SNES SimCity Save RAM Guide

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This guide details the Save RAM of SimCity for the SNES. Please note that this is an advanced technical manual.

The SNES SimCity save RAM occupies 32768 Bytes. It is divided into four sections:

- The header (the first 16 Bytes)
- Save slot #1 (the next 16368 Bytes)
- Save slot #2 (the next 16368 Bytes)
- The footer (the last 16 Bytes)

Most of the data in the save RAM are paired Bytes representing various Short values, but some arrays are also present with special information (e.g. the `CityName` property). As well, the save data contain arrays that hold map data and 10-year and 120-year history data for the Graph menu.

Descriptions of the various data (along with memory addresses) are below. Keep in mind that multiple-byte values such as Shorts are ***little-endian***. Additionally, the names of all the properties were arbitrarily assigned by me; they don't appear within the data, nor are they stored anywhere in the game's memory.

Header 16 Bytes

Address	Length	Type	Property Name	Notes
+0x0000	5	Byte[]	Title	Always 0x53 0x49 0x4D 0xFF 0xFF
+0x0005	1	Boolean	SaveFile1Present	False=0 True=1
+0x0006	1	Boolean	SaveFile2Present	False=0 True=1
+0x0007	2	UShort	ScenarioCompletion	Both Bytes contain bitwise flags—low Byte: SanFranciscoComplete+=0x01 BernComplete+=0x02 TokyoComplete+=0x04 DetroitComplete+=0x08 BostonComplete+=0x10 RioComplete+=0x20 LasVegasComplete+=0x40; high Byte: First6Complete+=0x80; other flags unused
+0x0009	1	Byte	DebugFlags	Contains bitwise flags: NoDisasters+=0x01 NeedlessMoney+=0x02 ValveMax+=0x04 WaterReclaim+=0x08 MemorySet+=0x90
+0x000A	2	UShort	Slot1Checksum	Equal to the sum of all slot #1 data (+0x0010 to +0x3FFF), modulo 65536
+0x000C	2	UShort	Slot2Checksum	Equal to the sum of all slot #2 data (+0x4000 to +0x7FEF), modulo 65536
+0x000E	2	UShort	HeaderChecksum	Equal to the sum of all previous header bytes (+0x0000 to +0x000D), modulo 65536

Save Slot #1 16368 Bytes

Address	Length	Type	Property Name	Notes
+0x0010	2	UShort	NextResPopHistEntry	Next entry for ResPopHist_10Yr; value+=1 for each 20 Residential population; divided by 8 when stored in ResPopHist_10Yr
+0x0012	2	UShort	NextComPopHistEntry	Next entry for ComPopHist_10Yr; value+=1 for each 160 Commercial population
+0x0014	2	UShort	NextIndPopHistEntry	Next entry for IndPopHist_10Yr; value+=1 for each 160 Industrial population
+0x0016	2	Short	ResidentialMeterValue	Range -2000 to 2000
+0x0018	2	Short	CommercialMeterValue	Range -1500 to 1500
+0x001A	2	Short	IndustrialMeterValue	Range -1500 to 1500
+0x001C	2	UShort	NextCrimeHistEntry	Next entry for CrimeHist_10Yr; range 0 to 250
+0x001E	2	UShort	NextPollutnHistEntry	Next entry for PolltionHist_10Yr; range 0 to 250
+0x0020	2	UShort	NextLandValHistEntry	Next entry for LandValueHist_10Yr; range 0 to 250
+0x0022	2	UShort	AvgCrimeCurrent	Range 0 to 250
+0x0024	2	UShort	AvgPollutionCurrent	Range 0 to 250
+0x0026	2	UShort	DifficultyLevel	Easy=0 Medium=1 Hard=2
+0x0028	4	UInteger	CashOnHand	Unsigned nature explains ‘Money Trick’
+0x002C	2	UShort	GameSpeed	Pause=0 Slow=1 Med=2 Fast=3

Address	Length	Type	Property Name	Notes
+0x002E	2	Boolean[]	AutoBgmFlags	Low Byte contains bitwise flags: AutoBulldozeOn+=0x01 AutoBudgetOn+=0x02 AutoGotoOn+=0x04 BGMOn+=0x08; high Byte 0x00
+0x0030	2	UShort	CurrentYear	
+0x0032	2	UShort	CurrentMonth	JAN=1 FEB=2 MAR=3 APR=4 MAY=5 JUN=6 JUL=7 AUG=8 SEP=9 OCT=10 NOV=11 DEC=12
+0x0034	2	UShort	TaxRate	Range 0 to 20
+0x0036	2	UShort	CityClass	Village=0 Town=1 City=2 Capital=3 Metropolis=4 Megalopolis=5
+0x0038	2	UShort	CityScore	
+0x003A	2	UShort	AssessedValMultiplier	Multiplied by (Population/10) to determine Assessed Value of city
+0x003C	4	UInteger	Population	Range 0 to 16777200; multiple of 20
+0x0040	2	UShort	MayorsHousesEarned	Range 0 to 255
+0x0042	2	UShort	BankEarned_LoanOut	False=0 True=1 TrueWithLoanOut=2
+0x0044	2	UShort	AmuPrk_CasinosEarned	Value stored as 1 Byte of data and 0x00: Stored in low Byte if Casino was chosen first, and in high Byte if AmusementPark was chosen first
+0x0046	2	UShort	ZoosEarned	Range 0 to 255
+0x0048	2	UShort	LandfillsEarned	Range 0 to 255
+0x004A	2	UShort	PoliceHQsEarned	Range 0 to 255
+0x004C	2	UShort	FireHQsEarned	Range 0 to 255
+0x004E	2	UShort	LibrariesEarned	Range 0 to 255
+0x0050	2	UShort	LargeParksEarned	Range 0 to 255
+0x0052	2	UShort	TrainStationsEarned	Range 0 to 255
+0x0054	2	UShort	TickCounter	Tracks the number of 'ticks' that have occurred (4 per month) since city start
+0x0056	1	Byte	WindmillsEarned	
+0x0057	1	Byte	MarioStatuesEarned	
+0x0058	2	UShort	ExposEarned	Range 0 to 255
+0x005A	2	UShort	ViewMenuEnabled	False=0 True=1
+0x005C	2	UShort	FountainsEarned	Range 0 to 255
+0x005E	2	UShort	YearsRemainingOnLoan	Range 0 to 21
+0x0060	1	Byte	PresentInSlot1	Nothing=0 MayorsHouse=1 Bank=2 AmusementPark=3 Zoo=4 Casino=5 Landfill=6 PoliceHQ=7 FireHQ=8 Fountain=9 MarioStatue=10 Expo=11 Windmill=12 Library=13 LargePark=14 TrainStation=15
+0x0061	1	Byte	PresentInSlot2	(See PresentInSlot1 notes above)
+0x0062	1	Byte	PresentInSlot3	(See PresentInSlot1 notes above)
+0x0063	1	Byte	PresentInSlot4	(See PresentInSlot1 notes above)
+0x0064	2	UShort	IsScenario	False=0 True=2
+0x0066	2	Short	CameraTopLeftX	Range -7 to 95
+0x0068	2	Short	CameraTopLeftY	Range -6 to 78
+0x006A	2	UShort	HighestCityClassEver	Village=0 Town=1 City=2 Capital=3 Metropolis=4 Megalopolis=5
+0x006C	2	UShort	CityMode	Practice=1 NormalCity=2 Scenario=3
+0x006E	2	Short	BowserStatus	Inactive=0 Rampaging=4 Leaving=-4
+0x0070	2	UShort	ScenarioNumber	SanFrancisco=0 Bern=1 Tokyo=2 Detroit=3 Boston=4 Rio=5 LasVegas=6 Freeland=7 NotScenario=7
+0x0072	2	UInteger	EventCountdown	Decreases by 1 each tick until 0; when certain values are reached, differing events happen depending on current scenario (see property notes below)
+0x0076	10	Byte[]	CityName	(See CityName format below)

