



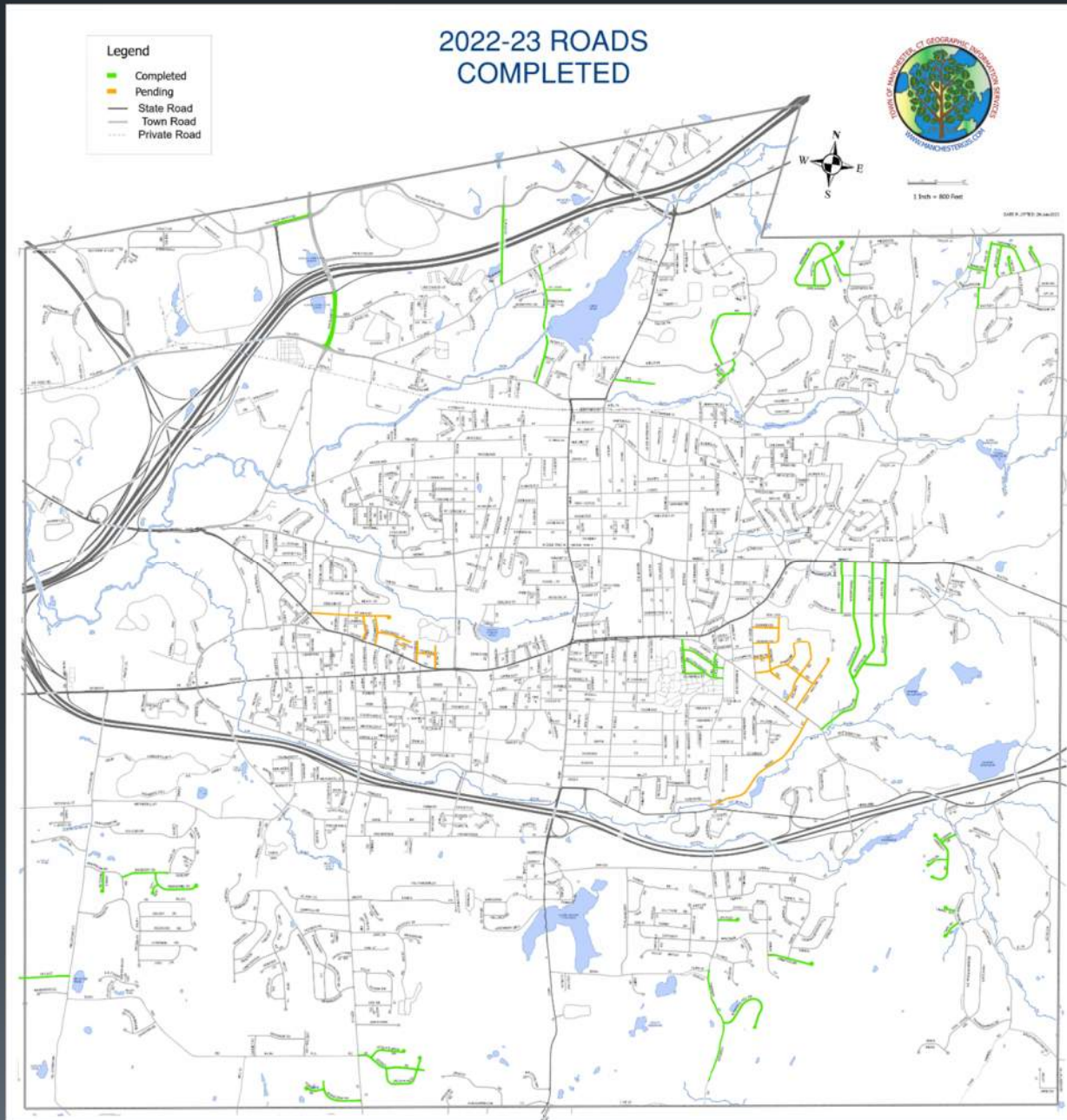
2023 Public Works Bond Referendum Discussion

July 11, 2023

Manchester Public Works Department

Tim Bockus, Director of Public Works
Jeff LaMalva, Town Engineer

2021-22 PW Bond Status



- 61 roads resurfaced
(39.8 lane miles)
(280,000 sy)
- Neighborhood sidewalk replacement project awarded



- Union Pond Dam repair project awarded

Cost History

BOND YEAR	FUNDING AMOUNT	LANE MILES COMPLETED	COST PER LANE MILE	LANE MILES PER \$1 MIL
2011	\$8,820,000	41.9	\$210,501	4.75
2013	\$4,900,000	20.3	\$241,379	4.14
2015	\$9,000,000	34.3	\$262,391	3.81
2017	\$8,000,000	25.3	\$316,206	3.16
2019	\$13,500,000	39.2	\$344,388	2.90
2021	\$14,500,000	39.8	\$364,322	2.74

