at Buffalo
Buffalo, NY 14214-3087
716-829-3485
Fax 716-829-3256
www.arch.buffalo.edu/~idea

Industrial Design Society Of America
IDSA - Special Interest Section
1142 Walker Rd.
Great Falls, VA 22066
703-759-0100
Fax 703-759-7679
www.idsa.org

J.L. Mueller, Inc.
4717 Walney Knoll Court
Chantilly, VA 20151
703-222-5808
Fax 703-378-5079
www.monumental.com/jlminc

Mary Jo Peterson, Ckd, Cbd
Design Consultants
3 Sunset Cove
Brookfield, CT 06804
203-775-4763
Fax 203-740-2333
www.mjpeterson@aol.com

MIG
1802 Fifth Street
Berkeley, CA 94710
510-845-0953
Fax 510-845-8750
www.migcom.com

National Center on Accessibility
5020 State Road 67 North
Martinsville, IN 46151
800-424-1877
Fax 765-342-6658
www.indiana.edu/~nca

National Kitchen & Bath Association
687 Willow Grove Street
Hackettstown, NJ 07840
800-843-6522
Fax 908-852-1695
www.nkba.org

Steven Winter Associates
50 Washington Street
Norwalk, CT 06854
203-852-0110
Fax 203-852-0741
www.swa@swinter.com

Trace Research and Development Center
1500 Highland Avenue, S151
Waisman Center
Madison, WI 53705-2280
608-262-6966 (v)/ 608-263-5406 (tty)
Fax 608-262-8848
www.trace.wisc.edu

Universal Designers and Consultants, Inc.
1700 Rockville Pike, Suite 110
Rockville, MD 20852
301-770-7890 (v/tty)
Fax 301-270-8199
www.universaldesign.com

Richard Duncan
Center For Universal Design
School Of Design
North Carolina State University
Box 8613
Raleigh, North Carolina 27695
919-515-3082
Fax 919-515-3023
www.design.ncsu.edu/cud/
E-Mail RC_Duncan@ncsu.edu

Home Modification Resources

Allan Browne
Extended Home Living Services, Inc.
9820 Capitol Drive
Wheeling, IL 60090
847-215-9490
Fax 847-215-9632

Brian Bixler
Department of Veterans Affairs, 262A
Specially Adapted Housing
810 Vermont Avenue, NW
Washington, DC 20420-0001
202-273-7355
Fax 202-275-3523

Jim Costello
Costello Design Group
1215 Lakewood Street
Pittsburgh, PA 15220
412-922-3199 (also fax)

Irma Dobkin
Irma Dobkin Interiors, Ltd.
8810 Fernwood Road
Bethesda, MD 20817-3014
301-469-4944
Fax 301-365-1998
E-Mail irma.dobkin@asid.noli.com

Todd Brickhouse
Hadley-Brickhouse
Accessible Design Assoc., Inc.
150 Herricks Road
Mineola, NY 11501
516-294-0555
Fax 516-294-1976

Jackie Dobson
Solutions For Accessibility
167 Union Avenue
Framington, MA 01701
508-872-5498 (also fax)
E-Mail AccessSols@aol.com

Jane Gay
Iowa Program For Assistive Technology
University Hospital School
Iowa City, IA 52242-1011
319-356-4463
Fax 319-356-8284
E-Mail jane-gay@uiowa.edu

Debbie Greenstein
U.S. Dept. of Housing &
Urban Development
Policy Development Division
451 Seventh Street, SW, Room 8120
Washington, DC 20410
202-708-1520
Fax 202-708-5536
E-Mail Deborah_Greenstein@hud.gov

Patty Johnson
Christmas In April, USA
1536 16th Street, NW
Washington, DC 20036-1402
202-483-9083
Fax 202-483-9081
E-Mail cinausa@erols.com

June Kailes
Policy Consultants
6201 Ocean Front, Suite 2
Playa Del Rey, CA 90293-7556
310-821-7080
Fax 310-827-0269
E-Mail jkailes@tsbbs02.tnet.com

