

Downspout extensions

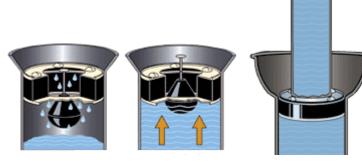




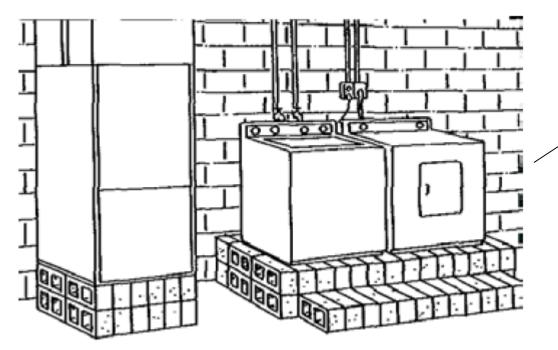
Rain gardens



Prevent water from getting into window wells or basement access



Floor drain float valve / standpipe



Elevate utilities in basement

200

WALL CRA

FOUNDATION DRAIN C

Mitiga Structura Raise utili valuable Insurance Gutter ma Downspou disconneo Site gradi extension Rain garde Permeabl pavemen Exterior d Interior d Seal wall Sump pur valve Sewer bac Overhead installatio x - primary o - seconda

What Can You Do At Home?

Internal drain tile to sump pump / waterproofing to reduce seepage



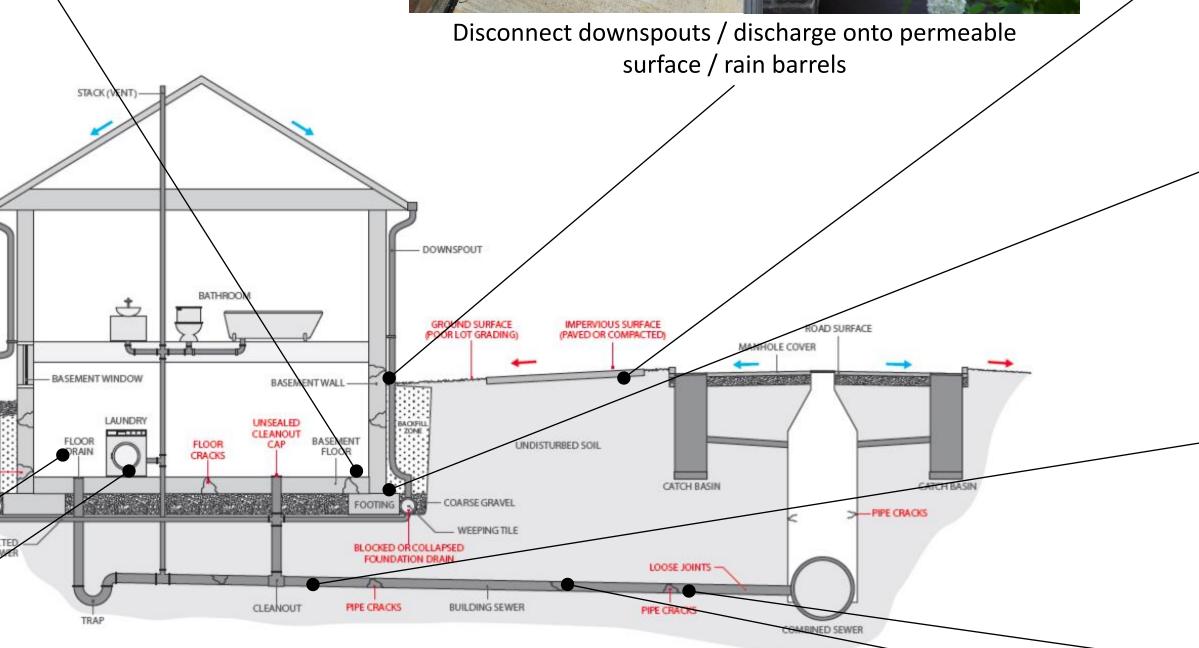


Figure 9.1: Types of urban flooding that can affect a residence. (Credit: Modified from Institute for Catastrophic Loss Reduction, Table J.1: Summary of basement flood risk reduction options to address damages on site

