

# POTOMAC YARD SITE ANALYSIS ALEXANDRIA CITY PUBLIC SCHOOLS



FEBRUARY 7, 2006



Creating Together: Meaningful Architecture and Client Success

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## Introduction

This brief site analysis was prepared based on civil engineering drawings prepared by Christopher Consultants, dated 5/20/05, and developer plans provided by Alexandria City Public Schools (ACPS) for this purpose. No boundary, topographical, or utility surveys were completed for this analysis, nor was any geotechnical investigation done. The purpose of the analysis is to test the viability of placing an elementary school, similar in size to the last elementary school built by ACPS, on the site being proposed by the developer.

## Potomac Yard General Site Description

The proposed site for a future elementary school is a triangular-shaped property at the corner of Monroe Avenue and the proposed realigned Route 1. The site is approximately 6 acres. Grades on the site range from an elevation of 40' to 52'. A large concrete-encased electrical ductbank runs through the site along the existing Route 1 right of way (ROW). Another possible constraint to the site is three proposed ramp configurations of Monroe Avenue.

## Potomac Yard Site Analysis

The building footprint of Samuel Tucker Elementary can fit on the site as shown in the attached site plan (2-Story School "A" Options). We have briefly investigated more slender "bar" building footprints and "L"

shaped footprints. Neither of these alternative shape footprints seems to allow for desirable vehicular / bus circulation and parking.

The 2-story footprint shown allows for a total of 110+/- parking spaces (or fewer), 10+/- buses, a small service yard access, and a parent drop-off area. Entry to the building from the bus drop-off will require a covered pavilion and side entry to the lobby. Entry for cars and buses to the site is available from Monroe Ave. The multi-purpose ball field would be located on the western portion of the site. Due to the limited available area of the site, a portion of the ball field is shown on what we understand is park property.

The topography and existing utilities on site will allow for an approximate first floor elevation of +49', 3 feet below the adjacent park, and 6 feet above the elevation of Route 1. Retaining walls will most likely be required along Route 1 and Monroe Ave. 0 feet to 7 feet of fill will be required to bring the building pad up to 49' from the grades proposed by the developer. The developer is proposing to provide fill over most of the building pad site. This will need to be carefully monitored to ensure that it will be adequate for a building pad.

### Potomac Yard Site Analysis- continued

Stormwater could tie into the existing storm sewer to remain along the existing Route 1 ROW, and could also tie into a regional stormwater management pond planned on the east side of the realigned Route 1. Further investigation is needed to determine the quantity and possible outfall for stormwater. Storage of stormwater in an above ground pond on site is not feasible due to the size of the site.

New sanitary access could possibly tie into the existing sanitary sewer at Bellefonte Avenue. This is approximately 600 feet from the building. The top of this sanitary structure is at 4.2', which may allow for adequate fall from the building.

Electrical service to the building will require a power stub from the electrical ductbank in the realigned Route 1. It would be beneficial if the developer provided this stub.

Water service to the building will require a 12" stub off of the 16" water main in the realigned Route 1. It appears the waterline in the existing Route 1 will be removed by the developer due to proposed grading. It would be beneficial if the developer provided this stub.

### Potomac Yard Site Drawbacks

1. Significant grading and possibly retaining walls will be required.
2. 110 parking spaces are fewer than the desired 150 spaces.
3. Due to the limited area of the site and the single entrance to the site, cars and buses cannot be separated.
4. Existing ductbank and geometry of site severely limit buildable area on the site.

5. New ramp configurations reduce the site size.
6. No storage of stormwater on the site can be accommodated.
7. Acreage of site does not meet state standard.

## OPTIONS MATRIX

<div>GRIMM+PARKER ARCHITECTS</div> Potomac Yard Site Analysis Matrix								
Option Number:	Option Name:	Comments:						
		Insufficient emergency vehicle access around building may be an issue with approval of plan.	This option does not allow the site to be developed	The Building cannot be built over the existing electrical duct bank.	The extent of the widening of Monroe Avenue cannot be determined by the plans provided.	CAUTION: The 2-Story School will not work if the widened Monroe Avenue encroaches into the proposed school property.	This option cannot work on the site with the 2-way Slip Ramp.	This option cannot work on the site with the proposed realigned Monroe Avenue bisecting the property
Option 1A	2-Story School - Approved Condon Site	X						
Option 2A	2-Story School - 2 Way Monroe Avenue Slip Ramp		X	X			X	
Option 3A	2-Story School - Realigned Monroe Avenue Thru Park		X					X
Option 4A	2-Story School - Right Turn Ramp From Monroe Avenue	X			X	X		



