

HPD Design Guidelines

FOR MULTIFAMILY NEW CONSTRUCTION & SENIOR HOUSING



Department of
Housing Preservation
& Development

www.nyc.gov/hpd

Bill de Blasio, MAYOR
Vicki Been, Commissioner

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The illustrations included within the Guidelines are intended merely to assist in navigating the various requirements and design standards; to aid staff during the plan review for projects participating in HPD programs and activities; and to add clarity and transparency to designers responding to HPD's design review comments. This document is not meant to offer a design template, but rather to document and illustrate some of the design controls and potential outcomes.

The designer of record is responsible to ensure a project is designed in a manner to comply with the applicable laws, regulations, codes, and design standards including, but not limited to, those related to non-discrimination.

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Preface

The New York City Department of Housing Preservation and Development (HPD) Office of Development's Division of Building and Land Development Services (BLDS) has issued the *HPD Design Guidelines for Multifamily New Construction and Senior Housing* (the *Guidelines*) as an update to the *HPD Design Guidelines for New Construction*. The *Guidelines* represent an effort to meet housing demand, respond to market changes, and contain costs; HPD has revised the design requirements to reflect the critical need for affordable housing demand, respond to emerging design practices, and provide greater flexibility in affordable housing development. The *Guidelines* are intended to apply to HPD-supported housing developments across a variety of conditions. However, HPD recognizes that any guidelines cannot address all development scenarios: when unique or special circumstances, extraordinary market conditions, or special community characteristics require a project that would deviate from any aspect of the *Guidelines*, the development team must consult with the applicable loan program and notify BLDS in writing in advance of the first design submission. For consideration, a proposal must identify known areas of non-compliance and explain the rationale behind design decisions, project constraints, and other considerations contributing to non-compliance. In some instances, it may be necessary to schedule a preliminary *design concept consultation meeting* with representatives from HPD program, BLDS, and the development team.

Special Thanks

This update to the *HPD Design Guidelines for Multifamily New Construction and Senior Housing* is the product of intense internal evaluations and community feedback, and would not have been possible without the help of numerous individuals and organizations. In particular, HPD would like to thank the New York State Association for Affordable Housing (NYSFAFH), the American Institute of Architects (AIA) New York Chapter, Peter Bafitis, Harold Bravo, Wids DeLaCour, Mark Ginsberg, Eric Goshow, Manny Halpern, Christine Hunter, Ted Liebman, James McCullar, Lisa Morgenroth, Rich Rosen, Mary Ruzs, Susanne Schindler, Bill Stein, Meenakshi Varandani, and Fernando Villa.

Introduction

The New York City Department of Housing Preservation and Development (HPD) Office of Development's Division of Building and Land Development Services (BLDS) has issued the *HPD Design Guidelines for Multifamily New Construction and Senior Housing* for HPD-assisted multi-family new construction and senior housing projects, but they may also be used to guide the design of 1-3 family homes. Design review to ensure compliance with the requirements of the *Guidelines* is a prerequisite to loan closing for any new construction projects developed under applicable HPD loan programs.

BLDS design reviews assure that the minimum standards outlined in the *HPD Design Guidelines for Multifamily New Construction and Senior Housing* are integrated into the project design. Design reviews also provide guidance to the development team regarding applicable laws, rules, codes, and regulations, including the New York City *Building Code*, New York City *Zoning Resolution*, New York City *Housing Maintenance Code*, New York State *Multiple Dwelling Law*, the *Fair Housing Act*, Section 504 of the *Rehabilitation Act of 1973*, and the *Americans with Disabilities Act*.

It is the development team's responsibility to ensure that the buildings' design and construction comply with all laws, rules, regulations, and codes mandated by city, state, and federal authorities having jurisdiction. The *Guidelines* are a policy document intended to establish a minimum design standard that may exceed what would otherwise be required. The laws, rules, regulations, and codes governing the activity, in event of a conflict, take precedence over the *Guidelines*.

Intention of the Design Guidelines

The *HPD Design Guidelines for Multifamily New Construction and Senior Housing* establish the design criteria by which BLDS will evaluate proposed developments upon application to the Agency for financial assistance. Within this document, the term *must* indicates a requirement; the term *should* indicates a recommendation.

HPD seeks to support projects that meet several core principles. Projects should: have a strong relation to the neighborhood (urban design and building planning); meet the needs of households and individuals (apartment planning and accessible design); encourage active design; utilize sustainable or renewable products; and select sustainable features that can potentially reduce operating costs.

Design Responsiveness Considerations

HPD's mission is to ensure that the quality of housing stock in New York City is at a minimum preserved, and preferably improved. To this end, HPD emphasizes topical areas requiring special consideration beyond New York City codes and regulations:

- *Accessible Design and Construction* –HPD seeks to develop projects that will invite and engage persons with physical impairments, whether mobility, hearing, visual, or other. Projects designed to achieve universal/inclusive design are encouraged by HPD.
- *Flood Resistant Construction* – Adapting to flooding and severe storm events poses particular challenges for the City's housing stock, both existing and proposed. HPD seeks projects that are designed to be resilient to flooding or readily adaptable to future increases in the floodplain or flood elevation.
- *Active Design* – HPD encourages the implementation of cost-effective active design principles such as those outlined in *Active Design: Affordable Designs for Affordable Housing*.
- *Aging in Place* – HPD encourages the implementation of cost-effective measures to accommodate the needs of aging residents, particularly in developments targeted for senior residence.
- *Energy Efficiency and Resource Conservation* – All HPD-assisted new construction loan program projects are required, at a minimum, to meet the Enterprise Green Communities standards for energy efficiency and sustainability. HPD encourages low-cost capital investments and/or larger capital investments (inclusive of any incentives, grants or non-affordable housing specific funding) with a payback period less than or equal to half their useful life.
- *Commercial/Retail Spaces* – HPD encourages the development of mixed-use buildings, residential structures that combine commercial and/or retail spaces. These spaces serve the needs of residents and neighbors and contribute toward a more vibrant neighborhood.

Accessible Design & Construction

HPD-assisted projects must comply with federal accessibility laws and regulations—including Section 504 of the *Rehabilitation Act of 1973*, the *Fair Housing Act*, and HUD's implementing Regulations (24 CFR Parts 8¹ and 100, respectively). HPD must also affirmatively further the goals of the *Fair Housing Act*. These, and related laws and regulations, prohibit discrimination based on disability and establish design requirements for program accessibility and physical accessibility in connection with housing programs. In addition, HPD must ensure that such comply with the local accessibility requirements of Chapter 11 of the New York City *Building Code*.

¹ While 24 CFR Part 8 Regulations indicate the minimum of 5% mobility impairment and minimum of 2% hearing or visual impairment requirements apply to projects receiving federal assistance, subsequent civil rights laws broadened the requirement to all programs and activities of housing agencies, such as HPD, that accept federal assistance.

ACCESSIBLE / ADAPTABLE

The various laws, regulations, and architectural standards use the terms "accessible" and "adaptable". For the purposes of this document, the term "accessible" is used throughout, with the recognition that the apartments/units may require adaption (e.g. installation of grab bars, lowering of countertop height, etc.) to meet the specific needs of households or individuals.

As an assurance that HPD-assisted projects meet all the applicable accessibility laws and regulations, each architect must provide an "Architect's Statement", pre-construction and post-completion, certifying that the design and construction of the project complies with the accessibility requirements of the New York City *Building Code*, Section 504 of the *Rehabilitation Act of 1973*, and the *Fair Housing Act*, as applicable. The form is available from the HPD website

<http://www1.nyc.gov/site/hpd/developers/BLDS-eSubmit.page>.

FAIR HOUSING ACT

All new construction housing projects built for first occupancy after March 13, 1991 consisting of four or more units are required to comply with the design and construction requirements of the *Fair Housing Act*. A Joint Statement of The United States Department of Housing and Urban Development and U.S. Department of Justice, Accessibility (Design and Construction) Requirements for Covered Multi-family Dwellings Under the Fair Housing Act, dated April 30, 2013 included ten (10) safe harbors satisfy these requirement. The Joint Statement is available at (http://www.ada.gov/doj_hud_statement.pdf). Information on the *Fair Housing Act* design and construction requirements is also available at <http://www.fairhousingfirst.org>.

SECTION 504 OF THE REHABILITATION ACT OF 1973

All HPD-assisted projects with five or more dwelling units must comply with the accessibility requirements of Section 504 of the *Rehabilitation Act of 1973*. Section 504 requires that, for projects involving the new construction of housing containing five or more dwelling units and for projects involving the substantial alteration of housing containing 15 or more dwelling units, a minimum of five percent (5%) of the total number of dwelling units must be accessible and designated for households with a person with a mobility-impairment. An additional minimum of two percent (2%) of the total dwelling units must be designated for households with a person with a hearing or vision impairment. These units must be distributed throughout the project and made available in a sufficient range of sizes as not to limit the choice of individuals/households with handicaps/physical impairments.

The *Uniform Federal Accessibility Standards* (UFAS) or the *2010 ADA Standards for Accessible Design* serve as the design standards for compliance with Section 504 of the *Rehabilitation Act of 1973* (UFAS is available at <http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-aba-standards/background/ufas>; the 2010 ADA Standards at <http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards>.) The requirements for new construction and substantial alteration projects differ from those for moderate alterations of existing housing;

refer to Section 8.23 “Alterations of Existing Housing Facilities” of the implementing regulations (<http://www.ecfr.gov>).

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

Places of public accommodation and commercial facilities (e.g. retail spaces, community facilities, leasing offices, etc.) must comply with the *Americans with Disabilities Act* (ADA) guidelines, *2010 ADA Standards for Accessible Design*.

For architects seeking to use the 2010 ADA standards to meet the UFAS requirement, HUD has identified certain provisions in the 2010 Standards that provide less accessibility than is currently required by UFAS and/or HUD’s Section 504 regulation. As a result, HUD is not deeming use of those specific provisions of the 2010 Standards as a means of providing accessibility under Section 504. For more information and instructions for use of this alternative design standard, please refer to the HUD notice: <http://www.regulations.gov/#!documentDetail;D=HUD-2014-0042-0001>.

Flood Resistant Construction

As required by State law, New York City is a Participating Community in the National Flood Insurance Program (NFIP), as administered by the Federal Emergency Management Agency (FEMA). In New York City, the Department of Buildings is the flood plain administrator and regulates building design and construction in accordance with the NFIP and FEMA requirements. Further, New York City Law and the DOB require that buildings be designed in accordance with the more restrictive of either the current or proposed Flood Insurance Rate Map (FIRM). Appendix G of the New York City *Building Code* sets forth the comprehensive regulations for flood plain management including the technical standards for compliance.

The New York City *Construction Codes* and the NFIP have established minimum requirements for flood-resistant construction in Special Flood Hazard Areas (based on the one percent chance or 100-year base flood elevation). Developers of HPD-assisted projects located in such areas should consider designing them to withstand a FEMA 500-year storm event, to the maximum extent practicable or feasible.

In addition, for HPD-assisted projects not located in areas currently governed by DOB requirements for flood-resistant construction, but for which it is reasonable to believe flooding may occur—those in FEMA 500-year flood plain, New York City Office of Emergency Management Evacuation Zones, and/or areas impacted historically by major weather event (e.g. Hurricane Sandy)—the design should consider flood-resistant techniques and measures consistent with the DOB/FEMA

requirements, to the maximum extent practical or feasible. HPD is cognizant that conflicts exist between the requirement to make sites readily accessible and the desire to elevate the structure for flood resilience. Generally:

- The entire structure, including any foundation, is to be designed to withstand collapse, lateral movement, and flotation due to extreme weather conditions.
- For all heating, ventilation, air-conditioning, electrical, plumbing, fire suppression, and other utilities services, equipment, and controls shall be constructed or located in areas that would preclude infiltration or accumulation of water within the components or machinery during flooding conditions. If electronic controls or devices are used to abate water infiltration, an emergency power supply (generator) should be permanently installed in-place.
- All projects that are subject to design review and located in either the FEMA 100- and 500- year flood plain, the New York City Office of Emergency Management Evacuation Zones, and/or areas impacted historically by a major weather event (e.g. Hurricane Sandy) may be required to submit additional information to HPD.

Project designers may be asked to consider the following strategies and implement them to the maximum extent practicable or feasible:

- Basements, cellars, and entry floors are designed in a manner to protect against flood and or surge waters
- Mechanical equipment and Building Operating System locations (including emergency generators and fuel supply) are positioned to protect from flood and/or surge waters
- The Emergency Generator has the capacity to maintain continuous service for all essential and critical systems and services in the building(s) during and after an emergency. Such systems and services include, but are not limited to:
 - heating and hot water
 - elevator service
 - fire alarm and fire suppression systems with sprinkler booster pumps
 - exit signs
 - building entrance system / alarm system
 - lighting of public hallways, public areas, stairs, and lobbies to maintain the illumination level required by the New York City Electrical Code in addition to the mandated battery operated emergency lighting system

Active Design Guidelines & Best Practices

The Center for Active Design publishes *Active Design: Affordable Designs for Affordable Housing*² as a guide for designing affordable housing developments that benefit resident health and well-being. The document, available for download from <http://centerforactivedesign.org/affordablehousingcosts>, supplements New York

City's *Active Design Guidelines*, which outline a broad array of architectural and urban design strategies to encourage, walking, bicycling, climbing stairs, using transit, active recreation, and a healthy diet. *Active Design: Affordable Designs for Affordable Housing* is more focused on feasible, low-cost strategies to integrate active design in affordable housing developments. The principles outlined in this document must be considered for new HPD development projects.

Aging in Place

Many adults prefer to live in their own home and community as they age, wishing to live safely, comfortably, and independently for as long as possible. BLDS strongly recommends cost-effective measures to ensure that affordable housing developments accommodate such lifestyle choices, particularly in senior housing developments. BLDS recommends, at a minimum, the following best practices:

- Handrails throughout the corridors
- Emergency pull-cords in bathrooms (and possibly in kitchens, bedrooms, and/or refuse rooms)
- All bathroom grab bars in-place in units
- 100% of apartments designed in accordance with UFAS

In addition, the New York City Department for the Aging and the American Institute of Architects New York Chapter are in the process of developing an Aging in Place Guide, which may be used as a design resource.

Energy Efficiency & Resource Conservation

HPD Policy and proposed City/local law requires that all new construction projects achieve Enterprise Green Communities (EGC) Certification (with an overlay for HPD projects). EGC requirements and compliance fall within the jurisdiction of the HPD Division of Planning and Pre-development.

Brownfield sites result from both site contamination and economics, and therefore, disproportionately plague lower-income communities. The sites stigmatize the community and may adversely affect the health of individuals or community at large. In 2014, the New York City Deputy Mayor's Office of Economic Development mobilized the Mayor's Office of Legislative Affairs, Mayor's Office of Environmental Remediation (OER), and HPD to lobby to preserve the New York State Brownfield Clean-up Program (BCP) within New York City, in part to support *Housing New York*. New York City HPD, OER, and the New York City Office of Management and Budget (OMB) have also collaborated on several OER led-initiatives to support the development of affordable housing on brownfield sites. The programs include:

AFFORDABLE HOUSING GATEWAY INITIATIVE

A grant / loan program requested in 2016 that will provide services to support BCP applications (including Phase I ESA and limited Phase II investigation) for HPD and New York City Housing Development Corporation (HDC) projects. The initiative was created to secure early enrollment in the State BCP to ensure the cost-basis for State tax credits are maximized and to ensure the highest possible rate of participation of HPD- and HDC-assisted projects in the State BCP. The program is most appropriate to initiate during the early-concept-phase of the site development (12-18 months before targeted closing date), anticipated value is between \$ 75 – 125k per site.

AFFORDABLE HOUSING JUMPSTART INITIATIVE

A grant / loan program started in 2015 that currently includes State BCP-application services and State BCP-required plans, investigations, and limited remediation capital to support HPD and HDC projects. The program is most appropriate to initiate during the schematic-phase (9 – 12 months) of the site development. Maximum amount is \$250k per site.

In addition, OER oversees the New York City Voluntary Clean-up Program, the New York City Brownfield Incentive Grant Program, and the New York City Clean Soil Bank, which are also available to support HPD and HDC projects. For more information, please visit <http://www.nyc.gov/html/oer/html/home/home.shtml>.

Commercial and Retail Spaces

HPD is interested in the long-term viability of retail space in affordable housing developments. To succeed, spaces must be able to accommodate the demands of the existing neighborhood context and be adaptable to changes to those demands. In collaboration with the Design Trust for Public Space, HPD has established a set of guidelines that inform developers of the most cost-effective strategies to develop high-quality, flexible retail spaces. The publication is available on HPD's website at <http://www1.nyc.gov/site/hpd/developers/laying-the-groundwork.page>.

Design Guidelines

Building Envelope

MASSING & ELEVATIONS

The massing of buildings should relate to the surrounding context, avoiding abrupt changes in building height from adjacent buildings and deviations from the street wall. Proportions, dimensions, and spacing of fenestrations should complement neighborhood patterns.

Articulation of massing, material, color, and texture should be used to define elements of buildings. Designs should relate to the human scale at the base level and activate the ground floor along the street frontage. The main residential entrance should be appropriately distinguished from the rest of the building and should provide shelter from inclement weather.

Building facades should minimize monotony or institutionality: HPD encourages variation in the type, color, and depth of material in the building envelope to create a sense of depth with light and shadow and to avoid a flat, planar appearance.

MATERIAL & PATTERN

All HPD projects should be constructed of high quality, attractive, sustainable, and durable materials that minimize maintenance costs. The choice of exterior finish materials should take into consideration the new building's relationship to the surrounding neighborhood in terms of color, texture, and pattern.

Site Planning

All outdoor space—including all yards at ground level, terraces, and any rooftop recreation areas—should be programmed, landscaped, and fully accessible: changes in elevation must be shown on all plans included in the submission. Front yards should be appropriately landscaped and should provide screening for all residential units adjacent to exterior utility meters, mechanical equipment, vehicular circulation and parking, and refuse storage. Any dwelling units adjacent to public or common spaces such as sidewalks, courtyards, and front and rear yards should also be adequately screened to ensure privacy for the residents of such adjacent units.

Building Planning

LOBBY & CIRCULATION

Each building must have a ground floor residential entrance lobby that is distinctly articulated and clearly visible from the street. This lobby must be restricted exclusively to residential use and must be entirely separate from the circulation of non-residential uses such as commercial, retail, or community facilities. BLDS strongly recommends entirely separating residential circulation, including secondary means of egress, from that of non-residential uses. Building services—including waste management, utilities, janitorial and mechanical rooms—should not open directly into the lobby.

The residential lobby must be an inviting space, distinguished from corridor circulation by choice of materials, high ceilings, seating areas or other design strategies. The lobby must have ample daylight and a direct view to the street or landscaped areas. If the building has a mailroom or mail alcove, it should be located in an area that is visible and accessible from the lobby. The residential lobby establishes circulation patterns within the building: the primary vertical circulation/elevator must be visible and accessible from the lobby. HPD encourages application of the strategies outlined in *Active Design: Affordable Designs for Affordable Housing* that promote fitness through active lifestyle, particularly emphasizing the location and treatment of circulation in buildings. BLDS encourages natural lighting throughout public circulation spaces and corridors.

On each floor, the public circulation space should be minimal. Long corridors are strongly discouraged except when designed to capture natural light: location of 3- and 4-bedroom units at the ends of corridors may reduce corridor length. The interior circulation system should minimize changes in corridor direction, recesses, and offsets. BLDS recommends a centralized core to diminish travel distances and multiple vertical circulation cores for larger buildings. To further the goals of the *Fair Housing Act*, HPD requires 5'-0" turning radii at the termination of corridors and at elevator cores.

COMMON SPACES

BLDS recommends providing a variety of thoughtfully designed and situated common spaces in all new buildings to the extent that they enhance the tenant experience and promote resident engagement. However, common spaces must not be so excessive as to reduce the number, capacity, or quality of residential units in the building. Otherwise, the occupancy and program of each space should determine its size, finishes, and furniture capacity. Common spaces may include, but are not limited to, the following:

- *Tenant Recreation Space* located adjacent to primary entryways, circulation, or outdoor space. This space should be adaptive to various uses and have access to natural light. HPD encourages multiple recreation spaces in buildings serving senior populations.
- *Laundry Room* conveniently located and directly accessible from the public circulation. BLDS encourages natural light and ventilation in this room.
- *Children's Indoor Play Room* with safe and durable play equipment and aesthetically interesting finishes. This space should be clearly visible from other common spaces such as the laundry room or tenant lounge.
- *Exercise Room* visually connected to other spaces.
- *Rest Room* convenient to other spaces.
- *Tenants' Storage* that is secure and fully accessible. Centralized storage areas should be located in close proximity to the elevator core, but BLDS encourages locating additional storage within individual units when possible.

The New York City Zoning Resolution establishes minimum areas, dimensions, and design requirements for common spaces in Quality Housing buildings, including tenant recreation spaces and refuse storage, and it incentivizes the inclusion of laundry facilities in these buildings. Bicycle storage is required by ZR 25-80, and should be located near circulation and easily accessible by the tenants.

Apartment Planning

The following pages describe the unit requirements and calculation methodology. HPD program may permit limited variation from these requirements. For consideration, a proposal must identify known areas of non-compliance in the initial design submission, accompanied by an explanation of the rationale behind design decisions, project constraints, and other considerations contributing to non-compliance. Projects receiving Housing Trust Fund (HTF) funding may exceed the maximum allowable areas, up to the lower end of the unit area ranges required by the New York State Homes and Community Renewal (HCR) *Design Handbook*.

Area Calculation

Dwelling unit area calculation refers to the area within the perimeter walls, which includes all area between the finished surfaces of all exterior walls and demising partitions. Mechanical and plumbing chases and structural members that are integral components of exterior walls and demising partitions will be excluded from area calculations for the purpose of determining compliance with unit size requirements. Mechanical and plumbing chases and structural members (such as freestanding columns) that are not integral components of exterior walls or demising partitions will be included in the unit and room area calculations.

FLEX CLOSETS

Some of the unit descriptions refer to a 'flex closet', which is a closet whose doors and hardware can be completely removed such that the closet area would become a nook where a bed could be located. The flex closet cannot be used to achieve floor clearances required for accessibility.

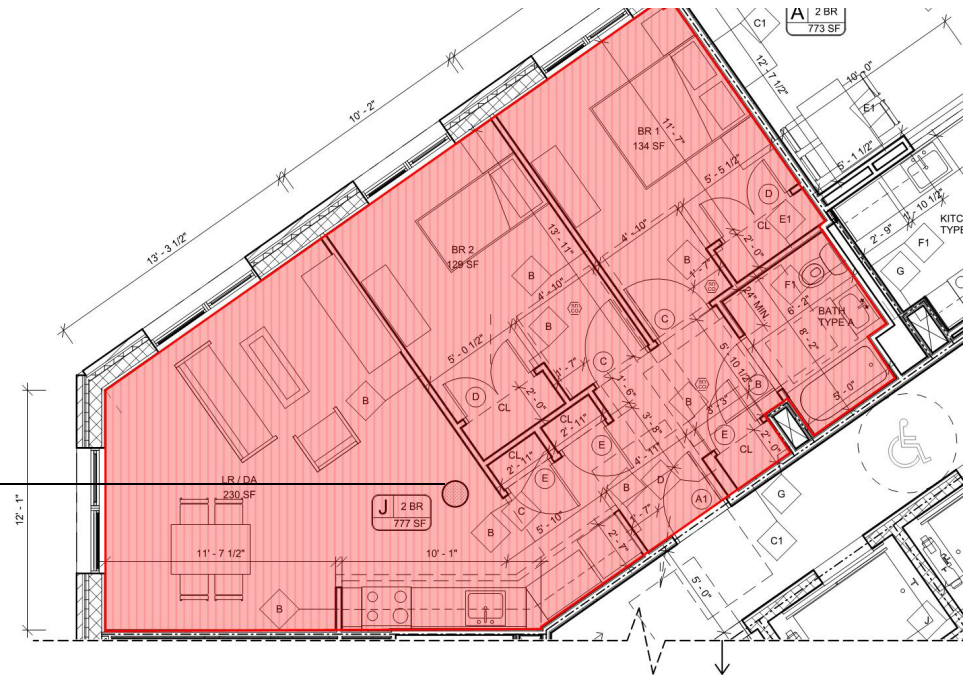
SAMPLE UNIT AREA CALCULATIONS

Mechanical and plumbing chases that **ARE NOT** integral parts of demising partitions **ARE** included in the unit area

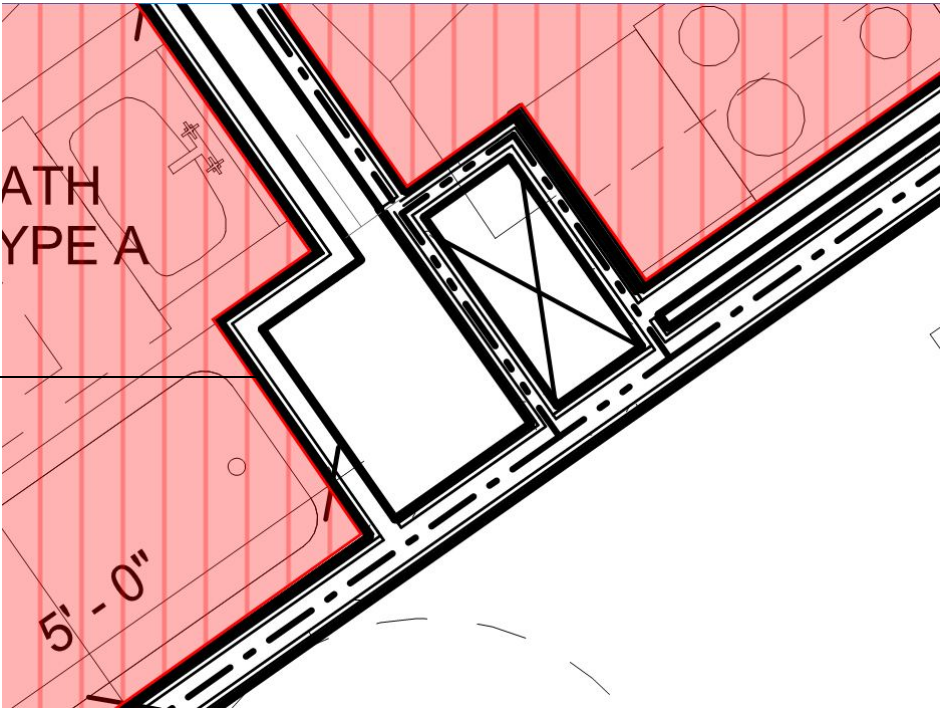
Mechanical and plumbing chases that **ARE** integral parts of demising partitions **ARE NOT** included in the unit area



Freestanding structure is included in the unit area



DETAIL OF AREA CALCULATION



Measurement taken to the finished face of demising partitions and exterior walls

Design Requirements For 0-Bedroom Units

TYPES OF SPACES

The studio, or 0-bedroom unit, is a Class A apartment consisting of the following:

- *Living Room/ Dining Area /Sleeping Area (LR/DA/SA)*
- *Kitchenette** consisting at minimum of a 24-inch range, 24-inch refrigerator, 24-inch sink with a 30-inch removable base cabinet, one continuous 30-inch work surface with removable base cabinets underneath, and adequate wall hung cabinets above countertops and appliances. Countertop work surface segments must have a minimum width of nine (9) inches. Base cabinets must be two feet deep and countertops must be 25 inches deep. Shelving must be minimally 11.5 inches deep. A pantry / broom closet is encouraged. This kitchen must be accessible (see Accessibility Diagrams).
- *Bathroom* containing a bathtub with a showerhead, a sink, and a toilet. This bathroom must be accessible (see Accessibility Diagrams).
- *Adequate Storage* including clothing closets, linen closets, pantry, and/or bulk storage. All clothing closets must be at least two (2) feet deep. The clothing closet space may be divided, but must total no less than four (4) feet wide, and no segment may be less than two (2) feet wide. Separate linen closets are encouraged.

MINIMUM SIZES

The areas in the following table describe minimum areas and dimensions to the inside finished surfaces of the walls and partitions. All spaces must be accessible.

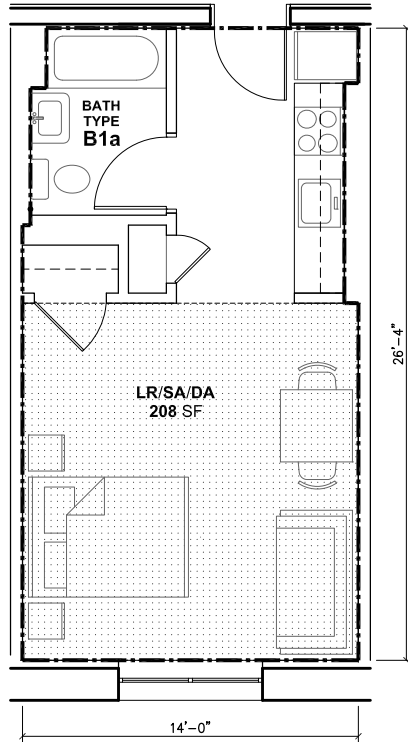
0-BR	LR/SA/DA	Storage	Target Net
Area	200 sf	10 sf	350 – 400 sf**
Min Dim	9'-0"	see description	-

**Requirements for appliance sizes are listed as absolutes, but nominal sizing may be applied, especially in the case of high-quality appliances. Verify market availability of selected appliances and provide product dimensions.*

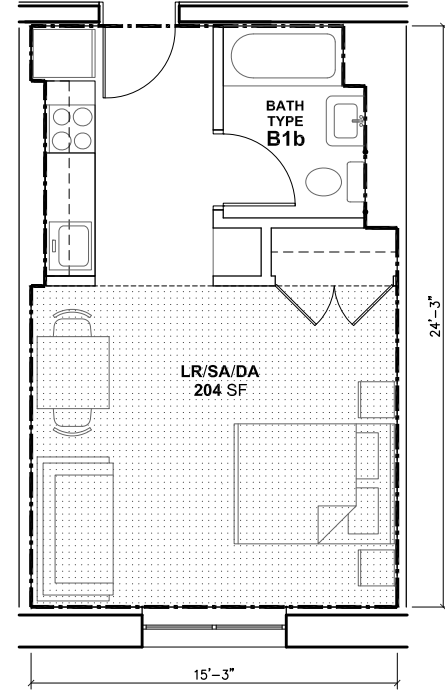
***Units designed to the Universal Federal Accessibility Standards, in accordance with Section 504 of the Rehabilitation Act of 1973, and all units in vertical line with such units, may exceed target net area by up to 25 sf.*

SAMPLE 0-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

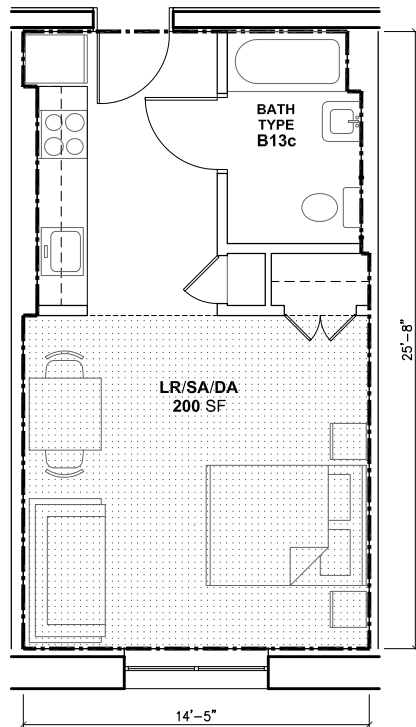
UNIT 0a
359 SF



UNIT 0b
351 SF



UNIT 0c UFAS Mobility Impaired Unit
361 SF



Design Requirements For 1-Bedroom Units

TYPES OF SPACES

The 1-bedroom unit is a Class A apartment consisting of the following:

- *Bedroom* with a closet, allowing flexible furniture arrangement.
- *Living Room / Dining Area* allowing suitable furniture placement
- *Kitchen / Kitchenette** consisting at minimum of a 27-inch range, 24-inch refrigerator, 24-inch sink with a 30-inch removable base cabinet, base cabinets with at least three (3) linear feet of countertop work surface (including one continuous 30-inch work surface with removable base cabinets underneath), and adequate wall hung cabinets over countertops and appliances. Countertop work surface segments must have a minimum width of nine (9) inches. Base cabinets must be two feet deep and countertops must be 25 inches deep. Shelving must be minimally 11.5 inches deep. A pantry / broom closet is encouraged. This room must be accessible (see Accessibility Diagrams).
- *Bathroom* containing a bathtub with a showerhead, a sink, and a toilet. This bathroom must be accessible (see Accessibility Diagrams).
- *Adequate Storage* including clothing closets, linen closets, pantry, and/or bulk storage. All clothing closets must be at least two (2) feet deep. The clothing closet space may be divided, but must total no less than four (4) feet wide, and no segment may be less than two (2) feet wide. BLDS will accept five (5)-foot wide removable 'flex closets' in bedrooms, where possible, to permit alternate furniture configuration according to resident preference. BLDS recommends providing a variety of closet configurations in similar layouts when possible. Separate linen closets are encouraged.

MINIMUM SIZES

The areas in the following table describe minimum areas and dimensions to the inside finished surfaces of the walls and partitions. All spaces must be accessible.

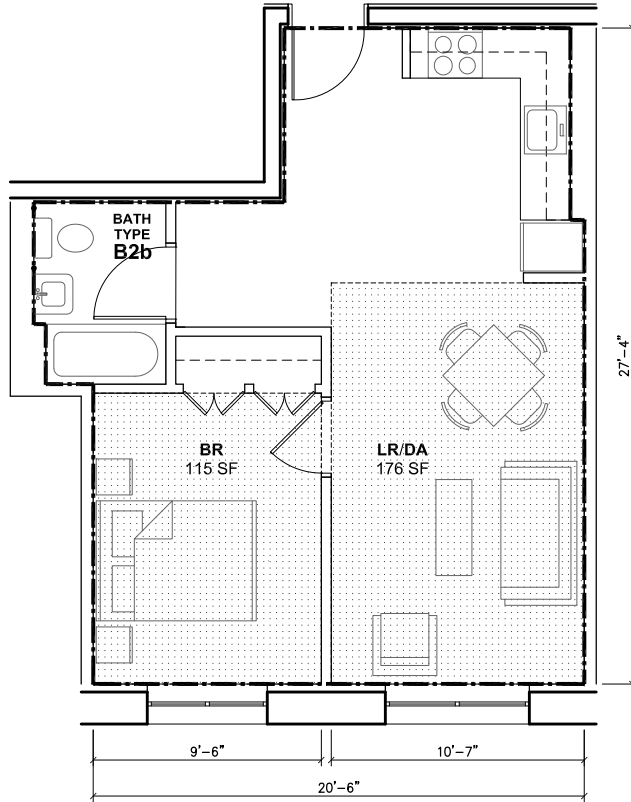
1-BR	BR	LR/DA	Storage	Target Net
Area	110 sf	170 sf	12 sf	500 – 550 sf**
Min Dim	9'-6"	9'-0"	see description	-

**Requirements for appliance sizes are listed as absolutes, but nominal sizing may be applied, especially in the case of high-quality appliances. Verify market availability of selected appliances and provide product dimensions.*

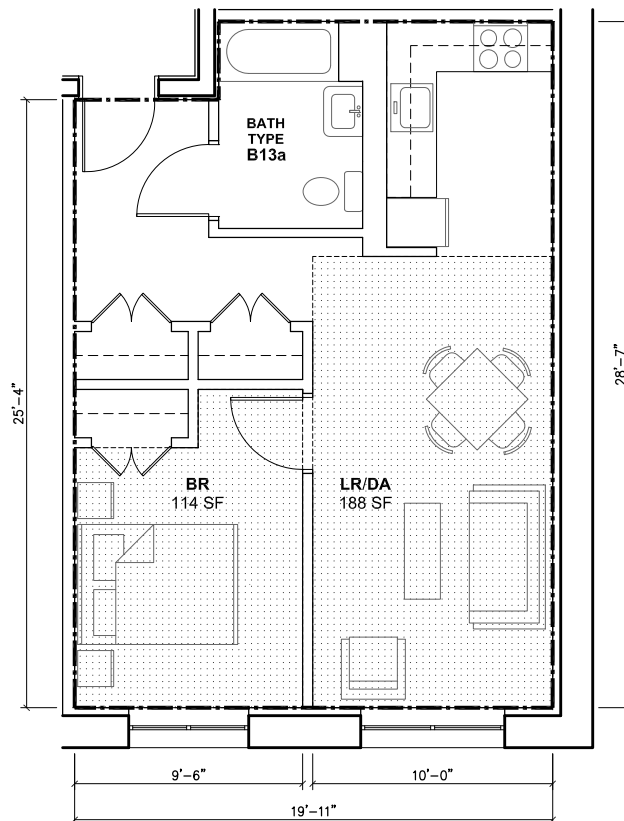
***Units designed to the Universal Federal Accessibility Standards, in accordance with Section 504 of the Rehabilitation Act of 1973, and all units in vertical line with such units, may exceed target net area by up to 25 sf.*

SAMPLE 1-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 1a
514 SF

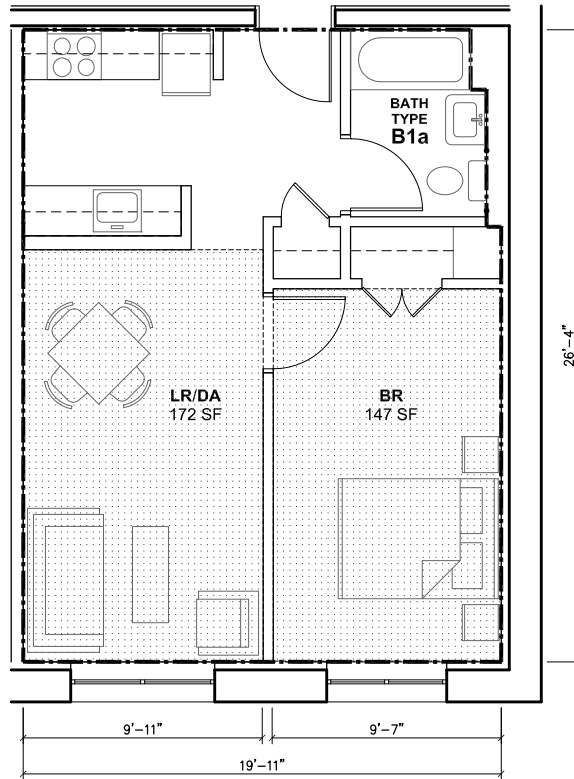


UNIT 1b UFAS Mobility Impaired Unit
550 SF

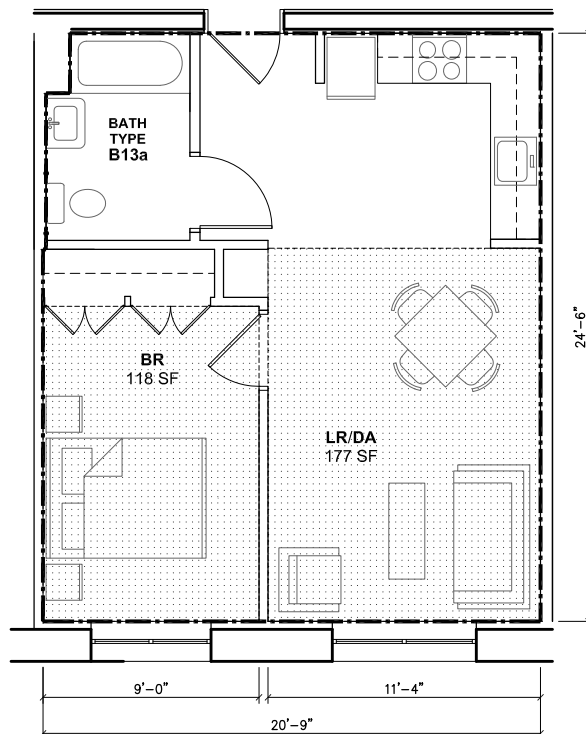


SAMPLE 1-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 1c
518 SF



UNIT 1d UFAS Mobility Impaired Unit
504 SF



Design Requirements for 2-Bedroom Units

TYPES OF SPACES

The 2-bedroom unit is a Class A apartment consisting of the following:

- *Bedrooms*, each with a closet, allowing flexible furniture arrangement.
- *Living Room / Dining Area* allowing suitable furniture placement
- *Kitchen / Kitchenette** consisting at minimum of a 27-inch range, 30-inch refrigerator, 24-inch sink with a 30-inch removable base cabinet, base cabinets with at least three (3) linear feet of countertop work surface, (including one continuous 30-inch work surface with removable base cabinets underneath), and adequate wall hung cabinets over countertops and appliances. Countertop work surface segments must have a minimum width of nine (9) inches. Base cabinets must be two feet deep and countertops must be 25 inches deep. Shelving must be minimally 11.5 inches deep. A pantry / broom closet is encouraged. This room must be accessible (see Accessibility Diagrams).
- *Bathroom* containing a bathtub with a showerhead, a sink, and a toilet. This bathroom must be accessible (see Accessibility Diagrams).
- *Adequate Storage* including clothing closets, linen closets, pantry, and/or bulk storage. All clothing closets must be at least two (2) feet deep. The clothing closet space may be divided, but must total no less than eight (8) feet wide, and no segment may be less than two (2) feet wide. BLDS will accept five (5)-foot wide removable 'flex closets' in bedrooms, where possible, to permit alternate furniture configuration according to resident preference. BLDS recommends providing a variety of closet configurations in similar layouts when possible. Separate linen closets are encouraged.

MINIMUM ROOM SIZES

The areas in the following table describe minimum areas and dimensions to the inside finished surfaces of the walls and partitions. All spaces must be accessible.

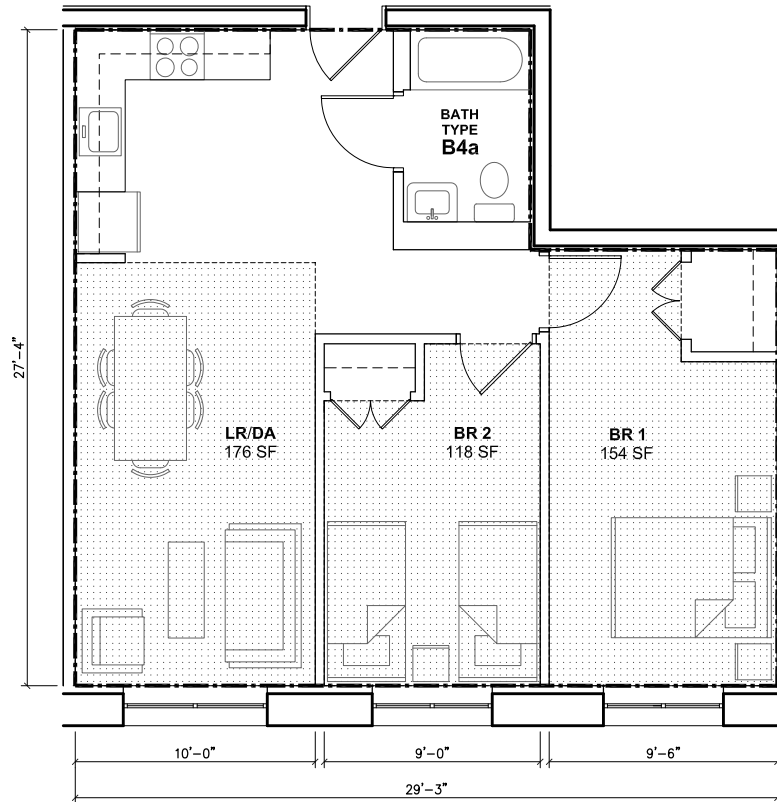
2-BR	Primary BR	Secondary BR	LR/DA	Storage	Target Net
Area	110 sf	100 sf	170 sf	20 sf	650 – 725 sf**
Min Dim	9'-6"	9'-0"	10'-0"	see description	

**Requirements for appliance sizes are listed as absolutes, but nominal sizing may be applied, especially in the case of high-quality appliances. Verify market availability of selected appliances and provide product dimensions.*

***Units designed to the Universal Federal Accessibility Standards, in accordance with Section 504 of the Rehabilitation Act of 1973, and all units in vertical line with such units, may exceed target net area by up to 25 sf.*

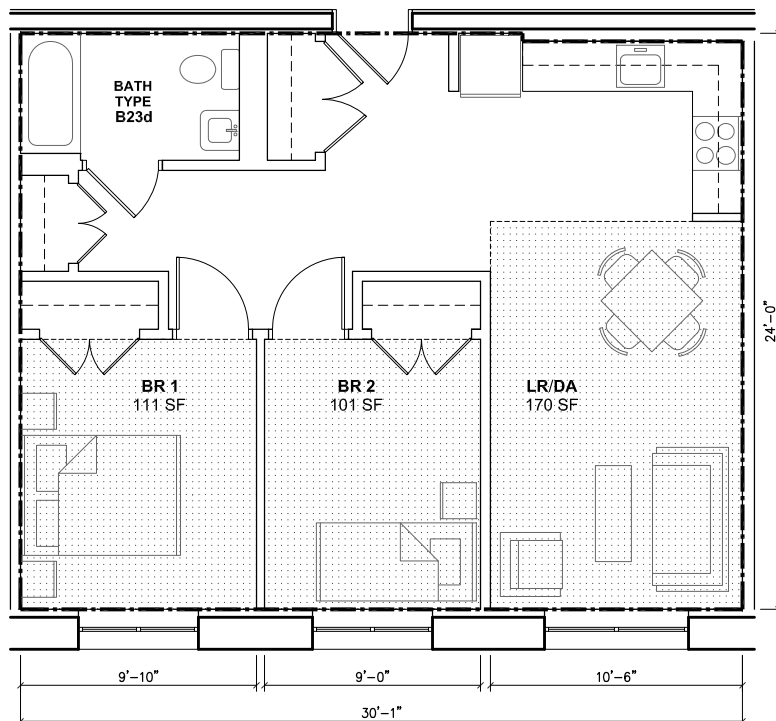
SAMPLE 2-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 2a
705 SF



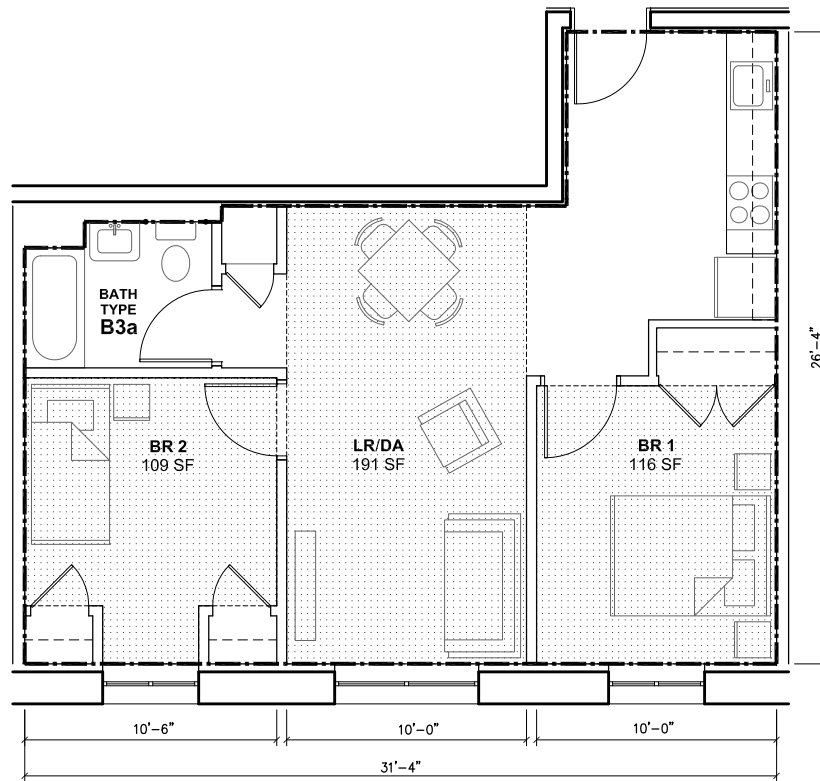
UNIT 2b
719 SF

UFAS Mobility Impaired Unit

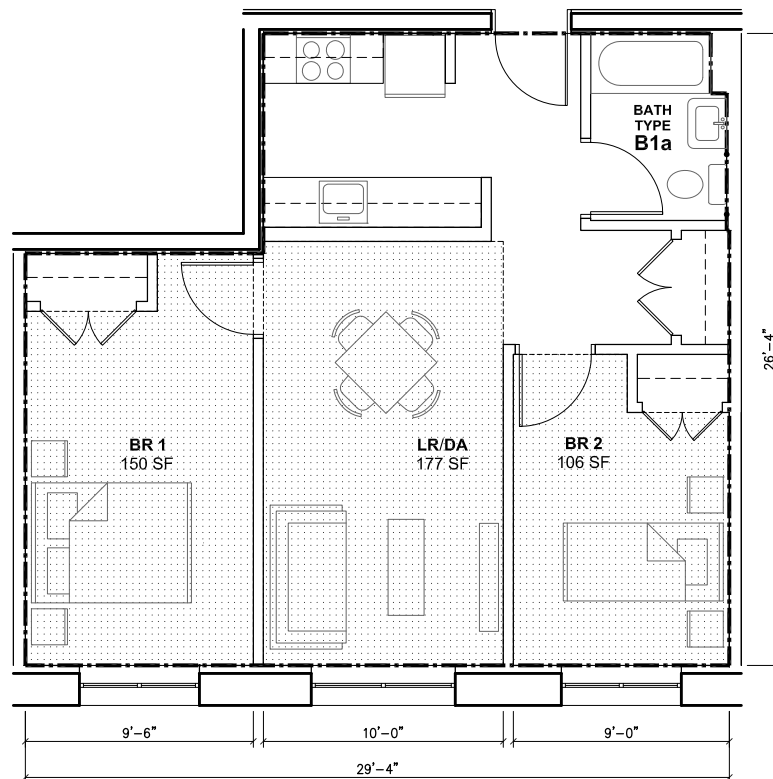


SAMPLE 2-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 2c
653 SF



UNIT 2d
679 SF



Design Requirements for 3-Bedroom Units

TYPES OF SPACES

The 3-bedroom unit is a Class A apartment consisting of the following:

- *Bedrooms*, each with a closet, allowing flexible furniture arrangement.
- *Living Room / Dining Area* allowing suitable furniture placement
- *Kitchen / Kitchenette** consisting at minimum of a 27-inch range, 30-inch refrigerator, 24-inch sink with a 30-inch removable base cabinet, base cabinets with at least three (3) linear feet of countertop work surface (including one continuous 30-inch work surface with removable base cabinets underneath), and adequate wall hung cabinets over countertops and appliances. Countertop work surface segments must have a minimum width of nine (9) inches. Base cabinets must be two feet deep and countertops must be 25 inches deep. Shelving must be minimally 11.5 inches deep. A pantry / broom closet is encouraged. This room must be accessible (see Accessibility Diagrams).
- *Bathroom* containing a bathtub with a showerhead, a sink, and a toilet. This bathroom must be accessible (see Accessibility Diagrams).
- *Secondary Bathroom / Half-bath* minimally containing a sink and toilet.
- *Adequate Storage* including clothing closets, linen closets, pantry, and/or bulk storage. All clothing closets must be at least two (2) feet deep. The clothing closet space may be divided, but must total no less than twelve(12) feet wide, and no segment may be less than two (2) feet wide. BLDS will accept five (5)-foot wide removable 'flex closets' in bedrooms, where possible, to permit alternate furniture configuration according to resident preference. BLDS recommends providing a variety of closet configurations in similar layouts when possible. Separate linen closets are encouraged.

MINIMUM ROOM SIZES

The areas in the following table describe minimum areas and dimensions to the inside finished surfaces of the walls and partitions. All spaces must be accessible.

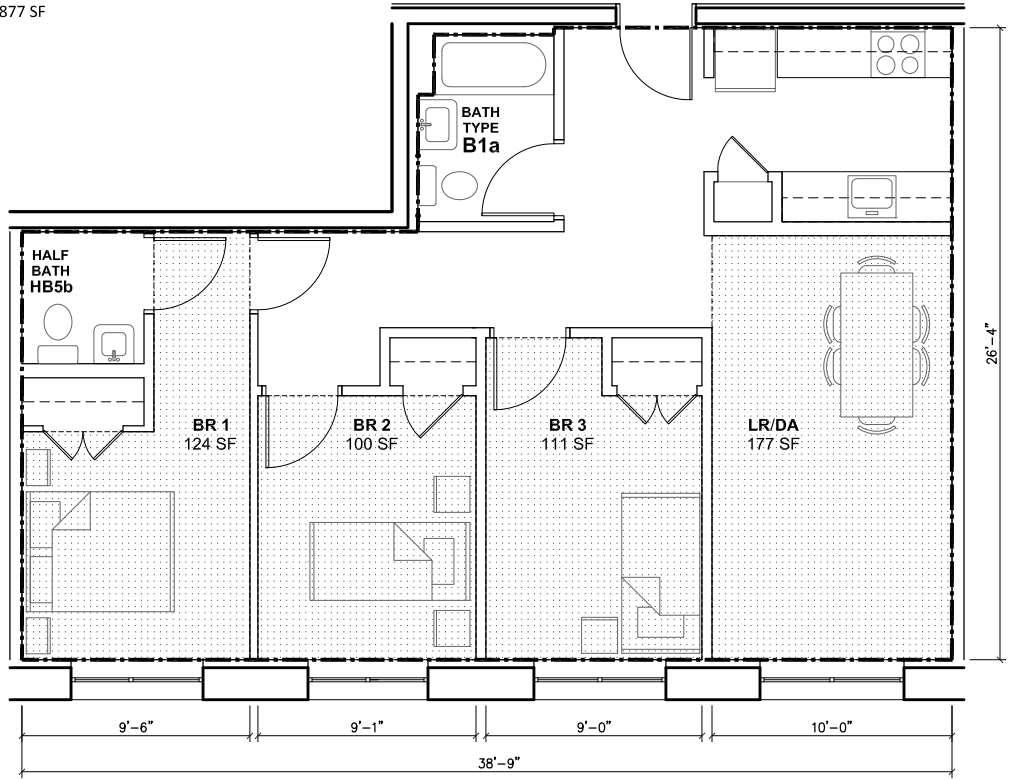
3-BR	Primary BR	2 nd BR	3 rd BR	LR/DA	Storage	Target Net
Area	110 sf	100 sf	100 sf	170 sf	26 sf	850 – 950 sf**
Min Dim	9'-6"	9'-0"	9'-0"	10'-0"	see description	-

**Requirements for appliance sizes are listed as absolutes, but nominal sizing may be applied, especially in the case of high-quality appliances. Verify market availability of selected appliances and provide product dimensions.*

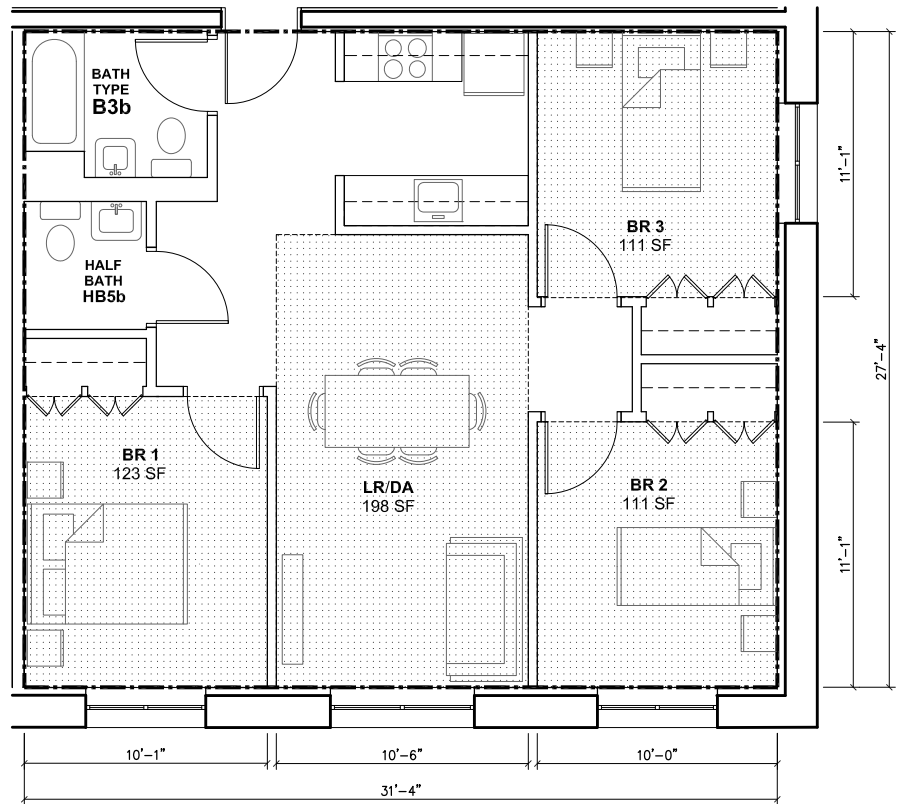
***Units designed to the Universal Federal Accessibility Standards, in accordance with Section 504 of the Rehabilitation Act of 1973, and all units in vertical line with such units, may exceed target net area by up to 25 sf.*

SAMPLE 3-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 3a
877 SF

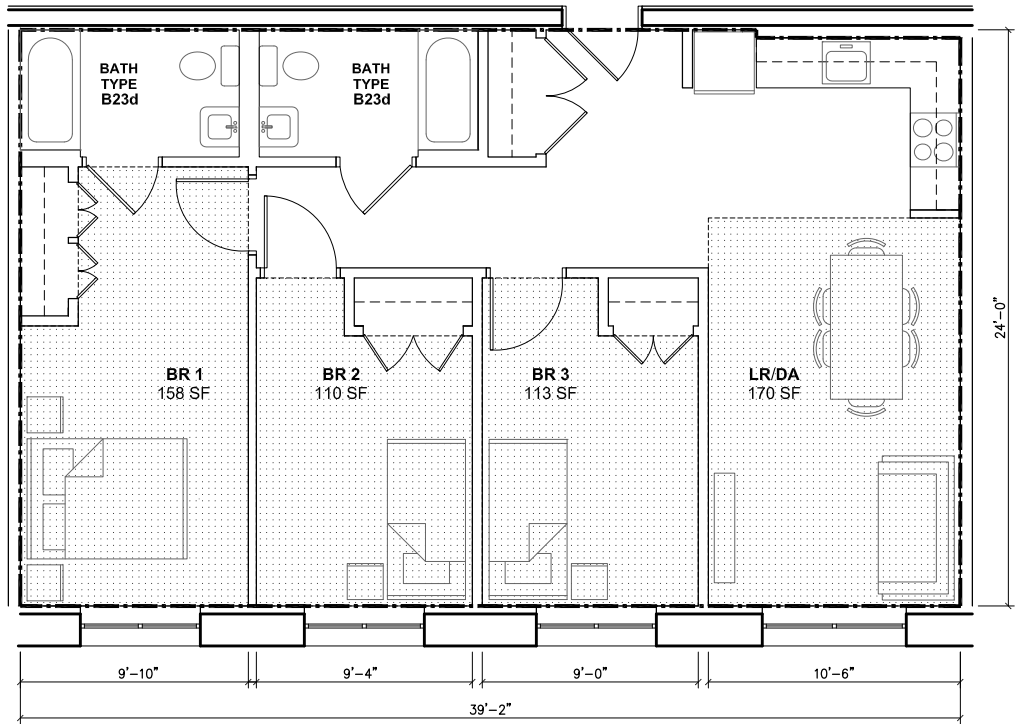


UNIT 3b
857 SF



SAMPLE 3-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 3c UFAS Mobility Impaired Unit 937 SF



Design Requirements for 4-Bedroom Units

TYPES OF SPACES

The 4-bedroom unit is a Class A apartment consisting of the following:

- *Bedrooms*, each with a closet, allowing flexible furniture arrangement.
- *Living Room / Dining Area* allowing suitable furniture placement
- *Kitchen / Kitchenette** consisting at minimum of a 27-inch range, 30-inch refrigerator, 24-inch sink with a 30-inch removable base cabinet, base cabinets with at least three (3) linear feet of countertop work surface (including one continuous 30-inch work surface with removable base cabinets underneath), and adequate wall hung cabinets over countertops and appliances. Countertop work surface segments must have a minimum width of nine (9) or 3" inches. Base cabinets must be two feet deep and countertops must be 25 inches deep. Shelving must be minimally 11.5 inches deep. A pantry / broom closet is encouraged. This room must be accessible (see Accessibility Diagrams).
- *Bathroom* containing a bathtub with a showerhead, a sink, and a toilet. This bathroom must be accessible (see Accessibility Diagrams).
- *Secondary Bathroom / Half-bath* minimally containing a sink and toilet.
- *Adequate Storage* including clothing closets, linen closets, pantry, and/or bulk storage. All clothing closets must be at least two (2) feet deep. The clothing closet space may be divided, but must total no less than sixteen (16) feet wide, and no segment may be less than two (2) feet wide. BLDS will accept five (5)-foot wide removable 'flex closets' in bedrooms, where possible, to permit alternate furniture configuration according to resident preference. BLDS recommends providing a variety of closet configurations in similar layouts when possible. Separate linen closets are encouraged.

MINIMUM ROOM SIZES

The areas in the following table describe minimum areas and dimensions to the inside finished surfaces of the walls and partitions. All spaces must be accessible.

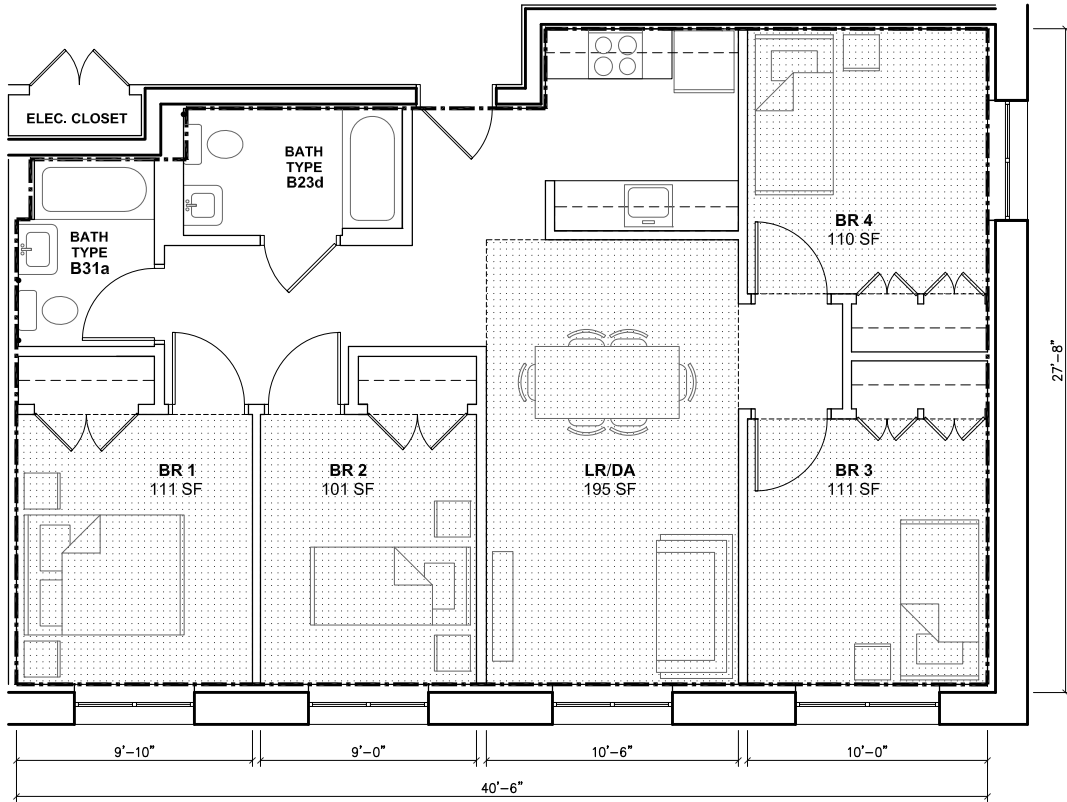
4-BR	Primary BR	2 nd & 3 rd BR	4 th BR	LR/DA	Storage	Target Net
Area	110 sf	100 sf	88 sf	170 sf	32 sf	950 – 1075 sf**
Min Dim	9'-6"	9'-0"	9'-0"	10'-0"	see description	-

**Requirements for appliance sizes are listed as absolutes, but nominal sizing may be applied, especially in the case of high-quality appliances. Verify market availability of selected appliances and provide product dimensions.*

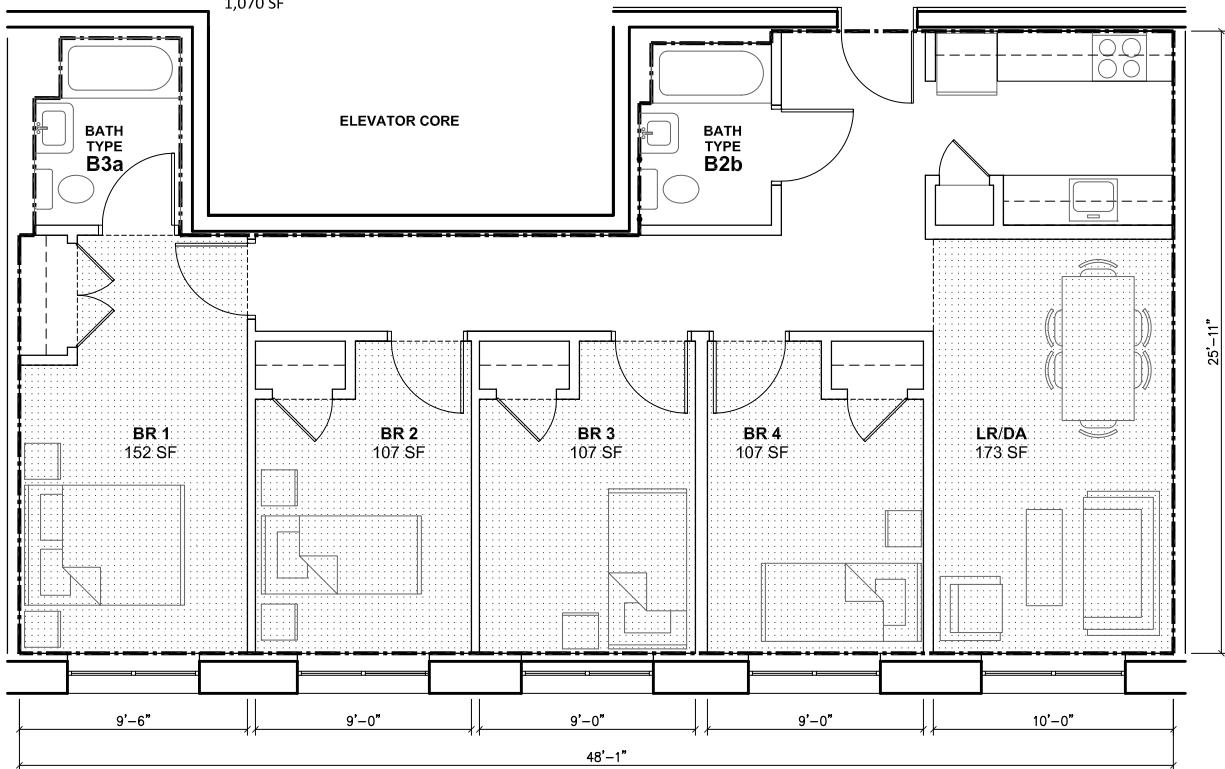
***Units designed to the Universal Federal Accessibility Standards, in accordance with Section 504 of the Rehabilitation Act of 1973, and all units in vertical line with such units, may exceed target net area by up to 25 sf.*

SAMPLE 4-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 4a UFAS Mobility Impaired Unit
1,016 SF



UNIT 4b
1,070 SF



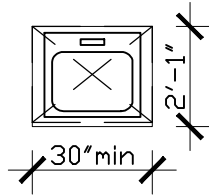
HPD BLDS Accessibility Diagrams

FOR KITCHENS AND BATHROOMS

ABBREVIATIONS:

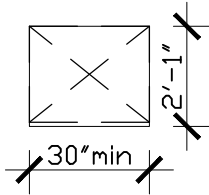
ADA	The Americans with Disabilities Act–2010 ADA Standards
AFF	Above Finished Floor
ANSI	American National Standards Institute–ANSI/A117.1–1986
BC	2014 New York City Building Code
Ⓢ	Centerline
CFS	Clear Floor Space
Dia	Diameter
FHA	Fair Housing Act
Fig	Figure
ICC	International Code Council –ICC/A117.1–2009
K	Kitchen Layout Sheet (Ex K–1)
KR	Kitchen Reference Sheet (Ex KR–1)
max	Maximum
min	Minimum
NYC	New York City
Ref	Refrigerator
Sec	Section or Reference Section
SC	Sink+Counter
UFAS	Uniform Federal Accessibility Standards
WS	Work Surface

LEGEND:



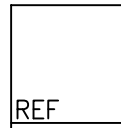
Kitchen Sink & Surrounding Counter, min 30" wide, with Removable Base cabinet below
As per

1. BC–Sec 1107.2.3,
ICC–Sec 1003.12.4.1,
Exception 2
2. UFAS–Sec 4.34.6.5(1) & (5),
Fig 51

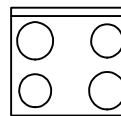


Work Surface, min 30" wide, with Removable Base cabinet below
As per

1. BC–Sec 1107.2.3,
ICC–Sec 1003.12.3.1,
Exception
2. UFAS–Sec 4.34.6.4(1) & (2),
Fig 50



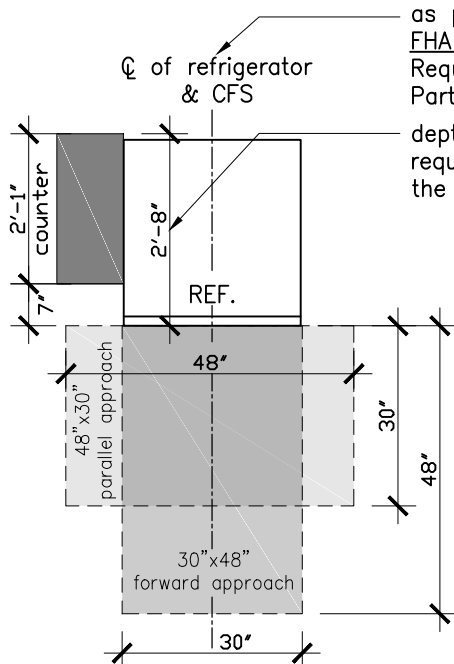
Refrigerator



Range

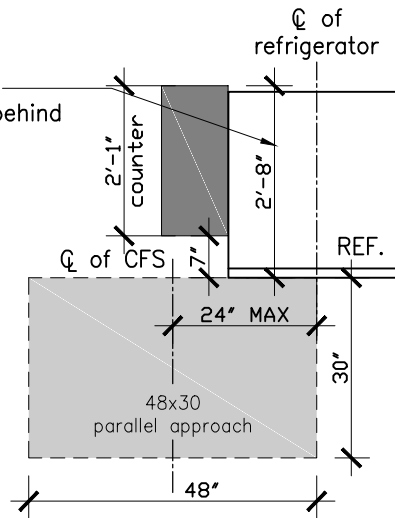
NOTES:

1. Section 504 Mobility Impaired Unit (5% of total units) kitchens shall comply with UFAS, BC & FHA. All the rest including Section 504 Hearing/Visual Impaired Unit (2% of total units) kitchens shall comply with BC & FHA.
2. Please keep in mind that selected Safe Harbor for FHA compliance may effect these layouts.
3. The width and length of kitchen may change depending on the size of refrigerator & range.
4. Refrigerator is assumed to be 30" wide & 31" min deep with 1" air space behind the refrigerator.
5. Range is assumed to be 30" wide & 27" min deep.
6. Base Cabinet is assumed to be 24" deep & Counter to be 2'-1"(25") min deep.
7. Locate the required work surface in the kitchen against a full height wall so as to facilitate required wall cabinet or shelf above (see reference sheet KR-7).
8. Locate the refrigerator (Ref) so that the doors can swing open to a minimum of 90 degrees to facilitate parallel/forward approach.
9. In Section 504 Mobility Impaired Unit, range shall be self cleaning or be located adjacent to an adjustable height counter with knee space below, as per UFAS-Sec 4.34.6.7, Fig 52. (verify the market availability of range with self-cleaning ovens in the proposed dimensions).
10. In Section 504 Mobility Impaired Unit, either top of open Shelf or top of lowest shelf of wall cabinet above the required work surface shall be mounted at 48" maximum AFF, as per UFAS-Sec 4.34.6.10(1), Fig 50.
11. In Section 504 Mobility Impaired Unit, microwave shall be installed @ an accessible height as per UFAS-Sec 4.34.2(9).
12. In Section 504 Mobility Impaired Unit, depth of the sink bowl shall be no greater than 6½", as per UFAS-sec 4.34.6.5(3)



as per
FHA Design Manual—
 Requirement 7,
 Part A, Page 7.6
 depth of the Ref +
 required air space behind
 the Ref

OR

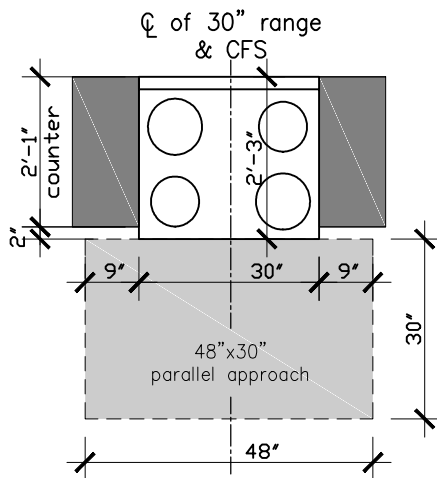


30"x48" CFS for Forward or
 Parallel Approach to Ref,
 As per

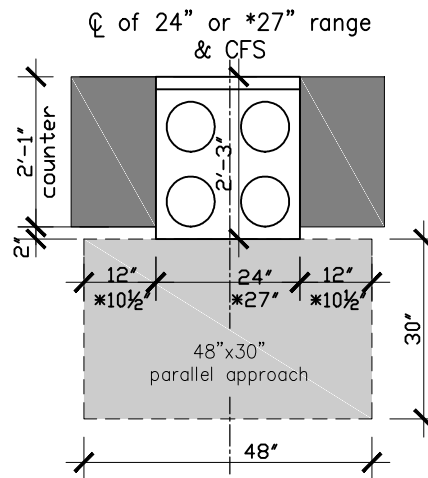
1. FHA Requirement 7(1)(a)
2. UFAS—Sec. 4.34.6.2

30"x48" CFS for Parallel
 Approach to Ref,
 As per

1. BC—Sec 1107.2.3.3,
ICC—Sec 1003.12.5.6
2. UFAS—Sec. 4.34.6.2



OR



30"x48" CFS for
 Parallel Approach to Range,
 As per

1. FHA Design Manual—
 Requirement 7, Part A, Page 7.4
2. BC—Sec 1107.2.3.4, ICC—Sec
 1003.12.5.4.3
3. UFAS—Sec. 4.34.6.2

30"x48" CFS for
 Parallel Approach to Range,
 As per

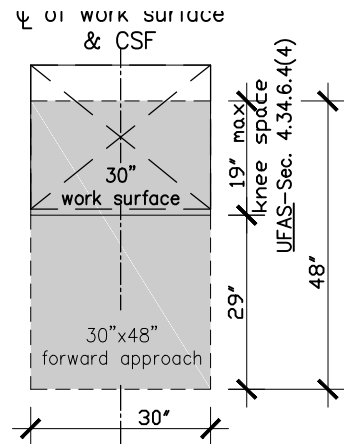
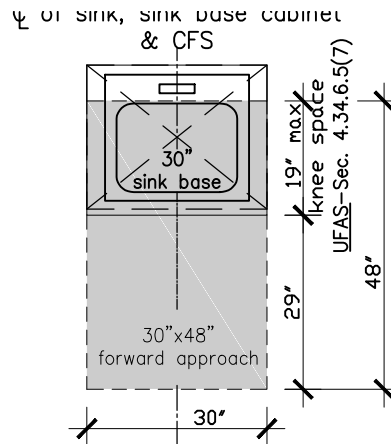
1. FHA Design Manual—
 Requirement 7, Part A, Page 7.4
2. BC—Sec 1107.2.3.4,
ICC—Sec 1003.12.5.4.3
3. UFAS—Sec. 4.34.6.2

OPTION 1:

Can be used for

1. Open Strip kitchen
2. Open "L" shaped kitchen
3. "U" shaped kitchen

(where 60" turning space is available or provided)



&

**For Example
See Kitchen Layouts
K-1, K-3 & K-6**

- 30"x48" CFS for Forward Approach to Sink, As per
1. FHA Design Manual -Requirement 7, Part A, Page 7.11
 2. BC-Sec 1107.2.3,

- 30"x48" CFS for Forward Approach to WS, As per
1. BC-Sec 1107.2.3,
ICC-Sec 1003.12.3.1
 2. UFAS-Sec. 4.34.6.4(4)

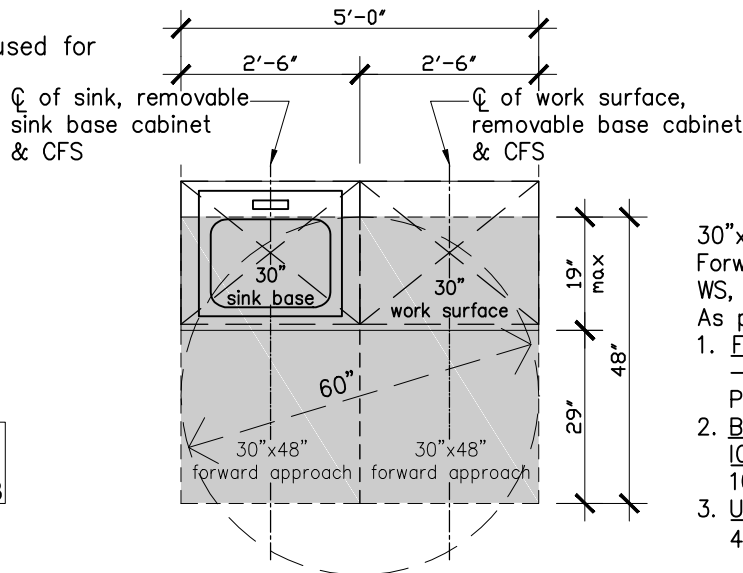
OPTION 2:

Can be used for

1. Enclosed Strip kitchen
2. Enclosed "L" shaped kitchen
3. "U" shaped kitchen

(where 60" turning space needs to be provided)

This option can also be used for any shape kitchen



- 30"x48" CFS for Forward Approach to Sink & WS, As per
1. FHA Design Manual -Requirement 7, Part A, Page 7.11.
 2. BC-Sec 1107.2.3,
ICC-Sec 1003.12.3.1,
1003.12.4.1, & 304.3.1
 3. UFAS-Sec. 4.34.6.4,
4.34.6.5, & 4.34.2(2)

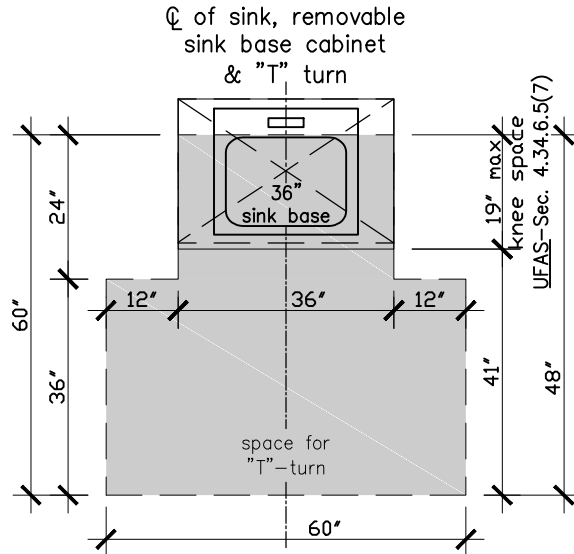
**For Example
See Kitchen Layouts
K-2, K-4 K-5, K-7 & K-8**

OPTION 3:

Can be used for
 1. Galley kitchen
 (where 60" turning space
 is not feasible)

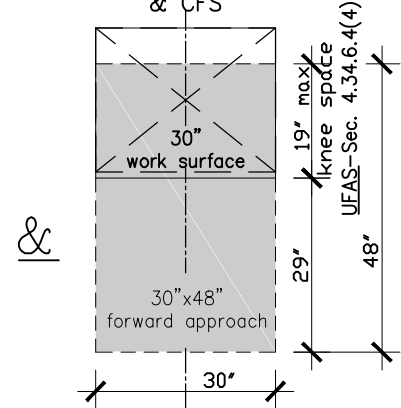
This option can also be
 used for any shape kitchen

**For Example
 See Kitchen Layout
 K-9**



36" wide Sink Base to facilitate
 a "T" Turn.
 As per
 1. ICC-Sec 304.3.2 & 1013.3.2
 2. UFAS-Sec 4.34.2(2)

Q of work surface,
 removable base cabinet
 & CFS



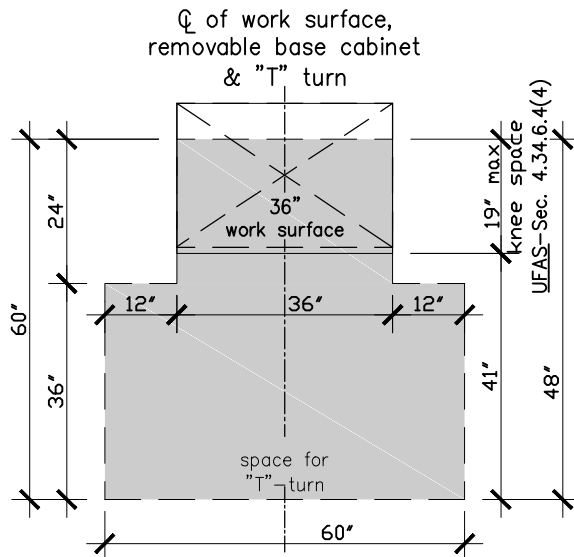
30"x48" CFS for
 Forward Approach to WS,
 As per
 1. BC-Sec 1107.2.3,
 ICC-Sec 1003.12.3.1
 2. UFAS-Sec. 4.34.6.4(4)

OPTION 4:

Can be used for
 1. Galley kitchen
 (where 60" turning space
 is not feasible)

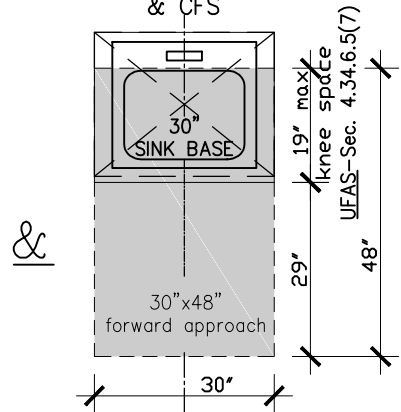
This option can also be
 used for any shape kitchen

**For Example
 See Kitchen Layout
 K-10**

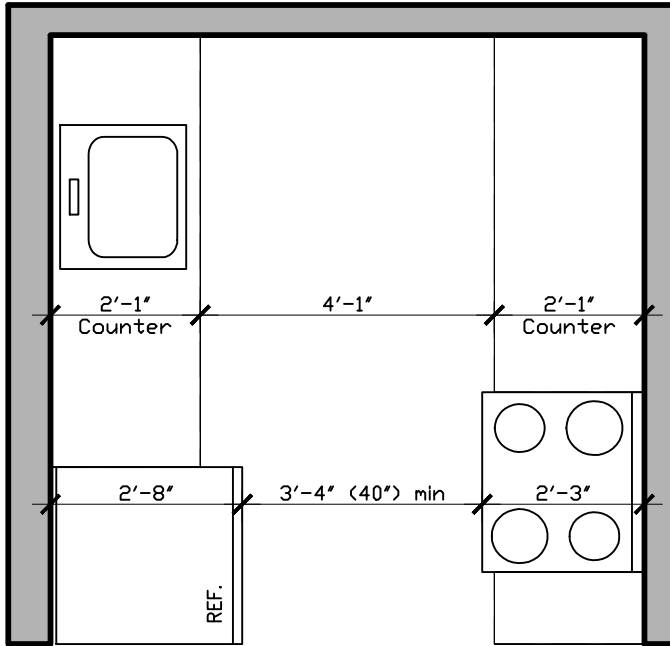


36" wide Base Cabinet Under
 36" wide Work surface to
 facilitate a "T" Turn.
 As per
 1. ICC-Sec 304.3.2 & 1003.3.2
 2. UFAS-Sec. 4.34.2(2)

Q of sink, removable
 sink base cabinet
 & CFS



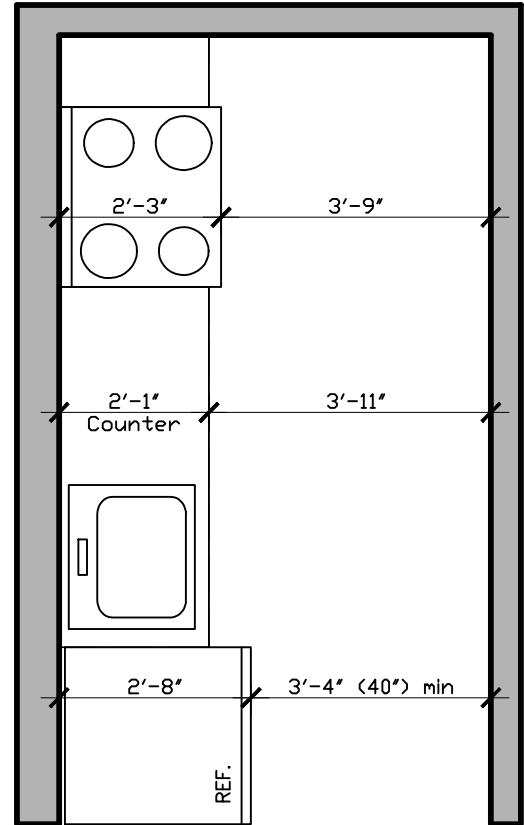
30"x48" CFS for
 Forward Approach to sink,
 As per
 1. FHA Design Manual
 -Requirement 7, Part A, Page 7.
 2. BC-Sec 1107.2.3,
 ICC-Sec 1003.12.4.1
 3. UFAS-Sec. 4.34.6.5(7)



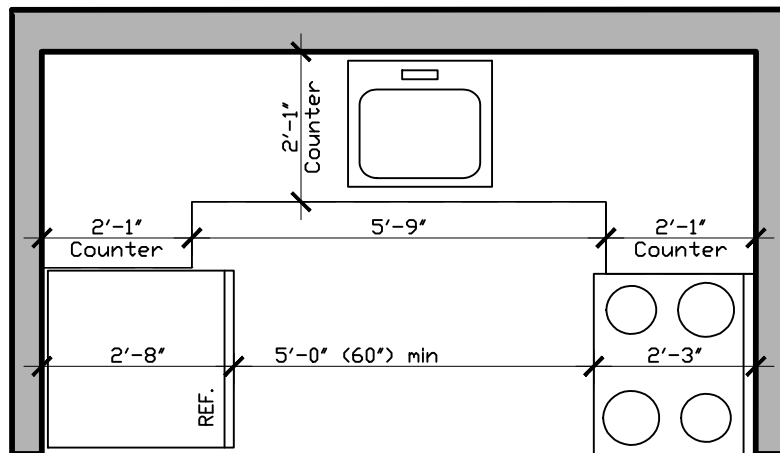
Minimum Kitchen Clearances

Minimum Clearance:

- Clearance between all opposing base cabinets, counter tops, appliances or walls shall be is at least 40" minimum
- As per
1. FHA Requirement 7(1)(b)
 2. BC-Sec 1107.2.3,
ICC-Sec 1003.12.1.1
 3. UFAS-Sec 4.34.6.1



Minimum Kitchen Clearances



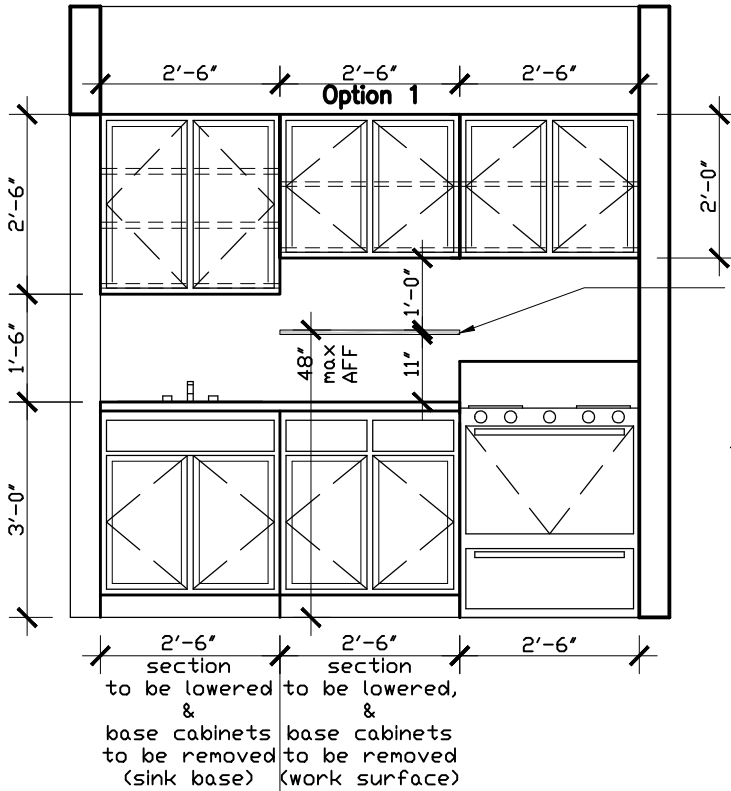
Minimum Clearances in U-Shaped Kitchen

NOTE:
Consider the most protruding element in the kitchen while calculating the clearances

"U" Shaped Kitchens:

- In kitchens with counters, appliances or cabinets on three contiguous sides, Clearance between all opposing base cabinets, counter tops, appliances or walls shall be is at least 40" minimum
- As per
1. FHA Requirement 7(1)(c)
 2. BC-Sec 1107.2.3,
ICC-Sec 1003.12.1.2
 3. UFAS-Sec 4.34.6.1

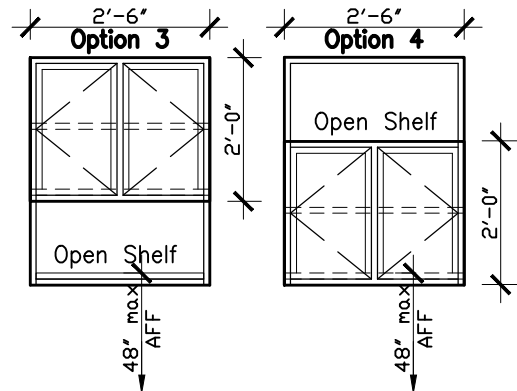
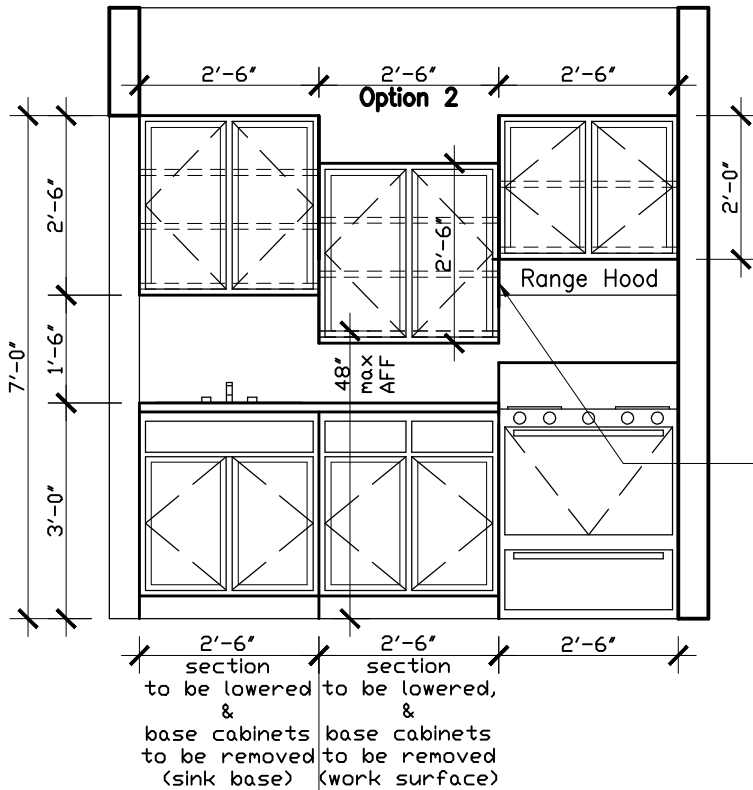
Option 1:



Top of Shelf @ 48" max AFF above 30" wide work surface
As per
1. UFAS-Sec 4.34.6.10(1)

NOTE:
30" wide shelf above 30" wide work surface @ 48" max AFF, with 9" to 12" clear storage height & same depth as wall cabinets, will provide reasonable storage space at an accessible height

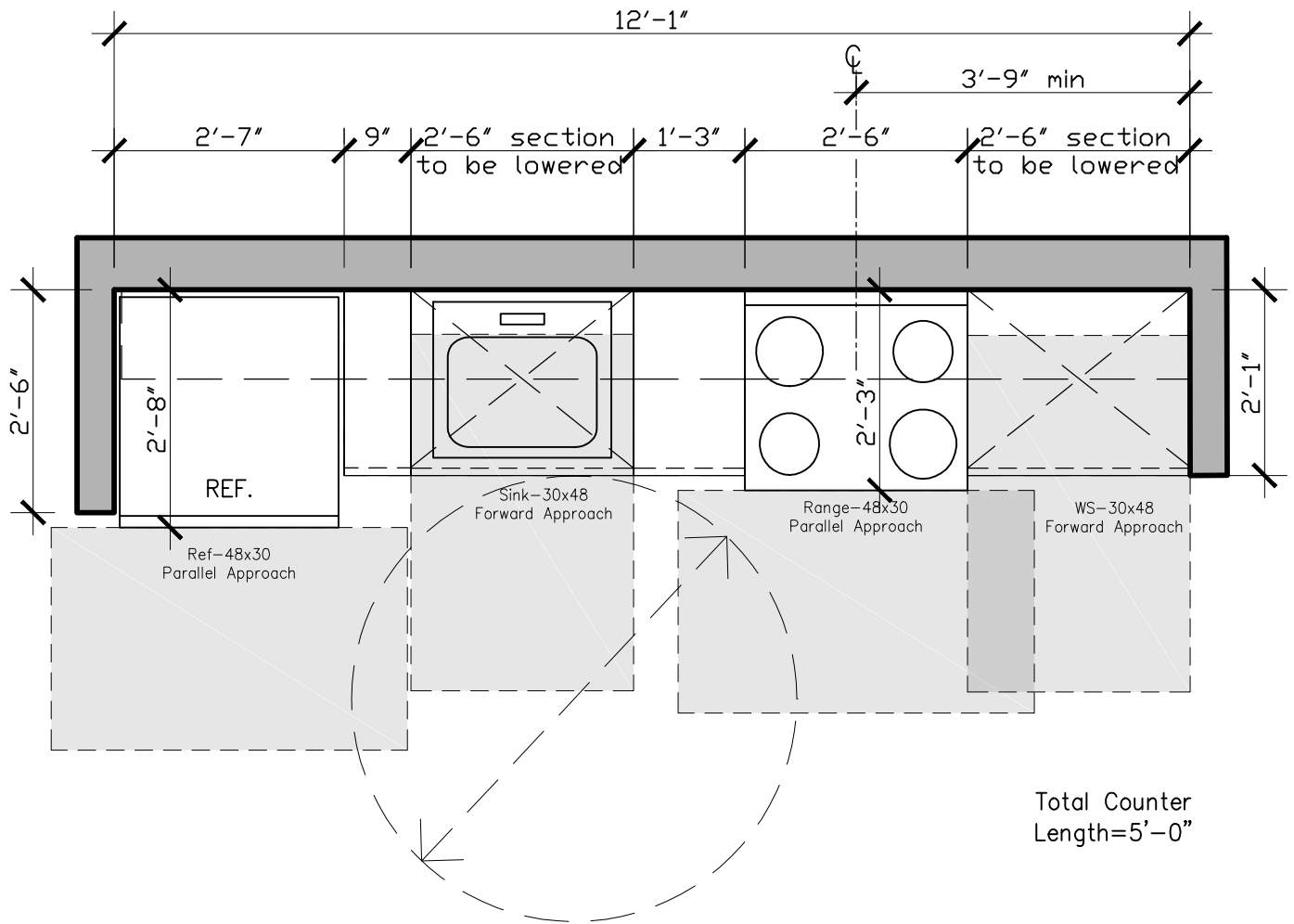
Option 2, 3 & 4:



Wall cabinet, with top of the lowest shelf @ 48" max AFF, above 30" wide work surface
As per
1. UFAS-Sec 4.34.6.10(1)

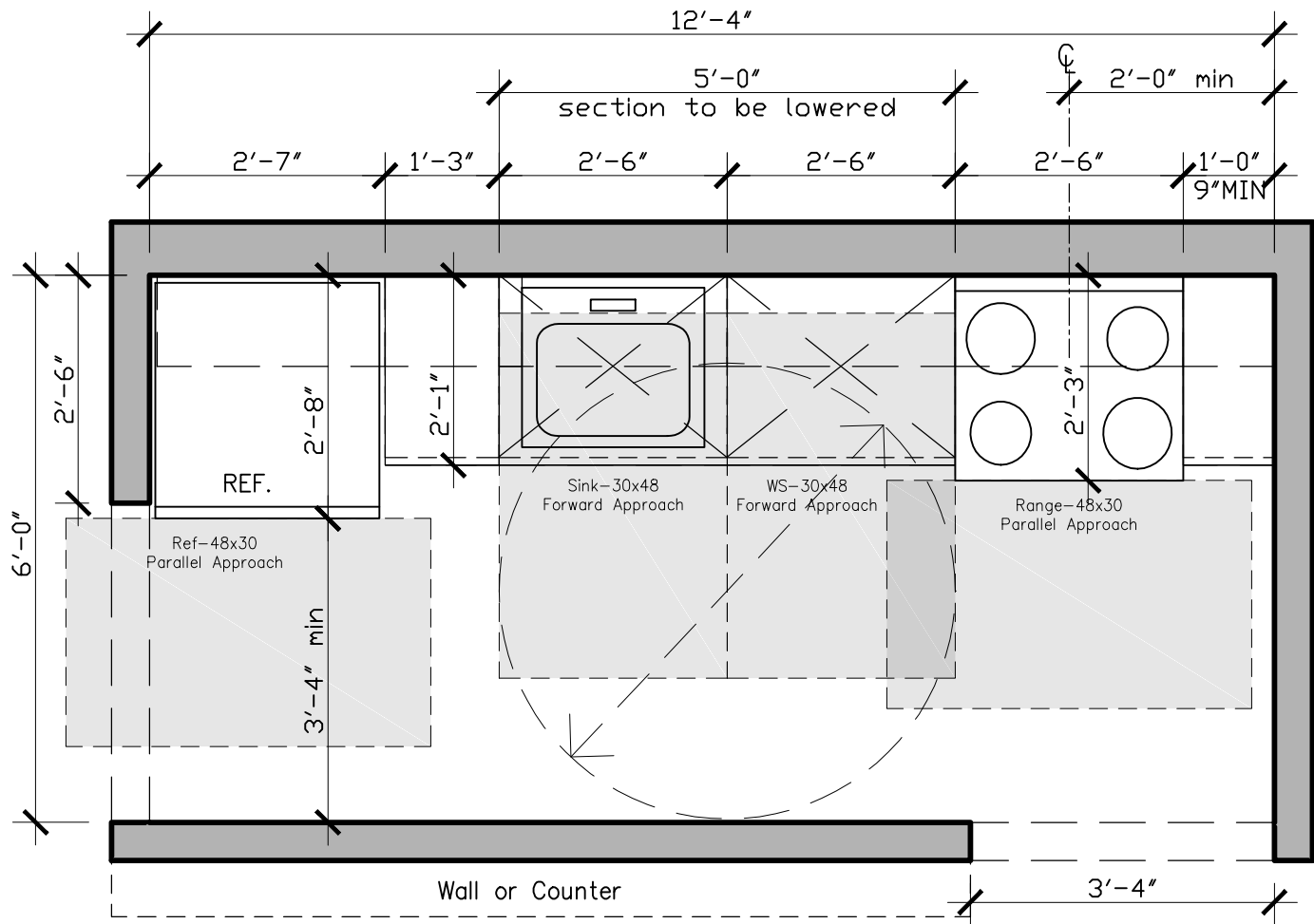
NOTE:
30" wide, taller wall cabinet above 30" wide work surface will provide reasonable storage space at an accessible height.

Elevation of Wall Cabinet or Shelf above Work Surface
for Section 504 Mobility Impaired Unit Kitchens;
& Removable Base Cabinets Under Sink & Work Surface
for all Kitchens



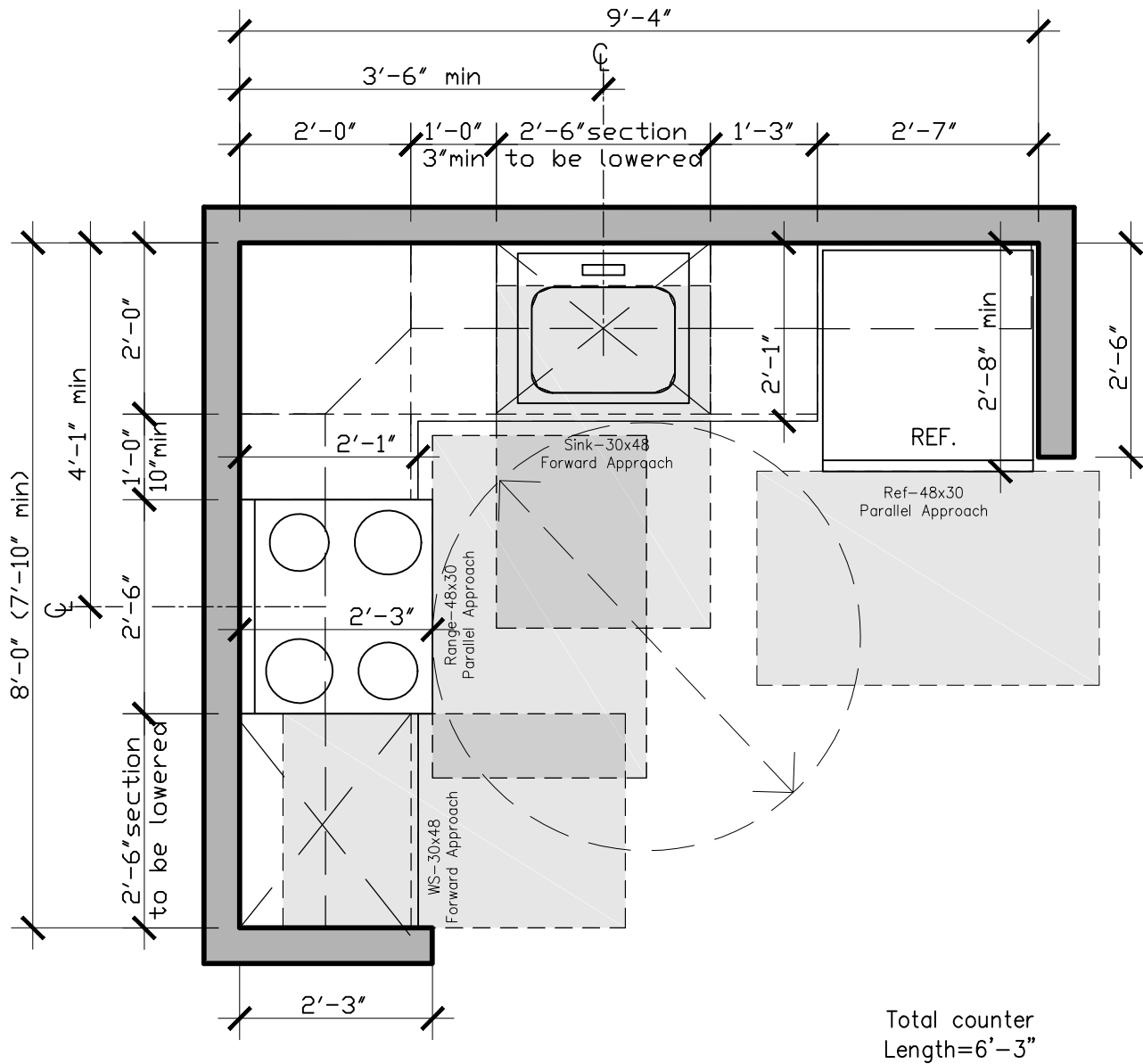
Min. Kitchen Size as per FHA, BC, & UFAS
with 60" Dia Turning Space for
Open Strip Kitchen Layout

K-1



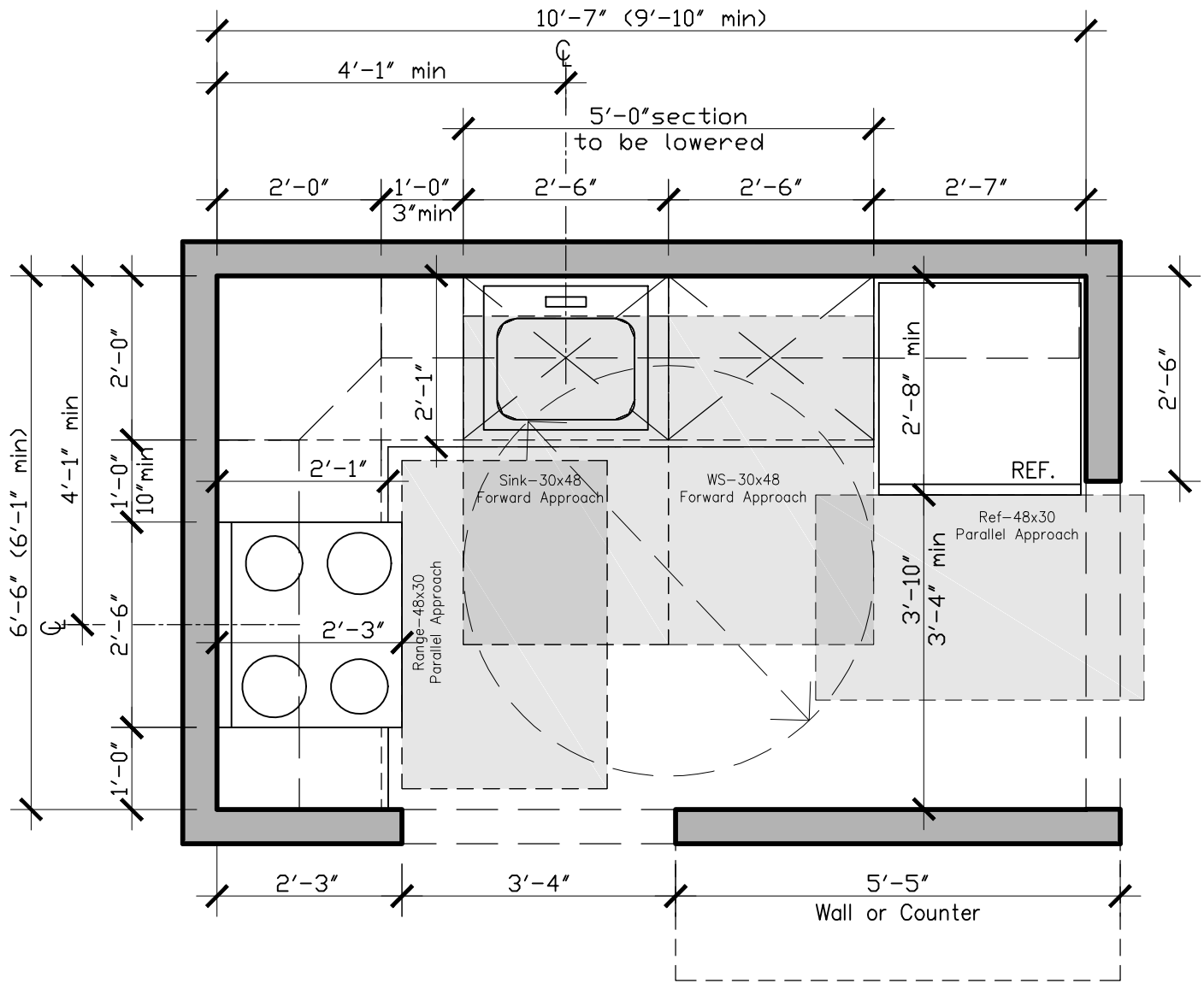
Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Dia Turning Space for
 Enclosed Strip Kitchen Layout

K-2



Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Dia Turning Space for
 Open "L" Shaped Kitchen Layout

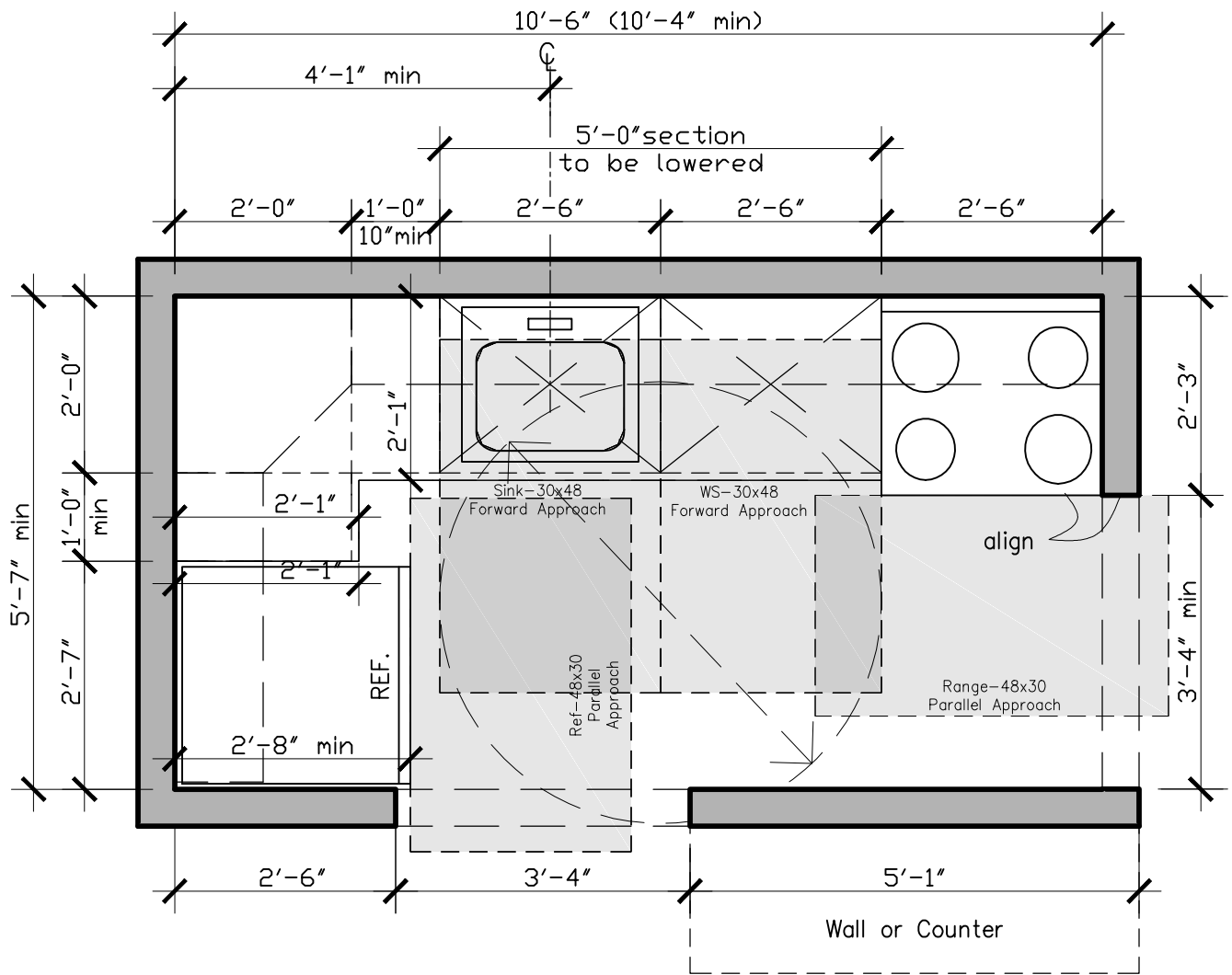
K-3



- Total counter Length=6'-0"
- Range shall be self cleaning in

Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Turning Space for
 Enclosed "L" Shaped Kitchen Layout

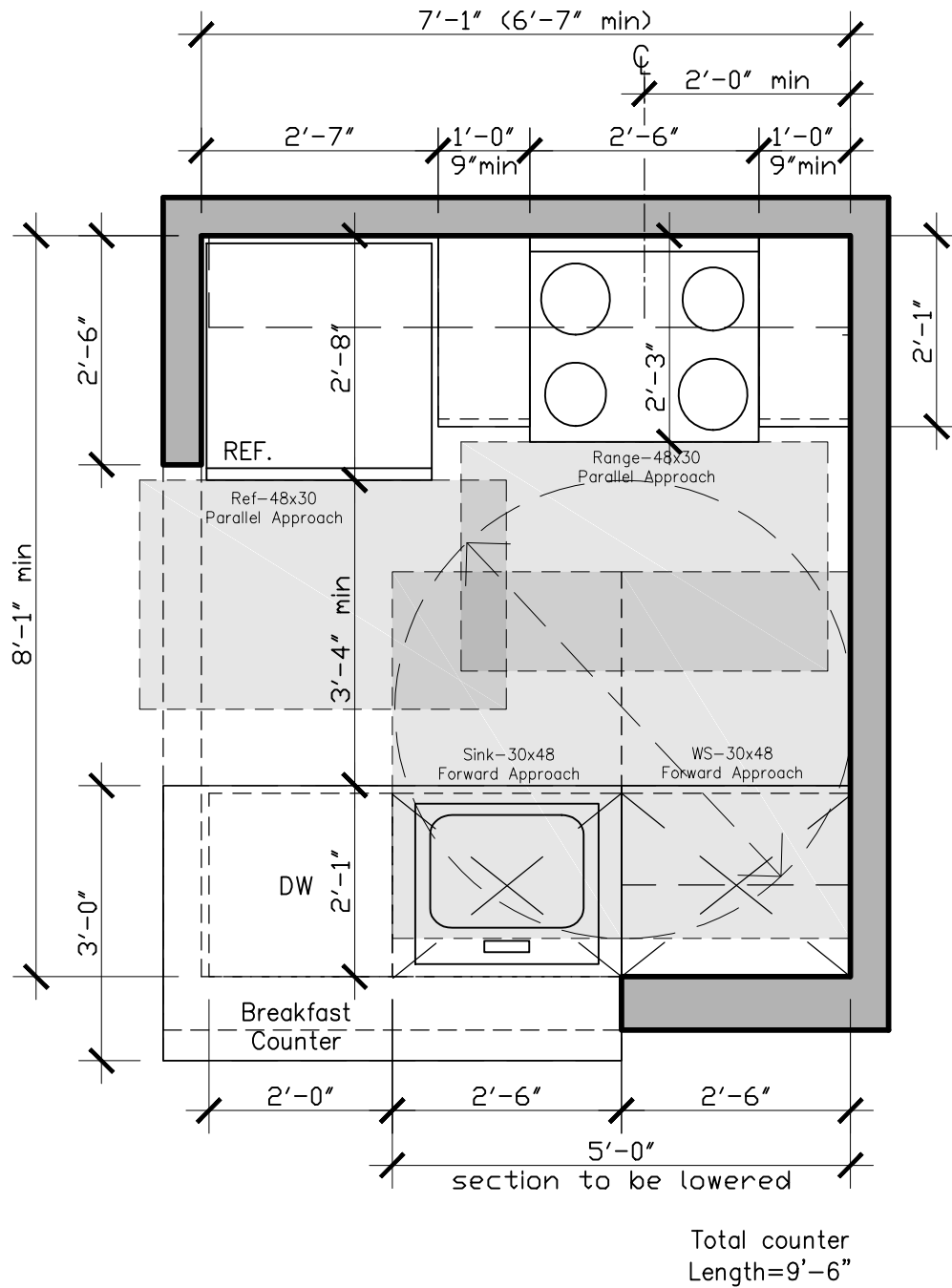
K-4



Total counter Length=5'-0"

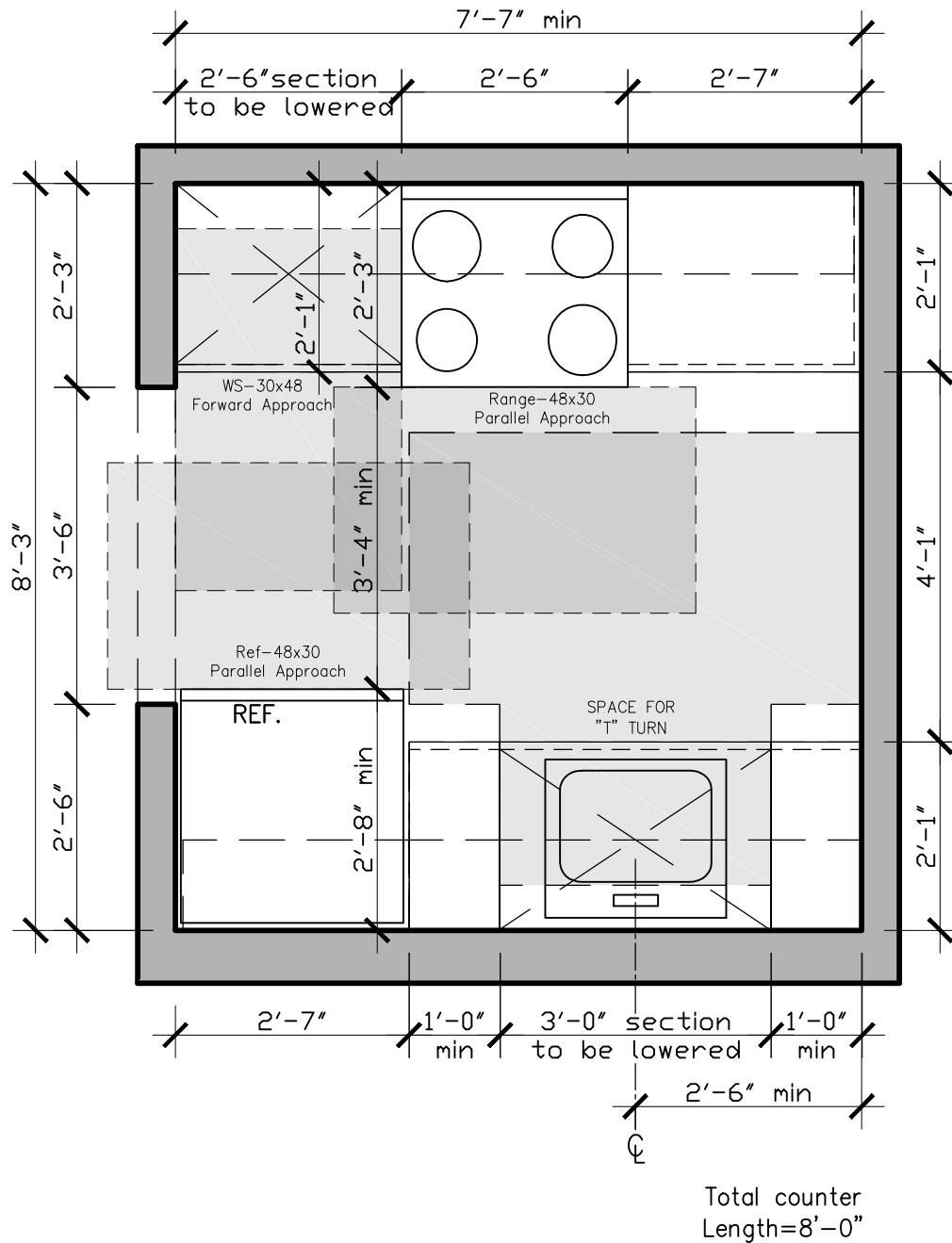
Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Turning Space for
 Enclosed "L" Shaped Kitchen Layout

K-5



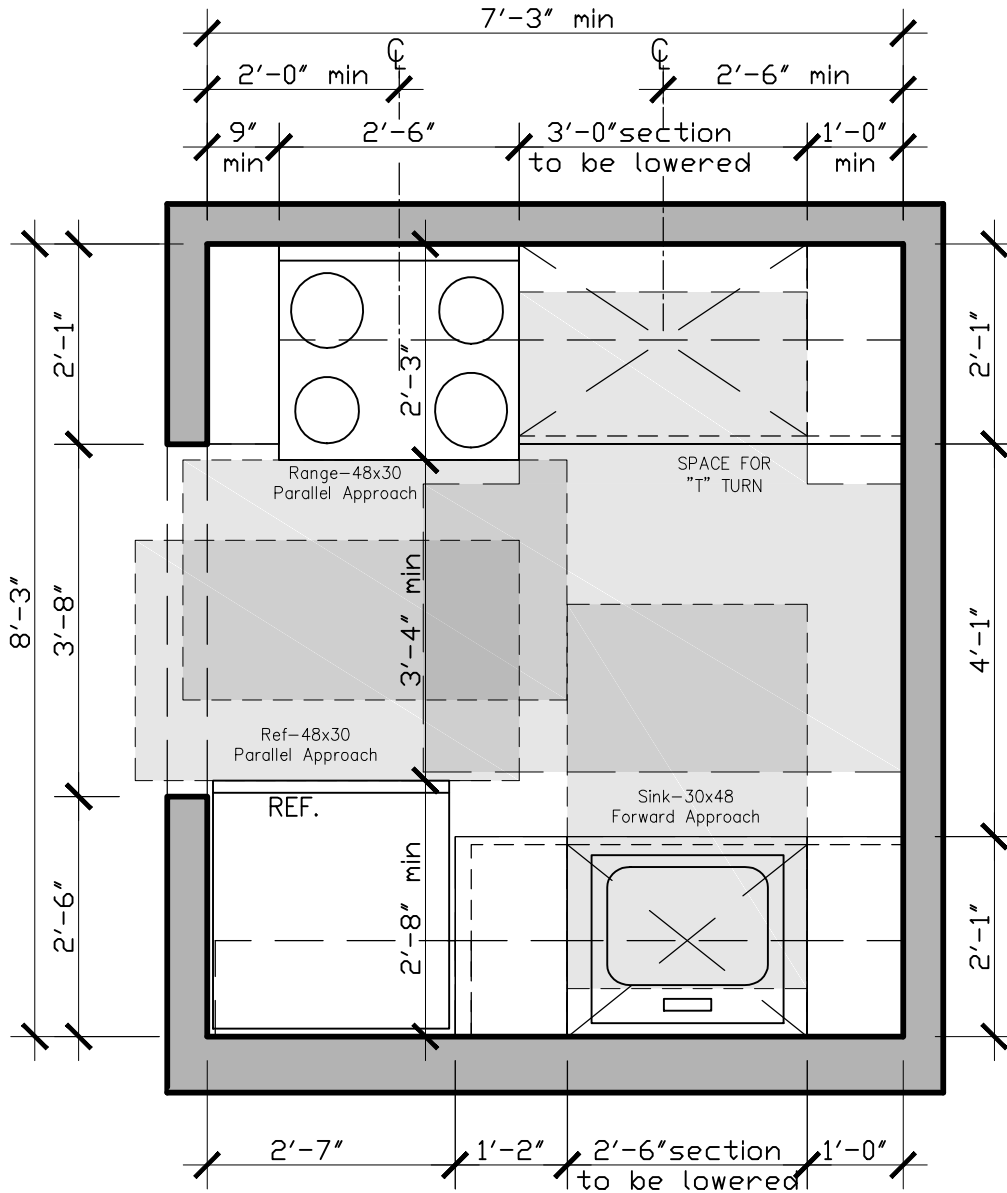
Min. Kitchen Size as per FHA, BC, & UFAS
with 60" Dia Turning Space for
Galley Kitchen Layout

K-8



Min. Kitchen Size as per FHA, BC, & UFAS
with "T" Shaped Turning Space Under the SC for
Galley Kitchen Layout

K-9



Total counter
Length 8'-0"

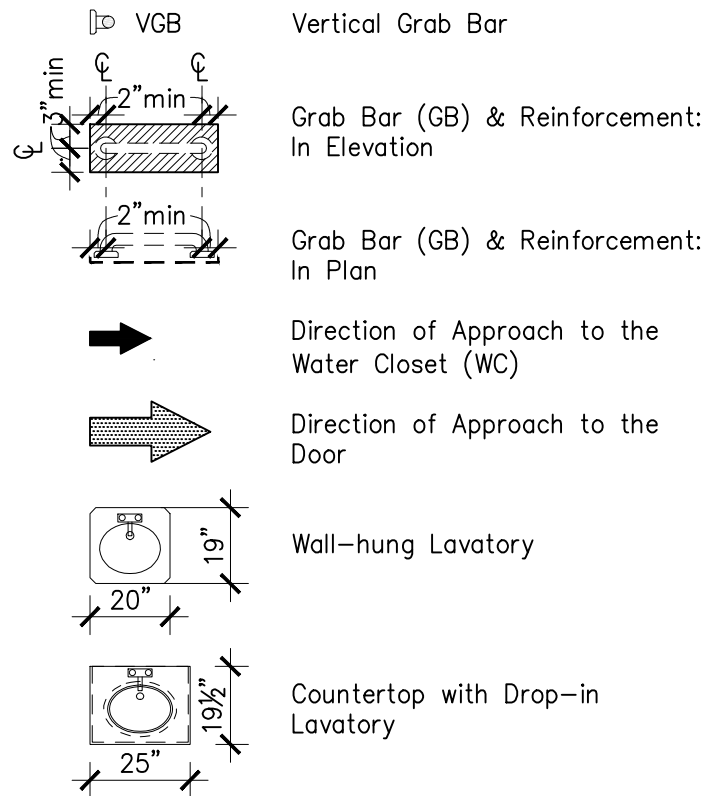
Min. Kitchen Size as per FHA, BC, & UFAS
with "T" Shaped Turning Space Under the WS for
Galley Kitchen Layout

K-10

ABBREVIATIONS:

ADA	The Americans with Disabilities Act—2010 ADA Standards
AFF	Above Finished Floor
ANSI	American National Standards Institute—ANSI/A117.1—1986
B	Full Bathroom Layout Sheet with Lav, WC & Tub (Ex B-1)
BC	2014 New York City Building Code
BR	Bathroom Reference Sheet (Ex BR-1)
⊕ of VGB	Centerline Of Vertical Grab Bar
CFS	Clear Floor Space
Dia	Diameter
DMC	Door Maneuvering Clearance
FHA	Fair Housing Act
Fig	Figure
GB	Grab Bar
HB	Half (1/2) Bath Reference Sheet with Lav & WC only (Ex HB-1)
ICC	International Code Council—ICC/A117.1—2009
Lav	Lavatory
max	Maximum
min	Minimum
NYC	New York City
PT	Common/Public Single-User Toilets Reference Sheet with Lav & WC Only (Ex PT-1)
Sec	Section or Reference Section
TPH	Toilet Paper Holder
UFAS	Uniform Federal Accessibility Standards
WC	Water Closet

LEGEND



NOTES:

1. Section 504 Mobility Impaired Unit (5% of total units) bathrooms shall comply with UFAS, BC & FHA. All the rest including Section 504 Hearing/Visual Impaired Unit (2% of total units) bathrooms shall comply with BC & FHA.
2. Please keep in mind that selected Safe Harbor for FHA compliance may effect these layouts.
3. The width and length of bathroom and half-bath may change depending on the size of lavatory or countertop with drop-in lavatory; Depth of the water closet; Width of the toilet bowl; Width & Depth of the toilet tank; Size & Location of the grab bars; Size & Location of surface-mounted TPH
4. Lavatory is assumed to be 20" wide & 19" deep; Countertop to be 25" wide & 19½" deep with removable vanity to be 24" wide & 19" deep.
5. Depth of water closet is assumed to be 30"; Width of the toilet bowl is assumed to be 14½"; Width & Depth of the toilet tank to be 20" & 10" respectively.
6. Surface Mounted TPH is assumed to be 6¼" wide & 6" deep.
7. Diameter of the escutcheon for the grab bars is assumed to be 3".
8. Roll-in shower shall not have more than 1:50 (2% max) pitch as shower area is used for 60" Dia turning space &/or DMC.
9. As per UFAS—Sec 4.34.5.1, doors shall not swing into CFS required for any fixture.
10. All dimensions are from finished wall surface, including wall tiles.

Scenario 1

BC Compliant Adaptable Unit or
Section 504 Hearing/Vision Impaired Unit With 1 Bath

Appendix "P" Compliant
Full Bath

Shall comply with:

1. Appendix "P" as per BC-Sec 1107.2.2

**Use Layouts
B-1a to B-5b**

Scenario 2

Section 504 Mobility Impaired Unit with 1 Bath

<u>UFAS</u> & Appendix "P" Compliant
Full Bath

Shall comply with:

1. UFAS-Sec 4.34.5
2. Appendix "P" as per BC-Sec 1107.2.2

**Use Bathroom Layouts
B-11a to B-15**

Scenario 3

BC Compliant Adaptable Unit or Section 504 Hearing/Vision Impaired Unit With 2 or more Bathrooms
One Full Bath; plus either a full Bath or HB

Appendix "P" Compliant
Full Bath

Shall comply with:

1. Appendix "P" as per BC-Sec. 1107.2.2

**Use Layouts
B-1a to B-5b**

Appendix "P" Compliant
Full Bath or HB

Shall comply with:

1. Appendix "P" as per BC-Sec 1107.2.2

**Use Layouts
B-1a to B-5b / HB-1a to HB-5b**

Scenario 4

Section 504 Mobility Impaired Unit with 2 or more Bathrooms
One Full Bath; plus either a full Bath or HB

4a

<u>UFAS</u> & <u>Type "A"</u> of <u>ICC</u> Compliant
Full Bath

Shall comply with:

1. UFAS-Sec 4.34.5
2. Type "A" of ICC-Sec 1003.11, as per BC-Sec 1107.2.2, Exception 1

**Use Layouts
B-21a to B-26b**

Must comply with Type "A" as it is more stringent than UFAS

Shall comply with:

Indicated Sec. of ICC Compliant
Full Bath or HB

1. Following Sections of ICC as per BC-Sec. 1107.2.2, Exception 2

- Sec 1004.3
- Sec 1004.4
- Sec 1004.5.2
- Sec 1004.9
- Sec 1004.11.1
- Sec 1107.2.1, Exception 5

**Use Layouts
B-31 to B-33 / HB-11 to HB-15**

If this is a HB, then no reinforcement for grab bar @ WC is required.

4b

<u>UFAS</u> Compliant
Full Bath

Shall comply with:

1. UFAS-Sec 4.34.5

**Use Bathroom Layouts
B-11a to B-15**

Appendix "P" Compliant
Full Bath or HB

Shall comply with:

1. Appendix "P" as per BC-Sec 1107.2.2

**Use Bathroom Layouts
B-1a to B-5b / HB-1a to HB-5b**

NOTES:

1. All Bathrooms shall also comply with FHA.

NOTES:

1. If multiple single-user toilets, for public or common use, are clustered to be within sight of, or adjacent to one another at a single location at least 50%, but not less than one for each use at each cluster shall be accessible:
As per
 - BC–Sec 1109.2, Exception(3)
 - ADA–Sec 213.2, Exception(4)
2. Where toilet rooms are provided for common use of residents or for public use, at least one fixture of each type provided must be accessible per room.:
As per
 - FHA Guidelines, Item #11 of the chart of Requirement 2 in Section 5
3. If toilet facilities are provided, then each public use and common use toilet room shall be accessible:
As per
 - UFAS–Sec 4.1.2(10)

Scenario 1

Cluster of toilets for Common Use:

<u>FHA, BC, & UFAS Compliant</u> First 50% or at least one min	Shall comply with: 1. <u>ANSI</u> –Sec 4.22 2. <u>ICC</u> –Sec 604 & 606 3. <u>UFAS</u> –Sec 4.22
	Use Layouts PT-1 to PT-6

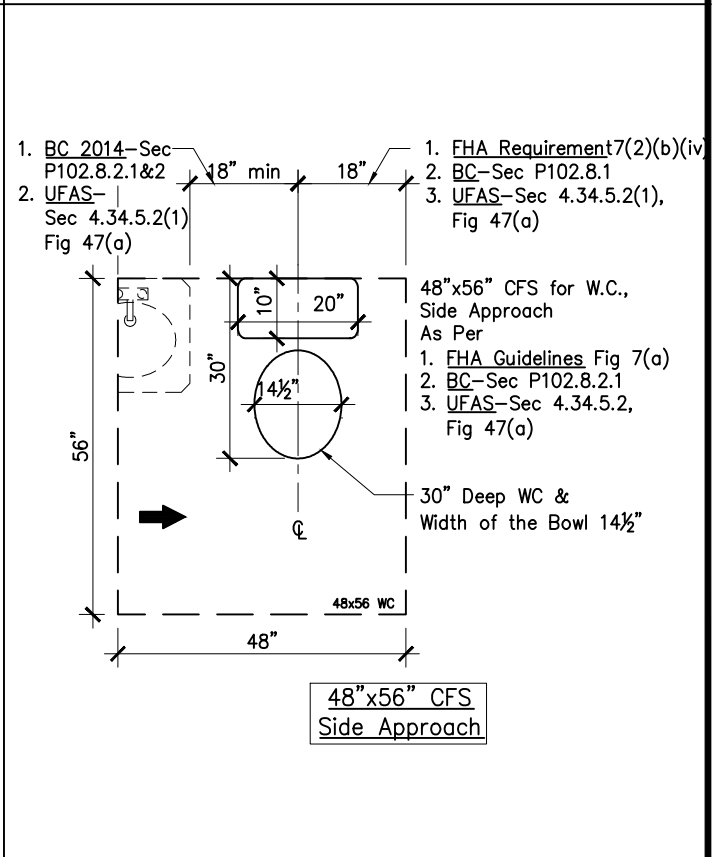
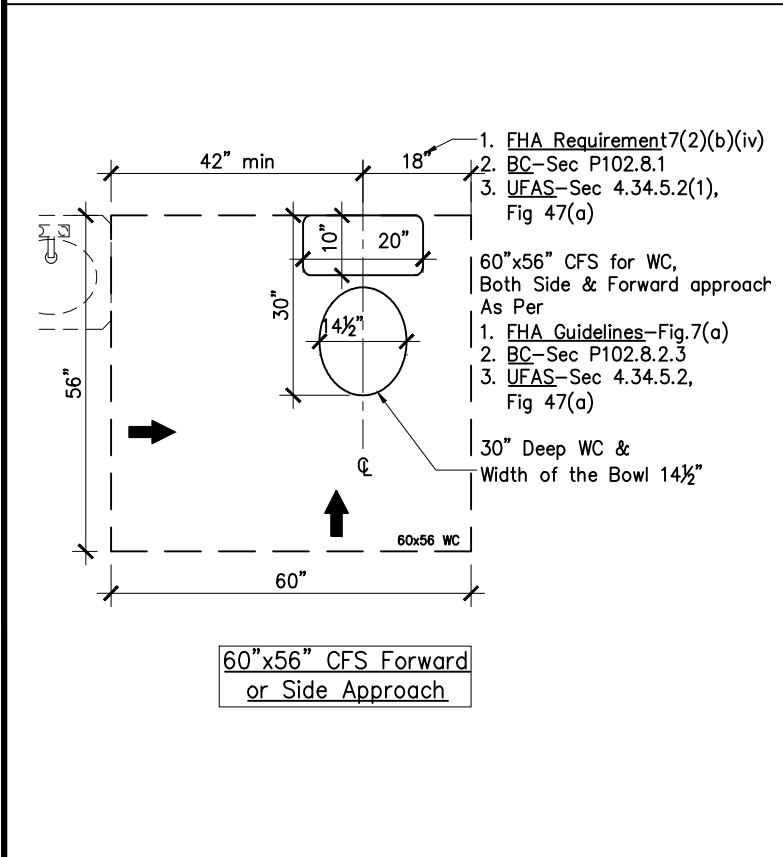
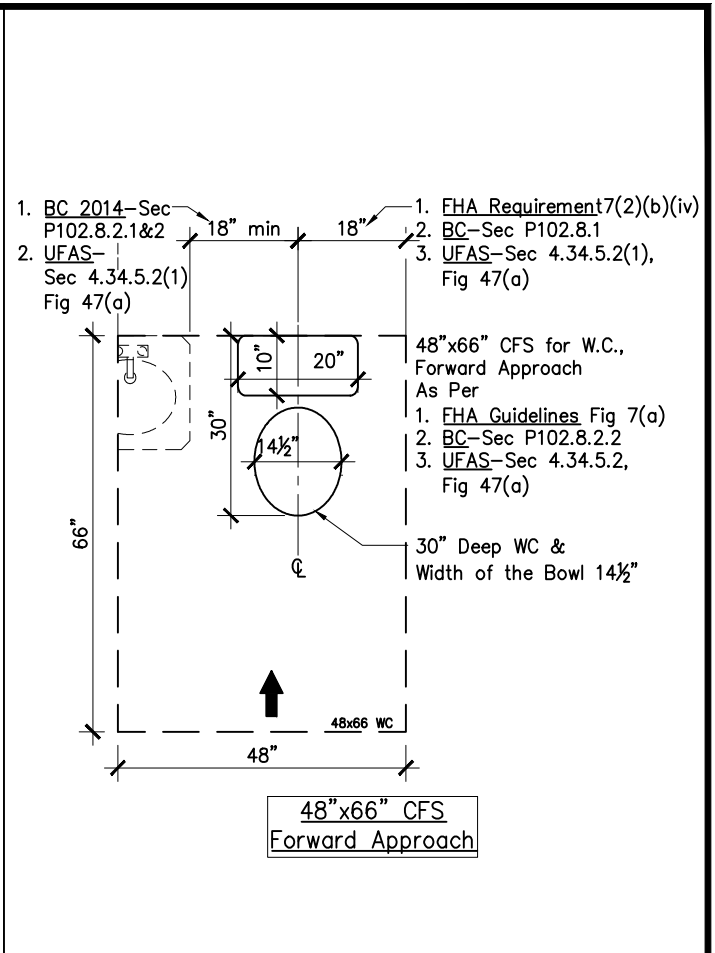
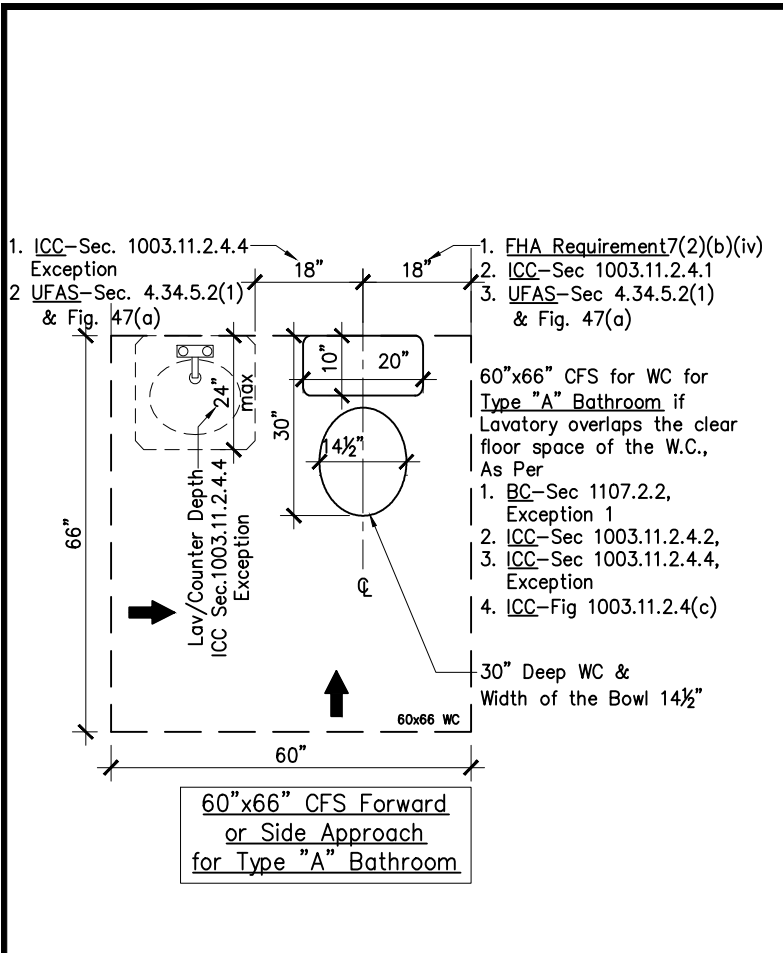
<u>ANSI & UFAS Compliant</u> The Remaining	Shall comply with: 1. <u>ANSI</u> –Sec 4.22 2. <u>UFAS</u> –Sec 4.22
	Use Layouts PT-11 & PT-12

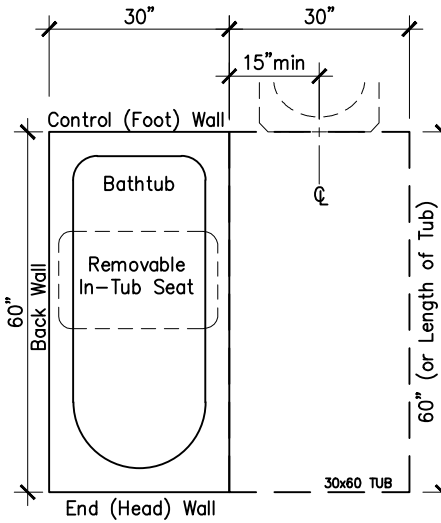
Scenario 2

Cluster of toilets for Public Use:

<u>FHA, BC, UFAS & ADA Compliant</u> First 50% or at least one min	Shall comply with: 1. <u>ANSI</u> –Sec 4.22 2. <u>ICC</u> –Sec 604 & 606 3. <u>UFAS</u> –Sec 4.22 4. <u>ADA</u> –Sec 604 & 606
	Use Layouts PT-1 to PT-6

<u>ANSI & UFAS Compliant</u> The Remaining	Shall comply with: 1. <u>ANSI</u> –Sec 4.22 2. <u>UFAS</u> –Sec 4.22
	Use Layouts PT-11 & PT-12





30"x60"(or length of tub)
CFS for Tub
for Type "A" Bathroom.
As Per

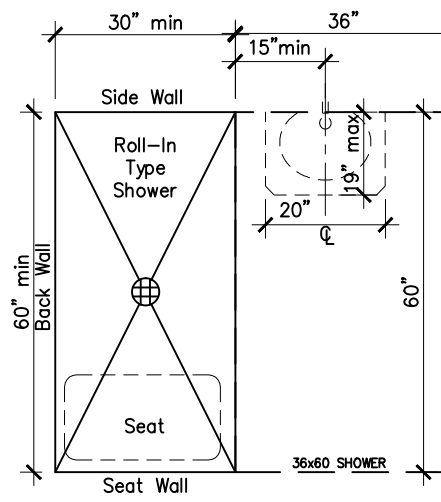
1. BC-Sec 1107.2.2, Exception 1
2. ICC-Sec 1003.11.2.5.1
3. ICC-Fig 1003.11.2.5.1
4. ICC-Sec 607.2

Lavatory shall not overlap
the CFS of the Tub.

Removable In-Tub Seat,
15"min to 16"max in depth
As Per

1. BC-Sec P102.9.1 & ICC-Sec 607.3 & 610
2. UFAS-Sec 4.34.5.4(2), Fig 33(a)

**30"x60" CFS
for Type "A" Bathroom**



36"x60" min CFS for 30"x60"
Roll-in Type Shower
As Per

1. UFAS-Sec 4.34.5.5(1), Fig 35(b)

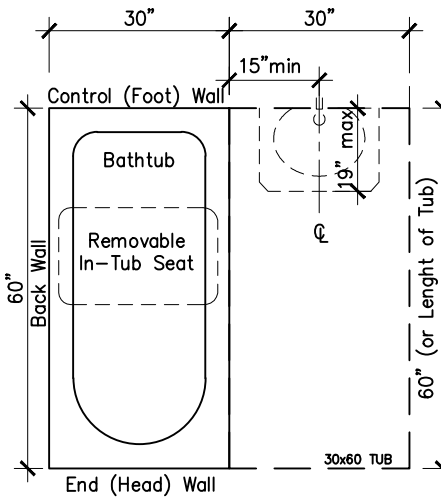
Lav shall be permitted as
shown
as per

1. BC-Sec P102.9.2, ICC-Sec 608.2.2.2, Exception 1 & ICC-Fig 1003.11.2.5.2
2. UFAS-Fig 35(b)

Folding Shower Seat,
As Per

1. BC-Sec P102.9.2.1 & ICC-Sec 608.2.2.3 & 610.3.1

36"x60" CFS



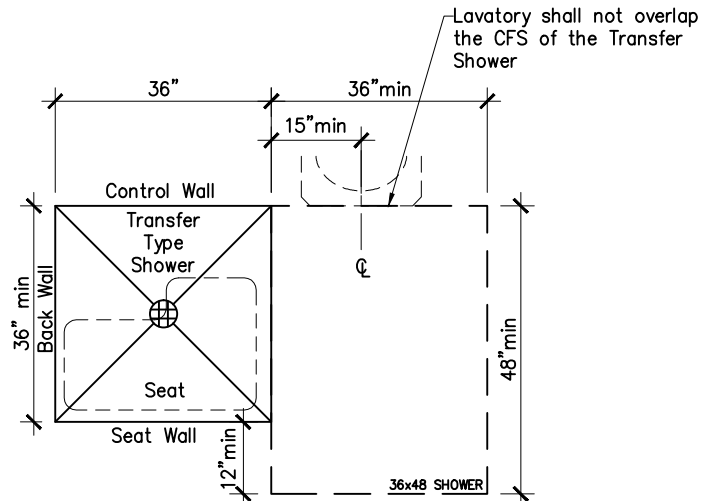
30"x60"(or length of tub)
CFS for Tub
As Per

1. FHA Guidelines Fig 7(b)
2. BC-Sec P102.9.1, & ICC-Sec 607.2
3. UFA-Sec 4.34.5.4(1), Fig 33(a)

Removable In-Tub Seat,
15"min to 16"max in depth
As Per

1. BC-Sec P102.9.1 & ICC-Sec 607.3 & 610.2
2. UFAS-Sec 4.34.5.4(2), Fig 33(a)

30"x60" CFS



Lavatory shall not overlap
the CFS of the Transfer
Shower

Transfer Shower Seat,
As Per

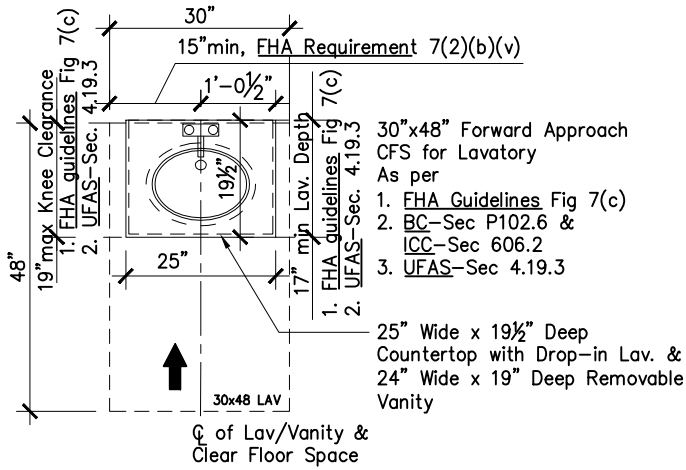
1. BC 2014-Sec P102.9.2.1 & ICC-Sec 607.3 & 610.3.2
2. UFAS-Sec 4.34.5.4(2), Fig 35(a) & 36

36"x48" min CFS for
36"x36" Transfer Shower
As Per

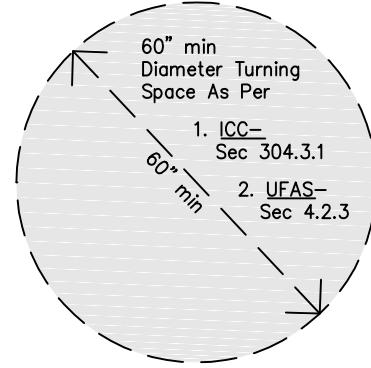
1. BC 2014-Sec P102.9.2 & ICC-Sec 608.2.1
2. UFAS-Sec 4.34.5.5, Fig 35(a)

36"x48" CFS

Countertop with Drop-in Lavatory

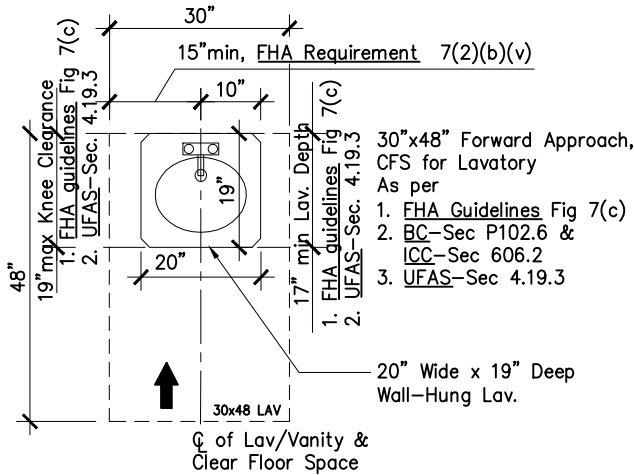


30"x48" CFS Forward Approach

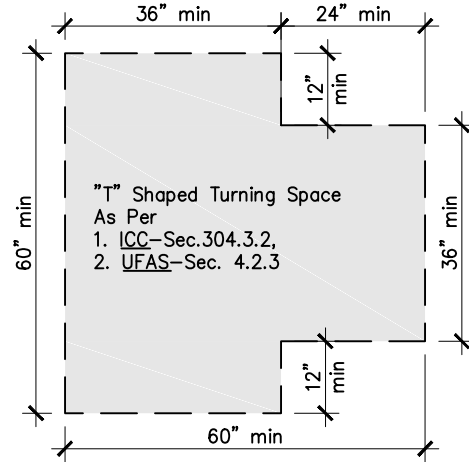


60" Dia Space for 180° Turn

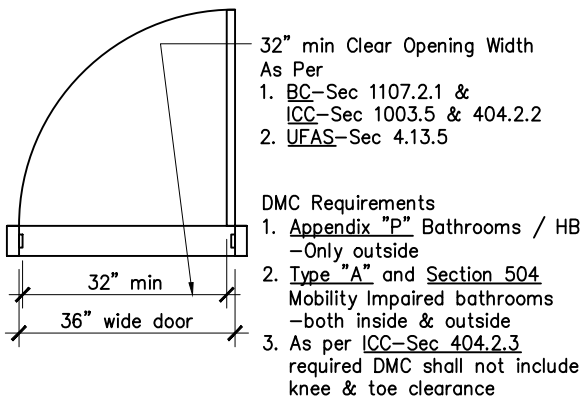
Wall-hung Lavatory



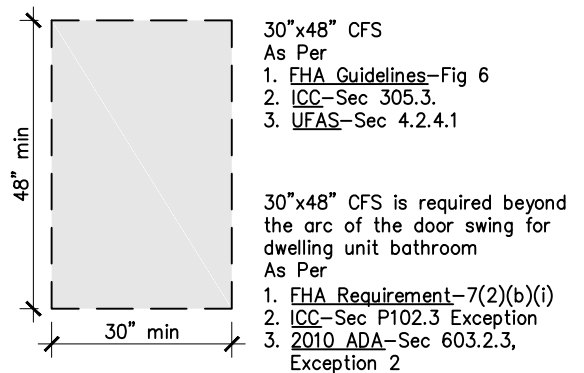
30"x48" CFS Forward Approach



"T" Shaped Space for 180° Turn

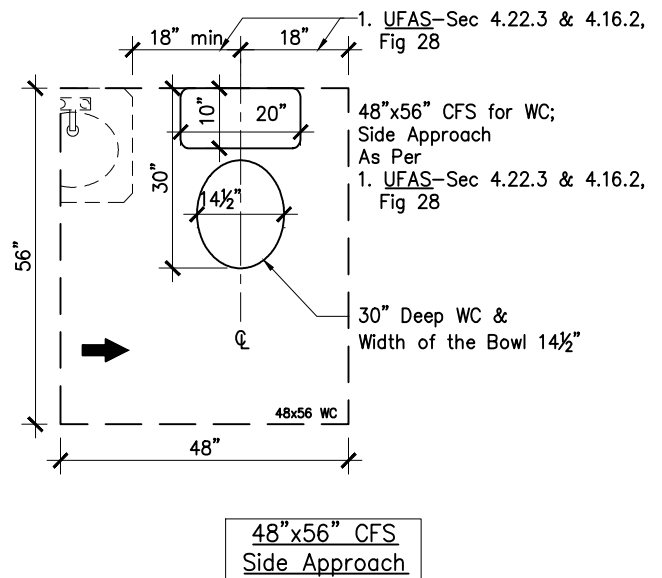
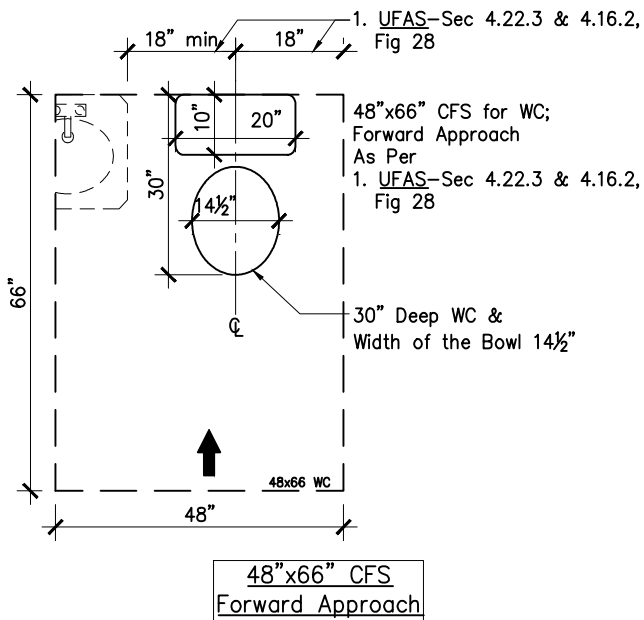
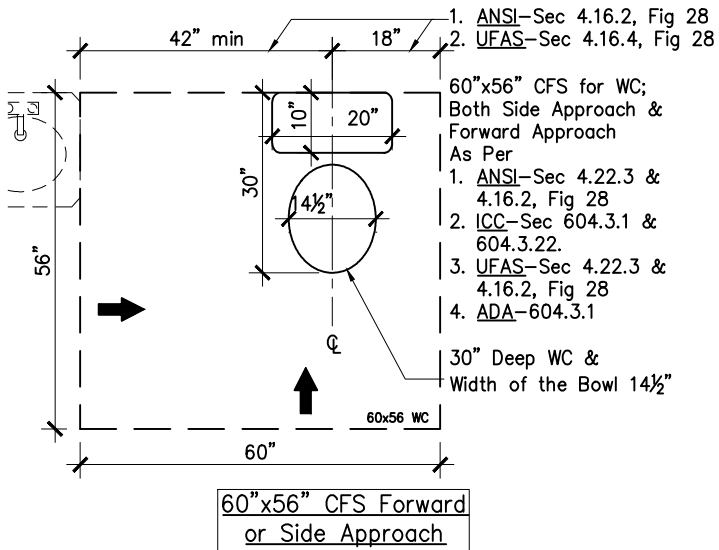


Clear Opening Width at Bathroom Door

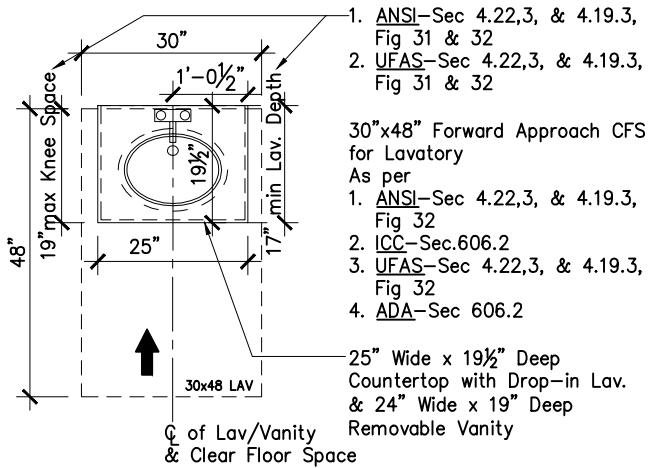


30"x48" CFS

Reference Sheet for Maneuvering Clearances for Wall-hung Lavatory & Countertop with Drop-in Lavatory within the Dwelling Unit Bathroom; 180 degree Turning Spaces & Clear Floor Space for Wheelchair; & Minimum Clear Opening at Bathroom Door



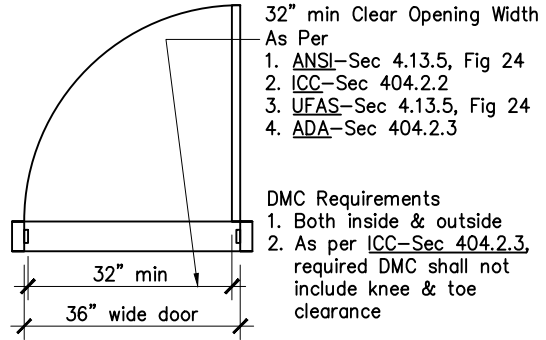
Countertop with Drop-in Lavatory



1. ANSI—Sec 4.22,3, & 4.19.3, Fig 31 & 32
 2. UFAS—Sec 4.22,3, & 4.19.3, Fig 31 & 32
- 30"x48" Forward Approach CFS for Lavatory
As per
1. ANSI—Sec 4.22,3, & 4.19.3, Fig 32
 2. ICC—Sec.606.2
 3. UFAS—Sec 4.22,3, & 4.19.3, Fig 32
 4. ADA—Sec 606.2

25" Wide x 19½" Deep Countertop with Drop-in Lav. & 24" Wide x 19" Deep Removable Vanity

30"x48" CFS Forward Approach



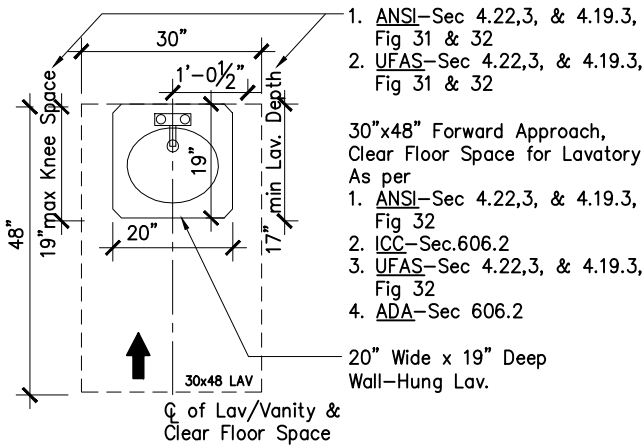
- 32" min Clear Opening Width
As Per
1. ANSI—Sec 4.13.5, Fig 24
 2. ICC—Sec 404.2.2
 3. UFAS—Sec 4.13.5, Fig 24
 4. ADA—Sec 404.2.3

DMC Requirements

1. Both inside & outside
2. As per ICC—Sec 404.2.3, required DMC shall not include knee & toe clearance

Clear Opening Width at Toilet Room Door

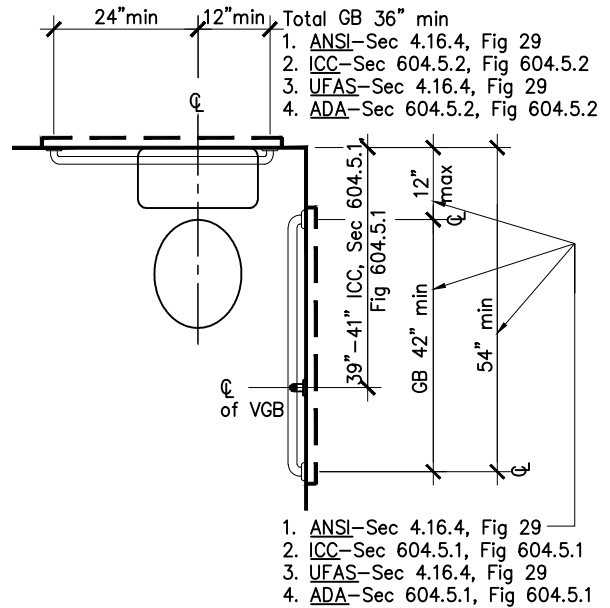
Wall-hung Lavatory



1. ANSI—Sec 4.22,3, & 4.19.3, Fig 31 & 32
 2. UFAS—Sec 4.22,3, & 4.19.3, Fig 31 & 32
- 30"x48" Forward Approach, Clear Floor Space for Lavatory
As per
1. ANSI—Sec 4.22,3, & 4.19.3, Fig 32
 2. ICC—Sec.606.2
 3. UFAS—Sec 4.22,3, & 4.19.3, Fig 32
 4. ADA—Sec 606.2

20" Wide x 19" Deep Wall-Hung Lav.

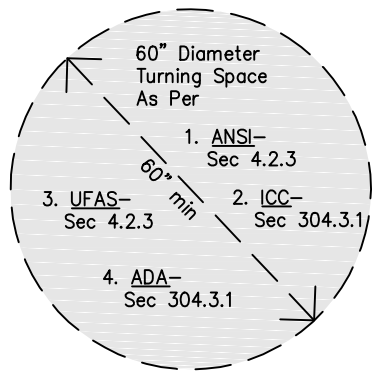
30"x48" CFS Forward Approach



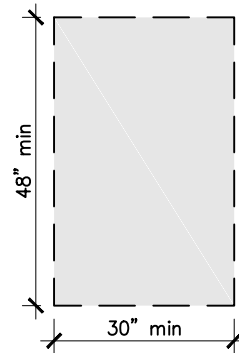
- Total GB 36" min
1. ANSI—Sec 4.16.4, Fig 29
 2. ICC—Sec 604.5.2, Fig 604.5.2
 3. UFAS—Sec 4.16.4, Fig 29
 4. ADA—Sec 604.5.2, Fig 604.5.2

1. ANSI—Sec 4.16.4, Fig 29
2. ICC—Sec 604.5.1, Fig 604.5.1
3. UFAS—Sec 4.16.4, Fig 29
4. ADA—Sec 604.5.1, Fig 604.5.1

Horizontal & Vertical Grab Bar Placement

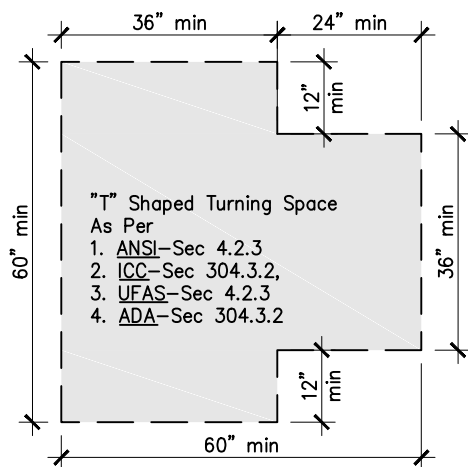


60" Dia Space for 180° Turn

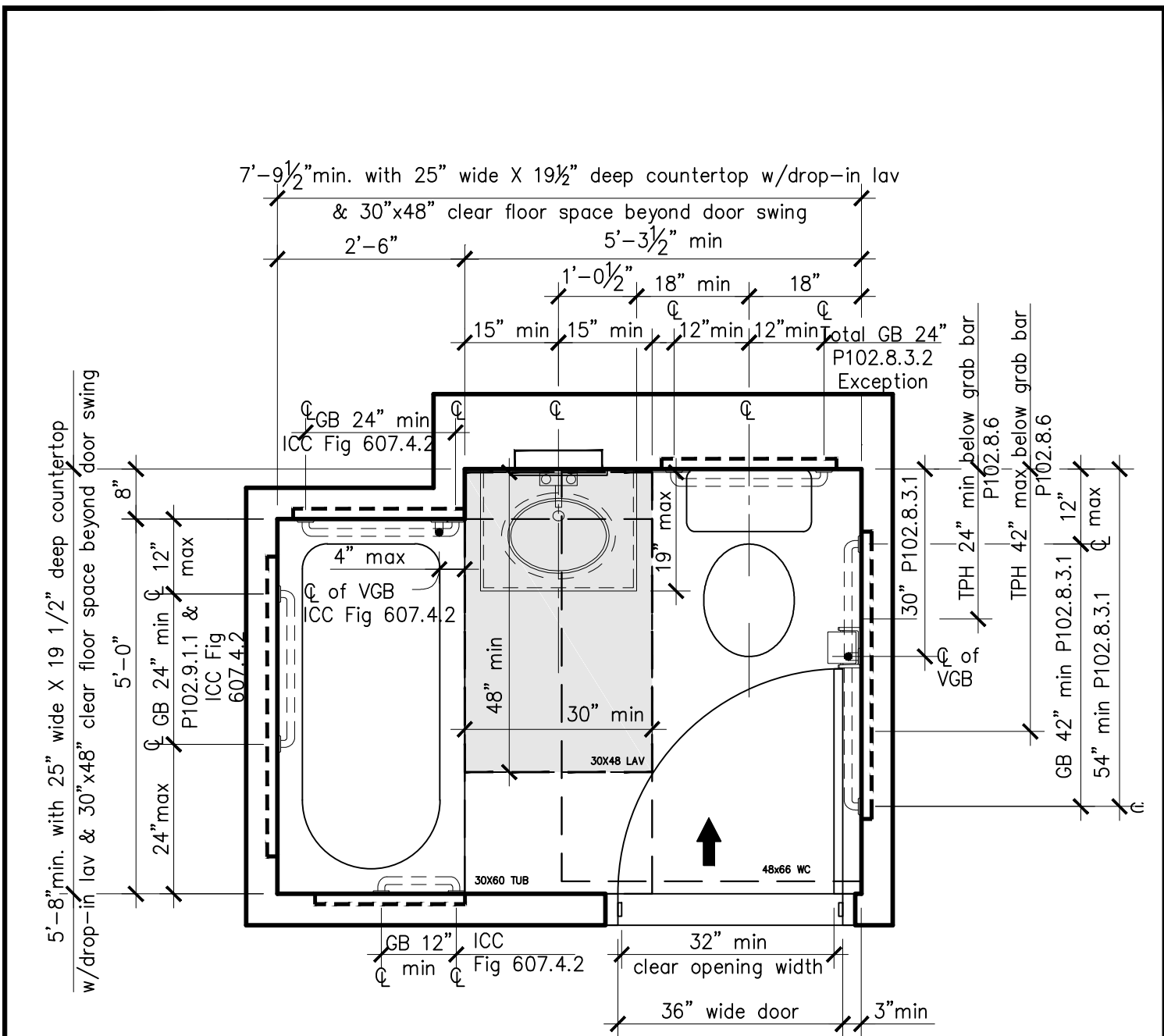


30"x48" clear floor space
As Per
1. FHA Guidelines Fig 6
2. ICC-Sec 305.3.
3. UFAS-Sec 4.2.4.1
4. ADA-Sec 305.3

30"x48" CFS



"T" Shaped Space for 180° Turn

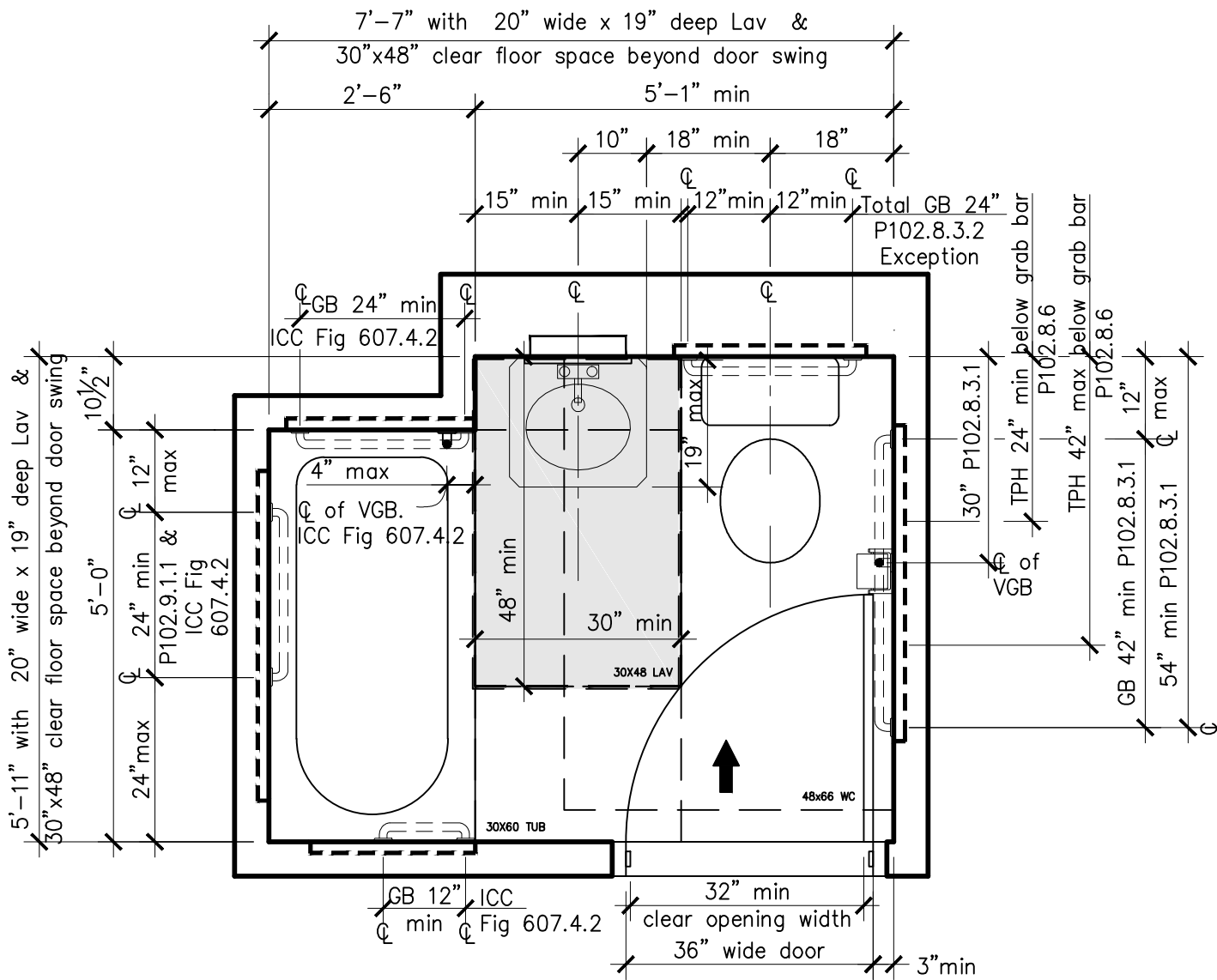


7'-9 1/2" x 5'-8"

- door maneuvering clearance is required only outside of the bathroom
- When TPH is surface mounted, it shall be installed so as not to limit full 90 degree door swing.

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CFS Beyond In-Swing Door (Front Door, Opposite to WC);
 Maneuvering Clearances at all Fixtures
 & Grab Bar Locations;

B-1a

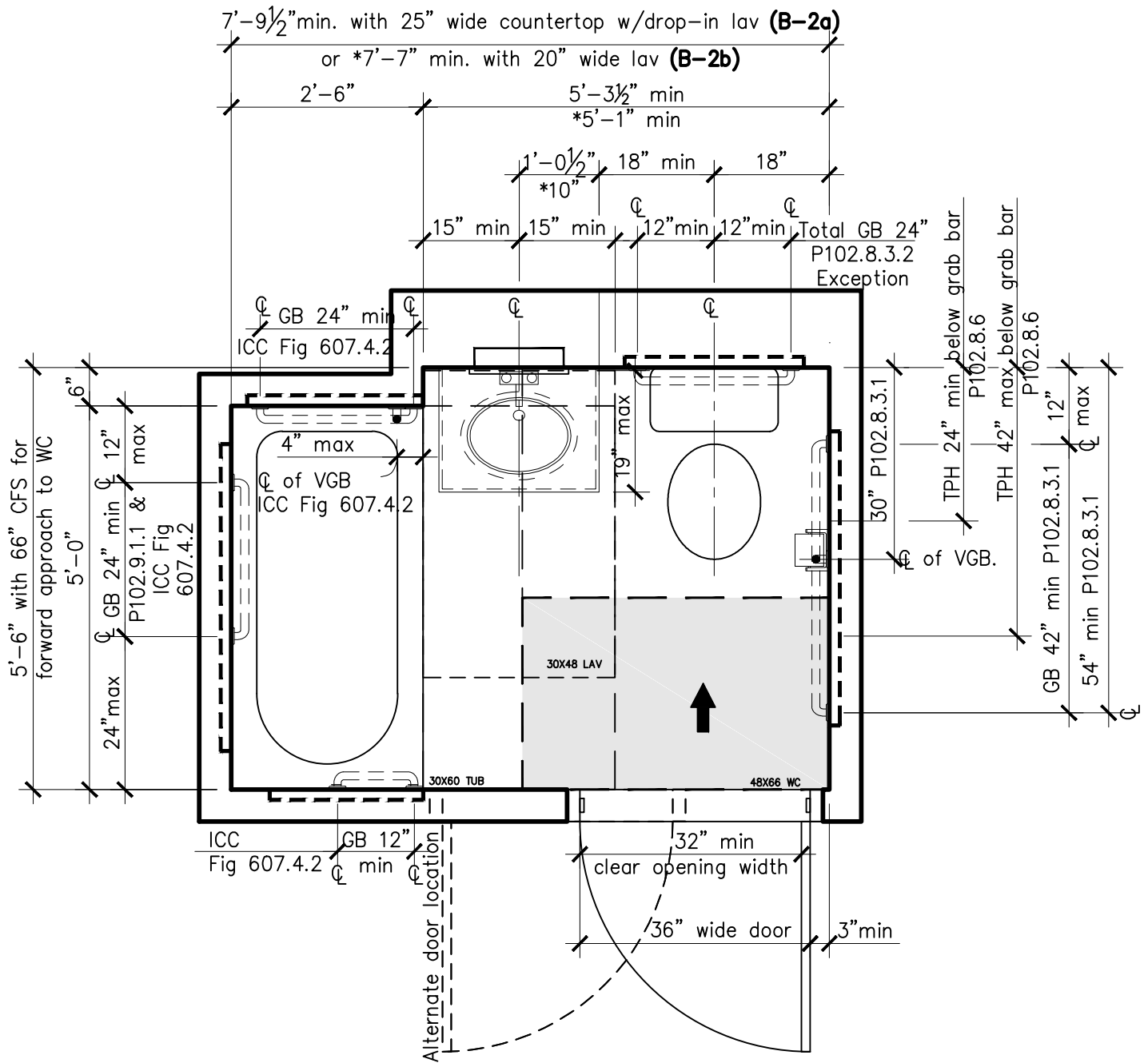


7'-7" x 5'-11"

- door maneuvering clearance is required only outside of the bathroom
- When TPH is surface mounted, it shall be installed so as not to limit full 90 degree door swing.
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception.

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CFS Beyond In-Swing Door (Front Door, Opposite to WC);
 Maneuvering Clearances at all Fixtures
 & Grab Bar Locations;

B-1b



$$B-2a = 7'-9\frac{1}{2}" \times 5'-6"$$

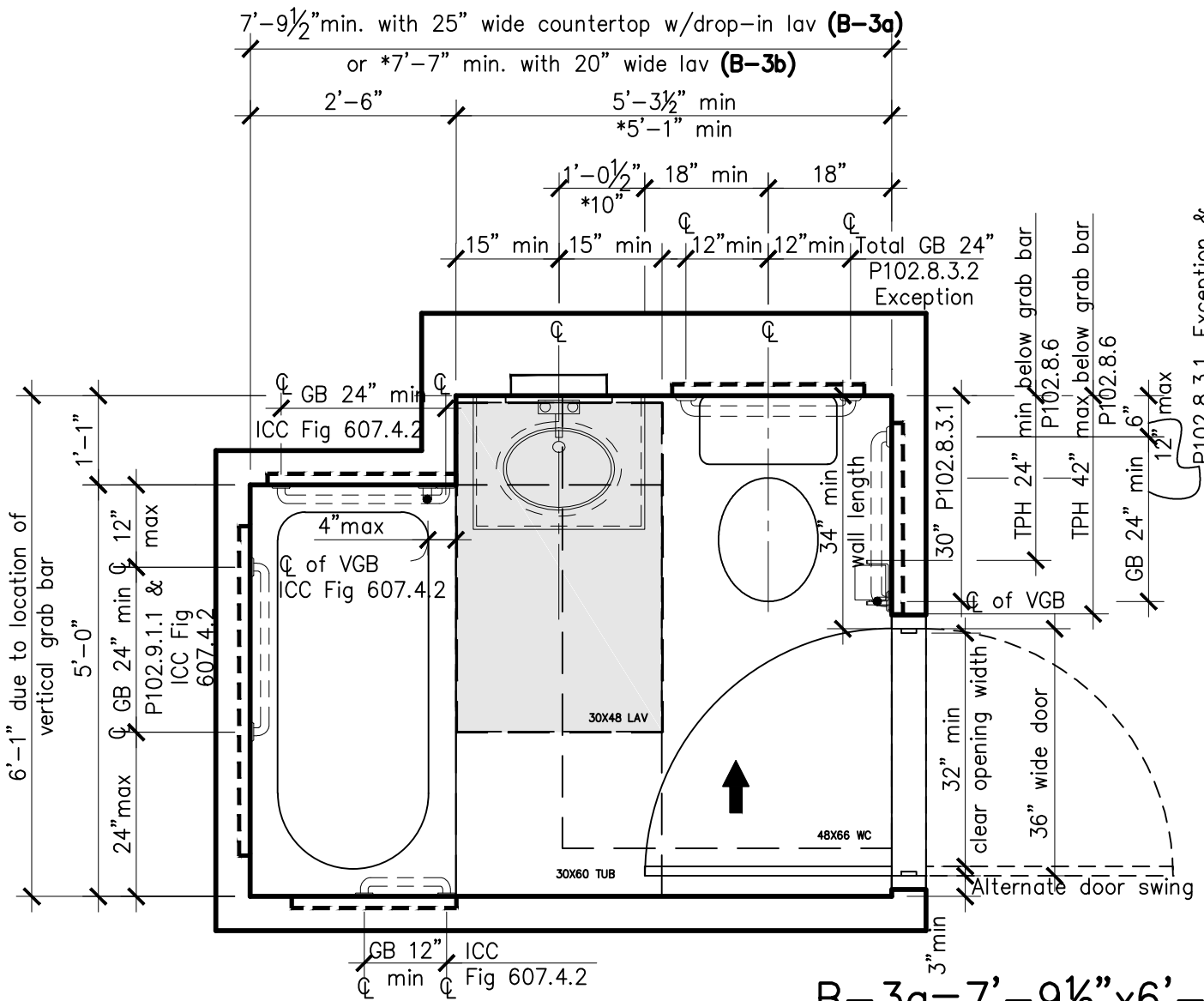
$$*B-2b = 7'-7" \times 5'-6"$$

- door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Appendix-"P"
 with Maneuvering Clearances at all Fixtures
 (Front Door, Out-Swing, Opposite to WC or Lav);
 & Grab Bar Locations

B-2a

B-2b



P102.8.3.1, Exception & FHA Guidelines-Fig. 3

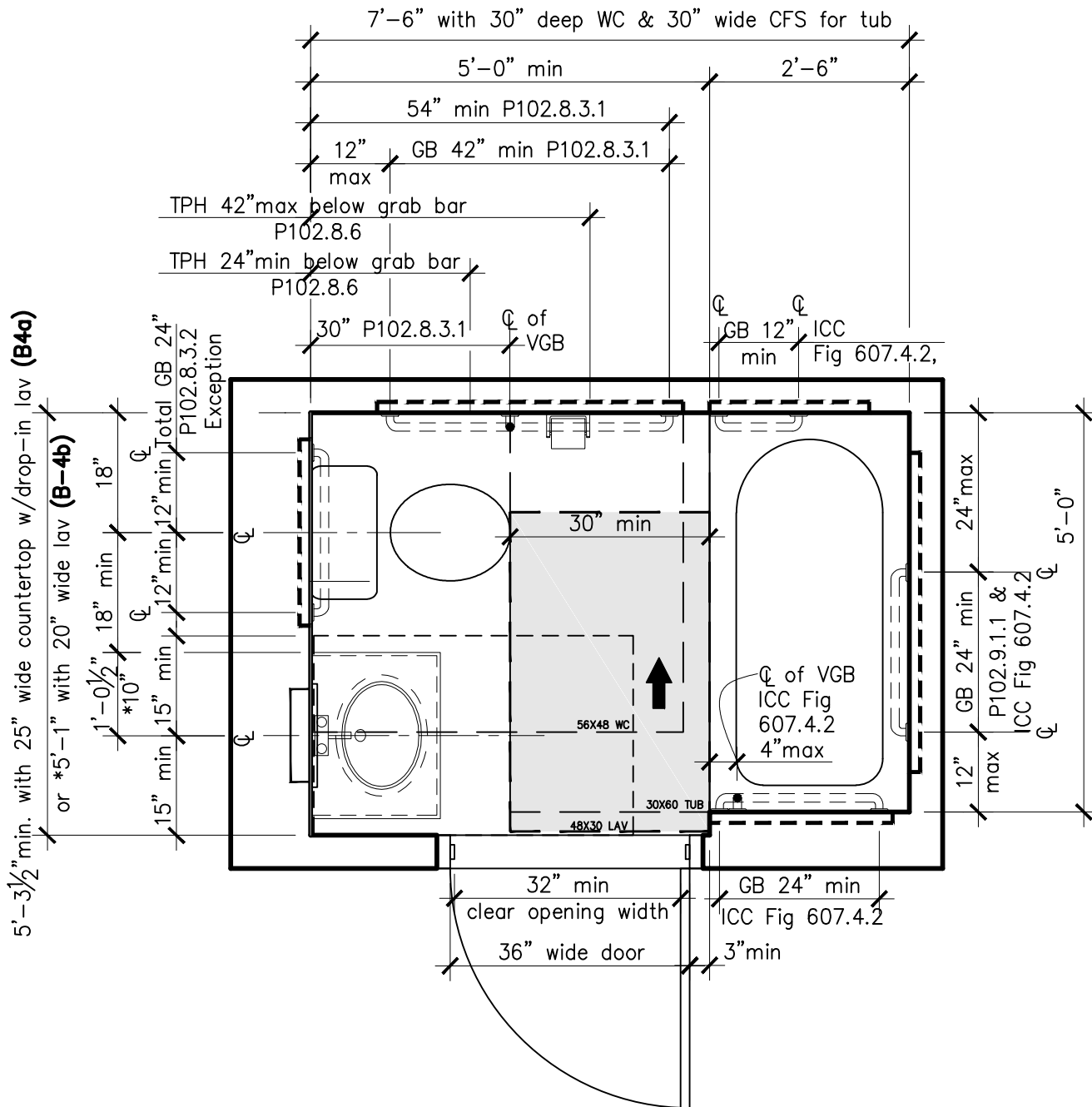
B-3a = 7'-9½" x 6'-1"

***B-3b = 7'-7" x 6'-1"**

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CSF Beyond In-Swing or Out-Swing Door
 (Side Door, Adjacent to WC); Maneuvering Clearances at all Fixtures
 & Grab Bar Locations

B-3a
 B-3b



$$\underline{B-4a = 7'-6" \times 5'-3\frac{1}{2}"}$$

$$\underline{*B-4b = 7'-6" \times 5'-1"}$$

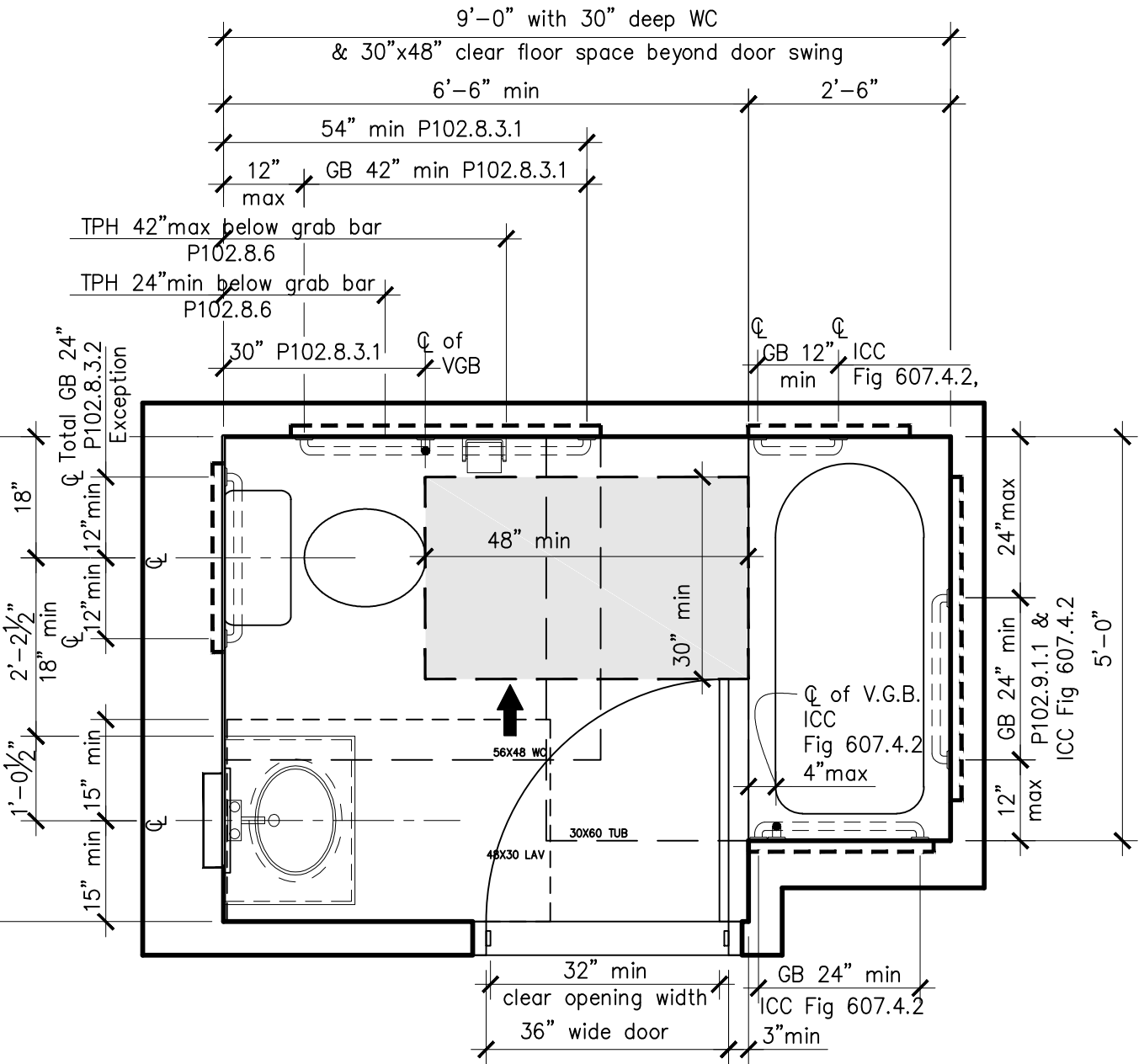
• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Appendix-"P"
 with Maneuvering Clearances at all Fixtures
 & Grab Bar Locations
 (Front Center, Out-Swing, Adjacent to Lav);

B-4a

B-4b

6'-0" with 30" CFS beyond 36" wide door swing & Surface Mounted TPH (B-5a)
 or *5'-6" with 30" CFS beyond 36" wide door swing & Recessed TPH (B-5b)



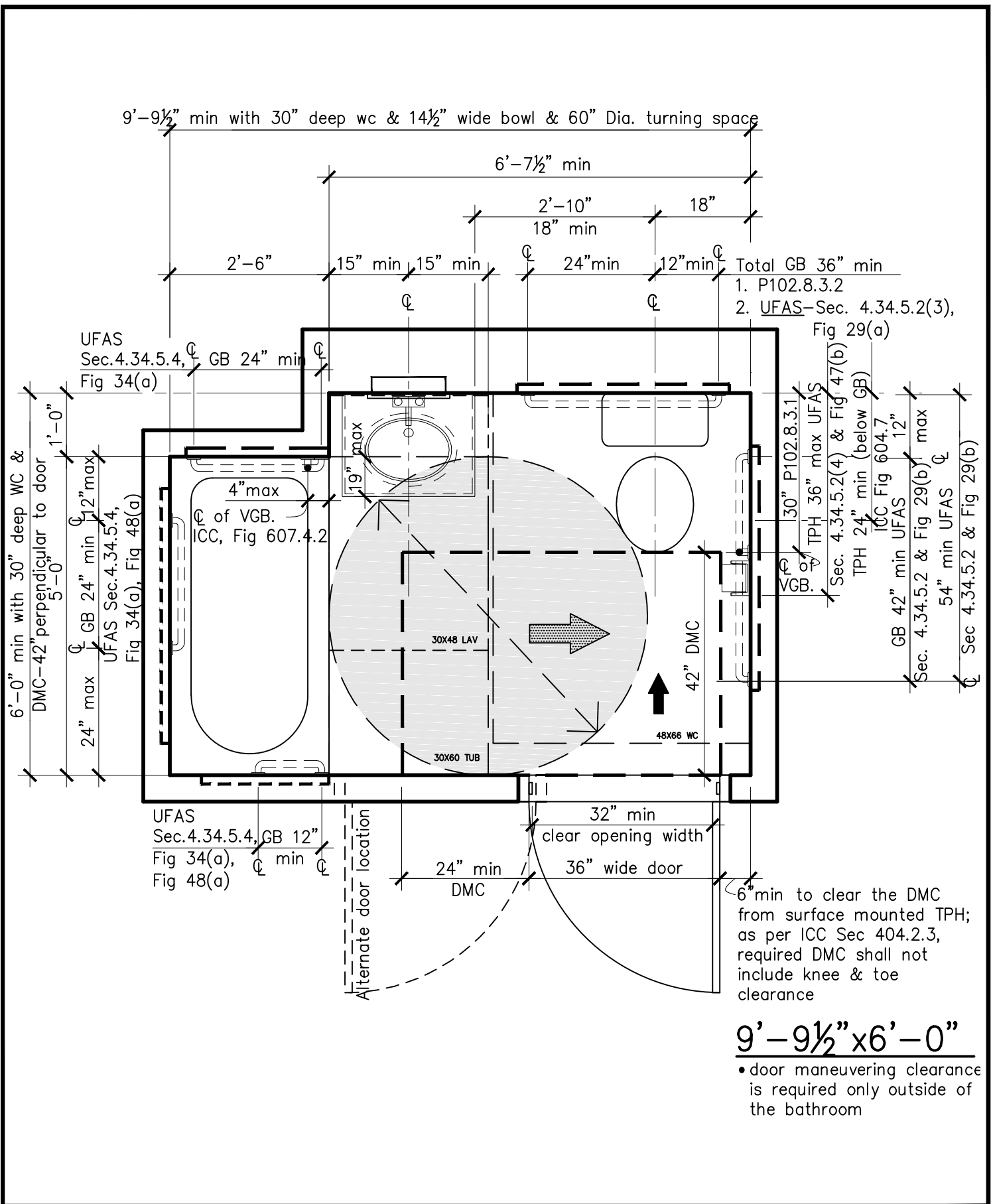
$$\underline{B-5a=9'-0" \times 6'-0"}$$

$$\underline{*B-5b=9'-0" \times 5'-6"}$$

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CSF Beyond In-Swing Door (Side Door, Adjacent to WC);
 Maneuvering Clearances at all Fixtures
 & Grab Bar Locations

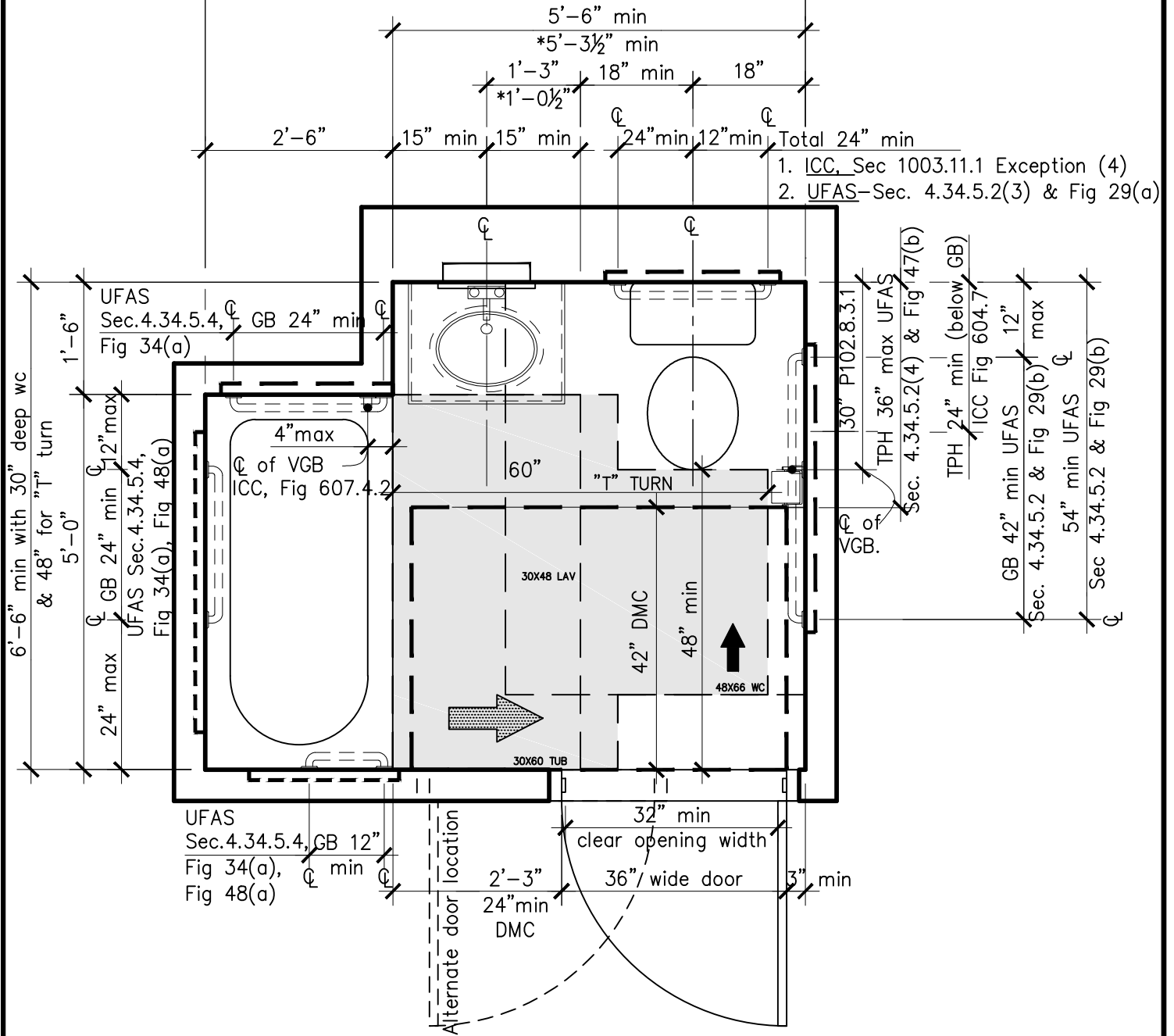
B-5a
 B-5b



Min. Bathroom Size as per UFAS & BC-Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to W.C. or Lav); & Grab Bar Locations

B-11b

8'-0" min with 60" for "T" turn & surface mounted TPH
 upto 30" wide countertop w/drop-in lav. can be used (25" shown) **(B-12a)**
 or *7'-9½" min with 60" for "T" turn & Recessed TPH
 (with 25" wide countertop w/drop-in lav.) **(B-12b)**



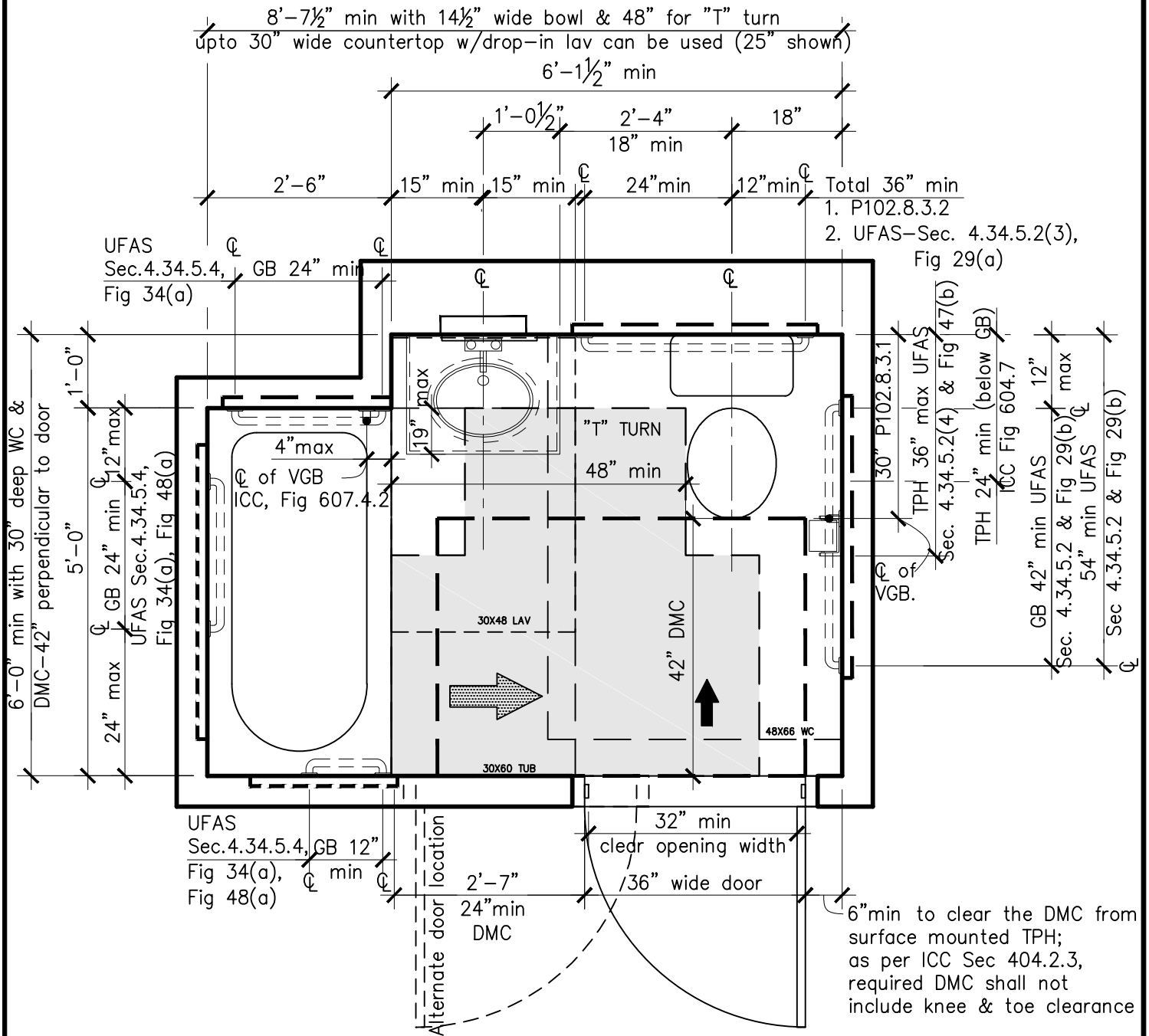
1. ICC, Sec 1003.11.1 Exception (4)
2. UFAS—Sec. 4.34.5.2(3) & Fig 29(a)

B-12a=8'-0" x 6'-6"
***B-12b=7'-9½" x 6'-6"**

• door maneuvering clearance is required only outside of

Min. Bathroom Size as per UFAS & BC-Appendix "P"
 with "T" Shaped Turning Space; Maneuvering Clearances at all
 Fixtures & Door (Front Door, Opposite to WC or Lav);
 & Grab Bar Locations

B-12a
 B-12b

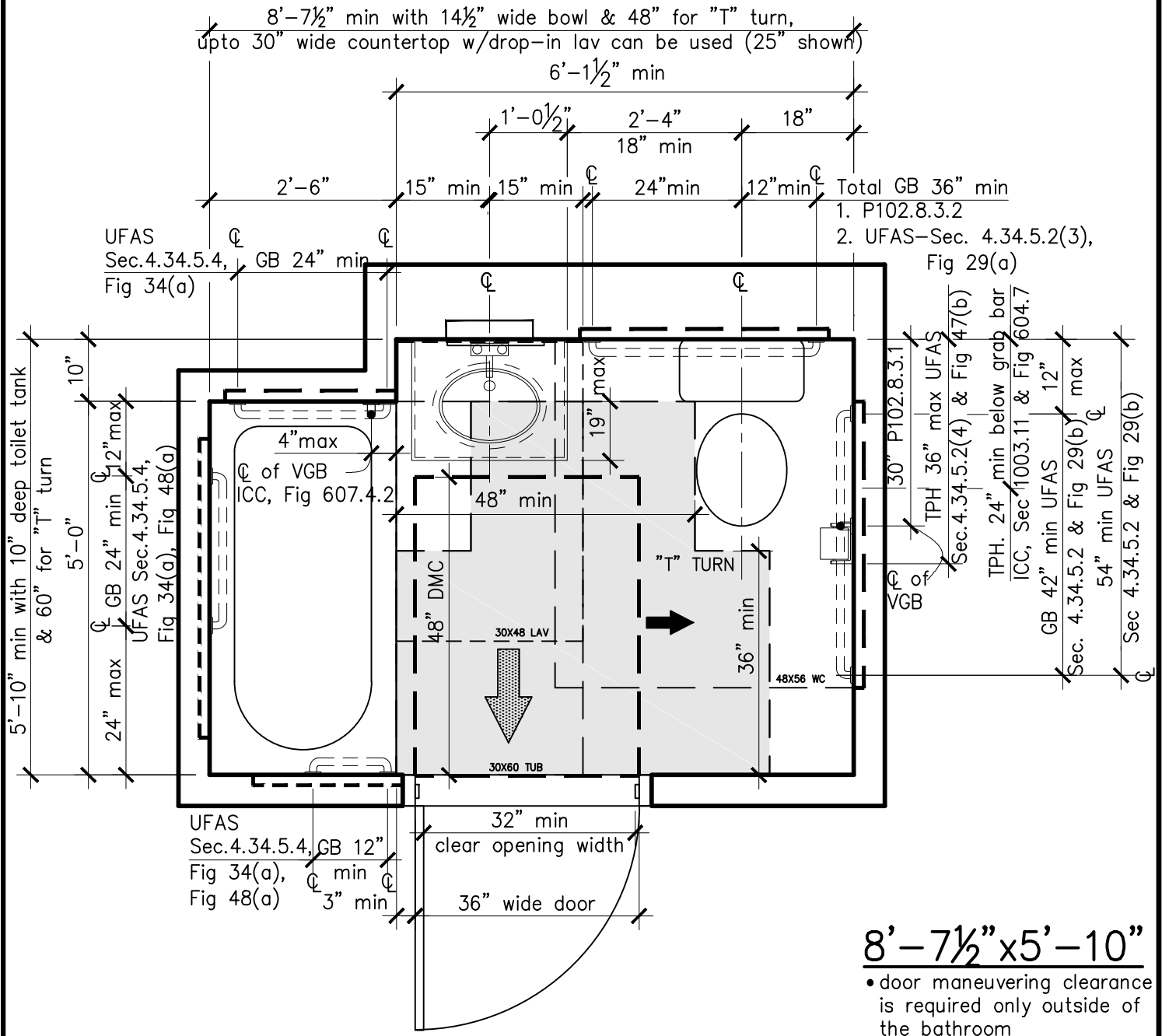


8'-7½" x 6'-0"

- door maneuvering clearance is required only outside of the bathroom

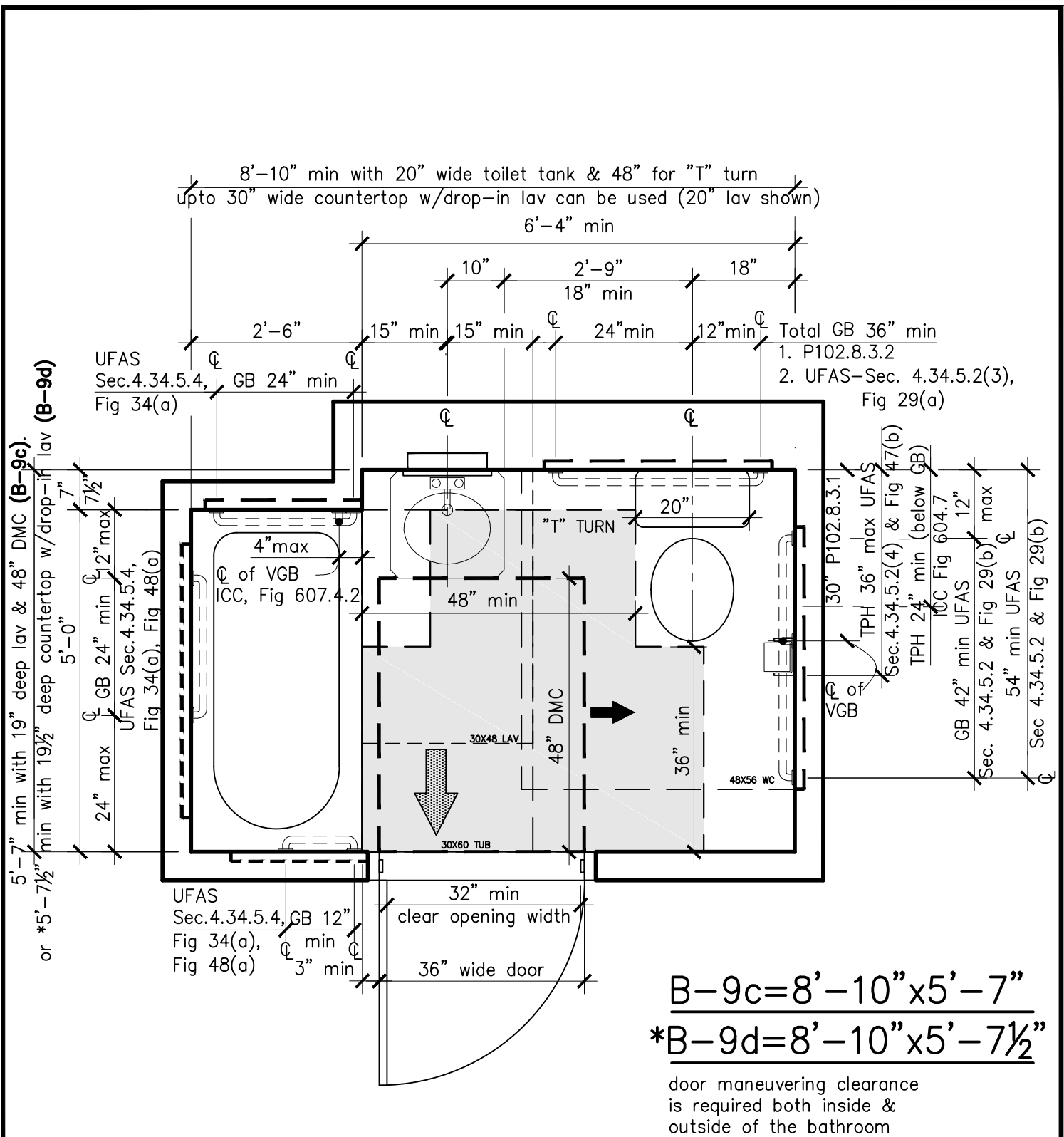
Min. Bathroom Size as per UFAS & BC-Appendix "P"
with "T" Shaped Turning Space; Maneuvering Clearances at all
Fixtures & Door (Front Door, Opposite to WC or Lav);
& Grab Bar Locations

