City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-08

DATE: APRIL 28, 2008

TO: HOMEOWNERS, CONTRACTORS, DEVELOPERS AND DESIGN PROFESSIONALS

FROM: EMILY A. BAKER, P.E., CITY ENGINEER EAB
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: GRADING PLAN REQUIREMENTS AND WAIVER PROVISIONS

The Department of Transportation & Environmental Services (T&ES) has the responsibility for ensuring that storm water and groundwater runoff on private properties does not create a nuisance on adjacent properties or within the public right-of-way. In addition, the T&ES department also ensures compliance with the City and State requirements for erosion and sediment control and Chesapeake Bay water quality requirements. In order to ensure compliance in these areas, T&ES requires that a grading plan be submitted for review and approval prior to the issuing of certain building permits.

On February 12, 2008, the Alexandria City Council approved amendments to Sections 8-1-22(d) and 8-1-30(e) of the City Code relating to grading plans. These amendments spell out the types of construction for which a grading plan is required and associated penalties for noncompliance. Any external site alterations necessitating a building permit are subject to the requirements of these sections. The complete text of City Code Sections 8-1-22(d) and 8-1-30(e), as amended, are attached (Attachment 1).

In summary, City Code Section 8-1-22(d) requires that a grading plan be submitted to and approved by T&ES prior to the issuance of building permits for improvements involving:

(1) the construction of a new home;
(2) construction of an addition to an existing home where either
    (A) the addition exceeds the area of the existing building footprint by 100% or more; or
    (B) the construction of the addition results in less than 50% of the existing first floor exterior walls, in their entirety, remaining;

(3) changes to the existing grade elevation of 1 foot or greater;
(4) changes to existing drainage patterns; or
(5) land disturbance of 2,500 square feet or greater.

The grading plan must be prepared by a professional engineer or land surveyor licensed by the Commonwealth of Virginia. If the land disturbance is greater than 2,500 square feet, the grading plan will be subject to the requirements of Article XIII of the Alexandria Zoning Ordinance regarding stormwater quality. The requirements for this grading plan are outlined in the attached checklist (Attachment 2). The checklist is also available on the City's website at http://www.alexandriava.gov/uploadedFiles/tes/info/gradingPlanChecklist.pdf

A review fee of $500 must be submitted with the Grading Plan.

WAIVERS

The Director of Transportation & Environmental Services may waive the requirement for a grading plan if the proposed improvements meet the above requirements of (2), (3) or (4) only. Waivers will be granted only where the applicant has demonstrated that the proposed construction will not create a nuisance to adjacent or downstream properties either public or private and that any existing drainage problems on adjacent or downstream properties either public or private will not be exacerbated by proposed construction. **No waiver will be granted for the construction of a new home or where land disturbance will be 2,500 square feet or greater.**

Determination of Disturbed Area: The disturbed land area shall be computed by adding a minimum 10-foot wide work area to the perimeter of the footprint of the proposed improvements and calculating the area within the increased perimeter. In addition, a minimum 10-foot wide access path from the edge of the disturbed area to the street or paved driveway must be included in the disturbed area calculation. It is the responsibility of the applicant to determine if a 10 foot width is sufficient for the building offset and access path to allow for the construction to reasonably take place. In the case where a 10-foot wide perimeter or access path is not sufficient, it is the responsibility of the applicant to delineate limits of disturbance sufficient for the execution of the work. In addition, for any underground pipe or conduit installed beyond the above described work area, a minimum five-foot width along the length of the excavation must be included in the disturbed area. Dumpsters, soil stockpiles and material storage areas must all be included within the limits of land disturbance as well.

Waiver Requests: In order to be considered, waiver requests must be submitted in writing and must contain the following minimum information:

- Proposed grading shown with 2' contours on the subject property and on adjacent parcels for sufficient distance to indicate the relationship of the site to off-site terrain. The scale shall be 1"=30' minimum.

- Buildings and structures, including optional decks and other projections such as canopies, roof overhangs drawn to scale, showing outside dimensions, including height and first floor elevations.
- Property lines
- Easements and significant site features (e.g. Streams, retaining walls, etc.)

