



# City of Manhattan Beach

## Community Development

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November 27, 2012

TO: Nhung Madrid  
Management Analyst

FROM: Jack Rydell, P.E., T.E., PTOE  
City Traffic Engineer

SUBJECT: ADULT CROSSING GUARD STUDY  
HERRIN AVENUE AT 18<sup>TH</sup> STREET (EAST LEG)

### Background

As requested, I have re-evaluated the intersection of Herrin Avenue and 18<sup>th</sup> Street (East leg) with respect to the need for an adult crossing guard and offer the following information. This location was previously studied in October/November 2011 at which time it was determined that an adult crossing guard was not warranted per criteria in the California Manual of Uniform Traffic Control Devices (CA MUTCD).

### Discussion

The subject intersection is located northwest of Manhattan Beach Middle School as shown on the attached vicinity map. It is a T-intersection with Herrin Avenue being a north-south through roadway and 18<sup>th</sup> Street forming the stem from the east. 18<sup>th</sup> Street is stop controlled and has a marked continental crosswalk. The crossing guard evaluation was conducted for pedestrians crossing Herrin Avenue in the immediate vicinity of the east leg of 18<sup>th</sup> Street, which does not have a marked crosswalk. Both streets qualify for the 25 mph prima facie residential speed limit. Approximately 200 feet north of the study location is the intersection of Herrin Avenue and 19<sup>th</sup> Street, which has stop controls on all four legs.

As part of the City's successful Cycle 10 Safe Routes to School (SR2S) grant application, and with the support of the school administration, the City is working with Cal Trans to obtain authorization to install the following modifications:

- A yellow high visibility crosswalk will be installed on south leg of 18th Street at Herrin Avenue, at the parking lot entrance; and,
- 250 feet of 4-inch white edgeline stripe will be installed on the south side of 18<sup>th</sup> Street (west leg) west of Herrin Avenue. This will provide a delineated pedestrian pathway immediately adjacent to the ball field.

ADULT CROSSING GUARD STUDY  
HERRIN AVENUE AT 18<sup>TH</sup> STREET – Page 2

Field observations and counts were conducted on Tuesday, November 27 during the morning arrival and afternoon dismissal periods. The first bell was 8:05 a.m. and school dismissal was at 3:00 p.m. on this day. The pedestrian count included all school pedestrians that crossed Herrin Avenue at 18<sup>th</sup> Street (east leg). A summary of the vehicular and pedestrian count data is attached. The weather was clear and warm. Based on the amount of vehicle traffic during arrival and dismissal periods, the observed prevailing speed of traffic was well below the 25 mph speed limit. No unusual conditions were noticed and regular school hours were in effect. The observed student walking routes to and from Manhattan Beach Middle School are as follows:

- On the west side of Herrin Avenue between the ball field parking lot and 19<sup>th</sup> Street;
- On the east side of Herrin Avenue between the ball field parking lot and 19<sup>th</sup> Street; and,
- On the east side of Herrin Avenue between the ball field parking lot and 18<sup>th</sup> Street, then travelling east on 18<sup>th</sup> Street.

The CA MUTCD identifies the criteria used to determine the need for adult crossing guards in Chapter 7D – Crossing Supervision. As indicated on Page 1285 of the CA MUTCD: *“Adult Crossing Guards normally are assigned where official supervision of school pedestrians is desirable while they cross a public highway, and at least 40 school pedestrians for each of any two hours (not necessarily consecutive) daily use the crossing while going to or from school.”*

As indicated on the count summary sheet, two (2) school pedestrians crossed Herrin Avenue at 18<sup>th</sup> Street during the morning arrival period and five (5) crossed during the afternoon dismissal period. These numbers fall far short of the 40 school pedestrians required for consideration of an adult crossing guard.

Page 1285 contains additional criteria for consideration of an adult crossing guard based on the type of controls at the crossing. Since Herrin Avenue is uncontrolled at 18<sup>th</sup> Street (east leg) and this location is considered an urban area, the following criteria would apply: *“At uncontrolled crossings where there is no alternate controlled crossing within 600 feet; and in urban areas where the vehicular traffic volume exceeds 350 during each of any two hours (not necessarily consecutive) in which 40 or more school pedestrians cross daily while going to or from school.”*

As indicated, there is an alternate crossing of Herrin Avenue approximately 200 feet to the north at 19<sup>th</sup> Street, where that intersection has all-way stop controls. Field observations indicated that this crossing option was utilized by a significant number of school pedestrians coming from or going to locations west of Herrin Avenue. Based on this criteria, the subject intersection would not qualify for an adult crossing guard.

