WATER DISTRIBUTION SYSTEM LEAD MAPPING SUBMITTAL

PREPARED FOR:

MOUNT CARMEL HEALTH SYSTEM
SISTER ROSE THOMAS HALL
PUBLIC WATER SYSTEM ID: OH2570722
793 WEST STATE STREET
COLUMBUS, OH 43222

PREPARED BY:

HULL & ASSOCIATES, INC. 6397 EMERALD PARKWAY, SUITE 200 DUBLIN, OHIO 43016

MARCH 2017

MOUNT CARMEL HEALTH SYSTEM SISTER ROSE THOMAS HALL

743 West State Street, Columbus, Franklin County, Ohio PWS #OH2570722

In June 2016, House Bill (HB) 512 was passed to enact section 6109.121 of the Ohio Revised Code to establish requirements governing lead and copper testing for community and non-transient non-community public water systems and to revise law governing lead contamination from plumbing and fixtures. The law requires community water systems to identify and map areas of their distribution systems that are known or likely to contain lead service lines. These systems are also required to identify and provide a description of the characteristics of buildings served by the system that may contain lead solder, fixtures or pipes. Single building community water systems and non-transient non-community water systems are required to map areas of the system that have solder, fixtures and pipes containing lead.

In accordance with HB 512, Mount Carmel Health System, specifically Sister Rose Thomas Hall, PWS #OH2570722 worked with their engineering consultant to produce a water system map for only their tempered water (defined as public water system per OEPA). The tempered water system map includes assumed locations of the exterior (Figure 1) and interior (Figures 2a-2m) tempered water distribution system with color coded lines that indicate type and locations of main line and other available system features. Additionally, each floor is shaded grey due to the fact of unknown or no information available for the building.

EPA guidance provides the following: Based on amendments to the Safe Drinking Water Act (SDWA) and Ohio Plumbing Code, the age of a building or the age of a re-plumbing are indicators of the plumbing materials. Buildings in Ohio built prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials with greater than 8% lead and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998. In addition, buildings built and plumbing materials manufactured after 2014 were required to have less than 0.25% lead by weight and have the lowest risk for contributing lead to drinking water. It should be noted however that, although prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective.

Due to the age of the building (portion built in 1905), multiple renovations over the years (1905 - 2016), and the unavailability and knowledge of plumbing plans, the size, location and type of piping being unknown in The Sister Rose Thomas Hall Building.

Additionally, with the OEPA guidance in mind, it is unknown as to whether any piping, internal or external, contains components that exceed the 8% lead. Let it be known, however, that this entire building will be out of service by 2019 as services are being moved to another location within the State.

Finally, Mount Carmel Health System, performs semi-annual Tier 2 testing for lead and copper (most recently on June 16, 2016) which is submitted to the OEPA. The ten separate testing locations within the Sister Rose Thomas Hall building are shown and labeled within Figures 2a - 2m. See attached Drinking Water Lead and Copper Monitoring Reports (EPA 5105 form) for the past year.

Mt. Carmel West - Sister Rose Building: Lead and Copper Sample Locations as depicted within Figures 2a, 2b, 2c.

- Test Location #1- 2 East Maintenance Hand Sink 19306
- Test Location #2- 3 South Next to Emergency Exit Hand Sink 19305
- Test Location #3- 3 South Women's RR Sink (by Chillers) 19304
- Test Location #4- 3 South Men's RR Right Sink (by Chillers) 19303
- Test Location #5- 3 South Men's RR Left Sink (by Chillers) 19302
- Test Location #6- 1 South Men's RR (1s52t) Sink 19301
- Test Location #7- 1 South Boiler Room Hand Sink 19300
- Test Location #8- 1 South Boiler Room RR(1p47t) Sink 19299
- Test Location #9- 1 South Women's RR (1p75t) Right Sink 19298
- Test Location #10- 1 South Women's RR (1p75t) Left Sink 19297

*All Sites are Tier 2 as there are no Tier 1 sites available in the Sister Rose Building.





EPA 5105

DRINKING WATER LEAD AND COPPER MONITORING REPORT

PWS Name:	PWSID:	County:	Population:
Mount Carnel West Hospital	OH2570722	Franklin	300
PWS Address: 793 West State St. Columbus, OH 43222	Phone: (440) -829 -3820	Sampling begin date:	Sampling end date:
Monitoring Schedule: 図 "6	month" or "optional"	☐ "annual" or "trie	nnial"

Return this completed form by mail or fax to the appropriate Ohio EPA district office (receipt being no later than 10 days after the end of the monitoring period). Retain a copy of this report in your files with supporting documentation for a minimum of 12 years.

Lead and Copper Tap Monitoring (First-Draw Samples)

a.	Number of sampling sites required:	10	Number of samples analyzed:
	If the number of samples analyzed is water system, then explain why:	less than the	standard number of sampling sites required for your
b.	Were all sampling sites tier 1 sites? () Yes ⋈No		n: Due to age of building, No Tier 1 were available.
C.	Were 50% of your lead samples from sites with Lead Service Lines? () Yes ⋈ No		ce lines are not lead.
d.	Have any of your sampling sites changed since the last monitoring period? () Yes (<) No	If yes, state	which sites and explain:
е.	90 th % Lead Level (mg/L):	A	90 th % Copper Level (mg/L): O . 44 (6

When the 90th % Lead Level is 0.0155 mg/L (or higher) or the 90th % Copper Level is 1.350 mg/L (or higher), contact your Ohio EPA district office within three business days for additional requirements.

I certify that each first-draw lead and copper sample collected for our water system was one liter in volume, was taken from a kitchen or bathroom cold-water tap or a drinking fountain, and, to the best of my knowledge, had stood motionless in the service line and in the interior plumbing of the sampling site for at least six hours. I further certify that each tap sample collected by residents was taken after the water system informed them of proper sampling procedures.

7-7-16 Printed Name

7-7-16 Printed Name

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EPA 5105 Appendix

DRINKING WATER LEAD AND COPPER MONITORING REPORT

Submit with Form EPA 5105			Page of pages
PWS Name:	PWSID:	Analytical Laboratory Name:	Laboratory Certification No.:
Mount Carnel West Hosp: Fal	OH 2570722	PACE Analytical	VAP - #CLØØ32 OHIO EPADANKIM Water -#836

List samples sequentially by Laboratory Sample Number

Date of Sample	Time Sample Taken	Laboratory Sample Number	Address of Sample Site Example: 234 S Main St Town OH 40000	Tap Type* and Location Example: B 2 nd floor	Structure Type SFR, MFR or BLDG	Interior Plumbing Material Pb, CuPb>82, CuPb<83, or other	Service Line Material Pb, Cu, or other	Tier 1, 2, 3, or other	Lead Concn (ug/L)	Copper Concn (ug/L)
4/14/16	14:43	16F1360-01	793 West Stute St. (olumbus, 04 43222	R 15 FI.	BLDG	CUP5 483	other**	2	BOL	0.000233
6/16/16	14:42	16F1360-02		R 15 FI.	() () () () () () () () () ()			2	3.80	0.000207
6/16/16	14:15	16F1366-03	2 1 35 6	R 1st FL	3 B 5			2	BDL	6.0006994
6/16/16	14:45	16F136B-64	1 2 4 5 1	B 12 FI	草 神 名	10.8 THE TOTAL T		2	BDL	0.000195
6/14/16	14:37	16F1368-65	0314431 9	R3rd Fl.	8 6 N		100	2	10.0	0.000389
6/14/16	14:27	16F1344-06		R 3 5 FL	直 報 美	2 1 2	日本	2	5,05	0.000341
4/16/16	14:27	14F1366-67		R3rd FL				2	8.31	6.000 510
6/16/16	14:23	14F1360-68	1 图 4 号 6 号 4	3 3ª FI.	E 24 2			2	7.63	0.000446
6/14/16		14F1344-00		B 2 nd F1.	V		1 8 6	2	BDL	0.000063
6/16/16	14:34	16F1360-10		R 15 F1.	2 2 V 5		V	2	BDL	0.00022

