

DIVISION 21  
SECTION 21000 - FIRE PROTECTION

A. SCOPE OF WORK

1. PROVIDE A COMPLETE AND OPERABLE FIRE PROTECTION SYSTEM AS IT APPLIES TO THE DEMISED PREMISE.
2. WHERE APPLICABLE, THE CONTRACTOR SHALL CONTRACT THIS WORK WITH A LANDLORD APPROVED FIRE PROTECTION CONTRACTOR. ALL MATERIALS AND EQUIPMENT UNDER THIS SECTION SHALL BE NEW AND LISTED BY UNDERWRITERS LABORATORIES, INC. FOR FIRE PROTECTION SYSTEM INSTALLATION.
3. THE FIRE PROTECTION SYSTEM SHALL BE AS FOLLOWS:
  - A. NEW WET SPRINKLER FIRE PROTECTION SYSTEM FOR ALL AREAS OF THE RETAIL SPACE, PORTIONS THAT ARE UNHEATED OR EXPOSED TO FREEZING TEMPERATURES SHALL BE PROVIDED WITH AN AUTOMATIC DRY PIPE SYSTEM COMPLYING WITH NFPA 13.
  - B. COVERAGE SHALL BE IN ACCORDANCE WITH EXISTING CONDITIONS, NFPA 13, LOCAL CODES, LANDLORD'S CRITERIA, MALL INSURANCE AND LSD&C'S STANDARDS AND SHALL INCLUDE:
    - 1) ALL PIPE TAPS, RISERS, LATERALS, BRANCHES, VALVES, HANGERS, ALARMS, SPRINKLER HEADS AND ALL COMPONENTS REQUIRED.
    - 2) PROVIDE PROFESSIONALLY DESIGNED AND SEALED DRAWINGS, HYDRAULIC CALCULATIONS, SUBMITTALS AND APPROVALS AS NEEDED INCLUDING ANY SEALS, PERMITS, FEES, AND CHARGES.
  - C. FIRE EXTINGUISHERS SHALL BE PROVIDED. REFER TO INSTALLATION SECTION OF THIS SPECIFICATION.
4. EXAMINE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DOCUMENTS TO PROPERLY SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE FIRE PROTECTION SYSTEM WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS.
5. CONTRACTOR SHALL USE APPROVED INDUSTRY FIRE SPRINKLER STANDARDS FOR REUSING EXISTING FIRE SPRINKLER BRANCHES AND SUBMIT CALCULATIONS TO THE LSD&C'S PROJECT MANAGER UPON REQUEST OR REWORK SYSTEM TO THE LSD&C PROJECT MANAGER'S SATISFACTION.
6. RELOCATION OF EXISTING MAINS, LATERALS, BRANCHES AND RISERS TO FACILITATE STORE DESIGN CRITERIA SHALL BE INCLUDED AS PART OF THIS WORK.

B. SHOP DRAWINGS AND DESIGN

1. IN ACCORDANCE WITH THE PREVAILING STANDARDS, BUT NO LESS THAN THAT REQUIRED BY NFPA 13, THIS FIRE PROTECTION CONTRACTOR SHALL PREPARE COMPLETE CALCULATIONS AND SHOP DRAWINGS. SIX (6) COPIES SHALL BE SUBMITTED TO THE GENERAL CONTRACTOR AND ADDITIONAL SETS AS REQUIRED TO THE PROPER CODE AUTHORITIES FOR APPROVAL (NO WORK SHALL BEGIN UNTIL ALL APPROVALS HAVE BEEN RECEIVED).
2. COPY OF THE LETTER OF APPROVAL FROM THE LANDLORD'S INSURANCE RATING BUREAU SHALL BE FORWARDED TO THE LANDLORD'S AGENT AND TO THE LSD&C PROJECT MANAGER.
3. LISTED BELOW ARE MINIMUM REQUIREMENTS FOR SPRINKLER SYSTEM DESIGN AND INSTALLATION. SYSTEM SHALL BE HYDRAULICALLY DESIGNED:
  - A. ORDINARY HAZARD, GROUP 2: PROVIDE A 0.20 GPM/SF PER 1,500 SQUARE FEET DENSITY WITH 165°F RATED 1" DRIFACE SPRINKLER HEADS OR FOLLOW NFPA DENSITY/AREA CURVE FOR DENSITY COVERAGE. PROVIDE A MAXIMUM COVERAGE OF 130 SQUARE FEET PER HEAD.
  - B. MAXIMUM HEAD SPACING: 15 FT.
  - C. SPRINKLERS SHALL BE TESTED FOR A MINIMUM OF 2 HOURS AT 200 PSI.
  - D. DESIGN CALCULATIONS OF INSIDE PIPE SHALL USE C=100 FOR DRY AND C=10 FOR WET SYSTEMS.

C. SPRINKLER HEADS

1. ALL SPRINKLER HEADS SHALL BE NEW (EXISTING HEADS IN EXISTING LSD&C STORES ARE NOT TO BE REPLACED UNLESS NOTED OTHERWISE), U.L. AND F.M. LISTED AND APPROVED AUTOMATIC SPRAY TYPE AS MANUFACTURED BY AUTOMATIC SPRINKLER, GRINNELL, RELIABLE, OR VIKING.
2. ALL SPRINKLER HEADS SHALL BE RATED AS FOLLOWS OR AS REQUIRED BY LOCAL CODES:
  - A. STORAGE AREAS OR MEZZANINES: 200°F-225°F.
  - B. SALES AREA: 150°F-170°F OR 200°F-225°F AS NOTED ON PLANS.
3. ALL SPRINKLER HEADS SHALL BE AS FOLLOWS:
  - A. MANUFACTURER
    - 1) SALES AREA : BASE BID SHALL INCLUDE HEADS MANUFACTURED BY RELIABLE WITH ALTERNATE BIDS BASED ON VIKING MICROMATIC MODEL M OR GRINNELL MODEL F972 AND SHALL BE APPROVED BY THE LSD&C PROJECT MANAGER PRIOR TO ORDERING AND INSTALLATION.
    - 2) NON-SALES AREA : ROUGH BRASS FINISH AS MANUFACTURED BY AUTOMATIC SPRINKLER, STAR, RELIABLE, GRINNELL OR VIKING SPRINKLER COMPANY ONLY.
  - B. HEAD TYPE
    - 1) SALES AREA: GYPSUM BOARD=CONCEALED; LAY-IN CEILING=RECESSED
    - 2) NON-SALES AREA: GYPSUM BOARD OR LAY-IN CEILING=RECESSED; OPEN TO STRUCTURE=UPRIGHT; HEADS MOUNTED UNDER 8 FEET ABOVE FINISHED FLOOR SHALL BE CONCEALED OR BE PROVIDED WITH WIRE GUARDS.
4. ALL SALES AREA SPRINKLER HEADS INCLUDING TRIM AND COVER SHALL HAVE FACTORY APPLIED FINISH. REFER TO FIRE SPRINKLER HEAD PLAN FOR FINISH REQUIREMENTS.
5. ALL SPRINKLER HEADS ON THE MALL SIDE OF TENANT'S STOREFRONT ENCLOSURE, IF ANY, SHALL MATCH LANDLORD'S TYPE.

D. PIPING, FITTINGS, & VALVES

1. SCHEDULE 40 BLACK STEEL: ASTM A-53 WELDED AND SEAMLESS, ANSI B-36-10-70 FOR WROUGHT STEEL PIPE.
2. CAST IRON OR MALLEABLE IRON SCREWED FITTINGS FOR PIPES 2 INCHES AND SMALLER, SCREWED OR CAST IRON FLANGED JOINTS FOR PIPES LARGER THAN 2 INCHES. FITTING SHALL BE APPROVED FOR 175 PSI WORKING PRESSURE.
3. GALVANIZED OR BLACK MALLEABLE IRON WITH BRASS SEAT SCREWED UNIONS FOR PIPES 2 INCHES AND SMALLER.
4. VICTAULIC TYPE COUPLINGS ARE ACCEPTABLE WHERE APPROVED BY LOCAL CODE AND THE LANDLORD.

E. INSTALLATION

1. A FIRE PROTECTION SYSTEM TAP IS NORMALLY FURNISHED BY THE LANDLORD, VERIFY IN FIELD PRIOR TO BID.
  - C. WHENEVER AN EXISTING SPRINKLER SYSTEM IS BEING RENOVATED, THE INTEGRITY AND RELIABILITY OF THE EXISTING SYSTEM SHALL BE MAINTAINED.
  - D. ORIGINAL SPRINKLER SHOP DRAWINGS SHALL BE ACQUIRED THROUGH THE MALL MANAGER/PROJECT MANAGER; HOWEVER, THE SPRINKLER CONTRACTOR SHALL VERIFY THE EXISTING SPRINKLER SYSTEM IN THE FIELD AND SHALL COORDINATE WITH AND SHOW DISCREPANCIES BETWEEN THE ORIGINAL SHOP DRAWINGS AND FIELD CONDITIONS IN THE RENOVATED SHOP DRAWINGS.
2. INSTALLATION SHALL INCLUDE TESTING THE BUILDING SYSTEM PRIOR TO CONNECTING TO MALL SPRINKLER SYSTEM. TESTING SHALL BE APPROVED BY THE FIRE DEPARTMENT AND LANDLORD REPRESENTATIVES. FINAL CONNECTION TO LANDLORD'S SPRINKLER MAIN WILL NOT BE MADE UNTIL THE ENTIRE SYSTEM WITHIN THE DEMISE PREMISES IS TESTED AND READY FOR SERVICE.
3. SPRINKLER HEAD SPACING SHALL COMPLY WITH ORDINARY HAZARD, GROUP 2.
4. SYSTEM SHALL COMPLY WITH THE MOST STRINGENT OF THESE SPECIFICATIONS, THE LANDLORD'S DESIGN CRITERIA OR LOCAL CODES WITH PIPE SIZING BEING BASED ON NFPA ORDINARY HAZARD, GROUP 2 AND COMPLY WITH NFPA 13 LATEST EDITION.
5. ALL SPRINKLER LINES SHALL BE CONCEALED AND MOUNTED AS HIGH AS IS PRACTICAL, AVOIDING INTERFERENCE WITH LIGHTS, DUCTS, PIPES, STORAGE DECK, ETC.
6. FIRE PROTECTION CONTRACTOR SHALL PREPARE COORDINATED SHOP DRAWINGS INDICATING THE LOCATIONS OF ALL SPRINKLER HEADS, SPRINKLER LINES, LIGHTS, DIFFUSERS, GRILLES PRIOR TO INSTALLATION.
7. RELOCATE ALL MAINS AND BRANCHES INTERFERING WITH CEILING HEIGHTS, EQUIPMENT AND MAJOR COMPONENTS, INCLUSIVE OF ADJACENT TENANTS AND MALL COMMON AREAS, REMOVE ALL UNUSED PIPING.
8. FASTENING AND/OR SUSPENSION DEVICES MUST BE ATTACHED TO THE BUILDING STRUCTURE ONLY. SUPPORT SHALL BE FROM THE TOP OF ANY BAR JOIST OR AS DIRECTED BY THE LANDLORD OR THE BUILDING STRUCTURAL ENGINEER.
9. FURNISH AND INSTALL A VALVED TEST CONNECTION IN AN ACCESSIBLE LOCATION FOR THE SPRINKLER SYSTEM AS REQUIRED OR REQUESTED BY THE MALL, LOCAL INSPECTOR, OR INSURANCE CARRIER - COORDINATE LOCATION WITH THE LSD&C PROJECT MANAGER AND LOCAL FIRE PROTECTION OFFICIAL TO ROUGH-IN.
10. WHEN COMPLETED, THE ENTIRE FIRE PROTECTION PIPING SYSTEM SHALL BE HYDROSTATICALLY TESTED AS REQUIRED BY THE RULES AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION. SYSTEM SHALL SHOW NO SIGNS OF LEAKAGE OR OTHER DEFECTS. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE WORK OF THE OTHER CONTRACTORS OR TO THE BUILDING, OR TO ITS CONTENTS, PEOPLE, ETC., EXPENSE. COMPLETELY FLUSH THE SYSTEM UNTIL DISCHARGE SHOWS NO DISCOLORATION.
11. PROPERLY COMPLETED AND SIGNED "SPRINKLER CONTRACTOR'S MATERIAL AND TEST CERTIFICATES SHALL BE FURNISHED TO THE LANDLORD, AUTHORITIES HAVING JURISDICTION, TENANT'S ARCHITECT, INSURANCE REPRESENTATIVE, PROJECT OFFICE AND THE LSD&C PROJECT MANAGER.
12. PROVIDE VALVED DRAIN WITH HOSE THREAD AT ALL LOW POINTS OR TRAPS IN SPRINKLER PIPING. IDENTIFY DRAIN VALVES IF ABOVE HARD CEILINGS WITH A SUITABLE CEILING MARKER AND PROVIDE ARCHITECT APPROVED METHOD FOR ACCESS AS REQUIRED.
13. COORDINATE SPRINKLER WORK WITH FIRE/ALARM CONTRACTOR WHERE THERE ARE FLOW AND TAMPER SWITCHES AND ALARM REQUIREMENTS.
14. SPRINKLER SYSTEM SHALL BE INTERFACED WITH BUILDING FIRE/LIFE SAFETY AND SMOKE EXHAUST SYSTEM IF REQUIRED. REFER TO LANDLORD TENANT CRITERIA AND REQUIREMENTS.
15. FURNISH AND INSTALL 10LB. TYPE "ABC" FIRE EXTINGUISHERS WITH CABINETS IF REQUIRED, AND AT LEAST A "2A10BC" RATED EXTINGUISHER. LOCATIONS ARE TO BE ESTABLISHED IN THE FIELD BY THE LSD&C PROJECT MANGER AND THE LOCAL FIRE PROTECTION OFFICIAL. MAXIMUM TRAVEL DISTANCE BETWEEN EXTINGUISHERS SHALL BE 75 FEET OR LESS AS REQUIRED BY LOCAL CODES.

END OF SECTION 21000

FIRE PROTECTION SPECIFICATIONS

DIVISION 22  
SECTION 22000 - PLUMBING

A. SCOPE OF WORK

1. THIS CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION AND FACILITIES NECESSARY FOR, REASONABLY IMPLIED AND INCIDENTAL INSTALLATION, COMPLETION AND TESTING OF ALL WORK FOR THE PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
  - A. COMPLETE SANITARY PIPING SYSTEMS OF WASTE, DRAINS, AND VENTS.
  - B. COMPLETE COLD AND HOT WATER PIPING SYSTEMS, APPURTENANCES AND INSULATION.
  - C. FIXTURES AND EQUIPMENT AS SCHEDULED.
  - D. COMPLETE NATURAL GAS OR PROPANE PIPING SYSTEMS (AS APPLICABLE, REFER TO PLANS).
  - E. CONDENSATE PIPING SYSTEMS (AS APPLICABLE, REFER TO PLANS).
  - F. TESTS AND ADJUSTMENTS.
  - G. SUBMIT A COMPLETE SET OF REPRODUCIBLE AS-BUILTS.
2. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE PLUMBING SYSTEM, MATERIALS, AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS.
3. GC TO PROVIDE WRITTEN REPORT TO LSD&C PM ON CONDITION OF EXISTING SEWER TIE-IN REGARDING SLOPE AND FLOW.
  - A. SCOPE WITH CAMERA PRIOR TO CONNECTION.
  - B. DO NOT CONNECT WITHOUT LSD&C PM AUTHORIZATION IF SPECS NOT MET.
4. RELOCATION OF EXISTING WATER, GAS, WASTE, VENT, OR DRAINAGE LINES TO FACILITATE STORE DESIGN CRITERIA MUST BE INCLUDED IN BID PROPOSAL.

B. EQUIPMENT AND INSTALLATION

1. REFER TO PLANS FOR SCHEDULES OF EQUIPMENT AND FIXTURES. AMERICAN STANDARD AND CRANE MAY BE CONSIDERED WITH APPROVAL FROM LSD&C PROJECT MANAGER.
2. SANITARY PIPING
  - A. PROVIDE ALL SANITARY WASTE, SEWERS, AND VENTS WITHIN THE PROJECT SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON-SITE. SANITARY WASTE AND VENT PIPING ABOVE FLOOR SHALL BE HUBLESS CAST-IRON PIPE, FITTINGS AND CONNECTIONS. SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC PLASTIC PIPE WITH SOLVENT WELD FITTINGS, OR SERVICE-WEIGHT CAST-IRON WITH NEOPRENE GASKET JOINT SYSTEM. NO PVC PLASTIC PIPING ALLOWED WITHIN CEILING VOIDS USED FOR NON-DUCTED RETURN AIR PLENUM OR IN WALLS, EXCEPT IN CANADA WHERE VFR-PVC MAY BE USED IF PERMITTED BY THE AUTHORITY HAVING JURISDICTION. ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/4" PER FOOT FOR PIPE SIZES 3" AND SMALLER, 1/8" PER FOOT FOR PIPE SIZES 4" AND LARGER, UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.
  - B. INSULATE ALL HORIZONTAL RUNS OF PIPING LOCATED IN CEILING SPACES, WHEN APPLICABLE. INSULATION TO BE AS SPECIFIED FOR WATER PIPING.
  - C. CONDENSATE PIPING SHALL BE TYPE "L" DRAWN COPPER TUBE WITH 95-5 TIN-ANTIMONY SOLDERED JOINTS AND WROUGHT COPPER FITTINGS WITH DIELECTRIC SEPARATION BETWEEN DISSIMILAR METALS.
3. POTABLE WATER PIPING SHALL BE AS FOLLOWS:
  - A. BELOW GRADE: TYPE "K", ANNEALED TYPE TEMPERED COPPER TUBE FOR PIPE SIZES 2 INCHES AND SMALLER, BRAZE ALL JOINTS.
  - B. ALL OTHER: TYPE "L" DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND 95-5 TIN-ANTIMONY SOLDER.
4. PIPING OF DISSIMILAR METALS MUST BE DIELECTRICALLY SEPARATED.
5. GENERALLY, SANITARY AND POTABLE WATER TAPS WILL BE PROVIDED BY THE LANDLORD. FIELD VERIFY EXACT CONNECTION POINTS PRIOR TO SUBMITTING BID. NOTIFY THE LSD&C PROJECT MANAGER, IF CONDITIONS ARE NOT AS SHOWN ON THE PLANS OR AS STATED IN THE SPECIFICATIONS. CONTRACTOR MUST VERIFY THE OPERABILITY OF ENTIRE SYSTEM PRIOR TO TIE-IN AS FOLLOWS:
  - A. SCOPE SANITARY TO LEASE LINE, SNAKE AS REQUIRED AND REPORT ANY BLOCKAGES.
  - B. TEST WATER PRESSURE TO INSURE MINIMUM PSI MATCHES MOST DEMANDED BY EQUIPMENT SUPPLIED.
6. INSULATE ALL HOT WATER, COLD WATER AND CONDENSATE PIPING WITH 1" THICK (K=0.23 @ 75°F) PIPE INSULATION WITH AN ALL SERVICE JACKET TO MEET LOCAL CODES AND UL FLAME SPREAD AND SMOKE DEVELOPED RATINGS.
7. INSULATE THE TRAP, SANITARY AND SUPPLY PIPES UNDER LAVATORY WITH 1/2" ARMSTRONG "ARMAFLEX" PIPING INSULATION OR TRUEBRO MODEL 102W "HANDI LAV GUARD" INSULATION KIT.
8. INSTALL ALL NECESSARY PIPE HANGERS, SADDLES, AND CARRIERS TO PROPERLY SUPPORT ALL PIPING AND FIXTURES. HANGERS SHALL SUIT TYPE OF PIPING PROVIDED AND BE SPACED AT A MAXIMUM SPAN OF 5 FEET. PROVIDE SWAY AND SEISMIC BRACING WHERE REQUIRED BY CODES.
9. STERILIZE WATER SYSTEM IN ACCORDANCE WITH LOCAL CODES.
10. CLEANOUTS AND FLOOR DRAINS SHALL BE INSTALLED PER LOCAL CODES. WALL COVERS ARE TO BE STAINLESS STEEL AND FLOOR COVERS ARE TO BE BRASS, UNLESS OTHERWISE SPECIFIED. PROVIDE FLOOR COVERS WITH INSET AREA FOR CARPETED LOCATIONS. ALL CLEANOUT LOCATIONS SHALL BE APPROVED BY THE LSD&C PROJECT MANAGER.
11. ESCUTCHEONS SHALL BE CHROME PLATED, SIZE AS REQUIRED, AND PLACED AT ALL PIPE PENETRATIONS AT WALLS, FLOORS AND CEILINGS IN FINISHED AREAS.
12. LEAKAGE TESTS SHALL BE PER LOCAL CODES MINIMUM AS FOLLOWS:
  - A. TEST WATER PIPING AT 100 PSIG FOR SIX HOURS.
  - B. TEST DRAIN, WASTE, VENT PIPING BY A 10" WATER COLUMN FOR TWO HOURS.
13. FLASHING SHALL BE SEALED WATERTIGHT AND PERFORMED IN ACCORDANCE TO THE LANDLORD'S CRITERIA. USE A LANDLORD APPROVED ROOFING CONTRACTOR, WHERE APPLICABLE.
14. PROVIDE WATER METER AND REMOTE READER PER LANDLORD'S CRITERIA OR LOCAL UTILITIES REQUIREMENTS, IF APPLICABLE. REFER TO PLANS TO DETERMINE IF WATER METER IS REQUIRED.

C. GAS PIPING

1. FURNISH AND INSTALL A COMPLETE GAS PIPING SYSTEM, IF APPLICABLE. REFER TO PLANS TO DETERMINE IF A GAS SYSTEM IS REQUIRED.
2. GAS LINES SHALL BE BLACK STEEL, SCHEDULE 40, ASTM A-53, WITH MALLEABLE THREADED FITTINGS FOR 2" AND SMALLER, AND WITH WELDED JOINTS FOR 2-1/2" AND LARGER.
3. FURNISH AND INSTALL A GAS COCK, DRIP LEG AND UNION CONNECTION TO EACH PIECE OF EQUIPMENT.
4. SUPPORT PIPING AS REQUIRED BY CODE OR REQUIRED BY LANDLORD CRITERIA, WHICHEVER IS MORE STRINGENT.
5. GAS PIPING EXPOSED ON ROOF MUST BE PAINTED WITH RUST-INHIBITTING PAINT.
6. GAS PIPING INSTALLED IN RETURN AIR PLENUMS SHALL BE SLEEVED AND VENTED, OR WELDED IN ACCORDANCE WITH THE LOCAL GAS COMPANY, LOCAL CODE, AND APPLICABLE NFPA 54 CODES.
7. TESTING AND PURGING OF GAS PIPING SHALL BE DONE PER THE REQUIREMENTS OF THE LOCAL GAS COMPANY, LOCAL CODES, AND APPLICABLE NFPA 54 CODES, UP TO FINAL CONNECTION POINT AT THE APPLIANCE.
8. CONTACT AND COORDINATE GAS SERVICE, METER AND REGULATOR REQUIREMENTS WITH THE LOCAL GAS COMPANY AND THE MALL'S OPERATIONS MANAGER PRIOR TO BID. INCLUDE INSTALLATION COST OF GAS METER AND REGULATOR IN BID.

END OF SECTION 22000

ABBREVIATIONS - PLUMBING

AD	ACCESS DOOR	G	GAS	PM	PROJECT MANAGER
ADA	AMERICAN DISABILITY ACT	GAL	GALLONS	POC	POINT OF CONNECTION
AF	ABOVE FINISHED FLOOR	GC	GENERAL CONTRACTOR	PRV	PRESSURE REDUCING VALVE
AP	ACCESS PANEL	GPM	GALLONS PER MINUTE	PSI	POUNDS PER SQUARE INCH
CD	CEILING DIFFUSER OR CONDENSATE DRAIN	HB	HOSE BIBB	(R)	RELOCATE
CFM	CUBIC FEET PER MINUTE	HD	HEAD	RD	ROOF DRAIN
CI	CAST IRON	HP	HORSEPOWER	RBPB	REDUCED PRESSURE BACKFLOW PREVENTER
CO	CLEANOUT	HW	HOT WATER	RPM	REVOLUTION PER MINUTE
CONT	CONTINUE	INV	INVERT		
CONTR	CONTRACTOR			SCH	SCHEDULE
COTS	CLEANOUT TO GRADE	LAV	LAVATORY	SOV	SHUT-OFF VALVE OR SCHEDULE OF VALVE
CW	COLD WATER	LB	POUND		
		LF	LINEAL FEET		
DET	DETAIL	MECH	MECHANICAL	UH	UNIT HEATER
DF	DRINKING FOUNTAIN	MFR	MANUFACTURER	UON	UNLESS OTHERWISE NOTED
DL	DOOR LOUVER	MTO	MOUNTED	UTR	UP THRU ROOF
DS	DREAMTEAMER	WTR	WATER	VTR	VENT THRU ROOF
DTR	DOWN THRU ROOF DRAWING				
DWG	DRAWING				
(E)	EXISTING	(N)	NEW	WC	WATER CLOSET
EW	ELECTRIC WATER COOLER	N.C.	NORMALLY CLOSED	WCO	WALL CLEANOUT
		N.C.	NOT IN CONTRACT	WG	WATER GAUGE
		N.O.	NORMALLY OPEN	WH	WATER HEATER
FCO	FLOOR CLEANOUT	N/A	NOT APPLICABLE	WHA	WATER HAMMER ARRESTER
FCU	FAN COIL UNIT	NTS	NOT TO SCALE	WT	WEIGHT
FD	FLOOR DRAIN				
FOC	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR	P	PUMP		
FP	FIRE PROTECTION CONTRACTOR	PC	PLUMBING CONTRACTOR		
		PD	PRESSURE DROP		
FS	FLOOR SINK	PLBG	PLUMBING		

PLUMBING SPECIFICATIONS



Shremshock Engineering, Inc.  
6130 S. Sunbury Rd. Westerville, OH 43081  
t: 614 545 4550 | f: 614 545 4555 | shremshock.com  
TX Registration Number: #F-6966

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LIMITED STORE PLANNING, INC.  
d/b/a STORE DESIGN & CONSTRUCTION

Three Limited Parkway • Columbus, Ohio 43230

Telephone: 614.415.7000 • Fax: 614.415.7349

24200161

BATH & BODY WORKS  
THE GALLERIA II

SPACE INDUSTRIES  
5005 WESTHEIMER RD.  
HOUSTON, TX 77056

PROJECT INFORMATION:

REQUIRED BY:	BUILDING DEPARTMENT COMMENTS:	DATE:
		04/11/14
	BUILDING DEPARTMENT COMMENTS:	05/06/14

ELITE CONSTRUCTION GROUP  
LANE JACKSON, TX  
PHONE: 979-284-0712  
NOTE: THESE PRINTS HAVE BEEN  
REDUCED BY 50 PERCENT SCALE  
WILL BE 50 PERCENT OF WHAT IS  
NOTED ON PLANS

DATE ISSUED:	3/7/14
DESIGNED BY:	PTM
DRAWN BY:	PTM
CHECKED BY:	JTP

PLUMBING AND  
FIRE PROTECTION  
SPECIFICATIONS

DRAWING NUMBER:

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