## SITE PHOTOGRAPHS



View from East



View from park



View from South



View from west side of Route 1



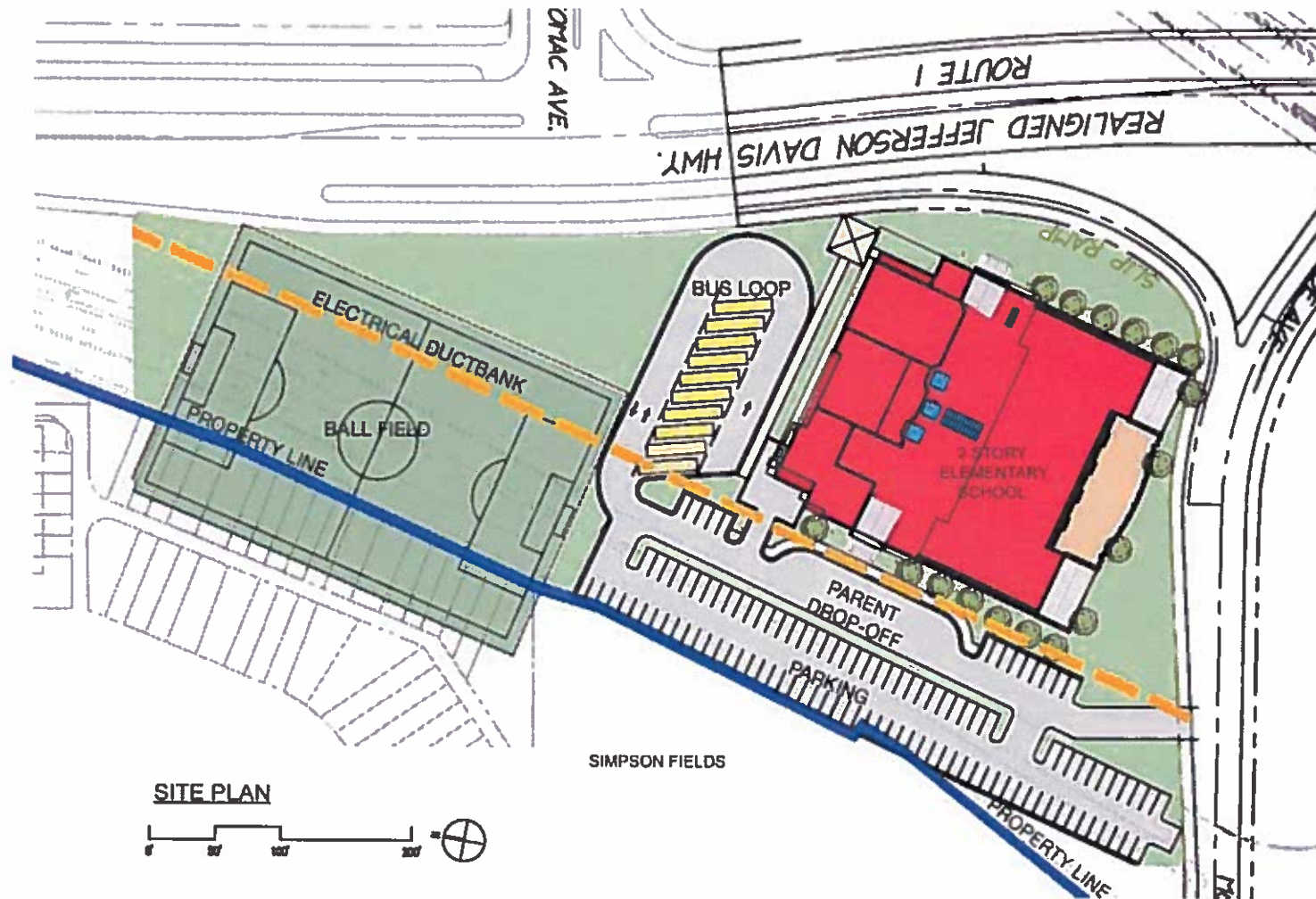