Furthermore, at least 350 vehicles should conflict with pedestrians at the crossing location. As indicated in the count summary sheet, only 214 vehicles travelled through the intersection during the morning arrival period and 130 vehicles travelled through the intersection during the afternoon dismissal period. These values are both well below the suggested threshold.

The CA MUTCD also contains criteria for consideration of an adult crossing guard at stop controlled locations, such as the east leg of the subject intersection where there were a greater number of school pedestrians. The criteria for this condition are as follows: *“Where the vehicular traffic volumes on undivided highways of four or more lanes exceeds 500 per hour during any period when the school pedestrians are going to or from school.”* This criteria is not satisfied as 18<sup>th</sup> Street is not a roadway with four or more lanes and the vehicular volume is far below the threshold of 500 vehicles per hour.

Recommendation

Based upon the number of school pedestrians, the location of a nearby controlled alternate crossing and the number of conflicting vehicles, the intersection of Herrin Avenue and 18<sup>th</sup> Street still does not warrant consideration of an adult crossing guard.

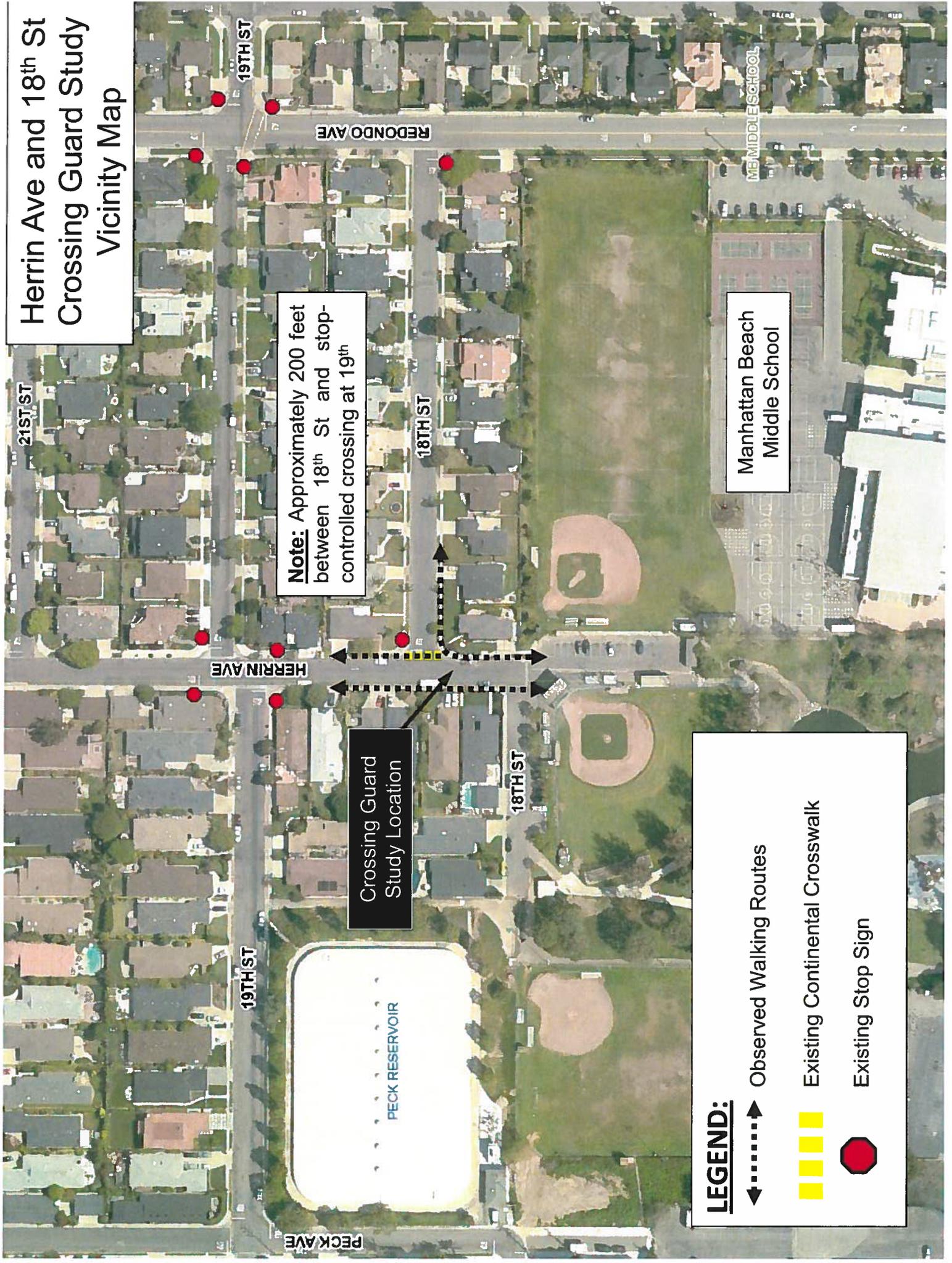
In coordination with the Police Department, alternative traffic improvement options were outlined for future consideration.

