PLUMBING SPECIFICATIONS

A. GENERAL
These specifications, together with the accompanying drawings are intended to provide the complete installation of the system specified for the buildings except where definitely called for otherwise.

B. SCOPE
Work specified under this section includes furnishing all materials, labor, equipment, permits, licenses, and other items required for execution and completion of all on-site work indicated. Everything necessary for a complete installation, including all necessary parts, devices, accessories, etc. required by the Plumbing Code (latest edition), Uniform Construction Code'
local codes and authorities having jurisdiction is required to satisfactorily complete the installation of the items shall be provided.
The work required under this section shall include, but is not necessarily limited to, the following:

1. Sanitary drainage system.
2. Vent systems.
3. Domestic cold water system, including valves and hose bibb.
4. Domestic hot water system.
5. Anti-sweat and thermal insulation.
6. Connection of miscellaneous equipment furnished by others.
7. All hangers and supports.
8. One (1) year guarantee.
11. Tie-ins to drain risers and vents.
12. All testing required as per Plumbing Code or local authorities.
13. Permits and inspections.

C. PIPE AND FITTING – MATERIALS
DOMESTIC HOT AND COLD WATER PIPING – INSIDE BUILDING shall be Type "L" hard drawn copper tubing above ground with wrought copper solder fittings. Solder shall be lead free type, and approved by local authority.
SOIL, WASTE, DRAIN AND VENT PIPING: Inside building shall be DWV copper or hubless cast iron with stainless steel couplings. Pipe fittings below slab and outside building shall be hubless cast iron with stainless steel couplings, service weight hub and spigot cast iron pipe, SDR26 or heavier PVC piping.
Provide dielectric fittings between piping systems using dissimilar materials including water piping and drainage piping systems.
VALVES:
A. Ball valves 1" and smaller shall be NIBCO Model #585-70, bronze body, screwed or sweat, 150 # S.W.P. with full port reinforced TFE seats and seals. 1-1/4" and larger to have chrome plated ball and conventional port.
B. Check valves up to 2" in size, NIBCO Model #S-433-B, 150 SWP, 300 WOG, bronze body, horizontal swing, bronze disc, solder ends.

D. SUBMITTALS
Six (6) copies of shop drawings and/or manufacturer's description data of a nature to completely identify the quality of material or equipment intended for installation shall be submitted for approval before beginning any construction, and within thirty (30) days after signing Contract, submittal required for:

1. Drains.
2. Cleanout covers.
3. Valves.
4. Pipe insulation.
5. Thermometers and gauges.
6. Hot water heaters.
7. Hose bibbs.
8. Plumbing fixtures.
9. Floor drains.

E. SUBSTITUTIONS
The manufacturer's names appearing in these specifications and on the drawings shall indicate the standard of quality and performance required. The bidder is invited to submit engineering data, catalog sheets, samples and other information, as may be required by the Engineer to evaluate products equivalent to those specified. All products to be substituted must be submitted for evaluation during the bidding period. "Requests for Product Substitution" after Contract award will not be granted.

F. PIPE INSTALLATIONS
As indicated below and as supplemented by the plumbing notes on drawings.
1. Run all piping exposed except where piping can be concealed in pipe chases, soffits, hung ceilings, walls, partitions, etc. as shown on the drawings.
2. All piping to be pitched to low points with drain valves.
3. Sleeve piping that passes through walls, provide waterproof or fire-retardant seals as required.
4. Flash all piping through roof.
5. Provide rod hangers with clevis pipe support in accordance with National Standard Plumbing Code.
6. Provide valves required for complete control of all systems. Stop valves on supply to all fixtures to be chrome-plated and have escutcheon plates to match, where exposed.
7. Provide access doors or plates for all concealed valves and cleanouts.
8. Provide cleanouts (full size for pipes up to 4 inches, and not less than 4" for larger piping) for all U/G sanitary and waste lines, at ends of lines, base of stack, and changes of direction greater than 45 degrees.
9. Each hot and cold water supply line to a fixture shall have an air chamber sized in accordance with P.D.I. standards. Water lines suppling a flush valve fixture. or where otherwise indicated on drawings, shall have a water hammer arrestor. The size of the arrestor shall be in accordance with P.D.I. standards.

