BORING INFORMATION

LOCATION: See plan.
GROUND SURFACE EL. (ft): 139
VERTICAL DATUM:
TOTAL DEPTH (ft): 17.0
LOGGED BY: T. Yurman
DATE START/END: 6/8/2023 - 6/8/2023
DRILLING COMPANY: New England Boring
DRILLER NAME: Dave DeAngelis
RIG TYPE:

BORING

B-3

DRILLING INFORMATION

HAMMER TYPE: Automatic
AUGER I.D./O.D.: 3.25 inch / NA
DRILLING METHOD: Hallow Stem Auger
WATER LEVEL DEPTHS (ft): ▽ 12.0 6/8/2023
CASING I.D./O.D.: NA/ NA
DRILL ROD O.D.: NM
CORE BARREL TYPE:
CORE BARREL I.D./O.D. NA / NA

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D. = Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 2	24/16	7-30-42-25		GLACIAL TILL	S1: WIDELY GRADED SAND WITH SILT AND GRAVEL (SW); 60.0% F sand, 13.1% NP fines, 26.3% F gravel, organic fibers, brown to gray, dry. TOPSOIL
		S2	2 to 4	24/10	24-23-32-30			S2: Similar to S1, gray, cobbles to small boulders.
	5	S3	4 to 6	24/17	42-42-28-22			S3: SILTY SAND WITH GRAVEL (SPM); 56.9% F-C sand, 22.6% NP fines, 20.5% F gravel, gray, dry to moist.
		S4	6 to 7.3	15/15	30-45-90/3"			S4: Similar to S3, F-C gravel, cobbles and small boulders.
130								
	10	S5	10 to 12	24/19	58-25-22-18			S5: NARROWLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~65% F sand, ~25% F-C gravel, ~10% NP fines, cobbles and small boulders, grayish brown to gray, dry to damp.
	15	S6	15 to 17	24/12	12-14-15-14			S6: SILTY SAND (SM); ~80% F-C sand, ~15% NP fines, ~5% F-C gravel, brown, wet.
120								Planned depth. Backfilled with drill cuttings.
	20							

NOTES:

PROJECT NAME: Curtis Corner Middle School
CITY/STATE: South Kingstown, Rhode Island
GEI PROJECT NUMBER: 2302440

GEI Consultants

BORING INFORMATION

LOCATION: See plan.
GROUND SURFACE EL. (ft): 128
VERTICAL DATUM:
TOTAL DEPTH (ft): 12.0
LOGGED BY: T. Yurman
DATE START/END: 6/8/2023 - 6/8/2023
DRILLING COMPANY: New England Boring
DRILLER NAME: Dave DeAngelis
RIG TYPE:

BORING

B-4

DRILLING INFORMATION

HAMMER TYPE: Automatic
AUGER I.D./O.D.: 3.25 inch / NA
DRILLING METHOD: Hallow Stem Auger
CASING I.D./O.D.: NA/ NA
DRILL ROD O.D.: NM
CORE BARREL TYPE:
CORE BARREL I.D./O.D. NA / NA
WATER LEVEL DEPTHS (ft): ▽ 7.0 6/8/2023

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D. = Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0.5 to 2.5	24/14	12-8-9-8		GLACIAL TILL	3 inches of ASPHALT S1: NARROWLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% F-M sand, ~15% F-C gravel, ~10% NP fines, cobbles to small boulders, light brown to bornw, dry.
		S2	2.5 to 4.5	24/2	7-4-4-5			S2: NARROWLY GRADED SAND (SP); ~90% F-M sand, ~5% F gravel, ~5% NP fines, poor recovery.
	5	S3	4.5 to 6.5	24/7	3-4-7-6		SILT	S3: SILT WITH SAND (ML); ~90% NP fines,~10% F sand, brown, moist.
120		S4	6.5 to 8.5	24/15	8-9-21-26			S4: SILT (ML); ~90% LP-MP fines, ~5% F sand, ~5% F gravel, , brown, wet.
	10	S5	10 to 12	24/10	15-20-15-11			S5: SILT WITH SAND (ML); ~90% NP-LP fines, ~15% F sand, ~5% F gravel, cobbles to small boulders, brown, moist, damp.
								Planned depth. Backfilled with drill cuttings.
110	15							
	20							

NOTES:

PROJECT NAME: Curtis Corner Middle School
CITY/STATE: South Kingstown, Rhode Island
GEI PROJECT NUMBER: 2302440

GEI Consultants

BORING INFORMATION

LOCATION: See plan.

GROUND SURFACE EL. (ft): 135 **DATE START/END:** 6/8/2023 - 6/8/2023

VERTICAL DATUM: **DRILLING COMPANY:** New England Boring

TOTAL DEPTH (ft): 5.5 **DRILLER NAME:** Dave DeAngelis

LOGGED BY: T. Yurman **RIG TYPE:**

BORING

B-5

DRILLING INFORMATION

HAMMER TYPE: Automatic **CASING I.D./O.D.:** NA/ NA **CORE BARREL TYPE:**

AUGER I.D./O.D.: 3.25 inch / NA **DRILL ROD O.D.:** NM **CORE BARREL I.D./O.D.** NA / NA

DRILLING METHOD: Hallow Stem Auger

WATER LEVEL DEPTHS (ft): Free groundwater not encountered.

ABBREVIATIONS:

Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer

S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger

Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D. = Inside Diameter/Outside Diameter

NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0.5 to 2.5	24/16	5-6-4-4		SILT	3 inches of ASPHALT S1: SILT WITH SAND (ML); ~90% NP fines, ~10% F sand, brown, dry to moist.
		S2	2.5 to 4.5	24/10	4-8-35-33			S2: Similar to S1, cobbles to small boulders.
130	5	S3	4.5 to 5.3	10/10	18-82/4"	Auger grinding.		S3: SILT WITH SAND (ML); ~85% NP fines, ~10% F sand, ~5% F gravel, brown, dry to moist. Auger refusal at 5.5 FT. Backfilled with drill cuttings.
	10							
120	15							
	20							

NOTES:

PROJECT NAME: Curtis Corner Middle School

CITY/STATE: South Kingstown, Rhode Island

GEI PROJECT NUMBER: 2302440

GEI Consultants

BORING INFORMATION

LOCATION: See plan.

GROUND SURFACE EL. (ft): 137 **DATE START/END:** 6/8/2023 - 6/8/2023

VERTICAL DATUM: **DRILLING COMPANY:** New England Boring

TOTAL DEPTH (ft): 8.5 **DRILLER NAME:** Dave DeAngelis

LOGGED BY: T. Yurman **RIG TYPE:**

BORING

AP-1

DRILLING INFORMATION

HAMMER TYPE: Automatic **CASING I.D./O.D.:** NA/ NA **CORE BARREL TYPE:**

AUGER I.D./O.D.: 2.25 inch / NA **DRILL ROD O.D.:** NM **CORE BARREL I.D./O.D.** NA / NA

DRILLING METHOD: Solid Stem Auger

WATER LEVEL DEPTHS (ft): Wet cuttings observed at 6 FT.

ABBREVIATIONS:

Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer

S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger

Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D. = Inside Diameter/Outside Diameter

NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
130	5					Auger grinding.		Auger drilling, no sampling at 0-8.5 ft. Brown, dry, SILTY SAND Cobbles to small boulders, damp to wet.
120	10 15 20					Auger refusal.		Auger refusal at 8.5 FT. Backfilled with drill cuttings.

NOTES:

PROJECT NAME: Curtis Corner Middle School

CITY/STATE: South Kingstown, Rhode Island

GEI PROJECT NUMBER: 2302440

GEI Consultants

BORING INFORMATION

LOCATION: See plan.

GROUND SURFACE EL. (ft): 135 **DATE START/END:** 6/8/2023 - 6/8/2023

VERTICAL DATUM: **DRILLING COMPANY:** New England Boring

TOTAL DEPTH (ft): 12.0 **DRILLER NAME:** Dave DeAngelis

LOGGED BY: T. Yurman **RIG TYPE:**

BORING

AP-2

DRILLING INFORMATION

HAMMER TYPE: Automatic **CASING I.D./O.D.:** NA/ NA **CORE BARREL TYPE:**

AUGER I.D./O.D.: 2.25 inch / NA **DRILL ROD O.D.:** NM **CORE BARREL I.D./O.D.** NA / NA

DRILLING METHOD: Solid Stem Auger

WATER LEVEL DEPTHS (ft): Free groundwater not encountered.

ABBREVIATIONS:

Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer

S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger

Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D. = Inside Diameter/Outside Diameter

NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
						Auger grinding.		Auger drilling, no sampling at 0-12.0 ft. Brown, dry, SILTY SAND
130	5					Auger grinding.		Brown, dry, SILTY SAND AND GRAVEL. Brown, dry to moist, SILTY SAND AND GRAVEL.
	10							
120	15							Planned depth. Backfilled with drill cuttings.
	20							

NOTES:

PROJECT NAME: Curtis Corner Middle School

CITY/STATE: South Kingstown, Rhode Island

GEI PROJECT NUMBER: 2302440

GEI Consultants

BORING INFORMATION

LOCATION: See plan.

GROUND SURFACE EL. (ft): 138 **DATE START/END:** 6/8/2023 - 6/8/2023

VERTICAL DATUM: **DRILLING COMPANY:** New England Boring

TOTAL DEPTH (ft): 12.0 **DRILLER NAME:** Dave DeAngelis

LOGGED BY: T. Yurman **RIG TYPE:**

BORING

AP-3

DRILLING INFORMATION

HAMMER TYPE: Automatic **CASING I.D./O.D.:** NA/ NA **CORE BARREL TYPE:**

AUGER I.D./O.D.: 2.25 inch / NA **DRILL ROD O.D.:** NM **CORE BARREL I.D./O.D.** NA / NA

DRILLING METHOD: Solid Stem Auger

WATER LEVEL DEPTHS (ft): Free groundwater not encountered.

ABBREVIATIONS:

Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer

S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger

Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D. = Inside Diameter/Outside Diameter

NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
								Auger drilling, no sampling at 0-12.0 ft. Brown, dry, SILTY SAND with cobbles and small boulders.
						Auger grinding.		
	5					Auger grinding.		
130						Auger grinding.		Brown, moist, SILTY SAND.
	10							Cobbles and small boulders.
						Auger grinding.		Planned depth. Backfilled with drill cuttings.
	15							
120								
	20							

NOTES:

PROJECT NAME: Curtis Corner Middle School

CITY/STATE: South Kingstown, Rhode Island

GEI PROJECT NUMBER: 2302440

GEI Consultants

Appendix B

Laboratory Test Results

Client:	GEI Consultants, Inc.				
Project:	Curtis Corner MS				
Location:	South Kingston, RI			Project No:	GTX-317490
Boring ID:	---	Sample Type:	---	Tested By:	ckg
Sample ID:	---	Test Date:	07/13/23	Checked By:	jsc
Depth :	---	Test Id:	724227		

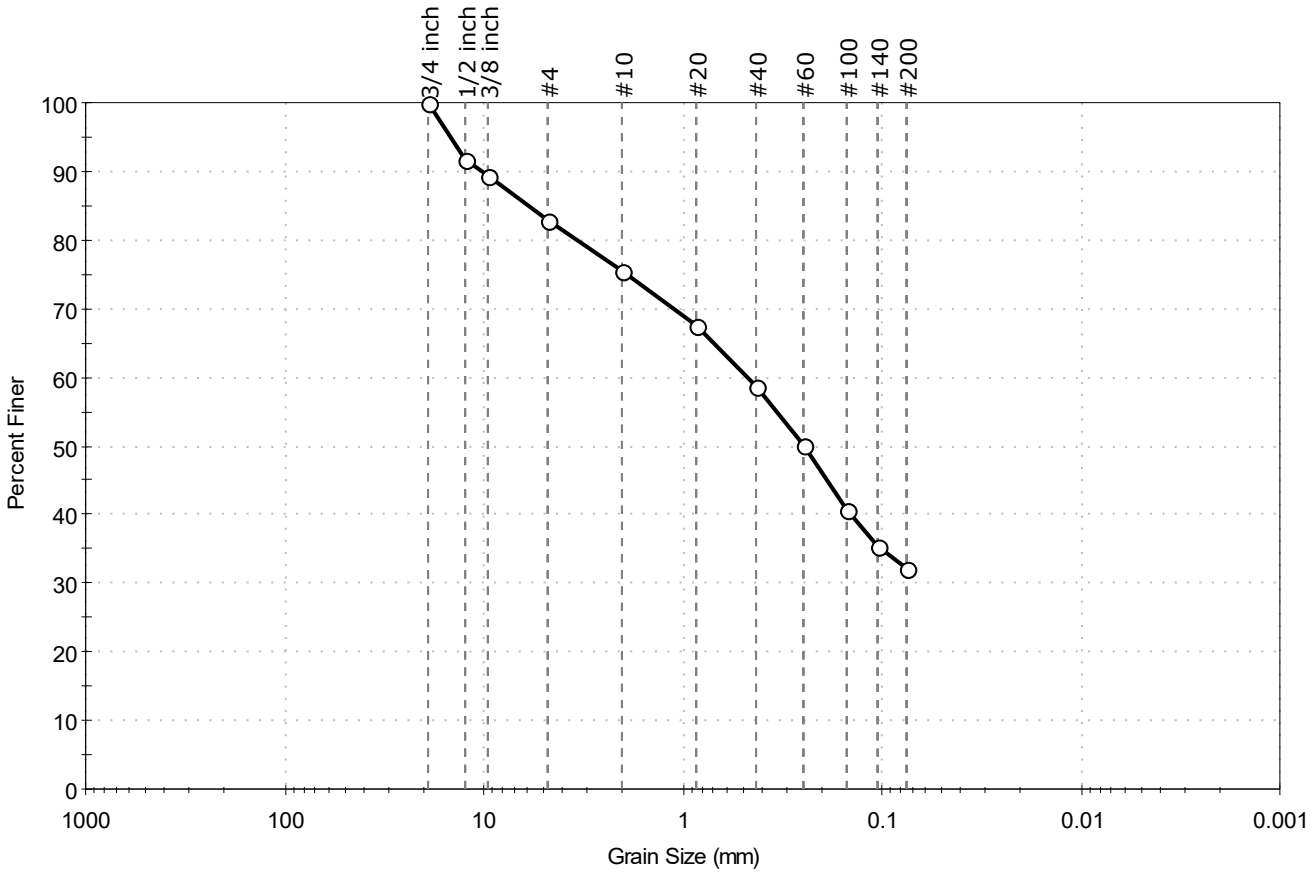
Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content,%
B-2	S3	4-6'	Moist, pale brown silty sand with gravel	4.3
B-3	S1	0-2'	Moist, pale brown silty sand with gravel	4.1
B-3	S3	4-6'	Moist, gray silty sand with gravel	6.2

Notes: Temperature of Drying : 110º Celsius

Client:	GEI Consultants, Inc.				
Project:	Curtis Corner MS				
Location:	South Kingston, RI			Project No:	GTX-317490
Boring ID:	B-2	Sample Type:	jar	Tested By:	ckg
Sample ID:	S3	Test Date:	07/14/23	Checked By:	jsc
Depth :	4-6'	Test Id:	724225		
Test Comment:	---				
Visual Description:	Moist, pale brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	17.0	50.7	32.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.50	92		
3/8 inch	9.50	89		
#4	4.75	83		
#10	2.00	76		
#20	0.85	67		
#40	0.42	59		
#60	0.25	50		
#100	0.15	41		
#140	0.11	36		
#200	0.075	32		

Coefficients

D_{85} = 5.9120 mm D_{30} = N/A

D_{60} = 0.4719 mm D_{15} = N/A

D_{50} = 0.2494 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

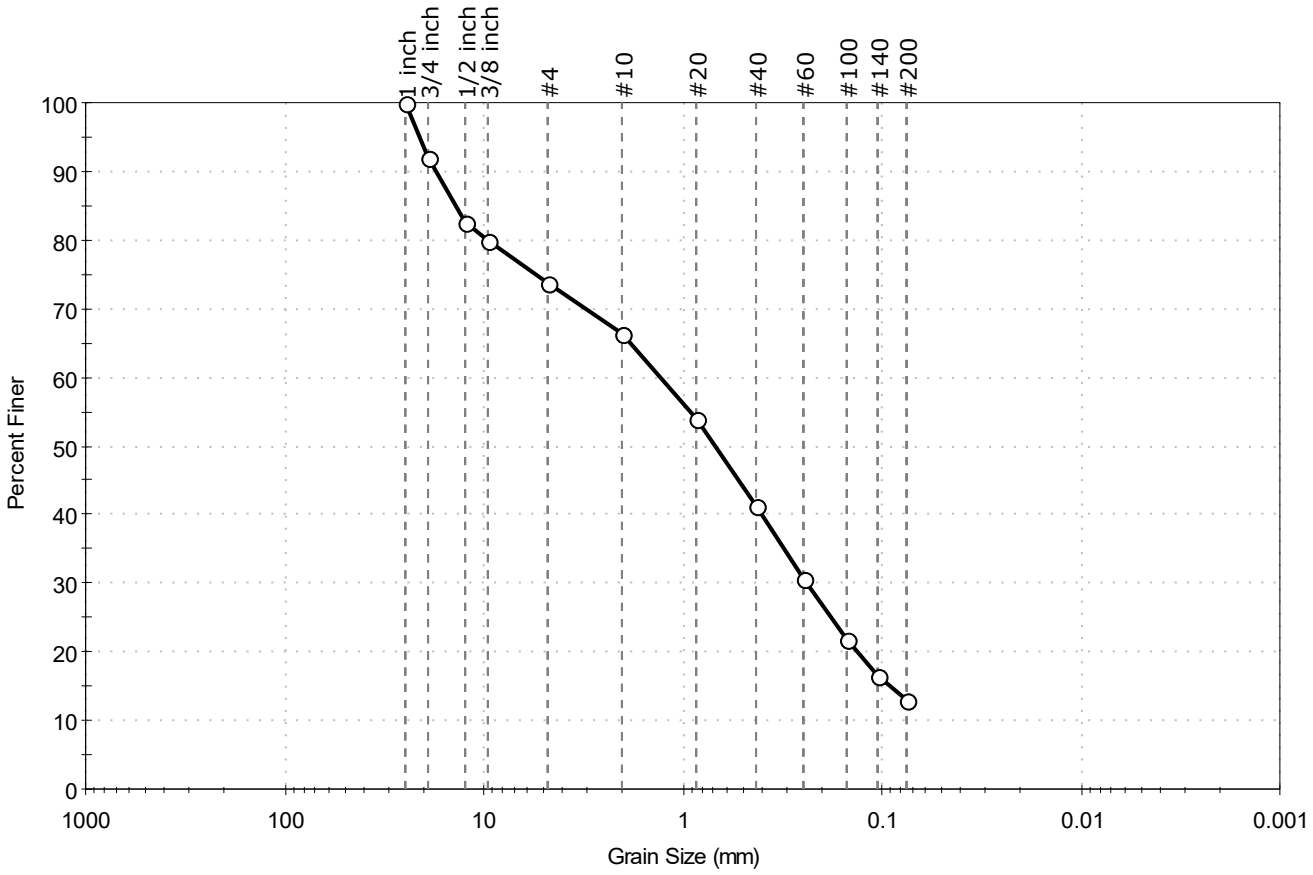
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting EXPRESS

Client:	GEI Consultants, Inc.				
Project:	Curtis Corner MS				
Location:	South Kingston, RI			Project No:	GTX-317490
Boring ID:	B-3	Sample Type:	jar	Tested By:	ckg
Sample ID:	S1	Test Date:	07/14/23	Checked By:	jsc
Depth :	0-2'	Test Id:	724223		
Test Comment:	---				
Visual Description:	Moist, pale brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	26.3	60.6	13.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 inch	25.00	100		
3/4 inch	19.00	92		
1/2 inch	12.50	82		
3/8 inch	9.50	80		
#4	4.75	74		
#10	2.00	66		
#20	0.85	54		
#40	0.42	41		
#60	0.25	31		
#100	0.15	22		
#140	0.11	17		
#200	0.075	13		

Coefficients

D_{85} = 13.9658 mm D_{30} = 0.2413 mm

D_{60} = 1.2865 mm D_{15} = 0.0907 mm

D_{50} = 0.6804 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

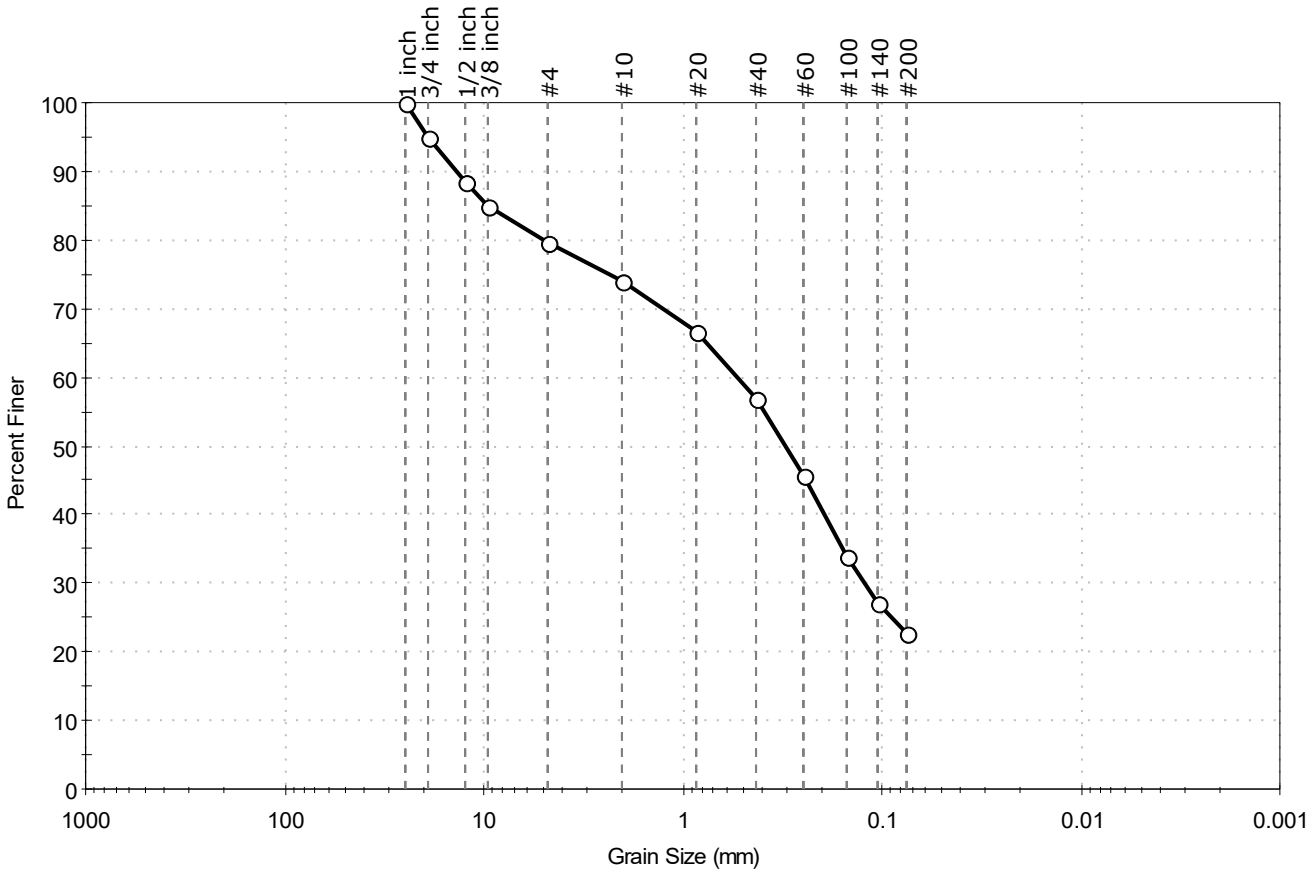
Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	GEI Consultants, Inc.				
Project:	Curtis Corner MS				
Location:	South Kingston, RI			Project No:	GTX-317490
Boring ID:	B-3	Sample Type:	jar	Tested By:	ckg
Sample ID:	S3	Test Date:	07/14/23	Checked By:	jsc
Depth :	4-6'	Test Id:	724224		
Test Comment:	---				
Visual Description:	Moist, gray silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	20.5	56.9	22.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 inch	25.00	100		
3/4 inch	19.00	95		
1/2 inch	12.50	88		
3/8 inch	9.50	85		
#4	4.75	80		
#10	2.00	74		
#20	0.85	67		
#40	0.42	57		
#60	0.25	46		
#100	0.15	34		
#140	0.11	27		
#200	0.075	23		

Coefficients

D_{85} = 9.6117 mm	D_{30} = 0.1224 mm
D_{60} = 0.5291 mm	D_{15} = N/A
D_{50} = 0.3057 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Appendix C

Recommended Material Specifications

Recommended Material Specifications
Curtis Corner Athletic Field Project
Wakefield, Rhode Island

Per the Geotechnical Report, most sandy native soils excavated as part of earthwork activities will not be ideal but can likely be re-used on site as Structural Fill or Ordinary Fill, provided they can meet the appropriate compaction requirements and do not contain deleterious material. We caution that this material will be difficult to work if it becomes wet and may require long drying times to obtain the required compaction. As such, careful moisture control will be required to achieve satisfactory compaction. Silts with high fines content similar to those encountered in borings B-4 and B-5 are not suitable for re-use on the project. Cobbles to small boulders in excess of 4 inches in diameter should be screened out of the native soils prior to re-use.

Fill placed within the building limits, within a 3-foot wide zone outside foundation walls, and under pavements should meet the compaction requirements for Structural Fill. Backfill placed in non-structural areas should meet the compaction requirements for Ordinary Fill. Soils to be used as fill imported from off-site should also meet the below gradation requirements. Proposed borrow materials that fall slightly outside of these specifications may also be suitable for use, subject to review and approval by GEI.

If existing asphalt pavements are milled, these materials (recycled asphalt pavements/RAP) may be suitable for use, subject to review by the geotechnical engineer, as recycled base beneath new pavements or mixed into general grade-raise fills at a proportion of no more than 50 percent by weight.

Structural Fill

Structural Fill should consist of hard, durable sand and gravel. It should be free of clay, organic matter, surface coatings, and other deleterious materials. Soil finer than the No. 200 sieve (the "fines") should be non-plastic. Structural Fill shall meet the following gradation requirements:

Sieve Size	Percent Passing by Weight
3 inches	100
1 - ½ inch	55 – 100
No. 4	35 – 85
No. 16	20 – 65
No. 50	5 – 40
No. 200 (fines)	0 – 10

Structural Fill should be compacted in maximum 12-inch-thick, loose lifts to at least 95 percent of the maximum dry density determined in accordance with ASTM D1557 (Modified AASHTO Compaction). The moisture content should be held to within +/- 3 percent of optimum moisture content (as determined by ASTM D1557).

Ordinary Fill

Ordinary fill should consist of hard, durable sand and gravel, free of clay, organic matter, surface coatings, and other deleterious materials. Soil finer than the No. 200 sieve (the "fines") should be non-plastic. Ordinary Fill shall meet the following gradation requirements:

Sieve Size	Percent Passing by Weight
6 inches	100
3 inches	80 – 100
No. 4	20 – 100
No. 200 (fines)	0 – 20

Ordinary fill should be compacted in maximum 12-inch-thick, loose lifts to at least 92 percent of the maximum dry density determined in accordance with ASTM D1557 (Modified AASHTO Compaction). The moisture content should be held to within +/- 3 percent of optimum moisture content (as determined by ASTM D1557).

Crushed Stone

Crushed Stone should consist of a ¾-inch size durable crushed rock or durable crushed gravel stone and shall conform to the requirements of Section M.01.09, Table I, Column II of the RI DOT Standard Specifications for Road and Bridge Construction. Crushed stone should be compacted with at least four passes of a vibratory compactor.

Geotextile Fabric

Geotextile fabric should be a non-woven fabric, consisting of Mirafi 140N or an approved equal product.

Exhibit 22

Historic Commission Correspondence

STATE OF RHODE ISLAND

HISTORICAL PRESERVATION & HERITAGE COMMISSION

Old State House 150 Benefit Street Providence, RI 02903

Telephone 401-222-2678 Fax 401-222-2968
TTY 401-222-3700 www.preservation.ri.gov

May 25, 2023

Via email: contep@studiojaed.com

Philip R. Conte
President
Studio JAED
42 Weybosset Street, Suite 403
Providence, RI 02903

Re: RIHPHC Project Nos. 17454-17460
South Kingstown School Projects
RIDE Stage II Submission

Dear Mr. Conte:

The Rhode Island Historical Preservation and Heritage Commission (RIHPHC) staff has reviewed the information that you provided for the above-referenced projects. The South Kingstown School Department is planning project at multiple schools across South Kingstown. The RIHPHC is providing information on the historic status of each school for planning purposes.

South Kingstown High School, 215 Columbia Street (RIHPHC Project No. 17454)

The building was constructed in 1954 and is proposed for demolition and replacement. The building is located within the Peace Dale Historic District, which is listed in the National Register of Historic Places. At the time of the nomination, the building was not yet 50 years old and was listed as noncontributing to the historic district. The noncontributing status was also due to the fact that the district was nominated primarily for its association with the Hazard family's contributions to the industrial and civic development of Peace Dale, and building did not fit that theme; however, we believe that it requires further evaluation for individual listing in the State Register of Historic Places. If the project proceeds, the building would need to be evaluated by this office. Exterior and interior photographs, as well as any known historical information, would need to be submitted in order to complete our review. If the building is determined to be historic, justification for demolition versus rehabilitation would be required. Regardless, any new construction must be reviewed by this office to ensure it is compatible with the surrounding historic district.

Hazard Building, 153 School Street (RIHPHC Project No. 17455)

The building is a contributing resource in the Peace Dale Historic District, which is listed in the National Register of Historic Places. The project will require further review by this office.

Curtis Corner Elementary School, 31 Curtis Corner Road (RIHPHC Project No. 17456)

The building was constructed in 1964 and is proposed for demolition and replacement. The building has not been evaluated for listing in the State Register. If the project proceeds, the building would need to be evaluated by this office. Exterior and interior photographs, as well as any known historical information, would need to be submitted in order to complete our review.

Broad Rock Middle School, 351 Broad Rock Road (RIHPHC Project No. 17457)

Interior improvements are proposed at the building, which was constructed in 2001. Based on our review of available information, it is the conclusion of the RIHPHC that no historic properties will be affected by the project – we would not need to review additional details for this project.

Matunuck Elementary School, 3580 Matunuck Beach Road (RIHPHC Project No. 17458)

Interior improvements are proposed at the building, which was constructed in 1975. Based on our review of available information, it is the conclusion of the RIHPHC that no historic properties will be affected by the project – we would not need to review additional details for this project.

Peace Dale Elementary School, 109 Kersey Road (RIHPHC Project No. 17459)

The building is a contributing resource in the Peace Dale Historic District, which is listed in the National Register of Historic Places. The project will require further review by this office.

Wakefield Elementary School, 101 High Street

This building will be closed and reverted back to the Town. No additional review is required at this time.

West Kingston Elementary School, 3119 Ministerial Road (RIHPHC Project No. 17460)

Interior improvements are proposed at the building, which was constructed in 1975. Based on our review of available information, it is the conclusion of the RIHPHC that no historic properties will be affected by the project – we would not need to review additional details for this project.

These comments are provided in accordance with the Rhode Island Historic Preservation Act and Rhode Island General Laws. If you have any questions, please contact RIHPHC Project Review Coordinator Elizabeth Totten at 401-222-2671 or elizabeth.totten@preservation.ri.gov.

Sincerely,

Elizabeth Totten
FOR

Jeffrey Emidy
Executive Director
Interim State Historic Preservation Officer

Exhibit 23

SKHS Site
Due Diligence Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

RE: **Site Investigation Summary**
South Kingstown High School
215 Columbia Street, South Kingstown, RI 02879

GAI PN 7458-00
DATE: June 6, 2023

Introduction
Garofalo & Associates Inc. (Garofalo) has prepared this report to assist with the due diligence assessment of the referenced site as it relates to RIDE Stage II investigations for the proposed improvements at the school.

The subject site is located at 215 Columbia Street and 153 School Street, South Kingstown. The approximately 11.12-acre site (215 Columbia St.) and 4.2-acre site (153 School St.) is currently comprised of an existing High School and Special Education buildings, athletic fields, associated parking and hardscape.

An Aerial Site Plan of the property is attached

Property Data
The site is identified as Lot 14 on Assessors Plat 49-4 and Lot 209 on Assessors Plat 57-1. The ownership of both parcels is identified as the Town of South Kingstown.

Zoning District
Zone: GI (Government & Institutional)
Use: Educational – Primary or Secondary

Exhibit A-Dimensional Standards:
Min. Lot Size: 200,000 sf + 40,000 per 100 pupils
Min Lot Width: 200 feet
Front yard: 40 feet
Corner Side: 40 feet
Side yard: 40 feet
Rear yard: 40 feet
Max. Principal Bldg. Height: 35 feet
Max. Accessory Bldg. Height: 15 feet
Max. Lot Coverage: 20%
Min distance from Residential Properties: Could not locate any info from town ordinances

On-site Soils
The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils of the site to be primarily comprised of Merrimac Urban land complex, 0% to 8% slopes (MU), Udorthents-Urban land complex (UD)

and Urban Land (Ur). The Hydrologic Soil Group classification for these soils are “A”(low runoff potential) and “D”(high runoff potential). On-site soil UD is considered limited for development and on-site soil Ur is not rated for development. The site lies in a GA groundwater class district. Refer to project geotechnical investigations for more complete discussion of the subsurface conditions at the site.

FEMA Flood Mapping

The project area is located within Zone "X" (areas outside the 0.2% annual floodplain) as shown on F.E.M.A. Flood Insurance Rate Map for the Town of South Kingstown, Washington County, Rhode Island, Community Panel No. 44009C0203K having an effective date of April 3, 2020.

Drainage

Generally, the property is bisected by improvements in a north-south ridge with western portions of the property falling to the west and moderately steep grades toward Columbia Street and the eastern portions falling eastward and southeastward at more gentle slopes to School Street. The property has a number of enclosed drainage systems in each sub-area which collect runoff from the building and adjacent paved areas. Many of the drainage facilities are dry-wells or other infiltration measures. Most lack suitable pre-treatment. No existing permits/approvals for those facilities were identified by these investigations.

- Limited Construction drawings for the onsite and adjacent facilities were located and those documents are included in the Appendix. No stormwater management facilities were identified on the property.

Runoff from the work area discharges at two (2) primary locations.

- The paved areas associated with the school building and adjacent parking is directed to enclosed drainages systems which appear to include drywells with overflows discharging westward toward the Columbia Street enclosed drainage system.

- The ballfields and some limited improvements discharge from the site as overland flow toward the southeast to a culvert under School Street. A small drainage system also discharges toward Brown Street, but the drainage area is limited in size.

- Also note that underground injection facilities are regulated as a site discharge and registration of facilities at the site is required.

There were no conditions noted during these investigations that indicate significant substandard drainage conditions currently occurring at the site or immediately downstream during normal rainfall (ie washouts or flooding).

The property falls within the Saugatucket River watershed (RI0010045R-05B), and more specifically in the Saugatucket River and Tributaries from the Rose Hill Landfill property to Saugatucket Pond in Wakefield. South Kingstown. The Saugatucket River is a Stormwater Impaired Watershed, including impaired water quality as evidenced in the 2008 Rhode Island list of impaired waters prepared pursuant to Section 303(d) of the Federal Clean Water Act. BMPs

targeted to remove other pollutant(s) of concern and/or to achieve higher pollutant removal efficiencies are required for impaired receiving water. The eastern portions discharge to the Indian Run Brook sub-watershed (RI0010045R-02), similarly an impaired water, ultimately discharging to the Saugatucket River.

Town Standards (Ord. Ch 20, Stormwater Management and Land development Regulations) requires stormwater management practices to meet 25-yr runoff, but also a more conservative standard of being consistent with the "Rhode Island Stormwater Design and Installation Standards Manual" and the "Rhode Island Soil Erosion and Sediment Control Handbook," as amended. Based on these standards, development of the site will require compliance RI Stormwater Rule, Standard 5, Overbank Flood Protection and some form of subsurface retention/infiltration as well as treatment and/or detention should be anticipated for all exterior improvements proposed.

Utilities

Water:
The site is within the South Kingstown (Veolia) Water service area and the site is understood to be connected to public water. According to Town mapping, there is a 12-inch main located within Columbia Street. No data regarding system pressures was obtained.

Gas:
The high school and administration building are understood to be connected to a 8-inch CA-35# main within Columbia Street.

Sewer:
The site is currently serviced by public sewer Columbia Street. Record plans indicate the main as an 8-main at 0.4% minimum slope. No pre-treatment facilities have been identified on the property. No failing or substandard conditions are known to exist in the immediate area. No additional research was performed regarding the capacity of existing adjacent or downstream facilities.

Based on discussion with the Department of Public Works no failing or substandard conditions are known to exist in the immediate area. No additional research was performed regarding capacity of existing adjacent facilities.

Electric:
Infrastructure records have been requested, but no records regarding electric service were obtained at the time of issuance. The primary service to the School and Admin buildings appears to be from the Columbia Street, but several potential service locations were noted and further investigation regard the adjacent facilities is necessary once loading requirements have been identified.

Verizon and Cox Communications:
No records regarding communications or cable service were obtained. Underground facilities are apparent in Columbia Street

RIDEM Environmental Resource Mapping

Wetlands:
There are no wetlands identified on or adjacent to the project site.

National Heritage Area / Conservation Land:
There are no national heritage areas or conservation land on or adjacent to the site.

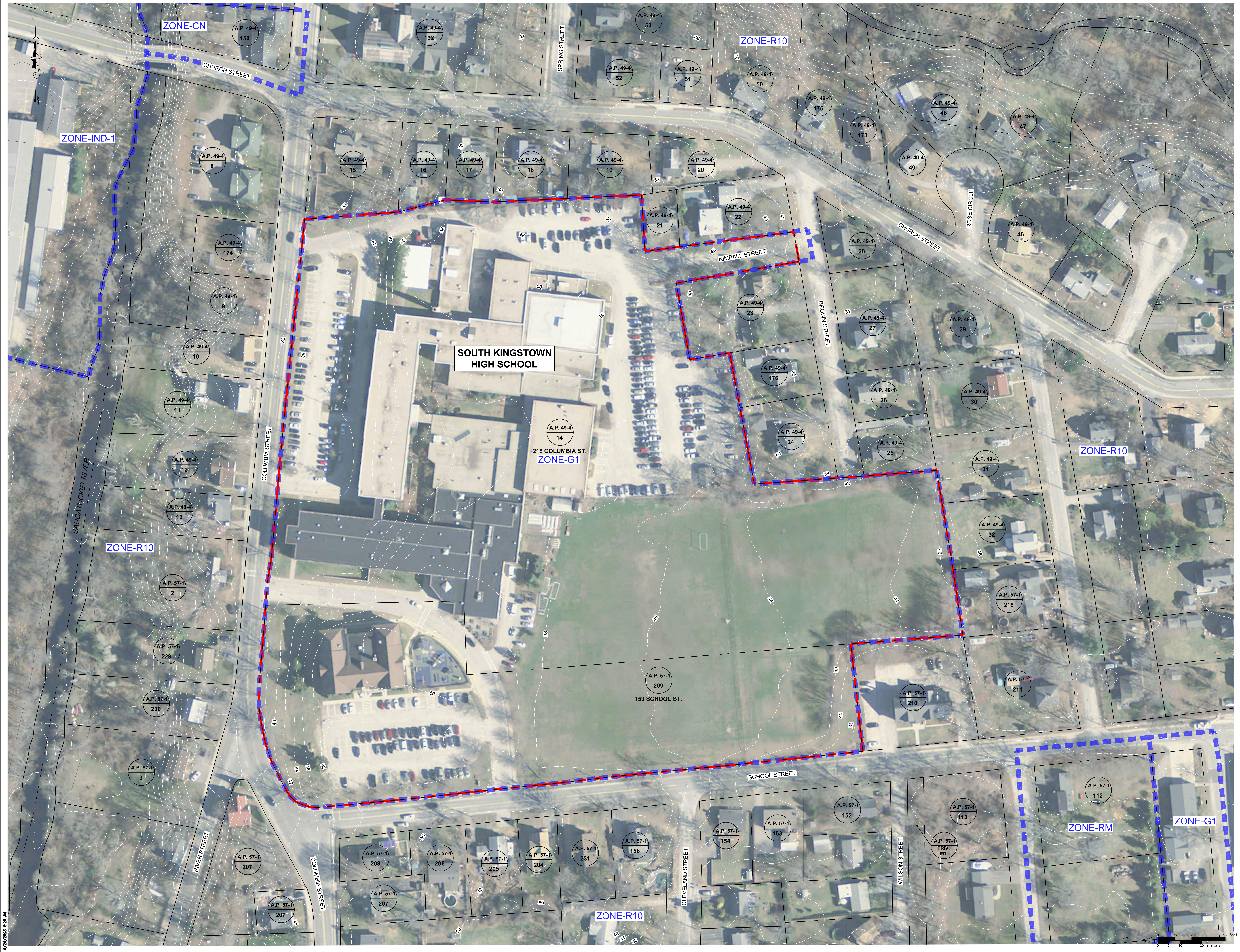
Conservation Areas:
The existing ballfields on the site (Hazard Field) are identified as a National Conservation (Recreational) Easement (US Federal/NPS – ID 12871).

Other Resources:
There were no other conditions noted on RIDEM Mapping that are believed to significantly impact the development potential of the property.

RIDEM Waste Management Search Data
The RIDEM Waste Management search performed found the following registered facilities on the property.

- 215 Columbia: UST-269, 10,000-Gallon No2 Heating Oil Tank, permanently closed.
- 153 School St.: UST-271, 2,000-Gallon, Gasoline, permanently closed.

END OF SUMMARY



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PROVIDENCE OFFICE
42 WEYBOSSET STREET, STE. 403
PROVIDENCE, RHODE ISLAND 02903
P: (401) 648-0884

MARYLAND OFFICE
213 FRONT STREET, P.O. BOX 254
CRUMPTON, MARYLAND 216285

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

THE PROFESSIONAL SERVICES OF THE ARCHITECT ARE UNDERTAKEN FOR AND ARE PERFORMED IN THE INTEREST OF [NAME OF PERSON EMPLOYING ARCHITECT]. NO CONTRACTUAL OBLIGATION IS ASSUMED BY THE ARCHITECT FOR THE BENEFIT OF ANY OTHER PERSON INVOLVED IN THE PROJECT.

SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT
TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
SOUTH KINGSTOWN HIGH SCHOOL
215 COLUMBIA STREET
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN
6-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.0

SHEET NO.
G-1

LIST OF ATTACHMENTS

1. Property Cards
2. GIS Parcel Map
3. Zoning Map
4. Future Land Use Map
5. Aerial Map
6. Record Site Plans
7. Utility Information
8. NCRS Soils Data
9. FEMA Flood Map (FIRMette)
10. RIDEM Environmental Resource Mapping

153 SCHOOL STREET

Location	153 SCHOOL STREET	**Map and Lot**	57-1/ 209/ / /
Acct#	R-34-0010-00	**Owner**	SOUTH KINGSTOWN TOWN OF
Assessment	$3,827,300	**PID**	6004
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$3,109,300	$718,000	$3,827,300

Owner of Record

Owner	SOUTH KINGSTOWN TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	153 SCHOOL STREET WAKEFIELD, RI 02879	**Book & Page**	0058/0178
		Sale Date	09/13/1945
		Instrument	

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1920
Living Area:	26,503
Replacement Cost:	$5,551,060
Building Percent Good:	55
Replacement Cost Less Depreciation:	$3,053,100

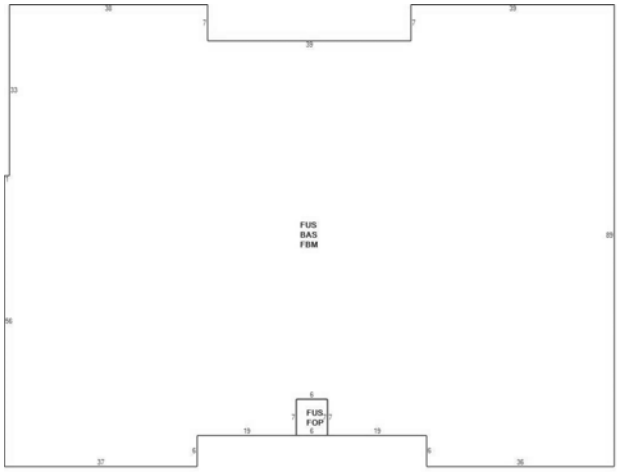
Building Attributes	
Field	**Description**
Style:	School/College

Model	Commercial
Grade	Good
Stories:	2
Occupancy	1.00
Exterior Wall 1	Stucco/Masonry
Exterior Wall 2	Stone/Masonry
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	Minim/Masonry
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Pine/Soft Wood
Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Struct Class	
Bldg Use	SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903L
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\00\67\61.jpg

Building Layout



(ParcelSketch.ashx?pid=6004&bid=6004)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	9,801	9,801
FUS	Upper Story, Finished	9,843	9,351
FBM	Basement, Finished	9,801	7,351
FOP	Porch, Open, Finished	42	0
		29,487	26,503

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
A/C	AIR CONDITION	1260.00 S.F.	$1,700	1

Land

Land Use

Use Code	903J
Description	SCHOOL MDL-94
Zone	GI
Neighborhood	0050
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	4.2
Frontage	
Depth	
Assessed Value	$718,000

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			31000.00 S.F.	$46,500	1
LT1	LIGHTS-IN W/PL			6.00 UNITS	$2,400	1
LT10	W/DOUBLE LIGHT			2.00 UNITS	$5,600	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$2,480,400	$717,200	$3,197,600
2020	$2,480,400	$717,200	$3,197,600
2019	$2,480,400	$717,200	$3,197,600

215 COLUMBIA STREET

Location	215 COLUMBIA STREET	**Map and Lot**	49-4/ 14/ / /
Acct#	R-34-0005-00	**Owner**	SOUTH KINGSTOWN TOWN OF
Assessment	$35,981,100	**PID**	4876
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$34,198,300	$1,782,800	$35,981,100

Owner of Record

Owner	SOUTH KINGSTOWN TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	215 COLUMBIA STREET WAKEFIELD, RI 02879	**Book & Page**	0WB2/0287
		Sale Date	
		Instrument	

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1992
Living Area:	245,692
Replacement Cost:	$40,081,618
Building Percent Good:	85
Replacement Cost Less Depreciation:	$34,069,400

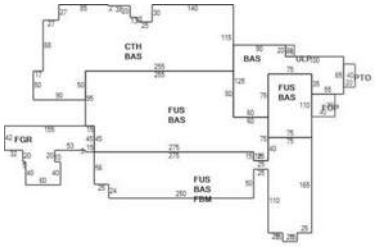
Building Attributes	
Field	**Description**
Style:	School/College

Model	Ind/Open Com
Grade	Average
Stories:	3
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Brick/Masonry
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	Minim/Masonry
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	MNCPL,LIBR M-96
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\00\67\39.jpg

Building Layout



(ParcelSketch.ashx?pid=4876&bid=4876)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	136,079	136,079
FUS	Upper Story, Finished	81,775	77,686
FBM	Basement, Finished	34,525	25,894
FGR	Garage	10,055	6,033
CTH	Cathedral Ceiling	40,379	0
FOP	Porch, Open, Finished	1,560	0
PTO	Patio	800	0
ULP	Loading Platform, Unfinished	300	0
		305,473	245,692

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	903I
Description	MNCPL,LIBR M-96
Zone	GI
Neighborhood	U
Alt Land Appr	No
Category	

Land Line Valuation

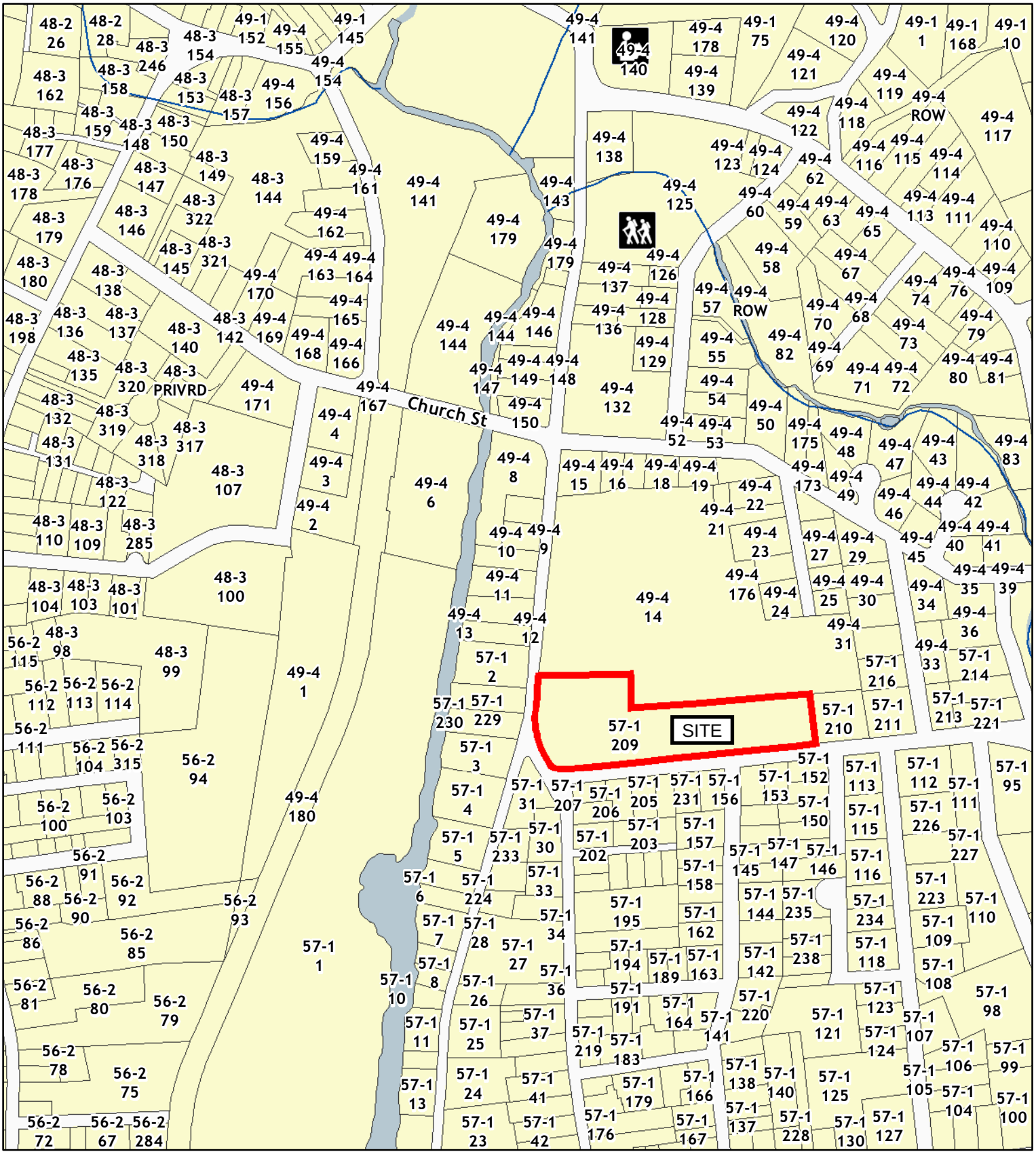
Size (Acres)	11.12
Frontage	
Depth	
Assessed Value	$1,782,800

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			80000.00 S.F.	$120,000	1
LT1	LIGHTS-IN W/PL			9.00 UNITS	$3,600	1
SHD1	SHED FRAME			600.00 S.F.	$3,600	1
GRN3	COMM PLASTIC			450.00 S.F.	$1,700	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$29,150,800	$1,604,500	$30,755,300
2020	$29,150,800	$1,604,500	$30,755,300
2019	$29,150,800	$1,604,500	$30,755,300



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

153 School Street

Parcel Boundaries not legally binding for title or zoning purposes.

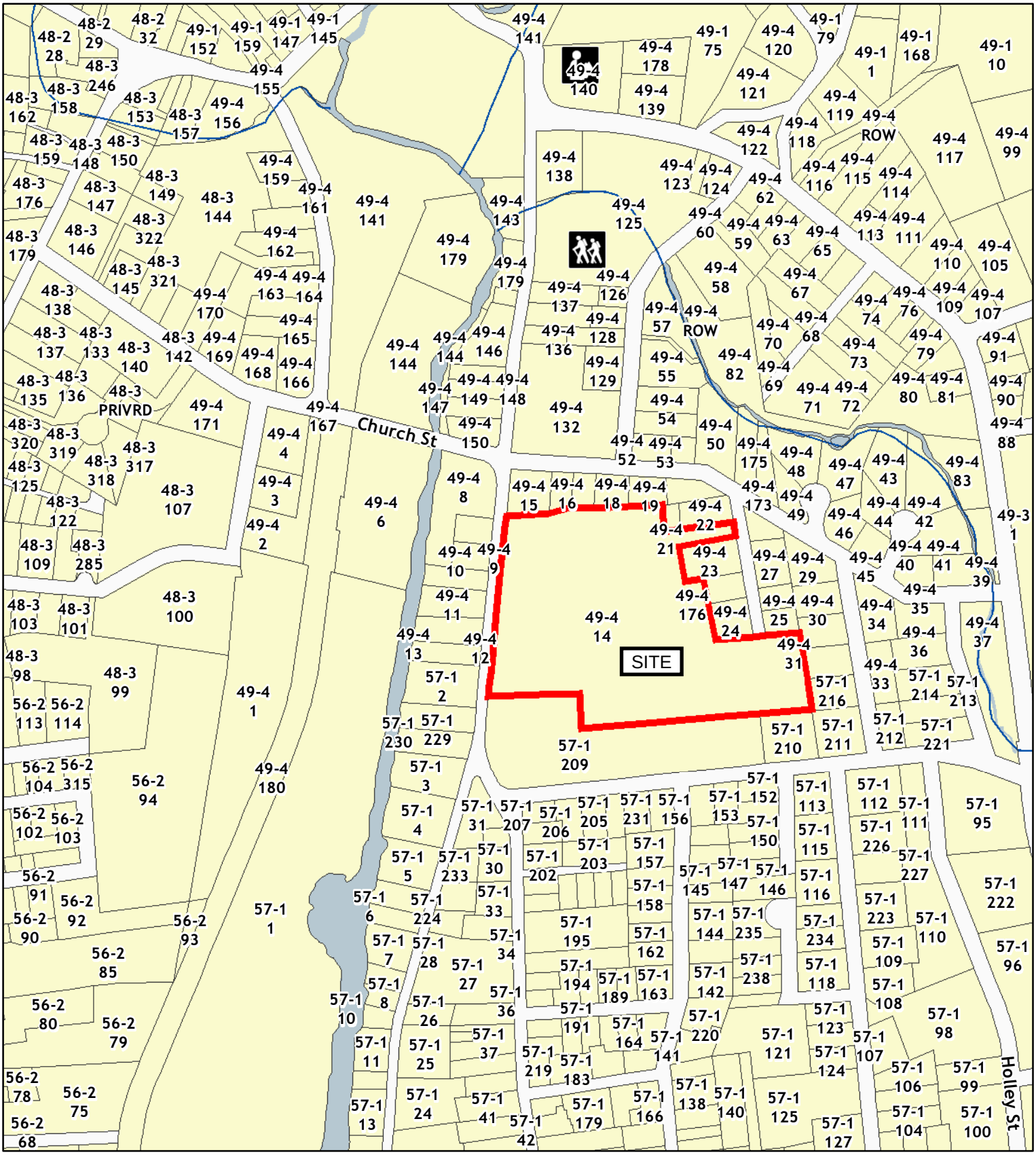
The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 417 feet

Feet
0 190 380 760

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

215 Columbia Street

Parcel Boundaries not legally binding for title or zoning purposes.

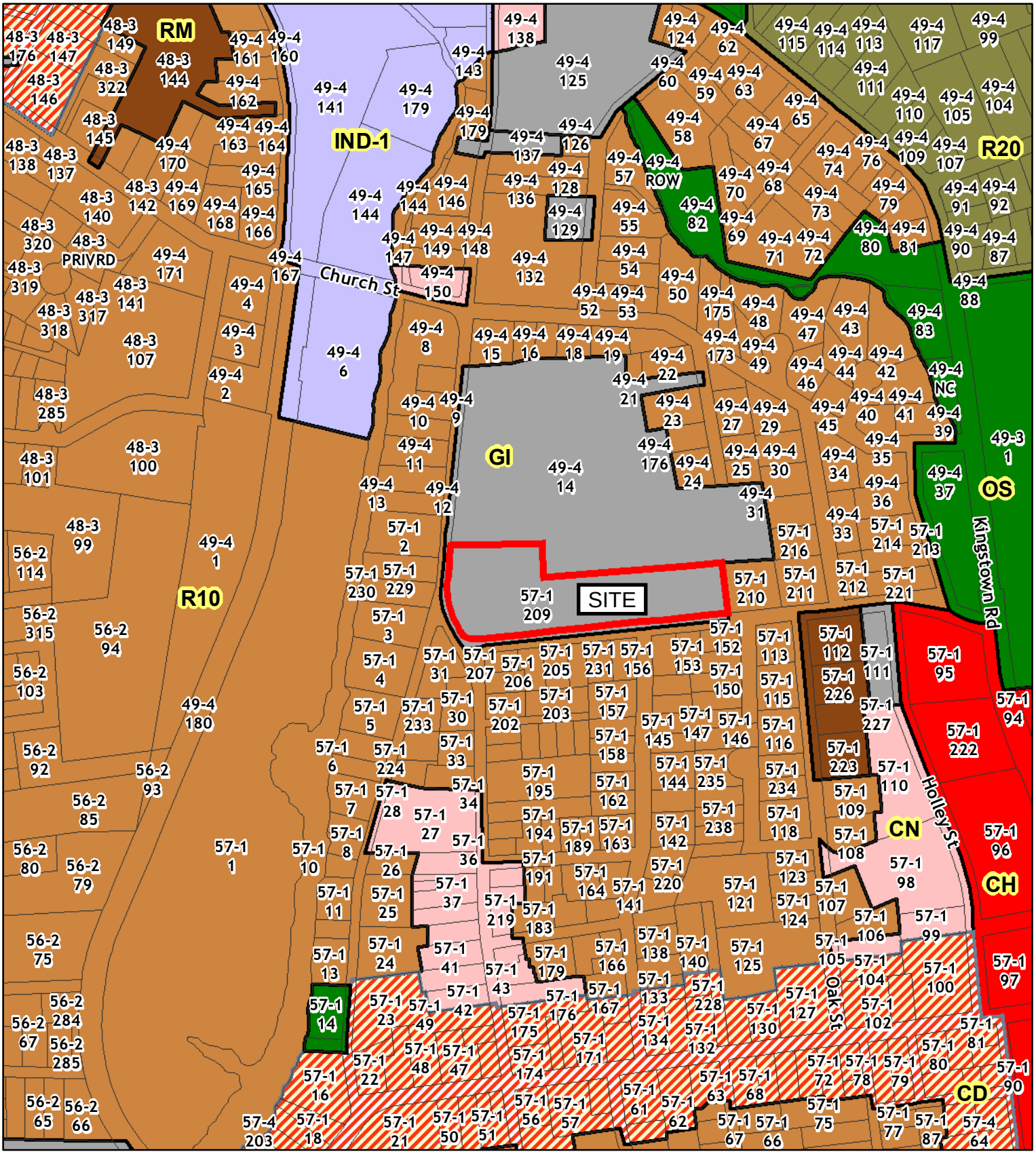
The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 417 feet

0 190 380 760 Feet

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

153 School Street Zoning Map

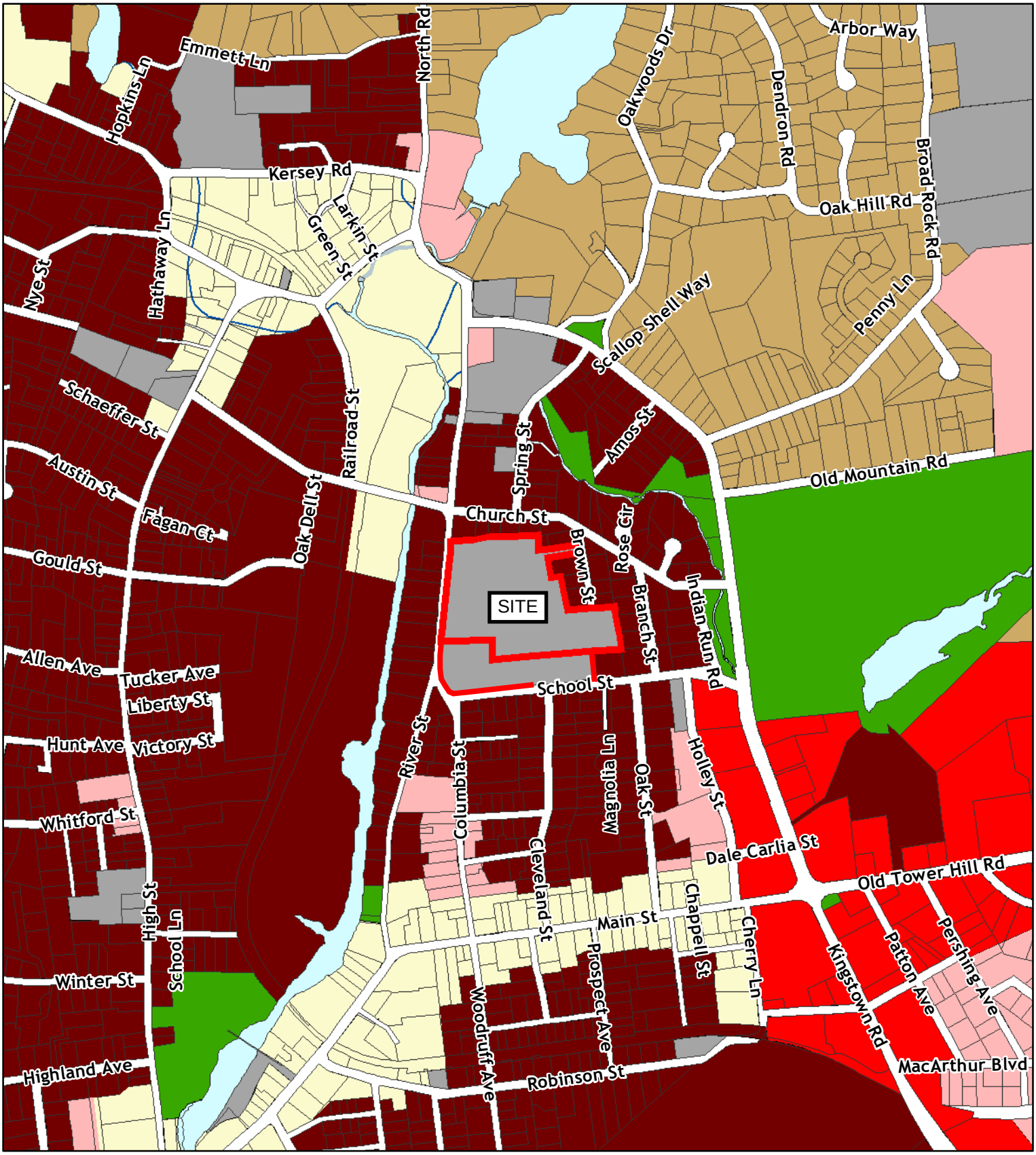
Parcel Boundaries not legally binding for title or zoning purposes.

1 inch = 417 feet

0 190 380 760 Feet

Town of South Kingstown Web GIS

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

153 School St. & 215 Columbia St.

N

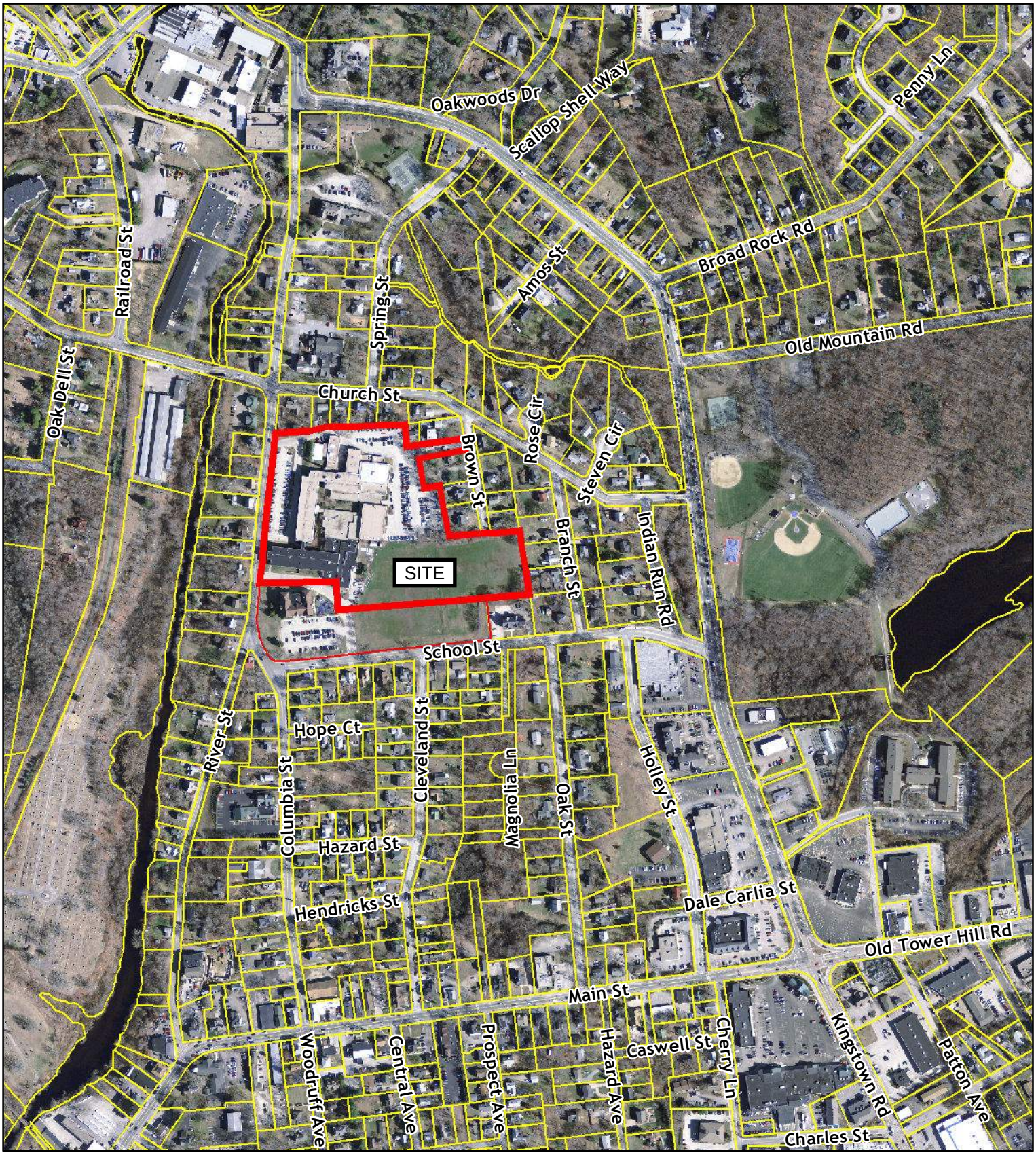
1 inch = 750 feet

Feet
0 345 690 1,380

Town of South Kingstown Web GIS

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

215 Columbia St. & 153 School St.

Parcel Boundaries not legally binding for title or zoning purposes.

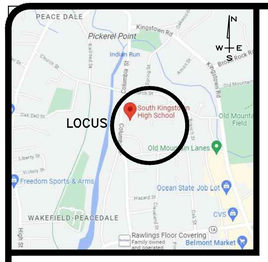
The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 500 feet

0 230 460 920 Feet

Town of South Kingstown Web GIS



LOCUS MAP
N.T.S.

1" = 40'

feet 0 20 40 80 160 240
meters 0 5 10 20 40 60

RI State Plane - NAD 83

STREET INDEX
COLUMBIA STREET
SCHOOL STREET
KIMBALL STREET
BROWN STREET

PARCEL DATA
A.P. 49-4, LOT 14 & A.P. 57-1, LOT 209 N/F TOWN OF SOUTH KINGSTOWN DEED BK. 58 / PG. 178 & BK. 27 / PG. 192 #215 COLUMBIA STREET & #153 SCHOOL STREET TOTAL LOT AREA: 679,716 S.F.± OR 15.60 ACRES±

CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF BOUNDARY SURVEY	MEASUREMENT SPECIFICATION
BOUNDARY SURVEY	CLASS I
DATA ACCUMULATION SURVEY	CLASS III
TOPOGRAPHY SURVEY	CLASS T-3

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TO PROVIDE A TOPOGRAPHIC AND A BOUNDARY SURVEY FOR ASSESSOR'S PLAT 49-4 LOT 14 AND ASSESSOR'S PLAT 57-1 LOT 209 IN SOUTH KINGSTOWN, RHODE ISLAND.

BY: Samuel A. White, Jr.
SAMUEL A. WHITE LICENSE NO. 1781
LS A59-COA

CHURCH STREET (FORMERLY BRIDGE ST.) (49' WIDTH PUBLIC WAY)

SPRING STREET

KIMBALL STREET

BROWN STREET (40' WIDTH PUBLIC WAY)

CHURCH STREET (FORMERLY BRIDGE ST.) (50' WIDTH PUBLIC WAY)

COLUMBIA STREET (WIDTH VARIES PUBLIC WAY)

SOUTH KINGSTOWN HIGH SCHOOL

AP 49-4 LOT 14 N/F TOWN OF SOUTH KINGSTOWN BK. PG.

AP 49-4 LOT 15 N/F CHRISTOPHER M. & DANKA M. HUBBARD BK. 1544 PG. 386

AP 49-4 LOT 16 N/F MICHAEL THACHER BK. 1807 PG. 177

AP 49-4 LOT 17 N/F KERT W. & SHANNA L. VECCHIO-SCHUBERT BK. 1676 PG. 33

AP 49-4 LOT 18 N/F PHILIPPA E. JACK BK. 1591 PG. 54

AP 49-4 LOT 19 N/F JUSTINE C. DEMETRICK BK. 843 PG. 59

AP 49-4 LOT 20 N/F MARGARET FOSTER BK. 1220 PG. 745

AP 49-4 LOT 21 N/F MICHAEL J. & LORI A. COYNE BK. 1292 PG. 665

AP 49-4 LOT 22 N/F JOYDE E. MCMANUS BK. 826 PG. 169

AP 49-4 LOT 23 N/F JUDITH A. WARBURTNON & ANDREW MARTINEZ BK. 1195 PG. 550

AP 49-4 LOT 176 N/F KATHLEEN LYNCH CURRAN, JONATHAN & JESSICA CURRAN BK. 1795 PG. 567

AP 49-4 LOT 24 N/F RICHARD MCINTYRE & DEBORAH BARBER BK. 883 PG. 473

AP 49-4 LOT 25 N/F ROBERT P. & MARY C. MARTIN BK. 1699 PG. 380

AP 49-4 LOT 31 N/F MILISSA J. BERGANTINI BK. 1710 PG. 604

MATCH LINE SHEET 3

TOPOGRAPHIC AND EXISTING CONDITION SURVEY
FOR
SOUTH KINGSTOWN HIGH SCHOOL & SPECIAL EDUCATION
AP 49-4 LOT 14 AND AP 57-1 LOT 209
SITUATED ON
215 COLUMBIA STREET & 153 SCHOOL STREET
WAKEFIELD, RHODE ISLAND
PREPARED FOR
STUDIO JAED

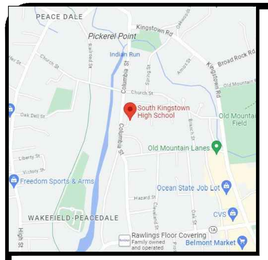
NO.	REVISION	BY	DATE

SAMUEL A. WHITE, JR.
No. 1781
PROFESSIONAL LAND SURVEYOR
Samuel A. White, Jr.
6-13-2023

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS\SURVEYORS
LAND PLANNERS\ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 7458.00	DRAWN BY LFA
DWG. NO. 7458-00-ECS	CALCS BY LFA
SCALE: 1"=40'	APPROVED SAW
	DATE: MAY 2023

SHEET
1
OF 2 SHEETS



LOCUS MAP
N.T.S.

GENERAL LEGEND & ABBREVIATIONS

	EXISTING GRANITE MONUMENT
	EXISTING IRON PIPE
•	BOLLARD
	CATCH BASIN
	CURB INLET
Ⓓ	DRAIN MANHOLE
EHH ⊕	ELECTRIC HANDHOLE
FP○	FLAG POLE
GG	GAS GATE
	GUY WIRE
	HANDICAP PARKING STRIPING
HH○	HANDHOLE (UNKNOWN)
	HYDRANT
IHH○	IRRIGATION HANDHOLE
☼	LIGHT POLE
Ⓜ	MANHOLE (UNKNOWN)
	SIGN
Ⓢ	SEWER MANHOLE
	SEWER CLEAN OUT
Ⓣ	TELEPHONE MANHOLE
	UTILITY POLE
WG	WATER GATE
WS	WATER SHUTOFF
BB	BITUMINOUS BERM
BRK.W	BRICK WALK
CC	CONCRETE CURB
CD	CONCRETE DRIVEWAY
CONC.	CONCRETE
CP	CONCRETE PAD
CRW	CONCRETE RETAINING WALL
CS	COBBLE STONE
CW	CONCRETE WALK
DYL	DOUBLE YELLOW LINE
EOP	EDGE OF PAVEMENT
FYL	FIRE YELLOW LINE
GD	GRAVEL DRIVE
HW	HEAD WALL
I=	INVERT
SWL	SINGLE WHITE LINE
SYL	SINGLE YELLOW LINE
x164.5	SPOT GRADE ELEVATION
SRW	STONE RETAINING WALL
SW	STONE WALK
W/	WITH
N'LY	NORTHERLY
E'LY	EASTERLY
S'LY	SOUTHERLY
W'LY	WESTERLY
NE'LY	NORTHEASTERLY
SE'LY	SOUTHEASTERLY
SW'LY	SOUTHWESTERLY
NW'LY	NORTHWESTERLY

	ASSESSORS LINE
	LOCUS PROPERTY LINE
	STREET LINE
	SURVEY TIE LINE
	CHAIN LINK FENCE
	GUARD RAIL
	PVC FENCE
	WOOD RAIL FENCE
	STONE WALL
	DRAIN LINE
	GAS PAINT LINE
	GAS SCALE LINE
	OVERHEAD WIRES
	SEWER LINE
	TELEPHONE LINE
	VERIZON PAINT LINE
	WATER PAINT LINE
	WATER SCALE LINE
	EXISTING CONTOUR MAJOR
	EXISTING CONTOUR MINOR
	TREE LINE

NOTES:

1. THE PROJECT SITE IS LOCATED WITHIN ZONE "X" (AREA OF MINIMAL FLOODING) AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE TOWN OF SOUTH KINGSTOWN, WASHINGTON COUNTY, RHODE ISLAND, COMMUNITY MAP NO. 44009C0203K, HAVING AN EFFECTIVE DATE OF APRIL 3, 2020.
2. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION @ 1-888-344-7233)
3. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE – NAD 83
   VERTICAL DATUM: NAVD 88*
   *DATUM WAS DERIVED BY OBSERVED GPS ORTHOMETRIC HEIGHTS VARIATIONS BETWEEN LOCAL BENCHMARKS MAY APPLY.

PLAN REFERENCES:

1. TOWN OF SOUTH KINGSTOWN MAP OF BRANCH STREET FROM BRIDGE STREET TO HIGH SCHOOL STREET, AS LAIDOUT BY GEORGE H. BULLOCK, EDMUND WALKER AND HERBERT R. WEBSTER, COMMITTEE, SCALE – 1"=40', OCTOBER 10TH 1903, BY LEON L. HOLLAND, CIVIL ENGINEER, WAKEFIELD, R.I., BOOK 1, PAGE 44.
2. PLAT AND PROFILE OF BROWN STREET IN SOUTH KINGSTOWN, R.I. AS LAIDOUT BY HENRY P. CHAMPLIN, WILLIAM H. TULLY AND FRANK A. FAGAN, COMMITTEE, DEC., 1934, SCALE 1"=20', BY LEON L. HOLLAND, CIVIL ENGINEER, BOOK 8 PAGE 564.
3. TOWN OF SOUTH KINGSTOWN MAP OF BRIDGE STREET (CHURCH STREET) FROM THE INTERSECTION OF BRIDGE AND SPRING STREETS TO KINGSTOWN ROAD, AS LAIDOUT BY ROBERT H. GARDNER, EDMUND WALKER AND HERBERT W. FISON, COMMITTEE, SCALE – 1"=100', JANUARY 10TH 1903, BY LEON L. HOLLAND, CIVIL ENGINEER, WAKEFIELD, R.I., BOOK 2 PAGE 124.
4. TOWN OF SOUTH KINGSTOWN, R.I. PLAT OF COLUMBIA STREET AS LAIDOUT BY DAVID REID, EDMUND LYONS AND JOHN R. CARPENTER, COMMITTEE, SURVEYED AUG.–OCT. 1930, SCALE 1"=80', BY LEON L. HOLLAND, CIVIL ENGINEER, BOOK 7 PAGES 500 AND 504.
5. TOWN OF SOUTH KINGSTOWN MAP OF HIGH SCHOOL STREET FROM COLUMBIA STREET TO KINGSTOWN ROAD, AS LAIDOUT BY ROBERT H. GARNER, EDMUND WALKER AND HERBERT W. FISON, COMMITTEE, SCALE – 1"=100', JANUARY 10TH 1903, BY LEON L. HOLLAND, CIVIL ENGINEER, WAKEFIELD, R.I., BOOK 1 PAGE 52.
6. RELOCATION OF HIGH SCHOOL STREET EAST FROM BRANCH ST. TO KINGSTOWN ROAD, SCALE 1"=50' JUNE 1935, SOUTH KINGSTOWN, R.I. BY EARL C. WHALEY, SURVEYOR, BOOK 8 PAGE 585.
7. TOWN OF SOUTH KINGSTOWN PLAT SHOWING LAND BETWEEN COLUMBIA ST. AND WEST, CHURCH ST., ON THE NORTH, BRANCH ST., ON THE EAST AND HIGH SCHOOL ST., ON THE SOUTH, JANUARY 31, 1947, BY LEON L. HOLLAND, CIVIL ENGINEER, BOOK 10 PG 752.
8. PLAT OF LAND BELONGING TO ROWLAND HAZARD IN SOUTH KINGSTOWN, R.I. SCALE 80 FEET TO THE INCH, JUNE 1894, BY GEO. T. LANPHEAR, SURV., BOOK 34 PAGE 477.
9. PLAT OF HOUSE LOTS IN PEACE DALE, R.I. OWNED BY MRS. SUSAN A. BROWN, SCALE – 40'=1", APRIL 3RD 1895, BY LEON L. HOLLAND SURVEYOR, BOOK 10 PAGE 752.

ZONING DATA

GOVERNMENT AND INSTITUTIONAL (GI) ZONE

MIN. LOT AREA: 400,000 S.F.
MAX. HEIGHT: VARIABLE BASED ON DISTANCE FROM LOT LINES:
DIST. LESS THAN 50' = 0'
50' TO 100' = 30'
100' TO 200' = 40'
GREATER THAN 200' = 50'
MIN. FRONT YARD: 50'
MIN. SIDE YARD: 50' PLUS 20' IF ABUTS RESIDENTIAL ZONING
MIN. REAR YARD: 50' PLUS 20' IF ABUTS RESIDENTIAL ZONING
BUILDING COVERAGE: 25%

* PLEASE REFER TO ZONING REGS. FOR ADDITIONAL INFORMATION.

CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF BOUNDARY SURVEY	MEASUREMENT SPECIFICATION
BOUNDARY SURVEY	CLASS I
DATA ACCUMULATION SURVEY	CLASS III
TOPOGRAPHY SURVEY	CLASS T-3

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TO PROVIDE A TOPOGRAPHIC AND A BOUNDARY SURVEY FOR ASSESSOR'S PLAT 49-4 LOT 14 AND ASSESSOR'S PLAT 57-1 LOT 209 IN SOUTH KINGSTOWN, RHODE ISLAND.