## AERIAL PHOTOGRAPH



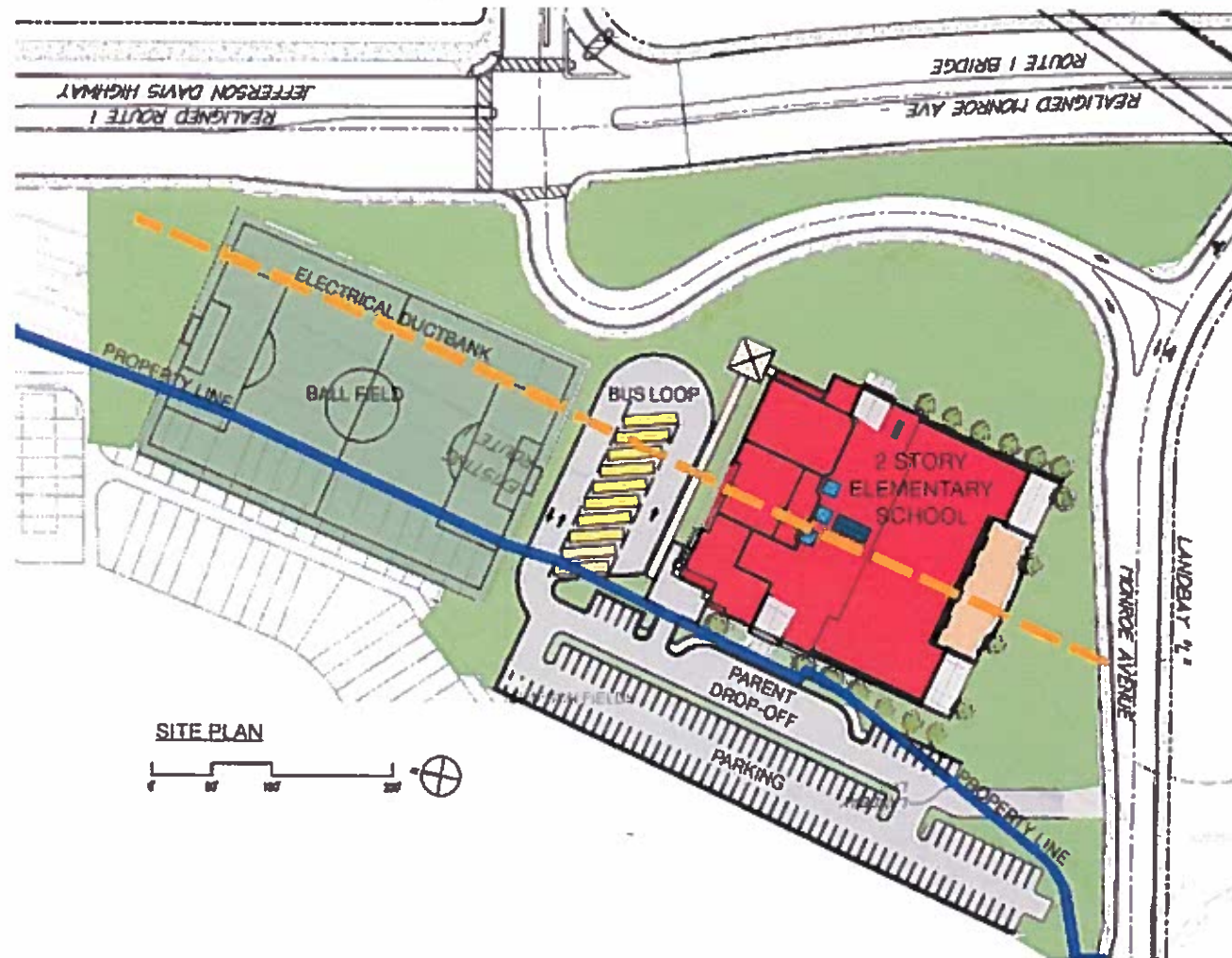


## 2-STORY SCHOOL- APPROVED CONDITION SITE



INSUFFICIENT EMERGENCY VEHICLE ACCESS AROUND BUILDING MAY BE AN ISSUE WITH APPROVAL OF PLAN.