Susan Klein
Philadelphia Corporation For Aging
642 North Broad Street
Philadelphia, PA 19130-3409
215-765-9000 ext. 5217
Fax 215-765-9066
E-Mail Sklein@pcaphl.com

Rick Millard
Access Unlimited
Division of Lewis Supply Co.
6526 Horsepen Road
Richmond, VA 23226
804-285-3674
Fax 804-285-3677

Anne Morris
AOTA
4720 Montgomery Lane
Bethesda, MD 20842-1220
301-652-6611 ext. 2049
Fax 301-652-7711
E-Mail annem@aota.org

Jim Mueller
J.L. Mueller Inc.
4717 Walney Knoll Court
Chantilly, VA 20151
703-222-5808
Fax 703-378-5079
www.monumental.com/jlminc

Pat Puckett
Statewide Independent Living Council
of Georgia
3125 Presidential Parkway, Suite 200
Atlanta, GA 30340
770-452-9601
Fax 770-452-9928
E-Mail silcga@mindspring.com

Jon Pynoos
National Resource and Policy Center
Center for Housing & Supportive Services
USC -Andrus Gerontology Center
Los Angeles, CA 90089-0191
213-740-1364
Fax 213-740-8241
E-Mail jpynoos@aol.com or
natresctr@usc.edu

U.S. Dept. of Housing &
Urban Development
Office of Fair Housing
& Equal Opportunity
451 Seventh Street, SW
Washington, DC 20410
800-669-9777
800-927-9275 (tty)
www.hud.gov

Carol Schaake
NAHB Research Center
400 Prince George's Center Blvd.
Upper Marlboro, MD 20774-8731
301-249-4000
Fax 301-249-0305
E-Mail cschaake@nahbrc.org

Shoshana Shamburg
Abilities Occupational Therapy Services
3309 W. Strathmore Avenue
Baltimore, MD 21215
410-358-7269
Fax 410-358-6454
E-Mail shamber@idt.net

Diane Sprague
Minnesota Housing Finance Agency
400 Sibley Street, #300
St. Paul, MN 55101
612-296-2257
Fax 612-296-8139
E-Mail
diane.sprague@marge.mhfa.state.mn.us

Louis Tennenbaum
Louis Group
Access Remodeling
10715 Rock Run Drive
Potomac, MD 20854
301-983-0131
Fax 301-983-9696
E-Mail HOMEMODS@aol.com

William K. Wasch
W.K. Wasch Associates
150 Coleman Road
Middletown, CT 06457
860-346-2967
Fax 860-346-8967
E-Mail ww Wasch@wesleyan.edu

Margaret Wylde
Promatura
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Fax 601-234-0288
E-Mail mwylde@promatura.com

Mary Yearns
Iowa State University
62 Labaron Hall
Ames, IA 50011
515-294-8520
Fax 515-294-1908
E-Mail yearns@iastate.edu

