

# **CITY OF LAKELAND**

## **Engineering** **Standards** **Manual**

### **VOLUME 1: ADMINISTRATIVE**

Created: April 16, 2002  
Revised: May 14, 2007

TABLE OF CONTENTS

**VOLUME 1 ADMINISTRATIVE**

INTRODUCTION, VARIANCE TO STANDARDS, AND PREPARATION OF  
PERFORMANCE & MAINTENANCE GUARANTEES

**VOLUME 2 PUBLIC WORKS**

ROADWAY AND DRAINAGE STANDARDS FOR SUBDIVISIONS  
AND COMMERCIAL DEVELOPMENTS

**VOLUME 3 WATER OPERATIONS**

POLICIES, STANDARDS, AND SPECIFICATIONS FOR SUBDIVISIONS,  
EXTENSIONS, AND COMMERCIAL DEVELOPMENTS

**VOLUME 4 WASTEWATER OPERATIONS**

POLICIES, STANDARDS, AND SPECIFICATIONS FOR SUBDIVISIONS,  
EXTENSIONS, AND COMMERCIAL DEVELOPMENTS

**VOLUME 5 LAKELAND ELECTRIC**

POLICIES, STANDARDS, AND SPECIFICATIONS FOR SUBDIVISIONS,  
EXTENSIONS, AND COMMERCIAL DEVELOPMENTS

# Engineering Standards Manual

## VOLUME 1 ADMINISTRATIVE

<b>SECTION 1.</b>	<b><u>INTRODUCTION</u></b>	<b><u>REVISION DATE</u></b>
1-1	Title	6/13/2005
1-2	Authority	6/13/2005
1-3	Purpose	6/13/2005
1-4	Jurisdiction and Applicability	6/13/2005
1-5	Policy	6/13/2005
1-6	Enforcement	6/13/2005
1-7	Definitions	6/13/2005
1-8	Amendment of the Manual	6/13/2005
<b>SECTION 2.</b>	<b><u>VARIANCE TO STANDARDS</u></b>	
2-1	Variance to Standards (Platted/Unplatted Improvements)	6/13/2005
<b>SECTION 3.</b>	<b><u>PREPARATION OF PERFORMANCE &amp; MAINTENANCE GUARANTEES</u></b>	
3-1	Purpose	6/13/2005
3-2	Authority	6/13/2005
3-3	Performance and Maintenance Guarantees for Roadways, Roadway Drainage, and Utilities	6/13/2005
3-4	Documentation Required for Guarantees	6/13/2005
3-5	Cost Estimates for Performance and Maintenance Guarantees	6/13/2005
3-6	Release and Partial Release of Guarantees	6/13/2005
3-7	Exhibits and Samples for Guarantees	6/13/2005
3-8	Exhibit A – Performance Bond	6/13/2005
3-9	Exhibit B – Performance Letter of Credit	6/13/2005
3-10	Exhibit C – Maintenance Bond	6/13/2005
3-11	Exhibit D – Maintenance Letter of Credit	6/13/2005
3-12	Exhibit E – Guarantee Cost Estimate Form	6/13/2005
3-13	Exhibit F – Engineer’s Certificate – Subdivision Plan	6/13/2005
3-14	Exhibit G – Engineer’s Certificate – Commercial Site Plan	6/13/2005

# Engineering Standards Manual

## SECTION 1.

## INTRODUCTION

### 1-1 TITLE

This Manual shall be known as the City of Lakeland “Engineering Standards Manual”, herein referred to as the Manual.

### 1-2 AUTHORITY

This Manual has been prepared pursuant to the adoption of Ordinance No. 3175 effective February 5, 1990, as amended, passed, and certified by the City Commission for the City of Lakeland, Florida.

### 1-3 PURPOSE

The purpose of this Manual is to assist in the implementation of Ordinance No. 3174 Subdivision Regulations and Ordinance No. 3412 Land Development Regulations, as amended, which establish policies, standards, specifications, regulations, and procedures and for the development of infrastructure within the City limits and within those unincorporated areas served by the City-owned utilities. These regulations have been developed to guide in the development of such infrastructure and to promote the health, safety and welfare of the public served by those public and private facilities within the City limits and within the City’s utility service area. The infrastructure improvements addressed in this Manual are generally related, but are not limited to the following categories: Streets, Drainage, Stormwater Management Facilities, Wastewater, Refuse Collection, Potable Water Systems, and Electric Utilities.