G. HANGERS AND SUPPORTS
All equipment and piping shall be supported and/or suspended in a manner which meets the requirements for seismic restraints as outlined in the International Building Code section 1621. All pipe hangers shall be installed to maintain required pitch of lines. The spacing of hangers and supports shall be as described in the National Standard Plumbing Code, Chapter 8.
Horizontal piping shall be hung from electro-galvanized adjustable band hangers N.P.H.C. Fig. 115 with electro galvanized thread rod and N.P.H.C. side-beam connectors. Note: All hanger and hanger components shall be electro-galvanized plated. Galvanized strap type hanger will not be permitted.
WATER PIPING shall be hung with full wrap type black polyethylene split design tubing clamp as manufactured by Sioux Chief Mfg. Co. The piping shall not be in contact with metal studding. Plastic or metal tubing strap will not be permitted.
SOIL,WASTE AND VENT PIPING shall be preformed galvanized D.W.V. strap hanger as manufactured by Sioux Chief Mfg. Co. Provide all steel required for support of pipes other than steel shown on Structural Engineer's Drawings.

H. ESCUTCHEONS
Furnish and install chrome-plated escutcheons around exposed piping penetrating walls or floors. Use PVC sleeves only where piping penertrations are in concealed areas.

I. CONNECTIONS OF MISCELLANEOUS EQUIPMENT
Rough-in and make final connections to all equipment.

J. INSULATION
1. All water piping within the hung ceiling shall be insulated. Insulation on pipe shall be 1" thick fiberglass with A.S.J. self sealing jacket lap. Stapling of jacket will not be permitted. Fittings on the piping shall be wrapped with F.S.K. faced fiberglass blanket insulation compressed to same thickness as adjoining piping and tied in place with copper clad wire. In lieu of fiberglass, 1" thick closed cell (Armaflex) insulation on pipe and fittings may be used.

K. DRAINS
See specifications this drawing.

L. PLUMBING FIXTURES
See specifications this drawing.

M. MEDICAL GAS SYSTEM:
1. PIPING AND FITTINGS:
FOR MEDICAL OXYGEN, AIR AND VACUUM PIPING USE TYPE K HARD TEMPER ASTM B-819 COPPER TUBING, WITH WROUGHT COPPER, BRASS, OR BRONZE FITTING FOR BRAZED CONNECTIONS, CLEANED FOR SERVICE, IN ACCORDANCE WITH NFPA-99 – 2012 EDITION. △1 REF #3
2. MEDICAL GAS EQUIPMENT: BEACON MEDAES:
a.) RECESSED WALL DIAMOND CARE OUTLETS-DISS
3. INSTALLATION AND TESTING:
ALL MEDICAL GAS PIPE SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA-99.
4. CROSS-CONNECTION TEST:
THE PLUMBING CONTRACTOR SHALL EMPLOY A INDEPENDENT TESTING AGENCY TO CERTIFY SYSTEM IS COMPLETE, OUTLETS AND ZONE VALVE FUNCTIONAL, AND TEST PERFORMED PER NFPA 99. DOCUMENT TESTS AND SUBMIT.
4. CONTRACTOR TO PROVIDE AN ALLOWANCE FOR REROUTING THE EXISTING MEDICAL GAS PIPING IN EXISTING CONTROL ROOM TO ACCOMMODATE FOR THE NEW DUCTWORK

N. TESTING AND ADJUSTING
Upon completion of work, all equipment shall be cleaned, tested and adjusted for proper operation and any defects discovered shall be corrected before final inspection, prior to acceptance. Soil, waste, storm and vent piping shall be tested by plugging all openings and filling entire system except highest opening with water to point of overflow. The water shall be kept in the system under test fo rat least 15 minutes before inspection starts. The system shall than be tight at all points. Water piping shall be thoroughly clean, pressure tested and proven tight with minimum 80 pounds hydrostatic pressure. Test of interior piping shall be made prior to setting of fixtures. Final test for gas and water tightness of the completed drainage and vent system shall be made by a smoke test, and the disinfection of the water system shall be as indicated in the Plumbing Code.

