**Vertical CADD Standards**

Version 1.3

November 18, 2020

3D Design Execution Plan Template

Project Name

3D Execution Plan Template

Document No. | <revision>

Date

Regional Municipality of Peel

Peel Region Reference Project No.

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| **Revision** | **Date** | **Description** | | **Author** | **Checked** | **Reviewed** | **Approved** |
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Executive Summary

To successfully implement 3D Design on this project, the project team has developed this detailed 3D Design Execution Plan. The 3D Design Execution Plan defines uses for 3D Design technologies on the project (i.e. design authoring, design coordination, and design review), along with a detailed description of the process for executing 3D Design throughout the project lifecycle.

# Project Information and Key Project Contacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Role | Organization | Contact Name | Location | E-mail | Phone |
| Project Manager(s) |  |  |  |  |  |
| 3D Design Manager(s) |  |  |  |  |  |
| Discipline Leads |  |  |  |  |  |
| Other Project Roles |  |  |  |  |  |
|  |  |  |  |  |  |

Project Goals / 3D Design Uses

3D Design – Required Project Uses

The following table shall be used to specify the application of 3D design during project design phases, if required.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PLAN |  | DESIGN |  | CONSTRUCT |
|  | X | Example; *3D Design Review* | X | Example; As Recorded Model |
|  |  |  |  |  |
|  |  |  |  |  |
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3D Design - Use definitions;

The following categories summarize 3D Design uses outlined in the Region of Peel Vertical CADD standard. These items should be considered as a minimum when utilizing 3D Design on a project, but may be altered on a project specific basis, when approved by the Region of Peel project manager. Please review the Region of Peel Vertical CADD standard and use this section to define the project specific 3D Design use or exemptions.

* Design Authoring:
* Design Review:
* Discipline Coordination:
* Quantity Take Off:
* As Recorded Model:
* Further describe requirements for any project specific 3D design use to be implemented, approved by the Region of Peel project manager.

3D Design Processes

3D Design Workflow Descriptions

Provide a description of the 3D Design workflow needed to enable the required use case in Section 2. These descriptions can be in the form of point form steps, but must include the 3D design use, required reference information, required information exchange and content produced through the process.

Example:

Design Reviews

* Prepare federated model of all required discipline files (*note the software solution*)
* Publish federated model for review (*note the format and location*)
* Review 3D model in conjunction with corresponding drawings and documentation
* Follow design review checklists to cover applicable considerations for 3D content and project design
* Document design review comments for Design team consideration and disposition
* Archive the federated model as record of the design stage review

3D Model Structure

Model Element Level of Development

3D Design Models shall be detailed enough to convey design intent. Level of model development shall provide accurate geometry to generate contract drawings and support the specified 3D Design uses outlined in the Region of Peel Vertical CADD Standard and this project specific 3D Design Execution Plan.

Project Specific LOD and Model exemptions

Use this section to expand on the Region of Peel Vertical CADD Standard, *3D Design – Level of Development*, to include project specific needs that align with the 3D Design uses, noted in Section 2.

Further, if project specific 3D design requirements do not include the baseline 3D Design uses outlined in the Vertical CADD Standard, use this section to identify exemptions to model elements and their level of detail and level of information for the project.

All project specific variations from the Region of Peel Vertical CADD standard shall be approved by the Region of Peel project manager.

Project LOD Matrix

Use this section and example LOD Matrix if project requirements dictate a more granular specification of Model element LOD. (*See Region of Reel Vertical CADD standard appendix E - 3D Design Execution Plan LOD-MasterFormat-UnniFormat*)

Collaboration Procedures

Collaboration Strategy

Complete this section to define the project specific collaboration strategy. At a minimum define the solution to enable Region of Peel access for review of federated 3D Design models at project milestones and via a web browser interface.

Electronic Communication Procedures

Complete this section to define the project specific software systems and procedures to share 3D Design files with Region of Peel and any subconsultants.

Quality Control

Overall Strategy for Quality Control:

Describe the strategy to control the quality of the model. At a minimum this should include the visual and coordination reviews noted in the Region of Peel Vertical CADD Standard.

Further project specific QC plans can be defined here, aligned with the project Quality Plan and approved by the Region of Peel project manager.

Quality Control Checks:

Use the following table to identify the project specific checks that will be done. At a minimum, identify the required checks noted in the Region of Peel Vertical CADD Standard – 3D Design Coordination & 3D Design Review.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Checks | Definition | Responsible Party | Software Program(s) | Frequency |
| Visual Check | Ensure there are no unintended model components and the design intent has been followed |  |  |  |
| Interference Check | Detect problems in the model where two building components are clashing |  |  |  |

Project Deliverables

Model Submissions

List 3D Design file delivery format and frequency

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BIM Submittal Item | Stage | Approximate Due Date | Format | Notes |
| Design Phase Review Models | Design Development |  | iModel |  |
| Issued for Tender Models | Construction Documents |  | iModel  Native Format |  |
| Issued for Construction Models | Construction |  | iModel  Native Format |  |
| ‘As Recorded’ Models | Close out |  | iModel  Native Format |  |

Software:

List software used to deliver 3D Design.

|  |  |  |  |
| --- | --- | --- | --- |
| 3D Design Use | Discipline (if applicable) | Software | Version |
| Design Authoring | Arch | XYZ Design Application | Ver. X.X (Year) |
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