The standards set forth in this Manual provide a basis for developing infrastructure improvements and providing minimum standards for their development. Where guidelines, design standards, and criteria given by reference to other manuals, they shall be considered as the requirements within the authority of this Manual. The standards provided in this Manual are in addition to the Land Development Regulations.

### 1-4 JURISDICTION AND APPLICABILITY

This Manual establishes standards for engineering design and construction within the City limits and also provides minimum engineering standards for the City of Lakeland owned facilities serving those unincorporated areas outside the City limits. Where a Developer executes an annexation agreement these Standards shall apply to the site where development is to occur. If the Standards set forth in this Manual conflict with Local, State, or Federal regulations, the regulation of the governing jurisdiction shall prevail. The provisions contained in this Manual shall apply to all work performed in public rights of way within the City, all work performed pursuant to an annexation agreement, and all work performed on City-owned facilities regardless of their location.

### 1-5 POLICY

When real property within the City limits is developed or redeveloped, the infrastructure facilities contained within said property or serving said property shall be constructed in accordance with the requirements set forth in this Manual.

When City-maintained utilities are extended to serve properties lying outside the City’s corporate limits, the utility extension shall be in compliance with the requirements set forth in this Manual.

# Engineering Standards Manual

## **1-6 ENFORCEMENT**

The City of Lakeland Departments of Public Works, Lakeland Electric, and Water Utilities, through their designated representatives, shall have the right to inspect the lands affected by this Manual and to issue “Notices To Comply” for violations.

The Lakeland City Commission has the right to seek appropriate injunctive relief for purposes of enforcing the terms of this Manual. Any person, firm or corporation, either individually or through its agents, employees, or independent Contractors, who violate the provisions of this Manual shall be subject to the penalties contained in ordinances and codes governing the City of Lakeland.

## **1-7 DEFINITIONS**

The definitions of the terms used in this Manual have the meanings respectively ascribed to them by common usage or specifically defined in those other publications identified by reference, except in those instances where the text clearly indicates a different meaning. The definitions or terms contained herein are not intended to alter definitions expressly specified in any other City of Lakeland Ordinance, Policy, Regulation or Code, but are provided for the purpose of making clear and distinct the intention of the language used in a specific Section of this Manual.

## **1-8 AMENDMENT OF THE MANUAL**

The City of Lakeland reserves the right to amend the contents of this Manual as required.

# Engineering Standards Manual

## SECTION 2.

## VARIANCE TO STANDARDS

### 2-1 VARIANCE TO STANDARDS PLATTED IMPROVEMENTS

During the course of preliminary review of the subdivision construction plans, if the Developer does not agree with the provisions or standards set forth in this Manual the Developer may seek a variance from these standards by appealing to the City of Lakeland Planning and Zoning Board.

The Planning and Zoning Board may grant a variance to the standards in new subdivision construction, prior to the approval of the final plat provided that in doing so, the intent of these standards is not violated. The Developer must demonstrate to the satisfaction of the Board that the proposed variance from the adopted standards will provide an equal or better end result and that enforcement of the standards would cause unnecessary, unusual or exceptional hardship. Any variance so granted shall be stated in writing both on the recorded plat and in the minutes of the Board with the reasons therefore.

Application for variance to the Planning & Zoning Board shall be submitted to the Director of Planning and Community Development.

The Public Works Director may approve minor deviations to the standards set forth in this Manual without requiring the Developer to seek a variance through the Planning and Zoning Board. This situation will only occur when the Director of Public Works determines that deviation from the standards is in the best interest of the City and the intent of these standards or the LDR's are not violated.

Application for variances concerning water or wastewater standards shall be directed to the Director of Water Utilities.

### 2-2 VARIANCE TO STANDARDS UNPLATTED IMPROVEMENTS

Any request to vary from the criteria set forth in this Manual and/or in the Lakeland City Code or Regulations for unplatted improvements will be considered by the appropriate City authority on a case by case basis. Such requests may be granted if it can be demonstrated that the proposal will not adversely affect the health, safety or welfare of the public and/or will not adversely affect adjacent properties.