O. GUARANTEE
All work performed under this section shall be guaranteed to be free from defects in materials and workmanship for a period of one (1) year from the date of final acceptance of such work by the Owner or Architect. Latent defects arising during this period shall, upon notification by the Owner or Architect, be promptly corrected at no additional cost to the Owner.

PLUMBING LEGEND

Symbol	Description	Symbol	Description
	SANITARY DRAIN PIPING AT CEILING	—A—	AIR
	SANITARY DRAIN PIPING BELOW SLAB	—O—	OXYGEN
	VENT PIPING	—V—	VACUUM
	COLD WATER PIPING	—N—	NITROGEN
	HOT WATER PIPING	—N_2O—	NITROUS OXIDE
	HOT WATER RETURN PIPING	—CO_2—	CARBON DIOXIDE
	BALL VALVE	—WAG—	WASTE ANESTHESIA GAS
	GATE VALVE	O V A S / 2 3 1 3	MEDICAL GAS OUTLETS O=OXYGEN, V=VACUUM,A=AIR, S=SLIDE; INDICATES NUMBER OF OUTLETS REQUIRED
	ARROW INDICATES DIRECTION OF FLOW	MGAP	MEDICAL GAS ALARM PANEL
CW	COLD WATER	MGVB	MEDICAL GAS VALVE BOX
HW	HOT WATER		
HWR	HOT WATER RECIRCULATING		
VTR	VENT THRU ROOF		
	TIE INTO EXISTING		

PLUMBING GENERAL NOTES

1. PLUMBING CONTRACTOR SHALL PERFORM ALL WORK AS TO CONFORM TO NATIONAL PLUMBING CODE 2018 EDITION.
2. ALL EXISTING SANITARY, DRAIN, VENT, H.W. AND C.W. PIPING MADE OBSOLETE AS RESULT OF THE WORK IN THE CONTRACT SHALL BE DISCONNECTED, REMOVED AND CAPPED EITHER BELOW THE SLAB OR IN THE CEILING SO AS NOT TO INTERFERE WITH NEW OR RENOVATED CONSTRUCTION.
3. THIS CONTRACTOR TO VERIFY LOCATION AND SIZES OF ALL EXISTING SERVICES BEFORE INSTALLATION OF NEW PIPING AND NOTIFY THE ARCHITECT IF PIPING SHOWN DIFFERS FROM FIELD CONDITIONS.
4. LOCATION AND ELEVATIONS OF ALL EXISTING PIPING SHOWN ON PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS IN FIELD PRIOR TO THE START OF ANY WORK.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTION TO PREVENT ANY UNNECESSARY DAMAGE TO THE BUILDING STRUCTURE AND PROTECT THE BUILDING CONTENTS AND OCCUPANTS.
6. THE CONTRACTOR SHALL NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING BUILDING NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT THE EXPRESSED PERMISSION OF THE OWNER. SUCH INTERRUPTIONS AND INTERFERENCE SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT THE TIME STATED BY THE OWNER.
7. THIS CONTRACTOR SHALL DO ALL NECESSARY CUTTING AND PATCHING FOR WORK UNDER THIS CONTRACT. HE SHALL FURNISH AND INSTALL ALL NECESSARY SUPPORTS AND BRACKETS REQUIRED FOR ALL EQUIPMENT UNDER THIS CONTRACT.
8. REFER TO SPECIFICATIONS AND THE LATEST EDITION OF INTERNATIONAL BUILDING CODE FOR SEISMIC RESTRAINTS.
9. THIS CONTRACTOR TO COORDINATE LOCATION OF ALL EQUIPMENT WITH ARCHITECTS EQUIPMENT DRAWINGS.
10. THIS PROJECT SHALL NOT OVERLOAD ANY EXISTING SYSTEMS, NOR CREATE/INCREASE ANY CODE NONCONFORMITY.