Note: 3 largest contracts (67%) were bid late 2021/early 2022

Inflation Impact

- Consumer Price Index Inflation Rate: **13.0%**
- ENR Construction Cost Index Inflation Rate: **10.8%**
- Asphalt Paving Mixture Producers Price Index: **18.4%**
- USDOT Highway Construction Cost Index: **36.7%**



Note: Data based on May 2021 compared to May 2023

2023 Recommended Projects

▪ Road Resurfacing	\$ 15,500,000
▪ Tolland Turnpike (LOTICIP)	\$ 1,250,000
▪ Sidewalk Repairs/Extensions	\$ 1,000,000
▪ Traffic Signal Replacements	\$ 700,000
▪ Case Mountain Dam Repairs	\$ 350,000
▪ Contingency/Debt Service	\$ 200,000
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▪ Total Request	\$ 19,000,000

*2021 PW Bond total = \$17,250,000 (10.1% increase)

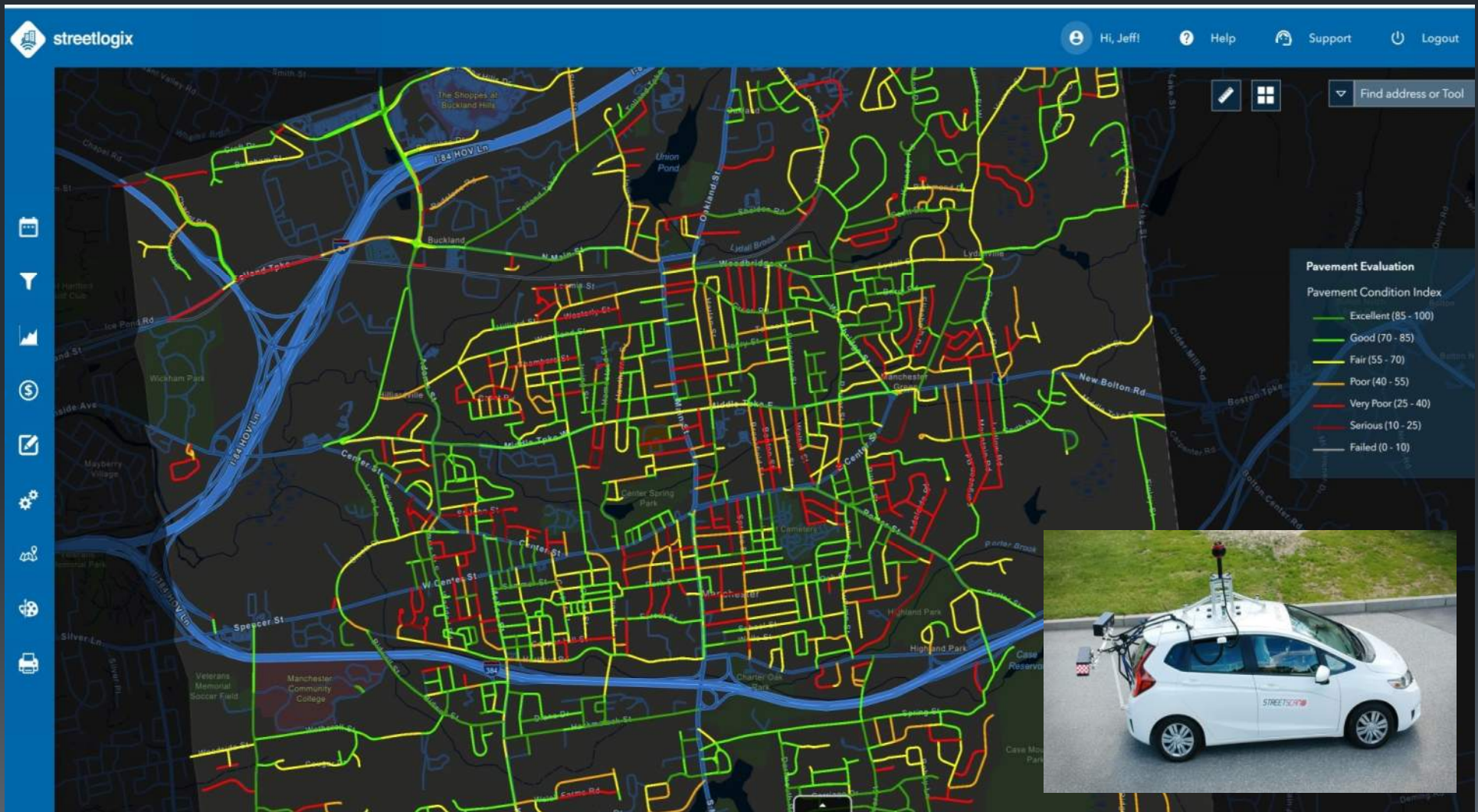
Federal and State Grants

- LOTCIP (State of CT DOT)
 - Hartford Road @ Mckee St/Keeney St intersection
 - Sidewalk Installations @ Deming St./Tolland Turnpike
- Community Development Block Grant (US HUD)
 - Sidewalk Installations @ Hilliard Street
 - Sidewalk Installations @ Tolland Turnpike
 - RRFB's @ East Center Street
- Community Investment Fund (State of CT DECD)
 - Main Street
- Local Accident Reduction Program (State of CT DOT)
 - Tolland Turnpike/Adams St./Buckland St. Intersection
- Grant awards total over \$13 million