(The above information must be provided by a licensed land surveyor)

- The dimensions of the proposed improvements must be shown, drawn to scale.
- The complete disturbed land area, drawn to scale (see Determination of Disturbed Area above).
- The location of all roof drain, sump pump and other concentrated flow discharges must be shown.
- The existing surface drainage patterns must be indicated by the use of dashed flow arrows (arrows indicating the direction of surface flow).
- The proposed drainage patterns must be indicated by the use of solid flow arrows.
- A letter requesting the waiver must be addressed to the Director of Transportation & Environmental Services. The letter must outline the scope of work to be performed and the reason(s) that a waiver of the grading plan requirement is being requested. The following certifications must be included in the letter and must be signed by the property owner or a licensed land surveyor, professional engineer or architect on behalf of the property owner:
    - **Drainage Certification:**
      I hereby certify that the existing and proposed drainage patterns associated with this project are as depicted herein, that construction of this project will not create a nuisance to adjacent or downstream properties either public or private and that any existing drainage problems on adjacent or downstream properties either public or private will not be exacerbated by construction of this project. I acknowledge that should this project result in the creation of any nuisance, or exacerbation of any existing drainage problem, the City will issue a stop work order and work on this project will not be allowed to resume until a Grading Plan has been submitted to and approved by the City of Alexandria, Department of Transportation and Environmental Services.

    - **Disturbed Area Certification:**
      I hereby certify that the limits of disturbance associated with this project represent a total land disturbance of less than 2,500 square feet. I further certify that no construction work, material storage, dumpster placement, construction access or disturbance of any other kind will take place beyond the limits of disturbance as depicted. I acknowledge that should this project result in land disturbance equal to or greater than 2,500 square feet, the City will issue a stop work order and work on the project will not be allowed to resume until a Grading Plan has been submitted to and approved by the City of Alexandria, Department of Environmental Services.

- Provide 2 copies of the waiver request letter and plan.
- No reduced, enlarged or faxed copies will be accepted.
- The waiver request must be submitted to the Site Plan Coordinator in Room 4130, City Hall, 301 King Street, Alexandria VA 22314.

The waiver request will be evaluated and the applicant will be notified in writing. If the waiver is granted, the building permit will be processed for review. If the waiver is not granted, a complete grading plan must be submitted and approved prior to the issuance of the building permit.

EXCEPTIONS

If the proposed construction meets the requirement of 8-1-22 (d)(4) **only** (changes to existing drainage patterns) and DOES NOT meet (1), (2), (3) **or** (5) above, the Grading Plan requirement may be waived if the following information is provided:

- A copy of the house location plat with the following information sketched on it:
  - The footprint area of the proposed improvements must be drawn to scale.
  - The dimensions of the proposed improvements must be shown.
  - The existing surface drainage patterns must be indicated by the use of dashed flow arrows (arrows indicating the direction of surface flow).
  - The location of all roof drain, sump pump and other concentrated flow discharges must be shown.
  - The proposed drainage patterns must be indicated by the use of solid flow arrows.
  - The complete disturbed land area, drawn to scale (see Determination of Disturbed Area above).
  - A **Drainage Certification** and **Disturbed Area Certification** (see above) must be provided and signed by the property owner.

The waiver request will be evaluated and the applicant will be notified in writing. If the waiver is granted, the building permit will be processed for review. If the waiver is not granted, a complete grading plan must be submitted and approved prior to the issuance of the building permit.

PENALTIES

If at any time after a waiver is approved, staff determines that either the construction of the improvements has created a drainage nuisance to adjacent properties, that the actual disturbed area is greater than 2500 square feet, or that information presented was otherwise misrepresented, a Stop Work order will be issued pursuant to City Code Section 8-1-30 and will remain in effect until such time as a Grading Plan is submitted and approved.

If at any time after construction has been completed, drainage from the site is determined to

create a nuisance to adjacent properties, other penalties outlined in City Code Section 8-1-3- may be applied, including fines, notwithstanding the City's approval of a waiver or complete grading plan.

If you have any questions about the above requirements, please contact the T&ES Site Plan Coordinator at 703-838-4318.

Attachment 1

Sec. 8-1-22 Method of storm and subsoil water disposal.

(a) Buildings shall have drainage provision for conveying storm water from roofs, paved areas and areaway drains, Subsoil water, condensate, cooling water, etc., on the premise to a public storm sewer: except that where a public storm sewer is not available, an approved method of disposal shall be provided to the satisfaction of the director of transportation and environmental services.

(b) Availability.

(1) For a one-and two-family dwelling, a public storm sewer shall be deemed available when such sewer is within 100 feet of the premises on which the dwelling is located, measured along a street, and a connection may be made lawfully thereto.

(2) For any other buildings, a public storm sewer shall be deemed available when such sewer is within 500 feet of the premises on which the building is located, measured along a street, and a connection may be made lawfully thereto.

