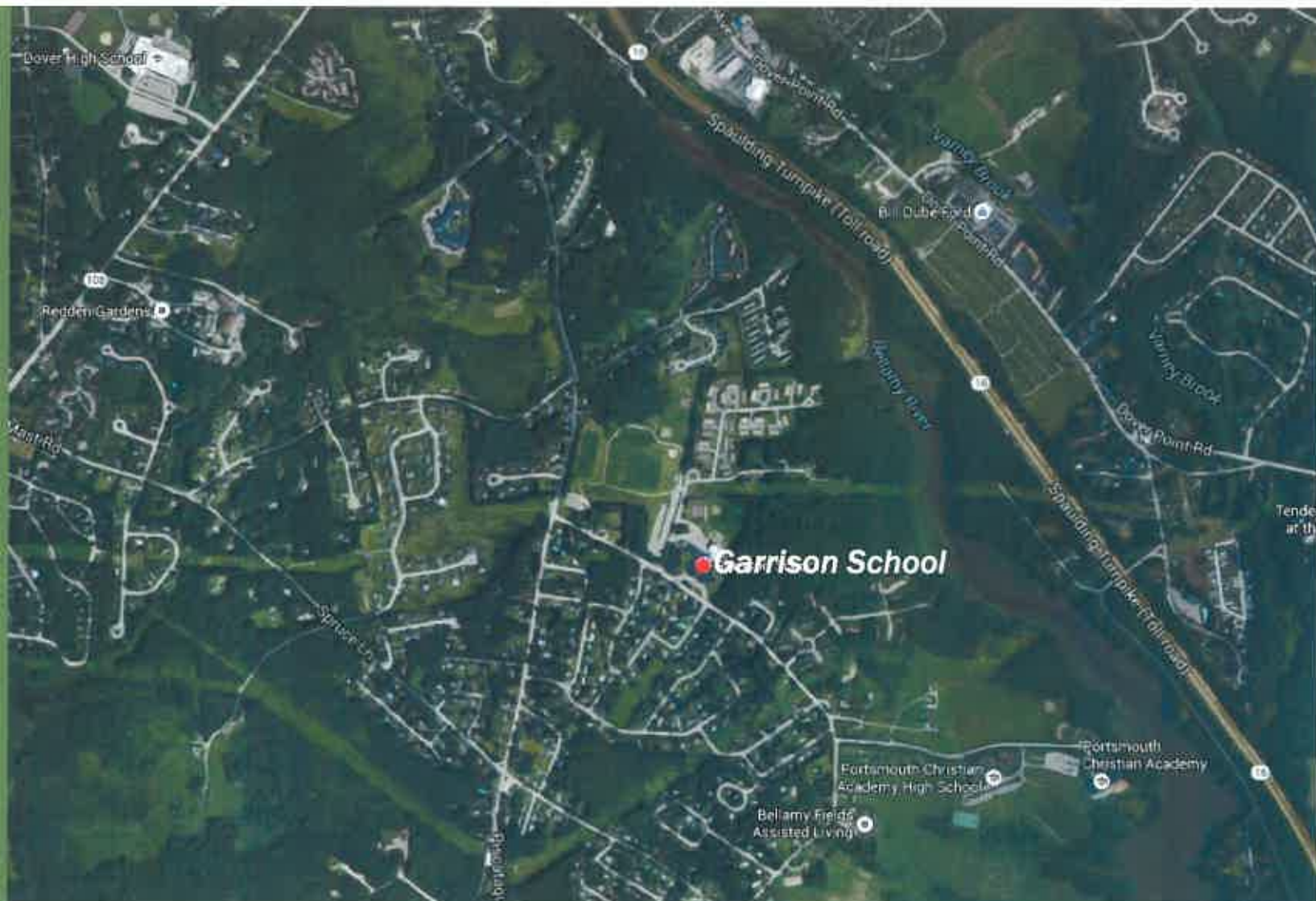


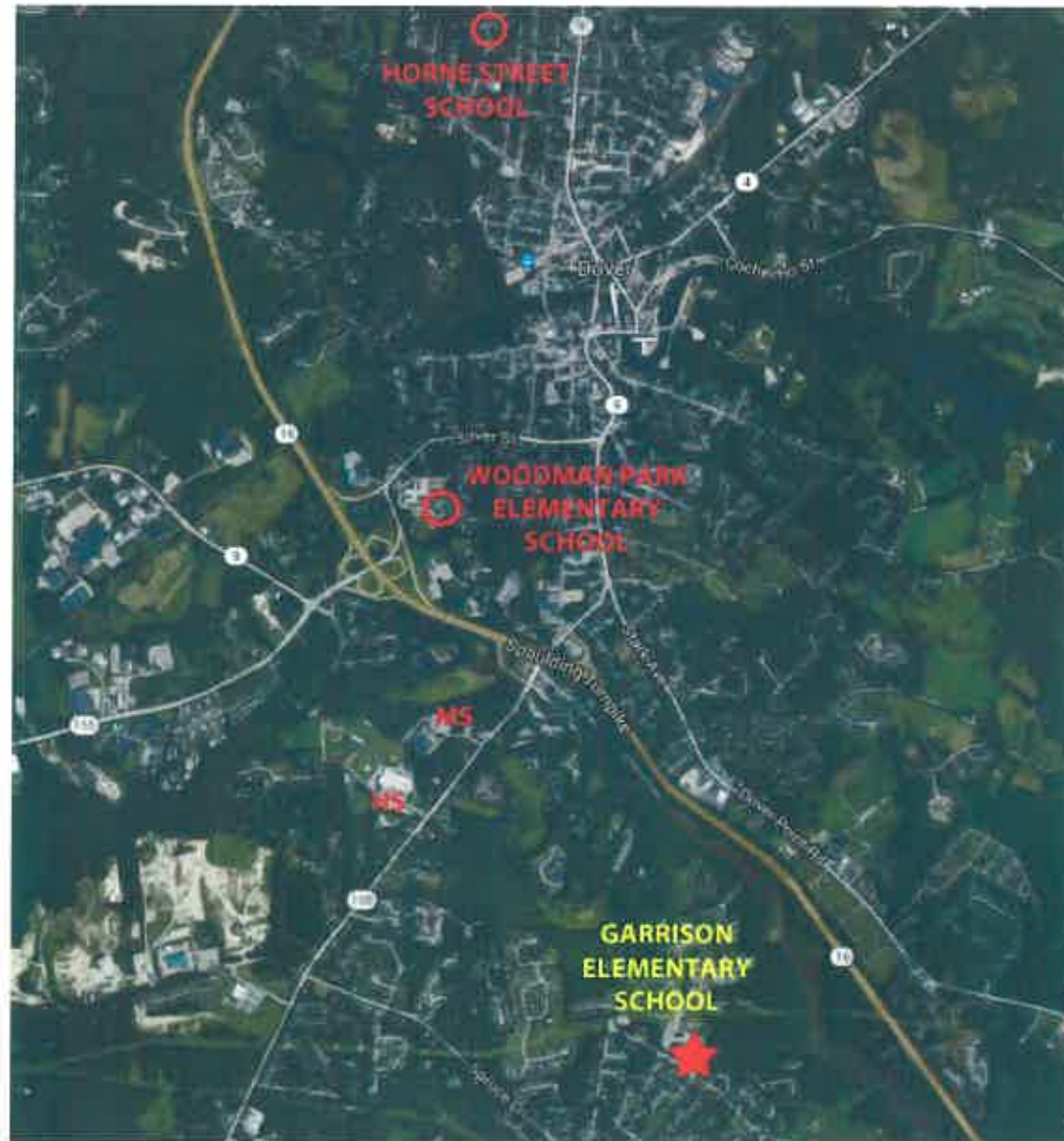


HARRIMAN

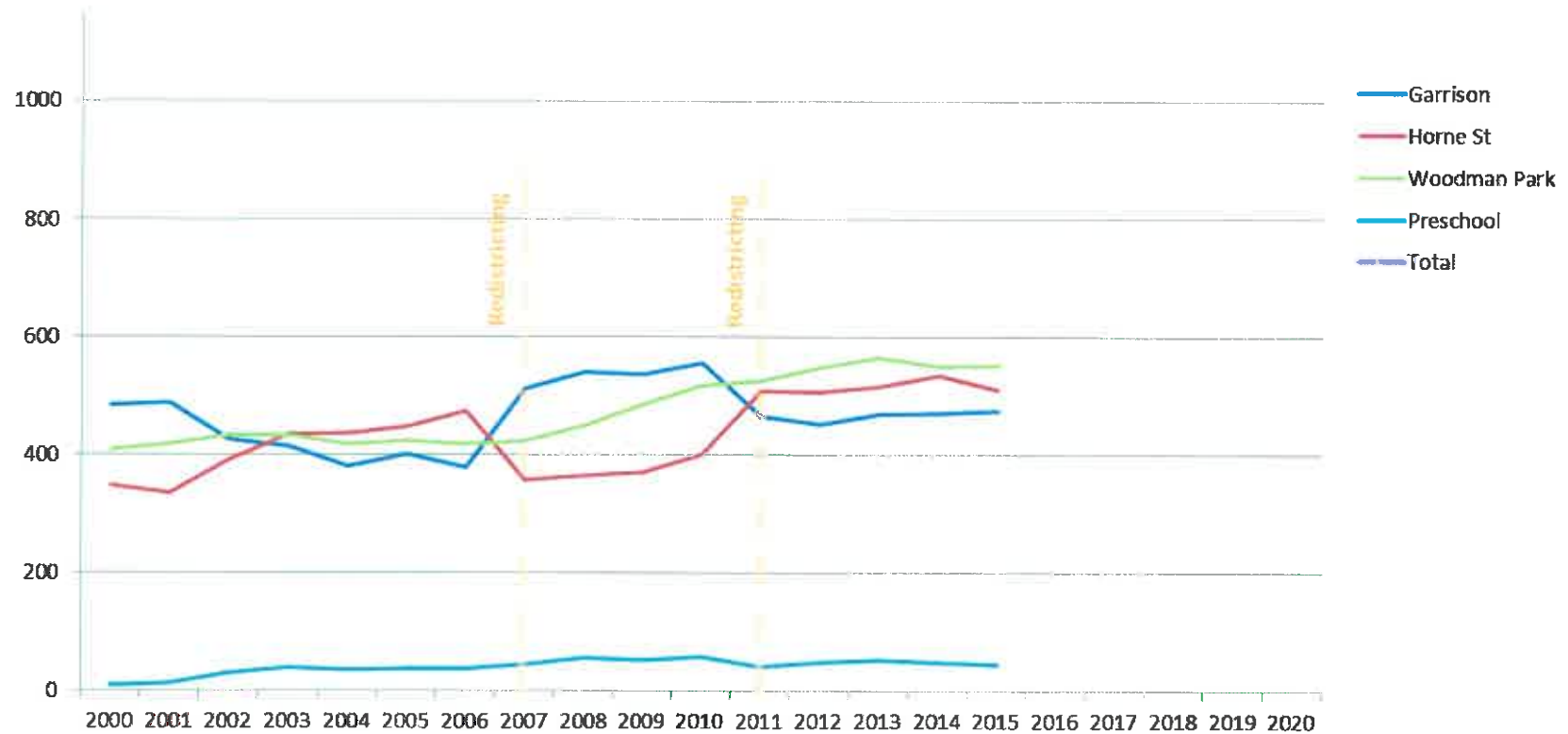


***Garrison Elementary School Facilities Study for
Dover School District, SAU 11***

SCHOOL PROXIMITY



DEMOGRAPHIC REVIEW



FACILITIES ANALYSIS

- 1. Learning Environment*
- 2. Code Concerns*
- 3. Health/Safety/Security*
- 4. Deferred Maintenance*
- 5. Energy Efficiency*



