



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

September 8, 2016

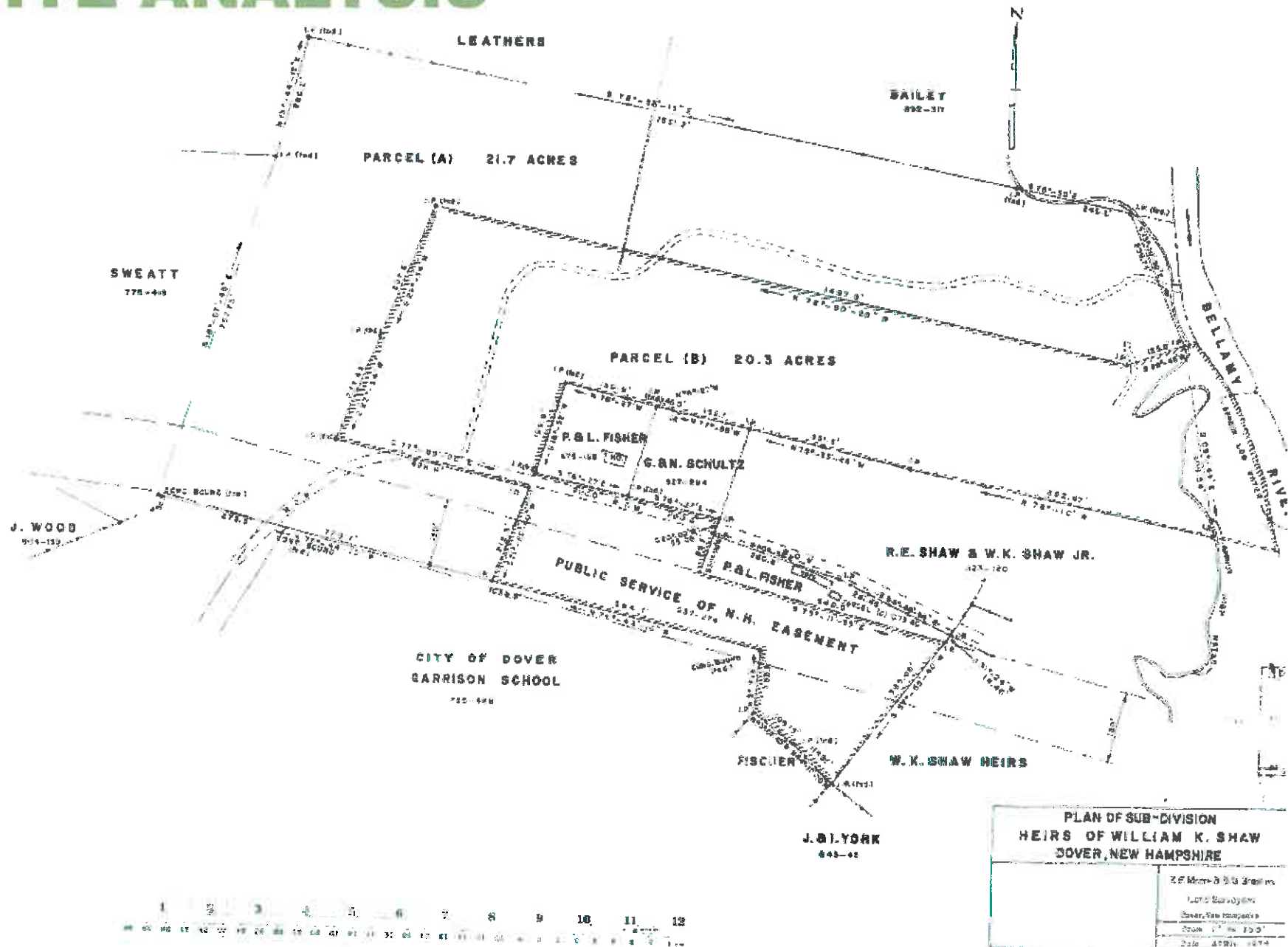


JANUARY 7, 1983 SCALE: 1"=100'