*Tap type codes: B – bathroom cold water tap; D – drinking fountain; K – kitchen sink cold water tap; R – restroom sink cold water tap; O – other (with prior Ohio EPA acceptance)

Note: 1 mg/L = 1000 ug/L

** Service lines are believed to be plastic.





EPA 5105

DRINKING WATER LEAD AND COPPER MONITORING REPORT

PWS Name: Mount Carmel West Hospital	PWSID: OH2570722	County: Franklin	Population: 300
PWS Address: 793 West State Street Columbus, OH 43222	Phone: (440) - 829 - 3820	Sampling begin date: 12/14/15	Sampling end date: 12/28/15
Monitoring Schedule: ₩ "6	month" or "optional"	□ "annual" or "trie	nnial"

Return this completed form to Ohio EPA, DDAGW-Central Office, PO Box 1049, Columbus, OH 43216-1049 or Fax to (614) 644-2909 (receipt being no later than 10 days after the end of the monitoring period). Retain a copy of this report in your files with supporting documentation for a minimum of 12 years.

Lead and Copper Tap Monitoring (First-Draw Samples)

a.	Number of sampling sites required:	10	Number of samples analyzed:
	If the number of samples analyzed is water system, then explain why:	less than the s	tandard number of sampling sites required for your
b.	Were all sampling sites tier 1 sites? () Yes ⟨✓⟩No	If no, explain: Due to ase a available.	flueldum, no Tier 1 sites were
C.	Were 50% of your lead samples from sites with Lead Service Lines? () Yes (Ⅺ No	If no, explain: Service Im	ves are not lead.
d.	Have any of your sampling sites changed since the last monitoring period? () Yes 🕍 No	If yes, state w	hich sites and explain:
e.	90th % Lead Level (mg/L): 〇. 〇〇ろうつ		90th % Copper Level (mg/L): 0.305

When the 90th % Lead Level is 0.0155 mg/L (or higher) or the 90th % Copper Level is 1.350 mg/L (or higher), contact your Ohio EPA district office within three business days for additional requirements.

I certify that each first-draw lead and copper sample collected for our water system was one liter in volume, was taken from a kitchen or bathroom cold-water tap or a drinking fountain, and, to the best of my knowledge, had stood motionless in the service line and in the interior plumbing of the sampling site for at least six hours. I further certify that each tap sample collected by residents was taken after the water system informed them of proper sampling procedures.

Signature of Operator of Record Date Printed Name

For Ohio EPA use	Received Date:	Monitoring Period:	Approved:	: ()Yes ()No
only:			1	





EPA 5105 Appendix

DRINKING WATER LEAD AND COPPER MONITORING REPORT

Submit with Form EPA 5105			Page/_ of/_ pages
PWS Name:	PWSID:	Analytical Laboratory Name:	Laboratory Certification No.: NELAP/NELAC - #0H130
Mount Carnel West Hospital	OH 2570722	Pace Analytical	VAP - # CL 6032 Onw EPA Drinking Water - # 836

List samples sequentially by Laboratory Sample Number

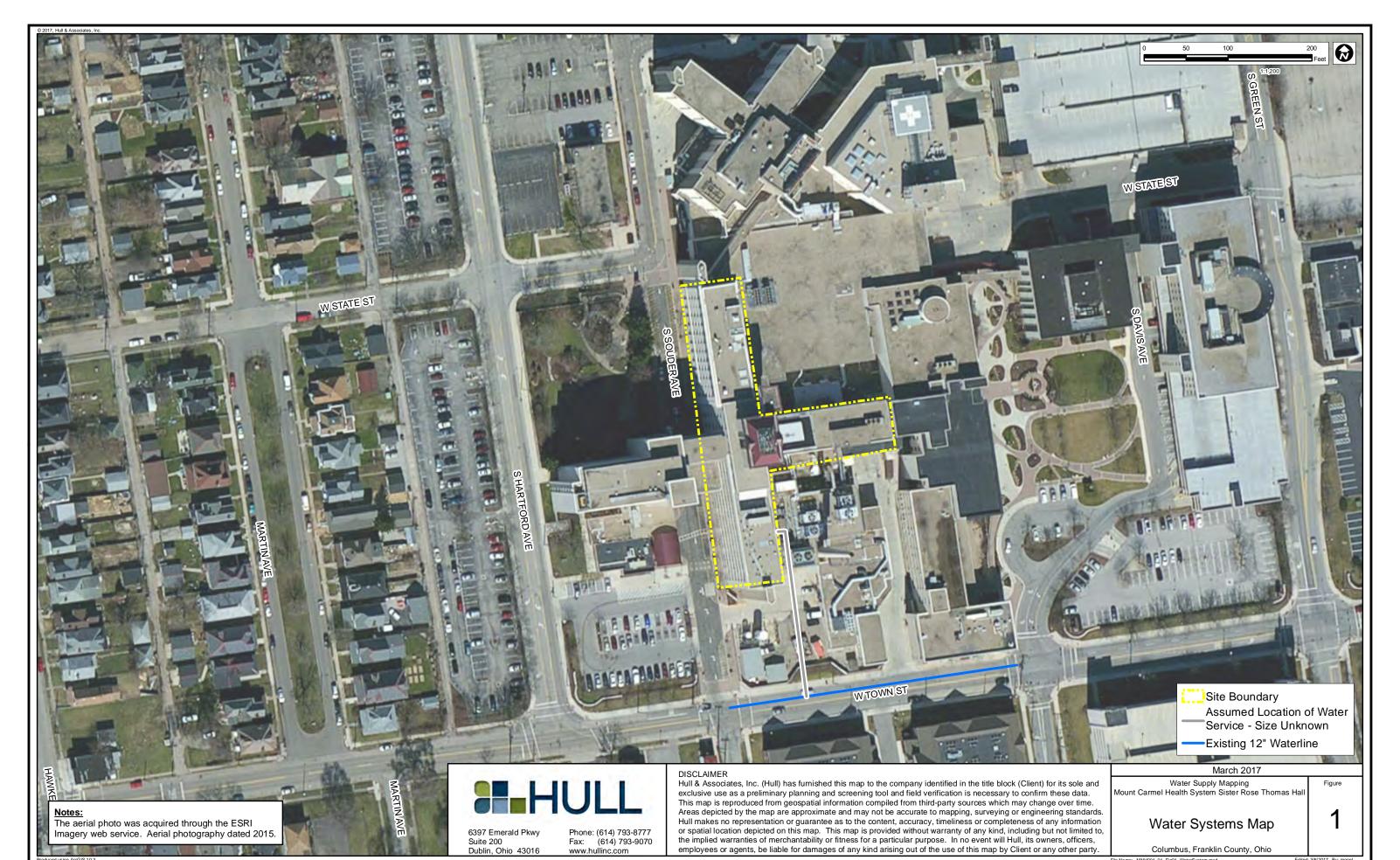
Date of Sample	Time Sample Taken	Laboratory Sample Number	Address of Sample Site Example: 234 S Main St Town OH 40000	Tap Type* and Location Example: B 2 nd floor	Structure Type SFR, MFR or BLDG	Interior Plumbing Material Pb, CuPb>82, CuPb<83, or other	Service Line Material Pb, Cu, or other	Tier 1, 2, 3, or other	Lead Concn (ug/L)	Copper Concn (ug/L)
12/1-1/15	4:12am	15LØ859-Ø1	793 west State St.	R 1 st floor	BLDG	CuP6483	other ***	2	BOL	000270
12/14/15		15 LØ 859 - 62		R 1st floor	BLDG	CuPb 283	oper	2	3.90	000305
12/14/15		15L\$859-\$3		R 16+ Floor	BLDG	(Pb 483	other	2	BDL	060125
12/14/15		15L \$854 - \$4		B 1st Floor	BLDG	Co P6 483	other	2	BOL	000248
12/14/15		15L\$859-\$6	A CONTRACTOR OF THE CONTRACTOR	A 3rd floor	BLDG	LU75483	other	2	BDL	000234
12/14/15	4:18 am	156859-07		R 3rd Floor	BLDG	CUP5 < 83	other	2	BDL	000259
12/14/15		156 959 - 68		R 3ret floor	BLDG	(UP6683	oper	2	BDL	,000 295
12/14/15		1510859-89		B 3rd floor	BLDG	CuP6683	when	2	BDL	HH 000.
12/14/15		15L \$859-18		B 2nd floor	BLDG	CuPb283	other	2	BDL	000142
12/28/15	9:45 am	1511393-41	V	R 1st floor	BLDG	Cv75683	other	2	9.07	000427

