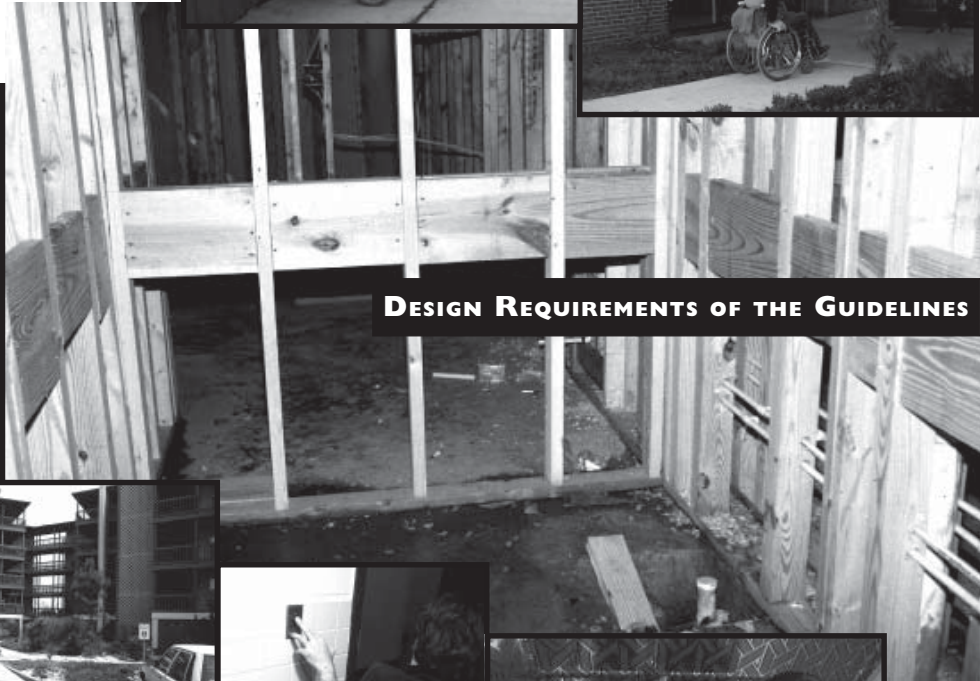


Part Two



DESIGN REQUIREMENTS OF THE GUIDELINES



Chapter One:

REQUIREMENT I

**Accessible Building Entrance
on an Accessible Route**



...covered multifamily dwellings shall be designed and constructed to have at least one building entrance on an accessible route unless it is impractical to do so because of terrain or unusual characteristics of the site.

Fair Housing Act Regulations, 24 CFR 100.205

Definitions from the Guidelines

Accessible route. A continuous unobstructed path connecting accessible elements and spaces in a building or within a site that can be negotiated by a person with a severe disability using a wheelchair, and that is also safe for and usable by people with other disabilities. Interior accessible routes may include corridors, floors, ramps, elevators and lifts. Exterior accessible routes may include parking access aisles, curb ramps, walks, ramps, and lifts. A route that complies with the appropriate requirements of ANSI A117.1 – 1986, a comparable standard, or Section 5, Requirement 1 of these guidelines is an “accessible route.” In the circumstances described in Section, 5, Requirements 1 and 2, “accessible route” may include access via a vehicular route.

Building. A structure, facility or portion thereof that contains or serves one or more dwelling units.

Building entrance on an accessible route. An accessible entrance to a building that is connected by an accessible route to public transportation stops, to parking or passenger loading zones, or to public streets or sidewalks, if available. A building entrance that complies with ANSI A117.1 – 1986 or a comparable standard complies with the requirements of this paragraph.

Entrance. Any exterior access point to a building or portion of a building used by residents for the purpose of entering. For purposes of these guidelines, an “entrance” does not include a door to a loading dock

or a door used primarily as a service entrance, even if nonhandicapped residents occasionally use that door to enter.

Finished grade. The ground surface of the site after all construction, levelling, grading, and development has been completed.

Site. A parcel of land bounded by a property line or a designated portion of a public right of way.

Slope. The relative steepness of the land between two points and calculated as follows: The distance and elevation between the two points (e.g., an entrance and a passenger loading zone) are determined from a topographical map. The difference in elevation is divided by the distance and that fraction is multiplied by 100 to obtain a percentage slope figure. For example, if a principal entrance is ten feet from a passenger zone, and the principal entrance is raised one foot higher than the passenger loading zone, then the slope is $1/10 \times 100 = 10\%$.

Undisturbed site. The site before any construction, levelling, grading, or development associated with the current project.

Vehicular or pedestrian arrival points. Public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks.

Vehicular route. A route intended for vehicular traffic, such as a street, driveway, or parking lot.

INTRODUCTION

The Fair Housing Accessibility Guidelines (the Guidelines) define covered multifamily dwellings as

1. those buildings consisting of four or more units if such buildings have one or more elevators and
2. ground floor units in other buildings having four or more units.

The Guidelines do not specify the total number of entrances a building must have nor where they must be positioned. However, the Guidelines do stipulate that each covered building on a site must have at least one accessible entrance on an accessible route. It is expected that most sites can and should be made accessible, i.e., an accessible route can be provided to entrances of covered dwellings; therefore, it is also expected that covered dwelling units will be provided on all building sites, including those where steep slopes, rock outcroppings, marshy areas, and similar conditions exist.

The requirements of the Fair Housing Act are outlined in the Act itself and in the implementing regulations issued by the U.S. Department of Housing and Urban Development (HUD). Section 100.205 (a) of these regulations states: “Covered multifamily dwellings for first occupancy after March 13, 1991, shall be designed and constructed to have at least one building entrance on an accessible route unless it is impractical to do so because of the terrain or unusual characteristics of the site.”

Requirement 1 of the Guidelines presents guidance on designing an accessible building entrance on an accessible route. Requirement 1 also provides tests to assist a developer of buildings that do not have one or more elevators to determine when an accessible entrance is impractical because

of extreme terrain or unusual characteristics of the site. See impracticality tests pages 1.40 through 1.55. Units where entrances are impractical do not have to meet the other design requirements; the tests, therefore, can alter the number of units on a site that must comply.

The language of the Fair Housing Act itself does not provide an exception for site impracticality; however, as HUD notes in the preamble to its regulations, “the legislative history makes it clear that Congress was ‘sensitive to the possibility that certain natural terrain may pose unique building problems.’”⁶ In applying the site impracticality tests, architects and builders should keep in mind that in enforcement proceedings under the Fair Housing Act, it is the person(s) who designed and constructed the building(s) who has the burden of establishing that site impracticality existed.

Accessible routes and accessible entrances may occur in the course of any design project. They also may not occur and be expensive to include later if a careful approach to site design is not conducted. Deliberate manipulation of the grade to avoid the requirements of the Fair Housing Act is regarded as a discriminatory housing practice and must be avoided. This chapter offers methods and strategies to assist designers and builders to more efficiently provide accessible entrances and routes for all sites.

⁶House Report No. 100-711, page 27

EARLY PLANNING FOR ACCESSIBLE ROUTES AT ENTRANCES

The language of the Fair Housing Act requires covered multifamily dwellings to be **designed** and constructed in a manner that incorporates certain features of accessible and adaptable design. The Act specifically includes the design process, thereby recognizing that changes will need to be made in the way buildings are designed in order to assure accessibility.

Planning for accessibility should be an integral part of the design process in multifamily housing developments. This is particularly crucial in the early stages of planning when major decisions are being made about the overall design of the site. The location and orientation of buildings, parking areas, loading zones, and other elements have a major impact on the ease with which accessibility can be achieved in a finished development. This is especially important on sloping sites where careful initial planning can eliminate the need for major earthwork and the construction of elaborate ramps, bridges, lifts, or elevators to provide accessibility.

Attempts should be made to set the entrance floor levels of buildings at or close to ground levels to eliminate or minimize changes in level that may require steps or ramps. Often this may be accomplished by making use of fill dirt which has been excavated from other parts of the building site to alter the ground levels at appropriate places.

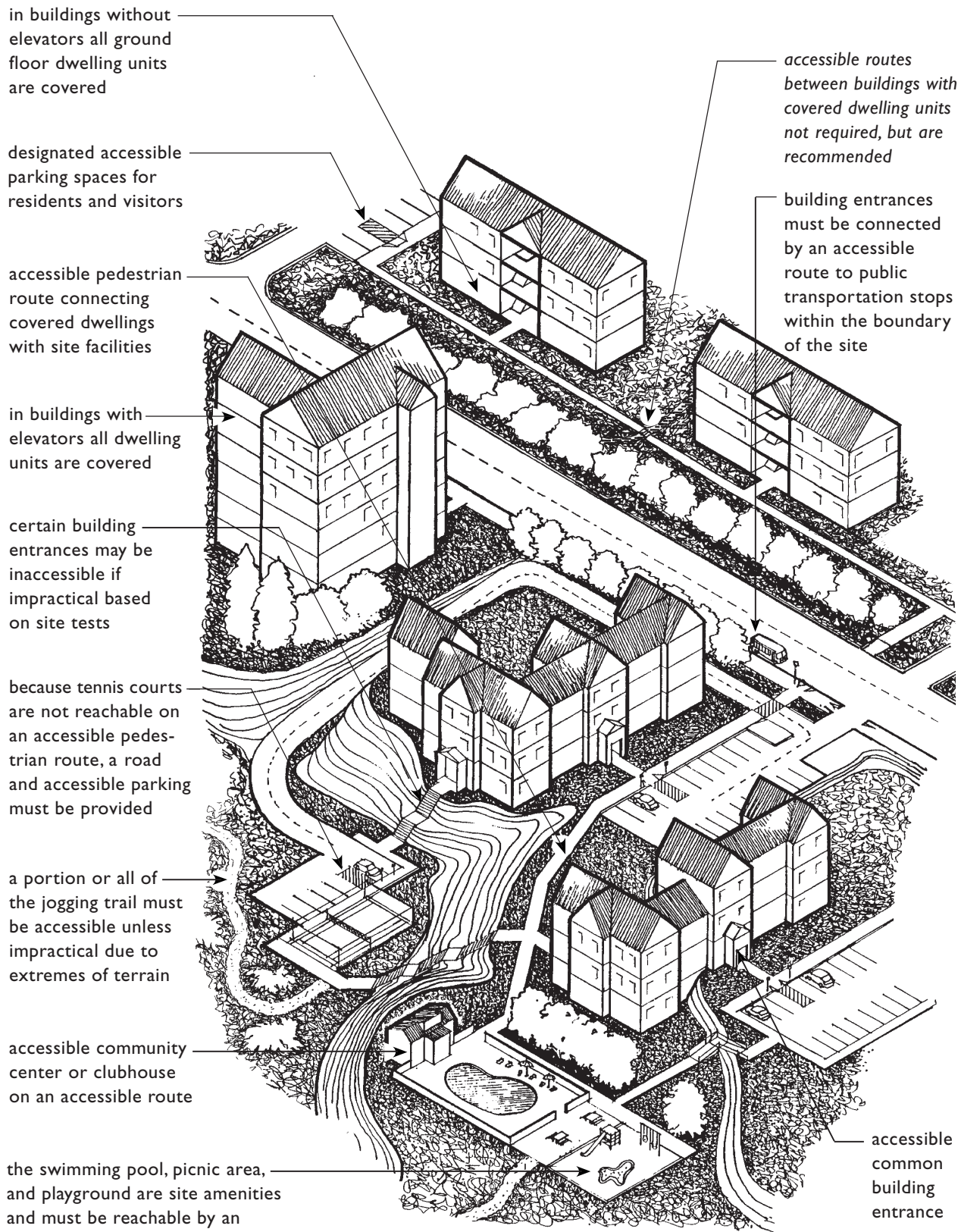
Since people generally arrive at buildings by a private car, bus, or taxi, the location of vehicle arrival points is critical. Passenger drop-off points and parking areas for people with disabilities

should be located close to building entrances and at levels which do not necessitate climbing steep slopes to reach the entrance floor level.

The path of travel to and placement of site amenities, such as outside mailboxes, refuse disposal areas, swimming pools, clubhouses, and sports facilities should be given careful consideration early in the planning process. The intent of the Fair Housing Act is that people with disabilities be able to reach and use such amenities.

In this manual, the ANSI Standard A117.1 - 1986 is referenced as the accessibility standard for compliance in much of public and common use space of multifamily housing developments. The Guidelines themselves cite the ANSI A117.1 - 1986 Standard (*the American National Standard for Buildings and Facilities – Providing Accessibility and Usability for Physically Handicapped People*). Although referenced, the ANSI specifications are not mandated. Any ANSI citation in this manual refers to the 1986 ANSI A117.1 Standard and should be understood to mean that compliance with ANSI or any other similar accessibility standard that is equal to or more stringent than the ANSI A117.1 (1986) Standard would fulfill the requirements of the accessibility provisions of the Fair Housing Act.

ACCESSIBLE BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE



Careful Site Analysis and Building Placement in the Planning Stage of a Housing Development Makes Accessible Entrances Easier to Provide

WHAT IS AN ACCESSIBLE ROUTE ?

An accessible route is a continuous, unobstructed path through sites and buildings that connects all accessible features, elements, and spaces. It is the critical element that allows the successful use of any site or building by a person with a disability. Such a route is safe for someone using a wheelchair or scooter and also is usable by others.

Accessible routes on a site may include parking spaces, parking access aisles, curb ramps, walks, ramps, and lifts. Accessible routes within buildings may include corridors, doorways, floors, ramps, elevators, and lifts. Specifications for accessible routes are found in ANSI 4.3. Certain elements of accessible routes which must be given careful attention are:

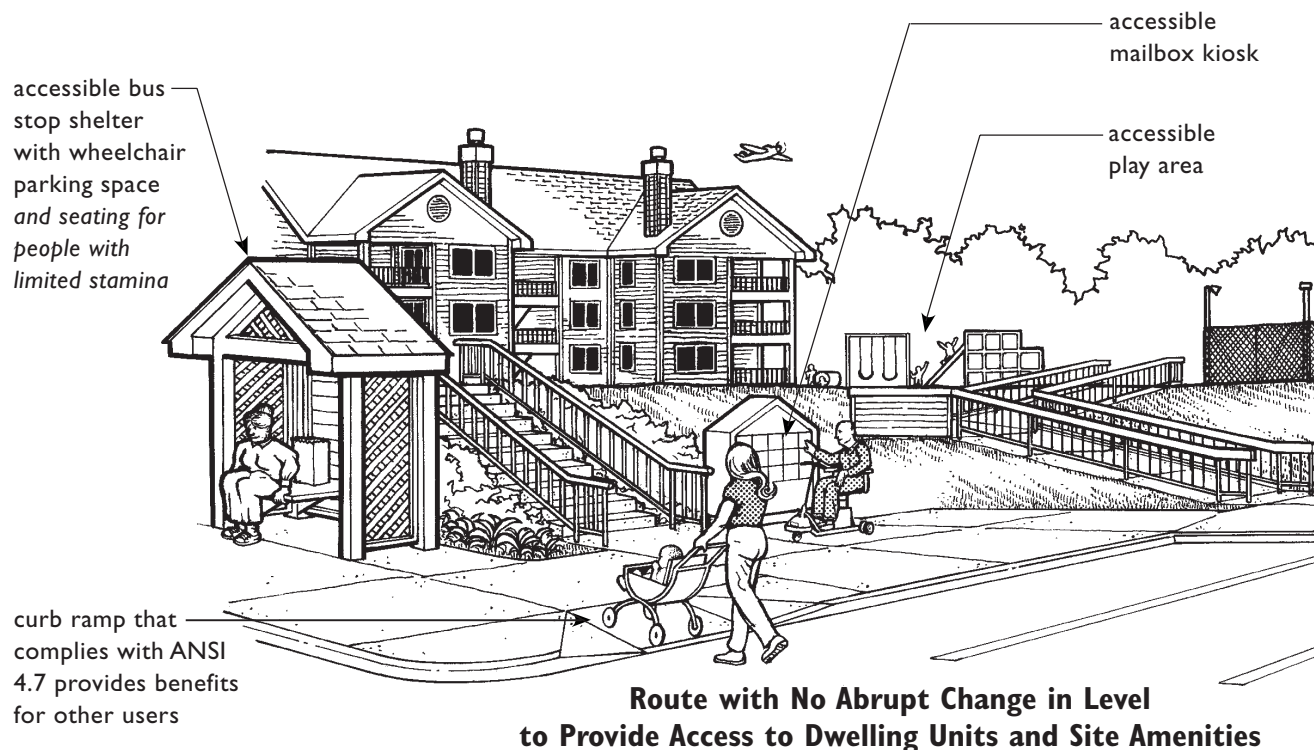
- width of route
- slope of route
- ground and floor surfaces
- cross slope
- headroom
- curb ramps
- protruding objects
- lift/elevator design

These elements are discussed in detail in Part Two, Chapter 2.

Stairs and Accessible Routes

Stairs are not an acceptable component of an accessible route because they prevent use by people using wheelchairs and others who cannot climb steps. ANSI specifications for accessible stairs (4.9) make stairs safer and more usable by mobility impaired people who can climb stairs.

accessible routes must connect covered dwelling units with accessible site facilities (and at least one of each type of recreational facility when more than one of each is provided at any location)

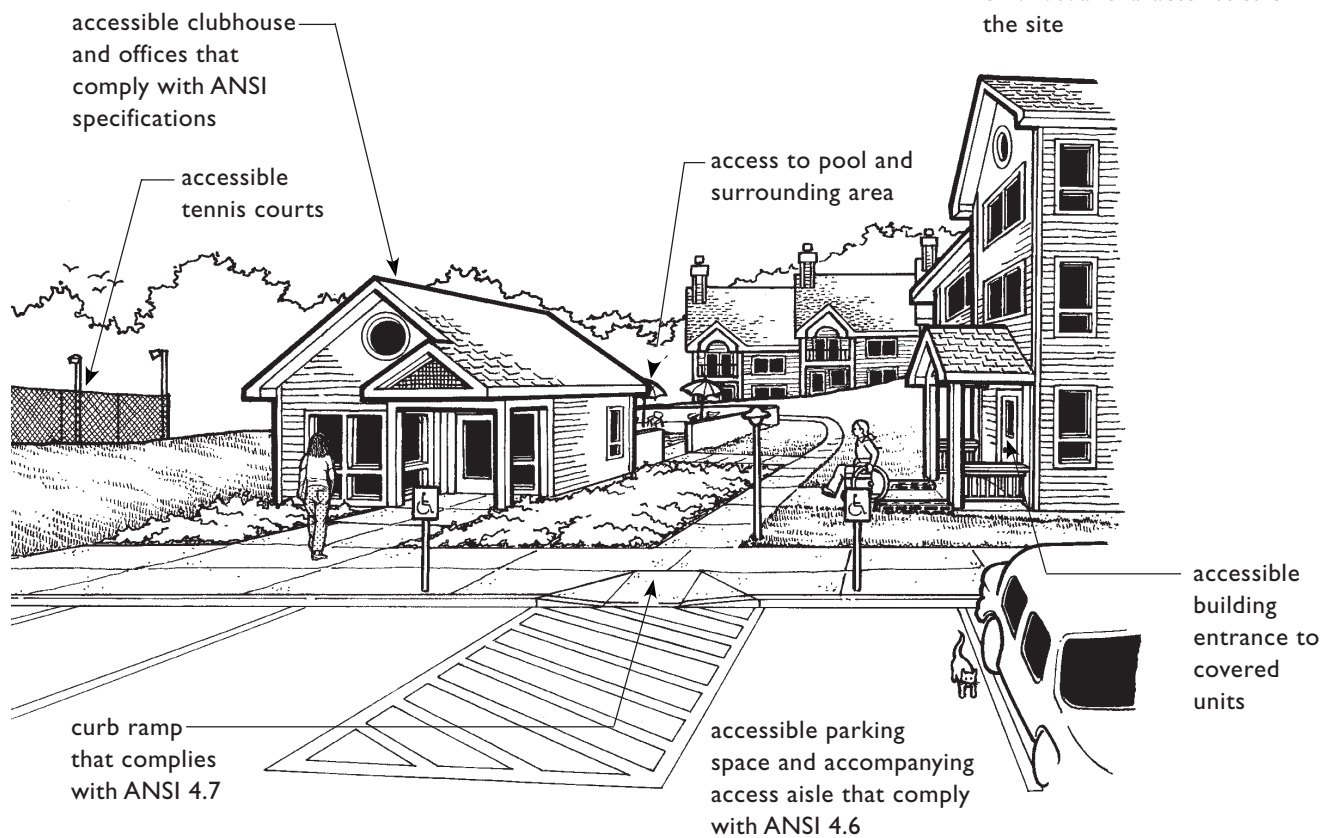


When stairs are installed along routes that are required to be accessible, there must be an alternative way to get between levels. If the alternative way is an elevator or lift, the stairs do not need to comply with ANSI 4.9. If the alternative way is a ramp, the stairs must comply with ANSI 4.9. When an accessible route consists of both a ramp and stairs, it is best if they are located in close proximity so people who can use only one of the two (such as the ramp), need not travel an unreasonable additional distance.

Walks on Accessible Routes

Walks that are part of accessible routes become ramps when their slope exceeds 5% (1 in 20). Handrails are not required on walks with slopes between 0% and 5%, but they are required on those steeper than 5% and up to 8.33% (1 in 12). Slopes steeper than 8.33% are not usable by most people with disabilities and cannot be considered part of an accessible route. Handrail requirements for walks differ, depending upon which buildings the walks connect. This is addressed in the following sections.

each building on site must have at least one building entrance on an accessible route unless prohibited by extreme terrain or unusual characteristics of the site



WHERE ARE ACCESSIBLE ROUTES REQUIRED ON SITES?

Accessible Route from Site Arrival Points to Accessible Building Entrances

The Guidelines require that an accessible route be provided from public transportation stops, accessible parking spaces, accessible passenger loading zones, and public streets or sidewalks to accessible building entrances unless it is impractical to do so as determined by application of the site tests specified in Requirement 1 (site impracticality due to terrain or unusual site characteristics, see page 1.38). Because these walkways are required to be accessible, handrails, as per ANSI, must be provided when the slope of the walk is between 5% (1 in 20) and 8.33% (1 in 12).

Accessible Routes and Walks Between Accessible Buildings and Site Facilities

The Guidelines require accessible routes to connect buildings containing covered dwelling units (those with one or more elevators and ground floors of other buildings, except two-story townhouses) and accessible facilities, elements, and spaces on the same site. The Guidelines do not require accessible routes, walks, or paths between buildings containing only covered dwelling units unless the route is also part of a required accessible route. For example, if a building also contains a facility such as a laundry that is shared by two buildings, then an accessible route must be provided between the two buildings.

If no portion of the finished grade of a route between two buildings that contain only dwelling units exceeds 8.33% (1 in 12), it is

recommended that the route be made accessible. Such voluntary accessible walks must meet the same specifications as an accessible route except that handrails, commonly required on accessible routes when their slope exceeds 5% (1 in 20), are not required.

Accessible Site Facilities on Accessible Routes

The Guidelines require accessible and usable public and common use areas. All facilities, elements, and spaces that are part of public and common use areas must meet ANSI 4.1 through 4.30 and must be on an accessible route from covered dwelling units. Such facilities might include outside mailboxes, site furnishings, outside storage areas, refuse disposal areas, playing fields, amphitheaters, picnic sites, swimming pools and sun decks, tennis courts, clubhouses, playgrounds, gazebos, parking areas, sidewalks, and all or part of nature trails and jogging paths.

Where multiple recreational facilities of the same type are provided at the same location on the site (e.g., tennis courts), not all but a “sufficient” number of the facilities must be accessible to ensure an equitable opportunity for use by people with disabilities. Whenever only one of a type of recreational facility is provided at a particular location on the site, it must be accessible and connected by an accessible route to the covered dwelling units. (See Chapter 2: “Accessible Public and Common Use Spaces.”)

**Use of Vehicles for
Access to Site Facilities**

When the finished grade exceeds 1 in 12 or other physical barriers (natural or man made) or legal restrictions, all of which are outside the control of the owner, prevent the installation of an accessible pedestrian route between covered dwellings and some public or common use site facilities; the Guidelines allow for automobiles to be used for access if certain conditions are met. When such a vehicular route is used as an alternative method to achieve accessibility:

1. the required parking at covered dwelling units must be provided, and
2. an appropriate number of additional accessible parking spaces on an accessible route must be

provided at each facility that is otherwise unreachable by means of an accessible pedestrian route. For a complete discussion of parking requirements, see Chapter 2: “Accessible and Usable Public and Common Use Areas.”

Careful planning and strategic location of accessible parking spaces and curb ramps around dwelling units and amenities will help give continuity between vehicular and pedestrian accessible routes. Accessible parking spaces and curb ramps are recommended at all on-site amenities to give residents choices in how to reach them, even those served by accessible pedestrian routes. This is especially important where accessible routes are very long and where parts or all of the route have maximum allowable slopes of 1 in 12 (1:12), which are difficult or impossible for many people to use.



**In Some Circumstances,
Site Access by Vehicle May Be Acceptable**

ACCESSIBLE ENTRANCES

All buildings containing covered dwelling units and separate buildings containing public and common use spaces, such as clubhouses, must have at least one accessible building entrance on an accessible route, unless it is impractical to do so as determined by applying the site impracticality tests provided in the Guidelines; see pages 1.38 through 1.58. Entrances into individual dwellings on an interior accessible route are referred to in the Guidelines as “entries.” These entries and the entries to dwelling units having separate exterior ground floor entrances will be discussed in Chapter 3: “Usable Doors.” The Guidelines establish three requirements for an accessible building entrance.

Accessible Building Entrance on an Accessible Route

The building entrance must be connected by an accessible route to public transportation stops, to accessible parking and passenger loading zones, and to public streets or sidewalks.

