



MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB 09/25/08
Item #6

September 17, 2008

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Dan Hardy, Acting Chief *DKH*
Transportation Planning Division

FROM: Larry Cole: 301-495-4528, for Transportation Planning Division and *LC*
Cathy Conlon: 301-495-4542, for Development Review Division *CC*

SUBJECT: MCER NO. 29-08: PROPOSED DEPARTMENT OF FIRE AND
RESCUE SERVICE REGULATION, Fire Safety Code – Fire Department
Apparatus Access and Water Supply

APPLICANT: Montgomery County Executive

RECOMMENDATION: We recommend that the Planning Board adopt the following comments to the Executive on the proposed regulations:

1. The Executive should convene an interagency working group to develop appropriate provisions to address issues associated with private development and environmental impacts before submitting these regulations to the County Council.
2. Add language that describes the exceptions or discretion that the Fire Marshall has so that applicants and reviewers can understand what non-standard items may be allowed. The waiver criteria should include consideration of other County goals such as preserving/protecting sensitive areas (e.g. historic settings, environmental areas, specimen/champion trees) and preserving rural character.
3. Clarify which driveways need to meet the 20-foot unobstructed width requirement.
4. Consider allowing parking on both sides of 26-foot-wide roads if the street pattern in the area would otherwise allow adequate fire access.

5. Clarify how the fire department access road requirements, including parking prohibitions on existing streets, would be applied to infill development.
6. A definition of an all-weather surface is needed. Grasscrete and other forms of more pervious pavement surfaces should be included.
7. The size of the easement needed for fire department-required cisterns needs to be specified.
8. All Executive departments should be required to identify when they are proposing to purchase larger vehicles than their current fleet and what road changes would be needed to accommodate them.

INTRODUCTION

On September 1, 2008, the County Executive published the proposed regulations (see Attachment 1) for adoption under the Method 2 process, which requires that they be submitted to the County Council for review. Thirty days will be allowed for public comment and this Planning Board discussion is intended to give you the opportunity to provide comments during this period. These Fire and Rescue Service regulations are being proposed in conjunction with MCER NO. 31-08, the proposed Context Sensitive Road Design Standards, to ensure that the road issues affected by fire access considerations are addressed concurrently.

These regulations also relate to the County's adoption of the National Fire Protection Act in 2006. The Board reviewed the proposed adoption on September 14, 2006. The Board's letter is Attachment 2. The staff memo for that discussion is on http://www.montgomeryplanningboard.org/agenda/2006/documents/20060914Item16_opt.pdf

The proposed regulations address most of the Board's concerns expressed at that meeting by:

- Defining the operating needs of fire and rescue vehicles on fire access roads
- Requiring that a fire department access plan showing these roads be developed as part of new development.
- Defining where parking will be permitted based on roadway width and the type of adjacent development
- Defining the turning radii that must be used to accommodate emergency vehicles in road design

The one remaining issue from the Board's follow-up letter that these regulations do not address is defining what types of driveways need to meet the 20-foot unobstructed width requirement.

We have additional concerns about the proposed regulations as described below.

ANALYSIS

As proposed, several of the requirements in this regulation conflict with other existing county regulations, guidelines, and policies. These conflicts result in a recurring need for case-by-case review of modifications by MCFRS. It would be more efficient to address these recurring conflicts by including specific exceptions in the proposed regulations. In some cases, the exceptions could be modifications of the standards. For instance, long shared driveways could be 20' wide in critical locations, but neck down in others to avoid unnecessary impervious areas and impacts to environmentally sensitive areas. In other cases, perhaps the standards should be waived altogether because the costs (both in terms of money and good design) may not be justified for small, infill developments. *Staff recommends that the Executive not submit these regulations to the County Council until an interagency working group can be convened to develop appropriate provisions to address these types of issues.*

Impact on the Road Cross Section Standards and Residential Parking: Adoption of these requirements would mean little change to most County road classifications, but would require parking restrictions on our most frequently used residential streets (closed-section Secondary and Tertiary Residential Roads and the reduced-width Alternative Primary Residential Road) when they are intended to be used as fire department access roads. The 26-foot-wide roadway on these streets is typically used for two-way traffic but parking is allowed on both sides.

