PLUMBING ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTER LINE
ℙ	PROPERTY LINE
ø	DIAMETER or ROUND
(E)	EXISTING
(N)	NEW
⊥	PERPENDICULAR
#	POUND or NUMBER
A/C	AIR CONDITIONING
AP	ACCESS PANEL
AD.	AREA DRAIN
ADJ	ADJUSTABLE
ADMIN	ADMINISTRATION
AGGR	AGGREGATE
AL	ALUMINUM
APPROX	APPROXIMATE
APPT	APPOINTMENTS
ARCH.	ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
ASST	ASSISTANT
AUTO.	AUTOMATIC
BD	BOARD
(BF)	BELOW FINISH FLOOR
(BG)	BELOW FINISH GRADE
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BV	BALL VALVE
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CEM	CEMENT
CER	CERAMIC
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING
CLKG	CAULKING
CLR	CLEAR
CO	CLEANOUT
COL	COLUMN
COMP	COMPRESSED
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
COTG	CLEANOUT TO GRADE
CP	CIRCULATING PUMP
CKS	COUNTERSUNK
CTR	CENTER
CV	CHECK VALVE
DBL	DOUBLE
DCW	DOMESTIC COLD WATER
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DIA or ø	DIAMETER
DIR	DIRECTOR
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DTW	DOMESTIC TEMPERED WATER
DWG	DRAWING
E	EAST
EA	EACH
EDF	ELECTRIC DRINKING FOUNTAIN
ELEC	ELECTRICAL
ELEV	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
EO	ELECTRICAL OUTLET
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
(E)	EXISTING
EXP	EXPANSION
EXPO.	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FHC	FIRE HOSE CAB.
FHMS	FLAT HEAD METAL SCREW
FIN.	FINISH
FL	FLOOR
FLASH.	FLASHING
FM	FIRE MAIN
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FR	FRAME
FRPF	FIREPROOFING
FS	FLOOR SINK
FSH	FIRE SPRINKLER HEAD
FSL	FIRE SPRINKLER LINE
FTR	FLUE THRU ROOF
FUNC	FUNCTION
FURR	FURRING
FUT	FUTURE
GA	GAUGE
GALV	GALVANIZED
GC	GAS COCK
GEN	GENERAL
GI	GALVANIZED IRON
GL	GLASS
GR	GRADE
GRD	GROUND
G	GAS LLINE

HB	HOSE BIBB
HC	HANDICAPPED
HD	HEAD
HDWE	HARDWARE
HI.	HIGH
HORIZ	HORIZONTAL
HP	HIGH PRESSURE
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATING, AIR CONDITIONING
ID	INSIDE DIAMETER (DIM.)
INSUL	INSULATION
INT	INTERIOR
IW	IRRIGATION WATER
LAV	LAVATORY
LPG	LIQUID PETROLEUM GAS
M	MEN
MACH	MACHINE
MATL	MATERIAL
MAX.	MAXIMUM
MECH	MECHANICAL
MS	MOP SINK
MTL	METAL
MFGR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MONIT	MONITOR
N	NORTH
NIC	NOT IN CONTRACT
NO. or #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OAV	OXYGEN, AIR & VACUUM
OC	ON CENTER
OVHD	OVERHEAD
OX.	OXYGEN
PTN	PARTITION
PHYS	PHYSICAL
PR	PRESSURE REGULATOR
PVC	POLY-VINYL CLORIDE PIPE
PLAS	PLASTER
PLYWD	PLYWOOD
POC	POINT OF CONNECTION
PREFAB	PREFABRICATED
PREP	PREPARATION
PT	PLUGGED TEE
PW	PROCESSED WATER
R	RISER
RAD.	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED
REQD	REQUIRED
RM	ROOM
RWL	RAINWATER LEADER
S	SINK or SOUTH
SA	WATER HAMMER ARRESTER
SB	SPLASH BLOCK
SCHD	SCHEDULE
SDL	STORM DRAIN LINE
SECT.	SECTION
SH	SHOWER
SHT	SHEET
SIM	SIMILAR
SL	SPRINKLER LINE
SPEC	SPECIFICATION
SOV	SHUT-OFF VALVE
SS	SERVICE SINK
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUPV	SUPERVISOR
SUSP	SUSPENDED
S&W	SOIL & WASTE
TC	TOP OF CURB
TEL	TELEPHONE
TER	TERRAZZO
THK	THICK
TOC	TOP OF CONCRETE
TP	TRAP PRIMER
TRANS	TRANSCRIPTION
TREAT.	TREATMENT
TYP	TYPICAL
TV	TEMPERING VALVE
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	VENT
VA	VALVE
VC	VITRIFIED CLAY
VTR	VENT THRU ROOF
VO	VENT OFFSET
W	WASTE LINE
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
W/O	WITHOUT
WMF	WASHING MACHINE FITTING
WP	WATERPROOF
WT	WEIGHT
YD	YARD