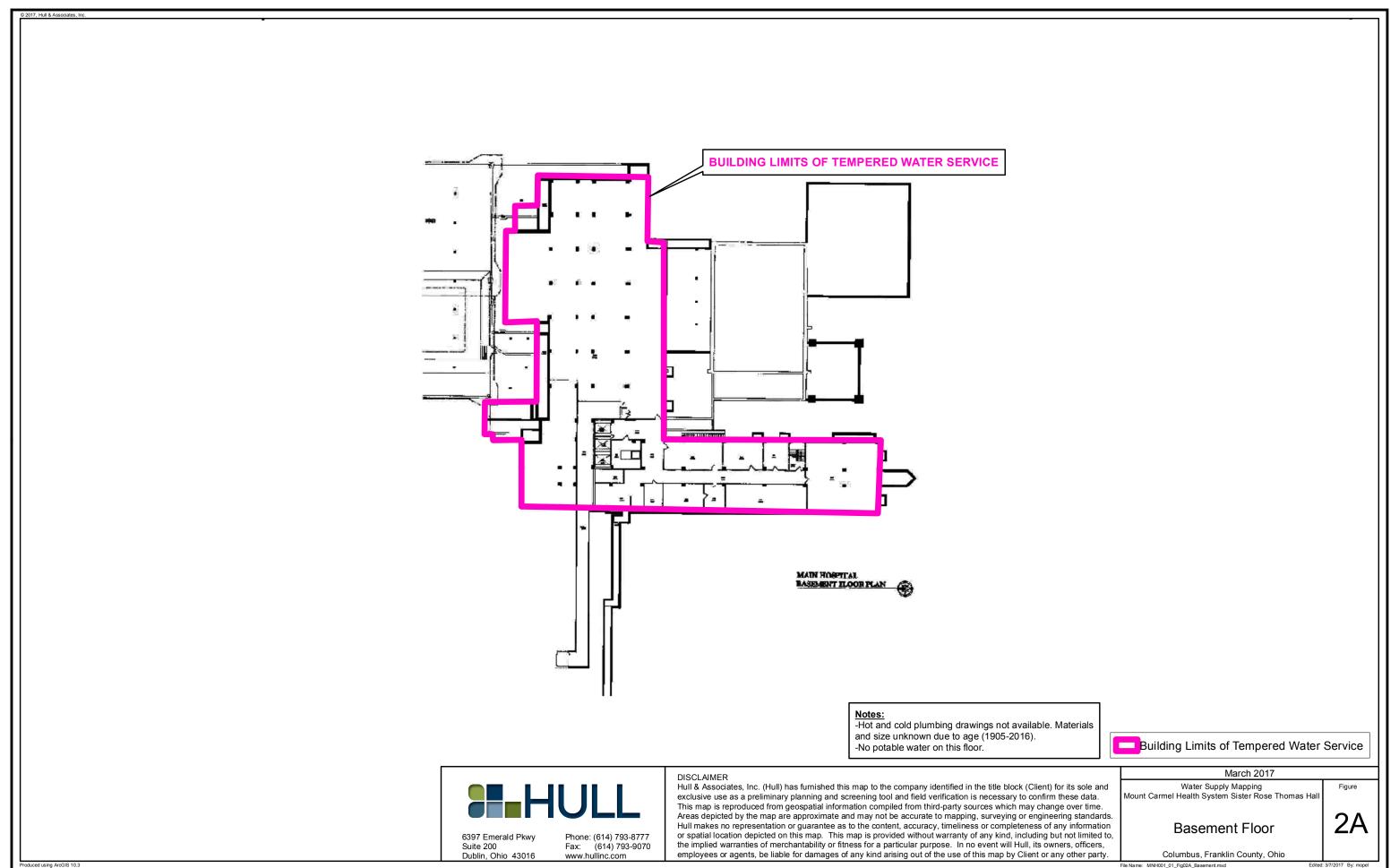
*Tap type codes: B - bathroom cold water tap; D - drinking fountain; K - kitchen sink cold water tap; R - restroom sink cold water tap; O - other (with prior Ohio EPA acceptance)