Since there is not enough room for four vehicles (two parked and two moving) in the cross section in any particular location, drivers typically have to travel more slowly on such roads so that they can negotiate around parked cars and opposing traffic. The proposed parking restrictions would eliminate the need for this negotiation, giving drivers a clear path and therefore likely increasing operating speeds in these residential neighborhoods. The proposed reduction in on-street parking would also mean that residents might need to provide additional private parking areas and that their visitors would have to park farther away from their homes.

We recommend that the regulation include language that allows parking on both sides of 26-foot-wide roads if the street pattern in the area would otherwise allow adequate fire access.

The proposed significant increase in “No Parking” areas could create an enforcement problem and it’s unclear how this would be applied to new developments in existing communities. While FRS staff have said that these requirements would not be applied retroactively to existing roads as a blanket requirement, *how the parking requirements would be applied to infill developments needs to be clarified.*

It will require more creative planning to accommodate the FRS requirements necessary to ensure public safety, but the requirement for a fire department access plan will ensure that these higher standards are not unnecessarily applied to other roads in a development.

Impact on Other Road Standards: The road standards for cul-de-sacs and turnarounds would need to be revised to accommodate larger emergency vehicles to meet the proposed Fire and Rescue Service Executive Regulations.

It is important that we codify these requirements so that they are known at the start of planning for new developments and roads.

If a developer has no road construction requirements other than a driveway, there should not be a requirement to provide a fire department access road. It could be an onerous requirement for a small development of one or two homes to upgrade an entire street to the proposed standards or to require a mid block development of two lots to provide a 60' x 20' turnaround.

Requirements for a 20-Foot-Wide Driveway

For long, shared, private driveways that are required to be 20 feet wide for their entire length; there should be some language that addresses Fire Department needs without unnecessarily requiring a 20-foot width for the whole length. We suggest that a Fire Department Apparatus Access (FDAA) consisting of a private driveway could be 20 feet wide at the intersection with the public (or private) street for a length of 60 feet at which point it could taper to 10 or 12 feet in width until it comes within 200 or 300 feet of any structure, at which time it could expand back to the standard 20 feet; additional clear areas could be provided on either side of the narrower driveway sections. Perhaps a distinction between FDAA drive aisles and FDAA operating areas having different dimensions should be considered. ***This regulation should clearly establish the exceptions or discretion that the Fire Marshall has, similar to the section on waivers in the Road Code, so that applicants and reviewers can understand what non-standard items may be allowed.*** One of the standard waivers should be in areas specifically recommended for reduced imperviousness. These include, but are not limited to: the County's four existing special protection areas, the Patuxent Primary Management Area (PMA), and the KI-2 and NE-1 areas in the Germantown Master Plan.

Other Concerns

Paragraph 2.a. of the proposed regulation states that the Fire Marshal “may require, and must approve” all suitable gates, access boxes, etc. This wording could be read as though the Fire Marshal has no discretion and has no choice but to approve the gates, access boxes, etc. It's not clear whether this is the intent, or whether it should have been written to say that the Fire Marshal may require, subject to approval, gates, access boxes, etc. Likewise paragraph 2.b regarding fire lanes – “the Fire Marshal must require and approve all fire lanes on new or existing roads to be clearly marked...” should be “the Fire Marshal must require, subject to approval, all fire lanes on new or existing roads to be clearly marked...” The criteria for waivers for these items should be clarified as with the 20-foot-wide driveway above.

Section 8d: Compensatory Actions: Additional Fire Protection Measures: While DFRS is lead agency, MNCPPC may recommend use of appropriate compensatory actions, in lieu of wide paved areas to preserve/protect sensitive areas (e.g. historic settings, environmental areas, specimen/champion trees), to preserve rural character, or achieve other public policy objectives. These considerations should be considered in the waiver criteria.

