

Transportation Commission

November 28, 2012

Item 4C

Action

Pedestrian Push Button Upgrades Proposed for Blind or Visually-Impaired Individuals

Background

The [General Plan's 2009 Transportation Element](#) policies recommend installing accessible pedestrian signals, which are pedestrian push buttons upgraded to have audible and tactile/vibrational features, and pedestrian countdown signals at all the signalized intersections in the City of Alameda (Figure 1). This recommendation is based on the Transportation Element guiding policy 4.1.1.f., which states:

“Design transportation facilities to comply with accepted design and safety standards or guidelines including the use of design features and materials that do not adversely impact on people with disabilities.

1. Upgrade existing pedestrian signals by adding countdown, audible, and tactile/vibrational signals. New signals should include these as standard features.”

The [City's 2009 Pedestrian Plan](#) lists the signalized intersections that are in need of upgraded pedestrian push buttons under a project category titled “Street Crossings.”

In Summer 2011, MTC solicited projects in the San Francisco Bay Area's large urbanized areas for the Federal Transit Administration's New Freedom Program (49 USC Section 5317). The New Freedom Program provides grants for new capital and operating projects aimed at reducing, beyond the requirements of the Americans with Disabilities Act of 1990, transportation barriers faced by individuals with disabilities. The available funding is \$3.7 million for the Bay Area's large urbanized areas. Eligible applicants include non-profit organizations, local government authorities, and public transportation operators. A local agency must contribute at least 20 percent of the total project cost. In September 2011, Public Works staff submitted a grant application for federal monies under the [New Freedom Program](#), which is administered by the Metropolitan Transportation Commission (MTC), to install pedestrian push button upgrades at nine intersections.

In November 2011, MTC informed the Public Works staff that the City of Alameda will receive federal funding in the amount of \$150,900 from the Federal Transit Administration's (FTA) New Freedom Program (Section 5317). This funding will be the federal share of the total project costs, which equal \$188,625. The local share is \$37,725.



Figure 1: Webster St. at Stargell Ave.

Discussion

Public Works staff is recommending that pedestrian push buttons at nine signalized intersections be modified to make it easier and safer for blind or visually-impaired individuals to cross the street. These intersections, listed in Table 1 and shown in Exhibit 1, are located adjacent to an AC Transit bus stop or an Alameda Paratransit Shuttle stop.

Table 1: Pedestrian Push Button Upgrades – Proposed Locations

Intersection Name	AC Transit Lines	Alameda Paratransit Shuttle Stops
High Street/Otis Drive	21, 314, OX, W	Krusi Park
Lincoln Avenue/Willow Street (Santa Clara Avenue/Willow Street)	(O, 314, 51A, 851)	Lincoln/Chestnut
Broadway/Encinal Avenue	O, OX	Broadway/Crist
Broadway/Otis Drive	21, 314, W	Otis/Broadway
Grand Street/Otis Drive	20, W	
High Street/Santa Clara Avenue	O, W	High/Santa Clara
Oak Street/Central Avenue (Oak Street/Santa Clara Avenue)	(O, 314, 51A)	Alameda Main Library
Island Drive/Robert Davey Junior	21	Park & Ride Lot
Robert Davey Junior/Packet Landing Road	21, OX	

Note: The intersection names in parentheses show the actual location of the closest bus stop when it differs from the location of the proposed pedestrian push button upgrades.

Public Works staff will follow the standards and guidance stated in the California Manual on Uniform Traffic Control Devices (California MUTCD) 2012 edition (Exhibit 2). As stated in the California MUTCD, the pedestrian push buttons are proposed to have the following features:

- Raised tactile arrow that points into the direction of the crosswalk;
- Locator tone - **with a lower night volume** - to help direct pedestrians to the push button;
- Once the button is pushed, the pedestrian will hear the word “Wait” if in a constrained location;
- During the pedestrian walk signal phase, which is only activated by pushing the pedestrian button:
 - The arrow push button will vibrate; and
 - An audible sound, rapid tick - **with a lower night volume** - will play.

These intersections were selected because they are identified in the City of Alameda’s Pedestrian Plan (2009) as priority locations for blind or visually-impaired individuals. These locations also are in close proximity to an AC Transit bus stop or an Alameda Paratransit Shuttle stop. Since blind or visually-impaired individuals are unable to drive and are transit dependent, intersections near AC Transit bus stops or Paratransit Shuttle stops were selected to provide these individuals with accessible transportation to and from their homes, jobs, shopping and other activities.

According to the 2010 U.S. Census, 10.4 percent of the population in the City of Alameda was disabled and 13.5 percent was 65 years and over. These groups will most benefit from pedestrian push button upgrades. Not only does this project give more independence to individuals with vision disabilities, it also helps make the local bus systems a more viable alternative, which in turn reduces congestion and vehicular emissions.