(c) Area drains are prohibited from entering septic tanks or public or private sewer systems unless specifically approved in writing by the director of transportation and environmental services.

(d) Prior to the issuance of any building permit for any proposed improvement to real property involving (1) the construction of a new home (2) construction of an addition to an existing home where either (A) the addition exceeds the area of the existing building footprint by 100% or more; or (B) the construction of the addition results in less than 50% of the existing first floor exterior walls, in their entirety, remaining; (3) changes to the existing grade elevation of 1 foot or greater; (4) changes to existing drainage patterns; or (5) land disturbance of 2,500 square feet or greater, a grading and drainage plan prepared by a professional engineer or land surveyor licensed by the Commonwealth of Virginia shall be submitted for review and approval by the director of transportation and environmental services or deputy director/city engineer. Such plan shall demonstrate that post-development drainage will have no greater impact on adjacent or down-stream property than pre-development conditions. The requirements for such plans, including without limitation form, content, methods of calculation, and procedures for review and approval, shall be established by regulations promulgated by the director of transportation and environmental services. A plan review fee in the amount of $500 shall accompany such plan, except that in instances where the proposed improvement is already subject to the erosion and sediment control requirements set forth in section 5-4-1, et seq. of this Code, and a fee has already been paid pursuant to those requirements, no additional fee shall be required. No building permit for improvements subject to this subsection shall be issued until after the grading and drainage plan has been approved. When a grading and drainage plan is required pursuant to subsections (d)(2), (3) or (4) hereof, the requirement may be waived by the director of transportation and environmental services or his designee when such a waiver is requested by the property owner and such request is accompanied by sufficient information to demonstrate to the satisfaction of the director or deputy director/city engineer, in his or her reasonable engineering discretion, that no adverse drainage impacts to abutting or adjacent property will occur as a result of the proposed construction. The director shall promulgate rules and regulations for the application, consideration, grant or denial of such waiver requests, including without limitation rules and regulations specifying the minimum information required for applications, and reasonable criteria and standards for the consideration of such requests. The decision on such requests shall be in writing, and shall state the grounds thereof. The decision to grant or deny a waiver request is committee to the discretion of the director or deputy director/city engineer, and shall not be subject to judicial review. (Ord. No. 4517, 2/12/08, Sec. 1)

Editorial Note: It should be noted that § 3 of Ord. No. 4517 provides, "That this ordinance shall become effective on the date and at the time of final passage provided, however, that the provisions of this ordinance shall not apply to any complete building permit application pending before any City board, tribunal, department, agency, or bureau on the effective date."

Sec. 8-1-30 Violations and penalties.

(a) With the exception of violations of section 8-1-22, a violation of any section or provision of this article shall be a misdemeanor, and any person found guilty of any such violation shall, upon conviction, be punished by a fine of not more than $500. Each day a violation of any section or provision of this article continues shall be deemed a separate violation. Notwithstanding the foregoing, if the violation of a section or provision of this article is also a violation of a section or provision of article A of this chapter, then section 8-1-6 shall apply to the violation in lieu of this section.

(b) A violation of any section or provision of this article may, in addition to and notwithstanding the penalty provided for in subsection (a) (c) or (d), be restrained, prohibited or enjoined by appropriate proceedings in a court of competent jurisdiction.

(c) Notwithstanding the provisions of subsection (a) and (b), any action or omission constituting a violation of a section or provision of this article which also constitutes a violation of a section or provision of article A shall only be subject to the penalties in section 8-1-6.

(d) Any violation of section 8-1-22 of this article shall be a civil violation that shall be enforced through the levying of a civil penalty, pursuant to section 1-1-11 of this code, of $100 for a person's first violation and of $150 for each subsequent violation of the same section or provision. Each day during which a violation exists shall constitute a separate violation. However, a series of violations arising from the same operative set of facts shall not give rise to the levying of a civil penalty more frequently than once in any 10-day period, and shall not result in civil penalties exceeding a total of $3,000.