1. Consider installation of a marked yellow high visibility crosswalk on 18th Street (west leg) at Herrin Avenue.
2. Consider the installation of all-way stop controls at the intersection of Herrin Avenue and 18<sup>th</sup> Street (west leg)
3. Consider the establishment of a passenger loading zone during school arrival and dismissal periods for the non-ADA parking spaces in the parking lot.
4. Consider installation of red curb at the curb ramps at Herrin Avenue at 18<sup>th</sup> Street (east leg) and at 19<sup>th</sup> Street.

JR: Crossing Guard Study - 11-27-12

Attach.

# Herrin Ave and 18th St Crossing Guard Study Vicinity Map



**Note:** Approximately 200 feet between 18<sup>th</sup> St and stop-controlled crossing at 19<sup>th</sup>

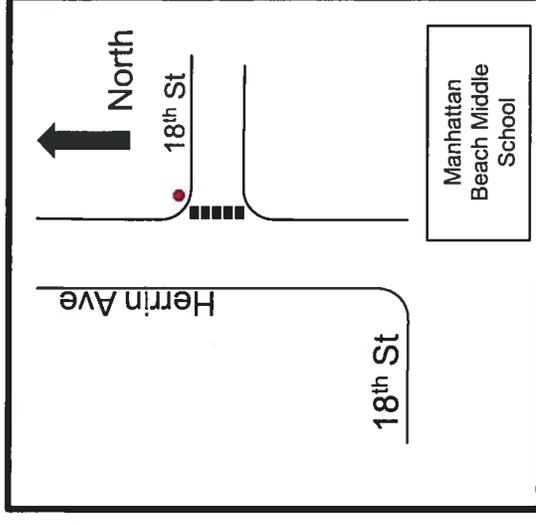
Crossing Guard Study Location

Manhattan Beach Middle School

**LEGEND:**

- ←-----→ Observed Walking Routes
- ▬▬▬ Existing Continental Crosswalk
- ◈ Existing Stop Sign

# Herrin Ave and 18th St Crossing Guard Study 11/27/12 Count Summary



15 Minute Period Starting	Vehicles	Vehicles	Vehicles	Vehicles	Vehicles	Peds	Peds
7:30am	1	3	1	1	0	0	0
7:45am	2	7	36	45	2	4	2
8:00am	1	8	28	26	1	8	0
8:15am	2	3	3	4	0	0	0
<b>Total</b>	<b>6</b>	<b>21</b>	<b>68</b>	<b>76</b>	<b>3</b>	<b>12</b>	<b>2</b>
2:45pm	2	1	17	2	1	0	0
3:00pm	1	18	10	26	4	189	5
3:15pm	0	5	4	4	2	9	0
3:30pm	0	1	2	0	0	0	0
<b>Total</b>	<b>3</b>	<b>25</b>	<b>33</b>	<b>32</b>	<b>7</b>	<b>198</b>	<b>5</b>

## Criteria for Adult Crossing Guards (excerpts from the 2012 California Manual of Uniform Traffic Control Devices):

Support:

Adult Crossing Guards normally are assigned where official supervision of school pedestrians is desirable while they cross a public highway, and at least 40 school pedestrians for each of any two hours (not necessarily consecutive) daily use the crossing while going to or from school.

Option:

Adult crossing guards may be used under the following conditions:

1. At uncontrolled crossings where there is no alternate controlled crossing within 600 ft; and
  - a. In urban areas where the vehicular traffic volume exceeds 350 during each of any two hours (not necessarily consecutive) in which 40 or more school pedestrians cross daily while going to or from school; or
  - b. In rural areas where the vehicular traffic volume exceeds 300 during each of any two hours (not necessarily consecutive) in which 30 or more school pedestrians cross daily while going to or from school.

