WRIGHT-PATTERSON MEDICAL CENTER PWS/PWS ID OH2958713
Area A, Building 10830
4881 Sugar Maple Dr., Wright-Patterson AFB, OH 45433-5529
(937) 656-2897

The Wright-Patterson Medical Center was constructed in 1956. In 1987 the original building was completely renovated and doubled in size to almost 800,000 sq. ft. The Medical Center is a multispecialty facility accredited by The Joint Commission on Accreditation of Healthcare Organizations that provides services for almost 40,000 beneficiaries. This Medical Center resides on Wright-Patterson Air Force Base, a Federal installation, which does not require the procurement of local building or plumbing permits. That being said, the historical permit records were not a resource we were able to use to determine installation or maintenance dates. We have hard copies of the "as build" drawings for the 1987-88 renovation and new construction. We have electronic "as build" drawings for the Gateway to Healthcare I thru III renovation projects. Based on the information we obtained from these sources we were able to generate lead mapping drawings depicting each area of each floor that was renovated from 1987 to present. The water distribution and branch lines are represented on these drawings as per the OEPA guidelines, (Yellow for Lead, Green for Non-Lead, and Gray for No Information). Because it is not practical to accurately determine the lead content of installed fixtures, fittings or pipe, we used Drawing specifications, manufacturer and installation dates to determine the likelihood of the existence of lead. The service lines entering the building were installed after 1986 and are galvanized steel not likely to contain lead.

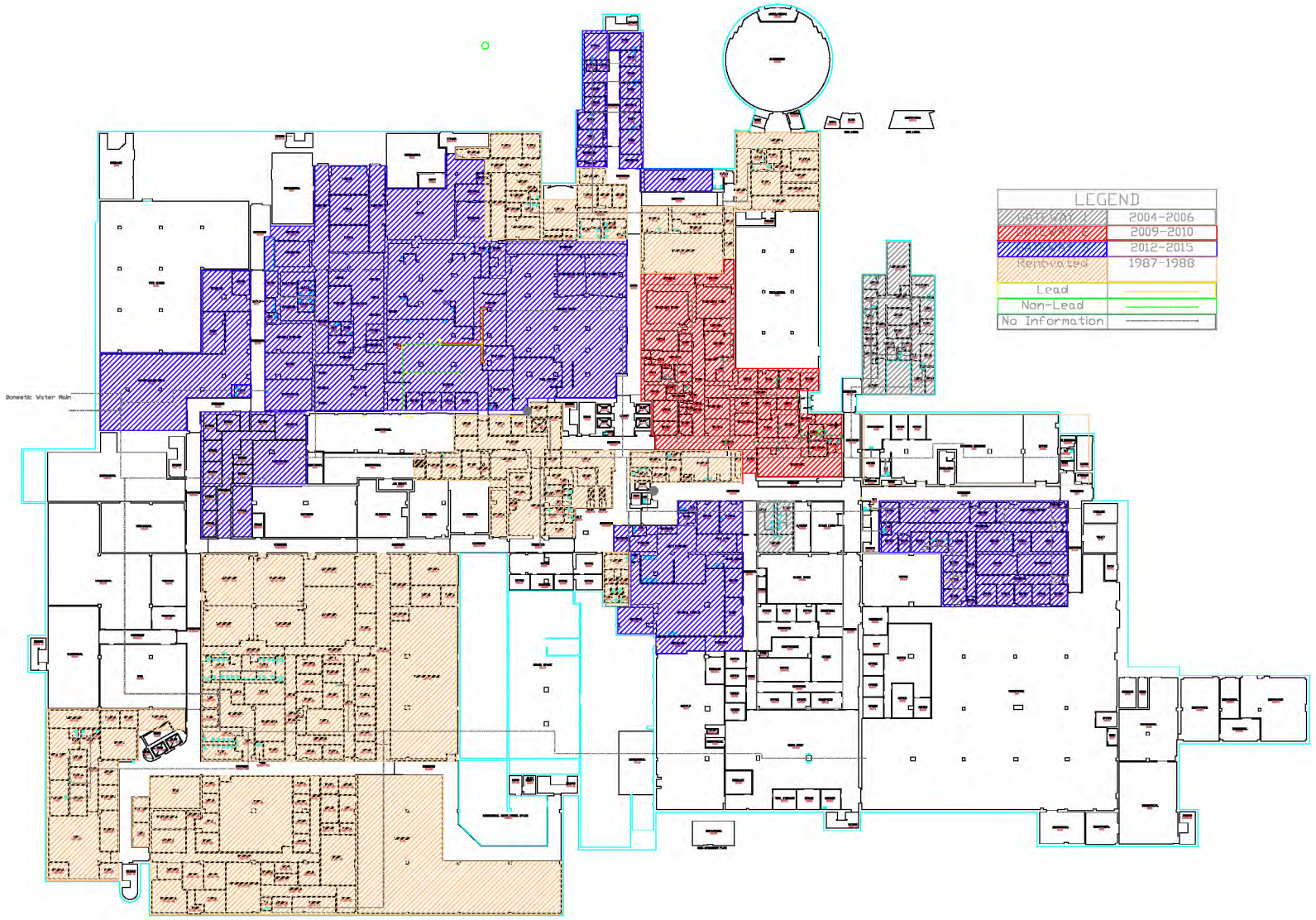
The areas renovated and constructed in 1987-1988 are depicted on the floor plans by the color orange. Based on the information we were able to obtain, these areas do not contain lead services lines. Due to the time frame of this renovation and construction, the pipe fittings, plumbing fittings, and the fixtures could potentially contain lead greater than 8%. The water lines in these areas have been color coded gray (no-info), since we do not have comprehensive specifications available.