Outreach

Public Works staff provided outreach in the following ways:

- Notified the residents, tenants and property owners within 300 feet of all nine intersections that are proposed to have pedestrian push button upgrades (Exhibit 3).
- Placed notifications on barricades at all nine intersections.
- Distributed a notification to the Transportation Commission email list serve.
- Issued a press release about the proposed project.
- Uploaded the meeting announcement onto the City's web site.
- Sent an email announcement to organizations that work directly with individuals with visual impairments such as:
 - Alameda County Senior Services
 - Community Resources for Independent Living (CRIL)
 - Center for Independent Living (CIL)
 - Lions Center for the Blind
 - United Seniors of Oakland and Alameda County

All the notifications directed individuals to respond to the City's Transportation Coordinator or to attend the Commission on Disability Issues meeting on Monday, October 29, 2012. Public Works staff received an email from a resident requesting that the intersection of Broadway and Otis Drive be removed from consideration of receiving these pedestrian push button upgrades due to "additional unnecessary noises from these push buttons, including the 'wait' command and the chirping. Even with the 'lower night volume', we will hear those noises frequently." Public Works staff also received an email from a low-vision resident in favor of the project stating: "These upgrades will be joyfully received." Exhibit 4 shows these two email correspondences.

Although not a quorum, the four Commission on Disability Issues members who were present on Monday, October 29, 2012 supported proceeding with the installation of the pedestrian push button upgrades at all nine selected intersections. One commission member requested that Public Works staff consider turning the locator tone off at night. Public Works staff will place the locator tone at the lowest tone possible. In addition, staff will consider requests on a case-by-case basis; however, the updated California MUTCD 2012 Edition seems to contradict this request with the below standard: "Under stop-and-go operation, accessible pedestrian signals shall not be limited in operation by the time of day or day of week." (Section 4E.09, line 07)

Budget Considerations/Fiscal Impacts

The federal New Freedom Program will fund 80 percent of the proposed project. The funding source for the local match is from Alameda County's Measure B transportation sales tax, which is administered by the Alameda County Transportation Commission.

Recommendation

Public Works staff recommends that the Transportation Commission review and approve proceeding with the installation of pedestrian push button upgrades at the nine selected intersections.

Exhibits:

1. Pedestrian Plan Maps – Proposed Locations for the Pedestrian Push Button Upgrades
2. California Manual on Uniform Traffic Control Devices (California MUTCD) - 2012
3. Notification to Adjacent Property/Business Owners, Employees and Residents
4. Public Comments

**Exhibit 1: Pedestrian Plan Maps –
Proposed Locations for the Pedestrian
Push Button Upgrades**

Figure 24: High-priority Pedestrian Projects (Main Island - East)

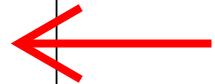
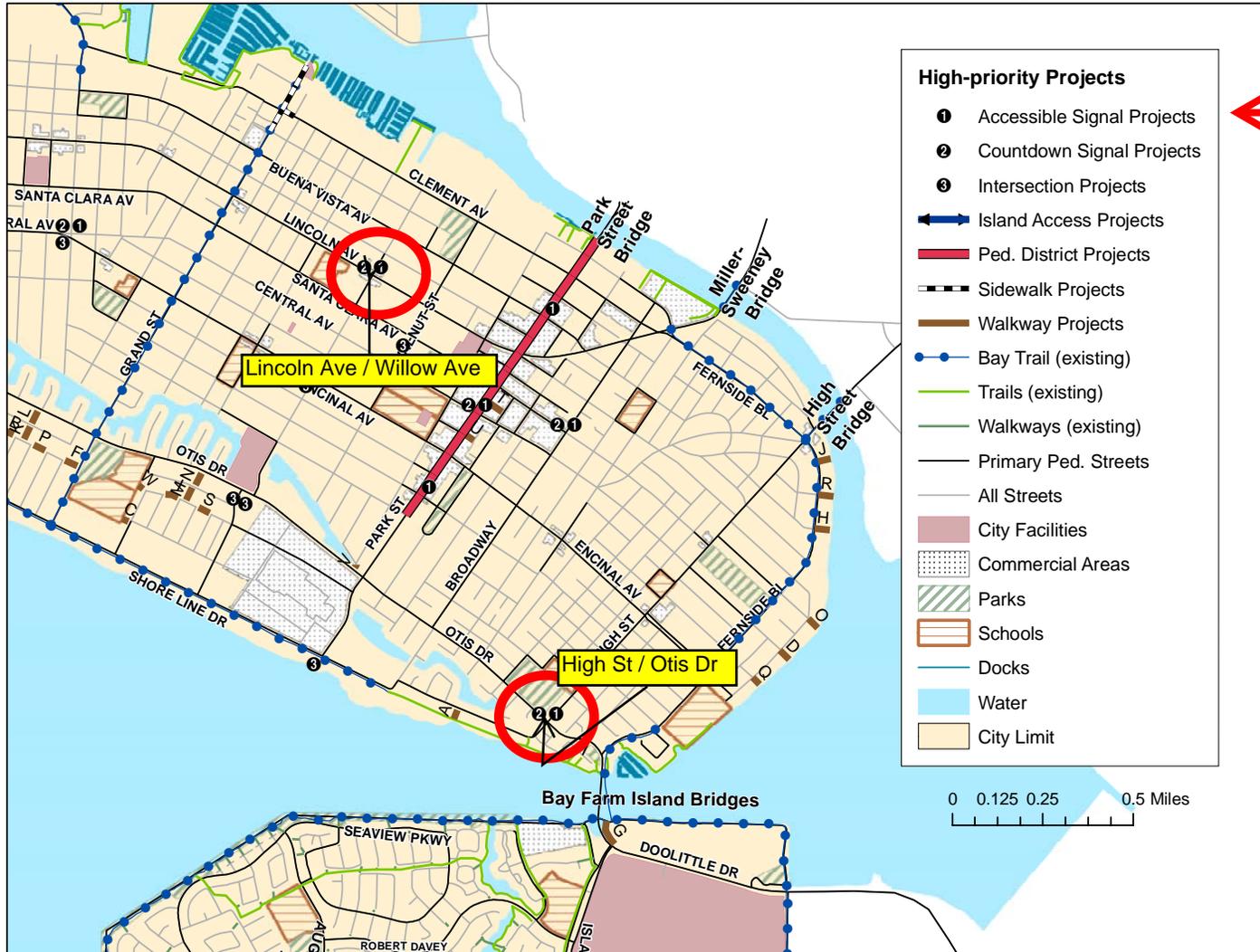


