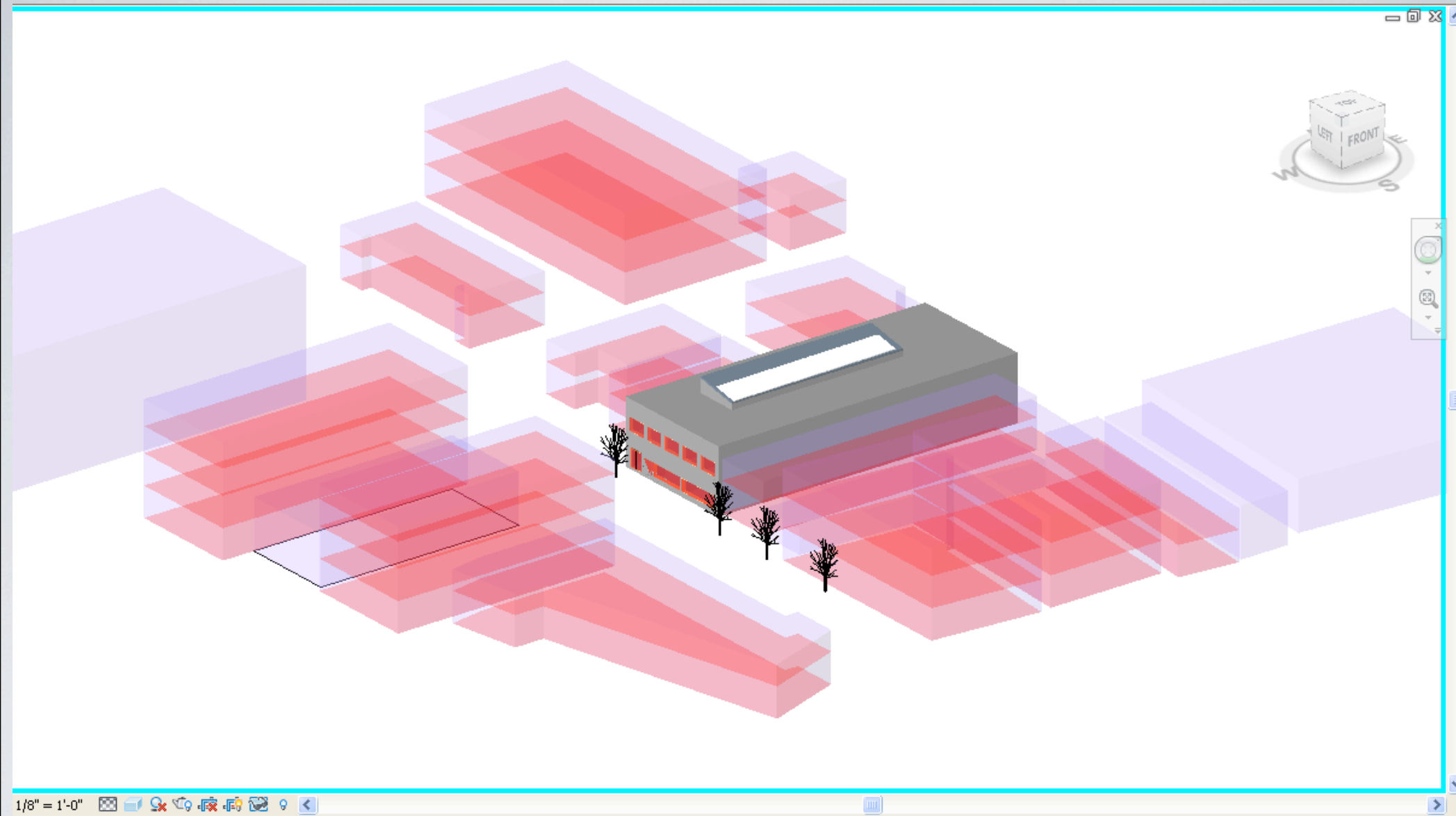


DATABASE MANAGEMENT IN AUTODESK REVIT

Week 11, Nov 5th 2009
Parametric Modeling with BIM



Building information model in Autodesk Revit

DATA TABLES IN REVIT

Id	Typeld	Area	Volume	Length
131704	250	799.833907233683	1299.73009925473	50
131888	250	3011.20540387816	4893.20878130201	125.466891828257
131953	250	975.833333333333	1578.6849695947	50
132006	250	2388.54029438399	3881.37797837409	125.466891828257
132891	262	139.915201939081	71.4150509897394	13.9668918282568
133203	262	66.8854166666667	34.1394314236112	8.5
133494	262	94.5	48.2343750000002	10.5
134473	262	43.4701099485372	20.7549801647048	5.5
135954	262	225.755208333333	115.229220920139	23.5
136073	262	33.8854166666669	17.2956814236111	5.50000000000001

Walls Table

DATA TABLES IN REVIT

Id	FamilyName	TypeName	Width
219	Basic Wall	Generic - 6"	0.5
220	Basic Wall	Interior - 5" Partition (2-hr)	0.416666666666667
221	Basic Wall	Exterior - Brick on Mtl. Stud	1.15625
249	Basic Wall	Generic - 8"	0.666666666666667
250	Basic Wall	Exterior - Brick on CMU	1.625
251	Basic Wall	Generic - 12"	1
