BEFORE THE BOARD OF ZONING ADJUSTMENT
OF THE DISTRICT OF COLUMBIA

SUPPLEMENTAL PREHEARING STATEMENT
OF APPLICANT AMIR MOTLAGH

APPLICATION NO. 18708

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I. INTRODUCTION.

This Application requests special exception relief pursuant to 11 DCMR §2516.1 for approval of two (2) or more principal buildings on a single subdivided lot, commonly known as theoretical lot subdivision. The request includes approval of the development of the one remaining undeveloped lot in this section of the Foxhall Crescents development, at 4509 Foxhall Crescents (Square 1397, Lot 960) (the "Subject Property"). This phase of Foxhall Crescents was approved by the District pursuant to a 1979 Master Plan, and originally included the development of twenty-eight (28) one-family dwellings One of those lots, which had sufficient street frontage on Foxhall Road, was eventually separated from this subdivision and developed outside of the Master Plan. The Subject Property is the remaining undeveloped lot from the 1979 Master Plan.

The Subject Property in this Application has not yet been developed, although in 1994 development was approved by the Board under the Section 2516 Regulations.[1] The Applicant is therefore requesting the same relief granted in 1994, under a similar development plan, with the understanding of course that the Applicant bears the burden of proof to satisfy the special exception requirements of §2516 today in a de novo review.

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EXHIBIT NO. 50

[1] The chief opponent of this Application, the Godleys, were the Applicants in that 1994 decision, in which they, as then owners of the Subject Property holding a contingent contract to sell, successfully asserted the exact opposite of the position they argue today, even though this Application is not materially different from their proposal. After gaining approval, they immediately sold the Subject Property while it was approved for development, and at some point after that changed their minds about development on this Subject Property

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To that end, we submit this Supplemental Statement in order to: (i) clarify and organize the evidence to show how it satisfies the particular requirements of §2516 and the variance test; (ii) formally amend the application to include a request for variance relief from the front yard setback requirement under § 2516.5(b); (iii) respond to the Office of Planning's request to re-submit all the key documentation in one package; and (iv) respond to comments and concerns of the Office of Planning and the opponents.

II. SPECIAL EXCEPTION UNDER § 2516.

A. Special Exception Standards.

Pursuant to Section 3104.1 of the Zoning Regulations, the Board is authorized to grant special exception relief where, in the judgment of the Board, the special exception will be in harmony with the general purpose and intent of the Zoning Regulations and Zoning Maps, and will not tend to affect adversely the use of neighboring property; subject also, in this case, to the specific requirements for relief under §2516 of the Zoning Regulations.

Uses that are permitted by special exception are deemed compatible with other uses permitted in that particular zoning classification provided certain requirements are met. In reviewing applications for a special exception under the Zoning Regulations, the Board's discretion is limited to determining whether the proposed exception satisfies the relevant zoning requirements. If the prerequisites are satisfied, the Board ordinarily must grant the application. See, e.g., *Nat'l Cathedral Neighborhood Ass'n. v. D C Board of Zoning Adjustment*, 753 A.2d 984, 986 (D.C. 2000). As described herein, this application satisfies the requirements of §§ 3104.1 and 2516.

B. The Application Satisfies §3104.1.

3104.1 The Board is authorized under § 8 of the Zoning Act, D.C. Official Code § 6-641.07(g)(2) (formerly codified at D.C. Code § 5-424(g)(2) (1994 Repl.)), to grant special exceptions, as provided in this title, where, in the judgment of the Board, the special exceptions will be in harmony with the general purpose and intent of the Zoning Regulations and Zoning Maps and will not tend to affect adversely, the use of neighboring property in accordance with the Zoning Regulations and Zoning Maps...

As provided in detail below, the granting of the requested special exception relief will be in harmony with the general purpose and intent of the Zoning Regulations and Zoning Maps and will not tend to affect adversely the use of neighboring property in accordance with the Zoning Regulations and Zoning Maps. The relief requested is the ability to develop the Subject Property in accordance with the original Master Plan for this community. The proposed home will be in character with the rest of the Foxhall Crescents neighborhood, in design as well as relative density and footprint. The home will meet all of the applicable zoning requirements including minimum lot area and width, lot occupancy, and required yards, and asks area variance relief only for the front yard setback, a situation that exists for the other homes in the neighborhood as well. The Applicant will undertake development in a way that optimizes tree protection and successfully manages storm water and erosion concerns, as discussed below.

C. The Application Satisfies §2516

The Applicant meets the specific requirements of §2516, as follows:

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 located within the R-1-A zone district, according to the Zoning Map of the District of Columbia (a copy of the Map for the Subject Property is included herein as Exhibit A).

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 § 2516.3(a) 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.

Attached as Exhibit B hereto are four (4) copies of the Site & Grading Plan prepared by KJ & Associates dated October, 2014.

Attached as Exhibit C hereto is the final Landscaping/Replanting Plan, a Tree Survey, and a letter from the Applicant's arborist – Pitchford Associates - making certain recommendations regarding optimization of tree preservation.

The proposed building's elevations and floor plans are included in BZA Exhibit No. 10.

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.

Development as proposed will add one principal building to this phase of Foxhall Crescents, totaling twenty-seven (27) one-family dwellings. The proposed structure meets the requirements of the Zoning Regulations regarding use, height, bulk, and open spaces. The Applicant is requesting variance relief from one of the requirements of §2516 for front yard setback, as discussed below.[2]

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.

(a) The front of the proposed building is the side upon with the principal entrance is located.

(b) Open space in front of the building entrance of twenty-five (25) feet is required. While there is approximately forty-five (45) feet of open space between the proposed house and adjacent lot boundary (and much more beyond that), § 2516.6(a) provides that any covenanted

[2] This section simply does <u>not</u> provide that theoretical streets be treated as §2507 alleys, as the opponent claims in its Prehearing Statement

means of ingress and egress (i.e., the theoretical street) shall not be included in the area of the theoretical lot for purposes of calculating density and setbacks.[3] Therefore the front yard setback is measured from the edge of the theoretical street to the front of the house. The Applicant is requesting area variance relief from this requirement, as the proposed structure sits on the edge of the theoretical street, consistent with the original master plan and most of the other homes in Foxhall Crescents.

(c) A rear yard of thirty (30) feet is provided.

(d) The theoretical lot and subdivided lot have a common boundary for the entire width of the lot, so the rear yard is satisfied under either measurement.

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;

(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;

(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

(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.

[3] Section 2516.6(a) does not, as opponent's counsel asserts, prohibit the theoretical street from being on a theoretical lot. It just prohibits including the area of that theoretical street as lot area for density and set-back calculations

(a) As noted above, the Applicant has not included the area of the theoretical street in the front yard setback calculation. This is why the front yard relief from §2516.5(b) is required. In addition, the Applicant has modified its lot occupancy calculation to exclude the area of the theoretical street in that denominator.

(b) The Applicant is requesting that the Board modify this requirement, as permitted pursuant to §2616.6(d), to allow for a width of sixteen (16) feet. While most of the Foxhall Crescents master plan includes theoretical streets of twenty-five (25) feet in width, as it approaches the Subject Property the width narrows to sixteen (16) feet curb-to-curb. This pattern is consistent with other later phases of Foxhall Crescents approved under § 2516. In addition, to provide the twenty-five (25) feet in width, the Applicant would have to demolish and reconstruct portions of street and sidewalk in front of neighboring properties. Furthermore, the ingress/egress width is only sixteen (16) feet on the two neighbors' lots, and the street will dead end on the Subject Property, so expanding, or re-expanding, the width to twenty-five (25) feet serves no meaningful purpose and would just add unnecessary impervious surface. Finally, addressing the opponents' claims of safety, parking, and traffic, the Office of Planning has noted that the Metropolitan Police Department, Fire and EMS, and DDOT all have no objections to the proposed project. And DDOT issued a report noting that the proposed projects will have no adverse impacts and that it had no objection to the Application's approval (Exhibit 30 in the BZA case file).

(c) The Applicant is requesting a modification of the requirement to provide a turnaround with a diameter of at least sixty (60) feet. No streets or driveways in Foxhall Crescents have such a turn-around area of this size. To provide one, the Applicant would have to add significant impervious surface to the project, and remove ten (10) existing trees. It is worth noting that the

1994 BZA approval for Mr. Godley included a twelve (12) foot wide street and no turn-around. The master plan, as well, did not include a turn-around. In addition, concerns about emergency vehicles and traffic are answered, as in (b) above, by the "no objection" positions of MPD, FEMS, and DDOT.

(d) The modifications requested are necessary specifically for the purpose of keeping this project consistent with the present character of the neighborhood. Further, as discussed above, these modifications are not likely to have an adverse effect on the neighborhood.[4]

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 proposed building complies with the maximum height restrictions of the R-1-A zone, with a building height of thirty-five (35) feet, as measured from this finished grade at the middle of the front of the building.

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.

Rather than having an adverse effect on the present character of the neighborhood, the proposed structure is completely consistent with the character of the neighborhood, as it was one

[4] As the plain language of this paragraph provides, this modification clearly does not require variance relief, as the opponent claims. The language could not be clearer that the Board has the specific authority to modify the requirements of paragraphs (a) and (b) in accordance with the standards provided in paragraph (d). If the Board has the authority under the Regulations, then no variance is needed The ambiguous "precedent" cited by Opponent's counsel is irrelevant The plain language of this Regulation is clear.

of the twenty-eight (28) lots initially approved in the master plan for this phase of Foxhall Crescents, and the proposed design is in character with the other Arthur Cotton Moore - designed homes here.

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:

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

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

(3) Public education;

(4) Recreation;

(5) Parking, loading, and traffic;

(6) Urban design; and

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

(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;

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

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

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

The Applicant has been working with the Office of Planning to provide them the necessary information to make their report pursuant to the guidelines in this section. Specifically:

(a)(1) The Office of Planning has noted that MPD, FEMS, and DDOT have no objection to the Application.

(a)(2) We would first note that the typical §2516 application includes a request for the development of 30, 40, or more lots, which is the source of the need for such extensive review by the Board of 'big-picture' environmental concerns of storm water management and soil erosion, water supply, and waste management. Adding the final home of a 27-home development will not have anywhere near the impact of a 27-home development or other large development. In any event, rather than causing concerns of storm water management and solid erosion, the development of this lot, with today's advanced storm water management and erosion controls, is likely to improve on any water run-off situation currently affecting the Subject Property. The Applicant has engaged civil engineer KJ & Associates to both review the previous soil study on the Subject Property, from the 1994 case, as well as to perform an updated study. These documents are attached hereto as Exhibit D. See also Exhibit E, the Erosion and Sediment Control Plan, and Exhibit F, the Erosion and Settlement Control Details. The engineer's conclusion is that the proposed project will have no adverse impact on neighboring lots. The Applicant is also proposing to install an infiltration trench, a measure beyond what would be required by DDOE, and the Applicant has agreed to have DDOE oversee the approval of the design and installation of the trench (as if the trench was required by the Building Code).

Regarding waste collection, this is a one-family dwelling, and waste collection will be handled just as it is for the other twenty-seven homes in this neighborhood and the other homes

on dead-end stubs The trash truck will stop prior to reaching the Subject Property, and wheel trash cans to the truck and back, without the need to turn around One additional home will not have a material impact on the current situation

(a)(3) The addition of this one home, which was included in the initial master plan, will have no material impact on public education

(a)(4) The addition of this one home, which was included in the initial master plan, will have no material impact on recreation

(a)(5) Parking, loading, and traffic The addition of this one home, which was included in the initial master plan, will have no material impact on parking, loading, or traffic The District Dept of Transportation has noted it has no objections. MPD and FEMS also have no objections, as one would expect from the addition of one single home within a community of twenty-seven homes The Subject Property will have a two-car garage, and will be located on a dead-end stub in the neighborhood, with no thru-traffic Loading, despite the opponents' unsubstantiated claim, is rarely a concern in one-family dwelling neighborhoods, and it wouldn't be here when adding a single home to the existing development [5]

(a)(6) The Applicant's proposal is for a one-family dwelling in a master planned community in which the proposed building and lot will be in character with the rest of Foxhall Crescents

(a)(7) Not applicable

(b) The proposed house is consistent with the structures and uses permitted in the R-1-A zone district It meets all of the density and setback requirements but for the front yard relief requested Even with the front yard relief, the proposed structure is compatible with the rest of

[5] By comparison, forty-nine (49) unit-or-less apartment houses have no loading requirements

the master planned neighborhood The proposed lot occupancy is thirteen (13%) when calculating that percentage using the entire lot, and fifteen (15%) when removing the area of the covenanted ingress and egress, as is required pursuant to §2516 6(a) The proposed location and footprint of the house is similar to that shown on the original site plan The Applicant regrets that it is impossible to save the 47" tulip poplar tree and develop the lot The proposed plan, does however, provide for a nearly one-to-one tree replacement The area of disturbance is limited to less than 5,000 square feet of the 13,629 square foot lot

In the end, the Applicant is only asking for the ability to develop a lot that was always intended for development, was approved twice for similar development, once to the economic benefit of the chief opponent in this case The style and size of development is perfectly in character with the rest of this neighborhood, as planned, and in character with the R-1-A zone

(c) See comments above regarding parking and traffic DDOT has no objection to the proposed project The proposed home is located at the end of a dead end There will be two parking spaces on the Subject Property, and no homes across the street Use as a one-family dwelling will not generate any material amount of traffic

(d) There will be minimal impact on neighboring properties from the proposed development In fact, the chief opponent in this case was very pleased to have this project approved in 1994 when he owned the Subject Property He lived in the same house he now lives in, adjacent to the Subject Property The Applicant's civil engineer has provided assurances that the neighboring properties will not be adversely affected by the proposed development, as did the Godley's engineer in 1994

(e) The Office of Planning has stated in its report that it generally supports construction of the house on the Subject Property The Applicant has been working to provide

additional information to OP, and believes that this Supplemental Statement is also very responsive to OP's request for additional information As noted in the OP Report, the MPD, FEMS, and DDOT all have no objection to approval of the Application

III. VARIANCE RELIEF FROM § 2516.5(b)

The Applicant is requesting area variance relief from the front yard open space requirements of §2516 5(b) Section 2516 5(b) requires that the proposed house have open space in front of the entrance equivalent to the amount of the rear yard requirement in the R-1-A zone, or twenty-five (25) feet This calculation is also subject to the qualification of §2516 6(a), which provides that any required open space not include the area of any covenanted ingress and egress, in effect, the "theoretical" street in front of the house When considering §2516 6(a), there is no open space in front of the house, and area variance relief is therefore required

The burden of proof for an area variance is well established The Applicant must demonstrate three elements. (1) unique physical aspect or other extraordinary or exceptional situation or condition of the property, (2) resulting in practical difficulty in complying with a strict application of the Zoning Regulations, and (3) no harm to the public good or the zone plan *Gilmartin v D C Board of Zoning Adjustment*, 579 A 2d 1164, 1167 (D C 1990) As set forth below, the Applicant meets the three-part test for the requested area variance.

A The Property is Subject to Exceptional Conditions and Situations

In order to prove an extraordinary or exceptional condition, or uniqueness, the Applicant must show that the property has a peculiar physical aspect or other extraordinary situation or condition *Monaco v D C Board of Zoning Adjustment*, 407 A 25 1091, 1096 (D C 1979) A

property's uniqueness is not limited to physical aspects of the land and may be determined by "some difficulty not shared by the entire neighborhood " *Id* at 1098

Furthermore, the Court of Appeals held in *Gilmartin v D C Board of Zoning Adjustment*, 579 A 2d 1164, 1167 (D C 1990), that it is not necessary that the exceptional situation or condition arise from a single situation or condition of the property. Rather, it may arise from a "confluence of factors " In *Monaco*, the Court of Appeals also held that the zoning history of a property could be considered in making the determination of uniqueness

The Subject Property is unique because of its status as the only undeveloped lot of a master planned community without street frontage As such, development on this Subject Property was approved by District officials twice, once in the 1979 Master Plan and again in Mr Godley's BZA Application No 15882 Because of this past zoning history, the Subject Property is a separate tax lot within an approved single record lot, and is therefore subject to approval under § 2516 and subject to the particular requirements of § 2516 6(a) regarding the theoretical street in front of the proposed house As a result of this, the Subject Property has no street frontage, and no possibly way of obtaining any

Another result of the zoning history of the Foxhall Crescents plan is that the Subject Property is subject to the approved plan for covenanted ingress and egress and is also subject to the design requirements of the built-out community

B Strict Application of the Zoning Regulations would Result in a Practical Difficulty

The second prong of the variance test is whether a strict application of the Zoning Regulations would result in a practical difficulty In reviewing the standard for practical difficulty, the Court of Appeals stated in *Palmer v Board of Zoning Adjustment*, 287 A 2d 535,

542 (D C App 1972), that "[g]enerally it must be shown that compliance with the area restriction would be unnecessarily burdensome The nature and extent of the burden which will warrant an area variance is best left to the facts and circumstances of each particular case " In area variances, applicants are not required to show "undue hardship" but must satisfy only "the lower 'practical difficulty' standards " *Tyler v D C Bd of Zoning Adjustment*, 606 A 2w 1362, 1365 (D C 1992) (citing *Gilmartin v Bd of Zoning Adjustment*, 579 A 2d 1164, 1167 (D C 1990)

It is well settled that the BZA may consider "a wide range of factors in determining whether there is an 'unnecessary burden' or 'practical difficulty " *Gilmartin*, 579 A.2d at 1711. Other factors to be considered by the BZA include "the severity of the variance(s) requested", "the weight of the burden of strict compliance", and "the effect the proposed variance(s) would have on the overall zone plan "

Thus, to demonstrate practical difficulty, an applicant must show that strict compliance with the regulations is burdensome, not impossible As such law applies to the facts in this Application, the Applicant has several substantial practical difficulties in complying with a strict application of the Zoning Regulations; and such practical difficulties are a direct result of the exceptional conditions and situations noted in the above section