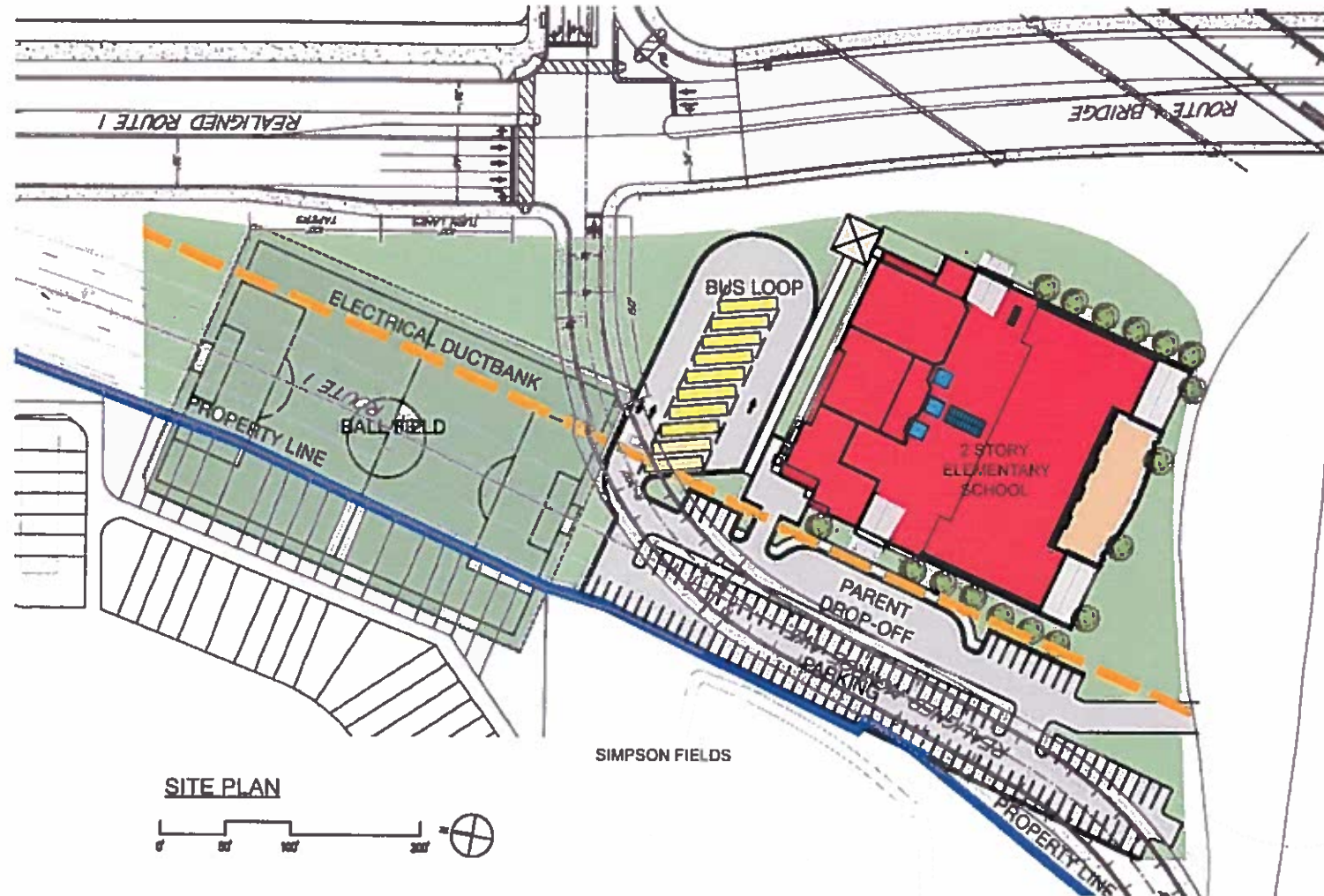
## 2-STORY SCHOOL- 2-WAY MONROE AVENUE SLIP RAMP



- A 2-STORY SCHOOL BUILDING CANNOT WORK ON THE SITE WITH THE 2-WAY SLIP RAMP.
- THE BUILDING CANNOT BE BUILT OVER THE EXISTING ELECTRICAL DUCT BANK.
- THIS OPTION DOES NOT ALLOW THE SITE TO BE DEVELOPED.
- THE PARKING IS BEYOND THE PROPERTY LINE.