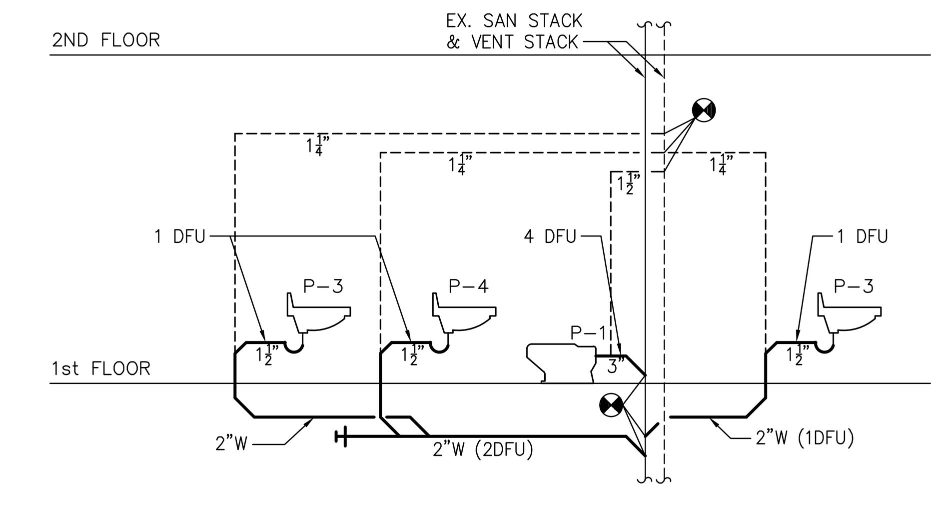
PLUMBING EQUIPMENT SPECIFICATIONS

EQUIPMENT/ SYMBOL	DESCRIPTION
P-1	WATER CLOSET – "KOHLER" ADA KINGSTON MOD. No. K-84325 ELONGATED VITREOUS CHINA, 1.6 GALLON SIPHON JET FLUSH, WALL MOUNTED REAR SPOUT WATER CLOSET. PROVIDE "OLSONITE" #95 HEAVY DUTY SOLID PLASTIC OPEN FRONT SEAT AND "SLOAN" MODEL G28111-1.6 MANUAL SENSOR OPERATED FLUSHOMETER AND J.R. SMITH COMPACT FIXTURE CARRIER OR APPROVED EQUAL. MOUNT SEAT 18" ABOVE FINISHED FLOOR.
P-2	WALL HUNG LAVATORY –(HANDICAPPED) "KOHLER" SOHO MOD. K-2084 VITREOUS CHINA LAVATORY WITH SINGLE CENTER FAUCET HOLE AND OVERFLOW. PROVIDE "SLOAN" OPTIMA MOD. EAF-200-P-ISM, SENSOR OPERATED ELECTRONIC HAND WASHING FAUCET WITH INTERGRAL SPOUT, 0.5 GPM FLOW AERATOR, BELOW DECK THERMOSTATIC TEMPERATURE MIXING VALVE "WATTS" MODEL LFMMV. PROVIDE CHROME PLATED GRID STRAINER, MCQUIRE FITTINGS #158-LK RIGID SUPPLIES, LOOSE KEY STOPS, CAST SET SCREW ESCUTCHEONS, 1-1/4"x1-1/2" CAST BRASS ADJUSTABLE P-TRAP W/CLEANOUT, NIPPLE AND ESCUTCHEON. MOUNT SINK 34"AFF. SINK DRAIN AND WATER SUPPLIES TO BE COVERED WITH TRUEBRO MODEL 102 INSULATION.