Address	Length	Type	Property Name	Notes
+0x0080	4	UInteger	MapNumber	First Byte×100 + second Byte×10 + third Byte; high Byte 0x00; scenarios use 0
+0x0084	60	Byte[][]	Last10HistoryEvents	(See HistoryEvent format below)
+0x00C0	240	Queue(UShort)	ResPopHist_10Yr	One UShort value per month over the last 10 years, in order of most to least recent; value+=1 for each 160 Residential population
+0x01B0	240	Queue(UShort)	ComPopHist_10Yr	(See ResPopHist_10Yr notes above)
+0x02A0	240	Queue(UShort)	IndPopHist_10Yr	(See ResPopHist_10Yr notes above)
+0x0390	240	Queue(UShort)	PollutionHist_10Yr	One UShort value per month over the last 10 years, in order of most to least recent; UShort range 0 to 250
+0x0480	240	Queue(UShort)	LandValueHist_10Yr	(See PollutionHist_10Yr notes above); default UShort value is 128 instead of 0
+0x0570	240	Queue(UShort)	CrimeHist_10Yr	(See PollutionHist_10Yr notes above)
+0x0660	240	Queue(UShort)	ResPopHist_120Yr	One UShort value per year over the last 120 years, in order of most to least recent; value+=1 for each 160 Residential population
+0x0750	240	Queue(UShort)	ComPopHist_120Yr	(See ResPopHist_120Yr notes above)
+0x0840	240	Queue(UShort)	IndPopHist_120Yr	(See ResPopHist_120Yr notes above)
+0x0930	240	Queue(UShort)	PollutionHist_120Yr	One UShort value per year over the last 120 years, in order of most to least recent; UShort range 0 to 250
+0x0A20	240	Queue(UShort)	LandValueHist_120Yr	(See PollutionHist_120Yr notes above); default UShort value is 128 instead of 0
+0x0B10	240	Queue(UShort)	CrimeHist_120Yr	(See PollutionHist_120Yr notes above)
+0x0C00	m_1	UShort[]	TileData	(See TileData format below)
+0x----	13312-m_1	UShort[]	PostMapData	(See PostMapData format below); ends at +0x3FFF

Save Slot #2 16368 Bytes

Address	Length	Type	Property Name	Notes
+0x4000	2	UShort	NextResPopHistEntry	Next entry for ResPopHist_10Yr; value+=1 for each 20 Residential population; divided by 8 when stored in ResPopHist_10Yr
+0x4002	2	UShort	NextComPopHistEntry	Next entry for ComPopHist_10Yr; value+=1 for each 160 Commercial population
+0x4004	2	UShort	NextIndPopHistEntry	Next entry for IndPopHist_10Yr; value+=1 for each 160 Industrial population
+0x4006	2	Short	ResidentialMeterValue	Range -2000 to 2000
+0x4008	2	Short	CommercialMeterValue	Range -1500 to 1500
+0x400A	2	Short	IndustrialMeterValue	Range -1500 to 1500
+0x400C	2	UShort	NextCrimeHistEntry	Next entry for CrimeHist_10Yr; range 0 to 250
+0x400E	2	UShort	NextPollutnHistEntry	Next entry for PolltionHist_10Yr; range 0 to 250
+0x4010	2	UShort	NextLandValHistEntry	Next entry for LandValueHist_10Yr; range 0 to 250