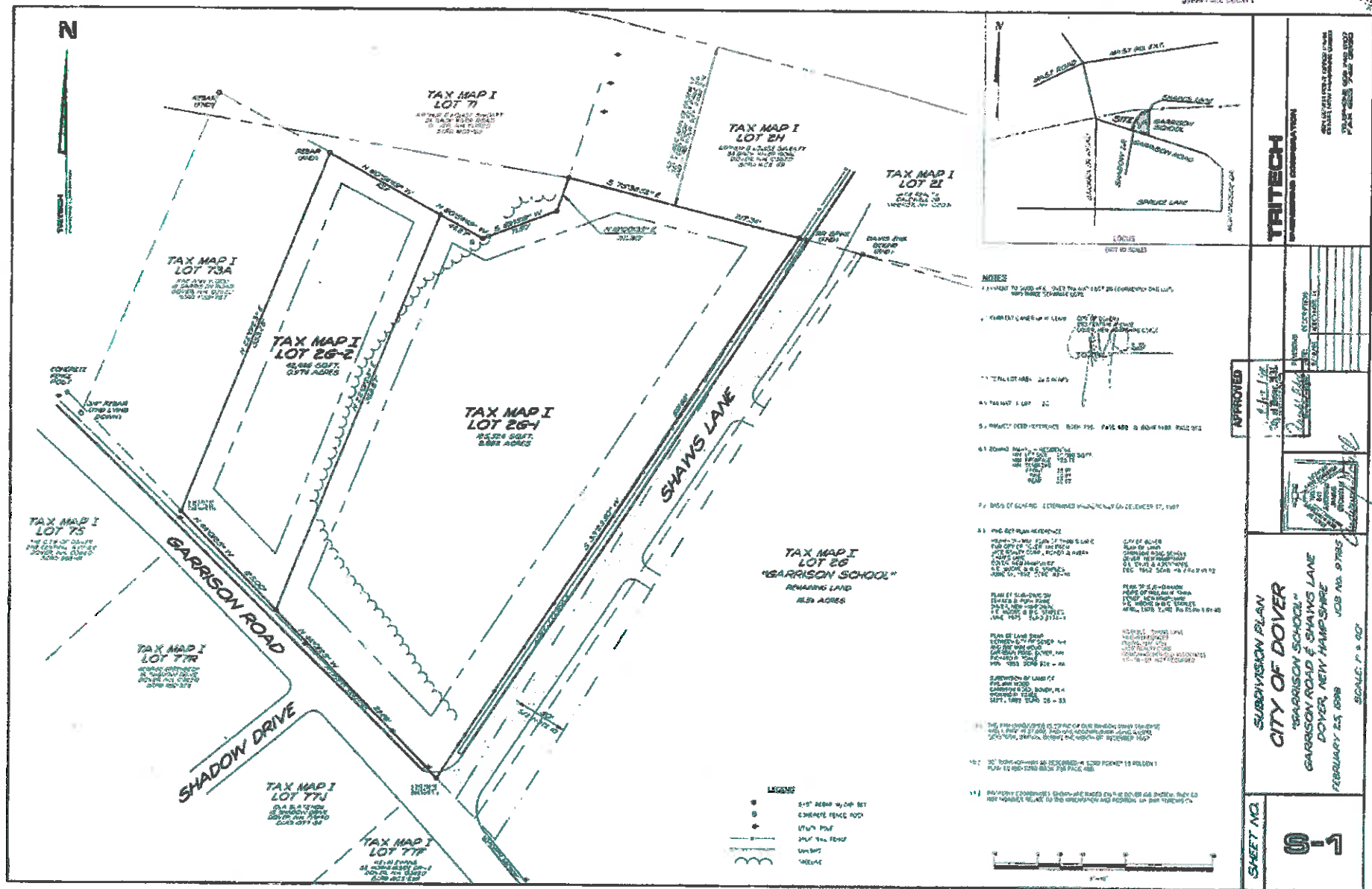
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TAKEN FROM PLAN BY C. L. DAVIS, LAND SURVEYORS

