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The New Role of the AIA

BIM / Digital Practice Documents

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New Mandatory Use

The AIA's Digital Practice Documents play a **prominent role** in its newly-released 2017 Contract Documents.



New Mandatory Use

Use of the Digital Practice Documents is **expressly required** by the AIA's new Owner-AE Agreements and Owner-Contractor Agreements.

New Mandatory Use

For example, the B101-2017 Owner-AE Agreement provides

§ 1.3 The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use [AIA Document E203–2013, Building Information Modeling and Digital Data Exhibit](#), to establish the protocols for the development, use, transmission, and exchange of digital data.



Why the Digital Practice Documents matter

Why This Matters

The Digital Practice Documents
were inspired by the rapidly evolving ways
parties transmit, use, and rely
on Digital Data.

Why This Matters

BIM and Digital Data sharing are not new.

But contracts and legal doctrines generally lag a few years behind new technologies and trends in project delivery.

Why This Matters

All projects use Digital Data.

Digital Data is anything stored in digital form, from emails to Building Information Modeling (BIM) model elements.



Why This Matters

Many AIA Contract Document users are unfamiliar with

- ▶ E203–2013, BIM / Digital Data Exhibit
- ▶ G201–2013, Project Digital Data Protocol Form
- ▶ G202–2013, Project BIM Protocol Form

Why This Matters

The AIA's 2013 Digital Practice Documents are seldom used.

Most contracts omit their important subject matter.



Why This Matters

Like other risks,
Digital Data-related risks can be most
predictably managed by contract.



Three principal **AIA Digital Practice Documents**

AIA Digital Practice Documents

Three principal documents

- ▶ [E203–2013, BIM / Digital Data Exhibit](#): this **contract exhibit** must be incorporated into the contracts of nearly all project participants
- ▶ [G201–2013, Project Digital Data Protocol Form](#): this **protocol** takes legal effect through the E203, and sets rules for Digital Data use
- ▶ [G202–2013, Project BIM Protocol Form](#): this **BIM-specific protocol** is used along with E203 and G201 on BIM projects



The flagship Digital Practice Document is
E203–2013, BIM / Digital Data Exhibit

E203 fosters a discussion between, and sets forth the basic expectations of, the Owner, lead A/E, and Contractor concerning transmission, use, and reliance on Digital Data.

E203-2013, BIM / Digital Data Exhibit

ARTICLE 4 BUILDING INFORMATION MODELING PROTOCOLS

§ 4.1 If the Parties indicate in Section 3.1 that Building Information Modeling will be used on the Project, specify below the extent to which the Parties intend to utilize Building Information Modeling and identify the provisions of this Article 4 governing such use:

- [« »] The Parties shall utilize Building Information Modeling on the Project for the sole purpose of fulfilling the obligations set forth in the Agreement without an expectation that the Model will be relied upon by the other Project Participants. Unless otherwise agreed in writing, any use of, transmission of, or reliance on the Model is at the receiving Party's sole risk. The remaining sections of this Article 4 shall have no force or effect.
- [« »] The Parties shall develop, share, use and rely upon the Model in accordance with Sections 4.2 through 4.10 of this Exhibit.

E203 is a fairly simple document.

It recognizes the Owner, lead A/E, and Contractor may not be ready at the time of contracting to enter into detailed Digital Data protocols.

E203-2013, BIM / Digital Data Exhibit

Under E203, the Owner, lead A/E and Contractor must, *“as soon as practical following the execution”* of their contracts, agree on and document detailed Digital Data protocols.

E203-2013, BIM / Digital Data Exhibit

§ 1.3 Adjustments to the Agreement

§ 1.3.1 If a Party believes that protocols established pursuant to Sections 3.2 or 4.5, and memorialized in AIA Documents G201–2013 and G202–2013, will result in a change in the Party's scope of work or services warranting an adjustment in compensation, contract sum, schedule or contract time, the Party shall notify the other Party. Failure to provide notice as required in this Section 1.3 shall result in a Party's waiver of any claims for adjustments in compensation, contract sum, schedule or contract time as a result of the established protocols.

E203 provides some contractual protection for Parties that use Digital Data per the agreed protocols.

Parties that use Digital Data in other ways do so at their sole risk.

E203-2013, BIM / Digital Data Exhibit

§ 3.4 Unauthorized Use

§ 3.4.1 Prior to Establishment of Digital Data Protocols

If a Party receives Digital Data prior to the agreement to, and documentation of, the Digital Data protocols in AIA Document G201–2013, that Party is not authorized to use or rely on the Digital Data. Any use of, or reliance on, such Digital Data is at that Party's sole risk and without liability to the other Party and its contractors, consultants, agents and employees.