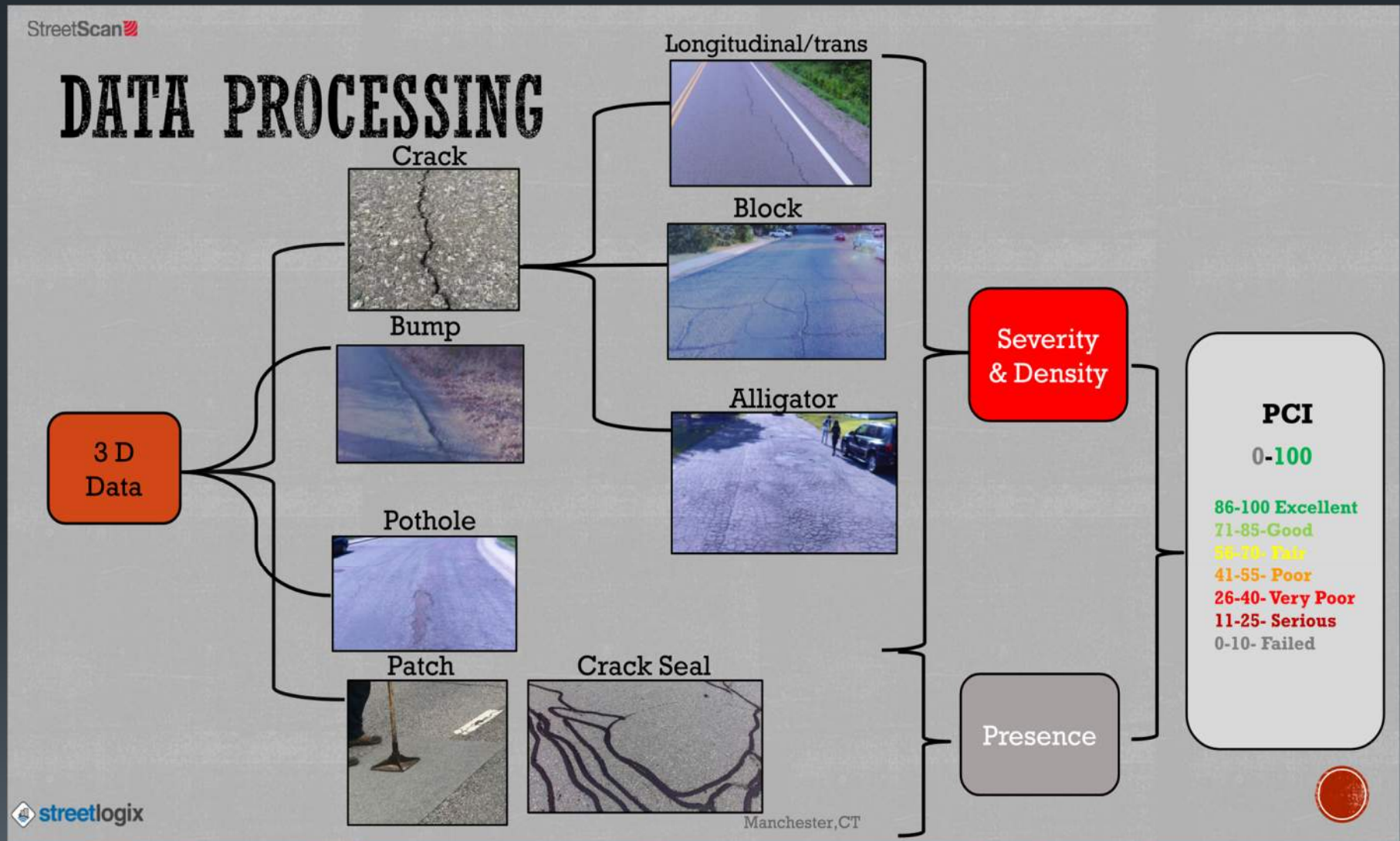
Road Resurfacing



Road conditions assessment performed by StreetScan

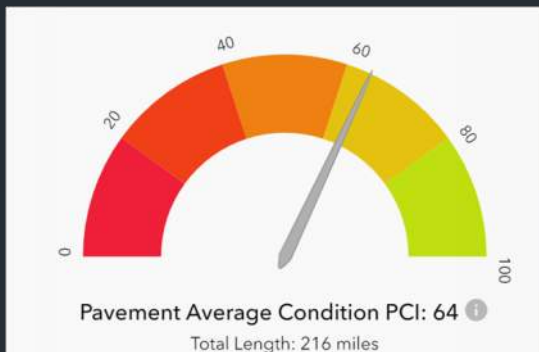


Road Resurfacing



Road Resurfacing

- Town average PCI (Pavement Condition Index) = 64



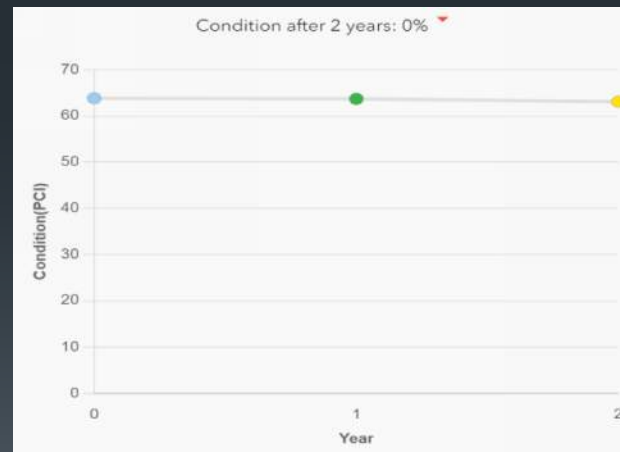
2023



2021

- Proposed bond amount would maintain current PCI at 64

A screenshot of a web application titled "Budget Planner". It features a sidebar with icons for different functions. The main content area has several input fields: "Select layer" (set to "Pavement Maintenance"), "Filter by" (set to "No Filter"), "Scenario Name*" (set to "EBP scenario"), "Program duration*" (set to "2"), "Annual Budget*" (set to "\$ 7,750,000"), and "Annual Inflation*" (set to "% 2"). There are also icons for help, full screen, and close.



- \$30 million to bring average PCI to 70

Road Resurfacing

■ Roads remaining from previous bonds

REMAINING FROM PREVIOUS BONDS							
ROAD	FROM	TO	AREA (SY)	TYPE	UNIT COST	EST. COST	CUMULATIVE
BROOKFIELD STREET			10652	MILL	\$ 32.50	\$ 346,190.00	\$ 346,190.00
BILYEU STREET			2705	REPLACE	\$ 50.00	\$ 135,250.00	\$ 481,440.00
COTTAGE STREET			2886	REPLACE	\$ 50.00	\$ 144,300.00	\$ 625,740.00
CUSHMAN DRIVE			7795	REPLACE	\$ 50.00	\$ 389,750.00	\$ 1,015,490.00