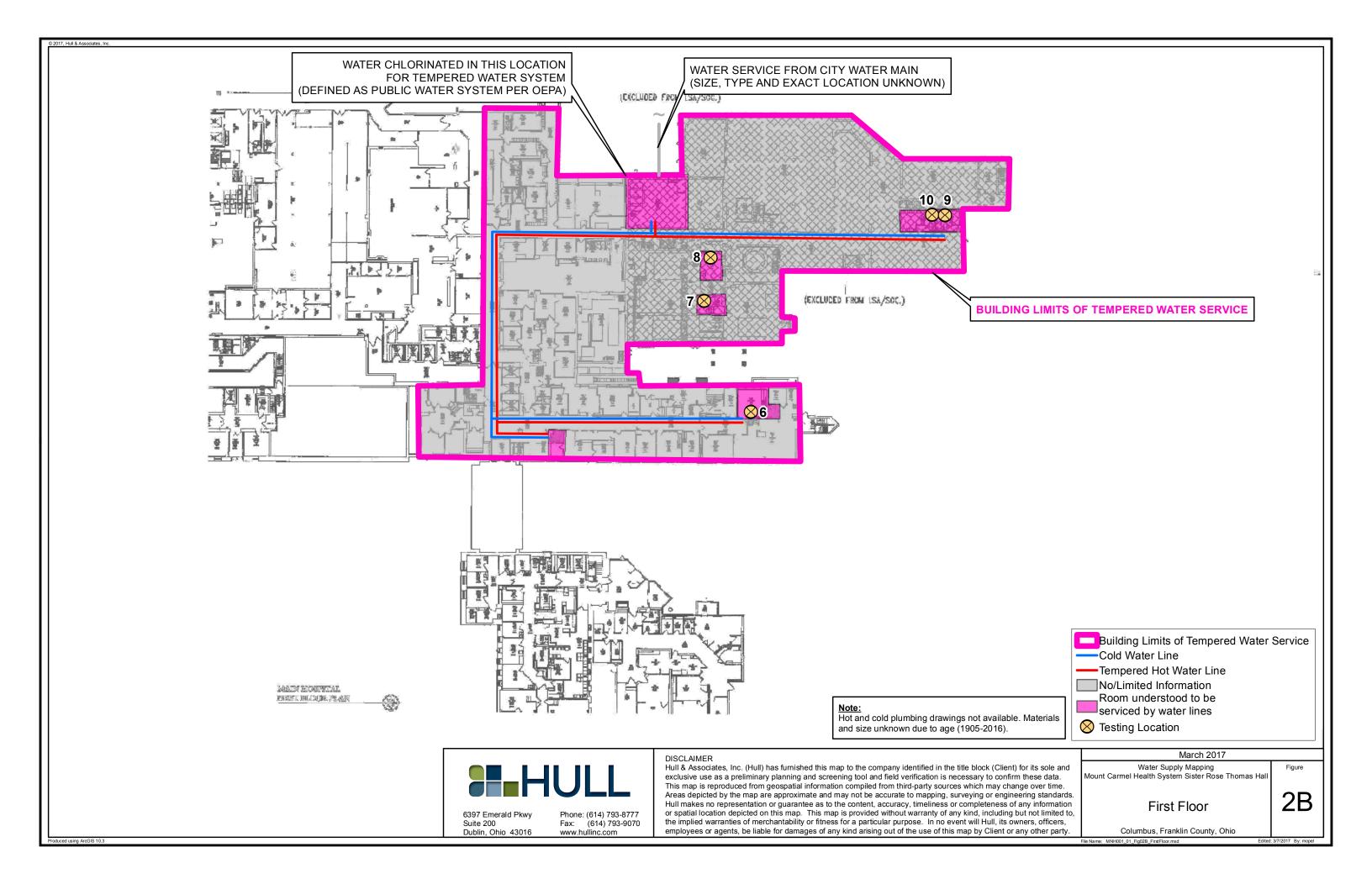
Note: 1 mg/L = 1000 ug/L

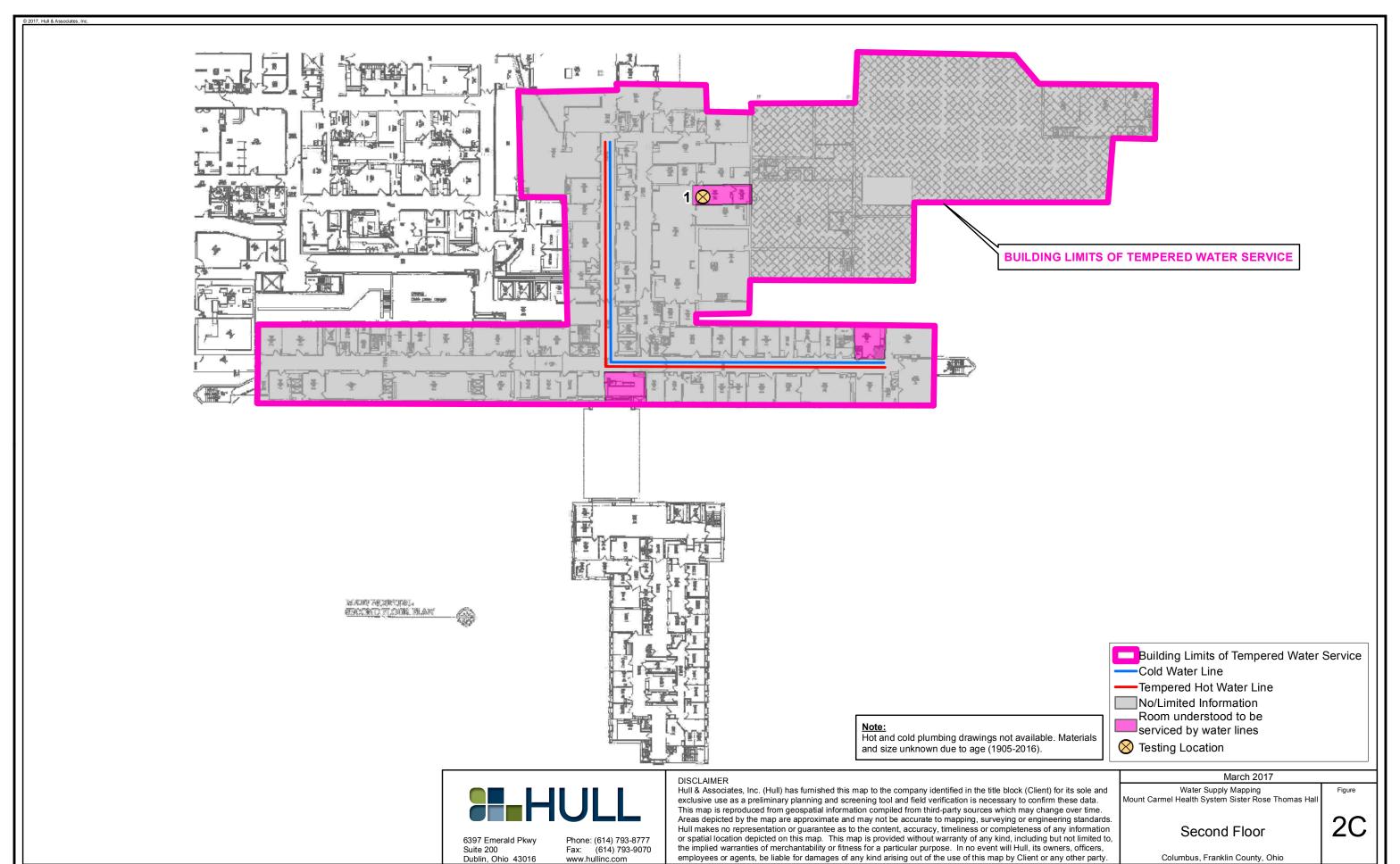
** Initial value was elevated but had interference in analysis, sample was immediately retested as seen here.

