I-95 Corridor
Branford to Rhode Island Feasibility Study Update



Final Report Appendices
May 2018

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Appendix A
Existing Infrastructure System Inventory

Figure A-1 to A-8: 2016, 2045 No-Build, and 2045 Build Peak Hour Volumes

Figure A-9: 2000 vs. 2016 Two-Way Daily Traffic Volumes

Figure A-10: 2000 vs. 2016 Two-Way AM Peak Hour Traffic Volumes

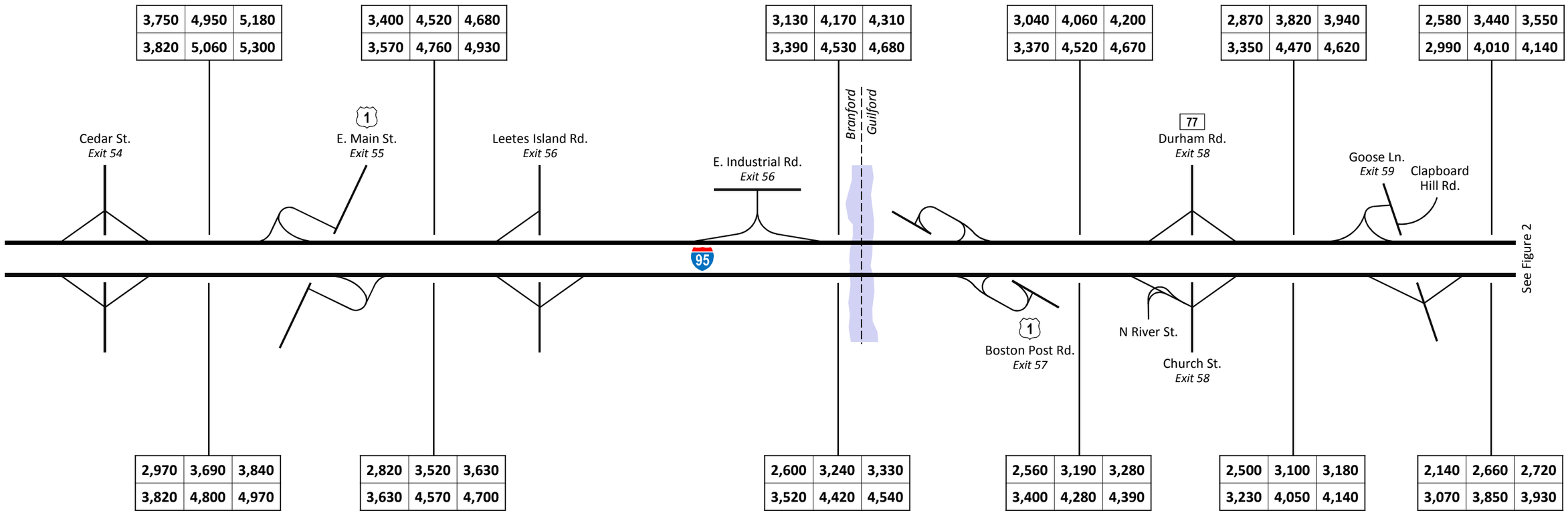
Figure A-11: 2000 vs 2016 Two-Way PM Peak Hour Traffic Volumes

Figure A-12 to A-15: I-95 Average Summer Sunday INRIX Travel Speeds

Figure A-16 to A-23: Corridor Improvements Since 2004 Plans

Figure A-24 to A-31: 2016, 2045 No-Build, and 2045 Build Level of Service and Density

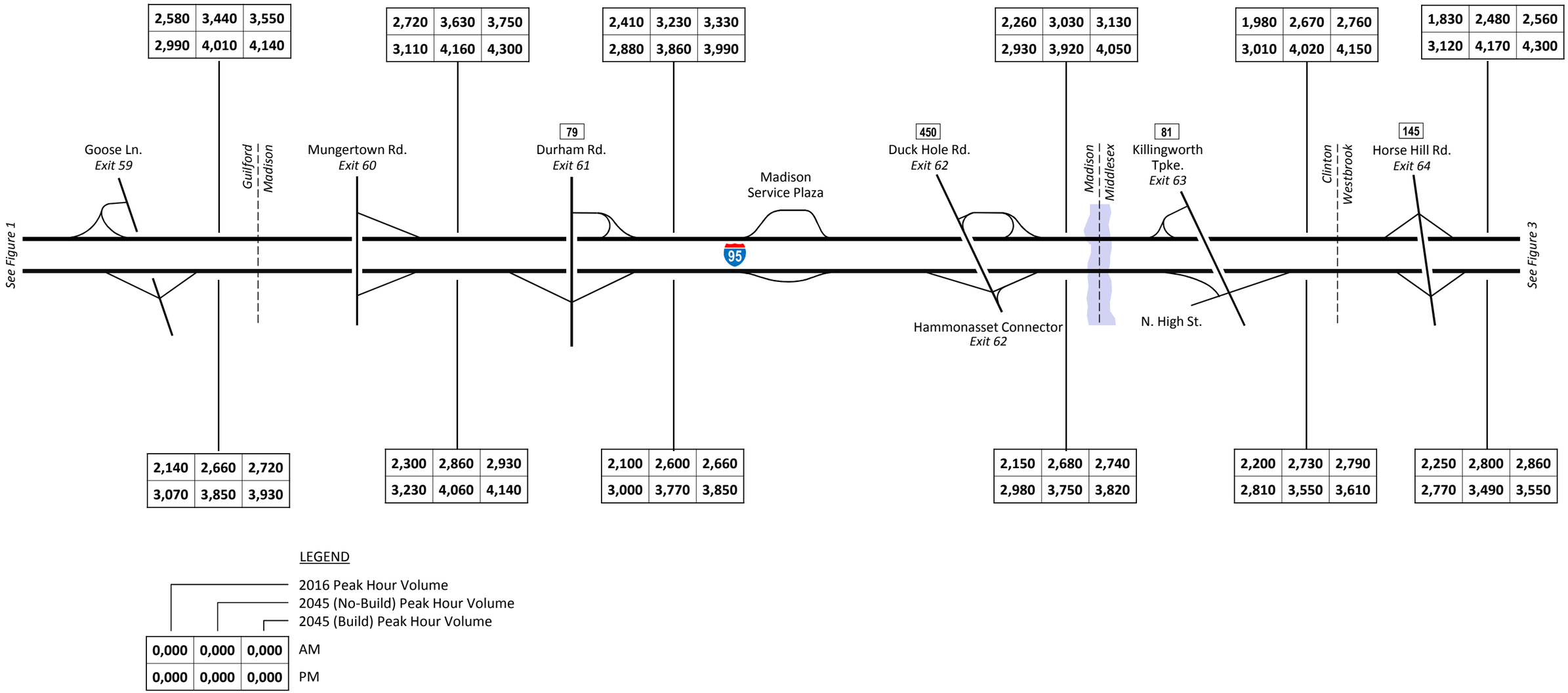
Figure A-32 to A-39: I-95 Crash Analysis



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PEAK HOUR VOLUMES

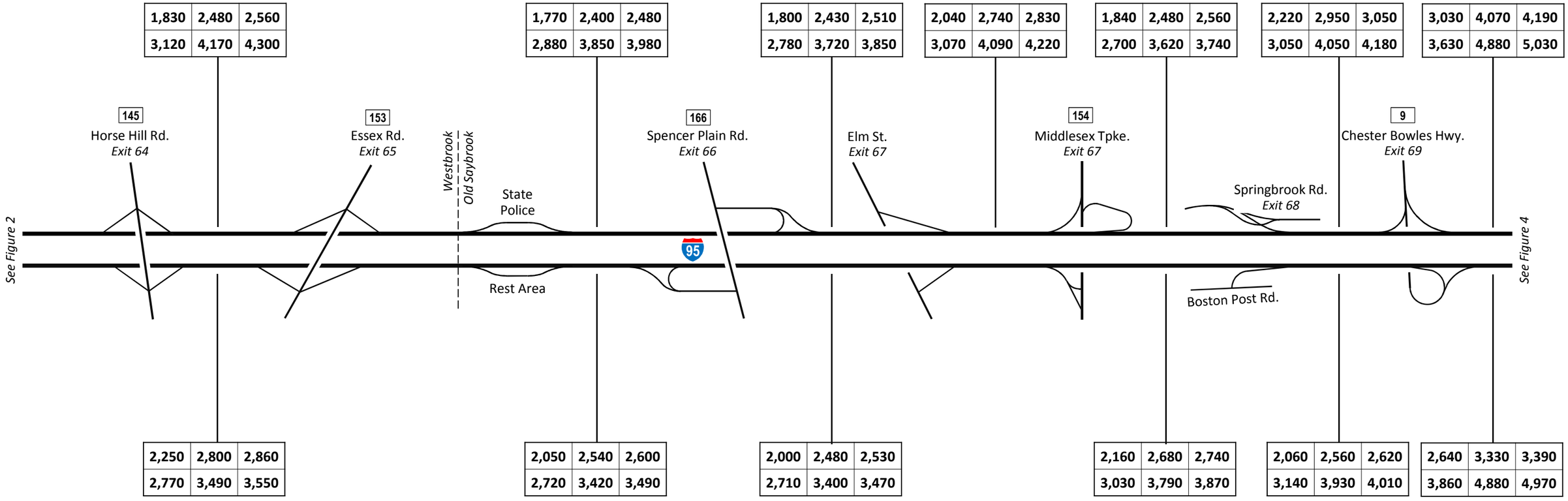
FIGURE A-1



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PEAK HOUR VOLUMES

FIGURE A-2



LEGEND

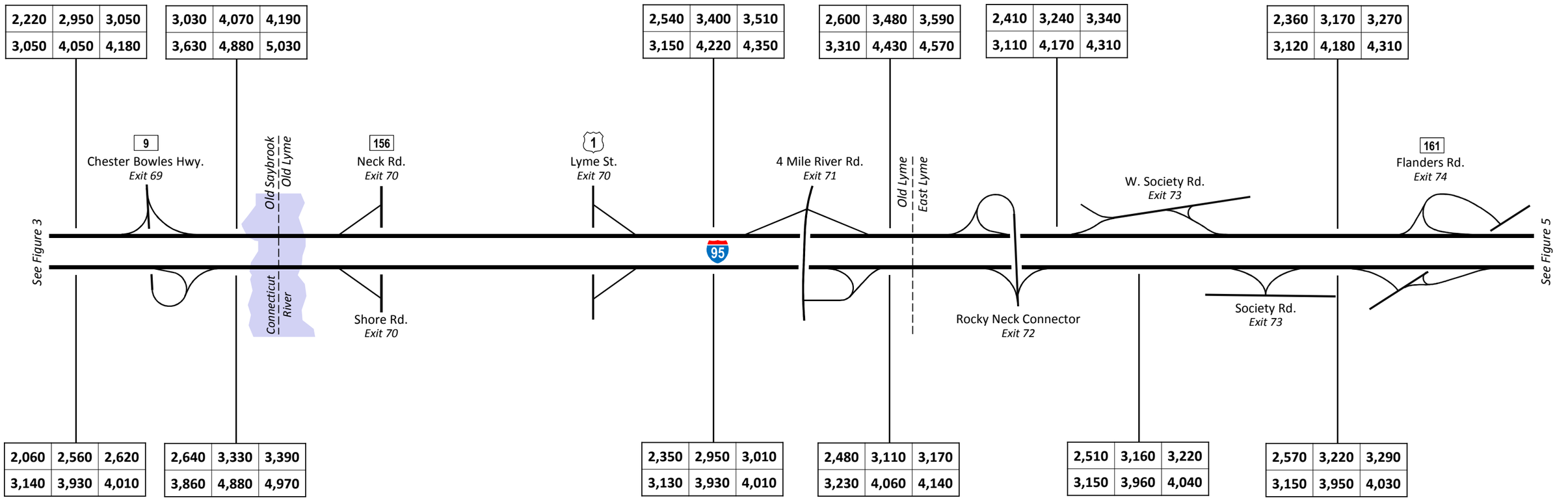
2016 Peak Hour Volume
2045 (No-Build) Peak Hour Volume
2045 (Build) Peak Hour Volume

0,000	0,000	0,000	AM
0,000	0,000	0,000	PM

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PEAK HOUR VOLUMES

FIGURE A-3



LEGEND

2016 Peak Hour Volume
2045 (No-Build) Peak Hour Volume
2045 (Build) Peak Hour Volume

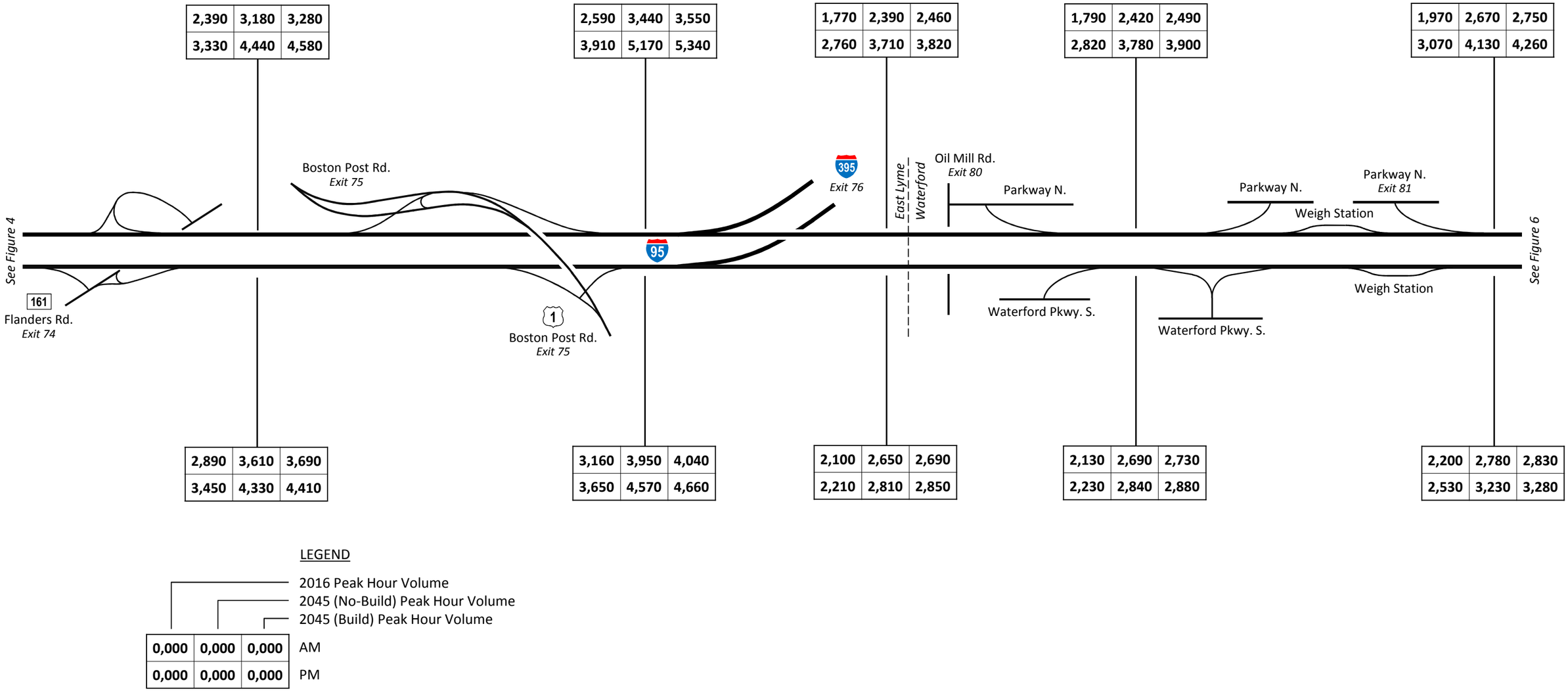
0,000	0,000	0,000
0,000	0,000	0,000

AM
PM

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PEAK HOUR VOLUMES

FIGURE A-4



LEGEND

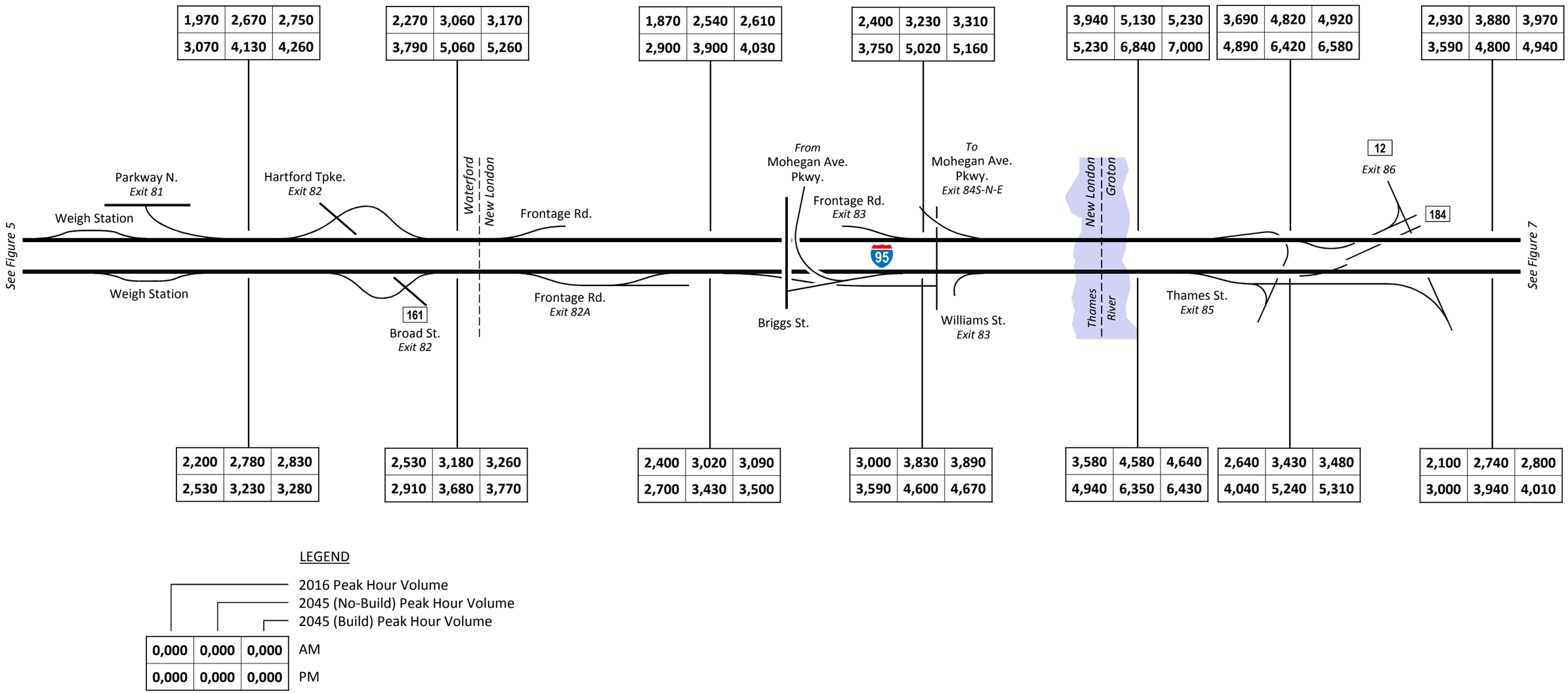
2016 Peak Hour Volume
2045 (No-Build) Peak Hour Volume
2045 (Build) Peak Hour Volume

0,000	0,000	0,000	AM
0,000	0,000	0,000	PM

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PEAK HOUR VOLUMES

FIGURE A-5



LEGEND

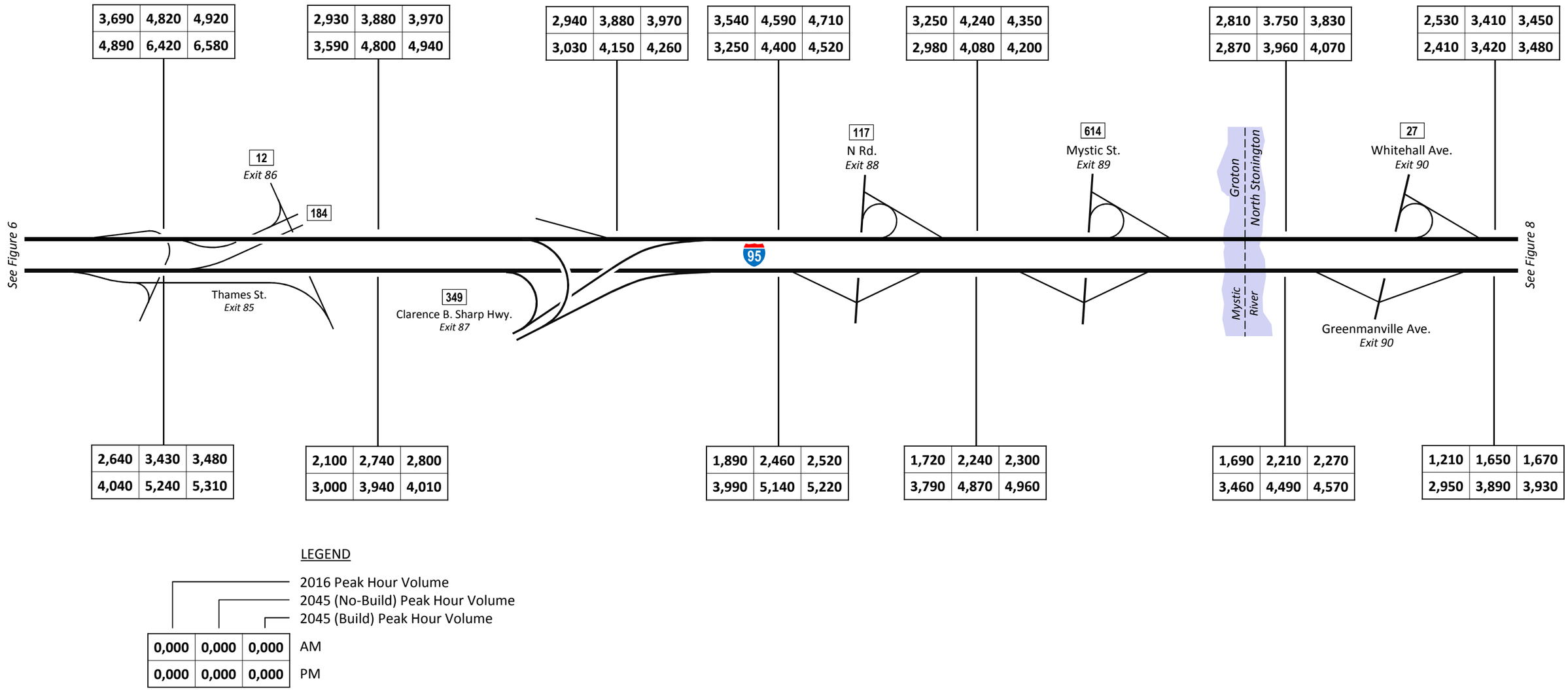
2016 Peak Hour Volume
2045 (No-Build) Peak Hour Volume
2045 (Build) Peak Hour Volume

0,000	0,000	0,000	AM
0,000	0,000	0,000	PM

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PEAK HOUR VOLUMES

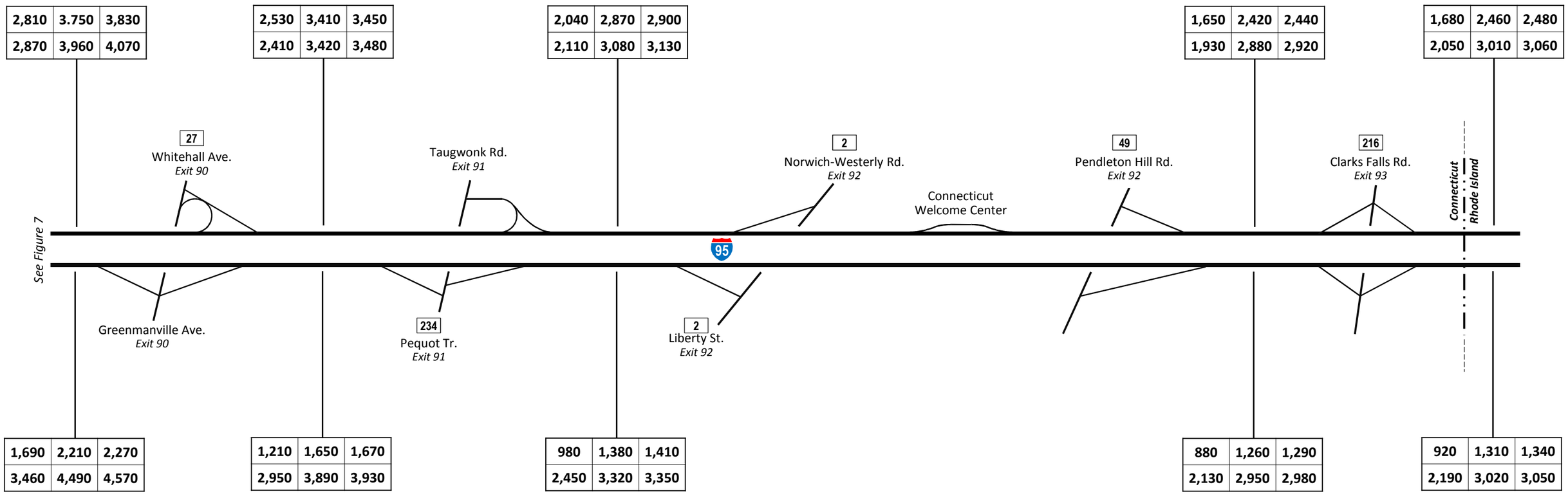
FIGURE A-6



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PEAK HOUR VOLUMES

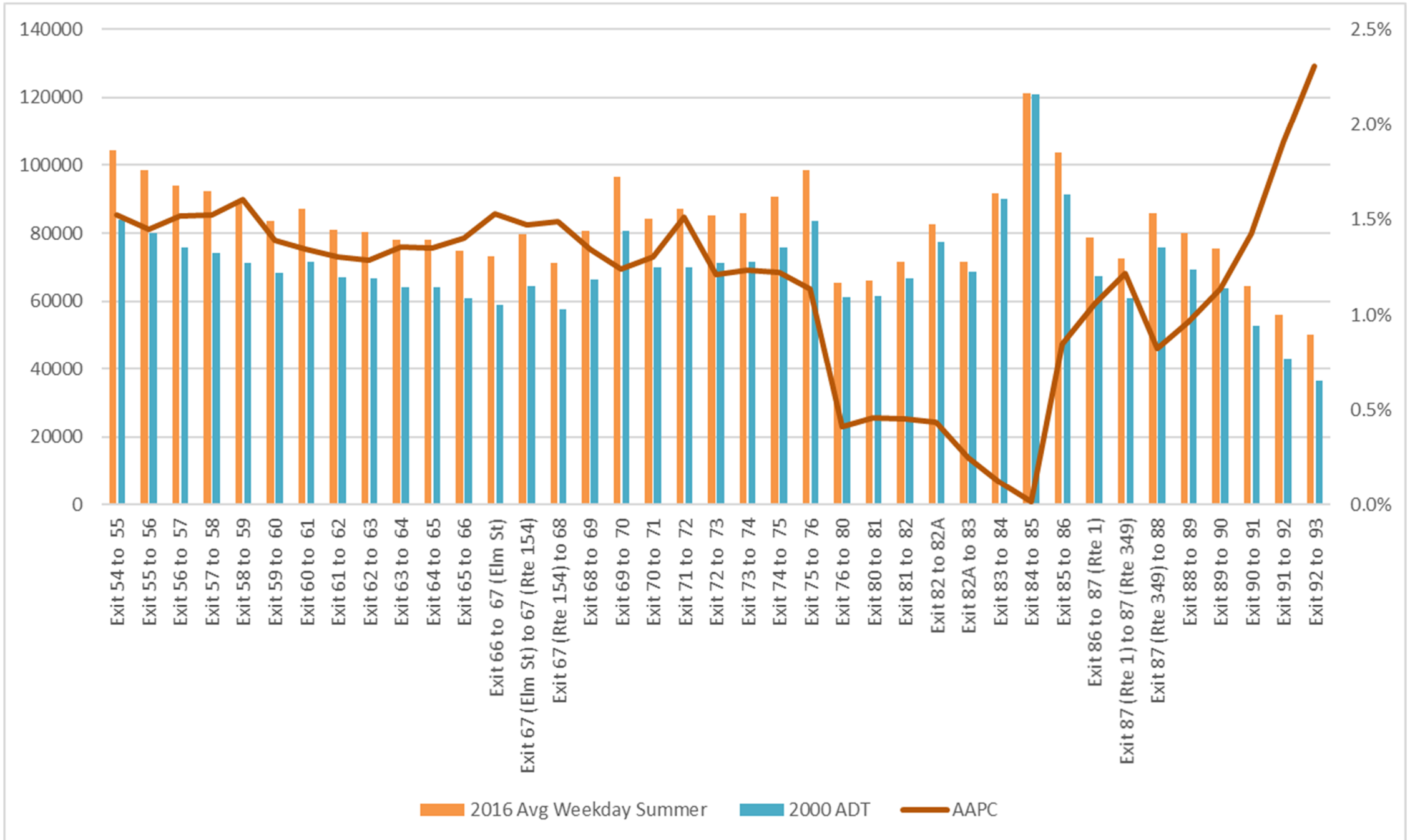
FIGURE A-7



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PEAK HOUR VOLUMES

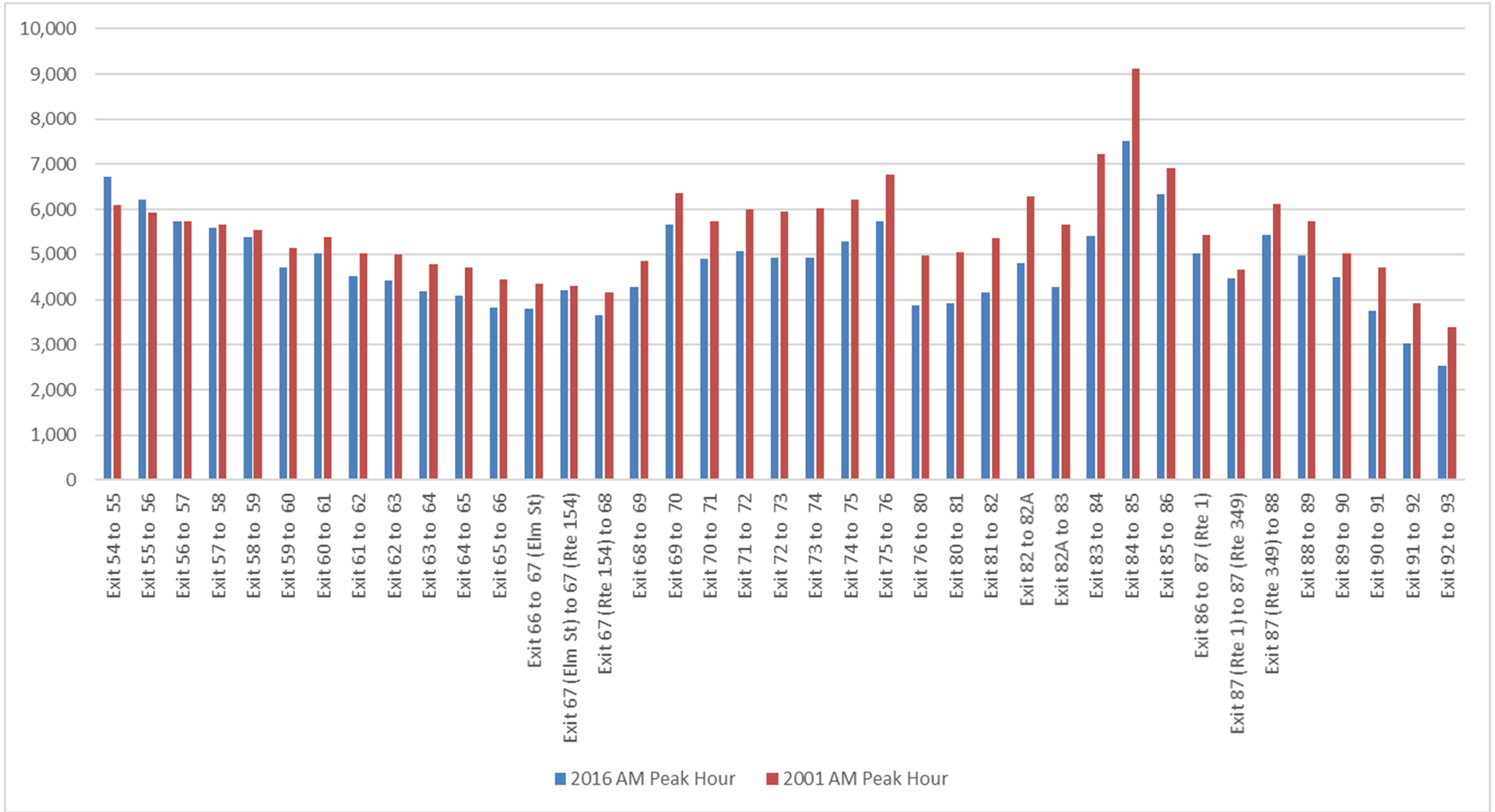
FIGURE A-8



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2000 vs 2016- TWO-WAY DAILY TRAFFIC VOLUMES

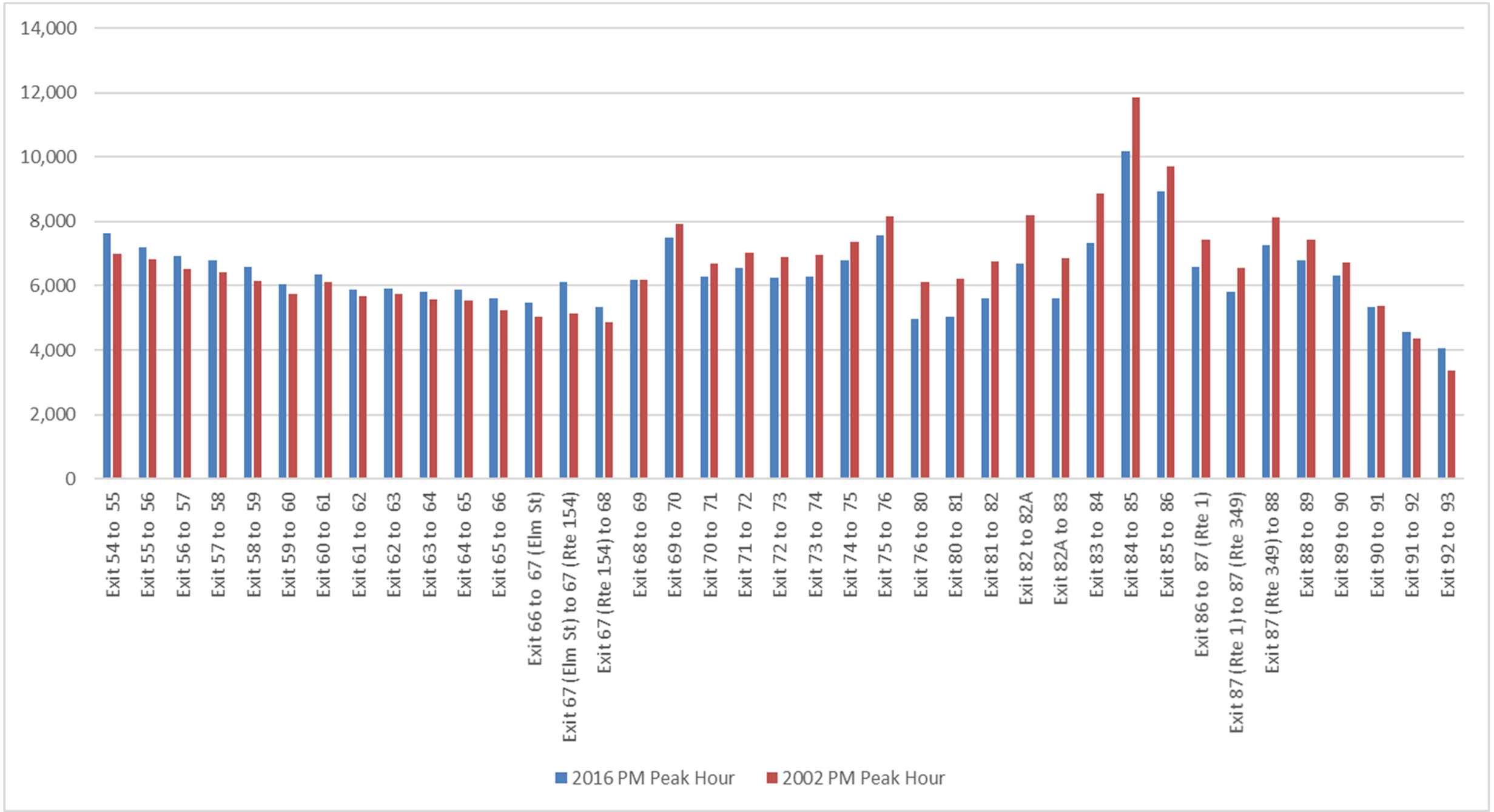
FIGURE A-9



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2000 vs 2016- TWO-WAY AM PEAK HOUR TRAFFIC VOLUMES

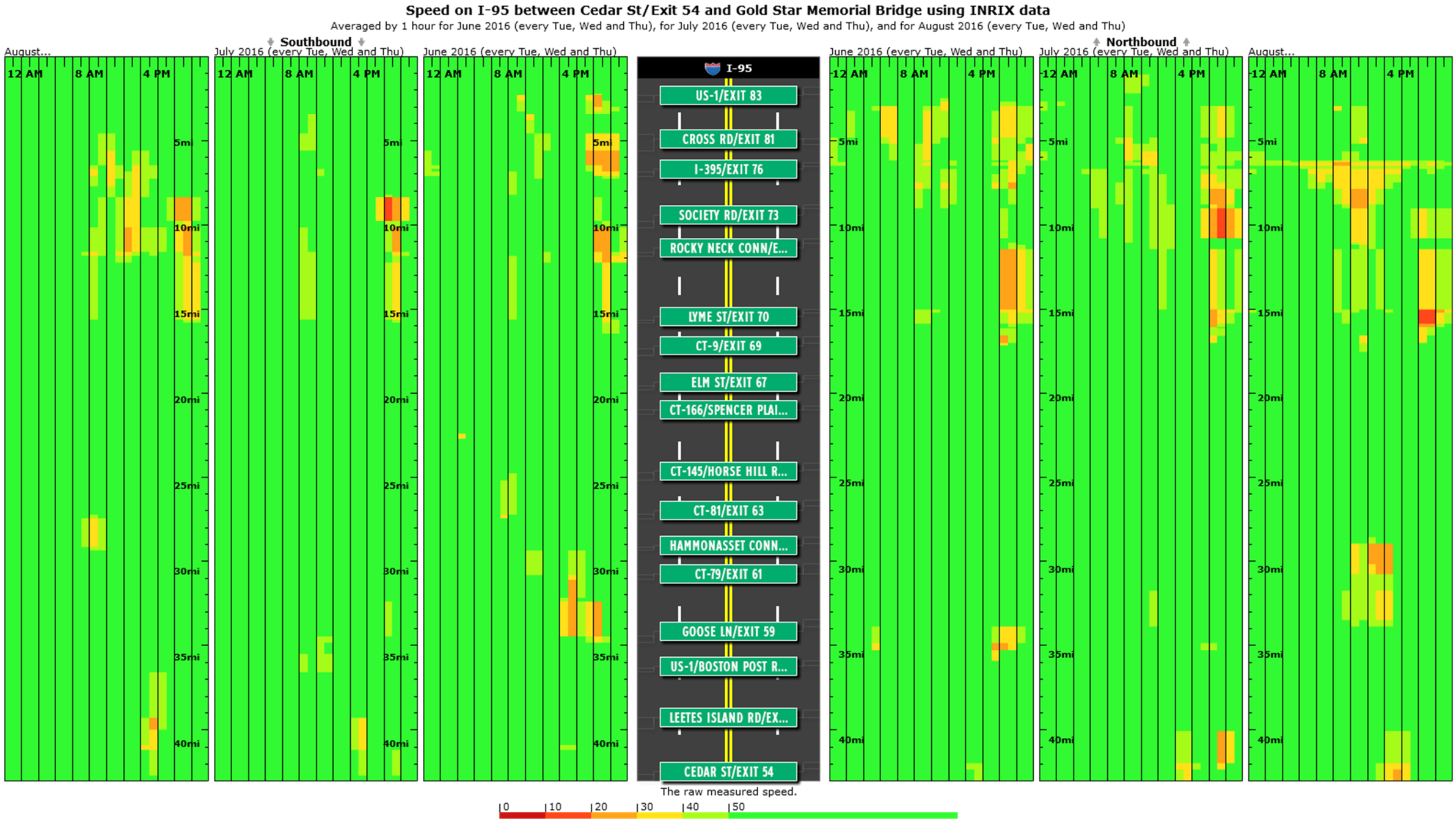
FIGURE A-10



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2000 vs 2016- TWO-WAY PM PEAK HOUR TRAFFIC VOLUMES

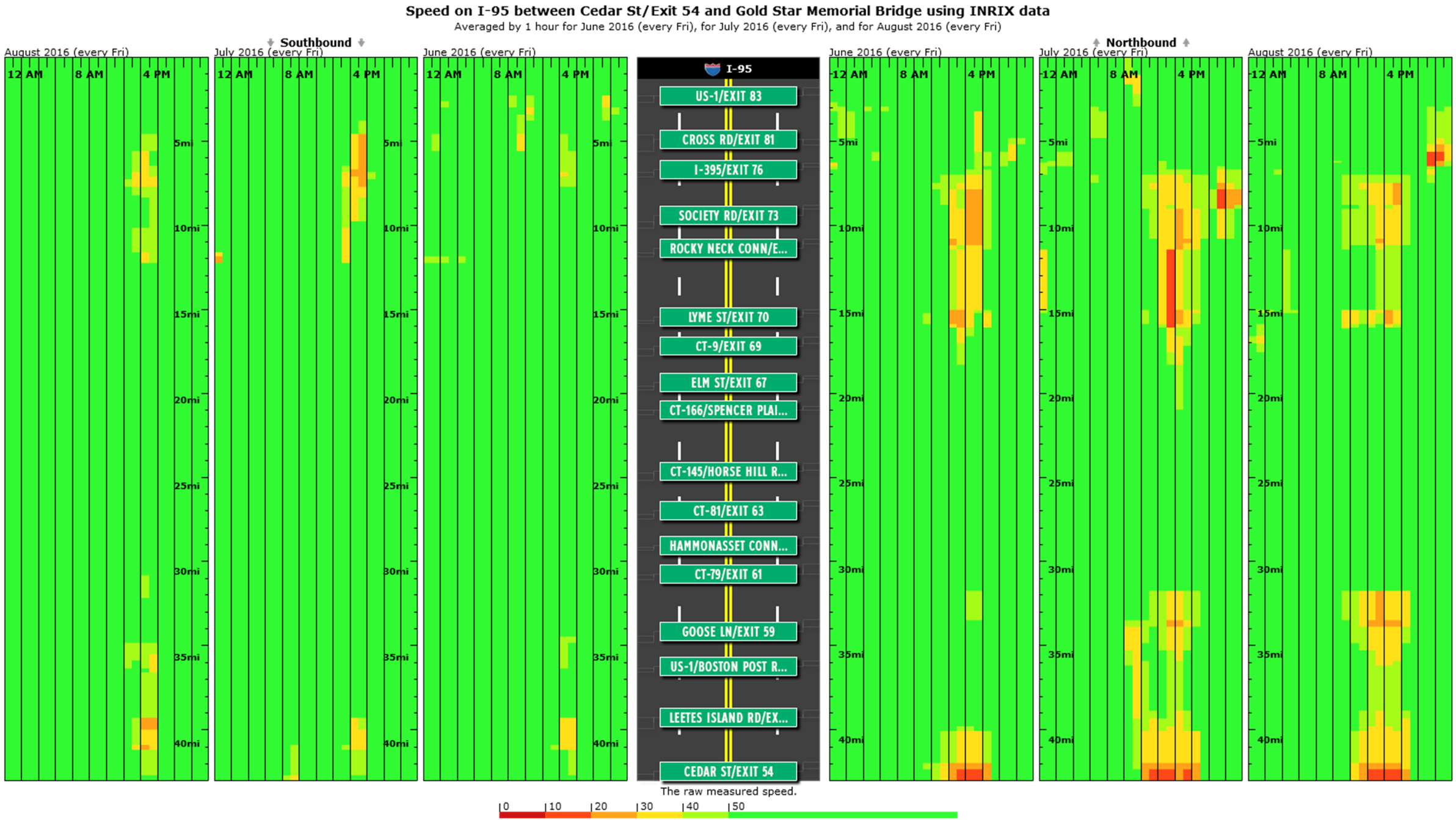
FIGURE A-11

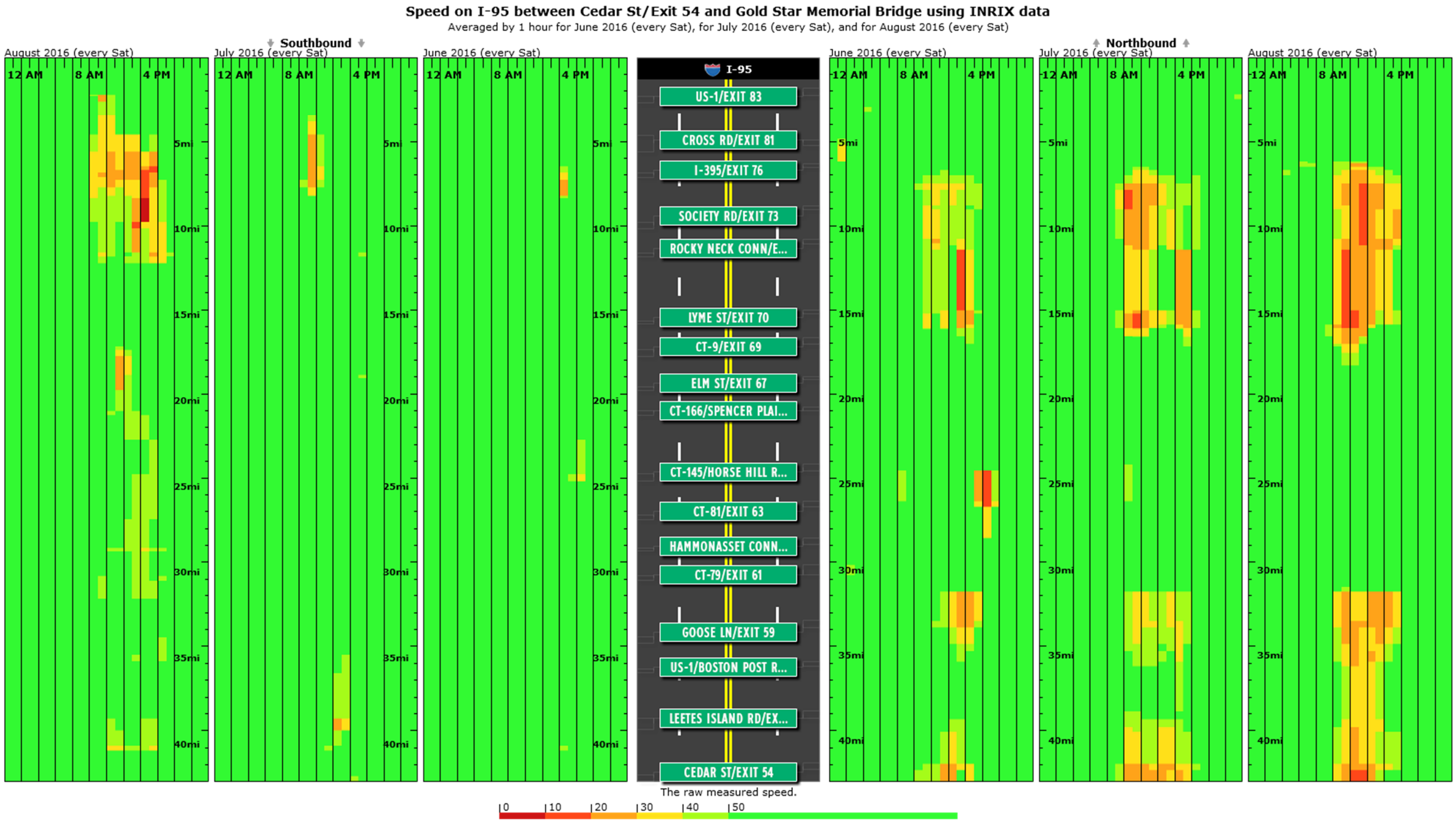


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INRIX: I-95 AVERAGE SUMMER WEEKDAY TRAVEL SPEEDS

FIGURE A-12


Speed on I-95 between Cedar St/Exit 54 and Gold Star Memorial Bridge using INRIX data
Averaged by 1 hour for June 2016 (every Fri), for July 2016 (every Fri), and for August 2016 (every Fri)
Southbound
Northbound
August 2016 (every Fri)
July 2016 (every Fri)
June 2016 (every Fri)
12 AM
8 AM
4 PM
5mi
10mi
15mi
20mi
25mi
30mi
35mi
40mi
I-95
US-1/EXIT 83
CROSS RD/EXIT 81
I-395/EXIT 76
SOCIETY RD/EXIT 73
ROCKY NECK CONN/E...
LYME ST/EXIT 70
CT-9/EXIT 69
ELM ST/EXIT 67
CT-166/SPENCER PLAI...
CT-145/HORSE HILL R...
CT-81/EXIT 63
HAMMONASSET CONN...
CT-79/EXIT 61
GOOSE LN/EXIT 59
US-1/BOSTON POST R...
LEETES ISLAND RD/EX...
CEDAR ST/EXIT 54
The raw measured speed.
0
10
20
30
40
50



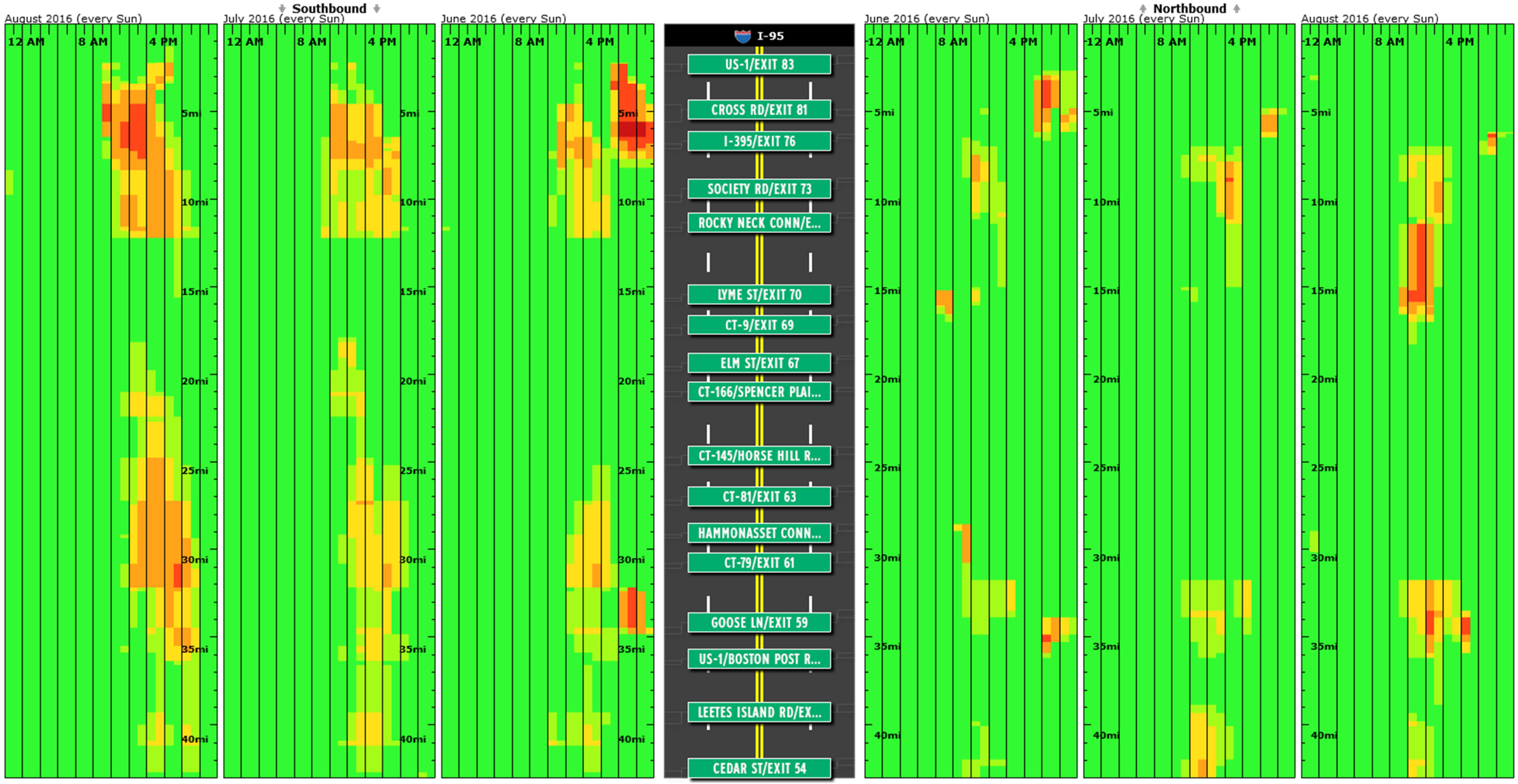
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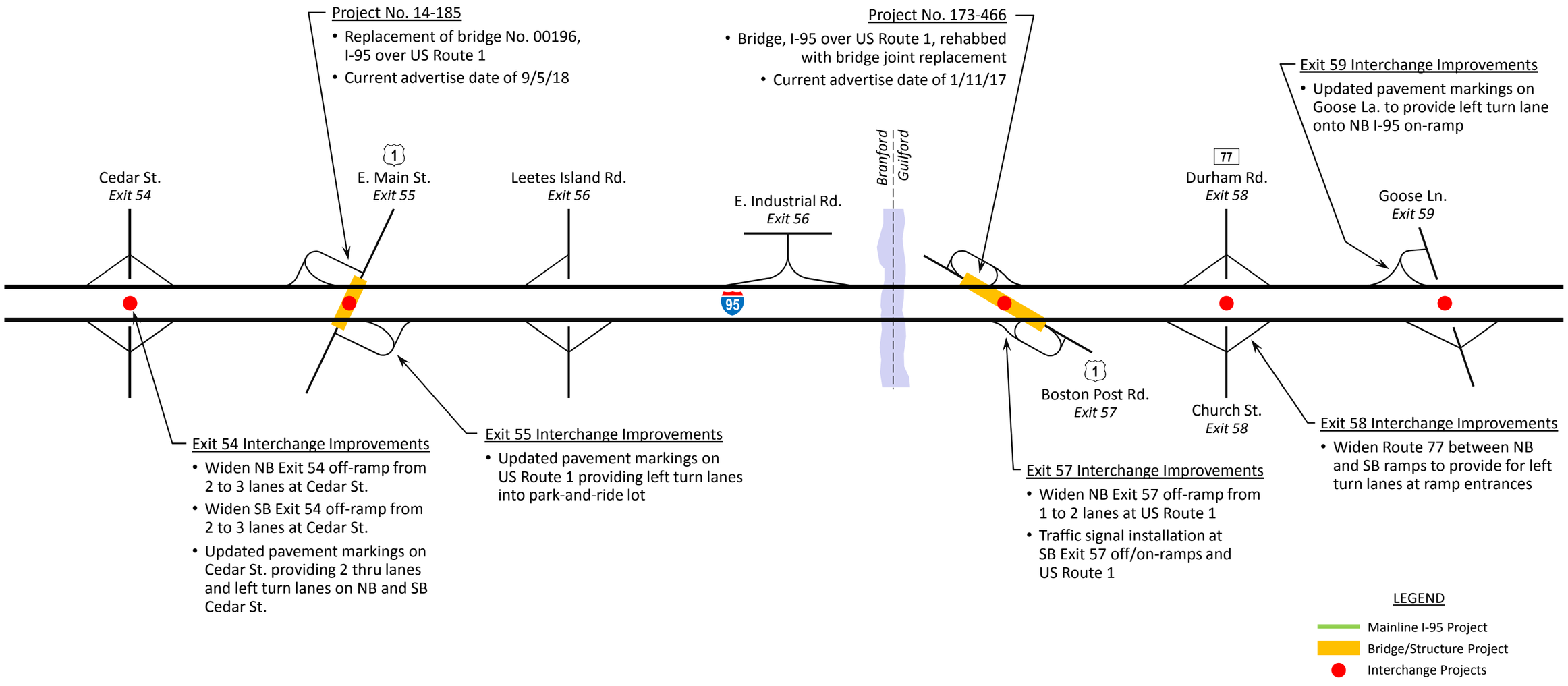
INRIX: I-95 AVERAGE SUMMER SATURDAY TRAVEL SPEEDS

FIGURE A-14

Speed on I-95 between Cedar St/Exit 54 and Gold Star Memorial Bridge using INRIX data

Averaged by 1 hour for June 2016 (every Sun), for July 2016 (every Sun), and for August 2016 (every Sun)

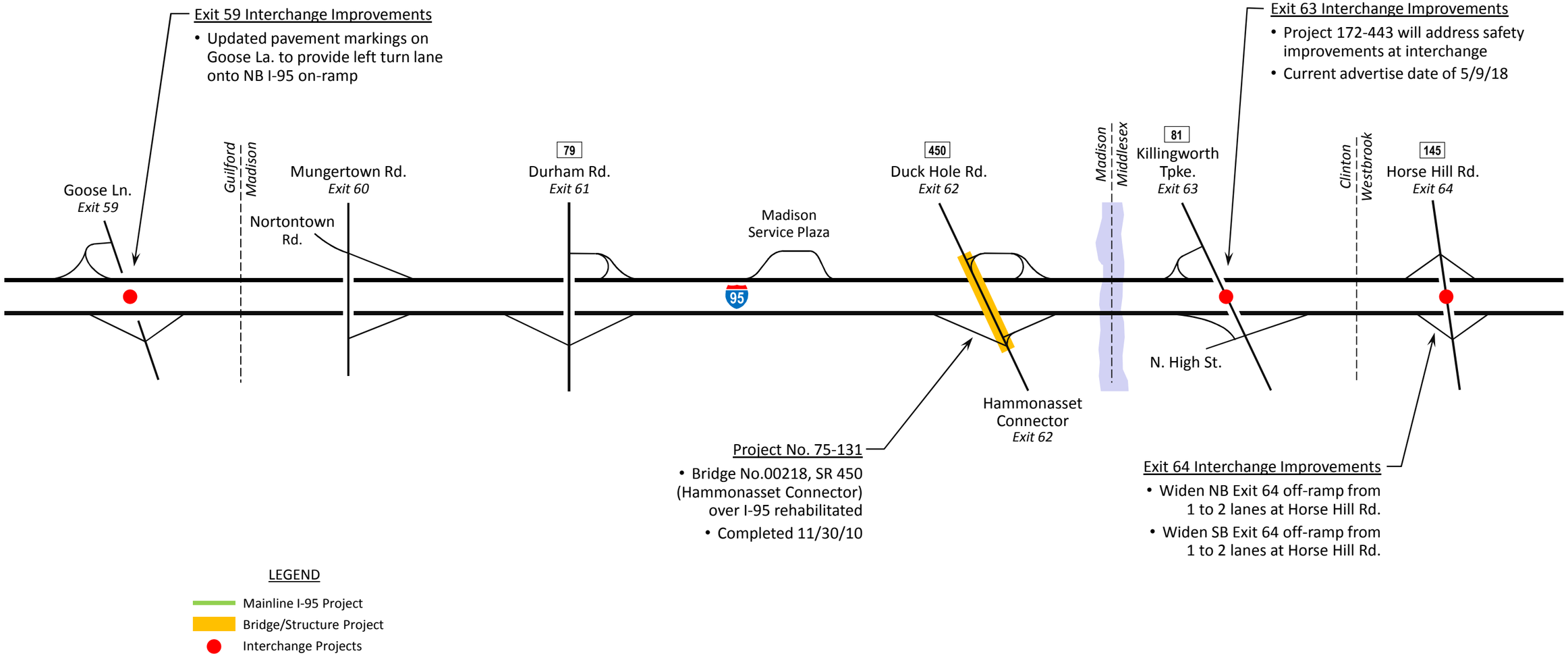


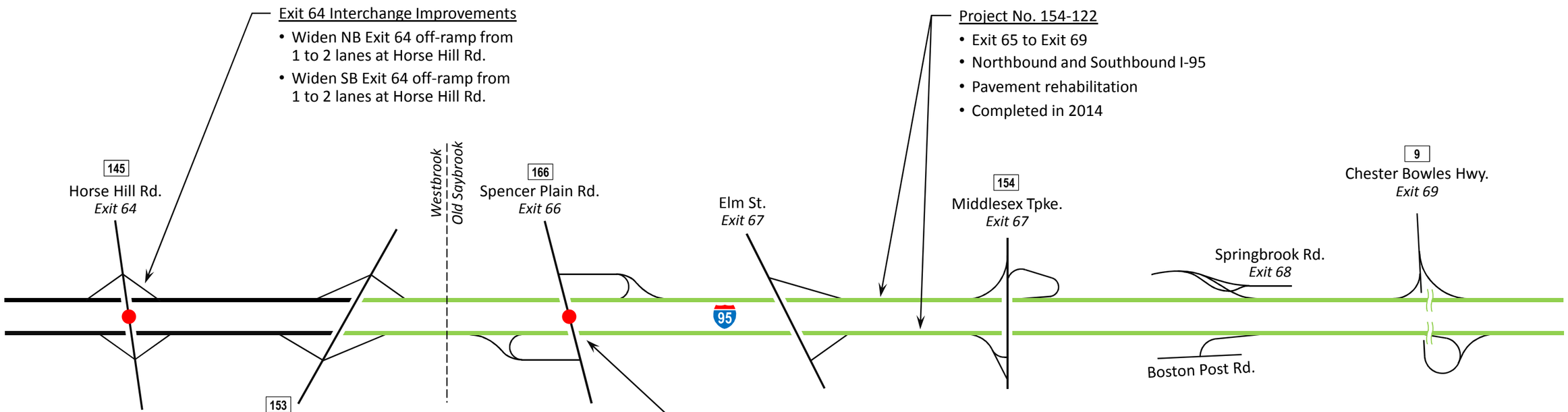


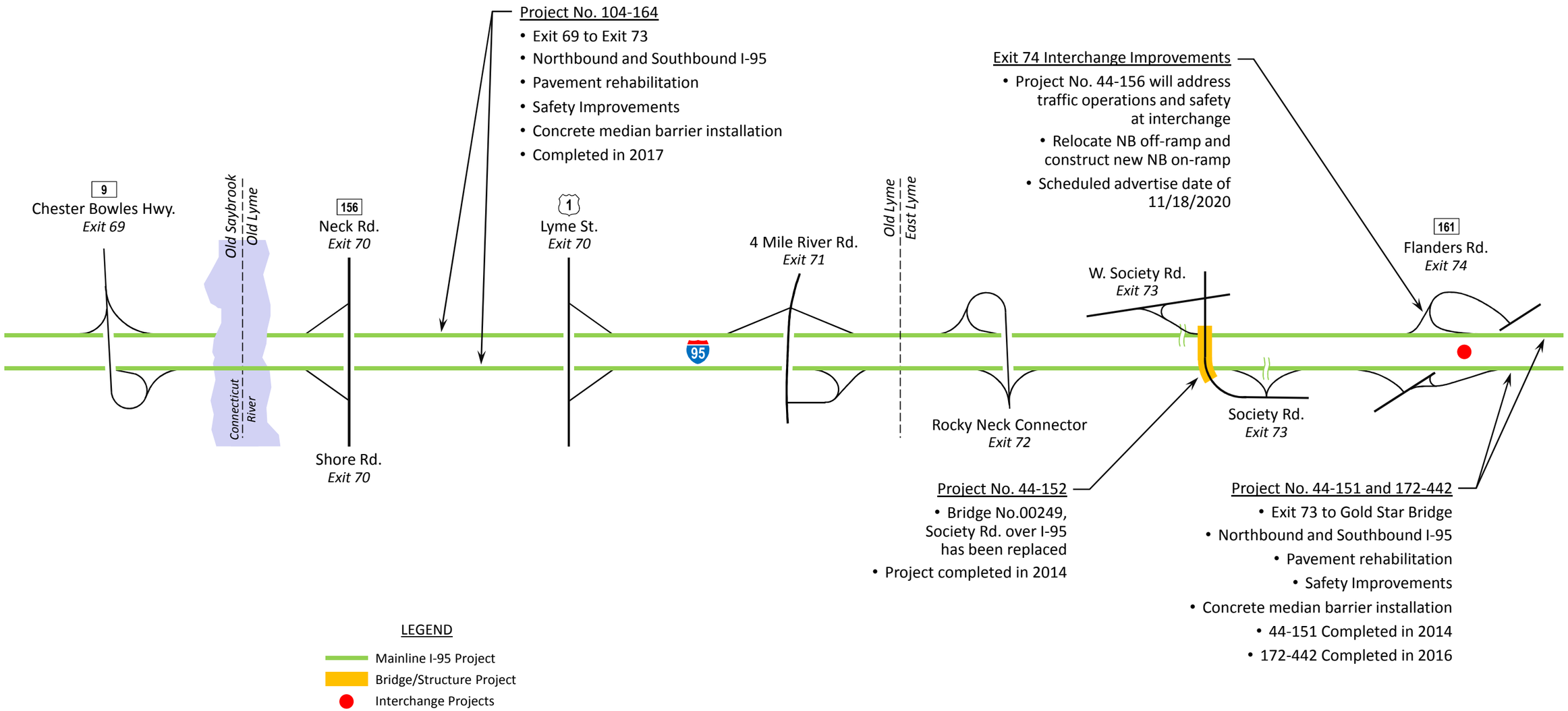
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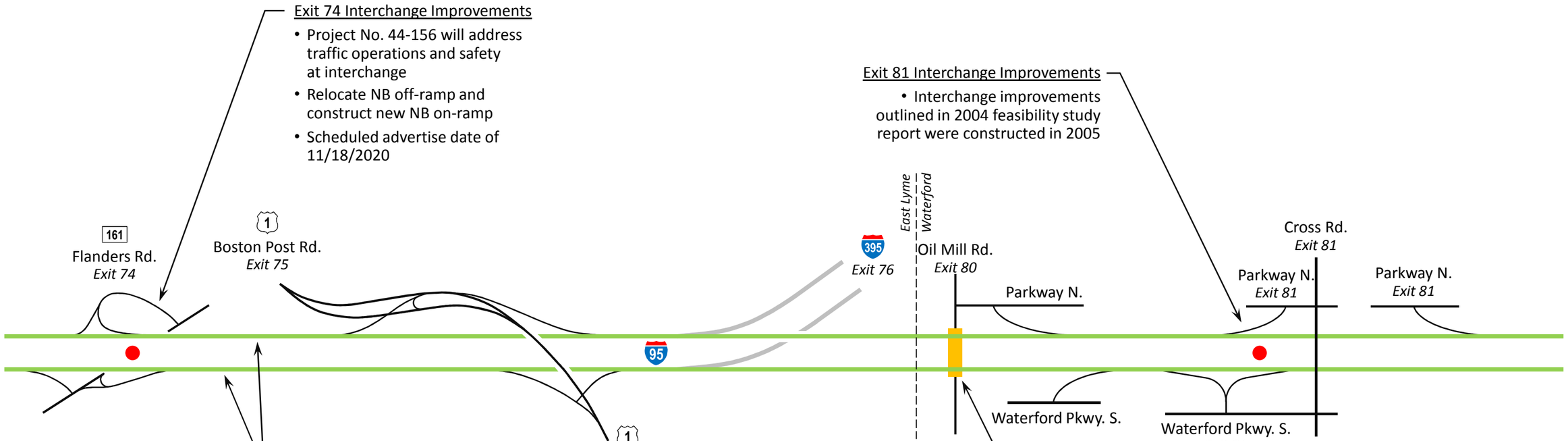
CORRIDOR IMPROVEMENTS SINCE 2004

FIGURE A-16


Exit 59 Interchange Improvements
• Updated pavement markings on Goose La. to provide left turn lane onto NB I-95 on-ramp
Goose Ln.
Exit 59
Guilford
Madison
Mungertown Rd.
Exit 60
Nortontown Rd.
79
Durham Rd.
Exit 61
Madison Service Plaza
95
450
Duck Hole Rd.
Exit 62
Madison
Middlesex
81
Killingworth Tpke.
Exit 63
Exit 63 Interchange Improvements
• Project 172-443 will address safety improvements at interchange
• Current advertise date of 5/9/18
Clinton
Westbrook
145
Horse Hill Rd.
Exit 64
N. High St.
Hammonasset Connector
Exit 62
Project No. 75-131
• Bridge No.00218, SR 450 (Hammonasset Connector) over I-95 rehabilitated
• Completed 11/30/10
Exit 64 Interchange Improvements
• Widen NB Exit 64 off-ramp from 1 to 2 lanes at Horse Hill Rd.
• Widen SB Exit 64 off-ramp from 1 to 2 lanes at Horse Hill Rd.
LEGEND
Mainline I-95 Project
Bridge/Structure Project
Interchange Projects


Exit 64 Interchange Improvements
• Widen NB Exit 64 off-ramp from 1 to 2 lanes at Horse Hill Rd.
• Widen SB Exit 64 off-ramp from 1 to 2 lanes at Horse Hill Rd.
Project No. 154-122
• Exit 65 to Exit 69
• Northbound and Southbound I-95
• Pavement rehabilitation
• Completed in 2014
145
Horse Hill Rd.
Exit 64
Westbrook
Old Saybrook
166
Spencer Plain Rd.
Exit 66
Elm St.
Exit 67
154
Middlesex Tpke.
Exit 67
9
Chester Bowles Hwy.
Exit 69
Springbrook Rd.
Exit 68
95
153
Essex Rd.
Exit 65
Boston Post Rd.
Exit 66 Interchange Improvements
• Widen NB Exit 66 off-ramp from 1 to 2 lanes at intersection with Route 166
• Updated pavement markings on Route 166 to provide a left turn lane onto NB I-95 on-ramp
• Widening of Route 166 South of the NB Exit 66 off/on ramps due to adjacent property development
LEGEND
Mainline I-95 Project
Bridge/Structure Project
Interchange Projects


Project No. 104-164
• Exit 69 to Exit 73
• Northbound and Southbound I-95
• Pavement rehabilitation
• Safety Improvements
• Concrete median barrier installation
• Completed in 2017
Exit 74 Interchange Improvements
• Project No. 44-156 will address traffic operations and safety at interchange
• Relocate NB off-ramp and construct new NB on-ramp
• Scheduled advertise date of 11/18/2020
9
Chester Bowles Hwy.
Exit 69
Old Saybrook
Old Lyme
156
Neck Rd.
Exit 70
1
Lyme St.
Exit 70
4 Mile River Rd.
Exit 71
Old Lyme
East Lyme
W. Society Rd.
Exit 73
161
Flanders Rd.
Exit 74
95
Connecticut River
Shore Rd.
Exit 70
Rocky Neck Connector
Exit 72
Society Rd.
Exit 73
Project No. 44-152
• Bridge No.00249, Society Rd. over I-95 has been replaced
• Project completed in 2014
Project No. 44-151 and 172-442
• Exit 73 to Gold Star Bridge
• Northbound and Southbound I-95
• Pavement rehabilitation
• Safety Improvements
• Concrete median barrier installation
• 44-151 Completed in 2014
• 172-442 Completed in 2016
LEGEND
Mainline I-95 Project
Bridge/Structure Project
Interchange Projects



Exit 74 Interchange Improvements

- Project No. 44-156 will address traffic operations and safety at interchange
- Relocate NB off-ramp and construct new NB on-ramp
- Scheduled advertise date of 11/18/2020

Exit 81 Interchange Improvements

- Interchange improvements outlined in 2004 feasibility study report were constructed in 2005

Project No. 44-151 and 172-442

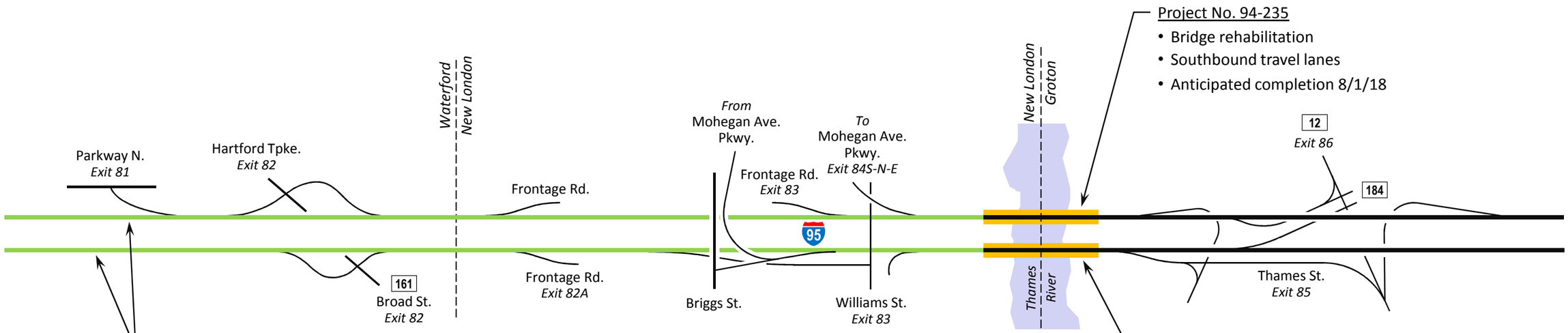
- Exit 73 to Gold Star Bridge
- Northbound and Southbound I-95
- Pavement rehabilitation
- Safety Improvements
- Concrete median barrier installation
- 44-151 Completed in 2014
- 172-442 Completed in 2016

Project No. 152-0157

- Replacement of Bridge No.00352A and 00352B, I-95 over Oil Mill Rd.
- Completed in 2017

LEGEND

- Mainline I-95 Project
- Bridge/Structure Project
- Interchange Projects



Project No. 94-235

- Bridge rehabilitation
- Southbound travel lanes
- Anticipated completion 8/1/18

Project No. 44-151 and 172-442

- Exit 73 to Gold Star Bridge
- Northbound and Southbound I-95
- Pavement rehabilitation
- Safety Improvements
- Concrete median barrier installation
- 44-151 Completed in 2014
- 172-442 Completed in 2016

Project No. 94-235

- Bridge rehabilitation
- Northbound travel lanes
- Anticipated advertise date of 8/30/17

