

- GENERAL AND ACQUSTIC NOTES:**
- 1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC AND SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
 - 2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
 - 3) REFER TO ACQUSTIC ENGINEER'S REPORT FOR ACQUSTIC TREATMENT REQUIRED.
 - 4) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE-PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
 - 5) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3-13-1.
 - 6) THE FIRE HOSE CABINETS THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR FIRE SEPARATION.
 - 7) MAIN FRESH AIR SHAFT TO BE C/W 25MM THICK ACQUSTIC DUCT LINER STARTING FROM THE MECHANICAL PENITHOUSE AND DOWN THREE FLOORS.
 - 8) COOLING TOWER SHAFTS HAVE TO BE SUPPORTED USING DISCRETE SPRING ISOLATORS. SPRING SHALL HAVE A MINIMUM STATIC DEFLECTION OF 50MM TO EXHAUST DOUBLE-LAYER PADS BELOW (N/N). TWIN-SPHERE RUBBER EXPANSION JOINTS THAT ARE RATED FOR OUTDOOR USE, SHALL BE PROVIDED BETWEEN THE COOLING TOWER AND ATTACHED PIPING.
 - 9) BOILERS AND HEAT EXCHANGERS SHALL BE SUPPORTED ON DOUBLE-LAYER NEOPRENE-STEEL-NEOPRENE RUBBER PADS BETWEEN THE SUPPORT CHANNELS AND THE HOUSEKEEPING PADS BELOW.
 - 10) C/WP AND HWP SHALL BE COUPLED FROM THE ATTACHED PIPING USING TWIN-SPHERE RUBBER EXPANSION JOINTS ON BOTH THE SUCTION AND DISCHARGE SIDES FOR WIL PUMPS. THESE EXPANSION JOINTS ARE TYPICALLY LOCATED IN THE VERTICAL SECTION ABOVE THE SUCTION STRAINER AND SHUT-OFF VALVE. THE PUMPS AND DIRECTLY ATTACHED PIPING TO THE TWIN-SPHERE JOINT SHALL BE MOUNTED ON CONCRETE INERTIA BASES, AND SUSPENDED FROM MECHANICAL ROOM FLOOR SLAB USING SPRING ISOLATOR WITH MINIMUM 38MM STATIC DEFLECTION, WITH NEOPRENE ELEMENT IN SERIES AND RUBBER PADS IN HANGER SADDLES.
 - 11) ALL BASE MOUNTED PUMPS SHALL BE MOUNTED C/W CONCRETE INERTIA BASES SUPPORTED ON STEEL SPRINGS WITH A STATIC DEFLECTION OF AT LEAST 15" AND INCLUDING AT LEAST TWO LAYERS OF WAFLED NEOPRENE PADS BELOW.
 - 12) SMALLER PUMPS MAY BE SUPPORTED USING PIPE STANDS UNDER THE BELLOWS (NOT DIRECTLY FROM THE CASING ITSELF) WITH 38MM DEFLECTION SPRING ISOLATORS PLUS NEOPRENE. SMALL PUMPS SHALL BE ISOLATED USING NEOPRENE-IN-SHEAR ISOLATORS FOR THE FIRST 3 POINTS OF SUPPORT ON EITHER SIDE OF THE PUMP.
 - 13) ALL VFD'S TO BE MOUNTED ON RUBBER PADS.
 - 14) IN-LINE AND CABINET FANS SHALL BE ISOLATED WITH SPRINGS OR NEOPRENE-IN-SHEAR MOUNTS. SIDEWALL FANS SHALL BE ISOLATED USING NEOPRENE MOUNTS, PADS OR GROMMETS.
 - 15) ALL INTAKE OR EXHAUST DUCT TO BE C/W 25MM EXTERNAL INSULATION 3M FROM EXTERIOR WALL.
 - 16) ALL PIPES 50MM DIA AND LARGER SUPPORTED FROM WITHIN MECHANICAL ROOM SHALL BE ISOLATED FROM SLAB ABOVE USING SPRING WITH AT LEAST 25MM STATIC DEFLECTION AND A NEOPRENE-IN-SHEAR ELEMENT WITH AT LEAST 6MM STATIC DEFLECTION IN SERIES. PLUS RUBBER PADS IN HANGER SADDLES.
 - 17) ALL PIPES LESS THAN 50MM DIA SUPPORTED FROM WITHIN MECHANICAL ROOM SHALL BE ISOLATED WITH THICK RUBBER PADS, OR FOAM RUBBER SLEEVES IN WIRE CLAMPS, POT FIDERS, PEX'S AND OTHER ANCILLARY EQUIPMENT MUST BE SIMILARLY ISOLATED.
 - 18) ALL MAIN VERTICAL PIPE RISERS REQUIRE VIBRATION ISOLATION. NONE OF THESE RISERS MAY TOUCH THE SLAB OR ANY PENETRATED PARTITION. ALL RISER ANCHORS MUST INCLUDE 1/2" THICK N/A ISOLATION PADS TO BE HELD IN PLACE WITH HORIZONTAL STEEL PLATES WELDED TO BRACKETS THAT ARE IN TURN WELDED TO THE RISER BOLTING THROUGH THE PADS IS NOT ACCEPTABLE.
 - 19) FOR THE MAIN RISERS, ANY PIPE GUIDES USED IN CONNECTION WITH EXPANSION JOINTS OR LOOPS MUST BE ISOLATED WITH RUBBER PADS AND SLEEVES WHERE FASTENED TO THE BUILDING STRUCTURE.
 - 20) ALL DUCT ELBOWS TO BE C/W TURNING VANES.
 - 21) ALL DUCTWORK TO BE SEALED ALONG SEAMS AND AT JOINTS.
 - 22) ALL RUBBER PADS OR MOUNTS USED FOR ISOLATION SHALL BE 45 DUROMETER OR LOWER.
 - 23) ALL HOUSEKEEPING PADS TO BE ISOLATED FROM FLOOR SLAB WITH DURACOUSTIC PADS. REFER TO ACQUSTIC ENGINEER'S REVIEW REPORT AND ISOLATED HOUSEKEEPING PAD DETAIL ON DETAILS DRAWING.

