- UNDERSTANDING OF WORK: STUDY, EXAMINE, AND COMPARE OF THE CONTRACT DOCUMENTS, INCLUDING DRAWINGS AND SPECIFICATIONS. THE SUBCONTRACTOR SHALL HAVE A FULL UNDERSTANDING OF HOW THE WORK IN THIS PART IS SCHEDULED, PHASED, AND INSTALLED WITH WORK OF OTHER TRADES.
  - INCLUDE IN THIS INSTALLATION PIPING, DUCTWORK, DEVICES, AND EQUIPMENT THAT ARE NECESSARY FOR COMPLETE AND OPERATING SYSTEMS AS SPECIFIED AND AS REQUIRED.
- CONNECT PIPING AND DUCTWORK FROM FIXTURES, OUTLETS, AND DEVICES FULL SIZE TO THE NEAREST SUITABLE MAIN OR CERTAIN INSTALLATIONS MAY BE PRESENTED AS TYPICAL, AND FULL DETAILS ARE NOT REPEATED FOR EACH CASE.
- AS IF FULL DETAILS APPLY TO EACH AND EVERY CASE, AND MAKE ADJUSTMENTS TO TYPICAL DETAILS TO SUIT EACH SPECIFIC INSTALLATION AS PART OF THE BASIC WORK. INSTALLATION OF WORK PRESENTED ON THE DIAGRAMS ARE APPLICABLE TO THE PLANS, AND WORK DEPICTED ON THE

PLANS ARE APPLICABLE TO THE DIAGRAMS

SUBCONTRACTOR SHALL PROVIDE COMPLETE INSTALLATION

IF THERE IS A DISCREPANCY IN THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL FIGURE THE WORK BASED ON THE MOST STRINGENT REQUIREMENTS TO COMPLETE THE INSTALLATION AND OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE INSTALLATION.

# **ACCURACY OF DATA**

THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATION OF PIPING, DUCTS, AND EQUIPMENT. SHOULD IT BE NECESSARY TO DEVIATE FROM ARRANGEMENT OR LOCATION INDICATED IN ORDER TO MEET ARCHITECTURAL CONDITIONS OR SITE CONDITIONS, OR DUE TO INTERFERENCE WITH OTHER WORK, MAKE SUCH DEVIATIONS AS OFFSETS, RISES AND DROPS IN PIPING AND DUCTS THAT MAY BE NECESSARY. WHETHER SHOWN OR NOT. WITHOUT EXTRA EXPENSE. EXTREME ACCURACY OF THE DATA GIVEN HEREIN AND ON THE DRAWINGS IS NOT GUARANTEED. THE DRAWINGS AND SPECIFICATIONS ARE FOR THE ASSISTANCE AND GUIDANCE OF THIS SECTION AND EXACT LOCATIONS, DISTANCES,

AND ELEVATIONS SHALL BE GOVERNED BY ACTUAL SITE CONDITIONS

- DRAWINGS ARE DIAGRAMMATIC. THEY INDICATE GENERAL ARRANGEMENTS OF PLUMBING SYSTEMS AND OTHER WORK. THEY DO NOT SHOW ALL OFFSETS REQUIRED FOR COORDINATION NOR DO THEY SHOW THE EXACT ROUTINGS AND LOCATIONS NEEDED TO COORDINATE WITH STRUCTURE AND OTHER TRADES AND TO MEET CEILING HEIGHTS AND OTHER ARCHITECTURAL REQUIREMENTS.
- INFORMATION AND COMPONENTS SHOWN ON SINGLE LINE /SCHEMATIC DIAGRAMS BUT NOT SHOWN ON PLANS, AND VICE VERSA, SHALL APPLY OR BE PROVIDED AS IF EXPRESSLY REQUIRED ON

## **COORDINATION ITEMS**

- COORDINATE MECHANICAL WORK WITH THAT OF OTHER TRADES IN ORDER TO: AVOID INTERFERENCES BETWEEN GENERAL CONSTRUCTION, MECHANICAL, ELECTRICAL, STRUCTURAL AND OTHER SPECIALTY TRADES. MAINTAIN CLEARANCES AND ADVISE OTHER TRADES OF CLEARANCE REQUIREMENTS FOR OPERATION, REPAIR, REMOVAL AND TESTING OF MECHANICAL EQUIPMENT.
- INDICATE AISLE WAYS AND ACCESS WAYS REQUIRED ON COORDINATED SHOP DRAWINGS FOR ROOF EQUIPMENT AREA. MECHANICAL EQUIPMENT ROOMS, DATA AND TELECOMM ROOMS, CEILING SPACES, SHAFTS, CORRIDORS, LABORATORIES, ETC.