Primary Use

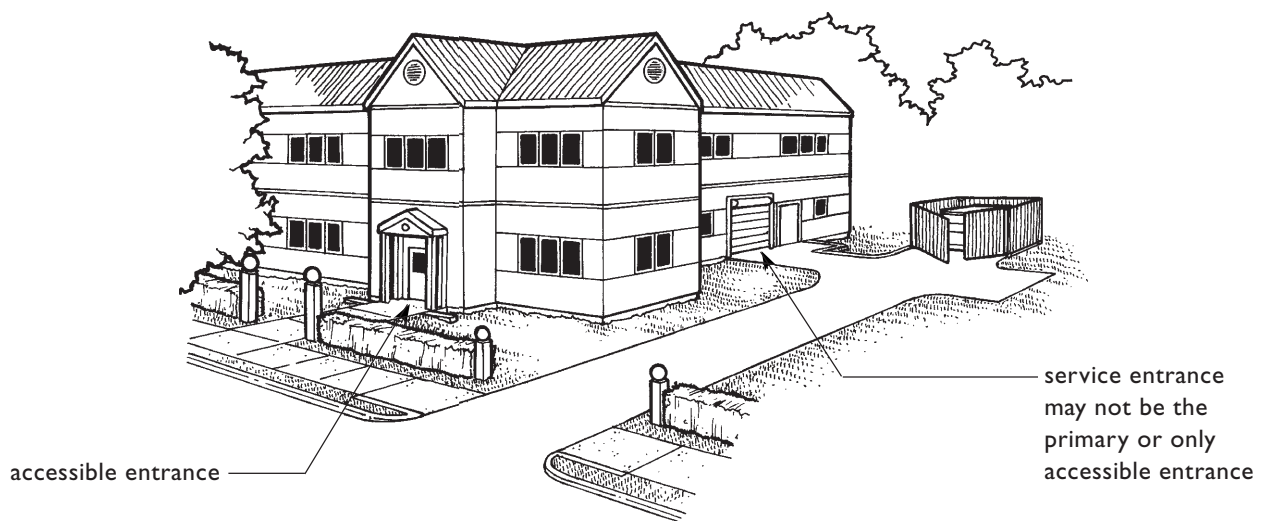
The accessible (common use) entrance must be one which is typically used by residents and/or guests for the purpose of entering the building. Service doors or loading docks cannot serve as the only accessible entrance to buildings, even if residents occasionally use such a door for entering the building.

Building Entrance Design Features

The entrance door itself must be usable by people with disabilities. Detailed specifications to achieve this are given in ANSI 4.13. Accessible building entrances are considered public and common use spaces and, unlike unit entrances, must meet the ANSI requirements on both sides of the door; see the next page.

Main factors which must be addressed are:

- minimum clear width of open doorway 32 inches,
- low or no threshold,
- clear maneuvering space inside and outside the door,
- force needed to open the door,
- accessible door hardware, and
- safe door closing speed.



Accessible Primary Use Entrance

good general illumination

weather protection

high intensity lighting focused at locks for people with low vision

color contrast between door and frame

clear, readable, high contrast signage

door closer with safe sweep period (ANSI 4.13.10)

view window (or wide angle peep hole in door)

lever or other easy-to-use door hardware (ANSI 4.13.9)

maneuvering space next to latch side of door (ANSI 4.13.6)

clear width of open doorway min. 32" (ANSI 4.13.5)

low force to open door (ANSI 4.13.11)

adequate slope to prevent ice build-up

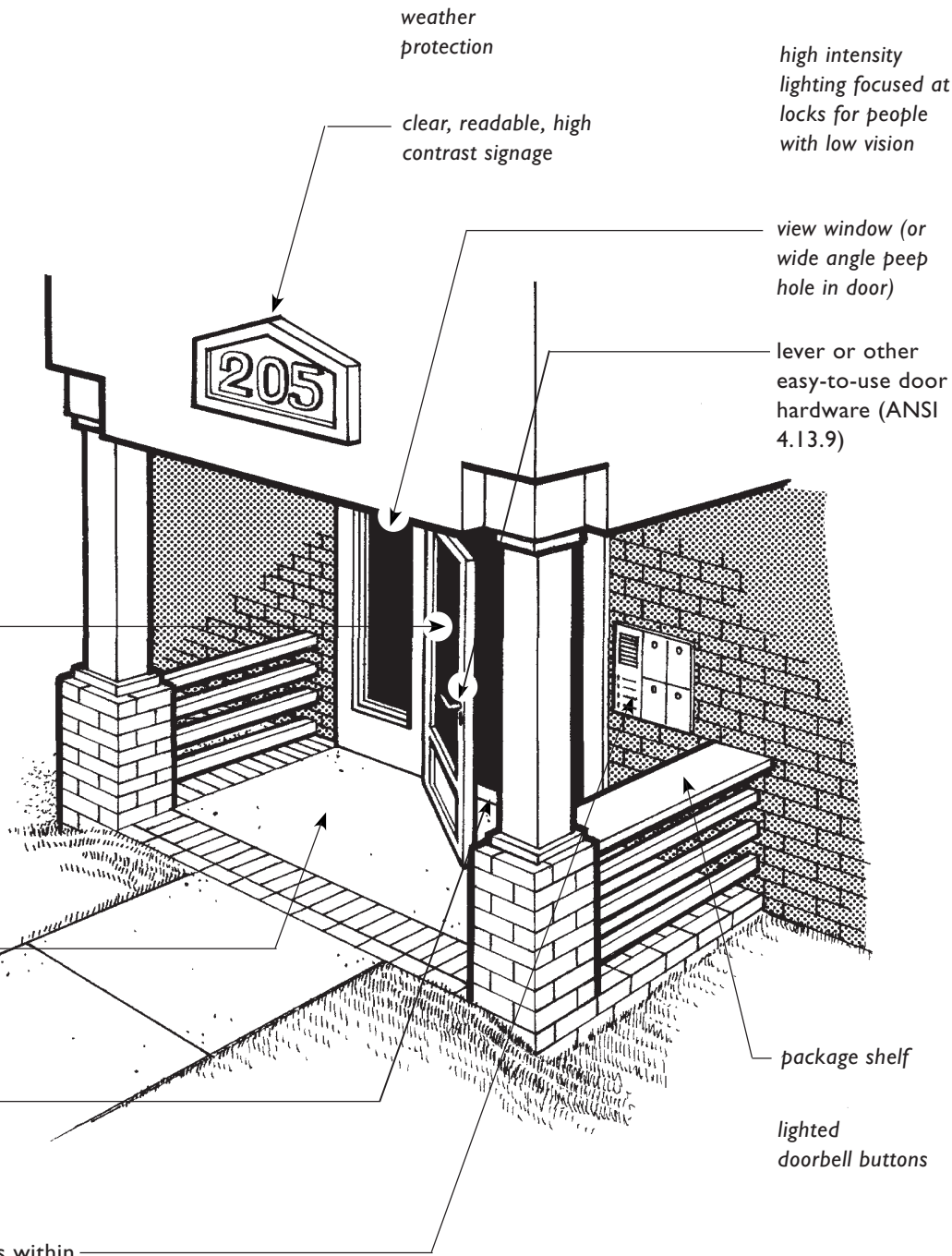
package shelf

low or no threshold (ANSI 4.13.8)

lighted doorbell buttons

Call and mail boxes within reach of a seated person.

Call boxes should be equipped with both visual and audible signals so as to be usable by both hearing and non-hearing people.



Design of Accessible Building Entrances

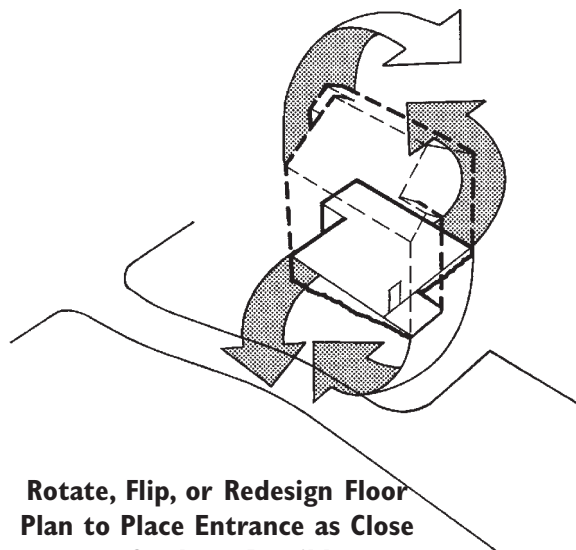
Notes in italic type are recommendations only and are not required by ANSI or the Guidelines. All recommended features are helpful to people with and without disabilities.

SITE PLANNING FOR ACCESSIBLE ENTRANCES ON ACCESSIBLE ROUTES

The ease of establishing an accessible route at building entrances can be radically affected by the type of construction used and the placement and positioning of the building on the site. These factors should be considered along with others essential to successful early planning and design of a housing complex.

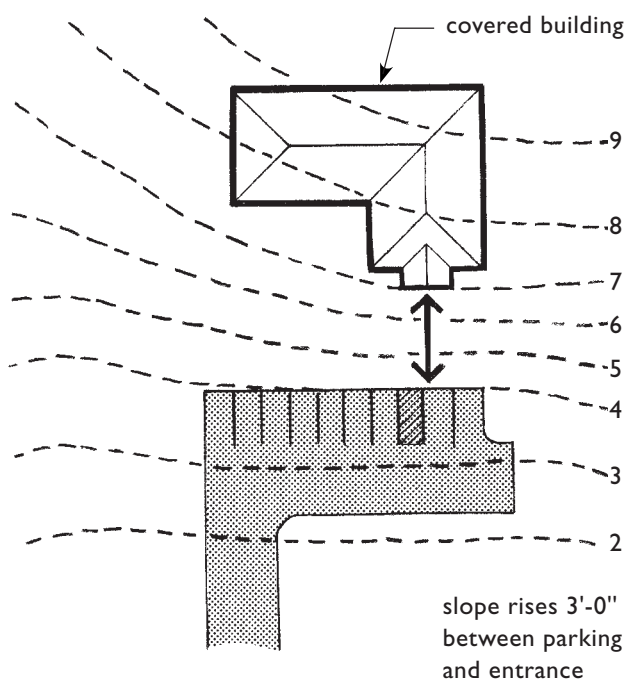
Careful Building Placement

Regardless of the type of construction, the way in which a building is located on a site will affect accessibility at entrances. If entrances exist at locations where the floor level is close to the ground, accessibility will be easier and less expensive to provide. Sometimes plans can be rotated or flipped to bring entrances closer to grade. Entrances and

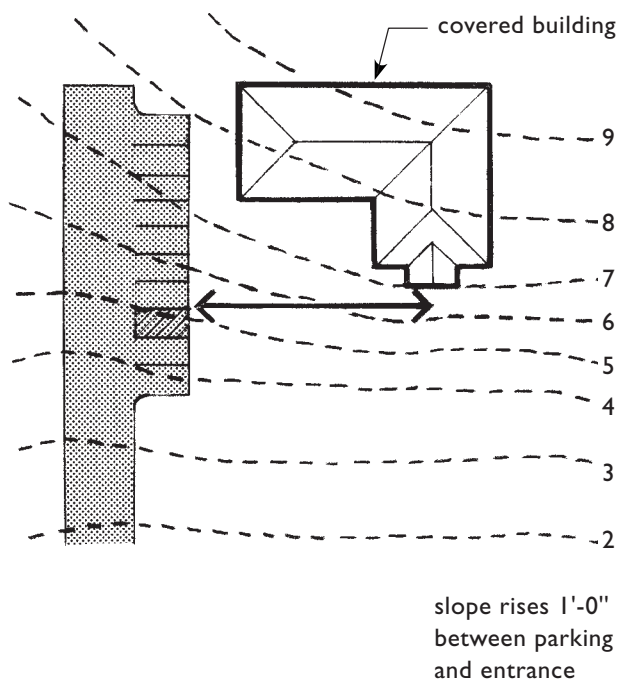


Rotate, Flip, or Redesign Floor Plan to Place Entrance as Close to Grade as Possible

parking often can be relocated to maximize use of existing grades. In some cases, the best solution is to redesign the proposed floor plan to place entrances at or as near grade as possible.



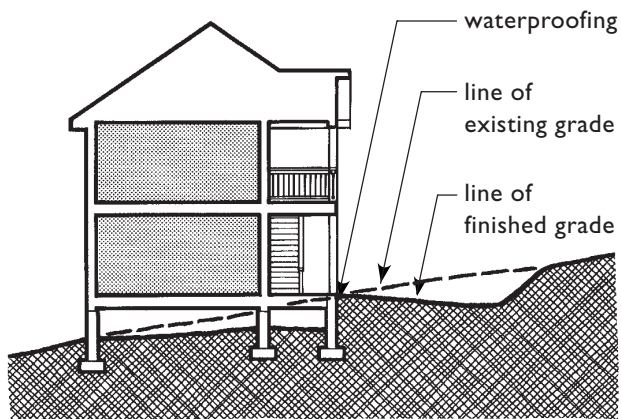
Current Position of Parking Lot Makes Accessible Route Difficult or Impossible to Provide



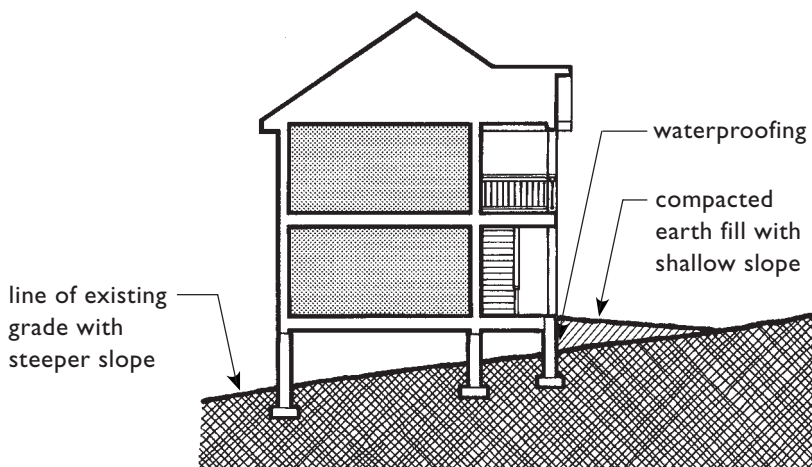
Reorientation of Parking Area to Achieve Accessible Route

Earthwork and Site Grading

It is often possible to create accessible routes to entrances by means of earthwork and the grading of sites. On sloping sites, fill can be added or the land can be cut and graded to place the building entrance at ground level.



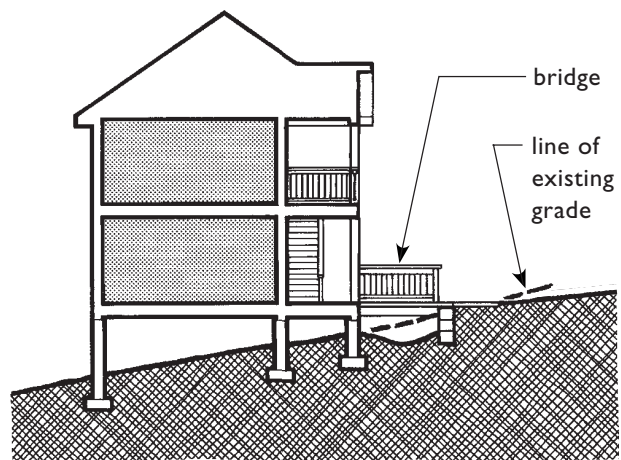
Earth Cut Site Grading



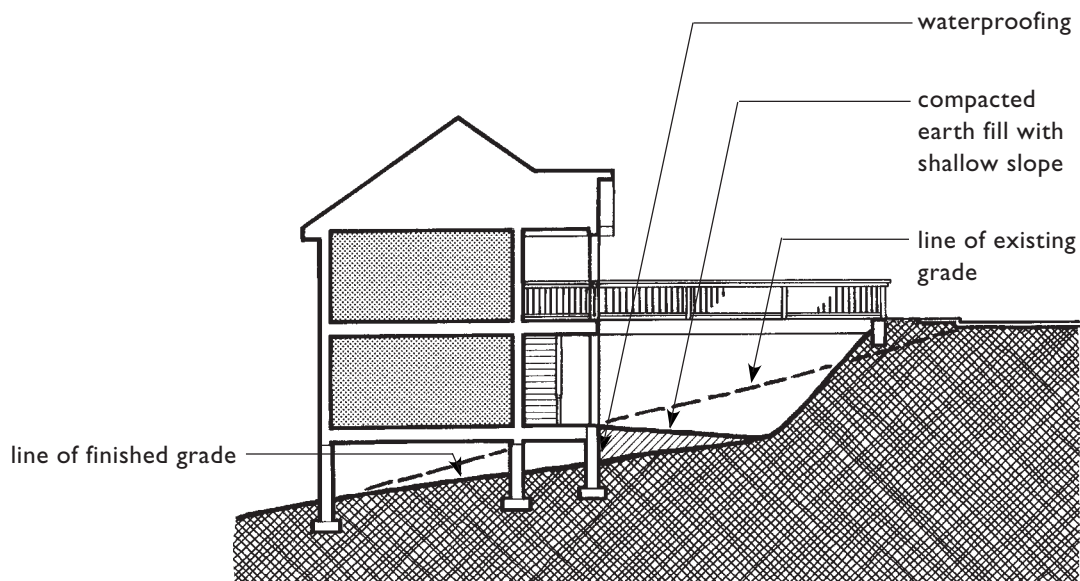
Earth Fill at Entrance

Bridges and Elevated Walks

Bridges or elevated walkways may be a good solution to providing an accessible route to an entrance on a sloping site, particularly where the building is approached from an uphill location. Combinations of techniques can be used on some sites to provide accessible entrances on more than one level. Bridges usually can be made level and thus easy and safe for everyone.



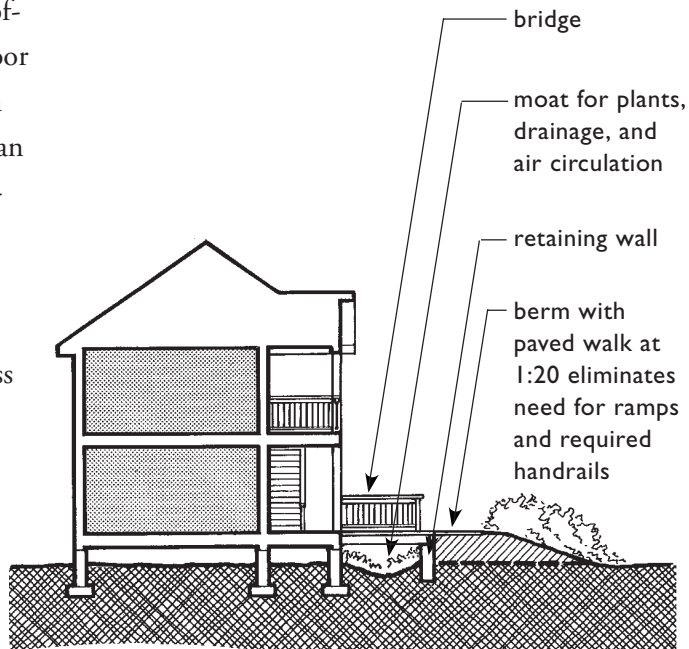
Bridges to Uphill Locations on Sloping Sites



Combination Earth Cut and Accessible Bridge/Walk to Entrances

Earth Berms and Bridges

On flat or irregular sites an accessible route to an above grade entrance might be created by providing a low retaining wall, an earth berm, and a bridge. There are several advantages to this method. The retaining wall is held several feet away from the foundation forming a moat that allows drainage and ventilation to occur at the foundation and eliminates the need for additional waterproofing. The bridge from the retaining wall to the floor of the building can be level. The sloping walk on the berm, if kept flush with the earth and less than 1:20 slope, will not require handrails, thus eliminating the awkward sloping appearance of access ramps and their handrails. Plants on and around the berm and in the moat create an attractive landscaped garden entrance rather than an “access ramp.”

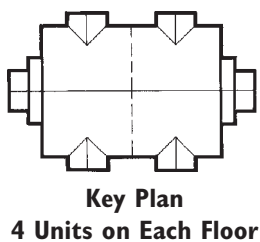
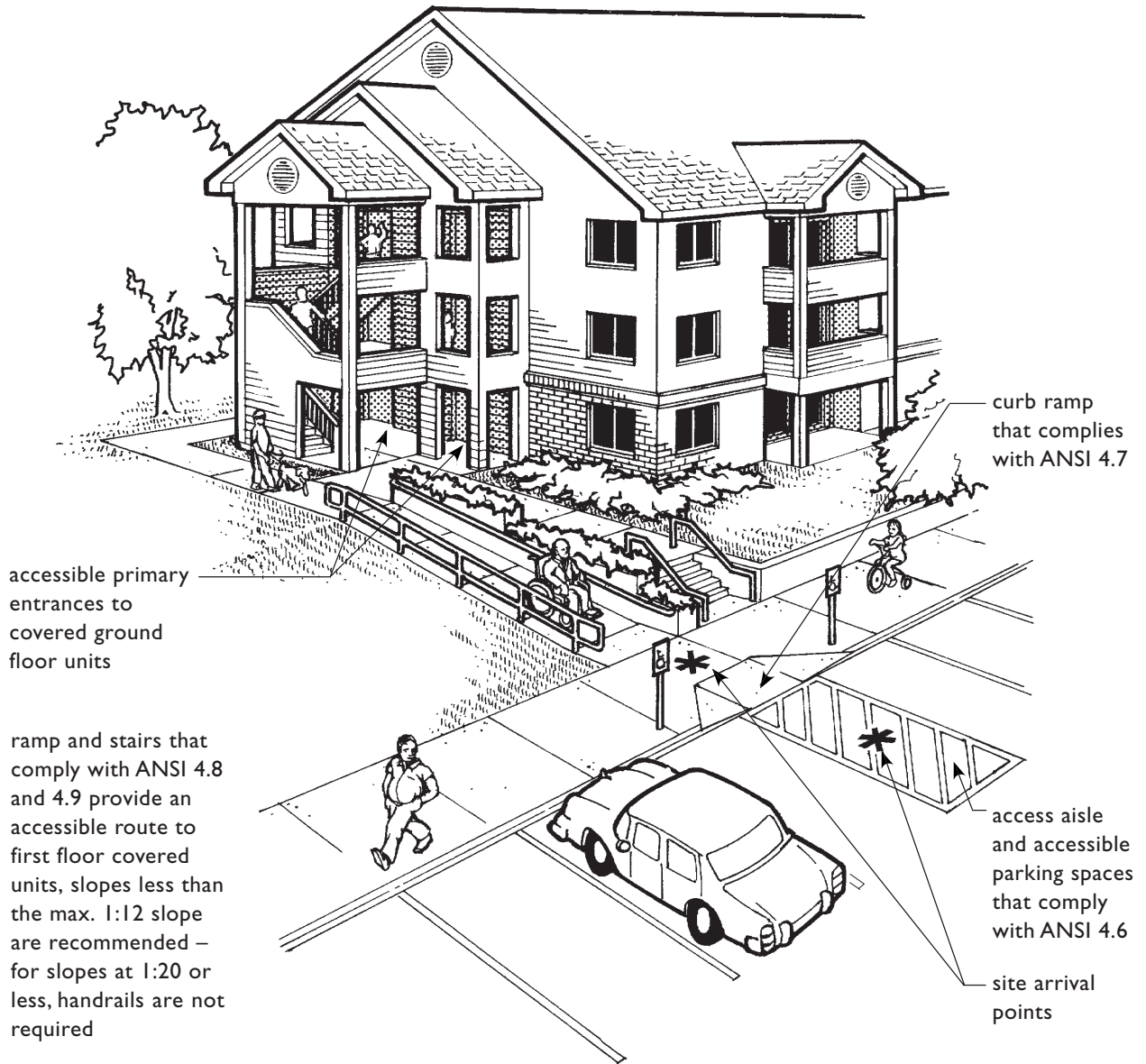


Earth Berm and Bridge

ACCESSIBLE BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE

In this site configuration a ramp provides the accessible route from several possible site arrival points to the building entrance. Often a ramp can be combined with stairs and a planter to create attractive entrances that serve the needs of a wide range of people.

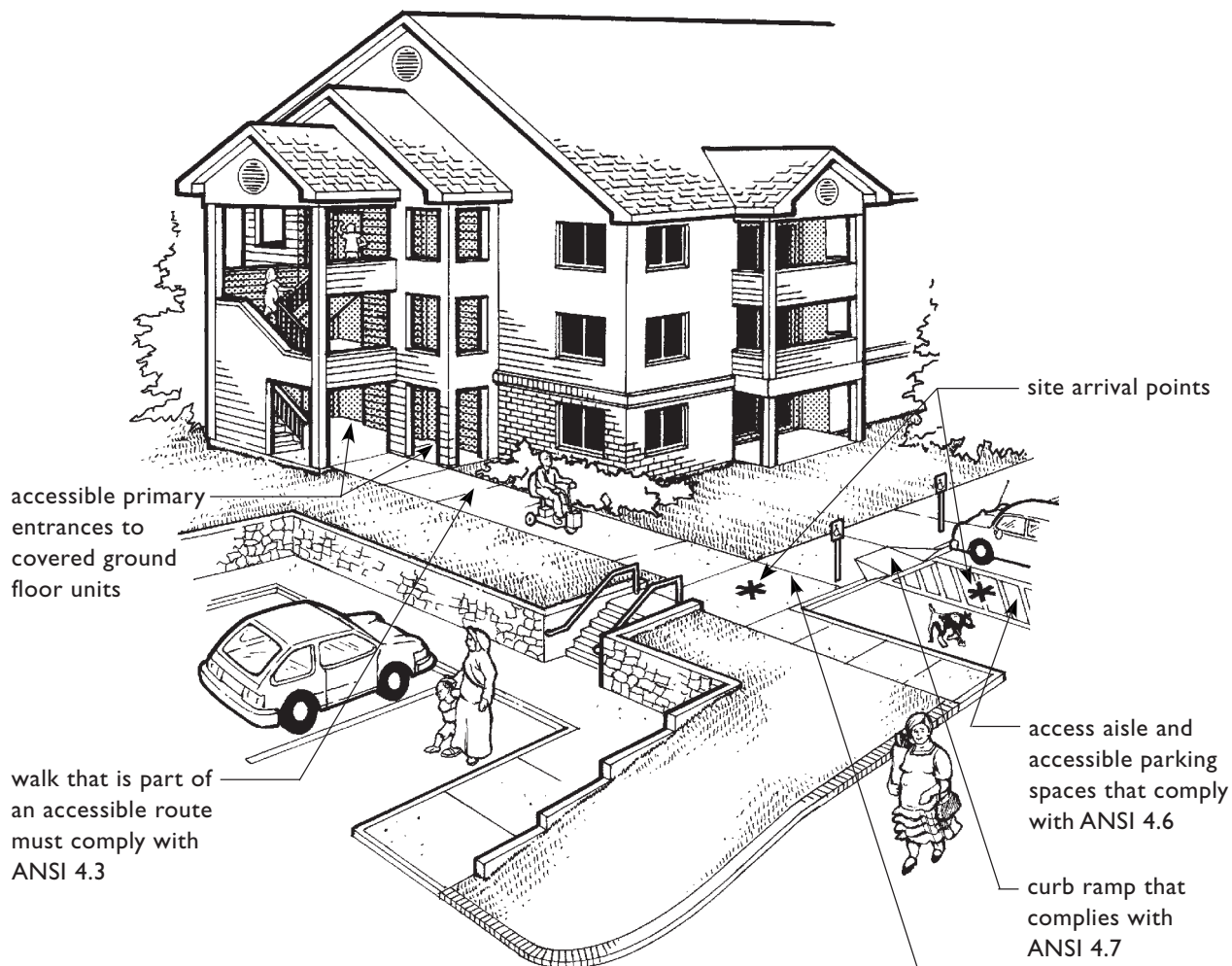
ground floor units are covered in this building without elevator(s)



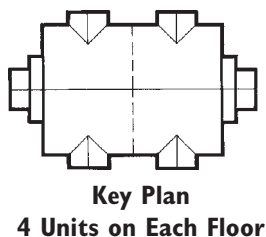
**Site Grading
with Combined Ramp and Stairs
to Create Access to First Floor Units**

In this site configuration the parking for the building is divided between two levels, with the accessible parking provided on the upper level. This solution creates the possibility of an accessible route, with little or no slope, to the building entrance and may reduce the required amount of earthwork necessary for a larger parking lot on the upper level that would serve the entire building.

buildings without one or more elevators, only ground floor units are covered



Earthwork and Site Grading to Achieve Access to Ground Floor Units



accessible route, that complies with ANSI 4.3, from upper level site arrival point to first floor units

ACCESSIBLE BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE

In this site configuration a combination of level walkway and bridge is used to create an accessible route to the units on the second floor. On such sloping sites, bridges can provide convenient, safer, and direct access to the upper level.

