



UNMCSM

**Nebraska
Medicine**

BIM Standards & Guidelines

Version 1.0

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1 – Project Setup Considerations

UNMC/NM does not provide a template or starter file for projects. Each business partner may utilize their own Revit files to originate digital deliverables. For example, linestyle types, workset names, family components, and other common characteristics of Revit project files are not dictated by UNMC/NM. However, these digital deliverables must comply with the requirements provided within this standards document.

Measurements and Coordinates

- True North and Project North should be correctly established.
- 1/8” precision shall be used.

Linked Models

- All linked models must be placed on their own, locked workset and path set to ‘relative’.
- All linked models must be positioned Origin to Origin.
- All linked models must have matching Project Coordinates, Base and Survey Points.

Other Types of Links

- CAD files must be linked (never imported) and placed on their own, locked workset.
- CAD files are not an acceptable replacement for geometry or elements that can be modeled, especially for room boundaries and required modeled elements.
- CAD files should be removed when they are no longer being referenced.
- CAD files for CIVIL and LA disciplines may be linked and should be properly transmitted with any digital deliverable submission.

2 – File Naming Conventions

Digital deliverable file naming shall adhere to the following format requirements:

21400	-	DGC	-	Auditorium Ventilation	-	Arch	-	V20
UNMC Project Number		Building Code		Project Name		Discipline		Revit Version

List of discipline suffixes:

Suffix	Discipline
Arch	Architectural
AV	AV/Telecom
Civil	Civil
Core-Shell	Core and Shell
Elec	Electrical
Equip	Equipment
Exist	Existing Conditions
FP	Fire Protection
Int	Interiors
LA	Landscape Architectural
Light	Lighting
Mech	Mechanical
MEP	Mechanical/Electrical/Plumbing
Plum	Plumbing
Struct	Structural
Tele	Telecom/AV

3 – Modeled Element Requirements

UNMC/NM requires the following modeled elements to be provided. Refer also to:

- BIM Execution Plan: *Section 5 – Building Information Model Uses* for specific requirements for level of detail and accuracy of position and geometry.
- This document: *Section 4 – Parameter Information Requirements*.

Ceilings

Ceilings must be modeled at accurate elevations and be room bounding.

Doors

Doors must be modeled to convey correct size and number of door panels, and graphically indicate direction of swing.

Electrical Equipment/Low Voltage/Telecom

The following Electrical Equipment elements are modeled and are connected to panels as required:

- Cameras
- Card readers
- Electrical panels
- Life safety (exit signage, nurse call devices, panels, pull stations, and strobe/alarm devices only)
- Light fixtures
- Lighting control devices (occupancy sensors and wall-mounted controls only)
- Service entrances

Levels

Levels shall comply with the following requirements:

- Levels shall be set to “Shared Level” to report geo-located elevations.
- Number values less than 10 shall be prefixed with a zero.
- The building and parking levels representing primary entrance shall use number “01”.
- All levels above the entry level shall positively increment the number value as the distance from the entry level increases.
- All building or parking levels below the entry level shall use the prefix “Sub”.
- All building, parking, and tunnel levels below the entry level shall positively increment the number value as the distance from the entry level increases.
- Mezzanines shall match the number value of the level it is associated.
- B.O./T.O. levels (“T.O. Parapet”) may be used but **cannot** host modeled elements with specified parameter requirements (*refer to other categories listed in this section and see Section 4 – Parameter Information Requirements*).
- Levels must follow this standard naming convention:

Level	-	01	-	A
Mezz				
Park				
Sub-Level				
Sub-Park				
Tunnel				
Label		Number		Sub-iterator (where required)

Mechanical Equipment

The following Mechanical Equipment elements must be modeled (include clearances where applicable):

- Air Handling Units
- Dampers
- Ducts
- VAVs

Plumbing

The following Plumbing elements must be modeled (include clearances where applicable):

- Service entrances
 - Chilled and steam
 - Fire sprinkler
 - Hot water
 - Main water
- Main pumps
- Med gas

Rooms

Rooms must comply with the following requirements:

- Rooms must be enclosed by model geometry.
- Room separation lines are may only be used when the separation of designated spaces is not result of physical boundaries.
- Penetrations (doors, windows, other openings) must be accurately modeled.

4 – Parameter Information Requirements

Correct parameter information is an essential component of digital deliverables. These parameters contain data that will be validated before use within internal systems at UNMC/NM.

Project Information

The following Project Information parameters are required to contain accurate data as provided by UNMC/NM:

- Project Address
- Project Name
- Project Number

Shared Parameters

Shared Parameters capture custom information that will be utilized by UNMC/NM after the completion of the project. A Shared Parameters text file is available [\[LINK\]](#).