The areas renovated during Gateway I, (2004-2006), are depicted on the floor plans by the color Gray. Based on the as build drawing specifications, these areas do not contain lead service lines and are not likely to contain pipe fittings, plumbing fittings, and fixtures that have a lead content greater than 8%. Water lines in these areas are color coded green (non-lead) or gray (no-info).

The areas renovated during Gateway II, (2009-2010), are depicted on the floor plans by the color Red. Based on the as build drawing specifications, these areas do not contain lead service lines and are not likely to contain pipe fittings, plumbing fittings, and fixtures that have a lead content greater than 8%. Water lines in these areas are color coded green (non-lead) or gray (no-info).

The areas renovated during Gateway III, (2012-2015), are depicted on the floor plans by the color Blue. Based on the as build drawing specifications, these areas do not contain lead service lines and are not likely to contain pipe fittings, plumbing fittings, and fixtures that have a lead content greater than 8%. Water lines in these areas are color coded green (non-lead) or gray (no-info).

Even though most of the areas in the medical center have been renovated between 1986 and 2017 where the use of materials containing greater than 8% lead content were prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective.



BUILDING 10830 – BASEMENT

AS BUILT DRAWING

DWG BY.

REVISIONS

WRIGHT-PATTERSON AFB, OHIO

88TH MEDICAL GROUP

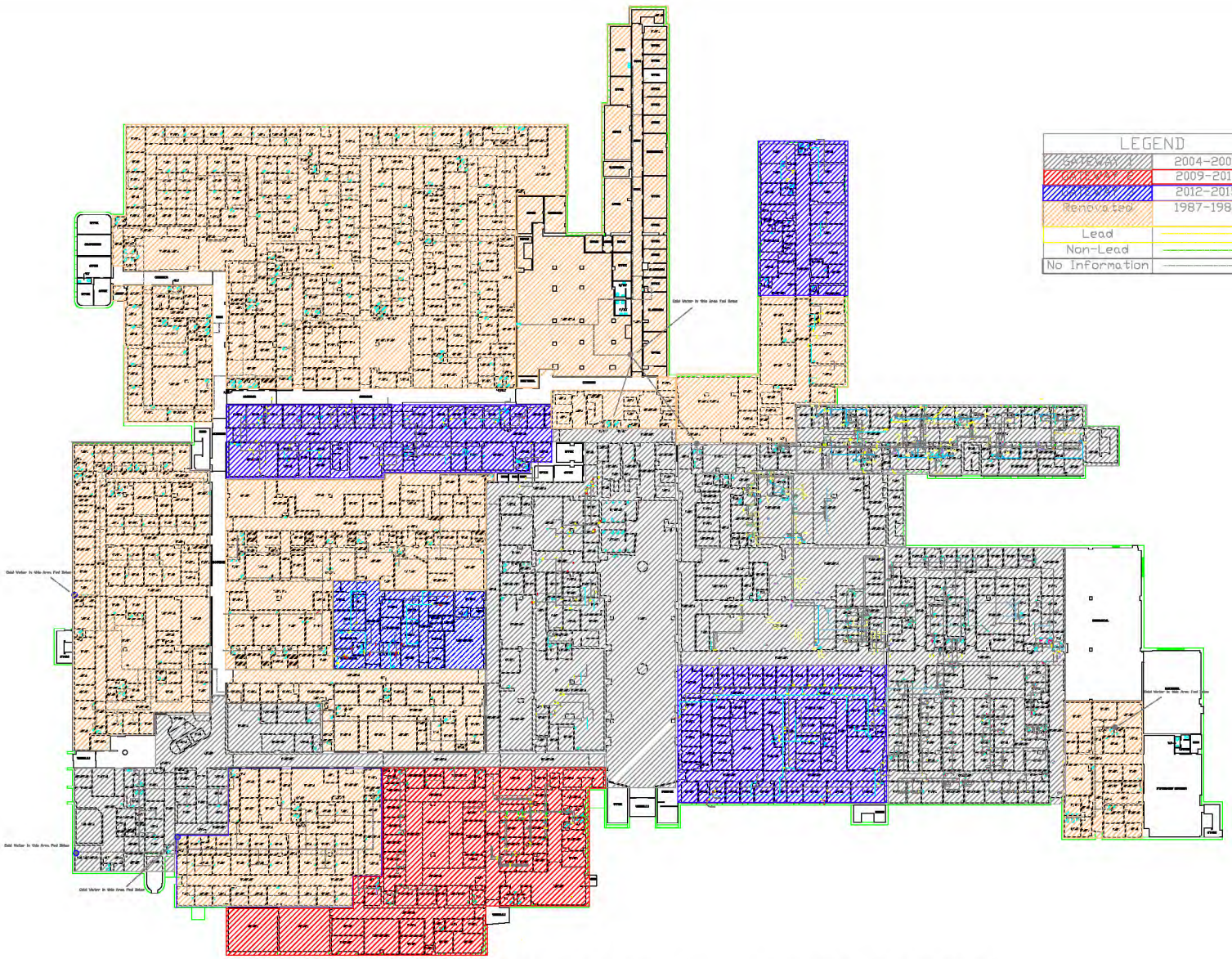
BUILDING 10830 – MEDICAL CENTER

DATE:

SCALE: 1/16" = 1'-0"

DRAWING NAME: ARCHITECTURAL FLOOR PLAN

SHEET NUMBER:



BUILDING 10830 – FIRST FLOOR

AS BUILT DRAWING

DWG BY.

