

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING



BOARD OF ZONING ADJUSTMENT
District of Columbia

Memorandum

TO: Board of Zoning Adjustment
FROM: *Ellen McCarthy*
Ellen McCarthy, Interim Director
Office of Planning
DATE: January 3, 2006
SUBJECT: Supplemental Report - BZA Application #17309 (Bender Subdivision)
Chain Bridge Road, N.W.

CASE NO. 17309
EXHIBIT NO. 79

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APPLICATION

Dorchester Associates LLC (applicant) requests, pursuant to 11 DCMR 3104.1, approval of a special exception, Section 2516 - Exceptions to Building Lot Control, to allow thirteen single-family detached dwellings on a single subdivided lot. In conjunction with the subdivision the applicant is requesting the approval of driveways that do not meet the twenty-five foot width required by Section 2516.6(b). The subject property is in the Chain Bridge Road University Terrace (CB/UT) Overlay District and the R-1-B District.

RECOMMENDATION IN BRIEF

The proposed development generally meets the requirements of the Zoning Regulations and will not have an adverse impact on the character of the neighborhood. Generally, the lot sizes are not incompatible with those in the community as outlined in the CB/UT Overlay. The applicant as presented tree preservation and tree protection measures which should lead to the continued rural character of the community as viewed for Chain Bridge Road. The Conceptual Stormwater Management Plan that was approved by the Department of Health (DOH) will prevent runoff from the site. The District Department of Transportation (DDOT) has approved a reduction in the width of the two driveways.

The Office of Planning (OP) has a concern regarding the impact of the location of the house on Lot F in proximity to the existing house on the adjacent property. Even though the applicant has reduced the height of the house, OP believes that for this area, an 11-foot separation is not sufficient space between the houses even though the applicant has proposed buffering with very large trees. OP recommends that the number of lots in the subdivision be reduced to twelve by the removal of Lot F.

OP is generally supportive of the application and recommends **approval** with the following conditions:

1. Reduce the number of lots to 12 to better accommodate all remaining interior lots and to reduce the proposed narrow separation between new structures and adjoining properties to the west and north.

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District of Columbia
CASE NO. 17309
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2. Provide information on the remediation for trees removed.
3. Provide a Soil and Sediment Control Plan to DOH for review.
4. Prohibit "gated" community.
5. Plans approved for each house will be the unit built with some flexibility to allow minor changes when more detailed plans are finalized.
6. Monitor the protection of trees during construction.
7. Retaining walls will be constructed of concrete.
8. A revised Site Plan showing the approved changes be submitted prior to BZA action

ANALYSIS

The proposal is to subdivide the property into 13 lots. Three lots will be accessed off an extended driveway that currently serves the adjacent historic building from Chain Bridge Road. The existing driveway will be widened to 20-feet.

The second driveway that formerly served a single house will be extended to serve nine lots. The width of the driveway currently varies between 13 and 16 feet wide and will be widened to varying widths of 12.5 feet, 18.5 feet and 20-feet. The internal driveways have been laid out to reflect, to some extent, the existing topography. The applicant submitted that they are utilizing the existing driveways to limit additional driveway cuts onto Chain Bridge Road. A new driveway is proposed for Lot A which is accessed directly from Chain Bridge Road.

The new lots vary in size from approximately 9,500 square feet to almost 12,200 square feet and each lot will be developed with a house specifically designed for that lot permitting a variety of house size, architecture, form, materials, and landscaping. Each lot provides a conforming building envelope, and the applicant will construct the house on each lot sold consistent with the design approved for each lot. A homeowners association will be created to handle among other things the maintenance of the stormwater management systems for individual lots and the rights-of-way, trash collection, and landscaping.

Historic Preservation

The landmark Chain Bridge Road School is adjacent to the subject property and is served by a curvilinear driveway that runs from Chain Bridge Road, around and in front of the building. The existing driveway will be extended to serve Lots 1, 2, and 3 in the proposed development. The road will be widened to a width of 20-feet and a radius of 30 feet at the cul-de-sac. The Historic Preservation Review Board (HPRB) reviewed the proposed extension and repaving of the roadway at its April 28, 2005 meeting and stated that the roadway extension will not impact the historic building.

Tree Preservation

DDOT regulates the Urban Forestry Preservation Act of 2002 that restricts the removal of healthy trees with a circumference of 55 inches and greater. DDOT noted that all trees that have a circumference greater than 55-feet are required by the Urban Forestry Preservation Act of 2002 to get a permit to for removal. A remediation for the removal of these trees will be replacement either on- or off-site. The applicant should provide information as to what type of remediation will be provided for the trees removed.

The applicant submitted a plan that identifies trees with a circumference of over 12 inches, and highlighting those that will be removed and those that will be retained. The table below outlines the trees with circumferences greater than 12-feet that will be removed because of construction, because they are hazardous, and those that have died.

Table 1

Circumference	# of Trees to be Removed for Construction	# of Hazardous Trees to be Removed	# of Died trees since Survey to be removed
12-38 feet	19	0	0
38-feet or larger	8	9	2

The CB/UT Overlay District (Section 1568) outlines limitations on the removal of trees on properties within the overlay which is addressed in a latter portion of this report. The applicant submitted an inventory and an assessment of the condition of trees with a circumference larger than 12 inches on the site. The applicant has provided a Tree Preservation Plan for the Chain Bridge Road Project dated August 16, 2005 that outlines methods of protection for trees during construction and identifies those that could be impacted by construction. OP has no expertise to assess whether this information is accurate. The applicant has stated that these recommendations have been incorporated into the design of the buildings.

Water and sewer lines will be located below the roadways and under driveways and therefore the trees should not be impacted by the excavation to install these facilities. Similarly, the location of trees was also taken into consideration in locating the stormwater management facilities.

Impervious Surface

The CB/UT Overlay limits the impervious surface area on a lot to 50%. The submission shows impervious surface on the lots ranging from a low of 34.31 % to a high of 47.8%. The total impervious surface on the entire lot is 44.68%. OP continues to encourage the applicant to investigate using appropriate pervious materials on the driveways to further lower the coverage on this sensitive area.

Stormwater Management

The applicant submitted a concept Stormwater Management Plan to the Watershed Protection Branch, Department of Health (DOH) for review. DOH in the letter dated November 7, 2005 (Attachment 1) states that the concept stormwater management plan "shows a broad range of best management practices" to treat anticipated runoff from the impervious area. Field percolation test were also conducted.

The results showed that the infiltration system far exceeded the minimum allowable infiltration rate requirement and if the system is fully implemented the proposed development will meet the District's stormwater management requirements. DOH also noted that they did not review the plans for erosion and sediment controls as plans were not provided.