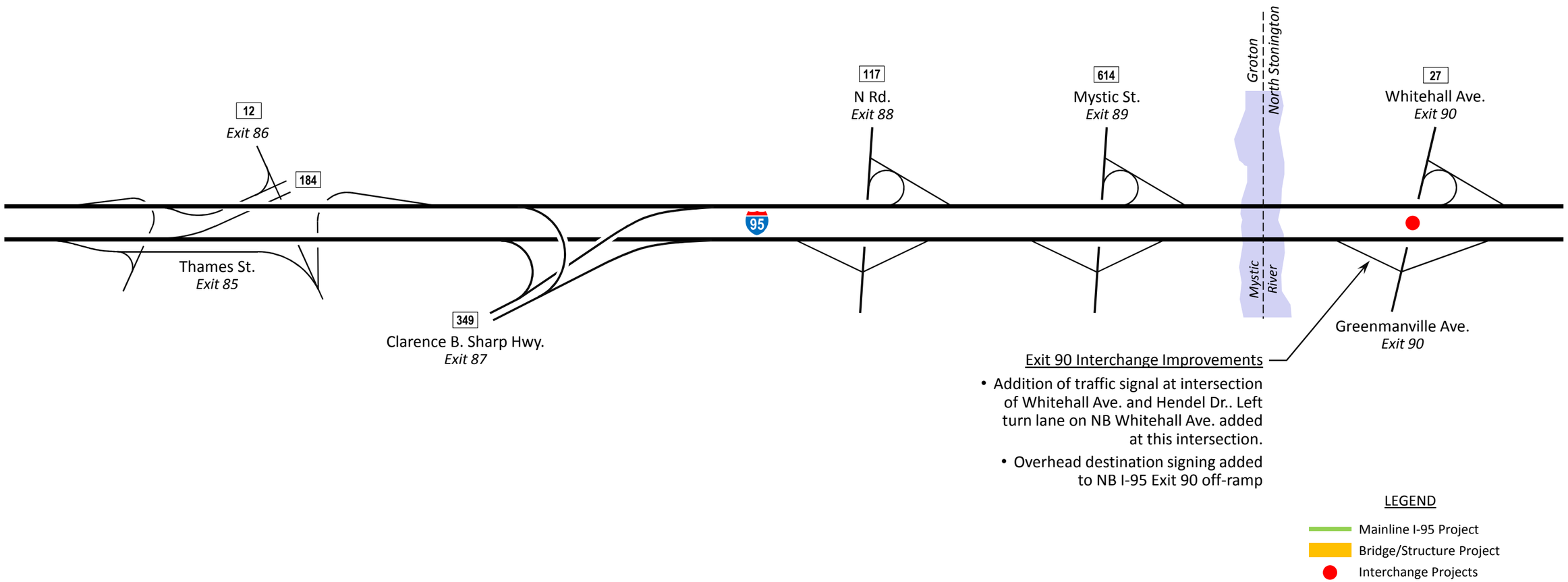
LEGEND

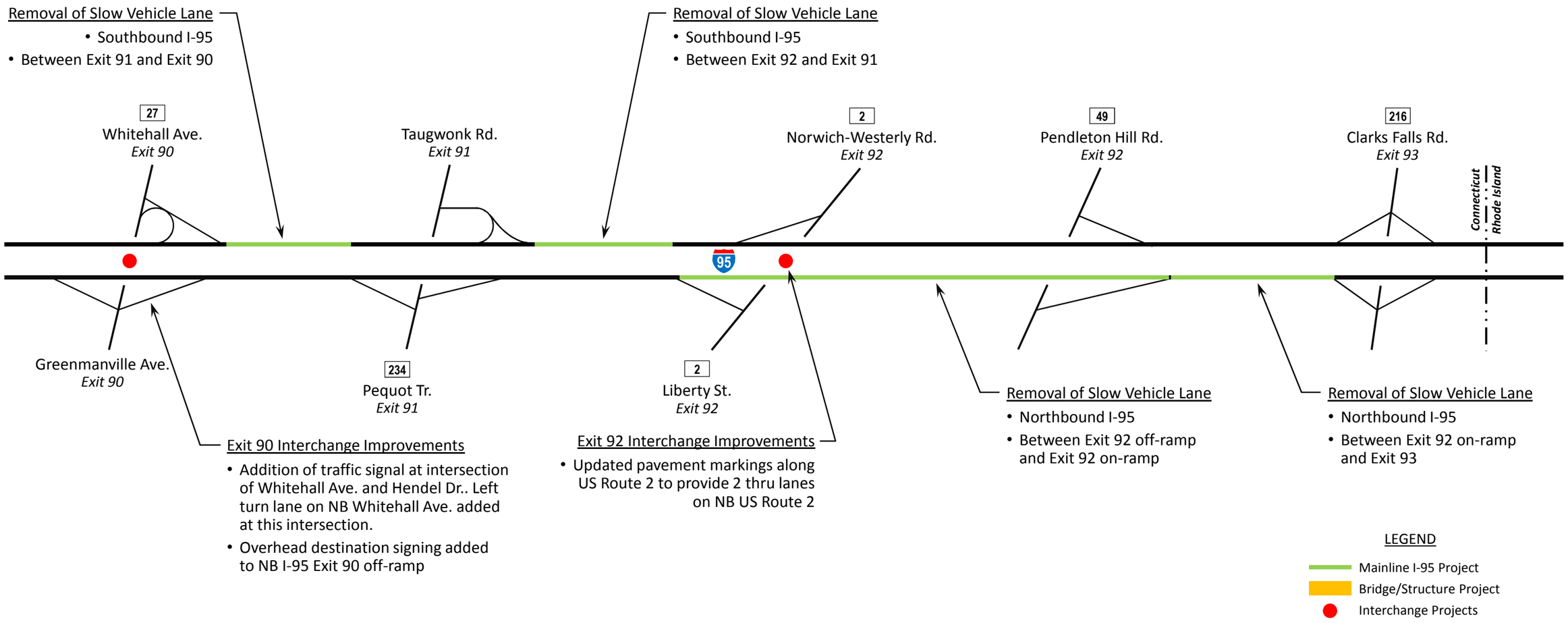
- Mainline I-95 Project
- Bridge/Structure Project
- Interchange Projects

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CORRIDOR IMPROVEMENTS SINCE 2004

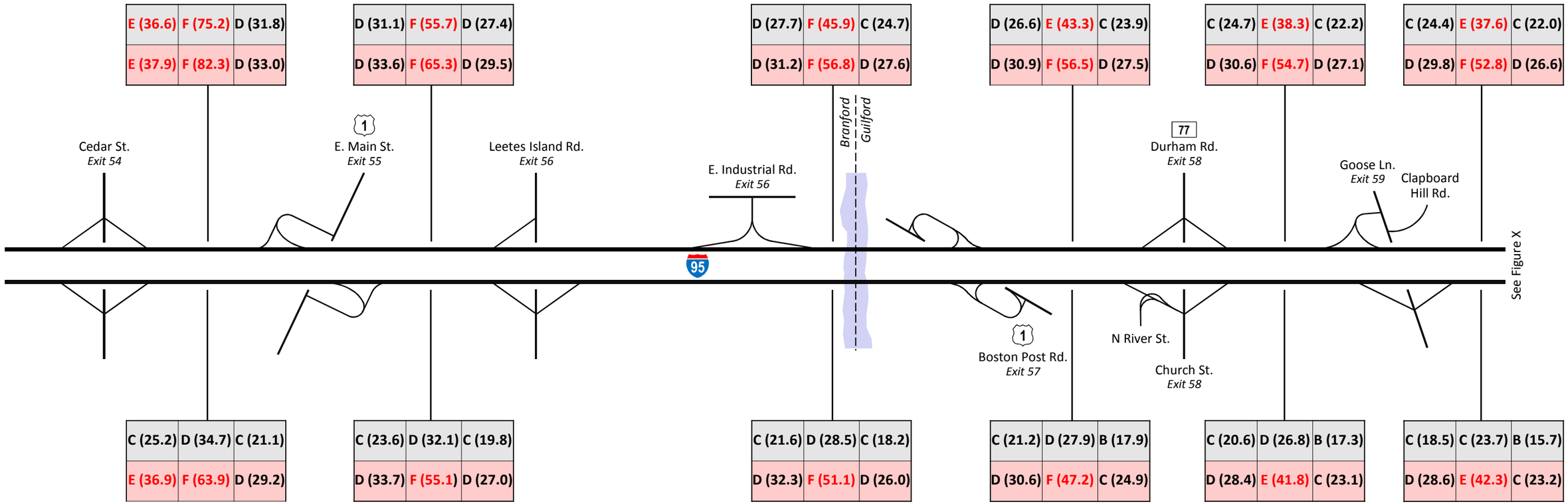
FIGURE A-21


12
Exit 86
184
Thames St.
Exit 85
349
Clarence B. Sharp Hwy.
Exit 87
95
117
N Rd.
Exit 88
614
Mystic St.
Exit 89
Groton
North Stonington
Mystic River
27
Whitehall Ave.
Exit 90
Greenmanville Ave.
Exit 90
Exit 90 Interchange Improvements
• Addition of traffic signal at intersection of Whitehall Ave. and Hendel Dr.. Left turn lane on NB Whitehall Ave. added at this intersection.
• Overhead destination signing added to NB I-95 Exit 90 off-ramp
LEGEND
Mainline I-95 Project
Bridge/Structure Project
Interchange Projects

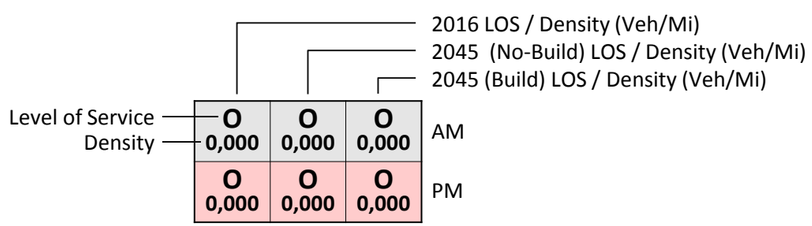


CORRIDOR IMPROVEMENTS SINCE 2004

FIGURE A-23



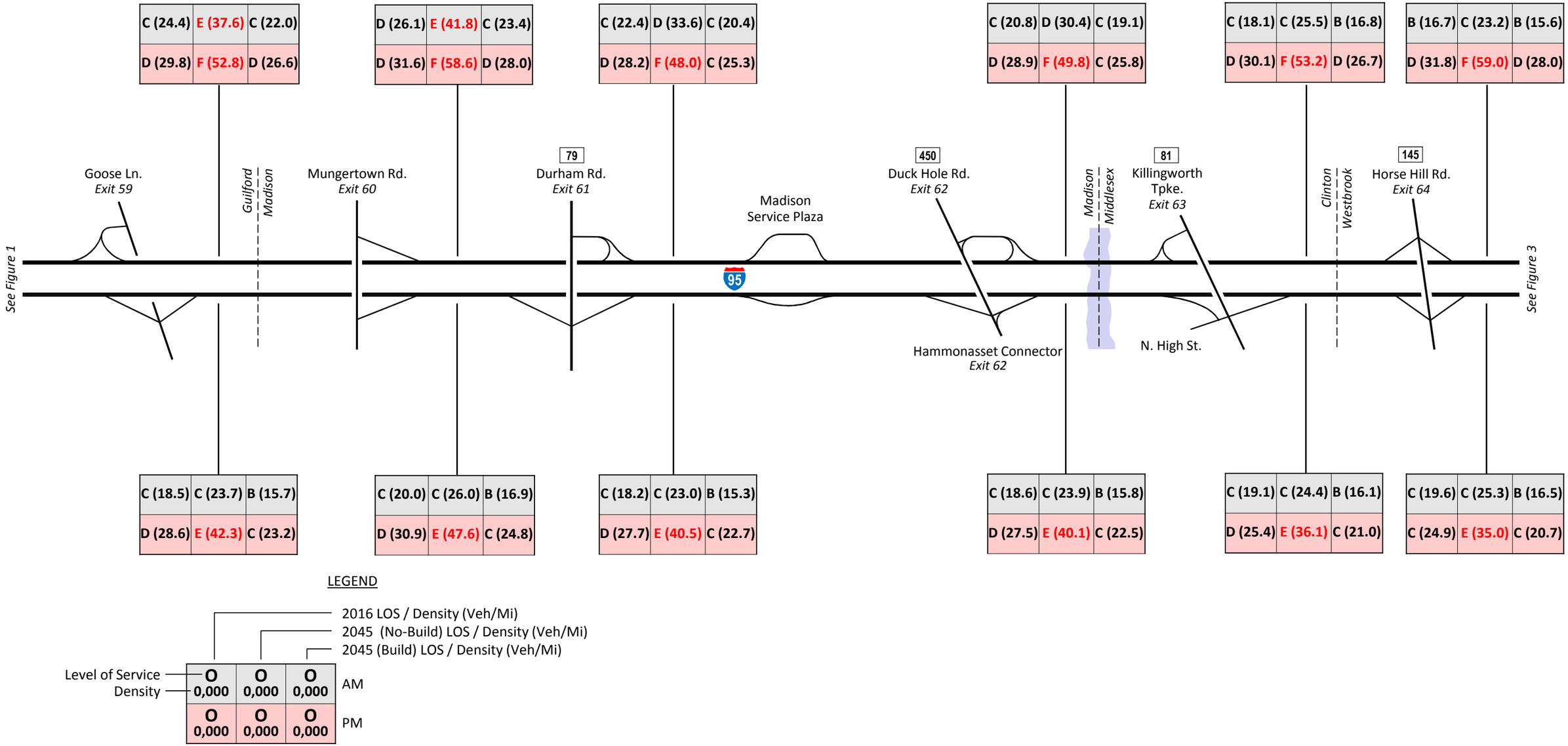
LEGEND



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LEVEL OF SERVICE AND DENSITY

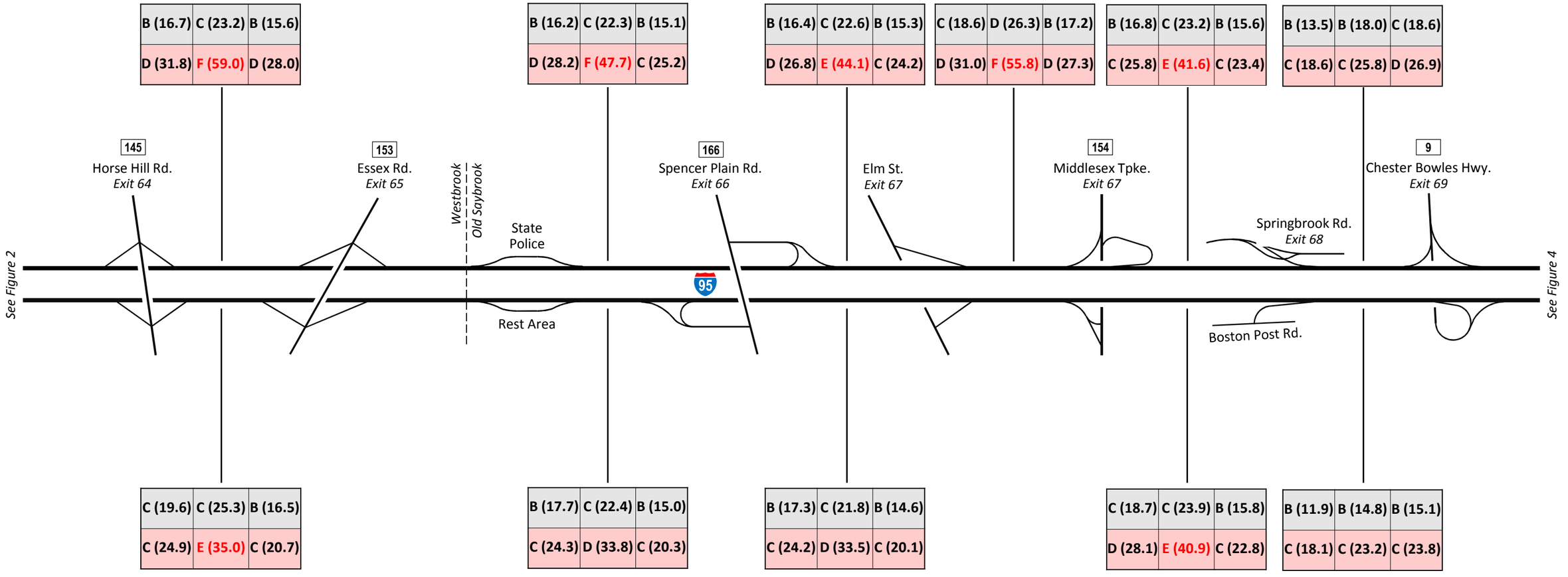
FIGURE A-24



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LEVEL OF SERVICE AND DENSITY

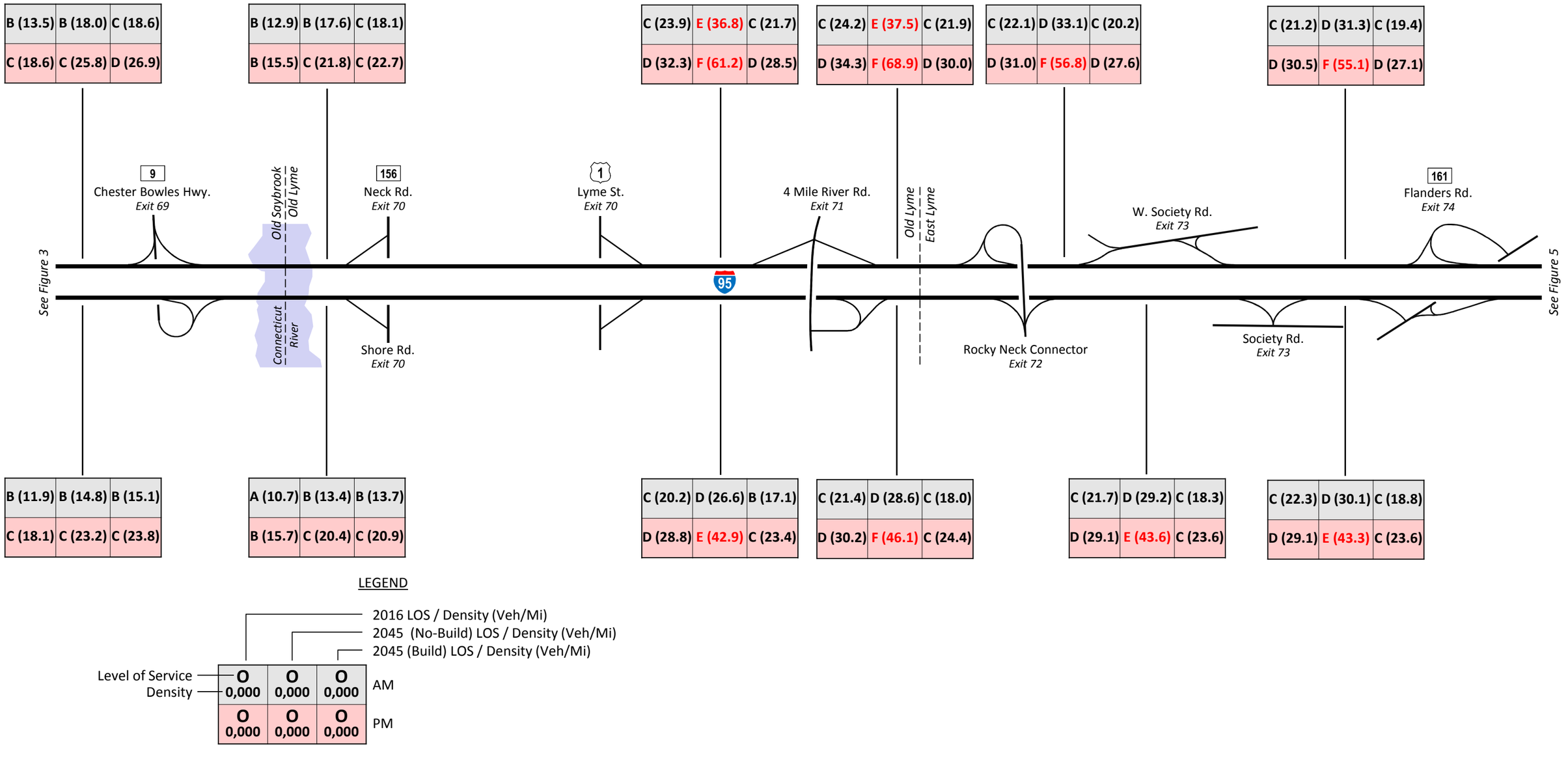
FIGURE A-25



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LEVEL OF SERVICE AND DENSITY

FIGURE A-26

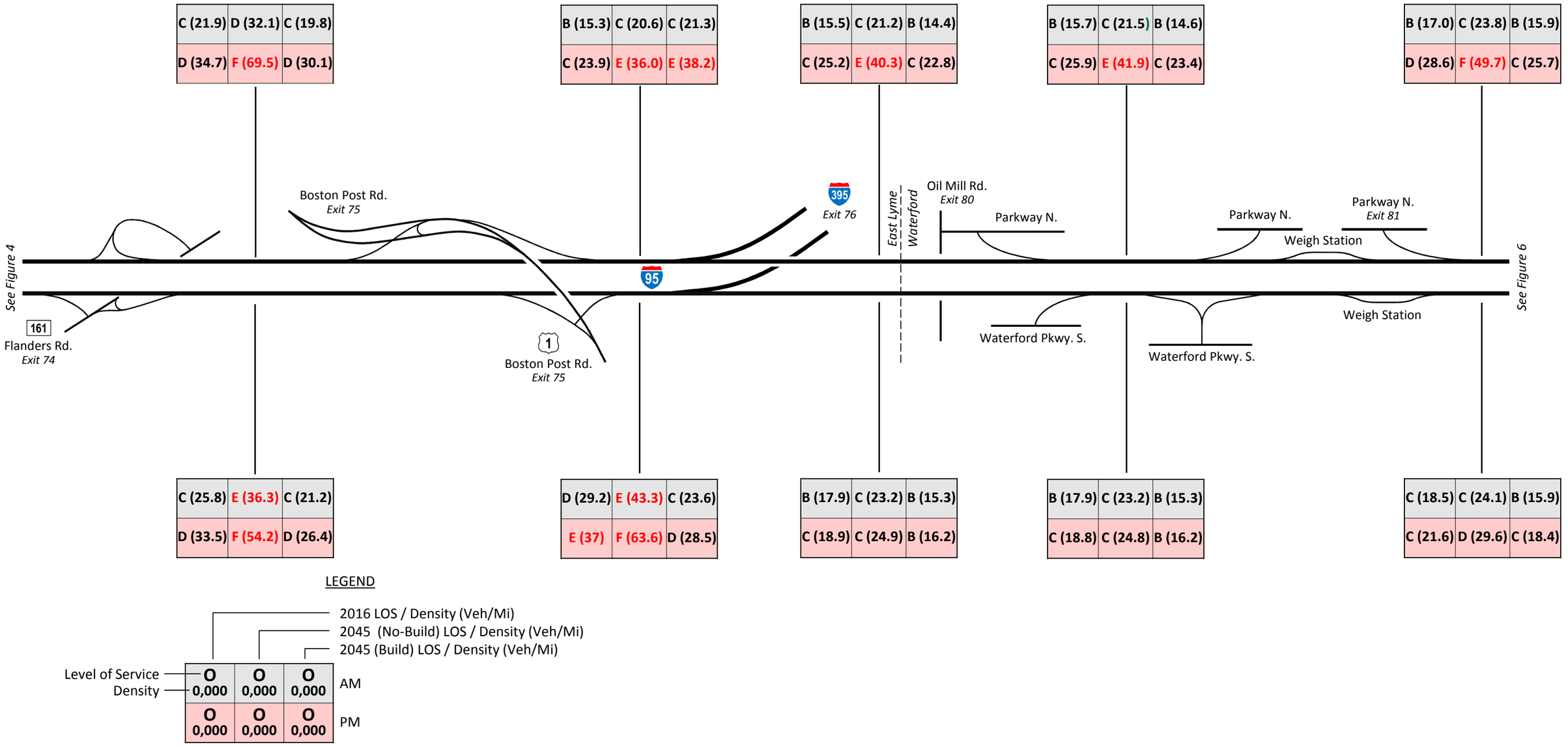


LEGEND

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LEVEL OF SERVICE AND DENSITY

FIGURE A-27

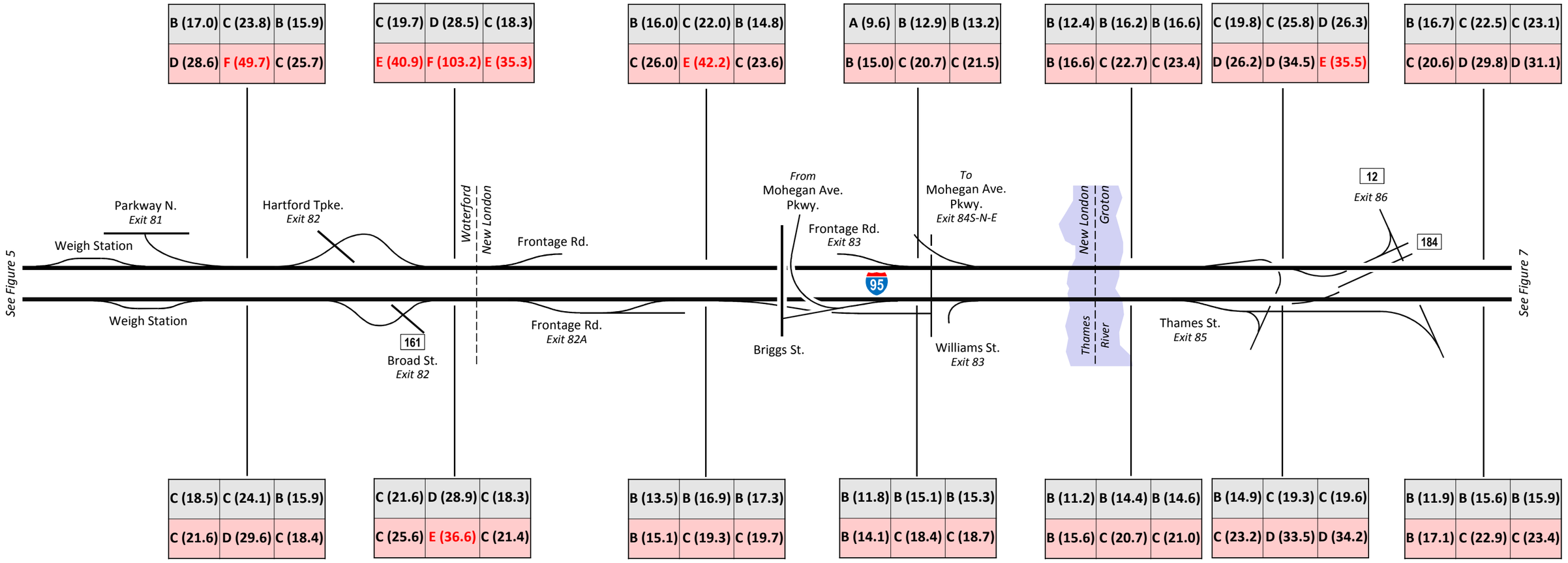


LEGEND

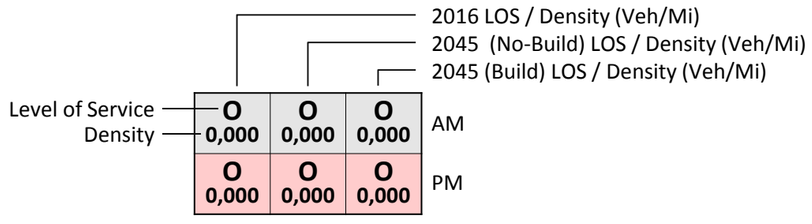
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LEVEL OF SERVICE AND DENSITY

FIGURE A-28



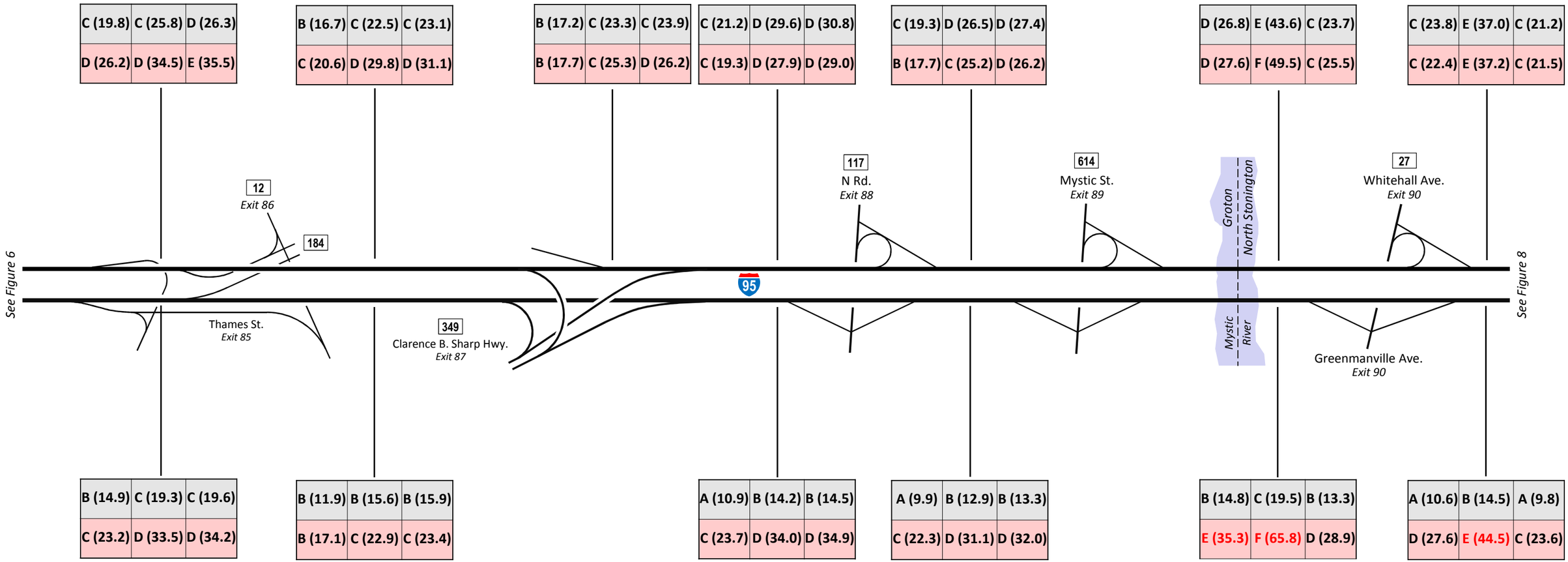
LEGEND



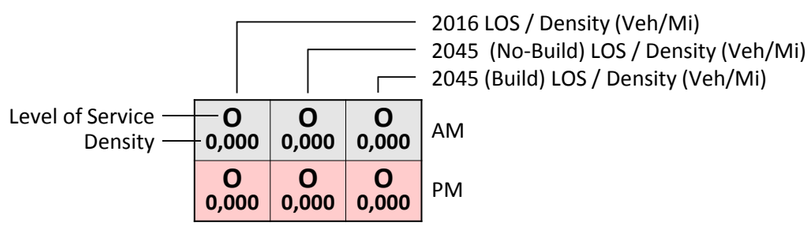
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LEVEL OF SERVICE AND DENSITY

FIGURE A-29



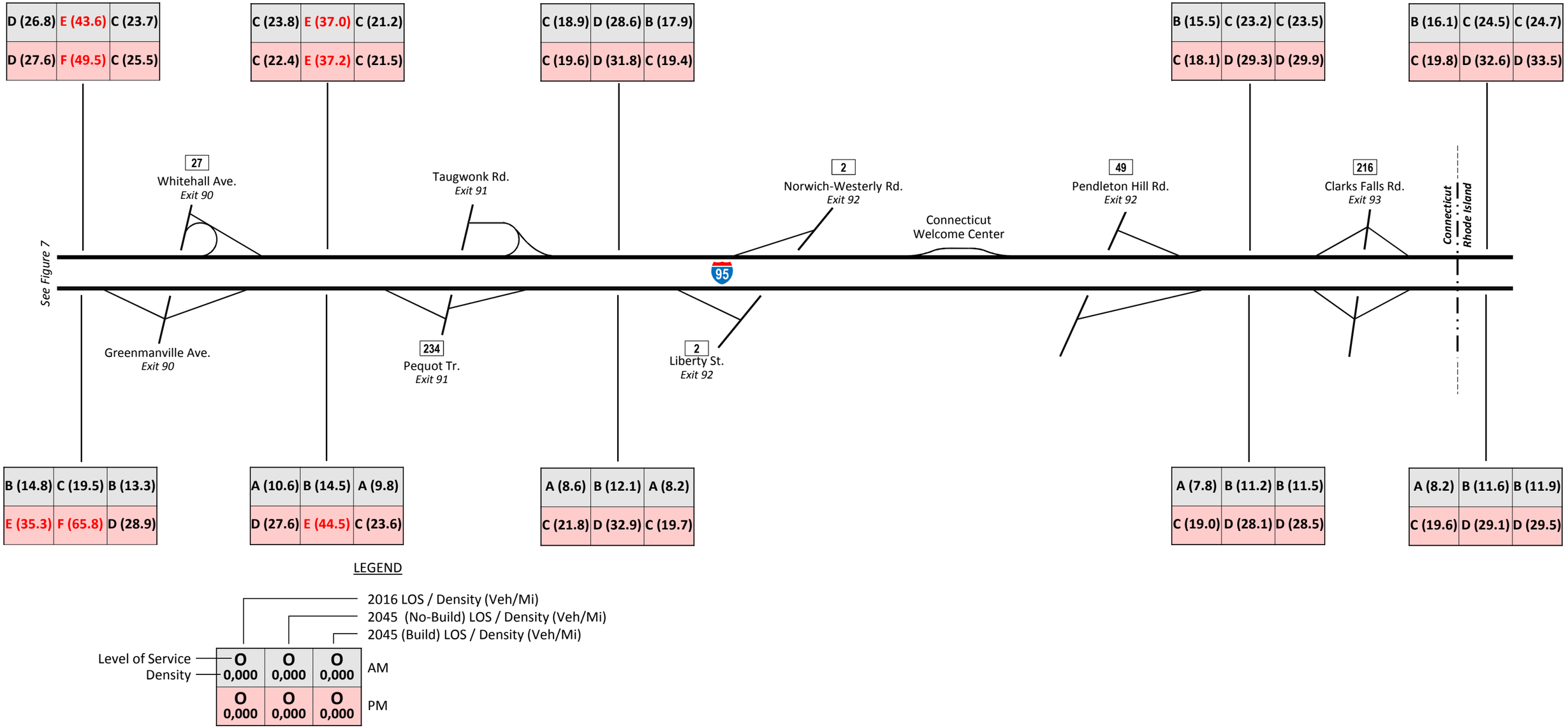
LEGEND



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LEVEL OF SERVICE AND DENSITY

FIGURE A-30

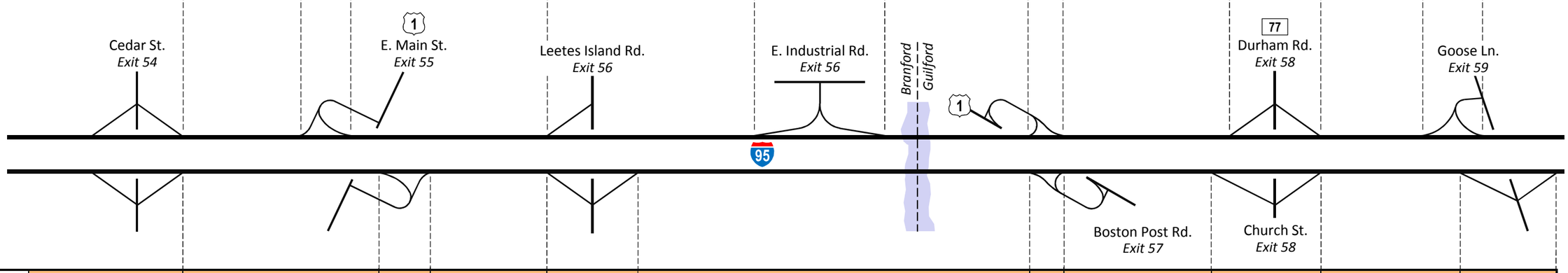


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LEVEL OF SERVICE AND DENSITY

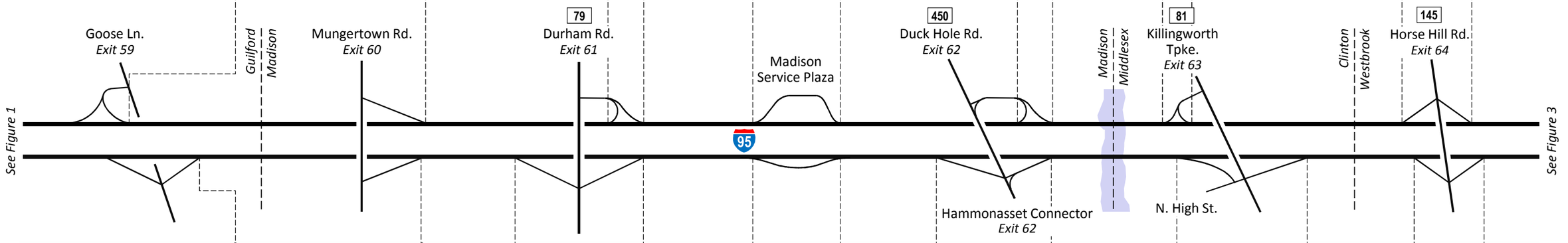
FIGURE A-31

Distance			1.51	0.22	0.96	0.37	0.25	2.69	0.18	0.5	0.34	0.73	0.28	2.22
Crash Rate			0.5	1.5	0.8	0.6	2.8	0.6	2.4	1.2	1.3	1.1	1.3	0.5
Total			36	13	35	9	25	60	16	24	16	30	12	37
Severity	A	Fatality	0	0	0	0	0	0	0	0	0	0	0	0
	B	Injury	10	4	8	3	9	18	2	8	1	7	1	7
	C	Property Damage Only	26	9	27	6	16	42	14	16	15	23	11	30
Crash Type	A	Angle	1	1	1	0	0	1	0	0	1	0	0	0
	B	Head On	0	0	0	0	0	0	0	0	0	0	0	0
	C	Rear End	13	5	23	5	19	27	7	10	6	15	5	13
	D	Sideswipe	8	4	4	2	2	7	0	5	5	5	1	5
	E	Other	14	3	7	2	4	25	9	9	4	10	6	19
Work Zone Related	A	Yes	0	0	1	0	1	1	0	0	0	0	0	0
	B	No	20	10	24	8	14	45	11	18	12	17	7	23
	C	Unknown	16	3	10	1	10	14	5	6	4	13	5	14
Road Surface Condition	A	Dry	31	13	31	8	22	44	10	17	9	22	7	19
	B	Wet	5	0	3	1	2	7	1	3	3	3	1	7
	C	Snow/Ice/Slush	0	0	1	0	1	9	5	4	4	5	4	11
	D	Other	0	0	0	0	0	0	0	0	0	0	0	0



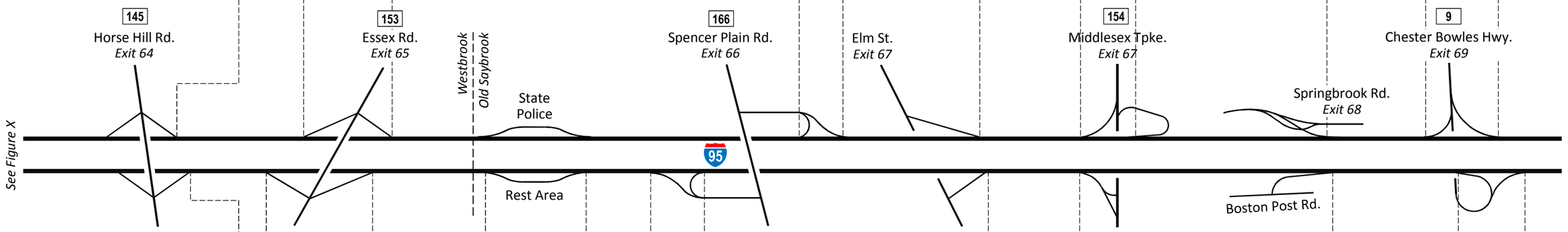
Distance			1.9	0.22	0.51	0.44	2.68	0.19	0.71	0.39	0.96	0.37
Crash Rate			0.8	0.9	1.2	1.1	0.5	2.2	1.0	1.1	0.4	1.5
Total			68	8	27	18	52	16	29	15	17	18
Severity	A	Fatality	0	0	0	0	1	0	0	0	1	0
	B	Injury	20	5	7	3	13	4	7	3	3	4
	C	Property Damage Only	48	3	20	15	38	12	22	12	13	14
Crash Type	A	Angle	0	0	0	0	0	0	1	0	0	0
	B	Head On	0	0	0	0	1	0	0	0	0	0
	C	Rear End	47	4	11	11	19	4	13	4	7	11
	D	Sideswipe	6	1	4	3	7	2	4	1	3	3
	E	Other	15	3	12	4	25	10	11	10	7	4
Work Zone Related	A	Yes	0	0	0	0	1	0	1	1	0	0
	B	No	45	6	16	15	35	8	19	9	11	11
	C	Other/ Unknown	23	2	11	3	16	8	9	5	6	7
Road Surface Condition	A	Dry	53	7	20	15	31	10	27	10	10	15
	B	Wet	9	0	5	1	16	1	1	4	3	1
	C	Snow/Ice/Slush	6	1	2	2	5	5	1	1	4	2
	D	Other/ Unknown	0	0	0	0	0	0	0	0	0	0

Distance			2.22	1.16	0.19	0.75	0.34	0.39	0.18	1.70	0.20	2.07	0.33	2.08
Crash Rate			0.5	0.6	2.3	0.9	0.3	0.9	1.3	0.6	3.4	0.9	1.3	0.6
Total			37	26	14	22	4	12	7	35	19	57	12	38
Severity	A	Fatality	0	0	0	0	0	0	0	0	0	0	0	0
	B	Injury	7	4	5	5	0	4	0	7	4	19	4	7
	C	Property Damage Only	30	22	9	17	4	8	7	28	15	38	8	31
Crash Type	A	Angle	0	3	0	0	0	2	0	0	0	2	0	2
	B	Head On	0	0	0	0	0	0	0	0	0	0	0	0
	C	Rear End	13	8	3	10	3	6	2	18	9	33	1	16
	D	Sideswipe	5	4	2	3	1	3	1	6	3	4	1	11
	E	Other	19	11	9	9	0	1	4	11	7	18	10	9
Work Zone Related	A	Yes	0	0	0	0	0	0	1	2	0	0	0	0
	B	No	23	14	10	18	4	11	5	23	13	38	7	22
	C	Unknown	14	12	4	4	0	1	1	10	6	19	5	16
Road Surface Condition	A	Dry	19	16	4	18	2	10	6	24	18	49	5	29
	B	Wet	7	3	8	2	2	0	0	5	1	1	2	2
	C	Snow/Ice/Slush	11	7	2	2	0	2	1	6	0	7	5	7
	D	Other	0	0	0	0	0	0	0	0	0	0	0	0



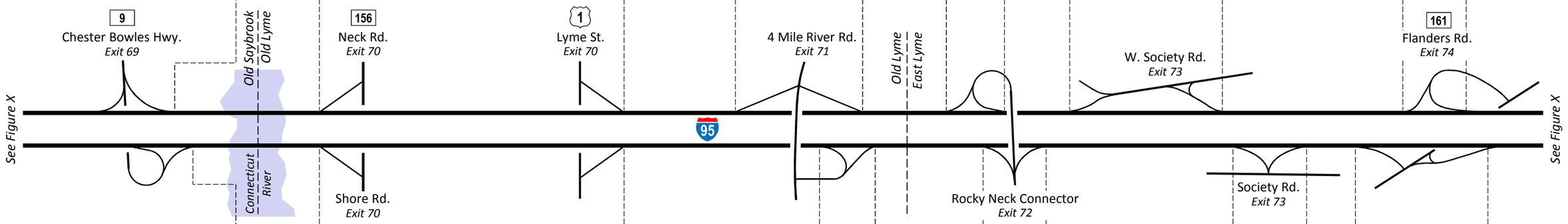
Distance			2	0.78	0.5	0.73	0.3	0.2	0.35	1.88	0.29	1.85	0.33	2.01
Crash Rate			0.3	0.6	2.9	0.2	0.3	0	1.2	0.4	1.8	0.2	0.9	0.4
Total			24	19	47	4	3	0	13	29	15	14	9	24
Severity	A	Fatality	0	0	0	0	0	0	0	1	0	0	0	0
	B	Injury	9	5	8	2	0	0	6	4	3	4	2	8
	C	Property Damage Only	15	14	39	2	3	0	7	24	12	10	7	16
Crash Type	A	Angle	1	0	0	0	0	0	1	0	1	1	1	1
	B	Head On	0	0	0	0	0	0	0	0	0	0	0	0
	C	Rear End	9	8	37	3	1	0	1	8	6	5	1	6
	D	Sideswipe	4	2	2	0	1	0	2	4	1	3	3	6
	E	Other	10	9	8	1	1	0	9	17	7	5	4	1
Work Zone Related	A	Yes	0	1	0	0	1	0	0	0	0	1	0	1
	B	No	18	12	28	3	2	0	13	18	11	9	6	15
	C	Other/ Unknown	6	6	19	1	0	0	0	11	4	4	3	8
Road Surface Condition	A	Dry	19	13	37	4	2	0	7	21	11	11	8	16
	B	Wet	0	2	7	0	0	0	1	4	1	1	0	1
	C	Snow/Ice/Slush	5	4	3	0	1	0	5	4	3	2	1	7
	D	Other/ Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Distance			2.08	0.25	1.19	0.19	1.44	0.51	0.19	0.94	0.18	0.33	0.69
Crash Rate			0.6	1.7	0.5	0.6	0.6	0.1	0.3	0.1	1.8	1.5	0.7
Total			38	12	17	3	24	14	2	3	11	15	21
Severity	A	Fatality	0	0	0	0	0	0	0	0	0	0	1
	B	Injury	7	4	1	1	4	4	1	0	4	2	2
	C	Property Damage Only	31	8	16	2	20	10	1	3	7	13	18
Crash Type	A	Angle	2	0	0	0	0	0	0	0	0	0	2
	B	Head On	0	0	0	0	0	0	0	0	0	0	0
	C	Rear End	16	2	10	0	9	5	0	1	3	1	7
	D	Sideswipe	11	3	1	0	4	0	0	0	0	2	7
	E	Other	9	7	6	3	11	9	2	2	8	12	5
Work Zone Related	A	Yes	0	0	1	0	0	0	0	0	0	0	0
	B	No	22	6	12	1	12	10	2	1	4	7	16
	C	Unknown	16	6	4	2	12	4	0	2	7	8	5
Road Surface Condition	A	Dry	29	7	15	3	17	12	2	1	3	8	12
	B	Wet	2	3	0	0	1	0	0	1	3	2	2
	C	Snow/Ice/Slush	7	2	2	0	6	2	0	1	5	5	7
	D	Other	0	0	0	0	0	0	0	0	0	0	0



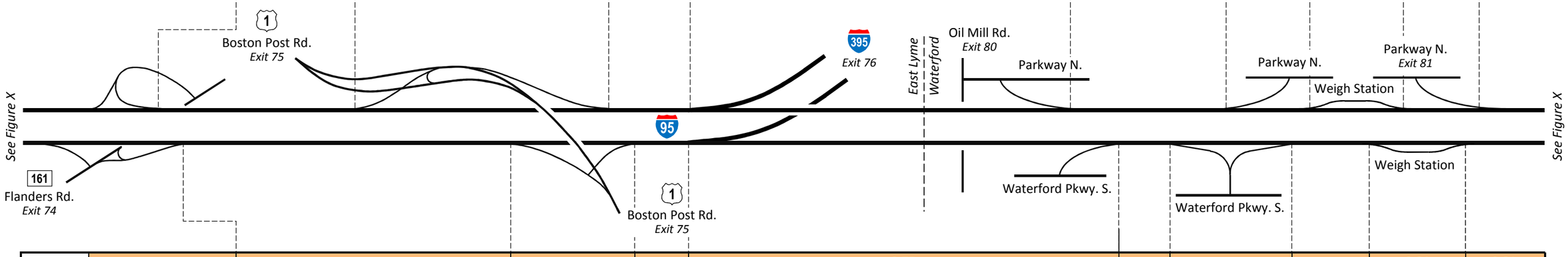
Distance			2.01	0.31	0.38	0.32	0.2	0.18	1.75	0.51	1.2	0.23	0.39	0.39
Crash Rate			0.4	1.3	0	0.5	0	2.4	0.4	0.6	0.3	0.6	1.7	2.1
Total			24	11	0	15	0	12	19	11	12	5	21	23
Severity	A	Fatality	0	0	0	0	0	0	0	0	0	1	0	0
	B	Injury	8	4	0	3	0	5	6	3	5	1	4	8
	C	Property Damage Only	16	7	0	12	0	7	13	8	7	3	17	15
Crash Type	A	Angle	1	0	0	1	0	0	1	2	0	2	0	4
	B	Head On	0	0	0	0	0	0	0	0	0	0	0	0
	C	Rear End	6	5	0	4	0	4	8	6	6	1	9	14
	D	Sideswipe	6	2	0	6	0	1	4	1	1	1	2	0
	E	Other	11	4	0	4	0	7	6	2	5	1	10	5
Work Zone Related	A	Yes	1	0	0	1	0	0	0	1	0	0	0	1
	B	No	15	8	0	7	0	9	13	7	7	4	18	13
	C	Unknown	8	3	0	7	0	3	6	3	5	1	3	9
Road Surface Condition	A	Dry	16	10	0	12	0	8	11	10	8	3	18	22
	B	Wet	1	0	0	1	0	1	2	1	3	2	2	1
	C	Snow/Ice/Slush	7	1	0	2	0	3	6	0	1	0	1	0
	D	Other	0	0	0	0	0	0	0	0	0	0	0	0

Distance			0.69	1	3.41	0.32	0.07	0.21	1.47	0.3	1.46	0.04	0.56
Crash Rate			0.7	0.7	0.6	1.9	2.6	1.4	1.0	1.0	1.2	6.0	1.6
Total			21	25	70	21	7	10	52	11	62	8	35
Severity	A	Fatality	1	0	1	0	0	0	1	0	0	0	0
	B	Injury	2	6	9	5	2	2	12	4	11	2	9
	C	Property Damage Only	18	19	60	16	5	8	39	7	51	6	26
Crash Type	A	Angle	2	0	5	0	0	1	2	0	1	0	0
	B	Head On	0	0	1	0	0	0	0	0	0	0	0
	C	Rear End	7	5	31	12	5	5	24	6	36	4	27
	D	Sideswipe	7	5	12	4	0	1	7	3	11	0	3
	E	Other	5	15	21	5	2	3	19	2	14	4	5
Work Zone Related	A	Yes	0	1	9	0	0	1	2	3	2	0	1
	B	No	16	12	40	18	4	7	37	6	43	4	25
	C	Unknown	5	12	21	3	3	2	13	2	17	4	9
Road Surface Condition	A	Dry	12	15	60	20	6	8	44	11	55	5	33
	B	Wet	2	4	3	0	1	1	4	0	5	1	2
	C	Snow/Ice/Slush	7	6	7	1	0	1	4	0	2	1	0
	D	Other	0	0	0	0	0	0	0	0	0	1	0



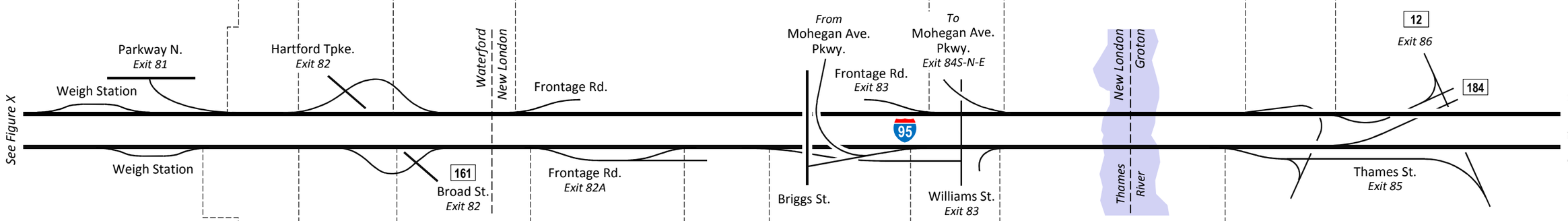
Distance			0.26	1.29	3.6	0.19	0.16	0.21	1.82	0.16	0.99	0.31	0.55
Crash Rate			2.1	1.9	0.8	1.4	1.0	2.1	1.1	1.0	1.5	3.3	1.1
Total			23	82	108	9	6	15	73	6	55	35	25
Severity	A	Fatality	0	1	0	0	0	1	0	0	0	0	0
	B	Injury	8	17	27	1	2	2	10	1	8	4	3
	C	Property Damage Only	15	64	81	8	4	12	63	5	47	31	22
Crash Type	A	Angle	4	3	2	0	0	0	3	0	2	1	0
	B	Head On	0	0	1	0	0	0	0	0	0	0	0
	C	Rear End	14	46	55	4	4	9	38	3	34	26	12
	D	Sideswipe	0	19	10	1	1	2	15	1	6	3	5
	E	Other	5	14	40	4	1	4	17	2	13	5	8
Work Zone Related	A	Yes	1	15	8	0	0	2	5	0	2	0	2
	B	No	13	48	71	8	4	10	48	6	42	28	18
	C	Unknown	9	19	29	1	2	3	20	0	11	7	5
Road Surface Condition	A	Dry	22	68	93	9	5	11	60	6	48	31	20
	B	Wet	1	9	10	0	0	1	4	0	4	3	3
	C	Snow/Ice/Slush	0	5	5	0	1	3	9	0	3	1	2
	D	Other	0	0	0	0	0	0	0	0	0	0	0

Distance			0.56	0.4	0.3	0.4	1	0.5	0.24	0.17	0.8
Crash Rate			1.6	1.8	2.0	1.3	0.7	0.7	1.4	1.1	0.7
Total			35	27	26	15	20	9	9	5	18
Severity	A	Fatality	0	0	0	0	0	0	0	0	0
	B	Injury	9	6	3	0	1	0	0	0	0
	C	Property Damage Only	26	21	23	15	19	0	0	0	0
Crash Type	A	Angle	0	0	1	0	0	0	0	0	0
	B	Head On	0	0	0	0	1	0	0	0	0
	C	Rear End	27	18	14	4	11	0	0	0	0
	D	Sideswipe	3	1	4	3	3	0	0	0	0
	E	Other	5	8	7	8	5	0	0	0	0
Work Zone Related	A	Yes	1	1	1	1	1	0	0	0	0
	B	No	25	20	16	9	14	0	0	0	0
	C	Unknown	9	6	9	5	5	0	0	0	0
Road Surface Condition	A	Dry	33	26	21	10	16	0	0	0	0
	B	Wet	2	1	3	1	0	0	0	0	0
	C	Snow/Ice/Slush	0	0	2	4	4	0	0	0	0
	D	Other	0	0	0	0	0	0	0	0	0



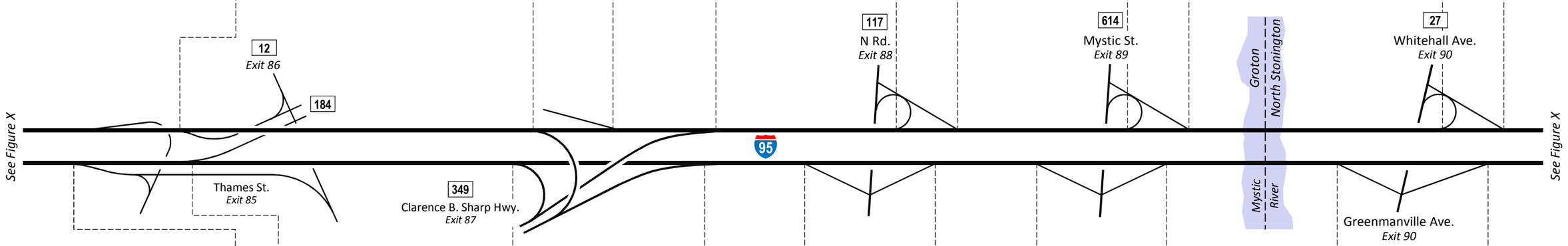
Distance			0.55	0.2	0.32	0.75	0.52	0.26	0.54	0.31	0.81
Crash Rate			1.1	2.5	1.0	0.6	0.4	1.4	0	0	0
Total			25	20	14	13	7	10	0	0	0
Severity	A	Fatality	0	0	0	0	0	0	0	0	0
	B	Injury	3	1	1	1	1	0	0	0	0
	C	Property Damage Only	22	19	13	12	6	10	0	0	0
Crash Type	A	Angle	0	0	0	1	0	0	0	0	0
	B	Head On	0	0	0	0	0	0	0	0	0
	C	Rear End	12	9	6	4	2	3	0	0	0
	D	Sideswipe	5	7	5	4	3	2	0	0	0
	E	Other	8	4	3	4	2	5	0	0	0
Work Zone Related	A	Yes	2	0	0	1	0	1	0	0	0
	B	No	18	12	11	10	5	6	0	0	0
	C	Unknown	5	8	3	2	2	3	0	0	0
Road Surface Condition	A	Dry	20	16	13	12	6	6	0	0	0
	B	Wet	3	3	1	1	1	2	0	0	0
	C	Snow/Ice/Slush	2	1	0	0	0	2	0	0	0
	D	Other	0	0	0	0	0	0	0	0	0

Distance			0.8	0.34	0.26	1.21	0.34	0.98	0.25	0.79
Crash Rate			0.7	2.5	3.4	0.8	1.6	1.2	1.4	X
Total			18	24	35	31	22	69	18	0
Severity	A	Fatality	0	1	0	0	0	0	0	0
	B	Injury	3	6	6	9	2	13	6	0
	C	Property Damage Only	15	17	29	22	20	56	21	0
Crash Type	A	Angle	0	1	1	0	0	0	0	0
	B	Head On	0	0	0	0	0	0	0	0
	C	Rear End	5	12	19	14	11	24	2	0
	D	Sideswipe	1	2	8	4	4	9	2	0
	E	Other	12	9	7	13	7	36	14	0
Work Zone Related	A	Yes	1	1	0	3	1	0	0	0
	B	No	12	20	21	24	8	47	9	0
	C	Unknown	5	3	14	4	13	22	9	0
Road Surface Condition	A	Dry	15	22	29	19	13	40	16	0
	B	Wet	2	1	6	10	5	16	1	0
	C	Snow/Ice/Slush	1	1	0	2	4	13	1	0
	D	Other	0	0	0	0	0	0	0	0



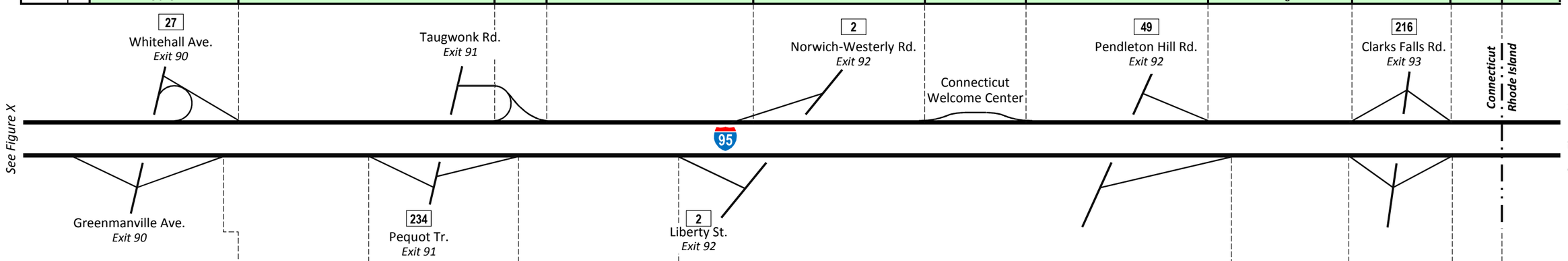
Distance			0.81	0.27	0.32	0.39	0.44	0.36	0.14	1.04	0.46
Crash Rate			0.7	1.9	0.7	0.8	0.6	1.4	0.6	1.3	0.9
Total			41	15	9	11	10	17	4	81	20
Severity	A	Fatality	0	0	0	0	0	0	0	1	0
	B	Injury	9	4	0	3	1	4	1	16	5
	C	Property Damage Only	32	11	9	8	9	13	3	64	15
Crash Type	A	Angle	0	1	0	0	1	1	0	4	1
	B	Head On	0	0	0	0	0	0	0	0	1
	C	Rear End	17	6	4	3	5	8	1	22	5
	D	Sideswipe	8	1	1	3	2	4	1	20	6
	E	Other	16	7	4	5	2	4	2	35	7
Work Zone Related	A	Yes	2	0	0	2	1	2	0	4	1
	B	No	32	12	4	6	8	13	3	55	11
	C	Unknown	7	3	5	3	1	2	1	22	8
Road Surface Condition	A	Dry	29	10	6	7	5	12	3	53	12
	B	Wet	7	4	1	2	2	2	0	15	2
	C	Snow/Ice/Slush	4	0	2	2	2	3	1	11	6
	D	Other	1	1	0	0	1	0	0	2	0

Distance			0.79	0.14	0.24	1.41	0.28	2.23	0.25	1.04	0.23	2.75
Crash Rate			0.8	3.7	1.6	0.6	3.5	0.8	1.7	0.6	2.3	0.5
Total			24	16	13	35	33	61	13	21	13	37
Severity	A	Fatality	0	0	0	0	0	0	0	1	0	0
	B	Injury	3	1	1	8	4	15	0	2	1	6
	C	Property Damage Only	21	15	12	27	29	46	13	18	12	31
Crash Type	A	Angle	3	1	0	0	1	2	0	0	1	0
	B	Head On	0	0	0	1	0	0	0	0	0	0
	C	Rear End	8	3	1	7	3	17	4	5	5	12
	D	Sideswipe	3	5	3	6	8	5	4	5	2	6
	E	Other	10	7	9	21	21	37	5	11	5	19
Work Zone Related	A	Yes	0	0	0	2	1	1	0	0	3	5
	B	No	23	12	9	20	28	47	12	13	9	18
	C	Unknown	1	4	4	13	4	13	1	8	1	14
Road Surface Condition	A	Dry	10	9	6	16	12	25	8	16	12	27
	B	Wet	7	4	2	11	15	14	1	0	0	1
	C	Snow/Ice/Slush	6	3	5	8	6	22	4	5	1	9
	D	Other	1	0	0	0	0	0	0	0	0	0



Distance			0.46	0.66	0.45	1.11	0.44	2.11	0.43	0.79	0.6	2.34
Crash Rate			0.9	0.7	1.1	0.7	1.4	0.9	1.9	0.6	2.2	0.4
Total			20	15	15	30	21	70	25	16	31	24
Severity	A	Fatality	0	0	0	0	0	0	0	0	1	1
	B	Injury	5	3	0	6	7	7	2	2	7	4
	C	Property Damage Only	15	12	15	24	14	63	23	14	23	19
Crash Type	A	Angle	1	0	1	0	0	2	0	0	0	0
	B	Head On	1	0	0	0	0	0	0	0	0	0
	C	Rear End	5	2	1	7	8	19	18	8	14	5
	D	Sideswipe	6	4	3	4	0	16	2	4	4	5
	E	Other	7	9	10	19	13	33	5	4	13	14
Work Zone Related	A	Yes	1	0	0	0	0	1	0	0	1	2
	B	No	11	10	11	18	18	46	14	14	18	15
	C	Unknown	8	5	4	12	3	23	11	2	12	7
Road Surface Condition	A	Dry	12	12	6	21	15	47	24	15	28	21
	B	Wet	2	1	4	5	3	4	0	1	2	3
	C	Snow/Ice/Slush	6	2	5	4	3	19	1	0	1	0
	D	Other	0	0	0	0	0	0	0	0	0	0

Distance			2.75	0.22	3.1	0.32	0.4	0.43	2.37	0.31	0.09	
Crash Rate			0.5	1.4	0.5	2.6	1.1	1.6	0.5	1.5	0.5	
Total			37	7	34	13	7	11	25	8	1	
Severity	A	Fatality	0	0	1	1	0	0	0	0	0	
	B	Injury	6	1	5	3	2	1	5	1	0	
	C	Property Damage Only	31	6	28	9	5	10	20	7	1	
Crash Type	A	Angle	0	0	0	1	0	0	1	0	0	
	B	Head On	0	0	0	0	0	0	0	0	0	
	C	Rear End	12	1	11	7	2	2	4	2	0	
	D	Sideswipe	6	1	3	0	2	2	5	0	0	
	E	Other	19	5	20	5	7	7	15	6	1	
Work Zone Related	A	Yes	5	0	2	0	1	1	0	0	0	
	B	No	18	5	23	9	9	9	15	6	1	
	C	Unknown	14	2	9	4	1	1	10	2	0	
Road Surface Condition	A	Dry	27	3	25	11	7	7	14	4	0	
	B	Wet	1	2	4	2	0	0	3	1	1	
	C	Snow/Ice/Slush	9	2	5	4	4	4	8	3	0	
	D	Other	0	0	0	0	0	0	0	0	0	



Distance			2.34	0.46	3.09	1.3	2.31	0.3	0.09	
Crash Rate			0.4	1.3	0.7	0.9	0.4	2.3	0.0	
Total			24	13	48	18	18	12	0	
Severity	A	Fatality	1	0	0	0	0	0	0	
	B	Injury	4	1	5	3	2	3	0	
	C	Property Damage Only	19	12	43	15	16	9	0	
Crash Type	A	Angle	0	1	0	0	0	0	0	
	B	Head On	0	0	0	1	0	0	0	
	C	Rear End	5	3	13	7	3	2	0	
	D	Sideswipe	5	1	3	1	3	2	0	
	E	Other	14	8	32	9	12	8	0	
Work Zone Related	A	Yes	2	0	1	0	0	0	0	
	B	No	15	11	35	8	14	8	0	
	C	Unknown	7	2	12	10	4	4	0	
Road Surface Condition	A	Dry	21	10	35	14	14	9	0	
	B	Wet	3	2	3	1	0	1	0	
	C	Snow/Ice/Slush	0	0	10	3	4	2	0	
	D	Other	0	1	0	0	0	0	0	

Appendix B
Bridge Inventory Database

STV 100 Years
For 100 years, STV's Engineers, Architects and Planners and Construction Managers have shaped the built environment on some of the nation's most exciting projects

BRIDGES ALONG I-95 - DETAIL EVALUATION CHART

Structure Number	Town	Features Intersected	Facility Carried	Year Built	Year Reconstructed	Lanes On I-95	ADT	Spans, Main	Structure Length	Existing I-95 Roadway Width	Proposed I-95 Roadway Width/ Structure Over Length	Bridge Roadway Width Curb-To-Curb	Deck Width, Out-To-Out	Area of Exisitng Bridge Deck (sf)	Area of Proposed Full Replacement Bridge Deck (sf)	Total Replacement Cost	Remarks
00189	BRANFORD	INTERSTATE-95	CHERRY HILL ROAD	1958	-	7	1046	2	171.0	132.2	210.0	41.0	49.2	8,413	10332	$5,424,000	RAMP NB ONLY
00190	BRANFORD	INTERSTATE-95	TODDS HILL ROAD	2002	-	6	715	2	250.0	132.4	210.0	30.2	38.8	9,700	8148	$4,278,000	
00191	BRANFORD	SR 740 (CEDAR STREET)	INTERSTATE-95	1958	1990	4	74600	1	95.0	97.2	138.0	97.2	103.7	9,849	13110	$6,883,000	
00192	BRANFORD	IVY STREET	INTERSTATE-95	1958	-	5	84100	1	55.0	105.5	138.0	105.5	113.8	6,256	7590	$3,985,000	RAMP NB ONLY
00193	BRANFORD	CHESTNUT STREET	INTERSTATE-95	1958	1990	4	84300	1	60.0	96.8	138.0	96.8	103.6	6,216	8280	$4,347,000	
06636	BRANFORD	BROOK	INTERSTATE-95	1958	-	4	84300	2	20.0	98.0	0.0	0.0	0.0	0		$0	CULVERT
00194	BRANFORD	MILL PLAIN ROAD	INTERSTATE-95	1958	-	4	84100	1	54.0	95.3	138.0	95.3	103.6	5,594	7452	$3,912,000	
00195	BRANFORD	BRANFORD RIVER	INTERSTATE-95	1958	-	4	84300	2	34.0	94.0	0.0	0.0	0.0	0		$0	CULVERT
00196	BRANFORD	US ROUTE 1	INTERSTATE-95	1958	-	4	97,800	3	135.0	95.3	138.0	95.3	103.6	13,986	18630	$9,781,000	SPN 0014-0185
00197	BRANFORD	INTERSTATE-95	FEATHERBED LANE	1958	1993	5	3010	2	181.0	108.0	210.0	40.0	52.8	9,548	11078	$5,816,000	RAMP NB ONLY
00198	BRANFORD	BRANFORD STEAM RAILROAD	INTERSTATE-95	1958	1990	4	79700	1	95.0	97.2	138.0	97.2	103.7	9,849	13110	$6,883,000	
00199	BRANFORD	INTERSTATE-95	LEETES ISLAND ROAD	2003	-	5	5460	2	214.8	105.5	210.0	70.0	83.5	17,936	17535	$9,206,000	RAMP SB ONLY
00200	GUILFORD	GRANITE ROAD	INTERSTATE-95	1958	1995	4	75300	1	50.0	97.1	138.0	97.1	103.7	5,184	6900	$3,623,000	
00201	GUILFORD	MOOSE HILL ROAD	INTERSTATE-95	1958	1995	4	75300	1	59.0	97.1	138.0	97.1	103.7	6,117	8142	$4,275,000	
00202	GUILFORD	US ROUTE 1	INTERSTATE-95	1958	1996	6	74400	3	216.0	116.8	138.0	116.8	123.7	26,712	29808	$15,649,000	SPN 0173-0466
06682	GUILFORD	SPINNING MILL BROOK	INTERSTATE-95	1958	2016	4	73200	1	10.0	97.0	0.0	0.0	0.0	0		$0	CULVERT, SPN 0059-0163
00203	GUILFORD	LONG HILL ROAD	INTERSTATE-95	1958	1995	4	65500	1	63.0	97.1	138.0	97.1	103.7	6,531	8694	$4,564,000	
00204	GUILFORD	WEST BRANCH WEST RIVER	INTERSTATE-95	1958	-	6	73200	2	30.0	98.0	0.0	0.0	0.0	0		$0	CULVERT
06634	GUILFORD	EAST BRANCH WEST RIVER	INTERSTATE-95	1958	-	6	67400	3	21.0	111.0	0.0	0.0	0.0	0		$0	CULVERT
00205	GUILFORD	ROUTE 77	INTERSTATE-95	1958	1995	4	66500	1	56.0	97.1	138.0	97.1	103.7	5,806	7728	$4,057,000	
00206	GUILFORD	STATE STREET	INTERSTATE-95	1958	1988	4	70700	1	63.0	97.2	138.0	97.2	104.1	6,557	8694	$4,564,000	
00207	GUILFORD	SR 718	INTERSTATE-95	1958	1988	4	62700	1	58.0	95.1	138.0	95.1	103.8	6,018	8004	$4,202,000	
00208	GUILFORD	INTERSTATE-95	TANNER MARSH ROAD	1958	-	5	2500	2	177.0	108.0	210.0	40.0	49.2	8,702	10325	$5,421,000	RAMP NB ONLY
00209	GUILFORD	EAST RIVER ROAD	INTERSTATE-95	1957	1997	4	66200	1	67.0	97.3	138.0	97.3	103.7	6,946	9246	$4,854,000	
00210	MADISON	EAST RIVER	INTERSTATE-95	1957	1998	4	65400	2	166.0	97.3	138.0	97.3	103.7	17,209	22908	$12,027,000	
00211	MADISON	INTERSTATE-95	WILDWOOD AVE. #1	1957	-	4	1760	2	156.0	98.0	210.0	40.0	49.2	7,670	10325	$5,421,000	
00212	MADISON	INTERSTATE-95	MUNGERTOWN ROAD	1957	-	4	3811	2	156.0	98.0	210.0	40.0	49.2	7,670	10325	$5,421,000	
00213	MADISON	NECK RIVER	INTERSTATE-95	1957	-	5	70800	2	21.0	97.0	0.0	0.0	0.0	0		$0	CULVERT, RAMP NB ONLY
00214	MADISON	COPSE ROAD	INTERSTATE-95	1957	1997	4	69500	1	59.0	97.5	138.0	97.5	103.7	6,116	8142	$4,275,000	
00215	MADISON	INTERSTATE-95	ROUTE 79	1957	-	5	12400	2	166.0	108.0	210.0	40.0	49.2	8,162	10325	$5,421,000	RAMP SB ONLY
00216	MADISON	INTERSTATE-95	HORSEPOND ROAD	1957	-	5	984	2	156.0	98.0	210.0	40.0	49.2	7,670	10325	$5,421,000	RAMP SB ONLY
06745	MADISON	FENCE CREEK	INTERSTATE-95	1957	-	6	63700	1	6.0	116.0	0.0	0.0	0.0	0		$0	CULVERT
00217	MADISON	INTERSTATE-95	NEW ROAD	1957	-	4	2267	4	216.0	98.0	210.0	40.0	49.2	10,620	10325	$5,421,000	
00218	MADISON	INTERSTATE-95	SSR 450	1957	-	5	11100	4	192.0	104.0	210.0	64.0	89.7	17,216	18830	$9,886,000	RAMP SB ONLY, SPN 0075-0131
00219	MADISON	RIVER RD &HAMMONASSET RV	INTERSTATE-95	1957	1998	4	64400	2	191.0	126.0	138.0	97.4	103.7	19,800	26358	$13,838,000	
06746	CLINTON	BROOK	INTERSTATE-95	1957	-	4	62700	1	6.0	95.0	0.0	0.0	0.0	0		$0	CULVERT
00220	CLINTON	INTERSTATE-95	NOD ROAD	1957	1993	4	2522	2	148.0	110.0	210.0	41.8	45.7	6,759	9590	$5,035,000	
06747	CLINTON	BROOK	INTERSTATE-95	1957	-	4	62000	1	9.0	95.0	0.0	0.0	0.0	0		$0	CULVERT
00221	CLINTON	COW HILL ROAD	INTERSTATE-95	1957	1989	5	62700	1	54.0	96.8	138.0	96.8	103.7	5,598	7452	$3,912,000	RAMP SB ONLY
00222	CLINTON	INTERSTATE-95	ROUTE 81	1957	1989	4	15900	2	156.0	98.0	210.0	52.0	61.1	9,529	12828	$6,734,000	
00223	CLINTON	INDIAN LAKE	INTERSTATE-95	1957	-	5	60600	2	25.0	110.0	0.0	107.0	113.7	2,842		$0	CULVERT, RAMP NB ONLY
00224	CLINTON	LIBERTY STREET NO. 1	INTERSTATE-95	1957	1998	5	62200	1	55.0	97.4	138.0	97.4	103.7	5,704	7590	$3,985,000	RAMP NB ONLY
00225	CLINTON	INTERSTATE-95	LONG HILL ROAD	1957	-	5	3110	2	161.0	100.0	210.0	40.0	49.2	7,916	10325	$5,421,000	
00226	CLINTON	MENUNKETESUCK RIVER	INTERSTATE-95	1957	1997	4	62200	1	51.0	97.3	138.0	97.3	103.7	5,289	7038	$3,695,000	
00227	WESTBROOK	INTERSTATE-95	CHAPMAN MILLPOND R	1957	1972	4	251	2	156.0	98.0	210.0	24.0	29.7	4,628	6230	$3,271,000	
00228	WESTBROOK	INTERSTATE-95	ROUTE 145	1957	-	4	8200	2	148.0	98.0	210.0	40.0	45.7	6,759	9590	$5,035,000	
06743	WESTBROOK	GATCHEN CREEK	INTERSTATE-95	1957	-	5	64000	1	6.1	95.0	0.0	0.0	0.0	0		$0	CULVERT, RAMP NB ONLY, SPN 0154-0123
00229	WESTBROOK	POND MEADOW ROAD	INTERSTATE-95	1957	-	4	59800	1	55.0	93.3	138.0	93.3	103.5	5,693	7590	$3,985,000	
00230	WESTBROOK	INTERSTATE-95	WILLARD AVENUE	1958	-	4	2289	4	176.0	91.0	210.0	30.0	42.7	7,509	8960	$4,704,000	
00231	WESTBROOK	PATCHOGUE RIVER	INTERSTATE-95	1957	-	6	51800	3	59.0	107.0	0.0	0.0	0.0	0		$0	CULVERT
00232	WESTBROOK	INTERSTATE-95	ROUTE 153	1957	-	4	11600	2	179.0	89.0	210.0	38.0	47.3	8,458	9923	$5,209,000	
00233	OLD SAYBROOK	INTERSTATE-95	ROUTE 166	1957	1993	5	7676	2	160.0	89.0	210.0	39.7	43.5	6,960	9135	$4,796,000	RAMP SB ONLY
00234	OLD SAYBROOK	SCHOOL HOUSE ROAD	INTERSTATE-95	1957	1997	4	54700	3	122.0	88.4	138.0	88.4	94.7	11,549	16836	$8,839,000	
02582	OLD SAYBROOK	FISHING BROOK	INTERSTATE-95	1957	-	4	54700	1	13.0	88.0	0.0	0.0	0.0	0		$0	CULVERT
02583	OLD SAYBROOK	BROOK	INTERSTATE-95	1957	-	4	54700	1	8.0	89.0	0.0	0.0	0.0	0		$0	CULVERT
00235	OLD SAYBROOK	ELM STREET	INTERSTATE-95	1957	1997	4	54700	3	119.0	88.3	138.0	88.3	94.7	11,265	16422	$8,622,000	
00236	OLD SAYBROOK	VALLEY RAILROAD	INTERSTATE-95	1957	1997	6	61000	1	27.0	105.5	138.0	105.5	113.0	3,051	3726	$1,956,000	
00237	OLD SAYBROOK	ROUTE 154	INTERSTATE-95	1957	1997	4	53600	3	125.0	88.3	138.0	88.3	94.7	11,833	17250	$9,056,000	
00238	OLD SAYBROOK	SR 628 {SPRING BROOK RD}	INTERSTATE-95	1957	1997	4	56800	1	99.0	88.4	138.0	8.4	94.7	9,372	13662	$7,173,000	
06172	OLD SAYBROOK	ROUTE 9 NB & I-95 TR 816	I-95 & ROUTE 9 NB	1992	-	7	64500	1	124.0	140.3	210.0	140.3	150.2	18,621	31535	$16,556,000	RAMP NB ONLY
06200A	OLD SAYBROOK	FERRY RD. CONNECTICUT R.	INTERSTATE-95 NB	1993	-	4	38300	11	2531.0	72.0	0.0	72.0	76.8	194,465		$0	SPN 0105-0201 & 0105-0204 - BALDWIN BRIDGE
06200B	OLD SAYBROOK	FERRY RD. CONN. RIVER	INTERSTATE-95 SB	1993	-	4	38,300	11	2531.0	72.0	0.0	72.0	86.0	217,666		$0	SPN 0105-0201 & 0105-0204 - BALDWIN BRIDGE

