PLUMBING APPLICATION

Department of Health and Human Services
Division of Environmental Health

 # 11920

PROPERTY ADDRESS

Town or Plantation	PORTLAND / 27 FORE
Street Subdivision Lot #	~~86 NEWBURY ST.~~

PROPERTY OWNERS NAME

Last: SHIPYARD BREWING COMPANY First:

Applicant Name:	JOHNSON/JORDAN MECH. CO.
Mailing Address of Owner/Applicant (If Different)	18 MUSSEY RD, SCARBOROUGH 04074

Caution: Permit Required

Plumbing shall not be installed until a Permit is attached here by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the plumbing in accordance with this application and the Maine Plumbing Rules.

20124542S

Owner/Applicant Statement

I certify that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Local Plumbing Inspectors to deny a Permit.

Signature of Owner/Applicant — Date

Caution: Inspection Required

I have inspected the installation authorized above and found it to be in compliance with the Maine Plumbing Rules.

Local Plumbing Inspector Signature — Date Approved

PERMIT INFORMATION

This Application is for

1. ☐ NEW PLUMBING
2. ☑ RELOCATED PLUMBING

Type of Structure To Be Served:

1. ☐ SINGLE FAMILY DWELLING
2. ☐ MODULAR OR MOBILE HOME
3. ☐ MULTIPLE FAMILY DWELLING
4. ☑ OTHER – SPECIFY BREWERY

20 C09

Plumbing To Be Installed By:

1. ☑ MASTER PLUMBER
2. ☐ OIL BURNERMAN
3. ☐ MFG'D. HOUSING DEALER/MECHANIC
4. ☐ PUBLIC UTILITY EMPLOYEE
5. ☐ PROPERTY OWNER

LICENSE # 0,4,2,6,0

Hook-Up & Piping Relocation Maximum of 1 Hook-Up		Column 2 Number	Column 2 Type of Fixture	Column 1 Number	Column 1 Type of Fixture
	HOOK-UP: to public sewer in those cases where the connection is not regulated and inspected by the Joint Sanitary District		Hosebibb / Sillcock		Bathtub (and Shower)
			Floor Drain		Shower (Separate)
			Urinal		Sink
1	HOOK-UP: to an existing subsurface wastewater disposal system.		Drinking Fountain		Wash Basin
			Indirect Waste		Water Closet (Toilet)
	PIPING RELOCATION: of sanitary lines, drains, and piping without new fixtures.		Water Treatment Softener, Filter, etc.		Clothes Washer
			Grease / Oil Separator		Dish Washer
			Roof Drain		Garbage Disposal
	OR		Bidet		Laundry Tub
	TRANSFER FEE [$6.00]	2	Other: EQUALIZATION TANK		Water Heater
			Fixtures (Subtotal) Column 2		Fixtures (Subtotal) Column 1
	SEE PERMIT FEE SCHEDULE FOR CALCULATING FEE				Fixtures (Subtotal) Column 2
				2	Total Fixtures
					Fixture Fee
					Transfer Fee
				1	Hook-Up & Relocation Fee
				50	Permit Fee (Total)