The Conceptual Stormwater Management Plan shows an area labeled as "New Wooden Retaining Wall" (on the northwest corner). In conversations with DOH, OP was told that there is an existing retaining wall at this location and the wooden wall was to provide an additional measure to prevent water from flowing onto adjacent properties. DOH states that the additional

wall can be made of different types of material. Adjacent neighbors have expressed a preference for a concrete wall which may be more durable. DOH reported that they will be amenable to such a recommendation.

Traffic

The subject site is off Chain Bridge Road, a winding 30-foot roadway with limited sight distances in some areas. All units will have two internal parking spaces per unit with additional parking, service and loading possible on the driveways.

DDOT in their report dated April 19, 2005 stated that the proposed development will have "minor impact in terms of capacity and level of service for the adjacent street system." At that time DDOT objected to an internal roadway of less than 20-feet. However, since that report DDOT has further reviewed the proposal and in a letter dated May 23, 2005 (Attachment 2) agreed to a 16-right of way if two shoulder areas, or "lay by", were provided to accommodate two vehicles passing each other. DDOT has subsequently approved a right-of-way of 18.5 feet at the entrance to the subdivision for a distance of 48.5 feet with a lay by; a right-of-way 12.5 feet for a distance of 146-feet; a right-of-way of 20-feet for a distance of 62 feet; and a cul-de-sac with a radius of 30 feet.

The right-of-way on the northern portion of the site will have a driveway of 20 feet wide and a radius of 30 feet at the cul-de-sac.

SPECIAL EXCEPTION - NUMBER OF PRINCIPAL BUILDINGS PER LOT (THEORETICAL LOT SUBDIVISION)

The applicant is proposing a theoretical lot subdivision to create 13 lots with all but one fronting on a private drive. As these lots do not have frontage on a public road, §2516.1 of the Zoning Regulations provides that *"If approved by the Board of Zoning Adjustment as a special exception under § 3104, two (2) or more principal buildings or structures may be erected on a single subdivided lot, subject to the provisions of this section."*

2516.2 This section applies to construction on a lot that is located in, or within twenty-five feet (25 ft.) of a Residence District.

The subject property is within the R-1-B and CB/UT Overlay districts.

2516.3 In addition to other filing requirements, the applicant shall submit to the Board, with the new application, four (4) site plans for all new rights-of-way and easements, and existing and preliminary landscaping and grading plans with approximate building footprints; provided:

- (a) The applicant shall also submit, either with the original application or at a later time, final landscaping and grading plans and two (2) sets of typical floor plans and elevations; and***
- (b) If the applicant elects to submit the plans referenced in paragraph (a) of this subsection at a later date, the Board's original approval shall be conditional, subject to a later public hearing and final decision on the project as a whole.***

The applicant has provided plans showing the proposed rights-of-way, landscaping on each lot, floor plans, and the elevations for each house, and a grading plan. The grading plan is necessary to accommodate the stormwater management system, driveways and areas where retaining walls will be installed. OP still has some concerns as to how some of the houses (Lots F, G, and H) will be sited without additional grading on the lot.

2516.4 The number of principal buildings permitted by this section shall not be limited; provided, that the applicant for a permit to build submits satisfactory evidence that all the requirements of this chapter (such as use, height, bulk, open spaces around each building, and limitations on structures on alley lots pursuant to § 2507), and §§ 3202.2 and 3202.3 are met.

Each of the theoretical lots provide the required site area and widths, as well as a building envelope within the required setbacks. The single family detached units are a permitted by-right use. The proposed structures also meet the restrictions of the CB/UT overlay regarding impervious surface and lot occupancy. The driveways do not conform to the required 25-foot width and the applicant has requested a deviation for this requirement. DDOT supports the proposed reductions in the driveway widths.

2516.5 If a principal building has no street frontage, as determined by dividing the subdivided lot into theoretical building sites for each principal building, the following provisions shall apply

- (a) The front of the building shall be the side upon which the principal entrance is located;***
- (b) Open space in front of the entrance shall be required that is equivalent either to the required rear yard in the zone district in which the building is located or to the distance between the building restriction line recorded on the records of the Surveyor of the District of Columbia for the subdivided lot and the public space upon which the subdivided lot fronts, whichever is greater;***
- (c) A rear yard shall be required; and***
- (d) If any part of the boundary of a theoretical lot is located in common with the rear lot line of the subdivided lot of which it is a part, the rear yard of the theoretical lot shall be along the boundary of the subdivided lot.***

Each building will front on a private drive except for Lot A that will front on Chain Bridge Road. The required 25-foot minimum rear yard setback and front yards of 25-foot minimum are provided on all lots. The rear boundaries of theoretical Lots B and 3 are along the rear boundary of the subdivided lot and therefore a rear yard is not required.

2516.6 In providing for net density pursuant to § 2516.11, the Board shall require at least the following:

- (a) The area of land that forms a covenanted means of ingress or egress shall not be included in the area of any theoretical lot, or in any yard that is required by this title***

The proposed lots conform to the CBUT/R-1-B area requirements and do not include any portions of the right-of-way.

- (b) Notwithstanding any other provision of this title, each means of vehicular ingress or egress to any principal building shall be twenty-five feet (25 ft.) in width, but need not be paved for its entire width;**

The applicant proposes to use the two existing driveways locations to serve 12 lots. The driveway serving Lots 1, 2, and 3 will be increased to a width of 20-feet. The second driveway will have varying widths of 20-feet, 12.5-feet and 18.5-feet. The applicant states that the reduction of the driveway is necessary because a wider driveway could impact the historic building and a loss of several existing large trees. Having driveways of 25-feet would also increase the amount of impervious surface on the site. Both driveways will be paved for their entire width and length.

- (c) If there are not at least two (2) entrances or exits from the means of ingress or egress, a turning area shall be provided with a diameter of not less than sixty feet (60 ft.); and**

Both roadways within the proposed development terminate at a cul-de-sac that has a diameter of 60-feet.

- (d) The requirements of paragraphs (b) and (c) of this subsection may be modified if the Board finds that a lesser width or diameter will be compatible with, and will not be likely to have an adverse effect on, the present character and future development of the neighborhood; provided, that the Board shall give specific consideration to the spacing of buildings and the availability of resident, guest, and service parking.**

The applicant requested a modification in driveway widths to be able to preserve many large trees which are consistent with the CB/UT Overlay and not impact the historic building. The reduction will not have any adverse impact on the present character of the neighborhood or any future development. The garages and driveways provided on each lot will accommodate resident, guest, and service parking. DDOT has stated that in the interest of preserving the trees on the site they have approved the reduction in the width of both driveways.

