



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

A deviation from the standards of or in **Section 2.3.4** of the Engineering Criteria Manual (ECM) is requested.

Identify the specific ECM standard which a deviation is requested:

Per Section 2.3.4.A.2 "Table 2-14 and Figure 2-20 show the required lengths of sag vertical curves for different algebraic differences in grade to provide required stopping sight distances for each design speed."  
Per Table 2-14. Design Controls for Stopping Distance on Sag Vertical Curves, the minimum Rate of Vertical Curvature, K has a minimum design value of 26 for a design speed of 25 mph.

State the reason for the requested deviation:

A k-value lower than the standard is necessary in order to meet the cross-slope of the intersecting street as well as create a low point for drainage flows.

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

Designing the vertical curves using the standard minimum k-value would result in much longer vertical curves and increased slopes for the longitudinal roads. Road design using a lower k-value allows for less steep roadways due to smaller vertical curve lengths. In addition, this design creates a true low point with sufficient depth capacity in order to capture the longitudinal roadway flows before they reach the intersecting street, keeping the road design consistent with the drainage patterns represented in the MDDP and Final Drainage report for the site.

**LIMITS OF CONSIDERATION**

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

- The ECM 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:

Meeting the 2% cross slope of the through road in conjunction with the longitudinal slope of the stop condition road, the minimum K-value for a sag curve per the ECM would require a vertical curve distance greater than the site constraints allow in order to capture drainage in the low point.

A lower K value than the design minimum is allowable given the stop conditions present at the deviation intersections. The horizontal distance for these intersections designed does not negatively impact the driving conditions at the intersections.

**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.

Per Section 5.8 of the ECM, "*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*"

The design revision provides a superior design to the roadway and enables the storm drain to system to function as intended.

The deviation will not adversely affect safety or operations.

Due to the stop condition of the roads, drivers will already be slowing to a lower speed. Therefore, the required stopping sight distance is diminished.

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

The roadways with the requested deviations will be built in conformance with all other roadway design criteria and will not affect maintenance nor costs.

The deviation will not adversely affect aesthetic appearance.

The reduction of vertical length will not have an affect on aesthetic appearance of the roadways.

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

The intent and purpose of the k-value in a sag vertical curve is to ensure that the driver has adequate stop distance. Due to the stop condition of the roadways, drivers will already be decreasing speed allowing the lower k-value to provide the required stop distance.

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 proposed deviation is in conformance with Part I.E.3 and Part I.E.4 of the County's MS4 permit.