REVISIONS

WRIGHT-PATTERSON AFB, OHIO

88TH MEDICAL GROUP

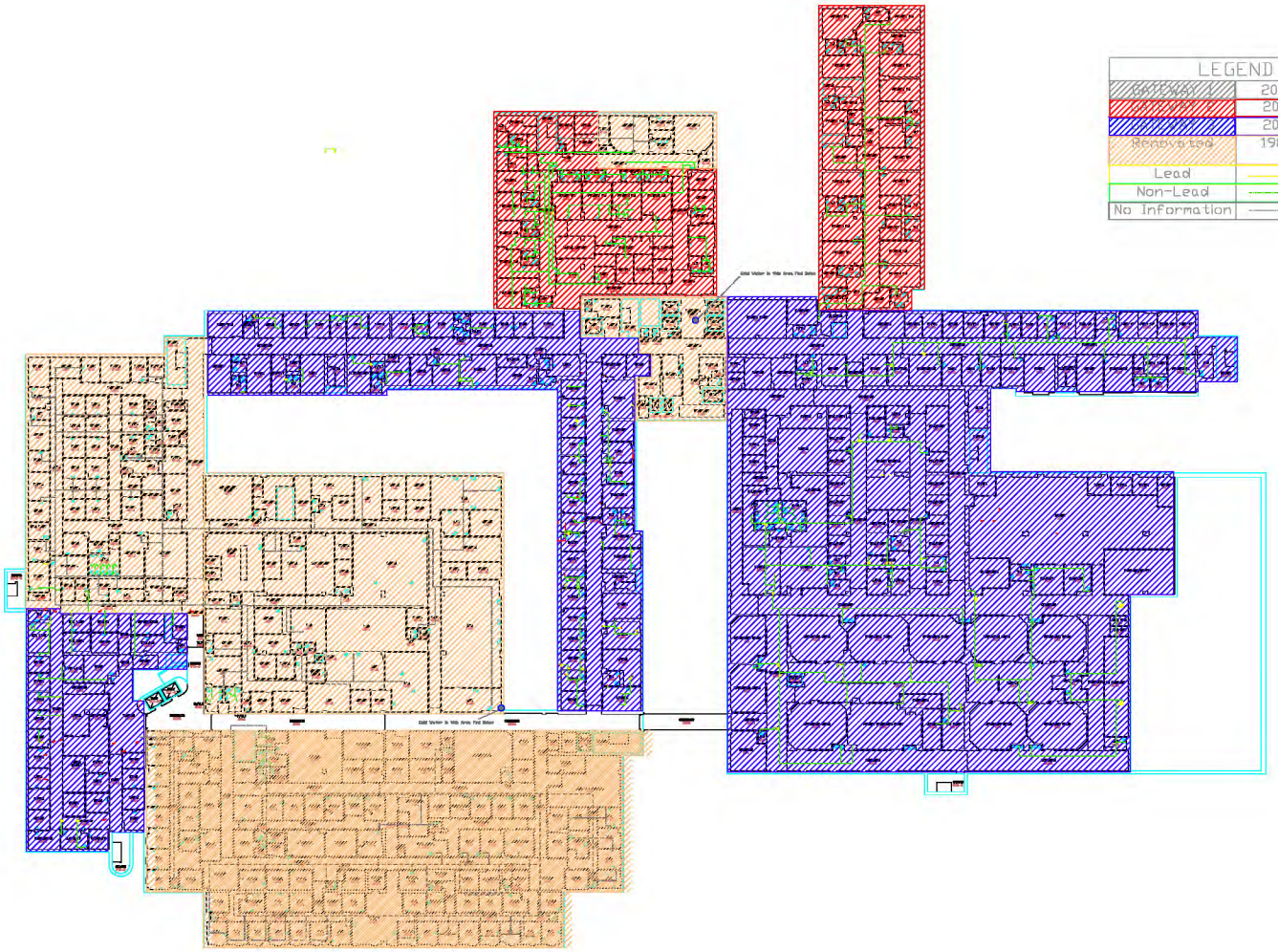
BUILDING 10830 – MEDICAL CENTER

DATE:

SCALE: 1/16" = 1'-0"

DRAWING NAME: ARCHITECTURAL FLOOR PLAN

SHEET NUMBER:



BUILDING 10830 – SECOND FLOOR

AS BUILT DRAWING

DWG BY.