# Engineering Standards Manual

## **SECTION 3. PREPARATION OF PERFORMANCE & MAINTENANCE GUARANTEES**

### **3-1 PURPOSE**

The purpose of this section is to provide guidelines for the preparation, submittal, and release of guarantees, for performance and maintenance of public and private improvements as defined under the following sections. These guarantees are deemed necessary for the health, safety, or welfare of the public and to guarantee to the City the completion and quality of materials and workmanship of such improvements.

This section is not intended as a set of codes, therefore future City Ordinance changes and Departmental policy revisions may dictate changes to certain guidelines contained herein.

### **3-2 AUTHORITY**

The authority for this Manual is the Lakeland Land Development Code and Florida Statutes, Chapters 163, 166, and 177 and City of Lakeland Charter.

### **3-3 PERFORMANCE AND MAINTENANCE GUARANTEES FOR ROADWAYS, ROADWAY DRAINAGE, AND UTILITIES**

#### **A. Performance Guarantee**

Performance guarantees are required according to the LDR's when publicly dedicated or private improvements are to be constructed within the City limits. Such guarantees shall not be released or expire without the written consent of the City. No Certificate of Occupancy or beneficial occupancy of any buildings shall take place until the subdivision is one hundred percent (100%) complete.

In all cases a performance guarantee shall be made prior to starting construction. A performance guarantee in the amount of twenty-five percent (25%) of the engineer's cost estimate of the approved infrastructure improvements will be required if construction is to commence **prior** to recording of the final plat. A performance guarantee in the amount of one-hundred ten percent (110%) of the engineer's cost estimate of the proposed infrastructure improvements will be required if construction is to commence **after** recording of the final plat. All guarantees shall be written in such a fashion and include language or an agreement that will allow the City to complete the project, or retain the right to assign the project to others for disposition or completion in case of default by the Developer. The City in no way is bound to complete the project by accepting the guarantee. Any form of surety satisfactory to the City Attorney may be provided to meet the requirements of the performance guarantee.

#### **B. Maintenance Guarantee**

When the roads, drainage system and/or utilities within a proposed subdivision are to be publicly maintained by the City, the Developer shall provide a maintenance guarantee in the amount of fifteen percent (15%) of the engineer's cost estimate for the publicly dedicated infrastructure. An acceptable maintenance guarantee must be provided prior to release of the performance guarantee. Where the roads, drainage systems and/or utilities within a subdivision are to be privately maintained, a maintenance guarantee will not be required. In the case where only certain infrastructure improvements are to be publicly maintained, the Developer will be required to furnish a maintenance guarantee only for those improvements that are to be publicly maintained.

## Engineering Standards Manual

This guarantee is to be furnished to include, but not limited to, the cost of repairing faulty workmanship, damages caused by onsite construction, and material failures. The maintenance guarantee shall not be released or expire without the written consent of the City.

Any surety satisfactory to the City Attorney may be provided for the maintenance guarantee.

### **3-4 DOCUMENTATION REQUIRED FOR GUARANTEES**

Each of the guarantees required by City Ordinances must have certain documentation submitted prior to acceptance of the guarantee by the City. This section will cover each guarantee separately and its associated documentation.

#### **A. Performance Guarantee**

1. A performance guarantee cost estimate, signed and sealed by a registered engineer must be submitted to the Public Works Engineering Division.
2. The guarantee selected must be in the approved format as shown in Exhibits A or B and the dollar amount included therein must agree with that shown on the cost estimate.

#### **B. Maintenance Guarantee**

1. All required test reports must be in the possession of the Public Works Engineering Division, reviewed and approved prior to acceptance of guarantee.
2. One complete set of "Record Drawings" / "As Builts" must be submitted by the Project Engineer. The acceptable record drawing will be a complete set of construction drawings for the subdivision, unit, or phase constructed and being covered by the maintenance guarantee, with the designation "Record Drawing" / "As Builts" placed on the front sheet. In addition, corrections will be noted on the drawings, wherever applicable, to identify where and what deviations exist in the completed improvements vs. the construction drawing.

Each unit, phase, or unit of a phase must have its own set of record drawings and cannot be combined with an adjacent unit.

3. Exhibit F is the accepted format for the Engineer's Certificate.
4. The cost estimate will conform to the requirements stated in Section 3-5.
5. The form of the maintenance guarantee will comply with Exhibits C and D.

For publicly dedicated roads the procedure for final inspection prior to acceptance of roads and final inspection prior to release of maintenance guarantee shall include a walk through which includes the Engineer of Record, Contractor, and City Staff. A punch list of items needing correction shall be furnished to the Developer, identifying all items to be completed or corrected by the contractor prior to the City's issuance of a letter to the Developer acknowledging the City's acceptance of the road.

### **3-5 COST ESTIMATES FOR GUARANTEES**

The Developer's Engineer shall submit to the Director of Public Works a certificate of cost estimate for all infrastructure improvements to be covered by the performance guarantee.

The examples shown in Section 3-7 are to be followed in regard to content and format of the engineer's cost estimate certification.

## Engineering Standards Manual

The cost estimate will be reviewed to assure that the cost estimate is representative of the work to be performed. Quantities, unit costs, and extensions will be checked. If any discrepancies are found a resubmittal of the cost estimate will be required. All cost estimates and any related documents must be signed and sealed. An example is given to illustrate the proper completion of the cost estimates in this section.

### **A. Cost Estimate Certificate**

A cost estimate certificate is to accompany the guarantee request. An example format of the cost estimate is shown in Exhibit E.

The items to be completed are itemized directly on the cost estimate certificate. These items would be improvements in the City right-of-ways coincident with the site development such as sidewalks, driveways, curb, sodding, and others required by the City. The amount that shall be made available to the City under the terms of the guarantee document shall be an amount equal to one hundred ten percent (110%) of the estimated cost of installing the improvements.

### **B. PRM's and PCP's**

If platting is being done prior to completion of the plat improvements, the cost of the PRM's and PCP's must be included in the engineer's cost estimate certificate.

### **C. Professional Services**

In all instances of preparing a cost estimate for completion of a subdivision, the estimate must list any professional services that apply, i.e., record drawings, guarantee of maintenance cost estimate, Engineer's Certificate, inspections and materials testing.

### **D. Unit Costs**

The City of Lakeland has prepared the unit costs for various items of improvement. The unit costs list will be updated periodically and provided upon request to the public. These unit costs may be used in the evaluation of all performance cost estimates submitted to the City for approval. The costs provided are the costs for the City to complete the proposed improvements and not necessarily the price paid by the Developer.

## **3-6 RELEASE AND PARTIAL RELEASE OF GUARANTEES**

The guarantee shall not have an expiration date. For the guarantee to be released by the City, the Public Works Director must receive a request from the Developer to release the guarantee. The Public Works Directors office must approve the request and direct the City Treasurer to release the guarantee. The Developer shall accompany the request with all required supporting documentation including, but not limited to test reports, As Builts, Engineer's Certification and any other pertinent documentation required by the City.

No maintenance guarantee document covering a unit or phase of required or approved improvements will be accepted until such time as all incomplete portions of the unit or phase have been completed and the performance guarantee document covering these uncompleted improvements has been completed and fully released. After a minimum of one (1) year following the date of approval of improvements by the City another walk through will be made and if acceptable the guarantee may be released.

If the Director of Public Works determines that special conditions encountered during design or construction making normal inspection and testing insufficient to assure structural integrity, the time period for which a maintenance guarantee is in force may be extended by the City. In the case of special

## Engineering Standards Manual

conditions, the City may require a maintenance guarantee remain in force and may be extended until the City can be satisfied the areas in question will function as designed.

### **3-7 EXHIBITS AND SAMPLES FOR GUARANTEES**

The following example forms are provided as a guideline to assist the Developer to successfully guarantee the project. They are not intended to be the only form allowed but merely a guideline to assure the necessary documentation is submitted.

EXHIBIT A – Performance Bond

EXHIBIT B – Performance Letter of Credit

EXHIBIT C – Maintenance Bond

EXHIBIT D – Maintenance Letter of Credit

EXHIBIT E – Guarantee Cost Estimate Form

EXHIBIT F and G – Engineer's Certificate

Engineering Standards Manual

**EXHIBIT A**  
**PERFORMANCE BOND**

BY THIS BOND, WE, \_\_\_\_\_, as PRINCIPAL, and \_\_\_\_\_, as SURETY, are bound to City of Lakeland, Florida, a municipal corporation of the State of Florida, hereinafter call "CITY", in the sum of \$ \_\_\_\_\_ Dollars, for the payment of which we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents:

WHEREAS, the above-named PRINCIPAL has applied to the CITY for approval of a plat of a certain area of land within the City to be known as \_\_\_\_\_ and has agreed, as a condition to the approval of said plat by the CITY, to install all required, approved, or dedicated improvements. Said improvements consisting of, but are not necessarily limited to, roads, drainage, sewer and water lines, and all other improvements installed in connection with the PROJECT; and

WHEREAS, the approval of said plat by the CITY is further conditioned upon the furnishing of an adequate Surety Bond to the CITY.

NOW, THEREFORE, THE CONDITION OF THIS BOND is such that if the PRINCIPAL:

- a. Shall in all respects comply with the terms and conditions of the approval of said plat, these conditions being more specifically the completion of all required, approved, or dedicated roads, drainage, sewer and water improvements, and/or other improvements which were installed in connection with the PROJECT pursuant to the approved plans and specifications heretofore filed with the CITY, and in accordance with the ordinances and regulations of the CITY;
- b. Shall complete all improvements within one (1) year after the final plat has received approval from the CITY, unless a longer time for completion shall be allowed by said CITY;
- c. Shall submit a written request for an inspection of all improvements to the Public Works Department at least sixty (60) days prior to the termination of the completion period; and
- d. Shall submit an appropriate maintenance guarantee as required by the City of Lakeland;

then this obligation shall be void. Otherwise, it remains in full force and effect.

AND the said SURETY, for value received, hereby stipulates and agrees that no change involving an extension of time, alterations, or additions to the terms of the improvements to be made hereunder, or in the plans, specifications and schedules covering the same, shall in any way affect the obligation of said SURETY on this bond and the SURETY does hereby waive notice of any such changes.

THIS BOND shall be for the use and benefit of the CITY if it should elect to proceed with said work upon the failure or refusal of the PRINCIPAL within the time hereinabove specified, or any subsequent date provided through an agreement between the PRINCIPAL and the CITY for an extension of time.

IT IS FURTHER understood that should the City of Lakeland be required to institute legal proceedings in order to collect any funds under this bond, the PRINCIPAL, shall be responsible for attorney's fees and court costs incurred by the CITY and SURETY.

IN WITNESS WHEREOF, the PRINCIPAL and the SURETY have caused these presents to be duly executed on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
PRINCIPAL (Seal)

By \_\_\_\_\_

Witness: \_\_\_\_\_

\_\_\_\_\_  
SURETY (Seal)

By \_\_\_\_\_

Witness: \_\_\_\_\_

There shall be no release of this performance bond without a written release from the City of Lakeland Public Works Department.

Engineering Standards Manual

**EXHIBIT B**

**PERFORMANCE LETTER OF CREDIT**

IRREVOCABLE LETTER OF CREDIT NO. \_\_\_\_\_  
(Date \_\_\_\_\_)

City of Lakeland  
City Commissioners (Performance)  
City Hall  
228 S. Massachusetts Avenue  
Lakeland, FL 33801-5086

Dear Sirs:

We hereby establish our Irrevocable Letter of Credit in favor of and for the account of \_\_\_\_\_  
\_\_\_\_\_ (hereinafter referred to as Applicant) up to the aggregate sum of  
\_\_\_\_\_ which amount is payable to you at sight of your draft drawn at  
sight on \_\_\_\_\_, and accompanied by the following documents:

Notarized statement issued by the City of Lakeland Director of Public Works stating that: (1) the applicant has failed to comply with the terms and conditions of the approval of the plat of \_\_\_\_\_, these conditions being more specifically the completion of all required, approved, or dedicated roads, drainage, sewer and water improvements, and/or other improvements which were to be installed in connection with the project pursuant to the approved plans and specifications with the City, and in accordance with the ordinance and regulations of the City; (2) the applicant has failed to complete all improvements within one (1) year after final plat approval from the City and no extension for completion has been granted by the City; (3) the applicant has failed to submit a written request for an inspection of all improvements to the Public Works Department Engineering Division at least sixty (60) days prior to the termination of the completion period; or (4) the applicant has failed to submit the maintenance guarantee required by the City of Lakeland Regulations.

This Letter of Credit shall expire only with the City's written approval otherwise it shall remain in full force and effect.

In the event the City is forced into litigation in order to collect under this document, the principals shall be liable for attorney's fees and court costs incurred by the City.

All drafts drawn hereunder must state "Drawn under \_\_\_\_\_ Letter of Credit No. \_\_\_\_\_ dated \_\_\_\_\_."

Unless otherwise expressly stated, this credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision), International Chamber of Commerce Publication No. 400.

Very truly yours,

\_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

By: \_\_\_\_\_

The "Endorsements of Drafts Drawn" shown below is an integral part of this agreement.

ENDORSEMENTS OF DRAFTS DRAWN:

Date	Negotiated By	(In Words)	Amount	(In Figures)

THIS LETTER OF CREDIT SHOULD BE CANCELLED AND ATTACHED TO THE LAST DRAFT.

There shall be no release of this performance letter of credit without a written release from the City of Lakeland Public Works Department.

Engineering Standards Manual

**EXHIBIT C**  
**MAINTENANCE BOND**

BY THIS BOND WE, \_\_\_\_\_, as PRINCIPAL and \_\_\_\_\_ corporation, as SURETY, are bound to the City of Lakeland, Florida, a political subdivision of the State of Florida, herein called City, in the sum of \$ \_\_\_\_\_ for the payment of which we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that if, for a period of one (1) year commencing on the latter of the date upon which a Certificate of Completion has been issued by the City, or the date upon which the Performance Bond has been released by the City for the platted subdivision known as \_\_\_\_\_, hereinafter called "PROJECT"), PRINCIPAL:

1. Maintains all required, approved, or dedicated roads, drainage, sewer and water improvements, and/or other improvements which were installed in connection with the PROJECT; and
2. Repairs or replaces all such improvements which are found by the Director of Public Works not to comply with CITY approvals or requirements, or which are found to be deficient in materials, workmanship, or structural integrity under City, State, or Federal regulations, whichever may be applicable, or industry standards; and
3. Submits a written request for an inspection of improvements to the Public Works Engineering Division at least sixty (60) days prior to the termination of the completion of the one (1) year maintenance period referenced above; and
4. Pays all costs and expenses incurred for or incidental to compliance with the requirements of Subparagraphs 1 and 2 above;

then this obligation shall be void. Otherwise, it remains in full force and effect.

IT IS FURTHER understood that should the City be required to institute legal proceedings in order to collect any funds under this bond, the PRINCIPAL and SURETY shall be responsible for attorney's fees and court costs incurred by the City.

DATED \_\_\_\_\_

WITNESS AS TO PRINCIPAL:

\_\_\_\_\_

PRINCIPAL \_\_\_\_\_ (Seal)

BY: \_\_\_\_\_

WITNESS AS TO SURETY:

\_\_\_\_\_

\_\_\_\_\_  
SURETY

BY: \_\_\_\_\_

There shall be no release of this maintenance bond without a written release from the City of Lakeland Public Works Department.

Engineering Standards Manual

**EXHIBIT D**

**MAINTENANCE LETTER OF CREDIT**

IRREVOCABLE LETTER OF CREDIT NO. \_\_\_\_\_

(Date \_\_\_\_\_)

City of Lakeland  
City Commissioners (Maintenance)  
City Hall  
228 S. Massachusetts Avenue  
Lakeland, FL 33801-5086

Dear Sirs:

We hereby establish our Irrevocable Letter of Credit in favor of the City of Lakeland (the "City") and for the account of \_\_\_\_\_

\_\_\_\_\_ (hereinafter referred to as Applicant) up to the aggregate sum of (in words) \_\_\_\_\_

\_\_\_\_\_, and (in numbers) \_\_\_\_\_ which the City may draw upon when accompanied by the following documents:

Notarized statement issued by the City of Lakeland Director of Public Works stating that:

- (1) the applicant has failed to maintain for a period of one (1) year all required, approved, or dedicated roads, drainage, sewer and water improvements, and/or other improvements which were installed in connection with the plat of \_\_\_\_\_;
- (2) the applicant has failed to repair all such improvements found by the Director of Public Works not to comply with City approvals or requirements, or found to be deficient in materials, workmanship, or structural integrity under City, State or Federal regulations, whichever may be applicable, or industry standards;
- (3) the applicant has failed to pay all costs and expenses incurred for or incidental to compliance of the foregoing; or
- (4) the applicant has failed to submit a written request for an inspection of all improvements to the Public Works Engineering Division at least sixty (60) days prior to the termination of the completion period.

This Letter of Credit expires only with the City's written approval.

In the event the City is forced into litigation in order to collect under this document, the Issuer shall be liable for attorney's fees and court costs incurred by the City.

All drafts drawn hereunder must state "Drawn under \_\_\_\_\_ Letter of Credit No. \_\_\_\_\_ dated \_\_\_\_\_."

Unless otherwise expressly stated, this credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision), International Chamber of Commerce Publication No. 400.

ATTEST:

Very truly yours,

By: \_\_\_\_\_

By: \_\_\_\_\_

The "Endorsements of Drafts Drawn" shown below is an integral part of this agreement.

ENDORSEMENTS OF DRAFTS DRAWN:

Date	Negotiated By	(In Words)	Amount	(In Figures)

THIS LETTER OF CREDIT SHOULD BE CANCELLED AND ATTACHED TO THE LAST DRAFT.

There shall be no release of this letter of credit without a written release from the City of Lakeland Public Works Department.

Engineering Standards Manual

**EXHIBIT E**

EXAMPLE

**GUARANTEE COST ESTIMATE FORM**

CITY OF LAKELAND ) ss:

I, \_\_\_\_\_, P.E., a Registered Professional Engineer in the State of Florida, with Registration No. \_\_\_\_\_, hereby certify that I have examined the Plat of \_\_\_\_\_, as filed by \_\_\_\_\_, located in Section \_\_\_\_\_, Township \_\_\_\_\_ South, Range \_\_\_\_\_ East, Polk County, Florida; and that the costs of the improvements lying within said Plat, as listed below, are accurate engineering estimates which were prepared for the purpose of determining the amount for Performance Guarantee required by the City of Lakeland.

(Attached Schedule Incorporated by Reference)  
(Unit Cost Tabulation for each Item is attached and incorporated by reference)

<u>Schedule I</u>	<u>Amount</u>
"A" – Roadways and Drainage Construction	\$166,007.85
"B" – Water Utilities	\$122,687.50
"C" – Electric	\$39,650.00
"D" – Street Signs and Traffic Signals	\$989.50
"E" - Professional Services and Misc.	\$12,960.00
Subtotal	<u>\$342,294.85</u>
Total	<b><u>\$342,294.85</u></b>

Bond Amount 1.10 x 342,294.85 = **\$376,524.33**

Reviewed By:

Prepared By:

\_\_\_\_\_  
Public Works Engineering Division

\_\_\_\_\_  
Professional Engineer (SEAL)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**Continued on next page**

Engineering Standards Manual

EXAMPLE

**UNIT COST TABULATION**

SCHEDULE 1 OF (PLAT NAME)

THE UNIT COSTS SHOWN HERE ARE **HYPOTHETICAL ONLY** AND ARE NOT TO BE USED AS A GUIDELINE FOR PRICING.

ROADWAY AND DRAINAGE CONSTRUCTION DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
6" Stab. Under Curb (4' Wide)	15,000	SY	1.50	22,500.00
6" Limerock Base	14,000	SY	4.80	62,700.00
Asphaltic Concrete, Types 1 ¼"	13,000	SY	2.50	32,500.00
Concrete Miami Curb – 2'	2,945	LF	6.60	19,437.00
Concrete Valley Gutter	2,230	LF	9.25	20,627.50
Underdrain – 6" PVC	565	LF	14.59	8,243.35
<b>SUBTOTAL</b>				<b>\$166,007.85</b>

WATER UTILITIES WATER DISTRIBUTION	QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
8" Water Line	2,000	LF	10.50	21,000.00
6" Water Line	1,250	LF	8.75	10,937.50
Fire Hydrant Assembly	2	EA	1,750.00	3,500.00
Single Water Services	2	EA	250.00	500.00
Double Water Services	23	EA	350.00	8,050.00
System Clearance	1	LS	1,500.00	1,500.00
<b>SUBTOTAL</b>				<b>\$45,487.50</b>

WATER UTILITIES WASTEWATER	QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
8" Sewer Line	2,000	LF	25.50	51,000.00
Sanitary Manhole	8	EA	1,750.00	14,000.00
Double Sewer Service	23	EA	450.00	10,350.00
Single Sewer Service	1	EA	350.00	350.00
System Clearance	1	LS	1,500.00	1,500.00
<b>SUBTOTAL</b>				<b>\$77,200.00</b>

Engineering Standards Manual

**UNIT COST TABULATION**

SCHEDULE 1 OF (PLAT NAME)

LAKELAND ELECTRIC ELECTRIC SERVICE	QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
4" CONDUIT	2,300	LF	6.50	14,950.00
TRANSFORMER PADS	8	EA	1,750.00	14,000.00
LIGHT POLE ASSEMBLY	23	EA	450.00	10,350.00
OPERATION SETUP FEE	1	EA	350.00	350.00
SUBTOTAL				\$39,650.00

PUBLIC WORKS STREET SIGNS AND TRAFFIC SIGNALS	QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
STOP SIGNS	3	EA	96.50	289.50
STREET SIGNS	6	EA	50.00	300.00
CURVE SIGNS	4	EA	50.00	200.00
SPEED LIMIT SIGNS	4	EA	50.00	200.00
SUBTOTAL				\$989.50

PUBLIC WORKS PROFESSIONAL SERVICES AND MISC.	QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
PRM's	20	EA	100.00	2,000.00
PCP's	12	EA	80.00	960.00
Professional Services (Inspections)	1	EA	3,000.00	3,000.00
Record Drawing	1	EA	2,500.00	2,500.00
Cost Estimate Maintenance Guarantee	1	EA	300.00	300.00
Engineer's Certificate	1	EA	200.00	200.00
Materials Testing	1	EA	4,000.00	4,000.00
SUBTOTAL				\$12,960.00

Engineering Standards Manual

**EXHIBIT F**

EXAMPLE

**ENGINEER'S CERTIFICATE**

CITY OF LAKELAND ) ss:

I, \_\_\_\_\_, a Registered Professional Engineer in the State of Florida, with Registration No. \_\_\_\_\_, hereby certify that I have examined the Plat of \_\_\_\_\_, as filed by \_\_\_\_\_, located in Section \_\_\_\_\_, Township \_\_\_\_\_ South, Range \_\_\_ East, Polk County, Florida; and the Plans and Specifications for improvements approved by the CITY on \_\_\_\_\_, 20\_\_\_\_; and that the improvements shown on said Plans and Specifications have been substantially completed in accordance with the City of Lakeland's LDR's and other municipal regulations.

\_\_\_\_\_  
Professional Engineer (SEAL)

\_\_\_\_\_  
Date

Engineering Standards Manual

**EXHIBIT G**

**EXAMPLE**

**ENGINEER'S CERTIFICATE – COMMERCIAL SITE PLAN**

To: City of Lakeland – Public Works Department:

I, \_\_\_\_\_, a Registered Professional Engineer in the State of Florida, hereby certify that I have examined the Surveyed Record Drawings for the commercial site name \_\_\_\_\_ and address is \_\_\_\_\_ that was provided by \_\_\_\_\_ a PLS&M, located in Section, \_\_\_\_\_, Township \_\_\_\_\_ South, Range \_\_\_\_\_ East, Polk County, Florida; and the plans and specifications for the improvements have been substantially completed in accordance with the City of Lakeland's Engineering Standards Manual, Land Development Regulations and other municipal ordinances.

Signature: \_\_\_\_\_

P.E. Number: \_\_\_\_\_

Date: \_\_\_\_\_

PE SEAL

Business name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_