FACILITIES ANALYSIS

ADA *(Code)*

- Toilet rooms
- Water fountains,
- Accessible routes
- Door hardware/clearances
- Play area
- Fire Alarm Devices

Security *(Heath/Safety/Security)*

- Secure Main Entrance
- Security Cameras
- Access Control System
- Door Hardware
- Perimeter Fence



FACILITIES ANALYSIS

Classrooms Renovations

- **Replace VAT Flooring**
(Heath/Safety/Security)
- **Replace Lighting** *(Efficiency, Learning Environment)*
- **Upgrade Finishes** *(Learning Environment)*
- **Replace Doors and Hardware**
(Code, Health/Safety/Security)
- **Replace Exterior Windows**
(Efficiency, Health/Safety/Security)
- **Replace Built-ins** *(Learning Environment, Code)*
- *Replace sinks with two separate bowls, one for sink and one for bubbler (Code)*



FACILITIES ANALYSIS

Toilet Room Renovations

- **ADA Fixtures** (*Code*)
 - *Water closets, Urinals, Lavatories, Mirrors, Grab Bars, Accessories*
- **Toilet Partitions** (*Code, Deferred Maintenance*)
- **Floor and Wall Tile** (*Deferred Maintenance*)
- **Door Hardware and Clearances** (*Code, Deferred Maintenance*)



FACILITIES ANALYSIS

MECHANICAL

Boiler Plant *(Efficiency, Deferred Maintenance)*

- Replace Original 1962 Boiler, Combustion Air, Controls

Classroom Wings 1, 2 *(Efficiency, Health/Safety/Security, Deferred Maintenance, Learning Environment, Code)*

- New Central HVAC, Controls
- New Hot Water Piping

Classroom Wing 3 *(Efficiency, Health/Safety/Security, Deferred Maintenance, Learning Environment, Code)*

- New Hydronic UV's, Controls
- New Hot Water Piping

FACILITIES ANALYSIS

MECHANICAL

Cafeteria *(Efficiency, Health/Safety/Security, Deferred Maintenance, Learning Environment, Code)*

- New HVAC, Controls

Kitchen *(Efficiency, Health/Safety/Security, Deferred Maintenance, Code)*

- New NFPA 96 compliant kitchen exhaust hood with fire suppression system
- Integral gas fired make-up air unit to temper air
- Condensate hood for dishwasher

Controls *(Efficiency, Health/Safety/Security, Deferred Maintenance, Learning Environment)*

- Replace controls, integrate various existing controls and equipment
- Update sequence of operation to provide:
 - Demand control ventilation
 - Variable speed control for pumps.

FACILITIES ANALYSIS

ELECTRICAL

Distribution, Panelboards and Circuiting *(Efficiency, Deferred Maintenance)*

- Original portion of the building (1960's vintage)
 - Eliminate old antiquated equipment
 - Eliminate aluminum feeders
 - Eliminate Non-metallic sheathed (Romex) cabling
- Main Electrical Room:
 - Remove the original switchboard currently used as a junction and extend feeders
- Add receptacle circuits throughout (particularly in classrooms)

Lighting *(Efficiency, Health/Safety/Security, Deferred Maintenance, Code, Learning Environment)*

- Replace all lighting in the original portion of the building (1960's vintage)
- Replace all interior and exterior metal halide fixtures
- Add site lighting to illuminate all parking areas and building perimeter

FACILITIES ANALYSIS

ELECTRICAL

Life-Safety (egress) Lighting *(Efficiency, Deferred Maintenance)*

- New inverter system with new Life-Safety lighting system
- Generator connect to Life-Safety Lighting, minimal mechanical equipment with freeze protection and to kitchen cooler and freezers

Lighting Controls *(Efficiency, Health/Safety/Security, Deferred Maintenance, Code)*

- Provide occupancy sensors in offices and classrooms
- Provide Low Voltage Lighting Control System to control exterior lighting and interior lighting in common spaces
- Lighting controls would comply with current energy codes

Fire Alarm System *(Deferred Maintenance, Code)*

- Replace existing system

FACILITIES ANALYSIS

ELECTRICAL

Intrusion Detection System *(Health/Safety/Security, Deferred Maintenance)*

- New system that monitors door contacts and motion sensors

CCTV System*(Health, Safety, Deferred Maintenance)*

- CCTV cameras to cover building and site
- System will be coordinated with local police

Data Systems *(Learning Environment)*

- Determined via further discussions with IT Department and administrators

Public Address System *(Health/Safety/Security, Deferred Maintenance, Code)*

- Replace with new system
- Explorer to incorporate the PA and Fire Alarm speakers

FACILITIES ANALYSIS

PLUMBING AND SPRINKLER

Boiler Rooms *(Efficiency, Deferred Maintenance, Code)*

- See Mechanical for Boiler replacement
- New efficiency tankless heaters and a storage tank
- New mixing valve arrangement including circulating pump
- Relocate the existing backflow preventers near the water meters

Plumbing Fixtures *(Efficiency, Health/Safety, Deferred Maintenance, Code)*

- Replace all of the plumbing fixtures installed prior to 1999
- Provide battery sensor flush valves and faucets for all fixtures
- Replace the sinks in each classroom with two separate bowls, one for sink and one for a bubbler
- Replace water coolers and drinking fountains that are not ADA compliant

FACILITIES ANALYSIS

PLUMBING AND SPRINKLER

Kitchen *(Efficiency, Code)*

- Remove propane tank serving the kitchen and pipe natural gas
- Provide an exterior gravity type grease interceptor

Domestic Piping *(Health/Safety, Code)*

- Replace domestic water piping installed prior to 1988 (noted that all water piping installed prior to 1988 utilized a 50/50 mix of lead and tin solder)

Sprinkler *(Maintenance)*

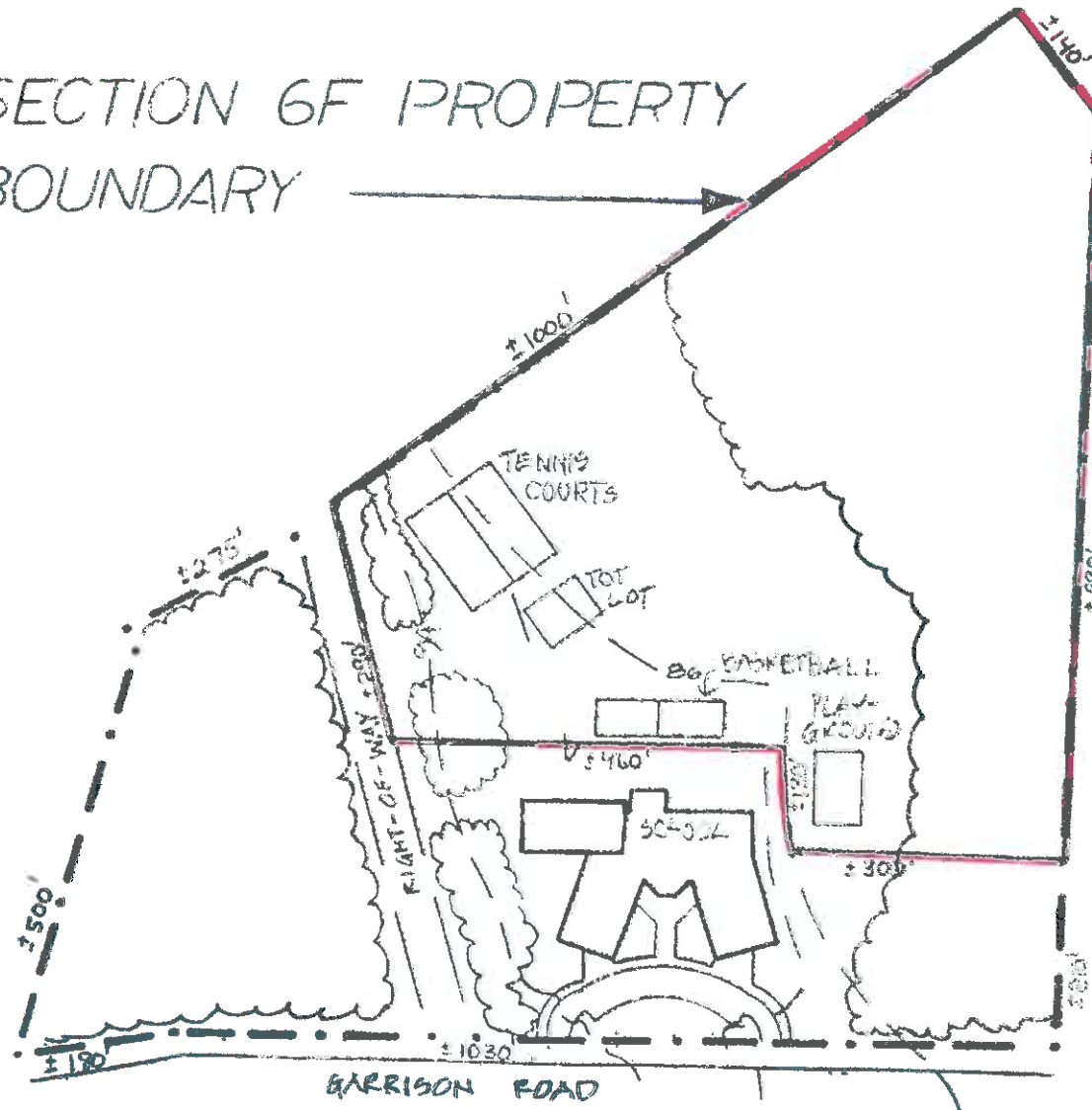
- Inspect pipe which showed corrosion at the seam. Review the lot number stamped on the pipe and research if a recall may have been issued for that lot of pipe
- Conduct a survey for corrosion at several existing piping locations
- Inspect the Victaulic and other fittings
- Ensure each sprinkler zone does not exceed a coverage area of 52,000 square feet