REVISIONS

WRIGHT-PATTERSON AFB, OHIO

88TH MEDICAL GROUP

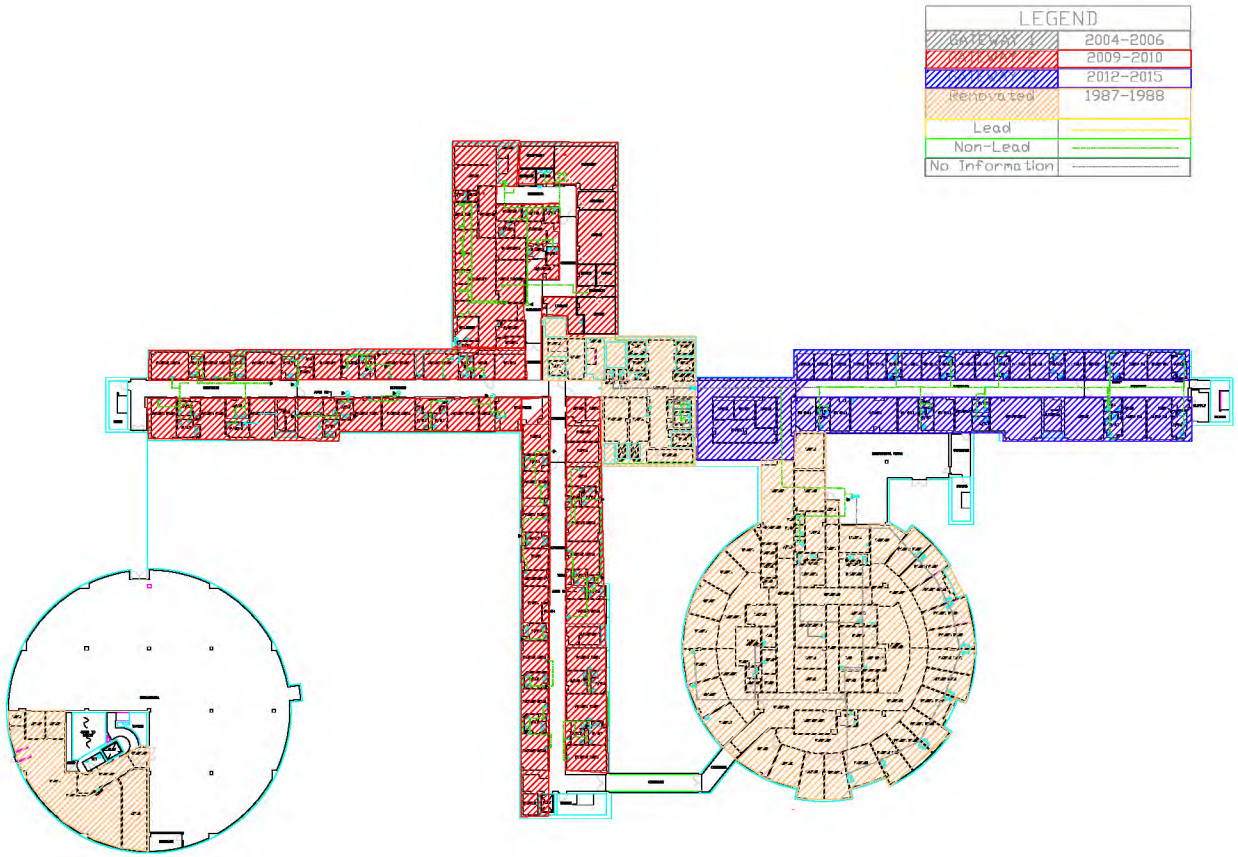
BUILDING 10830 – MEDICAL CENTER

DATE:

SCALE: 1/16" = 1'-0"

DRAWING NAME: ARCHITECTURAL FLOOR PLAN

SHEET NUMBER:



BUILDING 10830 – THIRD FLOOR

AS BUILT DRAWING

DWG BY.