Address	Length	Type	Property Name	Notes
+0x4012	2	UShort	AvgCrimeCurrent	Range 0 to 250
+0x4014	2	UShort	AvgPollutionCurrent	Range 0 to 250
+0x4016	2	UShort	DifficultyLevel	Easy=0 Medium=1 Hard=2
+0x4018	4	UInteger	CashOnHand	Unsigned nature explains 'Money Trick'
+0x401C	2	UShort	GameSpeed	Pause=0 Slow=1 Med=2 Fast=3
+0x401E	2	Boolean[]	AutoBgmFlags	Low Byte contains bitwise flags: AutoBulldozeOn+=0x01 AutoBudgetOn+=0x02 AutoGotoOn+=0x04 BGMOn+=0x08; high Byte 0x00
+0x4020	2	UShort	CurrentYear	
+0x4022	2	UShort	CurrentMonth	JAN=1 FEB=2 MAR=3 APR=4 MAY=5 JUN=6 JUL=7 AUG=8 SEP=9 OCT=10 NOV=11 DEC=12
+0x4024	2	UShort	TaxRate	Range 0 to 20
+0x4026	2	UShort	CityClass	Village=0 Town=1 City=2 Capital=3 Metropolis=4 Megalopolis=5
+0x4028	2	UShort	CityScore	
+0x402A	2	UShort	AssessedValMultiplier	Multiplied by (Population/10) to determine Assessed Value of city
+0x402C	4	UInteger	Population	Range 0 to 16777200; multiple of 20
+0x4030	2	UShort	MayorsHousesEarned	Range 0 to 255
+0x4032	2	UShort	BankEarned_LoanOut	False=0 True=1 TrueWithLoanOut=2
+0x4034	2	UShort	AmuPrk_CasinosEarned	Value stored as 1 Byte of data and 0x00: Stored in low Byte if Casino was chosen first, and in high Byte if AmusementPark was chosen first
+0x4036	2	UShort	ZoosEarned	Range 0 to 255
+0x4038	2	UShort	LandfillsEarned	Range 0 to 255
+0x403A	2	UShort	PoliceHQsEarned	Range 0 to 255
+0x403C	2	UShort	FireHQsEarned	Range 0 to 255
+0x403E	2	UShort	LibrariesEarned	Range 0 to 255
+0x4040	2	UShort	LargeParksEarned	Range 0 to 255
+0x4042	2	UShort	TrainStationsEarned	Range 0 to 255
+0x4044	2	UShort	TickCounter	Tracks the number of 'ticks' that have occurred (4 per month) since city start
+0x4046	1	Byte	WindmillsEarned	
+0x4047	1	Byte	MarioStatuesEarned	
+0x4048	2	UShort	ExposEarned	Range 0 to 255
+0x404A	2	UShort	ViewMenuEnabled	False=0 True=1
+0x404C	2	UShort	FountainsEarned	Range 0 to 255
+0x404E	2	UShort	YearsRemainingOnLoan	Range 0 to 21
+0x4050	1	Byte	PresentInSlot1	Nothing=0 MayorsHouse=1 Bank=2 AmusementPark=3 Zoo=4 Casino=5 Landfill=6 PoliceHQ=7 FireHQ=8 Fountain=9 MarioStatue=10 Expo=11 Windmill=12 Library=13 LargePark=14 TrainStation=15
+0x4051	1	Byte	PresentInSlot2	(See PresentInSlot1 notes above)
+0x4052	1	Byte	PresentInSlot3	(See PresentInSlot1 notes above)
+0x4053	1	Byte	PresentInSlot4	(See PresentInSlot1 notes above)
+0x4054	2	UShort	IsScenario	False=0 True=2
+0x4056	2	Short	CameraTopLeftX	Range -7 to 95
+0x4058	2	Short	CameraTopLeftY	Range -6 to 78
+0x405A	2	UShort	HighestCityClassEver	Village=0 Town=1 City=2 Capital=3 Metropolis=4 Megalopolis=5
+0x405C	2	UShort	CityMode	Practice=1 NormalCity=2 Scenario=3
+0x405E	2	Short	BowserStatus	Inactive=0 Rampaging=4 Leaving=-4
+0x4060	2	UShort	ScenarioNumber	SanFrancisco=0 Bern=1 Tokyo=2 Detroit=3 Boston=4 Rio=5 LasVegas=6 Freeland=7 NotScenario=7

Address	Length	Type	Property Name	Notes
+0x4062	4	UInteger	EventCountdown	Decreases by 1 each tick until 0; when certain values are reached, differing events happen depending on current scenario (see property notes below)
+0x4066	10	Byte[]	CityName	(See CityName format below)
+0x4070	4	UInteger	MapNumber	First Byte ×100 + second Byte ×10 + third Byte; high Byte 0x00; scenarios use 0
+0x4074	60	Byte[][]	Last10HistoryEvents	(See HistoryEvent format below)
+0x40B0	240	Queue(UShort)	ResPopHist_10Yr	One UShort value per month over the last 10 years, in order of most to least recent; value+=1 for each 160 Residential population
+0x41A0	240	Queue(UShort)	ComPopHist_10Yr	(See ResPopHist_10Yr notes above)
+0x4290	240	Queue(UShort)	IndPopHist_10Yr	(See ResPopHist_10Yr notes above)
+0x4380	240	Queue(UShort)	PollutionHist_10Yr	One UShort value per month over the last 10 years, in order of most to least recent; UShort range 0 to 250
+0x4470	240	Queue(UShort)	LandValueHist_10Yr	(See PollutionHist_10Yr notes above); default UShort value is 128 instead of 0
+0x4560	240	Queue(UShort)	CrimeHist_10Yr	(See PollutionHist_10Yr notes above)
+0x4650	240	Queue(UShort)	ResPopHist_120Yr	One UShort value per year over the last 120 years, in order of most to least recent; value+=1 for each 160 Residential population
+0x4740	240	Queue(UShort)	ComPopHist_120Yr	(See ResPopHist_120Yr notes above)
+0x4830	240	Queue(UShort)	IndPopHist_120Yr	(See ResPopHist_120Yr notes above)
+0x4920	240	Queue(UShort)	PollutionHist_120Yr	One UShort value per year over the last 120 years, in order of most to least recent; UShort range 0 to 250
+0x4A10	240	Queue(UShort)	LandValueHist_120Yr	(See PollutionHist_120Yr notes above); default UShort value is 128 instead of 0
+0x4B00	240	Queue(UShort)	CrimeHist_120Yr	(See PollutionHist_120Yr notes above)
+0x4BF0	m_2	UShort[]	TileData	(See TileData format below)
+0x----	$13312-m_2$	UShort[]	PostMapData	(See PostMapData format below); ends at +0x7FEF

Footer 16 Bytes

Address	Length	Type	Property Name	Notes
0x7FF0	16	Byte[]	Footer	Exactly the same 16 Bytes as the header

Special Data Formats

CityName Format:

The CityName property is stored as an array of 10 Bytes. The first Byte contains the number of characters in the name, with range 0x00 to 0x08.

In the case of Slot #1, the next 8 Bytes are by default set to 0x01, and then the first ***n*** of those 8 Bytes are overwritten by one Byte per character of the name, in order (***n*** is the name length).

In the case of Slot#2, the 8 character Bytes from Slot #1's CityName array are copied over those of Slot#2 rather than simply using 0x01 before overwriting with ***n*** character Bytes.

In both cases, the values of the overwriting Bytes are determined by which characters they represent: '0' to '9' = 0x00 to 0x09; 'A' to 'Z' = 0x0A to 0x23; four symbols ',' '.' '-' ' '(space) = 0x24 to 0x27, respectively. The final Byte in the array is always 0x00.

HistoryEvent Format:

The game stores the last 10 HistoryEvents in an array (in order of least to most recent) so they can be viewed in the History menu. Each HistoryEvent occupies 6 Bytes; in the case where fewer than 10 HistoryEvents have occurred, the empty (end) portion of the array is filled with the EmptyHistoryEvent (0xFF 0xFF 0x00 0x00 0x00 0x00).

