ZeroStep Guidelines

ZeroStep® Guidelines©

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May 19, 2008

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Acknowledgments

ZeroStep would like to recognize and thank the following individuals and organizations for contributing to this project.

Financial Supporters:

Dyer Ives Foundation
Grand Rapids Community Foundation
John and Nancy Kennedy Foundation
Mary Free Bed Guild
Slemons Foundation
Steelcase Foundation
Wheeler Family Foundation
Kate and Richard Wolters Family Foundation

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Jocelyn Dettloff – Development Director for Disability Advocates of Kent Co., Grand Rapids, MI
Joanne Feutz, OTR, CAPS – ZeroStep Program, Disability Advocates of Kent Co., Grand Rapids, MI
Rich Kogelschatz CGB, CAPS – Heartland Builders LLC, Rockford, MI
Kline Kauramaki – J.W. Messner, Inc., Grand Rapids, MI
Mike Murphy – J.W. Messner, Inc., Grand Rapids, MI
James Stortz – Director of Design at Eastbrook Builders, Grand Rapids, MI
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Brian S. Gill, AIA – TDG Architects, Pontiac, MI
J.W. Messner Inc., Integrated Marketing Communications, Grand Rapids, MI
Michigan Association of Home Builders, Lansing, MI
David Peters – Peters Group Architects & DP Development Co., Ann Arbor, MI
Irvin Poke, AIA – State of Michigan Bureau of Construction Codes & Fire Safety, Lansing, MI
Don Pratt – Wake Pratt Construction Company, Auburn Hills, MI
Lee Schwartz – Michigan Association of Home Builders, Lansing, MI

ZeroStep Introduction

Introduction

This document contains guidelines to achieve a zero-step universally designed home. In addition, a homeowner or builder must use these guidelines to accomplish a ZeroStep Certified Home. These guidelines are to be applied during the design, construction and alteration of homes.

These guidelines are voluntary, not mandatory criteria applied to housing design which meet or exceed Michigan residential codes.

What is ZeroStep?

ZeroStep provides comprehensive universal design consulting services for people in Michigan.

Our professional staff is comprised of Certified Aging in Place Specialists through the National Association of Home Builders. They also possess extensive experience in Interior Design and Occupational Therapy.

We work with individual consumers or families as well as with architects, interior designers, builders, building organizations, developers, contractors, remodelers, and realtors to achieve a home with maximum flexibility and value that enhances all stages of life.

What is universal design?

"Universal design is the design of products and environments to be usable by all people of all ages and abilities, to the greatest extent possible, without the need for adaptation or specialized design." — *Ron Mace (The Center for Universal Design at North Carolina State University.)*

As the name implies, universal design elements have universal appeal and application. This does not mean that universal design is about one size fits all. Instead, it is the only design concept that designs to accommodate peoples' differences, not their similarities.

Universal design differs from "accessible," "adaptable," and "visitable" design.

- *Accessible design* complies with regulations or criteria that establish a minimum level of design necessary to accommodate people with disabilities. It applies primarily to commercial buildings or multiple housing units.
- *Adaptable design* allows some features of a building or home to be easily changed to meet the needs of an individual with a disability or a person encountering limitations as he or she ages. For example, cabinets under sinks can be designed to be removable whereby the storage space under the sinks are replaced for knee space for a wheelchair user.

- *Visitable design* predominately focuses on the inclusion of one accessible entrance and a ground floor bathroom, not the whole home. A visitable home allows guests with disabilities to visit and can help a resident adapt in his/her home should the resident's needs change due to a disability or reduced mobility.

How do you benefit from ZeroStep and universal design?

National and state codes provide only minimum requirements to accommodate people with disabilities and do not apply to all people, nor extend into single family residential construction. For example, Michigan Building Codes are for commercial construction, while Michigan Residential Codes have little to no accessibility minimums.

ZeroStep saw the national standards as a good starting point, but not a good ending point. Hence, ZeroStep developed comprehensive Guidelines in order to help people understand how to incorporate universal design elements into their homes and achieve the most flexible and usable home possible.

We want to change the housing paradigm so that the home environment is usable and safe for as many people as possible. Homes should be easy to live in!

- A zero-step universally designed home makes day to day activities possible for some and easier for many. For example, a zero-step entrance is great for moving furniture in and out and essential for a person with a mobility aid to effortlessly visit a friend.
- A zero-step universally designed home is family friendly by taking into account the safety and accessibility needs of small children and older visitors.
- A zero-step universally designed home addresses the buyer's future needs which are often unrecognized. People can live in their ZeroStep homes for as long as they choose, rather than being forced to move due to some unforeseen event … whether a temporary disability … or a life-changing event. Being able to remain in one's home through life-stage changes is more psychologically supportive and cost-effective than being forced to move.
- Because zero-step universal design features can be easily adapted later, costly renovations may often be avoided, fostering a sense of security and helping to maintain a sense of place and community.

Ultimately, ZeroStep changes residential construction by building responsibly, so that we meet the needs of the present and the future.

What are ZeroStep Guidelines?

The ZeroStep Guidelines are voluntary standards for building a home. They meet or exceed ICC/ANSI A117.1 – 2003, Fair Housing Guidelines, Michigan Building Code 2006 (based on International Construction Code 2006) and Michigan Residential Code 2006.

- They are a reference resource tool for architects, interior designers, builders, building organizations, developers, contractors, remodelers, realtors and homeowners.
- They guarantee a base line for designing a ZeroStep Certified Home.
- ZeroStep Guidelines lead users through the decision making process.

How to use the ZeroStep Guidelines

ZeroStep Guidelines are comprised of prerequisites and optional credits. Prerequisites are the foundation of a ZeroStep Certified Home or House Plan. They deal with issues that are difficult and costly to change after initial construction or are of paramount importance in terms of safety and sufficient space. Prerequisites are required if the home or house plan is to be ZeroStep Certified.

Optional credits, however, are elective. They offer a greater degree of universal design features that further enhance the qualities of the home. Optional credits are also assigned points. The points determine whether the home is bronze, silver, or gold. For a future home buyer, the designation communicates that (1) this is a ZeroStep Certified Home, (2) it has additional universal design features, and (3) it is an appealing environment that adds value and is marketable to a broad base of home buyers.

Become thoroughly familiar with the ZeroStep Guidelines prior to designing a home so that the prerequisites are incorporated into the home's design and construction. The guidelines begin with the exterior and work towards the interior of the home, so they parallel the design process.

The ZeroStep Checklist comes immediately after the guidelines. Keep it at your side when designing or reviewing floor plans. The checklist is also extremely helpful when gathering client needs during the design phase.

The Appendixes are vital components of the ZeroStep Guidelines that should not be overlooked. Appendix A: Notes contains the logic and additional information behind the guidelines. Appendix B: Codes Comparison relates the ZeroStep Guidelines to other national or State of Michigan codes and standards. Appendix C: Glossary defines terms used throughout the guidelines.

Check ZeroStep's website at www.zerostep.org to learn more about ZeroStep certification, obtain training continuing education credits (CEUs), general public education forums, and universally designed products.

Point System

A point system has been established to communicate the level of universal design features that have been incorporated into the home. Points can be accumulated by executing the options that follow the prerequisites in each section of the guidelines.

The options range in value from 1 to 3 points, with 3 points considered exceptionally beneficial in terms of the home's added function, comfort and safety. Based on the total number of points accrued, a ZeroStep Home can fall into three classifications: bronze, silver or gold.

Point Scale:
50 – 179 points = Bronze
180 – 309 points = Silver
310 – 448 points = Gold

ZeroStep Home Certification Process

What ZeroStep Certifies

ZeroStep certifies individual homes and floor plans according to their compliance with the ZeroStep Guidelines. This includes, a detached, single-family house, an apartment or an individual unit in a condominium complex or high rise. The certification can be for one-time or multiple-time use.

What ZeroStep Does Not Certify

Presently, ZeroStep does not certify a community development.

The Certification Process

For certifying an existing home, qualified ZeroStep personnel make a site visit and perform an in-home assessment. For certifying a floor plan, ZeroStep reviews the floor plans, and after the home is constructed, a site visit takes place.

Reviews are based on applicable state law, local ordinances and the ZeroStep Guidelines. The review identifies any barriers, and includes recommendations on how to best eliminate the barriers from the home or final construction documents, which ever the case may be. Upon completion of the recommended changes, the home or floor plan is awarded "ZeroStep Certification."

Why Obtain ZeroStep Certification?

For an architect, builder, and developer, the ability to advertise a home as "ZeroStep Certified" and use the ZeroStep logo says that you are not only about quality homes, but also about responsible and sustainable building. ZeroStep universally designed homes are a personal or company mindset, philosophy, and choice exceeding the standard perceptions of quality to include comprehensive home designs that enhance *all* stages of life for *everyone*.

For the home owner or home buyer, ZeroStep Certification means that their home not only meets but exceeds current standards for residential construction. It also means they can expect a return on their investment because the home addresses not only today's needs but tomorrow's needs, as well as saving costs in remodeling or possibly relocating. A ZeroStep Certified Home is truly a home for a lifetime.

To learn more about the ZeroStep program, please call: 616.949.1100, ext. 255.

Chapter 1. Exterior Accessible Routes and Spaces

101 Components of an Accessible Route and Accessible Home Design

Accessible routes and entrances shall consist of all of the following components, if applicable, and shall comply with the appropriate sections of the ZeroStep Standards:

- There shall be one accessible parking space on an accessible route to a zero-step entrance in accordance with Section 102.
- There is at least one zero-step exterior entrance on an accessible route to the home in accordance with Section 201; *and* there shall be no steps between an interior landing and the main level of the house in accordance with Section 201.4.
- Walking surfaces are not steeper than 1:20 (5%) in accordance with Section 104.
- Turning spaces shall be a circular space with a 60" minimum diameter in accordance with Sections 105, 301, 401, 501, 601, 701, and 801.
- Doors and doorways shall be 36" wide in accordance with Section 201.
- Ramps have a slope not steeper than 1:12 (8%) in accordance with Section 106.
- Elevators comply with the most recent ANSI A117.1 code.
- Hallways are a minimum of 42" wide in accordance with Section 202.
- Stairways are a minimum of 36" wide in accordance with Section 203.
- Clear floor space shall be 48" x 48" at fixtures in accordance with Sections 301, 501, 601, 701, 1201 and 1301.
- An accessible route shall connect the main floor bathroom, bedroom, kitchen, and living/family room.

Accessible home design shall consist of all of the following components and shall comply with the applicable sections of the ZeroStep Standards:

- There is at least one accessible, *full* size bathroom on the main floor, in accordance with Section 301.
- There is at least one accessible bedroom, on the main floor, near an accessible bathroom in accordance with Section 401.
- There is at least one accessible closet in accordance with Section 501.
- There is at least one accessible kitchen on the main floor in accordance with Section 601.
- There is an accessible laundry area in accordance with Section 701.
- There is at least one accessible living/family room on the main floor in accordance with Section 801.
- Exterior lighting is provided in accordance with Section 1101.
- The electrical panel box is accessible in accordance with Section 1201.
- The thermostat is accessible in accordance with Section 1301.

102 Parking and Driveways

102.1 Parking and Driveways.
There shall be one accessible parking space on an accessible route to a zero-step entrance. That portion of the driveway that may serve as the accessible parking area shall have a maximum slope of 1:48 (2%) in all directions. That portion of the driveway that is part of any accessible route on the site shall have a maximum cross slope of 1:48 (2%) and a maximum running slope of 1:20 (5%).

102 OPTIONS.

102 Opt. 1 16' Minimum Width By 8' Minimum Length Loading/Unloading Zone.
There is at least a 16' wide by 8' minimum length loading/unloading zone with an accessible route to the home. (See Appendix A: 102 Opt. 1, p. 58.)

