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DESIGN MEMORANDUM NO. 4-24

TO: Chief District Engineers
Project Development Branch Managers
Design Engineers
Active Consultants

FROM: Tim Layson, P.E., Director *WTL*
Division of Highway Design

DATE: June 3, 2024

SUBJECT: Project Model Submittal – Check Prints

KYTC has understood the value of delivering a 3D model with final plans for many years. While the model has been built and submitted for years, it has rarely been utilized to its full potential. The construction industry has consistently asked for more precise and consistent models to be delivered with plans. In the past 3-5 years, KYTC has focused on developing methods and workflows to better deliver 3D data.

Starting December 31st, 2024, the Electronic Engineering Data folder shall be included at the Check Print Submittal to allow KYTC adequate time to review the model and provide feedback. As KYTC transitions to full 3D model reviews, **we will begin reviewing models as of this memo for final plan projects submitted (both InRoads and OpenRoads).**

***At this point, the 3D model will remain supplemental data and the pdf is still the legal document. Prior to this design memo, there have not been specific requirements in providing a 3D model, therefore, there have been vast differences in model detail. This model review will be used as a discussion point to ensure future expectations will be met. ***

After **August 1st, 2024**, any new Phase II negotiations will require a **Final Model Checklist**. The checklist ensures that the proper design intent is conveyed throughout project development and provides guidelines for those providing a review of the model. New Production Hours have already been created that focus on the work necessary to develop and deliver this data.

The model detail level shall match the level negotiated and adhere to the Model Requirements illustrated below. KYTC is currently working to define the detail level for models more clearly and future communication will be forthcoming.

All Models	
	Key stations at super transitions, vertical and horizontal tapers, gore areas, etc.
	Changes to templates – begin / end ditch, guardrail, etc.
	Minimum vertical and horizontal stroking – 0.1
	No Vertical surfaces (offset .083' - .125')
Mainline / Approaches	
Backbone	
	25' template drops
	No holes / spikes / or gaps
Radii	
	5' template drops
	No bumps
Grading	
	25' template drops
	No Vertical surfaces (offset .083' - .125')
	No spikes
	Holes, gaps, and jumps should be minimized to a point that doesn't affect constructability or quantities.
Entrances	
Model Pavement, radii, and grading	
	No holes / spikes / or gaps
Grading	
	No holes / spikes / or gaps
	Holes, gaps, and jumps should be minimized to a point that doesn't affect constructability or quantities.

Any deviations should be discussed at the negotiation meeting and documented in the Final Model Checklist.