REVISIONS

WRIGHT–PATTERSON AFB, OHIO

88TH MEDICAL GROUP

BUILDING 10830 – MEDICAL CENTER

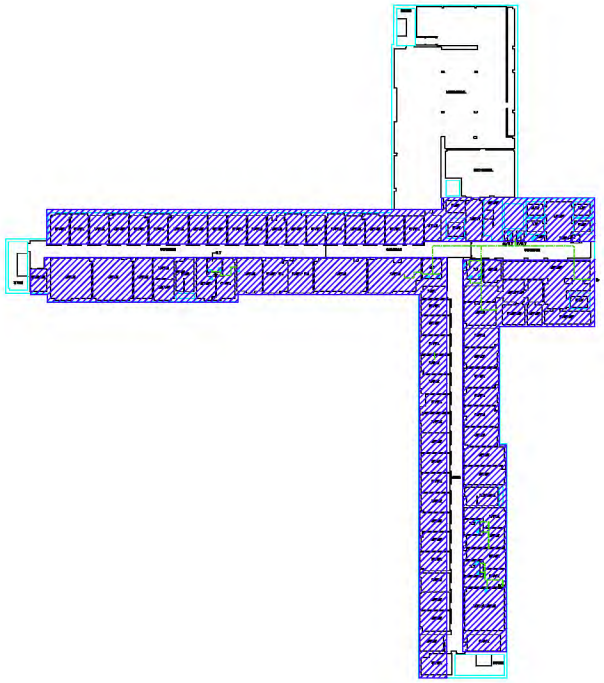
DATE:

SCALE: 1/16" = 1'-0"

DRAWING NAME: ARCHITECTURAL FLOOR PLAN

SHEET NUMBER:

LEGEND	
GATEWAY	2004-2006
[illegible]	2009-2010
[illegible]	2012-2015
Renovated	1987-1988
Lead	
Non-Lead	
No Information	



BUILDING 10830 – FOURTH FLOOR

AS BUILT DRAWING

DWG BY.

