

## Downtown Rochester Crosswalk Assessment

Prepared For:
City of Rochester, Rochester, New Hampshire

April 2017

## Executive Summary

The goal of this limited study was to summarize the existing conditions of the crosswalks and provide recommendations for accessibility and crosswalk improvements, including pavement markings, signage, and curb ramp reconstruction. The limited study did not include an analysis of vehicle or pedestrian volumes to determine whether existing crosswalks were warranted in their current locations or whether additional crosswalks were needed.

Twenty-six (26) crosswalks were assessed in this limited study, were located between the intersection of Dreyer Way and S. Main St., the intersection of Wakefield St. and Union St., and the intersection of Bridge St. and N. Main St. See Exhibit 1, on the following page, for an overview of the entire assessment area.

While a detailed probable cost analysis for the recommended improvements was not part of this study, preliminary opinions of probable cost are provided in Table 1 below to assist the City in determining which improvements to implement in the short term; and which to budget for future Capital Improvement Planning. The estimates have been broken out by five major recommended improvements identified in the study.

| Table 1 | Probable Cost | Notes |
| :---: | :---: | :--- |
| Signs <br> Installation | $\$ 30,000$ | Assumes existing signage will be removed and new signs <br> to be installed. Minor sitework required to install in <br> existing sidewalks. |
| Pavement <br> Marking | $\$ 12,500$ | Assumes existing markings to be obliterated prior to <br> restriping and thermoplastic markings in crosswalks. |
| Curb Ramp <br> Reconstruction | $\$ 120,000$ | Field surveys are strongly recommended to determine the <br> limits of City right of way, easements, elevations, etc. <br> before completing this work. |
| Pedestrian <br> Bump Out <br> Construction | $\$ 30,000$ | Optional feature to improve visibility of pedestrians. <br> Snow management operations must be considered. Field <br> surveys are strongly recommended to determine <br> elevations and placement. |
| RRFB / Ped <br> Signal <br> Upgrades | $\$ 52,000$ | Location of RRFB must be coordinated to ensure power <br> source is available. Does not include any reconstruction <br> of existing mast arms that may be required to upgrade <br> pedestrian crossing signals. |

To further aide in City planning efforts, Table 2 below is provided to show the twenty-six (26) crosswalks, or possible projects into three tiers based on total probable costs.

| Table 2 | Probable Cost per Project | Total Probable Cost of Projects |
| :---: | :---: | :---: |
| Crosswalk (Project)* |  |  |
| $1,2,4 a-b, 5,6 a-b, 7 b$, <br> $8 d, 9 b, 11,13,14 c, 16$ | $x \leq \$ 8,000$ | $\$ 76,000$ |
| $8 b-c, 9 a, 10,14 \mathrm{~b}, 14 \mathrm{~d}, 15$ | $\$ 8,000<\mathrm{x}<\$ 12,000$ | $\$ 70,000$ |
| $3,7 \mathrm{a}, 8 \mathrm{a}, 12,14 \mathrm{a}$ | $\$ 12,000 \leq \mathrm{x}$ | $\$ 100,000$ |

*See Exhibit 1 on the following page for location of project.
In addition to cost, safety should be taken into consideration when deciding how to prioritize improvements. A safety assessment of the existing pedestrian crossing locations was not included in the scope of this assessment. To determine if any of the existing crosswalk locations exhibits safety issues, a discussion with City staff and the Police Department can be conducted to determine if any issues exist which would guide the prioritization of the improvements to address safety issues. Absent this information, priority should be given to improving accessibility to existing pedestrian push buttons at signalized intersections in accordance with current design guidelines.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Tighe \& Bond should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. Reliance by others on the data presented herein or for purposes other than those stated in the text is authorized only if so permitted in writing by Tighe \& Bond.

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## Executive Summary

## 1 Introduction

## 2 Assessment of Existing Conditions

2.1 Approach ..... 2-1
2.2 Observed Conditions ..... 2-1
2.2.1 Signs and Signals ..... 2-2
2.2.2 Pavement Markings ..... 2-3
2.2.3 ADA Accessibility ..... 2-3
2.2.4 Crosswalk Visibility ..... 2-4
2.2.5 Maintenance ..... 2-4
3 Recommended I mprovements
3.1 Signs and Signals ..... 3-1
3.1.1 Signalized Intersection ..... 3-2
3.1.2 Unsignalized Intersection ..... 3-2
3.1.3 Mid-Block Crosswalks ..... 3-2
3.2 Pavement Markings ..... 3-3
3.2.1 Crosswalk Patterns ..... 3-3
3.2.2 Crosswalk Dimensions and Colors ..... 3-3
3.2.3 Materials ..... 3-3
3.3 ADA Accessibility ..... 3-4
3.3.1 Curb Ramps ..... 3-4
3.3.2 ADA Pedestrian Crossing Signals ..... 3-4
3.4 Crosswalk Visibility ..... 3-5
3.4.1 Street Parking ..... 3-5
3.4.2 Bump Outs / Refuge Medians ..... 3-5
3.5 Maintenance ..... 3-5
3.6 Conclusion ..... 3-6

## 4 References

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## Section 1 I ntroduction

Tighe \& Bond, Inc. was retained to complete a limited study of twenty-six (26) crosswalks in the downtown area of Rochester, NH. The goal of the assessment was to summarize the existing conditions of the crosswalks and provide recommendations for accessibility and crosswalk improvements, including pavement markings, signage, and curb ramp improvements.