P-3	WALL HUNG SINK (HANDICAPPED) –"AMERICAN STANDARD" LUCERENE MODEL 0356.015 VITREOUS CHINA LAVATORY WITH FAUCET HOLES 8" ON CENTER AND FRONT OVERFLOW, PROVIDE "SLOAN" OPTIMA MOD. EAF-200-P-ISM, SENSOR OPERATED ELECTRONIC HAND WASHING FAUCET WITH INTERGRAL SPOUT, 0.5 GPM FLOW AERATOR, BELOW DECK THERMOSTATIC TEMPERATURE MIXING VALVE "WATTS" MODEL LFMMV. PROVIDE CHROME PLATED GRID STRAINER, MCQUIRE FITTINGS #158-LK RIGID SUPPLIES, LOOSE KEY STOPS, CAST SET SCREW ESCUTCHEONS, 1-1/4"x1-1/2" CAST BRASS ADJUSTABLE P-TRAP W/CLEANOUT, NIPPLE AND ESCUTCHEON. MOUNT SINK 34"AFF. SINK DRAIN AND WATER SUPPLIES TO BE COVERED WITH TRUEBRO MODEL 102 INSULATION.
P-4	COUNTER TOP SINK – JUST MODEL No. SL-ADA-2019-16-GR SINGLE BOWL 304 STAINLESS STEEL. PROVIDE "T&S" FAUCET B-2866-05FC-CR WITH RIGID GOOSENECK W/PLAIN END SPOUT (LAMINAR), 1.6 GPM FLOW CONTROL IN BASE OF GOOSENECK, CERAMIC CARTRIDGES, 4" WRIST BLADE HANDLES. PIPING UNDER SINK TO BE INSULATED WITH "TRUEBRO" INSULATION KIT MODEL 102E-Z. JUST J-35-55F STAINLESS STEEL GRID DRAIN, PRE-INSTALLED, JT-150P-TRAP 1 1/2" CHROME PLATED CAST BRASS. 1/2" CHROME PLATED STOPS. BELOW DECK THERMOSTATIC TEMPERATURE MIXING VALVE "WATTS" MODEL LFMM
P-5	SCRUB STATION – AMSCO FLEXMATIC SRCUB STATION. TWO STATIONS WITH BUILT IN THERMOSTATIC MIXING VALVE, WITH OPTIONAL INFRA-RED WATER SENDOR, DIGITAL TIMER, EYE WASH FIXTURE, KNEEE ACTIVATED PANELS AND HANDS FREE SOAP DISPENSER.

