

CHAPTER 7: SUBDIVISION CONSTRUCTION, INSPECTION AND BONDING

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7.00 CONSTRUCTION

- A. General:** Improvements required or regulated by this Manual shall be constructed in accordance with approved engineering plans and specifications, the requirements of this Manual, City regulations and any applicable regulations of outside agencies.
- B. Plan Modification:** To modify the size, type, quality, quantity or location of improvements required or regulated by these regulations as shown on the approved construction plans, the subdivider's engineer shall contact the City Engineer for approval prior to proceeding with installation of the modified improvement. Said approval may be verbal or written. In any case, the subdivider's engineer shall submit, within one week, a brief written memorandum of understanding that briefly describes the modification and approval.
- C. Notice of Work:** The developer shall notify the City Engineer at least one day prior to the beginning of any regulated work. If the developer fails to comply with this requirement, the City Engineer may take any steps necessary to ensure that the work performed without the knowledge of the City Engineer complies with approved engineering plans and specifications, these regulations and other applicable ordinances of the City.
- D. Commencement of Construction:** Construction of subdivision improvements required or regulated by this Manual shall not commence until the City Engineer has approved, in writing, engineering plans and specifications for said improvements, hydrologic design studies, if required and the subsidiary drainage plat together with all permits that require the approval of the City Engineer. Additionally, review of construction plans or start of construction of improvements shall not commence until the formal approval of the Preliminary Plat is complete. The City will not be responsible for extra costs or penalties incurred when construction activity is undertaken after receiving City approval, but prior to obtaining all other permits.
- E. Time Period for Construction:** The developer shall complete construction of all subdivision improvements in accordance with plans and specifications approved by the City Engineer within two years of the date the City approves the final plat of the subdivision. As outlined in Section 31-422 of the Subdivision Regulations, at the owner's request, the City Engineer may extend the time period to complete the construction.

7.01 INSPECTION AND TESTING OF IMPROVEMENTS

- A. Observer Requirements:** An experienced observer, who is approved by the City Engineer, shall observe construction of all public improvements. The construction observer shall have at least one year's experience assisting in the inspection of public improvements. This observer shall be under the direction of the developer's engineer. The observer shall be present 100% of the time during the construction of major infrastructure items, including but not limited to:

 - 1. All pavements, sidewalks, storm sewers, sanitary sewers, detention basin inlet and outlet control structures.
 - 2. Any bridge or culvert.
 - 3. Any traffic signal or streetlight system.

- B. Testing Requirements:** Tests required by this Manual shall be performed solely by independent testing laboratories or the developer's engineer, and shall be performed at the developer's expense. The developer shall notify the City Engineer of failing tests immediately. All test results shall be delivered to the City Engineer together with the certification of the completion of public improvements (see Standard Attachment 7.01). No test results shall be withheld from the City Engineer, i.e. all failing tests shall be reported including corrective action taken and follow up passing tests.

7.02 APPROVAL OF IMPROVEMENTS

- A. Approval of Improvements:** Approval of improvements is a written notification by the City Engineer that indicates infrastructure meets the requirements of the City construction standards. The only purpose of an *approval* of infrastructure is to allow a reduction in the bond dollar amount. Approval of infrastructure does not mean *acceptance* and transfer of ownership of infrastructure.
1. *Approving All of the Improvements:* If the City Engineer finds that all of the pavements, sanitary sewer, storm sewer, required grading and drainage improvements and all other required improvements for a subdivision have been constructed in accordance with the requirements of this Manual and all required certifications, test results and as-built plans have been submitted in accordance with the requirements of this Manual, the City Engineer shall issue a written notice of the approval of all these improvements on behalf of the City (see Appendix C).
 2. *Approving Part of the Improvements:* At the request of the developer, if the City Engineer finds that all the required improvements in a distinct contiguous portion of the subdivision or over a complete infrastructure system have been constructed in accordance with this Manual, and all required certifications, test results and as-built plans have been submitted in accordance with the requirements of this Manual, the City Engineer shall issue a written notice of the approval of all these improvements on behalf of the City (see Appendix C).
- B. Required Submittals:** Prerequisites for approval include delivery of required engineer's certification together with testing results and as-built drawings and the correction of any deficiencies (punch list items) as noted by the City Engineer. Upon completion of construction of improvements regulated by this Manual, the developer's engineer shall deliver to the City Engineer:
1. All required test data, as indicated in Attachment 7.01.
 2. Two complete sets of "as-built" plans, each sheet of which is clearly marked "as-built" in the lower right corner. "As-built" plans shall depict actual construction on the date of submittal of the plans.