SYMBOLS

SYMBOL	DESCRIPTION
	BALL VALVE
	BRANCH TOP CONNECTION
	BRANCH BOTTOM CONNECTION
	CAPPED PIPE
	CHECK VALVE
	CLEANOUT
	CLEANOUT TO GRADE
	CIRCULATING PUMP
	CONDENSATE DRAIN
	CONDENSATE "P" TRAP
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	EXISTING WASTE OR SOIL & WASTE
	FIRE HYDRANT
	FLOOR CLEANOUT
	FLOOR SINK
G	GAS
	GAS COCK
	GAS PRESSURE REGULATOR
	GATE VALVE
	HOSE BIBB
	PIPE RISER (ELBOW)
	PIPE DROP (ELBOW)
	PIPE DROP OR RISER
	POINT OF CONNECTION
	PROCESS WASTE
	SHUT-OFF VALVE
	SHUT-OFF VALVE IN YARDBOX
	SOIL & WASTE
	TRAP PRIMER
	VENT
	VENT OFFSET
	VENT THRU ROOF
	WALL CLEANOUT
	WASTE
	WATER HAMMER

GENERAL PLUMBING NOTES

SECTION 1

BASIC MECHANICAL MATERIALS AND METHODS

PART 1 – GENERAL

1.1 SUMMARY

A. LABOR, MATERIALS, TOOLS, AND SERVICES FOR A COMPLETE INSTALLATION OF EQUIPMENT AND SYSTEM CONTAINED IN THE CONTRACT DOCUMENTS.

B. PRINCIPAL FEATURES OF THE WORK INCLUDED ARE:

1. PLUMBING SYSTEM AND RELATED PIPING INSULATION.
2. DOMESTIC WATER PIPING, VALVES, CONNECTIONS AND RELATED PIPING INSULATION.
3. LIMITED AREA FIRE PROTECTION (SPRINKLER SYSTEMS)
4. EXCAVATING AND BACKFILLING FOR MECHANICAL WORK; COORDINATE WITH APPROPRIATE TRADE.
5. ANCHOR BOLTS, SLEEVES, SUPPORTS AND SIMILAR ITEMS TO BE BUILT INTO CONCRETE OR MASONRY.
6. PREPARATION AND SUBMITTAL OF SHOP DRAWING AND PRODUCT DATA.
7. MAINTAINING A RECORD SET OF BLUE LINE PRINTS AND MAKING THEM TO INDICATE LOCATIONS OF CONCEALED ITEMS, AND DEVIATIONS MADE TO SUIT CONDITIONS AND PRODUCTION OF MECHANICAL AS-BUILT (RECORD) DRAWINGS.

1.2 JOB CONDITIONS.

A. SUBMITTAL OF BID IMPLIES BIDDER HAS READ APPLICABLE PARAGRAPHS OF THE SPECIFICATIONS AND WILL BE BOUND BY THEIR CONDITIONS.

1.3 LOCAL CONDITIONS

A. CONFORM WITH LOCAL CONDITIONS. COORDINATE WITH LOCAL UTILITIES ON SIZE OF UTILITY SERVICE.

1.4 INTENT

A. THE CONTRACT DOCUMENTS (DRAWINGS AND SPECIFICATIONS) DESCRIBE THE PLUMBING WORK OF THIS PROJECT ANY ITEMS MENTIONED IN ONE PART SHALL BE AS BINDING AS THOUGH MENTIONED IN BOTH.