- NOTE:
- 1) 50° SUR FROM BELOW.
 - 2) 50° SUR.
 - 3) 75° SUR.
 - 4) 150° SUR.
 - 5) 19° DHUR.
 - 6) 63° DCGW (HZ), 63° DHU (HZ) & 50° DHUR (HZ).
 - 1) 100° COOLING TOWER DRAIN @ 1% TO BE CONNECTED TO NEAREST SAN DRAIN.
 - 8) 38° MAKEUP WATER LINE C/W HEAT TRACING. HEAT TRACING BY ELECTRICAL CONTRACTOR. THIS CONTRACTOR TO INSULATE AND JACKET PIPE.
 - 9) DOMESTIC HOT WATER MIXING VALVE. REFER TO DOMESTIC RISER AND MANUFACTURER'S INSTALLATION MANUAL FOR PIPING DETAILS.
 - 10) WATER METER C/W BY-PASS TO BE SUPPLIED AND INSTALLED BY THIS CONTRACTOR. METER TO BE PURCHASED FROM PROVIDENT.
 - 11) CHEMICAL TANK C/W BUILT-IN PUMPS. SEE SCHEMATICS FOR DETAILS.
 - 12) 100° HWS & HUR
 - 13) 150° HWS & HUR
 - 14) 63° HWS & HUR
 - 15) AIR SEPARATOR AND EXPANSION TANK SEE SCHEMATICS FOR DETAILS.
 - 16) GAS METER C/W BY-PASS TO BE SUPPLIED AND INSTALLED BY THIS CONTRACTOR. GAS METER TO BE PURCHASED FROM PROVIDENT.
 - 17) BTU METER C/W BY-PASS TO BE SUPPLIED AND INSTALLED BY THIS CONTRACTOR. BTU METER TO BE PURCHASED FROM PROVIDENT.
 - 18) 5 LB. TO LOW PRESSURE (1" WC) GAS REGULATOR
 - 19) 25° HWS & R TO BE CONNECTED TO HWS & R MAINS.
 - 20) 150° CWS & R.

[illegible]