System B	reakdown St	ructure														
					/ Modeled											
1 Level 2	Level 3	Level 4	IfcBridge07	MinND			CRBIM	Comments	Existing IFC Entity	New IFC Entity	CRBIM Mappings	Additional info	Picture's filename	German		
vay					will adapt	FHWA										
Carriagew	*****															
Carriagew	Median				×											
	Lane			^	×											
	Refuge platform				_ ^		×									
	Sidewalk				×		^									
	Oldewalk				_ ^											
y																
Floor Syst	stem						×	CRBIM: mainly waterproof surfacing								
										IfcBridge						
										IfcSpatialElement						
Superstru										SMu: IfcSpatialElemen	is a not a new IFC entity.					
	Approach Slab			×					IfcSlab					Schlepplatte		
	Deck / Span		enum	×												
		Slab							IfcSlab							
		Cross frame						SMu: Either an IfcElementAssembly (could be ".TRUSS" or new F	CD: IfcElementAssembly							
		Diaphragm		· ·				SMu: would like to discuss this mapping. Diaphragm is a function	CD: IfcWall							
	Girder	Diapiliagili	enum	X				SMu: or IfcElementAssembly in case it is composed of parts.	IfcBeam			AASHTO 123	4,5,6, U shape, I shape, Invert T, double	T. Invert double T.	Hollow Box, Bulb T. Rectangular, Other*	
	Truss		endili	^				SMa: with chords, stiffeners etc.	noodani			, 010111 U 1,2,3,4	-,o,o, o anape, i anape, invert i , double	i, invert double 1, I	Tollow Box, Build 1, Nectarrigular, Other	
	IIuob	Combination (lev	el 5)					SMa: with chords, stiffeners etc. SMa: with shear studs etc.								
		Compilation (lev	o. o,					oma, mai anom auda oto.								
								AB: Not sure if this is an element	CD: IfcFeatureElementAdditi	on						
		Haunch						SMu: Does this have to be a separate occurrence in the structure	SMu: IfcFeatureElementAddi	tion is abstract and there						
										IfcBeamTypeEnum	m is a not a new IFC entit					
	Parapet			x				SMa: also called apron	SMa: IfcWall.PARAPET	SMu: IfcBeamTypeEnu	m is a not a new IFC entit	y. This mappng s	seems like a mistake.			
	Expansion Instal	ation					×	CRBIM:A single and useful part between beams. SMa and SMu: dilatation?				SM: Could be di	ianhragm?			
	Gear Block						×	CRBIM:A single and useful part of continuous beam. picture in the	l doc			SM: what is this				
	Tendon Bellow						×	CRBIM: A single and useful part in the T-section beams				OW. WHAT IS THE				
	Vertical Wall						×	AB: What kind wall is meant here? Anything different from ifcWall?	IfcWall							
	Beam falling pre	ention device					×	CRBIM: picture in doc	norvan							
	Dodni idining pro	Onton dovido						or terms produce in doc								
Substruct	cture															
									IfcWall							
	Abutment			×					SMu: IfcElementAssembly							
		Wing Wall							SMu: IfcWall							
		Head Wall							SMu: IfcWall							
		Stem Wall							SMu: IfcWall							
		Cone					x	CRBIM: a part of the abutment								
	Arch		×					SMa: out of scope								
		Arch Spring														
		Arch Piers	x													
	Bearing			х				SMu: General consensus, a new IFC entity is required. Proposed	SMu: IfcBearing	MINnD: IfcCivilBearing						
		Pedestal		х				SMa: also called bearing plinth or shelf								
	Bracing							SMa: lateral support SMu: are the elements in tenstion / compression and is this an im	portant distinction for the elem	onte Aleo door this how	to be a congrete elemen	Is this pooded a	e ovtra alamant?			
	Diadily							SMa: out of scope	yorum albunouon for tile elem	omo, ruso, does tris lidve	, to so a separate elemen	is alls needed a	o o o o o o o o o o o o o o o o o o o			
	Cable		×					SMa: out of scope SMu: Could be mapped to IfcTendon but the entity would have to	be expanded beyond the curre	ent "use in prestressed or	ncrete".					