102 Opt. 2 Surface Materials.
The driveway is covered with a firm surface material, such as concrete or asphalt.

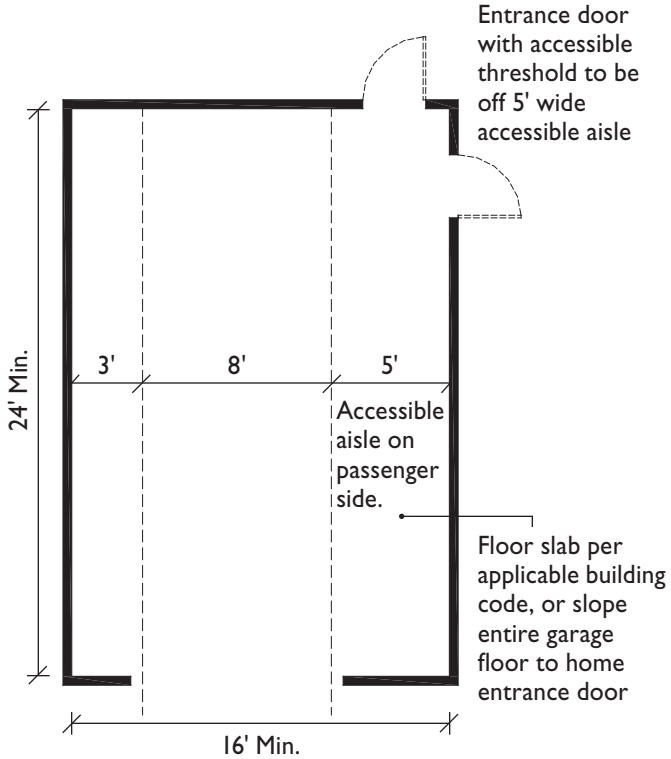
102 Opt. 3 24' Minimum Length Level Parking Space.
A minimum length of 24' of the driveway has a slope and cross slope of 1:48 (2%) to provide level parking space for cars.

103 Garage

103 OPTIONS.

103 Opt. 1 Minimum Measurements – One Stall.
A one stall garage has a minimum of 16' clear width, 24' minimum depth. There is a minimum of a 5' width access aisle located on an accessible route into the home. There is a minimum of a 3' width access aisle on the opposite side of the vehicle. (See Fig. 103 Opt. 1 and Appendix A: 103 Opt. 1, p. 58.)

103 Opt. 2 Minimum Measurements – Two Stall.
A two stall garage has a minimum of 27' clear width, 24' minimum depth. There is a minimum of a 5' width access aisle located on an accessible route into the home. There is a minimum of 3' width access aisles on the opposite sides of the vehicles. (See Fig. 103 Opt. 2, p. 3 and Appendix A: 103 Opt. 2, p. 59.)



Garage door width is owner's option

FIG. 103 OPT. 1 MINIMUM MEASUREMENTS
ONE STALL GARAGE

103 Opt. 3 Slope Entire Garage Floor.
The entire garage floor is sloped so that entrance door into the home is accessed from the 5' access aisle and there is no greater than a ½" high, beveled threshold. (See Appendix A: 103 Opt. 3, p. 59.)

103 Opt. 4 Garage Ramp.
A ramp to the home entrance is installed in the garage with a slope no greater than 1:12 (8%). Comply with Section 106 Ramps.

103 Opt. 5 9' Minimum Garage Door Height.
The garage door is 9' high or higher. (See Appendix A: 103 Opt. 5, p. 59.)

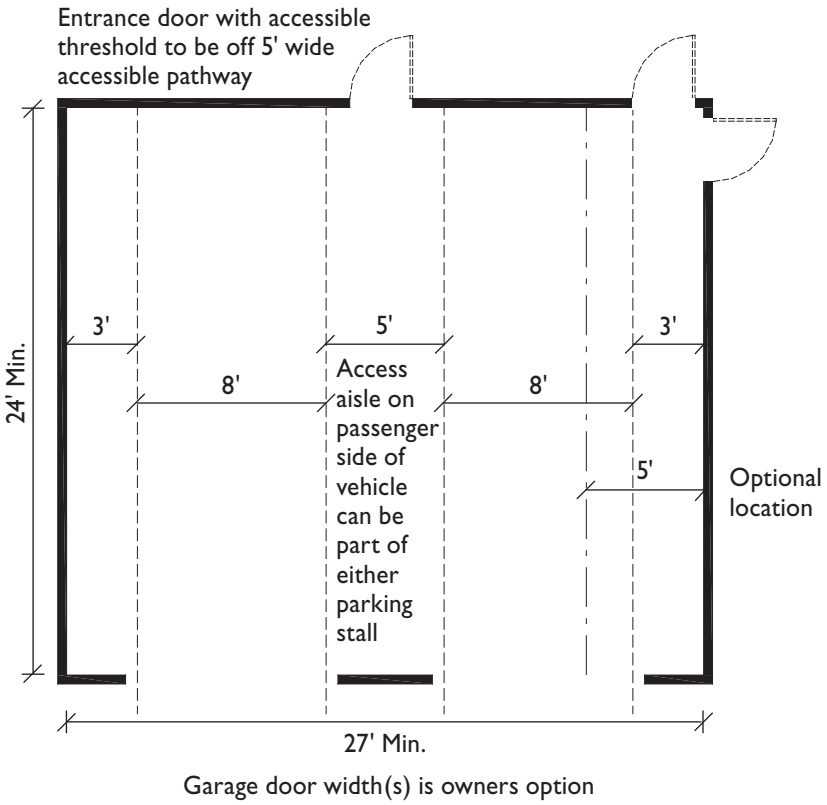


FIG. 103 OPT. 2 MINIMUM MEASUREMENTS TWO STALL GARAGE

103 Opt. 6 Electric Garage Door Opener.
An electric garage door opener is installed. (See Appendix A: 103 Opt. 6, p. 59.)

103 Opt. 7 Automatic Lighting.
Automatic or motion-activated lighting, other than the automatic light that comes with an electric garage door opener, is installed.

103 Opt. 8 Door Swing.
The house doors do not swing into the accessible route. (See Appendix A: 103 Opt. 8, p. 59).

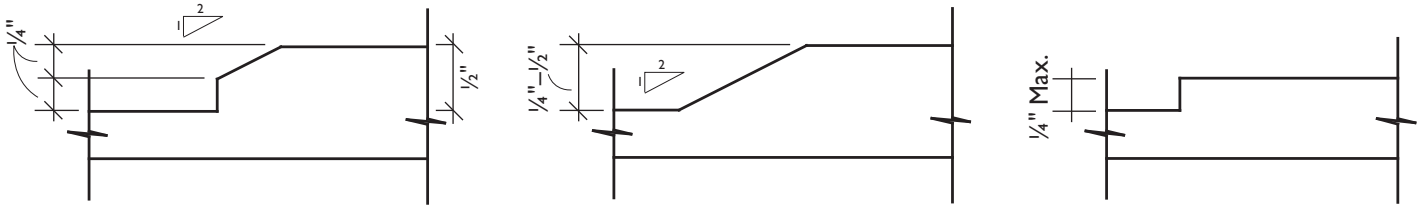
104 Walks and Pathways

104.1 Slope.
A primary walk or pathway to a zero-step entrance shall not be steeper than 1:20 (5%). If the primary walk or pathway is greater than 1:20, see Section 106 Ramps. (See Appendix A: 104.1, p. 59.)

104.2 Cross Slope.
The cross slope shall be a maximum of 1:48 (2%).

104.3 Changes in Level.
Any change in level shall follow the following guidelines:

104.3.1
Changes in level greater than ½" shall be beveled. (See Fig. 104.3 (a), p. 4.)



(a) (b) (c)

FIG. 104.3 CHANGES IN LEVEL

104.3.2
Changes in level between ¼" high and ½" high maximum shall be beveled with a slope not steeper than 1:2 (50%). (See Fig. 104.3 (b).)

104.3.3
Changes in level of ¼" high shall be permitted to be vertical. (See Fig. 104.3 (c).)

104.4 Clear Width.
A walk and pathway on an accessible route shall have a clear minimum width of 36" maintained throughout. (See Appendix A: 104.4, p. 60.)

104 OPTIONS.

104 Opt. 1 Additional Walks or Pathways.
Additional walks or pathways to zero-step entrances are not steeper than 1:20 (5%).

104 Opt. 2 Width Greater than 36".
Walks and pathways are greater than a clear width of 36".

104 Opt. 3 Firm, Stable, Non-Slip Surface Materials.
Walks and pathways are covered with a firm, stable, non-slip surface material (concrete, asphalt, or lumber). (See Appendix A: 104 Opt. 3, p. 60.)

104 Opt. 4 Sheltered Walkway.
The accessible walk or pathway between the vehicle and the home is sheltered overhead from the elements.

104 Opt. 5 Lighting.
(See Section 1101 Opt. 1.)

105 Porches, Patios, Decks and Landings

105.1 Location.
Porches, patios, decks and exterior landings that are on the primary accessible entrance to the home shall comply with Section 201.2, 201.3 and 1101.1. (See Fig.105.1 and Appendix A: 105.1, p. 60.)

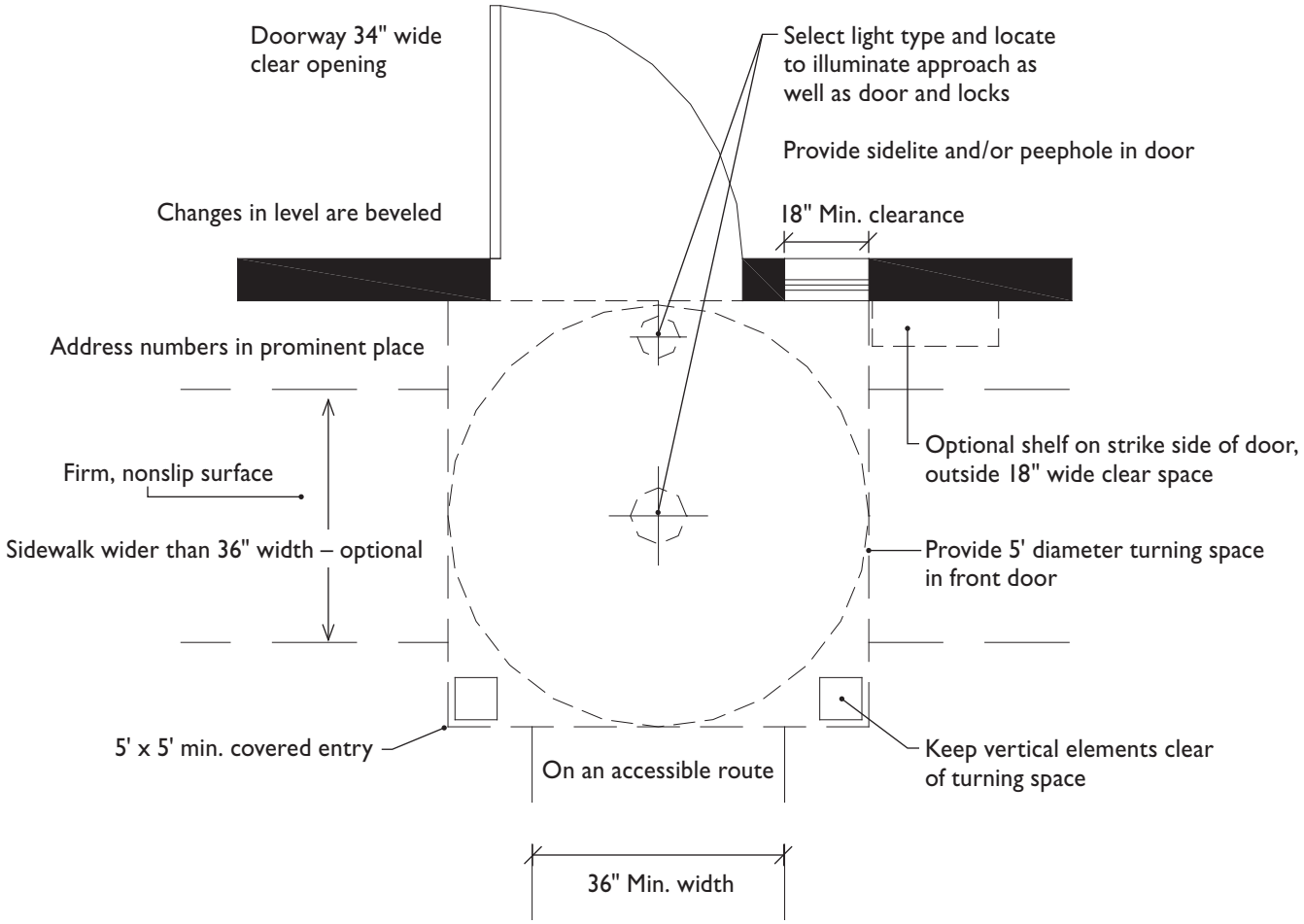


FIG. 105.1 PORCH

105.2 Turning Space.
The porch shall have at least a 5' diameter turning space in front of the primary door opening. (See Appendix A: 105.2, p. 60.)