B. THE CONTRACT DOCUMENTS FORM A GUIDE FOR A COMPLETE PLUMBING INSTALLATION. WHERE AN ITEM IS REASONABLY NECESSARY BUT NOT SPECIFICALLY MENTIONED, SUCH AS PIPING OFFSETS, DRAINS, ETC., FOR A COMPLETE SYSTEM, PROVIDE SAME.

C. PLUMBING LAYOUTS INDICATED ON DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATIONS OF PIPES, AND EQUIPMENT SHALL BE GOVERNED BY THE DRAWINGS OF RELATED TRADES.

1.5 DEVIATIONS

A. NO DEVIATIONS FROM SPECIFICATIONS AND DRAWINGS SHALL BE MADE WITHOUT FULL KNOWLEDGE AND WRITTEN CONSENT OF CONSTRUCTION MANAGER.

B. SHOULD CONTRACTOR FIND, DURING PROGRESS OF WORK, CONDITIONS WHICH DICTATE A MODIFICATION OF ANY PARTICULAR REQUIREMENTS, REPORT SUCH ITEM PROMPTLY FOR DECISION OF INSTRUCTIONS.

1.6 QUALITY ASSURANCE

A. COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL CODES.

B. COMPLY WITH APPLICABLE REQUIREMENTS OF RECOGNIZED INDUSTRY ASSOCIATIONS WITH PROMULGATE STANDARDS FOR THE VARIOUS TRADES. (SEE INDIVIDUAL SECTIONS OF DIVISION 15)

C. EMPLOY ONLY QUALIFIED JOURNEYMEN FOR THIS WORK. EMPLOY COMPETENT, QUALIFIED PLUMBERS TO SUPERVISE THE WORK.

1.7 CODES AND STANDARDS

A. PERFORM WORK SPECIFIED IN DIVISION 15 IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS LISTED BELOW, AND SUCH STANDARDS THAT MAY BE SPECIFIED IN OTHER SECTIONS. WHEN THESE SPECIFICATIONS ARE MORE STRINGENT, THEY TAKE PRECEDENCE. IN CASE OF CONFLICT, OBTAIN A DECISION FROM THE PLUMBING ENGINEER.

1. NFPA 54: NATIONAL FUEL AND GAS CODE.
2. NFPA 101: LIFE SAFETY CODE.
3. APPLICABLE STATE BUILDING CODE.
4. NATIONAL STANDARD PLUMBING CODE (OR APPLICABLE STATE PLUMBING CODE).
5. HANDICAPPED CODE ANSI A117.1 AND ADA
6. APPLICABLE STATE ENERGY CODE.
7. AGA: AMERICAN GAS ASSOCIATION.
8. ANSI: AMERICAN NATIONAL STANDARDS INSTITUTE.
9. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS.
10. MSS: MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY.
11. NEMA: NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
12. NFPA: NATIONAL FIRE PROTECTION ASSOCIATION.
13. UL: UNDERWRITERS' LABORATORIES. INC.

1.8 COORDINATION

A. CAREFULLY EXAMINE SPECIFICATIONS AND DRAWINGS TO BE THOROUGHLY FAMILIAR WITH ITEMS WHICH REQUIRE PLUMBING AND COORDINATION.

B. COORDINATE WITH OTHER DIVISIONS TO LEAVE PROPER CHASES AND OPENINGS. PLACE OUTLETS, ANCHORS, SLEEVES, AND SUPPORTS PRIOR TO POURING CONCRETE OF INSTALLATION OF MASONRY WORK.

1.9 SUBMITTALS

A. SUBMITTALS ARE ONLY REQUIRED FOR SPECIFIC ITEMS OF EQUIPMENT OR MATERIAL LISTED IN INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS.

B. WITHIN 15 DAYS AFTER AWARD OF CONTRACT FOR THIS WORK, SUBMIT A LIST OF PROPOSED MANUFACTURERS (OF EQUIPMENT OR MATERIAL TO BE USED) FOR APPROVAL. SUBMIT THIS LIST BEFORE SUBMITTAL OF SHOP DRAWINGS AND PRODUCT DATA, AND OBTAIN APPROVAL BEFORE SUBMITTING REQUIRED ITEMS.

