SPECIFICATIONS:

GENERAL MECHANICAL CONDITIONS

1. THE GENERAL AND SPECIAL CONDITIONS OF THE ARCHITECTURAL SPECIFICATIONS SHALL BE INCLUDED AS PART OF THESE DOCUMENTS.
2. ALL MATERIALS SHALL BE NEW, UNUSED, AND THE BEST OF THEIR RESPECTIVE KINDS AND FREE FROM DEFECTS.
3. DRAWINGS ARE DIAGRAMMATIC ONLY, INTENDING TO SHOW GENERAL RUNS AND LOCATIONS OF THE WORK AND ARE NOT INTENDED TO BE RIGID IN SPECIFIC DETAIL.
4. THE CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE SITE FOR HIS WORK BEFORE HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
5. THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR THE CORRECTNESS OF THE SAME.
6. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIS WORK WITH LIGHTING PLANS, REFLECTED CEILING PLANS, LANDLORD'S SPRINKLER PLANS AND ALL OTHER TRADES.
7. THE INSTALLATION OF ALL EQUIPMENT AND MATERIALS REQUIRING ACCESS SHALL BE MADE IN SUCH MANNER AS TO MAKE THE EQUIPMENT AND MATERIALS READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIRS.
8. STORAGE OF CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE ONLY IN SPACES AS DESIGNATED BY THE ARCHITECT/OWNER.
9. CONSTRUCTION DEBRIS AND RUBBISH GENERATED BY THE CONTRACTOR SHALL BE REMOVED FROM PREMISES AS OFTEN AS NECESSARY OR AS DIRECTED TO MAINTAIN A CLEAN AND WORKABLE AREA.
10. ALL WORK AND EQUIPMENT SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF FINAL PAYMENT AND ACCEPTANCE.
11. ALL WORK, INCLUDING INSIDE OF SUPPLY AIR DUCTS, AND EQUIPMENT WITHIN THE CONTRACT AREA FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE CLEANED TO THE SATISFACTION OF THE OWNER BEFORE TURNING SAME OVER TO THE OWNER.
12. CONNECT NEW WORK TO EXISTING IN A NEAT AND APPROVED MANNER.
13. ALL DESIGN SHALL INCORPORATE CURRENT ASHRAE METHODS.

FIRE PROTECTION

1. THE CONTRACTOR SHALL RETAIN AND PAY FOR A "PROFESSIONAL OF RECORD" FOR ALL FIRE SPRINKLER AND FIRE PROTECTION WORK.
2. THE DRAWINGS AND ALL SPECIFICATIONS FOR ALL FIRE PROTECTION WORK ARE PERFORMANCE IN SCOPE AND INTENT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, EQUIPMENT, LABOR, DESIGN, LAYOUT, DETAILS, DRAWINGS, DOCUMENTS, AND ALL CRITERIA TO MEET GOVERNING AUTHORITIES, CODES, REGULATIONS, AND UNDERWRITER'S REQUIREMENTS FOR ALL FIRE PROTECTION WORK.
4. CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
5. EXISTING FIRE PROTECTION: MODIFY EXISTING FIRE SUPPRESSION SYSTEM IN ACCORDANCE WITH ALL CODES HAVING JURISDICTION, AS REQUIRED. DESIGN AND LOCATE SPRINKLER HEADS IN CONJUNCTION WITH THE REFLECTED CEILING PLAN AND FLOOR PLAN. DESIGN LAYOUT TO TAKE IN CONSIDERATION SHELVING AND TOP STOCK. CONTRACTOR IS RESPONSIBLE TO COORDINATE FIRE SUPPRESSION WORK WITH ALL OTHER TRADES. USE SUBCONTRACTORS SHOP DRAWINGS FOR ALL APPROVAL SUBMISSIONS REQUIRED.
6. PRIOR TO COMMENCING WORK, VERIFY THAT ALL LEASE SPACE FIRE SUPPRESSION SYSTEM COMPONENTS HAVE EITHER BEEN UPDATED OR ARE NOT LISTED IN THE TYCO FIRE PRODUCTS VOLUNTARY RECALL AFFECTED MODELS OF CENTRAL AND GEM WET SPRINKLERS, CENTRAL AND GEM DRY SPRINKLERS, AND ALL OTHERS LISTED ON THE FOLLOWING WEBSITE WWW.SPRINKLERREPLACEMENT.COM AND FOUND WITHIN THE LEASE SPACE ARE TO BE REPLACED BY THE LANDLORD PRIOR TO OCCUPANCY AND FINAL BUILDING INSPECTIONS.
7. A COMPLETE SET OF ALL REQUIRED DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO THE PROPER AUTHORITIES WITHIN THIRTY (30) DAYS OF CONTRACT AWARD.
8. THE LANDLORD'S DESIGN CRITERIA SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS.
9. ALL FIRE PROTECTION WORK SHALL BE SCHEDULED IN ADVANCE WITH THE LANDLORD'S FIELD REPRESENTATIVE. FIRE PROTECTION SYSTEM SHALL BE FULLY OPERATIONAL WHEN THE CONTRACTOR IS OFF THE SITE.

PLUMBING SPECIFICATION

1. PROVIDE A COMPLETE AND OPERATING PLUMBING SYSTEM, AS INDICATED ON THE DRAWINGS. THE INSTALLATION SHALL BE COMPLETE WITH ALL FIXTURES, FITTINGS, TRIM AND ACCESSORIES TO PROVIDE A COMPLETE, FUNCTIONING SYSTEM. PROVIDE FOR ALL CODE REQUIREMENTS AND DISABILITY PROVISIONS.
2. PROVIDE SQUARE TOP CLEANOUT COVER ON FLOOR CLEANOUTS. SQUARE COVERS SHALL BE ALIGNED WITH BUILDING CONSTRUCTION AND FLUSH WITH FINISHED FLOOR.
3. SUPPLY PIPING SHALL BE TYPE "L" COPPER INSTALLED WITH LEADLESS SOLDER. SANITARY WASTE AND VENT PIPING SHALL BE SERVICE WEIGHT CAST IRON HUBLESS CONNECTOR FITTINGS ABOVE GRADE. BELOW GRADE SHALL BE SERVICE WEIGHT CAST IRON HUB AND SPIGOT WITH NEOPRENE GASKET JOINTS. SCHEDULE 40 DWV PVC PIPING WITH SOLVENT JOINT FITTINGS MAY BE USED WHERE ALLOWED BY CODE. PVC SHALL NOT BE USED IN AIR PLENUM SPACE. HOT AND COLD WATER SUPPLY PIPING SHALL BE INSULATED WITH A MINIMUM 1/2" FIBERGLASS WITH VAPOR PROOF ALL SERVICE JACKET OR EQUIVALENT CLOSED CELL FOAM INSULATION AS ALLOWED BY LOCAL CODES FOR INSTALLATION IN RETURN AIR PLENUMS. SIMILARLY, SUPPLY AND RETURN CONDENSER WATER PIPING SHALL BE INSULATED WITH MINIMUM 3/4" INSULATION. NATURAL GAS PIPE 2" AND SMALLER SHALL BE THREADED SCHEDULE 40 THICKNESS (ANSI B36.10) BLACK STEEL FINISHED WITH RUST INHIBITIVE PRIMER AND PAINT.
4. HANGERS, SUPPORTS AND SLEEVES
   - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING SUPPORTS, HANGERS AND METHODS FOR ATTACHMENT TO WALLS AND PARTITIONS.
   - B. ALL DRAIN, WASTE, HOT AND COLD WATER AND NATURAL GAS PIPING EXPOSED, ABOVE GRADE AND IN FURRED AREAS, SHALL BE SUPPORTED IN PLACE WITH SECURELY FASTENED SOLID PIPE HANGERS NOT OVER 8'-0" APART, AND AT EACH CHANGE IN DIRECTION (5'-0" ON CAST IRON PIPE).

PLUMBING SPECIFICATION (CONTINUED)

   - C. PIPE HANGERS SHALL BE INSTALLED AROUND THE OUTSIDE OF INSULATION WITH VAPOR BARRIERS, AND INSULATION SHALL BE PROTECTED AGAINST CRUSHING BY SHEET METAL JACKET OF PROPER AREA AND WEIGHT.
   - D. ALL WATER PIPING RUNNING THROUGH FLOORS OR WALLS SHALL BE ISOLATED FROM THE PENETRATION WITH A SLEEVE. MAINTAIN THE FIRE RATING OF ALL WALL AND FLOOR PENETRATIONS BY USE OF APPROVED FIRE STOP MATERIALS.
   - E. SLEEVES THROUGH WALLS SHALL BE CUT SO AS TO BE FLUSH WITH THE FINISHED SURFACE OF THE WALL, IN EACH CASE, AND SHALL BE MADE WATERTIGHT.
5. ALL VALVE HANDLES SHALL BE COLOR CODED IN ORDER SO THAT THEY SHALL CORRESPOND AS FOLLOWS:
   - A. BLUE = COLD WATER
   - B. RED = HOT WATER
6. NO PIPING SHALL RUN THROUGH DUCTWORK.
7. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SPACES AND CONDITIONS PRIOR TO FABRICATION AND INSTALLATION OF EQUIPMENT AND MATERIAL.
8. CONTRACTOR SHALL GUARANTEE ALL WORK FREE FROM DEFECTS OF WORKMANSHIP AND/OR MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE.
9. DIELECTRIC UNIONS SHALL BE PROVIDED WHEREVER DISSIMILAR METALS ARE JOINED.

MECHANICAL SPECIFICATIONS

1. AIR BALANCING:
   - A. CONTRACTOR SHALL PROCURE THE SERVICES OF AN INDEPENDENT NEBB OR AABC CERTIFIED AIR BALANCE AND TESTING AGENCY TO BALANCE, ADJUST & TEST EQUIPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING 2 COPIES OF BALANCE/TEST AGENCIES REPORT TO PROJECT MANAGER AND LANDLORD OPERATIONS DIRECTOR FOR REVIEW. MIN. OUTDOOR C.F.M. AND INDOOR FAN C.F.M. SHALL BE PROVIDED AS SHOWN ON RTU SCHEDULE.
2. DUCTWORK
   - A. INSTALL ALL DUCTWORK IN COMPLETE CONFORMANCE WITH RECOMMENDED CONSTRUCTION STANDARDS FOR RECTANGULAR AND ROUND SHEET METAL AND FLEXIBLE DUCTS IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS AND ALL OTHER AUTHORITIES HAVING JURISDICTION. FLEXIBLE DUCT SHALL NOT EXCEED 5'-0" IN LENGTH. MINIMUM SHEET METAL THICKNESS SHALL BE 26 GA. MINIMUM SUPPLY AND RETURN INSULATION R-VALUE SHALL BE R-6 IN UNCONDITIONED SPACES PER ENERGY CODE. FRESH AIR INTAKE DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH R-8 INSULATION.
   - B. ALL DUCT SHALL OPERATE AT 2 IN W.C. OR LESS, AND ALL JOINTS SHALL BE SEALED USING LISTED AND LABELED UL 181A OR 181B TAPES AND MASTICS. GRAY DUCT TAPE SHALL NOT BE ACCEPTED.
   - C. STRAP HANGERS SHALL NOT BE LESS THAN 1" BY 1/8" THICK ON SIX (6) FOOT CENTERS AND ATTACHED TO SIDE OF DUCT WITH SHEET METAL SCREWS. SEISMIC RESTRAINTS SHALL NOT BE REQUIRED FOR DUCTS WITH A CROSS-SECTIONAL AREA OF 6 SQUARE FEET OR LESS (ASCE 7-05, 13.6.7.). INSULATED FLEXIBLE DUCT MAY BE USED FOR LOW PRESSURE RUNOUTS TO INDIVIDUAL DIFFUSERS IN LENGTHS NOT TO EXCEED FIVE (5) FEET FOR EACH DIFFUSER. SEAL ALL SHEET METAL SCREW PENETRATIONS.
   - D. PROVIDE FLEXIBLE CONNECTION BETWEEN ALL FAN POWERED EQUIPMENT AND CONNECTING DUCTWORK.
   - E. ALL JOINING MATERIALS, SEALER, ETC. SHALL HAVE A U.L. FLAME SPREAD CLASSIFICATION OF NO MORE THAN 25 AND A SMOKE DEVELOPMENT RATING NOT MORE THAN 50.
3. AIR DEVICES:
   - A. MECHANICAL FASTENERS AND SEALANTS SHALL BE USED TO CONNECT DUCTS AND AIR DISTRIBUTION EQUIPMENT.
   - B. SUPPLY DIFFUSERS: (TITUS AS STANDARD) SHALL BE FURNISHED WITH BAKED WHITE ENAMEL FINISH, AND SHALL BE SELECTED FOR NECK VELOCITIES NOT EXCEEDING 700 FPM AND NOISE LEVEL OF NC-35 OR LESS.
   - C. SUPPLY DIFFUSERS SHALL BE SIZED USING CRITERIA INDICATED ABOVE FOR LAY-IN CEILING GRID TYPE CONSTRUCTION, DRYWALL CEILING OR DUCT-MOUNTED AS INDICATED ON DWG. DIFFUSERS SHALL BE COMPLETE WITH ADJUSTABLE AIR PATTERNS AND VOLUME CONTROL DAMPERS.
   - D. RETURN GRILLES: (TITUS AS STANDARD) SHALL BE FURNISHED WITH BAKED WHITE ENAMEL FINISH, AND SHALL BE SELECTED FOR FACE VELOCITIES NOT EXCEEDING 500 FPM AND NOISE LEVEL OF NC-20 OR LESS. VOLUME CONTROL DAMPER NOT REQUIRED FOR RETURN INSTALLATION.
   - E. RETURN GRILLES SHALL BE SIZED USING CRITERIA INDICATED ABOVE FOR LAY-IN CEILING GRID TYPE CONSTRUCTION, DRYWALL CEILING/WALL OR DUCT-MOUNTED AS INDICATED ON DWG.
   - F. EXHAUST GRILLES: (TITUS AS STANDARD) SHALL BE FURNISHED WITH BAKED WHITE ENAMEL FINISH, AND SHALL BE SELECTED FOR FACE VELOCITIES NOT EXCEEDING 500 FPM AND NOISE LEVEL OF NC-20 OR LESS. VOLUME CONTROL DAMPER NOT REQUIRED FOR RETURN INSTALLATION. PROVIDE VOLUME CONTROL DAMPERS AS INDICATED ON DWG.
   - G. EXHAUST GRILLES SHALL BE SIZED USING CRITERIA INDICATED ABOVE FOR LAY-IN CEILING GRID TYPE CONSTRUCTION, DRYWALL CEILING OR DUCT-MOUNTED AS INDICATED ON DWG.
   - H. COORDINATE LOCATION OF AIR DEVICES WITH LIGHTS, SPRINKLERS, SPEAKER, SMOKE DETECTORS, ETC.
4. CONTROLS:
   - A. PROVIDE CONTROLS AS SPECIFIED. SPECIAL CONTROL METHODS WILL BE ADDRESSED ON AN INDIVIDUAL BASIS. REFER TO SCHEDULES FOR ADDITIONAL INFORMATION.
   - B. THE CONTRACTOR SHALL PROVIDE ALL 24V WIRING INCLUDING CONNECTIONS, CHECKS, TESTS AND START-UP.
   - C. COORDINATE INTERFACING OF DUCT MOUNTED SMOKE DETECTOR (WHEN SPECIFIED OR REQUIRED) WITH ELECTRICAL CONTRACTOR, AND LANDLORD'S FIELD REPRESENTATIVE.
   - D. HVAC CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION.

PLUMBING FIXTURE SCHEDULE:

SYMBOL	FIXTURE TYPE	MANUFACTURER & MODEL NUMBER	FIXTURE CONNECTION CW	HW	W	V	REMARKS	ACCEPTABLE ALTERNATE MANUFACTURERS
WC 1	HANDICAP WATER CLOSET	AMERICAN STANDARD ADA "CADET RIGHT HEIGHT" #2467.016	1/2"	-	3"	2"	1.6GPF/PRESSURE ASSISTED, FLOOR MOUNTED, ELONGATED WHITE VITREOUS CHINA WATER CLOSET. AMERICAN STANDARD #5901.110 WHITE, ELONGATED, HEAVY DUTY, OPEN-FRONT SEAT. PROVIDE NECESSARY ROUGH-INS AND FINAL CONNECTIONS, INCLUDING WATER SUPPLY WITH STOP VALVE.	ELJER, "PATRIOT CONVENIENT HEIGHT" #091-2175 WITH #124-2100 SEAT, (800) 423-5537 KOHLER "HIGHLINE COMFORT HEIGHT" #K-3427 WITH "LUSTRA" #K-4650 SEAT, (800) 456-4537
WC 2	HANDICAP WATER CLOSET "RIGHT-HAND" TRIP LEVER	AMERICAN STANDARD #3483.016 BOWL & BOLT CAPS, #4142.800 TANK & TANK COVER WITH RIGHT-HAND TRIP LEVER	1/2"	-	3"	2"	1.6GPF/PRESSURE ASSISTED, FLOOR MOUNTED, ELONGATED WHITE VITREOUS CHINA WATER CLOSET. PROVIDE AMERICAN STANDARD "SPEED CONNECT" TANK/BOWL COUPLING COMPONENTS. AMERICAN STANDARD #5901.110 WHITE, ELONGATED, HEAVY DUTY, OPEN-FRONT SEAT. PROVIDE NECESSARY ROUGH-INS AND FINAL CONNECTIONS, INCLUDING WATER SUPPLY WITH STOP VALVE.	ELJER, (800) 423-5537 KOHLER, (800) 456-4537 ALTERNATE FIXTURES MUST BE EQUIVALENT TO PRIMARY FIXTURE.
LAV 1	ADA WALL-HUNG LAVATORY	PROFLO #PF5414WH	1/2"	1/2"	1-1/2"	1-1/2"	WALL-HUNG, WHITE VITREOUS CHINA LAVATORY. AMERICAN STANDARD ADA "RELIANT 3" #7385.003.002, POLISHED CHROME, SINGLE CONTROL LAVATORY FAUCET WITH GRID DRAIN AND 0.5 GPM VANDAL RESISTANT AERATOR. PROVIDE NECESSARY ROUGH-INS AND FINAL CONNECTIONS, INCLUDING P-TRAPS AND WATER SUPPLIES WITH STOP VALVES.	ELJER, (800) 423-5537 KOHLER, (800) 456-4537 ALTERNATE FIXTURES MUST BE EQUIVALENT (INCLUDING DIMENSIONS) TO PRIMARY FIXTURE.
DF 1	HANDICAP HI/LO DRINKING FOUNTAIN	ELKAY LZWS-EDFP217K	1/2"	-	1-1/2"	1-1/2"	BARRIER FREE, SPLIT LEVEL, DRINKING FOUNTAIN WITH BUILT IN BOTTLE FILLER, FILTER, AND STANDARD CABINET FINISH (STAINLESS). PROVIDE ELDAY ACCESSORY APRON #97258C FOR UPPER UNIT (NOTE: APRON IS NOT REQUIRED IF DRINKING FOUNTAIN IS INSTALLED IN AN ALCOVE, OR A WING WALL IS INSTALLED). PROVIDE SUPPLY, STOP VALVE AND P-TRAP. PROVIDE ACCESS PANELS #ACCESS12X38-5 FOR FRONT ACCESS TO BOTTLE FILLER ELECTRICAL.	STANDARD FIXTURE REQUIRES 115V 1PH POWER (FLA = 1.0AMPS) FOR BOTTLE FILLER. UNIT DOES NOT CHILL WATER. ALTERNATE FIXTURES MUST BE EQUIVALENT TO PRIMARY FIXTURE.
MS 1	MOP SINK	FIAT MSB-2424	3/4"	3/4"	3"	2"	10" DEEP MOLDED STONE MOP SERVICE BASIN. FIAT #830-AA SERVICE FAUCET, WITH INTEGRAL VACUUM BREAKER. FIAT #832-AA HOSE AND HOSE BRACKET. PROVIDE NECESSARY ROUGH-INS AND FINAL CONNECTIONS, INCLUDING 3" P-TRAP AND WATER SUPPLIES.	CRANE, #24EFS WITH #830-AA & #832-AA, (800) 546-5476 ZURN, #Z-1996-24 WITH #Z-1996-SF & #Z-1996-HH, (800) 906-5060
WH 1	ELECTRIC TANK WATER HEATER	STATE "SELECT" #ES6 6 SOMS	3/4"	3/4"	-	-	SIX (6) GALLON JUNIOR MODEL ELECTRIC WATER HEATER (1650 ELEMENT WATTAGE @ 120 VOLT). CAPABLE OF 90°F SET POINT.	A.O. SMITH "PROMAX" #EJC-6, (800) 365-0024 RHEEM "ENERGY MISER" #81VP6S, (770) 351-3000
FD 1	FLOOR DRAIN	JOSAM #30003-92-X	1/2"	-	3"	2"	3" CAST IRON FROOR DRAIN WITH INSIDE CAULK OUTLET AND TRAP PRIMER FITTING. PROVIDE NICKLE-BRONZE ADJUSTABLE STRAINER AND CLAMPING DEVICE.	ALTERNATE FIXTURES MUST BE EQUIVALENT TO PRIMARY FIXTURE.
TP 1	TRAP PRIMER, DISTRIBUTION UNIT & CONNECTION ADAPTOR	MIFAB #MR-500, #MI-DU-500 & #MI-600	1/2"	-	-	-	1/2" MNPT INLET & 1/2" FNPT OUTLET. PROVIDE DISTRIBUTION UNIT AND CONNECTION ADAPTOR AS REQUIRED. TRAP PRIMER SHALL BE INSTALLED LEVEL AND A MINIMUM OF 12" ABOVE FINISHED FLOOR, OR 12" FOR EVERY 20'-0" OF TRAP PRIMER LINE. TRAP PRIMER SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION. PROVIDE ACCESS PANEL AND SERVICE VALVE AS REQUIRED, FOR SERVICING (NOTE: FLUSH OUT LINE TO REMOVE DIRT AND SCALE, PRIOR TO INSTALLING).	ALTERNATE FIXTURES MUST BE EQUIVALENT TO PRIMARY FIXTURE.
TMV 1	THERMOSTATIC MIXING VALVE	POWERS "HYDROGUARD" #LFLM495-1(2)	1/2"	1/2"	-	-	FEMALE NPT OR SWEAT. 0.5 GPM MINIMUM FLOW RATE WHEN TESTED IN ACCORDANCE WITH ASSE 1069 AND ASSE 1070. MAXIMUM OUTLET TEMPERATURE NOT TO EXCEED 110°F.	ALTERNATE FIXTURES MUST BE EQUIVALENT TO PRIMARY FIXTURE.
WHA 1	WATER HAMMER ARRESTER	SIOUX CHIEF "HYDRA-RESTER" #652-A(S) "HYDRA-RESTER" #653-B(S)	1/2" 3/4"	-	-	-	MIP THREAD OR SWEAT. INSTALL ARRESTOR UPRIGHT.	PRECISION PLUMBING PRODUCTS, INC. (503) 256-4010 WATTS (978) 688-1811 ALTERNATE FIXTURES MUST BE EQUIVALENT TO PRIMARY FIXTURE.

NOTE:
INSTALL ALL PLUMBING FIXTURES TO BE FULLY ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES IN ACCORDANCE WITH 'THE AMERICANS WITH DISABILITIES ACT OF 1990 (ARCHITECTURAL GUIDELINES). FIXTURES AND THEIR INSTALLATION SHALL ALSO COMPLY WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATION A117.1 - 'PROVIDING ACCESSIBILITY AND USABILITY FOR PHYSICALLY HANDICAPPED PEOPLE' AND/OR GOVERNING CODES. - ALL PLUMBING FIXTURES EQUIPMENT, TRIM, & FITTINGS SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO, WATER AND ENERGY CONSERVATION CODES. THE SCHEDULED AND/OR SPECIFIED PLUMBING FIXTURES AND EQUIPMENT REPRESENT THE MINIMUM CRITERIA AND SHALL BE THE BASIS FOR THE CONTRACTOR'S BASE BID. IF THE SCHEDULED OR SPECIFIED FIXTURES OR EQUIPMENT DO NOT COMPLY WITH GOVERNING CODES OR REGULATIONS IN ALL RESPECTS, THE CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR COMPLYING FIXTURES, EQUIPMENT, TRIM, OR FITTINGS. THE ABSENCE OF AN ALTERNATE BID SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR'S BID INCLUDES ALL COSTS NECESSARY TO MEET ALL REGULATIONS & CODES.

ALL PIPING BELOW LAVATORY SHALL BE INSULATED WITH TRUEBRO LAV GUARDS AND CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORY.

EXHAUST FAN SCHEDULE:

FANS MARK	BRAND	MODEL	ACTUAL PERFORMANCE VOLUME (CFM)	ESP (IWG)	POWER (W)	MOTOR SPECIFICATIONS AMPS	VOLT	HZ	PH
EF 1	GREENHECK	CSP-A290	225	0.5	80.7	0.71	120	60	1

ACCESSORIES:
1. FACTORY FURNISHED SOLID STATE SPEED CONTROL, FIELD INSTALLED.
2. FACTORY FURNISHED ROUND DUCT CONNECTOR, FIELD INSTALLED.
3. FACTORY FURNISHED ISOLATION KIT, FIELD INSTALLED.
4. INTEGRAL BACK DRAFT DAMPER FACTORY INSTALLED.

ENERGY CODE POST CONSTRUCTION REQUIREMENTS

PER THE REQUIREMENTS OF THE 2009 INTERNATIONAL ENERGY CODE, THE GENERAL CONTRACTOR SHALL OBTAIN & PROVIDE THE FOLLOWING MECHANICAL RELATED ITEMS LISTED BELOW. CONTRACTOR SHALL PROVIDE A COPY TO THE PROJECT OWNER AND WRITTEN CONFIRMATION TO THE PROFESSIONAL OF RECORD PROVING SAID INFORMATION HAS BEEN PROVIDED.

1. HVAC RECORD DRAWINGS OF THE ACTUAL INSTALLATION, SYSTEM CAPACITIES, CALIBRATION INFORMATION AND PERFORMANCE DATA FOR EACH EQUIPMENT PROVIDED TO THE OWNER.
2. HVAC O&M DOCUMENTS FOR ALL MECHANICAL EQUIPMENT AND SYSTEM PROVIDED TO THE OWNER BY THE MECHANICAL CONTRACTOR.
3. WRITTEN HVAC BALANCING AND OPERATIONS REPORT PROVIDED TO THE OWNER.

LOUVER SCHEDULE:

MARK	MANUFACTURER	MODEL	SIZE	FREE AREA	FUNCTION	CFM	VELOCITY	STATIC PRESS.	REMARKS
L 1	RUSKIN	ELF6350DMP	42"X30"	5.12 SQFT	RELIEF	2250	440 FT/SEC	0.03 IN.W.C.	SEE BELOW
L 2	RUSKIN	ELF6350DMP	54"X30"	6.96 SQFT	INTAKE	2250	325 FT/SEC	0.03 IN.W.C.	SEE BELOW

REMARKS:
1. FIELD VERIFY EXACT DIMENSIONS OF WINDOWS THAT WILL BE REMOVED AND REPLACED BY THESE LOUVERS.
2. DRAINABLE, EXTRUDED ALUMINUM, STATIONARY LOUVER WITH BIRD SCREEN.
3. PAINT TO MATCH EXTERIOR OF BUILDING (COORDINATE WITH LANDLORD).
4. PROVIDE GRAVITY BACK DRAFT DAMPER.

AIR DEVICE SCHEDULE:

MARK	MANUFACTURER	MODEL	SIZE	CFM RANGE	FRAME	FINISH	FUNCTION	REMARKS
1	TITUS	OMNI	6"Ø (NOMINAL NECK) 12 X 12 (MODULE SIZE)	0-100	LAY-IN	WHITE (FIELD PAINTED TO MATCH CEILING)	SUPPLY	1, 2, 3, 4
2	TITUS	OMNI	12"Ø (NOMINAL NECK) 23.75 X 23.75 (MODULE SIZE)	380 - 500	LAY-IN	WHITE (FIELD PAINTED TO MATCH CEILING)	SUPPLY	1, 2, 3, 4
3	TITUS	300RS	12 X 8 (NOMINAL DUCT SIZE) 13.75 X 9.75 (MODULE SIZE)	0 - 285	DUCT MOUNTED	WHITE (FIELD PAINTED TO MATCH CEILING)	SUPPLY	5, 6
4	TITUS	350FL	8 X 8 (NOMINAL NECK) 9.75 X 9.75 (MODULE SIZE)	0 - 100	LAY-IN	WHITE (FIELD PAINTED TO MATCH CEILING)	EXHAUST	1, 3
5	TITUS	350RL	24 X 16 (NOMINAL DUCT SIZE) 25.75 X 17.75 (MODULE SIZE)	250 - 1700	SURFACE MOUNTED	WHITE (FIELD PAINTED TO MATCH WALL/DUCT)	RETURN/ TRANSFER	4
6	TITUS	350RL	22 X 22 (NOMINAL DUCT SIZE) 23.75 X 23.75 (MODULE SIZE)	250 - 1700	LAY-IN	WHITE (FIELD PAINTED TO MATCH CEILING)	RETURN	1

REMARKS:
1. PROVIDE MANUAL VOLUME DAMPER AS SHOWN ON PLAN.
2. FIELD ADJUST AIR PATTERN AS SHOWN ON PLAN.
3. FURNISH AND INSTALL T-BARS ON ALL FOUR (4) SIDES OF AIR DEVICE AT LAY-IN AREAS.
4. SEE HVAC/PUMBING PLAN ON SHEET MP1 FOR ADDITIONAL INFORMATION.
5. PROVIDE TITUS AG-35 DAMPER AT FACE OF GRILLE.
6. SEE DIFFUSER DIRECT CONNECTION TO SUPPLY TRUNK DETAIL ON SHEET MP2 FOR DUCT MOUNTING.

CASCO
10877 WATSON ROAD
ST. LOUIS, MO 63127
PROJECT MANAGERS

ISSUED DATES		
1	OWNER	11-23-16
2	BID/PERMIT	11-28-16
REVISIONS		

pure barre®
PURE BARRE
492 CONGRESS STREET
PORTLAND, ME 04101

NOV 30 2016

STATE OF MAINE
MICHAEL C. GRAPPERHAUS
#9350
LICENSED PROFESSIONAL ENGINEER
MICHAEL C. GRAPPERHAUS
LICENSE # 9350
EXPIRATION DATE 12/31/2017

Professional of Record

DRAWN BY
JCD

CHECKED BY
MCG

PROJECT NUMBER
316157

SHEET NAME
MECH/PLUMB SPECIFICATIONS & SCHEDULES

SHEET NUMBER
MP3