105.3 Changes in Level.
Porches, patios, decks and landings that are on an accessible route shall comply with Section 104 Walks and Pathways, 104.3.1 – 104.3.3.

105.4 Openings.
Deck boards shall be spaced no more than ¼" apart.

105 OPTIONS.

105 Opt. 1 Shelf.
A built-in shelf or ledge is located on the strike side of an accessible door. (See Appendix A: 105 Opt. 1, p. 60.)

105 Opt. 2 Address Numbers.
The house address numbers are a minimum of 4" high, high contrast or reflective material or lighted, and located in a prominent place on the house and/or the mailbox, easy for friends and emergency personnel to locate.

105 Opt. 3 Primary Covered Entry.
A 5' x 5' minimum covered entry (e.g., awning, covered porch) shall be provided at the primary zero-step entrance. A garage roof is an acceptable solution if the accessible entrance is through the garage.

105 Opt. 4 All Covered Entries.
A covered entry is provided at all zero-step entries.

105 Opt. 5 Door Bells.
Door bell installed at more than one entrance.

106 Ramps (See local codes first.)

106.1 When to Install a Ramp.
A ramp is installed when the walking slope is greater than 1:20 (5%). (See Appendix A: General Information, 106, p. 60.)

106.2 Slope.
The ramp slope shall not be steeper than 1:12 (8%). (See Appendix A: 106.2, p. 60.)

106.3 Cross Slope.
The cross slope shall be a maximum of 1:48 (2%) or less.

106.4 Clear Width.
The clear width of a ramp run shall be a minimum of 42" to a maximum of 48". Code allows a clear ramp width of 36" but this should be used in rare circumstance. (See Fig. 106.4 and Appendix A: 106.4, p. 61.)

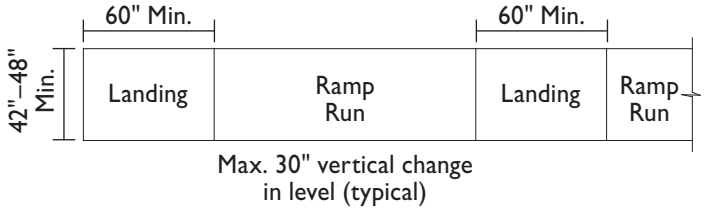


FIG. 106.4 RAMP CLEAR WIDTH

106.5 Rise.
The rise shall be 30" maximum between landings, and preferably less. (See Appendix A: 106.5, p. 61.)

106.6 Landings.
Ramps shall have landings at the bottom and top of each ramp run. The landing at the bottom need not be the same material as the ramp run, however it must be a hard surface, e.g. concrete. A ramp run shall not exceed 30' maximum, preferably 24', in length between landings.

106.6.1 Landing Slope.
Landings shall slope 1:48 (2%) or less. Changes in level are not permitted.

106.6.2 Landing Clear Width.
Clear width of landings shall be at least as wide as the widest ramp run leading to the landing.

106.6.3 Landing Length.
The landing length shall be 60" minimum. (See Fig. 106.4.)

106.6.4 Landing Change in Direction - 90° Turn.
A ramp that makes a 90° turn shall have a minimum 5' x 5' landing. (See Fig. 106.6.4.)

106.6.5 Landing Change in Direction - 180° Turn.
A ramp that makes a 180° turn shall have a minimum 7' landing length which is equal to the sum of the ramp widths plus space between ramps, if any, by 5' landing width. (See Fig. 106.6.5.)

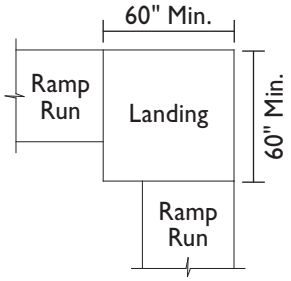


FIG. 106.6.4 RAMP LANDING CHANGE IN DIRECTION – 90° TURN

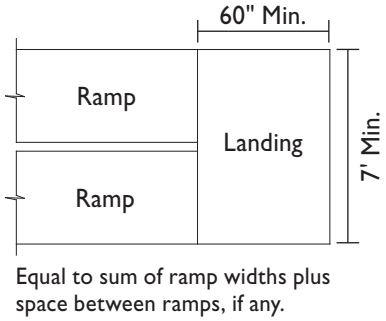


FIG. 106.6.5 RAMP LANDING CHANGE IN DIRECTION – 180° TURN

106.6.6 Landings for a Child.
Due to personal needs for a child, a home owner may customize the landing.

106.7 Edge Protection.
Edge protection shall comply with Section 1010.9.1 or 1010.9.2 of the Michigan Building Code. (See Appendix A: 106.7, p. 61).

106.8 Handrails.
Ramps with a rise greater than 6" shall have graspable handrails. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34" and not more than 36". (See Fig. 106.8.)

106.8.1 Handrail Location.
Handrails shall be provided on both sides of ramp.

> **EXCEPTION**: Ramps that are parallel and attached to the home or garage may have one continuous handrail on the side opposite the home or garage.

106.8.2 Handrail Continuity.
Handrails shall be continuous.

106.8.3 Balusters.
The space between balusters shall not exceed 4".

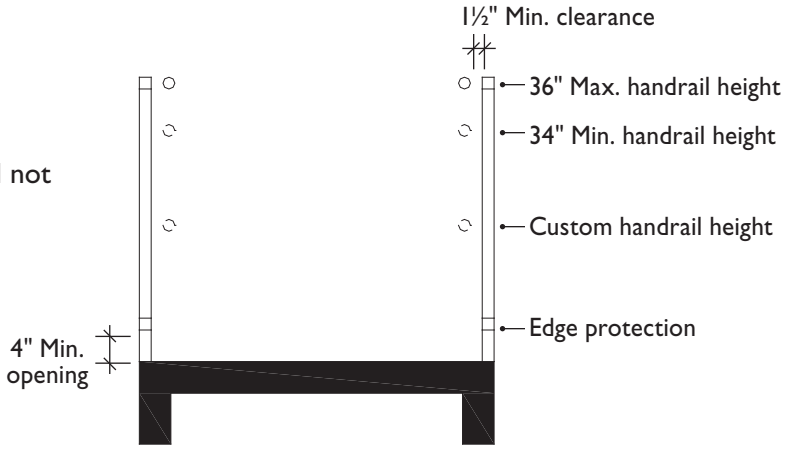


FIG. 106.8 RAMP HANDRAILS

106.9 Handrail Clearance and Graspability.
The handrail clearance shall be 1½" minimum from an adjacent surface. Handrails with a circular cross section shall have a perimeter dimension of 4" minimum and 6¼" maximum, and a cross-section dimension of 2 ¼" maximum. (See Fig. 106.9 (a)–(d).)

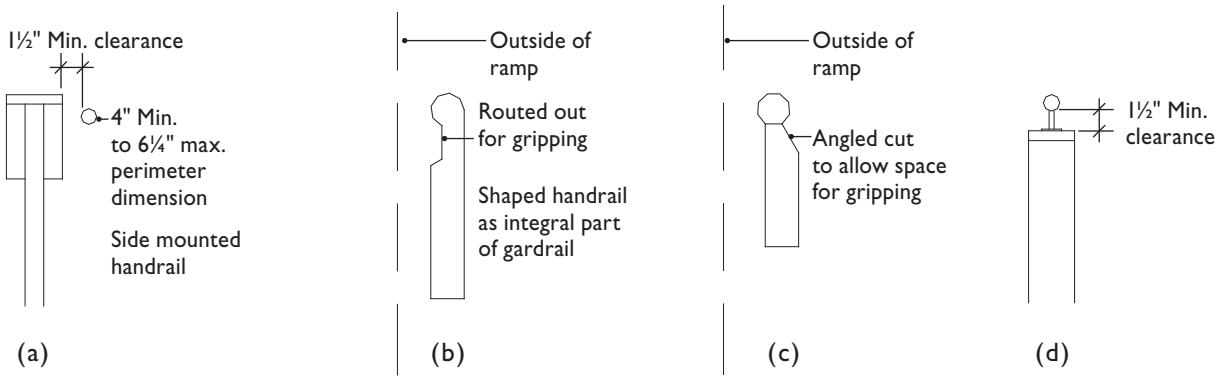


FIG. 106.9 RAMP HANDRAIL CLEARANCE AND GRASPABILITY

106.10 Outdoor Conditions.
Outdoor ramps and outdoor approaches to ramps shall be designed so that water will not accumulate on walking surfaces.

106.11 Ramp Surface.
The ramp surface shall be of slip-resistant material that is securely attached, or a brushed concrete surface. Decking shall be installed perpendicular to the path of travel with at least 1/8" gaps between boards to allow for drainage.

106 OPTIONS.

106 Opt. 1 No Ramp Required.
No ramp is required.

106 Opt. 2 Second Graspable Handrail.
A second graspable handrail is installed. The second handrail is continuous for the full length of the ramp, and does not reduce the clear ramp width.

106 Opt. 3 Slope Less Than 1:12 (8%).
The ramp slope is less than 1:12 (8%).

106 Opt. 4 Ramp Run 24' or Less.
A ramp run of 24' or less is installed, while adhering to Guideline 106.2 requiring the ramp slope not be steeper than 1:12 (8%). (See Appendix A: 106.5, p. 61.)

Chapter 2. Interior Accessible Routes and Spaces

Interior Accessible Route begins at the exterior entrance to the home.

201 Doors and Doorways

201.1 Zero-Step Exterior Entrance.
There shall be at least one zero-step exterior entrance on an accessible route to the home, and shall comply with Sections 104.3 and 1101.1. (See Fig. 104.3).

201.2 Clear Width.
Doors and doorways that are on an accessible route shall have a clear opening width of 34" minimum which is typically accomplished by a 36" wide door. (See Fig. 201.2.)

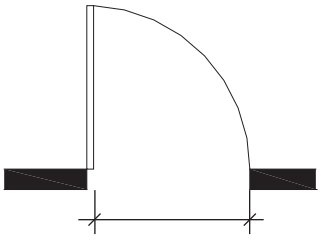


FIG. 201.2 DOOR CLEAR WIDTH

201.3 Swinging Doors, Sliding and Folding Doors, Doorways Without Doors and Pocket Doors.
Swinging doors, sliding and folding doors, doorways without doors and pocket doors that are on an accessible route shall have a clear opening width of 34" minimum. (See Fig. 201.3 (a)-(e).)

> **EXCEPTION**: Pantries and closets other than accessible closets addressed in Section 201 may have less than a clear opening width of 34".

201.4 Changes in Level.
Doors and doorways that are on an accessible route shall comply with Section 104.3.1 – Section 104.3.3.

