

Technical and Procedural Newsletter
January 13, 2014



Loudoun County, Virginia

Department of Building and Development

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TO: Members of the Land Development and Engineering Design Community

FROM: Gary Clare, Assistant Director - Engineering

The purpose of this correspondence is to inform the Land Development and Engineering Design Community of technical and procedural updates that have recently transpired. Please distribute this information to applicable personnel within your organization.

IN THIS EDITION:

Boring Density Waivers and Modifications: A reduction of the number of geotechnical borings is possible for specific scenarios, where it can be documented by the Registered Design Professional that the reduction in the prescribed subsurface borings layout will not impair their ability to investigate, analyze and make planning, design and construction recommendations.

The developer/owner or their Registered Design Professional may request a change to the boring density requirement by one of the following methods.

- (A) Waiver Request: This method is recommended when time is of the essence. Note that this determination is valid for the applicant only. Applicant can proceed upon approval of the waiver request.
- (B) Boring Density Modification Request: This method is recommended when timing is not critical and will be reviewed as time permits and in accordance with the standard submission review schedule. Applicant can proceed based on their own professional opinion.

APPLICABLE STANDARDS:

Loudoun County Facilities Standards Manual, 6.150.B.2
Building Official Technical Memorandum dated August 10, 2004

DISCUSSION: During the exploration, planning and development stages of property development/redevelopment, geotechnical reporting requirements dictate that a reasonable quantity of borings/test pits are needed to investigate the soils on a given site. This is done to identify and analyze potential problem soils and so that recommendations can be made by the Registered Design Professional to address planning, design, and construction concerns. The standard boring density requirements detailed in the Facilities Standards Manual and the Building Official Technical

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Memorandum dated August 10, 2004 are considered to be reasonable for most projects. However, it is recognized that some types of development and developments that occur in predictable subsurface conditions can be explored using reduced boring density and still achieve adequate characterization. The following is a list of some of the more common types of development conditions where a reduced boring density has been granted in the past:

1. Structures which cover ultra-large surface areas of a commercial site and encompass only a few differing soil types per Loudoun County's, Interpretive Guide to the Use of Soils Maps.
2. Large commercial site development projects with few soils types per Loudoun County's, Interpretive Guide to the Use of Soils Maps.
3. Expansions of existing residential and commercial structures with a historical geotechnical investigation/report, which may or may not have investigated the limits of the newly proposed site, but has investigated all of the soils on which the expansion is proposed.
4. Residential and commercial road alignments which have been investigated/analyzed previously for an initial development plan, and due to the passage of time and changes in site development plans, the realignment of the road places the initial borings off the centerline of the new alignment, but within the same soil and adjacent to the road.

It is noted that the above list is not an all-inclusive list of situations where a boring density reduction can be granted. Boring density reduction will be approved only after careful consideration by the Registered Design Professional and County staff based on the facts submitted as detailed below.

SUBMISSION REQUIREMENTS: Justification for a Boring Density Modification/Waiver Request shall be provided in a written narrative on the requesting firm's letterhead that discusses, in detail, the reasons the firm feels that Loudoun County should alter their written standards for the subject application. The following information, if available, shall be provided with the Boring Density Modification/Waiver Request document:

1. Soils map for the subject site and any adjacent parcels that are relevant to the subject application. Site boundaries should be shown on the soils map so that staff can locate the area of planned improvements in space. This information is available on the Loudoun County, Virginia WebLogis–Online Mapping System (<http://logis.loudoun.gov/weblogis/>)
2. Geologic map for the subject site and any adjacent parcels that are relevant to the subject application. Site limits should be shown on the geologic map so that staff can locate the area of planned improvements in space.
3. Previous and proposed locations of subsurface exploration. Locations of the planned site improvements should be shown.
4. Previous site specific subsurface information (ex...boring logs, test pit logs, geophysical profiles, etc.)
5. Proposed subsurface exploration methodology (ex...soil test borings, test pits, cone penetration test probes, geophysics)
6. Any other subsurface exploration information that the professional deems important to the understanding of site subsurface conditions.

Boring Density Modification/Waiver Requests shall be submitted to the Director. Once approved, the Boring Density Modification/Waiver Request approval shall be included in the final

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geotechnical report that is submitted to Loudoun County. It is recommended that the subject of an approved Boring Density Modification/Waiver be mentioned within the body of the geotechnical report and the approval document be included in the appendix of the report accompanying the results of the subsurface exploration