2516.7 Where not in conflict with the Act to Regulate the Height of Buildings in the District of Columbia approved June 1, 1910 (36 Stat. 452, as amended; D.C. Official Code §§ 6-601.01 to 6-601.09 (2001) (formerly codified at D.C. Code §§ 5-401 to 5-409 (1994 Repl. & 1999 Supp.))), the height of a building governed by the provisions of this section, in all zone districts shall be measured from the finished grade at the middle of the front of the building.

The height limit in this zone district is 40-feet. The plan elevations submitted by the applicant shows all the units meeting this requirement.

2516.8 The provisions of this section shall also apply to buildings erected under the terms and conditions of § 410, relating to a group of one-family dwellings, flats, or apartment houses, or a combination of such buildings.

This section is not applicable as §410 applies to developments in the R-4 and R-5 districts.

2516.9 The proposed development shall comply with the substantive provisions of this title and shall not likely have an adverse effect on the present character and future development of the neighborhood.

The applicant has tried to minimize the impact of the development on the character of the neighborhood by limiting the removal of trees and grading of the site as required but he CB/UT Overlay. Further, landscaping and additional trees will be added to create a buffer around the houses as well as help retain the rural, wooded character of the area. The development of this property will have no impact on future developments within the area. A majority of the houses are internal to the site and therefore will not be visible while traveling along Chain Bridge Road.

The houses along Chain Bridge Road will be more visible and to minimize their visibility the houses have been setback from the property line and the landscaping plans show the retention of existing trees in addition to trees that will be added to buffer the houses from Chain Bridge Road.

OP is concerned about the impact of two houses on the site, Lot 3 and Lot F. Lot 3 is located on the edge of a hill and towers over Chain Bridge Road. OP encourages the applicant to coordinate with the National Park Service (NPS) on the height of the house on Lot 3. As a result the applicant has moved the house eight feet back from the property line and reduced its height reduced by approximately 2.5 feet. Additional plantings are also proposed along Chain Bridge Road. OP still believes that even with the additional tree along the property line and within the right-of-way (if permitted) the house will still be towering over the roadway and a further reduction in the height of the house may be required to lessen that impact.

The location of the house on Lot F is in close proximity to the house on the adjacent lot. Currently, there is an abundance of bamboo between the properties which the applicant has agreed to replace. Lot F slopes steeply down to the adjacent property and the applicant proposed to place the house on top of the hill. Although the height of the house has been lowered, the basement area has become more exposed as it has been extended further into the ground. OP is still concerned about the minimal 11-foot slope distance between the houses. OP believes that within this area of large lots and large houses the distances between these houses is too narrow. OP recommends that Lot F be deleted. The applicant proposed lowering the height of the house by ten-feet to address OP concerns about the new house towering over the existing neighbor and the less privacy. OP appreciates the lower height but does not believe it is sufficient to minimize the impact of such a large new house so close to the existing neighbor, and is inconsistent with the surrounding character. OP recommends that the heights on the houses along Lots E, F, and G be limited to as measured from the cul-de-sac.

OP believes that by removing Lot F, more space can be created between the houses proposed for Lots C and D, and also for a more sensitive treatment of the topography for Lots G, H, and I by changing their lot lines and slightly realigning the proposed house locations.

2516.10 Before taking final action on an application under this section, the Board shall refer the application to the D.C. Office of Planning for coordination, review, and report, including

- (a) The relationship of the proposed development to the overall purpose and intent of the Zoning Regulations, and other planning considerations for the area and the District of Columbia as a whole, including the plans, programs, and policies of other departments and***

agencies of the District government; provided, that the planning considerations that are addressed shall include, but not be limited to:

OP believes that the application generally meets and conforms to the requirements of the Zoning Regulations. The applicant has tried to minimize the removal of trees and be consistent with the CB/UT Overlay. The only zoning relief that the applicant is requesting is to reduce the width of the driveways which is principally to minimize the removal of trees. OP continues to encourage the applicant to use pervious materials on the driveways to help reduce the area of impervious surface on the property.

(1) Public safety relating to police and fire concerns.

OP did not receive any comments in response to our referral to the Metropolitan Police Department (MPD) but we do not believe the subdivision will increase the demand on the services of the police. The applicant has worked with the Fire and Emergency Medical Services Department (FEMS0 and they have approved the location of additional fire hydrants on the site and have no objections to the reductions in the driveway widths (Attachment 3).

(2) The environment, relating to water supply, water pollution, soil erosion, and solid waste management;

Both water and sewer lines that run along Chain Bridge Road have the capacity to accommodate the proposed development. The applicant did not submit a detailed soil erosion plan for review by DOH.

(3) Public education

OP did not receive comments from DC Public Schools but it is believed that the development will not have a significant impact on the public school system.

(4) Recreation;

No public recreation spaces are proposed on the site.

(5) Parking, loading, and traffic;

Each unit has two internal parking spaces and driveways that can accommodate additional parking, service vehicles, and loading. Therefore, it is not anticipated that there will be any on-street parking. DDOT in their report states that the subdivision will not have a negative impact on traffic in the area.

(6) Urban design; and

The proposed single-family, detached homes are on large lots consistent with the CBTU Overlay and general residential nature of the neighborhood. The houses have been sited on the lots to minimize the removal of trees or any major redesign of the topography. OP strongly discourages any future "gating" of the community.

(7) As appropriate, historic preservation and visual impacts on adjacent parkland;

The subject property is not within a historic district. However, as stated above, the impact on the historic Chain Bridge Road School building was assessed by HPRB at its April 28, 2005 meeting and found not to have an impact. The Battery Kimble Park is located directly east of the subject property. National Park Service, will provide their comments. OP is concerned that the rear of the building on Lot 3, adjacent to Chain Bridge Road. Chain Bridge Road is a narrow, two-lane, 30-foot right-of-way and because the topography of the site the buildings will be on top of the hill above Chain Bridge Road. The house is located close to the property line and towers over the roadway. There are other homes along Chain Bridge Road that are located close to the property line but their impact is less because they are much smaller and their entrances face Chain Bridge Road. Therefore, OP recommends that the height of this house be further reduced.

