APPENDIX D.2 LAND USE REVIEW SUBMITTAL GUIDE

Land use review applications must include a conceptual Stormwater Management Plan that indicates stormwater pollution reduction, flow and volume control, and discharge methods in accordance with the stormwater hierarchy (See **Section 1.3.1**). To meet zoning code requirements (Title 33 of the City Code) and use the available land most efficiently, the applicant must determine the proposed stormwater management facilities and illustrate them on a site plan. The size and location of the proposed facilities will be assessed during the review process to ensure that adequate space is available with required setbacks. The facilities must also be located for proper overflow or access to an approved discharge point.

The Bureau of Environmental Services (BES) and the Bureau of Development Services (BDS) work cooperatively to review proposed plans during land use review to ensure stormwater management requirements are met. BES assesses the Stormwater Management Plan to determine if it meets the *Stormwater Management Manual* and *Sewer and Drainage Facilities Design Manual* requirements. BES provides the technical assessment information to BDS to determine if the land use review application meets zoning code approval criteria.

It is the applicant's responsibility to demonstrate that the stormwater hierarchy requirements are met. Some land use applications require more detailed information and more thorough planning and coordination with BES than others prior to land use approval. The determining factors are related to the type of land use review, the complexity of the proposed project, and the existing site conditions.

Land use applications that must address stormwater management can *generally* be divided into the following two categories:

1. those that verify adequacy of services, such as land divisions, planned developments, zone changes, and conditional uses
2. those that verify the available area for stormwater management and in some cases the impact of the stormwater management system, such as environmental reviews; greenway reviews; design reviews; and adjustments to regulations such as setbacks, building coverage, and paved area

Completing and documenting the first six steps presented in **Section 2.1.2** will meet most, if not all, of the submittal requirements for the Stormwater Management Report (see **Appendix D.4**) and the BES land use review process.

The applicant must determine the anticipated stormwater management design approach (Simplified, Presumptive, or Performance) that will be used. When the

Presumptive or Performance Approach is used, the applicant must complete and submit the project overview and description, methodology, analysis, and engineering conclusions (described in and the Stormwater Management Report Outline in **Appendix D.4**) with submittal of the application.

To determine which category of the stormwater hierarchy (see **Section 1.3.1**) the project will meet, the applicant must establish if, and to what degree, onsite infiltration is feasible (see **Appendix F.2** for infiltration testing requirements). In addition to providing the justification necessary to select a category of the stormwater hierarchy, the results of the infiltration testing will contribute to decisions regarding type, size, and location of stormwater facilities.

Other Design Considerations:

- Perimeter landscaping requirements, limited available area meeting setback requirements, and the need for impermeable liners or watertight planter boxes may make stormwater facilities impractical along property lines.
- Elevation and topographic constraints must be evaluated to ensure that gravity flow is possible and plumbing code depth of cover requirements for pipes can be met.
- Coordination between the project engineer, architect, and landscape designer may be necessary to ensure that potential conflicts with construction methods and materials (geogrids, drains, footings, foundations, limitations on rooting depth imposed by planter box dimensions, impervious liners, etc.) are considered during the selection of trees and landscaping plantings.
- The landscape design should minimize potential impacts of plan and tree roots on stormwater facilities and utilities, including under drains, storm sewer, and rain drains.
- Tree preservation and tree planting must account for not only initial construction, but also the need for future maintenance of stormwater facilities and utilities.
- Arborist reports should address all stormwater facilities and utilities proposed to encroach in the root protection zones of trees required to be preserved.

When stormwater management is required, the applicant must provide adequate information to show that the proposed development can meet the stormwater requirements at the time of development. In general, this includes:

- A plant list or table, including botanic and common names, size at time of planting, quantity, spacing, type of container, evergreen or deciduous, and other information related to the facility-specific planting, in accordance with landscape industry standards.

- A site utility plan that includes stormwater management facilities and a proposed discharge point.

- If public street improvements will be required as a condition of land use approval, a plan for managing stormwater from the street and identification of required right-of-way dedications (that include space for stormwater management facilities).

- A Stormwater Management Report (see **Appendix D.4**) that describes how the proposal complies with the stormwater hierarchy, including supporting documentation such as infiltration testing (see **Appendix F.2**) and calculations, per the requirements of the appropriate design approach (see detailed requirements of the Simplified, Presumptive, and Performance approaches in Appendices D.3, D.4, and D.5).

- Other requirements, depending on the site and complexity of the project. Examples include a grading plan, geotechnical report, and groundwater level testing (see **Appendix F.1**).

The use of the Presumptive and Performance Approach (required for larger and/or complex projects) require the stormwater submittal to be prepared by a qualified professional, as outlined in **Section 2.2**. The submittal must include Presumptive Approach Calculator (PAC) printouts that demonstrate the stormwater facility engineering.

Issues that Frequently Delay Land Use Review Applications

Land use applications that cannot be fully processed or approved often have the following deficiencies related to stormwater management:

- It is not clear whether infiltration is feasible on the site.
- It is not clear which category of the stormwater hierarchy is being met.
- A category of the stormwater hierarchy is chosen without proper justification.
- Access to an offsite stormwater discharge point (drainageway, storm sewer, or combined sewer) is not clearly shown.
- Site plan information is inaccurate or inadequate.
- The amount of land required to accommodate stormwater facilities is not accurately shown.

- Conflicts between stormwater facilities and property line or foundation setbacks are shown.
- Disturbance areas are undefined or inaccurate.
- Proposed and existing impervious areas are undefined or inaccurate.

To ensure a timely review, the land use review applicant is strongly encouraged to address these issues before submitting the land use application by following steps 1 through 5 in **Section 2.1.2**. This information should be included in the Stormwater Management Report and submitted with the land use application.