

MEMORANDUM

Date: May 13, 2020

To: Board of Directors
Cherry Hills North Metropolitan District

From: Chris Purrington, P.E.

Re: 2020 Sanitary Sewer Maintenance Program

2020 SANITARY SEWER MAINTENANCE

The District's Sanitary Sewer Maintenance Program consists of a two (2) year jet cleaning and video cycle. The District is divided into two (2) basins, the East Basin (6,792 linear feet) and the West Basin (5,198 linear feet). During even numbered years, the East Basin is jet cleaned and the West Basin is inspected by video. During odd numbered years, the West Basin is jet cleaned and the East Basin is inspected by video.

The 2020 Sanitary Sewer Maintenance Program was completed by Dale's Environmental Services (DES) and reviewed by our office. The following is a summary of the 2020 Program.

1. Jet Cleaning Program

The 2020 Jet Cleaning Program consisted of cleaning the East Basin. DES completed the cleaning on April 17, 2020.

2. Video Program

The 2020 Video Program consisted of video inspection of the West Basin. DES completed the video inspection on March 25, 2020. Structural defects with corresponding severity are identified on the attached Pipe Defects Map.

Summary

Below is a summary of the 2020 Video Program:

- **Root Removal**

Root removal was performed on 330 LF of main line in the West Basin. The pipe segments listed below are the lines that DES cleared of problematic roots.

Upstream MH	Downstream MH	Street Name	Pipe Length (LF)
MH 2.1	MH 2	S. Hudson Way	330

DES charged \$0.90 /LF (\$0.40 /LF for root cut, \$0.50 /LF for inspection), for a total of \$297.00.

- **Roots in Service Lines**

Five (5) service connections with roots were identified. We recommend that letters be provided, including photos of the blocked service lines, as a courtesy to the homeowner. The addresses with root blockage are listed below.

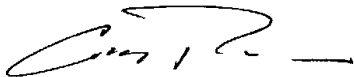
Service Line Addresses
4040 S Dahlia Street
3941 Nassau Circle West
3940 Nassau Circle West
4941 Nassau Circle West
5091 Nassau Circle West

- **Recommended Pipe Repairs**

Based on our review of the video inspections, there are no pipe defects that warrant repair. As a result, we do not recommend any repair project for 2020.

Please do not hesitate to contact me with any questions or if you need additional information.