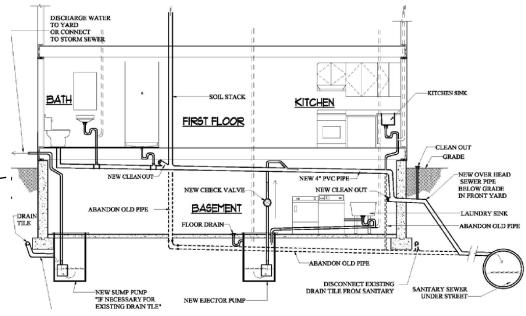
	Cause of Flooding				
gation Options	Overland	Infiltration	Sewer backup	Damage reduction	Estimated Cost
al Inspection					\$250-\$800 each
ilities and other items				x	
e				х	Based on coverage
naintenance	0	Х	0		
out ection			x		
ling, downspout n	o	х			
dens	0				\$3-40 per square foot
ole/porous nt	x				\$2-\$10 per square foot
drain tile		Х			\$185 per foot
drain tile		Х	х		\$40-50 per foot
l and floor cracks		Х	0		\$300-\$600 each
Imp with check	x	х	x		\$400-\$1,000 each
ackup valves			х		\$3,000-\$5,000
d sewer ion			х		\$2,000-\$10,000



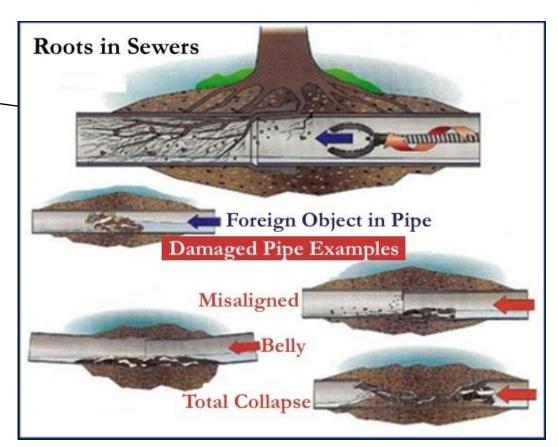
Permeable pavement (patios, walkways, driveways)



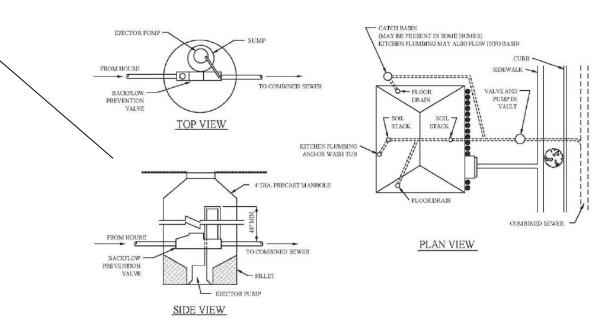
External drain tile to sump pump / waterproofing to reduce seepage