SITE OVERVIEW



SITE ANALYSIS

SECTION 6F PROPERTY
BOUNDARY



TAX MAP LOT # I-2G
0 100 200 400
scale in feet

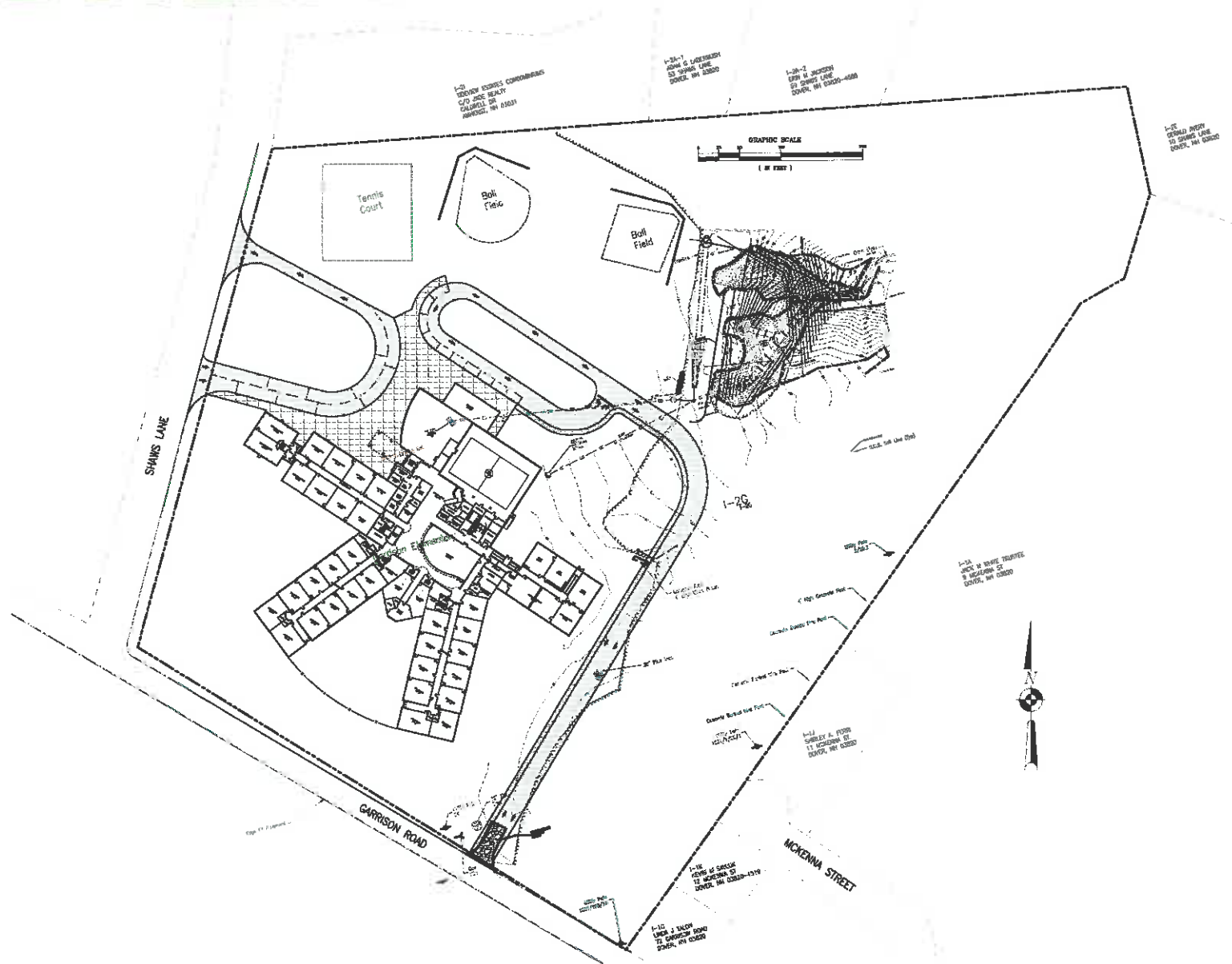
SITE ANALYSIS



BUILDABLE AREAS



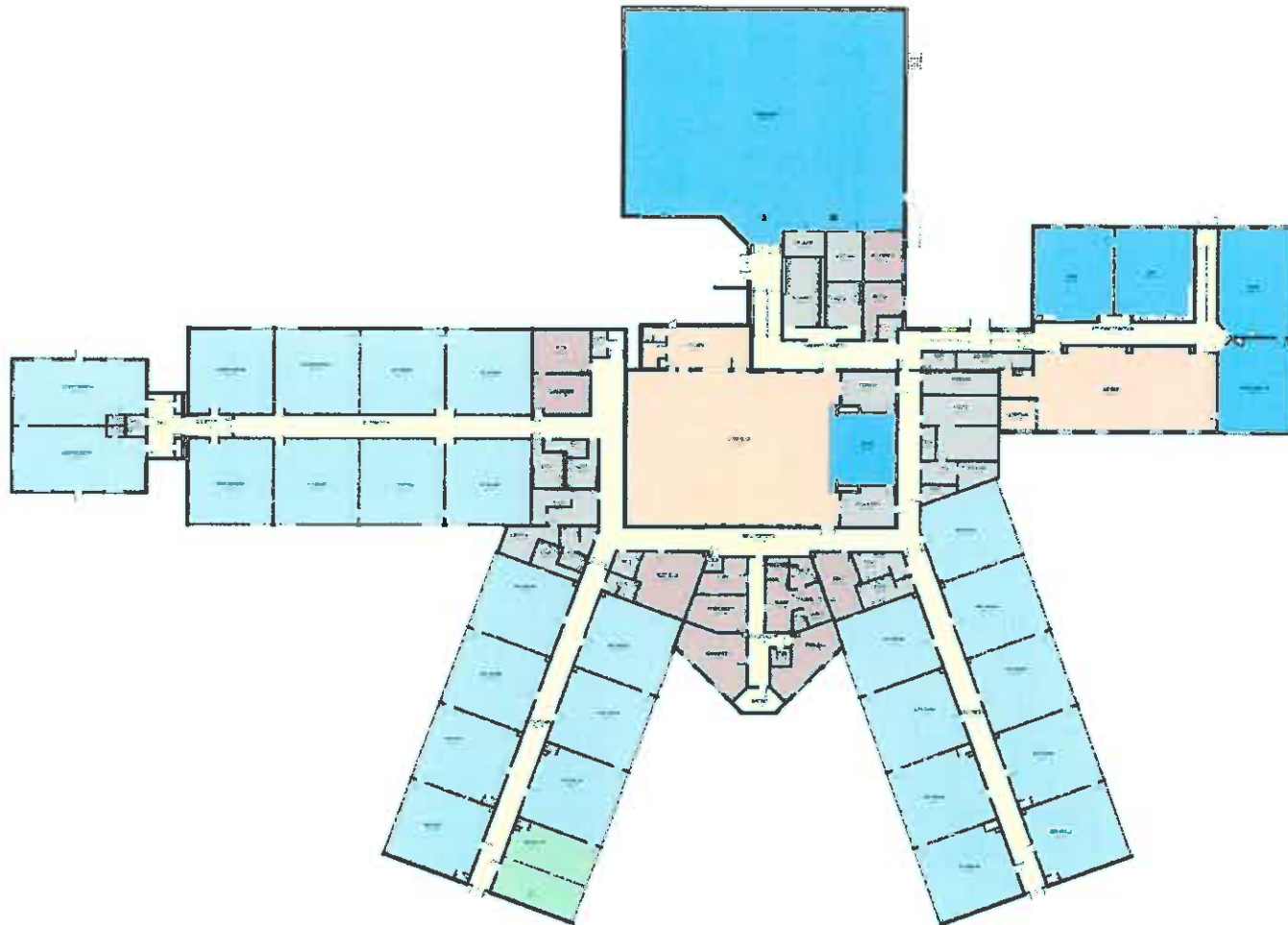
SITE OVERVIEW



