

	Cost	Att×pow	Def, HP	Moves	Tech. req'd	Vision	Hold	Obs'd by	Move	Fuel	Flags (below)
aegis cruiser	100	8×2	8,30	5	rocketry	2	0	never	sea	—	aegis,fieldunit
alpine troops	50	5	5,20	1	tactics	1	0	never	land	—	igter
archers	30	3	2,10	1	warriorcode	1	0	musketeers	land	—	
armor	80	10	5,30	3	mobile	1	0	never	land	—	
artillery	50	10×2	1,20	1	machine	1	0	howitzer	land	—	
battleship	160	12×2	12,40	4	automobile	2	0	never	sea	—	fieldunit
bomber	120	12×2	1,20	8	advanced	2	0	sbomber	air	2	fieldunit,oneattack
cannon	40	8	1,20	1	metallurgy	1	0	artillery	land	—	
caravan	50	—	1,10	1	trade	1	0	freight	land	—	caravan,igzoc,nonmil
caravel	40	2	1,10	3	navigation	1	3	galleon	sea	—	
carrier	160	1×2	9,40	5	advanced	2	8	never	sea	—	fieldunit,carrier
catapult	40	6	1,10	1	mathematics	1	0	cannon	land	—	
cavalry	60	8	3,20	2	tactics	1	0	armor	land	—	
chariot	30	3	1,10	2	wheel	1	0	knights	land	—	horse
cruise missile	60	18×3	—	12	rocketry	1	0	never	air	1	fieldunit,missile,oneattack
cruiser	80	6×2	6,30	5	steel	2	0	aegis	sea	—	fieldunit
crusaders	40	5	1,10	2	monotheism	1	0	dragoons	land	—	horse
destroyer	60	4	4,30	6	electricity	2	0	never	sea	—	fieldunit
diplomat	30	—	—	2	writing	1	0	spy	land	—	diplomat,igzoc,nonmil
dragoons	50	5	2,20	2	leadership	1	0	cavalry	land	—	horse
elephants	40	4	1,10	2	polytheism	1	0	crusaders	land	—	
engineers	40	—	2,20	2	explosives	1	0	never	land	—	settlers,nonmil
explorer	30	—	1,10	1	seafaring	1	0	partisan	land	—	nonmil,igter,igzoc
fanatics (n/a)	20	4	4,20	1	never	1	0	never	land	—	
fighter	60	4×2	3,20	10	flight	2	0	fighter	air	1	fighter,fieldunit
freight	50	—	1,10	2	corporation	1	0	never	land	—	caravan,igzoc,nonmil
frigate	50	4	2,20	4	magnetism	1	2	ironclad	sea	—	fieldunit
galleon	40	—	2,20	4	magnetism	1	4	transport	sea	—	
helicopter	100	10×2	3,20	6	combined	2	0	never	heli	—	oneattack,fieldunit
horsemen	20	2	1,10	2	horseback	1	0	knights	land	—	horse
howitzer	70	12×2	2,30	2	robotics	1	0	never	land	—	igwall
ironclad	60	4	4,30	4	steam	1	0	destroyer	sea	—	fieldunit
knights	40	4	2,10	2	chivalry	1	0	dragoons	land	—	horse
legion	40	4	2,10	1	iron	1	0	musketeers	land	—	
marines	60	8	5,20	1	amphibious	1	0	never	land	—	marines
mech. inf.	50	6	6,30	3	labor	1	0	never	land	—	
musketeers	30	3	3,20	1	gunpowder	1	0	riflemen	land	—	
nuclear	160	99	—	16	rocketry	1	0	never	air	1	fieldunit,oneattack,missile,nuclear
paratroopers	60	6	4,20	1	combined	1	0	never	land	—	
partisan	50	4	4,20	1	guerilla	1	0	never	land	—	igter,igzoc
phalanx	20	1	2,10	1	bronze	1	0	pikemen	land	—	
pikemen	20	1	2,10	1	feudalism	1	0	musketeers	land	—	pikemen
riflemen	40	5	4,20	1	conscription	1	0	never	land	—	
settlers	40	—	1,20	1	—	1	0	engineers	land	—	settlers,nonmil
spy	30	—	—	3	espionage	2	0	never	land	—	diplomat,spy,igzoc,nonmil
stealth bomber	160	14×2	5,20	12	stealth	2	0	never	air	2	fieldunit,oneattack
stealth fighter	80	8×2	4,20	14	stealth	2	0	never	air	1	fieldunit,fighter
submarine	60	10×2	2,30	3	combustion	2	8	never	sea	—	fieldunit,submarine
transport	50	—	3,30	5	industrialization	2	8	never	sea	—	
trireme	40	1	1,10	3	mapmaking	1	2	caravel	sea	—	fieldunit,trieme
warriors	10	1	1,10	1	—	1	0	pikemen	land	—	