*** Service lines are believed to be plastic.



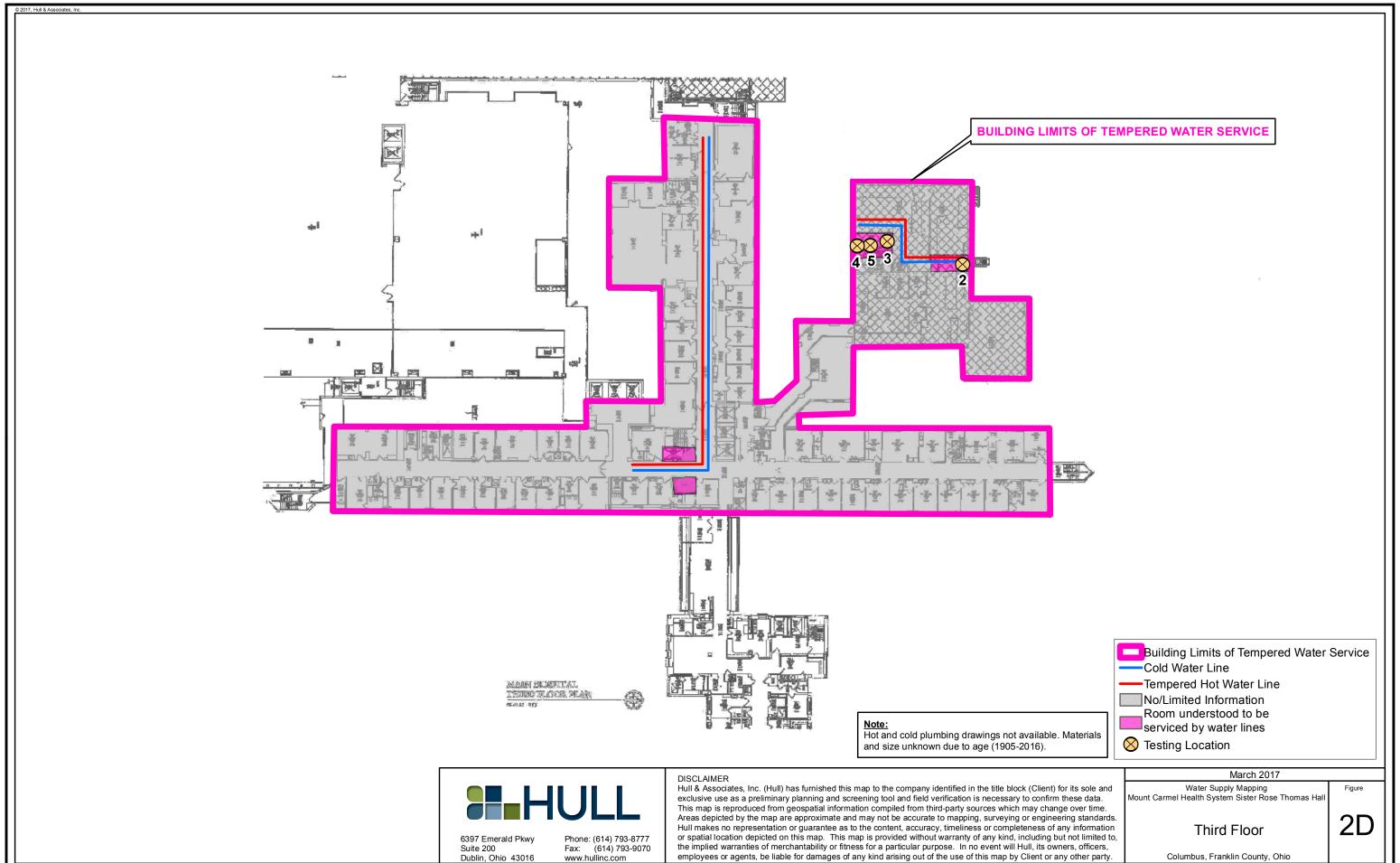


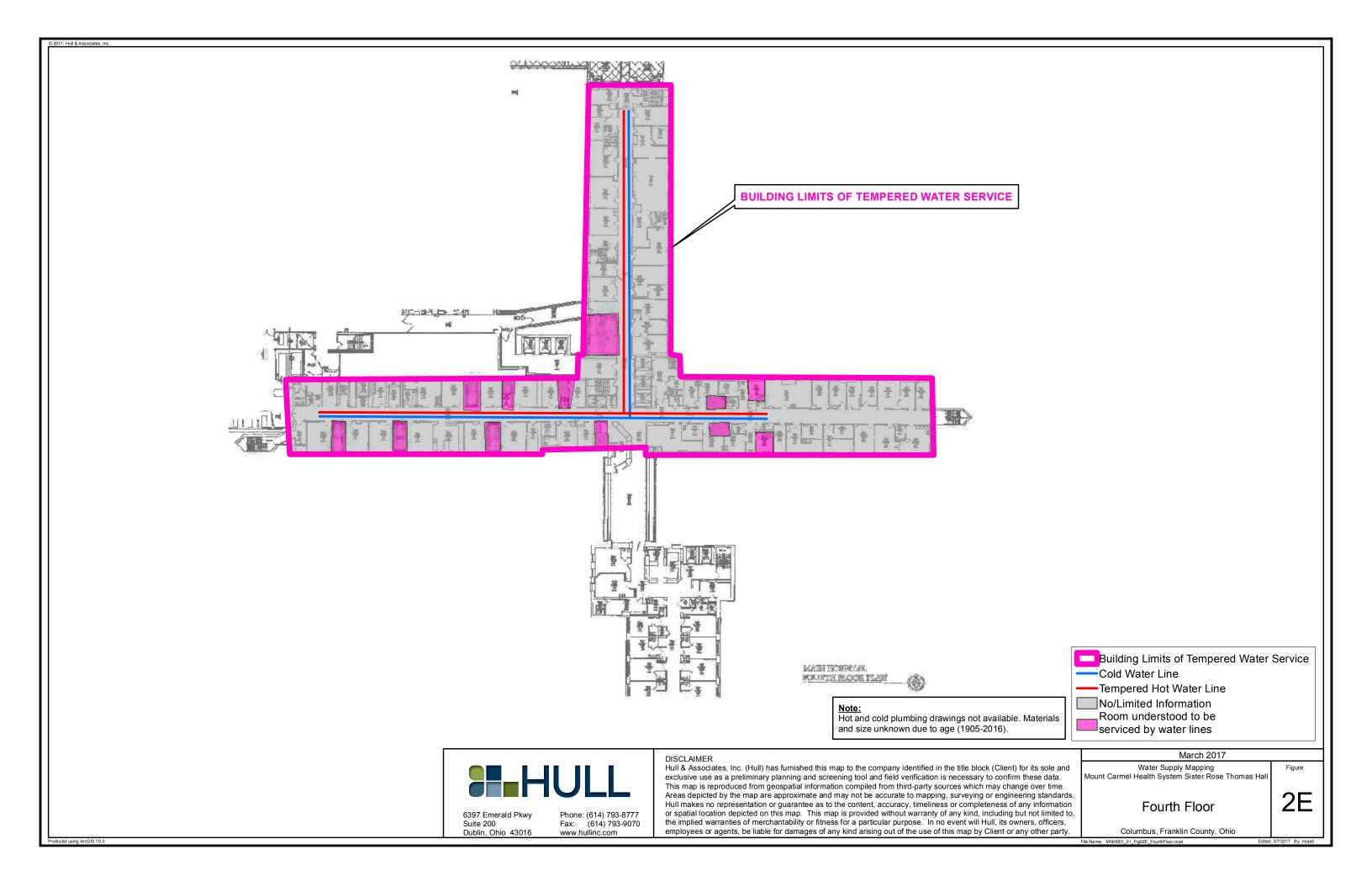