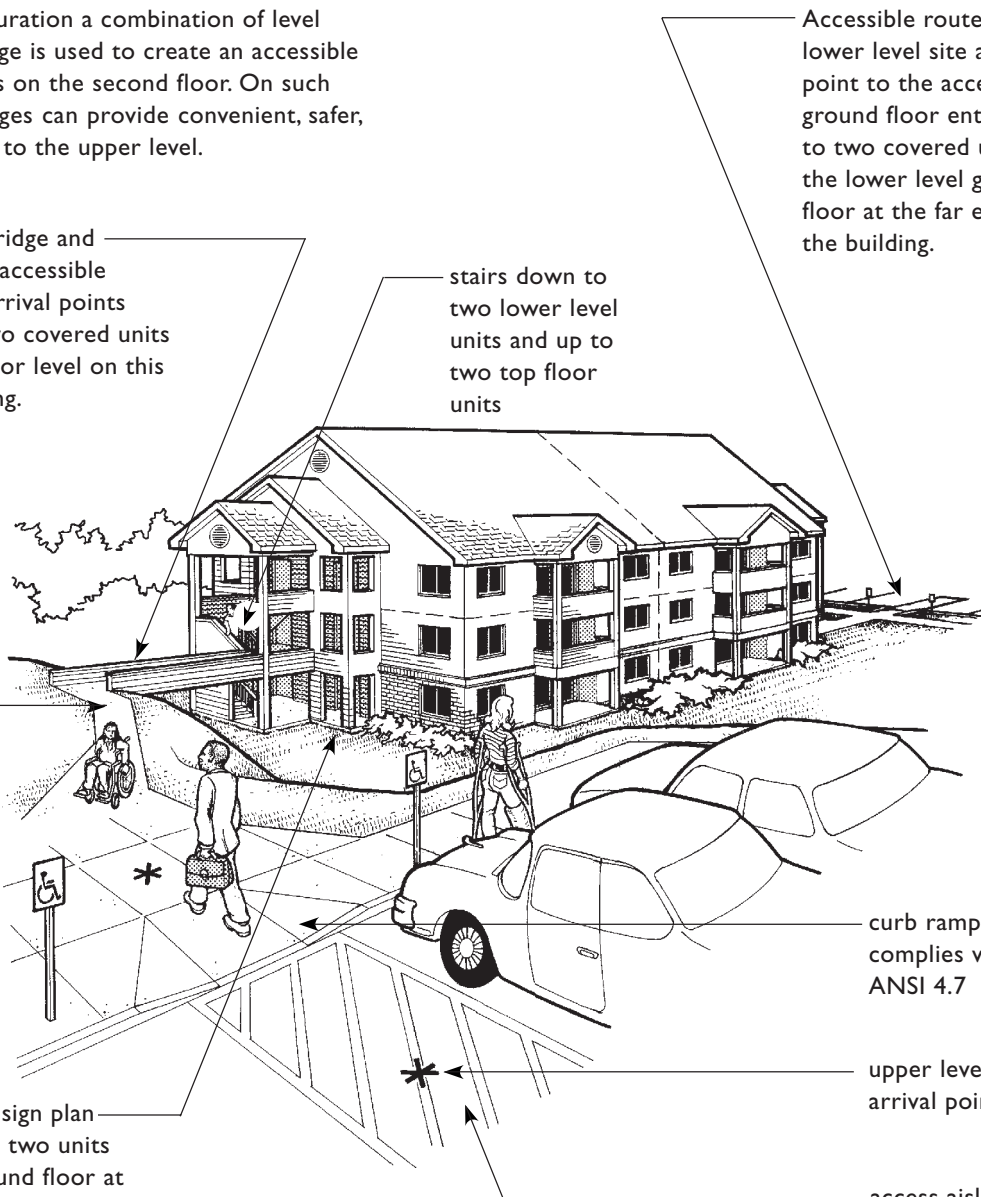
Access by level bridge and walk provides an accessible route from site arrival points to entrance of two covered units on the second floor level on this side of the building.

stairs down to two lower level units and up to two top floor units

Accessible route from lower level site arrival point to the accessible ground floor entrances to two covered units on the lower level ground floor at the far end of the building.

this walk is part of an accessible route and must comply with ANSI 4.3

If the resulting design plan was such that the two units on the lower ground floor at the near end of the building were on an accessible route, those units would also be covered.



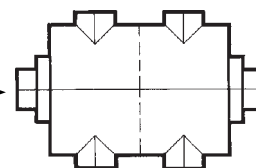
curb ramp that complies with ANSI 4.7

upper level site arrival point

access aisle and accessible parking that comply with ANSI 4.6

Bridge to Achieve Access to Second Floor Units

this building has four dwelling units on each floor with separate unit entrances and stairs at each end

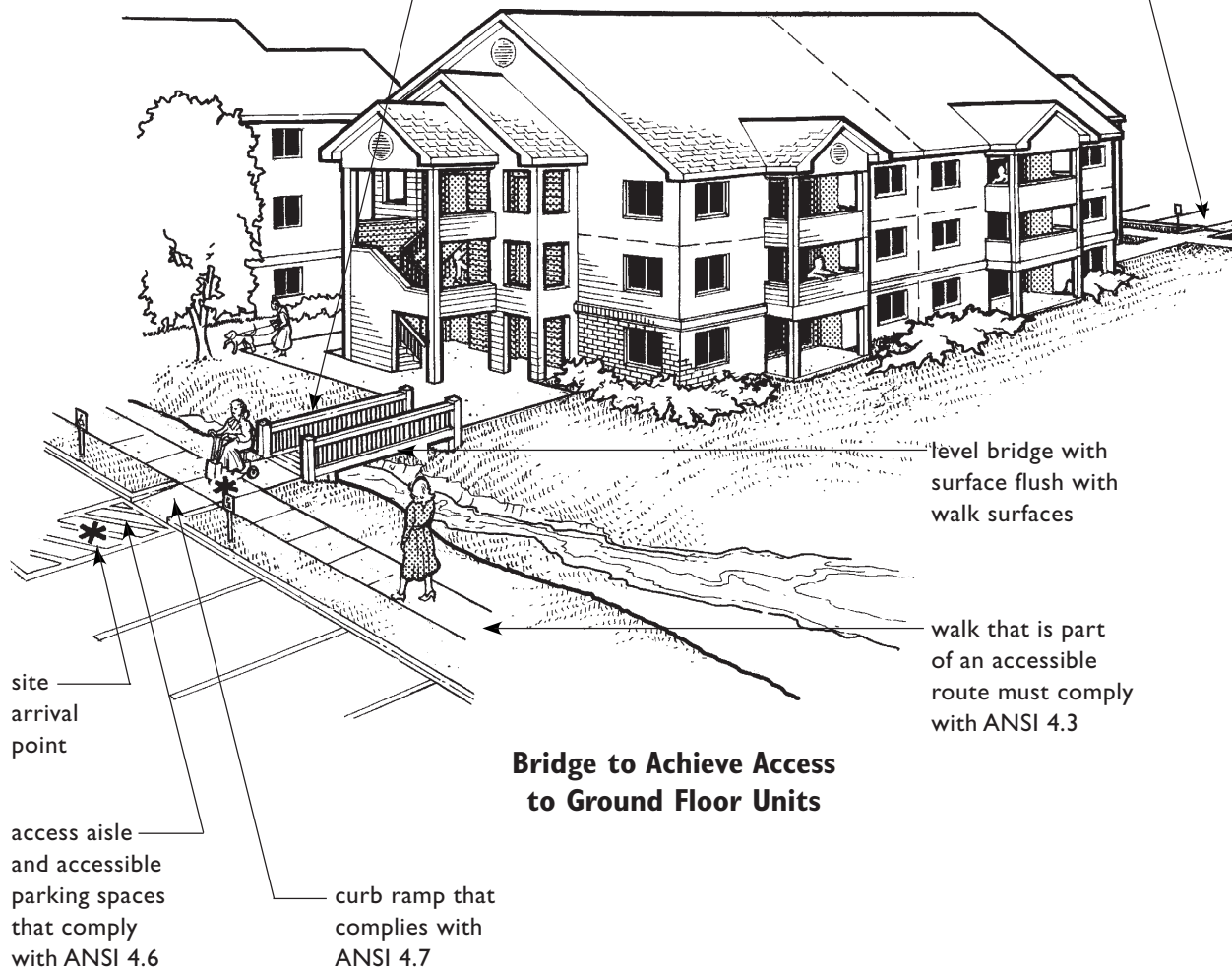


**Key Plan
4 Units on Each Floor**

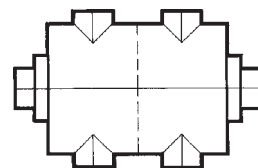
In this site configuration an ordinary site feature, a bridge over a stream, has been integrated with a level walkway to create an accessible route to the ground floor units of the building.

access by level bridge and walk provide an accessible route from site arrival points to primary entrances to two ground floor covered units at the near end of the building

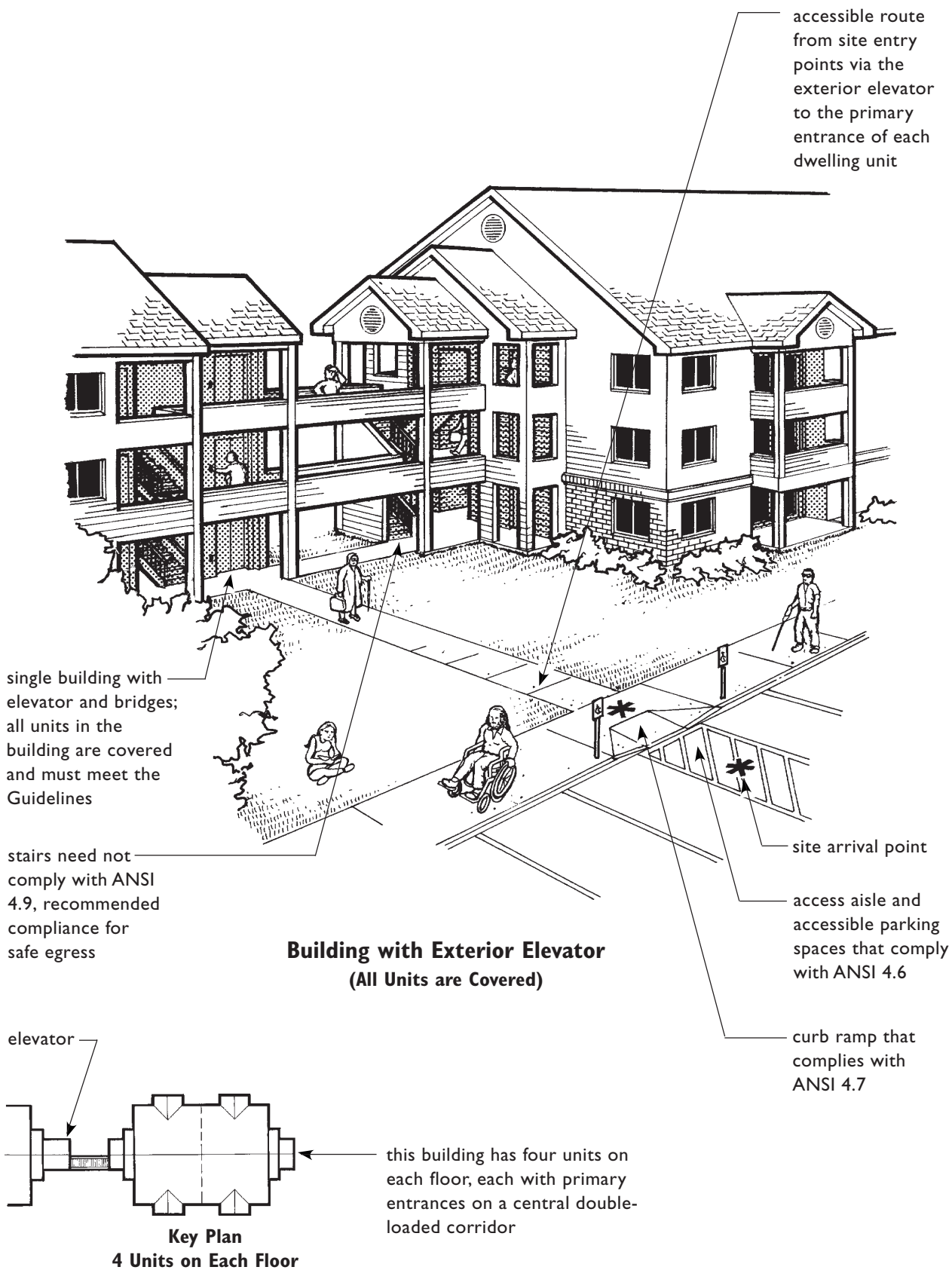
accessible route from site arrival point to accessible primary entrances to two ground floor units at the far end of the building



Bridge to Achieve Access to Ground Floor Units



**Key Plan
 4 Units on Each Floor**



COVERED DWELLING UNITS AND THEIR ACCESSIBLE ENTRANCES

In buildings containing multiple dwelling units, common use exterior entrances and individual exterior entrances to ground floor units are required by the Guidelines to be accessible, unless it is impractical to do so as determined by one of the site impracticality tests discussed in the next section on pages 1.38 through 1.58.

It is expected that all multifamily buildings will have covered dwelling units. However, the configuration of the building; the location of the entrances; the determination of which is the ground floor(s) (there can be more than one); the placement, origin, and destination (range) of elevators; and site impracticality will affect which units in multifamily buildings are covered and where or how accessible entrances are provided. This section of the manual discusses coverage and accessible exterior entrances in

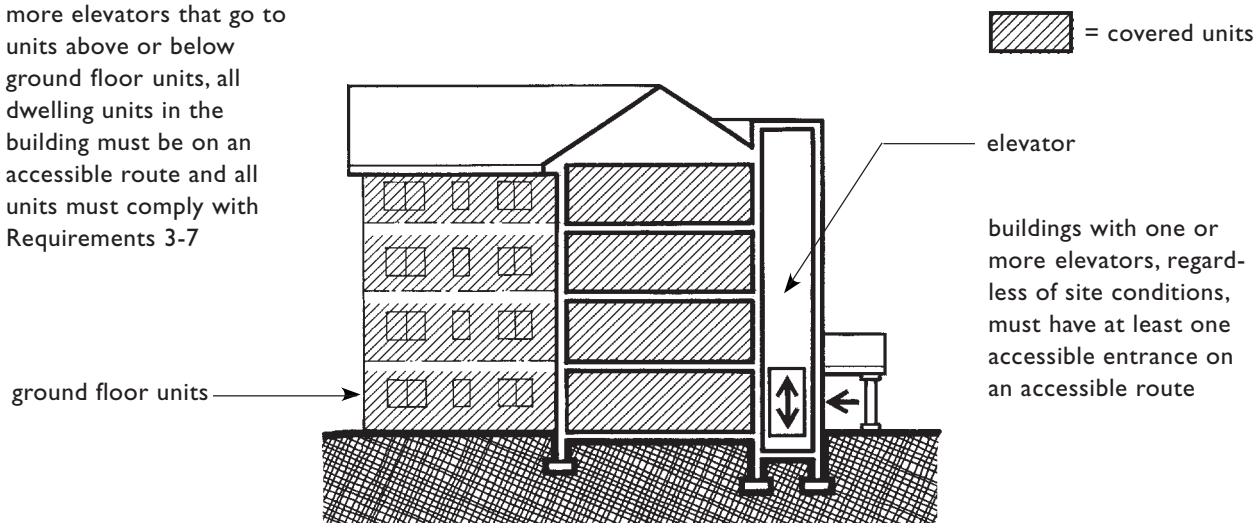
1. buildings having one or more elevators,

2. buildings with separate ground floor entrances to dwelling units, and
3. buildings with common entrances.

Entrances to covered dwelling units from interior halls, corridors, or accessible common use spaces are discussed in Chapter 3: “Usable Doors.”

Based on the legislative history of the Fair Housing Act, it is expected that **only** extreme conditions of a site may make it impractical to provide an accessible route to entrances of some covered dwelling units. The Guidelines allow, in some instances, the number of covered units to be reduced where such impracticality can be demonstrated. Requirement 1 of the Guidelines includes two site impracticality tests that can be used to determine if an accessible route at a required entrance is impractical due to extreme terrain or site conditions. The tests are referenced in this section and their applications are described in detail on pages 1.38 to 1.58 of this chapter.

in a building with one or more elevators that go to units above or below ground floor units, all dwelling units in the building must be on an accessible route and all units must comply with Requirements 3-7



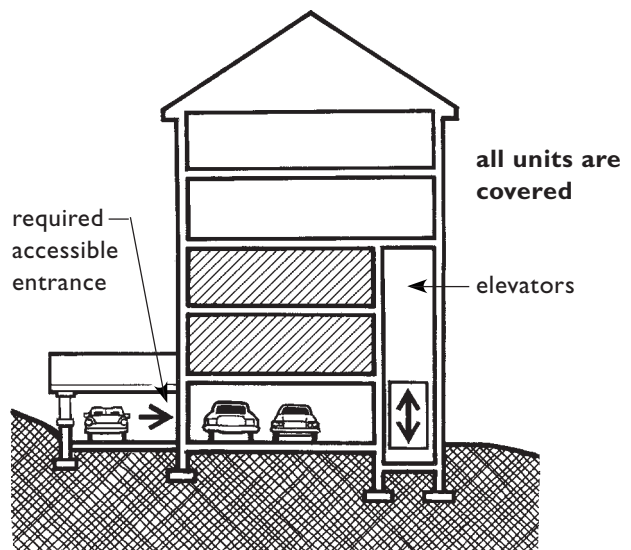
**In Buildings with One or More Elevators:
(Elevator Buildings) All Units are Covered**

BUILDINGS WITH ELEVATORS

All dwelling units are covered in buildings having one or more elevators and one or more common entrances. The Guidelines require that such buildings with elevators (elevator buildings) have at least one accessible entrance on an accessible route, regardless of the terrain or unusual characteristics of the site. In other words, site impracticality as defined in the tests discussed on pages 1.38 through 1.58 is not allowed for “buildings having one or more elevators.”

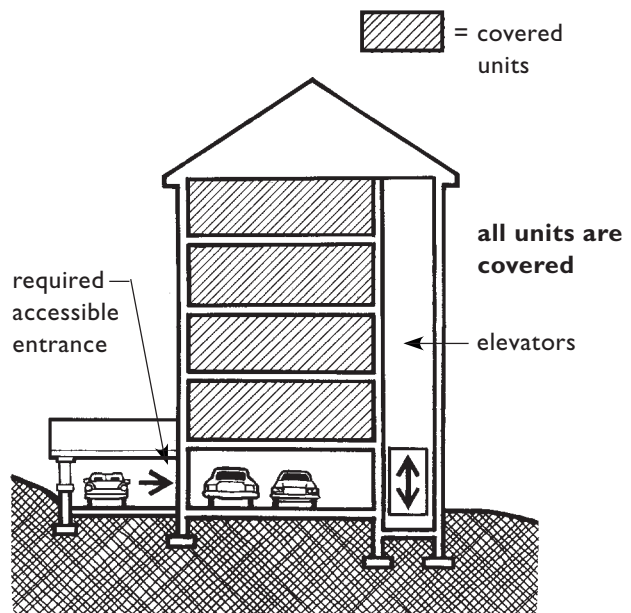
The rationale for disallowing site impracticality for such buildings includes the assumption that a building having elevators is a mid- to high-rise building and that all floors are accessible via the elevators. In addition, it is expected that the site work performed when building such elevator buildings generally results in a finished grade that would make an accessible route into and through the building practical. For a building to meet the Fair Housing Act definition of a “building having one or more elevators” (elevator building), it must have at least one elevator that travels from an entrance level to a floor containing dwelling units that is above or below a “ground floor.” If such an elevator is planned, it must go to all floors that contain dwelling units. Thus, it is not acceptable to provide elevator service to some floors or units and not others.

In the building shown in the upper right column on this page, the elevator only goes to the first and second floors containing dwelling units. This is unacceptable because the elevator is going to a floor other than a ground floor (floor two), therefore, floors three and four also must have access via the elevator.



X Termination of Elevator as Shown in this Building is NOT Acceptable

when an elevator provides access to dwelling units other than dwelling units on a ground floor, it becomes a “building with one or more elevators” and the elevator must go to all floors and all dwelling units are covered

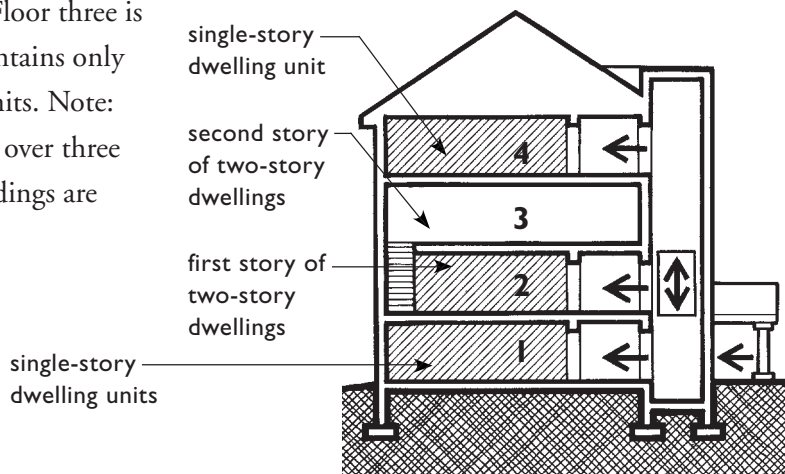


Elevators Must Provide Access to All Dwelling Units in Elevator Buildings

In the example to the right, if the elevator stops at floors other than just one, the building is classified as a building with one or more elevators (an elevator building), and the elevator must have a stop at the second and fourth floors. Floor three is not required to have a stop since it contains only second floors of two-story dwelling units. Note: most building codes require buildings over three stories to have elevators. All such buildings are covered by the Guidelines.

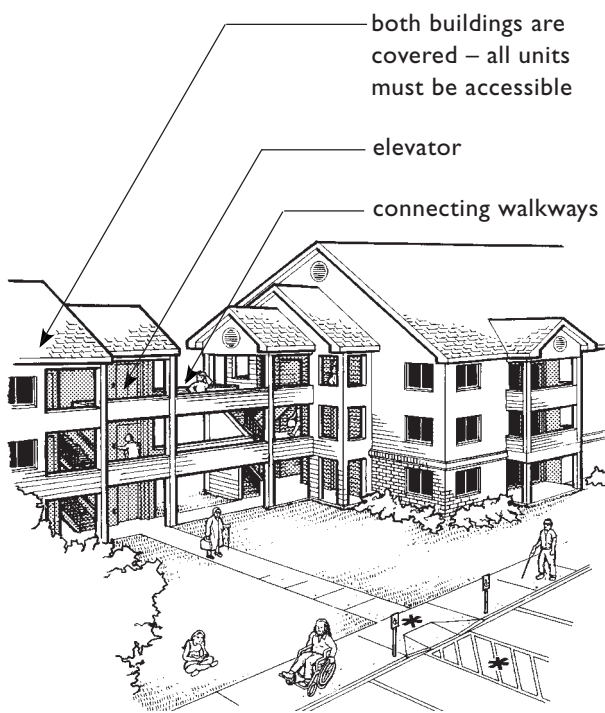
elevator must have stops at all floors containing single-story units and at the primary entry floor of two-story dwelling units

 = covered units



Elevators Must Provide Access to Primary Entry Floors of Two-Story Dwellings in Elevator Buildings

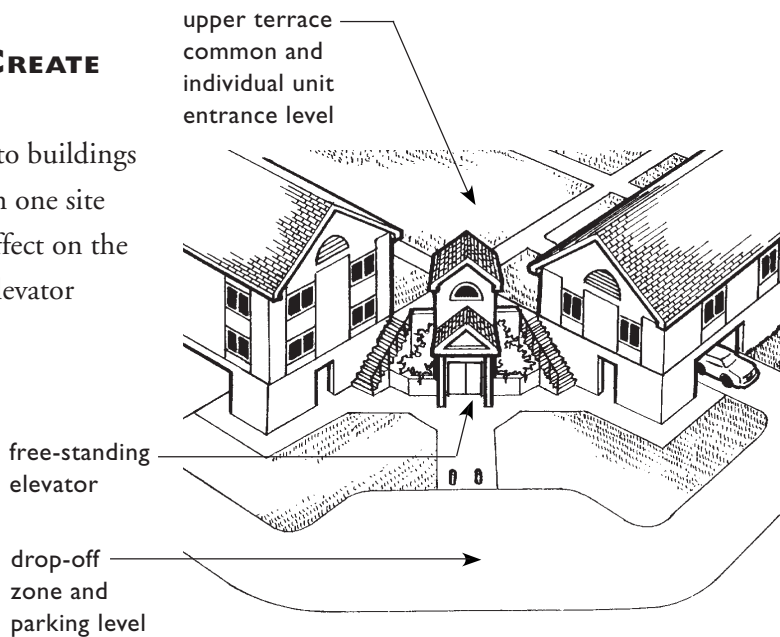
If an elevator in or at one building is connected to other buildings via overhead walks or bridges, the connectors must be accessible and all the connected buildings are covered.



