



PROCEDURES MANUAL FOR INFRASTRUCTURE DEVELOPMENT

**Lexington-Fayette Urban County Government
Lexington, Kentucky**

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DEFINITIONS

Basement – The lowest floor of a structure that is wholly or partly below the ground level.

Builder – The individual or corporation that applies for a building permit to construct homes or commercial/industrial structures.

Composite Drainage Plan – A component of the Improvement Plans prepared by the Engineer that shows the following:

1. surface drainage easements on each lot;
2. flow arrows that indicate the direction of surface drainage through each surface drainage easement;
3. sanitary sewers and manholes, and the elevation of the manhole lids;
4. storm sewers and manholes;
5. surface inlets, curb inlets, constructed channels, and stormwater best management practices;
6. Flood Protection Elevation for
 - lots adjacent to or containing a post-development floodplain
 - lots adjacent to or containing a constructed channel
 - lots at the low point of a street if there is no overflow channel
 - lots adjacent to detention ponds and wet ponds.
7. Environmentally sensitive areas;

8. Non-buildable areas such as sinkholes, floodplains, vegetation buffer strips, wetlands, and other environmentally sensitive areas.
9. Alluvial soils.
10. Building setback of 25' from the 100-year post-development floodplain.

Constructed Channels – Channels designed by the Engineer as part of the Improvement Plans.

Contractor – The individual(s) or corporation(s) hired by the Developer to construct the roads, sanitary sewer facilities, and stormwater facilities.

Developer – The individual or corporation that signs the Infrastructure Development Agreement in Appendix A.

Engineer – The Engineer hired by the Developer to design the infrastructure and inspect the construction. The Engineer signs the Infrastructure Development Agreement in Appendix A.

Environmentally Sensitive Area – Any area which due to its natural or physical setting may have environmental problems with regard to development. Areas included are (but not limited to) areas of steep slope (over 15%), floodplains, sinkholes, areas of poor soil, improper fills, wetlands, any significant tree or significant tree stands, aquifer recharge areas, and similar areas.

FEMA – Federal Emergency Management Agency.

Flood Protection Elevation (FPE) – The FPE shall be determined by the Engineer and shall be all of the following:

1. two feet above the 100-year FEMA floodplain elevation, or two feet above the calculated 100-year post development floodplain elevation, whichever is higher;
2. Two feet above the 100-year storm elevation in constructed channels;
3. Two feet above the 100-year storm elevation at low points of streets if there is no overflow channel;

4. Two feet above the 100-year, 24-hour storm elevation in detention ponds and wet ponds.
5. Two feet above the embankment crest of detention ponds and wet ponds.

For all new structures, the lowest floor elevation that is above ground level shall be at or above the FPE. Crawl space entrances, foundation vents, basement window sills, the top landing of outside stairways leading to basements, and other openings to the structure shall be at or above the FPE.

Improvement Plan – Design plans and Construction Specifications prepared by the Engineer for the infrastructure in residential, commercial, or industrial developments.

Infrastructure – Roads, sanitary sewer facilities, and stormwater facilities.

LFUCG – Lexington Fayette Urban County Government.

LFUCG Department of Public Works – Includes the Division of Engineering, Division of Sanitary Sewers, Division of Traffic Engineering, Division of Solid Waste, Division of Streets and Roads, and Construction Management.

LFUCG Division of Building Inspection – A division in the LFUCG Department of Public Safety.

Surety – An irrevocable letter of credit in favor of the LFUCG from a bank with offices in Lexington-Fayette County.

Warranty Period – The time period during which the Developer guarantees the work to be free from defective materials or improper workmanship.

The warranty period for roads dedicated to the LFUCG shall be 1 year from when the final surface course is applied.

For development projects that involve recording a plat, the warranty period for sanitary sewer facilities shall be 3 years from the date of plat recording, and the warranty period for stormwater facilities shall be 1 year from the date of plat recording.

For development projects that do not involve a plat, the warranty period for sanitary sewer facilities shall be 3 years from the date of substantial completion, and the warranty period for stormwater facilities shall be 1 year from the date of substantial completion.

Written Notice – First class U.S. mail, E-mail, or fax communication

INTRODUCTION

The Procedures Manual describes how the Lexington-Fayette Urban County Government (LFUCG) will manage the design and construction of roads, sanitary sewers and pump stations, and stormwater facilities in developing areas. The Procedures Manual applies to:

1. infrastructure that is financed and constructed by Developers that becomes LFUCG property for operation and maintenance by the LFUCG, or
2. infrastructure that is financed and constructed by Developers that remains private property with the operation and maintenance regulated by the LFUCG, such as detention ponds on commercial property

LFUCG's past role in the development process has been to check the designs prepared by the Developer's Engineer, provide construction inspection with LFUCG staff, and take full ownership responsibility for the facilities upon completion of construction and plat signing. The lack of written guidance and procedures has allowed the process to evolve over time, resulting in unclear responsibilities and expectations for the LFUCG, Engineer, and Developer. The Procedures Manual, along with a series of Technical Manuals referenced herein, clarifies responsibilities and establishes singular accountability.

Some examples of changes that will occur when the Procedures Manual is implemented are:

1. The Division of Engineering will not be responsible for the technical accuracy of the design plans; Division of Engineering approval of the plans will be from an administrative basis. Accuracy, completeness, and construction feasibility of designs and construction plans will be the responsibility of the Developer's Engineer as described below. The Division of Engineering will administer the development process, and rely on the Developer's Engineer to adequately design the infrastructure and comply with the Technical Manuals.

2. The Division of Engineering will not inspect construction of the roads, sanitary sewer facilities, or stormwater facilities. The Developer's Engineer will do this.
3. For subdivided property, the plat will be signed by the LFUCG when the Developer's Engineer provides a "Certificate of Substantial Completion" to the Division of Engineering.
4. The Developer and Engineer will commit to compliance with the manuals through a written contract with the LFUCG for each development project.
5. The Developer's Engineer will submit record drawings that comply with the requirements in the manuals.
6. Ownership of new infrastructure will be assumed by LFUCG after acceptable operation and performance has been demonstrated during a warranty period.
7. The LFUCGs' role during home building will be increased to effectively address the problems of covered manholes, improper plumber taps, drainage problems created by improper grading, erosion control, and damage to curbs and sidewalks.

The process is designed to place the LFUCG in an ownership role from the beginning of the design phase. This will be accomplished by:

- a contract signed by the Developer, Developer's Engineer, and LFUCG that defines the responsibilities of each party throughout the development process;
- financial assurance for correcting design errors or omissions through professional liability insurance provided by the Developer's Engineer;
- enhancing construction quality through full-time construction inspection;
- financial assurance for correcting defects in construction materials or workmanship through a Performance/Warranty Surety provided by the Developer;
- preservation of the integrity of new and existing infrastructure during home building; and

- consistent requirements for all Developers through use of the Technical Manuals for designing, constructing, and inspecting the infrastructure.

The foremost objective of the process is to ensure quality in public infrastructure that is financed and constructed by Developers. The Procedures Manual revises the current process to place the LFUCG in an administrative role similar to the role it plays in capital projects, i.e. projects financed and constructed by the LFUCG. This time tested and proven process is described in detail in the American Society of Civil Engineers Manual of Practice entitled *Quality in the Constructed Project*. Implementation of the Procedures Manual and Technical Manuals is expected to achieve LFUCG's quality objective.

The Procedures Manual is the link between the six Technical Manuals developed to guide technical activities in the infrastructure development process. The Technical Manuals contain the standards for designing, constructing, and inspecting the infrastructure. Each manual lists the information that must be submitted to the Division of Engineering.

PROCEDURES FOR REVISING THE MANUALS

Developers, Engineers, Builders, agencies within the LFUCG, and other stakeholders may propose revisions to the Procedures Manual and Technical Manuals in accordance with the following procedures. No other policies or rules shall be introduced to the development process without following these procedures.

1. The applicant shall submit the proposed revision in writing to the Commissioner of Public Works (Commissioner).
2. The Commissioner shall request comments from applicable stakeholders within 30 working days of receiving the applicant's proposed revision.
3. Based on comments from the other stakeholders, the Commissioner shall determine if the proposed revision will improve the process and maintain or improve the quality of infrastructure.
4. If the Commissioner determines that it will not improve the process, or will not maintain or improve the quality of infrastructure, the Commissioner shall respond in writing to the applicant stating his decision and reasons for not approving the proposed revision.