BY: Samuel A. White, Jr.
SAMUEL A. WHITE — LICENSE NO. 1781, LS A59-COA

1" = 40'
feet: 0 20 40 80 160 240
meters: 0 5 10 20 40 60

TOPOGRAPHIC AND EXISTING CONDITION SURVEY FOR SOUTH KINGSTOWN HIGH SCHOOL & SPECIAL EDUCATION

AP 49-4 LOT 14 AND AP 57-1 LOT 209
SITUATED ON
215 COLUMBIA STREET
& 153 SCHOOL STREET
WAKEFIELD, RHODE ISLAND
PREPARED FOR
STUDIO JAED

NO.	REVISION	BY	DATE

SAMUEL A. WHITE, JR.
No. 1781
PROFESSIONAL LAND SURVEYOR
6-13-2023

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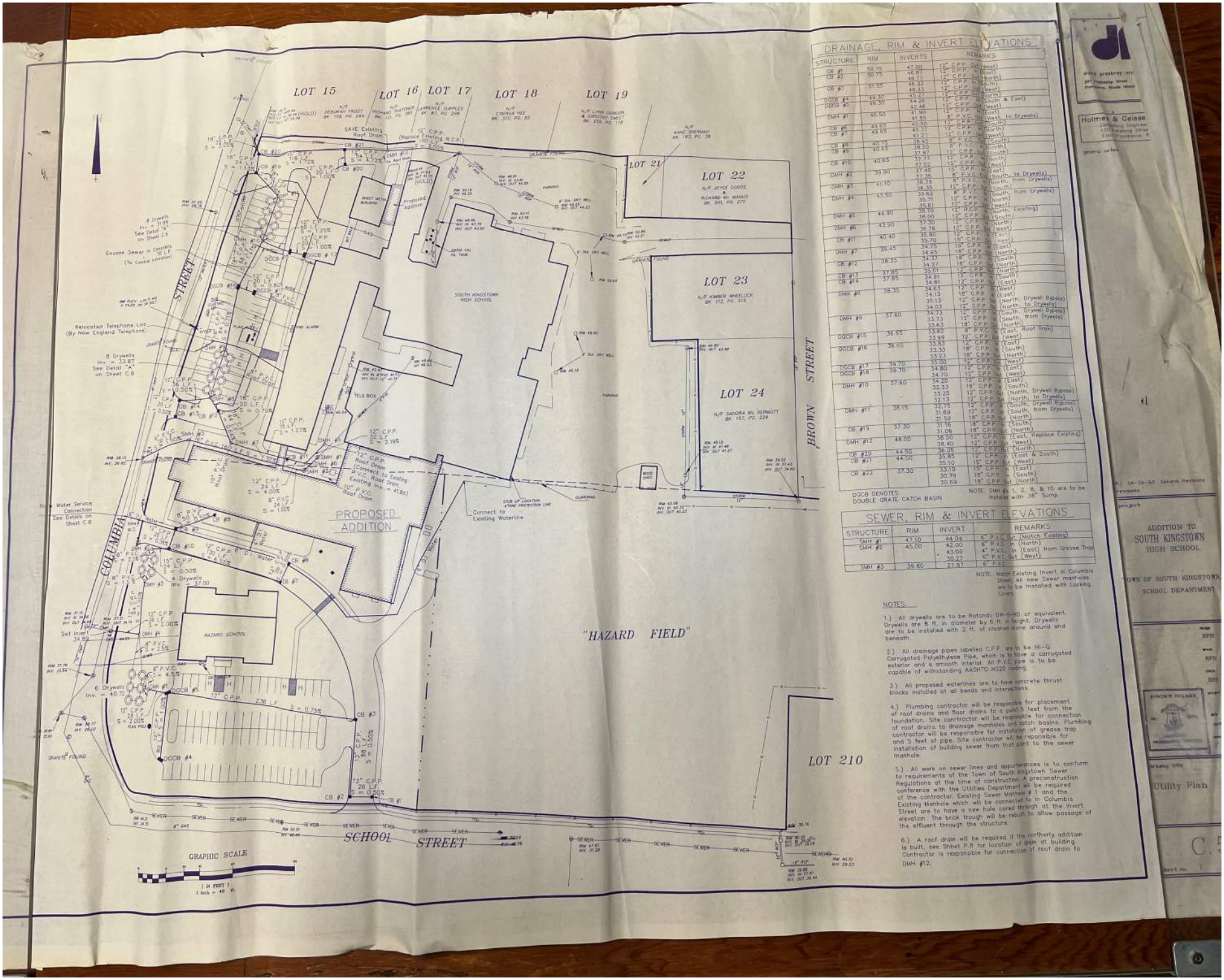
JOB NO. 7458.00	DRAWN BY LFA
DWG. NO. 7458-00-ECS	CALCS BY LFA
SCALE: 1"=40'	APPROVED SAW
	DATE: MAY 2023

SHEET
2
OF 2 SHEETS



DRAINAGE, RIM & INVERT ELEVATIONS

STRUCTURE	RIM	INVERTS	REMARKS
CB #1	50.75	47.00	12" C.P.P. Out (West)
CB #2	50.75	46.87	12" C.P.P. In (East)
		46.79	12" C.P.P. Out (North)
CB #3	51.55	48.33	12" C.P.P. In (South)
		48.23	12" C.P.P. Out (West)
DGCB #4	49.30	45.27	12" C.P.P. Out (North)
DGCB #5	49.30	44.25	12" C.P.P. In (South & East)
		42.46	12" C.P.P. Out (West)
DMH #1	48.50	41.90	12" C.P.P. In (East)
		41.80	8" P.V.C. Out (West, to Drywells)
CB #6	49.85	45.50	12" C.P.P. In (South)
CB #7	49.65	45.37	12" C.P.P. Out (West)
		45.27	12" C.P.P. In (East)
CB #8	40.75	38.14	8" P.V.C. In (South)
CB #9	40.85	38.20	8" P.V.C. In (North)
		37.87	12" C.P.P. Out (South)
CB #10	40.85	37.77	12" C.P.P. In (North)
		37.52	15" C.P.P. Out (West)
DMH #2	39.90	37.40	15" C.P.P. In (East)
		37.30	8" P.V.C. Out (South, to Drywells)
DMH #3	41.10	36.78	8" P.V.C. In (North, from Drywells)
		36.35	12" C.P.P. Out (South)
DMH #4	43.50	39.62	8" P.V.C. In (South, from Drywells)
		35.71	12" C.P.P. In (North)
		35.61	12" C.P.P. Out (West)
DMH #5	44.90	38.70	12" R.C.P. In (North, Existing)
		38.00	12" C.P.P. Out (South)
DMH #6	43.90	37.50	12" C.P.P. In (North)
		36.76	12" C.P.P. Out (West)
CB #11	40.40	35.80	12" C.P.P. In (East)
		35.70	15" C.P.P. Out (West)
DMH #7	39.45	34.75	15" C.P.P. In (East)
		34.65	18" C.P.P. Out (North)
CB #12	38.35	34.37	18" C.P.P. In (South)
		34.27	18" C.P.P. Out (North)
CB #13	37.85	35.01	12" C.P.P. In (North)
CB #14	37.85	34.91	12" C.P.P. In (South)
		34.81	12" C.P.P. In (East)
DMH #8	38.35	34.63	12" C.P.P. Out (West)
		34.13	18" C.P.P. In (East)
		34.13	12" C.P.P. Out (North, Drywell Bypass)
		34.03	12" C.P.P. Out (North, to Drywells)
DMH #9	37.80	34.73	12" C.P.P. In (South, Drywell Bypass)
		33.73	12" C.P.P. In (South, from Drywells)
		33.63	18" C.P.P. Out (North)
DGCB #15	36.65	33.82	8" P.V.C. In (East, Roof Drain)
		33.99	12" C.P.P. Out (West)
DGCB #16	36.65	33.83	12" C.P.P. In (East)
		33.33	18" C.P.P. In (South)
		33.23	18" C.P.P. Out (North)
DGCB #17	39.70	35.00	12" C.P.P. In (East)
DGCB #18	39.70	34.80	12" C.P.P. In (East)
		34.70	12" C.P.P. Out (West)
DMH #10	37.60	34.20	12" C.P.P. In (East)
		33.23	18" C.P.P. In (South)
		33.25	12" C.P.P. Out (North, Drywell Bypass)
		32.13	12" C.P.P. Out (North, to Drywells)
DMH #11	38.15	32.75	12" C.P.P. Out (South, Drywell Bypass)
		31.69	12" C.P.P. In (South, from Drywells)
		31.59	18" C.P.P. Out (North)
CB #19	37.30	31.78	18" C.P.P. In (South)
		31.08	18" C.P.P. Out (North)
DMH #12	48.00	38.50	12" C.P.P. In (East, Replace Existing)
		38.40	12" C.P.P. Out (West)
CB #20	44.50	36.05	12" C.P.P. In (North)
CB #21	44.50	35.85	12" C.P.P. In (East & South)
		35.10	15" C.P.P. Out (West)
CB #22	37.30	33.10	15" C.P.P. In (East)
		30.79	18" C.P.P. In (South)
		30.69	18" C.P.P. Out (North)

DGCB DENOTES DOUBLE GRATE CATCH BASIN

NOTE: DMH #'s 1, 2, 8, & 10 are to be installed with 36" Sump.

SEWER, RIM & INVERT ELEVATIONS

STRUCTURE	RIM	INVERT	REMARKS
SMH #1	47.10	44.0±	6" P.V.C. Out (Match Existing)
SMH #2	45.00	42.00	6" P.V.C. In (North)
		43.00	4" P.V.C. In (East) from Grease Trap
		30.27	6" P.V.C. Out (West)
SMH #3	39.80	27.87	6" P.V.C.

NOTE: Match Existing Invert in Columbia Street. All new Sewer manholes are to be installed with Locking Covers.

NOTES:

1.) All drywells are to be Rotonda DW-6-HD or equivalent. Drywells are 8 ft. in diameter by 6 ft. in height. Drywells are to be installed with 2 ft. of crushed stone around and beneath.

2.) All drainage pipes labelled C.P.P. are to be Hi-Q Corrugated Polyethylene Pipe, which is to have a corrugated exterior and a smooth interior. All P.V.C. pipe is to be capable of withstanding AASHTO H520 loading.

3.) All proposed waterlines are to have concrete thrust blocks installed at all bends and intersections.

4.) Plumbing contractor will be responsible for placement of roof drains and floor drains to a point 5 feet from the foundation. Site contractor will be responsible for connection of roof drains to drainage manholes and catch basins. Plumbing contractor will be responsible for installation of grease trap and 5 feet of pipe. Site contractor will be reponsible for installation of building sewer from that point to the sewer manhole.

5.) All work on sewer lines and appurtenances is to conform to requirements of the Town of South Kingstown Sewer Regulations at the time of construction. A preconstruction conference with the Utilities Department will be required of the contractor. Existing Sewer Manhole # 1 and the Existing Manhole which will be connected to in Columbia Street are to have a new hole cored through at the invert elevation. The brick trough will be rebuilt to allow passage of the effluent through the structure.

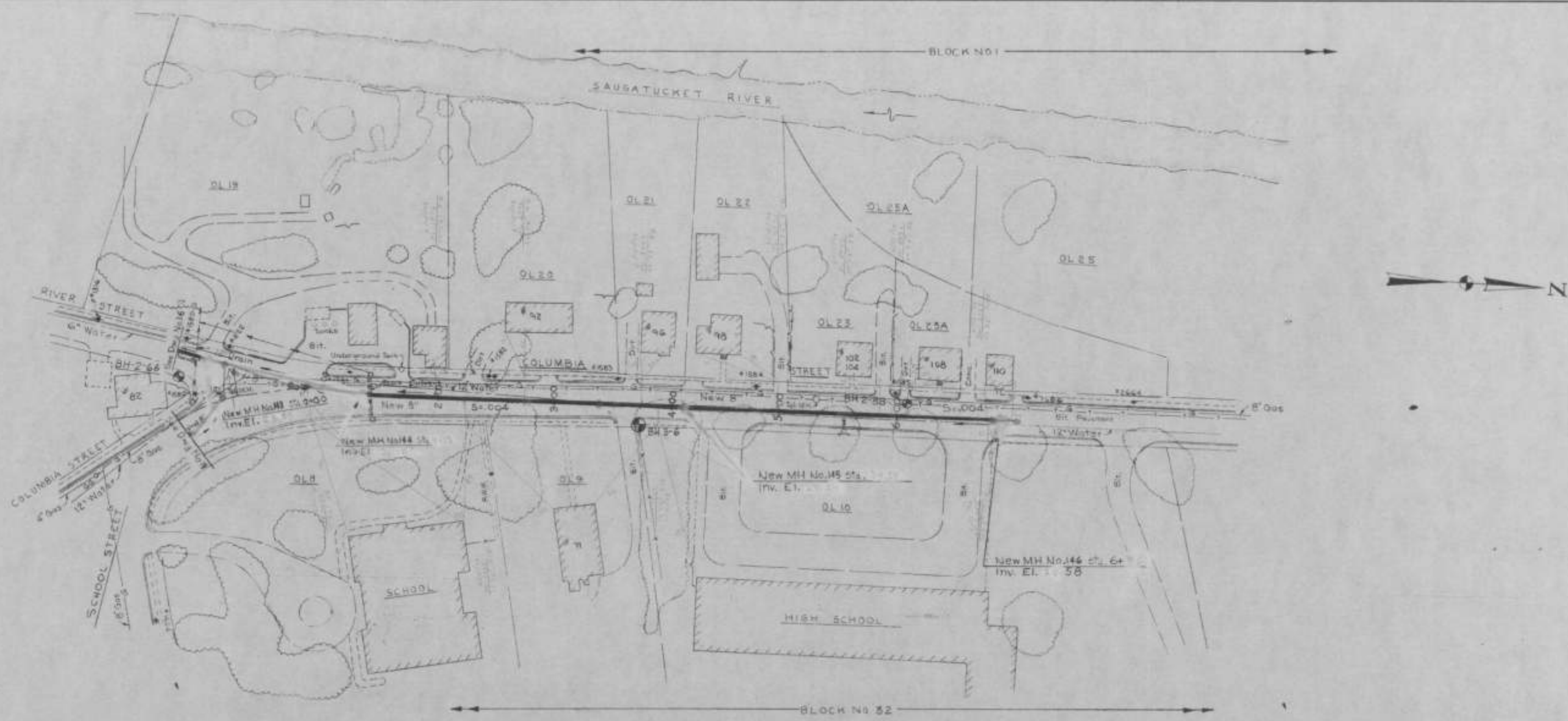
6.) A roof drain will be required if the northerly addition is built, see Shhet P.11 for location of drain at building. Contractor is responsible for connection of roof drain to DMH #12.

Holmes & Geisse
Consulting Engineers
1300 Hartford Street
East Providence, RI

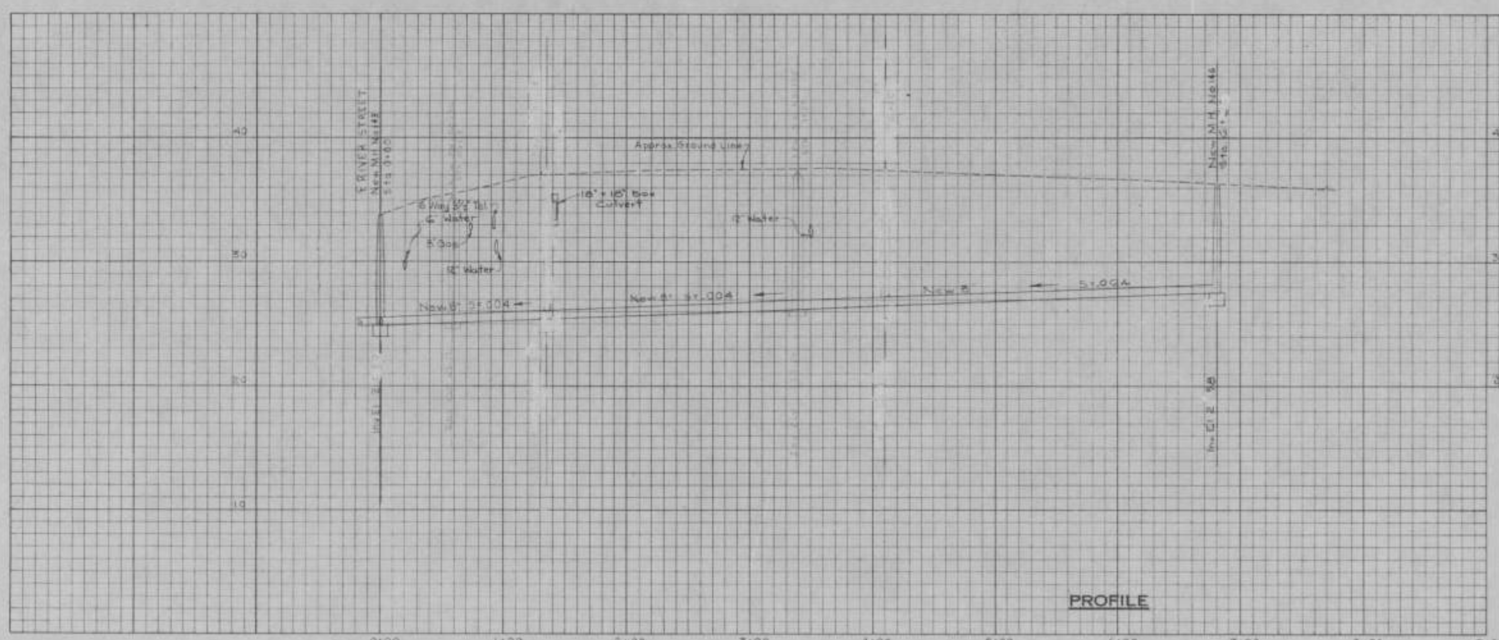
ADDITION TO SOUTH KINGSTOWN HIGH SCHOOL

TOWN OF SOUTH KINGSTOWN
SCHOOL DEPARTMENT

Utility Plan



PLAN



PROFILE

Rev. No	Description	Date	Int.
1	UPDATING	1975	

APPROVED

TOWN OF SOUTH KINGSTOWN

AS BUILT DRAWING
Date JAN 1978

DRAWN CNG
CHECKED JTA - HDH
APPROVED FIC
DATE NOV-27-64

SCALE
HORIZ. 1" = 50'
VERT. 1" = 5'

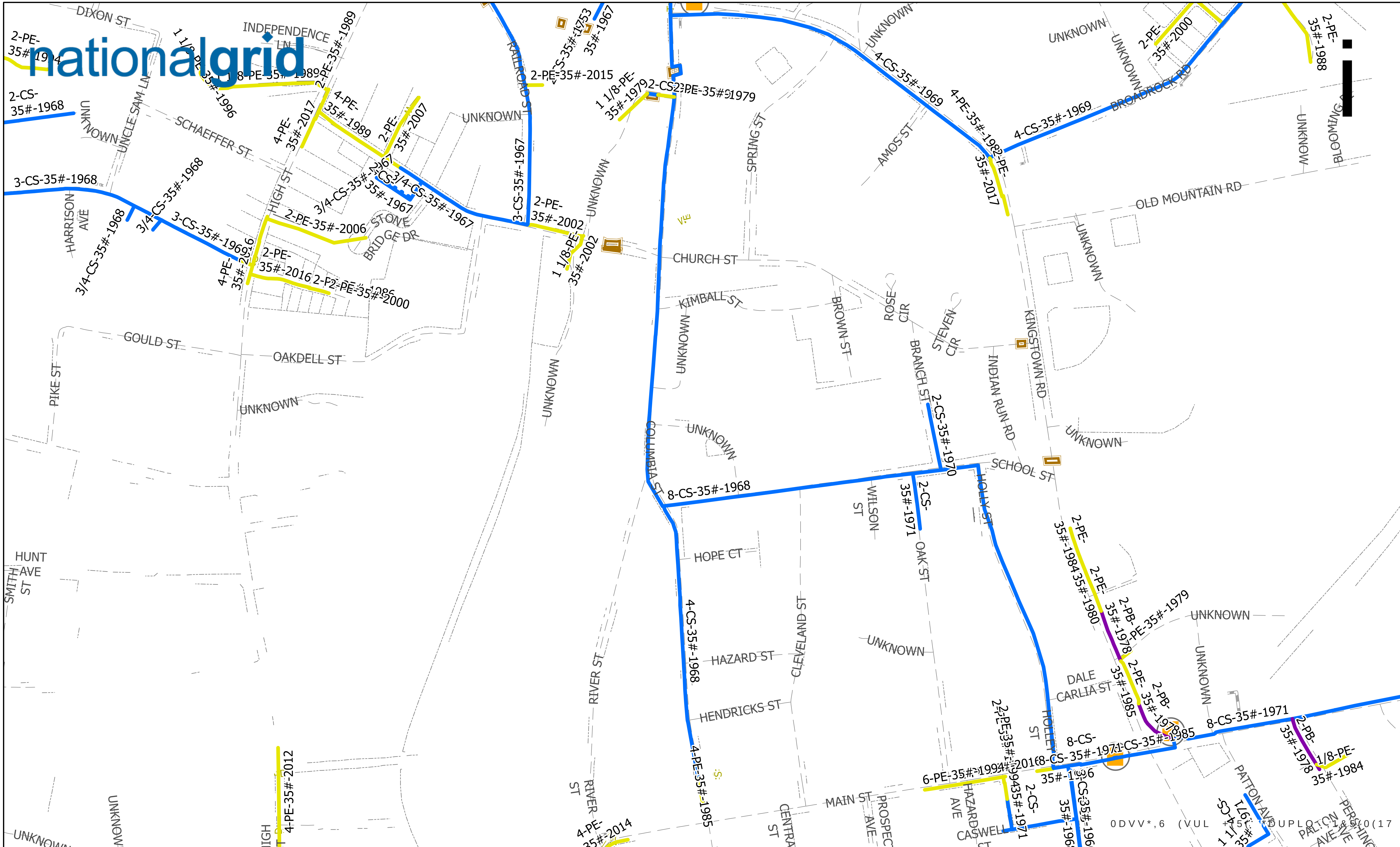
JOB NO. 428
DWG. NO. 17
FILE NO.

TOWN OF SOUTH KINGSTOWN, RH

SYSTEM OF SEWERS
CONTRACT NO. 3A

PLAN AND PROFILE
COLUMBIA ST
RIVER ST NORTHERL

CE MAGUIRE, INC
ARCHITECTS · ENGINEERS · PL



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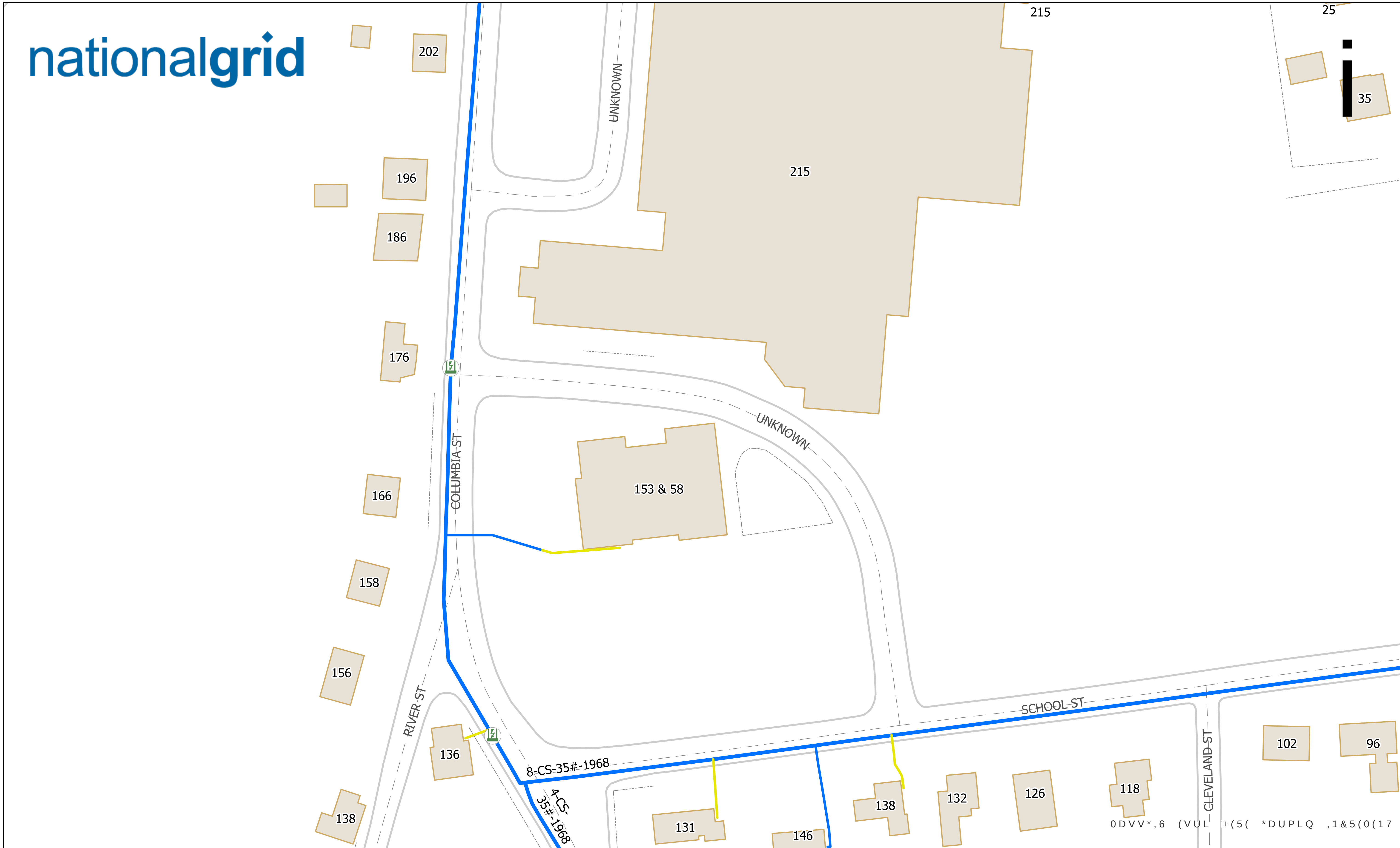

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Date Printed: 4/4/2023

nationalgrid

1 1/8-PE-35#-2002

202

240-242

11

12

232-234

239

152

144

134

124

108

91

CHURCH ST

19

11

BROWN ST

KIMBALL ST

224

1586 OR 14

220

210

8-CS-35#-1968

UNKNOWN

17

25

215

35

202

196

186

176

COLUMBIA ST

UNKNOWN

0DVV*,6 (VUL +(5(*DUPLQ ,1&5(0(17 3 86*6

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Date Printed: 4/4/2023

nationalgrid

316 & 316 & 217
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9
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UNKNOWN
2-PE-35#-2002
13
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261
143
SPRING ST
19
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118
103
91
CHURCH ST
1 1/8-PE-35#-2002
202
11
240-242
239
152
144
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124
108
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202R
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COLUMBIA ST
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232-234
8-CS-35#-1968
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KIMBALL ST
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BROWN ST
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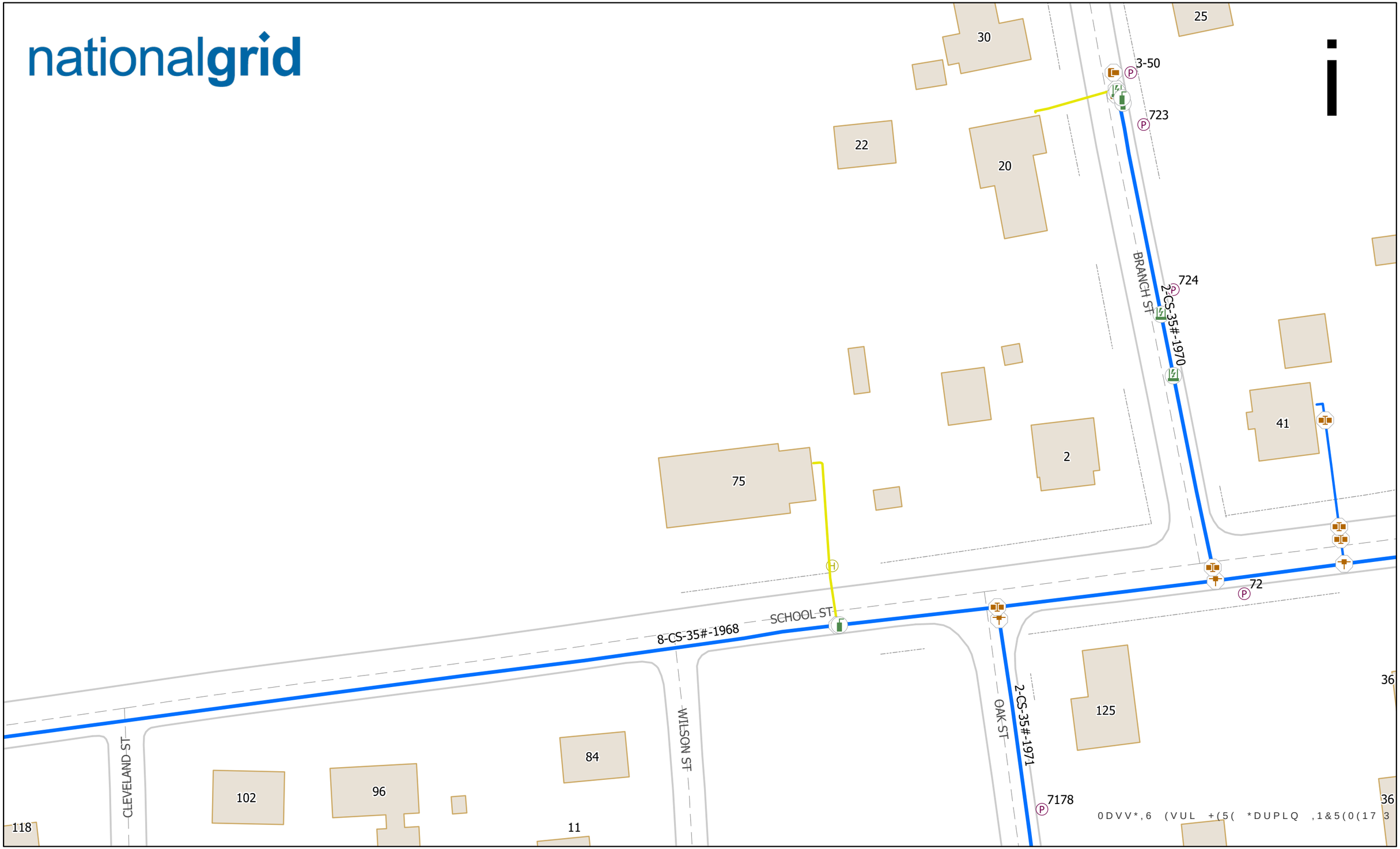
Date Printed: 4/4/2023

nationalgrid



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Date Printed: 4/4/2023

nationalgrid

153 & 58

RIVER ST

COLUMBIA ST

UNKNOWN

SCHOOL ST

8-CS-35#-1968

4-CS-35#-1968

CLEVELAND ST

22

136

131

146

138

132

126

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102

96

123

126

120

121

119

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0DVV*,6 (VUL +(5(*DUPLQ ,1&5(0(17 3 86*6

)HHW

127(7KH ORFDWLRQ RI VXUIDFH DQG XQGHUJURXQG REMHF

Date Printed: 4/4/2023

Town of South Kingstown

Water Suppliers

Yawgoo Pond
Hundred Acre Pond
Hurry Acre Pond
Indian Lake
Worden Pond
Tucker Pond
Long Pond
Factory Pond
Trustom Pond
Green Hill Pond
Card Pond
Potter Pond
Point Judith Pond
Sand Hill Cove
Narrow River
Chickasheen Brook
Chipuxet River
Horn Brook
White Rock Brook
Mink Brook
Indian Run
Pawcatuck River
SOUND
ISLAND
BLOCK

138 2 108 110 1

N W E S

0 0.5 1 1.5 2 Miles

- Town of South Kingstown - Middlebridge
- Town of South Kingstown - South Shore
- University of Rhode Island
- Veolia Water Company
- Kingston Water District

Geographic Information System

PS22-12 cpb 7/22

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

May 4, 2023

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,310 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties
Survey Area Data: Version 22, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Jul 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MU	Merrimac-Urban land complex, 0 to 8 percent slopes	5.1	32.8%
UD	Udorthents-Urban land complex	7.0	45.1%
Ur	Urban land	3.4	22.2%
Totals for Area of Interest		**15.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

MU—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9
Elevation: 0 to 820 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent
Urban land: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, dunes, outwash plains, deltas
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

UD—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 9lxj
Elevation: 0 to 670 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 120 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 70 percent
Urban land: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Human transported material

Typical profile

A - 0 to 12 inches: sandy loam
C1 - 12 to 25 inches: sandy loam
C2 - 25 to 60 inches: stratified sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 42 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: A
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land

Setting

Parent material: Human transported material

Typical profile

R - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Quonset

Percent of map unit: 5 percent
Landform: Outwash plains, terraces, outwash terraces, eskers
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Terraces, outwash plains, kames
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ur—Urban land

Map Unit Setting

National map unit symbol: 9lxk
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 100 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Parent material: Human transported material

Minor Components

Udorthents

Percent of map unit: 5 percent
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: No

Canton

Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Pittstown

Percent of map unit: 2 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Charlton

Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Merrimac

Percent of map unit: 1 percent
Landform: Terraces, outwash plains, kames
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Newport

Percent of map unit: 1 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Sudbury

Percent of map unit: 1 percent
Landform: Terraces, outwash plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Sutton

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: No

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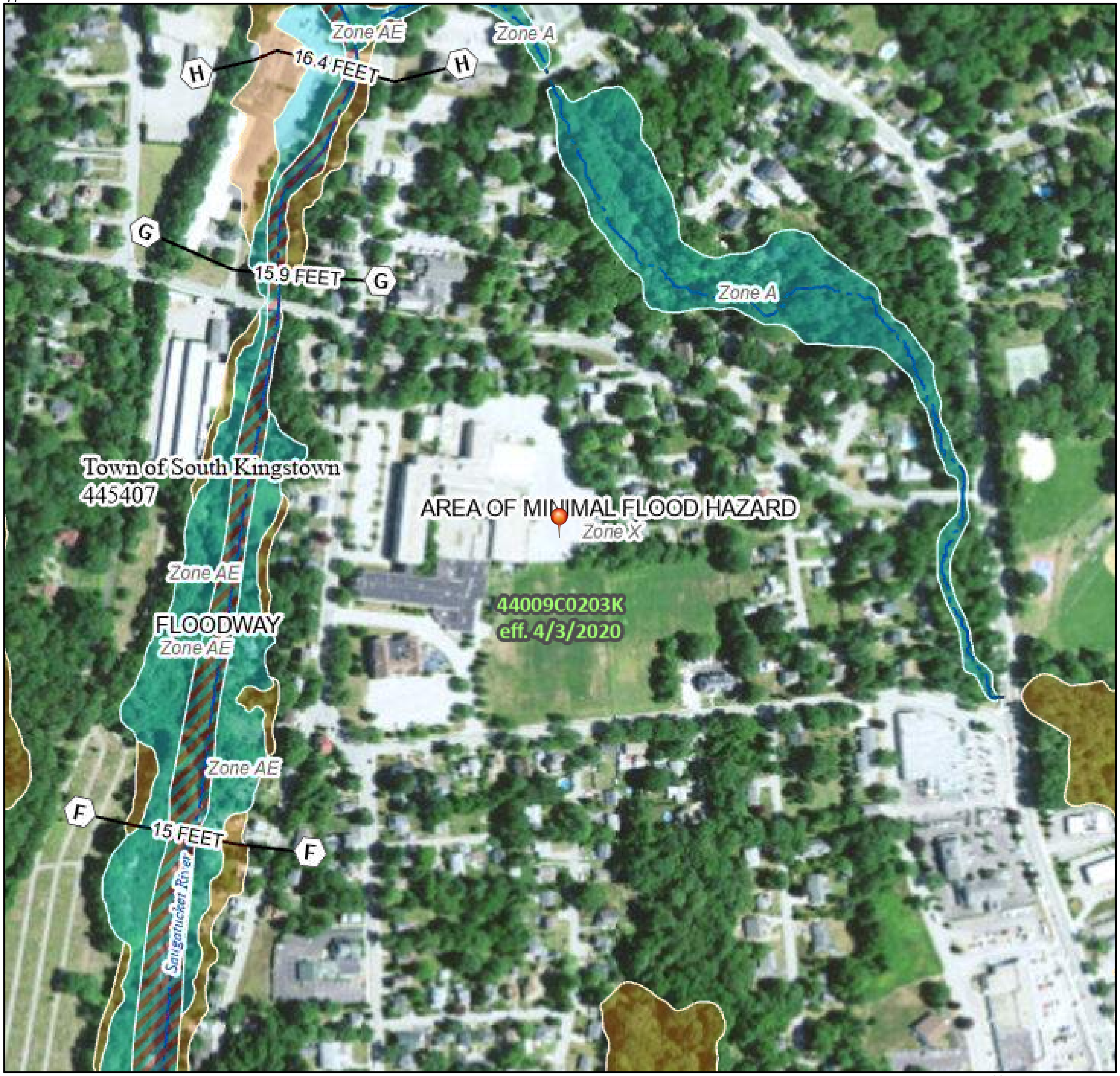
FEMA



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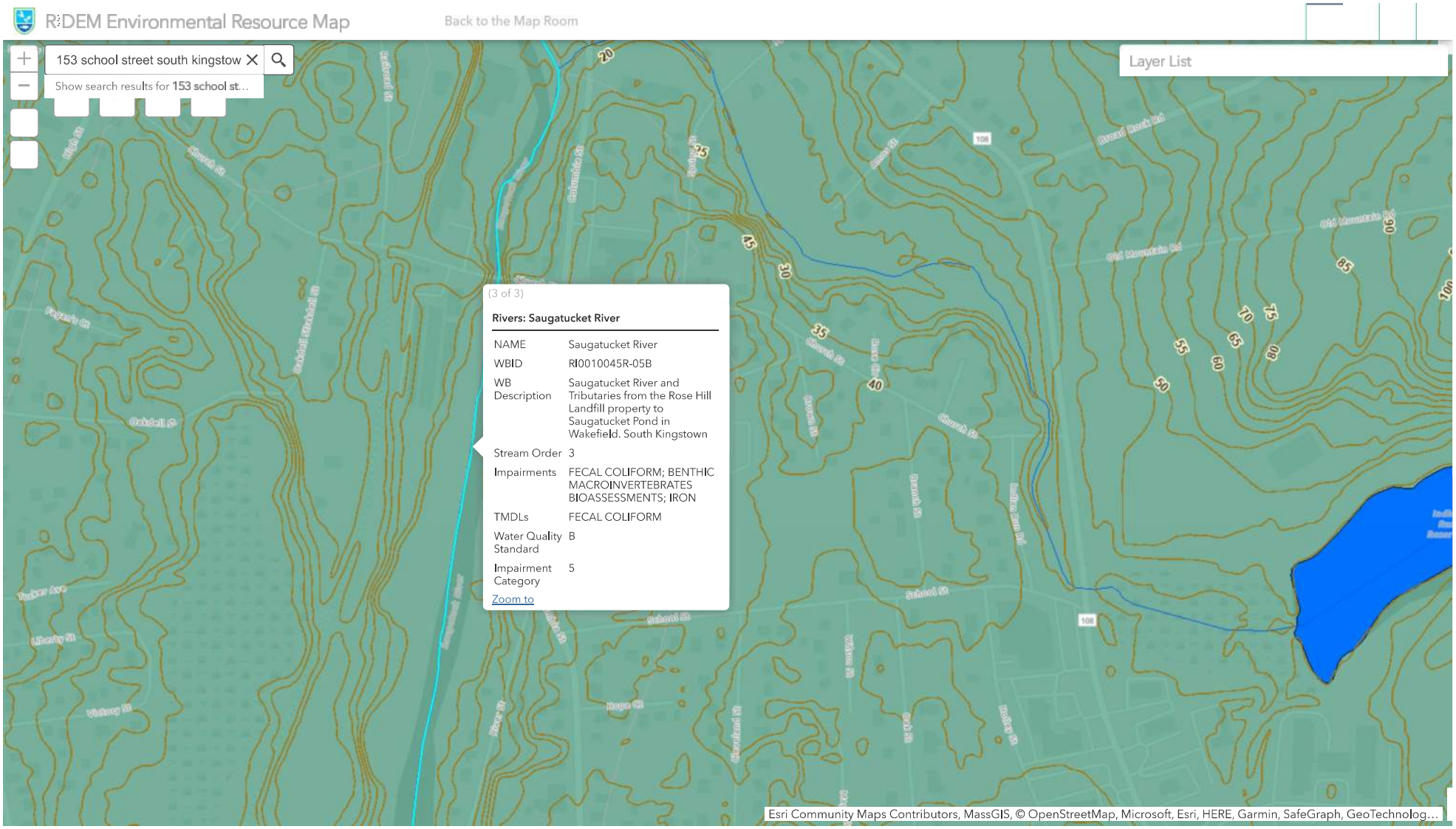
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Back to the Map Room
153 school street south kingstow
Show search results for 153 school st...
Layer List
(3 of 3)
Rivers: Saugatucket River
NAME Saugatucket River
WBID RI0010045R-05B
WB Description Saugatucket River and Tributaries from the Rose Hill Landfill property to Saugatucket Pond in Wakefield. South Kingstown
Stream Order 3
Impairments FECAL COLIFORM; BENTHIC MACROINVERTEBRATES BIOASSESSMENTS; IRON
TMDLs FECAL COLIFORM
Water Quality Standard B
Impairment Category 5
Zoom to
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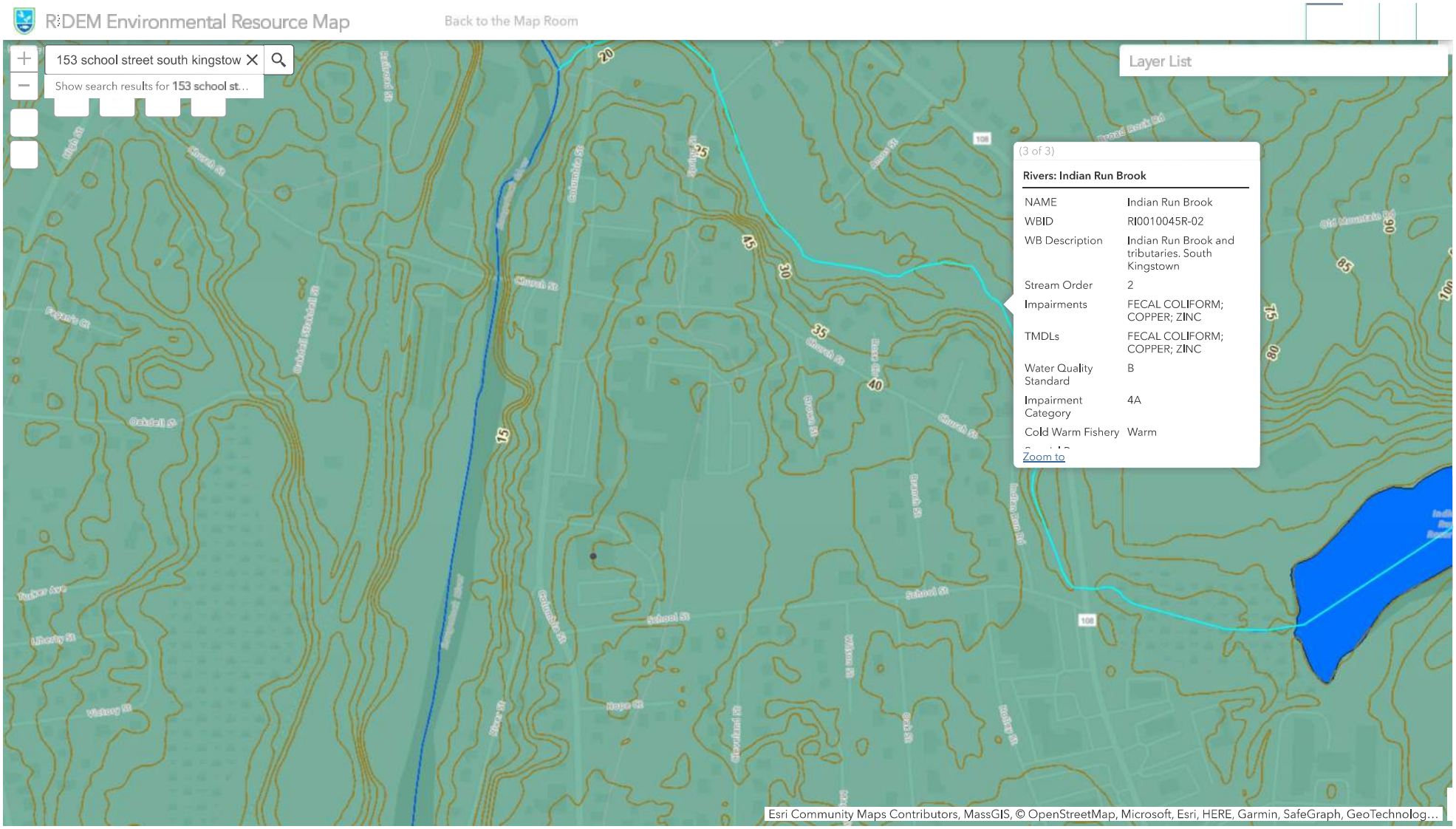
RIDEM Environmental Resource Map
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Show search results for 153 school st...
Layer List
(3 of 3)
Rivers: Indian Run Brook
NAME Indian Run Brook
WBID RI0010045R-02
WB Description Indian Run Brook and tributaries. South Kingstown
Stream Order 2
Impairments FECAL COLIFORM; COPPER; ZINC
TMDLs FECAL COLIFORM; COPPER; ZINC
Water Quality Standard B
Impairment Category 4A
Cold Warm Fishery Warm
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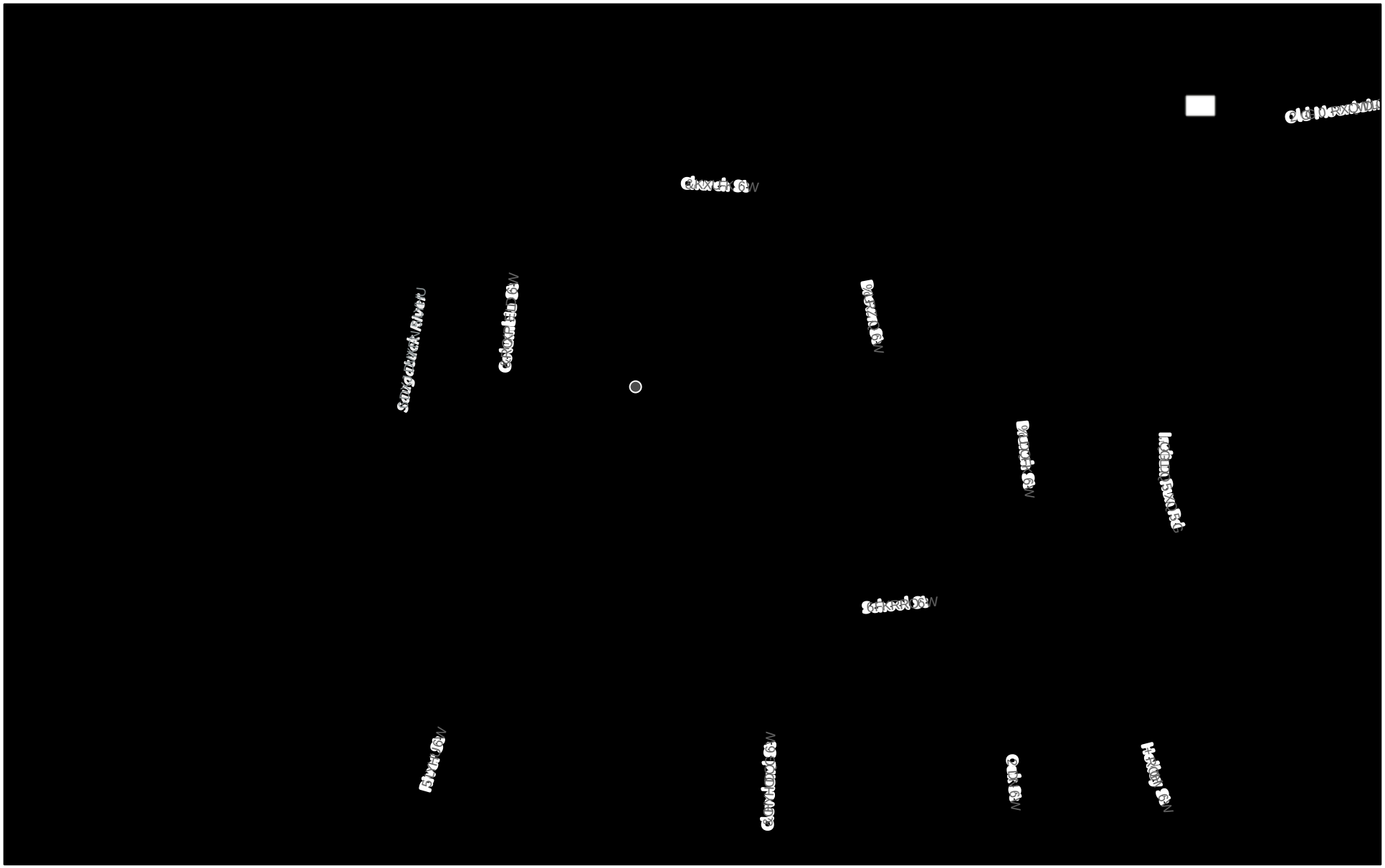

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Exhibit 24

SKHS PE/Athletic Site Due Diligence Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

RE: **Site Investigation Summary**
South Kingstown Junior High & Middle School
301 Curtis Corner Road, South Kingstown, RI 02879

GAI PN 7458-01
DATE: May 4, 2023

Introduction
Garofalo & Associates Inc. (Garofalo) has prepared this report to assist with the due diligence assessment of the referenced site as it relates to RIDE Stage II investigations for the proposed improvements at the school.

The subject site is located at 301 Curtis Corner Road, South Kingstown. The approximately 50.78 acres site is currently comprised of an existing Junior High School (Curtis Corner Middle School), South Road Elementary School & South Kingstown School Department buildings, tennis courts, football, soccer & track fields, and associated parking and hardscape areas. The property includes significant area to the north and west of the Middle School, but the information included herein is generally confined to the southeaster portions of the property (project area).

An Aerial Site Plan of the property is attached

Property Data
The site is identified as Lot 20 on Assessors Plat 39-3. The ownership of the parcel is identified as the Town of South Kingstown.

Zoning District
Zone: GI (Government & Institutional)
Use: Educational – Primary or Secondary

Exhibit A-Dimensional Standards:
Min. Lot Size: 200,000 sf + 40,000 per 100 pupils
Min Lot Width: 200 feet
Front yard: 40 feet
Corner Side: 40 feet
Side yard: 40 feet
Rear yard: 40 feet
Max. Principal Bldg. Height: 35 feet
Max. Accessory Bldg. Height: 15 feet
Max. Lot Coverage: 20%
Min distance from Residential Properties: Could not locate any info from town ordinances

85 Corliss Street, Post Office Box 6145, Providence, Rhode Island 02940
Phone: (401) 273-6000 ♦ Fax: (401) 273-1000 ♦ E-Mail: admin@garofaloassociates.com
Visit our Web Site at www.garofaloassociates.com

On-site Soils

The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils of the site to be primarily comprised of Narragansett silt loam, 0% to 3% slopes (NaA), Narragansett silt loam, 3% to 8% slopes (NaB), Narragansett very stony silt loam, 0% to 8% slopes (NbB), Narragansett very stony silt loam, 8% to 15% slopes (NbC), Ridgebury, Leicester and Whitman soils, 0% to 8% slopes, extremely stony (Rf), Udorthents-Urban land complex (UD), Urban Land (Ur) and Wapping very stony silt loam, 0% to 8% slopes (WcB). The Hydrologic Soil Group classification for these soils are "A"(low runoff potential), "B"(moderately low runoff potential), "C"(moderately high runoff potential) and "D"(high runoff potential). On-site soil UD is considered limited for development and on-site soil Ur is not rated for development. The site lies in a GA groundwater class district. Refer to geotechnical investigations for a more complete discussion of the subsurface conditions at the site.

FEMA Flood Mapping

The project area is located within Zone "X" (areas outside the 0.2% annual floodplain) as shown on F.E.M.A. Flood Insurance Rate Map for the Town of South Kingstown, Washington County, Rhode Island, Community Panel No. 44009C0184K having an effective date of April 3, 2020.

Site Drainage

Generally, the property falls from south to northeast at gently sloping grades. The property has a number of enclosed drainage systems which collect runoff from the building and adjacent paved areas. Landscaped portions of the development zone sheet flow to the northeast across the athletic field complex. Runoff from the site and fields flows generally northeast in enclosed drains that discharge to wetland features on- and off-site. A wetland findings summary is included in the Appendix.

- Limited Construction drawings for the onsite and adjacent facilities were located and those documents are included in the Appendix. No stormwater management facilities were identified on the property but a number of infiltrating catch basins were noted.

Runoff from the work area discharges at two (2) primary locations.

- The paved areas associated with the school entrance is collected within a series of enclosed drains and is directed Curtis Corner Road.

- The second and more significant discharge location includes regulated wetland facilities to the north of the fields, and this watershed includes most of the developed site. Construction drawings for these facilities indicate several outfalls, together with infiltrating facilities. A registered stormwater outfall is identified at this location (SK-39), but a review of that data was not initiated under these investigations.

- Also note that underground injection facilities are regulated as a site discharge and registration of facilities at the site is required.

There were no conditions noted during these investigations that indicate significant substandard drainage conditions currently occurring at the site or immediately downstream during normal rainfall (ie washouts or flooding). No stormwater management facilities were identified on the property.

The property falls within the Saugatucket River watershed (RI0010045R-05B), and more specifically in the Tributarty to Asa Pond. The Saugatucket River is a Stormwater Impaired Watershed, including impaired water quality as evidenced in the 2008 Rhode Island list of impaired waters prepared pursuant to Section 303(d) of the Federal Clean Water Act. BMPs targeted to remove other pollutant(s) of concern and/or to achieve higher pollutant removal efficiencies are required for impaired receiving water. The Tributarty to Asa Pond sub-watershed (RI0010045R-04), similarly an impaired water, and ultimately also discharges to the Saugatucket River.

Town Standards (Ord. Ch 20, Stormwater Management and Land development Regulations) requires stormwater management practices to meet 25-yr runoff, but also a more conservative standard of being consistent with the "Rhode Island Stormwater Design and Installation Standards Manual" and the "Rhode Island Soil Erosion and Sediment Control Handbook," as amended. Based on these standards, development of the site will require compliance RI Stormwater Rule, Standard 5, Overbank Flood Protection and some form of subsurface retention/infiltration as well as treatment and/or detention should be anticipated for all exterior improvements proposed.

Utilities

Water:
The site is within the South Kingstown (Veolia) Water service area and the site is understood to be connected to public water. According to Town mapping, there is a 12-inch main located within Curtis Corner Road. Record plans indicate an 8-inch main traversing the school property on the east side, with a meter pit and structure located near the entrance. Records similarly indicate extension of the main to portions of the property north of the school, and more specifically to the South Road School. Veolia Water had no records of the system whether the line serves other facilities to the north. A second service line was identified on the west side of the site, serving the administrative building. No data regarding system pressures was obtained.

Gas:
The middle school and administration building are understood to be connected to a 4-inch CA-35# main within Curtis Corner Road.

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Sewer:
The site is currently serviced by public sewer Columbia Street. Record plans indicate the main as an 8-main at 0.4% minimum slope. No pre-treatment facilities have been identified on the property. No failing or substandard conditions are known to exist in the immediate area. No additional research was performed regarding the capacity of existing adjacent or downstream facilities.

Based on discussion with the Department of Public Works no failing or substandard conditions are known to exist in the immediate area. No additional research was performed regarding capacity of existing adjacent facilities.

Electric:
Infrastructure records have been requested, but no records regarding electric service were obtained at the time of issuance. The primary service to the School and Admin buildings appears to be from Curtis Corner Road. Several potential secondary service locations were noted and further investigation regard the adjacent facilities is necessary once loading requirements have been identified.

Verizon and Cox Communications:
No records regarding communications or cable service were obtained.

RIDEM Environmental Resource Mapping

Wetlands:
There are wetlands identified on the site to the north of the school and fields. Field delineation of the wetland resources was performed and is included in the Appendix.

National Heritage Area / Conservation Land:
There are no national heritage areas or conservation land on or adjacent to the site.

Other Resources:
There were no other conditions noted on RIDEM Mapping that are believed to significantly impact the development potential of the property.

RIDEM Waste Management Search Data
The RIDEM Waste Management search performed found the following registered facilities on the property.

- 301 Curtis Corner Road: UST-266, 10,000-Gallon No6 Heating Oil Tank, permanently closed.
- 1157 South Road (South Road Elementary): UST-265, 50,000-Gallon Diesel, permanently Closed. LUST – OPEN.

END OF SUMMARY

STUDIOJAED
ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS
Website: www.StudioJAED.com
Email: info@StudioJAED.com

DELAWARE OFFICE
2500 WRANGLE HILL ROAD, STE. 110
BEAR, DELAWARE 19701
P: (302) 832-1652

PROVIDENCE OFFICE
42 WEYBOSSET STREET, STE. 403
PROVIDENCE, RHODE ISLAND 02903
P: (401) 648-0884

MARYLAND OFFICE
213 FRONT STREET, P.O. BOX 254
CRUMPTON, MARYLAND 216285

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
CURTIS CORNER MIDDLE SCHOOL &
SOUTH KINGSTOWN JUNIOR HIGH SCHOOL
301 CURTIS CORNER ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN
6-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.1

SHEET NO.

G-1

LIST OF ATTACHMENTS

1. Property Cards
2. GIS Parcel Map
3. Zoning Map
4. Future Land Use Map
5. Aerial Map
6. Record Site Plans
7. Utility Information
8. NCRS Soils Data
9. FEMA Flood Map (FIRMette)
10. RIDEM Environmental Resource Mapping

301 CURTIS CORNER ROAD

Location	301 CURTIS CORNER ROAD	**Map and Lot**	39-3/ 20/ / /
Acct#	R-34-0060-00	**Owner**	SOUTH KINGSTOWN TOWN OF
Assessment	$23,942,600	**PID**	2751
Building Count	3		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$20,249,800	$3,692,800	$23,942,600

Owner of Record

Owner	SOUTH KINGSTOWN TOWN OF	**Sale Price**	$0
Co-Owner	C/O SCHOOL ADMINISTRATION	**Certificate**	1
Address	307 CURTIS CORNER RD WAKEFIELD, RI 02879-2195	**Book & Page**	0092/0279
		Sale Date	09/24/1963
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
FROM ADMIN	$0		0088/0395		08/30/1961

Building Information

Building 1 : Section 1

Year Built:	1990
Living Area:	112,996
Replacement Cost:	$19,919,858
Building Percent Good:	75
Replacement Cost Less Depreciation:	$14,939,900

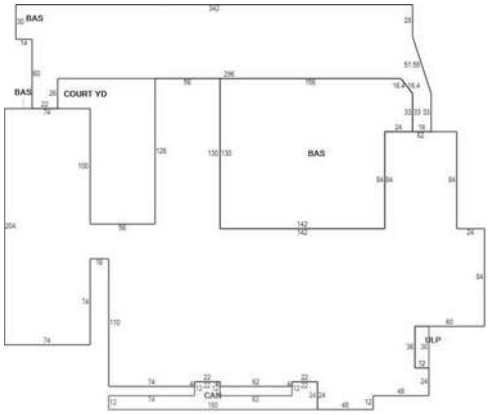
Building Attributes	
Field	**Description**
Style:	School/College

Model	Ind/Open Com
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903L
Heat/AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	10.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\01\75\45.jpg

Building Layout



(ParcelSketch.ashx?pid=2751&bid=2751)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	112,996	112,996
CAN	Canopy	2,688	0
ULP	Loading Platform, Unfinished	432	0
		116,116	112,996

Building 2 : Section 1

Year Built: 1990
Living Area: 7,952
Replacement Cost: $876,916
Building Percent Good: 75
Replacement Cost Less Depreciation: $657,700

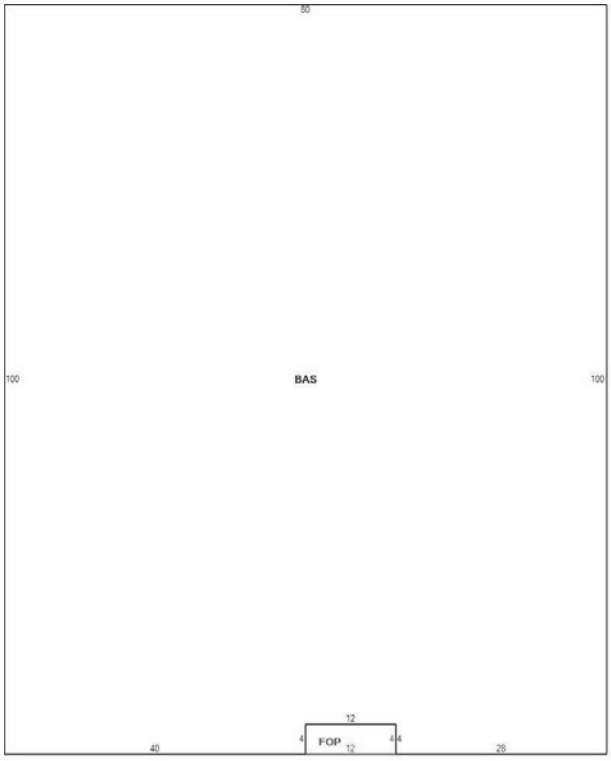
Building Attributes : Bldg 2 of 3	
Field	**Description**

Style:	Office Bldg
Model	Commercial
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Tar & Gravel
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Inlaid Sht Gds
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Struct Class	
Bldg Use	SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903J
Heat/AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	10.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\01\23\37.jpg

Building Layout



(ParcelSketch.ashx?pid=2751&bid=13296)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	7,952	7,952
FOP	Porch, Open, Finished	48	0
		8,000	7,952

Building 3 : Section 1

Year Built:	1990
Living Area:	32,405
Replacement Cost:	$5,944,377
Building Percent Good:	75

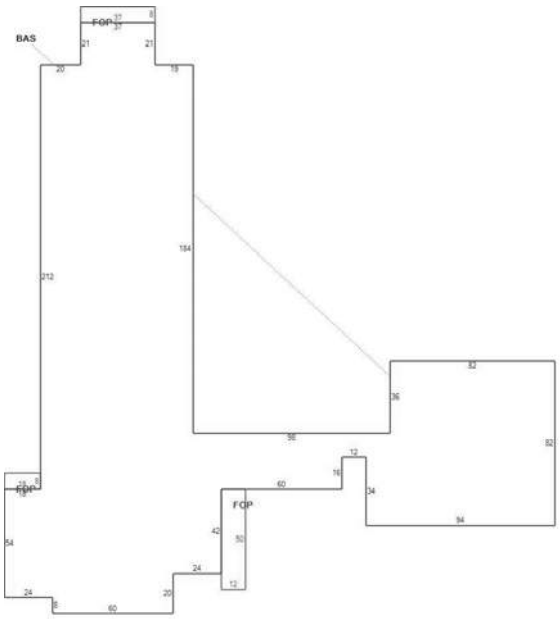
Replacement Cost
Less Depreciation: $4,458,300

Building Attributes : Bldg 3 of 3	
Field	**Description**
Style:	School/College
Model	Ind/Open Com
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	SCHOOL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903L
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL/MN WL
Rooms/Prtns	AVERAGE
Wall Height	10.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\01\75\46.jpg

Building Layout



(ParcelSketch.ashx?pid=2751&bid=13297)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	32,405	32,405
FOP	Porch, Open, Finished	1,040	0
		33,445	32,405

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	903L
Description	SCHOOL MDL-96
Zone	GI
Neighborhood	0040
Alt Land Appr	No
Category	

Land Line Valuation

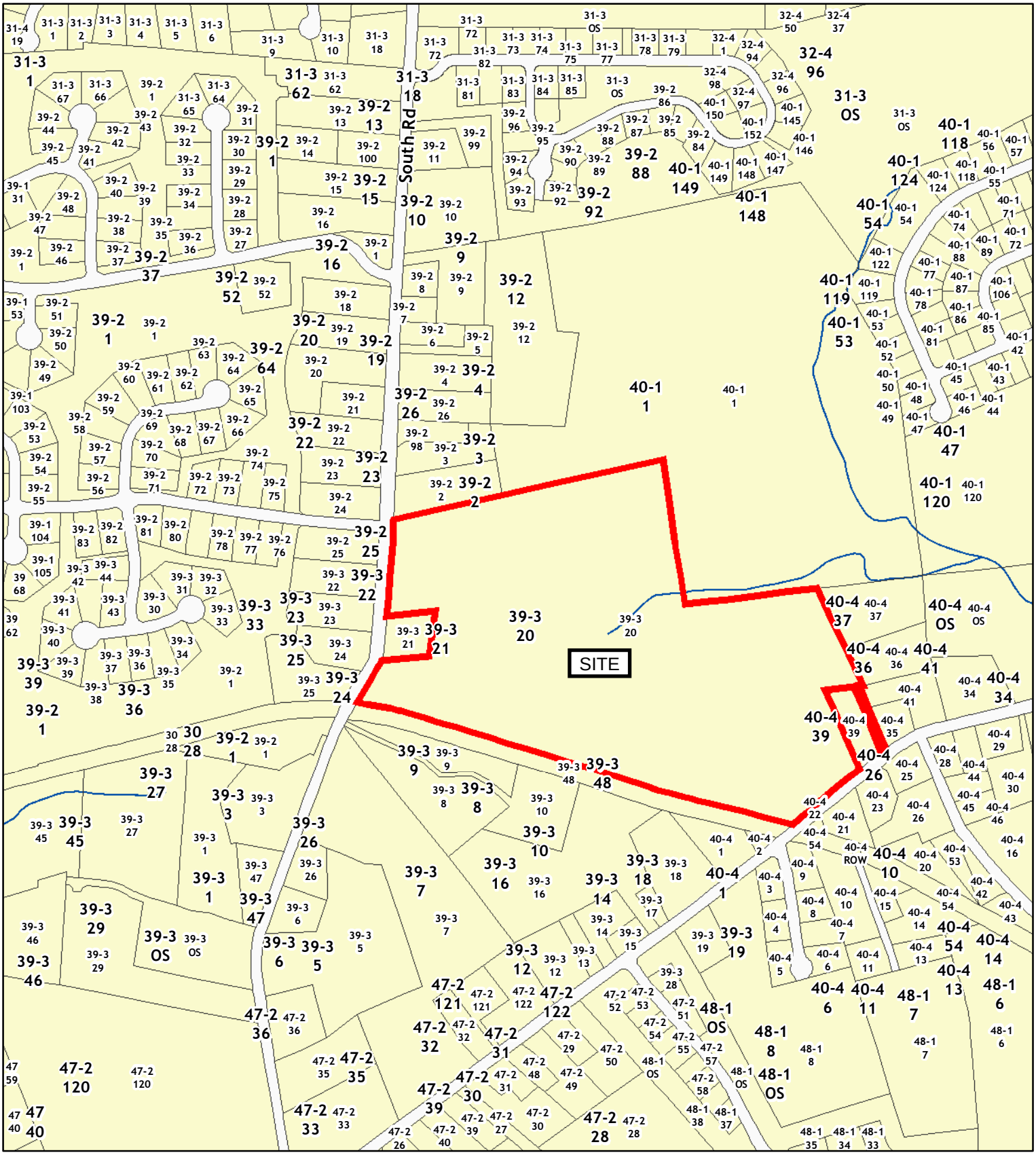
Size (Acres)	50.78
Frontage	
Depth	
Assessed Value	$3,692,800

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN3	FENCE-6' CHAIN			1400.00 L.F.	$9,800	1
PAV1	PAVING-ASPHALT			24000.00 S.F.	$36,000	3
TCT	TEN CRT COMM			43200.00 S.F.	$64,800	2
PAV1	PAVING-ASPHALT			16000.00 S.F.	$24,000	2
SHD6	COMM MASNRY			600.00 S.F.	$7,500	1
SHD6	COMM MASNRY			1276.00 S.F.	$23,900	2
SHD6	COMM MASNRY			600.00 S.F.	$7,500	1
SHD1	SHED FRAME			80.00 S.F.	$500	1
LT12	W/FOUR LIGHTS			4.00 UNITS	$7,800	1
LT10	W/DOUBLE LIGHT			2.00 UNITS	$3,100	1
GRN1	GREEN HOUSE-RS			899.00 S.F.	$9,000	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$18,239,400	$3,057,000	$21,296,400
2020	$18,239,400	$3,057,000	$21,296,400
2019	$18,239,400	$3,057,000	$21,296,400



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

301 Curtis Corner Road

Parcel Boundaries not legally binding for title or zoning purposes.

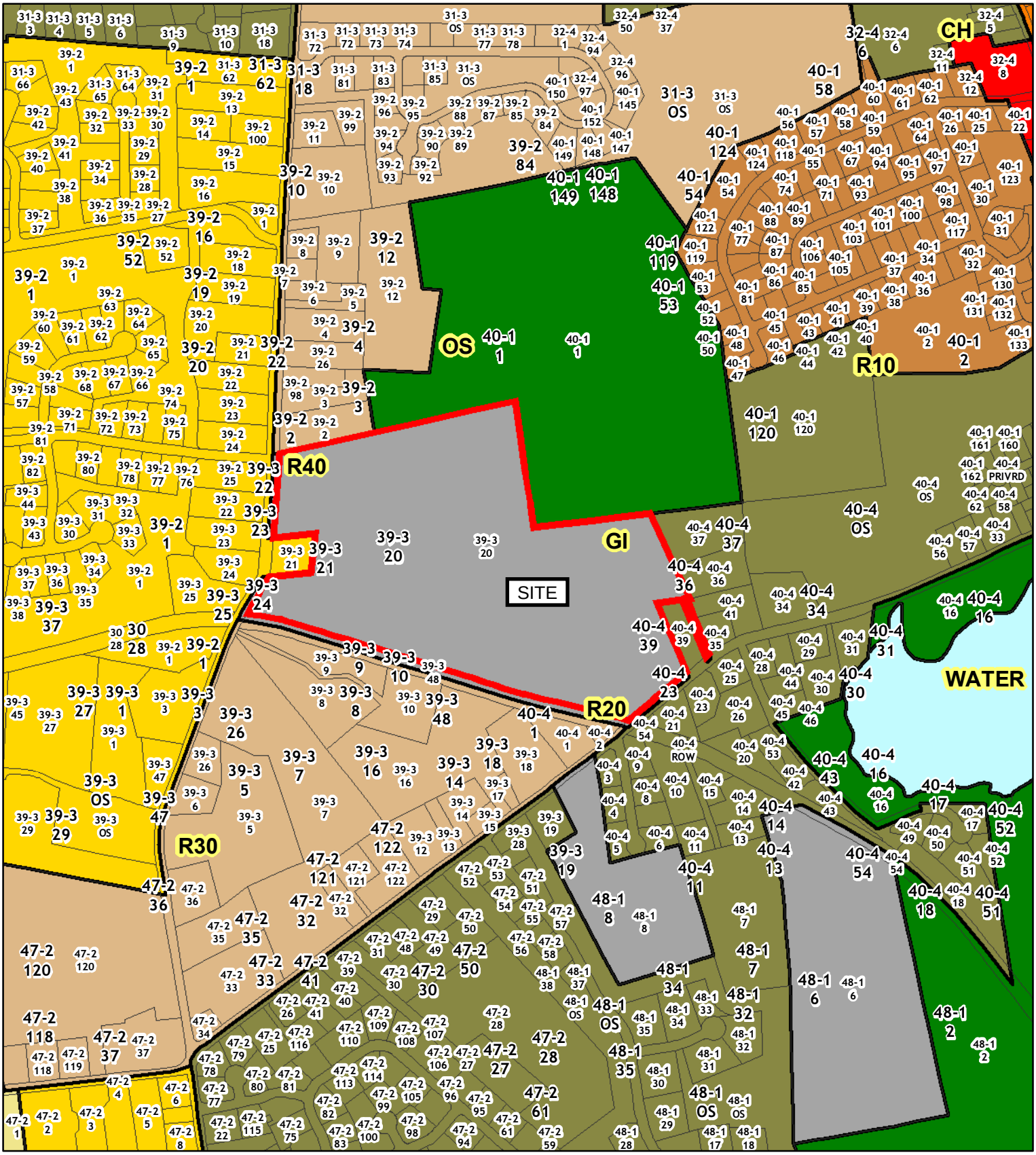
The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 583 feet

0 265 530 1,060 Feet

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

301 Curtis Corner Road

Parcel Boundaries not legally binding for title or zoning purposes.

1 inch = 667 feet

0 305 610 1,220 Feet

Town of South Kingstown Web GIS

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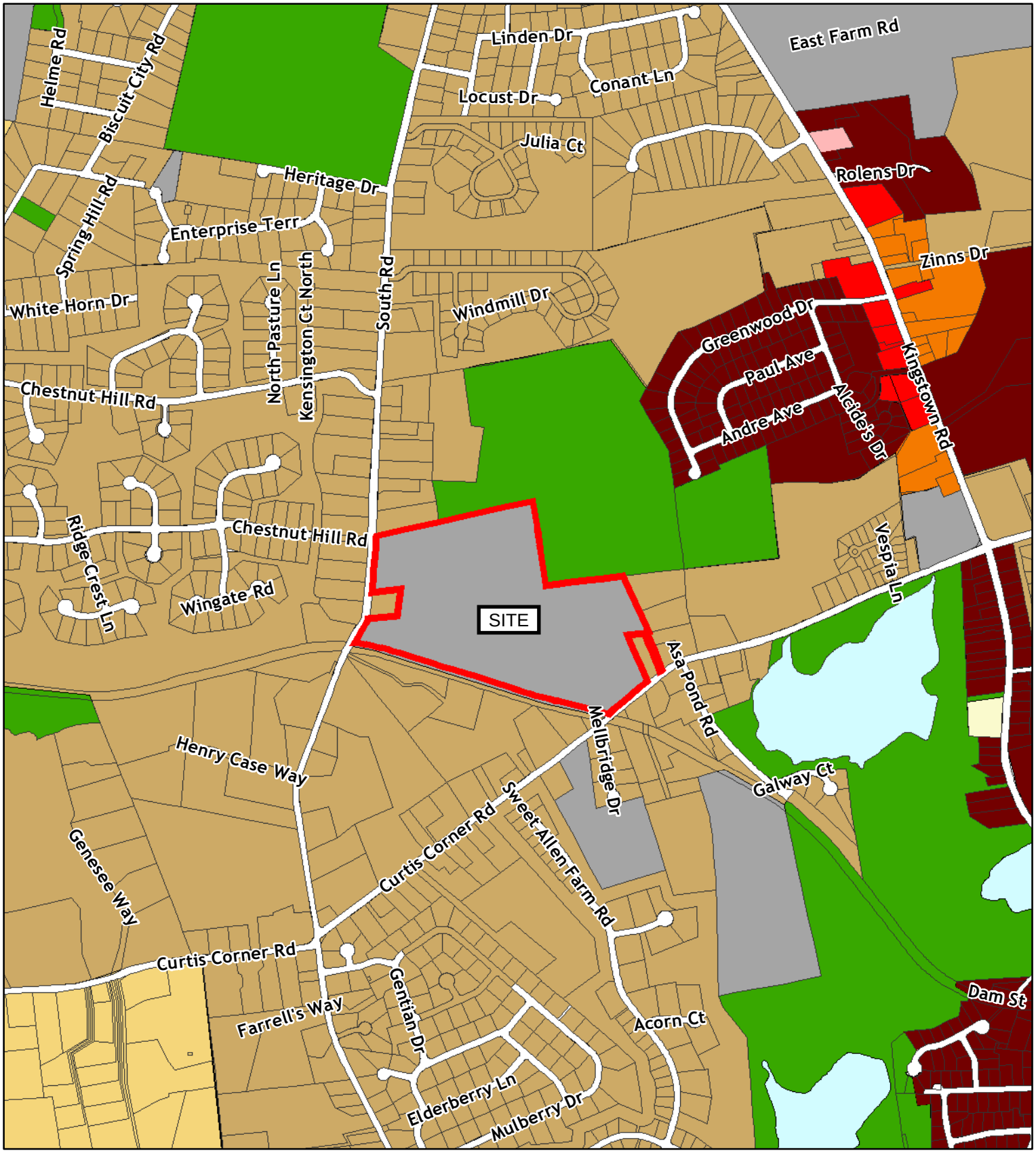

Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

301 Curtis Corner Road

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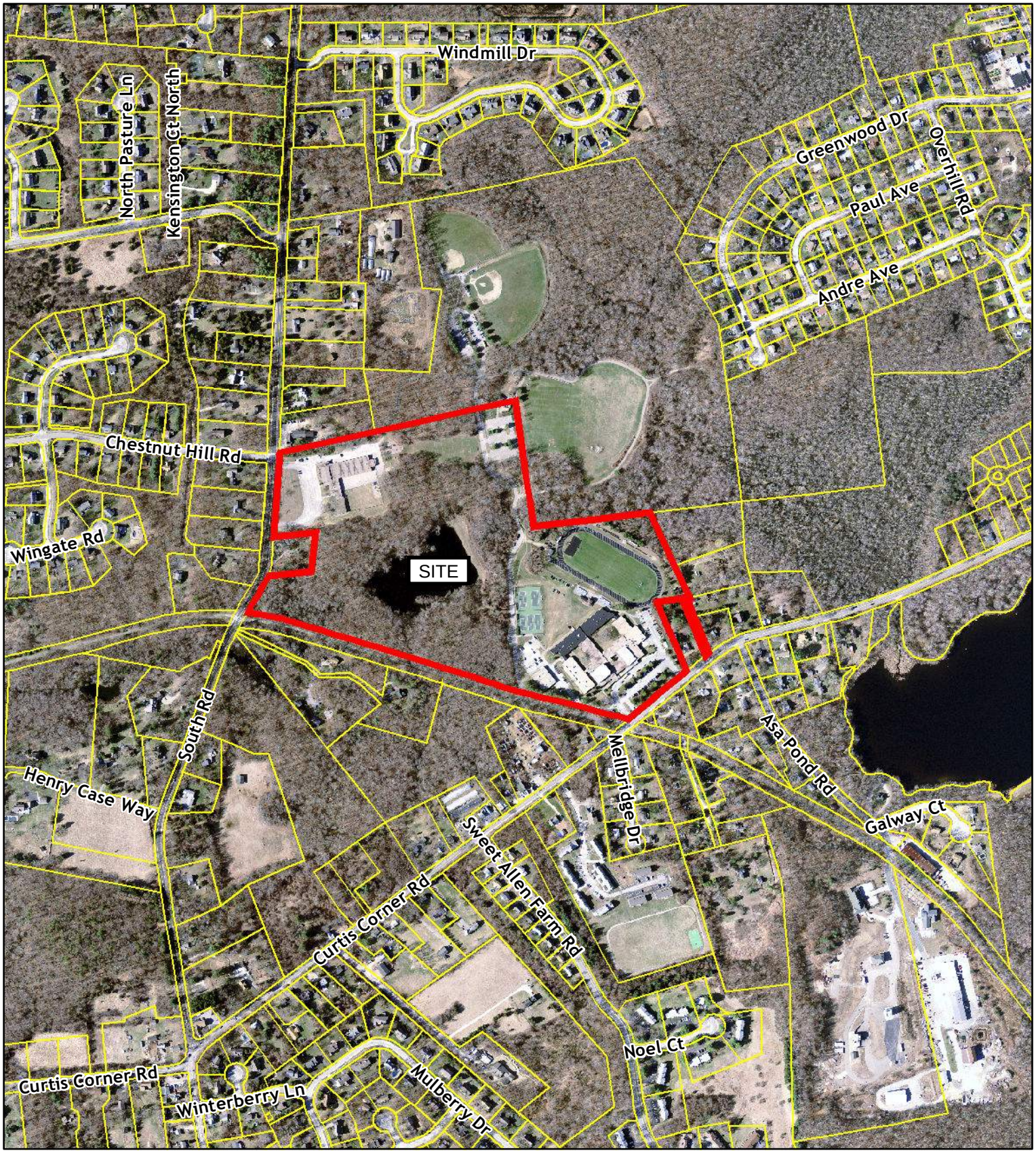
N

1 inch = 1,000 feet

Feet

0 460 920 1,840

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

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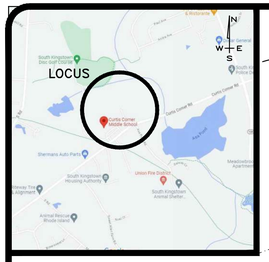
N

1 inch = 667 feet

Feet

0 305 610 1,220

Town of South Kingstown Web GIS



LOCUS MAP
N.T.S.

MATCH LINE SHEET 2

PARCEL DATA

A.P. 39–3, LOT 20
N/F
TOWN OF SOUTH KINGSTOWN
DEED BK. 92 / PG. 279
301 CURTIS CORNER ROAD
PARTIAL LOT AREA:
803,735 S.F.± OR
18.45 ACRES±

STREET INDEX

CURTIS CORNER ROAD
ONION STREET
SOUTH ROAD

1" = 40'
feet: 0 20 40 80 160 240
meters: 0 5 10 20 40 60

NOTES:

1. THE PROJECT SITE IS LOCATED WITHIN ZONE X (AREAS OUTSIDE THE 0.2% ANNUAL FLOODPLAIN) AND ZONE X* (AREAS OF 0.2% ANNUAL CHANCE FLOODPLAIN, AREAS OF 1% ANNUAL CHANCE FLOODPLAIN WITH AVERAGE DEPTHS OF 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.) AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE TOWN OF SOUTH KINGSTOWN, WASHINGTON COUNTY, RHODE ISLAND, COMMUNITY MAP NO. 44009C0184K, HAVING AN EFFECTIVE DATE OF APRIL 3, 2020.
2. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION @ 1–888–344–7233)
3. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE – NAD 83. VERTICAL DATUM: NAVD 88* (*DATUM WAS DERIVED BY OBSERVED GPS ORTHOMETRIC HEIGHTS VARIATIONS BETWEEN LOCAL BENCHMARKS MAY APPLY).
4. WETLAND PROVIDED BY NATURAL RESOURCE SERVICES, INC.. THE WETLAND DELINEATION WAS ESTABLISHED IN ACCORDANCE WITH THE STANDARDS OUTLINED IN SECTION 3.21 OF THE RULES AND REGULATIONS GOVERNING THE ADMINISTRATION AND ENFORCEMENT OF THE FRESHWATER WETLANDS ACT.
5. TOPOGRAPHY PROVIDED BY DOUGLAS DESIGN GROUP LAND SURVEYING.

PLAN REFERENCES:

1. TOWN OF SOUTH KINSTOWN CURTIS CORNER ROAD AS RELAID, WIDENED AND STRAIGHTENED BY PETER LABELLE, NORMAN H. POPPE, FOSTER R. SHELDON, COMMITTEE, JAN., 1954, IN 3 SHEETS, BY WILFRED R. EASETERBROOKS, CIVIL ENGINEER
2. RHODE ISLAND DEPARTMENT OF TRANSPORTATION DIVISION OF PUBLIC WORKS, SOUTH COUNTY BIKE PATH KINGSTON STATION TO RODMAN STREET SOUTH KINGSTOWN RHODE ISLAND, IN 42 SHEETS, PLAT NO. 2387.
3. TOWN OF SOUTH KINGSTOWN, RHODE ISLAND SYSTEM OF SEWERS CONTACT NO. CURTIS CORNER ROAD STA 21+15 TO STA 33+15, BY CE MAGUIRE , IN.C ENGINEERS, JOB NO. 1843, DWG. NO. 3, DATED JUNE 1979.

CERTIFICATION:

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 435–RICR–00–00–1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF BOUNDARY SURVEY	MEASUREMENT SPECIFICATION
BOUNDARY SURVEY	CLASS I
DATA ACCUMULATION SURVEY	CLASS III
TOPOGRAPHY SURVEY	CLASS T–3

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TO PROVIDE A PARTIAL TOPOGRAPHIC AND A BOUNDARY SURVEY FOR ASSESSOR'S PLAT 39–3 LOT 20 IN SOUTH KINGSTOWN, RHODE ISLAND.