A Central Elevator Serving a Building with Two Wings

FREE-STANDING ELEVATORS FOR SITE ACCESS DO NOT CREATE ELEVATOR BUILDINGS

Free-standing elevators not connected to buildings serve as part of an accessible route from one site level to another and do not have any effect on the building's status as an elevator or nonelevator building.



Free-Standing Elevators for Site Access Do Not Create Elevator Buildings

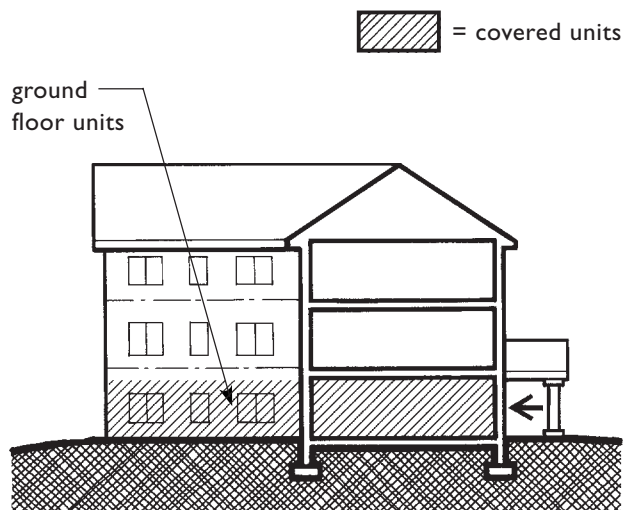
BUILDINGS NOT HAVING ELEVATORS

In buildings not having elevators, only ground floor dwelling units are covered and each dwelling unit must be on an accessible route and meet Requirements 3-7.

Buildings not having elevators must have at least one accessible entrance on an accessible route, unless prohibited by extreme terrain or unusual site characteristics. See site impracticality section, page 1.38. Note, in buildings either with or without elevators, more than one accessible entrance may be required when:

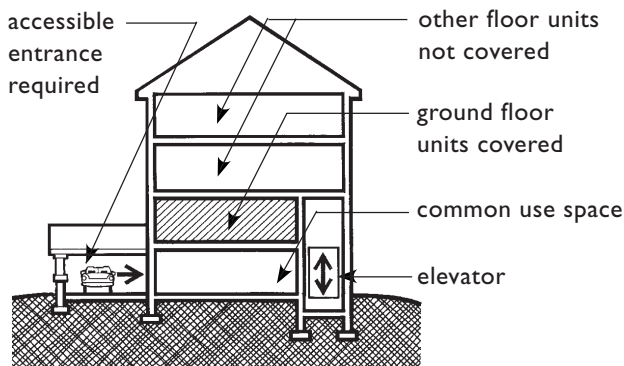
1. there is more than one ground floor,
2. there is a split-level ground floor, or
3. units are clustered on the ground floor and each cluster has a separate entrance.

These situations are covered on the next several pages.



In Buildings Not Having Elevators (Nonelevator Buildings) Only Ground Floor Units Are Covered

In some circumstances the “ground floor” units that are covered may not actually be at grade level. For example, when common use spaces such as parking, meeting rooms, shops, etc. occupy the floor at grade, the first floor containing dwelling units above or below that level will be the designated “ground floor” for purposes of the Guidelines. All dwelling units on such levels must meet Requirements 3-7 and be on an accessible route.

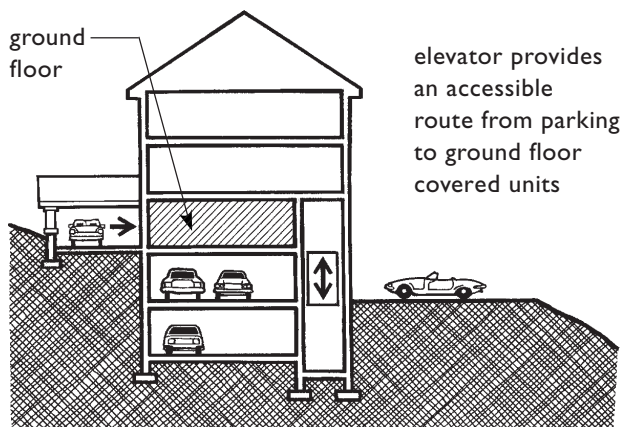


Elevator to First Floor of Dwelling Units Above Grade or Entrance Level Does Not Make a Building with One or More Elevators (a Covered Elevator Building)

 = covered units

It is important to note that some buildings may contain an elevator and not be considered a “building having one or more elevators” for purposes of the Guidelines. For example, when an elevator travels from a garage or other entry level not containing dwelling units only to a “ground floor” containing dwelling units, these “ground floor” units are covered; however, the building is not a “building having one or more elevators” (elevator building) and the elevator is not required to travel to all floors.

If a building elevator is provided only as a means of creating an accessible route from parking to dwelling units on a ground floor, the building is not considered an elevator building. In this case, the dwelling units on the “ground floor,” plus one of each type of public and common use area, must comply with the Guidelines.



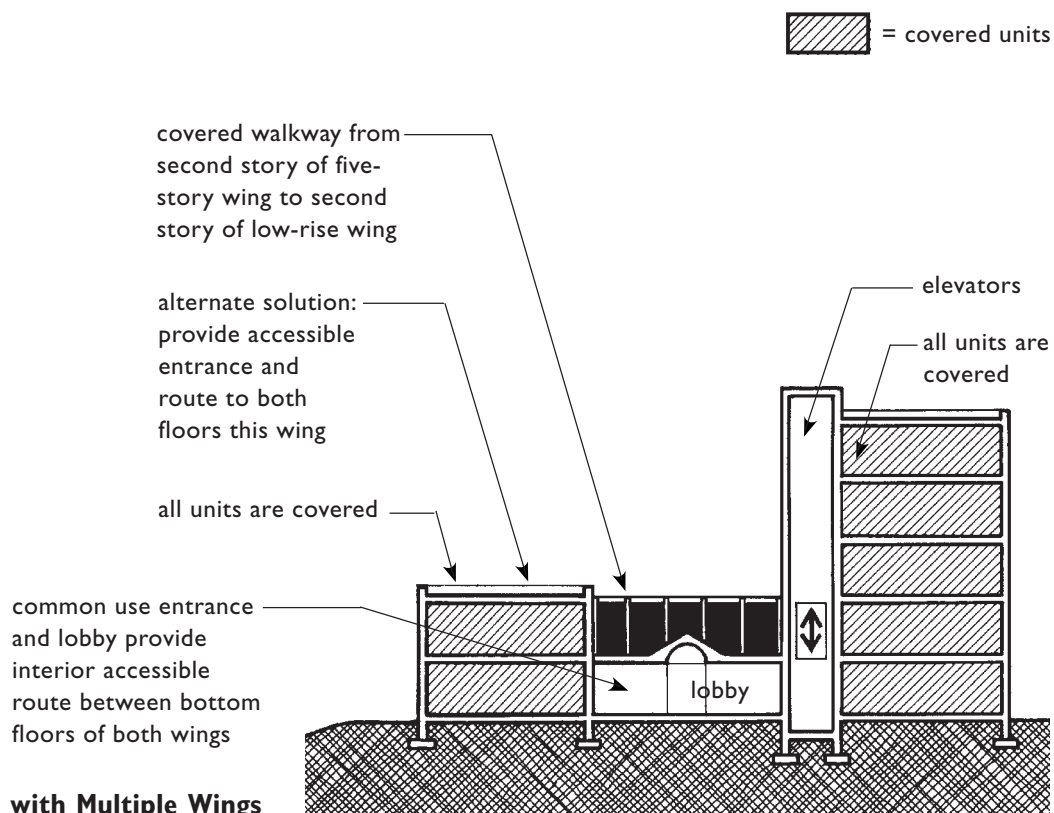
Elevators for Access to Ground Floor Units Do Not Make an Elevator Building

**BUILDINGS HAVING
CONNECTED ELEVATOR AND
NON-ELEVATOR WINGS**

Buildings having multiple wings of different configurations may have to provide more than one entrance and possibly more than one elevator. If any wing has an elevator, all of the units in the building are covered and must be on an accessible route.

In the example below, a single building has two wings, one of which has an elevator. A lobby or similar public and common use space connects the wings and serves both wings. All the units in the building are covered, therefore, the building either must have an additional elevator serving the two-story wing, or an alternative means of access to the

dwelling units on the second floor of the two-story wing. In addition, since the two wings share the common use entrance, lobby, and related amenities, such as mailboxes, reception desk, etc., there must be an interior accessible route between the lobby and the two-story wing. In this example, an accessible route has been created from the second floor of the five-story wing to the second floor of the two-story wing by means of a covered walkway, thereby providing the necessary access.



Buildings with Multiple Wings

BUILDINGS WITH SEPARATE EXTERIOR UNIT ENTRANCES

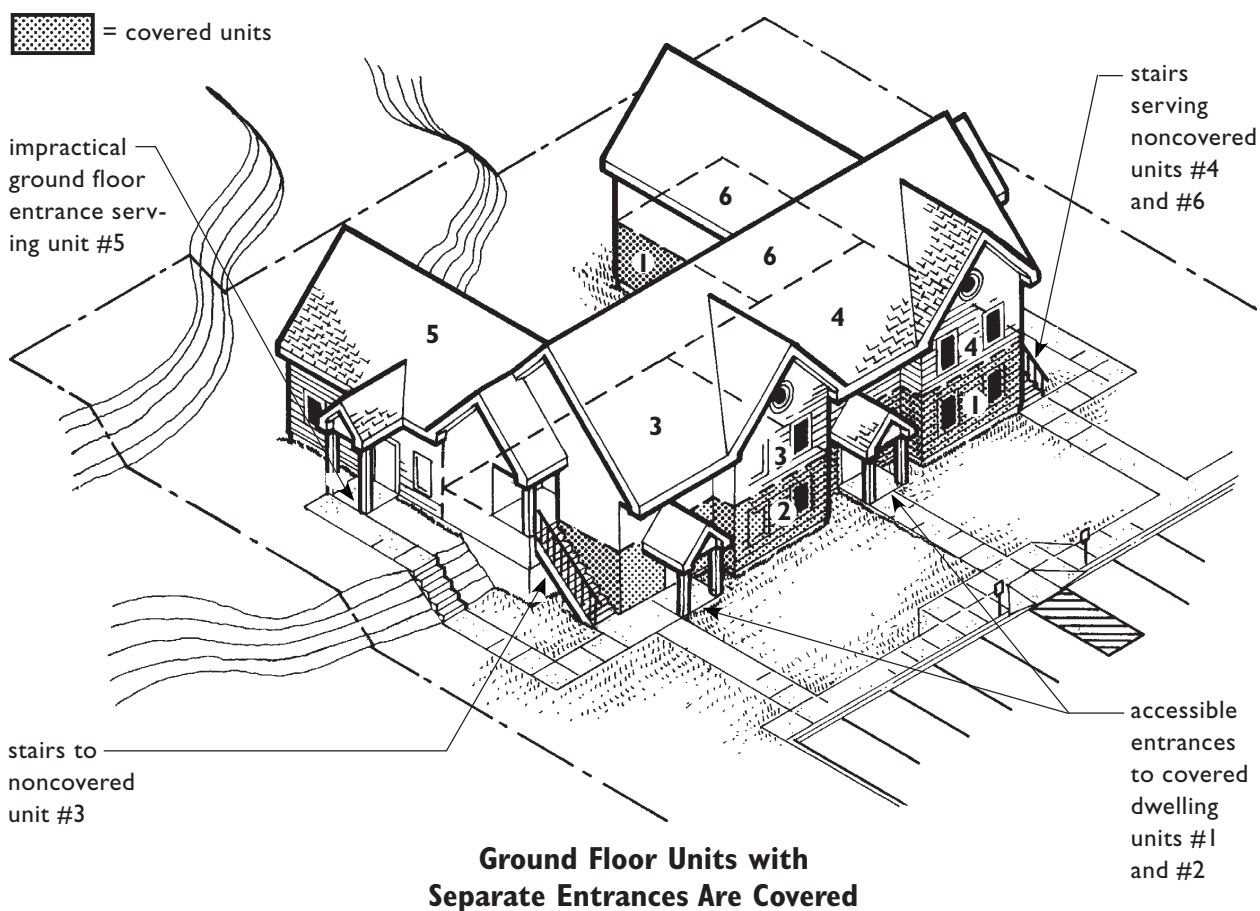
BUILDINGS WITH SEPARATE EXTERIOR GROUND FLOOR UNIT ENTRANCES

Where a building has ground floor units, each with its own exterior entrance, the Guidelines provide that each of these ground-floor units shall:

1. have an accessible entrance,
2. be on an accessible route, and
3. meet all other design requirements of the Guidelines.

The only exception applies to ground floor units where terrain or unusual characteristics of the site make an accessible entrance on an accessible route impractical.

The example below is a single non-elevator building on a site and has multiple entrances. Regardless of which site impracticality test is used, a minimum of 20% of the ground floor units must be accessible, and possibly more, based on the results of the test. The individual building test was used, and resulted in site impracticality at Unit #5. The site was not impractical for Units #1 and #2, and therefore, those units must be made accessible. Two out of three units = 66%, so the minimum of 20% has been satisfied, and no additional ground floor units must be made accessible. See site impracticality on page 1.38.

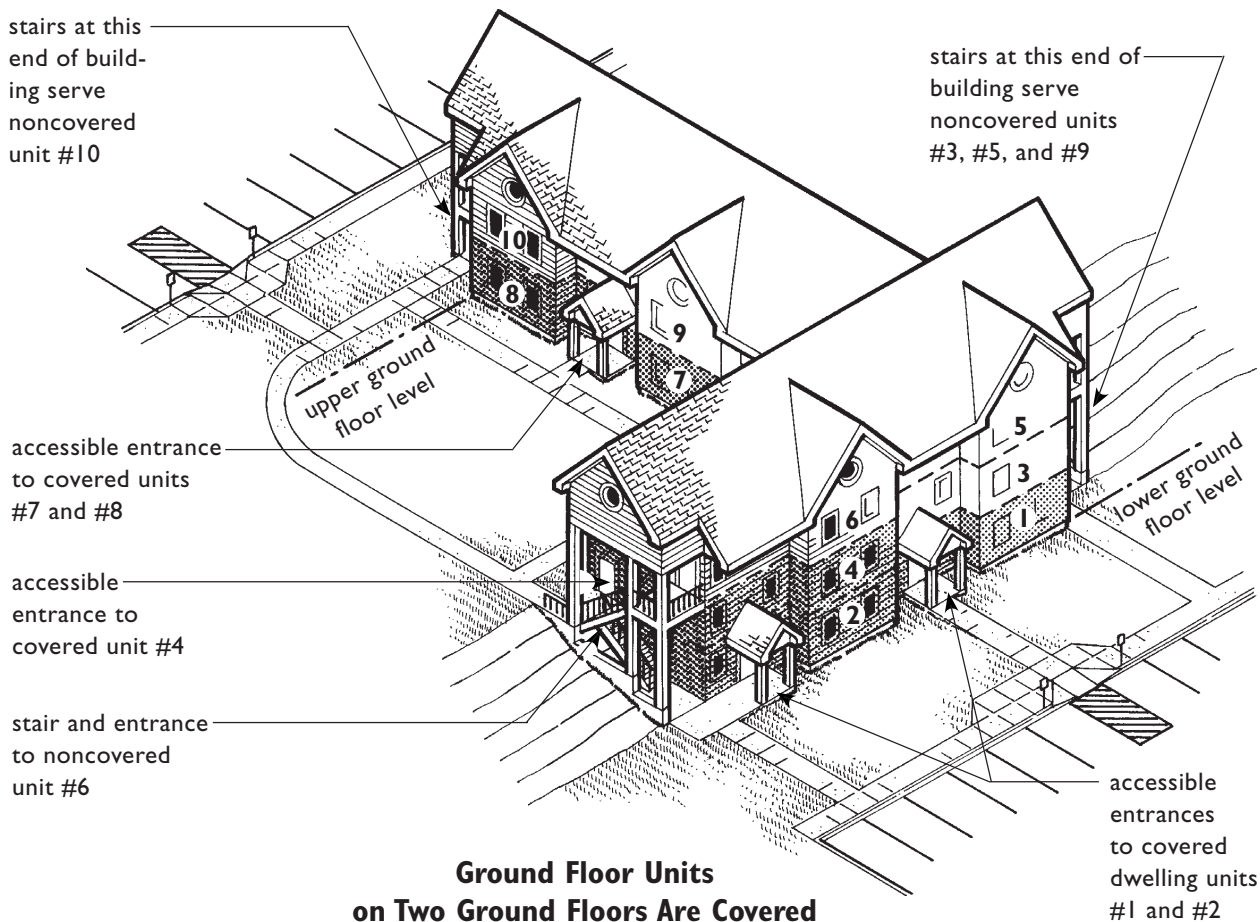


BUILDINGS WITH SEPARATE GROUND FLOOR UNIT ENTRANCES ON TWO OR MORE GROUND FLOORS

Where a building has ground floor units with their own individual entrances on two or more ground floors, the Guidelines provide that each of these entrances shall be an accessible entrance on an accessible route. The only exception to this applies to ground floor units where terrain or unusual characteristics of the site make an accessible entrance impractical, see site impracticality tests, page 1.38.

Since entrances were planned on both ground floors and all ground floor units are covered, each must have an accessible entrance on an accessible route and meet the other design requirements of the Guidelines.

 = covered units

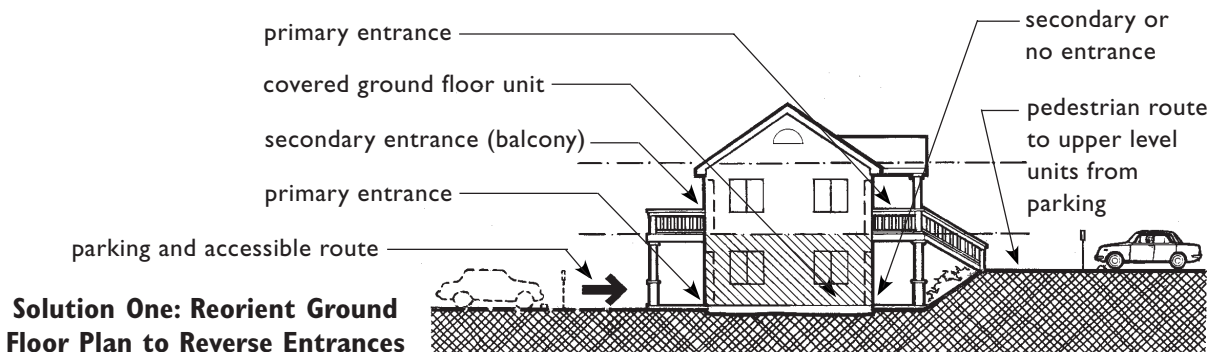
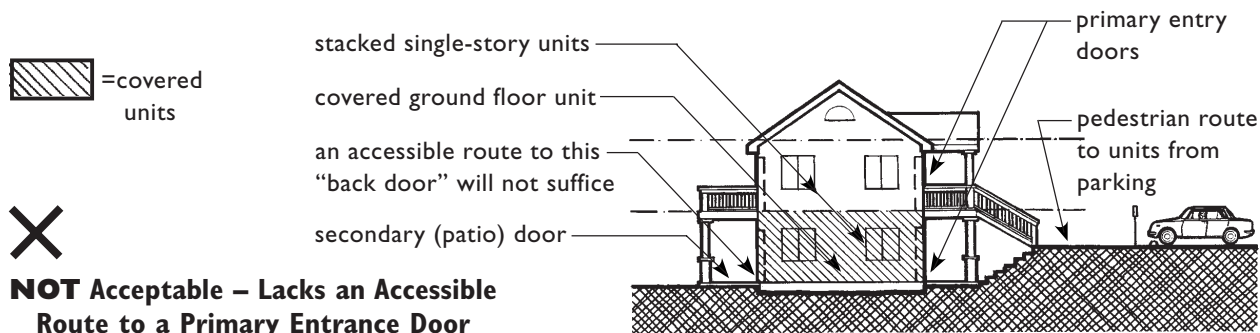


BUILDINGS WITH SEPARATE UNIT ENTRANCES HAVING SPLIT-LEVEL APPROACHES

Apartments with split-level approaches to their entrances typically cannot provide an accessible route from parking or other pedestrian arrival points to either lower or upper level primary entrances. Redesign is necessary to ensure an accessible building entrance on an accessible route to ground floor units. Note, however, that simply

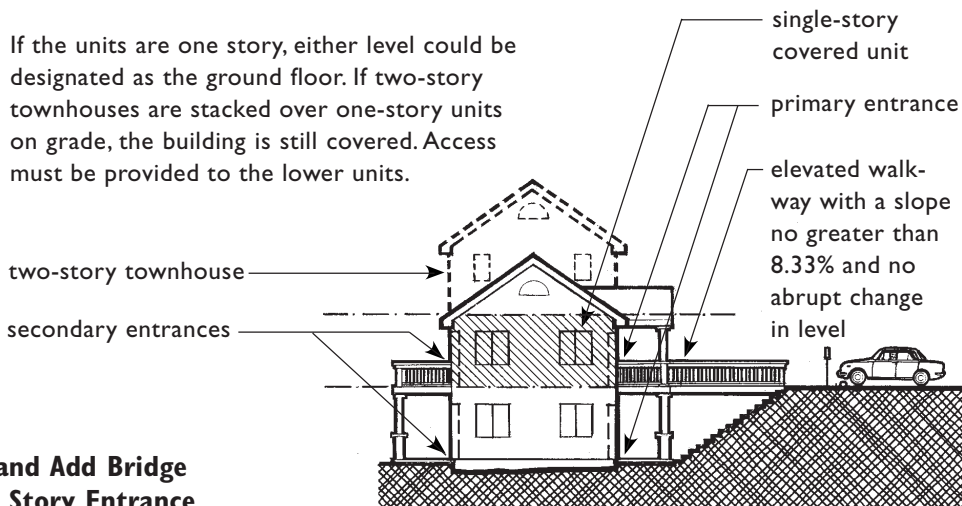
adding an accessible route to the secondary, rear entry is not acceptable as that results in “back door” access. See the first illustration and Solution One.

In Solution Two, regrading and the addition of a bridge provides access to the upper level, making that level the ground floor. Because no primary entrance was planned at the rear of the lower level units, and since there is no requirement to have more than one ground floor, an accessible route is not required to those units.



Solution Two is for a building having single-story units on each floor. Note, however, that if multistory units are stacked over the single-story units, then the building is still covered, and access to the single-story units would be required, as shown in Solution One.

If the units are one story, either level could be designated as the ground floor. If two-story townhouses are stacked over one-story units on grade, the building is still covered. Access must be provided to the lower units.

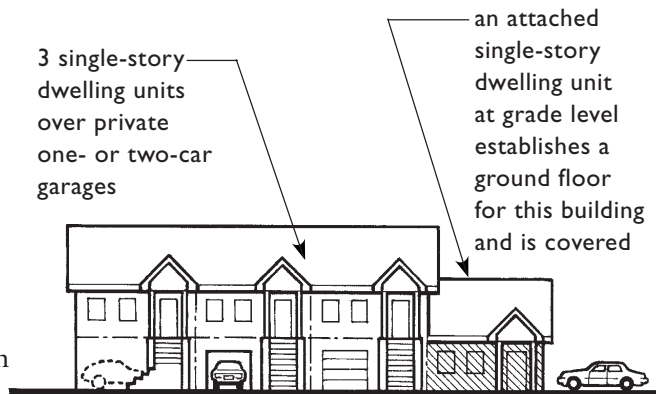


BUILDINGS WITH SEPARATE GROUND FLOOR UNIT ENTRANCES OVER PRIVATE GARAGES (CARRIAGE UNITS)


Carriage House Units

Carriage houses in which the garage footprint is used as the footprint for the remaining floor or floors of the units are not required to meet the design and construction requirements. (See December 16, 1991 memorandum from Frank Keating at back of Appendix C.)

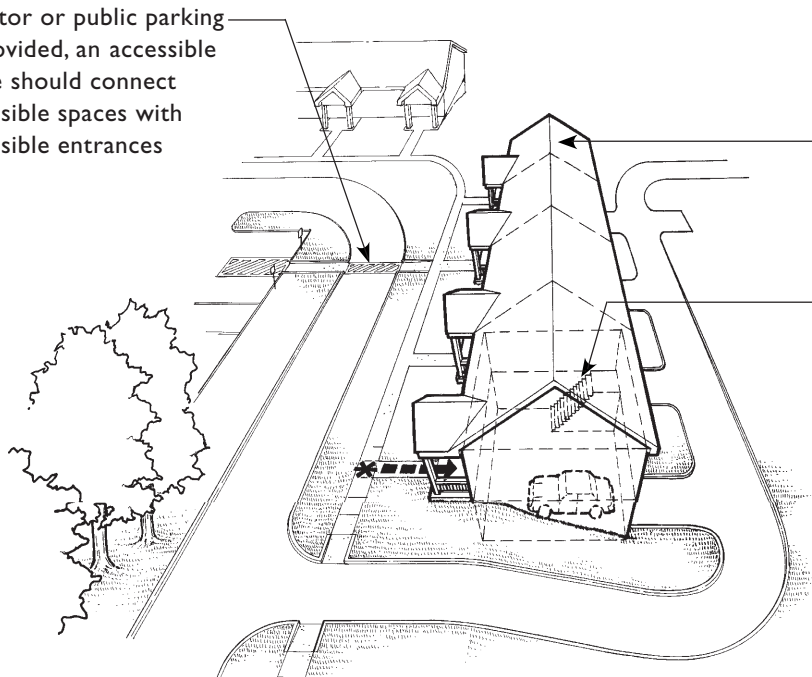
If buildings containing carriage units have one or more units at grade level with an entrance on an accessible route, the grade level unit establishes a ground floor for the building and is covered. There is no requirement for there to be more than one ground floor nor for other units in the building on the second or elevated floor to be accessible.