The applicant may appeal the decision in writing to the Mediation Committee. The Mediation Committee shall review the proposed revision from the applicant along with the written disapproval decision from the Commissioner. The Mediation Committee shall decide by a majority vote to approve or deny the proposed revision. If the proposed revision is approved, the Commissioner shall prepare a written amendment to the manual being revised after obtaining the necessary approvals from the Planning Commission and the Urban County Council for those items over which they have authority.

5. If the Commissioner determines that it will improve the process and maintain or improve the quality of infrastructure, the Commissioner shall approve the proposed revision. The Commissioner shall prepare a written amendment to the manual being revised after

obtaining the necessary approvals from the Planning Commission and the Urban County Council for those items over which they have authority.

6. Instead of making a determination, the Commissioner may choose to forward the proposed revision to the Mediation Committee for a decision along with a written report describing the applicants proposed revision and a summary of the comments from other stakeholders. The Mediation Committee shall review the Commissioner's information and shall decide by a majority vote to approve or deny the proposed revision. If the proposed revision is approved, the Commissioner shall prepare a written amendment to the manual being revised after obtaining the necessary approvals from the Planning Commission and the Urban County Council for those items over which they have authority.
7. The Procedures Manual and Technical Manuals shall be republished every two years to incorporate the amendments that have been issued by the Commissioner for the preceding two years.

APPLICATION OF TECHNICAL MANUALS

The following Technical Manuals contain the standards for designing, constructing, and inspecting infrastructure in Fayette County:

- Construction Inspection
- Geotechnical
- Roadway
- Sanitary Sewer and Pumping Station
- Stormwater
- Structures

The Technical Manuals shall apply to all infrastructure constructed by the LFUCG or a Developer. The Manuals shall apply to all of the following conditions, including all related structures.

Public Roads

- Roads constructed by the LFUCG
- Roads constructed by a Developer and dedicated to the LFUCG

Private Roads, Parking Lots, and Access Easements

- Roads identified by the Subdivision Regulations as a private road
- Access easements that serve more than two properties
- Parking lots and roads in commercial and industrial developments

Stormwater Facilities

- The constructed portion of the public drainage system, including pipes, culverts, bridges, retaining walls, headwalls, overland flow channels, swales, and stormwater practices that carry water to the natural portion of the drainage system.

- The natural portion of the public drainage system, including all solid or dashed blue-line streams shown on the USGS topographic maps, reservoirs, lakes, farm ponds, wetlands, a buffer around wetlands, post-development floodplains, FEMA floodplains, a vegetative buffer strip along streams, and a drainage right of way for proper maintenance of the drainage system.
- Detention ponds, retention ponds, and other best management practices constructed by either a Developer or the LFUCG and required for flood control or water quality control

Sanitary Sewer System

- Pump stations
- Sanitary sewers on land owned by the LFUCG
- Sanitary sewers in a LFUCG easement
- Sanitary sewers that initially serve only one property, but that may be extended in the future to serve additional properties. These sewers will be in an a LFUCG easement
- Sanitary sewer collectors and laterals on private commercial and industrial property
- Laterals on private residential property

Sanitary sewers that are collector sewer shall be placed in a LFUCG easement. Collector sewers are sewers that receive flow from laterals and therefore are connected to a manhole on each end. Laterals are sewers that carry flow from a building, or the building cleanout, to the collector.

Facilities Excluded from Technical Manuals

The following facilities are not regulated or owned by the LFUCG and therefore are not covered by the manuals:

Farm Facilities for Agricultural Purposes

Farm facilities are intended for agricultural uses and do not need to meet the requirements of the manuals for road, storm drainage, and sanitary sewer construction. If a farm requests approval for development activities, the infrastructure must meet the requirements of the manuals. If existing infrastructure does not meet the required standard, it cannot be used as part of the development.

PARTNERING WORKSHOPS

Annual partnering workshops shall be conducted to improve communication among the parties involved in development activities. The following parties should attend a partnering workshop with the LFUCG Department of Public Works each year:

- Developers
- Engineers
- Contractors
- Utility Companies
- Builders
- Home Builders Association of Lexington
- Division of Traffic Engineering
- Division of Engineering
- Division of Sanitary Sewers
- Division of Building Inspection
- Department of Law
- Division of Planning
- Division of Code Enforcement

The purpose of this workshop will be to:

1. establish an itemized list of construction items and associated unit costs that will be used to compute the amount of Performance/Warranty Sureties;
2. review new technology; and
3. resolve recurring problems encountered during :
 - a. preparation and approval of Improvement Plans,
 - b. construction of the infrastructure,

- c. plat signing, and
- d. residential and commercial/industrial building construction.

The Commissioner of the Department of Public Works shall schedule two workshops in January or February each year. The Commissioner shall prepare an agenda and moderate the meeting. The Commissioner shall also prepare notes of the meeting and distribute them to the attendees.

Failure to attend the workshop shall not relieve any party of its responsibilities as described in this manual or the Technical Manuals.

INFRASTRUCTURE DEVELOPMENT PROCESS

Introduction

The Director of the Division of Engineering shall determine which projects will be covered by the procedures in this section of the manual. In general, the procedures discussed in this section shall apply to residential, commercial, or industrial developments that require a Professional Engineer to design the infrastructure and inspect the construction. For these projects, the Director of the Division of Engineering shall require the Developer and Engineer to execute an Infrastructure Development Agreement with the LFUCG. An example contract is contained in Appendix A.

This section describes the interaction of the Developer, Engineer, and the Department of Public Works (through the Division of Engineering, Division of Sanitary Sewers, and Division of Traffic Engineering) in the following phases of the development process:

- Improvement Plans
- Construction of the Infrastructure
- Plat Recording
- Final Inspection of the Infrastructure by LFUCG

Improvement Plans

1. The LFUCG, Developer, and Engineer shall sign the Agreement in Appendix A. If the Developer changes Engineers, the Developer shall notify the Division of Engineering and a new Agreement shall be executed among the LFUCG, Developer, and Engineer.
2. The Division of Engineering shall appoint a staff member to function as the Project Coordinator for the proposed development. The Project Coordinator shall be a Licensed Professional Engineer and shall be the contact person for the Developer and the Engineer during the preparation of the Improvement Plans, during construction, and during the final inspection. All communication from the Division of Engineering to the Developer and the Engineer shall be through the Project Coordinator. The Project Coordinator shall

- be copied on all relevant correspondence that the Engineer may have with regulatory agencies, utility companies, contractors, developers, and others regarding the design and construction of the infrastructure.
3. The Division of Engineering shall clarify the requirements of the Subdivision Regulations, Zoning Ordinance, Technical Manuals, and Standard Drawings when requested by the Engineer or Developer.
 4. The Engineer shall coordinate with local utility companies to complete the design.
 5. The Engineer shall coordinate with the Division of Engineering, Division of Traffic Engineering, Division of Building Inspection, Division of Planning, Division of Parks, and other agencies to complete the design.
 6. The Engineer shall conduct any studies necessary to evaluate off-site stormwater impacts in accordance with the Stormwater Manual, and shall request information from the Division of Engineering regarding known stormwater problems downstream of the development site. The Engineer shall submit a preliminary report to the Division of Engineering, when the Improvement Plans are 50% complete, describing the impacts of the proposed development and the proposed stormwater facilities to control downstream flooding.
 7. The Engineer shall conduct a geotechnical exploration of the site in accordance with the Geotechnical Manual. The Geotechnical Report shall be included in the Improvement Plans.
 8. The Engineer shall prepare the Improvement Plans in accordance with the Subdivision Regulations, Zoning Ordinance, Technical Manuals, and Standard Drawings. The Plans shall include information required by the Division of Planning and shown on the Development Plan or Subdivision Plan, such as areas of no disturbance related to tree