Whenever the critical (85th percentile) approach speed exceeds 64 km/h (40 mph), the guidelines for rural areas should be applied.

## **Additional Traffic Control Options at Herrin Avenue at 18<sup>th</sup> Street**

### **Marked Crosswalk on 18<sup>th</sup> Street (west leg) - See Map Sheet 1, attached**

It was observed that pedestrians walking to school on the west side of Herrin Avenue generally travel south, to the west leg of 18<sup>th</sup> Street, then cross at the parking lot entrance. They cross Herrin Avenue in a number of ways, including straight across Herrin Avenue at 18<sup>th</sup> Street, diagonally from northwest to southeast and within the parking lot. It would be beneficial to channelize the pedestrians into a single path in order to reduce the occurrence of unexpected entries into the roadway. This could be accomplished by installing a marked crosswalk from the northwest corner of Herrin Avenue at 18<sup>th</sup> Street (west leg) to the southwest corner. Pedestrians could then travel in one of the following ways to access the school:

- Adjacent to the ball field/bleachers to the south end of the parking lot, then into the southerly school gate; or,
- Cross the parking lot driveway at 18<sup>th</sup> Street (west leg) and directly into the northerly school gate.

The marked crosswalk identified above would work in conjunction with the proposed marked crosswalk from the SR2S grant to provide clearly defined paths of travel between the school and the sidewalk on the west side of Herrin Avenue. In addition, they would further alert motorists to the potential for encountering pedestrians, thus encouraging them to utilize improved driving behaviors.

### **“STOP” signs at Herrin Avenue and 18<sup>th</sup> Street (west leg)/parking lot driveway - See Map Sheet 1, attached**

A review of traffic volumes and reported accidents at this intersection revealed that warrants contained within the CA MUTCD to justify consideration of all-way stop controls are not satisfied. However Section 2B.07 of the CA MUTCD contains additional criteria that may be considered in an engineering study for all-way stop controls, including: *“The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes.”* This intersection conducts a substantial number of pedestrians during school arrival and dismissal periods, as well as during other times when the park and ball fields are being utilized. Providing all-way stop controls at this intersection would enhance pedestrian safety, encourage better motorist behavior and reduce the potential for pedestrian/vehicular collisions. Furthermore, since the west leg of the intersection (18<sup>th</sup> Street) is only approximately 250 long and the south leg is a small parking lot, there would be a negligible effect on traffic flow.

### **Establish a passenger loading zone in the parking lot spaces - See Map Sheet 1, attached**

There are currently 12 non-ADA parking spaces in the parking lot. During the morning arrival and afternoon dismissal periods, the majority of these spaces were occupied by long-term parked vehicles. The Police Department was able to verify that the vehicles belonged to school staff. This location is used by staff due to a shortage of parking in the other school lots normally used by teachers and other staff. Establishing a passenger loading zone during the morning arrival and afternoon dismissal periods would provide a significant increase in available short term parking for drop-off and pick-up activities, thus reducing the congestion of vehicles along Herrin

Avenue, 18<sup>th</sup> Street and 19<sup>th</sup> Street. The times that the parking restrictions would be in effect would be the same as on Redondo Avenue on the east side of the school. The disadvantage would be requiring these school staff members to find parking elsewhere. It is suggested that the school be contacted to further discuss this option.

**Install red curb at curb ramps - See Map Sheet 2, attached**

Field observations revealed that vehicles frequently stop on the crosswalk at 18<sup>th</sup> Street (east leg) and in front of the curb ramps at 19<sup>th</sup> Street. Although stopping in these areas is already prohibited by the California Vehicle Code, the Police Department believes that additional notification may reduce the frequency of this activity. Stopping on a crosswalk or curb ramp severely restricts pedestrian access and forces them outside of marked and unmarked legal crosswalks. To better inform motorists of the existing stopping prohibition, it would be beneficial to install red curb adjacent to the curb ramps at Herrin Avenue and 18<sup>th</sup> Street (east leg) and 19<sup>th</sup> Street. Due to the presence of a fire hydrant on the northeast corner of Herrin Avenue and 18<sup>th</sup> Street (east leg), an additional 15 feet of red curb would be installed east of the curb ramp to comply with current California Vehicle Code prohibitions regarding parking in front of a fire hydrant.