The limited study did not include an analysis of vehicle or pedestrian volumes to determine whether existing crosswalks were warranted in their current locations or whether additional crosswalks were needed. It is recommended that prior to installing additional or removing existing crosswalks, an full evaluation of vehicle and pedestrian volumes be conducted.
Additionally, collision data was not considered within the context of the assessment of existing conditions and deficiencies, nor was data used to identify locations that should be prioritized for improvements to mitigate an existing safety issue. During the design of the improvements, discussions with City staff and the Police Department can be conducted to determine if any current safety issues exist that warrant mitigation at the study locations, or at other pedestrian crossings in the City where funding could be used to improve safety for the transportation system users.


## Section 2

## Assessment of Existing Conditions

A field assessment of the existing conditions of the crosswalks and curb ramps was performed by engineers from Tighe \& Bond in March of 2017. This information was used to establish the current condition of the pedestrian crossing facilities within the assessment area. The data was then reviewed and deficiencies and/or areas for improvements were identified, as noted in Section 3. This section describes the assessment method and summarizes the existing conditions observed in the field. These existing conditions will serve as a baseline to which improvement alternatives can be compared.

### 2.1 Approach

The assessment of existing conditions was conducted using the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) and the Americans with Disabilities Act (ADA) as guides.
The MUTCD, which is published by the US Department of Transportation's Federal Highway Administration (FHWA), is a standard by which transportation signage and pavement markings are designed and constructed. These guidelines, which have been adopted by the State of New Hampshire, promote uniformity, safety and efficiency for all road users including vehicles, bicycles, motorcycles, and pedestrians.
In addition to observing pavement markings and signage, ADA regulations were reviewed to determine whether existing traffic signal push buttons and curb ramps were compliant with federal standards. Components of the pedestrian crossing facilities that were reviewed as part of a check on ADA accessibility were the pedestrians signal push buttons, detectable warning systems, and curb ramp cross and running slopes, in addition to the physical crosswalks.

### 2.2 Observed Conditions

In March of 2017, the following data was collected for each of the crosswalks within the assessment area identified on Exhibit 1:

- Crosswalk Location: Crosswalks were organized by the street, intersection, landmark (business), and direction.
- Crosswalk Type: The type of crosswalk (mid-block, unsignalized intersection, or signalized intersection) is used to determine the necessary signage, markings, and curbing improvements.
- Zone: The type of zone the crosswalk is in (Commercial, Residential, School, or Other) is used to determine the style of signage package that is required.
- Crosswalk Marking: Pavement markings which are used to delineate crossing locations for both drivers and pedestrians.
- Pedestrian Signs and Signals: Pedestrian signs and signals are used to identify where crossing is appropriate, as well as protect pedestrians in a crosswalk from vehicular traffic.
- Lighting: The style, quantity, and proximity of lighting to crosswalks are used to ensure pedestrians are visible to drivers in low light or nighttime conditions. An analysis of the existing lighting levels was not performed.
- Curb Ramps: Properly constructed curb ramps are necessary to lead pedestrians from sidewalks to crosswalks.

Throughout the assessment, there were common opportunities for improvement noted at each of the assessed crosswalks. The most common deficiencies can be broken down in the following categories:

- Signs and Signals
- Pavements Markings
- ADA Accessibility
- Crosswalk Visibility
- Maintenance

The following is a summary of the field observations. A more detailed breakdown of observations for each crosswalk is provided in Appendix A.

### 2.2.1 Signs and Signals

This limited study evaluated the condition and placement of existing signage and signals at, or in advance or pedestrian crossings. The need for electronic pedestrian crossing signals at signalized and unsignalized intersections was not analyzed as part of this assessment. To determine the need for such devices, an assessment of pedestrian and vehicle volumes must be conducted.

All the crosswalks observed lacked one or more MUTCD recommended sign, which defines the location of pedestrian crossings, gives advanced warning to drivers, or inform pedestrians when and where they should cross the street. Figure 2-1 shows Crosswalk \#2 with deteriorated markings and no pedestrian


Figure 2-1: Crosswalk \#2 with no signage and worn striping

### 2.2.2 Pavement Markings

Crosswalk pavement markings are used to define the area where pedestrians can cross the roadway. Twentyfive of the twenty-six crosswalks observed in this assessment were striped in a zebra pattern (see Figure 2-
2) and varied from 6.5


Figure 2-2: Common Pavement Markings
to 8.5 feet wide. There was one crosswalk observed to have a ladder striping pattern. While the crosswalks were striped with a recommended pattern and width, all the crosswalks had common deficiencies when it comes to pavement markings. These deficiencies include markings that were worn, as seen in Figure 2-1, inconsistent with respect to dimensions and materials, and some that were misaligned to the curb ramps. In some instances, the crosswalk markings were directing pedestrians into driveways instead of curb ramps.