BY: Samuel A. White, Jr.
SAMUEL A. WHITE LICENSE NO. 1781
LS A59–COA

TOPOGRAPHIC AND EXISTING CONDITION SURVEY
FOR
CURTIS CORNER MIDDLE SCHOOL
AP 39-3 LOT 20
SITUATED ON
301 CURTIS CORNER RAOD
WAKEFIELD, RHODE ISLAND
PREPARED FOR
STUDIO JAED

NO.	REVISION	BY	DATE

DRAFT

This plan is a "DRAFT" version and has been prepared for the purpose of review and commenting and is not legal without the official stamp, signature and date of a Professional Land Surveyor registered in the State of Rhode Island. (RI General Laws § 5–8.1–12)

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERSISURVEYORS
LAND PLANNERSIENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO.	DRAWN BY	LFA
7458.01		
DWG. NO. 7458–01–ECS	CALCS BY	LFA
SCALE: 1"=40'	APPROVED	SAW
	DATE:	MAY 2023

SHEET
1
OF 2 SHEETS

MATCH LINE SHEET 1

MATCH LINE "A"

A.P. 39-3 LOT 20
N/F
TOWN OF SOUTH
KINGSTOWN
BK. 92 PG. 279

A.P. 40-4 LOT 39
N/F
JANICE A. DIMON
BK. 282 PG. 224

A.P. 39-3 LOT 48
N/F
STATE OF RI DOT
BK. 237 PG 127

ONION STREET

CURTIS CORNER ROAD
(50' WIDTH - PUBLIC WAY)

WILLIAM C. O'NEILL BIKE PATH
(74.25' WIDTH - PUBLIC)

EXISTING CENTERLINE OF RAILROAD ROW

CONSTRUCTION BASELINE, PLAT NO. 2387

TENNIS COURTS

BUILDING

GREEN HOUSE

DWELLING

SHED

STONE PATIO

BLEACHER

GRASS

BENCHMARK:
MAGNETIC NAIL SET
EL. = 126.18

BENCHMARK:
DRILL HOLE SET
EL. = 134.97

EGB (HELD)
STA: 27+01.01
OFF: 25.00'L(HELD)

EGB (HELD)
STA: 23+47.16
OFF: 25.00'L

EGB
STA: 26+57.20
OFF: 24.57'L

A.P. 40-4 LOT 35
N/F
MARGARET A. MILLER
& LUTHER F. POOR
BK. 1674 PG. 155

1" = 40'

0 20 40 80 160 240 feet
0 5 10 20 40 60 meters

GENERAL LEGEND & ABBREVIATIONS

ASSESSORS LINE
EASEMENT LINE
LOCUS PROPERTY LINE
CHAIN LINK FENCE
METAL FENCE
STOCKADE FENCE
STONE WALL
CABLE SCALE LINE
DRAIN PAINT LINE
DRAIN SCALE LINE
ELECTRIC PAINT LINE
ELECTRIC SCALE LINE
GAS PAINT LINE
GAS SCALE LINE
OVERHEAD WIRES
SEWER SCALE LINE
TELEPHONE SCALE LINE
WATER PAINT LINE
WATER SCALE LINE
WETLAND BUFFER
EXISTING CONTOUR MAJOR
EXISTING CONTOUR MINOR
TREE LINE

BOLLARD
CATCH BASIN
CLEAN OUT
CURB INLET
DRAIN MANHOLE
FLAG POLE
GAS GATE
GAS SHOT OFF VALVE
HANDICAP PARKING STRIPING
HYDRANT
LIGHT POLE
MANHOLE (UNKNOWN)
SIGN
SEWER MANHOLE
SEWER CLEAN OUT
UTILITY POLE
VENT PIPE
WATER GATE
WATER SHUTOFF
WETLAND FLAG
EDH EXISTING DRILL HOLE
EGM EXISTING GRANITE MONUMENT

BB BITUMINOUS BERM
BW BITUMINOUS WALK
BIT. BITUMINOUS
CC CONCRETE CURB
CONC. CONCRETE
CW CONCRETE WALK
DYL DOUBLE YELLOW LINE
EOP EDGE OF PAVEMENT
FP FLAG POLE
GC GRANITE CURB
GD GRAVEL DRIVE
GW GUY WIRE
HW HEAD WALL
INV. INVERT
MP METAL POST
SWL SINGLE WHITE LINE
SYL SINGLE YELLOW LINE
x164.5 SPOT GRADE ELEVATION
VP VENT PIPE
W/ WITH

RI State Plane - NAD 83

TOPOGRAPHIC AND EXISTING CONDITION SURVEY
FOR
CURTIS CORNER MIDDLE SCHOOL
AP 39-3 LOT 20
SITUATED ON
301 CURTIS CORNER RAOD
WAKEFIELD, RHODE ISLAND
PREPARED FOR
STUDIO JAED

NO.	REVISION	BY	DATE

DRAFT

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PROVIDENCE, R.I. 02940
TEL. 401-273-6000

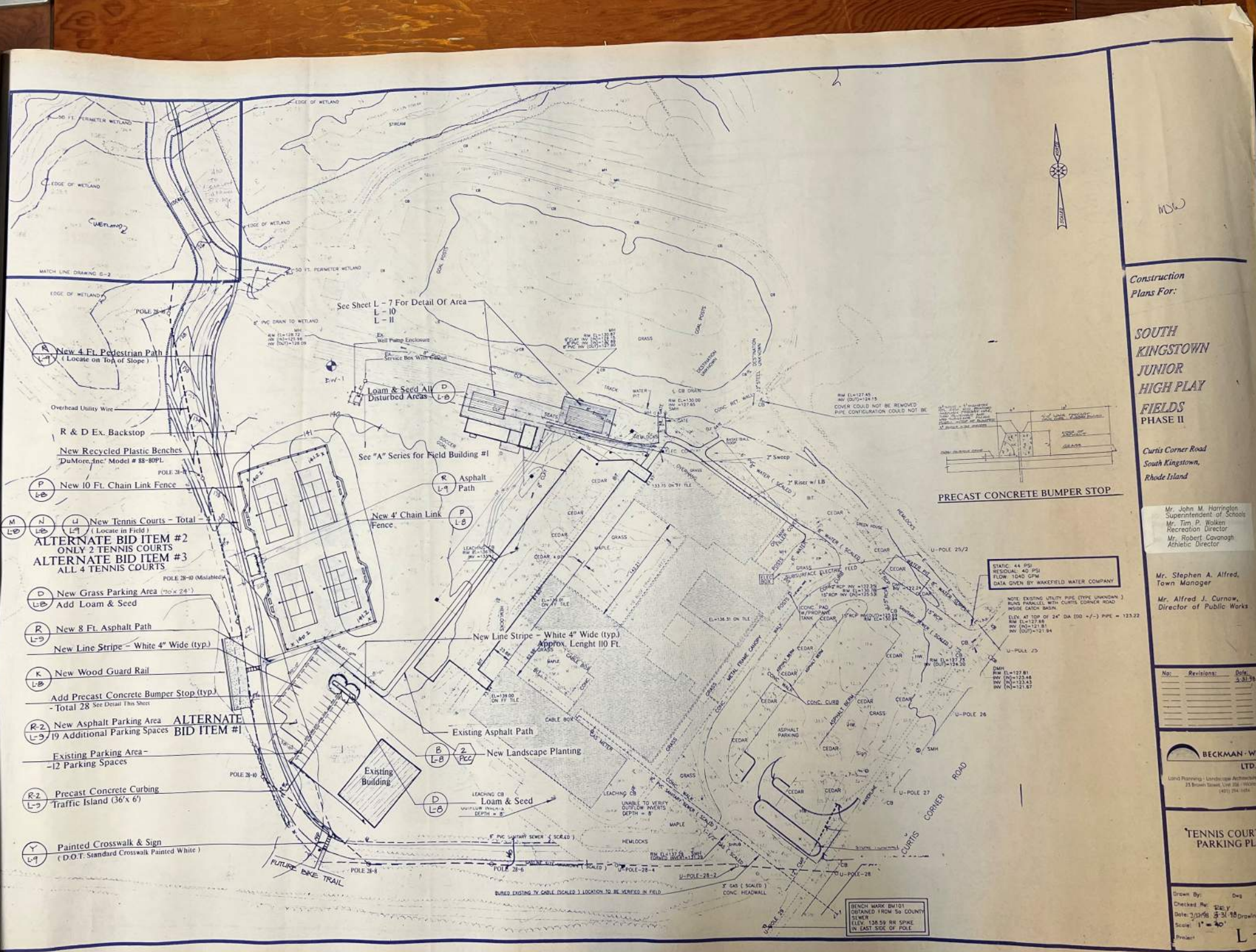
JOB NO. 7458.01	DRAWN BY LFA
DWG. NO. 7458-01-ECS	CALCS BY LFA
SCALE: 1"=40'	APPROVED SAW
	DATE: MAY 2023

SHEET

2

OF 2 SHEETS


J.G. EDWARDS CONSTRUCTION CO. INC.
APPROVED
APPROVED AS CORRECTED
RESUBMIT FOR APPROVAL
DISAPPROVED-RESUBMIT
DATE: 1/8/90 BY: JGE
AS Built Drawing
NOTES
1. PRIOT TO START OF CONSTRUCTION THE CONTRACTOR SHALL DIG TEST PITS (AT LOCATIONS INDICATED ON SITE PLAN) TO DETERMINE DEPTH OF THE EXISTING 6" SEWER LINE. NEW 6" SEWER LINE INVERTS & SLOPES WILL THEN BE DETERMINED BY THE ENGINEER.
2. DEPENDING UPON EXISTING INVERTS OF BUILDING SEWER, LAYOUT OF NEW SEWER MAY BE CHANGED.
3. EXISTING 6" SEWER TO CURTIS CORNER ROAD MAY HAVE TO BE REMOVED AND RELAID AT A GREATER DEPTH DEPENDING UPON TEST PIT RESULTS.
4. GAS LINE TO BE PLACED BY PROVIDENCE GAS CO. CONTRACTOR SHALL COORDINATE PLACEMENT OF GAS LINE WITH PROVIDENCE GAS CO.
5 BENCH MARK (130.29) TOP SPINDLE OF HYDRANT (VERIFY W/TOWN RECORDS)
LEGEND
A PRECAST CONCRETE MANHOLE (R.I. STD. 4.31) INCLUDING FRAME AND COVER (R.I. STD. 5.22) SEE DETAIL DRAWING C2.1.
B FURNISH AND INSTALL 2" BITUMINOUS CONCRETE PAVEMENT.
C 4" WHITE PAINTED PAVEMENT MARKINGS (TYPICAL)
D REMOVE AND DISPOSE OF BITUMINOUS CONCRETE PAVEMENT.
E FURNISH AND INSTALL 4" LOAM AND SEED.
F FURNISH AND INSTALL CONCRETE CURB (R.I. STD. 7.1)
G FURNISH AND INSTALL 8" LOAM, & GROUND COVER (CORNUS CANADENSIS- CREEPING DOGWOOD)
H FURNISH AND INSTALL 2" BITUMINOUS CONCRETE SEE DWG. NO. C2.2
I PRE-CAST CAR STOPS (R.I. STD 7.29) TYPICAL.
J 4' CONCRETE SIDEWALK SEE DWG. NO. C2.2.1
SEWER LINE
DRAIN LINE
WATER LINE
GAS LINE
PROJECT LIMIT LINE
NEW ADMINISTRATION BUILDING
TOP OF FOUNDATION ELEV. 138.1
NEW ADDITION
EXISTING JUNIOR HIGH SCHOOL BUILDING
EXISTING PAVED ROADWAY
RAILROAD RIGHT - OF - WAY
CURTIS CORNER ROAD
PROJECT NORTH
SITE PLAN
SCALE 1" = 20'-0"
ISSUED FOR CONSTRUCTION 5/25/89
SOUTH KINGSTOWN
JUNIOR HIGH SCHOOL ADDITION AND ADMINISTRATION BUILDING
ROBERT HAIG ASSOCIATES
ARCHITECTS PLANNERS ENGINEERS
EAST PROVIDENCE, R.I. TAUNTON, MASS.
PROJECT No. 87146
SCALE 1"=10'-0"
DATE 8/89
SHEET TITLE SITE PLAN
REVISIONS
DRAWN BY
CHECKED BY
APPROVED BY F.A.H.
DRAWING No. C 1.1
APPROVED BY F.A.H.



Construction Plans For:

SOUTH KINGSTOWN JUNIOR HIGH PLAY FIELDS
PHASE II

Curtis Corner Road
South Kingstown,
Rhode Island

Mr. John M. Harrington
Superintendent of Schools
Mr. Tim P. Wolken
Recreation Director
Mr. Robert Cavanagh
Athletic Director

Mr. Stephen A. Alfred,
Town Manager

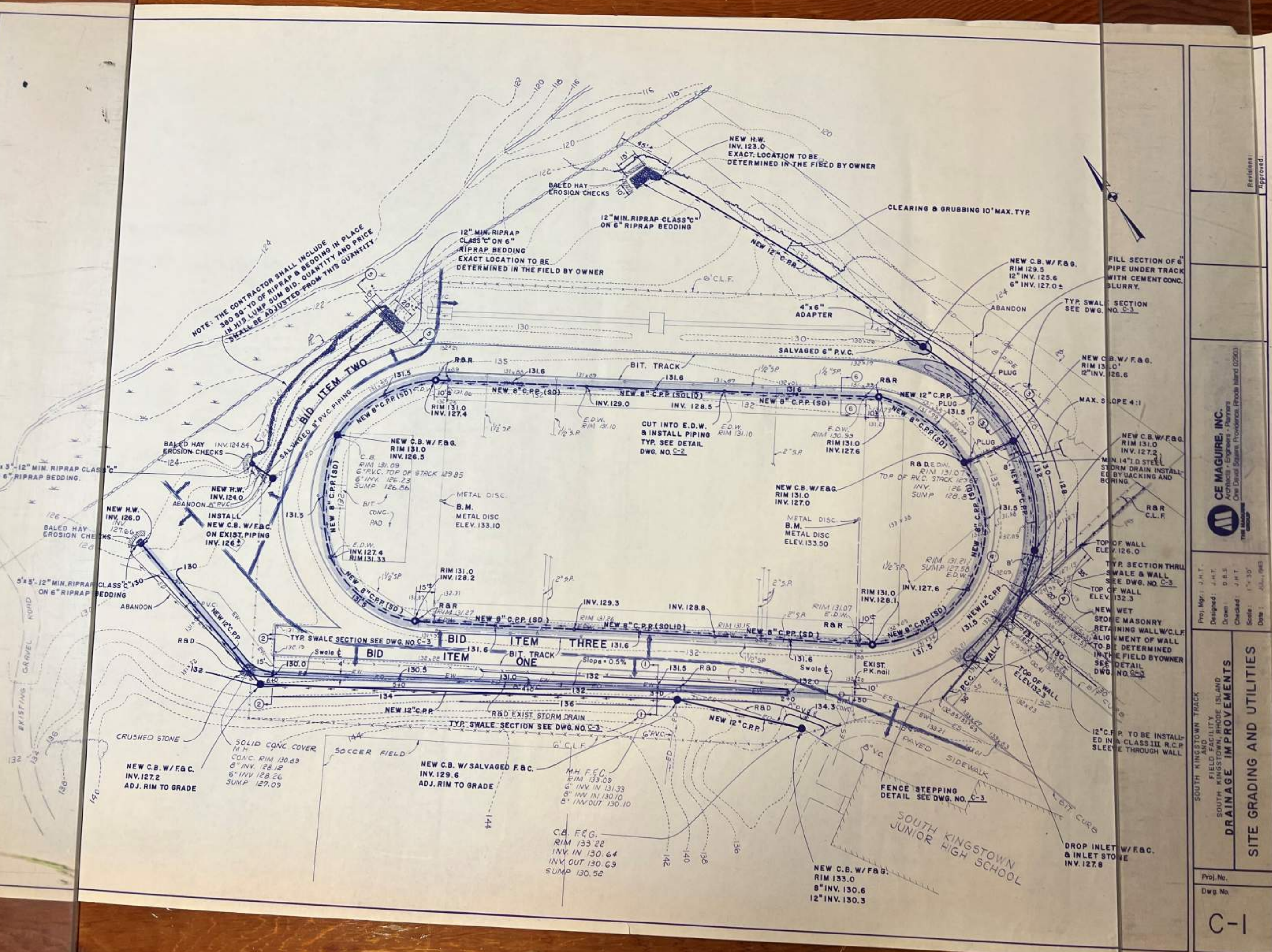
Mr. Alfred J. Curnow,
Director of Public Works

No:	Revisions:	Date:
		3-31-98

BECKMAN - WEREMAT LTD.
Land Planning - Landscape Architecture - Golf Course Design
23 Brown Street, Unit 202 - Wickford, RI 02852
(401) 294-1494

TENNIS COURT & PARKING PLAN

Drawn By: Dwg
Checked By: EEY
Date: 3/13/98 3-31-98 Drawing No.
Scale: 1" = 40'
Project
L - 3

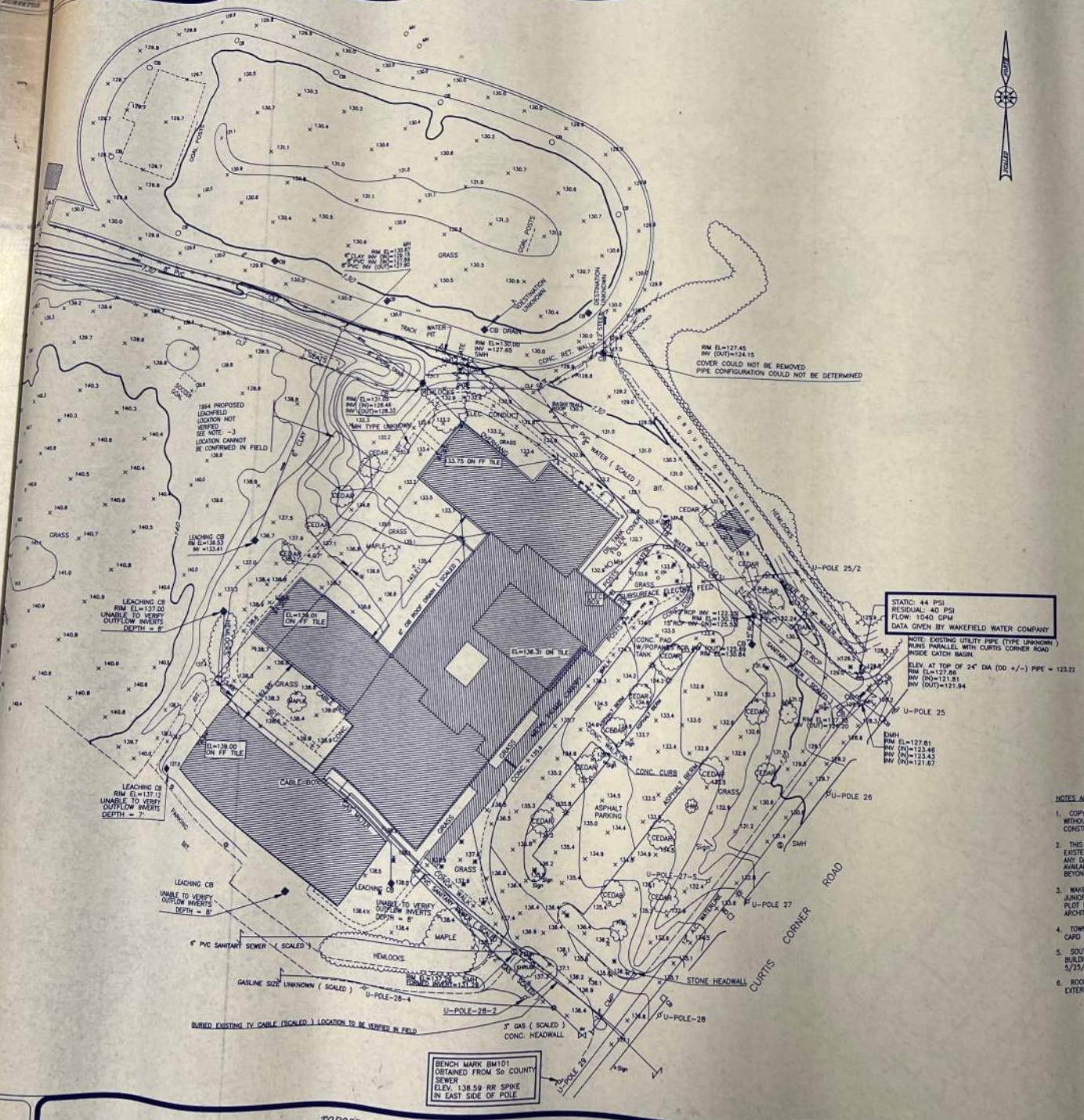

NOTE: THE CONTRACTOR SHALL INCLUDE 380 SQ-YD OF RIPRAP & BEDDING IN PLACE IN HIS LUMP SUM BID. QUANTITY AND PRICE SHALL BE ADJUSTED FROM THIS QUANTITY
NEW H.W. INV. 123.0 EXACT LOCATION TO BE DETERMINED IN THE FIELD BY OWNER
BALED HAY EROSION CHECKS
12" MIN. RIPRAP CLASS "C" ON 6" RIPRAP BEDDING
CLEARING & GRUBBING 10' MAX. TYP.
12" MIN. RIPRAP CLASS "C" ON 6" RIPRAP BEDDING EXACT LOCATION TO BE DETERMINED IN THE FIELD BY OWNER
NEW 12" C.P.P.
6' C.L.F.
4"x6" ADAPTER
SALVAGED 6" P.V.C.
NEW C.B. W/ F&G. RIM 129.5 12" INV. 125.6 6" INV. 127.0 ±
FILL SECTION OF 6" PIPE UNDER TRACK WITH CEMENT CONC. SLURRY.
TYP. SWALE SECTION SEE DWG. NO. C-3
ABANDON
NEW C.B. W/ F&G. RIM 13_.0' 12" INV. 126.6
MAX. SLOPE 4:1
BID ITEM TWO
SALVAGED 8" P.V.C. PIPING
R&R
BIT. TRACK
NEW 8" C.P.P. (SD)
NEW 8" C.P.P. (SOLID)
INV. 129.0
INV. 128.5
RIM 131.0 INV. 127.4
E.D.W. RIM 131.10
CUT INTO E.D.W. & INSTALL PIPING TYP. SEE DETAIL DWG. NO. C-2
E.D.W. RIM 130.99
RIM 131.0 INV. 127.6
NEW 12" C.P.P.
PLUG
NEW C.B. W/ F&G. RIM 131.0 INV. 127.2
MIN. 14" I.D. STEEL STORM DRAIN INSTALLED BY JACKING AND BORING
R&R C.L.F.
NEW C.B. W/ F&G. RIM 131.0 INV. 126.5
C.B. RIM 131.09 6" PVC TOP OF STACK 129.85 6" INV. 126.23 SUMP 126.86
METAL DISC
B.M. METAL DISC ELEV. 133.10
BIT. CONC. PAD
R&D E.D.W. RIM 131.07 TOP OF PVC STACK 129.6_ INV. 126.7_ SUMP 128.8_
NEW C.B. W/ F&G. RIM 131.0 INV. 127.0
METAL DISC B.M. METAL DISC ELEV. 133.50
BALED HAY EROSION CHECKS INV. 124.84
3'x3'-12" MIN. RIPRAP CLASS "C" 6" RIPRAP BEDDING.
NEW H.W. INV. 124.0
ABANDON 8" P.V.C.
INSTALL NEW C.B. W/ F&C. ON EXIST. PIPING INV. 126 ±
NEW H.W. INV. 126.0
BALED HAY EROSION CHECKS
E.D.W. INV. 127.4 RIM 131.33
TOP OF WALL ELEV. 126.0
TYP. SECTION THRU SWALE & WALL SEE DWG. NO. C-3
TOP OF WALL ELEV. 132.3
5'x5'-12" MIN. RIPRAP CLASS "C" ON 6" RIPRAP BEDDING
ABANDON
RIM 131.0 INV. 128.2
RIM 131.21 SUMP 127.58 E.D.W.
RIM 131.0 INV. 128.1
INV. 127.6
INV. 129.3
INV. 128.8
RIM 131.07 E.D.W.
NEW WET STONE MASONRY RETAINING WALL W/ C.L.F. ALIGNMENT OF WALL TO BE DETERMINED IN THE FIELD BY OWNER SEE DETAIL DWG. NO. C-3
R&D
TYP. SWALE SECTION SEE DWG. NO. C-3
BID ITEM ONE
BID ITEM THREE
Swale ℄
Slope = 0.5%
EXIST. P.K. nail
TOP OF WALL ELEV. 132.3
WALL
EXISTING GRAVEL ROAD
CRUSHED STONE
SOLID CONC. COVER M.H. CONC. RIM 130.69 8" INV. 128.12 6" INV. 128.26 SUMP 127.09
NEW 12" C.P.P.
R&D EXIST. STORM DRAIN
TYP. SWALE SECTION SEE DWG. NO. C-3
6" PVC
SOCCER FIELD
NEW C.B. W/ F&C. INV. 127.2 ADJ. RIM TO GRADE
NEW C.B. W/ SALVAGED F&C. INV. 129.6 ADJ. RIM TO GRADE
M.H. F.&C. RIM 133.09 6" INV. IN 131.33 8" INV. IN 130.10 8" INV. OUT 130.10
C.B. F.&G. RIM 133.22 INV. IN 130.64 INV. OUT 130.69 SUMP 130.52
PAVED SIDEWALK
BIT. CURB
FENCE STEPPING DETAIL SEE DWG. NO. C-3
SOUTH KINGSTOWN JUNIOR HIGH SCHOOL
NEW C.B. W/ F&G. RIM 133.0 8" INV. 130.6 12" INV. 130.3
12" C.P.P. TO BE INSTALLED IN A CLASS III R.C.P. SLEEVE THROUGH WALL
DROP INLET W/ F&C. & INLET STONE INV. 127.8
Revisions: Approved:
CE MAGUIRE, INC.
Architects • Engineers • Planners
One Davol Square, Providence, Rhode Island 02903
THE MAGUIRE GROUP
Proj. Mgr.: J.H.T.
Designed: J.H.T.
Drawn: D.B.S.
Checked: J.H.T.
Scale: 1" = 30'
SOUTH KINGSTOWN TRACK AND FIELD FACILITY
SOUTH KINGSTOWN, RHODE ISLAND
DRAINAGE IMPROVEMENTS
SITE GRADING AND UTILITIES
Proj. No.
Dwg. No.
C-1

Paved Play Area
SOUTH RD SCHOOL
Approx. Top of Bank
Area Cleared of Brush and is Usable
N
SOUTH ROAD
6" Water Line Approx Location
GEORGE H. MASON et ux
211.5'
222.7'
211.8
Wooded Area
Line as delineated on that plat entitled "PLAT OF TOWN LAND BEING PORTION OF LEWIS P. DIMON PROPERTY DESIGNATED FOR SCHOOL COMM. USE" (Plat Bk. 14 Pg 1074 - Council Bk 29 Pg 399)
Bridge
GEORGE E. BRIGGS et als
375.7
212.6
GRAVEL PIT
LEWIS P. DIMON
Play Area
Right of Way to land of Lewis P. Dimon being retained thru 25' & 40' strips sho.
NARRAGANSETT PIER RAILROAD
GRAVEL ROAD
JR. HIGH SCHOOL
LEWIS P. DIMON Jr.
164.7
ROAD

Louis Federici & Associates
land surveyors • biologists • planners
235 PROMENADE ST. PROVIDENCE, RI
Tele. (401) 331-1670

THIS SURVEY AND PLAN CONFORM TO A CLASS "I" BOUNDRAY STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS
BY: _____ PROFESSIONAL LAND SURVEYOR

THIS SURVEY AND PLAN CONFORM TO A CLASS "II" VERTICAL STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS
BY: _____ PROFESSIONAL LAND SURVEYOR



NOTES AND REFERENCE:

1. COPYING OF THIS PLAN IS PROHIBITED. ANY REPRODUCTION WITHOUT THE WRITTEN PERMISSION OF THE PREPARER WOULD CONSTITUTE A COPYRIGHT INFRINGEMENT.
2. THIS SURVEY DOES NOT INTEND TO ASSURE THE COMPLETENESS, EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND FACILITIES. ANY DATA SHOWN HEREIN HAS BEEN COMPILED FROM THE BEST AVAILABLE SOURCES. MORE EFFORT MAY BE NEEDED AND IS BEYOND THE SCOPE OF THIS SURVEY.
3. WAKEFIELD WATER COMPANY; SOUTH COUNTY UTILITIES DEPARTMENT; JUNIOR HIGH SCHOOL FOR THE TOWN OF SOUTH KINGSTOWN, R.I. PLOT PLAN, SCALE 1" = 32', BY MAC CONNELL AND ASSOCIATES ARCHITECTS, JOB NO. 284.
4. TOWN OF SOUTH KINGSTOWN "WASTE WATER INSPECTION" RECORD CARD PERMIT NO 1719 8/25/80.
5. SOUTH KINGSTOWN JUNIOR HIGH SCHOOL ADDITION AND ADMINISTRATION BUILDING SITE PLAN SHEET C1.1 BY ROBERT HAIG ASSOCIATED DATED 5/25/89.
6. ROOF STORM DRAINAGE MAY EXIST ON THE SUBSURFACE, ALONG ENTIRE EXTERIOR PERIMETER OF BUILDING.

GRAPHIC SCALE
40 0 40 80 160
1 inch = 40 ft.

C-1
sheet no. 2 of 56

TOPOGRAPHIC AND SITE SURVEY IN SOUTH KINGSTOWN RHODE ISLAND FOR PRESBREY & TORRADO ARCHITECHTS AT THE SOUTH KINGSTOWN JUNIOR HIGH SCHOOL

NO	BY	DATE	REVISIONS

SHEET

nationalgrid

301

UNKNOWN

UNKNOWN

UNKNOWN

301

UNKNOWN

6

4

UNKNOWN

ASA POND RD

2

2-PE-35#-1989

UNKNOWN

907

906

905

UNKNOWN

310

298

333

343

2-PE-35#-1989

MELLBRIDGE DR

10

381

381

15

4-PE-35#-1987

CURTIS CORNER RD

903

902

901

900

899

259

260

276

240

230

34

29

ASA POND RD UNKNOWN

0DVV*,6 (VUL +(5(*DUPLQ ,1&5(0(17 3 86*6

127(7KH ORFDWLRQ RI VXUIDFH DQG XQGHUJURXQG REMHF

)HHW

Date Printed: 4/4/2023

nationalgrid

i

UNKNOWN

UNKNOWN

UNKNOWN

UNKNOWN

UNKNOWN

UNKNOWN

UNKNOWN

UNKNOWN

UNKNOWN

ASA POND RD

2-PE-35#-1989

2-PE-35#-1989

4-PE-35#-1987

CURTIS CORNER RD

ASA POND RD UNKNOWN

0DVV*,6 (VUL +(5(*DUPLQ ,1&5(0(17 3 86*6

127(7KH ORFDWLRQ RI VXUIDFH DQG XQGHUJURXQG REMHF

)HHW

Date Printed: 4/4/2023

Town of South Kingstown

Water Suppliers

Yawgoo Pond
Hundred Acre Pond
Hurry Acre Pond
Indian Lake
Worden Pond
Tucker Pond
Long Pond
Factory Pond
Trustom Pond
Green Hill Pond
Card Pond
Potter Pond
Point Judith Pond
Sand Hill Cove
Narrow River
Chickasheen Brook
Chipuxet River
Horn Brook
White Rock Brook
Mink Brook
Indian Run
Pawcatuck River
SOUND
ISLAND
BLOCK

138 2 108 110 1

N W E S

0 0.5 1 1.5 2 Miles

- Town of South Kingstown - Middlebridge
- Town of South Kingstown - South Shore
- University of Rhode Island
- Veolia Water Company
- Kingston Water District

Geographic Information System

PS22-12 cpb 7/22

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

May 4, 2023

Custom Soil Resource Report
Soil Map

Map Scale: 1:4,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 50, 100, 200, 300

Feet: 0, 200, 400, 800, 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NaA	Narragansett silt loam, 0 to 3 percent slopes	5.5	10.8%
NaB	Narragansett silt loam, 3 to 8 percent slopes	4.2	8.2%
NbB	Narragansett very stony silt loam, 0 to 8 percent slopes	20.5	40.4%
NbC	Narragansett very stony silt loam, 8 to 15 percent slopes	1.1	2.2%
Rf	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	6.5	12.7%
UD	Udorthents-Urban land complex	4.2	8.3%
Ur	Urban land	4.5	8.8%
W	Water	3.3	6.4%
WcB	Wapping very stony silt loam, 0 to 8 percent slopes	1.1	2.1%
Totals for Area of Interest		**50.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas

are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

NaA—Narragansett silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9lvy
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 115 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Narragansett and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Narragansett

Setting

Landform: Till plains, hills
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Coarse-loamy eolian deposits over sandy and gravelly melt-out till derived from gneiss and/or schist and/or granite

Typical profile

Ap - 0 to 6 inches: silt loam
Bw1 - 6 to 15 inches: silt loam
Bw2 - 15 to 24 inches: silt loam
Bw3 - 24 to 28 inches: gravelly silt loam
2C - 28 to 60 inches: very gravelly loamy coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Bridgehampton
Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Canton
Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Wapping
Percent of map unit: 2 percent
Landform: Hills, till plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Charlton
Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge
Percent of map unit: 1 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

NaB—Narragansett silt loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9lvz
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 115 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Narragansett and similar soils: 90 percent

Rf—Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2t2qt
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, extremely stony, and similar soils: 40 percent
Leicester, extremely stony, and similar soils: 35 percent
Whitman, extremely stony, and similar soils: 17 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Extremely Stony

Setting

Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Leicester, Extremely Stony

Setting

Landform: Ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam
C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Whitman, Extremely Stony

Setting

Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 1 inches: peat
A - 1 to 10 inches: fine sandy loam
Bg - 10 to 17 inches: gravelly fine sandy loam
Cdg - 17 to 61 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 7 to 38 inches to densic material
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Woodbridge, extremely stony

Percent of map unit: 6 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Swansea

Percent of map unit: 2 percent
Landform: Bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

UD—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 9lxj
Elevation: 0 to 670 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 120 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 70 percent
Urban land: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Human transported material

Typical profile

A - 0 to 12 inches: sandy loam
C1 - 12 to 25 inches: sandy loam
C2 - 25 to 60 inches: stratified sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 42 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: A
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land

Setting

Parent material: Human transported material

Typical profile

R - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Quonset

Percent of map unit: 5 percent
Landform: Outwash plains, terraces, outwash terraces, eskers
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Terraces, outwash plains, kames
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ur—Urban land

Map Unit Setting

National map unit symbol: 9lxk
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 100 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Parent material: Human transported material

Minor Components

Udorthents

Percent of map unit: 5 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Canton

Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Pittstown

Percent of map unit: 2 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Charlton

Percent of map unit: 2 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Merrimac

Percent of map unit: 1 percent
Landform: Terraces, outwash plains, kames
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Newport

Percent of map unit: 1 percent
Landform: Drumlins
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Sudbury

Percent of map unit: 1 percent
Landform: Terraces, outwash plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Sutton

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: 9lxl
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WcB—Wapping very stony silt loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9lxq
Elevation: 0 to 620 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 115 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Wapping and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wapping

Setting

Landform: Till plains, hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly melt-out till derived from gneiss and/or schist and/or sandstone and shale

Typical profile

Ap - 0 to 11 inches: very fine sandy loam
Bw1 - 11 to 16 inches: very fine sandy loam
Bw2 - 16 to 20 inches: very fine sandy loam
2C1 - 20 to 28 inches: gravelly sandy loam
2C2 - 28 to 36 inches: gravelly loamy sand
2C3 - 36 to 80 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Narragansett

Percent of map unit: 4 percent
Landform: Till plains, hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Bridgehampton

Percent of map unit: 3 percent
Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 3 percent
Landform: Drainageways, depressions
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

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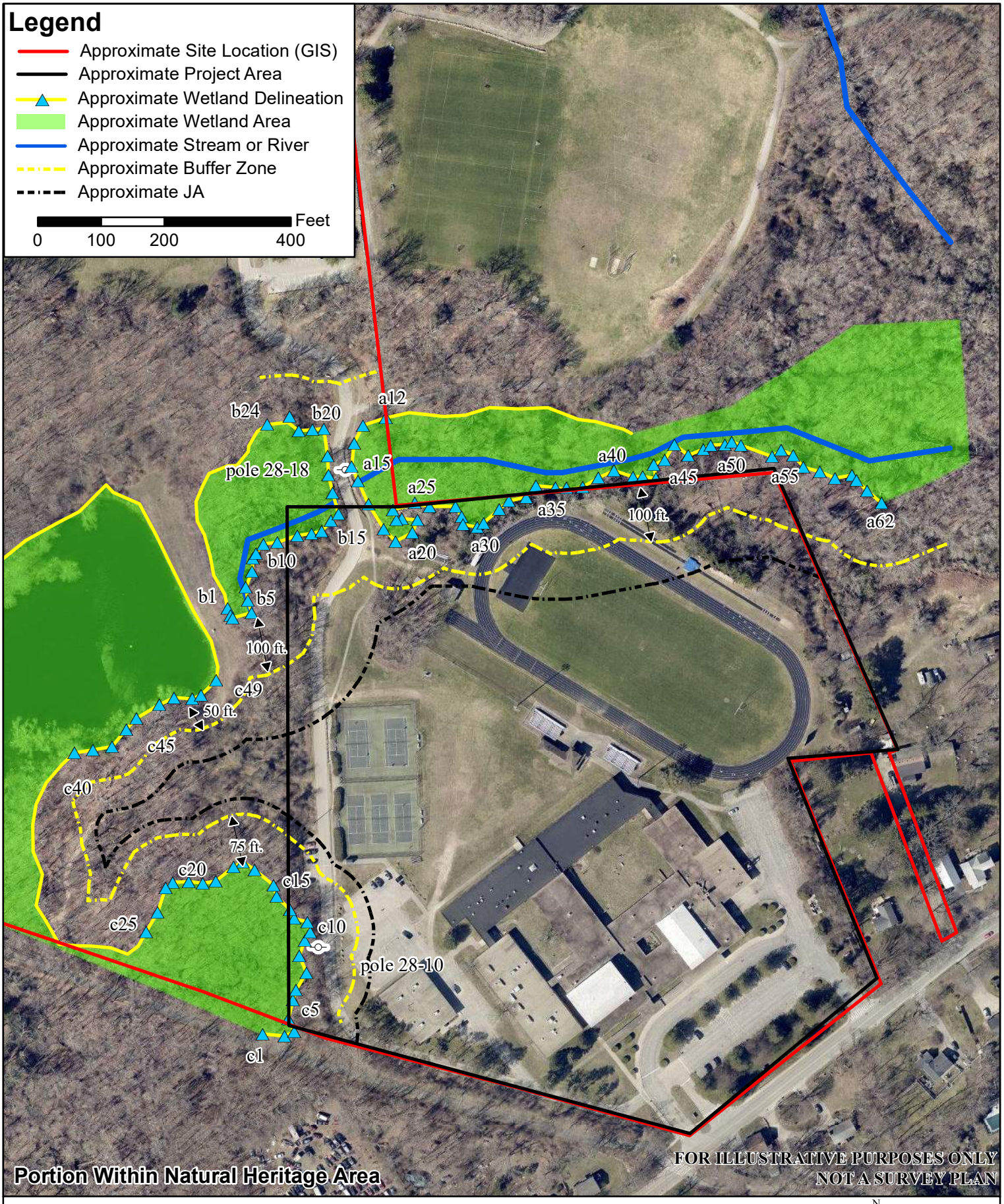

Site Sketch Depicting Approximate Wetland Delineation
301 Curtis Corner Rd
A.P. 39-3, Lot 20

South Kingstown, RI

Performed by
Hannah Chace - 1/18/23
Located using hand-held Trimble GeoXH

N
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Spring 2022 aerial
RI DEM Mapping

RIGIS
Natural Resource Services, Inc.
PO Box 311
180 Tinkham Lane
Harrisville, RI 02830
p: (401) 568-7390

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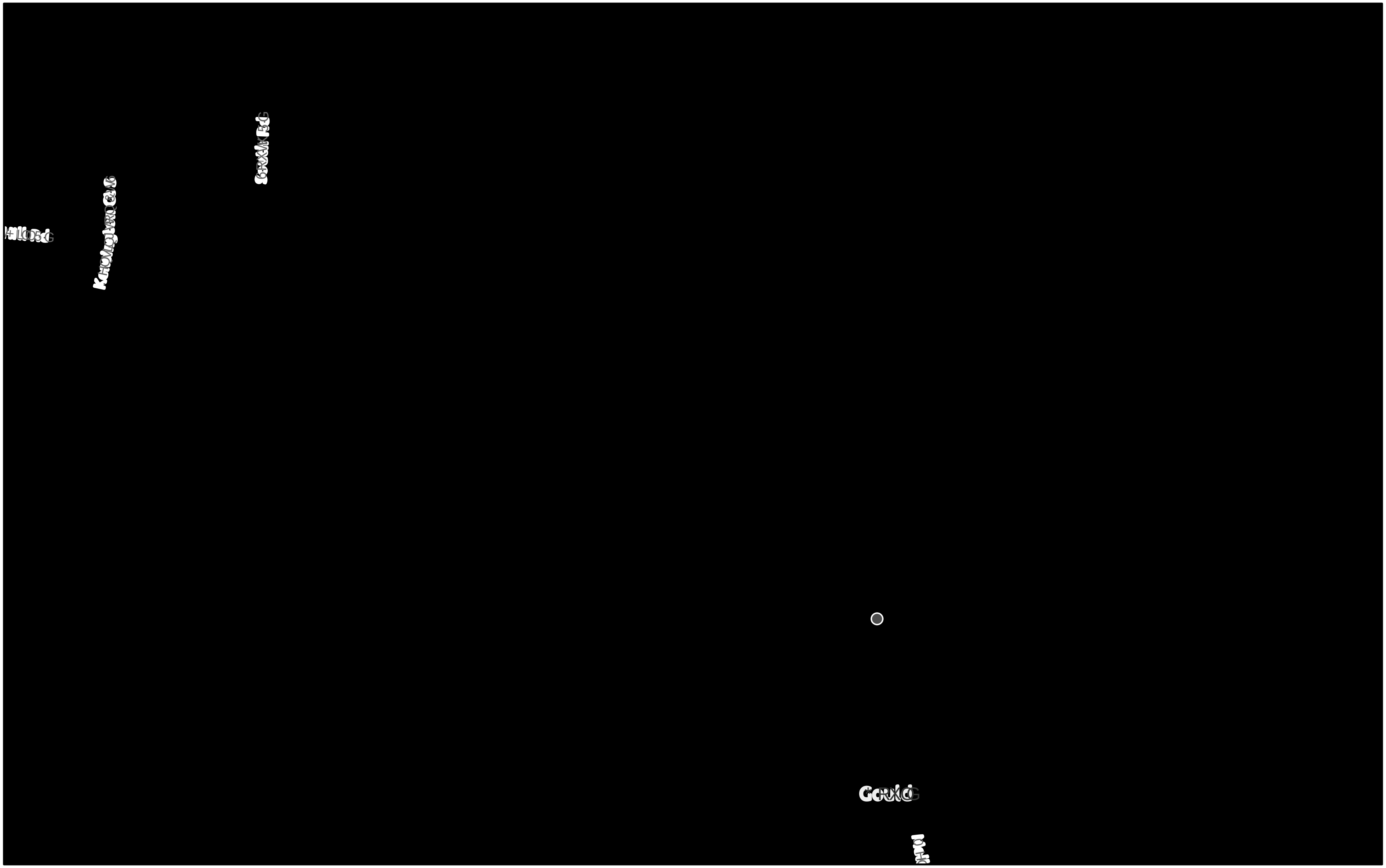

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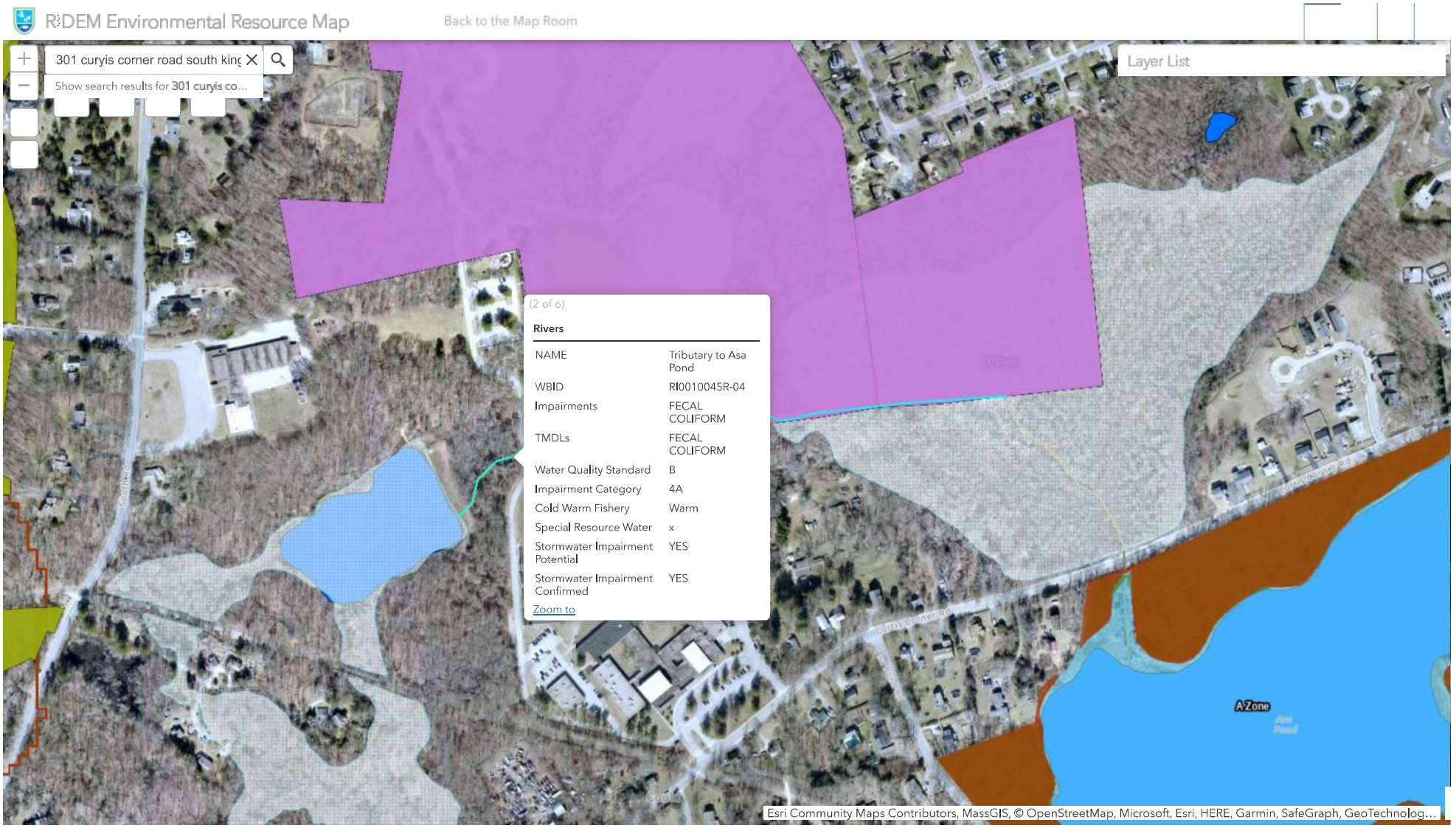
RIDEM Environmental Resource Map
Back to the Map Room
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Show search results for 301 curyis co...
Layer List
(2 of 6)
Rivers
NAME Tributary to Asa Pond
WBID RI0010045R-04
Impairments FECAL COLIFORM
TMDLs FECAL COLIFORM
Water Quality Standard B
Impairment Category 4A
Cold Warm Fishery Warm
Special Resource Water x
Stormwater Impairment Potential YES
Stormwater Impairment Confirmed YES
Zoom to
A Zone
Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnolog...
300ft
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Exhibit 25

Broad Rock MS Site Due Diligence Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

RE: **Site Investigation Summary**
Broad Rock Road Middle School
351 Broad Rock Road, South Kingstown, RI 02879

GAI PN 7458-02
DATE: June 23, 2023

Introduction
Garofalo & Associates Inc. (Garofalo) has prepared this report to assist with the due diligence assessment of the referenced site as it relates to RIDE Stage II investigations for the proposed improvements at the school.

The subject site is located at 351 Broad Rock Road, South Kingstown. The approximately 150.79 acres site is currently comprised of an existing Middle School, Senior Center, tennis courts, football, soccer, baseball fields and dog park, associated parking and hardscape areas. The property includes significant land to the south and east of the School, but the information included herein is generally confined to the northwest portions of the property (project area).

An Aerial Site Plan of the property is attached

Property Data
The site is identified as Lot 1 on Assessors Plat 41. The ownership of the parcel is identified as the Town of South Kingstown.

Zoning District
Zone: GI (Government & Institutional)

Use: Educational – Primary or Secondary

Exhibit A-Dimensional Standard:
Min. Lot Size: 200,000 sf + 40,000 per 100 pupils
Min Lot Width: 200 feet
Front yard: 40 feet
Corner Side: 40 feet
Side yard: 40 feet
Rear yard: 40 feet
Max. Principal Bldg. Height: 35 feet
Max. Accessory Bldg. Height: 15 feet
Max. Lot Coverage: 20%
Min distance from Residential Properties: Could not locate any info from town ordinances

85 Corliss Street, Post Office Box 6145, Providence, Rhode Island 02940
Phone: (401) 273-6000 ♦ Fax: (401) 273-1000 ♦ E-Mail: admin@garofaloassociates.com
Visit our Web Site at www.garofaloassociates.com

On-site Soils
The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils of the site to be primarily comprised of Bridgehampton-Charlton complex, 0% to 8% slopes (BnB), Bridgehampton-Charlton complex, 8% to 15% slopes (BnC), Broadbrook very stony silt loam, 0% to 8% slopes (BsB), Canton and Charlton fine sandy loams, 3% to 15% slopes (CeC), Mansfield mucky silt loam (Ma), Paxton-Urban land complex, 3% to 15% slopes (PD), Rainbow silt loam, 3% to 8% slopes (RaB), Rainbow very stony silt loam, 0% to 8% slopes (RbB), Ridgebury, Leicester and Whitman soils, 0% to 8% slopes (Rf) and Stissing silt loam (Se). The Hydrologic Soil Group classification for these soils are "B" (moderately low runoff potential), "C" (moderately high runoff potential) and "D" (high runoff potential). The developed portons of the lot are primareily Soils Group "B". Groundwater classification is GA with a seasonal high depth typically less than five feet.

FEMA Flood Mapping
The project area is located within Zone "X" (areas outside the 0.2% annual floodplain) as shown on F.E.M.A. Flood Insurance Rate Map for the Town of South Kingstown, Washington County, Rhode Island, Community Panel No. 44009C0203K having an effective date of April 3, 2020.

Site Condition
The site is comprised of a single building with parking and miscellaneous walks and site elements. Primary parking is in the front and rear. Bus dropoff is also provided to the rear of the building. Athletic fields exist to the south the school with other and sports amenities/courts (See Aerial Site Plan).

Overall, the parking areas are considered to be in fair to good condition, with rehabilitation recommended within 10 years. Other site elements appear in good but aged condition with localized repairs needed but consistent with resolution by standard maintenance. The site accessibility elements appear in general conformance. Sports/recreational facilities appeared to be in good condition.

Site Drainage
Generally, the property falls from west to east at moderately steep sloping grades. The property has a number of open swale and culvert drainages systems, which collect runoff from the building and adjacent paved areas. Limited enclosed drainage components (catch basins and conveyance runs) were noted. Landscaped/ballfield portions of the development zone wouth of the school sheet flow to the east as well. East of the development zones there are a series of swales and apparent stormwater basins which were noted to be overgrown but generally functional. East and southeast of the stormwater basins there is an expansive wetland area.

Runoff from the work area discharges at one (1) primary location.

- The entire developed school, as well as ballfield areas is collected within a series of open drains to a stormwater basin on the east. The basin discharges eastward to regulated wetland areas. Several registered stormwater outfall is identified at this location (SK-1 to 11), but a review of that data was not initiated under these investigations.

There were no conditions noted during these investigations that indicate significant substandard drainage conditions currently occurring at the site or immediately downstream during normal rainfall (ie washouts or flooding).

The property falls within the Saugatucket River watershed (RI0010045R-05B), and more specifically in the Tributary to Indian Run sub-watershed (RI0010045R-02). The Saugatucket River and Indian Run Tributary are Stormwater Impaired Watershed, including impaired water quality as evidenced in the 2008 Rhode Island list of impaired waters prepared pursuant to Section 303(d) of the Federal Clean Water Act. BMPs targeted to remove other pollutant(s) of concern and/or to achieve higher pollutant removal efficiencies are required for impaired receiving water.

Town Standards (Ord. Ch 20, Stormwater Management and Land development Regulations) requires stormwater management practices to meet 25-yr runoff, but also a more conservative standard of being consistent with the "Rhode Island Stormwater Design and Installation Standards Manual" and the "Rhode Island Soil Erosion and Sediment Control Handbook," as amended. Based on these standards, development of the site will require compliance RI Stormwater Rule, Standard 5, Overbank Flood Protection and some form of subsurface retention/infiltration as well as treatment and/or detention should be anticipated for all exterior improvements proposed.

Utilities

Water:
The site is within the South Kingstown (Veolia) Water service area and the site is understood to be connected to public water. According to Town mapping, there is a 8-inch main located within Broad Rock Road, with domestic and fire service lines extended to the site. No data regarding system pressures was obtained.

Gas:
The school building is understood to be connected to a 4-inch CS-35# within Broad Rock Road.
.
Sewer:
The site is currently serviced by public sewer, and more specifically effluent pumpted from the buidilng interior up to Broad Roack Road. Field investigations did not confirm the interior pumping set-up or identify an exterior pump station. A review of RIDEM on-site wastewater treatment system (OWTS) records identified no systems located within the parcel(s).

Based on discussion with the Department of Public Works no failing or substandard conditions are known to exist in the immediate area. No additional research was performed regarding capacity of existing adjacent facilities.

Electric:
Based upon correspondence from RI Energy/National Grid (NGrid), they do not have any underground electric distribution facilities on the property. The primary service appears to be from the west in Broad Rock Road, but several potential service locations were noted and further

investigation regard the adjacent facilities is necessary once loading requirements have been identified.

Verizon and Cox Communications:
No records regarding communications or cable service were obtained.

RIDEM Environmental Resource Mapping

Wetlands:
There are significant wetlands identified east of the project site. RIDEM permitting is presumed to have occurred with the School development as flagging and survey location is apparent from record research, but the application was not identified in the RIDEM database.

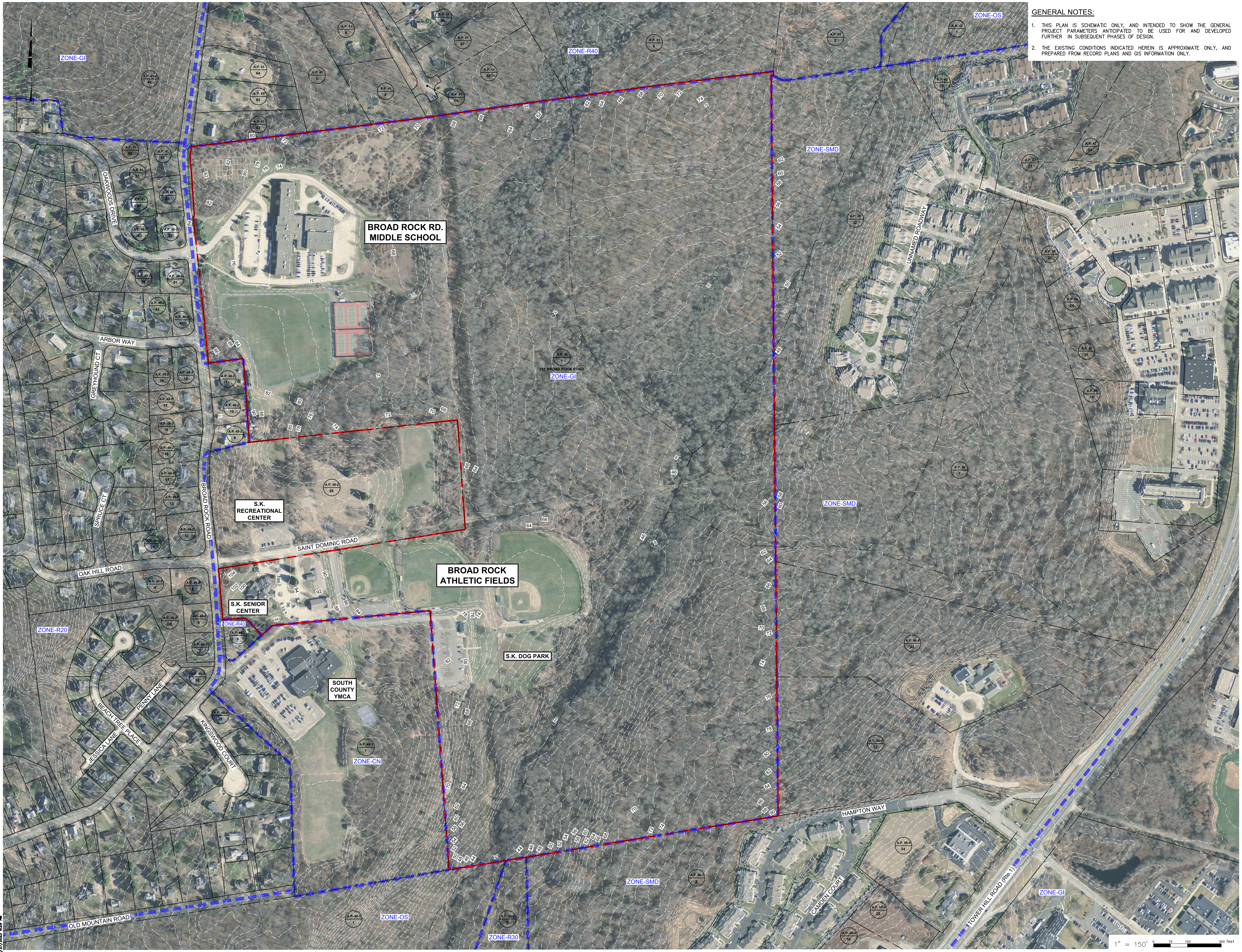
National Heritage Area:
There are no national heritage areas or conservation land on or adjacent to the site.

Conservation Areas:
The existing ballfields on the property but southeast of the project area is identified as a Conservation Easement (St. Dominic Savio).

Other Resources:
There were no other conditions noted on RIDEM Mapping that are believed to significantly impact the development potential of the property.

RIDEM Waste Management Search Data
The RIDEM Waste Management search performed found no registered facilities on the property.

END OF SUMMARY



GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

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PROVIDENCE, RHODE ISLAND 02903
P: (401) 648-0884

MARYLAND OFFICE
213 FRONT STREET, P.O. BOX 254
CRUMPTON, MARYLAND 216285

CONSULTANT

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GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

SIGNATURE: ______
DATE OF SIGNATURE: ______
DATE OF REGISTRATION EXPIRATION: ______

ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
BROAD ROCK MIDDLE SCHOOL

351 BROAD ROCK ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

5-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.2

SHEET NO.

G-1

LIST OF ATTACHMENTS

1. Property Card
2. GIS Parcel Map
3. Zoning Map
4. Future Land Use Map
5. Aerial Map
6. Sewer / Storm Information
7. Cox Service Information
8. National Grid Electric Service Letter
9. Providence Water Service Information
10. Verizon Service Map
11. Cox Service Map
12. NCRS Soils Data
13. FEMA Flood Map (FIRMette)
14. RIDEM Environmental Resource Mapping

351 BROAD ROCK ROAD

Location	351 BROAD ROCK ROAD	**Map and Lot**	41/ 1/ / /
Acct#	R-32-0005-00	**Owner**	SOUTH KINGSTOWN, TOWN OF
Assessment	$16,401,700	**PID**	3169
Building Count	3		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$13,751,800	$2,649,900	$16,401,700

Owner of Record

Owner	SOUTH KINGSTOWN, TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	180 HIGH ST WAKEFIELD, RI 02879	**Book & Page**	0691/0306
		Sale Date	12/31/1997
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SOUTH KINGSTOWN, TOWN OF	$750,000		0000/0000	UNKQ	12/01/1997
FROM ADMIN	$0		0076/0158		12/09/1954

Building Information

Building 1 : Section 1

Year Built:	1945
Living Area:	3,744
Replacement Cost:	$395,441
Building Percent Good:	55
Replacement Cost Less Depreciation:	$217,500

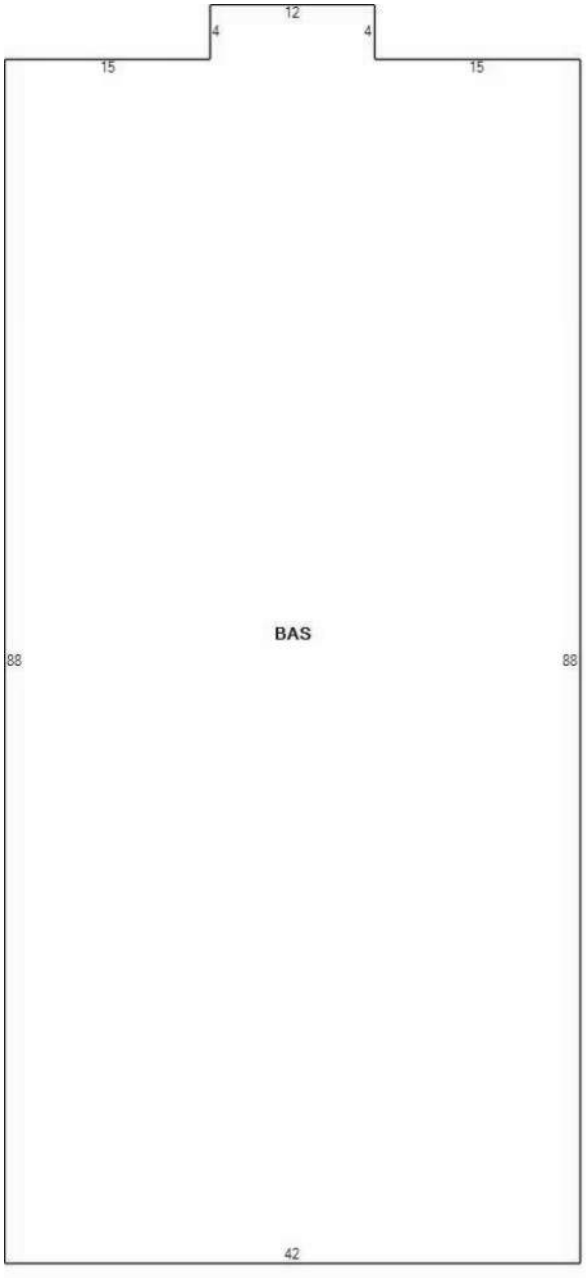
Building Attributes	
Field	**Description**

Style:	Clubs/Lodges
Model	Commercial
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	MNCPL,LIBR M-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903C
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\01\55\07.jpg

Building Layout



(ParcelSketch.ashx?pid=3169&bid=3169)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	3,744	3,744
		3,744	3,744

Building 2 : Section 1

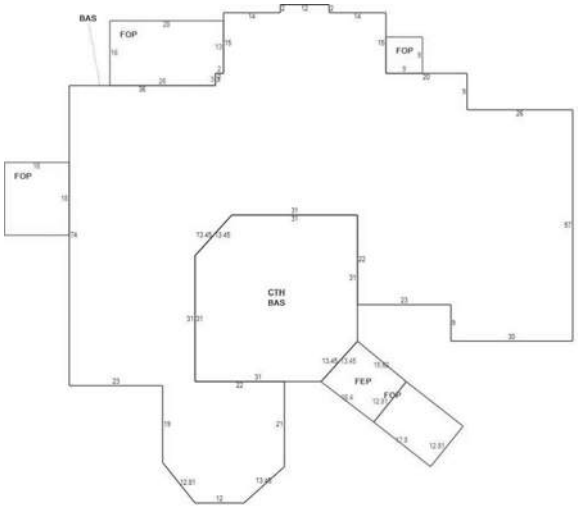
Year Built: 2000
Living Area: 9,762
Replacement Cost: $1,205,304
Building Percent Good: 85
Replacement Cost Less Depreciation: $1,024,500

Building Attributes : Bldg 2 of 3	
Field	Description
Style:	Day Care
Model	Commercial
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Hardwood
Interior Floor 2	Carpet
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Struct Class	
Bldg Use	MNCPL,LIBR M-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903C
Heat/AC	HEAT/AC PKGS
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\01\55\06.jpg

Building Layout



(ParcelSketch.ashx?pid=3169&bid=13246)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	9,762	9,762
CTH	Cathedral Ceiling	1,550	0
FEP	Porch, Enclosed, Finished	210	0
FOP	Porch, Open, Finished	1,039	0
		12,561	9,762

Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building 3 : Section 1

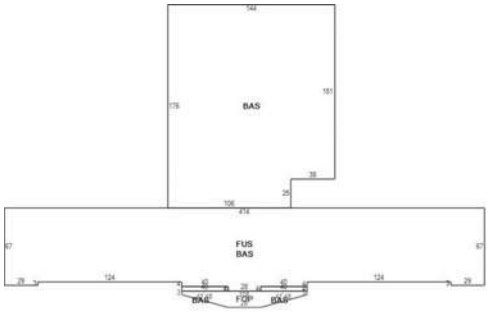
Year Built: 2001
Living Area: 77,781
Replacement Cost: $13,539,160
Building Percent Good: 91
Replacement Cost Less Depreciation: $12,320,600

Building Attributes : Bldg 3 of 3	
Field	**Description**
Style:	School/College
Model	Ind/Open Com
Grade	Average
Stories:	2
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Rolled Compos
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	MNCPL,LIBR M-96
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & MIN WL
Rooms/Prtns	AVERAGE
Wall Height	9.00

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\01\55\05.jpg

Building Layout



(ParcelSketch.ashx?pid=3169&bid=13247)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	51,928	51,928
FUS	Upper Story, Finished	27,214	25,853
FOP	Porch, Open, Finished	1,072	0
		80,214	77,781

% Comn Wall	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
SPR1	SPRINKLERS-WET	10000.00 S.F.	$6,300	2

Land

Land Use

Use Code	903C
Description	MNCPL,LIBR M-94
Zone	GI
Neighborhood	0050
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	150.79
Frontage	
Depth	
Assessed Value	$2,649,900

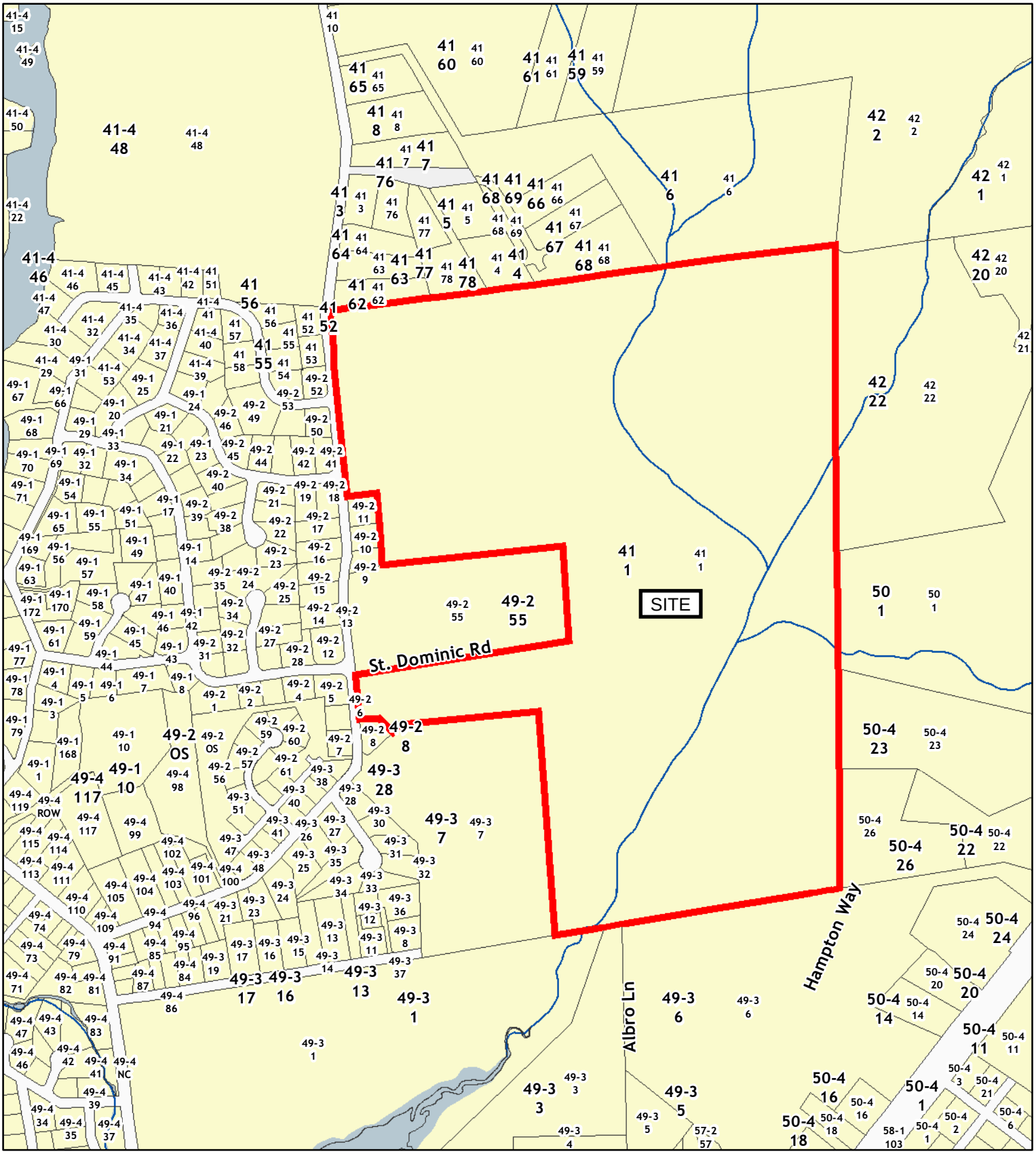
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			5000.00 S.F.	$7,500	1
PAV1	PAVING-ASPHALT			57400.00 S.F.	$86,100	3
PAV1	PAVING-ASPHALT			8000.00 S.F.	$12,000	2
FN1	FENCE-4' CHAIN			150.00 L.F.	$800	3
LT1	LIGHTS-IN W/PL			10.00 UNITS	$4,000	2
SHD6	COMM MASNRY			720.00 S.F.	$9,000	1
LT1	LIGHTS-IN W/PL			2.00 UNITS	$800	3
LT1	LIGHTS-IN W/PL			7.00 UNITS	$2,800	1
LT2	W/DOUBLE LIGHT			3.00 UNITS	$2,000	3
SHD6	COMM MASNRY			800.00 S.F.	$10,000	1
LT12	W/FOUR LIGHTS			5.00 UNITS	$9,800	1
LT3	W/TRIPLE LIGHT			4.00 UNITS	$3,400	3
FN3	FENCE-6' CHAIN			600.00 L.F.	$4,200	1
LT4	W/FOUR LIGHTS			5.00 UNITS	$5,300	3
SHD6	COMM MASNRY			1008.00 S.F.	$25,200	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$11,707,000	$2,350,100	$14,057,100
2020	$11,707,000	$2,350,100	$14,057,100

2019	$11,707,000	$2,350,100	$14,057,100



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

351 Broad Rock Road

Parcel Boundaries not legally binding for title or zoning purposes.

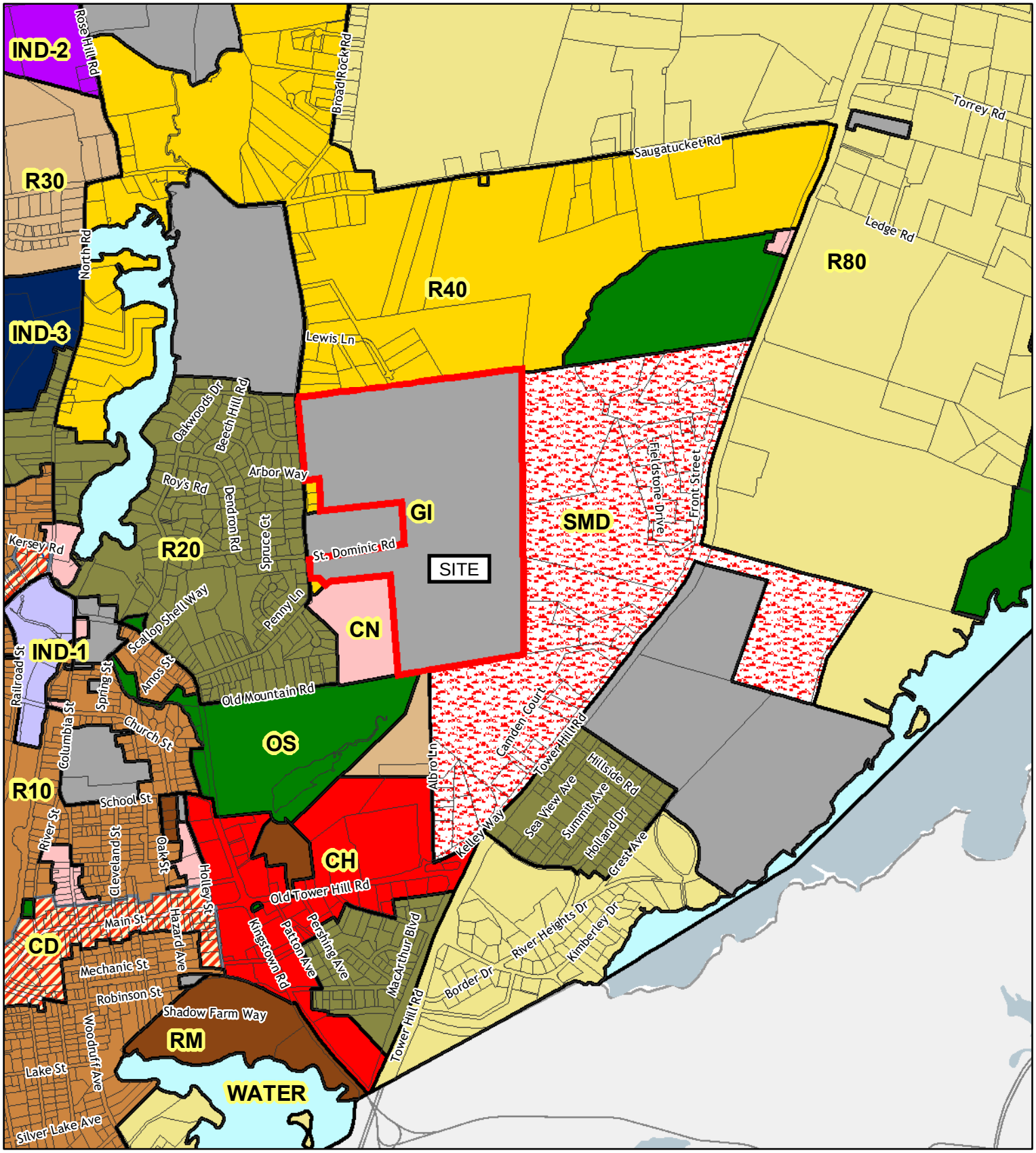
The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 667 feet

0 305 610 1,220 Feet

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

351 Broad Rock Road Zoning Map

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

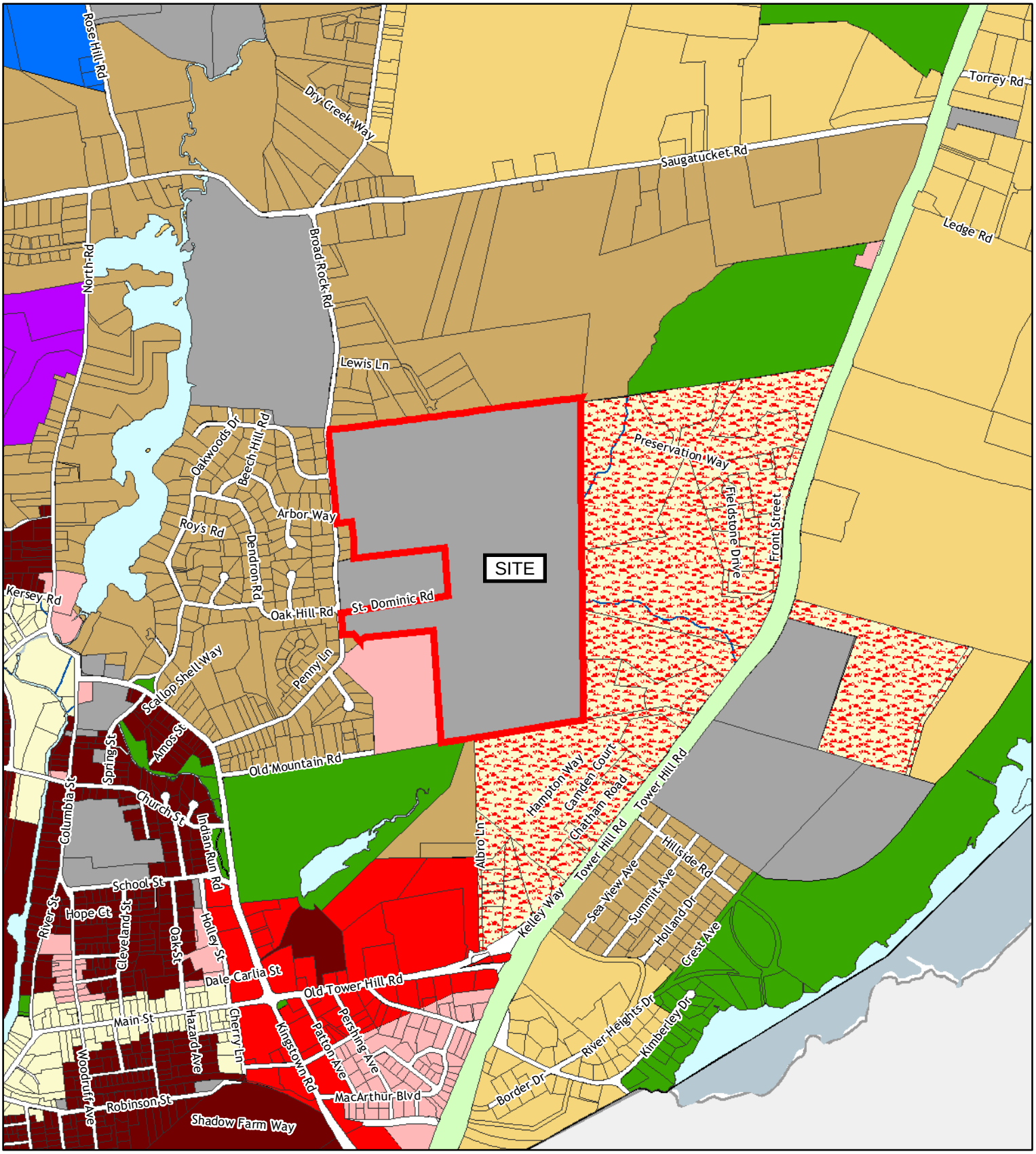
N

1 inch = 1,500 feet

Feet

0 650 1,300 2,600

Town of South Kingstown Web GIS



Washington County, Rhode Island

351 Broad Rock Road

Parcel Boundaries not legally binding for title or zoning purposes.

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

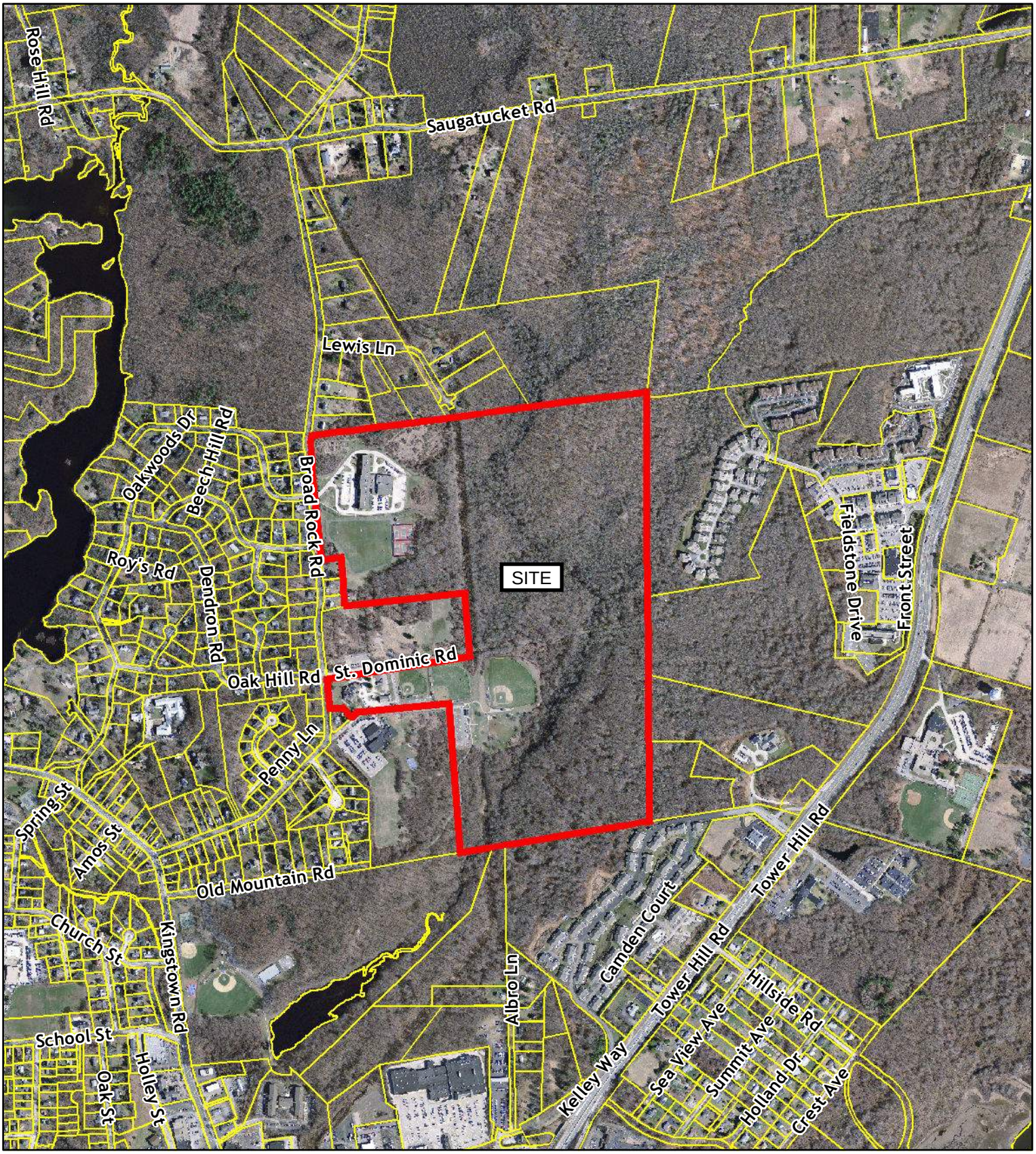
N

1 inch = 1,333 feet

Feet

0 600 1,200 2,400

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

351 Broad Rock Road

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 1,000 feet

Feet

0 460 920 1,840

Town of South Kingstown Web GIS

STUDIO JAED
ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS
Website: www.StudioJAED.com Email: info@StudioJAED.com

DELAWARE OFFICE
2600 WRANGLE HILL ROAD,
BEAR, DELAWARE 19701
P. (302) 832-1652

PROVIDENCE OFFICE
42 WEYBOSSET STREET,
9TH. 410
PROVIDENCE, RHODE
ISLAND 02903
P. (401) 648-0844

MARYLAND OFFICE
213 FRONT STREET, P.O.
BOX 254
CRUMPTON, MARYLAND
21628S

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CARLISS STREET
SUITE 202
PROVIDENCE, RI 02940
(PH) 401-273-6800 (FX) 401-273-1000

SIGNATURE:
DATE OF SIGNATURE:
DATE OF REGISTRATION EXPIRATION:

ARCHITECT
ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
BROAD ROCK MIDDLE SCHOOL
351 BROAD ROCK ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
-	-	-

SHEET TITLE

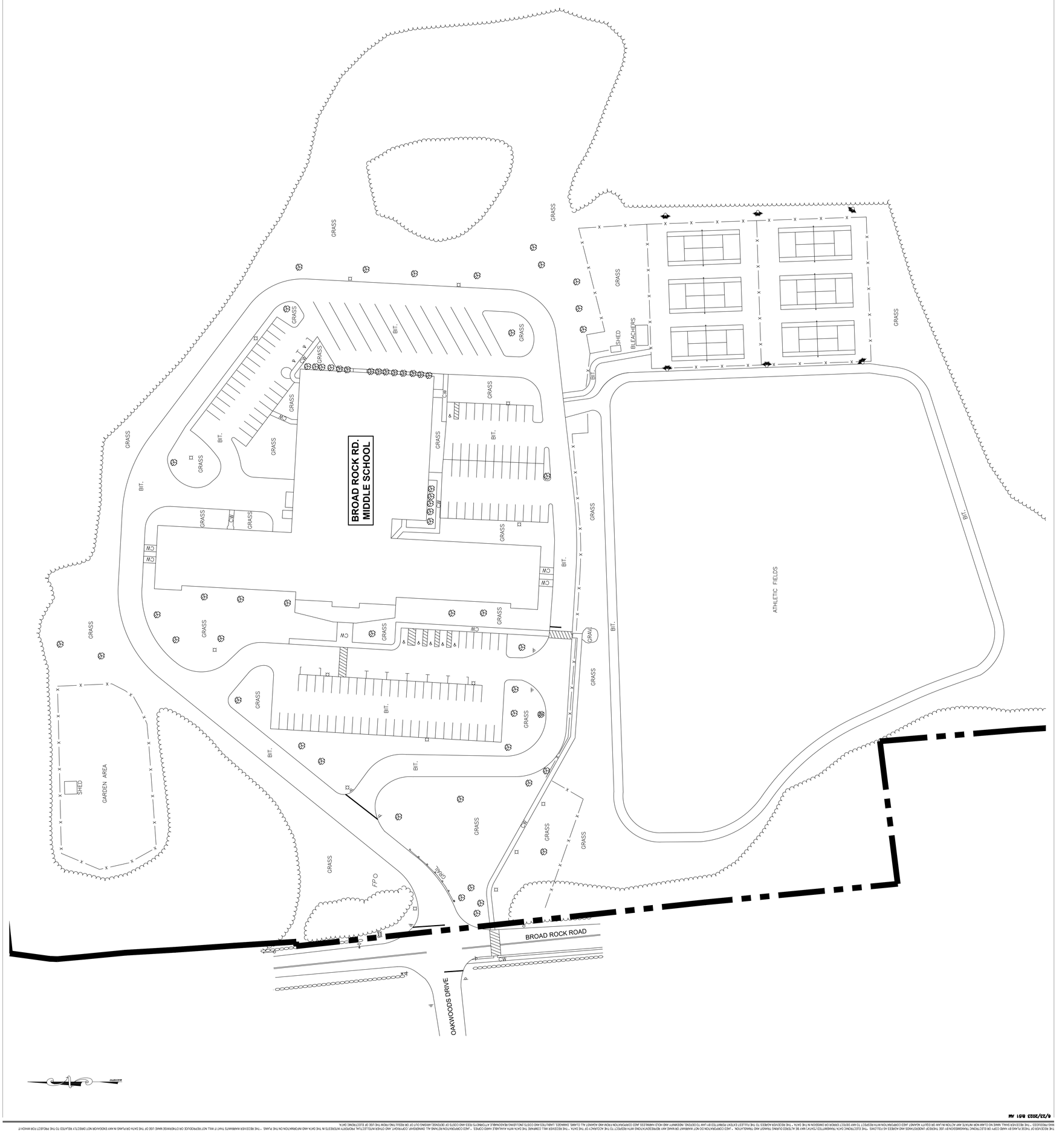
EXISTING CONDITIONS PLAN

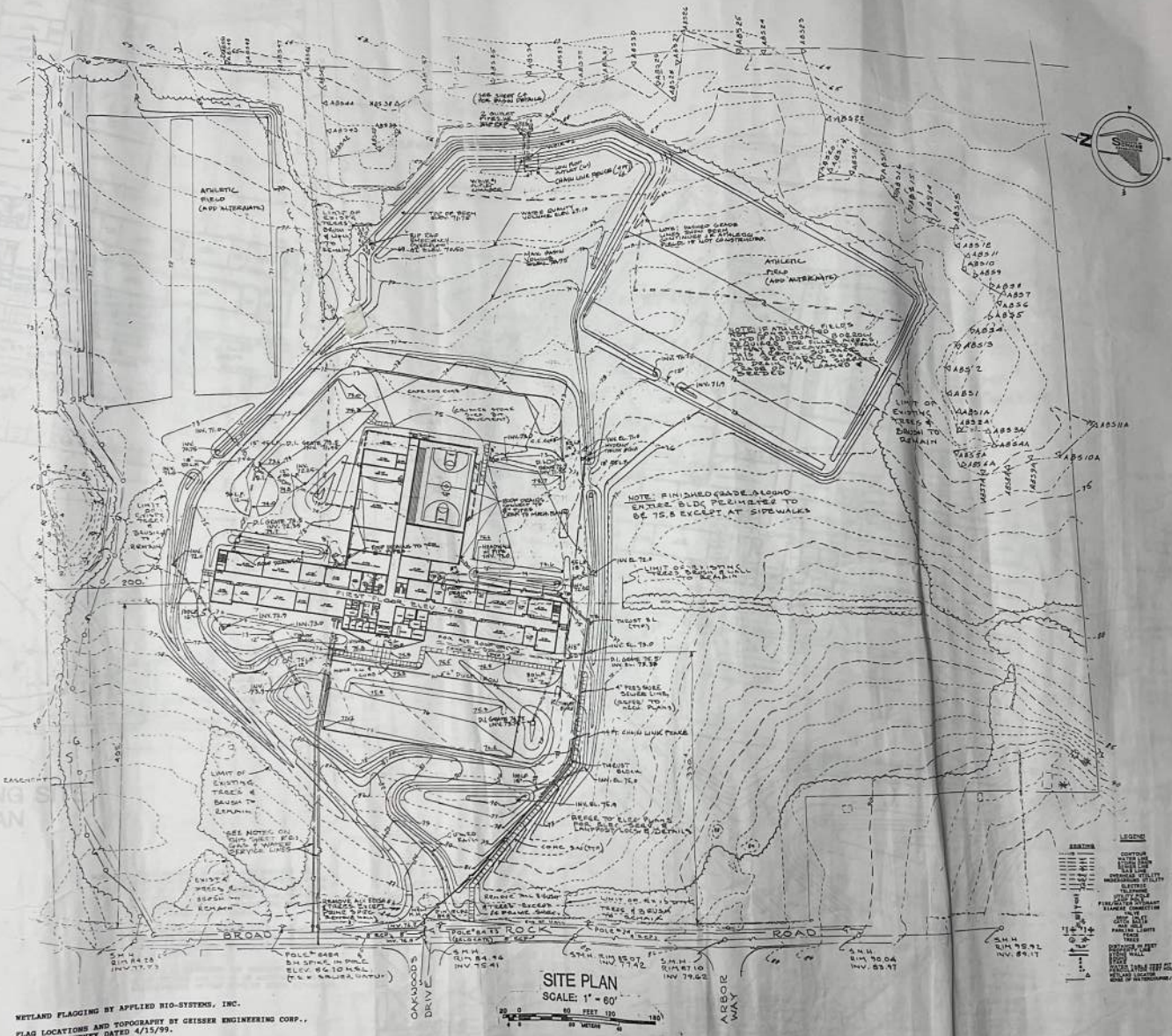
RIDE STAGE II
SCHEMATIC DESIGN
5.23.2023

DRAWN KJA | CHK'D SSH | PROJECT NO *7458.2*

SHEET NO. C-1

1" = 40'
0 5 10 20 40 feet
0 10 20 40 80 meters





NOTE: IF ANY ADDITIONAL BORROW IS REQUIRED TO CONSTRUCT PLAYFIELDS (ATHLETIC FIELDS), GRADE OF FIELDS MAY BE LOWERED, WITH APPROVAL OF ENGINEER, TO PROVIDE NECESSARY MATERIALS.

