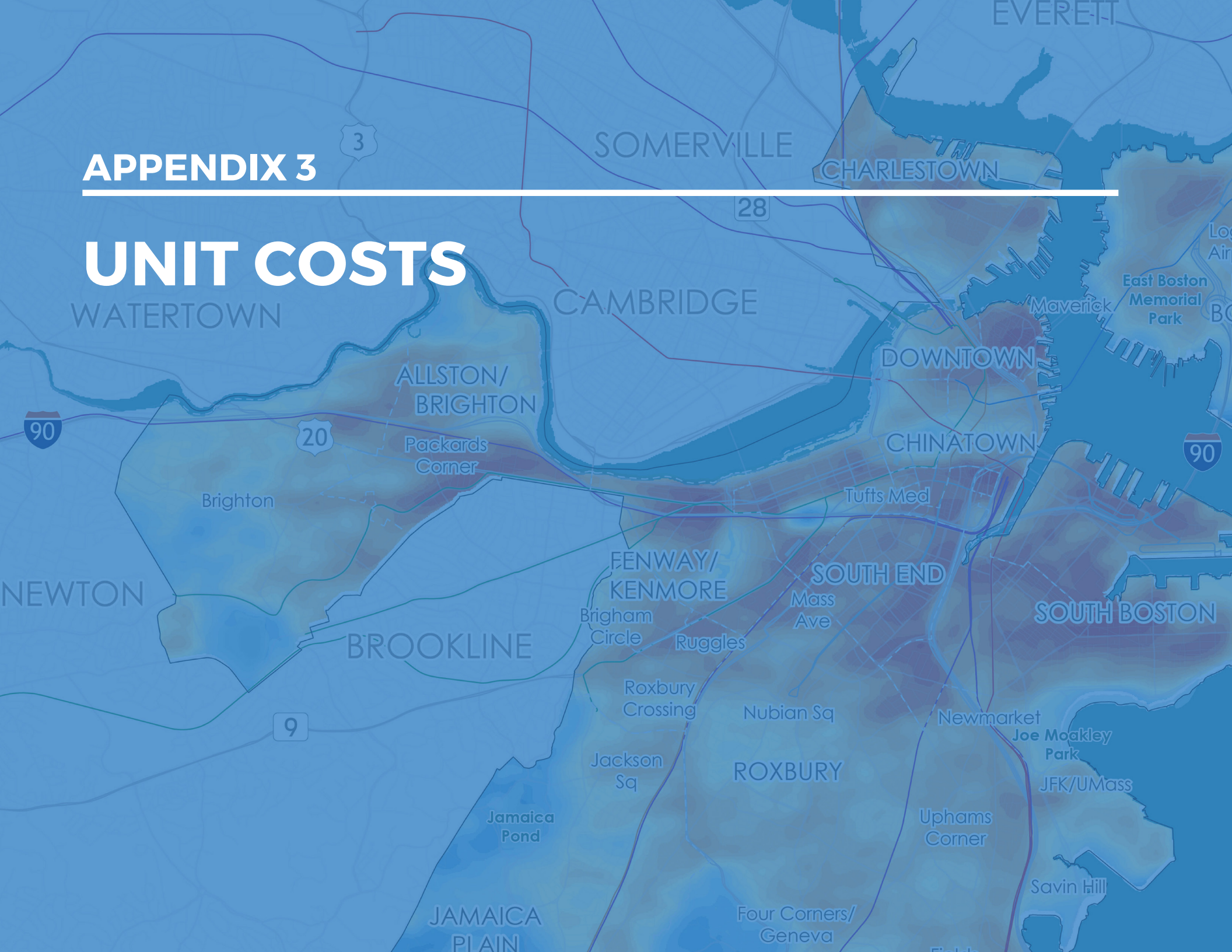


## APPENDIX 3

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# UNIT COSTS



# UNIT COSTS

In support of the unit costs of heat resilience elements, the *Heat Plan* process included the development of cost estimates for mitigation and adaptation. The following unit costs are provided to support strategies listed in Chapter 6.

## SHADE CANOPIES AND COOL PAVEMENT

Element	Unit Cost	Notes
Prefabricated Canopy with metal roofing and fascia	\$155.40/SF	50' x 20' canopy; includes fabrication, delivery, installation; spread footing foundations and LED lighting.
Fabric awnings with light gauge steel, per square foot	\$98.00/SF	50' x 20' canopy; includes installation, spread footings, and LED lighting.
Steel framed awnings on buildings/storefronts	\$256.03/linear foot	Attached to building facade; cost is based on a fixed fabric awning with lightweight steel frame, projecting 6ft from face of building; assumes 100' continuous length; includes installation.
Cool coating for travel lanes	\$190.12/linear foot	28 foot width; includes StreetBond coating; 3 applications + friction coat layer; 3 colors allowed on final coat.  The cool coating market is expanding material offerings. More options may be available in the future.

## SHADE TREES AND DRINKING FOUNTAINS

Element	Unit Cost	Notes
Shade Trees, no drainage box - planting	\$2,023.70/tree	3" caliper shade tree; assumes tree is not planted in a box; includes excavation and disposal; bioretention soil mix / crushed stone.
Shade trees, with drainage box - planting	\$6,687.33/tree	Includes excavation and installation.
Shade Trees - maintenance	\$896.30/tree annually	Includes pruning (6 to 10 year cycle), storm damage correct/clean-up (on average every 5 years), insect and disease treatment (on average every 10 years), tree and stump removal at end of life. These numbers do not include salaries, equipment, supplies, or administrative costs.

## COOL ROOFS UNIT COSTS

Element	Unit Cost / SF	Notes
Flat light-colored roofs + insulation (permanent)	\$44.03	Eg. white PVC membrane, includes striping and disposal of existing roofing materials, working around roof top equipment, and materials, craning, and lifting.
Pitched light-colored roofs (white asphalt shingles) + insulation (permanent)	\$13.37	Light-colored roofs + insulation (permanent) Eg. light-colored asphalt shingles, includes strip existing shingles down to sheathing, miscellaneous flashing replacement, prepare existing sheathing and install light-colored 30 yr Asphalt shingles; lifting of materials; dumpsters; police details and permits.
Pitched light-colored roofs (profiled metal roofing) + insulation (permanent)	\$62.26	Kynar coated metal roofing placed over existing asphalt shingles; includes removing existing flashings and providing new; lifting of materials; dumpsters; police details and permits.
Light-colored roofs (temporary, painted)	\$6.50	Includes clean & repairing existing EPDM roofing; light-colored coating; 3 applications + friction coat layer; lifting of materials; dumpsters; police details and permits.
Green roofs	\$35.00	Includes plant materials, soil, waterproofing membrane/system, working around roof top equipment, and materials, craning and lifting.

## COOL HOMES

Element	Unit Cost	Notes
Building wide AC system	\$48.79/SF	Cost for installation in an 80-family apartment building with a total GSf of 80,000. Includes a 2-pipe fan coil system with roof top equipment, digital thermostats, testing and commissioning, and removal of existing redundant heating system. Includes architectural, structural, electrical work associated with HVAC installation.
Window AC unit	\$4,060.00/unit	Includes installation of a commercial grade window/wall AC unit (230 Volt, 12,000 BTU). Includes wall mounting (form opening and 230V electrical rough in). Includes electrical upgrade to unit panelboard.
Replacement of windows for improved building performance	\$1,001.00/each	Installation of new replacement windows with caulking and sealing.
Blinds	\$74.90/each	Installation of blinds/shades to provide passive shading, especially on South facing windows.