Carriage Units in Buildings Having One or More Grade Level Units Are Not Covered

covered units = 

if visitor or public parking is provided, an accessible route should connect accessible spaces with accessible entrances



- 4 or more carriage units with separate ground floor accessible entrances
- an interior accessible route to garage spaces is not required
- an exterior vehicular or accessible pedestrian route to garages is required

Carriage Units Having an Accessible Route to an Entry Are Covered

This elevator serves several buildings on the site. Although this configuration meets the requirements of the Guidelines, it subjects people with disabilities to using a more circuitous route from the dwelling unit entrances to parking and exposes them in an unequal way to inclement weather conditions.

This building accessed by another, similar elevator at opposite end of the site.

accessible routes to ground floor unit entrances on upper grade level

accessible route from a public street or sidewalk or other pedestrian arrival point to accessible entrances to covered units

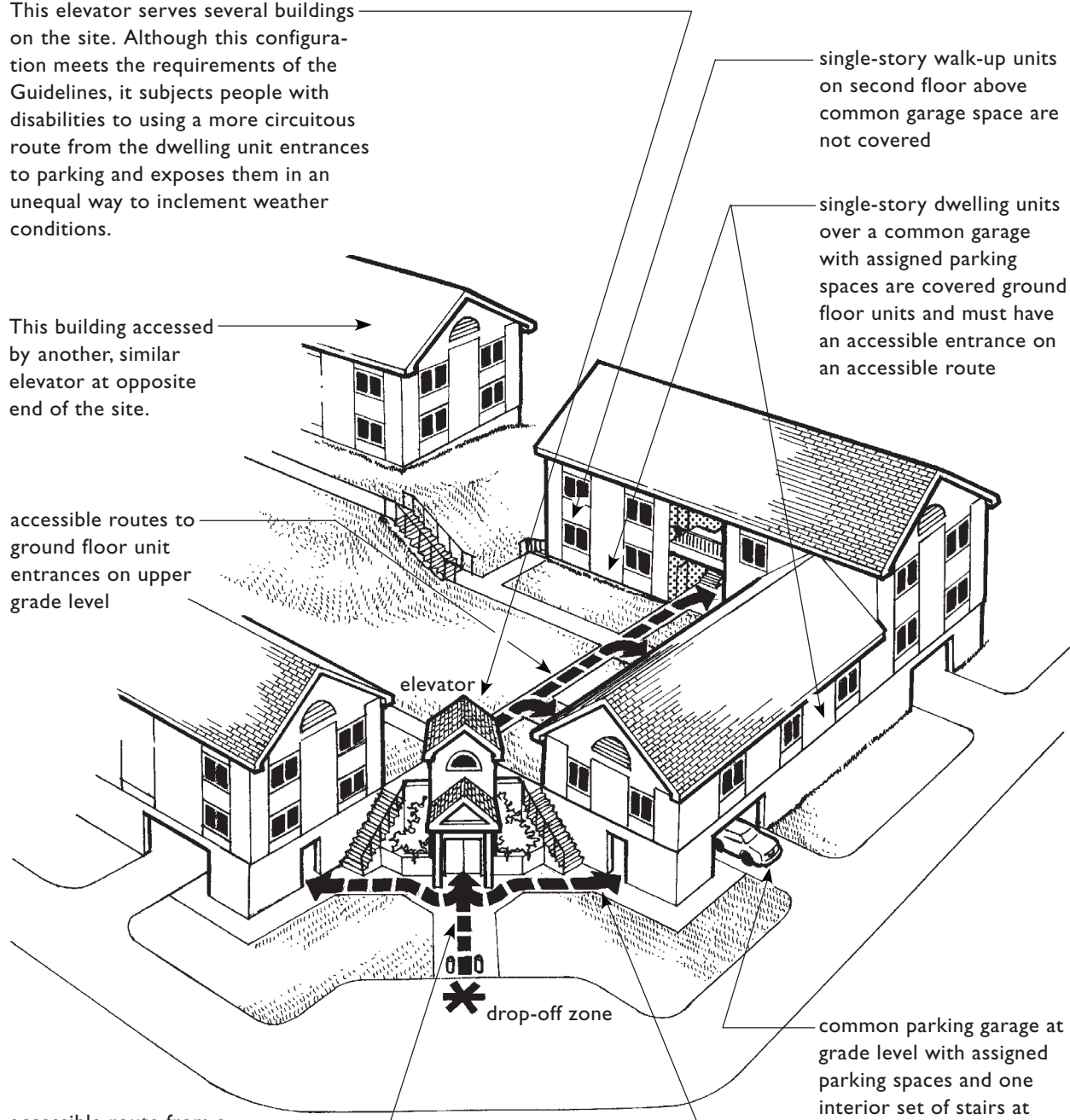
elevator to create an accessible route from parking to ground floor does not make these elevator buildings

single-story walk-up units on second floor above common garage space are not covered

single-story dwelling units over a common garage with assigned parking spaces are covered ground floor units and must have an accessible entrance on an accessible route

common parking garage at grade level with assigned parking spaces and one interior set of stairs at junction of two wings

accessible route from parking to accessible common or individual ground level entrances to covered units



Single-Story Ground Floor Dwelling Units with Separate Entrances Over Common Use Parking Garages

BUILDINGS WITH COMMON ENTRANCES

Buildings with Ground Floors Over Shops or Garages

Where the first floor containing dwelling units in a building is above grade, all units on that floor are covered and must be served by a building entrance on an accessible route. This floor will be considered a ground floor, thus making dwelling units over retail stores, garages, or other common use spaces covered units.

an accessible route to dwelling unit entrances must be provided

grade level is used entirely for parking, shops, or other common use spaces

third floor single-story units are not covered

covered single-story units

ground floor for purposes of the Guidelines

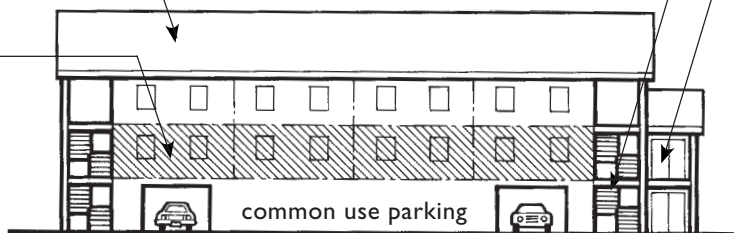


three-story building of single-story dwelling units on a double-loaded open-air corridor

single-story units above common use parking at grade level are covered

elevator, ramp, lift, elevated walkway, or bridge is required to provide accessible route to covered units

elevator stairs



Note: if the elevator is also taken to the next level, the building becomes a building with one or more elevators and all floors and units must comply.

Walk-Up Dwelling Units Over Garages, Shops, and Other Public or Common Use Spaces Are Covered

If one or more single-story dwelling units with an accessible entrance on an accessible route are located at grade level in buildings otherwise having public or common use parking or shops at grade level, a new grade level ground floor is established and only the grade level units are covered.

shops or common use parking

covered single-story unit



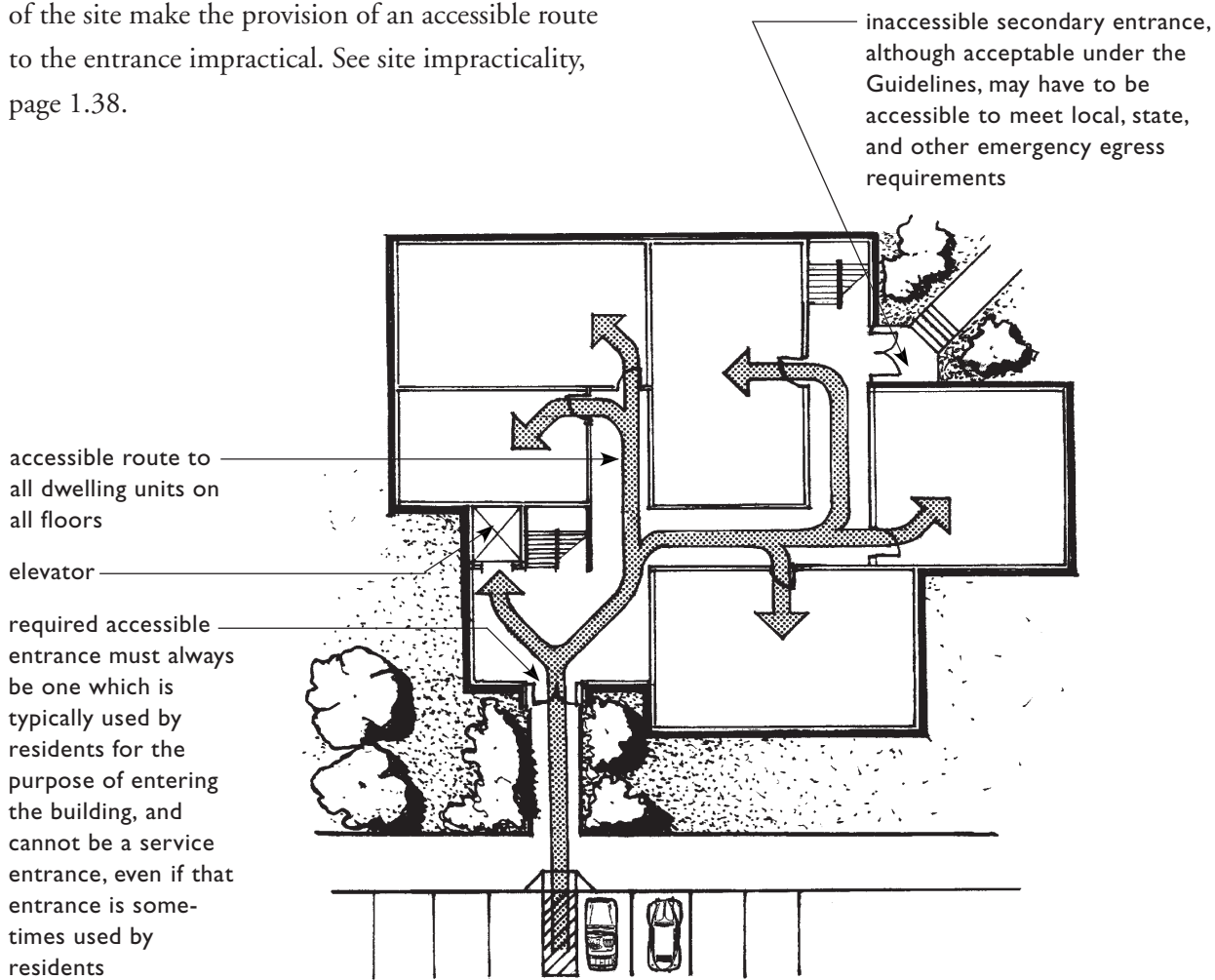
 = covered units

One or More Grade Level Accessible Units Establishes a Ground Floor and Eliminates Need for Accessible Routes to Units Over Garages or Shops

BUILDINGS WITH ONE OR MORE COMMON ENTRANCES

When a building has one or more common entrances, the Guidelines provide that at least one of these entrances shall be accessible and shall be on an accessible route to **all** dwelling units in buildings with one or more elevators, and to all ground floor units in nonelevator buildings. Examples of how this applies to specific buildings and sites follow. The only situation where an accessible entrance is not required is when there is a single building with a single entrance on a site with no elevator, and the terrain or unusual characteristics of the site make the provision of an accessible route to the entrance impractical. See site impracticality, page 1.38.

This is a single building on a site. It has two common entrances and an elevator serving multiple floors. Because it is a building with one or more elevators (an elevator building), all units in the building are covered, and at least one common entrance must be accessible and on an accessible route from a public street or sidewalk or other pedestrian arrival point, regardless of the terrain or unusual characteristics of the site; site impracticality tests do not apply for elevator buildings.



Buildings with Common Entrances

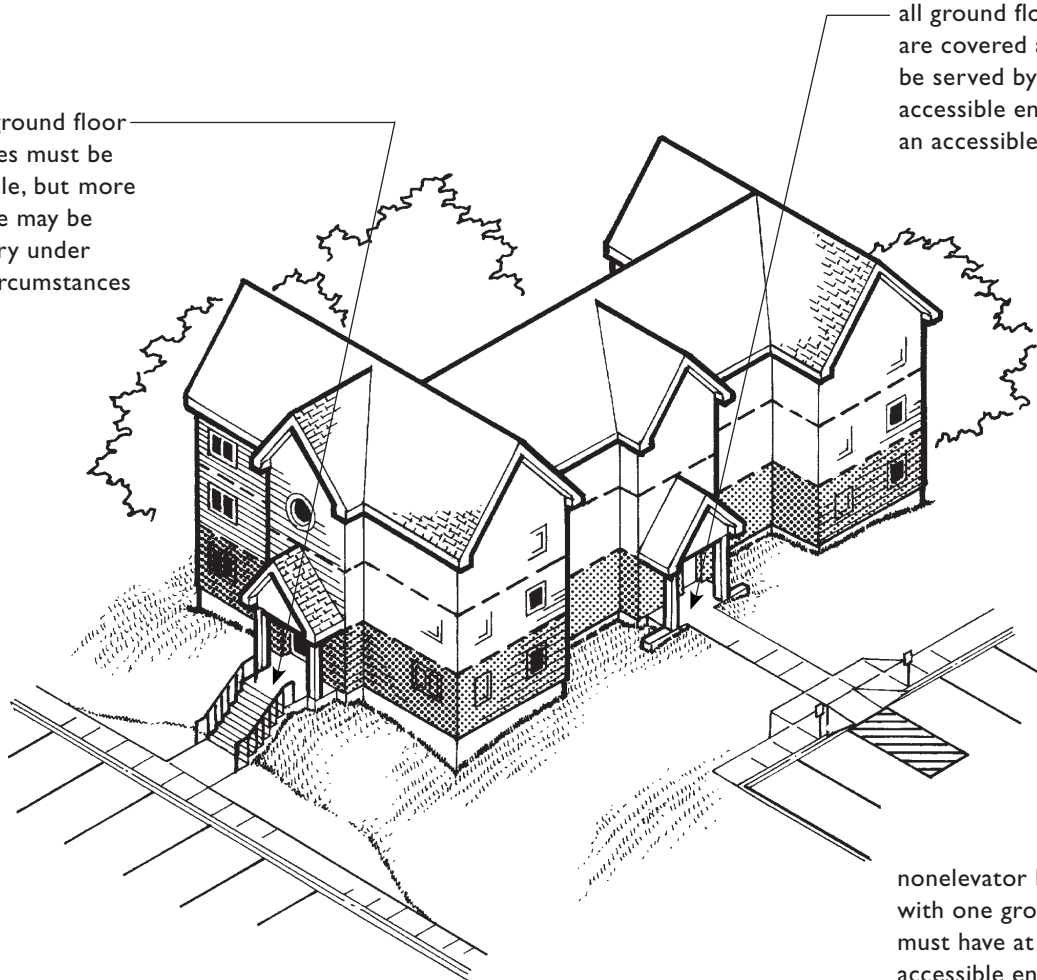
BUILDINGS WITH COMMON ENTRANCES AND A SINGLE GROUND FLOOR

When a building has a single ground floor and more than one common entrance, at least one entrance must be accessible. This accessible entrance should be the primary entrance and must provide an interior accessible route to all ground floor units in the building. If an interior accessible route does not connect the primary entrance to all ground floor units, additional entrances on accessible routes are necessary to reach the additional ground floor units.

 = covered units

not all ground floor entrances must be accessible, but more than one may be necessary under some circumstances

all ground floor units are covered and must be served by an accessible entrance on an accessible route

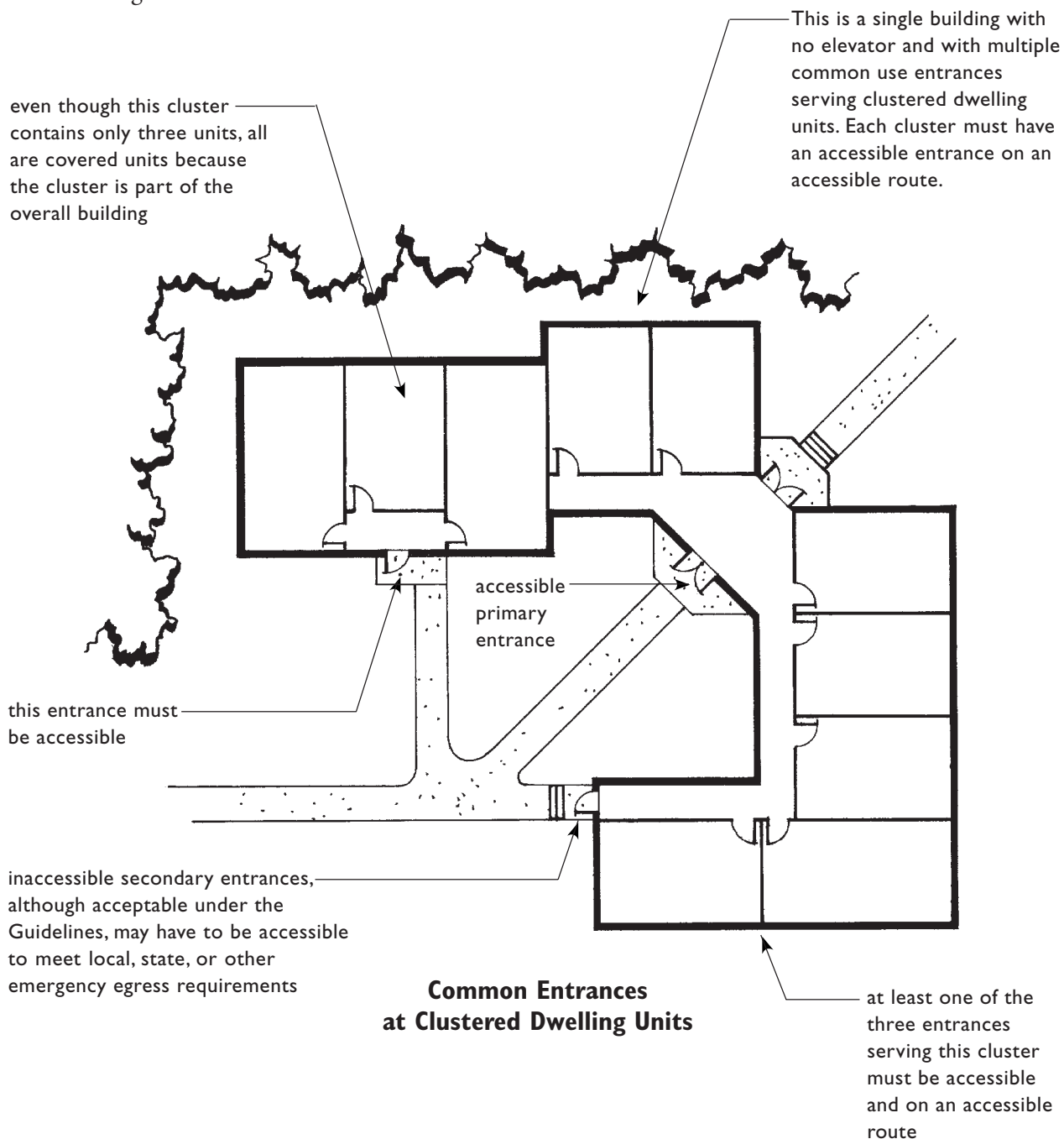


nonelevator building with one ground floor, must have at least one accessible entrance

Common Entrances in Buildings with a Single Ground Floor

BUILDINGS WITH COMMON ENTRANCES AND CLUSTERED DWELLING UNITS

Where dwelling units are clustered in a building, each cluster which has its own entrance or entrances shall have at least one accessible entrance providing access to all ground floor units in the cluster.



BUILDINGS WITH SPLIT-LEVEL GROUND FLOORS

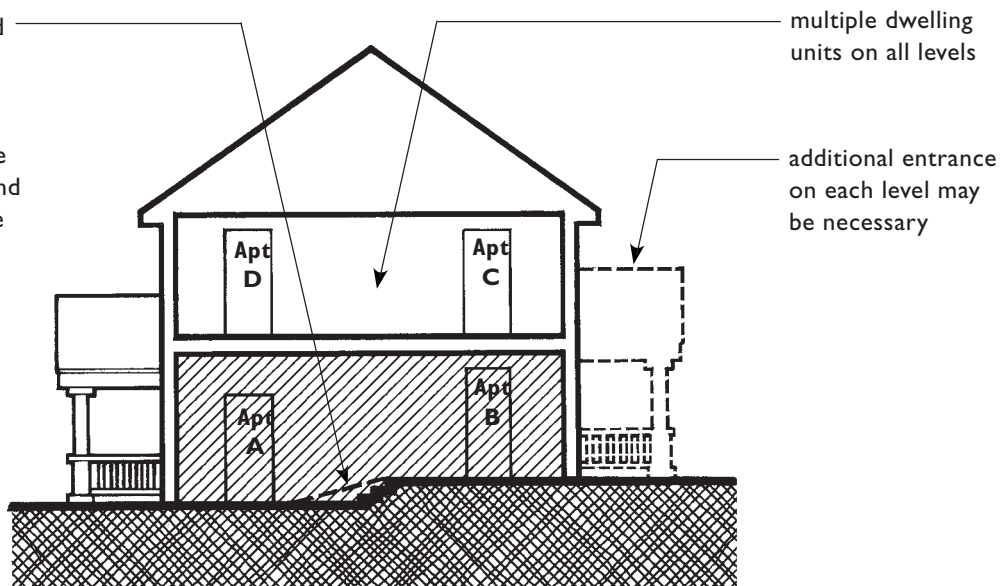
Split-level floors of less than a full story in height are not separate floor levels and are considered to be one ground floor. Covered ground floor units on each level must have entry doors on an accessible route connecting to at least one accessible common use building entrance and at least one of each type of common use facility or feature, such as mail rooms, laundries, vending areas, etc. Since steps and stairs cannot be part of an accessible route, changes in level on covered floors must be accomplished by means of ramps, lifts, or elevators.

If an accessible route, in lieu of or in addition to steps or stairs, is provided between levels, the route must not be remote, hidden,

circuitous, or require people with disabilities to travel excessively long distances to arrive at the same point as others. Finally, the accessible route between levels must be readily available to all residents and visitors and not be locked or require keys, attendants, or special services or permits for use.

If an accessible route is not provided between covered floor levels, each level must have its own accessible common use entrance on an accessible route; any common use facilities or features provided on one level must also be available on an accessible route on each other level.

steps must be replaced or accompanied by an accessible route
 – OR –
 additional common use accessible entrances and other facilities must be provided on each level

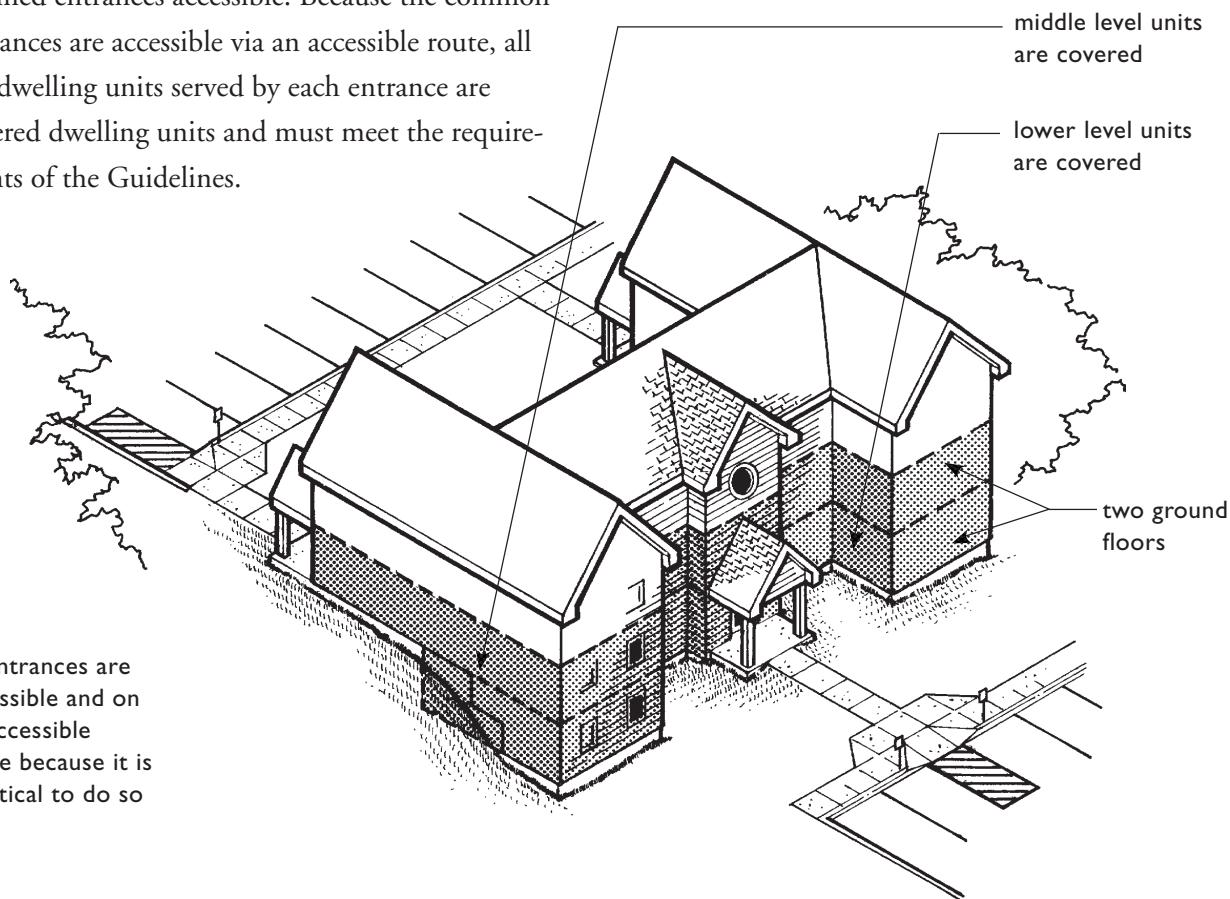


Split-Level Ground Floor Regarded as Single Ground Floor

BUILDINGS WITH COMMON ENTRANCES AND MORE THAN ONE GROUND FLOOR

In building designs that are planned to have more than one ground floor, an entrance on each ground floor is required to be accessible unless site conditions make it impractical to provide an accessible route to each entrance. See page 1.38 for site impracticality. In this illustrated example, the planned location of parking and sidewalks (that would serve as the pedestrian and vehicular arrival points) is close to the planned entrances, with only minor changes in level between the arrival points and the floor level of the building at the planned entrances, therefore, it is practical to make the planned entrances accessible. Because the common entrances are accessible via an accessible route, all the dwelling units served by each entrance are covered dwelling units and must meet the requirements of the Guidelines.