§ 3.4.2 Following Establishment of Digital Data Protocols

Following agreement to, and documentation of, the Digital Data protocols in AIA Document G201–2013, if a Party uses Digital Data inconsistent with the Authorized Uses identified in the Digital Data protocols, that use shall be at the sole risk of the Party using the Digital Data.



The basic AIA Digital Data protocol is
G201–2013, Project Digital Data Protocol Form

G201-2013, Project Digital Data Protocol Form

G201 is typically completed in the early phases of the project – after the Owner, lead A/E, and Contractor determine how they plan to use Digital Data.

G201-2013, Project Digital Data Protocol Form

The Parties should agree on G201 protocols without undue delay.

Under E203, Parties that use or rely on Digital Data before agreeing to G201 protocols do so at their sole risk.

G201-2013, Project Digital Data Protocol Form

Article 1 of G201 lists each Project Participant whose contract incorporates E203-2013.

These “Parties” agree, by attaching E203 to their separate contracts, to abide by the G201 protocols.

G201-2013, Project Digital Data Protocol Form

ARTICLE 1 GENERAL PROVISIONS REGARDING USE OF DIGITAL DATA

§ 1.1 List each Project Participant that has incorporated AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated « » , into its agreement for the Project:

Project Participant	Discipline
« »	

§ 1.2 Project Participants. For each Project Participant listed in Section 1.1, identify and provide contact information for the individuals responsible for implementation of the Digital Data protocols.

Project Participant	Individual Responsible	Contact Information
« »		

Article 2 protocols for managing Digital Data

- ▶document management systems
- ▶rules for user access and security
- ▶requirements for training, startup, and support
- ▶storage requirements and procedures
- ▶archiving and preservation protocols

G201-2013, Project Digital Data Protocol Form

Article 3 of G201 addresses transmission and use of Digital Data.

The Digital Data Protocol Table identifies the Digital Data to be used and the authorized formats, software versions, and transmission methods.

G201-2013, Project Digital Data Protocol Form

Digital Data	Digital Data Format	Transmission Method	Authorized Uses	Note Number (See Sec. 3.2)
§ 3.1.1 Project Agreements and Modifications				
§ 3.1.2 Project communications				
General communications				
Meeting notices				
Agendas				
Minutes				
Requests for information				
Architect's Supplemental Instructions				
§ 3.1.3 Architect's pre-construction submittals				
Schematic Design Documents				
Design Development Documents				
Construction Documents				

G201-2013, Project Digital Data Protocol Form

In G201 Article 3, the Parties identify the
Authorized Uses of Digital Data.

These project-specific rules govern the use of,
and reliance on, Digital Data.

G201-2013, Project Digital Data Protocol Form

The parties should modify the G201 protocol form as necessary to meet the Digital Data needs of the project.

G201-2013, Project Digital Data Protocol Form

G201 suggests a range of possible Authorized Uses

- ▶ modify as required
- ▶ incorporate additional Digital Data
- ▶ store and view only
- ▶ reproduce and distribute

G201-2013, Project Digital Data Protocol Form

Authorized Uses of Digital Data:

(Below are suggested abbreviations and definitions. Delete, modify or supplement, as necessary.)

Abbreviation	Definition
I	Integrate (incorporate additional digital data without modifying data received)
M	Modify as required to fulfill obligations for the Project
R	Reproduce and distribute
S	Store and view only



The AIA BIM protocol form is
G202–2013, Project BIM Protocol Form

G202-2013, Project BIM Protocol Form

If BIM will be used, the Parties must adopt a G202 protocol.

G202-2013, Project BIM Protocol Form

G202 is completed at a logical point near the project outset.

This is typically after the Owner, lead A/E, and Contractor determine their plan for BIM use, and after they hire key consultants and contractors.

G202-2013, Project BIM Protocol Form

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 For each Project Participant that has incorporated the Project specific AIA Document E203™–2013, Building Information Modeling and Digital Data Protocol Exhibit, dated « » , into its agreement for the Project, identify and provide the contact information for individuals responsible for implementation of the Modeling protocols. If, for any Project Participant, more than one individual will be responsible for implementation of the Modeling protocols, list each individual separately and describe the unique Modeling Role assigned to each individual.

Modeling Role	Project Participant	Individual Responsible	Contact Information
« »			

G202-2013, Project BIM Protocol Form

The Parties should agree on G202 protocols without undue delay.

Under E203, those who use, transmit, or rely on BIM information before the G202 is finalized do so at their sole risk.

G202-2013, Project BIM Protocol Form

Filling in the blanks of G202 helps develop the plan for project BIM use.

G202-2013, Project BIM Protocol Form

The heart of G202 is the Model Element Table

This substantial matrix identifies who will author various Model Elements, and the extent to which they can be relied on at various times.

