

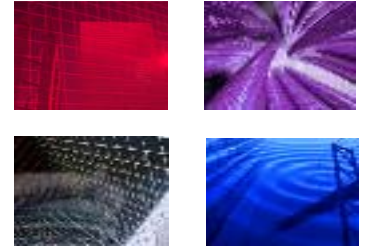
Sustainability ICIS

Matt Johnson
Chief Technology Officer - ARCOM

June 2, 2014



5 Sustainability Criteria



LEED 2009

LEED 4

IGCC

ASHRAE

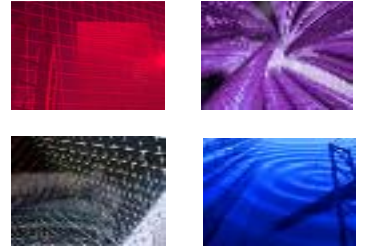
Green Globes

- Some are voluntary, some are required
- IGCC – International Green Construction Code
- ASHRAE 189.1 – sometimes incorporated into codes



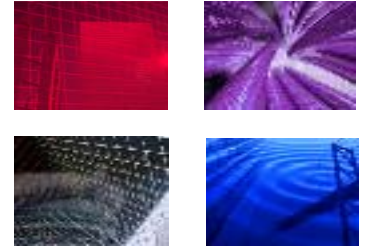
Challenge – “Make it Easy”

- Incorporate 5 sets of sustainability criteria into an already lengthy 450 individual sections
- Interdependent relationships (more complex to edit in Word)
- User may need to combine more than one set of criteria in a document when a single set of criteria is not available throughout
- Reduce errors
- Criteria change frequently
- Must be able to add additional systems (LEED v5, Living Buildings)



METADATA & SECTION INFORMATION	PART	Article	Level 1 Paragraph	Level 2 Paragraph	LEED 2009	LEED 4	IGCC	ASHRAE	Green Globes
	Child:	1.4 ACTION SUBMITTALS							
		Child:	Text: Product Data:...						
			Child:	Text: Include data for...					
			Child:	Text: Include data for...					
			Child:	Text: For fire-retardant...					
			Child:	Text: For products receiving...					
			Child:	Text: Include copies of...					
		Child:	Text: Sustainable Design Submittals...						
			Child:	Editor's Note: "Product Certificates"...	X				
			Child:	Text: Product Certificates:...	X				
			Child:	Editor's Note: "Product Certificates"...		X			
			Child:	Text: Product Certificates:...		X			
			Child:	Editor's Note: "Product Certificates"...			X		
			Child:	Text: Product Certificates:...			X		
			Child:	Editor's Note: "Product Certificates"...				X	
			Child:	Text: Product Certificates:...				X	
			Child:	Text: Chain-of-Custody...				X	
			Child:	Editor's Note: "Product Data"... (L NC, L CI,)	X	X	X	X	X
			Child:	Text: Product Data:...	X	X	X	X	X
			Child:	Editor's Note: "Laboratory Test Reports"...	X	X	X	X	X
			Child:	Text: Laboratory Test Reports:...	X	X	X	X	X
			Child:	Editor's Note: "Product Data"... (L NC, L CI)	X				
			Child:	Text: Product Data:...	X				
			Child:	Editor's Note: "Laboratory Test Reports"...	X				
			Child:	Text: Laboratory Test Reports:...	X				
			Child:	Editor's Note: "Laboratory Test Reports"...		X			

Technical Challenges

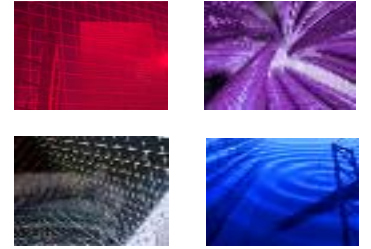


Make content available to users on:

- Windows, Mac and portable devices (future)
- ARCOM Software
 - Masterworks (MS Word)
 - Altarix (desktop)
 - SpecBuilder (cloud)
- Minimize expense of developing for each platform (SA,PB)
- Common experience between platforms



Why not just put all systems in the section text?



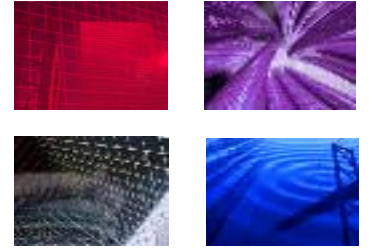
- Unmanageable length primarily due to editors notes explaining relationships and interdependencies
- Tactical shift

Previous efforts to combat intellectual property theft have focused on closed DB systems such as Linx and Altarix with no strategy for encouraging MS Word users to keep up with their license.