Figure 27: Medium-priority Pedestrian Projects (Main Island - East)



Figure 28: Medium-priority Pedestrian Projects (Bay Farm Island)



**Exhibit 2: California Manual on Uniform
Traffic Control Devices (California
MUTCD) - 2012**

Standard:

10 Signs (see Section 2B.52) shall be mounted adjacent to or integral with pedestrian pushbuttons, explaining their purpose and use.

Option:

11 At certain locations, a supplemental sign in a more visible location may be used to call attention to the pedestrian pushbutton.

Standard:

12 The positioning of pedestrian pushbuttons and the legends on the pedestrian pushbutton signs shall clearly indicate which crosswalk signal is actuated by each pedestrian pushbutton.

13 If the pedestrian clearance time is sufficient only to cross from the curb or shoulder to a median of sufficient width for pedestrians to wait and the signals are pedestrian actuated, an additional pedestrian detector shall be provided in the median.

Guidance:

14 The use of additional pedestrian detectors on islands or medians where a pedestrian might become stranded should be considered.

15 If used, special purpose pushbuttons (to be operated only by authorized persons) should include a housing capable of being locked to prevent access by the general public and do not need an instructional sign.

Standard:

16 If used, a pilot light or other means of indication installed with a pedestrian pushbutton shall not be illuminated until actuation. Once it is actuated, the pilot light shall remain illuminated until the pedestrian's green or WALKING PERSON (symbolizing WALK) signal indication is displayed.

17 If a pilot light is used at an accessible pedestrian signal location (see Sections 4E.09 through 4E.13), each actuation shall be accompanied by the speech message "wait."

Option:

18 At signalized locations with a demonstrated need and subject to equipment capabilities, pedestrians with special needs may be provided with additional crossing time by means of an extended pushbutton press.

Standard:

19 If additional crossing time is provided by means of an extended pushbutton press, a PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME (R10-32P) plaque (see Figure 2B-26) shall be mounted adjacent to or integral with the pedestrian pushbutton.

 **Section 4E.09 Accessible Pedestrian Signals and Detectors – General**

Support:

01 Accessible pedestrian signals and detectors provide information in non-visual formats (such as audible tones, speech messages, and/or vibrating surfaces).

02 The primary technique that pedestrians who have visual disabilities use to cross streets at signalized locations is to initiate their crossing when they hear the traffic in front of them stop and the traffic alongside them begin to move, which often corresponds to the onset of the green interval. The existing environment is often not sufficient to provide the information that pedestrians who have visual disabilities need to cross a roadway at a signalized location.

Guidance:

03 If a particular signalized location presents difficulties for pedestrians who have visual disabilities to cross the roadway, an engineering study should be conducted that considers the needs of pedestrians in general, as well as the information needs of pedestrians with visual disabilities. The engineering study should consider the following factors:

- A. Potential demand for accessible pedestrian signals;*
- B. A request for accessible pedestrian signals;*
- C. Traffic volumes during times when pedestrians might be present, including periods of low traffic volumes or high turn-on-red volumes;*
- D. The complexity of traffic signal phasing (such as split phases, protected turn phases, leading pedestrian intervals, and exclusive pedestrian phases); and*
- E. The complexity of intersection geometry.*

Support:

⁰⁴ The factors that make crossing at a signalized location difficult for pedestrians who have visual disabilities include: increasingly quiet cars, right turn on red (which masks the beginning of the through phase), continuous right-turn movements, complex signal operations, traffic circles, and wide streets. Furthermore, low traffic volumes might make it difficult for pedestrians who have visual disabilities to discern signal phase changes.