(b) Considerations of site planning; the size, location, and bearing capacity of driveways; deliveries to be made to the site; side and rear yards; density and open space; and the location, design, and screening of structures;

The applicant states that driveways, although not built to the DDOT's standards, will be designed to accommodate the level of traffic. It is anticipated that deliveries will be minimal and can be accommodated by the driveways proposed. The average lot area is greater than the minimum required by the CBTU/R-1-B district and the houses will meet all the required setbacks. The applicant is providing additional landscaping on the lots to further screen the houses and enhance the existing vegetation. To further improve the site planning OP recommends the deletion of Lot F that will allow a greater separation between the adjacent houses and the location of houses further away from areas of steep slopes.

(c) Considerations of traffic to be generated and parking spaces to be provided, and their impacts;

DDOT has stated that the development will have only a minor impact on traffic and level of service on Chain Bridge Road. Each house has two parking spaces and additional parking can be accommodated on the driveways.

(d) The impact of the proposed development on neighboring properties; and

HPRB has identified no impact on the historic Chain Bridge Road School from the development of the property. P is unaware of any impacts the development of the site may have on the Battery Kimble Park. DOH has stated that the proposed stormwater management system will not cause any impacts in relation to run-off from the site. OP believes that Lot F will impact the adjacent house because of the distance between the houses and the topography and believed that this house should be relocated. The removal of Lot F will provide a greater separation between the proposed house and the adjacent existing houses and provide more privacy.

(e) The findings, considerations, and recommendations of other District government agencies.

OP has included reports received from all relevant District agencies.

2516.11 The Board may impose conditions with respect to the size and location of driveways; net density; height, design, screening, and location of structures; and any other matter that the Board determines to be required to protect the overall purpose and intent of the Zoning Regulations.

OP recommends the Board consider conditions related to:

1. Prohibiting a "gated" community.
2. Plans approved for each house will be the unit built with some flexibility for minor changes when more detailed plans are finalized.
3. Provision of a Soil Erosion and Sediment Control Plan to DOH for review.
4. Monitoring of tree protection during construction
5. Removal of Lot F

With regards to the Special Exception test of §3104:

Will the special exception be in harmony with the general purpose and intent of the Zoning regulations and Maps?

OP concludes that with the removal of Lot F and a limitation of two stories adjacent to existing neighbors, the proposed theoretical lot subdivision meets the requirements of the zoning regulations. Each of the lots created will provide a greater than the minimum lot area and width required in this zone, and the single-family homes are consistent with the zoning.

Will the special exception adversely affect the use of neighboring property in accordance with the Zoning Regulations and Maps?

OP believes that the greatest impact will be from Lot F which is in close proximity to an existing house. If the number of lots were reduced to 12 then this house would be located further away from the existing house and could be relocated so as not to tower over this adjacent house. DDOT and DOH does not foresee any impacts on neighboring properties from traffic or stormwater management.

THE CHAIN BRIDGE ROAD UNIVERSITY TERRACE (CB/UT) OVERLAY DISTRICT

The CB/UT Overlay District was established to preserve and enhance the park-like setting of the Chain Bridge Road University Terrace area by regulating alteration or disturbance of terrain, destruction of trees, and ground coverage of permitted buildings and other impervious surfaces, and by providing for widely spaced residences. To achieve this goal, the overlay specifies lot occupancy and ground coverage restrictions that work in conjunction with the requirements of the R-1-A zone and the limitations on the theoretical lots.

The purposes of the CB/UT Overlay District as outlined in Section 1565.2 are outlined below:

- (a) Preserve the natural topography and mature trees to the maximum extent feasible in a residential neighborhood;***

The applicant has provided an inventory of trees and identified those with circumferences greater than 12 inches. The applicant has identified those trees that will be removed due to construction and those trees that are hazardous or dying. The homes are designed and sited to reduce grading or any other changes in order to preserve the natural topography of the site to the maximum extent possible. The applicant has requested relief to reduce the driveway widths for the purpose of saving the existing row of mature trees along the drive.

(b) Prevent significant adverse impact on adjacent open space, parkland, stream beds, or other environmentally sensitive natural areas;

The greatest significant impact that the applicant has to overcome is providing a stormwater management system that will contain all runoff on-site or connect to a public system if available to avoid runoff on adjacent properties or on Chain Bridge Road. DOH has stated that the proposed system will be adequate to serve the property's stormwater runoff. The property is adjacent to Battery Kimble Park and the NPS will comment on any effects for the proposed development.

(c) Limit permitted ground coverage of new and expanded buildings and other construction, so as to encourage a general compatibility between the siting of new buildings or construction and the existing neighborhood; and

The CB/UT Overlay (Section 1567.1) permits maximum lot occupancy of 30 percent with some exceptions on the larger lots. The CB/UT Overlay permits a maximum of 50 percent impervious surface on each lot and the applicant has limited the permitted ground coverage and lot occupancy to the permitted maximum by the CB/UT Overlay.

The applicant had submitted a Tree Preservation Plan that outlines the measures to be taken to preserve the trees during construction. OP reviewed the site plan for consistency with these recommendations and the CBTU Overlay. However, OP does not have the expertise to assess these recommendations as to the long term impact of the construction on the trees.

(d) Limit the minimum size of lots so as to prevent significant adverse impact on existing infrastructure, especially on traffic and pedestrian safety and to achieve the other purposes listed in this subsection.

All the lots provided exceed the minimum lot size of 9,500 square feet. DDOT, FEMS, and DOH all state the proposal will have no adverse impacts and achieves the purposes of the overlay. The large lot sizes allow for fewer units than the underlying R-1-B would allow which helps to minimize the impact on water and sewer services, traffic, the preservation of trees and the natural topography.

Section 1568 outlines limitation on the removal of trees:

1568.1 Except as provided in § 1568.2, constructing a building, accessory building, or an addition to a building, creating any impervious surface area, subdividing any unimproved lot, or subdividing any improved lot so as to increase the number of principal structures thereupon, shall only be permitted as a matter of right subject to the following tree removal limitations:

- (a) No tree that has a circumference of seventy-five inches (75 in.) or more at a height of four and one-half feet (4½ft.) above ground may be removed, cut down, or fatally damaged;**

The applicant has not proposed the removal of any healthy trees with a circumference of over 75 inches.

- (b) No more than three (3) trees that have a circumference of more than thirty-eight inches (38 in.) at a height of four and a half feet (4½ft.) above ground may be removed, cut down, or fatally damaged and none of these may be located within twenty-five feet (25 ft.) of any building restriction line or lot line abutting a public street;**

The applicant has identified the removal of eight healthy trees with circumferences of over 38 inches which is within the permitted 3 trees per lot. None of these trees to be removed are within 25-feet of a lot line abutting Chain Bridge Road.