Appendix C: Universal Design House Floor Plans

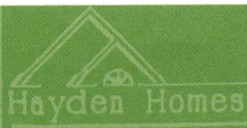


FIRST FLOOR PLAN

TOTAL FINISHED	2,694 SF
INTERIOR UNFINISHED	169 SF
EXTERIOR UNFINISHED	357 SF

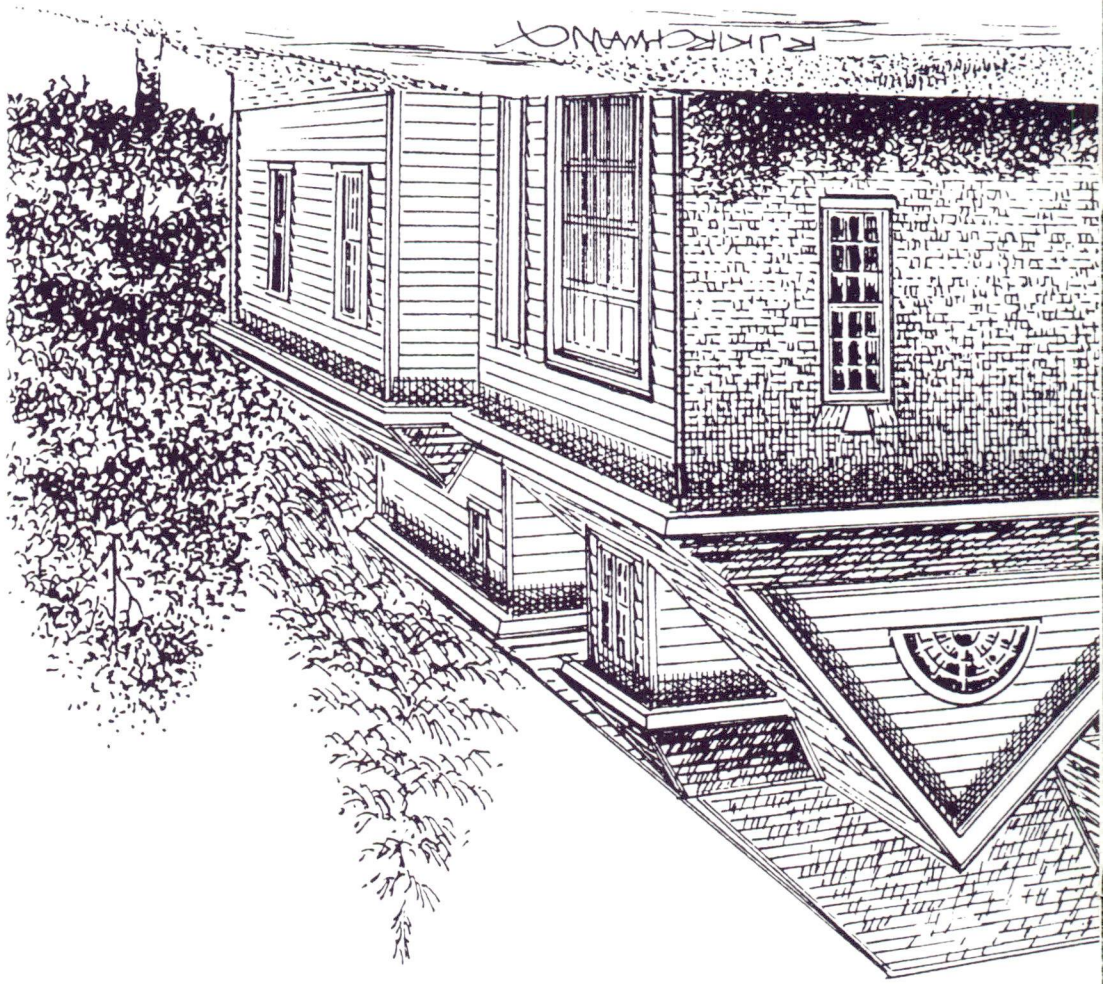
26

THE UNIVERSAL HOME
 TRACT 11
 SECTION II
 PEBBLE CREEK



7419 Whitapine Rd.
 Richmond VA 23237
 (804) 275-4720

CONCRETE PROVIDED BY
 Earth Smart Services
 205 N. TANKERS HILL, RICHMOND, VA 23224
 PHONE: (804) 276-7771 FAX: (804) 276-7771
 E-MAIL: earthsmart@earthsmart.com