252	Basic Wall	Generic - 5"	0.416666666666667
253	Basic Wall	Generic - 12" Masonry	0.96875
254	Basic Wall	Generic - 8" Masonry	0.635416666666667
255	Basic Wall	Generic - 6" Masonry	0.46875
256	Basic Wall	Exterior - CMU Insulated	2.20833333333333
257	Basic Wall	Generic - 4" Brick	0.333333333333333
258	Basic Wall	Interior - 3 1/8" Partition (1-hr)	0.260416666666667
261	Basic Wall	Interior - 4 7/8" Partition (1-hr)	0.40625
262	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.510416666666667

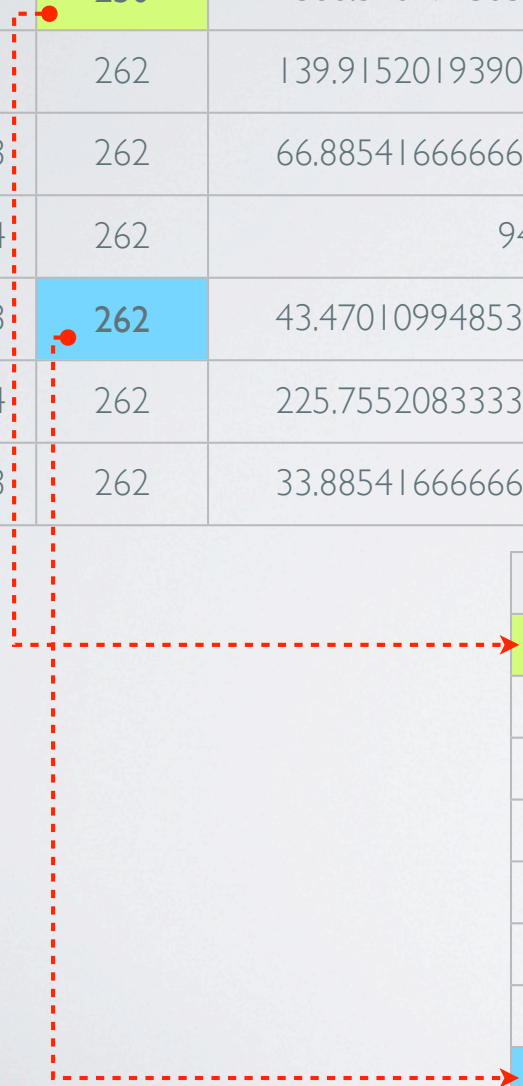
WallTypes Table

Id	TypeId	Area	Volume	Length
131704	250	799.833907233683	1299.73009925473	50
131888	250	3011.20540387816	4893.20878130201	125.466891828257
131953	250	975.833333333333	1578.6849695947	50
132006	250	2388.54029438399	3881.37797837409	125.466891828257
132891	262	139.915201939081	71.4150509897394	13.9668918282568
133203	262	66.8854166666667	34.1394314236112	8.5
133494	262	94.5	48.2343750000002	10.5
134473	262	43.4701099485372	20.7549801647048	5.5
135954	262	225.755208333333	115.229220920139	23.5
136073	262	33.8854166666669	17.2956814236111	5.50000000000001