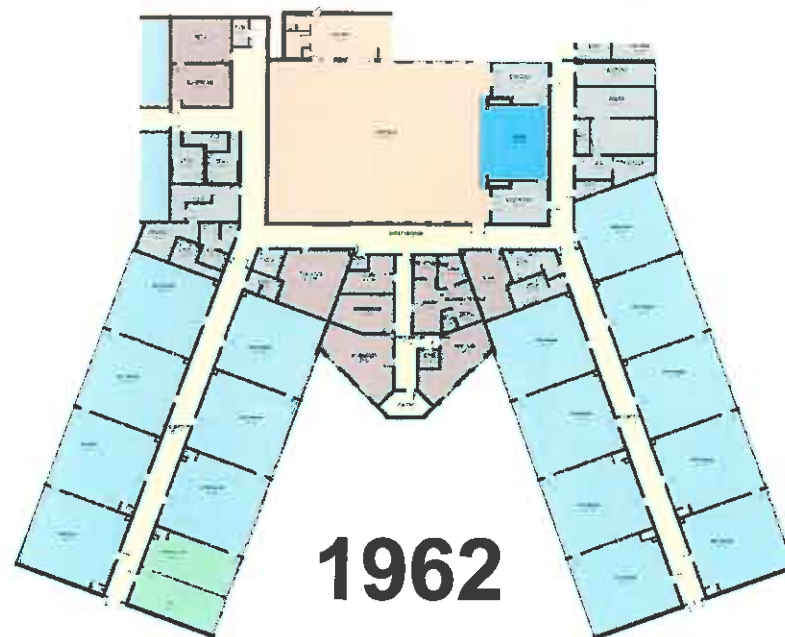
SITE ANALYSIS



EXISTING

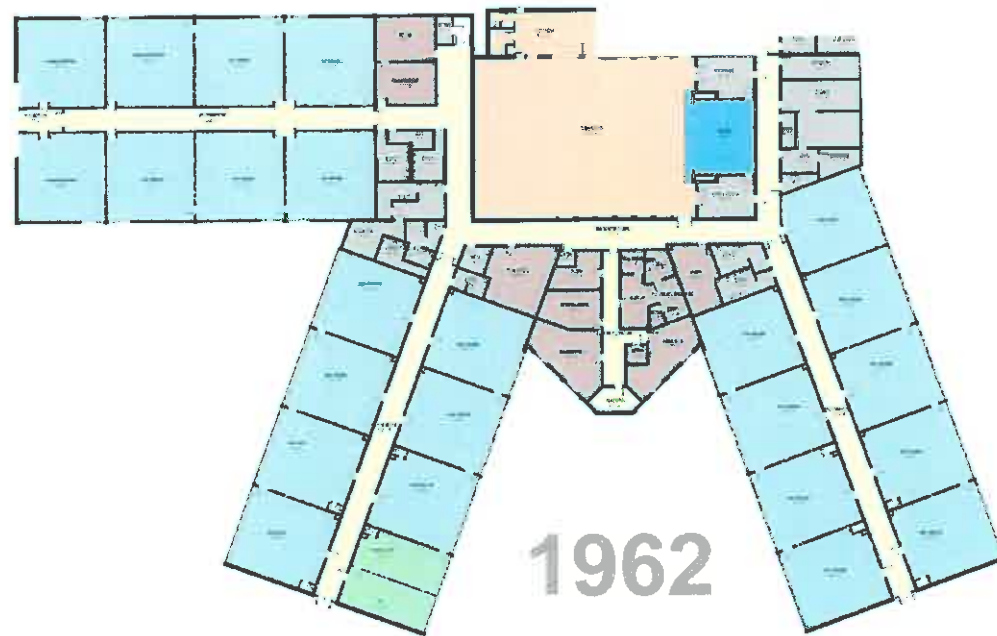


EXISTING



EXISTING

1967



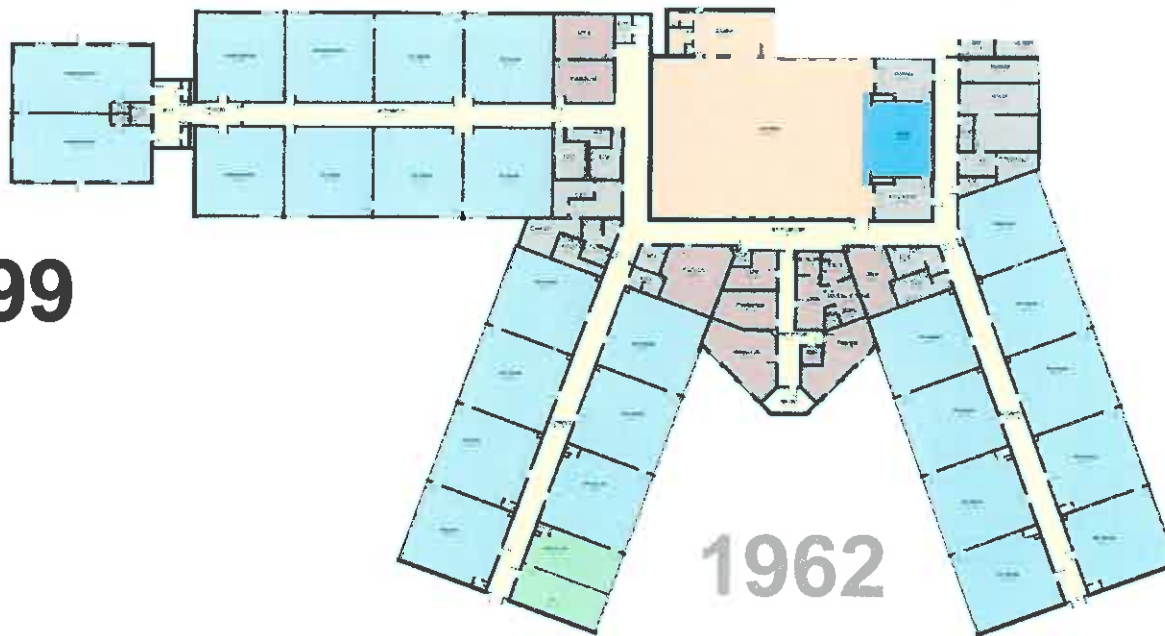
1962

EXISTING

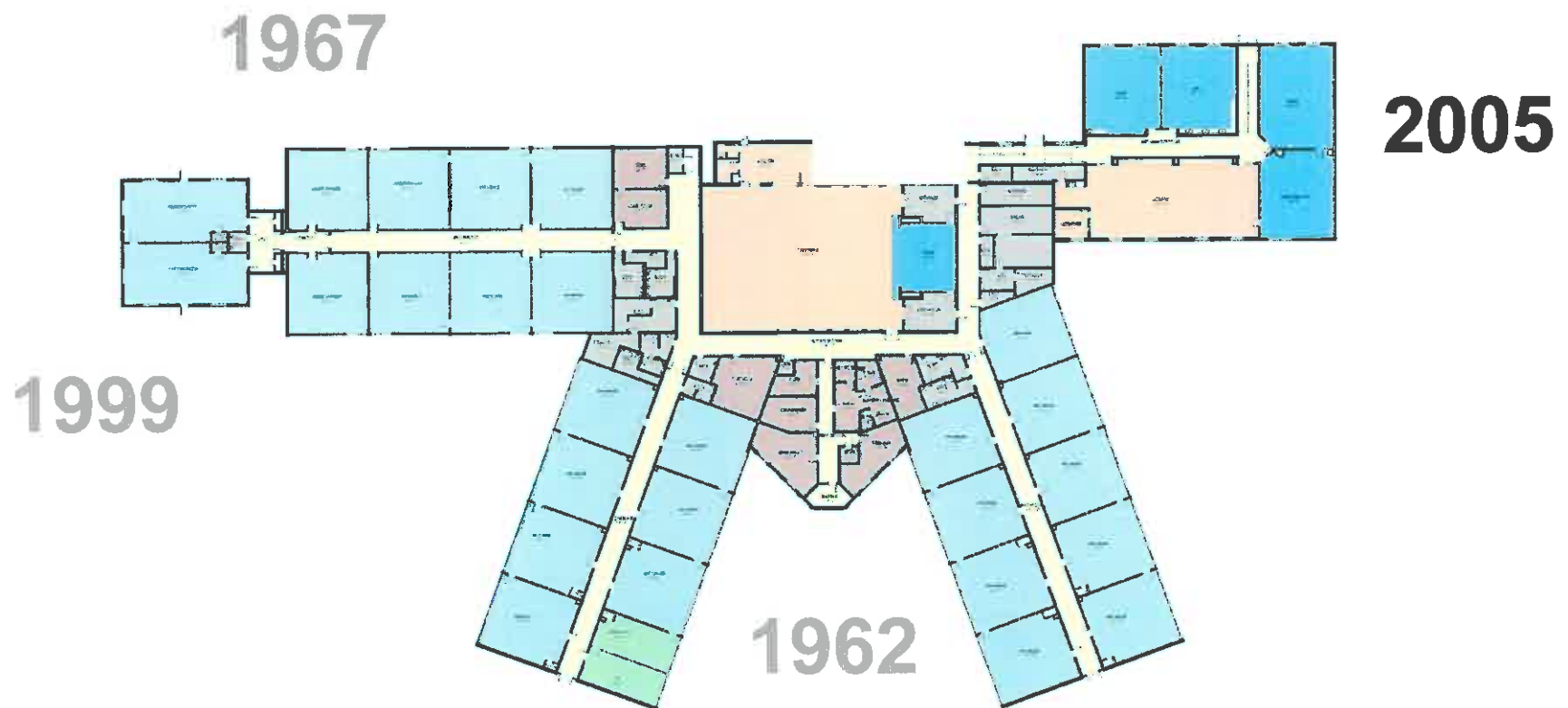
1967

1999

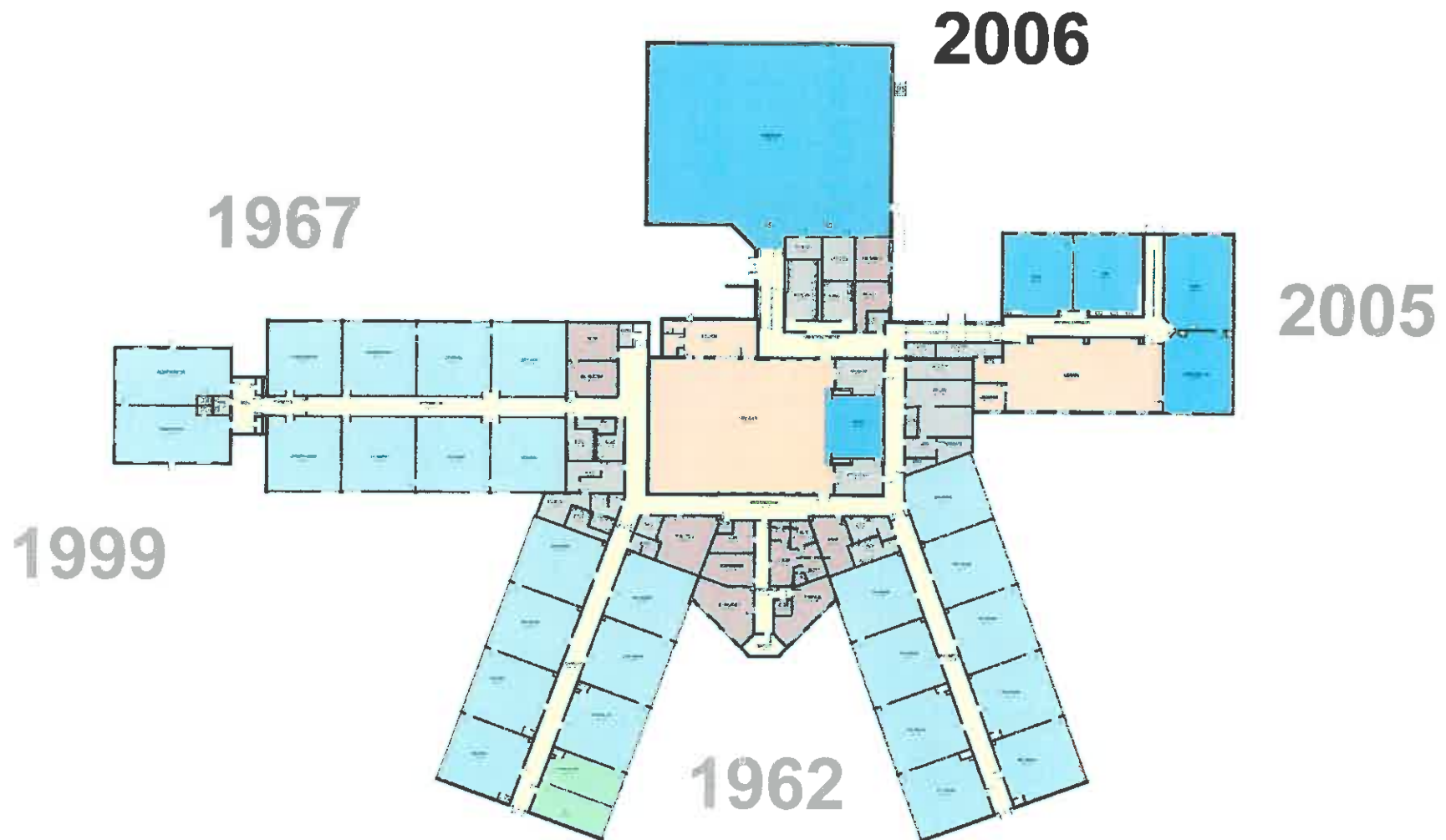