LEGEND:

Bridge Category 1 - Single Span Bridges Carrying I-95 with Full Height Abutments
Bridge Category 2 - Single Span Bridges Carrying I-95 with Stub Abutments
Bridge Category 3 - Multispan Bridges Carrying I-95
Bridge Category 4 - Bridges with Ramp Approaches
Bridge Category 5 - Culverts
Bridge Category 6 - Bridges Over I-95 with Full Height Abutments & No Setbacks
Bridge Category 7 - Bridges Over I 95 with Full Height Abutments & Setbacks (Semi Stub)
Bridge Category 8 - Bridges Over I-95 with Stub Abutments
Bridge Category 9 - Bridges Over I-95 with Shoulder Piers

Condition Rating 4 or Lower Signifying "Poor" Condition

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BRIDGES ALONG I-95 - DETAIL EVALUATION CHART

Structure Number	Town	Features Intersected	Facility Carried	Year Built	Year Reconstructed	Lanes On I-95	ADT	Spans, Main	Structure Length	Existing I-95 Roadway Width	Proposed I-95 Roadway Width/ Structure Over Length	Bridge Roadway Width Curb-To-Curb	Deck Width, Out-To-Out	Area of Exisitng Bridge Deck (sf)	Area of Proposed Full Replacement Bridge Deck (sf)	Total Replacement Cost	Remarks
06173	OLD LYME	ROUTE 156	INTERSTATE-95	1992	-	6	64300	1	124.0	120.0	138.0	120.0	129.8	16,089	17112	$8,984,000	SPN 0104-0164
06032	OLD LYME	LIEUTENANT RIVER	INTERSTATE-95	1948	1991	4	64300	3	192.0	70.1	138.0	70.1	77.0	14,784	26496	$13,910,000	SPN 0104-0164
00243	OLD LYME	LYME STREET	INTERSTATE-95	1948	-	4	66700	3	124.0	67.8	138.0	67.8	76.7	9,507	17112	$8,984,000	SPN 0104-0164
00244	OLD LYME	INTERSTATE-95	WHIPPOORWILL ROAD	1958	-	4	989	4	199.0	87.0	210.0	40.0	45.7	9,088	9590	$5,035,000	
00245	OLD LYME	INTERSTATE-95	FLAT ROCK HILL RD	2015	2015	4	130	2	180.0	87.0	210.0	42.0	45.7	8,220	0	$0	REPLACED IN 2017
00246	OLD LYME	INTERSTATE-95	FOUR MILE RIVER RD	1958	2015	4	4,565	2	151.0	88.0	210.0	42.0	45.7	6,896	9590	$5,035,000	
02584	OLD LYME	FOUR MILE RIVER	I-95 & RAMP 230 & 231	1958	-	6	66,200	2	20.0	112.0	0.0	0.0	0.0	0	0	$0	CULVERT
00247	EAST LYME	INTERSTATE-95	SSR 449	1958	2003	4	5300	2	156.0	87.6	210.0	60.5	66.7	10,400	14000	$7,350,000	
00248	EAST LYME	NORTH BRIDE BROOK ROAD	INTERSTATE-95	1958	1992	4	69500	1	50.4	87.9	138.0	87.9	94.8	4,780	6955	$3,651,000	
00249	EAST LYME	INTERSTATE 95	SOCIETY ROAD	2015	2016	4	2,020	2	242.9	87.5	210.0	36.0	39.7	9,635	0	$0	REPLACED IN 2017
02585	EAST LYME	PATTAGANSETT RIVER	INTERSTATE-95	1958	-	4	67,400	1	11.0	72.0	0.0	0.0	0.0	0		$0	CULVERT, SPN 0044-0156
00250	EAST LYME	ROUTE 161	INTERSTATE-95	1958	-	5	65,000	1	103.0	70.0	138.0	70.0	93.7	9,648	14214	$7,462,000	TO BE REPLACED UNDER PROJECT NO. 44-156
00251	EAST LYME	LATIMERS BROOK	INTERSTATE-95	1958	-	5	73400	2	34.0	70.0	0.0	0.0	0.0	0		$0	CULVERT, RAMP SB ONLY, SPN 0044-0156
00252	EAST LYME	INTERSTATE-95	US ROUTE 1	1958	2002	4	10800	2	281.0	89.0	138.0	64.1	67.6	18,991	0	$0	REPLACEMENT COST INCLUDED IN I-95/I-395 INTERCHANGE COST
00253	EAST LYME	I-395 NORTHBOUND	INTERSTATE-95 SB	1958	-	2	27,100	1	96.0	38.0	138.0	38.0	43.7	4,192	0	$0	REPLACEMENT COST INCLUDED IN I-95/I-395 INTERCHANGE COST
01891	WATERFORD	OIL MILL BROOK	INTERSTATE-95	1958	-	4	55,400	1	8.0	67.0	0.0	0.0	0.0	0		$0	CULVERT
00352A	WATERFORD	OIL MILL ROAD	INTERSTATE-95 NB	1958	2016	2	27,100	1	48.0	38.2	138.0	38.2	43.8	2,100	0	$0	REPLACEMENT COST INCLUDED IN I-95/I-395 INTERCHANGE COST
00352B	WATERFORD	OIL MILL ROAD	INTERSTATE-95 SB	1958	2016	2	27,100	1	48.0	38.0	138.0	38.0	43.7	2,096	0	$0	REPLACEMENT COST INCLUDED IN I-95/I-395 INTERCHANGE COST
02586	WATERFORD	STONY BROOK	I-95 & LOCAL ROADS	1964	-	4	56,100	1	6.0	76.0	0.0	0.0	0.0	0		$0	CULVERT
01767	WATERFORD	INTERSTATE-95	CROSS ROAD	2005	-	5	11660	2	237.0	136.0	210.0	86.7	99.9	23,680	20983	$11,016,000	RAMP NB ONLY
01768	WATERFORD	JORDAN BROOK	I-95 & PARKWAY N.	1964	-	6	59800	2	25.0	117.0	0.0	0.0	0.0	0		$0	CULVERT
06130	WATERFORD	ROUTE 85	INTERSTATE-95	1991	-	4	53700	3	228.0	120.0	138.0	120.0	127.8	29,127	31464	$16,519,000	
00354	NEW LONDON	I-95 SR 623 & SR 624	VAUXHALL ST EXT	1960	-	4	6000	4	343.0	88.8	210.0	40.0	49.2	16,864	10325	$5,421,000	LOCAL ROADS NEXT TO I-95
02602	NEW LONDON	I-95 SR 623 & N SR 624	SR 908 COLMAN ST	1973	-	7	13100	4	338.0	138.0	0.0	53.0	65.2	22,026		$0	LOCAL ROADS NEXT TO I-95
02603	NEW LONDON	I-95&SR623+641&I-95310	SR636 BRIGGS ST	1973	-	7	7346	4	366.0	148.9	0.0	53.0	69.2	25,315		$0	RAMP NB ONLY, LOCAL ROADS NEXT TO I-95
02611	NEW LONDON	INTERSTATE 95 & SR 623	ROUTE 32 RAMP 002	1973	-	6	7900	3	318.0	121.5	0.0	26.0	29.8	9,461		$0	LOCAL ROAD NEXT TO I-95 SB
02612	NEW LONDON	I-95 US 1 NB SR 623&641	ROUTE 32 SB	1974	-	6	7,800	6	738.0	130.6	0.0	50.0	53.8	39,704		$0	
02833	NEW LONDON	I-95 US 1 NB SR 623&641	ROUTE 32 NB	1974	-	6	8550	6	764.0	139.9	0.0	50.0	53.8	41,065		$0	
03820	NEW LONDON	WILLIAMS ST (SR 635)	INTERSTATE-95 NB	1975	-	4	40400	1	123.0	73.6	0.0	73.6	77.4	9,522		$0	
02514A	NEW LONDON	THAMES RV LOC RDS & CVRR	INTERSTATE-95 SB	1973	-	5	55100	11	6368.0	80.0	0.0	80.0	89.5	569,936		$0	SPN 0094-0252 - GOLD STAR MEMORIAL BRIDGE
02514B	NEW LONDON	WILLIAMS ST STAT PIER RD	I-95 TR 817	1975	-	2	18522	3	362.0	40.0	0.0	40.0	49.5	17,919		$0	SPN 0094-0252 - GOLD STAR MEMORIAL BRIDGE
03819	NEW LONDON	THAMES RV RR LOCAL ROADS	INTERSTATE-95 NB	1943	1975	5	55,100	11	5931.0	80.0	0.0	80.0	83.8	496,721		$0	SPN 0094-0235 - GOLD STAR MEMORIAL BRIDGE
01769	GROTON	I-95 RAMP 313	INTERSTATE-95 SB	1964	-	4	43800	1	92.0	80.0	0.0	80.0	85.5	7,866		$0	
02445	GROTON	I-95 RAMP 313	I-95 NB & RT 1 NB	1973	-	7	43800	1	99.0	148.0	0.0	148.0	151.8	15,031		$0	
01770	GROTON	ROUTE 184 & I-95 TR827	INTERSTATE-95 SB	1964	1990	3	32550	3	285.0	50.0	0.0	50.0	55.5	15,818		$0	
01771	GROTON	ROUTE 12	INTERSTATE-95 SB	1964	-	3	32550	3	261.0	52.0	0.0	52.0	55.5	14,486		$0	
01772	GROTON	ROUTE 12	INTERSTATE-95 NB	1964	-	3	32550	3	166.0	52.0	0.0	52.0	55.5	9,213		$0	
01773	GROTON	SR 900 (KINGS HIGHWAY)	INTERSTATE-95 NB	1964	-	3	32550	1	92.0	51.8	0.0	51.8	55.5	5,106		$0	
01774	GROTON	SR 900 (KINGS HIGHWAY)	INTERSTATE-95 SB	1964	-	3	32550	1	114.0	51.8	0.0	51.8	55.5	6,327		$0	
03328	GROTON	I-95 NB & I-95 TR 822	I-95 TR 821	1966	-	3	5400	7	661.0	50.0	0.0	25.5	37.0	24,457		$0	
01817	GROTON	INTERSTATE-95 NB	I-95 TR 822	1964	1994	3	6153	2	277.0	50.0	0.0	38.0	43.5	12,050		$0	
03006	GROTON	DRAINAGE	I-95 NB & RTE 349 NB	1964	-	6	29250	1	7.0	50.0	0.0	0.0	0.0	0		$0	CULVERT
01775	GROTON	BUDDINGTON ROAD	INTERSTATE-95 SB	1964	-	3	35950	3	129.0	51.8	0.0	51.8	55.5	7,160		$0	
01776	GROTON	BUDDINGTON ROAD	INTERSTATE-95 NB	1964	-	3	35950	3	120.0	51.8	0.0	51.8	55.5	6,660		$0	
01777	GROTON	GROTON RESERVOIR	INTERSTATE-95 SB.	1964	-	3	35950	9	723.0	52.0	0.0	52.0	55.5	40,127		$0	SPN 0058-0307
01778	GROTON	GROTON RESERVOIR	INTERSTATE-95 NB.	1964	-	3	35950	6	483.0	52.0	0.0	52.0	55.5	26,807		$0	SPN 0058-0307
01779	GROTON	POHEGNUT POND	INTERSTATE-95 NB	1964	-	3	35950	1	105.0	51.8	0.0	51.8	55.5	5,828		$0	
01780	GROTON	POHEGNUT POND	INTERSTATE-95 SB	1964	-	3	35950	1	105.0	51.8	0.0	51.8	55.5	5,828		$0	
03007	GROTON	DRAINAGE TO SMITH LAKE	INTERSTATE-95 NB	1964	-	4	35950	1	11.0	60.0	0.0	0.0	0.0	0		$0	CULVERT
01781	GROTON	ROUTE 117	INTERSTATE-95 NB	1964	-	3	31800	2	149.0	51.8	0.0	51.8	55.5	8,270		$0	
01782	GROTON	ROUTE 117	INTERSTATE-95 SB	1964	-	4	31800	2	150.0	61.8	0.0	61.8	65.5	9,825		$0	
03008	GROTON	FORT HILL BROOK WEST	INTERSTATE -95 NB	1964	-	4	33000	1	11.0	50.0	0.0	0.0	0.0	0		$0	CULVERT
03009	GROTON	FORT HILL BROOK WEST	INTERSTATE-95 SB	1964	-	3	33000	1	15.0	50.0	0.0	0.0	0.0	0		$0	CULVERT
01783	GROTON	INTERSTATE-95 NB	FLANDERS ROAD	1964	-	3	1752	3	194.0	50.0	0.0	34.0	43.6	8,465		$0	
01784	GROTON	INTERSTATE-95 SB	FLANDERS ROAD	1964	-	3	1752	3	202.0	50.0	0.0	34.0	43.6	8,814		$0	
01785	GROTON	INTERSTATE-95	NOANK-LEDYARD ROAD	1964	-	6	1576	5	339.0	53.0(SB) & 52.7(NB)	0.0	30.0	39.5	13,391		$0	RAMP NB ONLY
01786	GROTON	INTERSTATE-95	SR 614	1964	-	5	10500	5	350.0	64.2(SB) & 40.5(NB)	350.0	42.0	47.5	16,625	16625	$8,728,000	RAMP SB ONLY
06829	GROTON	BINDLOSS BROOK	INTERSTATE-95						0.0		138.0	0.0	0.0	0	0	$0	
01787	GROTON	COW HILL ROAD	INTERSTATE-95 SB	1964	-	2	30550	3	124.0	38.0	64.0	38.0	43.5	5,394	7936	$4,166,000	SPN 0058-0307
01788	GROTON	COW HILL ROAD	INTERSTATE-95 NB	1964	-	2	30550	3	123.0	38.0	64.0	38.0	43.5	5,351	7872	$4,133,000	SPN 0058-0307
01789	GROTON	RIVER RD & MYSTIC RIVER	INTERSTATE-95 NB	1964	-	2	32300	4	498.0	38.0	64.0	38.0	43.5	21,663	31872	$16,733,000	SPN 0058-0307
01790	GROTON	RIVER RD & MYSTIC RIVER	INTERSTATE-95 SB	1964	-	2	32300	4	498.0	38.0	64.0	38.0	43.5	21,663	31872	$16,733,000	SPN 0058-0307
01791	STONINGTON	ROUTE 27	INTERSTATE-95 NB	1964	-	2	24,250	3	148.0	38.0	64.0	38.0	43.5	6,438	9472	$4,973,000	SPN 0058-0307

LEGEND:

Bridge Category 1 - Single Span Bridges Carrying I-95 with Full Height Abutments
Bridge Category 2 - Single Span Bridges Carrying I-95 with Stub Abutments
Bridge Category 3 - Multispan Bridges Carrying I-95
Bridge Category 4 - Bridges with Ramp Approaches
Bridge Category 5 - Culverts
Bridge Category 6 - Bridges Over I-95 with Full Height Abutments & No Setbacks
Bridge Category 7 - Bridges Over I 95 with Full Height Abutments & Setbacks (Semi Stub)
Bridge Category 8 - Bridges Over I-95 with Stub Abutments
Bridge Category 9 - Bridges Over I-95 with Shoulder Piers

Condition Rating 4 or Lower Signifying "Poor" Condition

For 100 years, STV's Engineers, Architects and Planners and Construction Managers have shaped the built environment on some of the nation's most exciting projects

BRIDGES ALONG I-95 - DETAIL EVALUATION CHART

Structure Number	Town	Features Intersected	Facility Carried	Year Built	Year Reconstructed	Lanes On I-95	ADT	Spans, Main	Structure Length	Existing I-95 Roadway Width	Proposed I-95 Roadway Width/ Structure Over Length	Bridge Roadway Width Curb-To-Curb	Deck Width, Out-To-Out	Area of Exisitng Bridge Deck (sf)	Area of Proposed Full Replacement Bridge Deck (sf)	Total Replacement Cost	Remarks
01792	STONINGTON	ROUTE 27	INTERSTATE-95 SB	1964	-	3	24,250	3	148.0	48.0	64.0	48.0	53.5	7,915	9472	$4,973,000	SPN 0058-0307
01793	STONINGTON	JERRY BROWNE ROAD	INTERSTATE-95 SB	1964	-	2	25150	3	190.0	38.0	64.0	38.0	43.5	8,265	12160	$6,384,000	SPN 0058-0307
01794	STONINGTON	JERRY BROWNE ROAD	INTERSTATE-95 NB	1964	-	3	30550	3	190.0	42.0	64.0	42.0	47.5	9,025	12160	$6,384,000	SPN 0058-0307
06832	STONINGTON	PEQUOTSEPOS BROOK	INTERSTATE-95 SB	1964	-	2	25150	2	12.0	41.5	64.0	0.0	0.0	0	0	$0	CULVERT
01795	STONINGTON	MYSTIC RES&DEANS MILL RD	INTERSTATE-95 NB	1964	-	2	25150	2	165.0	38.0	64.0	38.0	43.5	7,178	10560	$5,544,000	SPN 0058-0307
01796	STONINGTON	MYSTIC RES&DEANS MILL RD	INTERSTATE-95 SB	1964	-	2	25150	2	166.0	38.0	64.0	38.0	43.5	7,221	10624	$5,578,000	SPN 0058-0307
01797	STONINGTON	INTERSTATE-95 SOUTHBOUND	ROUTE 234	1964	-	2	1600	3	201.0	58.0	128.0	40.0	49.5	9,958	6341	$3,329,000	SPN 0058-0307
01798	STONINGTON	INTERSTATE-95 NORTHBOUND	ROUTE 234	1964	-	2	1,600	3	209.0	58.0	128.0	40.0	49.5	10,354	6341	$3,329,000	SPN 0058-0307
01800	STONINGTON	STONY BROOK	INTERSTATE-95 NB	1964	-	2	21750	2	31.0	38.0	64.0	0.0	0.0	0	0	$0	CULVERT
01801	STONINGTON	STONY BROOK	INTERSTATE-95 SB	1964	-	2	23150	2	30.0	38.0	64.0	0.0	0.0	0	0	$0	CULVERT
01802	STONINGTON	TAUGWANK ROAD	INTERSTATE-95 NB	1964	1989	2	23150	3	124.0	38.0	64.0	38.0	43.5	5,394	7936	$4,166,000	SPN 0058-0307
01803	STONINGTON	TAUGWANK ROAD	INTERSTATE-95 SB	1964	1989	3	21750	3	125.0	48.0	64.0	48.0	53.5	6,685	8000	$4,200,000	SPN 0058-0307
01804	STONINGTON	ANGUILLA BROOK	INTERSTATE-95 NB	1964	-	2	20900	3	38.0	38.0	64.0	0.0	0.0	0	0	$0	CULVERT
01805	STONINGTON	ANGUILLA BROOK	INTERSTATE-95 SB	1964	-	2	20900	3	38.0	38.0	64.0	0.0	0.0	0	0	$0	CULVERT
01806	STONINGTON	INTERSTATE-95 NB	NO ANGUILLA ROAD	1964	-	2	645	3	161.0	39.7	128.0	30.0	35.5	5,716	4544	$2,386,000	SPN 0058-0307
01807	STONINGTON	INTERSTATE 95 SB	NO ANGUILLA ROAD	1964	-	2	645	3	172.0	41.3	128.0	30.0	35.5	6,106	4544	$2,386,000	SPN 0058-0307
01808	NORTH STONINGTON	ROUTE 2	INTERSTATE-95 NB	1964	1989	2	14,250	3	151.0	38.0	64.0	38.0	43.5	6,569	9664	$5,074,000	SPN 0058-0307
01809	NORTH STONINGTON	ROUTE 2	INTERSTATE-95 SB	1964	1989	2	14250	3	151.0	42.0	64.0	42.0	47.5	7,173	9664	$5,074,000	SPN 0058-0307
01810	NORTH STONINGTON	SHUNOCK RIVER	INTERSTATE-95 NB	1964	-	2	14250	2	37.0	38.0	0.0	0.0	0.0	0		$0	CULVERT
01811	NORTH STONINGTON	SHUNOCK RIVER	INTERSTATE-95 SB	1970	-	3	14250	2	37.0	38.0	0.0	0.0	0.0	0		$0	CULVERT
01812	NORTH STONINGTON	ROUTE 49	INTERSTATE-95 NB	1964	1988	2	14250	3	131.0	42.0	0.0	42.0	47.5	6,223		$0	SPN 0058-0307
01813	NORTH STONINGTON	ROUTE 49	INTERSTATE-95 SB	1964	1988	2	14250	3	135.0	38.0	0.0	38.0	43.5	5,873		$0	SPN 0058-0307
01814	NORTH STONINGTON	INTERSTATE-95	BOOM BRIDGE ROAD	1964	-	4	165	6	474.0	38.0 (SB) & 42.0 (NB)	0.0	30.0	35.5	16,827		$0	SPN 0058-0307
01815	NORTH STONINGTON	ROUTE 216	INTERSTATE-95 NB	1964	-	2	15950	3	118.0	38.0	0.0	38.0	43.5	5,133		$0	SPN 0058-0307
01816	NORTH STONINGTON	ROUTE 216	INTERSTATE-95 SB	1964	-	2	16750	3	117.0	42.0	0.0	42.0	47.5	5,558		$0	SPN 0058-0307

LEGEND:

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Condition Rating 4 or Lower Signifying "Poor" Condition

Forecasted Work Needed before 2040

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
00181	INTERSTATE-95	US RT. 1 SB AND AMTRAK	none	
00182	INTERSTATE-95	LAUREL STREET	Rehab	
00183	INTERSTATE-95	ROUTE 100	none	
00184	INTERSTATE-95	FARM RIVER	Rehab	
00185	PRIVATE ROAD	INTERSTATE-95	none	Private road - access to Lake Saltonstall
00186	INTERSTATE-95	LAKE SALTONSTALL	Rehab	
00187	HOSLEY AVENUE	INTERSTATE-95	Bridge replacement	
06629	INTERSTATE-95	HOSLEY BROOK	Rehab	
06630	INTERSTATE-95	HOSLEY BROOK	Rehab	
00188	INTERSTATE-95	SR 794 WB	none	
00189	CHERRY HILL ROAD	INTERSTATE-95	Rehab	
00190	TODDS HILL ROAD	INTERSTATE-95	none	
00191	INTERSTATE-95	SR 740 (CEDAR STREET)	Rehab	
00192	INTERSTATE-95	IVY STREET	Deck Replace, Super repair	
00193	INTERSTATE-95	CHESTNUT STREET	Rehab	
06636	INTERSTATE-95	BROOK	Rehab	
00194	INTERSTATE-95	MILL PLAIN ROAD	Superstructure replacement, Substructure repair	
00195	INTERSTATE-95	BRANFORD RIVER	Rehab	
00196	INTERSTATE-95	US ROUTE 1	None- will be new bridge	To be replaced in 2019 under Project #14-185
00197	FEATHERBED LANE	INTERSTATE-95	Bridge replacement	
00198	INTERSTATE-95	BRANFORD STEAM RAILROAD	Superstructure replacement, Substructure repair	
00199	LEETES ISLAND ROAD	INTERSTATE-95	none	
00200	INTERSTATE-95	GRANITE ROAD	none	

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
00201	INTERSTATE-95	MOOSE HILL ROAD	none	
00202	INTERSTATE-95	US ROUTE 1	Rehab	
06682	INTERSTATE-95	SPINNING MILL BROOK	none	Culvert was relined in 2017 under Project #59-163
00203	INTERSTATE-95	LONG HILL ROAD	none	
00204	INTERSTATE-95	WEST BRANCH WEST RIVER	Rehab	
06634	INTERSTATE-95	EAST BRANCH WEST RIVER	Rehab	
00205	INTERSTATE-95	ROUTE 77	none	
00206	INTERSTATE-95	STATE STREET	Rehab	
00207	INTERSTATE-95	SR 718	Bridge replacement	Replacement recommended instead of rehab due to underclearances=3
00208	TANNER MARSH ROAD	INTERSTATE-95	Bridge replacement	Replacement recommended instead of rehab due to underclearances=3
00209	INTERSTATE-95	EAST RIVER ROAD	none	
00210	INTERSTATE-95	EAST RIVER	Rehab	
00211	WILDWOOD AVE. #1	INTERSTATE-95	Bridge replacement	Replacement recommended instead of rehab due to underclearances=3
00212	MUNGERTOWN ROAD	INTERSTATE-95	Bridge replacement	Replacement recommended instead of rehab due to underclearances=3
00213	INTERSTATE-95	NECK RIVER	Rehab	
00214	INTERSTATE-95	COPSE ROAD	none	
00215	ROUTE 79	INTERSTATE-95	Bridge replacement	underclearances=3
00216	HORSEPOND ROAD	INTERSTATE-95	Bridge replacement	underclearances=3
06745	INTERSTATE-95	FENCE CREEK	Rehab	
00217	NEW ROAD	INTERSTATE-95	Bridge replacement	underclearances=3
00218	SSR 450	INTERSTATE-95	Bridge replacement	underclearances=3
00219	INTERSTATE-95	RIVER RD &HAMMONASSET RV	none	
06746	INTERSTATE-95	BROOK	Rehab	
00220	NOD ROAD	INTERSTATE-95	Bridge replacement	underclearances=3
06747	INTERSTATE-95	BROOK	Rehab	

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
00221	INTERSTATE-95	COW HILL ROAD	Bridge replacement	underclearances=3
00222	ROUTE 81	INTERSTATE-95	Bridge replacement	underclearances=3
00223	INTERSTATE-95	INDIAN LAKE	Rehab	
00224	INTERSTATE-95	LIBERTY STREET NO. 1	none	
00225	LONG HILL ROAD	INTERSTATE-95	Bridge replacement	underclearances=3
00226	INTERSTATE-95	MENUNKETESUCK RIVER	Rehab	
00227	CHAPMAN MILLPOND R	INTERSTATE-95	Rehab	
00228	ROUTE 145	INTERSTATE-95	Deck Replace, Superstructure repair	underclearances=3
06743	INTERSTATE-95	GATCHEN CREEK		no bridge data
00229	INTERSTATE-95	POND MEADOW ROAD	Rehab	
00230	WILLARD AVENUE	INTERSTATE-95	Bridge replacement	underclearances=3
00231	INTERSTATE-95	PATCHOGUE RIVER	Rehab	
00232	ROUTE 153	INTERSTATE-95	Bridge replacement	Replacement recommended instead of rehab due to deck geometry=2, underclearances=3
00233	ROUTE 166	INTERSTATE-95	Bridge replacement	deck geometry=2, underclearances=3
00234	INTERSTATE-95	SCHOOL HOUSE ROAD	none	
02582	INTERSTATE-95	FISHING BROOK	Rehab	
02583	INTERSTATE-95	BROOK	Rehab	
00235	INTERSTATE-95	ELM STREET	Rehab	
00236	INTERSTATE-95	VALLEY RAILROAD	Rehab	
00237	INTERSTATE-95	ROUTE 154	none	
00238	INTERSTATE-95	SR 628 {SPRING BROOK RD}	none	
06172	I-95 & ROUTE 9 NB	ROUTE 9 NB & I-95 TR 816	none	
06200A	INTERSTATE-95 NB	FERRY RD. CONNECTICUT R.	Rehab	
06200B	INTERSTATE-95 SB	FERRY RD. CONN. RIVER	Rehab	
06173	INTERSTATE-95	ROUTE 156	none	

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
06032	INTERSTATE-95	LIEUTENANT RIVER	Rehab	
00243	INTERSTATE-95	LYME STREET	Bridge replacement	
00244	WHIPPOORWILL ROAD	INTERSTATE-95	Deck Replacement, super & sub repairs	Consider replacement due to underclearances (over I-95) = 3
00245	FLAT ROCK HILL RD	INTERSTATE-95	none	
00246	FOUR MILE RIVER RD	INTERSTATE-95	Bridge replacement	underclearances=3
02584	I-95 & RAMP 230 & 231	FOUR MILE RIVER	Rehab	
00247	SSR 449	INTERSTATE-95	Rehab	Consider replacement due to underclearances (over I-95) = 3
00248	INTERSTATE-95	NORTH BRIDE BROOK ROAD	Rehab	
00249	SOCIETY ROAD	INTERSTATE 95	none	new bridge in 2016
02585	INTERSTATE-95	PATTAGANSETT RIVER	Rehab	
00250	INTERSTATE-95	ROUTE 161	none	To be replaced in 2021 under Project #44-156
00251	INTERSTATE-95	LATIMERS BROOK	Rehab	
00252	US ROUTE 1	INTERSTATE-95	Bridge replacement	underclearances=3
00253	INTERSTATE-95 SB	I-395 NORTHBOUND	Bridge replacement	underclearances=3; may need to be replaced to reconfigure interchange
01891	INTERSTATE-95	OIL MILL BROOK	Rehab	
00352A	INTERSTATE-95 NB	OIL MILL ROAD	none	Superstructure replaced 2017; may need to be replaced to reconfigure interchange
00352B	INTERSTATE-95 SB	OIL MILL ROAD	none	Superstructure replaced 2017; may need to be replaced to reconfigure interchange
02586	I-95 & LOCAL ROADS	STONY BROOK	Rehab	
01767	CROSS ROAD	INTERSTATE-95	none	
01768	I-95 & PARKWAY N.	JORDAN BROOK	Rehab	
06130	INTERSTATE-95	ROUTE 85	Bridge replacement	
00354	VAUXHALL ST EXT	I-95 SR 623 & SR 624	Bridge replacement	underclearances=3
02602	SR 908 COLMAN ST	I-95 SR 623 & N SR 624	Rehab	
02603	SR636 BRIGGS ST	I-95&SR623+641&I-95310	Rehab	
02611	ROUTE 32 RAMP 002	INTERSTATE 95 & SR 623	Rehab	

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
02612	ROUTE 32 SB	I-95 US 1 NB SR 623&641	Superstructure replacement, Substructure repair	Consider replacement
02833	ROUTE 32 NB	I-95 US 1 NB SR 623&641	Superstructure replacement, Substructure repair	Consider replacement
03820	INTERSTATE-95 NB	WILLIAMS ST (SR 635)	Rehab	
02514A	INTERSTATE-95 SB	THAMES RV LOC RDS & CVRR	Rehab	
02514B	I-95 TR 817	WILLIAMS ST STAT PIER RD	Rehab	
03819	INTERSTATE-95 NB	THAMES RV RR LOCAL ROADS	none	rehab projects already planned for 2018-2024
01769	INTERSTATE-95 SB	I-95 RAMP 313	none	
02445	I-95 NB & RT 1 NB	I-95 RAMP 313	Superstructure replacement	
01770	INTERSTATE-95 SB	ROUTE 184 & I-95 TR827	Bridge replacement	
01771	INTERSTATE-95 SB	ROUTE 12	Bridge replacement	
01772	INTERSTATE-95 NB	ROUTE 12	Rehab	
01773	INTERSTATE-95 NB	SR 900 (KINGS HIGHWAY)	Rehab	
01774	INTERSTATE-95 SB	SR 900 (KINGS HIGHWAY)	Rehab	
03328	I-95 TR 821	I-95 NB & I-95 TR 822	Rehab	
01817	I-95 TR 822	INTERSTATE-95 NB	Rehab	
03006	I-95 NB & RTE 349 NB	DRAINAGE	Rehab	
01775	INTERSTATE-95 SB	BUDDINGTON ROAD	Bridge replacement	
01776	INTERSTATE-95 NB	BUDDINGTON ROAD	Superstructure replacement	
01777	INTERSTATE-95 SB.	GROTON RESERVOIR	Bridge replacement	Over Groton reservoir
01778	INTERSTATE-95 NB.	GROTON RESERVOIR	Bridge replacement	Over Groton reservoir
01779	INTERSTATE-95 NB	POHEGNUT POND	Rehab	
01780	INTERSTATE-95 SB	POHEGNUT POND	Rehab	
03007	INTERSTATE-95 NB	DRAINAGE TO SMITH LAKE	Rehab	
01781	INTERSTATE-95 NB	ROUTE 117	Superstructure replacement	
01782	INTERSTATE-95 SB	ROUTE 117	Superstructure replacement	

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
03008	INTERSTATE -95 NB	FORT HILL BROOK WEST	Rehab	
03009	INTERSTATE-95 SB	FORT HILL BROOK WEST	Rehab	
01783	FLANDERS ROAD	INTERSTATE-95 NB	Superstructure replacement	
01784	FLANDERS ROAD	INTERSTATE-95 SB	Bridge replacement	
01785	NOANK-LEDYARD ROAD	INTERSTATE-95	Bridge replacement	
01786	SR 614	INTERSTATE-95	Bridge replacement	
06829	INTERSTATE-95	BINDLOSS BROOK		
01787	INTERSTATE-95 SB	COW HILL ROAD	Bridge replacement	Superstructure replacement may be an alternative
01788	INTERSTATE-95 NB	COW HILL ROAD	Bridge replacement	Superstructure replacement may be an alternative
01789	INTERSTATE-95 NB	RIVER RD & MYSTIC RIVER	Bridge replacement	Over Mystic River
01790	INTERSTATE-95 SB	RIVER RD & MYSTIC RIVER	Bridge replacement	Over Mystic River
01791	INTERSTATE-95 NB	ROUTE 27	Bridge replacement	Underclearances = 3
01792	INTERSTATE-95 SB	ROUTE 27	Bridge replacement	Underclearances = 3
01793	INTERSTATE-95 SB	JERRY BROWNE ROAD	Rehab	
01794	INTERSTATE-95 NB	JERRY BROWNE ROAD	Rehab	
06832	INTERSTATE-95 SB	PEQUOTSEPOS BROOK	Rehab	
01795	INTERSTATE-95 NB	MYSTIC RES&DEANS MILL RD	Superstructure Replacement	
01796	INTERSTATE-95 SB	MYSTIC RES&DEANS MILL RD	Rehab	
01797	ROUTE 234	INTERSTATE-95 SOUTHBOUND	Rehab	
01798	ROUTE 234	INTERSTATE-95 NORTHBOUND	Bridge replacement	
01800	INTERSTATE-95 NB	STONY BROOK	Rehab	
01801	INTERSTATE-95 SB	STONY BROOK	Rehab	
01802	INTERSTATE-95 NB	TAUGWANK ROAD	Bridge replacement	
01803	INTERSTATE-95 SB	TAUGWANK ROAD	Bridge replacement	
01804	INTERSTATE-95 NB	ANGUILLA BROOK	Rehab	

Structure Number	Facility Carried	Features Intersected	Bridge Management Forecast Work Needed Before 2040 *	Bridge Management Remarks
01805	INTERSTATE-95 SB	ANGUILLA BROOK	Rehab	
01806	NO ANGUILLA ROAD	INTERSTATE-95 NB	Bridge replacement	
01807	NO ANGUILLA ROAD	INTERSTATE 95 SB	Rehab	
01808	INTERSTATE-95 NB	ROUTE 2	Bridge replacement	
01809	INTERSTATE-95 SB	ROUTE 2	Bridge replacement	
01810	INTERSTATE-95 NB	SHUNOCK RIVER	Rehab	
01811	INTERSTATE-95 SB	SHUNOCK RIVER	Rehab	
01812	INTERSTATE-95 NB	ROUTE 49	Bridge replacement	
01813	INTERSTATE-95 SB	ROUTE 49	Bridge replacement	
01814	BOOM BRIDGE ROAD	INTERSTATE-95	Bridge replacement	
01815	INTERSTATE-95 NB	ROUTE 216	Bridge replacement	
01816	INTERSTATE-95 SB	ROUTE 216	Bridge replacement	

* Includes all major component (deck, superstructure, substructure) replacements needed before 2040 (less than 10 years after the mid-point of construction) and major rehab work that will likely be needed while the widening project is in construction. Minor rehab work (joint replacement, ovelays, etc.) is not included.

The work shown is the optimum given life cycle cost analysis. Prioritization against other projects given limited funding is not considered. In reality, due to budget constraints, some of this work may be postponed or reduced in scope.

Key:

Superstructure Replacement
Bridge replacement

Appendix C
Construction Cost Estimates

I-95 Improvements - Feasibility Evaluation and Phasing Study - Area 1 (Branford to Old Saybrook)

Base midpoint of expenditure:	**2045**
Base year:	**2018**
Base Inflation %:	**3.50%**
Phase of Development:	**Preliminary Engineering**

TOTAL DIRECTIONAL COST SUMMARY

Activity	Base Cost/Mile	Base Cost Percent of Total
Bituminous Pavement	$2,308,130.20	6.8%
Excavation & Borrow	$922,612.00	2.7%
Drainage	$697,008.02	2.0%
Metal Beam Rail and Concrete Median Barrier	$621,794.20	1.8%
Highway Lighting	$528,000.00	1.5%
Concrete Pavement Repair	$880,000.00	2.6%
Noise Barrier Wall	$534,400.00	1.6%
Signing	$70,984.43	0.2%
Retaining Walls	$21,450.00	0.1%
Pavement Markings	$8,580.00	0.0%
Interchange Improvements	$1,268,000.00	3.7%
Wetland Mitigation	$35,080.00	0.1%
Structures	$5,976,780.00	17.5%
Percentage Based Contract Items	$4,143,829.00	12.2%
Construction Subtotal	**$18,016,647.85**	**52.8%**

MINOR ITEM ALLOWANCE

	Base Cost Percentage	Base Cost/Mile	Base Cost Percent of Total
Minor Item Allowance	25%	$4,504,162.00	13.2%
Minor Item Allowance Subtotal		**$4,504,162.00**	**13.2%**

NON-CONTRACT ITEMS

	Base Cost Percentage	Base Cost/Mile	Base Cost Percent of Total
State Police	2.5%	$563,020.00	1.7%
Intelligent Transportation System (ITS)	N/A	$1,000,000.00	2.9%
Environmental Compliance	5%	$1,126,040.00	3.3%
Right-of-Way	N/A	$26,609.70	0.1%
NEPA Documentation	3%	$675,624.00	2.0%
Program Management	5%	$1,126,040.00	3.3%
Design	10%	$2,252,081.00	6.6%
Construction Engineering & Inspection	10%	$2,252,081.00	6.6%
Non-Contract Items Subtotal		**$9,021,495.70**	**26.5%**

Contingency	8.10%	$2,554,927.00

CONTRACT DIRECTIONAL COST SUMMARY

	Base Cost/Mile
Contract, Including Minor Item Allowance and Contingency in Base Year	**$34,097,233.00**
Contract, Including Minor Item Allowance, Contingency, and Inflation	**$66,319,118.00**
Total Contract Cost (Northbound & Southbound) Including Minor Item Allowance, Contingency, and Inflation	**$3,315,955,900.00**

Bituminous Pavement

Full Depth Pavement Section										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	26	4	50	0.0575	175,410	$89.00	$15,611,490.00	$312,229.80
0406170	HMA S1	Ton	26	8	50	0.0575	350,830	$89.00	$31,223,870.00	$624,477.40
0304002	Processed Aggregate Base	CY	26	10	50	N/A	211,850	$39.00	$8,262,150.00	$165,243.00
0212000	Subbase	CY	26	12	50	N/A	254,220	$46.00	$11,694,120.00	$233,882.40
0209001	Formation of Subgrade	SY	26	N/A	50	N/A	762,667	$2.00	$1,525,333.33	$30,506.67
								Total	**$68,316,963.33**	**$1,366,339.27**
Item No.	**Item Description**	**Units**	**Width (ft)**	**Length (mi)**	**Number of Applications**	**Conversion Factor (gal/sy)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406236	Material for Tack Coat	GAL	26	50	4	0.07	213,550	$5.00	$1,067,750.00	$21,355.00
								Total	**$1,067,750.00**	**$21,355.00**

Additional Full Depth Pavement for Left Shoulder Widening										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Total Length of I-95 Requiring Left Shoulder Widening (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	4	4	13	0.0575	7,020	$89.00	$624,780.00	$12,495.60
0406170	HMA S1	Ton	4	8	13	0.0575	14,030	$89.00	$1,248,670.00	$24,973.40
0304002	Processed Aggregate Base	CY	4	10	13	N/A	8,470	$39.00	$330,330.00	$6,606.60
0212000	Subbase	CY	4	12	13	N/A	10,170	$46.00	$467,820.00	$9,356.40
0209001	Formation of Subgrade	SY	4	N/A	13	N/A	30,507	$2.00	$61,013.33	$1,220.27
								Total	**$2,732,613.33**	**$54,652.27**
Item No.	**Item Description**	**Units**	**Width (ft)**	**Total Length of I-95 Requiring Left Shoulder Widening (mi)**	**Number of Applications**	**Conversion Factor (gal/sy)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406236	Material for Tack Coat	GAL	4	13	4	0.07	8,540	$5.00	$42,700.00	$854.00
								Total	**$42,700.00**	**$854.00**

Wedge Course for Shifting Crownline										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	8	0.5	13	0.0575	1,750	$89.00	$155,750.00	$3,115.00
								Total	**$155,750.00**	**$3,115.00**

Mill and Overlay Pavement Section										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	38	6	50	0.0575	384,560	$89.00	$34,225,840.00	$684,516.80
0406268	Milling of HMA (Over 4" to 8")	SY	38	N/A	50	N/A	1,114,667	$5.00	$5,573,333.33	$111,466.67
								Total Cost	**$39,799,173.33**	**$795,983.47**
Item No.	**Item Description**	**Units**	**Width (ft)**	**Length (mi)**	**Number of Applications**	**Conversion Factor (gal/sy)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406236	Material for Tack Coat	GAL	38	50	3	0.07	234,080	$5.00	$1,170,400.00	$23,408.00
								Total	**$1,170,400.00**	**$23,408.00**

Additional Full Depth Pavement for Concrete Base Replacement										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	24	0	2.5	0.0575	0	$89.00	$0.00	$0.00
0406170	HMA S1	Ton	24	6	2.5	0.0575	12,140	$89.00	$1,080,460.00	$21,609.20
0304002	Processed Aggregate Base	CY	24	10	2.5	N/A	9,780	$39.00	$381,420.00	$7,628.40
0212000	Subbase	CY	24	12	2.5	N/A	11,730	$46.00	$539,580.00	$10,791.60
0209001	Formation of Subgrade	SY	24	N/A	2.5	N/A	35,200	$2.00	$70,400.00	$1,408.00
								Total	**$2,071,860.00**	**$41,437.20**
Item No.	**Item Description**	**Units**	**Width (ft)**	**Length (mi)**	**Number of Applications**	**Conversion Factor (gal/sy)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406236	Material for Tack Coat	GAL	24	2.5	4	0.07	9,860	$5.00	$49,300.00	$986.00
								Total	**$49,300.00**	**$986.00**

Additional Full Depth Pavement for Concrete Base Replacement Notes:
Assumed 5% of the existing concrete base course will need to be replaced (50 miles * 5% = 2.5 miles)

	Total Cost	**Base Total Cost/Mile**
Total Cost for Bituminous Pavement	**$115,406,510.00**	**$2,308,130.20**

Excavation & Borrow

Excavation for Full Depth Widening Within Existing Right Shoulder									
Item No.	Item Description	Units	Width (ft)	Depth (in)	Length (mi)	Quantity (CY)	Unit Cost	Total Cost	Total Cost/Mile
0202000	Earth Excavation	CY	10	34	50	277,040	$12.00	$3,324,480.00	$66,489.60

Total Project Length =	50	miles
Length of Northbound Lanes in Fill Section =	13.9	miles
Length of Southbound Lane in Fill Section =	12.9	miles
Percentage of Roadway in Cut Section =	**54%**	

Excavation for Full Depth Widening Outside of Existing Right Shoulder							
Description		Units	Width (ft)	Depth (in)	Length (mi)	Quantity (CY)	
Pavement Excavation		CY	16	34	50	443,260	
Item No.	Item Description	Units	Percentage Cut vs. Fill	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0202000	Earth Excavation	CY	46%	203,900	$12.00	$2,446,800.00	$48,936.00
0207000	Borrow	CY	54%	239,360	$10.00	$2,393,600.00	$47,872.00

Excavation for Additional Full Depth Pavement for Left Shoulder Widening									
Item No.	Item Description	Units	Width (ft)	Depth (in)	Length (mi)	Quantity (CY)	Unit Cost	Total Cost	Total Cost/Mile
0202000	Earth Excavation	CY	4	34	13	28,810	$12.00	$345,720.00	$6,914.40

Total Length of Project in Cut Section =	23.2	miles
Length of Northbound Lanes with Visible Rock Outcrops =	2.03	miles
Length of Southbound Lanes with Visible Rock Outcrops =	1.24	miles
Percentage of Roadway in Rock Excavation Section = 8	**15%**	

Additional Excavation for Widening						
Description	Units	Excavation Assumption (CY/LF)	Length (mi)	Quantity (CY)		
Additional Excavation for Widening	CY	10	50	2,640,000		
Item No.	Item Description	Units	Percentage Cut vs. Fill	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0202000	Earth Excavation	CY	85%	2,244,000	$12.00	$26,928,000.00	$538,560.00
0202100	Rock Excavation	CY	15%	396,000	$27.00	$10,692,000.00	$213,840.00

	Total Cost	Base Total Cost/Mile
Total Cost for Excavation and Borrow	**$46,130,600.00**	**$922,612.00**

Drainage

Catch Basins

Item No.	Item Description	Units	Quantity	Catch Basin Spacing (LF)	Unit Cost	Length (mi)	Total Quantity (LF)	Total Cost	Total Cost/Mile
0507006	Type "C" Catch Basin	EA	1	300	$2,000.00	50	880	$1,760,000.00	$35,200.00
0507449	Type "C-M" Catch Basin	EA	1	300	$2,300.00	50	880	$2,024,000.00	$40,480.00

Notes:
Assume 1 Type "C" and 1 Type "C-M" Catch Basins Every 300 LF

Pipes

Longitudinal Pipes

Item No.	Item Description	Units	Number of Pipe Runs	Length of Project (mi)	Total Quantity (LF)	Unit Cost	Total Cost	Total Cost/Mile
0651015	24" R.C. Pipe	LF	1	50	264,000	$70.00	$18,480,000.00	$369,600.00

Notes:
Assume One 24" R.C. Pipe Run for Total Length

Crossing Pipes

Item No.	Item Description	Units	Length of Pipe Across Roadway (LF)	Spacing of Crossing Pipes (LF)	Length of Project (mi)	Total Quantity	Unit Cost	Total Cost	Total Cost/Mile
0651012	15" R.C. Pipe	LF	64	300	50	56,320	$60.00	$3,379,200.00	$67,584.00

Notes:
Assume new 15" R.C. Pipe crossing every 300 LF

Trench Excavation

Trench Excavation for Longitudinal Pipes

Description	Units	Pipe Size (in)	Total Length of 24" RCP	Trench Width (ft)	Trench Depth (ft)	Total Quantity
Trench Excavation	CY	24	264,000	4	6	234,667

Trench Excavation for Crossing Pipes

Description	Units	Pipe Size (in)	Total Length of 15" RCP	Trench Width (ft)	Trench Depth (ft)	Total Quantity
Trench Excavation	CY	15	56,320	3.25	6	40,676

Item No.	Item Description	Units	Percentage Non Rock vs. Rock	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0205003	Trench Excavation 0'-10' Deep	CY	85%	234,042	$16.00	$3,744,664.80	$74,893.30
0205004	Rock In Trench Excavation 0'-10' Deep	CY	15%	41,301	$80.00	$3,304,116.00	$66,082.32

Notes:
Length of Trench Excavation Determined by Length of Pipe

Bedding Material

Item No.	Item Description	Units	Trench Width (ft)	Depth (in)	Unit Cost	Total Length of Pipe (LF)	Percentage Non Rock vs. Rock	Total Quantity	Total Cost	Total Cost/Mile
0651001	Bedding Material (For Non-Rock Areas) 24" RCP	CY	4	4	$50.00	264,000	85%	11081	$554,050.00	$11,081.00
0651001	Bedding Material (For Non-Rock Areas) 15" RCP	CY	3.25	4	$50.00	56,320	85%	1921	$96,050.00	$1,921.00
0651001	Bedding Material (For Rock Areas) 24" RCP	CY	4	12	$50.00	264,000	15%	5867	$293,350.00	$5,867.00
0651001	Bedding Material (For Rock Areas) 15" RCP	CY	3.25	12	$50.00	56,320	15%	1017	$50,850.00	$1,017.00

Endwalls

Item No.	Item Description	Units	Quantity	Endwall Spacing (LF)	Unit Cost	Length (mi)	Total Quantity	Total Cost	Total Cost/Mile
0601000	Class "A" Concrete	CY	5.45	1100	$890.00	50	1308	$1,164,120.00	$23,282.40

Notes:
Assume One Standard Endwall for 24" R.C. Pipe Every 1100 LF

	Total Cost	Base Total Cost/Mile
Total Cost for Drainage	**$34,850,400.80**	**$697,008.02**

Metal Beam Rail and Concrete Median Barrier

Metal Beam Rail								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length for Northbound Lanes (lf)**	**Length for Southbound Lanes (lf)**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
0910170	Metal Beam Rail (Type R-B 350)	LF	$25.00	73,440	67,910	141,350	$3,533,750.00	$70,675.00

End Treatments						
Item No.	**Item Description**	**Units**	**Unit Cost**	**Quantity (EA)**	**Total Cost**	**Total Cost/Mile**
0910021	R-B End Anchorage - Type 1	EA	$1,190.00	284	$337,960.00	$6,759.20
0910173	R-B 350 Bridge Attachment - Vertical Shaped Parapet	EA	$2,500.00	116	$290,000.00	$5,800.00

Concrete Median Barrier								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length (mi)**	**Percentage of Barrier Replaced**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
0821502	F-Shape Precast Concrete Barrier Curb (21" X 45")	LF	$102.00	50	100%	264,000	$26,928,000.00	$538,560.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Metal Beam Rail and Concrete Median Barrier	**$31,089,710.00**	**$621,794.20**

Highway Lighting

Item Description	Units	Unit Cost	Spacing (LF)	Length (mi)	Total Quantity	Total Cost	Total Cost/Mile
Expressway Lighting (Conduit & Cable)	LF	$60.00	N/A	50	264,000	$15,840,000.00	$316,800.00
Individual Highway Pole & Light	EA	$10,000.00	250	50	1056	$10,560,000.00	$211,200.00

	Total Cost	Base Total Cost/Mile
Total Cost for Highway Lighting	**$26,400,000.00**	**$528,000.00**

Concrete Pavement Repair

Project 35-176 Reconstruction of Median & Resurfacing of I-95, Exit 10-15	
Length of Project Per Direction NB/SB (ft)	25,565
Length of Project (miles)	4.84
Volume of Concrete Pavement Joint Replacement (CY)	2,075
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	640
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (three 12' travel lanes)	36
Depth of Existing Concrete Pavement (in)	9
Percentage of Joints Replaced Under Project	33%
Number of Joints Replaced Under Project	211

Project 56-258 Resurfacing and Safety Improvements on Route I-95, NY State Line to Exit 3	
Length of Project Per Direction NB/SB (ft)	11,780
Length of Project (miles)	2.23
Volume of Concrete Pavement Joint Replacement (CY)	520
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	295
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (three 12' travel lanes)	36
Depth of Existing Concrete Pavement (in)	9
Percentage of Joints Replaced Under Project	18%
Number of Joints Replaced Under Project	53

Project 56-246 Reconstruction of Median & Resurfacing of I-95, Exit 5-7	
Length of Project Per Direction NB/SB (ft)	12,049
Length of Project (miles)	2.28
Volume of Concrete Pavement Joint Replacement (CY)	500
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	302
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (three 12' travel lanes)	36
Depth of Existing Concrete Pavement (in)	9
Percentage of Joints Replaced Under Project	17%
Number of Joints Replaced Under Project	51

Concrete Pavement Repair Calculation	
Total Length of I-95 in Study Area (Both Directions) (miles)	50
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	6,600
Estimated Percentage of Joints to be Replaced Under Future Widening Project	**50%**
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (two 12' travel lanes)	24
Estimated Area of Joint Replacement Under Futire Widening Project (sy)	88,000
Unit Price for Precast Joints (sy)	$500.00
Total Cost for Joint Replacement	$44,000,000.00
Cost Per Mile for Joint Replacement	$880,000.00

	Total Cost	Base Total Cost/Mile
Total Cost for Concrete Pavement Repair	**$44,000,000.00**	**$880,000.00**

Noise Barrier Wall

Northbound Lanes	Length (ft)
Total Length of Northbound Lanes	132,000
Length of Northbound Lanes Requiring Noise Barrier Wall	**22,250**

Southbound Lanes	Length (ft)
Total Length of Southbound Lanes	132,000
Length of Southbound Lanes Requiring Noise Barrier Wall	**19,500**

Total Length of Noise Barrier Wall (NB & SB)	**41,750**

Item No.	Item Description	Units	Unit Cost	Wall Height (ft)	Length (ft)	Total Quantity	Total Cost	Total Cost/Mile
0916126	Noise Barrier Wall	SF	$40.00	16	41,750	668,000	$26,720,000.00	$534,400.00

	Total Cost	Base Total Cost/Mile
Total Cost for Noise Barrier Wall	**$26,720,000.00**	**$534,400.00**

Signing

Project No. 0172-0388	
Total Bid Price of Project No. 0172-0388	$2,319,733.00
Number of Interchanges Per Direction	26
Length of Project (Miles)	55
Cost Per Interchange Per Direction	$44,610.25

I-95 East Sign Replacement Cost	
Number of Interchanges Per Direction	17
Length of Project Per Direction(Miles)	25
Total Cost Per Direction	$758,374.25
Total Cost Per Mile	$30,335.00
Total Cost	$1,516,750.00

Notes:

Cost of sign replacement determined by the cost to complete Project No. 0172-0388, Replacement of Highway Signs on I-395. Project No. 0172-0388 had a letting date of 10/16/13, and a contract length of 480 calendar days

Overhead Sign Supports Including Cantilevers, Full Overhead (monotube), Full Overhead (Truss), OVH Truss Foundation, Drilled Shaft Foundation		
	Cost/Mile	**Total Cost**
Overhead Sign Supports	$162,597.73	$8,129,886.50
25% of Cost	$40,649.43	$2,032,471.63

Notes:

Cost of overhead sign supports determined by the Department based on Project 173-351, which had a total cost of $1,817,843 for sign support structure replacements, and a total project length of 11.18 miles

	Total Cost	**Base Total Cost/Mile**
Total Cost for Signing	**$3,549,221.63**	**$70,984.43**

Retaining Walls

Total Length of Retaining Walls in the Northbound Direction (LF)	715
Total Length of Retaining Walls in the Southbound Direction (LF)	0
Average Height of Retaining Walls (LF)	10
Length of Project (Miles) (Northbound and Southbound)	50
Retaining Wall Unit Cost (SF)	$150.00

Notes:

Length of Retaining Walls determined from 2004 Feasibility Study Report Corridor Improvement Concepts

	Total Cost	**Base Total Cost/Mile**
Total Cost for Retaining Walls	**$1,072,500.00**	**$21,450.00**

Pavement Markings

Epoxy Resin Pavement Markings								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length (mi)**	**Number of Lines**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
1210101	4" White Epoxy Resin Pavement Markings	LF	$0.65	50	N/A	264,000	$171,600.00	$3,432.00
1210102	4" Yellow Epoxy Resin Pavement Markings	LF	$0.65	50	N/A	264,000	$171,600.00	$3,432.00
1210103	6" White Epoxy Resin Pavement Markings	LF	$0.65	50	2	132,000	$85,800.00	$1,716.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Pavement Markings	**$429,000.00**	**$8,580.00**

Interchange Improvements

Interchange Improvement Level	Cost
Exit 61 Interchange Estimate	$4,000,000

Notes:
Interchange level of impacts determined from I-95 Combined Option from the October 2017 I-95 Improvements - Feasibility Evaluation and Phasing Study Area 1 - (Branford to Baldwin Bridge)

Interchange No.	% of Exit 61	Reason	Base Cost
Interchange 54	25%	No widening of minor roadways, minor ramp relocations and modifications, 1 new signal and 2 modified signals	$1,000,000
Interchange 55	200%	Major widening of Route 1, minor ramp relocations/modifications, 2 signal modifications	$8,000,000
Interchange 56	25%	Minor ramp widening/modifications, no minor roadway modifications	$1,000,000
Interchange 57	75%	Widening of Route 1, minor ramp modifcatons, 1 signal modification	$3,000,000
Interchange 58	85%	Limited widening of Church Street, no relocated ramps, 1 new signal and 1 signal modification	$3,400,000
Interchange 59	250%	Widening of Both Route 1 and Route 718, Relocated NB On/Off Ramps, removal of existing NB On/Off Ramps, 3 new signals, ROW impacts	$10,000,000
Interchange 60	75%	Minor instersection improvements to existing Exit 60 SB off and NB on ramps. Addition of new NB off and SB on-ramps with intersection improvements	$3,000,000
Interchange 61	100%	See Cost Estimate	$4,000,000
Madison Rest Area	0%	No Improvements	$0
Interchange 62	110%	Widening of Duck Hole Road, relocated SB ramps, 2 new signals, 1 modified signal, No widening on Route 450	$4,400,000
Intercahnge 63	125%	Widening of Route 80, Relocated NB Off Ramp, Modifications to North High Street as well as Route 80, 3 signals modified, 1 new signal	$5,000,000
Interchange 64	90%	Widening of Horse Hill Road, no relocated ramps, 2 new signals, 1 signal modification	$3,600,000
Interchange 65	50%	No Widening on Route 153, no relocated ramps, 2 signal modifications	$2,000,000
Welcome Center/Police Barracks	0%	No Improvements	$0
Interchange 66	50%	No Widening on Route 168, minor ramp relocations, 2 new signals	$2,000,000
Interchange 67	100%	Widening of Elm Street, Relocated SB on ramp & NB off ramp, 2 new signals	$4,000,000
Interchange 67 - II	175%	Widening of Route 154, 4 relocated ramps, 2 new signals	$7,000,000
Interchange 68	25%	No widening, eliminating 2 ramps, no signals	$1,000,000
Interchange 69	25%	No widening, no relocated ramps, no signals, extension of acceleration/deceleration lanes	$1,000,000
		Total Interchange Cost	**$63,400,000**

Length of Project (Miles) (Northbound and Southbound) 50

	Total Cost	Base Total Cost/Mile
Total Cost for Interchange Improvements	**$63,400,000.00**	**$1,268,000.00**

Wetland Mitigation

Total Area of Wetland Impacts (AC) (Northbound and Southbound)	8.77
Length of Project (Miles) (Northbound and Southbound)	50
Wetland Mitigation Unit Cost (Per Acre)	$200,000.00

	Total Cost	Base Total Cost/Mile
Total Cost for Wetland Mitigation	**$1,754,000.00**	**$35,080.00**

Structure Items

STRUCTURE NO.	TOWN	FACILITY INTERSECTED	FACILITY CARRIED	TOTAL REPLACEMENT COST	Notes
00189	BRANFORD	INTERSTATE-95	CHERRY HILL ROAD	$5,424,000	
00190	BRANFORD	INTERSTATE-95	TODDS HILL ROAD	$4,278,000	
00191	BRANFORD	SR 740 (CEDAR STREET)	INTERSTATE-95	$6,883,000	
00192	BRANFORD	IVY STREET	INTERSTATE-95	$3,985,000	
00193	BRANFORD	CHESTNUT STREET	INTERSTATE-95	$4,347,000	
06636	BRANFORD	BROOK	INTERSTATE-95	$0	CULVERT
00194	BRANFORD	MILL PLAIN ROAD	INTERSTATE-95	$3,912,000	
00195	BRANFORD	BRANFORD RIVER	INTERSTATE-95	$0	CULVERT
00196	BRANFORD	US ROUTE 1	INTERSTATE-95	$9,781,000	
00197	BRANFORD	INTERSTATE-95	FEATHERBED LANE	$5,816,000	
00198	BRANFORD	BRANFORD STEAM RAILROAD	INTERSTATE-95	$6,883,000	
00199	BRANFORD	INTERSTATE-95	LEETES ISLAND ROAD	$9,206,000	
00200	GUILFORD	GRANITE ROAD	INTERSTATE-95	$3,623,000	
00201	GUILFORD	MOOSE HILL ROAD	INTERSTATE-95	$4,275,000	
00202	GUILFORD	US ROUTE 1	INTERSTATE-95	$15,649,000	
06682	GUILFORD	SPINNING MILL BROOK	INTERSTATE-95	$0	CULVERT
00203	GUILFORD	LONG HILL ROAD	INTERSTATE-95	$4,564,000	
00204	GUILFORD	WEST BRANCH WEST RIVER	INTERSTATE-95	$0	CULVERT
06634	GUILFORD	EAST BRANCH WEST RIVER	INTERSTATE-95	$0	CULVERT
00205	GUILFORD	ROUTE 77	INTERSTATE-95	$4,057,000	
00206	GUILFORD	STATE STREET	INTERSTATE-95	$4,564,000	
00207	GUILFORD	SR 718	INTERSTATE-95	$4,202,000	
00208	GUILFORD	INTERSTATE-95	TANNER MARSH ROAD	$5,421,000	
00209	GUILFORD	EAST RIVER ROAD	INTERSTATE-95	$4,854,000	
00210	MADISON	EAST RIVER	INTERSTATE-95	$12,027,000	
00211	MADISON	INTERSTATE-95	WILDWOOD AVE. #1	$5,421,000	
00212	MADISON	INTERSTATE-95	MUNGERTOWN ROAD	$5,421,000	
00213	MADISON	NECK RIVER	INTERSTATE-95	$0	CULVERT
00214	MADISON	COPSE ROAD	INTERSTATE-95	$4,275,000	
00215	MADISON	INTERSTATE-95	ROUTE 79	$5,421,000	
00216	MADISON	INTERSTATE-95	HORSEPOND ROAD	$5,421,000	
06745	MADISON	FENCE CREEK	INTERSTATE-95	$0	CULVERT
00217	MADISON	INTERSTATE-95	NEW ROAD	$5,421,000	
00218	MADISON	INTERSTATE-95	SSR 450	$9,886,000	
00219	MADISON	RIVER RD &HAMMONASSET RV	INTERSTATE-95	$13,838,000	
06746	CLINTON	BROOK	INTERSTATE-95	$0	CULVERT

00220	CLINTON	INTERSTATE-95	NOD ROAD	$5,035,000	
06747	CLINTON	BROOK	INTERSTATE-95	$0	CULVERT
00221	CLINTON	COW HILL ROAD	INTERSTATE-95	$3,912,000	
00222	CLINTON	INTERSTATE-95	ROUTE 81	$6,734,000	
00223	CLINTON	INDIAN LAKE	INTERSTATE-95	$0	CULVERT
00224	CLINTON	LIBERTY STREET NO. 1	INTERSTATE-95	$3,985,000	
00225	CLINTON	INTERSTATE-95	LONG HILL ROAD	$5,421,000	
00226	CLINTON	MENUNKETESUCK RIVER	INTERSTATE-95	$3,695,000	
00227	WESTBROOK	INTERSTATE-95	CHAPMAN MILLPOND R	$3,271,000	
00228	WESTBROOK	INTERSTATE-95	ROUTE 145	$5,035,000	
06743	WESTBROOK	GATCHEN CREEK	INTERSTATE-95	$0	CULVERT
00229	WESTBROOK	POND MEADOW ROAD	INTERSTATE-95	$3,985,000	
00230	WESTBROOK	INTERSTATE-95	WILLARD AVENUE	$4,704,000	
00231	WESTBROOK	PATCHOGUE RIVER	INTERSTATE-95	$0	CULVERT
00232	WESTBROOK	INTERSTATE-95	ROUTE 153	$5,209,000	
00233	OLD SAYBROOK	INTERSTATE-95	ROUTE 166	$4,796,000	
00234	OLD SAYBROOK	SCHOOL HOUSE ROAD	INTERSTATE-95	$8,839,000	
02582	OLD SAYBROOK	FISHING BROOK	INTERSTATE-95	$0	CULVERT
02583	OLD SAYBROOK	BROOK	INTERSTATE-95	$0	CULVERT
00235	OLD SAYBROOK	ELM STREET	INTERSTATE-95	$8,622,000	
00236	OLD SAYBROOK	VALLEY RAILROAD	INTERSTATE-95	$1,956,000	
00237	OLD SAYBROOK	ROUTE 154	INTERSTATE-95	$9,056,000	
00238	OLD SAYBROOK	SR 628 {SPRING BROOK RD}	INTERSTATE-95	$7,173,000	
06172	OLD SAYBROOK	ROUTE 9 NB & I-95 TR 816	I-95 & ROUTE 9 NB	$16,556,000	
			TOTAL	**$286,839,000**	

Utility Relocation Costs	
Total Number of Bridges Slated for Rehab/ Replacement Over I-95	20
Cost of Utility Relocation Per Bridge Rehab/Replacement	$600,000
Total Utility Relocation Cost	**$12,000,000**

	Base Cost
Total Structure Replacement Cost Including Utility Relocation	**$298,839,000**

Length of Project (Miles) (Northbound and Southbound)	50

	Base Cost/Mile
Total Cost for Structures Replacement/Modification	**$5,976,780.00**

Percentage Based Contract Items

	Base Total Cost/Mile	Base Total Percentage
Subtotal of Known Items	$13,872,818.85	77%

Base Total Cost/Mile

Item No.	Item Description	Units	Percent of Base Estimate	Equivalent Percent of Known Items	Base Total Cost/Mile
0201001	Clearing and Grubbing	LS	2%	2.60%	$360,333.00
0971001	Maintenance and Protection of Traffic	LS	10%	12.99%	$1,801,665.00
0975004	Mobilization and Project Closeout	LS	10%	12.99%	$1,801,665.00
0980001	Construction Staking	LS	1%	1.30%	$180,166.00

	Base Total Cost/Mile
Total Cost for Percentage Based Items	**$4,143,829.00**

Right-of-Way

Northbound				
Sheet #	Impacted Property Type Impacted	Area of Right-of-Way Impacts (SF)	Cost/SF	Total Cost
1	Commercial	4,625	$10	$46,250
	Commercial	743	$10	$7,430
3	Residental	4,259	$7	$29,813
7	Residental	3,918	$7	$27,426
	Commercial	6,285	$10	$62,850
11	Residental	699	$4	$2,796
14	Residental	6,874	$4	$27,496
21	Residental	2,531	$4	$10,124
30	Residental	1,832	$3	$5,496
	Residental	11,159	$3	$33,477
	Residental	547	$3	$1,641
34	Residental	6,317	$3	$18,951
36	Residental	5,293	$3	$15,879
41	Residental	1,647	$3	$4,941
44	Residental	14,095	$3	$42,285
	Residental	13,693	$3	$41,079
46	Residental	12,891	$3	$38,673
47	Residental	8,311	$3	$24,933
48	Residental	7,341	$3	$22,023
52	Residental	337	$3	$1,011
54	Commercial	4,051	$7	$28,357
	Northbound Total	**117,448**		**$492,931**

Southbound				
Sheet #	Impacted Property Type Impacted	Area of Right-of-Way Impacts (SF)	Cost/SF	Total Cost
1	Commercial	958	$10	$9,580
11	Residental	601	$4	$2,404
	Residental	809	$4	$3,236
14	Commercial	2,595	$7	$18,165
	Commercial	6,792	$7	$47,544
18	Commercial	2,355	$7	$16,485
21	Residental	4,531	$4	$18,124
31	Commercial	2,537	$7	$17,759
33	Commercial	712	$7	$4,984
36	Residental	5,633	$3	$16,899
37	Residental	6,972	$3	$20,916
43	Residental	163	$3	$489
44	Residental	358	$3	$1,074
45	Residental	723	$3	$2,169
47	Residental	7,587	$3	$22,761
	Residental	5,000	$3	$15,000
48	Residental	1,247	$3	$3,741
50	Residental	2,951	$3	$8,853
51	Residental	2,457	$3	$7,371
	Southbound Total	**54,981**		**$237,554**

Total Right of Way Costs:	
Northbound	$492,931
Southbound	$237,554
Total	**$730,485**

Administrative Costs	
Number of Properties Impacted	40
Administrative Cost Per Property	$15,000
Total Administrative Costs	**$600,000**

	Total Cost	Base Total Cost/Mile
Total Cost for Right-of-Way	**$1,330,485.00**	**$26,609.70**

I-95 Improvements - Feasibility Evaluation and Phasing Study - Area 2 (Old Lyme to New London)

Base midpoint of expenditure:	**2045**
Base year:	**2017**
Base Inflation %:	**3.50%**
Phase of Development:	**Preliminary Engineering**

TOTAL DIRECTIONAL COST SUMMARY

Activity	Base Cost/Mile	Base Cost Percent of Total
Bituminous Pavement	$3,771,691.81	3.6%
Excavation & Borrow	$1,470,699.83	1.4%
Drainage	$831,068.15	0.8%
Metal Beam Rail and Concrete Median Barrier	$628,039.17	0.6%
Highway Lighting	$528,000.00	0.5%
Concrete Pavement Repair	$0.00	0.0%
Noise Barrier Wall	$346,666.67	0.3%
Signing	$45,999.77	0.0%
Retaining Walls	$307,500.00	0.3%
Pavement Markings	$8,580.00	0.0%
Interchange Improvements	$30,966,666.67	29.9%
Wetland Mitigation	$70,083.33	0.1%
Structures	$4,065,291.67	3.9%
Percentage Based Contract Items	$12,856,191.00	12.4%
Construction Subtotal	**$55,896,478.06**	**53.9%**

MINOR ITEM ALLOWANCE

	Base Cost Percentage	Base Cost/Mile	Base Cost Percent of Total
Minor Item Allowance	25%	$13,974,120.00	13.5%
Minor Item Allowance Subtotal		**$13,974,120.00**	**13.5%**

NON-CONTRACT ITEMS

	Base Cost Percentage	Base Cost/Mile	Base Cost Percent of Total
State Police	2.5%	$1,746,765.00	1.7%
Intelligent Transportation System (ITS)	N/A	$1,000,000.00	1.0%
Environmental Compliance	5%	$3,493,530.00	3.4%
Right-of-Way	N/A	$216,529.67	0.2%
NEPA Documentation	3%	$2,096,118.00	2.0%
Program Management	5%	$3,493,530.00	3.4%
Design	10%	$6,987,060.00	6.7%
Construction Engineering & Inspection	10%	$6,987,060.00	6.7%
Non-Contract Items Subtotal		**$26,020,592.67**	**25.1%**

Contingency	8.10%	$7,767,186.00

CONTRACT DIRECTIONAL COST SUMMARY

	Base Cost/Mile
Contract, Including Minor Item Allowance and Contingency in Base Year	**$103,658,377.00**
Contract, Including Minor Item Allowance, Contingency, and Inflation	**$205,243,586.00**
Total Contract Cost (Northbound & Southbound) Including Minor Item Allowance, Contingency, and Inflation	**$4,925,846,064.00**

Bituminous Pavement

Full Depth Pavement Section

Item No.	Item Description	Units	Width (ft)	Depth (in)	Length (mi)	Conversion Factor (tons/sy/in)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406171	HMA S0.5	Ton	69	4	24	0.0575	223,450	$89.00	$19,887,050.00	$828,627.08
0406170	HMA S1	Ton	69	8	24	0.0575	446,900	$89.00	$39,774,100.00	$1,657,254.17
0304002	Processed Aggregate Base	CY	69	10	24	N/A	269,870	$39.00	$10,524,930.00	$438,538.75
0212000	Subbase	CY	69	12	24	N/A	323,840	$46.00	$14,896,640.00	$620,693.33
0209001	Formation of Subgrade	SY	69	N/A	24	N/A	971,520	$2.00	$1,943,040.00	$80,960.00
								Total	**$87,025,760.00**	**$3,626,073.33**

Item No.	Item Description	Units	Width (ft)	Length (mi)	Number of Applications	Conversion Factor (gal/sy)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406236	Material for Tack Coat	GAL	69	24	4	0.07	272,030	$5.00	$1,360,150.00	$56,672.92
								Total	**$1,360,150.00**	**$56,672.92**

Additional Full Depth Pavement Section for Collector-Distributer Road

Item No.	Item Description	Units	Width (ft)	Depth (in)	Length (mi)	Conversion Factor (tons/sy/in)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406171	HMA S0.5	Ton	40	4	1	0.0575	5,400	$89.00	$480,600.00	$20,025.00
0406170	HMA S1	Ton	40	8	1	0.0575	10,790	$89.00	$960,310.00	$40,012.92
0304002	Processed Aggregate Base	CY	40	10	1	N/A	6,520	$39.00	$254,280.00	$10,595.00
0212000	Subbase	CY	40	12	1	N/A	7,820	$46.00	$359,720.00	$14,988.33
0209001	Formation of Subgrade	SY	40	N/A	1	N/A	23,467	$2.00	$46,933.33	$1,955.56
								Total	**$2,101,843.33**	**$87,576.81**

Item No.	Item Description	Units	Width (ft)	Length (mi)	Number of Applications	Conversion Factor (gal/sy)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406236	Material for Tack Coat	GAL	40	1	4	0.07	6,570	$5.00	$32,850.00	$1,368.75
								Total	**$32,850.00**	**$1,368.75**

	Total Cost	Base Total Cost/Mile
Total Cost for Bituminous Pavement	**$90,520,603.33**	**$3,771,691.81**

Excavation & Borrow

Excavation for FOR Removal of Existing Pavement									
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Quantity (CY)**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	40	34	24	531,910	$12.00	$6,382,920.00	$265,955.00

