Graphical User Interface

- Materials Tab
- Prototype Tab
- Trial Batch Tab
- Submittal Tab
- Mix Design Tab

MixProportions: List

MixProportion

- +Material_ID: string
- +Prototype_ID: string
- +TB_ID: string
- +Submittal_ID: string
- +Mix_ID: string
- +ListOfFiles: List<string>
- +MaterialProportions: Dictionary<string, int>
- +SubmittalActivity: Dictionary<DateTime, string>

db: DataContext

Prototypes

PK	**Prototype_ID: varchar**
	Prototype_Serial: tinyint
	Concrete_Class: varchar
	Is_Air_Entrained: bit
	Target_Air: decimal
	Total_CM: int
	Total_CA: decimal
	Calculated_Density: decimal

Admixtures

PK	**Admixture_ID: tinyint**
	Minimum_Dosage: decimal
	Maximum_Dosage: decimal

Materials

PK	**Material_ID: tinyint**
	Material_Name: varchar
	Material_Source: varchar
	Relative_Density: decimal

Trial Batches

PK	**TB_ID: varchar**
	TB_Serial: tinyint
	Slump: decimal
	Actual_Air: decimal
	Concrete_Temperature: tinyint
	Ambient_Temperature: tinyint
	Measured_Density: decimal
	Compressive_Strength: int
FK	Prototype_ID: varchar

Aggregates

PK	**Aggregate_ID: tinyint**
	Aggregate_Grade: varcha
	Absorption: decimal
FK	Material_ID: tinyint

SCMs

PK	**SCM_ID: tinyint**
	SCM_Class: varchar
FK	Material_ID: tinyint

Cements

PK	**Cement_ID: tinyint**
	Cement_Type: varchar
FK	Material_ID: tinyint

Submittals

PK	**Submittal_ID: tinyint**
	Owner_Number: int
FK	TB_ID: varchar

Coarse Aggregates

PK	**CA_ID: tinyint**
	CA_Size: decimal
	CA_UW: decimal
FK	Aggregate_ID: tinyint

Fine Aggregates

PK	**FN_ID: tinyint**
	Fineness_Modulus: decimal
FK	Aggregate_ID: tinyint

Mix Designs

PK	**Mix_ID: varchar**
	Mix_Serial: tinyint
	Submittal_ID: tinyint