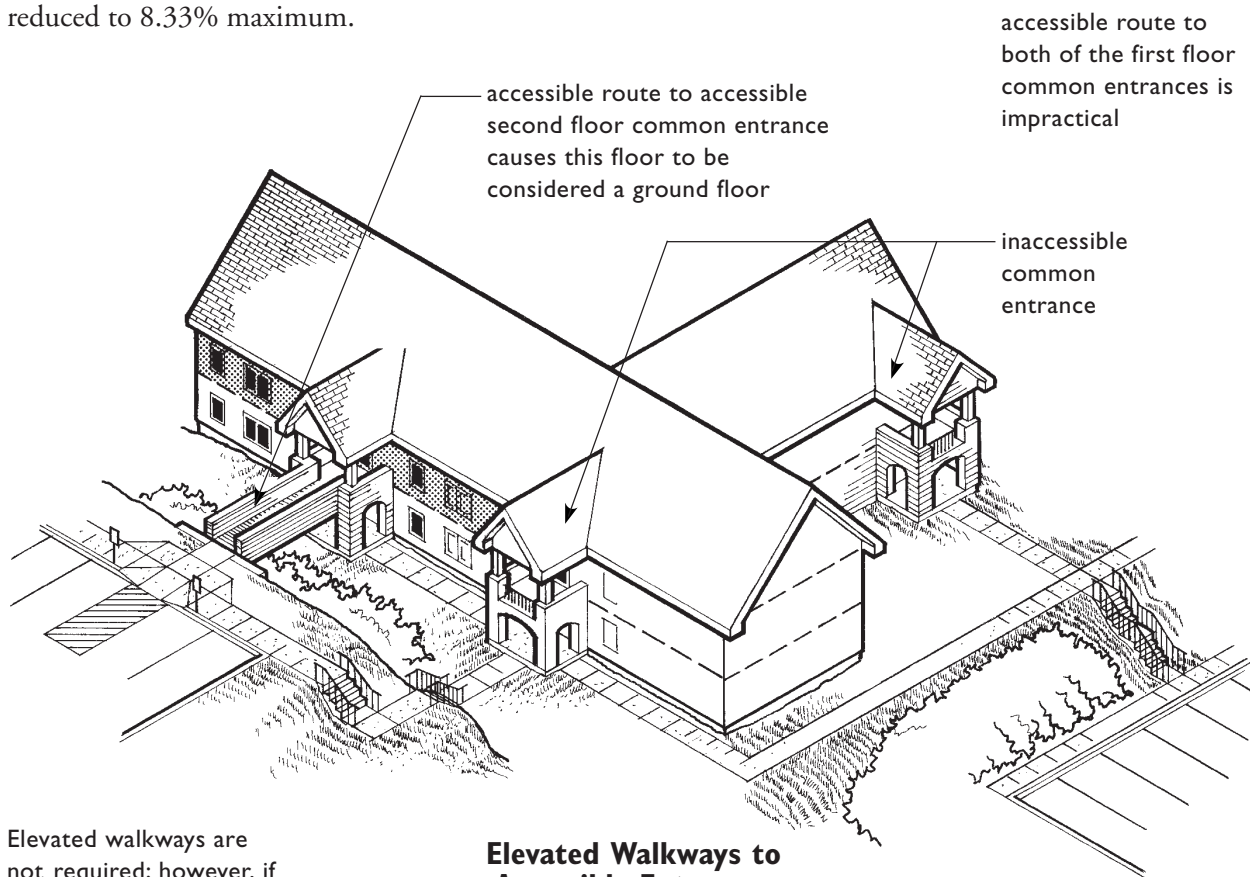
all entrances are accessible and on an accessible route because it is practical to do so



Common Entrances at Buildings with More Than One Ground Floor

BUILDING FLOORS HAVING COMMON ENTRANCES SERVED BY ELEVATED WALKWAYS

When a developer plans an elevated walkway from a pedestrian or vehicular arrival point to the building entrance and the walkway has a slope of 10% or less, that floor shall be considered a ground floor. The dwelling units on that floor are covered and the site is not considered impractical. Since the walkway meets the 10% slope criterion, it is practical to provide an accessible route to the entrance, and the slope of the walkway must be reduced to 8.33% maximum.



Elevated walkways are not required; however, if one is planned and its slope is no greater than 10%, then the slope must be reduced to 8.33% maximum and the dwelling units on that floor shall be accessible.

Elevated Walkways to Accessible Entrances

SITE IMPRACTICALITY

INTRODUCTION

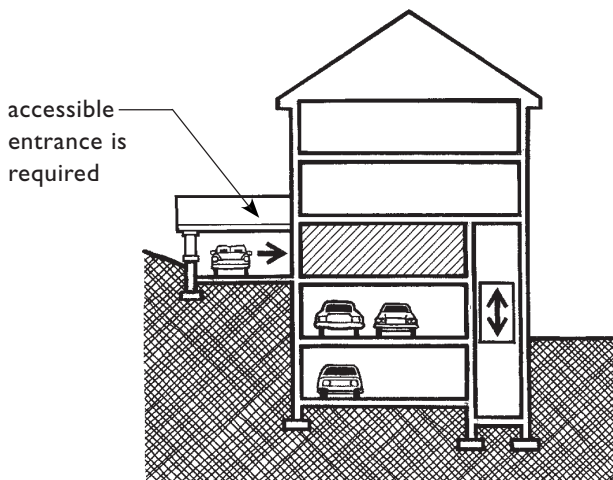
HUD's regulations implementing the Fair Housing Act state:

Covered multifamily dwellings for first occupancy after March 13, 1991 shall be designed and constructed to have at least one building entrance on an accessible route unless it is impractical to do because of the terrain or unusual characteristics of the site. [24 CFR 100.205(a)].

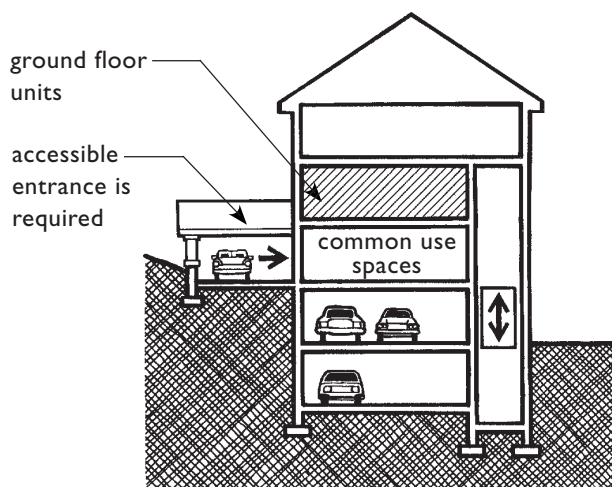
The Fair Housing Act itself does not contain an impracticality exception; however, the preamble to HUD's regulations explains as follows: "Congress did not intend to impose an absolute standard that all covered multifamily dwelling units be made accessible without regard to the impracticality of doing so. Even though the statute itself does not contain an impracticality standard the legislative history makes it clear that Congress 'was sensitive to the possibility that certain natural terrain may pose unique building problems'." Thus, the regulations and the Guidelines recognize that certain site conditions may make it impractical to make all ground floor units accessible in buildings that do not have an elevator due to the difficulty of providing an accessible route to the building entrance or to individual dwelling unit entrances. The Guidelines provide tests for determining site impracticality, which are discussed beginning on page 1.40.

Elevators from garages or grade levels to ground floors need not serve other floors and only the ground floor dwelling units must meet the design requirements of the Guidelines.

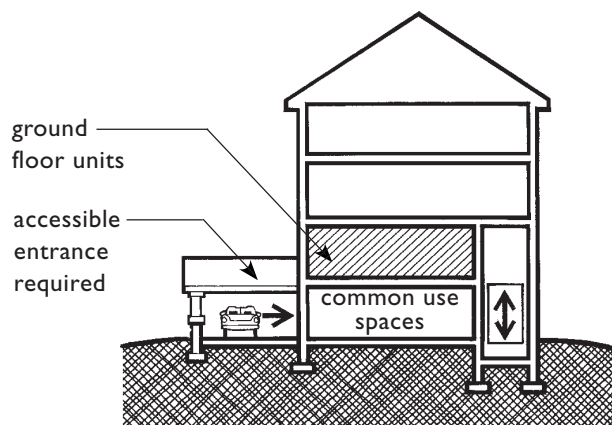
Buildings With Elevators, Including Those Having Elevators Only for Access to Covered Ground Floor Units, Cannot Claim Site Impracticality



Elevator From Garage to Covered Ground Floor Units

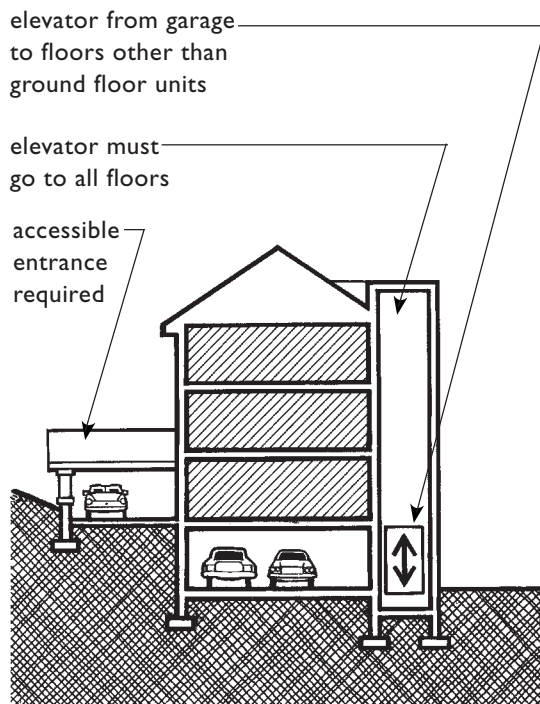


Elevator From Garage Levels to Ground Floor Units Above Common Use Grade Level Floor

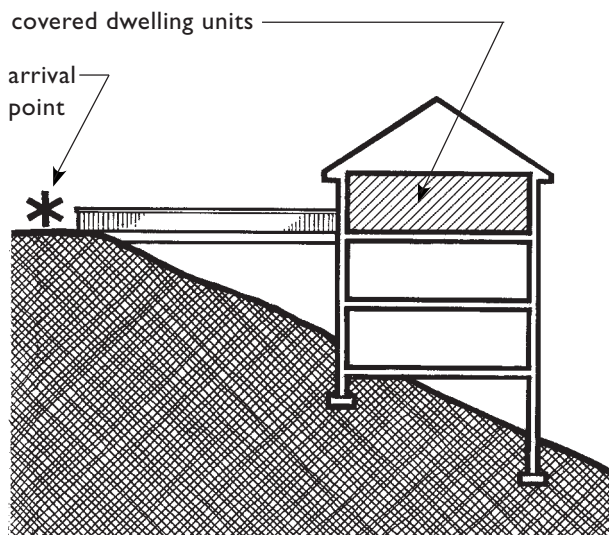


Elevator From Grade Level Common Use Spaces to Covered Ground Floor Units Above

If an elevator provides access to any floors other than a ground floor, then it must go to all floors in the building and all units in the building must meet the design requirements of the Guidelines.



Buildings with One or More Elevators Cannot Claim Site Impracticality



Buildings Served by a Planned Elevated Walkway Cannot Claim Site Impracticality

BUILDING TYPES WHERE SITE IMPRACTICALITY IS NOT ALLOWED

The Guidelines address the regulatory provision for site impracticality discussed above in Requirement 1, Accessible Building Entrance on an Accessible Route. The Guidelines **do not allow site impracticality for certain buildings**. These buildings are:

1. Buildings with one or more elevators – These buildings are covered and must have at least one entrance on an accessible route regardless of terrain or other characteristics of the site.
2. Buildings where an elevator is provided solely as a means of access to units on a ground floor – These buildings are covered and all ground floor units must be accessible. However, this type of building is not treated as an elevator building where all of the units in the building are covered. For a full explanation of buildings with elevators, see pages 1.20 through 1.25.
3. Buildings that have an elevated walkway – Site impracticality is not allowed for buildings where an elevated walkway is planned between a building entrance and a vehicular or pedestrian arrival point and the planned walkway has a slope no greater than 10%. The 10% criterion only determines whether making the entrance is practical. Once this criterion is met, the slope would have to be reduced to a maximum of 8.33%.

These building types for which site impracticality is not permitted are illustrated on this page and 1.38.

Site impracticality is not allowed where the entrance to the building is provided by an elevated walkway between the building entrance and an arrival point with a planned slope no greater than 10%. By meeting the 10% slope criterion, it is considered practical to provide an accessible route, and the slope must be reduced to 8.33% maximum.

SITE IMPRACTICALITY TESTS FOR SITES WITH DIFFICULT TERRAIN

The Guidelines provide **two tests to determine site impracticality** based upon difficult terrain conditions, the **Individual Building Test** and the **Site Analysis Test**.

Since buildings with one or more elevators and those served by a planned elevated walkway cannot claim site impracticality, the site impracticality tests apply only to other types of buildings on sites having extreme terrain or unusual characteristics. The tests will help determine the actual number of units that must meet the Guidelines on such sites.

The tests differ and their application will be affected by the number of buildings on the site, the number of planned entrances, the slope of the land, and the distance between key points on the planned site. Unusual site characteristics, including such conditions as federally designated flood plains or coastal high hazard areas where it is required to raise the floor level of buildings above a base flood elevation, also have an impact on the number of covered dwelling units. Each of the tests follow the Guidelines and conclude with a minimum required number of accessible units.

The **Individual Building Test** accepts as inaccessible, because of site impracticality due to terrain, all ground floor units in which the elevation difference between the undisturbed site grade and the proposed finished site grade from arrival points and the planned building entrance is over 10% when measured in a straight line. If either the undisturbed slope or the proposed finished slope, measured in a straight line, is 10% or less, then site impracticality due to terrain does not exist and the

developer must provide an accessible route to the particular entrance being measured.

The **Site Analysis Test** measures the total buildable area of undisturbed or natural grade having an existing slope before grading less than 10% (**Step A**). The area of less than 10% slope is expressed as a percentage of the total site area less any restricted use areas such as wetlands or flood plains. The percentage establishes the minimum percentage of ground floor units to be made accessible (**Step B**) subject to the additional requirement of **Step C**. **Step C** requires that, in addition to the percentage established in **Step B**, all ground floor units in a building or ground floor units served by a particular entrance shall be made accessible if the entrance to the units is on an accessible route, defined as a walkway with a slope between the planned entrance and a pedestrian or vehicular arrival point that is no greater than 8.33%.

Which Tests Apply to Which Sites

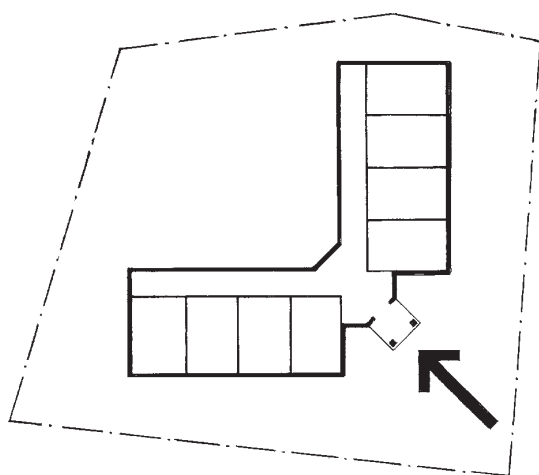
The tests relate to different buildings and site conditions. It is important to remember before discussing the test applications that they are not applicable to buildings having one or more elevators (elevator buildings) because they already are covered and all units in them must meet the requirements of the Guidelines, and they must have at least one entrance on an accessible route regardless of terrain or other characteristics of the site. None of the buildings described in the following explanation of test applications are elevator buildings; nor are they served by an elevated walkway between a building entrance and an arrival point.

Sites Where Only the Individual Building Test May be Used

For sites with difficult terrain which have a single building with only one common entrance on the site, the individual building test **must** be used. If the results of this test determine that it is impractical to make that entrance accessible, then the building is not required to be accessible and none of the ground floor units are covered. This is the only circumstance under which an entire site may not be covered.

Sites Where Either Test May be Used

Either test may be used for building sites having multiple buildings or a single building with more than one common entrance. When the Individual Building Test is applied to such sites it must be calculated for each building and each building entrance separately.



Single Building on a Site with One Common Entrance

Example of Potentially Impractical Site Based on Terrain and Application of Individual Building Test

The 20% Rule

For those sites where **either** the Individual Building Test or the Site Analysis Test may be used, the Guidelines set a **minimum** percentage of ground floor units, which serves as a starting point even before the tests are applied. This minimum is 20%. Thus, for those sites where either test may be used, there never will be a situation where less than 20% of the units are required to comply with the Guidelines; in most cases the tests will result in a much larger percentage of units required to be accessible. Keep in mind that this 20% minimum cannot be used as a maximum. The results of the test, depending on which test is used, will determine the maximum number of units required to be accessible.

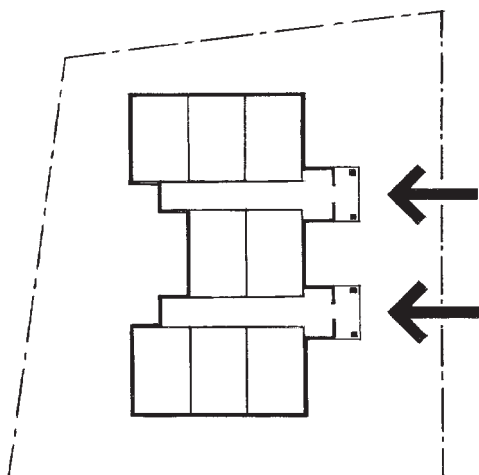
Note: The following examples apply only to buildings that do not have one or more elevators (elevator buildings). Buildings having one or more elevators must be accessible regardless of site conditions.

- one building
- 4 or more units
- 1 entrance

- **must** use the Individual Building Test

A site with a single building with one common entrance may not be required to be accessible if the site is impractical and application of the Individual Building Test determines impracticality at this entrance.

Note: The following examples apply only to buildings that do not have one or more elevators (elevator buildings). Buildings having one or more elevators must be accessible regardless of site conditions.

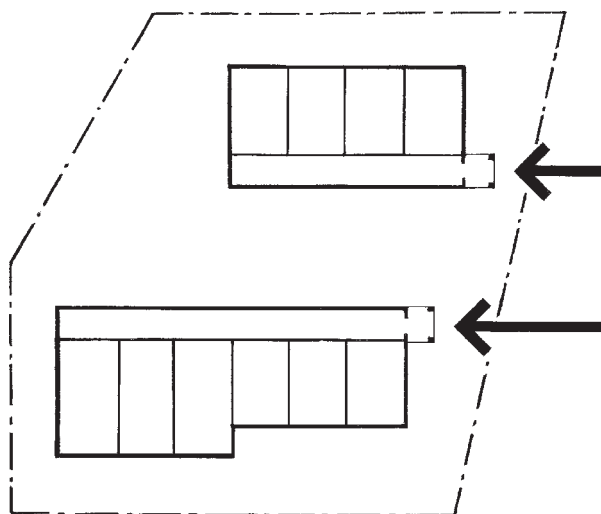


Single Building with Multiple Entrances on a Site

- single building on a site
- 4 or more units
- 2 or more entrances
- **may** use either the Individual Building Test or the Site Analysis Test

A minimum 20% of ground floor units must comply with the requirements of the Guidelines, plus an additional number determined by application of one of the tests. In addition, if any entrance is made accessible to meet either the 20% minimum or the percentage resulting from the test:

all units served by that entrance must comply.



Multiple Buildings on a Site

- multiple buildings on a site
- 4 or more units in each building
- 1 or more entrances
- **may** use either the Individual Building Test or the Site Analysis Test

A minimum 20% of ground floor units must comply with the requirements of the Guidelines, plus an additional number determined by application of one of the tests. In addition, if any entrance is made accessible to meet either the 20% minimum or the percentage resulting from the test:

all units served by that entrance must comply.

Examples of Potentially Impractical Sites Based on Terrain and Application of Site Impracticality Tests

INDIVIDUAL BUILDING TEST

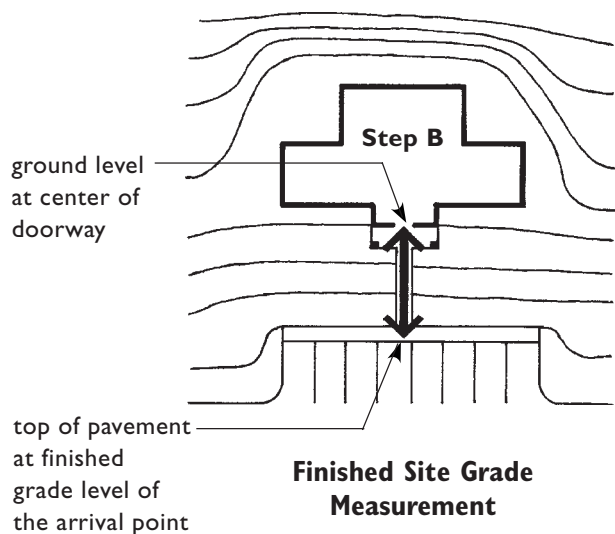
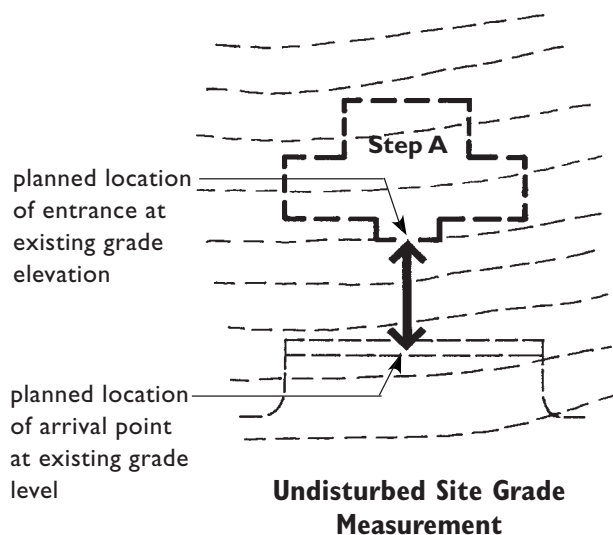
The Individual Building Test **must** be used to analyze a site with a single building with one common entrance and also may be used for all other sites. The Individual Building Test, unlike the Site Analysis Test, does not have to be certified by a professional licensed engineer, landscape architect, or surveyor; but it should be calculated on a topographic map with two-foot (or less) contour intervals.

For it to be considered impractical to provide an accessible route to any building or individual dwelling unit entrance, the slope between the pedestrian arrival points and the planned

entrances must meet both of the following two conditions (quoted directly from the Guidelines):

STEP A. the slopes of the undisturbed site measured between the planned entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance exceed 10%; and

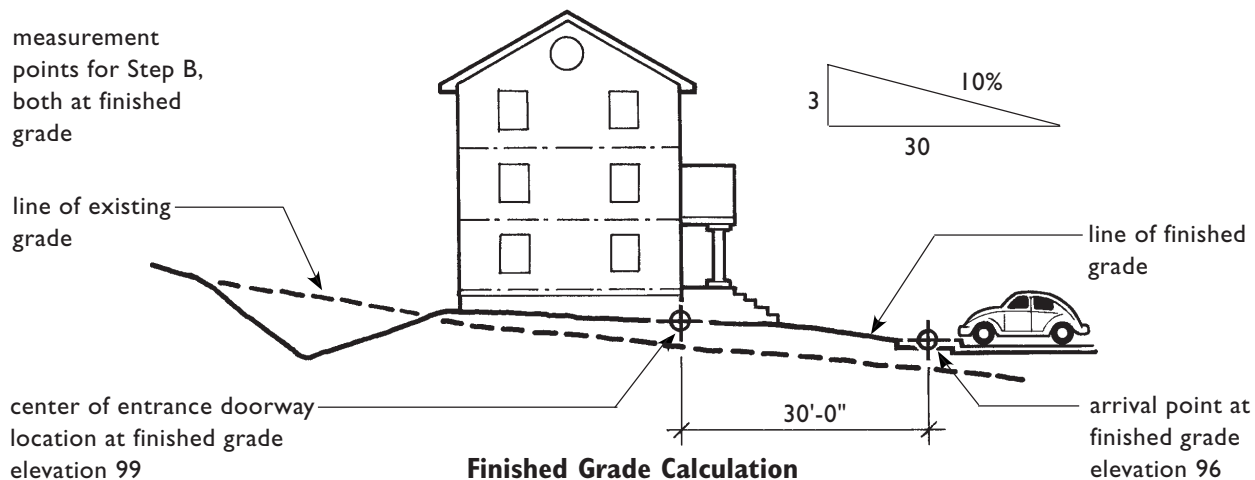
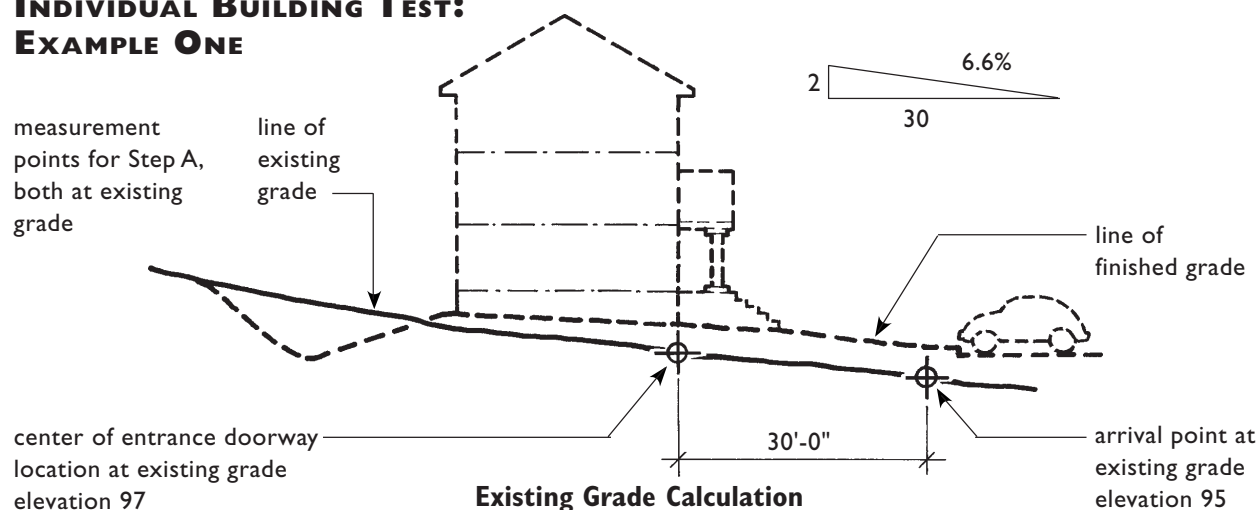
STEP B. the slopes of the planned finish grade measured between the entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance also exceed 10%.