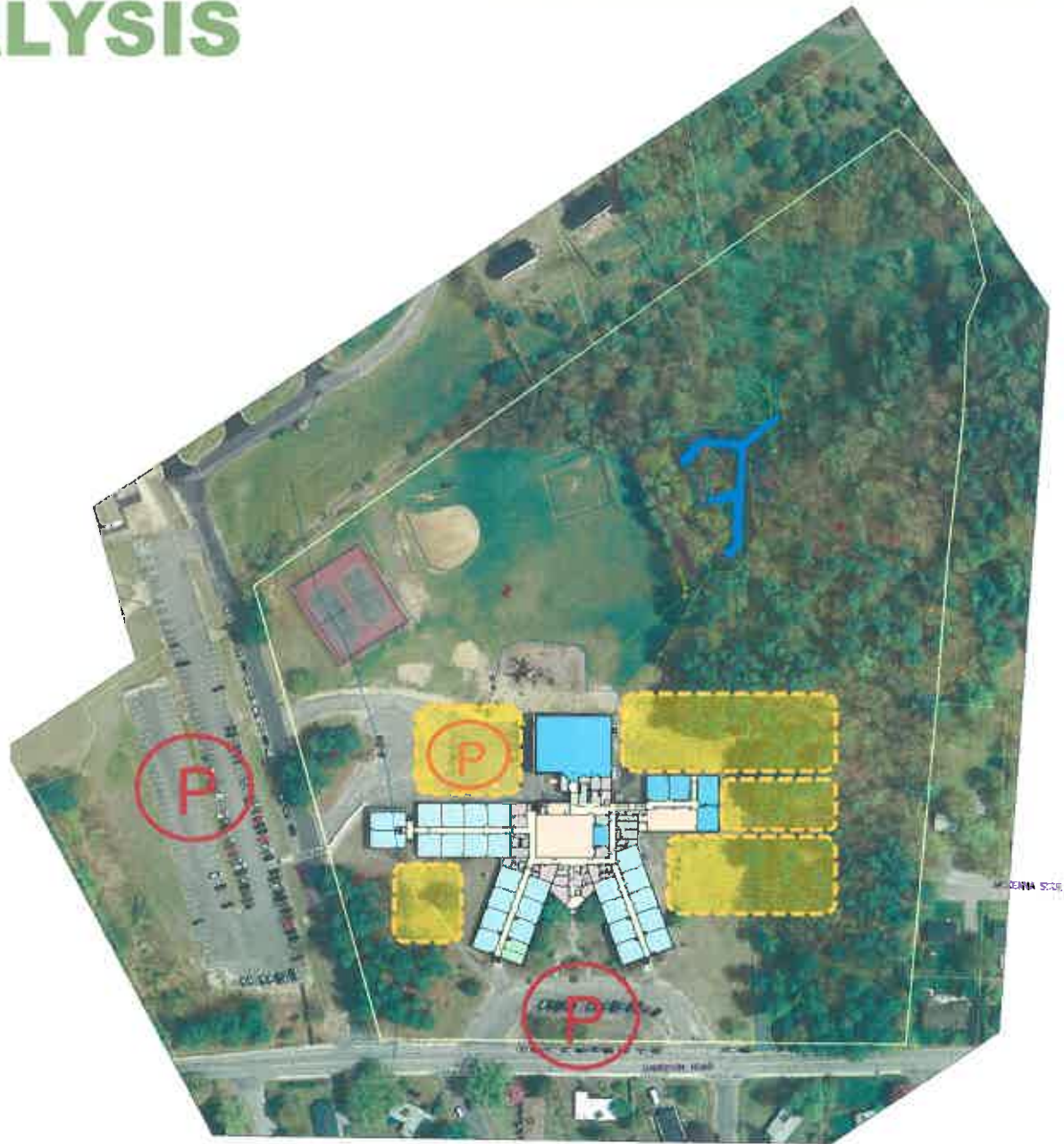
SITE ANALYSIS



SITE ANALYSIS



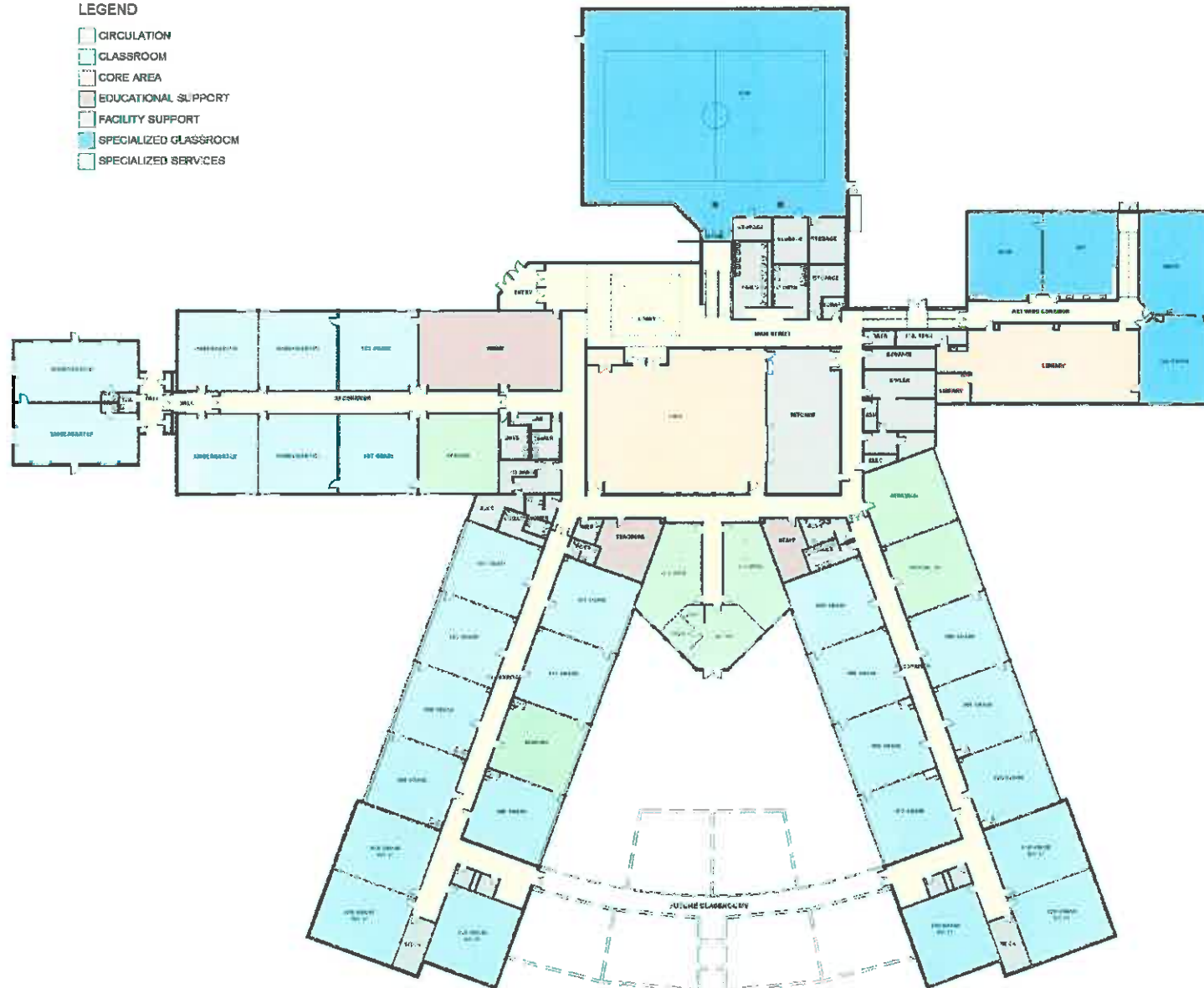
SITE ANALYSIS



REVISED SCHEME

LEGEND

- CIRCULATION
- CLASSROOM
- CORE AREA
- EDUCATIONAL SUPPORT
- FACILITY SUPPORT
- SPECIALIZED CLASSROOM
- SPECIALIZED SERVICES