THE UNIVERSAL HOME
PROJECT:
LOT 11
SECTION I
FEBBLE CREEK

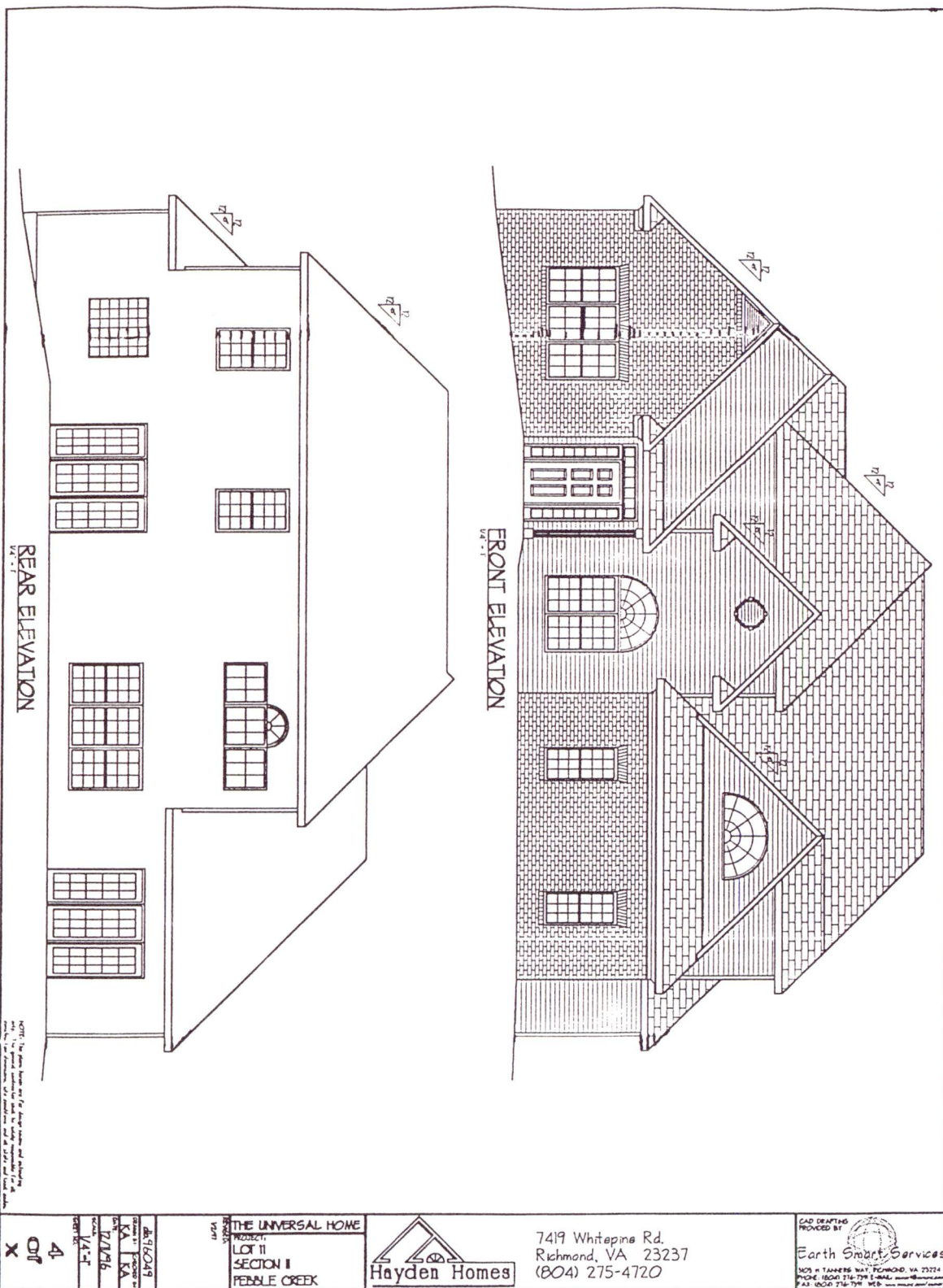