- (c) The total circumference inches of all trees removed or cut down on a lot may not exceed twenty-five percent (25%) of the total circumference inches of all trees on the lot having a circumference greater than twelve inches (12 in.); provided, that this section does not abrogate the right to remove or cut down up to three (3) trees as provided in paragraph (b) of this subsection; or any tree having a circumference of twelve inches (12 in.) or less at a height of four and one-half feet (4½ ft.) above ground.**

The applicant submits that the total circumference of all the trees to be removed is 16.6% and does not exceed the requirement.

1568.2 The prohibitions of § 1568.1 do not apply to the removal or cutting down of any dead or unhealthy tree or a tree that creates an unsafe condition. The need for removal of any tree shall be certified by a tree care professional certified by the International Society of Arboriculture.

The removal of the trees will require a permit and will be monitored by DDOT.

COMMUNITY COMMENTS

In a letter dated December 29, 2005 ANC-3D requested additional time to review the new information submitted by the applicant and have the applicant make a presentation at the January, 4, 2006 ANC public meeting.

The Chain Bridge Road Preservation Committee and the Palisades Advisory Neighborhood Commission have also reviewed the application and recommended denial.

SUMMARY AND RECOMMENDATION

The proposed development generally meets the requirements of the Zoning Regulations. Generally, the lot sizes are compatible with those in the community as outlined in the CB/UT Overlay. The applicant has presented tree preservation and tree protection measures which should lead to the continued rural character of the community as viewed for Chain Bridge Road. The Conceptual Stormwater Management Plan that was approved by the Department of Health (DOH) will prevent runoff from the site. The District Department of Transportation (DDOT) has approved a reduction in the width of the two driveways.

The Office of Planning (OP) has a concern regarding the impact of the location of the house on Lot F in proximity to the existing house on the adjacent property. Even though the applicant has reduced the height of the house, OP believes that for this area, an 11-foot setback is not sufficient space between the units even though the applicant has proposed buffering with very large tree. OP recommends that the number of lots in the subdivision be reduced to twelve houses.

OP is generally supportive of the application and recommends **approval** with the following conditions:

1. Reduce the number of lots to 12 to better accommodate all remaining interior lots and to reduce the proposed narrow separation between new structures and adjoining properties to the west and north.
2. Provide information on the remediation for trees removed.
3. Provide a Soil and Sediment Control Plan to DOH for review.
4. Prohibit a "gated" community.
5. Plans approved for each house will be the unit built with some flexibility to allow minor changes when more detailed plans are finalized.
6. Monitor the protection of trees during construction.
7. Retaining walls will be constructed of concrete.
8. Provide a revised Site Plan showing the approved changes be submitted prior to Board approval.
9. Heights of buildings along the area identified as Lots E, F, and G be limited to two stories as measured from the private street.

ATTACHMENTS

1. Memorandum from the Department of Health
2. Memorandum from DDOT
3. Memorandum from Fire and Emergency Services

EM/mbr



BZA 17309 Chain Bridge Road Project Aerial Photograph



★ ★ ★ Government of the
District of Columbia
Anthony A. Williams, Mayor

Office of Planning ~ January 3, 2006

This map was created for planning purposes from a variety of sources. It is neither a survey nor a legal document. Information provided by other agencies should be verified with them where appropriate.

	Zoning Districts
	Street Centerlines
	Major Roads
	Major Roads

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Health
Environmental Health Administration
Bureau of Environmental Quality

★ ★ ★

Office of the Bureau Chief



MEMORANDUM

TO : Maxine Brown Roberts
Development Review Division
Office of Planning

FROM : James R. Collier, P.E., Bureau Chief 

DATE : November 7, 2005

SUBJECT : BZA Case # 17309 – Application by Dorchester Associates, LLC.
Theoretical Subdivision – Square 1425, Lot 827 and Parcels 12/63, 12/293,
and 12/294, Chain Bridge Road, NW, - Storm Water Management Review

The Watershed Protection Division (WPD) of the Department of Health (DOH), Environmental Health Administration (EHA), Bureau of Environmental Quality (BEQ), has completed the review of the revised conceptual storm water management plan (see attachment) submitted by Dorchester Associates for BZA Case # 17309.

As part of the review, WPD staff conducted a site inspection on July 22, 2005 to assess existing conditions at the site. The current conditions at the site show a piece of land that is partially wooded with mature trees and slopes ranging from moderate to steep. The existing drainage pattern, as indicated on the conceptual site plan, shows that most of the surface runoff drains to an existing catch basin located at the southeast corner of the property. The out let pipe of this catch basin is an 18-inch diameter terra-cotta pipe which crosses the property line and conveys runoff to a 36-inch corrugated metal pipe (CMP) that eventually discharges to an existing creek down-gradient of the property. The rest of the runoff is dispersed towards the western and the northeastern portions of the property. Additionally, a review of FEMA flood maps for the District of Columbia indicates that the property is located in Zone C, classified by FEMA as areas of minimal flooding. With respect to soils, the soils at the site are classified as belonging to the Manor-Urban Land Complex (Mdd) series based on the "Soil Survey of the District of Columbia," Manual. Generally, soils in this category are considered to be well drained to somewhat excessively drained. These soils are typically found on ridge tops and side slopes of urbanized areas of the Piedmont Plateau. Permeability is moderate in areas of this complex where the soil is relatively undisturbed, and it is variable in areas dominated by cuts, fills and urban land.

The site assessment also shows that there is no immediate existing storm sewer system available in Chain Bridge Road to provide drainage connection for the entire site, thus making it imperative that a comprehensive on-site storm water management system is required to control the anticipated additional runoff from the proposed development in such a manner that there would be no adverse impact on the receiving creek. The conceptual storm water management plan that has been submitted by the developer

and reviewed by the Watershed Protection Division, shows a broad range of best management practices which are intended to treat all the anticipated runoff from the impervious areas of the proposed development. The proposed management practices which consist of infiltration/exfiltration systems, trench drains, drive-way entrance/french drains, an underground detention storage system, vegetative swales and check dams are designed to provide both quality and quantity control of the runoff. To ensure the infiltration systems are designed on sound engineering principles, field percolation tests have been conducted for each location (at the site) where an infiltration system would be installed. The tests were conducted on September 2, 2005 and observed by a WPD staff engineer. The results of the tests (see the attached copy of the infiltration testing and evaluation report) show that infiltration results for each system far exceeded the minimum allowable infiltration rate requirement of 0.52 inches per hour specified in the District of Columbia's Storm Water Management Guidebook. In general, it is our opinion that if the proposed system of BMPs which technically constitutes a treatment train is fully implemented, the proposed development would meet the District's storm water management requirements. The Watershed Protection Division also recommends that the following conditions be incorporated in the project's final design:

1. To prevent shear stress of the soil, the partial infiltration/exfiltration systems should be placed away from slopes;
2. To prevent in-stream erosion and stream bank erosion, the post development peak discharge should not exceed the 2-year pre-development peak discharge.