B-13a



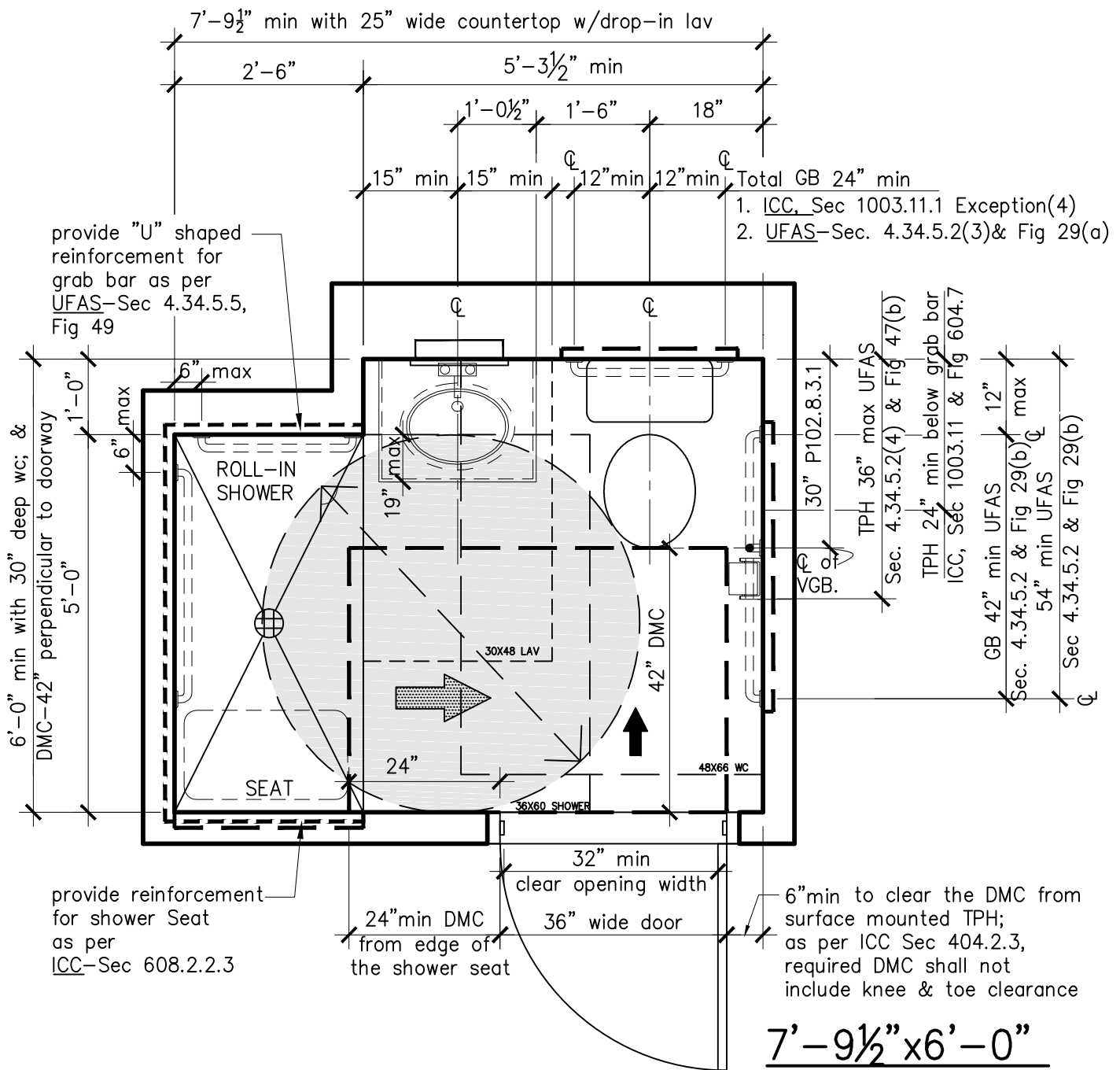
Min. Bathroom Size as per UFAS & BC-Appendix "P" with "T" Shaped Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to Lav); & Grab Bar Locations

B-13b



Min. Bathroom Size as per UFAS & BC-Appendix "P"
 with "T" Shaped Turning Space; Maneuvering Clearances at all
 Fixtures & Door (Front Door, Opposite to Lav);
 & Grab Bar Locations

B-13c
 B-13d



provide "U" shaped reinforcement for grab bar as per UFAS—Sec 4.34.5.5, Fig 49

6'-0" min with 30" deep wc; & DMC-42" perpendicular to doorway 5'-0"

provide reinforcement for shower Seat as per ICC—Sec 608.2.2.3

24" min DMC from edge of the shower seat

- Total GB 24" min
1. ICC, Sec 1003.11.1 Exception(4)
 2. UFAS—Sec. 4.34.5.2(3) & Fig 29(a)

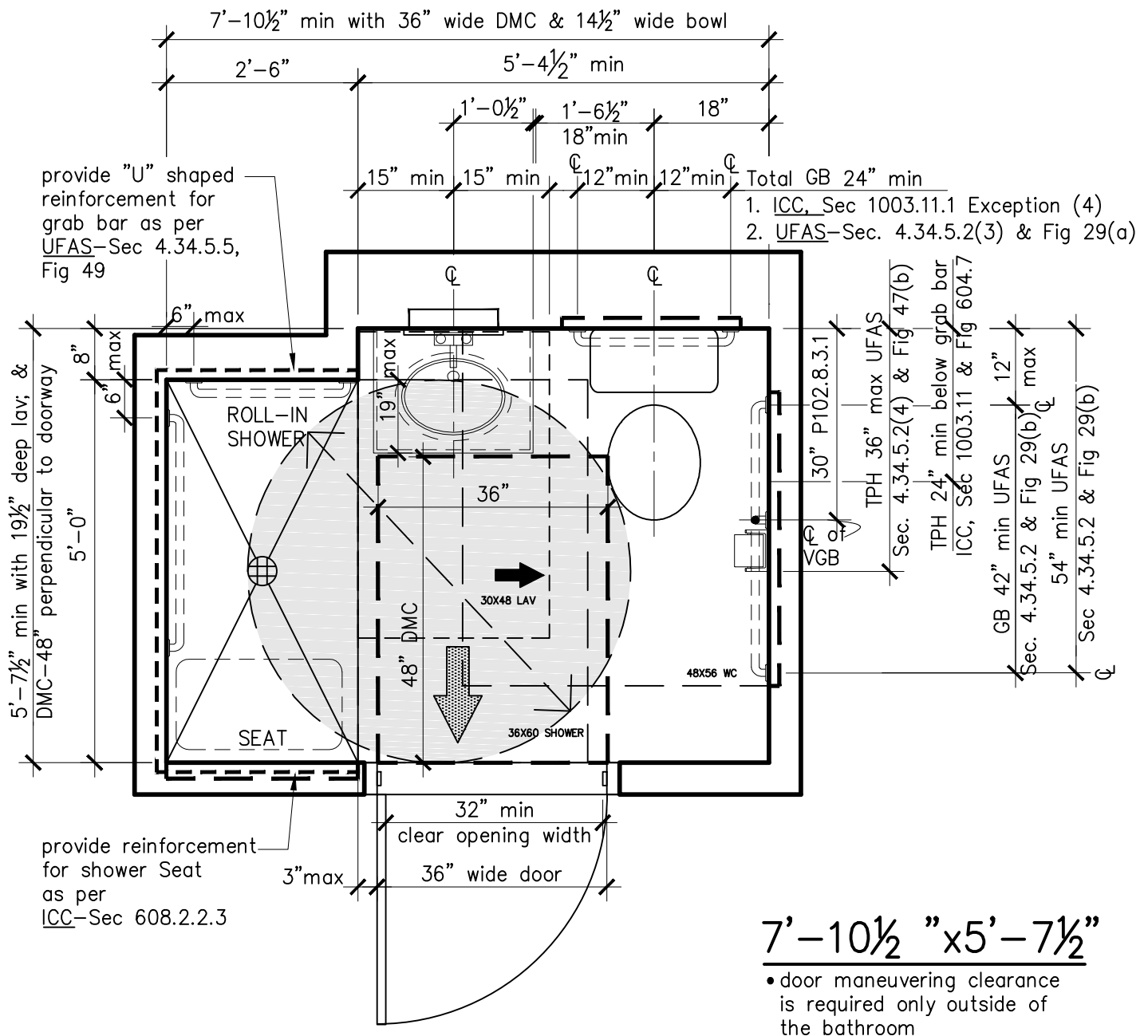
- 30" P102.8.3.1
- TPH 36" max UFAS
- Sec. 4.34.5.2(4) & Fig 47(b)
- TPH 24" min below grab bar
- ICC, Sec 1003.11 & Fig 604.7
- GB 42" min UFAS
- Sec. 4.34.5.2 & Fig 29(b)
- 54" min UFAS
- Sec 4.34.5.2 & Fig 29(b)

7'-9 1/2" x 6'-0"

- door maneuvering clearance is required only outside of the bathroom
- Roll-in shower shall not have more than 1:50 pitch (2% max.) as the shower area is used for 60" Dia turning space & DMC

Min. Bathroom Size with Roll-in Type Shower as per UFAS & BC—Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to WC); & Grab Bar Locations

B-14a

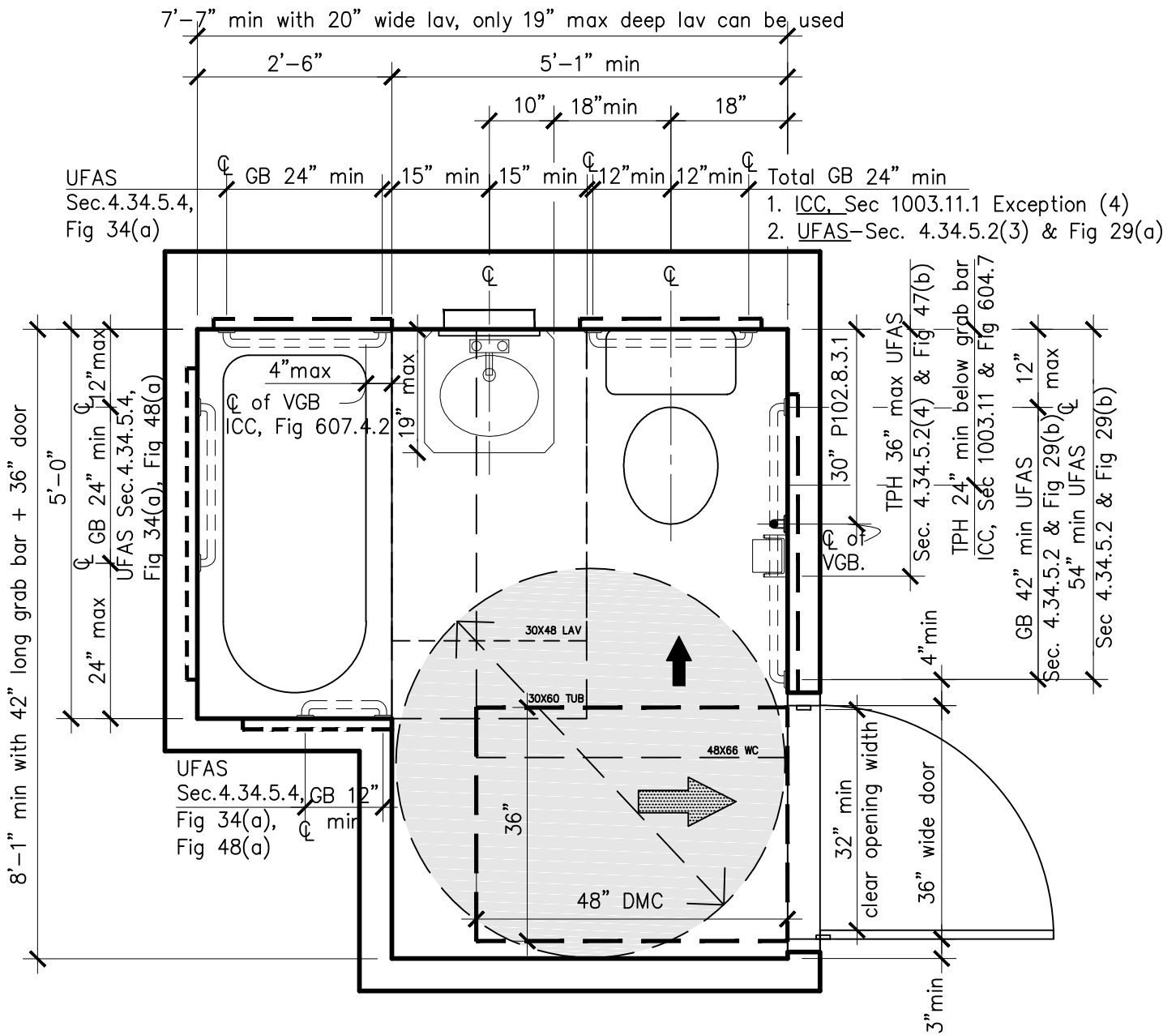


7'-10½" x 5'-7½"

- door maneuvering clearance is required only outside of the bathroom
- Roll-in shower shall not have more than 1:50 pitch (2% max.) as the shower area is used for 60" Dia turning space & DMC

Min. Bathroom Size with Roll-in Type Shower as per UFAS & BC-Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to Lav); & Grab Bar Locations

B-14b

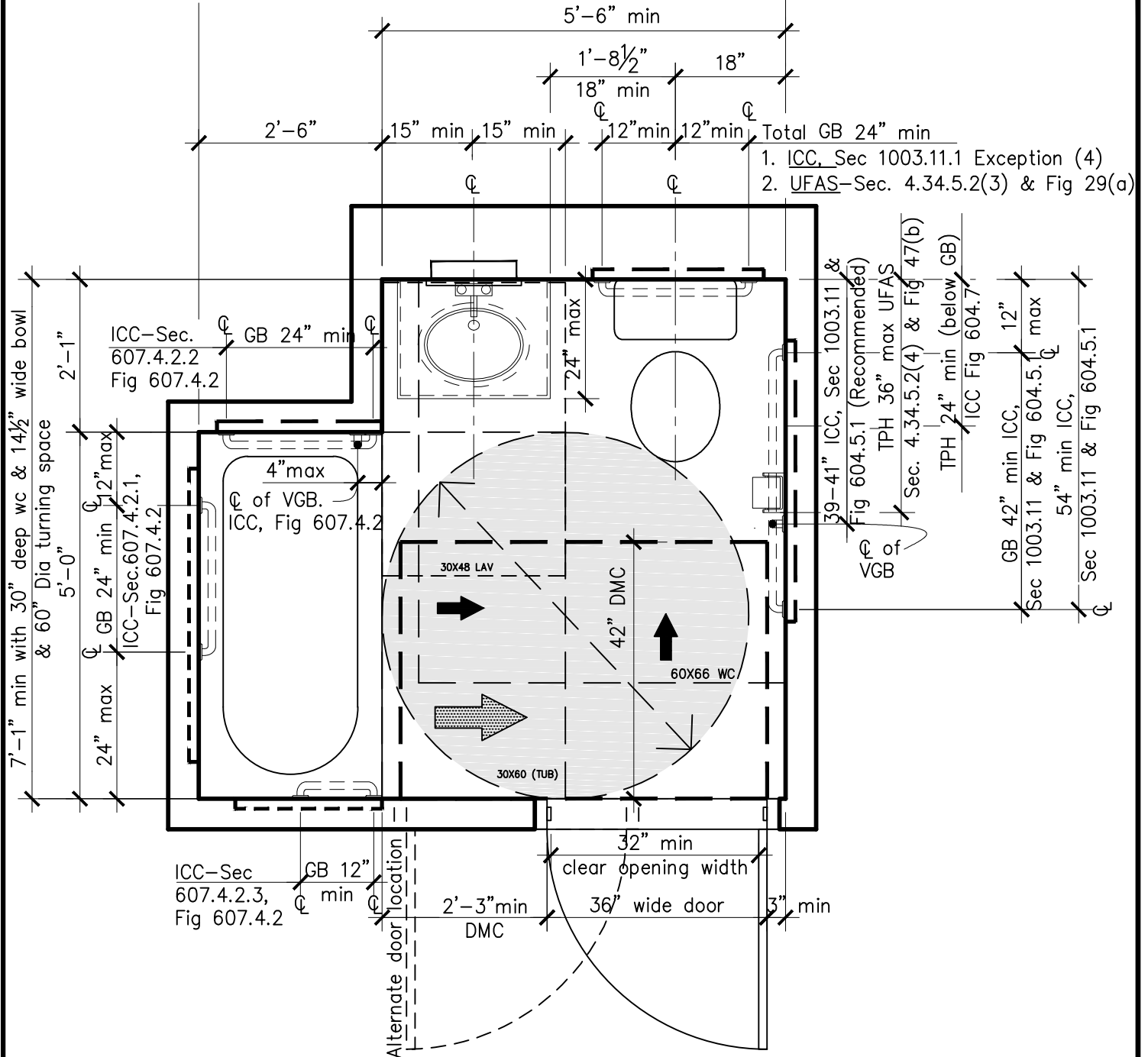


7'-7" x 8'-1"

- door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per UFAS & BC-Appendix "P"
with 60" Dia Turning Space; Maneuvering Clearances at all
Fixtures & Door (Side Door—Corner, Adjacent to WC);
& Grab Bar Locations

8'-0" min with 30" deep wc & 14½" wide bowl & 60" Dia turning space
upto 30" wide countertop w/drop-in lav can be used (25" shown)



8'-0" x 7'-1"

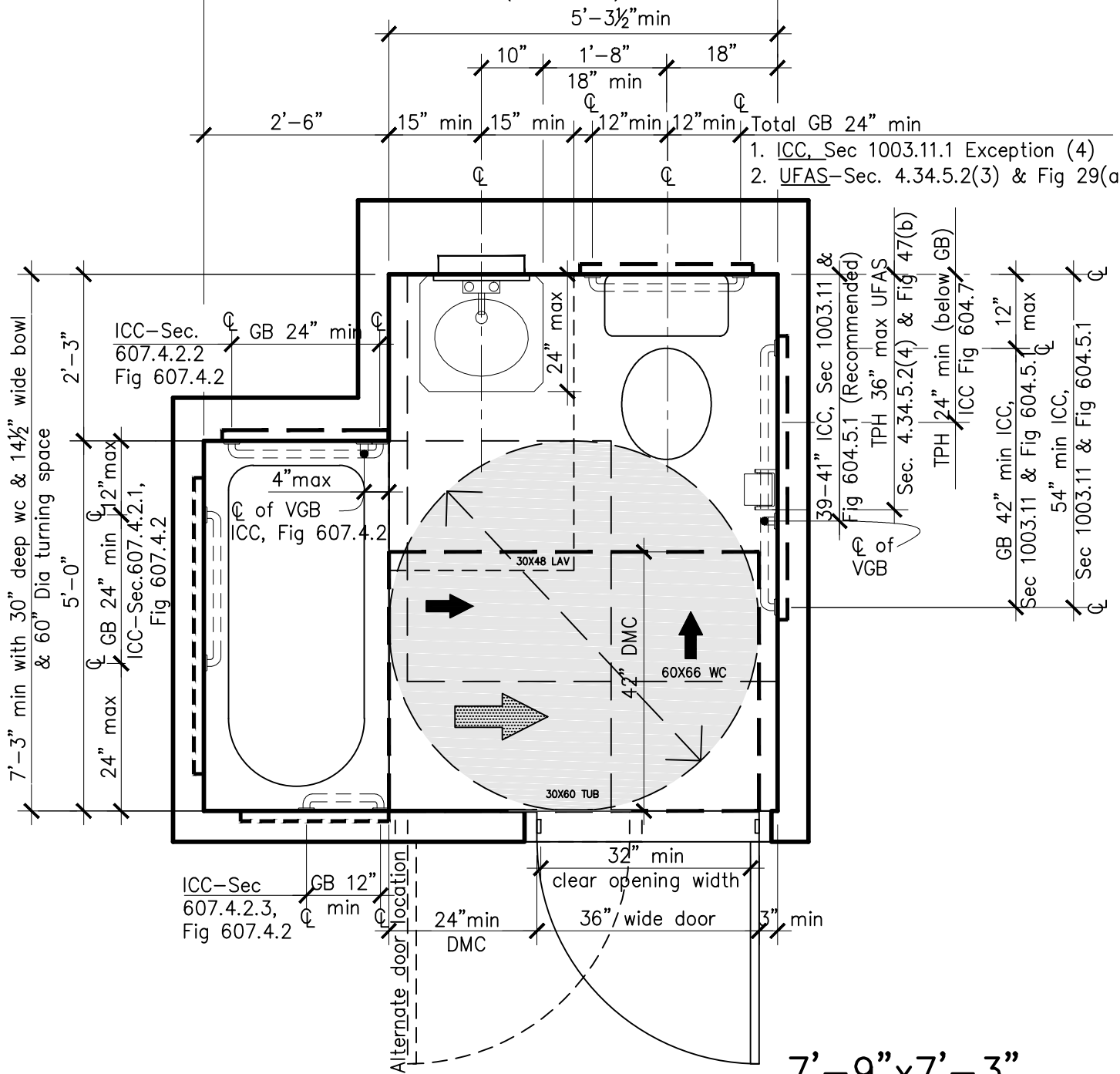
- door maneuvering clearance is required only outside of the bathroom

- Lav cannot overlap the required CFS of the tub

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
i.e. Type "A" of ICC-Sec 1003.11; & UFAS with 60" Dia Turning Space;
Maneuvering Clearances at all Fixtures & Door
(Front Door, Opposite to WC or Lav); & Grab Bar Locations

B-21a

7'-9½" min with 30" deep WC & 14½" wide bowl;
 & DMC-24" parallel & 42" perpendicular to door,
 upto 25" wide lav or 25" wide countertop w/drop-in lav
 can be used (20" shown)



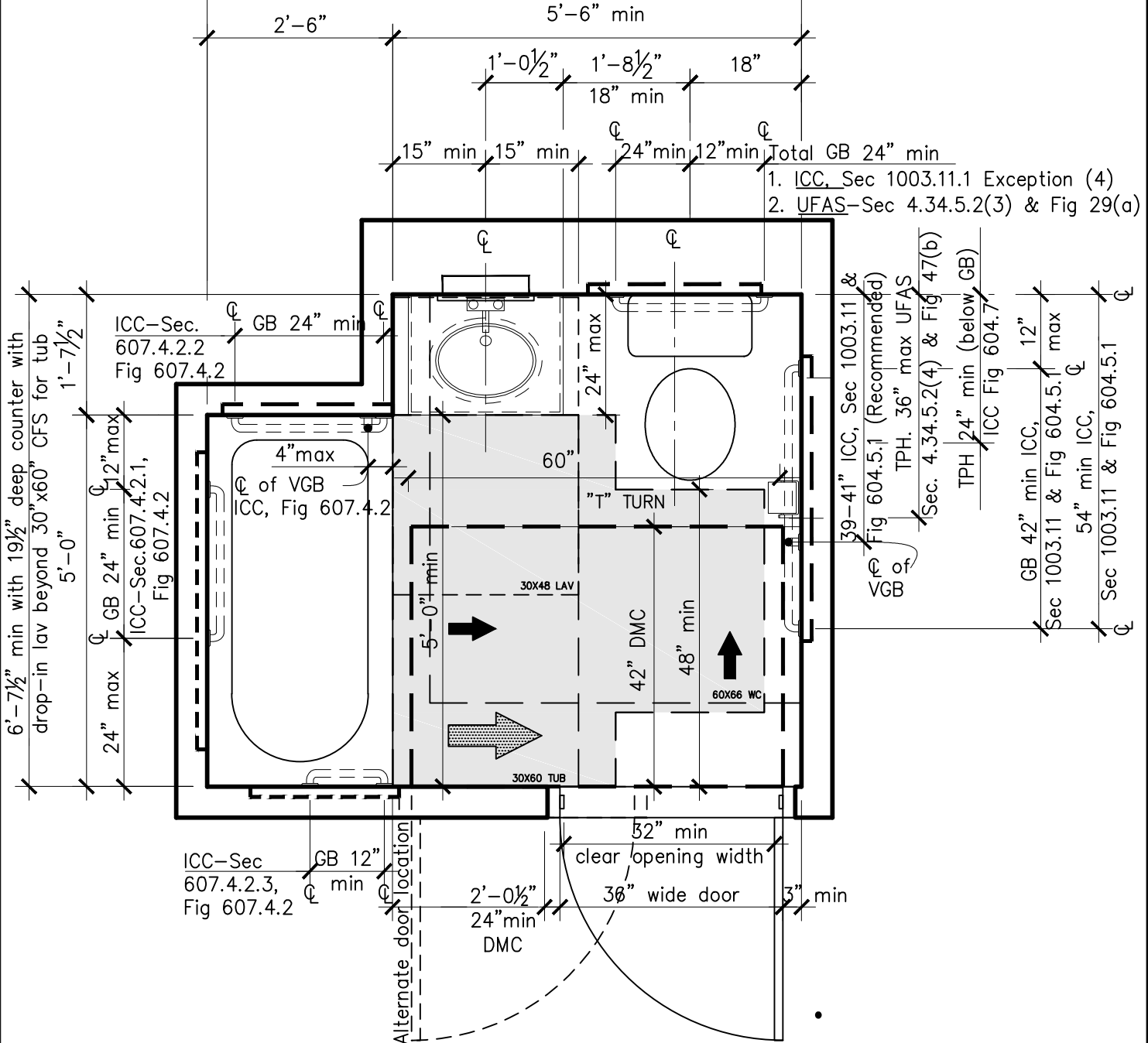
7'-9" x 7'-3"

- door maneuvering clearance is required only outside of the bathroom
- Lav cannot overlap the required CFS of the tub

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
 i.e. Type "A" of ICC-Sec 1003.11 & UFAS with 60" Dia Turning Space;
 Maneuvering Clearances at all Fixtures & Door
 (Front Door, Opposite to WC or Lav); & Grab Bar Locations

B-21b

8'-0" min with 60" for "T" turn & surface mounted TPH, upto 30" wide countertop w/drop-in lav can be used **(B-22a)**
 or *7'-9½" min with 60" for "T" turn & Recessed TPH with 25" wide countertop w/drop-in lav. **(B-22b)**



B-22a=8'-0"x6'-7½"

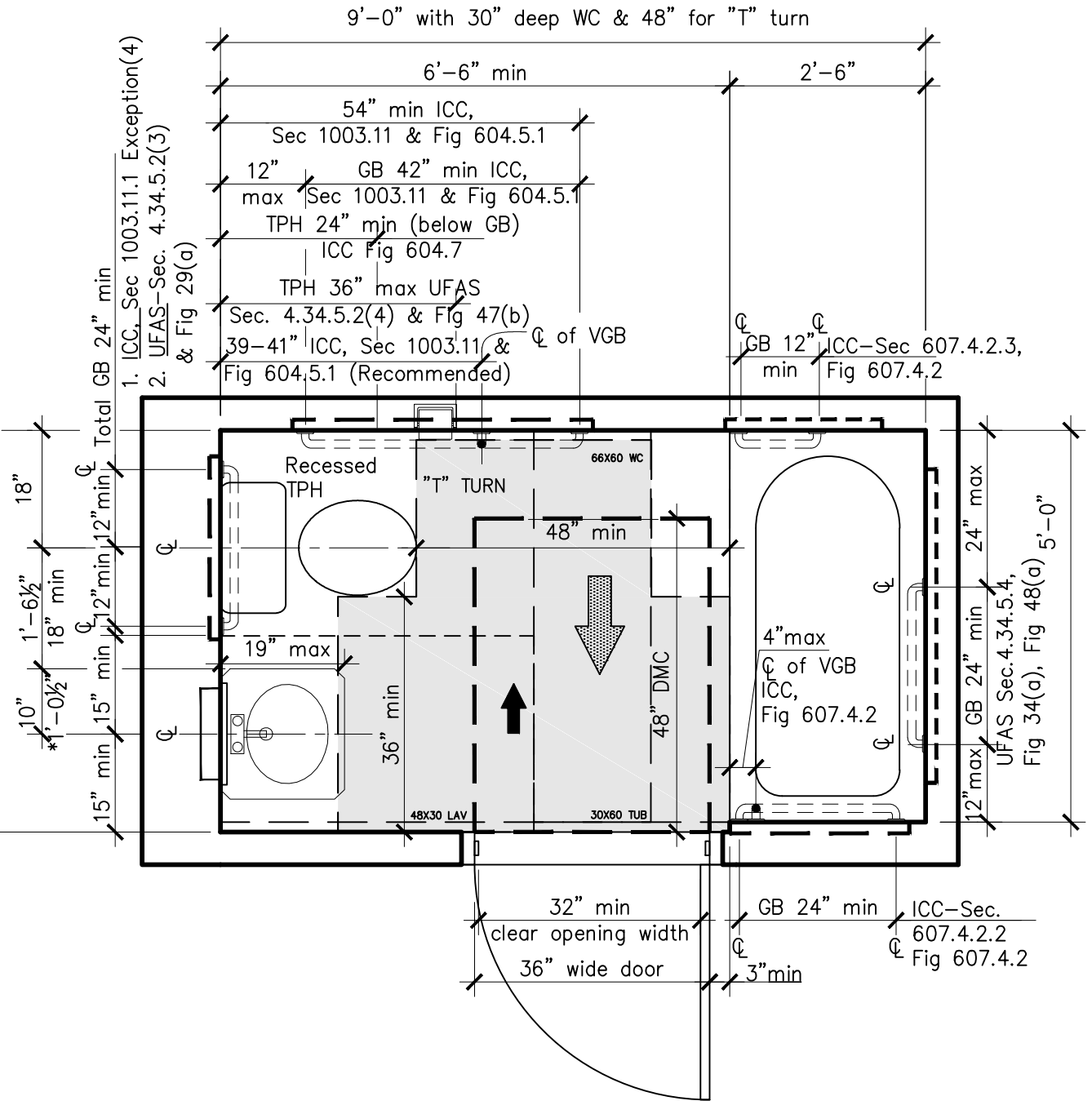
***B-22b=7'-9½"x6'-7½"**

- door maneuvering clearance is required only outside of the bathroom
- Lav cannot overlap the required CFS of the tub

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1, i.e. Type "A" of ICC-Sec. 1003.11 & UFAS with "T" Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to WC or Lav); & Grab Bar Locations

B-22a
 B-22b

5'-1½" min with 14½" wide toilet bowl & 36" for "T" turning space;
 or *5'-3½" min with 25" wide countertop w/drop-in lav (20" shown) (B-23c)

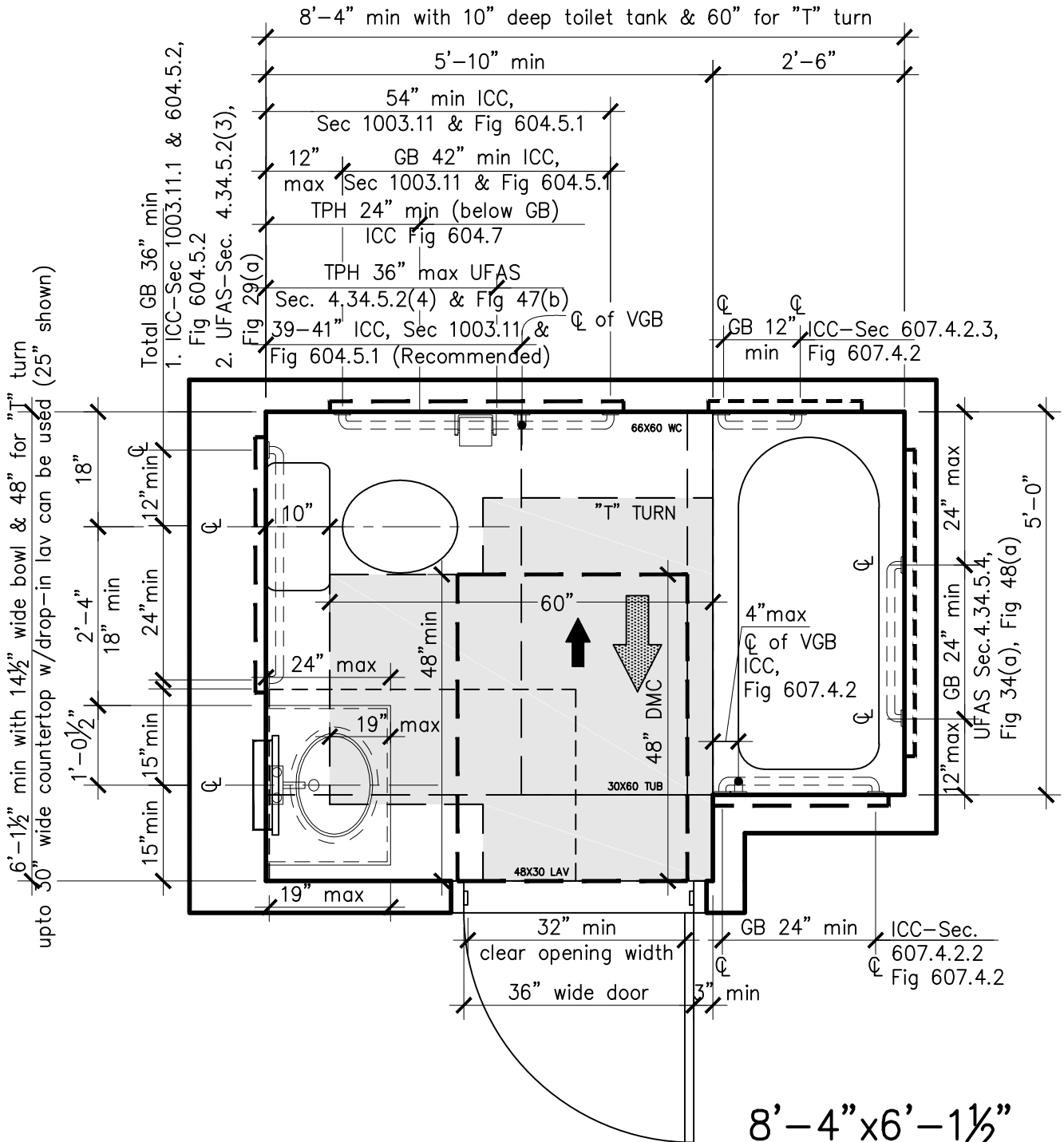


B-23b=9'-0" x 5'-1½"
***B-23c=9'-0" x 5'-3½"**

• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
 i.e. Type "A" of ICC-Sec 1003.11; & UFAS with "T" Turning Space;
 Maneuvering Clearances at all Fixtures & Door
 (Front Door, Center, Adjacent to Lav); & Grab Bar Locations

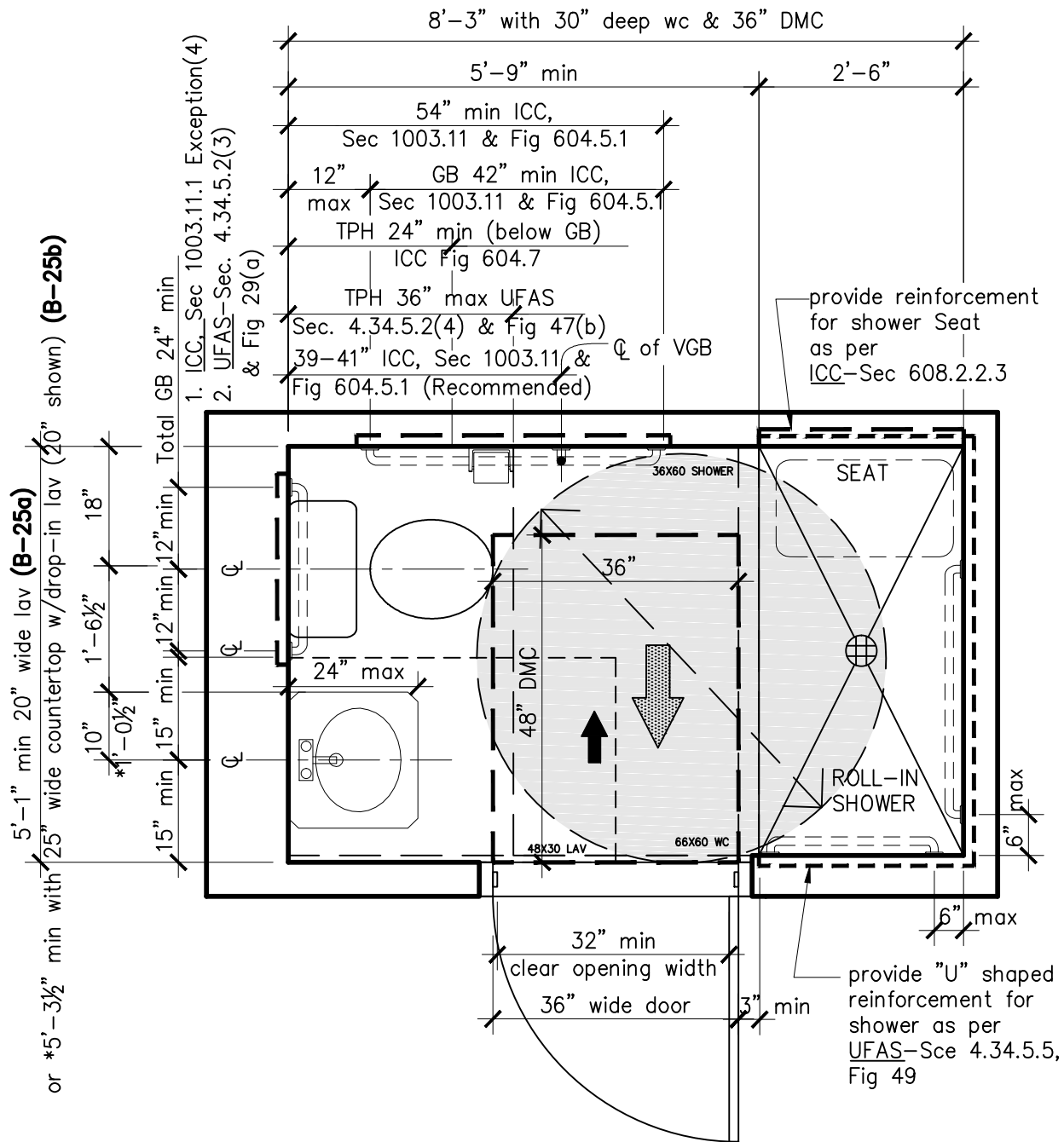
B-23b
 B-23c



8'-4" x 6'-1 1/2"

- door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
i.e. Type "A" of ICC-Sec 1003.11; & UFAS with "T" Turning Space;
Maneuvering Clearances at all Fixtures & Door
(Front Door, Center, Adjacent to Lav); & Grab Bar Locations



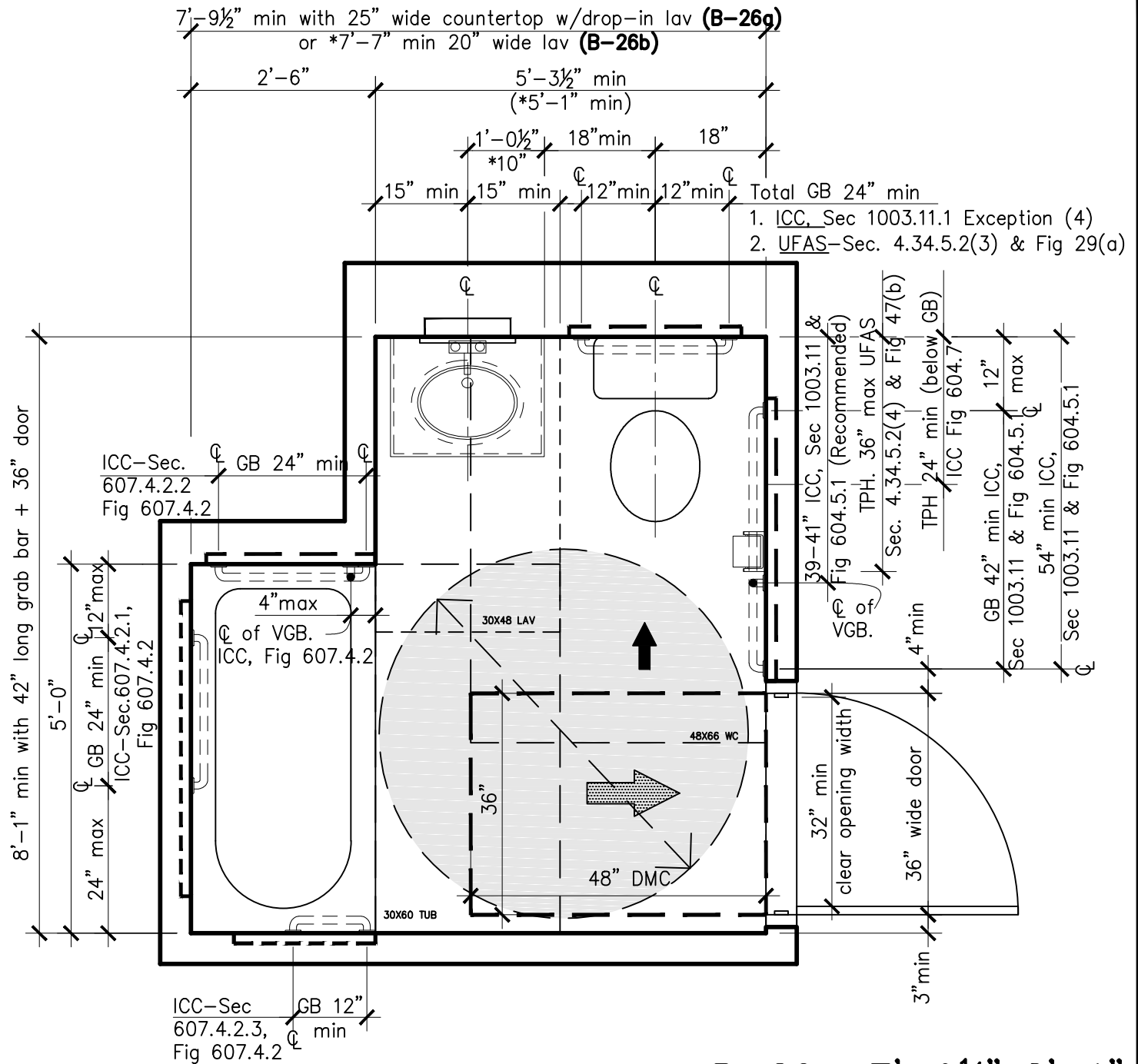
B-25a=8'-3"x5'-1"

***B-25b=8'-3"x5'-3 1/2"**

- door maneuvering clearance is required only outside of the bathroom
- Roll-in shower shall not have more than 1:50 pitch (2% max.) as the shower area is used for 60" Dia turning space & DMC

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1, i.e. Type "A" of ICC-Sec 1003.11; & UFAS with 60" Dia Turning space; Maneuvering Clearances at all Bathroom Fixtures & Door (Front Door, Center, Adjacent to Lav); & Grab Bar Locations

B-25a
B-25b



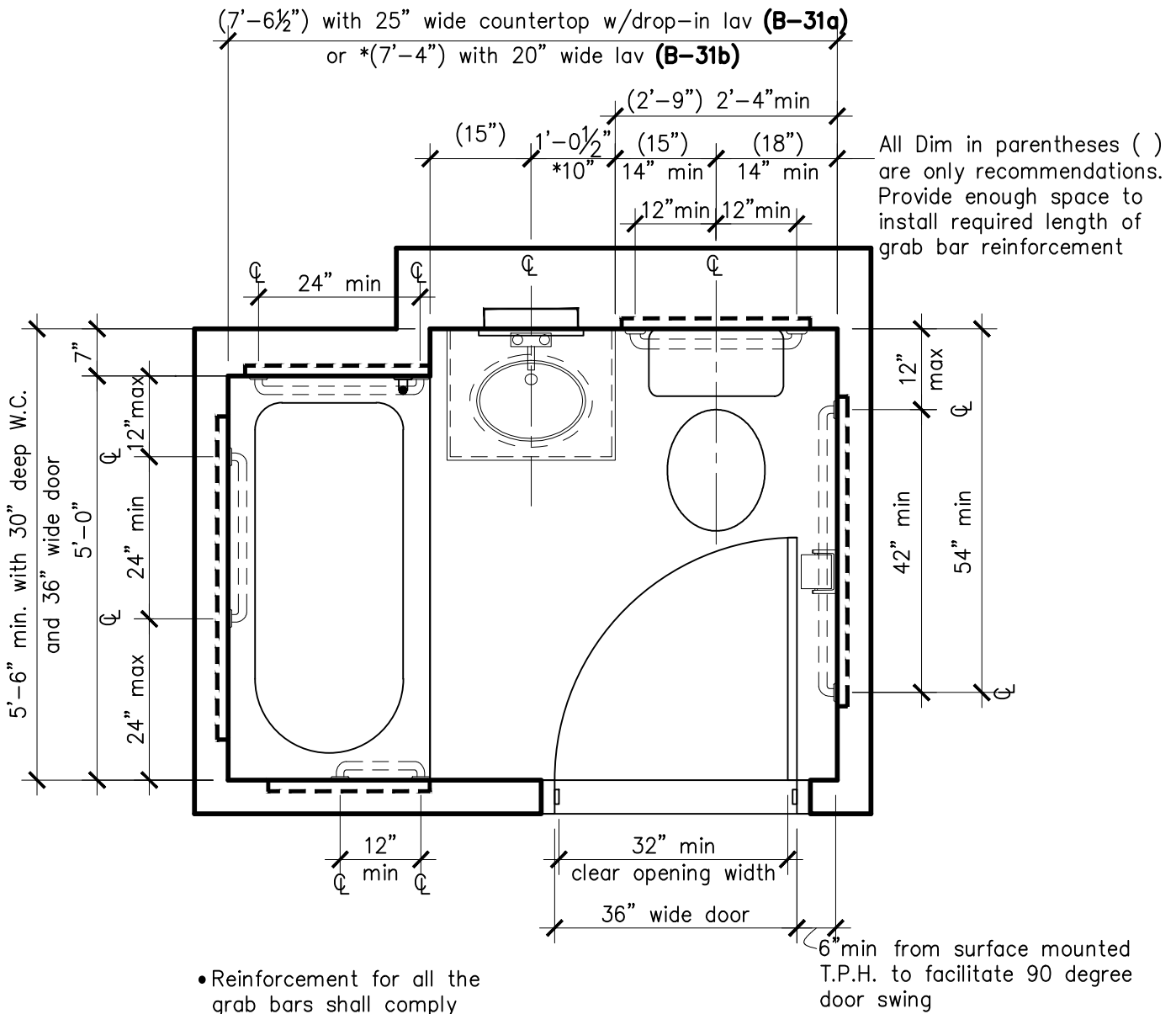
$$\underline{B-26a=7'-9\frac{1}{2}'' \times 8'-1''}$$

$$\underline{*B-26b=7'-7'' \times 8'-1''}$$

• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1, i.e. Type "A" of ICC-Sec 1003.11; & UFAS with 60" Dia Turning space; Maneuvering Clearances at all Fixtures & Door (Side Door-Corner, Adjacent to WC); & Grab Bar Locations

B-26a
B-26b



• Reinforcement for all the grab bars shall comply with

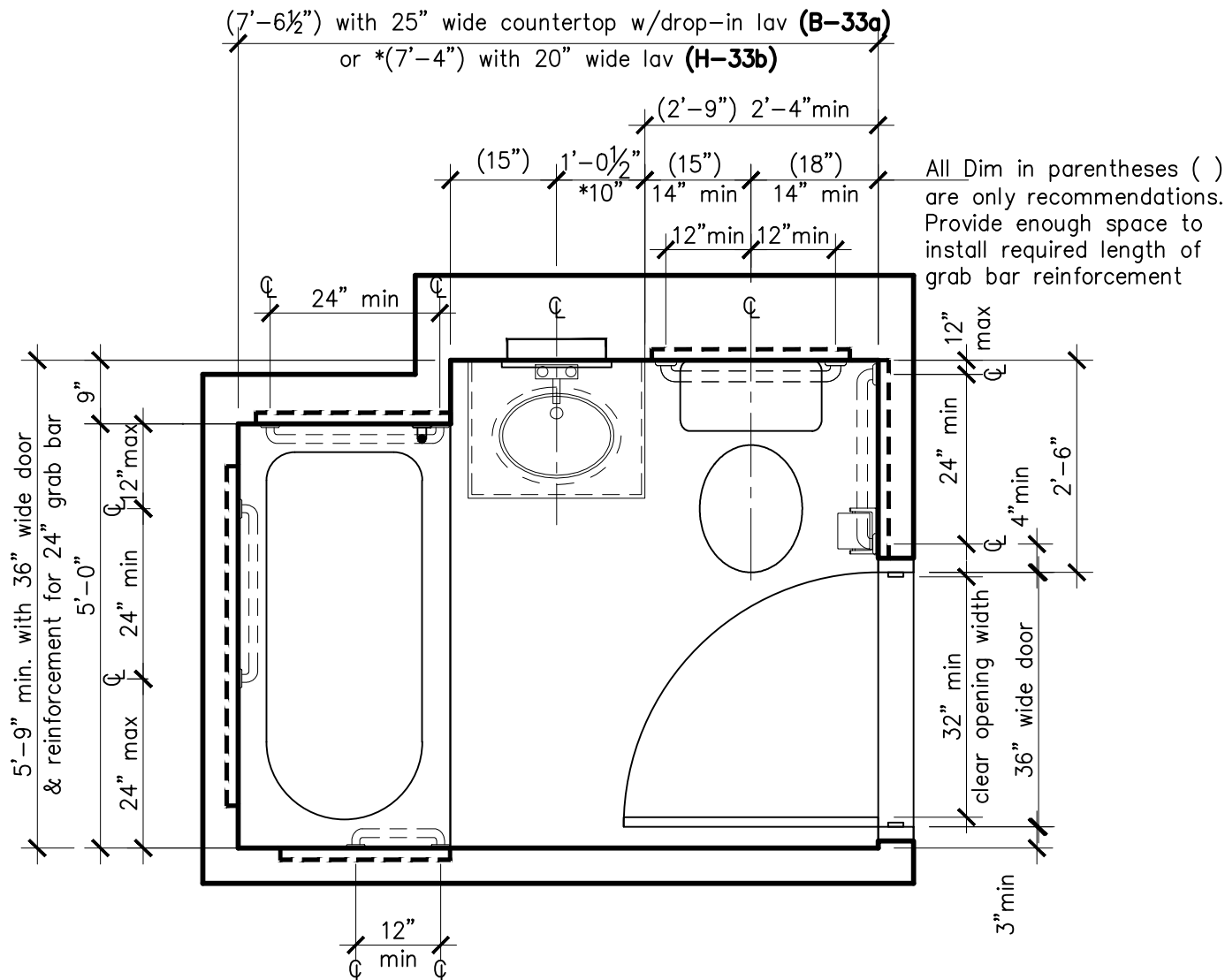
1. FHA Guidelines, Requirement 6, Fig 3,4, & 5
2. ICC 2009-Sec 1104.11.1, 604.5, 607.4, & 608.3
 As per BC 2014-Sec 107.2.2,

$$\underline{B-31a = 7'-6\frac{1}{2}" \times 5'-6"} \\
\underline{*B-31b = 7'-4" \times 5'-6"}$$

• door maneuvering clearance is only required outside of the bathroom

Min. Bathroom Size as per BC-Sec 1007.2.2, Exception 2
 (Front Door, In-Swing, Opposite to WC)

B-31a
 B-31b



• Reinforcement for all the grab bars shall comply with

1. FHA Guidelines, Requirement 6, Fig 3,4, & 5
2. ICC 2009–Sec 1104.11.1, 604.5, 607.4, & 608.3 As per BC 2014–Sec 107.2.2,

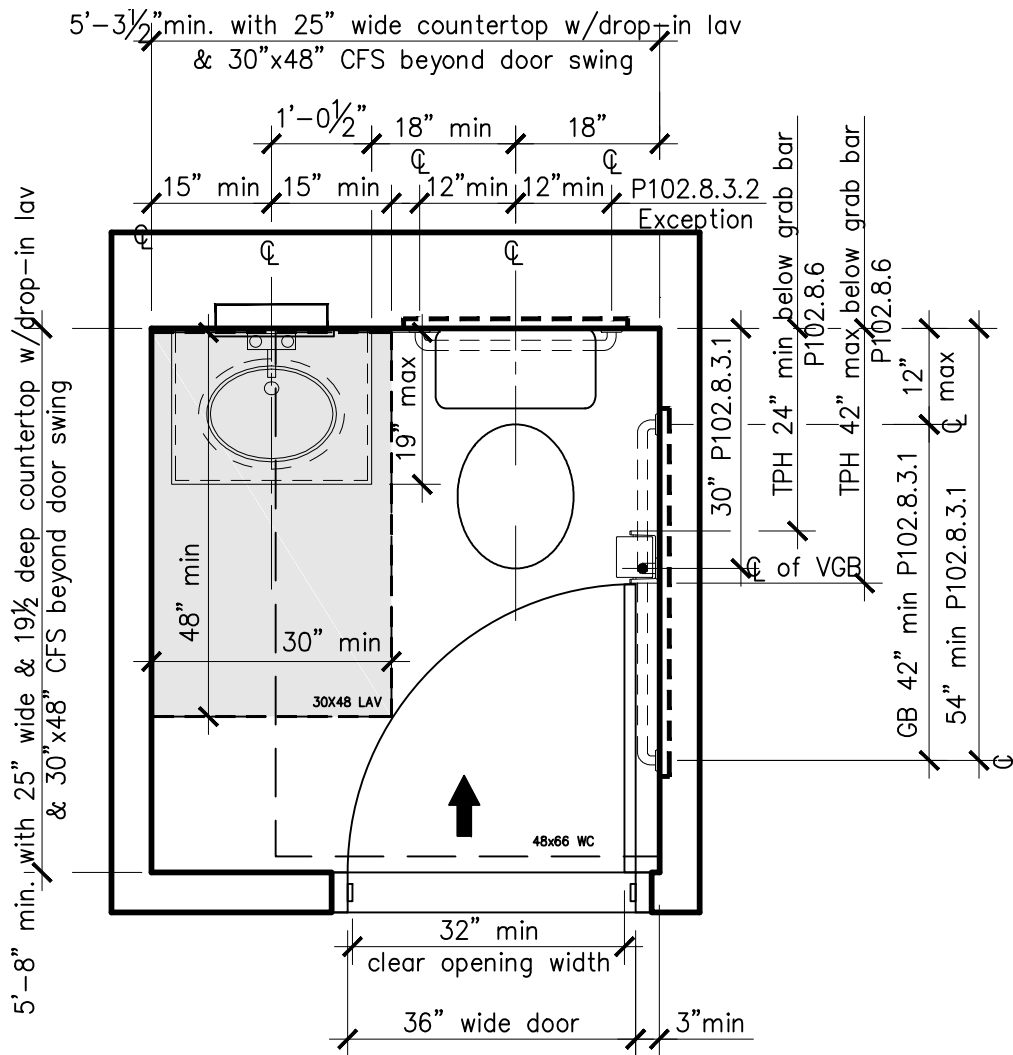
$$\underline{B-33a=7'-6\frac{1}{2}'' \times 5'-9''}$$

$$\underline{*B-33b=7'-4'' \times 5'-9''}$$

• door maneuvering clearance is only required outside of the bathroom

Min. Bathroom Size as per BC–Sec 1007.2.2, Exception 2
 (Side Door, In–Swing, Adjacent to WC)

B-33a
 B-33b

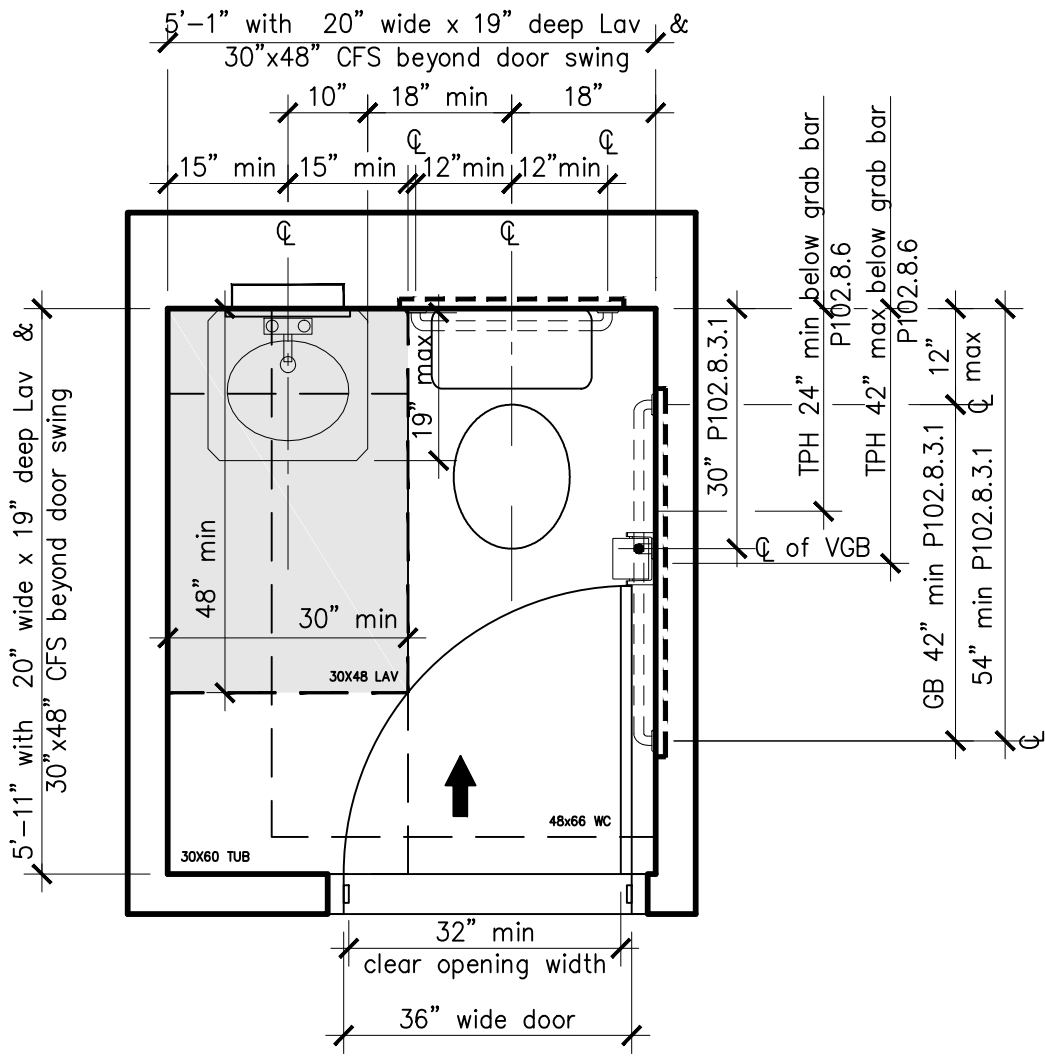


5'-3½" x 5'-8"

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath CFS Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door
 (Front Door, Opposite to WC); Maneuvering Clearances at all
 Fixtures; & Grab Bar Locations

HB-1a

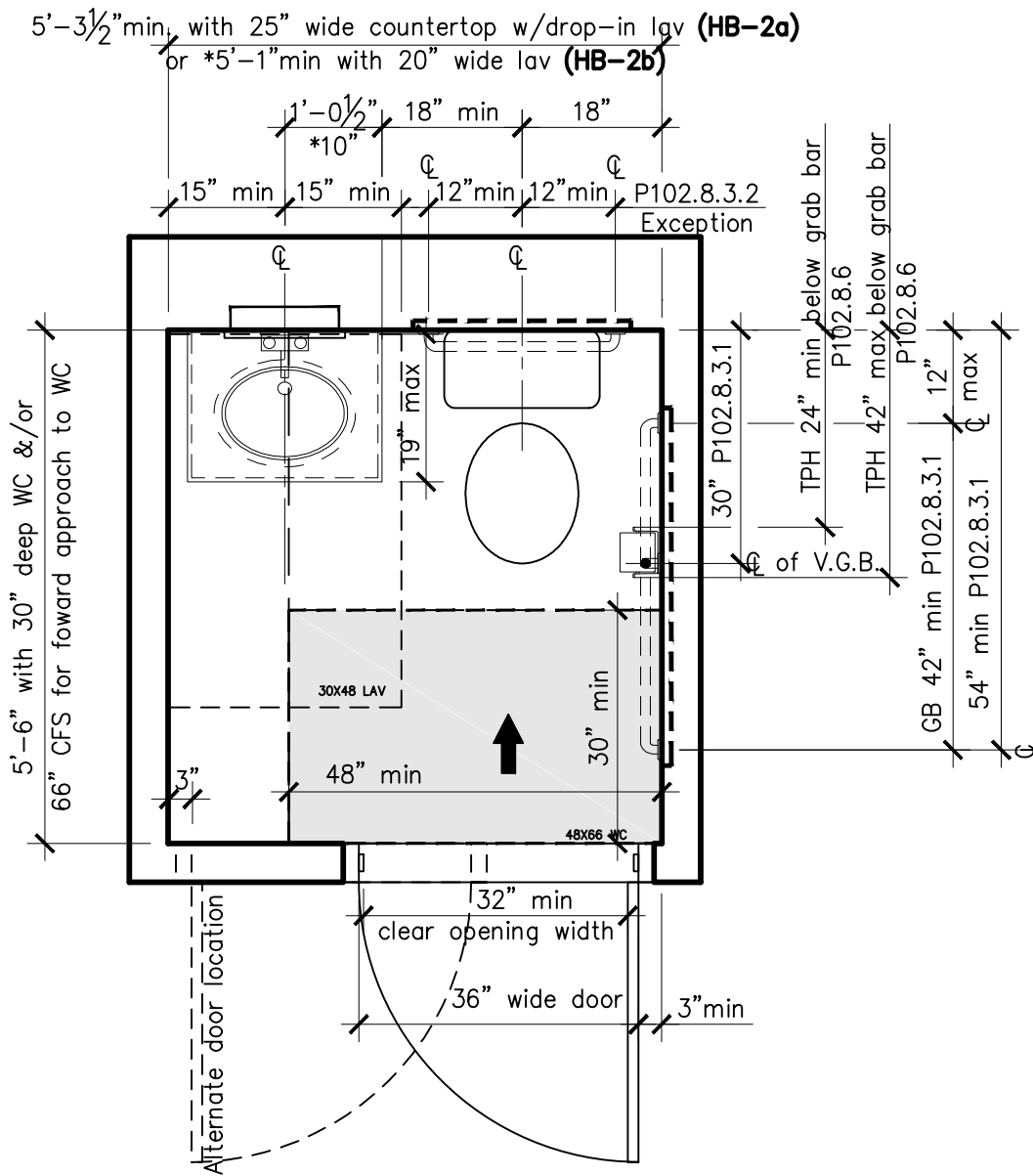


5'-1" x 5'-11"

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door (Front Door,
 Opposite to WC); Maneuvering Clearances at all Fixtures;
 & Grab Bar Locations

HB-1b

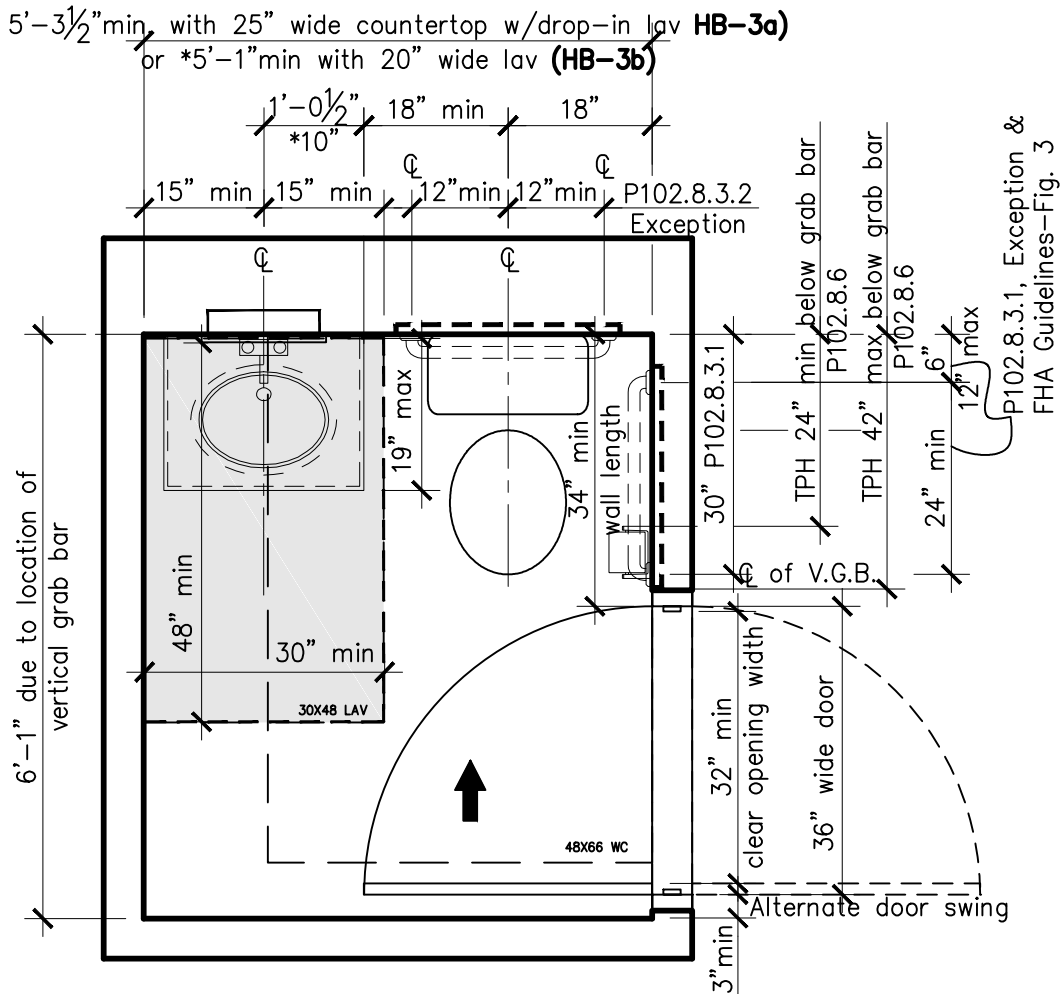


HB-2a=5'-3½"x5'-6"
*HB-2b=5'-1"x5'-6"

- door maneuvering clearance is required only outside of the bathroom

Min. Half-Bath Size as per BC-Appendix "P"
 with Maneuvering Clearances at all Fixtures; & Grab Bar locations
 (Front Door, Out-Swing, Opposite to WC or Lav)

HB-2a
 HB-2b



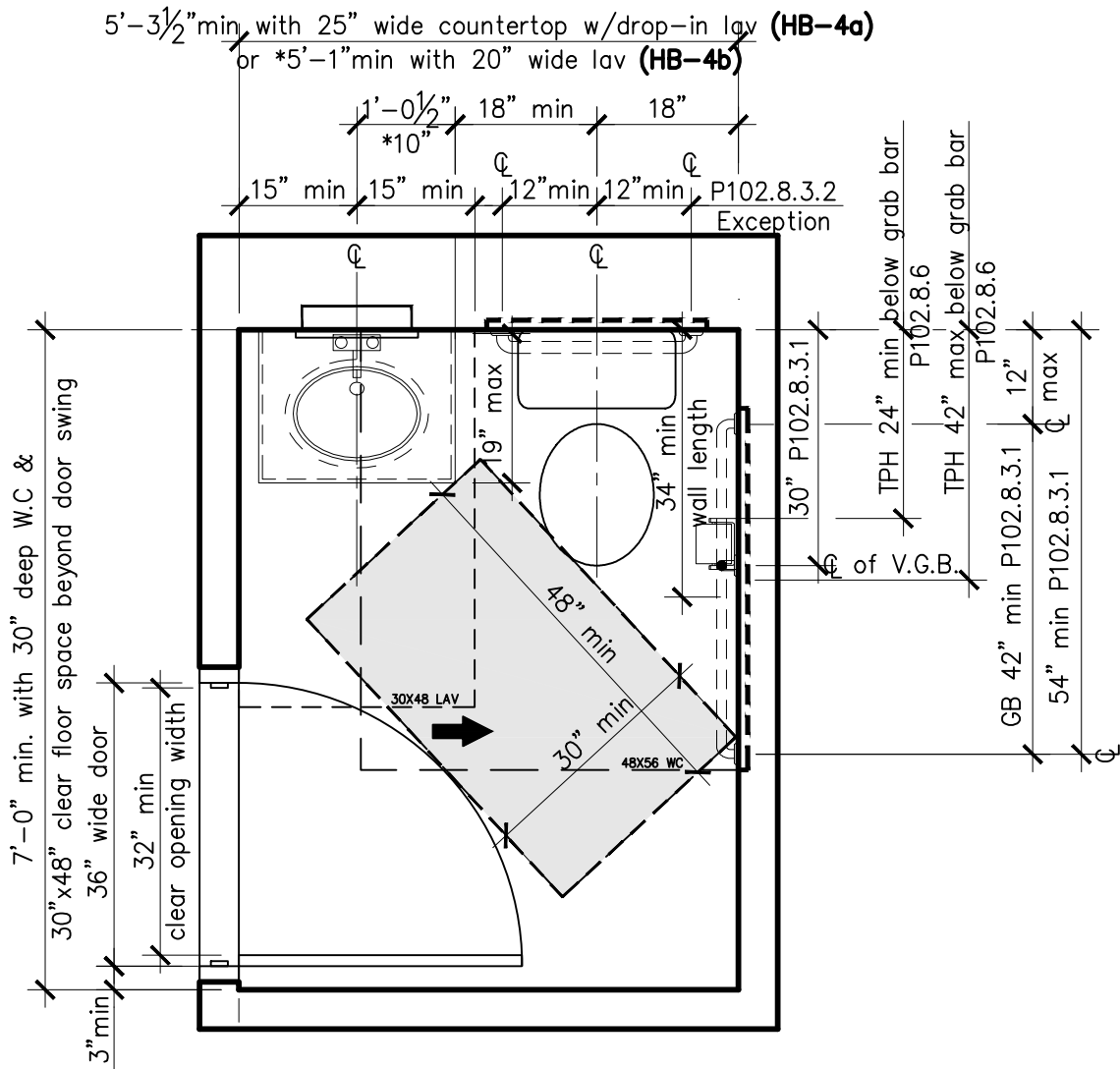
HB-3a = 5' - 3 1/2" x 6' - 1"

*HB-3b = 5' - 1" x 6' - 1"

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door
 (Side Door, In-Swing or Out-Swing, Adjacent to WC);
 Maneuvering Clearances at all Fixtures; & Grab Bar Locations

HB-3a
 HB-3b



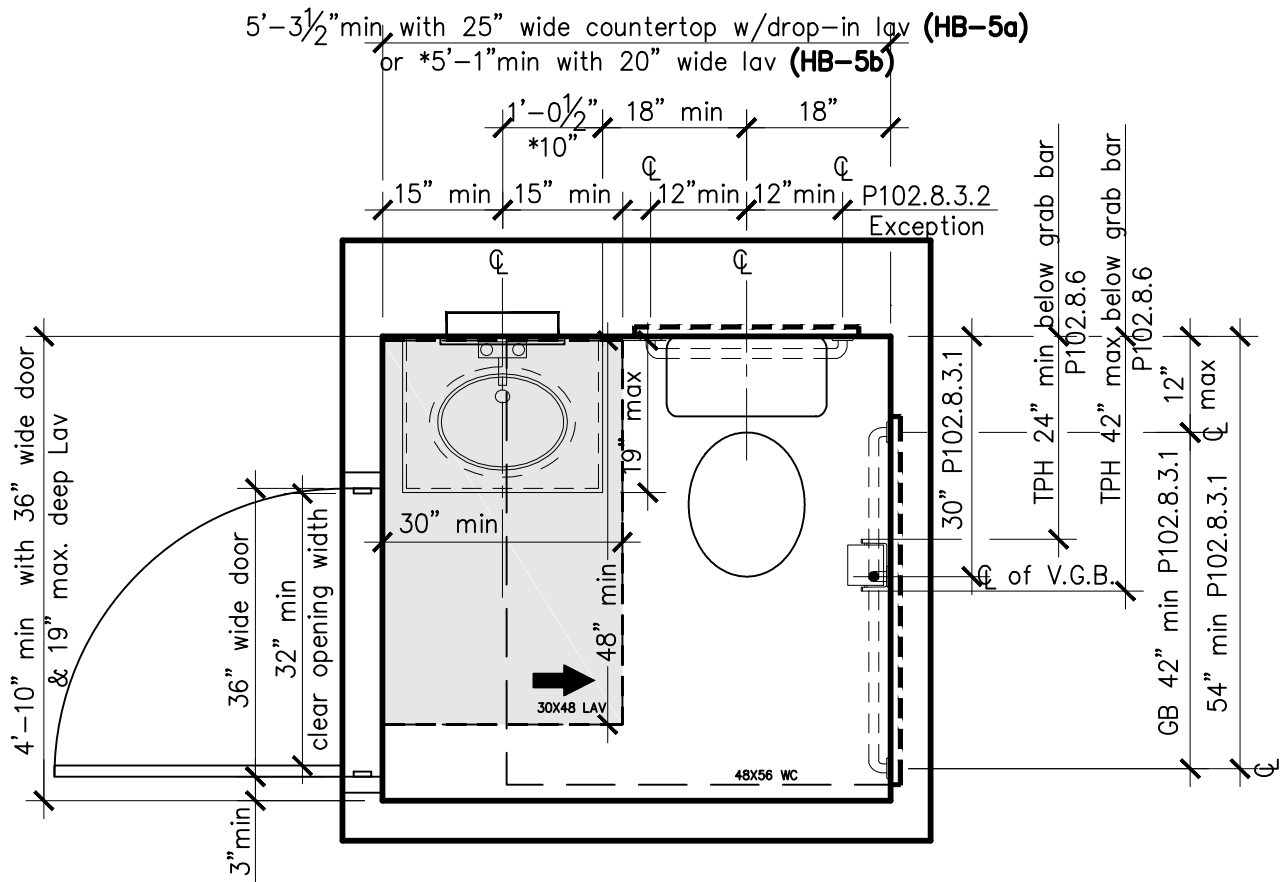
$$\underline{HB-4a=5'-3\frac{1}{2}" \times 7'-0"}$$

$$\underline{*HB-4b=5'-1" \times 7'-0"}$$

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door (Side Door,
 Adjacent to Lav); Maneuvering Clearances at all Fixtures;
 & Grab Bar Locations

HB-4a
 HB-4b

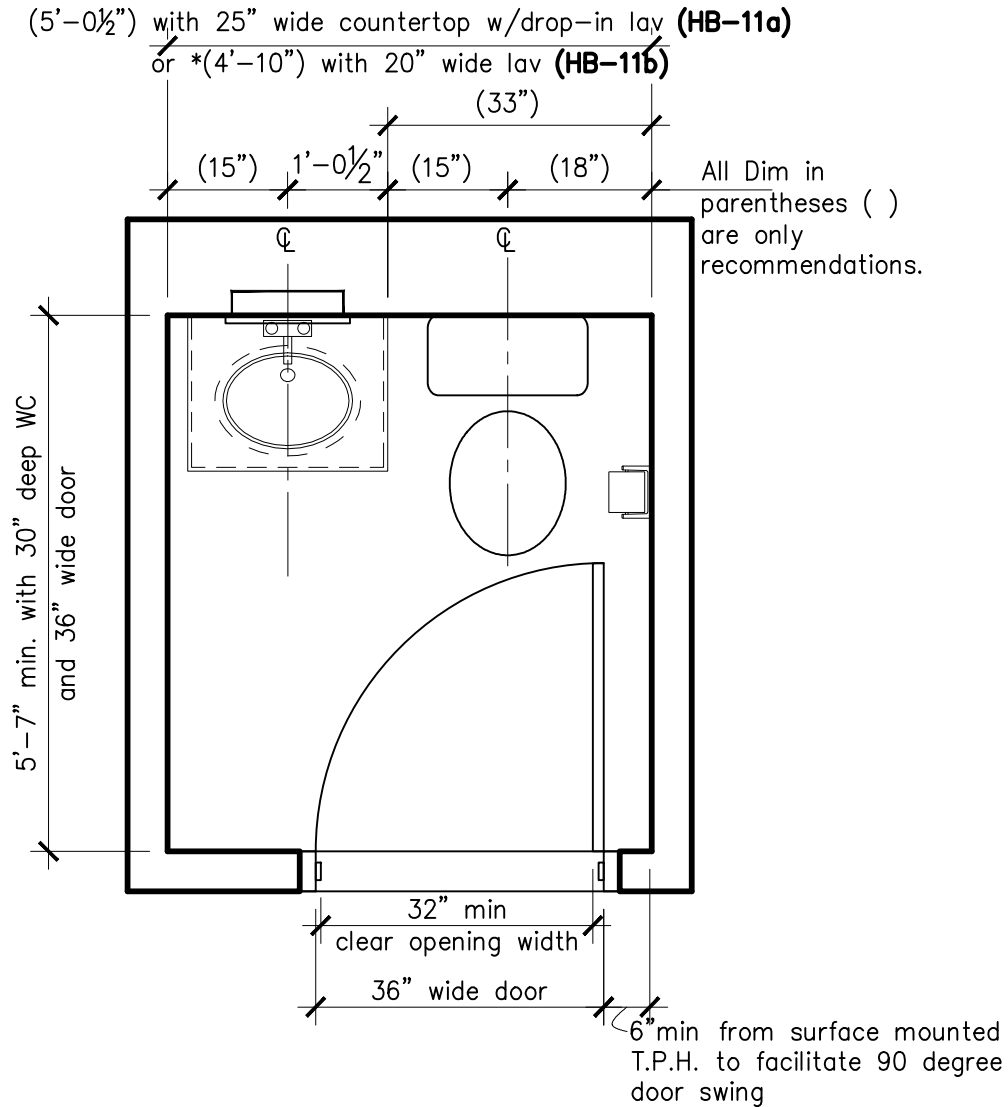


HB-5a=5'-3½"x5'-0'
*HB-5b=5'-1"x5'-0'

- door maneuvering clearance is required only outside of the bathroom

Min. Half-Bath Size as per BC-Appendix "P"
 with Maneuvering Clearances at all Fixtures; & Grab Bar Locations
 (Side Door, Out-Swing, Adjacent to Lav)

HB-5a
 HB-5b



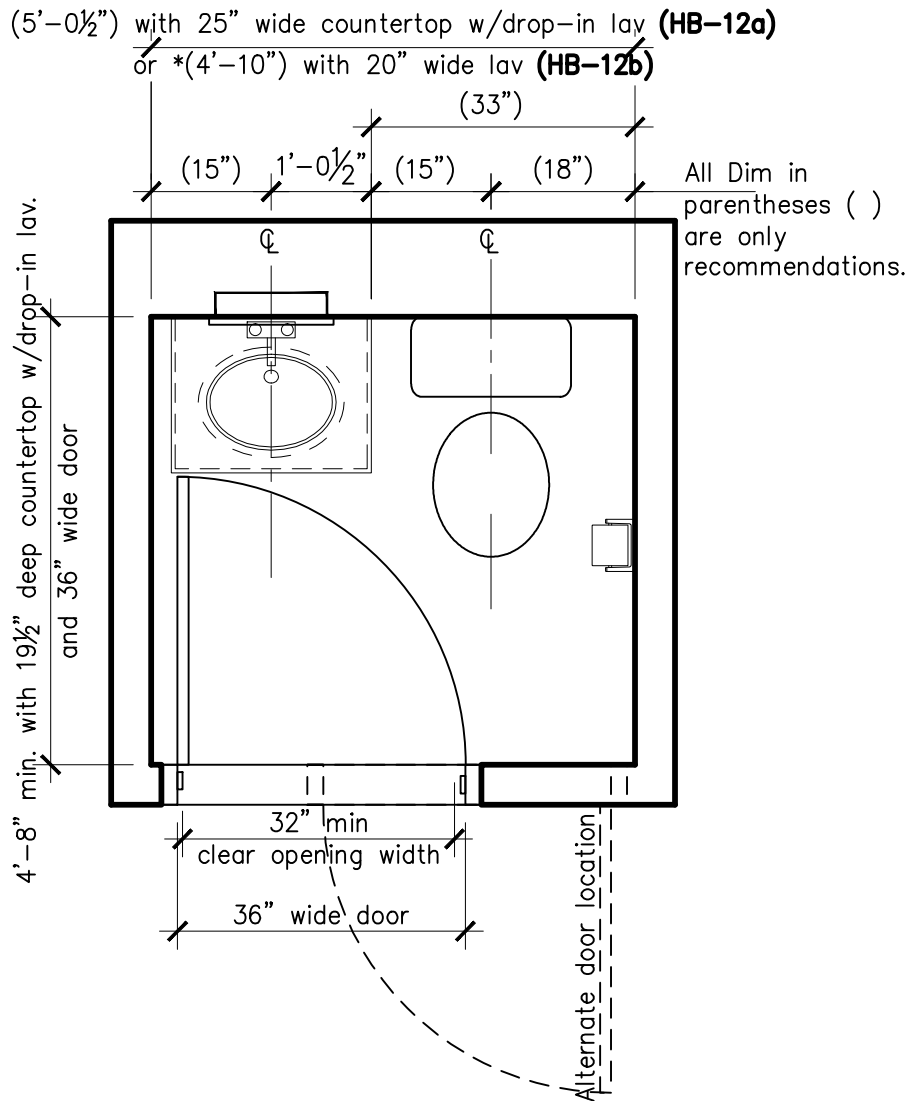
$$\underline{\underline{HB-11a=5'-0\frac{1}{2}''x5'-7''}}$$

$$\underline{\underline{*HB-11b=4'-10''x5'-7''}}$$

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Front Door, In-Swing, Opposite to WC)