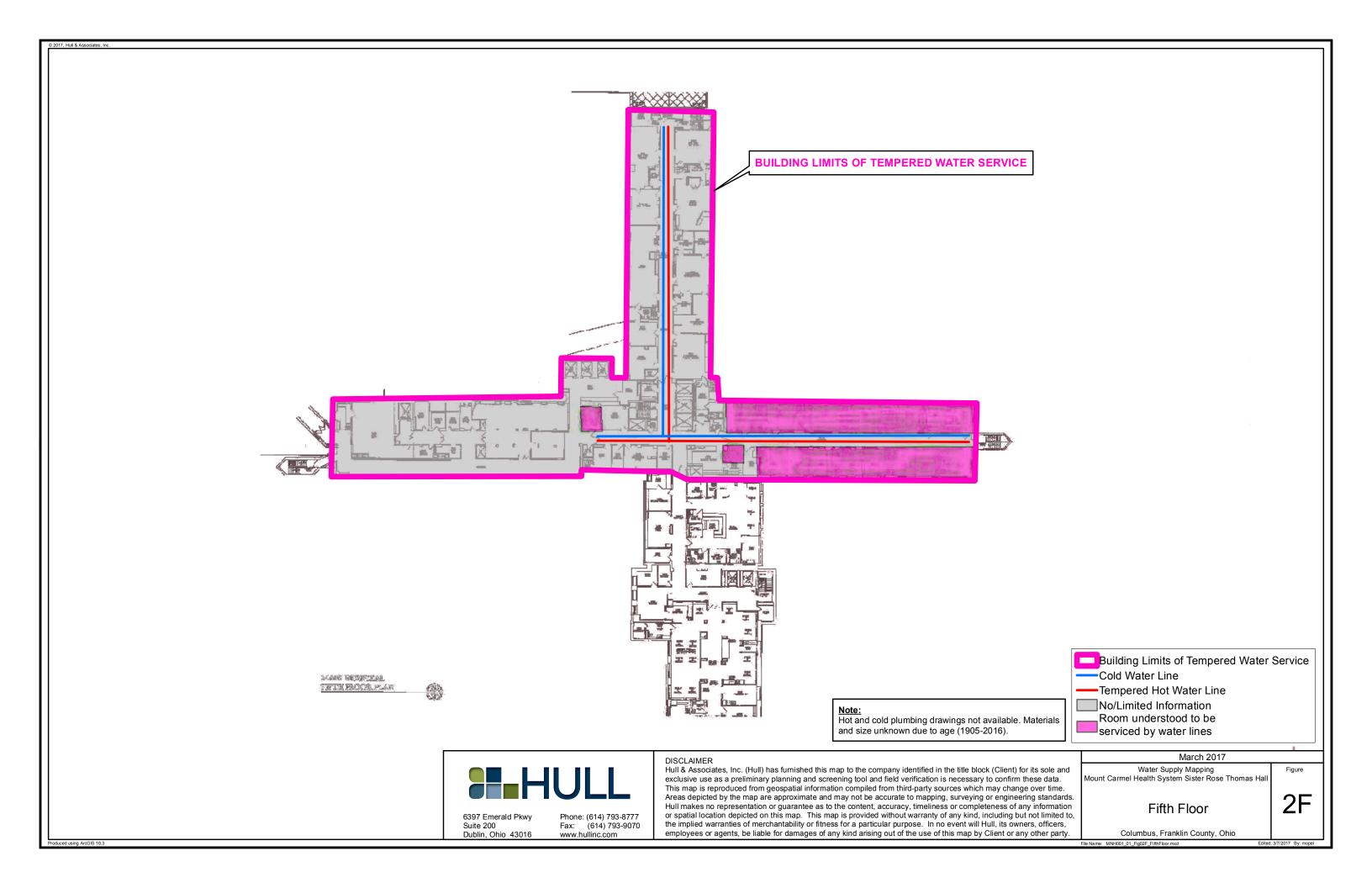


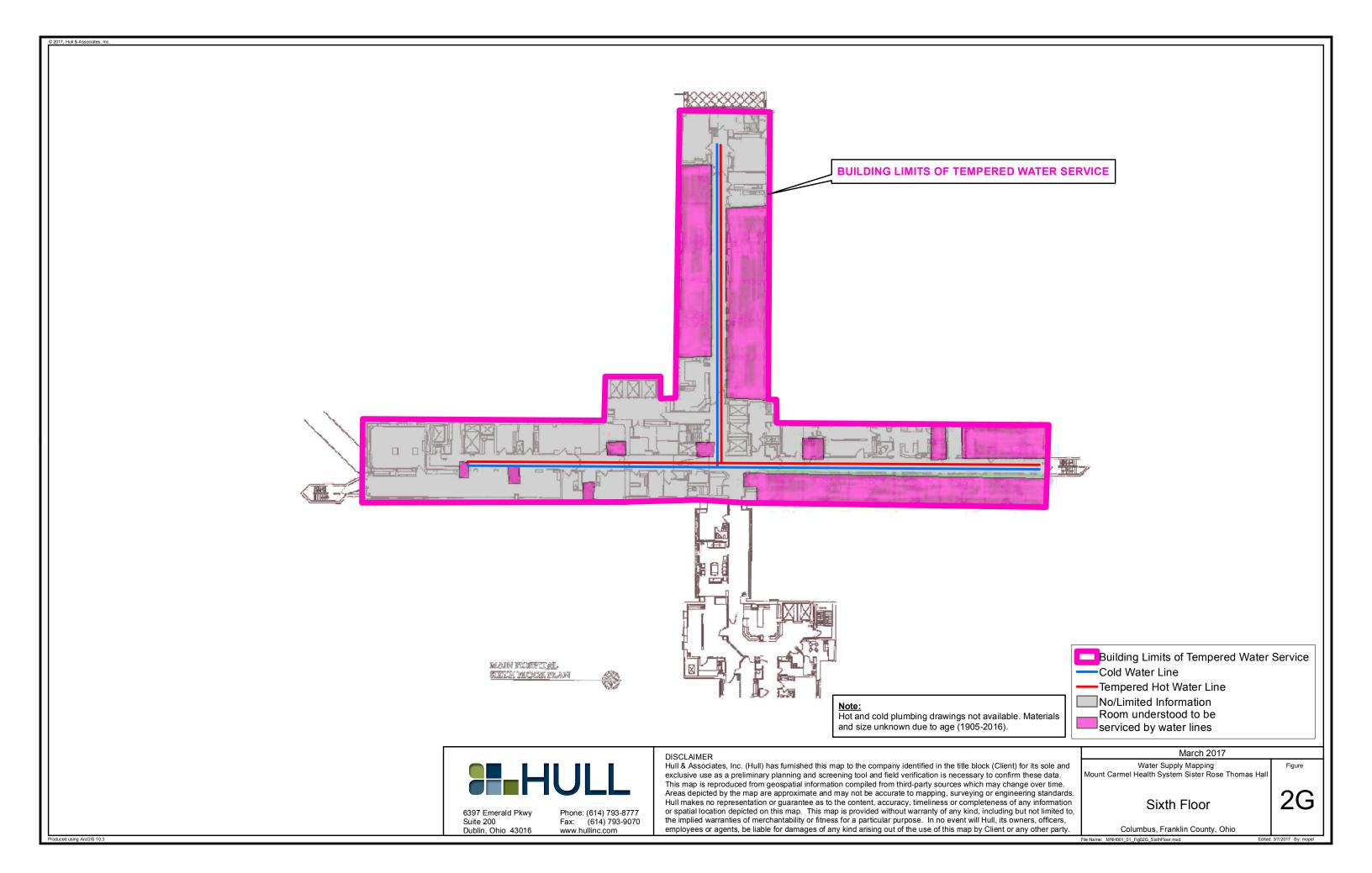
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