Section 9a: **A definition of an all-weather surface is needed.** Grasscrete and other forms of more pervious pavement surfaces should be included.

Section 10b.1: The size of the easement for a cistern needs to be specified. Since it can't overlap with the Public Utility Easement, this requirement could be burdensome on any small development.

Accommodating Future Emergency and Transit Vehicle Purchases

We need to accommodate all users of the right-of-way and two important public users are transit vehicles and fire and rescue vehicles. These vehicles have different size and operating characteristics but are large. Representatives of WMATA and FRS took part in the Roadway Design Standards Stakeholders Work Group and lobbied for wider lanes and stated that they have difficulty maneuvering on our roads with their current fleets. But both also said that they had just purchased even larger vehicles.

The County needs a policy for the purchase of such vehicles to avoid an externalization of costs to the general public in the form of construction costs of wider roadways, which would encourage faster operating speeds and a degradation of the pedestrian environment. We do not control WMATA's expenditures directly, but similar problems could also be created with our Ride-On bus fleet. *We recommend that all Executive departments be required to identify when they are proposing to purchase larger vehicles than their current fleet and what road changes would be needed to accommodate them.*

LC:tc



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Fire Safety Code – Fire Department Apparatus Access and Water Supply	Number 29-08
Originating Department Montgomery County Fire & Rescue Service	Effective Date

MONTGOMERY COUNTY EXECUTIVE REGULATION

FIRE SAFETY CODE – FIRE DEPARTMENT APPARATUS ACCESS AND WATER SUPPLY

MONTGOMERY COUNTY FIRE AND RESCUE SERVICE

Issued by: County Executive
 Executive Regulation No: 29-08
 COMCOR: Division 06
 Authority: Montgomery County Code Section 22-13
 Council Review: Method (2) under Code Section 2A-15
 Register: Vol. 25, No. 9
 Effective Date:

SUMMARY: Expedient fire department apparatus access and adequate water supply are essential to the efficient and timely delivery of emergency assistance and fire suppression services. This proposed Regulation establishes the requirements for effective fire department apparatus access and water supply in urban, suburban and rural settings in Montgomery County.

ADDRESS: Division Chief Michael Love, Fire Marshal, Montgomery County Fire and Rescue Service, Executive Office Building, 101 Monroe Street, 12th Floor, Rockville, Maryland 20850

STAFF: For additional information, contact Assistant Chief Michael Donahue, Office of the Fire Marshal, Montgomery County Fire and Rescue Service, 255 Rockville Pike, 2nd Floor, Rockville, MD 20850. (240) 777-2457. e-mail: Mike.Donahue@montgomerycountymd.gov



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Section 1. Applicability. In accordance with the procedures authorized in Chapter 22, "Fire Safety Code," of the Montgomery County Code (1994), as amended, this Executive Regulation applies to safeguarding life, property and the public welfare from the risks of fire and explosion arising from the improper storage, handling, or use of materials or devices, and from conditions hazardous to life, property and the public welfare in the use or occupancy of structures or lots and adopts, except as amended in this Regulation, the National Fire Protection Association (NFPA) 1141, Standard for Fire Protection in Planned Building Groups, 2006 Edition, and NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, 2006 Edition.

Section 2. Definitions.

- a. **Fire Department Apparatus Access.** Any approved load-bearing, all-weather surfaces, including public, private, or access roads, driveways, parking lots, shoulders, and buffers, whose use is required to access more than one residential dwelling unit or any non-residential occupied building. In addition to these access surfaces, the Fire Marshal may require, and must approve, all suitable gates, access boxes, and fire lanes to ensure adequate fire department apparatus access.
- b. **Fire Lane.** A road or path developed or reserved to allow fire apparatus to pass through congested areas. The Fire Marshal must require and approve all fire lanes on new or existing roads to be clearly marked to prohibit vehicles or obstructions from impeding fire department apparatus access.
- c. **Fire Marshal.** For purposes of this Regulation, the Fire Marshal of the Montgomery County Fire and Rescue Service (MCFRS) includes the Fire Marshal's designees.
- d. **One- and Two- Family Dwellings.** Detached one- and two-family dwellings and attached single-family dwellings (townhomes) not more than three stories in height with a separate means of egress.