REVISIONS

WRIGHT-PATTERSON AFB, OHIO

88TH MEDICAL GROUP

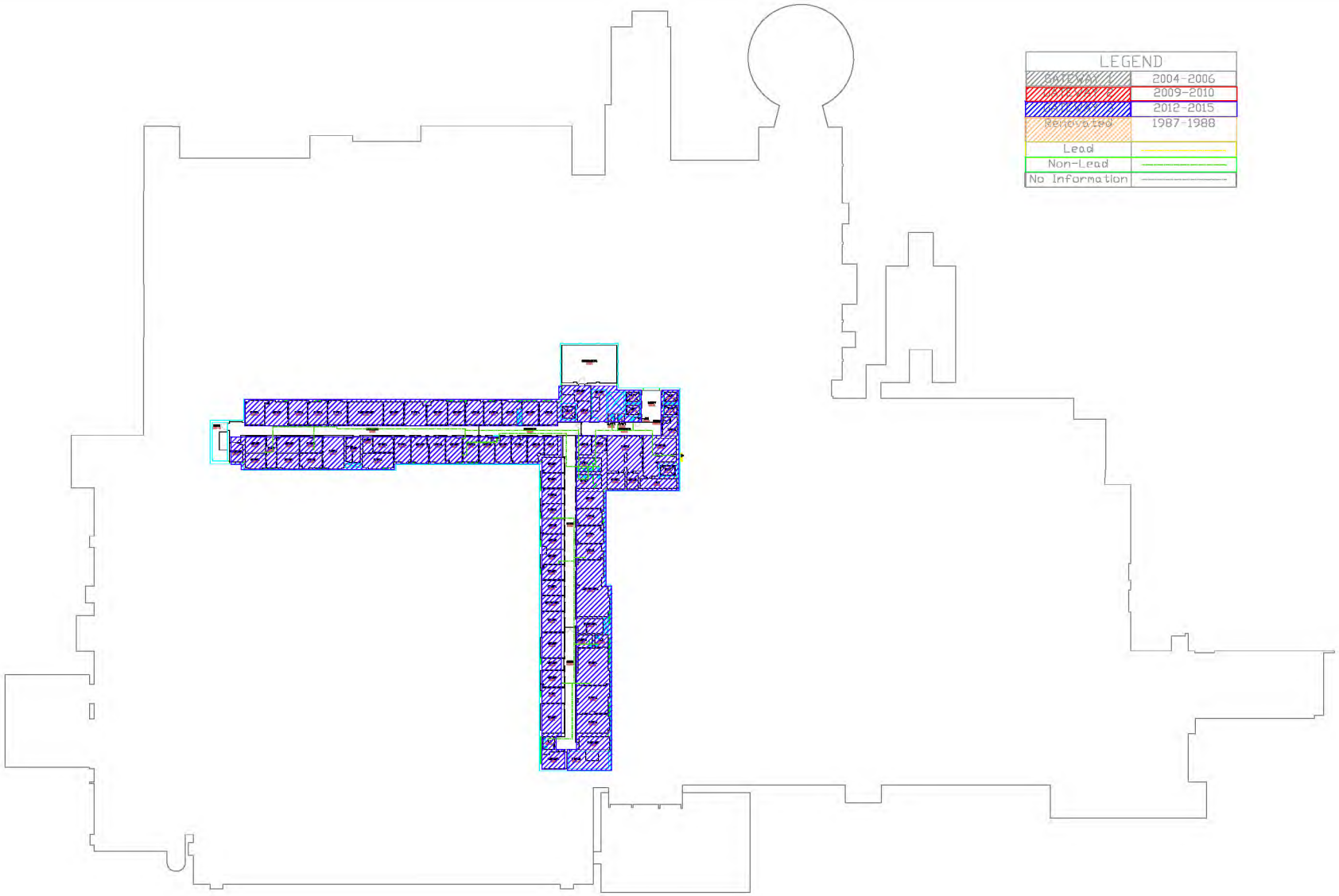
BUILDING 10830 – MEDICAL CENTER

DATE:

SCALE: 1/16" = 1'-0"

DRAWING NAME: ARCHITECTURAL FLOOR PLAN

SHEET NUMBER:



BUILDING 10830 – FIFTH FLOOR

AS BUILT DRAWING

DWG BY.

REVISIONS

WRIGHT–PATTERSON AFB, OHIO
88TH MEDICAL GROUP
BUILDING 10830 – MEDICAL CENTER

DATE:

SCALE: 1/16" = 1'-0"

DRAWING NAME: ARCHITECTURAL FLOOR PLAN

SHEET NUMBER:

Construction Specifications:

GATEWAY I PLUMBING (Construction 2004 - 2006)
A. Inside cold water 4 inches and smaller and all hot water:
1. Type L hard copper tubing with cast bronze or wrought copper fittings or brass pip with threaded cast brass fittings, except as noted.
2. Tempered or tepid water shall be the same as for hot water.

GATEWAY II PLUMBING SPECIFICATION EXCERPTS (Construction June 2009 - Oct 2010):

2.1 MATERIALS
Materials for various services shall be in accordance with TABLES I and II. Pipe fittings shall be compatible with the applicable pipe materials.
Plastic pipe, fittings, and solvent cement shall meet NSF 14 and shall be NSF listed for the service intended. Plastic pipe, fittings, and solvent cement used for potable hot and cold water service shall bear the NSF seal "NSF-PW." Polypropylene pipe and fittings shall conform to dimensional requirements of Schedule 40, Iron Pipe size. Pipe threads (except dryseal) shall conform to ASME B1.20.1. Grooved pipe couplings and fittings shall be from the same manufacturer. Material or equipment containing lead shall not be used in any potable water system. In line devices such as water meters, building valves, check valves, meter stops, valves, fittings and back flow preventers shall comply with PL 93-523 and NSF 61, section 8. End point devices such as drinking water fountains, lavatory faucets, kitchen and bar faucets, residential ice makers, supply stops and end point control valves used to dispense water for drinking shall meet the requirements of NSF 61, section 9. Hubless cast-iron soil pipe shall not be installed underground, under concrete floor slabs or in crawl spaces below kitchen floors. Plastic pipe shall not be installed in air plenums.
Plastic pipe shall not be installed in a pressure piping system in buildings greater than three stories including any basement levels.

h. Solder Material: Solder metal shall conform to ASTM B 32.
i. Solder Flux: Flux shall be liquid form, non-corrosive, and shall conform to ASTM B 813, Standard Test 1.

2.1.2 Copper Tubing and Fittings
a. Copper Tube: Copper tubing shall conform to ASTM B 88M, Type K, L or M.
b. Press Fittings: Copper and bronze press fittings shall conform to material requirements of ASME B16.18 or ASME B16.22 and performance criteria of IAPMO PS 117. Sealing elements shall be of EPDM and be factory installed or an alternative supplied by fitting manufacturer.

2.3 VALVES
Valves shall be provided on supplies to equipment and fixtures. Valves shall be gate valves, unless otherwise specified or indicated. Valves 2-1/2 inches and smaller shall be bronze, with threaded bodies for pipe and solder-type connections for tubing. Valves 3 inches and larger shall have flanged iron bodies and bronze trim. Pressure ratings shall be based upon the application. Grooved end valves may be provided if the manufacturer certifies that the valves meet the performance requirements of applicable MSS standard.