G202-2013, Project BIM Protocol Form

§ 3.3 Model Element Table <i>Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.</i> <i>Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."</i> <i>NOTE: LODs must be adapted for the unique characteristics of each Project.</i>																			
	Project Milestone 1			Project Milestone 2			Project Milestone 3			Project Milestone 4			Project Milestone 5			Project Milestone 6			Notes (See Sec. 3.4)
Model Elements Utilizing CSI UniFormat™	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	
A SUBSTRUCTURE																			
A10 FOUNDATIONS																			
A1010 Standard Foundations:																			
A1010.10 Wall Foundations:																			
A1010.30 Column Foundations:																			
A1010.90 Standard Foundation Supplementary Components:																			
A1020 Special Foundations:																			
A1020.10 Driven Piles:																			
A1020.15 Bored Piles:																			
A1020.20 Caissons:																			
A1020.30 Special Foundation Walls:																			
A1020.40 Foundation Anchors:																			
A1020.50 Underpinning:																			
A1020.60 Raft Foundations:																			
A1020.70 Pile Caps:																			
A1020.80 Grade Beams:																			
A20 SUBGRADE ENCLOSURES																			
A2010 Walls for Subgrade Enclosures																			
A2010.10 Subgrade Enclosure Wall Construction:																			
A2010.20 Subgrade Enclosure Wall Interior Skin:																			
A2010.90 Subgrade Enclosure Wall Supplementary Components:																			
A40 SLABS-ON-GRADE																			

G202-2013, Project BIM Protocol Form

All project BIM users – from design consultants to trade contractors – can provide valuable input to the G202 Model Element Table.

G202-2013, Project BIM Protocol Form

G202 specifies minimum content requirements for Model Elements at five **Levels of Development**

- ▶ LOD 100 (conceptual)
- ▶ LOD 200 (approximate quantities, size, shape, location)
- ▶ LOD 300 (specific quantities, size, shape, location)
- ▶ LOD 400 (fabrication, shop drawing detail)
- ▶ LOD 500 (field verified, as-built)

G202-2013, Project BIM Protocol Form

G202 identifies Authorized Uses for
BIM Model Elements at each LOD.

Authorized Uses are paired to Model Element
content requirements at specific points in time.

G202-2013, Project BIM Protocol Form

§ 2.2 LOD 100

§ 2.2.1 Model Element **Content Requirements**. The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e., cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.

§ 2.2.2 Authorized Uses

§ 2.2.2.1 **Analysis**. The Model Element may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to other Model Elements.

§ 2.2.2.2 **Cost Estimating**. The Model Element may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, condominium unit, hospital bed, etc.).

§ 2.2.2.3 **Schedule**. The Model Element may be used for Project phasing and determination of overall Project duration.

§ 2.2.2.4 **Other Authorized Uses**. Additional Authorized Uses of the Model Element developed to LOD 100, if any, are as follows:

G202-2013, Project BIM Protocol Form

A cautious Party (say, a cost estimator) can use G202 to determine, for example, that in LOD 100

- ▶ it can use Model Elements for conceptual estimating
- ▶ it cannot use Model Elements for detailed take-offs

G202-2013, Project BIM Protocol Form

The Model Element Table also assigns authorship responsibility to a **Model Element Author** for each Model Element.

Model Element Authors can change as milestones are achieved.

G202-2013, Project BIM Protocol Form

§ 3.3 Model Element Table <i>Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4.</i> <i>Insert abbreviations for each MEA identified in the table below, such as "A – Architect," or "C – Contractor."</i> NOTE: LODs must be adapted for the unique characteristics of each Project.																		
Model Elements: Utilizing CSI UniFormat™																		
	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes	LOD	MEA	Notes
A SUBSTRUCTURE																		
A10 FOUNDATIONS																		
A1010 Standard Foundations:																		
A1010.10 Wall Foundations																		
A1010.30 Column Foundations																		
A1010.90 Standard Foundation Supplementary Components																		
A1020 Special Foundations:																		
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A1020.15 Bored Piles																		
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A1020.30 Special Foundation Walls																		
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A2010.20 Subgrade Enclosure Wall Interior Skin																		
A2010.90 Subgrade Enclosure Wall Supplementary Components																		
A40 SLABS-ON-GRADE																		

G202-2013, Project BIM Protocol Form

For example, for systems procured through design-build subcontractors, the Model Element Author may change from the lead A/E to a trade subcontractor at LOD 300.



How do I use the Digital Practice Documents?

Using the Digital Practice Documents

The E203 contract exhibit and G201 protocol form are always used together.

On BIM projects, the G202 BIM protocol form should be used as well.

Using the Digital Practice Documents

E203-2013 is prepared at the project outset, is incorporated into the relevant contracts, and normally will not be revised.

Using the Digital Practice Documents

G201 and G202 protocols are frequently updated
– with the agreement of relevant Parties –
as project circumstances change.