RECEIVED
JUN 2005
Dept. of Building Inspections
City of Portland, Maine

STATE COPY

SHIPYARD BREWING COMPANY

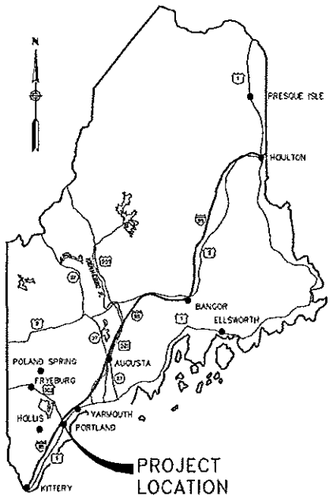
PORTLAND, MAINE

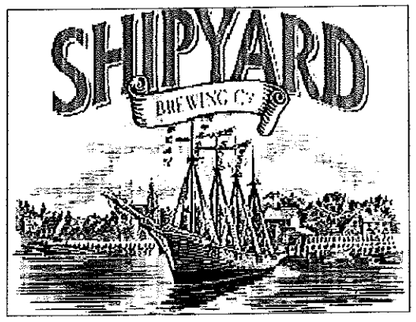
WASTEWATER EQUALIZATION SYSTEM

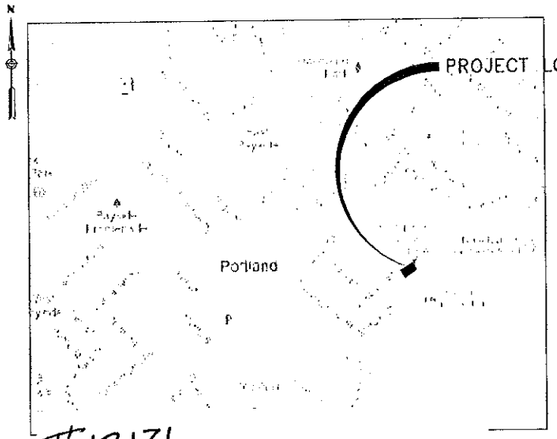
RECEIVED
JUL 0 3 2012
Dept. of Building Inspections
City of Portland Maine

ISSUE FOR BID - MARCH 2012
PROJECT NO. 225408.00

40 E







WOODARD & CURRAN
41 Hutchins Drive | Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

#12171
SHIPYARD BREWERY
SANITARY SEPARATION
PERMIT PKG

SHIPYARD BREWING COMPANY

WASTEWATER EQUALIZATION SYSTEM - PORTLAND, MAINE

MECHANICAL SYSTEMS - MARCH 2012

MASTER DRAWING INDEX

DRAWING NO.	DRAWING NAME	A	B
	MECHANICAL DRAWINGS - GENERAL REFERENCE		
SBC-GR-01	DRAWING INDEX	●	●
SBC-GR-02	LEGEND	●	●
SBC-GR-03	SYMBOLS	●	●
SBC-GR-04	OVERALL BREWERY LAYOUT	●	●
	MECHANICAL DRAWINGS - PROCESS BLOCK FLOW DRAWINGS		
SBC-WF-01-D	WW EQUALIZATION SYSTEM - DEMO	●	●
SBC-WF-01	WW EQUALIZATION SYSTEM	●	●
	MECHANICAL DRAWINGS - PROCESS P&ID DRAWINGS		
SBC-WP-01-D	WW EQUALIZATION SYSTEM - DEMO	●	●
SBC-WP-01	WW EQUALIZATION SYSTEM	●	●

DRAWING NO.	DRAWING NAME	A	B
	MECHANICAL DRAWINGS - PROCESS LAYOUT DRAWINGS		
SBC-WL-01	WW EQ SYSTEM LAYOUT	●	●
	MECHANICAL DRAWINGS - PIPE ROUTING DRAWINGS		
SBC-WR-01-D	OVERALL SEWER WW ROUTING - DEMO	●	●
SBC-WR-01	OVERALL WW PIPE ROUTING	●	●
SBC-WR-02-D	WW EQ SYSTEM PIPE ROUTING - DEMO	●	●
SBC-WR-02	WW EQ SYSTEM PIPE ROUTING	●	●
SBC-WR-03-D	SANITARY SEWER ROUTING - DEMO	●	●
SBC-WR-03	SANITARY SEWER ROUTING	●	●
	MECHANICAL DRAWINGS - DETAIL DRAWINGS		
	UTILITY DRAWINGS - DETAIL DRAWINGS		

REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
A	ISSUE FOR BID (REVIEW)	GJW	03-05-12

WOODARD & CURRAN

DRAWN: GJW | DESIGN: FPN | CONTROL NO.: 225408

SHIPYARD

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-01-12 | DRN.: P. HENDRY | SCALE: N/A

SIZE: D

SHEET NO.: SBC-GR-01

REV. NO.: B

WASTEWATER
DRAWING INDEX
GENERAL REFERENCE DRAWING

GENERAL NOTES

A. P&ID DRAWINGS FOLLOWS SCOPE AND PRECEDES ALL ELSE. THEN SCOPE OF WORK AND/OR LAYOUT DRAWINGS WHICH PRECEDE EQUIPMENT INSTALLATION DRAWINGS

