

REQUEST FOR COUNCIL ACTION

SUBJECT: 7000 South/1960 West Midblock Crosswalk Options

SUMMARY: Residents in the area north and south of 7000 South between Redwood Road and 2200 West have requested that the existing midblock crosswalk be improved. City staff prepared a list of crosswalk options for City Council to consider funding.

FISCAL IMPACT: The crosswalk improvements may cost between \$30,000 and \$90,000 depending on the options selected.

STAFF RECOMMENDATION:

Staff recommends Council review the crosswalk options presented by City staff and provide funding for any improvements selected by them.

MOTION RECOMMENDED:

"I move to direct City staff to implement the improvements recommended in the staff report including: Option number 2 immediately and obtain funding to implement Option number 3 once funding is obtained.

Prepared by:



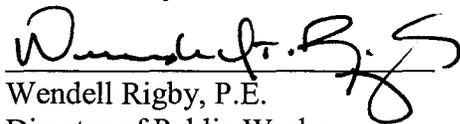
Bill Baranowski, P.E.
Traffic Engineer

Reviewed by:



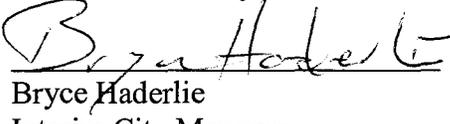
Nathan Nelson, P.E.
City Engineer

Reviewed by:



Wendell Rigby, P.E.
Director of Public Works

Recommended by:



Bryce Haderlie
Interim City Manager

Nearby School Crosswalks:

There are existing school crosswalks located at the intersection of 7000 South/2200 West. The school crosswalks are marked by the bold zebra striped lines shown in Figure 3. There are crossing guards there to assist children to cross the street with one school crosswalk on the north leg and one on the west leg of the intersection. The students crossing are within the West Jordan Elementary school boundary. The school is located to the south and west of the intersection. Traffic is controlled with an existing traffic signal.

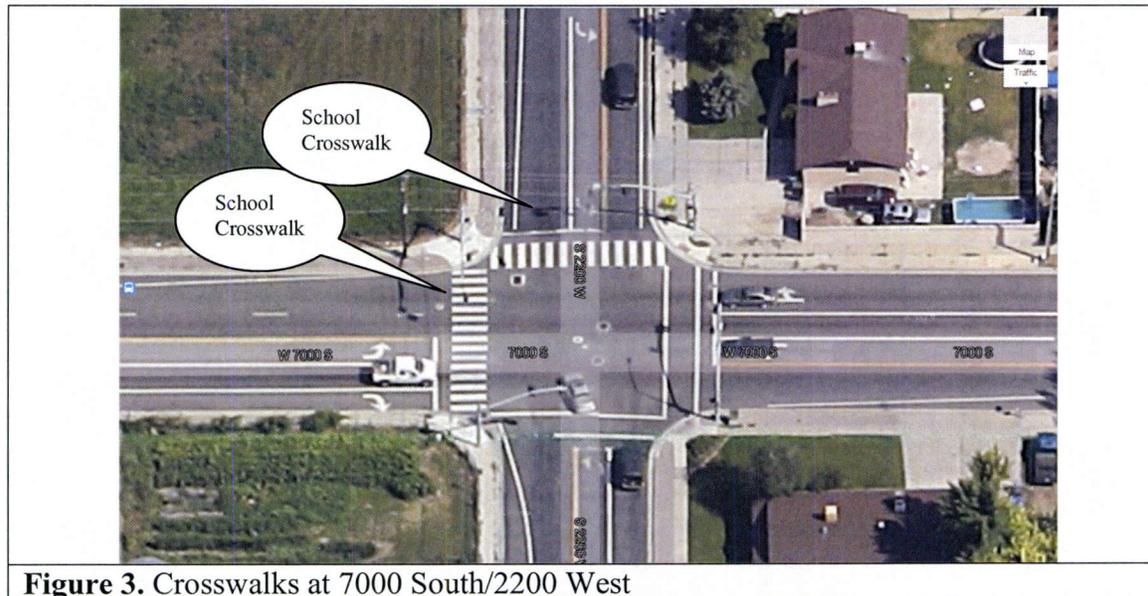


Figure 3. Crosswalks at 7000 South/2200 West

Midblock Crosswalk Guidelines:

Information recently published by the Federal Highways Administration (FHWA) suggest that, on higher volume, multi-lane roadways, marked crosswalks alone (without any other treatments) are associated with higher vehicle-pedestrian accidents rates compared to unmarked locations.

Options to Consider

The following options should be considered for the crosswalk at 7000 South/1960 West:

1. Remove the Crosswalk.
2. Improve the visibility of the existing crosswalk.
3. Install a Rectangular Rapid Flashing Beacons (RRFB) crosswalk.
4. Install a Hybrid Pedestrian Crosswalk Beacon (HAWK) crosswalk.
5. Install a Conventional Pedestrian Signal.

Option 1. Remove the Crosswalk Entirely

There are existing controlled crosswalks to the east at Redwood Road (1,100 feet) and to the west at 2200 West (1,400 feet) where pedestrians can cross.

Option 2. Improve the visibility of the existing crosswalk

The visibility of the existing crosswalk can be enhanced by repainting the crosswalk as a zebra crosswalk. Paint advance warning bars for traffic in the travel lanes in the east and west directions. Install a short raised concrete median on the center-lane near crosswalk to provide a pedestrian refuge area.

