Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities

Cast Iron/Bare Steel Replacement Program Results Fiscal Year 2020

April 15, 2020

Submitted by:



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INTRODUCTION

Pursuant to the settlement agreement approved by the New Hampshire Public Utilities

Commission (the "Commission") as part of the National Grid/KeySpan merger in Docket No.

DG 06-107 and the settlement agreement as part of the Liberty acquisition of EnergyNorth in

Docket No. DG 11-040 (the "Settlement Agreement") approved by Order No. 25,370, Liberty

Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities ("Liberty" or the "Company")

submits the results of the Cast Iron Bare Steel ("CIBS") Replacement Program for fiscal year

2020 (April 1, 2019, to March 31, 2020). As required by the Settlement Agreement, the

Company submits the following information in connection with this report, the pre-filed Joint

Testimony of Robert A. Mostone and Brian R. Frost, and the Testimony of Catherine A.

McNamara: (1) A report detailing the actual amount of capital investments made in accordance

with implementing the CIBS program during fiscal year 2020 (Attachment RAM/BRF-2 to

Joint Mostone-Frost Testimony); (2) A calculation of the incremental revenue requirement

associated with placing the capital investments into rate base above a base spending level of

\$549,222 (Attachment CAM-1 to McNamara Testimony); (3) A description of variances

between actual results and the original plan; and (4) a request for a permanent increase in base

distribution delivery rates in the amount of \$1,612,633 effective for usage on and after July 1,

2020.

SECTION 1: ACTUAL CAPITAL EXPENDITURES

Actual capital expenditures incurred during implementation of the CIBS program for

fiscal year 2020 are detailed in Attachment RAM/BRF-2 to the Mostone/Frost Testimony.

Through a series of technical sessions that began in 2008, the Commission Staff and the

Company have agreed that the capital investment amounts to be included for recovery under

CIBS may include all prudently incurred direct and indirect¹ costs associated with: (i)

replacement or abandonment² of cast iron and bare steel mains, including replacement of

existing pipe with replacement pipe of the same size,³ with recovery for the costs of "upsizing"

the pipe allowed only when specifically justified; (ii) replacement or abandonment of cast iron

or bare steel service lines directly connected to bare steel or cast iron main replacement projects;

and (iii) tie over of connected service lines not replaced or abandoned as part of a cast iron bare

steel main replacement project.

Categories of costs that may not be included for recovery under CIBS include: (i)

replacement or abandonment of plastic main; (ii) replacement or abandonment of coated steel

main, regardless of vintage, unless approved by the Safety Division of the Commission; (iii)

replacement, abandonment, or reconnecting of plastic or coated steel services that were

connected to existing cast iron or bare steel main replacement projects; (iv) the differential in

cost to replace existing cast iron or bare steel mains with pipe of a diameter that is greater than

the existing main and the cost to replace that main with a pipe that is larger than the existing

main, unless specifically justified; (v) relocation of customer meters from inside to outside; (vi)

random cast iron or bare steel service replacements not connected to a cast iron or bare steel

main replacement project; (vii) carryover costs in aggregate exceeding 5% of the approved

¹ Indirect costs mean overheads such as pension, OPEBs and other fringe benefits, payroll taxes, material handling costs and other general & administrative expenses that are loaded on all labor and material transactions. Categories of costs that may not be included for recovery under the plan include costs related to CIBS planning

(other than normal engineering and project planning), reporting and filing. ² For purposes of ii and iii, abandonments such as mains that are not servicing a customer via a service will not

be allowed. Other abandonments will be considered by Staff on a case by case basis.

³ 3-inch pipes, which are no longer standard size, will be routinely replaced with 4-inch pipes.

⁴ See Settlement Agreement in DG 11-040, Attachment J, section (20) n.

estimated total expenditures under the CIBS program for the construction year, unless approved

by the Safety Division; and (viii) replacements made under the Cast Iron Encroachment Policy

are not eligible for accelerated rate recovery in the Cast Iron/Bare Steel Program unless a special

circumstance is approved by the Safety Division.

On January 10, 2019, the Company made its proposed FY 2020 CIBS program filing

with the Commission. On May 1, 2019, the filing was revised and filed with Staff. On June

28, 2019, Commission Order No. 26,266 directed the Company to file its FY 2020 CIBS results

by April 15, 2020, with the stipulation that recovery of only 5% of carryover costs would be

allowed unless approval had first been obtained from the Safety Division prior to submitting

the filing.

The FY 2019 carryover costs that were captured within the FY 2020 program that are

potentially recoverable under CIBS rates totaled \$4,220,128. The estimated total cost associated

with completed FY 2019 projects is \$18,619,731, resulting in a 5% cap of \$930,987. Due to the

5% cap being smaller than the total FY 2019 carry over costs incurred, the total recoverable

carryover cost stands at \$930,987.

Line 78 column BE of Attachment RAM/BRF-2 shows the actual recoverable

expenditures of the FY 2019 projects, totaling \$15,434,483 (including carryover costs at the

5% cap). After removing from the actual expenditures the CIBS base amount of \$549,222 in

accordance with the terms of the Settlement Agreement, the total incremental expenditures to

be included in rate base is \$14,885,260. Appendix A to this report is the Condition Bare Steel

Main Replacement Program – Sample Analysis Report for FY 2020. This report contains

photographs and descriptions of various pipe segments removed and catalogued as part of the

FY 2020 CIBS program.

SECTION 2: CALCULATIONS OF INCREMENTAL REVENUE REQUIREMENT

In this filing, Liberty is seeking recovery in rates of the incremental revenue requirement

associated with an additional \$14,885,260 of CIBS recoverable capital investments. As set

forth in Attachment CAM-1, page 1 to the McNamara Testimony, the revenue requirement

associated with the CIBS cumulative capital expenditures is \$6,161,925 (line 35(1)) with a

corresponding revenue deficiency of \$1,612,633 (line 41 (l)). Consistent with prior delivery

rate increases for the CIBS program, the Company proposes to apply the increase pro rata across

all customer classes. Attachment CAM-1, page 4 to the McNamara Testimony also provides

the annual bill impacts for an average residential customer and commercial customers in rate

classes G-41, G-42, and G-52. Attachment CAM-2 is a computation of the cumulative revenue

requirement associated with the CIBS program since its inception in FY 2009.

SECTION 3: DIFFERENCES BETWEEN INITIAL ESTIMATED EXPENDITURES

AND FISCAL YEAR-END ESTIMATED EXPENDITURES

The Company's FY 2020 CIBS Plan provided for the replacement or abandonment of

12.68 miles of cast iron and bare steel pipe at an estimated cost of \$20,459,276. As shown on

Attachment RAM/BRF-2 (line 52 column AJ), the Company eliminated 11.13 miles of cast

iron and bare steel at a cost of \$21,369,387 (line 51, column BL). A reconciliation of the total

costs to the total recoverable costs is shown in the table on the following page:

|--|

		<u>Reference</u>
Actual Loaded Costs	\$21,369,387	line 51, column BL
FY 2019 5% cap carry-over costs	\$930,987	line 77, column BE
Less: Expected FY 2020 carry-over costs	-\$3,333,858	line 51, column BG
Non-recoverable main costs	-\$1,255,977	line 51, column BA
Non-recoverable service costs	-\$2,276,056	line 51, column BB
Total Recoverable Costs	\$15,434,483	line 78, column BE

Details of the variances between estimated and actual costs by project are shown in Attachment SDF/BRF-2 columns BH through BN. Overall, the actual costs of the CIBS projects completed in FY 2020 were 15% higher than budget.⁵

SECTION 4: STATUS OF THE LITIGATION BETWEEN LIBERTY AND THE CITIES OF CONCORD AND MANCHESTER

In 2010, National Grid filed actions in Hillsborough and Merrimack County Superior Courts against the Cities of Manchester and Concord seeking injunctions against enforcement of regulations concerning street opening permit fees ("degradation fees"), as well as requests for declaratory judgments invalidating such fees. The matters were later consolidated in the Merrimack County Superior Court.

After an appeal of pretrial motions that was resolved in 2012, a trial in 2015, and another appeal, the Supreme Court issued an order in 2017 that upheld both the ordinances and their penalty provisions, effectively making the Company responsible for all past and future degradation fees charged.