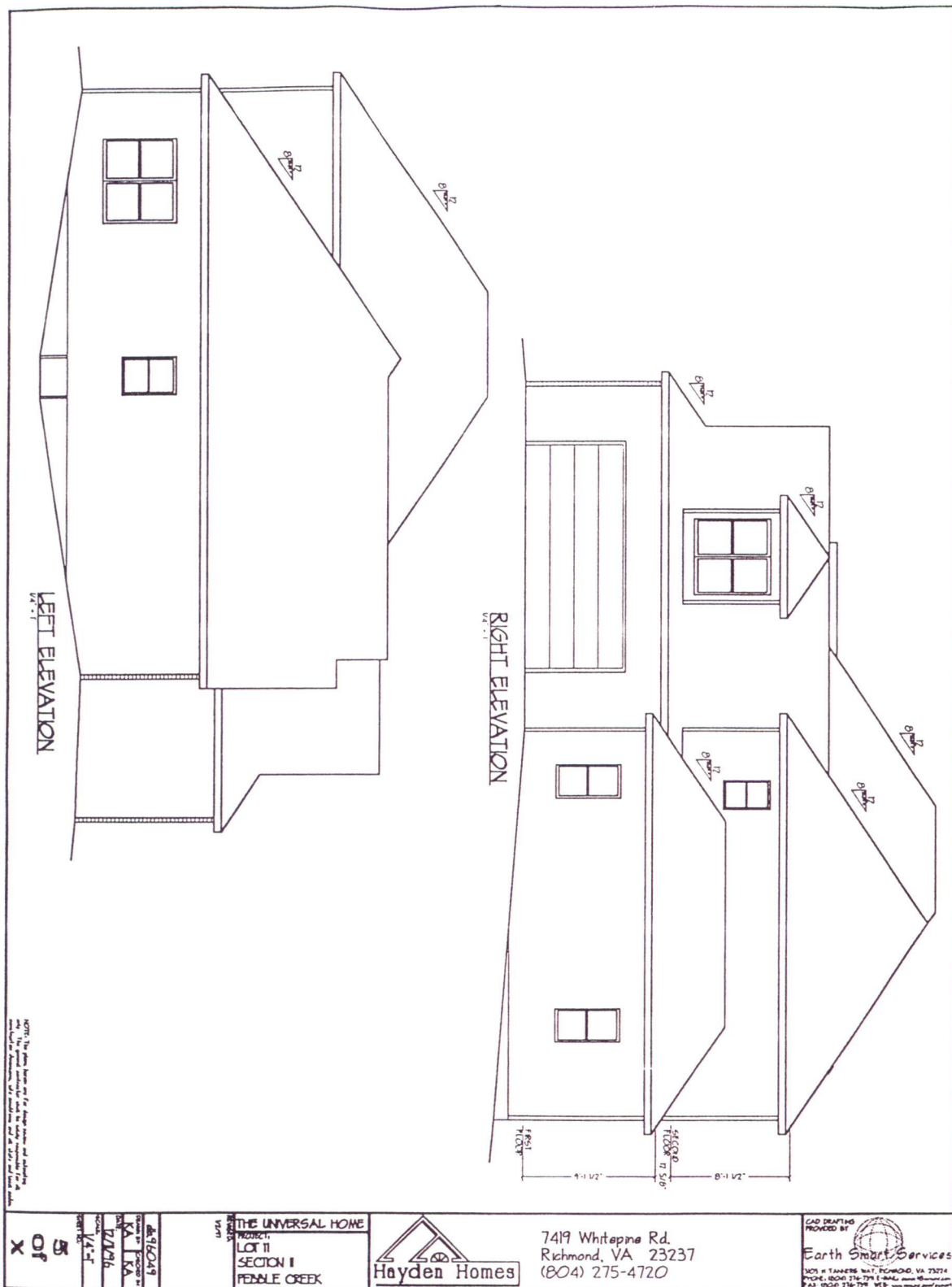
7419 Whitepine Rd.
Richmond, VA 23237
(804) 275-4720