- stands, greenways, wetlands, floodplains, sinkholes, and other environmentally sensitive areas.
9. The Engineer shall prepare construction specifications for the roads, sanitary sewer facilities, and stormwater facilities and submit them as part of the Improvement Plans to the Division of Engineering.
 10. The Division of Engineering shall coordinate with the Engineer and other agencies of the LFUCG to ensure that all Development Plan or Subdivision Plan engineering issues are addressed on the Improvement Plans.
 11. The Division of Engineering, in conjunction with the Division of Sanitary Sewers, shall
 - evaluate off-site sanitary sewer impacts
 - determine where the proposed development will connect to the LFUCG sanitary sewer system
 - determine if the LFUCG has adequate sanitary sewer transmission capacity for the proposed development
 - determine if the LFUCG has adequate sanitary sewer treatment plant capacity for the proposed development
 12. The Developer shall be responsible for obtaining the following permits where applicable:

Roadway

- Kentucky Transportation Cabinet right-of-way encroachment
- LFUCG Street Cut Permit
- LFUCG Lane Blockage Permit

Stormwater (See Stormwater Manual for more information)

- Federal 404 permit for construction in streams
- Kentucky Division of Water 401 Water Quality Certification
- Kentucky Division of Water Dam Construction Permit
- Kentucky Division of Water Floodplain Construction Permit

- Kentucky Division of Water Stormwater Permit for Construction Activities
- LFUCG Grading Permit

Sanitary Sewers

- Kentucky Division of Water Approval for Sanitary Sewer Extension

13. KRS 151.320 requires the LFUCG to concurrently enforce, along with the Kentucky Natural Resources and Environmental Protection Cabinet, state regulations related to construction along or in streams. The United States Code of Federal Regulations Title 44 Section 60.3 requires the LFUCG to assure that all state and federal permits have been obtained. Therefore, the Engineer shall obtain the following permits and submit them to the Division of Engineering before construction of the permitted item begins:

- Kentucky Division of Water 401 Water Quality Certification
- Kentucky Division of Water Dam Construction Permit
- Kentucky Division of Water Floodplain Construction Permit
- Kentucky Division of Water Stormwater Permit for Construction Activities (or evidence of submittal of the Notice of Intent to the Kentucky Division of Water)
- Federal 404 permit for construction in streams

14. To ensure that the LFUCG follows the requirements of the National Flood Insurance Program, the Division of Engineering shall

- notify the Engineer of the FEMA approvals, if any, that will be required before the Division of Engineering can accept the Improvement Plans;
- notify the Engineer of technical data that shall be submitted to the Division of Engineering related to construction in the floodplain; and
- submit technical data to FEMA within 6 months after receiving the data from the Engineer.

More information on FEMA requirements is contained in the Stormwater Manual.

15. The Division of Engineering shall set aside specific times of the week for meetings when requested by the Engineer. These times shall include at least two half-days each week and shall be reserved by appointment by the Engineer.
16. The Engineer shall prepare a Composite Drainage Plan of the project (see definitions).
17. The Division of Engineering and the Engineer shall conduct an office or field review when the Improvement Plans are approximately 50% complete. The Engineer shall schedule this meeting with the Division of Engineering. The Engineer shall invite the utility companies to this meeting if necessary.
18. Any disagreements between the Engineer/Developer and the Division of Engineering shall be resolved through a mediation process. The makeup and operation of the mediation process is contained in Appendix B.
19. The Engineer shall submit Improvement Plans for an administrative review to the Division of Engineering, including an itemized list of estimated construction costs of the infrastructure covered by the Technical Manuals. The unit cost of each construction item shall be determined at the Partnering Workshop.
20. The Division of Engineering shall conduct an administrative review of the Improvement Plans within 10 working days of receiving the plans. The purpose of this review shall be to verify that all items have been submitted as required by the checklist in Appendix C. The review is not to check for design errors by the Engineer. The Engineer shall have sole responsibility for the accuracy of the drawings, calculations, and reports.
21. The Division of Engineering shall sign the Compliance Statement in Appendix C within 10 working days of receiving the plans or notify the Engineer and Developer in writing of items that are missing. The plans are considered accepted by the LFUCG when the Division of Engineering signs the Compliance Statement.

22. The Division of Engineering shall notify the Developer and the Engineer in writing when the final plans, including the Erosion and Sediment control plan, have been accepted.
23. When the Improvement Plans have been accepted, the Division of Engineering shall submit a letter to the Kentucky Division of Water stating that the LFUCG
 - a. approves the proposed sanitary sewer system;
 - b. will assume ownership, operation, and maintenance of the proposed sanitary sewer system upon acceptance of the construction; and
 - c. has sufficient treatment and transmission capacity for the proposed wastewater flows.
24. The Developer may obtain the LFUCG Grading Permit before the Improvement Plans are accepted by the Division of Engineering if
 - a. the Planning Commission has certified the Development Plan or Subdivision Plan,
 - b. the Division of Engineering has received written notification from the Urban Forester that all tree protection area requirements have been installed (see Article 26 – Tree Protection Standards of the Zoning Ordinance).
 - c. The Erosion and Sediment Control Plan has been accepted by the Division of Engineering

Infrastructure Construction

Developers that are subdividing land must construct the infrastructure and record the lots before the Division of Building Inspection will issue building permits for homes or commercial/industrial structures.

Developers that are not subdividing land may begin structure building while constructing the infrastructure after getting approval from the Planning Commission, Division of Engineering, and the Division of Building Inspection. However, the construction of the infrastructure must be completed before the Division of Building Inspection issues a certificate of occupancy.

The following procedures shall apply to both types of development described above.

1. The Developer shall obtain a Grading Permit when
 - a. the Planning Commission has certified the Development Plan, or Subdivision Plan;
 - b. the Division of Engineering has received written notification from the Urban Forester that all tree protection area requirements have been installed (see Article 26 – Tree Protection Standard of the Zoning Ordinance).
 - c. the Erosion and Sediment Control Plan has been accepted by the Division of Engineering.
2. The Engineer shall submit Improvement Plans to the utility companies (water, natural gas, electric, cable television, and telephone) before the utility companies begin construction. This information will help the water company maintain the required distance between sanitary sewer pipes and water lines as described in the Sanitary Sewer and Pumping Station Manual.
3. The Engineer shall mark with colored ribbon or fencing the “do not disturb” areas in the field as shown on the Erosion and Sediment Control Plan and the Improvement Plans. The “do not disturb” areas include vegetative buffer strips along streams and around wetlands.
4. The Developer shall erect a project sign at each entrance to the development site. The sign shall identify the name and telephone number of the Developer, Engineer, and

Contractor. All calls received by the LFUCG related to the construction shall be directed to the Developer.

5. The Contractor shall construct the Erosion and Sediment Control practices and shall limit site grading to that necessary to construct the Erosion and Sediment Controls.
6. The Engineer shall provide an on-site resident project representative during construction of the Erosion and Sediment Controls, providing inspection and reports in accordance with the requirements in the Construction Inspection Manual. The Engineer shall submit copies of the daily inspection reports to the Division of Engineering every two weeks. The Engineer shall notify the Division of Engineering in writing when the Erosion and Sediment Control practices are completed.
7. The Engineer shall notify the Division of Engineering, Division of Sanitary Sewers, the Division of Traffic Engineering, and utility companies when construction of the infrastructure begins. These divisions, along with the Engineer and Contractor, shall hold an initial construction meeting within two weeks after construction of the roads, sanitary sewers, and stormwater facilities begins. The Engineer shall also invite the utility companies to this meeting. The purpose of this meeting is to make the divisions and the utility companies aware of the beginning of construction and the construction schedule. The Engineer shall prepare notes of the meeting and submit them to the divisions.
8. The Engineer shall submit the Kentucky Division of Water approval to construct sanitary sewers to the Division of Engineering.
9. The Contractor shall construct the infrastructure in accordance with the accepted Improvement Plans.
10. The Engineer shall provide an on-site resident project representative during construction of the infrastructure, providing inspection and reports in accordance with the

- requirements in the Construction Inspection Manual. The Engineer shall submit copies of the daily inspection reports to the Division of Engineering every two weeks.
11. The Engineer shall conduct all tests required by the Technical Manuals, including testing of the sanitary sewer lines. The Division of Sanitary Sewers shall observe all sanitary sewer testing. The Engineer shall notify in writing the Division of Sanitary Sewers and the Division of Engineering 72 hours in advance of conducting the tests.
 12. The Division of Sanitary Sewers shall observe connections to the sanitary sewer collection or interceptor system. The Engineer shall notify in writing the Division of Engineering and the Division of Sanitary Sewers 72 hours in advance of making a connection to the LFUCG sanitary sewer system.
 13. The Division of Sanitary Sewers shall observe the startup demonstration of pump stations. The Engineer shall notify in writing the Division of Engineering and the Division of Sanitary Sewers 72 hours in advance of startup demonstrations of pump stations.
 14. The Engineer shall notify in writing the Division of Engineering and the Division of Traffic Engineering 72 hours in advance of construction that will impact public streets.
 15. The Engineer shall revise the Improvement Plans to reflect field changes. Proposed field changes that materially affect the design performance of the infrastructure shall be considered a major field change and shall be submitted to the Division of Engineering. The Division of Engineering shall conduct an administrative review of the proposed major field change within two working days of receiving it. The purpose of this review shall be to verify that all items have been submitted as required by the checklist in Appendix C. The review is not to check for design errors by the Engineer. The Engineer shall have sole responsibility for the accuracy of the drawings, calculations, and reports. The Division of Engineering shall accept the proposed field change within two working

days of receiving it or notify the Engineer in writing of items that are missing. The Engineer may authorize minor field changes.