The Watershed Protection Division can not at this point in time provide any comments regarding erosion and sediment control as no plans pertaining to this area have been submitted to the Bureau of Environmental Quality for review. Please contact Tim Karikari or Abdi Musse of the Watershed Protection Division at (202) 535-2240 if you have any questions or need further assistance.

Attachments:

Cc: H. Karimi
T. Karikari
M. Musse



14221-B Willard Road
Suite 100
Chantilly, Virginia 20151
Tel: (703) 803-6411
Fax: (703) 803-6086
E-mail: ctichantilly@cti-consultants.com

August 10, 2005

Morton A. Bender, Inc.
1025 Connecticut Avenue N.W.
Washington, DC 20036

Attention: Mr. Jim Johnson

Reference: 2762 Chain Bridge Road, N.W.
Washington, DC
Infiltration Testing and Evaluation
CTI Project No.: 15G-157

Dear Mr. Johnson:

In accordance with your request, CTI Consultants, Inc. (CTI) has performed in-situ testing at the proposed infiltration trenches in order to determine the field infiltration rates. This letter is intended to address the feasibility of providing infiltration water quality management techniques at the proposed infiltration areas. A geotechnical engineering report addressing the site development and laboratory test results shall be submitted under a separate cover.

Based upon the drawing entitled *Chain Bridge Road Project - Lot 8022, 827, Square 1425 & Parcel 12/294 - 2800 Chain Bridge Road, NW*, prepared by AULtec, Inc. dated June 22, 2005, we executed infiltration tests as requested for the storm water trenches.

In order to evaluate the field infiltration rates, CTI drilled Standard Penetration Test (SPT) borings in the proposed trenches. The SPT borings were each drilled to a depth of 8 feet below existing grade. Four-inch diameter standpipes were installed in the SPT boring holes upon completion. Field infiltration tests were performed for a period of 5 hours after 24-hours of presoaking. The results of the testing are listed below:

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BLACKSBURG, VA ■ FREDERICKSBURG, VA ■ CHESAPEAKE, VA ■ WOODBRIDGE, VA

Geotechnical Engineering ■ Testing & Inspection ■ Quality Control ■ Environmental Services
Code Compliance & Specialty Services



SUMMARY OF INFILTRATION RESULTS

Number/ Location	Time (min)	Water (in)	Infiltration (in/min)	Permeability Result (in/min)
Lot A/I-1	1	100	2	2.6
	2	100	0	
	3	95	5	
	4	92	3	
	5	89	3	
Lot B/I-2	1	82	17.5	11.1
	2	73	9	
	3	61	12	
	4	52	9	
	5	44	8	
Lot C/I-3	1	86	14	8.8
	2	66	20	
	3	64	2	
	4	62	2	
	5	58	6	
Lot D/I-4	1	30	70	18.8
	2	20	10	
	3	14	6	
	4	10	4	
	5	6	4	
Lot E/I-5	1	30	70	30.7
	2	20	10	
	3	8	12	
	4	Dry		
	5			
Lot F/I-6	1	60	40	16.8
	2	40	20	
	3	29	11	
	4	21	8	
	5	16	5	
Lot G/I-7	1	87	13	8.0
	2	76	11	
	3	71	5	
	4	65	8	
	5	60	5	

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Lot Number Boring Number	Time (hr.)	Head (ft.)	Infiltration (in/hr.)	Permeability Test Results (in/hr.)
Lot H/I-8	1	85	15	7.2
	2	79	6	
	3	71	8	
	4	67	4	
	5	64	3	
Lot I/I-9	1	55	45	20.5
	2	38	17	
	3	27	11	
	4	18	9	
	5	Dry		
Lot 1/I-10	1	47	53	19.0
	2	27	20	
	3	16	11	
	4	11	5	
	5	5	6	
Lot 2/I-11	1	38	62	24.0
	2	21	17	
	3	11	10	
	4	4	7	
	5	Dry		
Lot 3/I-12	1	22.5	79.5	79.5
	2	Dry		
	3			
	4			
	5			
Lot 4/I-13	1	24	78	30.3
	2	16	8	
	3	11	5	
	4	Dry		
	5			

Based on the above test results, the average in-place infiltration values exceed the minimum guidelines of 0.52 inches per hour. Groundwater was not encountered in the SPT borings performed at the site, either during drilling or upon the completion of drilling. Therefore, it is CTI's opinion that groundwater will not significantly impact the construction of the infiltration trenches. Auger refusal, indicating the likely presence of bedrock, was also not encountered in the SPT borings. Therefore, based on the above in-place infiltration test results.

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infiltration at the proposed locations is feasible.

CTI Consultants, Inc. appreciates the opportunity to provide geotechnical services for this project, and will remain available for further consultation during the design and construction of the project. Should you have any questions concerning this letter, or require additional consultation, design, inspection, or testing services, please contact our office at (703) 803-6411.

Sincerely,

CTI CONSULTANTS, INC.

Catriona Lynch

Catriona Lynch
Staff Engineer



Matthew W. Wager, P.E.
Senior Geotechnical Engineer

ATTACHMENTS

cc: Dorchester Associates via fax 202-466-6233

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GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING



Office of the Director

MEMORANDUM

SENT VIA FAX

TO: Jim Collier, P.E., Chief
Bureau of Environmental Quality

FROM: Maxine Brown Roberts
Development Review Division
Office of Planning

DATE: October 3, 2005

SUBJECT: BZA # 17309 - Application by Dorchester Associates LLC.
Theoretical Lot Subdivision - Square 1425, Lot 827 and Parcels 12/63, 12/293, and
12/294
Chain Bridge Road, NW

*Complete
draft by 10/3
Index
10/19/05*

The applicant for the above case has submitted a Stormwater Management Plan to the Office of Planning (OP) to be referred to the Bureau of Environmental Quality for review. At this time the applicant has not submitted a revised Site Plans to the OP for our review. Therefore, when OP receives a full package for the proposal we will resubmit the application for further review.

If you have questions or need further information about this case, please call me at 442-8807.