DOVER ROAD			2276	REPLACE	\$ 50.00	\$ 113,800.00	\$ 1,129,290.00
DURKIN STREET			2460	REPLACE	\$ 50.00	\$ 123,000.00	\$ 1,252,290.00
ELDRIDGE STREET	MAIN STREET	SPRUCE STREET	3340	REPLACE	\$ 50.00	\$ 167,000.00	\$ 1,419,290.00
ERIE STREET			3140	REPLACE	\$ 50.00	\$ 157,000.00	\$ 1,576,290.00
FORD STREET			600	REPLACE	\$ 50.00	\$ 30,000.00	\$ 1,606,290.00
GARDEN STREET			4163	REPLACE	\$ 50.00	\$ 208,150.00	\$ 1,814,440.00
GLEN ROAD			2,280	REPLACE	\$ 50.00	\$ 114,000.00	\$ 1,928,440.00
HILLIARD STREET	NEW STATE ROAD	ADAMS STREET	4480	MILL	\$ 32.50	\$ 145,600.00	\$ 2,074,040.00
JARVIS ROAD			3825	REPLACE	\$ 50.00	\$ 191,250.00	\$ 2,265,290.00
KNOLLWOOD ROAD			14686	REPLACE	\$ 50.00	\$ 734,300.00	\$ 2,999,590.00
MARGARET ROAD			2420	REPLACE	\$ 50.00	\$ 121,000.00	\$ 3,120,590.00
NEW STREET			2950	REPLACE	\$ 50.00	\$ 147,500.00	\$ 3,268,090.00
PERKINS STREET			1,900	REPLACE	\$ 50.00	\$ 95,000.00	\$ 3,363,090.00
SANRICO DRIVE			9583	MILL	\$ 32.50	\$ 311,447.50	\$ 3,674,537.50
TIMBER TRAIL			4330	REPLACE	\$ 50.00	\$ 216,500.00	\$ 3,891,037.50
TRACY DRIVE			5533	REPLACE	\$ 50.00	\$ 276,650.00	\$ 4,167,687.50
WADSWORTH STREET EAST			1448	REPLACE	\$ 50.00	\$ 72,400.00	\$ 4,240,087.50
WEAVER ROAD			5,270	REPLACE	\$ 50.00	\$ 263,500.00	\$ 4,503,587.50