- COOPERATE AND COORDINATE WITH WORK OF OTHER SECTIONS IN EXECUTING WORK OF THIS SECTION. 2. PERFORM WORK SO THAT PROGRESS OF ENTIRE PROJECT INCLUDING WORK OF OTHER SECTIONS SHALL NOT BE
- INTERFERED WITH OR DELAYED. PROVIDE INFORMATION AS REQUESTED ON ITEMS FURNISHED UNDER ONE SECTION WHICH SHALL BE INSTALLED UNDER
- 4. FOR EQUIPMENT PROVIDED UNDER ANY DIVISION OR SECTION WHICH HAS CONNECTION MADE UNDER THE MECHANICAL OR ELECTRICAL SECTIONS, OBTAIN DETAILED INSTALLATION AND HOOKUP INFORMATION FROM THE EQUIPMENT MANUFACTURERS.
- 5. OBTAIN FINAL ROUGHING DIMENSIONS OR OTHER INFORMATION AS NEEDED FOR COMPLETE INSTALLATION OF ITEMS FURNISHED UNDER OTHER SECTIONS OR BY OWNER.
- 6. KEEP FULLY INFORMED AS TO SHAPE, SIZE AND POSITION OF OPENINGS REQUIRED FOR MATERIAL OR EQUIPMENT TO BE PROVIDED UNDER ALL SECTIONS. GIVE FULL INFORMATION SO THAT OPENINGS REQUIRED BY WORK OF THIS SECTION MAY BE COORDINATED WITH OTHER WORK AND OTHER OPENINGS AND MAY BE PROVIDED FOR IN ADVANCE. IN CASE OF FAILURE TO PROVIDE SUFFICIENT INFORMATION IN PROPER TIME, PROVIDE CUTTING AND PATCHING OR HAVE SAME DONE, AT OWN EXPENSE AND TO FULL SATISFACTION OF ARCHITECT.
- 7. NOTIFY ARCHITECT OF LOCATION AND EXTENT OF EXISTING PIPING. CONDUIT. DUCTWORK AND EQUIPMENT THAT INTERFERES WITH NEW CONSTRUCTION. IN COORDINATION WITH AND WITH APPROVAL OF ARCHITECT, RELOCATE PIPING, DUCTWORK AND EQUIPMENT TO PERMIT NEW WORK TO BE PROVIDED. REMOVE NONFUNCTIONING AND ABANDONED PIPING, DUCTWORK AND EQUIPMENT. DISPOSE OF OR STORE

#### SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:

- COORDINATE MECHANICAL SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
- VERIFY DIMENSIONS BY FIELD MEASUREMENTS. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION, TO ALLOW FOR
- MECHANICAL INSTALLATIONS. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES
- AND SLEEVES TO BE SET IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF
- THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING IN THE BUILDING. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED INSTALL SYSTEMS. MATERIALS AND EQUIPMENT TO PROVIDE THE
- MAXIMUM HEADROOM POSSIBLE. WORK SHALL BE ABOVE CEILINGS OR CEILING LINE. COORDINATE INSTALLATION AND CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING
- INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH APPROVED SUBMITTAL DATA, INCLUDING COORDINATION DRAWINGS,

AGENCIES. PROVIDE REQUIRED CONNECTION FOR EACH SERVICE.

- TO GREATEST EXTENT POSSIBLE. CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS, RECOGNIZING THAT PORTIONS OF THE WORK ARE SHOWN ONLY IN DIAGRAMMATIC FORM. COORDINATE WITH INDIVIDUAL SYSTEM REQUIREMENTS.
- INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS IS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING. WITH MINIMUM OF INTERFERENCE WITH
- K. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT GIVING RIGHT-OF-WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.
- COORDINATE WITH THE LOCATIONS OF ELECTRICAL PANELS AND AVOID INSTALLING PIPING AND DUCTWORK OVER THEM. ELECTRICAL PANELS ARE PURPOSELY LOCATED AND HAVE PRIORITY FOR LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR REQUIRED PIPING AND DUCTWORK OFFSETS TO ENSURE THAT THE PANELS ARE LOCATED AS DESIGNED AND FOR OTHER CONDITIONS.

OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE

## **BUILDING EXPANSION JOINTS AND FIREWALLS**

- A. PLUMBING PIPING AND OTHER HORIZONTAL DISTRIBUTION SYSTEMS SHALL BE PROVIDED WITH APPROVED EXPANSION PROVISIONS WHEN PASSING BY BUILDING EXPANSION JOINTS. SYSTEMS SHALL BE RUN THROUGH RATED WALLS, PARTITIONS, AND FLOORS VIA APPROVED FIREPROOFED SLEEVES.
- INSTALLATION SHALL PROVIDE ACCESS TO SYSTEMS
- A. INSTALLATION SHALL ALLOW CLEARANCES FOR EASY ACCESS TO SYSTEMS FOR ROUTINE MAINTENANCE, FOR REPAIRS, AND FOR INSTALLING NEW CABLE IN CONDUIT AND CABLE TRAYS.
- B. ACCESS PANELS SHALL BE INSTALLED IN CEILINGS THAT ARE NOT COMPOSED OF REMOVABLE TILES. THESE SHALL BE LOCATED WHEREVER SYSTEMS COMPONENTS EXIST THAT HAVE MOVING PARTS MOTORS. OR OTHER COMPONENTS REQUIRING PERIODIC MAINTENANCE, ADJUSTMENT, OR REPLACEMENT. ACCESS PANELS SHALL BE SHOWN ON COORDINATION DRAWINGS AND SHALL BE OF THE TYPE AND FINISH AS APPROVED BY THE ARCHITECT.
- **INSTALLATION**
- MANUFACTURER'S DIRECTIONS: FOLLOW MANUFACTURER'S DIRECTIONS COVERING POINTS NOT SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN. MANUFACTURER'S DIRECTIONS DO NOT TAKE PRECEDENCE OVER DRAWINGS AND SPECIFICATIONS. WHERE THESE ARE IN CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS, NOTIFY THE PROJECT MANAGER FOR CLARIFICATION BEFORE INSTALLING THE WORK.
- B. CARPENTRY, CUTTING, PATCHING, AND CORE DRILLING: PROVIDE CARPENTRY, CUTTING, PATCHING, AND CORE DRILLING REQUIRED FOR INSTALLATION OF MATERIAL AND
  - EQUIPMENT SPECIFIED IN THIS DIVISION. NO PENETRATIONS SHALL BE SLEEVED, CUT, OR CORE DRILLED THROUGH CONCRETE CONSTRUCTION WITHOUT A SUBMITTAL INDICATING EXACT LOCATIONS AND SIZES AND SPECIFIC WRITTEN APPROVAL FROM THE UNIVERSITY OR UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL
  - IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO ACCURATELY SIZE AND LOCATE OPENINGS THROUGH THE STRUCTURE. THE DIMENSIONS SHOWN ON THE STRUCTURAL

## DRAWINGS ARE FOR GENERAL INFORMATION ONLY. PROVIDE SPECIFIC SIZES, DIMENSIONS, REQUIREMENTS, ETC.

EACH CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND

CAREFULLY STORE MATERIALS AND EQUIPMENT THAT IS NOT

IMMEDIATELY INSTALLED AFTER DELIVERY TO SITE. CLOSE OPEN

ENDS OF WORK WITH TEMPORARY COVERS OR PLUG DURING

EQUIPMENT UNTIL FINALLY INSPECTED, TESTED, AND ACCEPTED.

- C. WATERPROOF CONSTRUCTION: MAINTAIN WATERPROOF INTEGRITY OF PENETRATIONS OF MATERIALS INTENDED TO BE WATERPROOF. PROVIDE FLASHINGS AT EXTERIOR ROOF PENETRATIONS. CAULK PENETRATIONS OF FOUNDATION WALLS AND FLOORS WATERTIGHT. PROVIDE MEMBRANE CLAMPS AT
  - C. PROTECT THE WORK AND MATERIAL OF OTHER TRADES THAT MIGHT PENETRATIONS OF WATERPROOF MEMBRANES. BE DAMAGED BY WORK OR WORKMEN AND MAKE GOOD ALL DAMAGE PROVIDE WATERPROOF NEMA 3R ENCLOSURES FOR THUS CAUSED. EQUIPMENT OR DEVICES MOUNTED OUTSIDE OR OTHERWISE EXPOSED TO THE WEATHER. FIREPROOFING:
- A. CLIPS, HANGERS, CLAMPS, SUPPORTS AND OTHER ATTACHMENTS TO D. PAINTING OF MECHANICAL EQUIPMENT AND HARDWARE: SURFACES TO BE FIREPROOFED SHALL BE INSTALLED, INSOFAR AS COMPLY WITH APPLICABLE DIVISION 09 SECTIONS FOR PAINTS POSSIBLE, PRIOR TO START OF SPRAY FIBER WORK.
  - AND COATINGS. B. PIPING AND OTHER ITEMS THAT WOULD INTERFERE WITH PROPER 2. PROVIDE MOISTURE RESISTANT PAINT FOR EXTERIOR APPLICATION OF FIREPROOFING SHALL BE INSTALLED AFTER
  - COMPLETION OF SPRAY FIBER WORK. 3. COLORS SHALL BE AS SHOWN ON THE DRAWINGS UNLESS C. PATCHING AND REPAIRING OF FIREPROOFING DUE TO CUTTING OR

