

3/28/2018 10:21:44 AM P:\COMMERCIAL\2016 PROJECT IN-BOX\2016-139 New Restroom at Durr Field\5. Drawing Info.c Revit\16139 Durr Field Restrooms - PLMG.rvt
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GENERAL PLUMBING NOTES:

- GENERAL REQUIREMENTS:**
- ALL WORK SHALL CONFORM TO THE 2012 EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC), ALL STATE AND LOCAL CODES, RULES, AND REGULATIONS, AND PROJECT SPECIFICATIONS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, PERMITS, AND LICENSES FOR THE COMPLETE INSTALLATION OF THE WORK OUTLINED IN THESE CONTRACT DOCUMENTS.
 - SEE CIVIL DRAWINGS FOR THE EXTENT OF ALL PIPING ENTERING AND LEAVING BUILDING. PLUMBING CONTRACTOR SHALL EXTEND ALL APPLICABLE SERVICES (DOMESTIC WATER, NATURAL GAS, SEWER, STORM DRAINAGE, FIRE SUPPRESSION) TO CIVIL CONNECTION POINTS AND MAKE FINAL CONNECTIONS.
 - CONTRACTOR IS TO COORDINATE W/ GENERAL CONTRACTOR IN REGARDS TO PROJECT TIMELINE, WORK HOURS, AS WELL AS ANY BONDING OR INSURANCE REQUIREMENTS.
 - ALL PLUMBING FIXTURES AND PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, TRAP COVERS, FAUCETS, STRAINERS, ETC. REGARDLESS OF PRESENCE ON PLANS. SEE FIXTURE SCHEDULE.
 - ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. EXISTING EQUIPMENT IS EXCLUDED FROM WARRANTY REQUIREMENT.
 - THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.
 - BEFORE BID, PLUMBING CONTRACTOR IS RESPONSIBLE FOR CLARIFYING W/ GENERAL CONTRACTOR ANY CONFUSION IN REGARDS TO RESPONSIBILITY OF WORK TO BE PERFORMED OR MATERIALS TO BE PROVIDED. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTANDS THOROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, AND HAS INCLUDED ON THE BID ALL THE NECESSARY ITEMS TO CARRY OUT THIS SECTION OF WORK.
 - ALL EXISTING EQUIPMENT AND SYSTEMS ARE ASSUMED BY ENGINEER TO BE IN GOOD WORKING ORDER. BEFORE BEGINNING WORK PLUMBING CONTRACTOR IS TO ENSURE ANY EQUIPMENT & SYSTEMS TO REMAIN ARE PROPERLY FUNCTIONING. NOTIFY GENERAL CONTRACTOR IMMEDIATELY IF PROBLEMS ARE DISCOVERED.
 - ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.

- DIVISION OF WORK:**
- ALL LOW VOLTAGE WIRING RELATED TO PLUMBING EQUIPMENT AND SYSTEMS IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. ALL HIGH VOLTAGE CONNECTIONS TO PLUMBING EQUIPMENT, INCLUDING DISCONNECTS TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
 - GENERAL CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ACCESS DOORS RELATED TO PLUMBING SYSTEM (W/ EXCEPTION OF CLEANOUT COVERS, BY PLUMBING CONTRACTOR). PLUMBING CONTRACTOR RESPONSIBLE FOR COMMUNICATING TO GENERAL CONTRACTOR SIZE AND LOCATION OF REQ'D ACCESS DOORS.
 - PLUMBING CONTRACTOR IS TO EMPLOY THE SERVICES OF THE GENERAL CONTRACTOR FOR CUTTING AND PATCHING OF WALLS, FLOORS & CEILINGS RELATED TO THE INSTALLATION OF PLUMBING EQUIPMENT & SYSTEMS.
 - GENERAL CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY WATER HEATER PLATFORMS, EITHER FLOORWALL MOUNTED OR SUSPENDED. PLUMBING CONTRACTOR TO COMMUNICATE REQ'S TO GENERAL CONTRACTOR.

- COORDINATION:**
- INVERT ELEVATIONS SHALL BE ESTABLISHED PRIOR TO BEGINNING WORK. PLUMBING CONTRACTOR IS TO ENSURE PROPER SLOPES OF ALL WASTE AND STORM PIPING CAN BE MAINTAINED. CONTACT ENGINEER IMMEDIATELY IF PROBLEM/ISSUE IS DISCOVERED.
 - PLUMBING CONTRACTOR TO COORDINATE W/ GENERAL CONTRACTOR AND ARCH PLANS TO ENSURE NECESSARY BACKINGS/SUPPORTS HAVE BEEN PROVIDED TO ALLOW INSTALLATION OF PLUMBING FIXTURES.
 - THE PLUMBING CONTRACTOR SHALL COORDINATE CLOSELY WITH ALL OTHER TRADES TO AVOID CONFLICT AND ENSURE OTHER TRADES PROVIDE MEASURES TO ACCOMMODATE PLUMBING WORK (I.E. ACCESS DOORS, SLAB/WALL/ROOF OPENINGS, ELECTRICAL CONNECTIONS, ETC.)
 - PIPING SHOULD BE COORDINATED WITH ALL STRUCTURAL, FOOTINGS AND FOUNDATIONS. PIPE SHOULD BE OFFSET TO AVOID CONTACT WITH FOOTINGS AND FOUNDATION WALLS. IF PIPING MUST RUN UNDERNEATH A FOOTING OR THROUGH A FOUNDATION WALL, THE PIPE MUST BE INSTALLED WITH A RELIEVING ARCH OR IN A PIPE SLEEVE.
 - PLUMBING CONTRACTOR SHALL COORDINATE MOUNTING HEIGHTS AND METHODOLOGIES WITH ARCHITECTURAL DRAWINGS.

- IDENTIFICATION:**
- EACH PIPE FITTING AND LENGTH OF PIPE, TRAP, FIXTURE, MATERIAL, AND DEVICE UTILIZED IN A PLUMBING SYSTEM SHALL BEAR THE IDENTIFICATION OF THE MANUFACTURER.

- MATERIALS:**
- ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED.
 - ALL PLASTIC PIPE, FITTINGS AND COMPONENTS SHALL CONFORM TO NSF 14/ANSI 14.
 - PIPING MATERIALS AND FITTINGS SHALL BE AS FOLLOWS:
 - WASTE, VENT (ABOVE & BELOW SLAB, NOT IN AIR RETURN PLENUMS): PVC PIPE.
 - DOMESTIC WATER (BELOW SLAB): TYPE 'K' COPPER WITH WROUGHT COPPER FITTINGS.
 - DOMESTIC WATER (ABOVE SLAB): TYPE 'L' COPPER WITH SWEATED SOCKET FITTINGS. THREADED FITTINGS MAY BE USED AT VALVES, FIXTURES & SIMILAR.
 - DOMESTIC WATER (ABOVE SLAB, DOWNSTREAM OF WATER MAIN SERVICE ASSEMBLY):
 - TYPE 'L' COPPER WITH SWEATED SOCKET FITTINGS. THREADED FITTINGS MAY BE USED AT VALVES, FIXTURES & SIMILAR.
 - COLOR-CODED CROSS-LINKED POLYETHYLENE PIPING (PEX) (DOMESTIC COLD WATER = BLUE, DOMESTIC HOT WATER = RED, DOMESTIC HOT WATER RECIRCULATION = PURPLE)
 - SCH. 40 CPVC PIPE.
 - INSULATION IS REQUIRED ON ALL WATER SUPPLY PIPING (COLD & HOT) ABOVE FINISHED FLOOR. INSULATION TO BE EQUAL TO "ARMAFLEX" PIPE INSULATION W/ SEALED OR TAPER SEAMS. CW LINE INSULATION TO BE MIN. 1/2" THICK. HW LINE INSULATION TO HAVE A MINIMUM R FACTOR OF 6.5 (1") OR IN ACCORDANCE W/ LOCAL CODES WHICHEVER IS GREATER.
 - EXCEPTION: NO INSULATION PERMITTED ON BACKFLOW PREVENTER ASSEMBLY.
 - PROVIDE HANGERS & SUPPORTS APPROVED FOR USE PER THE REQUIREMENTS IN ALL APPLICABLE CODES AND STANDARDS.
 - ANY PLUMBING FIXTURES WITH A COMMON SHUT-OFF VALVE ARE TO HAVE A CHECK VALVE ON THE HOT & COLD WATER VALVES TO PREVENT INTERCONNECTION OF HOT & COLD WATER LINES.

- HEALTH & SAFETY:**
- IN ORDER TO INHIBIT MICROBIAL GROWTH (SUCH AS LEGIONELLA), ALL HOT WATER STORAGE VESSELS (INCLUDING TANK-TYPE WATER HEATERS AND HOT WATER RECIRCULATION LINES) SHALL BE SET TO STORE HOT WATER AT A MINIMUM TEMPERATURE OF 140°F.
 - ALL PUBLIC PLUMBING FIXTURES WITH A HOT WATER CONNECTION (E.G., LAVATORIES, SHOWERS, BREAK ROOM SINKS, ETC.) SHALL BE PROTECTED BY A COMBINED PRESSURE BALANCING / THERMOSTATIC CONTROL MIXING VALVE, SUCH AS WATTS™ LFMMV, LF1170, OR APPROVED EQUAL.
 - MIXING VALVES SHALL MEET ALL APPLICABLE REQUIREMENTS OF ASSE 1016, ASSE 1017, AND ASSE 1070. PRESSURE-BALANCED-ONLY TYPE MIXING VALVES ARE DISALLOWED.
 - EACH MIXING VALVE SHALL BE EQUIPPED WITH A HEAT TRAP, STOP VALVE, CHECK VALVES ON BOTH HOT AND COLD WATER SUPPLY, AND INLET FILTERS OR STRAINERS. MIXING VALVES SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION, OR SHALL BE PROVIDED WITH AN ACCESS DOOR OR PANEL. COORDINATE INSTALLATION OF ACCESS DOORS AND PANELS WITH ARCHITECT OF RECORD TO ENSURE GOOD AESTHETICS IN FINAL INSTALLATION.

- EXECUTION:**
- PLUMBING CONTRACTOR SHALL INSTALL PLUMBING EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. ENSURE REQUIRED MAINTENANCE ACCESS AND CLEARANCES ARE MAINTAINED. IF CONFLICT EXISTS BETWEEN THESE PLANS AND MANUFACTURER INSTRUCTIONS, CONTACT ENGINEER OF RECORD.
 - PLUMBING CONTRACTOR IS RESPONSIBLE FOR EXECUTING ALL CODE REQUIRED TESTS AND INSPECTIONS PRIOR TO FINALIZATION OF WORK.
 - ALL SANITARY WASTE PIPING AND STORM DRAINING PIPING, 4" AND LARGER, SHALL BE SLOPED AT 1/8" PER FOOT, UNLESS NOTED OTHERWISE.
 - ALL SANITARY WASTE PIPING AND STORM DRAINING PIPING, 3" AND SMALLER, SHALL BE SLOPED AT 1/4" PER FOOT, UNLESS NOTED OTHERWISE.
 - ALL SLOPES AND INVERT ELEVATIONS SHALL BE CHECKED BEFORE ANY PIPING IS INSTALLED, IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.
 - ALL VENT PIPES THROUGH ROOF MUST BE A MINIMUM OF 100" FROM ANY OUTSIDE AIR INTAKES AND A MINIMUM OF 50" FROM ANY EXHAUST FANS, OR EXTEND AT LEAST 20" ABOVE THE TOP OF ANY INTAKES.
 - MAINTAIN REQUIRED AIR GAP AT ALL INDIRECT WASTE LINES (MINIMUM 2X THE EFFECTIVE PIPE OPENING WIDTH).
 - EACH FIXTURE TRAP SHALL HAVE A LIQUID SEAL OF NOT LESS THAN 2 INCHES AND NOT MORE THAN 4 INCHES. WHERE A TRAP SEAL IS SUBJECT TO LOSS BY EVAPORATION, THE TRAP SEAL SHALL BE PROTECTED BY RECTORSEAL, SURESEAL® TRAP SEALER OR EQUAL A TRAP SEAL PRIMER, OR OTHER METHOD APPROVED IN WRITING BY THE ENGINEER OF RECORD. TRAP SEAL PRIMERS SHALL CONFORM TO ASSE 1018 OR ASSE 1044.
 - ALL FLOOR DRAINS AND FLOOR SINKS SHALL HAVE DEEP SEAL TRAPS, WHERE TRAP PRIMERS ARE USED IN LIEU OF TRAP SEALERS. CONTRACTOR SHALL SUPPLY WATER FROM NEAREST WATER SOURCE AND INSTALL PRIMER PER MANUFACTURER'S INSTRUCTIONS. IN SUCH A MANNER AS TO MITIGATE SEDIMENT BUILD-UP IN PRIMER VALVE.
 - ENSURE PIPING LOCATED ON EXTERIOR WALLS (OR OTHER WALLS EXPOSED TO FREEZING CONDITIONS) IS INSTALLED ON WARM-SIDE OF WALL INSULATION. IF FIELD CONDITIONS DO NOT ALLOW THIS, CONTRACTOR SHALL INSULATE PIPING ADEQUATELY FOR FREEZE PROTECTION. RE-ROUTE PIPING TO ALTERNATIVE LOCATION WHERE PIPING IS NOT SUSCEPTIBLE TO FREEZING, OR PROVIDE HEAT TRACING (COORDINATE WITH ELECTRICAL FOR HEAT TRACING APPLICATIONS).
 - ANY NOTCHING, DRILLING, BORING OR OTHER ALTERATION TO BUILDING STRUCTURE SHALL BE PERFORMED IN A CODE APPROVED METHOD AND NOT THREATEN THE INTEGRITY OF THE BUILDING STRUCTURE. COORDINATE ANY STRUCTURAL IMPACTS WITH STRUCTURAL ENGINEER OF RECORD.
 - SUPPORT ALL PIPING IN ACCORDANCE W/ APPLICABLE CODES AND STANDARDS. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE.
 - PROVIDE A U.L. LISTED ASSEMBLY FOR ALL PENETRATIONS THRU FIRE RATED WALLS, FLOORS & CEILINGS.
 - PENETRATIONS OF ALL EXTERIOR WALLS, FLOORS AND CEILINGS SHALL BE SEALED IN AN AIR-TIGHT AND WATER-TIGHT MANNER.
 - CLEANOUTS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS. PROVIDE CLEANOUTS AS PLANS INDICATE, AND AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR 45 DEGREE TURNS, AT EVERY 90 DEGREE TURN, AT EVERY 100 FEET, AND AT THE BASE OF ALL ROOF LEADERS. CLEANOUTS SHALL BE PLACED IN READILY ACCESSIBLE LOCATIONS.
 - VALVES NOT DIRECTLY AT EQUIPMENT SHALL BE LABELED INDICATING THE FIXTURE OR AREA SERVED.
 - WATER HEATER SHALL BE FILLED WITH WATER AND PURGED AS SOON AS INSTALLED OR IN NO EVENT LATER THAN GAS / ELECTRIC HOOK-UP.
 - PANS SHALL BE INSTALLED UNDER STORAGE-TYPE WATER HEATERS OR WATER STORAGE TANKS INSTALLED IN ATTICS OR ABOVE CEILINGS. THE PAN SHALL BE GALVANIZED STEEL HAVING A MINIMUM THICKNESS OF 24 GAUGE, OR OTHER PANS APPROVED FOR SUCH USE. PANS ARE NOT REQUIRED UNDER TANKLESS WATER HEATERS.
 - COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH MASONRY OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, SATISFACTORY AND PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PROTECT THE COPPER AGAINST CONTACT WITH OTHER METALS.
 - WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, SLEEVES SHALL BE COPPER OR RED BRASS. WHERE COPPER MUST BE CONCEALED IN A MASONRY PARTITION OR AGAINST MASONRY, CONTACT SHALL BE PREVENTED BY COATING THE COPPER HEAVILY WITH ASPHALTIC ENAMEL AND PROVIDING 1# ASPHALT SATURATED FELT BETWEEN THE PIPE AND MASONRY.
 - ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS. PIPE INSULATION SHALL BE MITERED AT ELBOWS AND TEES TO ENSURE COMPLETE COVERAGE OF PIPING.
 - PROVIDE SHUT OFF VALVES ON ALL FIXTURES TO EACH PLUMBING FIXTURE, APPLIANCE, OR MECHANICAL EQUIPMENT.
 - VACUUM BREAKERS SHALL BE PROVIDED FOR ALL FIXTURES TO WHICH HOSES MAY BE ATTACHED. VACUUM BREAKERS SHALL BE PERMANENTLY ATTACHED.
 - THE PLUMBING CONTRACTOR SHALL PROVIDE WATER HAMMER PROTECTION ON ALL WATER DISTRIBUTION PIPING SERVING EQUIPMENT W/ QUICK CLOSING VALVES (ICE MAKERS, DISHWASHERS, FLUSH VALVES, WASHING MACHINES, WATER COOLERS, ETC.)
 - ACCESS DOORS TO BE PROVIDED FOR ALL VALVES AND DEVICES REQUIRING ACCESS WHEN LOCATED IN WALLS OR ABOVE INACCESSIBLE CEILING CONSTRUCTION. ACCESS DOORS TO BE RATED WHERE INSTALLED IN RATED ASSEMBLIES.
 - THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLUMBING EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (NAIL, SPACKLE, ETC.). UPON COMPLETION OF WORK THE PLUMBING CONTRACTOR SHALL CLEAN, WASH, ETC. ALL ITEMS AND EQUIPMENT WITH THE SCOPE OF WORK AND LEAVE ALL ITEMS BRIGHT AND CLEAN.
 - EXPOSED INSULATED PIPING SHALL BE PROTECTED WITH A MINIMUM SHEET METAL JACKETS OR PVC JACKETS.
 - BURIED METALLIC PIPING SHALL BE PROTECTED AGAINST CORROSION BY THE USE OF A COATING OR WRAPPING SYSTEM INTENDED FOR SUCH APPLICATION. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ANY ANTI-CORROSION COATINGS OR WRAPPING SYSTEMS FOR BURIED METALLIC PIPING TO ENGINEER OF RECORD FOR APPROVAL.
 - DO NOT USE JOINTS, TUBE FITTINGS, RIGHT AND LEFT COUPLINGS, BUSHINGS, SWING JOINTS, AND IN-LINE COMPRESSION FITTINGS ON PIPING IN CONCEALED LOCATIONS. USE OF ELBOWS AND TEES ARE APPROVED FOR USE IN CONCEALED LOCATIONS.

PLUMBING FIXTURE...

Mark	Fixture Description	Flow	Mfgr	Model	Trim	Cold	Hot	Waste	Vent	Notes
FD	FLOOR DRAIN	-	JAY R. SMITH	2010	CAST IRON BODY AND FLASHING COLLAR; 6" NICKEL BRONZE ROUND STRAINER; VANDAL-PROOF GRATE; SEDIMENT BUCKET; NO TRAP PRIMER OPTION. PROVIDE...	-	-	5"	-	1
HB	HOSE BIBB	-	WOODFORD	24	NON-REMOVABLE VACCUUM BREAKER	3/4"	-	-	-	-
LAV	WALL-MOUNTED LAVATORY	0.5 GPM	AMERICAN STANDARD	478	VITREOUS CHINA, 20"x18" WALL HUNG WITH GRID DRAIN, JAY R. SMITH 0700-M31 SERIES CARRIER, CHROME-PLATED LOOSE KEY ANGLE STOP, ESCUTCHEON, P-TRAP, AND SUPPLIES. MOUNT PER ADA REQUIREMENTS. PROVIDE TRUBRO UNDERSINK...	1/2"	1/2"	2"	2"	2
MS	SQUARE, MOLDED STONE, FLOOR MOUNTED MOP SINK	-	FIAT PRODUCTS	MSB-2424	CHICAGO FAUCETS MODEL#897 CHROME, 3/4" HOSE THREAD SPOUT AND WALL BRACE MTD @ 24" A.F.F., FIAT 832-AA 30" HVY DUTY FLEXIBLE 3/4" RUBBER HOSE & WALL BRACKET, FIAT 833-AA SILICONE SEALANT, FIAT 889-CC 18-GAUGE TYPE-302 S...	3/4"	-	1-1/2"	2"	-
T1	EXPANSION TANK	-	WATTS	PLT-5	-	-	-	-	-	-
UR	FLUSH VALVE...	1.0 GPF	AMERICAN...	STALLBROOK 6400.014	VITREOUS CHINA, SLOPING FRONT STALL URINAL, INTEGRAL FLUSH SPREADER,...	3/4"	-	3-1/2"	2"	-
WC	FLUSH TANK WATER CLOSET, REAR SPUD,...	1.6 GPF	AMERICAN STANDARD	HURON 3342.001	VITREOUS CHINA, ENLONGATED BOWL, WALL OUTLET, 5905.100 EXTRA-HEAVY-DUTY OPEN FRONT-LESS SEAT, CONCEALED SELECTRONIC BACK-SPUD TOILET FLUSH VALV...	1-1/2"	-	4"	2"	3
WCO	WALL CLEANOUT	-	MIFAB	C1460-RD-6	CAST IRON TEE WITH THREADED COUNTERSINK PLUG. VANDAL RESISTANT SCREW...	-	-	*SPECI...	-	4
WH-1	TANK-TYPE WATER HEATER (40 GALLONS, 6...	-	A.O. SMITH	DEN-40	240V / 1P, TWO NON-SIMULTANEOUS ELEMENTS, SET STORAGE TEMPERATURE TO 140°F, ENSURE ALL PUBLIC SERVICE FIXTURES SERVED BY THIS UNIT ARE PROTECTED...	3/4"	3/4"	3/4"	-	6, 7, 8
WHA	WATER HAMMER...	-	MIFAB	MWH	FIXTURE UNIT RATING 1-11: 1/2" FIXTURE UNIT RATING 2-30: 3/4" FIXTURE...	-	-	-	-	5

- GENERAL NOTES:**
- COORDINATE FINISH OF ALL FIXTURES, CLEANOUT COVERS, ETC. WITH...
 - FIXTURE FLOW RATES SHOWN ARE RATED AT MINIMUM 40 PSI. CONTRACTOR SHALL VERIFY WATER PRESSURE AND MIN. FLOW RATE AFTER INSTALLATION
- NOTES:**
- INCLUDE RECTORSEAL SURE SEAL® TRAP SEAL...
 - FIXTURE SHALL BE PROTECTED WITH WATTS FAUCET MIXER VALVE AS INDICATED IN PLUMBING GENERAL NOTES, SHEET P-001
 - MOUNT WATER CLOSET PER ADA REQUIREMENTS
 - SIZE WALL CLEANOUT TO MATCH CONNECTED SANITARY PIPE
 - CONTRACTOR SHALL INSTALL WATER HAMMER ARRESTORS AS REQUIRED TO MEET THE FIXTURE LOAD. INSTALL IN ACCESSIBLE LOCATION COMPLETE WITH ACCE...
 - PROVIDE T&P RELIEF. SET @ 150 PSI DISCHARGE TO SERVICE SINK. DO NOT ROUTE INTO DRAIN PAN.
 - PROVIDE SHEET METAL DRAIN PAN AS INDICATED IN PLUMBING GENERAL NOTES, SHEET P-001
 - ELEMENTS ARE RATED FOR 6 KW @ 240V / 1P, AND 4.5 KW @ 208V / 1P. WATER HEATER TO BE POWERED @ 240V / 1P

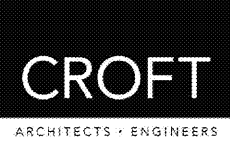
PLUMBING LEGEND	
SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
⊗	GATE VALVE
⊕	GLOBE VALVE
⊘	CHECK VALVE
○	PIPE SLEEVE
(A)	COMPRESSED AIR DROP
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
B.E.	BOTTOM ELEVATION
CA	COMPRESSED AIR
CAD	COMPRESSED-AIR DROP
CAHR	COMPRESSED AIR RETRACTABLE HOSE REEL
CWW	CHEMICAL WASTE WATER
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHR	DOMESTIC HOT WATER RECIRCULATION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN WITH FLUSH-MOUNTED GRATE
FD-B	FLOOR DRAIN WITH RECESSED GRATE
FGCO	FINISH GRADE CLEAN OUT
HB	HOSE BIBB
HBF	HOSE BIBB (FREEZE-PROOF)
HC	HANDICAPPED ACCESSIBLE
HWR	DOMESTIC HOT WATER RETURN
NG	NATURAL GAS
N.T.S.	NOT TO SCALE
TP	TRAP PRIMER
TYP.	TYPICAL
VTR	VENT THRU ROOF
WCO	WALL CLEAN OUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR

DOMESTIC WATER - FIXTURE COUNTS						
Room	Fixture Type	Values	Sum of CW...	Sum of HW...	Sum of Total...	Sum of...
MEN'S	Urinal - Standard (Public)	1	10	0	10	4
	Lavatory (Public)	2	1.5	1.5	2	1
	Water Closet - Flush Valve...	1	10	0	10	4
MEN'S Total		4	21.5	1.5	22	9
FAMILY	Lavatory (Public)	1	1.5	1.5	2	1
	Water Closet - Flush Valve...	1	10	0	10	4
FAMILY Total		2	11.5	1.5	12	5
WOMEN'S	Lavatory (Public)	2	1.5	1.5	2	1
	Water Closet - Flush Valve...	2	10	0	10	4
WOMEN'S Total		4	11.5	1.5	12	5
Grand Total		10	44.5	4.5	46	19

DOMESTIC WATER CALCULATIONS	
System Type	Predominantly...
Total Fixture Units	46
GPM	50
Cubic Ft / Min	6.6845
Min. Req'd Meter Size, In.	1.5
Main Svc. Riser Size, In. (@...)	2.5
Backflow Preventer Size	3
Pressure Loss Per 100 LF...	0.7660
Horizontal Pipe Length (FT)	60
Vertical Pipe Length (FT)	12
Total Pipe Length (FT)	72
Fitting Loss Factor	25%
Fitting Loss Eq. Length (FT)	18
Eq. Length TOTAL (FT)	90

A	Street Pressure	80	PSI
B	Est. Water Meter Loss	2.3	PSI
C	Available Pressure @ PRV / Main	77.7	PSI
(Subtract Line B from Line A, Max ...)			
E	Backflow Preventer Assy. Allowance	6	PSI
F	Tap From Main Loss - 2.5 in. Tap	0.1150	PSI
Static Loss per LF (Vertical)			
G	Vertical Static Loss	5.16	PSI
H	Highest Fixture Pressure Req'd...	45	PSI
Total Losses & Requirements 20.9950 PSI			
(Add Lines E - H)			
56.7050 PSI			
Maximum Pressure Available to...			
(Subtract Line I from Line C)			

NOTE: CONTRACTOR SHALL FIELD-VERIFY STREET PRESSURE AND CONTACT ENGINEER OF RECORD IF SUFFICIENT PRESSURE IS NOT AVAILABLE.



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03/28/2018
 In accordance with GA R&R Dept.
 180 §12 - Sealing of Documents

OWNER
CITY OF ACWORTH
 4415 SENATOR RUSSELL AVENUE
 ACWORTH, GEORGIA 30101



DURR FIELD
 4757 - 4805 SCHOOL STREET
 ACWORTH, GEORGIA 30101

No.	Date	Description
0	2018-03-12	ISSUED FOR CONSTRUCTION
	2016-07-22	100% SET
A	2016-07-08	REVIEW
ISSUANCE		

PROJECT NUMBER
16139
 DRAWN: MDJ
 CHECKED: JKM
 SHEET TITLE
PLUMBING GENERAL NOTES, SCHEDULES, AND CALCULATIONS
 SHEET NO.

P-001