Id	FamilyName	TypeName	Width
250	Basic Wall	Exterior - Brick on CMU	1.625
251	Basic Wall	Generic - 12"	1
252	Basic Wall	Generic - 5"	0.416666666666667
253	Basic Wall	Generic - 12" Masonry	0.96875
254	Basic Wall	Generic - 8" Masonry	0.635416666666667
255	Basic Wall	Generic - 6" Masonry	0.46875
261	Basic Wall	Interior - 4 7/8" Partition (1-hr)	0.40625
262	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.510416666666667

Id	Typeld	Area	Volume	Length
131704	250	799.833907233683	1299.73009925473	50
131888	250	3011.20540387816	4893.20878130201	125.466891828257
131953	250	975.833333333333	1578.6849695947	50
132006	250	2388.54029438399	3881.37797837409	125.466891828257
132891	262	139.915201939081	71.4150509897394	13.9668918282568
133203	262	66.8854166666667	34.1394314236112	8.5
133494	262	94.5	48.2343750000002	10.5
134473	262	43.4701099485372	20.7549801647048	5.5
135954	262	225.755208333333	115.229220920139	23.5
136073	262	33.8854166666669	17.2956814236111	5.50000000000001

Id	FamilyName	TypeName	Width
250	Basic Wall	Exterior - Brick on CMU	1.625
251	Basic Wall	Generic - 12"	1
252	Basic Wall	Generic - 5"	0.416666666666667
253	Basic Wall	Generic - 12" Masonry	0.96875
254	Basic Wall	Generic - 8" Masonry	0.635416666666667
255	Basic Wall	Generic - 6" Masonry	0.46875
261	Basic Wall	Interior - 4 7/8" Partition (1-hr)	0.40625
262	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.510416666666667



Id	Typeld	Area	Volume	Length
131704	250	799.833907233683	1299.73009925473	50
131888	250	3011.20540387816	4893.20878130201	125.466891828257
131953	250	975.833333333333	1578.6849695947	50
132006	250	2388.54029438399	3881.37797837409	125.466891828257
132891	262	139.915201939081	71.4150509897394	13.9668918282568
133203	262	66.8854166666667	34.1394314236112	8.5
133494	262	94.5	48.2343750000002	10.5
134473	262	43.4701099485372	20.7549801647048	5.5
135954	262	225.755208333333	115.229220920139	23.5
136073	262	33.8854166666669	17.2956814236111	5.50000000000001

Id	FamilyName	TypeName	Width
250	Basic Wall	Exterior - Brick on CMU	1.625
251	Basic Wall	Generic - 12"	1
252	Basic Wall	Generic - 5"	0.416666666666667
253	Basic Wall	Generic - 12" Masonry	0.96875
254	Basic Wall	Generic - 8" Masonry	0.635416666666667
255	Basic Wall	Generic - 6" Masonry	0.46875
261	Basic Wall	Interior - 4 7/8" Partition (1-hr)	0.40625
262	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.510416666666667

DATA TABLES IN REVIT

Id	FamilyName	TypeName	Width	Volume	Area	Length
131704	Basic Wall	Exterior - Brick on CMU	1.625	799.833907234	1299.73009925	50
131888	Basic Wall	Exterior - Brick on CMU	1.625	3011.20540388	4893.2087813	125.466891828
131953	Basic Wall	Exterior - Brick on CMU	1.625	975.833333333	1578.68496959	50
132006	Basic Wall	Exterior - Brick on CMU	1.625	2388.54029438	3881.37797837	125.466891828
132891	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	139.915201939	71.4150509897	13.9668918283
133203	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	66.8854166667	34.1394314236	8.5
133494	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	94.5	48.234375	10.5
134473	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	43.4701099485	20.7549801647	5.5
135954	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	225.755208333	115.22922092	23.5
136073	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	33.8854166667	17.2956814236	5.5