1962



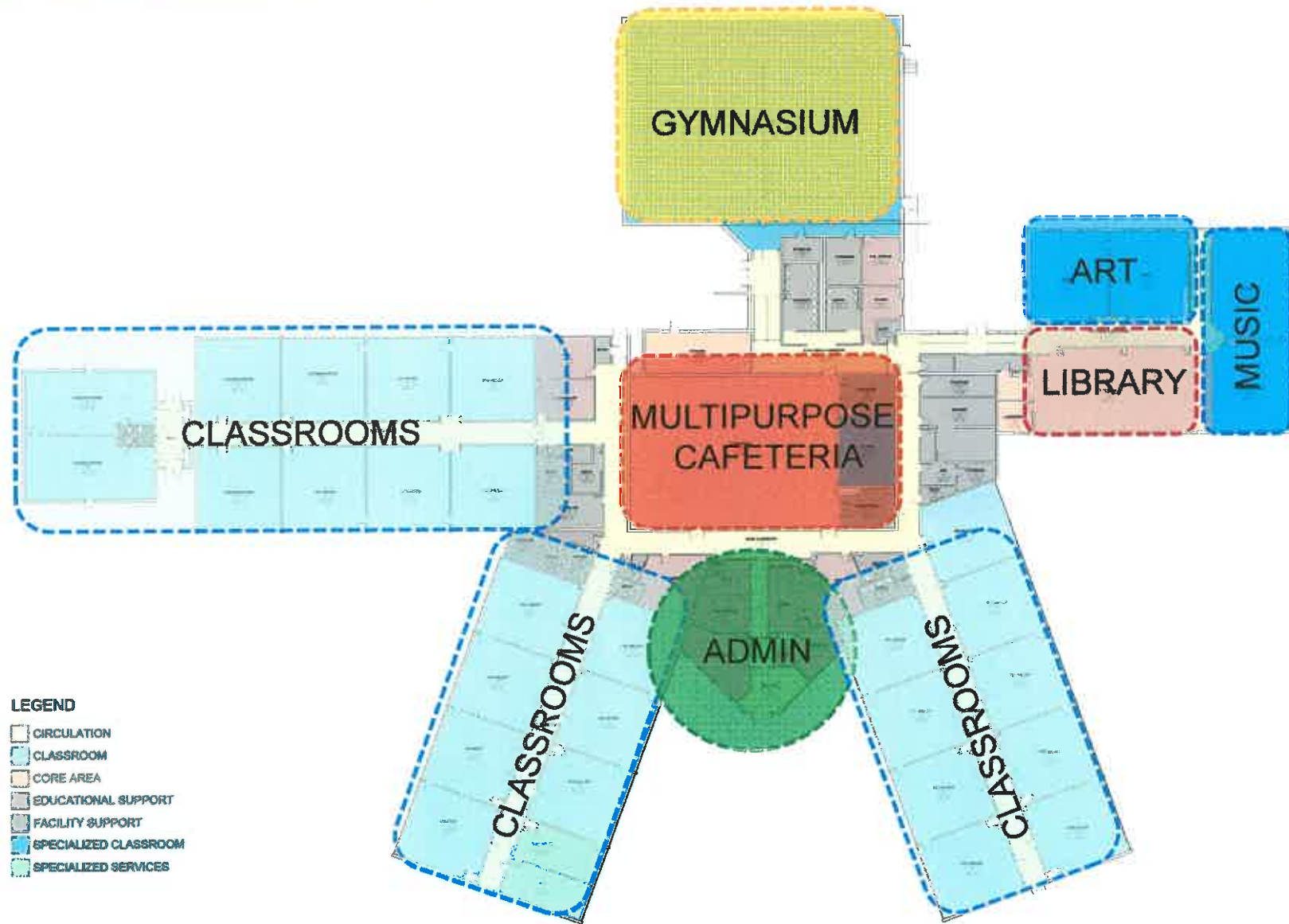
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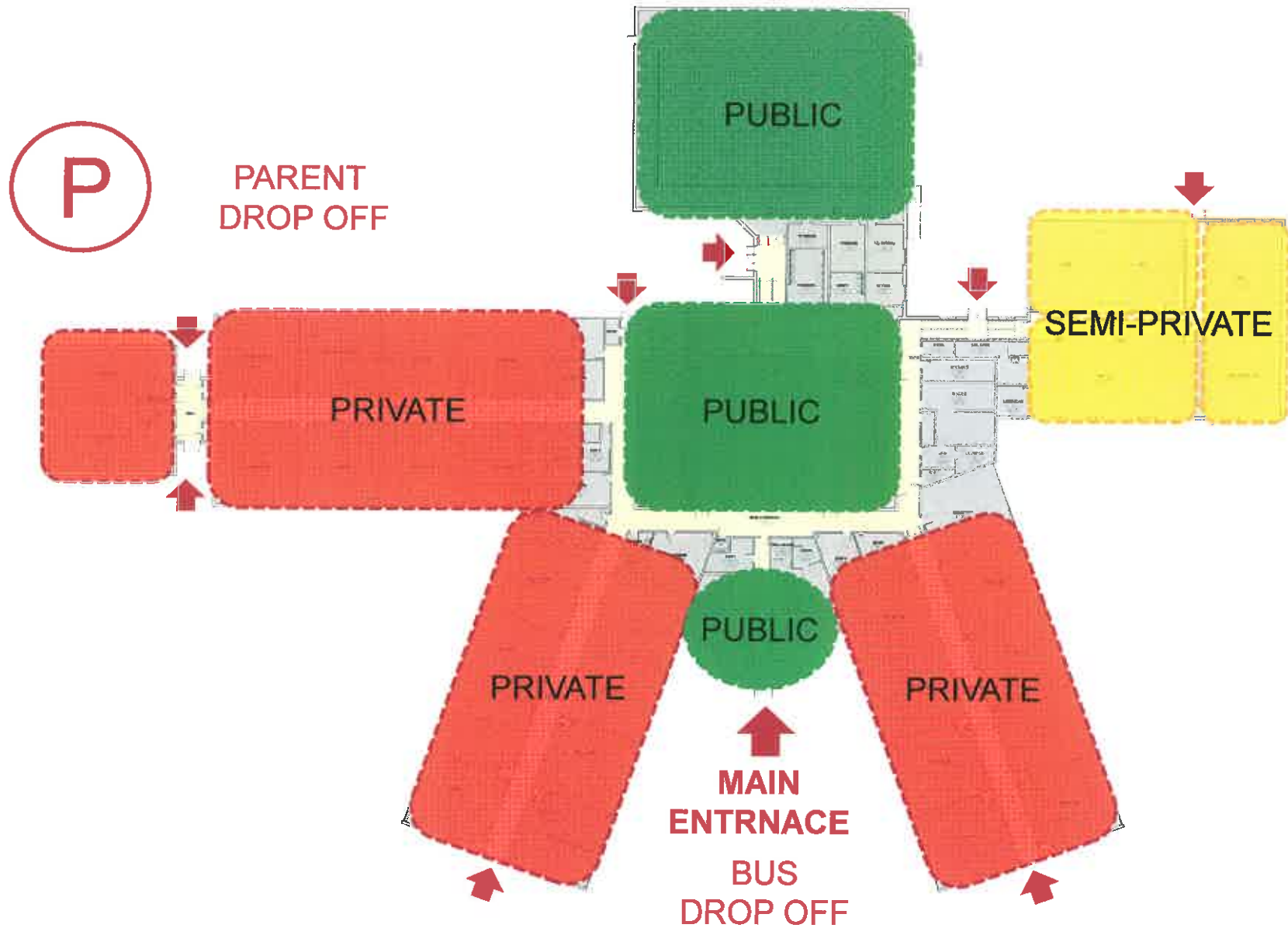
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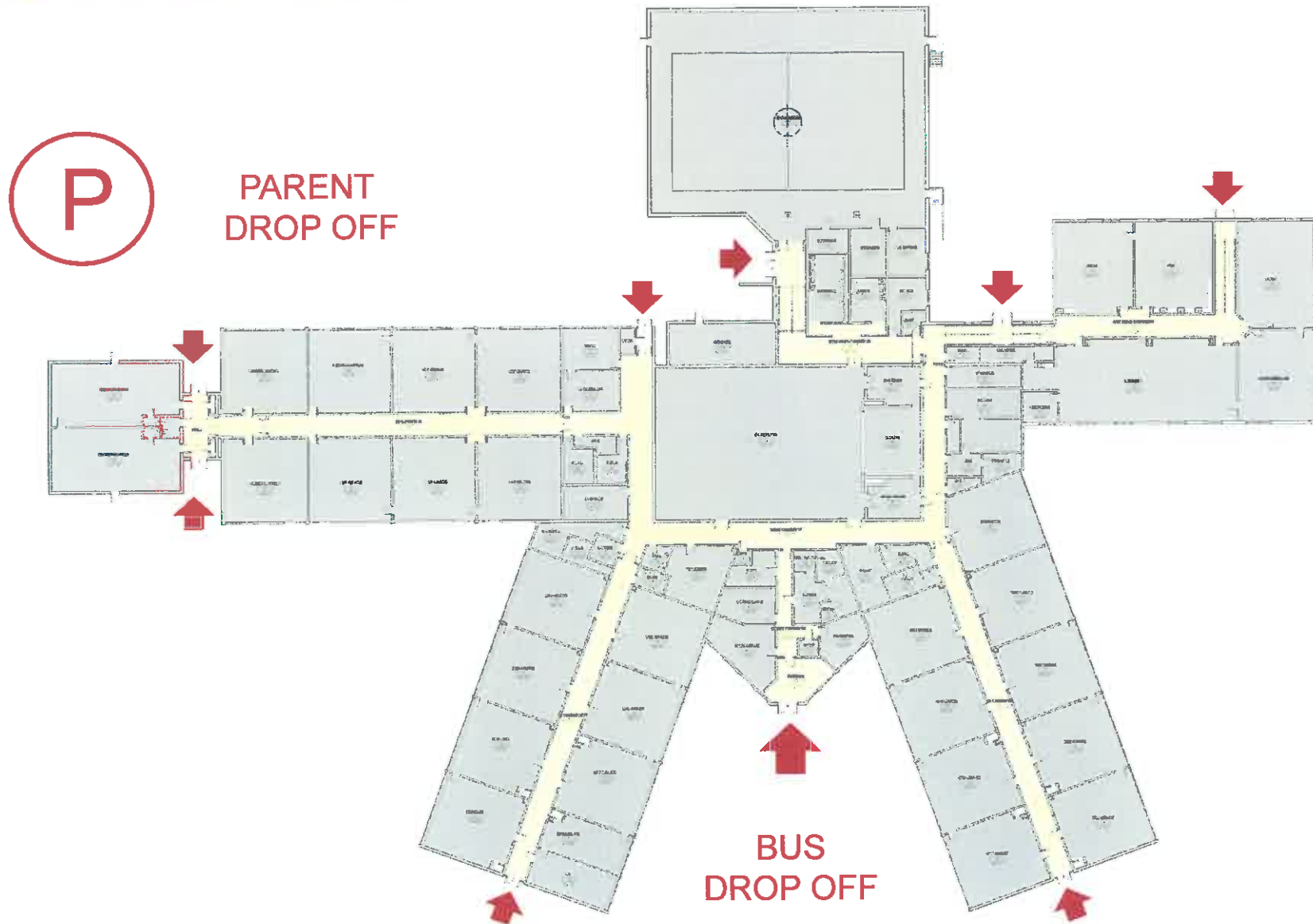
PROGRAM ORGANIZATION