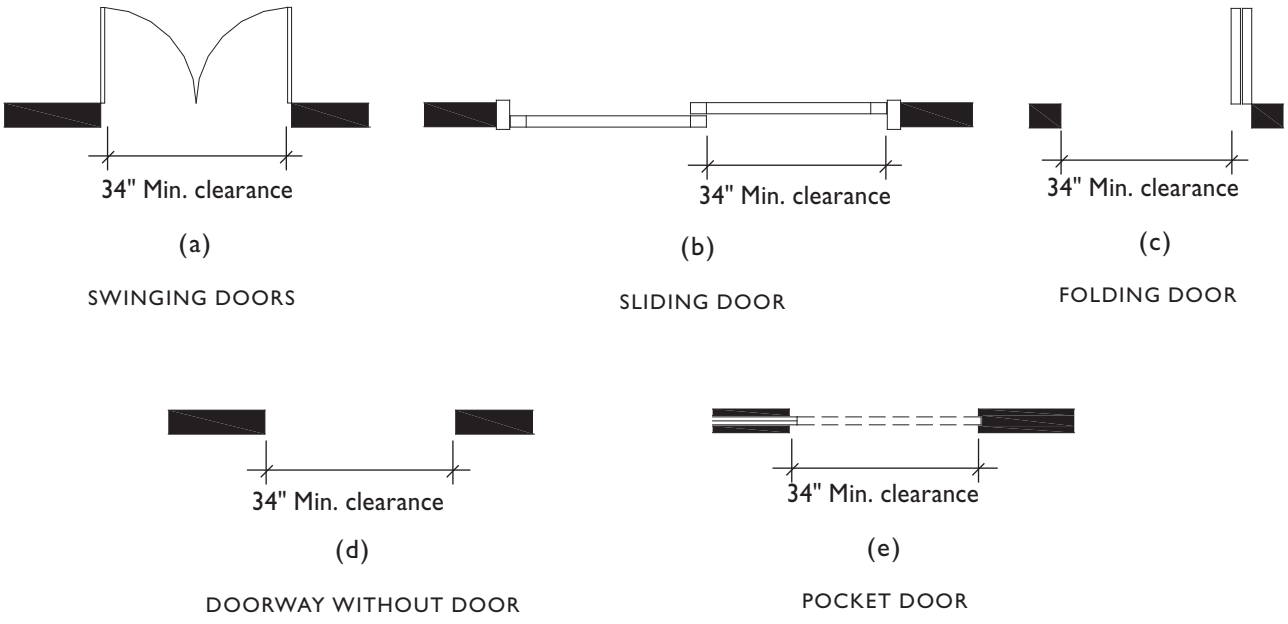
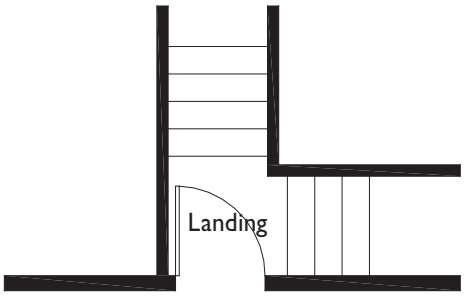


FIG. 201.3 DOORS

201.5 Split Level Landing.
No split level landings are permitted at a zero-step entrance into the home. For example, a "back landing" where the exterior door swings over a landing and there are additional steps to climb before reaching a kitchen is not allowed. (See Fig. 201.5.)



*A split level landing is NOT permitted at a zero-step entrance.

FIG. 201.5 SPLIT LEVEL LANDING

201.6 Two Doors in Series.
Minimum maneuvering clearances shall be at double doors on an accessible route. Door swings shall not infringe on the 5' turning space. (See Fig. 201.6(a)-(c).)

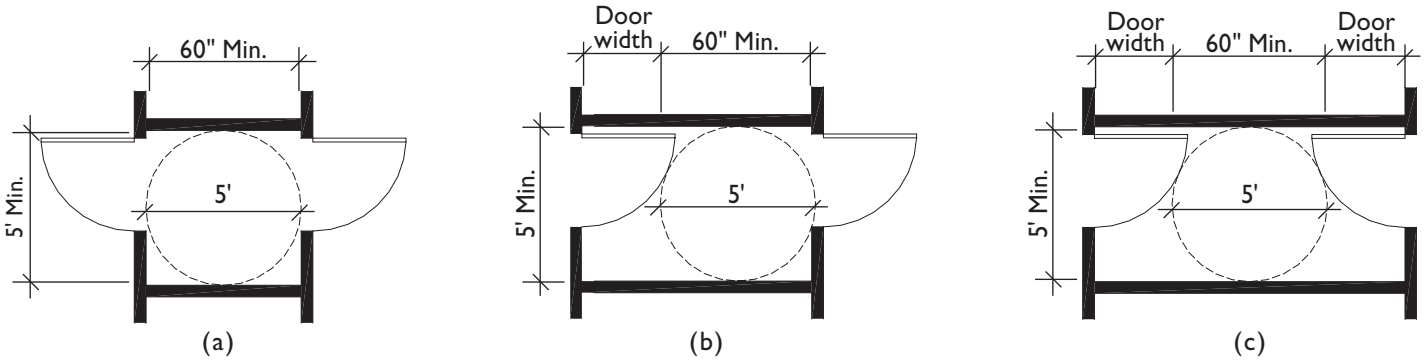


FIG. 201.6 TWO DOORS IN SERIES

201 OPTIONS.

201 Opt. 1 Two or More Zero-Step Exterior Entrances.
Two or more zero-step exterior entrances are provided into the home. (See Appendix A: 201 Opt. 1, p. 61.)

201 Opt. 2 18" Minimum Maneuvering Clearances.
Latch-side maneuvering clearance is a minimum of 18" on the push and pull side of a door. (See Fig. 201 Opt. 2.)

201 Opt. 3 Sidelite.
Primary entrance door with one or two sidelites or a primary entrance door with a window is installed so that a person has visibility from a seated position. (See Appendix A: 201 Opt. 3, p. 61.)

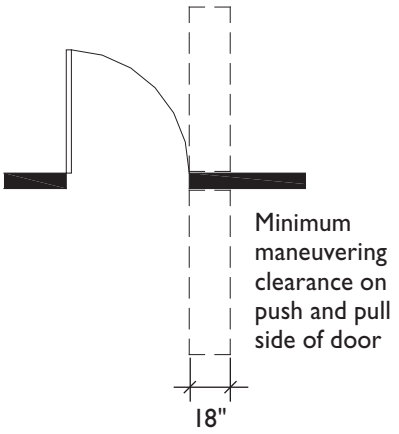


FIG. 201 OPT. 2 18" MINIMUM MANEUVERING CLEARANCE

201 Opt. 4 Lever Door Hardware.
Lever hardware is used on all doors of the dwelling. (See Appendix A: 201 Opt. 4, p. 61.)

201 Opt. 5 Automatic Door Opener.
An automatic door opener is installed on an accessible door. This does not include an electric garage door opener. (See Appendix A: 201 Opt. 5, p. 62.)

202 Hallways

202.1 Width.
A 42" minimum width hallway is required on an accessible route.

202.2 Changes in Level.
Shall comply with Section 104.3.1 – Section 104.3.3.

202 OPTIONS.

202 Opt. 1 Width Greater Than 42".
Greater than a 42" width hallway is provided.

203 Stairways

203.1 Interior Landing at Exterior Doorway.
Shall comply with Section 201.4.

203.2 Stairway Lighting.
All interior and exterior stairways shall be provided with a means to illuminate the stairs, the landings and treads. Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. (See Fig. 203 (a) and Appendix B: 203.2, p. xx.)

EXCEPTION: An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section.

203.3 Lighting Controls.
The control for activation of the required interior stairway light shall be accessible at the top and bottom of each stairway without traversing any steps. The illumination of exterior stairways shall be controlled from inside the dwelling unit. (See Fig. 203 (a) and Appendix B: 1201.3, p. xx.)

EXCEPTION. Lights that are continuously illuminated or automatically controlled.

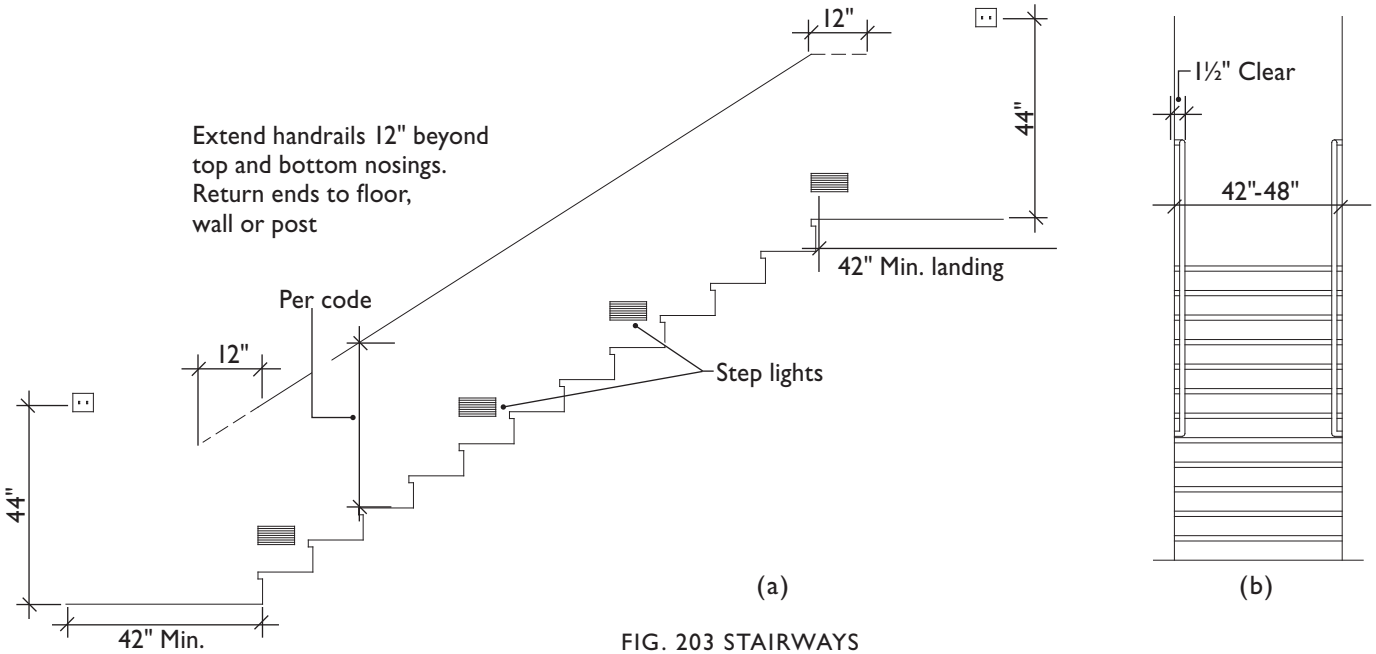


FIG. 203 STAIRWAYS

203 OPTIONS.
(See Sections 901 Flooring Options and Fig. 203 (a) and (b).)

203 Opt. 1 No Open Risers.
Open risers are not installed on interior stairways. (See Appendix A: 203 Opt. 1, p. 62.)

203 Opt. 2 Increased Width.
Stairways on an accessible route are a minimum of 42" wide to a maximum of 48" wide above the handrail.

203 Opt. 3 Deeper Treads and Lower Risers.
Treads and risers on stairs have uniform riser height and uniform tread depth. Risers are between 4" minimum and 7" maximum in height. Treads are 11" minimum in depth. (See Appendix A: 203 Opt. 3, p. 62.)

203 Opt. 4 Landings or Clear Floor Space Exceed Minimums.
There is a landing or clear floor space at the top and bottom of the stairway. The landing or clear floor space width is not less than the stairway served, and is a minimum dimension of 42" in the direction of travel. (See Fig. 203 (a).)

203 Opt. 5 Two Handrails.
Handrails are provided on both sides of the stairway. (See Fig. 203 (b).)

203 Opt. 6 Handrail Extension.
At the top and bottom of a stair flight, the handrails extend beyond the landing 12 inches. (See Fig. 203 (a).)

203 Opt. 7 Handrail Terminations.
At the top and bottom of a stair flight, the handrail ends are returned to the floor, wall or post. (See Fig. 203 (a) and Appendix A: 203 Opt. 7, p. 62.)

203 Opt. 8 Wall Reinforcement for Additional Custom Height Handrail.
Wood 2x blocking is installed for custom height handrail.

203 Opt. 9 Lighting Along Length.
Theatre lights, cove lighting, tread lights, wall lights or similar lights are installed along the length of the stairway to provide adequate lighting on each tread. See Section 1201 Opt. 4 and Opt. 7. (See Fig. 203 (a).)