⁰⁵ Local organizations, providing support services to pedestrians who have visual and/or hearing disabilities, can often act as important advisors to the traffic engineer when consideration is being given to the installation of devices to assist such pedestrians. Additionally, orientation and mobility specialists or similar staff also might be able to provide a wide range of advice. The U.S. Access Board (www.access-board.gov) provides technical assistance for making pedestrian signal information available to persons with visual disabilities (see Page i for the address for the U.S. Access Board).

Standard:

⁰⁶ **When used, accessible pedestrian signals shall be used in combination with pedestrian signal timing. The information provided by an accessible pedestrian signal shall clearly indicate which pedestrian crossing is served by each device.**

⁰⁷ **Under stop-and-go operation, accessible pedestrian signals shall not be limited in operation by the time of day or day of week.**

Option:

⁰⁸ Accessible pedestrian signal detectors may be pushbuttons or passive detection devices.

⁰⁹ At locations with pretimed traffic control signals or non-actuated approaches, pedestrian pushbuttons may be used to activate the accessible pedestrian signals.

Support:

¹⁰ Accessible pedestrian signals are typically integrated into the pedestrian detector (pushbutton), so the audible tones and/or messages come from the pushbutton housing. They have a pushbutton locator tone and tactile arrow, and can include audible beaconing and other special features.

Option:

¹¹ The name of the street to be crossed may also be provided in accessible format, such as Braille or raised print. Tactile maps of crosswalks may also be provided.

Support:

¹² Specifications regarding the use of Braille or raised print for traffic control devices can be found in the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" (see Section 1A.11).

Standard:

¹³ **At accessible pedestrian signal locations where pedestrian pushbuttons are used, each pushbutton shall activate both the walk interval and the accessible pedestrian signals.**

Standard:

¹⁴ **The tone of the walk signal shall not be similar to the push button locator tones.**

¹⁵ **The cost of installing and maintaining Accessible Pedestrian Signals shall be shared with the local agency in the same manner as a traffic signal. See Section 4B.104(CA).**

Option:

¹⁶ New signalized intersections and planned upgrades to signalized intersections that are equipped with pedestrian crosswalks as well as the following characteristics may be considered for accessible pedestrian signals when the need and viability are confirmed by an engineering study:

- A. Intersections near blind centers and senior centers
- B. Transit terminals
- C. T-type intersections
- D. Wide intersections
- E. Intersections with unusual geometry
- F. Skewed intersections
- G. Mid-block crosswalks
- H. Intersections with exclusive phasing
- I. Intersections with leading pedestrian intervals
- J. Intersections with frequent side street calls, and;

K. Intersections with high turning volumes

Option:

¹⁷ The installation of Accessible Pedestrian Signals may be considered when an engineering study and evaluation have been conducted and the following minimum conditions have been met:

- A. The proposed intersection crosswalk must be signalized.
- B. The audible devices should be retrofittable to the existing traffic signal hardware.
- C. The signalized intersection should be equipped with pedestrian push buttons.
- D. The selected crosswalk must be suitable for the installation of audible signals, in terms of surrounding land use and traffic patterns.
- E. There must be a demonstrated need for the audible signals in the form of a request from an individual or group that would use the audible signal.
- F. The individual or group requesting the device should agree to train the visually impaired users of the audible signals.

Standard:

¹⁸ **The tone of the walk signal shall not be similar to the push button locator tones.**

Section 4E.10 Accessible Pedestrian Signals and Detectors – Location

Support:

⁰¹ Accessible pedestrian signals that are located as close as possible to pedestrians waiting to cross the street provide the clearest and least ambiguous indication of which pedestrian crossing is served by a device.

Guidance:

⁰² *Pushbuttons for accessible pedestrian signals should be located in accordance with the provisions of Section 4E.08 and should be located as close as possible to the crosswalk line furthest from the center of the intersection and as close as possible to the curb ramp.*

Standard:

⁰³ **If two accessible pedestrian pushbuttons are placed less than 10 feet apart or on the same pole, each accessible pedestrian pushbutton shall be provided with the following features (see Sections 4E.11 through 4E.13):**

- A. A pushbutton locator tone,
- B. A tactile arrow,
- C. A speech walk message for the WALKING PERSON (symbolizing WALK) indication, and
- D. A speech pushbutton information message.

