



Department of Transportation
Division Traffic Engineering and Operations
Montgomery County, Maryland

SCHOOL WALKING AREA ANALYSIS

I. IDENTIFICATION:

Location: Kensington Parkwood Elementary

Study By: Boris Calderon

School

Recommended Approval _____

Study Date: 06/27/2019

Approved _____

Police District: Bethesda

T.O. # _____ W.O. # _____

Logger #:

Kensington Parkwood Elementary School

II. ANALYSIS:

Overview:

Kensington Parkwood Elementary School is located just east of the I-270 spur in Kensington, Maryland. The school has a current enrollment of 650 students, of which 400 of them are bus riders on the 9 assigned buses. The school has two access points, the main entrance (Office) off Saul Road and the secondary and most used entrance off Franklin Street. The bus and parent loops are also separated in accordance with these entrances, with the bus loop using the Saul Road entrance and the parent loop using the Franklin Street one.

Kensington Parkwood ES's attendance area is bound by Beach Drive on the west, the eastern border of the Town of Kensington and Cedar Lane. The school's walking area is also bound by Beach Drive on the west, the north side of Westbrook Lane on the north and Cedar Lane on the east.

Vehicles can access the school through all of the side streets intersecting Cedar Lane, as well as through Beach Drive by way of Franklin Street.

The Division of Traffic Engineering and Operations completed a comprehensive school study in December of 2005 that focused on the modification of the school zone along Saul Road, addition and modification of parking restrictions in the roadways adjacent the school property and the addition of "stop" controls and new crosswalks to the intersections in close vicinity to the school. Subsequent partial studies focused on individual items such as the enhancement of the school crossing at Oldfield Drive and Saul Road by the addition of bump outs.

Walking Route Analysis:

The designated walking area for Kensington Parkwood ES has a vast sidewalk network that encompasses nearly 70% of the roadways. Nearly the entirety of the roads containing no sidewalk are in the southern end of the walking area with half of Dresden Street and Clearbrook Lane being the exception. It is important to note that while Parkwood Terrace has sidewalk on only its west side, it intersects with Conifer Lane, Delmont Lane, Amherst Lane, Wildwood Road and Roxbury Drive and serves as a collector for any walkers that originate from this area.

While pedestrians who originate from these streets must walk along the roadway, these residential roads see low vehicle volumes even with direct access to Cedar Lane. This is due to school bound vehicles choosing to use Saul Road and Franklin Street to reach the school premises.

In the north section of the walking area, the southeast half of Dresden Street and the entirety of Westbrook Lane do not have sidewalk on either side. On Dresden Street, sidewalks resume two properties southeast of the intersection with Wildwood Road. Pedestrians originating from the southern end of Clearbrook lane can rejoin the sidewalk network at the intersection with Clearbrook Place, while pedestrians north of Clearbrook Place can proceed to its dead end and use the pedestrian path to either Greenfield Street or Westbrook Lane and once again connect to the sidewalk network.

It is therefore recommended that new sidewalk be installed on streets without existing sidewalk through the county's new sidewalk program. Various ADA ramps throughout the walking area are not up to ADA standards. ADA ramp improvements are recommended where proper sidewalks exist, and ramps can meet construction standards.

While the school's walking area currently has an extensive crosswalk network, several intersections were identified where pedestrians would benefit from new crosswalk and stop bar markings. It is recommended that new crosswalk and stop bar markings be installed at the identified intersection where sidewalks and ADA ramps are currently present. Most notably this would be at the intersection of Woodfield Road and Franklin Street. During morning and afternoon observations, 19 pedestrians crossed over Franklin Street to access the school. Parents parked along Woodfield Road and crossed over Franklin Street with students for both arrival and dismissal periods. Since this is now an informal crossing point, a new ladder bar crosswalk with accompanying school crossing signs is recommended for installment at this location.

The majority of walkers accessed the school via the Franklin Street and Saul Road intersection (59 of 75) where the assigned crossing guard is stationed. With 31 pedestrians arriving from the east side of Franklin Street; 24 approaching from the south by Saul Road; 3 from the north via Saul Road and one pedestrian from the west leg of Franklin Street. Only one pedestrian approached the intersection from the west side of Franklin Street. No pedestrians were seen using the main school entrance along Saul Road.