WATER SERVICE TO BE 6 INCH LINE EXTENDING FROM CONNECTIONS TO WATER MAIN IN STREET TO CONNECTION 10 FEET FROM BUILDING; TO INCLUDE CURB STOP, PIPING, AND OTHER MATERIALS MEETING THE REQUIREMENTS OF THE UNITED WATER COMPANY.

GAS SERVICE TO BE INSTALLED BY THE GAS COMPANY; TRENCHING AND BACKFILL INCLUDED IN THIS CONTRACT. MINIMUM SEPARATION BETWEEN GAS AND WATER SERVICE TO BE 10 FEET.

REPAIRS TO PAVEMENT AND SHOULDER WITHIN STREET RIGHT OF WAY ARE TO BE IN ACCORDANCE WITH REQUIREMENTS OF THE TOWN OF SOUTH KINGSTOWN.

WETLAND FLAGGING BY APPLIED BIO-SYSTEMS, INC.

FLAG LOCATIONS AND TOPOGRAPHY BY GEISSER ENGINEERING CORP., A CLASS I SURVEY DATED 4/15/99.

L • A • TORRADO ARCHITECTURE A CORPORATION

76 DORRANCE ST.
PROVIDENCE, RI 02903
401.351.3304 FAX: 401.455.0466

ARCHITECTURAL, CIVIL, ENVIRONMENTAL ENGINEERING
RAYMOND W. SCHWAB ASSOCIATES, INC.
(401) 769-0259
P.O.BOX 97 PEACE DALE RI 02883-0097

No. 2067
REGISTERED PROFESSIONAL ENGINEER

SOUTH KINGSTOWN MIDDLE SCHOOL

SOUTH KINGSTOWN, RI

GRADING, DRAINAGE & UTILITY PLAN

SCALES AS SHOWN

DATE:	REV. #	DESCRIPTION

REVISIONS:

DATE: 7 APRIL 2000
DRWN:
SCALE:
CHECK:

SHEET C 2 OF FIVE

LOCATION MAP 1"=2,000'

PLOT PLAN 1"=200'

SITE PLAN

SCALE: 1" = 60'

SIGN SCHEDULE

OPS	FULL STOP	2 REQ'D
ONE	ONE WAY	3 REQ'D
DONE	DO NOT ENTER	3 REQ'D

NOTE: PAINTING & STRIPING OF PAVEMENT BY OWNER, N.I.C.

C 1 SITE PLANS
C 2 GRADING, DRAINAGE & UTILITY PLAN
C 3 BUILDING SITE & GRADING PLANS
C 4 DETENTION BASIN
EROSION & SEDIMENT CONTROL
C 5 DETAILS & NOTES

L • A • TORRADO
ARCHITECTURE
A CORPORATION

76 DORRANCE ST.
PROVIDENCE, RI 02903
401.351.3504 FAX: 401.455.0466

RAYMOND W. SCHWAB ASSOCIATES, INC.
ARCHITECTURAL, CIVIL, ENVIRONMENTAL ENGINEERING
P.O. BOX 67 PEACE DALE RI. 02883-0067
REGISTERED PROFESSIONAL

SOUTH KINGSTOWN MIDDLE SCHOOL

BROAD ROCK ROAD
SOUTH KINGSTOWN
RHODE ISLAND

SITE PLANS

SCALES AS SHOWN

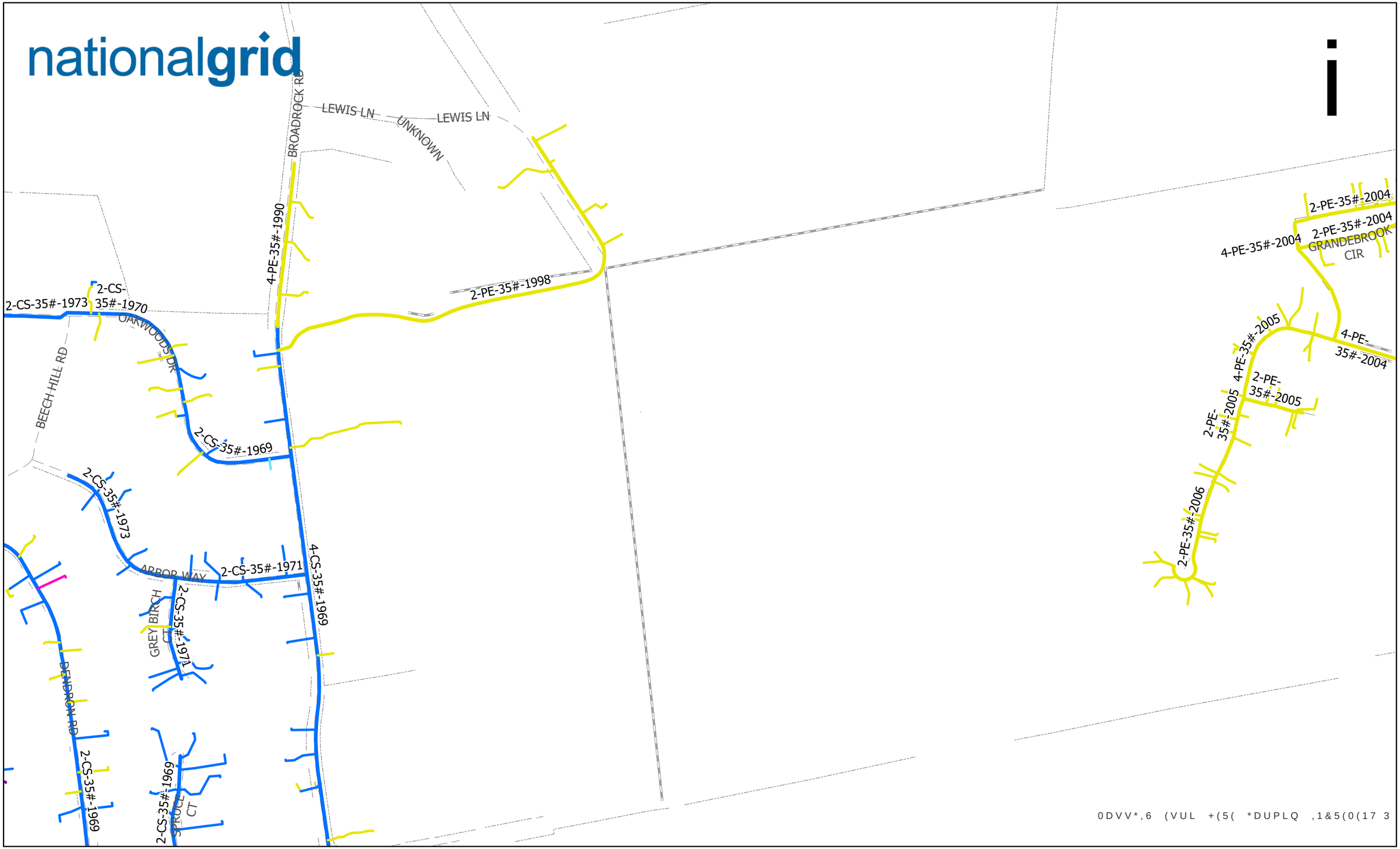
DATE:	REV. #	DESCRIPTION

REVISIONS:

DATE: 7 APRIL 2000
DRWN:
SCALE:
CHECKED BY:

SHEET C 1 OF FIVE

nationalgrid



)HHW

Date Printed: 6/14/2023

Town of South Kingstown

Water Suppliers

Yawgoo Pond
Hundred Acre Pond
Hurry Acre Pond
Indian Lake
Worden Pond
Tucker Pond
Long Pond
Factory Pond
Trustom Pond
Green Hill Pond
Card Pond
Potter Pond
Point Judith Pond
Sand Hill Cove
Narrow River
Chickasheen Brook
Chipuxet River
Horn Brook
White Rock Brook
Mink Brook
Indian Run
Pawcatuck River
SOUND
ISLAND
BLOCK

138 2 108 110 1

N W E S

0 0.5 1 1.5 2 Miles

- Town of South Kingstown - Middlebridge
- Town of South Kingstown - South Shore
- University of Rhode Island
- Veolia Water Company
- Kingston Water District

Geographic Information System

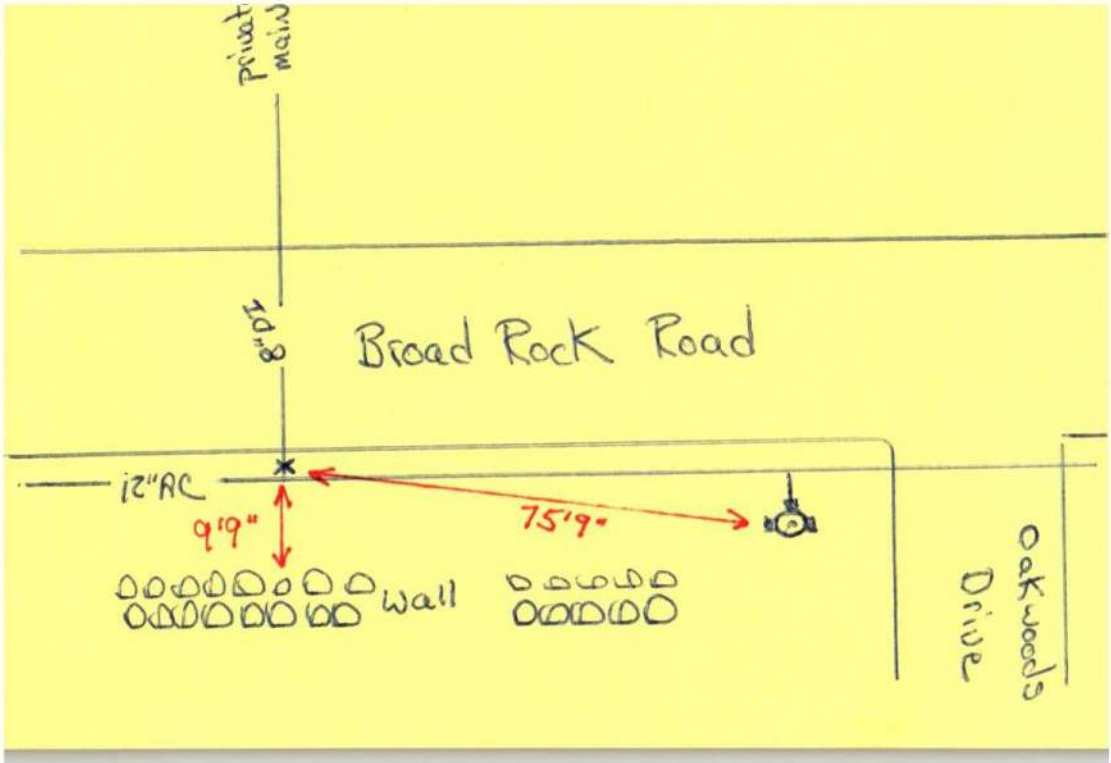
PS22-12 cpb 7/22

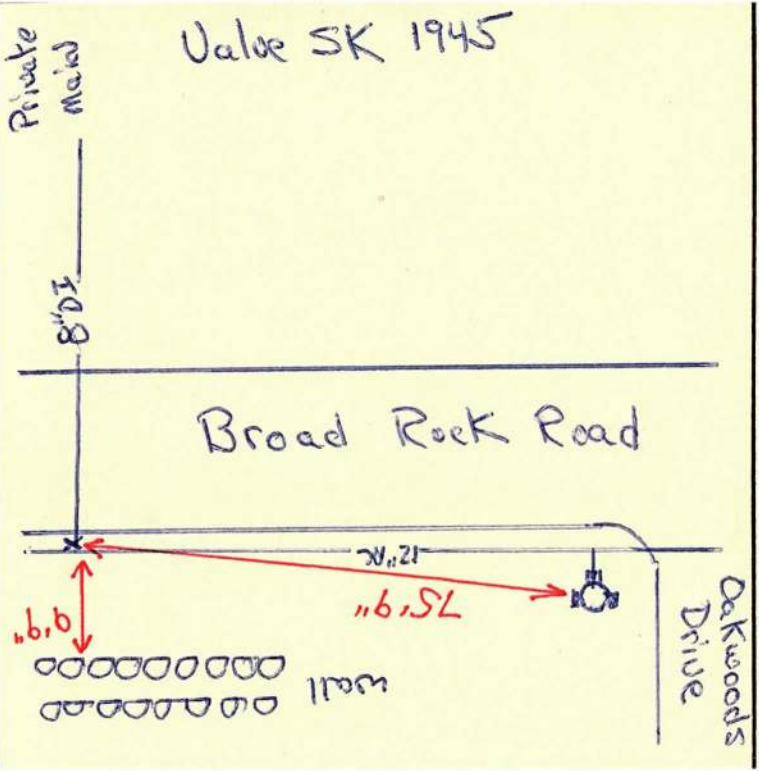
UNITED WATER RHODE ISLAND Service #6825 VALVE No. 1945

Location 351 Broad Rock Road
South Kingstown

Make	Installed	Size	Turn To Open	Bell or Spigot	
	2000	6"	CW RT	MJ	T.S.&V.

Date	Inspected	Repaired	Date	Inspected	Repaired


Broad Rock Road
12"AC
9'9"
75'9"
wall
Oakwoods Drive



Service No. 6825

S.K. Middle School

351 Broad Rock Rd

So. Kingstown

Size Main 12" AC

Depth Main

Main to Curb Cock TSV

Size Tap 8" DI

Tap Made 2000

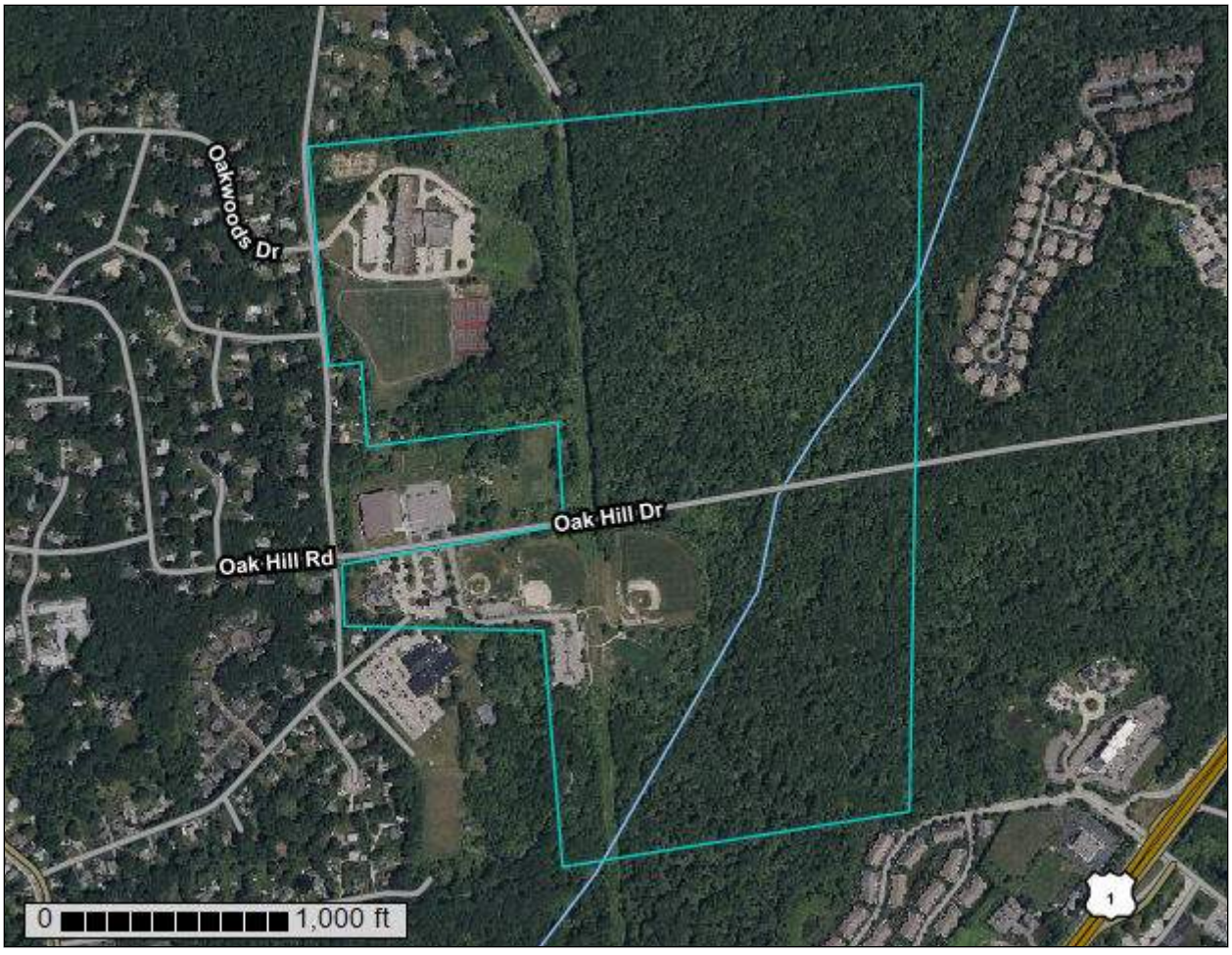
United States Department of Agriculture

NRCS

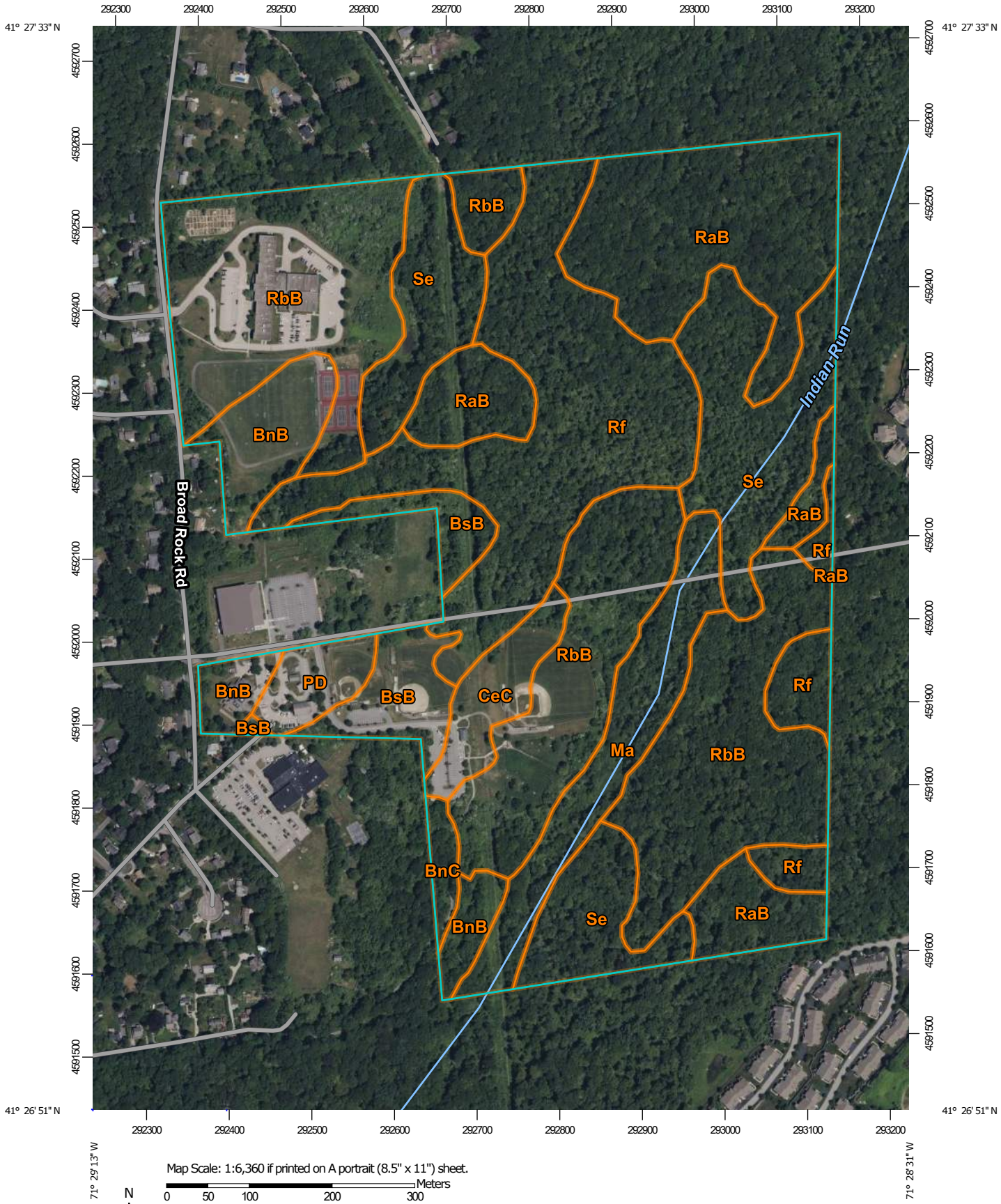
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties



May 12, 2023


71° 29' 13" W
71° 28' 31" W
41° 27' 33" N
41° 26' 51" N
292300
292400
292500
292600
292700
292800
292900
293000
293100
293200
4592700
4592600
4592500
4592400
4592300
4592200
4592100
4592000
4591900
4591800
4591700
4591600
4591500
RbB
RaB
Se
RbB
RaB
BnB
Rf
Indian Run
Broad Rock Rd
Se
BsB
RaB
Rf
RaB
RbB
BnB
PD
BsB
CeC
BsB
Rf
Ma
RbB
BnC
Rf
BnB
Se
RaB
Map Scale: 1:6,360 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 50 100 200 300
Feet
0 300 600 1200 1800
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties
Survey Area Data: Version 22, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Jul 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BnB	Bridgehampton-Charlton complex, very stony, 0 to 8 percent slopes	8.1	5.2%
BnC	Bridgehampton-Charlton complex, very stony, 8 to 15 percent slopes	1.2	0.8%
BsB	Broadbrook very stony silt loam, 0 to 8 percent slopes	6.4	4.1%
CeC	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, very rocky	4.0	2.6%
Ma	Mansfield mucky silt loam	9.1	5.8%
PD	Paxton-Urban land complex, 3 to 15 percent slopes	2.7	1.8%
RaB	Rainbow silt loam, 3 to 8 percent slopes	24.2	15.6%
RbB	Rainbow very stony silt loam, 0 to 8 percent slopes	48.7	31.3%
Rf	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	28.5	18.3%
Se	Stissing silt loam	22.7	14.6%
Totals for Area of Interest		**155.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a

particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

1DWLRQDO)ORRG+D]DUG/DHU)ΙΡ0HWWH

/HJHQG

6(( )Ι6 5(3257)25 '(7$Ι/(' /(*(1' $1' Ι1'(; 0$3)25)Ι50 3$1(/ /$<287

6Ρ(&Ι$/)/22' +$=$5' $5($6 — :LWKRXW %DVH)ORRG (OHYDWLRQ %)(=RQH $ 9 $ — :LWK %)(RU 'HSWK =RQH $($2 $+ 9($5 — 5HJXODWRU\ )ORRG:D\

27+(5 $5($6 2))/22' +$=$5' — $QQXDO &KDQFH)ORRG +D]DUG $UHDV RI DQQXDO FKDQFH IORRG ZLWK DYHUDJH GHSWK OHVV WKDQ RQH IRRW RU ZLWK GUDLQDJH DUHDV RI OHVV WKDQ RQH VTXDUH PLOH =RQH ; —)XWXUH &RQGLWLRQV $QQXDO &KDQFH)ORRG +D]DUG =RQH ; — $UHD ZLWK 5HGXFHG)ORRG 5LVN GXH WR /HYHH 6HH 1RWHV =RQH ; — $UHD ZLWK)ORRG 5LVN GXH WR /HYHH =RQH '

27+(5 $5($6 — $UHD RI 0LQLPDO)ORRG +D]DUG =RQH ; — (IIHFWLYH /20U — $UHD RI 8QGHWHUPLQHG)ORRG +D]DUG =RQH '

*(1(5$/ 6758&785(6 — &KDQQHO &XOYHUW RU 6WRUP 6HZHU — /HYHH 'LNH RU)ORRGZDOO

27+(5)($785(6 — &URVV 6HFWLRQV ZLWK $QQXDO &KDQFH :DWHU 6XUIDFH (OHYDWLRQ — &RDVWDO 7UDQVHFW — %DVH)ORRG (OHYDWLRQ /LQH %)(— /LPLW RI 6WXG\ — -XULVGLFWLRQ %RXQGDU\ — &RDVWDO 7UDQVHFW %DVHOLQH — 3URILOH %DVHOLQH — +\GURJUDSKLF)HDWXUH

0$3 3$1(/6 — 'LJLWDO 'DWD $YDLODEOH — 1R 'LJLWDO 'DWD $YDLODEOH — 8QPDSSHG

7KH SLQ GLVSOD\HG RQ WKH PDS LV DQ DSSUR[LPDWH SRLQW VHOHFWHG E\ WKH XVHU DQG GRHV QRW UHSUHVHQW DQ DXWKRULWDWLYH SURSHUW\ ORFDWLRQ

7KLV PDS FRPSOLHV ZLWK)(0\$V VWDQGDUGV IRU WKH XVH RI GLJLWDO IORRG PDSV LI LW LV QRW YRLG DV GHVFULEHG EHORZ 7KH EDVHPDS VKRZQ FRPSOLHV ZLWK)(0\$V EDVHPDS DFFXUDF\ VWDQGDUGV

7KH IORRG KD]DUG LQIRUPDWLRQ LV GHULYHG GLUHFWO\ IURP WKH DXWKRULWDWLYH 1)+/ ZHE VHUYLFHV SURYLGHG E\ )(0\$ 7KLV PDS ZDV H[SRUWHG RQ DW 30 DQG GRHV QRW UHIOHFW FKDQJHV RU DPHQGPHQWV VXEVHTXHQW WR WKLV GDWH DQG WLPH 7KH 1)+/ DQG HIIHFWLYH LQIRUPDWLRQ PD\ FKDQJH RU EHFRPH VXSHUVHGHG E\ QHZ GDWD RYHU WLPH

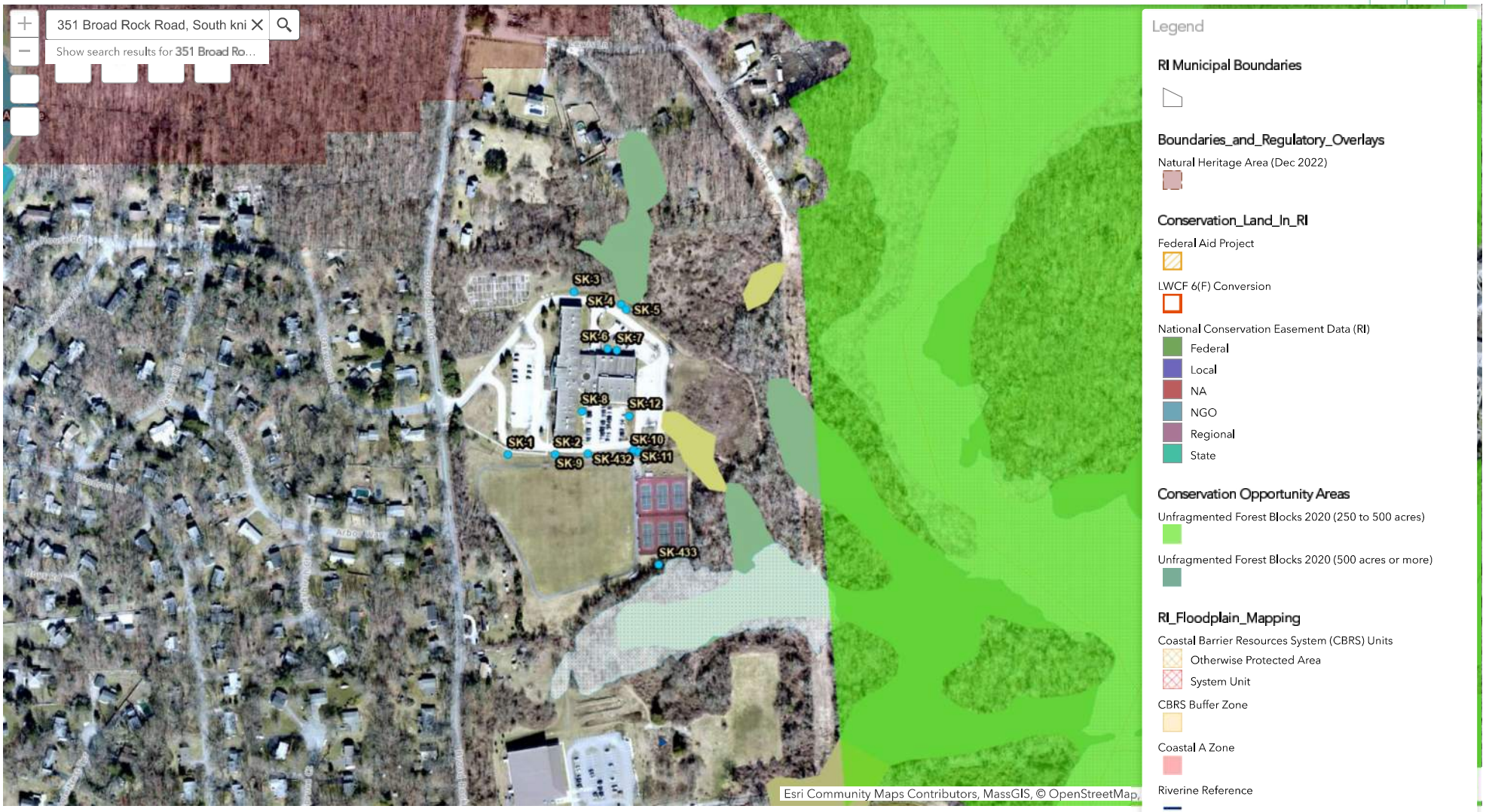
7KLV PDS LPDJH LV YRLG LI WKH RQH RU PRUH RI WKH IROORZLQJ PDS HOHPHQWV GR QRW DSSHDU EDVHPDS LPDJHU\ IORRG]RQH ODEHOV OHJHQG VFDOH EDU PDS FUHDWLRQ GDWH FRPPXQLW\ LGHQWLILHUV)Ι50 SDQHO QXPEHU DQG)Ι50 HIIHFWLYH GDWH 0DS LPDJHV IRU XQPDSSHG DQG XQPRGHUQL]HG DUHDV FDQQRW EH XVHG IRU UHJXODWRU\ SXUSRVHV

)HHW

%DVHPDS 86*6 1DWLRQDO 0DS 2UWKRLPDJHU\ 'DWD UHIUHVKHG 2FWREHU

RIDEM Environmental Resource Map

Back to the Map Room



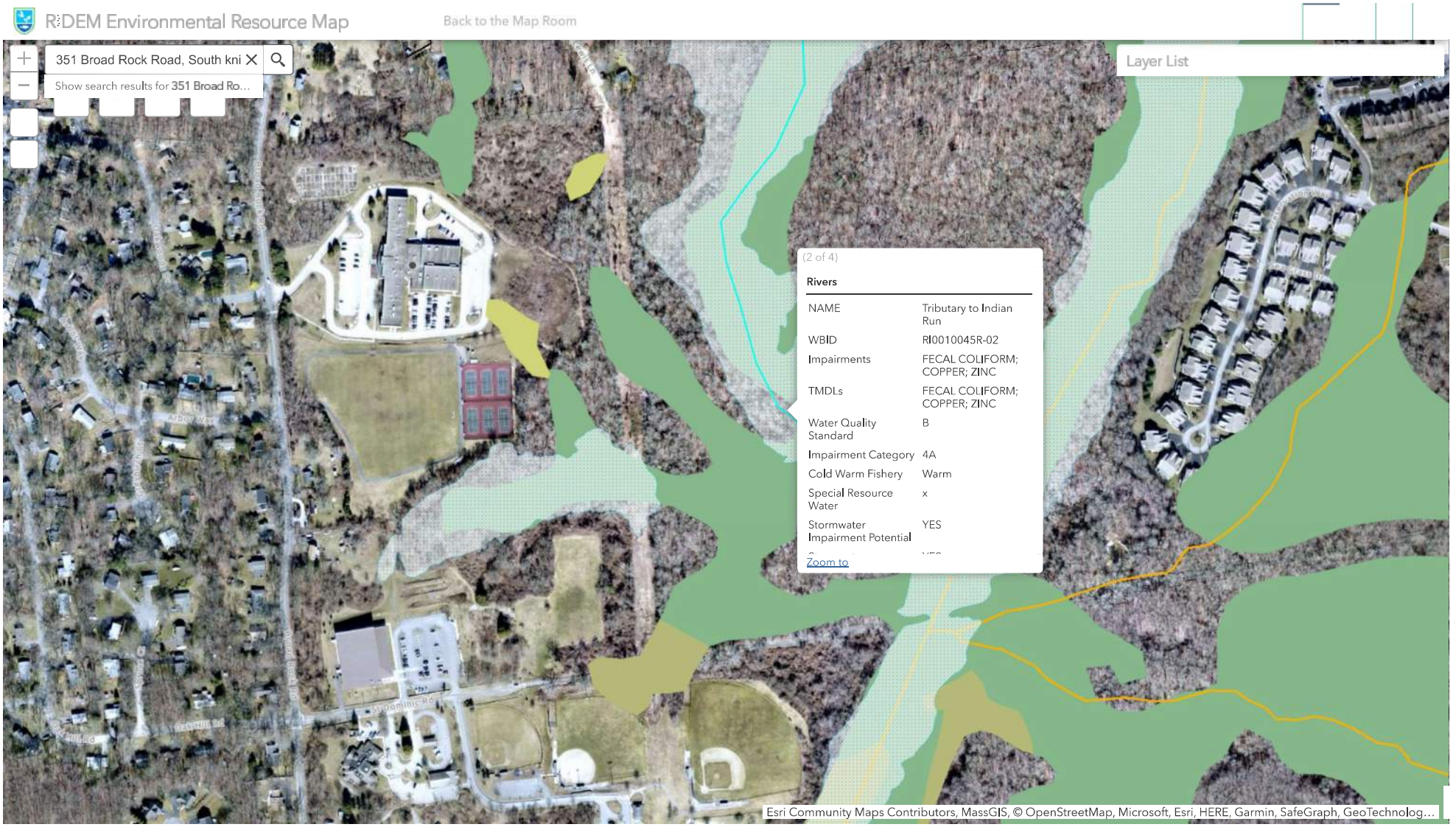

RIDEM Environmental Resource Map
Back to the Map Room
351 Broad Rock Road, South kni
Show search results for 351 Broad Ro...
Layer List
(2 of 4)
Rivers
NAME
Tributary to Indian Run
WBID
RI0010045R-02
Impairments
FECAL COLIFORM; COPPER; ZINC
TMDLs
FECAL COLIFORM; COPPER; ZINC
Water Quality Standard
B
Impairment Category
4A
Cold Warm Fishery
Warm
Special Resource Water
x
Stormwater Impairment Potential
YES
Zoom to
Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnolog...
300ft
-71.481 41.457 Degrees

Exhibit 26

Matunuck ES Site Due Diligence Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

RE: **Site Investigation Summary**
Matunuck Elementary School
380 Matunuck Beach Road, South Kingstown, RI 02879

GAI PN 7458-03
DATE: June 6, 2023

Introduction
Garofalo & Associates Inc. (Garofalo) has prepared this report to assist with the due diligence assessment of the referenced site as it relates to RIDE Stage II investigations for the proposed improvements at the school.

The subject site is located at 380 Matunuck Beach Road South Kingstown. The approximately 13.71 acres site is currently comprised of an existing Elementary School, associated parking and hardscape.

An Aerial Site Plan of the property is attached

Property Data
The site is identified as Lot 18 on Assessors Plat 86-2. The ownership of the parcel is identified as the Town of South Kingstown.

Zoning District
Zone: GI (Government & Institutional)

Use: Educational – Primary or Secondary

Exhibit A-Dimensional Standards:
Min. Lot Size: 200,000 sf + 40,000 per 100 pupils
Min Lot Width: 200 feet
Front yard: 40 feet
Corner Side: 40 feet
Side yard: 40 feet
Rear yard: 40 feet
Max. Principal Bldg. Height: 35 feet
Max. Accessory Bldg. Height: 15 feet
Max. Lot Coverage: 20%
Min distance from Residential Properties: Could not locate any info from town ordinances

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Phone: (401) 273-6000 ♦ Fax: (401) 273-1000 ♦ E-Mail: admin@garofaloassociates.com
Visit our Web Site at www.garofaloassociates.com

On-site Soils
The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils of the site to be primarily comprised of Bridgehampton silt loam, 0% to 3% slopes (BhA), Bridgehampton silt loam, 3% to 8% slopes (BhB) and Ninigret sandy loam, 0% to 3% slopes (Nt). The Hydrologic Soil Group classification for these soils are "B"(moderately low runoff potential) and "C"(moderately high runoff potential). The site lies in a GA groundwater class district and seasonal high groundwater depths are typically less than five feet..

FEMA Flood Mapping
The project area is located within Zone "X" (areas outside the 0.2% annual floodplain) as shown on F.E.M.A. Flood Insurance Rate Map for the Town of South Kingstown, Washington County, Rhode Island, Community Panel No. 44009C0193J having an effective date of October 16, 2013.

Site Condition
The site is comprised of a single building, primary front field parking, rear parking/play area and miscellaneous walks and site elements. Open fields surround the school to the rear and to the front of the parking field (See Aerial Site Plan).

Overall, the parking area is considered to be in fair to good condition, with rehabilitation recommended within 10 years. Other site elements appear in good but aged condition with localized repairs needed but consistent with resolution by standard maintenance. The site accessibility elements appear in general conformance, but signage and accessible route upgrade is required for full compliance.

Site Drainage
Generally, the property is bisected by improvements in a north-south ridge with western portions of the property falling to the west at gently sloping grades toward an apparent stormwater management basin adjacent to Matunuck Beach Road and the eastern portions falling eastward and southeastward at more moderate slopes to a local depression on the eastern portions of the site. The property has a number of open and enclosed drainage systems in each sub-area which collect runoff from the building and adjacent paved areas. Although depressions exist within each watershed, runoff mitigation with formal stormwater management facilities does not appear

to be evident to the east. No existing permits/approvals related to stomwater were identified by these investigations but outfall registration is noted as outlined below.

- Limited Construction drawings for the onsite and adjacent facilities were located and those documents are included in the Appendix. Apparent stormwater management facilities were identified on the property adjacent to Matunuck Beach Road.

Runoff from the work area discharges at two (2) primary locations.

- The paved areas associated with the school building and adjacent parking is directed to open drainages systems with overflows discharging westward toward the Matunuck Beach Road Rights of way. Several registered stormwater outfalls are identified at this location (SK-52, 53 & 368), but a review of that data was not initiated under these investigations. No permit or maintenance records for the stormwater basin were identified.

- The playfields and some limited improvements discharge from the site as overland flow toward the southeast to a localized depression. No evidence of wetland vegetation was noted during the cursor site inspection, but a formal investigaiotn was not performed. Overtopping of the depression is overland to the east.

There were no conditions noted during these investigations that indicate significant substandard drainage conditions currently occurring at the site or immediately downstream during normal rainfall (ie washouts or flooding).
The property falls within the Potters Pond watershed (RI0010043E-05). No stormwater impairments have been identified for the receiving water body. Town Standards (Ord. Ch 20, Stormwater Management and Land development Regulations) requires stormwater management practices to meet 25-yr runoff, but also a more conservative standard of being consistent with the "Rhode Island Stormwater Design and Installation Standards Manual" and the "Rhode Island Soil Erosion and Sediment Control Handbook," as amended. Based on these standards, development of the site will require compliance RI Stormwater Rule, Standard 5, Overbank Flood Protection and some form of subsurface retention/infiltration as well as treatment and/or detention should be anticipated for all exterior improvements proposed.

Utilities

Water:
The site is within the South Kingstown (South Shore) Water service area and the site is understood to be connected to public water. According to Town mapping, there is a 10-inch AC main located within Matunuck Beach Road. Record plans indicate an 8-inch main traversing the school property on the south side, with no metering identified by these investigations. No data regarding system pressures was obtained.

Gas:
The school building is understood to be connected to a 2-inch PE-35# within Matunuck Beach Road, but the mapping provided by the Gas Company is not conclusive.
.

Sewer:
The site is currently serviced by an on-site wastewater treatment system (OWTS). A review of RIDEM records (#7432248) indicate the installation was performed in 1974. The system is understood to be a conventional type trench system with a design capacity of 3225 GPD. The system includes a 3500-gallon septic tank and no grease trap. No modifications or records of subsequent inspections was identified. No additional research was performed regarding current population or design flows.

Electric:
Based upon correspondence from RI Energy/National Grid, they do not have any underground electric distribution facilities on the property. The primary service appears to be from the west in Matunuck Road. Further investigation regarding the adjacent facilities is necessary based on site specific loading requirements that are identified.

Verizon and Cox Communications:
No records regarding communications or cable service were obtained.

RIDEM Environmental Resource Mapping

Wetlands:
The site falls within the jurisdictional areas of the Coastal Resources Management Council (CRMC).There are no wetlands identified on or adjacent to the project site.

National Heritage Area / Conservation Land:
There are no national heritage areas or conservation land on or adjacent to the site.

Other Resources:
There were no other conditions noted on RIDEM Mapping that are believed to significantly impact the development potential of the property.

RIDEM Waste Management Search Data
The RIDEM Waste Management search performed found no registered facilities on the property.

END OF SUMMARY

GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

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PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
MATUNUCK ELEMENTARY SCHOOL
380 MATUNUCK BEACH ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

5-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.3

SHEET NO.

G-1

LIST OF ATTACHMENTS

1. Property Cards
2. GIS Parcel Map
3. Zoning Map
4. Future Land Use Map
5. Aerial Map
6. Record Site Plans
7. Utility Information
8. NCRS Soils Data
9. FEMA Flood Map (FIRMette)
10. RIDEM Environmental Resource Mapping

380 MATUNUCK BEACH ROAD

Location	380 MATUNUCK BEACH ROAD	**Map and Lot**	86-2/ 18/ / /
Acct#	R-34-0070-00	**Owner**	SOUTH KINGSTOWN TOWN OF
Assessment	$7,670,400	**PID**	10007
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$5,178,900	$2,491,500	$7,670,400

Owner of Record

Owner	SOUTH KINGSTOWN TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	380 MATUNUCK BEACH ROAD WAKEFIELD, RI 02879-5305	**Book & Page**	0116/0068
		Sale Date	04/08/1974
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
FROM ADMIN	$0		0036/0153		

Building Information

Building 1 : Section 1

Year Built:	1980
Living Area:	41,560
Replacement Cost:	$6,839,901
Building Percent Good:	75
Replacement Cost Less Depreciation:	$5,129,900

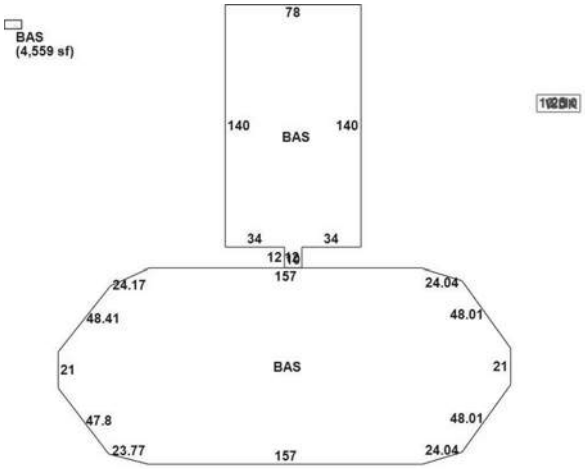
Building Attributes	
Field	**Description**
Style:	School/College

Model	Ind/Open Com
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Irregular
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Forced Air-Duc
AC Type	None
Struct Class	
Bldg Use	MNCPL,LIBR M-96
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\00\75\83.jpg

Building Layout



(ParcelSketch.ashx?pid=10007&bid=10007)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	41,560	41,560
WDK	Deck, Wood	250	0
		41,810	41,560

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 903I

Land Line Valuation

Size (Acres) 13.71

Description	MNCPL,LIBR M-96	**Frontage**	
Zone	GI	**Depth**	
Neighborhood	0730	**Assessed Value**	$2,491,500
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			25000.00 S.F.	$37,500	1
FGR1	GARAGE-AVE			308.00 S.F.	$4,400	1
LT10	W/DOUBLE LIGHT			2.00 UNITS	$3,100	1
MSC14	BUS SHELTER			560.00 UNIT	$4,000	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$4,409,000	$2,044,600	$6,453,600
2020	$4,409,000	$2,044,600	$6,453,600
2019	$4,409,000	$2,044,600	$6,453,600

Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

380 Matunuck Beach Road

N

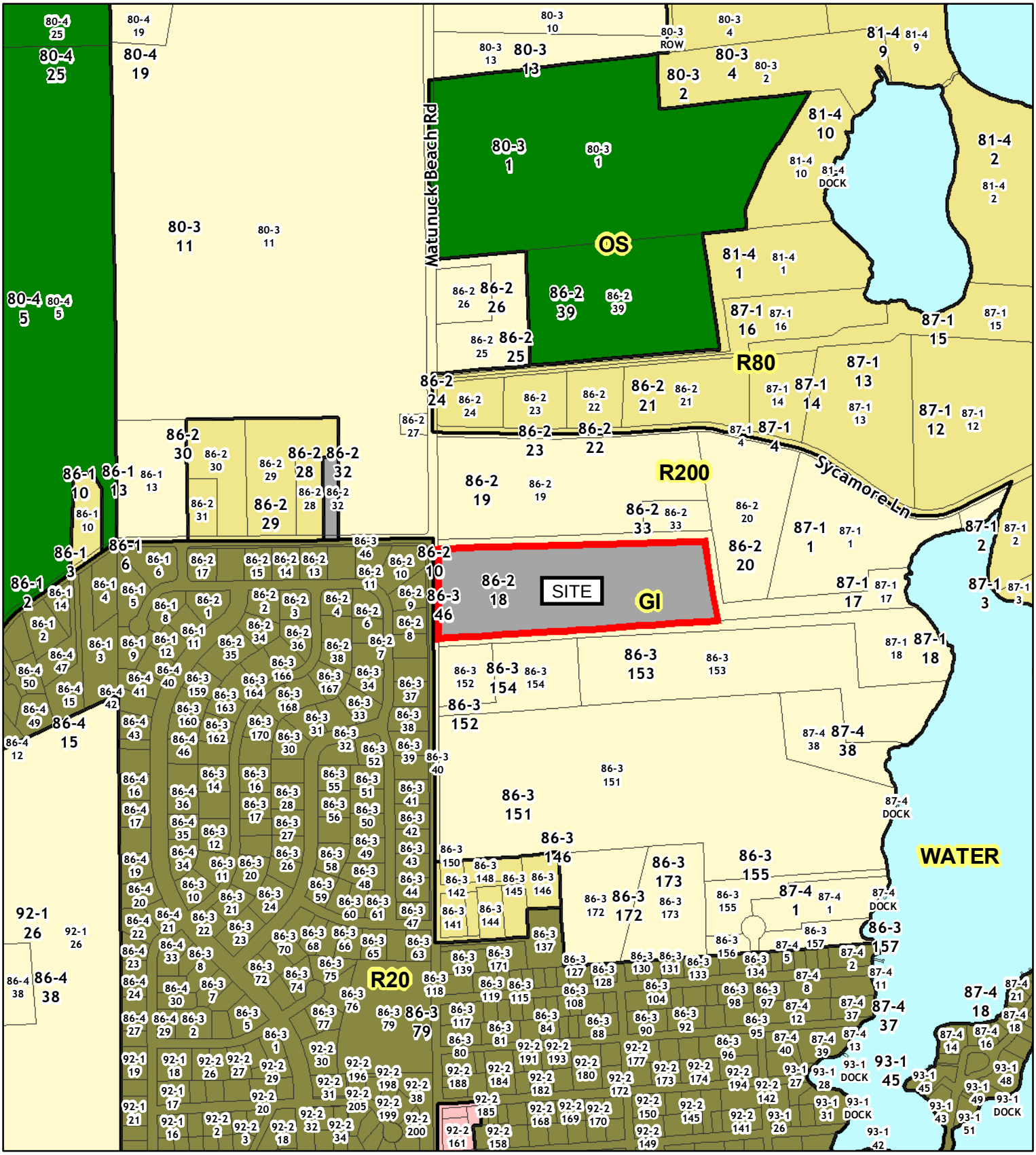
1 inch = 417 feet

0 190 380 760 Feet

Town of South Kingstown Web GIS

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

380 Matunuck Beach Road

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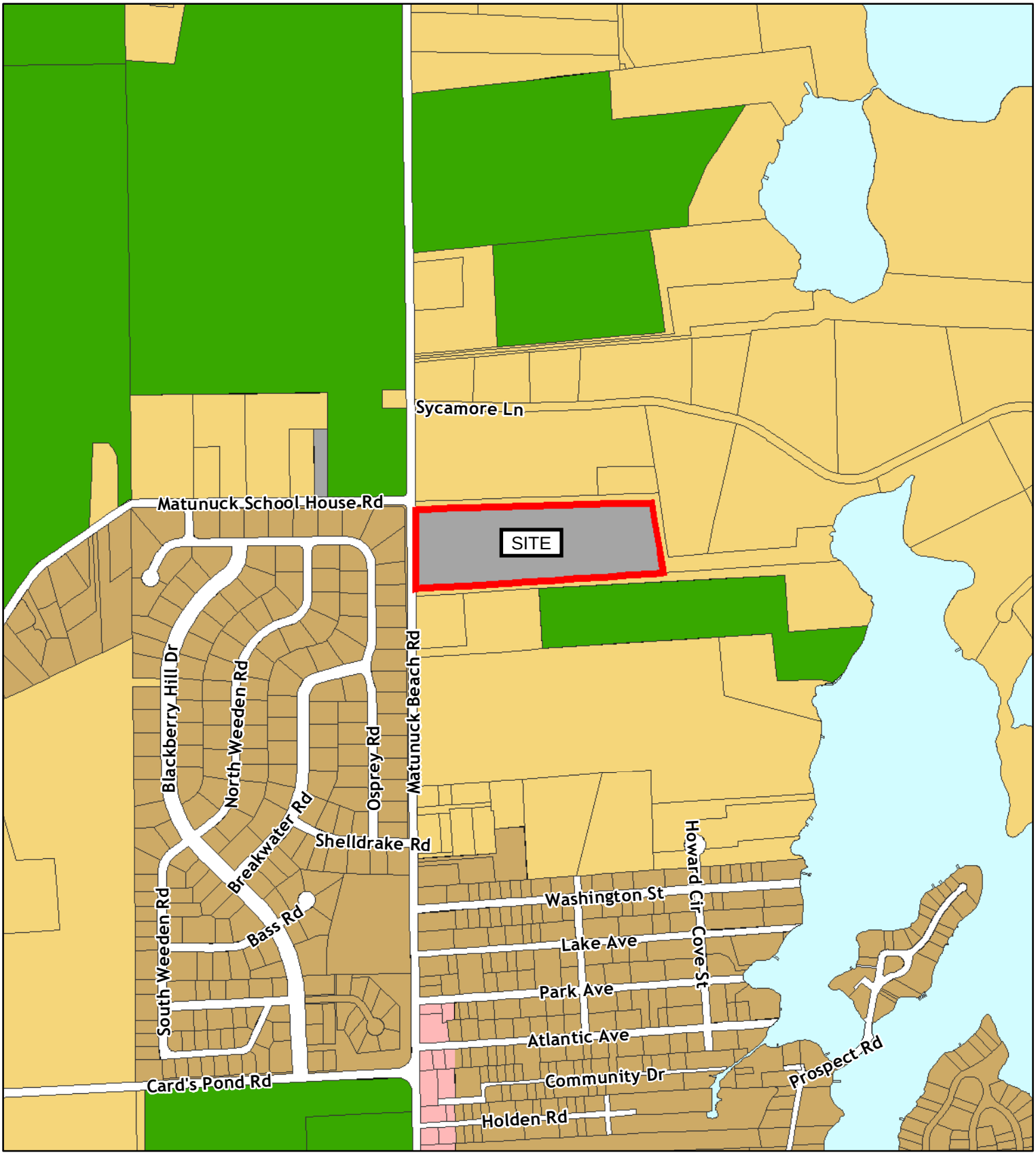
N

1 inch = 667 feet

0 305 610 1,220 Feet

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

380 Matunuck Beach Road

N

1 inch = 752 feet

0 345 690 1,380 Feet

Town of South Kingstown Web GIS

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Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

380 Matunuck Beach Road

1 inch = 750 feet

0 345 690 1,380 Feet

Town of South Kingstown Web GIS

Parcel Boundaries not legally binding for title or zoning purposes.

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6/23/2023 9:07 AM

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SIGNATURE: ____________
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NEW CONSTRUCTION
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REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

EXISTING CONDITIONS PLAN

RIDE STAGE II
SCHEMATIC DESIGN

5-??-2023

DRAWN	CHK'D	PROJECT NO
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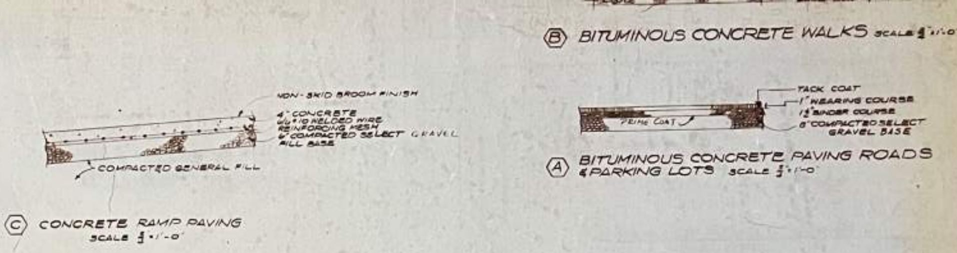
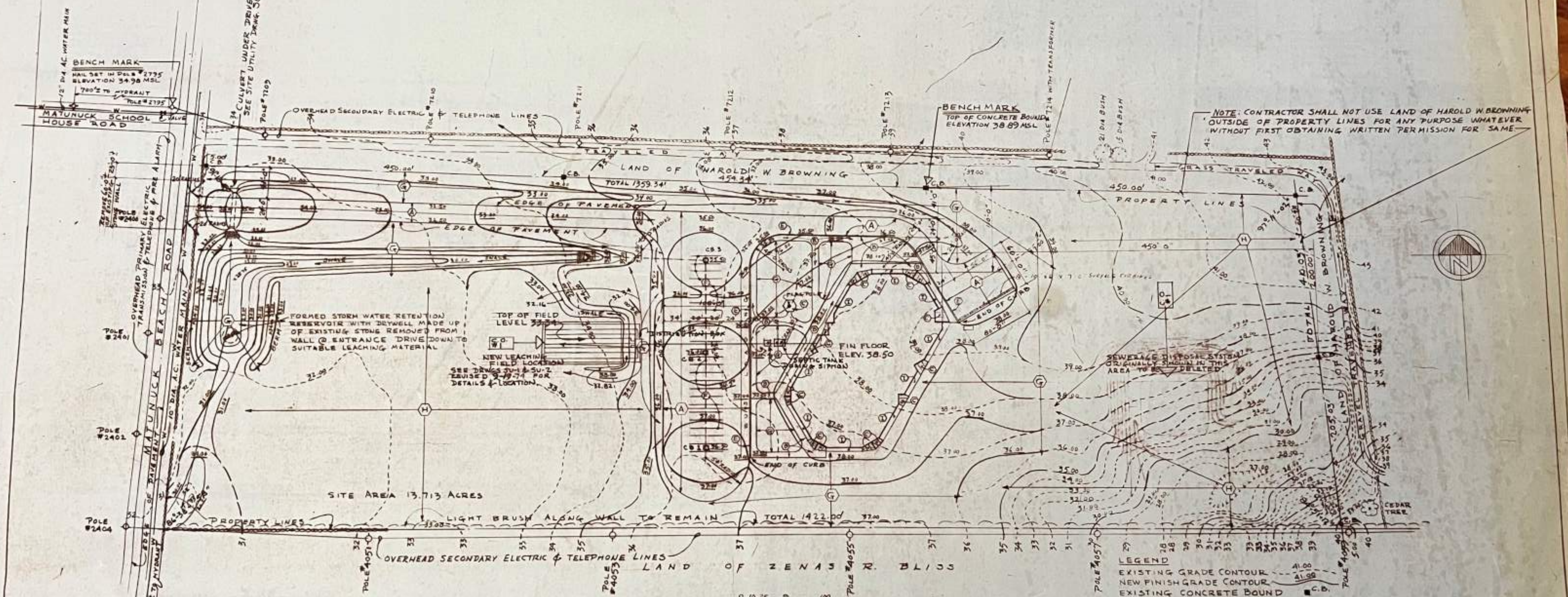
SHEET NO.

C-1





SITE PLAN SCALE 1" = 50'-0"

NOTE: SURVEY DATA SHOWN ON THIS SITE PLAN WAS TAKEN FROM PLAN ENTITLED: TRACT OF LAND AT MATUNUCK IN THE TOWN OF SOUTH KINGSTOWN R.I. PROPERTY OF HAROLD W. BROWNING. SURVEYED AND PLATTED DEC. 1973 BY A.J. EASTERBROOKS C.E. SCALE 1" = 100'-0"

TOPOGRAPHIC DATA SHOWN ON THIS SITE PLAN WAS TAKEN FROM PLAN ENTITLED "MATUNUCK BEACH ROAD SCHOOL SITE" TOPOGRAPHIC MAP OF LAND LOCATED IN THE TOWN OF SOUTH KINGSTOWN WASHINGTON COUNTY STATE OF RHODE ISLAND BY VILLAGE GREEN ASSOCIATES, INC. LAND SURVEYING-PLANNING-TECH. SERVICES 162 COLUMBIA ST. PEACE DALE, RHODE ISLAND 02883 RAYMOND W. SCHWAB REGISTERED PROFESSIONAL ENGINEER SHEET NUMBER 1 OF ONE JOB Nº 5000/74 DRAWN ON JAN. 25, 1974 BY J.D.C. CHECKED ON JAN. 25, 1974 BY A.B.H.

LEGEND
EXISTING GRADE CONTOUR 41.00
NEW FINISH GRADE CONTOUR 41.00
EXISTING CONCRETE BOUND C.B.
PROPERTY LINES
Ⓐ BITUMINOUS CONCRETE ROAD & PARKING AREA PAVING
Ⓑ 7'-0" WIDE BITUMINOUS CONCRETE WALKS (10'-0" WIDE @ MAIN ENTRANCE WALK ONLY)
Ⓒ CONCRETE RAMPS WITH NON-SKID BROOM FINISH
Ⓓ DELETED
Ⓔ MACHINE FORMED BITUMINOUS CURBING
Ⓕ PAINTED TRAFFIC & PARKING MARKINGS
Ⓖ AREAS TO BE LOAMED TO FINISH GRADES SHOWN (FINE GRADING & SEEDING TO BE PERFORMED BY OWNER UNDER SEPERATE CONTRACT)
Ⓗ AREAS TO BE LEFT IN NATURAL STATE WITH NO CLEARING OR LOAMING
Ⓘ NATIVE STONE DRIP BEDS
SEE SITE UTILITY DRAWINGS SU-1 & SU-2 FOR UTILITY LOCATIONS NOT SHOWN ON THIS DRAWING
NOTE: ALL RADII AT INTERSECTING WALKS TO BE 10'-0" UNLESS NOTED OTHERWISE
THIS DRAWING SUPERSEDES DRAWING SI-1 REVISED 7-10-74 ITEM #13 ADDENDUM #4.

CHANGE ORDER NO. 1 SEPT. 19, 1974	REVISED DRAWING AT LOCATIONS NOTED TO DELETE SEWAGE DISPOSAL SYSTEM EAST OF BLDG. AND SHOW NEW SEWERAGE DISPOSAL SYSTEM WEST OF PARKING AREA.

KENT CRUISE & PARTNERS ARCHITECTS AND ENGINEERS
PROVIDENCE, RHODE ISLAND

MATUNUCK ELEMENTARY SCHOOL
TOWN OF SOUTH KINGSTOWN, R. I.
SITE PLAN

SCALE 1" = 50'-0"
DATE 10/3/74
DWG. NO. SI-1
REVISED
CHANGE ORDER 1

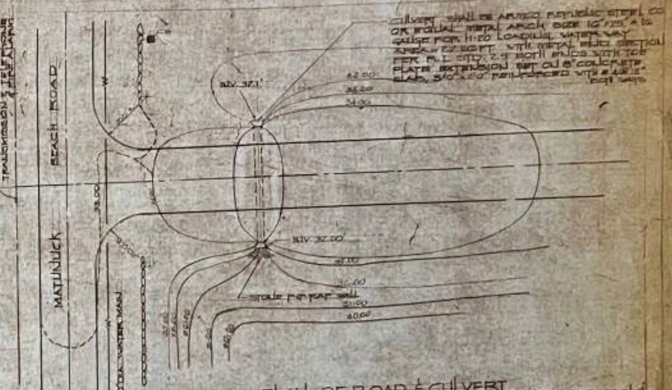
(PROFILE LOOKING SOUTH)

SEWAGE DISPOSAL SYSTEM PROFILE

SCALE: HORIZONTAL 1"=20 VERTICAL 1"=4

SEWAGE DISPOSAL SYSTEM NOTES:

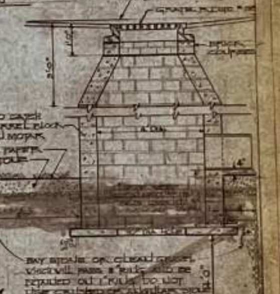
1. PERFORATED DISTRIBUTION PIPES TO BE SCH.40 PVC.
2. PIPES TO BE LEVEL AND AT THE SAME INV. AT ALL POINTS OF FIELD.
3. SECTION THROUGH FIELD TAKEN LOOKING SOUTH
4. FOR DETAILS OF SEPTIC TANK, DOSING SIPHON, AND DISTRIBUTION BOX SEE DWG. SU-2
5. AREA OVER LEACHING FIELD SHALL BE COVERED WITH LOAM AND SEEDED.

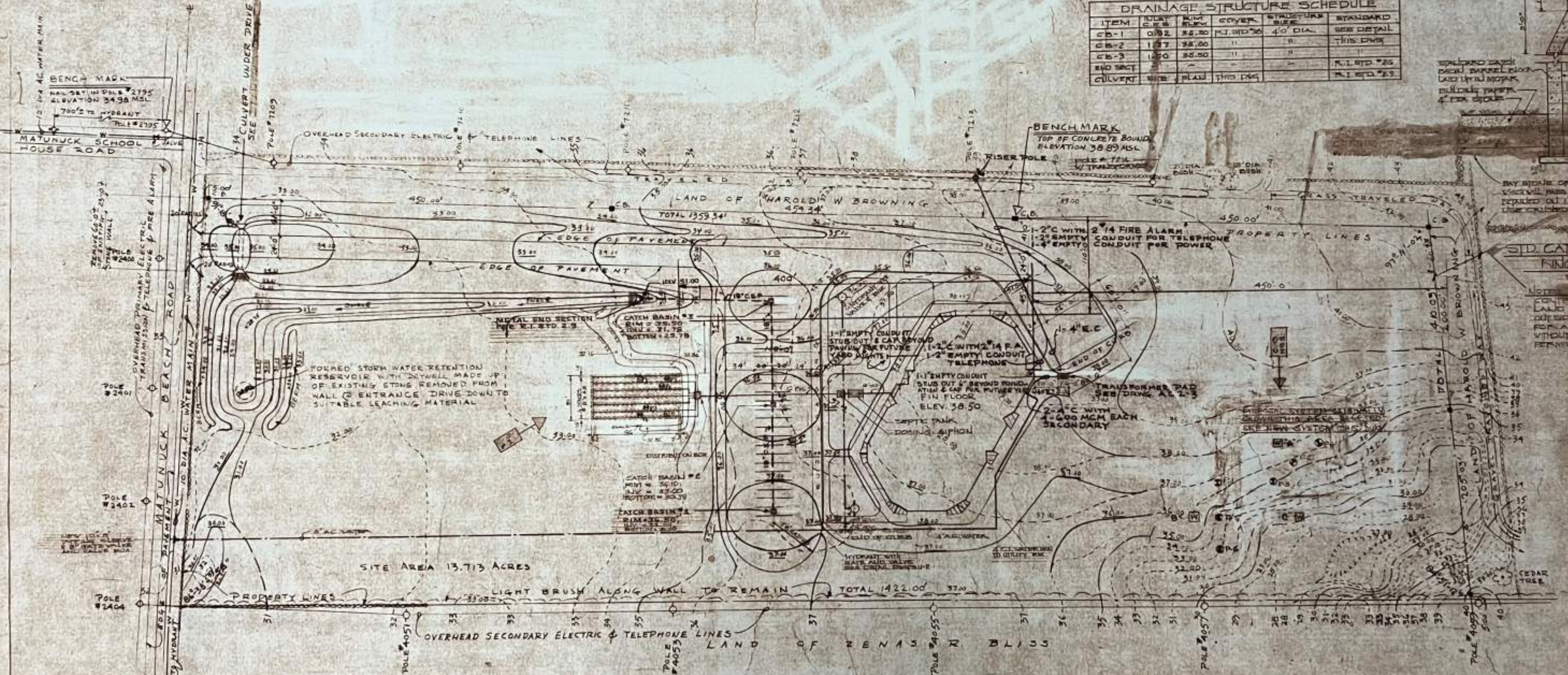


PLAN OF ROAD & CULVERT

SCALE 1"=20'

DRAINAGE STRUCTURE SCHEDULE					
ITEM	INLET C.F.S.	RIM ELEV.	COVER	STRUCTURE SIZE	STANDARD
CB-1	0.92	36.50	R.I. STD 36	4'0" DIA.	SEE DETAIL
CB-2	1.77	38.00	"	"	THIS DWG
CB-3	1.50	35.50	"	"	"
END SECT	–	–	–	–	R.I. STD #26
CULVERT	SEE	PLAN	THIS DWG		R.I. STD #25





STORM DRAINAGE SYSTEM NOTES:

1. ALL CULVERTS AND CORRUGATED STEEL STORM WATER PIPES SHALL BE ZINC COATED IN ACCORDANCE WITH AASHO SPECIFICATION, WITH FULL ASPHALT COATING, INSIDE AND OUTSIDE DOUBLE HOT DIP, THICKNESS 0.05 INCHES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS PUBLISHED PROCEDURES.
2. REINFORCED CONCRETE PIPE, WHERE NOTED, SHALL BE IN ACCORDANCE WITH SPECIFICATIONS SECTION 2F, CONFORMING TO ASTM C76 CLASS III
3. ALL STORM AND SANITARY PIPING SHALL BE INSTALLED WITH MINIMUM OF 6 INCHES OF COMPACTED APPROVED GRANULAR MATERIAL, CLASS C BEDDING

SEWAGE DISPOSAL SYSTEM NOTES:

● - PERCOLATION TEST LOCATION, P-1 & P-3 30" BELOW GRADE, P2 & P-4, 48" BELOW GRADE

▣ TEST WELL LOCATION

PERCOLATION TESTS, WELLS AND SUB SOIL DATA BY VILLAGE GREEN ASSOCIATES AND AS CONTAINED IN REPORT DATED 13 SEPT 1974

ADDENDUM	DESCRIPTION
	DWG REVISED TO SHOW NEW ...
	CHANGED GRADING AT LEACHING BED AND CHANGED SYSTEM PROFILE

KENT CRUISE & PARTNERS ARCHITECTS AND ENGINEERS
PROVIDENCE, RHODE ISLAND

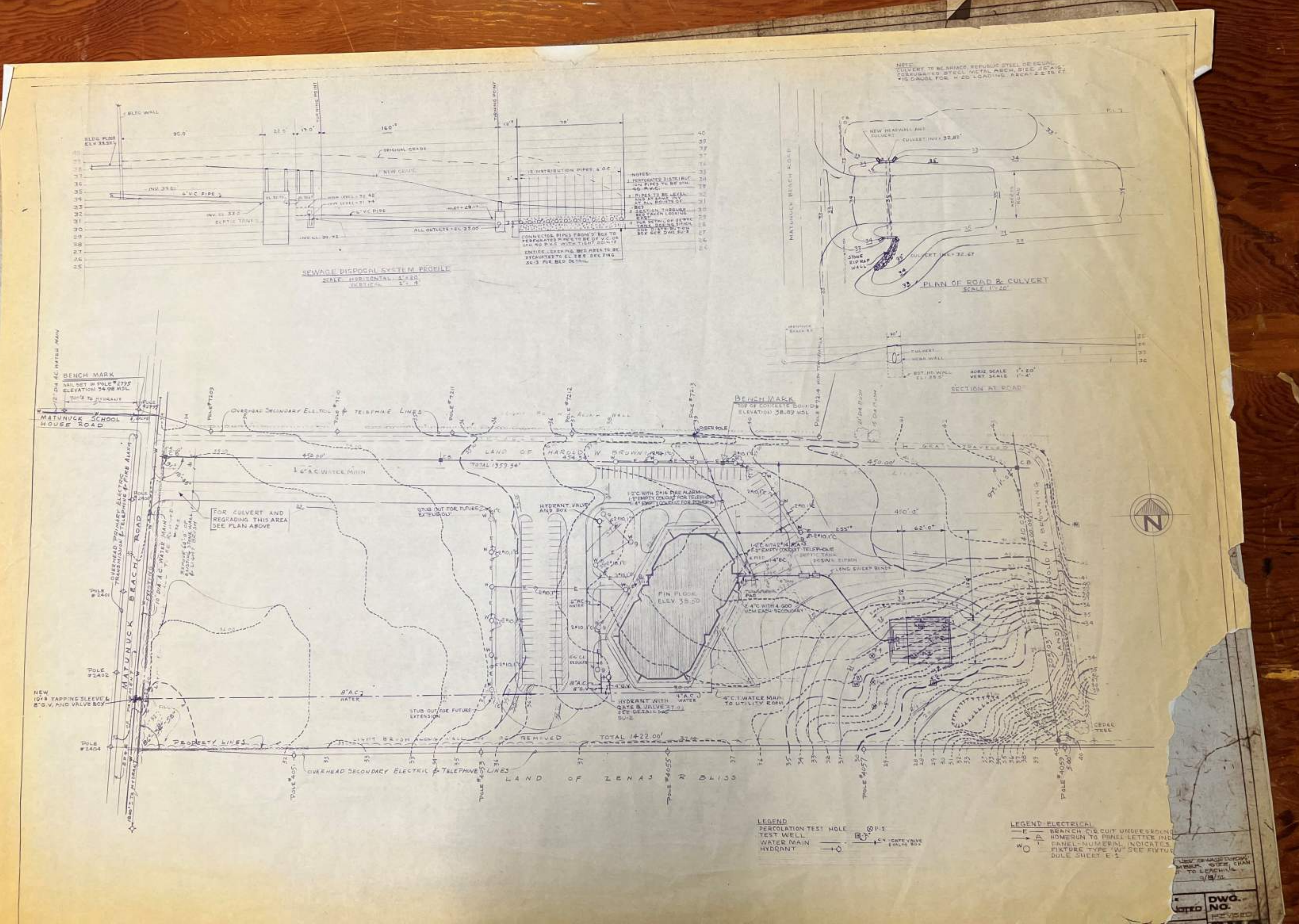
MATUNUCK ELEMENTARY SCHOOL
TOWN OF SOUTH KINGSTOWN, R. I.

SITE UTILITY PLAN

SCALE 1" = 50'-0"

DATE 10/3/74

DWG. NO. SU-1


SEWAGE DISPOSAL SYSTEM PROFILE
SCALE HORIZONTAL 1"=20'
VERTICAL 1"=4'
ORIGINAL GRADE
NEW GRADE
12 DISTRIBUTION PIPES 6' O.C.
SEPTIC TANK
ALL OUTLETS EL 29.00
CONNECTOR PIPES FROM 'D' BOX TO PERFORATED PIPES TO BE OF V.C. OR SCH 40 P.V.C. WITH TIGHT JOINTS
PLAN OF ROAD & CULVERT
SCALE 1"=20'
MATUNUCK BEACH ROAD
NEW HEADWALL AND CULVERT
STONE RIP RAP WALL
SECTION AT ROAD
BENCH MARK
MATUNUCK SCHOOL HOUSE ROAD
OVERHEAD SECONDARY ELECTRIC & TELEPHONE LINES
LAND OF HAROLD W BROWNING
6" A.C. WATER MAIN
TOTAL 1359.34'
FOR CULVERT AND REGRADING THIS AREA SEE PLAN ABOVE
HYDRANT, VALVE AND BOX
STUB OUT FOR FUTURE EXTENSION
FIN FLOOR ELEV 39.50
LONG SWEEP BENDS
MATUNUCK BEACH ROAD
NEW 10"Ø TAPPING SLEEVE & 8" G.V. AND VALVE BOX
HYDRANT WITH GATE & VALVE
4" C.I. WATER MAIN TO UTILITY ROOM
PROPERTY LINES
TOTAL 1422.00'
OVERHEAD SECONDARY ELECTRIC & TELEPHONE LINES
LAND OF ZENAS R BLISS
CEDAR TREE
LEGEND
PERCOLATION TEST HOLE
TEST WELL
WATER MAIN
HYDRANT
LEGEND ELECTRICAL
BRANCH CIRCUIT UNDERGROUND
HOMERUN TO PANEL LETTER IND.
PANEL-NUMERIAL INDICATES
FIXTURE TYPE 'W' SEE FIXTURE
POLE SHEET E-1
DWG. NO.

nationalgrid

i

2-PE-35#-2006

2-PE-35

0DVV*,6 (VUL +(5(*DUPLQ ,1&5(0(17 3 86*6

)HHW

127(7KH ORFDWLRQ RI VXUIDFH DQG XQGHUJURXQG REMHF

Date Printed: 6/14/2023

RHODE ISLAND DEPARTMENT OF HEALTH
DIVISION OF FOOD PROTECTION AND SANITATION
INDIVIDUAL SEWAGE DISPOSAL SYSTEM
APPLICATION/PERMIT (FPS 569-3)
REV. 5/72

7432248

16786

APPLICATION NO. [illegible] | APPLICATION DATE 23 SEPT. 197

PURPOSE OF APPLICATION/PERMIT: ☒ CONSTRUCT ☐ ALTER ☐ REPAIR

LOCATION NO. STREET: Matunuck Beach Road | CITY/TOWN: South Kingstown | PLAT NO. | LOT NO.

OWNER NAME: Town of South Kingstown | ADDRESS: 66 High Street, Wakefield | TELEPHONE NO.: 789-9331

SUBDIVISION NAME AND SECTION: Matunuck Elementary School | REVIEWED BY STATE? ☐ YES ☐ NO | LOT SIZE: 13.17 Acres | WATER SYSTEM TYPE: Public

BUILDING USE: Elementary School | NO. PERSONS: 215 | NO. BEDROOMS: - | DESIGN FLOW: 15 gals. per Per Day (unit)

TOTAL DAILY FLOW	REQ'D. SEPTIC TANK CAP.	PUBLIC SEWERS AVAILABLE?
3225 gals.	3500 gals.	☐ YES ☒ NO

A PLAN OF THE PROPOSED DISPOSAL SYSTEM MUST BE SUBMITTED WITH THIS APPLICATION SHOWING THE INFORMATION REQUIRED BY REGULATION R23.1 – SD 2.2.

THE APPLICANT SIGNED AT RIGHT AGREES TO CONSTRUCT THE PROPOSED INDIVIDUAL SEWAGE SYSTEM IN ACCORDANCE WITH THE PROVISIONS OF 23.1 SD AS ADOPTED UNDER THE AUTHORITY OF THE 1956 GENERAL LAWS AS AMENDED, CHAPTER 23.1. THE APPLICANT FURTHER AGREES TO REFRAIN FROM COVERING THE SYSTEM UNTIL AUTHORIZED BY THE DIRECTOR.

SIGNATURE OF APPLICANT: Palmer-Donovan Associates
P.T. Bowen
X P. T. Bowen

☐ OWNER ☒ AGENT ☐ BUILDER

SOIL EXPLORATION DATA

SOIL DESCRIPTION: Medium sand and gravel at elevation of disposal bed.

DEPTH TO GROUND WATER: over 13 FT. 6 IN. | DATE: Sept. 10, 1974

WET SEASON DEPTH	HOW DETERMINED		
over 13 FT.	Test Wells		
DEPTH TO LEDGE, ETC.	TEST HOLE DEPTH	SEEPAGE AREA ELEVATION 29.84	TO GRADE
over 13 ft.	11'-0" and 11'-4"	☐ NATURAL ☐ FILLED ☒ CUT	2 FT. 6 IN.

PERCOLATION TEST BY (NAME): Village Green Associates (Copy attached) | DATE: Sept. 10, 1974

TEST HOLE FALL (MIN./IN.)			PERC. TEST HOLE DEPTH		
1. 6.0	2. 10.0	3. 10 4. 5.0	1. 32"	2. 45"	3. 30" 4. 45"

PERC. RATE	APPLICATION RATE	MIN. TOTAL LEACHING AREA
10	1.6 sq. ft.	2020 sq. ft.

THE UNDERSIGNED CERTIFIES THAT THE SUBSOIL EXPLORATIONS WERE MADE AND REPORTED IN ACCORDANCE WITH THE PROVISIONS OF R23.1 SD AND ACCEPTS RESPONSIBILITIES FOR THE VALIDITY OF ALL DATA SUBMITTED ON FORMS FPS 569.3 AND FPS 569.5.

PAUL T. BOWEN
No. 2042
REGISTERED
PROFESSIONAL ENGINEER
ENGINEER'S OR SURVEYOR'S SEAL

SIGNATURE OF ENGINEER OR SURVEYOR: X Paul T Bowen | SIGNATURE OF WITNESS: X Madeleine A. Wilcox

REPRESENTING: Palmer-Donovan Associates | TITLE: P.E. | TITLE OF WITNESS: Secretary

SEEPAGE SYSTEM TO BE INSTALLED

TYPE	NO. LINES	WIDTH	DEPTH	TOTAL SQ. FEET
☒ TRENCH ☐ BED →	7	51'	100'	2020
☐ SEEPAGE PIT ☐ CESSPOOL →	DIMENSIONS			DEPTH BELOW INLET

DISPOSITION OF APPLICATION

THIS APPLICATION (INCLUDING CORRESPONDING PLANS, PERCOLATION TEST REPORTS, AND WATER TABLE DATA) IS HEREBY

☒ APPROVED ☐ DENIED ☐ OPINION RESERVED

RENEWALS MUST BE SUBMITTED WITHIN 90 DAYS OF EXPIRATION

COMMENTS:

1. Approved per WPC 693.
2. Call for trench excavation inspection prior to placement of stone.
3. Please contact your engineer upon installation of the sewage system as a letter indicating compliance with the approved plan will be required from him, over and above inspections by this office, prior to the issuance of a certificate of complaince.
4. The leaching area must be grassed and adequately bermed or fenced to divert vehicular traffic from the leaching area.

RHODE ISLAND STATE DEPARTMENT OF HEALTH
Division of Food Protection and Sanitation

APPROVAL EXPIRES TWO (2) YEARS FROM ISSUE IF CONSTRUCTION NOT BEGUN PRIOR TO EXPIRATION DATE

SIGNATURE OF APPROVING AUTHORITY: X [signature] | DATE: 9/25/74 | FIELD OF OFFICE: SOUTHERN FIELD OFFICE, 2943 South County Trail, East Greenwich, R. I. 02818

COPY DISTRIBUTION: WHITE – APPLICANT PINK – HEALTH DEPARTMENT YELLOW – LOCAL BUILDING INSPECTOR

(30)

VILLAGE GREEN ASSOCIATES, INC.
LAND SURVEYING — PLANNING — TECHNICAL SERVICES

(401) 789-0256
(401) 884-3134

RAYMOND W. SCHWAB, P.E., L.S.
ALFRED E. HANSEN, L.S.
LLOYD L. WHALEY, L.S.
HERBERT R. WEBSTER
JOHN J. HEFLER

162 COLUMBIA STREET
PEACE DALE, RHODE ISLAND 02883

SEPTEMBER 13, 1974

MR. GEORGE W. GRAHAM
SOUTH KINGSTOWN SCHOOL DEPARTMENT
71 COLUMBIA STREET
WAKEFIELD, RHODE ISLAND 02879

DEAR MR. GRAHAM:

ON SEPTEMBER 10, 1974, REPRESENTATIVES OF THIS OFFICE CONDUCTED SOIL STRATA INVESTIGATION AND PERCOLATION TESTS AT THE MATUNUCK SCHOOL SITE IN THE LOCATIONS SHOWN ON THE ACCOMPANYING SKETCH.