⁰⁴ **If the pedestrian clearance time is sufficient only to cross from the curb or shoulder to a median of sufficient width for pedestrians to wait and accessible pedestrian detectors are used, an additional accessible pedestrian detector shall be provided in the median.**

Section 4E.11 Accessible Pedestrian Signals and Detectors – Walk Indications

Support:

⁰¹ Technology that provides different sounds for each non-concurrent signal phase has frequently been found to provide ambiguous information. Research indicates that a rapid tick tone for each crossing coming from accessible pedestrian signal devices on separated poles located close to each crosswalk provides unambiguous information to pedestrians who are blind or visually impaired. Vibrotactile indications provide information to pedestrians who are blind and deaf and are also used by pedestrians who are blind or who have low vision to confirm the walk signal in noisy situations.

Standard:

⁰² **Accessible pedestrian signals shall have both audible and vibrotactile walk indications.**

⁰³ **Vibrotactile walk indications shall be provided by a tactile arrow on the pushbutton (see Section 4E.12) that vibrates during the walk interval.**

⁰⁴ **Accessible pedestrian signals shall have an audible walk indication during the walk interval only. The audible walk indication shall be audible from the beginning of the associated crosswalk.**

⁰⁵ **The accessible walk indication shall have the same duration as the pedestrian walk signal except when the pedestrian signal rests in walk.**

Guidance:

06 If the pedestrian signal rests in walk, the accessible walk indication should be limited to the first 7 seconds of the walk interval. The accessible walk indication should be recalled by a button press during the walk interval provided that the crossing time remaining is greater than the pedestrian change interval.

Standard:

07 Where two accessible pedestrian signals are separated by a distance of at least 10 feet, the audible walk indication shall be a percussive tone. Where two accessible pedestrian signals on one corner are not separated by a distance of at least 10 feet, the audible walk indication shall be a speech walk message.

08 Audible tone walk indications shall repeat at eight to ten ticks per second. Audible tones used as walk indications shall consist of multiple frequencies with a dominant component at 880 Hz.

Guidance:

09 The volume of audible walk indications and pushbutton locator tones (see Section 4E.12) should be set to be a maximum of 5 dBA louder than ambient sound, except when audible beaconing is provided in response to an extended pushbutton press.

Standard:

10 Automatic volume adjustment in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA.

Guidance:

11 The sound level of audible walk indications and pushbutton locator tones should be adjusted to be low enough to avoid misleading pedestrians who have visual disabilities when the following conditions exist:

- A. Where there is an island that allows unsignalized right turns across a crosswalk between the island and the sidewalk.*
- B. Where multi-leg approaches or complex signal phasing require more than two pedestrian phases, such that it might be unclear which crosswalk is served by each audible tone.*
- C. At intersections where a diagonal pedestrian crossing is allowed, or where one street receives a WALKING PERSON (symbolizing WALK) signal indication simultaneously with another street.*

Option:

12 An alert tone, which is a very brief burst of high-frequency sound at the beginning of the audible walk indication that rapidly decays to the frequency of the walk tone, may be used to alert pedestrians to the beginning of the walk interval.

Support:

13 An alert tone can be particularly useful if the walk tone is not easily audible in some traffic conditions.

14 Speech walk messages communicate to pedestrians which street has the walk interval. Speech messages might be either directly audible or transmitted, requiring a personal receiver to hear the message. To be a useful system, the words and their meaning need to be correctly understood by all users in the context of the street environment where they are used. Because of this, tones are the preferred means of providing audible walk indications except where two accessible pedestrian signals on one corner are not separated by a distance of at least 10 feet.

15 If speech walk messages are used, pedestrians have to know the names of the streets that they are crossing in order for the speech walk messages to be unambiguous. In getting directions to travel to a new location, pedestrians with visual disabilities do not always get the name of each street to be crossed. Therefore, it is desirable to give users of accessible pedestrian signals the name of the street controlled by the pushbutton. This can be done by means of a speech pushbutton information message (see Section ~~4D.13~~ 4E.13) during the flashing or steady UPRAISED HAND intervals, or by raised print and Braille labels on the pushbutton housing.

16 By combining the information from the pushbutton message or Braille label, the tactile arrow aligned in the direction of travel on the relevant crosswalk, and the speech walk message, pedestrians with visual disabilities are able to correctly respond to speech walk messages even if there are two pushbuttons on the same pole.

Standard:

17 If speech walk messages are used to communicate the walk interval, they shall provide a clear message that the walk interval is in effect, as well as to which crossing it applies. Speech walk messages shall be used only at intersections where it is technically infeasible to install two accessible pedestrian signals at one corner separated by a distance of at least 10 feet.