203 Opt. 10 Electrical Outlets.
Electrical outlets are in place at the top and bottom landings for future stair lift or incline platform lift.

203 Opt. 11 Stair-Lift or Incline Platform Lift.
A stair-lift or incline platform lift is installed. (See Appendix A: 203 Opt. 11, p. 62.)

204 Elevators

204 OPTIONS.

204 Opt. 1 Stacked Walk-In Closets.
A 5' x 5' clear interior dimension for "stacked" walk-in closets for a future elevator is constructed. (See Appendix A: 204 Opt. 1, p. 63.)

204 Opt. 2 Elevator Installed.
A residential elevator is installed.

205 Balconies, Lofts, Raised or Sunken Areas and Split-Level Entries

205.1 Balconies, Lofts, Raised or Sunken Areas and Split-Level Entries.
Balconies, lofts, raised or sunken areas and split-level entries are not recommended, however if they are designed into a dwelling, they must not interfere with the accessible route or with accessible bathroom, kitchen and living room.

205 OPTIONS.

205 Opt. 1 No Balconies, Lofts, Raised or Sunken Areas and Split Entries.
No balconies, lofts, raised or sunken areas and split entries are installed.

Chapter 3. Bathrooms

301 Bathrooms

301.1 Location.
There shall be at least one full size bathroom (consisting of a sink, toilet, and bathtub or shower) on the main floor, on an accessible route, near an accessible bedroom. (See Appendix A: 301.1, p. 63.)

301.2 Turning Space.
There shall be a 5' diameter turning space. The turning space may overlap approaches at fixtures and doorway swings. (See Fig. 301.2 and Appendix A: 301.2, p. 63.)

301.3 Clear Floor Space.
A 48" x 48" minimum clear floor space shall be provided at the sink, bathtub and shower. Only 19" of the 48" clear floor space may extend under the sink. The 48" x 48" clear floor spaces may overlap and include the toe kick space. (See Fig. 301.3 and Appendix A: 301.3, p. 63.)

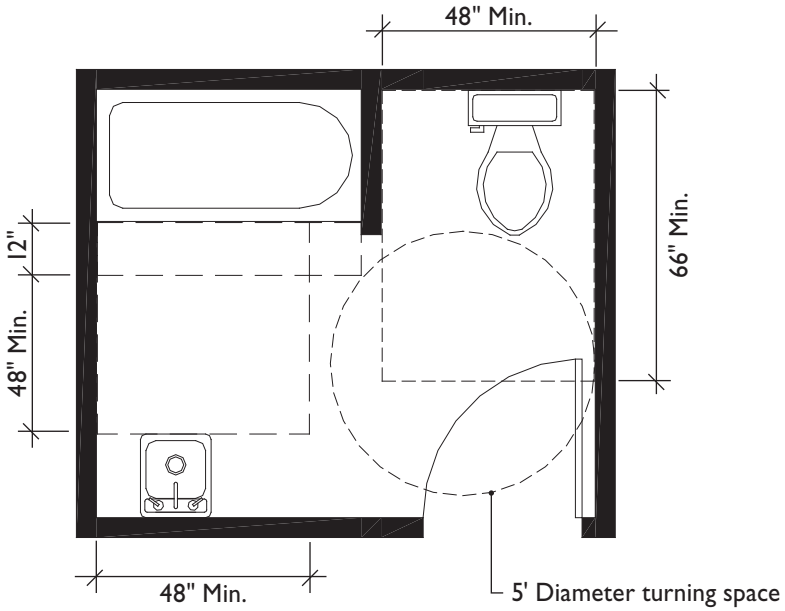


FIG. 301.2 BATHROOM TURNING SPACE AND CLEAR FLOOR SPACE

EXCEPTION: Where a 48" x 48" clear floor space cannot be provided, a 32" x 48" minimum clear floor space shall be permitted with two provisions: the 32" x 48" clear floor space must be positioned parallel to the fixtures and provide sufficient floor space to enlarge to a 48" x 48" clear floor space without moving perimeter bathroom walls. This will require changing fixtures or cabinetry. (See Fig. 301.3 Exception.)

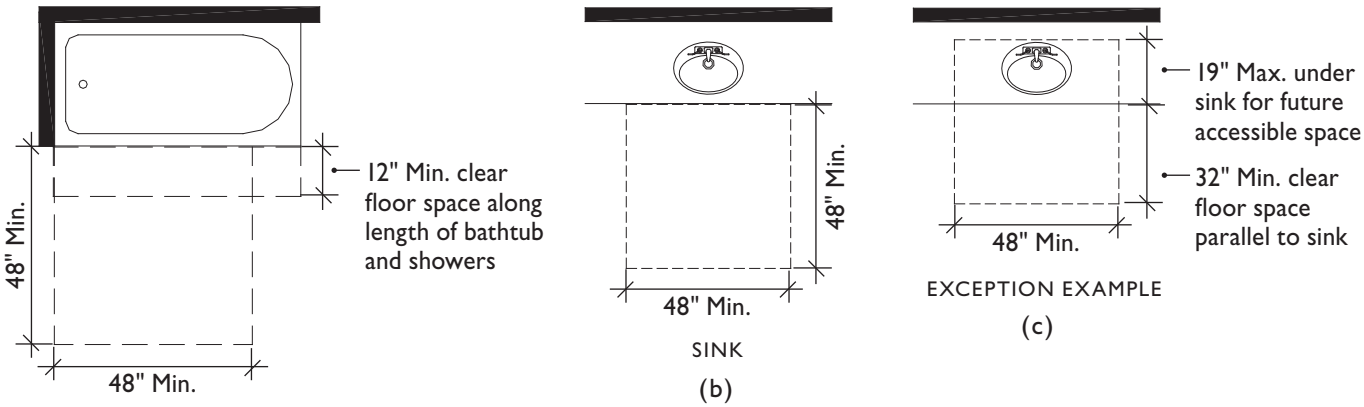


FIG. 301.3 BATHROOM CLEAR FLOOR SPACE

301.4 Toilet Clear Floor Space.
A clear floor space around the toilet of 48" minimum, measured perpendicular from the side wall, and 66" minimum, measured perpendicular from the rear wall, shall be provided. The required clearance around the toilet shall be permitted to overlap other fixture clear floor spaces. (See Fig. 301.4 and Appendix A: 301.4, p. 63.)

> **EXCEPTION**: Where a 48" x 66" clear floor space cannot be provided, a 32" x 48" minimum clear floor space shall be permitted with two provisions: the 32" x 48" clear floor space must be positioned parallel to the front of the toilet rim and provide sufficient floor space to enlarge to a 48" x 66" clear floor space without moving perimeter bathroom walls. This will require changing fixtures or cabinetry.

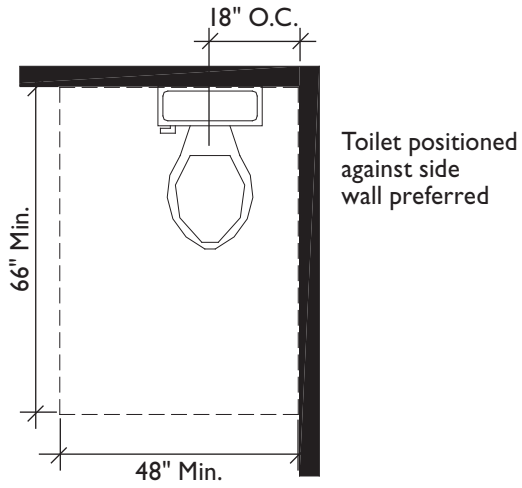


FIG. 301.4 BATHROOM TOILET CLEAR FLOOR SPACE

301.5 Doors.
Doors shall comply with Section 201.

301.6 Wall Reinforcement.
Walls shall be reinforced with 2x blocking concealed in the wall for future grab bar placement around toilets, bathtubs, showers and for slide bar, hand held showers. Allowable stresses shall not be exceeded for materials used where a vertical or horizontal force of 250 pounds is applied at any point when grab bars are installed. (See Fig. 301.6 and Appendix A: 301.6, p. 63.)

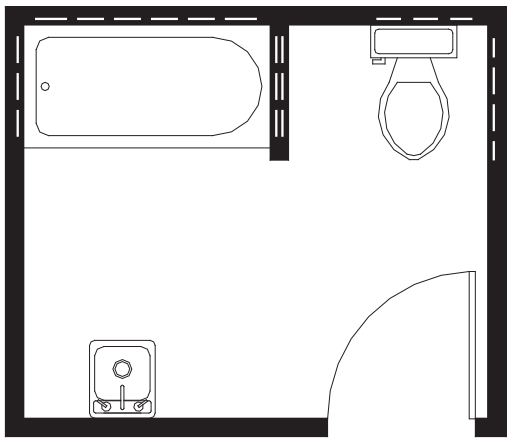
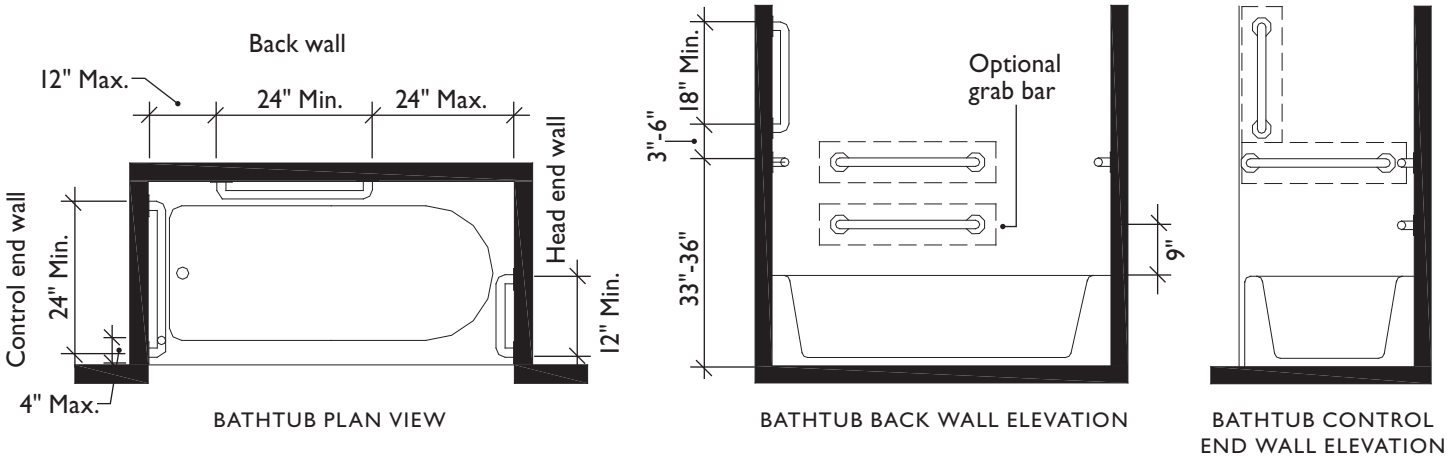