### 2.2.3 ADA Accessibility

The ADA, which was enacted in 1990, mandates that all public spaces must accommodate persons with disabilities. To make crosswalks accessible to pedestrians with disabilities (wheelchair bound or visually impaired), curb ramps must be constructed in compliance with ADA guidelines. In addition to curb ramps, pedestrians trying to cross signalized and unsignalized intersections may need to access push buttons to trigger pedestrian crossing signals. For the purposes of this assessment, only the push button location in relation to the sidewalk and not their height nor function were measured.

Thirty-seven (37) of the forty-two (42)


Figure 2-3: Non-ADA Compliant Curb Ramp with step curb ramps observed in this assessment had greater than the allowed $8.5 \%$ slope (in some cases exceeding $13 \%$ as shown in Figure 2-3).

Detectable warning systems, as required by Section 705 of the ADA were not present at Thirty-eight (38) of the forty-two (42) curb ramps observed in the assessment.

Observations also determined that all eight the pedestrian push buttons used to actuate the pedestrian crossing phase at the signalized intersection were potentially inaccessible to persons with disabilities due to non-ADA compliant ramps, sidewalks, and physical barriers including buttons that were separated from the sidewalk by grass strips. The

MUTCD prescribes very specific requirements that define the allowable locations for pedestrian push buttons relative to the location of the ramps.

### 2.2.4 Crosswalk Visibility

Ensuring that motorists and pedestrians can see each other is one factor associated with the overall safety of a pedestrian crossing. Vegetation, signs, and parked vehicles can all obscure pedestrians waiting to cross the road from approaching motorists.

While most of the crosswalks assessed in this report had acceptable visibility, eleven (11) of the twenty-six (26) crosswalks were noted to have some obstruction that could potentially reduce visibility including, lack of street lighting (within 20 feet of a crosswalk), low lying tree branches, and the crosswalk being situated too close to onstreet parking (within 25 feet).

### 2.2.5 Maintenance

Proper maintenance of the roadway and its traffic control devices are vital to address some of the issues observed during this assessment. The condition of all crosswalks observed indicate that a formal crosswalk maintenance program, including strict quality control measures, may not be in place.


## Section 3

## Recommended Improvements

Recommended improvements for the crosswalks are based on the guidelines set forth in the MUTCD and ADA with regards to signs and signals, pavement markings, accessibility, and visibility as noted in the previous section. See the individual reports and exhibits in the appendices for more detailed information on the assessments and recommended improvements for each of the crosswalks.

### 3.1 Signs and Signals

The MUTCD recommendations for signs and signals vary depending on where the crosswalk is located. For that reason, all intersections in this section were organized into three categories:

- Signalized Intersections: These intersections typically have traffic signals and push button controlled pedestrian crossing signals. (See Figure 3-1)
- Unsignalized Intersections:

These intersections are typically stop or yield controlled on some or all of the approach legs depending on their configuration. (See Figure 3-2)

- Mid-Block Crosswalks: These are crosswalks located at neither a signalized nor an unsignalized intersection of two streets. Mid-


Figure 3-1: Typical Signalized Intersection (Crosswalk 8) block crosswalks often have curb bump outs as refuge for pedestrians who may be obscured by parked vehicles, trees, or other obstructions. (See Figure 3-3)


Figure 3-2: Typical Unsignalized Intersection (Crosswalk 6B, From Google Maps)


Figure 3-3: Typical Mid-Block I ntersection (Crosswalk 12)

### 3.1.1 Signalized I ntersection

Two (2) signalized intersections were observed during the assessment. The recommended signal improvements at these intersections include the following:

- Replace crossing signals that do not have audible and visual pedestrian countdowns signal heads within the existing signal housing (See Figure 3-4)
- Replace or repair crossing signals that are damaged
- Add or relocate pedestrian push buttons so that they are accessible by persons in wheelchairs in compliance with the guidelines set forth in the MUTCD

Pedestrian crossing signs are not required at signalized intersections, as it is an expected location for pedestrians to cross the roadway under some form of traffic control.


Figure 3-4: ADA Compliant Visual Pedestrian Signal

### 3.1.2 Unsignalized I ntersection

Seven (7) unsignalized intersections were observed during the assessment. The recommended sign and signal improvements at these intersections include the following:

- Install a stop sign (Crocker Street)
- Install advanced pedestrian crossing signs (MUTCD Sign W11-2 \& W16-9P) at intersections with reduced visibility due to roadway geometry

Pedestrian crossing signs are not required at unsignalized intersections, as it is an expected location for pedestrians to cross.

### 3.1.3 Mid-Block Crosswalks

Eleven (11) mid-block crosswalks were observed during the assessment. The recommended improvements at the mid-block crossings include the following:

- Install pedestrian crossing signage (W112 \& W16-7P) on both sides of each crosswalk

The use of a Rapid Rectangular Flashing Beacon (RRFB), as shown in Figure 3-5, can help draw attention to pedestrians waiting at mid-block crossings. These signals can be wired to an electric service or solar powered. It is


Figure 3-5: RRFB Warning System recommended that a RRFB be installed where North Main Street meets South Main Street as the crosswalks are located near a corner with limited pedestrian visibility for vehicles.

### 3.2 Pavement Markings

### 3.2.1 Crosswalk Patterns

It is recommended that the City utilize the continental style crosswalk as shown in Figure 2-6 and Figure 3-6 below. This would replace the current standard zebra marking. By aligning the gaps in the crosswalk with the observed wheel paths, the life expectancy of continental style markings could be extended.

