CUBIC FEET PER HOUR ROOFTOP UNIT DESIGNATION **BELOW FINISHED GRADE**

LEGEND

MASTER MIXING VALVE

EXISTING PIPING AS NOTED - SW — STORM WATER LINE - DHWR — DOMESTIC HOT WATER RETURN DOMESTIC COLD WATER DOMESTIC HOT WATER (110°F) SANITARY SEWER LINE · VT — VENT LINE NATURAL GAS

PLUMBING SYMBOLS LIST

SYMBOL | DESCRIPTION -X-X EXISTING PIPING

NEW TO EXISTING CONNECTION

REMOVE TO THIS POINT ///// WORK TO BE REMOVED

— • — COLD WATER PIPING (C)

— ∘∘ — HOT WATER PIPING (H)

— ∘∘∘ — | HW RECIRCULATION PIPING (HWR)

-HWS-HOT WATER SUPPLY

---- VENT PIPING (V)

-->- STORM PIPING (ST)

----- SANITARY (SAN)

--- IW --- INDIRECT WASTE (IW) — G — NATURAL GAS PIPING (G)

CAP OR PLUG

⊣⊦ UNION

∞— P-TRAP

→ DIRECTION OF FLOW

← ELBOW UP, ELBOW DOWN

——— DROP CONNECTION

ð ⋈ shut off valve

N | CHECK VALVE

⊗ BALANCE VALVE

IS 片 | VALVE WITH TAMPER SWITCH #5 WALL HYDRANT

+--- HB HOSE BIBB

SA- | SHOCK ABSORBER (SA)

PRESSURE GAGE

THERMOMETER

∥ ↔ | CLEANOUT (CO)

→ REDUCED PRESSURE BFP (RPBP)

☐ FLOOR DRAIN (FD)

RPZ REDUCED PRESSURE ZONE

BFP | BACKFLOW PREVENTER

DPCO DECK PLATE CLEANOUT

WPCO | WALL PLATE CLEANOUT

AFF ABOVE FINISHED FLOOR

ETR EXISTING TO REMAIN

VTR VENT THROUGH ROOF

P.C. | PLUMBING CONTRACTOR

PRESSURE REGULATING VALVE

ACCORDANCE WITH A.W.W.A. SPECIFICATION C601-53T.

1 1/2" TO NPS 4": 3" WIDE SHIELD WITH 4 BANDS

8. AIR VENT: HOFFMAN #79 WATER MAIN VENT VALVE.

9. WATER METER; HERSEY CO. MODEL 400 SERIES IIS.

11, EXPANSION TANK; GOULDS PUMP MODEL V15P

REQUIRED FOR 2, 3 AND FOUR DRAIN LINES.

MAINS NOT LESS THAN 1/8 INCH PER FOOT.

S. SLOPE WASTE LINES 2 INCHES AND SMALLER NOT LESS THAN 1/4 INCH PER FOOT. SLOPE LARGER

I, DRAINAGE AND YENT PIPING; EXTRA HEAVY HUB AND SPIGOT CAST IRON SOIL WITH RUBBER

ETS CONFORMING TO ASTM C564, NO-HUB CAST IRON TO HAVE HEAVY DUTY, TYPE 304

STAINLESS STEEL COUPLINGS CONFORMING TO ASTM A 666, TYPE 304 STAINLESS STEEL SHIELD, TYP

2. WATER PIPING BELOW SLAB: TYPE K HARD COPPER TUBING, WITH CAST BRONZE OR WROUGHT COPPER SOLDER JOINT HITINGS USING 95-5 SOLDER. WATER PIPING ABOVE SLAB: TYPE L COPPER

3. WATER HAMMER ARRESTERS: PROVIDE ON HOT AND COLD WATER BRANCHES TO FIXTURES, J. R.

6. PRESSURE REDUCING VALYE: WATTS SERIES 25AUB BRONZE BODY WITH INTEGRAL S/S STRAINER SEALED CAGE FOR 1/2" TO 2 1/2" DIA. TO 300 PSI.

7. PRESSURE GAUGE; AMETEK DIV. OF U.S. GAUGE MODEL P5105, 3 1/2" DIAL, 1/4" STEM, ALUMINUM

2. TRAP PRIMER: PPP MODEL P1-500 UP TO FOUR CONNECTIONS. OPTIONAL DISTRIBUTION UNIT

I . ALL HOT AND COLD WATER PIPING AND FITTINGS SHALL BE INSULATED WITH 1" THICK RIGIT

2. ALL ADA CONFORMING, WHEELCHAIR ACCESSIBLE LAVATORY P-TRAP AND ANGLE VALVE

ASSEMBLIES TO BE COVERED WITH THE MOLDED, ANTIMICROBIAL TRUBRO, INC "LAY-GUARD" UNDERSINK PROTECTIVE PIPE COVER MODEL #103.

I. INSTALL NEW ONLY IF EXISTING DOES NOT MEET CURRENT ADA/CABO-ANSI (AS APPLICABLE)

STANDARDS, OR IS DAMAGED, NOT IN WORKING ORDER OR NOT EXISTING AS APPLICABLE.

BERGLASS WITH VAPOR BARRIER UNIVERSAL JACKET PASTED WITH VAPOR BARRIER CEMENT, VAPOR

SERIES B6080 OR B6081 FULL PORT. ALL VALVES 1/2" TO 2" BRONZE BODY.