Thank you.

cc: Dr. Hamid Karimi
Tim Karikari

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DISTRICT DEPARTMENT OF TRANSPORTATION



Transportation Policy and Planning Administration

Memorandum

TO: Jerrily R. Kress, FAIA
Director, Office of Zoning

FROM: Kenneth G. Laden 
Associate Director

DATE: May 23, 2005

SUBJECT: BZA Application No. 17309 – Dorchester Associates
Supplemental Comments

On April 19, 2005, The District of Columbia Department of Transportation (DDOT) submitted its comments on the above project, which entails constructing 13 single-family residential units on Chain Bridge Road, NW.

Initially, DDOT indicated its preference for the proposed driveway serving nine lots to be a minimum of 20 feet wide for safety reasons. The roadway is planned to be 16 feet, which would only safely accommodate one-way traffic. In order to rectify this situation, the applicant has agreed to provide two shoulder areas to allow cars to wait while vehicles pass in the opposite direction; one "lay by" will be at the front of the driveway and the other will be at the end. This solution is in lieu of widening the road to 20 feet, which would necessitate removing ten trees. In light of this agreement from the applicant, DDOT has no objection to the project.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DISTRICT DEPARTMENT OF TRANSPORTATION



Transportation Policy and Planning Administration

Memorandum

TO: Jerrily R. Kress, FAIA
Director, Office of Zoning

FROM: Kenneth G. Laden
Associate Director

A handwritten signature in black ink, appearing to read 'K. G. Laden', is written over the printed name and title.

DATE: April 19, 2005

SUBJECT: BZA Application No. 17309 – Special exception to allow 13 detached single-family dwellings on a single subdivided lot, including two 16 feet roadways for Chain Bridge Road residential development

The applicant seeks a special exception to construct 13 single-family detached homes and a modification to the requirement of a 25-foot roadway as permitted in the CUBT/R-1-A District on Chain Bridge Road, NW, Square 1425. Each home will have its own driveway and will provide at least 2 parking spaces.

The subject property fronts on the west side of Chain Bridge Road, abutting the Battery Kemble Park on the east side. The property includes Lot 827 in Square 1425 and Parcels 12/63, 12/293 and 12/294. The property is currently vacant, it is the site of the former Murphy home, which was razed in 2000. The property has a land area of 143,190 square feet with approximately 574 feet of frontage on Chain Bridge Road.

The proposed development will repave two existing driveways off Chain Bridge Road to service 12 homes. The home located at the southern end of the property will have its own driveway off Chain Bridge Road. The roadway located at the northern end of the property would be 16 feet wide and would serve three homes and terminate in a cul-de-sac with a 60-foot diameter. The central roadway bisecting the site would also be 16 feet wide to serve nine homes and terminate in a cul-de-sac with 60 feet diameter.

The Department of Transportation (DDOT) has reviewed the applicant's traffic study with regard to capacity analysis and level of service associated with the proposed development. We note that approximately 20 vehicle trips are generated during the a.m. peak hour and 26 vehicles during the p.m. peak hour. This level of traffic generation

would not have a significant impact on the street system in the area. However, DDOT is concerned whether the proposed 16-foot roadway could support two-way traffic movement.

We understand that the applicant is trying to save the maximum on site trees, a desirable objective DDOT shares in the area. But the Department would prefer a minimum of 20 feet roadway from the standpoint of safety. We also note that the applicant will provide mitigating measures such as concave mirrors appropriately placed to ensure appropriate sight distance at the entrances to the development.

In summary, the site impact analysis indicates that the proposed development will have a minor impact in terms of capacity and level of service of the adjacent street system. Accordingly, DDOT will not object to the proposed project provided the main driveway providing access to Chain Bridge Road is widened to 20 feet. Any trees removed to accommodate this driveway widening should be replaced with an equivalent caliper inches of new trees.

04/10/2005 10:10 AM
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GOVERNMENT OF THE DISTRICT OF COLUMBIA
FIRE AND EMERGENCY MEDICAL SERVICES DEPARTMENT
WASHINGTON, D.C. 20001



MEMORANDUM

TO: Maxine Brown-Roberts
Development Review Division

FROM: Richard Fleming *RF*
Acting Fire Marshal

DATE: April 14, 2005

SUBJECT: BZA No. 17309

The D.C. Fire and EMS Department has reviewed the above BZA proposal to subdivide Square 1425, Lot 827 and Parcels 12/63, 12/293 and 12/294 into 13 lots to accommodate custom, single-family detached houses.

Based upon the site plans submitted to this office and an on-site visit, we object to this proposal based on the following:

1. **Lack of hydrants.** The nearest hydrants to the property are located 303' South and 420' north of the entrance to proposed B through I. The access roadway is approximately 360' in length to proposed lot G placing this lot 663' from the nearest hydrant. Hydrants shall be placed in accordance with the 2000 International Fire Code, Appendix B – Fire-Flow Requirements for Buildings, and Appendix C – Fire Hydrant Locations and Distribution. Copy attached.
2. **Apparatus access:** The notice of a zoning hearing for this property, posted on the gate, stated that the developer would like to have two 16-foot roadways instead of one 25-foot roadway. The site plans submitted to this office does not show a configuration of two 16-foot roadways, rather a single lane of approximately 25' in width. Roadways should be placed in accordance with the 2000 International Fire Code, Appendix D – Fire Apparatus Access Roads. Copy attached.

Attachment

Maxine Brown-Roberts

Page 2

Once the above problems have been satisfactorily addressed, the D.C. Fire and EMS Department would remove its objections to BZA No. 17309.

If you have any questions concerning this review, I may be reached at 727-3659.

Attachments: 2

Appendix C

FIRE HYDRANT LOCATIONS AND DISTRIBUTION

SECTION C101
GENERAL

C101.1 Scope. Fire hydrants shall be provided in accordance with this appendix for the protection of buildings, or portions of buildings, hereafter constructed.

SECTION C102
LOCATION

C102.1 Fire hydrant locations. Fire hydrants shall be provided along required fire apparatus access roads and adjacent public streets.

SECTION C103
NUMBER OF FIRE HYDRANTS

C103.1 Fire hydrants available. The minimum number of fire hydrants available to a building shall not be less than that listed in Table C105.1. The number of fire hydrants available to a complex or subdivision shall not be less than that determined by spacing requirements listed in Table C105.1 when applied to fire apparatus access roads and perimeter public streets from which fire operations could be conducted.

SECTION C104
CONSIDERATION OF EXISTING FIRE HYDRANTS

C104.1 Existing fire hydrants. Existing fire hydrants on public streets are allowed to be considered as available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads.

SECTION C105
DISTRIBUTION OF FIRE HYDRANTS

C105.1 Hydrant spacing. The average spacing between fire hydrants shall not exceed that listed in Table C105.1.