Safety & Operational Issues:

While arrival and dismissal periods ran relatively smooth, the overall size and capacity of the parent loop off Franklin Street remains the main issue in terms of traffic operations. The small capacity of the parent loop causes the queue of vehicles to back onto Franklin street relatively fast during afternoon pickup periods. It was noted that the queue spilled onto Franklin Street as soon as 3:40 pm, 10 minutes prior to the last bell. By 3:47 pm the queue reached Saul Road and wrapped around the intersection. The existing turn restrictions facilitated the movement of the queue so that no left turn movements would hinder the flow of the line of vehicles.

Six minutes past the 3:50 pm last bell the vehicles push out and clear the roadways of the queue. As previously mentioned, this causes some parents to park along Woodfield Road and cross over Franklin Street. Buses are not affected by the queuing since their entrance and exit driveways are located along Saul Road.

A school administrator is placed at the school driveway to allow vehicles to enter the parent driveway as the queue moves along. The entirety of the process lasts 16 minutes. No other operational issues were observed.

Crash data for the period of January 2015 to May 2019 shows three pedestrian related crashes within the established walking area. None of the crashes occurred during school arrival or dismissal periods with the MCPD reports listing them as occurring at 7:15 am; 2:18 pm and 7:56 pm. Kensington Parkwood ES school hours are 9:25am – 3:50pm. Two of these crashes were located at the intersection of Saul Road and Cedar Drive, an intersection that would not need to be crossed by a student walker.

III. <u>ATTACHMENTS:</u>	Walking Area Map	<u> X </u>	Sidewalk Map	<u> X </u>
	Recommendation Map	<u> X </u>	Accident Study	<u> X </u>
	Photos	<u> X </u>	Concept Plans	<u> X </u>
	Count Data	<u> </u>		

IV. RECOMMENDED IMPROVEMENTS:

Map ID	Location	Issue	Recommendation	Timeframe*
1	Parkwood Drive at Cedar Lane	New Markings	New crosswalk and stop bar markings	Short
2	Conifer Lane at Cedar Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
2	Conifer Lane at Cedar Lane	New Markings	New crosswalk and stop bar markings	Short
2	Conifer Lane at Cedar Lane	Inadequate Signing	Upgrade 24" to 30" SL25	Short
3	Conifer Lane at Parkwood Drive	New Markings	New stop bar markings	Short
3	Conifer Lane at Parkwood Drive	Inadequate Signing	Upgrade STOP from 24" to 30"	Short
4	Delmont Lane at Parkwood Drive	New Markings	New stop bar markings	Short
5	Delmont Lane at Cedar Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
5	Delmont Lane at Cedar Lane	New Markings	New crosswalk and stop bar markings	Short

Map ID	Location	Issue	Recommendation	Timeframe*
6	Amherst Lane at Cedar Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
6	Amherst Lane at Cedar Lane	New Markings	New crosswalk and stop bar markings.	Short
6	Amherst Lane	Inadequate Signing	Upgrade SL25 from 24" to 30"	Short
7	Amherst Lane at Wildwood Road	New Markings	New stop bar	Short
8	Roxbury Drive at Parkwood Drive	New Markings	New stop bars (2)	Short
9	Roxbury Drive at Saul Road	New Markings	New stop bar	Short
10	Thornwood Road at Saul Road	New Signing	Upgrade Stop from 24" to 30"	Short
11	Glenridge Street at Thornwood Road	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
11	Glenridge Street at Thornwood Road	Inadequate Signing	Upgrade stop from 24" to 30" (2)	Short
12	Franklin Street	Inadequate Signing	Upgrade SL25 from 24" to 30"	Short
13	Thornwood Road at Franklin Street	ADA ramps not to standard	Bring ADA ramps to standard	Intermediate
14	Franklin Street at Wildwood Road	ADA ramps not to standard	Bring ADA ramps to standard	Intermediate

Map ID	Location	Issue	Recommendation	Timeframe*
14	Franklin Street at Wildwood Road	Inadequate Signing	Upgrade SL25 from 24" to 30"	Short
15	Wildwood Court at Wildwood Road	ADA ramps not to standard	Bring ADA ramps to standard	Intermediate
16	Wildwood Road at Everett Street	ADA ramps not to standard	Bring ADA ramps to standard	Intermediate
17	Thornwood Road at Wildwood Road	ADA ramps not to standard	Bring ADA ramps to standard	Intermediate
17	Thornwood Road at Wildwood Road	Inadequate Signing	Relocate existing Stop	Short
18	Wildwood Road at Dresden Street	ADA ramps not to standard	Bring ADA ramps to standard	Intermediate
18	Wildwood Road at Dresden Street	Inadequate Signing	Upgrade stop from 24" to 30"	Short
19	Everett Street at Cedar Lane	Inadequate Signing	Relocate and upgrade SL25 from 24" to 30"	Short

