FIRE PROTECTION NOTES

1. THE FIRE PROTECTION SUBCONTRACTOR IS RESPONSIBLE FOR CODE COMPLIANCE, RESEARCH, DESIGN, COORDINATION, AND INSTALLATION OF A COMPLETE AND FUNCTIONAL HYDRAULICALLY CALCULATED SPRINKLER AND STANDPIPE SYSTEM THAT MEETS THE APPROVAL OF AND IS IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND REQUIREMENTS OF THE FOLLOWING AND AS FURTHER SPECIFIED:
   ALL APPLICABLE N.F.P.A STANDARDS TO INCLUDE NOS. 13,14,20, 24 AND 96.
   FACTORY MUTUAL STANDARDS.
   MARRIOT MODULE #14
   APPLICABLE STANDARDS.

2. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
3. FIRE PROTECTION SUBMITTAL DATA SHALL INCLUDE THE FOLLOWING:
   FLOW TEST DATA
   COMPLETE HYDRAULIC CALCULATIONS
   COMPLETE STAMPED AND COORDINATED SHOP DRAWINGS
   FIRE PUMP
   TANK
   PIPE AND FITTINGS
   VALVES
   SPRINKLER HEADS
   ESCUTCHEONS
   ALL APPLICABLE DEVICES, ALARMS, AND SPECIALTIES
   AIR COMPRESSORS AND ACCESSORIES
   APPLICABLE CONTROL/WIRING DIAGRAMS
4. TRANSMIT FIRE PROTECTION SUBMITTAL DATA TO OWNER'S INSURANCE COMPANY, THE LOCAL AND STATE AUTHORITIES HAVING JURISDICTION AND LICENSING AGENCIES FOR APPROVAL.
   SUBMIT APPROVED SUBMITTAL DATA BEARING APPROVAL STAMP FROM ALL GOVERNING AUTHORITIES TO ARCHITECT AND ENGINEER.
5. ZONING: AT A MINIMUM, THE SYSTEM SHALL BE ZONED BY FLOOR OR AS REQUIRED TO MEET THE APPROVAL OF ALL APPLICABLE CODES AND AUTHORITIES, WHICHEVER IS MORE STRINGENT. ZONING SHALL BE IN COMPLIANCE OF MARRIOTT MODULE 14.
6. THE FIRE PROTECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE COMPLETE SET OF CONTRACT DRAWINGS AND COORDINATING HIS WORK WITH ALL OTHER TRADES INVOLVED. SPRINKLER HEAD LOCATIONS SHALL BE SIMILAR TO THOSE SHOWN ON THESE SPRINKLER DRAWINGS. IF THE CONTRACTOR FINDS THAT ADDITIONAL SPRINKLERS AND/OR STANDPIPE ARE REQUIRED TO MEET THE REQUIREMENTS OF GOVERNING AUTHORITIES, HE SHALL PROCEED WITH THE ADDITIONAL HEADS AND STANDPIPE AT NO ADDITIONAL COST TO THE OWNER. THE FIRE PROTECTION PIPING AND HEAD LAYOUT SHALL BE DESIGNED IN SUCH A MANNER SO AS NOT TO INTERFERE WITH LIGHTING FIXTURES, AIR DISTRIBUTION DEVICES, EQUIPMENT, PIPING, BEAMS, DUCTWORK, ETC. THE WORK OF THIS CONTRACTOR SHALL YIELD TO THE WORK OF ALL OTHER TRADES.
7. CONTRACTOR SHALL ALLOW AT LEAST 10% SAFETY CUSHION IN ALL HYDRAULIC CALCULATIONS.
8. CONTRACTOR SHALL PROVIDE PROPER MATERIALS SUCH AS: PIPE, FITTINGS, RELIEF VALVES, ETC. WHERE WORKING PRESSURE IN THE PIPING SYSTEM EXCEEDS 175 P.S.I. IN COMPLIANCE TO ALL APPLICABLE STANDARDS.
9. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF MIC. TESTING WHERE APPLICABLE.
10. ALL HABITABLE SPACES SHALL BE PROVIDED WITH A WET-PIPE SPRINKLERS. DRY-PIPE SPRINKLERS MAY ONLY BE USED IN AREAS SUBJECT TO FREEZING. DRY TYPE HEADS MAY BE PROVIDED OFF THE WET SYSTEM IN UNHEATED AREAS SUCH AS THE LAUNDRY DRYER ENCLOSURE AND WALK-IN COOLER AND FREEZER. WET PIPING SHALL NOT BE ROUTED THRU UNHEATED AREAS, SUCH AS ATTICS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND ALL COSTS INCURRED FROM DAMAGE CAUSED BY FREEZING OF THE FIRE PROTECTION SYSTEM.
11. PIPING – CLASS 1, SCHEDULE 40 ASTM BLACK STEEL PIPING FOR BRANCHES & CLASS 1, SCHEDULE 10 ASTM BLACK STEEL FOR MAINS. PIPING FOR DRY SYSTEMS SHALL BE GALVANIZED STEEL.
    ALL PIPING IN FINISHED AREAS SHALL BE CONCEALED.
12. SPRINKLER HEADS SHALL BE UL LISTED AND FACTORY MUTUAL APPROVED. ALL HEADS SHALL BE FAST RESPONSE, 165° F., SEMI-RECESSED WITH WHITE COVER PLATE IN ALL PUBLIC AREAS AND SEMI RECESSED PENDENTS IN UNIT, UPRIGHT HEADS TO BE BRONZE Q.R.EXCEPT AS FOLLOWS:
    DRY PIPE SYSTEMS, STANDARD, 212° F.
    MECH/ELEC, STANDARD, 212° F.
    ELEV. MACHINERY, STANDARD, 212° F.
    WALK-IN COOLER, DRY PENDENT, 165° F.
    SIDEWALL SPRINKLERS: FAST RESPONSE, RECESSED.
13. PROVIDE CAGE TYPE COVERS FOR HEADS IN SERVICE AND UTILITY AREAS.
14. INSTALL SPRINKLER HEADS IN THE CENTER OF CEILING TILES. NO EXCEPTIONS.
15. SWING JOINTS SHALL BE INSTALLED FOR SPRINKLER HEADS. NO EXCEPTIONS.
16. ALL CONTROL VALVES SHALL BE EQUIPPED WITH TAMPER SWITCHES.
17. ALL WIRING BY ELECTRICAL CONTRACTOR.
18. ALL HOSE THREADS SHALL CONFORM TO THE LOCAL FIRE DEPARTMENT REQUIREMENTS.
19. ALL MATERIALS SHALL BE UL LISTED AND FACTORY MUTUAL APPROVED.
20. ALL OPENINGS THRU RATED WALLS AND FLOORS SHALL BE SEALED WITH AN APPROVED FIREPROOFING TO MAINTAIN THE INTEGRITY OF THE WALL OR FLOOR.
21. PROVIDE SPRINKLER PROTECTION FOR ALL CONCEALED COMBUSTIBLE SPACES, ELEVATOR SHAFTS EQUIPMENT ROOMS LINEN CHUTE, TRUSH CHUTES AND STAIRWAYS AS REQUIRED BY GOVERNING AUTHORITIES.
22. LOCATE WET PIPE AND DRY PIPE INSPECTOR TEST VALVES AND ASSOCIATED SIGHT GLASSES AT REMOTE ENDS OF SYSTEM, IN ACCESSIBLE LOCATIONS. PROVIDE DRAIN PIPES TO EXTERIOR. DO NOT DISCHARGE ONTO SIDEWALKS OR LANDSCAPING. COORDINATE LOCATION OF ALL DRAINS FOR FIRE PROTECTION SYSTEM WITH OWNER'S REPRESENTATIVE.
23. TESTING OF THE COMPLETED FIRE PROTECTION SYSTEMS SHALL BE WITNESSED BY THE OWNER'S REPRESANTATIVE AS WELL AS INSURANCE COMPANY.
24. PROVIDE THE BUILDING ENGINEER WITH RECORD DRAWINGS AND EQUIPMENT DATA AT COMPLETION OF THE CONSTRUCTION. THE CONTRACTOR SHALL HOLD A MINIMUM OF FOUR HOURS TRAINING WITH THE OWNER'S STAFF ON THE BASIC OPERATION OF THE SPRINKLER PIPE SYSTEMS.
25. PROVIDE PRE ACTION SYSTEM FOR PROTECTION OF ELEVATOR EQUIPMENT ROOM AND SHAFT IF REQUIRED BY AUTHORITIES HAVING JURISDICTION. THE PRE ACTION VALVE TO BE LOCATED IN THE FIRE PUMP ROOM.