**aegis:** Unit has double defence against missiles and aircraft.  
**carrier:** Unit can carry and refuel aircraft.  
**fieldunit:** Causes one unhappiness in Rep/Democ, two if outside a city not in a fortress three squares from a city.  
**fighter:** Unit can attack air units.  
**igter:** Unit moves over all terrain as if there were roads.  
**igwall:** Unit's attacks are not adversely affected by city walls.  
**igzoc:** Movement is not affected by enemy zones of control, allowing the unit to slip through enemy lines.  
**marine:** Unit can attack land units and cities from ships.

**missile:** Unit is destroyed in its own attack.  
**nonmil:** Unit requires no shield upkeep from its home city.  
**nuclear:** Nuclear damage; requires The Manhattan Project to build; always blocked by SDI defence.  
**oneattack:** An attack ends the unit's turn.  
**pikemen:** Unit has double defence against all horse units except cavalry (with horse flag).  
**submarine:** Unit can carry and refuel missiles. Yes, refuel.  
**trireme:** If you don't have the Lighthouse, unit has one in two chance of sinking if away from land.

		Normal			Special			Move cost	Defence bonus	Road time	Irrigation		Mining	
	Special	food	shield	trade	food	shield	trade				effect	time	effect	time
arctic	seals	0	0	0	2	0	0	2	10	3	—	—	—	—
desert	oasis	0	1	0	3	1	0	1	10	1	desert	5	desert	5
forest	game	1	2	0	3	2	0	2	15	3	plains	5	—	—
grassland	resources	2	0	0	2	1	0	1	10	1	grassland	5	forest	10
hills	coals	1	0	0	1	2	0	2	20	3	hills	10	hills	10
jungle	gems	1	0	0	1	0	4	2	15	3	grassland	15	forest	15
mountains	gold	0	1	0	0	1	5	3	30	5	—	—	mountains	10
ocean	fish	1	0	2	3	0	2	1	10	0	—	—	—	—
plains	horses	1	1	0	3	1	0	1	10	1	plains	5	forest	15
river	resources	2	0	1	2	1	1	1	15	1	river	5	—	—
swamp	oil	1	0	0	1	4	0	2	15	3	grassland	15	forest	15
tundra	game	1	0	0	3	0	0	1	10	1	—	—	—	—

	<b>Cost + upkeep</b>	<b>Tech. req'd</b>	<b>Obs'd by</b>	<b>Description</b>
airport	160+3	radio	never	Allows a city to produce veteran air units. Also, damaged air units which stay in town for one turn are completely restored. Two cities with airports can airlift one unit per turn. Airlifting instantly transports the unit from one city to another and will use all of the unit's MP. A unit must have some MP left to be airlifted.
aqueduct	80+2	construction	never	Allows a city to grow larger than size 8. (A Sewer system is also required for a city to grow larger than size 12.)
bank	120+3	banking	never	Together with the Marketplace improvement, a Bank increases the generated luxuries and taxes within a city by 100%.
barracks	40+1	none	gunpowder	With a Barracks, each new land unit built in a city will automatically have Veteran status, which means that its attack and defence strengths are increased by 50%. Also, damaged land units which stay in town for one turn are completely restored. Note that discovering Gunpowder and Combustion will obsolete any existing Barracks.
barracks ii	40+1	gunpowder	combustion	With a Barracks, each new land unit built in a city will automatically have Veteran status, which means that its attack and defence strengths are increased by 50%. Also, damaged land units which stay in town for one turn are completely restored. The discovery of Combustion will make Barracks II obsolete.
barracks iii	40+1	combustion	never	With a Barracks, each new land unit built in a city will automatically have Veteran status, which means that its attack and defence strengths are increased by 50%. Also, damaged land units which stay in town for one turn are completely restored.
