NEW COOLING TOWER

EXISTING COOLING TOWER

EXISTING RELOCATED FENCE - SEE SHT. 5

REMOVE EXIST. FENCE SEE SHT. NO. 5

NOTE: SEE SHT. NO. 5 FOR ADDITIONAL TOWER & BASIN DETAILS

AIR INLET

ROOF HATCH

12" CWR UP TO TOWER CONN.

12" CWE UP TO TOWER CONN.

SUPPORT CWR PIPING FROM BASIN FLOOR

SUPPORT CWR PIPING FROM BASIN FLOOR

12" CWR UP TO TOWER CONNECTION

12" CWE UP TO TOWER CONNECTION

AIR INLET

12" FLOAT VALVE

3" C.W. FILL-FLUSH UP TO ABOVE TOP OF BASIN & SPILL THRU 4" HOLE

FLOAT OPERATED ON MAKE-UP VALVE IN PIT W/ H.O.A. CONTROLLER IN BASIN

1/2" BY-PASS INTO TOWER BASIN

1/4" WALL DRAIN

DN. TO SEWER

GAS METER & REG. LOOP (EXISTING)

6'-0" HIGH CHAIN LINK FENCE

8" GAS (EXISTING)

PORCH

3" C.W. IN C.I. VALVE BOX W/ COVER FLUSH W/ GRADE, 3" GATE & 3/4" DRAIN VALVE IN BOX. EXT. VALVE STEMS UP TO 1'-0" BLW. FIN. GRADE W/ CONTROL HANDLES.

BELOW GRADE

12" THRU FLOOR

12" CWS

12" CWR

CHILLED WATER PUMP #1

CHILLED WATER PUMP #2

CHILLED WATER PUMP #3

CONDENSER WATER PUMP #1

CONDENSER WATER PUMP #2

CONDENSER WATER PUMP #3

3" C.W. BLW. GRADE

3" TEE CONN. BLIND FLANGE

3" BLEED LINE

SEE SPEC. FOR C.W. STRAINERS

DROP NEW 3" BLEED LINE DN. & EXTEND TO EXISTING HUB DRAIN. VERIFY LOCATION

NEW CHILLED WATER PUMP NO. 4 - SET ON EXIST. CONC. PUMP PAD

REMOVE EXIST. CAP & CONN. NEW 1" C.W. - EXTEND AS SHOWN

1" C.W. QUICK-FILL LINE

CONTROL AIR CONN.

REMOVE EXIST. CAP & CONN. NEW 8" CR. EXTEND AS SHOWN

CR

NEW REFRIGERATION MACHINE #6 AS SPEC. - SET ON 6" HIGH REINF. CONC. PAD AND VIB. ISOL. AS SPEC.

A.A.V. DISCH. TO FD.

REFRIGERATION MACHINE STARTER SET ON CONC. PAD W/ CHAMFERED EDGES HEIGHT TO MATCH EXIST.

E.O.M. DRIP TRAP

2" CAPPED NIPPLE FOR FUTURE WATER TREATMENT

CONN. NEW 12" BY-PASS LINE INTO EXIST. 12" - VERIFY LOCATION

EXISTING REFRIG. MACHINE #1

EXIST. STARTER

CONNECT NEW 3" C.W. LINE INTO EXIST. 4" - VERIFY LOCATION ON JOBSITE

LIMIT OF MEZZ. ABOVE

CONN. NEW 12" CWR INTO EXIST. 10" CWR - VERIFY LOCN.

8" FROM MEZZ.

EXIST. AIR. BLOWER MACH. #3 (SCIENCE BLDG.)

EXIST. STARTER

MACHINE ROOM

SEE MEZZ PLAN

PIPING BELOW GRADE

10" MOTORIZED BUTTERFLY VAL. FOR BY-PASS AT 3 THRU FLR.

CHEM. FEEDERS FOR COND. WTR.

1/2" H.B. ON WALL 48" A.F.F.

8" GAS UP THRU MEZZ.