COVERS.

- 4. COMPLY WITH INDIVIDUAL SECTIONS FOR OTHER EQUIPMENT FIREPROOFING AND PAID FOR BY TRADE RESPONSIBLE FOR DAMAGE AND SHALL NOT CONSTITUTE GROUNDS FOR AN EXTRA TO OWNER. REPAIR DAMAGED GALVANIZING, PAINT, OR COATINGS. USE ASSUME RESPONSIBILITY FOR DAMAGE TO OF THE WORK OR Z.R.C. (NO KNOWN EQUAL) COLD GALVANIZED COMPOUND
  - PREMISES BEFORE SUBSTANTIAL COMPLETION. SHOULD NEW OR EXISTING EQUIPMENT BECOME DAMAGED, RESTORE IT TO ITS ORIGINAL CONDITION AND FINISH BEFORE FINAL ACCEPTANCE DAMAGE INCURRED TO OWNER PROPERTY OR TO THE WORK OF OTHER DIVISIONS, CAUSED BY THIS DIVISION, SHALL BE REPLACED OR REPAIRED BY, AND AT THE EXPENSE OF, THE SUBCONTRACTOR

CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.

COVER WORK SUBJECT TO FALLING DEBRIS WITH TEMPORARY

ADEQUATE PROTECTION OF ALL EQUIPMENT DURING THE COURSE OF

CONSTRUCTION. THIS INCLUDES PROTECTION FROM MOISTURE AND

FOREIGN MATERIAL. AT COMPLETION, ALL WORK MUST BE TURNED

DAMAGING TO FIREPROOFING DURING COURSE OF WORK SPECIFIED

UNDER THIS SECTION SHALL BE PERFORMED BY INSTALLER OF

B. PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR TO PROVIDE

OVER TO OWNER CLEAN AND IN NEW CONDITION.

#### WARRANTY **CONTINUITY OF SERVICES**

- 3.12 <u>TESTS</u> A. UPON COMPLETION OF THE MECHANICAL CONSTRUCTION WORK, PERFORM TESTS AND PROVIDE TEST REPORTS AS SPECIFIED IN THIS AND OTHER SECTIONS.
- EACH TRADE SHALL ARRANGE THAT AN OFFICER OF THE CONTRACTING COMPANY SHALL CERTIFY THAT EACH AND EVERY SYSTEM HAS BEEN TESTED. AT THE CONCLUSION OF THE TESTS, SUBMIT A LETTER AND ENCLOSED COMMISSIONING FORMS SIGNED BY THE OFFICER STATING:
- ALL TESTS SHALL BE MADE IN THE PRESENCE OF A REPRESENTATIVE OF THE PROJECT MANAGER. THE SUBCONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER 3 COPIES OF TEST RESULTS, CERTIFIED IN WRITING, WITNESSED, SIGNED AND DATED, IMMEDIATELY UPON COMPLETION OF WORK. UNSATISFACTORY CONDITION REVEALED BY THESE TEST RESULTS, OR UNSATISFACTORY METHODS OF TESTS AND/OR TESTING APPARATUS AND INSTRUMENTS, SHALL BE CORRECTED BY THE SUBCONTRACTOR TO THE SATISFACTION OF THE PROJECT MANAGER.
- THE PROJECT MANAGER RESERVES THE RIGHT TO REQUIRE THAT THE SUBCONTRACTOR PERFORM AND REPEAT TESTS THAT ARE DEEMED NECESSARY TO COMPLETE OR CHECK THE TESTS OR THE CERTIFIED RECORDS OF THE SUBCONTRACTOR DURING THE COURSE OF THE WORK. CORRECT UNSATISFACTORY PORTION OF ITS WORK THAT IS REVEALED BY THE TESTS OR THAT MAY BE DUE TO PROGRESSIVE DETERIORATION DURING THIS PERIOD, UNLESS THE ITEM IN QUESTION WAS A DIRECT SPECIFICATION.