The first two Bytes of each HistoryEvent are a Short that represents its type: (Empty)=-1; NewMayor (start of city)=0; TownReached=2; CityReached=3; CapitalReached=4; MetropolisReached=5; MegalopolisReached=6; BowserAttacked=7; NuclearMeltdownOccurred=8; TornadoOccurred=10; FireOccurred=11; FloodingOccured=12; EarthquakeOccurred=14; ShipwreckOccurred=16; Population600kReached=19; UFOsAttacked=20; PlaneCrashed=777.

The middle two Bytes of each HistoryEvent are an unsigned Short representing the year the event occurred. The final two Bytes are an unsigned Short representing the month the event occurred: January=1; February=2; ... December=12.

TileData Format:

The map's tile data are stored as a variable-length array of TileInfos; the length of this array generally increases with the degree of variation throughout the map, but TileInfo allows for a type of compression in case simple value storage would make the array too large. A fast way of seeing this in action is to place 185 or more Airports on a map and save; you'll notice the extra game message "One moment please..." and the extra wait time during the save.

The TileInfo structure is simply an unsigned Short value that holds information about the type of tile, how much to include (1×1 tile or 3×3 building), and how many repetitions to perform. Base values for every tile in the game are listed below, however these values represent a quantity of 1 of the given tile. Quantity calculation is also described below.

Individual 1×1 TileInfo values (with quantities) use range 0 to 16383—this includes all individual tile pieces of all buildings in addition to the standard 1×1 tiles. Range 32768 to 49151 is used to represent quantities of entire buildings, but only the 3×3 buildings—larger buildings are always represented tile-by-tile. If an entire building value is used, then all 9 tiles in the building are present (i.e. *haven't been destroyed*); otherwise the game uses the requisite individual tile values to represent the partial building and whatever occupies its missing pieces.

Entire building values indicate that the top-left corner of the building is at the current location, and the remaining 8 tiles are east and south of this location. Appropriately, the next TileInfo in the array will refer to a location three tiles along rather than just one, as will another in each of the next two rows.

The order of the array of TileInfos with respect to the in-game map starts with the top-left tile, and moves left-to-right (wrapping to the next row of tiles after the last column in a row) until the end of the map is reached. After all TileInfo data, the array terminates with FinalTileInfo, 0xFF 0xFF.

The quantity of tiles or buildings in a TileInfo has a range of 1 to 16. Quantity q in TileInfo t can be described by:

$$q = (t \text{ Mod } 16384) \backslash 1024 + 1$$

The base value b in TileInfo t with quantity q can be described by:

$$b = t - (q - 1) \cdot 1024$$

And so, TileInfo t with base value b and quantity q can be described as follows:

$$t = (q - 1) \cdot 1024 + b$$

Using this routine to store highly variable maps (e.g. a map entirely filled with alternating road and rail tiles) could require too many Bytes to meet the limitations of the save RAM. In this case, the game utilises a compression algorithm prior to saving and after loading save RAM. There are no TileInfo values used between 16384 and 32767; these are reserved for compression/decompression instructions.

When the game encounters large quantities of repetitive data, these compression instructions are used instead of repeating the data: A repeated sequence of up to 128 Bytes is first identified; the first TileInfo after the first instance of the sequence is then coded to duplicate the sequence a given number of times, from 1 to 16.

TileInfo t holding the action to duplicate the last n Bytes of data q times can be described by:

$$t = (q - 1) \cdot 1024 + n + 16384$$

This method can be used to further compress compressed regions when the last n Bytes referred to contain one or more compression instruction TileInfos. The game only utilises compression instruction TileInfos when it is necessary to reduce the size of the array below the maximum (13312 Bytes), however.

PostMapData Format:

The PostMapData array is effectively a tile-by-tile copy of the TileData. It is an array of UShorts, with each value being the base TileInfo value for 1 quantity of the tile located there. Like TileData, entire 3×3 building values are used in place of 1×1 tiles where appropriate.

The size of this array is limited by the size of the TileData array—it must end at 0x3FFF for slot #1 and 0x7FEF for slot #2. Usually, its representation of TileData doesn't actually start at the top-left corner or end at the bottom-right corner, and is incomplete. Without reviewing the game's ASM, I have no way of determining how the beginning is chosen.

Its data are loaded and saved with the rest, but not much else is done with them. It seems to have been intended to either serve as a backup for corrupted map data, or as a collection of pre-calculated values to avoid a slow file start from loading.

Base TileInfo Values:

0	EmptyLand
1	Water_NoCoast_A
2	Water_NoCoast_B
3	Water_NoCoast_C
4	Water_CoastNW_A
5	Water_CoastN_A
6	Water_CoastNE_A
7	Water_CoastW_A
8	Water_CoastE_A
9	Water_CoastSW_A
10	Water_CoastS_A
11	Water_CoastSE_A
12	Water_CoastNW_B
13	Water_CoastN_B
14	Water_CoastNE_B
15	Water_CoastW_B
16	Water_CoastE_B
17	Water_CoastSW_B
18	Water_CoastS_B
19	Water_CoastSE_B
20	Forest_EdgeNW_A
21	Forest_EdgeN_A
22	Forest_EdgeNE_A
23	Forest_EdgeW_A
24	Forest_NoEdge_A
25	Forest_EdgeE_A
26	Forest_EdgeSW_A
27	Forest_EdgeS_A
28	Forest_EdgeSE_A
29	Forest_EdgeNW_B
30	Forest_EdgeN_B
31	Forest_EdgeNE_B
32	Forest_EdgeW_B
33	Forest_NoEdge_B
34	Forest_EdgeE_B
35	Forest_EdgeSW_B
36	Forest_EdgeS_B
37	Forest_EdgeSE_B
38	SmallPark_NoTree
39	SmallPark_Tree
40	Rubble_A
41	Rubble_B
42	Rubble_C
43	Rubble_D
44	Rubble_E
45	Rubble_F
46	Rubble_G
47	Rubble_H
48	Road_LineEW_Water
49	Road_LineNS_Water
50	Road_LineEW
51	Road_LineNS
52	Road_CornerSW
53	Road_CornerNW
54	Road_CornerNE
55	Road_CornerSE
56	Road_TeeS
57	Road_TeeW
58	Road_TeeN
59	Road_TeeE
60	Road_4WayCross
61	Road_LineEW_PowerLine
62	Road_LineNS_PowerLine
63	(Unused)
64	(Unused)
65	(Unused)
66	Road_LineEW_LowTraffic
67	Road_LineNS_LowTraffic
68	Road_CornerSW_LowTraffic
69	Road_CornerNW_LowTraffic
70	Road_CornerNE_LowTraffic
71	Road_CornerSE_LowTraffic
72	Road_TeeS_LowTraffic
73	Road_TeeW_LowTraffic
74	Road_TeeN_LowTraffic
75	Road_TeeE_LowTraffic
76	Road_4WayCross_LowTraffic
77	Road_LineEW_PowerLine_LowTraffic
78	Road_LineNS_PowerLine_LowTraffic
79	(Unused)
80	(Unused)
81	(Unused)
82	Road_LineEW_HighTraffic
83	Road_LineNS_HighTraffic
84	Road_CornerSW_HighTraffic
85	Road_CornerNW_HighTraffic
86	Road_CornerNE_HighTraffic
87	Road_CornerSE_HighTraffic
88	Road_TeeS_LowTraffic
89	Road_TeeW_LowTraffic
90	Road_TeeN_LowTraffic
91	Road_TeeE_LowTraffic
92	Road_4WayCross_LowTraffic
93	Road_LineEW_PowerLine_LowTraffic
94	Road_LineNS_PowerLine_LowTraffic
95	(Unused)
96	PowerLine_LineEW_Water
97	PowerLine_LineNS_Water
98	PowerLine_LineEW
99	PowerLine_LineNS
100	PowerLine_CornerSW
101	PowerLine_CornerNW
102	PowerLine_CornerNE
103	PowerLine_CornerSE
104	PowerLine_TeeS
105	PowerLine_TeeW
106	PowerLine_TeeN
107	PowerLine_TeeE
108	PowerLine_4WayCross
109	PowerLine_LineNS_Rail
110	PowerLine_LineEW_Rail
111	(Unused)
112	Rail_LineEW_Water
113	Rail_LineNS_Water
114	Rail_LineEW
115	Rail_LineNS
116	Rail_CornerSW
117	Rail_CornerNW

118	Rail_CornerNE
119	Rail_CornerSE
120	Rail_TeeS
121	Rail_TeeW
122	Rail_TeeN
123	Rail_TeeE
124	Rail_4WayCross
125	Rail_LineEW_Road
126	Rail_LinrNS_Road
127	Fire
128	Residential_Undeveloped_TopLeft
129	Residential_Undeveloped_TopCenter
130	Residential_Undeveloped_TopRight
131	Residential_Undeveloped_CenterLeft
132	Residential_Undeveloped_Center
133	Residential_Undeveloped_CenterRight
134	Residential_Undeveloped_BottomLeft
135	Residential_Undeveloped_BottomCenter
136	Residential_Undeveloped_BottomRight
137	Residential_Stage0LowHouse_A
138	Residential_Stage0LowHouse_B
139	Residential_Stage0LowHouse_C
140	Residential_Stage0MidHouse_A
141	Residential_Stage0MidHouse_B
142	Residential_Stage0MidHouse_C
143	Residential_Stage0UpperHouse_A
144	Residential_Stage0UpperHouse_B
145	Residential_Stage0UpperHouse_C
146	Residential_Stage0HighHouse_A
147	Residential_Stage0HighHouse_B
148	Residential_Stage0HighHouse_C
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172	Residential_Stage3Low_CenterRight
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174	Residential_Stage3Low_BottomCenter
175	Residential_Stage3Low_BottomRight
176	Residential_Stage4Low_TopLeft
177	Residential_Stage4Low_TopCenter
178	Residential_Stage4Low_TopRight
179	Residential_Stage4Low_CenterLeft
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181	Residential_Stage4Low_CenterRight
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183	Residential_Stage4Low_BottomCenter
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187	Residential_Stage1Mid_TopRight
188	Residential_Stage1Mid_CenterLeft
189	Residential_Stage1Mid_Center
190	Residential_Stage1Mid_CenterRight
191	Residential_Stage1Mid_BottomLeft
192	Residential_Stage1Mid_BottomCenter
193	Residential_Stage1Mid_BottomRight
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195	Residential_Stage2Mid_TopCenter
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199	Residential_Stage2Mid_CenterRight
200	Residential_Stage2Mid_BottomLeft
201	Residential_Stage2Mid_BottomCenter
202	Residential_Stage2Mid_BottomRight
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210	Residential_Stage3Mid_BottomCenter
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217	Residential_Stage4Mid_CenterRight
218	Residential_Stage4Mid_BottomLeft
219	Residential_Stage4Mid_BottomCenter
220	Residential_Stage4Mid_BottomRight
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222	Residential_Stage1Upper_TopCenter
223	Residential_Stage1Upper_TopRight
224	Residential_Stage1Upper_CenterLeft
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300 Residential_School_BottomCenter
301 Residential_School_BottomRight
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589 PoliceStation_BottomRight
590 FireDepartment_TopLeft
591 FireDepartment_TopCenter
592 FireDepartment_TopRight
593 FireDepartment_CenterLeft
594 FireDepartment_Center
595 FireDepartment_CenterRight
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597 FireDepartment_BottomCenter
598 FireDepartment_BottomRight
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600 StadiumOpen_TopCenterL
601 StadiumOpen_TopCenterR
602 StadiumOpen_TopRight
603 StadiumOpen_UpperLeft
604 StadiumOpen_UpperCenterL
605 StadiumOpen_UpperCenterR