Map ID	Location	Issue	Recommendation	Timeframe*
20	Clearbrook Lane at Cedar Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
20	Clearbrook Lane at Cedar Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
21	Thornwood Court at Thornwood Road	New Marking	New crosswalk marking	Short
22	Clearbrook Place at Clearbrook Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
22	Clearbrook Place at Clearbrook Lane	New Markings	New crosswalks and stop bars	Short
23	Clearbrook Place at Westbrook Lane	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
23	Clearbrook Place at Westbrook Lane	New Markings	New crosswalks and stop bars	Short
24	Westbrook Lane at Parkwood Drive	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
25	Parkwood Court at Parkwood Drive	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
25	Parkwood Court at Parkwood Drive	New Markings	New crosswalk markings	Short

Map ID	Location	Issue	Recommendation	Timeframe*
26	Everett Road at Parkwood Drive	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
26	Everett Road at Parkwood Drive	Inadequate Signing	Upgrade SL25 from 24" to 30"	Short
27	Oldfield Drive at Everett Road	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
27	Oldfield Drive at Everett Road	Inadequate Signing	Upgrade Stop from 24" to 30"	Short
28	Saul Road at Parkwood Drive	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
29	Crestwood Road at Everett Road	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
30	Woodfield Road at Crestwood Road	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
31	Crestwood Road at Franklin Street	Inadequate Signing	Upgrade Stop from 24" to 30"	Short
32	Woodfield Road at Franklin Street	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate

	Location	Issue	Recommendation	Timeframe*
32	Woodfield Road at Franklin Street	Inadequate Signing	Upgrade Stop from 24" to 30"	Short
33	Ashwood Drive at Woodfield Road	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
34	Ashwood Drive at Franklin Street	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
34	Ashwood Drive at Franklin Street	Inadequate Signing	Relocate STOP to location in front of bushes	Short
35	Edgefield Road at Franklin Street	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
35	Edgefield Road at Franklin Street	Inadequate Signing	Upgrade Stop and SL25 from 24" to 30"	Short
36	Franklin Street at Saul Road	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
37	Woodfield Road at Franklin Street	New Markings	New Crosswalk (Ladder Bar) markings	Short
37	Woodfield Road at Franklin Street	New Signings	New "State Law" signage	Short

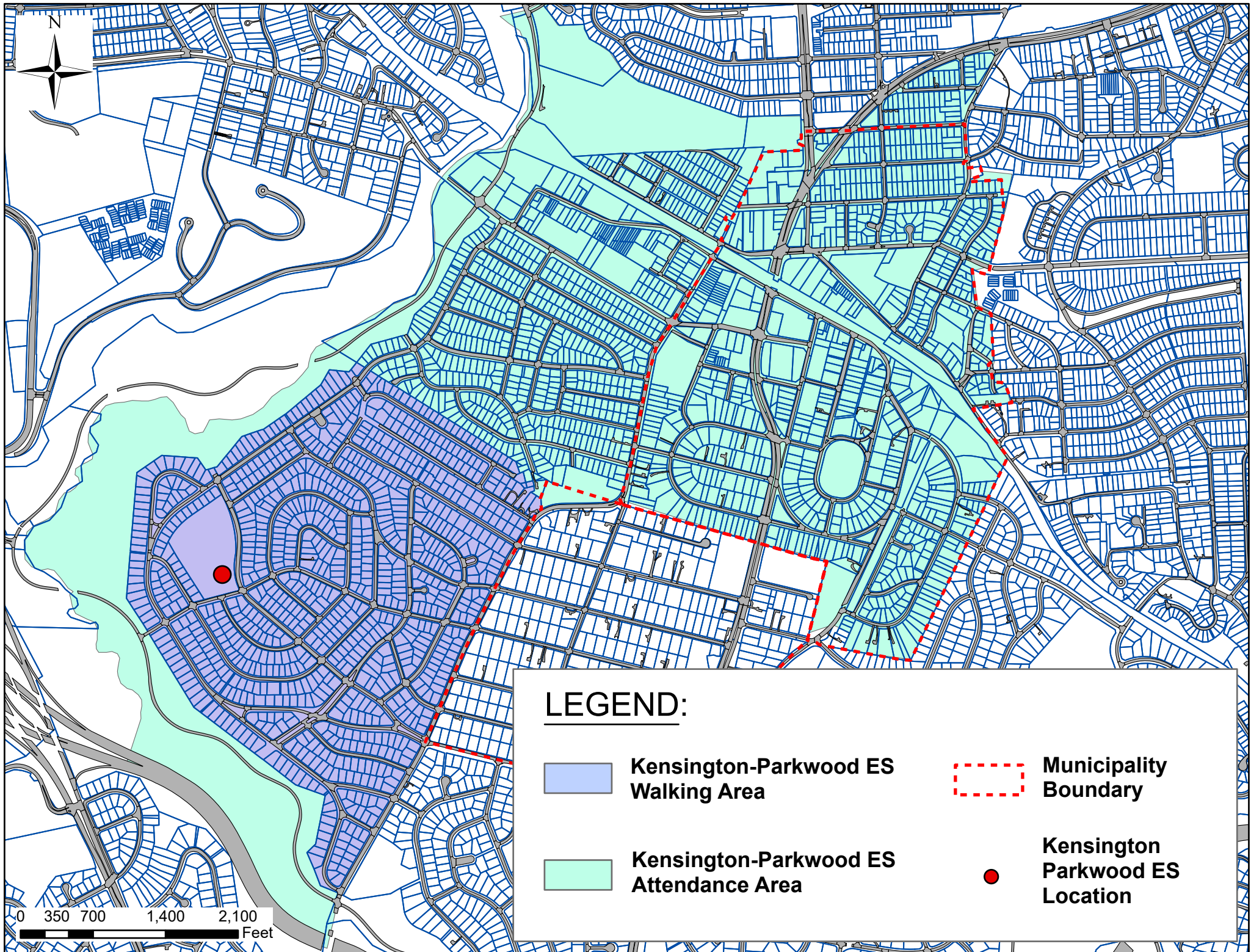
	Location	Issue	Recommendation	Timeframe*
38	Edgefield Road at Franklin Street	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
39	Parkwood Drive at Franklin Street	Inadequate Signing	Upgrade SL25 from 24" to 30"	Short
40	Parkwood Drive at Parkwood Terrace	New Markings	New Stop Bars (2)	Short
40	Parkwood Drive at Parkwood Terrace	Inadequate Signing	Relocate Stop to new location	Short
41	Parkwood Terrace at Parkwood Drive	ADA ramps not to standard	Bring ADA ramps to standard.	Intermediate
41	Parkwood Terrace at Parkwood Drive	New Markings	New crosswalk and stop bar markings	Short