18 **Speech walk messages that are used at intersections having pedestrian phasing that is concurrent with vehicular phasing shall be patterned after the model: “Broadway. Walk sign is on to cross Broadway.”**

19 **Speech walk messages that are used at intersections having exclusive pedestrian phasing shall be patterned after the model: “Walk sign is on for all crossings.”**

20 **Speech walk messages shall not contain any additional information, except they shall include designations such as “Street” or “Avenue” where this information is necessary to avoid ambiguity at a particular location.**

Guidance:

21 *Speech walk messages should not state or imply a command to the pedestrian, such as “Cross Broadway now.” Speech walk messages should not tell pedestrians that it is “safe to cross,” because it is always the pedestrian’s responsibility to check actual traffic conditions.*

Standard:

22 **A speech walk message is not required at times when the walk interval is not timing, but, if provided:**

A. It shall begin with the term “wait.”

B. It need not be repeated for the entire time that the walk interval is not timing.

23 **If a pilot light (see Section 4E.08) is used at an accessible pedestrian signal location, each actuation shall be accompanied by the speech message “wait.”**

Option:

24 *Accessible pedestrian signals that provide speech walk messages may provide similar messages in languages other than English, if needed, except for the terms “walk sign” and “wait.”*

Standard:

25 **Following the audible walk indication, accessible pedestrian signals shall revert to the pushbutton locator tone (see Section 4E.12) during the pedestrian change interval.**

Section 4E.12 Accessible Pedestrian Signals and Detectors – Tactile Arrows and Locator Tones

Standard:

01 **To enable pedestrians who have visual disabilities to distinguish and locate the appropriate pushbutton at an accessible pedestrian signal location, pushbuttons shall clearly indicate by means of tactile arrows which crosswalk signal is actuated by each pushbutton. Tactile arrows shall be located on the pushbutton, have high visual contrast (light on dark or dark on light), and shall be aligned parallel to the direction of travel on the associated crosswalk.**

02 **An accessible pedestrian pushbutton shall incorporate a locator tone.**

Support:

03 *A pushbutton locator tone is a repeating sound that informs approaching pedestrians that a pushbutton to actuate pedestrian timing or receive additional information exists, and that enables pedestrians with visual disabilities to locate the pushbutton.*

Standard:

04 **Pushbutton locator tones shall have a duration of 0.15 seconds or less, and shall repeat at 1-second intervals.**

05 **Pushbutton locator tones shall be deactivated when the traffic control signal is operating in a flashing mode. This requirement shall not apply to traffic control signals or pedestrian hybrid beacons that are activated from a flashing or dark mode to a stop-and-go mode by pedestrian actuations.**

06 **Pushbutton locator tones shall be intensity responsive to ambient sound, and be audible 6 to 12 feet from the pushbutton, or to the building line, whichever is less.**

Support:

07 *Section 4E.11 contains additional provisions regarding the volume and sound level of pushbutton locator tones.*

Section 4E.13 Accessible Pedestrian Signals and Detectors – Extended Pushbutton Press Features

Option:

01 *Pedestrians may be provided with additional features such as increased crossing time, audible beaconing, or a speech pushbutton information message as a result of an extended pushbutton press.*

Standard:

02 If an extended pushbutton press is used to provide any additional feature(s), a pushbutton press of less than one second shall actuate only the pedestrian timing and any associated accessible walk indication, and a pushbutton press of one second or more shall actuate the pedestrian timing, any associated accessible walk indication, and any additional feature(s).

03 If additional crossing time is provided by means of an extended pushbutton press, a PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME (R10-32P) plaque (see Figure 2B-26) shall be mounted adjacent to or integral with the pedestrian pushbutton.

Support:

04 Audible beaconing is the use of an audible signal in such a way that pedestrians with visual disabilities can home in on the signal that is located on the far end of the crosswalk as they cross the street.

05 Not all crosswalks at an intersection need audible beaconing; audible beaconing can actually cause confusion if used at all crosswalks at some intersections. Audible beaconing is not appropriate at locations with channelized turns or split phasing, because of the possibility of confusion.

Guidance:

06 Audible beaconing should only be considered following an engineering study at:

- A. Crosswalks longer than 70 feet, unless they are divided by a median that has another accessible pedestrian signal with a locator tone;*
- B. Crosswalks that are skewed;*
- C. Intersections with irregular geometry, such as more than four legs;*
- D. Crosswalks where audible beaconing is requested by an individual with visual disabilities; or*
- E. Other locations where a study indicates audible beaconing would be beneficial.*

Option:

07 Audible beaconing may be provided in several ways, any of which are initiated by an extended pushbutton press.

Standard:

08 If audible beaconing is used, the volume of the pushbutton locator tone during the pedestrian change interval of the called pedestrian phase shall be increased and operated in one of the following ways:

- A. The louder audible walk indication and louder locator tone comes from the far end of the crosswalk, as pedestrians cross the street,**
- B. The louder locator tone comes from both ends of the crosswalk, or**
- C. The louder locator tone comes from an additional speaker that is aimed at the center of the crosswalk and that is mounted on a pedestrian signal head.**

Option:

09 Speech pushbutton information messages may provide intersection identification, as well as information about unusual intersection signalization and geometry, such as notification regarding exclusive pedestrian phasing, leading pedestrian intervals, split phasing, diagonal crosswalks, and medians or islands.