Overhead sewer installation

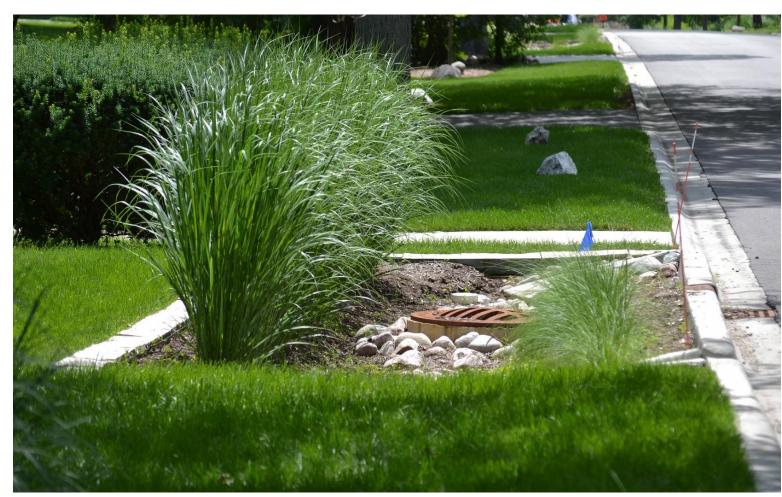


Clean / Rod / Repair Sewer Lateral Line



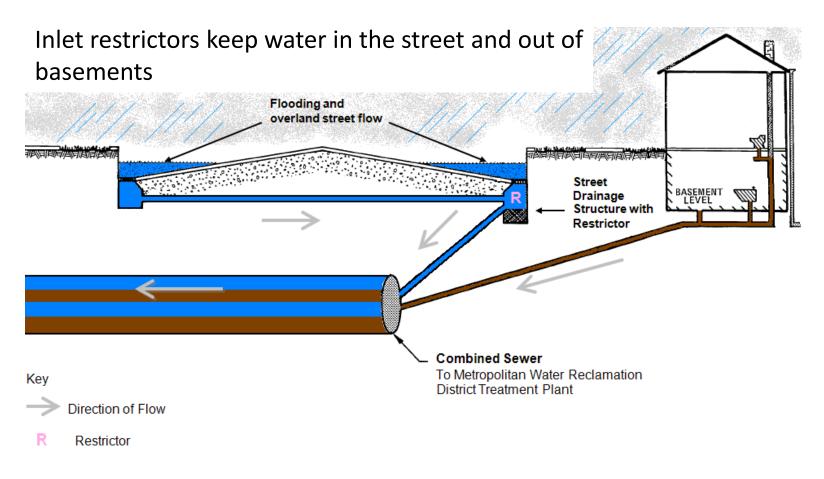
Install Flood Control System / Backflow Preventer

What Improvements Can Be Made in Your Neighborhood?



Rain garden or bioswale in parkway

Photo credit: Center for Neighborhood Technology (CNT)



STREETSCAPE



Permeable pavers in parking lane (above) and street (below)



PARKING LOT



Rain gardens or bioswales capture runoff from the parking lot

Photo credit: CNT



Photo credit: CNT

Landscape islands allow runoff to enter through cuts in the curb







Photo credit: Space to Grow

ATHLETIC FIELD



Photo credit: Space to Grow

Photo credit: CNT

GREEN ALLEY

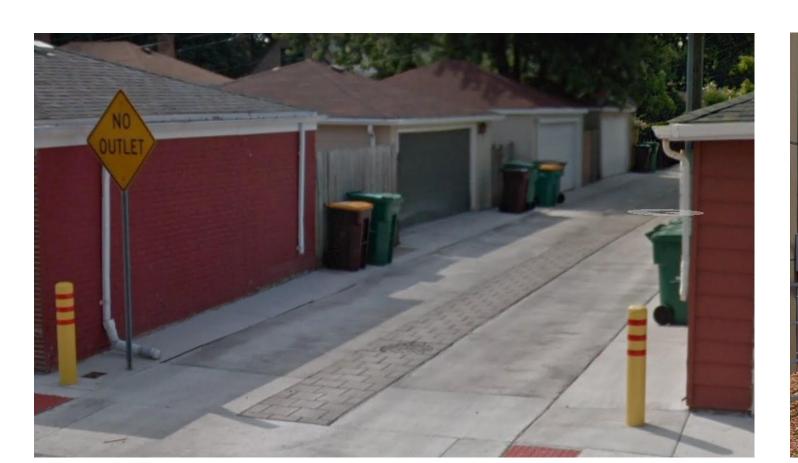




Photo credit: Space to Grow



Include subsurface storage to manage runoff from additional adjacent impervious surfaces (not illustrated here).



Photo credit: CNT