5. PRESSURE AND TEMPERATURE RELIEF VALVE: WATTS REGULATING CO. MODEL 10L.

10. YACUUM RELIEF YALYE: WATTS MODEL N36-M1 BRASS BODY, 1/2" NPT LINE SIZE

REVENTOR. LINE SIZE 1/2" TO 2" TO MATCH INLET WATER LINE SIZE.

ORK, TESTED AND READY FOR OPERATION, THE WORK THROUGHOUT SHALL BE EXECUTED IN THE . ALL MATERIALS REQUIRED FOR THIS WORK SHALL BE NEW, UNUSED, BEST OF ITS RESPECTIVE KINDS, IND FREE FROM DEFECTS AND OF FIRST CLASS QUALITY. BASIS OF QUALITY SHALL BE LATEST TANDARDS OF ASTM, ANSI FEDERAL SPECIFICATIONS OR OTHER ACCEPTABLE STANDARDS.

3. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR WORK UNTIL ITS COMPLETION AND PATH OF THE A.D.A./CABO-ANSI, 5°-0° CIRCULAR PATTERN, FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST OR OLEN WITHOUT ADDITIONAL COST TO THE OWNER.

4. THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL WORK PERFORMED AND MATERIALS INSTALLED TO BE FREE FROM INHERENT DEFECTS AND SHALL KEEP IN REPAIR AND REPLACE ANY DEFECTIVE MATERIALS OF WORKMANSHIP, FREE OF COST TO THE TENANT (OWNER) FOR A PERIO

5. ALL WORK SHALL BE DONE ACCORDING TO THE REQUIREMENTS OF ALL APPLICABLE CODES AND LEASE CRITERIA (IF APPLICABLE) AND SHALL RECEIVE THE APPROVAL OF ALL AUTHORTHES HAVING JURISDICTION, PREPARE ALL REQUIRED DOCUMENTS, DRAWINGS AND PERFORM ALL REQUIRED TESTS . CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE SITE FOR THE WORK BEFORE HAVIN UBMITTED A PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS OUND DURING THE COURSE OF THE CONTRACT.

7. THIS CONTRACTOR MUST PROVIDE LANDLORD'S CONSTRUCTION REPRESENTATIVE WITH COPIES OF 3. HANGERS AND SUPPORTS: SUPPORT HORIZONTAL DRAINAGE PIPING AT LEAST EVERY 5 FEET OR AT REQUIRED INSURANCE AND COPIES TO BE FURNISHED TO THE OWNER BEFORE COMMENCING WORK. EVERY HUB, COPPER TUBING EVERY 7 FEET AND STEEL PIPE EVERY 10 FEET WITH "CLEVIS" HANGERS AND ECTRIC HOT WATER HEATER OR INSINKERATOR (2) PLUMBING FIXTURES AND TRIM, CONTRACTOR HALL SUBMIT SHOP DRAWING OF PIPING LAYOUT TO THE OWNER FOR THEIR FILE,

. THE PLUMBING SUBCONTRACTOR IS A SUBCONTRACTOR OF THE TENANT'S GENERAL CONTRACTOR.

REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND/OR AS SPECIFIED. TEST SHALL BE PERFORMED IN THE PRESENCE OF OWNER'S REPRESENTATIVE AND LOCAL INSPECTOR. TEST SHA D. NOTCHING AND BORING OF STRUCTURAL STEEL MEMBERS IS NOT PERMITTED, WHEN HANGING ROM STRUCTURAL STEEL ONLY HANG FROM TOP FLANGE OF BEAMS AND TOP CHORDS ONLY AT ANEL POINTS OF JOISTS / TRUSSES.

. THE PLUMBING SUBCONTRACTORS QUOTING ON THEIR SPECIFIC SCOPE OF WORK/SERVICES TO ONTACT THE LOCAL BUILDING DEPARTMENT/AGENCY TO DISCUSS CODE ISSUES/IDIOSYNCRASIES GARDING THEIR SERVICES AND THE QUOTE ASSOCIATED WITH THE SERVICES TO THE GENER ONTRACTOR FOR THIS PROJECT. THIS CONTRACTOR TO BE FAMILIAR WITH THE SITE WHERE SUCH SERVICES/WORK WILL BE PERFORMED, THIS SPECIFIC USE AND THE IDIOSYNCRASIES ASSOCIATED WITH THE LIFE, SAFETY AND HEALTH ASSOCIATED WITH THIS WORK AND TO INDICATE ON THE QUOTE ANY

EMS REQUIRED THAT ARE NOT NECESSARILY SHOWN ON THE DRAWINGS/SPECIFICATIONS. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND CONTRACTORS FOR A COMPLETE, SAFE IT DIVISTALL DOOR MATERIALS, ESQUIPMENT AND CONTROLLING TO A CONTRELE SAFE INSTALLATION OF PLUMBING WORK IN PULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAYING JURISDICTION AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED, INCLUDING IN