### 3.2.2 Crosswalk Dimensions and Colors

It is recommended that all crosswalk markings have the following dimensions as shown in Figure 3-6:

- 12 inch solid white lines
- The spacing between the lines shall be 36 inches
- The minimum width of a crosswalk at a mid-block crossing shall be 6 feet
- The width at all crosswalks at intersections shall be a minimum of 8 feet


Figure 3-6: Typical Crosswalk Detail

- Crosswalks should start and end at a curb ramp and extend the full width of the road


### 3.2.3 Materials

The crosswalk marking materials at all crosswalks within the City of Rochester shall be thermoplastic with glass beads per current City standard. It is also highly recommended that all previous pavement markings, patterns (stamped brick) and materials in the crosswalks be removed prior to installing new markings to avoid driver and pedestrian confusion.

### 3.3 ADA Accessibility

To improve the crosswalks and curb ramps that were observed in this study, ADA compliant, physical improvements are recommended.

### 3.3.1 Curb Ramps

Crosswalk curb ramps shall be constructed to be ADA accessible. As shown in the "Sidewalk Curb Ramps With Detectable Warnings Detail" prepared by the NHDOT and dated March 3, 2017 (Appendix B) curb ramps can be constructed in a number of ways based on the location or site constraints. However, a common requirement throughout all the various designs is that curb ramps shall be constructed so the slope does not exceed 1:12.

If sufficient room exists, an ADA compliant landing which is at least 4 feet by 4 feet in area should be constructed at the top of the curb ramp. If area for a compliant landing is not present due to right-of-way limitations or lack of easements on private property alternate curb ramp layouts may need to be utilized. The need for easements and detailed designs for curb ramps were not evaluated in this report.

In areas where existing crosswalks direct pedestrians into driveways, it is recommended that new curb ramps be constructed to the side of the driveway to reduce the potential for vehicle and pedestrian conflicts.

Where crosswalks direct pedestrians to a median island, the curb ramp shall be flush with the existing pavement and have ADA compliant slopes in all directions (less than $2 \%$ cross slope and 5\% in the direction of travel).

Chapter 4, Section 406 and Chapter 7, Section 705 of the ADA contains a more complete breakdown of requirements and guidelines for the construction of curb ramps that should be adhered to.

### 3.3.1.1 Detectable Warning Systems

All curb ramps must have an ADA approved detectable warning system that extends the full width of the curb ramp, as shown in Figure 3-7. Detectable warning systems shall be placed at all transitions from a sidewalk to crosswalk. The detectable warning systems shall extend to the full width of the curb ramp and at least 2 feet deep. Per current City standards, the detectable warnings shall be untreated cast iron and shall be set in concrete.

### 3.3.2 ADA Pedestrian Crossing Signals

All signalized intersections shall have a pedestrian push button controlled signal with audible and visual countdown components as specified in Section 3.1. Ensure that all visual components are properly aligned to the crosswalk and push buttons are located on an ADA accessible routes.

### 3.4 Crosswalk Visibility

### 3.4.1 Street Parking

Upstream parking spaces (against the flow of traffic) shall be located no closer than 25' to an adjacent crosswalk (See Figure 3-8). Downstream street parking may abut a crosswalk as it does not impede the visibility of pedestrians attempting to use a crosswalk.

### 3.4.2 Bump Outs / Refuge Medians

Bump outs or refuge medians are not required but can be useful at mid-block crosswalks as they can improve pedestrian visibility when vehicles are parked on both


Figure 3-8: Crosswalk with Adjacent Street Parking sides of the street or when there is a bend in the roadway. It is recommended that the City consider adding pedestrian bump outs to the mid-block crosswalks within the assessment area. The design of these bump outs should be based on site specific data and was not performed in this assessment.

### 3.5 Maintenance

It is recommended that the City develop standard maintenance plan for the crosswalks, pedestrian signage, and all pedestrian crossing signals. At a minimum, the maintenance guide shall include the following:

- Complete removal of existing deteriorated pavement markings
- Stripe pavement markings with consistent dimensions, material, and patterns, including conversion to the continental-style crosswalk pattern to replace the typical zebra patterns that were observed
- Replace faded, damaged, or missing signs and/or signals and consider upgrading mid-block crossings with RRFB actuated pedestrian crossing signals
- Signs in sidewalk area shall have a minimum clearance of 7 feet from the bottom of the sign to the sidewalk per the MUTCD
- Trim trees or vegetation in advance of crosswalks to maintain a minimum of 7 feet of clearance between the bottom of the branches and the sidewalk


### 3.6 Conclusion

In conclusion, while the existing crosswalks in the assessment area need improvement, many of the recommendations can be implemented without major disruption to the pedestrians and at relative low cost (tree trimming, sign replacing, sign installation, restriping). Other improvements (curb ramp reconstruction, crosswalk relocation, etc.) are more extensive and may require temporary disruption to pedestrian traffic.