		Cable hangers						SMu: Conceptually the same as (the expanded) IfcTendon propos								
		Cable anchor						SMu: The same applies as for Cable.	IfcTendonAnchor							
		Cable spreader							SMu: IfcDiscreteAccessory							
				×					SMu: IfcBeam	IfcBeamTypeEnum						
	Cap Beam							http://www.concretebridgeviews.com/images/prestressed%20girde	er%20bridge.jpg							
										IfcBeamTypeEnum						
	Cap Beam Hammer Head			x					SMu: IfcElementAssembly							
			×	x					IfcColumn							
	Hammer Head	Column Pier	x	x												
	Hammer Head	Pier Cap	x	×				SMu: Either IfcColumn or IfcBeam, depends on the main load-care	ying capacity.	IfcFootingTypeEnum						
	Hammer Head	Pier Cap Wall Pier	x					SMu: Either IfcColumn or IfcBeam, depends on the main load-care	ying capacity.							
	Hammer Head Pier	Pier Cap	x	×			x	SMu: Either IfcColumn or IfcBeam, depends on the main load-care CRBIM: part on top of pier cap	lying capacity. IfcWall SMu: IfcFooting or IfcDiscrete	eAccessory.						
	Hammer Head Pier	Pier Cap Wall Pier	x	×			x	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap	ying capacity.	eAccessory.						
	Hammer Head Pier Pylon Slope Protection	Pier Cap Wall Pier		×				SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure	ying capacity. IfcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or	eAccessory. IfcColumn?						
	Hammer Head Pier Pylon Slope Protection Suspender	Pier Cap Wall Pier Bed Stone	x x	×			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope	ying capacity. ItcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or SMu: Seems similar to Cable	eAccessory. IfcColumn?						
	Hammer Head Pier Pylon Slope Protection	Pier Cap Wall Pier Bed Stone		×				SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope	ying capacity. IfcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or	eAccessory. IfcColumn?						
	Hammer Head Pier Pylon Slope Protection Suspender	Pier Cap Wall Pier Bed Stone		×			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope	ying capacity. ItcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or SMu: Seems similar to Cable	eAccessory. IfcColumn?						
	Hammer Head Pier Pylon Slope Protection Suspender	Pier Cap Wall Pier Bed Stone		×			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope	ying capacity. ItcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or SMu: Seems similar to Cable	eAccessory. IfcColumn?						
	Hammer Head Piler Pylon Stope Protection Suspender Suspended Tend	Pier Cap Wall Pier Bed Stone		×			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope	ying capacity. ItcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or SMu: Seems similar to Cable	eAccessory. IfcColumn?						
Foundation	Hammer Head Piler Pylon Stope Protection Suspender Suspended Tend	Pier Cap Wall Pier Bed Stone		×			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope SMa: out of scope	ying capacity. ItcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or SMu: Seems similar to Cable	eAccessory. IfcColumn?						
Foundation	Hammer Head Piler Pylon Stope Protection Suspender Suspended Tend	Pier Cap Wall Pier Bed Stone		x x x			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope SMa: out of scope AB: The same as Bored Pie? SM: Yes, I think so.	ying capacity. ItcWall SMu: IfcFooting or IfcDiscrete SMu: IfcElementAssembly or SMu: Seems similar to Cable	aAccessory. IfcColumn? hangers. hangers.						