11" DN. TO EMERG. SHOWER

ELEC. WATER HEATER

EXH. FAN #1

EXIST. CARRIER MACH. #5 (CORR'N. MACH. ROOM)

RISER ABOVE GR. W/ SPLIT-STOP VAL.

FUTURE TRANSFORMER 48"x 48" W. WALL LOUVER

ELECTRICAL TRANSFORMERS

1 1/4" CWS & 3/4" DN. W/ 1/2" H.W. & 1" CWR DN. W/ 3/4" H.W. & 1" CWR DN. W.C.

NOTE: HOLD ALL PIPING UNDER MEZZ. HIGH AS POSSIBLE

CHEM. STO.

TOIL. 2

TOIL. 1

TESTING

STO.

10" x 10" E.R. 100 GPM

12" x 12" E.R. - 400 GPM

1" DRAIN DN. TO F.D.

3/4" H.P. - 86° A.F.F.

NOTE: SEE SHT. NO. 2 FOR LOCATION OF GRAVITY VENT ON MEZZ. ABOVE

DN. TO F.D.

2" CHS. CHR FROM ABOVE - OFFSET ABOVE CLG. 1 1/4" CW & 3/4" HW DN

3/4" CHS. CHR & D. UP TO UNIT ABOVE

CONTROL RM

CONTROL PANEL

PLANT

CHECK

ALDEN PRINTER

COLLECTOR MATRIC

OFFICE

RECEPTION

ABOVE CLG.

LIMIT OF MEZZ. ABOVE

EXIST. BOILER NO. 2

EXIST. BOILER NO. 1

FUTURE BOILER

CAP FOR FUTURE

REMOVE EXIST. CAP & CONN. NEW 8" CS & EXTEND AS SHOWN

FLOW ORIFICE

8" THRU ROOF

BOILER SAFETY RELIEF VALVE

NON-RETURN VALVE

EXPANSION TANK

8" EXP. DRUM CONN. TO TANK W/ VALVED CONN.

8" VENT THRU ROOF

BOILER SAFETY RELIEF VALVE

NON-RETURN VAL.

EXISTING CONDENSATE STORAGE TANK

WATER FEEDER & MAKE-UP VAL.

8" BY PASS

11/4" VENT THRU RF

DEAERATOR

CONVERTOR

2" FROM PUMPS BELOW

2" FROM OVERFLOW

1" DRIP TRAP

1" H.P. DRIP TRAP

4" STEAM HEADER

1" 100# STM. & 1/2" 100# COND. DN. TO BOILER

1" OIL LINES DN. TO BOILER

4" GAS DN. TO BOILER

2 1/2" DN. TO BOILER

55'-0" Φ STACK

3/4" DN. TO BOILER

NOTE: FOR BOILER BLOW DOWN

FUT. CHEM. FEEDER

CHEM. FEEDER FOR BOILER #2

1/2" H.B. (SOFT WTR.) ON WALL 48" A.F.F. @ EA. CHEM. FEEDER

CHEM. FEEDER FOR BOILER #1

CHEM. FEEDER FOR CONDENSATE

1 1/4" DRAINS

PROVIDE 1 1/2" B. STOP COCK IN DROP FROM BLDG. @ PRESS. REGULATOR

DROP BELOW GRADE 4" GAS LINE FOR CAMPUS

WATER FEEDER & MAKE UP VAL.

COND. TRANSFER PUMP #1

COND. TRANSFER PUMP #2

PIPING DN. INTO PIPE TUNNEL

STOP VALS w/ Φ 5'-0" A.F.F.

4" CW SERVICE

EXISTING UNDERGROUND OIL TANK

SUPPLY & RET. TO TANK CONNS. CLEAR OF CONC. PAD

8" OIL FILL CONN. - SET IN CONC. PAD

24" Φ MANHOLE - SET IN CONC. PAD

APPROX. 4'-0" x 6'-0" x 6" THK. CONC. PAD FLUSH w/ FIN. GR.