THE RESULTS WERE AS FOLLOWS:

SOIL STRATA INVESTIGATION

"A"		"B"	
0" TO 8"	TOPSOIL	0" TO 9"	TOPSOIL
8" TO 16"	BROWN FINE SILTY LOAM	9" TO 27"	SILTY SAND
16" TO 38"	GRAY FINE SILTS (MEDIUM DENSITY)	27" TO 136"	RED MOTTLING THRU SANDY GRAVEL
38" TO 72"	MEDIUM SAND AND GRAVEL, SILTY, SMALL STONES (GLACIAL TILL)		
72" TO 132"	COARSE GRANULAR SAND & GRAVEL		
TOTAL HOLE DEPTH	11'-0"	TOTAL DEPTH OF HOLE	11'-4"
NO GROUND WATER OR LEDGE OBSERVED		NO GROUND WATER OR LEDGE OBSERVED	

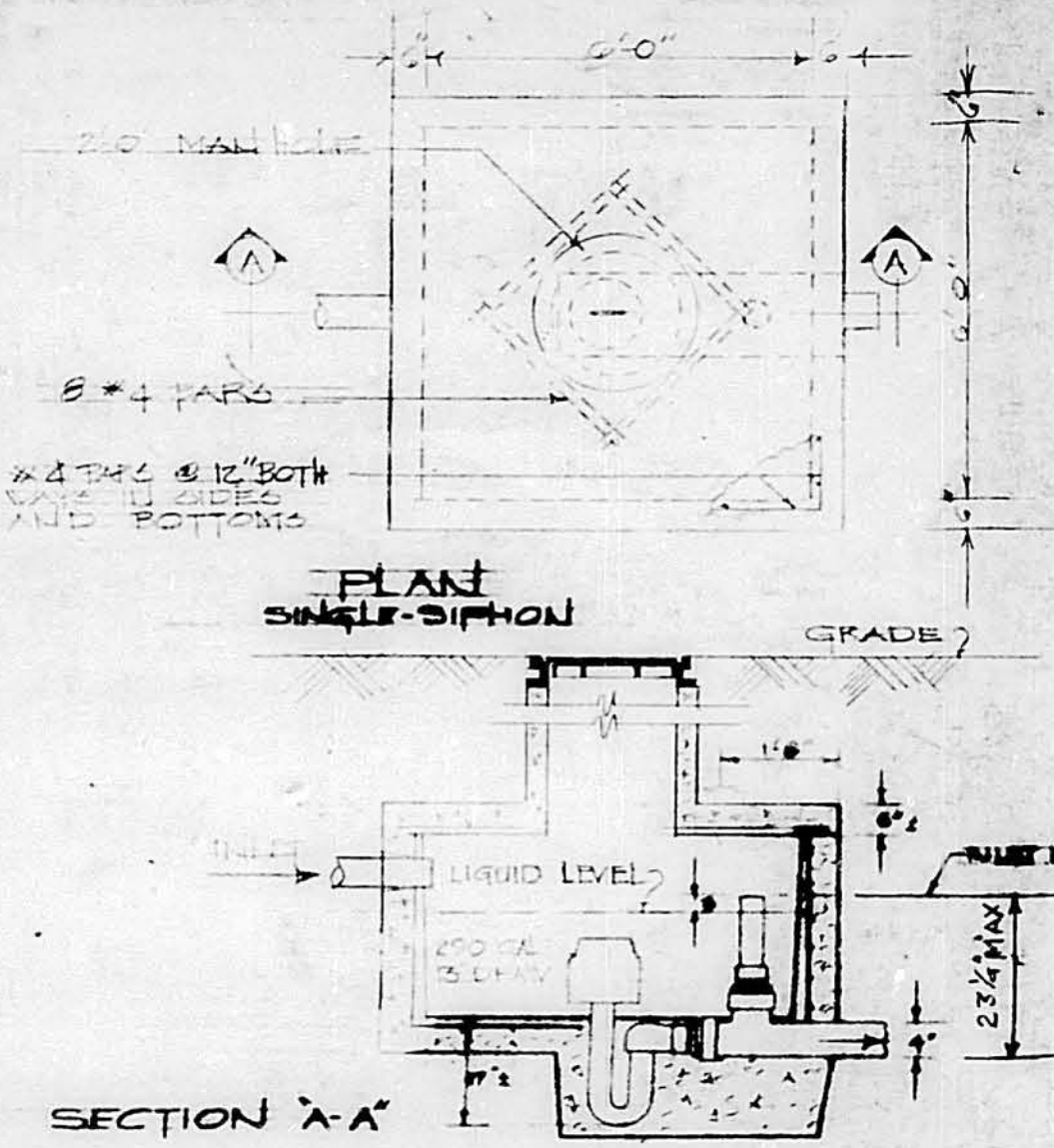
PERCOLATION TESTS

P1	P2
DEPTH - 32"	DEPTH - 45"
TYPE SOIL - GRAY SILTS	TYPE SOIL - MEDIUM SAND WITH SILTS
BOTTOM 6 IN.	BOTTOM 6 IN. (COMPACTED)
RATE - 6 MIN/INCH	RATE - 10 MIN/INCH

R.I. DEPT. of HEALTH
DIVISION OF WATER SUPPLY
AND POLLUTION CONTROL
RECOMMENDATIONS MADE
ON SEP 23 1974
REFER TO THIS PLAN
WPC-693

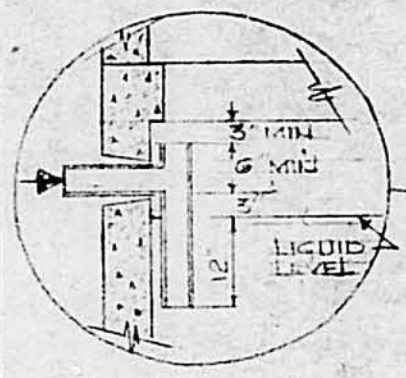
RECEIVED
#227
24 SEP 1974
DIV. FOOD PROTECTION & SANITATION
R. I. DEPT. OF HEALTH
CENTRAL OFFICE

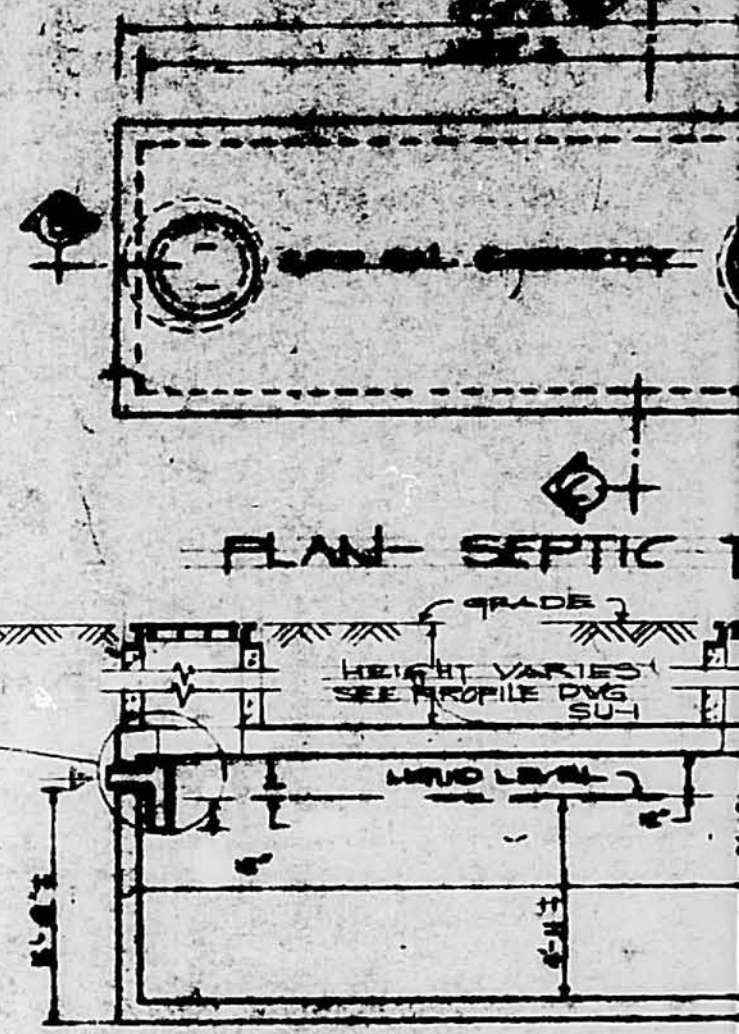
RECEIVED
KENT, [illegible]
& PARTNERS

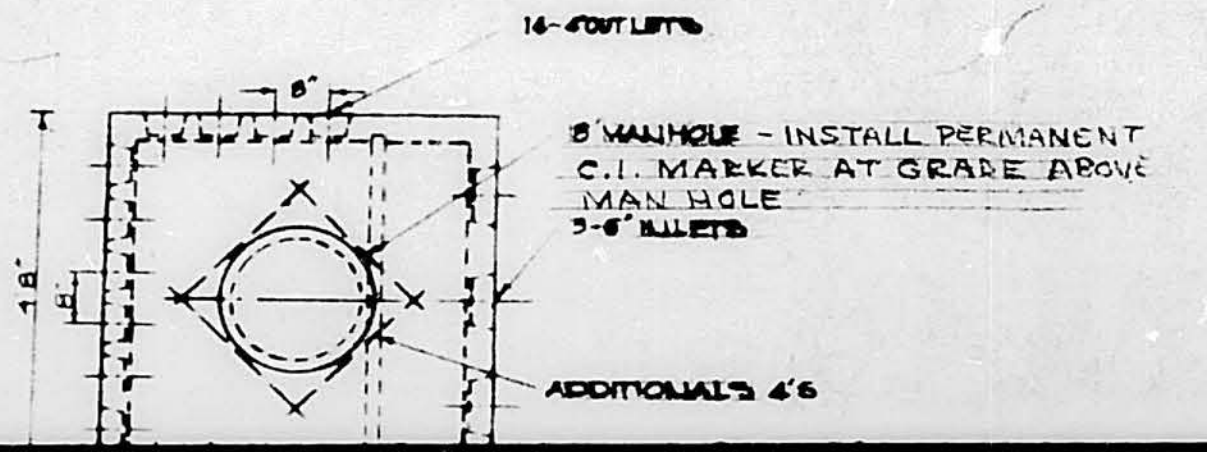


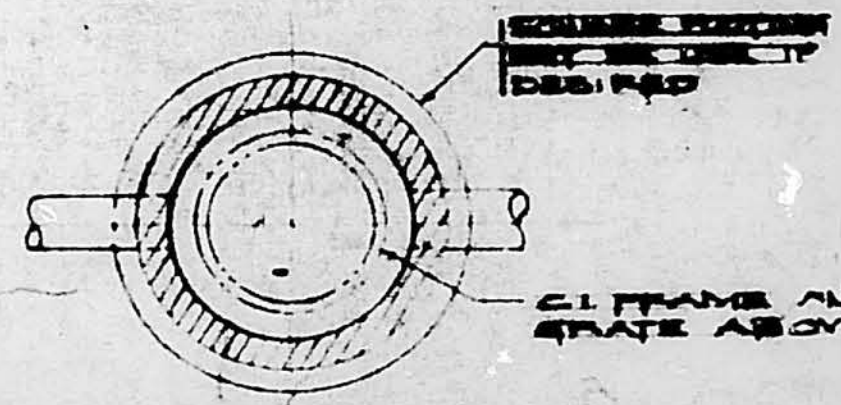
DOSING CHAMBER

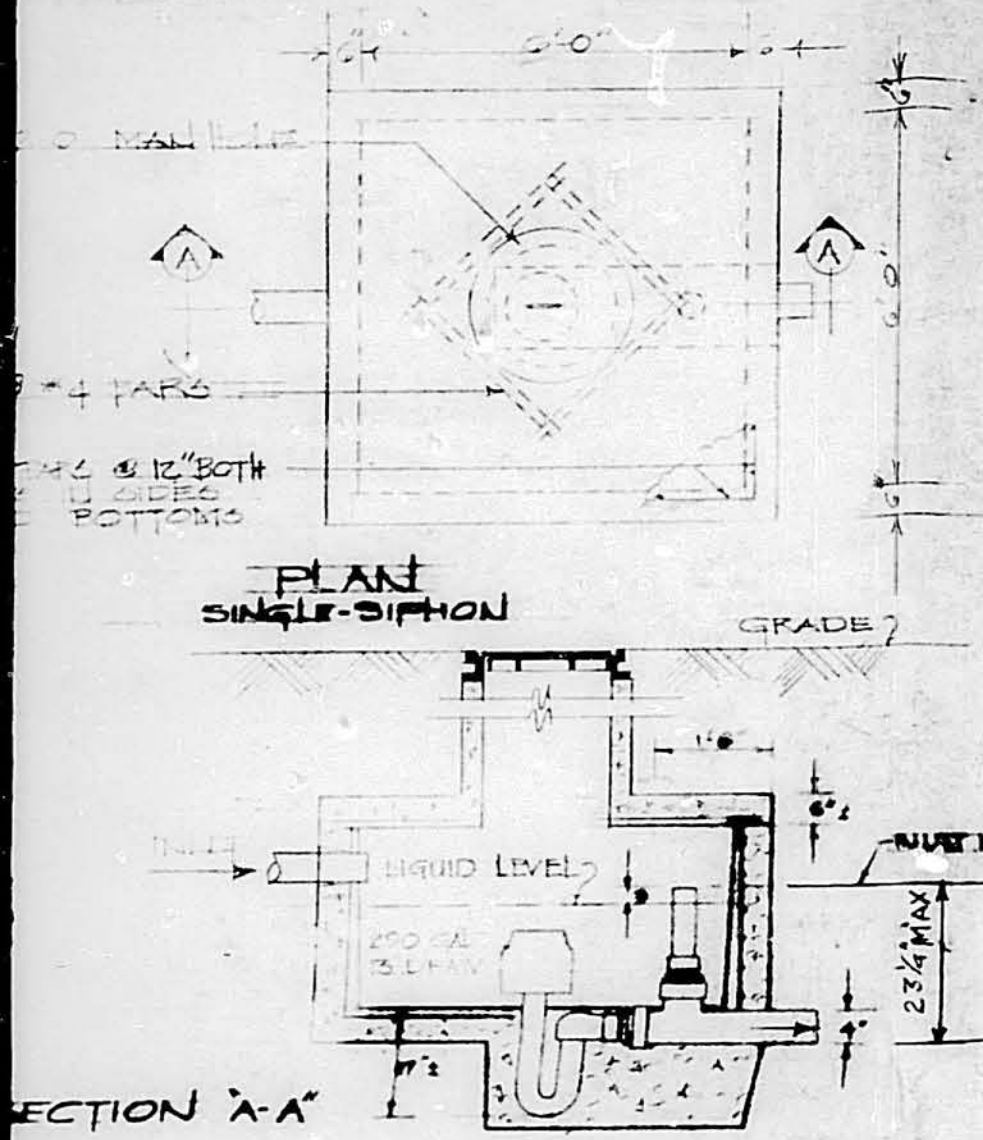
SCALE: NONE











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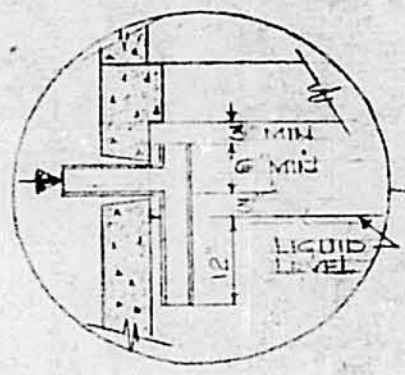
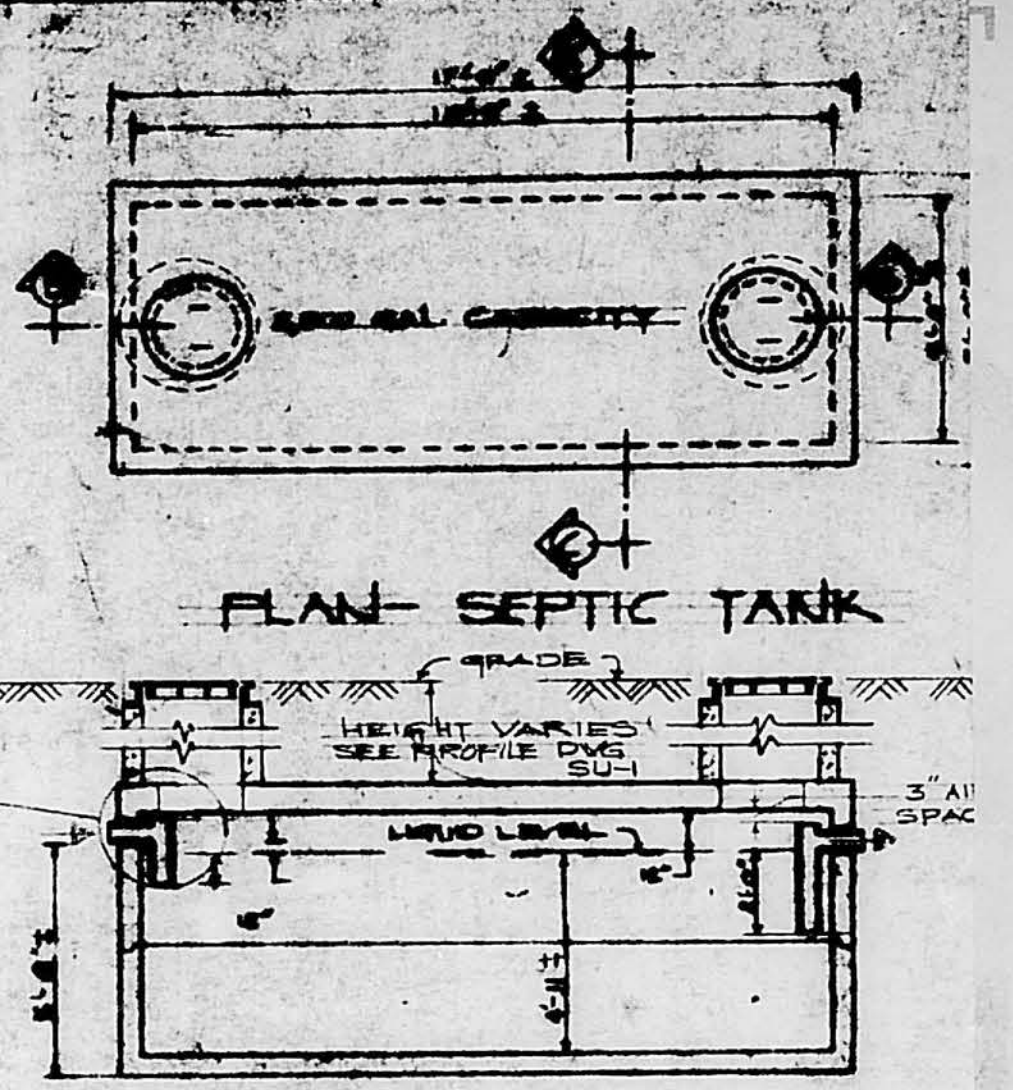
SCALE: NONE

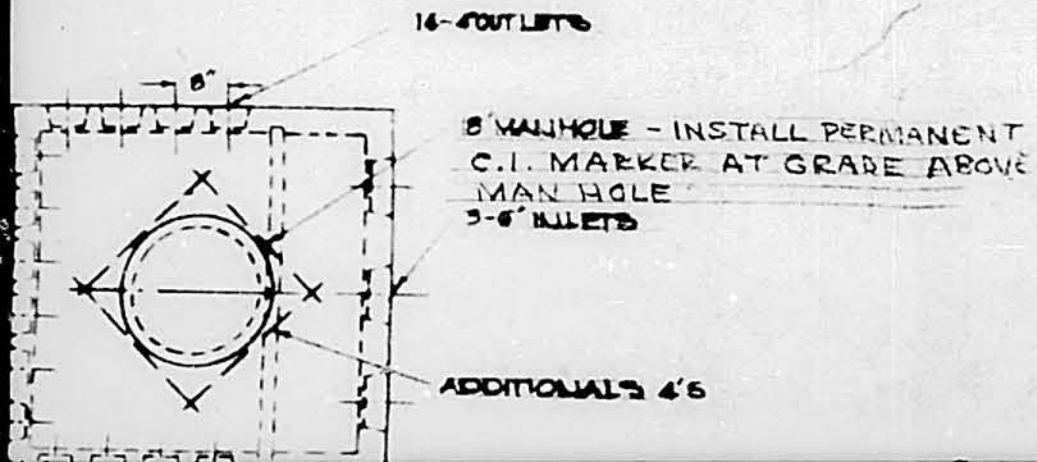


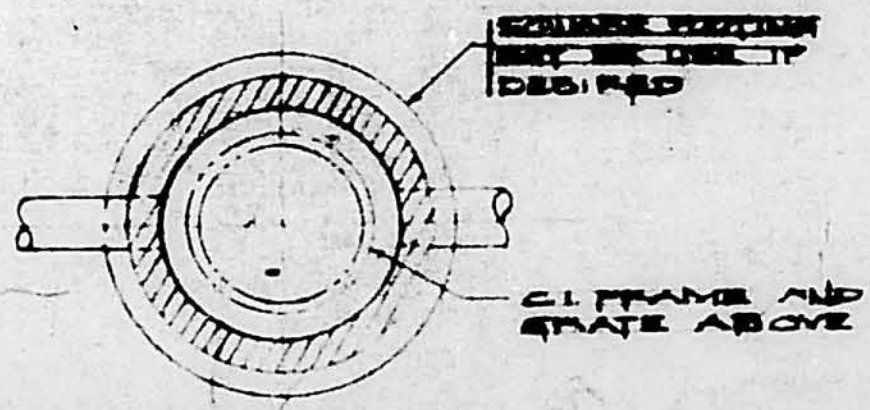


PLAN SEPTIC TANK

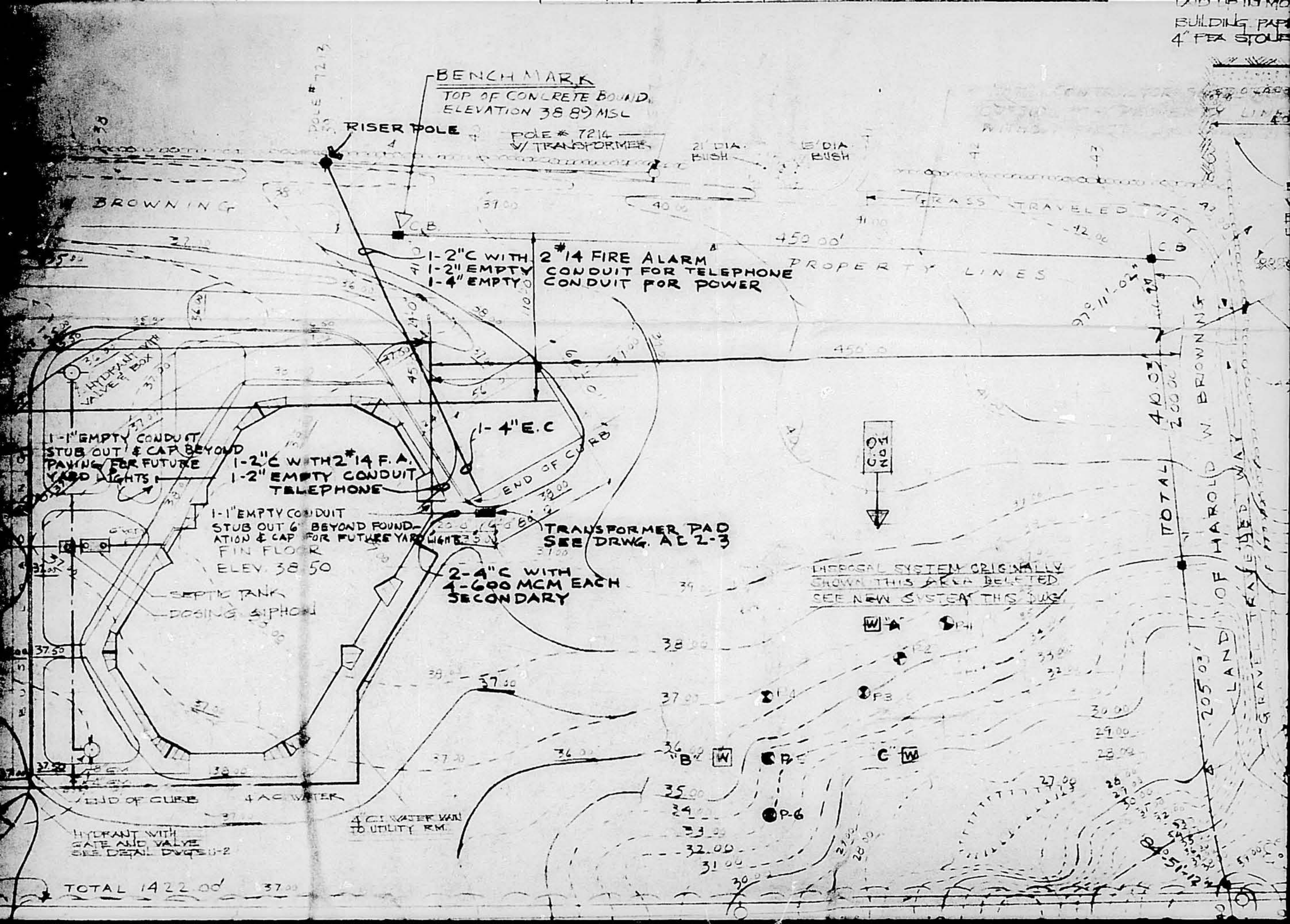
SEPTIC TA

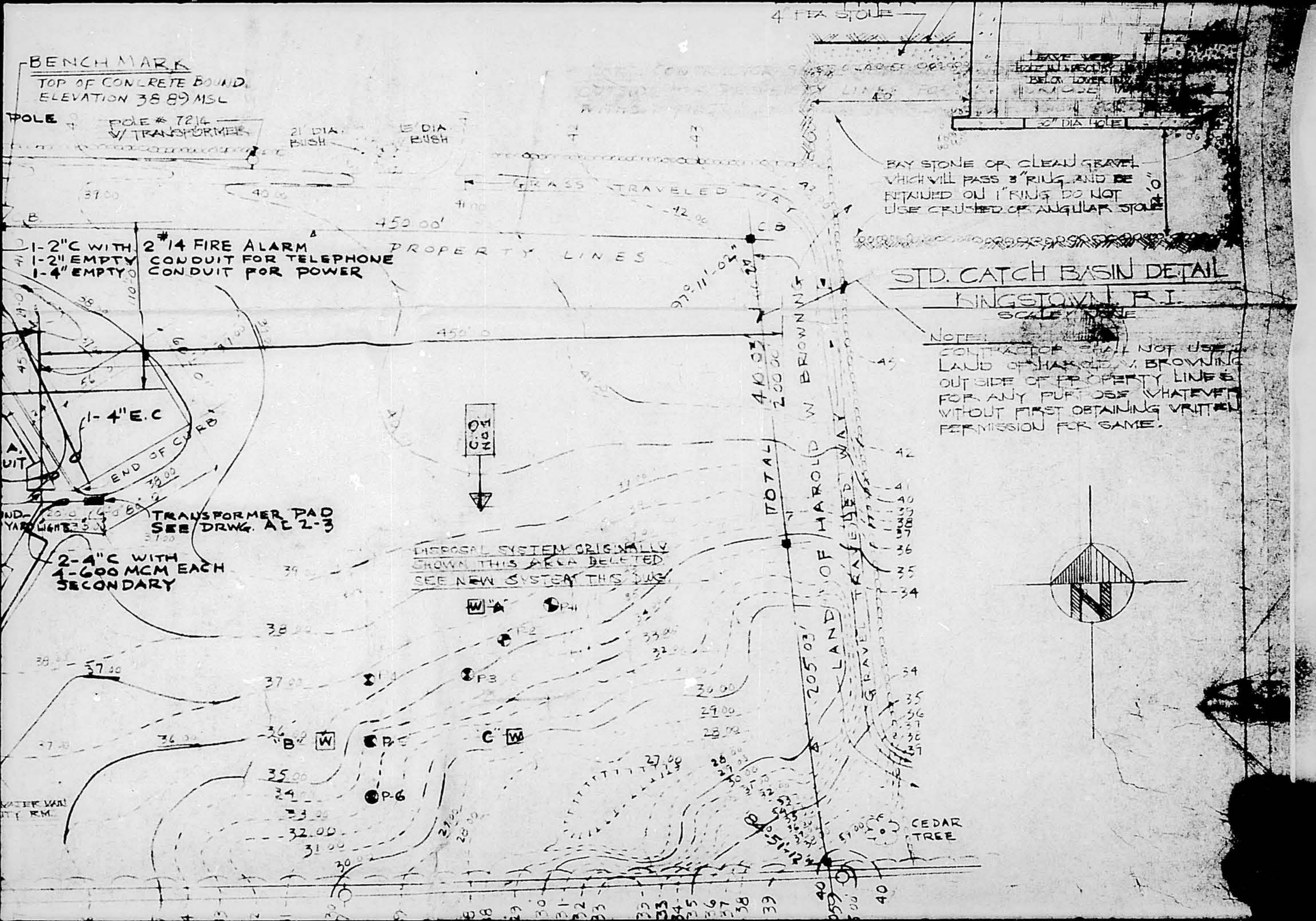
SCALE: NO





PLAN


BENCHMARK
TOP OF CONCRETE BOUND
ELEVATION 38.89 MSL
RISER POLE
POLE # 7214
W/ TRANSFORMER
21' DIA. BUSH
15' DIA BUSH
BROWNING
GRASS TRAVELED WAY
C.B.
450.00'
PROPERTY LINES
1-2"C WITH 2 #14 FIRE ALARM
1-2" EMPTY CONDUIT FOR TELEPHONE
1-4" EMPTY CONDUIT FOR POWER
HYDRANT WITH VALVE BOX
1-4" E.C
END OF CURB
1-1" EMPTY CONDUIT STUB OUT & CAP BEYOND PAVING FOR FUTURE YARD LIGHTS
1-2"C WITH 2 #14 F.A.
1-2" EMPTY CONDUIT TELEPHONE
1-1" EMPTY CONDUIT STUB OUT 6' BEYOND FOUNDATION & CAP FOR FUTURE YARD LIGHTS
FIN FLOOR
ELEV. 38.50
TRANSFORMER PAD
SEE DRWG. AC 2-3
2-4"C WITH
4-600 MCM EACH
SECONDARY
SEPTIC TANK
DOSING SIPHON
DISPOSAL SYSTEM ORIGINALLY SHOWN THIS AREA DELETED
SEE NEW SYSTEM THIS DWG
END OF CURB
4" AC WATER
4" CI WATER MAIN TO UTILITY RM.
HYDRANT WITH GATE AND VALVE
SEE DETAIL DWG SU-2
TOTAL 1422.00'
TOTAL 410.03'
200.00
205.03'
LAND OF HAROLD W. BROWNING
GRAVEL TRAVELED WAY
BUILDING PAPER
4" PEA STONE



BENCH MARK
TOP OF CONCRETE BOUND
ELEVATION 38.89 MSL
POLE
POLE # 7214
W/ TRANSFORMER
21' DIA. BUSH
18' DIA BUSH
GRASS TRAVELED WAY
450.00'
PROPERTY LINES
1-2"C WITH 2 #14 FIRE ALARM
1-2" EMPTY CONDUIT FOR TELEPHONE
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SEE DRWG. AC 2-3
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SECONDARY
DISPOSAL SYSTEM ORIGINALLY
SHOWN THIS AREA DELETED
SEE NEW SYSTEM THIS DWG.
TOTAL 410.03'
200.00'
205.03'
LAND OF HAROLD W. BROWNING
GRAVEL TRAVELED WAY
CEDAR TREE
BAY STONE OR CLEAN GRAVEL
WHICH WILL PASS 3" RING AND BE
RETAINED ON 1" RING DO NOT
USE CRUSHED OR ANGULAR STONE
30" DIA HOLE
STD. CATCH BASIN DETAIL
KINGSTOWN R.I.
NOTE:
CONTRACTOR SHALL NOT USE
LAND OF HAROLD W. BROWNING
OUTSIDE OF PROPERTY LINES
FOR ANY PURPOSE WHATEVER
WITHOUT FIRST OBTAINING WRITTEN
PERMISSION FOR SAME.

Town of South Kingstown

Water Suppliers

Yawgoo Pond
Hundred Acre Pond
Hurry Acre Pond
Indian Lake
Worden Pond
Tucker Pond
Long Pond
Factory Pond
Trustom Pond
Green Hill Pond
Card Pond
Potter Pond
Point Judith Pond
Sand Hill Cove
Narrow River
Chickasheen Brook
Chipuxet River
Horn Brook
White Rock Brook
Mink Brook
Indian Run
Pawcatuck River
SOUND
ISLAND
BLOCK

138 2 108 110 1

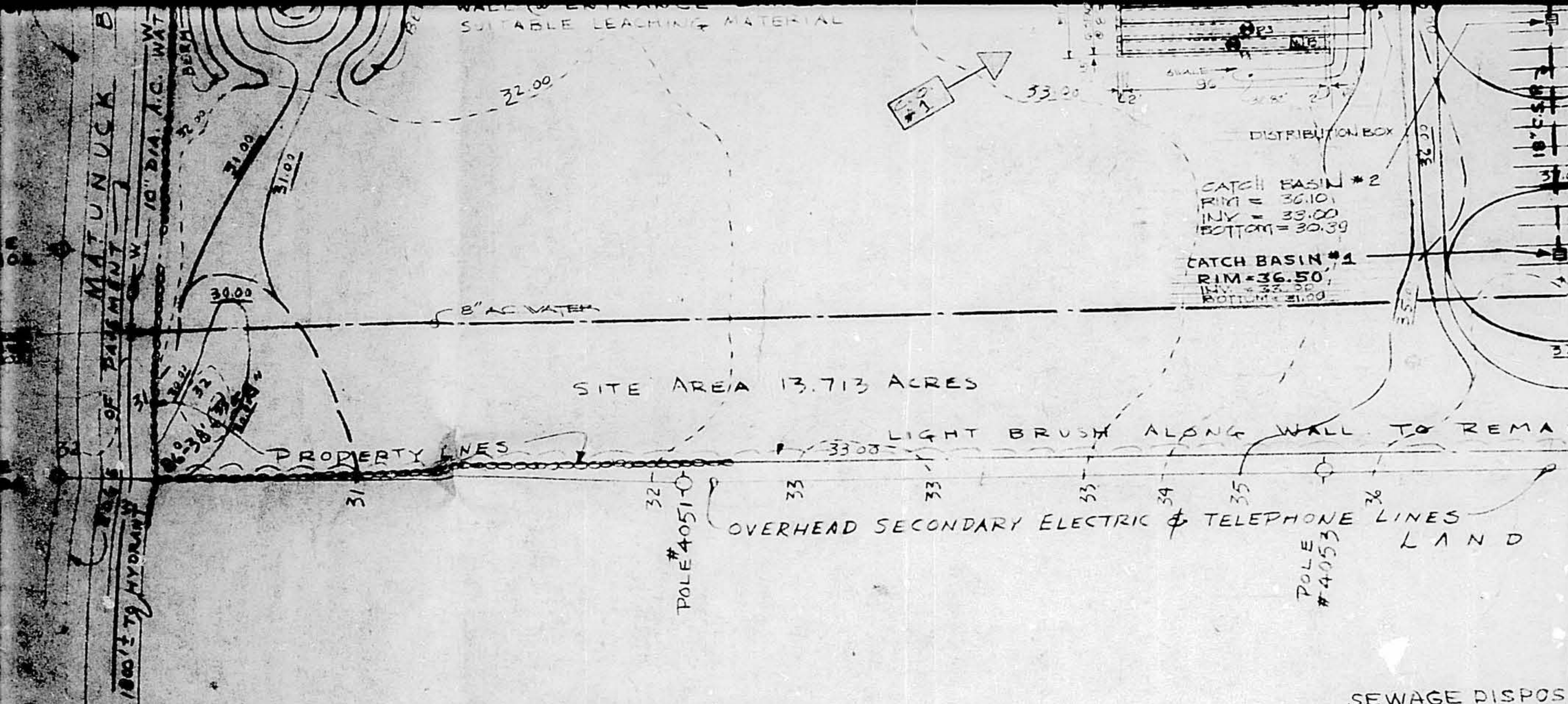
N W E S

0 0.5 1 1.5 2 Miles

- Town of South Kingstown - Middlebridge
- Town of South Kingstown - South Shore
- University of Rhode Island
- Veolia Water Company
- Kingston Water District

Geographic Information System

PS22-12 cpb 7/22



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3. ALL STORM AND SANITARY PIPING SHALL BE INSTALLED WITH MINIMUM OF 6 INCHES OF COMPACTED APPROVED GRANULAR MATERIAL, CLASS C BEDDING

SEWAGE DISPOS
- PERCOLATION 30" BELOW GR
TEST WELL L
PERCOLATION TEST BY VILLAGE GRE CONTAINED IN REP

& PARTNERS ARCHITECTS AND ENGINEERS
RHODE ISLAND

MATU
TOWN

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

May 12, 2023

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BhA	Bridgehampton silt loam, 0 to 3 percent slopes	2.1	15.2%
BhB	Bridgehampton silt loam, 3 to 8 percent slopes	11.6	82.6%
Nt	Ninigret fine sandy loam, 0 to 3 percent slopes	0.3	2.3%
Totals for Area of Interest		**14.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

BhA—Bridgehampton silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9ltj
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 120 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Bridgehampton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bridgehampton

Setting

Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty loess over sandy and gravelly glaciofluvial deposits derived from granite and gneiss

Typical profile

Ap - 0 to 8 inches: silt loam
B - 8 to 41 inches: silt loam
2C - 41 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F144AY024NY - Well Drained Eolian Outwash
Hydric soil rating: No

Minor Components

Agawam
Percent of map unit: 3 percent
Landform: Outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Enfield
Percent of map unit: 3 percent
Landform: Terraces, outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tisbury
Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Scio
Percent of map unit: 2 percent
Landform: Terraces, lakebeds
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

BhB—Bridgehampton silt loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9ltk
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 120 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Bridgehampton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bridgehampton

Setting
Landform: Outwash plains
Landform position (three-dimensional): Tread

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty loess over sandy and gravelly glaciofluvial deposits derived from granite and gneiss

Typical profile

Ap - 0 to 8 inches: silt loam
B - 8 to 41 inches: silt loam
2C - 41 to 60 inches: gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY024NY - Well Drained Eolian Outwash
Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 3 percent
Landform: Outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Enfield

Percent of map unit: 3 percent
Landform: Terraces, outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tisbury

Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Scio

Percent of map unit: 2 percent
Landform: Terraces, lakebeds
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Nt—Ninigret fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tyr6
Elevation: 0 to 1,250 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ninigret and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ninigret

Setting

Landform: Drainageways, depressions, kame terraces, outwash plains, moraines, kames, outwash terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Crest, side slope, tread, dip, rise
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, convex
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 16 inches: fine sandy loam
Bw2 - 16 to 26 inches: fine sandy loam
2C - 26 to 65 inches: stratified loamy sand to loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 18 to 38 inches to strongly contrasting textural stratification
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 17 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C
Ecological site: F144AY026CT - Moist Silty Outwash
Hydric soil rating: No

Minor Components

Agawam

Percent of map unit: 5 percent
Landform: Kame terraces, moraines, outwash plains, outwash terraces, kames
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread, rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Deerfield

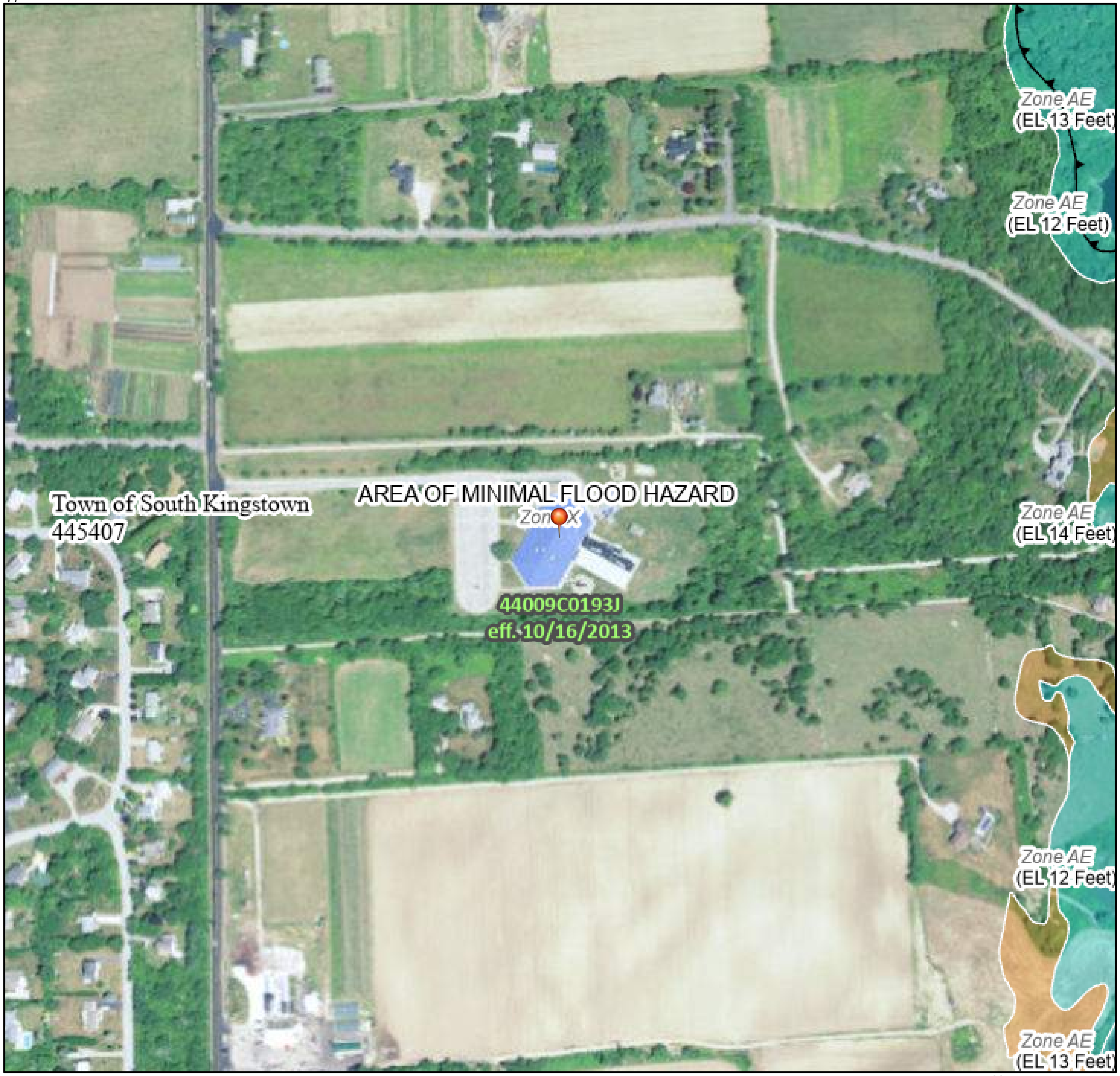
Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, dunes, outwash plains, deltas
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

1DWLRQDO)ORRG+D]DUG/DHU)5,5HWWH

FEMA



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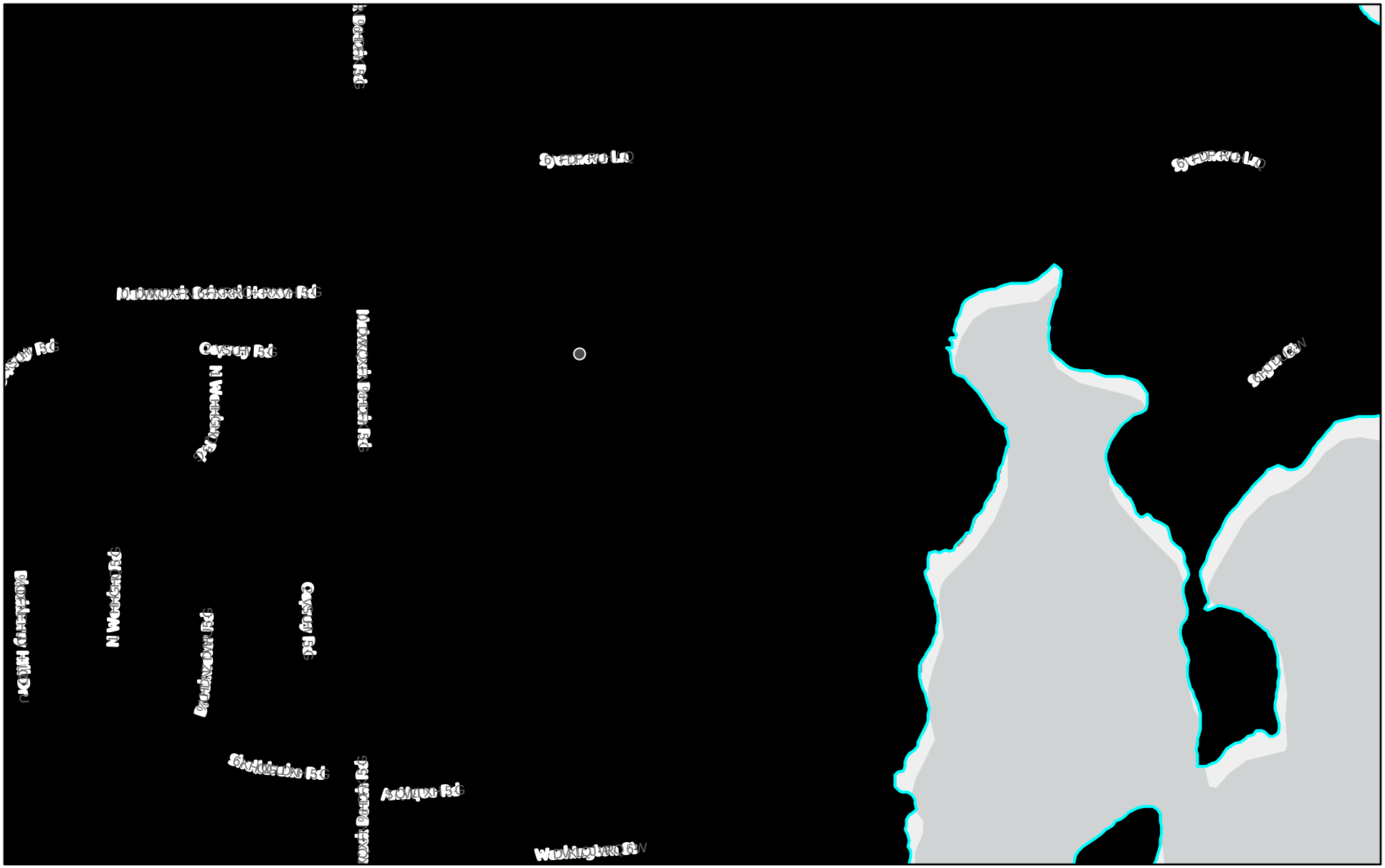

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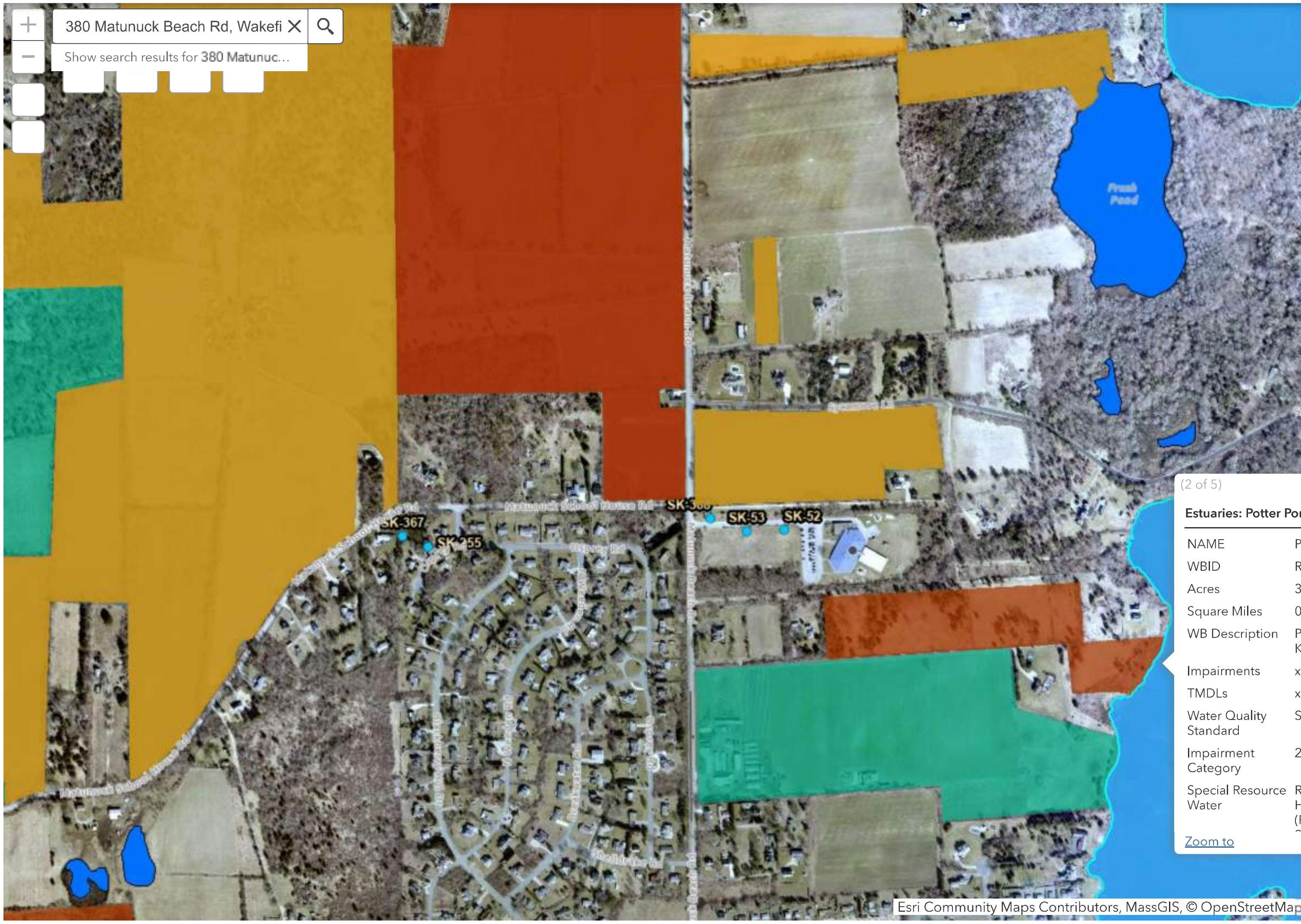
RIDEM Environmental Resource Map

Back to the Map Room

380 Matunuck Beach Rd, Wakefi

Show search results for 380 Matunuc...



(2 of 5)

Estuaries: Potter Pond

NAME	Potter Pond
WBID	RI0010043E-05
Acres	340.21
Square Miles	0.53
WB Description	Potter Pond. South Kingstown
Impairments	x
TMDLs	x
Water Quality Standard	SA
Impairment Category	2
Special Resource Water	Recreation, Ecological Habitat, Critical Habitat (Rare and Endangered

Zoom to

Legend

RI Municipal Boundaries

Conservation_Land_In_RI

Local Conservation Land

- Fee Interest
- Easement Interest
- Deed Restriction
- Conservation Intent (Weak)

National Conservation Easement Data (RI)

- Federal
- Local
- NA
- NGO
- Regional
- State

National Historic Park

ation Land

tunity Areas

locks 2020 (250 to 500 acres)

locks 2020 (500 acres or more)

Restriction

RIDOT

Storage Tank - Above Ground (2016)

Storage Tank - Underground (2021)

Storage Tank - Underground L-UST (2021)

Stormwater Construction General Permit

Stormwater Multi-Sector General Permit

Surface Water

Rivers

- 1
- 2

600ft

-71.540 41.389 Degrees

Exhibit 27

Peace Dale ES Site Due Diligence Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

RE: **Site Investigation Summary**
Peace Dale Elementary School
109 Kersey Road, South Kingstown, RI 02879

GAI PN 7458-04
DATE: June 3, 2023

Introduction
Garofalo & Associates Inc. (Garofalo) has prepared this report to assist with the due diligence assessment of the referenced site as it relates to RIDE Stage II investigations for the proposed improvements at the school.

The subject site is located at 109 Kersey Road, South Kingstown. The approximately 7.84 acres site is currently comprised of an existing Elementary School, South Kingstown CARES (non-profit organization), playground, associated parking and hardscape.

An Aerial Site Plan of the property is attached

Property Data
The site is identified as Lot 73 on Assessors Plat 48-2 and Lot 110 on Assessors Plat 49-1. The ownership of both parcels is identified as the Town of South Kingstown.

Zoning District
Zone: GI (Government & Institutional)

Use: Educational – Primary or Secondary

Exhibit A-Dimensional Standard:
Min. Lot Size: 200,000 sf + 40,000 per 100 pupils
Min Lot Width: 200 feet
Front yard: 40 feet
Corner Side: 40 feet
Side yard: 40 feet
Rear yard: 40 feet
Max. Principal Bldg. Height: 35 feet
Max. Accessory Bldg. Height: 15 feet
Max. Lot Coverage: 20%
Min distance from Residential Properties: Could not locate any info from town ordinances

85 Corliss Street, Post Office Box 6145, Providence, Rhode Island 02940
Phone: (401) 273-6000 ♦ Fax: (401) 273-1000 ♦ E-Mail: admin@garofaloassociates.com
Visit our Web Site at www.garofaloassociates.com

On-site Soils
The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils of the site to be primarily comprised of Canton-Urban land complex (CB), Enfield silt loam, 3% to 8% slopes (EfB), Hinckley loamy sand, 8% to 15% slopes (HkC), Merrimac-Urban land complex, 0% to 8% slopes (MU) and Scarboro mucky fine sandy loam, 0% to 3% slopes (Sb). The Hydrologic Soil Group classification for these soils are "A"(low runoff potential), "B"(moderately low runoff potential) and "A/D"(high runoff potential). The groundwater classification is GA but usual depths vary and require site specific investigations.

FEMA Flood Mapping
The project area is located within Zone "X" (areas outside the 0.2% annual floodplain) as shown on F.E.M.A. Flood Insurance Rate Map for the Town of South Kingstown, Washington County, Rhode Island, Community Panel Nos. 44009C0184K & 44009C0203K both having an effective date of April 3, 2020.

Site Condition
The site is comprised of several connected buildings, primary front field parking, rear parking/play area and miscellaneous walks and site elements. An open field exists to the east of the school (See Aerial Site Plan).

Overall, the parking area is considered to be in good condition, with recent upgrades apparent. Other site elements appear in good condition with localized repairs needed but consistent with standard maintenance. The site accessibility elements appear in general conformance due to the recent upgrade.

Site Drainage
Generally, the property is bisected east to west with a ridge that discharges runoff to two watersheds. The largest portion of the developed site falls from north to south at gently sloping grades and is discharged southwest to the Rocky Brook within a series of enclosed drains. Based on a review of design plans, many of these drains are leaching catch basins. Although mitigating runoff, no formal stormwater management permits or maintenance program was identified during these investigations. Several outfall registrations were, however, noted as outlined below. Limited portions of the development zone also sheet flows to the northeast across the fire lane and discharge to low lying regulated areas north of the site.

Runoff from the work area discharges at two (2) primary locations.

- The paved areas associated with the school building and parking areas is collected within a series of enclosed drains and is directed west to Rocky Brook. Several registered stormwater outfalls were identified at this location (SK-29 &30), but a review of that data was not initiated under these investigations. No permit or maintenance records for the leaching basin were identified.

- The second discharge location includes general sheet flows and limited enclosed drain flow north toward lower lying areas north.

There were no conditions noted during these investigations that indicate significant substandard drainage conditions currently occurring at the site or immediately downstream during normal rainfall (ie washouts or flooding). No stormwater management facilities were identified on the property.

The property falls within the Saugatucket River watershed (RI0010045R-05B), and more specifically the southern poritions discharge to the tributary Rocky Brook sub-watershed (RI0010045R-04). The Saugatucket River is a Stormwater Impaired Watershed, including impaired water quality as evidenced in the 2008 Rhode Island list of impaired waters prepared pursuant to Section 303(d) of the Federal Clean Water Act. BMPs targeted to remove other pollutant(s) of concern and/or to achieve higher pollutant removal efficiencies are required for impaired receiving water. The Rocky Brook sub-watershed is similarly an impaired water, ultimately discharging to the Saugatucket River.

Town Standards (Ord. Ch 20, Stormwater Management and Land development Regulations) requires stormwater management practices to meet 25-yr runoff, but also a more conservative standard of being consistent with the "Rhode Island Stormwater Design and Installation Standards Manual" and the "Rhode Island Soil Erosion and Sediment Control Handbook," as amended. Based on these standards, development of the site will require compliance RI Stormwater Rule, Standard 5, Overbank Flood Protection and some form of subsurface retention/infiltration as well as treatment and/or detention should be anticipated for all exterior improvements proposed.

Utilities

Water:
The site is within the South Kingstown (Veolia) Water service area and the site is understood to be connected to public water. According to Town mapping, there is a 8-inch AC main located within Kersey Road. Record plans indicate a 6-inch main traversing the school property on the east side, with no metering identified by these investigations. No data regarding system pressures was obtained.

Gas:
The school and m building is understood to be connected to a main within Kersey Road, but the information provided by the Utility Company is not conclusive with regard to size or location.
.
Sewer:
The site is currently serviced by public sewer in Kersey Street. Record plans indicate an 8-main. A series of 8-inch mains similarly extend on the site to the building. No pre-treatment facilities have been identified on the property. No failing or substandard conditions are known to exist in the immediate area. No additional research was performed regarding the capacity of existing adjacent or downstream facilities.

Electric:
Based upon correspondence from RI Energy/National Grid, they do not have any underground electric distribution facilities on the property. The primary service appears to be from the south in Kersey Road, but several potential service locations were noted and further investigation regard the adjacent facilities is necessary once loading requirements have been identified.

Verizon and Cox Communications:
No records regarding communications or cable service were obtained.

RIDEM Environmental Resource Mapping

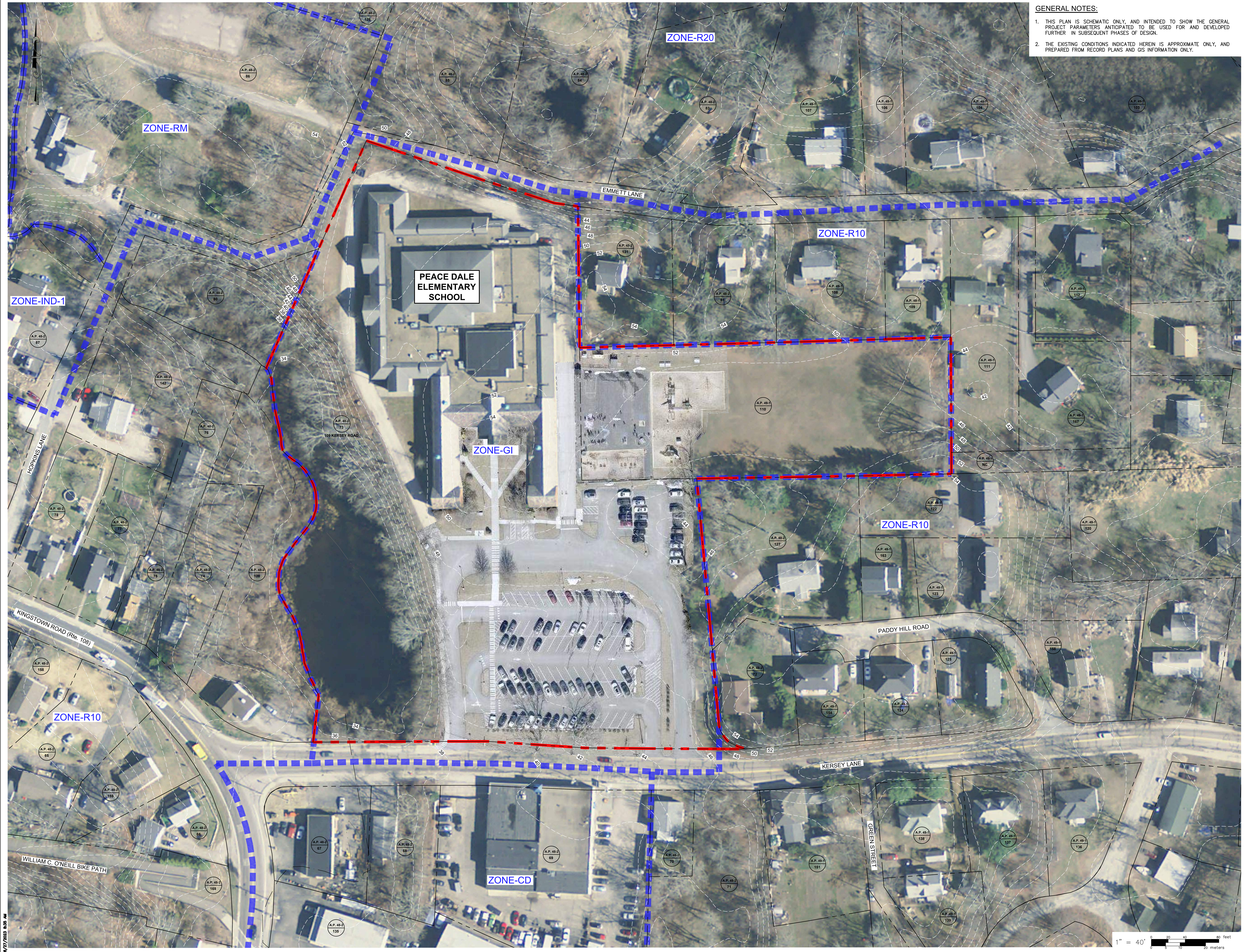
Wetlands:
There are significant wetlands identified west of the project site. RIDEM permitting is presumed to have occurred with the School development as flagging and survey location is apparent from record research, but the application was not identified in the RIDEM database.

National Heritage Area / Conservation Land:
There are no national heritage areas or conservation land on or adjacent to the site.

Other Resources:
There were no other conditions noted on RIDEM Mapping that are believed to significantly impact the development potential of the property.

RIDEM Waste Management Search Data
The RIDEM Waste Management search performed found no registered facilities on the property.

END OF SUMMARY



GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

STUDIOJAED
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PROVIDENCE OFFICE
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PROVIDENCE, RHODE ISLAND 02903
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MARYLAND OFFICE
213 FRONT STREET, P.O. BOX 254
CRUMPTON, MARYLAND 216285

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
PEACE DALE ELEMENTARY SCHOOL
109 KERSEY ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

5-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.4

SHEET NO.

G-1

LIST OF ATTACHMENTS

1. Property Cards
2. GIS Parcel Map
3. Zoning Map
4. Future Land Use Map
5. Aerial Map
6. Record Site Plans
7. Utility Information
8. NCRS Soils Data
9. FEMA Flood Map (FIRMette)
10. RIDEM Environmental Resource Mapping

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109 KERSEY ROAD

Location	109 KERSEY ROAD	**Map and Lot**	48-2/ 73/ / /
Acct#	R-34-0020-00	**Owner**	SOUTH KINGSTOWN TOWN OF
Assessment	$13,144,400	**PID**	4119
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$11,895,900	$1,248,500	$13,144,400

Owner of Record

Owner	SOUTH KINGSTOWN TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	109 KERSEY ROAD PEACE DALE, RI 02883-2407	**Book & Page**	0042/0496
		Sale Date	02/28/1924
		Instrument	

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1924
Living Area:	85,477
Replacement Cost:	$16,333,179
Building Percent Good:	72
Replacement Cost Less Depreciation:	$11,759,900

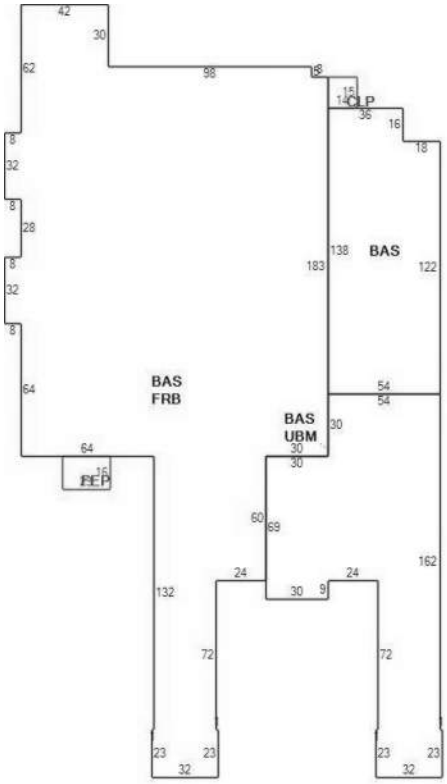
Building Attributes	
Field	**Description**
Style:	School/College

Model	Ind/Open Com
Grade	Above Ave
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Brick/Masonry
Roof Structure	Gable/Hip
Roof Cover	Slate
Interior Wall 1	Plastered
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	MNCPL,LIBR M-96
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\00\10\82.jpg

Building Layout



(ParcelSketch.ashx?pid=4119&bid=4119)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	52,682	52,682
FRB	Fin.Raised Bsmnt (Not Used)	35,692	30,338

UBM	Basement, Unfinished	9,826	2,457
CLP	Loading Platform, Finished	210	0
FEP	Porch, Enclosed, Finished	368	0
		98,778	85,477

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
SPR2	WET/CONCEALED	106180.00 S.F.	$114,700	1

Land

Land Use

Use Code 903I
Description MNCPL,LIBR M-96
Zone GI
Neighborhood T
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 6.23
Frontage
Depth
Assessed Value $1,248,500

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			11000.00 S.F.	$16,500	1
LT1	LIGHTS-IN W/PL			7.00 UNITS	$2,800	1
LT2	W/DOUBLE LIGHT			3.00 UNITS	$2,000	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$10,270,800	$1,123,600	$11,394,400
2020	$10,270,800	$1,123,600	$11,394,400
2019	$10,270,800	$1,123,600	$11,394,400

EMMETT LANE

Location	EMMETT LANE	**Map and Lot**	49-1/ 110/ / /
Acct#	R-32-0005-00	**Owner**	SOUTH KINGSTOWN, TOWN OF
Assessment	$155,600	**PID**	4581
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$1,500	$154,100	$155,600

Owner of Record

Owner	SOUTH KINGSTOWN, TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	180 HIGH ST WAKEFIELD, RI 02879	**Book & Page**	0114/0520
		Sale Date	08/28/1973
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
FROM ADMIN	$0		0097/0411		12/02/1965
FROM ADMIN	$0		0075/0277		06/19/1954

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**

Style:	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Num Park	
Fireplaces	
Mason. FRPL	
Openings	
Gas FRPL	
Fndtn Cndtn	
Basement	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//default.jpg)

Building Layout

(ParcelSketch.ashx?pid=4581&bid=4581)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	9030
Description	MNCPL,LIBR M-00
Zone	GI
Neighborhood	0035
Alt Land Appr	No
Category	

Land Line Valuation

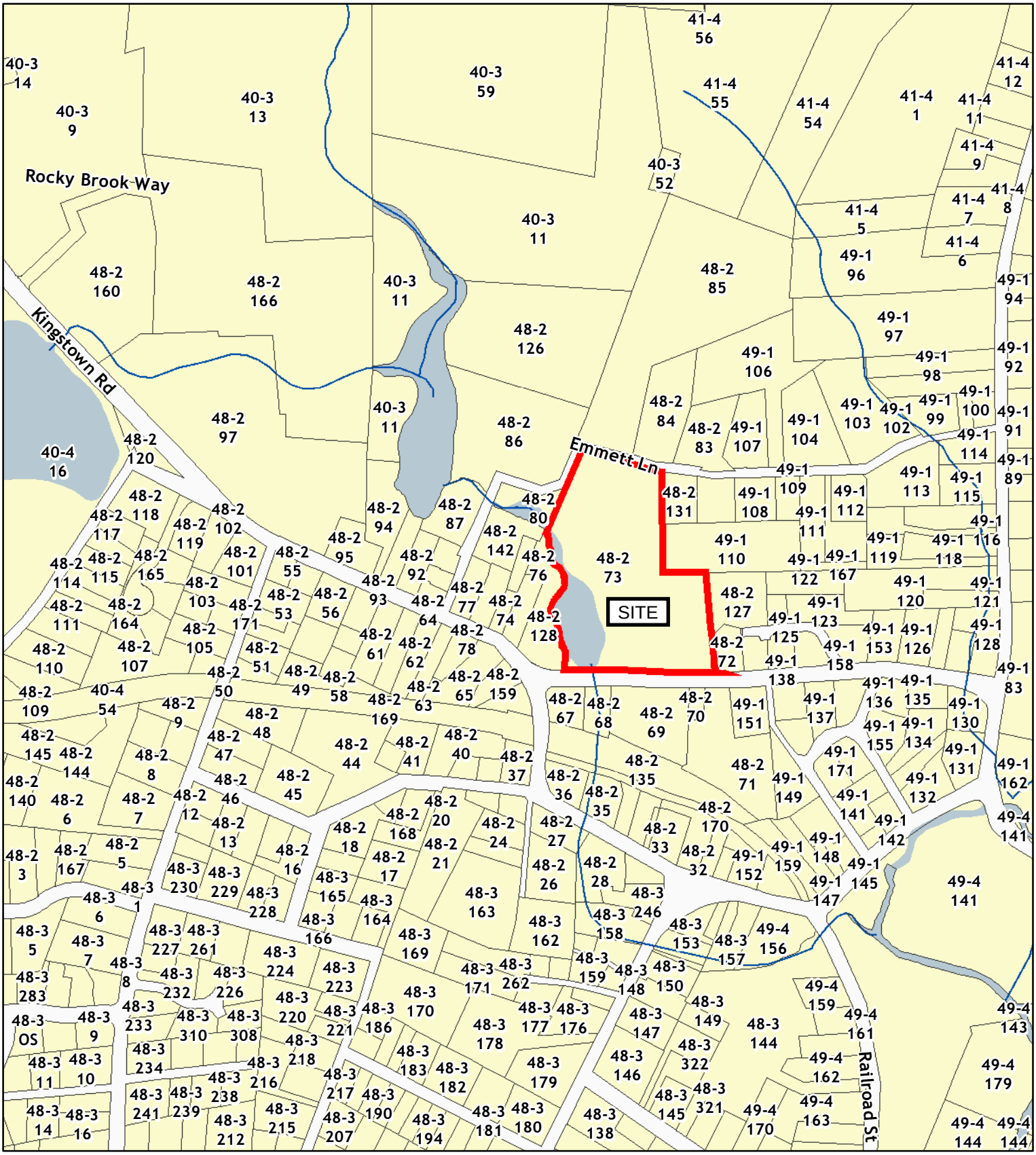
Size (Acres)	1.61
Frontage	
Depth	
Assessed Value	$154,100

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN2	FENCE-5' CHAIN			250.00 L.F.	$1,500	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$1,300	$127,300	$128,600
2020	$1,300	$127,300	$128,600
2019	$1,300	$127,300	$128,600



109 Kersey Road

Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

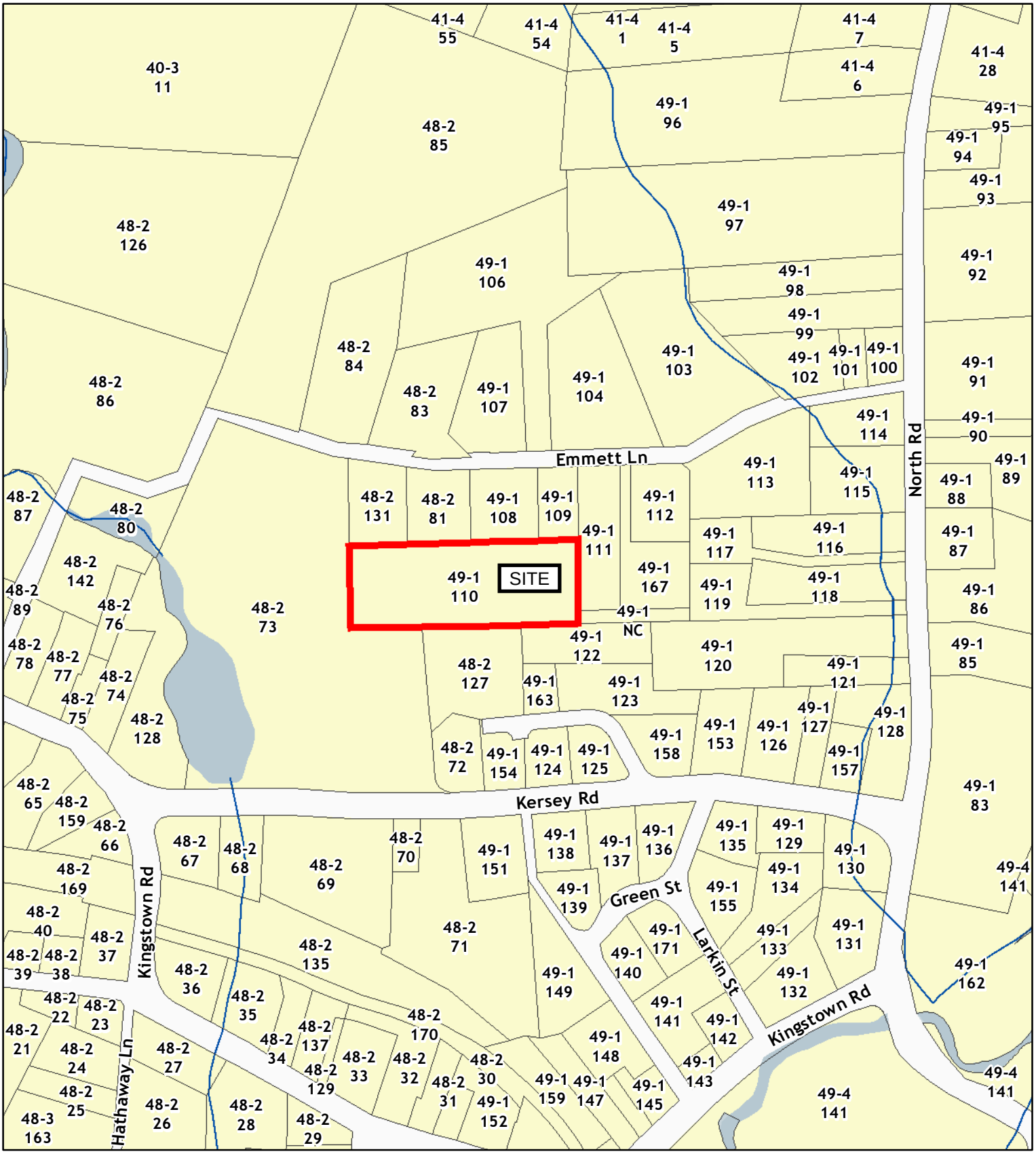
1 inch = 417 feet

0 190 380 760 Feet

Town of South Kingstown Web GIS

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

Emmett Lane AP 49-1 Lot 110

Parcel Boundaries not legally binding for title or zoning purposes.

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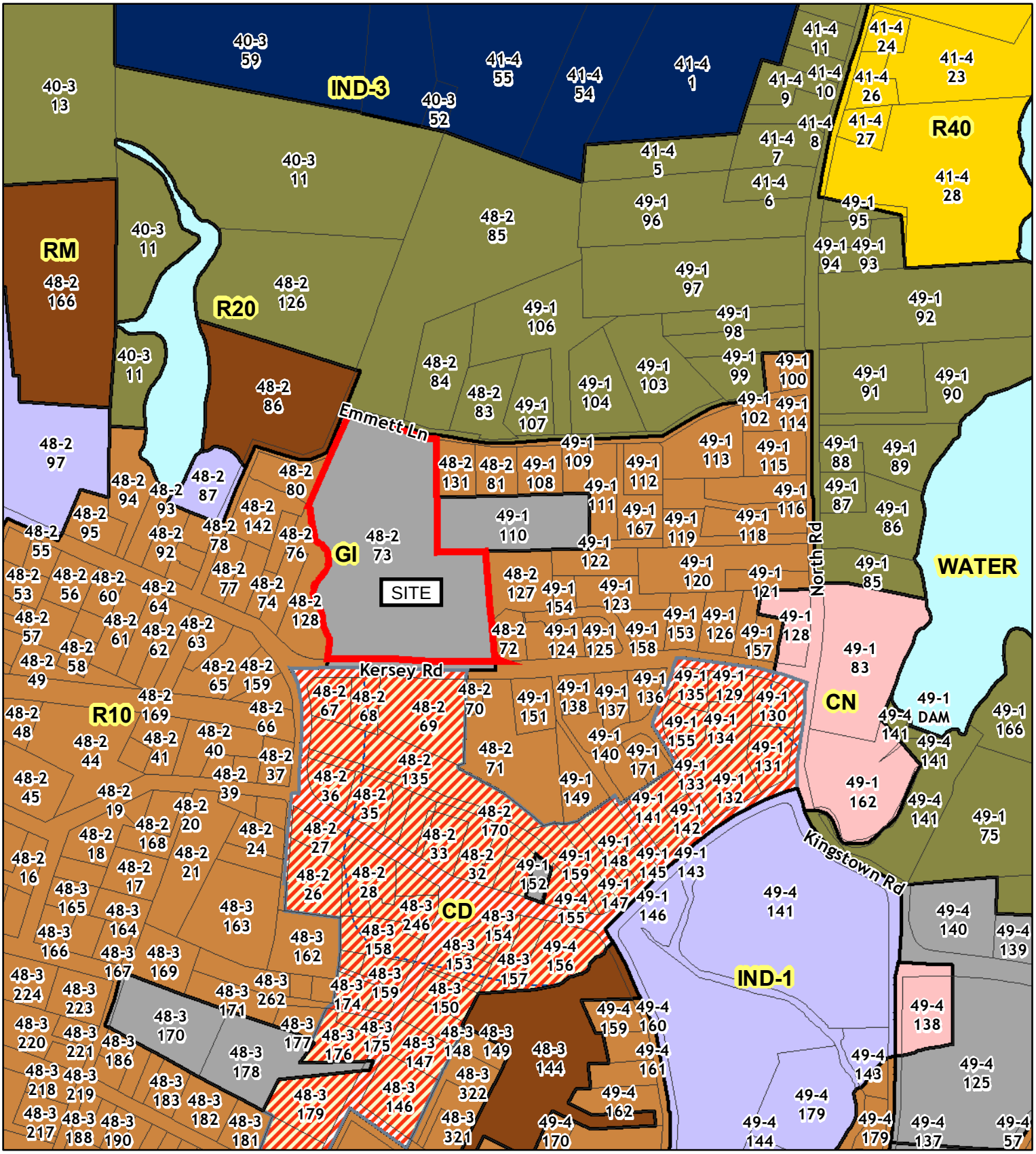
N

1 inch = 250 feet

Feet
0 115 230 460

Town of South Kingstown Web GIS



109 Kersey Road

Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

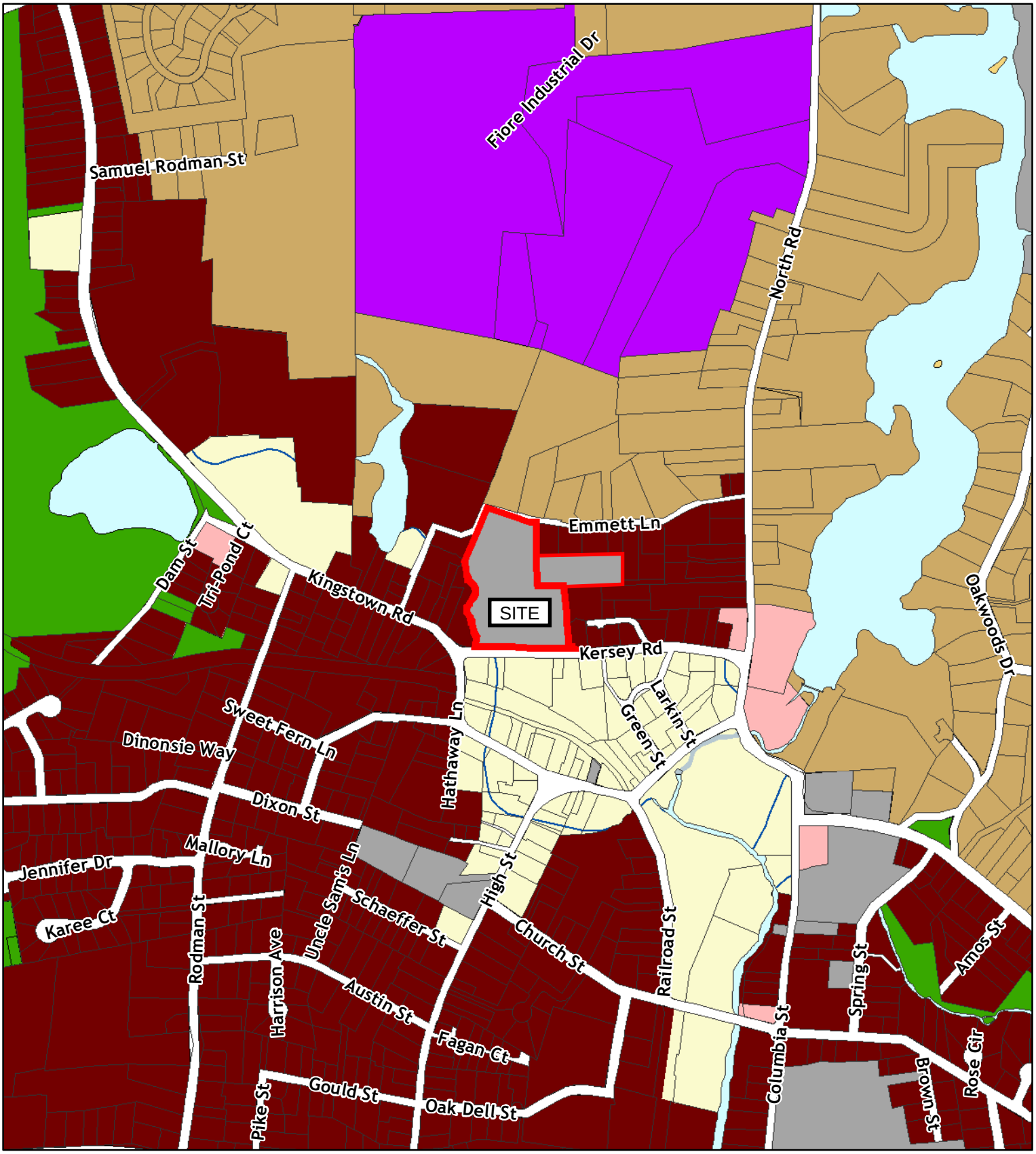
1 inch = 376 feet

0 170 340 680 Feet

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

Town of South Kingstown *Web GIS*



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

109 Kersey Road

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

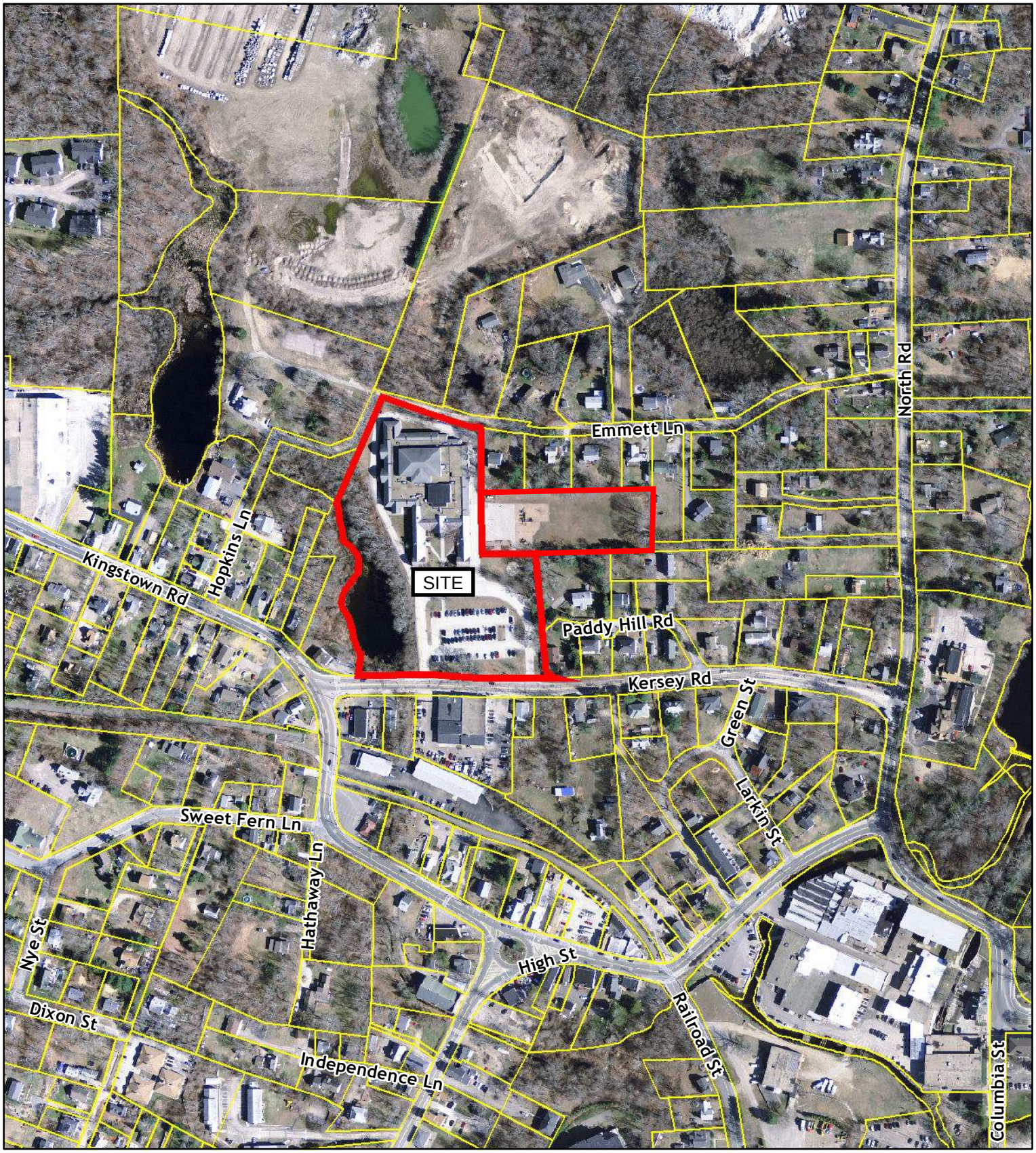
N

1 inch = 667 feet

Feet

0 305 610 1,220

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

109 Kersey Road & Emmett Lane AP 49-1 Lot 110

N

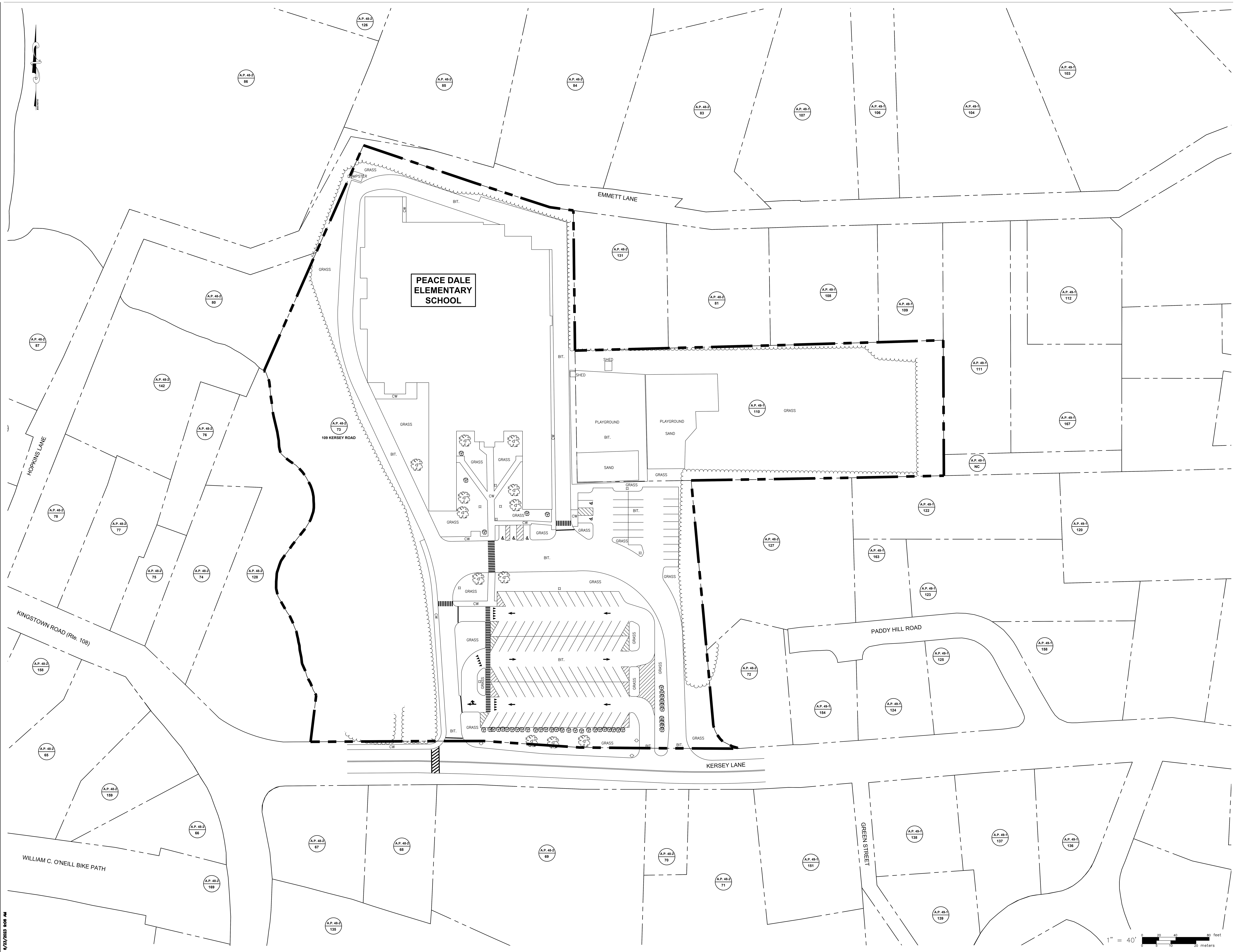
1 inch = 333 feet

0 150 300 600 Feet

Town of South Kingstown Web GIS

Parcel Boundaries not legally binding for title or zoning purposes.