HB-11a
 HB-11b

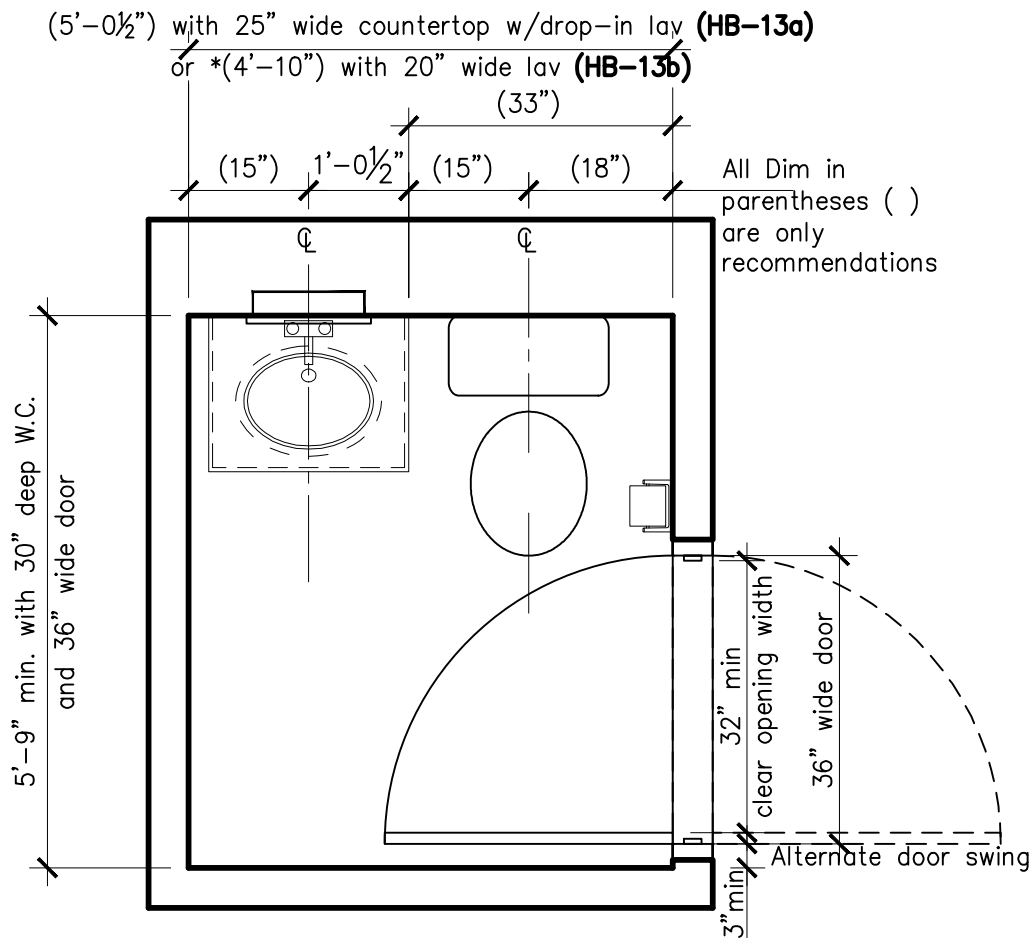


HB-12a=5'-0½"x4'-8'
*HB-12b=4'-10"x4'-8"

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Front Door, In-Swing, Opposite to Lav/
 or Out-Swing, Opposite to WC)

HB-12a
 HB-12b

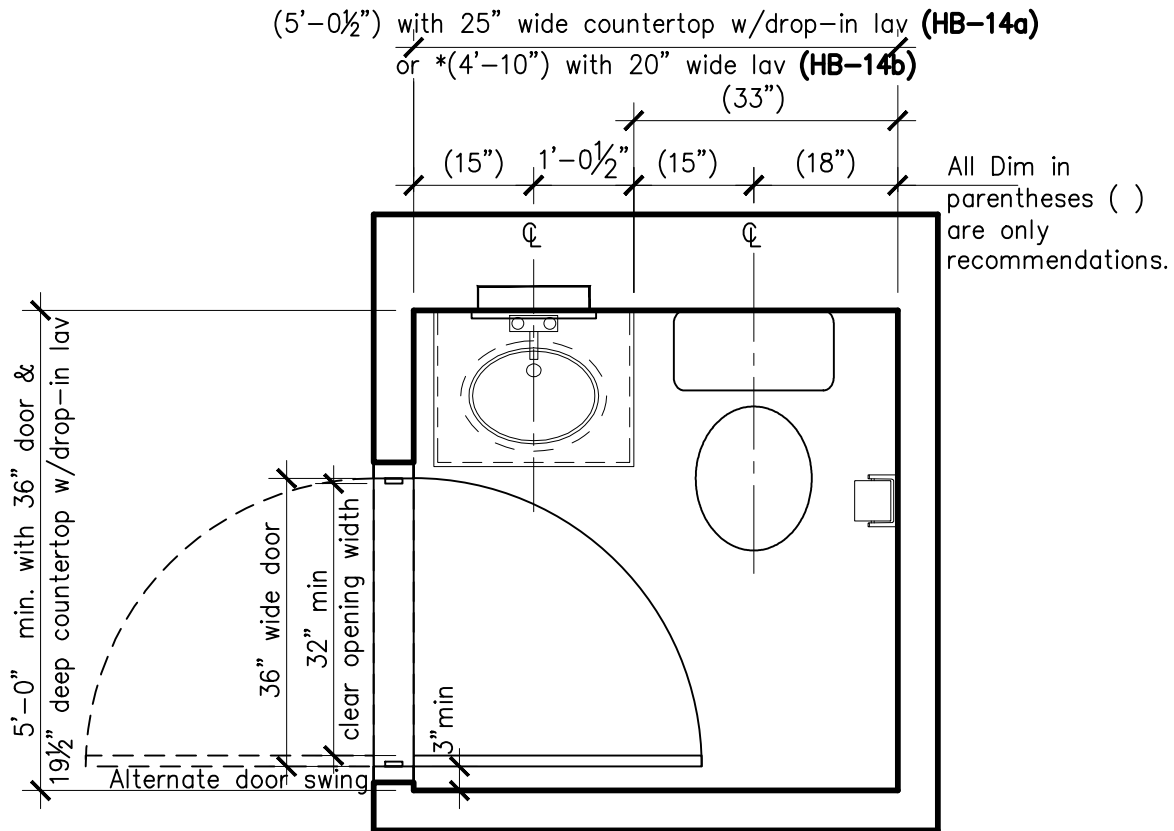


HB-13a=5'-0½"x5'-9"
*HB-13b=4'-10"x5'-9"

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Side Door, In-Swing or Out-Swing, Adjacent to WC)

HB-13a
 HB-13b



$$\underline{HB-14a=5'-0\frac{1}{2}'' \times 5'-0''}$$

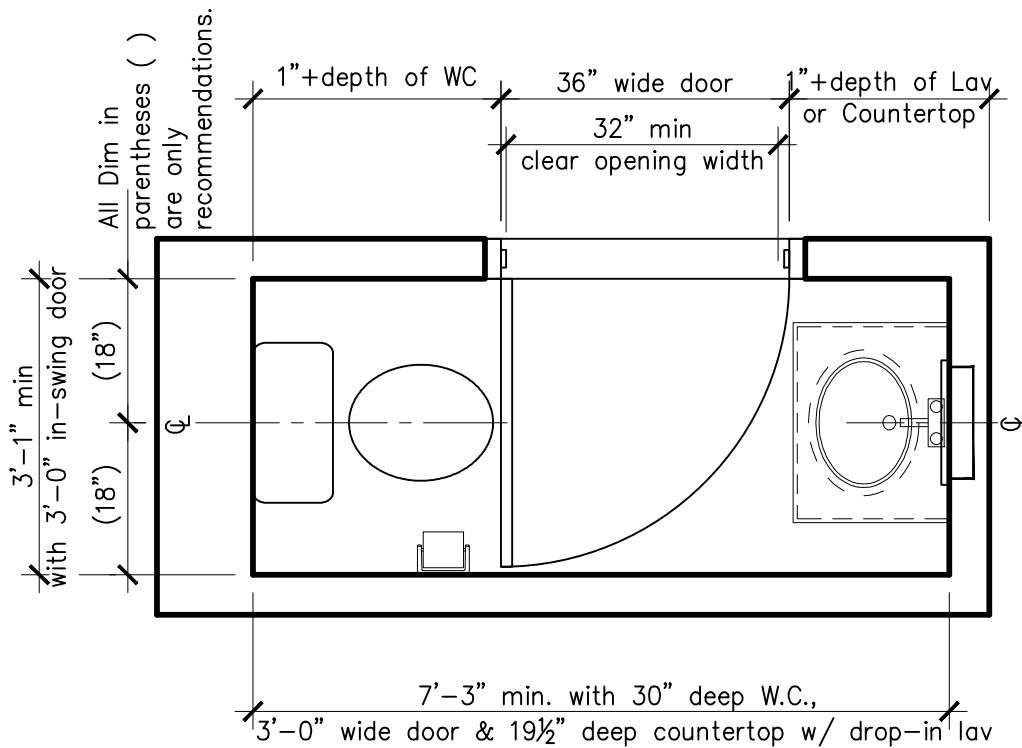
$$\underline{*HB-14b=4'-10'' \times 5'-0''}$$

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Side Door, In-Swing or Out-Swing, Adjacent to Lav)

HB-14a

HB-14b

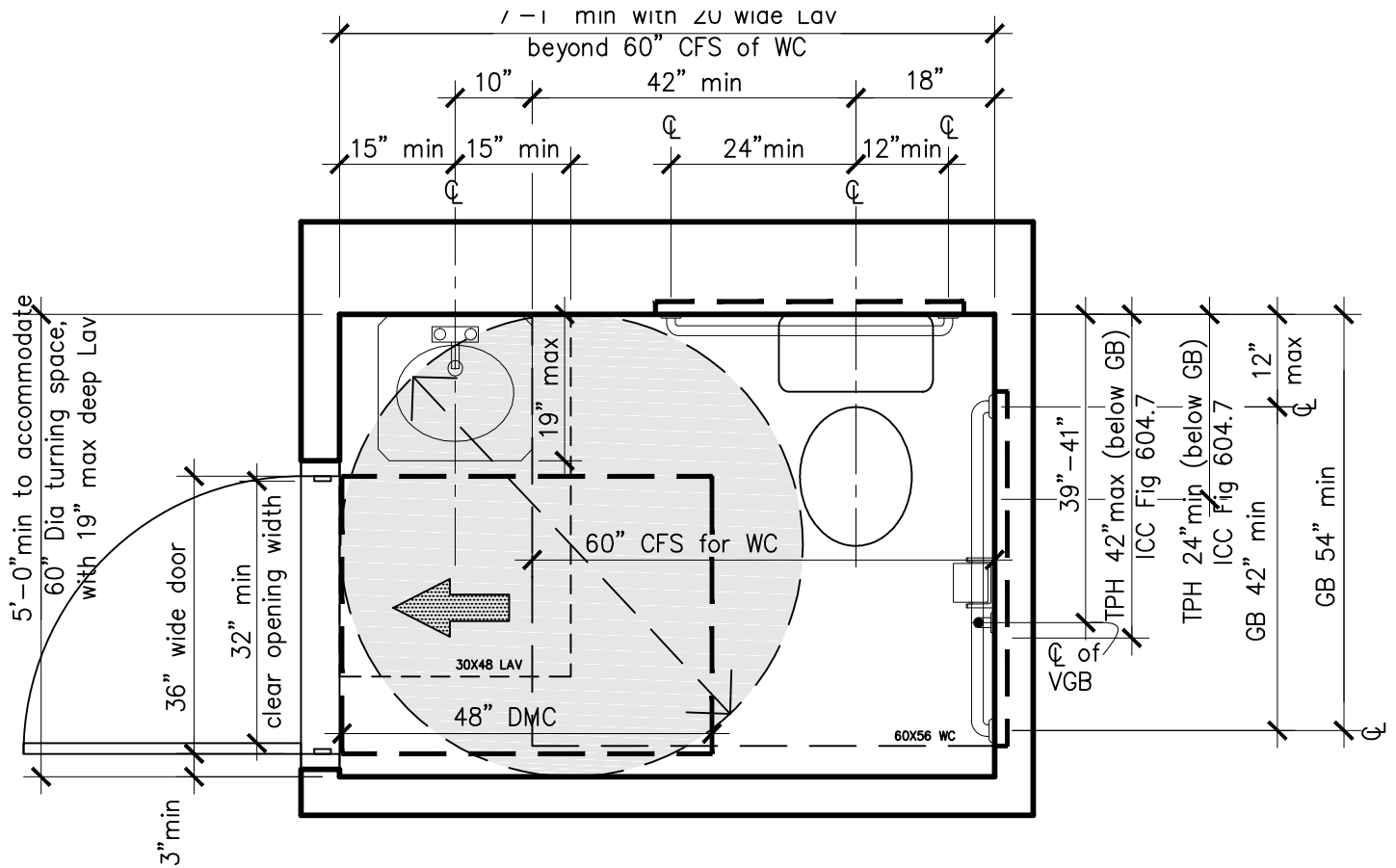


PR-4=7'-2"x3'-1"

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
(Front Door-Center, In-Swing)

HB-15

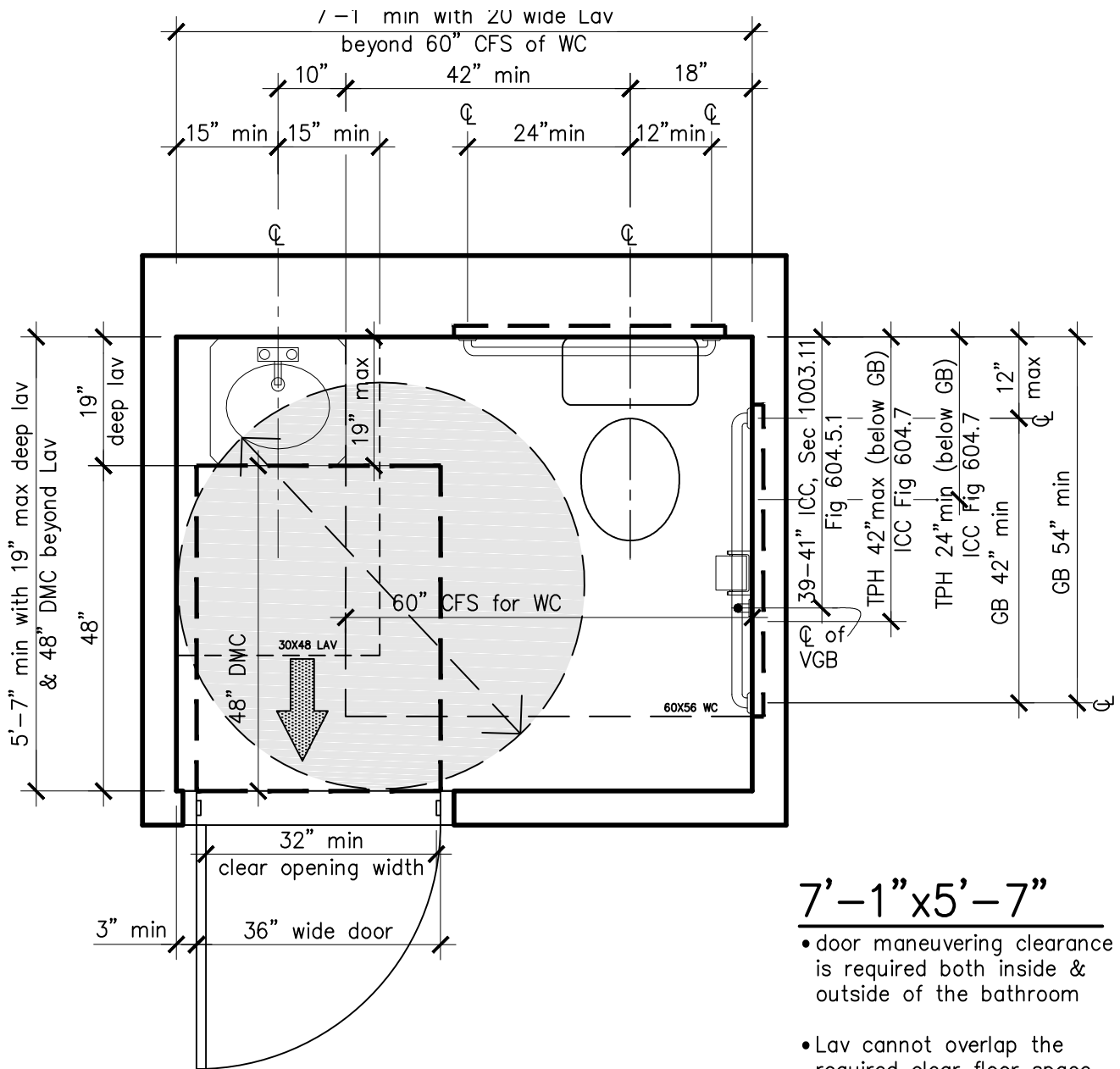


7'-1" x 5'-0"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Side Door, Out-Swing, Adjacent to Lav); & Grab Bar Locations

PT-1

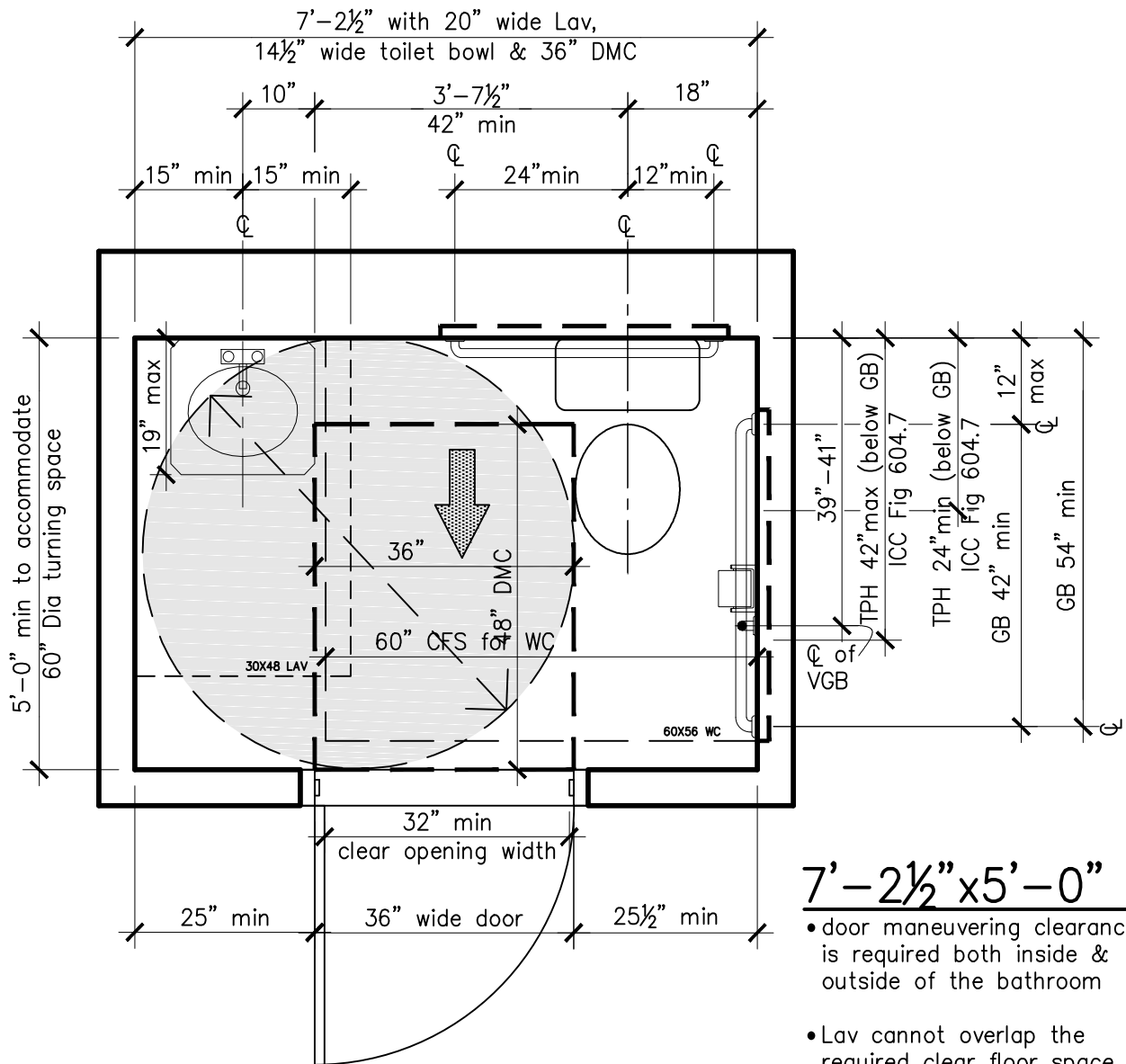


7'-1" x 5'-7"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

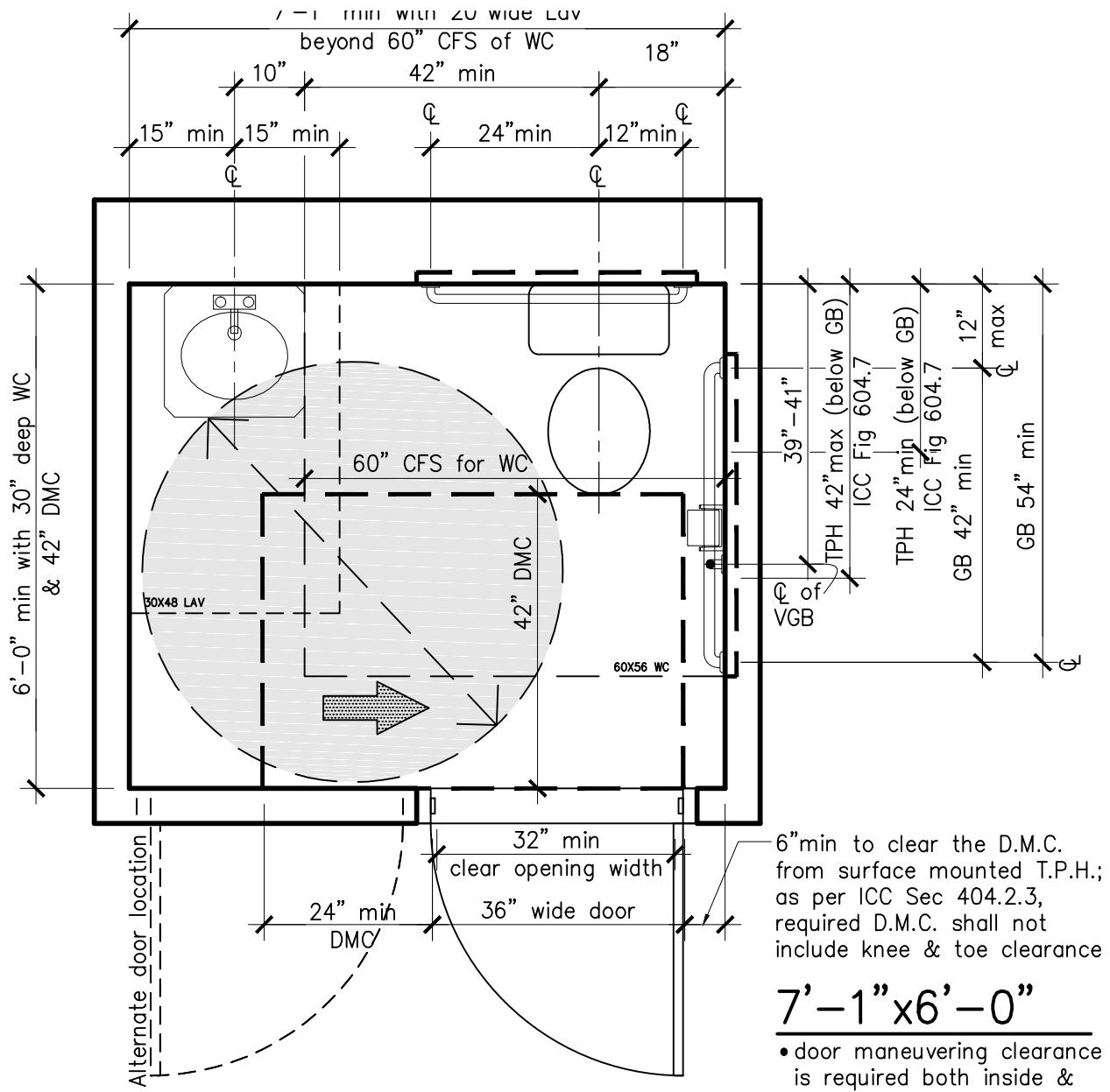
Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Out-Swing, Opposite to Lav); & Grab Bar Locations

PT-2



Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door-Center, Out-Swing,); & Grab Bar Locations

PT-3

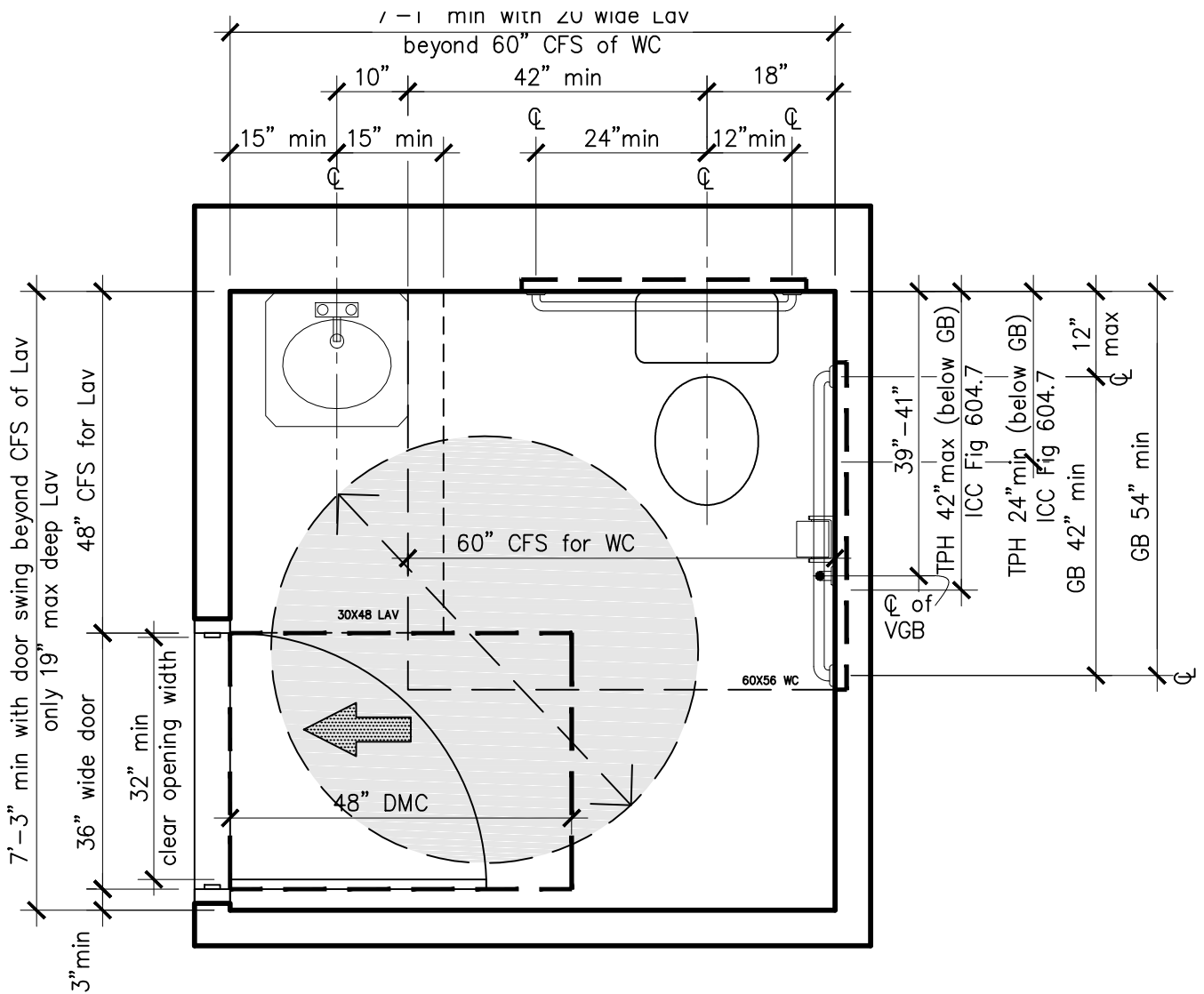


6" min to clear the D.M.C. from surface mounted T.P.H.; as per ICC Sec 404.2.3, required D.M.C. shall not include knee & toe clearance

7'-1" x 6'-0"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Out-Swing, Opposite to WC); & Grab Bar Locations

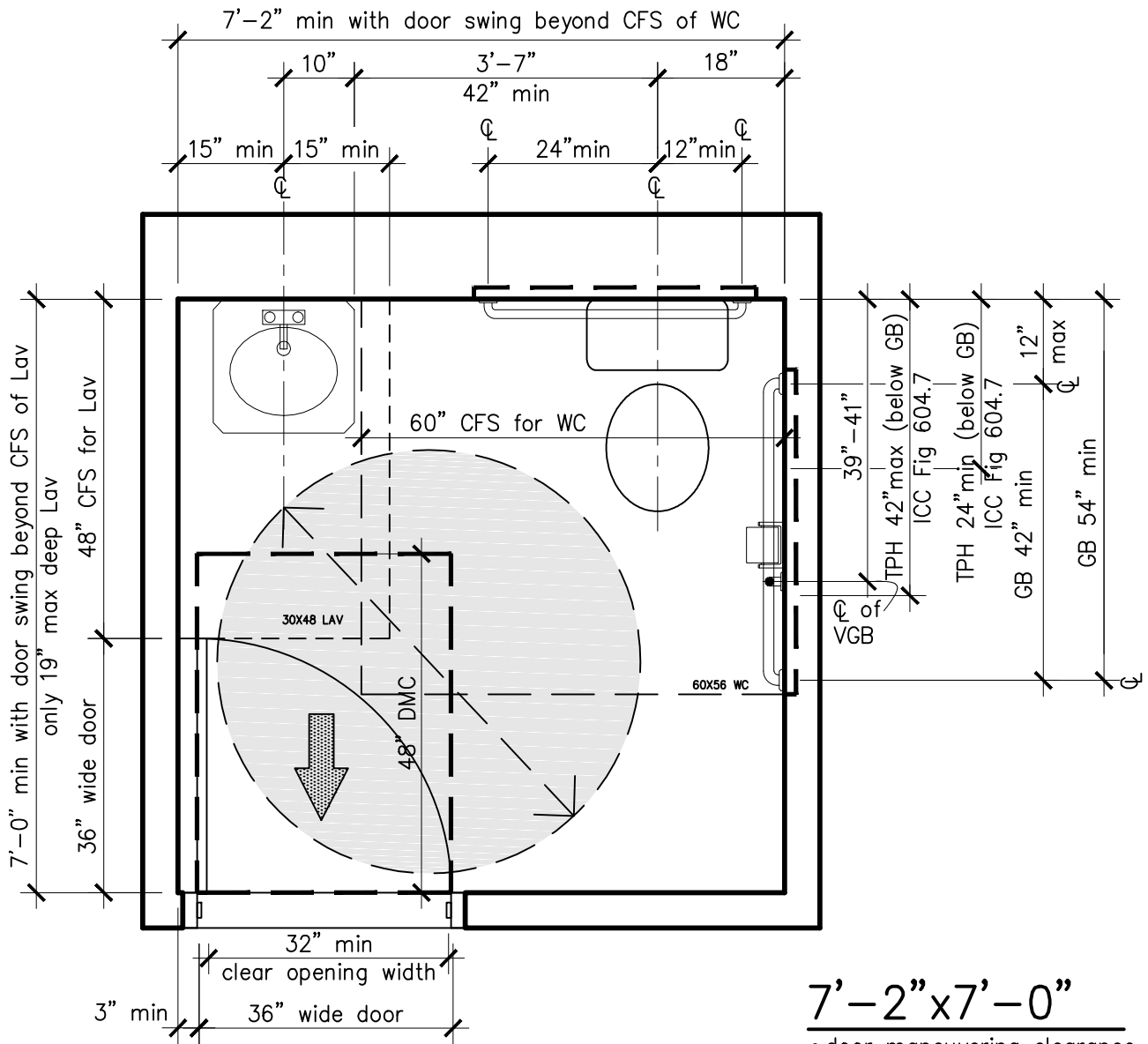


7'-1" x 7'-3"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door (Side Door, Adjacent to Lav); Maneuvering Clearances at all Fixtures & Door & Grab Bar Locations

PT-5

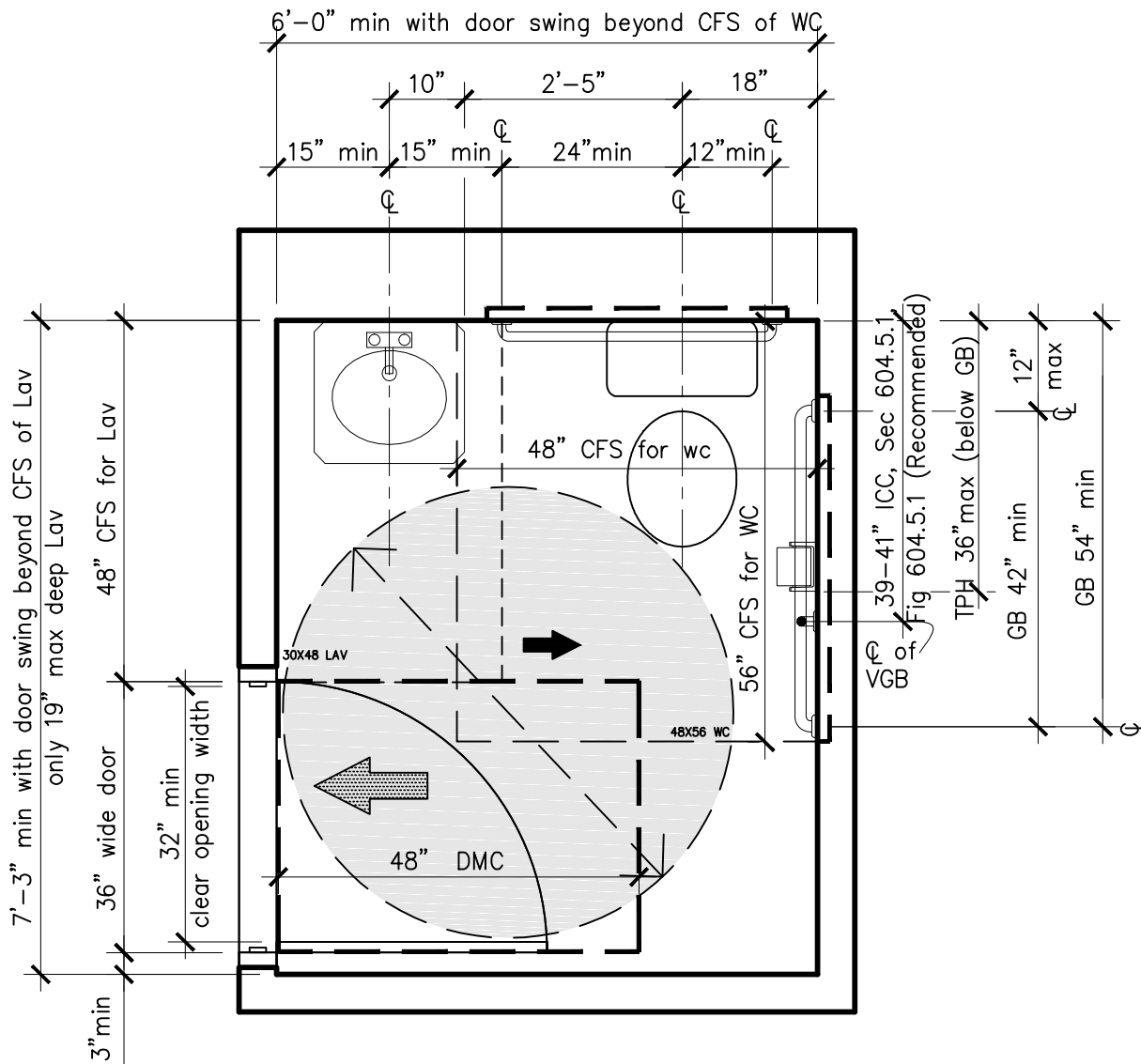


7'-2" x 7'-0"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door (Front Door, Opposite to Lav); Maneuvering Clearances at all Fixtures & Door; & Grab Bar Locations

PT-6

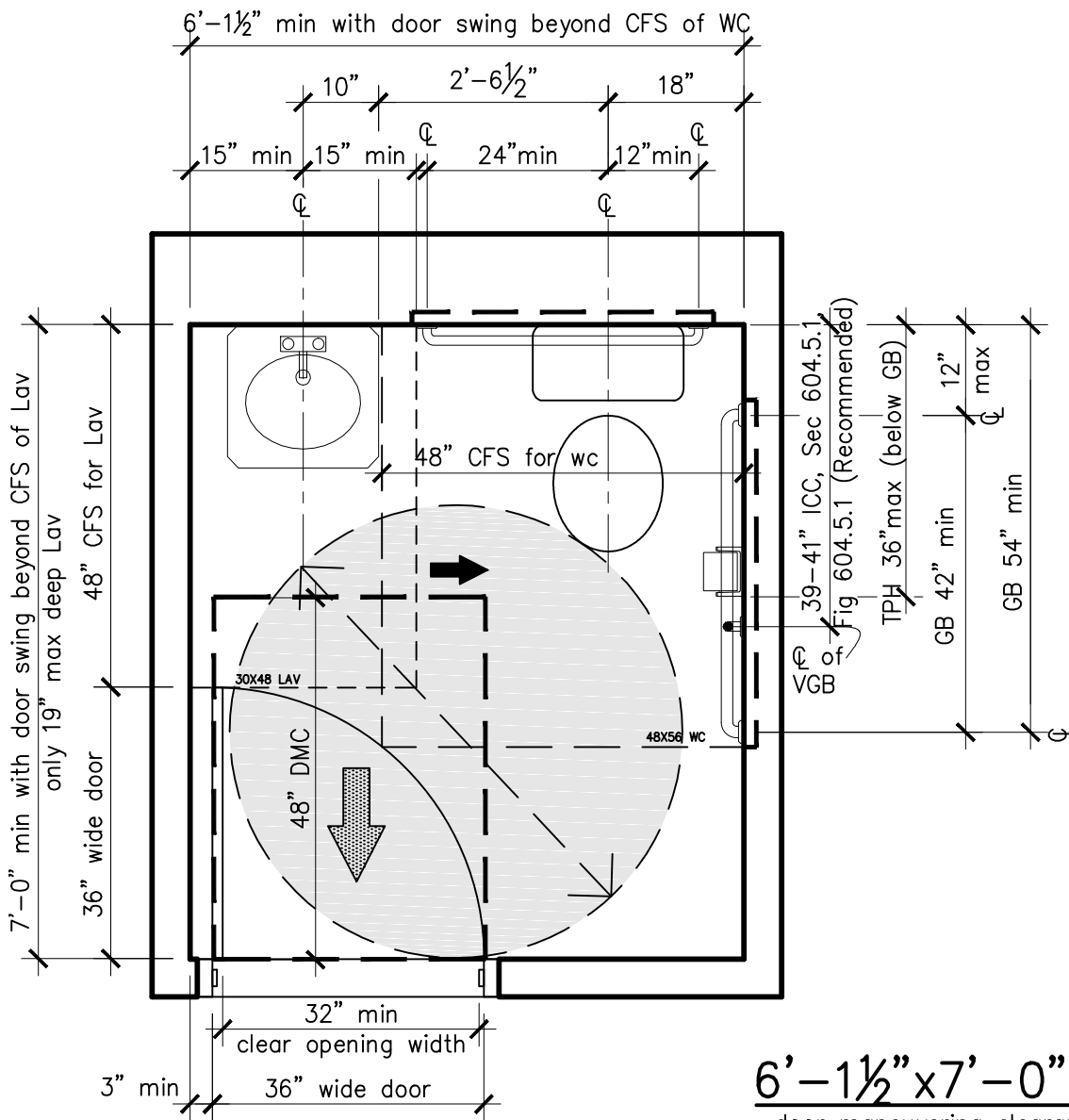


6'-1½" x 7'-3"

- door maneuvering clearance is required both inside & outside of the bathroom

Min. Common/Public Single-User Toilet Room as per ANSI & UFAS
with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door;
Maneuvering Clearances at all Fixtures & Door
(Side Door, Adjacent to Lav); & Grab Bar Locations

PT-11



6'-1½" x 7'-0"

- door maneuvering clearance is required both inside & outside of the bathroom

Min. Common/Public Single-User Toilet Room as per ANSI & UFAS with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to Lav); & Grab Bar Locations

PT-12