Foundation	Hammer Head Pier Pylon Slope Protection Suspender Suspended Tend	Pier Cap Wall Pier Bed Stone		x x x			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope SMa: out of scope	ying capacity. IncWaii Shu: IfcFooting or IfcDiscret SMu: IfcEiementAssembly or SMu: Seems similar to Cable SMu: Seems similar to Cable	aAccessory. IfcColumn? I hangers. hangers. IfcPileTypeEnum						
Foundatio	Hammer Head Piler Pylon Slope Protection Suspender Suspended Tend Drilled Shaft Footing	Pier Cap Wall Pier Bed Stone		x x x			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope SMa: out of scope AB: The same as Bored Pie? SM: Yes, I think so.	ying capacity. IncWaii SMu: IfcFooting or IfcDiscret SMu: IfcElementAssembly or SMu: Seems similar to Cable SMu: Seems similar to Cable	eAccessory. IfcColumn? hangers. hangers. IfcPileTypeEnum IfcFootingTypeEnum						
Foundatio	Hammer Head Pier Pylon Slope Protection Suspender Suspended Tend	Pier Cap Wall Pier Bed Stone		x x x			×	SMu: Either IfcColumn or IfcBeam, depends on the main load-can CRBIM: part on top of pier cap AB: not essiantially part of the substructure SMa: out of scope SMa: out of scope AB: The same as Bored Pile? SM: Yes, I think so, SMu: I would assume this is the shaft for the pile.	ying capacity. IncWaii Shu: IfcFooting or IfcDiscret SMu: IfcEiementAssembly or SMu: Seems similar to Cable SMu: Seems similar to Cable	aAccessory. IfcColumn? I hangers. hangers. IfcPileTypeEnum		CIP Bored pile,	Prestressed Concrete hammered pile, Sk	eel profile Hammer	ed pile, Wooden profile hammered pile, Helical	pile, Other*

General																
	Anchors					SMu: Is this a general anchor as in the anchor of a cable or pr	ractracead?									
			-													
	Blisters					SM: what is this? (p. 111/160)										
	Conduit					SMu: The IFC schema has these kinds of elements only deriv	red from IfcFlowSeament which is	semantically not correct. W	e might consider these	before defining new	entities					
	Drainage					SMa: is usually different as in the free route; similar to highrise	e IfcPipeSegment; IfcPipeFittir	,								
								ig								
	Lights			x		SMa: Common Schema?	IfcLightFixture; IfcLamp									
	Signs			x		SMa: Common Schema?										
	Soil Borings			×		SMa: Common Schema?										
	Embankments															
	Vents															
	Embedded Parts				>											
	Embedded Parts F	oundation)											
	Inspection Facility				,											
	Protecting Wall				>		SMu: IfcWall									
	Stiffening Rib				>	CRBIM:Mainly used in steel structure.										
	Steel Joint															
	Steel Joint				>	CRBIM:Mainly used in steel structure.picture in the doc										
	Steel Cross Brace				>	CRBIM:Mainly used in steel structure.picture in the doc										
B : 6	0															
Reinforcement																
	Rebar						SMu: IfcRebar and for comp	lex reinorcing elements IfcE	ElementAssembly.Prede	finedType=".REINF	ORCEMENT_UNIT*					
Prestressing S	ystem					CD: to be prepared by MINnD										
	Tendon		×				IfcBridgeTendon									
		Tendon Cable					1 3									
		Tendon Anchor					IfcTendonAnchor									
Retaining wall						SMa: To be covered by IfcBridge for Common Schema				A retaining wall ele	ement type is selected from predefined ntilever Embedded Wall, Anchored retai	ist: Gravity Wall R	Reinforced Concrete	cantilever Wall. Co	ounterfort Retaining Wall, Rein	forced Earth Wall
rouning wan										Gabions Wall. Car	ntilever Embedded Wall, Anchored retail	ning wall, Rock bo	Its slope stabilization	, modular element	ts Wall, Other*	
							1									
Culvert & Frame Bridge					>	CRBIM: Rigid Frame Bridge, Frame Bridge and Culvertare us	sed frequently in railway and roads	way projects in China. Usua	ally they are considered a	as bridge structure i	n China,so in CRBIM IFC1.0,we define	these as predefine	d types of BRIDGE.	We suggest that t	aking them into consideration.	
_	Wing Wall				,											
	Cultural C						OLD WIND									
	Culvert Segment				>		SMu: IfcWall									
	Rigid Frame Segm	ent			-											
	Hat Stone				,											
	. idi Olone		-													
Rigid Frame Bridge					>											
T																
Temporary works							1									
Superstructure																
	Launching Nose		×			07: used during construction										
	Other Section 19															
	Staying Mast		×			07: temporary pylon										
	Strut		×			07: supporting element										
							-									
			1				1									
							-									
			1													
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			1			T. Control of the Con	1									