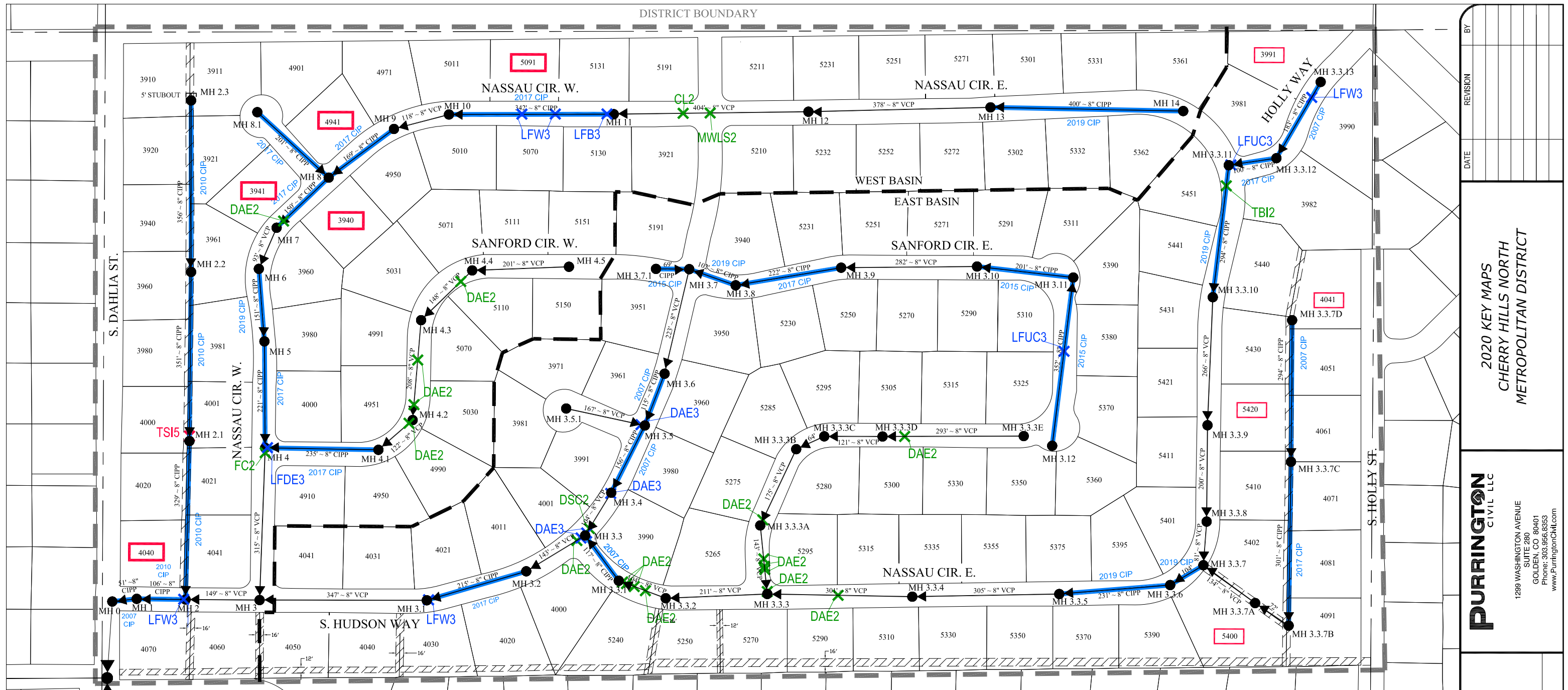
Sincerely,
PURRINGTON CIVIL, LLC



Chris Purrington, P.E.

Attachments:

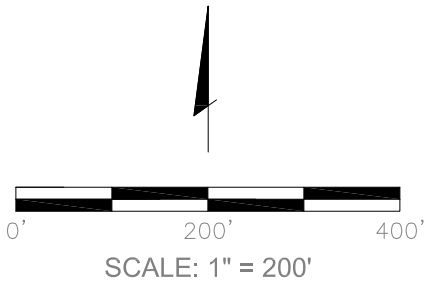
- Pipe Defects & Root Maps



PIPE DEFECTS LEGEND

CODE	CODE	CODE
BPVV = BROKEN PIPE VOID VISIBLE	FS = FRACTURE SPIRAL	STRUCTURAL GRADE
CH(#) = CRACK HINGE (# OF CRACKS)	JOL = JOINT OFFSET LARGE	1 = MINOR (NOT SHOWN)
CC = CRACK CIRCUMFERENTIAL	LFBL = LINING FAILURE BLISTERED	2 = MINOR TO MODERATE
CL = CRACK LONGITUDINAL	LFCCS = " CONNECTION CUT SHIFTED	3 = MODERATE
CM = CRACK MULTIPLE	LFDD = LINING FAILURE DETACHED	4 = SIGNIFICANT
CS = CRACK SPIRAL	LFDE = LINING FAILURE DEFECTIVE END	5 = MOST SIGNIFICANT
DH = DEFORMED HORIZONTALLY	LFUC = LINING FAILURE UNDERCUT CONNECTION	
DAGS = DEPOSITS ATTACHED ENCRUSTATION	LFWR = LINING FAILURE WRINKLED	
DSF = DEPOSITS SETTLED FINE	MWLS = MISC WATER LEVEL SAG	
DSC = DEPOSITS SETTLED COMPACTED	MWM = MISC WATER MARK	
ISSR = INTRUDING SEALING RING	OPM = OBSTACLE PIPE MATERIAL	
FC = FRACTURE CIRCUMFERENTIAL	TBC = TAP BREAK-IN CAPPED	
FL = FRACTURE LONGITUDINAL	TBI = TAP BREAK-IN INTRUDING	
FM = FRACTURE MULTIPLE	TSI = TAP SADDLE INTRUDING	

STRUCTURAL GRADE	CIPP =
1 = MINOR (NOT SHOWN)	ROOTS IN SERVICE =
2 = MINOR TO MODERATE	
3 = MODERATE	
4 = SIGNIFICANT	
5 = MOST SIGNIFICANT	



CHERRY HILLS NORTH METROPOLITAN DISTRICT

REVISION	BY
DATE	

2020 KEY MAPS
CHERRY HILLS NORTH
METROPOLITAN DISTRICT

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DEFECTS MAP
SCALE: AS NOTED