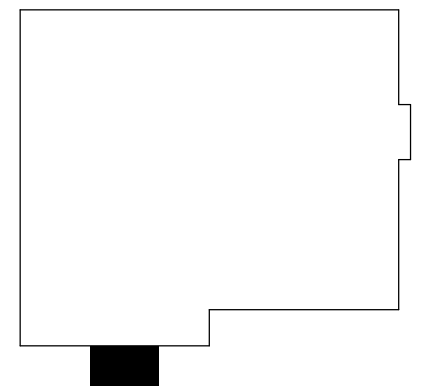


- ## GENERAL NOTES

1. REFER TO M-001 FOR MECHANICAL ABBREVIATIONS, LEGEND, SYMBOLS, AND GENERAL NOTES.
2. TEMPORARY CHILLER WORK MUST BE SEQUENCED (RECOMMENDED BY KEYED NOTE ORDER) AND COMPLETED SUCH THAT BUILDING SERVICE IS NOT INTERRUPTED FOR MORE THAN 48 HOURS.
3. REMOVE AND DISPOSE OF ALL EXISTING EXTERIOR CHW AND LCW PIPING, FITTINGS AND APPURTENANCES SERVING EXISTING CHILLER AS REQUIRED TO PERFORM NEW WORK.
4. EXISTING CHILLED WATER MAKEUP WATER CONNECTION, PRV, BACKFLOW PREVENTER, AND EXPANSION TANK MUST REMAIN CONNECTED TO CHILLED WATER SYSTEM WHILE TEMPORARY CHILLER IS IN OPERATION.
5. SUBCONTRACTOR MUST SAMPLE CHILLED WATER FOR CHEMICAL TREATMENT ANALYSIS PRIOR TO CONSTRUCTION START. FORWARD REPORT AND ANY RECOMMENDATIONS FOR RESPONSE.
6. PROVIDE LOCKOUT-TAGOUT PLAN FOR APPROVAL PRIOR TO DEMOLITION START.



## KEYED NOTES

- ① EXISTING LCWV AND CHWV PIPING PENETRATIONS THROUGH EXTERIOR WALL TO REMAIN.
- ② EXISTING CHILLER SHELTER WALL TO REMAIN.
- ③ INSTALL SELECT CHWS, CHWR, LCWS, LCWR PIPING AND LINE-SIZE ISOLATION VALVES TO EXTENTS INDICATED IN D1 / M-002 (SEE KEYED NOTES 7 THROUGH 13) WITH FIRST SYSTEM SHUTDOWN AT BEGINNING OF CONSTRUCTION PROJECT. ALL WORK REQUIRING CHILLED WATER SYSTEM SHUTDOWN MUST BE ACCOMPLISHED IN THIS OUTAGE. REFER TO M-413 FOR ADDITIONAL WORK REQUIRED DURING FIRST SHUTDOWN. WORK SHALL BE ACCOMPLISHED WITHOUT DRAINING FULL SYSTEM. FREEZING PIPE OR USING HOT TAP PIPE PLUG INSERTION SOLUTION IS ACCEPTABLE.
- ④ EXTEND NEW CHWS AND CHWR PIPING THROUGH EXISTING CHILLER SHELTER WALL TO TEMPORARY CHILLER CONNECTIONS WITH BLIND FLANGED TERMINATIONS AT 12" ABOVE GRADE. APPLY SEALANT AROUND NEW PIPE PENETRATIONS.
- ⑤ FURNISH, INSTALL, AND STARTUP TEMPORARY 80 TON (NOMINAL) AIR-COOLED CHILLER (WITH INTEGRAL PUMP PACKAGE). RETURN RENTAL CHILLER ONLY AFTER OWNER AND ENGINEER ACCEPTANCE OF NEW WATER-COOLED CHILLER AND CHILLED WATER PUMPS.
- ⑥ FURNISH AND INSTALL FLEXIBLE 4" CHWS AND CHWR HOSES TO TEMPORARY CHILLER.