2.3.2.1 Mixing Valves
Mixing valves, combination thermostatic and pressure-balanced shall be line size and shall be constructed with rough or finish bodies either with or without plating. Each valve shall be constructed to

control the mixing of hot and cold water and to deliver water at a desired temperature regardless of pressure or input temperature changes. The control element shall be of an approved type. The body shall be of heavy cast bronze, and interior parts shall be brass, bronze, corrosion-resisting steel or copper. The valve shall be equipped with necessary stops, check valves, unions, and sediment strainers on the inlets. Mixing valves shall maintain water temperature within 5 degrees F of any setting.

2.4 FIXTURES

Fixtures shall be water conservation type, in accordance with ICC IPC.

Fixtures for use by the physically handicapped shall be in accordance with ICC A117.1. Vitreous china, nonabsorbent, hard-burned, and vitrified throughout the body shall be provided. Porcelain enameled ware shall have specially selected, clear white, acid-resisting enamel coating evenly applied on surfaces. No fixture will be accepted that shows cracks, crazes, blisters, thin spots, or other flaws. Fixtures shall be equipped with appurtenances such as traps (or approved equal), faucets, stop valves, and drain fittings. Each fixture and piece of equipment requiring connections to the drainage system, except grease interceptors, shall be equipped with a trap (or approved equal). Brass expansion or toggle bolts capped with acorn nuts shall be provided for supports. Pipe, valves, and fittings exposed to view shall be chromium plated. Fixtures and trim not covered by MIL-STD-1691 shall be considered special, but shall be of equal quality and material. Fixtures with the supply discharge below the rim shall be equipped with backflow preventers. Internal parts of flush and/or flushometer valves, shower mixing valves, shower head face plates, pop-up stoppers of lavatory waste drains, and pop-up stoppers and overflow tees and shoes of bathtub waste drains may contain acetal resin, fluorocarbon, nylon, acrylonitrile-butadiene-styrene (ABS) or other plastic material, if the material has provided satisfactory service under actual commercial or industrial operating conditions for not less than 2 years. Plastic in contact with hot water shall be suitable for 180 degree F water temperature. Plumbing fixtures shall be as listed below. Shower heads, ASME A112.18.1 other than emergency showers, shall be adjustable spray type and shall include a non-removable, tamperproof flow control device which shall limit water flow to 2.5 gpm when tested in accordance with ASME A112.18.1.

3.5.6 Copper Tube and Pipe

Joints shall be made up with fittings of compatible material and made for the purpose intended.

a. Brazed. Brazed joints shall conform to MSS SP-73 and CDA A4015, made with flux, and are acceptable for all pipe sizes.

b. Soldered. Soldered joints shall be made with flux and are only acceptable for piping 2 inches and smaller. Soldered joints shall conform to ASME B31.5 and CDA A4015. Soldered joints shall not be used in compressed air piping between the air compressor and the receiver.

c. Copper Tube Extracted Joint. Mechanically extracted joints shall be made in accordance with ICC IPC.

d. Press Connection. Copper press connections shall be made in strict accordance with the manufacturers' installation instructions for manufactured rated size. The joints shall be pressed using the tool(s) approved by the manufacturer of that joint. Minimum distance between fittings shall be in accordance with the manufacturer's requirements.

e. Mechanical couplings may be used in conjunction with grooved tube for aboveground, nonferrous, domestic hot and cold water systems in lieu of unions, brazed, soldered, or threaded joints. Mechanical couplings are permitted only in accessible locations, including behind access plates. Designs which can only clamp on the bottom of the groove or which utilize gripping teeth or jaws, or which use misaligned housing bolt holes, or which require a torque wrench or torque specifications will not be permitted.

Rigid grooved tube couplings shall be used with grooved end tubes, fittings, and valves. Rigid couplings shall be designed for not less than 125 psi service appropriate for static head plus the pumping head, and shall provide a watertight joint. Grooved fittings and couplings, and grooving tools shall be provided

from the same manufacturer. Segmentally brazed or soldered elbows shall not be used. Grooves shall be prepared in accordance with the coupling manufacturer's latest published standards. Grooving shall be performed by qualified grooving operators having demonstrated proper grooving procedures in accordance with the tool manufacturer's recommendations. The Contracting Officer shall be notified 24 hours in advance of test to demonstrate operator's capability, and the test shall be performed at the work site, if practical, or at an agreed upon site. The operator shall demonstrate the ability to properly adjust the grooving tool, groove the tube, and to verify the groove dimensions in accordance with the coupling manufacturer's specifications.

GATEWAY III PLUMBING SPECIFICATION EXCERPTS (Construction January 2012 - July 2015):

Plumbing piping systems shall meet the requirements of ICC IPC.

2.1.10.1 Lead-Free Solder
ASTM B 32, 95.5 tin-antimony solder or other "lead-free" solder. Use for all potable water copper tubing and fitting connections, and for solder joints in contact with food.
2.1.10.2 Tin-Lead Solder
ASTM B 32, alloy grade 50B for temperatures up to 150 degrees F and alloy grade 95TA for temperatures over 150 degrees F.
2.1.10.3 Silver Solder
AWS A5.8/A5.8M, 15 percent silver base brazing alloy, melting point not less than 1000 degrees F.