FACILITIES ANALYSIS

ARCHITECTURE

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

ARCHITECTURE

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

ARCHITECTURE

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 Boilers, 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)*

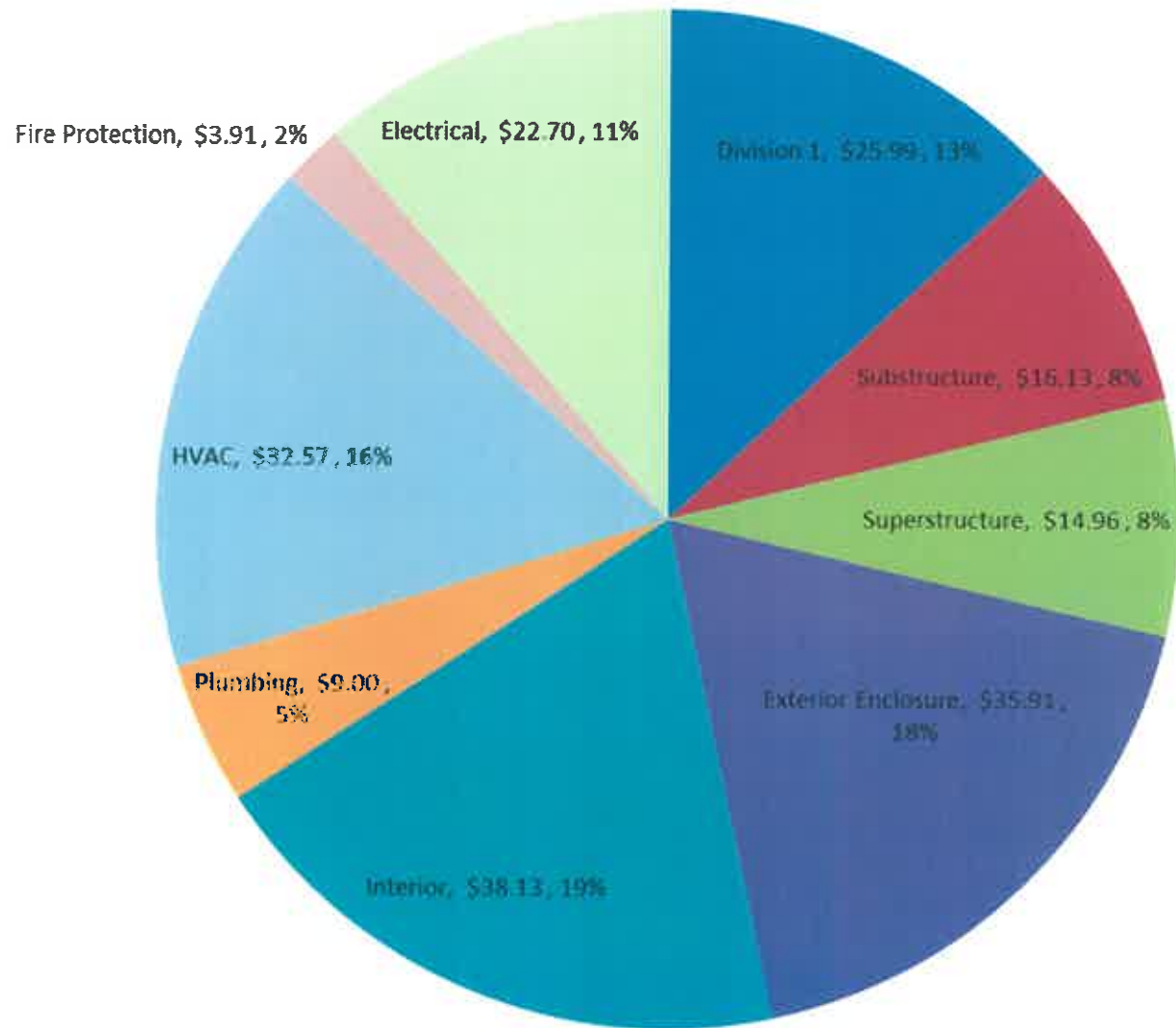
- Replace domestic water piping installed prior to 1988 (noted that all water piping installed prior to 1988 utilized a 50/50 mix of lead and tin solder)