3. The following signed and sealed "Engineer's Certificate."

ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF CHAMPAIGN) SS

I, _____, being a Registered Professional Engineer in the State of Illinois, registration number _____, do hereby certify that the _____ (the project) was, to the best of my knowledge, constructed in accordance with the Engineering Plans and Specifications and Change Orders approved by the City Engineer, City of Champaign, Champaign, Illinois.

(Seal)

I further certify that all construction operations were observed by me or someone under my supervision.

Signed and sealed this _____ day of _____, 20 __.

Signature

4. With the approval of the City Engineer, said certificate may certify to the completion of a portion of the improvements with specifically stated exceptions for which a bond shall be filed.
- C. **Deficient Construction:** The City Engineer is authorized to reject any construction, which fails to conform to the approved plans, specifications or the requirements of this Manual.

7.03 CITY ENGINEER'S ACCEPTANCE OF ALL IMPROVEMENTS

- A. **Acceptance of Improvements:** Acceptance of improvements is a written notification by the City Engineer that indicates all required improvements meet the requirements of the City construction standards and that all required certifications, testing results and as-built drawings have been submitted. The **acceptance** of the required improvements results in the start of the one-year maintenance period (see Section 7.06 below). Acceptance of infrastructure means that the ownership of the public infrastructure is transferred from the developer to the City.
- B. **Developer's Responsibility:** Upon completion of construction of all subdivision improvements, the developer shall seek final acceptance of the improvements by the City.
- C. **City Engineer's Obligation:** The City Engineer shall issue a written notice of the acceptance of the improvements when he finds that all the requirements of this Manual and the Subdivision Regulations have been met. The form of this written notice shall be as approved by the City Attorney (see Appendix C).

7.04 DUTY TO MAINTAIN IMPROVEMENTS

The developer shall maintain the subdivision improvements, free from defects, for a period of one year after acceptance in writing of all the subdivision improvements by the City Engineer or after a later date mutually agreed upon by the City Engineer and the developer. The developer shall promptly correct any defect of which he has notice or which the City discovers, which occurs prior to one year from the date of the acceptance of all improvements. The City Engineer shall notify the owner of any defects discovered by the City, which occurred during this period and the developer shall promptly remedy the same. The time period for maintenance shall be one year in length with the following stipulations.

- A. The developer shall maintain **all subdivision improvements** free from defects for a period of one year after the date the City Engineer issues a written notice of acceptance of all the subdivision improvements, or one year after a date agreed upon by the City Engineer and developer. Maintenance in the context of “the maintenance period of the subdivision improvement performance bond” does not refer to routine maintenance (e.g. street cleaning, snow plowing, etc.) but rather the owner’s obligation to repair defects.
- B. If the City Engineer approves part but not all of the subdivision improvements, the developer must maintain free of defects the part approved, until the expiration of the maintenance period for all subdivision improvements.
- C. A defect which may be required to be repaired is any:
 - 1. Failure of a subdivision improvement to operate in conformance with these regulations during the maintenance period; or
 - 2. Any defect in a subdivision improvement which is discovered during the maintenance period; or
 - 3. Any incomplete and required public improvement.