(e) In addition to the foregoing penalties, in the event that any person obtains a building permit based on representations that exempt the proposed construction from the grading and drainage plan requirements of section 8-1-22(d), and those representations prove to be incorrect, the director of transportation and environmental services or his designee may issue a written order stopping all work at the site until such time as a grading and drainage plan has been submitted for review and approved pursuant to section 8-1-22(d). (Ord. No. 3849, 3/23/96, Sec. 4; Ord. No. 4433, 12/17/05, Sec. 1; Ord. No. 4517, 2/12/08, Sec. 2)

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Attachment 2

GRADING PLAN CHECK LIST SUBMISSION REQUIREMENTS:

Per City of Alexandria Code Section 8-1-22 (d)

Note: The following sheets and information are required for every submission. Additional sheets and information should be provided where necessary to demonstrate compliance with City requirements or conditions of approval. Provide 11 copies of the plan and $500 fee at first submission.

The Check List shall be completed and submitted with first submission of the plans. Failure to comply may result in the plan being deemed incomplete and unacceptable for review.

Property Address: _____

Owner/Applicant: _____

Owner/Applicant Contact Phone # and Email: _____

Engineer: _____

Engineer Phone # and Email: _____

REQUIREMENTS FOR EACH SHEET

____ Print size shall be 24" x 36" and all sheets shall be the same size
____ Scale no less than 30' to 1" with scale identified on each sheet
____ City grading plan approval signature block in same place (lower right corner) on each sheet
____ Date, scale and north arrow with reference to source of meridian
____ Name, address, signature and registration number of professional preparing the plan on each sheet (original signature required for mylar submission)
____ Date the plan was prepared on each sheet/ Date of latest revision
____ Name, address and phone number of the developer/builder and/or the owner(s) of record
____ Location map with the site shown in relation to the nearest intersection of two or more streets
____ Table of standard symbols per common engineering practice and abbreviations utilized in the plan set.

ADDITIONAL REQUIREMENTS

____ A narrative description of the proposed development
____ Index to plan sheets
____ Total area included in the site plan, total area of tax parcel, total existing and proposed impervious area on the tax parcel, and total area that will be disturbed during construction (all expressed in square feet and acres). The disturbed area will be calculated as described in Memorandum to the Industry on Grading Plan Requirements and Waiver Provisions
____ If applicable, a list of all special use permits, variances, certificate of appropriateness, special exception, waivers, etc., **approved** for the Grading Plan (i.e. Curb cut approval)

____ Copy of Curb cut approval (if proposed) shown on plan
____ City Standard Notes to include: *(amend as applicable- available from Site Plan Coordinator)*

- Existing Conditions Survey Notes
- City Standard General Notes
- Environmental Site Assessment Statement
- Stormwater Management Notes
- Utility Works Notes
- Sequence of Construction Notes
- Demolition Notes
- Construction Notes
- Archaeology Notes
- Rodent Abatement Note
- Site Specific Notes

GRADING PLAN

Show location, dimensions, size, height and elevation of the following along with the existing features to be retained:

____ Sidewalks, streets, alleys with widths labeled, and elevations
____ Building restriction lines, vision clearances (on corner lots)
____ Property lines; show course and distance of each site boundary line
____ Dimensions of front, side and rear yards
____ Buildings and structures, including optional decks and other projections such as canopies, roof overhangs
____ Stoops, steps and staircases
____ Locations of building entrances and exits
____ Sump pump and roof drain outfalls *[Note: Flow from downspouts, foundation drains, and sump pumps shall be discharged as per the requirements of Memorandum to Industry on Downspouts, Foundation Drains, and Sump Pumps, Dated June 18, 2004 available on the City web site.]*
____ Existing and proposed storm and sanitary sewer systems, including lateral lines in plan and profile.
____ Existing and proposed gas mains and service lines in plan view
____ Light poles and fixtures on-site and on adjoining rights-of-way
____ Driveways, entrances, exits, parking areas; show parking spaces by type (standard, compact and handicap) and indicate the number in each bay and the total count
____ Sidewalks, bike and walking trails on site and on abutting streets or public property/easements
____ If applicable, recreation areas, swimming pools, etc.
____ Watercourses, bodies of water, wetlands and limits of flood plains
____ Depict any Resource Protection Areas as defined in Article XIII of the Zoning Ordinance and delineate their appropriate buffer width

____ To any wetland or RPA add a note stating that "RPA buffer shall be vegetated with native riparian species and remain undisturbed. RPA is limited to water dependent facilities or redevelopment."
____ Significant geological features
____ Proposed grading shown with 2' contours on the subject property and on adjacent parcels for sufficient distance to indicate the relationship of the site to off-site terrain. The Director of Transportation and Environmental Services (T&ES), at his discretion, may ask to show the contours at a lesser interval than 2', if required, to understand the pattern of micro drainage from the site and/or the adjacent properties.
____ Two benchmarks
____ Slopes, terraces and retaining walls, including elevations of level areas and tops and bottoms of walls and exterior stairways and ramps
____ Indicate elevations at the base of all utility structures other than individual poles, such as fire hydrants and transformers
____ Provide rim elevation and invert elevations of all piping at manholes
____ Elevations of streets and alleys

ZONING REQUIREMENTS (Provided on cover sheet)
For each element, list zoning ordinance requirement, number approved on preliminary plan and number proposed on final plan, if different.