FIG. 301.6 BATHROOM WALL REINFORCEMENT & GRAB BAR LOCATIONS



BATHTUB PLAN VIEW

BATHTUB BACK WALL ELEVATION

BATHTUB CONTROL END WALL ELEVATION

FIG. 301.6 BATHROOM WALL REINFORCEMENT

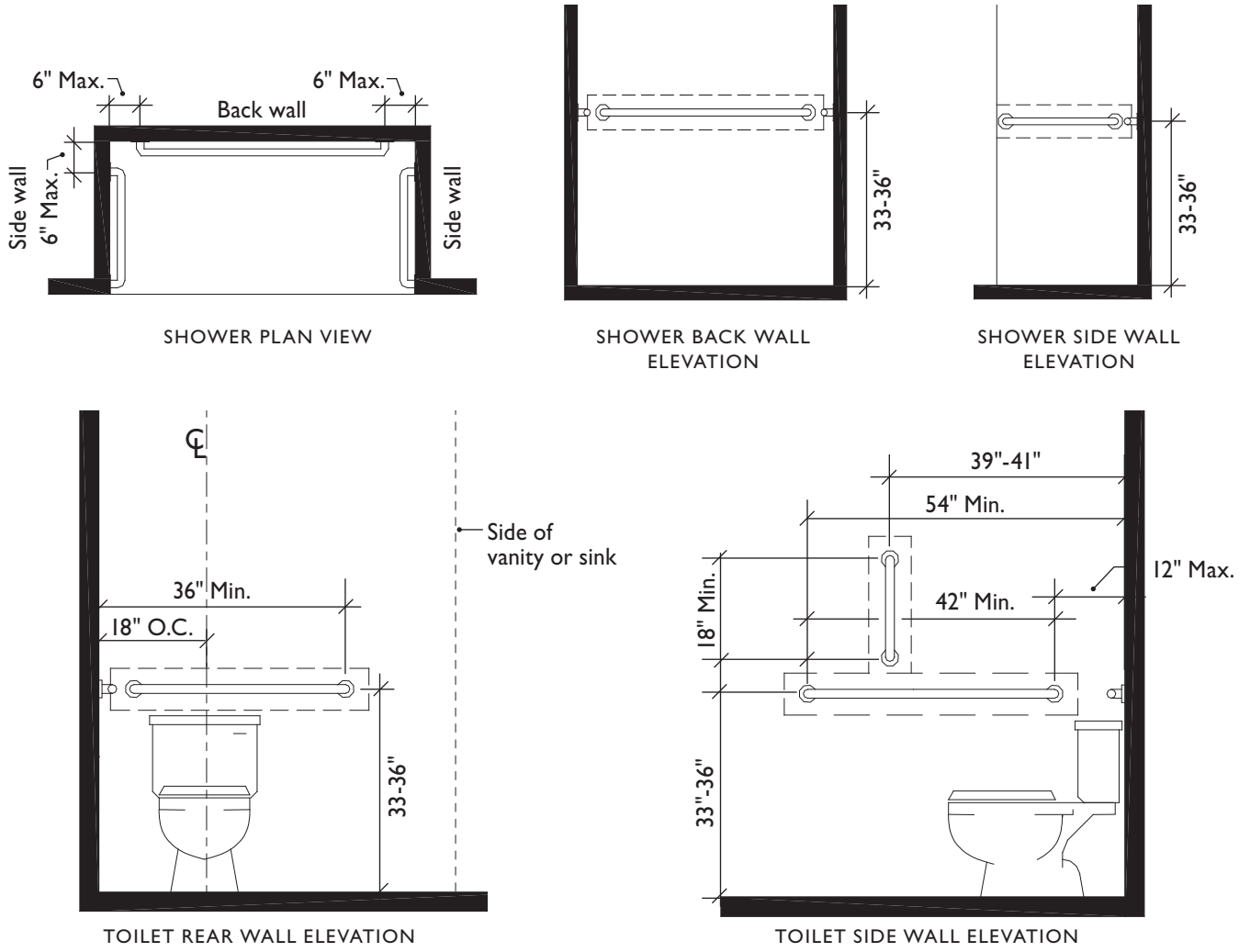


FIG. 301.6 BATHROOM WALL REINFORCEMENT

301.7 Wall Reinforcement Documentation.
Wall reinforcement documentation for installation of future grab bars shall be provided. (See Appendix A: 301 Opt. 7, p. 63.)

301.8 Bathtub/Shower Stall 12" Deep Clear Floor Space.
A 12" minimum clear floor space shall be provided along the entire length of a bathtub and/or a shower stall according to Table 301.11, p. 18. (See Fig. 301.3 (c) and Appendix A: 301.8, p. 64.)

301.9 Bathtub Height.
On-slab construction shall not increase the height of the bathtub. (See Appendix A: 301.9, p. 64.)

301.10 Toilet.
The toilet shall be positioned with a wall to the rear and a wall to one side. The centerline of the toilet shall be 18" on center from the side wall. If the toilet cannot be positioned against a wall to one side, the rear wall must have wall reinforcement with blocking for a future pull-down grab bar. Note: the side wall must be of adequate height, depth and strength for future grab bar installation. (See 301.4 Exception, Fig.(s) 301.2 & 301.4 and Appendix A: 301.10, p. 64.)

301.11 Shower Stall.
A minimum shower stall shall be 36" x 36". Shower stalls must comply with Shower Stall Approaches Table 301.11. (See Appendix A: 301.11, p. 65.)

301.12 Sink Cabinet.
A minimum of a 36" wide cabinet shall be permitted under the bathroom sink, provided the counter top shall be self supportive and the base cabinet under the sink be in-fill. A cabinet without a center stile is recommended. (See Appendix A: 301.12, p. 65.)

301.13 Exposed Pipes.
Where knee space is provided under sinks, exposed pipes and surfaces shall be insulated or configured to protect against contact. There shall be no sharp or abrasive surfaces under sinks. (See Appendix A: 301.13, p. 65.)

Table 301.11 Shower Stall Approaches

Shower Size	Approach
30"D x 60"W	Follow 301.3 and 301.8
36"D x 36"W	Follow 301.3 and 301.8
36"D x 48"W	Follow 301.3 and 301.8
32"D x 60"W	Follow 301.3 and 301.8
36"D x 60"W	Follow 301.3 and 301.8
40"D x 60"W	Follow 301.3 and 301.8
48" x 48"	Follow 301.3
48" x 60"	Follow 301.3
Corner Angled Shower 36", 38" & 40"	Follow 301.3
Round Base 36" & 40"	Follow 301.3

301 OPTIONS.
(See Sections 901 Flooring Options, 1001 Window Options, 1101 Lighting Options, 1201 Lighting Controls Options and 1401 Technology Options.)

301 Opt. 1 Accessible Half-Bath – Main Floor.
An additional accessible half-bath is provided on the main floor and on an accessible route.

301 Opt. 2 2nd Accessible Full-Size Bath – Main Floor.
A second full-size, accessible bathroom (consisting of a sink, toilet, and bathtub or shower) is provided on the main floor and on an accessible route. (See Appendix A: 301 Opt. 2, p. 65.)

301 Opt. 3 Accessible Half-Bath/Full Bath – Second Floor.
An accessible half bath or full bath is provided on an alternate level of home.

301 Opt. 4 No Doors Swing Into 5' Turning Space.
No doors swing into 5' diameter turning space. (See Appendix A: 301 Opt. 4, p. 65.)

301 Opt. 5 Bathroom Doors Swing Out.
Bathroom doors swing out of the accessible bathroom space or pocket doors are used, in accordance with Section 201. (See Appendix A: 301 Opt. 5, p. 65.)

301 Opt. 6 Wall Reinforcement Extended.
Wood blocking is extended beyond Section 301.6 requirements and/or includes wood blocking for future child-height grab bars. (See Appendix A: 301 Opt. 6, p. 65.)

301 Opt. 7 Wall Reinforcement Document Permanent Installation.
The wall reinforcement document is permanently installed in the bathroom for future homeowners to review. (See Appendix A: 301 Opt. 7, p. 65.)

301 Opt. 8 Grab Bars Installed.
Grab bars are installed in the bathtub and/or shower area on reinforced walls that can support up to 250 pounds of downward force. (See Appendix A: 301 Opt. 8, p. 66.)

301 Opt. 9 Comfort Height Toilet.
A comfort height toilet with a rim between 17" and 19" high, above the floor is installed. (See Appendix A: 301 Opt. 9, p. 66.)

301 Opt. 10 Bidet or Toilet Seat with Bidet Functionality.
A bidet or toilet seat with bidet functionality is installed. (See Appendix A: 301 Opt. 10, p. 66.)

301 Opt. 11 Mirror Mounting Height.
Mirrors above sinks are mounted with the bottom edge of the reflecting surface no higher than 40" above the finished floor. (See Appendix A: 301 Opt. 11, p. 66.)

301 Opt. 12 Mirror Types.
Full length mirrors, tilt mirrors, mirrors that turn, split-angle mirrors, or magnifying mirrors are installed.

301 Opt. 13 Shut-Off Valves.
Shut-off valves are easily reached from a seated position. (See Appendix A: 301 Opt. 13, p. 66.)

301 Opt. 14 Toe Clearance.
There is a 9" high toe clearance on base cabinets.

301 Opt. 15 Space Under Sink.
In accessible bathrooms, wall-hung, pedestal, or exposed basin sinks (exposed sink front on a vanity) shall be installed with a minimum of a 27" space from above the finished floor to underneath the bowl of the sink. The drain shall be placed toward the back of the fixture rather than the middle. (See Appendix A: 301 Opt. 15, p. 66.)

301 Opt. 16 Sink Height Between 32"–34".
The front of a sink, including vessel sink, is between 32"-34" at the rim above the finished floor.

301 Opt. 17 Levers or Handle on Faucet Control.
Dual or single levers or handle are installed. Single lever handle is preferred. (See Appendix A: 301 Opt. 17, p. 67.)

301 Opt. 18 Sink Faucet Location.
Faucet hardware is mounted on the side of the sink, rather than at the back. (See Appendix A: 301 Opt. 18, p. 67.)

301 Opt. 19 Motion Activated Faucets.
Motion activated faucets are installed.

301 Opt. 20 Scald Guard.
A scald guard valve or mixing valves are installed. (See Appendix A: 301 Opt. 20, p. 67.)

301 Opt. 21 Bathtub 36" Deep Clear Floor Space.
36" deep or greater clear floor space is provided along the entire length of the bathtub. (See Appendix A: 301 Opt. 21, p. 67.)

301 Opt. 22 Bathtub Height.
The bathtub height does not exceed 16" above the finished floor. (See Appendix A: 301 Opt. 22, p. 67.)

301 Opt. 23 Accessible Bathtub.
An accessible walk-in bathtub is installed. (See Appendix A: 301 Opt. 23, p. 67.)

301 Opt. 24 Bathtub/Shower Faucet Control Location.
Controls are repositioned closer to the bathtub or shower stall front rim/edge so they are easily reached. (See Appendix A: 301 Opt. 24, p. 67.)

301 Opt. 25 Hand Held Shower.
A hand held shower head, on an adjustable slide bar with a hose at least 6' long, is installed on a reinforced wall in the bathtub and/or the shower. (See Appendix A: 301 Opt. 25. p. 67.)

301 Opt. 26 Additional Shower Controls.
More than one set of controls are installed within easy reach in the shower compartment.

301 Opt. 27 Acrylic Bathtub/Shower Wall Reinforcement.
Manufactured reinforced acrylic bathtub/shower walls are installed with no dead air space between the unit and adjacent walls, which could negatively impact future grab bar installation.

301 Opt. 28 Non-Conventional Bathtubs.
Non-conventional bathtubs, whirlpools and saunas follow Sections 301.2, 301.3, 301.5, 301.6., 301.7, 301.8, and 301.9.

301 Opt. 29 Walk-In Shower Stall.
A minimum of a 36" x 36" walk-in shower stall is installed.

301 Opt. 30 Wet Room.
A wet room bathroom meeting bathroom prerequisites is provided.

301 Opt. 31 Shelving.
Built-in or recessed shelving is installed at the front corner, closest to the bathroom fixture controls, or on the side wall, where it does not interfere with future grab bars. (See Appendix A: 301 Opt. 31, p. 68.)

301 Opt. 32 Telephone Jack.
A telephone jack is installed in the bathroom. (See Appendix A: 301 Opt. 32, p. 68.)

301 Opt. 33 Counter/Cabinet Switches and Outlets.
Switches and outlets are easy to reach near the end of the counter and/or are placed at the front edge of base cabinets (See Fig. 601 Opt. 26 and Appendix A: 601 Opt. 25, p. 72); and/or switches and outlets are no more than 21" from the front counter edge on a side wall. (See Fig. 601 Opt. 27.)

301 Opt. 34 Extending Flooring Under Removable Cabinets.
Extending a finished flooring material, such as wood, tile, or vinyl, under removable bathroom cabinets is provided.

Chapter 4. Bedrooms

401 Bedrooms

401.1 Location.
There shall be at least one bedroom on an accessible route, on the main floor, near an accessible bathroom. (See Appendix A: 401.1, p. 68.)