DATA TABLES IN REVIT

Id	FamilyName	TypeName	Width	Volume	Area	Length
131704	Basic Wall	Exterior - Brick on CMU	1.625	799.833907234	1299.73009925	50
131888	Basic Wall	Exterior - Brick on CMU	1.625	3011.20540388	4893.2087813	125.466891828
131953	Basic Wall	Exterior - Brick on CMU	1.625	975.833333333	1578.68496959	50
132006	Basic Wall	Exterior - Brick on CMU	1.625	388.54029438	3881.37797837	125.466891828
132891	Basic Wall	Interior Partition (2-hr)	0.51041666667	139.915201939	71.4150509897	13.9668918283
133203	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	66.8854166667	34.1394314236	8.5
133494	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	94.5	48.234375	10.5
134473	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	43.4701099485	20.7549801647	5.5
135954	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	225.755208333	115.22922092	23.5
136073	Basic Wall	Interior - 6 1/8" Partition (2-hr)	0.51041666667	33.8854166667	17.2956814236	5.5

HOW?

DATA TABLES IN REVIT

Id	FamilyName	TypeName	Width	Volume	Area	Length
131704	Basic Wall	Exterior - Brick	1.625	799.833907234	1299.73009925	50
131888	Basic Wall	Exterior - Brick	1.625	3011.20540388	4893.2087813	125.466891828
131953	Basic Wall	Exterior - Brick	1.625	975.833333333	1578.68496959	50
132006	Basic Wall	Exterior - Brick	1.625	2388.54029438	3881.37797837	125.466891828
132891	Basic Wall	Interior - 6 1/8"	0.51041666667	139.915201939	71.4150509897	13.9668918283
133203	Basic Wall	Interior - 6 1/8"	0.51041666667	66.8854166667	34.1394314236	8.5
133494	Basic Wall	Interior - 6 1/8"	0.51041666667	94.5	48.234375	10.5
134473	Basic Wall	Interior - 6 1/8"	0.51041666667	43.4701099485	20.7549801647	5.5
135954	Basic Wall	Interior - 6 1/8"	0.51041666667	225.755208333	115.22922092	23.5
136073	Basic Wall	Interior - 6 1/8"	0.51041666667	33.8854166667	17.2956814236	5.5

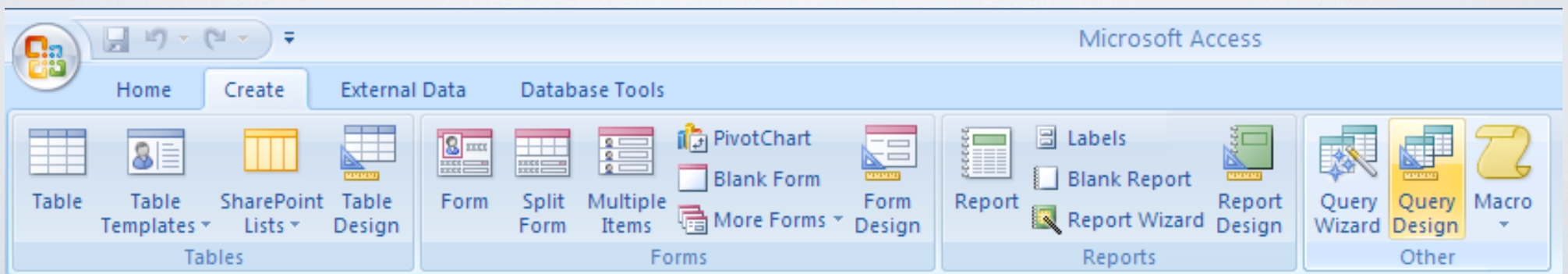
1. Database Management Tool, e.g. Microsoft **Access**
2. Programming Language, e.g. **SQL** (Structured Query Language)

more.....