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- e. **Operating Bay.** Clear and unobstructed fire department apparatus load bearing surface along **fire department apparatus access** that increases operating width to a minimum of 26 feet wide. It may be defined by bollards and accessed via 3 inch mountable curb. The minimum length of an operating bay is 50 feet.

Section 3. Fire Department Apparatus Access.

The **Fire Marshal** must review and approve **fire department apparatus access** for all new development, and any changes made to **fire department apparatus access**. A **fire department apparatus access** plan is required as part of any development plan. Fire department access improvements may be required at the time of road reconstruction, surrounding new development, or redevelopment. The **Fire Marshal** may require at least two **fire department apparatus access** roads into new developments when, in the **Fire Marshal's** opinion, there is substantial risk that a single fire department access road into a community may become impassable.

Section 4. Width of Fire Department Apparatus Access.

Fire department apparatus access must be at least 20 feet wide, unless specifically excepted in this Regulation, or as approved by the **Fire Marshal**. Clear width may include, but is not limited, to multiple features of the cross-section, such as travel lanes, bike lanes, and load-bearing shoulders. Clear width excludes obstructive features such as, but not limited, to parking lanes and raised medians.

- a. On-street parking is allowed on one side only if the load-bearing **fire department apparatus access** is at least 28-feet wide.
- b. On-street parking is allowed on both sides if the load-bearing **fire department apparatus access** is at least 36-feet wide. The required width may increase with additional roadway features, such as pedestrian refuges.
- c. **Fire department apparatus access** serving one- and two-family dwellings of three stories or less, with no superimposed dwelling units or portions of dwelling units, and having no window sill greater than 27 feet from grade,



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may be 26-feet wide and allow parking on one side, if there are 50-foot long operating bays at 300-foot intervals. See Figure 1.