UNMC-specified shared parameter names are formatted as such:

UNMC	-	Room	-	Name
Standard Prefix		Category		Unique Descriptor

The following tables describes the Shared Parameter name, organized by the categories they're applied to, and the type of information stored in each.

Doors

Doors shall include the following parameter information. Assume information may be summarized at a door instance, regardless if there are differences between data points across multiple door panels within the same door frame.

Parameter	Contents	CD	CA
Door Number (Revit)	Door number, comply with UNMC/NM standards	•	•
UNMC-Door-Closer	Specify if a closer exists (true/false)	•	•
UNMC-Door-Elec	Specify if electrical is used (true/false)	•	•
UNMC-Door-Elec-Circuit	Panel name/number and circuit number		•
UNMC-Door-Exit	Specify if exit hardware exists (true/false)	•	•
UNMC-Door-Key	Specify if the door is keyed (true/false)	•	•
UNMC-Door-Lite	Specify if a lite exists (true/false)	•	•
UNMC-Door-Material-Frame	Specify frame material (<i>refer to Exhibit B</i>)	•	•
UNMC-Door-Material-Panel	Specify door material (<i>refer to Exhibit B</i>)	•	•
UNMC-Door-Operator	Specify if an operator exists (true/false)	•	•

Equipment

Any required equipment elements must contain the following parameter information:
(Refer to Section 3 – Modeled Element Requirements)

Parameter	Contents	CD	CA
UNMC-Equip-Elec	Panel name/number and circuit number		•
UNMC-Equip-Elev	Installed elevation A.F.F. (B.O. equipment)		•
UNMC-Equip-Manufacturer	Equipment Manufacturer		•
UNMC-Equip-Model	Equipment Model		•
UNMC-Equip-Rating	Only for fire/smoke dampers	•	•
UNMC-Equip-Service-Areas	Room numbers this equipment serves	•	•
UNMC-Equip-Tag	Equipment Tag	•	•

Rooms

Rooms shall include the following parameters:

- Each ID parameter shall be an interior finish code with unique number value per finish type on the project (WD-01, APC-02) (*Refer to Exhibit B*).
- Each Product parameter shall provide final installed product information including manufacturer, series, finish type, color, etc.
- For painted gypsum walls and ceilings, use ID-1 and Product-1 to convey primary paint color; ID-2 and Product-2 for one accent color.
- (*) Room-Plan-Area parameter is only required when a project requires area validation reporting.
- (**) Room-Name, Room-Number, Room-Use-Code parameters are only reported in SD and DD if the project requires area validation reporting. These parameters are required in CD and CA for all projects.

Parameter	Contents	SD	DD	CD	CA
UNMC-Room-Name**	Room Name	•	•	•	•
UNMC-Room-Number**	Room Number, based on standards			•	•
UNMC-Room-Use-Code**	Use code as specified by the program document.	•	•	•	•
UNMC-Room-Floor-ID-1	Primary floor finish unique ID			•	•
UNMC-Room-Floor-Product-1	Primary floor finish material product information				•
UNMC-Room-Floor-ID-2	Secondary floor finish, if it exists.			•	•
UNMC-Room-Floor-Product-2	Provide as-built information only				•
UNMC-Room-Wall-ID-1	Primary wall finish of all walls			•	•
UNMC-Room-Wall-Product-1	Provide as-built information only				•
UNMC-Room-Wall-ID-2	Secondary wall finish, if it exists			•	•
UNMC-Room-Wall-Product-2	Provide as-built information only				•
UNMC-Room-Ceiling-ID-1	Primary ceiling system/finish			•	•
UNMC-Room-Ceiling-Product-1	Provide as-built information only				•
UNMC-Room-Ceiling-ID-2	Secondary ceiling, if it exists			•	•
UNMC-Room-Ceiling-Product-2	Provide as-built information only				•
UNMC-Room-Plan-Area*	Required Area as specified by the program document.	•	•	•	•

Service Entrances

Any family and/or modeled element (pipes, conduit, etc.) representing a service entrance shall contain the following parameter. Service entrances shall be defined as a modeled element cutting through an exterior building boundary.

Parameter	Contents	CD	CA
UNMC-Service-Entrance-Type	Service type descriptor (electrical, telecom, steam, etc.)	•	•

EXHIBIT A: Space Use Codes

A space use code matrix is provided to satisfy Room parameter requirements [\[LINK\]](#).

EXHIBIT B: Interior Finish Definitions

An index of common interior finish ID and Product types is provided to satisfy Room parameter requirements [\[LINK\]](#).