CITY OF LONGMONT
STORM DRAINAGE CRITERIA MANUAL

TABLE OF CONTENTS

LIST OF FIGURES

SECTION 1300 EROSION AND SEDIMENTATION CONTROL FROM CONSTRUCTION ACTIVITIES

1301 INTRODUCTION

All new development shall have prepared and implemented an erosion and sedimentation plan (Policy Section 303.6). The plan shall be prepared and will be reviewed in accordance with the criteria presented in this section.

The clearing and stripping of land for development can cause high localized erosion rates with subsequent deposition and damage to offsite properties. Whereas erosion and sedimentation is a natural process, the intensity is increased by development which can destroy the aesthetic and practical values of other properties, stream, and lakes. The purpose of implementing an erosion and sedimentation control plan is to reduce the process to an acceptable level without placing undue burdens on the home owner, builder, or community.

Subsequent to the passage of the Federal Water Pollution Control Act Amendments (PL-92-500), the Denver Regional Council of Governments (DRCOG) initiated a federally funded areawide water quality management study. The result of the study ("Clean Water Plan") identified the control of pollutants which originate from non-point or diffuse sources as an important consideration, requiring preventative measures for developing areas. A best management practices manual for erosion and sedimentation control was prepared by DRCOG to define, explain, and guide the protection of land and water resources within the DRCOG area. The information and guidelines presented herein utilize the best management practices manual as well as subsequent publications of DRCOG.

1302 STANDARDS AND REQUIREMENTS

1302.1 Guidelines

1. "Managing Erosion and Sedimentation from Construction Activities" DRCOG, 2480 West 26th Avenue, Suite 200-B, Denver, Colorado 80211, April 1980.

2. "Factors Affecting the Cost of Erosion Control Planning", DRCOG 2480 West 26th Avenue, Suite 200, Denver, Colorado 80211, June 1982.

3. "Cost of Erosion Control Measures", DRCOG 2480 West 26th Avenue, Suite 200, Denver, Colorado 80211, May 1982.

1302.2 Planning Submittals

1. Requirements

   All subdivision plats, planned unit developments, or any other proposed construction submitted for approval shall include adequate erosion and storm water pollution control design, management, and maintenance arrangements before approval of construction will be made. Such design shall reflect the purposes and criteria presented herein and in the adopted guidelines (Section 1302.1).

   Five elements of an erosion control plan have been identified by DRCOG. They are:

1. Gather information on topography, soils, drainage, vegetation, and other site features.

2. Analyze the information in order to project the magnitude of erosion and sedimentation.

3. Devise a plan which schedules construction activities, thereby minimizing the potential for serious erosion/sedimentation.

4. Develop an erosion control plan which specifies effective erosion/sedimentation control measures.

5. Follow the erosion control plan, and revise it when necessary.

All or portions of the above elements may be required during the development review process. The elements required are illustrated by Figure-1301. As a minimum, elements 1 and 2 will be required along with the preliminary platting process. At this time, the plan will be reviewed to determine if a final plan and the associated construction details are required. The decision as to the necessity for a final plan will be based on project size, amount of grading, soil type, slopes of the site, and proximity to areas likely to be damaged by erosion and sedimentation. The criteria for evaluation are set forth in the table below:

CRITERIA FOR FINAL EROSION CONTROL AND SUBMTTAL

CONTROL	SUBMITTAL OF PLAN REQUUIRED
Slope $\geq$ 18%	Yes
Soil Erodibility Factor (K) $\geq$ 0.37	Yes
Slope $\geq$ 6% and K $\geq$ 0.24	Yes
Site $\leq$ 500' from Permanent or Perennial Water Course	Yes
Unsheltered Distance > 500'	Yes
Impervious Area $\geq$ 10,000 Sq. Ft.	Yes
Any Combination of the Above	Yes

2. Reporting

Since erosion control planning is an extension of the grading and drainage planning process, the erosion control planning is not an entirely independent process. The drainage reporting outlined in Section 200 of this manual shall include a section dealing with erosion control planning (as required) and include the following additional information. Note that the amount of information required will depend on the stage of the development process (Figure-1301).

Element No. 1: Information Collection

A. Vicinity Map

B. Topographic Map

C. Soils Survey - SCS survey or survey by soils scientist

D. Vegetation Survey - on site

E. Climatic Data - precipitation and wind direction

F. Legal Requirements

Element No. 2: Analyze Information

A. Combine topographic, soils, and vegetation information on a map to indicate critical areas. This forms the basis for the site analysis drawing. Preliminary site layout should then be added to map.

B. Analyze potential impact of erosion on adjacent properties

C. Show points of runoff outfall from site

D. Indicate (generally) how site will be protected from erosion

E. Meet with local government to decide whether a comprehensive erosion control plan is necessary.

If a comprehensive erosion control plan is needed, continue to Element 3.

Element No. 3: Prepare a Site Development Plan

A. Consider modification to the preliminary site layout in order to make the best fit between site's natural characteristics and proposed land use; minimize earth change and disturbance of critical areas.

B. Illustrate how runoff volume and velocity will be accommodated.

C. Illustrate how wind velocity will be accommodated.

Element No. 4: Prepare Final Erosion Control Plan

A. Obtain (develop) drainage plan. This is the strating point for the erosion control plan.

B. Prepare final erosion control plan
   1. Stage construction (yearly schedule)
   2. Schedule all earth change activities (bar schedule)
   3. Locate all temporary erosion and sedimentation control facilities
   4. Locate all permanent erosion and sedimentation control facilities. Those items which are included in the drainage plan will already be shown; the manner in which drainage-related appurtenances mitigate erosion should be noted.