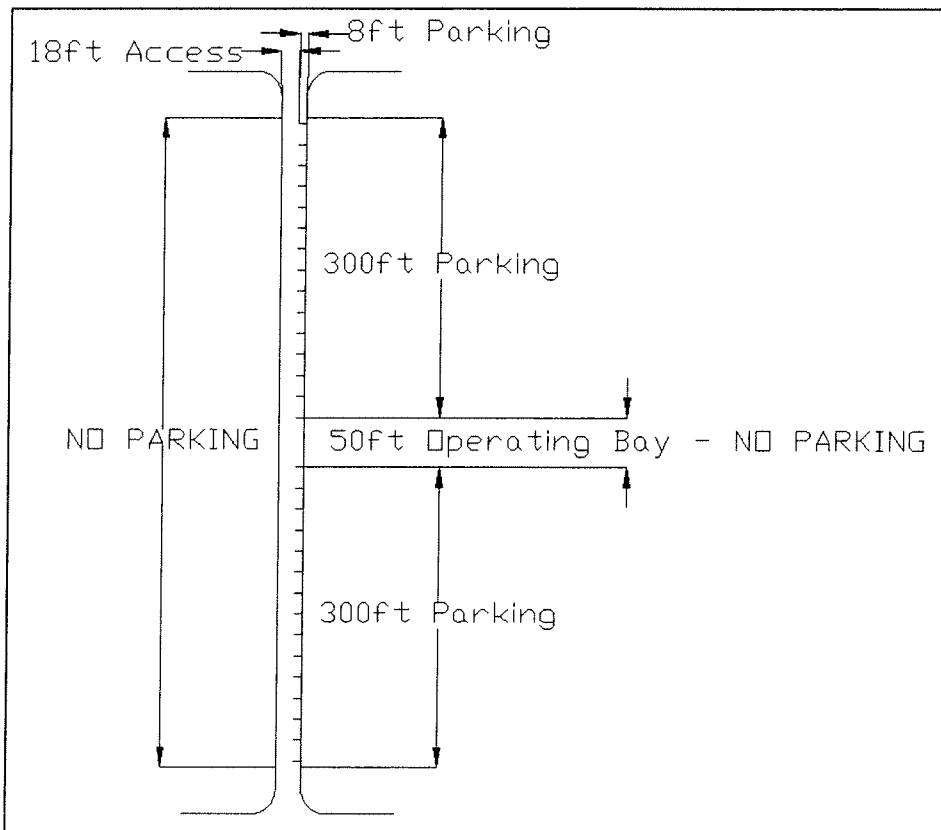


Figure 1. Operating bay application sketch

Section 5. Minimum and Maximum Turning Radii. Turning radius is measured from travel lane to travel lane. It is not necessarily inclusive of curb radius. The minimum interior turning radius for **fire department apparatus access** is 25 feet. The minimum exterior turning radius for **fire department apparatus access** is 50 feet. Performance-based approval of alternative turning radii may be allowed if apparatus movement into opposing lanes of traffic is minimized and unrestricted **fire department apparatus access** is maintained.



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Section 6. Provision of Dead-End Apparatus Turn-Around. Dead-end fire department apparatus access greater than 150-feet long must provide an approved apparatus turnaround. Approved designs include a cul-de-sac at the closed end at least 90-feet in diameter, or a T-turnaround, with each leg of the tee at least 60-feet long and 20-feet wide.

Section 7. When a Building Requires an Automatic Sprinkler System.

- a. A building must be protected throughout by an approved automatic sprinkler system if any portion of its footprint is more than 150 feet of clear and unobstructed walkable grade from a **fire department apparatus access** point.
- b. No portion of a building footprint in a building protected throughout by an approved automatic sprinkler system can be more than 450 feet of clear and unobstructed walkable grade from a **fire department apparatus access** point.

Section 8. Access Requirements for Occupied Structures.

- a. One- and two-family dwellings of three stories or less, with no superimposed dwelling unit or portion of a dwelling unit, must provide access to the occupied interior through a main, side-hinged door, via a clear and unobstructed walkable grade, within 150 feet of **fire department apparatus access**.
- b. One- and two-family dwellings more than three stories, or dwellings with superimposed dwelling units or a portion of a dwelling unit, must provide access to the occupied interior through a main, side-hinged door, via a clear and unobstructed walkable grade, within 50 feet of **fire department apparatus access**.
- c. A non-residential occupied structure must provide access to the occupied interior through a main, side-hinged door, via a clear and unobstructed walkable grade, within 50 feet of **fire department apparatus access**.



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- d. When **fire department apparatus access** to a new building cannot be provided, the **Fire Marshal** may require compensatory actions in the form of additional fire protection features. Compensatory action may include, but is not limited, to upgraded sprinkler protection, onsite water supply, and early notification fire alarm systems.

Section 9. Fire Department Apparatus Access Requirements: Surface, Load-Bearing, Clearance.

- a. At-grade **fire department apparatus access** must have all-weather surface, and must be capable of bearing the heaviest piece of apparatus in the MCFRS fleet at the time of **Fire Marshal** review and approval.
- b. Elevated decks designated as “**fire department apparatus access**” must have all-weather surface, and be load-bearing up to 75 pounds per square inch, or as specified in Chapter 20 of NFPA Standard 1901, Automotive Fire Apparatus, whichever is greater, or as approved by the **Fire Marshal**.
- c. All buildings, parts of buildings, or other obstructions extending over apparatus access must have a minimum of 13.5 feet vertical clearance from the finished driveway surface. Vertical clearance for any overhead obstruction over arterial roadways must be at least 16 feet from the finished surface. This requirement does not preclude the planting of street trees if maintained appropriately for **fire department apparatus access**.