Total Project Length =	24	miles
Length of Northbound Lanes in Cut Section =	4.5	miles
Length of Southbound Lane in Cut Section =	6.8	miles
Percentage of Roadway in Cut Section =	**45%**	

Excavation for Full Depth Widening Outside of Existing Right Shoulder						
Description	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Quantity (CY)**	
Pavement Excavation	CY	29	34	24	385,640	

Item No.	**Item Description**	**Units**	**Percentage Cut vs. Fill**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	45%	173,538	$12.00	$2,082,456.00	$86,769.00
0207000	Borrow	CY	55%	212,102	$10.00	$2,121,020.00	$88,375.83

Additional Excavation for Widening						
Description	**Units**	**Excavation Assumption (CY/LF)**	**Length (mi)**	**Quantity (CY)**		
Additional Excavation for Widening	CY	10	24	1,267,200		

Item No.	**Item Description**	**Units**	**Percentage Cut vs. Fill**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	50%	633,600	$12.00	$7,603,200.00	$316,800.00
0202100	Rock Excavation	CY	50%	633,600	$27.00	$17,107,200.00	$712,800.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Excavation and Borrow	**$35,296,796.00**	**$1,470,699.83**

Drainage

Catch Basins

Item No.	Item Description	Units	Quantity	Catch Basin Spacing (LF)	Unit Cost	Length (mi)	Total Quantity (LF)	Total Cost	Total Cost/Mile
0507006	Type "C" Catch Basin	EA	1	300	$2,000.00	24	422.4	$844,800.00	$35,200.00
0507449	Type "C-M" Catch Basin	EA	1	300	$2,300.00	24	422.4	$971,520.00	$40,480.00

Notes:
Assume 1 Type "C" and 1 Type "C-M" Catch Basins Every 300 LF

Pipes

Longitudinal Pipes

Item No.	Item Description	Units	Number of Pipe Runs	Length of Project (mi)	Total Quantity (LF)	Unit Cost	Total Cost	Total Cost/Mile
0651015	24" R.C. Pipe	LF	1	24	126,720	$70.00	$8,870,400.00	$369,600.00

Notes:
Assume One 24" R.C. Pipe Run for Total Length

Crossing Pipes

Item No.	Item Description	Units	Length of Pipe Across Roadway (LF)	Spacing of Crossing Pipes (LF)	Length of Project (mi)	Total Quantity	Unit Cost	Total Cost	Total Cost/Mile
0651012	15" R.C. Pipe	LF	64	300	24	27,034	$60.00	$1,622,016.00	$67,584.00

Notes:
Assume new 15" R.C. Pipe crossing every 300 LF

Trench Excavation

Trench Excavation for Longitudinal Pipes

Description	Units	Pipe Size (in)	Total Length of 24" RCP	Trench Width (ft)	Trench Depth (ft)	Total Quantity
Trench Excavation	CY	24	126,720	4	6	112,640

Trench Excavation for Crossing Pipes

Description	Units	Pipe Size (in)	Total Length of 15" RCP	Trench Width (ft)	Trench Depth (ft)	Total Quantity
Trench Excavation	CY	15	27,034	3.25	6	19,524

Item No.	Item Description	Units	Percentage Non Rock vs. Rock	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0205003	Trench Excavation 0'-10' Deep	CY	50%	66,082	$16.00	$1,057,312.00	$44,054.67
0205004	Rock In Trench Excavation 0'-10' Deep	CY	50%	66,082	$80.00	$5,286,560.00	$220,273.33

Notes:
Length of Trench Excavation Determined by Length of Pipe

Bedding Material

Item No.	Item Description	Units	Trench Width (ft)	Depth (in)	Unit Cost	Total Length of Pipe (LF)	Percentage Non Rock vs. Rock	Total Quantity	Total Cost	Total Cost/Mile
0651001	Bedding Material (For Non-Rock Areas) 24" RCP	CY	4	4	$50.00	126,720	50%	3129	$156,450.00	$6,518.75
0651001	Bedding Material (For Non-Rock Areas) 15" RCP	CY	3.25	4	$50.00	27,034	50%	542	$27,100.00	$1,129.17
0651001	Bedding Material (For Rock Areas) 24" RCP	CY	4	12	$50.00	126,720	50%	9387	$469,350.00	$19,556.25
0651001	Bedding Material (For Rock Areas) 15" RCP	CY	3.25	12	$50.00	27,034	50%	1627	$81,350.00	$3,389.58

Endwalls

Item No.	Item Description	Units	Quantity	Endwall Spacing (LF)	Unit Cost	Length (mi)	Total Quantity	Total Cost	Total Cost/Mile
0601000	Class "A" Concrete	CY	5.45	1100	$890.00	24	627.84	$558,777.60	$23,282.40

Notes:
Assume One Standard Endwall for 24" R.C. Pipe Every 1100 LF

	Total Cost	Base Total Cost/Mile
Total Cost for Drainage	**$19,945,635.60**	**$831,068.15**

Metal Beam Rail and Concrete Median Barrier

Metal Beam Rail								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length for Northbound Lanes (lf)**	**Length for Southbound Lanes (lf)**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
0910170	Metal Beam Rail (Type R-B 350)	LF	$25.00	39,500	36,060	75,560	$1,889,000.00	$78,708.33

End Treatments						
Item No.	**Item Description**	**Units**	**Unit Cost**	**Quantity (EA)**	**Total Cost**	**Total Cost/Mile**
0910021	R-B End Anchorage - Type 1	EA	$1,190.00	150	$178,500.00	$7,437.50
0910173	R-B 350 Bridge Attachment - Vertical Shaped Parapet	EA	$2,500.00	32	$80,000.00	$3,333.33

Concrete Median Barrier								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length (mi)**	**Percentage of Barrier Replaced**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
0821502	F-Shape Precast Concrete Barrier Curb (21" X 45")	LF	$102.00	24	100%	126,720	$12,925,440.00	$538,560.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Metal Beam Rail and Concrete Median Barrier	**$15,072,940.00**	**$628,039.17**

Highway Lighting

Item Description	Units	Unit Cost	Spacing (LF)	Length (mi)	Total Quantity	Total Cost	Total Cost/Mile
Expressway Lighting (Conduit & Cable)	LF	$60.00	N/A	24	126,720	$7,603,200.00	$316,800.00
Individual Highway Pole & Light	EA	$10,000.00	250	24	506.88	$5,068,800.00	$211,200.00

	Total Cost	Base Total Cost/Mile
Total Cost for Highway Lighting	**$12,672,000.00**	**$528,000.00**

Noise Barrier Wall

Northbound Lanes	Length (ft)
Total Length of Northbound Lanes	63,360
Length of Northbound Lanes Requiring Noise Barrier Wall	**8,900**

Southbound Lanes	Length (ft)
Total Length of Southbound Lanes	63,360
Length of Southbound Lanes Requiring Noise Barrier Wall	**4,100**

Total Length of Noise Barrier Wall (NB & SB)	**13,000**

Item No.	Item Description	Units	Unit Cost	Wall Height (ft)	Length (ft)	Total Quantity	Total Cost	Total Cost/Mile
0916126	Noise Barrier Wall	SF	$40.00	16	13,000	208,000	$8,320,000.00	$346,666.67

	Total Cost	Base Total Cost/Mile
Total Cost for Noise Barrier Wall	**$8,320,000.00**	**$346,666.67**

Signing

Project No. 0172-0388	
Total Bid Price of Project No. 0172-0388	$2,319,733.00
Number of Interchanges Per Direction	26
Length of Project (Miles)	55
Cost Per Interchange Per Direction	$44,610.25

I-95 East Sign Replacement Cost	
Number of Interchanges Per Direction	8
Length of Project Per Direction(Miles)	12
Total Cost Per Direction	$356,882.00
Total Cost Per Mile	$29,740.00
Total Cost	$713,760.00

Notes:

Cost of sign replacement determined by the cost to complete Project No. 0172-0388, Replacement of Highway Signs on I-395. Project No. 0172-0388 had a letting date of 10/16/13, and a contract length of 480 calendar days

Overhead Sign Supports Including Cantilevers, Full Overhead (monotube), Full Overhead (Truss), OVH Truss Foundation, Drilled Shaft Foundation		
	Cost/Mile	**Total Cost**
Overhead Sign Supports	$162,597.73	$3,902,345.52
10% of Cost	$16,259.77	$390,234.55

Notes:

Cost of overhead sign supports determined by the Department based on Project 173-351, which had a total cost of $1,817,843 for sign support structure replacements, and a total project length of 11.18 miles

	Total Cost	**Base Total**
Total Cost for Signing	**$1,103,994.55**	**$45,999.77**

Retaining Walls

Total Length of Retaining Walls in the Northbound Direction (LF)	1920
Total Length of Retaining Walls in the Southbound Direction (LF)	3000
Average Height of Retaining Walls (LF)	10
Length of Project (Miles) (Northbound and Southbound)	24
Retaining Wall Unit Cost (SF)	$150.00

Notes:

Length of Retaining Walls determined from 2004 Feasibility Study Report Corridor Improvement Concepts

	Total Cost	Base Total Cost/Mile
Total Cost for Retaining Walls	**$7,380,000.00**	**$307,500.00**

Interchange Improvements

Interchange Improvement Level	Cost
Exit 61 Interchange Estimate	$4,000,000

Interchange No.	% of Exit 61	Reason	Base Cost
Interchange 70	140%	Widening on route 1, no widening on route 156, 1 relocated ramp, 3 signals	$5,600,000
Interchange 71/72	225%	2 connected exits, no widening, relocating 2 ramps, no	$9,000,000
Interchange 73	95%	No widening, 1 relocated ramp, no signals	$3,800,000
Interchange 74	120%	Widening on Route 161, 2 relocated ramps, 2 signals	$4,800,000
I-95/I-395 Interchange	N/A	Complete Interchange Reconstruction. Cost from Separate Study	$700,000,000
Interchange 81	100%	No widening, no relocated ramps, 2 signals	$4,000,000
Interchange 81/82/82A	400%	3 connected exits, extend Parkway North, 9 relocated ramps, 3 signals	$16,000,000
		Total Interchange Cost	**$ 743,200,000.00**

Length of Project (Miles) (Northbound and Southbound) 24

	Total Cost	Base Total Cost/Mile
Total Cost for Interchange Improvements	**$743,200,000.00**	**$30,966,666.67**

Pavement Markings

Epoxy Resin Pavement Markings								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length (mi)**	**Number of Lines**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
1210101	4" White Epoxy Resin Pavement Markings	LF	$0.65	24	N/A	126,720	$82,368.00	$3,432.00
1210102	4" Yellow Epoxy Resin Pavement Markings	LF	$0.65	24	N/A	126,720	$82,368.00	$3,432.00
1210103	6" White Epoxy Resin Pavement Markings	LF	$0.65	24	2	63,360	$41,184.00	$1,716.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Pavement Markings	**$205,920.00**	**$8,580.00**

Wetland Mitigation

Total Area of Wetland Impacts (AC) (Northbound and Southbound)	8.41
Length of Project (Miles) (Northbound and Southbound)	24
Wetland Mitigation Unit Cost (Per Acre)	$200,000.00

	Total Cost	Base Total Cost/Mile
Total Cost for Wetland Mitigation	**$1,682,000.00**	**$70,083.33**

Structures

BRIDGE NO.	TOWN	FEATURES INTERSECTED	FACILITY CARRIED	TOTAL REPLACEMENT COST	NOTES
06200A	OLD SAYBROOK	FERRY RD. CONNECTICUT R.	INTERSTATE-95 NB	$0	BALDWIN BRIDGE
06200B	OLD SAYBROOK	FERRY RD. CONN. RIVER	INTERSTATE-95 SB	$0	BALDWIN BRIDGE
06173	OLD LYME	ROUTE 156	INTERSTATE-95	$8,984,000	
06032	OLD LYME	LIEUTENANT RIVER	INTERSTATE-95	$13,910,000	
00243	OLD LYME	LYME STREET	INTERSTATE-95	$8,984,000	
00244	OLD LYME	INTERSTATE-95	WHIPPOORWILL ROAD	$5,035,000	
00245	OLD LYME	INTERSTATE-95	FLAT ROCK HILL RD	$0	BRIDGE REPLACED IN 2017
00246	OLD LYME	INTERSTATE-95	FOUR MILE RIVER RD	$5,035,000	
02584	OLD LYME	FOUR MILE RIVER	I-95 & RAMP 230 & 231	$0	CULVERT
00247	EAST LYME	INTERSTATE-95	SSR 449	$7,350,000	
00248	EAST LYME	NORTH BRIDE BROOK ROAD	INTERSTATE-95	$3,651,000	
00249	EAST LYME	INTERSTATE 95	SOCIETY ROAD	$0	BRIDGE REPLACED IN 2014
02585	EAST LYME	PATTAGANSETT RIVER	INTERSTATE-95	$0	CULVERT
00250	EAST LYME	ROUTE 161	INTERSTATE-95	$7,462,000	
00251	EAST LYME	LATIMERS BROOK	INTERSTATE-95	$0	CULVERT
00252	EAST LYME	INTERSTATE-95	US ROUTE 1	$0	REPLACED UNDER I-95/I-395 INTERCHANGE
00253	EAST LYME	I-395 NORTHBOUND	INTERSTATE-95 SB	$0	REPLACED UNDER I-95/I-395 INTERCHANGE
01891	WATERFORD	OIL MILL BROOK	INTERSTATE-95	$0	CULVERT
00352A	WATERFORD	OIL MILL ROAD	INTERSTATE-95 NB	$0	REPLACED UNDER I-95/I-395 INTERCHANGE
00352B	WATERFORD	OIL MILL ROAD	INTERSTATE-95 SB	$0	REPLACED UNDER I-95/I-395 INTERCHANGE
02586	WATERFORD	STONY BROOK	I-95 & LOCAL ROADS	$0	CULVERT
01767	WATERFORD	INTERSTATE-95	CROSS ROAD	$11,016,000	
01768	WATERFORD	JORDAN BROOK	I-95 & PARKWAY N.	$0	CULVERT
06130	WATERFORD	ROUTE 85	INTERSTATE-95	$16,519,000	
00354	NEW LONDON	I-95 SR 623 & SR 624	VAUXHALL ST EXT	$5,421,000	
02602	NEW LONDON	I-95 SR 623 & N SR 624	SR 908 COLMAN ST	$0	NO REPLACEMENT REQUIRED
02603	NEW LONDON	I-95&SR623+641&I-95310	SR636 BRIGGS ST	$0	NO REPLACEMENT REQUIRED
02611	NEW LONDON	INTERSTATE 95 & SR 623	ROUTE 32 RAMP 002	$0	NO REPLACEMENT REQUIRED

02612	NEW LONDON	I-95 US 1 NB SR 623&641	ROUTE 32 SB	$0	NO REPLACEMENT REQUIRED
02833	NEW LONDON	I-95 US 1 NB SR 623&641	ROUTE 32 NB	$0	NO REPLACEMENT REQUIRED
03820	NEW LONDON	WILLIAMS ST (SR 635)	INTERSTATE-95 NB	$0	NO REPLACEMENT REQUIRED
02514A	NEW LONDON	THAMES RV LOC RDS & CVRR	INTERSTATE-95 SB	$0	GOLD STAR MEMORIAL BRIDGE
02514B	NEW LONDON	WILLIAMS ST STAT PIER RD	I-95 TR 817	$0	GOLD STAR MEMORIAL BRIDGE
03819	NEW LONDON	THAMES RV RR LOCAL ROADS	INTERSTATE-95 NB	$0	GOLD STAR MEMORIAL BRIDGE
			TOTAL	**$93,367,000**	

Utility Relocation Costs	
Total Number of Bridges Slated for Rehab/ Replacement Over I-95	7
Cost of Utility Relocation Per Bridge Rehab/Replacement	$600,000
Total Utility Relocation Cost	**$4,200,000**

	Base Cost
Total Structure Replacement Cost Including Utility Relocation	**$97,567,000**

Length of Project (Miles) (Northbound and Southbound)	24

	Base Cost/Mile
Total Cost for Structures Replacement/Modification	**$4,065,291.67**

Percentage Based Contract Items

	Base Total Cost/Mile	Base Total Percentage
Subtotal of Known Items	$43,040,287.06	77%

Base Total Cost/Mile

Item No.	Item Description	Units	Percent of Base Estimate	Equivalent Percent of	Base Total Cost/Mile
0201001	Clearing and Grubbing	LS	2%	2.60%	$1,117,930.00
0971001	Maintenance and Protection of Traffic	LS	10%	12.99%	$5,589,648.00
0975004	Mobilization and Project Closeout	LS	10%	12.99%	$5,589,648.00
0980001	Construction Staking	LS	1%	1.30%	$558,965.00

	Base Total Cost/Mile
Total Cost for Percentage Based Items	**$12,856,191.00**

Right-of-Way

Northbound				
Sheet #	Impacted Property Type Impacted	Area of Right-of-Way Impacts (SF)	Cost/SF	Total Cost
57	Commercial	2,642	$7	$18,494
59	Residental	4,886	$3	$14,658
61	Residental	4,081	$3	$12,243
64	Commercial	7,258	$7	$50,806
65	Commercial	6,927	$7	$48,489
67	Residental	1,979	$3	$5,937
68	Residental	4,736	$3	$14,208
82	Commercial	36,736	$8	$293,888
	Residental	41,969	$3	$125,907
83	Residental	65,528	$3	$196,584
84	Residental	112,629	$3	$337,887
				$0
	Northbound Total	**289,371**		**$1,119,101**

Southbound				
Sheet #	Impacted Property Type Impacted	Area of Right-of-Way Impacts (SF)	Cost/SF	Total Cost
64	Residental	2,261	$3	$6,783
	Residental	2,737	$3	$8,211
65	Residental	5,314	$3	$15,942
66	Residental	16,416	$3	$49,248
67	Residental	2,908	$3	$8,724
71	Residental	14,112	$3	$42,336
	Residental	893	$3	$2,679
82	Commercial	214,757	$8	$1,718,056
	Commercial	79,330	$8	$634,640
83	Commercial	87,116	$8	$696,928
	Commercial	16,368	$8	$130,944
84	Commercial	52,265	$8	$418,120
	Southbound Total	**494,477**		**$3,732,611**

Total Right of Way Costs:	
Northbound	$1,119,101
Southbound	$3,732,611
Total	**$4,851,712**

Administrative Costs	
Number of Properties Impacted	23
Administrative Cost Per Property	$15,000
Total Administrative Costs	**$345,000**

	Total Cost	Base Total Cost/Mile
Total Cost for Right-of-Way	**$5,196,712.00**	**$216,529.67**

I-95 Improvements - Feasibility Evaluation and Phasing Study (Greenwich to New Haven)

Base midpoint of expenditure:	**2045**
Base year:	**2017**
Base Inflation %:	**3.50%**
Phase of Development:	**Preliminary Engineering**

TOTAL DIRECTIONAL COST SUMMARY

Activity	Base Cost/Mile	Base Cost Percent of Total
Bituminous Pavement	$2,718,952.19	8.7%
Excavation & Borrow	$391,729.14	1.3%
Drainage	$612,744.07	2.0%
Metal Beam Rail and Concrete Median Barrier	$180,870.86	0.6%
Highway Lighting	$528,000.00	1.7%
Concrete Pavement Repair	$352,000.00	1.1%
Noise Barrier Wall	$405,942.86	1.3%
Signing	$46,849.77	0.2%
Retaining Walls	$0.00	0.0%
Pavement Markings	$8,580.00	0.0%
Interchange Improvements	$651,428.57	2.1%
Wetland Mitigation	$58,628.57	0.2%
Structure Replacement / Modification	$6,701,314.29	21.5%
Percentage Based Contract Items	$3,780,673.00	12.1%
Construction Subtotal	**$16,437,713.32**	**52.7%**

MINOR ITEM ALLOWANCE

	Base Cost Percentage	Base Cost/Mile	Base Cost Percent of Total
Minor Item Allowance	25%	$4,109,428.00	13.2%
Minor Item Allowance Subtotal		**$4,109,428.00**	**13.2%**

NON-CONTRACT ITEMS

	Base Cost Percentage	Base Cost/Mile	Base Cost Percent of Total
State Police	2.5%	$513,679.00	1.6%
Intelligent Transportation System (ITS)	N/A	$1,000,000.00	3.2%
Environmental Compliance	5%	$1,027,357.00	3.3%
Right-of-Way	N/A	$0.00	0.0%
NEPA Documentation	3%	$616,414.00	2.0%
Program Management	5%	$1,027,357.00	3.3%
Design	10%	$2,054,714.00	6.6%
Construction Engineering & Inspection	10%	$2,054,714.00	6.6%
Non-Contract Items Subtotal		**$8,294,235.00**	**26.6%**

Contingency	8.10%	$2,336,151.48

CONTRACT DIRECTIONAL COST SUMMARY

	Base Cost/Mile
Contract, Including Minor Item Allowance and Contingency in Base Year	**$31,177,528.00**
Contract, Including Minor Item Allowance, Contingency, and Inflation	**$61,731,505.00**
Total Contract Cost (Northbound & Southbound) Including Minor Item Allowance, Contingency, and Inflation	**$1,080,301,337.50**

Bituminous Pavement

Full Depth Pavement Section										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	26	4	17.5	0.0575	61,390	$89.00	$5,463,710.00	$312,212.00
0406170	HMA S1	Ton	26	8	17.5	0.0575	122,790	$89.00	$10,928,310.00	$624,474.86
0304002	Processed Aggregate Base	CY	26	10	17.5	N/A	74,150	$39.00	$2,891,850.00	$165,248.57
0212000	Subbase	CY	26	12	17.5	N/A	88,980	$46.00	$4,093,080.00	$233,890.29
0209001	Formation of Subgrade	SY	26	N/A	17.5	N/A	266,933	$2.00	$533,866.67	$30,506.67
								Total	**$23,910,816.67**	**$1,366,332.38**
Item No.	**Item Description**	**Units**	**Width (ft)**	**Length (mi)**	**Number of Applications**	**Conversion Factor (gal/sy)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406236	Material for Tack Coat	GAL	26	17.5	4	0.07	74,740	$5.00	$373,700.00	$21,354.29
								Total	**$373,700.00**	**$21,354.29**

Additional Full Depth Pavement for Left Shoulder Widening										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Total Length of I-95 Requiring Left Shoulder Widening (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	14	4	17.5	0.0575	33,060	$89.00	$2,942,340.00	$168,133.71
0406170	HMA S1	Ton	14	8	17.5	0.0575	66,120	$89.00	$5,884,680.00	$336,267.43
0304002	Processed Aggregate Base	CY	14	10	17.5	N/A	39,930	$39.00	$1,557,270.00	$88,986.86
0212000	Subbase	CY	14	12	17.5	N/A	47,910	$46.00	$2,203,860.00	$125,934.86
0209001	Formation of Subgrade	SY	14	N/A	17.5	N/A	143,733	$2.00	$287,466.67	$16,426.67
								Total	**$12,875,616.67**	**$735,749.52**
Item No.	**Item Description**	**Units**	**Width (ft)**	**Total Length of I-95 Requiring Left Shoulder Widening (mi)**	**Number of Applications**	**Conversion Factor (gal/sy)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406236	Material for Tack Coat	GAL	14	17.5	4	0.07	40,250	$5.00	$201,250.00	$11,500.00
								Total	**$201,250.00**	**$11,500.00**

Wedge Course for Shifting Crownline										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0406171	HMA S0.5	Ton	12	0.5	17.5	0.0575	3,540	$89.00	$315,060.00	$18,003.43
								Total	**$315,060.00**	**$18,003.43**

Mill and Overlay Pavement Section										
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Conversion Factor (tons/sy/in)**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**

0406171	HMA S0.5	Ton	24	6	17.5	0.0575	85,010	$89.00	$7,565,890.00	$432,336.57
0406268	Milling of HMA (Over 4" to 8")	SY	24	N/A	17.5	N/A	246,400	$5.00	$1,232,000.00	$70,400.00
								Total Cost	**$8,797,890.00**	**$502,736.57**

Item No.	Item Description	Units	Width (ft)	Length (mi)	Number of Applications	Conversion Factor (gal/sy)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406236	Material for Tack Coat	GAL	24	17.5	3	0.07	51,740	$5.00	$258,700.00	$14,782.86
								Total	**$258,700.00**	**$14,782.86**

Additional Full Depth Pavement for Concrete Base Replacement

Item No.	Item Description	Units	Width (ft)	Depth (in)	Length (mi)	Conversion Factor (tons/sy/in)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406171	HMA S0.5	Ton	24	0	1	0.0575	0	$89.00	$0.00	$0.00
0406170	HMA S1	Ton	24	6	1	0.0575	4,860	$89.00	$432,540.00	$24,716.57
0304002	Processed Aggregate Base	CY	24	10	1	N/A	3,910	$39.00	$152,490.00	$8,713.71
0212000	Subbase	CY	24	12	1	N/A	4,690	$46.00	$215,740.00	$12,328.00
0209001	Formation of Subgrade	SY	24	N/A	1	N/A	14,080	$2.00	$28,160.00	$1,609.14
								Total	**$828,930.00**	**$47,367.43**

Item No.	Item Description	Units	Width (ft)	Length (mi)	Number of Applications	Conversion Factor (gal/sy)	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0406236	Material for Tack Coat	GAL	24	1	4	0.07	3,940	$5.00	$19,700.00	$1,125.71
								Total	**$19,700.00**	**$1,125.71**

Additional Full Depth Pavement for Concrete Base Replacement Notes:
Assumed 5% of the existing concrete base course will need to be replaced (17.5 miles * 5% = 1 miles)

	Total Cost	Base Total Cost/Mile
Total Cost for Bituminous Pavement	**$47,581,663.33**	**$2,718,952.19**

Excavation & Borrow

Excavation for Full Depth Widening Within Existing Right Shoulder									
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Quantity (CY)**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	10	34	17.5	96,960	$12.00	$1,163,520.00	$66,486.86

Excavation for Full Depth Widening Outside of Existing Right Shoulder							
Description		**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Quantity (CY)**	
Pavement Excavation		CY	16	34	17.5	155,140	
Item No.	**Item Description**	**Units**	**Percentage Cut vs. Fill**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	50%	77,570	$12.00	$930,840.00	$53,190.86
0207000	Borrow	CY	50%	77,570	$10.00	$775,700.00	$44,325.71

Excavation for Additional Full Depth Pavement for Left Shoulder Widening									
Item No.	**Item Description**	**Units**	**Width (ft)**	**Depth (in)**	**Length (mi)**	**Quantity (CY)**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	14	34	17.5	135,750	$12.00	$1,629,000.00	$93,085.71

Total Length of Project in Cut Section = 8.8 Miles
Length of Northbound Lanes with Visible Rock Outcrops = 0.07 miles
Length of Southbound Lanes with Visible Rock Outcrops = 0.27 miles
Percentage of Roadway in Rock Excavation Section = 5%

Additional Excavation for Widening						
Description	**Units**	**Excavation Assumption (CY/LF)**	**Length (mi)**	**Quantity (CY)**		
Additional Excavation for Widening	CY	2	17.5	184,800		
Item No.	**Item Description**	**Units**	**Percentage Cut vs. Fill**	**Quantity**	**Unit Cost**	**Total Cost**	**Total Cost/Mile**
0202000	Earth Excavation	CY	95%	175,560	$12.00	$2,106,720.00	$120,384.00
0202100	Rock Excavation	CY	5%	9,240	$27.00	$249,480.00	$14,256.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Excavation and Borrow	**$6,855,260.00**	**$391,729.14**

Drainage

Catch Basins

Item No.	Item Description	Units	Quantity	Catch Basin Spacing (LF)	Unit Cost	Length (mi)	Total Quantity (LF)	Total Cost	Total Cost/Mile
0507006	Type "C" Catch Basin	EA	1	300	$2,000.00	17.5	308	$616,000.00	$35,200.00
0507449	Type "C-M" Catch Basin	EA	1	300	$2,300.00	17.5	308	$708,400.00	$40,480.00

Notes:
Assume 1 Type "C" and 1 Type "C-M" Catch Basins Every 300 LF

Pipes

Longitudinal Pipes

Item No.	Item Description	Units	Number of Pipe Runs	Length of Project (mi)	Total Quantity (LF)	Unit Cost	Total Cost	Total Cost/Mile
0651015	24" R.C. Pipe	LF	1	17.5	92,400	$70.00	$6,468,000.00	$369,600.00

Notes:
Assume One 24" R.C. Pipe Run for Total Length

Crossing Pipes

Item No.	Item Description	Units	Length of Pipe Across Roadway (LF)	Spacing of Crossing Pipes (LF)	Length of Project (mi)	Total Quantity	Unit Cost	Total Cost	Total Cost/Mile
0651012	15" R.C. Pipe	LF	64	300	17.5	19,712	$60.00	$1,182,720.00	$67,584.00

Notes:
Assume new 15" R.C. Pipe crossing every 300 LF

Trench Excavation

Trench Excavation for Longitudinal Pipes

Description	Units	Pipe Size (in)	Total Length of 24" RCP	Trench Width (ft)	Trench Depth (ft)	Total Quantity
Trench Excavation	CY	24	92,400	4	6	82,133

Trench Excavation for Crossing Pipes

Description	Units	Pipe Size (in)	Total Length of 15" RCP	Trench Width (ft)	Trench Depth (ft)	Total Quantity
Trench Excavation	CY	15	19,712	3.25	6	14,236

Item No.	Item Description	Units	Percentage Non Rock vs. Rock	Quantity	Unit Cost	Total Cost	Total Cost/Mile
0205003	Trench Excavation 0'-10' Deep	CY	95%	91,551	$16.00	$1,464,808.80	$52,314.60
0205004	Rock In Trench Excavation 0'-10' Deep	CY	5%	4,818	$80.00	$385,476.00	$13,767.00

Notes:
Length of Trench Excavation Determined by Length of Pipe

Bedding Material

Item No.	Item Description	Units	Trench Width (ft)	Depth (in)	Unit Cost	Total Length of Pipe (LF)	Percentage Non Rock vs. Rock	Total Quantity	Total Cost	Total Cost/Mile
0651001	Bedding Material (For Non-Rock Areas) 24" RCP	CY	4	4	$50.00	92,400	95%	4335	$216,750.00	$7,741.07
0651001	Bedding Material (For Non-Rock Areas) 15" RCP	CY	3.25	4	$50.00	19,712	95%	751	$37,550.00	$1,341.07
0651001	Bedding Material (For Rock Areas) 24" RCP	CY	4	12	$50.00	92,400	5%	684	$34,200.00	$1,221.43
0651001	Bedding Material (For Rock Areas) 15" RCP	CY	3.25	12	$50.00	19,712	5%	119	$5,950.00	$212.50

Endwalls

Item No.	Item Description	Units	Quantity	Endwall Spacing (LF)	Unit Cost	Length (mi)	Total Quantity	Total Cost	Total Cost/Mile
0601000	Class "A" Concrete	CY	5.45	1100	$890.00	17.5	457.8	$407,442.00	$23,282.40

Notes:
Assume One Standard Endwall for 24" R.C. Pipe Every 1100 LF

	Total Cost	Base Total Cost/Mile
Total Cost for Drainage	**$11,527,296.80**	**$612,744.07**

Metal Beam Rail and Concrete Median Barrier

Metal Beam Rail								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length for Northbound Lanes (lf)**	**Length for Southbound Lanes (lf)**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
0910170	Metal Beam Rail (Type R-B 350)	LF	$25.00	59,460	55,190	114,650	$2,866,250.00	$163,785.71

End Treatments						
Item No.	**Item Description**	**Units**	**Unit Cost**	**Quantity (EA)**	**Total Cost**	**Total Cost/Mile**
0910021	R-B End Anchorage - Type 1	EA	$1,190.00	121	$143,990.00	$8,228.00
0910173	R-B 350 Bridge Attachment - Vertical Shaped Parapet	EA	$2,500.00	62	$155,000.00	$8,857.14

	Total Cost	**Base Total Cost/Mile**
Total Cost for Metal Beam Rail and Concrete Median Barrier	**$3,165,240.00**	**$180,870.86**

Highway Lighting

Item Description	Units	Unit Cost	Spacing (LF)	Length (mi)	Total Quantity	Total Cost	Total Cost/Mile
Expressway Lighting (Conduit & Cable)	LF	$60.00	N/A	17.5	92,400	$5,544,000.00	$316,800.00
Individual Highway Pole & Light	EA	$10,000.00	250	17.5	369.6	$3,696,000.00	$211,200.00

	Total Cost	Base Total Cost/Mile
Total Cost for Highway Lighting	**$9,240,000.00**	**$528,000.00**

Concrete Pavement Repair

Project 35-176 Reconstruction of Median & Resurfacing of I-95, Exit 10-15	
Length of Project Per Direction NB/SB (ft)	25,565
Length of Project (miles)	4.84
Volume of Concrete Pavement Joint Replacement (CY)	2,075
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	640
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (three 12' travel lanes)	36
Depth of Existing Concrete Pavement (in)	9
Percentage of Joints Replaced Under Project	33%
Number of Joints Replaced Under Project	211

Project 56-258 Resurfacing and Safety Improvements on Route I-95, NY State Line to Exit 3	
Length of Project Per Direction NB/SB (ft)	11,780
Length of Project (miles)	2.23
Volume of Concrete Pavement Joint Replacement (CY)	520
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	295
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (three 12' travel lanes)	36
Depth of Existing Concrete Pavement (in)	9
Percentage of Joints Replaced Under Project	18%
Number of Joints Replaced Under Project	53

Project 56-246 Reconstruction of Median & Resurfacing of I-95, Exit 5-7	
Length of Project Per Direction NB/SB (ft)	12,049
Length of Project (miles)	2.28
Volume of Concrete Pavement Joint Replacement (CY)	500
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	302
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (three 12' travel lanes)	36
Depth of Existing Concrete Pavement (in)	9
Percentage of Joints Replaced Under Project	17%
Number of Joints Replaced Under Project	51

Concrete Pavement Repair Calculation	
Total Length of I-95 in Study Area (Both Directions) (miles)	17.5
Joint Spacing (ft)	40
Number of Concrete Joints in Project Area	2,310
Estimated Percentage of Joints to be Replaced Under Future Widening Project	**20%**
Average Joint Replacement Width (ft)	10
Joint Replacement Length (ft) (two 12' travel lanes)	24
Estimated Area of Joint Replacement Under Futire Widening Project (sf)	12,320
Unit Price for Precast Joints (sy)	$500.00
Total Cost for Joint Replacement	$6,160,000.00
Cost Per Mile for Joint Replacement	$352,000.00

	Total Cost	Base Total Cost/Mile
Total Cost for Concrete Pavement Repair	**$6,160,000.00**	**$352,000.00**

Noise Barrier Wall

Northbound Lanes	Length (ft)
Total Length of Northbound Lanes	7,650
Length of Northbound Lanes Requiring Noise Barrier Wall	**7,650**

Southbound Lanes	Length (ft)
Total Length of Northbound Lanes	3,450
Length of Northbound Lanes Requiring Noise Barrier Wall	**3,450**

Total Length of Noise Barrier Wall (NB & SB)	**11,100**

Item No.	Item Description	Units	Unit Cost	Wall Height (ft)	Length (ft)	Total Quantity	Total Cost	Total Cost/Mile
0916126	Noise Barrier Wall	SF	$40.00	16	11,100	177,600	$7,104,000.00	$405,942.86

	Total Cost	Base Total Cost/Mile
Total Cost for Noise Barrier Wall	**$7,104,000.00**	**$405,942.86**

Signing

Project No. 0172-0388	
Total Bid Price of Project No. 0172-0388	$2,319,733.00
Number of Interchanges Per Direction	26
Length of Project (Miles)	55
Cost Per Interchange Per Direction	$44,610.25

I-95 East Sign Replacement Cost	
Number of Interchanges Per Direction	6
Length of Project Per Direction(Miles)	8.75
Total Cost Per Direction	$267,661.50
Total Cost Per Mile	$30,590.00
Total Cost	$535,325.00

Notes:

Cost of sign replacement determined by the cost to complete Project No. 0172-0388, Replacement of Highway Signs on I-395. Project No. 0172-0388 had a letting date of 10/16/13, and a contract length of 480 calendar days

Overhead Sign Supports Including Cantilevers, Full Overhead (monotube), Full Overhead (Truss), OVH Truss Foundation, Drilled Shaft Foundation		
	Cost/Mile	**Total Cost**
Overhead Sign Supports	$162,597.73	$9,755,863.80
10% of Cost	$16,259.77	$975,586.38

Notes:

Cost of overhead sign supports determined by the Department based on Project 173-351, which had a total cost of $1,817,843 for sign support structure replacements, and a total project length of 11.18 miles

	Total Cost	**Base Total Cost/Mile**
Total Cost for Signing	**$1,510,911.38**	**$46,849.77**

Retaining Walls

Total Length of Retaining Walls in the Northbound Direction (LF)	0
Total Length of Retaining Walls in the Southbound Direction (LF)	0
Average Height of Retaining Walls (LF)	10
Length of Project (Miles) (Northbound and Southbound)	17.5
Retaining Wall Unit Cost (SF)	$150.00

Notes:

Length of Retaining Walls determined from 2004 Feasibility Study Report Corridor Improvement Concepts

	Total Cost	Base Total Cost/Mile
Total Cost for Retaining Walls	**$0.00**	**$0.00**

Pavement Markings

Epoxy Resin Pavement Markings								
Item No.	**Item Description**	**Units**	**Unit Cost**	**Length (mi)**	**Number of Lines**	**Total Quantity**	**Total Cost**	**Total Cost/Mile**
1210101	4" White Epoxy Resin Pavement Markings	LF	$0.65	17.5	N/A	92,400	$60,060.00	$3,432.00
1210102	4" Yellow Epoxy Resin Pavement Markings	LF	$0.65	17.5	N/A	92,400	$60,060.00	$3,432.00
1210103	6" White Epoxy Resin Pavement Markings	LF	$0.65	17.5	2	46,200	$30,030.00	$1,716.00

	Total Cost	**Base Total Cost/Mile**
Total Cost for Pavement Markings	**$150,150.00**	**$8,580.00**

Interchange Improvements

Interchange Improvement Level	Cost
Exit 61 Interchange Estimate	$4,000,000

Interchange No.	% of Exit 61	Reason	Base Cost
Interchange 89	90%	No Widening, no relocated ramps, 2 signals	$3,600,000
Interchange 90	100%	Widening of Route 27, No relocated ramps, 3 signals	$4,000,000
Interchange 91	70%	Limited widening of Taugwonk Road, no relocated ramps, 1 signal	$2,800,000
	0%		$0
Interchange 92	25%	No widening, limited work on ramps, 1 signal	$1,000,000
Total Interchange Cost			**$11,400,000**

Length of Project (Miles) (Northbound and Southbound) 17.5

	Total Cost	Base Total Cost/Mile
Total Cost for Interchange Improvements	**$11,400,000.00**	**$651,428.57**

Wetland Mitigation

Total Area of Wetland Impacts (AC) (Northbound and Southbound)	5.13
Length of Project (Miles) (Northbound and Southbound)	17.5
Wetland Mitigation Unit Cost (Per Acre)	$200,000.00

	Total Cost	Base Total Cost/Mile
Total Cost for Wetland Mitigation	**$1,026,000.00**	**$58,628.57**

Structure Replacement / Modification

STRUCTURE NO.	TOWN	FACILITY INTERSECTED	FACILITY CARRIED	TOTAL REPLACEMENT COST	Notes
01769	GROTON	I-95 RAMP 313	INTERSTATE-95 SB	$0	
02445	GROTON	I-95 RAMP 313	I-95 NB & RT 1 NB	$0	
01770	GROTON	ROUTE 184 & I-95 TR827	INTERSTATE-95 SB	$0	
01771	GROTON	ROUTE 12	INTERSTATE-95 SB	$0	
01772	GROTON	ROUTE 12	INTERSTATE-95 NB	$0	
01773	GROTON	SR 900 (KINGS HIGHWAY)	INTERSTATE-95 NB	$0	
01774	GROTON	SR 900 (KINGS HIGHWAY)	INTERSTATE-95 SB	$0	
03328	GROTON	I-95 NB & I-95 TR 822	I-95 TR 821	$0	
01817	GROTON	INTERSTATE-95 NB	I-95 TR 822	$0	
03006	GROTON	DRAINAGE	I-95 NB & RTE 349 NB	$0	CULVERT
01775	GROTON	BUDDINGTON ROAD	INTERSTATE-95 SB	$0	
01776	GROTON	BUDDINGTON ROAD	INTERSTATE-95 NB	$0	
01777	GROTON	GROTON RESERVOIR	INTERSTATE-95 SB.	$0	
01778	GROTON	GROTON RESERVOIR	INTERSTATE-95 NB.	$0	
01779	GROTON	POHEGNUT POND	INTERSTATE-95 NB	$0	
01780	GROTON	POHEGNUT POND	INTERSTATE-95 SB	$0	
03007	GROTON	DRAINAGE TO SMITH LAKE	INTERSTATE-95 NB	$0	CULVERT
01781	GROTON	ROUTE 117	INTERSTATE-95 NB	$0	
01782	GROTON	ROUTE 117	INTERSTATE-95 SB	$0	
03008	GROTON	FORT HILL BROOK WEST	INTERSTATE -95 NB	$0	CULVERT
03009	GROTON	FORT HILL BROOK WEST	INTERSTATE-95 SB	$0	CULVERT
01783	GROTON	INTERSTATE-95 NB	FLANDERS ROAD	$0	
01784	GROTON	INTERSTATE-95 SB	FLANDERS ROAD	$0	
01785	GROTON	INTERSTATE-95	NOANK-LEDYARD ROAD	$0	
01786	GROTON	INTERSTATE-95	SR 614	$8,728,000	
06829	GROTON	BINDLOSS BROOK	INTERSTATE-95	$0	

01787	GROTON	COW HILL ROAD	INTERSTATE-95 SB	$4,166,000	
01788	GROTON	COW HILL ROAD	INTERSTATE-95 NB	$4,133,000	
01789	GROTON	RIVER RD & MYSTIC RIVER	INTERSTATE-95 NB	$16,733,000	
01790	GROTON	RIVER RD & MYSTIC RIVER	INTERSTATE-95 SB	$16,733,000	
01791	STONINGTON	ROUTE 27	INTERSTATE-95 NB	$4,973,000	
01792	STONINGTON	ROUTE 27	INTERSTATE-95 SB	$4,973,000	
01793	STONINGTON	JERRY BROWNE ROAD	INTERSTATE-95 SB	$6,384,000	
01794	STONINGTON	JERRY BROWNE ROAD	INTERSTATE-95 NB	$6,384,000	
06832	STONINGTON	PEQUOTSEPOS BROOK	INTERSTATE-95 SB	$0	CULVERT
01795	STONINGTON	MYSTIC RES&DEANS MILL RD	INTERSTATE-95 NB	$5,544,000	
01796	STONINGTON	MYSTIC RES&DEANS MILL RD	INTERSTATE-95 SB	$5,578,000	
01797	STONINGTON	INTERSTATE-95 SOUTHBOUND	ROUTE 234	$3,329,000	
01798	STONINGTON	INTERSTATE-95 NORTHBOUND	ROUTE 234	$3,329,000	
01800	STONINGTON	STONY BROOK	INTERSTATE-95 NB	$0	CULVERT
01801	STONINGTON	STONY BROOK	INTERSTATE-95 SB	$0	CULVERT
01802	STONINGTON	TAUGWANK ROAD	INTERSTATE-95 NB	$4,166,000	
01803	STONINGTON	TAUGWANK ROAD	INTERSTATE-95 SB	$4,200,000	
01804	STONINGTON	ANGUILLA BROOK	INTERSTATE-95 NB	$0	CULVERT
01805	STONINGTON	ANGUILLA BROOK	INTERSTATE-95 SB	$0	CULVERT
01806	STONINGTON	INTERSTATE-95 NB	NO ANGUILLA ROAD	$2,386,000	
01807	STONINGTON	INTERSTATE 95 SB	NO ANGUILLA ROAD	$2,386,000	
01808	NORTH STONINGTO	ROUTE 2	INTERSTATE-95 NB	$5,074,000	
01809	NORTH STONINGTO	ROUTE 2	INTERSTATE-95 SB	$5,074,000	
01810	NORTH STONINGTO	SHUNOCK RIVER	INTERSTATE-95 NB	$0	CULVERT
01811	NORTH STONINGTO	SHUNOCK RIVER	INTERSTATE-95 SB	$0	CULVERT
01812	NORTH STONINGTO	ROUTE 49	INTERSTATE-95 NB	$0	
01813	NORTH STONINGTO	ROUTE 49	INTERSTATE-95 SB	$0	
01814	NORTH STONINGTO	INTERSTATE-95	BOOM BRIDGE ROAD	$0	
01815	NORTH STONINGTO	ROUTE 216	INTERSTATE-95 NB	$0	
01816	NORTH STONINGTO	ROUTE 216	INTERSTATE-95 SB	$0	

			TOTAL	**$114,273,000**	

Utility Relocation Costs	
Total Number of Bridges Slated for Rehab/ Replacement Over I-95	5
Cost of Utility Relocation Per Bridge Rehab/Replacement	$600,000
Total Utility Relocation Cost	**$3,000,000**

	Base Cost
Total Structure Replacement Cost Including Utility Relocation	**$117,273,000**

Length of Project (Miles) (Northbound and Southbound)	17.5

	Base Cost/Mile
Total Cost for Structures Replacement/Modification	**$6,701,314.29**

Percentage Based Contract Items

	Base Total Cost/Mile	Base Total Percentage
Subtotal of Known Items	$12,657,040.32	77%

Base Total Cost/Mile

Item No.	Item Description	Units	Percent of Base Estimate	Equivalent Percent of	Base Total Cost/Mile
0201001	Clearing and Grubbing	LS	2%	2.60%	$328,754.00
0971001	Maintenance and Protection of Traffic	LS	10%	12.99%	$1,643,771.00
0975004	Mobilization and Project Closeout	LS	10%	12.99%	$1,643,771.00
0980001	Construction Staking	LS	1%	1.30%	$164,377.00

	Base Total Cost/Mile
Total Cost for Percentage Based Items	**$3,780,673.00**

Northbound: Exit 54 to Exit 55 Widening

Length (mi)	1.6

Item	Cost/Mile	Total Cost
Bituminous Pavement	$2,308,130.20	$3,693,008.32
Excavation	$922,612.00	$1,476,179.20
Drainage	$697,008.02	$1,115,212.83
Metal Beam Rail and Concrete Median Barrier	$621,794.20	$994,870.72
Highway Lighting	$528,000.00	$844,800.00
Concrete Pavement Repair	$880,000.00	$1,408,000.00
Noise Barrier Wall	$534,400.00	$855,040.00
Signing	$70,984.43	$113,575.09
Retaining Walls	$21,450.00	$34,320.00
Pavement Markings	$8,580.00	$13,728.00
Interchange Improvements		$1,000,000.00
Wetland Mitigation	$35,080.00	$56,128.00
Structure Replacement/Modifications		$24,917,000.00
Utility Relocation (Structures)		$500,000.00
Percentage Items		$11,058,478.31
	Subtotal	**$48,080,340.47**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$12,020,085.12
	Subtotal	**$60,100,425.58**

Item	Percentage	Total Cost
State Police	2.50%	$1,502,510.64
ITS		$1,600,000.00
Environmental Compliance	5.00%	$3,005,021.28
Right-of-Way		$83,493.00
NEPA Documentation	0.00%	$0.00
Program Management	5.00%	$3,005,021.28
Design	10.00%	$6,010,042.56
Construction Engineering & Inspection	10.00%	$6,010,042.56

Grand Total	**$81,316,556.90**
Contingency (8.10%)	**$87,903,198.01**

Southbound Exit 63 Acceleration Lane Improvements

Length (mi) 0.3

Item	Cost/Mile	Total Cost
Bituminous Pavement	$1,387,694.27	$416,308.28
Excavation & Borrow	$163,297.60	$48,989.28
Drainage	$697,008.02	$209,102.41
Metal Beam Rail and Concrete Median Barrier	$70,675.00	$21,202.50
Highway Lighting	$0.00	$0.00
Concrete Pavement Repair	$0.00	$0.00
Noise Barrier	$0.00	$0.00
Signing	$0.00	$0.00
Retaining Walls		$0.00
Pavement Markings	$8,580.00	$2,574.00
Structure Replacement/Modification		$3,912,000.00
Percentage Items		$1,377,065.70
	Subtotal	**$5,987,242.16**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$1,496,810.54
	Subtotal	**$7,484,052.71**

Item	Percentage	Total Cost
State Police	2.50%	$187,101.32
ITS		$0.00
Environmental Compliance	5.00%	$374,202.64
Right-of-Way	0.00%	$0.00
NEPA Documentation	0.00%	$0.00
Program Management	5.00%	$374,202.64
Design	10.00%	$748,405.27
Construction Engineering & Inspection	10.00%	$748,405.27

Grand Total	**$9,916,369.84**
Contingency (8.10%)	**$10,719,595.79**

Southbound Exit 88 Acceleration Lane Improvements

Length (mi) 0.3

Item	Cost/Mile	Total Cost
Bituminous Pavement	$1,387,686.67	$416,306.00
Excavation & Borrow	$164,003.43	$49,201.03
Drainage	$612,744.07	$183,823.22
Metal Beam Rail and Concrete Median Barrier	$180,870.86	$54,261.26
Highway Lighting	$0.00	$0.00
Concrete Pavement Repair	$0.00	$0.00
Noise Barrier	$0.00	$0.00
Signing	$0.00	$0.00
Retaining Walls		$1,462,500.00
Pavement Markings	$8,580.00	$2,574.00
Structure Replacement/Modification		$0.00
Percentage Items		$647,783.20
	Subtotal	**$2,816,448.71**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$704,112.18
	Subtotal	**$3,520,560.89**

Item	Percentage	Total Cost
State Police	2.50%	$88,014.02
ITS		$0.00
Environmental Compliance	5.00%	$176,028.04
Right-of-Way	0.00%	$0.00
NEPA Documentation	0.00%	$0.00
Program Management	5.00%	$176,028.04
Design	10.00%	$352,056.09
Construction Engineering & Inspection	10.00%	$352,056.09

Grand Total	**$4,664,743.18**
Contingency (8.10%)	**$5,042,587.38**

Northbound Exit 90 Interchange Improvements

Length (mi) 1

Item	Cost/Mile	Total Cost
Bituminous Pavement	$1,387,686.67	$1,387,686.67
Additional Bituminous for Acceleration Lane		$679,966.47
Excavation	$391,729.14	$391,729.14
Drainage	$612,744.07	$612,744.07
Metal Beam Rail and Concrete Median Barrier	$180,870.86	$180,870.86
Highway Lighting	$0.00	$0.00
Concrete Pavement Repair	$0.00	$0.00
Noise Barrier	$0.00	$0.00
Signing		$44,610.25
Retaining Walls	$0.00	$0.00
Pavement Markings	$8,580.00	$8,580.00
Interchange Improvements		$2,000,000.00
Wetland Mitigation	$58,628.57	$58,628.57
Structure Replacement/Modification		$11,357,000.00
Percentage Items		$4,994,828.16
	Subtotal	**$21,716,644.19**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$5,429,161.05
	Subtotal	**$27,145,805.24**

Item	Percentage	Total Cost
State Police	2.50%	$678,645.13
ITS		$0.00
Environmental Compliance	5.00%	$1,357,290.26
Right-of-Way		$223,200.00
NEPA Documentation	0.00%	$0.00
Program Management	5.00%	$1,357,290.26
Design	10.00%	$2,714,580.52
Construction Engineering & Inspection	10.00%	$2,714,580.52

Grand Total	**$36,191,391.94**
Contingency (8.10%)	**$39,122,894.69**

I-95/I-395 Interchange

Construction Items	**Subtotal**	**$700,000,000.00**

Item	**Percentage**	**Total Cost**
Right-of-Way		$0.00
NEPA Documentation	3.00%	$21,000,000.00
Program Management	5.00%	$35,000,000.00
Design	10.00%	$70,000,000.00
Construction Engineering & Inspection	10.00%	$70,000,000.00

Grand Total **$896,000,000.00**

I-95/I-395 Interchange	
Preliminary Engineering	$105,000,000.00
Construction Engineering & Inspection	$70,000,000.00
Right-of-Way	
NEPA Documentation	$21,000,000.00
Construction	$700,000,000.00
TOTAL	**$896,000,000.00**

Northbound & Southbound: Exit 70 to Exit 74

Length (mi) **16.8**

Item	Cost/Mile	Total Cost
Bituminous Pavement	$3,682,746.25	$61,870,137.00
Excavation & Borrow	$1,470,699.83	$24,707,757.14
Drainage	$831,068.15	$13,961,944.92
Metal Beam Rail and Concrete Median Barrier	$628,039.17	$10,551,058.06
Highway Lighting	$528,000.00	$8,870,400.00
Concrete Pavement Repair		$0.00
Noise Barrier Wall	$346,666.67	$5,824,000.06
Signing	$45,999.77	$772,796.14
Retaining Walls	$307,500.00	$5,166,000.00
Pavement Markings	$8,580.00	$144,144.00
Interchange Improvements		$23,200,000.00
Wetland Mitigation	$70,083.33	$1,177,399.94
Structure Replacement		$60,411,000.00
Utility Relocation (Structure)		$2,400,000.00
Percentage Items		$65,432,502.04
	Subtotal	**$284,489,139.29**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$71,122,284.82
	Subtotal	**$355,611,424.12**

Item	Percentage	Total Cost
State Police	2.50%	$8,890,285.60
ITS		$16,800,000.00
Environmental Compliance	5.00%	$17,780,571.21
Right-of-Way		$298,758.00
NEPA Documentation	3.00%	$10,668,342.72
Program Management	5.00%	$17,780,571.21
Design	10.00%	$35,561,142.41
Construction Engineering & Inspection	10.00%	$35,561,142.41

Grand Total	**$498,952,237.68**
Contingency (8.10%)	**$539,367,368.93**

Northbound & Southbound: Exit 80 to Exit 82A

Length (mi) **7.2**

Item	Cost/Mile	Total Cost
Bituminous Pavement	$3,771,691.81	$27,156,181.03
Excavation & Borrow	$1,470,699.83	$10,589,038.78
Drainage	$831,068.15	$5,983,690.68
Metal Beam Rail and Concrete Median Barrier	$628,039.17	$4,521,882.02
Highway Lighting	$528,000.00	$3,801,600.00
Concrete Pavement Repair		$0.00
Noise Barrier Wall	$346,666.67	$2,496,000.02
Signing	$45,999.77	$331,198.34
Retaining Walls	$307,500.00	$2,214,000.00
Pavement Markings	$8,580.00	$61,776.00
Interchange Improvements		$20,000,000.00
Wetland Mitigation	$70,083.33	$504,599.98
Structure Replacement		$32,956,000.00
Utility Relocation (Structure)		$1,200,000.00
Percentage Items		$33,399,574.52
	Subtotal	**$145,215,541.37**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$36,303,885.34
	Subtotal	**$181,519,426.71**

Item	Percentage	Total Cost
State Police	2.50%	$4,537,985.67
ITS		$7,200,000.00
Environmental Compliance	5.00%	$9,075,971.34
Right-of-Way		$298,758.00
NEPA Documentation	3.00%	$5,445,582.80
Program Management	5.00%	$9,075,971.34
Design	10.00%	$18,151,942.67
Construction Engineering & Inspection	10.00%	$18,151,942.67

Grand Total	**$253,457,581.20**
Contingency (8.10%)	**$273,987,645.27**

Northbound & Southbound: Exit 54 to Exit 69

Length (mi) **48.4**

Item	Cost/Mile	Total Cost
Bituminous Pavement	$2,308,130.20	$111,713,501.68
Excavation	$922,612.00	$44,654,420.80
Drainage	$697,008.02	$33,735,188.17
Metal Beam Rail and Concrete Median Barrier	$621,794.20	$30,094,839.28
Highway Lighting	$528,000.00	$25,555,200.00
Concrete Pavement Repair	$880,000.00	$42,592,000.00
Noise Barrier Wall	$534,400.00	$25,864,960.00
Signing	$70,984.43	$3,435,646.41
Retaining Walls	$21,450.00	$1,038,180.00
Pavement Markings	$8,580.00	$415,272.00
Interchange Improvements		$62,400,000.00
Wetland Mitigation	$35,080.00	$1,697,872.00
Structure Replacement/Modifications		$261,922,000.00
Percentage Items		$192,697,907.11
	Subtotal	**$837,816,987.45**

Item	Percentage	Total Cost
Minor Item Allowance	25.00%	$209,454,246.86
	Subtotal	**$1,047,271,234.32**

Item	Percentage	Total Cost
State Police	2.50%	$26,181,780.86
ITS		$48,400,000.00
Environmental Compliance	5.00%	$52,363,561.72
Right-of-Way		$1,287,909.48
NEPA Documentation	3.00%	$31,418,137.03
Program Management	5.00%	$52,363,561.72
Design	10.00%	$104,727,123.43
Construction Engineering & Inspection	10.00%	$104,727,123.43

Grand Total	**$1,468,740,431.98**
Contingency (8.10%)	**$1,587,708,406.97**

Basis of Estimate

The following is a list of assumptions made while assembling the construction cost estimate for the I-95 Improvements – Feasibility Evaluation and Phasing Study (Branford to Rhode Island). The cost estimates developed for this study are based on the risk estimate prepared for the I-95 Improvements – Feasibility Evaluation Study (Greenwich to New Haven). Many of the costs derived from the risk model were applied to this study corridor area.

Area 1: Branford to Baldwin Bridge

General Assumptions:

- All estimate quantities are calculated based on direction, with a total construction length of 25 miles in each direction (northbound or southbound), 50 miles for both directions (northbound & southbound). This distance excludes areas in Branford and Old Saybrook where I-95 contains 3 existing travel lanes.

Unit Prices:

- All unit prices were generated from AASHTO Estimator's database, based on quantities of materials for 1 mile in length. Any unit pricing no found through Estimator was based off similar historical projects and engineering judgement.

Bituminous Pavement:

- Assumed the following full depth pavement course for all full depth widening areas:
  - 4" HMA S0.5
  - 8" HMA S1
  - 10" Processed Aggregate Base
  - 12" Subbase
- Assumed full depth pavement widening of 26 ft. for additional 12 ft. 3rd travel lane and 14 ft. shoulder.
- Additional full depth pavement for left shoulder widening calculated for the following areas:
  - NB & SB between Mile 18.5 and Mile 25
    - Existing left shoulder = 10', requires 4' of full depth pavement to widen to 14'
    - Length of 4' widening section = 4.0 miles per direction, 13 miles total
- A wedge course of HMA S0.5 will be required to shift the crown line 4' to right edge of the left shoulder in the areas that require left shoulder widening.
  - Assumed the wedge course will be 8' width with an average depth of 0.5"
- Assumed Milling and Overlay of existing 2 travel lanes (12' width) and left shoulder (14' width) to expose the concrete base course. Width of pavement overlay in each direction is 38'.
  - Assumed that 6" of HMA S0.5 will be placed on-top of the existing concrete base in mill and overlay sections
  - Assumed a milling depth of 4"-8"
- Assumed 4 applications of tack coat on the total proposed roadway width
- Assumed tack coat is applied at a factor of 0.07 Gal/SY, per Form 817 Section 4.6.03
- Assumed 5% of the existing concrete base course over the total project length (50 miles) will need to be replaced. Concrete base replacement length = 2.5 miles

- HMA S0.5 set at 0" and HMA S1 set at 6" for this section since the 6" overlay course is covered under the mill & overlay pavement section

Excavation & Borrow:

- Assumed 34" depth of excavation for full depth pavement widening within the existing 10' right shoulder
- The remaining 16' of widening (26' total – 10' within the right shoulder = 16' remaining) for full depth pavement will be split between excavation and borrow:
  - Total Project Length = 50 miles
    - Length of Northbound Lanes in Fill Section = 73,440 LF = 13.91 miles
    - Length of Southbound Lanes in Fill Section = 67,910 LF = 12.86 miles
    - Percentage of Roadway in Cut Section = 46%(earth excavation)
    - Percentage of Roadway in Fill Section = 54% (borrow)
    - Fill sections estimated from the 2004 Corridor Improvement Concepts

- Assumed 34" depth of excavation for full depth pavement for left shoulder widening in areas where the left shoulder is less than 14'
  - Average width of widening of left shoulder = 4'
  - Length of left shoulder widening = 13 miles
- Assumed an additional 10CY of excavation per linear foot for tying in slopes for widening, of which:
  - Total Length of Project in Cut Section = 23.2 miles
    - Length of Northbound Lanes with Visible Rock Outcrops = 2.03 miles
    - Length of Southbound Lanes with Visible Rock Outcrops = 1.24 miles
    - Percentage of Roadway in Rock Excavation Section = 14%, rounded to 15%
  - 85% of additional excavation is earth excavation
  - 15% of additional excavation is rock excavation

Drainage:

- Assumed placing 1 Type "C" Catch Basin and 1 Type "C-M" Catch Basin every 300 LF along each direction (northbound/southbound) the total length of project
  - Catch Basin spacing determined by the average spacing of catch basins from Project 35-176 Reconstruction of Median and Resurfacing on I-95
- Assumed 1 run of 24" R.C. Pipe the total project length
  - Pipe sizes may vary from 15" to 36", 24" is a representative size for estimate purposes
- Assumed one 15" R.C. Pipe crossing the roadway every 300'
  - Crossing pipe spacing determined by the average spacing of catch basins from Project 35-176 Reconstruction of Median and Resurfacing on I-95
- Trench Excavation quantity was based on a longitudinal 24" R.C. Pipe and crossing 15" R.C. Pipe
  - Assumed average depth of 6'
  - Assumed 85% of trench excavation will be earth, 15% will be rock
    - 15% Rock Excavation determined from the earth excavation calculations
- Bedding Material quantity was based on longitudinal 24" R.C. Pipe and crossing 15" R.C. Pipe

    - Assumed 85% of bedding material will be in non-rock areas (4" bedding material depth), 15% of bedding material will be in rock areas (12" bedding material depth)
- Assumed 1 standard endwall for every 1100 LF of roadway
    - Quantity of Class "A" Concrete based on a standard endwall for a 36" pipe (5.45 CY). Quantity of Class "A" Concrete taken from Standard Highway Drawing HW-506_01.
    - The spacing of endwalls determined by the average spacing of outlet structure from Project 35-176 Reconstruction of Median and Resurfacing on I-95.
- It is assumed that all existing corrugated metal pipes will be replaced within the project area. The cost of the CMP replacement is covered under the cost of new 24" RCP and 15" RCP placement.

Metal Beam Rail & Concrete Median Barrier:

- Assumed metal beam rail placed in all Fill Sections
    - Fill sections measured from the 2008 Corridor Improvement Concepts
        - Length of Northbound Lanes in Fill Section = 73,440 LF = 13.91 miles
        - Length of Southbound Lanes in Fill Section = 67,910 LF = 12.86 miles
- Assumed 1 R-B End Anchorage – Type I and 1 Metal Beam Rail Terminal Element at end of each Fill Section
- Assumed 1 R-B 350 Bridge Attachment – Vertical Shaped Parapet at the intersection of a bridge and fill section
- Assumed new F-Shape Precast Concrete Barrier Curb (21" x 45") on 100% of the project length

Highway Lighting:

- Assumed new conduit and cable the length of project in each direction
- Assumed 250' spacing between new highway lighting poles (same spacing as existing lighting along I-95)

Concrete Pavement Repair:

- Assumed concrete pavement repair will be replacement of the transverse joints with precast concrete joints
    - Assumed joint spacing is 40'
    - Assumed joints will be sawcut 5' on each side of the joint, for a 10' total width joint replacement
    - Assumed joints over the two (2) 12' travel lanes (24' total length) occur in the same transverse locations and have the same spacing
- Three existing Rehabilitation Projects along I-95 were used to estimate the percent of joints to be replaced. The quantity of concrete pavement (cy) on the bid tabulation sheet was used to estimate the number of joints replaced under each project. The assumed size of joint replacement was 10' width x 36' length x 9" depth.
    - Project 35-176 had an estimated 211 joints replaced (33% of the project length)
    - Project 56-258 had an estimated 53 joints replaced (18% of the project length)

        - Project 56-246 had an estimated 51 joints replaced (17% of the project length)
    - The total number of joints on both the northbound and southbound travel lanes was estimated as 6,600, assuming a 40' spacing between joints
    - Of the 6,600 joints in the corridor, **50%** will be replaced under future projects
    - Assumed a replacement cost of $500/SY of precast joint replacement

Noise Barrier Wall:

- Assumed noise barrier wall will be placed where noise sensitive areas or developments are within 300' of I-95 corridor
    - Length of Northbound Travel Lanes = 132,000'
        - Length of Northbound Travel Lanes Requiring Noise Barrier Wall = 22,500'
    - Length of Southbound Travel Lanes = 132,000'
        - Length of Southbound Travel Lanes Requiring Noise Barrier Wall = 19,500'
- Assumed wall height of 16'

Signing:

- Cost of sign replacement based on the cost to complete for Project No. 0172-0388, Replacement of Highway Signs on I-395.
    - Total Bid Price of Project No. 0172-0388 = $2,319,733
    - Total Number of Interchanges for Project No. 0172-0388 = 26
    - Cost Per Interchange for Project No. 0172-0388 = $44,610.25
    - Cost of signing per interchange applied to 17 interchanges along I-95
    - Total cost of signing per mile = $30,335.00
- Overhead sign supports including cantilevers, full overhead (monotube), full overhead (truss), overhead truss foundations, and drilled shaft foundations costs determined by the Department.
    - Costs determined from Project 173-351 completed in the Summer of 2015, which replaced all signs and supports on I-95 from Fairfield/Bridgeport line to the West Haven/New Haven Line
        - Total Project Length = 11.18 miles
        - Cantilevers = 5 each @ $48,954 average bid price for each
        - Full Overhead (monotube) = 2 each @ $88,385 average bid price for each
        - Full Overhead (truss) = 3 each @ $159,058 average bid price for each
        - OVH Truss Foundation = 6 each @ $75,396 average bid price for each
        - Drilled Shaft Foundation = 9 each @ $51,862 average bid price for each
        - Assume 25% of cost, as I-95 East of New Haven has less overhead signage than West of New Haven
        - Total average cost per mile for overhead sign supports = $40,649.43

Retaining Walls:

- Lengths of retaining walls for northbound and southbound I-95 based on Preliminary Design plans developed for the I-95 Improvements – Feasibility Evaluation and Phasing Study (Branford to Rhode Island) = 715 LF
- Average height of retaining walls assumed to be 10'

Pavement Markings:

- Assumed one (1) 4" white right shoulder line, one (1) 4" yellow left shoulder line, and two (2) 6" white broken lines (10' line length, 30' spacing) the entire project length.

Interchange Improvements:

- Cost of all interchanges based on a comparison of Exit 61 interchange. The proposed Exit 61 interchange was estimated, and will be used as a basis to determine the costs of all the other interchanges.
- Cost of Exit 61 Interchange as follows:

Item Number	Description	Units	Quantity	Cost	Total
0406171	HMA S0.5	Ton	4460	$ 89.00	$ 396,940.00
0406170	HMA S1	Ton	6790	$ 89.00	$ 604,310.00
0304002	Processed Aggregate Base	CY	4920	$ 39.00	$ 191,880.00
0212000	Subbase	CY	9840	$ 46.00	$ 452,640.00
0209001	Formation of Subgrade	SY	29520	$ 2.00	$ 59,040.00
0406236	Material for Tack Coat	GAL	9580	$ 5.00	$ 47,900.00
0406267	Milling of HMA (Over 0" to 4")	SY	9330	$ 4.00	$ 37,320.00
0202000	Earth Excavation	CY	63480	$ 12.00	$ 761,760.00
0202100	Rock Excavation	CY	6350	$ 27.00	$ 171,450.00
0207000	Borrow	CY	0	$ 10.00	$ -
0910170	Metal Beam Rail (Type R-B 350)	LF	5045	$ 25.00	$ 126,125.00
0910021	R-B End Anchorage - Type 1	EA	17	$ 1,190.00	$ 20,230.00
0910173	R-B 350 Bridge Attachment - Vertical Shaped Parapet	EA	4	$ 2,500.00	$ 10,000.00
	Traffic Signal - Location 1	EA	1	$ 235,000.00	$ 235,000.00
	Traffic Signal - Location 2	EA	1	$ 235,000.00	$ 235,000.00
	Traffic Signal - Location 3	EA	1	$ 235,000.00	$ 235,000.00
	Wetland Mitigation	LS	1	$ 120,000.00	$ 120,000.00
				Subtotal:	$ 3,704,595.00
				SAY:	**$ 4,000,000.00**

- All other interchange costs determined by a percentage (%) of work compared to Interchange 61

Wetland Mitigation:

- Wetland mitigation areas based on the total anticipated impacts calculated in Section 5.3.4 of the report update
- Mitigation areas based on a total of the National Wetland Inventory Wetlands and Tidal Wetlands located within the project area.

Structure Replacement:

- Structure replacements based on Structure Evaluation Chart provided in Appendix B

- For structures carrying I-95, the proposed bridge deck width was assumed to be 138 ft. (14 ft outside shoulders, 12 ft travel lanes, 14 ft inside shoulders and 10 ft median barrier = 138 ft). Total proposed deck area = 138 ft * existing bridge length.
- For structures carrying local roads over I-95, the proposed bridge length was assumed to be 210 ft., to account for the 138 ft. I-95 typical section plus additional width to tie in a slope to the bridge abutments. Total proposed deck area = 210 ft. * existing bridge width.
- Cost of bridge replacement = $525/sf
- Cost of culverts was not included in the structure replacement costs

Area 2: Baldwin Bridge to Gold Star Memorial Bridge

General Assumptions:

- All estimate quantities are calculated based on direction, with a total construction length of 12 miles in each direction (northbound or southbound), 24 miles for both directions (northbound & southbound). This length excludes the I-95/I-395 interchange, as this work is included in a separate cost estimate.

Unit Prices:

- All unit prices were generated from AASHTO Estimator's database, based on quantities of materials for 1 mile in length. Any unit pricing not found through Estimator was based off similar historical projects and engineering judgement.

Bituminous Pavement:

- Assumed the following full depth pavement course for all full depth widening areas:
    - 4" HMA S0.5
    - 8" HMA S1
    - 10" Processed Aggregate Base
    - 12" Subbase
- Assumed that the entire section of Area 2 will be full depth pavement replacement. The existing concrete base course will be removed and replaced with full depth bituminous pavement.
- Pavement for full depth construction of the collector/distributer roads calculated separately.
- Assumed 4 application of tack coat on the total proposed roadway width (26' widened section + 28' mill and overlay section).
- Assumed tack coat is applied at a factor of 0.07 Gal/SY, per Form 817 Section 4.6.03

Excavation & Borrow:

- Assumed 34" depth of excavation for full depth pavement the entire width of existing roadway
- The remaining 16' of widening (64' total – 40' within the existing roadway section = 29' remaining) for full depth pavement will be split between excavation and borrow:
    - Total Project Length = 24 miles
        - Length of Northbound Lanes in Cut Section = 4.5 miles
        - Length of Southbound Lanes in Cut Section = 6.8 miles
        - Percentage of Roadway in Cut Section = 45%.
    - 45% of roadway is in cut sections (earth excavation)
    - 55% of roadway is in fill sections (borrow)
- Assumed an additional 10 CY of excavation per linear foot for tying in slopes for widening, of which:
    - Assumed 50% of additional excavation is earth excavation
    - Assumed 50% of additional excavation is rock excavation

Drainage:

- Assumed placing 1 Type "C" Catch Basin and 1 Type "C-M" Catch Basin every 300 LF along each direction (northbound/southbound) the total length of project

    - Catch Basin spacing determined by the average spacing of catch basins from Project 35-176 Reconstruction of Median and Resurfacing on I-95
- Assumed 1 run of 24" R.C. Pipe the total project length
    - Pipe sizes may vary from 15" to 36", 24" is a representative size for estimate purposes
- Assumed one 15" R.C. Pipe crossing the roadway every 300'
    - Crossing pipe spacing determined by the average spacing of catch basins from Project 35-176 Reconstruction of Median and Resurfacing on I-95
- Trench Excavation quantity was based on a longitudinal 24" R.C. Pipe and crossing 15" R.C. Pipe
    - Assumed average depth of 6'
    - Assumed 50% of trench excavation will be earth, 50% will be rock
        - 50% Rock Excavation determined from the earth excavation calculations
- Bedding Material quantity was based on longitudinal 24" R.C. Pipe and crossing 15" R.C. Pipe
    - Assumed 50% of bedding material will be in non-rock areas (4" bedding material depth), 50% of bedding material will be in rock areas (12" bedding material depth)
- Assumed 1 standard endwall for every 1100 LF of roadway
    - Quantity of Class "A" Concrete based on a standard endwall for a 36" pipe (5.45 CY). Quantity of Class "A" Concrete taken from Standard Highway Drawing HW-506_01.
    - The spacing of endwalls determined by the average spacing of outlet structure from Project 35-176 Reconstruction of Median and Resurfacing on I-95.
- It is assumed that all existing corrugated metal pipes will be replaced within the project area. The cost of the CMP replacement is covered under the cost of new 24" RCP and 15" RCP placement.

Metal Beam Rail & Concrete Median Barrier:

- Assumed metal beam rail placed in all Fill Sections
- Assumed 1 R-B End Anchorage – Type I and 1 Metal Beam Rail Terminal Element at end of each Fill Section
- Assumed 1 R-B 350 Bridge Attachment – Vertical Shaped Parapet at the intersection of a bridge and fill section
- Assumed new F-Shape Precast Concrete Barrier Curb (21" x 45") on 100% of the project length

Highway Lighting:

- Assumed new conduit and cable the length of project in each direction
- Assumed 250' spacing between new highway lighting poles (same spacing as existing lighting along I-95)

Concrete Pavement Repair:

- Assumed all existing concrete base will be removed and replaced with full depth bituminous in this section

Signing:

- Cost of sign replacement based on the cost to complete for Project No. 0172-0388, Replacement of Highway Signs on I-395.
    - Total Bid Price of Project No. 0172-0388 = $2,319,733
    - Total Number of Interchanges for Project No. 0172-0388 = 26
    - Cost Per Interchange for Project No. 0172-0388 = $44,610.25
    - Cost of signing per interchange applied to 26 interchanges along I-95
    - Total cost per interchange per direction for sign replacement = $41,636.00
- Overhead sign supports including cantilevers, full overhead (monotube), full overhead (truss), overhead truss foundations, and drilled shaft foundations costs determined by the Department.
    - Costs determined from Project 173-351 completed in the Summer of 2015, which replaced all signs and supports on I-95 from Fairfield/Bridgeport line to the West Haven/New Haven Line
        - Total Project Length = 11.18 miles
        - Cantilevers = 5 each @ $48,954 average bid price for each
        - Full Overhead (monotube) = 2 each @ $88,385 average bid price for each
        - Full Overhead (truss) = 3 each @ $159,058 average bid price for each
        - OVH Truss Foundation = 6 each @ $75,396 average bid price for each
        - Drilled Shaft Foundation = 9 each @ $51,862 average bid price for each
        - Assume 10% of cost, as I-95 East of New Haven has less overhead signage than West of New Haven
        - Total average cost per mile for overhead sign supports = $16,259.77

Noise Barrier Wall:

- Assumed noise barrier wall will be placed where noise sensitive areas or developments are within 300' of I-95 corridor
    - Length of Northbound Travel Lanes = 63,360'
        - Length of Northbound Travel Lanes Requiring Noise Barrier Wall = 8,900'
    - Length of Southbound Travel Lanes = 63,360'
        - Length of Southbound Travel Lanes Requiring Noise Barrier Wall = 4,100'
- Assumed wall height of 16'

Retaining Walls:

- Lengths of retaining walls for northbound and southbound I-95 based on Preliminary Design plans developed for the I-95 Improvements – Feasibility Evaluation and Phasing Study (Branford to Rhode Island)
- Average height of retaining walls assumed to be 10'

Interchange Improvements:

- See interchange improvements under Area 1 Basis of Estimate

Pavement Markings:

- Assumed one (1) 4" white right shoulder line, one (1) 4" yellow left shoulder line, and two (2) 6" white broken lines (10' line length, 30' spacing) the entire project length.