NOT FOR CONSTRUCTION

DATE CONC. PAID

FIRST FLOOR PLAN

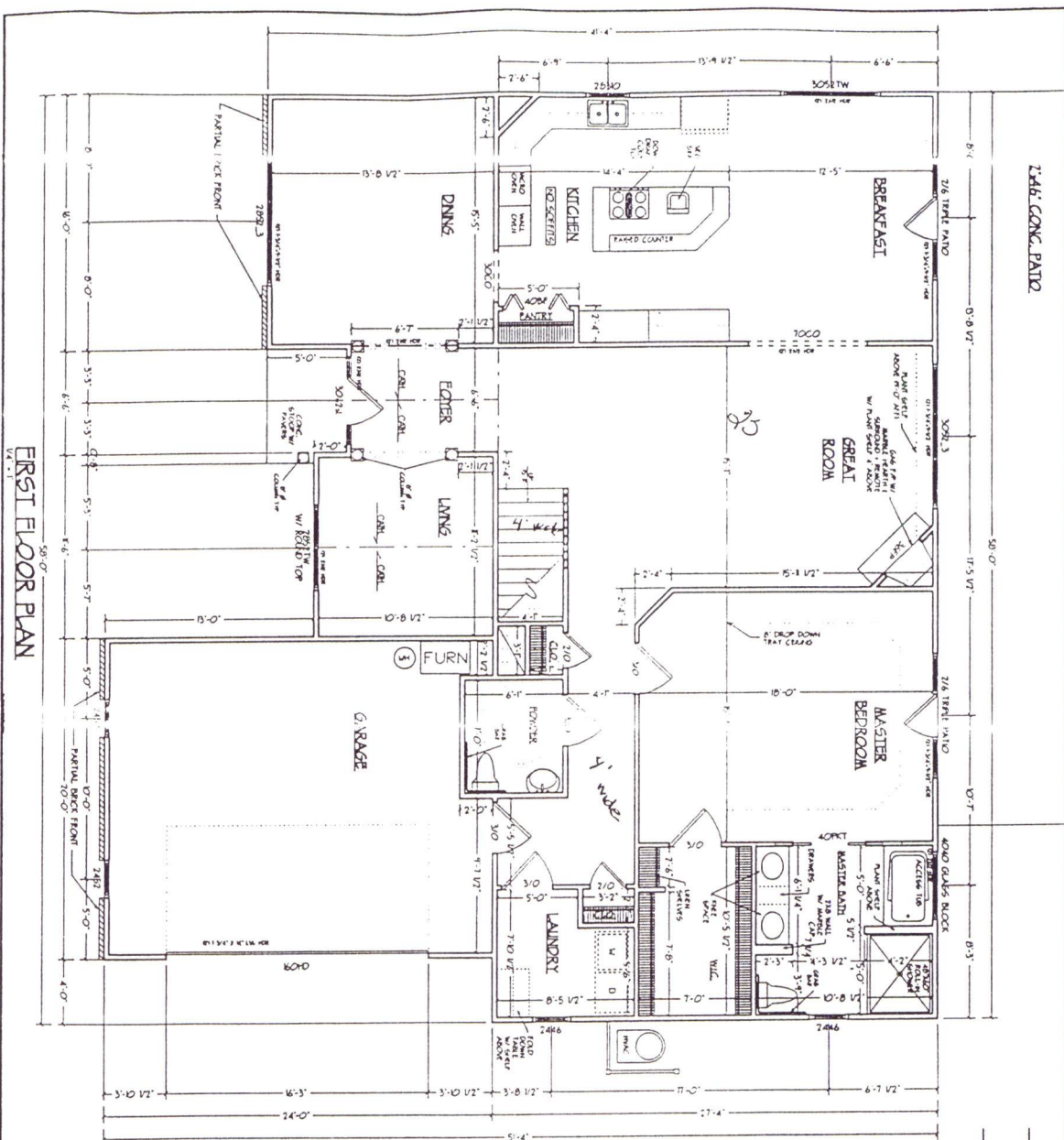




5 OF X	DATE: 12/16/16	PROJECT: LOT II SECTION II PEBBLE CREEK	7419 Whitpain Rd. Richmond, VA 23237 (804) 275-4720	Earth Smart Services 1301 N. TANKERS HILL, RICHMOND, VA 23274 PHONE: (804) 775-1144 FAX: (804) 775-1144 WWW.EARTHSMARTSERVICES.COM
	SCALE: 1/4" = 1'-0"	THE UNIVERSAL HOME		
	BY: KA/KA	PROJECT: LOT II SECTION II PEBBLE CREEK		
	DATE: 12/16/16	PROJECT: LOT II SECTION II PEBBLE CREEK		

2 OF X	DATE: 12/16/16	PROJECT: LOT II SECTION II PEBBLE CREEK	7419 Whitpain Rd. Richmond, VA 23237 (804) 275-4720	Earth Smart Services 1301 N. TANKERS HILL, RICHMOND, VA 23274 PHONE: (804) 775-1144 FAX: (804) 775-1144 WWW.EARTHSMARTSERVICES.COM
	SCALE: 1/4" = 1'-0"	THE UNIVERSAL HOME		
	BY: KA/KA	PROJECT: LOT II SECTION II PEBBLE CREEK		
	DATE: 12/16/16	PROJECT: LOT II SECTION II PEBBLE CREEK		

FIRST FLOOR PLAN



