Municipality of Princeton

Municipal Building
400 Witherspoon Street
Princeton, NJ 08540-3496

Traffic and Transportation Committee
Telephone (609) 921-7077
Fax: (609) 688-2026

MEMORANDUM

TO: Mayor and Council
Robert Bruschi, Administrator

FROM: Princeton Traffic & Transportation Committee

DATE: October 23, 2013

Subject: **Adoption of Crosswalk Design Standards**

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The Traffic & Transportation Committee has considered the current use of multiple types of crosswalks in Princeton and is recommending that Council adopt the white reflective Thermoplastic International type crosswalk as Princeton's standard design to be used for all crosswalks.

This recommendation is being made for the following reasons:

1. The Police Department recommends for safety purposes, in keeping with the philosophy of the Federal Highway Administration 'Manual on Uniform Traffic Control Devices', that crosswalks be uniform and as visible as possible to warn motorists as to the location where pedestrians may be crossing the street.

2. The National Highway Traffic Safety Administration reports that 69,000 pedestrians were injured and 4,432 killed by automobiles in the US in 2011 with 142 of these fatalities occurring in New Jersey.

3. The Traffic and Transportation Committee has found the white reflective Thermoplastic International type design crosswalk is the most highly visible type crosswalk installed in Princeton.

4. The Department of Public Works reports that the brick paver type crosswalks deteriorate over a few years and are very difficult and costly to maintain.

5. The Princeton Engineering Department compared the 20 year cost of installing and maintaining various types of crosswalks located in Princeton and found the thermoplastic type crosswalk to be highly cost effective to install and maintain as compared to brick paver and brick surface treatment type crosswalks.

6. The Traffic and Transportation Committee voted unanimously to make this recommendation based on their concern for pedestrian safety, cost to the municipality and consistency of design (also a safety factor).

Attached please find the 20 year cost comparison prepared by the Engineering Department. Also attached, please find photos of the various type of crosswalks that can be found in Princeton.

Consideration for this recommendation by the Princeton Council will be appreciated.

Please contact Anton Lahnston, Traffic & Transportation Committee Chairman or Robert V. Kiser, P.E., if you have any questions.

c: Linda McDermott, Municipal Clerk
Edwin W. Schmierer, Municipal Attorney
Kathy Monzo, Deputy Administrator/Director of Financing
Anton Lahnston, Chair, Traffic and Transportation Committee
Robert Altman, Vice Chair, Traffic and Transportation Committee
Robert V. Kiser, P.E., Director of Engineering
Deanna L. Stockton, P.E., Assistant Engineer
Jack West, P.E., Land Use Engineer
Sgt. Thomas Murray, Traffic Safety Officer

RESOLUTION 2013-R
OF THE MAYOR AND COUNCIL
OF THE MUNICIPALITY OF PRINCETON
REGARDING A CROSSWALK DESIGN STANDARD

WHEREAS, there are currently many different types of crosswalks in the Princeton Committee ranging in design from parallel painted lines to concrete paver crosswalks; and

WHEREAS, it is desirable that crosswalks be uniform and as visible as possible in keeping with the philosophy of the Federal Highway Administration "Manual on Uniform Traffic Control Devices" to warn motorists that pedestrians may be crossing the street; and

WHEREAS, the National Highway Traffic Safety Administration reports that 69,000 pedestrians were injured and 4,432 killed by automobiles in 2011 with 142 of these fatalities occurring in New Jersey; and

WHEREAS, of the crosswalks installed in Princeton the reflective Thermoplastic white International type design crosswalk is the most highly visible type crosswalk; and

WHERAS, The Department of Public Works has found the brick paver type crosswalks deteriorate over a few years and very difficult and costly to maintain; and

WHEREAS, the Princeton Engineering Department compared the 20 year cost of installing and maintaining various types of crosswalks located in Princeton and found the thermoplastic type crosswalk to be much more cost effective to install and maintain than all other types of crosswalks; and

WHEREAS, the Traffic and Transportation Committee unanimously recommends that the Municipality adopt the white reflective Thermoplastic Intersection type crosswalk as its standard design to be used for all crosswalks in Princeton.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of Princeton that the Princeton Traffic and Transportation Committee's recommendation to establish the white reflective Thermoplastic International type crosswalk as Princeton's standard design, to be used on all crosswalks, is hereby adopted.

Councilperson	Absent	Present	1st	2nd	Yea	Nay	Abstain	Disqualified
Ms. Butler								
Mrs. Crumiller								
Ms. Howard								
Mr. Liverman								
Mr. Miller								
Mr. Simon								
Mayor Lempert								

I, Linda S. McDermott, Clerk of the Municipality of Princeton, do hereby certify that the above is a true and complete copy of a resolution adopted by the Mayor and Council of said Municipality at a meeting held October 28, 2013.

IN WITNESS WHEREOF, I hereunto set my hand and affix the corporate seal of said Municipality, this ___ day of October, 2013.