If the slope of both the undisturbed site and the planned finished grade between the building entrance and pedestrian arrival points does not exceed the 10% slope criterion, then it is considered practical to provide an accessible route with a maximum slope of 8.33% to the building or dwelling unit entrance. The entrance, thus, must be accessible and the unit(s), plus the public and

common use spaces in the building served by the entrance, must comply with the design requirements of the Guidelines. The 10% slope criterion determines whether it is practical to provide an accessible route from a pedestrian arrival point to the building or dwelling unit entrance. It is not meant to imply that 10% is the acceptable slope for an accessible route.

**INDIVIDUAL BUILDING TEST:
EXAMPLE ONE**

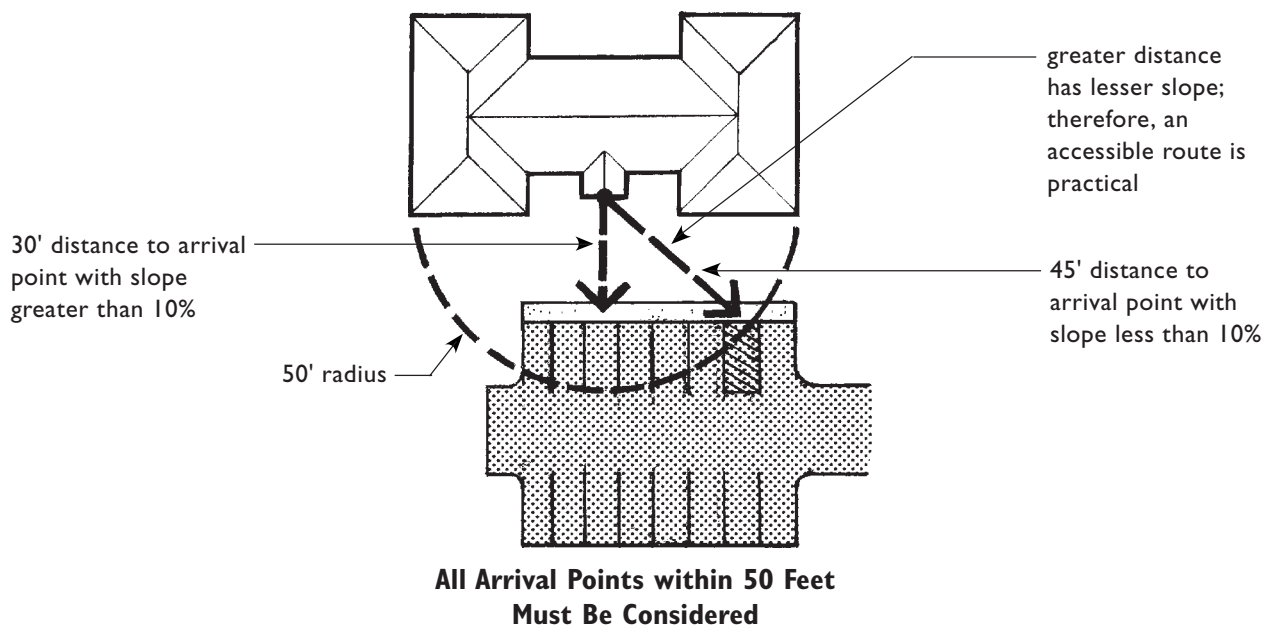


**Individual Building Test:
Example One**

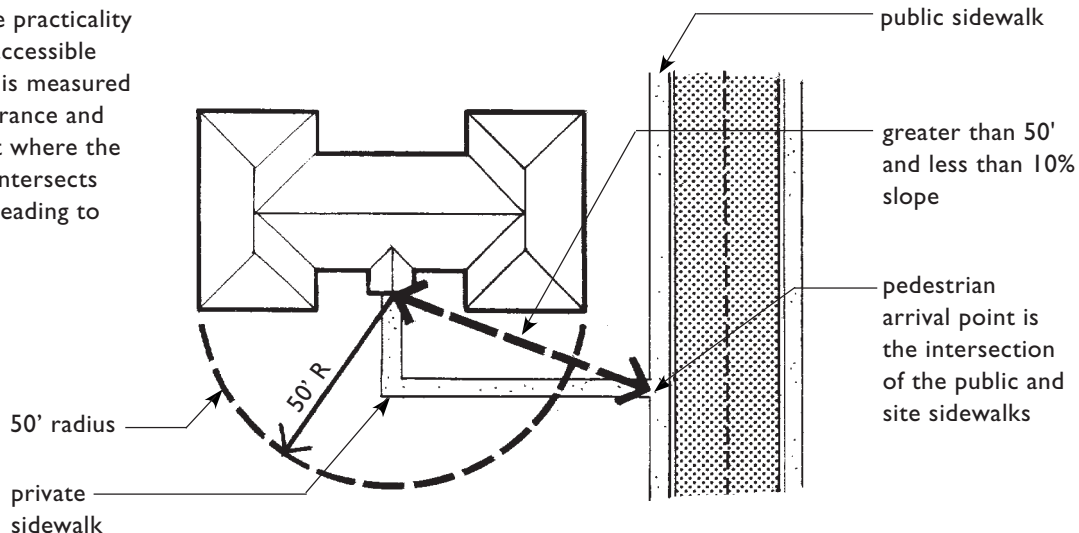
both calculations do not exceed 10%; therefore, the developer must provide an accessible route to the entrance and all units on the ground floor served by the entrance are covered

Vehicular or pedestrian arrival points include public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks. In applying the test, all arrival points within the radius of 50 feet must be reviewed and not just a direct line to the closest arrival point. As shown in the diagram below, a 30-foot line to the closest arrival point has a slope of more than 10%, while a 45-foot line to a farther point has a slope of less than 10%. An accessible building entrance on an accessible route is, therefore, practical and the entrance must be accessible.

If there are no vehicular or pedestrian arrival points within 50 feet, the slope must be calculated to the closest arrival point beyond 50 feet. For sidewalks, the closest point to the planned entrance is taken at the point where a public sidewalk entering the site intersects with a sidewalk leading to the entrance.



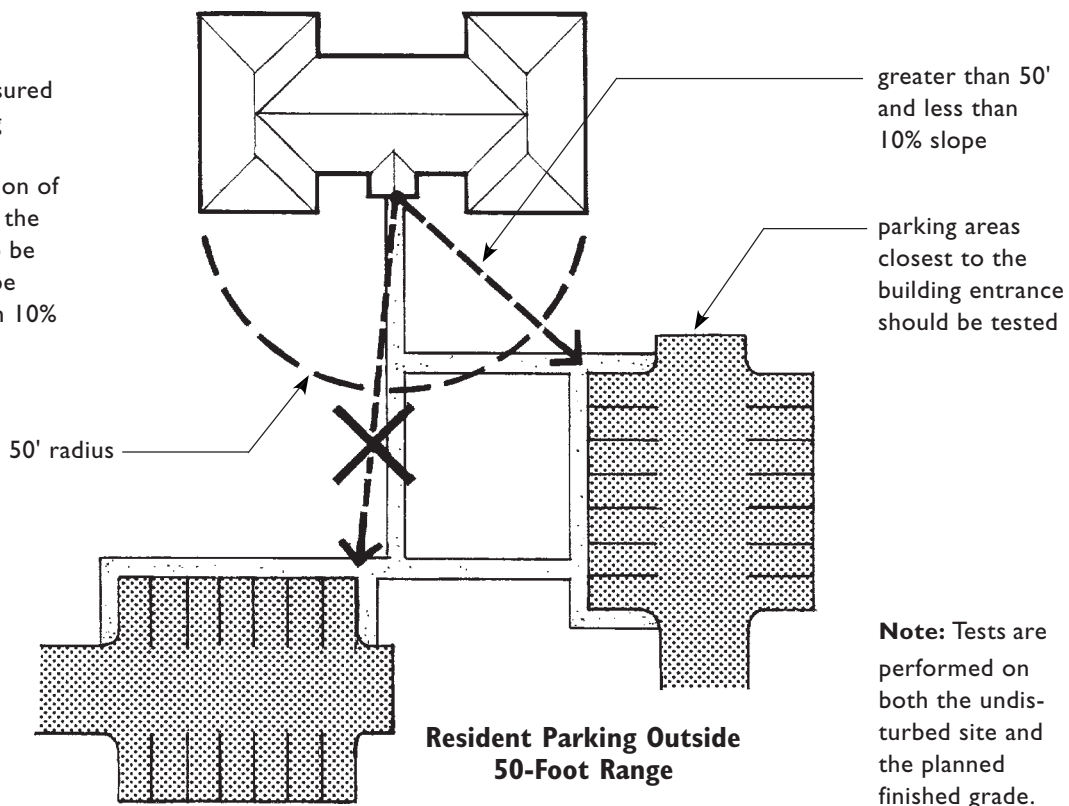
to determine the practicality of providing an accessible route, the slope is measured between the entrance and the closest point where the public sidewalk intersects with a sidewalk leading to the entrance



**Sidewalks as Pedestrian Arrival Points
(Closest Arrival Point Is Outside 50-Foot Range)**

In the case of resident parking areas, the closest point to the planned entrance will be measured from the entry point to the parking areas that are located closest to the planned entrance.

the slope is measured from the building entrance to the closest intersection of the sidewalk and the parking area – to be practical the slope must be less than 10%

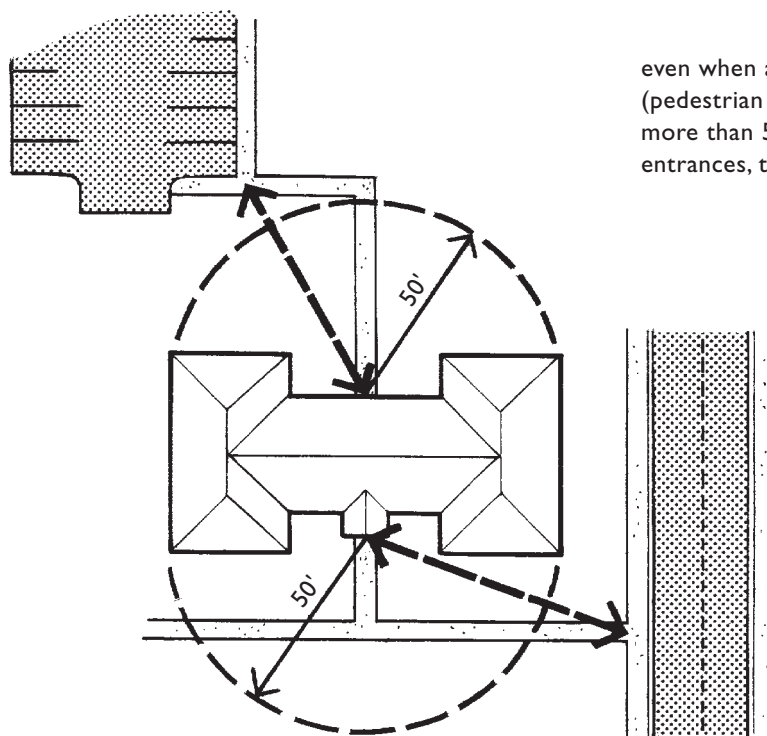


In some buildings the Individual Building Test may need to be applied to each entrance. The following pages contain illustrations explaining the application of this test at different site conditions.

**INDIVIDUAL BUILDING TEST:
EXAMPLE TWO**

For buildings having **more than one planned common entrance** on a ground floor, the Individual Building Test must be conducted for each

entrance. Even if both entrances prove to be impractical, 20% of the ground floor units still must meet the requirements of the Guidelines; and the developer must change the entrance in whatever way necessary to provide an accessible route to these units. Once the accessible route and entrance is provided, all ground floor units served by the accessible entrance must comply. However, only one entrance is required to be accessible and on an accessible route.



even when all arrival points (pedestrian or vehicular) are more than 50' from the planned entrances, they must be tested

**Individual Building Test:
Example Two
Buildings with More than One Planned Common
Entrance on a Ground Floor**

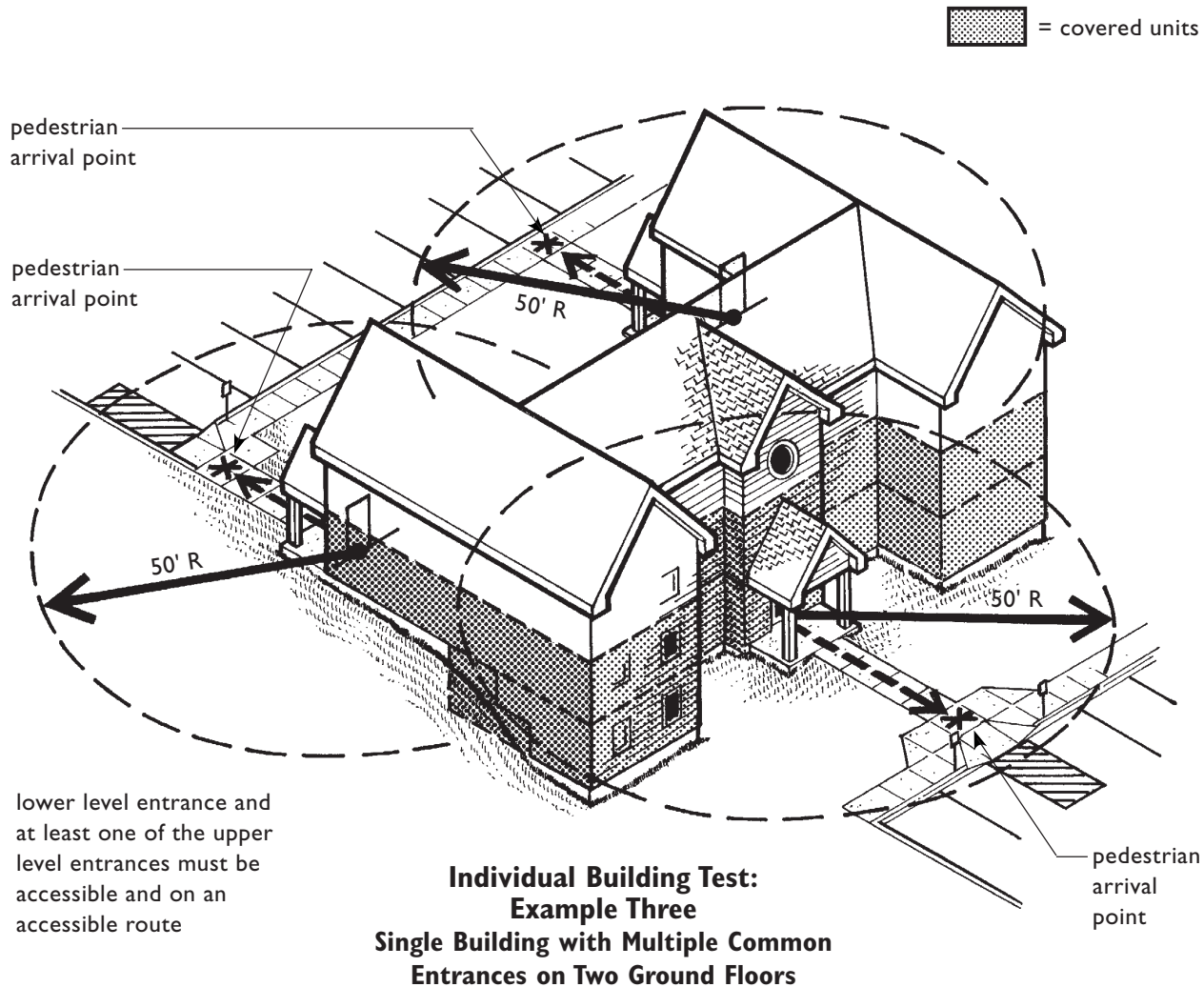
INDIVIDUAL BUILDING TEST:

EXAMPLE THREE

For buildings having **more than one planned common entrance on more than one ground floor** the Individual Building Test is applied to each entrance.

The site arrival points within 50 feet of each entrance for both the existing and finished grade do not exceed 10%; therefore, all entrances

are practical. Since all entrances are practical, units on both floors are covered and must comply with the requirements of the Guidelines. The entrance on the lower floor level and at least one of the entrances on the upper floor level must be on an accessible route unless the two entrances on the upper level serve different sets of clustered units, in which case both upper level entrances must be on an accessible route.



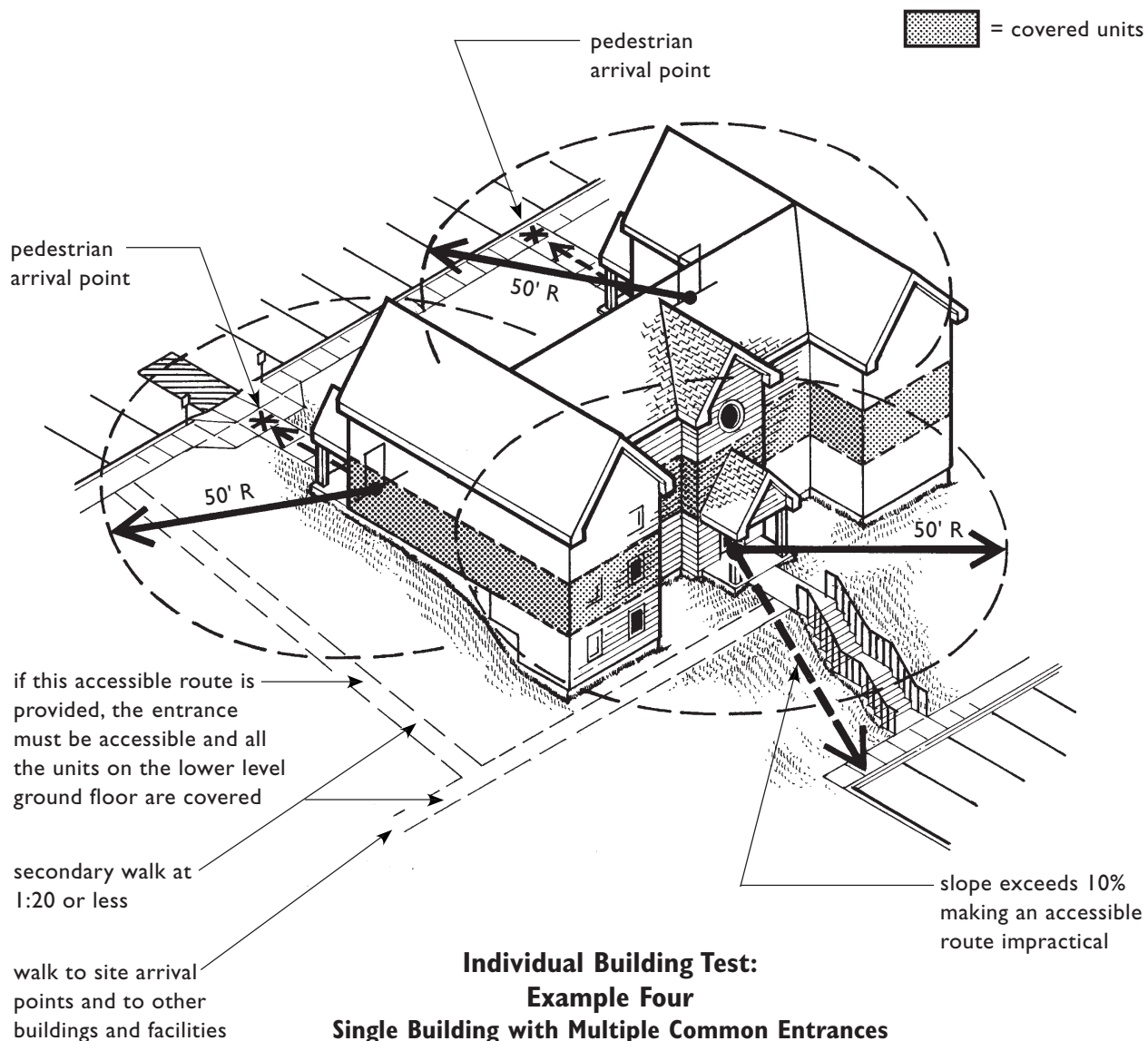
INDIVIDUAL BUILDING TEST:

EXAMPLE FOUR

There is a site arrival point within 50 feet of each planned entrance. The slopes from the existing and finished grade for the two upper level entrances do not exceed 10%, but the slopes for the lower level entrance do.

It is impractical to provide an accessible route from parking to the entrance on the lower ground floor. However, a secondary and

nonrequired walk system is planned (dotted lines). It would connect the lower level entrance to the upper level arrival points and to other on-site buildings, amenities, and arrival points. The walk would not exceed a 1:20 slope and would therefore be an accessible route. If the walk is installed, the lower level entrance would be on an accessible route and the units on the lower level floor also would be covered.



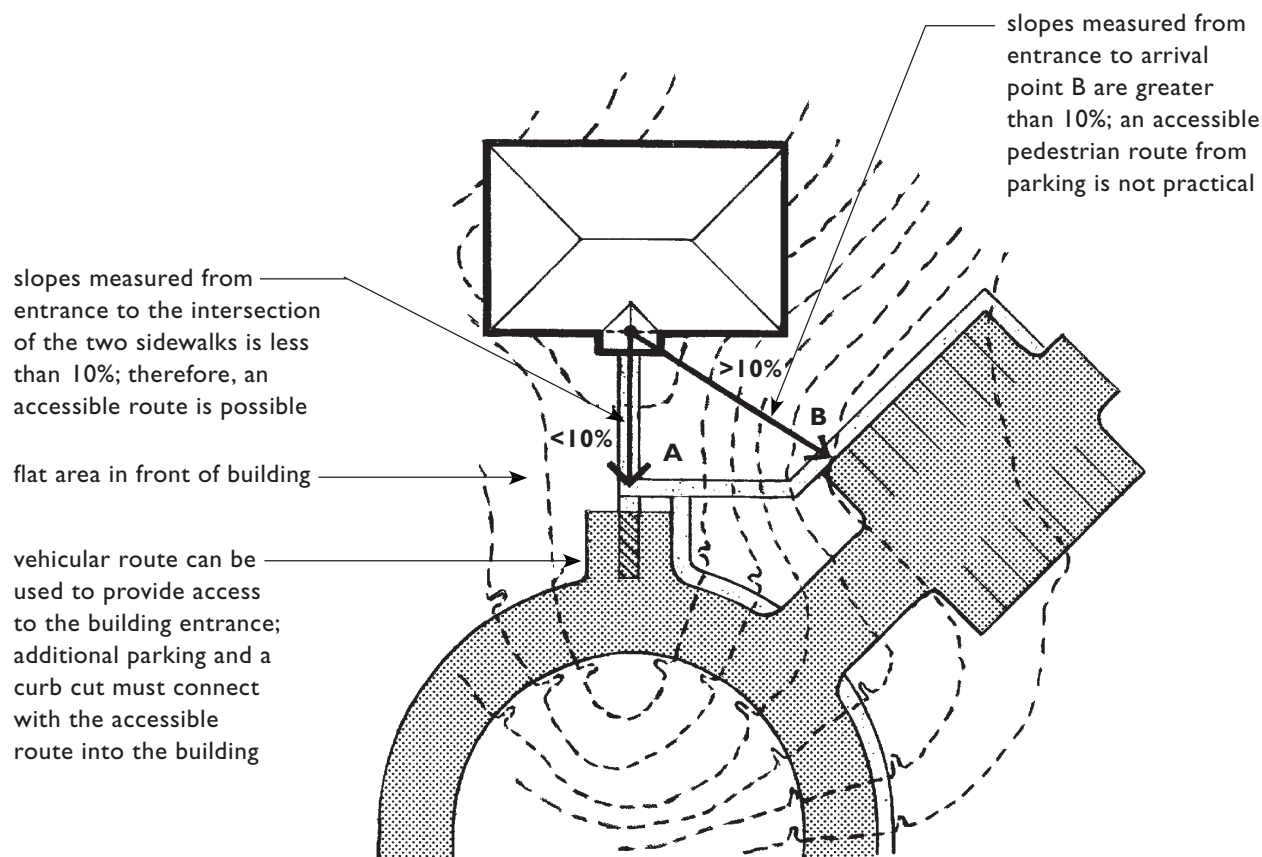
**Individual Building Test:
Example Four
Single Building with Multiple Common Entrances
Lower Ground Floor Units May Be Covered**

**INDIVIDUAL BUILDING TEST:
EXAMPLE FIVE
VEHICULAR ROUTE PROVIDES ACCESS
TO BUILDING ENTRANCES**

There is a single nonelevator building on a site having one common entrance, so the Individual Building Test is used to evaluate the practicality of providing an accessible route from the arrival points to the planned entrance. The closest arrival point is the sidewalk beside the driveway that curves up a slope to a flat area in front of the entrance (point A). The slopes from the entrance to arrival point A are less than 10%, but no parking is provided. The slopes between the entrance and all

other vehicular and pedestrian arrival (point B) are greater than 10%, making it impractical to provide an accessible pedestrian route from the parking lot to the building entrance.