. SANITARY DRAINAGE CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT REQUIRING SAME WITH FINAL CONNECTIONS TO EXISTING PREINSTALLED OUTLETS PROVIDED BY PRIOR TENANT(S) OR LANDLORD. PLUMBER SHALL VERIFY EXACT LOCATION OF WASTE PIPE OUTLET BEFORE SUBMITTING BID 1. DRAINAGE AND VENT PIPING: EXTRA HEAVY HUB AND SPIGOT CAST IRON SOIL WITH RUBBER AND NOTIFY THE ARCHITECT OF ANY LOCATION DISCREPANCIES, PLUMBING CONTRACTOR SHALL BE GASKETS CONFORMING TO ASTM C564, NO-HUB CAST IRON TO HAVE HEAVY DUTY, TYPE 304 PRONSIBLE FOR ANY CONCRETE SAWCUITING REQUIRED TO MAKE THE FINAL CONNECTION TO THE STAINLESS STEEL COUPLINGS CONFORMING TO ASTM A 666. TYPE 304 STAINLESS STEEL SHIELD, TYPE EXISTING WASTE PIPING OR CAPPED OUTLET(S), SAYCUTTING, EXCAVATING, BACKFILLING AND NEW CONCRETE MUST MEET WITH THE LANDLORD'S APPROVAL. SNAKE SANITARY FOR A DISTANCE OF 100 FEET AND REPORT ANY BLOCKAGE.
TEST WATER PRESSURE TO INSURE MINIMUM OF 50 PSI.

COMPLETE VENT SYSTEM, ALL FIXTURES INDIVIDUALLY VENTED WITH FINAL CONNECTION THROUGH PERFORMED BY LANDLORD'S ROOFER (IF APPLICABLE), COST OF ROOF PENETRATION AND ASHING TO BE PART OF THIS CONTRACT, UNLESS NOTED OTHERWISE IN BID PROPOSAL (IF

FINAL CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT REQUIRING SAME, VERIFY EXAC

i. INSULATION OF ALL HOT AND COLD WATER PIPING, INCLUDING UNDER LAVATORY A.D.A. PIPE 6. FURNISH AND INSTALL WATER METER (IF APPLICABLE) ACCESSIBLE TO UTILITY COMPANY OF

7. COSTS FOR WORKING BELOW TENANT'S SLAB IN ANOTHER TENANT'S SPACE. 8. INSTALLATION OF FLOOR DRAIN, BACKFLOW PREVENTER (IF REQ. BY CODE) AS PER LANDLORD REQUIREMENT AND CLEANOUT PER LOCAL CODE, COORDINATE ALL LOCATIONS WITH OPERATIONS

9) COMPLETE NATURAL GAS PIPING SYSTEMS (AS APPLICABLE, REFER TO PLANS)

 SLEEVES: PROVIDE #22 GAGE GALVANIZED IRON PIPE SLEEVES FOR PIPING THROUGH WALLS AND 2. ESCLITCHEONS: PROVIDE EXPOSED PIPING, BOTH BARE AND COVERED, WITH CP CAST BRASS

EVERY HUB, COPPER TUBING EVERY 7 FEET AND STEEL PIPE EVERY 10 FEET WITH "CLEVIS" HANGERS INSULATION PROTECTION SHIELDS. PIPING SHALL NOT BE SUPPORTED FROM BRIDGING OR OTHER I. SUBMIT THREE (3) SETS OF SHOP DRAWINGS IDENTIFIED WITH PROJECT NAME OF THE FOLLOWING (1) PIPING. ONLY SUPPORT FROM TOP FLANGES OF BEAMS AND TOP CHORDS AT PANELS OF JOIST AND

4. TEST: TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS IN ACCORDANCE WITH REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS OBTAINED. A. TEST DRAINAGE AND YENT PIPING BY FILLING WITH WATER TO OYERFLOWING AT ROOF, WATER LEVEL TO REMAIN.

B. TEST WATER PIPING WITH WATER 1 1/2 TIMES THE WORKING 5. STERILIZATION OF DOMESTIC WATER SYSTEM: BEFORE BEING PLACED IN SERVICE, ALL WATER LINES TH SHALL BE CHLORINATED TO THE SATISFACTION OF THE ARCHITECT OR LANDLORD'S REPR ACCORDANCE WITH A.W.W.A. SPECIFICATION C601-53T.

6. SLOPE WASTE LINES 2 INCHES AND SMALLER NOT LESS THAN 1/4 INCH PER FOOT, SLOPE LARGER 7. INSTALL A CLEANOUT AT BASE OF EACH SOIL STACK, AT EACH CHANGE IN DIRECTION, A INTERVALS NOT OVER 50 FEET AND ELSEWHERE AS SHOWN ON DRAWINGS OR REQUIRED BY LOCA CODE. CLEANOUTS SHALL NOT BE INSTALLED IN PUBLIC AREAS WITHOUT SPECIFIC PERMISSION BY

304 STAINLESS STEEL BANDS AND SLEEVE

NPS 5" TO NPS 10": 4" WIDE BAND WITH 6 BANDS 2. WATER PIPING BELOW SLAB: TYPE K HARD COPPER TUBING, WITH CAST BRONZE OR WROUGHT COPPER SOLDER JOINT FITTINGS USING 95-5 SOLDER. WATER PIPING ABOVE SLAB: TYPE L COPPER TUBING USING SILVER SOLDER. 3. WATER HAMMER ARRESTERS: PROVIDE ON HOT AND COLD WATER BRANCHES TO FIXTURES, J. R SMITH HYDROTROL MODEL 5020 FOR UP TO 60 FIXTURE UNITS.

