HOUSING AUTHORITY of the CITY of PITTSBURGH

DEVELOPMENT AND MODERNIZATION DEPARTMENT 100 ROSS STREET, 2ND FLOOR PITTSBURGH, PENNSYLVANIA 15219

HACP MANAGEMENT #7381 **TASK ORDER #57 GUALTIERI MANOR HVAC PIPING SYSTEM REPLACEMENT, PA 1-47**

MARCH 22, 2019

SITE MAP GUALTIERI HIGH RISE 2125 LOS ANGELES AVENUE PITTSBURGH, PA 15216



DRAWING INDEX

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	H-1	HVA
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PROJECT TEAM:





SCRIPTION

/ERSHEET

- AC NOTES, SYMBOLS, LEGENDS AND DETAILS
- AC DEMOLITION PLANS AND NOTES
- AC DEMOLITION PLANS AND NOTES
- AC NEW WORK PLANS AND NOTES
- AC NEW WORK PLANS AND NOTES

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DRAWING NUMBER

SHEET NUMBER 1 OF 6

GENERAL NOTES:

- 1. THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EXACT LOCATION OF EQUIPMENT, PIPING, DUCTWORK AND OTHER DEVICES UNLESS DIMENSIONS ARE GIVEN OR OTHERWISE IMPLIED. CONTRACTOR SHALL CONFORM TO ACTUAL BUILDING CONDITIONS.
- 2. TRANSITIONS, OFFSETS, DROPS, ETC. SHALL BE PROVIDED AS REQUIRED FOR DUCTWORK AND PIPING, WHETHER SHOWN OR NOT ON PLANS. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCES.
- 3. PROVIDE ACCESS PANELS/DOORS WHERE REQUIRED FOR ADEQUATE ACCESS TO ALL CONCEALED EQUIPMENT, VALVES, DAMPERS AND CONTROLS WHETHER SHOWN OR NOT ON DRAWINGS. 4. INSTALL DUCTWORK AND PIPING MAINS TIGHT TO UNDERSIDE OF STRUCTURE UNLESS OTHERWISE
- INDICATED. 5. LOCATION OF THERMOSTATS AND CONTROL PANELS SHALL BE AS SHOWN ON DRAWINGS OR AS DIRECTED
- IN FIELD. 6. MANUAL AIR VENTS SHALL BE PROVIDED AT HIGH POINTS IN CLOSED LOOP PIPING SYSTEMS AT EVERY 100 FOOT LENGTH OF PIPING WHETHER SHOWN ON DRAWINGS OR NOT.
- 7. SYSTEMS SHALL BE DESIGNED AND INSTALLED FOR EFFICIENT UTILIZATION OF ENERGY IN ACCORDANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
- 8. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
- 9. ALL PIPING DISCONNECTED AND INTENDED FOR RE-USE SHALL BE TEMPORARILY CAPPED UNTIL NEW CONNECTIONS ARE COMPLETED.
- 10. CONTRACTOR SHALL REFER TO FLOW DIAGRAMS, DETAILS, PLANS AND SPECIFICATIONS FOR ALL MECHANICAL SYSTEM CONNECTIONS.
- 11. SLEEVES SHALL BE INSTALLED AT ALL WALL AND FLOOR PENETRATIONS FOR PIPING AND DUCTWORK WHETHER SHOWN ON DRAWINGS OR NOT.
- 12. PATCH AND SEAL ALL OPENINGS IN FLOORS, WALLS AND ROOF RESULTING FROM DEMOLITION OR NEW WORK WITH MATERIALS AND FINISHES TO MATCH EXISTING.
- 13. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. 14. ALL WORK SHALL BE PERFORMED IN AN ORDERLY MANNER WITHOUT DAMAGE TO EXISTING
- SYSTEMS/STRUCTURES. 15. CONTRACTOR SHALL USE CARE WHEN PERFORMING SELECTIVE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO BUILDING FINISHES, EQUIPMENT, STRUCTURE, AND MEP SYSTEMS AND EQUIPMENT. SHOULD ANY DAMAGE OCCUR, THE CONTRACTOR SHALL RESTORE ITEMS/AREA TO ITS ORIGINAL CONDITION.
- 16. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER ANY UTILITY OUTAGES.
- 17. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING ACOUSTICAL CEILING TILE AND GRID AS NECESSARY FOR ALL DEMOLITION AND NEW INSTALLATION WORK. WHERE CEILING TILE, GRID AND ALL ITEMS ASSOCIATED WITH THE CEILING TILES ARE DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THE CEILING TILE AND REPAIRING/REPLACING CEILING GRID TO MATCH CONDITION OF EXISTING CEILING PRIOR TO THE DAMAGE.

