

## **FORWARD**

### **GOALS AND OBJECTIVES OF THE MANUAL**

The goal of writing the El Paso County Engineering Criteria Manual (ECM) was to establish an updated set of standards to use to plan, design, construct and maintain county infrastructure and guide the design and construction of common development improvements within the unincorporated areas of the El Paso County (County). The ECM was developed with three primary objectives in mind: (1) update criteria to address current standards of practice in the county and region by seek the advice of the primary stakeholders in identifying appropriate standards and preparing the document; (2) establish consistent, fair and enforceable standards; (3) ensure the quality of infrastructure being accepted by the County meets consistent standards of quality. The ECM recognizes that circumstances vary. In some instances, complying with strict provisions of the ECM may not be appropriate or possible. However, the ECM establishes the general purpose and intent to help guide decisions concerning the application of alternative standards.

### **WHAT ARE SOME OF THE KEY REVISIONS TO THE MANUAL**

The ECM enhances the design and review process by providing detailed criteria and establishing clear expectations. The ECM uses tables and graphics to concisely present information.

Some examples of important changes to the ECM include:

- Incorporation of both rural and urban standards;
- Revised and updated roadway cross sections;
- Inclusion of Transportation Impact Study requirements;
- Discussions on subsurface investigations and pavement design requirements;
- Policies for acceptable uses and placement of utilities within the County's right-of-way (ROW);
- Listing of requirements for completion of Engineering Record Drawings;
- Presentation of County-specific requirements for drainage and site grading;
- Inclusion of stormwater quality requirements based on new regulations;
- Provisions for guarantees on the performance of constructed improvements; and
- Requirements for acceptance of public improvements.

### **ORGANIZATION OF THE MANUAL**

The ECM is organized into five chapters and series of supporting appendices. The specific procedures and submittal requirements to obtain the required approvals and permits are included and are supported by specific engineering criteria to guide design of public infrastructure. The ECM also outlines the onsite quality control and workmanship necessary for public improvements to be accepted by the County.

## **HOW THE MANUAL IS APPLIED**

The ECM will be used by engineers, planners, plan reviewers, and inspectors. The ECM governs any proposed activities (temporary or permanent) in the County's ROW and is intended to guide the development and subdivision of land within the unincorporated El Paso County. Deviations are allowed and encouraged where the standards are inappropriate based on specific site conditions, but the burden of the proof is on the applicant to provide sufficient information to the ECM Administrator to justify the deviation.

## **INTEGRATION OF THE ECM WITH OTHER COUNTY DOCUMENTS**

The ECM is only one of the guidance documents used by the County. Others include:

- The Policy Plan;
- The Land Development Code; and
- Other County Plans (Major Transportation Corridors Plan, Strategic Plans, and Small Area Plans)

No single document stands alone as the controlling document for the County. Instead, coordination among the policy and regulatory documents is required to meet the BOCC's overall expectations.

In general terms, the ECM supports the County's various plans by providing standards that ensure facilities are designed and built to the BOCC's expectations. In addition, it provides the Land Development Code with the standards necessary to guide land development within the County.

## **MANUAL PREPARATION – WHAT PROCESS HAS BEEN FOLLOWED TO PRODUCE THIS ECM?**

The development of the ECM began in early 2000 at the request of the BOCC. The work program included seven phases. Throughout the process, input was solicited from stakeholders to gain insights, practical knowledge and identify expectations. Each phase was directed at a particular set of stakeholders and the outcome was integrated into the ECM. The seven phases included:

- Phase I – consultant analysis and assessment of existing standards and solicitation of initial thoughts on work program objectives
- Phase II – technical subcommittee review and comment on work program objectives and initial product
- Phase III – staff review and comment of initial product with a focus on the development reviews and County-lead public improvements
- Phase IV – County leadership issue assessment of the changes being proposed for the new ECM
- Phase V – technical subcommittee review and comment on the compilation of technical information and processes for acceptance of public improvements

- Phase VI – public comment on the draft product and BOCC adoption of ECM and Addendum to the Drainage Criteria Manual Volume 2 including specific dialogue and issue resolution with the development community
- Phase VII – implementation of ECM to include a period of testing standards under real world application

Though this has been long process, the results will greatly enhance coordination and provide for a more consist review and approval process.

## ACKNOWLEDGEMENTS

The individuals listed below are some of the many contributors to the ECM. El Paso County thanks them for their efforts and insights during this long and tedious process. We recognize that many others have provided input, but may not be listed below.

### County Leadership

Board of County Commissioners

Planning Commission

Terry Harris

John McCarty

### County Steering Committee

Cole Emmons

Imad Karaki

Mark Gebhart

Denny Cripps

Mike Hrebenar

Patricia Parish

Andre Brackin

Jerry Haile

Mike Bonar

Mark Johnston

Nancy Prieve

Mike McCarthy

### County DOT Staff

George Sugars

Andre Brackin

Paul Danley

Carl McClelland

Barbara Dallemund

Jude Willcher

Dick Carlson

Rich Harvey

John Clack

Gary Hamacher

Jennifer Powell

Colleen Dawson

Lesley Mace

### ECM Private Consultants Subcommittee

Cindy Hoover – Colorado Springs HBA

James Hatfield – Colorado Springs HBA

Mike Bartuesk - ADP

Tim Marshall – JR Engineering

David Whitehead – Leigh, Whitehead & Assoc.

Andy McCord – Kiowa Engineering

Charles Crum – MVE Inc.

John Radcliffe – Nolte & Assoc.

Brian Huth – Nolte & Assoc.

Roger Dekloe – New Generation Homes

Fred Williams – Wilson and Company

Lilly Hardin – Drexel Barrel & Company

Patrick Skinner – Skinner & Assoc.

Jeffrey Hodsdon – LSC Transportation Consul.

John LeSage – Matrix Design Group

Donald Smith – Development Solutions

Kyle Campbell – Classic Consulting

FORWARD  
Adopted: 1/9/2006  
Revised: 1/1/2008  
REVISION 2

Brian Law – Law and Mariotti

John Schwab – JPS Engineering

**Public**

Judy von Ahlefeldt  
Barbara Hosmer  
Ed Bracken  
Fred Herman

**Consultants**

W. Sam Otero – HDR Engineering  
Mark Sawyer – HDR Engineering  
James Adams – HDR Engineering  
Margaret Zebley – The RETEC Group  
Mandy Betters – The RETEC Group  
Steve Nelson – The RETEC Group

FORWARD  
Adopted: 1/9/2006  
Revised: 1/1/2008  
REVISION 2