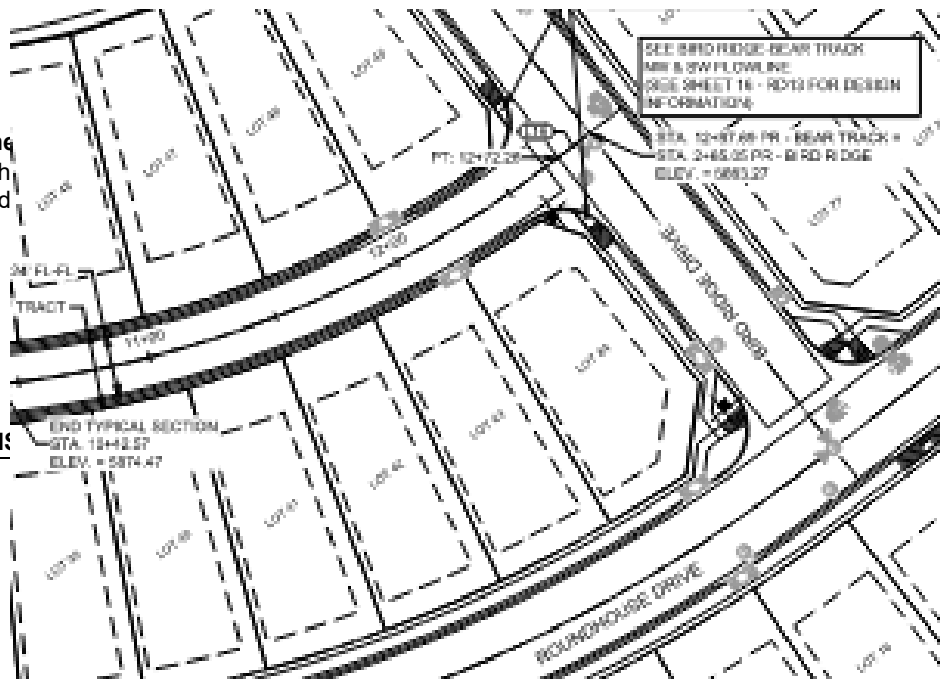
**REVIEW AND RECOMMENDATION:**

**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.

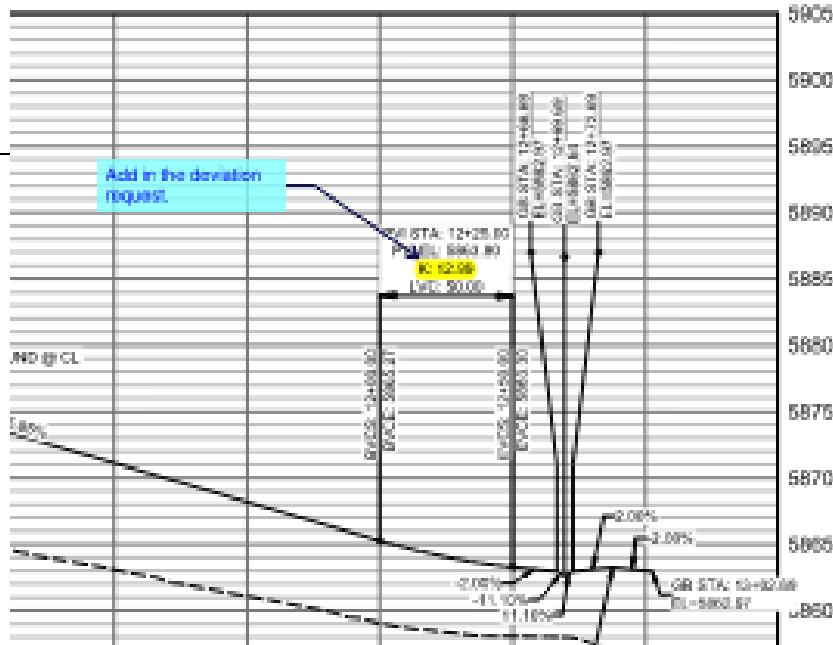
Denied by the  
This request has  
hereby denied

ECM ADMINIS



**PLAN**

UT 10



Add in the deviation request.

LINE TABLE		
LINE #	BEARING	DIST.
L16	S89°10'47"E	15.9
L17	S85°09'12"E	18.1

CURVE	
CURVE #	ARC LENGTH
C3	288.30

Add Bear Track & Bird Ridge intersection to the deviation request.