The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.



STUDIOJAED
ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS
Website: www.StudioJAED.com
Email: info@StudioJAED.com

DELAWARE OFFICE
2500 WRANGLE HILL ROAD, STE. 110
BEAR, DELAWARE 19701
P: (302) 832-1652

PROVIDENCE OFFICE
42 WEYBOSSET STREET, STE. 403
PROVIDENCE, RHODE ISLAND 02903
P: (401) 648-0884

MARYLAND OFFICE
213 FRONT STREET, P.O. BOX 254
CRUMPTON, MARYLAND 216285

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

SIGNATURE: ______________
DATE OF SIGNATURE: ______________
DATE OF REGISTRATION EXPIRATION: ______________

ARCHITECT / ENGINEER SEAL

PROJECT
TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
PEACE DALE ELEMENTARY SCHOOL
109 KERSEY ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

EXISTING CONDITIONS PLAN

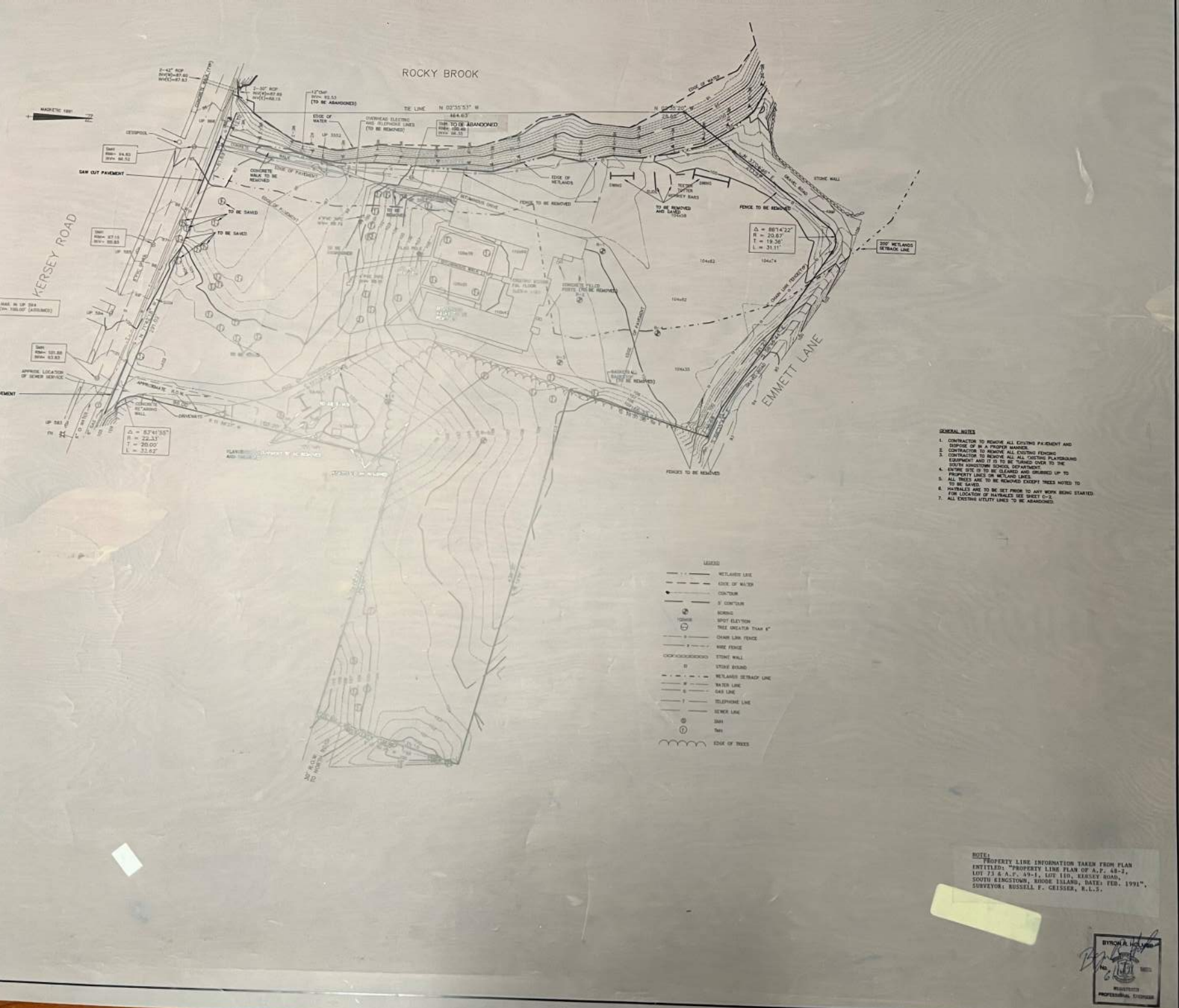
RIDE STAGE II SCHEMATIC DESIGN

5-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.4

SHEET NO.

C-1



GENERAL NOTES

1. CONTRACTOR TO REMOVE ALL EXISTING PAVEMENT AND DISPOSE OF IN A PROPER MANNER.
2. CONTRACTOR TO REMOVE ALL EXISTING FENCING
3. CONTRACTOR TO REMOVE ALL ALL EXISTING PLAYGROUND EQUIPMENT AND IT IS TO BE TURNED OVER TO THE SOUTH KINGSTOWN SCHOOL DEPARTMENT.
4. ENTIRE SITE IS TO BE CLEARED AND GRUBBED UP TO PROPERTY LINES OR WETLAND LINES.
5. ALL TREES ARE TO BE REMOVED EXCEPT TREES NOTED TO TO BE SAVED.
6. HAYBALES ARE TO BE SET PRIOR TO ANY WORK BEING STARTED FOR LOCATION OF HAYBALES SEE SHEET C-2.
7. ALL EXISTING UTILITY LINES TO BE ABANDONED.

NOTE:
PROPERTY LINE INFORMATION TAKEN FROM PLAN ENTITLED: "PROPERTY LINE PLAN OF A.P. 48-2, LOT 73 & A.P. 49-1, LOT 110, KERSEY ROAD, SOUTH KINGSTOWN, RHODE ISLAND, DATED: FEB. 1991", SURVEYOR: RUSSELL F. GEISSER, R.L.S.

BYRON R. HOLMES
No. 6
REGISTERED PROFESSIONAL ENGINEER

david presbrey architect
301 Friendship Street
Providence, Rhode Island 02903

general notes

R.F. GEISSER INC.
CONSULTING ENGINEERS
120 PERSHING STREET
EAST PROVIDENCE, RI

NOTE:
This contractor is obligated to review all contract documents for full comprehension of the project and the scope of work under the various sections. The various sections may include work which affect the work of This Section. Full coordination and cooperation with the work of all other sections is required.

The Contract Documents include:

- The Project Specification Manual
- Architectural Drawings
- Structural Drawings
- Plumbing Drawings
- Fire Protection Drawings
- HVAC Drawings
- Electrical Drawings
- Demolition Drawings

revisions

project

Peace Dale Elementary School PROJECT

105 Kersey Road
Peace Dale, Rhode Island

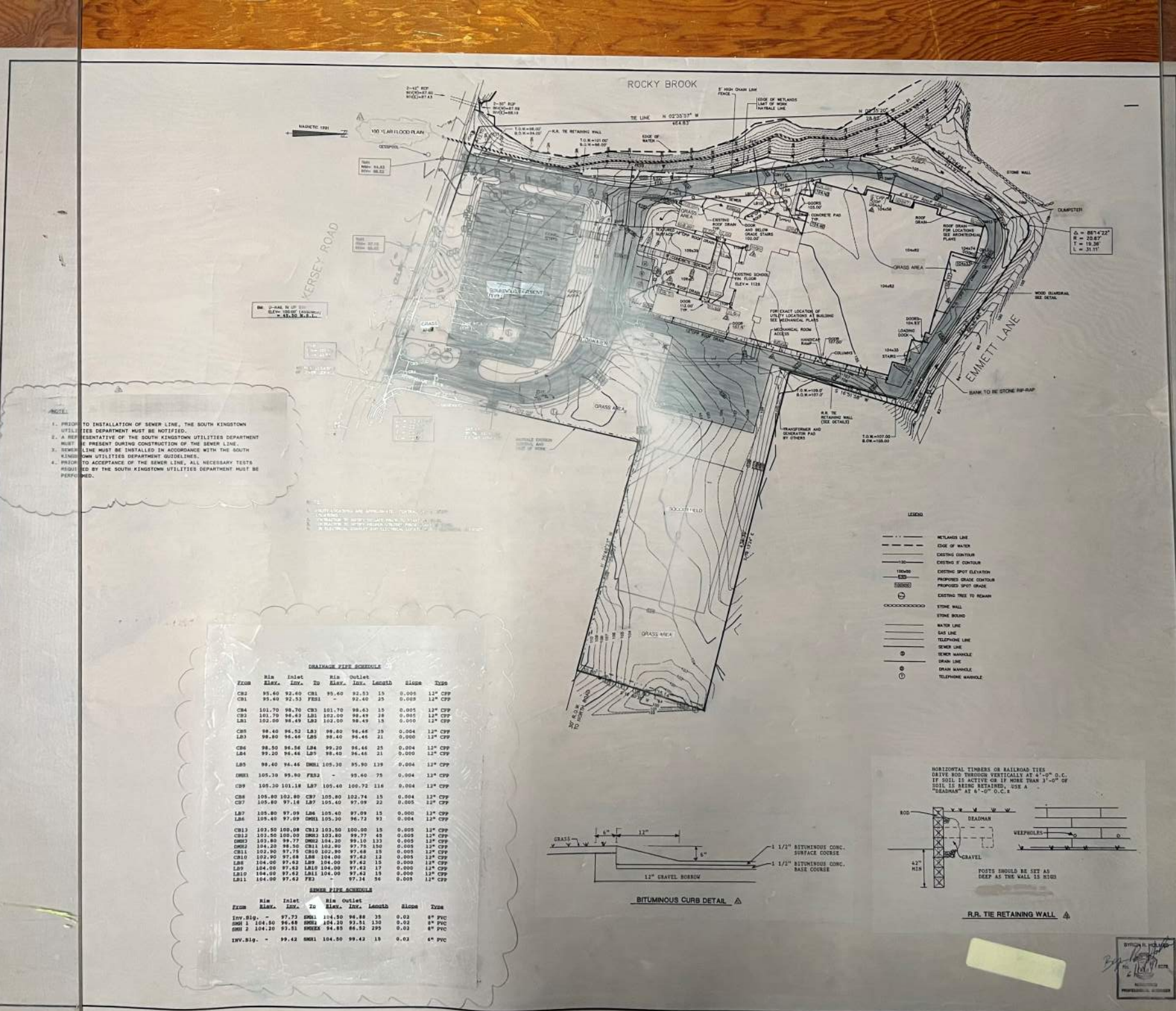
PLAT 48-2 LOT 73
PLAT 49-1 LOT 11

drawing title

EXISTING CONDITIONS & DEMOLITION PLAN

C-1

sheet no. ____ of ____



NOTE:

1. PRIOR TO INSTALLATION OF SEWER LINE, THE SOUTH KINGSTOWN UTILITIES DEPARTMENT MUST BE NOTIFIED.
2. A REPRESENTATIVE OF THE SOUTH KINGSTOWN UTILITIES DEPARTMENT MUST BE PRESENT DURING CONSTRUCTION OF THE SEWER LINE.
3. SEWER LINE MUST BE INSTALLED IN ACCORDANCE WITH THE SOUTH KINGSTOWN UTILITIES DEPARTMENT GUIDELINES.
4. PRIOR TO ACCEPTANCE OF THE SEWER LINE, ALL NECESSARY TESTS REQUIRED BY THE SOUTH KINGSTOWN UTILITIES DEPARTMENT MUST BE PERFORMED.

DRAINAGE PIPE SCHEDULE

From	Rim Elev.	Inlet Inv.	To	Rim Elev.	Outlet Inv.	Length	Slope	Type
CB2	95.60	92.60	CB1	95.60	92.53	15	0.005	12" CPP
CB1	95.60	92.53	FES1	-	92.40	25	0.005	12" CPP
CB4	101.70	98.70	CB3	101.70	98.63	15	0.005	12" CPP
CB3	101.70	98.63	LB1	102.00	98.49	28	0.005	12" CPP
LB1	102.00	98.49	LB2	102.00	98.49	15	0.000	12" CPP
CB5	98.40	96.52	LB3	98.80	96.46	25	0.004	12" CPP
LB3	98.80	96.46	LB5	98.40	96.46	21	0.000	12" CPP
CB6	98.50	96.56	LB4	99.20	96.46	25	0.004	12" CPP
LB4	99.20	96.46	LB5	98.40	96.46	21	0.000	12" CPP
LB5	98.40	96.46	DMH1	105.30	95.90	139	0.004	12" CPP
DMH1	105.30	99.90	FES2	-	95.60	75	0.004	12" CPP
CB9	105.30	101.18	LB7	105.40	100.72	116	0.004	12" CPP
CB8	105.80	103.80	CB7	105.80	102.74	15	0.004	12" CPP
CB7	105.80	97.18	LB7	105.40	97.09	22	0.005	12" CPP
LB7	105.80	97.09	LB6	105.40	97.09	15	0.000	12" CPP
LB6	105.40	97.09	DMH1	105.30	96.72	93	0.004	12" CPP
CB13	103.50	100.08	CB12	103.50	100.00	15	0.005	12" CPP
CB12	103.50	100.00	DMH3	103.80	99.77	45	0.005	12" CPP
DMH3	103.80	99.77	DMH2	104.20	99.10	133	0.005	12" CPP
DMH2	104.20	98.50	CB11	102.90	97.75	150	0.005	12" CPP
CB11	102.90	97.75	CB10	102.90	97.68	15	0.005	12" CPP
CB10	102.90	97.68	LB8	104.00	97.62	12	0.005	12" CPP
LB8	104.00	97.62	LB9	104.00	97.62	15	0.000	12" CPP
LB9	104.00	97.62	LB10	104.00	97.62	17	0.000	12" CPP
LB10	104.00	97.62	LB11	104.00	97.62	15	0.000	12" CPP
LB11	104.00	97.62	FE2	-	97.34	56	0.005	12" CPP

SEWER PIPE SCHEDULE

From	Rim Elev.	Inlet Inv.	To	Rim Elev.	Outlet Inv.	Length	Slope	Type
Inv.Stg.	-	97.73	SMH1	104.50	96.88	35	0.02	8" PVC
SMH 1	104.50	96.68	SMH2	104.30	93.51	130	0.02	8" PVC
SMH 2	104.20	93.51	SMHEX	94.85	86.52	295	0.03	8" PVC
INV.Stg.	-	99.42	SMH1	104.50	99.42	18	0.03	6" PVC

BITUMINOUS CURB DETAIL

R.R. TIE RETAINING WALL

david presbrey architect
301 Friendship Street
Providence, Rhode Island 02903

general notes

R.F. GEISSER INC.
CONSULTING ENGINEERS
120 PERSHING STREET
EAST PROVIDENCE, RI

revisions

project

Peace Dale Elementary School PROJECT
109 Kersey Road
Peace Dale, Rhode Island

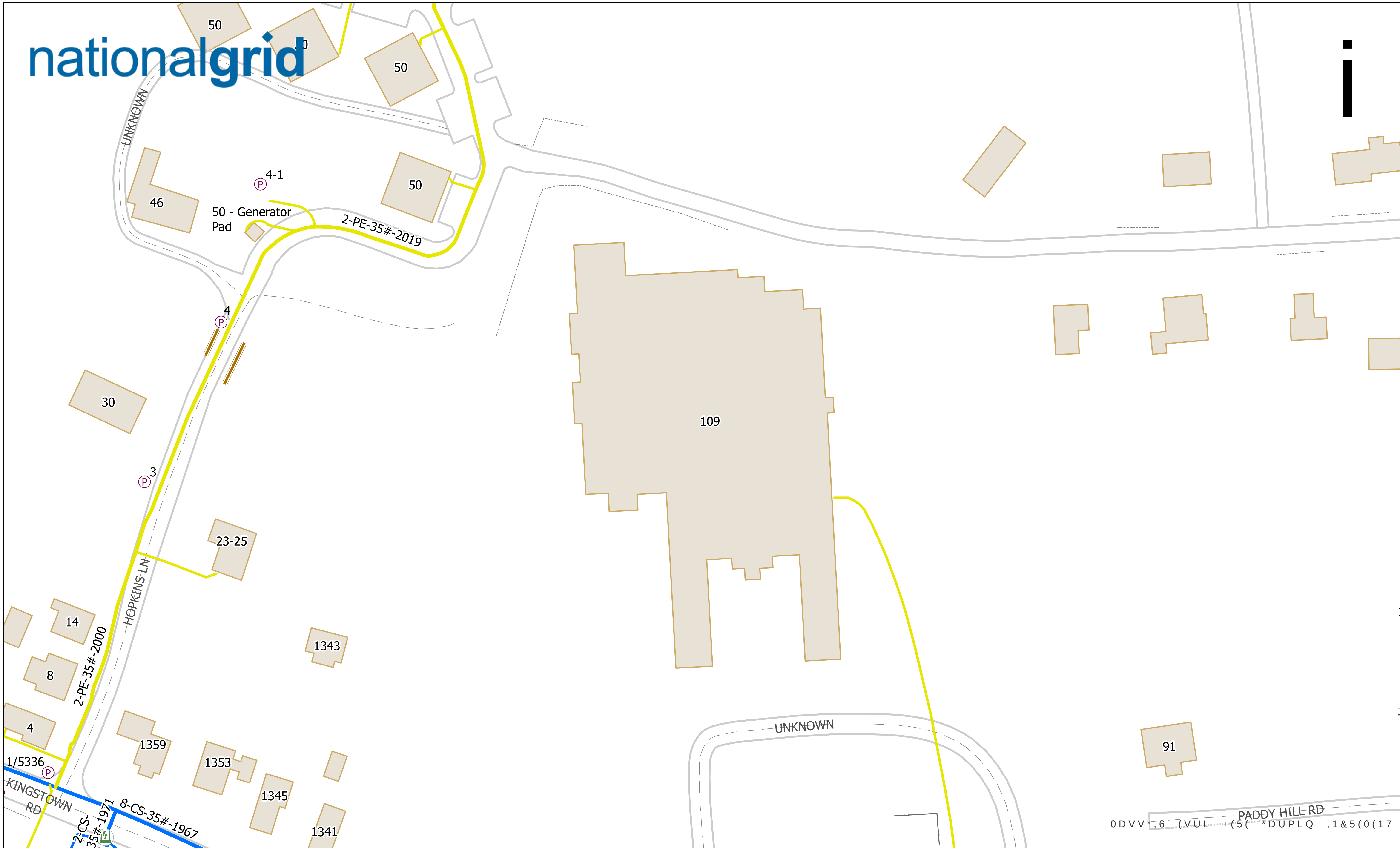
PLAT 48-2 LOT 73
PLAT 48-1 LOT 11

drawing title

SITE PLAN

C-2

sheet no. of



)HHW

127(7KH ORFDWLRQ RI VXUIDFH DQG XQGHUJURXQG REMHF

Date Printed: 6/14/2023

Town of South Kingstown

Water Suppliers

Yawgoo Pond
Hundred Acre Pond
Hurry Acre Pond
Indian Lake
Worden Pond
Tucker Pond
Long Pond
Factory Pond
Trustom Pond
Green Hill Pond
Card Pond
Potter Pond
Point Judith Pond
Sand Hill Cove
Narrow River
Chickasheen Brook
Chipuxet River
Horn Brook
White Rock Brook
Mink Brook
Indian Run
Pawcatuck River
SOUND
ISLAND
BLOCK

138 2 108 110 1

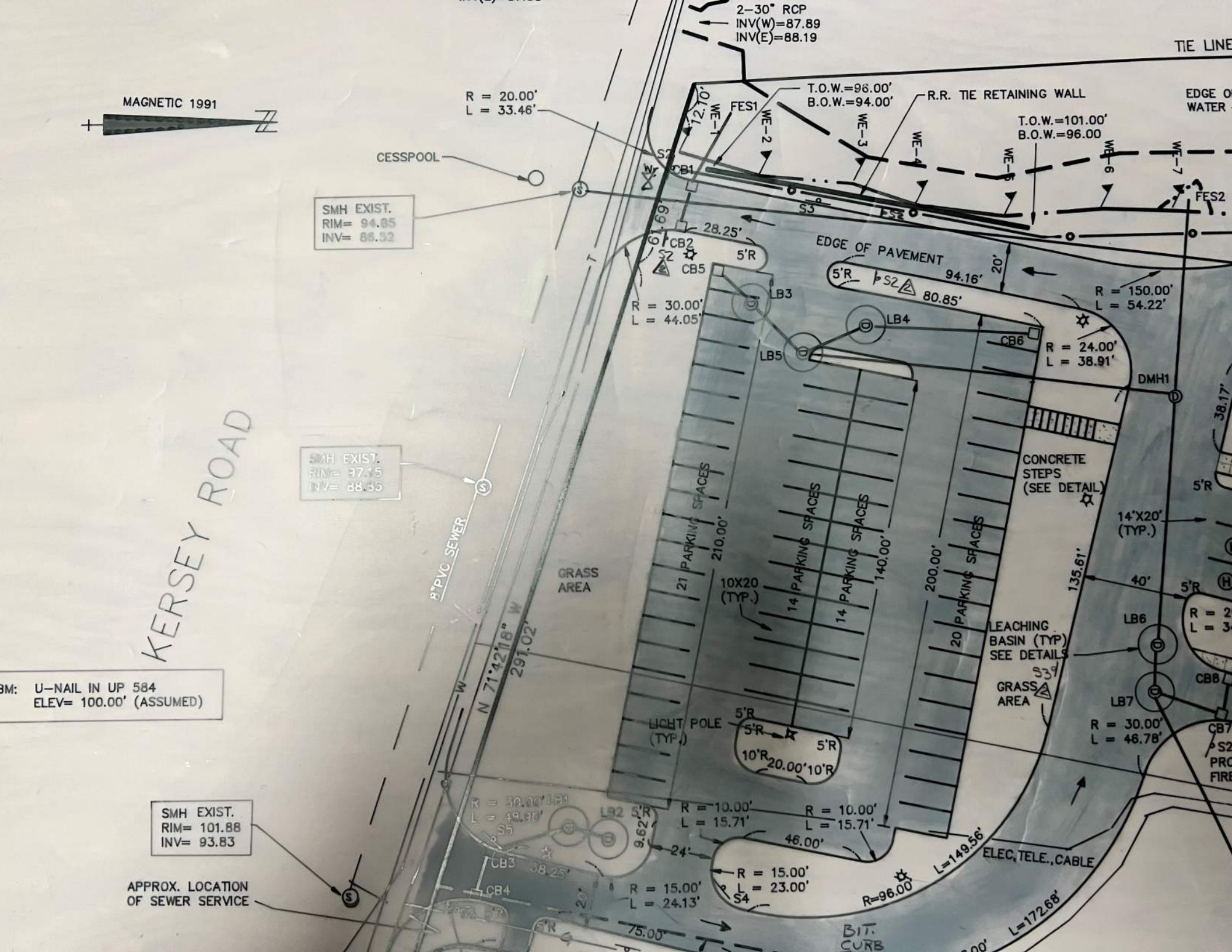
N W E S

0 0.5 1 1.5 2 Miles

- Town of South Kingstown - Middlebridge
- Town of South Kingstown - South Shore
- University of Rhode Island
- Veolia Water Company
- Kingston Water District

Geographic Information System

PS22-12 cpb 7/22

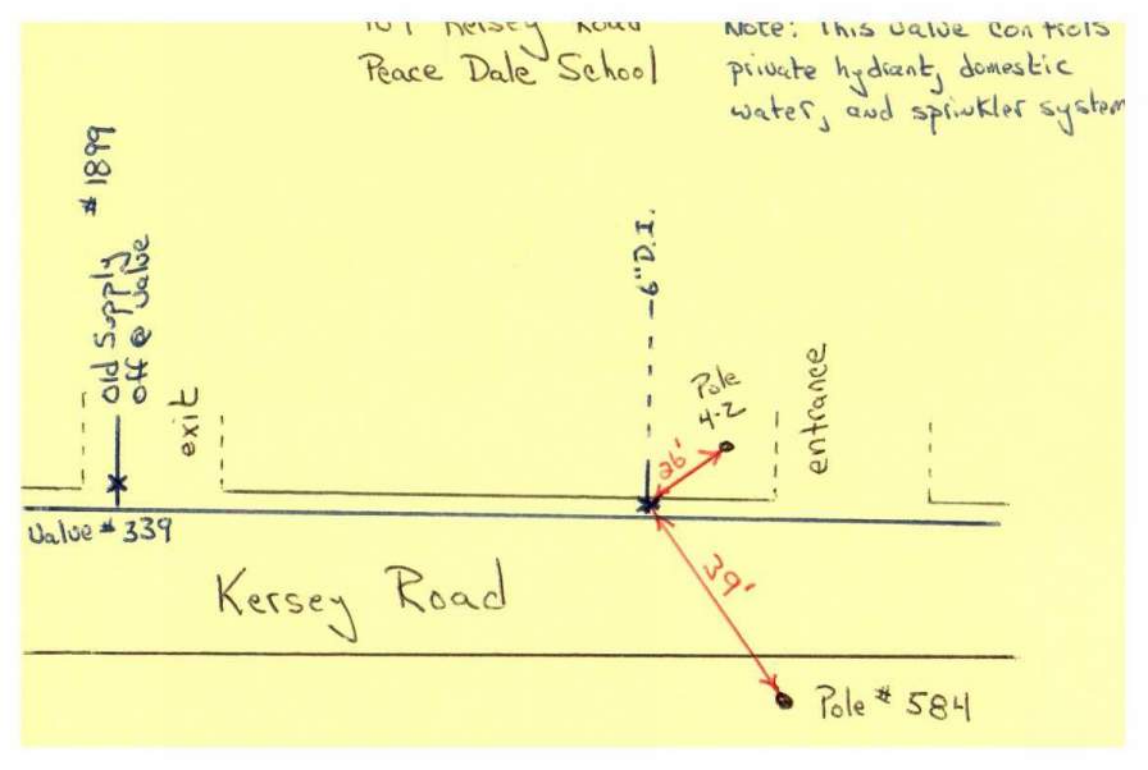

MAGNETIC 1991
KERSEY ROAD
2-30" RCP
INV(W)=87.89
INV(E)=88.19
TIE LINE
T.O.W.=96.00'
B.O.W.=94.00'
R.R. TIE RETAINING WALL
T.O.W.=101.00'
B.O.W.=96.00
EDGE OF WATER
FES1
FES2
WE-1
WE-2
WE-3
WE-4
WE-5
WE-6
WE-7
12.70'
R = 20.00'
L = 33.46'
CESSPOOL
SMH EXIST.
RIM= 94.85
INV= 86.52
SMH EXIST.
RIM= 97.15
INV= 88.35
SMH EXIST.
RIM= 101.88
INV= 93.83
APPROX. LOCATION
OF SEWER SERVICE
8"PVC SEWER
N 71°42'18" W
291.02'
61.69'
28.25'
CB1
CB2
CB3
CB4
CB5
CB6
CB7
CB8
S1
S2
S3
S4
S5
5'R
EDGE OF PAVEMENT
94.16'
20'
80.85'
R = 150.00'
L = 54.22'
R = 30.00'
L = 44.05'
R = 24.00'
L = 38.91'
LB3
LB4
LB5
LB6
LB7
DMH1
CONCRETE
STEPS
(SEE DETAIL)
14'X20'
(TYP.)
10X20
(TYP.)
21 PARKING SPACES
14 PARKING SPACES
14 PARKING SPACES
20 PARKING SPACES
210.00'
140.00'
200.00'
135.61'
40'
38.17'
GRASS
AREA
LEACHING
BASIN (TYP)
SEE DETAILS
GRASS
AREA
LIGHT POLE
(TYP.)
10'R
20.00'
10'R
R = 30.00'
L = 49.90'
R = 10.00'
L = 15.71'
R = 10.00'
L = 15.71'
46.00'
24'
9.62'
38.25'
R = 15.00'
L = 24.13'
R = 15.00'
L = 23.00'
R=96.00
L=149.56'
ELEC, TELE., CABLE
75.00'
BIT.
CURB
L=172.68'
BM: U-NAIL IN UP 584
ELEV= 100.00' (ASSUMED)

WAKEFIELD WATER COMPANY Service # 6124 B & D VALVE No. SK-1715

Location Peace Dale School @ Kersey Road
South Kingstown

Make	Installed	Size	Turn To Open	Bell or Spigot	
Clow	1992	6"	↷ Rt	M. J.	T. S. & V.

Date	Inspected	Repaired	Date	Inspected	Repaired


Peace Dale School
Note: This valve controls private hydrant, domestic water, and sprinkler system
1899
old supply off @ valve
exit
6" D.I.
Pole 4.2
36'
entrance
Valve # 339
Kersey Road
39'
Pole # 584

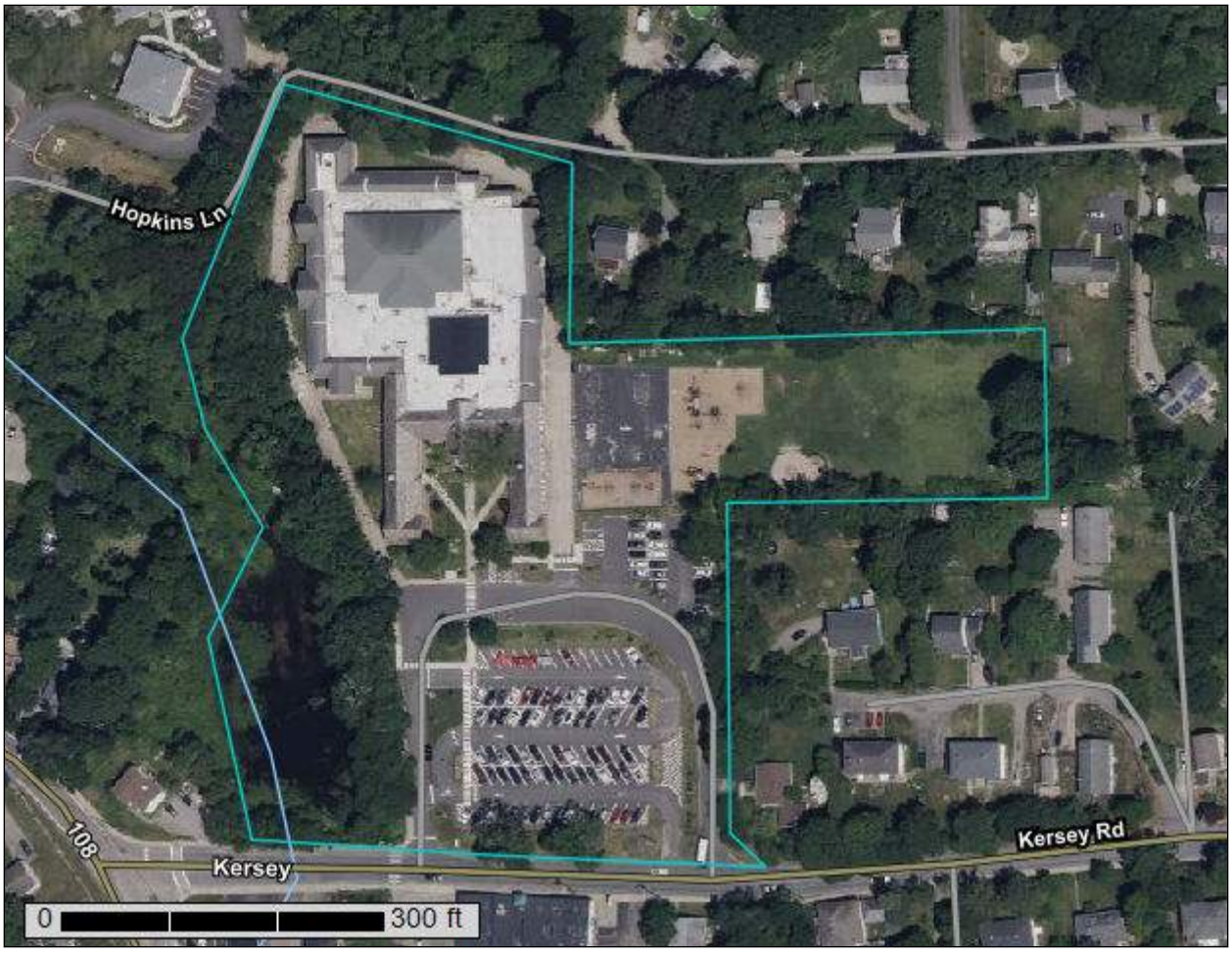
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

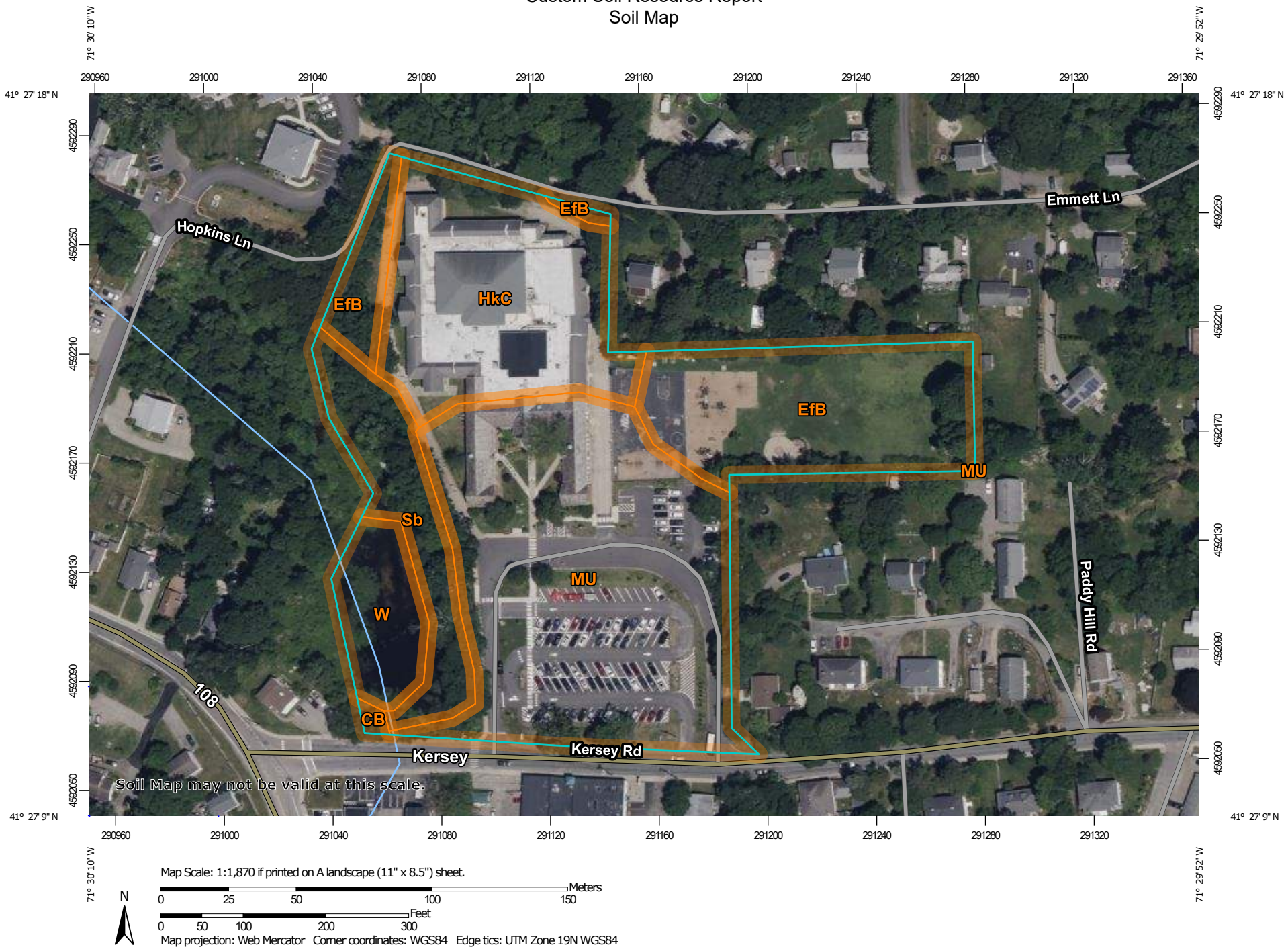
A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties



May 12, 2023

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,870 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties
Survey Area Data: Version 22, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Jul 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CB	Canton-Urban land complex	0.0	0.3%
EfB	Enfield silt loam, 3 to 8 percent slopes	1.7	22.0%
HkC	Hinckley loamy sand, 8 to 15 percent slopes	1.6	21.6%
MU	Merrimac-Urban land complex, 0 to 8 percent slopes	3.1	40.6%
Sb	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	0.7	9.5%
W	Water	0.5	6.0%
Totals for Area of Interest		**7.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

CB—Canton-Urban land complex

Map Unit Setting

National map unit symbol: 9ltv
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton and similar soils: 40 percent
Urban land: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy and gravelly melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: gravelly fine sandy loam
Bw1 - 3 to 15 inches: gravelly loam
Bw2 - 15 to 24 inches: gravelly loam
Bw3 - 24 to 30 inches: gravelly loam
2C - 30 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Parent material: Human transported material

Typical profile

R - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Gloucester

Percent of map unit: 6 percent
Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Charlton

Percent of map unit: 6 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Narragansett

Percent of map unit: 5 percent
Landform: Till plains, hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Paxton

Percent of map unit: 5 percent
Landform: Hills, drumlins
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Sutton

Percent of map unit: 3 percent
Landform: Drainageways, depressions
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: No

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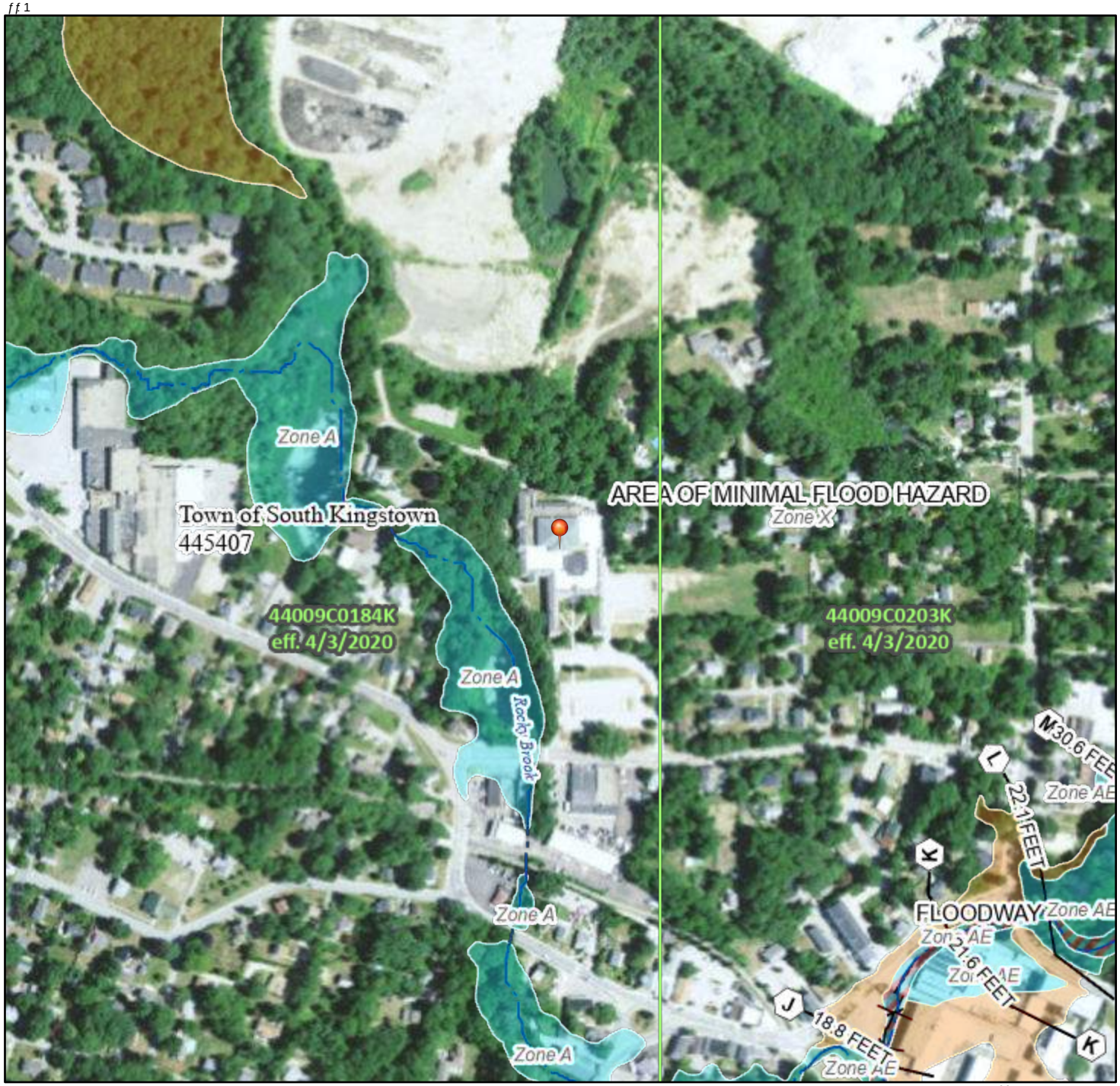
FEMA



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L:WKRXW %DVH)ORRG(OHYDWLRQ %)(
=RQH$ 9 $
L:WK%)(RUHSWK =RQH$ $ 9 9($
5LVNPODWRU\)ORRGZD\

$QQXDO &KDQFH)ORRG+D]DUG $UHDV
R DQQXDO FKDQFHIORRGZ WKDYHUDJH
G+D]DUGHAV WKROQHIRRW RU ZWKGUDLQDJH
DUHDV R OHAV WKDQRQHVTXDUHPLOH=RQH;
)WXUH&RQGLWLRQV$QQXDO
&KDQFH)ORRG+D]DUG =RQH;
$UHDZLWK5HGXFHG)ORRG5LVNGXHWR
/HYHH 6HH1RWHV =RQH;
$UHDZLWK)ORRG5LVNGXHWR/HYHH =RQH'

$UHDR1RQLBO)ORRG+D]DUG =RQH;
(IHFWLYH%V
$UHDR 8QGHWHUPLQHG)ORRG+D]DUG =RQH'
&KDQQHO &XOYHUW RU 6WUXFWXUH
/HYHH L'NH RU)ORRGZDOO

&URVV6HFWLRQV ZLWK$QQXDO &KDQFH
DWHU 6XUIDFH(OHYDWLRQ
&RDVWDO 7UDQVHFW
%DVH)ORRG(OHYDWLRQ/LQH %)(
/LPLW R 6WUXFWXUH
-XULVGLFWLRQ%RXQGDU\
&RDVWDO 7UDQVHFW %DVHOLQH
3URILOH%DVHOLQH
+GURJUDSKLF)HDWXUH

L'LWDO DWD$YDLODEOH
1R'LWDO DWD$YDLODEOH
8QSSHG

7KHSLQGLVSOD\HGRQWKHSLV DQDSSURSULDWH
SRQW VHOHFWHGEWKHXHU DQGGRHV QRW UHSUHV
DQDWKRULWDWLYHSURSHUW\ORFDWLRQ

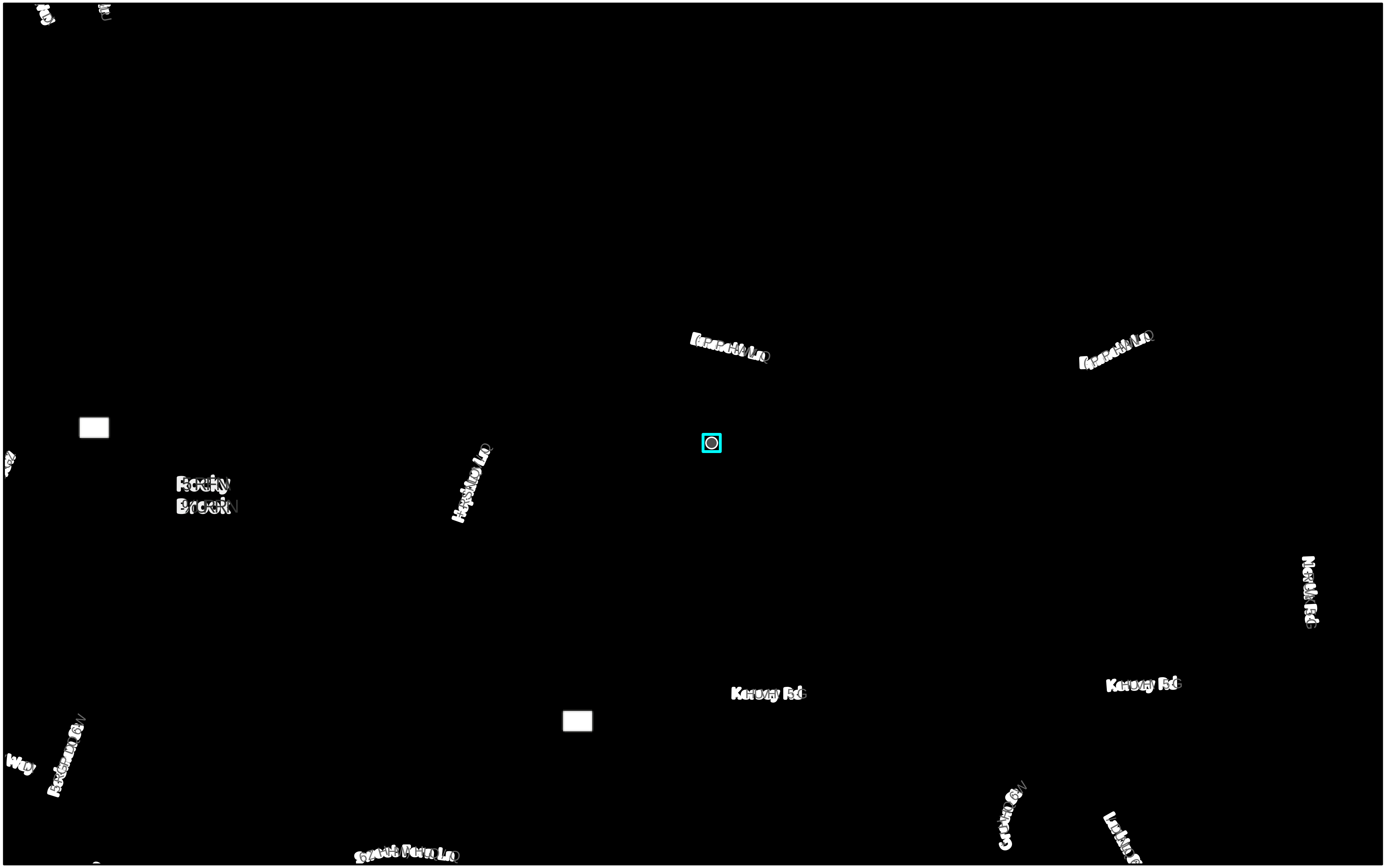
7KLVPSFRRSHUDWLYHZLWK)VVWDQGDUGIRUWKHXHR
GLLWDO IORRGPS/LI LW LVQRW YRLGV/GHVFULEHGEHORZ
7KHEDVHPSVKRZQFRRSHUDWLYHZLWK)VEDVHPS
DFFXUDWHWDQGDUG/

7KHIORRGKD]DUGLQRUPDWLQLVGHULYHGGLUHFWO\IURPWKH
DWKRULWDWLYHHZEVHUYLFHV SURYLGHGE\)7KLVPS
ZVHSRUWHGRQ DW 3 DQGGRHV QW
UHOHFW FKDQHV RU DQGRQWV VXEVHXHQW WRWKLVGDWHDQG
WLFH 7KH)HDQGHIHFWLYHLQRUPDWLQRQEFKDQHRU
EHFRPXSUVHGGE\QHZGDWDRYHU WLFH

7KLVPSLBHLV YRLGLI WKHIRQHRUHWHIOORZLQJPS
HOHQWV GR QRW DSSHDU EDVHPSLBHU\ IORRGRQHODEHOV
OHHQG VFDOHEDU PSFRWDWLRQGDWH FRRL W\LGHQWLILHUV
)5$QQXDO QHU DQG)5HIHFWLYHGDWH DSLBHV IRU
XQPSHGDQGXQRGHUQG DUHDV FDQQRW EHXVHGIRU
UHDOWRU\SUSRVHV

%DVHPS 86DWLRQDO DS 2UWKRLBHU\ DWDUHUHVHGE2WREHU

5,'(0 :HE 0DS



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5, 0XQLFLSDO %RXQGDULHV
+\GURFDO
5HJLRQDO
3URWHFWHG $UHDV
'DWDEDVH 86
'HVLJQDWLRQ
1DWLRQDO &RQVHUYDWLRQ (DVHPHQW
(DVHPHQW 'DWD
1$
6WDWH
5,)HH
3URFODPDWLRQ
)HGHUDO
1*2
(DVHPHQW

PL
NP

5,'(0 (VUL &RPPXQLW\ 0DSV &RQWULEXWRUV 0DVV*,
0LFURVRIW (VUL +(5(*DUPLQ 6DIH*UDSK *HR7HFK

(VUL &RPPXQLW\ 0DSV &RQWULEXWRUV 0DVV*,6 k 2SHQ6WUHHW0DS 0LFURVRIW (VUL +(5(*DUPLQ 6DIH*UDSK *HR7HFKQRORJLHV ,QF 0(7, 1$6$ 86*6 (3$ 136

RIDEM Environmental Resource Map

Back to the Map Room

Layer List

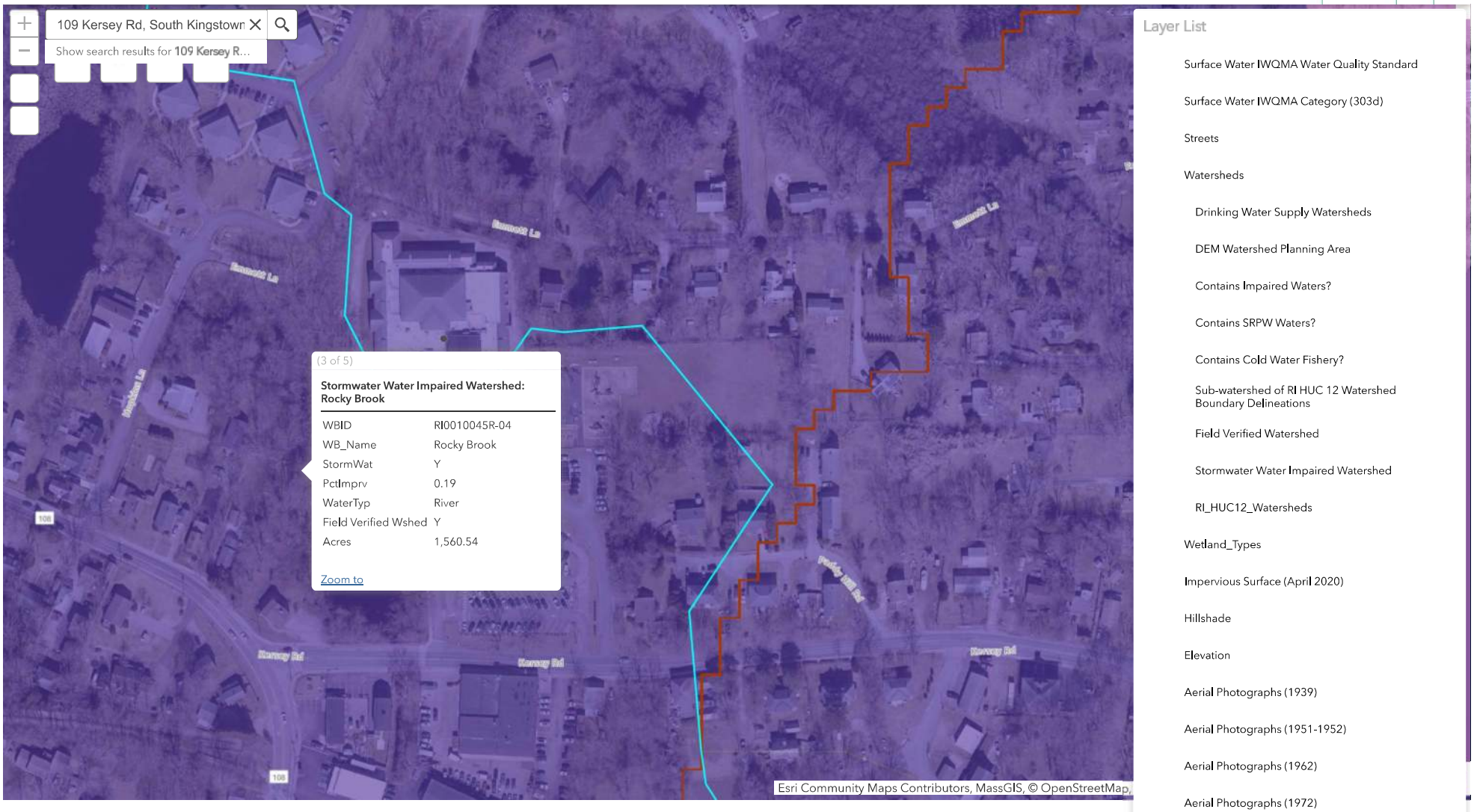
- Surface Water IWQMA Water Quality Standard
- Surface Water IWQMA Category (303d)
- Streets
- Watersheds
  - Drinking Water Supply Watersheds
  - DEM Watershed Planning Area
  - Contains Impaired Waters?
  - Contains SRPW Waters?
  - Contains Cold Water Fishery?
  - Sub-watershed of RI HUC 12 Watershed Boundary Delineations
  - Field Verified Watershed
  - Stormwater Water Impaired Watershed
  - RI_HUC12_Watersheds
- Wetland_Types
- Impervious Surface (April 2020)
- Hillshade
- Elevation
- Aerial Photographs (1939)
- Aerial Photographs (1951-1952)
- Aerial Photographs (1962)
- Aerial Photographs (1972)
- Aerial Photographs (1981)
- Aerial Photographs (1988)
- Aerial Photographs (1997)
- Aerial Photographs (2008)
- Aerial Photo (2011)
- Aerial Photo (2014)
- Aerial Photographs (April 2018)

200ft

-71.498 41.454 Degrees

RIDEM Environmental Resource Map

Back to the Map Room



Layer List

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Exhibit 28

West Kingston ES Site Due Diligence Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

RE: **Site Investigation Summary**
West Kingstown Elementary School
3119 Ministerial Road, South Kingstown, RI 02892

GAI PN 7458-05
DATE: June 3, 2023

Introduction
Garofalo & Associates Inc. (Garofalo) has prepared this report to assist with the due diligence assessment of the referenced site as it relates to RIDE Stage II investigations for the proposed improvements at the school.

The subject site is located at 3119 Ministerial Road, South Kingstown. The approximately 12.78 acres site is currently comprised of an existing Elementary School, together with associated parking and hardscape.

An Aerial Site Plan of the property is attached

Property Data
The site is identified as Lot 24 on Assessors Plat 22-3. The ownership of the parcel is identified as the Town of South Kingstown.

Zoning District
Zone: GI (Government & Institutional)

Use: Educational – Primary or Secondary

Exhibit A-Dimensional Standard:
Min. Lot Size: 200,000 sf + 40,000 per 100 pupils
Min Lot Width: 200 feet
Front yard: 40 feet
Corner Side: 40 feet
Side yard: 40 feet
Rear yard: 40 feet
Max. Principal Bldg. Height: 35 feet
Max. Accessory Bldg. Height: 15 feet
Max. Lot Coverage: 20%
Min distance from Residential Properties: Could not locate any info from town ordinances

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Visit our Web Site at www.garofaloassociates.com

On-site Soils
The *Soil Survey of Rhode Island* prepared by the US Department of Agriculture, Soil Conservation Service depicts the underlying soils of the site to be primarily comprised of Bridgehampton silt loam, 3% to 8% slopes (BhB), Hinckley loamy sand, 0% to 3% slopes (HkA), Hinckley loamy sand, 8% to 15% slopes (HkC) and Merrimac fine sandy loam, 0% to 3% slopes (MmA). The Hydrologic Soil Group classification for these soils are "A"(low runoff potential) and "B"(moderately low runoff potential). The property is in a GA groundwater district. Expected seasonal high water tables are typically below five feet which is consistent with record septic system design data for the site (Refer utility discussion).

FEMA Flood Mapping
The project area is located within Zone "X" (areas outside the 0.2% annual floodplain) as shown on F.E.M.A. Flood Insurance Rate Map for the Town of South Kingstown, Washington County, Rhode Island, Community Panel No. 44009C0185J having an effective date of April 3, 2020.

Site Condition
The site is comprised of a single building, primary front field parking, rear parking/play area and miscellaneous walks and site elements. Open fields surround the school to the rear (See Aerial Site Plan).

Overall, the parking area is considered to be in fair condition, with rehabilitation recommended within 5 years. Other site elements appear in good but aged condition with localized repairs needed but consistent with standard maintenance. The site accessibility elements appear in general conformance, but signage and accessible route upgrade is required for full compliance.

Site Drainage
Generally, the property falls from east to west at moderately sloping grades. The property has a number of open drainage systems (swales) with culverted crossings, as well as limited enclosed drains which collect runoff from the building and adjacent paved areas. Landscaped portions of the east side of the property grade toward a localized depression. Although depressions exist within each watershed, runoff mitigation with formal stormwater management facilities does not

appear to be evident at the site. No existing permits/approvals related to stomwater were identified by these investigations but outfall registration is noted as outlined below.

Runoff from the work area discharges at two (2) primary locations.

- Runoff from the building and adjacent paved areas is collected within a series of catch basins that discharge west toward Ministerial Road, and then appear to discharge wests gain in the Chipuxet River. The aparent stormwater outfalls is registered at RIDEM and identified at as Outfall SK-35, A review of that data was not initiated under these investigations.

- Again, a second discharge location includes surface infiltration in the eastern poritions of the site. This area is not believed to overtop, but in surcharged conditions would be discharged eastward to the White Horn Brook.

There were no conditions noted during these investigations that indicate significant substandard drainage conditions currently occurring at the site or immediately downstream during normal rainfall (ie washouts or flooding). No stormwater management facilities were identified on the property.

The property falls within the Chipuxet River watershed (RI0008039R-06C), Chipuxet River is not identified as impaired water. Town Standards (Ord. Ch 20, Stormwater Management and Land development Regulations) requires stormwater management practices to meet 25-yr runoff, but also a more conservative standard of being consistent with the "Rhode Island Stormwater Design and Installation Standards Manual" and the "Rhode Island Soil Erosion and Sediment Control Handbook," as amended. Based on these standards, development of the site will require compliance RI Stormwater Rule, Standard 5, Overbank Flood Protection and some form of subsurface retention/infiltration as well as treatment and/or detention should be anticipated for all exterior improvements proposed.

Utilities

Water:
The site is within the Kingstown Water District service area and the site is understood to be connected to public water. According to Town mapping, there is a 10-inch AC main located within Ministirial Road. Record plans indicate a 8-inch AC main traversing the school property on the norht side, with an underground meter located just south of the entrance. No data regarding system pressures was obtained.

Gas:
The utility company did not identify gas service to the property. No above ground or underground storage tanks were noted during the site visit(s)
.
Sewer:
The site is currently serviced by an on-site wastewater treatment system (OWTS). A review of RIDEM records (#8732146) indicate the installation was performed in 1987. The system is

understood to be a conventional type trench system with a design capacity of 2250 GPD. The system includes a 3750-gallon septic tank and no grease trap. No modifications or records of subsequent inspections was identified. No additional research was performed regarding current population or design flows.

Electric:
Based upon correspondence from Energy/National Grid (NGrid), they do not have any underground electric distribution facilities on the property. The primary service appears to be from the west in Ministirial Road, traversing the northern property line and entering the building toward the rear (east) of the lot.

Verizon and Cox Communications:
No records regarding communications or cable service were obtained.

RIDEM Environmental Resource Mapping

Wetlands:
There are no wetlands identified on or adjacent to the project site.

National Heritage Area / Conservation Land:
There are no national heritage areas or conservation land on or adjacent to the site.

Other Resource Areas:
RIDEM Mapping indicates the property overlaps one Non-Community Wellhead Protection Area (NCWPA) and one Community Wellhead Protect Area (CWHPA) Wellhead. Although these resources may impact development programming and more specifically land use and pollutant mitigation strategies, the resources are not identified to constrain development on the site.

RIDEM Waste Management Search Data
The RIDEM Waste Management search performed found no registered facilities on the property.

END OF SUMMARY

GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

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SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT
TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
WEST KINGSTOWN ELEMENTARY SCHOOL
3119 MINISTERIAL ROAD
WEST KINGSTOWN, RI 02892

REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

5-??-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.5

SHEET NO.

G-1

LIST OF ATTACHMENTS

1. Property Cards
2. GIS Parcel Map
3. Zoning Map
4. Future Land Use Map
5. Aerial Map
6. Record Site Plans
7. Utility Information
8. NCRS Soils Data
9. FEMA Flood Map (FIRMette)
10. RIDEM Environmental Resource Mapping

3119 MINISTERIAL ROAD

Location	3119 MINISTERIAL ROAD	**Map and Lot**	22-3/ 24/ / /
Acct#	R-34-0065-00	**Owner**	SOUTH KINGSTOWN TOWN OF
Assessment	$3,827,100	**PID**	714
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$3,053,400	$773,700	$3,827,100

Owner of Record

Owner	SOUTH KINGSTOWN TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	1
Address	3119 MINISTERIAL ROAD WEST KINGSTON, RI 02892	**Book & Page**	0116/0092
		Sale Date	04/25/1974
		Instrument	

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1975
Living Area:	27,703
Replacement Cost:	$4,285,377
Building Percent Good:	70
Replacement Cost Less Depreciation:	$2,999,800

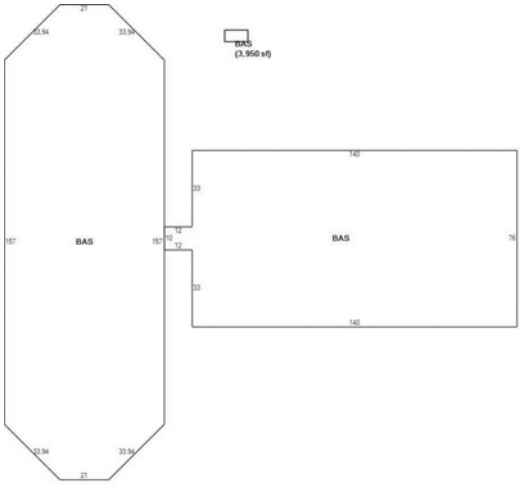
Building Attributes	
Field	**Description**
Style:	School/College

Model	Commercial
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Irregular
Roof Cover	Tar & Gravel
Interior Wall 1	Minim/Masonry
Interior Wall 2	Drywall/Sheet
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	Carpet
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	None
Struct Class	
Bldg Use	SCHOOL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Design/Appeal	
1st Floor Use:	903I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	8.00
% Comn Wall	

Building Photo

(https://images.vgsi.com/photos/SouthkingstownRIPhotos//\00\00\85\97.jpg

Building Layout



(ParcelSketch.ashx?pid=714&bid=714)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	27,703	27,703
		27,703	27,703

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	903J
Description	SCHOOL MDL-94
Zone	GI
Neighborhood	0050
Alt Land Appr	No
Category	

Land Line Valuation

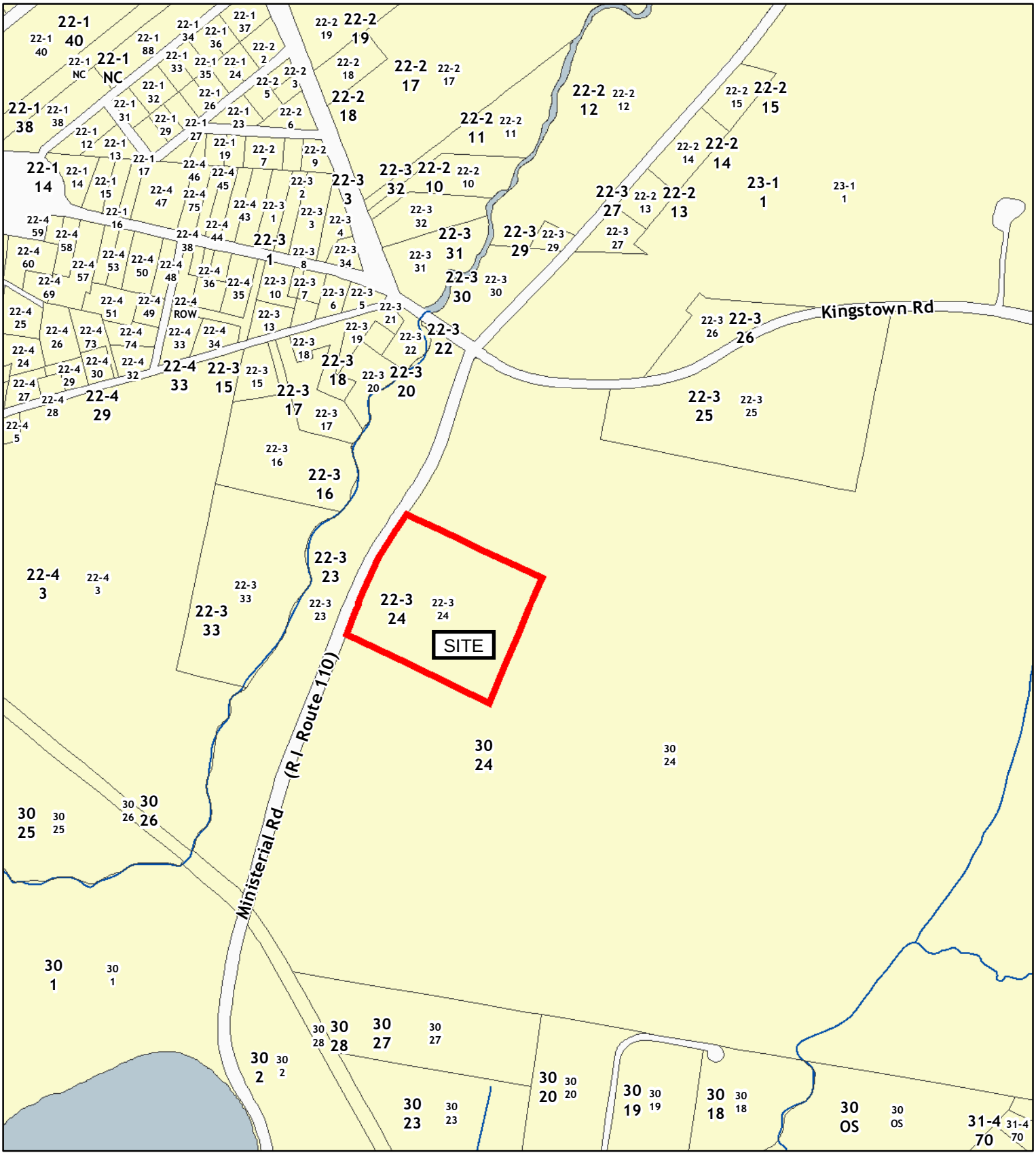
Size (Acres)	12.78
Frontage	
Depth	
Assessed Value	$773,700

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	PAVING-ASPHALT			35000.00 S.F.	$52,500	1
LT1	LIGHTS-IN W/PL			1.00 UNITS	$400	1
LT2	W/DOUBLE LIGHT			1.00 UNITS	$700	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$2,646,800	$678,400	$3,325,200
2020	$2,646,800	$678,400	$3,325,200
2019	$2,646,800	$678,400	$3,325,200



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

3119 Ministerial Road

Parcel Boundaries not legally binding for title or zoning purposes.

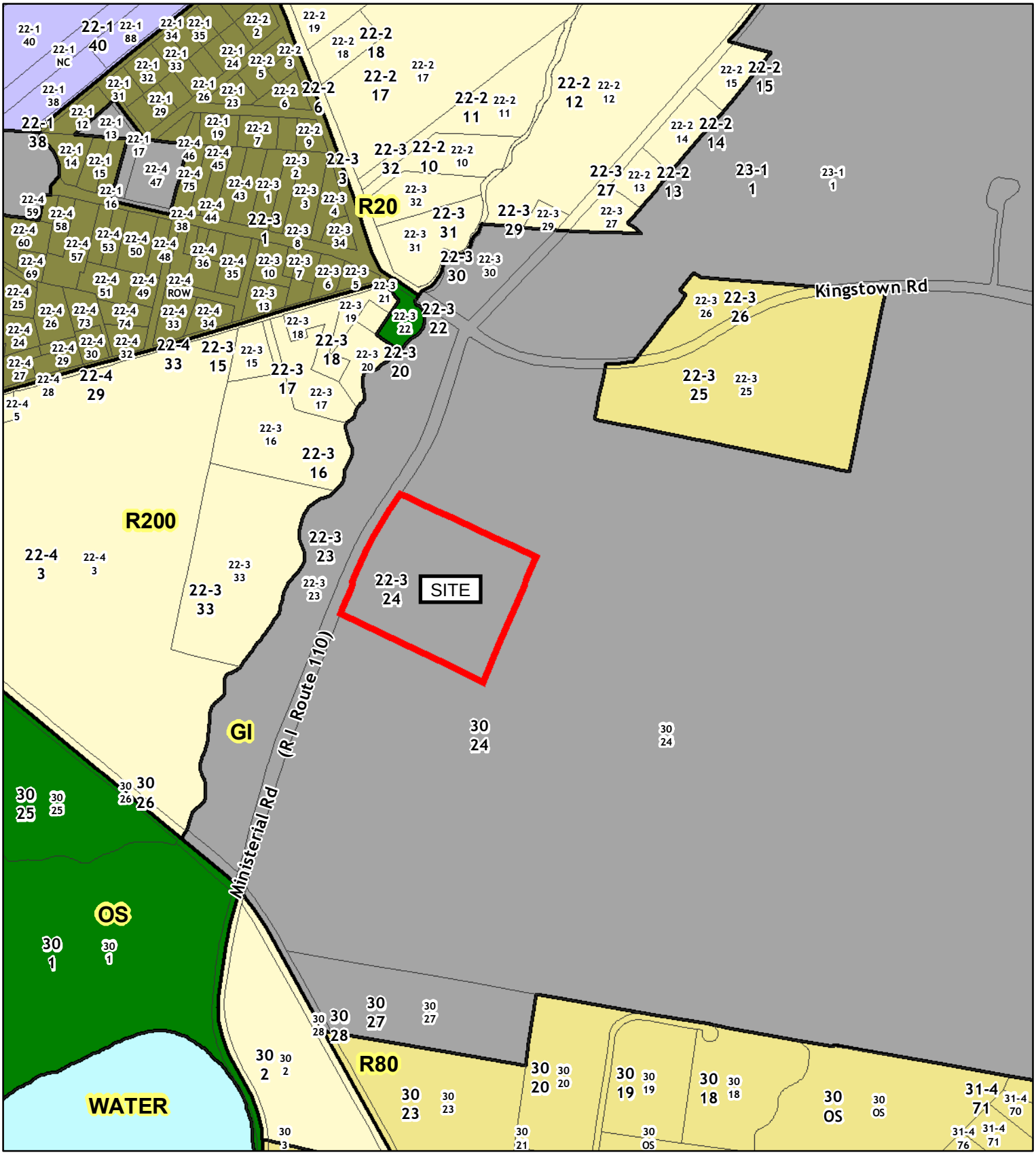
The Town of South Kingstown makes no warranty as to the accuracy, reliability, or completeness of the information and is not responsible for any errors or omissions for results obtained from the use of the information.

N

1 inch = 667 feet

0 305 610 1,220 Feet

Town of South Kingstown Web GIS



Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

3119 Ministerial Road Zoning Map

1 inch = 667 feet

0 305 610 1,220 Feet

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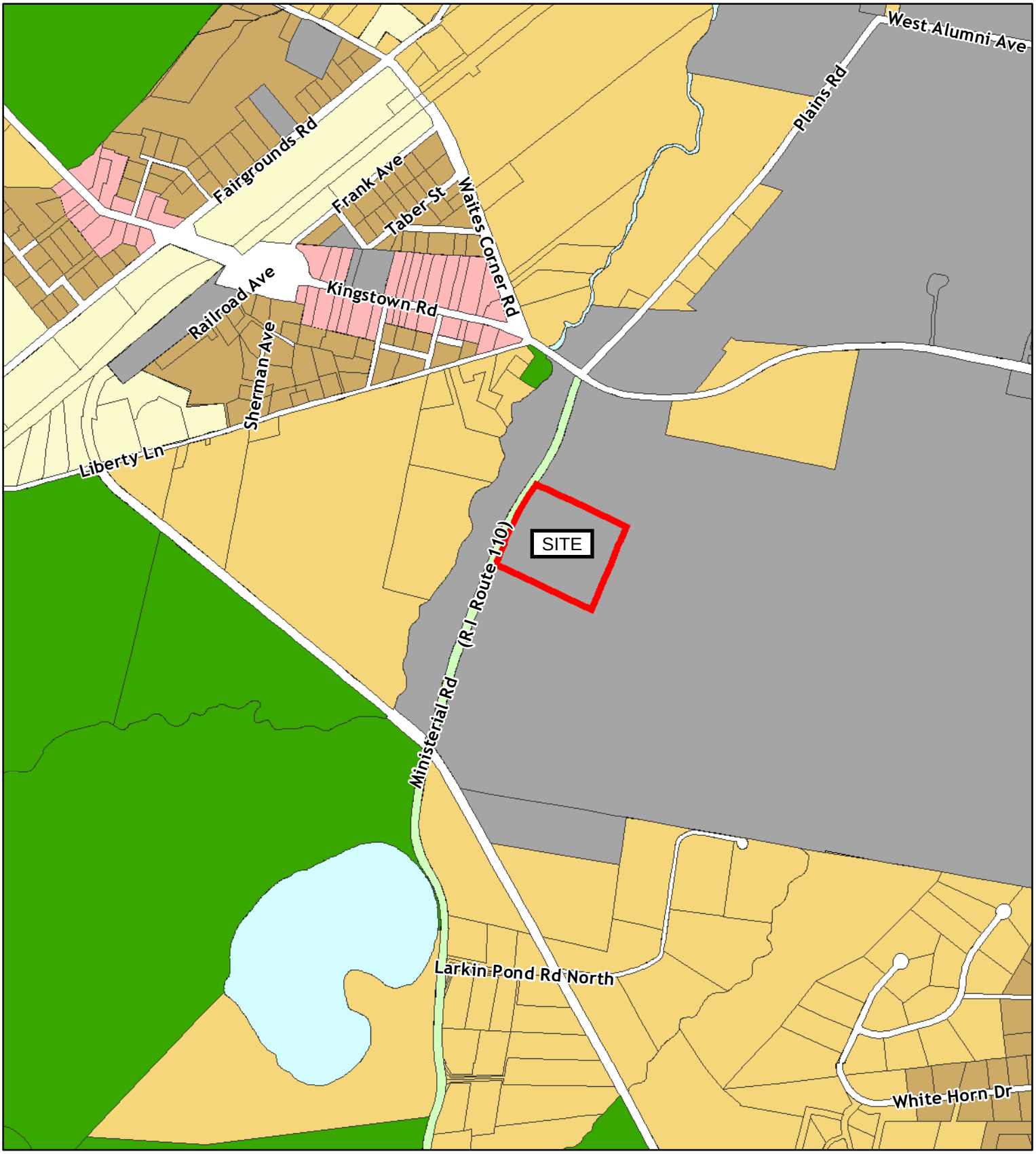

Washington County, Rhode Island

Horizontal Datum is Rhode Island State Plane Feet, NAD83.