The Subject Property cannot be developed without the special exception approval, and it cannot be developed outside of the design requirements of its homeowners' association, which reflects the entire design plan of this phase of the Foxhall Crescents neighborhood The portion of the lot between the theoretical street and the rear lot line – which is also the subdivision line – is too narrow to provide both the full rear yard and the twenty-five foot front yard Moving the

house back twenty-five feet would violate the rear yard setback, and would be out of character with the entire design of the neighborhood

Furthermore, regarding the practical difficulty analysis, the D C Court of Appeals has found that the variance procedure "is designed to provide relief from the strict letter of regulations, protect zoning legislation from constitutional attack, alleviate an unjust invasion of property rights and *prevent usable land from remaining idle* " *Palmer v D C Board of Zoning Adjustment,* 287 A 2d 535, 541, (D C 1972)(emphasis added) The relief in this Application, both the area variance relief as well as the special exception relief, will help achieve this stated objective of land use law – to prevent usable land from remaining idle This is even more appropriate for a lot like this one which has been approved and slated for development in accordance with such a diligently-considered (and twice approved) development plan

C Relief Can be Granted without Substantial Detriment to the Public Good

The Office of Planning has stated that it generally supports the construction of a home here, and that it is not opposed to the variance relief once the Applicant makes the argument for such relief, as we have here The proposed project enjoys positions of no objection from MPD, FEMS, and DDOT The Subject Property is configured such that there is no house opposite the proposed house, across the theoretical street Therefore, granting the specific relief requested here affects no adjacent properties, as the theoretical street in front of the house serves only this lot, and in actuality there is more open space in front of this proposed house than any other house in this community Furthermore, the primary effects of granting this relief will be to make the proposed house compatible with the design of the neighborhood as well as to optimize tree protection

ANC 3D has remained neutral in this case, which the Applicant asserts is indicative of the strength of this proposal, that ANC 3D did not oppose the Application despite the objections from the nearest neighbors

D Relief Can Be Granted Without Impairing the Intent, Purpose, and Integrity of the Zone Plan

The proposed structure is well within the limits of the R-1-A zone district, with a lot area safely over the required minimum and a lot occupancy well under the required maximum The use and structure has been approved twice before, indicating its consistency with the neighborhood and with the Zone Plan as embodied in the Zoning Regulations and Zoning Map Granting the relatively minor variance relief for the open space in front of the entrance merely provides the Applicant the ability to construct the home in accordance with the design standards of the community of which it has always been a part

Finally, the unique conditions causing the need for the relief are so unique and extraordinary, that there is no concern about setting undue precedent or damaging the integrity of the Zoning Regulations

IV. RESPONSE TO OFFICE OF PLANNING REPORT

While the Office of Planning's report is mostly supportive of the proposal, it does raise some concerns and it requests additional information The Applicant has provided additional information to the Office of Planning, and notes its response to the report here

The OP Report helpfully provided a Summary Table at the end of the report. We have reproduced that table here with the Applicant's response added

	OP Comment	Planning and/or Zoning Rationale	Response
1	Provide an updated net Lot Area figure and an updated Lot Occupancy calculation, in consideration of the easement	Section 2516 6(a) prohibits the land within an easement from counting in the area of a theoretical lot	The revised Lot Area and Lot Occupancy Figures are included in the revised Form 135
2	Provide a single, complete and updated package of all plans to the record	Board and staff analysis of the application can be completed after all plans have been updated and collated into one complete set	The single package of plans is included in the exhibits to this Statement
3	Provide a legible electronic copy of the site plan and erosion control plan	The notes section of the plans are important to the complete understanding by the Board, staff and the public of the erosion control methods	An electronic copy has been provided to OP and to the BZA in this filing
4	The applicant should address three-part variance test for the requested front yard variance	Relief cannot be granted unless the applicant demonstrates that the property qualifies for the granting of a variance	The variance test is addressed in this Statement
5	The applicant and HOA should work together to establish maintenance procedures for the portion of the easement on the subject property	The Zoning Regulations seek to establish adequate vehicular access to each property	Such maintenance is provided for in the HOA Bylaws
6	OP recommends adoption of the conditions proposed by the applicant	The conditions address topics raised by § 2516, including construction traffic and sediment and erosion control, among other items	Applicant agrees to these conditions
7	The applicant should examine ways to save the 47-inch diameter tulip poplar on the site	Preservation of as many trees as possible, especially such a large tree, would benefit the subject property and neighbors' properties by absorbing rainfall, absorbing overland runoff, creating shade and minimizing heat gain, and stabilizing soil	Preservation of this particular tree is unfortunately not possible The Applicant is replacing twelve of the fifteen trees being removed, and preserving 27 other trees
8	In any scenario where the tulip poplar remains, the UFA recommends a tree preservation plan	A preservation plan that would detail pre-construction, during-construction and post-construction measures to protect the tree will help it survive	The Applicant would agree to a tree preservation plan for the other applicable trees on the Subject Property

9	As part of the complete, single set of revised plans, a new plan should show roof runoff being directed to the infiltration trench, as well as a design for the infiltration trench	Complete and up to date plans would help the Board, staff and the public completely understand the proposal	This has been ordered and is expected within a few days
10	OP recommends a condition of approval that, prior to issuance of the building permit, the applicant obtain written DDOE approval of the infiltration trench design	DDOE review of the trench design would help ensure that it is adequate to serve the anticipated runoff volumes	The Applicant agrees with this condition
11	The applicant should complete a new soil boring and provide those results to the record	A new soil boring could help determine the impacts, if any, of construction on the groundwater levels	The Applicant has completed the requested test and the results are attached to this Statement
12	The applicant should provide to the record a description of how trash would be removed from the site	Solid waste management is an item to be reviewed under § 2516 10(a)(2)	Trash collection would follow same protocol for other homes and other dead end homes The truck will stop at the bottom of the hill – one house down from 4509 – and trash bins will be wheeled down to the truck and wheeled back to 4509 The truck will not need to turn around

V. RESPONSE TO PARTY OPPONENT APPLICANTS

The Party Opponent Applicant has raised several concerns, many of which are technical or procedural issues that don't impact the critical issue of whether or not granting the special exception will adversely affect the use of neighboring properties

A Party Status Request

Before addressing those concerns, however, the Applicant would like to note that nowhere in the record has the Foxhall Crescent Homeowners Association ("FCHA") established the right to enjoy party status First, FCHA has not shown by what process or procedure the

person purportedly acting on its behalf, Mr Godley, is authorized to so represent the interests of the FCHA in this way Also from the FCHA's party status application, the only issue that relates to the granting of relief is the stormwater management and erosion concerns, which at worst could affect only two properties, 4513 Foxhall Crescents (Godley) and 4507 Foxhall Crescents (Wong) It also raises issues of traffic, which clearly won't be an issue for the neighborhood, as the request is for a single one-family dwelling [6] The FCHA claims in its application mostly concerns about construction, which it notes is regulated by the FCHA anyway, as well as by DCRA. The Applicant is happy to work closely with the FCHA and others on construction management issues, but that is not directly an issue before the Board under either area of the requested relief

B Substantive Concerns

Using over-the-top language apparently meant to influence the Board in the place of expressing legitimate and credible concerns, the FCHA's Prehearing Statement claims that the Applicant has been "largely unresponsive", has been "dismissive" of concerns "for years", has repeatedly left emails unanswered for months, has "refused to engage" and has "stubbornly moved forward". In the most baseless of these accusations, the Statement claims that the Applicant has failed to engage in a "good faith effort" to resolve the concerns of neighboring property owners

There is no other way to characterize these inflammatory statements than as a completely inaccurate representation of the course of events The owner, Mr Motlagh, and the contract purchaser, Mr Jacobsen, have been completely engaged with Mr Godley, Mr. Wong, and the

[6] Party requests from anybody other than these two persons (Wong and Godley), such as the request from the Sharkeys, who are more than 200 feet away, do not meet the test for party status

FCHA Mr Motlagh has owned this lot since 2002, and has attended FCHA meetings since then Mr Godley was first informed about this project by Mr Motlagh in October, 2011 There have been numerous communications between the parties, and the Applicant has attended three (3) ANC meetings and four (4) FCHA/Architecture Review Board meetings over the last couple years

The problem seems to be that Mr Godley, after economically benefiting from the 1994 approval and his subsequent sale of the then-approved lot, and Mr Wong, simply do not want a house to be located on what is now open space adjacent to their homes Of course, given the choice, who wouldn't want open space next to them rather than another house? They themselves have offered no compromise, have accepted no explanations or documentation as satisfactory to them, and provided no apparent avenue to the compromise that *they* claim the Applicant will not attempt

As a result, the Board has before it an opponent's prehearing statement that claims that a one-family dwelling will present loading problems, that a one-family dwelling with a two-car garage on the edge of the neighborhood will present parking problems, that the lot is somehow deemed to be an alley lot, that variance relief is required for two requirements which the Board clearly has the authority to modify outside of variance relief, that adding one more home to the existing development will be a burden on public safety and emergency vehicle access, that traffic conditions remain unaddressed (despite DDOT's report), and other various odd procedural technicalities or immaterial aspects of the project

In the end, the opponent's ask for nothing less than a complete denial of the Application, which belies the opponents' real objective, to prevent any use of the Subject Property for any use whatsoever This is a particularly spiteful position, when considering that when it was to his

economic benefit, Mr Godley argued eloquently – and successfully - for the exact opposite position

At any rate, the Applicant has focused its Application, and this Supplemental Statement, on addressing the *legitimate* concerns of the neighbors, particularly in the context of the requirements of 11 DCMR §2516

The FCHA's objections, in turn

1) Public Safety According to the Office of Planning Report, the MPD responded to OP and stated they it has no particular concerns with this project Fire and EMS Services also had no concerns about access to the site DDOT also expressed no concern about traffic or parking, or public safety And the Office of Planning agreed with all of these experts that the addition of this single one-family dwelling at the edge of the neighborhood will not have a negative impact on public safety

2) The Environment The Applicant acknowledges the legitimate concerns of neighboring properties in the area of storm water management and erosion issues This is a concern almost any time a one-family detached dwelling is constructed in the District This is why the Applicant has presented two engineering reports, and also plans to install a non-mandated infiltration trench, to aggressively address any potential storm water management and erosion issues The opponents claim, only anecdotally to this point, that the soil situation has changed so much since Mr Godley's 1994 approval that the Application should be denied completely [7] But they have not submitted any technical support for that argument, and the Applicant's expert claims

[7] We would argue the opposite, that while the soil composition is unlikely to have changed drastically over the past twenty years, storm water management technology has, and the Applicant's ability to corral run-off and erosion is assured, and the overall impervious surface proposed for the Subject Property is less than what was approved in 1994

otherwise, opining that neighboring properties will not be adversely affected by the proposed development

Regarding tree preservation, the Applicant has hired an arborist and submitted a tree survey The area of disturbance on the Subject Property is less than 5,000 square feet, including the area of the covenanted ingress and egress (the theoretical street) The plan will require removing fifteen (15) trees, to be replaced by thirteen (13) new trees, and twenty-seven trees on the Subject Property will remain untouched

3) Parking, Loading, and Traffic

The FCHA Statement claims that the Applicant has not met the "statutory requirements regarding parking, loading, and traffic" The Applicant is not aware of any such "statutory" requirements and the FCHA Statement does not cite them or say what they are Regarding parking, the Subject Property will have two off-street parking spaces, where one is required Regarding loading, it will handle the occasional "loading" activities of a one-family dwelling in the same manner as the other twenty-six (26) homes in the neighborhood, by using the garage or by loading at the front of the Subject Property Regarding traffic, it is not clear what the FCHA means by saying that the Applicant hasn't provided sufficient information. The Applicant does not believe that a professional traffic study is necessary for the approval of a single one-family dwelling The Office of Planning, DDOT, MPD, and FEMS, also agree with this

4) Urban Design

The FCHA has not articulated any failure of urban design in its Statement There may perhaps be no project more in line with urban design, as the proposed plan is compatible with the land, as approved in the Master Plan

5) Site Planning

The FCHA Statement concludes that site planning considerations have not been met by the proposed project but offers no support for this conclusion, other than to claim - falsely - that the Applicant has argued that "all considerations of the variance request should be ignored based on the original BZA approval of Foxhall Crescents theoretical lots" The Applicant has never made this claim or anything even closely resembling it, just like it hasn't been "largely unresponsive" and has not "denied requests to provide plans" and has not "refused to engage with the FCHOA " The hyperbole and false accusations don't help to reach common solutions or help the Board in fairly reaching its decision

6) Traffic and Parking

This objection was noted twice in the FCHA Statement See above for the Applicant's response

7) Impact on Neighboring Properties

The FCHA Statement lists the 16-foot ingress and the lack of a turn-around, but does not describe why these aspects of the project are harmful to the HOA, and does not rebut the conclusions of DDOT, OP, FEMS, and MPD, that this situation is not objectionable Also, the Statement claims that the turn-around **was** "planned at the upper end of the Property to accommodate emergency vehicles and other traffic, such as snowplows, delivery trucks, and garbage trucks with an additional house " This is simply false, and intentionally meant to mislead the BZA into thinking that the Applicant is presenting a plan that is altered in some way from the originally approved Master Plan and from the Godfrey plan in 1994 It is not In fact, not only was a turn-around never planned, but there is no such turn-around anywhere in the larger Foxhall Crescents development In addition to that misrepresentation, Mr Godfrey actually argued for

and won a twelve (12) foot ingress path in 1994, four (4) feet narrower than the current Application

8) Fire and Emergency

This was another repeated objection Perhaps the FCHA was not yet aware that the MPD, FEMS, DDOT, and OP all had no objection to the proposal including the sixteen (16) foot ingress/egress path and not having a turn-around

9) Plans Require Additional Relief

This is not really an objection about the impact of the proposed project The Applicant has amended the Application to include variance relief from the requirements of §2615 5(b) On other claims by the FCHA, §2615 6(a) does not mean that the internal access road cannot be part of any of the theoretical lots or their yards If this were true, every single §2516 theoretical lot case would require variance relief The concept of theoretical streets being part of the theoretical lots is inherent in the very concept of theoretical lot subdivisions These are not public streets That is why their development requires relief under §2516

10) Authorized Modifications to §2516 6

The FCHA claims that variance relief is required for the Board to modify the requirements of §§2516 6(b) and (c), even though §2516 6(d) specifically gives the BZA the authority to modify the requirements of §§2516 6(b) and (c) without such variance relief

11) These are Not Alley Lots

The FCHA claims that theoretical lots should be treated as alley lots, and therefore the proposed building should be limited in height to twenty (20) feet It is not clear how the FCHA came to such a conclusion that all theoretical lots are to be treated as alley lots That is simply

not the case The reference to §2507 obviously applies to theoretical alleys, as opposed to theoretical streets, when those are included in a theoretical lot subdivision

12) The Zoning Administrator and OP

The FCHA Statement claims that its counsel has met with the Office of Planning and the Zoning Administrator, both of whom "share the FCHOA's concerns with the insufficiency of the special exception relief requested " It is not clear why an opponent would meet with the Zoning Administrator about a self-certified application The Applicant and his counsel bear the risk that the correct relief is being requested, and the BZA does not need to bother determining whether or not additional relief is needed If it's needed, then the Applicant will discover this insufficiency in the permit process and have to return to the BZA if it so chooses Regarding the Office of Planning's concerns, OP agrees with the Applicant that variance relief is not required from §2516 6(a), §2516(b), §2516(c), §2516 4, and §2507 4 As OP disagrees with the FCHA's position on five of their six claims for insufficiency of relief, it is not clear what is meant when FCHA says that the Office of Planning "shares FCHA's concerns with the insufficiency of the special exception relief requested " Clearly OP does not share their concerns

13) Summary

The FCHA has taken an everything-but-the-kitchen-sink approach to making objections to the proposed development of this one house The approach is possibly meant to mislead the Board and exaggerate both the particulars of the proposed project, the amount of variance relief required, and the potential impacts from the proposed project The FCHA claims objectionable harm due to everything from loading and parking to trash collection, issues that are rarely if ever concerns for the construction of a one-family detached dwelling In reality, the potential issues are the same as those noted and accommodated in 1994, that being storm water management and

soil erosion The Applicant has addressed these issues with the submitted engineering reports, as discussed in detail above

VI. LIST OF EXHIBITS

Exhibit A	Copy of the Zoning Map for Subject Property
Exhibit B	Updated Site and Grading Plan
Exhibit C	Final Landscape Plan
Exhibit D	The Soil and Erosion Reports from KJ & Associates
Exhibit E	The Erosion and Sediment Control Plan
Exhibit F	The Erosion and Sediment Control Plan Details
Exhibit G	Resume of Proposed Expert Witness, Kayvan Jaboori, P E

VII. EXPERT WITNESS TESTIMONY

The Applicant will have its Civil Engineer, Mr Kayvan Jaboori, available at the hearing to testify and to answer questions relating to storm water management and soil erosion issues Mr Jaboori's resume is attached hereto as Exhibit G

VIII. CONCLUSION

For the reasons provided hereinabove, the Applicant respectfully requests that the Board approve the Application