⁵ Note that the budget-to-actual variance of all costs related to cast iron and bare steel, including the costs within this program, costs excluded from the program, and carryover costs, was 8%. \$23,709,475 versus \$25,589,515). Attachment RAM-BRF-2, columns BK, BL, and BM, row 79.

For FY 2018 and onward, the Company has included degradation fees in its proposed

CIBS rates. Accrued Manchester degradation fees from prior year CIBS filings were included

in the most recent distribution rate case, Docket No. DG 17-048. The Company paid the

Concord degradation fees while the case was pending, so no adjustment was necessary.

SECTION 5: TAX DEDUCTION FOR REPAIR EXPENSES

In 2009, the Internal Revenue Service issued guidance, under Internal Revenue Code

Section 162, regarding the eligibility of certain repair and maintenance expenses for an

immediate deduction for income tax purposes, but capitalized by the Company for book

purposes. This tax deduction has the effect of increasing deferred taxes and lowering the

revenue requirement that customers will pay under the CIBS program. Repairs resulting in the

replacement of less than 20 percent of an original unit of property qualify for a repairs tax

deduction. A gas company's gas subsystem is considered a "unit of property" for the purposes

of the repairs tax deduction. As explained in the McNamara Testimony, projects included in

the CIBS program are expected to qualify as repairs; thus, when computing the revenue

requirement, the Company reflects a tax deductibility of 100 percent for all CIBS jobs.

SECTION 6: CAST IRON/BARE STEEL REPLACED UNDER MUNICIPAL PROJECTS AND THE CAST IRON ENCROACHMENT POLICY

In FY 2020, the Company replaced approximately 428 feet of cast iron through the Cast

Iron Encroachment Policy and approximately 8,960 feet of cast iron and bare steel through

municipal projects, totaling to approximately 1.78 miles of replacement. Combined with the

11.13 miles replaced through the CIBS program as discussed above, this amounts to a total of

approximately 12.9 miles of cast iron and bare steel replacement in FY 2020. A yearly

summary of cast iron and bare steel replacement through municipal projects and encroachments can be seen below:

	Footage of Cast Iron	/Bare Steel Replaced
Fiscal Year	Municipal Projects	Encroachments
2008-2009	10,980	171
2009-2010	19,920	28
2010-2011	11,649	62
2011-2012	17,791	40
2012-2013	12,524	53
2013-2014	19,118	55
2014-2015	10,587	169
2015-2016	12,206	248
2016-2017	15,663	30
2017-2018	15,570	30
2018-2019	14,793	458
2019-2020	8,960	428
Total Footage	169,761	1,772
Total Mileage	32.15	0.34

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APPENDIX A: FY 2020 CONDITION BARE STEEL MAIN REPLACEMENT PROGRAM – SAMPLE ANALYSIS

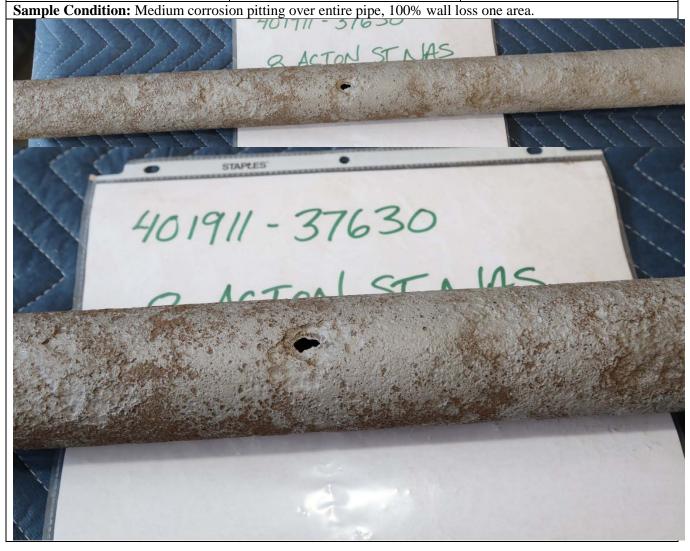
Over the course of the FY 2020 construction season, bare steel pipe and soil samples were collected from the CIBS main replacement program. Each sample was sand blasted to expose the pipe down to the bare metal and will be provided for visual representation. Soil samples were taken as close to the pipe samples as possible in an effort to retrieve native soil. Chemical testing was conducted to determine the existing pH, chloride, sulfide, and sulfate levels. Microbiological testing for Acid Producing Bacteria (APB) and Sulfate Reducing Bacteria (SRB) were performed as well. Both chemical and microbiological tests were conducted as soon as possible. The table below shows the threshold of bacteria levels based on the results of bacterial colonies per milliliter.

Number of Positive Bottles	Bacteria Colonies/ml	Reporting Value Colonies/ml	Bacteria Level
0	< 1 - 10	< 10	Low
1	10	10	Low
2	10 - 100	100	Medium
3	100 - 1000	1,000	Medium
4	1,000 - 10,000	10,000	High
5	> 10,000 - 100,000	100,000	High

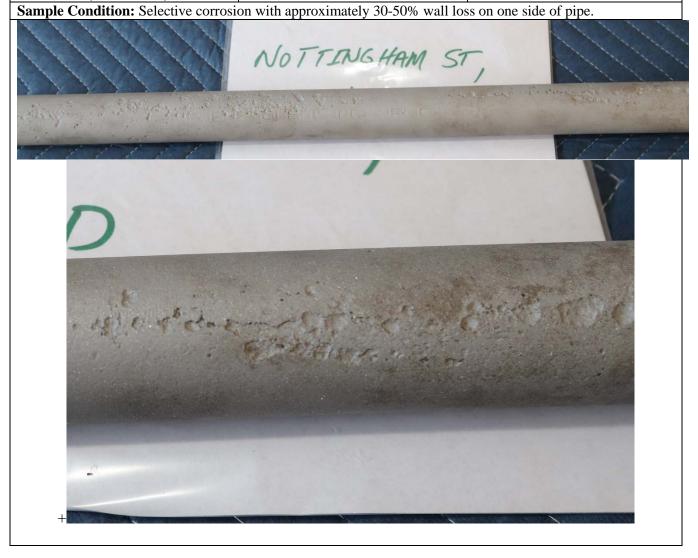
Positive APB and SRB vials with corresponding reporting values.

Details and testing results for the four pipe and soil samples collected are summarized on the following pages:

Work Order & Project:	401911-37630 - 1-35 Hunt St, Actor	401911-37630 - 1-35 Hunt St, Acton St, and Pine St									
Sample Location:	In Front of 8 Acton St	In Front of 8 Acton St									
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154)	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1950									
Soil Sample Details:	Medium Brown Sandy Soil	Medium Brown Sandy Soil									
Test Date:	9/25/2019	9/25/2019									
Soil Testing Results											
	Quantitative Value	Qualitative Value									
pH:	7	-									
Chloride (mg/l):	0	None									
Sulfide (mg/l):	< 5	Not Appreciably Present									
Sulfate (mg/l):	400	Medium									
APB Level (Colonies/ml):	1,000	Medium									
SRB Level (Colonies/ml):	100	Low									
	·	·									



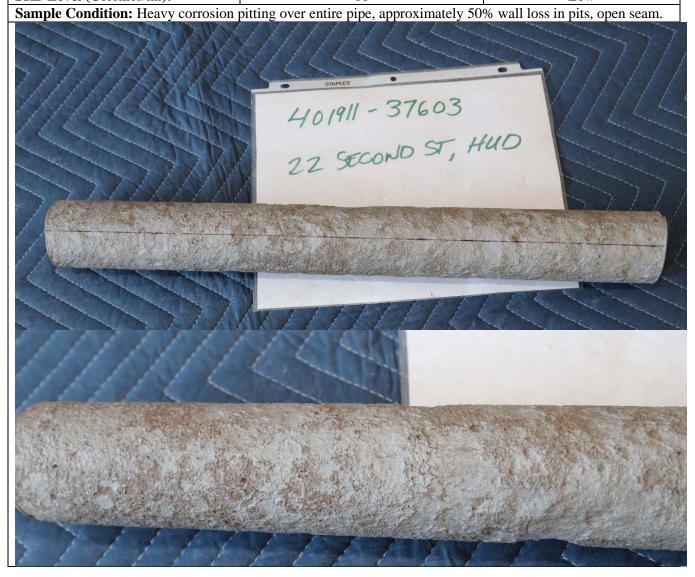
Work Order & Project: 401911-37604 - 9-15 Nottingham St											
Sample Location:	Intersection of Nottingham St and H	Intersection of Nottingham St and Highland St									
Pipe Sample Details:	1.25" Bare Steel, Standard Wall (0.1	1.25" Bare Steel, Standard Wall (0.140"), High Pressure, Installed in									
-	1959										
Soil Sample Details:	Light Brown Dry sSandy Soil	Light Brown Dry sSandy Soil									
Test Date:	3/16/2020	3/16/2020									
Soil Testing Results											
Quantitative Value Qualitative Value											
pH:	6	-									
Chloride (mg/l):	0	None									
Sulfide (mg/l):	< 5	Not Appreciably Present									
Sulfate (mg/l):	Below 200	Low									
APB Level (Colonies/ml):	1,000	Medium									
SRB Level (Colonies/ml):	100	Medium									
0 1 0 14 01 4	' '.1 ' .1 20 700/ 11.1	'1 C'									