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607	StadiumOpen_LowerLeft
608	StadiumOpen_LowerCenterL
609	StadiumOpen_LowerCenterR
610	StadiumOpen_LowerRight
611	StadiumOpen_BottomLeft
612	StadiumOpen_BottomCenterL
613	StadiumOpen_BottomCenterR
614	StadiumOpen_BottomRight
615	Seaport_TopLeft
616	Seaport_TopCenterL
617	Seaport_TopCenterR
618	Seaport_TopRight
619	Seaport_UpperLeft
620	Seaport_UpperCenterL
621	Seaport_UpperCenterR
622	Seaport_UpperRight
623	Seaport_LowerLeft
624	Seaport_LowerCenterL
625	Seaport_LowerCenterR
626	Seaport_LowerRight
627	Seaport_BottomLeft
628	Seaport_BottomCenterL
629	Seaport_BottomCenterR
630	Seaport_BottomRight
631	NuclearPlant_TopLeft
632	NuclearPlant_TopCenterL
633	NuclearPlant_TopCenterR
634	NuclearPlant_TopRight
635	NuclearPlant_UpperLeft
636	NuclearPlant_UpperCenterL
637	NuclearPlant_UpperCenterR
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645	NuclearPlant_BottomCenterR
646	NuclearPlant_BottomRight
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649	CoalPlant_TopCenterR
650	CoalPlant_TopRight
651	CoalPlant_UpperLeft
652	CoalPlant_UpperCenterL
653	CoalPlant_UpperCenterR
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658	CoalPlant_LowerRight
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660	CoalPlant_BottomCenterL
661	CoalPlant_BottomCenterR
662	CoalPlant_BottomRight
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664	Airport_TopRow2
665	Airport_TopRow3
666	Airport_TopRow4
667	Airport_TopRow5
668	Airport_TopRight
669	Airport_2ndRowLeft
670	Airport_2ndRow2
671	Airport_2ndRow3
672	Airport_2ndRow4
673	Airport_2ndRow5
674	Airport_2ndRowRight
675	Airport_3rdRowLeft
676	Airport_3rdRow2
677	Airport_3rdRow3
678	Airport_3rdRow4
679	Airport_3rdRow5
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695	Airport_BottomRow3
696	Airport_BottomRow4
697	Airport_BottomRow5
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743	Bank_BottomRight
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760	Zoo_BottomCenter
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769	Casino_BottomCenter
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772	PoliceHQ_TopCenter
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778	PoliceHQ_BottomCenter
779	PoliceHQ_BottomRight
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781	FireHQ_TopCenter
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787	FireHQ_BottomCenter
788	FireHQ_BottomRight
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793	Fountain_Center
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796	Fountain_BottomCenter
797	Fountain_BottomRight
798	MarioStatue_TopLeft
799	MarioStatue_TopCenter
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805	MarioStatue_BottomCenter
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812	Expo_CenterRight
813	Expo_BottomLeft
814	Expo_BottomCenter
815	Expo_BottomRight
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817	Windmill_TopCenter
818	Windmill_TopRight
819	Windmill_CenterLeft
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822	Windmill_BottomLeft
823	Windmill_BottomCenter
824	Windmill_BottomRight
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827	Library_TopRight
828	Library_CenterLeft
829	Library_Center
830	Library_CenterRight
831	Library_BottomLeft
832	Library_BottomCenter
833	Library_BottomRight
834	LargePark_TopLeft
835	LargePark_TopCenter
836	LargePark_TopRight
837	LargePark_CenterLeft
838	LargePark_Center
839	LargePark_CenterRight
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841	LargePark_BottomCenter
842	LargePark_BottomRight
843	TrainStation_TopLeft
844	TrainStation_TopCenter
845	TrainStation_TopRight
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847	TrainStation_Center
848	TrainStation_CenterRight
849	TrainStation_BottomLeft