Wetland Mitigation:

- Wetland mitigation areas based on the total anticipated impacts calculated in Section 5.3.4 of the report update
- Mitigation areas based on a total of the National Wetland Inventory Wetlands and Tidal Wetlands located within the project area.

Structure Replacement:

- Structure replacements based on Structure Evaluation Chart provided in Appendix B
- For structures carrying I-95, the proposed bridge deck width was assumed to be 138 ft. (14 ft outside shoulders, 12 ft travel lanes, 14 ft inside shoulders and 10 ft median barrier = 138 ft). Total proposed deck area = 138 ft * existing bridge length.
- For structures carrying local roads over I-95, the proposed bridge length was assumed to be 210 ft., to account for the 138 ft. I-95 typical section plus additional width to tie in a slope to the bridge abutments. Total proposed deck area = 210 ft. * existing bridge width.
- Cost of bridge replacement = $525/sf
- Cost of culverts was not included in the structure replacement costs

Area 3: Gold Star Memorial Bridge to Rhode Island Border

General Assumptions:

- All estimate quantities are calculated based on direction, with a total construction length of 8.75 miles in each direction (northbound or southbound), 17.5 miles for both directions (northbound & southbound).
    - This length extends from the Noank/Ledyard Road overpass to Exit 92 and excludes the distance from the Gold Star Memorial Bridge to the Noank/Ledyard Road overpass, as I-95 is already 3 lanes in each direction. It also excludes the distance from Exit 92 to the Rhode Island border, where traffic analysis has determined that no widening is required.

Unit Prices:

- All unit prices were generated from AASHTO Estimator's database, based on quantities of materials for 1 mile in length. Any unit pricing not found through Estimator was based off similar historical projects and engineering judgement.

Bituminous Pavement:

- Assumed the following full depth pavement course for all full depth widening areas:
    - 4" HMA S0.5
    - 8" HMA S1
    - 10" Processed Aggregate Base
    - 12" Subbase
- Additional full depth pavement for left shoulder widening for entire 14' width
- A wedge course of HMA S0.5 will be required to shift the crown line 12' to center on the proposed 3 thru lanes
    - Assumed the wedge course will be 24' in width with an average depth of 0.5"
- Assumed Milling and Overlay of existing 2 travel lanes (12' width)
    - Assumed that 6" of HMA S0.5 will be placed on-top of the existing concrete base in mill and overlay sections
    - Assumed a milling depth of 4"-8"
- Assumed 4 application of tack coat on the total proposed roadway width
- Assumed tack coat is applied at a factor of 0.07 Gal/SY, per Form 817 Section 4.6.03
- Assumed 5% of the existing concrete base course over the total project length (17.5 miles) will need to be replaced. Concrete base replacement length = 1 miles
    - HMA S0.5 set at 0" and HMA S1 set at 6" for this section since the 6" overlay course is covered under the mill & overlay pavement section

Excavation & Borrow:

- Assumed 34" depth of excavation for full depth pavement widening within the existing 10' right shoulder
- The remaining 16' of widening (26' total – 10' within the right shoulder = 16' remaining) for full depth pavement will be split between excavation and borrow:
    - Assumed Percentage of Roadway in Cut Section = 50%.
    - 50% of roadway is in cut sections (earth excavation)
    - 50% of roadway is in fill sections (borrow)

- Assumed 34" depth of excavation for full depth pavement for left shoulder widening in areas where the left shoulder is less than 14'
    - Length of left shoulder widening = 17.5 miles
- Assumed an additional 2CY of excavation per linear foot for tying in slopes for widening, of which:
    - Total Length of Project in Cut Section = 8.8 miles
        - Length of Northbound Lanes with Visible Rock Outcrops = 0.07 miles
        - Length of Southbound Lanes with Visible Rock Outcrops = 0.27 miles
        - Percentage of Roadway in Rock Excavation Section = 5%
    - 95% of additional excavation is earth excavation
    - 5% of additional excavation is rock excavation

Drainage:

- Assumed placing 1 Type "C" Catch Basin and 1 Type "C-M" Catch Basin every 300 LF along each direction (northbound/southbound) the total length of project
    - Catch Basin spacing determined by the average spacing of catch basins from Project 35-176 Reconstruction of Median and Resurfacing on I-95
- Assumed 1 run of 24" R.C. Pipe the total project length
    - Pipe sizes may vary from 15" to 36", 24" is a representative size for estimate purposes
- Assumed one 15" R.C. Pipe crossing the roadway every 300'
    - Crossing pipe spacing determined by the average spacing of catch basins from Project 35-176 Reconstruction of Median and Resurfacing on I-95
- Trench Excavation quantity was based on a longitudinal 24" R.C. Pipe and crossing 15" R.C. Pipe
    - Assumed average depth of 6'
    - Assumed 95% of trench excavation will be earth, 10% will be rock
        - 5% Rock Excavation determined from the earth excavation calculations
- Bedding Material quantity was based on longitudinal 24" R.C. Pipe and crossing 15" R.C. Pipe
    - Assumed 95% of bedding material will be in non-rock areas (4" bedding material depth), 5% of bedding material will be in rock areas (12" bedding material depth)
- Assumed 1 standard endwall for every 1100 LF of roadway
    - Quantity of Class "A" Concrete based on a standard endwall for a 36" pipe (5.45 CY). Quantity of Class "A" Concrete taken from Standard Highway Drawing HW-506_01.
    - The spacing of endwalls determined by the average spacing of outlet structure from Project 35-176 Reconstruction of Median and Resurfacing on I-95.
- It is assumed that all existing corrugated metal pipes will be replaced within the project area. The cost of the CMP replacement is covered under the cost of new 24" RCP and 15" RCP placement.

Metal Beam Rail & Concrete Median Barrier:

- Assumed metal beam rail placed in all Fill Sections
- Assumed 1 R-B End Anchorage – Type I and 1 Metal Beam Rail Terminal Element at end of each Fill Section

- Assumed 1 R-B 350 Bridge Attachment – Vertical Shaped Parapet at the intersection of a bridge and fill section
- Assumed new F-Shape Precast Concrete Barrier Curb (21" x 45") on 0% of the project length

Highway Lighting:

- Assumed new conduit and cable the length of project in each direction
- Assumed 250' spacing between new highway lighting poles (same spacing as existing lighting along I-95)

Concrete Pavement Repair:

- Assumed concrete pavement repair will be replacement of the transverse joints with precast concrete joints
  - Assumed joint spacing is 40'
  - Assumed joints will be sawcut 5' on each side of the joint, for a 10' total width joint replacement
  - Assumed joints over the two (2) 12' travel lanes (24' total length) occur in the same transverse locations and have the same spacing
- Three existing Rehabilitation Projects along I-95 were used to estimate the percent of joints to be replaced. The quantity of concrete pavement (cy) on the bid tabulation sheet was used to estimate the number of joints replaced under each project. The assumed size of joint replacement was 10' width x 36' length x 9" depth.
  - Project 35-176 had an estimated 211 joints replaced (33% of the project length)
  - Project 56-258 had an estimated 53 joints replaced (18% of the project length)
  - Project 56-246 had an estimated 51 joints replaced (17% of the project length)
- The total number of joints on both the northbound and southbound travel lanes was estimated as 2,310, assuming a 40' spacing between joints
- Of the 2,310 joints in the corridor, **20%** will be replaced under future projects
- Assumed a replacement cost of $500/SY of precast joint replacement

Noise Barrier Wall:

- Assumed noise barrier wall will be placed where noise sensitive areas or developments are within 300' of I-95 corridor
  - Length of Northbound Travel Lanes Requiring Noise Barrier Wall = 7,650'
  - Length of Southbound Travel Lanes Requiring Noise Barrier Wall = 3,450'
- Assumed wall height of 16'

Signing:

- Cost of sign replacement based on the cost to complete for Project No. 0172-0388, Replacement of Highway Signs on I-395.
  - Total Bid Price of Project No. 0172-0388 = $2,319,733
  - Total Number of Interchanges for Project No. 0172-0388 = 26

    - Cost Per Interchange for Project No. 0172-0388 = $44,610.25
    - Cost of signing per interchange applied to 26 interchanges along I-95
    - Total cost per interchange per direction for sign replacement = $41,636.00
- Overhead sign supports including cantilevers, full overhead (monotube), full overhead (truss), overhead truss foundations, and drilled shaft foundations costs determined by the Department.
    - Costs determined from Project 173-351 completed in the Summer of 2015, which replaced all signs and supports on I-95 from Fairfield/Bridgeport line to the West Haven/New Haven Line
        - Total Project Length = 11.18 miles
        - Cantilevers = 5 each @ $48,954 average bid price for each
        - Full Overhead (monotube) = 2 each @ $88,385 average bid price for each
        - Full Overhead (truss) = 3 each @ $159,058 average bid price for each
        - OVH Truss Foundation = 6 each @ $75,396 average bid price for each
        - Drilled Shaft Foundation = 9 each @ $51,862 average bid price for each
        - Assume 10% of cost, as I-95 East of New Haven has less overhead signage than West of New Haven
        - Total average cost per mile for overhead sign supports = $16,259.77

Retaining Walls:

- Lengths of retaining walls for northbound and southbound I-95 based on Preliminary Design plans developed for the I-95 Improvements – Feasibility Evaluation and Phasing Study (Branford to Rhode Island)
- Average height of retaining walls assumed to be 10’

Pavement Markings:

- Assumed one (1) 4” white right shoulder line, one (1) 4” yellow left shoulder line, and two (2) 6” white broken lines (10’ line length, 30’ spacing) the entire project length.

Interchange Improvements:

- See interchange improvements under Area 1 Basis of Estimate

Wetland Mitigation:

- Wetland mitigation areas based on the total anticipated impacts calculated in Section 5.3.4 of the report update
- Mitigation areas based on a total of the National Wetland Inventory Wetlands and Tidal Wetlands located within the project area.

Structure Replacement:

- Structure replacements based on Structure Evaluation Chart provided in Appendix B
- For structures carrying I-95, the proposed bridge deck width was assumed to be 138 ft. (14 ft outside shoulders, 12 ft travel lanes, 14 ft inside shoulders and 10 ft median barrier = 138 ft). Total proposed deck area = 138 ft * existing bridge length.

- For structures carrying local roads over I-95, the proposed bridge length was assumed to be 210 ft., to account for the 138 ft. I-95 typical section plus additional width to tie in a slope to the bridge abutments. Total proposed deck area = 210 ft. * existing bridge width.
- Cost of bridge replacement = $525/sf
- Cost of culverts was not included in the structure replacement costs

Percentage Based Items:

- All percentages for Clearing and Grubbing, Maintenance and Protection of Traffic, Mobilization and Project Closeout, and Construction Staking determined from the average percent of total bid from the Connecticut DOT 2017 Cost Estimating Guidelines. Average percentages were applied to the Total Construction Base Cost/Mile.
    - Clearing & Grubbing = 2%
    - Maintenance and Protection of Traffic = 10%
    - Mobilization & Project Closeout = 10%
    - Construction Staking = 1%

Minor Item Allowance:

- Percentage of minor item allowance determined by the midpoint of the percentage range for projects in the Programming Phase, as detailed in the Connecticut DOT 2017 Cost Estimating Guidelines
- Percentage applied to the Construction Subtotal
    - Base Percentage: 25%

Intelligent Transportation Systems (ITS):

- Assumed that new fiber will be run the length of the project with replacement of dynamic message signs.
- Assumed Base cost of $1,000,000/mile

Right-of-Way:

- Area of right-of-way impacts (sf) for northbound and southbound I-95 based on Preliminary Design plans developed for the I-95 Improvements – Feasibility Evaluation and Phasing Study (Branford to Rhode Island)
    - Utilized Average SF costs for commercial, residential and industrial, summarized by town, provided by CTDOT.
- Number of properties with Right-of-Way impacts determined based on Preliminary Design plans developed for the I-95 Improvements – Feasibility Evaluation and Phasing
    - Administrative cost of $15,000 per property impact applied
- Right-of-way impacts were only calculated for mainline I-95, and did not include any potential right-of-way impacts for interchange and ramp improvements. The costs of right-of-way impacts in the interchanges are included in the interchange improvement costs.

Non-Contract Item Percentages:

Percentages for each non-contract item applied to the Construction Subtotal **and** the Minor Item Allowance Subtotal. Assumed the following percentages for non-contract items for the Base estimate:

- State Police
    - Base Cost Percentage= 2.5%
- Environmental Compliance

    - Base Cost Percentage= 5%
- NEPA Documentation
    - Base Cost Percentage= 3%
- Program Management
    - Base Cost Percentage= 5%
- Design
    - Base Cost Percentage= 10%
- CEI
    - Base Cost Percentage= 10%

Inflation:

- Assumed an inflation of 3.5% per year
- Base Year = 2017
- Base Midpoint of Year of Expenditure = 2045

Contingency:

- Used a contingency of 8.10%, based on the results of the risk cost estimate from I-95 Improvements – Feasibility Evaluation Study (Greenwich to New Haven)

STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION MEMORANDUM	Subject	I-95 New Haven to Rhode Island Land Values
	Date	December 5, 2017
To Mr. David Elder Supervising Transportation Planner Planning & Projects Ext. 2139	From	Edward Sass Property Agent 2 Appraisal Section ext. 2402

As per your request I have completed an estimate of the land values in each town along Interstate 95 from New Haven to Rhode Island. It is broken down into commercial, industrial and residential. The values are not based on a per acre value but are based on the typical lot size of parcels in the towns on a per square foot value. Larger parcels may be valued lower per square foot and smaller parcels may be valued higher per square foot.

Cc:
David C. Elder
Amy N. Martinez
Anthony J. DeLucco
Edward P. Sass

TOWN	Commercial	Industrial	Residential
New Haven	$15-25/SF	$5-8/SF	$3-5/SF
East Haven	$15-25/SF	$5-8/SF	$3-5/SF
Branford	$7-10/SF	$5-8/SF	$5-7/SF-Acre, $9-13/SF Smaller
Guilford	$5-7/SF	$3-5/SF	$2-4/SF-Acre, $4-6/SF Smaller
Madison	$5-7/SF	$3-5/SF	$2-4/SF
Clinton	$5-7/SF	$2-4/SF	$1-3/SF
Westbrook	$5-7/SF	$2-4/SF	$1-3/SF
Old Saybrook	$5-7/SF	$2-4/SF	$1-3/SF
Old Lyme	$5-7/SF	$2-4/SF	$2-3/SF
East Lyme	$5-7/SF	$2-4/SF	$2-3/SF
Waterford	$5-8/SF	$2-4/SF	$1-3/SF
New London	$5-8/SF	$2-4/SF	$1-3/SF
Groton	$5-8/SF	$2-4/SF	$2-4/SF
Stonington	$4-6/SF	$2-4/SF	$2-4/SF

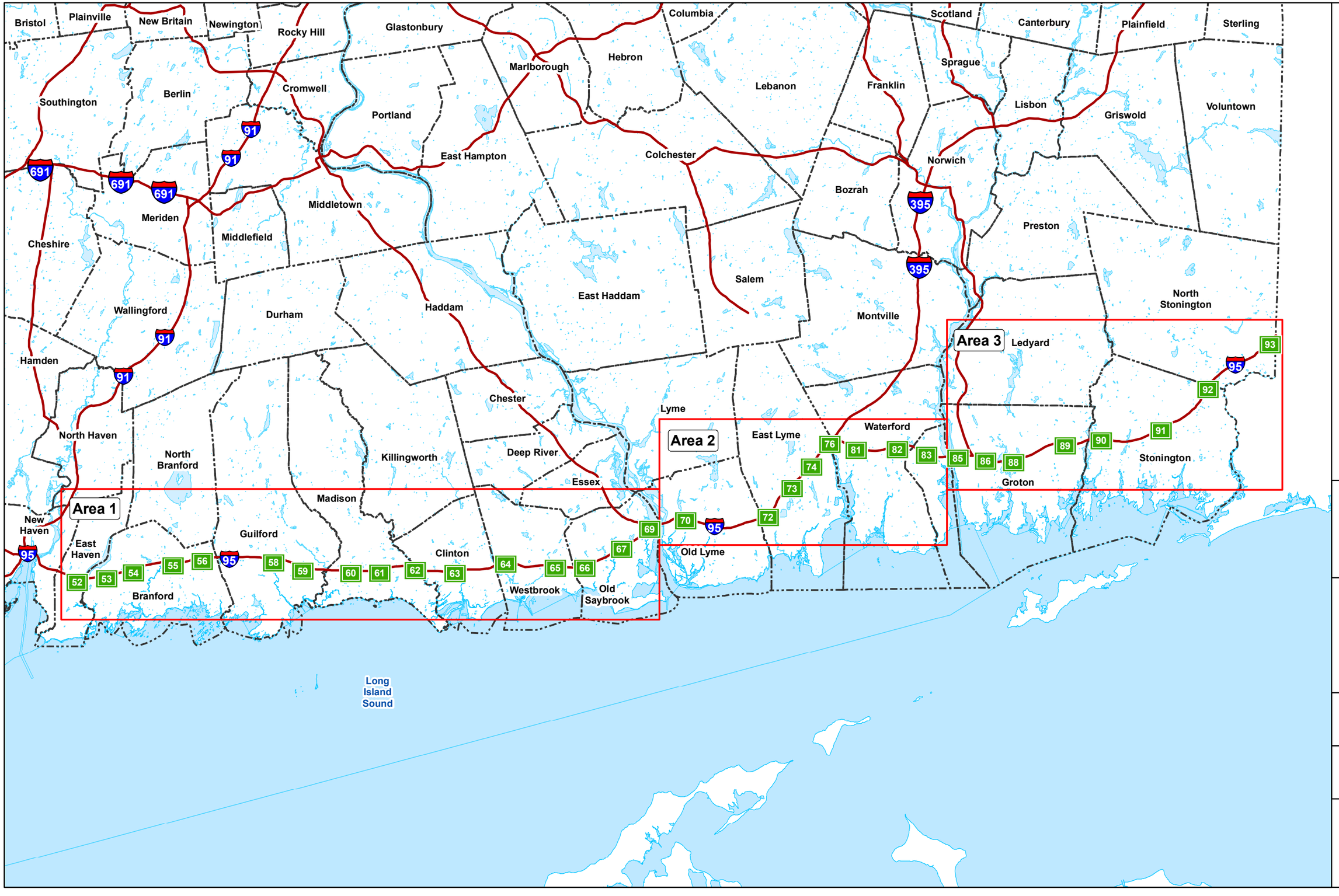
Appendix D
Environmental Mapping

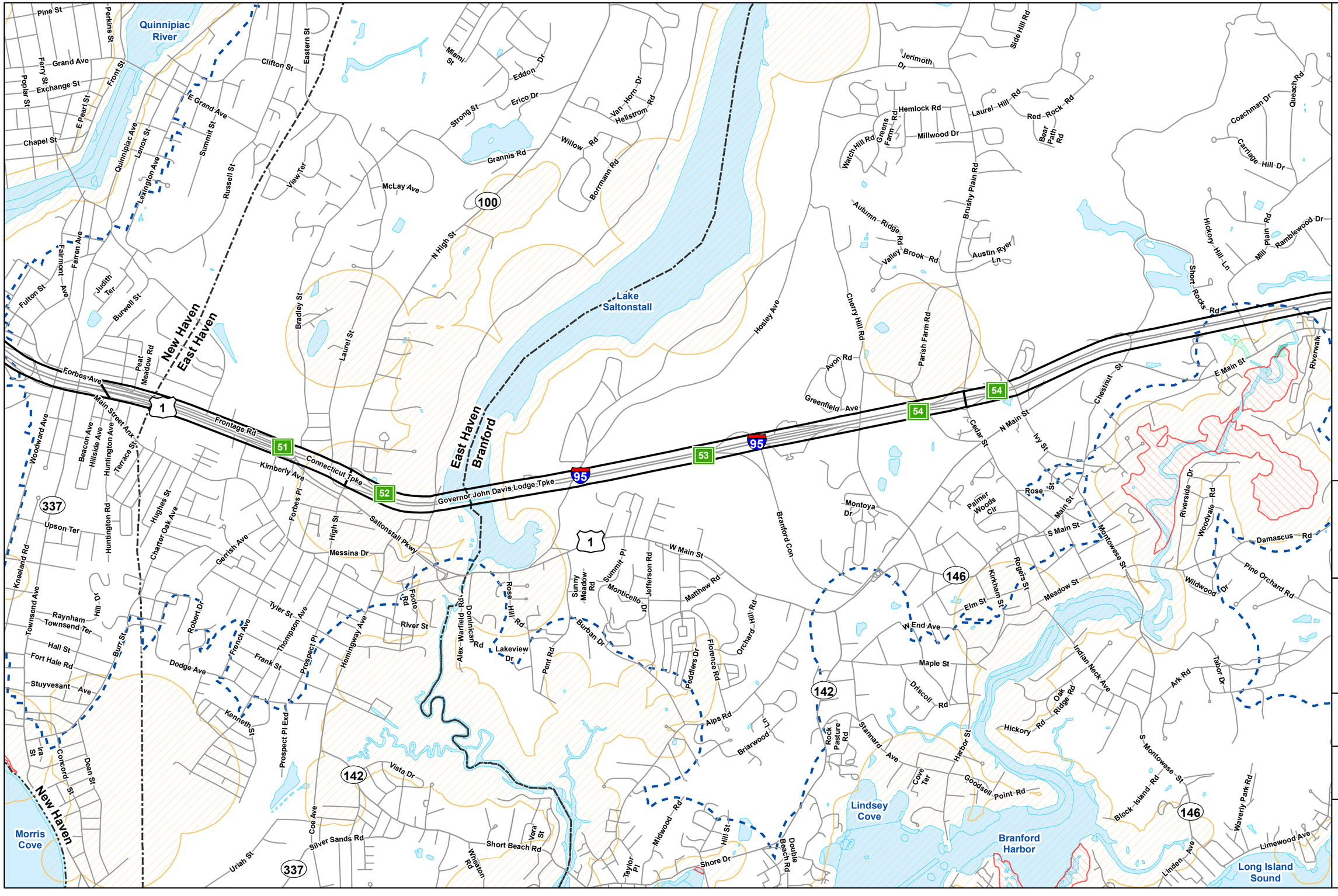
Corridor Overview Map

Cultural Resources

Groundwater Resources

Surface Water Resources

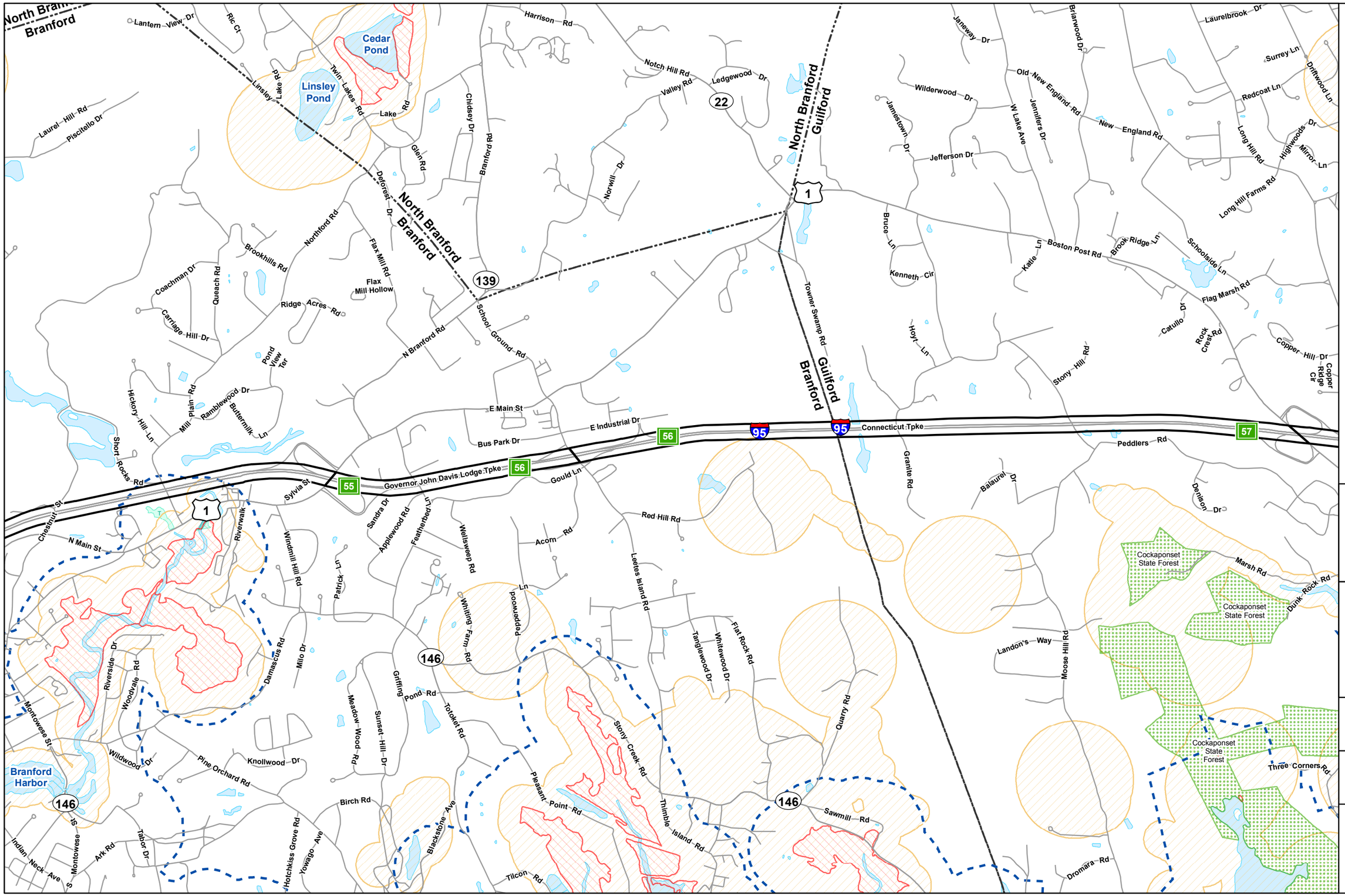

Bristol
Plainville
New Britain
Newington
Rocky Hill
Glastonbury
Columbia
Scotland
Canterbury
Plainfield
Sterling
Marlborough
Hebron
Sprague
Southington
Berlin
Cromwell
Portland
Lebanon
Franklin
Lisbon
Griswold
Voluntown
East Hampton
Colchester
Norwich
Bozrah
Middletown
Meriden
Middlefield
Preston
Cheshire
Salem
East Haddam
North Stonington
Wallingford
Durham
Haddam
Montville
Area 3
Ledyard
Hamden
Chester
Lyme
Waterford
North Haven
North Branford
Killingworth
Deep River
Area 2
East Lyme
Stonington
Essex
Groton
Madison
Area 1
New Haven
Guilford
Clinton
Old Lyme
East Haven
Westbrook
Old Saybrook
Branford
Long Island Sound
Legend
Major Roads
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
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CDM Smith
I-95 Corridor
Corridor Overview Map



CDM Smith

I-95 Corridor

Cultural Resources



Legend

- Town Line
- Exit to Exit (150 ft Buffer)
- Road Centerline
- Natural Diversity Area
- Critical Habitat

Surface Water

- Surface Waterbody or Watercourse

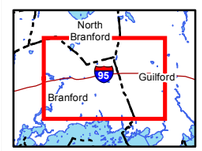
DEEP Property

- State Forest
- Natural Area Preserve

Coastal Resources

- Coastal Zone Boundary
- T — Tidal Wetland (1990s)*
- EM — Estuarine and Marine Deepwater*
- SC — Shellfish Area*

*Coastal Resources shown within 1000 feet of I-95



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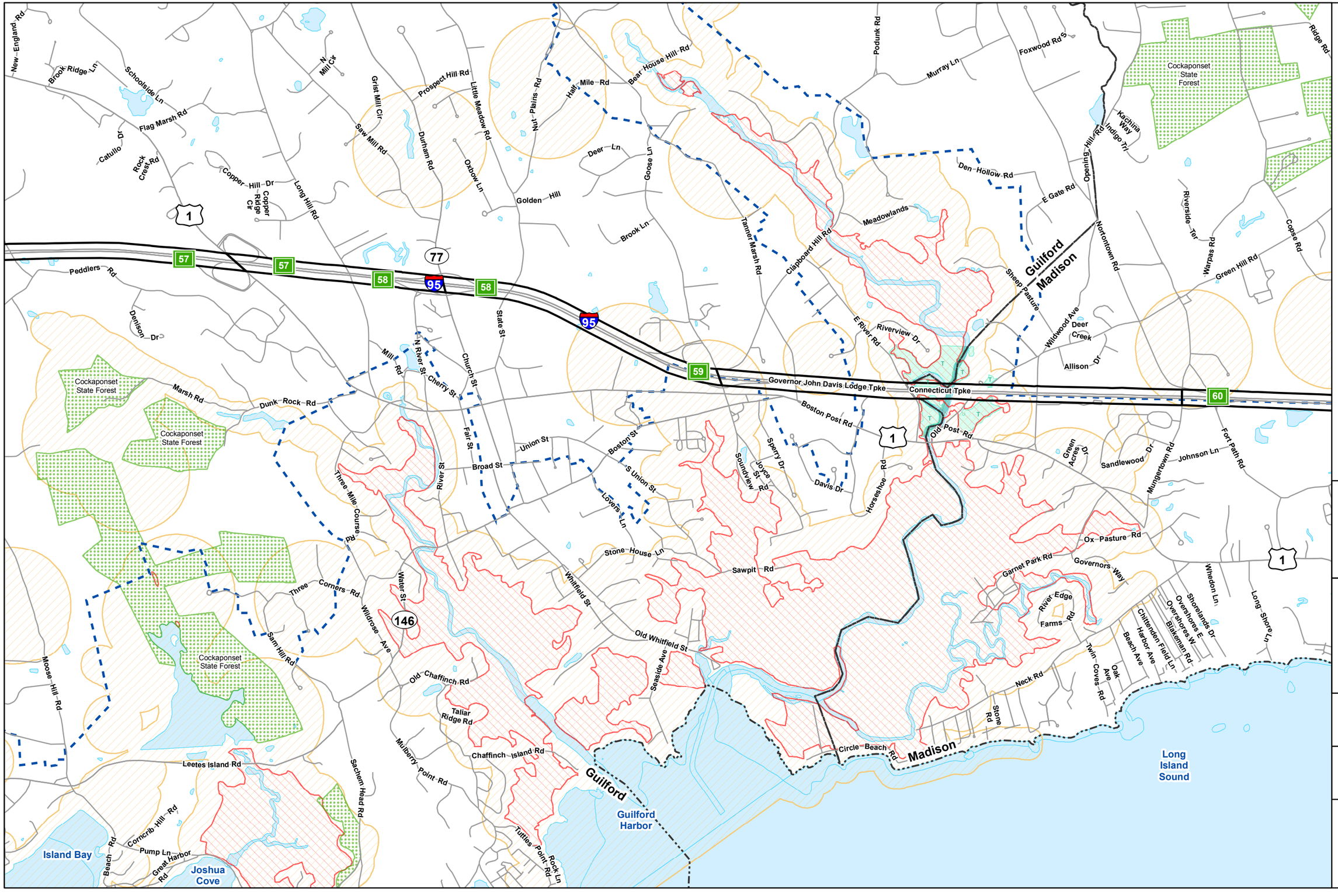
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CDM Smith

I-95 Corridor

Cultural Resources



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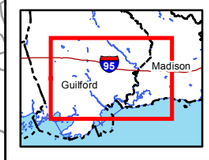
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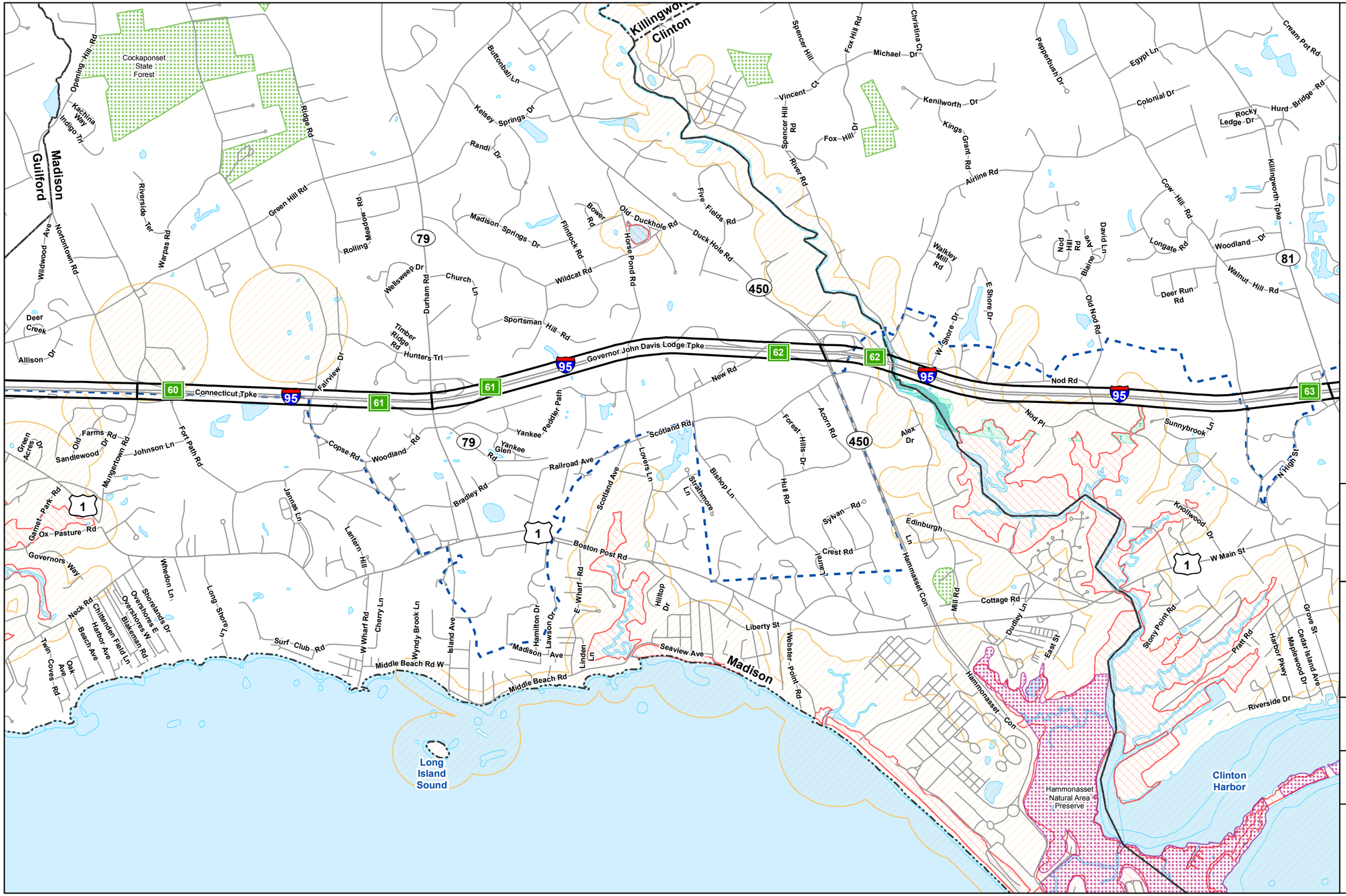
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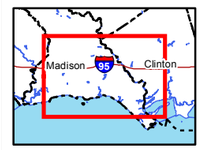
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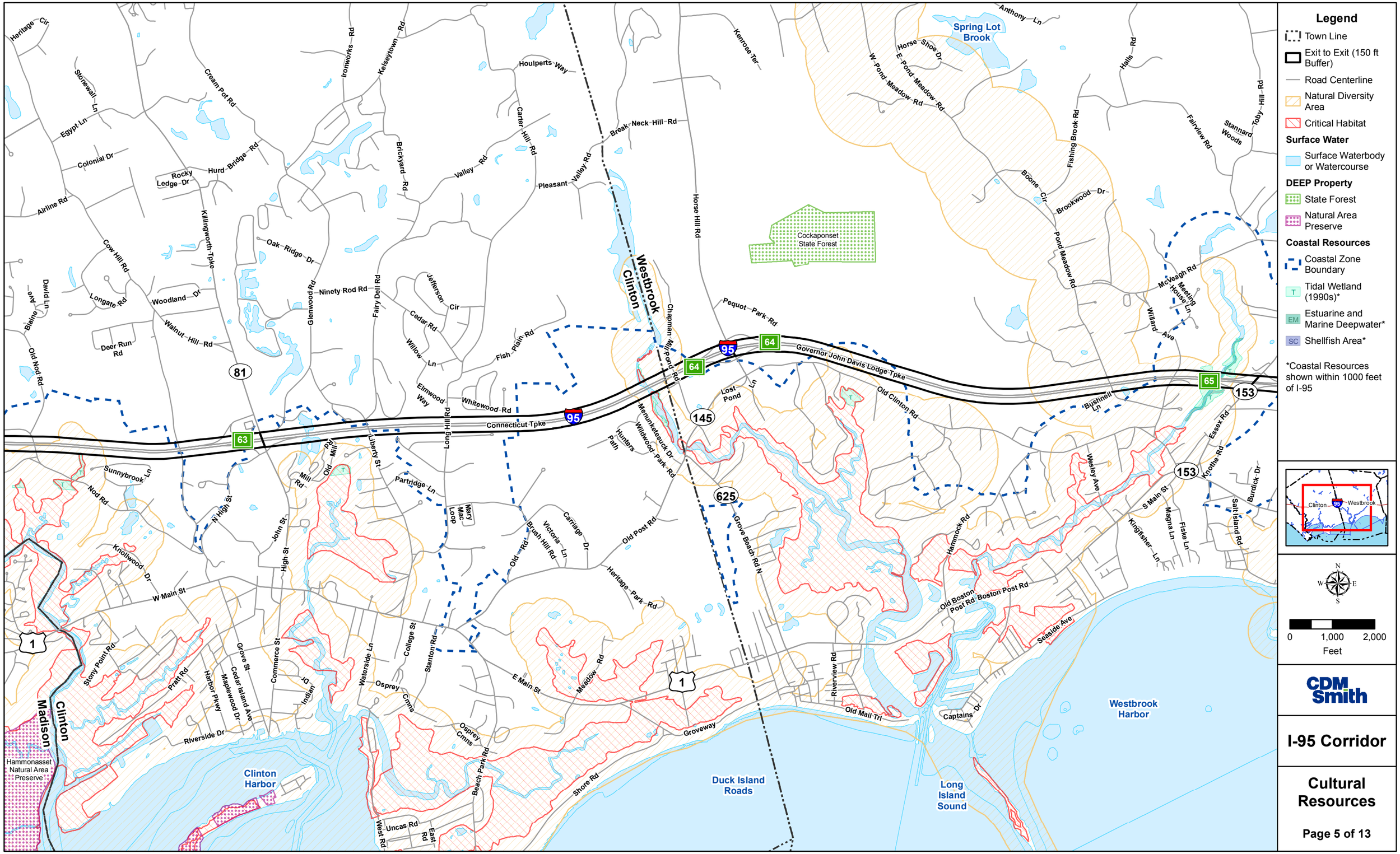
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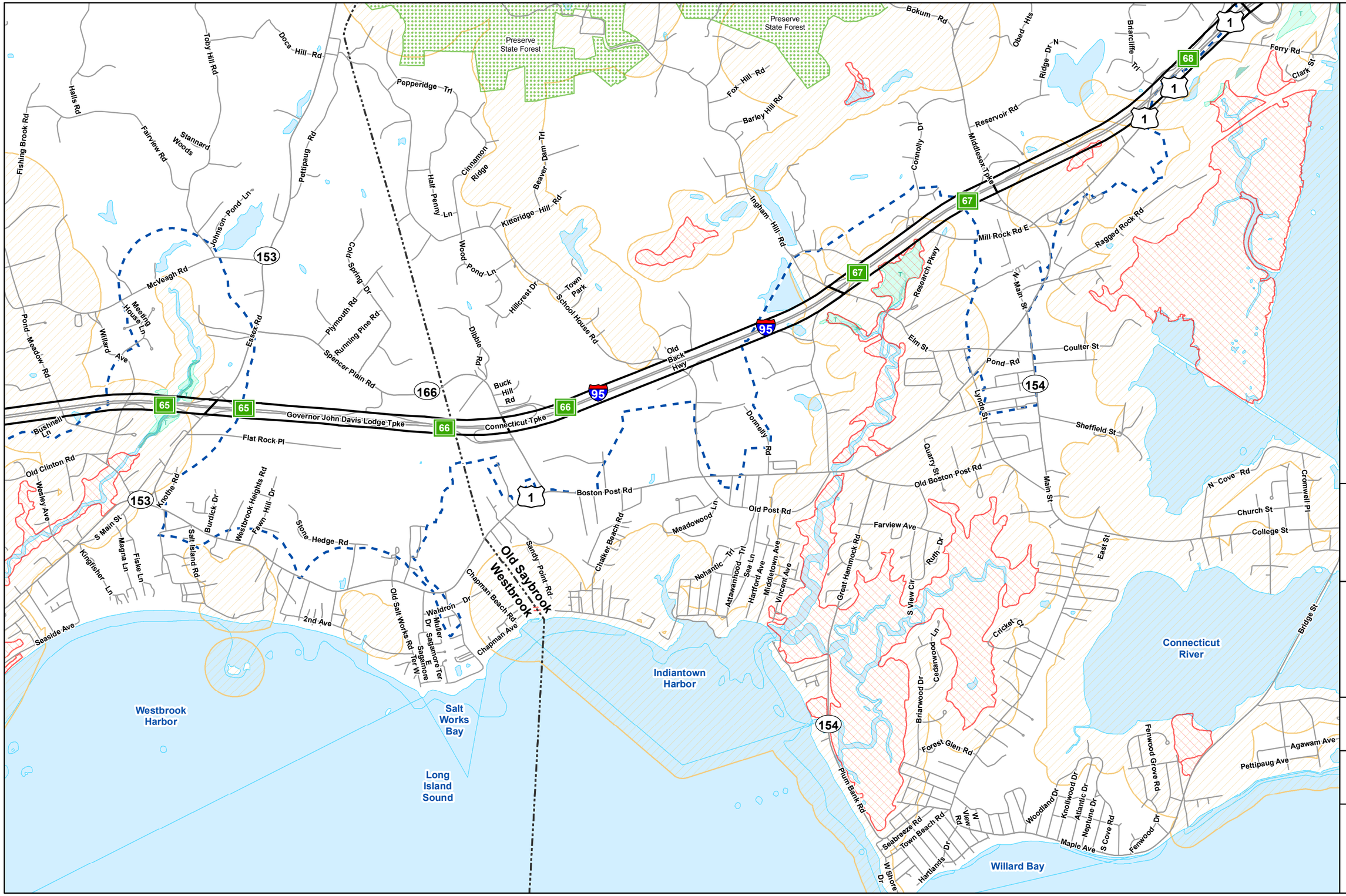
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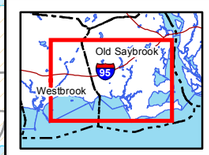
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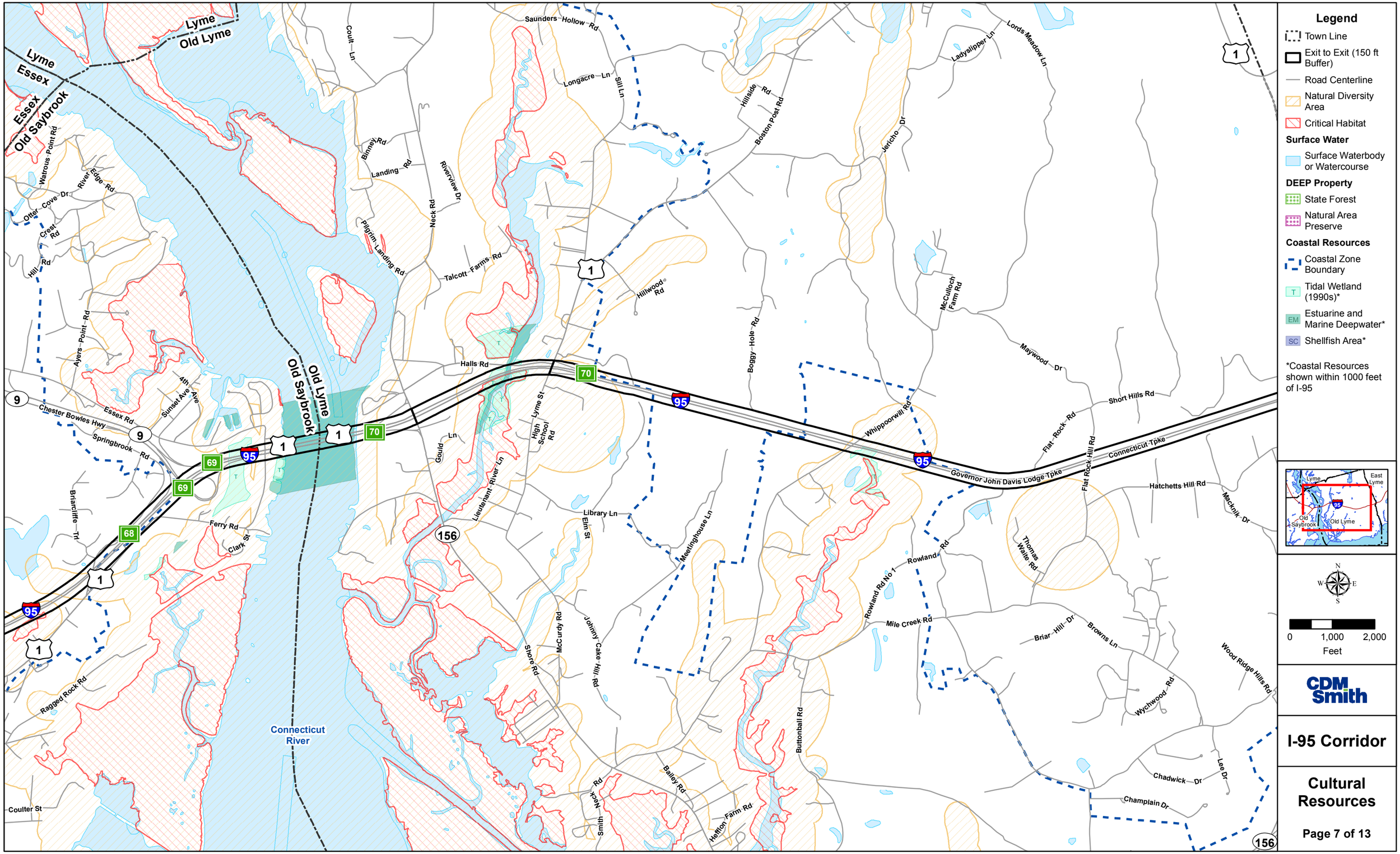
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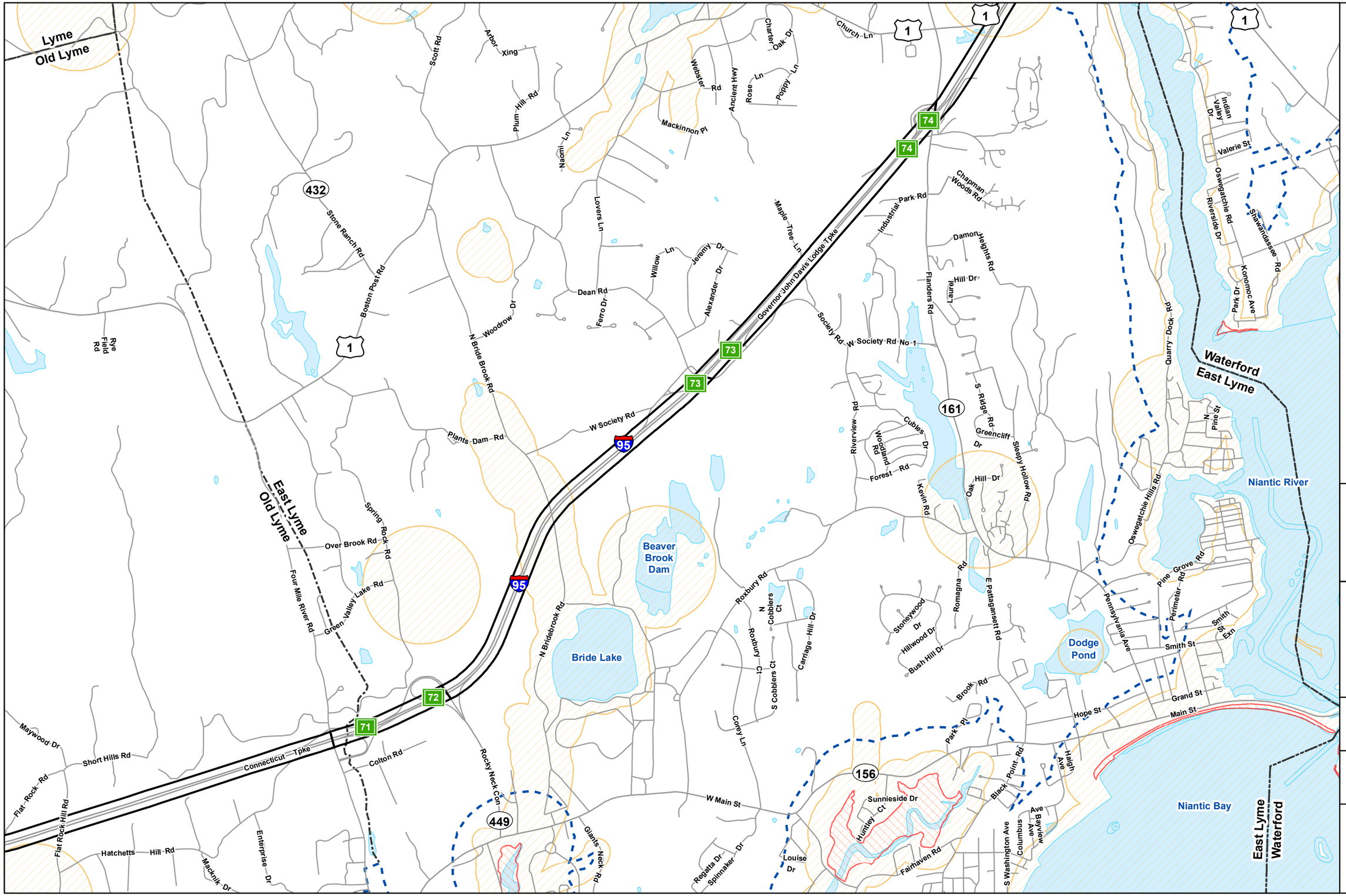
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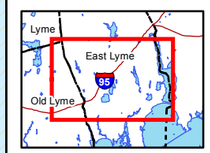
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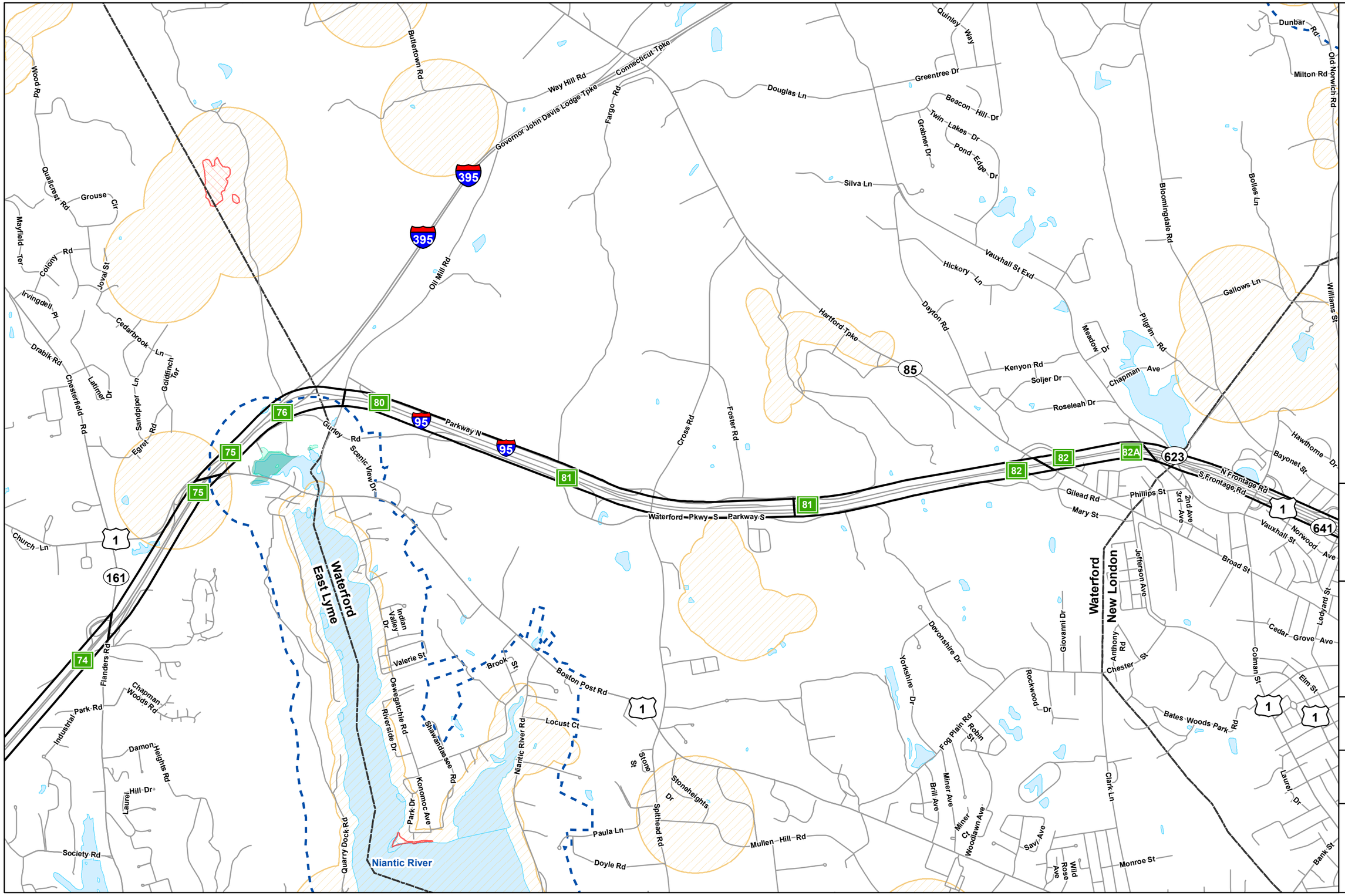


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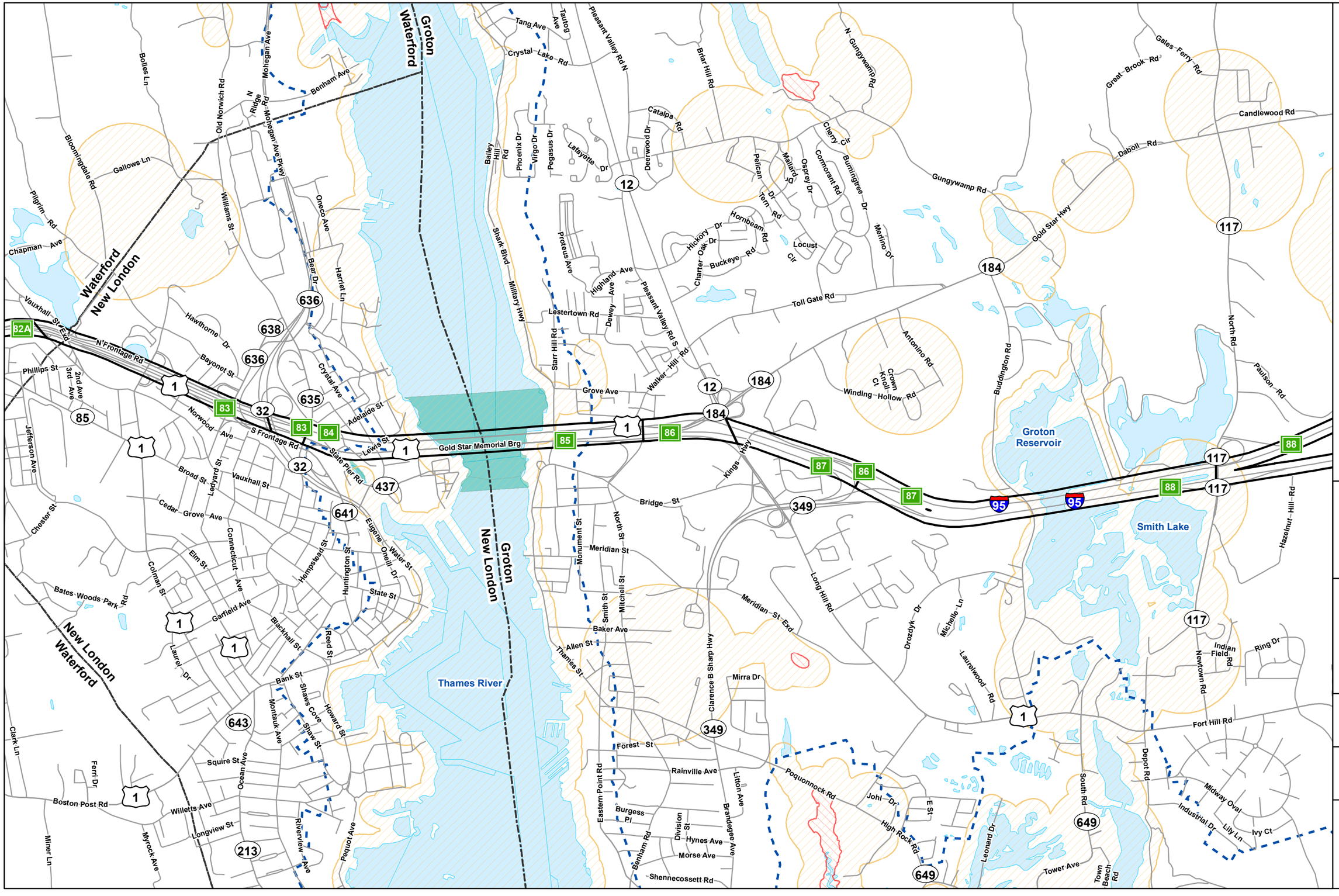
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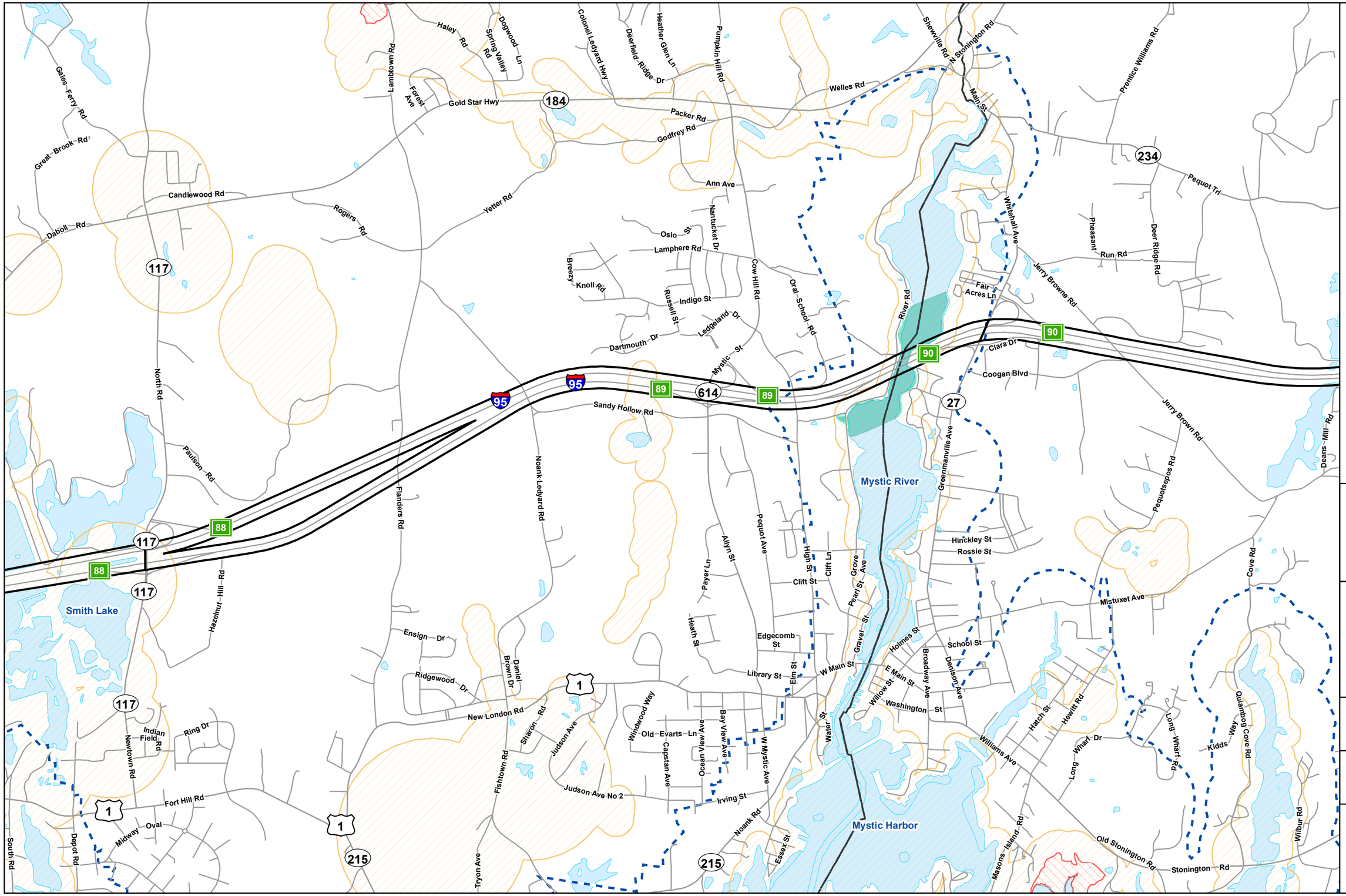


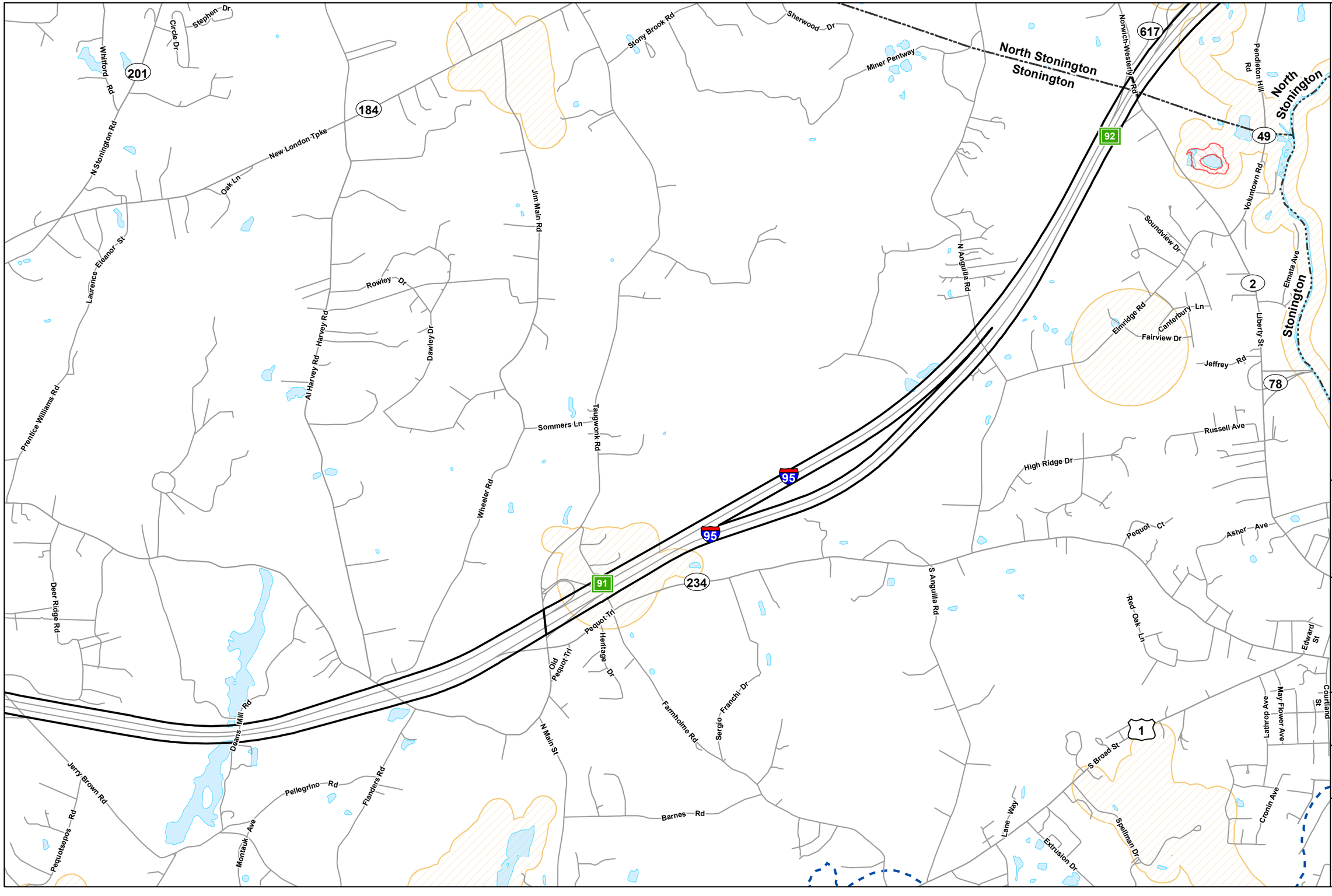
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Shellfish Area*
*Coastal Resources shown within 1000 feet of I-95
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Stonington
Groton
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CDM Smith
I-95 Corridor
Cultural Resources
Page 11 of 13
Mystic River
Mystic Harbor
Smith Lake
Gales Ferry Rd
Great Brook Rd
Candlewood Rd
Daboll Rd
Rogers Rd
Yetter Rd
Lambtown Rd
Haley Rd
Spring Valley Rd
Dogwood Ln
Forest Ave
Gold Star Hwy
184
Colonel Ledyard Hwy
Deerfield Ridge Dr
Heather Glen Ln
Pumpkin Hill Rd
Packer Rd
Godfrey Rd
Welles Rd
Ann Ave
Nantucket Dr
Oslo St
Lamphere Rd
Breezy Knoll Rd
Russell St
Indigo St
Cow Hill Rd
Oral School Rd
Ledgeland Dr
Dartmouth Dr
Mystic St
Sandy Hollow Rd
95
89
614
Stewville Rd
N Stonington Rd
Main St
Prentice Williams Rd
234
Pequot Trl
Whitehall Ave
Pheasant Run Rd
Deer Ridge Rd
Jerry Browne Rd
Fair Acres Ln
River Rd
90
Ciara Dr
Coogan Blvd
27
Greenmanville Ave
Jerry Brown Rd
Deans Mill Rd
Pequotsepos Rd
Cove Rd
Mistuxet Ave
Hinckley St
Rossie St
Clift St
Clift Ln
High St
Grove St
Pearl St
Gravel St
Holmes St
School St
Broadway Ave
Denison Ave
Willow St
Washington St
E Main St
W Main St
Library St
Elm St
Edgecomb St
Heath St
Payer Ln
Allyn St
Pequot Ave
Water St
W Mystic Ave
Bay View Ave
Ocean View Ave
Capstan Ave
Windwood Way
Old Evarts Ln
Judson Ave No 2
Irving St
Noank Rd
Essex St
Noank Ledyard Rd
Flanders Rd
Judson Ave
Sharon Rd
Daniel Brown Dr
Ridgewood Dr
Ensign Dr
New London Rd
Fishtown Rd
Tryon Ave
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215
Hazelnut Hill Rd
Paulson Rd
North Rd
Newtown Rd
Indian Field Rd
Ring Dr
Fort Hill Rd
Midway Oval
Depot Rd
South Rd
117
88
Williams Ave
Hatch St
Hewitt Rd
Long Wharf Dr
Long Wharf Rd
Kidds Way
Quiambog Cove Rd
Wilbur Rd
Masons Island Rd
Old Stonington Rd
Stonington Rd



Legend

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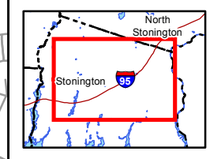
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- SC — Shellfish Area*

*Coastal Resources shown within 1000 feet of I-95



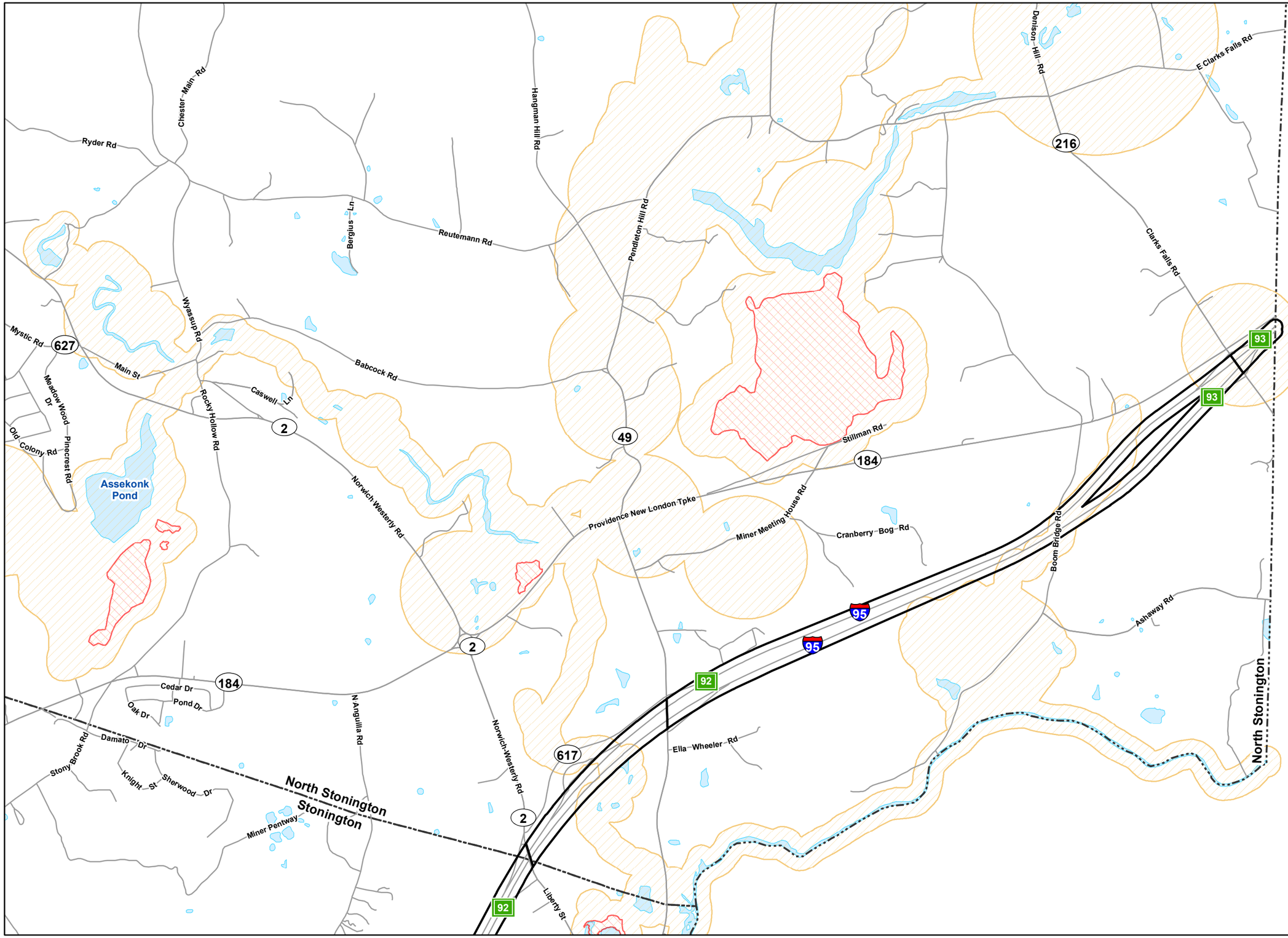
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Feet

CDM Smith

I-95 Corridor

Cultural Resources



Legend

- Town Line
- Exit to Exit (150 ft Buffer)
- Road Centerline
- Natural Diversity Area
- Critical Habitat

Surface Water

- Surface Waterbody or Watercourse

DEEP Property

- State Forest
- Natural Area Preserve

Coastal Resources

- Coastal Zone Boundary
- T — Tidal Wetland (1990s)*
- EM — Estuarine and Marine Deepwater*
- SC — Shellfish Area*

*Coastal Resources shown within 1000 feet of I-95



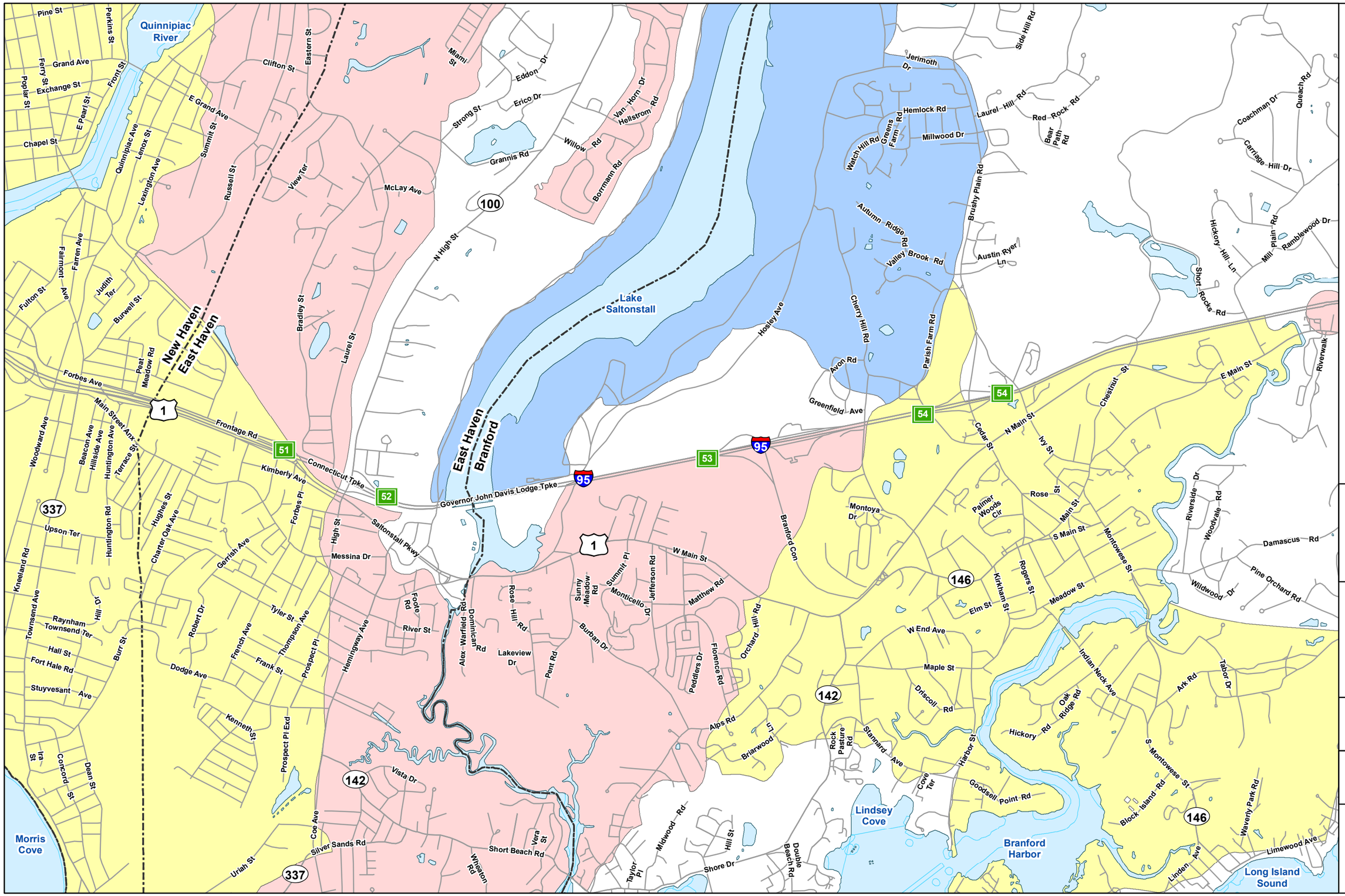
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CDM Smith