## **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**

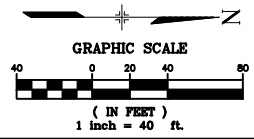
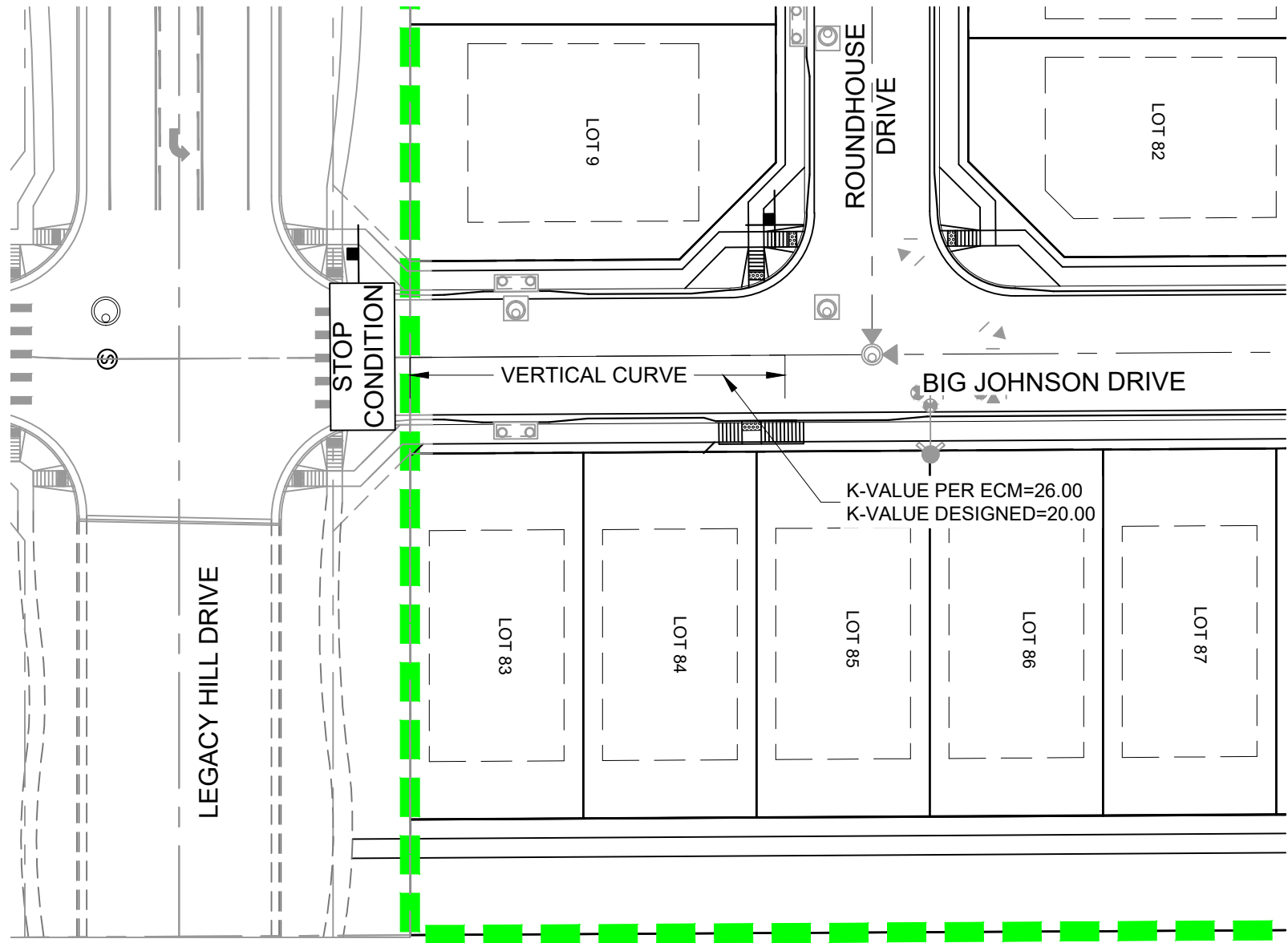
The review shall ensure all criteria for approval are adequately considered and that justification for the deviation is properly documented.