Id	FamilyName	TypeName	Width	Volume	Area	Length
131704	Basic Wall	Exterior - Brick	1.625	799.833907234	1299.73009925	50
131888	Basic Wall	Exterior - Brick	1.625	3011.20540388	4893.2087813	125.466891828
131953	Basic Wall	Exterior - Brick	1.625	975.833333333	1578.68496959	50
132006	Basic Wall	Exterior - Brick	1.625	2388.54029438	3881.37797837	125.466891828
132891	Basic Wall	Interior - 6 1/8"	0.51041666667	139.915201939	71.4150509897	13.9668918283
133203	Basic Wall	Interior - 6 1/8"	0.51041666667	66.8854166667	34.1394314236	8.5
133494	Basic Wall	Interior - 6 1/8"	0.51041666667	94.5	48.234375	10.5
134473	Basic Wall	Interior - 6 1/8"	0.51041666667	43.4701099485	20.7549801647	5.5
135954	Basic Wall	Interior - 6 1/8"	0.51041666667	225.755208333	115.22922092	23.5
136073	Basic Wall	Interior - 6 1/8"	0.51041666667	33.8854166667	17.2956814236	5.5

BUILDING A CUSTOMIZED DATA TABLE IN ACCESS

-> Create -> Query Design



Step 03 :Add fields

Double-Click on the attributes to create the Fields in the new databse.

Field:	Id	FamilyName	TypeName	Width	Length	Area	Volume
Table:	Walls	WallTypes	WallTypes	WallTypes	Walls	Walls	Walls
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:							
or:							

Result Table

Id	FamilyName	TypeName	Width	Length	Area	Volume
170594	Basic Wall	Generic - 8"	0.66666666667	71.7943536143	58.3396382445	38.893092163
170737	Basic Wall	Generic - 8"	0.66666666667	71.7943536143	244.600350148	160.048709908
173076	Basic Wall	Generic - 8"	0.66666666667	16.6760133028	78.7861547054	52.524103137
173113	Basic Wall	Generic - 8"	0.66666666667	16.6760133028	81.0154206832	54.0102804555
175343	Basic Wall	Generic - 8"	0.66666666667	71.7943536143	221.887887343	144.879041783
194773	Basic Wall	Generic - 8"	0.66666666667	20	205.104166667	136.736111111
195586	Basic Wall	Generic - 8"	0.66666666667	15.1109127035	296.572420736	197.714947157
195801	Basic Wall	Generic - 8"	0.66666666667	15.1109127035	309.905754069	206.603836046
195830	Basic Wall	Generic - 8"	0.66666666667	8.79841270347	164.197420736	109.464947157
196033	Basic Wall	Generic - 8"	0.66666666667	12.0000000000	250.52309987	165.510202641
196054	Basic Wall	Generic - 8"	0.66666666667	7.60346907782	140.313508888	92.9694066569
196098	Basic Wall	Generic - 8"	0.66666666667	13.5	271.330984426	180.689957401
131704	Basic Wall	Exterior - Brick	1.625	50	799.833907234	1299.73009925
131888	Basic Wall	Exterior - Brick	1.625	125.466891828	3011.20540388	4893.20878130
131953	Basic Wall	Exterior - Brick	1.625	50	975.833333333	1578.68496959
132006	Basic Wall	Exterior - Brick	1.625	125.466891828	2388.54029438	3881.37797837
169841	Basic Wall	Exterior - Brick	1.625	50	42	68.25
169842	Basic Wall	Exterior - Brick	1.625	50	11.375	7.04419707197
169843	Basic Wall	Exterior - Brick	1.625	50	42	68.25
169844	Basic Wall	Exterior - Brick	1.625	50	92.5000000000	150.3125
132891	Basic Wall	Interior - 6 1/8'	0.51041666667	13.9668918283	139.915201939	71.4150509897
133203	Basic Wall	Interior - 6 1/8'	0.51041666667	8.5	66.8854166667	34.1394314236
133494	Basic Wall	Interior - 6 1/8'	0.51041666667	10.5	94.5	48.2343750000
134473	Basic Wall	Interior - 6 1/8'	0.51041666667	5.5	43.4701099485	20.7549801647
135954	Basic Wall	Interior - 6 1/8'	0.51041666667	23.5	225.755208333	115.229220920
136073	Basic Wall	Interior - 6 1/8'	0.51041666667	5.50000000000	33.8854166667	17.2956814236
136300	Basic Wall	Interior - 6 1/8'	0.51041666667	5	28.3854166667	14.4883897569
136330	Basic Wall	Interior - 6 1/8'	0.51041666667	10.75	91.1197916667	46.5090603299
136687	Basic Wall	Interior - 6 1/8'	0.51041666667	10.75	85.5416666667	43.6618923611