

NJDOT TRANSPORTATION ALTERNATIVES PROGRAM
2022 COST ESTIMATE GUIDELINES AND RECOMMENDATIONS
FOR PEDESTRIAN, BICYCLE AND TRAFFIC CALMING PROJECTS

The following guidelines and recommendations are provided to assist in the development of cost estimates. It is recognized that these estimates are being developed at the conceptual level and that there are many unknowns at this phase of project development. Itemized costs shown here are for typical treatments used on Transportation Alternatives (TA) projects and should be adjusted for project-specific conditions.

Itemized costs are shown on the attached pages for typical treatments used on Transportation Alternatives (TA) projects. The costs shown are for typical sizes and/or units of a particular item and should be adjusted for project-specific conditions.

- A. **Maintenance and Protection of Traffic (MPT):** If the proposed work will require temporary impacts to traffic during construction (lane shifts, detours, etc.), include a line item in the cost estimate for MPT. Costs for MPT typically range from \$1,000-\$2,000 per day depending on complexity of the location.
- B. **Right-of-Way (ROW) Costs:** ROW impacts commonly occur at intersections where traffic signals, sidewalk, and curb ramps are installed. The cost of the acquisition of property should not be overlooked. As each local agency will handle ROW acquisition differently (fee acquisition, easement, dedication, etc.), ROW costs should be estimated based on past experience.
- C. **Design Costs:** If the project will not be designed in-house, include engineering design costs in the conceptual estimate. Typical engineering fees for these types of projects will be approximately 30% of the construction cost.
- D. **Curb and Sidewalk Costs:** Curb and sidewalk quantities are typically underestimated at the concept level due to the continued deterioration in the condition of these items between the concept phase and the construction phase. If there will be several years from concept to construction, consider increasing the quantity of curb and sidewalk.
- E. **Contingency Costs:** If there will be a gap of more than 1 year between the concept phase and construction phase, consider escalating the estimate by 5% per year. This is recommended on projects that will be funded through a public agency as the project delivery process will take longer than a locally-funded project.
- F. **Utility Relocation Costs:** Although utility relocation costs are not typically reimbursed, an evaluation of potential utility impacts should be conducted during the concept phase, especially for above ground facilities. When multiple options exist, it is advantageous to minimize utility impacts since owners are typically reluctant to incur major costs without reimbursement, significantly impacting schedules during design and construction phases. In addition, utility relocations can create unanticipated secondary costs such as the need for ROW acquisition, which is common in constrained areas such as intersections.

Transportation Alternatives Design Treatment Typical Costs (2022)		Installed Cost	
Type of Treatment	Typical Size	Unit Cost (Labor + Material)	Product Cost (Labor + Material)
Designing for Pedestrians - Signs and Stripes/ Pavement Markings			
<i>Pavement Markings - Words or Symbols ("School XING", "ONLY" or 2 arrows)</i>			
Material = Paint	20 SF	\$ 7.00 /SF	\$140
Material = Long life, thermoplastic	20 SF	\$ 12.50 /SF	\$250
Crosswalks			
Standard style - Paint (Two Lines Crosswalk, 40' long)	80 LF	\$ 3.50 /LF	\$280
Continental style (10' wide, 40' long, 1' lines every 2')			
Material = Paint	225 LF	\$ 3.50 /LF	\$800
Material = Long life, thermoplastic	225 LF	\$ 6.50 /SF	\$1,475
Imprinted Crosswalks (10' wide, 40' long)	400 SF (44 SY)	\$225 /SY	\$9,900
Signs			
Regulatory and Warning Signs (ex. "Stop for Pedestrian", "End School Zone")	3 SF - 9 SF (18"x24" to 36"x36")	\$ 50.00 /SF	\$150 - \$450
Driver Speed Feedback Sign - Portable (also called a Radar Speed Sign)	Each (2' x 3')	\$7,000	\$7,000
Driver Speed Feedback Signs - Fixed on pole (also called a Radar Speed Sign)	Each (2' x 3')	\$5,500	\$5,500
Portable Solar Powered Traffic Speed Trailer	Each (trailer)	\$15,000	\$15,000
Dynamic Message Sign - portable (Multiple Lines of Text)	Each (4' x 8')	\$19,000	\$19,000

Transportation Alternatives Design Treatment Typical Costs (2022)		Installed Cost	
Type of Treatment	Typical Size	Unit Cost (Labor + Material)	Product Cost (Labor + Material)
Designing for Pedestrians - Intersections			
<i>Traffic Signals</i>			
Addition of Pedestrian Signal Heads and Push Buttons to an Existing Traffic Signal	1 intersection (8 signal heads and 8 push buttons)	\$30,000	\$30,000
New Traffic Signal with Countdown Pedestrian Signal Heads	Small intersection	\$250,000	\$250,000
New Traffic Signal with Countdown Pedestrian Signal Heads	Large intersection	\$400,000	\$400,000
<i>Pedestrian Activated Facilities</i>			
Flashing Beacon/Enhanced Warning Sign	2 signs, one posted in each direction	\$13,000	\$26,000
Rectangular Rapid Flashing Beacon (RRFB)	2 signs, one on each Side of Street	\$10,000	\$20,000
Pedestrian Crossing In-Roadway Illumination System	Equipment includes fixtures, 4 lamps/ lane for a 3 lane crosswalk, controller, pole, and push button activator.	\$50,000.00	\$50,000
Pedestrian Hybrid Beacon (HAWK Signal)	2 units, one on each side of the road	\$150,000	\$150,000
<i>Shorter Crossing Treatments & Refuge Areas</i>			
Curb Extensions (simple - no drainage modification required)	6' wide, 20 feet long	\$6,000	\$6,000
Curb Extensions (complex - assume drainage modifications required)	6' wide, 20 feet long	\$20,000	\$20,000
Pedestrian refuge island	6' wide and 10' long	\$4,000	\$4,000