7.05 SUBDIVISION IMPROVEMENT PERFORMANCE BOND REQUIREMENTS

- A. **General:** The developer shall execute a performance bond in favor of the City, which guarantees that all subdivision improvements required by these regulations be built by the developer shall be constructed and maintained as required in these regulations. The developer shall use the Performance Bond Form approved by the City Attorney (see template in Appendix C). The City Engineer may require payment of penalties, extended bonds or removal and replacement of substandard infrastructure.
- B. **Performance Bond Amount and Allowed Reductions:**
 - 1. The initial amount of the Subdivision Improvement Performance Bond shall be 100% of the estimated cost of construction as determined by the developer’s engineer and approved by the City Engineer. Upon approval, the initial amount may be reduced to 15% of the estimated cost of construction of all subdivision improvements approved by the City Engineer plus 100% of incomplete items.
 - 2. The amount of the Subdivision Improvement Performance Bond may be reduced a maximum of three times prior to acceptance of all required improvements.
 - 3. Each allowed reduction will be in the amount of the estimated cost of the part of the subdivision improvements that have been approved and are being considered for the particular reduction. All cost estimates shall be approved in writing by the

City Engineer. No reduction shall be less than 25% of the original amount of the bond. In no event shall the total bond value be less than 25% of the total estimated cost of construction of subdivision improvements until all improvements are approved.

4. Upon approval of all improvements, the developer may reduce the amount of the bond to 15% of the estimated cost of construction of all subdivision improvements, subject to the limitations of this chapter.
5. Upon request of the developer, and approval of the City Engineer, all bond reductions shall be accomplished by a written notice from the City Engineer to the developer or the developer's representative. The form of the written notice shall be the same as the notice for **approval** with the addition of a reduction table (see template in Appendix C).

C. Allowable Subdivision Improvement Performance Bond Security: The Subdivision Performance Bond is a legal document agreed to and signed by the developer or owner. The language included in the bond form defines the obligations of the owner. This bond in itself does not have any monetary value. An additional capital security shall be submitted together with the bond. The capital security shall be as required in Section 31-432 of the Subdivision Regulations. Templates forms for these securities are included in Appendix C.

D. Final Release of Performance Bond and Security Upon Acceptance of All Improvements:

1. *General:* Upon satisfactory completion of all required maintenance work on subdivision improvements required by these regulations and expiration of the maintenance period, and the request of the owner, the City Engineer shall release the Subdivision Improvement Performance Bond and its security in its entirety.
2. *Bond Release Process:* After approval of all of the subdivision improvements required in these regulations, the City Engineer together with the developer, and/or developer's engineer shall conduct a final inspection of the improvements regulated by this Manual. The City Engineer shall approve in writing all improvements that conform to the approved engineering plans / specifications and any other requirements of these regulations. The developer shall contact the City Engineer to request final inspection and bond release prior to the end of the one-year maintenance period.
3. *Release Form:* The release of any or all of the bond and its security shall be in writing on forms approved by the City Attorney and signed by the City Engineer (see template in Appendix C).

7.06 STANDARD ATTACHMENTS

Attachment 7.01 – Required Test Data

Required Test Data for Subdivision Certification and Acceptance:

(See individual chapters for testing requirements)

- A. Sanitary sewer infiltration/exfiltration tests are required by the IEPA including ground water elevation as necessary. Also, list lamping and mandrel results.
- B. Pavement Subgrade Moisture. Density with proctor results and stability—dynamic cone penetrometer (DCP) tests listing all location results. Failing subgrade tests shall be included, noting the remedial action and subsequent passing test results.
- C. Concrete and/or asphalt mix design information together with a packet that includes random sample copies of delivery tickets.
- D. Concrete slump and air content results per IDOT.
- E. Concrete cylinder break strengths per IDOT.
- F. Asphalt mix temperature, lift thicknesses and density tests.
- G. Pavement core thickness results.
- H. Compacted trench backfill moisture - density test results with corresponding proctor test.
- I. All test data shall include name of individual performing tests together with location, date, time and any other notable environmental conditions.
- J. All tests results shall be initialed as approved by the observer / inspector, printed on letterhead, dated and signed as "Checked by Illinois Professional Engineer _____."
- K. All pavement test procedures shall be in accordance with the IDOT "Procedures Manual for Hot Mix Asphalt & Portland Cement Concrete.