■ Arterials/Collectors

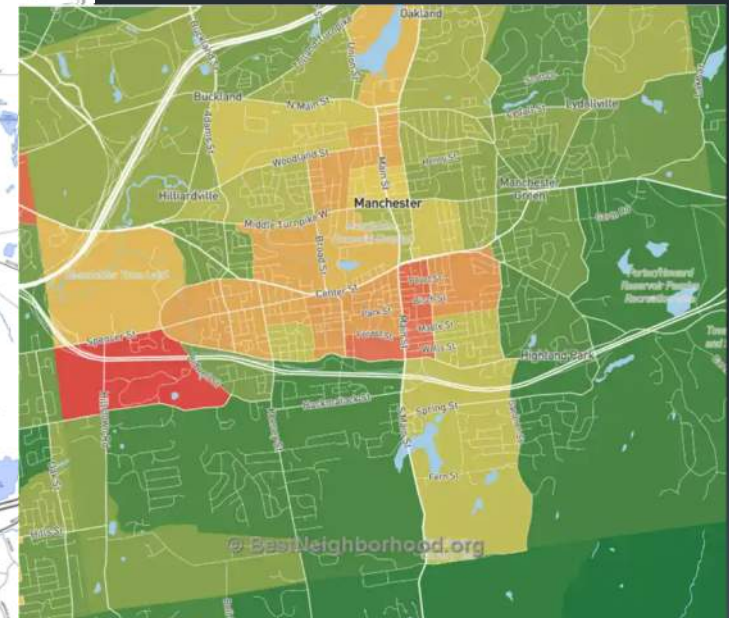
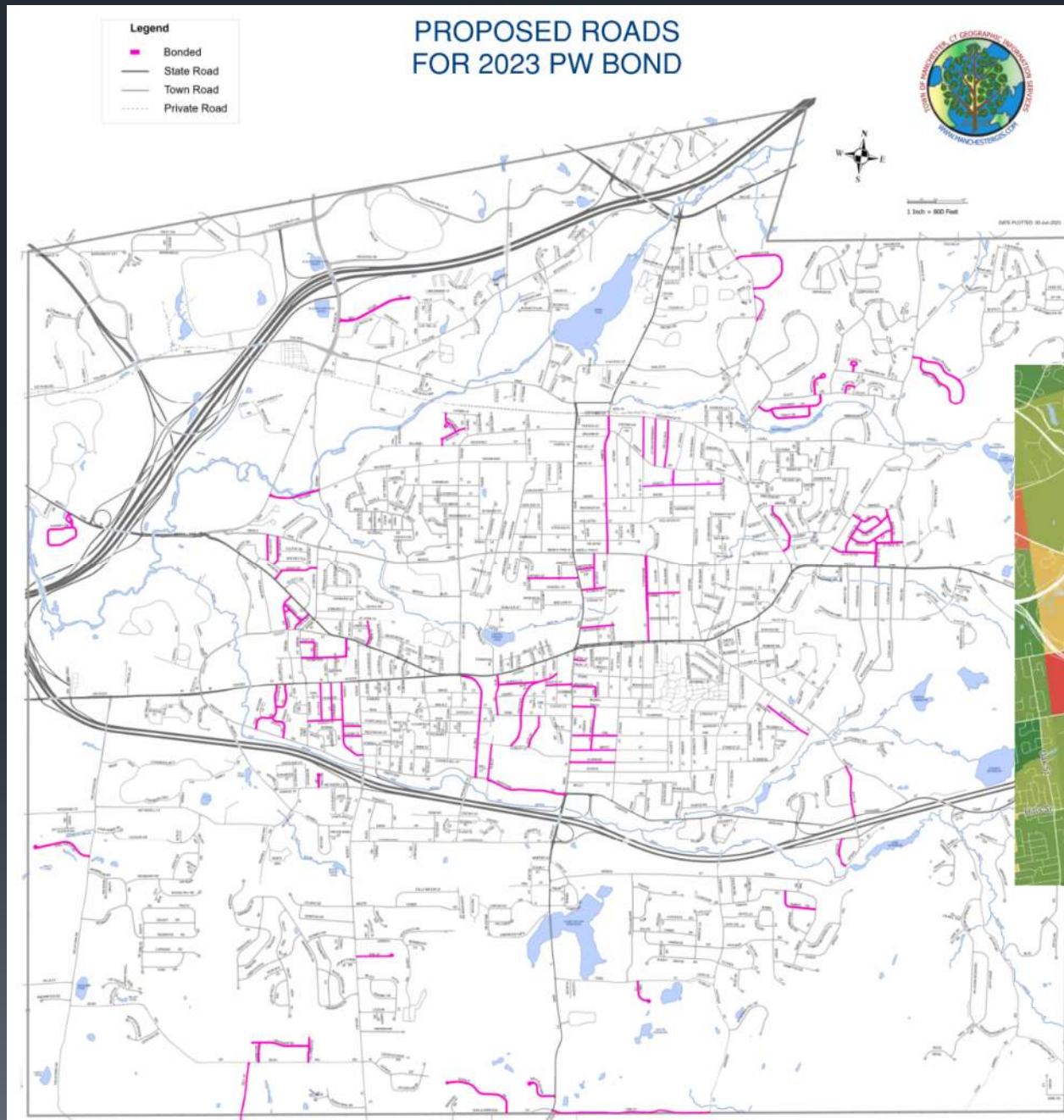
ARTERIALS AND COLLECTORS							
ROAD	FROM	TO	AREA (SY)	TYPE	UNIT COST	EST. COST	CUMULATIVE
BELL STREET			3300	REPLACE	\$ 60.00	\$ 198,000.00	\$ 198,000.00
HARTFORD ROAD	ELM STREET	MAIN STREET	6750	MILL	\$ 32.50	\$ 219,375.00	\$ 417,375.00
LINE STREET			8760	REPLACE	\$ 60.00	\$ 525,600.00	\$ 942,975.00
PINE STREET			10050	MILL	\$ 32.50	\$ 326,625.00	\$ 1,269,600.00
REDSTONE ROAD			10050	MILL	\$ 32.50	\$ 326,625.00	\$ 1,596,225.00
SUMMIT STREET	WOODBRIIDGE STREET	MIDDLE TURNPIKE EAST	12460	MILL	\$ 32.50	\$ 404,950.00	\$ 2,001,175.00
WYLLYS STREET	PORTER STREET	HIGHLAND STREET	3880	MILL	\$ 32.50	\$ 126,100.00	\$ 2,127,275.00