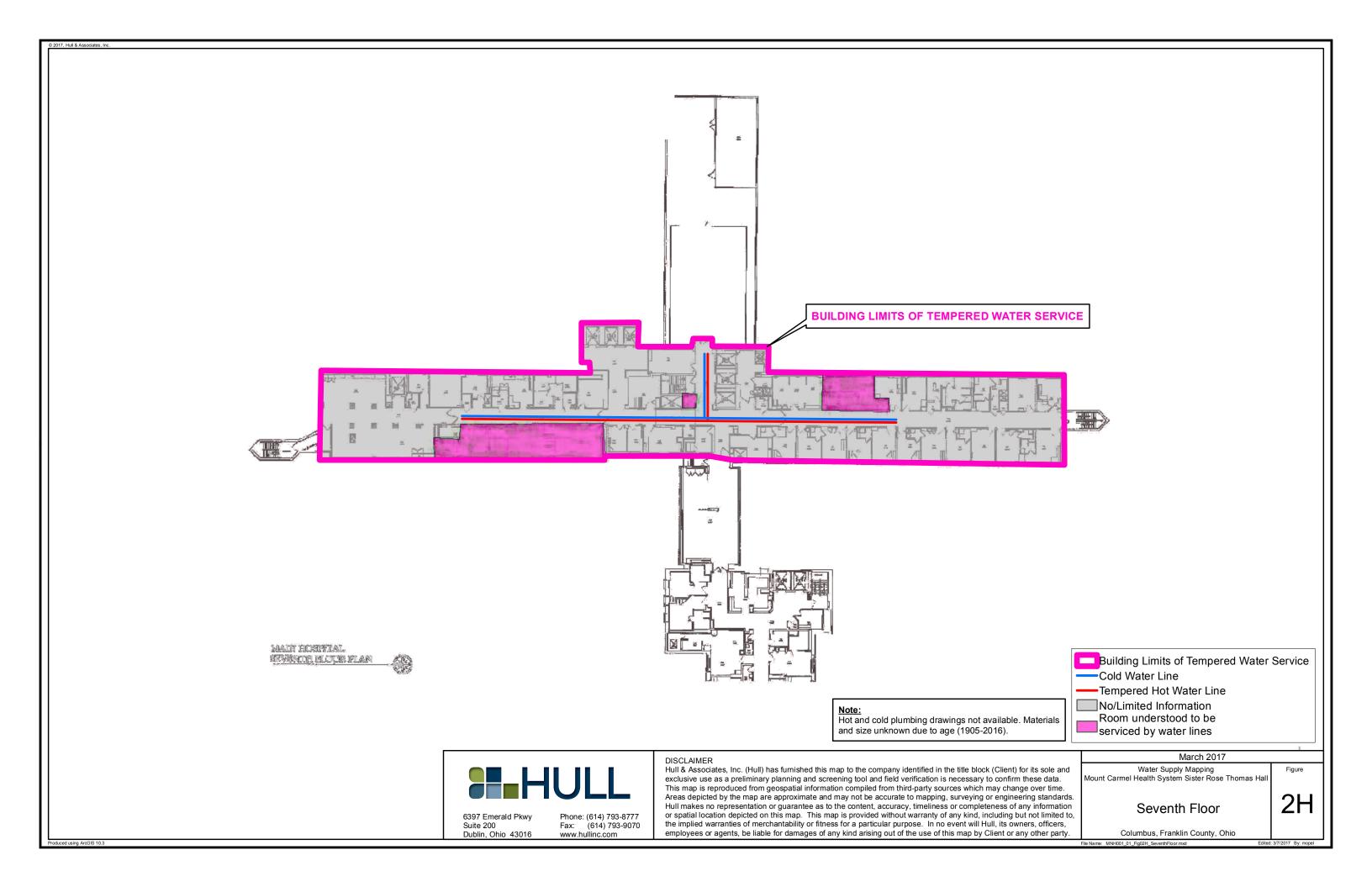
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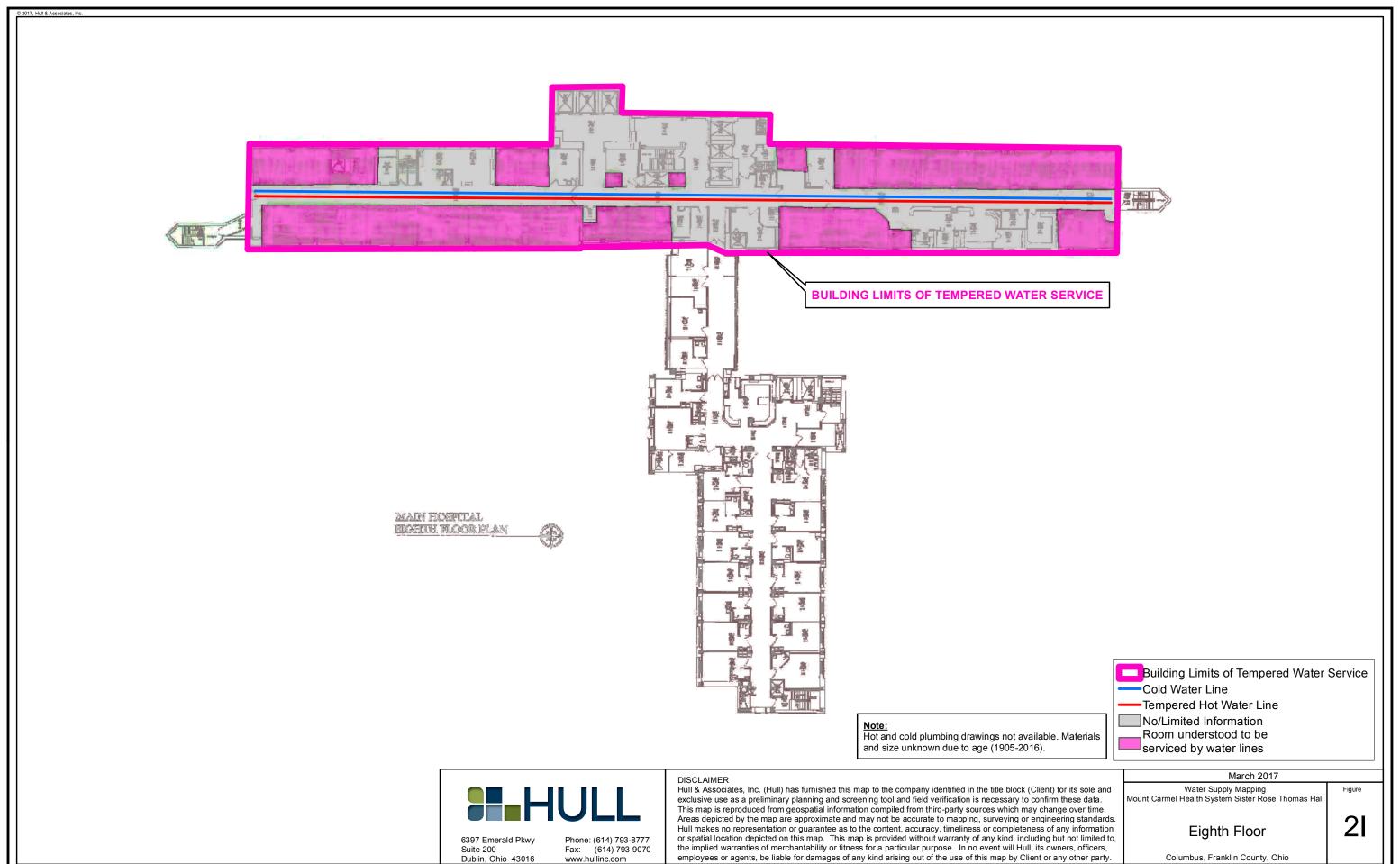