Attach: Herrin Avenue and 18<sup>th</sup> Street Improvement Options Maps, Sheet 1 and 2

# Herrin Ave and 18th St Improvement Options – Sheet 1

Existing  
"STOP" sign

Existing yellow high visibility  
crosswalk

OPTIONAL - Install  
"STOP" sign

OPTIONAL - Install yellow  
high visibility crosswalk on  
west leg of 18th St and  
Herrin Ave

Existing  
"STOP" sign

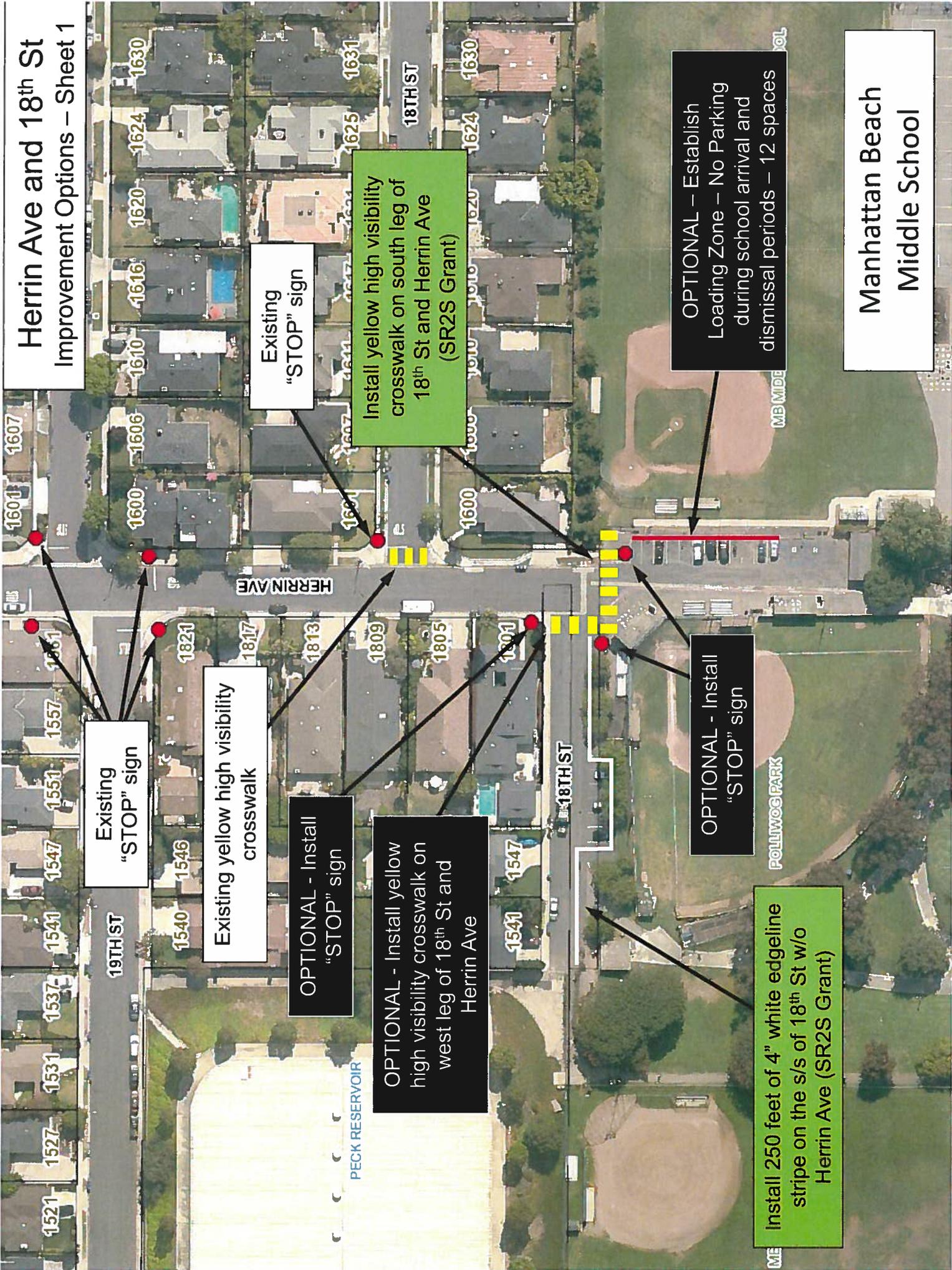
Install yellow high visibility  
crosswalk on south leg of  
18th St and Herrin Ave  
(SR2S Grant)

Install 250 feet of 4" white edgeline  
stripe on the s/s of 18th St w/o  
Herrin Ave (SR2S Grant)