1302.3 Performance Standards

The general requirements for erosion control work shall be as follows:

1. Any earth changes shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation and should not exceed the limits of allowable erosion.

2. All earth changes shall be designed, constructed, and completed in such a manner so that the exposed area of any disturbed land shall be limited to the shortest possible period of time.

3. Sediment caused by accelerated soil erosion shall be removed from runoff water before leaving the site.

4. Any temporary or permenant facility designed and constructed for the conveyance of water around, through, or from the earth change area shall be designed to limit the water flow to a non-erosive velocity.

5. Temporary soil erosion control facilities shall be removed and earth change areas graded and stabilized with permanent soil erosion control measures pursuant to approved standards and specifications as prescribed.

1302.4 Exemtions

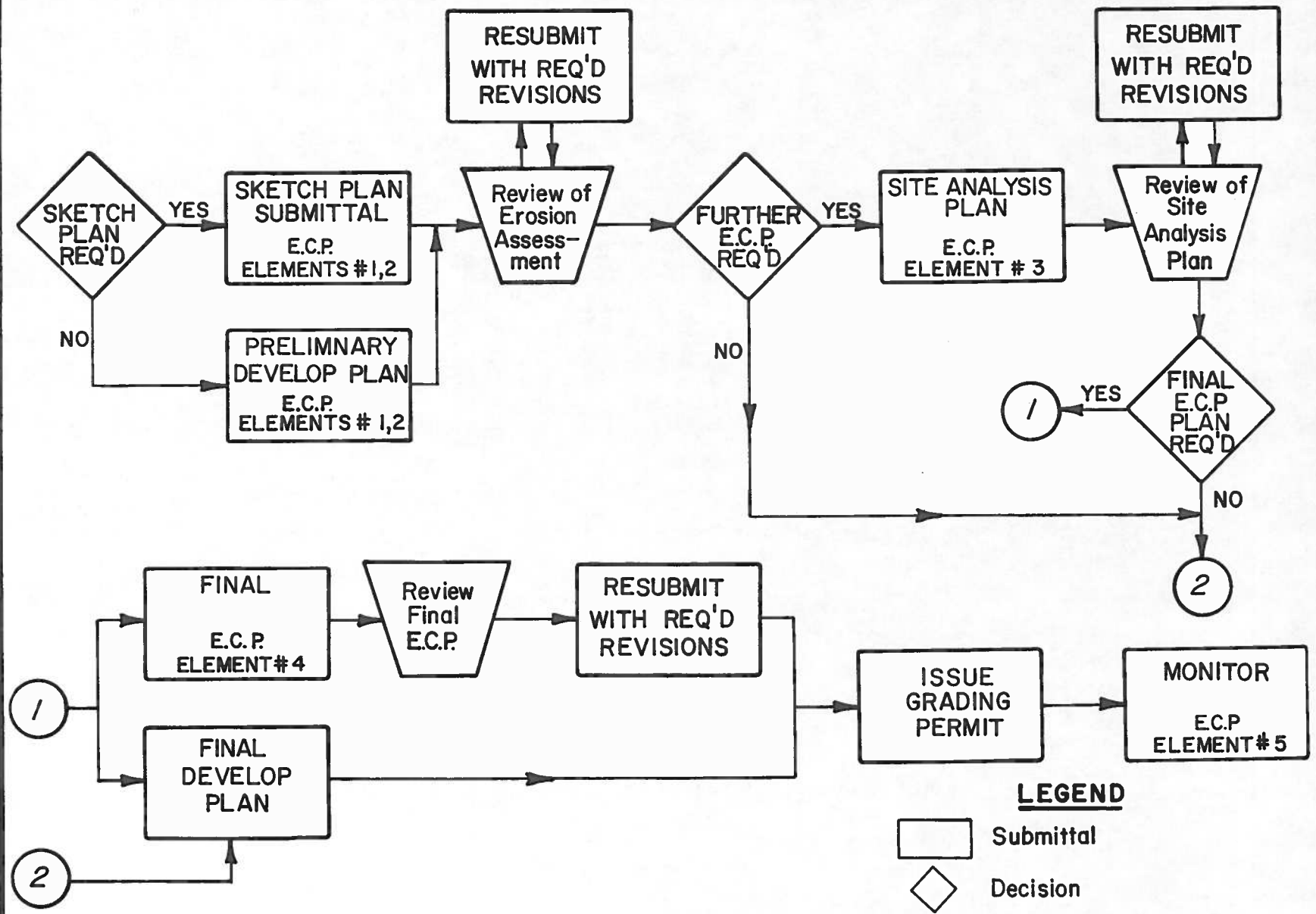
Exemptions from the erosion control planning process may be granted by the City Engineer for the following conditions.

1. Agricultural use of land zoned agricultural.

2. Grading or an excavation below finished grade for basements, footings, retaining walls, or other structures on plots containing less than 10,000 square feet of impervious area unless otherwise required by the uniform building code.

3. A sidewalk or driveway authorized by a valid permit.

4. Gravel, sand, dirt, or topsoil removal as authorized.



EROSION CONTROL PLAN SUBMITTAL REQUIREMENTS

WRC ENG.

REFERENCE:

FIGURE 1301