PLUMBING FIXTURE SCHEDULE

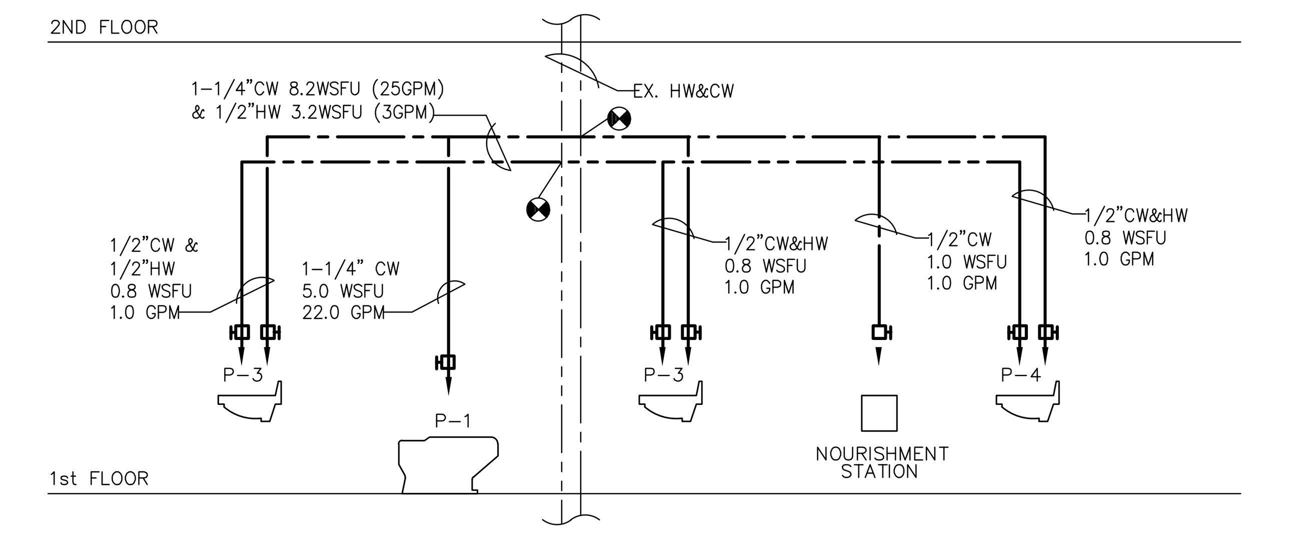
ITEM NO.	ITEM	DESCRIPTION	BRANCH PIPING CONNECTION C.W.	H.W.	DRAIN	TRAP	VENT	DFU	WSFU COLD	HOT	TOTAL	REMARKS
P-1	WATER CLOSET	WALL HUNG WATER CLOSET SENSOR FLUSH VALVE △1 REF #1	1-1/4"	---	3"	----	2"	4	5	---	5	SEAT HEIGHT 18"AFF
P-2	LAVATORY HANDICAPPED	WALL HUNG WITH ELECTRIC FAUCET	1/2"	1/2"	1 1/4"	1 1/4" x 1 1/2"	1 1/2"	1	0.80	0.80	1.0	INSULATE PIPING UNDER LAV. PROVIDE 6VOLT DC PLUG-IN ADAPTOR
P-3	WALL HUNG SINK	WALL HUNG WITH ELECTRIC FAUCET	1/2"	1/2"	1 1/4"	1 1/4" x 1 1/2"	1 1/2"	1	0.80	0.80	1.0	INSULATE PIPING UNDER SINK PROVIDE 6VOLT DC PLUG-IN ADAPTOR
P-4	COUNTER SINK	COUNTERTOP SINK HANDICAPPED WITH GOOSENECK FAUCET	1/2"	1/2"	1 1/4"	1 1/4" x 1 1/2"	1 1/2"	1	0.80	0.80	1.0	INSULATE PIPING UNDER SINK
P-5	SCRUB STATION	AMSCO FLEXMATIC SCRUB STATION	1/2"	1/2"	1 1/2"	1 1/2" x 1 1/2"	1 1/2"	1	0.80	0.80	1.0	INSULATE PIPING UNDER SINK

NOTE:
ALL SINKS TO BE SUPPLIED WITH WATTS 1/2" SERIES LFMMV THERMOSTATIC MIXING VALVE, FINAL LOCATION TO BE DETERMINED IN FIELD