Linda S. McDermott
Municipal Clerk

Crosswalk Material Cost Comparison

Material	2013 Installation Unit Price / SF	Comments	Maintenance Schedule	Installation Cost for 30'x6' Crosswalk	5 Year Cost*	10 Year Cost*	15 Year Cost*	20 Year Cost*	Total Cost over 20 Years
Thermoplastic	$3.00	quickest installation, high reflectivity	Reinstall every 5 years	$324	$375	$435	$503	$584	$2,221
Addaprint	$18.00	bituminous/polymer surface treatment added to pavement, 3/4" thick, integral color for accent and aesthetics but dependent on life of pavement	Powerwash every 5 years	$3,240	$290	$336	$389	$6,069	$10,324
Imprint	$15.00	thermoplastic with immersed aggregate surface treatment added to pavement, 3/4" thick, integral color for accent and aesthetics but dependent on life of pavement	Powerwash and reinstall thermoplastic lines every 5 years; replace @ 20 years	$2,700	$498	$497	$668	$5,093	$9,456
Endurablend	$12.00	cementitious polymer blend applied to surface of pavement without detriment to pavement. Applied in two coats to create brick & mortar look. Comes in variable colors.	Powerwash and reinstall thermoplastic lines every 5 years; replace @ 20 years	$2,160	$498	$497	$668	$4,117	$7,940
Concrete Pavers	$22.00	pavers are engineered for traffic loading and wear. Foundation and pavers are separate from roadway system.	Repair headers @ 10 years; adjust 10% of pavers every 10 years; reinstall thermoplastic lines every 5 years	$4,140	$208	$3,532	$279	$932	$9,091

* 3% inflation rate added per year

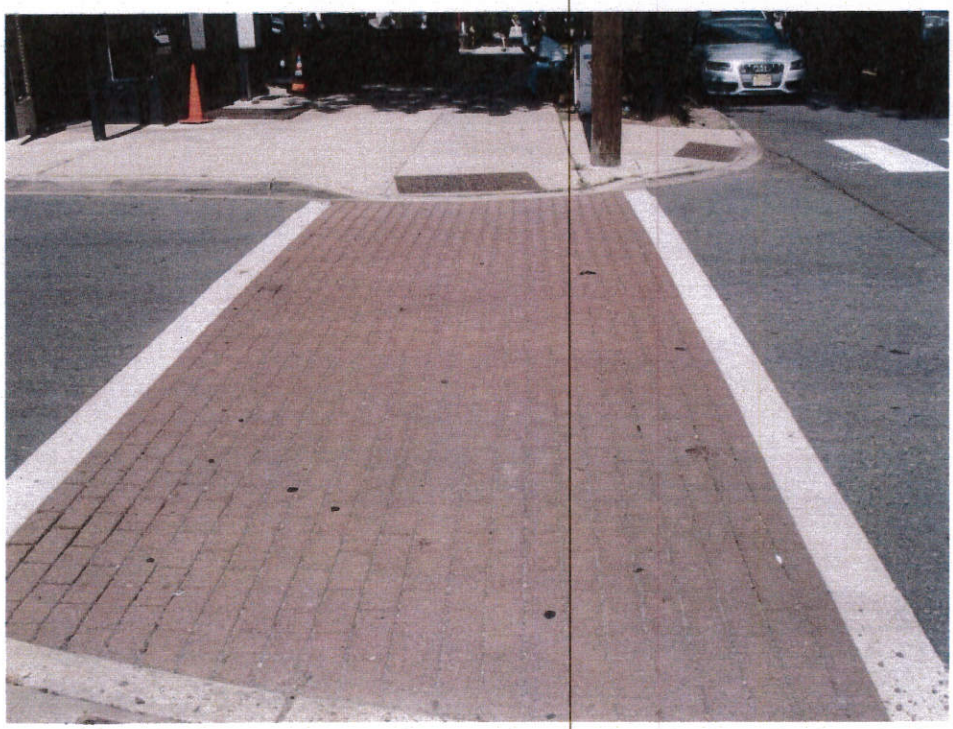
Location: Franklin Ave and Jefferson Road
Type: INTERNATIONAL STYLE THERMOPLASTIC STRIPING

Location: Wiggins Street and Madison Street
Type: INTERNATIONAL STYLE THERMOPLASTIC STRIPING

Location: Wiggins Street and N Tulane Street
Type: INTERNATIONAL STYLE THERMOPLASTIC STRIPING

Location: Witherspoon Street and Spring Street
Type: INTERNATIONAL STYLE THERMOPLASTIC STRIPING