PIPING SYMBOLS

PIPING SYMBOLS		$\left(\times \right)$	SPECIFIC DR
ē	GAGE COCK	Ū.	THERMOSTA
i&i	PLUG VALVE	A	
	GLOBE VALVE	H-1	SHEET LOCA
	BALL VALVE		
——————————————————————————————————————	CHECK VALVE		
——————————————————————————————————————	GATE VALVE		
I[i	BUTTERFLY VALVE		
<u> </u>	FLOW BALANCING VALVE		
	THREE WAY AUTO CONTROL VALVE		
	TWO WAY AUTO CONTROL VALVE		
—— <u> </u>	TRIPLE DUTY VALVE		
]	CAPPED LINE		
>	CONCENTRIC REDUCER		TOF
>>	DIRECTION OF FLOW		
	DRAIN VALVE W/HOSE BIBB END (3/4")		
	ELBOW TURNING DOWN		2ND FLOOR CEILING
o	ELBOW TURNING UP	\$	
Ĵ	45° OR 90° BOTTOM CONNECTION		dts
	45° OR 90° TOP CONNECTION		
`	PIPE BREAK		·
Q	PRESSURE GAGE		
	SIDE CONNECTION		
—— ,/ ——	STRAINER		1ST FLOOR
Ň			(
T	THERMOMETER	5	DUAL TEMP
	UNION - SCREWED	H1	SCALE: NTS
	AUTOMATIC AIR VENT		
 	TEMPERATURE SENSOR		
T	FLOW SENSOR		
<u>ــــــــــــــــــــــــــــــــــــ</u>	MANUAL AIR VENT		

ABBREVIATIONS:

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X-X

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AS	AIR SEPARATOR
В	BOILER
С	CONDENSATE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CP	CONDENSATE PUMP
CV	CONVECTOR
CW	CITY WATER
DTP	DUAL TEMPERATURE PUMP
DTR	DUAL TEMPERATURE RETURN
DTS	DUAL TEMPERATURE SUPPLY
EX	EXISTING
FC	FAN COIL
FT	FIN-TUBE
GPM	GALLONS PER MINUTE
H#	HOT WATER RISER NUMBER
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HP	HORSEPOWER
HWP	HOT WATER PUMP
MAV	MANUAL AIR VENT
MBH	1000 BTU/H
PF	POT FEEDER
R#	DUAL TEMP RISER NUMBER
S#	FAN NUMBER
S-R	SUPPLY AND RETURN
ST	STORAGE TANK
UH	UNIT HEATER
WH	WATER HEATER
TYP	TYPICAL

GENERAL SYMBOLS

	DETAIL NUMBER SHEET LOCATION
	EQUIPMENT TAG FOR SCHEDULES
	NEW TO EXISTING CONNECTION-DEVIC BEYOND THIS SYMBOL ARE EXISTING BE REMOVED AND REPLACED PER THE LINE WEIGHTS SHOWN.
	SPECIFIC DRAWING NUMBERED NOTE
	THERMOSTAT
•	SECTION LETTER SHEET LOCATION



6 FIRST FLOOR FAN COIL DETAIL H1 SCALE: NTS

FAN COIL





HHWS (------





YMBOL ARE EXISTING TO ND REPLACED PER THE

NG CONNECTION-DEVICES

DN



THI SCALE: NTS

MP TURN IPPLY





1 FIRST FLOOR NORTH PIPING DEMOLITION PLAN H2 SCALE: 1/4" = 1'-0"

DEMOLITION CONSTRUCTION NOTES:

- SURVEY INFORMATION AND SHALL BE FIELD VERIFIED BY CONTRACTOR.

DEMOLITION DESIGN NOTES:

1. ENGINEER OF RECORD IS NOT RESPONSIBLE FOR WORK INVOLVING CEILINGS BEYOND THAT NOTED AND/OR ANY HAZARDOUS MATERIAL REVIEW/TESTING/ABATEMENT.

