MCB NEW RIVER - MECHANICAL Design Criteria Dec. 1999

1. MCAS New River Planning is separate from Camp Lejeune.

2. The Air Station's steam distribution system has a median high pressure of 150 psi. Pressures have gone as high as 160 psi. The minimum steam pressure is 80 psi.

3. FRP pipe should not be used for buried steam condensate lines. Use schedule 80 black steel pipe.

4. Minimize the use of steam manholes. Those that must be used are to be raised 18" above finish grade and provided with a full grated top.

5. Steam condensate receiver pumps should be steam pressure powered. Do not use electric duplex condensate pumps. Base maintenance electrical and mechanical trade responsibilities overlap when servicing electric condensate pumps; single trade responsibility is desired.

6. Equip steam manholes with steam ejector pumps.

7. New River has a "Green Zone" policy that determines use of above or below grade steam distribution. This zone is generally any area in the proximity zone of the club and BEQ areas. The former right-of-way for the SEABOARD COAST RAILROAD that runs approximately north-south, establishes an approximate boundary of this "Green Zone". West of the right-of-way, all steam lines must generally be below grade; east of the right of away is the industrial area where steam lines may be above grade. Contact Mr. Jerry Harper, MCAS N.R. facilities planning phone (919) 451-6506 for direction on a case-by- case basis.

8. New River's future expansion of below grade steam lines will utilize a trench system with removable tops that can double as sidewalks. High ground water may require partial burial of the trenches with backfilled berms.

9. All equipment within mechanical rooms should be accessible for maintenance and removable with minimal disruption.

10. Avoid rooftop equipment.

11. Avoid use of cooling towers.

12. HVAC equipment should not be installed in attics, overhead or above suspended ceilings, unless absolutely necessary. When dictated by necessity, provide access and floor space for maintenance.

13. Provide separate mechanical and electrical rooms with exterior, ground-level entrances, if possible.

14. Avoid use of economizers (dry bulb or enthalpy). High humidity and poor control reliability prohibit successful use.

15. Do not install steam pits within mechanical rooms.

16. Avoid the use of chilled water fan coil (FCU) systems. FCU's provide poor humidity control.

17. Pneumatic control systems are trouble-prone and should not be used. DDC controls are desired.

18. Provide auxiliary coil drain pans below all cooling equipment installed above ceilings.

19. Avoid the use of space heating hot water reset; control reliability has been a problem.

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