Work Order & Project:	401823-37609 - 1-10 Chandler St, and Salvail Ct										
Sample Location:	Intersection of Salvail Ct and Canal	Intersection of Salvail Ct and Canal St									
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1928									
Soil Sample Details:	Dark Brown Sandy Soil	Park Brown Sandy Soil									
Test Date:	3/16/2020	3/16/2020									
Soil Testing Results											
	Quantitative Value Qualitative Value										
pH:	76	-									
Chloride (mg/l):	0	None									
Sulfide (mg/l):	< 5	Not Appreciably Present									
Sulfate (mg/l):	Below 200	Low									
APB Level (Colonies/ml):	1,000	Medium									
SRB Level (Colonies/ml):	10	Low									



Work Order & Project:											
Sample Location:	Intersection of Second St and Oakwo	Intersection of Second St and Oakwood St									
Pipe Sample Details:	2" Bare Steel, Standard Wall (0.154"	2" Bare Steel, Standard Wall (0.154"), Low Pressure, Installed in 1949									
Soil Sample Details:	Light Brown Dry Sandy Soil	Light Brown Dry Sandy Soil									
Test Date:	3/16/2020	3/16/2020									
Soil Testing Results											
Quantitative Value Qualitative Value											
pH:	7	-									
Chloride (mg/l):	0	None									
Sulfide (mg/l):	< 5	Not Appreciably Present									
Sulfate (mg/l):	Below 200	Low									
APB Level (Colonies/ml):	1,000	Medium									
SRB Level (Colonies/ml):	10	Low									