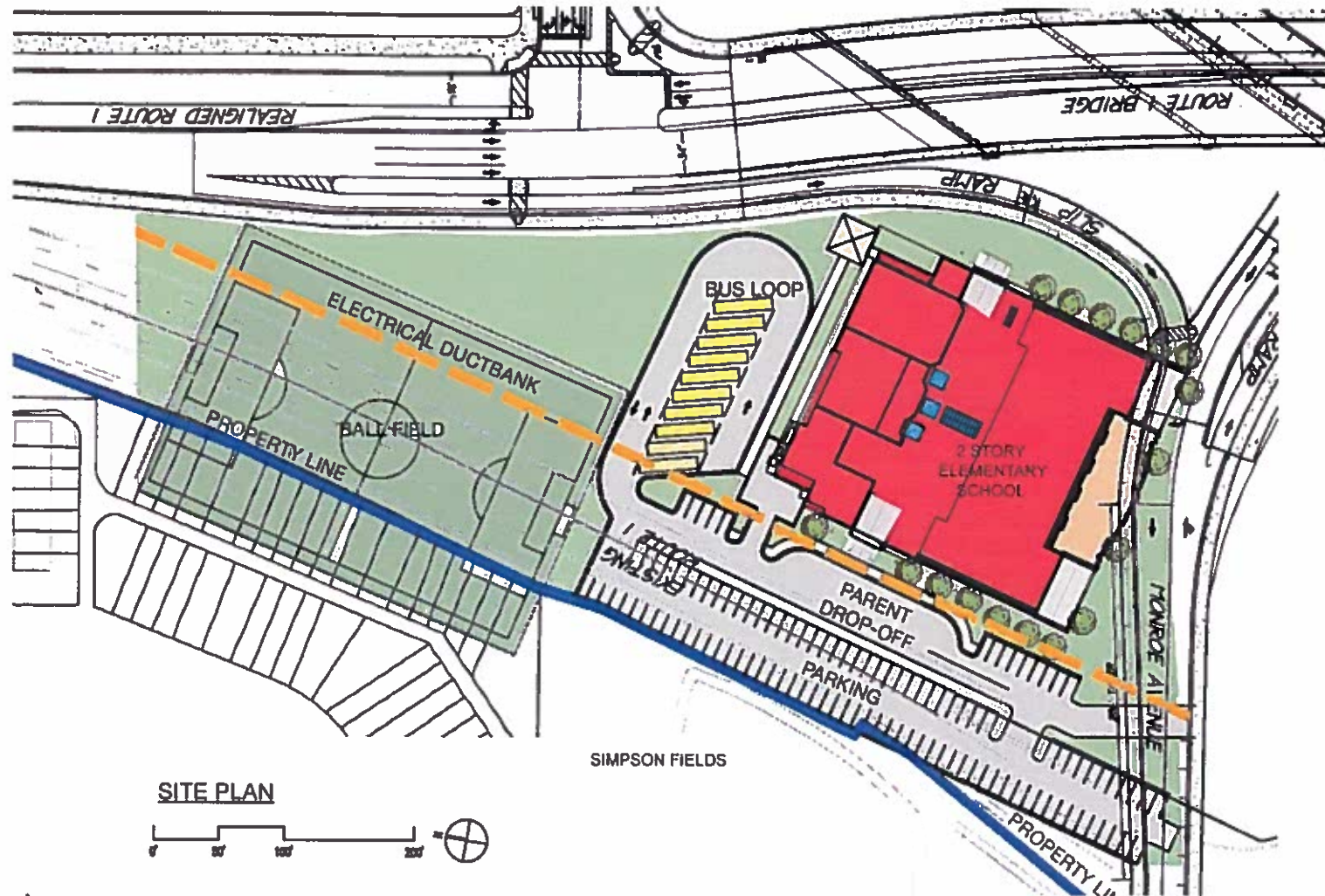
## 2-STORY SCHOOL- REALIGNED MONROE AVENUE THRU PARK



- A 2-STORY SCHOOL BUILDING CANNOT WORK ON THE SITE WITH THE PROPOSED REALIGNED MONROE AVENUE BISECTING THE PROPERTY.
- THIS OPTION DOES NOT ALLOW THE SITE TO BE DEVELOPED.



## 2-STORY SCHOOL-RIGHT TURN RAMP FROM MONROE AVENUE



- INSUFFICIENT EMERGENCY VEHICLE ACCESS AROUND THE BUILDING MAY BE AN ISSUE WITH APPROVAL OF PLAN.
- THE EXTENT OF THE WIDENING OF MONROE AVENUE CANNOT BE DETERMINED BY THE PLANS PROVIDED.
- **CAUTION:** THE 2-STORY SCHOOL WILL NOT WORK IF THE WIDENED MONROE AVENUE ENCROACHES INTO THE PROPOSED SCHOOL PROPERTY.



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