



**DEVIATION REQUEST** (Attach diagrams, figures, and other documentation to clarify request)

A deviation from the standards of or in **Section 4.1 Providing WQCV** of the Drainage Criteria Manual Volume 2 (DCM) is requested, in conformance with **Section 1.7.2.B Other Specialized BMPs** of the Engineering Criteria Manual.

Identify the specific ECM/DCM standard which a deviation is requested:

The El Paso County Engineering Criteria Manual Section 2.6.9 (G) states that multiple pipe crossings are not permitted. Specifically "Due to maintenance issues, parallel culverts (a.k.a. culvert batteries) are not permitted except in areas where low headwater is unavoidable, areas where approach velocity is supercritical, or in the vicinity of a bend immediately upstream"

State the reason for the requested deviation:

This deviation is requested in order to provide for four-36" RCP culverts to pass underneath Conestoga Trail South, directly south of Lot 25. This area will receive a large amount of runoff in a major storm event, that needs to be safely directed to the south, before being discharged into the existing south detention pond. In order to minimize the grading impact to the surrounding area, this section of Conestoga Trail South sits at a low point and generally follows the natural grade of the area. Using a single, larger round culvert would require substantial fill to achieve the necessary clearance, while a single wide box culvert would result in excessive costs. The proposed 36" culverts have adequate capacity to convey the 100-year flows without overtopping the road.

Explain the proposed alternative and compare to the ECM/DCM standards (May provide applicable regional or national standards used as basis):

Installation of 4-36" RCP culverts will provide for the required flow capacity and headwater depth at Conestoga Trail South in conformance with criteria. The roadway will not overtop in a major storm event and the roadway will remain passable.

per the calculation this does not meet Hw/D criteria. Please revise accordingly.

Cost cannot be considered. Additional justification is needed.

**LIMITS OF CONSIDERATION**

(At least one of the conditions listed below must be met for this deviation request to be considered.)

- The ECM/DCM standard is inapplicable to the particular situation.
- Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.
- A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

Provide justification:

In order to minimize the grading impact to the surrounding area, this section of Conestoga Trail South sits at a low point and generally follows the natural grade of the area. Using a single, larger round culvert would require substantial fill to achieve the necessary clearance, while a single wide box culvert would result in excessive cost, procurement and installation time. The proposed 36" culverts have adequate capacity to convey the 100-year flows without overtopping the road, and are immediately available from precast pipe manufacturers.

**CRITERIA FOR APPROVAL**

Per ECM section 5.8.7 the request for a deviation may be considered if the request is **not based exclusively on financial considerations**. The deviation must not be detrimental to public safety or surrounding property. The applicant must include supporting information demonstrating compliance with **all of the following criteria**:

The deviation will achieve the intended result with a comparable or superior design and quality of improvement.

This deviation will achieve the intended result. The proposed culverts have adequate capacity to convey the 100-year flows without overtopping the road. This will allow the culverts to function as intended without any impact to the subdivision or downstream properties.

The deviation will not adversely affect safety or operations.

This deviation will not adversely affect safety or operations. The proposed culverts have adequate capacity to convey the 100-year flows without overtopping the road. This will allow the culverts to function as intended without any impact to the roadway, allowing traffic to operate normally.

The deviation will not adversely affect maintenance and its associated cost.

This deviation will not adversely affect maintenance and its associated cost. The maintenance of four parallel 36" RCP pipes is equivalent to that of a single pipe or box culvert.

The deviation will not adversely affect aesthetic appearance.

This deviation will not negatively impact the aesthetic appearance. Using a larger-span circular pipe would impact the aesthetic appearance by requiring additional fill for adequate cover. A box culvert however, would not offer a noticeable visual difference compared to the multiple barrel culvert.

The deviation meets the design intent and purpose of the ECM standards.

This deviation meets the design intent and purpose of the ECM standards. The proposed culverts have adequate capacity to convey the 100-year flows without overtopping the road.

The deviation meets the control measure requirements of Part I.E.3 and Part I.E.4 of the County's MS4 permit, as applicable.

The deviation is in conformance with Part I.E.3 and Part I.E.4 of the County's MS4 permit. Required control measures will be followed for the subdivision until final stabilization. Required codes, resolutions, ordinances, and program documents will be used to meet permit requirements. Control for all pollutants will be designed to follow site plan requirements and maintained for each phase of construction. Site inspection requirements, winter requirements and long-term maintenance will be followed for this deviation.

**REVIEW AND RECOMMENDATION:**

**Approved by the ECM Administrator**

This request has been determined to have met the criteria for approval. A deviation from Section \_\_\_\_\_ of the ECM is hereby granted based on the justification provided.

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**Denied by the ECM Administrator**

This request has been determined not to have met criteria for approval. A deviation from Section \_\_\_\_\_ of the ECM is hereby denied.

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**ECM ADMINISTRATOR COMMENTS/CONDITIONS:**

## **1.1. PURPOSE**

The purpose of this resource is to provide a form for documenting the findings and decision by the ECM Administrator concerning a deviation request. The form is used to document the review and decision concerning a requested deviation. The request and decision concerning each deviation from a specific section of the ECM shall be recorded on a separate form.

## **1.2. BACKGROUND**

A deviation is a critical aspect of the review process and needs to be documented to ensure that the deviations granted are applied to a specific development application in conformance with the criteria for approval and that the action is documented as such requests can point to potential needed revisions to the ECM.

## **1.3. APPLICABLE STATUTES AND REGULATIONS**

Section 5.8 of the ECM establishes a mechanism whereby an engineering design standard can be modified when if strictly adhered to, would cause unnecessary hardship or unsafe design because of topographical or other conditions particular to the site, and that a departure may be made without destroying the intent of such provision.

## **1.4. APPLICABILITY**

All provisions of the ECM are subject to deviation by the ECM Administrator provided that one of the following conditions is met:

- The ECM standard is inapplicable to a particular situation.
- Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship on the applicant, and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.
- A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

## **1.5. TECHNICAL GUIDANCE**

The review shall ensure all criteria for approval are adequately considered and that justification for the deviation is properly documented.

## **1.6. LIMITS OF APPROVAL**

Whether a request for deviation is approved as proposed or with conditions, the approval is for project-specific use and shall not constitute a precedent or general deviation from these Standards.

## **1.7. REVIEW FEES**

A Deviation Review Fee shall be paid in full at the time of submission of a request for deviation. The fee for Deviation Review shall be as determined by resolution of the BoCC.