FY 2019-2020 Cast Iron/Bare Steel Replacement Program
Attachment A

A B C D	E F G	H I J	К	L M N O P	Q R S T U	V Control	W X Y Z AA	A8 AC Estimated	AD AE	AF AG AH	L Actual Actual Actual Actual Actual	AO AP AQ Actual	Q AR AS Actual	AT AU AV Main Cost -	AW AX	AY AZ BA	BB	BC BD BE	BF Settlement of the settlemen	BG BH	BI	BJ	ВК	BL BM		BN	
Priority Work Order # Town Code Street	From To Materia	System I Pressure (PSIG) Exst Diameter (Inches) YOI	Relay Diameter	Steel Steel Services	Main Footage Only Leak Prone Footage	xcl. (Loaded, Excl. ion) Degradation)	Estimated Degradation Fee (Direct) Total Cost Estimate (Loading (Loaded) %	t Recoverable Cost Comments (Loaded)	Actual Start Actual Date Completion D	stanca main	L A Actual Vipsized Footage (AG+R-AH) BS Actual Service Servic	Service Service Aband RS New	vice Service Fees (DEG	Direct Actual Service Actual Total Cost	Actual Main Cost Loaded GRADATION INCL) Actual Service Cost - Loaded Load	tual Total Cost aded (AW + AX) Loading % Main Costs to I Removed (Nor recoverable)	- Removed (Non-	Recoverable Main Cost (AW - BA) Recoverable Service Cost (AX - BB) Total Recoverab Cost (BC + BD)	Carryover Costs - Carry	over Costs - Estimated Direct Cost	Actual Cost Direct (INCL CARRYOVER)	Direct Variance % Esti	timated Loaded Cost	Actual Loaded Cost (INCL CARRYOVER) Loaded Cost Variance %		Project Comments	
2 NORTHERN DIVISION				a C3)	rootage					Footag	e	. Вз		NCLI													
22.48 401711-37605 CCD 8-42 Centre St, N State St, and Park St		LP, LP to 60 4", 6", 8", 10" 1892, 1893, 1894, 1938	Centre St.	8 9 7 24 2,460			\$33,940 \$502,561 \$653,827 30% \$265.78		6/28/2019 12/18/201		0 2,908 2 0 8 6					\$707,119 23% \$28,481		\$605,342 \$11,540 \$616,882		\$502,561	\$662,945	32%	\$653,827	\$826,478 26% to be installed.	Also, T &M for pressure increase and time permit		
4 15.26 401911-37608 CCD 44-62 Pleasant St, Chesley St, Wall St, and Fayette St	N Spring St S State St CI	LP, LP to 60 8", 4", 3" 1892, 1893, 1955	6" HP on Pleasant St with 2" HP on Chesley St and Wall St. 6" LP on Fayette St.	1 5 30 36 2,645	2,645 \$432,508	9574,245	\$34,800 \$467,308 \$609,045 30% \$230.26	6 \$452,613 Open grade 3 leak.	5/8/2019 12/23/201	9 CASBUILT 2,645 0	900 2,645 0 0 17 4	13 0 0	34 \$56,645 \$		\$708,007 \$197,118	\$905,125 24% \$9,756	\$197,118	\$698,251 \$0 \$698,251	\$66,725	89,934 \$467,308	\$795,021	70%	\$609,045	\$995,059 63% permit restrict	ions. Sections were completed at night and traffic		
14.36 401911-37606 CCD 15-53 Broadway, Allison St, West St, and South St		LP 6", 4" 1895, 1898, 1927, 1933, 1949	8" LP on South St and Broadway. 6" LP on West St. 4" LP on Allison St.	12 0 14 26 2,075			\$28,700 \$388,482 \$500,324 29% \$241.12		9/11/2019 12/12/201		1,430 2,005 9 0 4 0	6 0 0	19 \$26,140 \$:	79,606 \$80,326 \$459,932	\$500,406 \$101,328	\$601,735 31% \$32,382	\$51,558	\$468,024 \$49,770 \$517,794	\$49,708	66,989 \$388,482	\$509,640	31%	\$500,324	\$668,724 34% Main and serv extra excavation		d 2019 restoration scheduled for 2020. Variance is	ue to permit time restriction
11.35 401911-37605 CCD 19-71 Washington St, and Perry Ave	Perry Ave N State St CI	LP to 60 6", 4" 1893, 1906, 1934		19 1 23 43 2,605	40 260 2,645 \$388,633	\$517,839	\$30,990 \$419,623 \$548,829 31% \$207.50	0 \$424,845 Paving Washington St	4/15/2019 8/19/2019	9 CASBUILT 2,961 300		9 0 2	44 \$33,635 \$	92,528 \$137,667 \$530,195	\$473,477 \$132,925	\$606,402 14% \$47,971	\$79,077	\$425,506 \$53,848 \$479,354	\$74,529	100,411 \$419,623	\$604,723	44%	\$548,829		ices complete. 2020 for finish paving. Variance is d act carryover costs in 2020.	due to installation footage being greater than estim	te and rebid of 5 year contrac
10.33 401911-37610 LAC 1-125 Messer St	Church St Oak St CI	LP 8" 1900	8" LP on Messer St.	3 6 12 21 1,270	75 1,270 \$258,976	76 \$339,991	\$0 \$258,976 \$339,991 31% \$267.71	1 \$240,127 Eliminates all CIBS main in LAC.	5/28/2019 8/7/2019	CASBUILT 1,470 75	635 1,395 3 0 7 0	10 0 0		21,121 \$67,088 \$288,209	\$255,392 \$110,962	\$366,354 27% \$19,914	\$84,609	\$235,478 \$26,352 \$261,831	\$100,057	134,903 \$258,976	\$388,266	50%	\$339,991		ices complete. 2020 for finish paving. Variance is di act carryover costs in 2020.	due to installation footage being greater than estim	ate and rebid of 5 year contra
8.14 401911-37611 LAC 186-261 Union Ave, and Church St	Spring St Riverside Ct CI, WI	LP to 60 4", 6" 1900		2 3 4 9 1,350			\$0 \$197,139 \$263,788 34% \$195.40	City paying in area Eliminates all CIRS main in LAC		9 CASBUILT 1,105 100	0 1,445 2 0 3 3	1 0 2	! 11 \$0 \$:	98,055 \$23,134 \$221,189	\$279,052 \$32,183	\$311,235 41% \$25,254	\$26,356	\$253,799 \$5,826 \$259,625	\$37,968	51,173 \$197,139	\$259,157	31%	\$263,788		ices complete. City contribution paid. Small amoun	nt of restoration remaining on Church St. Variance	s due to increased traffic contr
8	Wallace Ct Union Ave CI	LP to 60 6" 1900	Abandon and tie over services.	4 0 2 6	1,360 1,360 \$45,061	1 \$60,080	\$0 \$45,061 \$60,080 33% \$44.18	\$ \$40,053 Eliminates all CIBS main in LAC.	3/28/2019 4/11/2019		0 1,360 1 1 0 2	0 1 2	! 7 \$0	\$0 \$37,025 \$37,025	\$0 \$45,969	\$45,969 24% \$0	\$28,027	\$0 \$17,943 \$17,943	\$0	\$0 \$45,061	\$37,025	-18%	\$60,080		complete. Paved by City. Road reconstruction.	t project.	-
10 7.53 401911-37607 CCD 42-68 S Spring St 11 Northern Division Totals	Clinton St House #42 CI	LP to 60 4" 1899, 1957	2" HP on S Spring St.	0 0 19 19 785 49 24 111 184 13,190	785 \$142,179 40 2,370 420 15,600 \$2,292,900	79 \$190,111 100 \$3,037,564	\$8,785 \$150,964 \$198,896 32% \$253.37 \$137,215 \$2,430,115 \$3,174,779 31% \$213.16	7 \$149,172 Open grade 3 leak. 6 \$2,464,535		12,704 655	2,965 14,419 33 2 48 22	41 1 7	154 \$158,097 \$2	286,706 \$552,564 \$2,839,271	\$2,850,158 \$693,781	\$3,543,939 25% \$163,758	\$528,502	\$2,686,400 \$165,279 \$2,851,680	\$417,507	562,769 \$2,279,151	\$3,256,778	43%	\$2,975,883	Project 100% o	deferred to 2020.		
12 13 CENTRAL DIVISION				Total Miles 2.50	0.01 0.45 0.08 2.95					Mileage 2.41 0.12	0.56 2.73										Average Loaded C	ost/Foot North	\$239	\$323			
45.92 401911-37613 MNC 123-396 Smyth Rd		LP, LP to 60 8", 6" 1950	6" HP Sagamore St to Salmon St, tie over services for remainder.	5 0 3 8 460			\$17,625 \$132,742 \$170,257 28% \$370.12			9 CASBUILT 317 40	0 1,477 3 2 0 3	0 0 0	8 \$0 \$:	06,387 \$60,788 \$167,175	\$71,932 \$58,799	\$130,730 -22% \$9,077	\$17,110	\$62,855 \$41,689 \$104,544			\$167,175	26%	\$170,257	\$130,730 -23% Project 100% o	complete. Variance is due to ledge throughout proj	eject, City time permit restrictions, and extra excava	ition at tie-in's.