2.4 PIPE AND FITTINGS
2.4.1 Domestic Water Piping
Domestic water piping at service entrance (from 1 foot inside building to 5 feet outside): Same as indicated for outside utilities.
a. 2 inches and smaller after service entrance above grade:
1) Copper tube conforming to ASTM B 88, type L, with soldered joints and wrought copper ASME B16.22 or cast brass ASME B16.18 fittings.
2) Press fittings for Copper Pipe and Tube: Copper press fittings shall conform to the material and sizing requirements of ASME B16.18 or ASME B16.22. Sealing elements for copper press fittings shall be EPDM, FKM or HNBR. Sealing elements shall be factory installed or an alternative supplied fitting manufacturer. Sealing element shall be selected based on manufacturer's approved application guidelines.

2.5 PIPE JOINT MATERIALS
Grooved pipe and hubless cast-iron soil pipe shall not be used underground. Solder containing lead shall not be used with copper pipe. Mark cast iron soil pipe and fittings with the collective trademark of the Cast Iron Soil Pipe Institute. Joints and gasket materials shall conform to the following:
a. Coupling for Cast-Iron Pipe: for hub and spigot type ASTM A 74, AWWA C606. For hubless type: CISPI 310 b. Couplings for Grooved Pipe: Ductile Iron ASTM A 536 (Grade 65-45-12). Copper ASTM A 536.
c. Flange Gaskets: Gaskets shall be made of non-asbestos material in accordance with ASME B16.21. Gaskets shall be flat, 1/16 inch thick, and contain Aramid fibers bonded with Styrene Butadiene Rubber (SBR) or Nitro Butadiene Rubber (NBR). Gaskets shall be the full face or self-centering flat ring type. Gaskets used for hydrocarbon service shall be bonded with NBR.
d. Brazing Material: Brazing material shall conform to AWS A5.8/A5.8M, BCuP-5.

e. Brazing Flux: Flux shall be in paste or liquid form appropriate for use with brazing material. Flux shall be as follows: lead-free; have a 100 percent flushable residue; contain slightly acidic reagents; contain potassium borides; and contain fluorides.
f. Solder Material: Solder metal shall conform to ASTM B 32 and be Code approved "Lead Free" having a chemical composition equal to or less than 0.2 percent lead.
g. Solder Flux: Flux shall be liquid form, non-corrosive, Code approved "Lead Free" and conform to ASTM B 813, Standard Test 1.

2.9 VALVES
Provide valves on supplies to equipment and fixtures. Valves 2-1/2 inches and smaller shall be bronze with threaded bodies for pipe and solder-type connections for tubing. Valves 3 inches and larger shall have flanged iron bodies and bronze trim. Pressure ratings shall be based upon the application. Grooved end valves may be provided if the manufacturer certifies that the valves meet the performance requirements of applicable MSS standard.

2.10 PLUMBING FIXTURES
2.10.1 General
Fixtures shall be water conservation type, in accordance with ICC IPC.
Fixtures for use by the physically handicapped shall be in accordance with ICC A117.1. Provide vitreous china fixtures that are nonabsorbent, hard-burned, and vitrified throughout the body. No fixture will be accepted that shows cracks, crazes, blisters, thin spots, or other flaws.
Equip fixtures with appurtenances such as traps, faucets, stop valves, and

3.3 DOMESTIC WATER PIPING SYSTEMS
3.3.1 General
Pipe shall be accurately cut and worked into place without springing or forcing. Structural portions of the building shall not be weakened.
Aboveground piping shall run parallel with the lines of the building, unless otherwise indicated. Branch pipes from service lines may be taken from top, bottom, or side of main, using crossover fittings required by structural or installation conditions. Supply pipes, valves, and fittings shall be kept a sufficient distance from other work and other services to permit not less than 1/2 inch between finished covering on the different services. Bare and insulated water lines shall not bear directly against building structural elements so as to transmit sound to the structure or to prevent flexible movement of the lines. Water pipe shall not be buried in or under floors unless specifically indicated or approved. Changes in pipe sizes shall be made with reducing fittings. Use of bushings will not be permitted except for use in situations in which standard factory fabricated components are furnished to accommodate specific accepted installation practice. Change in direction shall be made with fittings.
3.3.2 Pipe Drains
Pipe drains shall consist of full port ball with 3/4" hose end connections valve. At other low points, 3/4 inch brass plugs or caps shall be provided. Disconnection of the supply piping at the fixture is an acceptable drain.
3.3.3 Valves
Provide manual isolation valves at base of risers, on branch runouts from piping mains, on each branch serving a rest room, on each branch serving an equipment item, and on each branch to hose bibb or wall hydrant. Wire isolation valves on emergency fixture supply open and tag "Do Not Close".
Balance hot water circulation system.