## E. TESTING CRITERIA

TO BE PAINTED.

PROTECTION OF WORK

FOR GALVANIZED REPAIRS.

SYSTEM	TEST MEDIUM	TEST PRESSURE	TEST DURATION	OTHER
DRAINAGE AND VENT (ALL SYSTEMS)	WATER	10 FEET	30 MINUTES	
WATER (ALL SYSTEMS)	WATER	150 PSIG MIN OR 1.5 OPERATING PRESSURE	1 HOUR	DO NOT SUBMIT THERMOPLASTIC PIPING SYSTEMS TO TEST PRESSURES HIGHER THAN 90 PSIG

- 1. FOR EACH SYSTEM NOTED ABOVE, AT THE END OF THE TEST PERIOD FLUSH THE SYSTEM WITH COMPONENT FLUID AND THE SYSTEM SHALL BE DRAINED COMPLETELY; FILL SYSTEM WITH THE PRODUCT FLUID CONTRACTOR SHALL RETURN THE PIPING SYSTEM TO ITS PRE-TEST CONDITION
- SUBMIT AS PART OF THE CLOSEOUT DOCUMENTS, A TEST REPORT FOR EACH FLUID SYSTEM ABOVE. THE TEST FORM FOR THE SELECTED PIPING SYSTEM SHALL BE FILLED-OUT, SIGNED AND DATED BY THE CONTRACTOR AND OWNER OR ITS REPRESENTATIVE WITNESSING THE TEST AS THE ACCEPTANCE DOCUMENT FOR FILING IN OWNER'S DOCUMENTATION FILE FOR THE PROJECT.
- 3. REPAIR ALL SYSTEMS LEAKS WHERE FOUND DURING TEST PROCEDURES. RETEST SYSTEMS AFTER REPAIRS PER THE ABOVE TABLE.

# **DISINFECTION OF WATER SYSTEMS**

- WATER PIPING SYSTEMS SHALL BE THOROUGHLY DISINFECTED WITH A SOLUTION CONTAINING NO LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE.
- B. CHLORINATING MATERIALS SHALL BE EITHER LIQUID CHLORINE OR SODIUM HYPO CHLORITE SOLUTION, SHALL BE INTRODUCED INTO THE SYSTEM AND DRAWN TO ALL POINTS IN THE SYSTEM. DISINFECTION SOLUTION SHALL BE ALLOWED TO REMAIN IN SYSTEM FOR 24 HOURS, DURING THIS TIME, VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER DISINFECTION. SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAR WATER UNTIL RESIDUAL CHLORINE CONTENT IS NO GREATER THAN 0.2 PARTS
- SUBMIT A CHLORINATION DISINFECTION REPORT AS RECORD OF PROCEDURE.
- PROJECT PUNCH LIST PROCEDURE
- IF, WHEN THE ENGINEER ARRIVES AT THE SITE CERTAIN AREAS ARE NOT COMPLETE AND READY FOR PUNCH OUT, THE ENGINEER WILL NOT REVIEW THESE AREAS. WHEN A SECOND NOTIFICATION IS ISSUED INDICATING THE INSTALLATION IS COMPLETED AND THE CONTRACTOR

## HAS PLINCHED AND CORRECTED THESE AREAS. THE ENGINEER WILL THEN RE-VISIT THE SITE FOR FINAL OBSERVATIONS AND PUNCH LIST.

- 1. SYSTEMS SHALL BE OPERATED UNDER ACTUAL OR SIMULATED FULL LOAD CONDITIONS. IDENTIFY THE OPERATING CONDITIONS IN THE WORK PLAN.
- WORK PLAN SHALL INCORPORATE THE "DEMONSTRATION OF SUCCESSFUL OPERATION" DESCRIBED BELOW.
- 3. THE ARCHITECT/OWNER MAY CHECK THE COMPLETED AND COMMISSIONED INSTALLATION EITHER SEQUENTIALLY AS DIFFERENT PARTS ARE COMPLETED, AND/OR WHEN THE ENTIRE INSTALLATION IS COMPLETE, AT THE SOLE OPTION OF THE ARCHITECT/OWNER.

#### 3.15 PROJECT CLOSE-OUT PROCEDURE A. A. PROJECT CLOSE-OUT CHECKLIST

- 1. REVIEW REQUIREMENTS OF EACH SECTION OF THE SPECIFICATIONS AND SUBMIT FOR APPROVAL TO ARCHITECT THE SIGN-OFF FORMS THAT SHALL BECOME THE PROJECT CLOSE-OUT CHECKLIST, THIS, AT A MINIMUM, SHALL INCLUDE THE FOLLOWING INFORMATION SHOWN IN ATTACHED PROJECT CLOSEOUT CHECKLIST EXAMPLE. THE ARCHITECT AND/OR
- OWNER MAY INCORPORATE ADDITIONAL SPECIFIC ITEMS TO THE FOLLOWING CHECKLIST WHICH SHALL BECOME PART OF THE PROJECT REQUIREMENTS.

SUBMIT RECORD DRAWINGS TO OWNER AND

- ARCHITECT/ENGINEER MAINTENANCE AND OPERATING INSTRUCTIONS AND TRAINING
- A. REFER TO DIVISION 01 SECTION "GENERAL REQUIREMENTS", FOR MAINTENANCE AND OPERATING INSTRUCTIONS, AND TRAINING REQUIREMENTS.
- B. AT TIME OF OCCUPANCY, ARRANGE FOR MANUFACTURER'S REPRESENTATIVES TO INSTRUCT OPERATING AND MAINTENANCE PERSONNEL IN THE USE OF EQUIPMENT REQUIRING OPERATING AND MAINTENANCE. ARRANGE FOR PERSONNEL TO BE INSTRUCTED AT ONE TIME. COSTS FOR THIS SERVICE SHALL BE INCLUDED IN THE SUBCONTRACT.
- MAINTENANCE AND OPERATING INSTRUCTIONS AND TRAINING FOR -FURNISHED EQUIPMENT WILL BE PROVIDED BY THE EQUIPMENT VENDOR. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OTHER EQUIPMENT.

Page | 6

# **CROCKFORDS** -

A. DO NOT INTERRUPT EXISTING SERVICES WITHOUT OWNER'S

B. SCHEDULE INTERRUPTIONS IN ADVANCE, ACCORDING TO OWNER'S

INSTRUCTIONS. SUBMIT, IN WRITING, WITH REQUEST FOR

INTERRUPTION, METHODS PROPOSED TO MINIMIZE LENGTH OF

INTERRUPTIONS SHALL BE SCHEDULED AT TIMES OF DAY AND WORK

SUBCONTRACTOR SHALL COORDINATE SHUTDOWNS OF EXISTING

FURNISH PIPE CLEANING CHEMICALS, CHEMICAL FEED

PERMANENTLY INSTALL NECESSARY CHEMICAL INJECTION

AFTER PIPING SYSTEMS HAVE BEEN PRESSURE TESTED AND

SPECIFIED AND IN ACCORDANCE WITH APPLICABLE CODES.

MAINTAIN CONTINUOUS BLOWDOWN AND MAKE-UP DURING

SURFACE OF EQUIPMENT, INCLUDING CONCRETE RESIDUE,

1. AFTER COMPLETION OF PROJECT, CLEAN THE EXTERIOR

APPROVED FOR TIGHTNESS, CLEAN AND FLUSH PIPING AS

EQUIPMENT, MATERIALS AND LABOR NECESSARY TO CLEAN

SO THAT THEY HAVE MINIMAL IMPACT ON OWNER'S OPERATIONS.

FITTINGS COMPLETE WITH STOP VALVES.

FLUSHING OPERATION.

DIRT AND PAINT RESIDUE.

SYSTEMS.

**CLEANING** 

PIPING

EQUIPMENT

3.11

888 resorts World Dr Monticello, NY 12701

**JCJ**ARCHITECTURE 120 HUYSHOPE AVENUE SUITE 400

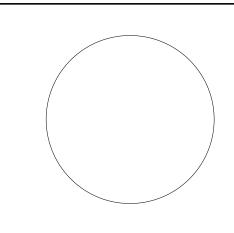
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> BIDDING & CONSTRUCTION



ISSUE 07/06/2022

REVISIONS

SCALE

DRAWN RD

PLUMBING SPECIFICATIONS