21.11 401911-37612 MNC 122-144 Calef Rd, Welch Ave, Sterling Ave, and Crowley S		LP 4" 1899, 1900, 1954	8" LP from Elm St to Queen City Ave, 4" LP for remainder.	15 3 16 34 1,245	60 1,245 \$319,226	26 \$423,281	\$51,250 \$370,476 \$474,531 28% \$381.15	5 \$342,747 Paving Calef Rd. Open Grade 3 leak.	8/29/2019 12/6/2019	CASBUILT 1,315 40	610 1,275 14 0 7 0	12 0 0	33 \$0 \$:	54,146 \$118,306 \$372,452	\$262,940 \$115,404	\$378,344 2% \$14,611	\$61,866	\$248,329 \$53,538 \$301,867			\$541,635	46%	\$474,531	\$606,624 28% Main and serv	ices complete. 2020 for finish paving. Variance is d	ue to crew down time for SOP modifications and	xtra excavation at tie-in's.
15 16 19.67 401911-37627 MNC 89-205 Second St, Third St, and Bath St		LP, LP to 60 8", 4", 3" 1899, 1912, 1919, 1962		4 8 10 22 1,530	1,530 \$329,596	96 \$438,014	\$54,500 \$384,096 \$492,514 28% \$321.90	0 \$348,420 Paving Second St. Paving Pine St. Completes partially complete 2018		CASBUILT 1,753 0		2 0 0	25 \$0 \$4			\$515,405 -3% \$0		\$416,710 \$21,445 \$438,155		\$0 \$384,096	\$530,334	38%	\$492,514	\$515,405 5% Project 100% o	complete.		
18.42 401911-37618 MNC 677-759 Pine St 18 14.71 401911-37617 MNC 146-314 Bridge St		LP 10", 8", 4" 1900, 1928, 1930 LP to 60 3" 1892, 1894	12" LP on Pine St. 2" HP.	8 3 10 21 1,075 10 3 16 29 2,160			\$42,250 \$353,188 \$448,160 27% \$416.85 \$76,350 \$485,169 \$624,567 29% \$289.15	9 \$332,341 project			1,097 1,097 8 0 4 0 0 1,470 1 0 0 1		0 21 \$0 \$1 0 22 \$5,655 \$1			\$432,143 13% \$11,891 \$255,660 32% \$26,923		\$332,486 \$32,929 \$365,415 \$133,942 \$3,035 \$136,977	\$0 \$87,118 \$	\$0 \$353,188 117,435 \$485,169	\$381,766 \$280,774	-42%	\$448,160 \$624,567	\$432,143 -4% Project 100% of \$373,095 -40% Main and serv		nish paving for 2019 completed work is scheduled	for 2020.
13.17 401911-37615 MNC 110-228 Boutwell St, Laval St, Bremer St, and Kelley St		LP to 60 6", 4" 1913, 1914, 1917, 1921, 1924, 1926	5, 19524" HP on Kelley St and Laval St, 2" HP for remainder.	32 3 24 59 2,735	175 260 2,910 \$591,296	96 \$792,854	\$103,625 \$694,921 \$896,479 29% \$327.78	8 \$645,617 Paving Bremer St.	6/12/2019 9/17/2019	O CASBUILT 2,535 150	0 2,560 27 4 12 17	7 1 1	69 \$3,900 \$6	76,389 \$297,869 \$974,258	\$981,562 \$294,769	\$1,276,330 31% \$58,081	\$140,843	\$923,481 \$153,926 \$1,077,407	\$0	\$0 \$694,921	\$974,258	40%	\$896,479		complete. Variance is due to ledge throughout proj diment bags required by City.	oject, t & m required on sections where pressure in	crease took place, test holes, a
19 20 13.00 401911-37621 MNC 96-185 Oakdale Ave	S Lincoln St S Willow St CI, BS	LP to 60 4", 2" 1920, 1941, 1948	2" HP on Oakdale Ave and tie over services for remainder.	6 2 12 20 605	420 1,025 \$145,812	12 \$195,556	\$23,500 \$169,312 \$219,056 29% \$362.08	8 \$161,333 Paving Oakdale Ave.	10/21/2019 11/13/201	9 CASBUILT 31 31	0 420 2 0 1 2	2 0 0	7 \$0 \$	18,568 \$34,787 \$83,355	\$98,629 \$34,463	\$133,092 60% \$98,629	\$23,642	\$0 \$10,821 \$10,821	\$21,121	28,398 \$169,312	\$104,476	-38%	\$219,056	\$161,490 -26% Abandonment	on Lincoln complete. Balance of project as well as		
12.15 401811-37612 MNC 35-98 W Brook St	Canal St Elm St CI			3 2 4 9 665	120 665 \$135,656	\$180,329	\$24,550 \$160,206 \$204,879 28% \$308.09	9 \$119,219 Paving W Brook St.	10/21/2019 12/11/201	9 CASBUILT 637 115	637 522 2 0 1 0	5 0 0		39,887 \$47,261 \$137,148	\$109,037 \$66,885	\$175,922 28% \$26,590	\$48,153	\$82,447 \$18,732 \$101,179	\$57,753	77,850 \$160,206	\$194,901	22%	\$204,879			due to test holes, extra excavation at tie-ins, origina ditions throughout project requiring additional san	
22 10.13 401823-37640 MNC 305-336 E High St		LP 4" 1928		4 2 7 13 510	510 \$127,017	17 \$168,500	\$20,550 \$147,567 \$189,050 28% \$370.69	9 \$139,337 Paving E High St.	9/16/2019 10/21/201		498 478 2 0 4 0	5 1 0	\$0 \$1	01,733 \$40,907 \$142,640	\$141,513 \$59,429	\$200,942 41% \$11,082	\$49,511	\$130,431 \$9,918 \$140,349	\$49,674	\$147,567	\$192,313	30%	\$189,050		ices complete. 2020 for finish paving. Variance is di required by City and higher than anticipated loadi	fue to extra excavation at tie-in, crew downtime du lings.	ing tapping operations, catcl
10.00 401911-27622 MNC 96-161 Paker St. and Stevens St.	S Elm St Queen City Ave CI	LP 8", 4" 1924, 1929, 1942		5 1 8 14 1,295	40 1,295 \$274,321	\$362,366	\$45,375 \$319,696 \$407,741 28% \$314.86	6 \$295,734 Paving Baker St.	4/24/2019 6/12/2019	O CASBUILT 1,308 40	0 1,268 5 0 3 0	7 0 0	15 \$15,580 \$4	68,253 \$33,580 \$501,833	\$510,668 \$40,747	\$551,415 10% \$15,617	\$27,042	\$495,051 \$13,705 \$508,756	\$0	\$0 \$319,696	\$501,833	57%	\$407,741	\$551.415 25% Project 100% of		e-ins, test holes, catch basin sediment bags require	ı by City, and asphalt thickne
23 8.88 401911-37622 MNC 172-240 Belmont St, Silver St, Young St, and Lawton St, a 24 Rose St, and Several St. Silver St, Young St, and Lawton St, a 24 Rose St, and Several St. Silver St. Young St, and Lawton St, a 24 Rose St. Silver St. Young St, and Lawton St, a 24 Rose St. Silver St. Young St. and Lawton St, a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. and Lawton St. a 24 Rose St. Silver St. Young St. Young St. Silver St. Young St. Young St. Young St. Young St. Young St. You	Silver St Hayward St CI, WI	LP to 60 4", 2" 1902, 1919, 1922, 1923	4" HP on Belmont St, Silver St and Taylor St. 2" HP for remainder	29 2 22 53 2,885	200 85 3,085 \$536,170	70 \$717,149	\$106,250 \$642,420 \$823,399 28% \$285.41	1 \$620,115 Paving Belmont St, Silver St, and Taylor St.	9/30/2019 12/16/201	9 CASBUILT 2,638 85	0 2,753 25 1 6 17	3 0 0	52 \$0 \$:	13,539 \$204,479 \$418,017	\$293,385 \$246,485	\$539,870 29% \$9,453	\$134,039	\$283,932 \$112,447 \$396,378	\$249,794	336,933 \$642,420	\$667,812	4%	\$823,399	,. ,	ices complete. 2020 for finish paving.		
8.84 401811-37603 MNC 532-660 Cilley Rd, S Taylor St, and Villa St	Taylor St S Cypress St CI	LP 6", 4" 1912, 1922, 1946, 1947, 1958		9 0 16 25 1,615	1,615 \$344,653	53 \$455,548	\$52,015 \$396,668 \$507,563 28% \$314.28	8 \$374,410 Paving Cilley Rd.	4/29/2019 8/26/2019	O CASBUILT 1,756 0		11 0 0		28,374 \$51,845 \$680,219		\$845,940 24% \$20,173		\$760,889 \$18,197 \$779,086	\$161,495	,	\$841,714	112%	\$507,563	\$1,063,803 110% work.		due to extra excavation at tie-ins, test holes, ledge t	roughout project, and Sature