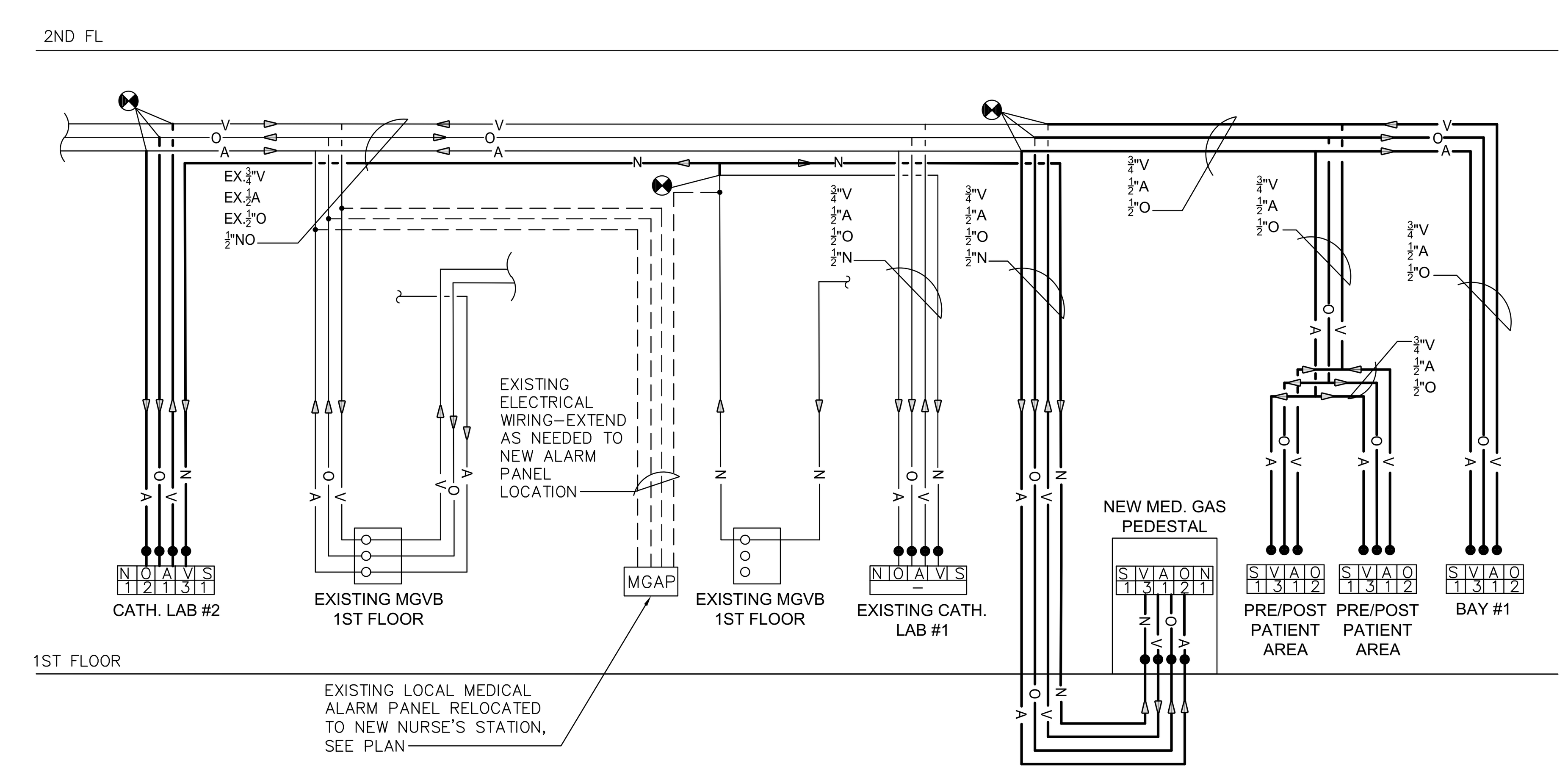
SANITARY RISER DIAGRAM

SCALE: NONE



WATER SUPPLY RISER DIAGRAM

SCALE: NONE



MEDICAL GAS RISER DIAGRAM

SCALE: NONE

△1 REF #2

Department of Community Affairs
Construction Project Review
Project No: 5228-22
Partial Plumbing release
Plumbing
Brian Hendricks
Released: 02/13/23
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

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Issuance / Revision

No.	Date	Description
△1	01/25/23	PER DCA COMMENTS

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Posen Project No.: 22119	DCA Number: NJPRP-14794	
Submission: PROGRESS SET NOT FOR CONSTRUCTION		
Drawing: PLUMBING: SPECIFICATIONS, SYMBOLS LIST & GENERAL NOTES		
Drawn By: DA	Checked By: JA	Date: 8/10/2022
Scale: 1/4" = 1'-0"	Dwg No.Issue No.: P-0.1	Drawing: of