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

CONCEPT ESTIMATE

New Construction Cost Per SF (Does not include site costs)



CONCEPT ESTIMATE

Harriman

Opinion of Probable Construction Costs

A NEW CONSTRUCTION

	Area	Cost
1 Classroom Additions	8,100	\$ 1,620,000
2 Entry	<u>2,000</u>	<u>\$ 400,000</u>
Subtotal	10,100	\$2,020,000

B RENOVATIONS

1 Admin Area	1,635	\$ 245,250
2 Classroom Wing 1	10,400	\$ 1,196,000
3 Classroom Wing 2	10,400	\$ 1,196,000
4 Classroom Wing 3/Kindergarten	12,000	\$ 1,380,000
5 Kitchen	1,500	\$ 450,000
6 Multipurpose	3,500	\$ 350,000
7 Other Misc Areas	<u>3,000</u>	<u>\$ 375,000</u>
Subtotal	42,435	\$4,817,250

C SITE WORK

1 Site work (Allowance)		<u>\$ 500,000</u>
Subtotal		\$ 500,000

D TOTAL CONSTRUCTION COST

\$7,337,250

PROJECT BUDGET

A CONSTRUCTION

1 Construction	\$7,337,250
2 Bid Contingency (5%)	<u>\$366,863</u>
Subtotal	\$7,704,113

B ADMINISTRATIVE COSTS & RESERVES

1 Land Purchase and Related Costs	\$0
2 Furniture/Equipment (6%)	\$385,206
3 Technology (3%)	\$231,123
4 Advertising and Legal	\$77,041
5 Project Reserves	\$0
6 Project Construction Contingency (5%)	<u>\$385,206</u>
Subtotal	\$1,078,576

C FEES AND SERVICES

1 Architect / Engineer Basic Services	\$693,370
2 Architect / Engineer Reimbursables	\$38,521
3 Permitting & Approvals	\$80,000
4 Survey and Soils	\$55,000
5 Construction Testing	\$40,000
6 Clerk of the Works	\$96,000
7 Commissioning	<u>\$50,000</u>
Subtotal	\$1,052,891

D TOTAL PROJECT COST

\$9,835,579

PROJECT BUDGET

A CONSTRUCTION

1 Construction	\$5,100,000
2 Bid Contingency (5%)	<u>\$255,000</u>
Subtotal	\$5,355,000

B ADMINISTRATIVE COSTS & RESERVES

1 Land Purchase and Related Costs	\$0
2 Furniture/Equipment (6%)	\$267,750
3 Technology (3%)	\$160,650
4 Advertising and Legal	\$53,550
5 Project Reserves	\$0
6 Project Construction Contingency (5%)	<u>\$267,750</u>
Subtotal	\$749,700

C FEES AND SERVICES

1 Architect / Engineer Basic Services	\$535,500
2 Architect / Engineer Reimbursables	\$26,775
3 Permitting & Approvals	\$60,000
4 Survey and Soils	\$55,000
5 Construction Testing	\$40,000
6 Clerk of the Works	\$96,000
7 Commissioning	<u>\$50,000</u>
Subtotal	\$863,275

D TOTAL PROJECT COST

\$6,967,975



Property Information
 Property ID: 0002-000001
 Location: GARFISON RD
 Owner: CITY OF DOVER



MAP FOR REFERENCE ONLY
 NOT A LEGAL DOCUMENT

City of Dover, NH makes no claim and no warranty, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Property Location:

50 Garrison Rd

Commercial Property Record Card - Dover, New Hampshire

Parcel ID: I0002-G00000

Map Block No. I-2-G-0

Class: E

Use:

903

Card 1 of 1

Current Owner City Of Dover 288 Central Ave Dover Nh 03820	Previous Owner History <table border="1"> <thead> <tr> <th>Name</th> <th>Deed</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Name	Deed	Date							Miscellaneous Deed Info: I- Zoning: RM-SU Neighborhd: 170 Units: 1	Assessment Information Assessed Value: * <table border="1"> <thead> <tr> <th>Inc:</th> <th></th> <th>Prior</th> </tr> </thead> <tbody> <tr> <td>Land:</td> <td>166,900</td> <td>166,900</td> </tr> <tr> <td>Bldg:</td> <td>3,671,400</td> <td>3,671,400</td> </tr> <tr> <td>Total:</td> <td>3,838,300</td> <td>3,838,300</td> </tr> </tbody> </table> Assessed Information: Value: 3,838,300 Effective DOV: 4/1/2015 Value Flag: COST VALUE	Inc:		Prior	Land:	166,900	166,900	Bldg:	3,671,400	3,671,400	Total:	3,838,300	3,838,300			
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Notes Garrison Elementary School	Entrance Information <table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>ID</th> <th>Actv</th> <th>Entrance Code</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>08/11/2006</td> <td>C</td> <td>TC</td> <td></td> <td>Entry Gained</td> <td></td> </tr> <tr> <td>08/11/2006</td> <td>C</td> <td>RC</td> <td></td> <td>Not At Home</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Entry & Sign</td> <td></td> </tr> </tbody> </table>	Date	Time	ID	Actv	Entrance Code	Source	08/11/2006	C	TC		Entry Gained		08/11/2006	C	RC		Not At Home						Entry & Sign			
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				Entry & Sign																							

Sales History				
Book/Page	Date	Price	Type	Validity
/				

Permit Information				
Date	Permit #	Price	Purpose	% Comp.
07/21/2015	15-260	480,000	Replc Roof	0
09/02/2005	5-365	1,515,000	11,000sf Addn	100

Land Information				
Type	Size	Grade	Influence Factor 1, 2 and %	Value
Primary	A	2.25 0	0	100,940
Residual	A	12.25 0	Shape/Size	-15 63,750
Waste	A	4.5 0	0	2,250
Total Acres for this Parcel		19	Total Land Value	166,900



5/21/2009 2:10 PM

Inspection witness by: _____

50 Garrison Rd

Commercial Property Record Card - Dover, New Hampshire

Parcel ID: 10002-G00000

Map Block No. I-2-G-0

Class: E

Use:

903

Card 1 of 1

Exterior/Interior Information

[illegible]

Building Information

Building No:	1
Year Built:	1963
No of Units:	1
Structure Type:	School

Grade:	C
Identical Units:	1
Efficiencies:	0
1 Bedroom Apts:	0
2 Bedroom Apts:	0
3 Bedroom Apts:	0
Covered Park:	0
Uncovered Park:	60
Notes:	

Building Summary

Total Unadjusted RCN:	5,940,230
Average Percent Good:	.80
Total Unadj. RCNLD:	3,564,140
Grade Factor:	1.00
No of Identical Units:	1
Economic Cond Factor:	1.00
RCNLD:	3,564,100

Income Approach Summary

Net Rentable Area:

Out Building Information

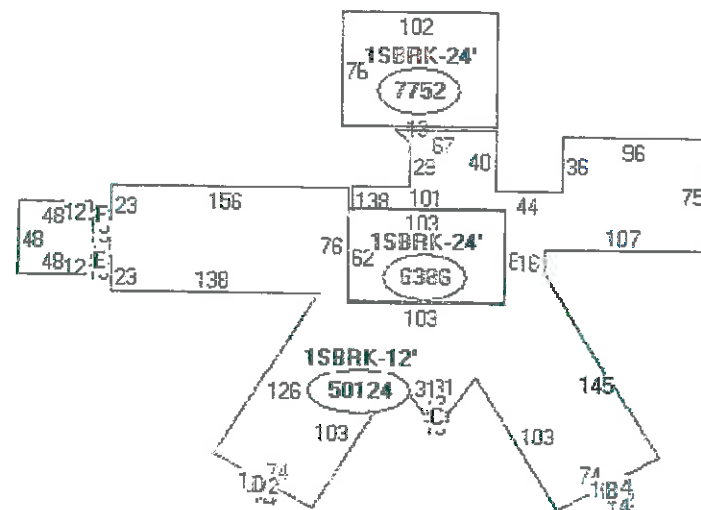
Out Building Information			Lgth/	Ident.		Physical	Functional	Percent		
StructureCode	+/-	Width	SqFt	Units	Gr	Condition	Utility	Year	Good	RCNLD
Asphalt Parking		1	38000	1	C	Normal	Normal	1999	0%	51,410
Fence Chain		1	10260	1	C	Normal	Normal	1995	0%	20,210
Tennis Court-Asph		60	120	2	C	Normal	Normal	1995	0%	35,200
Light - Pole Mounted		1	1	2	C	Normal	Normal	1995	0%	510
		0	0	0				0	0%	0
		0	0	0				0	0%	0