3119 Ministerial Road

N

1 inch = 1,000 feet

0 460 920 1,840 Feet

Town of South Kingstown Web GIS

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Washington County, Rhode Island

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3119 Ministerial Road

N

1 inch = 667 feet

Feet

0 305 610 1,220

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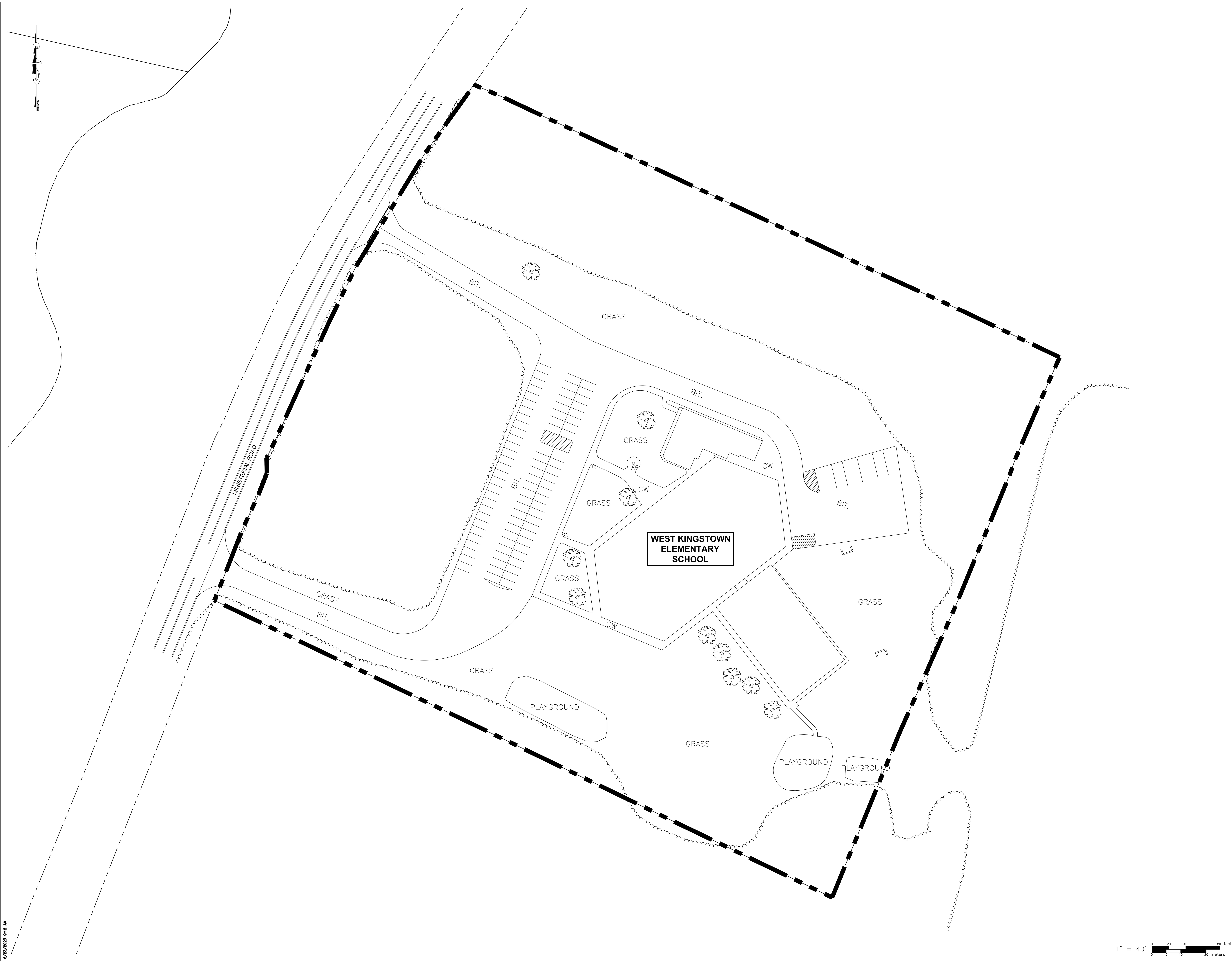

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REVISIONS

MARK	DESCRIPTION	DATE
–	–	–

SHEET TITLE

EXISTING CONDITIONS PLAN

RIDE STAGE II
SCHEMATIC DESIGN

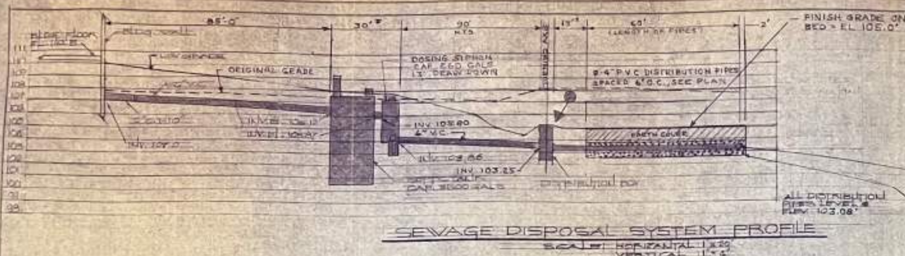
5-??-2023

DRAWN	CHK'D	PROJECT NO
KJA	SSH	7458.5

SHEET NO.

C-1

6/23/2023 9:12 AM



NOTES:
1. PERFORATED DISTRIBUTION PIPES TO BE SCH 40 PVC
2. PIPES TO BE LEVEL AND AT SAME INVERT AT ALL POINTS OF BED
3. SECTION THROUGH BED TAKEN LOOKING NORTH
4. FOR DETAILS OF LEACHING BED, SEPTIC TANK, DOSING SIPHON, AND DISTRIBUTION BOX SEE DWG SU-2
5. AREA OVER LEACHING FIELD SHALL BE COVERED WITH LOAM AND SEEDED, SEE DWG SM

CONNECT ENDS OF DISTRIBUTION PIPES WITH LATERAL FULL LENGTH OF FIELD

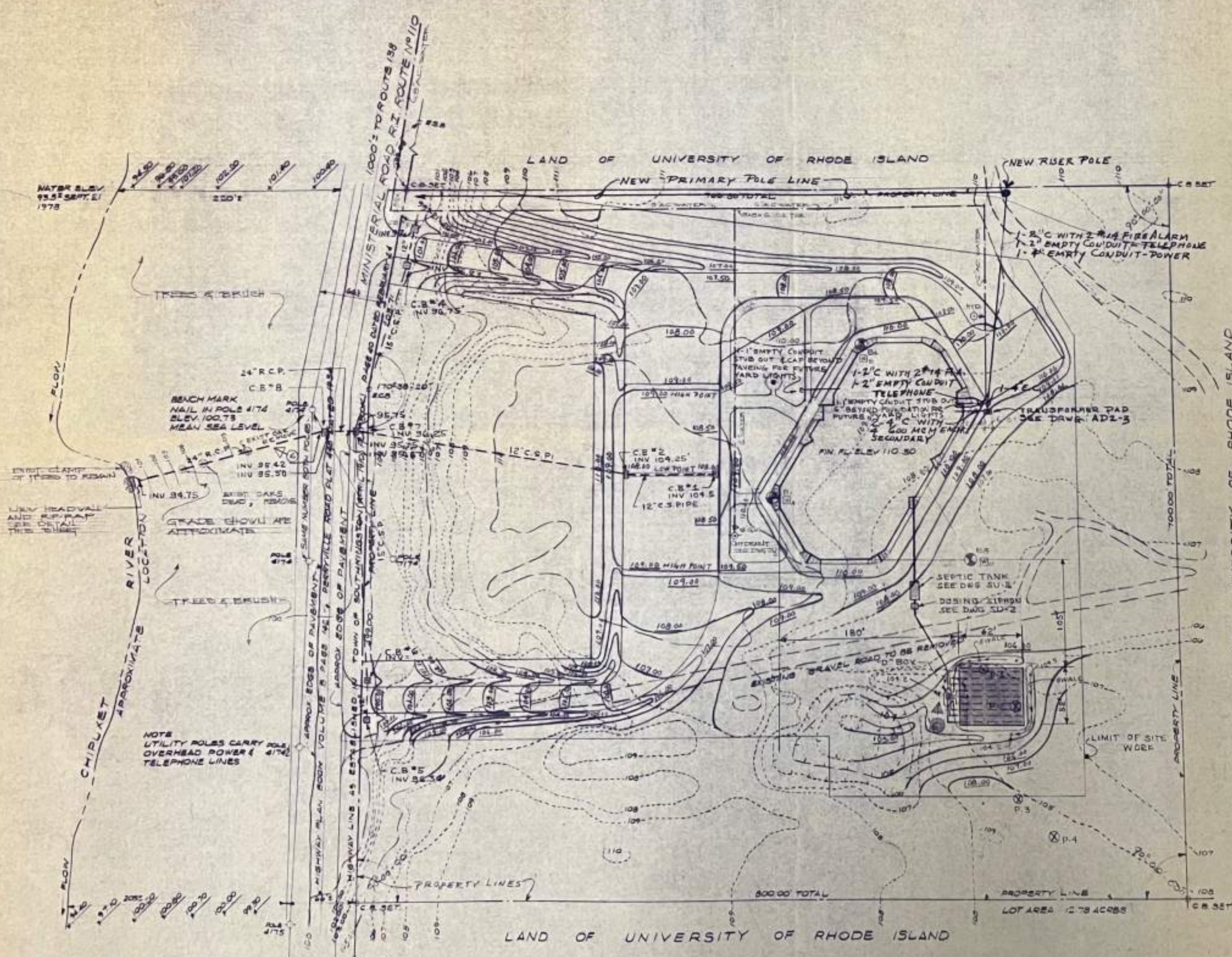
EXCAVATE ENTIRE BED AREA TO ELEVATION 102.58

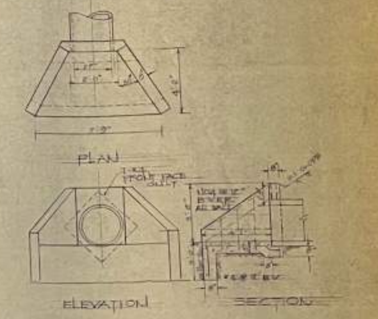
SEWAGE DISPOSAL SYSTEM PROFILE

SCALE: HORIZONTAL 1"=20' VERTICAL 1"=2'

SCHEDULE OF STORM DRAINAGE STRUCTURES

ITEMS	INLET CFM	RIM ELEVATION	COVER	STRUCTURE SIZE	STANDARD	REMARKS
CB-1	1.90	[illegible]	[illegible]	4' DIA	[illegible]	
CB-2	1.40	[illegible]	"	"	"	
CB-3	1.21	[illegible]	"	"	"	
CB-4	2.20	[illegible]	"	"	"	
CB-5	1.93	99.84	"	"	"	
CB-6	0.95	99.84	"	[illegible]	[illegible]	[illegible]
CB-7	2.05	[illegible]	"	[illegible]	[illegible]	[illegible]
CB-8	0.84	[illegible]	"			
TOCAL	SEE	DETAIL	THIS DWG			





REINFORCED CONCRETE HEADWALL

SCALE: NONE

STORM DRAINAGE SYSTEM NOTES:
1. ALL CULVERTS AND CORRUGATED STEEL STORM WATER PIPES SHALL BE ZINC COATED IN ACCORDANCE WITH AASHO SPECIFICATION WITH FULL ASPHALT COATING INSIDE AND OUTSIDE, DOUBLE HOT DIP, THICKNESS 0.03 INCHES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS PUBLISHED PROCEDURES.
2. REINFORCED CONCRETE PIPE, WHERE NOTED, SHALL SHALL BE IN ACCORDANCE WITH SPECIFICATIONS SECTION 2F, CONFORMING TO ASTM C-76 CLASS III
3. ALL STORM AND SANITARY PIPING SHALL BE INSTALLED WITH MINIMUM OF 6 INCHES OF COMPACTED APPROVED GRANULAR MATERIAL, CLASS C BEDDING.
4. ALL STORM PIPING AND STRUCTURES IN STATE OF RHODE ISLAND RIGHT OF WAYS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" AND "RHODE ISLAND STANDARD DETAILS" 1974
5. PAVING REPLACEMENT IN STATE HIGHWAY SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SHALL BE AS SHOWN ON THIS DRAWING.

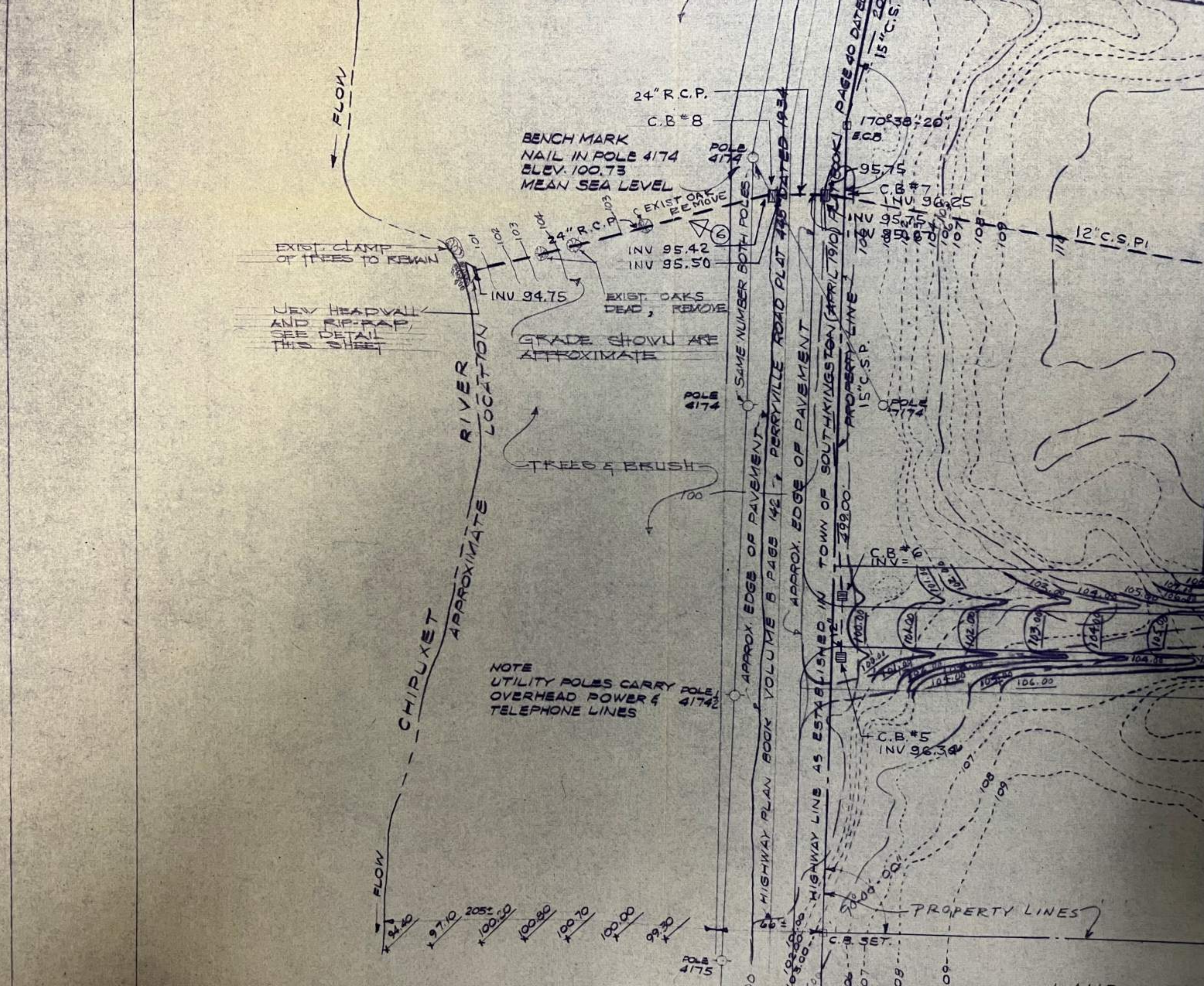
LEGEND
- PERCOLATION TEST HOLE
- TEST WELL SEE DWG. EL-1
- WATER MAIN
- GATE VALVE & VALVE BOX
- HYDRANT

ADDED NOTE ON FINISHED GRADE AT LEACHING BED. RELOCATED DISTRIBUTION BOX. CHANGE NOTE ON TREES AT STORM DRAIN.

ADDENDUM | DESCRIPTION

WEST KINGSTON ELEMENTARY SCHOOL

PAUL T. BOWEN | SCALE | DWG



FLOW
24" R.C.P.
C.B.#8
BENCH MARK
NAIL IN POLE 4174
ELEV. 100.73
MEAN SEA LEVEL
POLE 4174
EXIST. OAK REMOVE
170°38'-20"
95.75
C.B.#7
INV 96.25
INV 95.75
12" C.S.P.
15" C.S.
EXIST. CLAMP OF TREES TO REMAIN
24" R.C.P.
INV 95.42
INV 95.50
INV 94.75
EXIST. OAKS DEAD, REMOVE
NEW HEADWALL AND RIP-RAP, SEE DETAIL THIS SHEET
GRADE SHOWN ARE APPROXIMATE
SAME NUMBER BOTH POLES
PERRYVILLE ROAD PLAT 445 DATED 1934
TOWN OF SOUTHKINGSTON APRIL 1910
PROPERTY LINE
15" C.S.P.
POLE 4174
POLE 7174
RIVER LOCATION
TREES & BRUSH
100
APPROX. EDGE OF PAVEMENT
VOLUME 8 PAGE 142
APPROX. EDGE OF PAVEMENT
TOWN OF SOUTHKINGSTON
499.00
C.B.#6
INV=
APPROXIMATE
CHIPUXET
NOTE
UTILITY POLES CARRY OVERHEAD POWER & TELEPHONE LINES
POLE 4174 1/2
HIGHWAY PLAN BOOK
HIGHWAY LINE AS ESTABLISHED IN
C.B.#5
INV 96.30
PROPERTY LINES
FLOW
94.40
97.10
205±
100.20
100.80
100.70
100.00
99.30
66'±
C.B. SET
POLE 4175

TION WALL

30

4000 GAL. PRECAST CONC. SEPTIC TANK

38 L.F. OF 6" SCHED. PVC.

INVERT 105.75

D-BOX

INVERT 105.09

INVERT 104.93

NED

4

PES

STEM,

SIDES

STATE BEFORE

ORMATION

6.77)'	• SW(106.87)'
LOAM	0-1'6" LOAM
ED.SAND	1'6"-13'6" MED.SAND
AVEL	13'6" GRAVEL

6" PERF. DISTRIBUTION LINES

AREA = 1,891 Sq. Ft. OR 463 Lin. Ft.

6" PERF. DISTRIBUTION LINES

INV. AT END OF TRENCH 104.63

43'

DETAIL OF TRENCHES
SCALE 1"=10'

17'-0"

16'-0"

3'-0"

7'-0"

24" DIA. COVERS

PLAN VIEW
SCALE 1/4"=1'-0"

MANHOLES

SIDE

6" WALLS

GRADE

TOP EL. 107.41

INV. 106.00

LIQUID LEVEL

OUTLET INV. 105.75

INLET TEE

OUTLET TEE

6'-6"

5'-8"

6'-8"

7'-0"

EL. 99.58

6" BOTTOM

CROSS SECTION
SCALE 1/4"=1'-0"

SEPTIC TANK DETAILS

SIGN
FOUND
TION # 8732-G1

RE: SEWAGE DISPOSAL SYSTEM FOR
WEST KINGSTOWN ELEMENTARY SCHOOL

BY:
KIRK D. ANDREWS RLS

SCALE SEE PLAN

DRAWN BY GLM

REVISED 9/25/87

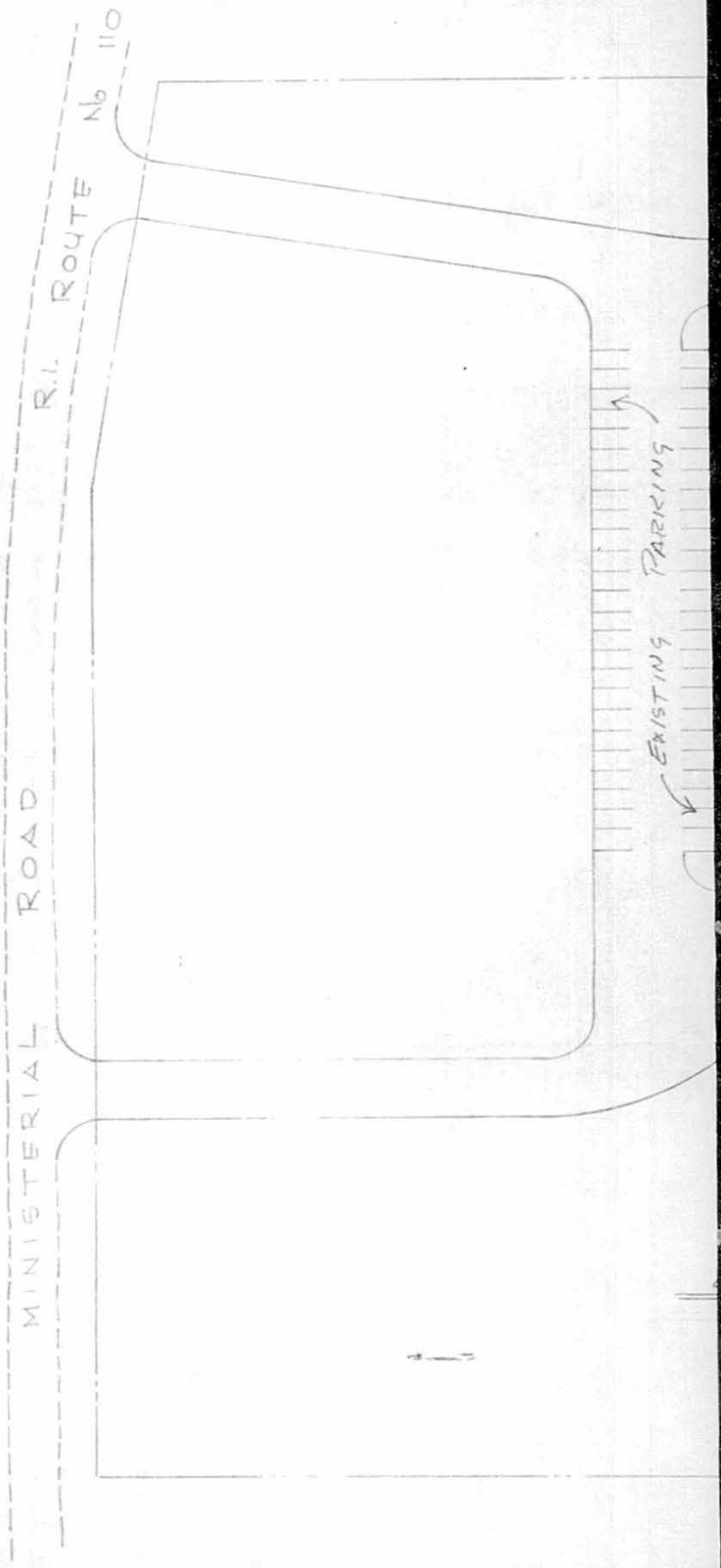
LOCATION
MINISTERIAL ROAD SOUTH KINGSTOWN, R.I.

DATE MAY, 1987

APPROVED BY

DRAWING NUMBER
WK8732-G1
9 FT. WIDTH

MADE IN U.S.A.



DESIGN NOTES:

1. SYSTEM DESIGNED FOR 225 PERSONS 9 ROOMS X 25 PERS
2. SCHOOL ADDITION NO GYMNASIUM, CAFETERIA, OR SHOWERS 10 GA
   TOTAL DAILY FLOW = 2250 GALLONS
3. REQUIRED SEPTIC TANK = 1,500 GAL PLUS 100% OF DAIL
   + 2,250
   3,750 REQUIRED SEPTIC TANK
4. DESIGN SEPTIC TANK = 4,000 GALLON
5. ACTUAL PERCOLATION RATE = HOLE #1 = 28 MIN. ÷
   HOLE #2 = 27.25 MIN. ÷
6. DESIGN PERCOLATION RATE = 5 MIN / INCH
7. DESIGN APPLICATION RATE FOR A 5 MIN PERC RATE = 1.
8. DESIGN LEACHING TRENCH TYPE SYSTEM FOR 225 PERSON
   DAILY FLOW OF 2250 GALLONS = 2250 GALLONS ÷ 1.20 GA
9. REQUIRED LEACHING AREA = 1,875 SQ. FT. OR 399
10. DESIGN LEACHING AREA = 1,875 SQ. FT. ÷ 4.70 # AL
    FOOT OF TRENCH WITH 36" WIDE X 24" OF STONE UN
    399 LI
    DESIGN SYSTEM = 403 LINEAL FEET X 4.7 = 1

8732/46

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF LAND RESOURCES
INDIVIDUAL SEWAGE DISPOSAL SYSTEM APPLICATION (2/79)

APPLICATION NUMBER: ~~8732/46~~

APPLICATION DATE: 10/2/87 (9/29/87)

PURPOSE OF APPLICATION: [X] NEW BUILDING CONSTRUCTION [ ] ALTERATION OF EXISTING SYSTEM [ ] REPAIR TO MALFUNCTIONING SYSTEM

SITE LOCATION — STREET — CITY/TOWN: W. KINGSTON ELEM. SCHOOL, MINISTERIAL RD., S. KINGSTOWN

PLAT NUMBER | [ ] ASSESSORS [ ] RECORDED | LOT NUMBER | LOT SIZE | WETLANDS DETERMINATION REQUEST ATTACHED? [ ] YES [X] NO

SUBDIVISION NAME | SUBDIVISION LOT NUMBER | REVIEWED BY STATE? [ ] YES [ ] NO | WATER SUPPLY [X] PUBLIC [ ] WELL

OWNER'S NAME — LAST — FIRST: TOWN OF SOUTH KINGSTOWN 053603 UNIT

MAILING ADDRESS — CITY/TOWN — ZIP CODE: 180 HIGH STREET, WAKEFIELD, 02879

BUILDING USE: SCHOOL

ANY PREVIOUS APPLICATION FOR THIS SITE? [X] YES [ ] NO APP. NO 8732-146 DATE 5/29/87

NO. DESIGN UNITS	DESIGN FLOW	TOTAL DAILY FLOW
225 PERSONS	10 GALLONS PER PERSON UNIT	2250 GALS.

REQ'D. TANK SIZE	TYPE SYSTEM
3,750 GALS.	[X] TRENCH [ ] CHAMBER [ ] BED [ ] OTHER: DESCRIBE

NUMBER OF LINES	WIDTH	LENGTH	TOTAL SQ. FEET
6	3'	63'	1891

SOIL DESCRIPTION BY STRATA - SEE REVERSE SIDE FOR CODES AND INSTRUCTIONS

DEPTH	0 TO 12"	12" TO 12'	12' TO 14'	TO
SOIL TEXTURE	LM	MS	GRAVEL	
DENSITY	LC	MC BROWN	MC TAN	
DEPTH	TO	TO	DEPTH HOLE: 10'	DEPTH IMPERVIOUS: —
SOIL TEXTURE			DATE HOLE EXCAVATED: 9/12/87	
DENSITY				

WATER TABLE DATA

	DEPTH (A)	DATE
1	DRY 10'	2/2/87
2	DRY 10'	2/13/87
3	DRY 10'	2/25/87
4		
5		

MULTIPLE READINGS

	DEPTH (B)	DATE
1		
2		
3		
4		
5		

PERCOLATION RATES

	RATE	DEPTH	DATE
1	4.1 min./in.	43"	2/2/87
2	4.32 min./in.	46"	2/2/87
3			

DESIGN PERC. RATE: 5/min/in — DESIGN APP. RATE: 1.2 GAL/SF/DAY

MINIMUM REQUIRED LEACHING AREA: 1891 S.F.

WET SEASON DESIGN DEPTH: 9 FEET — EXPLAIN HOW DETERMINED: TEST HOLE W 8732-61

The undersigned, ALFRED J. CURNOW, Engineer/Surveyor, hereby certifies that he has conducted certain percolation tests, subsoil explorations and ground water table elevation determinations on the property identified in and by this application and accompanying forms, submittals, plans and sketches; that said tests have been conducted in accordance with the rules and regulations of the Rhode Island Department of Environmental Management pertaining to individual sewage disposal systems; that he has prepared all of the aforementioned documents; and that all information on this application and accompanying forms, submittals, plans and sketches are true and accurate and represent truthfully and accurately what the information herein and the information and designs on the accompanying forms, submittals, plans and sketches purport to represent.

SIGNATURE OF ENGINEER/SURVEYOR — TITLE: P.E.

REGISTRATION NUMBER: 4546 — REPRESENTING: TOWN OF S. KINGSTOWN — TELEPHONE NO.: 789-9821

The Owner certifies that the system will be installed in strict accordance with this application and attached forms, submittals, plans and sketches. The Owner further certifies that he assumes all responsibility for the truth and accuracy of the representations hereon, and on all forms, submittals, plans and sketches attached hereto, and assumes all liability and responsibility for any improper installation of the system on this site, and agrees to hold the Department of Environmental Management harmless from any and all claims against it for any future failure of the system.

TELEPHONE NO. — Owner's Signature

DISPOSITION OF APPLICATION (ENVIRONMENTAL MANAGEMENT DEPT. USE ONLY)
THIS APPLICATION, ATTACHED PLAN AND SPECIFICATIONS ARE HEREBY

[X] APPROVED [ ] RENEWED [ ] TRANSFERRED OWNERSHIP [ ] DENIED SEE ATTACHED SHEET — PREVIOUS APP. NO.

If approved, renewed or transferred, the following applies:
Based upon the representations of the Owner, and the Owner's agents and/or servants, including the representations of the Owner's Engineer and/or surveyor, regarding the truth and accuracy of all information submitted on the application and the accompanying forms submittals, plans and sketches, this application for an individual sewage disposal system is hereby approved. The Department of Environmental Management assumes no responsibility or liability for the future safe operation or maintenance of the aforesaid system, of the fitness or suitability of this system to this site, nor does it assume any responsibility for the accuracy and truth of the Owner's, or the Owner's agents' and/or servants' representations. This approval is subject to future suspension and revocation in the event that subsequent examination reveals any of the data indicated on any application, form, submittal, plan or sketch to be incorr[illegible] or non-compliance with the regulations, or in the event that the system discharges sewage on or to the surface of the ground, or, on or to any watercourse or, fails to operate satisfactorily in any other manner.

This approval expires in 1 year if water supply is individual well, or in 2 years if public. This permit is valid for owner signed above only, change of ownership requires new permit.

RECEIVED OCT 28 1987 DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

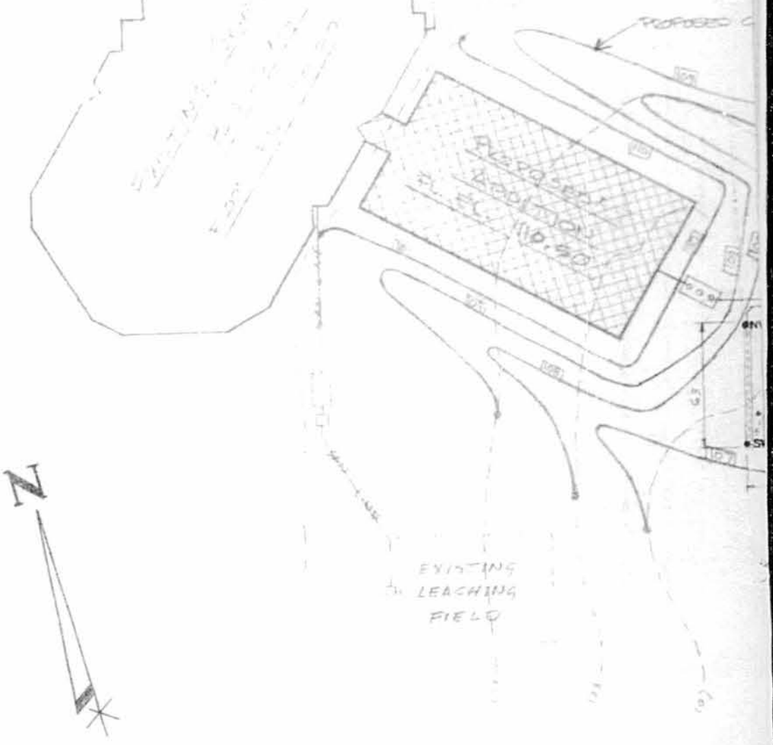
IMPORTANT: NOTE (Circled) ADDITIONAL TERMS OF APPROVAL

(A) Bottom of leaching area excavation must be inspected by the Dept. of Environmental Management prior to placement of any gravel or stone.
B. Excavation work on leaching area must be performed during dry season only (June-November)
(C) It is essential that all distances and elevations be accurately set prior to the start of construction.
D. Approved per variance Board/Appeal Decision dated _____ all requirements, conditions and stipulations of which shall be strictly adhered to.
(E) All stages of construction must be supervised by the system designer, and a written statement of findings submitted to this office.
(F) The discharge of laundry wastes into this system is prohibited.
G. Other:

SIGNATURE OF ENVIRONMENTAL MANAGEMENT DEPT. OFFICIAL: Vincent D. Matteo — DATE: 10/28/87 — CONTROL NO: 54039

DEPT. OF ENVIRONMENTAL MANAGEMENT

W EXISTING 6" A.C. WATER LINE



SITE PLAN
SCALE 1" = 50'

B.M. = FLOOR OF EXISTING SCHOOL BUILDING EL. 110.50

PROPERTY LINE

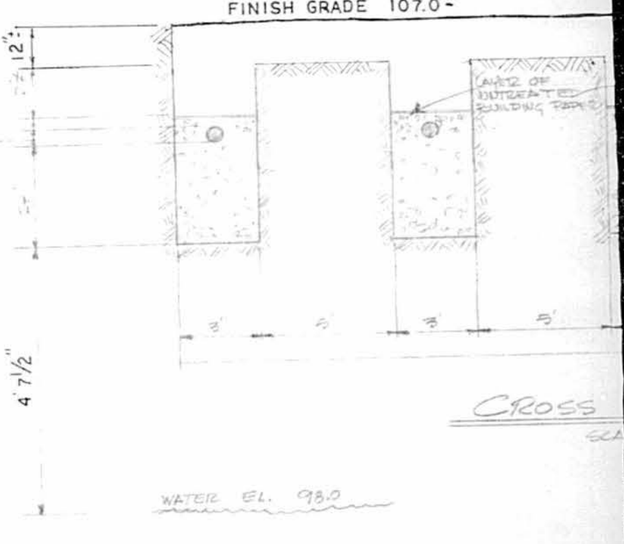
SONS / 200M
L / DAY / PERSON
Y FLOW

GINCHES = 4.66 MIN / INCH
GINCHES = 4.04 MIN / INCH

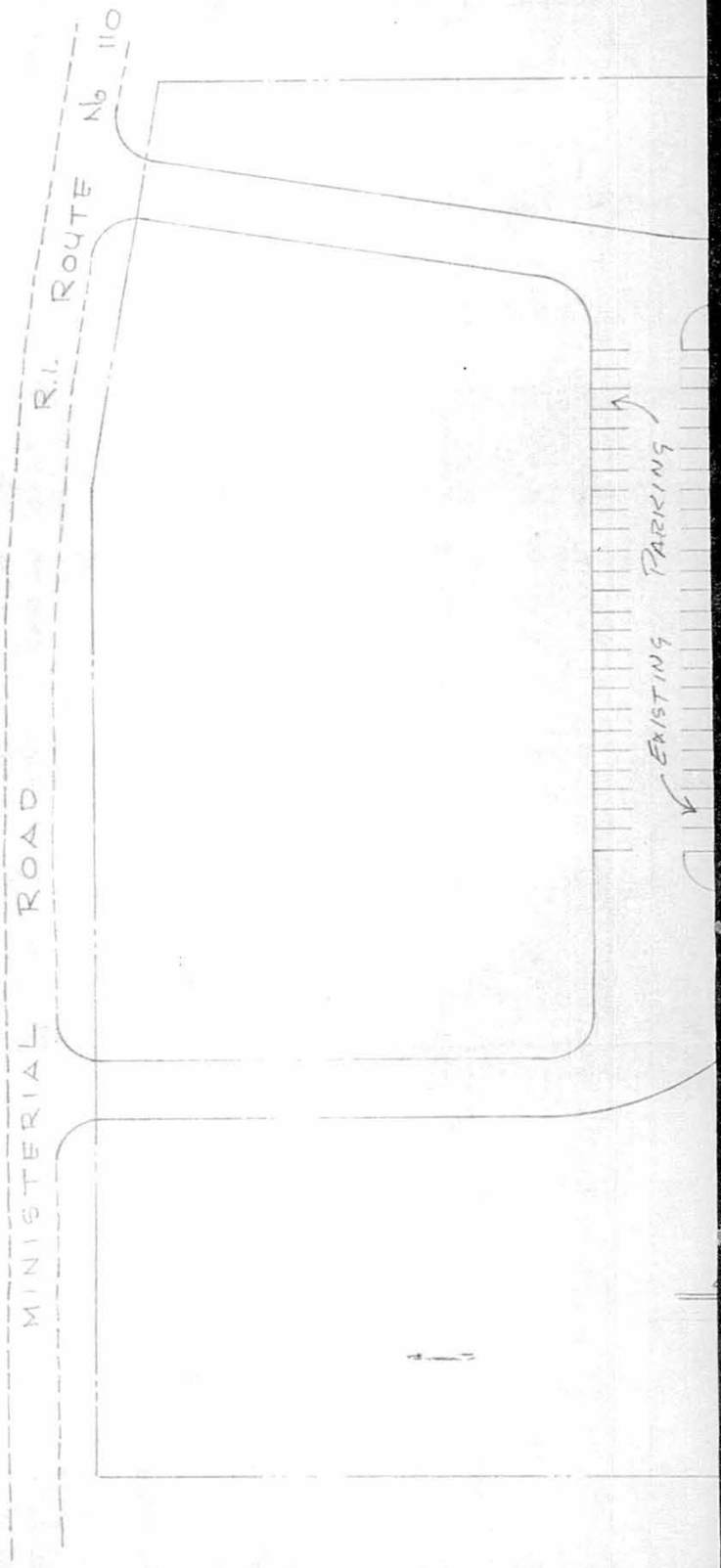
20 GAL / SQ. FT. / DAY
US WITH A TOTAL
L / SQ. FT. = 1,875 ϕ

9 LINEAL FEET

LLOWED PER LINEAL
NDER PIPES =
INEAL FEET
891 SQ. FT.



CROSS



DESIGN NOTES:

1. SYSTEM DESIGNED FOR 225 PERSONS 9 ROOMS X 25 PERS
2. SCHOOL ADDITION NO GYMNASIUM, CAFETERIA, OR SHOWERS 10 GA
   TOTAL DAILY FLOW = 2250 GALLONS
3. REQUIRED SEPTIC TANK = 1,500 GAL PLUS 100% OF DAIL
   + 2,250
   3,750 REQUIRED SEPTIC TANK
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7. DESIGN APPLICATION RATE FOR A 5 MIN PERC RATE = 1.
8. DESIGN LEACHING TRENCH TYPE SYSTEM FOR 225 PERSON
   DAILY FLOW OF 2250 GALLONS = 2250 GALLONS ÷ 1.20 GA
9. REQUIRED LEACHING AREA = 1,875 SQ. FT. OR 399
10. DESIGN LEACHING AREA = 1,875 SQ. FT. ÷ 4.70 # AL
    FOOT OF TRENCH WITH 36" WIDE X 24" OF STONE UN
    399 LI
    DESIGN SYSTEM = 403 LINEAL FEET X 4.7 = 1

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF LAND RESOURCES
INDIVIDUAL SEWAGE DISPOSAL SYSTEM APPLICATION (2/79)

APPLICATION NUMBER: 8732-146

APPLICATION DATE: 5/29/87

PURPOSE OF APPLICATION: [X] NEW BUILDING CONSTRUCTION [ ] ALTERATION OF EXISTING SYSTEM [ ] REPAIR TO MALFUNCTIONING SYSTEM

SITE LOCATION: STREET: MINISTERIAL ROAD (WEST KINGSTOWN ON TOWNSEND MAP) SOUTH KINGSTOWN

PLAT NUMBER: [ ] ASSESSORS [ ] RECORDED | LOT NUMBER | LOT SIZE | WETLANDS DETERMINATION REQUEST ATTACHED? [ ] YES [ ] NO

SUBDIVISION NAME: — | SUBDIVISION LOT NUMBER: — | REVIEWED BY STATE? [ ] YES [X] NO | WATER SUPPLY [X] PUBLIC [ ] WELL

OWNER'S NAME: LAST: TOWN OF SOUTH KINGSTOWN | FIRST | INIT

MAILING ADDRESS: C/O KIRK ANDREWS 63 SOCKANOSSETT ROAD CRANSTON, RI | ZIP CODE: 02920

BUILDING USE: SCHOOL

ANY PREVIOUS APPLICATION FOR THIS SITE? [ ] YES [X] NO APP. NO _____ DATE _____

NO. DESIGN UNITS	DESIGN FLOW	TOTAL DAILY FLOW
225 PERSONS	10 GALLONS PER PERSON UNIT	2250 GALS

REQ'D. TANK SIZE	TYPE SYSTEM
3,750 GALS	[X] TRENCH [ ] CHAMBER [ ] BED [ ] OTHER: DESCRIBE

NUMBER OF LINES	WIDTH	LENGTH	TOTAL SQ. FEET
6	3'	63'	1891 ft

SOIL DESCRIPTION BY STRATA - SEE REVERSE SIDE FOR CODES AND INSTRUCTIONS

DEPTH	0 TO 4'	4" TO 3.5	3.5 TO 10	TO
SOIL TEXTURE	LAM	SL	CS G	
DENSITY	LC BRWN	MC BROWN	MC TAN	
DEPTH	TO	TO	DEPTH HOLE: 10'	DEPTH IMPERVIOUS: —
SOIL TEXTURE			DATE HOLE EXCAVATED: 2/2/87	
DENSITY				

WATER TABLE DATA

	DEPTH (A)	DATE
1	Dry 10'	2/2/87
2	Dry 10'	2/13/87
3	Dry 10'	2/25/87
4		
5		

MULTIPLE READINGS

	DEPTH (B)	DATE
1		
2		
3		
4		
5		

PERCOLATION RATES

	RATE	DEPTH	DATE
1	4.10 min/in	43"	2/2/87
2	4.52 min/in	46"	2/2/87
3			

DESIGN PERC. RATE: 5 min/in | DESIGN APP. RATE: 1.20 GAL/SQ FT/DAY

MINIMUM REQUIRED LEACHING AREA: 1891 ft

WET SEASON DESIGN DEPTH: 9 FEET | EXPLAIN HOW DETERMINED: TEST HOLE - W 8732-61

The undersigned William D. Dowdell, P.E. Engineer/Surveyor, hereby certifies that he has conducted certain percolation tests, subsoil explorations and ground water table elevation determinations on the property identified in and by this application and accompanying forms, submittals, plans and sketches; that said tests have been conducted in accordance with the rules and regulations of the Rhode Island Department of Environmental Management pertaining to individual sewage disposal systems; that he has prepared all of the aforementioned documents; and that all information on this application and accompanying forms, submittals, plans and sketches are true and accurate and represent truthfully and accurately what the information hereon and the information and designs on the accompanying forms, submittals, plans and sketches purport to represent.

SIGNATURE OF ENGINEER/SURVEYOR: William D. Dowdell, P.E. | TITLE: P.E.

REGISTRATION NUMBER: RPE 4217 | REPRESENTING: Self | TELEPHONE NO.: 364-1027

The Owner certifies that the system will be installed in strict accordance with this application and attached forms, submittals, plans and sketches. The Owner further certifies that he assumes all responsibility for the truth and accuracy of the representations hereon, and on all forms, submittals, plans and sketches attached hereto, and assumes all liability and responsibility for any improper installation of the system on this site, and agrees to hold the Department of Environmental Management harmless from any and all claims against it for any future failure of the system.

TELEPHONE NO. _____ Owner's Signature

DISPOSITION OF APPLICATION (ENVIRONMENTAL MANAGEMENT DEPT. USE ONLY) THIS APPLICATION ATTACHED PLAN AND SPECIFICATIONS ARE HEREBY:

[X] APPROVED [ ] RENEWED [ ] TRANSFERRED OWNERSHIP [ ] DENIED SEE ATTACHED SHEET | PREVIOUS APP. NO.

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Based upon the representations of the Owner, and the Owner's agents and/or servants, including the representations of the Owner's Engineer and/or Surveyor, regarding the truth and accuracy of all information submitted on the application and the accompanying forms, submittals, plans and sketches, this application for an individual sewage disposal system is hereby approved. The Department of Environmental Management assumes no responsibility or liability for the future safe operation or maintenance of the aforesaid system, or the fitness or suitability of this system to this site, nor does it assume any responsibility for the accuracy and truth of the Owner's, or the Owner's agents' and/or servants' representations. This approval is subject to future suspension and revocation in the event that subsequent examination reveals any of the data indicated on any application, form, submittal, plan or sketch to be incorrect, or not in compliance with the regulations, or in the event that the system discharges sewage on or to the surface of the ground, or, on or to any watercourse or, fails to operate satisfactorily in any other manner.

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B. Excavation work on leaching area must be performed during dry season only (June-November).

(C) It is essential that all distances and elevations be accurately set prior to the start of construction.

D. Approved per variance Board/Appeal Decision dated _____ all requirements, conditions and stipulations of which shall be strictly adhered to.

(E) All stages of construction must be supervised by the system designer, and a written statement of findings submitted to this office.

(F) The discharge of laundry wastes into this system is prohibited.

G. Other:

SIGNATURE OF ENVIRONMENTAL MANAGEMENT DEPT. OFFICIAL: Vincent D. Mattera | DATE: 6/18/87 | CONTROL NO.: 65980

APPLICANT

Town of South Kingstown

Water Suppliers

Yawgoo Pond
Hundred Acre Pond
Hurry Acre Pond
Indian Lake
Worden Pond
Tucker Pond
Long Pond
Factory Pond
Trustom Pond
Green Hill Pond
Card Pond
Potter Pond
Point Judith Pond
Sand Hill Cove
Narrow River
Chickasheen Brook
Chipuxet River
Horn Brook
White Rock Brook
Mink Brook
Indian Run
Pawcatuck River
SOUND
ISLAND
BLOCK

138 2 108 110 1

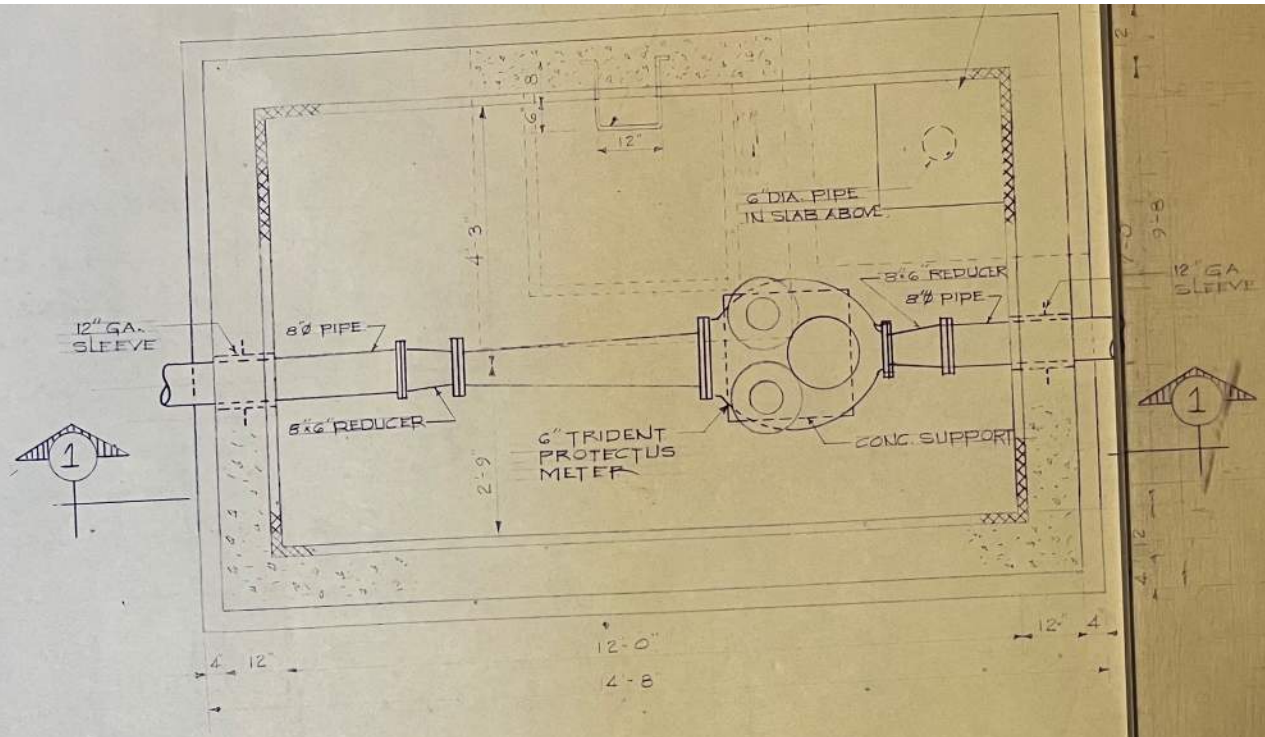
N W E S

0 0.5 1 1.5 2 Miles

- Town of South Kingstown - Middlebridge
- Town of South Kingstown - South Shore
- University of Rhode Island
- Veolia Water Company
- Kingston Water District

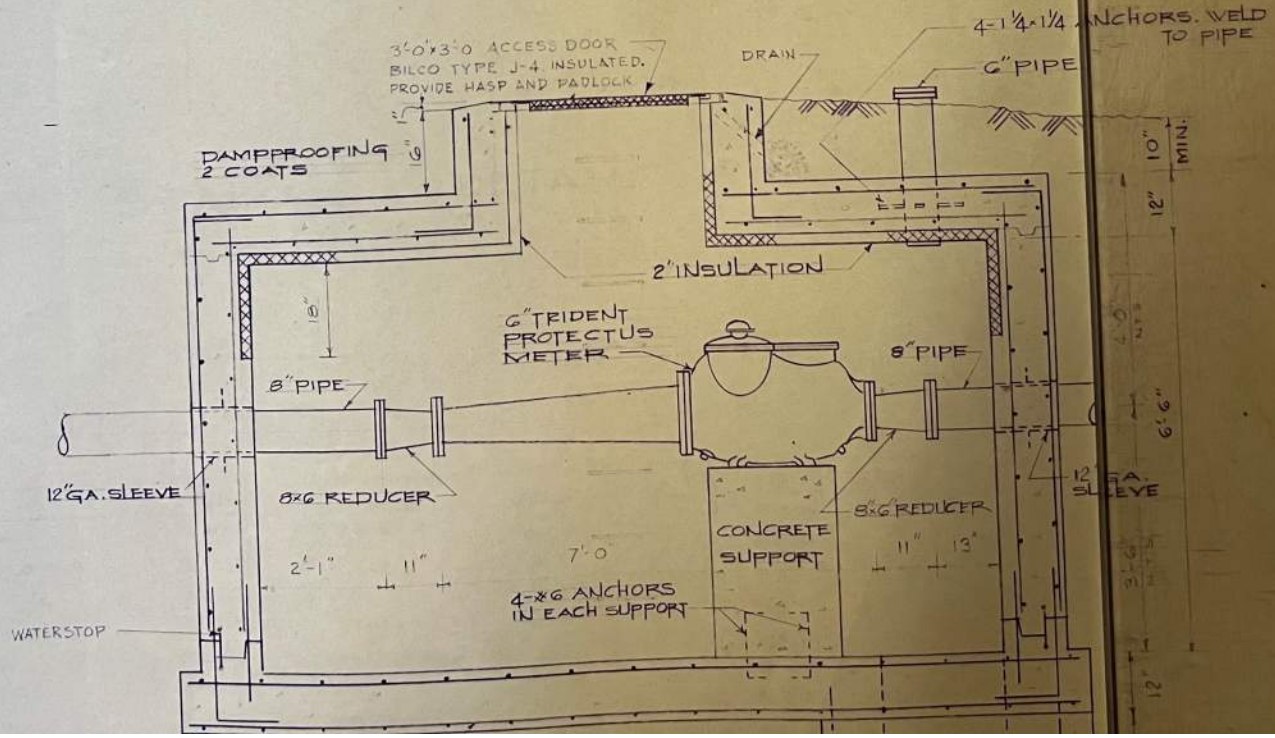
Geographic Information System

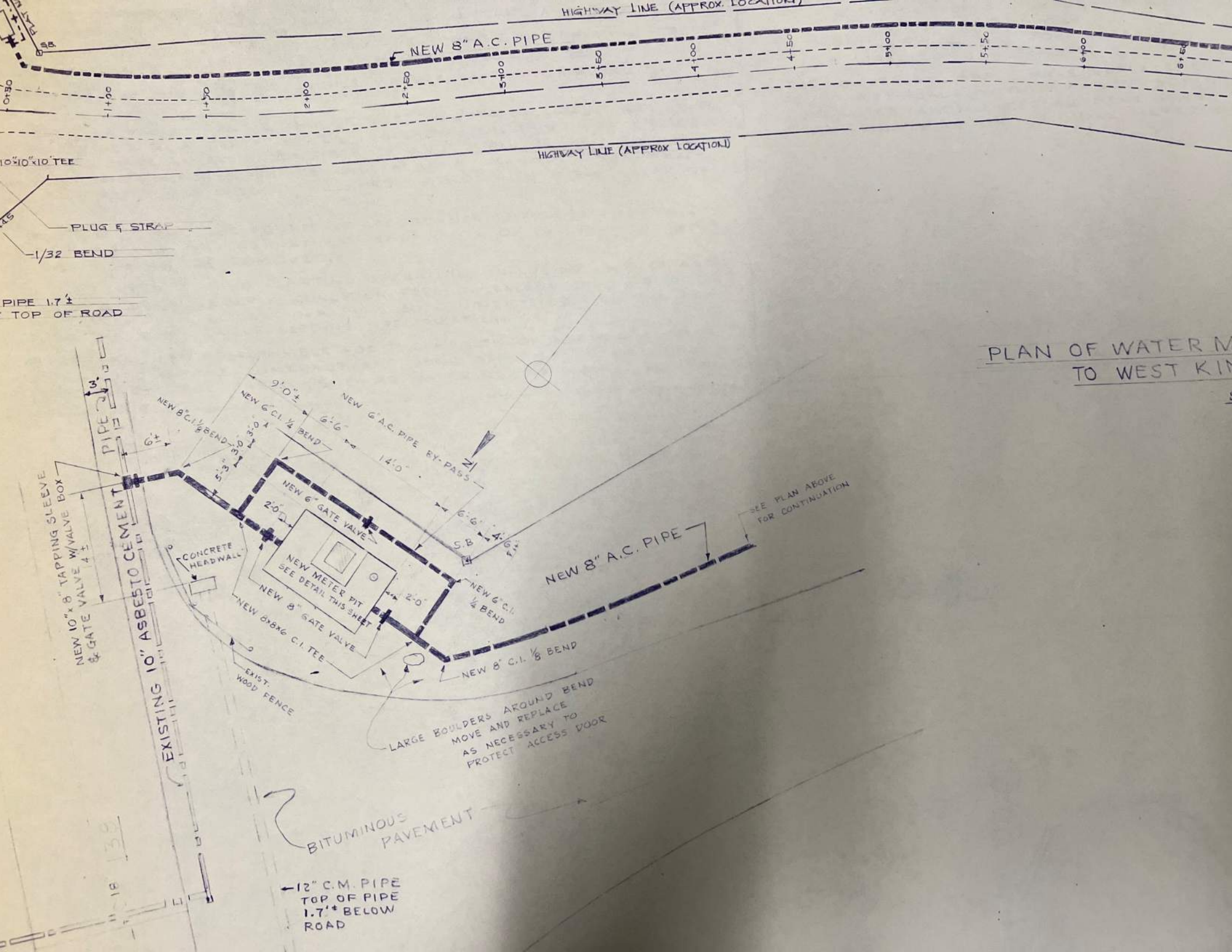
PS22-12 cpb 7/22



PLAN- METER PIT & PIPING

SCALE: 1/2" = 1'-0"




HIGHWAY LINE (APPROX. LOCATION)
NEW 8" A.C. PIPE
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
HIGHWAY LINE (APPROX LOCATION)
10"x10"x10" TEE
PLUG & STRAP
1/32 BEND
PIPE 1.7'±
TOP OF ROAD
PLAN OF WATER M
TO WEST KI
NEW 8" C.I. 1/8 BEND
NEW 6" C.I. 1/4 BEND
9'0"±
NEW 6" A.C. PIPE BY-PASS
6'6"
14'10"
N
NEW 6" GATE VALVE
2'0"
NEW METER PIT
SEE DETAIL THIS SHEET
NEW 8" GATE VALVE
NEW 8x8x6 C.I. TEE
CONCRETE HEADWALL
NEW 10"x 8" TAPPING SLEEVE & GATE VALVE W/VALVE BOX 4'±
EXISTING 10" ASBESTO CEMENT PIPE
EXIST. WOOD FENCE
NEW 8" A.C. PIPE
SEE PLAN ABOVE FOR CONTINUATION
NEW 8" C.I. 1/8 BEND
LARGE BOULDERS AROUND BEND MOVE AND REPLACE AS NECESSARY TO PROTECT ACCESS DOOR
BITUMINOUS PAVEMENT
12" C.M. PIPE TOP OF PIPE 1.7'± BELOW ROAD

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

May 12, 2023

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 35, 70, 140, 210

Feet: 0, 100, 200, 400, 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties
Survey Area Data: Version 22, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Jul 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BhB	Bridgehampton silt loam, 3 to 8 percent slopes	10.1	76.5%
HkA	Hinckley loamy sand, 0 to 3 percent slopes	0.9	7.0%
HkC	Hinckley loamy sand, 8 to 15 percent slopes	0.0	0.3%
MmA	Merrimac fine sandy loam, 0 to 3 percent slopes	2.2	16.2%
Totals for Area of Interest		**13.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

State of Rhode Island: Bristol, Kent, Newport, Providence, and Washington Counties

BhB—Bridgehampton silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9ltk
Elevation: 0 to 810 feet
Mean annual precipitation: 44 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 120 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Bridgehampton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bridgehampton

Setting

Landform: Outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty loess over sandy and gravelly glaciofluvial deposits derived from granite and gneiss

Typical profile

Ap - 0 to 8 inches: silt loam
B - 8 to 41 inches: silt loam
2C - 41 to 60 inches: gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY024NY - Well Drained Eolian Outwash
Hydric soil rating: No

Minor Components

Agawam
Percent of map unit: 3 percent
Landform: Outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Enfield
Percent of map unit: 3 percent
Landform: Terraces, outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tisbury
Percent of map unit: 2 percent
Landform: Outwash plains, terraces
Down-slope shape: Linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Scio
Percent of map unit: 2 percent
Landform: Terraces, lakebeds
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

HkA—Hinckley loamy sand, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2svm7
Elevation: 0 to 1,420 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

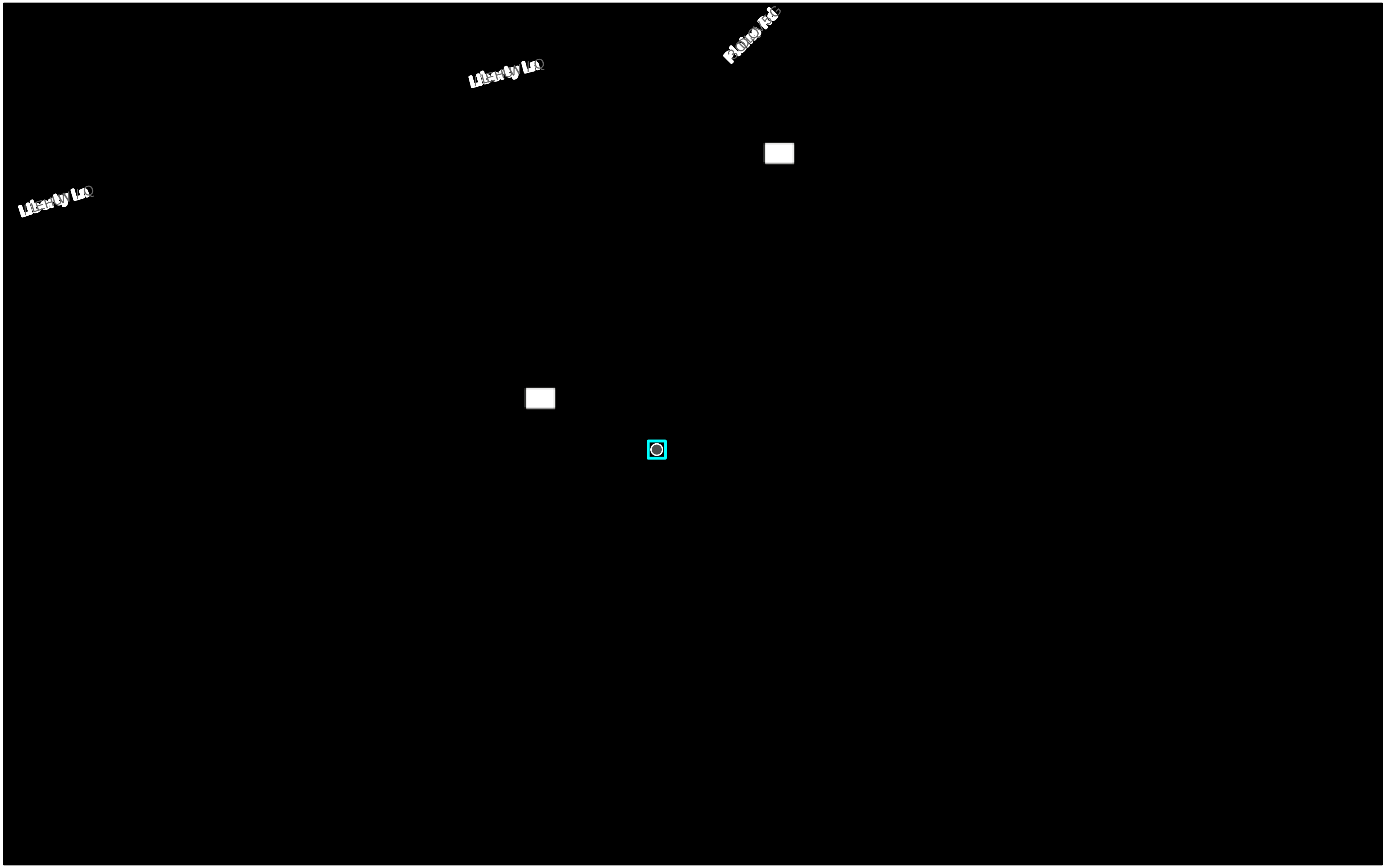
Description of Hinckley

Setting
Landform: Outwash terraces, outwash plains, kame terraces, outwash deltas
Landform position (three-dimensional): Tread

FEMA


Zone AE
AB
97.2 FEET
97.4 FEET
97.1 FEET
AC
AB
Zone AE
AA
97 FEET
AA
Z
96.9 FEET
Chipuxet River
Town of South Kingstown
445407
AREA OF MINIMAL FLOOD HAZARD
Zone X
44009C0185J
eff. 4/3/2020
Zone AE
96.7 FEET
FLOODWAY
Zone AE
Zone AE
Y
96.6 FEET
X

5,'(0 :HE 0DS



30

■ 5, 0XQLFLSDO %RXQGDULHV	/RFDO	5HJLRQDO	3URWHFWHG $UHDV 'DWDEDVH 86 'HVLJQDWLRQ
1DWLRQDO &RQVHUYDWLRQ (DVHPHQW 'DWD	1$	6WDWH	5,)HH	3URFODPDWLRQ
)HGHUDO	1*2	(DVHPHQW	

PL

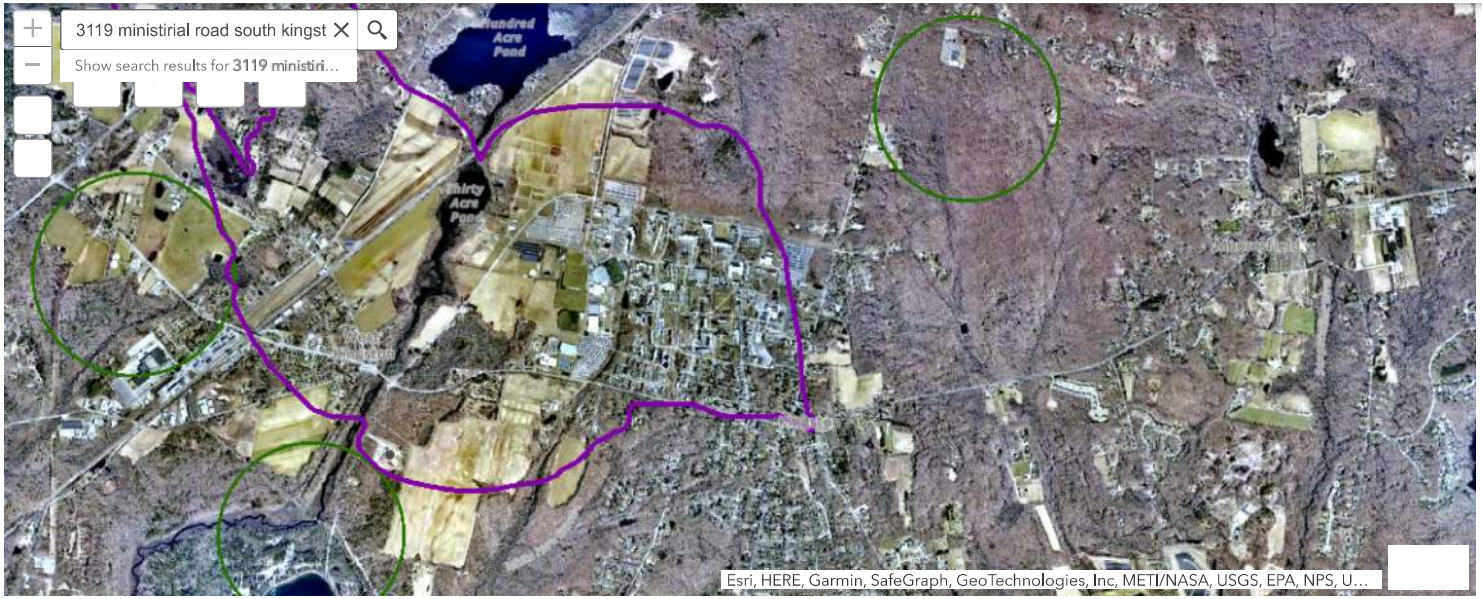
NP

5,'(0 (VUL &RPPXQLW\ 0DSV &RQWULEXWRUV 0DVV*,
0LFURVRIW (VUL +(5(*DUPLQ 6DIH*UDSK *HR7HFK

(VUL &RPPXQLW\ 0DSV &RQWULEXWRUV 0DVV*,6 k 2SHQ6WUHHW0DS 0LFURVRIW (VUL +(5(*DUPLQ 6DIH*UDSK *HR7HFKQRORJLHV ,QF 0(7, 1$6$ 86*6 (3$ 136

RIDEM Environmental Resource Map

Back to the Map Room



Layer List

0.4mi

-71.509 41.492 Degrees

RI Municipal Boundaries | CWHPA | NCWHPA | Aerial Photo (Spring 2023)

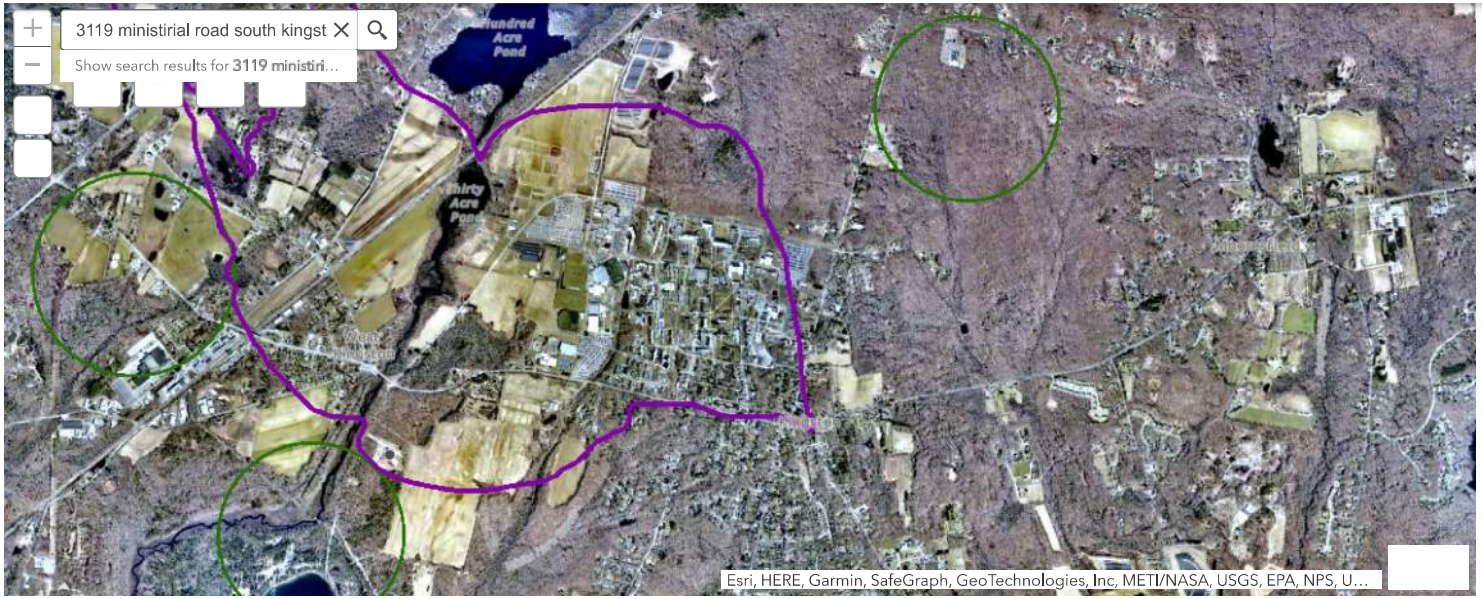
Options | Filter by map extent | Zoom to | Clear selection | Refresh

OBJECTID	Area_Acres	Shape_Leng	Shape	Shape.STArea()	Shape.STLength()
19	1,842.94	53,552.77		80,275,836.74	53,552.21

1 features 0 selected

RIDEM Environmental Resource Map

Back to the Map Room



Layer List

0.4mi

-71.551 41.486 Degrees

RI Municipal Boundaries | CWHPA | NCWHPA | Aerial Photo (Spring 2023)

Options | Filter by map extent | Zoom to | Clear selection | Refresh

OBJECTID	Shape_Leng	Area_Acres	Shape	Shape.STArea()	Shape.STLength()
28	11,068.70	223.81		9,746,698.95	11,068.02
30	12,063.72	265.87		11,578,530.50	12,063.03
35	10,995.56	220.87		9,618,752.63	10,994.89

3 features 0 selected

Exhibit 29

South Kingstown HS
Energy Star Report

ENERGY STAR® Statement of Energy Design Intent (SEDI)[1]

South Kingstown HS

97

ENERGY STAR® Design Score[2]

Primary Property Type: K-12 School
Gross Floor Area (ft²): 150,081
Estimated Date of Certification of Occupancy: _____

Date Generated: June 05, 2023

1. This form is required when applying for Designed to Earn the ENERGY STAR recognition. It was generated from ENERGY STAR Portfolio Manager.
2. The ENERGY STAR 1 – 100 Score is based on total annual Source Energy. To be eligible for Designed to Earn the ENERGY STAR recognition you must score at least 75.

Property & Contact Information for Design Project

Property Address	**Project Architect**	**Owner Contact**
South Kingstown HS 215 columbia st wakefield, Rhode Island 02879	____ _____ , (____)____-_____ _____	____ _____ , (____)____-_____ _____
Property ID: 26960721	**Architect Of Record**	**Property Owner**
	_____ _____ _____, ____ _____ (____)____-_____	_____ , (____)____-_____

Estimated Design Energy

Fuel Type	Usage	Energy Rate ($/Unit)
Natural Gas	517,950 kBtu (thousand Btu)	$ 0.11/kBtu (thousand Btu)
Electric - Grid	625,744 kWh (thousand Watt-hours)	$ 0.94/kWh (thousand Watt-hours)

Estimated Design Use Details

This Use Detail is used to calculate the 1-100 ENERGY STAR Score.

K-12 School	
Number of Workers on Main Shift	50
Percent That Can Be Cooled	80
Number of Computers	80
Gymnasium Floor Area	12,500 Sq. Ft.
Number of Walk-in Refrigeration/Freezer Units	3
Cooking Facilities	Yes
School District	
Student Seating Capacity	1,650
Weekend Operation	No
High School	Yes
Gross Floor Area Used for Food Preparation	2,095 Sq. Ft.
Percent That Can Be Heated	80
Gross Floor Area	150,081 Sq. Ft.
Months in Use	9

Design Energy and Emission Results

Metric	Design Project	Median Property	Estimated Savings
ENERGY STAR Score (1-100)	**97**	50	N/A
Energy Reduction (from Median)(%)	**-55.4**	0	N/A
Source Energy Use Intensity (kBtu/ft²/yr)	**43**	97	54
Site Energy Use Intensity (kBtu/ft²/yr)	**17**	39	22
Source Energy Use (kBtu/yr)	**6,521,955**	14,611,067	8,089,112
Site Energy Use (kBtu/yr)	**2,652,988**	5,943,462	3,290,474
Energy Costs ($)	**643,102**	1,440,734	797,632
Total (Location-Based) GHG Emissions (Metric Tons CO2e)	**178**	400	222

Designed to Earn the ENERGY STAR: Application Checklist

This section is only required if you are using this document to apply for Designed to Earn the ENERGY STAR. All design projects that achieve an EPA energy performance score of 75 or higher are eligible for this certification.

1) Does your property type match the function or use of a property that's eligibility to receive an ENERGY STAR design score? ☐ **Yes** ☐ **No/Not Sure**

If you are not sure your project is eligible for an ENERGY STAR design score, please describe the property's major functions or use:

2) Is the design project at least 95% complete with construction documents? ☐ **Yes** ☐ **No**

If no, please explain:

3) Is the property currently unoccupied and not yet generating energy bills? ☐ **Yes** ☐ **No**

4) Do energy calculations account for the whole building intended operations and all energy sources? ☐ **Yes** ☐ **No**

5) Is the Architect of Record (AOR) applying for ENERGY STAR partnership? ☐ **Yes** ☐ **No**

6) Was the design record created in the owner's Portfolio Manager account? ☐ **Yes** ☐ **No**

7) Are you seeking other qualifications for this design project? ☐ **Yes** ☐ **No**

If so, please select all that apply:

- ☐ AIA 2030 Commitment
- ☐ Architecture 2030 Challenge
- ☐ Federal, State or Local Disclosure Ordinance
- ☐ Green Globes
- ☐ LEED
- ☐ Other, please indicate: _____

Professional Verification

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____Date: _____

Verifying Professional

____ _____
,
(____)____-_____
_____

Note: When applying for the ENERGY STAR Designed to Earn, the signature of the Verifying Professional must match the stamp.

Verifying Professional Stamp (if applicable)

I agree to adhere to the ENERGY STAR Identity Guidelines when using the Designed to Earn the ENERGY STAR recognition graphic in association with this project.

Architect of Record Acknowledgement

As the Architect of Record representative, I confirm that the information on this SEDI is true and accurate to the best of my knowledge. It is our best estimate for all energy use of specified systems and processes but does not guarantee the operational performance of this building. Instead, this project has been specified to achieve Designed to Earn the ENERGY STAR recognition in an effort to assist the Owner/Developer in meeting their operational performance goal for the building to earn ENERGY STAR certification.

Signature: _____

Date: _____

Building Owner/Developer Acknowledgement

As the Building Owner/Developer representative, I concur that this project be nominated for Designed to Earn the ENERGY STAR recognition. Our organization understands the importance of measuring actual energy use in Portfolio Manager after receiving the Certificate of Occupancy to verify that this property is performing as intended. We understand that once the building earns an ENERGY STAR score of 75 or higher, it may be eligible for ENERGY STAR certification.

Signature: _____

Date: _____

Exhibit 30

South Kingstown HS Photovoltaic Report

HALEY & ALDRICH, INC.
465 Medford St.
Suite 220
Boston, MA 02129-1400
617.886.7400

MEMORANDUM

24 May 2023
File No. 0208155-000

TO: Studio Jaed
Mr. Philip Conte, AIA, NCARB

FROM: Haley & Aldrich, Inc.
E. Quinn Lewis, P.E. (NY)
John R. Kastrinos, P.G. (PA)

SUBJECT: Feasibility Assessment Narrative
Ground-Source Heat Exchange (GSHE) System
South Kingstown High School Project
Wakefield, Rhode Island

In accordance with the Haley & Aldrich, Inc. (Haley &Aldrich) proposal dated 24 March 2023 (authorized on 24 April 2023), this memorandum summarizes feasibility-level considerations for a ground-source heat exchange (GSHE) installation. These considerations are based on our review of publicly available information, concept level site plans provided by StudioJAED (SJ), whom is serving as the project lead and mechanical-electrical-plumbing (MEP) engineer, and understanding that the proposed building size, location, and potential GSHE borefield location are still under development. Haley & Aldrich understands that the GSHE system would be integrated into the proposed heating, ventilation, and air conditioning (HVAC) systems to serve the proposed South Kingstown High School (SKHS) project located at 215 Columbia Street, Wakefield, Rhode Island.

Scope of Work

To support development of the GSHE program, Haley & Aldrich's feasibility assessment included the following:

- Reviewing publicly available information on geologic and hydrogeologic conditions proximal to the site;
- Summarizing potential applicable state and local permitting requirements related to closed-loop GSHE system installation and operation;
- Using available information and engineering judgment to conduct conceptual-level modeling of alternative borefield configurations. The number of boreholes, spacing, and depth were adjusted based on the schematic-level heating and cooling loads, which were prorated based on building square footage from a similar project being completed by SJ in Newport RI.

GSHE Feasibility Assessment

HYDROGEOLOGIC SETTING

Depth to bedrock is an important consideration for well installation and trenching for pipe installation. Casing or drilling mud is required to keep the borehole open through the overburden soils; increasing depth to bedrock requires increased lengths of temporary or permanent casing. Conversely, on sites where depth to bedrock is shallow, blasting or ripping may be required to enable installation of piping at a consistent, level elevation across the site.

Bedrock geology affects both drilling production rates and associated costs and schedule. At the feasibility stage, important considerations include rock type and typical well yields. Rock type affects drilling progress, potential deviations from vertical that can run the risk of damaging wells in the network by intersecting boreholes, and the potential for borehole collapse due to highly fractured and/or weathered zones. Well yields reflect groundwater inflows. When high inflows (i.e., exceeding 100 gallons per minute [gpm]) are encountered above design well depths, the drilling contractor frequently needs to employ additional methods to control the inflow or advance the borehole to the design depth while maintaining acceptable drilling production rates. Inflows accordingly affect the cost of the system and the schedule for installation. Observations of site hydrogeology, based on available published information, include:

1. **Depth to bedrock**: Regionally bedrock depth ranges from surface outcrops to approximately 15-30 ft below ground surface (bgs) based on available geologic mapping of the area. Based on this information, GSHE closed loops would include approximately 25 to 40 ft of casing through the overburden and be completed “open-hole” in the underlying bedrock. Should areas be encountered with shallow bedrock that would obstruct GSHE horizontal piping installations in the proposed borefield areas, this may require bedrock-blasting or ripping.

2. **Bedrock geology (rock type)**: The site is within the Esmond-Dedham formation, located in the West Bay Area. Based on published information, the formation comprises a pale to dark gray, generally medium to coarse-grained augen granite gneiss. Depending on rock hardness, granites are generally favorable for drilling for GSHE systems as they are less prone to borehole collapse, and high groundwater inflows are generally sporadic and confined to zones with interconnected open fractures. Granites also have favorable thermal conductivity, depending largely on their quartz content.

3. **Typical bedrock well yields**: Bedrock well yields vary widely, which is typical of fractured bedrock, and typically range from 20 to 30 gpm or less. This is based on our experience with drilling GSHE boreholes at a project site in Middletown, Rhode Island, in which 3 to 13 gpm was encountered while drilling approximately 500 ft deep boreholes in shale bedrock and an information exchange (non-site-specific) with a Rhode Island licensed well driller familiar with drilling conditions in the Newport and Middletown areas. Though yields are difficult to predict, drillers installing GSHE systems in fractured-rock settings must be prepared to advance the boreholes through higher inflow zones, if encountered, to achieve the design borehole depth, and manage water generated by drilling. Methods to advance the borehole through these

transmissive zones include casing or grouting off inflow zones or applying supplemental air and pressure through compressors and boosters.

4. **Groundwater Classification:** The groundwater at the project site is designated as a GA groundwater resource, which is known or presumed to be suitable for drinking water use without treatment. Any work shall not impair the groundwater as a source of drinking water, nor shall it adversely affect other beneficial uses of the groundwater.

SITE CONDITIONS

Haley & Aldrich reviewed the site limits via Google Earth, the Rhode Island Geographic Information System (GIS) interactive mapping system, and the conceptual site plans provided by SJ in March 2023. It appears that drill rig access to the current existing high school area, which is understood to the potential future location of a geothermal borefield, could be gained from Columbia Street and access roads surrounding the existing building. Additional on-site field reconnaissance is required to further assess drill rig accessibility.

Other conditions that would require additional considerations, should the GSHE program advance, would include understanding the extent of the below grade portion of the planned existing building demolition, and future subsurface utilities or features (drainage, irrigation, electrical, etc.) to be located under the new athletic fields. Existing foundations and abandoned underground utilities that may remain after demolition could affect advancing casing through the overburden soils and installing the horizontal piping network to interconnect the vertical boreholes.

ALTERNATIVE GSHE DESIGNS AND SELECTION FOR GSHE FEASIBILITY STUDY

Both closed- and open-GSHE systems are typically considered during the feasibility assessment phase of a project. Open-loop systems, which in the Northeast typically are standing-column wells (SCWs) drilled to depths of approximately 1,000 to 1,500 ft, pump and circulate groundwater to transfer thermal energy between the ground and the building. Thermal exchange occurs as the returning water travels along the borehole to the openings at the bottom of the shroud. Closed-loop systems exchange thermal energy by circulating fluids in closed piping, typically installed in bedrock, such that groundwater is not pumped from or recharged to the subsurface. In both types of systems, a heat pump rejects or extracts thermal energy to/from the fluid to condition the building. SCWs typically provide 5 to 10 times the thermal exchange capacity of closed-loop boreholes but often require additional permitting for aquifer protection or discharge of system “bleed” water.

SCW installation costs are significantly higher on a per well basis (on the order of 5 to 10 times) than closed-loop systems, and SCW operation and maintenance costs are typically higher due to requirements for down-hole pumps, instrumentation, electrical services, and potential issues with recovered/recirculated groundwater quality affecting the well pump, heat pump, or both. SCW pumps must be periodically removed for maintenance or replacement using a hoist rig.

Closed-loop boreholes typically utilize high-density polyethylene (HDPE) single “U”-bend systems, consisting of a two-pipe supply and return arrangement, or double (Quad) “U”-bend systems consisting

of a four pipe (two supply, two return) arrangement, both installed at depths of 400 to 600 ft below grade. Closed-loop boreholes are less expensive to drill than SCWs. Once the borehole is drilled to depth and the U-bend is inserted, the borehole is sealed with thermally-enhanced grout around the U-bend. In closed loops, the GSHE piping is connected from the wellhead to horizontal circuit piping at the top of the borehole. The circuit piping is near the ground surface with horizontal piping connecting each borehole to the building, typically in a manifolded arrangement. Once the borehole is completed, it does not need to be accessed for maintenance except in the unlikely event of a break in the piping. Mechanical components associated with the fluid circulation (such as pumps, air separators, instrumentation) are typically located in the building mechanical room, which provides greater accessibility for operations and maintenance.

Based on potential technical, financial, and operational considerations, local drilling conditions, and Haley & Aldrich's experience with both open- and closed-loop GSHE systems, boreholes drilled to approximately 500 ft completed with Quad (double) closed-loop U-bends spaced at 20 ft on-center were used to support development of this Feasibility Study.

PERMITTING

Closed-loop systems are not regulated as water supply wells based on information provided by Rhode Island Department of Environmental Management and the Rhode Island Board of Health.

CONCEPT-LEVEL BOREFIELD MODELING

Bore-field modeling results for four GSHE options are summarized in Table 1. Based on work conducted by SJ at the Rogers High located in Newport RI, Haley & Aldrich utilized the following concept-level building heating and cooling loads for the SKHS project that were prorated based on square footage and similar use from the Rogers High school loads, monthly loads derived by this method are summarized in Table 2:

- Peak Heating: 4,755 kBH
- Annual Heating: 2,430,600 kBtu
- Peak Cooling: 311 tons
- Annual Cooling: 1,605,200 kBtu

Ground-Loop Design (GLD) software was used to model ground thermal exchange options. The modeled GSHE options were as follows:

1. GSHE providing 100 percent building heating and cooling;
2. GSHE providing 100 percent of the cooling loads and 75 percent heating, with 25 percent supplemental heating provided by the mechanical system.

This initial concept-level modeling simulated GSHE loop fluids circulating water only, and water with 20 percent propylene glycol, respectively. The model used default thermal-property values consistent with the regional bedrock geology. Based on the modeling results, approximately 60 to 240 boreholes would be needed for the GSHE system, as summarized in Table I.

Due to the projected distance from the new borefield area to the new building, installation of the below grade piping manifold vault should be considered. This would allow routing of set of supply and return lines from each well circuit to the vault and one set of main supply and return lines from the vault to the new building, to avoid routing multiple sets of circuit supply and return lines from the borefield to the new building.

POTENTIAL TEST WELL PROGRAM

If the GSHE program is advanced, the GSHE design will need to be revised based on GSHE field testing results and project hourly heating and cooling loads from a building energy model. GSHE test wells have not been completed to date at the site; however, if the Owner and design team choose to advance the GSHE design, Haley & Aldrich would propose completing a GSHE test well installation and thermal conductivity test for a minimum of one closed-loop test well. Data from the test well program will support design development and further analysis of constructability, site logistics, and scheduling for full-scale implementation, as well as cost estimates to install the GSHE system. The intent is that this test well will also be part of the full-scale production borefield.

GSHE Installation Considerations

Haley & Aldrich defines the GSHE as the exterior below ground heat exchange system comprising vertical boreholes and interconnecting horizontal piping that is typically routed to mechanical rooms or central heating plants. The GSHE piping is routed into the building and is connected to the HVAC system as designed by the project MEP. Therefore, the limits of the GSHE design are derived from the mechanical room/central heating plant piping tie-in points to and from the borefield. GSHE sizes and configurations are subject to change, due to uncertainties in ground conditions and potential changes in the building design and associated heating and cooling loads.