C. SHOP DRAWINGS (NOT REQUIRED FOR OWNER FURNISHED EQUIPMENT).

1.10 DELIVERY AND STORAGE

A. INSOFAR AS POSSIBLE, DELIVER ITEMS IN MANUFACTURER'S ORIGINAL UNOPENED PACKAGING. WHERE THAT IS NOT PRACTICAL COVER ITEMS WITH PROTECTIVE MATERIALS TO KEEP THEM FROM BEING DAMAGED. USE CARE IN LOADING, TRANSPORT, UNLOADING, AND STORAGE TO KEEP ITEMS FROM BEING DAMAGED.

1.11 FIRE RATINGS

A. MATERIALS USED ANYWHERE IN THE WORK MUST HAVE NFPA RATINGS AS FOLLOWING:

1. FLAME SPREAD – NOT OVER 25
2. SMOKE DEVELOPED – NOT OVER 50
3. FUEL CONTRIBUTED – NOT OVER 25

B. MATERIALS SHALL BE "SELF EXTINGUISHING".

1.12 PERMITS AND FEES

A. OBTAIN, PAY FOR, AND DELIVER PERMITS, CERTIFICATION OF INSPECTION, AND OTHER SUCH ITEMS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER CERTIFICATION TO THE CONSTRUCTION MANAGER PRIOR TO FINAL ACCEPTANCE OF THE WORK. AN INSPECTION CERTIFICATE FOR EACH CLASS OF WORK REQUIRING INSPECTION MUST BE SUBMITTED PRIOR TO OR WITH THE FINAL PAYMENT INVOICE. THE RESPONSIBLE TRADE CONTRACTOR MUST MAKE APPLICATION FOR THE INSPECTION, COORDINATE SAME AND PAY THE REQUIRED INSPECTION FEE.

1.13 EXTENDED WARRANTIES

A. WORK FURNISHED UNDER THE CONTRACT SHALL BE WARRANTED AGAINST DEFECTS IN WORKMANSHIP AND (CONTRACTOR FURNISHED) MATERIALS FOR A PERIOD OF NOT LESS THAT ONE (1) YEAR, OR AS OTHERWISE SPECIFIED, FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION. DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED, AND DEFECTIVE MATERIAL REPLACED, WITHOUT ADDITIONAL COST WHEN DEFECTS IN A TRADE CONTRACTOR'S WORK CAUSES DAMAGE TO THE WORK OF THE OTHER TRADE CONTRACTORS, SUCH DAMAGE SHALL BE REPAIRED BY THE TRADE CONTRACTOR CAUSING DAMAGE AND WORK RESTORED TO ITS ORIGINAL CONDITION, AT THE EXPENSE OF THE TRADE CONTRACTOR THAT CAUSED THE DAMAGE.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. WITHIN THE CONTRACT DOCUMENTS RELATING TO PLUMBIMG WORK, MANUFACTURER'S NAMES, CATALOG NUMBERS, AND OTHER PROPRIETARY REFERENCES TO MATERIALS AND EQUIPMENT ARE MADE. SUCH REFERENCES ARE MADE TO ESTABLISH THE STANDARDS OF QUALITY AND TYPE REQUIRED, AND NOT TO LIMIT COMPETITION. ACCEPTABLE MANUFACTURER'S OF COMPETITIVE PRODUCTS ARE LISTED IN APPLICABLE SECTIONS AS "APPROVED EQUALS". REASONABLE REQUESTS FOR SUBSTITUTION OR ADDITIONS TO "APPROVED EQUALS" WILL BE CONSIDERED, BUT THE MECHANICAL ENGINEER WILL BE THE SOLE JUDGE OF ACCEPTABILITY OF ITEMS PROPOSED AS SUBSTITUTES.

B. MATERIALS AND EQUIPMENT USED IN CARRYING OUT THESE SPECIFICATIONS SHALL BEAR UL OR OTHER RECOGNIZED TESTING LABORATORY LABEL WHEN SUCH LABELS ARE AVAILABLE.

PART 3 – EXECUTION

3.1 LOCATIONS

A. PLUMBING LAYOUTS INDICATED ON DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATIONS OF PIPES, AND EQUIPMENT MAY VARY BECAUSE OF CONFLICTS WITH WORK OF OTHER TRADES. WORK OUT CONFLICTS WHERE RELOCATION'S WILL NOT AFFECT OPERATION OR APPEARANCE OF SYSTEMS.

B. LOCATE EQUIPMENT REQUIRING PERIODIC SERVICING SO THAT IT IS READILY ACCESSIBLE. DO NOT BACK UP SERVICE SIDES TO WALLS, NOR PLACE IT TOO CLOSE TO OTHER EQUIPMENT TO MAKE SERVICE IMPRACTICAL. EQUIPMENT SERVICE CLEARANCE SHALL MEET MINIMUM ACCEPTABLE DISTANCE AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

3.2 UTILITIES EXCAVATING AND BACKFILLING

A. PERFORM TRENCHING, EXCAVATING, BACKFILLING FOR PLUMBING WORK IN ACCORDANCE WITH THE APPROPRIATE SECTIONS AND AS SET FORTH BELOW

1. PERFORM WORK NECESSARY FOR INSTALLATION OF PLUMBING UTILITIES.
2. DEPTH OF EXCAVATION TO PROVIDE A MINIMUM OF 3" ABOVE TOP OF PIPE. EXCAVATION TO BE CARRIED TO A DEPTH OF AT LEAST 6" BELOW BOTTOM OF PIPE ELEVATION. FILL BELOW PIPE (6"), AROUND PIPE, AND A MINIMUM OF 12" ABOVE PIPE WIT SAND OR CLASS "B" CRUSHED STONE TAMPED FIRM AND EVEN. SEPARATE TOPSOIL DURING EXCAVATION. FINAL LAYER OR DIRT (12" MINIMUM) TO BE TOPSOIL. TRENCHES TO BE AT LEAST 18" WIDER THAN PIPE WITH BATTER BOARDS PLACED EVERY 25'. BACKFILLING SHALL BE DONE TO EXCLUDE USE OF ROCK OR STONE ABOVE SAND OR CRUSHED STONE.

3.3 CUTTING AND PATCHING

A. REPAIR OR REPLACE ROUTINE DAMAGE CAUSED BY CUTTING IN PERFORMANCE OF CONTRACT.

B. PERFORM REPAIRS WITH MATERIALS WHICH MATCH EXISTING AND INSTALL IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THESE SPECIFICATIONS OR THE BEST STANDARDS OF THE INDUSTRY.

3.4 CONNECTION TO EQUIPMENT

A. CONNECT OR INSTALL EQUIPMENT SHOWN ON MECHANICAL DRAWINGS THAT REQUIRE PLUMBING

1. ROUGH – IN PIPING AND CONNECT EQUIPMENT
2. PROVIDE PIPING, SHUTOFF VALVES, AND UNIONS REQUIRED FOR A COMPLETE INSTALLATION,

3.5 SERVICE OF SYSTEM

A. EMPLOY COMPETENT, QUALIFIED PERSONNEL IN OPERATION OF THE EQUIPMENT.

B. PROVIDE FOR PROPER OPERATION AND CLEANLINESS.

END OF SECTION

SECTION 2

PLUMBING

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. FURNISHING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, SERVICE, AND RELATED ITEMS NECESSARY TO COMPLETE THE INSTALLATION OF THE PLUMBING SYSTEM AS ILLUSTRATED ON THE DRAWING AND AS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. HOT & COLD WATER SYSTEM WITH COMPLETE CONNECTIONS FROM METER TO ALL PLUMBING FIXTURES & EQUIPMENT REQUIRING WAWTER CONNECTIONS
2. SOIL, WASTE, VENT AND CONDENSATE SYSTEM LINES INSIDE AND OUTSIDE THE BUILDING.
3. TRENCHING AND BACKFILLING.
4. FINAL PLUMBING CONNECTIONS TO HEATING AND AIR CONDITIONING EQUIPMENT.
5. GAS PIPING TO HEATING, WATER HEATERS AND ALL OTHER GAS BURNING EQUIPMENT.

PART 2 – PRODUCTS

2.1 DESCRIPTION

A. SOIL, WASTE, AND VENT PIPING BELOW FLOOR TO 5'–0" OUTSIDE BUILDING: STANDARD WEIGHT COATED CAST IRON SOIL PIPE AND CAST IRON/ NEOPRENE GASKET FITTINGS. YARD PIPING, PIPE AND FITTINGS. A.B.S. OR P.V.C. SCHEDULE 40 PIPE AND FITTINGS MAY BE INSTALLED, AS APPROVED BY LOCAL AUTHORITY IN CONCEALED LOCATIONS ONLY. EXCEPTION: ALL SOIL, WASTE & VENTS LOCATED WITHIN A FIRE RATED WALL SHALL BE METALLICS.(STEEL, CAST IRON ECT., NO PVC) IT SHALL BE THE RESPONIBILITY OF THE PLUMBER TO VERIFY ALL FIRE RATED WALLS & CONSTRUCTION AS SHOWN ON THE ARCHITECTURAL DRAWINGS & COORDINATE WITH THE GENERAL CONTRACTOR

B. SOIL, WASTE AND VENT PIPING ABOVE FLOOR: STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/ NEOPRENE GASKET FITTING, OR A.B.S. OR P.V.C. SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY IN CONCEALED LOCATIONS.

C. HOT & COLD WATER PIPING ABOVE FLOOR: TYPE "L" COPPER, HARD DRAWN. BELOW GROUND OUTSIDE OF BUILDING: TYPE "K" SOFT DRAWN COPPER TUBING WITH OUT JOINTS.

D. CONDENSATE DRAIN PIPING: TYPE "M" COPPER WITH 95–5 TIN ANTIMONY SOLDER AND WROUGH COPPER FITTINGS OR

E. INDIRECT WASTE PIPING: TYPE "M" COPPER WITH 95–5 TIN ANIMONY SOLDER AND WROUGHT COPPER FITTINGS OR P.V.C. SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY.

F. UNDERGROUND GAS PIPING: SCHEDULE 40 BLACK STEEL PIPE WITH LONG RADIUS STEEL WELDING FITTINGS INCLUDING CATHOLIC PROTECTION OR POLYETHYLENE AS APPROVED BY LOCAL GAS COMPANY AND AUTHORITY HAVING JURISDICTION. INSTALLATION OF GAS SERVICE PIPING IN VENTED CONDUIT AND MEETING WITH THE LOCAL GAS COMPANY'S APPROVAL.

G. GAS PIPING ABOVE GROUND: SCHEDULE 40 BLACK STEEL WITH 125 POUND BLACK MALLEABLE IRON SCREWED FITTINGS. GAS PIPING COMPOUND AT JOINTS IN COMPLIANCE WITH NFPA BULLETIN #45 AND LOCAL APPLICABLE CODES AND SUITABLE FOR NATURAL GAS SERVICE. INSTALL MOISTURE TRAPS ON HVAC UNITS, WATER HEATERS, AND KITCHEN EQUIPMENT

H. STORM PIPING BELOW GROUND: STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/ NEOPRENE GASKET FITTING, OR A.B.S. OR P.V.C. SCHEDULE 40. AS APPROVED BY LOCAL AUTHORITY IN CONCEALED LOCATIONS.

I. STORM PIPING ABOVE GROUND: STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/ NEOPRENE GASKET FITTING, OR A.B.S. OR P.V.C. SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY.

J. TRAPS AND VENTS FOR SERVICE SINK: A.B.S. OR P.V.C. SCHEDULE 40, AS APPROVED BY LOCAL AUTHORITY.

2.2 INSULATION

A. INSULATE ALL HOT AND COLD WATER COPPER PIPING WITH AT LEAST 1/2" THICK FOAM RUBBER OR FOAM PLASTIC TYPE PIPE INSULATION

2.3 FIXTURES

A. ALL FIXTURES: AS INDICATED ON DRAWINGS WITH EQUAL PRODUCTS FURNISHED BY AMERICAN STANDARD, KOHLER, ELJER OR EQUAL.

2.4 CLEANOUTS, FLOOR DRAINS, FLOOR SINKS, AND ROOF DRAINS.

A. ALL ACCESSORIES, AS INDICATED ON DRAWING WITH EQUAL PRODUCTS FURNISHED BY WADE, JOSAM, OR ZURN BEING ACCEPTABLE.

2.5 EQUIPMENT

A. SHUTOFF VALVES UNDERNEATH LAVATORIES, TANK TYPE WATER CLOSETS, AND KITCHEN EQUIPMENT WITH CHROME PLATED ANGLE STOP VALVES WITH CHROME PLATED ESCUTCHEON PLATES.

B. HOSE BIBBS – AS SCHEDULED ON DRAWINGS.

C. VACUUM BREAKERS – AS SCHEDULED ON DRAWINGS.

D. BACKFLOW PREVENTERS – AS SCHEDULED ON DRAWINGS.

E. GAS COCK – PLUG VALVE IRON BODY, BRONZE TAPERED PLUG, LUBRICATED, THREADED ENDS. RATED FOR 200 CWP, AGA AND UL LISTED.

PART 3 – INSTALLATION

3.1 PIPING

A. RUN ALL PIPING CONCEALED EXCEPT WHERE OTHERWISE INDICATED ON DRAWINGS.

B, INSTALL VALVES TRAPS CLEANOUT AND OTHER APPARATUS IN AN EASILY ACCESSIBLE LOCATION

C. INSTALL SOIL, WASTE VENT OFFSETS AND CONDENSATE DRAINS WITH A MINIMUM UNIFORM GRADE OF ONE QUARTER INCH TO THE FOOT.

D. MAINTAIN HOT AND COLD WATER LINES AT LEAST 6 INCHES APART WHERE PIPING IS PARALLEL.

E. PROVIDE ESCUTCHEON PLATES WHERE ALL PIPES PASS THROUGH A FINISHED WALL.

3.2 PLUMBING FIXTURES

A. FURNISH AND INSTALL ALL PLUMBING FIXTURES COMPLETE WITH ALL EQUIPMENT FITTINGS, TRIMMING, AND ACCESSORIES.

B. ALL FIXTURES: GRADE A, WHITE.

C. EXPOSED PIPING TO FIXTURES: A PRODUCT OF THE FIXTURE MANUFACTURE.

D. PROVIDE STOPS AS MANUFACTURED BY THE FIXTURE MANUFACTURER, WITH METAL – TO – SEAT FOR ALL FIXTURES AND EQUIPMENT.

3.3 TEST

A. THE PLUMBING SYSTEM AND ASSOCIATED SYSTEM IS SUBJECT TO FINAL APPROVAL OF THE OWNER'S REPRESENTATIVE AND CODE AUTHORITIES HAVING JURDICTION. PERFORM ALL TESTS REQUIRED TO SHOW CODE COMPLIANCE AS DIRECTED.

3.4 CLEANING AND PROTECTION

A. AFTER THE PLUMBING PIPING HAS BEEN INSTALLED, INSPECTED, AND APPROVED, FLUSH THE PIPING SYSTEM TO REMOVED ANY FOREIGN MATTER FROM THE PIPES.

3.5 MAINTENANCE

A. MAINTAIN ALL PARTS OF THE PLUMBING FIXTURES AND ASSOCIATED EQUIPMENT THROUGHOUT THE GUARANTEE

END OF SECTION

P.E.
INCORPORATED
PASQUINI
ENGINEERING
903 H Street Suite 300
Bakersfield, Ca. 93304
Telephone: (661)-328-9600
Fax: (661)-328-9030

NO.	DATE

SUBWAY
STORE 49992
2508 E. LAS POSAS RD.
CAMARILLO, CA 93010

THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS A "WET STAMP & SIGNATURE" FROM BOTH THE ENGINEER OF RECORD AND A APPROVAL STAMP WITH A "WET STAMP & SIGNATURE" FROM THE LOCAL GOVERNING AGENCY ARE PRESENT.

DWG. BY	J.P.
CHK'D BY	
DATE	10/4/10
JOB NO.	6232
FILE NO.	623222

EXP. 12/31/10

SHEET
P-1
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PRINTED 12/3/2010