850	TrainStation_BottomCenter
851	TrainStation_BottomRight
852	Road_DrawbridgeClear_A
853	Road_DrawbridgeClear_B
854	Road_DrawbridgeEW_TopLeft
855	Road_DrawbridgeEW_BottomLeft
856	Road_DrawbridgeEW_TopRight
857	Road_DrawbridgeEW_BottomRight
858	Road_DrawbridgeNS_BottomLeft
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861	Road_DrawbridgeNS_TopRight
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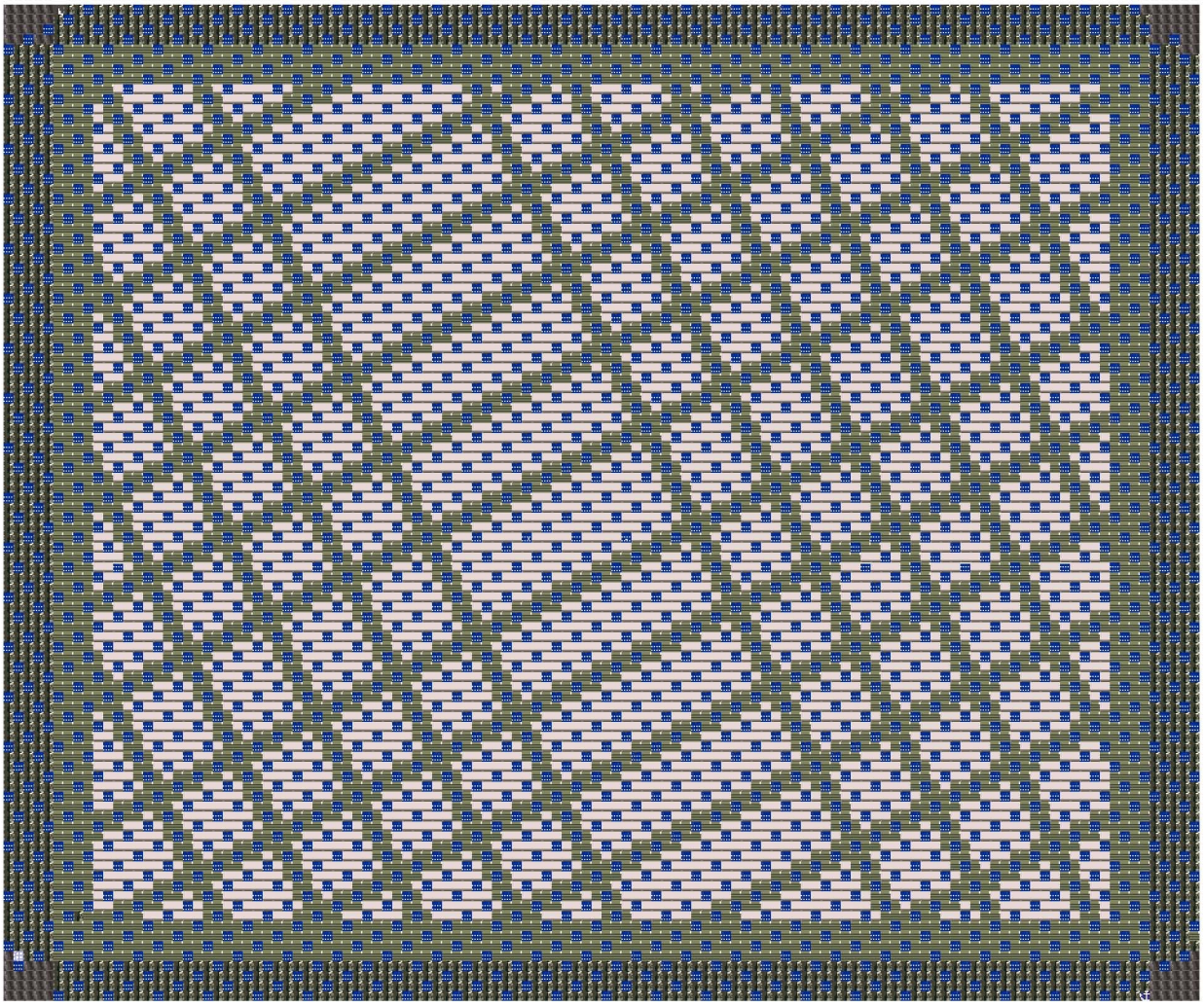
863	(Unused)
864	(Unused)
865	(Unused)
866	(Unused)
867	(Unused)
868	Fallout
869	FloodedLand
870	StadiumDomed_TopLeft
871	StadiumDomed_TopCenterL
872	StadiumDomed_TopCenterR
873	StadiumDomed_TopRight
874	StadiumDomed_UpperLeft
875	StadiumDomed_UpperCenterL
876	StadiumDomed_UpperCenterR
877	StadiumDomed_UpperRight
878	StadiumDomed_LowerLeft
879	StadiumDomed_LowerCenterL
880	StadiumDomed_LowerCenterR
881	StadiumDomed_LowerRight
882	StadiumDomed_BottomLeft
883	StadiumDomed_BottomCenterL
884	StadiumDomed_BottomCenterR
885	StadiumDomed_BottomRight
886	Residential_TopEW_WestHalf_TopLeft
887	Residential_TopEW_WestHalf_TopCenter
888	Residential_TopEW_WestHalf_TopRight
889	Residential_TopEW_WestHalf_CenterLeft
890	Residential_TopEW_WestHalf_Center
891	Residential_TopEW_WestHalf_CenterRight
892	Residential_TopEW_WestHalf_BottomLeft
893	Residential_TopEW_WestHalf_BottomCenter
894	Residential_TopEW_WestHalf_BottomRight
895	Residential_TopEW_EastHalf_TopLeft
896	Residential_TopEW_EastHalf_TopCenter
897	Residential_TopEW_EastHalf_TopRight
898	Residential_TopEW_EastHalf_CenterLeft
899	Residential_TopEW_EastHalf_Center
900	Residential_TopEW_EastHalf_CenterRight
901	Residential_TopEW_EastHalf_BottomLeft
902	Residential_TopEW_EastHalf_BottomCenter
903	Residential_TopEW_EastHalf_BottomRight
904	Residential_TopNS_NorthHalf_TopLeft
905	Residential_TopNS_NorthHalf_TopCenter
906	Residential_TopNS_NorthHalf_TopRight
907	Residential_TopNS_NorthHalf_CenterLeft
908	Residential_TopNS_NorthHalf_Center
909	Residential_TopNS_NorthHalf_CenterRight
910	Residential_TopNS_NorthHalf_BottomLeft
911	Residential_TopNS_NorthHalf_BottomCenter
912	Residential_TopNS_NorthHalf_BottomRight
913	Residential_TopNS_SouthHalf_TopLeft
914	Residential_TopNS_SouthHalf_TopCenter
915	Residential_TopNS_SouthHalf_TopRight
916	Residential_TopNS_SouthHalf_CenterLeft
917	Residential_TopNS_SouthHalf_Center
918	Residential_TopNS_SouthHalf_CenterRight
919	Residential_TopNS_SouthHalf_BottomLeft
920	Residential_TopNS_SouthHalf_BottomCenter
921	Residential_TopNS_SouthHalf_BottomRight
922	Commercial_TopEW_WestHalf_TopLeft
923	Commercial_TopEW_WestHalf_TopCenter
924	Commercial_TopEW_WestHalf_TopRight
925	Commercial_TopEW_WestHalf_CenterLeft
926	Commercial_TopEW_WestHalf_Center
927	Commercial_TopEW_WestHalf_CenterRight
928	Commercial_TopEW_WestHalf_BottomLeft
929	Commercial_TopEW_WestHalf_BottomCenter
930	Commercial_TopEW_WestHalf_BottomRight
931	Commercial_TopEW_EastHalf_TopLeft
932	Commercial_TopEW_EastHalf_TopCenter
933	Commercial_TopEW_EastHalf_TopRight
934	Commercial_TopEW_EastHalf_CenterLeft
935	Commercial_TopEW_EastHalf_Center
936	Commercial_TopEW_EastHalf_CenterRight
937	Commercial_TopEW_EastHalf_BottomLeft
938	Commercial_TopEW_EastHalf_BottomCenter
939	Commercial_TopEW_EastHalf_BottomRight
940	Commercial_TopNS_NorthHalf_TopLeft
941	Commercial_TopNS_NorthHalf_TopCenter
942	Commercial_TopNS_NorthHalf_TopRight
943	Commercial_TopNS_NorthHalf_CenterLeft
944	Commercial_TopNS_NorthHalf_Center
945	Commercial_TopNS_NorthHalf_CenterRight
946	Commercial_TopNS_NorthHalf_BottomLeft
947	Commercial_TopNS_NorthHalf_BottomCenter
948	Commercial_TopNS_NorthHalf_BottomRight
949	Commercial_TopNS_SouthHalf_TopLeft
950	Commercial_TopNS_SouthHalf_TopCenter
951	Commercial_TopNS_SouthHalf_TopRight
952	Commercial_TopNS_SouthHalf_CenterLeft
953	Commercial_TopNS_SouthHalf_Center
954	Commercial_TopNS_SouthHalf_CenterRight
955	Commercial_TopNS_SouthHalf_BottomLeft
956	Commercial_TopNS_SouthHalf_BottomCenter
957	Commercial_TopNS_SouthHalf_BottomRight
32896	Residential_Undeveloped
32917	Residential_Stage1Low
32926	Residential_Stage2Low
32935	Residential_Stage3Low
32944	Residential_Stage4Low
32953	Residential_Stage1Mid
32962	Residential_Stage2Mid
32971	Residential_Stage3Mid
32980	Residential_Stage4Mid
32989	Residential_Stage1Upper
32998	Residential_Stage2Upper
33007	Residential_Stage3Upper
33016	Residential_Stage4Upper
33025	Residential_Stage1High