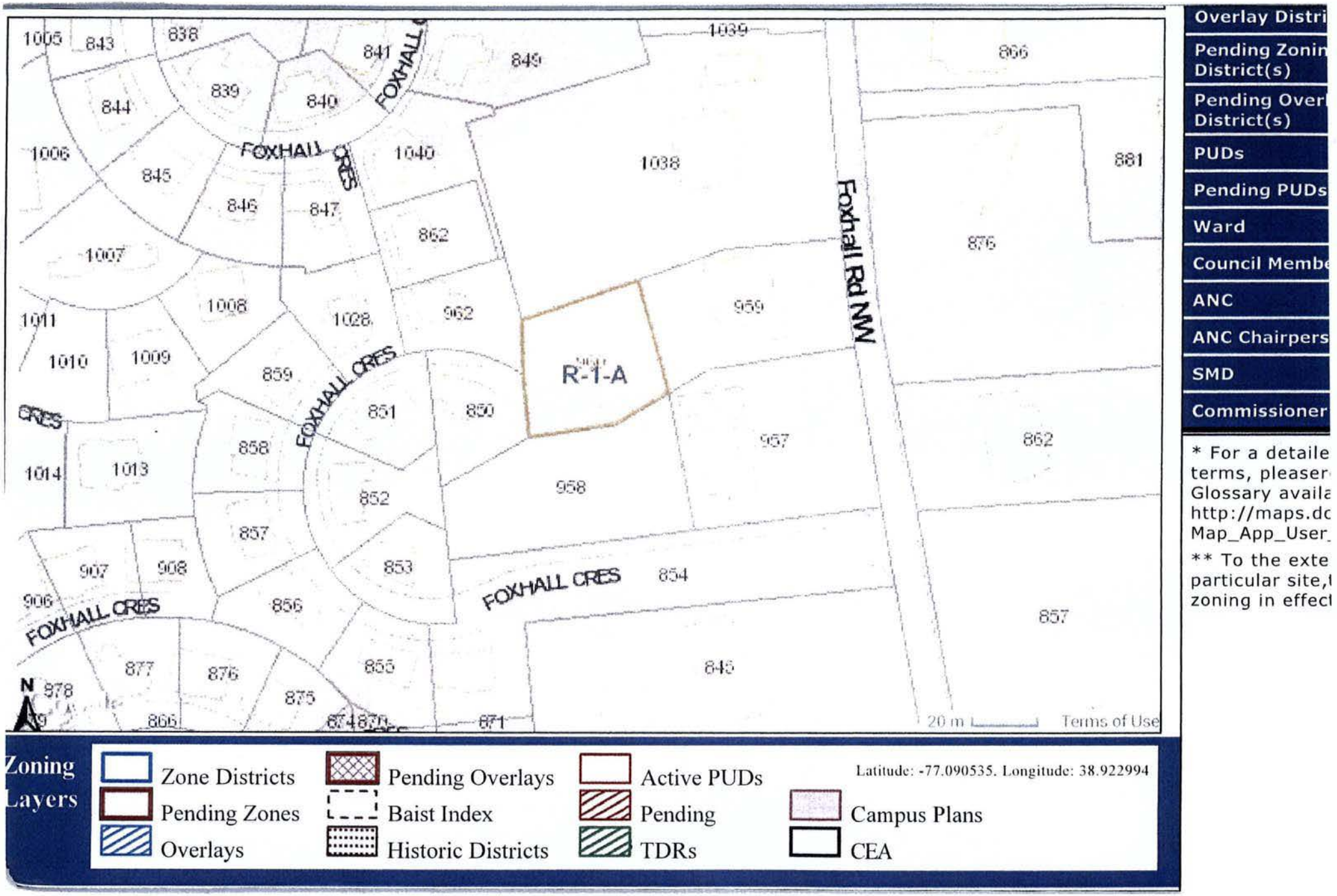
Respectfully,

Martin P Sullivan, Esq
Sullivan & Barros, LLP

10/14/14

Exhibit A

Copy of the Zoning Map for Subject Property


R-1-A
Foxhall Rd NW
FOXHALL CRES
1005
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838
841
849
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Terms of Use
Zoning Layers
Zone Districts
Pending Zones
Overlays
Pending Overlays
Baist Index
Historic Districts
Active PUDs
Pending
TDRs
Campus Plans
CEA
Latitude: -77.090535, Longitude: 38.922994
Overlay Distri
Pending Zonin District(s)
Pending Overl District(s)
PUDs
Pending PUDs
Ward
Council Membe
ANC
ANC Chairpers
SMD
Commissioner
* For a detaile terms, pleaser Glossary availa http://maps.dc Map_App_User_
** To the exte particular site, zoning in effect

Exhibit A

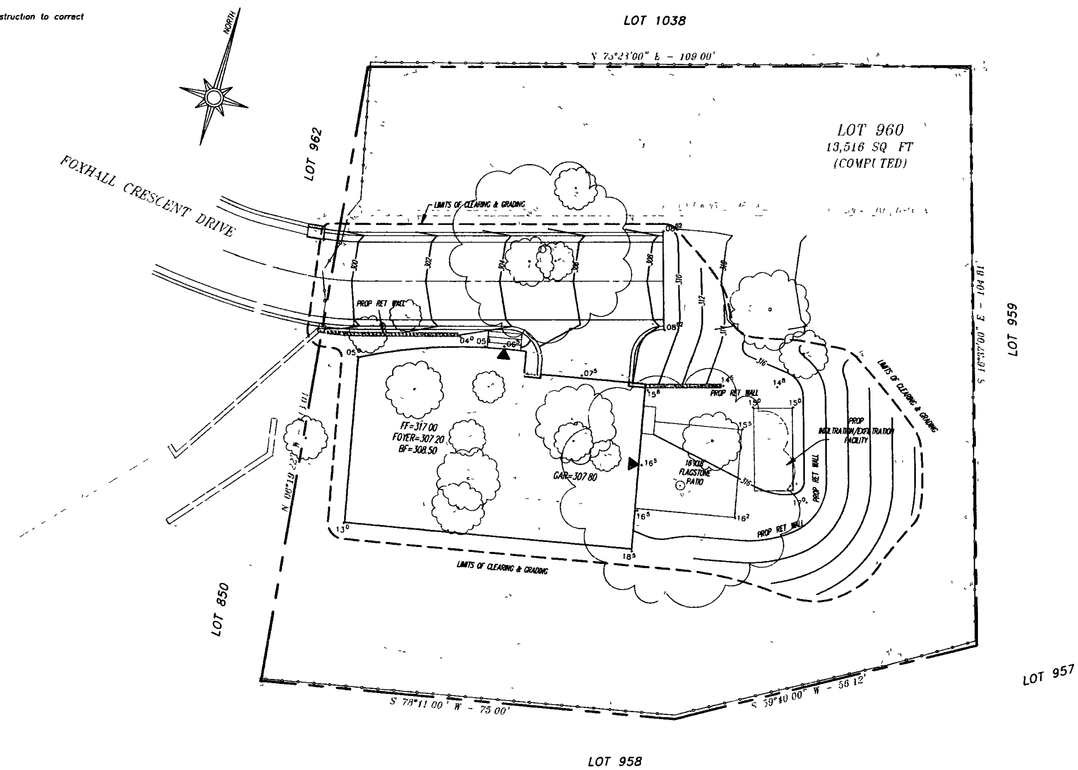
Exhibit B

Updated Site and Grading Plan

NOTES.

- Owner Amir Motlagh
  201 Berry Street, SE
  Vienna, VA 22180
- Property Address 4509 Foxhall Crescent
  Washington DC 20007
- Property Location Lot #960, Square #1397
- Developer Jacobsen Builders
  40862 Robinson Circle
  Leesburg VA 20175
- All construction shall conform to DDOE and/or DDOT specifications
- Only those utilities visible from the ground surface have been indicated on these plans The location and depth of utilities shall be verified by contractor
- This property is served by public water and sewer
- No title report furnished
- Recommendation for materials and methods of construction to correct existing soil conditions is not a part of this plan
- F.E.M.A./F.I.R.M. DATA

  MAP ITEM ID 1100010012C
  FLOOD ZONE X
  EFFECTIVE DATE 09/27/2010



SURVEY	JARRETT SURVEYS, INC
DESIGN	KJ
DRAWN	KJ
CHECKED	KJ

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

KJ & ASSOCIATES
CIVIL AND LAND DEVELOPMENT ENGINEERING
10650 MAIN STREET SUITE 302
FAIRFAX VA 22030-3814
(703) 449-1600
FAX (703) 449-1601
e-mail kjanda@cox.net
www.kjandassociatesengineering.com

DATE	OCTOIBER 2014
SCALE	HORZ 1"=10' VERT N/A
SEAL	DISTRICT OF COLUMBIA · No.PE 905801 · PROFESSIONAL ENGINEER · CIVIL

SITE AND GRADING PLAN

PROJECT
4509 FOXHALL CRESCENTS DRIVE, N.W.
WASHINGTON, D.C. 20007
LOT 960, SQUARE 1397

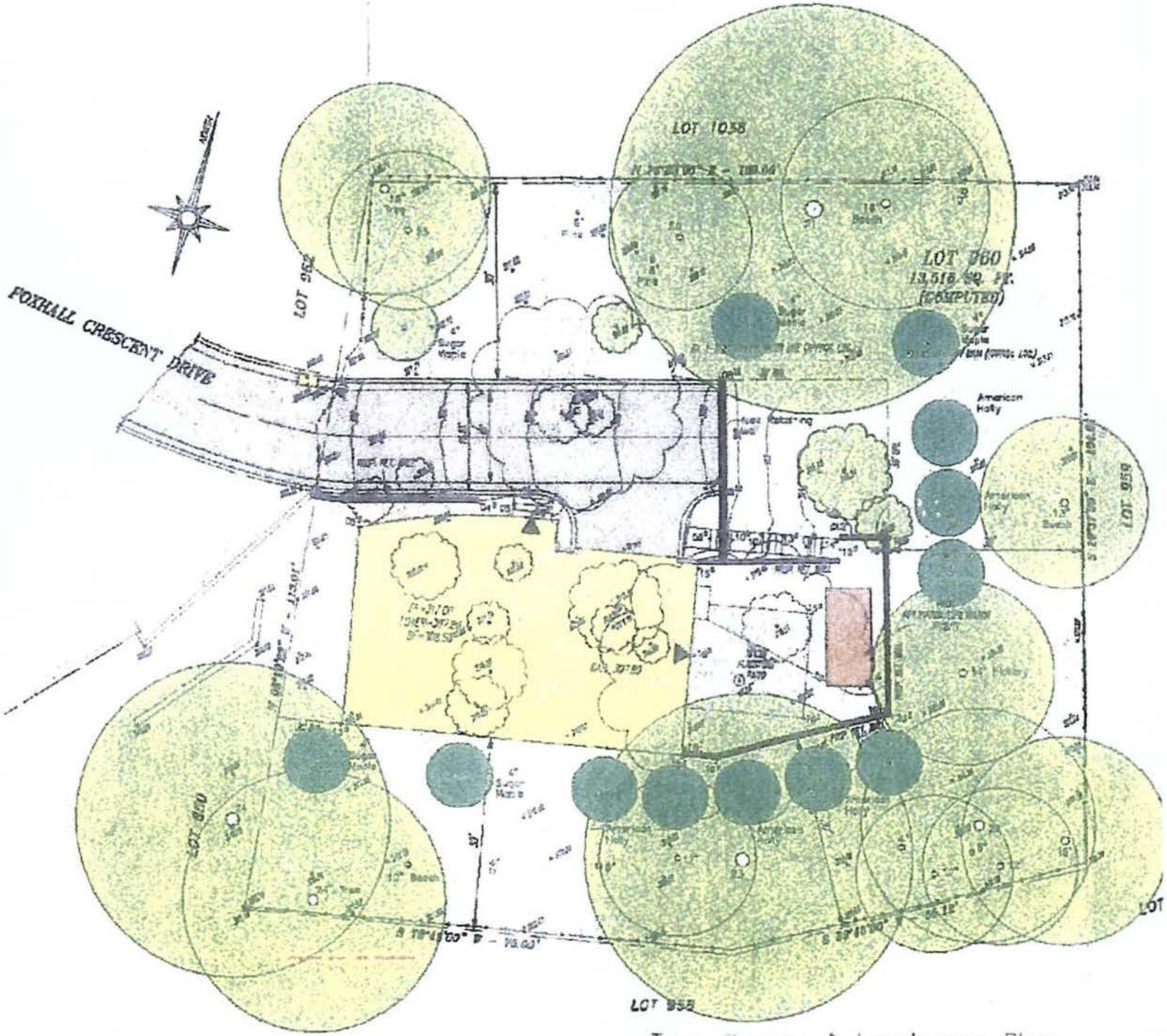
JOB	2013-005
SHEET	1 OF 5

D:\Projects\Foxhall Crescents\dwg\Grading Plan - No Wall.dwg 10/14/2014 12:41:00 PM

(C) COPYRIGHT 2012 KJ & ASSOCIATES

Exhibit C

Final Landscape Plan



Tree Survey & Landscape Plan
Scale: 1" = 10'

Exhibit D

The Soil and Erosion Reports from KJ & Associates

18708

KJ & ASSOCIATES (703) 449-1600
CIVIL AND LAND DEVELOPMENT ENGINEERING FAX (703) 449-1601
10650 Main Street, Suite 302, Fairfax, VA 22030-3814 e-mail kjanda@cox net

December 13, 2013

Mr. Edwin Jacobsen
40862 Robin Circle
Leesburg, VA 20175

Dear Mr. Jacobsen;

Based on a review on the drainage patterns and topographic conditions proposed for Lot 960, Square 1397 in Washington D.C., we have provided means and methods to control the stormwater runoff during, and after construction of the proposed single family residence.

The total land disturbance for the project is 4,950 square feet. Construction drainage and Siltation and Erosion Control considerations will be handled by such standard D.C. methods as Earth Dikes along the eastern and southern limits of land disturbance; Super Silt Fence along the northern limits of disturbance; and double Silt Fence is used to control siltation along the western limits of disturbance on the lot. Inlet Protection is proposed to be installed upon the existing storm sewer inlet at the entrance to the lot.

Post-construction drainage from the site, both originating from the site, and runoff from off-site sources, will be controlled by way of sheet flow and will be collected by the existing storm sewer inlet at the lot entrance. This inlet was originally designed to adequately collect run-off from Lot 960 and it's upstream off-site land. There is no change in on-site or off-site drainage patterns.

As the proposed improvement on Lot 960 include construction of on-site stormwater management facility (infiltration trench) to convey the run-off generated by the proposed house on the lot, construction of the proposed single family residence will not have any adverse effect on the adjacent lots.

Sincerely,

Kayvan Jaboori, P E
Owner

RECEIVED
D.C. OFFICE OF ZONING
2013 DEC 16 PM 12:07

BOARD OF ZONING ADJUSTMENT
District of Columbia
CASE NO. 18708
EXHIBIT NO. 24

Board of Zoning Adjustment
District of Columbia
CASE NO 18708
EXHIBIT NO 24

PCS PROFESSIONAL CONSULTING SERVICES
GEOTECHNICAL•ENVIRONMENTAL•TOXICOLOGY•GEOLOGY•HYDROGEOLOGY

Partners:
Gerald C. Davit, P.E.
James T. Kirkland, Ph.D., C.P.G.
Barbara M. Davit, Ph.D., Chemist

December 18, 1993

Mr. Timothy J. Ward
5505 Seminary Road
Falls Church, Virginia 22041

Subject: Geotechnical Engineering Services,
Proposed Residence, 4509 Foxhall Crescents Drive, N.W.
Washington D.C. (PCS Project #931107)

Gentlemen:

We have performed two test borings on this property to explore subsurface soil and groundwater conditions.

Water was not encountered during drilling or observed at completion when the augers were removed. About 24 hours after drilling observations were made in the open bore holes. No water was observed in boring # 1 to a depth of 20 feet. Water was observed in test boring # 2 at a depth of about 20 feet (EL 295±). Based on this data hydrostatic groundwater is believed to be about 12 feet below the proposed lower floor of the new residence at EL 307±.

Groundwater levels fluctuate due to many variables. However, since groundwater levels are presently below planed excavation levels, we would not anticipate construction of the proposed home to influence groundwater levels on this or adjacent sites. Surface water should be addressed in your site plans.

Additional details are include in our geotechnical report for this project. If you have any questions please contact the undersigned.

Bzd 15882
Rec'd. 12/22/93
Ex. No. 23

Very truly yours,
PROFESSIONAL CONSULTING SERVICES

Gerald C Davit

Gerald C. Davit

DISTRICT OF COLUMBIA
GERALD C. DAVIT
No 6944
REGISTERED
PROFESSIONAL ENGINEER

Existing Conditions and Proposed Construction

The property is located at the end of Foxhall Crescents Drive. The proposed site is wooded and slopes up from about EL 300 at the existing street to EL 319 to the south. Slopes are typically less than 3H:1V. There is an abandon asphalt road along the south side of the proposed home site.

The proposed structure will consist of a three story single family home with lower level at about EL 307.67. The outside grade will slope from about EL 307 in the front to El 317 along the rear of the building.

Subsurface Exploration

Two test borings were performed in the abandon road on the high side of the proposed site at the approximate locations shown on Enclosure (1).

Results of the subsurface exploration are shown on the test boring logs in Enclosure (2). These logs indicate results of Standard Penetration Tests (SPT) performed in the borings by ASTM D-1586, visual descriptions per ASTM D-2488, estimated Uniform Soil Classification System (USCS) group symbols per ASTM D-2487 and laboratory natural moisture content (MC).

Water was not observed in the test borings during drilling or at completion. Water was observed in test boring No. 2 at a depth of about 20 feet the day after drilling was completed. Based on these observations, we anticipate hydrostatic groundwater levels were about EL 295, which is 12± feet below the proposed floor, at the time the borings were performed.

Water levels may fluctuate due to changes in precipitation, surface grading, seasons of the year and other causes. Perched water, trapped by clayey soils, may also develop periodically.

Soil Laboratory Testing

Results of laboratory classification tests on selected samples are included with the ASTM D-2487 descriptions in Enclosure (3). Some variation between visual and laboratory determined results is anticipated.

Soil Conditions

Soils disclosed by this exploration generally consist of residual materials that were formed by weathering of the parent bedrock. Typically these soils increase in density with depth and grade from soil to rock. Some colluvial soils may also be present near the ground surface and at lower elevations.

Boring No. 1 disclosed about 1.5 feet of fill that was probably part of the abandon road. Below this material the soils consist of firm silty and clayey sand and sandy silt. Refusal was not encountered.

Soils disclosed by Boring no. 2 are typical of the general weathering pattern in residual soils. This boring indicates firm to hard silty sand classified SM. Refusal on hard residual material was encountered at 24 feet. Remnants of the asphalt road were present at the ground surface.

Foundation Support

Based on available information, firm, natural silty sand is anticipated at and below the lower floor at EL 307.67. These materials are anticipated to be suitable for support of normal spread footings with a soil bearing pressure of at least 2500 psf.

Foundation subgrades should be observed by us after they are excavated and prior to placement of concrete to evaluate if the soils anticipated are encountered. If necessary modifications to the footing sizes, depth or other design aspects could be made during construction.

Foundation Walls

The walls of the lower level will extend up to 10 feet below exterior grade. These walls must be designed to resist lateral earth pressure. We recommend designing foundation walls below grade for an equivalent fluid pressure of 45 pcf. A perimeter exterior drain is recommended to prevent hydrostatic pressure on the walls. This is discussed later in this report.

We recommend backfill placed against the exterior walls generally consist of soils classified ML, SM, SP, SW, GM, GW or GP. In order to limit settlement of exterior grades that may cause water ponding and increased water seepage into subdrains we recommend the backfill be compacted to at least 90 % of the maximum dry density determined by the Standard Proctor, ASTM D-698 or AASHTO T-99. Areas under walks, or other soil supported structures should be compacted to at least 95 % of this standard.

The on site soils encountered above the floor grade are generally anticipated to be of suitable quality for reuse as backfill. However, the natural moisture content is high and we anticipate scarifying and drying of the on site soils would be required to obtain compaction. Since the site is relatively small for performing drying operations it may become more economical to import dryer material. Weather conditions at the time of construction will be a factor.

Floor Support

The lower level floor slab may be soil supported. We recommend a minimum of 4 inches of open graded aggregate about 3/8 to 3/4 inch size be placed below the floor slab. The aggregate base should be covered with a layer of polyethylene at least 6 mil thickness or equivalent.

Floor slab subgrades should be prepared by removing any soft or unsuitable material. The subgrades should be observed by us prior to placing the aggregate base.

Subdrains

The proposed construction is anticipated to be above the hydrostatic groundwater levels; however, the lower level walls and floor slab should be protected from potential surface water infiltration.

We recommend that both interior and exterior drains be provided. A sketch of the subdrainage system recommended is shown in Enclosure (4). We suggest design drawings be developed to show the details of the system including cleanout locations, drain discharge points and invert elevations. If requested we can prepare drawings or review and comment on drawings prepared by others.

Limitations

This report has been prepared based on information furnished at this time and our interpretation of data from a limited number and depth of test borings and laboratory tests. Additional exploration and testing may disclose differing results. More than one interpretation of available data is possible. Subsurface conditions may change between locations explored and soil and water conditions change with time.

Our services have been provided in accordance with generally accepted geotechnical engineering practice based on available information. No warranties or guarantees are made.

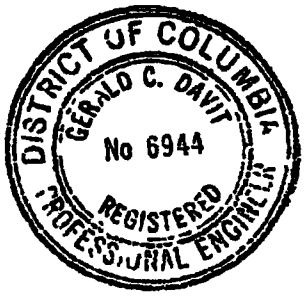
Samples obtained during this exploration will be retained for thirty days from the date of this report and then discarded unless other disposition is requested.

If additional services, design details, or clarification of any aspect of this report is desired please contact the undersigned.

Very truly yours,
PROFESSIONAL CONSULTING SERVICES

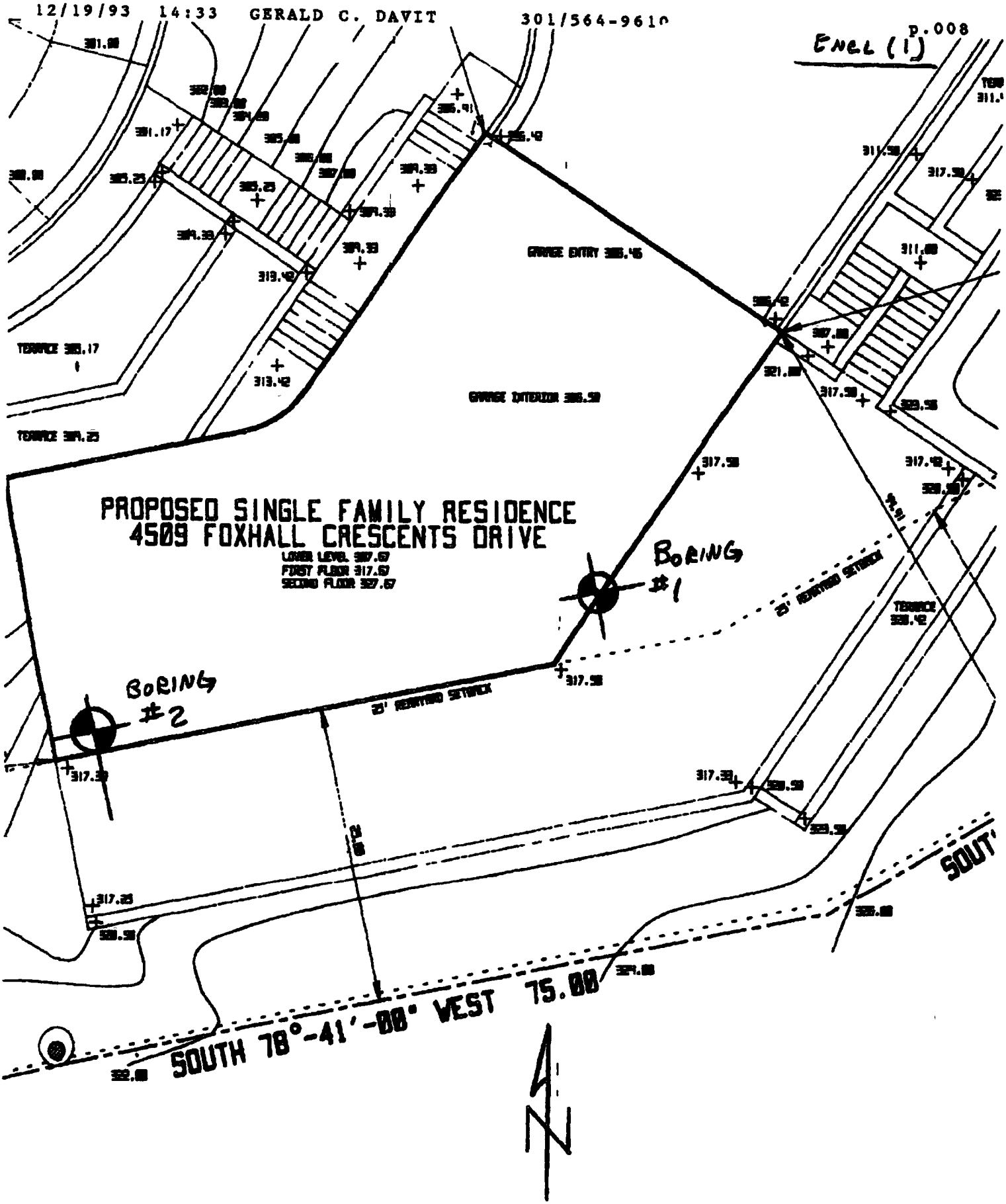
Gerald C. Davit

Gerald C. Davit, P.E.



Enclosure:
1) Test Boring Locations (1 sheet)
2) Test Boring Logs (2 sheets)
3) Laboratory Testing (2 sheets)
4) Subdrain Sketch (1 sheet)

ENCL (1)



PROPOSED SITE PLAN

SCALE 1" = 10'-0"

TEST BORING LOG
PROFESSIONAL CONSULTING SERVICES

PROJECT
Ward Residence

Boring No. : 1
Ground Surface EL: 318±
PCS Project No. : 931107

Boring Contractor: Jamison Drilling Company
Drilling Method: 2¼" Hollow Stem Augers
Boring Location: As shown

Drilling Equipment: CME 45

Date Completed : 12-10-93
Sheet Number : 1 of 1

DEPTH (Ft)	SPT	VISUAL DESCRIPTION	USCS	STRA-TUM	MC (%)
0	2+3+5	FILL, contains; asphalt, crushed stone, clayey sand, wet			
1					
2		brown silty SAND, trace roots, contains mica, wet	SM		
3	4+4+8				
4					25
5		yellowish brown silty SAND, trace roots, contains mica, wet	SM		
6	6+5+6				
7					
8					
9	7+8+11				
10					38
11					
12					
13		reddish brown clayey SAND, contains mica, wet	SC		
14	5+7+11				
15					44
16					
17					
18		light brown & grey sandy SILT, contains mica, wet	ML		
19	6+11+12				
20					41
21					
22					
23					
24	6+7+8				
25		Boring terminated at 25.0'			

WATER OBSERVATIONS:

Encountered: None
Augers Pulled: None, Caved 20.0'
After 24 hours: None, Caved 20.0'

REMARKS:

TEST BORING LOG
PROFESSIONAL CONSULTING SERVICES

PROJECT
Ward Residence

Boring No. : 2
Ground Surface EL: 315±
PCS Project No. : 931107

Boring Contractor: Jamison Drilling Company
Drilling Method: 2¼" Hollow Stem Augers
Boring Location: As shown

Drilling Equipment: CME 45

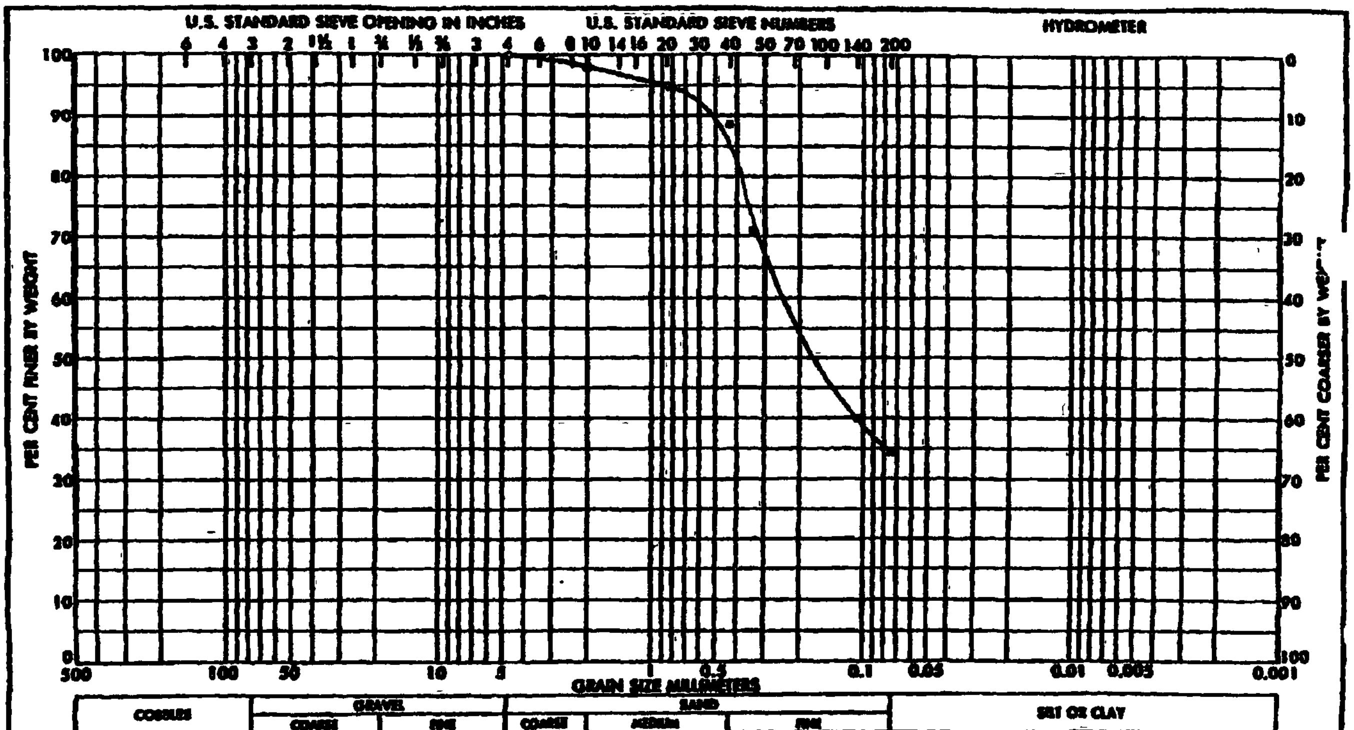
Date Completed : 12-10-93
Sheet Number : 1 of 1

DEPTH (Ft)	SPT	VISUAL DESCRIPTION	USCS	STRA-TUM	MC (%)
0	10+4+7	2"± Asphalt			
1		brown & gray silty SAND, with clayey sand layers, contains mica, wet	SM		
2					
3	5+6+8	brown & gray silty SAND, contains mica, moist to wet	SM		23
4					
5					
6	7+9+11				
7					
8					
9	10+13+16				13
10					
11					
12					
13					
14	16+24+29				12
15					
16					
17					
18					
19	10+50/5½				
20					
21					
22					
23					
24	50/5½"	Refusal at 24 feet			
25					

WATER OBSERVATIONS:

Encountered: None
Augers Pulled: None, Caved 24.0'
After 24 hours: 20.0', Caved 24.0'

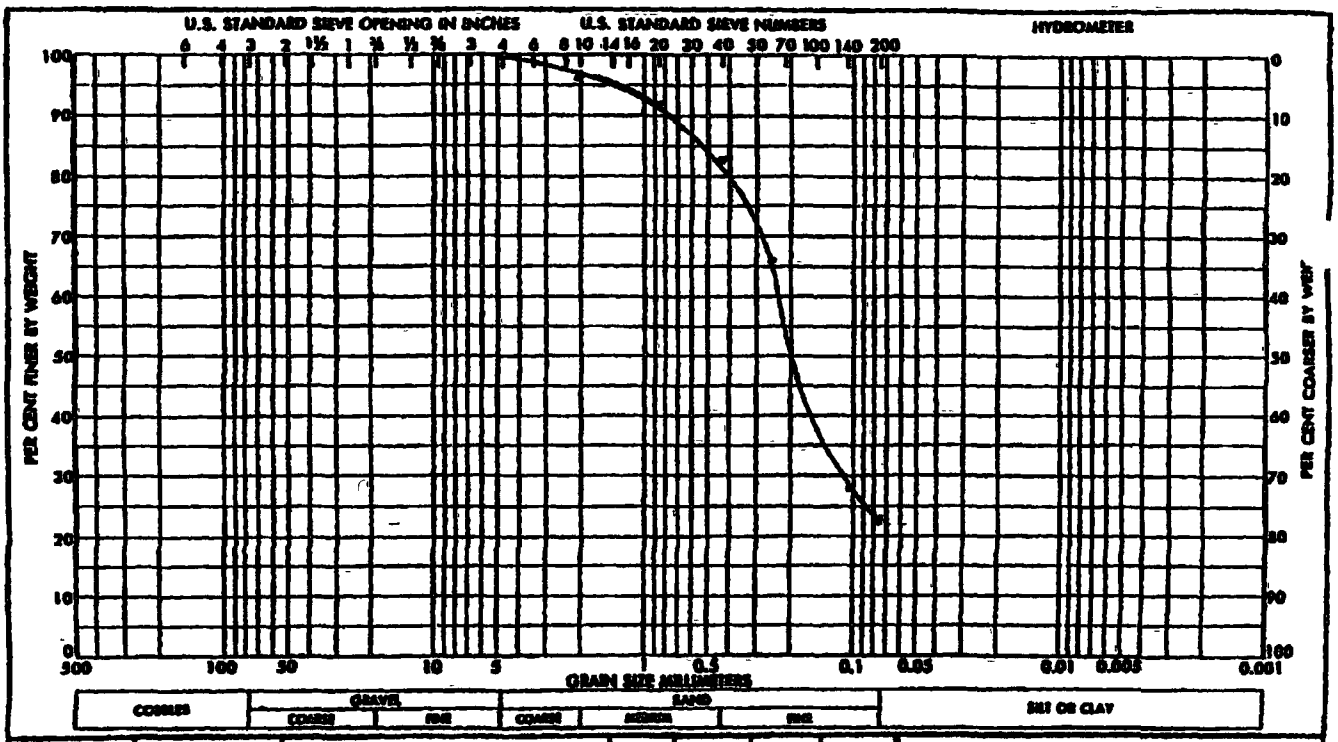
REMARKS:



SAMPLE NO	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
1	13.5-15.0'	REDDISH BROWN, CLAYEY SAND, CONTAINS MICA		66	51	15

PROJECT: WARD RESIDENCE
4509 FOXHALL CRESCENTS DRIVE N.W.
AREA: WASHINGTON D.C.
BORING NO.: 1 @ 13.5-15.0'
DATE:

GRADATION CURVES



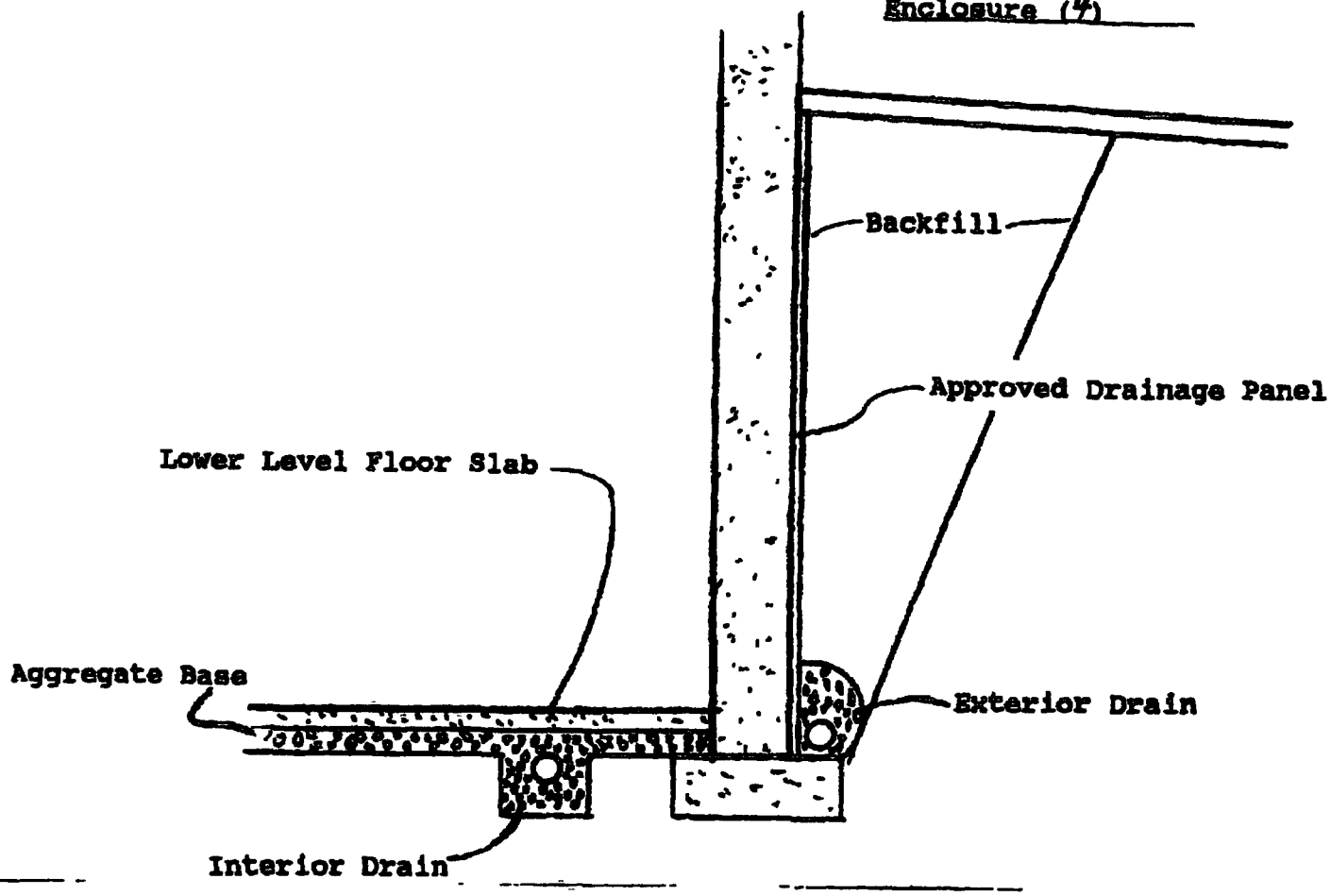
SAMPLE NO.	CLAY OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
2	8.5'-10.0'	BROWN & GRAY SAND WITH SILT, CONTAINS MICA		—	NP	NP

GRADATION CURVES

PROJECT: WARD RESIDENCE
4509 FURNALL CRESCENTS DRIVE N.W.
AREA: WASHINGTON D.C.
BORING NO.: 2 @ 8.5'-10.0'
DATE:

p.012

ubdrainage Sketch
Enclosure (4)



General Notes:

1. Interior Drain 4" min. dia. corrugated PE pipe, ¼" slots, enveloped with 6" min. 3/8" open graded aggregate, drained by gravity or pump.

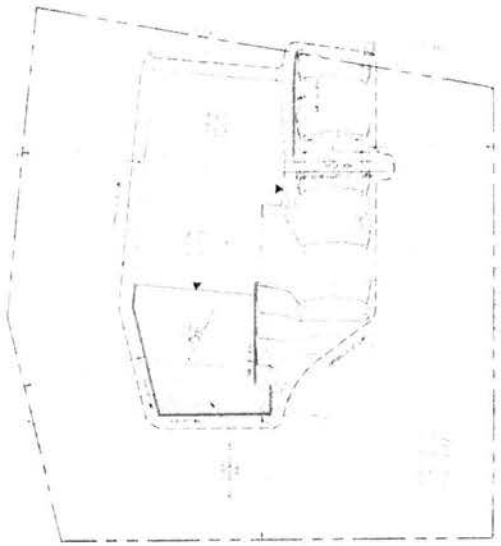
2. Exterior Drain 4" min. dia. corrugated PE pipe, ¼" slots, placed on footing against wall with invert 4" min. below bottom of inside slab, 6" min. 3/8" open graded aggregate above and side, aggregate separated from backfill by approved geotextile filter, drain by gravity.

3. Interior drains and/or exterior drains may be placed level or with positive slope to drain as shown on design drawings. Adjust grades during construction to prevent negative slopes.

4. Cap exterior grade over backfill with clayey soil and slope away from structures.

5. Provide cleanouts for drains as shown on design drawings.

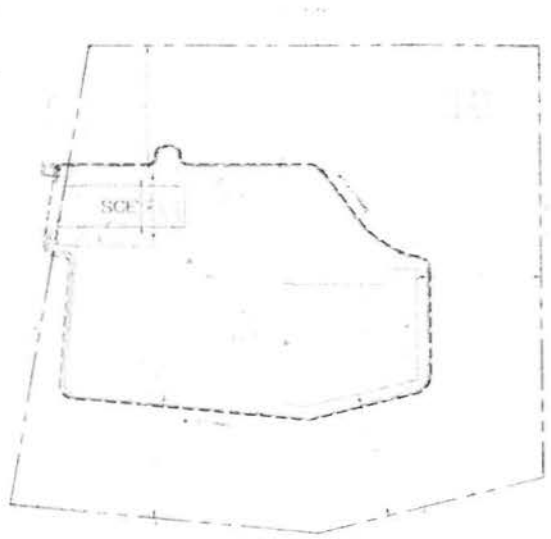
6. Refer to geotechnical report for additional information.



SITE & GRADING PLAN

4509 FOXHALL CRESCENTS DRIVE, N.W.
WASHINGTON, D.C. 20007

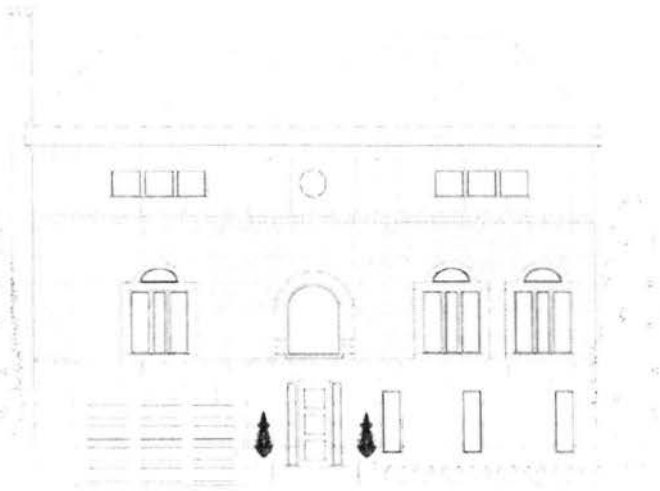
KJ & ASSOCIATES



KJ & ASSOCIATES

KJ & ASSOCIATES

1919 FOXHALL CRESCENTS DRIVE N.W.
WASHINGTON, D.C. 20007



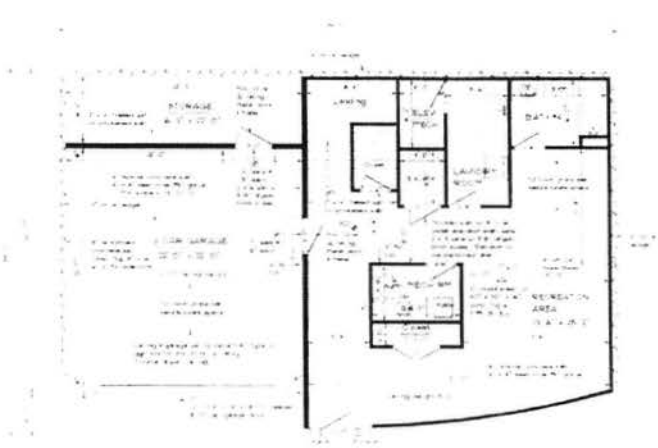
FOXHALL

C5

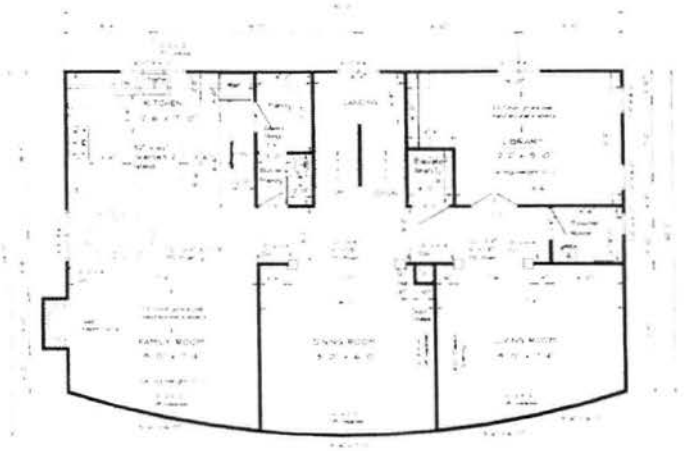
4508 FOXHALL CRESCENTS DRIVE N.W.
WASHINGTON, DC 20007

SHEET SCHEDULE

C5 COVER SHEET
A1 BASEMENT / FIRST FLOOR PLANS
A2 SECOND FLOOR PLAN / FRONT ELEVATION
A3 LEFT & RIGHT ELEVATIONS
A4 REAR ELEVATION



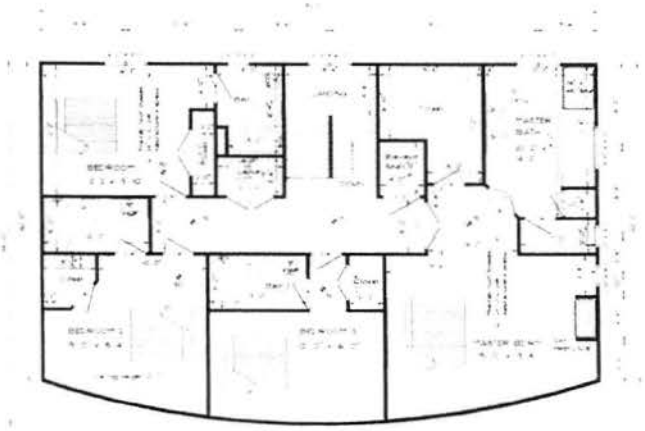
BASEMENT FLOOR PLAN



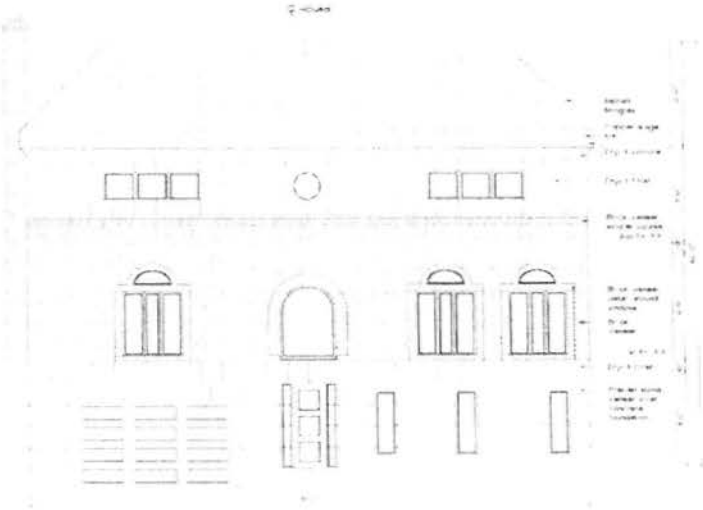
MAIN FLOOR PLAN

Foxrell

A.1



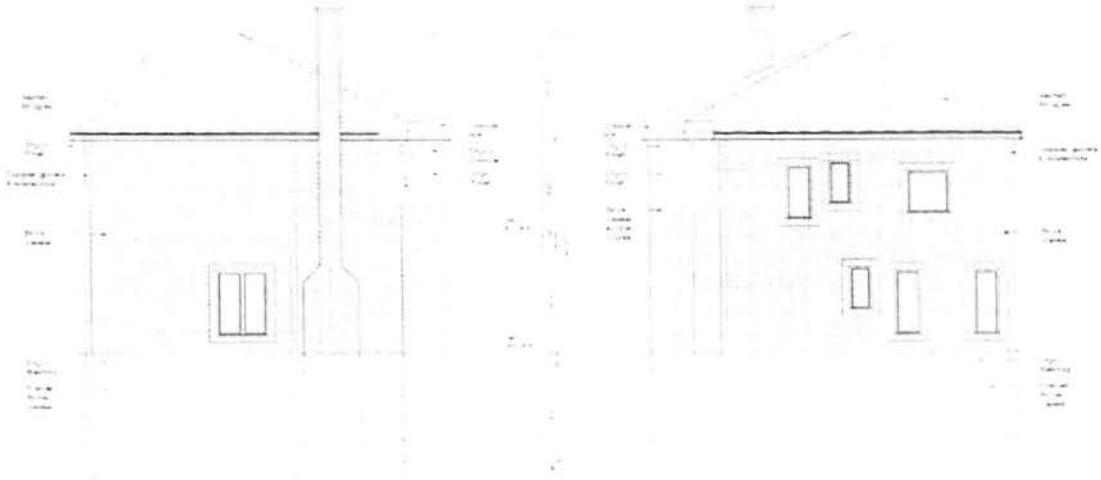
SECOND FLOOR PLAN



FRONT ELEVATION

Foxnall

A.2

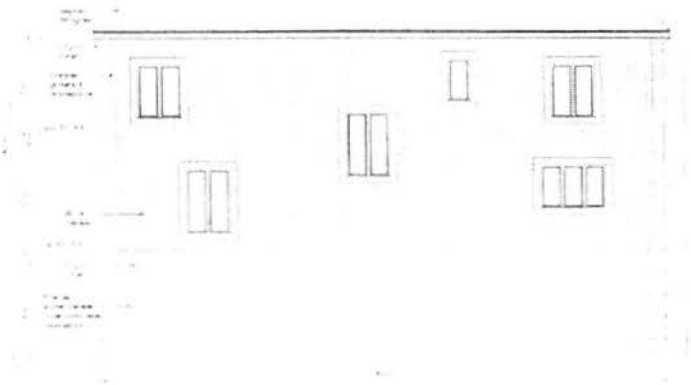


LEFT ELEVATION

RIGHT ELEVATION

Foxral

A3



REAR ELEVATION

Foxrail

A4

KJ & ASSOCIATES (703) 449-1600
CIVIL AND LAND DEVELOPMENT ENGINEERING
10650 Main Street, Suite 302, Fairfax, VA 22030-3814
FAX (703) 449-1601
e-mail kjanda@cox net
www kjandassociatesengineering com

RECEIVED
OFFICE OF ZONING
2014 SEP 16 AM 8:42

September 10, 2014

Mr Amir Motlagh
201 Berry Street, SE
Vienna, VA 22180

Re: 4509 Foxhall Crescents

Sub: Feasibility Study

Dear Mr. Motlagh,

Per your request, I have conducted a feasibility study on the development of Foxhall Crescents, Lot 960 (4509 Foxhall Crescents) in Washington, D C for construction of a single family house

As a professional civil engineer licensed to practice in Washington, D.C. (Lic. #PE905801), State of Maryland (Lic #22831), and Commonwealth of Virginia (Lic. #0402-19863), with more than 30 years of experience in civil, land development, and geo-technical engineering fields, I qualify to render my opinion and advise in various aspects of civil engineering and design, including but not limited to, storm-water management, hydrology and hydraulics, and earth movement

In regards to the adjoining lot owners' request for site drainage evaluation by a hydrologist, I have evaluated the site drainage patterns. In my professional opinion, the proposed improvements on lot 960 will result in the diversion of direct runoff onto lower lying parcels in Foxhall Crescents, thus improving the current conditions by collecting portions of the lot impervious surface by the infiltration facility and collecting the run-off from the roadway extension by the existing curb inlet located at the end of the existing travel way where it meets lot 960.

In regards to your inquiry about a geo-hydrology study, it is not necessary for the following reasons.

- Storm-water runoff from the parcel will be diverted to an adequate outfall point (storm sewer inlet or overland) away from the adjoining and the downstream houses.
- The proposed house on lot 960 will have a foundation drain system which will convey subsurface runoff to an adequate outfall
- Soil infiltration testing for the on-site water quality facility (infiltration trench) will be done by a geotechnical engineer of a soil scientist to determine the rate of subsoil infiltration for the design of the facility. Thus, in-situ soil properties will be determined.
- A geo-technical report was prepared and approved for the entire development at the time of original plan for the subdivision

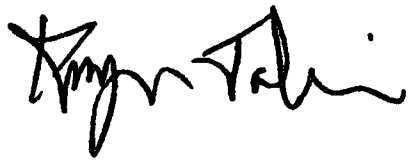
BOARD OF ZONING ADJUSTMENT
District of Columbia
CASE NO. 18708
EXHIBIT NO. 40

Board of Zoning Adjustment
District of Columbia
CASE NO 18708
EXHIBIT NO 40

- To the best of my knowledge, there is no evidence of subsurface drainage problems in Foxhall Crescents.

Therefore, in my professional opinion, and based on the above facts, a hydro-geological evaluation is unnecessary.

Respectfully,



Kayvan Jaboori, P.E

KJ & ASSOCIATES (703) 449-1600
CIVIL AND LAND DEVELOPMENT ENGINEERING FAX (703) 449-1601
10650 Main Street, Suite 302, Fairfax VA 22030-3814 e-mail kjanda@cox net
www kjandassociatesengineering.com

September 29, 2014

Mr. Amir Motlagh
201 Berry Street, SE
Vienna, VA 22180

Re: 4509 Foxhall Crescents

Sub. Hydrologic soil evaluation/Infiltration Trench Design

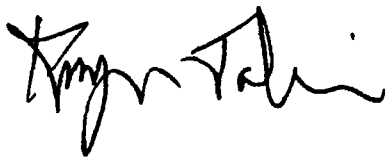
Dear Mr. Motlagh,

We have evaluated the soil infiltration study report on 4509 Foxhall Crescents conducted by Soil Tech Inc. dated September 19, 2014 for design of infiltration trench and subsurface soil drainage on the parcel The property has soil classified as hydrologic group B, which is considered non-problem soil with good drainage and suitable for infiltration trench design. The study indicates the underlying soil on the property is predominantly sandy silt loam with gravel and some clay mix. The report is also consistent with findings of the original geotechnical report for Foxhall Crescents Subdivision prepared by Professional Consulting Services in December 1993.

The infiltration test followed Johnson Permeameter Instruction Manual and the saturated connectivity value was correlated to an infiltration rate using the relationships from Hvorslev as identified in SOIL MECHANICS, 1969, John Wiley & Sons, New York. The actual field testing concludes an infiltration rate of 11.7 in/hr. A design rate of 5.85 in/hr. is recommended in the report. Accordingly, a trench 15 feet in length, 7 feet in width, and 3'-10" deep will provide the required storage volume for treating 1" of runoff from the impervious surface created by the house footprint and the patio. This design meets water quality requirements for the development in accordance with DDOE guidelines.

As the soil properties on 4509 Foxhall Crescents provide good subsurface drainage, there is no evidence that the proposed house construction will result in negative impact on the neighboring parcels. A foundation drain system is proposed as failsafe means. The system would only be activated in high-water situations, which does not exist, based on either reports. Further, with the proposed grading scheme, upland drainage and the runoff from 4509 Foxhall Crescents is directed to the existing storm inlet in the travel way. Therefore, in my professional opinion, the proposed house construction on Foxhall Crescents Lot 960 has no adverse impact on the neighboring lots.

Respectfully,



Kayvan Jaboori, P.E.

SOIL TECH INC.
14630-F FLINT LEE ROAD
CHANTILLY, VIRGINIA 20151
(703) 631-9647
(703) 631-2156 FAX

September 19, 2014

Ed Jacobsen
Jacobsen Builders, Inc.
40862 Robin Circle
Leesburg, VA 20175

Re: Infiltration Studies at 4509 Foxhall Crescent NW, Washington, DC

Dear Mr. Jacobsen,

An infiltration test was made in the vicinity of the proposed infiltrtin/exfiltration facility located at the referenced parcel. The tests were conducted in accordance with the *Geotechnical Requirements for Underground BMP's Appendix O* The infiltration test was conducted with a Precision Permeameter following the procedure in the Johnson Permeameter Instruction Manual, Johnson Permeameter, LLC, 2012 as identified in the September 17, 2013 Guidance NC Department of Health and Human Services publication The saturated conductivity value was correlated to an infiltration rate using the relationships from Hvorslev as identified in SOIL MECHANICS, 1969, John Wiley & Sons, New York

The following is a description of the soil materials encountered at the test location.

Boring B1 s.e. ≈327.5		**Manor loam**	**Soil Hydrologic Group B**
Horizon	Depth	Description	
Ap	0.0–0.8'	Light brownish gray (10YR 6/2) loam, very friable (loose sandy SILT. ML) moist, topsoil, 5 % quartz gravel. moist.	
Bt1	0.8-1.5'	Light brown (7.5 YR 6/4) heavy loam, friable, (loose sandy SILT, ML), 10% quartz gravel, moist.	
2Bt2	1.5-2.9'	Brownish yellow (10YR 6/6), heavy loam, friable, (stiff SILT some sand, ML), moist.	
2C1	*2 9-5 5'*	*Brownish yellow (10YR 6/6),white (10YR 8/1), light yellowish brown (10YR 6/4) channery loam, very friable (loose sandy SILT with gravel, SM-GM), moist*	
2C2	5.5-8.0'	Light yellowish brown (10YR6/4) channery loam, friable, 5% quartz gravel (medium dense sandy SILT with gravel, SM-GM) moist	

Infiltration Test Results

Saturated hydraulic conductivity (Ksat)	=	0.66 in./ hr.
Infiltration rate, 24 in. water column in a 3.25 in diameter boring	=	11.7 in./hr

Textural Analysis at Test Depth

Channery loam	Percent silt+ clay	= 27%

Summary

The soil consists of a thin gravelly capping grading to mostly friable (loose to medium dense) channery loam (sandy SILT with gravel, SM-GM). No ground water nor soil indicators of seasonal saturation were encountered. No bedrock was encountered There were no smells or visual indication of soil or groundwater contamination

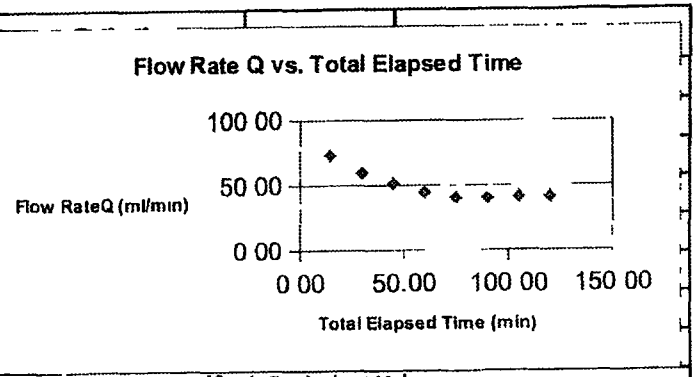
The design rate should be based on a value which is ½ the measured rate or < 6.0 in /hr

William F Sledjeski, VAPSS, CPSS

Constant-Head Borehole Permeameter Test

Analytical Method:

Project Name.....:	4509 Foxhall Crescent NW		Boring No.....:	B1	
Project No. ..... .:	14-12091		Investigators.....:	AV	
Project Location..:	Washington, DC		Date..... .....:	9/18/14	
Boring Depth.....:	8	ft.	WCU Base Ht. h.	15 0	cm
Boring Diameter..:	8.3	cm	WCU Susp. Ht. S:	2 4	cm
Boring Radius r...:	4 15	cm	Const. Wtr. Ht. H:	17.4	cm
Soil/Water Tmp. T:	22	°C	H/r**	4 2	
Dyn. Visc. @ T.....:	0.000955	kg/m·s	Dyn. Visc. @ T_s.:	0.001003	kg/m·s



VOLUME	Volume Out	TIME	Interval Elapsed Time		Flow Rate Q	Ksat Equivalent Values				
(ml)	(ml)	(h:mm:ss A/P)	(hr:min:sec)	(min)	(ml/min)	(µm/sec)	(cm/sec)	(cm/day)	(in/hr)	(ft/day)
2,020		10:25.00 AM								
920	1,100	10:40.00 AM	0:15:00	15 00	73 33	8.3	8.30E-04	71.7	1 18	2 35
2,050	-1,130	10 40.00 AM	0.00.00	0.00						
1,160	890	10:55.00 AM	0.15 00	15 00	59 33	6 7	6 71E-04	58 0	0 95	1 90
2,040	-880	10.55.00 AM	0:00.00	0 00						
1,270	770	11:10.00 AM	0.15:00	15 00	51 33	5 8	5 81E-04	50 2	0 82	1 65
2,050	-780	11:10.00 AM	0.00.00	0.00						
1,380	670	11:25.00 AM	0.15.00	15 00	44 67	5.1	5.05E-04	43 7	0 72	1 43
2,020	-640	11.25:00 AM	0.00.00	0.00						
1,410	610	11 40.00 AM	0.15 00	15 00	40 67	4.6	4 60E-04	39 8	0 65	1 30
2,010	-600	11 40.00 AM	0 00 00	0 00						
1,400	610	11:55:00 AM	0:15 00	15 00	40 67	4 6	4.60E-04	39.8	0.65	1 30
2,000	-600	11 55.00 AM	0:00 00	0 00						
1,380	620	12 10:00 PM	0:15 00	15 00	41 33	4.7	4.68E-04	40.4	0.66	1 33
760	620	12 25.00 PM	0:15.00	15 00	41 33	4.7	4 68E-04	40.4	0.66	1 33
Natural Moisture... ..:	moist	Consistency.....	friable		Enter Ksat Value:			40	0.66	1.33
USDA Txt.	channery loam,	Water Table Depth...:	> 8 ft							
Struct./% Pass. #200..		Init. Saturation Time								

Notes Test Ksat Value is determined by averaging and/or rounding the test results for the final three or four stabilized values and analyzing the Flow Rate Q vs Total Elapsed Time Graph

*Glover, R. E 1953 Flow from a test-hole located above groundwater level pp 69-71 in: Theory and Problems of Water Percolation (C N Zanger, ed) USBR. The condition for this solution exists when the distance from the bottom of the borehole to the water table or an impervious layer is at least twice the depth of the water in the well **H/r>5 to ≥10

SOIL TECH INC.
14630-F FLINT LEE ROAD
CHANTILLY, VIRGINIA 20151
(703) 631-9647
(703) 631-2156: FAX

October 14, 2014

Ed Jacobsen
Jacobsen Builders, Inc.
40862 Robin Circle
Leesburg, VA 20175

Re: 4509 Foxhall Crescent NW, Washington, DC

Dear Mr. Jacobsen,

A review of prior infiltration and geotechnical studies was made to evaluate the subsurface groundwater conditions at this parcel. The tract is located in the Piedmont Physiographic Province. This area is underlain by soils, which are the residual weathering products of the underlying metamorphic rocks. The depth to ground water is generally deep and does not impact residential construction. The soil type is identified as Manor (District of Columbia Soil Survey Report, USDA, July 1976) which is generally deep with good internal drainage.

Prior test borings indicated ground water below 18 feet from the existing surface. The present infiltration study indicated moderately rapid permeability and no ground water within 8 feet of the present surface.

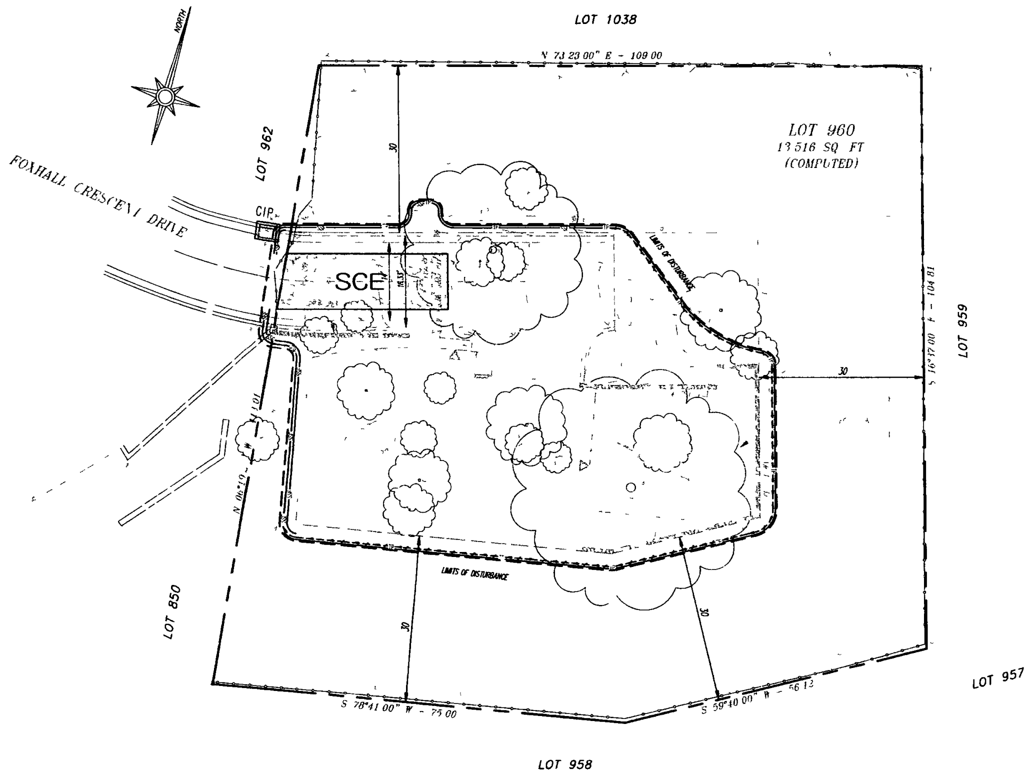
Surface water generated by site development can be diverted to infiltration trenches or diverted through proper site grading to storm water catch basins.

Regards,

William Sledjeski, VA PSS

Exhibit E

The Erosion and Sediment Control Plan



EROSION CONTROL NARRATIVE

THE CONSTRUCTION SHOWN HEREON PROPOSES THE CONSTRUCTION OF A HOUSE., RETAINING WALL AND ASSOCIATED FEATURES. THE EXISTING SITE CONDITION IS HEAVILY WOODED IT IS THE INTENT OF THIS PLAN TO LIMIT THE AMOUNT OF LAND DISTURBANCE. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS A FIRST ORDER OF CONSTRUCTION, IN ACCORDANCE WITH THE DETAIL AND LOCATION PROPOSED. EROSION AND SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AT ALL TIMES DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS REACHED. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT ONTO THE PAVED PUBLIC AND/OR PRIVATE ROADWAY BY CONSTRUCTION VEHICLES AND TO STABILIZE DISTURBED AREAS AS QUICKLY AS POSSIBLE. THE CONTROLS SHALL BE INSPECTED DAILY AND PARTICULARLY AFTER EACH RAINFALL EVENT ANY NECESSARY REPAIRERS OR CLEAMUP REQUIRED TO MAINTAIN EFFECTIVENESS OF THE CONTROLS SHALL BE MADE BY THE END OF EACH DAY STRAWBALE SHALL BE PLACED ALONG THE WIDTH OF CONSTRUCTION ENTRANCE AT THE END OF EACH DAY IF ADDITIONAL EROSION CONTROL DEVICES ARE DEEMED NECESSARY THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION. DISTURBED AREAS SHALL HAVE PERMANENT AND/OR TEMPORARY SOIL STABILIZATION APPLIED WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED. EROSION CONTROL SHALL BE REMOVED ONLY AT THE DIRECTION OF THE CITY INSPECTOR OR, AT LEAST WITHIN THIRTY (30) DAYS OF FINAL SITE STABILIZATION. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS REACHED THAT IS UNIFORMED AND MATURE ENOUGH TO SURVIVE AND THAT WILL INHIBIT EROSION. IF IT BECOMES NECESSARY SEEDED AREAS SHALL BE FERTILIZED AND RESEEDED TO ENSURE A GOOD STAND OF GROUND COVER. TRAPPED SEDIMENT RESULTING FROM THE DEPOSITION OF THE CONTROLS SHALL BE DISPOSED OF PROPERLY TO PREVENT FURTHER SEDIMENTATION

SEQUENCE OF CONSTRUCTION

1) CLEAR FOR AND INSTALL CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN (E&S).
2) INSTALL TREE PROTECTION AS SHOWN ON THE E&S PLAN.
3) INSTALL EARTH DIKE ALONG THE EASTERN & SOUTHERN LIMITS OF DISTURBANCE AS SHOWN ON THE E&S PLAN.
4) INSTALL SUPER SILT FENCE (2 ROWS ALONG THE LOWER CLEARING LIMITS ON LOT) AS SHOWN ON THE E&S PLANS.
5) CLEAR AND GRUB WITHIN THE LIMITS OF DISTURBANCE ONLY ALL DEBRIS TO BE TAKEN TO AN APPROVED DISPOSAL AREA.
6) LIMIT SOIL STOCKPILING ON-SITE TO EXTENT POSSIBLE.
7) BEGIN CONSTRUCTION ON HOUSE.
8) INSTALL WATER, SEWER, GAS AND CABLE CONNECTIONS AND EXTEND LINES TO FOUNDATIONS.
9) BACKFILL AND GRADE TO FINISHED ELEVATIONS AS SHOWN ON THE GRADING PLANS.
10)CONSTRUCT DRIVEWAY
11)SEED AND MULCH ALL DISTURBED AREAS.
12)AFTER STABILIZATION, REMOVE SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF THE CITY INSPECTOR.

GENERAL LAND CONSERVATION NOTES

1) NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED UPON SHALL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR.

2) ALL E&S CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FROST STEP IN GRADING.

3) ALL STORM AND SANITARY SEWER LINES NOT IN STREETS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER BACKFILL. NO MORE THAN 500 SHALL BE OPEN AT ANY ONE TIME.

4) ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MUL,CHED WITHIN 7 DAYS.

5) ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY (AS SOON AS POSSIBLE BUT NOT LATER THAN 48 HOURS) AFTER COMPLETION OF GRADING. STRAW OR HAY MULCH IS REQUIRED ALL SOIL STOCKPILES SHALL BE SLEEDED AND MULCHED WITHIN 7 DAYS AFTER GRADING.

6) DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAINTAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.

7) ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1 OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.

8) AT THE COMPETITION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED

EROSION AND SEDIMENT CONTROL
STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

1 The contractor shall conduct operations and maintain the project site as to minimize the creation and dispersion of dust. Dust control shall be used throughout the work at the site.

2 The contractor must provide clean water free from salt, oil and other deleterious material to be used for on-site dust control.

3 The contractor shall supply water spraying equipment capable of accessing all work areas.

4 The contractor shall implement strict control measures during active construction periods on-site. These control measures will generally consist of water applications that shall be applied a minimum of once per day during dry weather or more often as required to prevent dust emission.

5 For water application to undisturbed soil surfaces, the contractor shall:

A. Apply water with equipment consisting of tank, spray bar pump with discharge pressure gauge;
B. Arrange spray bar height, nozzle spacing and spray pattern to provide complete coverage of ground with water
C. Disperse water through nozzle on spray bar at 20 PSI (137 8 K Pa) minimum, Keep areas damp without creating nuisance conditions such as ponding.

6 For water application to soil surfaces during demolition and/or excavation, the contractor shall:

A. Apply water with equipment consisting of a tank, pump with discharge gauge, hoses and mist nozzle;
B. Locate tank and spraying equipment so that the entire excavation area can be misted without interfering with demolition and/or excavation equipment or operations. Keep areas damp without creating nuisance conditions such as ponding;
C. Apply water spray in a manner to prevent movement of spray beyond the site boundaries.

DISTURBED AREA	4 950 SQ. FT
CUT	560 CUBIC YARDS
FILL	10 CUBIC YARDS

NO	DESCRIPTION	APPROVED	DATE
	REVISION APPROVED BY DIVISION OF DESIGN REVIEW		

SURVEY: JARRETT SURVEYS INC
DESIGN: KJ
DRAWN: KJ
CHECKED: KJ

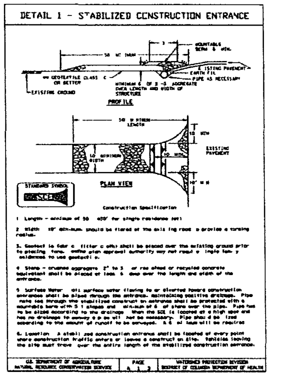
KJ & ASSOCIATES
CIVIL AND LAND DEVELOPMENT ENGINEERING

DATE: October 2014
SCALE: HORZ 1 =10 VERT N/A
SEAL

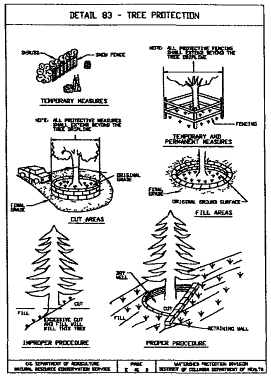
EROSION AND SEDIMENT CONTROL PLAN
PROJECT: 4509 FOXHALL CRESCENTS DRIVE, N W WASHINGTON, D C 20007
LOT 960 SQUARE 1397

JOB: 2013-005
CADD: D \Projects\Foxhall Crescents\dwg\E&S.dwg
SHEET: 4 OF 5

DETAIL 1 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 83 - TREE PROTECTION



43.0 STANDARD AND SPECIFICATIONS FOR TREE PROTECTION

Definition

Protection of desirable trees from mechanical and other injury while the land is being developed

Purpose

To employ the necessary protective measures to insure the survival of desirable trees for shade, beautification, and vegetative cover

Conditions Where Practice Applies

On areas now occupied by single specimen trees or groups of trees.

Criteria for deciding upon the trees to leave:

1. Aesthetic value: Consideration should be given to autumn foliage, flowering habits, bark and crown characteristics, and type of fruit.
2. Freedom from disease and rot.
3. Life span of trees: Some are considered short-lived trees
4. Wind firmness. Virginia pine has a very shallow root system and trees will blow over easily if they have been growing in a closed stand.
5. Wild life values. Oaks, hickories, and dogwoods, etc have a high wildlife food value
6. Comfort rule: Summer temperatures are generally ten degrees cooler under stands of hardwoods than pines or cedars
7. Sudden exposure: Some trees are sensitive to direct sunlight radiated heat from proposed buildings and pavement
8. Space needed: Give consideration to future growth and relationship to structures electric and telephone lines, water and sewer lines, and driveways. Mark trees with bright paint or ribbon so there is no doubt as to which trees are to be left and protected from damage during construction.

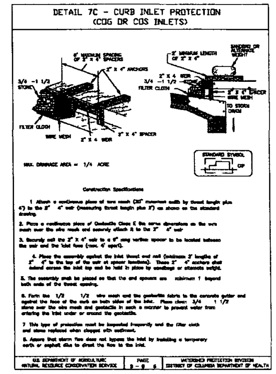
Criteria for protecting trees:

1. Trees within 25 of a building site and associated grading, parking and utility extensions shall be boxed in to prevent mechanical injury. The box should be as close to the drip line of the tree as possible
2. Boards will not be nailed to trees during building operations.
3. Heavy equipment operators will be cautioned to avoid damage to existing tree trunks and roots during land leveling operations. Tunnel under root system when installing utility lines, if possible
4. Tree trunks and exposed roots and limbs damaged during equipment operations will be cared for as prescribed by a forester or licensed tree expert
5. Wood chips when spread to a 4 depth can be used in wooded sites to help prevent soil compaction and damage to trees.
6. The use of heavy equipment on root systems of desirable trees must be avoided to prevent soil compaction. All construction should be kept out of the drip line of protected trees. Protective fencing shall be utilized for trees being retained and shall be located at the drip line
7. Broad leaf trees should receive a heavy application of complete fertilizer to aid their recovery from possible damage caused by construction operations. Fertilization should be done during winter and/or early spring following completion of construction. It should be applied at the following rate: 2 to 4 lbs. of 10-6-4 for each inch of trunk diameter measured at 4 1/2' above ground line. Fertilizer should be applied in holes 1 in diameter 18" deep. Spaced about 2' apart at the drip line of the tree.
8. During the first two summers following construction, it is desirable that the trees receive adequate amounts of water

References

1. Agricultural Information Bulletin 285 "Protecting Trees Against Damage from Construction Work, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
2. Guidelines for the Control of Erosion and Sediment in Urban Areas of the Northeast. USDA, Soil Conservation Service, Upper Darby Pa., 1970

DETAIL 7C - CURB INLET PROTECTION (COG OR COS INLETS)



C. Curb Inlet Protection (COC or COS Inlets)

1. Attach a continuous piece of 1/2 X 1/2" wire mesh (30 minimum width by throat length plus 4') to the 2" x 4 weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a continuous piece of approved Geotextile Class F of the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2 x 4 weir
3. Securely nail the 2 X 4 weir to a 9 long vertical spacer to be located between the weir and the inlet face (max. 4 apart)
4. Place the assembly against the inlet throat and nail (minimum 2 lengths of 2 x 4 to the top of the weir at spacer locations). These 2 x 4 anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are 1 beyond both ends of the throat opening.
6. Form the 1/2 x 1/2 wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 to 1 1/2 stone over the wire mesh and geotextile in such a manner as to prevent water from entering the inlet under or around the geotextile
7. This type of protection must be inspected frequently and the geotextile fabric and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet
9. If there are any signs of street flooding or water ponding, this structure must be cleaned or replaced or redesigned with a viable alternative

D. Median Inlet Protection (MIP)

1. Construct standard Slope Silt Fence having 5 post spacing 1 6 away from the existing inlet only on the sides of the inlet receiving sheet flow and in the location of the "wings"
2. In the location of concentrated flow construct a stone check dam using 4 7" stone for the base faced on the upstream side with 3/4 – 1 1/2 aggregate 1 thick. The stone check dam shall be 16 high with the weir 10 above the invert of the ditch or valley gutter and shall be the same width as the ditch or gutter bottom or 2' (min.). Where the end of the wings meet the ground shall be at or above the weir elevation

6.0 STANDARDS AND SPECIFICATIONS FOR SUPER SILT FENCE

Definition

A temporary barrier of Geotextile Class F over chain link fence used to intercept sediment laden sheet flow runoff from drainage areas.

Purpose

To reduce runoff velocity and allow the deposition of transported sediment to occur. Limits imposed by ultraviolet light stability of the fabric will dictate the maximum period that the silt fence may be used

1. Super silt fence provides a barrier that can collect and hold debris and soil, preventing the material from entering critical areas, streams, streets, etc
2. Super silt fence should be placed as close to the contour as possible. No section of silt fence should exceed a grade of 5 for a distance of more than 50 feet
3. Super silt fence shall not be used as velocity checks in ditches or swales or placed where it will intercept concentrated flow

Table Design Criteria

Length of the flow contributing to Super Silt Fence shall conform to the following limitations.

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 10%	0 10:1	Unlimited	Unlimited
>10 20%	>10:1 5:1	200 feet	1 500 feet
>20- 33%	5:1 3:1	100 feet	1 000 feet
>33 50%	>3:1 2:1	100 feet	500 feet
50% +	1	50 feet	250 feet

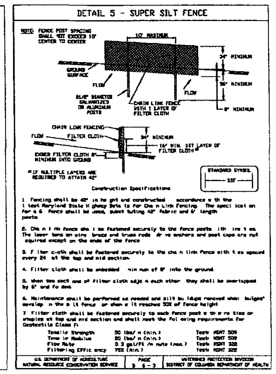
Where ends of the geotextile fabric come together the ends shall be overlapped folded, and stapled to prevent sediment bypass.

Construction Specifications

1. Fencing shall be 42 inches in height and constructed in accordance with the latest DDOT Details for Chain Link Fencing. The DDOT specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts. (Posts do not need to be set in concrete.)
2. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence
3. Filter Cloth shall be fastened securely to the chain link fence with ties spaced every 24 at the top and mid section
4. Filter cloth shall be embedded a minimum of 8 into the ground
5. When two sections of geotextile fabric adjoin each other they shall be overlapped by 6 and folded
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of the fence height
7. Filter cloth shall meet the following requirements for Geotextile Class F

Tension Strength	50 lb/in (min.)	Test: ASTM D-4595
Tensile Modulus	20 lb/in (min.)	Test: ASTM D-4595
Flow Rate	0.3 gal/ft /minute (max.)	Test: ASTM D-5141
Filtering Efficiency	75% (min.)	Test: ASTM D-5141

DETAIL 5 - SUPER SILT FENCE

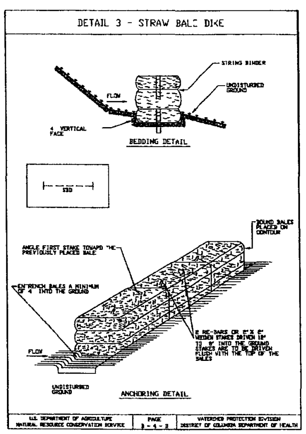


SUPER SILT FENCE

Design Criteria
NATURAL RESOURCE CONSERVATION SERVICE

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 10%	0 10:1	Unlimited	Unlimited
10 20%	10:1 5:1	200 feet	1 500 feet
20 – 33%	5:1 3:1	100 feet	1 000 feet
33 – 50%	3:1 2:1	100 feet	500 feet
50%	2:1	50 feet	250 feet

DETAIL 3 - STRAW BALE DIKE



STRAW BALE DIKE

Construction Specifications

1. Bales shall be placed at the toe of a slope on the contour and in a row with the ends of each bale tightly abutting the adjacent bales.
2. Each bale shall be entrenched in the soil a minimum of 4" and placed so the bindings are horizontal
3. Bales shall be securely anchored in place by either two 2" X 2" wooden stakes or re-bars driven through the bale 12" to 18" into the ground. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the top of the bale
4. Straw bale dikes shall be inspected frequently and after each rain event and maintenance performed as necessary
5. All bales shall be removed when the site has been stabilized. The trench where the bales were located shall be graded flush and stabilized.

DETAIL 10 - EARTH DIKE

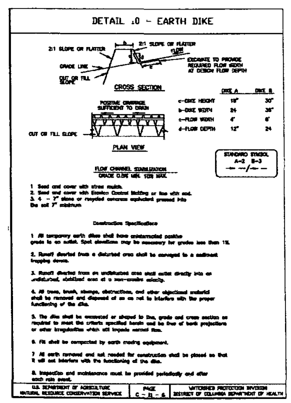


Table 5. Earth Dike Selection

Slope % **	Drainage Area (acres) 1	2	3	4	5	6	7	8	9	10
1	SEED	AND								
2	MULCH			SEED	AND	SOIL	STABILIZATION			
3				MATTING				6	6	6
4							6			
5					6	6				
6				6		4* – 7*		STONE	PRESSED	
7			6			7* (Min)		INTO	GROUND	
8										
9										
10		6								

"A" Dike — "B" Dike

*Velocity of discharge in feet/second
** For slopes steeper than 10%, refer to Standards and Specifications 16.0, 17.0, 18.0, and 19.0

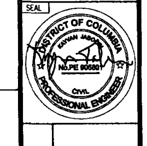
NO	DESCRIPTION	AB	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

SURVEY --
DESIGN KJ
DRAWN KJ
CHECKED KJ

KJ & ASSOCIATES
CIVIL AND LAND DEVELOPMENT ENGINEERING
10650 MAIN STREET SUITE 302 (703) 449-1600
FAIRFAX VA 22030-3814 FAX (703) 449-1601
e-mail: kjanda@cox.net
www.kjandassociatesengineering.com

DATE October 2014
SCALE HORZ N/A VERT N/A
SEAL



ERosion AND SEDIMENT CONTROL DETAILS

PROJECT
4509 FOXHALL CRESCENTS DRIVE, N W
WASHINGTON, D C 20007
LOT 960 SQUARE 1397

JOB 2013-005
CADD D:\Projects\Foxhall Crescents\dwg\E&S.dwg
SHEET 5 OF 5

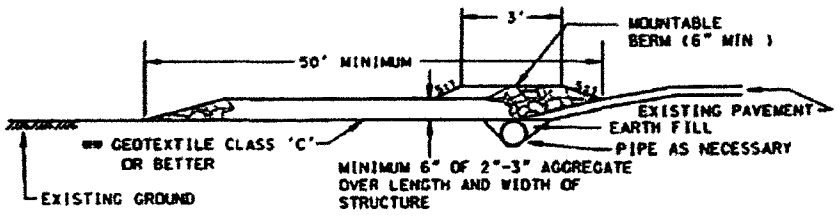
D:\Projects\Foxhall Crescents\dwg\E&S.dwg 10/14/2014 10:44:51 AM

© COPYRIGHT 2012 KJ & ASSOCIATES

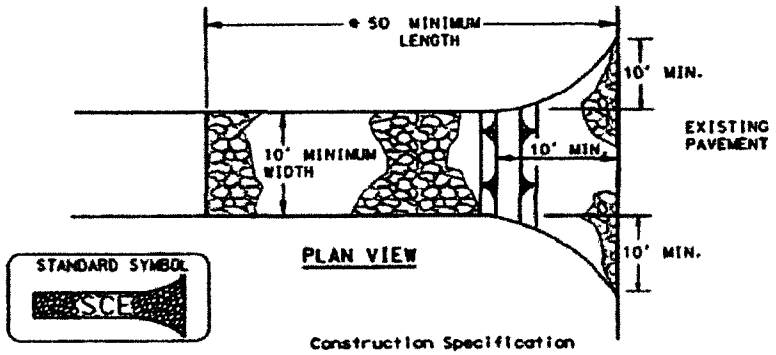
Exhibit F

The Erosion and Sediment Control Plan Details

DETAIL 1 - STABILIZED CONSTRUCTION ENTRANCE



PROFILE



PLAN VIEW

Construction Specification

1. Length - minimum of 50' (*30 for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4 Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance

5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed A 6" minimum will be required.

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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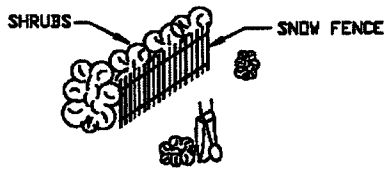
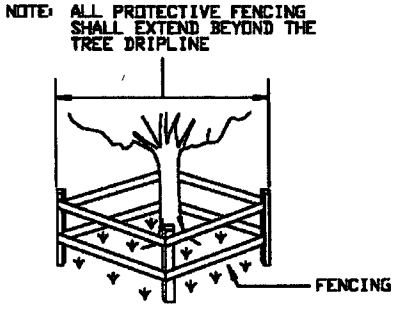
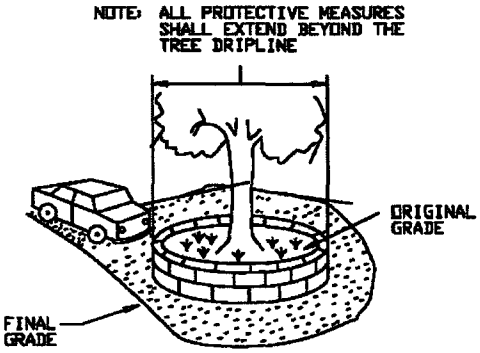
DETAIL 83 - TREE PROTECTION



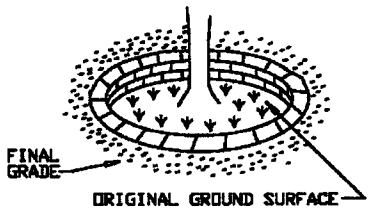
TEMPORARY MEASURES



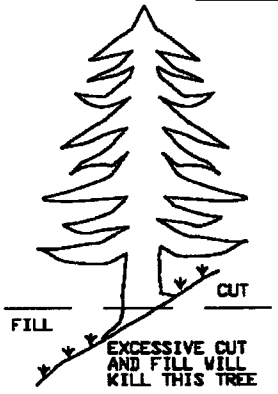
TEMPORARY AND PERMANENT MEASURES



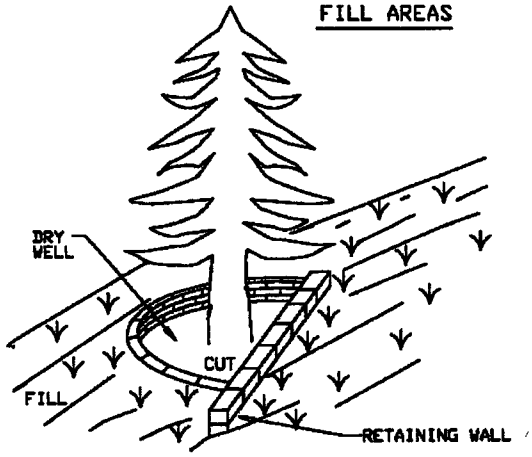
CUT AREAS



FILL AREAS



IMPROPER PROCEDURE



PROPER PROCEDURE

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE K - 46 - 3	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

43 0 STANDARD AND SPECIFICATIONS

FOR

TREE PROTECTION

Definition

Protection of desirable trees from mechanical and other injury while the land is being developed

Purpose

To employ the necessary protective measures to insure the survival of desirable trees for shade, beautification, and vegetative cover

Conditions Where Practice Applies

On areas now occupied by single specimen trees or groups of trees

Criteria for deciding upon the trees to leave

1 Aesthetic value Consideration should be given to autumn foliage, flowering habits, bark and crown characteristics and type of fruit

2 Freedom from disease and rot

3 Life span of trees Some are considered short-lived trees

4 Wind firmness Virginia pine has a very shallow root system, and trees will blow over easily if they have been growing in a closed stand

5 Wildlife values Oaks hickories and dogwoods, etc have a high wildlife food value

6 Comfort index Summer temperatures are generally ten degrees cooler under stands of hardwoods than pines or cedars

7 Sudden exposure Some trees are sensitive to direct sunlight radiated heat from proposed buildings and pavement

8 Space needed Give consideration to future growth and relationship to structures, electric and telephone lines, water and sewer lines, and driveways Mark trees

with bright paint or ribbon so there is no doubt as to which trees are to be left and protected from damage during construction

Criteria for protecting trees

1 Trees within 25' of a building site and associated grading, parking and utility extensions shall be boxed in to prevent mechanical injury The box should be as close to the drip line of the tree as possible

2 Boards will not be nailed to trees during building operations

3 Heavy equipment operators will be cautioned to avoid damage to existing tree trunks and roots during land leveling operations Tunnel under root system when installing utility lines if possible

4 Tree trunks and exposed roots and limbs damaged during equipment operations will be cared for as prescribed by a forester or licensed tree expert

5 Wood chips when spread to a 4" depth can be used in wooded sites to help prevent soil compaction and damage to trees

6 The use of heavy equipment on root systems of desirable trees must be avoided to prevent soil compaction All construction should be kept out of the drip line of protected trees Protective fencing shall be utilized for trees being retained and shall be located at the drip line

7 Broad leaf trees should receive a heavy application of complete fertilizer to aid their recovery from possible damage caused by construction operations Fertilization should be done during winter and/or early spring following completion of construction It should be applied at the following rate 2 to 4 lbs of 10-6-4 for each inch of trunk diameter measured at 4 1/2' above ground line Fertilizer should be applied in holes 1" in diameter 18" deep Spaced about 2' apart at the drip line of the tree

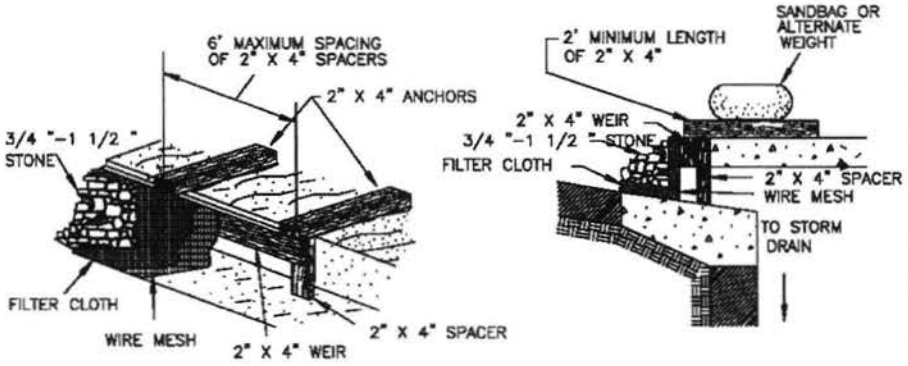
8 During the first two summers following construction it is desirable that the trees receive adequate amounts of water

References

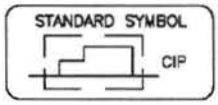
1 Agricultural Information Bulletin 285 "Protecting Trees Against Damage from Construction Work," Superintendent of Documents, U S Government Printing Office, Washington D C 20402

2 Guidelines for the Control of Erosion and Sediment in Urban Areas of the Northeast, USDA Soil Conservation Service Upper Darby Pa 1970

DETAIL 7C - CURB INLET PROTECTION
(COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE



Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

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C Curb Inlet Protection (COG or COS Inlets)

1 Attach a continuous piece of 1/2" X 1/2" wire mesh (30" minimum width by throat length, plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing

2 Place a continuous piece of approved Geotextile Class E of the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir

3 Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max 4' apart)

4 Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations) These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight

5 The assembly shall be placed so that the end spacers are 1' beyond both ends of the throat opening

6 Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet Place clean 3/4" to 1 1/2" stone over the wire mesh and geotextile in such a manner as to prevent water from entering the inlet under or around the geotextile

7 This type of protection must be inspected frequently and the geotextile fabric and stone replaced when clogged with sediment

8 Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet

9 If there are any signs of street flooding or water ponding, this structure must be cleaned or replaced or redesigned with a viable alternative

D Median Inlet Protection (MIP)

1 Construct standard Slope Silt Fence having 5' post spacing 1' - 6" away from the existing inlet only on the sides of the inlet receiving sheet flow and in the location of the "wings"

2 In the location of concentrated flow, construct a stone check dam using 4" - 7" stone for the base faced on the upstream side with 3/4" – 1-1/2" aggregate, 1' thick The stone check dam shall be 16" high with the weir 10" above the invert of the ditch or valley gutter and shall be the same width as the ditch or gutter bottom or 2' (min) Where the end of the "wings" meet the ground shall be at or above the weir elevation

SUPER SILT FENCE

Design Criteria
NATURAL RESOURCE CONSERVATION SERVICE

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

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6 0 STANDARDS AND SPECIFICATIONS

FOR

SUPER SILT FENCE

Definition

A temporary barrier of Geotextile Class F over chain link fence used to intercept sediment laden sheet flow runoff from drainage areas

Purpose

To reduce runoff velocity and allow the deposition of transported sediment to occur Limits imposed by ultraviolet light stability of the fabric will dictate the maximum period that the silt fence may be used

1 Super silt fence provides a barrier that can collect and hold debris and soil preventing the material from entering critical areas, streams streets etc

2 Super silt fence should be placed as close to the contour as possible No section of silt fence should exceed a grade of 5% for a distance of more than 50 feet

3 Super silt fence shall not be used as velocity checks in ditches or swales or placed where it will intercept concentrated flow

Table 3 Design Criteria

Length of the flow contributing to Super Silt Fence shall conform to the following limitations

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10 1	Unlimited	Unlimited
>10 - 20%	>10 1- 5 1	200 feet	1,500 feet
>20- 33%	>5 1- 3 1	100 feet	1,000 feet
>33 - 50%	>3 1 - 2 1	100 feet	500 feet
>50% +	>2 1 +	50 feet	250 feet

Where ends of the geotextile fabric come together, the ends shall be overlapped folded, and stapled to prevent sediment bypass

Construction Specifications

1 Fencing shall be 42 inches in height and constructed in accordance with the latest DDOT Details for Chain Link Fencing The DDOT specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts (Posts do not need to be set in concrete)

2 Chain link fence shall be fastened securely to the fence posts with wire ties or staples The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence

3 Filter Cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section

4 Filter cloth shall be embedded a minimum of 8" into the ground

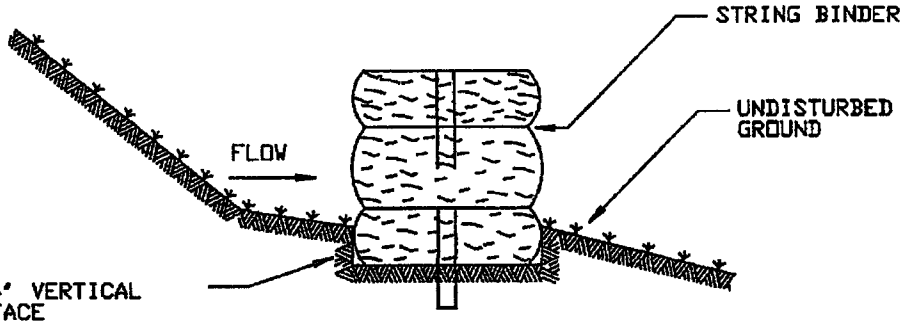
5 When two sections of geotextile fabric adjoin each other they shall be overlapped by 6" and folded

6 Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 30% of the fence height

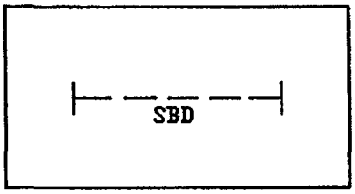
7 Filter cloth shall meet the following requirements for Geotextile Class A

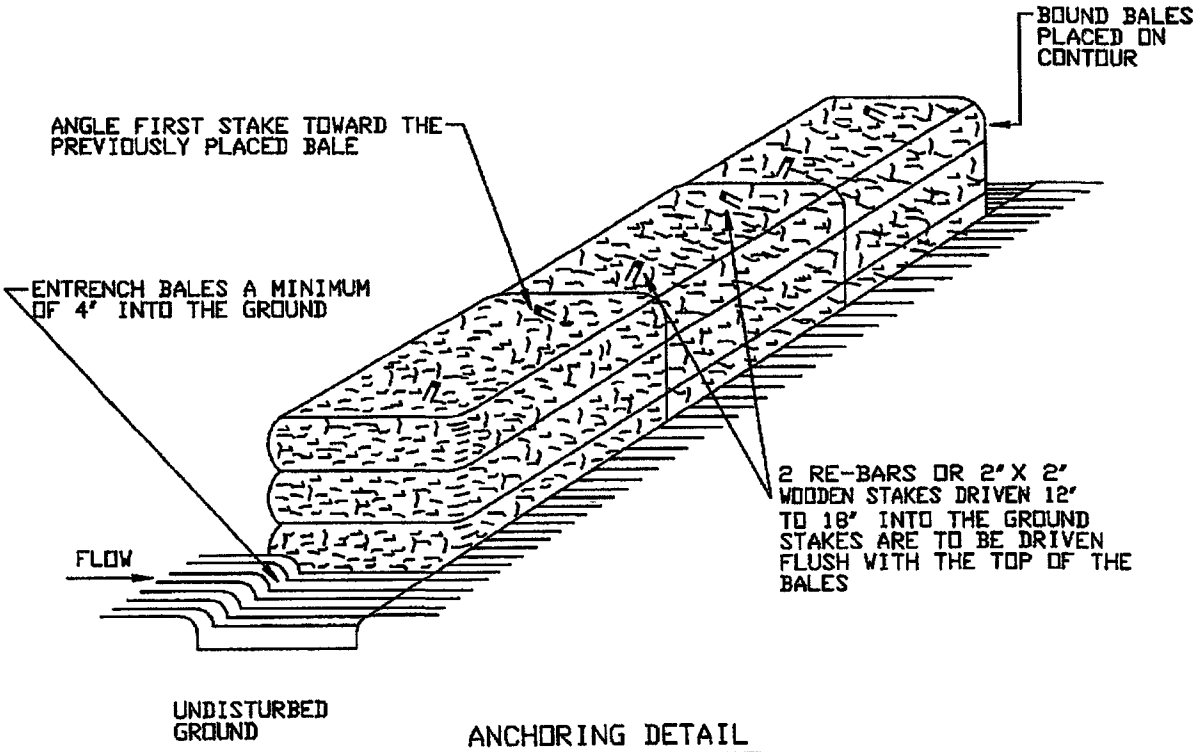
Tension Strength	50 lb/in (min)	Test ASTM D-4595
Tensile Modulus	20 lb/in (min)	Test ASTM D-4595
Flow Rate	0 3 gal/ft^2/minute (max)	Test ASTM D-5141
Filtering Efficiency	75% (min)	Test ASTM D-5141

DETAIL 3 - STRAW BALE DIKE



BEDDING DETAIL

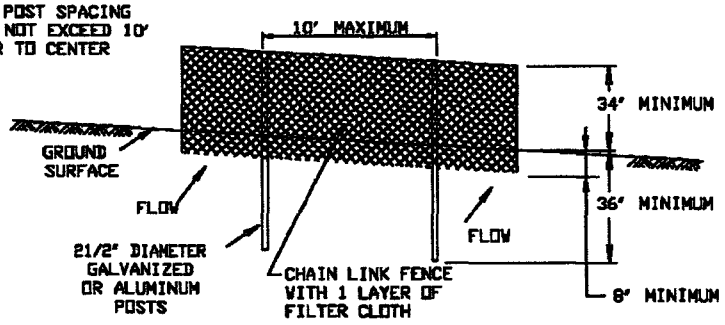


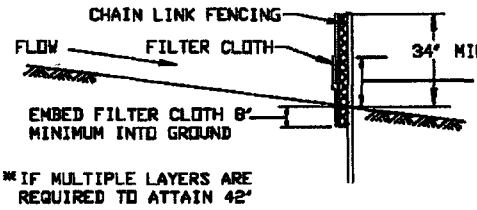


ANCHORING DETAIL

DETAIL 5 - SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER





*IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42'

STANDARD SYMBOL

SSF

Construction Specifications

1 Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts

2. Chain link fence shall be fastened securely to the fence posts with wire ties The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24' at the top and mid section.

4 Filter cloth shall be embedded a minimum of 8' into the ground

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded.

6. Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height

7 Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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STRAW BALE DIKE

Construction Specifications

1. Bales shall be placed at the toe of a slope, on the contour, and in a row with the ends of each bale tightly abutting the adjacent bales.

2. Each bale shall be entrenched in the soil a minimum of 4" and placed so the bindings are horizontal.

3. Bales shall be securely anchored in place by either two 2" X 2" wooden stakes or re-bars driven through the bale 12" to 18" into the ground. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the top of the bale.

4. Straw bale dikes shall be inspected frequently and after each rain event and maintenance performed as necessary.

5. All bales shall be removed when the site has been stabilized. The trench where the bales were located shall be graded flush and stabilized.

Table 5 Earth Dike Selection

	Drainage Area (acres)									
Slope % **	1	2	3	4	5	6	7	8	9	10
1	SEED	AND	4							
2	MULCH	4		SEED	AND	SOIL	STABILIZATION			
3				MATTING				6	6	6
4	4*						6			
5					6	6				
6				6		4" – 7"		STONE	PRESSED	
7			6			7" (Min)		INTO	GROUND	
8										
9										
10		6								

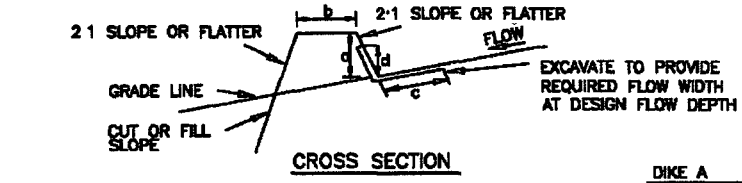
"A" Dike

"B" Dike

*Velocity of discharge in feet/second

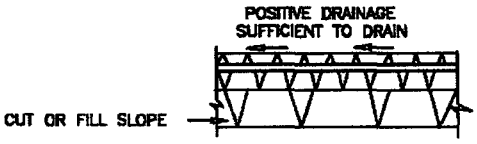
** For slopes steeper than 10%, refer to Standards and Specifications 16.0, 17.0, 18.0, and 19.0

DETAIL 10 - EARTH DIKE



CROSS SECTION

	DIKE A	DIKE B
a–DIKE HEIGHT	18"	30"
b–DIKE WIDTH	24"	36"
c–FLOW WIDTH	4'	6'
d–FLOW DEPTH	12"	24"



PLAN VIEW

STANDARD SYMBOL
A–2 B–3

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN 10% MAX.

1. Seed and cover with straw mulch
2. Seed and cover with Erosion Control Matting or line with sod
3. 4" – 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike

8. Inspection and maintenance must be provided periodically and after each rain event.

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Exhibit G

Resume of Proposed Expert Witness, Kayvan Jaboori, P.E.

Kayvan Jaboori, P.E.

6861 Malton Court, Centreville, VA 20121-2559
Home (703) 818-1830 - kjanda@cox net
Office (703) 449-1600 – Fax (703) 449-1601 – www kjandassociatesengineering com

Profile

A detail-oriented professional civil engineer, licensed in Virginia, Maryland, and District of Columbia, with strong business development, educational, and managerial background in civil, land development and geo-technical engineering fields, supported by field research and professional work experience

Accomplishments

Business Owner - Founder and principal manager of KJ & Associates, a consulting engineering company in Fairfax County, Virginia
Project Management - Supervise project production efforts to ensure projects are completed to company standards, on time and within budget constraints, exceeding design and client expectations
Problem Resolution - Collaborate with design team to resolve engineering design issues
Supervision – Supervise, mentor, and direct engineering staff to ensure timely project delivery
Client Interface - Meet with clients to help achieve their goals and needs in the design of projects
Design - Developed detailed construction document drawings in adherence with customer requests for commercial, industrial, and residential projects in the land development arena utilizing AutoCAD/Civil 3D and other engineering software
Program Manager - City of Alexandria, Virginia Peer Review Program
Course Instructor – Engineers and Surveyors Institute's Basic Education Program
Designated Plan Examiner (DPE) – For expedited plan review process in counties of Fairfax and Loudoun, Virginia

Professional Experience

1996 to Current - KJ & Associates (Founder/Principal)
Founded and defined business strategy plan for the company Building strategic alliances with clients resulting in positive and long term relationships, generate new business through effective marketing and teamwork

1983 to 1996 Employed by various engineering consulting firms in Northern Virginia as staff engineer, design engineer, senior engineer/team leader, and project manager

Skills

- Self-starter
- Business operations organization
- Project management
- Effective leadership and excellent communicator
- Strong client relations
- Problem solver
- Quality control/Quality assurance
- Extensive engineering design experience
- Hydrology/Hydraulics expertise
- AutoCAD Civil 3D software
- Microsoft Office suite

Education

Old Dominion University, Norfolk, Virginia – Bachelor of Science in Engineering Technology (1982)

Affiliations

Board of Directors Member, Engineers and Surveyors Institute

References Available