Timeframe:

Short - MCDOT DTEO has direct control over contractor or work can be done in house. Minimal or no community involvement necessary.

Intermediate - MCDOT DTEO to work through other agency, such as MCDOT DTE, and their contractors. Timeframe dependent on other agencies schedule. May require community input.

Long - Will require community involvement, such as a public hearing, and/or designated CIP funding.



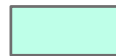
LEGEND:



**Kensington-Parkwood ES
Walking Area**



**Municipality
Boundary**

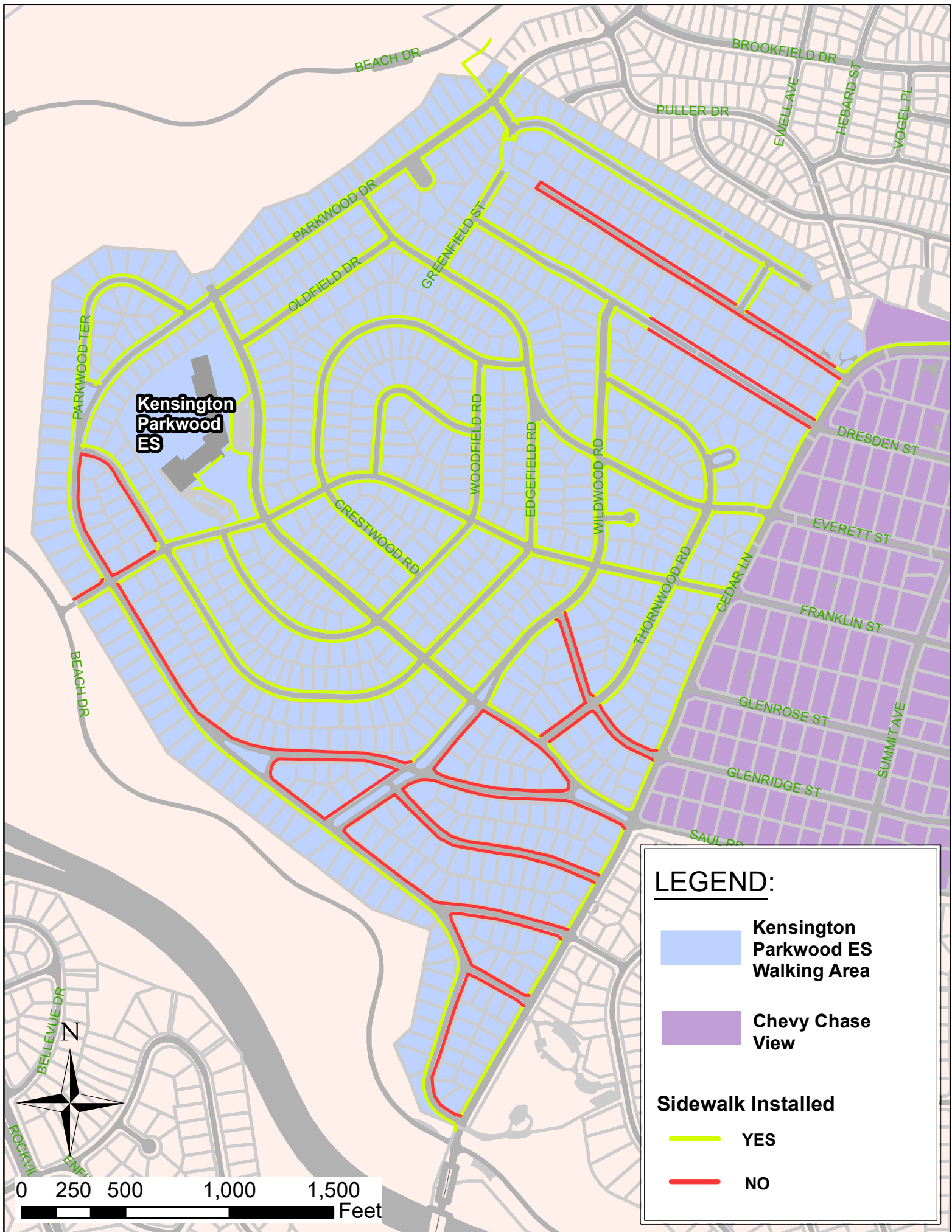


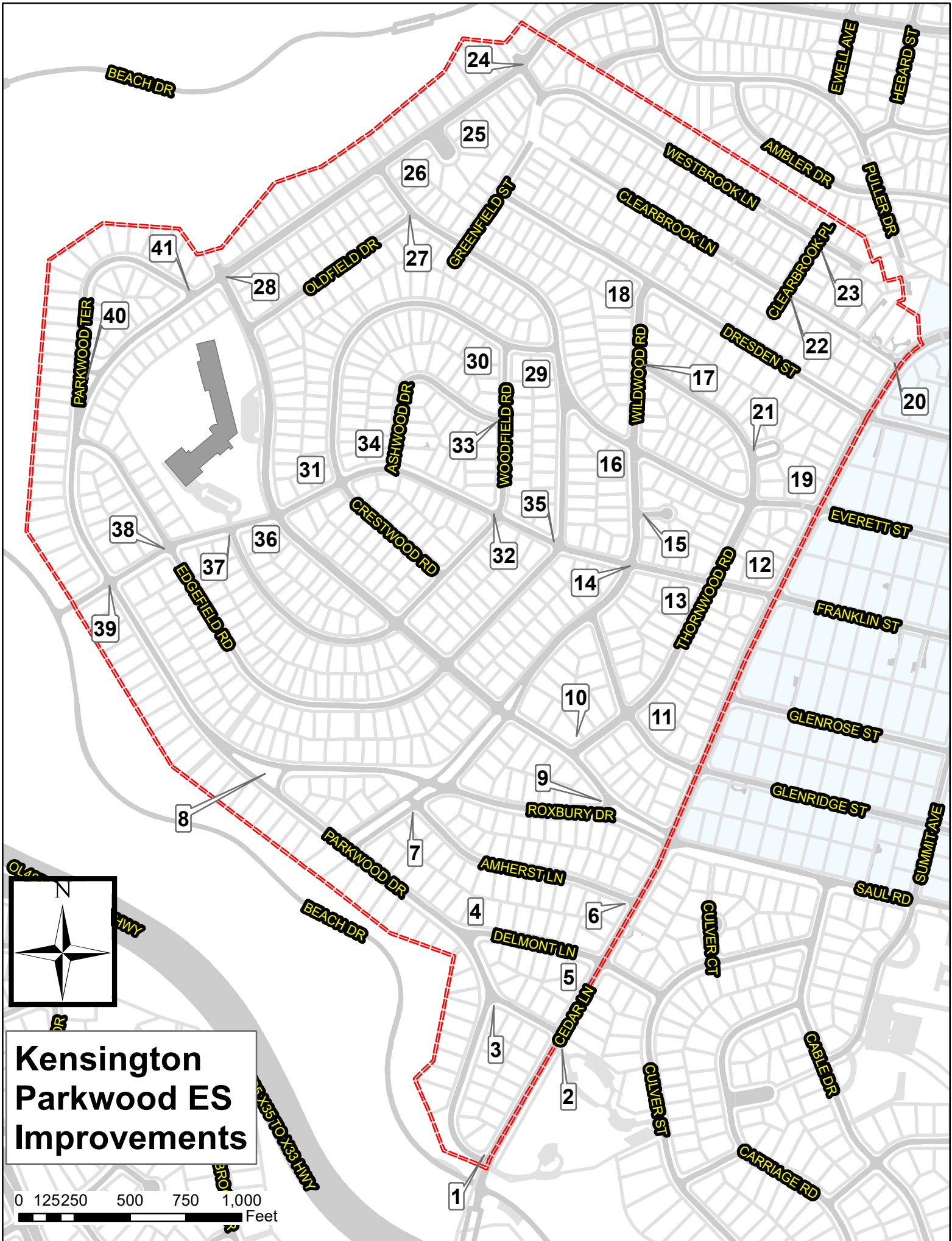
**Kensington-Parkwood ES
Attendance Area**