**KEYED NOTES CONTINUED; DETAIL D1 ONLY**

- 7 FURNISH AND INSTALL (2) NEW 4"Ø PIPING TEES FOR CHWS AND CHWR CONNECTIONS TO TEMPORARY CHILLER AND NEW CHILLER.
- 8 FURNISH AND INSTALL NEW 4"Ø CHW ISOLATION BUTTERFLY VALVE.
- 9 FURNISH AND INSTALL NEW 3"Ø LCW ISOLATION BUTTERFLY VALVE.
- 10 FURNISH AND INSTALL TEMPORARY BLIND FLANGE CONNECTION.
- 11 FOR PERMANENT LCW CONNECTIONS TO CHILLER.
- 12 BUILDING EXTERIOR.
- 13 EXISTING STEEL CHILLER YARD STRUCTURE.

HYDRONIC PIPING MATERIAL SCHEDULE			
PIPING SYSTEM	SIZE	MATERIAL SPECIFICATION	SHUTOFF VALVE
CHILLED WATER SUPPLY & RETURN	2" AND SMALLER	COPPER, TYPE L, ASTM B88, SOLDERED JOINTS	BALL VALVE, BRONZE ALLOY BODY, THREE PIECE FULL PORT, SOLDER ENDS
	2-1/2" - 3"	COPPER, TYPE L, ASTM B88, BRAZED JOINTS	BUTTERFLY VALVE, CARBON STEEL BODY, CLASS 150 FLANGE OR LUG STYLE
	4" AND LARGER	CARBON STEEL, SCHEDULE 40, ASTM A53 GRADE B, WELDED JOINTS	
LOW CONDUCTIVITY WATER SUPPLY & RETURN	2" AND SMALLER	COPPER, TYPE L, ASTM B88, SOLDERED JOINTS	BALL VALVE, BRONZE ALLOY BODY, THREE PIECE FULL PORT, SOLDER ENDS
	2-1/2" - 3"	COPPER, TYPE L, ASTM B88, BRAZED JOINTS	BUTTERFLY VALVE, CARBON STEEL BODY, CLASS 150 FLANGE OR LUG STYLE
	4" AND LARGER	CARBON STEEL, SCHEDULE 40, ASTM A53 GRADE B, WELDED JOINTS	
HEATING HOT WATER SUPPLY & RETURN	2" AND SMALLER	COPPER, TYPE L, ASTM B88, SOLDERED JOINTS	BALL VALVE, BRONZE ALLOY BODY, THREE PIECE FULL PORT, SOLDER ENDS
	2-1/2" - 3"	COPPER, TYPE L, ASTM B88, BRAZED JOINTS	BUTTERFLY VALVE, CARBON STEEL BODY, CLASS 150 FLANGE OR LUG STYLE

TEMPORARY CHILLER SCHEDULE (RCHSR)																
TAG NO.	NOMINAL COOLING CAPACITY (TONS)	EVAPORATOR				COMPRESSOR			ELECTRICAL				INSTALLED WEIGHT (LBS.)	BASIS OF DESIGN		NOTES
		FLUID TYPE	DESIGN FLOW (GPM)	EWT (DEG. F.)	LWT (DEG. F.)	TYPE	QUANTITY / CIRCUITS	REF TYPE	V	PH	MCA	MOCP		MFR	MODEL	
(T)432RCHSR01	80	WATER	192	55	45	SCROLL	1	R-134A	460	3	189	200	10300	TRANE	CGAM	ALL
NOTES: 1. UNIT IS TEMPORARY AND SHOULD BE USED ONLY TO PROVIDE CHILLED WATER BEFORE INSTALLATION AND STARTUP OF NEW CHILLER. 2. PROVIDE UNIT WITH INTEGRAL CIRCUIT BREAKER FOR OVERCURRENT PROTECTION AND DISCONNECTING MEANS. 3. PROVIDE UNIT WITH INTEGRAL PUMP PACKAGE. 4. PROVIDE UNIT WITH TRAILER AND TEMPORARY POWER CABLE AND HOSES OF SUFFICIENT LENGTH FOR INSTALLATION.																