



# Town of Westford

## Engineering Department

**DRAFT**

### KIRSI CIRCLE & DOUGLAS ROAD

#### SIDEWALK ESTIMATE - 5,250 LINEAR FEET

Date: August 2, 2021

#### Granite Curb Option (4' Wide Sidewalk)

Item #	Item	Quantity	Unit	Unit Price	Total
120	Earthwork/Unclassified Excavation	545	CY	\$ 40	\$21,800
145	Abandon or Remove Drainage Structure	7	Each	\$ 800	\$5,600
151	Gravel Sub-base	490	CY	\$ 45	\$22,050
170	Fine Grading & Compaction	2,920	SY	\$ 6	\$17,520
201	Catch Basin	7	Each	\$ 5,000	\$35,000
204	Gutter Inlet	7	Each	\$ 2,500	\$17,500
220	Drainage Structure Adjusted	7	Each	\$ 450	\$3,150
222.3	Frame and Grate (or Cover) Municipal Standard	21	Each	\$ 500	\$10,500
252.12	Drain Pipe - 12" HDPE	50	LF	\$ 95	\$4,750
482.3	Saw Cut Pavement	5,650	LF	\$ 3	\$16,950
504	Vertical Granite Curb	4,850	LF	\$ 45	\$218,250
701.2	Cement Concrete Wheelchair Ramps	85	SY	\$ 100	\$8,500
702	Hot Mix Asphalt Sidewalk	395	Ton	\$ 200	\$79,000
703	Hot Mix Asphalt Driveway Apron	100	Ton	\$ 200	\$20,000
715	Mailbox Removed & Reset	20	Each	\$ 125	\$2,500
748	Mobilization, Misc. Work, Safety & Cleanup	1	LS	\$ 15,000	\$15,000
751	Loam Borrow	200	CY	\$ 60	\$12,000
765	Seed & Establishment of Growth	1,750	SY	\$ 2	\$3,500
	Irrigation System Adjustment	1	Allowance	\$ 1,500	\$1,500
	Miscellaneous Landscaping	1	Allowance	\$ 5,000	\$5,000
	Survey	1	LS	\$ 15,000	\$15,000
	Right-of-Way Impacts (appraisals & easements)	1	LS	\$ 38,000	\$38,000
	Erosion Controls	1	LS	\$ 5,000	\$5,000
	Police Details	240	Hours	\$ 67	\$16,080
<b>Sub-Total</b>					<b>\$594,150</b>
<b>Contingency</b>				15%	<b>\$89,123</b>
<b>Total</b>					<b>\$683,273</b>

**Asphalt Curb Option (4' Wide Sidewalk)**

Item #	Item	Quantity	Unit	Unit Price	Total
120	Earthwork/Unclassified Excavation	545	CY	\$ 40	\$21,800
145	Abandon or Remove Drainage Structure	7	Each	\$ 800	\$5,600
151	Gravel Sub-base	490	CY	\$ 45	\$22,050
170	Fine Grading & Compaction	2,920	SY	\$ 6	\$17,520
201	Catch Basin	7	Each	\$ 5,000	\$35,000
204	Gutter Inlet	7	Each	\$ 2,500	\$17,500
220	Drainage Structure Adjusted	7	Each	\$ 450	\$3,150
222.3	Frame and Grate (or Cover) Municipal Standard	21	Each	\$ 500	\$10,500
252.12	Drain Pipe - 12" HDPE	50	LF	\$ 95	\$4,750
570	Hot Mix Asphalt Curb	4,850	LF	\$ 15	\$72,750
482.3	Saw Cut Pavement	5,650	LF	\$ 3	\$16,950
701.2	Cement Concrete Wheelchair Ramps	85	SY	\$ 100	\$8,500
702	Hot Mix Asphalt Sidewalk	395	Ton	\$ 200	\$79,000
703	Hot Mix Asphalt Driveway Apron	100	Ton	\$ 200	\$20,000
715	Mailbox Removed & Reset	20	Each	\$ 125	\$2,500
748	Mobilization, Misc. Work, Safety & Cleanup	1	LS	\$ 15,000	\$15,000
751	Loam Borrow	200	CY	\$ 60	\$12,000
765	Seed & Establishment of Growth	1,750	SY	\$ 2	\$3,500
	Irrigation System Adjustment	1	Allowance	\$ 1,500	\$1,500
	Miscellaneous Landscaping	1	Allowance	\$ 5,000	\$5,000
	Survey	1	LS	\$ 15,000	\$15,000
	Right-of-Way Impacts (appraisals & easements)	1	LS	\$ 38,000	\$38,000
	Erosion Controls	1	LS	\$ 5,000	\$5,000
	Police Details	200	Hours	\$ 67	\$13,400
<b>Sub-Total</b>					<b>\$445,970</b>
<b>Contingency</b>				15%	<b>\$66,896</b>
<b>Total</b>					<b>\$512,866</b>

## Notes:

The original sidewalk was constructed in the 1970's and was in poor condition, considered unsafe in many areas, and did not comply with a number of current ADA or AAB standards. The water main replacement project required a full overlay of the pavement to cover the water main trenches and to appropriately restore the road pavement structure. Since the existing sidewalk was directly connected to the road pavement the sidewalk could not be left in its current condition. Full replacement was determined to be the only available option to retain the sidewalk. A simple asphalt overlay of the sidewalk was not a viable option based on its poor condition, noncompliance, and need to transition between the new roadway pavement surface and the sidewalk. A decision was made to remove the sidewalk based on the limited use, potential impacts to private properties, and prohibitive costs to replace it.

The original sidewalk was attached to the asphalt road berm with no contrast in color and limited difference in elevation between the two making it difficult for motorists to determine where the road ended and where the sidewalk began. A vertical granite curb is typically used in this type of situation where the sidewalk is less than 5 feet from the roadway pavement for safety purposes. This is consistent with past practice for town sidewalk projects constructed over the last several years.

The existing roads in many locations within the neighborhood were higher than the sidewalk elevation which is likely the result of past road paving projects. The required pavement overlay associated with the water main project would raise the road elevation even higher which would result in potential drainage issues and uneven transitions between the roadway, driveways, and the sidewalk which are not permitted.

The majority of the original sidewalk was less than 4 feet wide. The typical standard used today is 5 feet wide which is consistent with MassDOT standards and widths used on town projects over the last several years. A 5 foot width is also considered the minimum usable width for sidewalk snow plows.

Adding a new complaint sidewalk could result in the need for temporary and/or permanent easements on private properties.

Approximately 8 utility poles are located within the existing sidewalk and would need to be relocated if a new sidewalk were constructed.

Approximately 20 driveway aprons would need to be removed and adjusted to accommodate a new sidewalk since the driveway crossing is considered part of the sidewalk and is subject to width and maximum slope requirements. This work would likely require permission from each home owner and could possibly result in temporary easements.

It is estimated that the removal of the existing sidewalk would reduce impervious surface area by more than 15,000 square feet. A reduction in impervious area results in less stormwater runoff being generated from the neighborhood.