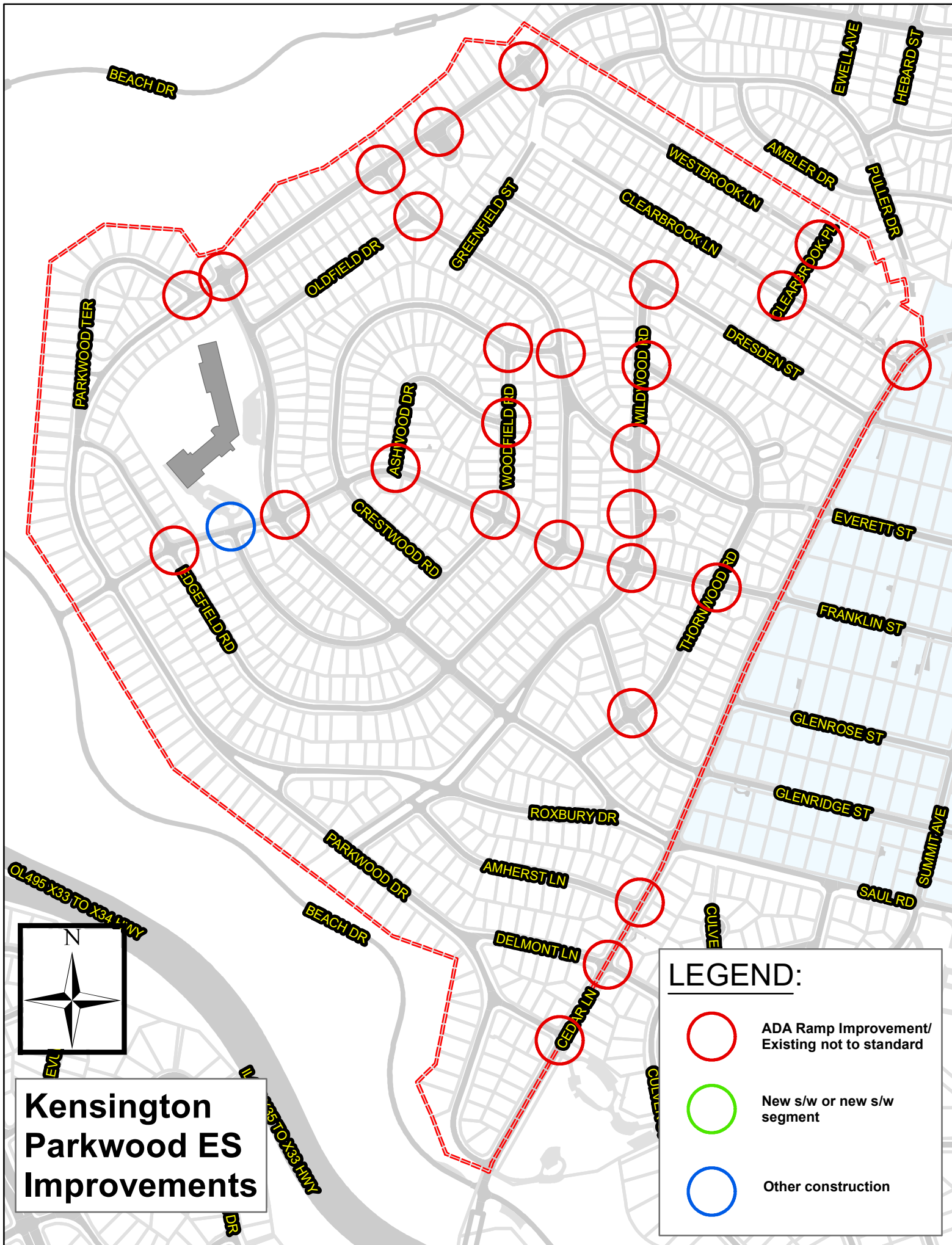


**Kensington
Parkwood ES
Location**

0 350 700 1,400 2,100
Feet







BEACH DR

EWELL AVE

HEBARD ST

PULLER DR

AMBLER DR

WESTBROOK LN

CLEARBROOK LN

CLEARBROOK PL

DRESDEN ST

EVERETT ST

FRANKLIN ST

GLENROSE ST

GLENRIDGE ST

SAUL RD

SUMMIT AVE

CULVE

ROXBURY DR

AMHERST LN

DELMONT LN

CEDAR LN

PARKWOOD DR

BEACH DR

GREENFIELD ST

OLDFIELD DR

ASHWOOD DR

CRESTWOOD RD

WOODFIELD RD

WILDWOOD RD

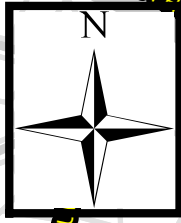
THORNWOOD RD

PARKWOOD TER

EDGEFIELD DR

OL495 X33 TO X34 HWY

OL495 TO X33 HWY



**Kensington
Parkwood ES
Improvements**

LEGEND:



ADA Ramp Improvement/
Existing not to standard

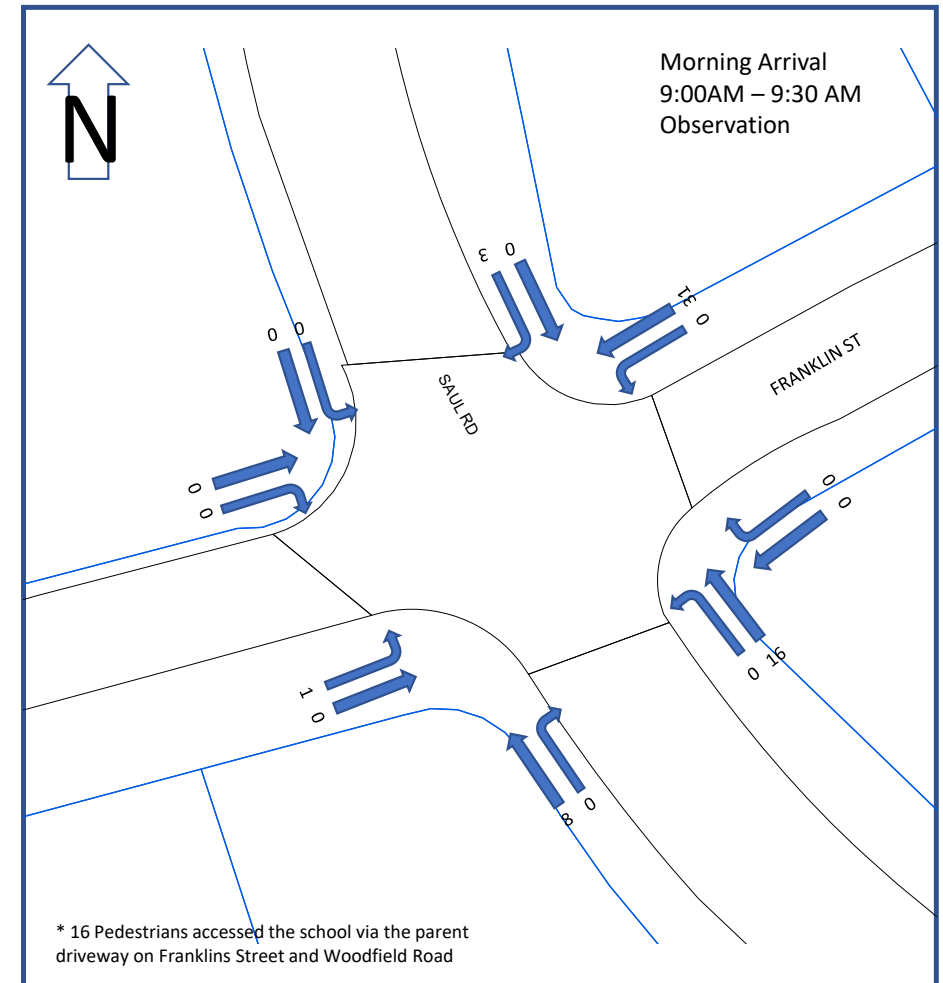
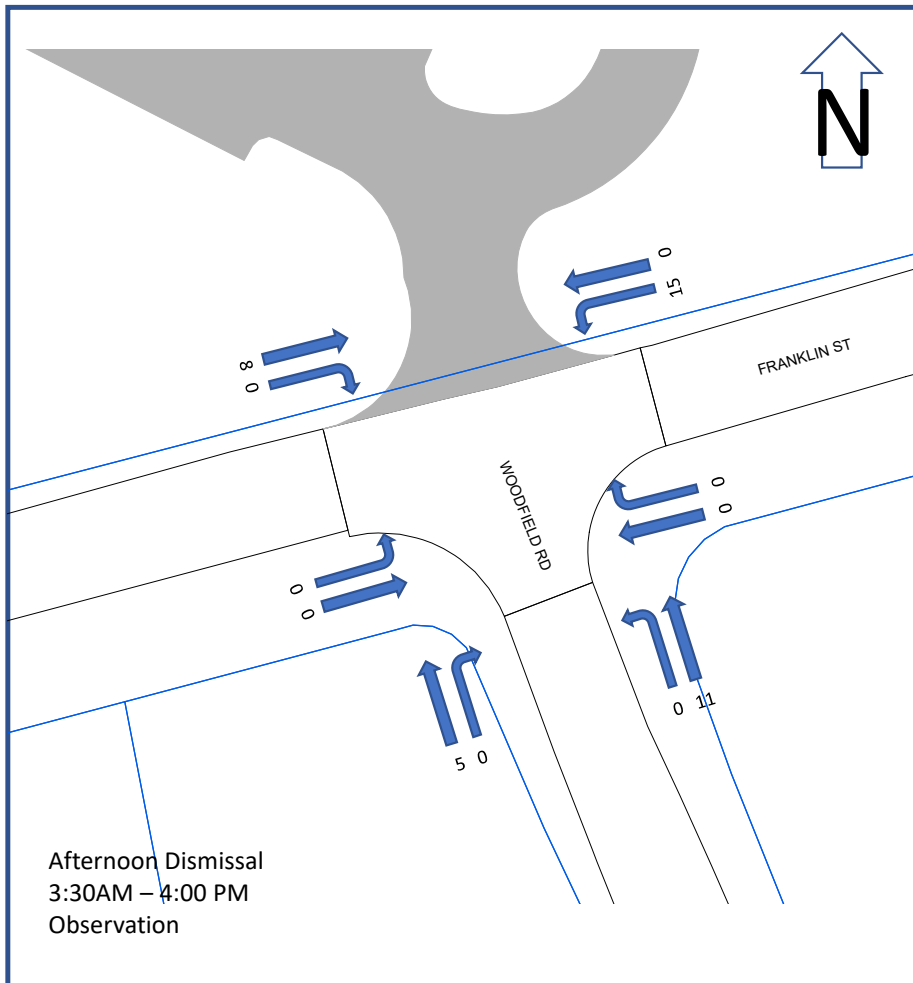


New s/w or new s/w
segment



Other construction

PEDESTRIAN COUNTS FOR KENSINGTON-PARKWOOD ES





Non-compliant ADA ramps (with and without crosswalks) found throughout the walking area.



Inadequate signing found throughout the walking area

Crash Data - Kensington-Parkwood ES - January 2015 to May 2019

Report Number	Crash Date/Time	Road Name	Cross-Street Name	Related Non-Motorist	Collision Type	Weather	Surface Condition	Light	Traffic Control	Driver At Fault	Driver Distracted By
MCP28660054	12/17/2018 19:56	CEDAR LA	SAUL RD	PEDESTRIAN	OTHER	CLEAR	DRY	DARK LIGHTS ON	TRAFFIC SIGNAL	Yes	UNKNOWN
MCP11280021	1/28/2014 7:15	CEDAR LA	SAUL RD	PEDESTRIAN	SINGLE VEHICLE	CLEAR	DRY	DAWN	TRAFFIC SIGNAL	No	NOT DISTRACTED
MCP3132000H	10/13/2018 14:18	FRANKLIN ST	EDGEFIELD RD	BICYCLIST	OTHER	CLEAR	DRY	DAYLIGHT	NO CONTROLS	Yes	LOOKED BUT DID NOT SEE