____ Zoning of the site
____ Existing use on the site
____ Proposed use for the site
____ Existing and required lot area
____ Depict building restriction line
____ Gross square feet (GSF) of existing and new building area (attach P&Z floor area calculations sheet)
____ Net square feet (NSF) of existing and new building area (attach P&Z floor area calculations sheet)
____ Floor-area-ratio (existing and proposed)
____ Open space (existing and proposed)
____ Average finished grade of structure for existing and new construction
____ Height of structure from existing and average finished grade
____ Yards (front, side and rear) required and proposed
____ Parking space(s), if applicable listed by total number, size of space and type (compact, standard, and handicapped)
____ % of crown coverage existing and proposed (based on P&Z Landscape Guidelines)

****Note: ** If the proposed development includes multiple lots, the zoning tabulation information must be provided for each individual lot unless all the lots will be consolidated in conjunction with the proposal.**

EROSION AND SEDIMENT CONTROL PLANS (When required)

____ Delineate the total area that will be disturbed during construction and show it on the plan. Calculate the total disturbed area as described in the Memorandum to the Industry on Grading Plan Requirements and Waiver Provisions in square feet and acres and show it on the plan. If the total disturbed area is more than 2,500 square feet then the proposed improvements shall be designed to complete the requirements of Article XIII of the Zoning Ordinance of the City of Alexandria.

____ Narrative phasing plan including demolition and sequence of construction activities

____ All appropriate details of erosion and sediment control measures [must meet Virginia Erosion and Sedimentation Control Handbook (VESCH) standards]

____ Sources of water for construction entrance wash down

____ Grading for drains and traps for construction entrance runoff

____ Show and list appropriate control measures defined for each drainage area

____ Identify areas having different ground covering materials (i.e. concrete, asphalt, gravel, turf, crushed stone, etc.)

____ Delineate any wetlands or Resource Protection Areas (RPA)

____ Legend for line types (must be in accordance with VESCH)

____ Temporary and permanent seeding mixtures

____ Erosion and Sediment Control Narrative to include:

- Project Description
- Existing Conditions
- Critical Areas
- Adjacent Areas
- Off-site Areas
- Erosion and Sediment Control Measures
- Permanent Stabilization
- Contaminated Soils
- Stormwater Runoff Considerations
- Asphalt Drive Note
- Tree Note
- Erosion Control Program
- Sediment Control Practices

____ BMP strategies (projects with 2,500 SF of disturbed area including construction staging and storage.)

____ BMP Narrative

____ Delineation and description of areas with contaminated soils

____ Erosion & Sediment Control Notes *(amend as applicable- available from Site Plan Coordinator)*

STORMWATER MANAGEMENT/BMP SHEETS (When Required)
(*See Article XIII of the Zoning Ordinance for guidance on water quality calculations*)

____ Location and description of RPA components
____ Location and nature of RPA encroachment
____ Water Quality Impact Assessment, if applicable
____ Type and location of proposed BMP, with supporting calculations
____ Pre and post development runoff calculations
____ Stormwater Narrative
____ Stormwater Outfall Narrative
____ Drainage divides off-site/on-site identified and delineated
____ Water Quality Volume (WQV) computation (in cubic feet and acre-feet)
____ Water Quality Worksheets A or B and C
____ City standard water quality BMP data blocks (2) (Project Description and Miscellaneous Blocks)
____ Signage detail for surface BMP
____ Water Quality Improvement Fund request, if applicable, can either be included on the First Final plan with original submitted separately to the Division of Environmental Quality, Department of T&ES for approval. Once the request is approved then both the request and approval letters must be included on the plan of subsequent submissions and/or Mylar.
_____ BMP and associated structure details
_____ BMP Sign details

EXISTING AND PROPOSED VEGETATION (When Required)
____ Notes for Preservation & Protection of Existing Vegetation *(amend as applicable- available from Site Plan Coordinator)*
____ Notes for Proposed Planting *(amend as applicable- available from Site Plan Coordinator)*