Standard:

10 If speech pushbutton information messages are made available by actuating the accessible pedestrian signal detector, they shall only be actuated when the walk interval is not timing. They shall begin with the term "Wait," followed by intersection identification information modeled after: "Wait to cross Broadway at Grand." If information on intersection signalization or geometry is also given, it shall follow the intersection identification information.

Guidance:

11 Speech pushbutton information messages should not be used to provide landmark information or to inform pedestrians with visual disabilities about detours or temporary traffic control situations.

Support:

12 Additional information on the structure and wording of speech pushbutton information messages is included in ITE's "Electronic Toolbox for Making Intersections More Accessible for Pedestrians Who Are Blind or Visually Impaired," which is available at ITE's website (see Page i).

**Exhibit 3: Notification to Adjacent
Property/Business Owners, Employees
and Residents**



October 9, 2012

RE: Pedestrian Push Button Upgrades Proposed for Blind or Visually-Impaired Individuals

Dear Alameda Resident/Business/Property Owner:

The Public Works Department is recommending that pedestrian push buttons at nine signalized intersections be modified to make it easier and safer for blind or visually-impaired individuals to cross the street. These intersections, listed in Table 1, are located adjacent to an AC Transit bus stop or an Alameda Paratransit Shuttle stop. The pedestrian push buttons are proposed to have the following features (Figure 1):

- Raised tactile arrow that points into the direction of the crosswalk;
- Locator tone - **with a lower night volume** - to help direct pedestrians to the push button;
- Once the button is pushed, the pedestrian will hear the word "Wait";
- During the pedestrian walk signal phase, which is only activated by pushing the pedestrian button:
 - The arrow push button will vibrate; and
 - An audible sound, either a chirp or a cuckoo - **with a lower night volume** - will play.



Figure1: Webster St. at Stargell Ave.

Table 1: Pedestrian Push Button Upgrades – Proposed Locations

Intersection Name	AC Transit Lines	Alameda Paratransit Shuttle Stops
High Street/Otis Drive	21, 314, OX, W	Krusi Park
Lincoln Avenue/Willow Street (Santa Clara Avenue/Willow Street)	(O, 314, 51A, 851)	Lincoln/Chestnut
Broadway/Encinal Avenue	O, OX	Broadway/Crist
Broadway/Otis Drive	21, 314, W	Otis/Broadway
Grand Street/Otis Drive	20, W	
High Street/Santa Clara Avenue	O, W	High/Santa Clara
Oak Street/Central Avenue (Oak Street/Santa Clara Avenue)	(O, 314, 51A)	Alameda Main Library
Island Drive/Robert Davey Junior	21	Park & Ride Lot
Robert Davey Junior/Packet Landing Road	21, OX	

Note: The intersection names in parentheses show the actual location of the closest bus stop when it differs from the location of the proposed pedestrian push button upgrades.

These intersections were selected because they are identified in the City of Alameda's Pedestrian Plan (2009) as priority locations for blind or visually-impaired individuals. These locations also are in close proximity to an AC Transit bus stop or an Alameda Paratransit Shuttle stop. Since blind or visually-impaired individuals are unable to drive and are transit dependent, intersections near AC Transit bus stops or Paratransit Shuttle stops were selected to provide these individuals with accessible transportation to and from their homes, jobs, shopping and other activities. Not only does this project give more independence to individuals with vision disabilities, it also helps make the local bus systems a more viable alternative, which in turn reduces congestion and vehicular emissions.

The Commission on Disability Issues is scheduled to review the proposed project on Monday, October 29, 2012 at 6:30 p.m. (2263 Santa Clara Avenue, City Council Chambers). The Public Works Department will be accepting written comments on this proposal until 5:00 p.m., Monday, November 5, 2012. Comments may be mailed, emailed or hand delivered to:

Gail Payne, Transportation Coordinator
City of Alameda, Public Works Department
950 West Mall Square, Room 110
Alameda, California 94501
gpayne@ci.alameda.ca.us

All comments will be considered prior to making a final decision on this matter. Public Works staff will mail a separate notice informing property owners/occupants of its final determination. Please feel free to contact Gail Payne, Transportation Coordinator at (510) 747-7948 or gpayne@ci.alameda.ca.us, should you have any questions or require additional information. Furthermore, it is the policy of the City of Alameda to employ its best efforts to ensure that all programs, services, activities and benefits are implemented without discrimination and that there are provisions for non-English speaking residents (Exhibit 1).

Sincerely,

Matthew T. Naclerio
Public Works Director



Gail Payne
Transportation Coordinator

GP:jn

Exhibit:

1. Equal Opportunity Policies

cc: Linda Morris, AC Transit
Lucretia Akil, Commission on Disability Issues Secretary
Jackie Krause, Mastick Senior Center
Center for Independent Living

Exhibit 1: Equal Opportunity Policies

Provisions for Persons with Disabilities

If any person with an interest in participating in the meeting and is a person with a disability as defined by Section 504 of the Rehabilitation Act of 1974 who requires an accommodation to participate, that person must make a request for accommodation to Gail Payne, 510-747-7948 or email gpayne@ci.alameda.ca.us at least 48 hours prior to the meeting. Such request shall include a description of the accommodation sought, along with a statement of the impairment that necessitates the accommodation. Any request for accommodation shall be reviewed and a response promptly provided to the requester. A copy of the City's 504 grievance procedure can be found online at <http://www.cityofalamedaca.gov/City-Hall/ADA-CDI-Accessibility> .



Provisions for Non-English Speaking Residents

The City of Alameda has a network of employees speaking some 45 languages who can act as interpreters for residents seeking information regarding this meeting. If notified five business days in advance, the City will arrange to have an interpreter available. Please contact the City via phone at (510) 747-7948 or via e-mail at gpayne@ci.alameda.ca.us.

Non-Discrimination Policy

The City of Alameda does not discriminate against any persons on the grounds of race, color, national origin, religion, sex or age, per Title VI of the Civil Rights Act, Section 109. The City of Alameda under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person shall, on grounds of race, color, national origin, sex, disability or age, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity it administers. To file a complaint based on the grounds of race, color, national origin, sex, disability or age, please visit the following web page: <http://www.cityofalamedaca.gov/City-Hall/ADA-CDI-Accessibility> or via phone at 510-747-4762.

Know Your Rights under the City of Alameda's Sunshine Ordinance

Government's duty is to serve the public, reaching its decisions in full view of the public. Commissions, boards, councils and other agencies of the City of Alameda exist to conduct the community members' business. This ordinance assures that deliberations are conducted before the people and that City operations are open to the people's review. For more information on your rights under the Sunshine Ordinance or to report a violation of the ordinance, contact the Open Government Commission. The address is 2263 Santa Clara Avenue, Room 380, Alameda, CA, 94501; phone number is 510-747-4800; fax number is 510-865-4048, e-mail address is lweisige@ci.alameda.ca.us; and contact is Lara Weisiger, City Clerk.

Exhibit 4: Public Comments

From: "Mike & Vickie"
To: <gpayne@ci.alameda.ca.us>
Date: 10/21/2012 3:52 PM
Subject: Pedestrian Push Button Upgrades

Dear Ms. Payne,

My family and I would like to register our strong objection to the proposed pedestrian push button upgrades at the intersection of Broadway and Otis Drive.

This is a residential neighborhood with single family homes on all four corners. Each corner home is next to two push buttons and would be subjected to additional unnecessary noises from these push buttons, including the "wait" command and the chirping. Even with the "lower night volume", we will hear those noises frequently.

We are very familiar with the proposed push buttons as we pass them often at the corner of Park Street and Otis Drive. This type of push button is appropriate for a commercial area such as Park Street, but definitely not for a residential neighborhood.

If you do a study of the pedestrian traffic in this intersection, it would be a surprise if you find any visually impaired pedestrians. If this upgrade is intended to benefit visually impaired pedestrians, this intersection is definitely not the proper location. The money spent will benefit very few, if any citizens. And the push buttons will be a source of constant annoyance to the residents of the four corner homes.

Please locate the proposed push buttons in commercial and non-residential areas where they will not disturb the residents.

Thank you,

Michael Levitch

Oct. 29 Pedestrian Signal Upgrades meeting

From: Ellen McKean
To: "gpayne@ci.alameda.ca.us" <gpayne@ci.alameda.ca.us>
Date: 10/25/2012 10:20 PM
Subject: Oct. 29 Pedestrian Signal Upgrades meeting

Dear Gail Payne,

Thank you for the conversation informing me more fully what the upgrades to the pedestrian signals at the 9 intersections in Alameda will involve.

These push button pedestrian signal upgrades are very necessary for the safe crossing of these 9 intersections for visually disabled people. For the past year and a half, I have been receiving mobility instruction from The Lions Center for the Blind in Oakland. My current instructor has focused on safely crossing intersections and we have been appalled at how inadequate the existing push button signals are at many Alameda intersections. These upgrades will be joyfully received.

One terrifically dangerous intersection is High Street and Otis Drive, filled with very heavy traffic volume. Currently there is a pedestrian walk light that flashes on to signal begin walking before the red traffic light has changed to green. Many left-turning vehicles traveling from High St. turning left onto Otis going towards the bridge have a very short light to complete their left turns. If a visually impaired person can not see the walk signal starting their crossing before the vehicles turning, the pedestrian places them self in extreme danger to begin crossing when the vehicle traffic light turns green. Upgraded pedestrian push button signals would signal the visually impaired person to begin crossing before the left-turning traffic moves into the intersection.

That nearby residents, businesses should find the audible pedestrian signals bothersome is absurd. How many other constant sounds are there of cell phones, TV's, computers, airplanes and jets overhead, car alarms, yard maintenance machines, and other noises of modern city living?

Ellen McKean
Low vision resident of Alameda