Road Resurfacing

Local Roads

LOCAL ROADS							
ROAD	FROM	TO	AREA (SY)	TYPE	UNIT COST	EST. COST	CUMULATIVE
AGNES DRIVE			3176	REPLACE	\$ 50.00	\$ 158,800.91	\$ 158,800.91
ALICE DRIVE			3080	REPLACE	\$ 50.00	\$ 153,991.39	\$ 312,792.31
AMERICAN LEGION DRIVE			1342	REPLACE	\$ 50.00	\$ 67,093.92	\$ 379,886.22
ARCELIA DRIVE			5030	REPLACE	\$ 50.00	\$ 251,488.59	\$ 631,374.82
BENT STREET			1515	REPLACE	\$ 50.00	\$ 75,750.00	\$ 707,124.82
BIRCH STREET	MAIN STREET	COTTAGE STREET	1850	REPLACE	\$ 50.00	\$ 92,500.00	\$ 799,624.82
BLUEFIELD DRIVE			5081	REPLACE	\$ 50.00	\$ 254,050.00	\$ 1,053,674.82
BOWERS STREET	GREEN ROAD	TANNER STREET	1100	REPLACE	\$ 50.00	\$ 55,000.00	\$ 1,108,674.82
BRAINARD PLACE			2076	REPLACE	\$ 50.00	\$ 103,800.00	\$ 1,212,474.82
CAROL DRIVE			1755	REPLACE	\$ 50.00	\$ 87,761.97	\$ 1,300,236.79
CASE DRIVE			3550	REPLACE	\$ 50.00	\$ 177,500.00	\$ 1,477,736.79
CHESTER DRIVE			2104	REPLACE	\$ 50.00	\$ 105,221.54	\$ 1,582,958.33
CHESTNUT STREET			2369	REPLACE	\$ 50.00	\$ 118,446.16	\$ 1,701,404.49
DEARBORN DRIVE			1582	REPLACE	\$ 50.00	\$ 79,091.67	\$ 1,780,496.16
DOWNEY DRIVE			10105	REPLACE	\$ 50.00	\$ 505,270.55	\$ 2,285,766.71
DUDLEY STREET			2520	REPLACE	\$ 50.00	\$ 126,018.39	\$ 2,411,785.10
EDISON ROAD			2432	REPLACE	\$ 50.00	\$ 121,600.00	\$ 2,533,385.10
ELLEN LANE			1948	REPLACE	\$ 50.00	\$ 97,414.40	\$ 2,630,799.51
ELM STREET			2407	REPLACE	\$ 50.00	\$ 120,359.50	\$ 2,751,159.01
ELRO STREET			2953	REPLACE	\$ 50.00	\$ 147,671.10	\$ 2,898,830.11
ELSIE DRIVE			3467	REPLACE	\$ 50.00	\$ 173,365.00	\$ 3,072,195.11
EMILY LANE			2921	REPLACE	\$ 50.00	\$ 146,050.00	\$ 3,218,245.11
ENSIGN STREET			1342	REPLACE	\$ 50.00	\$ 67,112.48	\$ 3,285,357.58
EVA DRIVE			3003	REPLACE	\$ 50.00	\$ 150,167.89	\$ 3,435,525.48
FLINT DRIVE			1260	REPLACE	\$ 50.00	\$ 63,000.00	\$ 3,498,525.48
FLOWER STREET			1815	REPLACE	\$ 50.00	\$ 90,758.04	\$ 3,589,283.52
FOLEY STREET			2731	REPLACE	\$ 50.00	\$ 136,533.48	\$ 3,725,817.00
GARNET ROAD			2029	REPLACE	\$ 50.00	\$ 101,450.00	\$ 3,827,267.00