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CONSTRUCTION

[illegible]

GAS HEAT / HOT WATER

4' CEILING FIRST FLOOR

DIMENSIONAL SHINGLES
RESINQUE II

AREA SUMMARY:	
FIRST FLOOR	208 SF
SECOND FLOOR	881 SF
TOTAL FINISHED	2874 SF
INTERIOR UNFINISHED	462 SF
EXTERIOR UNFINISHED	587 SF

NOTE: The plans herein are for design review and estimating only. The general contractor shall be solely responsible for all construction dimensions, site conditions and all utility and local code requirements.

DATE	8/9/62	BY	DAF
NAME	KAY	ROOM NO.	KA
SECTION	17/11/6	REMARKS	THE UNIVERSAL HOME HOUSE, LOT II SECTION II PEBBLE CREEK
OFF	2	DATE	
X	X		



7419 Whitepine Rd.
Richmond VA 23237
(804) 275-4720

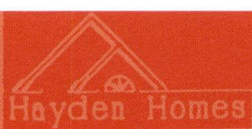
CAD DRAFTING
PROVIDED BY



Earth Smart Services

1005 H TANNERS WAY, PICHMORO, VA 23724
PHONE: (804) 716-7791 E-MAIL: earthsmart@earthsmart.com
FAX: (804) 716-7791 WEBSITE: www.earthsmart.com