16. The Division of Engineering shall clarify the requirements of the Subdivision Regulations, Zoning Ordinance, Technical Manuals, and Standard Drawings when requested by the Engineer or Developer.
17. Any disagreements among the Engineer/Developer/Contractor, and the Division of Engineering shall be resolved through a mediation process. The makeup and operation of the mediation process is contained in Appendix B.
18. When the construction is substantially complete, then the procedures on Plat Recording in this manual shall be followed for projects that require lots to be recorded before a building permit is issued by the Division of Building Inspection.
19. When the construction is substantially complete and a plat does not have to be recorded, the following procedures shall be followed:
 - a. The Engineer shall conduct an inspection to determine if the construction is substantially complete. If the Engineer considers the construction “substantially complete” as defined in Appendix D, the Engineer shall prepare the “Certificate of Substantial Completion”, including a punch list of items to be completed or repaired.
 - b. If seeding was not accomplished before December 1, the Developer shall include in the Performance/Warranty Surety the quantities of permanent and temporary seeding required by the Stormwater Manual. Seeding shall be applied between March 1 and March 15. If weather conditions do not permit seeding during this period, then the seeding shall be done as soon as possible after March 15. The Stormwater Manual contains the requirements for temporary and permanent seeding.

- c. The Division of Building Inspection shall issue a Certificate of Occupancy after the Division of Engineering receives the following information:
- Certificate of Substantial Completion from the Engineer;
 - The results of all tests required by the Technical Manuals;
 - Construction cost estimate of the infrastructure including the punch list. The cost estimate shall show the items of construction, actual quantities constructed, quantities remaining to be constructed (punch list), and the unit costs that were determined at the Partnering Workshop;
 - Record drawings in paper and electronic (AUTOCAD) form from the Engineer, including a revised Composite Drainage Plan;
 - Videotape of the sanitary sewer system television survey conducted by the Engineer along with a table of lateral stub connections suitable for use by the Division of Engineering when issuing sewer tap permits;
 - Performance/Warranty Surety to complete the construction of the Engineer's punch list in accordance with Appendix E along with the schedule for completing the construction.
- d. The Engineer shall provide copies of the above items to the Division of Sanitary Sewers.
- e. The Division of Engineering shall conduct a pre-final inspection of the construction within 30 days after the Certificate of Occupancy is issued and notify in writing the Developer and Engineer of their findings.

- f. The Developer shall complete construction of all punch list items in accordance with the schedule submitted with the plat. The final surface course of pavement shall be constructed after all primary services of utilities requiring street cuts have been installed. The Engineer shall notify the Division of Engineering in writing when the utilities have been installed.
- g. The Engineer shall continue construction phase services as described in Appendix A until all construction is completed.
- h. The Engineer shall notify in writing the Division of Engineering and the Developer in writing when all punch list items have been constructed in accordance with the Improvement Plans and Technical Manuals.
- i. The Division of Engineering shall conduct an inspection to verify that all punch list items have been constructed and shall notify in writing the Engineer and the Developer of their findings.
- j. The Division of Engineering shall reduce the Performance/Warranty Surety as described in Appendix E
- k. The Developer shall include the commercial property owner's "Agreement to Maintain Stormwater Management Facilities" (Appendix F) in all title conveyance transactions where applicable.
- l. The Developer shall maintain erosion and sediment controls until grass cover is achieved on 70% of the disturbed land draining to the controls. At that time, the Developer shall remove the controls or convert them to a permanent best management practice if indicated on the Improvement Plans.

Plat Recording

1. The Division of Planning shall appoint a staff member to coordinate the concurrent review of the plat by the Division of Engineering, Division of Building Inspection, Division of Traffic Engineering, Division of Planning, and any other applicable agency. The staff member shall be the central point of contact for the Developer and Engineer to ensure timely review and approval of the plat.
2. The Division of Planning shall maintain a checklist of items that each agency will review on the plat. This checklist shall be made available to Developers and Engineers. The checklist from the Division of Engineering is included in Appendix G.
3. The Engineer shall prepare the plat in accordance with the Subdivision Regulations and the checklists maintained by the Division of Planning. The plat shall show the Flood Protection Elevation where applicable (see definitions).
4. If seeding was not accomplished before December 1, the Developer shall include in the Performance/Warranty Surety the quantities of permanent and temporary seeding required by the Stormwater Manual. Seeding shall be applied between March 1 and March 15. If weather conditions do not permit seeding during this period, then the seeding shall be done as soon as possible after March 15. The Stormwater Manual contains the requirements for temporary and permanent seeding.
5. The Engineer shall conduct an inspection to determine if the construction is substantially complete. If the Engineer considers the construction “substantially complete” as defined in Appendix D, the Engineer shall prepare the “Certificate of Substantial Completion”, including a punch list of items to be completed or repaired.
6. The Division of Engineering shall sign the plat within five working days after receiving the following information:

- a. Plat prepared by the Engineer that fulfills the engineering requirements established by the Planning Commission
- b. Certificate of Substantial Completion from the Engineer.
- c. The results of all tests required by the Technical Manuals
- d. Construction cost estimate of the infrastructure including the punch list. The cost estimate shall show the items of construction, actual quantities constructed, quantities remaining to be constructed (punch list), and the unit costs that were determined at the Partnering Workshop
- e. Record drawings prepared by the Engineer in paper and electronic form (AUTOCAD), including a revised Composite Drainage Plan.
- f. Videotape of the sanitary sewer system television survey conducted by the Engineer along with a table of lateral stub connections suitable for use by the Division of Engineering when issuing sewer tap permits.
- g. Performance/Warranty Surety to complete the construction of the Engineer's punch list in accordance with Appendix E, along with the schedule for completing the construction.

The Engineer shall submit copies of the above items to the Division of Sanitary Sewers.

- 7. Within 5 working days of receiving the plat, the Division of Engineering shall notify the Developer, Engineer, and the Division of Planning in writing of the items, if any, that are missing from the plat.

8. If it is determined that the plat prepared by the Engineer did not contain all the information required by the LFUCG, then the Engineer shall be responsible for submitting the required information.
9. The Division of Planning shall ensure that all requirements of the Planning Commission have been fulfilled before certifying the plat. Within 5 days of receiving the signed plat from the Division of Engineering, the Division of Planning shall certify the plat or shall notify the Developer and Engineer in writing of missing items or other requirements that have not been met.
10. Approval and recording of the plat shall mean the following:
 - a. constitutes acceptance of the infrastructure for operation and maintenance by LFUCG, except for roads that lack the final surface course of pavement;
 - b. does not relieve the Developer from compliance with the requirements of the Procedures Manual or Technical Manuals related to the completed construction;
 - c. acknowledges the beginning of the Developer's warranty period as described in this manual; and
 - d. acknowledges LFUCG's intention to take full ownership responsibility of the public facilities at the end of the warranty period, provided that the infrastructure is in compliance with the Procedures Manual and Technical Manuals.
11. The Division of Engineering shall conduct a pre-final inspection of the construction within 30 days after the plat is signed and notify the Developer and Engineer in writing of their findings.
12. The Developer shall complete construction of all the punch list items in accordance with the schedule submitted with the plat. The base courses of the roadways shall be installed

- for at least one year prior to the installation of the final surface course of pavement. The final surface course of pavement shall be constructed only after all primary services of utilities requiring street cuts have been installed, and any defective areas of the base courses have been identified by the Engineer and have been corrected or reconstructed (including removal of portions of the pavement to obtain a uniformly compacted base). The Engineer shall notify the Division of Engineering in writing when the utilities have been installed and the Developer wishes to install the final surface.
13. The Engineer shall continue construction phase services as described in Appendix A until all construction is completed.
 14. The Engineer shall notify the Division of Engineering and the Developer in writing when all punch list items have been constructed in accordance with the Improvement Plans and Technical Manuals.
 15. The Division of Engineering shall conduct an inspection to verify that all punch list items have been constructed and shall notify the Engineer and the Developer in writing of their findings.
 16. The Division of Engineering shall reduce the Performance/Warranty Surety as described in Appendix E.
 17. The Developer shall include the commercial property owner's "Agreement to Maintain Stormwater Management Facilities" (Appendix F) in all title conveyance transactions where applicable.
 18. The Developer shall maintain erosion and sediment controls until grass cover is achieved on 70% of the disturbed land draining to the controls. At that time, the Developer shall remove the pond or convert it to a permanent best management practice if indicated on the Improvement Plans.