“Widget” and “Connector” efficiency tools make it easier to build and edit accurate MasterSpec sections, in return for staying current on license.



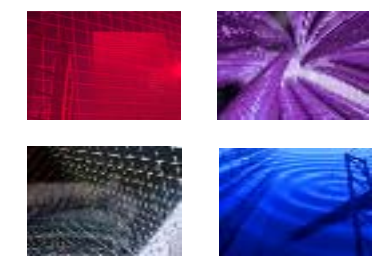
Proposed Solution



- Create a sustainability “widget” that allows the user to select a single or variety of sustainability requirements
- Delivered through ARCOM custom web browser
- All content delivered from custom web Data Base
- “Minimal portion” is platform specific to Windows or Mac
- **Solution will be the basis for additional widgets using the same license authentication, interface and delivery (PB, electrical testing, hybrid Project Management)**



Development - Content



Full Section Sustainability Verification

034100 Format: 1
 PRECAST STRUCTURAL CONCRETE SID: 10306
 06/01/14

Para#	Status	TopicID	TopicName	Systems	Tagged Paragraph T
42	Bookmarked	1	Sustainable Design Submittals	9 4 I A G	<PR.1>Sustainable
43	Bookmarked	7	Recyded Content Submittal	9 4 I A G	<PR.2>Product Dat
44	Bookmarked	8	Regional Materials Submittal	9	<CMT>"Product Ce
45	Bookmarked	8	Regional Materials Submittal	9	<PR.2>Product Cer
46	Bookmarked	8	Regional Materials Submittal	4	<CMT>"Product Ce
47	Bookmarked	8	Regional Materials Submittal	4	<PR.2>Product Cer
48	Bookmarked	8	Regional Materials Submittal	I	<CMT>"Product Ce
49	Bookmarked	8	Regional Materials Submittal	I	<PR.2>Product Cer
50	Bookmarked	8	Regional Materials Submittal	A	<CMT>"Product Ce
51	Bookmarked	8	Regional Materials Submittal	A	<PR.2>Product Cer
192	Bookmarked	110	Recycled Content of Steel Products	9 4 I A G	<CMT>Retain "Rec
193	Bookmarked	110	Recycled Content of Steel Products	9 4 I A G	<PR.1>Recycled Co
215	Bookmarked	111	Regional Materials - Concrete	9	<CMT>"Regional M
216	Bookmarked	111	Regional Materials - Concrete	9	<PR.1>Regional Ma
217	Bookmarked	111	Regional Materials - Concrete	9	<CMT>"Regional M
218	Bookmarked	111	Regional Materials - Concrete	9	<PR.1>Regional Ma
219	Bookmarked	111	Regional Materials - Concrete	4	<CMT>"Regional M
220	Bookmarked	111	Regional Materials - Concrete	4	<PR.1>Regional Ma
221	Bookmarked	111	Regional Materials - Concrete	I	<CMT>"Indigenous
222	Bookmarked	111	Regional Materials - Concrete	I	<PR.1>Indigenous I
223	Bookmarked	111	Regional Materials - Concrete	A	<CMT>"Regional M
224	Bookmarked	111	Regional Materials - Concrete	A	<PR.1>Regional Ma
331	Bookmarked	124	Regional Materials - Brick	9	<CMT>"Regional M
332	Bookmarked	124	Regional Materials - Brick	9	<PR.1>Regional Ma
333	Bookmarked	124	Regional Materials - Brick	9	<CMT>"Regional M
334	Bookmarked	124	Regional Materials - Brick	9	<PR.1>Regional Ma

<CMT>Retain "Recycled Content of Steel Products" Paragraph below to specify recycled content if required. content is to retain requirement in Project's Division 01 sustainable design requirements Section that gives Com determine how recycled content requirements will be met. </CMT>

Find Matches in DB for Regions Mark Found Regions

Create New Sustainability Topic

Topic Name: Verify Name

Hyperlink Display Text:

"Regional Materials" Paragraph below applies to LEED 2009 NC, CS, and LEED 2009 for Schools Credit MR 5 and to LEED 2009 CI Credit MR 5, Option 2; before retaining, verify availability of materials that comply.

Regional Materials: Concrete shall be manufactured within 500 miles (800 km) of Project site from aggregates[and cementitious materials] that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.

"Regional Materials" Paragraph below applies to LEED 2009 CI Credit MR 5, Option 1.

Regional Materials: Concrete shall be manufactured within 500 miles (800 km) of Project site.

"Regional Materials" Paragraph below applies to LEED v4.

Regional Materials: Concrete shall be manufactured within 100 miles (160 km) of Project site from aggregates[and cementitious materials] that have been extracted, harvested, or recovered, as well as manufactured, within 100 miles (160 km) of Project site.