While a detailed probable cost analysis for the recommended improvements was not part of this study, a preliminary estimate is provided in table 1 below to assist the City in determining which improvements to implement in the short term and which to implement as part of future Capital Improvement Planning.

| Table 1 | Probable Cost | Notes |
| :---: | :---: | :--- |
| Signs <br> Installation | $\$ 30,000$ | Assumes existing signage will be removed and new signs <br> to be installed. Minor sitework required to install in <br> existing sidewalks. |
| Pavement <br> Marking | $\$ 12,500$ | Assumes existing markings to be obliterated prior to <br> restriping and thermoplastic markings in crosswalks. |
| Curb Ramp <br> Reconstruction | $\$ 120,000$ | Field surveys are strongly recommended to determine the <br> limits of City right of way, easements, elevations, etc. <br> before completing this work. |
| Pedestrian <br> Bump Out <br> Construction | $\$ 30,000$ | Optional feature to improve visibility of pedestrians. Snow <br> management operations must be considered. Field <br> surveys are strongly recommended to determine <br> elevations and placement. |
| RRFB / Ped <br> Signal <br> Upgrades | $\$ 52,000$ | Location of RRFB must be coordinated to ensure power <br> source is available. Does not include any reconstruction of <br> existing mast arms that may be required to upgrade <br> pedestrian crossing signals. |

To further aide in City planning efforts, Table 2 below is provided to show the twenty-six (26) crosswalks, or possible projects into three tiers based on total probable costs.

| Table 2 | Probable Cost per Project | Total Probable Cost of Projects |
| :---: | :---: | :---: |
| Crosswalk (Project) |  |  |
| $1,2,4 a-b, 5,6 a-b, 7 b$, <br> $8 d, 9 b, 11,13,14 c, 16$ | $x \leq \$ 8,000$ | $\$ 76,000$ |
| $8 b-c, 9 a, 10,14 \mathrm{~b}, 14 \mathrm{~d}, 15$ | $\$ 8,000<\mathrm{X}<\$ 12,000$ | $\$ 70,000$ |
| $3,7 \mathrm{a}, 8 \mathrm{a}, 12,14 \mathrm{a}$ | $\$ 12,000 \leq \mathrm{X}$ | $\$ 100,000$ |

In addition to cost, safety should be taken into consideration when deciding how to prioritize improvements. A safety assessment of the existing pedestrian crossing locations was not included in the scope of this assessment. To determine if any of the existing crosswalk locations exhibits safety issues, a discussion with City staff and the Police Department can be conducted to determine if any issues exist which would guide the prioritization of the improvements to address safety issues. Absent this information, priority should be given to improving accessibility to existing pedestrian push buttons at signalized intersections in accordance with current design guidelines.

Lastly, while this assessment provides recommended improvements for the twenty-six (26) crosswalks located within the area shown in Exhibit 1, the City can use this report for future study of crosswalks and improvements throughout the City. To facilitate this effort, a blank copy of the Crosswalk Assessment Report has been provided in Appendix C. However, as noted throughout this report, additional engineering study, traffic analysis, and design effort is recommended prior to adding or removing crosswalks in the City or undertaking major reconstruction efforts to bring curb ramps into compliance with the current standards.


## Section 4 <br> References

1. MUTCD, 2009 Edition, published by FHWA
at http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm
2. Unsignalized Intersection Improvement Guide at http://www.ite.org/uiig/
3. Americans with Disabilities Act of 1990 or (Americans with Disabilities Act, 1990)

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City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{1}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 1

| Pedestrian Signs | Pes | Pedestrian Crossing | Advanced Warning |
| :--- | :--- | :--- | :--- |

## City of Rochester, NH - Crosswalk Assessment - Crosswalk 1

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Landscaped median island is well maintained.
-Curbing shows signs of vehicle damage.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage.
-Add lighting within 20 feet of crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{2}$



## City of Rochester, NH - Crosswalk Assessment - Crosswalk 2

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Landscaped median island is well maintained.
-Curbing shows signs of vehicles traveling over.
-Reconstruction of auto repair parking area may be required to accept new ADA compliant ramp and/or landing at the southern curb ramp.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage.
-Add landscaped area or raised curb behind new curb ramp to provide separation from auto repair lot.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{3}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 3


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 3

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Both curb ramps exceed 10\% running slope.
-Existing signals triggered by Summer Street intersection for fire station. No push button for pedestrian crossing. -No sidewalk bump outs for pedestrians.
-Pedestrian visibility reduced by parked cars.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage
-Add pedestrian crossing signals with audible and visual component tied to signals. If a pedestrian crossing signal is added, no pedestrian crossing warning signage would be necessary.
-Designated parking areas shall be relocated to 25 ft away from crosswalk and signed.
-Candidate for Rectangular Rapid Flashing Beacon (RRFB) to warn drivers for mid-block crossing.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{4 A}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 4A


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 4A

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away.
-Two hour parking sign (near 18 Wakefield Street) is located in an area too short for parking.
-No sidewalk bump outs for pedestrians.
-Pedestrian visibility reduced by parked cars.

## Recommendations

-Reconstruct curb ramps to add proper slope, ADA detectable warning strips and landing.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage.
-Designated parking area north and west of crosswalk could be moved right up to the edge of the crosswalk as it is on a one way street.
-Move two hour parking sign near 18 Wakefield Street
-Extend no parking area north and east of crosswalk to accommodate COAST Bus. Coordinate with COAST Bus.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{4 B}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 4B

| Pedestrian Signs |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Type | Yield to Pedestrian | Pedestrian Crossing | Advanced Warning | Other |
| Downward Arrow |  | $\stackrel{\mathrm{No}}{\square}$ |  |  |
| Notes |  |  |  |  |
| Lighting |  |  |  |  |
| Number of Lights within $\pm 20 \mathrm{ft}$ : |  |  |  |  |
| Distance \& Direction to Closest Light: 10' North |  |  |  |  |
| Type | Dark Sky $\square$ | Non-Dark Sky $\checkmark$ | Other |  |
| Curb Ramp 1 |  |  |  |  |
| Location | North | South $\square$ | East $\square$ | West $\square$ |
| Condition |  | Satisfactory | Good $\square$ |  |
| Type | Flared $\checkmark$ | Parallel | Returned Sides | Other |
| Slope | $\begin{gathered} <8.5 \% \\ \square \end{gathered}$ | $\begin{gathered} >8 / 5 \% \\ \square \end{gathered}$ | $\begin{aligned} & \text { N/A } \\ & \square \end{aligned}$ |  |
| Landing |  |  |  |  |
| ADA Detectable Strip | $\begin{gathered} \text { Yes } \\ \square \end{gathered}$ | $\begin{array}{\|l} \text { No } \\ \hline \sqrt{\prime} \end{array}$ |  |  |
| Curb Ramp 2 |  |  |  |  |
| Location $\quad \square$ |  |  |  | $\square$ |
| Condition |  | Satisfactory | Good $\square$ |  |
| Type | Flared $\square$ <br> $\checkmark$ | Parallel $\square$ | Returned Sides $\square$ | Other |
| Slope | $\begin{gathered} <8.5 \% \\ \square \end{gathered}$ | $\begin{gathered} >8.5 \% \\ \sqrt{7} \end{gathered}$ |  |  |
| Landing | Yes $\square$ |  |  |  |
| ADA Detectable Strip |  |  |  |  |

## City of Rochester, NH - Crosswalk Assessment - Crosswalk 4B

## Other Notes

## Recommendations

-Reconstruct curb ramps to add proper slope, ADA detectable warning strips and landing.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add stop sign signage.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{5}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 5


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 5

## Other Notes

-Location of parked cars on Wakefield Street may obscure pedestrians in crosswalk.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage (right turning vehicles look for pedestrians).
-Designated parking areas shall be relocated to 25 ft away from crosswalk. Remove one space in front of the mobile telephone space.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{6 A}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 6A


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 6A

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Crosswalk is around a corner for vehicles heading north.

## Recommendations

-Reconstruct western curb ramps to add ADA detectable warning strip.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage (at crosswalk) and advanced warning signage (100ft prior to crosswalk) on northbound land and left turn approach from northbound side of Wakefield Street.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{6 B}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 6B


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 6B

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Curb ramps appear to be in compliance with ADA regulations.
-Crosswalk is at a stop controlled intersection. Pedestrian warning signs are not necessary.

## Recommendations

-Completely remove existing pavement markings, stamped texture, and restripe.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. 7A


City of Rochester, NH - Crosswalk Assessment - Crosswalk 7A


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 7A

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Western curb ramp appears to be in compliance with ADA regulations.
-Parking on northbound side of S. Main Street may obscure pedestrians in crosswalk.
-Curb lip on western side is greater than one quarter inch.

## Recommendations

-Completely remove existing pavement markings, stamped texture, and restripe.
-Reconstruct eastern curb ramp to reduce slope, curb lip, and add ADA detectable warning strip.
-Add pedestrian crossing warning signage to either ends of the crosswalk.
-Designated parking areas shall be relocated to 25 ft away from the crosswalk.
-Candidate for Rectangular Rapid Flashing Beacon (RRFB) to warn drivers coming around the corner heading north.
-Trees prior to the crosswalk should be pruned to bottom branches are a minimum of 7 feet off the ground.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{7 B}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 7B


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 7B

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Both curb ramps appear to be in compliance with ADA regulations.
-Parking on southbound side of N. Main Street may obscure pedestrians in crosswalk.
-Curb lip on western side is greater than one quarter inch.

## Recommendations

-Completely remove existing pavement markings, stamped texture, and restripe.
-Add sign; "Right turning vehicles watch for pedestrians crossing sign".
-Eliminate curb lip on curb ramp.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{8 A}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 8A


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 8A

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Both curb ramps exceed 13\% running slope with no ADA detectable warning strips.
-Pedestrian crossing buttons are inaccessible.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signals with audible and visual component (clock) tied to signals.
-Add sidewalk access to the existing pedestrian crossing signals/push buttons.
-Designated parking areas shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{8 B}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 8B


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 8B

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Both curb ramps exceed $8.5 \%$ running slope with no ADA detectable warning strips.
-Pedestrian crossing buttons are inaccessible.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signals with audible and visual component (clock) tied to signals.
-Add sidewalk access to the existing pedestrian crossing signals/push buttons.
-Add sign; "Right turning vehicles watch for pedestrians".

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{8 C}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 8C


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 8C

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Both curb ramps exceed $8.5 \%$ running slope with no ADA detectable warning strips.
-Pedestrian crossing buttons are inaccessible.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signals with audible and visual component (clock) tied to signals.
-Add sidewalk access to the existing pedestrian crossing signals/push buttons.
-Designated parking areas shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{8 D}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 8D


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 8D

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Both curb ramps exceed $8.5 \%$ running slope with no ADA detectable warning strips.
-Pedestrian crossing buttons are inaccessible.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signals with audible and visual component (clock) tied to signals.
-Add sidewalk access to the existing pedestrian crossing signals/push buttons.
-Designated parking areas shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{9 \mathrm{~A}}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 9A


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 9A

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -No bump outs for pedestrians.
-Pedestrian visibility reduced by parked cars

## Recommendations

-Consider relocating curb ramp to line up with front door of church, away from the existing driveway.
-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signs for Northbound travel lane.
-Designated parking areas shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{9 B}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 9B


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 9B

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture and restripe.
-Consider installing additional street light to southern end of the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{10}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 10


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 10

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -No bump outs on either side makes pedestrians harder to see with parked cars
-Curb lip exceeds one quarter of an inch from pavement on both sides.

## Recommendations

-Reconstruct curb ramps to add ADA detectable warning strips and reduce curb lips between pavement and sidewalk.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Consider installing additional street light to eastern side of S . Main Street, adjacent to the crosswalk.
-Separate curb ramp from driveway of Friendly's.
-Add pedestrian crossing warning signage per MUTCD.
-Stripe crosswalk across Dreyer Way and add sign northbound on S. Main street "Vehicles turning right watch for pedestrian crossings."

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{11}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 11


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 11

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -Pedestrian visibility reduced by parked cars.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage per MUTCD.
-Designated parking spaces shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{12}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 12


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 12

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -No bump outs for pedestrians.
-Pedestrian visibility reduced by parked cars.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage per MUTCD.
-Consider adding bump outs to both sides for pedestrians.
-Designated parking spaces shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{13}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 13


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 13

## Other Notes

-Crosswalk was stamped at one time with red painted brick pattern. The color and pattern has since worn away. -One bump out for pedestrians on north side.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing warning signage per MUTCD.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{14 \mathrm{~A}}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 14A


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 14A

## Other Notes

-Pedestrian crossing button on northern side is above a raised curb.
-Pedestrian crossing signal on northern side does not have a countdown.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, Stamped texture, and restripe.
-Add pedestrian crossing signals with audible and visual component (countdown) to northern side.
-Consider separating the curb ramps for the crosswalks.
-Reconstruct the sidewalks up to the pedestrian crossing signals and push buttons.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{14 B}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 14B


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 14B

## Other Notes

-Pedestrian crossing button on eastern side is above a raised curb.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Realign pedestrian crossing signals on western side. Consider replacing the signal.
-Add pedestrian crossing signals with audible and visual component (countdown) to both sides.
-Consider separating the curb ramps for the crosswalks.
-Reconstruct the sidewalks up to the pedestrian crossing signals and push buttons.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{14 \mathrm{C}}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 14C


# City of Rochester, NH - Crosswalk Assessment - Crosswalk 14C 

## Other Notes

N/A

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Realign pedestrian crossing signals on northern side. Consider replacing the signal.
-Add pedestrian crossing signals with audible and visual component (countdown) to both sides.
-Consider separating the curb ramps for the crosswalks.
-Reconstruct the sidewalks up to the pedestrian crossing signals and push buttons.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{14 D}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 14D


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 14D

## Other Notes

-Pedestrian crossing signal on western side does not have a countdown clock.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signals with audible and visual component (countdown) to western side.
-Consider separating the curb ramps for the crosswalks.
-Reconstruct the sidewalks up to the pedestrian crossing signals and push buttons.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{15}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 15


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 15

## Other Notes

-No bump outs for pedestrians.
-Pedestrian visibility reduced by parked cars.

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add pedestrian crossing signage on both sides per MUTCD.
-Consider relocating the curb ramps north approximately 10' to avoid driveways, provide a proper landing area, and move closer to existing street lighting.
-Designated parking areas shall be relocated to 25 ft away from the crosswalk.

City of Rochester, NH - Crosswalk Assessment
Crosswalk No. ${ }^{16}$


City of Rochester, NH - Crosswalk Assessment - Crosswalk 16


## City of Rochester, NH - Crosswalk Assessment - Crosswalk 16

## Other Notes

N/A

## Recommendations

-Reconstruct curb ramps to add proper slope and ADA detectable warning strips.
-Completely remove existing pavement markings, stamped texture, and restripe.
-Add additional pedestrian crossing signage per MUTCD.
-Consider relocating the curb ramps north approximately 10' east to avoid driveways and provide a proper landing area.














## NOTE:

1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGINEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

CROSSWALK 8A

CROSSWALK ASSESSMENT ROCHESTER, NH




NOTE:

1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGI NEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

SCALE IN FEET




NOTE:

1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGI NEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

SCALE IN FEET


CROSSWALK 9B

CROSSWALK ASSESSMENT ROCHESTER, NH



1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGINEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.