Final Inspection by LFUCG

The LFUCG shall conduct a final inspection of the construction near the end of the warranty period (see definitions) in accordance with the following procedures. The Developer and the Division of Sanitary Sewers shall also participate in the final inspection as described below.

1. The Division of Engineering shall
 - a. conduct a final inspection of the roads within 1 year after the final surface course is applied
 - b. conduct a final inspection of the stormwater facilities before the warranty period ends
 - c. notify the Division of Sanitary Sewers in writing six months before the warranty period ends that the sanitary sewers and pump stations need to be inspected
2. The Division of Sanitary Sewers shall
 - a. conduct an inspection of the sanitary sewers and pump stations within 30 working days of receiving written notice from the Division of Engineering to conduct the inspection, and
 - b. notify the Division of Engineering in writing within 30 working days of conducting the inspection of repairs that need to be made to the sanitary sewers and pump stations
3. The Division of Engineering shall notify the Developer in writing at least three months before the warranty period ends of repairs that must be made to the roads, sanitary sewers

and pump stations, and stormwater facilities resulting from improper workmanship or defective materials.

4. The Developer shall repair roads, sanitary sewers and pump stations, and stormwater facilities identified by the Division of Engineering at any time during the warranty period. The repairs shall be made at least 30 working days before the warranty period ends. The Developer shall notify the Division of Engineering and the Division of Sanitary Sewers 72 hours in advance of when repairs will be made.
5. The Division of Engineering shall
 - a. inspect the construction of the repairs to roads and stormwater facilities made by the Developer at least 7 days before the warranty period ends;
 - b. inspect the construction of the repairs to the sanitary sewer system in conjunction with the Division of Sanitary Sewers at least 7 days before the warranty period ends;
 - c. reduce the Performance/Warranty Surety in accordance with Appendix E after the Developer makes all the repairs; and
 - d. call the surety and make the necessary repairs if the Developer does not make the repairs within the time frame listed above.

RESIDENTIAL AND COMMERCIAL/INDUSTRIAL BUILDING CONSTRUCTION

Introduction

These procedures shall apply to construction on vacant lots recorded after this manual is adopted, and on vacant recorded lots that exist when this manual is adopted. The procedures describe the interaction of the Division of Engineering, Division of Building Inspection in the Department of Public Safety, and the Builders. The Builder is the individual or company who obtains the building permit from the Division of Building Inspection. The Developer and Engineer have no role during home building other than to complete the construction of the infrastructure.

Developers that are subdividing land must construct the infrastructure and record the lots before the Division of Building Inspection issues building permits for homes or commercial/industrial structures.

Developers that are not subdividing land may obtain a building permit while constructing the infrastructure in accordance with the Improvement Plans accepted by the Division of Engineering. However, the construction of the infrastructure must reach substantial completion before the Division of Building Inspection issues a certificate of occupancy.

Builder Responsibilities

1. Inspect the lot before purchasing it to ensure that there are no covered manholes, damaged curbs, damaged sidewalks, or other damaged infrastructure on the lot that needs to be repaired by the Developer, utility company, or another party. The Builder shall be responsible for repairing any damaged infrastructure that exists on the lot when the Builder purchases it. Any verbal or written agreements between the Builder and another party, such as a Developer, for repairing damaged infrastructure shall not relieve the Builder of the responsibility to make the repairs if the other party fails to make the repairs.

2. Obtain from the Division of Engineering the Composite Drainage Plan (see definitions) for the subdivision or commercial/industrial development prepared by the Developer's Engineer and included in the Record Drawings.
3. Submit a drainage plan for the lot as part of the application for a building permit. The drainage plan shall show the following information:
 - a. surface drainage easements on the lot;
 - b. sanitary sewers and manholes on the lot and the elevation of the manhole lids;
 - c. location of proposed grease traps for food preparation facilities such as restaurants;
 - d. non-buildable areas on the lot as shown on the Composite Drainage Plan prepared by the Developer's Engineer;
 - e. storm sewers and manholes on the lot;
 - f. surface inlets, curb inlets, and constructed channels on the lot;
 - g. flow arrows that indicate the direction of surface drainage through each surface drainage easement;
 - h. flow arrows that indicate the direction of proposed surface drainage away from the building line to the surface drainage easement, surface inlet, constructed channel, or curb inlet;
 - i. the Flood Protection Elevation as shown on the Composite Drainage Plan and plat prepared by the Developer's Engineer;

- j. for lots having a Flood Protection Elevation
 - the elevation of the proposed lowest floor that is above ground level, including the basement floor if it is above ground level on the side facing the floodplain;
 - the elevation of proposed openings to basements or crawl spaces, such as window sills, foundation vents, crawl space entrances, and the top landing of outside stairways leading to basements;
 - k. building setbacks shown on the plat;
 - l. the location and elevation of the nearest downstream sanitary manhole lid;
4. If the structure will be adjacent to or in a floodplain, construct the home or commercial/industrial structure in accordance with Article 19 of the Zoning Ordinance entitled Floodplain Conservation and Protection.
5. Coordinate with the plumber and state plumbing inspector to construct the home or commercial/industrial structure as follows:
- a. For structures with a concrete slab floor (and without a basement), the top of slab elevation shall be at least 1 foot above the nearest downstream manhole lid elevation.
 - b. For structures with a crawl space, the lowest floor elevation shall be at least 1 foot above the nearest downstream manhole lid elevation.
 - c. For structures with a basement (including split foyer residential housing) having plumbing fixtures in the basement that include, but not limited to, a shower, washing machine, toilet, bathtub, sink, or floor drain, then:
 - the lowest floor that is not a basement shall be at an elevation at least 1 foot above the nearest downstream manhole lid elevation.

- the basement floor elevation shall be at least 1' above the nearest downstream manhole lid elevation, or else the plumbing fixtures in the basement shall discharge through a sewage pump to the house gravity sewer at an elevation at least 1' above the nearest downstream manhole lid. The installation of the pump shall be in accordance with the state plumbing code.
6. Notify the Division of Engineering when the plumber proposes to connect the lateral to the LFUCG sanitary sewer system, and leave the connection uncovered until the Division of Engineering inspects it.
 7. Construct and maintain erosion controls on the lot in accordance with the requirements of the building permit issued by the LFUCG Division of Building Inspection.
 8. Ensure that manholes are not covered, damaged, or filled during construction. The Builder shall obtain approval from the Division of Engineering before raising or lowering a manhole lid and frame.
 9. Ensure that the final grading on the lot does not fill or excavate the drainage easement, or otherwise alter the drainage pattern on the lot.
 10. Repair curbs, sidewalks, and other infrastructure damaged by the Builder.
 11. Inspect the work of utility companies on the lot to ensure that they repair curbs, sidewalks, or other infrastructure they damage. However, the Builder shall be ultimately responsible for repairing any damages that the utility company fails to repair.
 12. Ensure that other parties, such as building supply companies, repair curbs, sidewalks, or other infrastructure they damage while delivering materials. However, the Builder shall be ultimately responsible for repairing any damages that the other party fails to repair.