401.2 Turning Space.
There shall be a clear 5' diameter turning space close to the bedroom entrance door, unobstructed by furniture or furnishings.

401.3 Doors.
Doors shall comply with Section 201.

401 OPTIONS.
(See Sections 901 Flooring Options, 1001 Window Options, 1101 Lighting Options, 1201 Lighting Controls Options and 1401 Technology Options.)

401 Opt. 1 Additional Main Floor Accessible Bedroom.
An additional accessible bedroom or room that can be converted into a second bedroom is provided on an accessible route on the main floor.

401 Opt. 2 Additional Alternate Floor Accessible Bedroom.
An additional accessible bedroom or room that can be converted into a second bedroom is provided on an accessible route on an alternate floor.

401 Opt. 3 Emergency Escape Window Exceeds Michigan Building Code.
An emergency escape window which exceeds the Michigan Building Code as follows, (with a sill height between 20" and 30", a minimum net clear opening width of 30", and exceeds 5.7 square feet) is installed. (See Appendix A: 401 Opt. 3, p. 68.)

401 Opt. 4 Exterior Emergency Escape Door.
An exterior emergency escape door is installed. The door shall comply with Section 201.1 – 201.5. (See Appendix A: 401 Opt. 4, p. 68.)

401 Opt. 5 2 Additional Outlets on Bed Wall.
The wall that will likely have a bed along it shall have least two outlets (one receptacle box) on each side of the bed or ideally four outlets (two receptacle boxes) on each side of the bed. (See Section 1201 Opt. 3 and Appendix A: 401 Opt. 5, p. 69.)

401 Opt. 6 Bedside Switch Outlet.
A switched outlet for the bedroom light is installed with a switch at the entrance and another at bedside. (See Section 1201 Opt. 4 and Appendix A: 401 Opt. 6, p. 69.)

401 Opt. 7 Auxiliary Wiring.
Accessible bedroom(s) is wired for any of the following: telephone jacks, cable television and/or internet/computer. (See Appendix A: 401 Opt. 7, p. 69.)

Chapter 5. Closets

501 Closets

501.1 Location.
One accessible closet is in an accessible bedroom.

501.2 Clear Floor Space.
A 48" x 48" minimum clear floor space is in front of a wall closet.

501.3 Doors.
Shall comply with Section 201. Closet doors may overlap the 48" x 48" clear floor space.

501.4 Lighting.
Lighting shall be installed in accessible walk-in closets in accordance with Michigan Residential Code E3903.11.

501 OPTIONS.

501 Opt. 1 Two or More Additional Accessible Closets.
Two or more additional accessible closets are provided on an accessible route.

501 Opt. 2 Overhead/Recessed Door Mounting Hardware.
Accessible closet door hardware is suspended from above or tracks are recessed into the floor for sliding doors. See Section 201.5 and Sections 103.3.10 – 103.3.3.

501 Opt. 3 Walk-In Closets With 5' Turning Space.
Walk-in closets have a 5' diameter turning space within the closet, or have a 42" minimum wide clear aisle within or through the closet. (See Appendix A: 501 Opt. 3, p. 69.)

501 Opt. 4 Adjustable Rods.
One or more adjustable rods at different heights and/or a pull down rod is installed.
(See Appendix A: 501 Opt. 4, p. 69.)

501 Opt. 5 Shelves.
Some shelves are between 15" and 48" in height from the finished floor. (See Appendix A: 501 Opt. 5, p. 69.)

501 Opt. 6 Pull-Out or Pull Down Shelves.
Pull-out wire baskets or custom built pull-out shelves, and/or pull down shelves are installed.
(See Appendix A: 501 Opt. 6, p. 69.)

501 Opt. 7 Drawers.
Drawers are installed in an accessible closet. (See Appendix A: 501 Opt. 7, p. 70.)

501 Opt. 8 Closet Carrousel.
An automated closet carrousel is installed.

Chapter 6. Kitchens

601 Kitchens

601.1 Location.
There shall be at least one accessible kitchen on the main floor on an accessible route.

601.2 Doors.
Doors and doorways shall comply with Section 201.

601.3 Turning Space.
There shall be a 5' diameter turning space within the kitchen area. The turning space may overlap approaches at fixtures.

> **EXCEPTION**: A galley kitchen may have a minimum 48" clearance between all opposing base cabinets, countertops, appliances or walls, with a 5' diameter turning space at either end.
>
> An island may have a minimum 48" clearance between all opposing base cabinets, countertops, appliances or walls measured beneath the counter, with a 5' diameter turning space located in the kitchen.

601.4 Clear Floor Space.
A 48" x 48" minimum clear floor space shall be provided at ranges, cooktops, ovens, wall-mount ovens, dishwashers, kitchen sinks, microwave ovens, pantries, refrigerators, and trash compactors.
The approaches may overlap.

> **601.4.1 Sink.**
> The centerline of the sink shall align with the centerline of the clear floor space.

601.5 Sink Cabinet.
A minimum of a 36" wide cabinet shall be permitted under a kitchen sink or cooktop, provided the cabinetry can be removed. (See Appendix A: 601.5, p. 70.)

601.6 Counter Width.
A minimum 18" width of counter space is located near all ovens and the refrigerator. (See Appendix A: 601.6, p. 70.)

601.7 Sink Exposed Pipes and Surfaces.
Water supply and drain pipes under sinks shall be configured to protect against contact. There shall be no sharp or abrasive surfaces under sinks. (See Appendix A: 601.7, p. 70.)

601.8 Underneath Range/Cooktop Exposed Hot Surfaces.
Where knee space is provided, the underside of the range or cooktop shall be protected.

601.9 Accessible Walk-In Pantries.
Lighting shall be installed in walk-in pantries.

601 OPTIONS.
(See Sections 901 Flooring Options, 1001 Window Options, 1101 Lighting Options, 1201 Lighting Controls Options and 1401 Technology Options.)

601 Opt. 1 Galley Kitchen Width 60" Clearance.
The clearance between all opposing base cabinets, countertops, appliances or walls is at least 60".

601 Opt. 2 Pull-Down Shelves.
Pull-down shelf accessories are installed on one or more overhead cabinets. (See Appendix A: 601 Opt. 2, p. 70.)

601 Opt. 3 Glide-Out Shelves/Drawers and Swing-Up Shelves.
Glide-out shelves or drawers and/or heavy-duty, swing-up shelves are installed on at least one or more base cabinets. (See Appendix A: 601 Opt. 3, p. 70.)

601 Opt. 4 Sink Cabinet With Retractable Doors and No Center Stile.
Retractable doors and no center stile are on the sink cabinet. (See Appendix A: 601 Opt. 4, p. 70.)

601 Opt. 5 Counter Space Greater Than 18".
Greater than 18" of counter space is adjacent to all ovens and the refrigerator.

601 Opt. 6 Pull-Out Work Surface.
There is at least one pull-out work surface, such as a cutting board, between 28" to 32" height above the finished floor is installed. (See Appendix A: 601 Opt. 6, p. 70.)

601 Opt. 7 Lowered Counter.
A lowered counter dimension of 36" minimum width by 28" to 32" height above the finished floor is installed. (See Appendix A: 601 Opt. 7, p. 70.)

601 Opt. 8 Side Mount or Sprayer Sink Faucet.
A faucet mounted on the side of the sink, or an incorporated faucet/sprayer that pulls out from the spout, or lever faucets – either single lever or double lever is installed. (See Appendix A: 601 Opt. 8, p. 70.)

601 Opt. 9 Sink Drain in Back.
The sink drain shall be installed in the back. (See Appendix A: 601 Opt. 9, p. 71.)

601 Opt. 10 Cook Sink.
A cook sink is installed. (See Appendix A: 601 Opt. 10, p. 71.)

601 Opt. 11 Adjustable-Height Sink.
An adjustable sink is installed.

601 Opt. 12 Knee Space Under Sink.
A 27" height knee clearance is provided below the sink.

601 Opt. 13 Dishwasher Location.
A dishwasher is adjacent at the left or right of the sink. (See Appendix A: 601 Opt. 13, p. 71.)

601 Opt. 14 Dishwasher Drawer or Elevated Dishwasher.
A drawer style dishwasher or elevated dishwasher is installed. (See Appendix A: 601 Opt. 14, p. 71.)

601 Opt. 15 Scald Guard.
A scald guard valve or mixing valves are installed. (See Appendix A: 601 Opt. 15, p. 71.)

601 Opt. 16 Wall Mount Oven With Side Opening Door.
One or more wall mount ovens that have side-opening doors are installed; the door latch side is next to an 18" minimum width countertop.

601 Opt. 17 Induction Stove.
An induction stove is installed. (See Appendix A: 601 Opt. 17, p. 71.)

601 Opt. 18 Stove Controls on Front or Side.
The location of stove controls does not require reaching across burners.

601 Opt. 19 Oven Controls on Front or Side.
Ovens have controls on front panels or on either side of the door. (See Appendix A: 601 Opt. 19, p. 71.)

601 Opt. 20 Roll-Under Range.
A roll-under range is installed.

601 Opt. 21 Microwave Oven.
A freestanding microwave oven is placed on the counter or built-in so that the floor of the microwave is at counter top height or lower. (See Appendix A: 601 Opt. 21, p. 72.)

601 Opt. 22 Microwave Oven Drawer.
A microwave drawer is installed. (See Appendix A: 601 Opt. 22, p. 72.)

601 Opt. 23 Side by Side Refrigerator or Freezer on Bottom.
A side by side refrigerator – freezer or a refrigerator with a freezer on the bottom is installed. (See Appendix A: 601 Opt. 23, p. 72.)

601 Opt. 24 Rounded or Contrasting Counter Edges.
The counter corner edges are rounded or have a contrasting color edge. (See Appendix A: 601 Opt. 24, p. 72.)

601 Opt. 25 Built-In Task Lighting.
(See Section 1101 Opt. 2.)

601 Opt. 26 Switches and Outlets Over Counters on Back Wall.
Switches and outlets are easy to reach near the end of the counter and/or are placed at the front edge of base cabinets. (See Fig. 601 Opt. 26 and Appendix A: 601 Opt. 26, p. 72.)

FIG. 601 OPT. 26 SWITCHES AND OUTLETS OVER COUNTERS ON BACK WALL

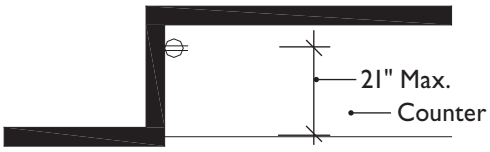


FIG. 601 OPT. 27 SWITCHES AND OUTLETS OVER COUNTERS ON BACK WALL

601 Opt. 27 Switches and Outlets Over Counters on Side Wall.
Switches and outlets are no more than 21" from the front counter edge on a side wall. (See Fig. 601 Opt. 27 on page 24.)

601 Opt. 28 Island Switches and Outlets.
Switches and outlets are easy to reach on islands.

601 Opt. 29 Touch Latch Hardware.
Touch latch hardware is installed. (See Appendix A: 601 Opt. 29, p. 72.)

Chapter 7. Laundry Room

701 Laundry Room

701.1 Location.
The laundry area shall be on an accessible route.
(See Appendix A: 701 General Information and 701.1, p. 73.)

701. 2 Clear Floor Space.
A 48" x 48" minimum clear floor space shall be provided at the washing machine, clothes dryer and laundry tub. Clear floor spaces may overlap. If there is a swing door or other type of door, it may overlap the appliance clear floor space. (See Fig. 701.2.)

701.3 Doors.
Doors shall comply with Section 201.

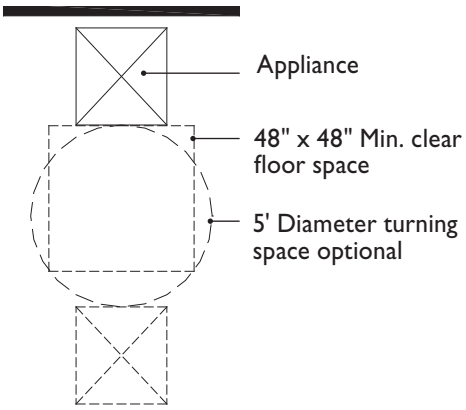


FIG. 701.2 LAUNDRY ROOM CLEAR FLOOR SPACE AND OPTIONAL TURNING SPACE

701 OPTIONS.
(See Sections 901 Flooring Options, 1001 Window Options, 1101 Lighting Options, and 1201 Lighting Controls Options.)