1. PRIOR TO ALL PIPE REMOVAL, FIELD VERIFY EXISTING PIPE SIZES FOR VERIFICATION TO CONFIRM NEW PIPE INSTALLATION.

2. CONTRACTOR SHALL DISCONNECT/TEMPORARILY MOVE TRASH COMPACTOR AND ASSOCIATED OBSTRUCTIONS AS REQUIRED TO ACCESS PIPING FOR DEMOLITION AND NEW INSTALLATION. COORDINATE WITH HACP PRIOR TO DISCONNECTION ACTIVITY. RETURN TRASH COMPACTOR AND ASSOCIATED EQUIPMENT TO CURRENT CONDITION UPON COMPLETION OF NEW WORK.

3. CONTRACTOR SHALL DRAIN ENTIRE SYSTEM PRIOR TO ANY DEMOLITION WORK. 4. CONTRACTOR SHALL ENSURE ENTIRE WORK AREA IS PROTECTED FROM DAMAGE

DURING DEMOLITION PROCESS. 5. PIPING LAYOUT SHOWN IS BASED UPON EXISTING DRAWINGS AND LIMITED SITE

6. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE EXISTING ACOUSTICAL CEILING TILE AND GRID AS REQUIRED FOR ALL DEMOLITION AND NEW INSTALLATION WORK. WHERE CEILING TILE, GRID AND ALL ITEMS ASSOCIATED WITH THE CEILING TILES ARE DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE THE CEILING TILE AND REPAIR/REPLACE THE CEILING GRID TO MATCH THE CONDITION OF THE EXISTING CEILING PRIOR TO THE DAMAGE.

DEMOLITION CODED NOTES:

1 REMOVE EXISTING DUAL TEMPERATURE SUPPLY AND RETURN PIPING AND CONDENSATE DRAIN PIPING, TO INCLUDE ALL VALVES, AT BOTTOM OF RISERS BELOW CEILING AND PREPARE FOR CONNECTION TO NEW. ALL EXISTING RISERS SHALL REMAIN. SEE DETAIL NO. 5, DWG. H1.

(2) REMOVE HEATING HOT WATER SUPPLY AND RETURN PIPING AND ALL ASSOCIATED EQUIPMENT FROM MAINS TO THE FINTUBE CONNECTIONS AND PREPARE FOR CONNECTION TO NEW. SEE DETAIL NO. 1, DWG. H1. WHERE FIN TUBE IS SUPPORTED FROM EXISTING PIPING, REMOVE FIN-TUBE AND PREPARE FOR RE-INSTALLATION IN EXISTING LOCATION AS NECESSARY

(3) REMOVE HEATING HOT WATER SUPPLY AND RETURN PIPING AND ALL ASSOCIATED EQUIPMENT FROM MAINS TO NEAR WALL AND PREPARE FOR CONNECTION TO NEW. SEE DETAIL NO. 2, DWG. H1.

(4) REMOVE HEATING HOT WATER SUPPLY AND RETURN PIPING, SUPPORTS, INSULATION AND ALL ASSOCIATED EQUIPMENT AT FIRST FLOOR CEILING.

5 REMOVE DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING, SUPPORTS, INSULATION AND ALL ASSOCIATED EQUIPMENT AT FIRST FLOOR CEILING.

6 REMOVE CONDENSATE PIPING, SUPPORTS, AND ALL ASSOCIATED EQUIPMENT TO SAFE WASTE DRAIN. DRAIN TO REMAIN FOR RE-USE.

(7) EXISTING PIPE WALL OPENINGS TO REMAIN FOR RE-USE.

8 CONTRACTOR SHALL REMOVE EXISTING HARD PLASTER/DRYWALL CEILING AS NECESSARY TO EXPOSE AND DEMOLISH EXISTING PIPING. CONTRACTOR SHALL DOCUMENT THE CONDITION OF THE EXISTING CEILING PRIOR TO DEMOLITION AND RETURN DEMOLISHED AREA OF THE CEILING TO THE CONDITION PRIOR TO THE DEMOLITION, UPON COMPLETION OF THE NEW WORK.

9 REMOVE HEATING HOT WATER SUPPLY AND RETURN PIPING AND ALL ASSOCIATED EQUIPMENT FROM MAINS TO THE AIR HANDLING UNIT CONNECTIONS AND PREPARE FOR CONNECTION TO NEW. SEE DETAIL NO. 4, DWG. H1.