I-95 Corridor

Cultural Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
- GAA, GAAs
- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well



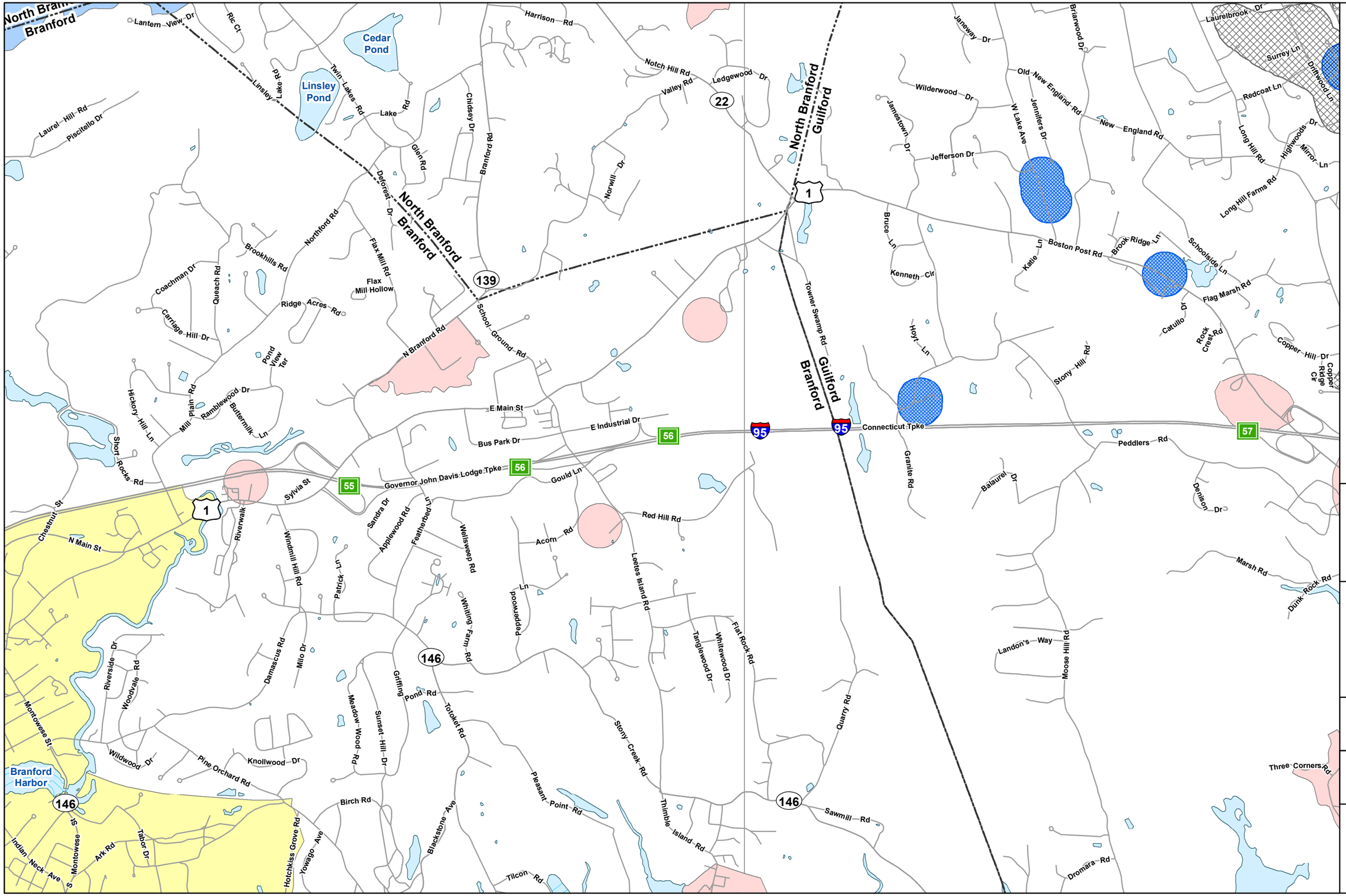
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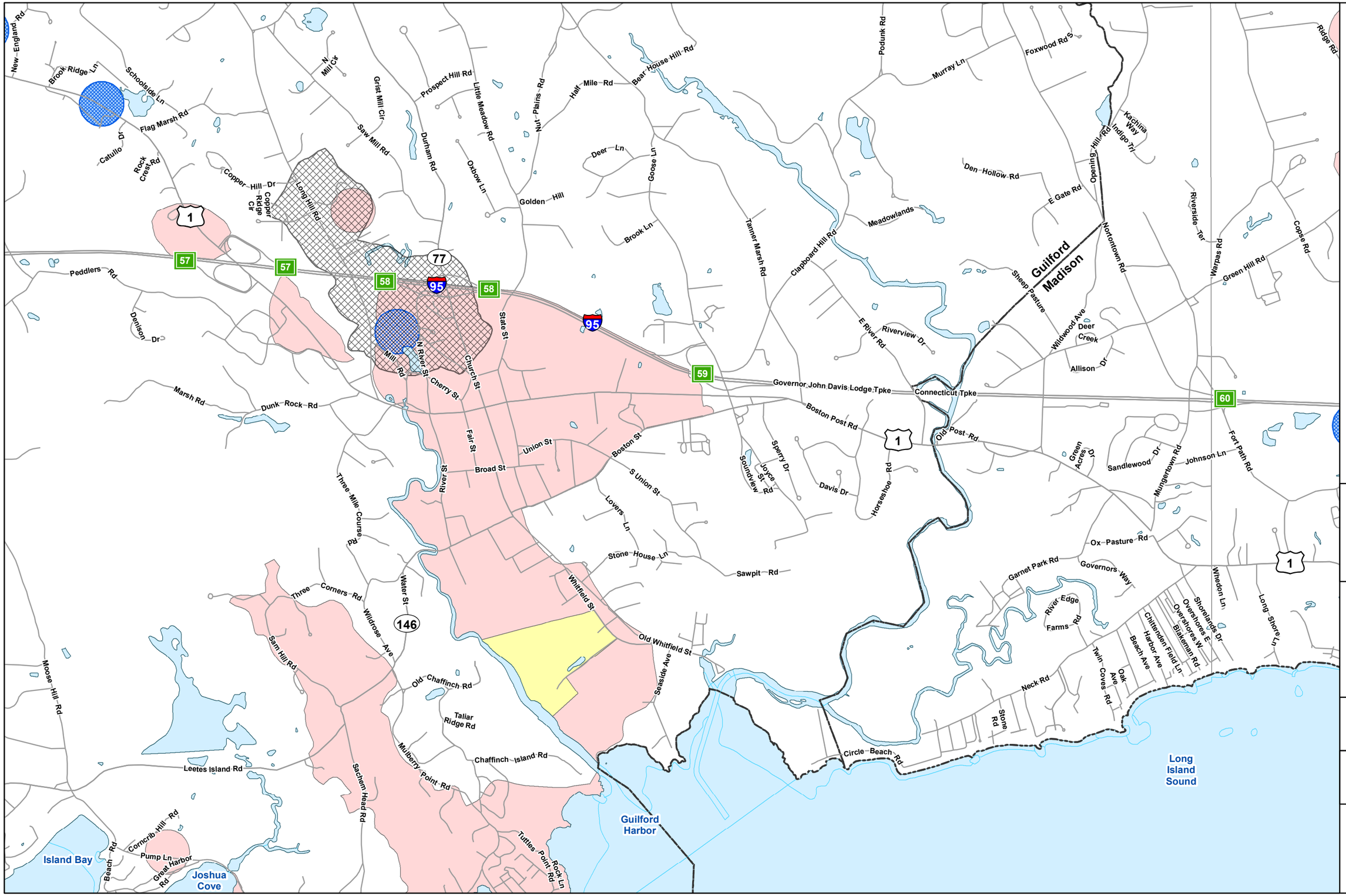
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CDM Smith

I-95 Corridor

Groundwater Resources


North Branford
Branford
Lantern View Dr
Ric Ct
Linsley Pond Rd
Cedar Pond
Linsley Pond
Twin Lakes Rd
Lake Rd
Harrison Rd
Notch Hill Rd
Valley Rd
Ledgewood Dr
22
Chidsey Dr
Branford Rd
Glen Rd
Laurel Hill Rd
Piscitello Dr
Deforest Dr
North Branford
Branford
Norwill Dr
North Branford
Guilford
1
Janeway Dr
Briarwood Dr
Laurelbrook Dr
Surrey Ln
Driftwood Ln
Wilderwood Dr
Old New England Rd
Jamestown Dr
Jefferson Dr
W Lake Ave
Jennifers Dr
New England Rd
Redcoat Ln
Long Hill Rd
Highwoods Dr
Mirror Ln
Long Hill Farms Rd
Bruce Ln
Kenneth Cir
Katie Ln
Boston Post Rd
Brook Ridge Ln
Schoolside Ln
Flag Marsh Rd
Catullo Dr
Rock Crest Rd
Copper Hill Dr
Copper Ridge Cir
Stony Hill Rd
Hoyt Ln
Towner Swamp Rd
Guilford
Branford
Granite Rd
Balaurel Dr
Denison Dr
Marsh Rd
Dunk Rock Rd
Landon's Way
Moose Hill Rd
Three Corners Rd
Brookhills Rd
Northford Rd
Flax Mill Rd
Flax Mill Hollow
Coachman Dr
Queach Rd
Carriage Hill Dr
Ridge Acres Rd
139
School Ground Rd
N Branford Rd
Pond View Ter
Hickory Hill Ln
Mill Plain Rd
Ramblewood Dr
Buttermilk Ln
Short Rocks Rd
E Main St
E Industrial Dr
Bus Park Dr
56
95
Connecticut Tpke
57
Peddlers Rd
Governor John Davis Lodge Tpke
55
Sylvia St
Gould Ln
Chestnut St
N Main St
Riverwalk
Windmill Hill Rd
Patrick Ln
Sandra Dr
Applewood Rd
Featherbed Ln
Wellsweep Rd
Acorn Rd
Red Hill Rd
Leetes Island Rd
Tanglewood Dr
Whitewood Dr
Flat Rock Rd
Whiting Farm Rd
Peppermint Ln
Riverside Dr
Woodvale Rd
Damascus Rd
Milo Dr
Griffing Pond Rd
Totoket Rd
Meadow Wood Rd
Sunset Hill Dr
Stony Creek Rd
Quarry Rd
Pleasant Point Rd
Thimble Island Rd
Sawmill Rd
Dromara Rd
Tilcon Rd
Blackstone Ave
Hotchkiss Grove Rd
Yowago Ave
Montowese St
Indian Neck Ave S
Ark Rd
Tabor Dr
Wildwood Dr
Knollwood Dr
Pine Orchard Rd
Birch Rd
Branford Harbor
146
Legend
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
Aquifer Protection Area
Level A Final Aquifer Protection Area
Level B Preliminary Aquifer Protection Area
Ground Water Quality
GA
GAA, GAAs
GB
GC
GA, GAA May be impaired
Area of Contribution to Public Supply Well
North Branford
Guilford
Branford
95
N
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Feet
CDM Smith
I-95 Corridor
Groundwater Resources
Page 2 of 13



Legend

- Town Line
- Road Centerline

Surface Water

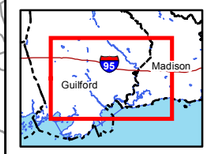
- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
- GAA, GAAs
- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well

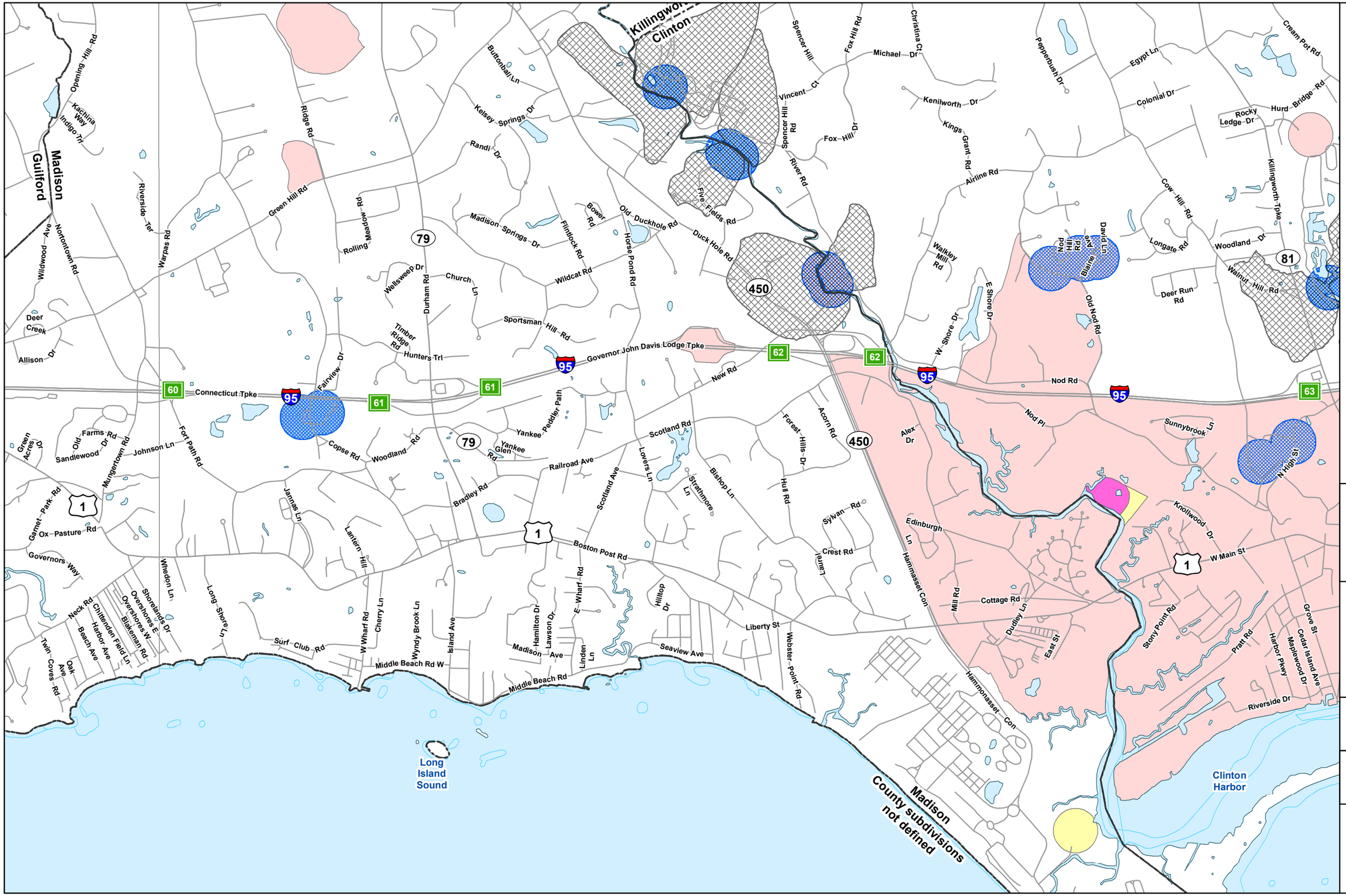


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Feet

CDM Smith

I-95 Corridor

Groundwater Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
- GAA, GAAs
- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well



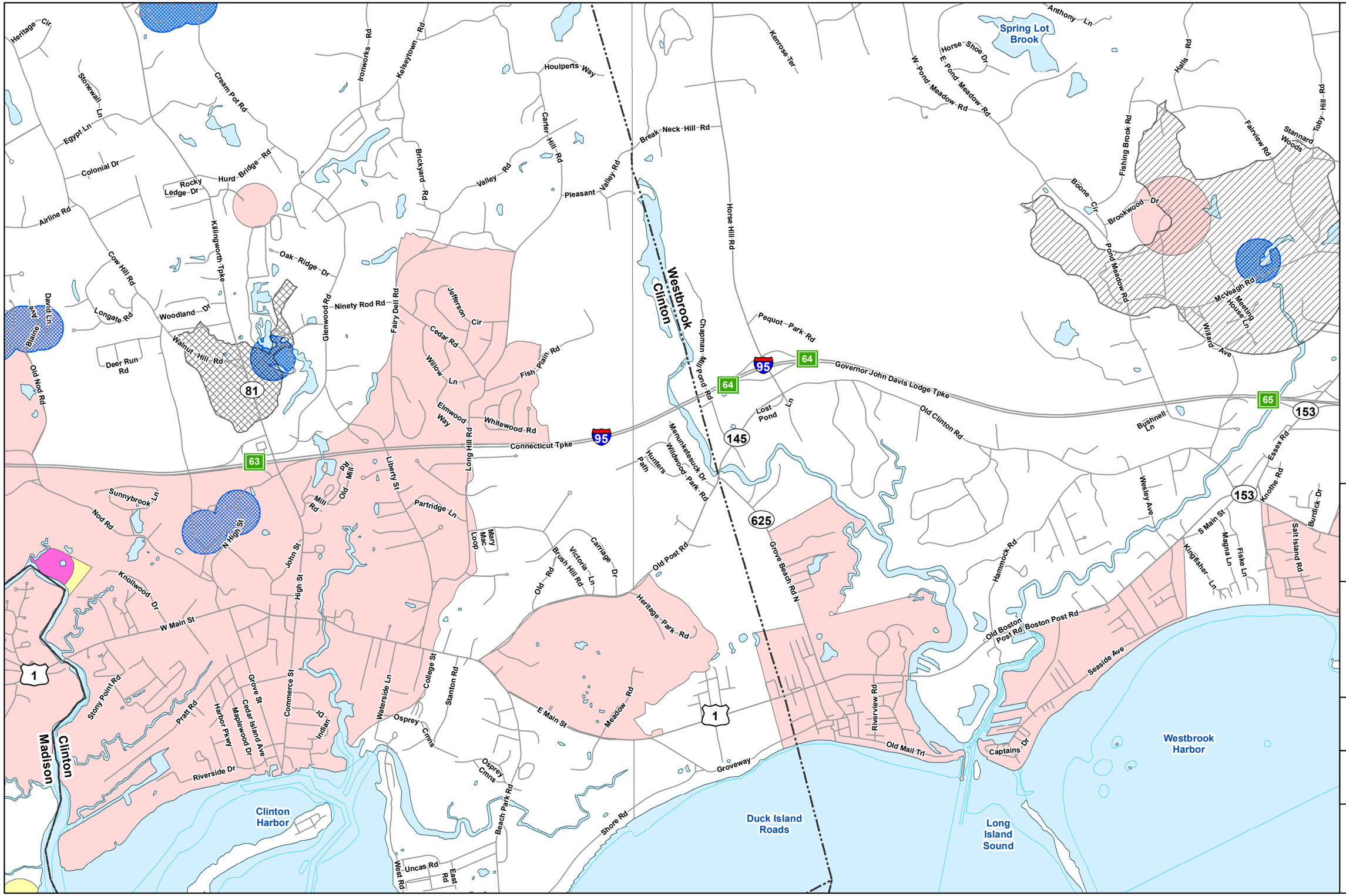
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CDM Smith

I-95 Corridor

Groundwater Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
- GAA, GAAs
- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well



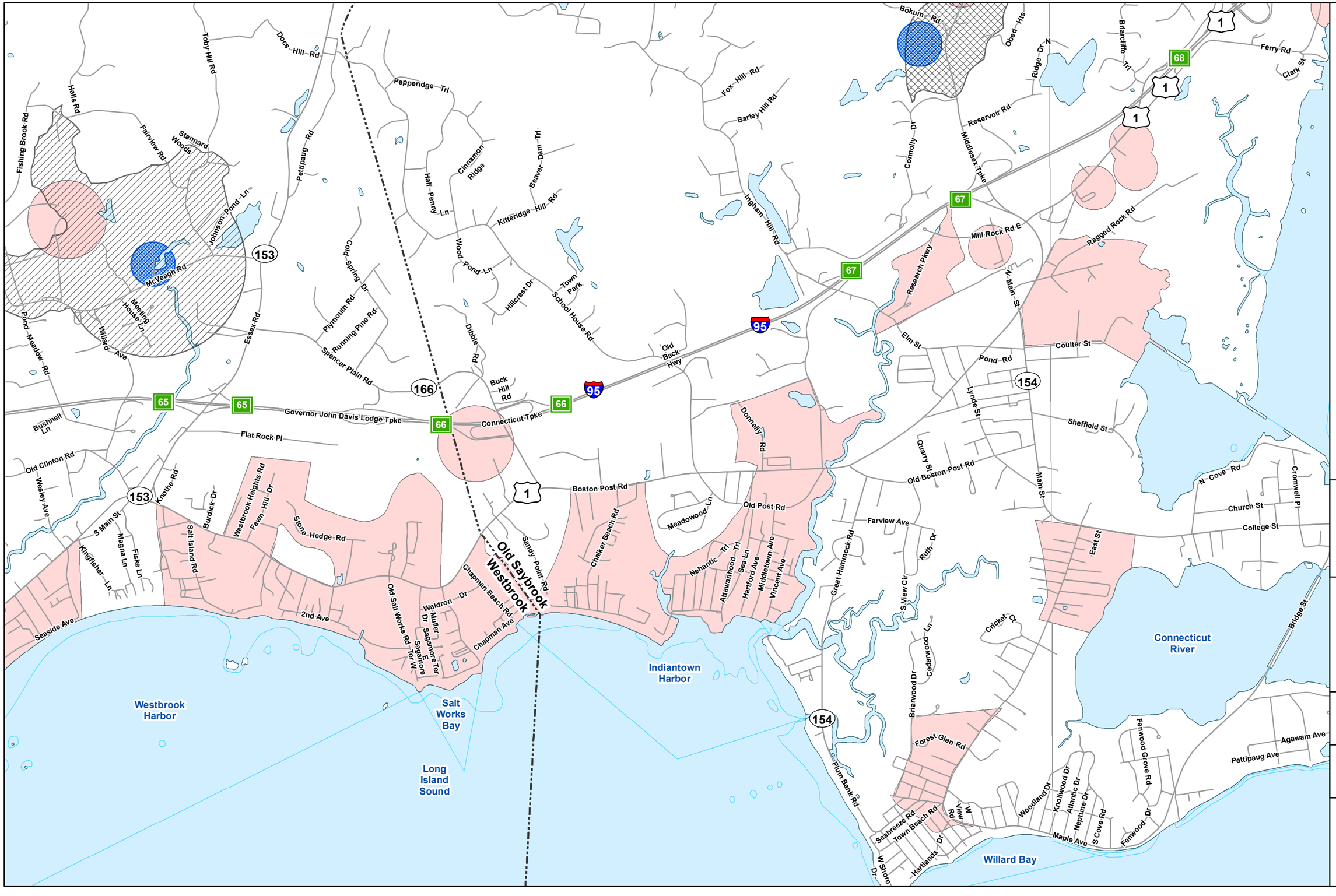
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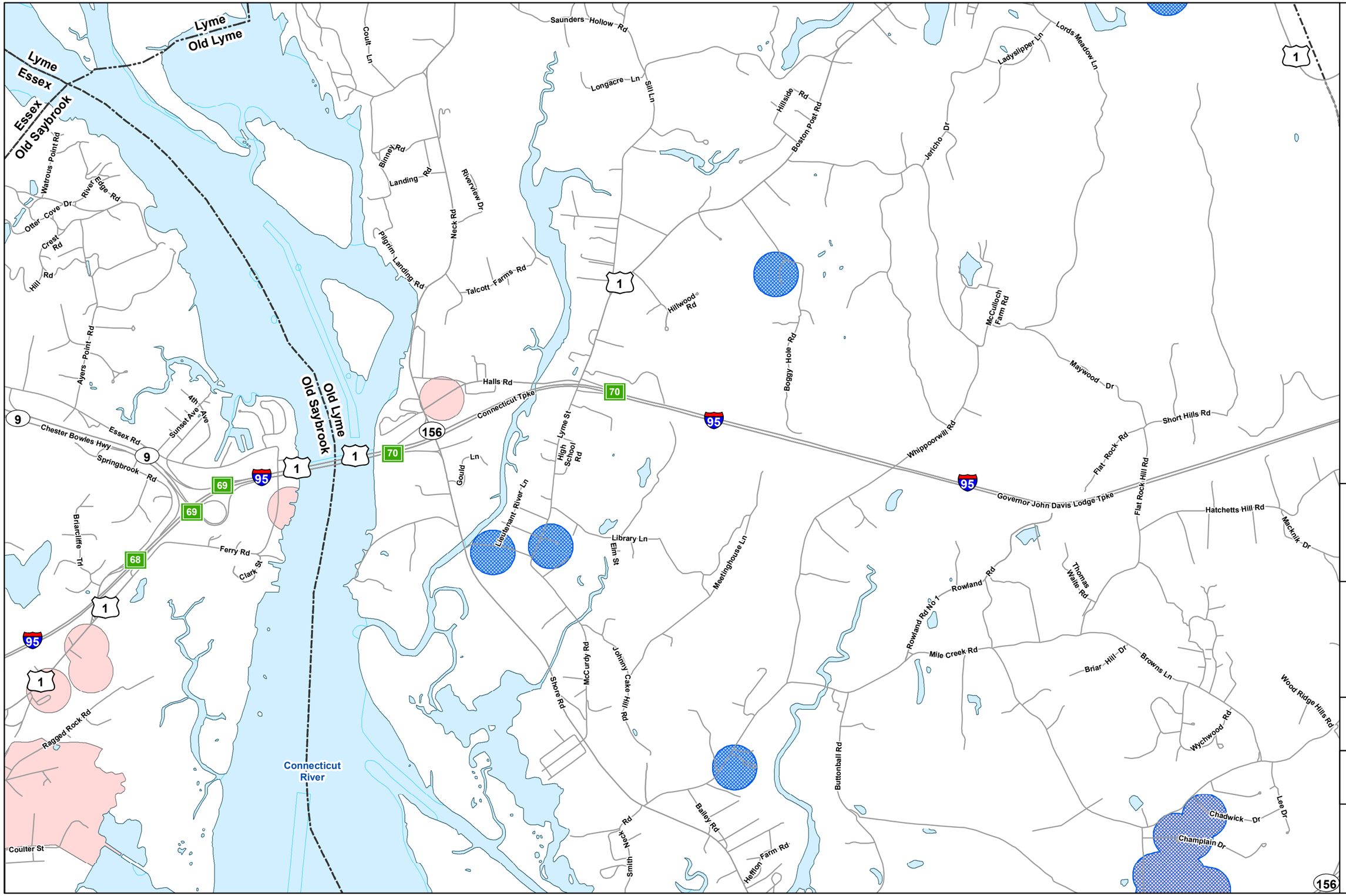
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Feet

CDM Smith

I-95 Corridor

Groundwater Resources


Toby Hill Rd
Docs Hill Rd
Halls Rd
Fishing Brook Rd
Fairview Rd
Stannard Woods
Johnson Pond Ln
Pettipaug Rd
Pepperidge Trl
Half Penny Ln
Cinnamon Ridge
Beaver Dam Trl
Kitteridge Hill Rd
Wood Pond Ln
Cold Spring Dr
Plymouth Rd
Running Pine Rd
Spencer Plain Rd
Hillcrest Dr
Town Park
School House Rd
Dibble Rd
Buck Hill Rd
Old Back Hwy
Fox Hill Rd
Barley Hill Rd
Ingham Hill Rd
Bokum Rd
Obed Hts
Ridge Dr N
Briarcliffe Trl
Ferry Rd
Clark St
Reservoir Rd
Comolly Dr
Middlesex Tpke
Mill Rock Rd E
Ragged Rock Rd
Research Pkwy
N Main St
Elm St
Coulter St
Pond Rd
Lyndie St
Sheffield St
Donnelly Rd
Quarry St
Old Boston Post Rd
Main St
N Cove Rd
Church St
College St
Cromwell Pl
East St
Farview Ave
Ruth Dr
Great Hammock Rd
S View Cir
Cricket Ct
Cedarwood Ln
Briarwood Dr
Bridge St
Connecticut River
Pond Meadow Rd
Willard Ave
Meeting House Ln
Essex Rd
Bushnell Ln
Old Clinton Rd
Wesley Ave
S Main St
Magna Ln
Fiske Ln
Kingfisher Ln
Knothe Rd
Salt Island Rd
Burdick Dr
Westbrook Heights Rd
Fawn Hill Dr
Stone Hedge Rd
Seaside Ave
2nd Ave
Old Salt Works Rd
Waldron Dr
Muller Dr
Sagamore Ter
Sagamore Rd
Chapman Beach Rd
Chapman Ave
Old Saybrook Westbrook
Sandy Point Rd
Flat Rock Pl
Governor John Davis Lodge Tpke
Connecticut Tpke
Boston Post Rd
Chalker Beach Rd
Meadowood Ln
Old Post Rd
Nehantic Trl
Attawanhood Trl
Sea Ln
Hartford Ave
Middletown Ave
Vincent Ave
Forest Glen Rd
Plum Bank Rd
Seabreeze Rd
Town Beach Rd
W View Rd
Hartlands Dr
W Shore Dr
Woodland Dr
Knollwood Dr
Atlantic Dr
Neptune Dr
S Cove Rd
Fenwood Dr
Fenwood Grove Rd
Maple Ave
Agawam Ave
Pettipaug Ave
Westbrook Harbor
Salt Works Bay
Indiantown Harbor
Long Island Sound
Willard Bay
153
166
154
1
65
66
67
68
95
Legend
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
Aquifer Protection Area
Level A Final Aquifer Protection Area
Level B Preliminary Aquifer Protection Area
Ground Water Quality
GA
GAA, GAAs
GB
GC
GA, GAA May be impaired
Area of Contribution to Public Supply Well
Old Saybrook
Westbrook
N
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Feet
CDM Smith
I-95 Corridor
Groundwater Resources
Page 6 of 13



Legend

- Town Line
- Road Centerline

Surface Water

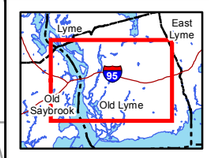
- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
- GAA, GAAs
- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well



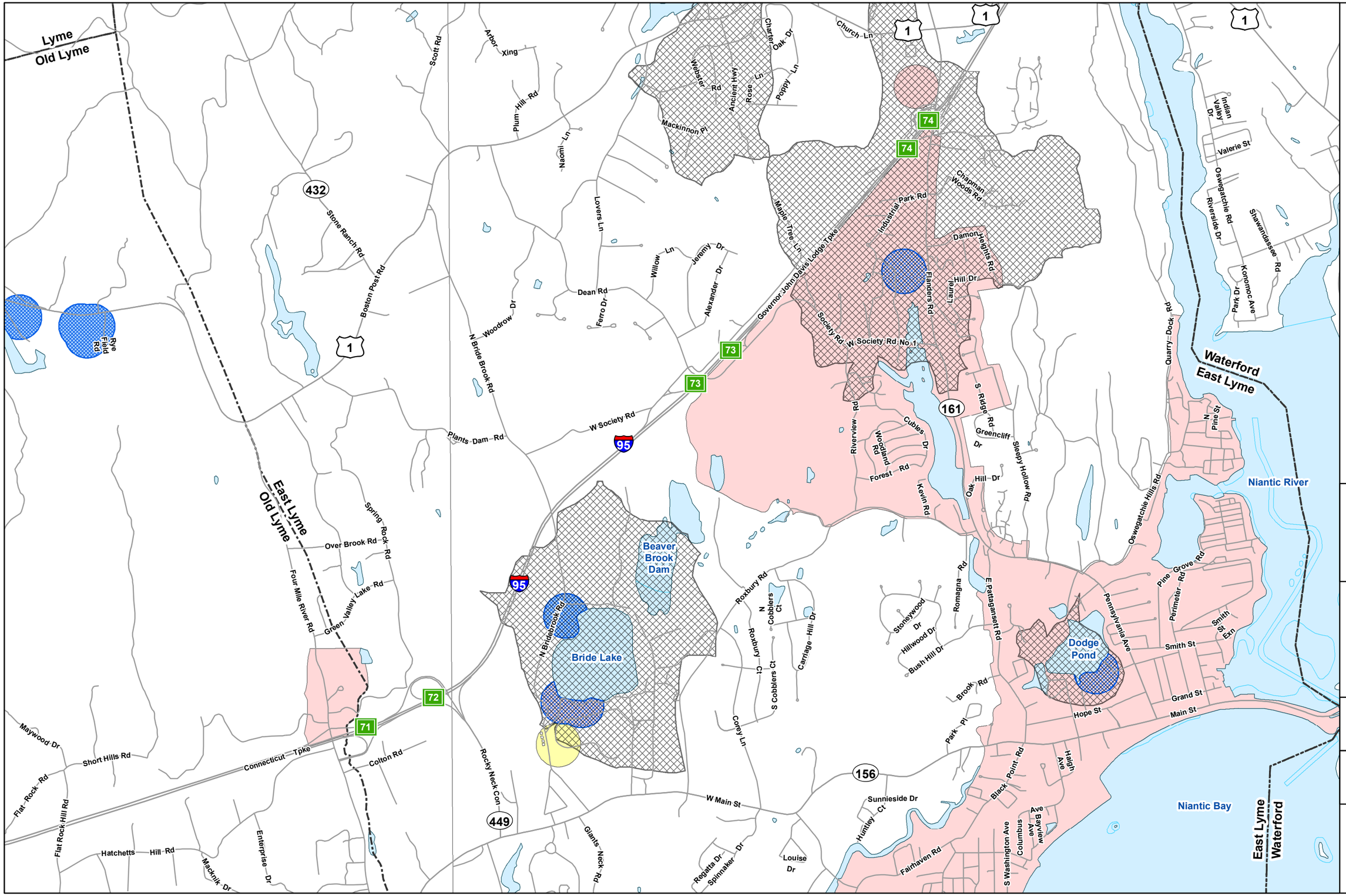
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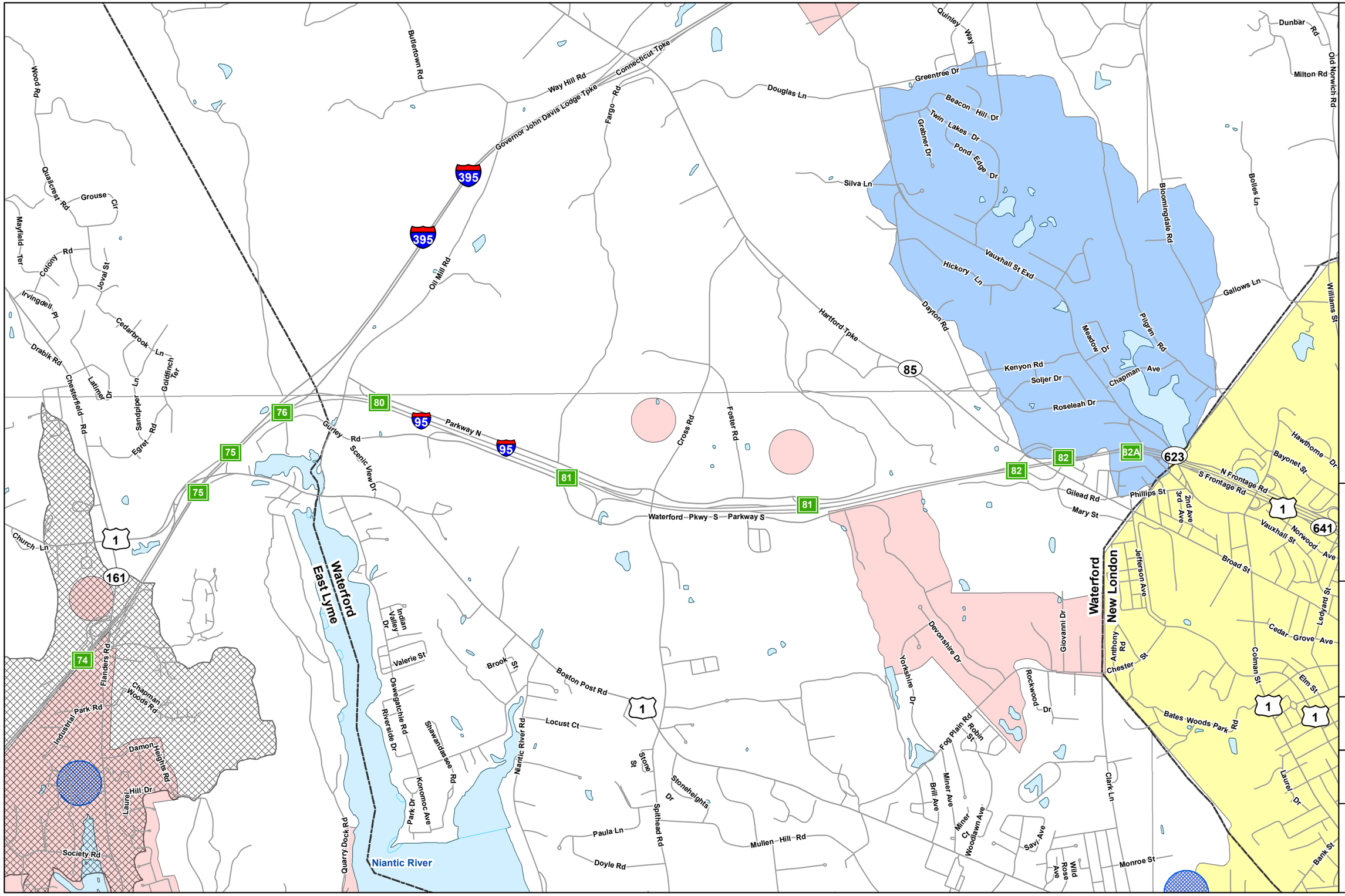
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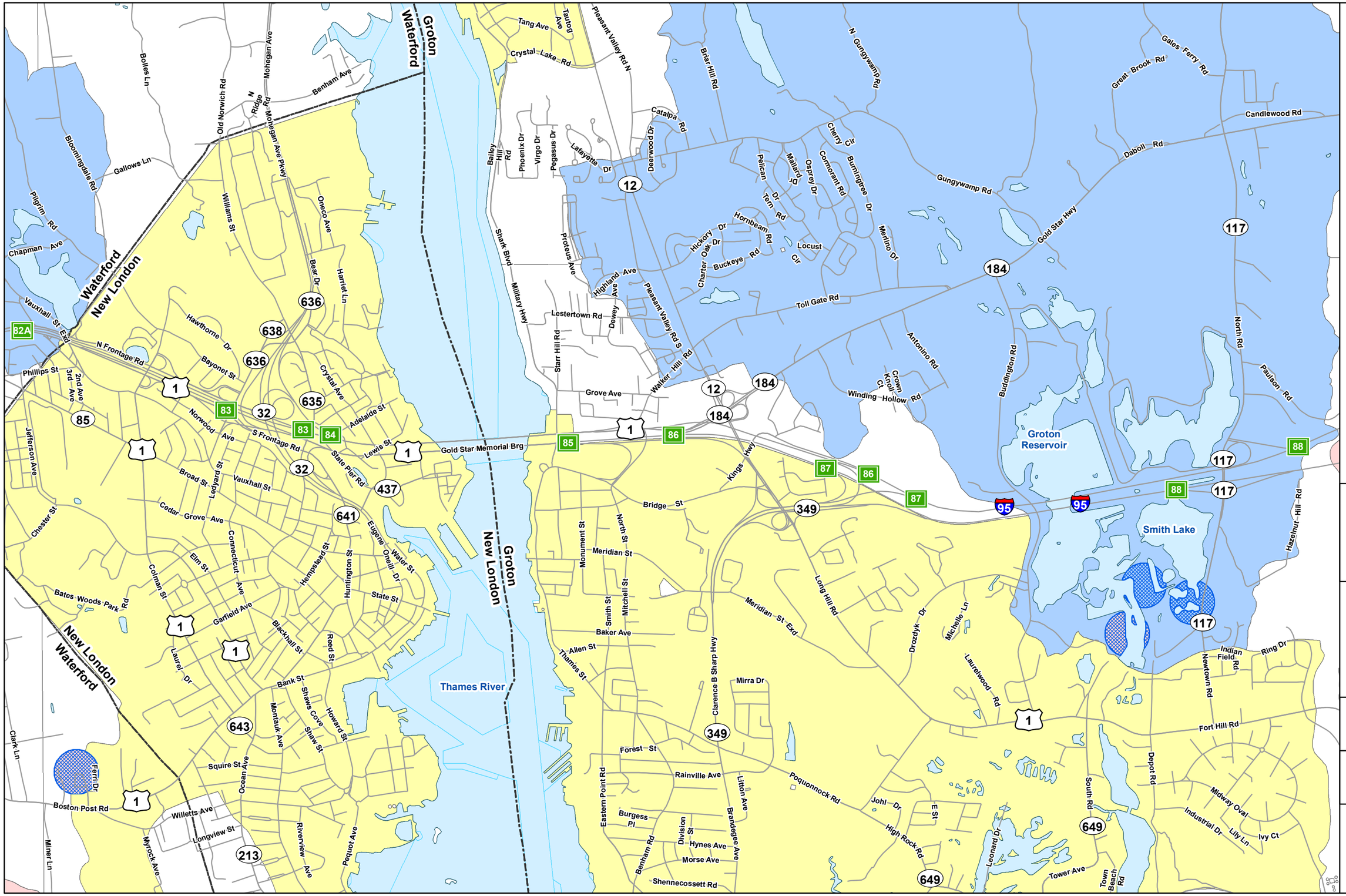
CDM Smith

I-95 Corridor

Groundwater Resources


Lyme
Old Lyme
East Lyme
Old Lyme
Waterford
East Lyme
Niantic River
Niantic Bay
East Lyme
Waterford
Bride Lake
Beaver Brook Dam
Dodge Pond
Scott Rd
Arbor Xing
Plum Hill Rd
Webster Rd
Charter Oak Dr
Ancient Hwy
Rose Ln
Poppy Ln
Church Ln
Mackinnon Pl
Naomi Ln
Lovers Ln
Stone Ranch Rd
Boston Post Rd
Rye Field Rd
Willow Ln
Jeremy Dr
Alexander Dr
Dean Rd
Ferro Dr
Woodrow Dr
N Bride Brook Rd
Plants Dam Rd
W Society Rd
Maple Tree Ln
Governor John Davis Lodge Tpke
Industrial Park Rd
Chapman Woods Rd
Damon Heights Rd
Hill Dr
Flanders Rd
Terrace Ln
Society Rd
N Society Rd
No 1
Riverview Rd
Woodland Rd
Cubles Dr
Forest Rd
S Ridge Rd
Greencliff Dr
Sleepy Hollow Rd
Kevin Rd
Oak Hill Dr
Indian Valley Dr
Valerie St
Oswegatchie Rd
Riverside Dr
Park Dr
Konomoc Ave
Shawandassee Rd
Quarry Dock Rd
N Pine St
Oswegatchie Hills Rd
Pine Grove Rd
Perimeter Rd
Pennsylvania Ave
Smith St
Smith St Exn
Stoneleywood Dr
Hillwood Dr
Bush Hill Dr
Romagna Rd
E Pattagansett Rd
Brook Rd
Park Pl
Grand St
Hope St
Main St
Haigh Ave
Black Point Rd
Columbus Ave
Bayview Ave
S Washington Ave
Sunnieside Dr
Huntley Ct
Fairhaven Rd
Louise Dr
Regatta Dr
Spinnaker Dr
Giants Neck Rd
W Main St
Rocky Neck Conn
Roxbury Rd
N Cobblers Ct
S Cobblers Ct
Roxbury Ct
Carriage Hill Dr
Corey Ln
N Bridebrook Rd
Spring Rock Rd
Over Brook Rd
Four Mile River Rd
Green Valley Lake Rd
Connecticut Tpke
Colton Rd
Maywood Dr
Short Hills Rd
Flat Rock Rd
Flat Rock Hill Rd
Hatchetts Hill Rd
Mackrill Dr
Enterprise Dr
Legend
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
Aquifer Protection Area
Level A Final Aquifer Protection Area
Level B Preliminary Aquifer Protection Area
Ground Water Quality
GA
GAA, GAAs
GB
GC
GA, GAA May be impaired
Area of Contribution to Public Supply Well
Lyme
East Lyme
Old Lyme
N
W
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1,000
2,000
Feet
CDM Smith
I-95 Corridor
Groundwater Resources
Page 8 of 13


Legend
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
Aquifer Protection Area
Level A Final Aquifer Protection Area
Level B Preliminary Aquifer Protection Area
Ground Water Quality
GA
GAA, GAAs
GB
GC
GA, GAA May be impaired
Area of Contribution to Public Supply Well
Waterford
East Lyme
New London
Niantic River
Waterford Pkwy S
Parkway S
Parkway N
Hartford Tpke
Connecticut Tpke
Governor John Davis Lodge Tpke
Boston Post Rd
Mullen Hill Rd
Broad St
Bates Woods Park Rd
Gallows Ln
Milton Rd
Old Norwich Rd
Greentree Dr
Douglas Ln
Vauxhall St Exd
Hickory Ln
Dayton Rd
Kenyon Rd
Soljer Dr
Roseleah Dr
Meadow Dr
Pilgrim Rd
Chapman Ave
Bloomingdale Rd
Boles Ln
Williams St
Hawthorne Dr
Bayonet St
N Frontage Rd
S Frontage Rd
Phillips St
Gilead Rd
Mary St
Norwood Ave
Cedar Grove Ave
Ledyard St
Elm St
Laurel Dr
Bank St
Monroe St
Clark Ln
Wild Rose Ave
Savi Ave
Miner Ct
Woodlawn Ave
Miner Ave
Brill Ave
Fog Plain Rd
Robin St
Rockwood Dr
Giovanni Dr
Devonshire Dr
Yorkshire Dr
Anthony Rd
Chester St
Colman St
Jefferson Ave
2nd Ave
3rd Ave
Vauxhall St
Beacon Hill Dr
Twin Lakes Dr
Pond Edge Dr
Grabner Dr
Silva Ln
Quinley Way
Dunbar Rd
Fargo Rd
Way Hill Rd
Butlertown Rd
Wood Rd
Quailcrest Rd
Grouse Cir
Mayfield Ter
Colony Rd
Joval St
Irvingdell Pl
Drabik Rd
Cedarbrook Ln
Goldfinch Ter
Chesterfield Rd
Latimer Ln
Egret Rd
Sandpiper Ln
Gurley Rd
Scenic View Dr
Old Mill Rd
Church Ln
Flanders Rd
Industrial Park Rd
Chapman Woods Rd
Damon Heights Rd
Laurel Hill Dr
Society Rd
Quarry Dock Rd
Indian Valley Dr
Valerie St
Oswegatchie Rd
Riverside Dr
Shawantasee Rd
Konomoc Ave
Park Dr
Brook St
Niantic River Rd
Locust Ct
Stone St
Stoneheights Dr
Spithead Rd
Paula Ln
Doyle Rd
Foster Rd
Cross Rd
Scale
0
1,000
2,000
Feet
CDM Smith
I-95 Corridor
Groundwater Resources
Page 9 of 13



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
- GAA, GAAs
- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well



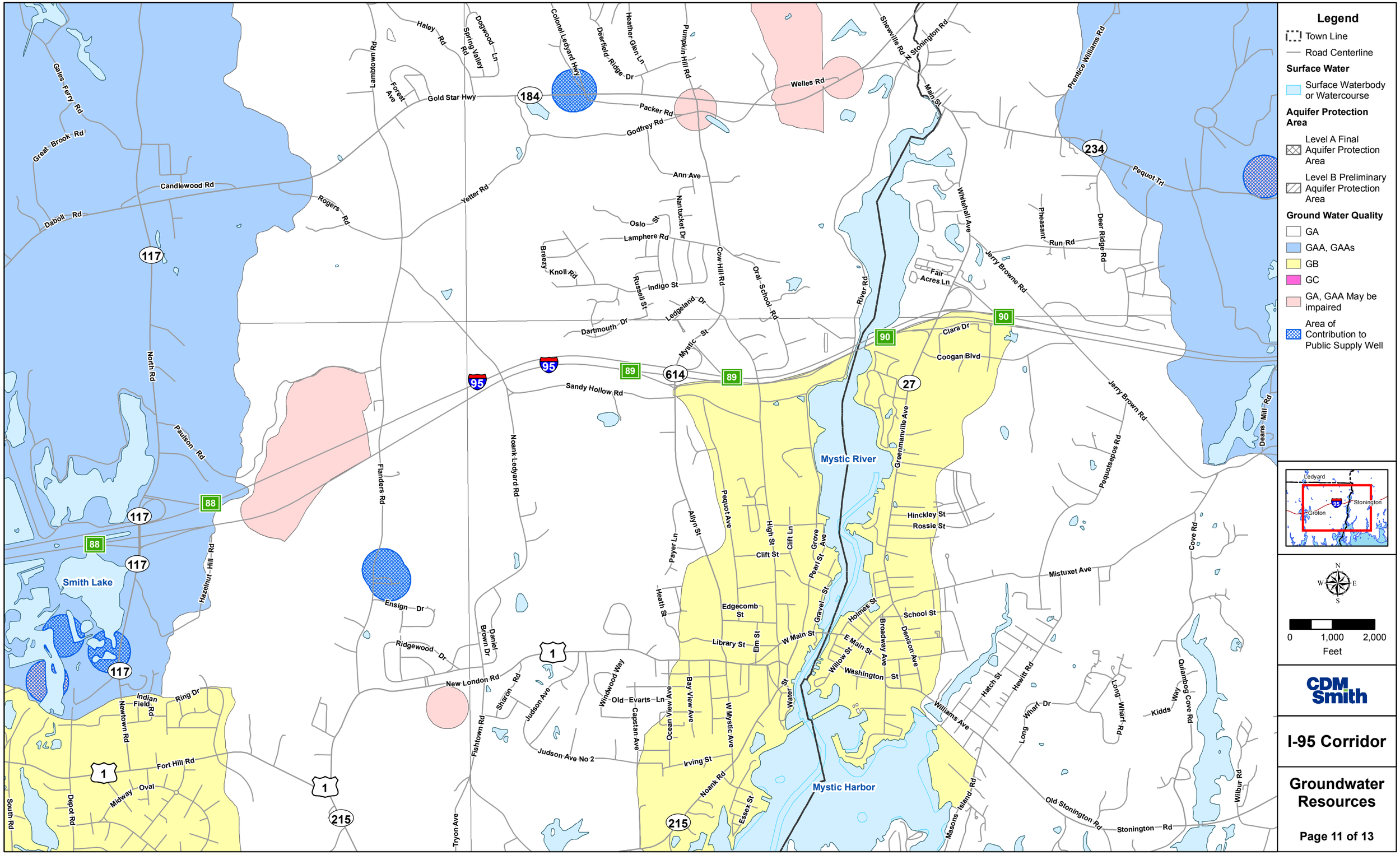
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Feet

CDM Smith

I-95 Corridor

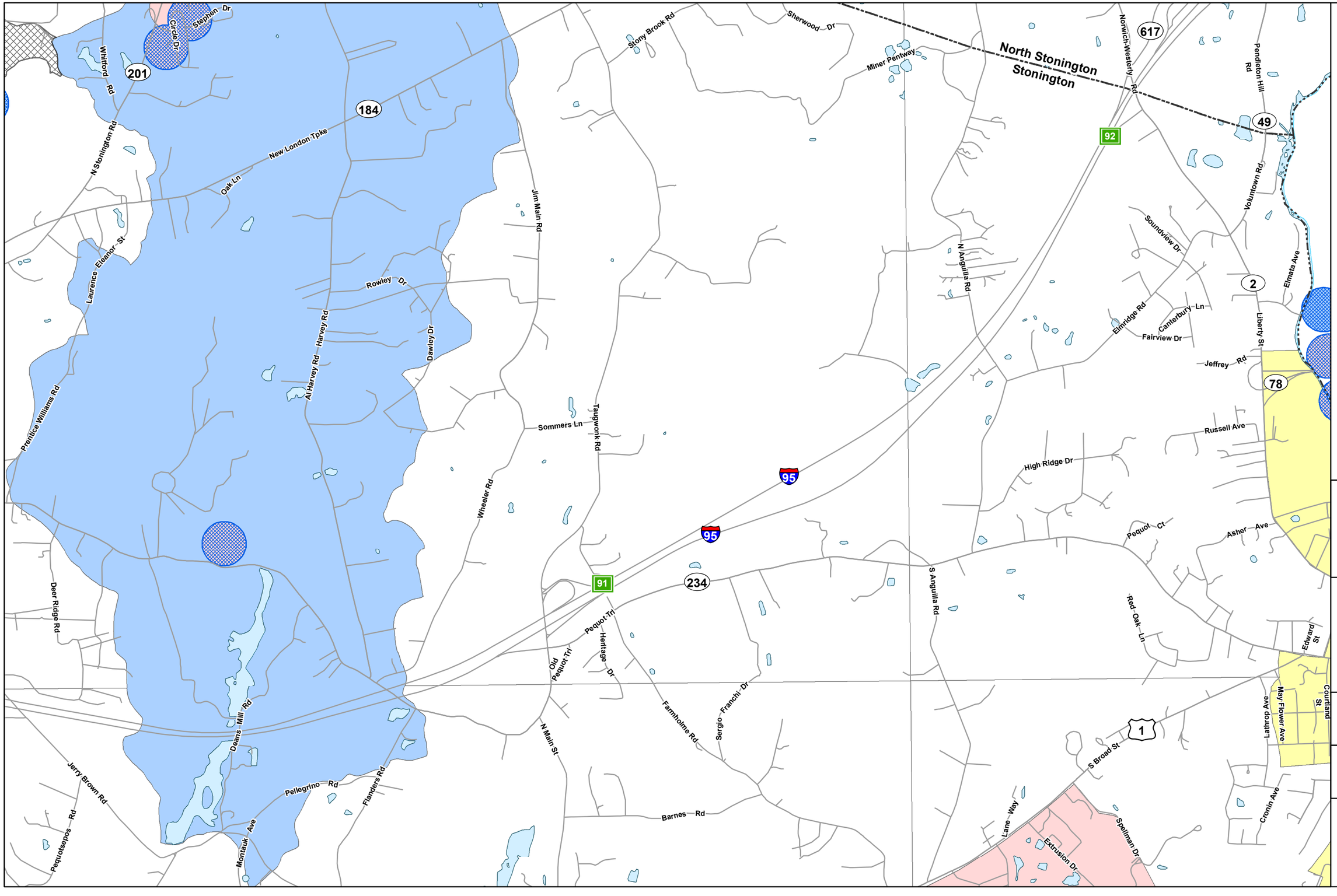
Groundwater Resources



CDM Smith

I-95 Corridor

Groundwater Resources



Legend

- Town Line
- Road Centerline

Surface Water

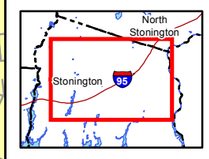
- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
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- GB
- GC
- GA, GAA May be impaired
- Area of Contribution to Public Supply Well



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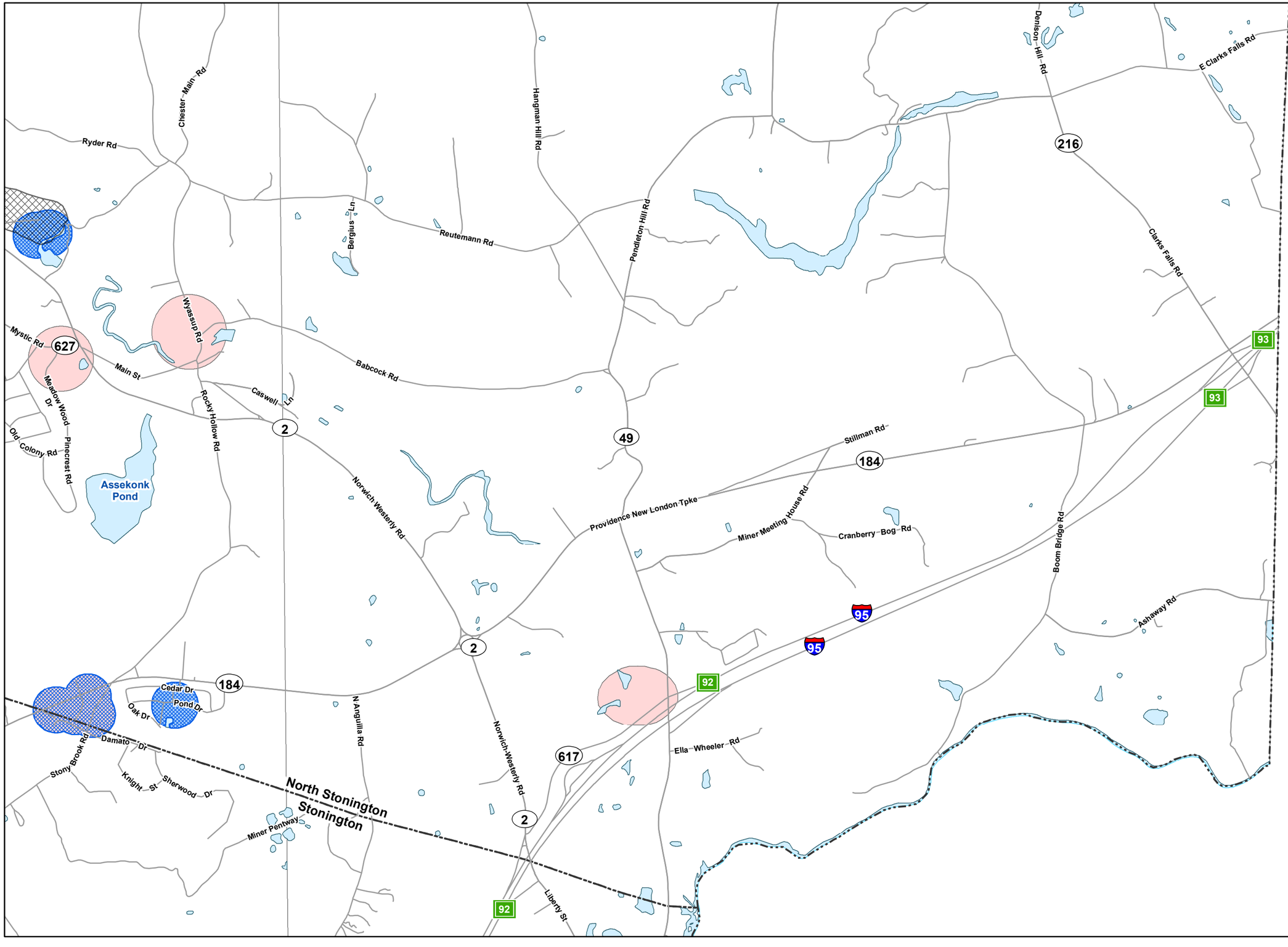
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Feet

CDM Smith

I-95 Corridor

Groundwater Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse

Aquifer Protection Area

- Level A Final Aquifer Protection Area
- Level B Preliminary Aquifer Protection Area

Ground Water Quality

- GA
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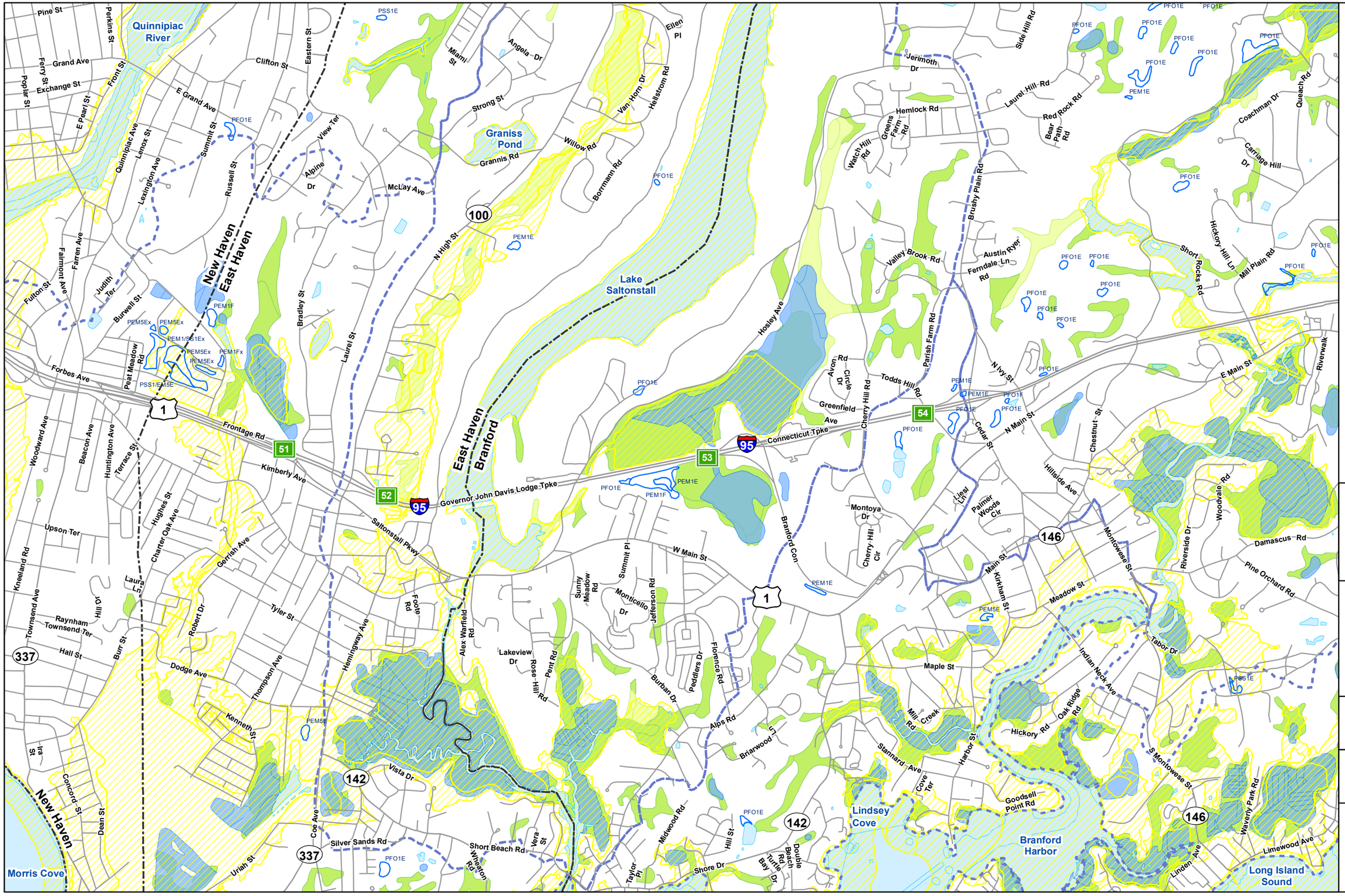
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Feet

CDM Smith

I-95 Corridor

Groundwater Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

- Alluvial and Floodplain Soils
- Poorly Drained and Very Poorly Drained Soils

Coastal Wetlands

- Tidal Wetland (1990s)**

*Only NWI Wetlands that do not correspond to wetland soils are shown for clarity.

**Tidal Wetlands are shown within 1000 ft of I-95.



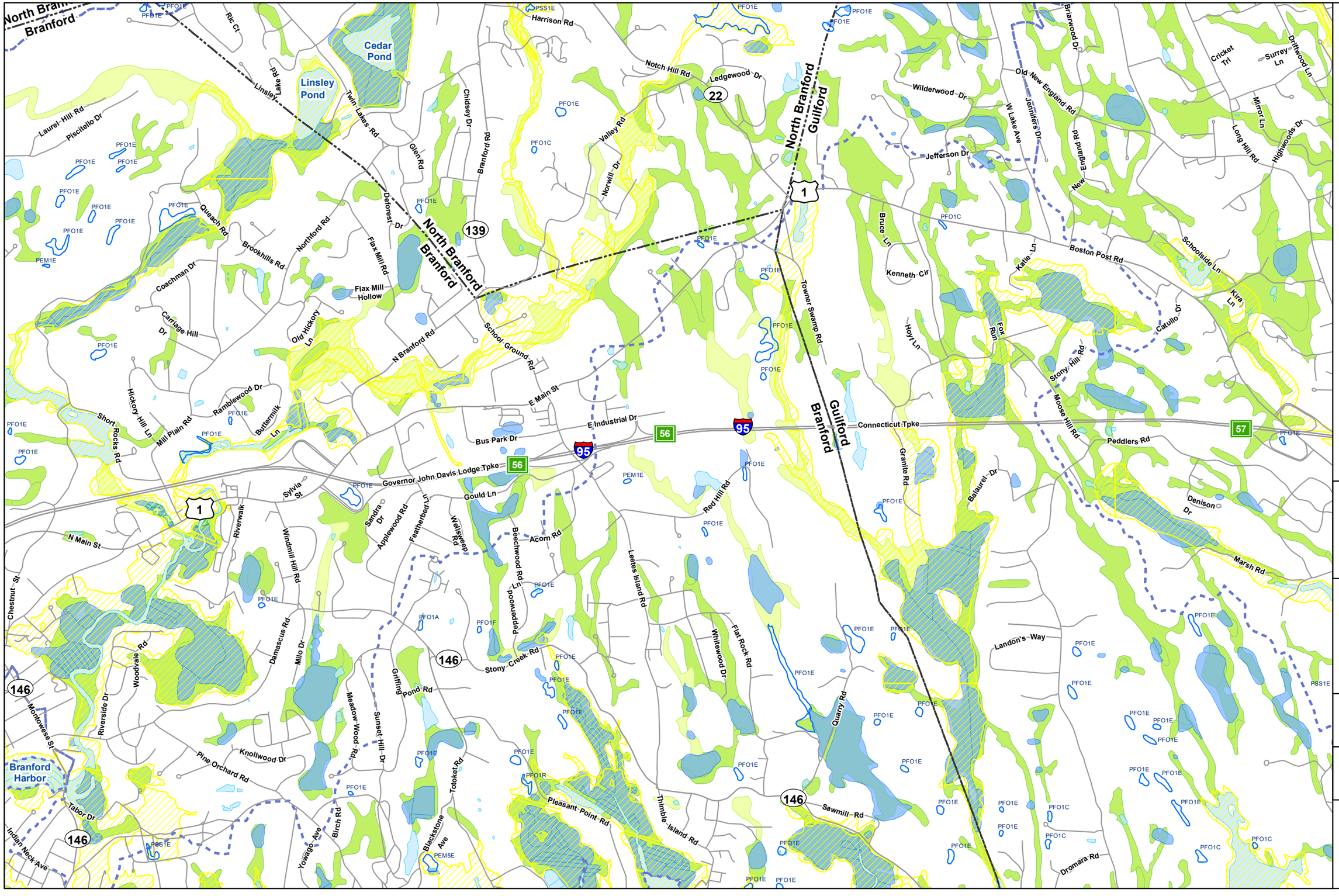
N W E S

0 1,000 2,000
Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

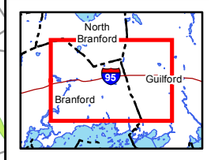
- Alluvial and Floodplain Soils
- Poorly Drained and Very Poorly Drained Soils

Coastal Wetlands

- Tidal Wetland (1990s)**

*Only NWI Wetlands that do not correspond to wetland soils are shown for clarity.