"Indigenous Materials" Paragraph below applies to IgCC; before retaining, verify availability of materials that comply.

Indigenous Materials: Concrete shall be manufactured within 500 miles (800 km) of Project site from aggregates[and cementitious materials] that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site. If materials are transported by rail or water, the distance shall be 100 miles (160 km).

"Regional Materials" Paragraph below applies to ASHRAE 189.1; before retaining, verify availability of materials that comply.

Regional Materials: Concrete shall be manufactured within 500 miles (800 km) of Project site from aggregates[and cementitious materials] that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site. If materials are transported by rail or water, the distance shall be 100 miles (160 km).

LEED 2009
 LEED v4
 IgCC
 ASHRAE
 Green Globes

LEED 2009
 LEED v4
 IgCC
 ASHRAE
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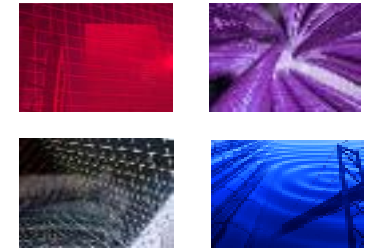
LEED 2009
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 IgCC
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 IgCC
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 Green Globes

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 IgCC
 ASHRAE
 Green Globes



Development - ISO



Filter **show all** metal transition -ium Sort original order name symbol **number**

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N ⁷ Nitrogen 14.007	Na ¹¹ Sodium 22.99	Ar ¹⁸ Argon 39.948	K ¹⁹ Potassium 39.0983	Ca ²⁰ Calcium 40.078	Co ²⁷ Cobalt 58.933	Cd ⁴⁸ Cadmium 112.411	Sb ⁵¹ Antimony 121.76
Te ⁵² Tellurium 127.6	Yb ⁷⁰ Ytterbium 173.054	Re ⁷⁵ Rhenium 186.207	Au ⁷⁹ Gold 196.967	Hg ⁸⁰ Mercury 200.59	Tl ⁸¹ Thallium 204.383	Pb ⁸² Lead 207.2	Bi ⁸³ Bismuth 208.980
U ⁹² Uranium 238.029	Pu ⁹⁴ Plutonium (244)						

528.058 Uranium (See) Bismuth

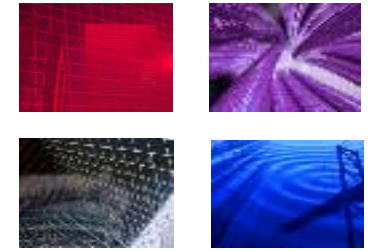
n⁸⁵ **bn**⁸⁴

112.011 186.204 186.203 200.29 204.383 207.2 208.980

- Allows creation of “fluid” interfaces
- User can adjust their environment
- Eliminates the need for “multiple screens”



Development - ISO



Full Length Short Form **Both** Hide Changes Hide Editors Notes

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075216 - STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

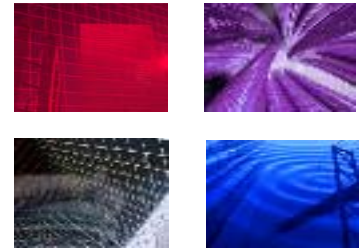
1. Styrene-butadiene-styrene (SBS) modified bituminous membrane roofing.
2. Hybrid roofing system that combines built-up ply sheets with SBS-modified bituminous membrane roofing.
3. Vapor retarder.
4. Roof insulation.

Retain first paragraph below if acoustical roof deck is required and if installation of insulation strips is included in this Section.

B. Section includes the installation of insulation strips in ribs of acoustical roof deck. Insulation strips are



Demonstration



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SECTION 096400 - WOOD FLOORING

TIPS:

To view non-printing **Editor's Notes** that provide guidance for editing, click on Masterworks/Single-File Formatting/Toggle/Editor's Notes.

To read **detailed research, technical information about products and materials, and coordination checklists**, click on Masterworks/Supporting Information.

Revise this Section by deleting and inserting text to meet Project-specific requirements.

This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

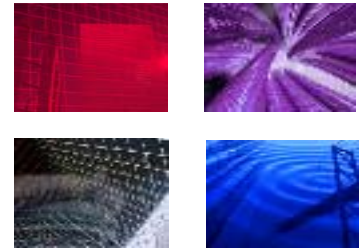
Retain or delete this article in all Sections of Project Manual.

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.



Why it Matters

- Faster, more accurate editing
- Changes and new sustainability requirements can be added without reissuing sections
- Provides strong incentive for MS Word users to stay current on their license



Questions?