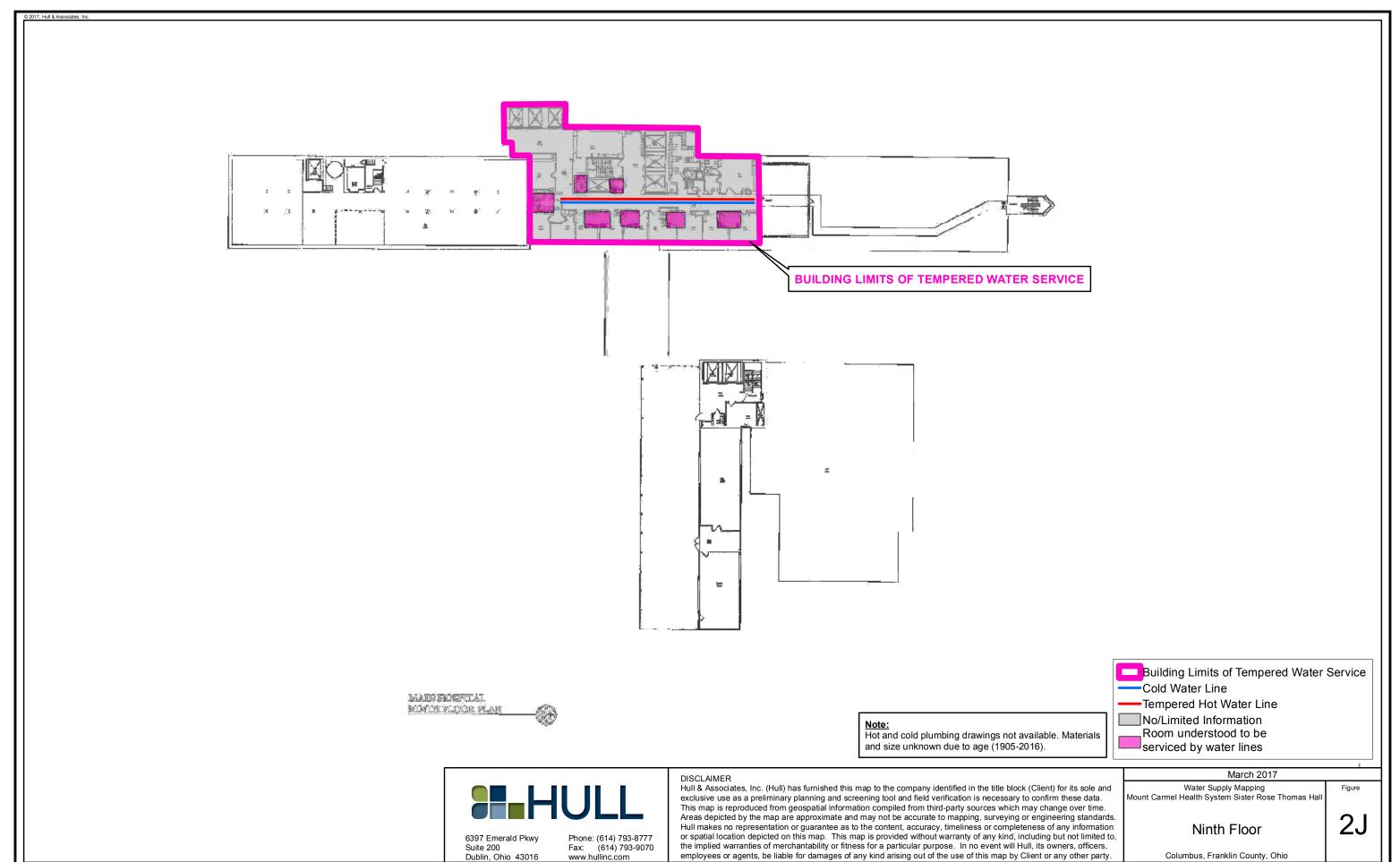






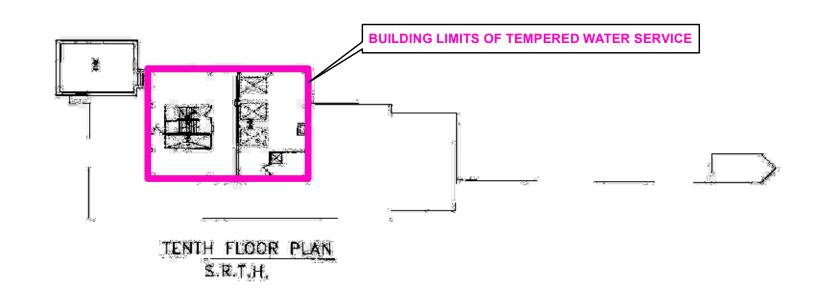


Columbus, Franklin County, Ohio



File Name: MNH001_01_Fig02J_NinthFloor.mxd

Edited: 3/7/2017 By: mop





TENTH FLOOR PLAN WEST WING

Notes:
-Hot and cold plumbing drawings not available. Materials and size unknown due to age (1905-2016). -No potable water on this floor.

Building Limits of Tempered Water Service



Dublin, Ohio 43016

Fax: (614) 793-9070

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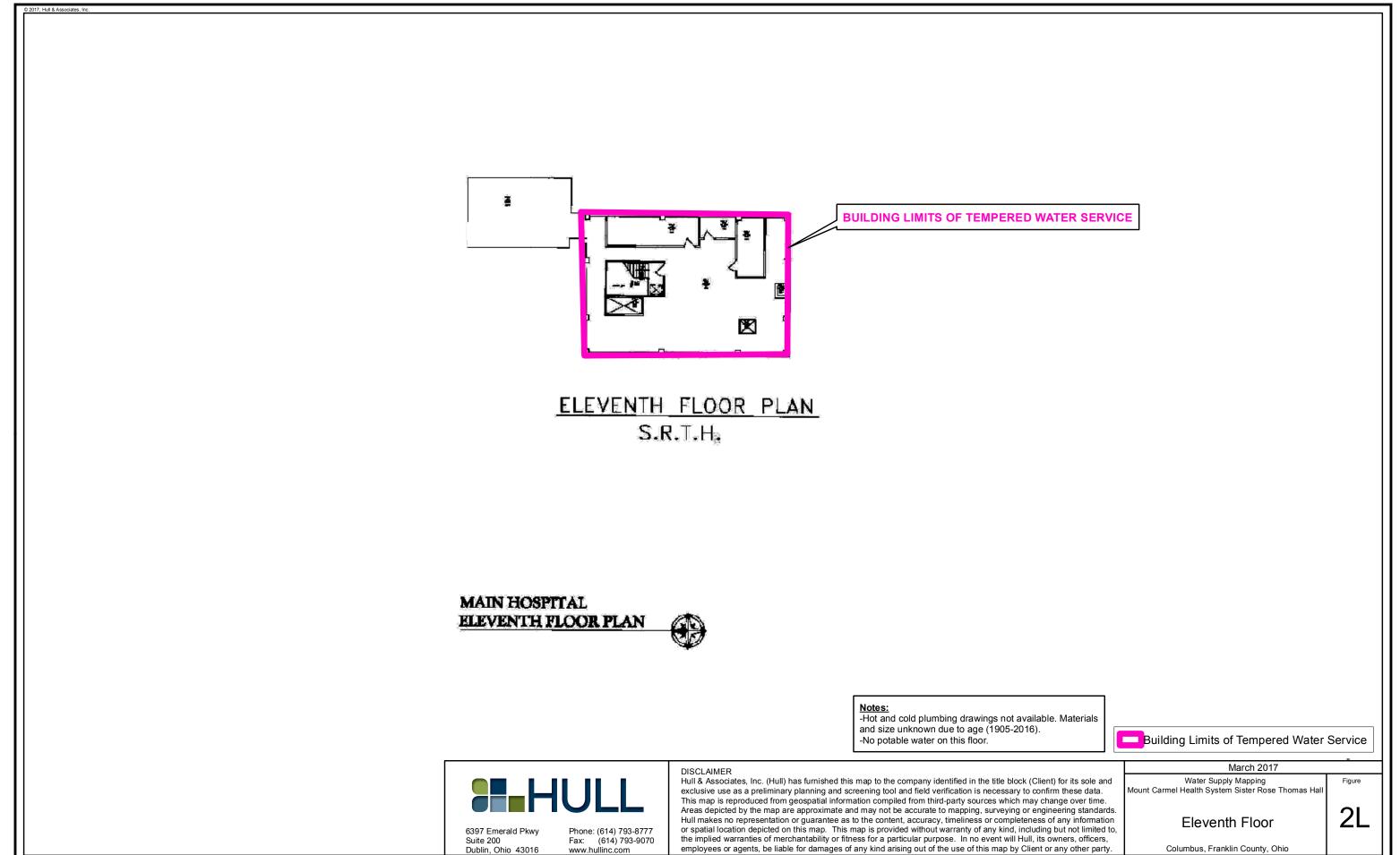
March 2017

Water Supply Mapping Mount Carmel Health System Sister Rose Thomas Hall

Tenth Floor

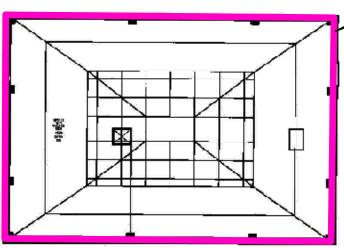
Figure

Columbus, Franklin County, Ohio



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BUILDING LIMITS OF TEMPERED WATER SERVICE



TWELFTH FLOOR PLAN S.R.T.H.

MAIN HOSPITAL TWELFTH FLOOR PLAN

SCALE: NTS



-Hot and cold plumbing drawings not available. Materials and size unknown due to age (1905-2016). -No potable water on this floor.

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March 2017

Water Supply Mapping Mount Carmel Health System Sister Rose Thomas Hal

Twelfth Floor

Figure

Columbus, Franklin County, Ohio