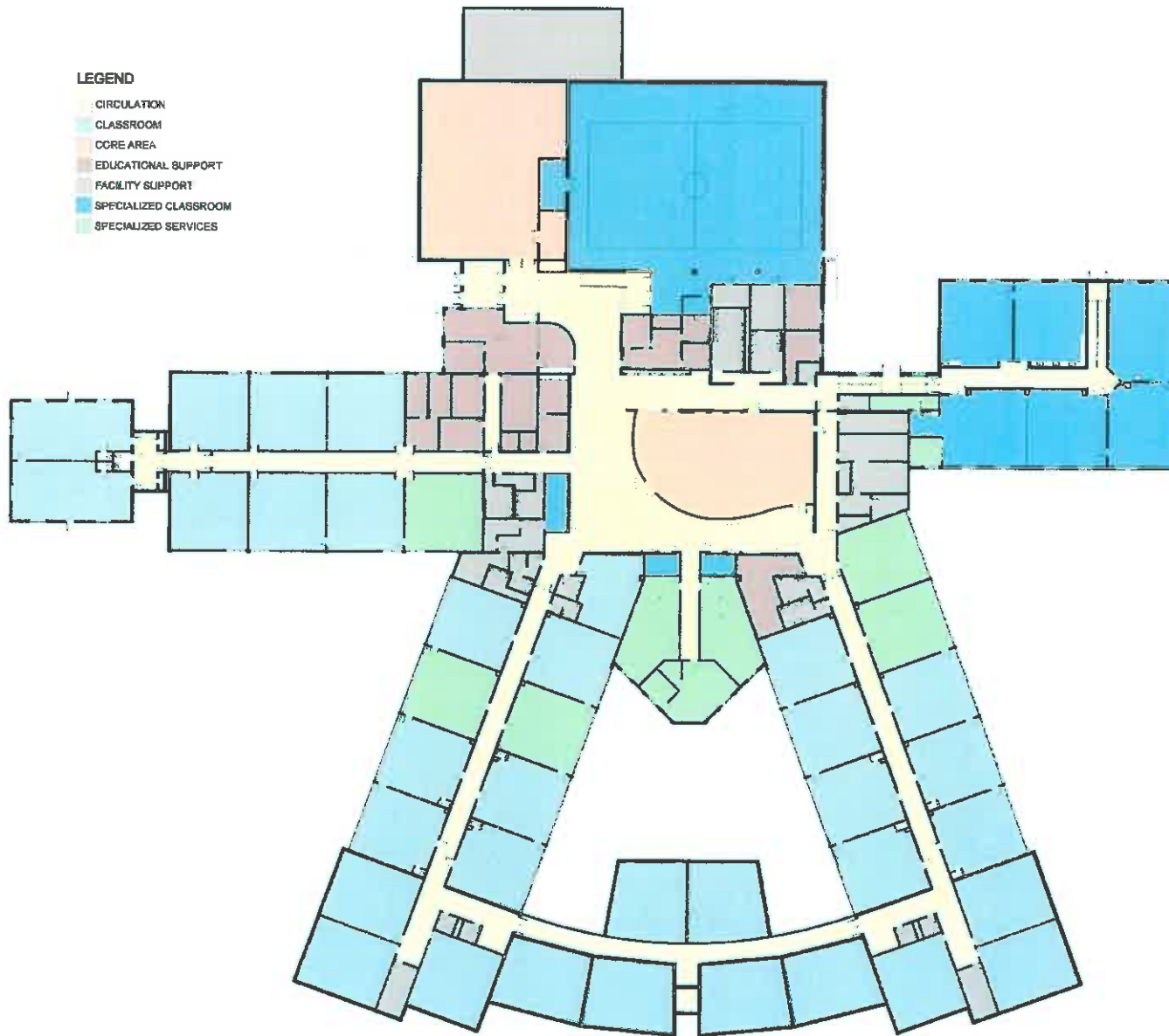
ENTRANCE ANALYSIS



ENTRANCE ANALYSIS



OPTION A / COMPLETE



OPTION A / PHASE - I

LEGEND

EXISTING

NEW CONSTRUCTION - 3128 S.F.

RENOVATION - 2216 S.F.