Option 3. Install a RRFB crosswalk- Rapid Rectangular Beacons (RRFB)

Rectangular Rapid Flashing Beacons (RRFBs) are traffic safety warning devices that use LED lights to emit rapid flashing (wig-wag) lights to drivers to alert them of the presence of pedestrians in the crosswalk. West Jordan City has been successful in using RRFBs to increase motorist yielding to pedestrians at unsignalized crossings. Typically a minimum crossing volume of 20 pedestrians per hour is typically required.

The City has installed Rapid Rectangular Beacons (RRFB) at four midblock crosswalk locations in the City in 2013 and one is proposed for installation in 2015:

1. 2700 West at the TRAX Light Rail Station at 8350 South
2. 2700 West at the West Jordan High School at 8120 South
3. 2200 West at 7600 South
4. Grizzly Way south of Copper Hills High School at 8740 South – Old Creek Road
5. The City received a request and has planned a new RRFB on Grizzly Way at the crosswalk in front of West Hills Middle School.

The cost estimate for an RRFB crosswalk at 7000 South/1960 West is \$30,000.

How RRFB Crosswalks are Used

The lights are activated by a pushbutton used by the pedestrian as they wait to cross the roadway. Pedestrians are expected to wait until drivers yield before entering the crosswalk. The LED lights are timed to allow time for the vehicles to yield while continuing to flash as the pedestrians cross the roadway. Drivers are expected to follow State law and yield to pedestrians in the crosswalk. The RRFBs will be active all day allowing for activations anytime for users. The units are solar powered so they will not be subject to interruption during power outages. A typical RRFB crosswalk is shown in Figure 4.

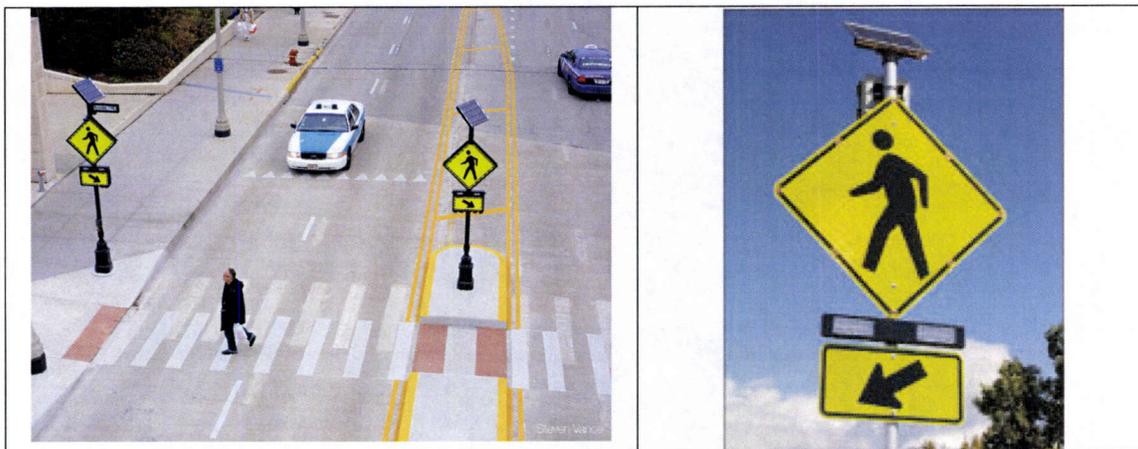


Figure 4. Typical RRFB Crosswalk on a Multi-lane Street

Option 4. Install a HAWK crosswalk- HAWK Hybrid Pedestrian Crosswalk Beacon

There are two existing HAWK crosswalks in the City: one is located at Gardner Village on 7800 South providing access to the TRAX station and the other HAWK is located at the 6200 South/Clermonts intersection (approximately 5400 West).

A typical HAWK crosswalk is shown in Figure 5. Hybrid Beacons (HAWK beacons) may be considered on 7000 South and the MUTCD contains warranting guidelines that utilize automobile traffic, pedestrian traffic, automobile speeds, and pedestrian crossing

distance. HAWK beacons may be installed where the crossing volume is as low as 20 pedestrians per hour but are typically used for higher pedestrian volumes than a RRFB crossing. This option is not warranted for the 7000 South location.

The cost estimate for a HAWK beacon at 7000 South/1960 West is \$90,000.



Figure 5. Typical HAWK Crosswalk

Option 5. Install a Conventional Pedestrian Signal

A Conventional Pedestrian Signal crosswalk is shown in Figure 6. The MUTCD contains warranting procedures for conventional pedestrian traffic signals based on automobile and vehicle traffic volumes to help determine if a pedestrian signal is appropriate. These signals are typically considered when there are over 100 pedestrians an hour crossing a roadway. There is one existing conventional pedestrian signal in West Jordan City located at Redwood Road/8400 South. This option is not warranted for the 7000 South location.



Figure 6. Typical Conventional Pedestrian Signal – Redwood Road/8400 South

Recommendations:

City staff recommends implementing the following:

Option Number 2 - Improve the Visibility of the Existing crosswalk

- ✓ Improve the existing crosswalk in the short term (this Spring). The visibility of the existing crosswalk can be enhanced by repainting the crosswalk as a zebra crosswalk. Paint advance warning bars for traffic in the travel lanes in the east and west directions. Install a short concrete raised median on the center-lane at the crosswalk to provide a pedestrian refuge area. Estimated cost is \$5,000.

Option Number 3 - Install a Rapid Rectangular Flashing Beacon (RRFB) crosswalk

- ✓ Install a Rapid Rectangular Flashing Beacon (RRFB) pushbutton activated solar powered crosswalk in the 2015-16 fiscal year. Estimated cost is \$30,000. After a funding source is identified and funds are made available, the RRFB could be installed.