The following should be considered relative to installation and testing of a GSHE borefield:

- **General:** The Contractor shall provide labor, materials, and equipment to install the GSHE system in accordance with the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), the International Ground-Source Heat Pump Association (IGSHPA) standards, and local regulations. All drilling shall be conducted by Rhode Island-licensed well drilling contractors. All piping and loop installations shall be conducted by personnel certified as a System Fabricator and Installer by IGSHPA or an approved manufacturers' certification program. All high-density polyethylene (HDPE) heat fusion shall be conducted by IGSHPA-Certified Heat Fusion Technicians.
- **Quality Control and Testing:** The Contractor will be required to flush the GSHE piping to remove solids and air and perform flow testing and hydrostatic testing on each installed exchanger and each circuit before backfilling. These steps must also be completed on the total GSHE system before the start of operation. Testing will follow the American National Standards Institute (ANSI)/Canadian Standards Association (CSA), Plastic Pipe Institute (PPI), and American Society of Testing and Materials (ASTM) International standards.

- **Drilling Water Management:** The GSHE driller (or the site work Contractor) shall manage drilling water as required either under a NPDES permit and other applicable local, state, or federal regulatory authorities, including obtaining water discharge and drilling permits. Water from the wellhead and drilling operations must be collected and contained such that water does not leave the rig area, enter a storm drain untreated, or cause erosion. The driller should attempt to generate the least amount of water possible given the site and anticipated ground conditions. Well yields greater than 50 to 100 gpm typically require a supplemental air compressors and boosters.
- **Drilling Spoils and Excavated Materials Management:** The GSHE driller (or the site work Contractor) shall manage drilling spoils and excavated materials as required by the Town of South Kingstown and other applicable local, state, or federal regulatory authorities, and shall collect samples to characterize drill spoils for off-site disposal, if required by the Owner, either in advance of drilling or at the beginning of drilling operations.

SCHEDULE CONSIDERATIONS

Project specifications should require that the GSHE contractor provide information relative to the anticipated construction schedule including, at a minimum, estimated durations for:

- Pre-mobilization site work, submittals, and permitting.
- Mobilization and site set-up, drill water, drill spoils, materials management, and anticipated number of drill rigs operating concurrently.
- Borehole drilling, loop (exchanger) installation, and testing.
- Horizontal piping installation and testing.
- Site restoration, demobilization, and close-out.

Based on Haley & Aldrich experience in construction of closed-loop GSHE systems, the following should be considered:

- Approximately three to four days per borehole should be allotted for drilling, vertical loop installation and testing. To expedite installation of the borefield, the Contractor could consider mobilizing more than one drill rig if space allows, to work concurrently.
- Approximately four to five days should be allotted for the excavation, horizontal piping installation, testing and backfilling per piping circuit. Typically, approximately six to eight boreholes are connected per circuit.
- Approximately five to seven days should be allotted for the excavation and installation of a piping manifold vault.

A portion of the above work could be done concurrently; however, installation of the supply and return piping from the manifold vault to the new building mechanical tie-in point should be coordinated with other trades such that the installation schedule aligns with other planned site and underground project work.

Rough Order-of-Magnitude (ROM) costs and Construction Cost Contingencies

ROM COSTS

	500-foot 1¼-in. Quad-Loop			
Options	1A	1B	2A	2B
No. of Boreholes	240	70	150	60
GSHE Capacity	100% GSHE Heating and Cooling		100% GSHE Cooling / Partial GSHE Heating	
Loop Fluid	Water Only	Water with 20% PP Glycol	Water Only	Water with 20% PP Glycol
GSHE Borehole and Loop Installation	$3.4MM	$1.1MM	$2.2MM	$960K
GSHE Site Work for Horizontal Piping and Manifold Vault Installation Cost	$1.6MM	$600K	$940K	$520K
ROM Range Totals	$5MM	$1.7MM	$3.14MM	$1.48MM
Approx. Cost per Borehole	$21K	$25K	$21K	$25K

$MM = dollars in millions
$K = dollars in thousands

ROM ASSUMPTIONS

1. GSHE borehole and loop installation includes estimates for: drilling, drill water and drill spoils management, loop installation, and testing.
2. GSHE site work for horizontal piping and manifold includes estimates for: trenching, pipe installation and testing; backfilling and restoration of supply/return piping mains from circuits to manifold piping vault and piping from vault to mechanical room; and excavation, piping connections, testing, backfill, and restoration for installation of piping manifold vaults or structures.
3. All construction cost estimates shown should be considered concept-level ROM estimates and do not represent detailed engineering cost estimates. Contractor bid pricing has not been obtained for these estimates and is based on experience with similar systems.
4. ROM cost estimates for GSHE system components do not include the following: soft (engineering) costs associated with design, preparation of contract documents, providing field oversight during construction, or providing commissioning support.
5. ROM cost estimates for piping installation assume pipe inverts are approximately 5 feet below grade, no rock excavation is required, open cut (no support-of-excavation [SOE]) with no dewatering required, excavated soils are not environmentally-impacted, and circuits are piped to GSHE geothermal manifold vault/structure.

6. ROM cost estimates do not include any costs for regulatory fees or permitting.
7. Assumes all excavated soils from trenching work will remain on site for reuse.
8. ROM costs do not include mechanical equipment, potential site enabling, relocation of existing utilities, or other site features needed for installation of the GSHE borefield.
9. Assumes encountered media is not contaminated such that it would require on-site treatment, or off-site disposal at a facility licensed to receive contaminated material.
10. Construction management fees or incentive cost reductions were not applied to the ROM estimates.

Construction Cost Contingencies

The GSHE Contractor shall include contingencies for changes in the approach to drilling, water management, and closed-loop installation that may affect GSHE construction costs. These include, but are not limited to, the following:

- Managing groundwater yields greater than 50 gpm;
- Managing drill spoils in covered stockpiles, if required by the Owner.
- If shallow bedrock is encountered, bedrock ripping or blasting may be required to enable installing wellheads and/or GSHE supply- and return-piping to the design elevations (currently anticipated at a minimum of 4 ft bgs). Final invert elevations of the below-grade GSHE piping may be deeper but will be determined during design development;
- Drilling replacement boreholes to install GSHE loops at alternate locations in cases where borehole collapse prevents loop installation and the collapse condition cannot be cost-effectively remedied; and
- Abandoning boreholes by tremie-grouting and drilling replacement boreholes and U-Bends to account for boreholes damaged by collisions resulting from one or more borehole deviations.

Limitations

This memorandum has been prepared in general accordance with standard hydrogeological and engineering consulting practices applied to GSHE heating and cooling. The work was completed in general accordance with the authorized scope of work. No other warranty, express or implied is made.

References:

1. Bedrock Geologic Map of Rhode Island; compiled by O.D. Hermes, L.P. Gromet, D.P. Murray, 1994.
2. Rhode Island Department of Environmental Management - Office of Water Resources, “A Summary of Rhode Island GROUNDWATER CLASSIFICATION and GROUNDWATER STANDARDS” September 2009.

3. Rhode Island Department of Environmental Management web page www.state.ri.us/dem/maps/index.htm.

End of Memorandum

Attachments:

- Table 1 – Summary of GSHE Options
- Table 2 – Building Load Summary
- Figure 1 – Borefield Layouts – GSHE Options 1A and 2A
- Figure 2 – Borefield Layouts – GSHE Options 1B and 2B

TABLE 1 - SUMMARY OF GROUND SOURCE HEAT EXCHANGE OPTIONS
GSHE FEASIBILITY STUDY - FOR COORDINATION ONLY (NOT FOR CONSTRUCTION)
SOUTH KINGSTOWN HIGH SCHOOL
WAKEFIELD, RI
Haley & Aldrich Project No: 0208155-000

Preliminary

FOR COORDINATION ONLY (NOT FOR CONSTRUCTION)

5/23/2023

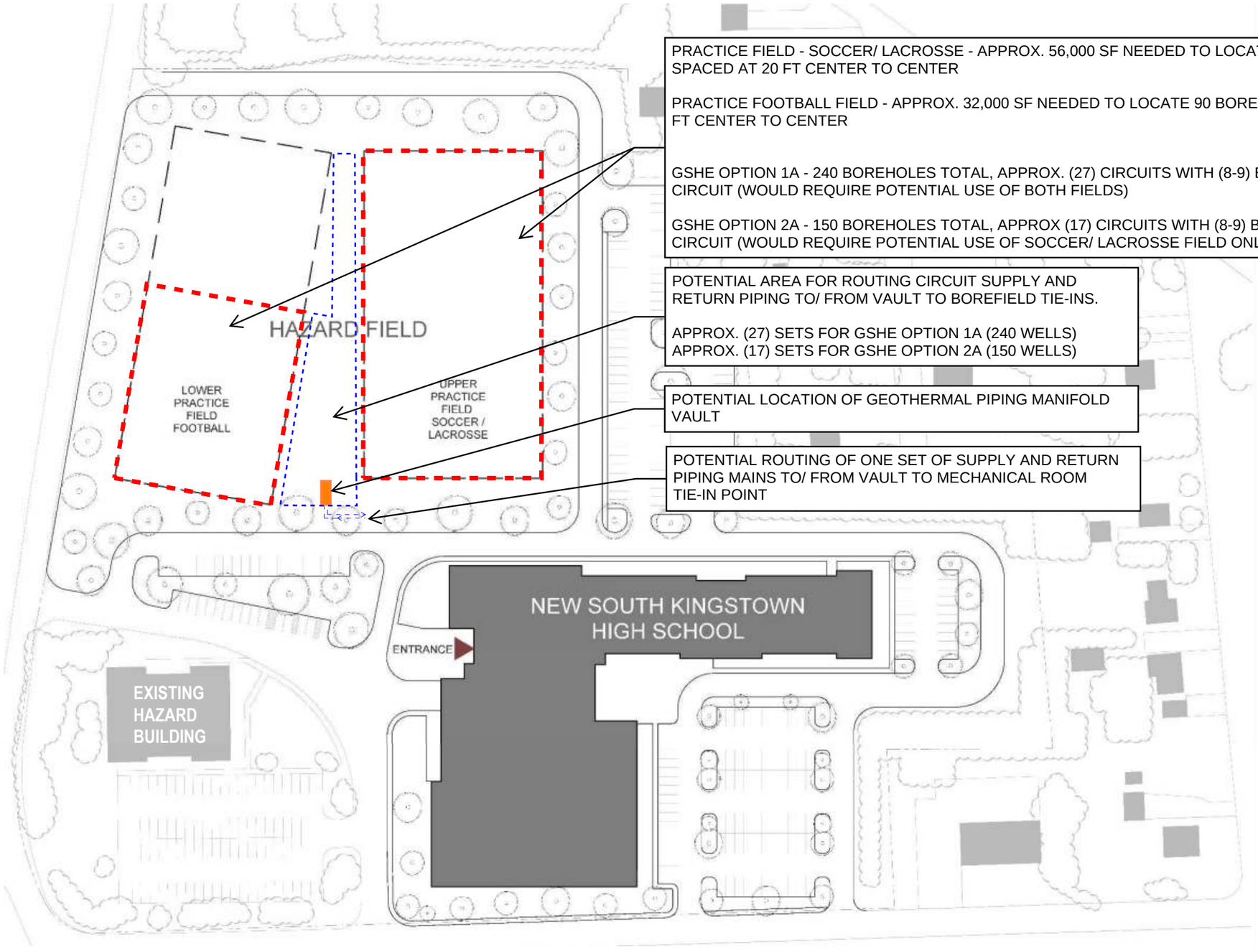
					Cooling										Heating										Cooling		Heating	
					GSHE						Supplemental (support from alternate cooling source needed)				GSHE						Supplemental (support from alternate heating source needed)							
Option	**Borehole Depth - Completion Type - Spacing**	**GSHE Loop Fluid**	**General Condition (either 100% GSHE or 100% of smaller load / partial GSHE for larger load)**	**Total Number of Boreholes Modeled**	**Peak Cooling (%)**	**Peak Cooling (Tons)**	**Peak Cooling (kBH)**	**Annual Cooling (%)**	**Annual Cooling (kBtu)**	**GSHE Loop ExWT (from Ht-Pump) (°F)**	**Peak Cooling (%)**	**Peak Cooling (Tons)**	**Annual Cooling (%)**	**Annual Cooling (kBtu)**	**Peak Heating (%)**	**Peak Heating (Tons)**	**Peak Heating (kBH)**	**Annual Heating (%)**	**Annual Heating (kBtu)**	**GSHE Loop ExWT (from Ht-Pump) (°F)**	**Peak Heating (%)**	**Peak Heating (kBH)**	**Annual Heating (%)**	**Annual Heating (kBtu)**	**Peak Cooling (Tons)**	**Annual Cooling (kBtu)**	**Peak Heating (kBH)**	**Annual Heating (kBtu)**
1A	500 ft-1 1/2" Quad Loop (20 ft centers)	Water	100% GSHE Htg and Clg	240	100%	311	3,732	100%	1,605,200	70	0%	0	0%	-	100%	396	4755	100%	2,430,600	45	0%	0	0%	-	311	1,605,200	4755	2,430,600
1B		Glycol	100% GSHE Htg and Clg	70	100%	311	3,732	100%	1,605,200	85	0%	0	0%	-	100%	396	4755	100%	2,430,600	30	0%	0	0%	-	311	1,605,200	4755	2,430,600
2A		Water	100% GSHE Clg, Partial GSHE Htg	150	100%	311	3,732	100%	1,605,200	77	0%	0	0%	-	75%	297	3566	98%	2,382,000	43	25%	1189	2%	48,600	311	1,605,200	4755	2,430,600
2B		Glycol	100% GSHE Clg, Partial GSHE Htg	60	100%	311	3,732	100%	1,605,200	91	0%	0	0%	-	75%	297	3566	98%	2,382,000	32	25%	1189	2%	48,600	311	1,605,200	4755	2,430,600

DEFINITIONS:
%: percent
°F: degrees Fahrenheit
clg: cooling
ExWT: Exiting Water Temperature
GSHE: Ground-source Heat Exchanger
htg: heating
kBH = 1,000 Btu/hr
kbtu = 1,000 Btu
Supplemental - requires support from alternate heating and/ or cooling source

NOTES & ASSUMPTIONS:
1. GSHE energy modeling input values based on public data research relative to bedrock type and estimated thermal properties.
2. GSHE energy modeling based heating and cooling load data provided by StudioJAED on 22 July 2021 for a similar sample project with a 25 year GSHE performance prediction time.
3. GSHE loop with 100% water (0% glycol) assumes loop temperature ranges between 42-95°F.
4. GSHE loop with glycol (assumes 20% propylene glycol and water mix) and loop temperature ranges between 30-95°F.

TABLE 2 - BUILDING LOAD SUMMARY
GSHE FEASIBILITY STUDY - FOR COORDINATION ONLY (NOT FOR CONSTRUCT
SOUTH KINGSTOWN HIGH SCHOOL
WAKEFIELD, RI **Preliminary**
Haley & Aldrich Project No: 0208155-000

	South Kingstown High School Building Heating and Cooling Load Summary (from sample project) Loads Provided by StudioJAED 22 July 2021			
Month	**Monthly Cooling (kBtu/month)**	**Peak Cooling (kBtu/hr)**	**Monthly Heating (kBtu/month)**	**Peak Heating (kBtu/hr)**
January	0	0	583,634	4,728
February	0	0	550,988	4,743
March	0	0	353,703	4,455
April	9,491	130	151,843	2,975
May	285,498	1,624	0	0
June	267,991	2,612	0	0
July	452,011	3,737	0	0
August	279,987	2,704	0	0
September	274,261	1,961	618	65
October	31,541	400	55,225	1,641
November	4,465	101	198,294	3,700
December	0	0	536,344	4,755
Total	**1,605,200**		**2,430,600**	
Maximum (kBtu/hr)		**3,737**		**4,755**
Maximum (tons)		**311**		**396**



PRACTICE FIELD - SOCCER/ LACROSSE - APPROX. 56,000 SF NEEDED TO LOCATE 150 BOREHOLES SPACED AT 20 FT CENTER TO CENTER

PRACTICE FOOTBALL FIELD - APPROX. 32,000 SF NEEDED TO LOCATE 90 BOREHOLES SPACED AT 20 FT CENTER TO CENTER

GSHE OPTION 1A - 240 BOREHOLES TOTAL, APPROX. (27) CIRCUITS WITH (8-9) BOREHOLES PER CIRCUIT (WOULD REQUIRE POTENTIAL USE OF BOTH FIELDS)

GSHE OPTION 2A - 150 BOREHOLES TOTAL, APPROX (17) CIRCUITS WITH (8-9) BOREHOLES PER CIRCUIT (WOULD REQUIRE POTENTIAL USE OF SOCCER/ LACROSSE FIELD ONLY

POTENTIAL AREA FOR ROUTING CIRCUIT SUPPLY AND RETURN PIPING TO/ FROM VAULT TO BOREFIELD TIE-INS.

APPROX. (27) SETS FOR GSHE OPTION 1A (240 WELLS)
APPROX. (17) SETS FOR GSHE OPTION 2A (150 WELLS)

POTENTIAL LOCATION OF GEOTHERMAL PIPING MANIFOLD VAULT

POTENTIAL ROUTING OF ONE SET OF SUPPLY AND RETURN PIPING MAINS TO/ FROM VAULT TO MECHANICAL ROOM TIE-IN POINT

NOTES:
1. BACKGROUND FOR PROPOSED CONCEPT SITE PLAN PROVIDED BY STUDIO JAED 6 MARCH 2023

2. SPACE AVAILABILITY AT ATHLETICS FIELD PENDING SCOPE OF SUBGRADE DEMOLITION WORK OF EXISTING BUILDING AND OTHER POTENTIAL FUTURE UNDERGROUND WORK.

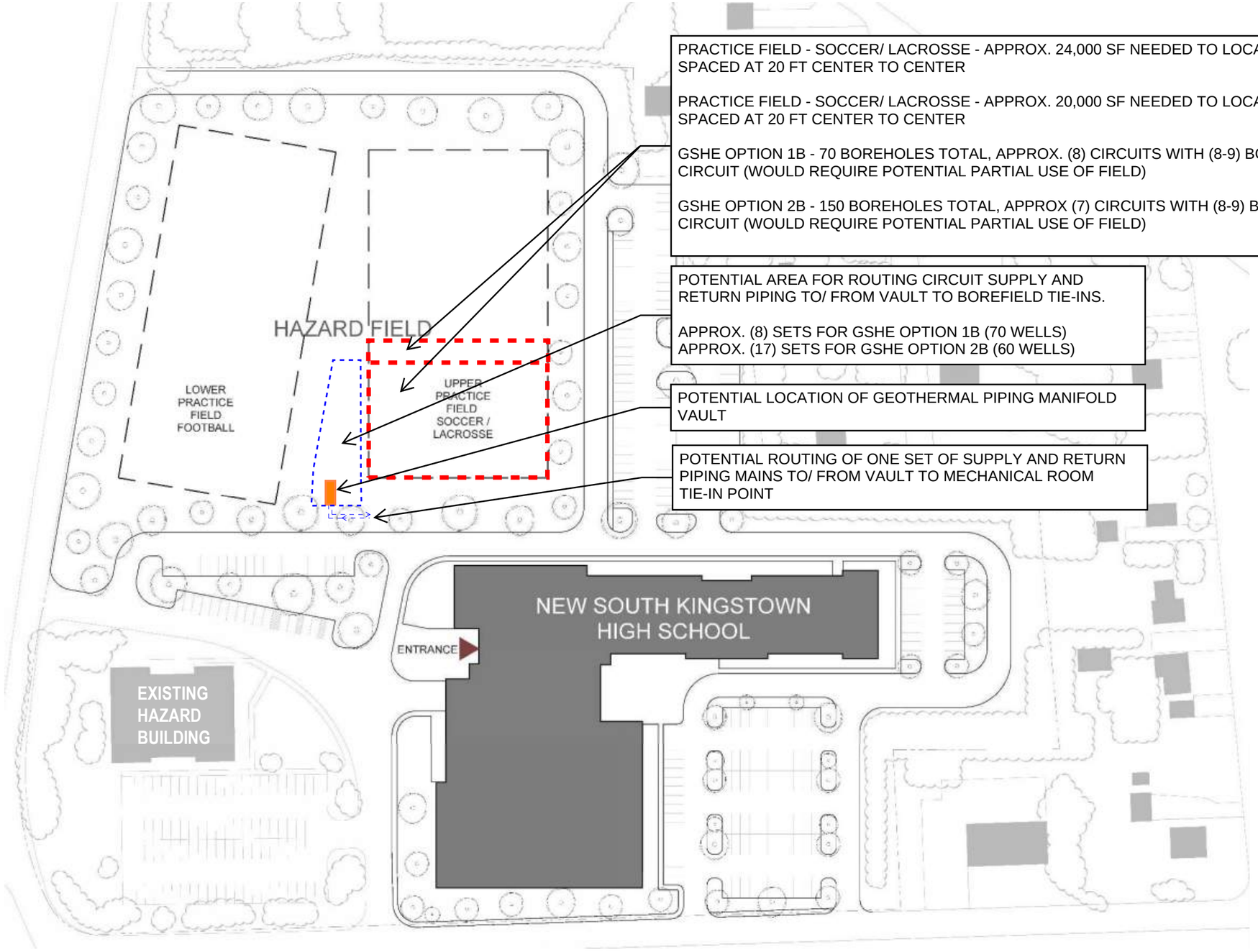
HALEY ALDRICH

SOUTH KINGSTOWN HIGH SCHOOL
215 COLUMBIA STREET
WAKEFIELD, RI
GEOTHERMAL FEASIBILITY STUDY

BOREFIELD LAYOUTS
GSHE OPTIONS 1A AND 2A

SCALE: NONE
MAY 2023

FIGURE 1



PRACTICE FIELD - SOCCER/ LACROSSE - APPROX. 24,000 SF NEEDED TO LOCATE 70 BOREHOLES SPACED AT 20 FT CENTER TO CENTER

PRACTICE FIELD - SOCCER/ LACROSSE - APPROX. 20,000 SF NEEDED TO LOCATE 60 BOREHOLES SPACED AT 20 FT CENTER TO CENTER

GSHE OPTION 1B - 70 BOREHOLES TOTAL, APPROX. (8) CIRCUITS WITH (8-9) BOREHOLES PER CIRCUIT (WOULD REQUIRE POTENTIAL PARTIAL USE OF FIELD)

GSHE OPTION 2B - 150 BOREHOLES TOTAL, APPROX (7) CIRCUITS WITH (8-9) BOREHOLES PER CIRCUIT (WOULD REQUIRE POTENTIAL PARTIAL USE OF FIELD)

POTENTIAL AREA FOR ROUTING CIRCUIT SUPPLY AND RETURN PIPING TO/ FROM VAULT TO BOREFIELD TIE-INS.

APPROX. (8) SETS FOR GSHE OPTION 1B (70 WELLS)
APPROX. (17) SETS FOR GSHE OPTION 2B (60 WELLS)

POTENTIAL LOCATION OF GEOTHERMAL PIPING MANIFOLD VAULT

POTENTIAL ROUTING OF ONE SET OF SUPPLY AND RETURN PIPING MAINS TO/ FROM VAULT TO MECHANICAL ROOM TIE-IN POINT

NOTES:
1. BACKGROUND FOR PROPOSED CONCEPT SITE PLAN PROVIDED BY STUDIO JAED 6 MARCH 2023

2. SPACE AVAILABILITY AT ATHLETICS FIELD PENDING SCOPE OF SUBGRADE DEMOLITION WORK OF EXISTING BUILDING AND OTHER POTENTIAL FUTURE UNDERGROUND WORK.

HALEY ALDRICH

SOUTH KINGSTOWN HIGH SCHOOL
215 COLUMBIA STREET
WAKEFIELD, RI
GEOTHERMAL FEASIBILITY STUDY

BOREFIELD LAYOUTS
GSHE OPTIONS 1B AND 2B

SCALE: NONE
MAY 2023

FIGURE 2

Exhibit 31

South Kingstown HS Geothermal Report

PVWatts Monthly PV Performance Data

Requested Location	**South Kingstown High School, Columbia Street, Wakefield, RI**
Location	Lat, Lng: 41.45, -71.5
Latitude (DD)	41.45
Longitude (DD)	-71.5
Elevation (m)	25
DC System Size (kW)	683
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt (deg)	40
Array Azimuth (deg)	180
System Losses (%)	14.08
DC to AC Size Ratio	1.2
Inverter Efficiency (%)	96
Ground Coverage Ratio	NA
Albedo	From weather file

Month	Daily Average POA Irradiance	DC Array Output (kWh)	AC System Output (kWh)
1	3.628	69,093.35	65,815.80
2	4.389	73,844.43	70,178.76
3	5.006	90,824.67	86,094.39
4	5.443	93,366.85	88,917.40
5	5.222	89,683.95	85,319.53
6	5.511	89,737.51	85,368.29
7	5.745	95,202.92	90,647.89
8	5.497	90,639.71	86,307.66
9	5.484	89,601.77	85,459.51
10	4.554	80,175.29	76,418.87
11	3.535	63,292.89	60,317.54
12	2.976	55,933.80	53,210.72
TOTAL			934,056.37

Exhibit 32

SKHS Design Heating & Cooling Capacity

SYSTEM SUMMARY

DESIGN HEATING CAPACITIES

By StudioJAED

Alternative 1

System Coil Capacities

System Description	System Type	Main System Btu/h	Aux System Btu/h	Preheat Btu/h	Reheat Btu/h	Humid. Btu/h	Optional Vent Btu/h	Stg 1 Desic Regen Btu/h	Stg 2 Desic Regen Btu/h	Stg 1 Frost Prevention Btu/h	Stg 2 Frost Prevention Btu/h	Heating Totals Btu/h
VRF	Variable Refrigerant Flow	-1,817,886	0	0	0	0	-724,723	0	0	0	0	-2,542,609
RTU VAV	Single Zone Variable Air Volume	-1,209,656	0	0	0	0	0	0	0	0	0	-1,209,656
Totals		**-3,027,542**	**0**	**0**	**0**	**0**	**-724,723**	**0**	**0**	**0**	**0**	**-3,752,264**

Building Plant Capacities

		Peak Loads												
Plant	System	Main Coil MBh	Preheat Coil MBh	Reheat Coil MBh	Humid. Coil MBh	Aux Coil MBh	Opt Vent Coil MBh	Misc Load MBh	Stg 1 Desic. Regen. MBh	Stg 2 Desic. Regen. MBh	Stg 1 Frost Prev. MBh	Stg 2 Frost Prev. MBh	Base Utility MBh	Absorption Load MBh
VRF BACK UP		1,818	0	0	0	0	725	0	0	0	0	0	0	0
	VRF	1,818	0	0	0	0	725	0	0	0	0	0	0	0
GAS RTU		1,210	0	0	0	0	0	0	0	0	0	0	0	0
	RTU VAV	1,210	0	0	0	0	0	0	0	0	0	0	0	0

Building peak load is 3,752.3 MBh.

SYSTEM SUMMARY

DESIGN COOLING CAPACITIES

By StudioJAED

Alternative 1

Building Airside Systems and Plant Capacities

		Peak Plant Loads								Block Plant Loads								
Plant	System	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Peak Total ton	Time Of Peak mo/hr	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Block Total ton
VRF		200.1	0.0	0.4	0.0	0.0	0.0	0.0	200.4	7/15	154.8	0.0	0.0	0.0	0.0	0.0	0.0	154.8
	VRF	200.1	0.0	0.4	0.0	0.0	0.0	0.0	200.4	7/15	154.8	0.0	0.0	0.0	0.0	0.0	0.0	154.8
RTU		142.9	0.0	0.0	0.0	0.0	0.0	0.0	142.9	7/10	142.9	0.0	0.0	0.0	0.0	0.0	0.0	142.9
	RTU VAV	142.9	0.0	0.0	0.0	0.0	0.0	0.0	142.9	7/10	142.9	0.0	0.0	0.0	0.0	0.0	0.0	142.9
Building totals		342.9	0.0	0.4	0.0	0.0	0.0	0.0	343.3		297.7	0.0	0.0	0.0	0.0	0.0	0.0	297.7

Building peak load is 343.3 tons.

Building maximum block load of 297.7 tons occurs in July at hour 15 based on system simulation.

Exhibit 33

SKHS Traffic/ Transportation Report

GAROFALO
Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

Date: July 13, 2023

To: Philip Conte, AIA, NCARB
President & CEO
Studio Jaed Architects

From: Garofalo & Associates, Inc.

Subject: Traffic & Transportation Assessment
South Kingstown High School
South Kingstown, Rhode Island

Introduction

This Traffic Assessment was prepared at the request of Studio Jaed Architects located in Providence RI in connection with its Rhode Island Department of Education Stage II Study of the proposed replacement of the South Kingstown High School located on Columbia Street in South Kingstown. The Traffic Impacts of the New High School will eventually be substantially identical to the existing school since the new school is proposed on the existing site. The traffic impacts of the proposed new school have been assessed and presented for review by various Town Boards and Agencies.

As mentioned previously the project site is located at the existing high school site on Columbia Street and School Street. As shown in Figure 1 the existing school has four driveways to service the existing school. Three of these driveways access onto Columbia Street while one has access onto School Street.

The proposed new school will be designed to accommodate 750 students (250 less than current enrollment) and is proposed to be located on the same site as the existing school within the open area located on School Street. The new school site layout plan (Figure2) proposes three (3) driveways to services the school. Two of these driveways will provide access to and from School Street while one will access Columbia Street. Presently busses load and unload students along a one-way driveway entering the site on School Street and existing onto Columbia Street. The proposed new school will employ a similar traffic pattern. Sixteen busses were observed to be servicing the school.

Existing Conditions

The new school will continue to utilize School Street and Columbia Street for access to and from the site. The site is defined as Assessor Plat 49-4 Lot 14-1 and Assessors Plat75-1 Lot 209 (2), located east of Columbia Street and north of School Street and totals approximately 15.6 acres. While the School does not have frontage on either Church Street or Kingstown Road these roads form the basis to provide access along the existing school site. Columbia Street is classified as a Minor Arterial while Kingstown Road (RI Route 108) is classified as a Principal Arterial. School Street and Church Street are classified as Local Roads.

85 Corliss Street, Post Office Box 6145, Providence, Rhode Island 02940
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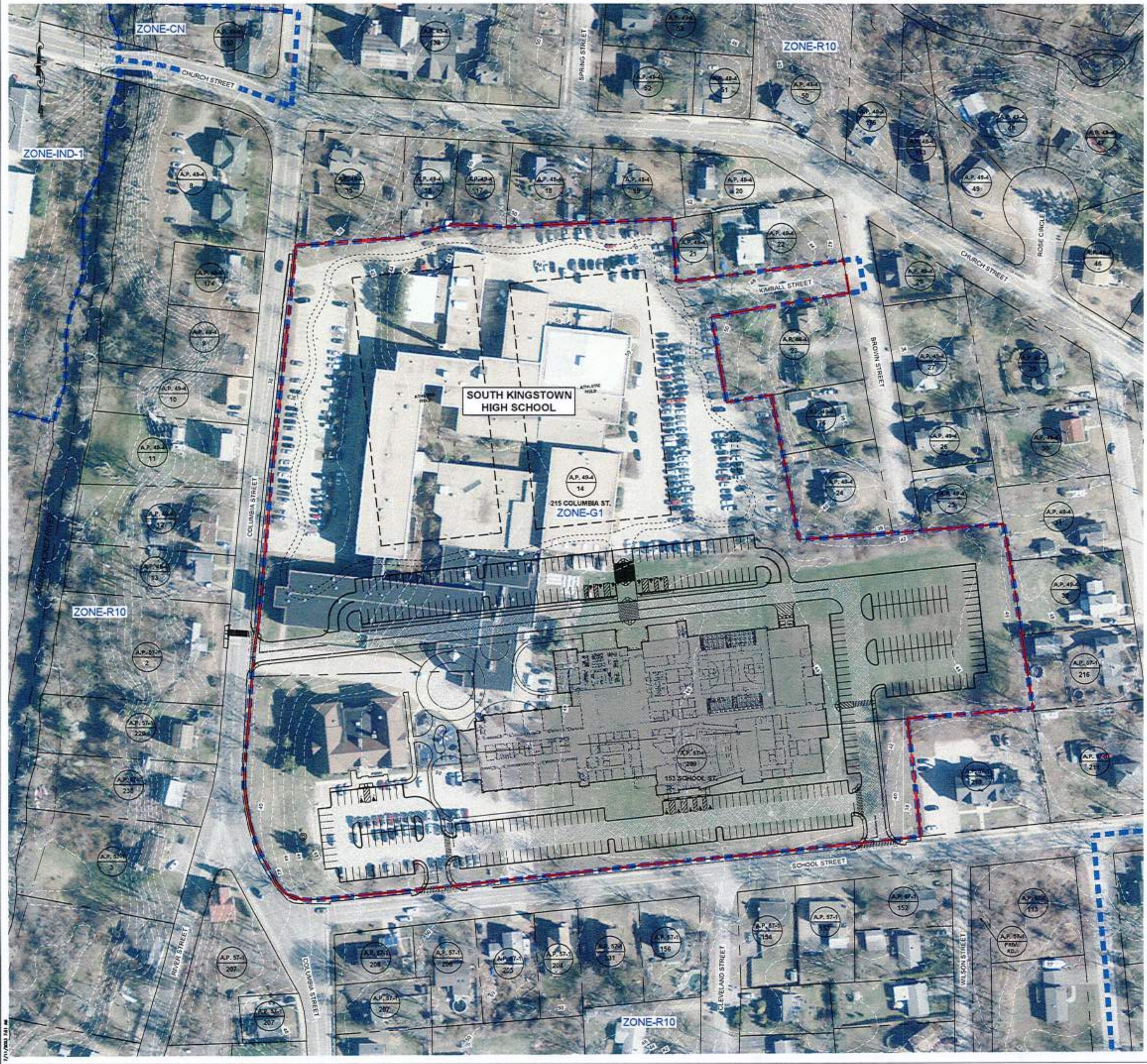
Visit our Web Site at www.garofaloassociates.com



SITE LEGEND

EXISTING	NEW	DESCRIPTION
		CENTERLINE (LAYOUT)
	D	STORM DRAIN
	E	ELECTRIC (UNDERGROUND)
	F	FIRE SERVICE
	G	GAS
	OHW	OVERHEAD WIRE
		PROPERTY LINE
	S	SANITARY SEWER
	T	TELEPHONE
	W	WATER
	64	CONTOUR
	64.00	SPOT GRADE
	64.00(BC)	SPOT GRADE (BOT. OF CURB)
	64.50(TC)	SPOT GRADE (TOP OF CURB)
	64.50(BW)	SPOT GRADE (BOT. OF WALL)
	64.50(TW)	SPOT GRADE (TOP OF WALL)
	VCC	VERTICAL CONCRETE CURB
		CHAINLINK FENCE (CLF)
		STOCKADE FENCE (STKF)
		BORING LOCATION
	CB	CATCH BASIN
	CBDG	DOUBLE GRATE CATCH BASIN
	CTB	CONCRETE THRUST BLOCK
	DMH	DRAIN MANHOLE
	FES	FLARED END STRUCTURE
	SMH	SEWER MANHOLE
		WATER SERVICE
		UTILITY POLE
		FIRE HYDRANT
	GV	GATE VALVE AND CURB BOX
		HANDICAP SYMBOL (PRKG. SPACE)
		SIGN
		WETLAND
	SEV	SOIL EVALUATION LOCATION
	TP	TEST PIT LOCATION
	FDC	FIRE DEPARTMENT CONNECTION
	PIV	POST INDICATOR VALVE (PIV)
		ELECTRIC MANHOLE (EMH)
		TELEPHONE MANHOLE (TMH)
	T	TRANSFORMER PAD
	GEN	GENERATOR PAD
	GCO	GROUND CLEANOUT
		SIGHT LIGHT POLE
		TRAFFIC FLOW DIRECTION

GENERAL NOTES:

1. THESE PLANS ARE SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS SHOW HEREIN ARE TAKEN FROM PLAN TITLE "TOPOGRAPHY AND EXISTING CONDITIONS SURVEY" FOR SOUTH KINGSTOWN HIGH SCHOOL AND SPECIAL EDUCATION, AP 49-4 LOT 14 & AP 57-1 LOT 209, SITUATED ON 215 COLUMBIA STREET & 153 SCHOOL STREET WAKEFIELD, RI. PREPARED FOR STUDIO JAED. PREPARED BY GAROFALO & ASSOCIATES INC. JOB NO. 7458-00; DWG. NO. 7458-00-ECS.DWG. DATED: MAY 2023.
3. ALL IMPROVEMENTS INDICATED HEREON MUST COMPLY WITH THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)". NOTE THAT THE DETAIL CONTAINED WITHIN THIS PLAN MAY NOT SHOW THE DETAIL NECESSARY TO CONSTRUCT WALKWAYS, RAMPS AND SPACES TO COMPLY WITH THE ADAAG REQUIREMENTS BUT THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LEVEL OF CARE NECESSARY TO BE CERTAIN THAT THE CONSTRUCTED PRODUCT MEETS THESE STANDARDS.
4. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO THE TOWN OF SOUTH KINGSTOWN AND THE STATE OF RHODE ISLAND DEPARTMENT OF TRANSPORTATION CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE TIME OF PROJECT DEVELOPMENT.
5. ALL MATERIALS USED FOR CONSTRUCTION MUST BE NEW AND FREE OF DEFECTS. USED OR SALVAGED MATERIAL WILL NOT BE ALLOWED UNLESS WRITTEN APPROVAL FROM THE OWNER IS OBTAINED BY THE CONTRACTOR.
6. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE, FEDERAL AND LOCAL CODES AND STANDARDS.
7. THE CONTRACTOR SHALL REMOVE ANY ABANDONED FOUNDATIONS, UTILITY STRUCTURES, BURIED DEBRIS ETC. WHICH INTERFERE WITH THE INSTALLATION OF THE PROJECT. ALL SUCH STRUCTURES SHALL BE COMPLETELY REMOVED AND THE EXCAVATED AREA SHALL BE BACKFILLED WITH COMPACTED GRAVEL IN 8" LIFTS TO 95% COMPACTION UNLESS OTHERWISE ABANDONED.
8. PROPOSED STORMWATER MANAGEMENT AREAS INCLUDE INFILTRATION CHAMBERS AND SHALL COMPLY WITH THE PERFORMANCE CRITERIA OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL (RISDISM).
9. ALL PARKING AND TRAVEL LANES SHALL BE LANDSCAPED IN ACCORDANCE WITH ARTICLE VI OF THE SOUTH KINGSTOWN ZONING CODE.

STUDIOJAED
ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

ARCHITECT / ENGINEER SEAL

PROJECT
TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
SOUTH KINGSTOWN
HIGH SCHOOL
215 COLUMBIA STREET
SOUTH KINGSTOWN, RI 02879

REVISIONS

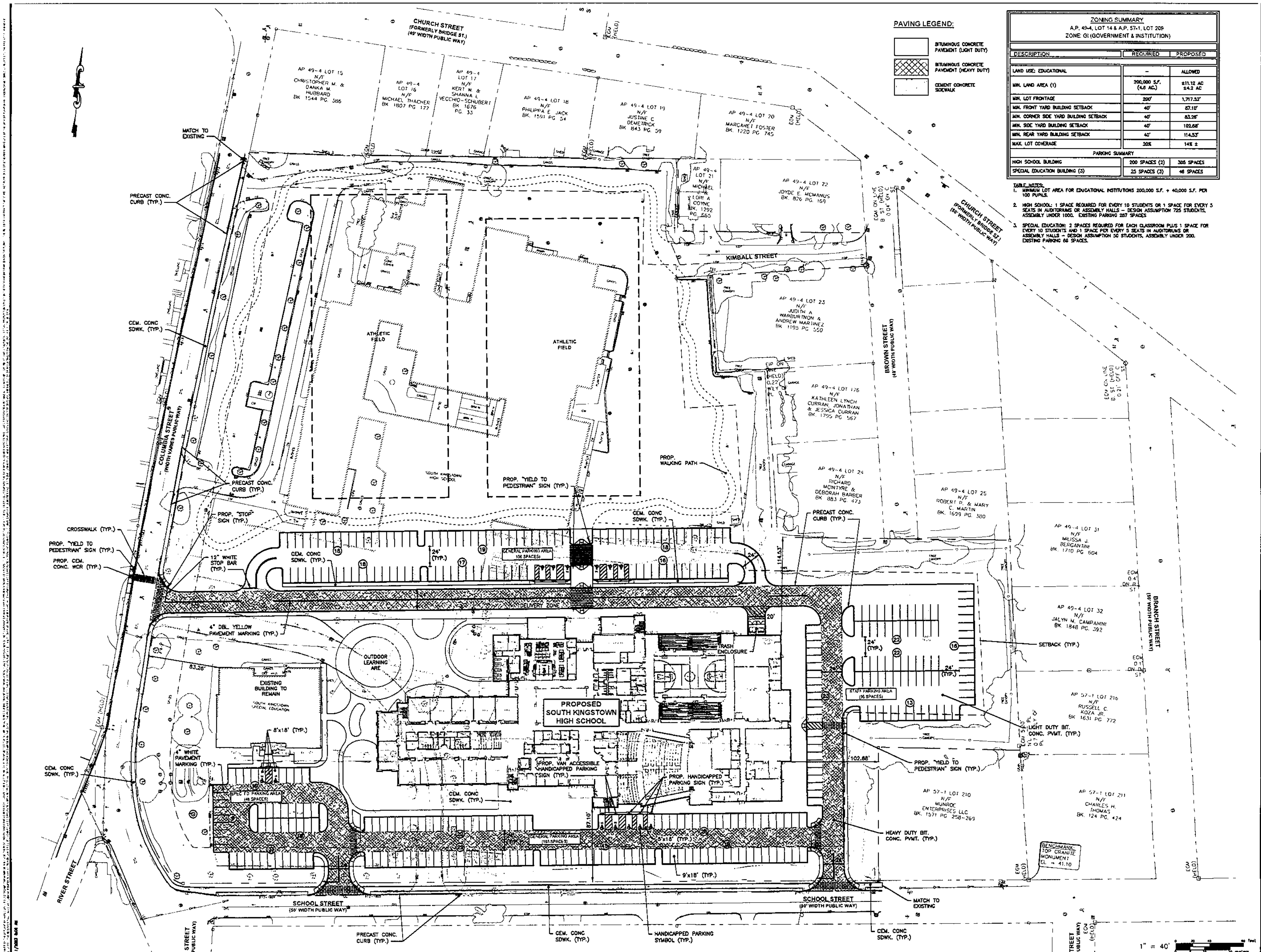
MARK	DESCRIPTION	DATE
-	-	-

SHEET TITLE
SITE CONTEXT PLAN

RIDE STAGE II
SCHEMATIC DESIGN
7-12-2023

DRAWN	CHK'D	PROJECT NO
KJA	SSH	7458.0

SHEET NO.
C-1



ZONING SUMMARY A.P. 49-4, LOT 14 & A.P. 57-1, LOT 209 ZONE: GI (GOVERNMENT & INSTITUTION)		
DESCRIPTION	REQUIRED	PROPOSED
LAND USE: EDUCATIONAL	–	ALLOWED
MIN. LAND AREA (1)	200,000 S.F. (4.6 AC.)	±11.12 AC ±4.2 AC
MIN. LOT FRONTAGE	200'	1,717.52'
MIN. FRONT YARD BUILDING SETBACK	40'	87.10'
MIN. CORNER SIDE YARD BUILDING SETBACK	40'	83.26'
MIN. SIDE YARD BUILDING SETBACK	40'	102.88'
MIN. REAR YARD BUILDING SETBACK	40'	114.53'
MAX. LOT COVERAGE	20%	14% ±
PARKING SUMMARY		
HIGH SCHOOL BUILDING	200 SPACES (2)	305 SPACES
SPECIAL EDUCATION BUILDING (3)	25 SPACES (3)	46 SPACES

TABLE NOTES:
1. MINIMUM LOT AREA FOR EDUCATIONAL INSTITUTIONS 200,000 S.F. + 40,000 S.F. PER 100 PUPILS.
2. HIGH SCHOOL: 1 SPACE REQUIRED FOR EVERY 10 STUDENTS OR 1 SPACE FOR EVERY 5 SEATS IN AUDITORIUMS OR ASSEMBLY HALLS – DESIGN ASSUMPTION 725 STUDENTS, ASSEMBLY UNDER 1000. EXISTING PARKING 287 SPACES
3. SPECIAL EDUCATION: 2 SPACES REQUIRED FOR EACH CLASSROOM PLUS 1 SPACE FOR EVERY 10 STUDENTS AND 1 SPACE PER EVERY 5 SEATS IN AUDITORIUMS OR ASSEMBLY HALLS – DESIGN ASSUMPTION 50 STUDENTS, ASSEMBLY UNDER 200. EXISTING PARKING 69 SPACES.

STUDIOJAED
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CONSULTANT

GAROFALO

PROJECT
TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
SOUTH KINGSTOWN HIGH SCHOOL
215 COLUMBIA STREET
SOUTH KINGSTOWN, RI 02879

REVISIONS		
MARK	DESCRIPTION	DATE

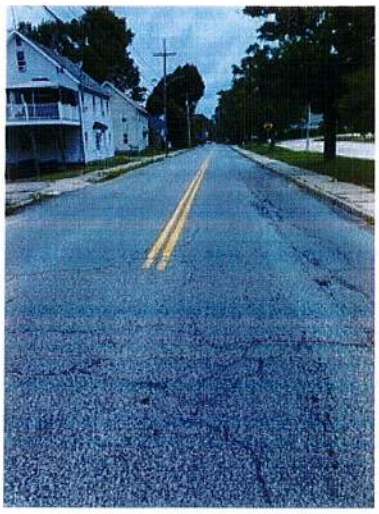
SHEET TITLE
SITE LAYOUT PLAN

RIDE STAGE II
SCHEMATIC DESIGN
7-7-2023

DRAWN	CHK'D	PROJECT NO
KJA	SSH	7458.0

SHEET NO.
C-3

While an arterial's primary role is to provide effective and safe through movement for traffic, they also provide access to abutting properties. The primary role of local roads is to provide access to abutting properties.



Columbia Street looking South.

Existing School Driveways

There are presently four driveways servicing the high school. The first of these driveways is located at the northern boundary of the property and provides access to and from the rear parking field. The width of the access drive is 24 feet and it intersects with Columbia Street at an angle slightly greater than 90 degrees. This intersection is controlled by a stop sign on the school drive. The second of these is located on Columbia Street and enters the school site in the middle of the Columbia Street frontage. It proceeds to enter a parking field and proceeds past the front door of the original school to intersect with the access drive to the rear of the school. This access drive is a 24-foot driveway that provides for two two-way traffic to the rear of the school.

The remaining access drive from Columbia Street is the southern most access drive which consists of a one-way loop exiting onto Columbia Street. This access has an overall width of approximately 24 feet and is the main area utilized for bus loading and unloading of students. This T-Type intersection is also controlled by a stop sign on the access drive and posted with "Do Not Enter" signs form Columbia Street.

The fourth access drive is located on School Street. This two-way drive provides access to the faculty parking area located at the separate special education building on this site. This access drive provides for two-way traffic up to the entrance to the parking field. From that point to its intersection with Columbia Street it is a one-way drive accessible for vehicles travelling westbound to Columbia Street. It should be mentioned that the second main access to the school is located from this access drive. This is the access for all bus students entering and exiting the school.

All four of these driveways are unsignalized T-Type intersections with the school leg forming the minor movement.

Surrounding Roadways

Columbia Street is a two-way minor arterial having a width of approximately 26 feet. Concrete curbing and 5-foot concrete sidewalks exist along each side of the roadway. Parking is prohibited along the west side of the roadway during school hours of operation. Marked crosswalks exist across all of the school driveways and an additional crosswalk across Columbia Street is located in the vicinity of the southern most access drive. Signage consisting of "Do Not Enter" signs and a stop sign are located at the intersection of the southern access drive and Columbia Street. Similarly, a stop sign is located to control existing school traffic from the northern access drive. School crossing signs are also located on Columbia Street in the vicinity of the crosswalk.

A review of the available stopping sight distance from each of the access drives on Columbia Street yielded values ranging from 760 feet to an excess of 1000 feet to the north and 265 feet to 650 feet to the south. The posted speed limit on Columbia Street in the vicinity of the school is 25 MPH. Conservatively we have compared these values to those associated with a speed of 35 MPH. The minimum safe stopping sight distance for a vehicle travelling at 35 MPH is 250 feet. The available safe stopping sight distance is exceeded at each of the access drives.

School Street is also a two-way roadway having a paved width to approximately 26 feet. School Street is classified as a local road and has concrete curbing and a 5 feet concrete sidewalk on the northerly side of the road. School Street is signed for no parking during school hours along the southerly side of the road. Marked crosswalks are present on School Street at its intersection with Columbia Stret and across the school access drive. Multiple signs consisting of advance school crosswalks are present for traffic traveling westbound on School Street. The intersection of School Street with Columbia Street is stop controlled for School Street.

School Street looking East.

A review of the existing stopping sight distance from the School Street access revealed a value of 380 feet to the east and 440 feet to the west. These volumes exceed the safe stopping sign distance required for a vehicle speed of 35 MPH

Parent pickup of students was observed to occur at two separate locations. The first of these is at the front door of the school. This is the designated location for parent pickup. Vehicles enter the school property at the one-way entrance from Columbia Street. They then proceed to queue within the front parking field waiting for students to be dismissed. At dismissal students exit the school enter their approximate vehicle and proceed to exit the school property by the northerly access drive. The second area utilized for parent pickup appears to be an informal one. Vehicles will queue on School Street east of the school access waiting for students.

Parking at the school consist of 356 spaces distributed into 3 separate lots. These parking fields are well defined delineated parking areas located around the building. The first of these fields is located in the front of the school and is accessed by the drives on Columbia Street. There are approximately 81 spaces located in this lot and it is utilized for general parking. The second parking area is located to the rear of the school and is accessed by the northerly driveway from Columbia Street. This lot is dedicated for student use and accommodates 206 vehicles. The third area is located south of the school to the Administration Building. This parking field accommodates 69 vehicles and is dedicated to faculty and staff.

It should be mentioned that overflow student parking is provided on both sides of Kingstown Road approximately 1200 feet east of the school property. Kingstown Road is 46 feet wide with parking allowed along both sides. There are approximately 60 students that utilize this parking. A crossing guard is located along with a marked and signed crosswalk to assist students crossing Kingstown Road. Students will utilize the sidewalks of Church Street or School Street to access the school. Pedestrian access is also provided along the other roadway surrounding the school.

Existing Traffic Flow

Existing Traffic Counts at the school access drive were obtained from the previous study conducted by Beta Group. These counts were conducted during both the morning arrival and afternoon dismissal periods. This data results in AM Volumes for Columbia Street ranging from 490 vehicles to 570 vehicles with the larger volumes associated with the segment north of north access drive. Afternoon volumes range from 570 vehicles to 580 vehicles again with the greater volume associated with the segment north of the northerly access. School Street volumes for the morning period are consistent at approximately 211 vehicles.

The Columbia Street access will intersect with Columbia Street in the same location as the exiting southerly Columbia access Drive. The School Street access drives will be located approximately 240 feet and 800 feet east of Columbia Street. Bus pickup and drop off is expected to occur along the access drive to the north of new school. Parent pickup is anticipated to occur within the parking field south of the school. The preferred route for parent vehicles would be to enter the westerly access drive and proceed east past the main entrance and exit through the easterly access drive. This will ensure maximum stopping sight distance for vehicles exiting the school.

Similarly, to the existing School, parking is provided within three district areas north, south and east of the proposed school. These parking field contains a total of 345 spaces distributed with 146 spaces located south of the school, 106 spaces located north of the school and 93 spaces east of the school.

The majority of vehicles parking in the north of the school will most likely utilize the access drive onto Columbia Street while those vehicles parked in the south field will most likely utilize the School Street access drives to enter and exit the site. Those vehicles parking in the lot east of the school will utilize either the Columbia Steet access or the easterly School Street access drive.

Available stopping sight distance from the Columbia Stret access is identical to the existing southern access drive at 260 feet to the south and in excess of 1000 feet to the north. The available site distance from the School Street access drive is 240 feet to the west and 390 feet to the east from the westerly access and 260 feet to the west and 450 feet to the east from the easterly access.

The posted speed limit on Columbia Street is 25 MPH while. The School Street posted limit is 20 MPH. Conservatively we have compared the available stopping sight distance required for a 35 MPH speed. A review of the available sight distance at the proposed access drives meets or exceeds that required for a vehicle travelling at 35 MPH.

Conclusion

This report has attempted to analyze existing and future traffic characteristics of the roadway intersection in the vicinity of the proposed South Kingstown High School.

Based upon the analysis presented within the report coupled with field observations it can be concluded that the development of a New High School within the property boundaries of the existing school will not increase traffic and substantially adversely impact the surrounding roadway network.

Exhibit 34

SKHS PE/Athletic Site Traffic/Transportation Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

Date: July 18, 2023

To: Philip Conte, AIA, NCARB
President & CEO
Studio Jaed Architects

From: Garofalo & Associates, Inc.

Subject: Traffic & Transportation Assessment
Curtis Corner Middle School
South Kingstown, Rhode Island

Existing Conditions

The proposed Curtis Corner Middle School is proposed to be razed. In its place will be constructed a new Town Wide Athletic Facility. This new facility will include a synthetic surfaced field adequate for Football, Socker and Lacrosse, a quarter mile Track along the perimeter of the field, stadium seating parking for 430 vehicles, and associated walkways. As part of this site the existing administration building will remain with reconstructed parking for 67 vehicles and new concrete curbing and walk ways.

These facilities will be constructed on a portion of the property presently occupied by the existing school and closest to Curtis Corner Road. Once completed it will combine with the existing Town facilities to the rear of the property. After completion it will provide facilities for Football, Soccer, Lacrosse, Track & Field, Baseball, Softball and Tennis in one location.

Access to the site will continue to come from Curtis Corner Road. Curtis Corner Road is classified as a Major Collector Road extending in an east-west direction. The segment of Curtis Corner Road examined for the assessment extends from Kingstown Road (RI Route 108) to South Road. Curtis Corner Road has a paved width of approximately 26 feet with a 13-foot travel lane in each direction. The centerline is striped with a double yellow continuous centerline marking.

Concrete curbing and sidewalks are present along the northerly side of the road extending from the Middle School site to Kingstown Road. The posted speed limit o Curtis Corner Road is 25 MPH however there is a posted school zone limit of 20 MPH. The horizontal and vertical alignment of Curtis Corner Road in the vicinity of the access drives is generally straight and level. There is a short horizontal curve west of Asa Pond Road.

Access to the site would be provided by one of two access drives from Curtis Corner Road. These access drives are proposed to be located at the existing access drives to the middle school. These access drives will form "T" intersections with Curtis Corner Road. Presently there are 3 access drives from Curtis Corner Road to the existing school. Two of these are utilized for school access while the most westerly drive is utilized to access the administration building and the athletic field to the rear of the property. The middle access drive will be removed.

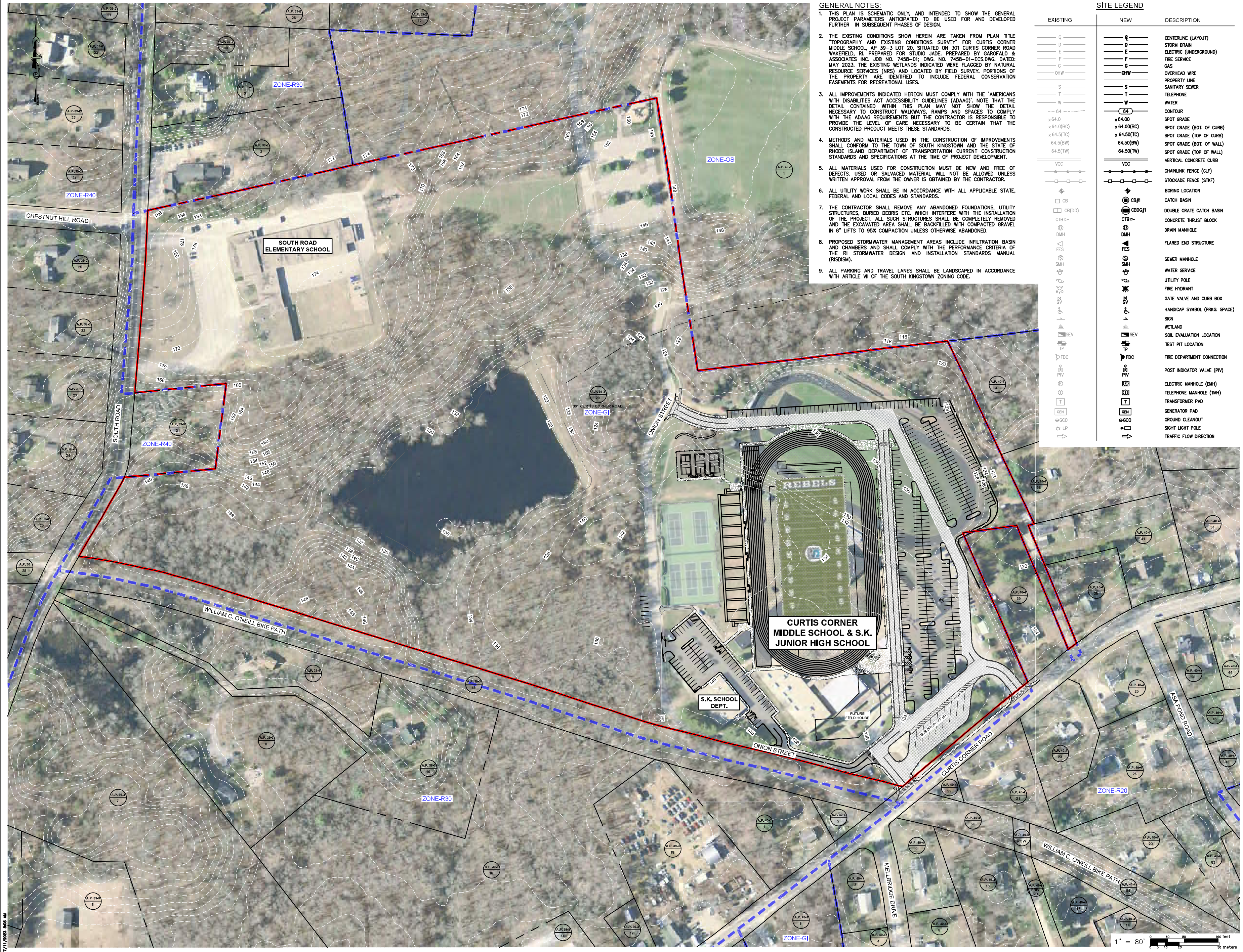
The western drive will extend for a relatively short distance of 80 feet intersecting with Onion Stret in a "T" configuration. Onion Street is the existing roadway along the westerly edge of the property that provides access to the athletic facilities to the rear. The continuation of Orion Street to the east connects to the easterly access. That segment of Onion Street extending from the westerly access drive to the easterly access drive will have a paved width of 24 feet. South of this segment of Onion Street will be a bus parking area adequate to accommodate 9 busses. Busses will enter the area from the westerly access drive and park in a saw tooth configuration. These will exit once this segment of Onion Stret and exit on site via the easterly access drive.

Proposed north of the connecting segment of Onion Street will be the two major parking fields of this facility. These parking fields will accommodate 365 vehicles having isles width of 24 feet and parking spaces measuring 9 feet by 18 feet. The configuration of this parking will allow for safe and efficient circulation through these lots. The third parking field is located from Onion Street west of the westerly access and is associated with administration building. There are 67 spaces within this lot.

A review of the available stopping sign sight distance from the proposed access drives reveals clear sight distances in excess of 320 feet to the east and west. These values are greater than that required for a vehicle travelling at 35 MPH.

It is recommended that appropriate signage and pavement markings be incorporated during the Final Design Stage.

Based upon this assessment of the existing and proposed physical features associated with this proposed athletic facility it can be concluded that future traffic conditions resulting from this proposed facility will provide for adequate and safe access.



GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS SHOW HEREIN ARE TAKEN FROM PLAN TITLE "TOPOGRAPHY AND EXISTING CONDITIONS SURVEY" FOR CURTIS CORNER MIDDLE SCHOOL, AP 39-3 LOT 20, SITUATED ON 301 CURTIS CORNER ROAD WAKEFIELD, RI. PREPARED FOR STUDIO JADE. PREPARED BY GAROFALO & ASSOCIATES INC. JOB NO. 7458-01; DWG. NO. 7458-01-ECS.DWG. DATED: MAY 2023. THE EXISTING WETLANDS INDICATED WERE FLAGGED BY NATURAL RESOURCE SERVICES (NRS) AND LOCATED BY FIELD SURVEY. PORTIONS OF THE PROPERTY ARE IDENTIFIED TO INCLUDE FEDERAL CONSERVATION EASEMENTS FOR RECREATIONAL USES.
3. ALL IMPROVEMENTS INDICATED HEREON MUST COMPLY WITH THE 'AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)'. NOTE THAT THE DETAIL CONTAINED WITHIN THIS PLAN MAY NOT SHOW THE DETAIL NECESSARY TO CONSTRUCT WALKWAYS, RAMPS AND SPACES TO COMPLY WITH THE ADAAG REQUIREMENTS BUT THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LEVEL OF CARE NECESSARY TO BE CERTAIN THAT THE CONSTRUCTED PRODUCT MEETS THESE STANDARDS.
4. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO THE TOWN OF SOUTH KINGSTOWN AND THE STATE OF RHODE ISLAND DEPARTMENT OF TRANSPORTATION CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE TIME OF PROJECT DEVELOPMENT.
5. ALL MATERIALS USED FOR CONSTRUCTION MUST BE NEW AND FREE OF DEFECTS. USED OR SALVAGED MATERIAL WILL NOT BE ALLOWED UNLESS WRITTEN APPROVAL FROM THE OWNER IS OBTAINED BY THE CONTRACTOR.
6. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE, FEDERAL AND LOCAL CODES AND STANDARDS.
7. THE CONTRACTOR SHALL REMOVE ANY ABANDONED FOUNDATIONS, UTILITY STRUCTURES, BURIED DEBRIS ETC. WHICH INTERFERE WITH THE INSTALLATION OF THE PROJECT. ALL SUCH STRUCTURES SHALL BE COMPLETELY REMOVED AND THE EXCAVATED AREA SHALL BE BACKFILLED WITH COMPACTED GRAVEL IN 6" LIFTS TO 95% COMPACTION UNLESS OTHERWISE ABANDONED.
8. PROPOSED STORMWATER MANAGEMENT AREAS INCLUDE INFILTRATION BASIN AND CHAMBERS AND SHALL COMPLY WITH THE PERFORMANCE CRITERIA OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL (RISDISM).
9. ALL PARKING AND TRAVEL LANES SHALL BE LANDSCAPED IN ACCORDANCE WITH ARTICLE VII OF THE SOUTH KINGSTOWN ZONING CODE.

SITE LEGEND

EXISTING	NEW	DESCRIPTION
℄	℄	CENTERLINE (LAYOUT)
D	D	STORM DRAIN
E	E	ELECTRIC (UNDERGROUND)
F	F	FIRE SERVICE
G	G	GAS
OHW	OHW	OVERHEAD WIRE
		PROPERTY LINE
S	S	SANITARY SEWER
T	T	TELEPHONE
W	W	WATER
64	64	CONTOUR
x64.0	x64.00	SPOT GRADE
x64.0(BC)	x64.00(BC)	SPOT GRADE (BOT. OF CURB)
x64.5(TC)	x64.50(TC)	SPOT GRADE (TOP OF CURB)
64.5(BW)	64.50(BW)	SPOT GRADE (BOT. OF WALL)
64.5(TW)	64.50(TW)	SPOT GRADE (TOP OF WALL)
VCC	VCC	VERTICAL CONCRETE CURB
		CHAINLINK FENCE (CLF)
		STOCKADE FENCE (STKF)
		BORING LOCATION
CB	CB#1	CATCH BASIN
CB(DG)	CBDG#1	DOUBLE GRATE CATCH BASIN
CTB	CTB	CONCRETE THRUST BLOCK
DMH	DMH	DRAIN MANHOLE
FES	FES	FLARED END STRUCTURE
SMH	SMH	SEWER MANHOLE
		WATER SERVICE
		UTILITY POLE
HYD		FIRE HYDRANT
GV	GV	GATE VALVE AND CURB BOX
		HANDICAP SYMBOL (PRKG. SPACE)
		SIGN
		WETLAND
SEV	SEV	SOIL EVALUATION LOCATION
TP	TP	TEST PIT LOCATION
FDC	FDC	FIRE DEPARTMENT CONNECTION
PIV	PIV	POST INDICATOR VALVE (PIV)
E	E	ELECTRIC MANHOLE (EMH)
T	T	TELEPHONE MANHOLE (TMH)
T	T	TRANSFORMER PAD
GEN	GEN	GENERATOR PAD
GCO	GCO	GROUND CLEANOUT
LP		SIGHT LIGHT POLE
		TRAFFIC FLOW DIRECTION

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CRUMPTON, MARYLAND 216285

CONSULTANT

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
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PROVIDENCE, RI 02940
(PH) 401-273-6000 (FX) 401-273-1000

SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
CURTIS CORNER MIDDLE SCHOOL &
SOUTH KINGSTOWN JUNIOR HIGH SCHOOL
301 CURTIS CORNER ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
-	-	-

SHEET TITLE

SITE CONTEXT PLAN

RIDE STAGE II
SCHEMATIC DESIGN

7-12-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.1

SHEET NO.

C-1

Exhibit 35

Broad Rock MS Traffic/Transportation Report

STUDIO JAED
ARCHITECTS ENGINEERS FACILITIES SOLUTIONS
42 Weybosset Street | Suite 403 | Providence, RI 02903
Phone 401.648.0884 | Fax 401.331.0923 | studiojaed.com

Traffic & Transportation Assessment
Broad Rock Middle School
South Kingstown, Rhode Island

For the 2023-24 school year, a number of site improvements will be implemented by the School District in anticipation of receiving additional students from Curtis Corner Middle School. A number of traffic improvements were discussed between South Kingstown Public Schools, the Police Department, and the Fire Department. The design team will report and assess the traffic implications in the RIDE Stage II Supplement following the start of the school year. This will allow time to study and understand how the recent traffic improvements have impacted the overall traffic conditions and what other improvements may be necessary.

Exhibit 36

Matunuck ES Traffic/Transportation Report

GAROFALO
Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

Date: July 18, 2023

To: Philip Conte, AIA, NCARB
President & CEO
Studio Jaed Architects

From: Garofalo & Associates, Inc.

Subject: Traffic & Transportation Assessment
Matunuck Elementary School
South Kingstown, Rhode Island

Existing Conditions

The Matunuck Elementary School is located on Matunuck Beach Road in the Matunuck section of South Kingstown. The entrance to the school is 120 feet south of the Matunuck School House Road intersection. Matunuck School House Road forms a "T" type intersection with Matunuck Beach Road. Matunuck School House Road is west of Matunuck Beach Road while the school is east of Matunuck Beach Road. Matunuck School House Road is classified as a Major Road Arterial by the Statewide Planning Authority. Matunuck Beach Road is straight and flat through the school area. The posted speed limit is 25 MPH with a posted school zone limit of 20 MPH. Matunuck Beach Road is rural in nature and has no curbing or sidewalks.

Vehicle Access to the school is available from a single access drive onto Matunuck Beach Road. This access drive to the school is approximately 24 feet wide, 800 feet in length and leads to the parking field in front of the school. This parking field consists of two isles and three bays of parking and forms a "P" loop with the access drive. (See Figure 1) The total number of parking spaces is approximately 81.

The school access drive forms a "T" type intersection with Matunuck Beach Road and is controlled by a stop sign for traffic exiting the school. A review of the available stopping sight distance for this intersection reveals distance in excess of that necessary for a vehicle speed of 35 MPH. The posted limit of Matunuck Beach Road is 25 MPH with a school overlay zone of 20 MPH.

Existing Traffic Flow

Parent drop off occurs at the rear door of the school. During the AM Arrival Period vehicles enter the site and begin to queue from the rear of the building extending down the entire access drive. Once students are allowed to enter the building, parent vehicles will proceed to pull to the rear door and allow students to exit the vehicles and enter the school. School staff are available to assist students to enter the building.

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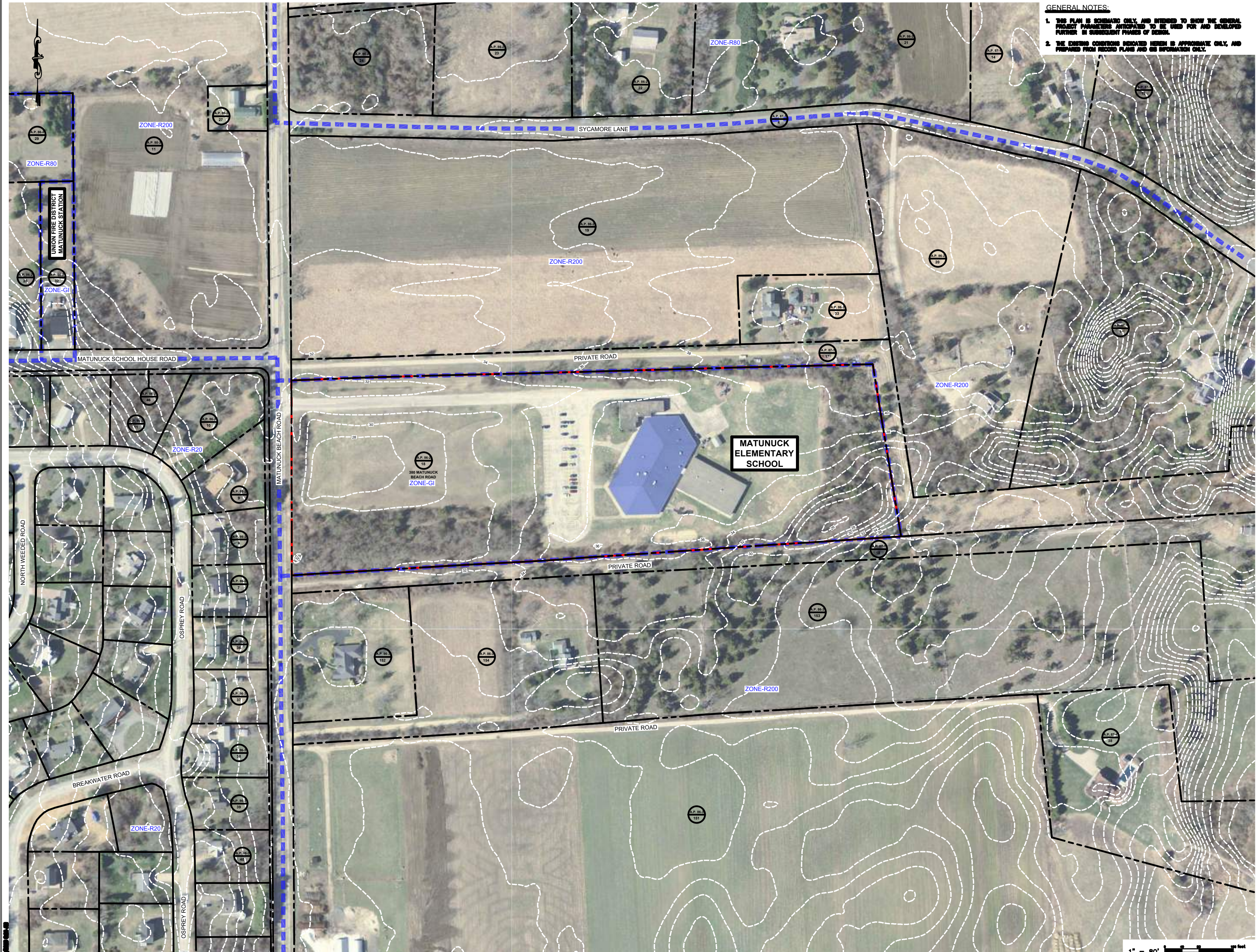
During the afternoon dismissal period parent vehicles queue from the rear of the building to the front similar to the AM period. This queue extends along the entry access drive but does not reach Matunuck Beach Road. School staff are positioned within the queue to identify parents and transmit that information to staff within the school to coordinate student dismissal. Once again bus loading is accompanied through the front of the school. Buses will enter the access drive and utilize the "P" loop formed by the parking field to access the front door of the school. They will queue several hundred feet from the front door and proceed when allowed to the front door to pick up students. When complete the next bus will do the same

During the afternoon dismissal period 8 busses were observed to service the school. The majority of students were transported to and from the school either by parents or bus. Only two students were observed to be walking to the school. These students were escorted by their parents.

Proposed Site Improvements

Proposed site improvements at the Matunuck Elementary School are limited. They should consist of a restriping of the front parking field, placement of approximate new school signing and development of code compliant handicap accessibility.



GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

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ARCHITECTS ■ ENGINEERS ■ FACILITIES SOLUTIONS

CONSULTANT:

GAROFALO

SIGNATURE: ____________
DATE OF SIGNATURE: ____________
DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT:
TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
MATUNUCK ELEMENTARY SCHOOL
380 MATUNUCK BEACH ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
-	-	-

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

7-12-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.3

SHEET NO.

G-1

Exhibit 37

Peace Dale ES Traffic/Transportation Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

Date: July 18, 2023

To: Philip Conte, AIA, NCARB
President & CEO
Studio Jaed Architects

From: Garofalo & Associates, Inc.

Subject: Traffic & Transportation Assessment
Peacedale Elementary School
South Kingstown, Rhode Island

Existing Conditions

The Peacedale Elementary School is located on Kersey Road within the Peacedale section in the Town of South Kingstown. Kersey road is classified as a Minor Arterial by Statewide Planning. Kersey Road is a 2-way bituminous roadway having a paved width ranging from 26 feet 30 feet. Cement concrete curbing and sidewalks are present along southerly side of Kersey Road. Kersey Road in the vicinity of the school is straight and relatively flat. The posted speed limit is 25 MPH however there is an overlay limit associated with the school of 20 MPH.

Vehicle access to the Peacedale Elementary School is available from Kersey Street. There are two drives from Kersey Road to the school, one access drive (East Access) and one egress drive (West Access). The easterly access, which is split by a median, provides a one-way entrance leading to the primary parking lot or the front of the school. The segment of this access drive leading to the front of the school continues to form a loop and exits onto Kersey Road. The segment that leads to the parling lot is a one way drive that winds through the parking field. Parking spaces within the main parking field are stripped at an angle to facilitate the one-way movement of vehicles. (See Figure 1)

There are approximately 115 parking spaces at the Peacedale School. All of these spaces are contained in the parking field located at the front of the school.

Existing Traffic Flow

Both parent pick up/drop off and bus pick up/drop off occur at the front of the school. During the AM Arrival Period parent vehicles enter the school property via the easterly access from Kersey Road. They will enter into the parking area queued waiting to reach the front door. Once at the front door the students will exit the vehicles and enter the school. School staff are available to escort students into the school.

During the AM busses enter the site through the easterly access drive to the front door. They will stop at the curb and allow students to exit the bus and enter the school. School staff are available to assist student to the front door.

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During the Afternoon Dismissal Period parent vehicles queue once again within the one-way isles of the parking lot. School staff are positioned within the queue to identify parents and transmit the information to staff within the school to coordinate students with parents. Once again bus loading is accompanied through the front of the school. However, parent pick up does not begin until bus pickup is complete. Busses will queue in the access drive and proceed to the front door, one at a time, to load students. When complete the next bus will do the same.

During the Afternoon Dismissal period 8 buses were observed to service the school while the minority of students were transported by parent vehicles or bus, there were a number of students walking to and from school.

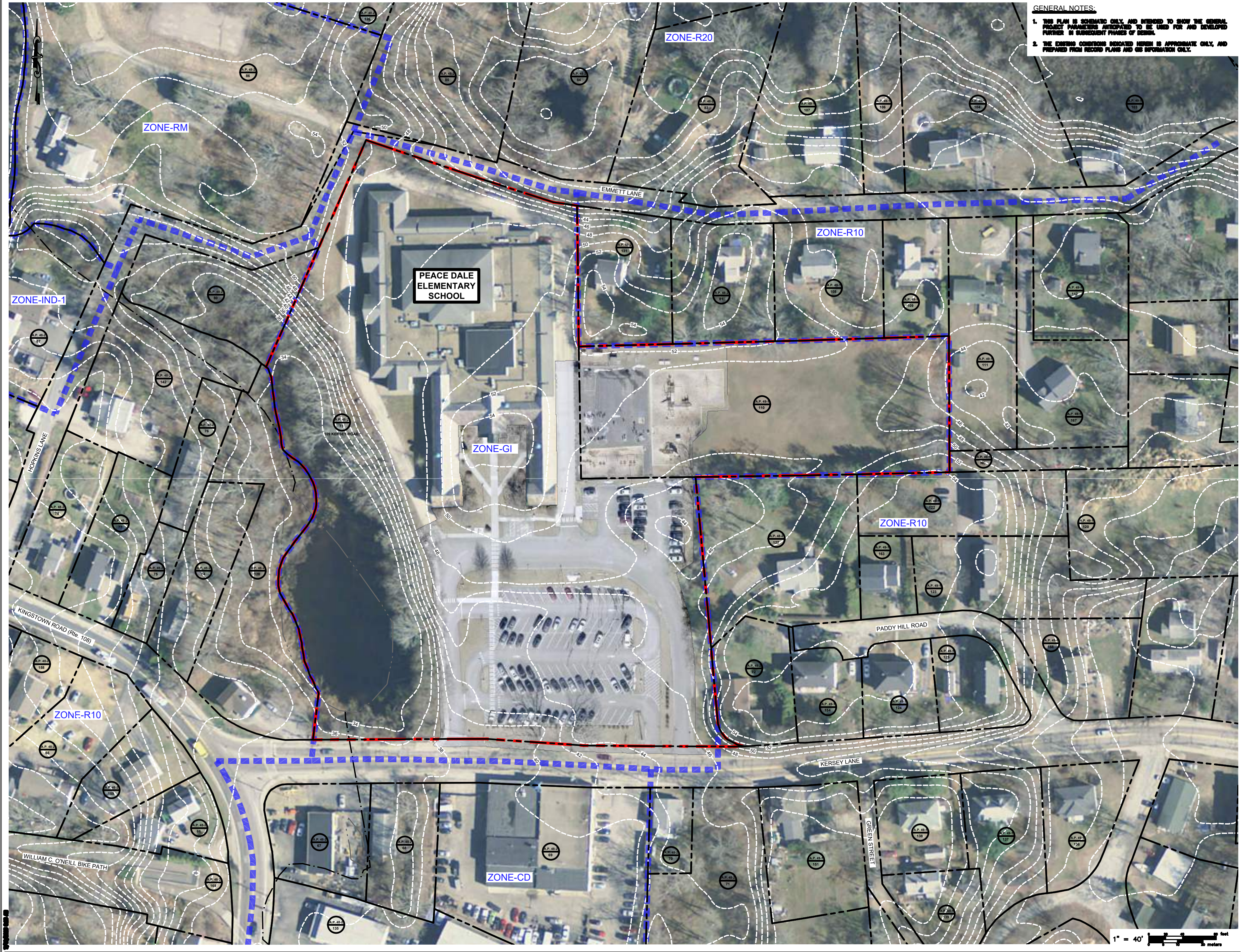
To facilitate these walking students, crossing guards were positioned at the following intersections

1. Kersey Road at the west school entrance
2. Kersey Road at Kingstown Road
3. Kingstown Road at the bike path

These intersections were also the location of formalized crosswalks.

Proposed Improvements

The site features of Peacedale School appear to have been recently upgraded with new asphalt pavement in the parking area, new concrete sidewalk at the school and new pavement markings. Therefore, proposed improvements are limited. At a minimum new school signage should be placed on Kersey Road



GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

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THE PROFESSIONAL SERVICES OF THE ARCHITECT ARE UNDERTAKEN FOR AND ARE PERFORMED IN THE INTEREST OF [NAME OF PERSON EMPLOYING ARCHITECT]. NO CONTRACTUAL OBLIGATION IS ASSUMED BY THE ARCHITECT FOR THE BENEFIT OF ANY OTHER PERSON INVOLVED IN THE PROJECT.

SIGNATURE: ____________

DATE OF SIGNATURE: ____________

DATE OF REGISTRATION EXPIRATION: ____________

ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
PEACE DALE ELEMENTARY SCHOOL
109 KERSEY ROAD
SOUTH KINGSTOWN, RI 02879

REVISIONS

MARK	DESCRIPTION	DATE
-	-	-

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

7-12-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.4

SHEET NO.

G-1

Exhibit 38

West Kingston ES Traffic/Transportation Report

Garofalo & Associates, Inc.
Consulting Engineers
Surveyors ♦ Land Planners

Date: July 18, 2023

To: Philip Conte, AIA, NCARB
President & CEO
Studio Jaed Architects

From: Garofalo & Associates, Inc.

Subject: Traffic & Transportation Assessment
West Kingstown Elementary School
South Kingstown, Rhode Island

Existing Conditions

The West Kingstown Elementary School is located on Ministerial Road (RI Route 110) within the Kingstown section of South Kingstown. Ministerial Road is classified as a Rural Arterial by the Statewide Planning and connects RI Route 138 to the north with US Route 1 to the south. Ministerial Road in the vicinity of the school is 26 feet and is relatively flat and relatively straight however there is a large radius horizontal curve located at the school. The posted speed limit for Ministerial Road in 35 MPH however a reduced limit of 20 MPH is posted for that portion of roadway adjacent to the school. Ministerial Road is rural in nature and has no curbing or sidewalk.

Vehicle access to the West Kingstown Elementary School is available from Ministerial Road. There are two drives from Ministerial leading to the school, one access drive and one egress drive. There access drives form a one-way counter clockwise loop through the school property.

Vehicles entering the property through the southerly access proceed to the entrance drive to either bear left into the main parking area or continue on the entrance drive to the front door. The front door is utilized by bus students entering and exiting the school. (See Figure 1)

There are approximately 83 parking spaces at the West Kingstown School. All of the spaces are contained in the school parking field located at the front of the school.

Existing Traffic Flow

Parent drop off occurs at the rear door to the school. During the AM Period parent vehicles queue on the school property within a single lane. This queue will extend from the rear of the building to the front of the building. Once students are allowed to enter the building, parent vehicles will pull to the curb and allow the students to exit the vehicles and enter the school. School staff are available to escort students into the school.

During the AM busses enter the site and proceed to the access drive to the front door. They will stay at the curb and allow students to exit the bus and enter the school. Bus staff and school staff are available to escort students to the front entrance.

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During the Afternoon Dismissal period parent vehicles queue from the rear of the school to the front similar to the AM Arrival Period. School staff are positioned within the queue to identify parents and transmit that information to staff within the school to coordinate students with parents. Once again bus loading is accomplished through the front of the school. Busses will queue along the front curb of the school away from the front door. As groups of students exit the building the appropriate bus will pull to the front door and allow students to board. When complete the next bus will do the same.

During the Afternoon Dismissal Period 6 buses were observed to service the school. The majority of students were transported to and from school by parents while no students were observed walking along Ministerial Road.

Proposed Site Improvements

Proposed site improvements at the West Kingstown Elementary School are limited. They should consist of restriping the front parking lot and a development of code compliant handicapped accessories.

GENERAL NOTES:

1. THIS PLAN IS SCHEMATIC ONLY, AND INTENDED TO SHOW THE GENERAL PROJECT PARAMETERS ANTICIPATED TO BE USED FOR AND DEVELOPED FURTHER IN SUBSEQUENT PHASES OF DESIGN.
2. THE EXISTING CONDITIONS INDICATED HEREIN IS APPROXIMATE ONLY, AND PREPARED FROM RECORD PLANS AND GIS INFORMATION ONLY.

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ARCHITECT / ENGINEER SEAL

PROJECT

TOWN OF SOUTH KINGSTOWN
NEW CONSTRUCTION
AT THE
WEST KINGSTOWN ELEMENTARY SCHOOL
3119 MINISTERIAL ROAD
WEST KINGSTOWN, RI 02892

REVISIONS

MARK	DESCRIPTION	DATE
-	-	-

SHEET TITLE

AERIAL SITE PLAN

RIDE STAGE II
SCHEMATIC DESIGN

7-12-2023

DRAWN	CHK'D	PROJECT NO.
KJA	SSH	7458.5

SHEET NO.

G-1