SYSTEM UPGRADES

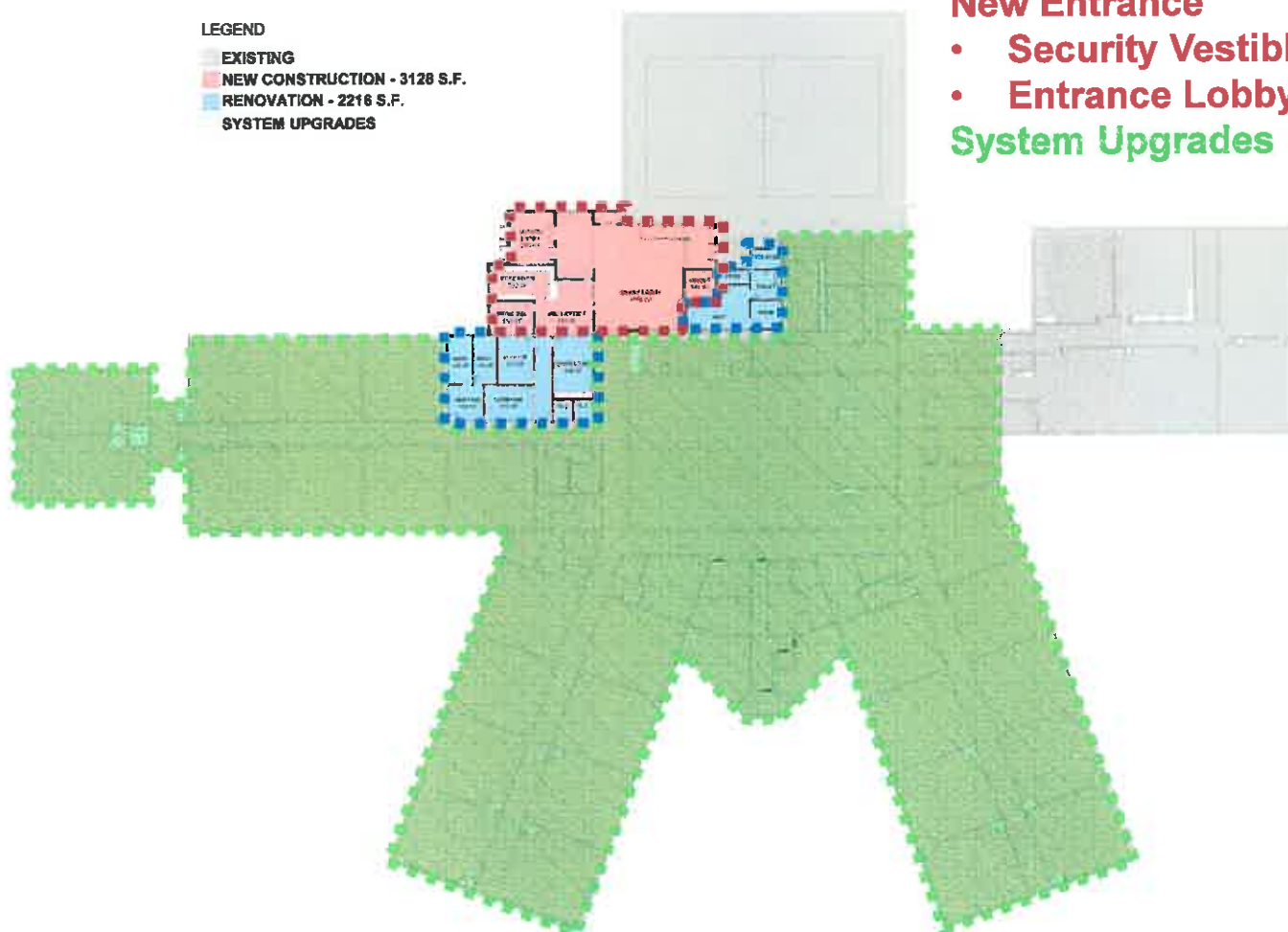
Renovations

- New Admin Area

New Entrance

- Security Vestible
- Entrance Lobby

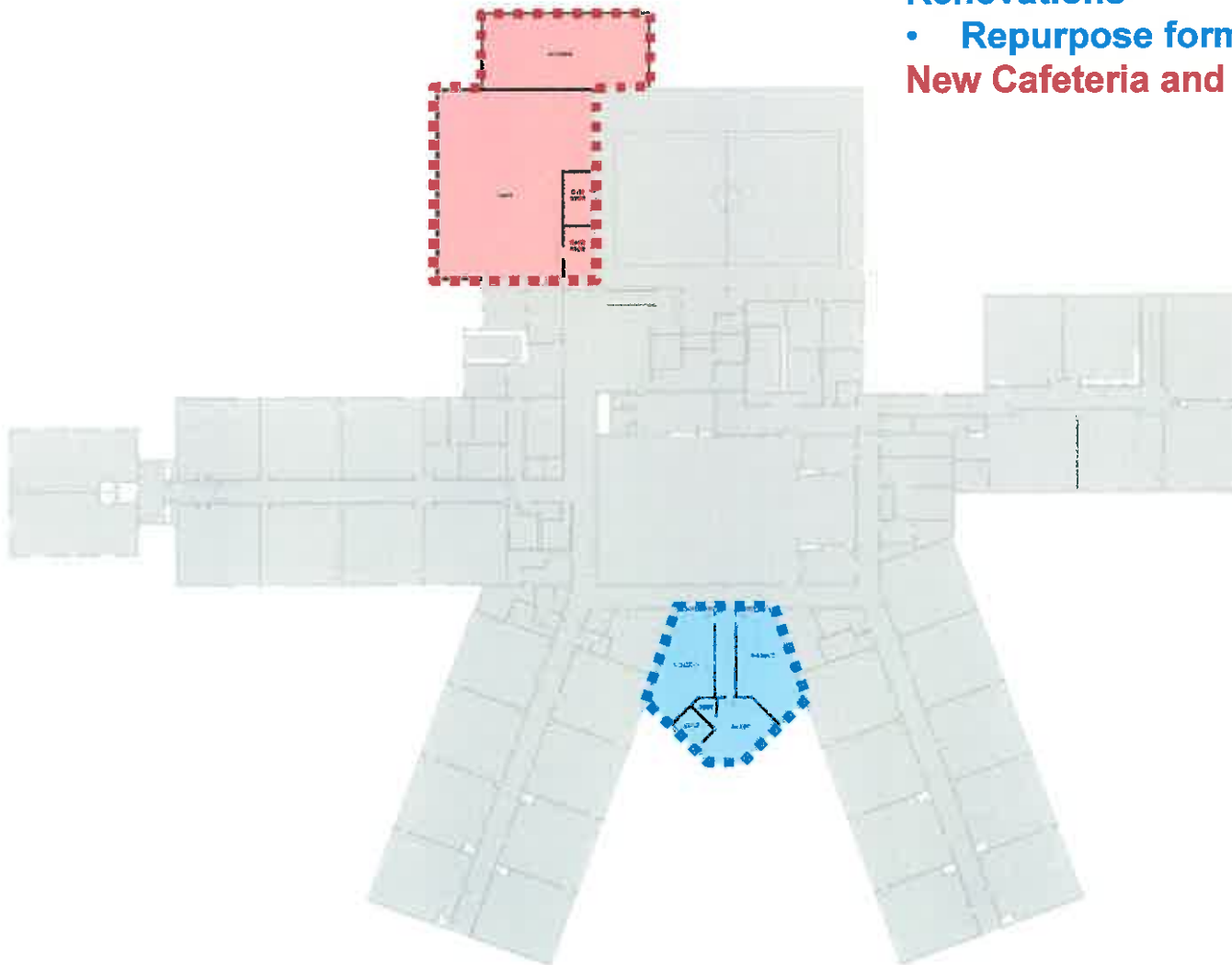
System Upgrades



OPTION A / PHASE - II

Renovations

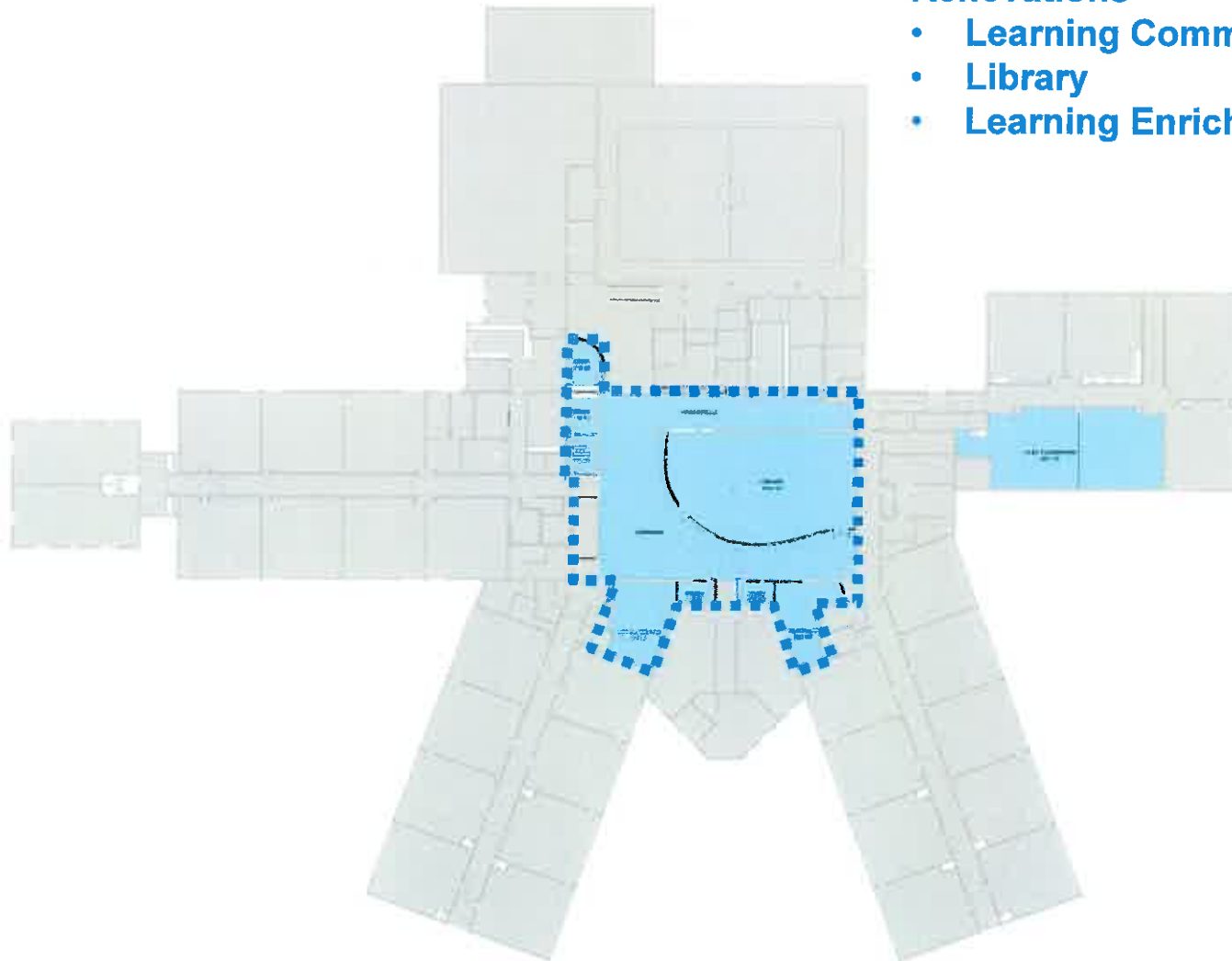
- Repurpose former Admin
- New Cafeteria and Kitchen