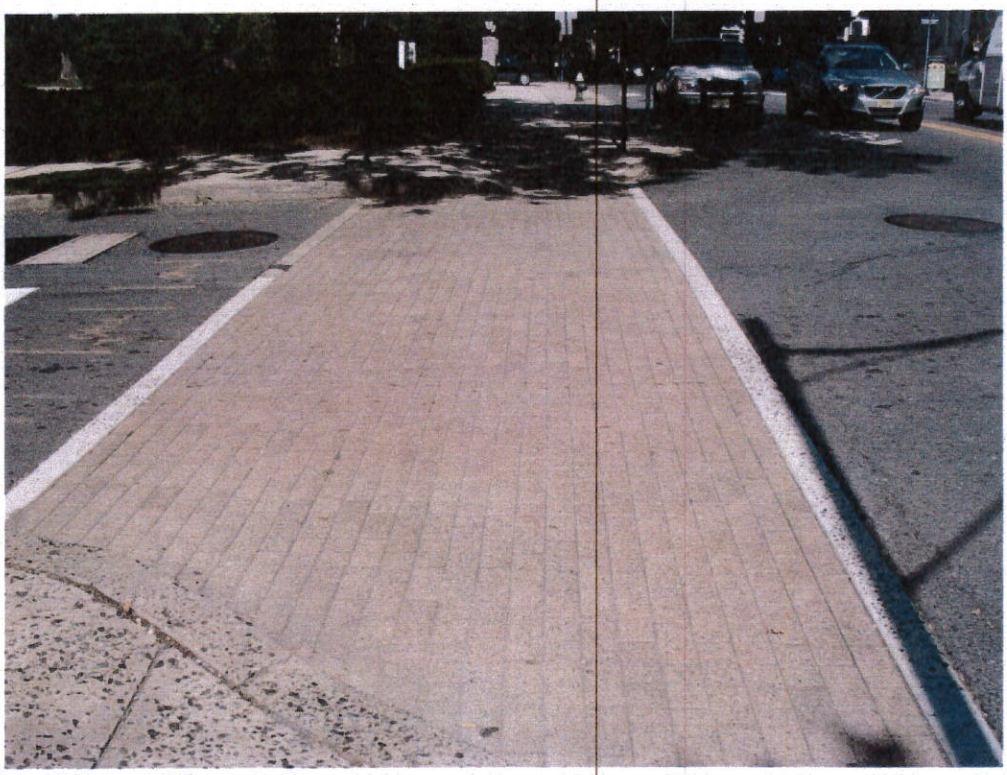
Location: Hamilton at Linden
Date Installed: 2004
Type: STREET PRINT



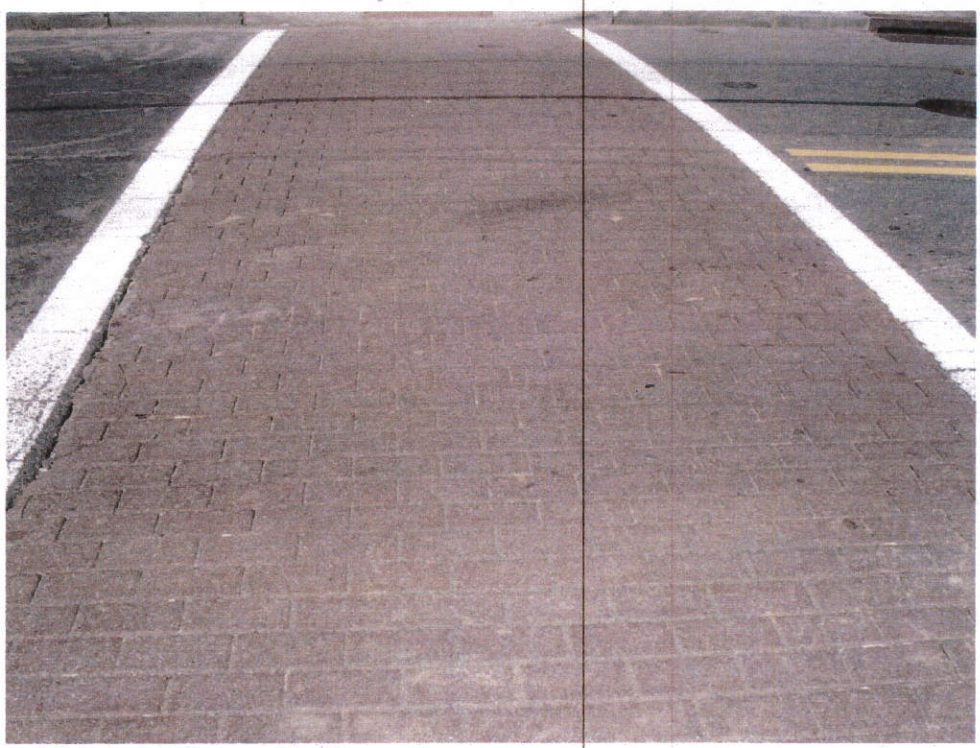
Location: Pine at Nassau
Date Installed: 2008
Type: ADDA PRINT

Location: Chestnut at Nassau
Date Installed: 1997
Type: CONCRETE PAVER WITH ANGLE IRON

Location: Moran Avenue at Nassau
Date Installed: 2013
Type: ENDURABLEND



Location: Moore at Nassau
Date Installed: 1991
Type: CONCRETE PAVERS WITH CONCRETE HEADER



Location: University Place at Dickinson
Date Installed: 2005
Type: IMPRINT

Location: Morven at Boudinot
Date Installed: 1990
Type: BRICK PAVER