Section 10. Water Supply Requirements along Fire Department Apparatus Access Routes.

- a. In municipally-supplied areas, hydrants must be spaced not more than 500 feet apart, and within 400 feet from any dead- ends in apparatus travel.
- b. In non-municipally supplied areas, static water sources compliant with NFPA 1142, Water Supplies for Suburban and Rural Firefighting, must be



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sited not more than one mile travel distance along **fire department apparatus access** routes. If an acceptable water supply is not available at the time of development:

1. residential development of more than one dwelling unit must dedicate an easement along the **fire department apparatus access** route to MCFRS that is appropriate in size for the grading and installation of an underground cistern.
2. Non-residential development must install a new, or upgrade an existing water supply, that is acceptable to the **Fire Marshal**.

Section 11. Alternative Application. The alternative application of performance-based design, as specified in Chapter 5 of NFPA 1, Uniform Fire Code, applies to any **fire department apparatus access** requirement identified in this Regulation.

Recommended:

 Thomas W. Carr, Jr., Fire Chief
 Montgomery County Fire and Rescue Service

Date

Approved:

 Isiah Leggett,
 County Executive

Date

M-NCPPC



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

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September 15, 2006

Douglas M. Duncan, County Executive
Montgomery County
Executive Office Building
101 Monroe Street
Rockville, MD 20850

President George Leventhal
Montgomery County Council
100 Maryland Avenue
Rockville, MD 20850

RE: Proposed County Regulations on Fire and Rescue MCER 6-06

Dear Sirs:

The Planning Board discussed the proposed regulation MCER-6-06 at our regularly scheduled meeting on September 14, 2006. We are concerned with the unintended adverse impacts that could result from the proposed regulation, especially in new neo-traditional subdivisions as well as many existing communities. More consultation is needed within the Executive Branch, with M-NCPPC, and with the building industry before this regulation is adopted. Toward that end, we recommend that the Fire & Rescue Service (FRS):

- Work with Department of Public Works and Transportation (DPWT), Department of Permitting Services (DPS), and Maryland-National Capital Park and Planning Commission (M-NCPPC) staff to clearly define what is considered to be a 20-foot unobstructed width, define where it will be required, and avoid or minimize revisions to the County's Roadway Design Standards that would require additional pavement width.
- Agree to identify all fire department access roads prior to approval of all future subdivisions, including access roads needed to meet the 20-foot unobstructed width requirement. (This could be accomplished by the applicants, with review by the FRS.)
- Make a recommendation on how existing roads should be handled – which need to have parking prohibitions, which should be upgraded in the near future to meet the proposed requirements, which should be modified when they are next scheduled for maintenance, and which can remain as-is.

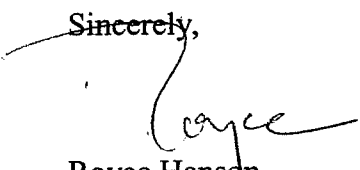
Douglas M. Duncan
President George Leventhal
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- Clearly define what types of driveways would need to meet the 20-foot unobstructed width requirement, as well as the requirement for having a turnaround for fire and rescue vehicles.
- Determine with M-NCPPC and DPS staff what additional requirements are needed in the zoning code and building permit application in regard to a 35-foot windowsill height to ensure adequate fire access.
- Work with M-NCPPC and DPWT staff on alternatives to larger curb radii at intersections in order to accommodate fire and rescue vehicles and alternatives to using cul-de-sacs at road termini.

Thank you in advance for your consideration of the Planning Board's comments in your discussions concerning the proposed change to the County Code.

If you have any questions concerning the Board's actions on this matter, please contact Mr. Larry Cole of our staff at 301-495-4528.

Sincerely,



Royce Hanson

RH:LC:gw
Enclosure

cc: Phil Andrews
Mike Knapp
Mike Donohue

ltr to Leventhal re FRS followup ltr