GERALD DRIVE			7912	REPLACE	\$ 50.00	\$ 395,600.00	\$ 4,222,867.00
GLENDALE ROAD			2512	REPLACE	\$ 50.00	\$ 125,600.00	\$ 4,348,467.00
HAYNES STREET			4186	REPLACE	\$ 50.00	\$ 209,321.45	\$ 4,557,788.45
HILLTOP DRIVE			4017	REPLACE	\$ 50.00	\$ 200,856.57	\$ 4,758,645.02
HOUSE DRIVE			2820	REPLACE	\$ 50.00	\$ 141,000.00	\$ 4,899,645.02
JOHNSON TERRACE			786	REPLACE	\$ 50.00	\$ 39,300.00	\$ 4,938,945.02
LINDMAN STREET			726	REPLACE	\$ 50.00	\$ 36,300.00	\$ 4,975,245.02
LUCIAN STREET			1359	REPLACE	\$ 50.00	\$ 67,951.70	\$ 5,043,196.72
LYNESS STREET			6804	REPLACE	\$ 50.00	\$ 340,221.14	\$ 5,383,417.87
MAPLE STREET	MAIN STREET	SPRUCE STREET	3150	REPLACE	\$ 50.00	\$ 157,500.00	\$ 5,540,917.87
MASTERS WAY			3876	REPLACE	\$ 50.00	\$ 193,800.00	\$ 5,734,717.87
MCCANN DRIVE			2026	REPLACE	\$ 50.00	\$ 101,283.03	\$ 5,836,000.90
MCKINLEY STREET			2596	REPLACE	\$ 50.00	\$ 129,784.52	\$ 5,965,785.42
MEADOW LANE			4165	REPLACE	\$ 50.00	\$ 208,250.00	\$ 6,174,035.42
MONTCLAIR DRIVE			3361	REPLACE	\$ 50.00	\$ 168,064.61	\$ 6,342,100.03
MYRTLE STREET			2225	REPLACE	\$ 50.00	\$ 111,250.00	\$ 6,453,350.03
NORTH ELM STREET	WOODBRIIDGE STREET	GREEN ROAD	3625	REPLACE	\$ 50.00	\$ 181,250.00	\$ 6,634,600.03
OAK STREET	MAIN STREET	SPRUCE STREET	3825	REPLACE	\$ 50.00	\$ 191,250.00	\$ 6,825,850.03
OTIS STREET			2645	REPLACE	\$ 50.00	\$ 132,256.53	\$ 6,958,106.56
PHELPS ROAD			3502	REPLACE	\$ 50.00	\$ 175,085.62	\$ 7,133,192.18
PLAZA DRIVE			3020	REPLACE	\$ 50.00	\$ 151,012.04	\$ 7,284,204.22
PRESTON DRIVE			1365	REPLACE	\$ 50.00	\$ 68,250.00	\$ 7,352,454.22
ST. PAUL DRIVE			2941	REPLACE	\$ 50.00	\$ 147,026.75	\$ 7,499,480.97
STARKWEATHER STREET			3485	REPLACE	\$ 50.00	\$ 174,240.60	\$ 7,673,721.57
STILL FIELD ROAD			6672	REPLACE	\$ 50.00	\$ 333,600.00	\$ 8,007,321.57
TANNER STREET			6165	REPLACE	\$ 50.00	\$ 308,250.00	\$ 8,315,571.57
THOMAS DRIVE			3569	REPLACE	\$ 50.00	\$ 178,452.34	\$ 8,494,023.91
THOMPSON ROAD	ADAMS ST SOUTH	CENTER STREET	5876	REPLACE	\$ 50.00	\$ 293,800.00	\$ 8,787,823.91
WINTHROP ROAD			5781	REPLACE	\$ 50.00	\$ 289,050.00	\$ 9,076,873.91

Road Resurfacing



Sidewalk Repairs/Extensions

- Full Replacement

- Santina Drive



- Spot Repairs

- Multiple Locations

- Extensions/Gap Closures

- Prospect Street
 - Bidwell Street
 - Lydall Street
 - Parker Street

Traffic Signal Replacements

- Middle Turnpike West @ Essex/Homestead



- Adams Street @ New State Rd/Manchester Materials



Case Mountain Dams

- Case Mountain Upper and Lower Dams
- Engineering and repairs required by CT DEEP
 - Tree/Vegetation Clearing
 - Stone masonry wall repair
 - Construct toe drain system
 - Install riprap slope protection



Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep/dams Affirmative Action/Equal Opportunity Employer

Owner: Town of Manchester
321 Olcott Street
Manchester, CT 06045
thekas@townofmanchester.gov

Operator: Ken Longo
41 Center Street, P.O. Box 191
Manchester, CT 06045
klongo@townofmanchester11.com

Attn: Timothy A. Beckus, Director of Public Works

Re: Request for Engineering and Maintenance Work
Case Brothers Lower Pond Dam, ID# 7704
Hazard Class: II (Significant Hazard Potential Dam)
Registration#: 201507807
Municipality: Manchester

Dear Mr. Beckus:

Thank you for having the Case Brothers Lower Pond Dam inspected. The inspection report submitted to the Department of Energy and Environmental Protection (DEEP) Dam Safety Program on December 12, 2019 was based on a July 30, 2019 inspection by Tighe & Bond. The DEEP Dam Safety Program has reviewed the report.

Your consultant has assessed the dam to be in poor condition overall. Based on the information in the report, we concur with that assessment because engineering analysis and work with professional engineer oversight is necessary at this dam.

The consultant's report identified deficiencies with the dam. Before any recommendations that the DEEP Dam Safety Program deems necessary. The requested repairs, investigations, and maintenance to be completed include, but are not necessarily limited to the following:

ENGINEERING REPAIRS/INVESTIGATIONS:

1. Cut and clear all trees and woody vegetation on and within 25 feet of the dam. Removal of roots of trees/brush larger than 3 inches in diameter should be done under the supervision of a professional engineer to determine its impact on the dam embankment and to re-fill voids with proper materials and compaction. You may preliminarily cut trees flush to the ground as a maintenance activity under a GP-414 until you receive appropriate authorization from DEEP and a professional engineer can oversee the root removal. After removing the stump that is displacing the stone masonry wall on the upstream slope reconstruct and repair said section of the wall. Check with DEEP to determine if this modification to the wall would require obtaining a DEEP Dam Safety permit prior to conducting the work.
2. Work with a licensed engineer to evaluate the need for a hydraulic and hydrologic (H&H) analysis, seepage analysis, and stability analysis for this dam. If an H&H analysis is needed, NOAA's Atlas 14 data should be used for the most accurate and up to date results. As a B Hazard dam the spillway must be minimally designed to safely pass between the 100-year and 500-year return frequency flood flow with one foot of freeboard.