13. For lots with a Flood Protection Elevation, submit to the Division of Building Inspection a certification from Registered Land Surveyor stating that
 - a. the lowest floor elevation, including the basement floor if it is above ground level on the side facing the floodplain, is at or above the Flood Protection Elevation.
 - b. the lowest elevation of openings to the structure, such as window sills, foundation vents, crawl space entrances, and the top landing of outside stairways leading to basements, is at or above the Flood Protection Elevation;
14. Notify the Division of Engineering in writing when construction is complete and schedule an on-site meeting with the Division of Engineering to inspect the lot. The Division of Engineering shall meet with the Builder within 5 working days of being notified that the construction is complete.

Division of Building Inspection Responsibilities

1. Issue building permits that include the erosion and sediment control requirements for the builder.
2. Issue certificates of occupancy after receiving the certification from a registered land surveyor stating that
 - a. the elevation of the lowest floor, including basements, that is above ground level is at or above the flood protection elevation shown on the plat and Composite Drainage Plan, and
 - b. the lowest elevation of openings to the structure, such as window sills, foundation vents, crawl space entrances, and the top landing of outside stairways leading to basements, is at or above the flood protection elevation shown on the plat and Composite Drainage Plan.

3. Provide a copy of the lot drainage plan to the Division of Engineering.

Division of Engineering Responsibilities

1. Inspect every two weeks the erosion controls constructed by the Builder and notify the Builder in writing to correct observed erosion problems within 2 working days.
2. Ensure that the plumber makes the proper connection to the LFUCG sanitary sewer service fitting that was constructed by the Developer's Contractor. The Division of Engineering shall notify plumbers in writing to repair improper connections within 5 working days. Plumbers who fail to make repairs shall be subject to the enforcement actions described in this manual.
3. Coordinate with the state plumbing inspector the inspection of sewer pipe construction, including service laterals.
4. Review residential lot drainage plans submitted by the Builder and work with the Builder to resolve any problems that may occur during construction.
5. Inspect the installation of grease traps for food preparation facilities such as restaurants.
6. Conduct a final inspection of the lot within 5 working days after the Builder notifies them in writing that the construction is complete and final grading is complete. The final inspection shall be conducted as follows:
 - a. Inspect the lot for covered manholes and notify the Builder in writing to uncover manholes within 10 working days.
 - b. Inspect the lot to confirm compliance with the lot drainage plan, and notify the Builder in writing to correct any observed drainage problems within 10 working days.

- c. Inspect for damaged curbs and sidewalks and notify the Builder in writing to make necessary repairs within 10 working days.
- d. Inspect for erosion problems on the lot and notify the Builder in writing to correct the problem within 10 working days.
- e. Inspect for other damaged infrastructure on the lot and notify the Builder to repair the infrastructure within 10 working days.
- f. Complete the Lot Inspection Checklist in Appendix H.

Enforcement

Certain staff in the Divisions of Engineering and Sanitary Sewers shall have the authority to issue written citations for violations of specific provisions of the Zoning Ordinance, Subdivision Regulations, and the Code of Ordinances. Examples of the types of violations which may be cited are:

- Damaged curbs and sidewalks
- Covered manholes
- Alteration of the surface drainage
- Unauthorized fill in the floodplain
- Lack of erosion and sediment control
- Improper plumber taps
- Improper discharge to the stormwater or sanitary sewer system
- Other damage to the infrastructure

It is intended that the Infrastructure Administrative Hearing Board will be used as the primary means to achieve compliance. This five member citizen board has the authority to impose fines for violations and those fines increase for repeated violations during any twelve-month period. Violations that are not corrected within the specified time-period may be abated by the LFUCG, with the cost of the abatement recoverable through liens on the violator's property.

In addition, the LFUCG reserves the authority to cite the violator to District Court, to seek a restraining order or injunctive relief, to order the stoppage of work, or to order other action as necessary to correct a violation. Further information concerning enforcement may be found in the Code of Ordinances, the Zoning Ordinance and the Subdivision Regulations.

MAINTENANCE RESPONSIBILITIES

The following maintenance responsibilities apply to infrastructure constructed after this manual is adopted.

Roads

The LFUCG shall maintain all roads after the final surface course of pavement has been applied, unless the road is identified as an access easement or private road. For the purposes of maintenance, roads shall not include sidewalks and curbs which are the responsibility of the property owner to maintain.

Sanitary Sewer Facilities

The LFUCG shall own and maintain all pump stations. The LFUCG shall maintain all collector sewers on residential and commercial/industrial property. Collector sewers are sewers that receive flow from laterals and therefore are connected to a manhole on each end. Laterals are sewers that carry flow from a building, or the building cleanout, to the collector.

The LFUCG will not maintain laterals. The LFUCG will also not maintain private sanitary sewer collection and treatment systems.

Stormwater Facilities

The LFUCG shall own and maintain all detention ponds, extended detention ponds, wet ponds, infiltration basins, and constructed wetlands in new single family residential and two family residential developments. In new multifamily developments, such facilities shall be owned and maintained by the LFUCG if they are on a separate lot with access to a public street. All other property owners shall own and maintain stormwater best management practices on their property. The maintenance requirements are contained in the Stormwater Manual.

The LFUCG shall be responsible for maintaining the major structural items in the public drainage system easement. These items shall include pipes, paved channels, and headwalls. In residential areas, minor maintenance like mowing shall be the responsibility of the property

owner. For commercial, industrial, and high density residential areas, the property owner shall be responsible for all maintenance.

Property owners shall not construct anything in the public drainage system, including the waters and post-development floodplains of Fayette County adjoining their property, that will impede the flow of water.

**APPENDIX A – INFRASTRUCTURE DEVELOPMENT AGREEMENT
LOCATED ON THE DIVISION OF ENGINEERING WEBSITE**

APPENDIX B – MEDIATION PROCESS

APPENDIX B

Mediation Process

Purpose

The following procedures are for mediating disputes during the review of improvement plans and during construction. The term “applicant” refers to a Developer, Developer’s Engineer, or Contractor who wishes to file a formal request for mediation in accordance with the procedures described below.

Division of Engineering Staff Responsibility

If there is a dispute with the applicant, the Division of Engineering staff involved in the dispute shall prepare a written statement of the dispute and forward it to the New Development Section Manager. The statement shall describe the Division of Engineering staff position along with supporting references in the Subdivision Regulations, Zoning Ordinance, Technical Manuals, or Procedures Manual.

Applicant Responsibilities

The applicant shall prepare a written statement of the dispute and forward it to the New Development Section Manager. The statement shall describe the applicant’s position along with supporting references in the Subdivision Regulations, Zoning Ordinance, Technical Manuals, or Procedures Manual.

The New Development Section Manager shall respond with a written decision within 5 working days of receiving the written statement from the applicant. The applicant shall respond in writing that he agrees or disagrees with that decision.

If the dispute cannot be resolved with the New Development Section Manager and is forwarded to the Mediation Committee, the applicant may make a presentation to the Mediation Committee.

New Development Section Manager Responsibilities

The New Development Section Manager shall review any written disputes submitted by the Division of Engineering staff and applicant and make a decision. He shall inform the applicant in writing of this decision along with supporting references in the Subdivision Regulations, Zoning Ordinance, Technical Manuals, or Procedures Manual. If the applicant does not agree with the decision, the Section Manager shall request a decision from the Mediation Committee. The Section Manager shall forward to the committee a copy of his written decision along with the written positions of the Division of Engineering staff and the applicant.

Mediation Committee

The mediation committee shall be made up of one representative from the following:

1. Department of Public Works
2. Planning Commission
3. Urban County Council
4. Licensed Professional Engineer in Private Practice appointed by the Kentucky Society of Professional Engineers
5. Home Builders Association of Lexington

Each group listed above shall choose their own representative.

The committee shall meet within 10 working days of receiving the request from the New Development Section Manager. The committee may request additional information from the New Development Section Manager or the applicant. The committee shall make a written recommendation, within 10 working days after meeting, to the Director of the Division of Engineering that includes the following:

- A brief statement of the dispute
- A summary of the Division of Engineering staff's original position
- A summary of the applicant's original position
- A copy of the Division of Engineering Section Manager's decision

- The reasons for the committee's decision
- Supporting documentation
- A draft letter to the applicant stating the decision of the committee

The Committee's decision shall be by majority vote.

The committee will meet bi-weekly to review disputes. Additional meetings may be held if necessary.