12" GAUGE OPNG. - SET IN CONC. PAD

2" C.W. LINE TO TANK 1" AIR CHARGE LINE DN. TO TANK

20" DN. TO EXIST. TANK

2 1/2" SUCTION HEADER

OIL LINE BELOW GRADE

1" VENT UP THRU ROOF

12" RETURN HEADER

OIL PUMP

WATER SOFTENER

4" BY-PASS LINE UP

LIMIT OF PLATFORM ABOVE

11/2" RELIEF UP TO DEAERATOR

RELIEF ORIFICE

6" FROM DEAERATOR ABOVE W/ 4" TO EA. FEED PUMP

4" PUMP COND.

4" STM.

12" CS

12" CR.

B.L.R. FEED PUMP #1

B.L.R. FEED PUMP #2

A.A.V. DISCHARGE TO FD

STOP VALS W/ Φ 5'-0" A.F.F.

PIPING DN. IN TUNNEL

PRESS. RED. STATION #1

SAFETY RELIEF VAL. W/ FULL SIZE DISCH. THRU RF.

NOTE: BOILER FEED PUMPS ON FLOOR BELOW DEAERATOR PLATFORM - SEE PARTIAL FLOOR PLAN

MECH. SYMBOLS

- G — GAS LINE
- C.W. — COLD WATER
- STEAM
- CONDENSATE
- P — PUMPED CONDENSATE
- H.B. — HEATING WATER SUPPLY
- H.R. — HEATING WATER RETURN
- C.S. — CHILLED WATER SUPPLY
- C.R. — CHILLED WATER RETURN
- C.W.S. — CONDENSER WATER SUPPLY
- C.W.R. — CONDENSER WATER RETURN
- PIPE ANCHOR
- FLEXIBLE CONN. (PIPE LINE)
- TWO WAY VALVE (MOTORIZED)
- THREE WAY VALVE (MOTORIZED)
- THREE WAY VALVE (MANUAL)
- GATE VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- BALANCE COCK
- ECCENTRIC REDUCER (SOC. RED.)
- CONCENTRIC REDUCER
- STRAINER
- VALVE IN VERTICAL (TYPE AS NOTED)
- DIRECTION OF FLOW
- DIRECTION OF PITCH DOWN
- UNION
- FLOAT & THERMOSTATIC TRAP
- BUCKET TRAP
- THERMOSTAT
- THERMOSTAT W/ GUARD
- GRILLE
- REG. — REGISTER
- ER — EXHAUST REGISTER
- S.M. — SHEET METAL
- A.A.V. — AUTOMATIC AIR VENT
- M.A.V. — MANUAL AIR VENT
- F.L. — FLOW LINE
- B.S. — BEAM SLEEVE
- FIRESTAT
- THERMOMETER
- THERMOMETER WELL
- VALVE PRESS. GAUGE CONN.

ALL SYMBOLS SHOWN IN SYMBOL LIST ARE NOT NECESSARILY USED.

PARTIAL FLOOR PLAN - AREA BELOW DEAERATOR PLATFORM (EXISTING)

SCALE: 1/4" = 1'-0"

CENTRAL PLANT FLOOR PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. NEW EQUIPMENT TO BE INSTALLED IS SHOWN SHADED THUS: [ ]
2. NOTES THAT REFER TO NEW EQUIPMENT, PIPES, ETC., ARE SHOWN THUS: [NOTE]
3. EXISTING EQUIPMENT & SYSTEMS ARE SHOWN FOR CONTRACTORS' INFORMATION. VERIFY ALL DIMENSIONS PRIOR TO BEGINNING WORK.

CENTRAL PLANT FLOOR PLAN - MECHANICAL

ADDITIONS & ALTERATIONS TO CENTRAL HEATING & COOLING PLANT FOR MIDWESTERN UNIVERSITY

WICHITA FALLS, TEXAS

EMIL E. FRIBERG 22565 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

LOVE, FRIBERG & ASSOCIATES, INC. CONSULTING ENGINEERS

FORT WORTH, TEXAS

DRAWN: MPC	DATE: 18 MAY 70	JOB NO. 7500G	SHEET 1 OF 5
CHECKED: EM			