(10) REMOVE HEATING HOT WATER SUPPLY AND RETURN PIPING AND ALL ASSOCIATED EQUIPMENT FROM MAINS TO THE UNIT HEATER CONNECTIONS AND PREPARE FOR CONNECTION TO NEW. SEE DETAIL NO. 3, DWG. H1.

(11) REMOVE CONDENSATE HOSE AND SUPPORTS FROM CONDENSATE PUMP DISCHARGE TO POINT OF DISCHARGE. EXISTING PUMP ASSEMBLY AND INLET HOSE TO REMAIN.



AND

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3/22/19

ISCALE

WING NO

H2

AS SHOWN

ROJECT NO.

SUE DATE

BEYOND THAT NOTED AND/OR ANY HAZARDOUS MATERIAL

- ASSOCIATED OBSTRUCTIONS AS REQUIRED TO ACCESS PIPING FOR DEMOLITION AND NEW INSTALLATION. COORDINATE WITH HACP PRIOR TO DISCONNECTION ACTIVITY. RETURN TRASH COMPACTOR AND ASSOCIATED EQUIPMENT TO





1 FIRST FLOOR NORTH PIPING NEW WORK PLAN H4 SCALE: 1/4" = 1'-0"

NEW WORK DESIGN NOTES:

1. ENGINEER OF RECORD IS NOT RESPONSIBLE FOR WORK INVOLVING CEILINGS BEYOND THAT NOTED AND/OR ANY HAZARDOUS MATERIAL REVIEW/TESTING/ABATEMENT.

NEW WORK CONSTRUCTION NOTES:

- 1. CONTRACTOR SHALL RE-CONNECT/RE-INSTALL/REPLACE ALL EXISTING EQUIPMENT/INTERFERENCES MODIFIED UPON COMPLETION OF NEW PIPING AND ASSOCIATED WORK.
- 2. CONTRACTOR SHALL CHEMICALLY TREAT AND FILL ENTIRE PIPING SYSTEM FOR START UP.
- 3. CONTRACTOR SHALL ENSURE ENTIRE WORK AREA IS PROTECTED FROM DAMAGE DURING NEW WORK INSTALLATION PROCESS.
- 4. CONTRACTOR SHALL RE-INSALL EXISTING CEILING TILE AND GRID AS REQUIRED UPON COMPLETION OF NEW WORK INSTALLATION.
- 5. CONTRACTOR SHALL ENSURE THAT ANY WALL OR FLOOR SURFACE DAMAGE IS RESTORED TO MATCH EXISTING CONDITION.
- 6. CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE EXISTING ACOUSTICAL CEILING TILE AND GRID AS REQUIRED FOR ALL DEMOLITION AND NEW INSTALLATION WORK. WHERE CEILING TILE, GRID AND ALL ITEMS ASSOCIATED WITH THE CEILING TILES ARE DAMAGED. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE THE CEILING TILE AND REPAIR/REPLACE THE CEILING GRID TO MATCH THE CONDITION OF THE EXISTING CEILING PRIOR TO THE DAMAGE.
- 7. INSTALL MANUAL AIR VENTS AT SYSTEM HIGH POINTS OR AS REQUIRED FOR SYSTEM VENTING.

NEW WORK CODED NOTES:

- (1) CONNECT NEW DUAL TEMPERATURE SUPPLY AND RETURN PIPING, TO INCLUDE ALL VALVES, SIZED AS SHOWN, TO EXISTING AT BOTTOM OF RISERS. SEE DETAIL NO. 5, DWG. H1. INSULATE AND SUPPORT PIPING AS SPECIFIED. BALANCE RISERS TO FLOW RATE SHOWN.
- CONNECT NEW 3/4" CONDENSATE DRAIN PIPING TO EXISTING AT BOTTOM OF RISER WITH REMOVABLE CAPPED TEE FITTING (CLEANOUT) FOR FLUSHING. SEE DETAIL NO. 5, DWG. H1. SUPPORT PIPING AS SPECIFIED.
- (2) CONNECT NEW HEATING HOT WATER SUPPLY AND RETURN PIPING, SIZED AS SHOWN, AND ALL ASSOCIATED EQUIPMENT AS SHOWN IN DETAIL NO. 4, DWG. H1, TO THE EXISTING AIR HANDLING UNIT CONNECTIONS. INSULATE AND SUPPORT PIPING AS SPECIFIED. BALANCE AHU FLOW RATE AS SHOWN.
- (3) CONNECT NEW HEATING HOT WATER SUPPLY AND RETURN PIPING, SIZED AS SHOWN, AND ALL ASSOCIATED EQUIPMENT AS SHOWN IN DETAIL NO. 3, DWG. H1, TO THE EXISTING UNIT HEATER CONNECTIONS. INSULATE AND SUPPORT PIPING AS SPECIFIED. BALANCE UNIT HEATER FLOW RATE AS SHOWN.
- (4) CONNECT NEW HEATING HOT WATER SUPPLY AND RETURN PIPING, SIZED AS SHOWN, AND ALL ASSOCIATED EQUIPMENT AS SHOWN IN DETAIL NO. 1, DWG. H1, TO THE EXISTING FIN TUBE CONNECTIONS. WHERE REMOVED DURING DEMOLITION, RE-INSTALL EXISTING FIN-TUBE IN PREVIOUS LOCATION AT CEILING. INSULATE AND SUPPORT PIPING AS SPECIFIED. BALANCE FIN TUBE FLOW RATE AS SHOWN.
- (5) CONNECT NEW HEATING HOT WATER SUPPLY AND RETURN PIPING, SIZED AS SHOWN, AND ALL ASSOCIATED EQUIPMENT AS SHOWN IN DETAIL NO. 2, DWG. H1, DOWN WALL TO THE EXISTING CABINET UNIT HEATER CONNECTIONS. INSULATE AND SUPPORT PIPING AS SPECIFIED. BALANCE FLOW RATE AS SHOWN. SEAL ALL PIPE PENETRATIONS AS SPECIFIED IN 15010.
- (6) INSTALL NEW DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING, SIZED AS SHOWN, SUPPORTS, INSULATION AND ALL ASSOCIATED EQUIPMENT AT FIRST FLOOR CEILING. ROUTING IS SCHEMATIC AND SHALL BE FIELD VERIFIED AND INSTALLED AS SPECIFIED.
- (7) INSTALL NEW HEATING HOT WATER SUPPLY AND RETURN PIPING, SIZED AS SHOWN, SUPPORTS, INSULATION AND ALL ASSOCIATED EQUIPMENT AT FIRST FLOOR CEILING. ROUTING IS SCHEMATIC AND SHALL BE FIELD VERIFIED AND INSTALLED AS SPECIFIED.
- (8) ROUTE NEW PIPING THRU EXISTING PIPE PENETRATIONS AS POSSIBLE. CONTRACTOR SHALL MODIFY EXISTING OR PROVIDE NEW OPENINGS AS REQUIRED TO ACCOMMODATE NEW PIPE ROUTING. INSULATE (15260) PIPING THRU OPENING AND SEAL AROUND PIPE AT PENETRATIONS PER SPEC SECTION 15010.
- (9) INSTALL AND ROUTE NEW 3/4" CONDENSATE DRAIN PIPING, 1% MINIMUM SLOPE, TO NEAREST SAFE WASTE DRAIN. SUPPORT PIPING AS SPECIFIED. ROUTING IS SCHEMATIC AND SHALL BE FIELD VERIFIED AND INSTALLED AS SPECIFIED.
- (10) ROUTE NEW CONDENSATE PIPING FROM PUMP DISCHARGE UP TO CEILING AND INTO NEW 3/4" CONDENSATE DRAIN PIPING, 1% MINIMUM SLOPE, TO NEAREST SAFE WASTE DRAIN. SUPPORT PIPING AS SPECIFIED. ROUTING IS SCHEMATIC AND SHALL BE FIELD VERIFIED AND INSTALLED AS SPECIFIED.



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3/22/19

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SUE DATE

NEW WORK DESIGN NOTES:

BEYOND THAT NOTED AND/OR ANY HAZARDOUS MATERIAL REVIEW/TESTING/ABATEMENT.

- ASSOCIATED WORK.
- START UP.
- DURING NEW WORK INSTALLATION PROCESS.
- UPON COMPLETION OF NEW WORK INSTALLATION.
- RESTORED TO MATCH EXISTING CONDITION.
- WHERE CEILING TILE, GRID AND ALL ITEMS ASSOCIATED WITH THE CEILING TILES ARE DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE THE CEILING TILE AND REPAIR/REPLACE THE CEILING GRID TO MATCH THE CONDITION OF THE EXISTING CEILING PRIOR TO THE DAMAGE.



NEW WORK CODED NOTES: