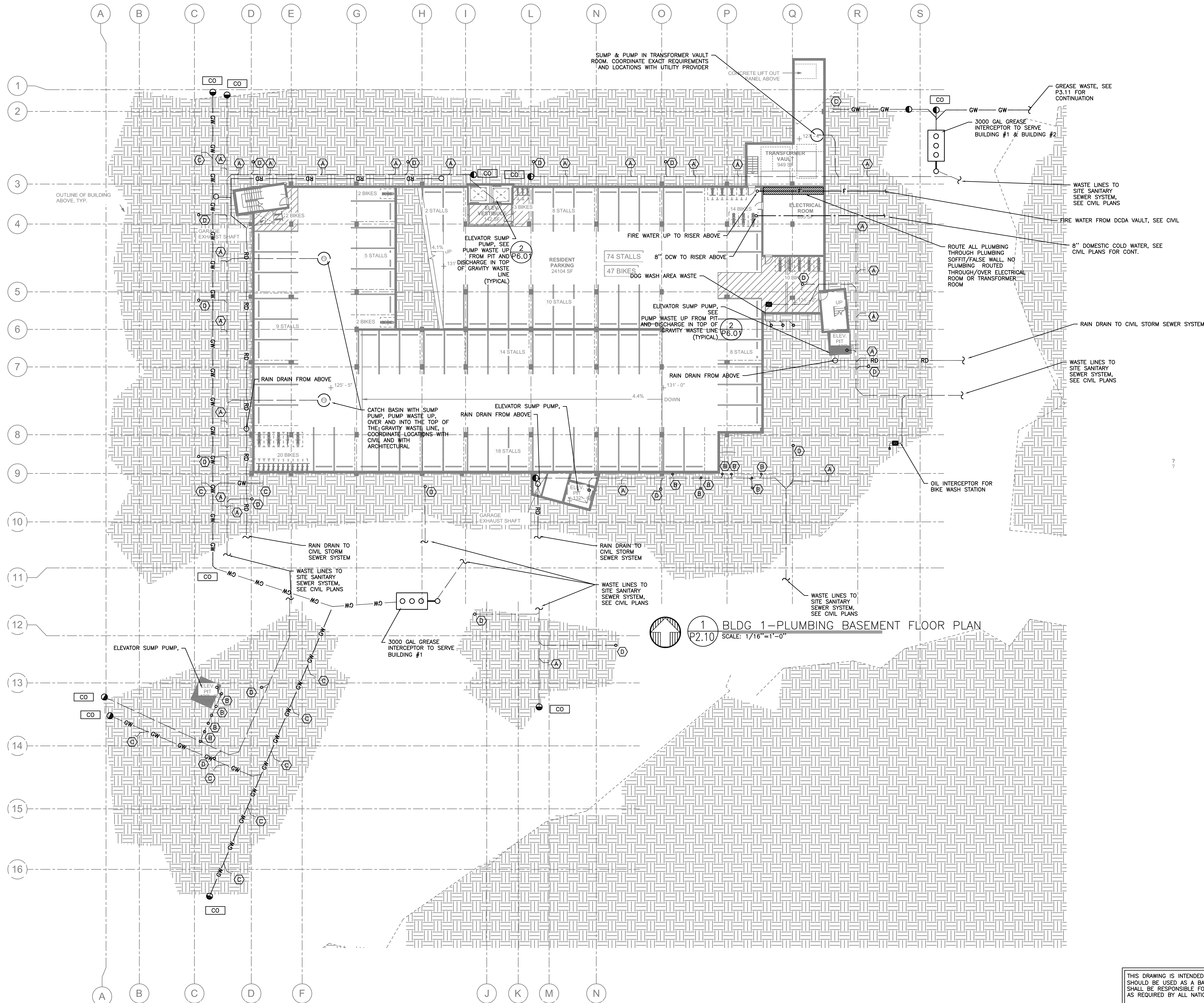


BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK.

SHEET NOTES:

- (A) WASTE LINE CAPPED FOR FUTURE TI SPACE.
- (B) WASTE RISER UP TO LIVE WORK UNITS & PLUMBING FIXTURES ABOVE.
- (C) GREASE WASTE CAPPED FOR FUTURE TI SPACE.
- (D) TYPICAL WASTE RISER TO MEZZANINE CEILING SPACE, WITH BRANCH PIPING TO WASTE RISERS IN EACH DWELLING UNIT.



1 BLDG 1-PLUMBING BASEMENT FLOOR PLAN
 P2.10 SCALE: 1/16"=1'-0"



Holst Architecture

110 SE 8th Ave
 Portland, OR 97214
 www.holstarc.com

1400 NE MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
 NOT FOR
 CONSTRUCTION

MEDIA Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PH: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MEDIA-ENG.COM
 CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:
 MEP Design Assist 4.26.2016

revision list date:

sheet title:
BLDG 1 - BASEMENT LEVEL 01 FLOOR PLAN

sheet no.:
P2.10B1

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

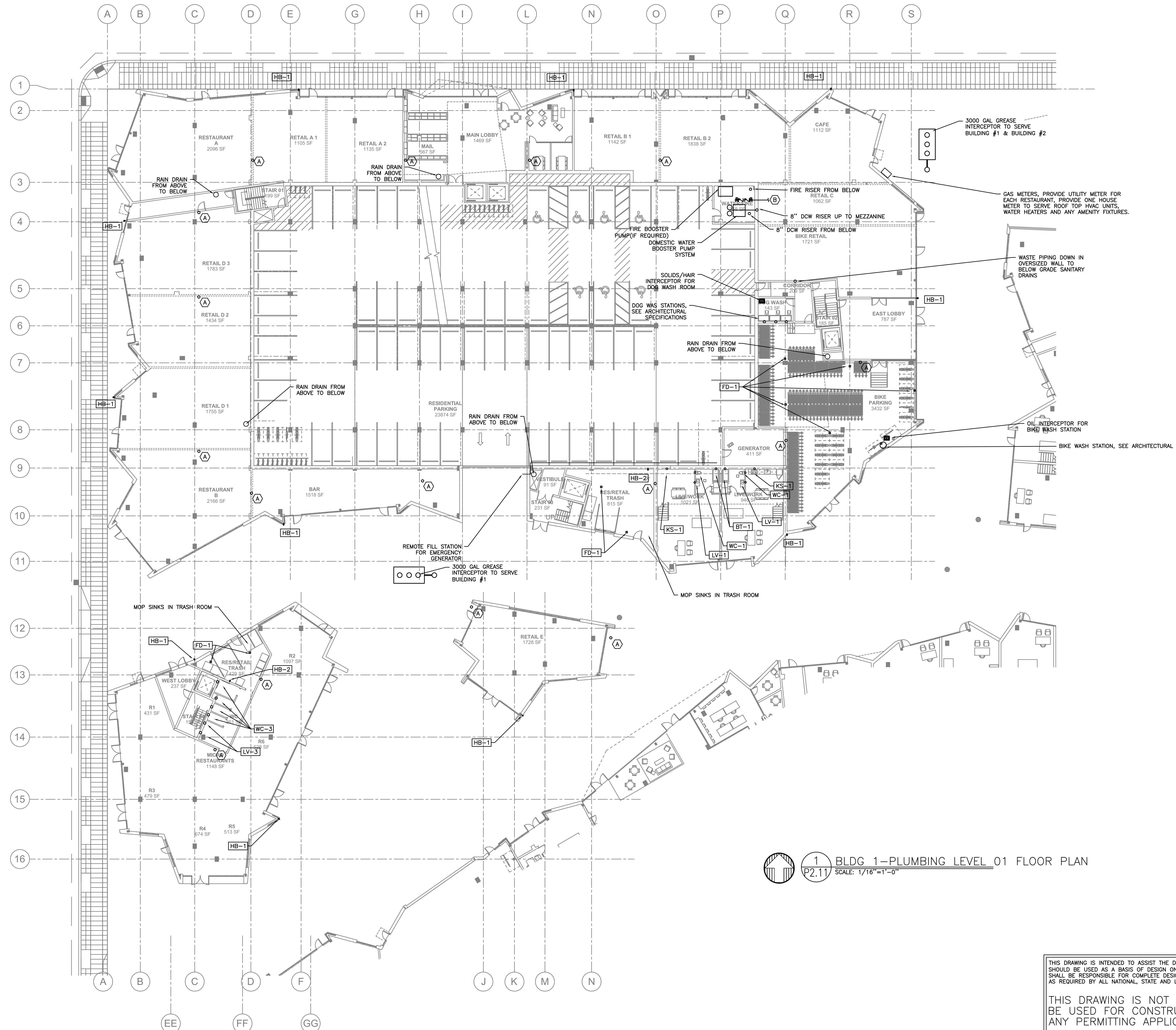
THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN-BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

SHEET NOTES:

- (A) WASTE RISER FROM MEZZANINE ABOVE TO DOWN TO BELOW GRADE.
- (B) PROVIDE IRRIGATION POINT OF CONNECTION, WITH BACKFLOW PREVENTION AND LINE STUBBED TO OUTSIDE BUILDING, AND ALSO ROUTED UP TO IRRIGATED DECK SPACES. PROVIDE SUB METER ON IRRIGATION LINE.



1 BLDG 1-PLUMBING LEVEL 01 FLOOR PLAN
 P2.11 SCALE: 1/16"=1'-0"

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS



Holst Architecture

110 SE 8th Ave
 Portland, OR 97214
 www.holstarc.com

1400 NE MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
 NOT FOR
 CONSTRUCTION

MEFA
 Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PH: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MEFA-ENG.COM

CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:

MEP Design Assist 4.26.2016

revision list date:

sheet title:
**BLDG 1 -
 PLUMBING
 LEVEL 01 FLOOR
 PLAN**

sheet no.:
P2.11B1

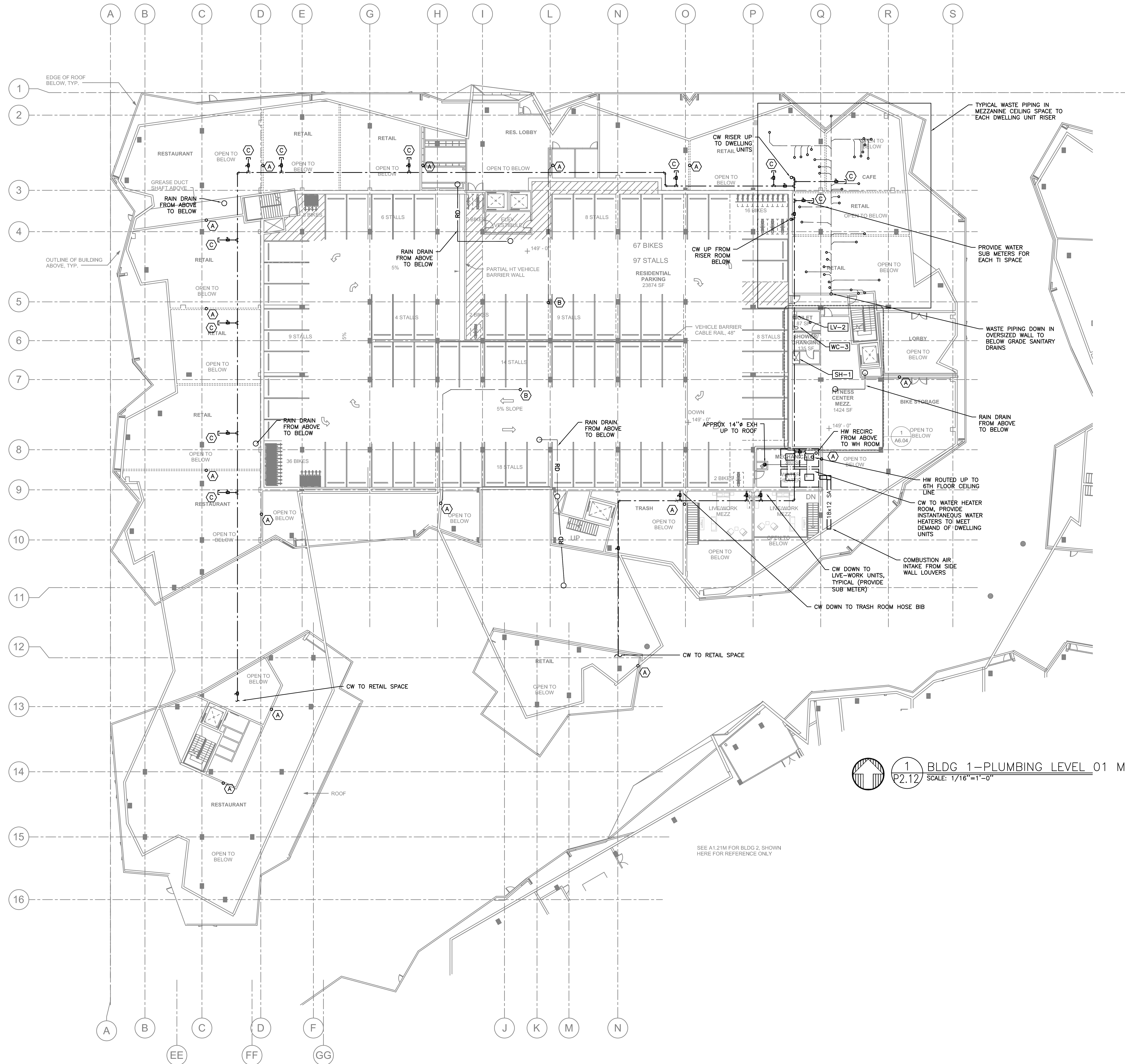
© 2015 HOLST ARCHITECTURE pc

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK.

SHEET NOTES:

- (A) WASTE PIPING DOWN IN OVERSIZED WALL TO BELOW GRADE SANITARY DRAINS
- (B) WASTE PIPING FROM DWELLING UNIT RISERS - ROUTE CLEAR OF PARKING GARAGE AND COMBINE WITH WASTE RISER.
- (C) CW CAPPED FOR FUTURE TI SPACE
- (D)



1 BLDG 1-PLUMBING LEVEL 01 MEZZANINE FLOOR PLAN
 P2.12 SCALE: 1/16"=1'-0"



Holst Architecture

110 SE 8th Ave
 Portland, OR 97214
 www.holstarc.com

1400 NE MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
 NOT FOR
 CONSTRUCTION

MEFA Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PDX: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MEFA-ENG.COM
 CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:
 MEP Design Assist 4.26.2016

revision list date:

sheet title:
BLDG 1 - PLUMBING LEVEL 01 MEZZANINE FLOOR PLAN

sheet no.:
P2.12B1

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BLDG CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK



Holst Architecture

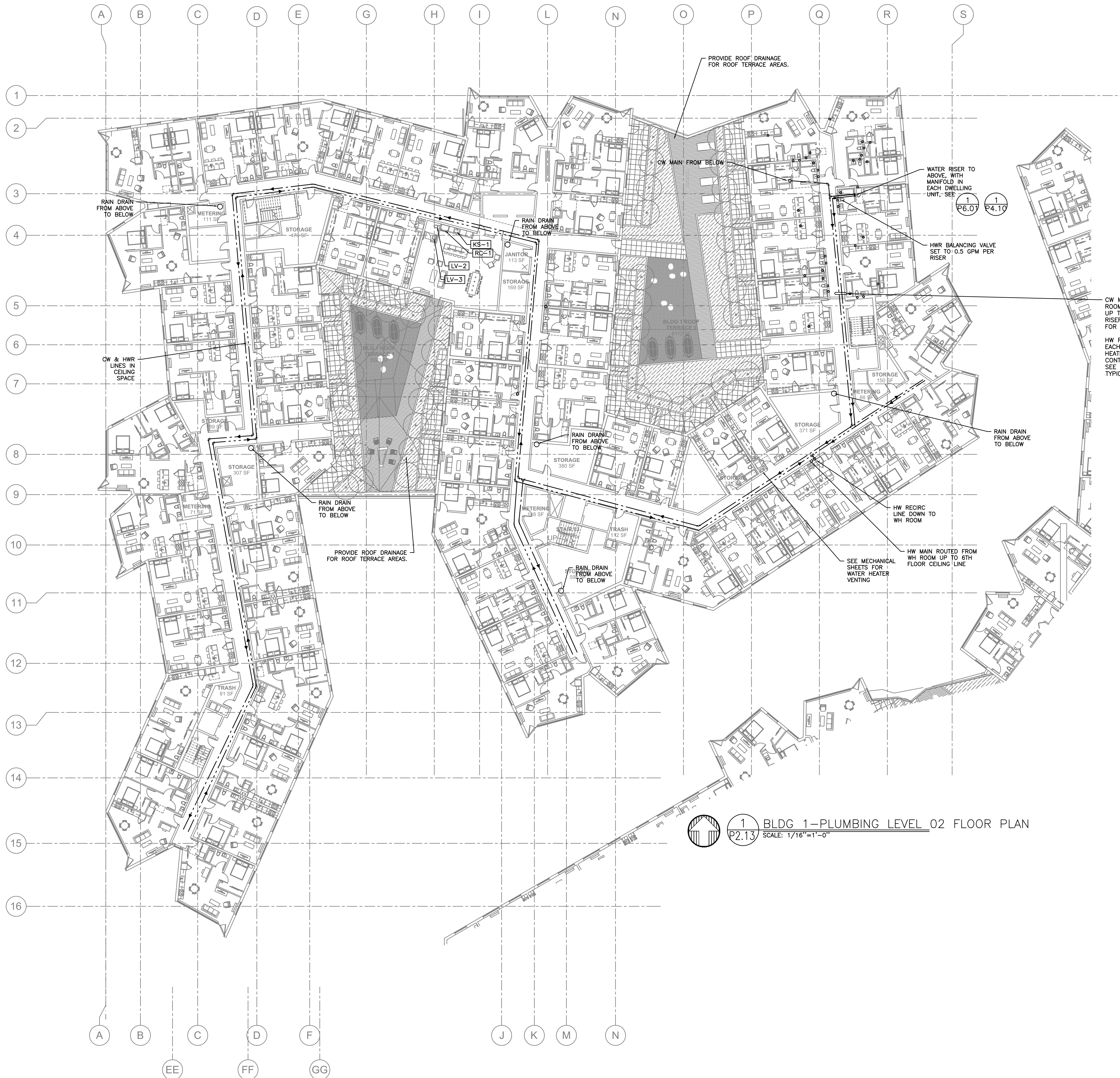
110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

**1400 NE
MULTNOMAH**

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

MEDIA Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
INC. WWW.MEDIA-ENG.COM
CONTACT: MARK DENTER/ROB CONNELL



1 BLDG 1-PLUMBING LEVEL 02 FLOOR PLAN
P2.13 SCALE: 1/16"=1'-0"

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:
MEP Design Assist 4.26.2016

revision list date:

sheet title:
**BLDG 1 -
PLUMBING
LEVEL 02 FLOOR
PLAN**

sheet no.:
P2.13B1

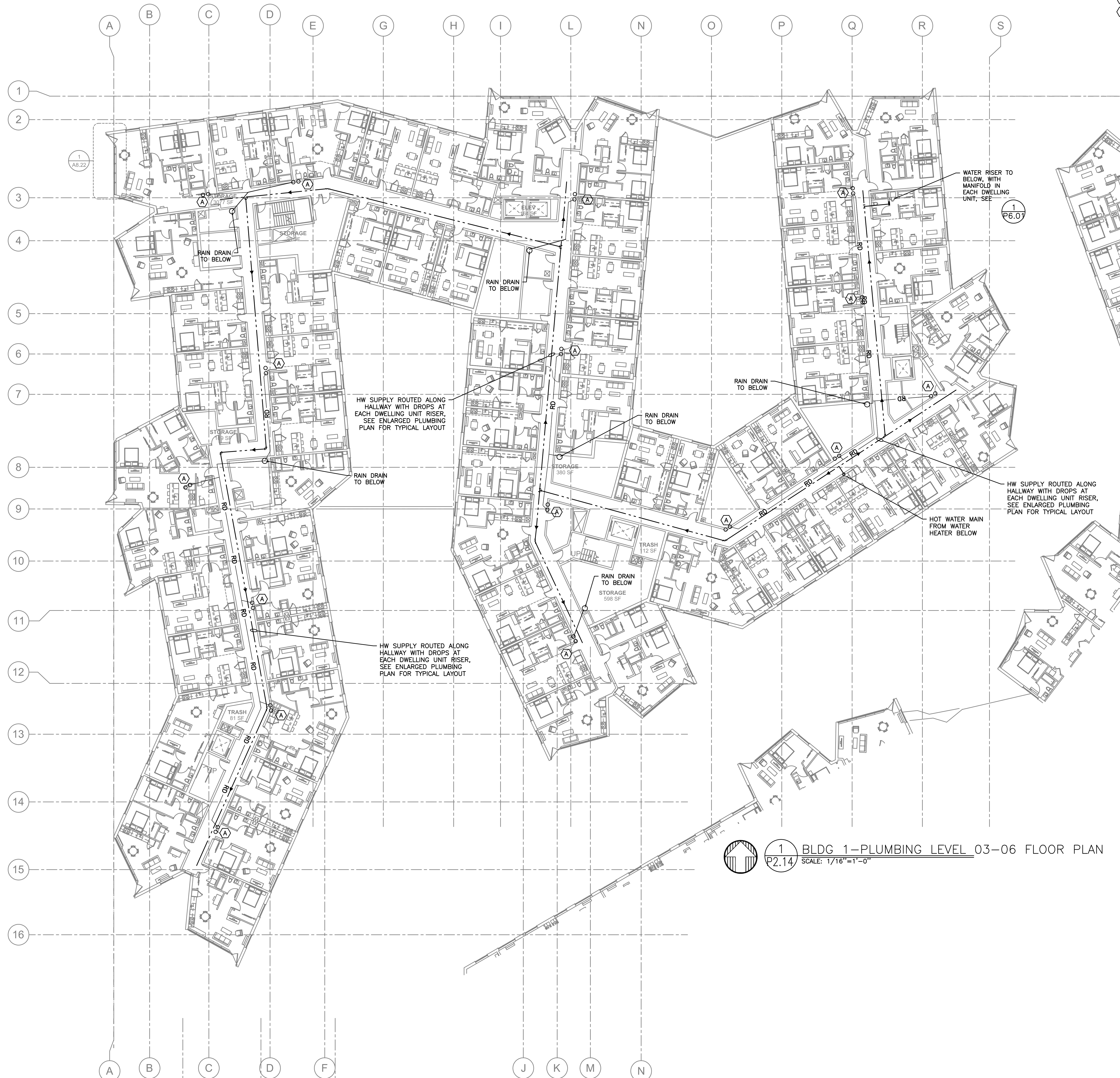
THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.
THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK.

SHEET NOTES:

- (A) RAIN DRAIN AND OVERFLOW DRAIN FROM ROOF, ROUTE PARALLEL LINES THROUGH ATTIC TO DROP LOCATION, ROUTE RAIN DRAINS TO CIVIL STORM SEWER SYSTEM, ROUTE OVERFLOW DRAINS TO DAYLIGHT TO SITE.
- (B)
- (C)
- (D)



1 BLDG 1-PLUMBING LEVEL 03-06 FLOOR PLAN
 P2.14 SCALE: 1/16"=1'-0"



Holst Architecture

110 SE 8th Ave
 Portland, OR 97214
 www.holstarc.com

**1400 NE
 MULTNOMAH**

JOB NO. 15021.00

PRELIMINARY
 NOT FOR
 CONSTRUCTION

MEDIA Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PFX: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MEDIA-ENG.COM
 CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:
 MEP Design Assst 4.26.2016

revision list date:

sheet title:
**BLDG 1 -
 PLUMBING
 LEVEL 03-06
 FLOOR PLAN**

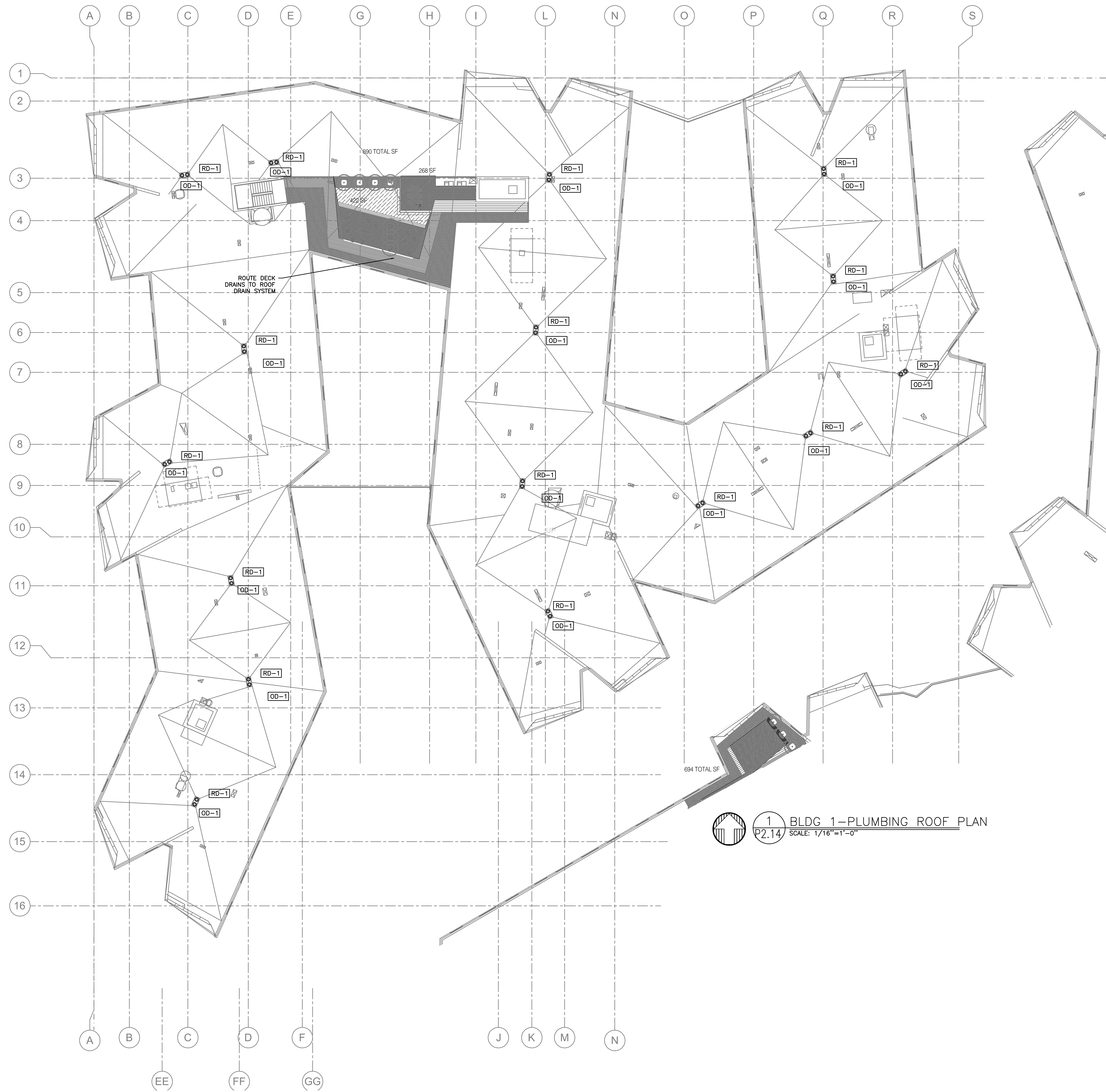
sheet no.:
P2.14B1

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK



1 BLDG 1-PLUMBING ROOF PLAN
 P2.14 SCALE: 1/16"=1'-0"



Holst Architecture

110 SE 8th Ave
 Portland, OR 97214
 www.holstarc.com

**1400 NE
 MULTNOMAH**

JOB NO. 15021.00

PRELIMINARY
 NOT FOR
 CONSTRUCTION

**M
 E
 I
 A
 INC.** Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PH: (503) 234-0548
 FAX: (503) 234-0677
 WWW.MEIA-ENG.COM

CONTACT: MARK DENTZER/ROB CONNELL

**50% DESIGN
 DEVELOPMENT** 4.26.2016

Issue: date:
 MEP Design Assst 4.26.2016

revision list date:

sheet title:
**BLDG 1 -
 PLUMBING
 ROOF
 PLAN**

sheet no.:
P2.15B1

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS



Holst Architecture

110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

1400 NE
MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

MEFA
INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
WWW.MEFA-ENG.COM
CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN
DEVELOPMENT 4.26.2016

Issue: date:

MEP Design Assist 4.26.2016

revision list date:

sheet title:
BLDG 2 -
BASEMENT
LEVEL 01 FLOOR
PLAN

sheet no.:
P3.10B2

© 2015 HOLST ARCHITECTURE pc

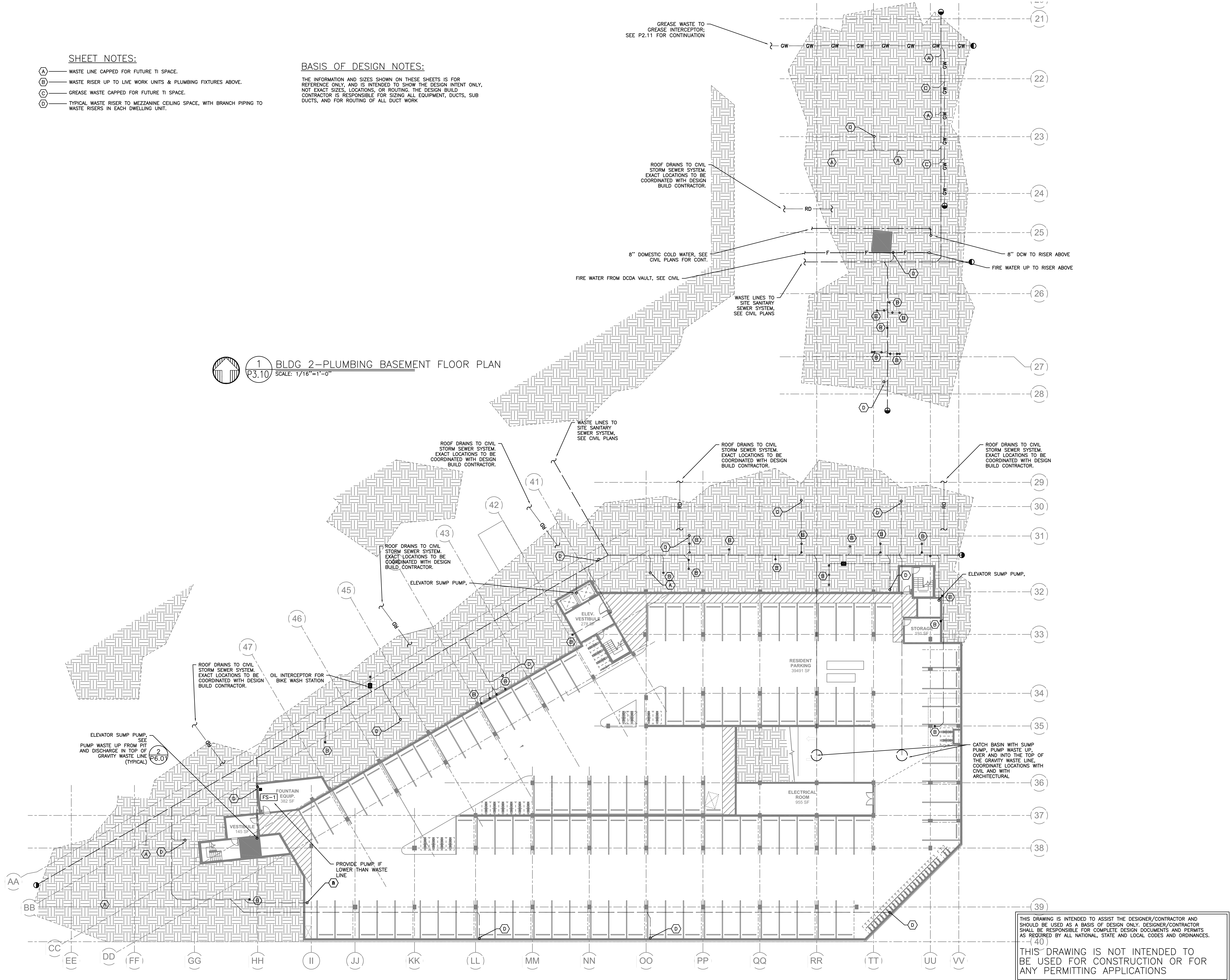
SHEET NOTES:

- (A) WASTE LINE CAPPED FOR FUTURE TI SPACE.
- (B) WASTE RISER UP TO LIVE WORK UNITS & PLUMBING FIXTURES ABOVE.
- (C) GREASE WASTE CAPPED FOR FUTURE TI SPACE.
- (D) TYPICAL WASTE RISER TO MEZZANINE CEILING SPACE, WITH BRANCH PIPING TO WASTE RISERS IN EACH DWELLING UNIT.

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK.

1 BLDG 2-PLUMBING BASEMENT FLOOR PLAN
P3.10 SCALE: 1/16"=1'-0"



THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

(40)

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

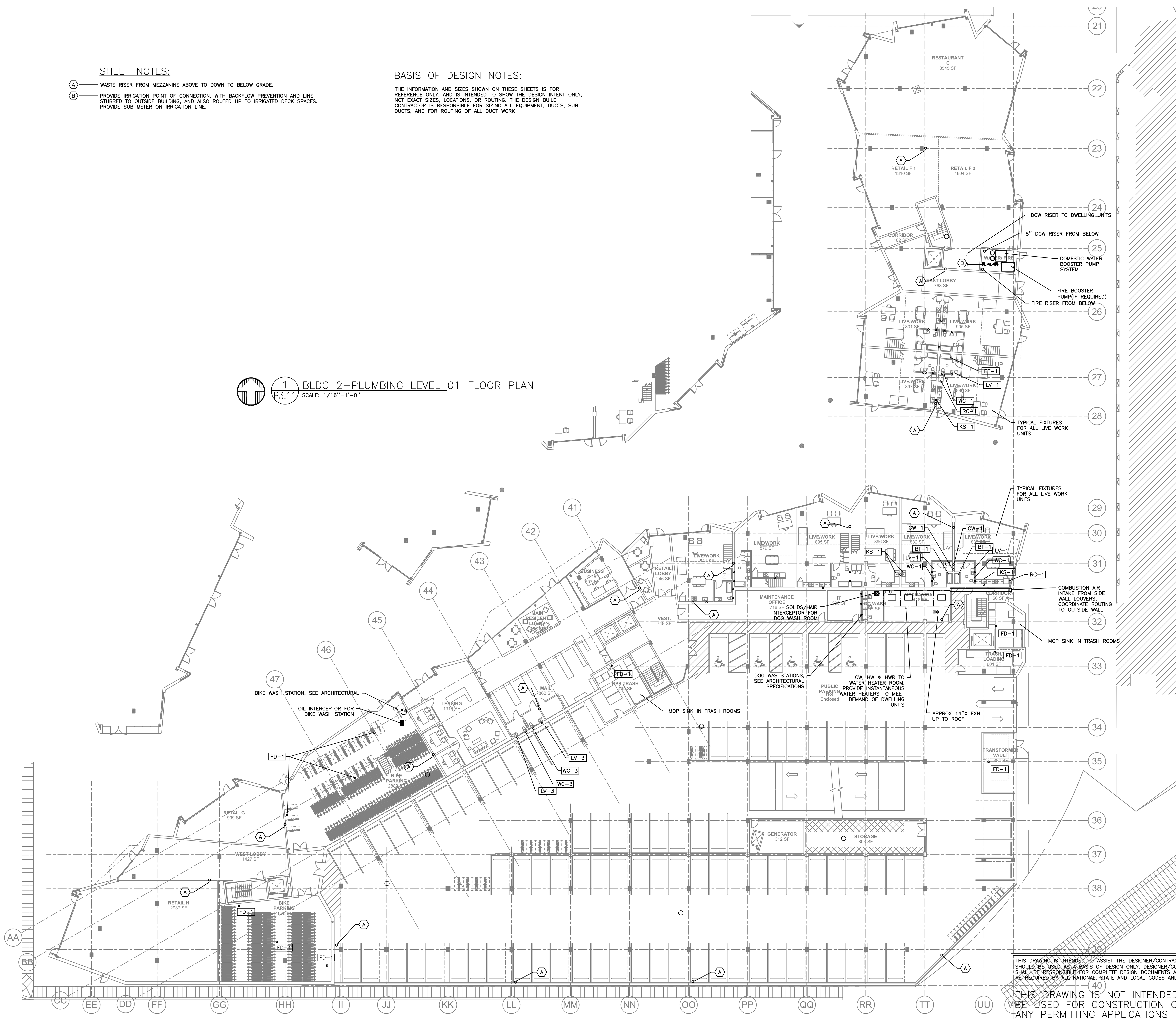
SHEET NOTES:

- (A) WASTE RISER FROM MEZZANINE ABOVE TO DOWN TO BELOW GRADE.
- (B) PROVIDE IRRIGATION POINT OF CONNECTION, WITH BACKFLOW PREVENTION AND LINE STUBBED TO OUTSIDE BUILDING, AND ALSO ROUTED UP TO IRRIGATED DECK SPACES. PROVIDE SUB METER ON IRRIGATION LINE.

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

1 BLDG 2-PLUMBING LEVEL_01 FLOOR PLAN
 P3.11 SCALE: 1/16"=1'-0"



PRELIMINARY
 NOT FOR
 CONSTRUCTION

MEDIA Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PH: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MEDIA-ENG.COM
 CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:
 MEP Design Assst 4.26.2016

revision list date:

sheet title:
BLDG 2 - PLUMBING LEVEL 01 FLOOR PLAN

sheet no.:
P3.11B2



Holst Architecture

110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

1400 NE
MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

M
E
I
A
INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
WWW.MEIA-ENG.COM
CONTACT: MARK DENTON/ROB CONNELL

50% DESIGN
DEVELOPMENT 4.26.2016

Issue: date:
MEP Design Assist 4.26.2016

revision list date:

sheet title:
BLDG 2 -
PLUMBING
LEVEL 01
MEZZANINE FLOOR
PLAN

sheet no.:
P3.12B2

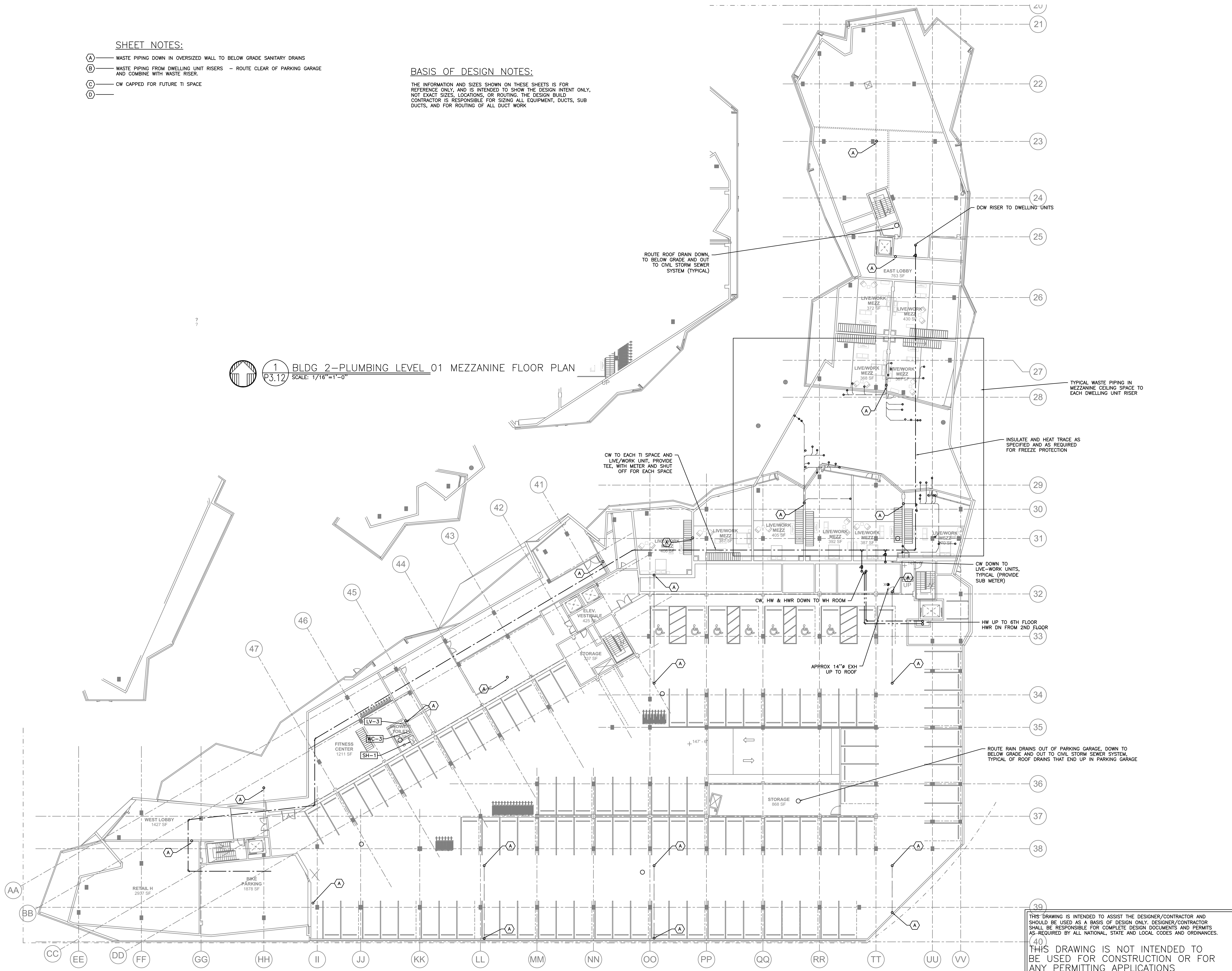
© 2015 HOLST ARCHITECTURE PC

SHEET NOTES:

- (A) WASTE PIPING DOWN IN OVERSIZED WALL TO BELOW GRADE SANITARY DRAINS
- (B) WASTE PIPING FROM DWELLING UNIT RISERS - ROUTE CLEAR OF PARKING GARAGE AND COMBINE WITH WASTE RISER.
- (C) CW CAPPED FOR FUTURE TI SPACE
- (D)

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK



1 BLDG 2-PLUMBING LEVEL 01 MEZZANINE FLOOR PLAN
P3.12 SCALE: 1/16"=1'-0"

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.
THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

1 BLDG 2-PLUMBING LEVEL 02 FLOOR PLAN
 P3.13 SCALE: 1/16"=1'-0"



Holst Architecture

110 SE 8th Ave
 Portland, OR 97214
 www.holstarc.com

**1400 NE
 MULTNOMAH**

JOB NO. 15021.00

PRELIMINARY
 NOT FOR
 CONSTRUCTION

M Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PFX: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MFIA-ENG.COM
 CONTACT: MARK DENTER/ROB CONNELL

**50% DESIGN
 DEVELOPMENT** 4.26.2016

Issue: date:

MEP Design Assist 4.26.2016

revision list date:

sheet title:
**BLDG 2 -
 PLUMBING
 LEVEL 02 FLOOR
 PLAN**

sheet no.:
P3.13B2

© 2015 HOLST ARCHITECTURE pc

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.
 (40)
 THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS



Holst Architecture

110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

**1400 NE
MULTNOMAH**

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

**M
E
I
A
I
N
C.** Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
WWW.MEIA-ENG.COM
CONTACT: MARK DENTER/ROB CONNELL

**50% DESIGN
DEVELOPMENT** 4.26.2016

Issue: date:

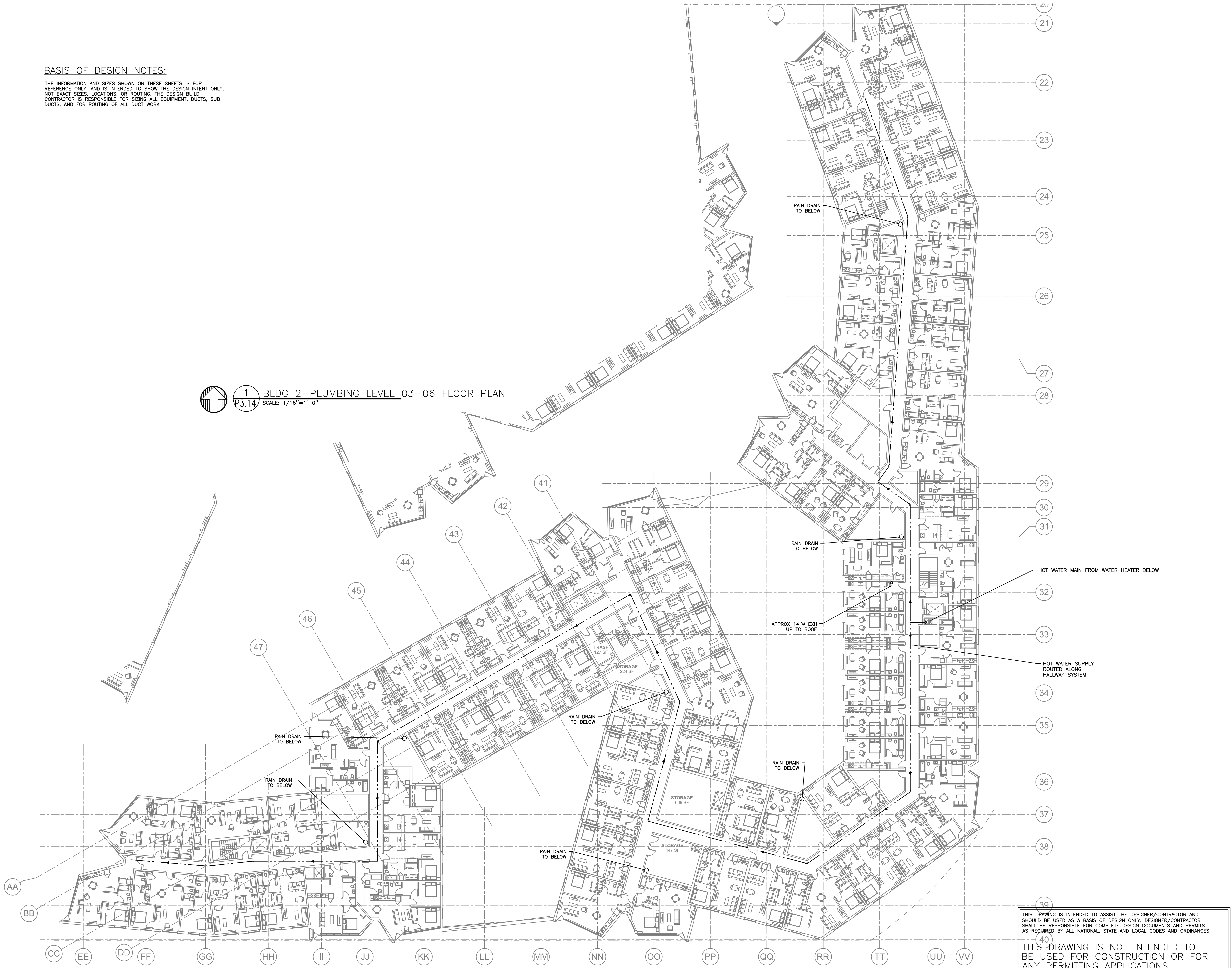
MEP Design Assst 4.26.2016

revision list date:

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

1 BLDG 2-PLUMBING LEVEL 03-06 FLOOR PLAN
P3.14 SCALE: 1/16"=1'-0"



THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.
THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

sheet title:
**BLDG 2 -
PLUMBING
LEVEL 03-06
FLOOR PLAN**

sheet no.:
P3.14B2



Holst Architecture

110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

**1400 NE
MULTNOMAH**

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

**M
E
I
A
INC.** Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
WWW.MEIA-ENG.COM
CONTACT: MARK DENTON/ROB CONNELL

**50% DESIGN
DEVELOPMENT** 4.26.2016

Issue: date:

MEP Design Assist 4.26.2016

revision list date:

sheet title:

**BLDG 2 -
PLUMBING
ROOF
PLAN**

sheet no.:

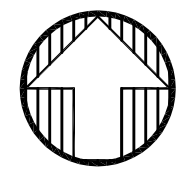
P3.15B2

© 2015 HOLST ARCHITECTURE pc

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

ROUTE RD & OD LINES THROUGH ROOF, AND ROUTE IN CEILING SPACE TO RISERS, CONTRACTOR TO COORDINATE EXACT LOCATIONS AND QUANTITIES OF RISERS.

 **1 BLDG 2-PLUMBING ROOF PLAN**
P3.14 SCALE: 1/16"=1'-0"



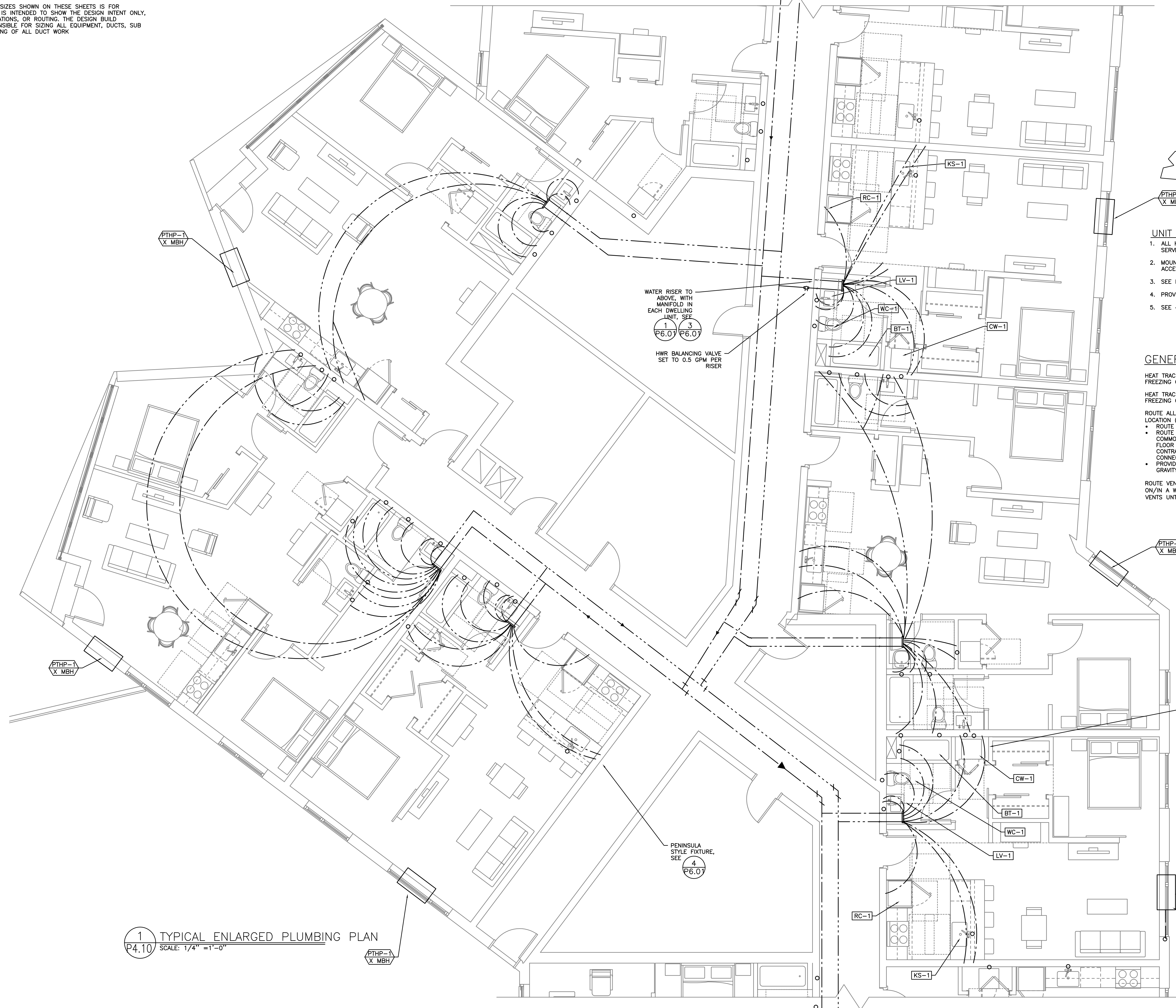
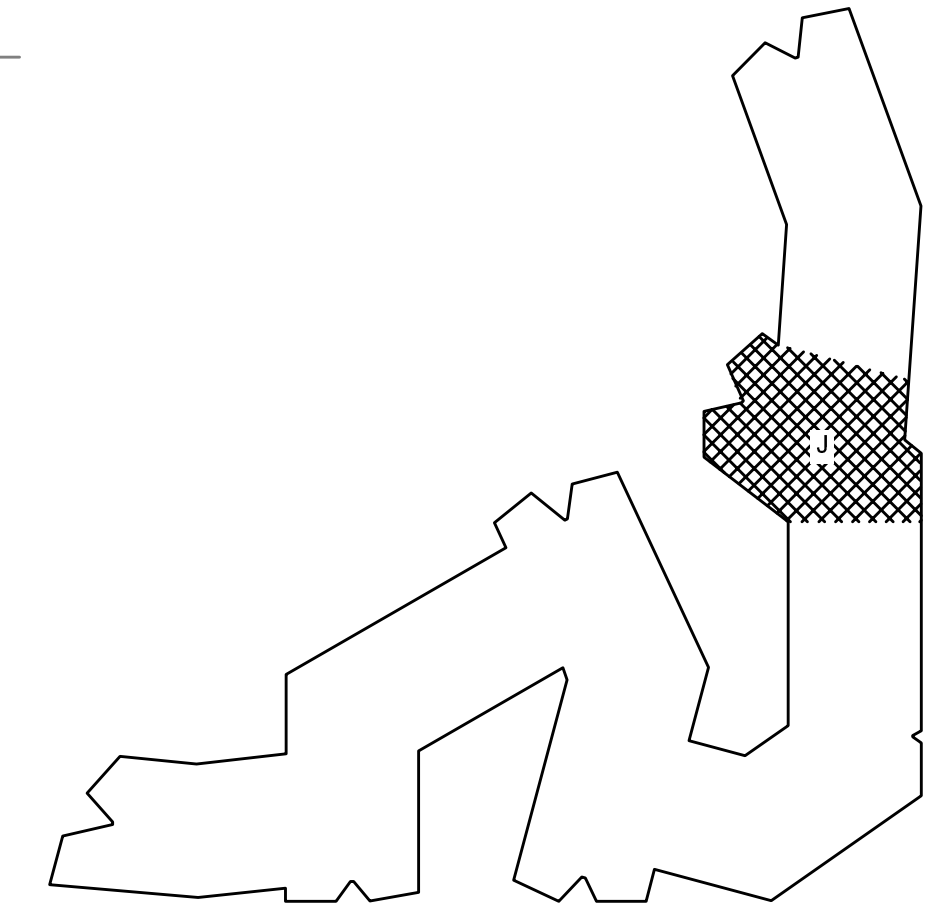
THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

BLDG 2 KEY PLAN



WATER RISER TO ABOVE, WITH MANIFOLD IN EACH DWELLING UNIT. SEE 1 P6.01 3 P6.01

HWR BALANCING VALVE SET TO 0.5 GPM PER RISER

- UNIT DISTRIBUTION NOTES:**
1. ALL HOT AND COLD LINES ARE 1/2" UNLESS THEY SERVE MORE THAN ONE FIXTURE
 2. MOUNT WASHING MACHINE BOX SO SHUT OFFS ARE ACCESSIBLE.
 3. SEE DETAIL 1/P6.01 FOR UNIT WATER DISTRIBUTION.
 4. PROVIDE DISHWASHER SUPPLY AND SHUT OFF.
 5. SEE 4/P6.01 FOR ISLAND AND PENINSULA FIXTURES.

GENERAL NOTES:

HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS.

HEAT TRACE WASTE TRAPS, INSULATE WASTE PIPING EXPOSED TO FREEZING CONDITIONS

ROUTE ALL HVAC UNIT CONDENSATE DRAINS TO AN APPROVED LOCATION (OPTIONS LISTED BELOW).

- ROUTE TO CLOTHES WASHER STAND PIPE, OR UNIT BELOW
- ROUTE ALL CONDENSATES DOWN IN EXTERIOR WALL IN COMMON DRAIN SYSTEM AND ROUTE THROUGH MEZZANINE TO FLOOR SINK OR MOP SINKS IN UTILITY SPACES - CONTRACTOR TO SIZE DRAIN SYSTEM BASED ON NUMBER OF CONNECTED UNITS.
- PROVIDE CONDENSATE PUMPS ON ALL UNITS THAT ARE NOT GRAVITY DRAINED.

ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

PROVIDE WASHING MACHINE DRAIN PAN, WITH DIRECT DRAINAGE TO THE WASTE SYSTEM, WITH PRIMED TRAP. ALTERNATE FOR MOISTURE SENSOR WITH ELECTRICALLY OPERATED SOLENOID VALVES (TYPICAL OF ALL WASHING MACHINES).

PROVIDE PTHPs WITH CONDENSATE DRAIN KIT. ROUTE CONDENSATE DRAINS DOWN IN WALL TO APPROVED LOCATION, AS NOTED IN GENERAL NOTES, TYPICAL OF ALL PTHPs AND SPLIT SYSTEM DX UNITS.

1 TYPICAL ENLARGED PLUMBING PLAN
P4.10 SCALE: 1/4" = 1'-0"



Holst Architecture

110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

1400 NE MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

MEDIA Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
INC. WWW.MEDIA-ENG.COM

CONTACT: MARK CENTER/ROB CONNELL

50% DESIGN DEVELOPMENT 4.26.2016

Issue: date:
MEP Design Assist 4.26.2016

revision list date:

sheet title:
ENLARGED UNIT PLANS

sheet no.:
P4.10

© 2015 HOLST ARCHITECTURE pc

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS



PLUMBING LEGEND

AFF	.....	ABOVE FINISHED FLOOR	---	---	(CW) COLD WATER
ARCH	.....	ARCHITECTURAL	---	---	(HW) HOT WATER
B.G.	.....	BELOW GRADE	---	---	(HWR) HOT WATER RECIRC
BTU	.....	BRITISH THERMAL UNIT	---	---	(W) BELOW GRADE WASTE
CAP.	.....	CAPACITY	---	---	(W) ABOVE GRADE WASTE
C.I.	.....	CAST IRON	---	---	(V) VENT
COMP.	.....	COMPARTMENT	---	---	(RD) RAIN DRAIN
CONT.	.....	CONTINUATION	---	---	(OD) OVERFLOW RAIN DRAIN
CU.	.....	CUBIC	---	---	(G) NATURAL GAS
DIA.	.....	DIAMETER	---	---	(F) FIRE WATER
ELEV.	.....	ELEVATION	V	V	
FD	.....	FLOOR DRAIN			
FDC	.....	FIRE DEPARTMENT CONNECTION			
F.F.	.....	FINISH FLOOR			
FLG.	.....	FLANGE			
FT	.....	FOOT / FEET			
G	.....	GAS			
GA.	.....	GAUGE			
GALV.	.....	GALVANIZED			
GPM	.....	GALLONS PER MINUTE			
G.V.	.....	GATE VALVE			
HP	.....	HORSEPOWER			
kW	.....	KILOWATT			
LAV	.....	LAVATORY			
LBS	.....	POUNDS			
MAX.	.....	MAXIMUM			
MBH	.....	THOUSANDS OF BTUs PER HOUR			
MIN.	.....	MINIMUM			
M.J.	.....	MECHANICAL JOINT			
N.I.M.	.....	NOT IN MECHANICAL			
PROT.	.....	PROTECTION			
PRV	.....	PRESSURE REDUCING VALVE			
PSI, PSIG	.....	POUNDS PER SQUARE INCH			
P/T	.....	PRESSURE / TEMPERATURE			
REQ'D	.....	REQUIRED			
TYP.	.....	TYPICAL			
VTR	.....	VENT THROUGH ROOF			
WC	.....	WATER CLOSET			

	.....	EQUIPMENT MARK NUMBER
	.....	FIXTURE MARK
	.....	NOTE
	.....	RISER DIAGRAM

	.....	PRESSURE/TEMP RELIEF VALVE
	.....	BUTTERFLY VALVE
	.....	PIPE TURNED UP, PIPE TURNED DOWN
	.....	GATE VALVE
	.....	BALL VALVE
	.....	BALANCING VALVE
	.....	CHECK VALVE
	.....	UNION
	.....	DOUBLE CHECK ASSEMBLY
	.....	CAP
	.....	TEE
	.....	ELBOW
	.....	CLEANOUT

PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	W	V	CW	HW	REMARKS
BT-1	BATH TUB	1-1/2"	1-1/2"	1/2"	1/2"	
BT-2	BATH TUB	1-1/2"	1-1/2"	1/2"	1/2"	ADA, GRAB BARS
CW-1	CLOTHES WASHER FITTING	2"	2"	1/2"	1/2"	W/ DRAIN PAN & DRAIN
RC-1	REFRIGERATOR CONNECT			1/2"		VALVE BOX WITH BALL VALVE
HB-1	HOSE BIB			3/4"		NON-FREEZE
HB-2	HOSE BIB (TRASH)			3/4"		INDOOR HB WITH KEY
LV-1	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	UNDER COUNTER MOUNT
LV-2	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	PUBLIC COUNTER MOUNT
LV-3	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	PUBLIC WALL HUNG
KS-1	KITCHEN SINK	2"	1-1/2"	1/2"	1/2"	DOUBLE COMPARTMENT WITH DISPOSAL
KS-2	KITCHEN SINK	2"	1-1/2"	1/2"	1/2"	DOUBLE COMPARTMENT WITH DISPOSAL, ADA
SH-1	SHOWER	2"	1-1/2"	1/2"	1/2"	
WC-1	WATER CLOSET	3"	2"	1/2"		FLOOR MOUNT, TANK TYPE
WC-2	WATER CLOSET	3"	2"	1/2"		FLOOR MOUNT, TANK TYPE, ADA
SP-1	SUMP PUMP	2"				50 GPM, 1/2 HP
FD-1	FLOOR DRAIN	3"	VL			SILOUX CHIEF
FD-2	FLOOR DRAIN	3"	VL			SILOUX CHIEF
RD-1	RAIN DRAIN	X"				
OD-1	OVERFLOW RAIN DRAIN	X"				GLUE-ON-NOZZLE
CB-1	CATCH BASIN	3"	2"			
CO	CLEAN OUT					

V.L. - VENTED LINE

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS

PLUMBING CALCULATIONS Building #1

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	370	4	1480	1110	1110	2	740
CLOTHES WASHER	320	4	1280	960	960	3	960
KITCHEN SINK (GRINDER)	320	1.5	480	360	360	2	640
LAVATORY (SINGLE)	370	1	370	277.5	277.5	1	370
RECEPTOR (INDIRECT WASTE)	3	---	---	---	---	1	3
RECEPTOR (ELEVATOR SUMP)	4	---	---	---	---	100	400
WATER CLOSET (1.6 GPF TANK-PRIVATE)	370	2.5	925	925	0	3	1110
HOSE BIBB (FIRST ONE)	1	2.5	2.5	2.5	0	---	---
HOSE BIBB (EACH ADDITIONAL)	5	5	5	5	0	---	---
WATER CLOSET (1.6 GPF TANK-GENERAL)	4	2.5	10	10	0	4	16
LAVATORY (SINGLE)	4	1	4	3	3	1	4
Average Full size Restaurant	3	63	63	36	36	1	87
Average Micro Rest	11	0	66	49.5	49.5	0	99
Average Retail	4	0	40	35	15	0	64
TOTAL	1789		4725.5	3788.5	2811		4493
		GPM	650	500	420		
		Size	8"	6"	6"		WASTE SIZE 10"
		METER SIZE	See Civil				

PLUMBING CALCULATIONS - 1-Bedroom

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (GRINDER)	1	1.5	1.5	1.125	1.125	2	2
LAVATORY (SINGLE)	1	1	1	0.75	0.75	1	1
WATER CLOSET (1.6 GPF TANK-PRIVATE)	1	2.5	2.5	0	0	3	3
TOTAL	5		13	10.375	7.875		11
		GPM	8	7			
		Size	1"	3/4"			WASTE SIZE

PLUMBING CALCULATIONS - 2-Bedroom

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	2	4	8	6	6	2	4
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (GRINDER)	1	1.5	1.5	1.125	1.125	2	2
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
WATER CLOSET (1.6 GPF TANK-PRIVATE)	2	2.5	5	0	0	3	6
TOTAL	8		20.5	16.625	11.625		17
		GPM	12	9			
		Size	1"	3/4"			WASTE SIZE

PLUMBING CALCULATIONS - Average Full Size Restaurant

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BAR SINK (GENERAL USE)	1	2	2	1.5	1.5	2	2
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
MOP BASIN	1	3	3	2.25	2.25	3	3
SINK GENERAL (1-1/2" TRAP)	2	1.5	3	2.25	2.25	3	6
SINK GENERAL (2" TRAP)	2	3	6	4.5	4.5	4	8
WATER CLOSET (1.6 GPF TANK-GENERAL)	2	2.5	5	0	0	4	8
TOTAL	10		21	17	12		29
		GPM					WASTE SIZE