33034	Residential_Stage2High
33043	Residential_Stage3High
33052	Residential_Stage4High
33061	Residential_School
33070	Residential_Hospital
33079	Commercial_Undeveloped
33088	Commercial_Stage1Low
33097	Commercial_Stage2Low
33106	Commercial_Stage3Low
33115	Commercial_Stage4Low
33124	Commercial_Stage5Low
33133	Commercial_Stage1Mid
33142	Commercial_Stage2Mid
33151	Commercial_Stage3Mid
33160	Commercial_Stage4Mid
33169	Commercial_Stage5Mid
33178	Commercial_Stage1Upper
33187	Commercial_Stage2Upper
33196	Commercial_Stage3Upper
33205	Commercial_Stage4Upper
33214	Commercial_Stage5Upper
33223	Commercial_Stage1High
33232	Commercial_Stage2High
33241	Commercial_Stage3High
33250	Commercial_Stage4High
33259	Commercial_Stage5High
33268	Industrial_Undeveloped
33277	Industrial_Stage1Low
33286	Industrial_Stage2Low
33295	Industrial_Stage3Low
33304	Industrial_Stage4Low
33313	Industrial_Stage1High
33322	Industrial_Stage2High
33331	Industrial_Stage3High
33340	Industrial_Stage4High
33349	PoliceStation
33358	FireDepartment
33467	MayorsHouse_Stage1
33476	MayorsHouse_Stage2
33485	MayorsHouse_Stage3
33494	MayorsHouse_Stage4
33503	Bank
33512	AmusementPark
33521	Zoo
33530	Casino
33539	PoliceHQ
33548	FireHQ
33557	Fountain
33566	MarioStatue
33575	Expo
33584	Windmill
33593	Library
33602	LargePark
33611	TrainStation
33654	Residential_TopEW_WestHalf
33663	Residential_TopEW_EastHalf
33672	Residential_TopNS_NorthHalf
33681	Residential_TopNS_SouthHalf
33690	Commercial_TopEW_WestHalf
33699	Commercial_TopEW_EastHalf
33708	Commercial_TopNS_NorthHalf
33717	Commercial_TopNS_SouthHalf
65535	FinalTileInfo

Additional Notes

Maximum Potential Unlocked:
With due respect to other SimCity efficient city guides, the knowledge contained in this guide unlocks the potential to have over ***eleven million*** residents in your city, without Game Genie codes or debug settings.



In this case, '▪' in the population is representing 73 (population 7393280)

*Simply by using each building's center tile only, a **lot** more buildings fit in a map*

While such a city looks 'glitchy' because of the building pieces used, it is a fully functional 'normal' city with respect to the game engine. However with so much to process, growth in this type of city doesn't seem to care about power, land value, crime, pollution, or anything else, as buildings never change stage or class.

The example pictured above utilises only eight different tiles: Residential_Stage4High_Center (×4143), Commercial_Stage5High_Center (×3953), Industrial_Stage4High_Center (×1432), Rail_LineEW_Water (×2389), NuclearPlant_UpperCenterL (×80), Seaport_UpperCenterL (×1), StadiumDomed_UpperCenterL (×1), and Airport_3rdRow3 (×1). Using only 12000 instances Residential_TopEW_WestHalf_Center (or one of the other seven R- and C-Top center tiles) allows for the maximum possible actual population on a map without ROM-modding, 11520000.

Notes on the Properties:

The ScenarioCompletion property contains an additional flag in the low Byte, FreetownComplete+=0x80. While this can be set to show the Freetown scenario as completed with the red 'X' for aesthetic purposes, it has no other bearing on the game as Freetown can't otherwise be completed.

The CashOnHand property is an unsigned Integer, which was either to intentionally prevent funds from falling below 0, or it was simply a mistake. In either case, a 4-Byte Integer/UInteger value reduced below 0x00000000 wraps around to 0xFFFFFFFF or less—with a signed Integer, this value would be represented as normal, a negative Integer; however this value as an unsigned Integer results in a ridiculously high positive value that gets truncated to 999999 by the game. This is why the 'Money Trick' fills your cash to 999999 when you force it below 0.

The CurrentYear property can never be below 1900 in the natural course of the game; this is the earliest any map starts. That being said, this value can be modified to any value within the UShort range, including years before 1900.

The AssessedValueMultiplier property is used in the calculation that determines the Assessed Value of the city. It is effectively multiplied by one tenth of the population to obtain this result.

The Population property will be recalculated (based on the actual map data) almost immediately after the file is loaded, regardless of game speed.

The TickCounter property tracks the number of 'ticks' that have passed since the city was first started; this is used for internal calculations. Four of these ticks occur each month, for a total of 48 per year.

The CameraTopLeftX and CameraTopLeftY properties can be set outside of -7 to 95 and -6 to 78—this is what happens when one glitches the cursor off the edge of the map and saves. The given bounds are the typical range limited by the cursor's movement (in-bounds).

The BowserStatus property describes Bowser's behavior: if 0, Bowser isn't on the screen; if 4, Bowser is present, is intent on destruction, and will continue to ravage the city; if -4, Bowser is present and will seek either a map edge or a body of water to disappear into, razing all the while (barring reaching an edge or water, Bowser may simply vanish on land to leave).

The EventCountdown property is a counter that begins at differing values at the start of the city, and is reduced by 1 every tick until its value is 0. Typically this is set to 0, but on some maps it is nonzero. An event is triggered when certain values are reached, depending on the map. Some examples of this are Tokyo (starts at 4—Bowser appears at 0), Las Vegas (starts at 384—UFOs attack at various values) and Boston (starts at 1—Nuclear meltdown occurs at 0).

The 10-year and 120-year History queues each get pre-filled with 0 (except land value—prefilled with 128). Each successive month/year, a value is 'enqueued'—all Short values are shifted ahead 1 position, with the oldest (highest-addressed) value being 'dequeued' (lost), and the added value filling the now empty first slot.

A final note is that pressing L+R+Select+Start on the title screen doesn't actually delete the save data; it simply sets the SaveFile1Present, SaveFile2Present, ScenarioCompletion, and DebugFlags properties to 0x00 and updates the header checksum (making the data inaccessible in-game). This means that if you change your mind after 'erasing' the save data, you just need to modify the header/footer to recover the data. For a slot that has never been saved to, all bytes for that slot are initially set to 0xFF.

Legal Notes:

SimCity is a trademark of Nintendo. I claim no ownership of anything except the guide itself and its content.