STANDPIPE
NOT TO SCALE

NOTE:
THE STANDPIPE IS SUPPLIED FROM THE FIRE PUMP IN THE BASEMENT – SEE FP SHEETS FOR ROUTINGS.

FLOW TEST INFORMATION	
STATIC PRESSURE:	*90PSI*
RESIDUAL PRESSURE:	*88 PSI*
FLOW:	*1758 GPM*
TESTED INFORMATION BY	*PORTLAND WATER DIST.*

FOR INFO ONLY. CONTRACTOR SHALL PROVIDE AND UPDATED WATER FLOW TEST FROM THE CITY OF HOUSTON AND BASE HIS DESIGN CRITERIA ON THAT INFORMATION.

ALT #1 – CONTRACTOR TO PROVIDE A SEPERATE PRICE FOR THE FIRE PUMP AND ALL ASSOCIATED PIPING.

THE FIRE PUMP SHALL BE APPROVED BY FACTORY MUTUAL AND LISTED BY UNDERWRITERS LABORATORIES.
FIRE PUMP – 750 GPM @ 95 PSI DRIVEN BY 60 HORSEPOWER
JOCKEY PUMP – 5 HORSEPOWER, 10 GPM @ 95 PSI

PIPING SCHEMATIC AT ELECTRIC FIRE PUMP
NOT TO SCALE

Figure 1 - Schematic of Typical Zoned Low-Pressure Sprinkler System
PER MODULE 14 FIRE PROTECTION AND LIFE SAFETY OF MARRIOTT STANDARDS

Figure 2 - Detail Inspector's Test & Drain Assembly
PER MODULE 14 FIRE PROTECTION AND LIFE SAFETY OF MARRIOTT STANDARDS

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 01/22/14

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Revisions:

1	13_10-14	Issue for Bid & Marriott Revw
2	13_10-21	Addendum #2
3	13_10-31	Addendum #3

Scale: 1/8" = 1'-0"

Date: 31 OCT 13

DETAILS - FIRE PROTECTION

F9.00