PLUMBING CALCULATIONS - Average Micro Restaurant

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BAR SINK (GENERAL USE)	0	2	0	0	0	2	0
LAVATORY (SINGLE)	0	1	0	0	0	1	0
MOP BASIN	1	3	3	2.25	2.25	3	3
SINK GENERAL (1-1/2" TRAP)	2	1.5	3	2.25	2.25	3	6
SINK GENERAL (2" TRAP)	0	3	0	0	0	4	0
WATER CLOSET (1.6 GPF TANK-GENERAL)	0	2.5	0	0	0	4	0
TOTAL	3		6	4.5	4.5		9
		GPM					WASTE SIZE

PLUMBING CALCULATIONS - Average Retail

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BAR SINK (GENERAL USE)	0	2	0	0	0	2	0
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
MOP BASIN	0	3	0	0	0	3	0
SINK GENERAL (1-1/2" TRAP)	2	1.5	3	2.25	2.25	3	6
SINK GENERAL (2" TRAP)	0	3	0	0	0	4	0
WATER CLOSET (1.6 GPF TANK-GENERAL)	2	2.5	5	0	0	4	8
TOTAL	6		10	8.75	3.75		16
		GPM					WASTE SIZE

PLUMBING CALCULATIONS Building #2

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	420	4	1680	1260	1260	2	840
CLOTHES WASHER	375	4	1500	1125	1125	3	1125
KITCHEN SINK (GRINDER)	375	1.5	562.5	421.875	421.875	2	750
LAVATORY (SINGLE)	420	1	420	315	315	1	420
RECEPTOR (INDIRECT WASTE)	3	---	---	---	---	1	3
RECEPTOR (ELEVATOR SUMP)	3	---	---	---	---	100	300
WATER CLOSET (1.6 GPF TANK-PRIVATE)	420	2.5	1050	1050	0	3	1260
HOSE BIBB (FIRST ONE)	1	2.5	2.5	2.5	0	---	---
HOSE BIBB (EACH ADDITIONAL)	5	5	5	5	0	---	---
WATER CLOSET (1.6 GPF TANK-GENERAL)	5	2.5	12.5	12.5	0	4	20
LAVATORY (SINGLE)	5	1	5	3.75	3.75	1	5
Average Full size Restaurant	1	0	6	4.5	4.5	0	9
Average Micro Rest	2	0	12	8.75	8.75	0	17
Average Retail	2	0	20	17.5	7.5	0	32
TOTAL	2036		5284.5	4234.625	3149.625		4793
		GPM	700	600	450		
		Size	8"	6"	6"		WASTE SIZE 10"
		METER SIZE	See Civil				

PLUMBING CALCULATIONS - 1-Bedroom

FIXTURE TYPE	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE		
	NUMBER OF FIXTURES	WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (GRINDER)	1	1.5	1.5	1.125			



Holst Architecture

110 SE 8th Ave
Portland, OR 97214
www.holstarc.com

1400 NE
MULTNOMAH

JOB NO. 15021.00

PRELIMINARY
NOT FOR
CONSTRUCTION

MEFA
Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
INC. WWW.MEFA-ENG.COM
CONTACT: MARK DENTER/ROB CONNELL

50% DESIGN
DEVELOPMENT 4.26.2016

Issue: date:

MEP Design Assst 4.26.2016

revision list date:

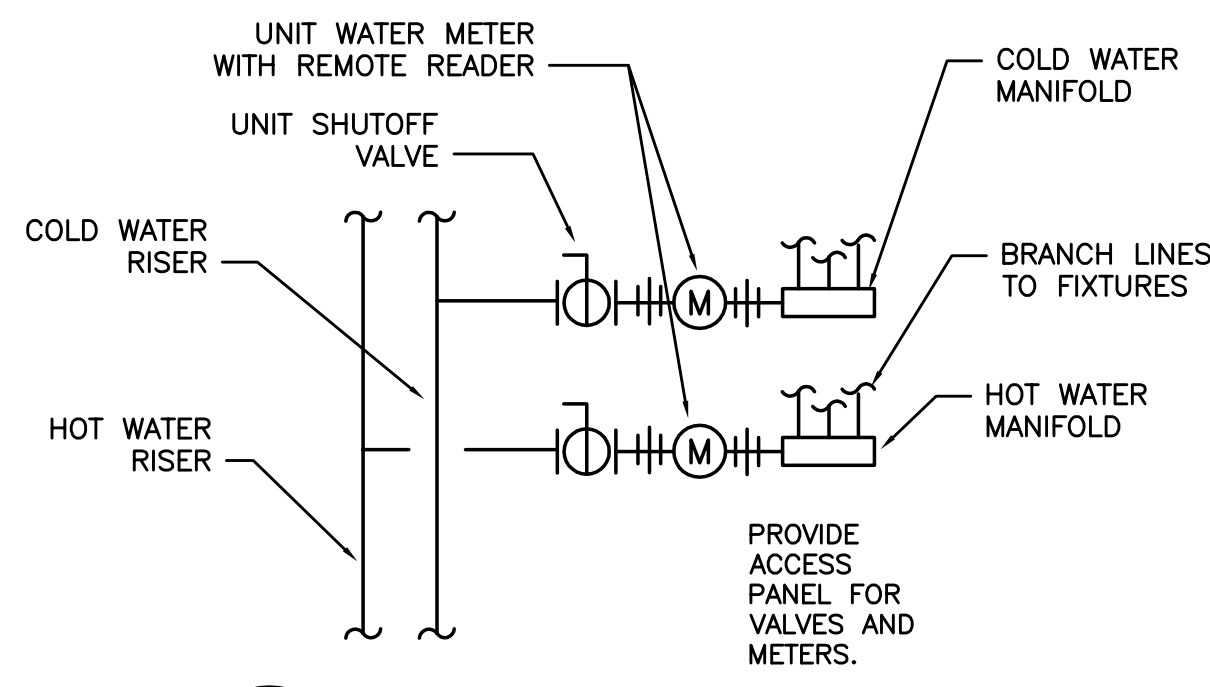
sheet title:

PLUMBING
DETAILS AND
SCHEDULES

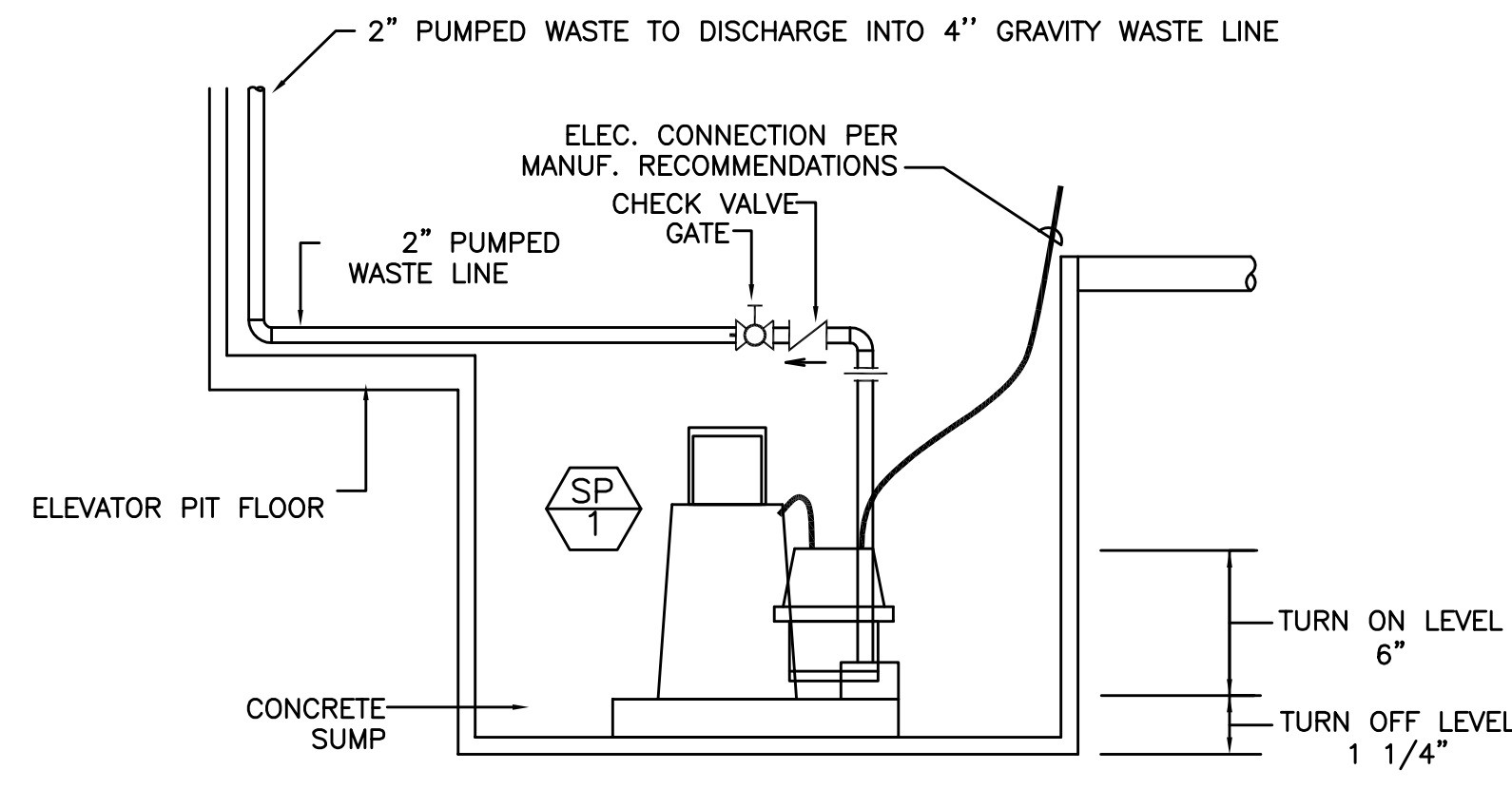
sheet no.:

P6.01

© 2015 HOLST ARCHITECTURE PC



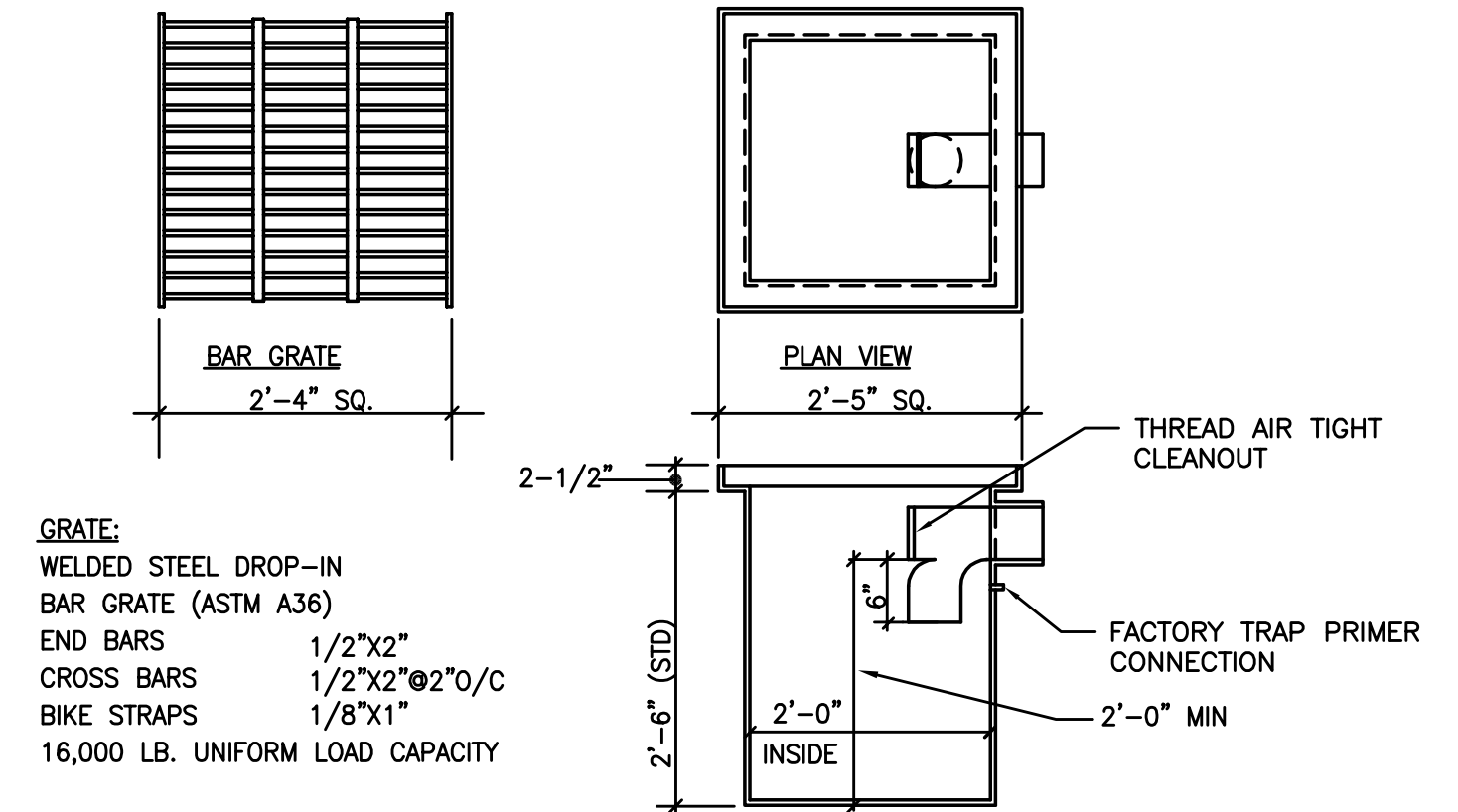
1 UNIT WATER DISTRIBUTION
P6.01 NOT TO SCALE



SUMP PUMP	
MARK NUMBER	SP 1
SYSTEM	ELEVATOR
TYPE	SUMP *
FLOW RATE (GPM)	50
HEAD (FT H2O)	25
POWER (HP)	1/2 HP

* - PROVIDE W/ PLUG IN CONNECTION FOR POWER

2 TYPICAL ELEVATOR SUMP
P6.01 SCALE: DETAIL

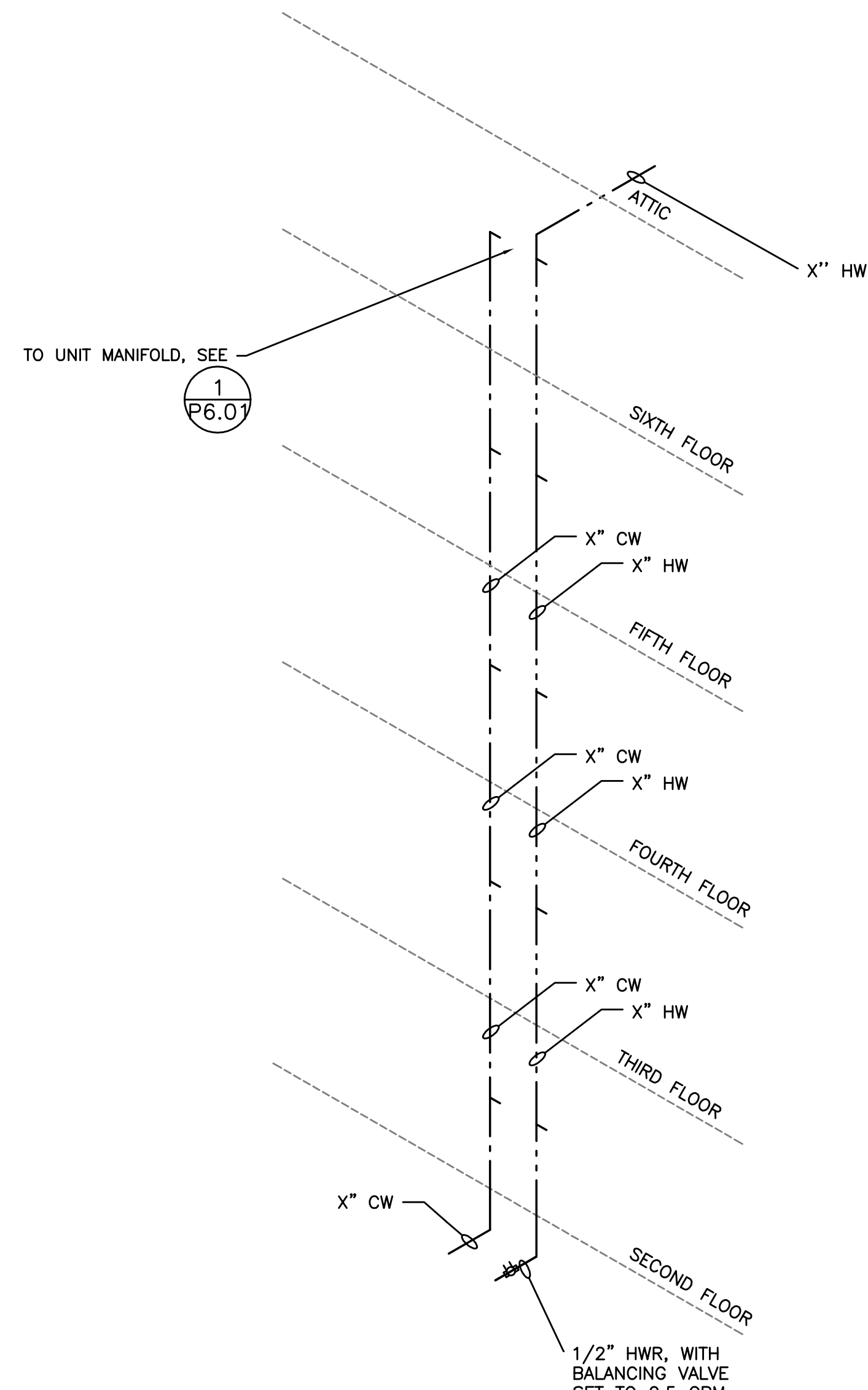


GRATE:
WELDED STEEL DROP-IN
BAR GRATE (ASTM A36)
END BARS 1/2"x2"
CROSS BARS 1/2"x2" @ 2" O/C
BIKE STRAPS 1/8"x1"
16,000 LB. UNIFORM LOAD CAPACITY

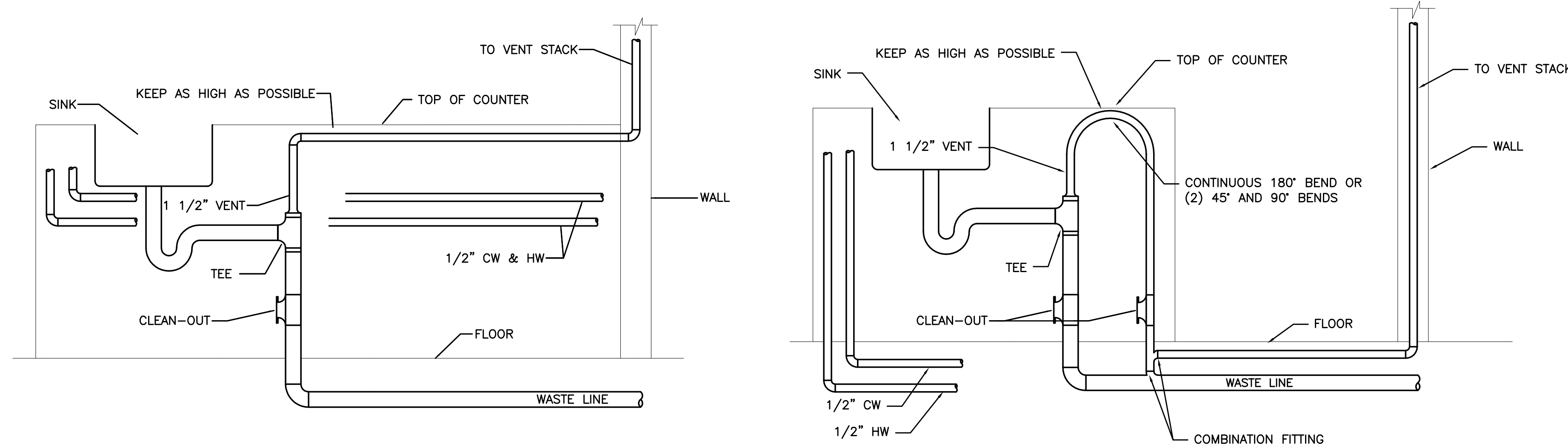
BASIN
WELDED 10 GA. MILD STEEL, COATED ALL SURFACES WITH ASPHALTIC PAINT

OUTLET STUB
FOR NO HUB CONNECTOR. SIZE AS REQ'D FOR INDICATED PIPE (SEE PLAN)

5 CATCH BASIN
P6.01 NOT TO SCALE



3 TYPICAL RISER WATER
P6.01 NOT TO SCALE



4 PENINSULA & ISLAND FIXTURES
P6.01 NO SCALE

BASIS OF DESIGN NOTES:

THE INFORMATION AND SIZES SHOWN ON THESE SHEETS IS FOR REFERENCE ONLY, AND IS INTENDED TO SHOW THE DESIGN INTENT ONLY. NOT EXACT SIZES, LOCATIONS, OR ROUTING. THE DESIGN BUILD CONTRACTOR IS RESPONSIBLE FOR SIZING ALL EQUIPMENT, DUCTS, SUB DUCTS, AND FOR ROUTING OF ALL DUCT WORK

THIS DRAWING IS INTENDED TO ASSIST THE DESIGNER/CONTRACTOR AND SHOULD BE USED AS A BASIS OF DESIGN ONLY. DESIGNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN DOCUMENTS AND PERMITS AS REQUIRED BY ALL NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.

THIS DRAWING IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR FOR ANY PERMITTING APPLICATIONS