cathedral	120+3	monotheism	never	A Cathedral makes 3 unhappy citizens content in a city, making it easier to maintain order in that city. The discovery of COMMUNISM will reduce this by 1, while the discovery of THEOLOGY will increase this by 1.
city walls	80+0	masonry	never	City Walls make it easier to defend a city. They triple the defence strength of units within the city against ground and helicopter units. They are ineffective against airborne and sea units as well as Howitzers. City Walls also prevent the loss of population which occurs when a defending unit is destroyed by a land unit.
coastal defense	80+1	metallurgy	never	Increases the defence strength of units within a city by a factor of 2 when defending against bombardments from enemy ships.
colosseum	100+4	construction	never	Entertains the citizens of a city, making 3 unhappy citizens content. Increased by 1 upon the discovery of ELECTRICITY.
courthouse	80+1	code	never	Reduces the corruption in a city by 50%. Under a Democracy, a Courthouse makes 1 unhappy citizen content. Also halves the effective distance to the capital, for the purpose of calculating revolt cost.
factory	200+4	industrial	never	Increases the resources produced in a city by 50%. Also contributes to pollution.
granary	60+1	pottery	never	If a city has a granary, then when it grows or shrinks, the amount of stored food will be set to half full. This helps a city to grow faster, and withstand famine more easily.
harbour	60+1	seafaring	never	Gives one food resource extra on all water terrain-types. The city needs to be coastal to build this improvement.
hydro plant	240+4	electronics	never	Reduces the amount of pollution generated in a city. It also increases the production generated by a Factory or Mfg. Plant in the city: a Factory and a Hydro Plant together give a 75% production bonus, and a Factory, Mfg. Plant and Hydro Plant together give a 150% production bonus. A city can only have one Hydro Plant, Power Plant, or Nuclear Plant. A city can only build a Hydro Plant if it is next to (or on) a Mountain or River tile.
library	80+1	writing	never	Increases the knowledge production in a city by 50%
marketplace	80+1	currency	never	Increases the generated luxuries and taxes in a city by 50%.
mass transit	160+4	mass	never	Neutralises the pollution generated by the population. The population simply has no effect on the pollution generated in the city.
mfg. plant	320+6	robotics	never	Together with a factory, a Manufacturing Plant increases the resource production in a city by 100%.
nuclear plant	160+2	power	never	Reduces the amount of pollution generated in a city. It also increases the production generated by a Factory or Mfg. Plant in the city: a Factory and a Nuclear Plant together give a 75% production bonus, and a Factory, Mfg. Plant and Nuclear Plant together give a 150% production bonus. A city can only have one Hydro Plant, or a Power Plant, or a Nuclear Plant.
offshore platform	160+3	miniaturization	never	Adds 1 to shield production on all ocean squares in a city. The city needs to be coastal to build this improvement.
palace	100+0	masonry	never	Makes a city the capitol and the centre of your government. Corruption in other cities is related to how far away from the capitol they are, except when the Government is a Democracy or under Communism.
police station	60+2	communism	never	Reduces unhappiness for military units outside the city by 2 under Democracy and 1 under Republic. No effect for other governments.
port facility	80+3	amphibious	never	Allows a city to build veteran sea units. Also, damaged sea units which stay in town for one turn are completely restored.
power plant	160+4	refining	never	Increases the production generated by a Factory or Mfg. Plant in a city: a Factory and a Power Plant together give a 75% production bonus, and a Factory, Mfg. Plant and Power Plant together give a 150% production bonus. The extra production may lead to the city generating more pollution. A city can only have one Hydro Plant, or a Power Plant, or a Nuclear Plant.
recycling center	200+2	recycling	never	Building a recycling centre reduces the amount of pollution generated by a city by 65%.
research lab	160+3	computers	never	Together with a Library and a University, a Research Lab increases the knowledge production of a city by 150%.
sam battery	100+2	rocketry	never	Doubles the defense of all units inside the city when attacked by non-nuclear air units.
sdi defense	200+4	laser	never	Protects a city from attacks from Nuclear units. Nuclear attacks simply have no effect on the city. Also, doubles defence against non-nuclear missiles.
sewer system	120+2	sanitation	never	Allows a city to grow beyond size 12.
solar plant	320+4	environmentalism	never	This improvement has not been implemented.