4. YALVES: GATE VALVE WATTS SERIES B-3000, CHECK VALVE WATTS SERIES B-5000, BALL VALVE WATTS SERIES B6080 OR B6081 FULL PORT, ALL VALVES 1/2" TO 2" BRONZE BODY 5. PRESSURE AND TEMPERATURE RELIEF YALVE: WATTS REGULATING CO. MODEL 101

PLUMBING NOTES

EQUIRED BY CODE OR NOTED ON THE DRAWINGS, UTILIZING THE SPECIFICATION ABOVE AS A OVERFLOWING AT ROOF, WATER LEVEL TO REMAIN INDARD AND MEETING CODE REQUIREMENTS. SPACING OF FIXTURES TO BE COORDINAT 5. STERILIZATION OF DOMESTIC WATER SYSTEM: BEFORE BEING PLACED IN SERVICE, ALL WATER LINES SHALL BE CHLORINATED TO THE SATISFACTION OF THE ARCHITECT OR LANDLORD'S REPRESENTATIVE, IN

THE PLUMBING CONTRACTOR IS TO BECOME FAMILIARIZED WITH LANDLORD'S CRITERIA FOR HIS LOCATION AND INCLUDE ANY WORK REQUIRED OF THIS CRITERIA, WHICH IS NOT

2, ALL LANDLORD WORK TO BE FILED UNDER SEPARATE APPLICATION. 7. INSTALL A CLEANOUT AT BASE OF EACH SOIL STACK, AT EACH CHANGE IN DIRECTION, AT INTERVALS NOT OVER 50 FEET AND ELSEWHERE AS SHOWN ON DRAWINGS OR REQUIRED BY LOCAL CODE, CLEANOUTS SHALL NOT BE INSTALLED IN PUBLIC AREAS WITHOUT SPECIFIC PERMISSION BY

1. DESCRIPTION: MANUFACTURER'S PROPRIETARY ELASTOMERIC COMPOUND FORMULATED FOR USE AS HEAVY DUTY WATERPROOF MEMBRANE UNDER CERAMIC TILE FLOORS. b.FLOOR MUST PITCH TO FLOOR DRAIN A MINIMUM OF 1" PER FOOT (2% SLOPE), MAXIMUM OF

D. BOSTIC CONSTRUCTION PRODUCTS, HUNTINGDON YALLEY, PA. b. MAPEI CORPORATION, ELK GROYE VILLAGE, IL.

4. INSTALLATION: (2 COATS) a. INSTALL OVER CURED CEMENT MORTAR BED AND CONCRETE FLOORS AS APPLICABLE, IN STRICT COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS. b. Flash Membrane 4" up adjacent Walls and Restraining Surfaces as recommended 4. YALVES: GATE VALVE WATTS SERIES B-3000, CHECK VALVE WATTS SERIES B-5000, BALL VALVE WATTS

8. CONTRACTORS MUST CONFIRM ALL REQUIREMENTS AND CONNECTION

C. ALLOW MEMBRANE TO CURE PRIOR TO SETTING TILE. d. DO NOT ALLOW CONSTRUCTION TRAFFIC ON MEMBRANE e. MUST BE SLEEVED AND CAULKED. 09/24/08

3. CODES, STANDARDS AND REGULATIONS

AND THE SAFETY OF WORKMEN.

GENERAL PLUMBING NOTES

AS SPECIFIED IN THESE SPECIFICATIONS.

WITH OTHER SYSTEMS AND TRADES.

ITEMS INTO CONSIDERATION IN BID.

SUBCONTRACTORS FOR PLUMBING SYSTEM.

1. CONFORM TO ALL APPLICABLE CODES, GOVERNMENT REGULATIONS.

2. ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE NATIONAL

1. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT

2. SPECIFICATIONS ARE APPLICABLE TO ALL CONTRACTORS AND/OR

4. VISIT SITE, CHECK FACILITIES AND CONDITIONS, VERIFY ALL

PLACED IN OPERATION AND PROPERLY ADJUSTED.

POINTS IN FIELD PRIOR TO STARTING WORK.

REQUIREMENTS AND CONNECTIONS IN FIELD, AND TAKE ALL

SYSTEMS ARE TO BE COMPLETE AND WORKABLE IN ALL RESPECTS,

EACH CONTRACTOR SHALL PROVIDE FOR HIS OWN CLEAN-UP,

7. FULLY COORDINATE ALL WORK WITH OTHER CONTRACTORS

10. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR

OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT.

ELECTRIC CODE DIVISION 16 MATERIALS AND METHODS.

11. NO PIPING, CONTROLS, ETC., SHALL BE INSTALLED

REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH ON A DAILY BASIS.

SUBCONTRACTORS, THE OWNER AND COOPERATE COMPLETELY.

P. ARRANGE FOR AND OBTAIN OWNER REPRESENITIVE'S PERMISSION

FOR ANY SERVICE SHUTDOWNS REQUIRED UNDER THIS CONTRACT.

CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION

CHECK OTHER PLANS AND SPECIFICATIONS AND FULLY COORDINATE

2. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.

1. THE SYSTEMS ARE SHOWN ON PLUMBING DRAWINGS. DRAWINGS ARE DIAGRAMMATIC IN NATURE. CONFIRM ALL DIMENSIONS BY FIELD MEASUREMENT.

2. THE INTENT IS FOR COMPLETE AND WORKABLE SYSTEMS. THE DRAWINGS AND THESE NOTES ARE TO BE USED TOGETHER AS A BASIS OF SHOWING AND/OR DESCRIBING THE SYSTEM REQUIRED FOR THIS FACILITY (RESOURCE CENTER).