Director of the Division of Engineering Responsibilities

The Director of the Division of Engineering shall review the Mediation Committee's recommendation and shall either approve it, refer it back to the committee for further review, or overrule it within 10 working days.

If he approves it, he shall sign the letter to the applicant prepared by the Mediation Committee stating the decision. Copies of the letter shall be sent to the Commissioner of the Department of Public Works and the members of the Mediation Committee.

If he refers it back to the Mediation Committee for additional review, he shall make a written statement of his reasons for doing so along with a list of issues for the committee to address.

If he overrules the decision of the Mediation Committee, he shall inform the applicant in writing of his decision and send copies to the Commissioner of the Department of Public Works and the members of the Mediation Committee.

Final Appeals

If the applicant wishes to appeal the decision of the Director of the Division of Engineering, he may send a written appeal to the Commissioner of the Department of Public Works. The Commissioner may review the appeal with the Director of Division of Engineering and/or the Mediation Committee before deciding, or he may refuse to review the appeal. In all cases of an appeal to the Commissioner, the decision shall be in writing with copies to the Director of the Division of Engineering and the Mediation Committee.

**APPENDIX C – IMPROVEMENT PLAN SUBMITTAL CHECKLIST AND
COMPLIANCE STATEMENT**

IMPROVEMENT PLAN SUBMITTAL CHECKLIST

The items below shall be submitted to the Division of Engineering.

1. Plans stamped and signed by a Licensed Professional Engineer employed by the engineering firm that signed the Infrastructure Development Agreement.
2. Compliance statement signed by the Developer and Engineer.
3. Certified Preliminary Subdivision/Development Plan.
4. Grading, Erosion, and Sediment Control Plan.
5. Street Plans and Profiles.
6. Pavement Design.
7. Storm sewer and sanitary sewer plans and profiles.
8. Storm sewer, inlet spacing, culvert, and constructed channel design calculations.
9. Stormwater best management practices plans, cross sections, and design calculations.
10. Sanitary sewer design calculations.
11. Pump station/force main design calculations.
12. Geotechnical Report.
13. Construction Specifications.
14. Composite Drainage Plan.
15. Structural drawings and details (bridges, box culverts, retaining walls, etc.).
16. Post development floodplain and supporting analyses.
17. Lists of permits, prepared by the Engineer, that will be obtained by the Developer or Engineer.
18. Offsite easements or property notification.

Items 1-4 shall be submitted if a Grading Permit is requested separate from the Improvement Plans.

Improvement Plan Compliance Statement.

The Compliance Statement is located on the Division of Engineering website.

APPENDIX D – CERTIFICATE OF SUBSTANTIAL COMPLETION

CERTIFICATE OF SUBSTANTIAL COMPLETION

DATE OF ISSUANCE _____

DEVELOPER _____

Contract: _____

Project: _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To Lexington-Fayette Urban County Government

And To _____

DEVELOPER

The Work to which this Certificate applies has been inspected by the Engineer (through full-time representation as defined in the Infrastructure Development Agreement), and that Work is hereby declared to be substantially complete and in accordance with the Contract Documents.

DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of DEVELOPER to complete all the Work in accordance with the Contract Documents.

The responsibilities between LFUCG and DEVELOPER for security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees shall be as follows:

LFUCG: _____

DEVELOPER: _____

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of DEVELOPER'S obligation to complete the Work in accordance with the Contract Documents.

Executed by ENGINEER on _____
Date

ENGINEER

By: _____
(Authorized Signature)

DEVELOPER accepts this Certificate of Substantial Completion on _____
Date

DEVELOPER

By: _____
(Authorized Signature)

LFUCG accepts this Certificate of Substantial Completion on _____
Date

By: _____
(Authorized Signature)

Substantial Completion

Substantial Completion shall mean the time at which the work has progressed to the point where, in the opinion of Engineer, the work is sufficiently complete, in accordance with the Improvement Plans and Technical Manuals, so that the work can be utilized for the purposes for which it is intended. This includes the following:

Roads

- granular base, tack coat, and bituminous pavement (except the 1-inch surface course)
- curb and gutter
- concrete pavement

Sanitary Sewers

- Pipes, manholes, and pump stations shall be installed and shall have passed all tests required by the Sanitary Sewer/Pumping Station Manual and the Construction Inspection Manual

Stormwater Facilities

- Pipes
- Manholes
- Curb inlets and surface inlets
- Headwalls and stilling basins, along with any fencing required
- Constructed channels with channel lining, including concrete where required
- Detention ponds, including the principal spillway and emergency spillway
- Erosion Control and Sediment Control

The stormwater system must be completed to the point that it functions as designed on the Improvement Plans. Individual components may be included in the Performance/Warranty Surety if they do not materially affect the performance of the system.

**APPENDIX E – PROCEDURES FOR COMPUTING PERFORMANCE/WARRANTY
SURETY**

PROCEDURES FOR COMPUTING PERFORMANCE/WARRANTY SURETY

The Performance/Warranty Surety shall be sufficient to complete all construction items identified by the Engineer on the punch list submitted with the certificate of substantial completion, and to repair infrastructure due to improper workmanship or defective materials during the warranty periods.

Warranty Period

The warranty period is the time period during which the Developer guarantees the work to be free from defective materials or improper workmanship.

The warranty periods for roads dedicated to the LFUCG shall be as follows:

- a. For the base courses, the warranty period shall begin at the time of substantial completion and extend until the application of the final course of asphalt, but in no case shall the warranty period be less than one year.
- b. For the final course of asphalt, the warranty period shall be 1 year from when the final surface course is applied.

For development projects that involve recording a plat, the warranty period for sanitary sewer facilities shall be 3 years from the date of plat recording, and the warranty period for stormwater facilities shall be 1 year from the date of plat recording.

For development projects that do not involve a plat, the warranty period for sanitary sewer facilities shall be 3 years from the date of substantial completion, and the warranty period for stormwater facilities shall be 1 year from the date of substantial completion.

Surety Amount

The surety shall be computed as follows:

100% of the punch list items, plus

10% of the cost estimate of the completed project infrastructure, including roads, sanitary sewer facilities, and stormwater facilities, plus

- 20% of the sum of the above items to cover contingencies

The Engineer shall compute the surety based on the quantities of materials and the unit costs determined at the Partnering Workshop.

Punch List Items

The following items include, but are not limited to, the items that shall appear on the punch list if they are not constructed before substantial completion:

- Constructing the final surface course of pavement
- Seeding and mulching areas of disturbed land
- Conducting maintenance on ponds, channels, and streams
- Constructing sidewalks
- Constructing handicap ramps
- Mortaring pipes in headwalls
- Adjusting manholes
- Cleaning the storm sewer system
- Adding steps, mortaring steps, and grouting lift lugs in manholes
- Repairing or replacing curbs that are damaged by the infrastructure construction. This does not include damage caused by Builders after the date of substantial completion. The builders shall be responsible for repairing curbs that they damage.
- Removing erosion and sediment controls or converting them to permanent best management practices

- Constructing trash racks
- Constructing fences between agricultural land and the project site

The items above shall be completed in accordance with the schedule submitted along with the certificate of substantial completion. All items shall be completed within 1 year except the final surface course of pavement, sidewalks, and removal/conversion of sediment ponds.

Total Project Cost Estimate

The cost estimate of the total project infrastructure shall show the unit cost items and the actual quantities of construction for roads, sanitary sewer facilities, and storm water facilities. For the purpose of establishing the amount of the surety, the total project cost shall not include such items as site excavation, rock removal, trench rock for the sanitary sewer, testing of the sanitary sewers, turn lanes constructed on state right-of-way or other similar items.

Reduction in Surety for Projects That Require Plat Recording

The surety may be reduced as follows:

First Reduction – The Division of Engineering will conduct an inspection 30 days after the plat is recorded. At this time, the surety may be reduced by an amount equal to the punch list items that have been completed.

Second Reduction – One year after the plat is recorded, the surety may be reduced by an amount equal to the punch list items that have been completed, and reduced by 10% of the total cost of the stormwater facilities.

Third Reduction – Two years after the plat is recorded, the surety may be reduced by an amount equal to the punch list items that have been completed. If the final surface course has been applied for at least one year, then the surety may also be reduced by an amount equal to 10% of the total cost of the final course of asphalt.