Exception: The fire chief is authorized to accept a deficiency of up to 10 percent where existing fire hydrants provide all or a portion of the required fire hydrant service.

Regardless of the average spacing, fire hydrants shall be located such that all points on streets and access roads adjacent to a building are within the distances listed in Table C105.1.

TABLE C105.1
NUMBER AND DISTRIBUTION OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS ^{a, b, c} (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT ^d
1,750 or less	1	500	250
2,000-2,250	2	450	225
2,500	3	450	225
3,000	3	400	225
3,500-4,000	4	350	210
4,500-5,000	5	300	180
5,500	6	300	180
6,000	6	250	150
6,500-7,000	7	250	150
7,500 or more	8 or more ^e	200	120

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

b. Where streets are provided with median dividers which can be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis up to a fire-flow requirement of 7,000 gallons per minute and 400 feet for higher fire-flow requirements.

c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

d. Reduce by 50 feet for dead-end streets or roads.

e. One hydrant for each 1,000 gallons per minute or fraction thereof.

Appendix D

FIRE APPARATUS ACCESS ROADS

SECTION D101
GENERAL

D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*.

SECTION D102
REQUIRED ACCESS

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds (34 050 kg).

SECTION D103
MINIMUM SPECIFICATIONS

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm). See Figure D103.1.

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as approved by the fire chief.

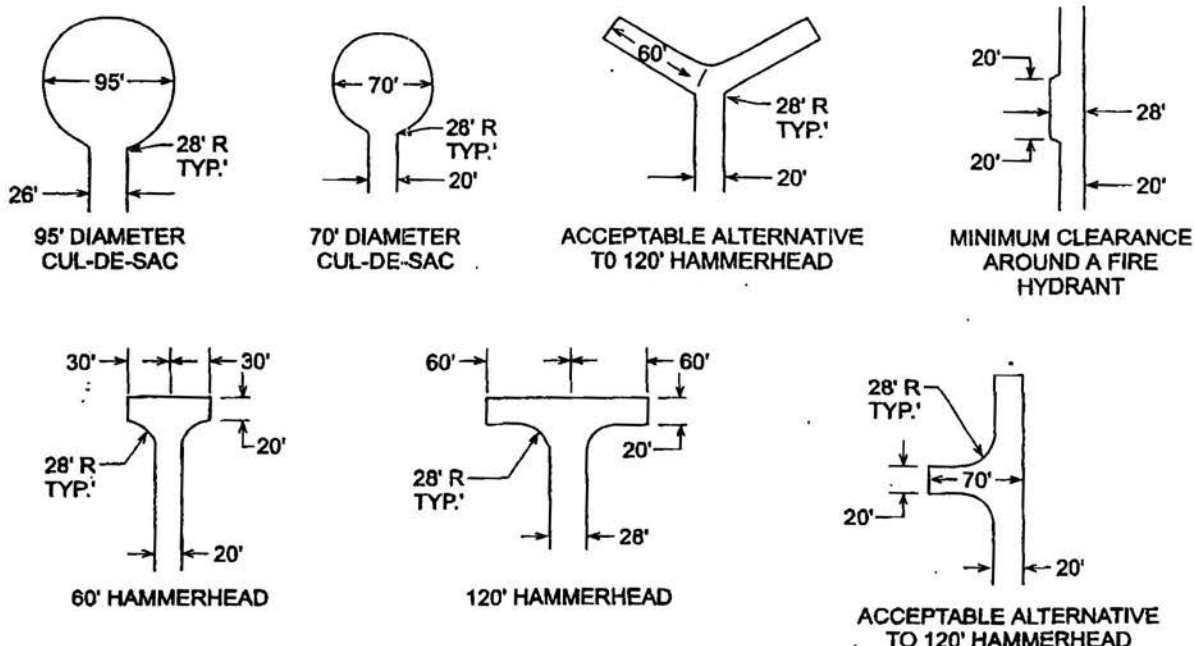
D103.3 Turning radius. The minimum turning radii shall be determined by the code official.

D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

TABLE D103.4
REQUIREMENTS FOR DEAD-END FIRE
APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151-500	20	120 feet "Hammerhead," 60 feet "Y" or 96 feet diameter cul-de-sac in accordance with Figure D103.1
501-750	26	120 feet Hammerhead, 60 feet "Y" or 96 feet Diameter cul-de-sac in accordance with Figure D103.1
Over 750		Special approval required

For SI: 1 foot = 304.8 mm.



For SI: 1 foot = 304.8 mm.

FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools and
7. Locking device specifications shall be submitted for approval by the code official.

D103.6 Signs. Where required by the code official, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.

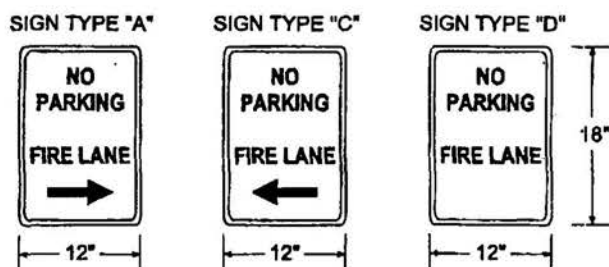


FIGURE D103.6
FIRE LANE SIGNS

D103.6.1 Roads 20 to 26 feet in width. Fire apparatus access roads 20 to 26 feet wide (6096 to 7925 mm) shall be posted on both sides as a fire lane.

D103.6.2 Roads more than 26 feet in width. Fire apparatus access roads more than 26 feet wide (7925 mm) to 32 feet wide (9754 mm) shall be posted on one side of the road as a fire lane.

SECTION D104 COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or

three stories in height shall have at least three means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m²) shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet (11 520 m²) having a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

SECTION D105 AERIAL FIRE APPARATUS ACCESS ROADS

D105.1 Where required. Buildings or portions of buildings or facilities exceeding 30 feet (9144 mm) in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.

D105.2 Width. Fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm) in the immediate vicinity of any building or portion of building more than 30 feet (9144 mm) in height.

D105.3 Proximity to building. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building.

SECTION D106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Fire Code*.

D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

FIRE APPARATUS ACCESS ROADS**APPENDIX D****SECTION D107
ONE- OR TWO-FAMILY RESIDENTIAL
DEVELOPMENTS**

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads, and shall meet the requirements of Section D104.3.

Exceptions:

1. Where there are 30 or fewer dwelling units on a single public or private access way and all dwelling units are protected by approved residential sprinkler systems, access from two directions shall not be required.
2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the code official.