26 7.84 401911-37626 MNC 1-203 Mammoth Rd, and Cilley Rd 27 6.84 401911-37616 MNC 85-160 Lexington Ave, N Adams St, Ray St, and Madeline	Massabesic St Cilley Rd CI e Rd Elm St Union St CI		2" HP on Cilley Rd. 6" LP on Mammoth Rd. I, 19518" LP, 6" LP, and 4" LP as shown on project drawings.	9 3 46 58 3,565 12 1 19 32 3,110			\$123,750 \$758,210 \$969,427 28% \$271.93 \$109,500 \$764,357 \$979,392 28% \$314.92		5/23/2019 6/24/2019 9/23/2019 1/8/2020	CASBUILT 1,294 0 CASBUILT 2,200 60	0 1,494 4 0 1 4 585 2,140 7 1 1 0	16 0 1 12 1 0		22,348 \$111,440 \$333,788 79,708 \$85,852 \$765,560		\$384,872 15% \$0 \$903,226 18% \$28,671	\$114,268 \$42,841	\$222,518 \$48,085 \$270,604 \$790,080 \$41,634 \$831,715	\$0 \$250,321	\$0 \$758,210 337,721 \$764,357	\$333,788 \$1,015,881	-56% 33%	\$969,427 \$979,392	\$384,872 -60% Cilley Rd main \$1,240,948 27% Main and serv	and services and finish paving complete. Mammot ices complete for approximately 50% of original pr	κα main and services deferred to 2020. oject scope. Finish paving for 2019 completed w	k is scheduled for 2020.
5.74 401911-37614 GOF 486-564 Rockland Ave and Mast Rd		LP, LP to 60 8", 6", 4" 1928, 1929	2" HP on Rockland Ave. 8" LP on Mast Rd and 4" LP for remainder.	7 2 15 24 1,840	1 1 1		\$0 \$361,229 \$482,536 34% \$262.25			O CASBUILT 2,015 0	0 2,425 5 3 0 11	5 0 0		59,348 \$69,384 \$728,732	\$621,126 \$84,340	\$705,466 -3% \$0	\$54,304	\$621,126 \$30,036 \$651,162	\$193,718	261,519 \$361,229	\$922,450	155%	\$482,536	S966.986 100%	ices complete. 2020 for finish paving. Variance is d rface utilities caused new line to have to be relocat		ocate existing cast iron main. cavation at tie-in locations.
26 5.48 401911-37624 MNC 555-609 S Beech St	Mystic Purchase St CI	LP 4" 1930		4 0 1 5 400	400 \$99,836	6 \$132,972	\$16,750 \$116,586 \$149,722 28% \$374.31	1 \$126,023 Paving S Beech St.	8/13/2019 8/30/2019	CASBUILT 473 0	30 473 3 0 1 0	1 1 0	6 \$0 \$:					\$79,290 \$15,258 \$94,548			\$171,704	47%	\$149,722	\$169,016 13% Main and serv	ices complete. 2020 for finish paving. Variance is di	Je to ledge throughout project, extra excavation	tie-ins, shoring box requirement
o Central Division Totals				162 35 229 426 25,695 Total Miles 4.87	0 3,080 925 28,775 \$5,389,009 0.00 0.58 0.18 5.45	05 \$7,171,434	\$867,840 \$6,256,845 \$8,039,274 29% \$330.36	5 \$5,823,964		21,062 781 Mileage 3.99 0.15	5,318 23,361 118 12 65 58 1.01 4.42	116 5 2	2 376 \$28,655 \$5	144,926 \$1,392,453 \$6,537,379	\$5,914,690 \$1,622,585	\$7,537,275 15% \$331,122	\$997,190	\$5,583,568 \$625,395 \$6,208,963	\$1,285,434 \$,733,955 \$6,256,845	\$7,822,813 Average Loaded Co	25% ost/Foot Central	\$8,039,274 \$313	\$9,271,230 15% \$440			
32 SOUTHERN DIVISION 33 32.78 401911-37631 NAS 1-17 Warren St	Bridge St End CI	LP 16" 1909	12" LP.	6 0 0 6 315	315 \$205,558	58 \$268,189	\$0 \$205,558 \$268,189 30% \$851.35	9 \$268,189 City reconstructing Warren St.	4/29/2019 9/17/2019	9 CASBUILT 331 0	0 331 0 0 0 0	0 0 0	0 \$0 \$:	81,427 \$0 \$181,427	\$176,160 \$0	\$176,160 -3% \$0	\$0	\$176,160 \$0 \$176,159.68	\$0	\$0 \$205,558	\$181,427	-12%	\$268,189	\$176,160 -34% Project 100% of	complete and City contribution paid.		
24.49 401823-37644 NAS 78-147 W Pearl St, E Pearl St, and Main St	High St W Pearl St CI	LP 6", 8" 1906, 1909, 1930	12" LP on Main St and 6" LP on W Pearl St	4 2 1 7 870			\$0 \$262,253 \$346,298 32% \$398.04		s. 5/5/2019 8/14/2019		305 504 0 0 0 0	2 0 0	2 \$0 \$1	62,152 \$47,017 \$709,168	\$794,981 \$75,183	\$870,165 23% \$3,306	\$75,183	\$791,675 \$0 \$791,675.21	\$0	\$0 \$262,253	\$709,168	170%	\$346,298		complete. Variance is due to this being a night proj lities encountered which impacted the installation	ject due to high volume of road traffic. T $\&$ M utiliz of the new line.	.d for this project due to the #
16.40 401823-37609 NAS 1-10 Chandler St, and Salvail Ct	Calal St End BS	LP 2" 1928, 1945		2 0 1 3 150			\$0 \$54,236 \$72,988 35% \$486.59		5/7/2019 6/12/2019		150 181 3 0 0 0					\$137,411 43% \$18,972		\$103,027 \$11,326 \$114,353.65			\$127,388	135%	\$72,988		ices complete. Chandler St and Canal St final paved eet was generated, time permit restrictions, Saturd	d. Salvail Ct final paving remaining. Variance is due day work, and update to 2020 Contractor bid.	o project being re-estimated a
36 14.48 401811-37621 NAS 84-136 Ledge St, First through Seventh Sts, Havana St, an	nd Man First St Seventh St CI, BS	LP 4", 2" 1900, 1915, 1916, 1920, 1922, 1925	5, 1924 12" LP, 8" LP, 4" LP, and 2" HP as shown on project drawings.	41 3 8 52 2,975	80 2,975 \$968,435	\$1,291,239	\$0 \$968,435 \$1,291,239 33% \$434.03	3 \$1,180,711 Leak prone CI combined with large BS area.																Project 100% o	deferred to 2020.		
12.20 401911-37629 NAS 1-74 Allds St and Merrill St	Main St Mckean St CI, BS	LP 6", 2" 1919, 1924	8" LP on Allds St, 4" LP on Merrill St.	10 2 5 17 2,665	140 2,665 \$812,722	. ,,	\$0 \$812,722 \$1,083,424 33% \$406.54			O CASBUILT 3,162 475		6 0 0	16 \$0 \$1	36,076 \$60,958 \$997,034	\$995,796 \$84,174	\$1,079,970 8% \$151,162	\$44,865	\$844,635 \$39,309 \$883,943.42	\$229,957	310,124 \$812,722	\$1,226,992	51%	\$1,083,424			ng. City contribution paid for final paving for balanc ncrete located below asphalt in locations, and time	
12.18 401911-37602 HUD 1-55 Central St, Library St, Connell St, and Campbell Ave		LP 4", 2" 1908, 1928, 1929, 1954	6" LP on Central St. 2" HP on Connell St. Abandon Library St and tie over	15 5 12 32 3,080	865 230 3,945 \$653,811	\$874,067	\$0 \$653,811 \$874,067 34% \$283.75	9 \$693,527 Open grade 3 leak. Eliminates remaining HUD CIBS main.	6/17/2019 11/14/201	9 CASBUILT 3,066 460	1265 3,471 9 5 8 7	12 0 3	\$ 44 \$0 \$!	32,500 \$212,564 \$745,063	\$608,479 \$255,993	\$864,473 16% \$105,004	\$195,176	\$503,475 \$60,818 \$564,292.82	\$45,715	59,430 \$653,811	\$790,778	21%	\$874,067	\$923,902 6% Paving 50% co winter.	mplete. Library and Central St City contribution in	spring of 2020. Variance is due to Town requiring	grind on sections of project pri
9.24 401911-37630 NAS 1-35 Hunt St, Acton St, and Pine St	Lake St Acton St CI, BS	LP 4", 2" 1912, 1921, 1922, 1936, 1947, 1950,), 19548" LP on Pine St. 6" LP on Hunt St and Acton St.	31 4 15 50 2,615			\$0 \$828,510 \$1,105,835 33% \$422.88	8 \$902,448 Large BS pipe neighborhood with leak history.	6/26/2019 9/12/2019	O CASBUILT 2,477 250	2,477 2,227 30 0 5 0	12 0 0	9 47 \$0 \$1	41,445 \$145,393 \$986,837	\$1,050,141 \$217,777	\$1,267,918 28% \$132,840	\$67,766	\$917,301 \$150,011 \$1,067,312.24	\$0	\$0 \$828,510	\$986,837	19%	\$1,105,835	\$1,267,918 15% Project 100% oins, and pole h	complete. Update to Contractor contract in 2019. Volding.	ariance is due to existing asphalt being greater th	ın estimate, extra excavation