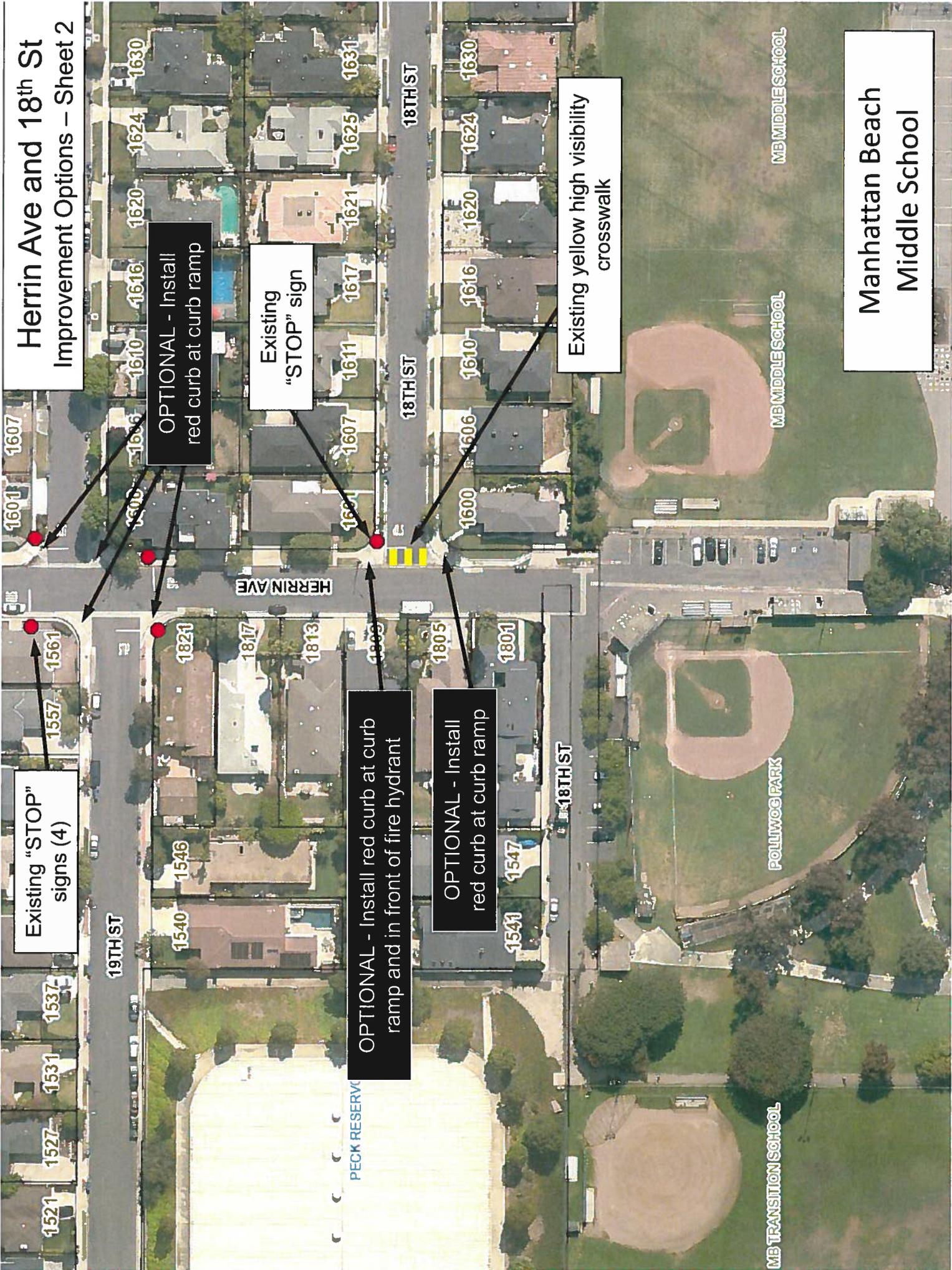
OPTIONAL - Install  
"STOP" sign

OPTIONAL – Establish  
Loading Zone – No Parking  
during school arrival and  
dismissal periods – 12 spaces

Manhattan Beach  
Middle School



# Herrin Ave and 18th St Improvement Options – Sheet 2



Existing "STOP" signs (4)

OPTIONAL - Install red curb at curb ramp

Existing "STOP" sign

OPTIONAL - Install red curb at curb ramp and in front of fire hydrant

OPTIONAL - Install red curb at curb ramp

Existing yellow high visibility crosswalk

Manhattan Beach Middle School