space component	160+0	plastics	never	
space module	320+0	superconductor	never	
space structural	80+0	spaceflight	never	
stock exchange	160+4	economics	never	Together with a Marketplace and a Bank, a Stock Exchange boosts trade and luxury production in a city by 150%.
super highways	160+3	automobile	never	Increases trade by 50% on all squares with roads or railroads.
supermarket	120+3	refrigeration	never	Increases the food production by 50% on each irrigated square which is being used around the city.
temple	40+1	ceremonial	never	Makes one unhappy citizen content. Both the Mysticism advance and the Oracle wonder double this effect. With both Mysticism and the Oracle, 4 citizens are made content.
university	160+3	university	never	Together with a library, a University increases the knowledge production of a city by 100%.
capitalization	999+0	corporation	never	This is not a normal improvement. Instead, setting a city's production to Capitalization means its production is converted to monetary income.

	<b>Cost</b>	<b>Tech. req'd</b>	<b>Obs'd by</b>	<b>Description</b>
Apollo Program	600	spaceflight	never	All cities on the map become visible.
A.Smith's Trading Co.	400	economics	never	City Improvements which have an upkeep of 1, are free of upkeep, for all cities.
Colossus	200	bronze	flight	Each square around the city where this Wonder is built, produces one extra trade resource.
Copernicus' Observatory	300	astronomy	never	Boosts science output by 50% in the city where it is built.
Cure For Cancer	600	genetic	never	Makes one unhappy citizen content in all cities.
Darwin's Voyage	300	railroad	never	Gives two immediate technology advances.
Eiffel Tower (n/a)	300	never	never	
Great Library	300	literacy	electricity	The civilization which builds the Great Library gets every Advance that at least two other civilizations have achieved.
Great Wall	300	masonry	metallurgy	Works as a City Wall in all cities.
Hanging Gardens	200	pottery	railroad	Makes one unhappy or content citizen happy in every city. Makes 2 extra happy faces in the city containing the Hanging Gardens (for a total of 3).
Hoover Dam	600	electronics	never	Works as if you had a Hydro Plant in every city. (This reduces pollution and increases the effects of Factories and Mfg. Plants.) Like a Hydro Plant, the Hoover Dam can only be built in a city which is next to (or on) a Mountain or River tile.
Isaac Newton's College	400	theory	never	Boosts science output by 100% in the city where it is built.
J.S. Bach's Cathedral	400	theology	never	Makes two unhappy citizens content in every city.
King Richard's Crusade	300	engineering	industrial	Makes one extra production shield on every square around the city where it is built.
Leonardo's Workshop	400	invention	automobile	Upgrades one obsolete unit per game turn.
Lighthouse	200	mapmaking	magnetism	Gives all sea units 1 additional move point and eliminates the risk of losing Triremes on the high seas. Makes all new sea units veterans (for all cities).
Magellan's Expedition	400	navigation	never	Gives all sea units 2 additional moves.
Manhattan Project	600	fission	never	Allow all players with sufficient knowledge to create Nuclear units.
Marco Polo's Embassy (n/a)	200	never	communism	
Michelangelo's Chapel	400	monotheism	never	Counts as having a Cathedral in each of your cities. (This makes 3 unhappy citizens content in each city. The discovery of COMMUNISM will reduce this effect by 1. The discovery of THEOLOGY will increase this effect by 1.)
Oracle	300	mysticism	theology	Doubles the effect of Temples, in all cities.
Pyramids	200	masonry	never	Counts as having a Granary in every city.
SETI Program	600	computers	never	Counts as having a Research Lab in all of your cities. That is, it boots science in each city by 50%.
Shakespeare's Theatre	300	medicine	never	Makes all unhappy citizens content, in the city where it is located.
Statue of Liberty	400	democracy	never	Allows you to choose any Government without the transition period of Anarchy.
Sun Tzu's War Academy	300	feudalism	mobile	All your new ground units become veterans (for all cities). The chance of a unit becoming a veteran after a battle increases from 50% to 100%
United Nations	600	communism	never	Units regain one extra hitpoint per turn.
Women's Suffrage	600	industrial	never	Counts as a Police Station in every city. (That is, for each city, reduces unhappiness for military units outside the city by 2 under Democracy and 1 under Republic. No effect for other governments.)