40 8.21 401911-37628 NAS 171-185 Concord St, and Damon Ave 41 7.84 431911-37601 KNE 33-399 Marlboro St, and Adams St		LP 6", 4", 2" 1930, 1954	6" LP on Concord St, 4" LP for remainder. 8" LP on Marlboro St and Martin St. 4" LP for remainder.	2 2 2 6 900 1 0 22 23 4710			\$0 \$262,321 \$349,410 33% \$388.23 \$0 \$594.216 \$773.623 30% \$164.25		3/4/2019 7/11/2019	CASBUILT 5.236 840	3720 4,416 1 0 4 0	14 6 1	26 \$0 \$1	74,813 \$92,765 \$767,578	\$679.576 \$96.562	\$776.138 1% \$149.348	\$92,516	\$530,229 \$4,046 \$534,274,25	\$0	\$0 \$594.216	\$767,578	29%	\$773,623	Project 100% o		nate	
7.64 401811-37624 NAS 1-32 Farley St, Reservoir St, Wellington St, Stark St, and F	Hall Ave Manchester St Wellington St CI, BS		3, 19292" HP.	30 5 20 55 3,715	30 3,715 \$940,303	3 \$1,264,428	\$0 \$594,216 \$773,623 30% \$164.25 \$0 \$940,303 \$1,264,428 34% \$340.36	6 \$1,113,085 City paving Reservoir St. Large neighborhood LP to P	P 10/1/2019 12/24/201	9 CASBUILT 1,799 0	3720 4,416 1 0 4 0 0 1,799 11 1 8 1		33 \$0 \$:	49,962 \$105,757 \$355,719	\$300,812 \$143,217	\$444,029 25% \$0	\$82,654	\$300,812 \$60,564 \$361,375.35	\$312,414	\$0 \$594,216 421,179 \$940,303	\$668,133	-29%				. 2019 completed main and services to be final pay	/ed in 2020.
6.74 401823-37605 NAS 52-75 Lake St, and Rice Ave	Pine St Ash St CI	LP 6", 2" 1901, 1906, 1914	CILID on Lake Chand All LD on Disc Ave	3 2 4 9 735	725 6252 220	00 6335 547	\$0 \$252,339 \$335,517 33% \$456.49	0 6370 000 60			100 925 2 0 2 0		. 11 \$0 \$:		\$264,966 \$49,511	\$314,477 -30% \$3,918	\$28,473	\$261,048 \$21,038 \$282,086.03		\$0 \$252,339	\$446,585	77%	\$335,517		complete. Variance is due to update to Contractors stimate, City permit time restrictions, and concrete	s contract in summer of 2019. Variance is also due to below existing asphalt.	.o actual paving thickness bei
43 6.50 401911-37604 HUD 9-15 Nottingham St	Highland St Buswell St BS	60 1.25" 1959						9 \$77,513 HP bare steel main. Eliminates remaining HUD CIBS main.	4/2/2019 4/24/2019	CASBUILT 310 0	310 310 3 0 1 0	1 0 0	5 \$0 \$	53,523 \$11,846 \$75,370	\$69,950 \$21,243	\$91,192 21% \$3,360	\$7,962	\$66,589 \$13,281 \$79,870.20	\$0	\$0 \$64,117	\$75,370	18%	\$86,126	\$91,192 6% Project 100% of	complete.		
44 45 5.98 401723-37607 NAS 1-29 Prescott St 5.60 401911-37603 HUD 1-22 Second St, Ferry St, School St, and Oakwood St	Bruce St Baldwin St CI Ferry St Oakwood St CL BS	LP 4" 1923, 1926 LP to 60 6", 4", 2" 1949, 1950, 1952, 1960	4" LP.	9 5 3 17 650 15 1 4 20 1360	60 650 \$232,796 0 585 265 1.945 \$358.661	96 \$312,258	\$0 \$232,796 \$312,258 34% \$480.40 \$0 \$358,661 \$481,624 34% \$354.14	0 \$253,904 Poor pavement condition. 4 \$381,138 Open Grade 3 leak. Eliminates remaining HUD CIBS	8/30/2019 10/9/2019 10/1/2019 11/5/2019	O CASBUILT 701 40	0 661 8 0 4 0 0 1,100 4 2 0 2	3 0 0	15 \$0 \$ 0 8 \$0 \$	33,425 \$50,697 \$134,122 15,154 \$26,259 \$241,414	\$70,990 \$37,959 \$261,125 \$36,643	\$108,949 -19% \$4,051 \$297,768 23% \$0	\$21,959 \$7,767	\$66,939 \$16,000 \$82,938.77 \$261,125 \$28,876 \$290,001.09			\$265,576 \$261,620	14% -27%		\$286,268 -8% Main and serv \$324,959 -33% Due to weather	ices complete. 2020 for finish paving. er, project scope cut in half. Second St and Oakwoo	od St mains and services slated for 2020. Paving ap	proximately 25% complete (Fe
46 3.50 40311-37603 HUD 1-41 Baker St, Highland Ave, Leslie St, and Daw St		LP to 60 4" 1908, 1926, 1947, 1956	2" HP and abandon Highland St and tie over services.	15 5 9 29 2,735	100 1,075 1,460 3,910 \$446,987	37 \$600,195	\$0 \$446,987 \$600,195 34% \$211.71	main. 1 \$271,002 Eliminates remaining HUD CIBS main.	4/17/2019 8/8/2019	CASBUILT 2.850 1560	0 2.365 10 5 5 4	8 0 3	35 S0 S	29.042 \$131.158 \$460.199	\$345.538 \$180.126	\$525,665 14% \$189,137	\$121.957	\$156,402 \$58,169 \$214,570,46	\$0	\$0 \$446.987	\$460.199	3%	\$600.195	\$525.665 -12% Project 100% of	complete.		
48 South Division Totals 49					100 2,805 2,700 30,715 \$6,937,263 0.02 0.53 0.51 5.82	9,245,224	\$0 \$6,937,263 \$9,245,224 33% \$395.73	3 \$7,491,903		21,952 3,665 Mileage 4.16 0.69	8,472 20,977 88 13 40 14 1.60 3.97	73 7 11	1 246 0 \$5	244,057 \$952,731 \$6,196,788	\$5,740,513 \$1,213,801	\$6,954,314 12% \$761,097	\$750,364	\$4,979,416 \$463,437 \$5,442,853	\$770,864 \$,037,134 \$5,706,507	\$6,967,652 Average Loaded C	22% ost/Foot South	\$7,604,574 \$316	\$7,991,449 5% \$364			
FY2020 CIBS Program Totals				398 95 448 941 66,695	140 8,255 4,045 75,090 \$14,619,16	168 \$19,454,221	\$1,005,055 \$15,624,223 \$20,459,276 31% \$313.09	9 \$15,780,402		55,718 5,101	16,755 58,757 239 27 153 94	230 13 20	0 776 \$186,752 \$12	675,689 \$2,897,748 \$15,573,437	\$14,505,361 \$3,530,167 \$	\$18,035,529 16% \$1,255,977	\$2,276,056	\$13,249,384 \$1,254,112 \$14,503,496	\$2,473,805 \$3	,333,858 \$14,242,503	\$18,047,243	27%	\$18,619,731	\$21,369,387 15%			
51					0.03 1.56 0.77 14.22					Mileage 10.55 0.97											Average Loaded C			\$384			
Estimated FY2019 Carry Over Costs				<u> </u>																		l l					-
Work Order # Town Code Street	From To Materia	System Pressure Exst Diameter (Inches) YOI			Project Total Cost Estima (Direct, Exc	nate Cost Estimate xcl. (Loaded, Excl.	Estimated Total Cost Degradation Estimate Estimate Fee (Direct) (Loaded)	Estimated Recoverable Cost Comments					Degradation Fees	Actual Total Direct Cost	Actu	ual Total Loaded Cost		Total Recoverab	le Estimated Degr	adation Fee Estimated Direct Cost	t Actual Total Direct Cost	Direct Variance % Esti	timated Loaded Cost	Actual Loaded Loaded		Project Comments	
54 Cooe 401711-37601 CCD 66-89 S State St		(PSIG) LP 10" 1892			Date Poorage Degradatio		Fee (Direct) (Loaded) \$17,761 \$23,536	\$23,536					\$0	\$31,530		\$32,103		\$32,103			\$31,530	78%	\$23,536		omplete. Length of actual paving greater than esti	imate which resulted in length interval bid pricing i	ncreasing between estimate to
55 401711-37601 CCD 56-693 State St 401711-37607 CCD 59-105 Pleasant St & Pine St		LP to 60 3", 4", 6", 8" 1892, 1893, 1934			12/17/2018 3,835 \$75,484			\$101,903	+				\$0	\$1,530		\$230,506				\$0 \$17,761	\$164,404			actual.	omplete. Sidewalk restoration, wider mill than act	timate due to trench location, and had to dig out a	and mill in spots due to ledge
56 404044 27C20 CCD 42 42 Deeldeeldeel Ct	Broadway Fellows St CI	LP 4" 8.6" 1931, 1956 LP 4" 1.25" 1911, 1926, 1927, 1928, 1935, 1938, 1938			6/20/2018 850 \$24,592	2 \$33,200	\$24,592 \$33,200	\$33,200					\$0	\$35,718		\$32,193		\$32,193	\$0	\$0 \$24,592	\$35,718	45%	\$33,200	\$32,193 -3% Paving 100% C	omplete		грэгэ аас то неоде.
401811-37628 CCD 13-42 NCCongnimm St NF ruit St, Minot St, Kens 401811-37602 CCD Rd Rd Rd Rd Rd Rd Rd R	Westbourne Rd Rum Hill Rd CI School St End CI	LP 4", 1.25" 1911, 1926, 1927, 1928, 1935, 1938, 1948, 1953 1948, 1953 1896, 1906, 1925, 1926	29		12/18/2018 7,435 \$103,229	29 \$139,359	\$103,229 \$139,359	\$139,359					\$0 \$0	\$63,651		\$99,760 \$40,906		\$99,760 \$40,906	\$0 \$0	\$0 \$103,229 \$0 \$30,372	\$63,651 \$42,824	-38% 41%	\$139,359 \$41,002	\$99,760 -28% Paving 100% C \$40,906 0% Paving 100% C	omplete. City to pave streets within project scope.		
	Pine St Ash St CI Lowell St Pearl St CI	LP 4", 1.25" 1948, 1953 LP 4" 1896, 1906, 1925, 1926 LP 4" & 8" 1906, 1921, 1922, 1924 LP 6" 1894			12/19/2018 1,540 \$97,349	9 \$131,422	\$57,400 \$154,749 \$188,822	\$41,002 \$188,822 \$143,399					\$0	\$42,824 \$263,172 \$169,855		\$285,297		\$285,297 \$168,021	\$57,400 \$37,885	\$0 \$154,749 \$0 \$116,044	\$263,172 \$169,855	70% 46%	\$188,822 \$143,399	\$285,297 51% Paving 100% C \$168,021 17% Paving 100% C	omplete. Have not been billed for degradation fee omplete. Update to Contractor contract in 2019.	e. Variance is due to update to Contractor contract e.	n 2019.
52 401811-37611 MNC 550-615 Pine St, Harrison St, and Brook St 401811-37605 MNC 139-229 Young St, Taylor St, Norris St, and Ainsworth Av		LP 6" 1894 LP 12", 10", 8", 4" 1912, 1925, 1927 LP 4" 1894, 1899, 1919, 1926			7/27/2018 1.965 \$38.087	7 \$51.418	\$74.165 \$112.252 \$125.583	\$224,634 \$125,583					\$0 \$0	\$169,855 \$51,330 \$16,853		\$168,021 \$106,335 \$16,808		\$106,335 \$16.808	\$78,400 \$74,165	\$0 \$186,721 \$0 \$112,252	\$51,330 \$16,853	-73% -85%	\$224,634 \$125,583	\$106,335 -53% Paving 100% C \$16,808 -87% Paving 100% C	omplete. Have not been billed for degradation fee omplete. Have not been billed for degradation fee		
63 401811-37607 MNC 686-1091 Valley St, Cypress St, and Taylor St 65 401811-37613 MNC 677-759 Pine St, N Adams St, and Bay St		LP 6", 4", 3" 1895, 1901, 1905, 1906, 1945 LP 10", 8", 4" 1900, 1928, 1930			12/27/2018 4,080 \$225,748 9/18/2018 1 605 \$50.670	18 \$304,760 8 \$68.416	\$134,900 \$360,648 \$439,660 \$26,040 \$76,718 \$94,456	\$439,660 \$94,456 Project cut short, 12" LP not installed on Pine St.					\$0	\$370,213 \$73,194		\$408,531 \$89,283		\$408,531	\$134,900	\$0 \$360,648 \$0 \$76,718	\$370,213				omplete. Have not been billed for degradation fee omplete. Have not been billed for degradation fee		
401811-37608 MNC 266-507 Concord St. Lincoln St. Malvern St. and Belmont	t St Maple St Beacon St CI	LP 6", 4" 1892, 1896, 1912, 1925, 1933, 1934			10/25/2018 3,715 \$237,779	79 \$321,001	\$141,600 \$379,379 \$462,601	\$462,601 \$462,601					\$0	\$170,438		\$153,658		\$153,658	\$141,600	\$0 \$379,379	\$170,438				omplete. Nave not been blilled for degradation ree		
66 401811-37606 MNC 1001-1202 Hayward St, Prout Ave, Riley Ave, Sunnyside S Knowlton St S93-703 Maple St, Myrtle St, Prospect St, and Brook St	St, Jewett St Mammoth Rd CI	LP to 60 6", 4" 1900, 1909, 1911, 1913, 1923, 1928	3		12/19/2018 4.555 \$171.775	75 \$231.896	\$77.400 \$249.175 \$309.296	\$309,296					\$0	\$241,860		\$214,562		\$214.562	\$77.400	\$0 \$249.175	\$241,860	-3%			omplete. Have not been billed for degradation fee		
401811-37610 MNC 593-703 Maple St, Myrtle St, Prospect St, and Brook St 401711-37618 NAS 69-85 Lock St, Luder St, Lessard St, and Aetna Ct 401811-37618 NAS 1-132 Allds St, Crown St, and Proctor St	Orange St Blodget St Cl Tolles St Chandler St Cl, BS F Hollic St Cliffold St Cl 20	LP 6", 4" 1894, 1899, 1928 LP 6", 4", 2" 1911, 1915, 1919, 1925 LP 6" 4" ," 1900, 1912, 1916, 1919, 1924, 1940			8/31/2018 2,615 5114,270 12/31/2018 1,430 5297,069 Ongoing 5,705 \$574,793	70 \$154,265 59 \$401,043 63 \$775 970	\$60,350 \$174,620 \$214,615 \$297,069 \$401,043 \$574,703 \$775,070	\$214,615 \$401,043 \$775,970 Project cut short, only northern half installed.						\$36,128 \$381,777 \$611,554		\$35,752 \$386,569 \$652,340		\$35,752 \$386,569	\$60,350 \$0 \$0	\$0 \$174,620 \$0 \$297,069 \$0 \$574,793	\$36,128 \$381,777 \$611 554	-79% 29%	\$214,615 \$401,043 \$775,970	\$35,752 -83% Paving 100% C \$386,569 -4% Paving 100% C \$652,340 -16% Paving 100% C	omplete. Have not been billed for degradation fee omplete.		
	Lake St W Otterson St CI, BS	LP 6", 4", 2" 1911, 1915, 1919, 1925 LP 6", 4", 2" 1900, 1912, 1916, 1919, 1924, 1940 LP 4", 2" 1907, 1912, 1919, 1920, 1923, 1926, 1930	3,		12/18/2018 1,495 \$245,681	\$331,669	\$245,681 \$331,669	\$331,669					\$0	\$404,040		\$394 978		\$394,978	\$0	\$0 \$245,681	\$404,040	64%	\$331,669	\$394,978 19% Paving 100% C	omplete. Update to Contractor contract in 2019.		-
1 2 401711-37640 NAS 1-21 Fowell Ave, Lawndale Ave, and Park Ave 3 401811-37619 NAS 171-185 Concord St, Bell St, and Damon Ave	Main St End CI, BS	LP 4", 2" 1923, 1924, 1927, 1930			8/16/2018 1,845 \$270,171 Ongoing 2,460 \$189,988	71 \$364,730 38 \$256,483	\$270,171 \$364,730 \$189,988 \$256,483	\$364,730 \$256,483 Project cut short, only Bell St pipe installed.					\$0 \$0	\$250,903 \$208,726		\$231,353 \$261,272		\$231,353 \$261,272	\$0 \$0			-7% 10%	\$364,730 \$256,483	\$231,353 -37% Paving 100% C \$261,272 2% Paving 100% C	omplete. City Contribution. omplete.		
401811-3/623 NAS 126-226 Pine St, Loveweii St, and Paim St	Actor St Gilman St Ci, BS	1952,1957),		12/7/2018 3,190 \$290,842	12 \$392,637	\$290,842 \$392,637	\$392,637 Project cut short, 8" LP on Pine St south of Ross St n installed.	ot				\$0	\$386,869		\$361,597		\$361,597	\$0	\$0 \$290,842	\$386,869	33%	\$392,637	\$361,597 -8% Paving 100% C	omplete.		
75 401811-37629 NAS 65-125 Concord St FY2019 Carry Over Totals	Hills Ferry Rd Hall Ave CI	LP 6" 1930			7/30/2018 4,195 \$18,627	7 \$25,147		\$25,147 \$5,089,745						\$27,754 \$4,002,791		\$18,304 \$4,220,128				\$0 \$18,627 \$0 \$3,948,915	\$27,754		\$25,147	\$18,304 -27% Paving 100% C	omplete.		
76					\$3,260,77	. 5 94,401,605	באילבסחלבב הדבוחהבורה הבדוחברי	4,,00,,10					ŞU	34,002,73T			timated Costs for the FY2018-19.	Deferred Projects Removed \$930,987	3000,140	÷> \$5,548,915	y-1,002,791	1/0	93,003,143	-1170			
77																,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		verable Costs (5% Cap Only) \$15,434,483									
Grand Total							\$25,549,021	\$20,870,147		55,718 5,101	16,755 58,757 239 27 153 94	230 13 20	0 776 \$186,752 \$12	.675,689 \$2,897,748 \$19,576,229		\$22,255,657 \$1,255,977		Fotal Possible Recoverable Costs \$18,723,624	\$3,161,945 \$3	,333,858 \$18,191,418	\$22,050,034	21%	\$23,709,475	\$25,589,515 8%			
81																	Total Estimated FY2020	Costs Including Degradation \$18,619,	731								
2 3																FY2020 Total Recove	rable + 5% FY2019 Carryover - Ha Total Recoverable Costs Di	ndy Whitman Adjusted Base \$14,885,i regarding 5% Carryover Cap \$18,723,	260 624								
4 85																	Total Unr	ecoverable Costs in Program \$3,532,0 er Costs in Excess of 5% Cap \$3,289,	033								