## **1.6. LIMITS OF APPROVAL**

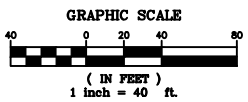
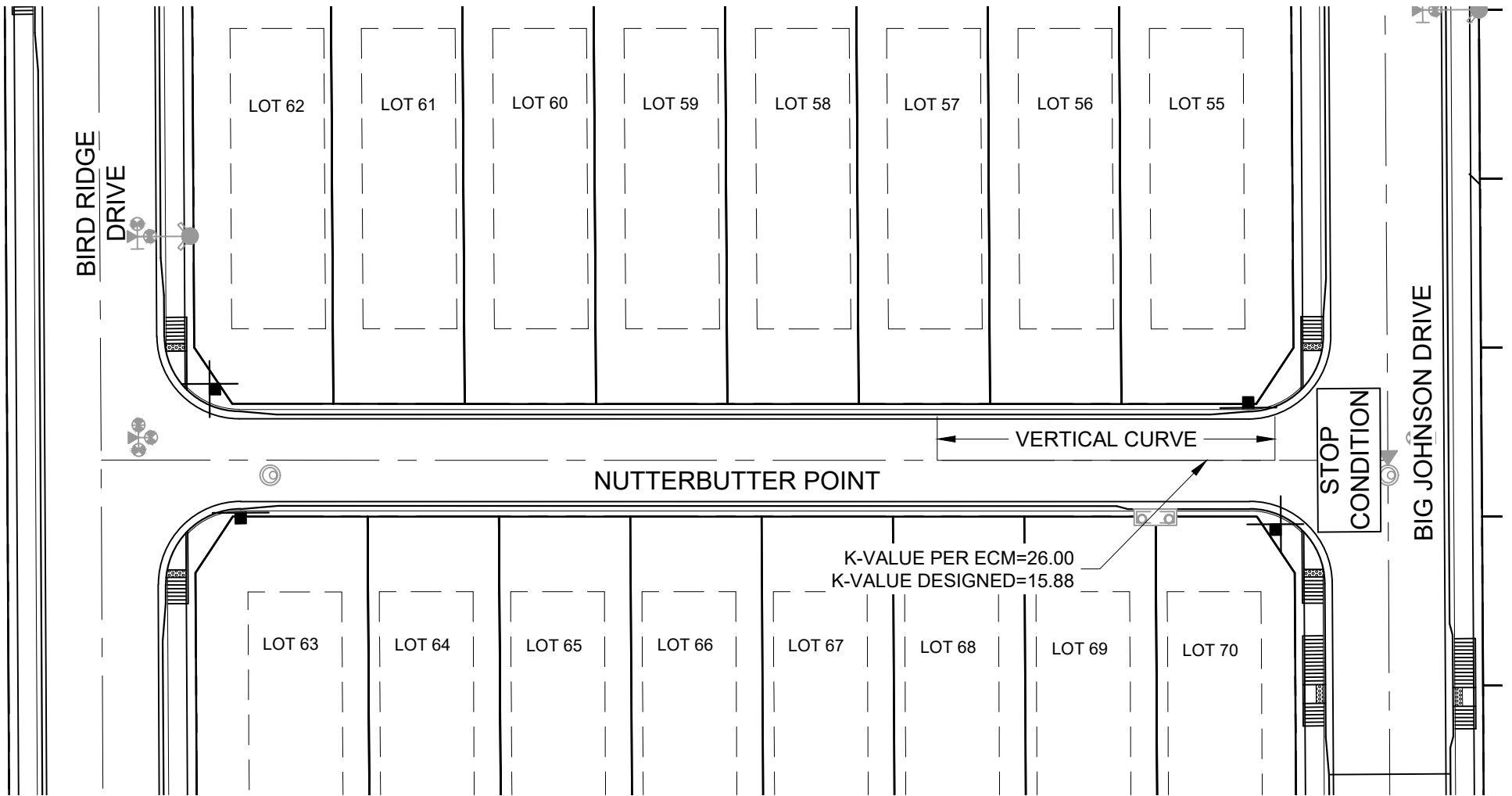
Whether a request for deviation is approved as proposed or with conditions, the approval is for project-specific use and shall not constitute a precedent or general deviation from these Standards.

## **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.



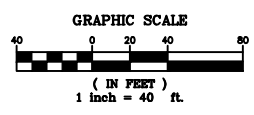
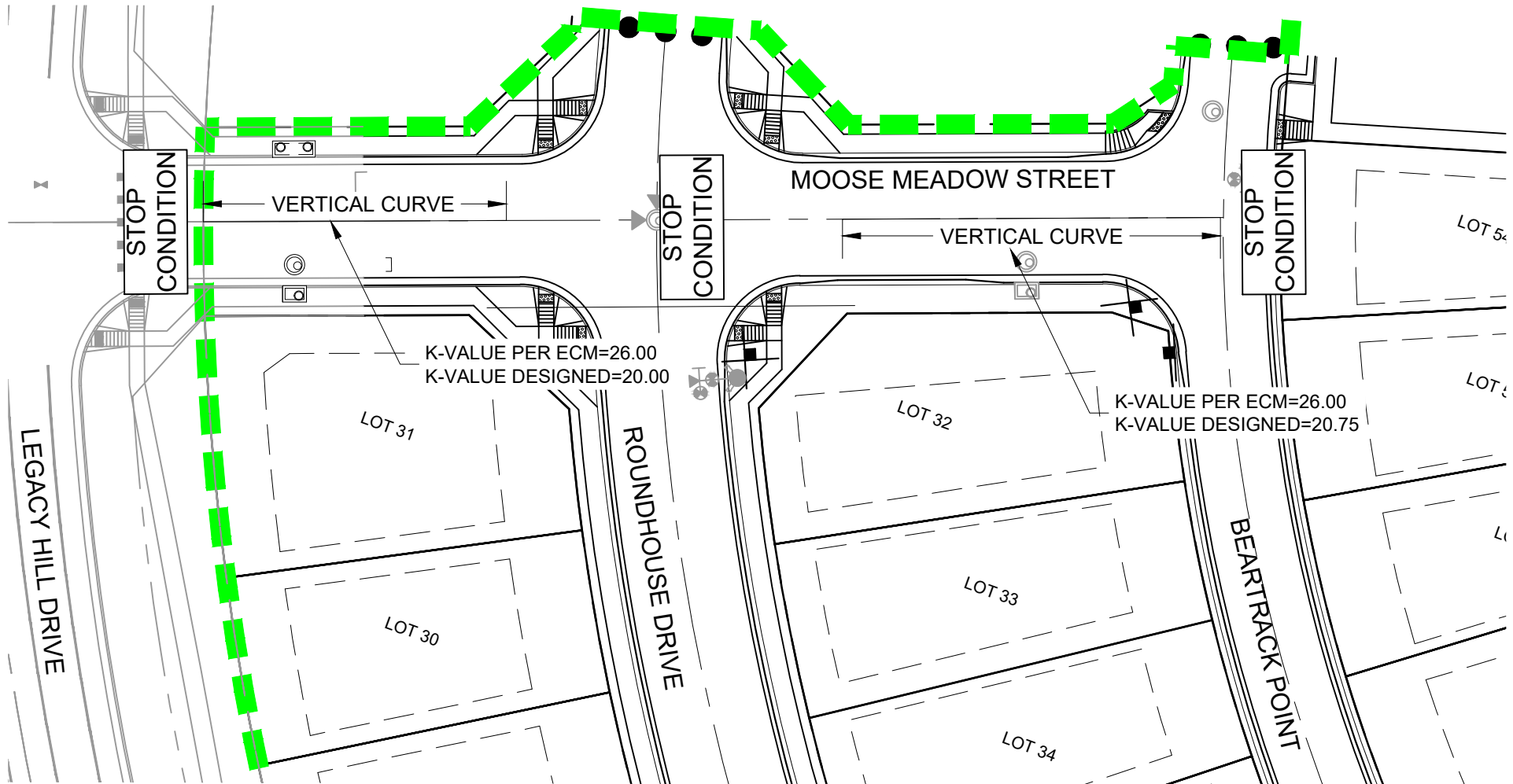
BIG JOHNSON DRIVE & LEGACY HILL DRIVE INTERSECTION  
TRAILS AT ASPEN RIDGE FILING NO. 2 DEVIATION EXHIBIT  
FEBRUARY, 2020



NUTTERBUTTER POINT & BIG JOHNSON DRIVE INTERSECTION  
 TRAILS AT ASPEN RIDGE FILING NO. 2 DEVIATION EXHIBIT  
 FEBRUARY, 2020







LEGACY HILL DRIVE & MOOSE MEADOW STREET AND  
 MOOSE MEADOW STREET & BEARTRACK POINT INTERSECTIONS  
 TRAILS AT ASPEN RIDGE FILING NO. 2 DEVIATION EXHIBIT  
 FEBRUARY, 2020