Fourth Reduction – Three years after the plat is recorded, the surety may be reduced by an amount equal to the punch list items that have been completed, and reduced by 10% of the total cost of the sanitary sewer facilities. If the final surface course has been applied for at least one year, then the surety may also be reduced by an amount equal to 10% of the total cost of the final course of asphalt (if it has not been previously reduced).

Reduction in Surety for Projects That Do Not Involve Plat Recording

The surety may be reduced as follows:

First Reduction – The Division of Engineering will conduct an inspection 30 days after the date of substantial completion. At this time, the surety may be reduced by an amount equal to the punch list items that have been completed.

Second Reduction – One year after the date of substantial completion, the surety may be reduced by an amount equal to the punch list items that have been completed, and reduced by 10% of the total cost of the stormwater facilities.

Third Reduction – Two years after the date of substantial completion, the surety may be reduced by an amount equal to the punch list items that have been completed. If the final surface course has been applied for at least one year, then the surety may also be reduced by an amount equal to 10% of the total cost of the final course of asphalt.

Fourth Reduction – Three years after the date of substantial completion, the surety may be reduced by an amount equal to the punch list items that have been completed, and reduced by 10% of the total cost of the sanitary sewer facilities. If the final surface course has been applied for at least one year, then the surety may also be reduced by an amount equal to 10% of the total cost of the final course of asphalt (if it has not been previously reduced).

**APPENDIX F – COMMERCIAL/INDUSTRIAL AGREEMENT TO MAINTAIN
STORMWATER MANAGEMENT FACILITIES**

**Commercial, Industrial Agreement to Maintain
Stormwater Management Facilities**

The upkeep and maintenance of stormwater management facilities is essential to the protection of aquatic resources. All property owners are expected to conduct business in a manner that promotes resource protection. This Agreement contains specific provisions with respect to maintenance of stormwater management facilities.

LEGAL DESCRIPTION

Whereas, Business Name, has constructed stormwater management facilities on the property described above and whereas the goals of the LFUCG are to ensure the protection and enhancement of Fayette County's aquatic resources, the LFUCG and Business Name hereby enter into this Agreement. The responsibilities of each party to this Agreement are identified below.

BUSINESS NAME HEREBY:

1. Agrees to implement the stormwater management facility maintenance program included herein.
2. Agrees to maintain the stormwater management facilities in good working condition, acceptable to the LFUCG, so that they are performing their design functions.
3. Grants permission to the LFUCG, its authorized agents and employees, to enter upon the property, and to inspect the stormwater management facilities whenever the LFUCG deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When deficiencies are noted, the LFUCG shall give the Business Name, its successors and assigns, copies of the inspection report with findings and evaluations.
4. Agrees that in the event the Business Name, its successors and assigns, fails to maintain the stormwater management facilities in good working condition acceptable to the LFUCG, the LFUCG may enter upon the property and take whatever steps it

deems necessary to maintain said stormwater management facilities and to charge the costs of the repairs to the Business Name, its successors and assigns. This provision shall not be construed to allow the LFUCG to erect any structure of a permanent nature on the land of the Business Name, outside of an easement belonging to the LFUCG. It is expressly understood and agreed that the LFUCG is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any obligation on the LFUCG.

5. Agrees that in the event the LFUCG, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like on account of the Business Name or its successors and assigns, Business Name shall reimburse the LFUCG upon demand, within 30 days of receipt thereof for all costs incurred by the LFUCG hereunder. If not paid within such 30 day period, the LFUCG shall have a lien against the property in the amount of such costs, plus interest at the Judgement Rate, and may enforce same in the same manner as a lien for real property taxes may be enforced.
6. Agrees to indemnify and hold harmless the LFUCG and its agents and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the LFUCG for the construction, presence, existence or maintenance of the stormwater management facilities by the Business Name, its successors, and assigns.

In the event a claim is asserted against the LFUCG, its agents or employees, the LFUCG shall promptly notify the Business Name, their successors and assigns, and they shall defend, at their own expense, any suit based on such claim. If any judgement or claims against the LFUCG, its agents or employees shall be allowed, the Business Name, its successors, and assigns shall pay all costs and expenses in connection herewith.

7. Grants permission to the LFUCG, its authorized agents and employees, to enter upon the property, and to install, operate, and maintain equipment to monitor the flow rate and pollutant content of the input flow, the effluent, and at intermediate points in the BMP. The Business Name further agrees to design and construct the facility to provide access for monitoring.
8. Agrees to maintain a record (in the form of a logbook) of steps taken to implement the programs referenced in (1) and (2) above. The logbook shall be available for inspection by the LFUCG staff at Business Address during normal business hours. The logbook shall catalog the action taken, who took it, when the action was done, how it was done, and any problems encountered or follow-up actions recommended. Maintenance items ("problems") listed in Attachment "A" shall be inspected on a monthly or more frequent basis as necessary.
9. Submit an annual report to the LFUCG regarding implementation of the programs referenced in (1) and (2) above. The report must be submitted on or before January 30 of each calendar year and shall contain, at a minimum, the following items:

- A. Name, address, and telephone number of the business, the person, or the firm responsible for plan implementation, and the person completing the report.
- B. Time period covered by the report.
- C. A chronological summary of activities conducted to implement the program referenced in (1) and (2) above. A photocopy of the applicable sections of the logbook, with any additional explanation needed, shall normally suffice. For any activities conducted by paid parties not affiliated with Business Name include a copy of the invoice for services.
- D. An outline of planned activities for the next year.

APPENDIX G – PLAT CHECKLIST

PLAT CHECKLIST

Plat Name _____

Final (Y/N) _____ Amended (Y/N) _____ # _____

Engineer's Stamp (Y/N) _____ Land Surveyor Stamp (Y/N) _____

Engineer's Certification and Signature _____

Owner's Certification and Signature _____ Urban County Engineer's Certification _____

Zone _____ Length of Streets _____ Number of Lots _____

Bonded (Y/N) _____

OPSS Fees Due? _____

Street Cross Sections (Y/N) _____

Cul-de-sac Detail (Y/N) _____

As Built:	Sanitary:	On site	Off site
	Street:	On site	Off site
	Storm:	On site	Off site

Easements: On site _____ Off site _____

Easement Maintenance Note (Y/N) _____ Detention Maintenance Note (Y/N) _____

Floodplain Shown(Y/N) _____ Flood Protection Elevations (Y/N) _____

Alluvial Soils Shown (Y/N) _____

Building Setback of 25' from the Floodplain Shown (Y/N) _____

Drainage Easements Shown (Y/N) _____

Vegetative Buffer Strip Shown (Y/N) _____

Monument Description Complete (Y/N) _____ Reference Meridian Identified (Y/N) _____

Sinkhole Non-Building Area _____ Date of Survey and Signature Date (Y/N) _____

Unadjusted Error of Closure (Y/N) _____ Adjustment Statement (Y/N) _____

Bearings and Distances: On Plat _____ Accuracy _____ Survey Class A (Y/N) _____

Have the requirements from the Improvement Plans been placed on the plat? (Y/N) _____

Comments: _____

APPENDIX H – LOT INSPECTION CHECKLIST

LOT INSPECTION CHECKLIST

This checklist shall be completed and signed by a Division of Engineering inspector when the construction of the house or commercial/industrial structure is completed and final grading is completed.

Name of Development _____ Unit _____

Address of Property _____

Name of Builder _____ Phone Number _____

Name of Property Owner _____ Phone Number _____

MANHOLES

1. Does the plat or record drawings show sanitary or storm sewer manholes on the lot?
Yes____ No____
2. If yes, how many? ____
3. Are any manhole lids buried? Yes____ No____ If so, indicate which ones are buried.

CURBS

1. Are the curbs damaged? Yes____ No____
2. If yes, identify the location and length of the damaged curb.

SIDEWALKS

1. Is the sidewalk damaged?
2. If yes, identify the location and length of the damaged sidewalk.

EROSION CONTROL

1. Has sod or seed/mulch been applied? Yes____ No____
2. If not, is erosion control provided? Yes____ No____

DRAINAGE EASEMENTS

1. Has the builder filled in or excavated the drainage easement? Yes____ No____
2. If yes, will this cause a drainage problem on the lot or adjacent lots? Yes____ No____
3. If yes, describe the problem.

Note: The back of this page shall be used for any sketches that are needed.

Signature of Inspector _____ Date _____