Using the Digital Practice Documents

A late-project G201 revision may address mechanical coordination – a subject perhaps addressed only lightly in the original G201.

Using the Digital Practice Documents

A late-project G202 revision may, for example, change a Model Element Author from the mechanical engineer to the mechanical subcontractor at LOD 400.

G202-2013, Project BIM Protocol Form

PROJECT: *(Name and address)*

«Blank 2016»

« »

PROTOCOL VERSION NUMBER: « »

DATE: « »

PREPARED BY: « »

DISTRIBUTION TO: *(List each individual to whom this protocol is distributed. Include individuals listed in Section 1.1, or reference Section 1.1, along with any additional recipients.)*

« »

Using the Digital Practice Documents

Keep a record of each Party receiving and approving any revised G201 or G202 protocols.

This prevents a Party from claiming it did not agree to comply with the latest revised protocols.

Using the Digital Practice Documents

Project Participants must understand why the AIA Digital Practice Documents are contractually binding.

Using the Digital Practice Documents

E203 is not a standalone agreement; it is a contract exhibit.

It takes legal effect, and reaches the entire project, when incorporated to the contracts of all Parties who may use Digital Data.

Using the Digital Practice Documents

§ 1.2 The Parties agree to incorporate this Exhibit into their agreements with any other Project Participants that may develop or make use of Digital Data on the Project. Prior to transmitting or allowing access to Digital Data, a Party may require any Project Participant to provide reasonable evidence that it has incorporated this Exhibit into its agreement for the Project, and agreed to the most recent Project specific versions of AIA Document G201™–2013, Project Digital Data Protocol Form and AIA Document G202™–2013, Project Building Information Modeling Protocol Form.

Using the Digital Practice Documents

E203 must be incorporated into both the lead A/E and Owner-Contractor Agreements.

Those Parties must then incorporate E203 into their other project contracts with relevant lower tier Project Participants.

Using the Digital Practice Documents

G201 and G202 are not standalone agreements or contract exhibits.

They take legal effect through E203 – so E203 must be incorporated into the contracts of any Project Participant who may use Digital Data.

Using the Digital Practice Documents

A Party who fails to incorporate E203 into its downstream contracts may become contractually responsible for others' misuse of Digital Data.



Risk Allocation Scheme

Risk Allocation Scheme

If a Party receives Digital Data **before** G201 and G202 protocols are agreed and documented

- ▶ the receiving Party may not use, transmit, or rely on the Digital Data, and
- ▶ any such premature use is at the receiving Party's sole risk – without liability to other Parties

Risk Allocation Scheme

After G201 / G202 protocols are agreed and documented, any use or reliance on Digital Data in a manner inconsistent with the “Authorized Uses” is at the sole risk of the user.

What if a Party fails to incorporate
E203-2013 into its relevant
downstream contracts?

Risk Allocation Scheme

A “third party beneficiary”
can sue on a contract –
despite not being a direct
party to that contract.



Risk Allocation Scheme

Under E203, every Project Participant who uses Digital Data is an intended **third party beneficiary** of

- ▶ every Party's obligation to incorporate E203 into their other relevant project contracts, and
- ▶ *“any rights and defenses associated with enforcement of that obligation.”*

Risk Allocation Scheme

§ 1.2.1 The Parties agree that each of the Project Participants utilizing Digital Data on the Project is an intended third party beneficiary of the Section 1.2 obligation to incorporate this Exhibit into agreements with other Project Participants, and any rights and defenses associated with the enforcement of that obligation. This Exhibit does not create any third-party beneficiary rights other than those expressly identified in this Section 1.2.1.

Risk Allocation Scheme

This provision tries to ensure each Party complies with its obligation to incorporate E203 into its relevant downstream project contracts.

Risk Allocation Scheme

Assume, for example, an Engineer fails to include E203 in its contracts with subconsultants that use Digital Data.

Risk Allocation Scheme

Under that example, if a design subconsultant's failure to comply with G201 or G202 protocols damages a contractor, it *may* have a claim directly against the engineer— even though they do not share a contract.

Risk Allocation Scheme

Time will tell how judges and arbitrators enforce E203-2013's third party beneficiary provisions.



Conclusion

Conclusion

The Digital Practice Documents take important steps in trying to match contract terms with modern trends in Digital Data use.

This is a good thing.

Conclusion

The Digital Practice Documents can, however, be complex to use and administer.

They require significant early “buy in” from the Owner, lead A/E, and Contractor.

Conclusion

Parties should consider using the Digital Practice Documents – but they should not use them lightly, and not without understanding their requirements.

The AIA's invaluable "*Guide, Instructions and Commentary to the 2013 AIA Digital Practice Documents*" is on the AIA website:

<http://aiad8.prod.acquia-sites.com/sites/default/files/2017-02/2013%20Digital%20Practice%20Documents%20Guide.pdf>

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