701 Opt. 1 Main Floor Location.
The laundry area is located on the main floor on an accessible route.

701. Opt. 2 5' Diameter Turning Space.
The laundry room has a 5' diameter turning space which may overlap the 48" x 48" clear floor space in front of the washer, dryer and laundry sink/tub. (See Fig. 701.2 and Appendix A: 701 Opt. 2, p. 73.)

701 Opt. 3 Front Loading Washer and Dryer.
A front loading washing machine and dryer are installed. (See Appendix A: 701 Opt. 3, p. 73.)

701 Opt. 4 Front Appliance Controls.
The controls are on the front of the washing machine and dryer. (See Appendix A: 701 Opt. 4, p. 73.)

701 Opt. 5 Raised Appliances.
A front loading washing machine and dryer are installed on a platform per client specifications. (See Appendix A: 701 Opt. 5, p. 73.)

701 Opt. 6 Easy Reach Operable Parts.
Operable parts, including doors, lint screens, detergent and bleach compartments are within easy reach – near the front or along the side of the appliance. (See Appendix A: 701 Opt. 6, p. 73.)

701 Opt. 7 Built-In Task lighting.
(See Section 1101 Opt. 2.)

Chapter 8. Living Room

801 Living Room

801.1 Location.
There shall be at least one living/family room on the main floor, on an accessible route.

801.2 Turning Space.
There shall be a 5' diameter turning space.

801.3 Changes in Level.
Shall comply with Section 104.3. (See Appendix A: 801.3, p. 73.)

801.4 Doors.
Doors shall comply with Section 201.

801.5 Flooring.
Shall comply with Section 901.

801 OPTIONS.
(See Sections 901 Flooring Options, 1001 Window Options, 1101 Lighting Options, 1201 Lighting Controls Options and 1401 Technology Options.)

Chapter 9. Flooring

901 Flooring

901.1 Changes in Level.
Shall comply with Section 104.3. (See Appendix A: 901 General Information, p. 73.)

901.2 Floor Registers.
Shall comply with Section 901.1 or shall be flush with the floor.

901 OPTIONS.
(See Appendix – Notes 901 General Information.)

901 Opt. 1 Hard Surface Flooring.
Hard surface flooring (tile, wood or linoleum) and/or non slip flooring (slip resistant or non-glazed ceramic tiles or linoleum products) are installed in some accessible areas of the home.

901 Opt. 2 Low Pile Carpet.
Low pile, low-level loop or commercial grade carpet is installed with either no padding or with thin, firm padding. (See Appendix A: 901 Opt. 2, p. 74.)

901 Opt. 3 Slip Prevention Paint or Traction Strips.
Traction paint or adhesive traction strips are used to prevent slipping in areas that might get wet (e.g. bathtub, garage floor and/or steps). (See Appendix A: 901 Opt. 3, p. 74.)

901 Opt. 4 Color Contrast.
A contrasting color border is installed. (See Appendix A: 901 Opt. 4, p. 75.)

Chapter 10. Windows

1001 Windows

1001 OPTIONS.
(See Appendix – Notes 1001 General Information.)

1001 Opt. 1 Operable Components.
Operable components are a minimum of 20" to a maximum of 44" above the finished floor. (See Appendix A: 1001 Opt. 1, p. 19.)

1001 Opt. 2 Window Hardware.
Window hardware does not require fine fingering, grasping, turning or twisting, such as a casement crank or two ample size handles on a double hung window. (See Appendix A: 1001 Opt. 2, p. 19.)

1001 Opt. 3 Automatic Window Openers.
Automatic window openers are installed on some or all windows, particularly those difficult to reach.

1001 Opt. 4 Automated Window Coverings.
Automated window coverings are installed on some or all windows, particularly those difficult to reach. (See Appendix A: 1001 Opt. 4, p. 19.)

1001 Opt. 5 Extended Window Covering Controls.
Extended window covering controls, such as the plastic "wand" for mini-blinds or an extended length of cord for draperies and curtains, are installed on some or all windows, particularly those difficult to reach.

Chapter 11. Lighting

1101 Lighting

1101.1 Exterior Lighting.
Exterior lighting shall be provided near all entrances so things such as the front door, porch, keyhole, keypad and house number are clearly visible. (See Section 105 Opt. 2., Fig. 105 and Appendix A: 1101 General Information, p. 76.)

1101 OPTIONS.

1101 Opt. 1 Exterior Lighting.
Outdoor lighting is installed along walks and pathways, decks, balconies, and auxiliary buildings. (See Appendix A: 1101 Opt. 1, p. 76.)

1101 Opt. 2 Built-In Task Lighting.
Built-in task lighting is provided at areas such as under kitchen cabinets, kitchen desks or islands, laundry rooms cabinets, hobby or office work surfaces. (See Appendix A: 1101 Opt. 2, p. 77.)

1101 Opt. 3 Remote Controls.
Remote controls for ceiling fans/lights are installed.

1101 Opt. 4 Lighted Door Bells.
Lighted door bells are installed.

Chapter 12. Lighting Controls, Electrical Switches, and Outlets

1201 Lighting Controls, Electrical Switches, and Outlets

1201.1 Electrical Panel Box.
The electrical panel box shall be on an accessible route. (See Appendix A: 1201.1, p. 77.)

1201.2 Electrical Panel Box Clear Floor Space.
A clear 32" x 48" floor space shall be provided at the electrical panel box for either a parallel or perpendicular approach.

1201.3 Door.
Any door or doorway directly opening into the electrical panel box location shall be 36" wide in accordance with Section 201.

1201.4 Electrical Panel Box Upper Fuse Height.
The upper most circuit breaker switch is a maximum of 54" above the finished floor.

1201 OPTIONS.

1201 Opt. 1 Electrical Panel Box Location.
Electrical panel box is located on the main floor or in the garage.

1201 Opt. 2 Outlets 18"–24" High.
Typical electrical outlets are 18"–24" on center above the finished floor. (See Appendix A: 1201 Opt. 2, p. 77.)

> **EXCEPTION**: Floor outlets, outlets above the counter, TV monitor outlets and similar non-typical or specialized electrical outlets need not adhere to the 18"–24" maximum height.

1201 Opt. 3 48" Max. Switch Heights.
Electrical switches are a maximum of 48" on center above the finished floor; 44" is preferred height. (See Appendix A: 1201 Opt. 3, p. 77.)

1201 Opt. 4 Rocker Switches.
Rocker switches or lighted rocker switches are installed. (See Appendix A: 1201 Opt. 4, p. 77.)

1201 Opt. 5 Dimmer Switches.
Dimmer switches that have large controls, e.g. a dial or large lever, or are lighted, are installed.

1201 Opt. 6 Three or Four-Way Switches.
Three or four-way switches are installed so lights can be activated from several locations.

1201 Opt. 7 Programmable Lighting.
Programmable lighting is installed.

1201 Opt. 8 Motion Activated Lights or Motion Detectors.
Occupancy sensor lights/motion detectors are installed in places such as entrances, garages, basements and utility spaces. (See Appendix A: 1201 Opt. 8, p. 77.)

Chapter 13. Heating, Ventilation and Air Conditioning

1301 Heating, Ventilation and Air Conditioning (HVAC)

1301.1 Thermostat.
The thermostat shall be on an accessible route, according to Section 101. (See Appendix A: 1301 General Information, p. 78.)

1301.2 Thermostat Clear Floor Space.
A clear 32" x 48" minimum clear floor space shall be provided at the thermostat for either a parallel or perpendicular approach.

1301 OPTIONS.

1301 Opt. 1 Furnace on Main Floor.
The furnace is installed on an accessible route on the main floor. (See Appendix A: 1301 Opt. 1, p. 78.)

1301 Opt. 2 Furnace Clear Floor Space.
A 32" x 48" clear floor space at the front of the furnace is provided. (See Appendix A: 1301 Opt. 2, p. 78.)

1301 Opt. 3 54" Maximum Thermostat Height.
The thermostat is located at 54" maximum height above the finished floor. (See Appendix A: 1301 Opt. 3, p. 78.)

1301 Opt. 4 Programmable Thermostat.
A programmable thermostat is installed. (See Appendix A: 1301 Opt. 4, p. 78.)

1301 Opt. 5 Easy To Read Thermostat.
An easy to read thermostat is installed that is back lit (glow in the dark) with very large numbers showing the heating set point, the cooling set point and the room temperature.

1301 Opt. 6 Remote Controls.
Remote controls for heating and/or cooling systems are installed. (See Appendix A: 1301 Opt. 6, p. 79.)

1301 Opt. 7 Furnace Filter.
Ability to reach and change filter is easy.

1301 Opt. 8 Air Conditioning.
Air conditioning is installed.

Chapter 14. Technology and Automation In The Home

1401 Technology and Automation In The Home

1401 OPTIONS.
(See Appendix – Notes 1401 General Information.)

1401 Opt. 1 Remote Control Smoke Detectors.
The home has a UL rated, infrared, remote control feature smoke detector installed.

1401 Opt. 2 Smoke Detectors Linked to a Security Systems Provider.
The smoke detectors are linked to a security systems provider or a rapid response system in case of a fire.

1401 Opt. 3 Visible and Audible Alarms.
In addition to a sound alarm, a UL rated smoke, fire or carbon monoxide detector is equipped with either a strobe or flashing light. (See Appendix A: 1401 Opt. 3, p. 79.)

1401 Opt. 4 Gas Detector(s).
At least one hardwired, battery-operated or plug-in type carbon monoxide (CO) detector is installed.

1401 Opt. 5 Fire Extinguishers.
A fire extinguisher is provided on each floor in accessible locations. Preferred locations are the kitchen, bedrooms, garage and basement.

1401 Opt. 6 Security/Surveillance System.
Security/surveillance system is installed. (See Appendix A: 1401 Opt. 6, p. 79.)

1401 Opt. 7 Remote Deadbolt Locks.
Remote electrical deadbolt locks are installed on exterior doors.

1401 Opt. 8 Intercom System.
Keypad intercoms or video intercom systems are installed between 42"–48" height above the finished floor. (See Appendix A: 1401 Opt. 8, p. 79.)

1401 Opt. 9 Voice Control System.
A voice control system is installed. Examples of voice control systems include: lights, devices, appliances, home theater, audio/video, security, climate, telephone and the Internet are installed.

1401 Opt. 10 T-Loop Transmitter System.
T-loop wireless hearing aid transmitter system is installed.

1401 Opt. 11 Environmental Control Unit.
An Environmental Control Unit (ECU) system is installed, such as a hard-wired system, system based on X-10 or infrared computer control modules.

1401 Opt. 12 Programmable HVAC System.
A programmable heating/cooling system is installed.

1401 Opt. 13 Home Air Purifier.
A home air purifier is installed.

1401 Opt. 14 Central Vacuum.
A central vacuum system is installed.

1401 Opt. 15 Wall-Mount Phones.
One or more wall-mount phones are installed between 42"–48" high at the top of the unit.

1401 Opt. 16 Home Network System.
A home network system receives phone, internet, cable or satellite TV lines, as well as stereo and video connections from an entertainment center in the home.

1401 Opt. 17 Internet Connections.
An Internet connection (voice/data) is installed throughout the home. (See Appendix A: 1401 Opt. 17, p. 79.)

1401 Opt. 18 Wireless Internet.
A wireless Internet system is installed throughout the home.

References

There are many resources in print, on the Internet and through agencies, such as Centers for Independent Living that provide information about universal design, federal and state accessibility laws, regulations and standards. These resources were referenced in compiling the ZeroStep Guidelines, Illustrations, Code Comparison, Notes and Glossary.

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