BASE EQUIPMENT/MATERIALS AND SUBSTITUTIONS

. BASE EQUIPMENT, MANUFACTURER, MODEL, AND CAPACITY OF EQUIPMENT ARE LISTED IN SCHEDULE ON DRAWING. ANY OTHER MANUFACTURER OR MODEL IS CONSIDERED A SUBSTITUTION. 2. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND FREE OF

DEFECTS AND U.L. LABELED. OTHERWISE NOT ACCEPTED.

3. SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER IF A SUBSTITUTION IS SUBMITTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE IT AND CERTIFY THAT THE SUBSTITUTION IS EQUIVALENT IN ALL RESPECTS TO THE BASE **SPECIFICATIONS**

4. IF SUBSTITUTIONS ARE APPROVED, NOTIFY ALL OTHER CONTRACTORS, SUBCONTRACTORS OR TRADES AFFECTED BY SUBSTITUTION AND FULLY COORDINATE. ANY COSTS RESULTING FROM SUBSTITUTION, WHETHER BY CONTRACTOR OR OTHERS, SHALL SHALL BE RESPONSIBILITY OF AND PAID FOR BY SUBSTITUTING CONTRACTOR.

5. ALL EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFORM TO THESE REQUIREMENTS PRIOR TO STARTING WORK

E. CHECK, TEST, START, ADJUST AND INSTRUCTIONS

1. AFTER INSTALLATION AND SERVICING, CHECK ALL EQUIPMENT AND PERFORM START UP IN ACCORDANCE WITH THE MANUFACTURER'S

2. PIPING SHALL BE FULLY TESTED AND MADE FREE OF LEAKS. 3. INSTRUCT OWNER/TENANT IN OPERATION OF SYSTEMS AND SUBMIT OPERATING AND MAINTENANCE MANUAL ON ALL EQUIPMENT

F. PROJECT WARRANTY

AND SYSTEMS.

1. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.

2. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD.

PLUMBING SYSTEM

A. <u>SCOPE</u> 1. FURNISH ALL PLUMBING FIXTURES, EQUIPMENT AND MATERIAL INDICATED AND SHOWN ON DRAWINGS AND INSTALL COMPLETE

AND PLACE IN PROPER OPERATION. 2. PLUMBING SYSTEMS CONSISTS OF, BUT NOT LIMITED TO

THE FOLLOWING: A. PLUMBING FIXTURES WITH ALL REQUIRED TRIM AND

EQUIPMENT. B. PLUMBING SPECIALTIES (SHUT-OFF VALVES, ETC.).

C. DOMESTIC HOT/COLD WATER, WASTE, VENT AND STORM WATER PIPING SPECIFIED.

D. INSULATION OF PIPING ITEMS (DOMESTIC HOT/COLD RECIRCULATING AND STORM WATER PIPING).

E. OTHER PLUMBING ITEMS THAT MAY BE INDICATED OR SPECIFIED (NATURAL GAS PIPING).

B. CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS

1. INCLUDE ACCESSORIES REQUIRED BY CODE, DRAWING OR MANUFACTURER'S INSTRUCTIONS TO MAKE FINAL CONNECTIONS. C. <u>SANITARY SEWERS</u>

AND CLEANOUTS FOR PROJECT AND AS INDICATED ON THE DRAWINGS. 2. SEWERS TO BE PITCHED A MINIMUM OF 1/4" PER FOOT FOR 3"

1. INSTALL SANITARY SEWERS, STACKS, VENTS, FLOOR DRAINS

SIZES AND UNDER AND 1/8" PER FOOT FOR 4" SIZES OR TO PITCH INDICATED ON DRAWINGS. 3. CHANGES IN DIRECTION AND BRANCH CONNECTIONS SHALL BE MADE

WITH SAME PIPING SYSTEM MATERIAL IN WHICH IT IS INSTALLED. 4. ALL FIXTURES AND SANITARY DRAINS SHALL BE VENTED AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH STATE CODES. D. FIXTURES AND EQUIPMENT

. FURNISH ALL FIXTURES AND EQUIPMENT INDICATED AND SCHEDULED, COMPLETE WITH ALL ACCESSORIES, CONTROLS AND INSTALLATION ITEMS REQUIRED

2. INSTALL IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PLACE IN SATISFACTORY OPERATION.

E. PIPING - WITHIN BUILDING TO 5 FT. OUTSIDE OF BUILDING

1. ABOVE GROUND SANITARY DRAINAGE - CAST IRON WITH 'NO-HUB' COUPLINGS OR RUBBER GASKETED JOINTS. 2. UNDERSLAB SANITARY SEWER DRAINAGE CAST IRON WITH 'NO-HUB'

COUPLINGS OR RUBBER GASKETED JOINTS. 3. DOMESTIC WATER - COPPER, TYPE L ABOVE GROUND - TYPE K UNDERGROUND. PROVIDE SHUT-OFF VALVE FOR EACH FIXTURE. WROUGHT COPPER FITTINGS WITH LEAD FREE SOLDER

4. EXPOSED PIPING IN TOILET ROOM SHALL BE CHROME PLATED WITH ESCUTCHEONS.

5. LAVATORY TRAPS, WASTE AND WATER PIPING SHALL BE ARRANGED TO MEET ADA CLEARANCE REQUIREMENTS WHERE NOTED. 6. GAS PIPING - SCHEDULE 40 BLACK STEEL WITH MALLEABLE SCREWED FITTING IN SIZE UP TO 3". 3" AND OVER TO BE SCHEDULE

7. FIRESTOP ALL PIPING PENETRATIONS THROUGH FLOORS, WALLS AND PARTITIONS.

40 BLACK STEEL WITH WELDED FITTINGS.

F. PIPING INSULATION

A. INSULATE THE FOLLOWING:

 DOMESTIC COLD WATER PIPING. 2. DOMESTIC HOT AND RECIRCULATING WATER PIPING.

3. LAVATORY TRAP AND HOT WATER SUPPLY (ON HANDICAPPED

4. ROOF DRAINAGE (ROOF DRAIN & HORIZONTAL RUNS ABOVEFLOOR

ON NEW AND EXISTING STORM WATER LINES AND SUMP) B. INSULATION PRODUCTS AND INSTALLATION SHALL COMPLY WITH NYSECCC -NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE. C. HOT WATER PIPING INSULATION SHALL BE PREFORMED, SNAP-ON FIBERGLASS

INSULATION WITH PAINTABLE WHITE KRAFT OR ALUMINUM FOIL JACKET OR

FLEXIBLE CELLULAR POLYOLEFIN FOAM BY IMCOA. D. DOMESTIC COLD WATER AND ROOF DRAINAGE INSULATION SHALL BE

40 - 60 1/2" 1" 1"

SIMILAR TO DOMESTIC HOT WATER WITH VAPOR BARRIER. E. INSULATION THICKNESS SCHEDULE

FLUID INSULATION THICKNESS FOR TEMPERATURE PIPE SIZES * DEGREES F 1" AND 1-1/4" LESS ** TO 2" 3" & UP

DOMESTIC COLD

WATER

DOMESTIC HOT AND RECIRCULATING 105 - 140 1" 1" 1" WATER ROOF DRAINAGE

** RUNOUTS AS DEFINED BY NYSECCC CAN BE 1/2'THICK UP TO 140°F F. LAVATORY INSULATION SHALL BE TRAP WRAP OR EQUAL.

1. PROVIDE DOMESTIC WATER PIPING AS NOTED ON DRAWING.

2. INCLUDE UNIONS, OR OTHER DISCONNECT MEANS, STOPS OR VALVES FOR ISOLATION OF FIXTURES AND EQUIPMENT. VALVES TO BE FULLY COMPATIBLE WITH PIPING FOR SERVICE INTENDED AS MANUFACTURED BY NIBCO, CRANE OR OTHER APPROVED MANUFACTURER. INCLUDE HOSE OR DRAIN VALVES AT LOW POINTS WHERE FIXTURES CANNOT BE USED FOR DRAINAGE.

3. HANGERS ON INSULATED PIPE TO BE OUTSIDE OF INSULATION, SIZED ACCORDINGLY AND WITH SUFFICIENT SADDLE TO PROTECT

4. FIRESTOP ALL PIPING PENETRATIONS THROUGH FLOORS, WALLS AND

5. INSTALL SHOCK ABSORBERS AT EACH FIXTURE OR WHERE REQUIRED TO PREVENT WATER HAMMER.

H. STERILIZATION OF WATER PIPING

1. THE WATER SUPPLY AND DISTRIBUTION SYSTEM SHALL BE STERILIZED WITH CHLORINE IN SOLUTION IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION PUBLICATION AND LOCAL ORDINANCES.

2. ALL WORK AND CERTIFICATION OF PERFORMANCE SHALL BE DONE BY APPROVED APPLICATIONS OR QUALIFIED PERSONNEL WITH CHEMICAL AND LABORATORY EXPERIENCE. SUBMIT A CERTIFICATE OF STERILIZATION.

PIPING TEST A. ALL PIPING SYSTEMS INCLUDING VALVES AND ACCESSORIES SHALL BE TESTED AS FOLLOWS: TEST PRESSURES SHALL BE MAINTAINED WITH NO LEAKS FOR DURATIONS SPECIFIED.

1) SOIL, WASTE, VENT AND RAINWATER - FILL WITH WATER TO 10 FT. ABOVE HIGHEST FIXTURE WHERE POSSIBLE, TIGHT FOR 6 HOURS.

2) HOT AND COLD WATER - 150 PSIG HYDROSTATIC. TIGHT FOR 4 HOURS.

3) GAS PIPING - TEST AT 15 PSIG AIR PRESSURE FOR MINIMUM OF 1 HOUR.

EVER POSSIBLE.

J. SUPPORTS AND HANGERS 1. HANGERS AND SUPPORTS ARE TO BE PROVIDED TO PROPERLY SUPPORT, SECURE AND ALIGN PIPING AND TO MEET CONDITIONS. SPACING TO COMPLY WITH AND LOCAL CODE REQUIREMENTS.

K. ROOF DRAINAGE (WHERE NOTED ON DRAWINGS) 1. PROVIDE A CLEANOUT AT ALL BASES OF RAIN WATER LEADERS.(18"ABOVE

2. COORDINATE ALL RAIN WATER LEADERS WITH ARCHITECTURAL DRAWINGS. RAIN WATER LEADERS TO BE CONCEALED IN WALLS/CHASE WHERE

1. COORDINATE ALL NEW GAS LINES ROUTING LOCATED ON ROOF IN FIELD.

2. PAINT GAS PIPING TWO COATS EXTERIOR ENAMEL AND SUPPORTS. 3. PROVIDE GAS METER VENTS AND INSTALL AS REQUIRED.

NOTES BING

DRAWING NO.

ARCHITECT James A Rumsey 5729 East River Road Grand Island, NY 14072 CONTACT: James Rumsey PHONE: 716.4447.9698 <u>James A. Kumsey</u> ARCHITECT PROJECT NO: pds3495 DESIGNED BY: JAR DRAWN BY: PDS CHECKED BY: JAR VERIFY ALL LINES, ANGLES AND DIMENSIONS BY SPECIFICATINO AND

Creative construction Structures Services 210 Summer Street Buffalo, New York 14222 TEL/FAX (716) 882-1226

06.22.10

3495

RTMI venue York

6/22/10

EXPOSED PIPING IN RESTROOMS: CHROME PLATED COPPER OR BRASS 2) PIPING MATERIALS (OUTSIDE OF BUILDING) UNDERGROUND DOMESTIC WATER SERVICE: TYPE K COPPER SANITARY SEWER LATERALS: SDR-35 PVC NATURAL GAS (BELOW GRADE): PE (ASTM 2513) W/ FUSED JOINTS

PLUMBING NOTES

ABOVE GRADE HOT AND COLD DOMESTIC WATER: TYPE L COPPER

UNDERGROUND DOMESTIC WATER SERVICE: TYPE K COPPER

NATURAL GAS (ABOVE GRADE): STD. WT. STEEL (SCH. 40 ASTM A53

1) PIPING MATERIALS (WITHIN BUILDING TO 5' OUTSIDE BUILDING)

SANITARY SEWER VENTS: DWV COPPER

INSULATION TYPE AND THICKNESS

* FRONT - 30"

* REAR - 12"

ACCOMODATE FULL DISCHARGE.

3) PIPING INSULATION

SANITARY SEWER: CAST IRON OR DWV COPPER

GRADE A OR B W/150 LB MALABLE IRON FITTINGS

INSULATE THE FOLLOWING HOT WATER PIPING

HOT WATER PIPING - 1" THICK PREFORMED FIBERGLASS W/KRAFT JACKI COLD WATER & DRAIN PIPING - 1" THICK CLOSED CELL PLASTIC (R4/INCH)

4) PLUMBING CONTRACTOR SHALL INSTALL NEW METER SET FOR 1.5" WATER

METER AND SHALL COORDINATE WORK WITH THE LOCAL UTILITY 5) PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL SHUT OFF VALVES @ ALL FIXTURES 6) REDUCED PRESSURE ZONE BACKFLOW PREVENTER SHALL BE INSTALLED IN ACCORDANCE WITH THE CROSS-CONNECTION REQUIREMENTS OF THE NYDOH AND LOCAL UTILITY

LAV. TRAP AND HOT WATER SUPPLY @ ADA LAVATORY W/PVC JACKETS

RPZ SHALL BE A WATTS MODEL 009 WITH: - BALL VALVES, ON INLET AND OUTLET W/ RESILENT SEAT, - TEST COCKS AND STRAINER. - PRESSURE DIFFERENTIAL RELIEF VALVES BETWEEN POSITIVE SEATED CHECK CHECK VALVES. - RELIEF AIR SHALL NOT ENTER SAME OPENING AS THE RELIEF WATER DISCHARGE. - RPZ SHALL BE MOUNTED IN A LIGHTED AND HEATED ROOM - 4" FUNNEL DRAIN W/ 2" AIR GAP - MINIMUM MOUNTING CLEARANCES

* BOTTOM - 36" * TOP - 12" 8) PROVIDE 1 GAL. EXPANSION TANK @ HOT WATER HEATER 9) BACKFLOW PREVENTION DEVICES, ON THIS DRAWING, WILL BE REFERRED TO AS AN RPZ.

10) ALL RPZ'S SHOULD BE ADEQUATELY SUPPORTED TO PREVENT LATERAL MOVEMENT. PIPE HANGERS, BRACES, SADDLES, PIERS, ETC., SHOULD BE USED TO SUPPORT THE RPZ AND SHOULD BE PLACED IN A MANNER THAT WILL NOT OBSTRUCT THE FUNCTION OF, OR INTERFERE WITH ACCESS TO THE RPZ. 11) MANUFACTURER'S AIR GAP FITTINGS, WHEN USED, ARE ONLY SIZED TO HANDLE INTERMITTENT

OR LOW FLOW DISCHARGES. ADDITIONAL DRAINAGE CAPACITY WILL BE BE REQUIRED TO

CONTRACTOR SHALL PAY ALL PLUMBING & RPZ PERMIT AND INSPECTION FEES

PROVIDED BY OTHER.

AN APPROVED RPZ ASSEMBLY MUST INCLUDE TWO (2) SHUT-OFF VALVES ON EACH SIDE

12) RPZ IS MOUNTED IN A ROOM WHICH IS LIGHTED AND HEATED

13) RPZ SHALL COMPLY W/ WYOMING COUNTY HEALTH DEPARTMENT AND NYS DOH RULES & REGULATIONS.

A. MINIMUM SANITARY SEWER LINE UNDER SLAB 3".

B. MINIMUM WATER LINE ABOVE CEILING 3/4". C. MAINTAIN VENT THROUGH ROOF 12'-0" FROM FRESH AIR INTAKES. D. PROVIDE HEAT-TRAP AT WATER LINES TO DOMESTIC WATER HEATER E. PROVIDE FIRESTOP AROUND ALL PIPES PENETRATING FIRE

RATED WALLS. INSTALL PER MANUFACTURERS RECOMMENDATIONS

COORDINATE EXACT LOCATION OF FIRE WALLS WITH ARCHITECTURAL

WASHER, DRYER MACHINES AND REFRIG.

9. PROVIDE WATER HAMMER ARRESTER ON ALL SELF CLOSING PLUMBING FIXTURES, CLOTHS WASHER MACHINE, ETC. AND ALL DOMESTIC HOT AND COLD WATER LINES. GUEST ROOMS: WATTS SERIES 150A 1/2" 0269503 OR SIMILAR APPROVED SHARKBITE, SIOUX CHIEF, PFF, OR FLEXICRAFT. FOR 3/4" WATERLINES: WATTS 150 0269508 OR SHARKBITE, SIOUX CHIEF, OR PFF.

PLUMBING WORK PLUMBING WORK SHALL INCLUDE ALL MATERIALS, LABOR, INCIDENTALS, PRESSURE TESTING AND DISINFECTION REQUIRED FOR A COMPLETE AND FUNCTIONING PLUMBING SYSTEM INCLUDING BUT NOT LIMITED TO INTERIOR AND EXTERIOR WORK WITHIN 5' OF THE BUILDING AS DETAILED ON SHEETS P1, P2, P3, M1 & M2 AND THE CONTRACT SPECIFICATIONS. THIS WORK SHALL INCLUDE POTABLE WATER SUPPLY, HOT & COLD WATER SUPPLY, HOT WATER RECIRCULATING PUMPS, BALANCING VALVES, SANITARY WASTE, AND VENT PIPING, NATURAL GAS SUPPLY PIPING, VALVES, HANGERS, FIXTURES, EQUIPMENT, PIPING INSULATION, PIPE SUPPORTS AND MISC. APPURTENANCES.

*** THE MOUNTING HEIGHTS OF ALL ACCESSORY ITEM AND HARDWARE SHALL COMPLY WITH NBHA "RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE" AND/OR THE LATEST REQUIREMENTS OF THE A.D.A. REGULATIONS, CABO/ANSI STANDARDS, LOCAL CODE, OR AGENICIES HAVING JURISDICTION OVER THIS LOCATION WHICHEVER APPLICATION IS MORE STRINGENT FOR ITS USE.

NOTE: ROOF FLASHINGS AND BOOTS FOR PLUMBING VENTS BY GENERAL

EACH DEVICE OR FIXTURE INCLUDING HVAC EQUIPMENT.

PLUMBING WORK SHALL ALSO INCLUDE EXCAVATION AND BACKFILL REQUIRED FOR INTERIOR PLUMBING WORK, (AND EXTERIOR WORK WITHIN 5' OF THE BUILDING STRUCTURE) AND COORDINATION REQUIRED WITH OTHER TRADES. GAS PIPING WORK INCLUDES GAS SUPPLY PIPING TO AND INCLUDING THE SHUTOFF VALVE @

NOTE: ALL FINAL CONNECTIONS TO HVAC DEVICES OR FIXTURES BY HVAC CONTRACTOR. PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO PLUMBING

FIXTURES AND EQUIPMENT, AND FINAL GAS CONNECTIONS TO RANGE AND OVEN

WET/DRY SPRINKLER SYSTEM FOR THE STRUCTURE AND AN ANSUL SYSTEM FOR THE

PLUMBING WORK ALSO INCLUDES FURNISHING AND INSTALLING A COMPLETE

IN KITCHEN AREA INCLUDING SHUTOFFS AND "FLEX" CONNECTORS.

RANGE HOOD IN THE KITCHEN. SEE P2 & P3

- ALL OPEN VENT PIPES WHICH EXTEND THROUGH ROOF SHALL BE TERMINATED

ALL INDIVIDUAL VENTS OR COMBINED VENTS SHALL BE A MINIMUM OF 3" DIAMETER WHERE VENT EXTENDS THROUGH ROOF.

ANY INCREASE IN THE SIZE OF THE VENT SHALL BE MADE INSIDE

THE STRUCTURE A MINIMUM OF 1'-0" BELOW THE ROOF.

PLUMBING NOTES 1. ALL POTABLE WATER PIPING TO BE TYPE L COPPER WITH FLEXIBLE ELASTROMERIC PIPE INSULATION-MAIN COLD WATER PIPING FOR

AT LEAST 6" ABOVE THE ROOF.

NEW FIXTURES TO TIE INTO AT EXISTING WATER SERVICE LOCATION

ALL PENETRATIONS TO BE FIRE SEALED ELECTRIC TO HW-TANK #1 AND RE-CIRC PUMP TO BE BY OTHERS

EXISTING GAS METER -PLUMBING CONTRACTOR TO COORDINATE

TO COMPLETE WORK. 2. NEW 2" NATURAL GAS LINE TO ROOF ABOVE WITH SHUT-OFF GAS VALVE. PROVIDE SUPPORT FROM EXISTING WALL PER LOCAL CODE. (GAS SIZING IS BASED ON 7"W.C. GAS PRESSURE)

3. REFER TO GAS SUPPORT DETAIL ON DRAWING P-3 (GAS LINE SUPPORT DETAIL) TYPICAL

(GAS CONNECTION DETAIL) TYPICAL

NEW GAS METER INSTALLATION WITH LOCAL GAS COMPANY. GAS COMPANY TO DECIDE IF REPLACEMENT OF EXISTING GAS SERVICE IS REQUIRED. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL FEES REQUIRED

PLUMBING CONTRACTOR TO REPORT TO ENGINEER IF GAS PRESSURE IS NOT 7"W.C..

4. REFER TO GAS CONNECTION DETAIL ON DRAWING P-3