**Tidal Wetlands are shown within 1000 ft of I-95.



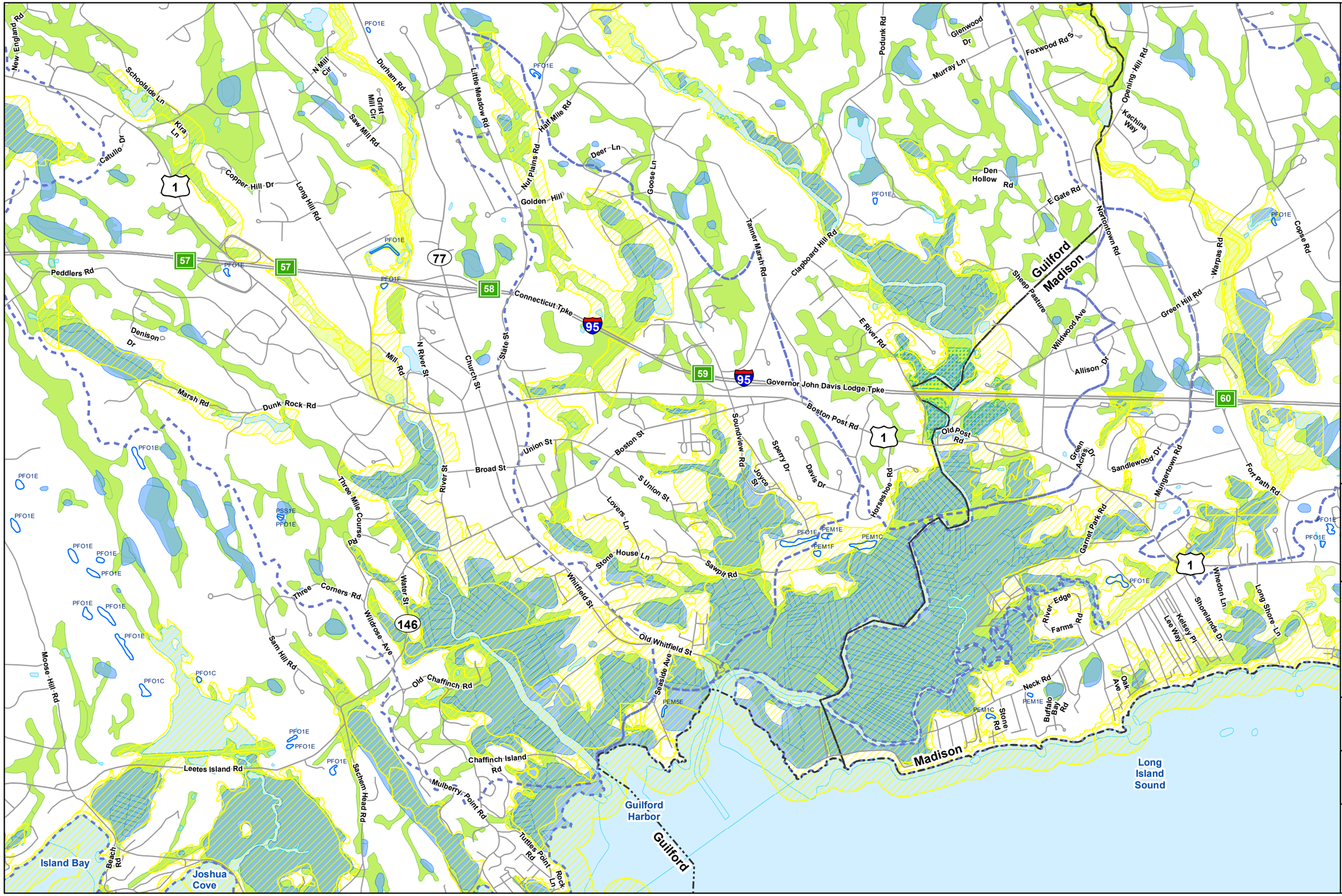
N W E S

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Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

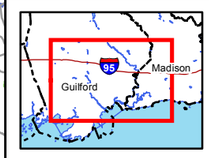
- Alluvial and Floodplain Soils
- Poorly Drained and Very Poorly Drained Soils

Coastal Wetlands

- Tidal Wetland (1990s)**

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N W E S

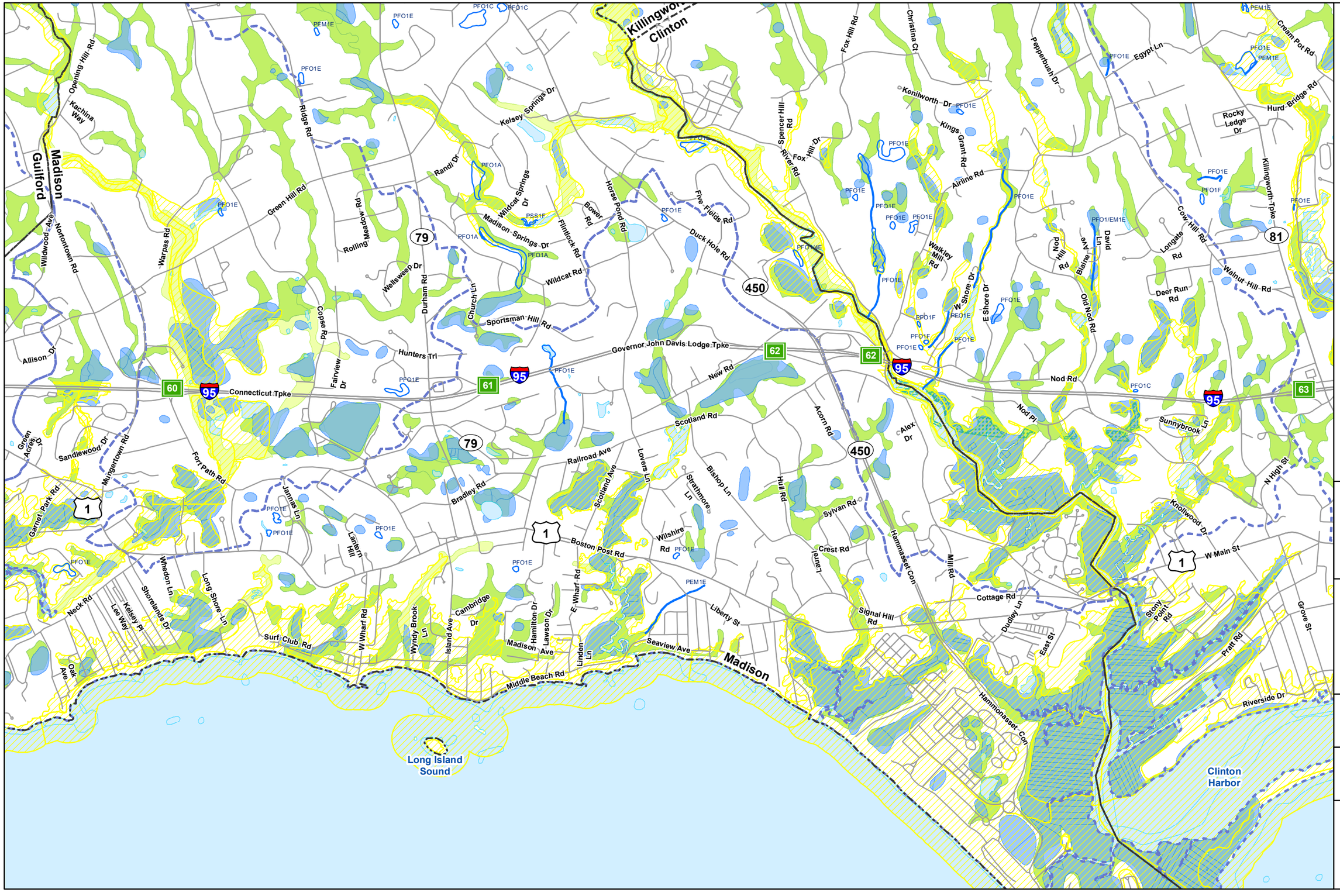
0 1,000 2,000

Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

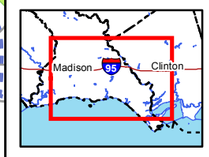
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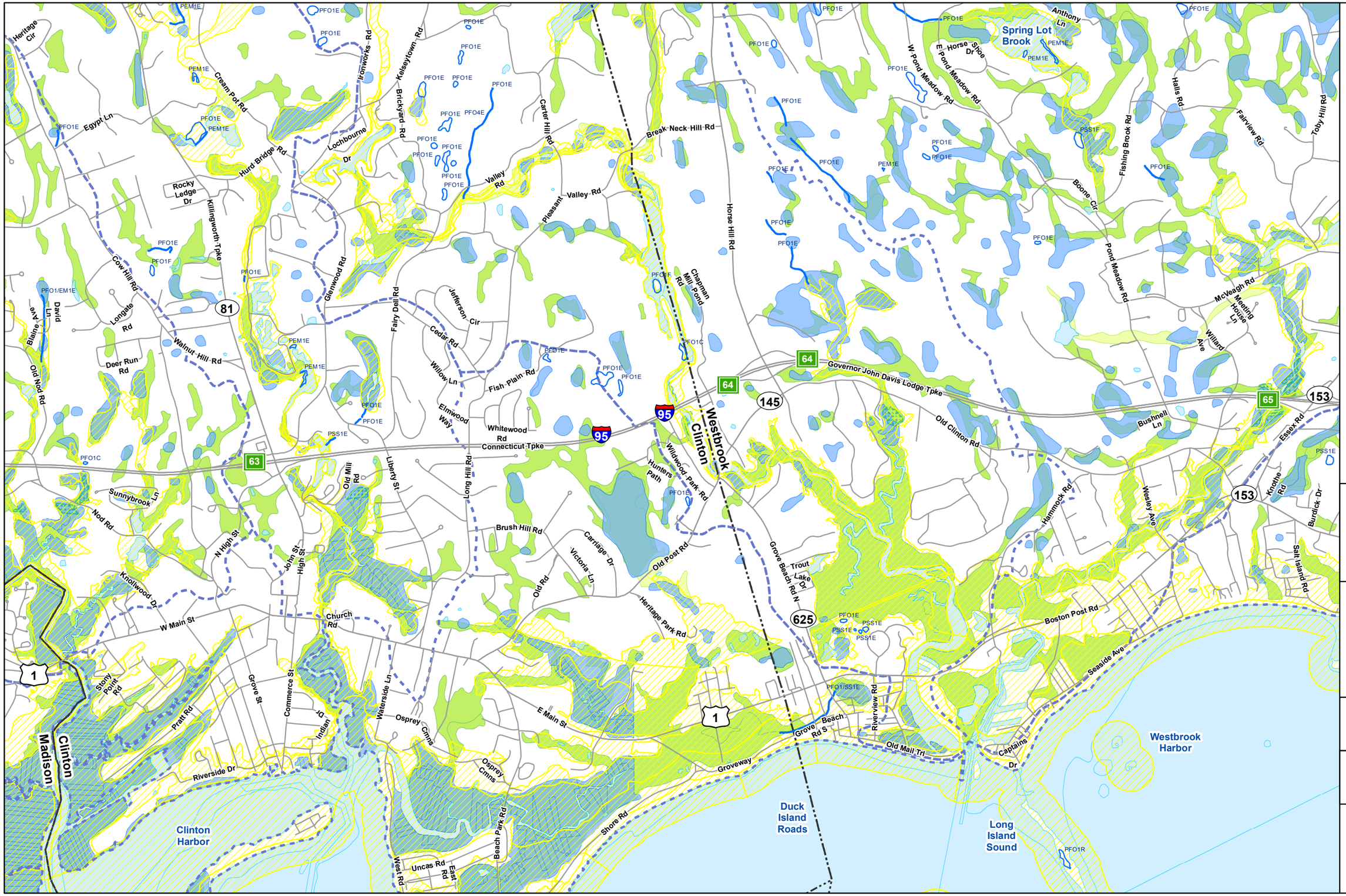
N W E S

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Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

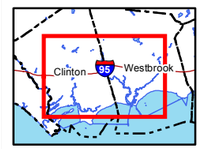
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Coastal Wetlands

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N W E S

0 1,000 2,000
Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

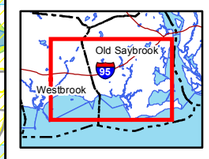
- Alluvial and Floodplain Soils
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Coastal Wetlands

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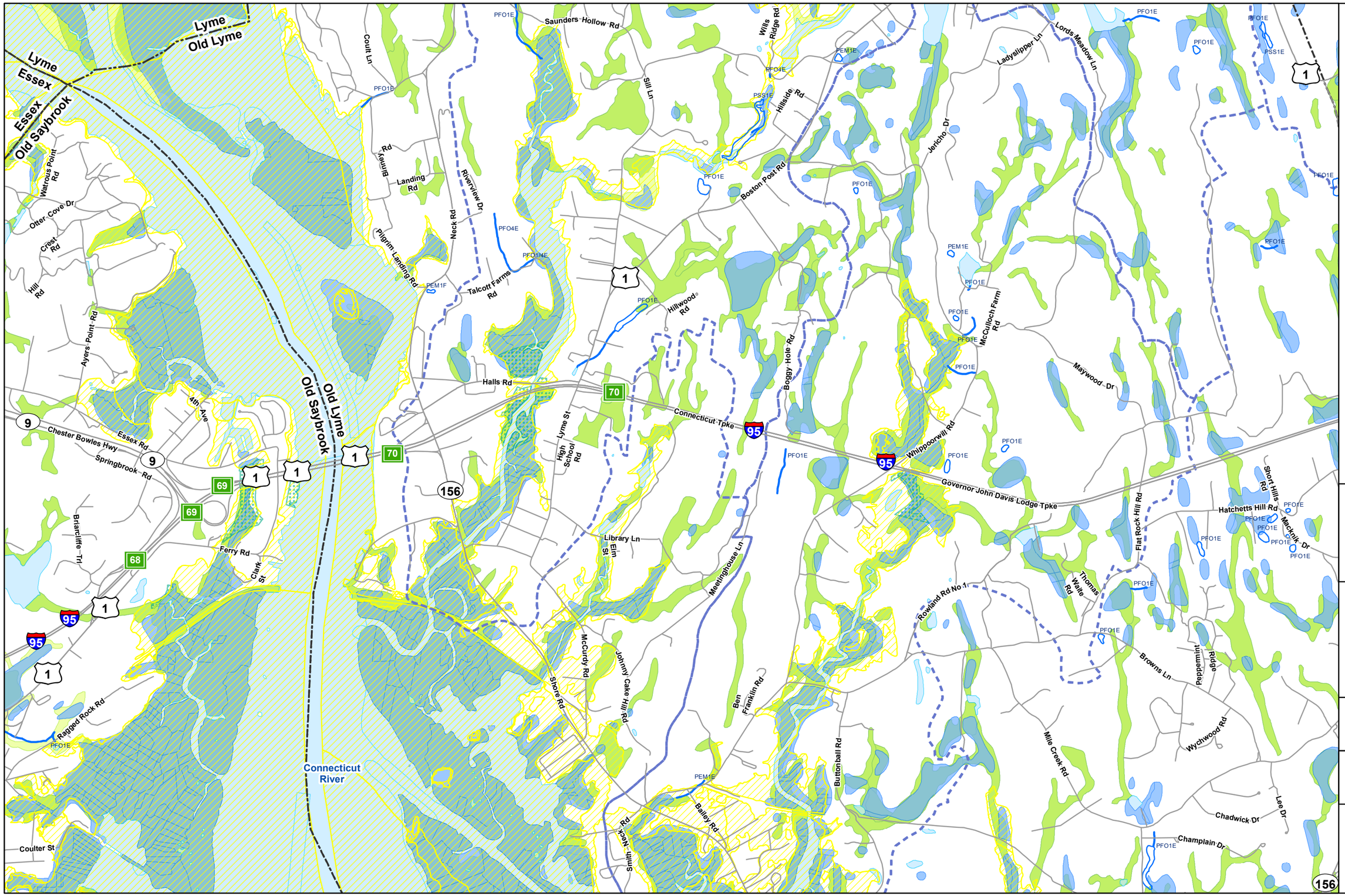
N W E S

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CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
- FEMA 100 Year Flood Zone
- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

- Alluvial and Floodplain Soils
- Poorly Drained and Very Poorly Drained Soils

Coastal Wetlands

- Tidal Wetland (1990s)**

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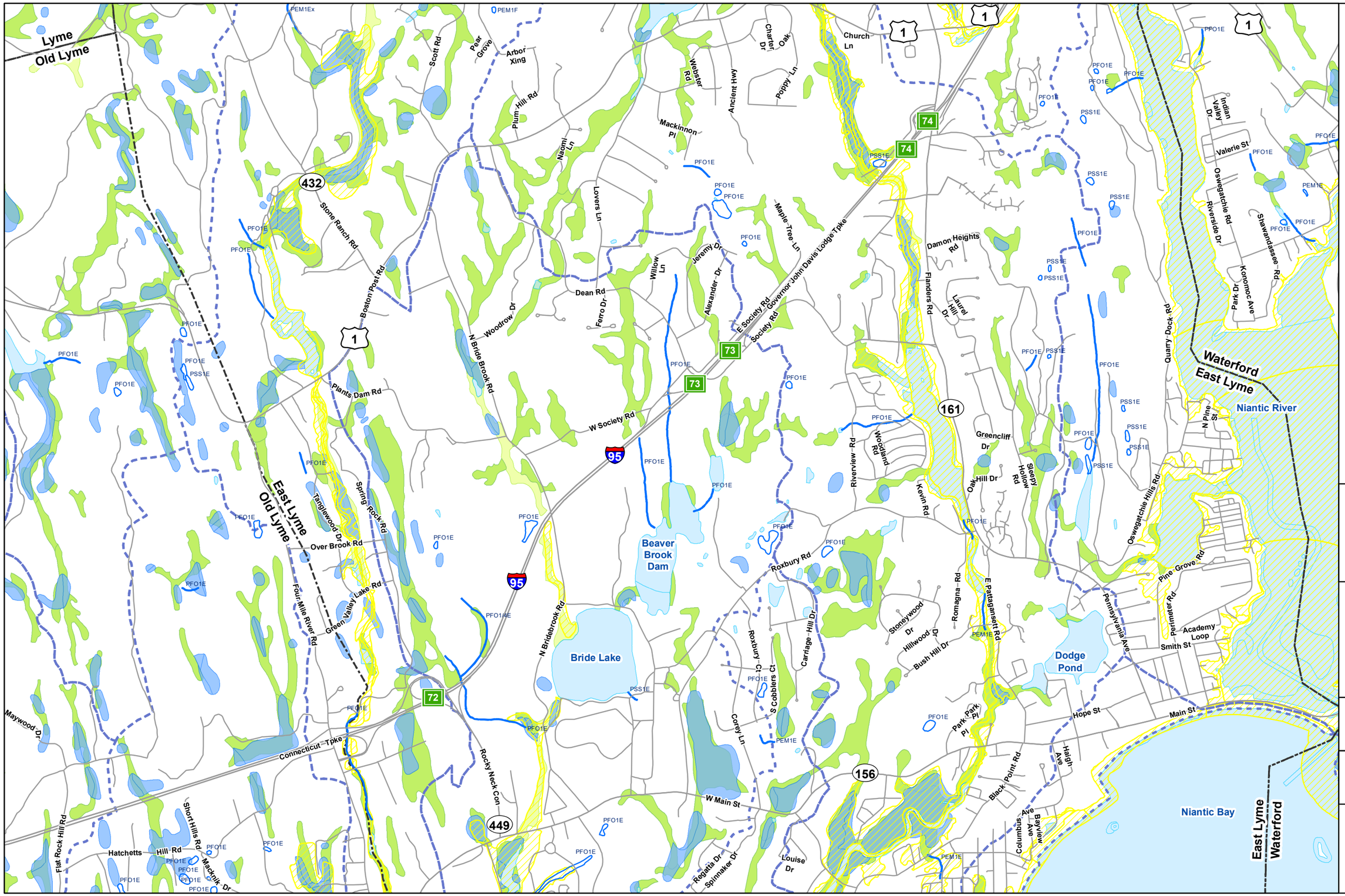
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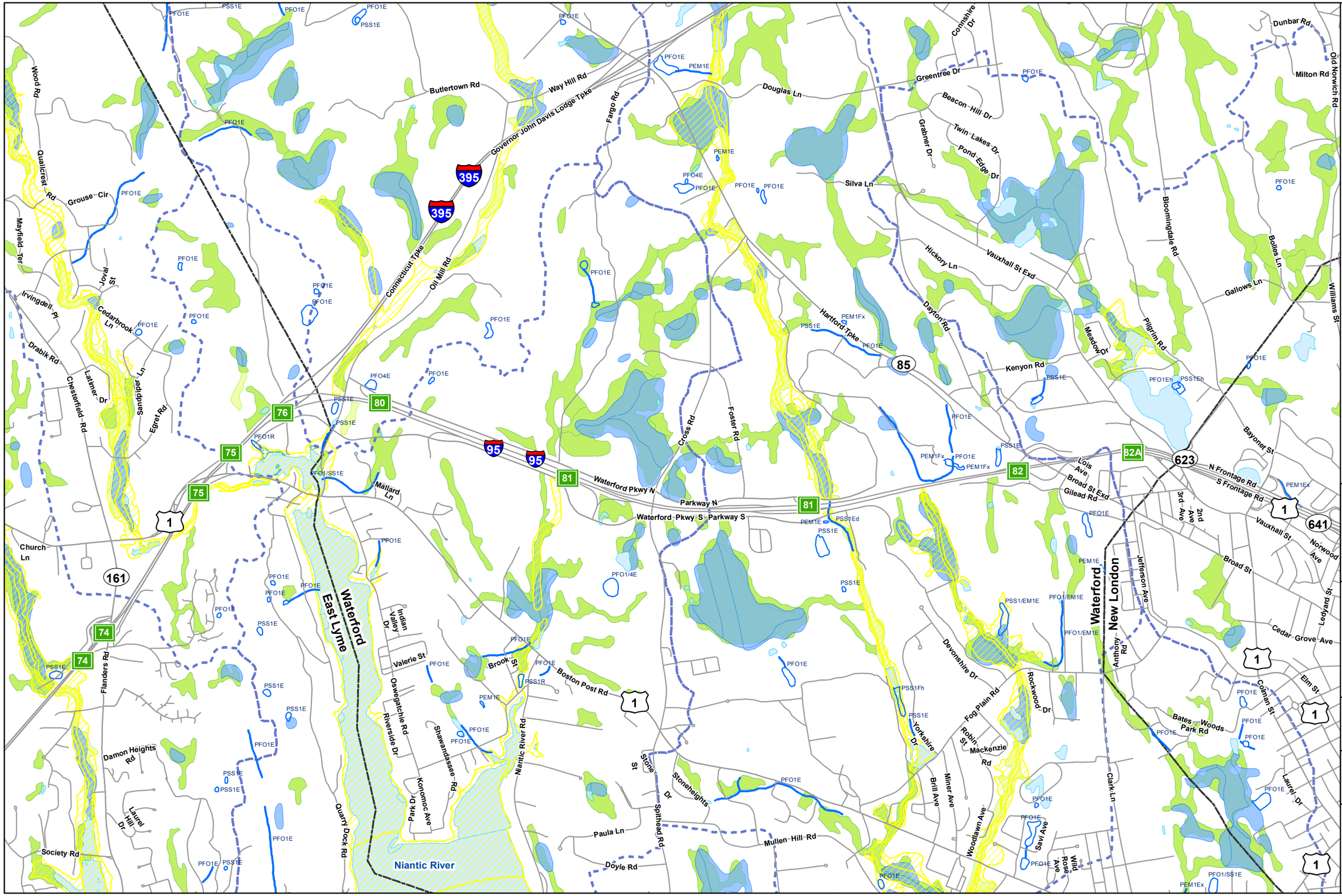
0 1,000 2,000
Feet

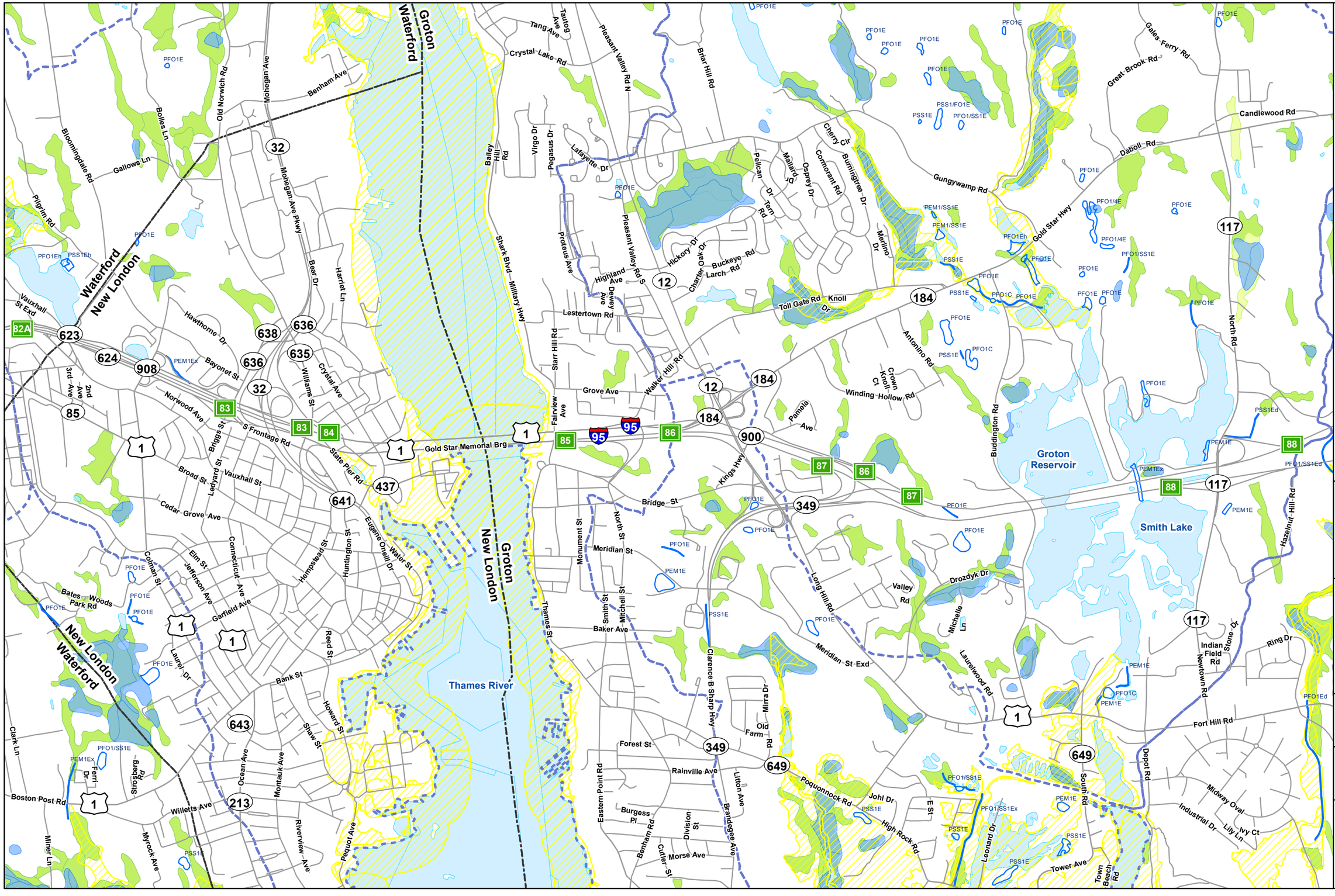
CDM Smith

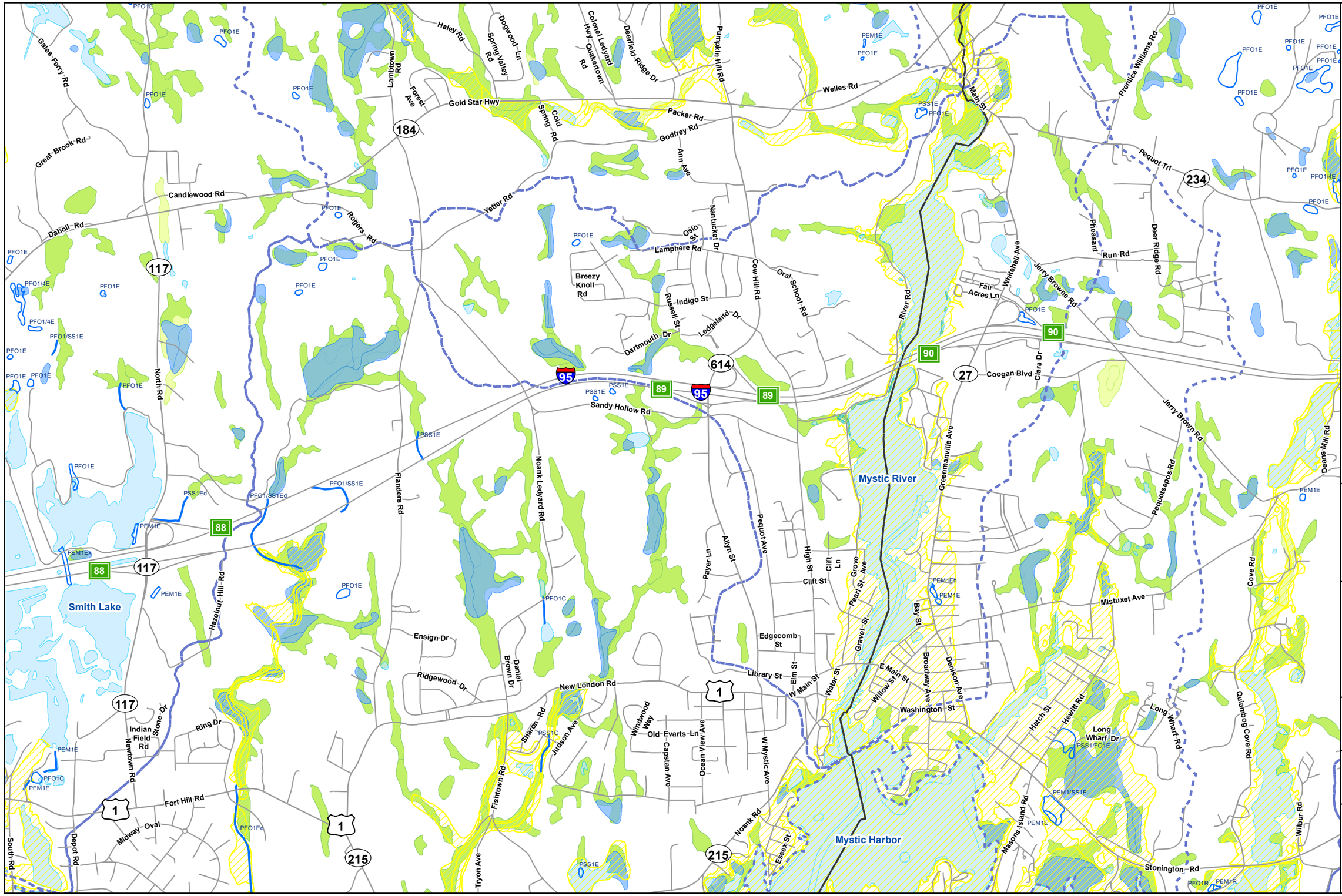
I-95 Corridor

Surface Water Resources


Lyme
Old Lyme
East Lyme
Old Lyme
Waterford
East Lyme
Niantic River
Beaver Brook Dam
Bride Lake
Dodge Pond
Niantic Bay
East Lyme
Waterford
PEM1Ex
PEM1F
PFO1E
PSS1E
PEM1E
PFO1AE
Scott Rd
Pear Grove
Arbor Xing
Plum Hill Rd
Webster Rd
Mackinnon Pl
Ancient Hwy
Charter Oak Dr
Poppy Ln
Church Ln
Naomi Ln
Lovers Ln
Willow Ln
Jeremy Dr
Alexander Dr
Maple Tree Ln
Governor John Davis Lodge Tpke
E Society Rd
Society Rd
Dean Rd
Ferro Dr
Woodrow Dr
N Bride Brook Rd
Stone Ranch Rd
Boston Post Rd
Plants Dam Rd
W Society Rd
Damon Heights Rd
Flanders Rd
Laurel Hill Dr
Riverview Rd
Woodland Rd
Kevin Rd
Greencliff Dr
Oak Hill Dr
Sleepy Hollow Rd
Indian Valley Dr
Valerie St
Oswegatchie Rd
Riverside Dr
Park Dr
Konomoc Ave
Shawandassee Rd
Quarry Dock Rd
N Pine St
Oswegatchie Hills Rd
Pine Grove Rd
Perimeter Rd
Academy Loop
Smith St
Pennsylvania Ave
Hope St
Main St
Park Park Pl
Haigh Ave
Black Point Rd
Columbus Ave
Bayview Ave
Louise Dr
Regatta Dr
Spinnaker Dr
Roxbury Rd
Roxbury Ct
S Cobblers Ct
Carriage Hill Dr
Stoneywood Dr
Hillwood Dr
Bush Hill Dr
Romagna Rd
E Pattagansett Rd
Corey Ln
N Bridebrook Rd
Rocky Neck Conn
W Main St
Connecticut Tpke
Maywood Dr
Flat Rock Hill Rd
Short Hills Rd
Hatchetts Hill Rd
Mackrill Dr
Tanglewood Dr
Spring Rock Rd
Over Brook Rd
Four Mile River Rd
Green Valley Lake Rd
1
74
73
95
161
432
72
449
156
Legend
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
Marsh
FEMA 100 Year Flood Zone
Subregional Watershed Boundary
NWI Wetlands
NWI Wetland (with NWI classification)*
Inland Wetland Soil
Alluvial and Floodplain Soils
Poorly Drained and Very Poorly Drained Soils
Coastal Wetlands
Tidal Wetland (1990s)**
*Only NWI Wetlands that do not correspond to wetland soils are shown for clarity.
**Tidal Wetlands are shown within 1000 ft of I-95.
Lyme
East Lyme
Old Lyme
95
N
W
E
S
0
1,000
2,000
Feet
CDM Smith
I-95 Corridor
Surface Water Resources
Page 8 of 13


Legend
Town Line
Road Centerline
Surface Water
Surface Waterbody or Watercourse
Marsh
FEMA 100 Year Flood Zone
Subregional Watershed Boundary
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Waterford
East Lyme
New London
Niantic River
0
1,000
2,000
Feet
CDM Smith
I-95 Corridor
Surface Water Resources
Page 9 of 13


Groton
Waterford
Groton
New London
Waterford
New London
Thames River
Groton Reservoir
Smith Lake
Tang Ave
Taulog Ave
Crystal Lake Rd
Pleasant Valley Rd N
Briar Hill Rd
Bailey Hill Rd
Virgo Dr
Pegasus Dr
Lafayette Dr
Pleasant Valley Rd S
Proteus Ave
Starr Hill Rd
Fairview Ave
Highland Ave
Dewey Ave
Lestertown Rd
Hickory Dr
Charter Oak Dr
Buckeye Rd
Larch Rd
Strart Blvd
Military Hwy
Walker Hill Rd
Grove Ave
Pelican Dr
Mallard Dr
Osprey Dr
Cormorant Rd
Tern Rd
Cherry Cir
Burmingtree Dr
Merlino Dr
Gungywamp Rd
Great Brook Rd
Gales Ferry Rd
Candlewood Rd
Daboll Rd
Gold Star Hwy
North Rd
Toll Gate Rd
Knoll Dr
Antonino Rd
Crown Knoll Ct
Winding Hollow Rd
Pamela Ave
Buddington Rd
Kings Hwy
Bridge St
Meridian St
North St
Monument St
Smith St
Mitchell St
Baker Ave
Long Hill Rd
Valley Rd
Drozdyk Dr
Michelle Ln
Laurelwood Rd
Meridian St Exd
Clarence B Sharp Hwy
Mirra Dr
Old Farm Rd
Forest St
Rainville Ave
Litton Ave
Brandegee Ave
Eastern Point Rd
Burgess Pl
Benham Rd
Cutler St
Division St
Morse Ave
Poquonnock Rd
Johl Dr
High Rock Rd
E St
Leonard Dr
Tower Ave
Town Beach Rd
South Rd
Depot Rd
Fort Hill Rd
Newtown Rd
Indian Field Rd
Stone Dr
Ring Dr
Midway Oval
Industrial Dr
Ivy Ct
Lily Ln
Hazelnut Hill Rd
Gold Star Memorial Brg
Mohegan Ave
Benham Ave
Old Norwich Rd
Bolles Ln
Gallows Ln
Bloomingdale Rd
Pilgrim Rd
Mohegan Ave Pkwy
Bear Dr
Harriet Ln
Vauxhall St Exd
Hawthorne Dr
Bayonet St
Norwood Ave
3rd Ave
2nd Ave
Briggs St
S Frontage Rd
Ledyard St
Vauxhall St
Broad St
Cedar Grove Ave
State Pier Rd
Eugene Oneill Dr
Water St
Huntington St
Hempstead St
Connecticut Ave
Elm St
Jefferson Ave
Garfield Ave
Colman St
Bates Woods Park Rd
Laurel Dr
Bank St
Reed St
Howard St
Shaw St
Thames St
Ocean Ave
Montauk Ave
Riverview Ave
Pequot Ave
Myrock Ave
Miner Ln
Willetts Ave
Boston Post Rd
Clark Ln
Strosberg Rd
Ferri Dr
Williams St
Crystal Ave
Harbor Dr
Water Ln
Shore Dr
Ridge Rd
Hillcrest Rd
Lambert Rd
Lambert Ln
Lillian Ln
Lillian Dr
Lillian Ct
Lillian Rd



Legend

- Town Line
- Road Centerline

Surface Water

- Surface Waterbody or Watercourse
- Marsh
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- Subregional Watershed Boundary

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- NWI Wetland (with NWI classification)*

Inland Wetland Soil

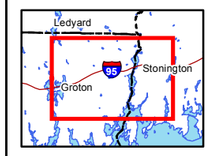
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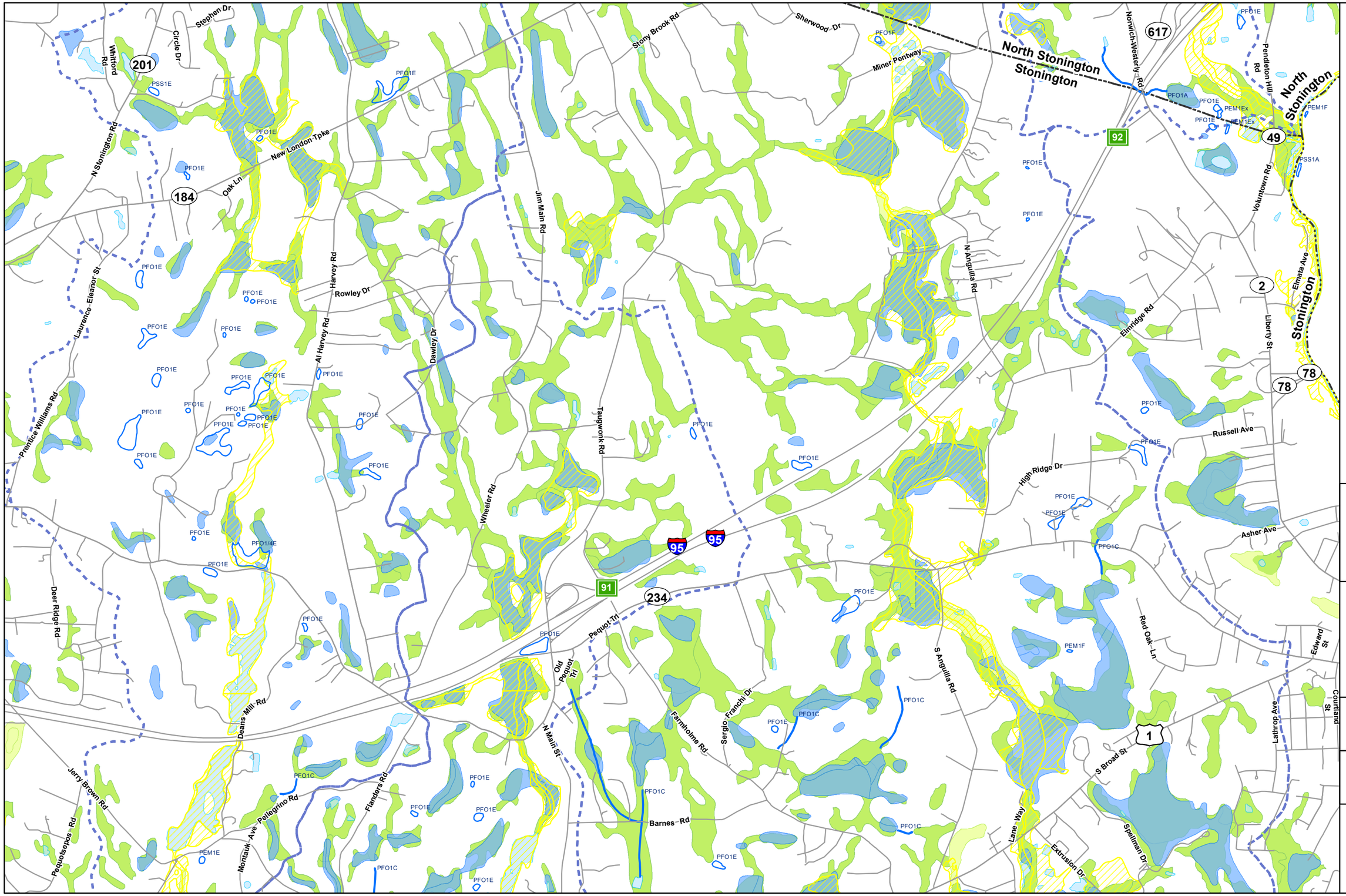
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Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

- Town Line
- Road Centerline

Surface Water

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- Subregional Watershed Boundary

NWI Wetlands

- NWI Wetland (with NWI classification)*

Inland Wetland Soil

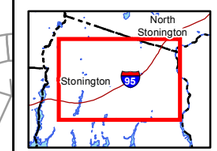
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Coastal Wetlands

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N W E S

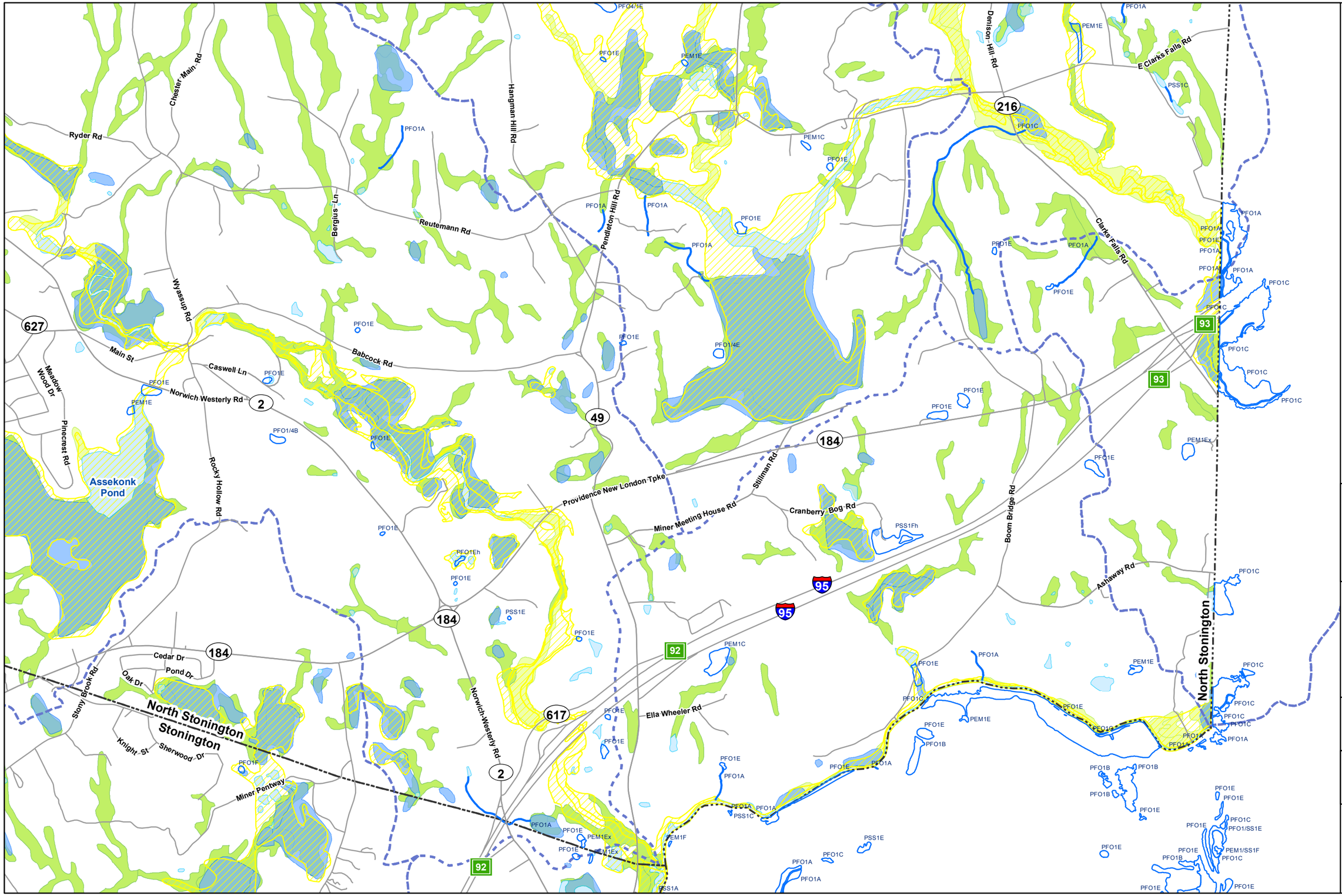
0 1,000 2,000

Feet

CDM Smith

I-95 Corridor

Surface Water Resources



Legend

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- Road Centerline

Surface Water

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N W E S

0 1,000 2,000
Feet

CDM Smith

I-95 Corridor

Surface Water Resources

Appendix E
Improvement Concepts

Exit 54 to Exit 55 Improvements: PLN-01 to PLN-11

Exit 63 Acceleration Lane Improvements: PLN-01 to PLN-02

I-95/I-395 Interchange Improvements

Exit 88 Acceleration Lane Improvements: PLN-01 to PLN-02

Exit 89 Acceleration Lane Improvements: PLN-01

Exit 90 Improvements: PLN-01 to PLN-06

Route 32 Improvements Alternative 1: PLN-01 to PLN-04

Route 32 Improvements Alternative 2: PLN-01 to PLN-04

Route 32 Improvements Alternative 3: PLN-01 to PLN-04



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit 53 to Exit 56_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **BRANFORD**

DRAWING TITLE:
EXIT 54 TO EXIT 55 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-01**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit 53 to Exit 56_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **BRANFORD**

DRAWING TITLE:
EXIT 54 TO EXIT 55 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-02**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Exit 53 to Exit 56 PLN-03.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **BRANFORD**

DRAWING TITLE:
EXIT 54 TO EXIT 55 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-03**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit 53 to Exit 56_PLN-04.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **BRANFORD**

DRAWING TITLE:
EXIT 54 TO EXIT 55 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-04**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Exit 53 to Exit 56_PLN-05.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: BRANFORD

DRAWING TITLE:
EXIT 54 TO EXIT 55
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-05

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit 53 to Exit 56_PLN-06.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: BRANFORD

DRAWING TITLE:
EXIT 54 TO EXIT 55
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-06

SHEET NO.



MATCH MARK - SEE DRAWING NO. PLN-06

MATCH MARK - SEE DRAWING NO. PLN-08

CONNECTICUT COORDINATE SYSTEM

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Exit 53 to Exit 56 PLN-07.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: BRANFORD

DRAWING TITLE:
EXIT 54 TO EXIT 55
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-07

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

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CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit 53 to Exit 56_PLN-08.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
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PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **BRANFORD**

DRAWING TITLE:
EXIT 54 TO EXIT 55 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-08**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Exit 53 to Exit 56 PLN-09.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: BRANFORD

DRAWING TITLE:
EXIT 54 TO EXIT 55
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-09

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Exit 53 to Exit 56 PLN-10.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN:
BRANFORD

DRAWING TITLE:
EXIT 54 TO EXIT 55 IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-10

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Exit 53 to Exit 56 PLN-11.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: BRANFORD

DRAWING TITLE:
EXIT 54 TO EXIT 55
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-11

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\I-95_Exit63_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **CLINTON**

DRAWING TITLE:
EXIT 63 ACCELERATION LANE IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-01

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\Plan\I-95_Exit63_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

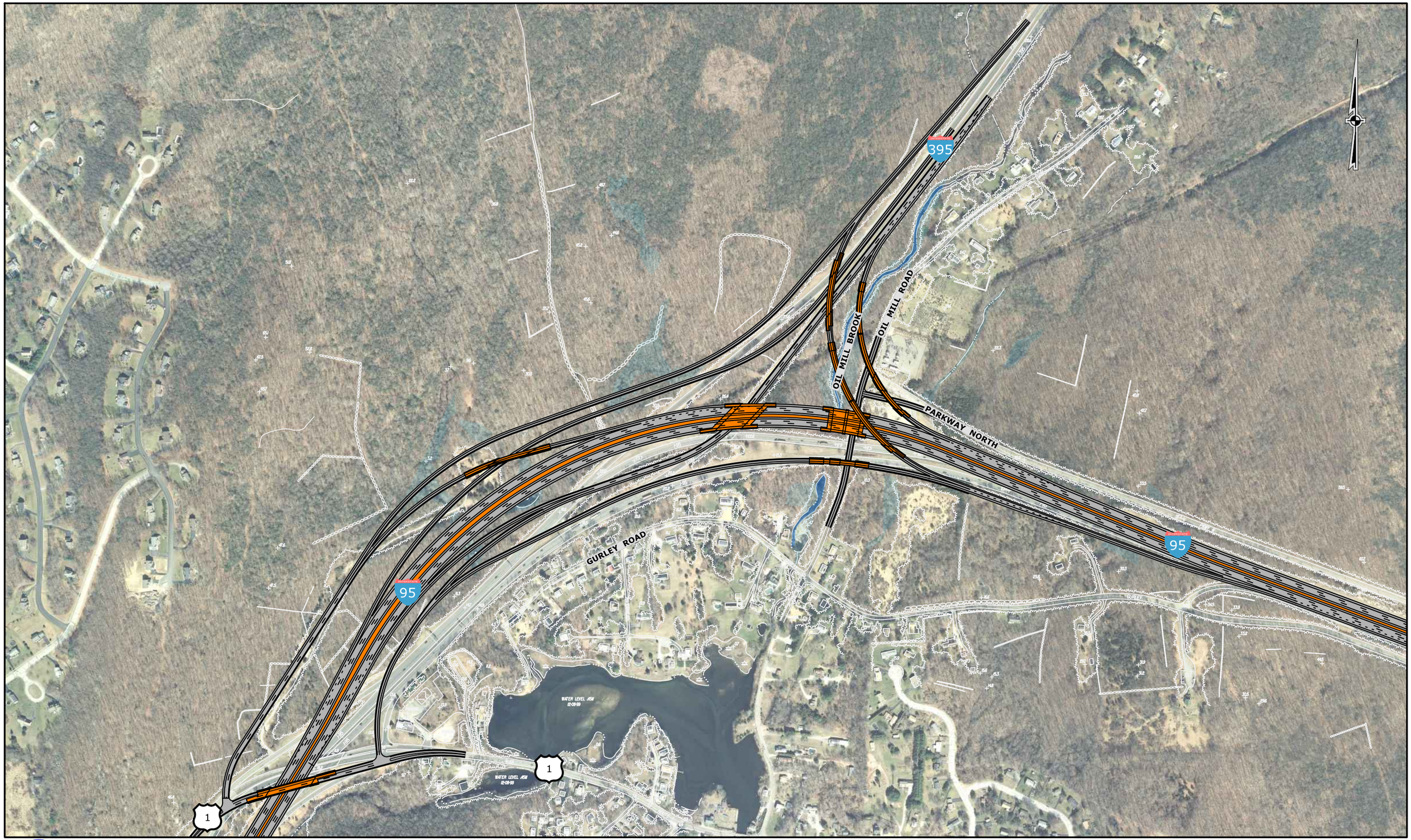
TOWN: CLINTON

DRAWING TITLE:
EXIT 63 ACCELERATION LANE IMPROVEMENTS

PROJECT NO.

DRAWING NO. PLN-02

SHEET NO.



MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

LEGEND

- REVISED DESIGN
- PREVIOUS DESIGN
- OVERLAPPING DESIGN

395

OIL MILL BROOK

OIL MILL ROAD

PARKWAY NORTH

95

GURLEY ROAD

WATER LEVEL ASH 12-09-99

1

95

1

MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE FOOTPRINT COMPARISON
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

COMMON RAVEN

NORTHERN PARULA

HABITAT BLOCK

ARCHEOLOGICAL SITE (TYP.)

APPROXIMATE PROPOSED
OIL MILL HISTORIC DISTRICT

VERNAL POOL SP-24

OIL MILL BROOK

OIL MILL ROAD

PARKWAY NORTH

VERNAL POOL 100'
BUFFER (TYP.)

VERNAL POOL 750'
BUFFER (TYP.)

GURLEY ROAD

SPOTTED TURTLE

WOLF PIT HILLS
DISTRICT BOUNDARY

APPROXIMATE PROPOSED
OIL MILL HISTORIC DISTRICT

SNOWY EGRET

STANDING HISTORIC
STRUCTURE (TYP.)

GREAT EGRET

VERNAL POOL SP-25

WATER LEVEL ASM
12-08-99

WATER LEVEL ASM
12-08-99

395

95

95

1

1

MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
Companies

LEGEND

- I-95 MAINLINE
- I-95 - I-395 RAMPS
- ROUTE 1 RAMPS
- SECONDARY ROADS
- BRIDGES
- TRAFFIC FLOW

SOUTH 95

NORTH 95

1

1

NORTH 395

NORTH 95

NORTH 395

NORTH 395

OIL MILL ROAD

OIL MILL BROOK

PARKWAY NORTH

GURLEY ROAD

A

B

A

B

WATER LEVEL ASH 12-09-99

WATER LEVEL ASH 12-09-99

1

1

95

95

95

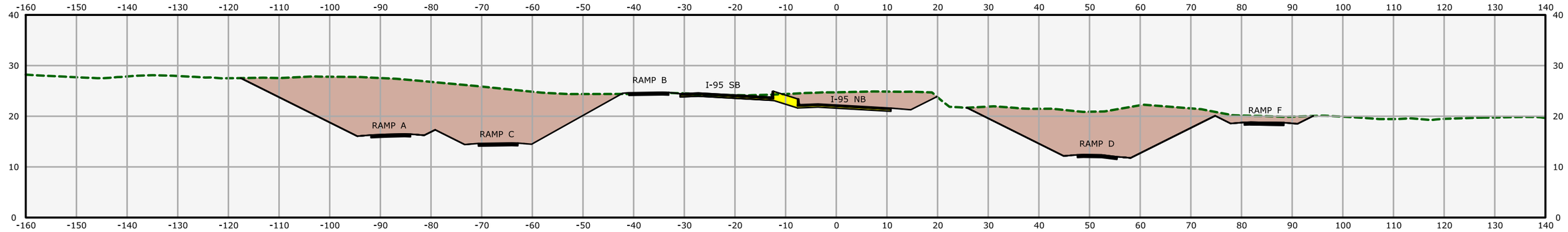
395

395

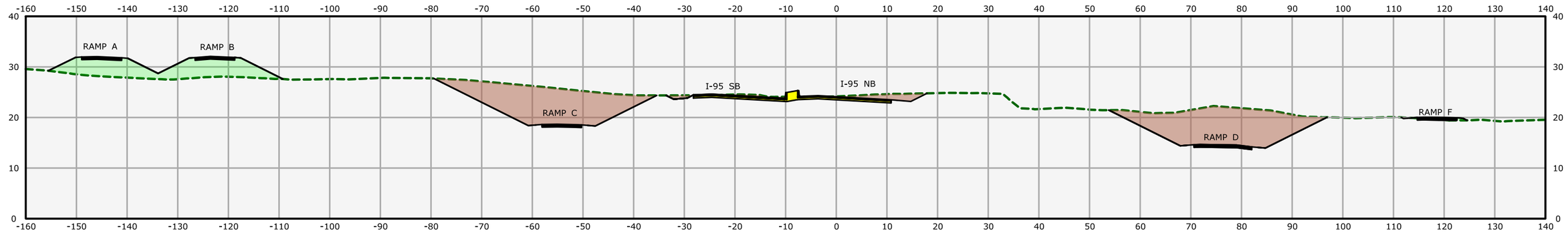
MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



REVISED DESIGN
SECTION A-A: I-95 NB 22+140

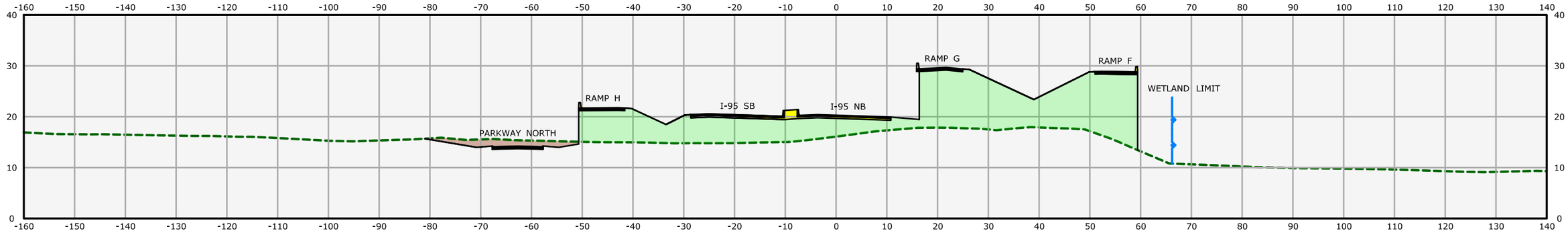


PREVIOUS DESIGN
SECTION A-A: I-95 NB 22+140

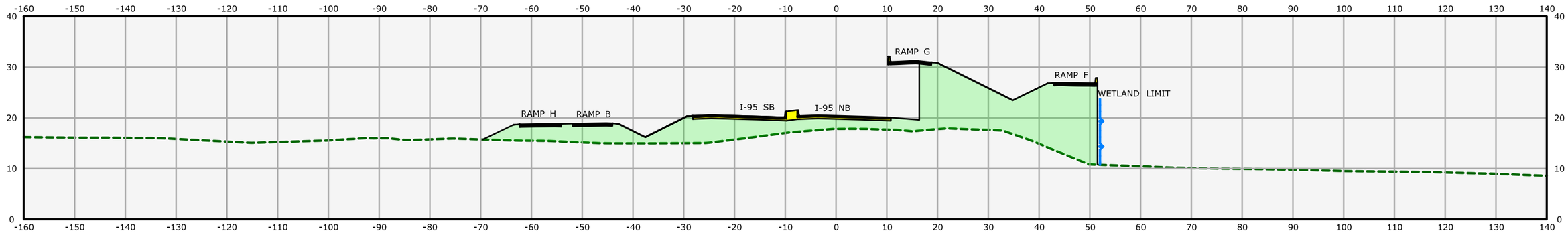
MARCH XX, 2017 - STATE OF CONNECTICUT

CRITICAL CROSS SECTIONS - SECTION A-A
EAST LYME & WATERFORD, CT

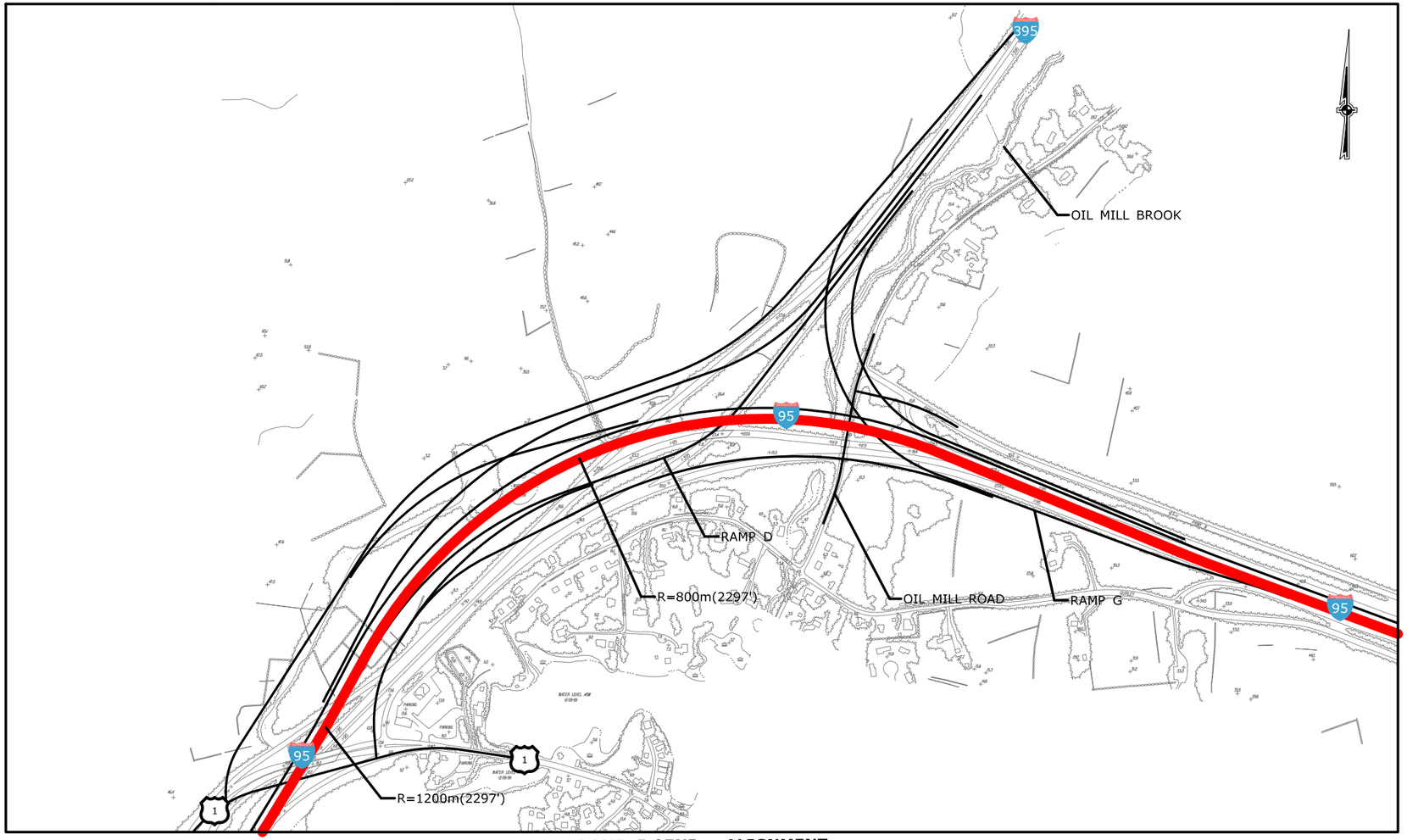
BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



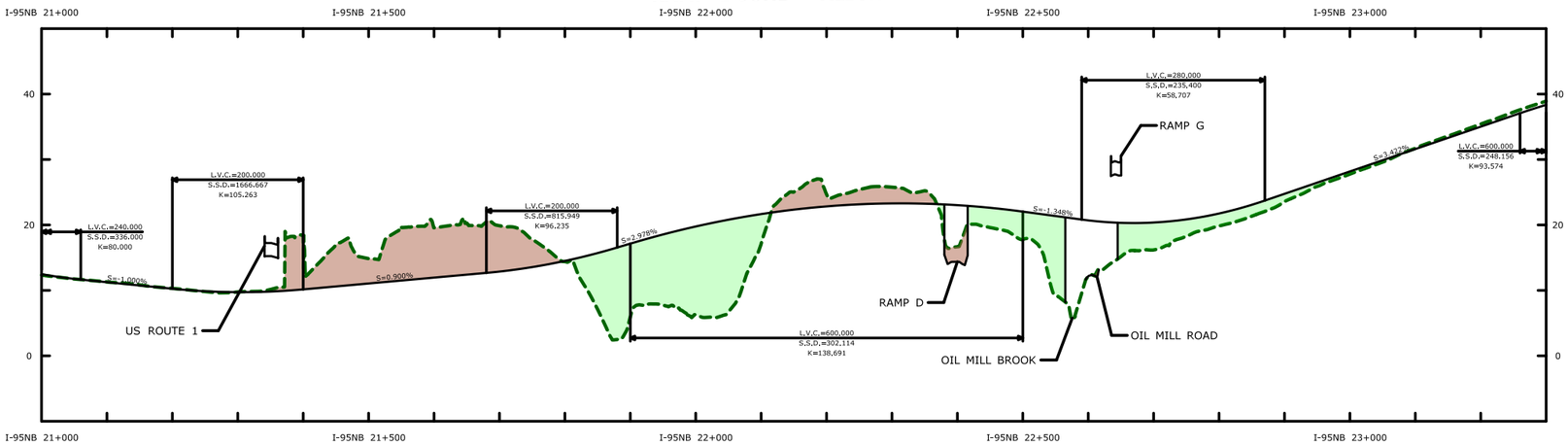
REVISED DESIGN
SECTION B-B: I-95 NB 22+680



PREVIOUS DESIGN
SECTION B-B: I-95 NB 22+680



RAMP I-95NB - ALIGNMENT



RAMP I-95NB - PROFILE

MARCH XX, 2017 - STATE OF CONNECTICUT

RAMP I-95NB - DESIGN CONTROLS

DESIGN SPEED = 110 KPH (70 MPH)

MINIMUM RADII = 565m (1854')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

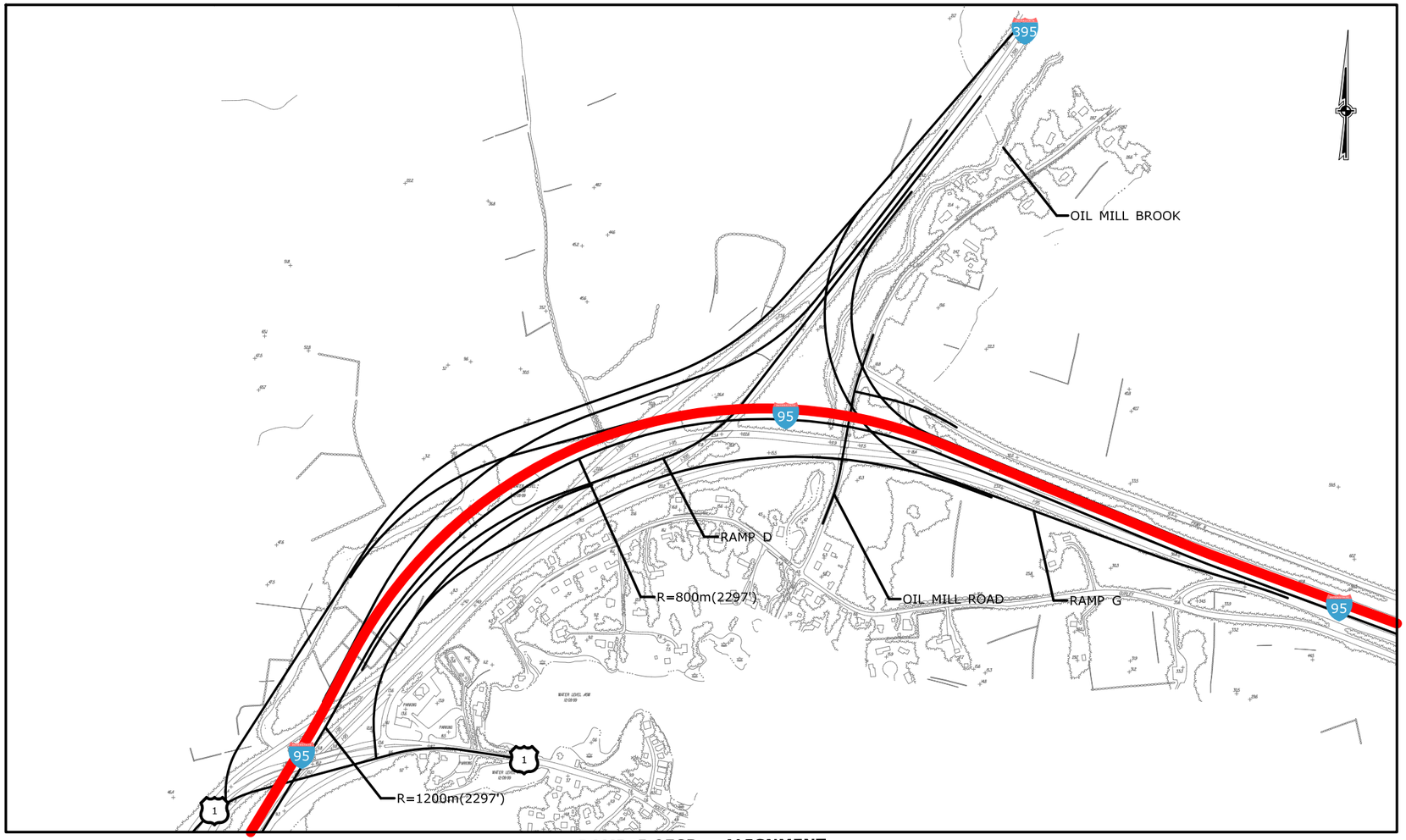
RAMP I-95NB - GENERAL NOTES

NO. OF BRIDGES = 2

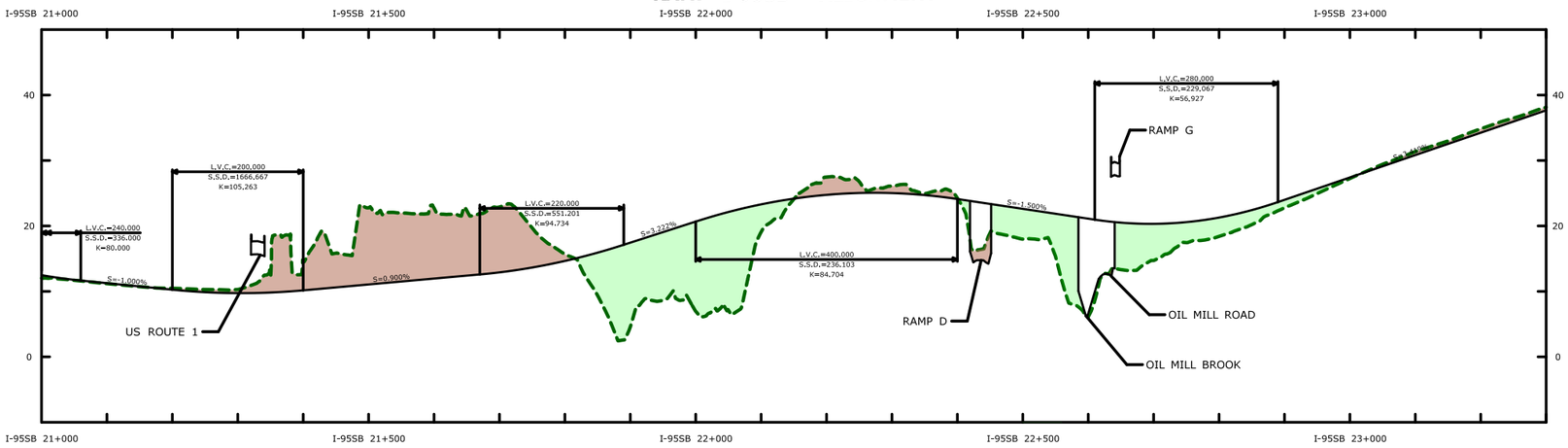
BUILT PRIMARILY OFF LINE IN FIRST STAGE

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies



RAMP I-95SB - ALIGNMENT



RAMP I-95SB - PROFILE

MARCH XX, 2017 - STATE OF CONNECTICUT

RAMP I-95SB - DESIGN CONTROLS

DESIGN SPEED = 110 KPH (70 MPH)

MINIMUM RADII = 565m (1854')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

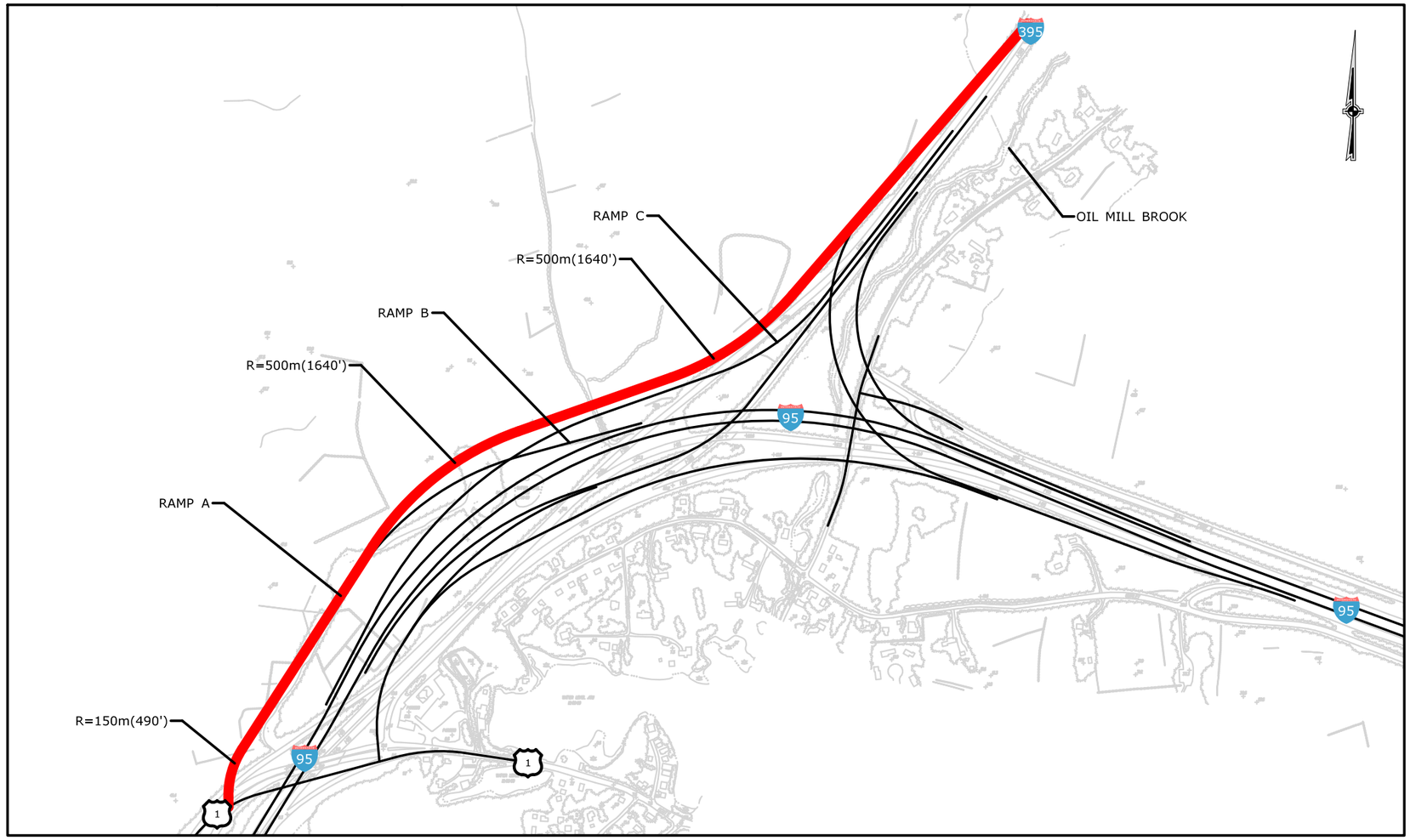
RAMP I-95SB - GENERAL NOTES

NO. OF BRIDGES = 2

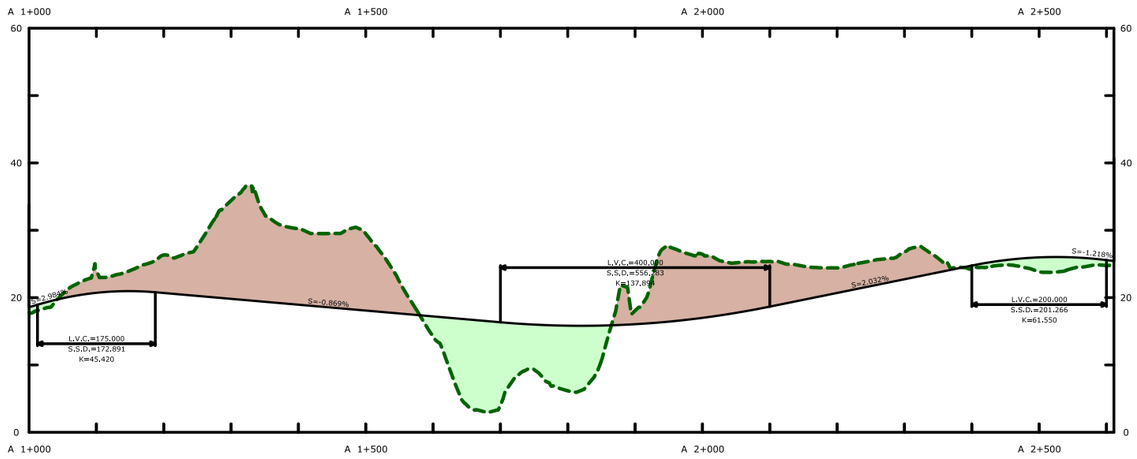
BUILT PRIMARILY OFF LINE IN FIRST STAGE

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
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ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



RAMP A - ALIGNMENT



RAMP A - PROFILE

RAMP A - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

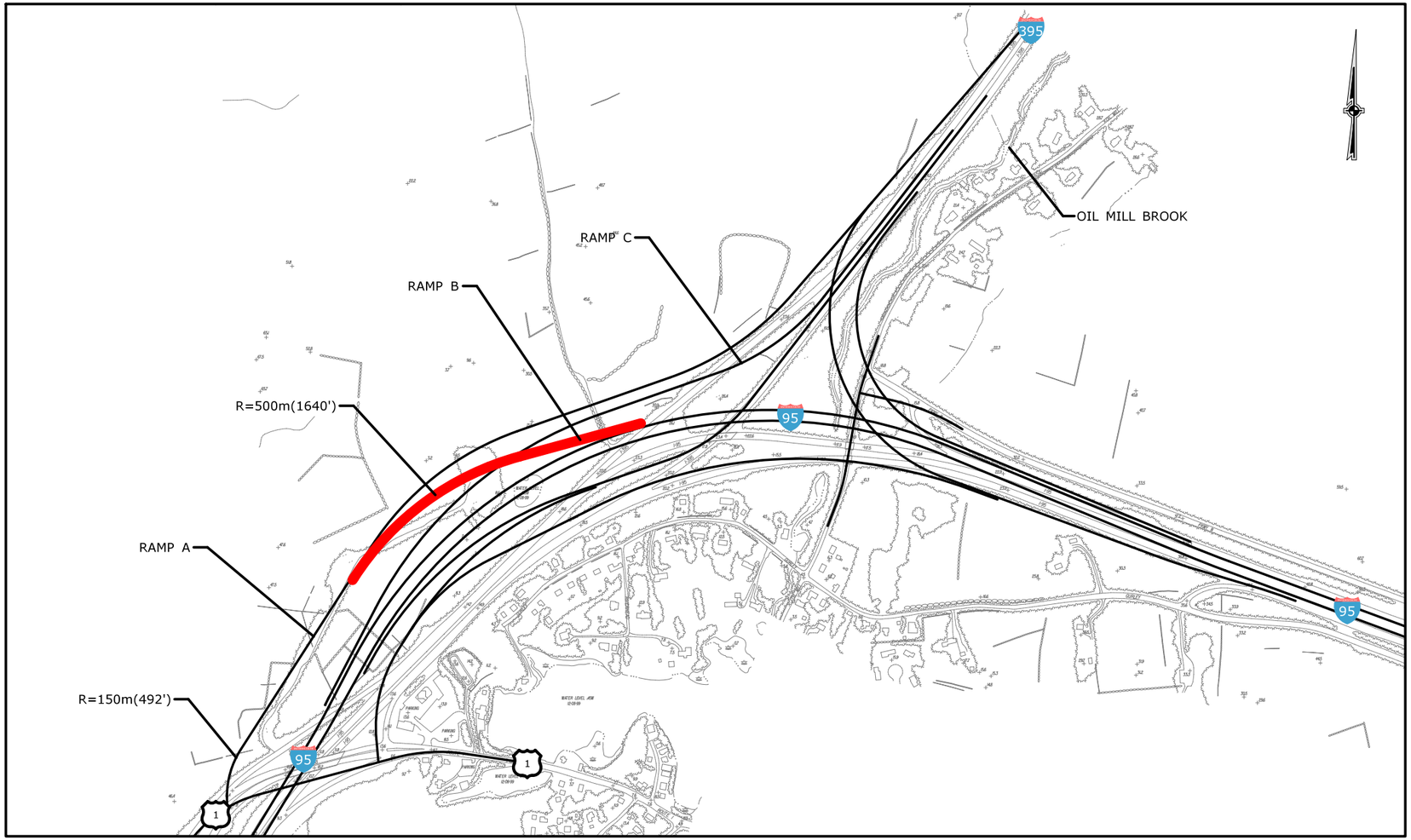
RAMP A - GENERAL NOTES

BUILT PRIMARILY OFF LINE IN FIRST STAGE

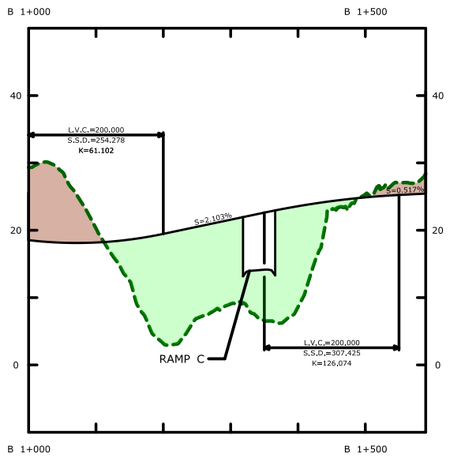
MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