Other Improvements

Description	±	RCNLD
		0

Building Other Information

Line	StructureCode	Measure 1	Measure 2	IdenticalUnits
1	Sprinkler - Wet	54262	1	1
1	Porch - Open	13	1	2
1	Canopy - Only	13	1	1
1	Canopy - Only	14	1	2
0		0	0	0
0		0	0	0
0		0	0	0
0		0	0	0
Total Other Features				150,520



Descriptor/Area

A:15BRK-12'
50124 sqft

8:CP5
162 soft

C. CP5
78 sqft

D:CP5
162 sqft

E:RP1
65 sqft

F: RP1
65 sqft

G:15BRK-24'
6386 sqft

H:15BRK-24'
7752 sqft

Property Location:
Garrison Rd

Commercial Property Record Card - Dover, New Hampshire

Parcel ID: 10002-G00001

Map Block No. 1-2-G-1

Class: E

Use:

903

Card 1 of 1

Current Owner	Previous Owner History	Miscellaneous	Assessment Information																													
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Sales History				
Book/Page	Date	Price	Type	Validity
/				

Permit Information				
Date	Permit #	Price	Purpose	% Comp.
				0
				0

Land Information				
Type	Size	Grade	Influence Factor 1, 2 and %	Value
Primary	A	1 0	0	85,000
Residual	A	1.88 0	0	12,780
Total Acres for this Parcel				2.88
Total Land Value				97,800

No Picture Available

Inspection witness by: _____

Garrison Rd

Commercial Property Record Card - Dover, New Hampshire

Parcel ID: 10002-G00001

Map Block No. 1-2-G-1

Class: E

Use:

903

Card 1 of 1

Exterior/Interior Information

[illegible]

Building Information

Building No:	0
Year Built:	0
No of Units:	0
Structure Type:	
Grade:	
Identical Units:	0
Efficiencies:	0
1 Bedroom Apts:	0
2 Bedroom Apts:	0
3 Bedroom Apts:	0
Covered Park:	0
Uncovered Park:	186
Notes:	

Building Summary

Total Unadjusted RCN:	0
Average Percent Good:	.00
Total Unadj. RCNLD:	0
Grade Factor:	0.00
No of Identical Units:	0
Economic Cond Factor:	0.00
RCNLD:	0

Income Approach Summary

Net Rentable Area:

Out Building Information

Out Building Information		Lgth/	Ident.	Physical		Functional	Percent		
StructureCode	+/- Width	SqFt	Units	Gr	Condition	Utility	Year	Good	RCNLD
Asphalt Parking	1	86000	1	C	Normal	Normal	1995	0%	116,360
	0	0	0				0	0%	0
	0	0	0				0	0%	0
	0	0	0				0	0%	0
	0	0	0				0	0%	0
	0	0	0				0	0%	0

Other Improvements

Description	+/-	RCNLD
		0

Building Other Information

Line	StructureCode	+/-	Measure 1	Measure 2	IdenticalUnits
0			0	0	0
0			0	0	0
0			0	0	0
0			0	0	0
0			0	0	0
0			0	0	0
0			0	0	0
0			0	0	0
0			0	0	0
Total Other Features					0

Descriptor/Area