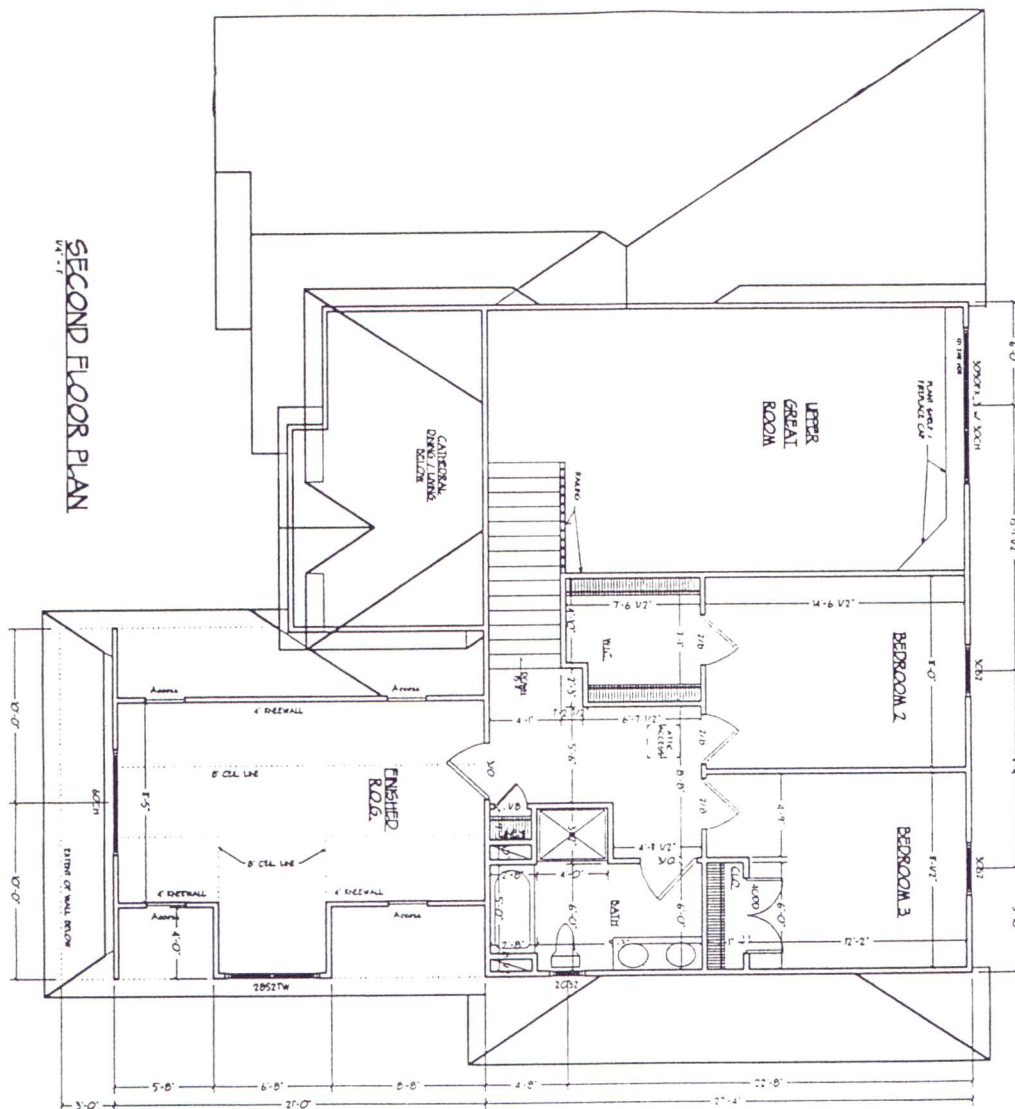
THE UNIVERSAL HOME
PROJECT
LOT 11
SECTION II
PEOPLE'S CREEK



200 PEA 1163
 PROVIDED BY

 Earth Smart Services
 503 N TANNERS WAY, RICHMOND, VA 73224
 PHONE: (804) 716-7791 E-MAIL: earthsmart@earthsmart.com
 FAX: (804) 716-7791 WEB: www.earthsmart.com

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NOT FOR
CONSTRUCTION

NOTE: The above notes are for design practice and are helpful only in general information and are only representative for all types of structures. The conditions of a job and local conditions are always the controlling factors.

3 of x

CR/ANALYST	DATE
K.A.	K.A.
BATCH NO.	
ZN096	
QC ANAL.	
K.A.-F	
REMARKS	

THE UNIVERSAL HOME
PROJECT,
LOT 11
SECTION II
PERRILLE CREEK



7419 Whitepine Rd.
Richmond, VA 23237
(804) 275-4720



Notes...

FIRST FLOOR PLAN

TOTAL FINISHED	264.37
FINISHED	167.37
UNFINISHED	97.00

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THE UNIVERSAL HOME
SECTION I
FEMALE CREEK



7419 Whitapine Rd.
Richmond VA 23237
(804) 275-4720

Earth Smart Services
1015 N. FARMERS WAY, RICHMOND, VA 23224
PHONE: (804) 275-4720 FAX: (804) 275-4720