Transportation Alternatives Design Treatment Typical Costs (2022)		Installed Cost	
Type of Treatment	Typical Size	Unit Cost (Labor + Material)	Product Cost (Labor + Material)
Designing for Pedestrians - Paths and Sidewalks			
<i>Paths - Shared Use Path (10' wide)</i>			
Shared Use Path - Asphalt Surface w/ DGA base)	300 LF	\$150 /LF	\$45,000
Shared Use Path - Crushed Stone Surface (will have higher maintenance costs)	300 LF	\$60 /LF	\$18,000
<i>Sidewalks & Accessibility</i>			
Sidewalks – Concrete (4" Thick, 5' wide)	100 LF	\$75/LF	\$7,500
Detectable Warning Surface (assumes curb ramp already in place)	Each (2'x4')	\$325	\$325
Curb Ramps	Each (new curb and concrete -5" deep, 15' wide)	\$1,500	\$1,500
Tinted Concrete Sidewalk, 4" Thick, 5' Wide	100 LF	\$130 /LF	\$13,000
Brick Sidewalk, 5' wide	100 LF	\$90 /LF	\$9,000
Bollards on sidewalk (typical grouping of at least 4 bollards)	4 units (4' high, steel or concrete)	\$1,250 /unit	\$5,000
Designing for Bicyclists - Roadway treatments and Amenities			
<i>Roadway Treatments</i>			
"Bicycle-safe" stormwater drainage grates	Each	\$800	\$800
Video Detectors (Installed in pairs) (2 Cameras + Processor)	2 Detectors	\$20,000	\$20,000
<i>Parking</i>			
Bicycle Racks (parking for two bicycles)	Each	\$200-\$400	\$200 - \$400
Lockers (each holds 2 bikes)	Each	\$2,000 - \$4,000	\$2,000 - \$4,000
Shelter/Covered (Excluding Racks) (each holds 8 - 12 bikes)	Each	\$1,700 - \$5,000	\$1,700 - \$5,000

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Designing for Bicyclists - Signs and Stripes/ Pavement Markings			
<i>Signs</i>			
Share the Road Sign (Assembly)	Each (12 SF)	\$600	\$600
Bike Route (signing per mile)	20 signs per mile	\$150 /Sign	\$3,000
<i>Pavement Markings</i>			
Shared lane markings "Sharrows"	Each (20 SF)	\$7 /SF	\$140
Bike Symbol (Words or Arrows, assume thermoplastic)	Each (10 SF)	\$7 /SF	\$70
Bike lane striping (addition of 4" white thermoplastic striping)	1 mile	\$2.50 /LF	\$13,200
Colored Bike Lane (Green thermoplastic 4' wide and 50 ' long)	200 SF	\$12.50 /SF	\$2,500
Traffic Calming - Passive Measures			
<i>Passive Speed Control Measures</i>			
<i>Streetscaping</i>			
Street trees	Each	\$900	\$900
Pedestrian Scale Lighting (12' tall, installed every 50 ')	Each	\$5,000	\$5,000
Rumble Strips (Milled into Pavement)	100 LF	\$10 /LF	\$1,000
Rumble Strips (Thermo on top of Pavement)	100 LF	\$15 /LF	\$1,500

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Traffic Calming - Active Measures			
<i>Active Speed Control Measures</i>			
Horizontal Deflection			
Chicane	Each	\$30,000	\$30,000
Mini roundabout (small enough to stay within the existing ROW)	Each	\$35,000	\$35,000
Neighborhood Traffic Circle (does not include raised channelization)	Each (90' inscribed circle)	\$75,000.00	\$75,000
Constrictions			
Curb Extensions (with drainage modifications)	Each (1 corner of intersection)	\$20,000	\$20,000
Neckdowns (assume no drainage modifications required)	Each	\$8,000	\$8,000
Pedestrian refuge island	Each	\$4,000	\$4,000
Vertical Deflection			
Speed Humps (Speed Tables)	Each	\$10,000	\$10,000
Raised crosswalk	Each	\$10,000	\$10,000
Raised intersection (includes paving, drainage, signs and striping)	Small Intersection	\$80,000	\$80,000
Raised intersection (includes paving, drainage, signs and striping)	Large Intersection	\$120,000	\$120,000
<i>Volume Control Measures</i>			
Physical Diverters			
Full Street Closure	Each	Variable - Cost depends on proposed closure methods. Develop costs based on individual items	
Partial Street Closure	Each	Variable - Cost depends on proposed closure methods. Develop costs based on individual items	
Diagonal Diverter	Each	\$150,000	\$150,000
Forced turn island (Centerline Raised Island)	100 LF	\$25,000	\$25,000

Abbreviations

LF = Linear Foot
SY = Square Yard
SF = Square Foot