CROSSWALK ASSESSMENT ROCHESTER, NH

CROSSWALK 11


## NOTE:

1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGINEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

SCALE IN FEET


CROSSWALK ASSESSMENT ROCHESTER, NH





## NOTE:

1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGINEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

CROSSWALK 14C

CROSSWALK ASSESSMENT ROCHESTER, NH
SCALE IN FEET





NOTE:

1. THIS EXHIBIT REPRESENTS CONCEPTUAL IMPROVEMENTS TO THIS CROSSWALK. FIELD VERIFICATION OF EXISTING FEATURES AND ENGINEERING DESIGN OF CURB RAMPS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

SCALE IN FEET


CROSSWALK ASSESSMENT ROCHESTER, NH


PERPENDICULAR CURB RAMP DETAIL


SECTION A-A

$\frac{4^{\prime \prime} \text { CRUSHED GRAVEL. OR }}{\text { OTHER APROVEO MATERIAL AT }}$ SECTION B-B


de mith slope \& width
LENGTHASS PANEL

IRANSITION RAMPS:
BLENDED TRANSITIINS HAVE A RUNING SLOPE GREATER THAN $2 \%$
BUT LESS THAN $5 \%$. CURB RAMPS HAVE ALUNING


ALL GRade breaks between landings. Ramps. and blended transitions
Shall be perpendicilar to the direction of tavel.


BLENDED TRANSITION. OR LANDING CONNECTS TO A STREET IOR T:
PLACEMENT FOR DETECTABLE WARNING SURFACES ARE AS FOLLOWS:
PERPENDICULAR CURB RAMPS:
WHERE BOTH ENDS OF THE BOTTOM GRADE ARE LESS THAN $5^{\prime \prime} 0^{\prime \prime \prime}$
FROM THE BACK OF THE CURB. LOCATE THE DETECTABLE WARNING
PANEL ON THE RAMP SURF ACE AT THE THET DEM OF THELE WAMN. THG
WHERE EITHER END OF THE BOTTOM GRADE IS GREATER THAN $5^{\prime}-0^{\prime \prime}$
FROM THE BACK OF THE CUB. LOCATE THE DETECTABLE WARNINGS
parallel curb ramps:
LOCATE THE DETECTABLE WARNING SURFACES AT. THE baCK
OF THE CURB ALONG THE EDGE OF THE LANDING. FOR BLENDED TRANSITIONS AND LANDINGS:
locate the detectable warning surfaces at the back of the curb
PARALLEL CURB RAMP DETAIL

THE ORDER OF PREFERENCE FOR

1. TWO SEPARATE RAMPS LOCATED ON TANGENT SIDE WALK AREA
IMMEDIATELY OUTS IDE OF CORNER RADIUS.
. two separate ramps separated by $5^{\prime}$ minimum as shown above. . single ramp serving two crosswalks.
GENERAL NOTES

1- THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP
IS 12:1. THE MAXIMUM CROSS SLOPE IS 2\%. THE SLOPE O IS $12: 1$ THE MAXIMUM CROSS SLOPE IS $2 \%$ THE SLOPE
THE LANDING SHALL NOT EXCEEO $2 \%$ IN ANY DIRECTION. RAMP RUNNING SLOPE EXCEPTION: A GREATER THAN $8.33 \%$ RAMP
RUNNING GRADE IS ALLOWED WHERE THE THE ROADWAY AND THE SIDEWALKIS) ARE PARALLEL AND VERY CLOSE TOGETHER. WITH


2. TRANSITI INS SHALL EBE FLUSH AND FREE OF ABRUPT CHANGES
ROADWAY SHOULER SLOFS ADJOINING SIDEWLK CURB RMPS SHALL BE A MAXIMUM OF $5 \%$ (FULL WIDTH) FOR A DISTANCE
intercept drainage along the curb in advance of sidewalk
 SHALL NOT BE LOCATED IN.
CURB RAMPS OR LANDINGS.

5. The surface of a perpendicular sidewalk curb ramp or

 CONRE ATTDARK-STANINED COL
SHALL BE SLIP RESISTANT.
6. DE TECTABLE WARNING PaNELS SHALL BE THE FULL WIDTH OF THE


DOME SECTION


City of Rochester, NH - Crosswalk Assessment
Crosswalk No.


## Notes

| Pedestrian Signals | Yes | No |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Audible Signal | Yes | No |  |  |
| Countdown | Yes | No |  |  |
| Push Button | Yes | No |  |  |
| Accessibility |  |  |  |  |
| Lighting | Yes |  |  |  |
| Number of Lights within $\pm 20 \mathrm{ft}$ : |  |  |  |  |
| Distance \& Direction to Closest Light: |  |  |  |  |
| Type | Dark Sky | Globe Style | Other |  |
| Notes |  |  |  |  |
| Curb Ramp 1 |  |  |  |  |
| Location | North | South | East | West |
| Condition | Poor | Satisfactory | Good |  |
| Type | Flared | Parallel | Returned Sides | Other |
| Slope | <8.5\% | >8/5\% | N/A |  |
| ADA Detectable Strip | Yes | No |  |  |
| Notes |  |  |  |  |
| Curb Ramp 2 |  |  |  |  |
| Location | North | South | East | West |
| Condition | Poor | Satisfactory | Good |  |
| Type | Flared | Parallel | Returned Sides | Other |
| Slope | <8.5\% | >8.5\% | N/A |  |
| ADA Detectable Strip | Yes | No |  |  |
| Notes |  |  |  |  |

Observation Summary

Recommendations


[^0]:    F:\Data\Standard\T\&B\Executive Summary.dot