RAMP B - ALIGNMENT



RAMP B - PROFILE

RAMP B - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

RAMP B - GENERAL NOTES

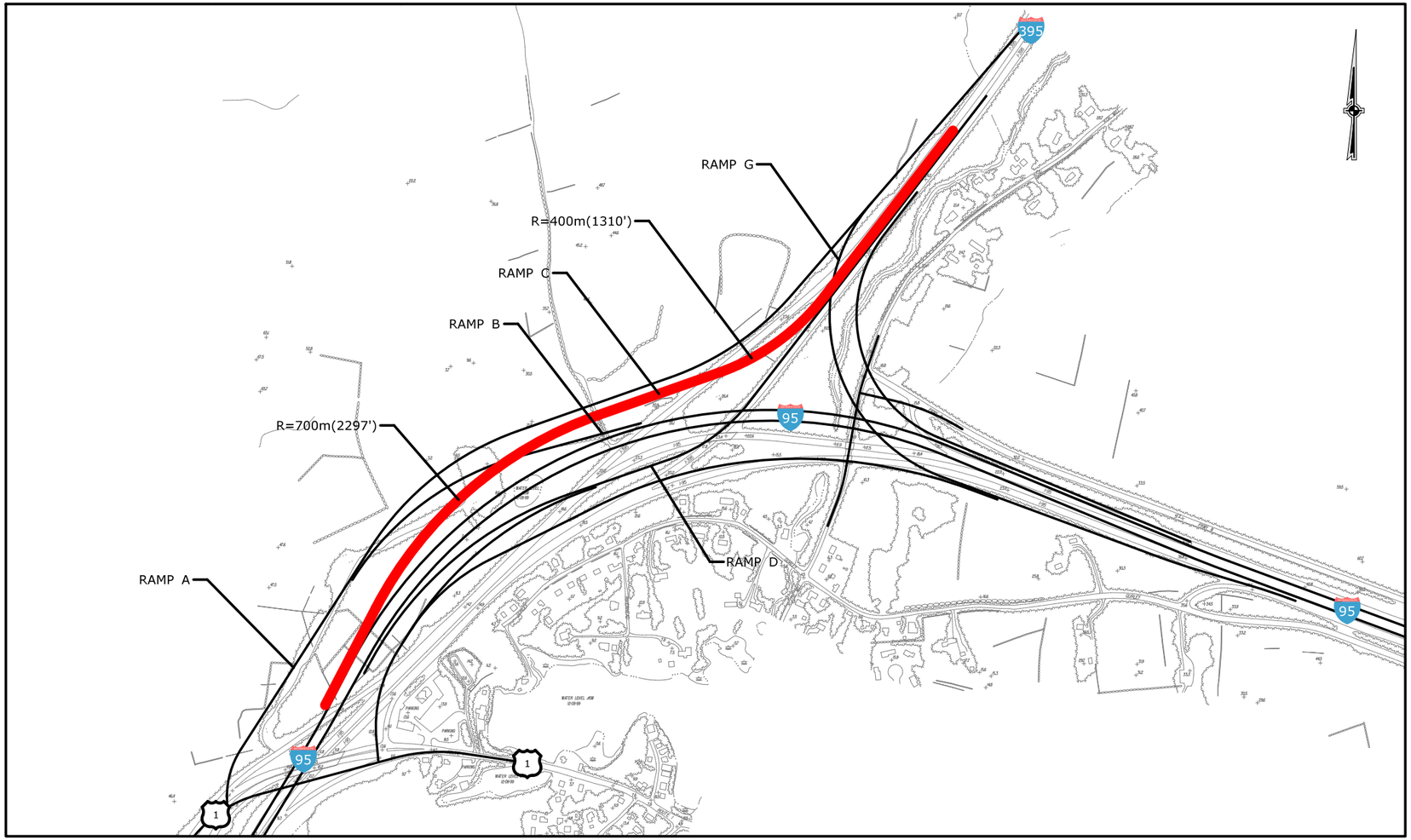
NO. OF BRIDGES = 1

BUILT PRIMARILY OFF LINE IN FIRST STAGE

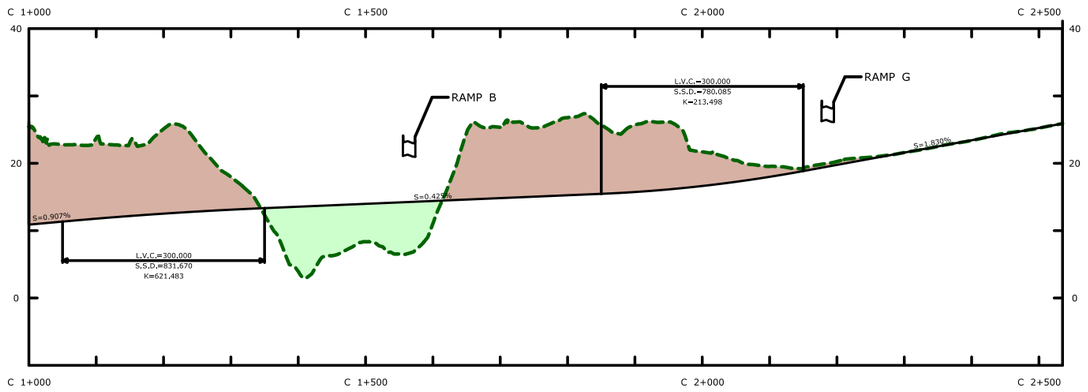
MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



RAMP C - ALIGNMENT



RAMP C - PROFILE

RAMP C - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

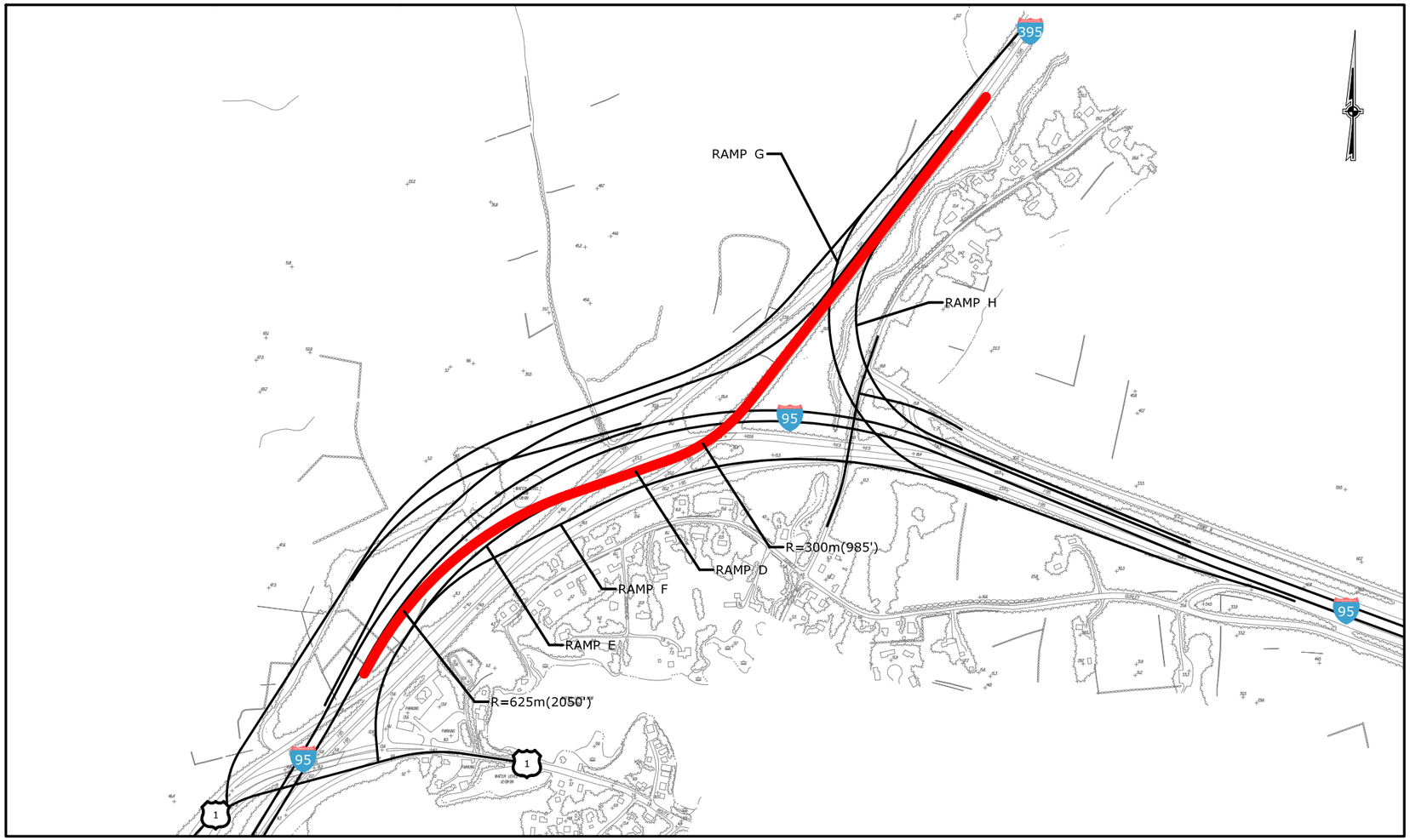
RAMP C - GENERAL NOTES

BUILT PRIMARILY OFF LINE IN FIRST STAGE

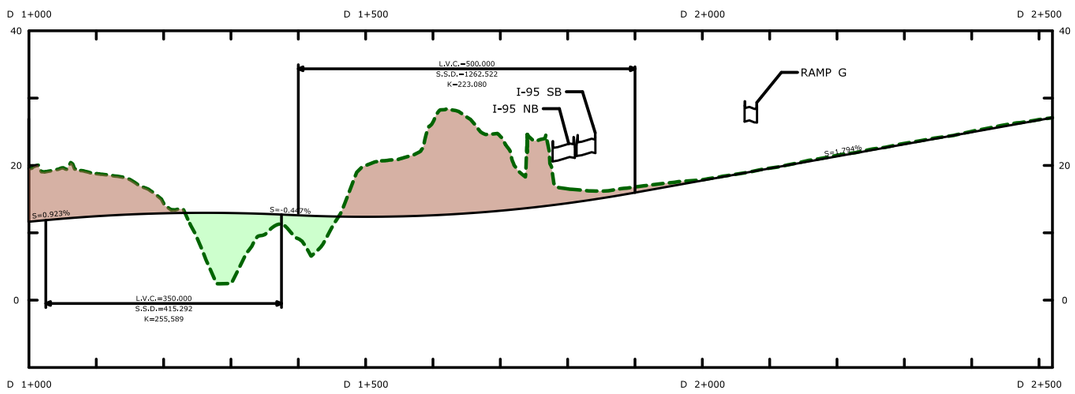
MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



RAMP D - ALIGNMENT



RAMP D - PROFILE

RAMP D - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
UPGRADE = 3-5%
DOWNGRADES = 3-7%

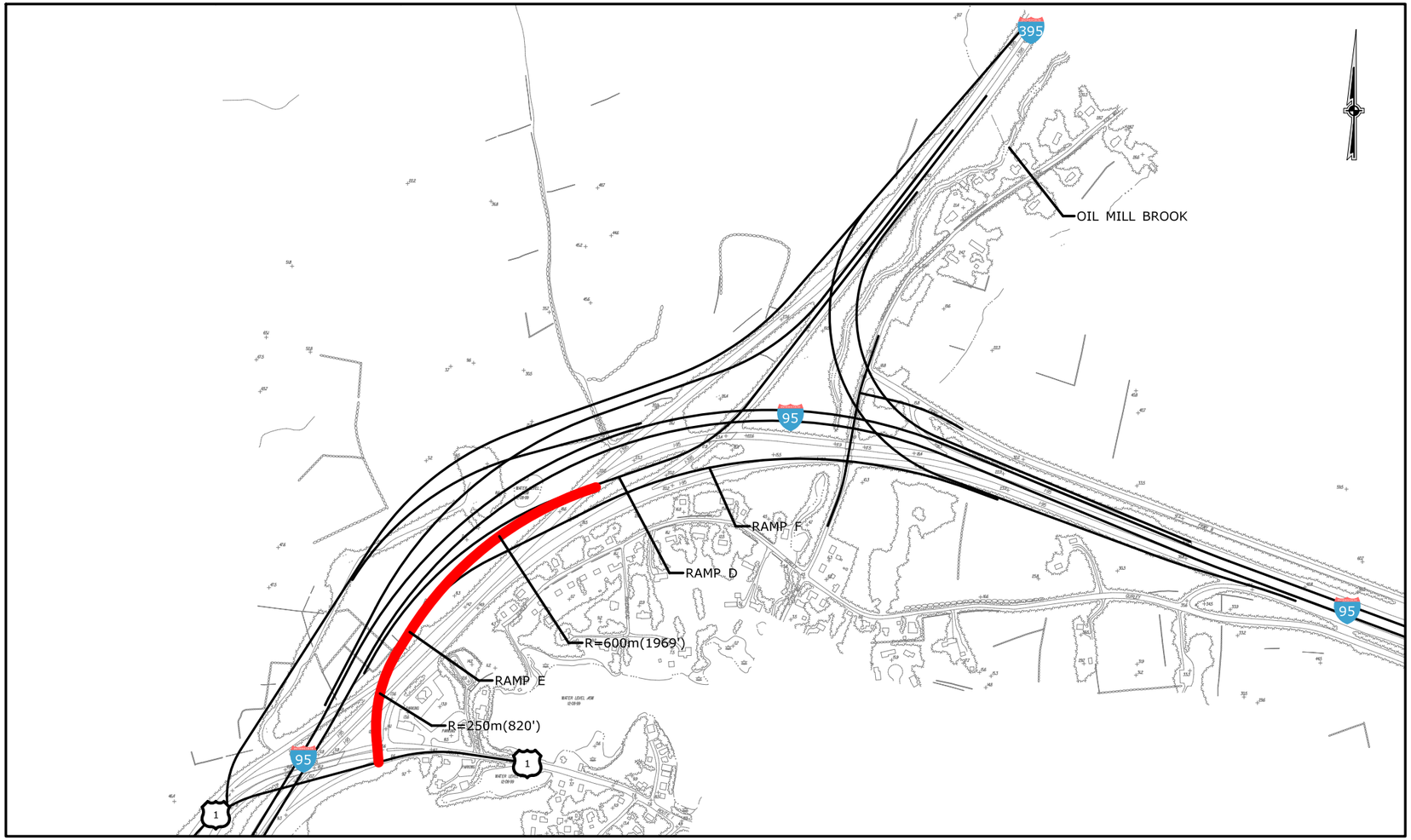
RAMP D - GENERAL NOTES

BUILT PRIMARILY ON LINE IN STAGE 1 & 2

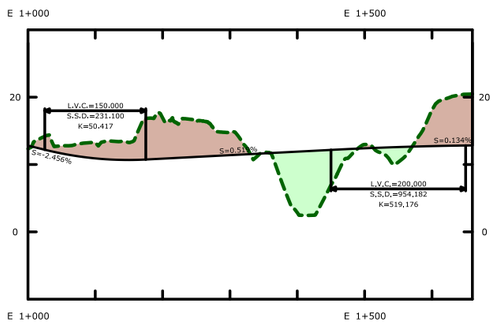
MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



RAMP E - ALIGNMENT



RAMP E - PROFILE

RAMP E - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

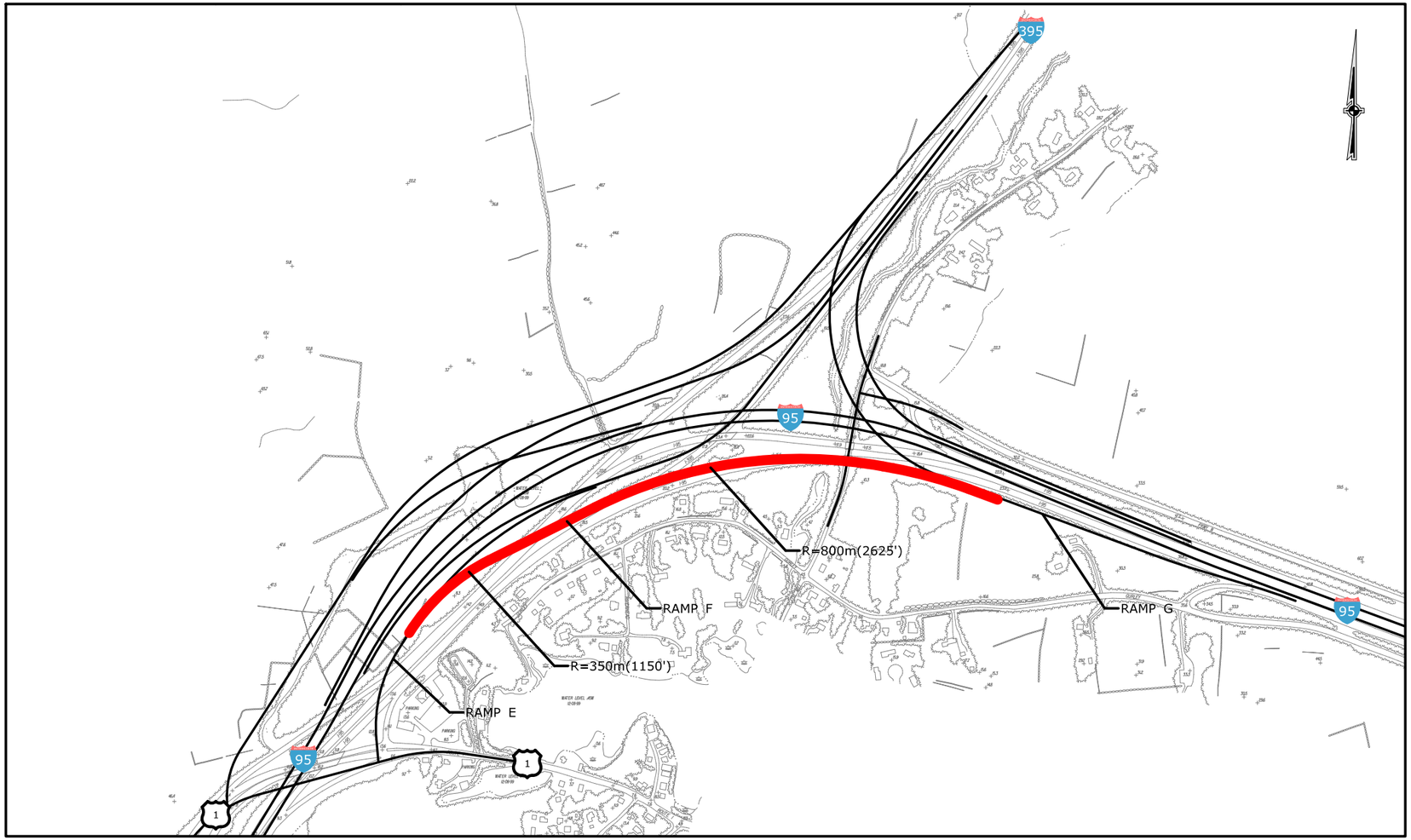
MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

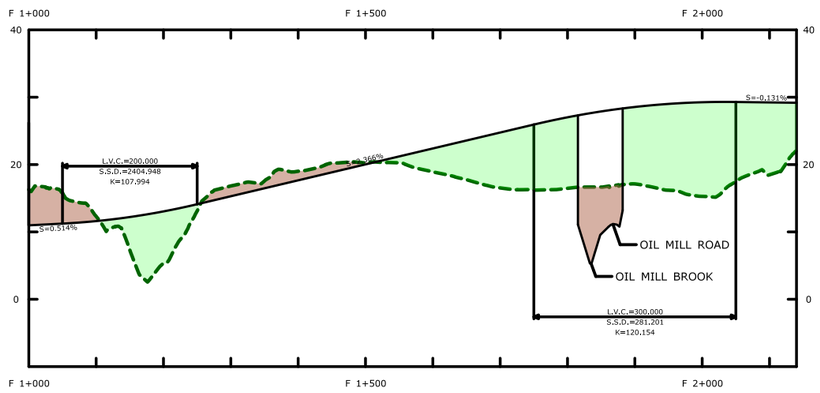
MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

RAMP E - GENERAL NOTES

BUILT PRIMARILY OFF LINE IN STAGE 1



RAMP F - ALIGNMENT



RAMP F - PROFILE

MARCH XX, 2017 - STATE OF CONNECTICUT

RAMP F - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

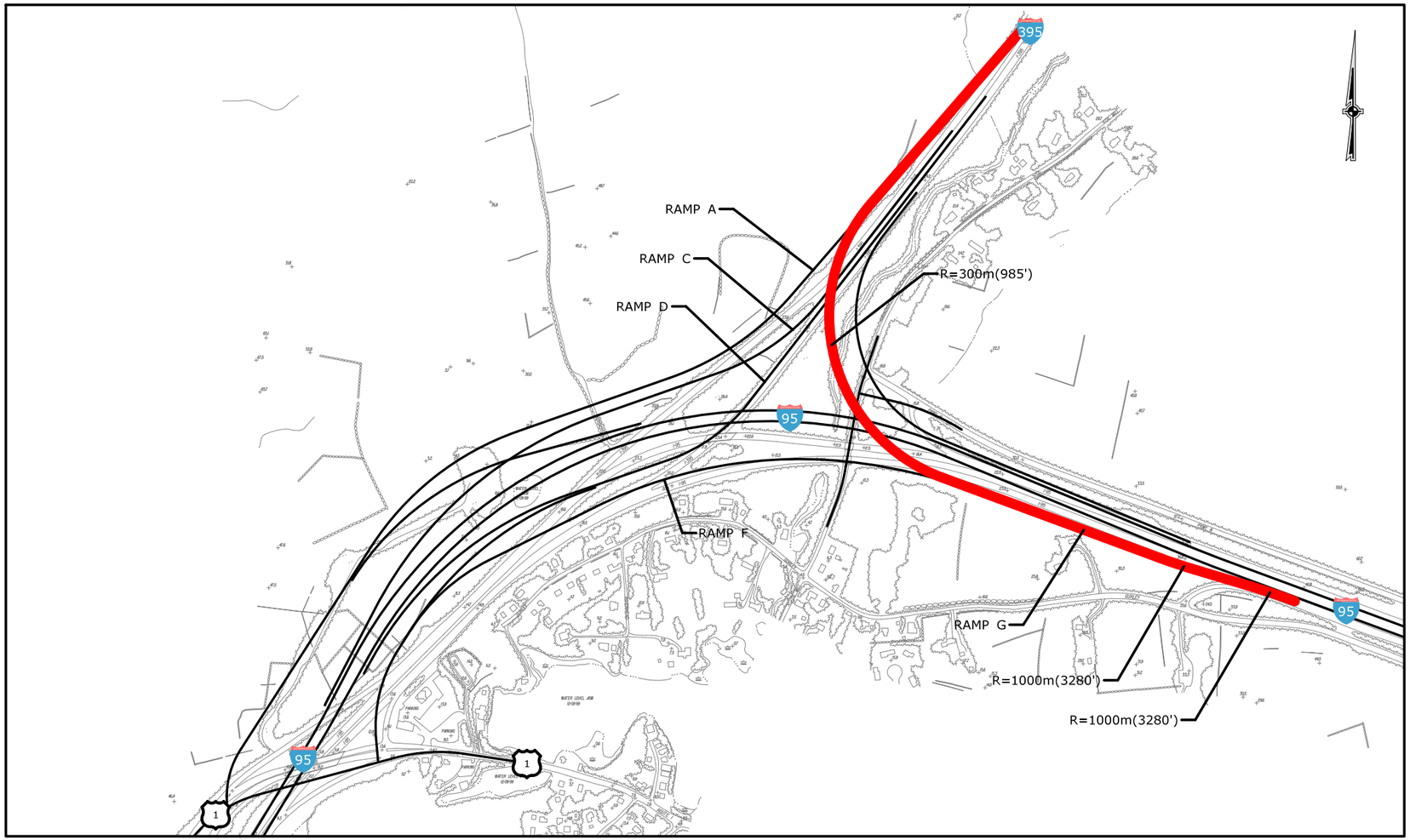
MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

RAMP F - GENERAL NOTES

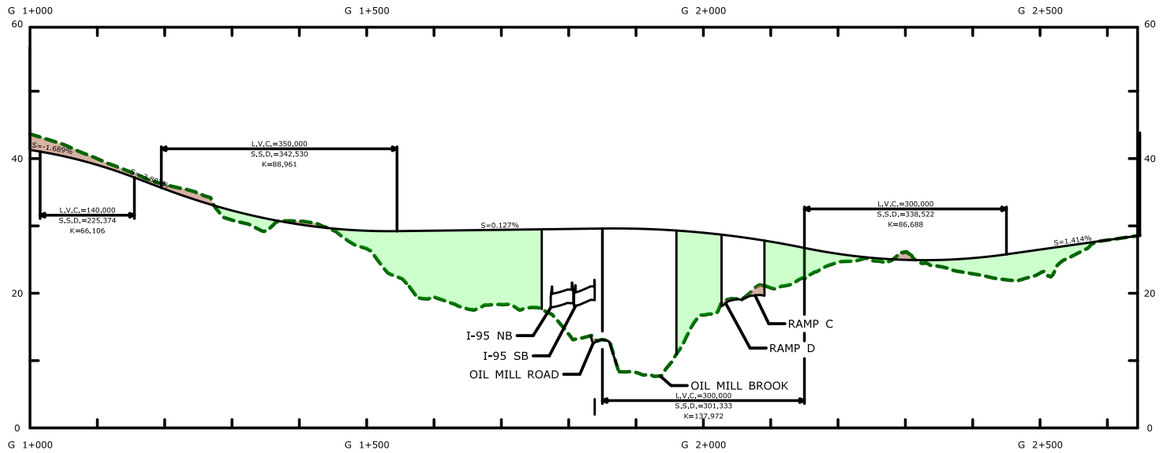
BUILT PRIMARILY ON LINE IN STAGE 2

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies



RAMP G - ALIGNMENT



RAMP G - PROFILE

RAMP G - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

RAMP G - GENERAL NOTES

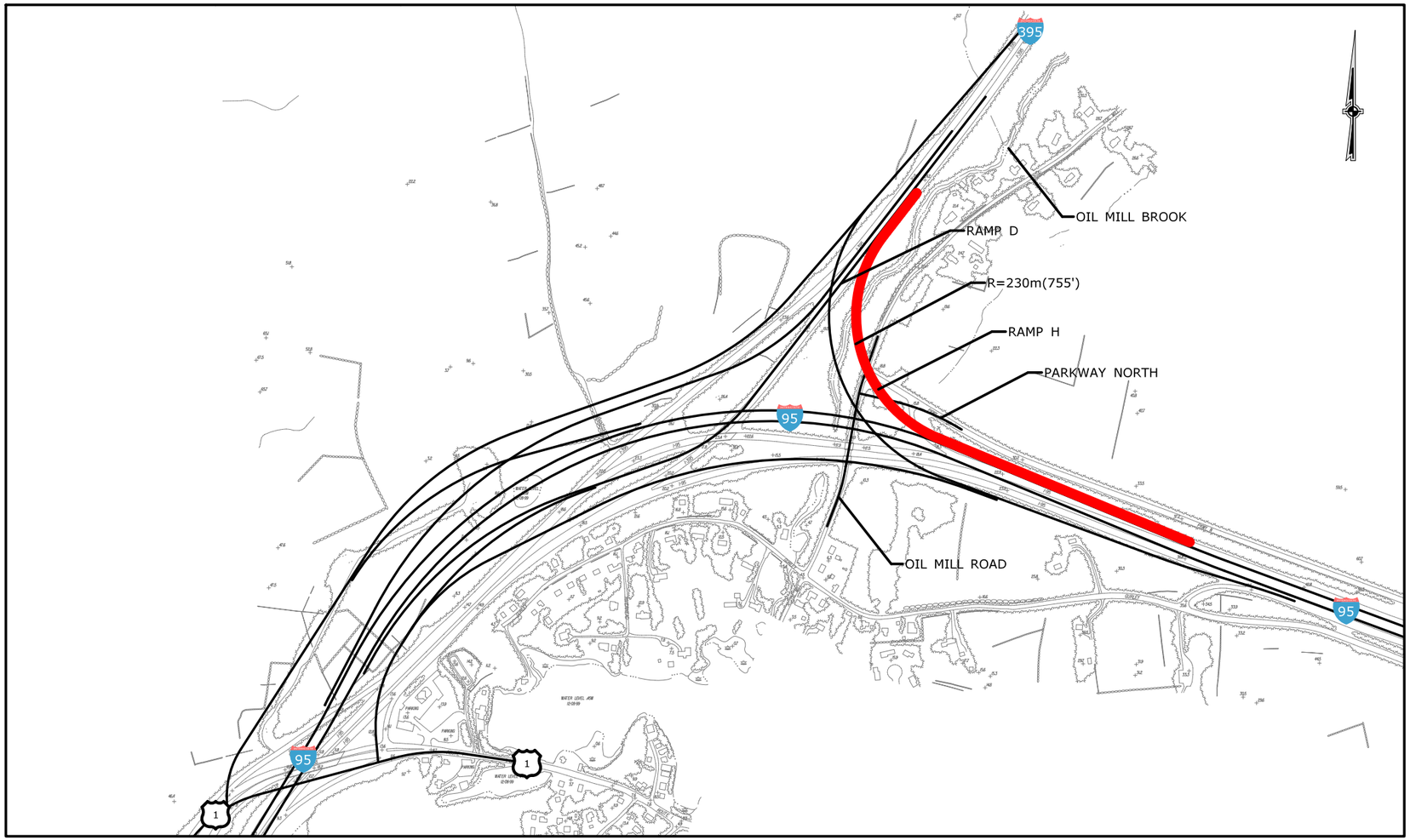
NO. OF BRIDGES = 1

BUILT PRIMARILY OFF LINE IN FIRST STAGE

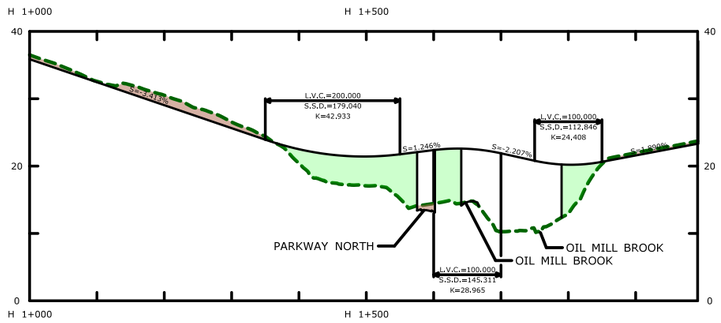
MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies



RAMP H - ALIGNMENT



RAMP H - PROFILE

RAMP H - DESIGN CONTROLS

DESIGN SPEED = 70 KPH (45 MPH)

MINIMUM RADII = 195m (640')

MAXIMUM SUPERELEVATION = 6%

VERTICAL CLEARANCE
- FREEWAY/EXPRESSWAY UNDERPASS MINIMUM = 5.05m (16.57')
- LOCAL UNDERPASS = 4.50m (14.76')

MAXIMUM GRADES
- UPGRADE = 3-5%
- DOWNGRADES = 3-7%

RAMP H - GENERAL NOTES

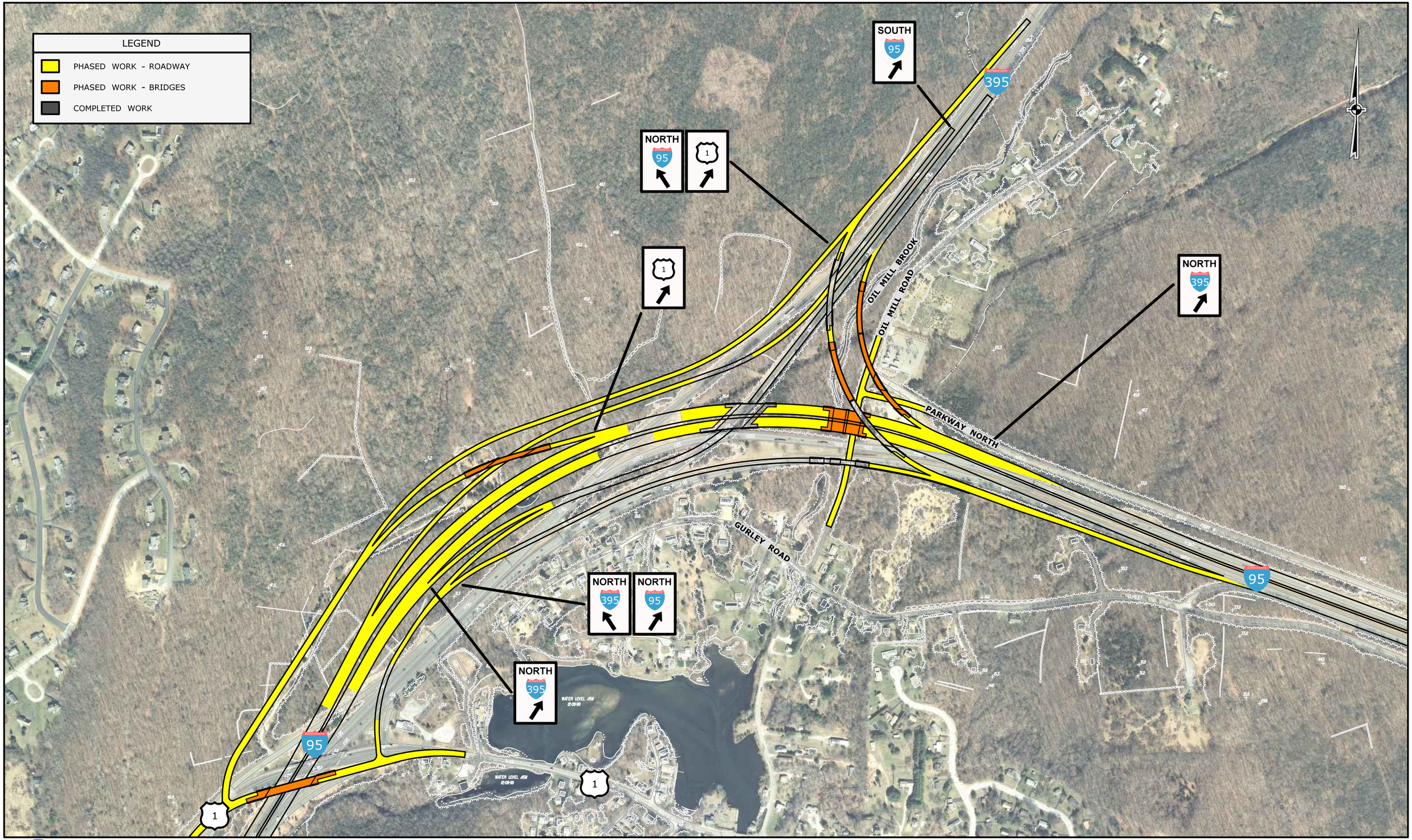
NO. OF BRIDGES = 1

BUILT PRIMARILY OFF LINE IN FIRST STAGE

MARCH XX, 2017 - STATE OF CONNECTICUT

I-95/I-395 INTERCHANGE
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

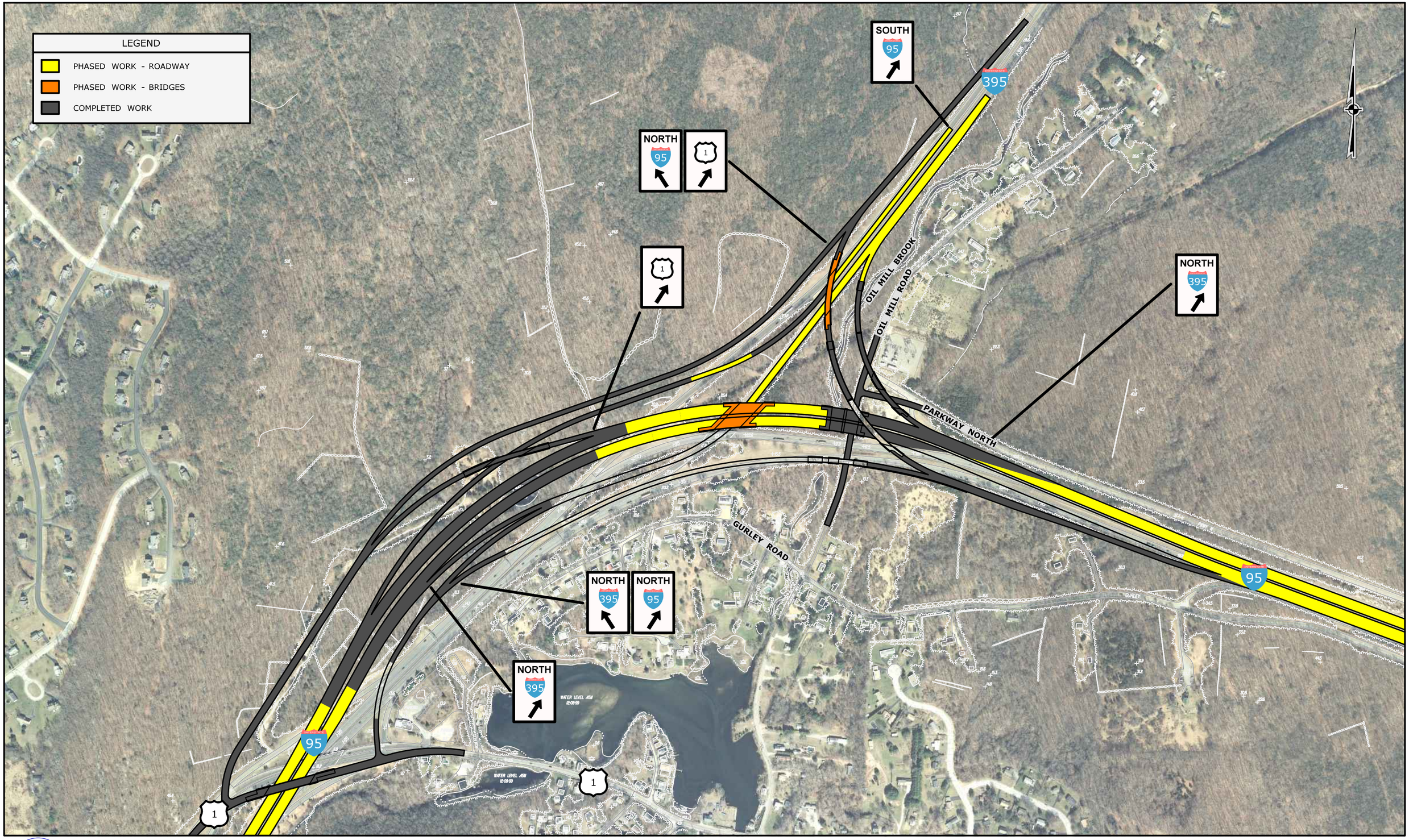


MARCH XX, 2017 - STATE OF CONNECTICUT

STAGE 1

I-95/I-395 INTERCHANGE - CONCEPTUAL CONSTRUTION
EAST LYME & WATERFORD, CT

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

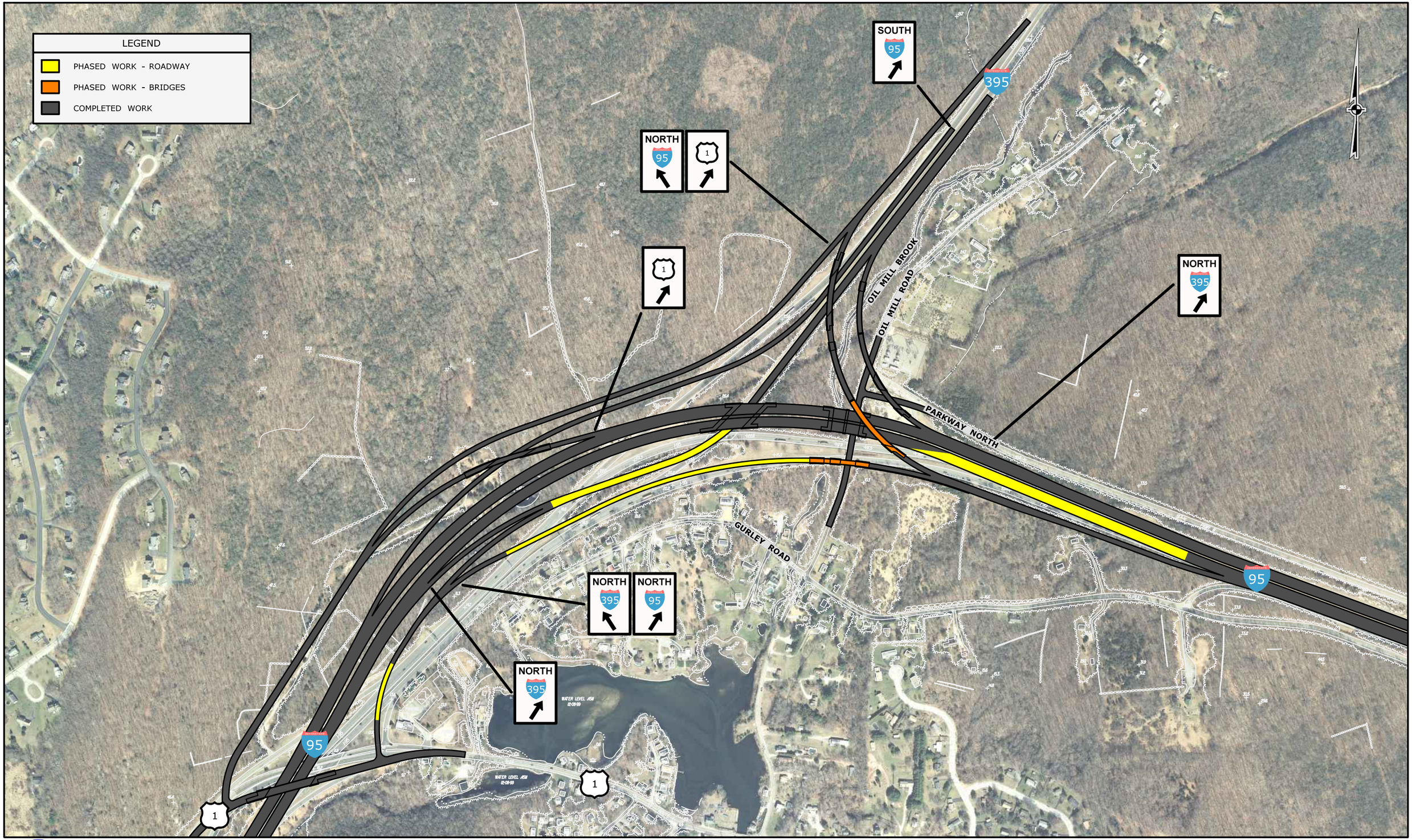


MARCH XX, 2017 - STATE OF CONNECTICUT

STAGE 2

I-95/I-395 INTERCHANGE - CONCEPTUAL CONSTRUTION
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



MARCH XX, 2017 - STATE OF CONNECTICUT

STAGE 3

I-95/I-395 INTERCHANGE - CONCEPTUAL CONSTRUTION
EAST LYME & WATERFORD, CT

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit88_Alt1_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

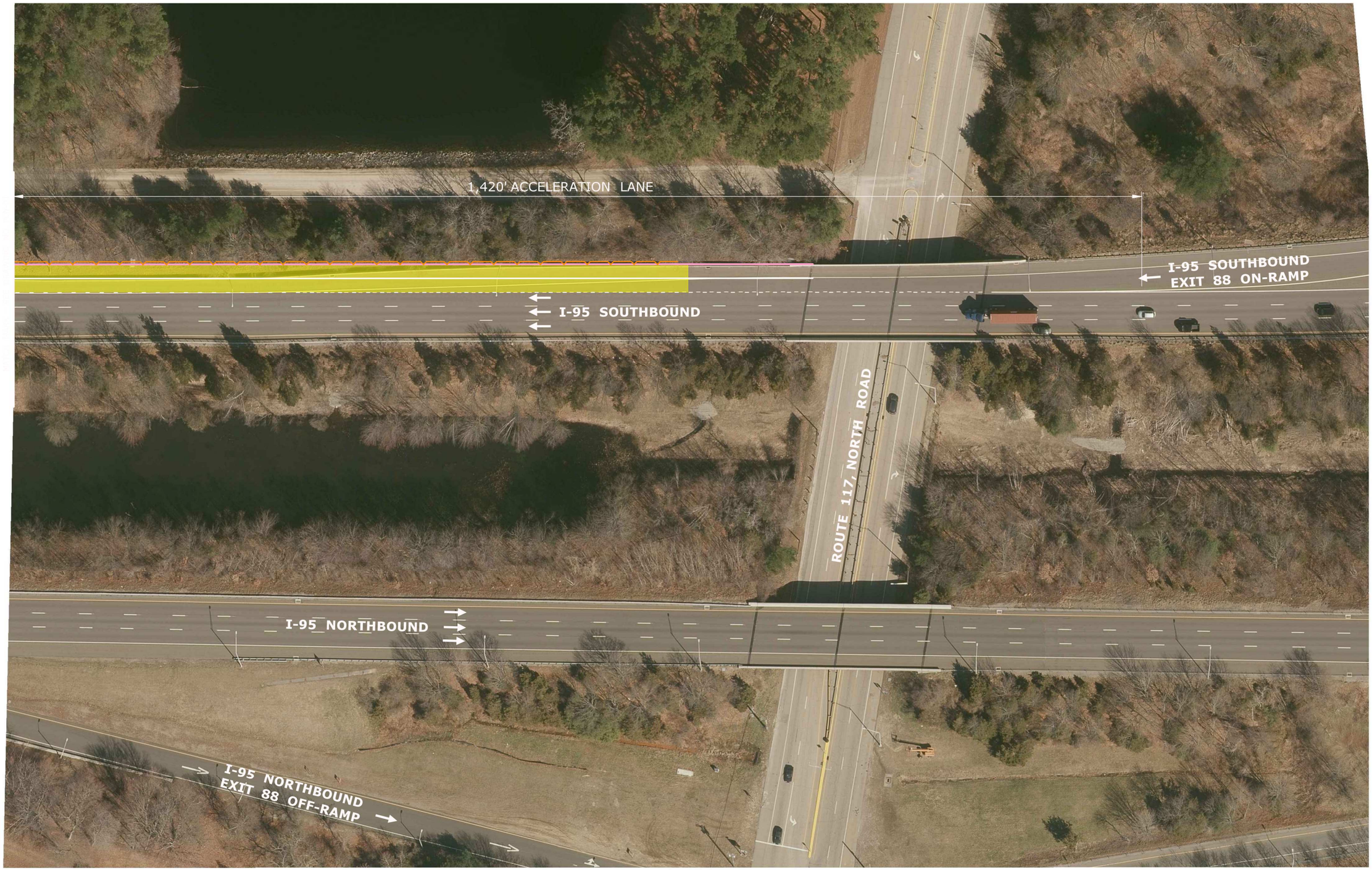
TOWN: GROTON

DRAWING TITLE:
EXIT 88 ACCELERATION LANE IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-01

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit88_Alt1_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: GROTON

DRAWING TITLE:
EXIT 88 ACCELERATION LANE IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-02

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit89_Alt1_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: MYSTIC

DRAWING TITLE:
EXIT 89 ACCELERATION LANE IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-01

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

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SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit90_Alt1_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

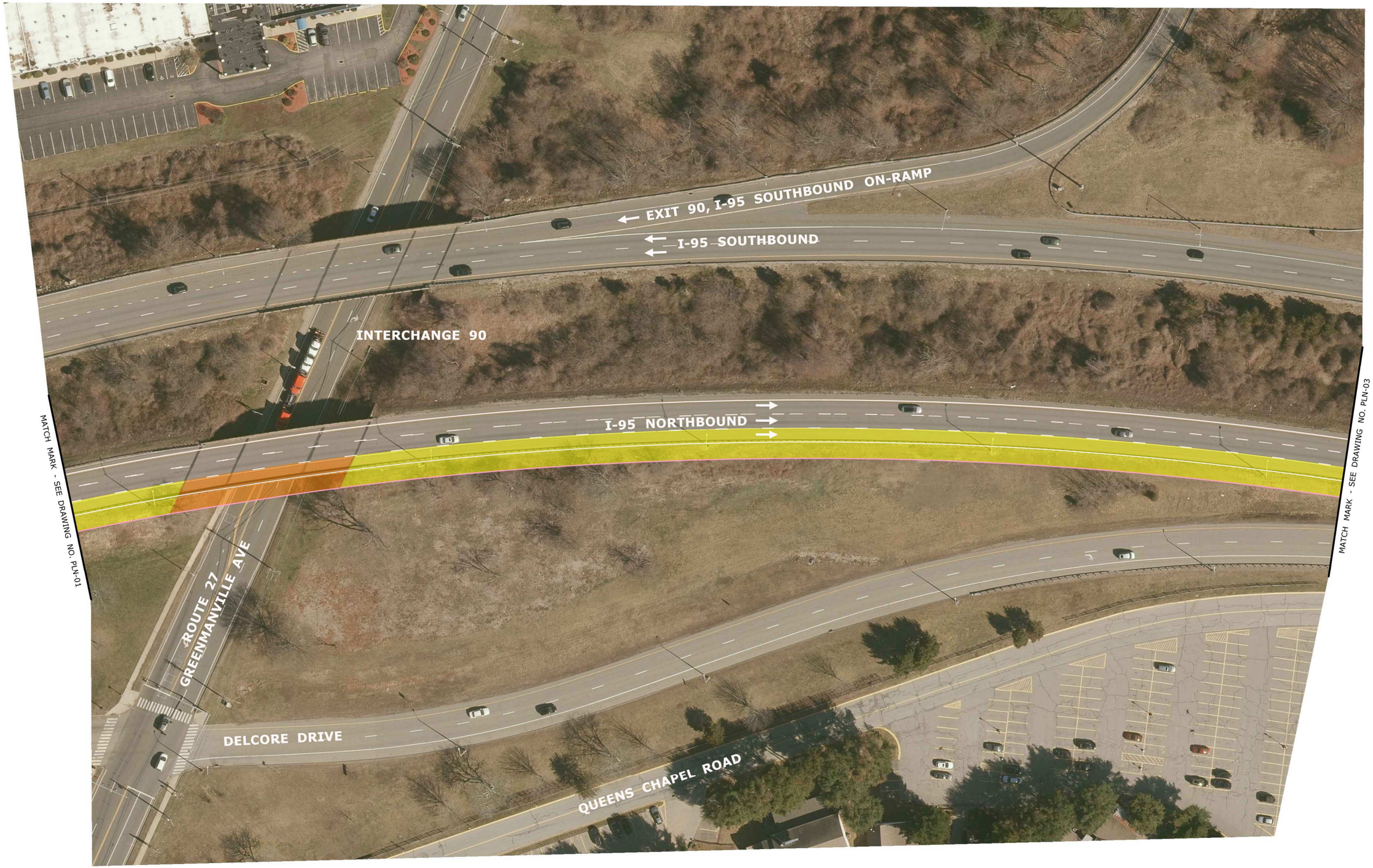
TOWN: **MYSTIC**

DRAWING TITLE:
EXIT 90 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-01**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit90_Alt1_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel. (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: MYSTIC

DRAWING TITLE:
EXIT 90
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-02

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

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SCALE IN FEET
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SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit90_Alt1_PLN-03.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY
IMPROVEMENT RECOMMENDATIONS

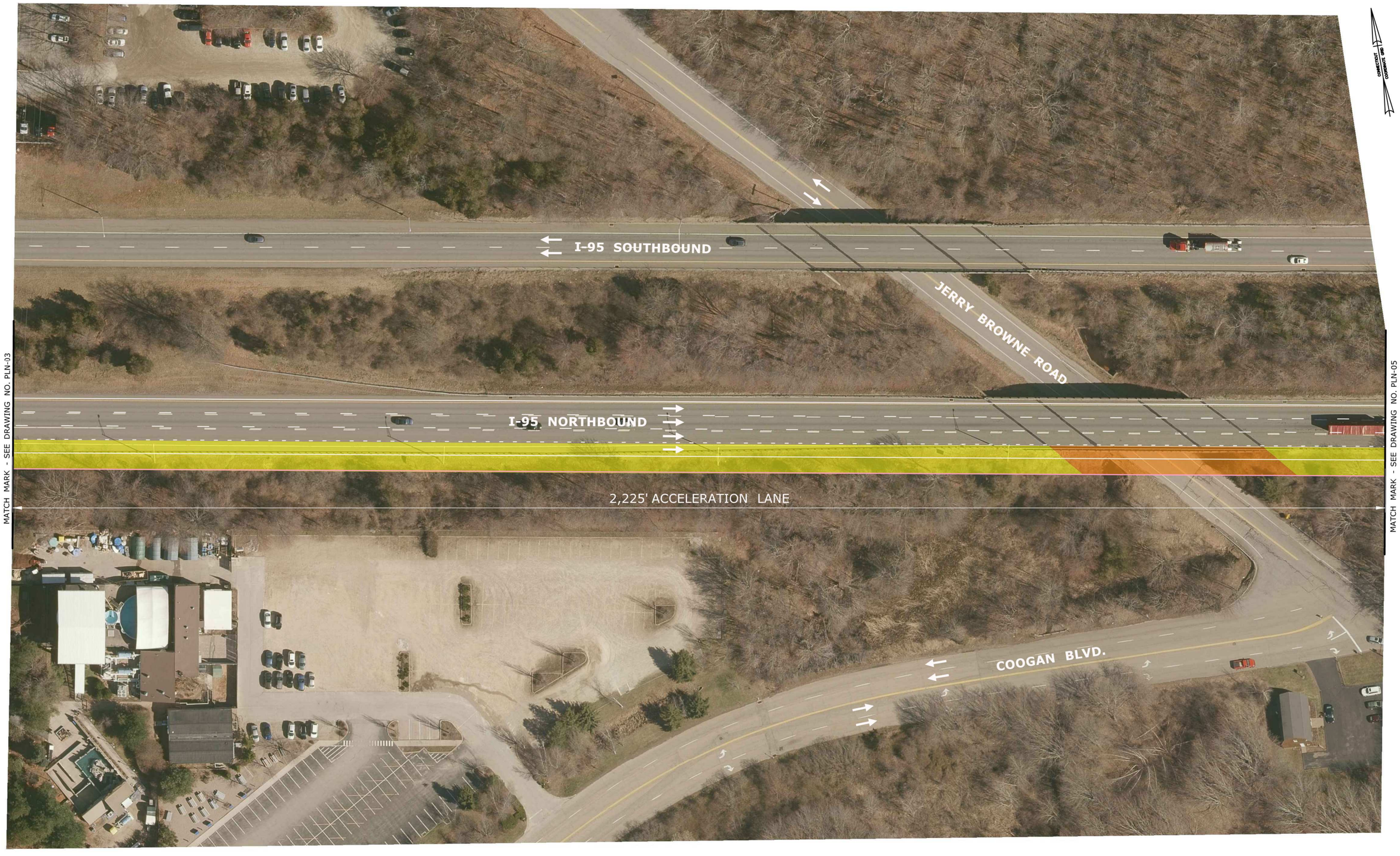
TOWN: MYSTIC

DRAWING TITLE:
EXIT 90
IMPROVEMENTS

PROJECT NO.

DRAWING NO.
PLN-03

SHEET NO.



MATCH MARK - SEE DRAWING NO. PLN-03

MATCH MARK - SEE DRAWING NO. PLN-05

CONNECTICUT COORDINATE SYSTEM

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit90_Alt1_PLN-04.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel. (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **MYSTIC**

DRAWING TITLE: **EXIT 90 IMPROVEMENTS**

PROJECT NO.

DRAWING NO. **PLN-04**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

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SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit90_Alt1_PLN-05.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **MYSTIC**

DRAWING TITLE:
EXIT 90 IMPROVEMENTS

PROJECT NO.

DRAWING NO. **PLN-05**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Exit90_Alt1_PLN-06-a.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILTY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **MYSTIC**

DRAWING TITLE: **EXIT 90 IMPROVEMENTS**

PROJECT NO.

DRAWING NO. **PLN-06**

SHEET NO.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt_1_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 1

PROJECT NO.

DRAWING NO.
PLN-01

SHEET NO.

Border Versions 11/29/13



MATCH MARK - SEE DRAWING NO. PLN-01

MATCH MARK - SEE DRAWING NO. PLN-03

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

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SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt 1_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: **NEW LONDON**

DRAWING TITLE:
ROUTE 32 IMPROVEMENTS ALTERNATIVE 1

PROJECT NO.

DRAWING NO. **PLN-02**

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
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SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt 1_PLN-03.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

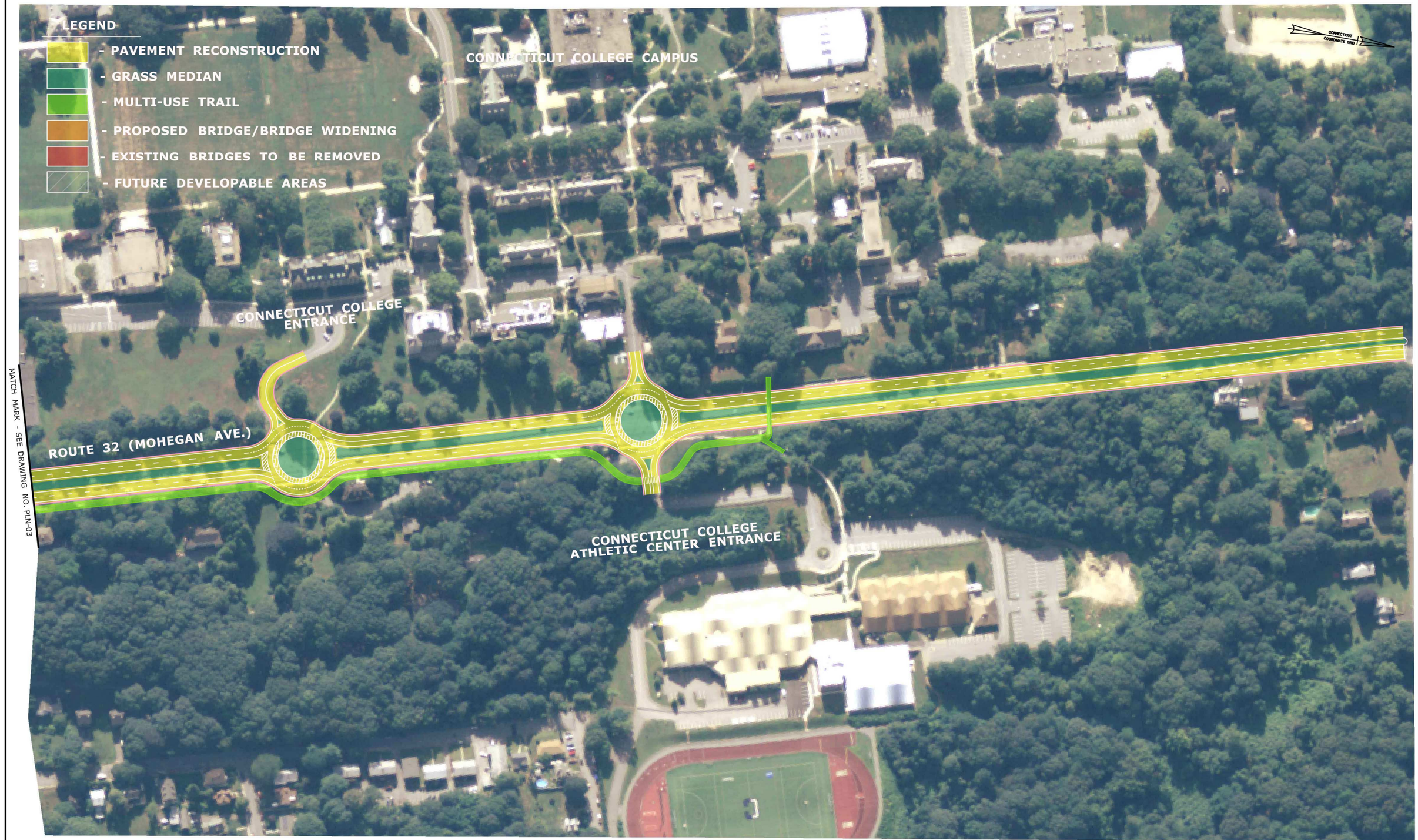
DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 1

PROJECT NO.

DRAWING NO.
PLN-03

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Route 32 Alt 1 PLN-04.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 1

PROJECT NO.

DRAWING NO.
PLN-04

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt_2_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 2

PROJECT NO.

DRAWING NO.
PLN-01

SHEET NO.

Border Versions 11/29/13



MATCH MARK - SEE DRAWING NO. PLN-01

MATCH MARK - SEE DRAWING NO. PLN-03

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

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SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Route 32_Alt 2_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

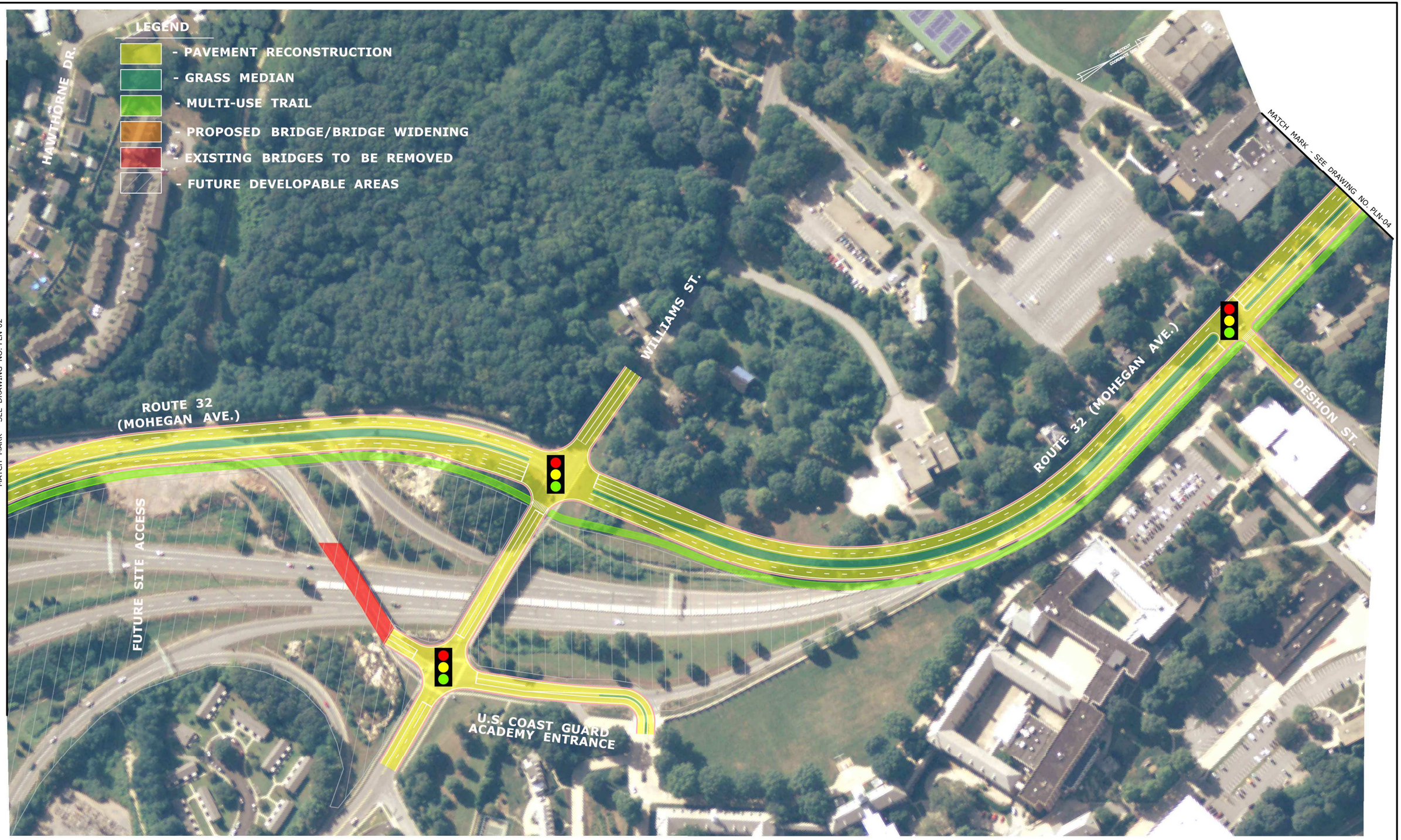
DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 2

PROJECT NO.

DRAWING NO.
PLN-02

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt 2_PLN-03.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

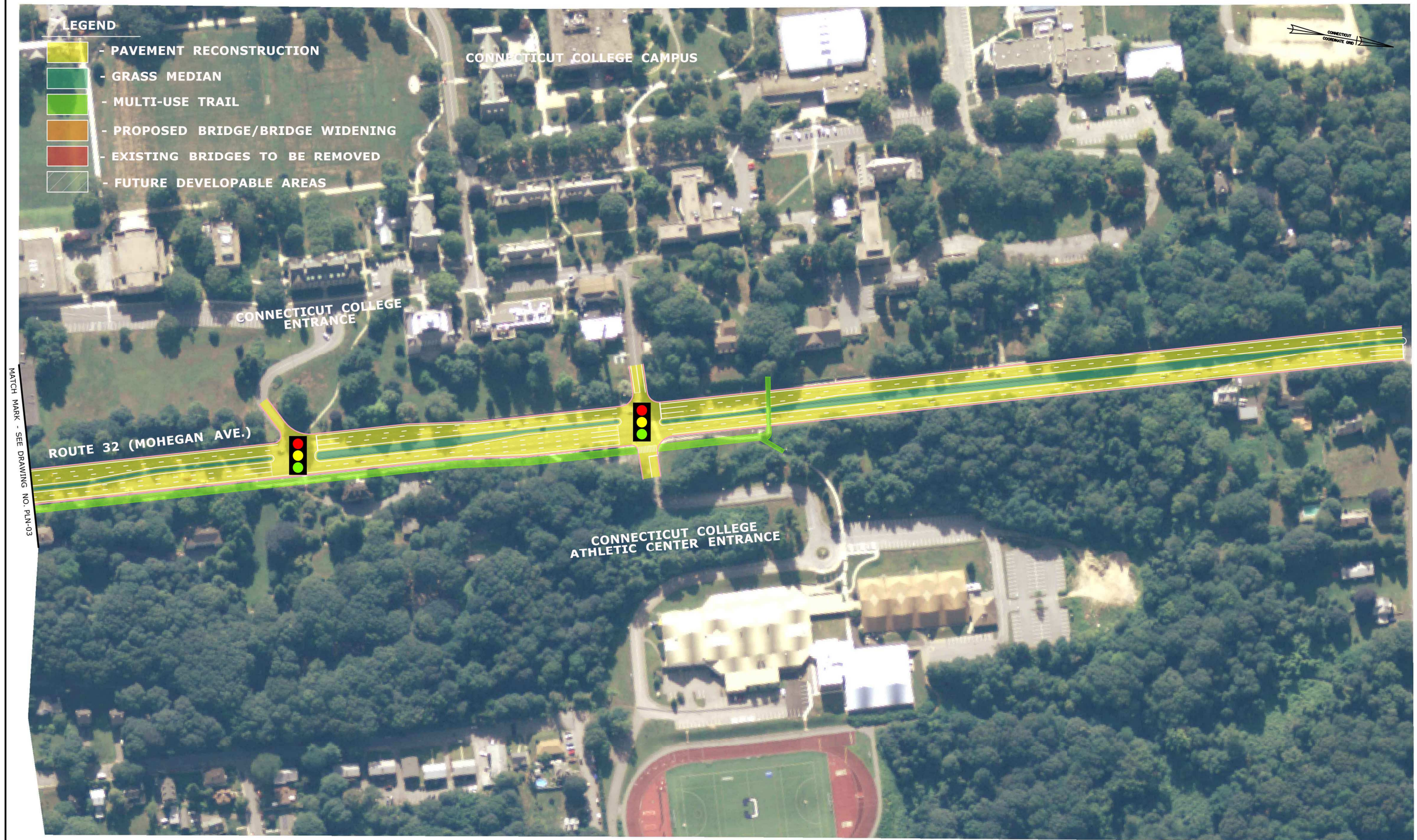
DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 2

PROJECT NO.

DRAWING NO.
PLN-03

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

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SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Route 32 Alt 2 PLN-04.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 2

PROJECT NO.

DRAWING NO.
PLN-04

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt_3_PLN-01.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:

I-95 FEASIBILITY STUDY IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

DRAWING TITLE: ROUTE 32 IMPROVEMENTS ALTERNATIVE 3

PROJECT NO.

DRAWING NO. PLN-01

SHEET NO.

Border Versions 11/29/13



MATCH MARK - SEE DRAWING NO. PLN-01

MATCH MARK - SEE DRAWING NO. PLN-03

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

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SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95 Route 32_Alt 3_PLN-02.dgn

SIGNATURE/ BLOCK:

CDM Smith
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East Hartford, Connecticut 06108 USA
Tel: (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

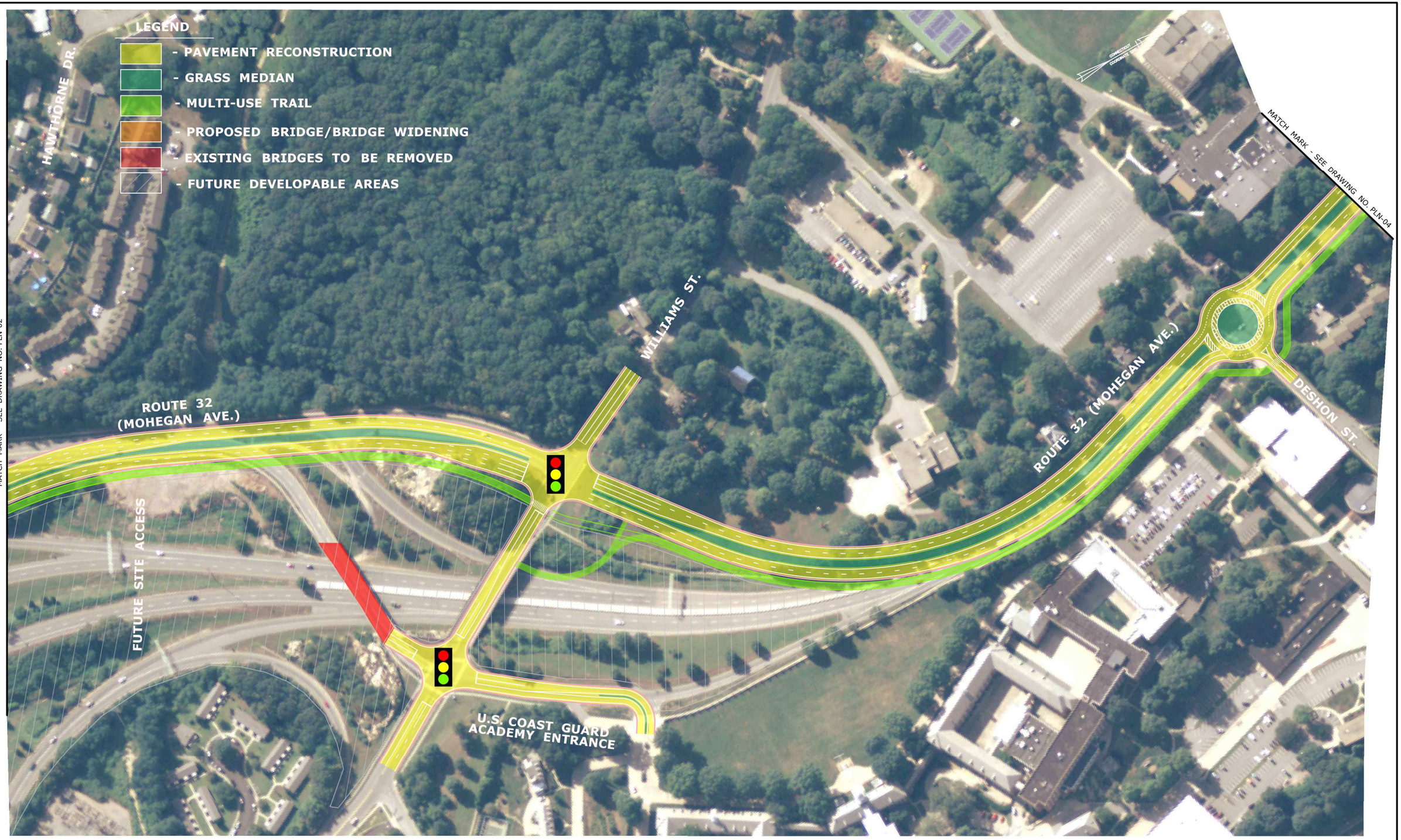
DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 3

PROJECT NO.

DRAWING NO.
PLN-02

SHEET NO.

Border Versions 11/29/13



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STATE OF CONNECTICUT
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Filename: ...\I-95_Route_32_Alt 3_PLN-03.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
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PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

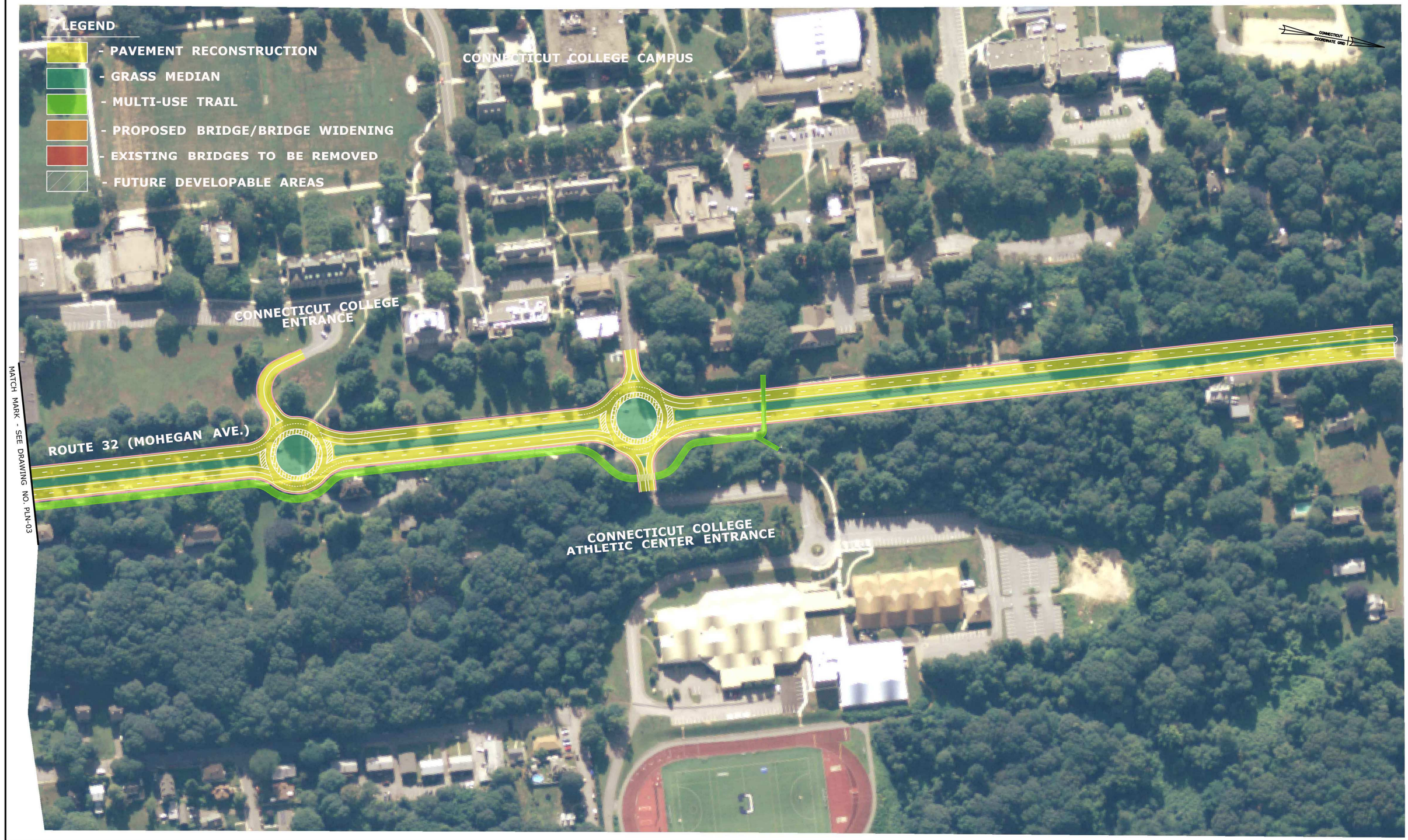
DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 3

PROJECT NO.

DRAWING NO.
PLN-03

SHEET NO.

Border Versions 11/29/13



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/26/2018

DESIGNER/DRAFTER:

CHECKED BY:

SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\I-95_Route_32_Alt 3_PLN-04.dgn

SIGNATURE/ BLOCK:

CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108 USA
Tel. (860) 808-2295

PROJECT TITLE:
I-95 FEASIBILITY STUDY
IMPROVEMENT RECOMMENDATIONS

TOWN: NEW LONDON

DRAWING TITLE:
ROUTE 32 IMPROVEMENTS
ALTERNATIVE 3

PROJECT NO.

DRAWING NO. PLN-04

SHEET NO.

Border Versions 11/29/13