This is still a covered building since an accessible route is possible from the entrance to the sidewalk in front of the building. Because it is impractical to install an accessible pedestrian route from the parking area, an acceptable alternative is to provide access via a vehicular route. However, necessary site provisions, such as parking spaces and curb ramps, must be provided on an accessible route to 2% of the covered dwelling units.



**Individual Building Test:
Example Five
Vehicular Route May Be Used to Provide Access to
Buildings Containing Dwelling Units**

SITE ANALYSIS TEST

This test may be used to analyze the site for a multifamily housing development containing multiple buildings without elevators, or a single nonelevator building with multiple entrances. The methodology for this test is significantly different from the Individual Building Test. It requires an analysis of the site to determine the number of required units which must be on an accessible route and which must meet the design requirements of the Guidelines. After this calculation is completed, the site is laid out and the minimum number of covered units must be provided. A third step which analyzes the placement of required units, accessible routes, and accessible entrances is then performed. This step is used to identify any additional units that can and therefore must be made to comply. Where the site contains multiple buildings, all the covered units should not be clustered in one building, but, as much as the site allows, should be dispersed throughout all the buildings. To perform the Site Analysis Test the following steps must be taken:

STEP A

Calculate the percentage of total buildable area of the undisturbed site with a natural grade less than 10% slope.

1. Obtain a Survey Map: Obtain a topographic survey map of the undisturbed site with 2-foot contour intervals. The map must show precise boundaries of the site as well as areas where building is not allowed, such as floodplains, wetlands, setbacks, easements, or other restricted use areas.

2. Measure the Total Buildable Area: Measure the total area on which building is allowed, i.e., the area of the lot or site where a building can be located in compliance with applicable codes and zoning regulations. The “Total Buildable Area” is the total area of the site minus any restricted use areas.

3. Complete a Slope Analysis: Do a slope analysis of the total buildable area and mark on the topographic survey all those areas which have a slope of 10% or less. Calculate the combined area of site with slopes less than 10%. The slope determination shall be made between each successive 2-foot contour interval. **The accuracy of the slope analysis must be certified by a professional licensed engineer, architect, landscape architect, or surveyor.**

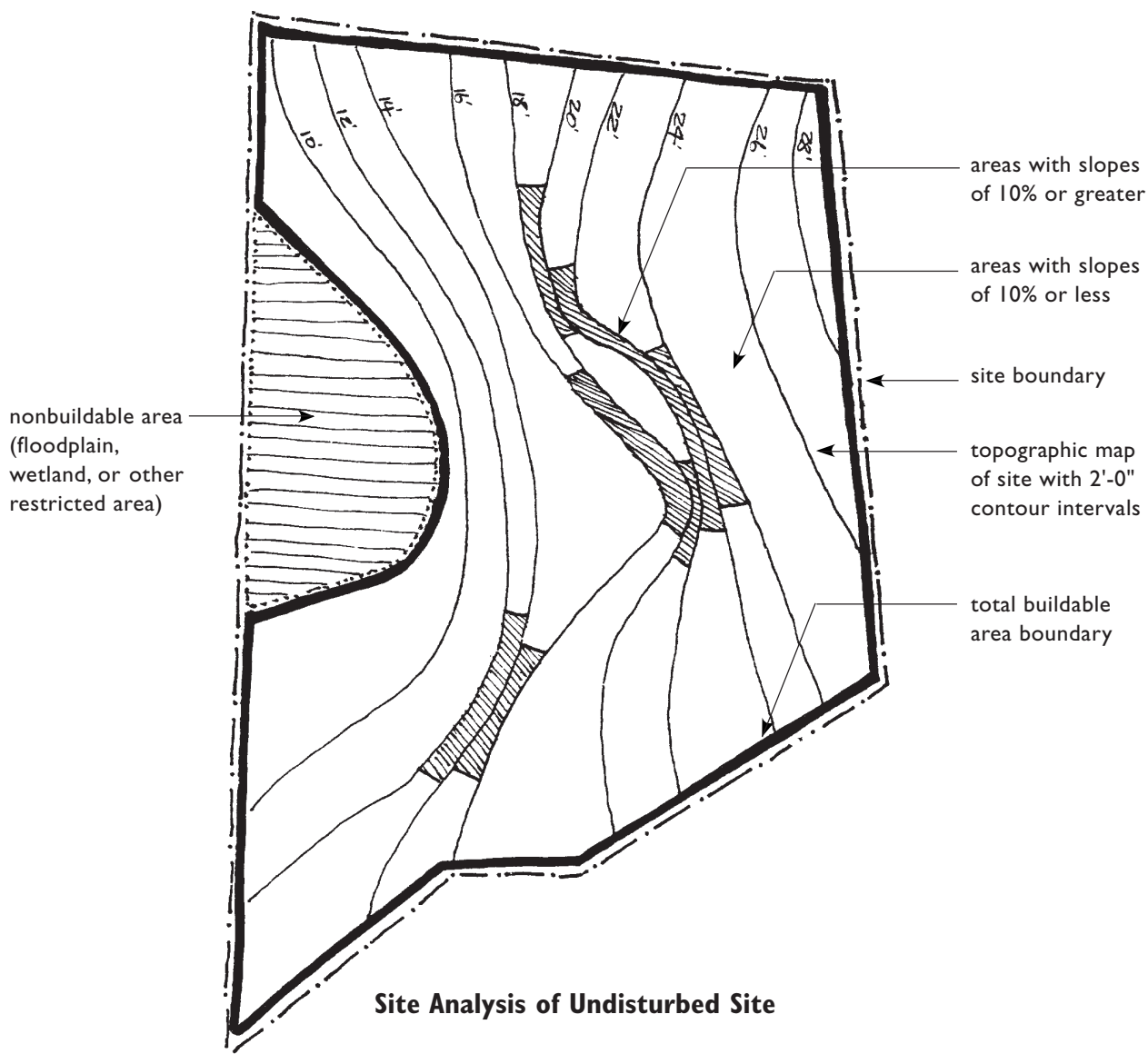
STEP B

Calculate percentage of accessible units.

Calculate the percentage of total buildable area of the undisturbed site with a natural grade less than 10%. This percentage is the minimum percentage of ground floor units which must be made accessible. See sample site on page 1.52.

For example, if the total buildable area is 125,000 square feet and the area with slopes of less than 10% is 100,000 square feet, then the minimum percentage of units to be accessible is 80%.

$$\frac{\text{Area with slope } < 10\%}{\text{Total buildable area}} = \frac{100,000}{125,000} = 80\%$$



STEP C

Additional Covered Units

In addition to the number of units required by the preceding analysis, **all ground floor units** must meet the design requirements of the Guidelines if they are served by a planned building entrance which is on an accessible route, i.e., on a walkway having a slope no greater than 8.33% between the planned entrance and a vehicular or pedestrian arrival point. This requires the builder/developer to

review the site plan a second time to determine if additional accessible routes and/or entrances have been created that will increase the number of covered accessible units. Whenever accessible routes or entrances have been created to provide access to the minimum required number of units, any additional units that may be served by those entrances also must meet the requirements of the Guidelines.

APPLYING THE SITE ANALYSIS TEST

Calculating the Required Number of Covered Units

There are three nonelevator buildings on a site. Two have 16 units, 4 on the lowest ground floor level and 6 on each of the other floors. The third building has 12 units, 6 on each floor. Performing **Step A** of the site analysis test reveals that 75% of the buildable area has a slope of less than 10%. Therefore, 75% of the total number of ground floor units must meet the requirements of the Guidelines and be on an accessible route.

Buildings One and Two have two ground floors, while Building Three has only one ground floor. The total number of ground floor units for the development is 26. Seventy-five percent of $26 = 20$ (19.5 rounded up) ground floor units that are covered (**Step B**). The covered units should be dispersed on the site among the three buildings.

To provide the required number of units the developer/builder chooses to place the covered units on the only ground floor in Building Three and on the upper ground floor of Buildings One and Two, where accessible entrances on accessible routes can be provided most easily. The number of units on these floors totals 18, which is 2 units **less** than the 20 that are needed to meet **Steps A and B**.

To meet the requirement for 20 accessible units, the developer/builder has the option of providing the 2 additional units on the second ground floor of either Building One or Two. In this example, the builder places the additional 2 required units on the lower ground floor of Building One, and provides the required accessibility by regrading and adding a ramp to the lower level entrance. Additionally, under **Step C**, since the

lower level entrance is now on an accessible route, all the units on that floor become covered units and the entire ground floor must comply. As a result, the total number of covered units is 22.

Positioning Covered Units on a Building Site

It is permissible under the Site Analysis Test to select in which buildings and on which floors covered units will be placed; however, in a multiple building development, all the covered units should not be located in a single building. Covered units should be dispersed between buildings and, if possible, among all the ground floors. However, if the required number of covered units is less than the total number of units on a floor, all the units on that floor become covered units because the required units are served by an accessible route and entrance.

Step A

Topographic analysis:
Area < 10% slope = 75%
Ground floor units to comply = 75%

Step B

Total Ground Floor Units = 26

$$\begin{array}{r} \times 75\% \\ \hline \end{array}$$
 Covered Units = 20

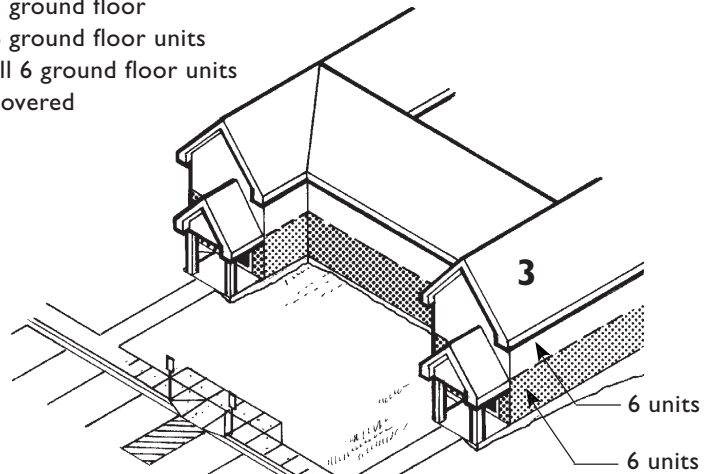
Step C

After distribution of required units, total count of 20 covered ground floor units is raised to 22.

Two more units are added to lower ground floor of Building #1 and an accessible route is provided to meet the required 20. Two remaining units on that floor become covered units because all ground floor units served by an accessible route are covered units.

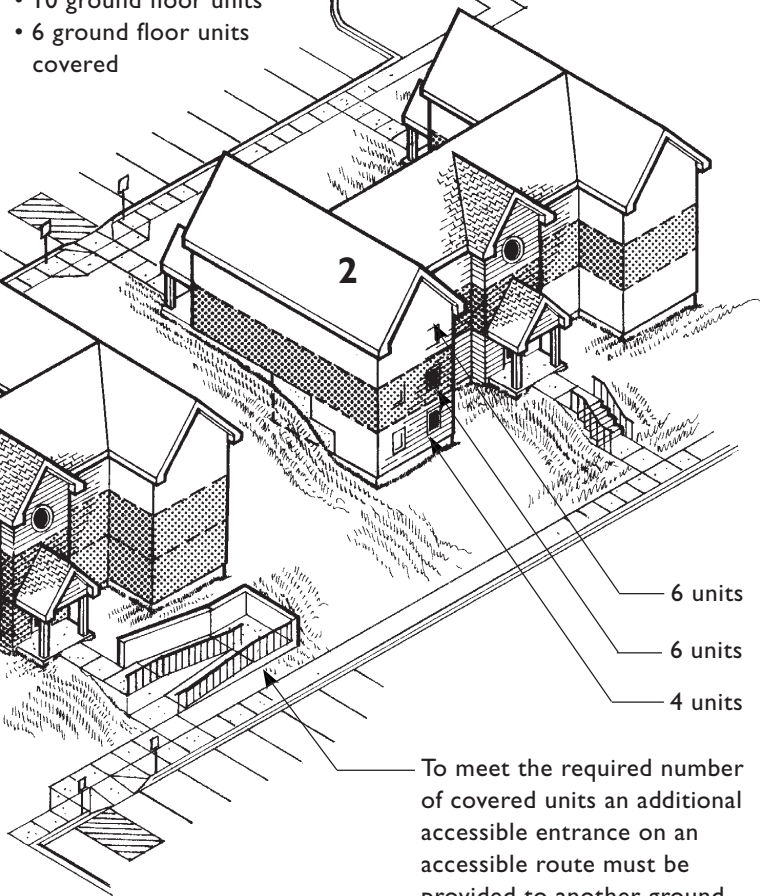
Building #3

- 1 ground floor
- 6 ground floor units
- all 6 ground floor units covered



Building #2

- 2 ground floors
- 10 ground floor units
- 6 ground floor units covered



Building #1

- 2 ground floors
- 10 ground floor units
- all 10 ground floor units covered

additional required covered units provided on lower ground floor

6 units
6 units
4 units

To meet the required number of covered units an additional accessible entrance on an accessible route must be provided to another ground floor, thus making all the units on that floor covered.

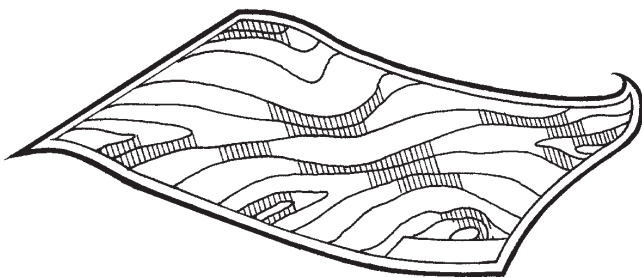
**Site Analysis Test:
Example One
The Number of Covered Units**

ACCESSIBLE ROUTES MAY DICTATE ADDITIONAL COVERED UNITS

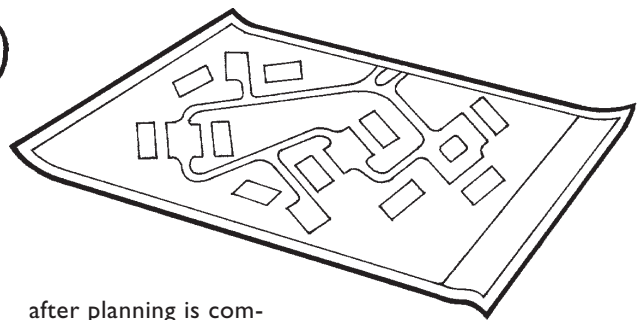
If the Site Analysis Test indicates a particular percentage of required covered units and the project has a larger number, all of which are on accessible routes, the larger number are covered and must meet the design requirements of the Guidelines.

Ten three-story nonelevator buildings are planned for a site, each having eight ground floor units for a total of 80 units. **Steps A and B** of the site analysis test show 60% (or 48) of the ground

floor units must comply. During planning the developer places these 48 required units in six of the ten buildings, selecting the six buildings where providing accessibility is easily achieved. However, after the site planning is completed, application of **Step C** shows that all ten buildings have entrances on an accessible route, i.e., a walkway with a slope between the planned building entrances and a pedestrian or vehicular arrival point that is no greater than 8.33%. Therefore, all ground floor units in each building (or 80 units) must meet the Guidelines.



Steps A and B of the site analysis reveals 60% of ground floor units are covered



after planning is completed **Step C** of the test requires all buildings to have entrances on an accessible route; therefore, 100% of ground floor units are covered

Site Analysis Test: Example Two Additional Covered Units

SITES WITH UNUSUAL CHARACTERISTICS

Certain sites are subject to laws or codes which specify that the lowest floor of a building or the lowest structural member of the lowest floor must be raised to a specified level. Examples of such sites are those located in a federally designated flood-plain or coastal high-hazard area, where buildings must be raised to a level at or above the base flood elevation.

When these circumstances result in **Step One**, a difference in grade elevation exceeding 30 inches

– and –

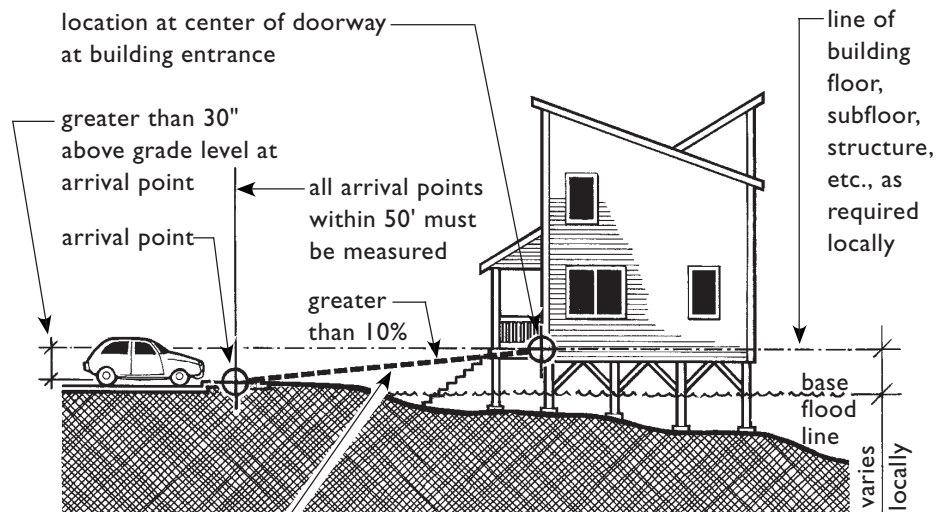
Step Two, a slope exceeding 10% between a building entrance and all vehicular and pedestrian arrival points within 50 feet of the entrance (or to the closest one if none are within 50 feet), then an accessible route to that building entrance is considered impractical. Therefore, the building would not be subject to the accessibility requirements of the Fair Housing Act.

The heavy dotted line between the door threshold and the arrival point in the following illustrations is a measuring and slope determination line only. It is not intended to represent the surface of a ramp or walk. The slope and the length of this line simply will determine whether or not the building entrance is required to be on an accessible route. Once that determination is made, the developer/builder can design any system of ramps, walks, lifts, or other method of providing the necessary access.

The entrances shown in these examples may be either a common or an individual dwelling unit entrance. If the measuring and slope determination line shown has a vertical elevation change less than 30 inches and the slope is less than 10%, the entrance and the route to it must be accessible (meet the Guidelines) as well as the dwelling units on that ground floor.

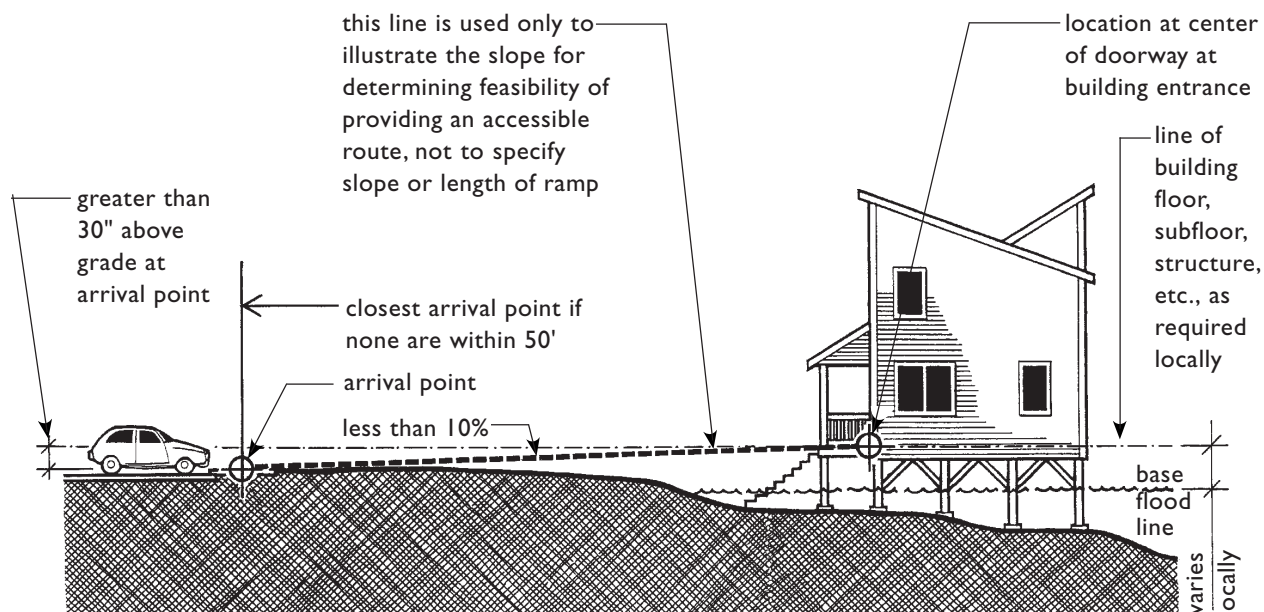
Tree-save ordinances do not constitute an unusual site characteristic that necessarily would exempt a site from complying with the requirements of the Act. However, the Guidelines would not require that a site be graded in violation of a tree-save ordinance. If, however, access is required based on the final site plan, then installation of a ramp for access, rather than grading, could be necessary in some cases so as not to disturb the trees.

Line of building floor, subfloor, underside of lowest structural member, or other measuring point required by local code authority is more than 30" above grade level at the arrival point. In addition, the slope of the measuring line between the entrance and the arrival point is greater than 10%; therefore, the building is not covered.



this line is used only to illustrate the slope measurement for determining feasibility of providing an accessible route, not to specify slope or length of ramp

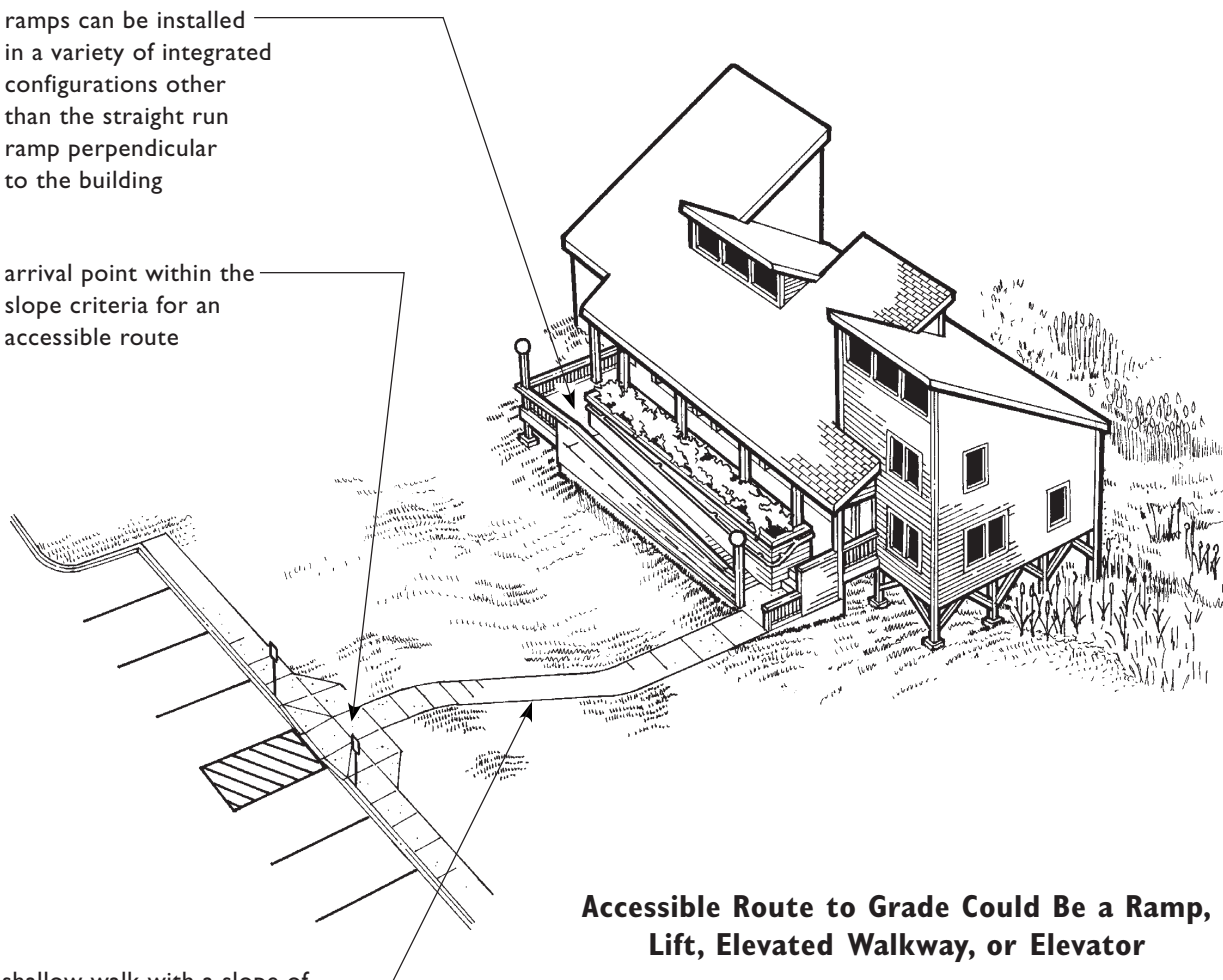
Building Meets Both Criteria for Exemption



Building Must Comply With Requirements of the Guidelines

ramps can be installed
in a variety of integrated
configurations other
than the straight run
ramp perpendicular
to the building

arrival point within the
slope criteria for an
accessible route



**Accessible Route to Grade Could Be a Ramp,
Lift, Elevated Walkway, or Elevator**

shallow walk with a slope of
less than 5%; walks between
covered buildings and pedes-
trian or vehicular arrival points
with slopes between 5% and
8.33% require handrails