OPTION A / PHASE - III

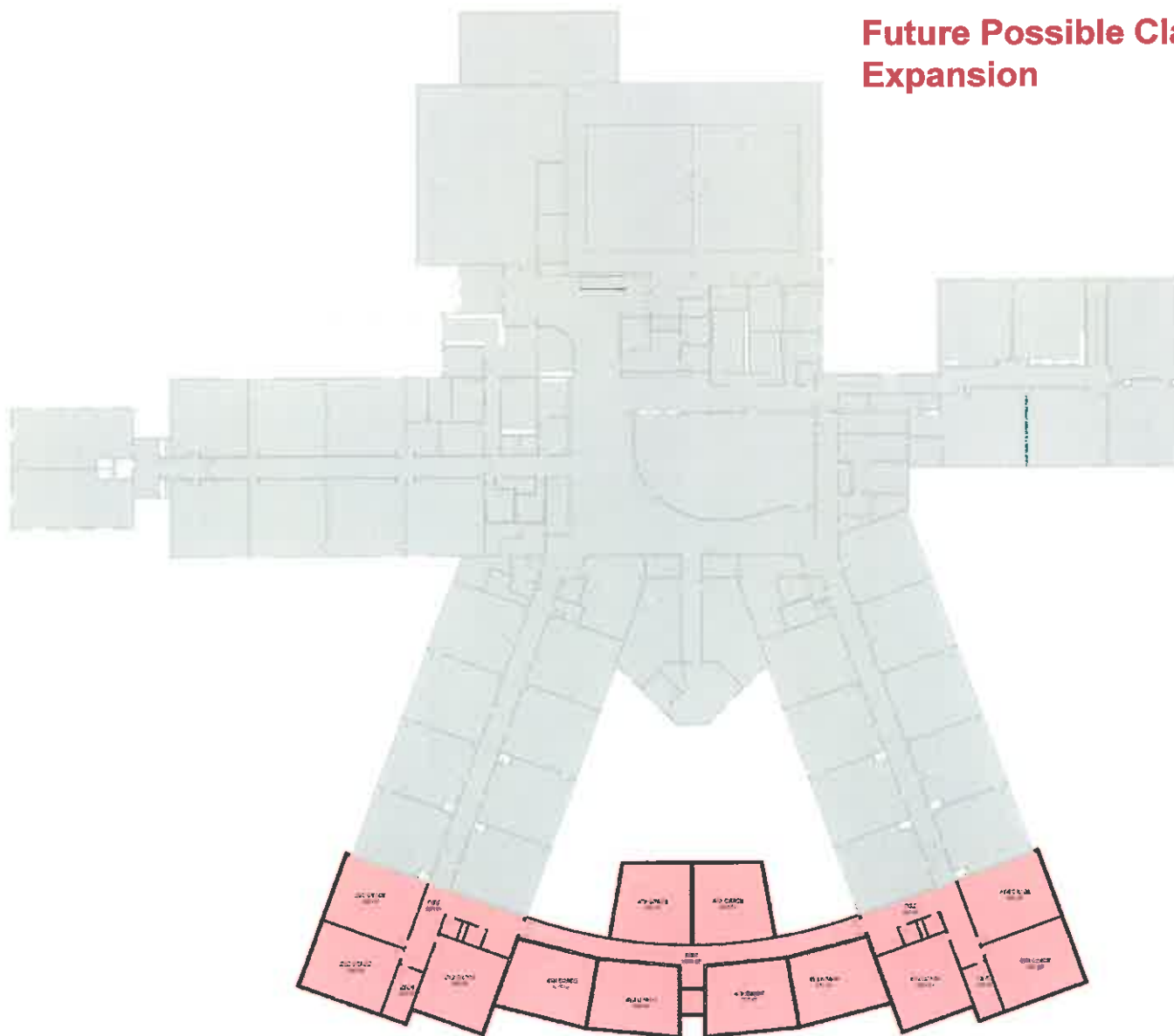
Renovations

- Learning Commons
- Library
- Learning Enrichment Rooms

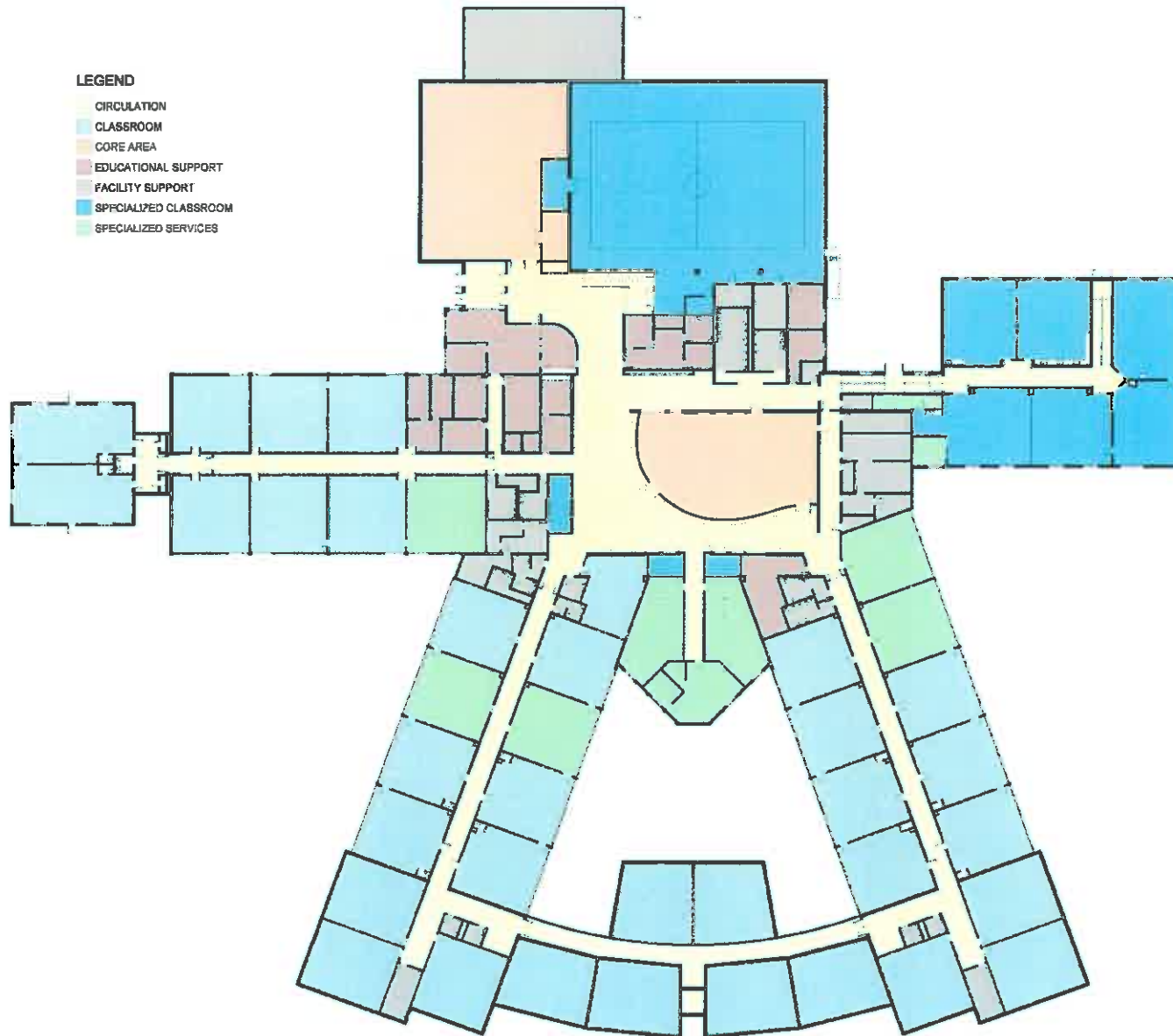


OPTION A / PHASE - IV

**Future Possible Classroom
Expansion**

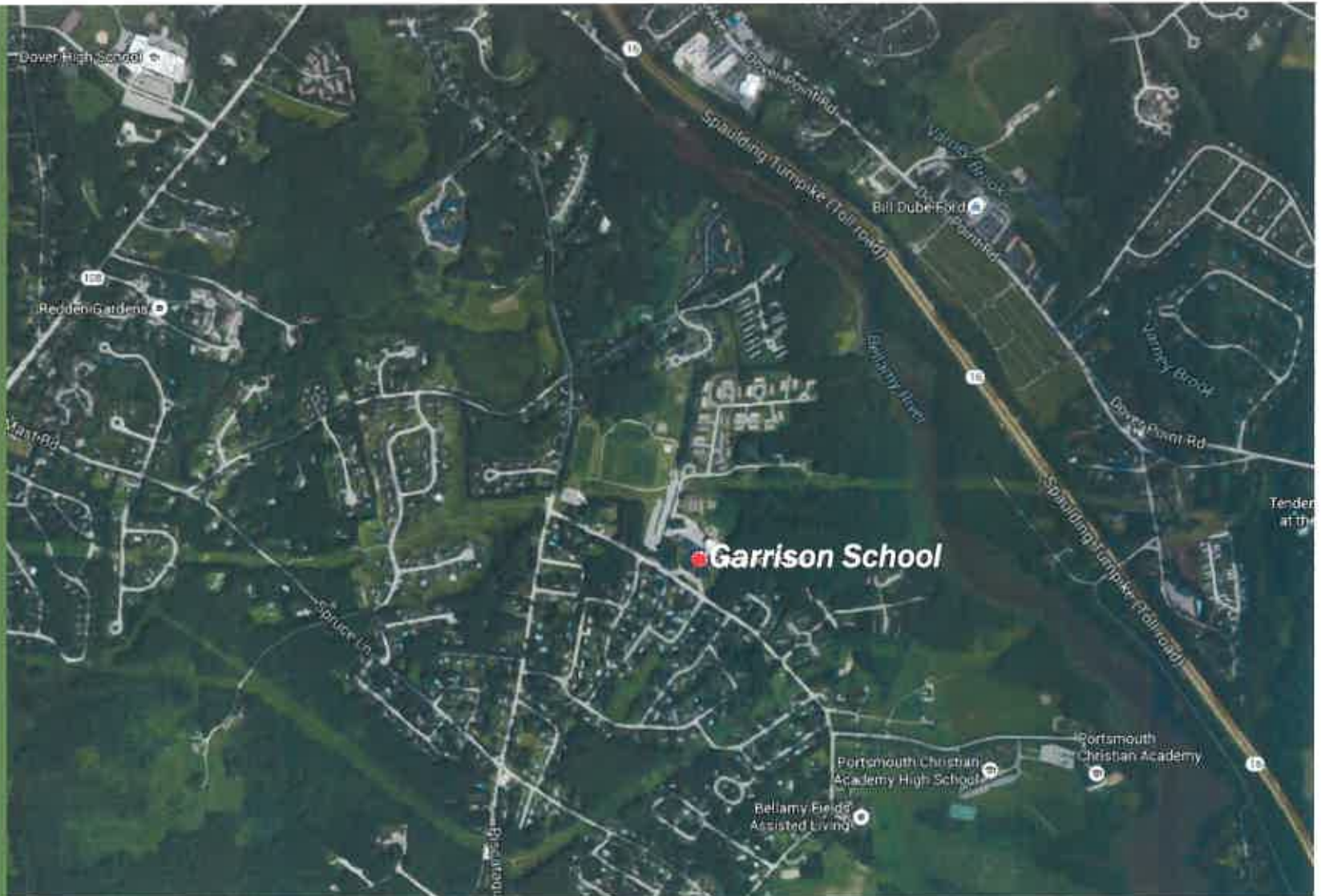


OPTION A / COMPLETE



TENTATIVE SCHEDULE

Task/Milestone	Schedule
Facility Study	Fall 2016
Phase 1 Design	Spring 2017
Construction Manager Selection	Spring 2017
Construction Start	Summer 2017
Construction Completion	Fall 2018



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