B. LINE CONTINUATION AS FOLLOWS:

A-2	4"-CHWS TO AIR HANDLER DRAWING UP-03

ex. LINE ENTERS AT LOCATION A-2 ON DRAWING NUMBER UP-03

C. CONTRACTOR TO FOLLOW REQUIREMENTS OF LOCAL CODES AND STANDARDS.

D. REFER TO SPECIFICATIONS FOR PIPE MATERIAL AND VALVE CONSTRUCTION DETAILS.

GENERAL ABBREVIATIONS

ACFM	ACTUAL CUBIC FEET PER MINUTE		OD	OUTSIDE DIAMETER
AFF	ABOVE FINISHED FLOOR		OF	OVERFLOW
ALGMT	ALIGNMENT		PB	PULL BOX
AS	COMPRESSED AIR SUPPLY		PD	PROCESS DETAIL
BF	BLIND FLANGE		FE	PLAIN END
BOP	BOTTOM OF PIPE		P&D	PIPING & INSTRUMENTATION DIAGRAM
CO2	CARBON DIOXIDE		PF	PROCESS FLOW
COP	CLEAN-OUT-OF-PLACE		PL	PROCESS LAYOUT
CS	CARBON STEEL		POC	POINT OF CONNECTION
DR	DRAIN		POL	POLYFLOW
ECC	ECCENTRIC (REDUCER)		POLY	POLYETHYLENE
EL	ELEVATION		PP	PROCESS P&D
FC	FAIL CLOSED		PPB	PARTS PER BILLION
FD	FLOOR DRAIN		PPD	POUNDS PER DAY
FF	FINISHED FLOOR		PPM	PARTS PER MILLION
FLG	FLANGE		PSIA	POUNDS PER SQUARE INCH ABSOLUTE
FL	FLOOR		PSIG	GAUGE POUNDS PER SQUARE INCH
FO	FAIL OPEN		PR	PROCESS ROUTING
FS	FLOW SWITCH		PVC	POLYVINYL CHLORIDE
GPD	GALLONS PER DAY		PVDF	POLYVINYLIDENE FLORIDE
GPH	GALLONS PER HOUR		RED	REDUCER
GPM	GALLONS PER MINUTE		RO	ORIFICE PLATE
HS	HOSE BIB		RT	REDUCING "TEE"
HD	HUB DRAIN		S.C	SAMPLE COCK
HOA	HAND-OFF-AUTO		S.P.	SET POINT
HS	HOSE STATION		SAN	SANITATION
HWL	HIGH WATER LEVEL		SCFM	CUBIC FEET PER MINUTE (STANDARD CONDITION)
ID	INSIDE DIAMETER		Sch	PIPE SCHEDULE
INCL	INCLUDED IN PURCHASE		SS	STAINLESS STEEL
INV	INVERT		STDBY	STANDBY
LWL	LOW WATER LEVEL		SW	STRAIGHT WALL
mA	MILLIAMP		TDH	TOTAL DYNAMIC HEAD
MCC	MOTOR CONTROL CENTER		T.O.P.	TOP OF PIPE
MGD	MILLION GALLON PER DAY		TOS	TOP OF STEEL
MG/L	MILLIGRAMS PER LITER		TYP	TYPICAL
MHW	MEAN HIGH WATER		UNO	UNLESS OTHERWISE NOTED
MJ	MECHANICAL JOINT		UD	UTILITY DETAIL
MLW	MEAN LOW WATER		UF	UTILITY FLOW DIAGRAM
MSL	MEAN SEA LEVEL		UL	UTILITY LAYOUT
N.C.	NORMALLY CLOSED (i.e., VALVE)		UP	UTILITY P&D
N.O.	NORMALLY OPEN (i.e., VALVE)		UR	UTILITY ROUTING
N2	NITROGEN		UV	ULTRAVIOLET
NaCl	BRINE		VB	VACUUM BREAKER
NH3	AMMONIA		VCP	VENDOR SUPPLIED CONTROL PANEL
NIC	NOT IN CONTRACT		VFD	VARIABLE FREQUENCY DRIVE
NIR	NEAR INFRARED		WS	WATER SURFACE
NTS	NOT TO SCALE		X	EXISTING EQUIPMENT
O.L.	OVERLOAD			
O2	OXYGEN			
O3	OZONE			
OC	ON CENTER			

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

FIELD MOUNTED	NORMALLY INACCESSIBLE	NORMALLY ACCESSIBLE	INSTRUMENT OR FUNCTION DESCRIPTION
○	⊖	⊖	DISCRETE INSTRUMENTS (i.e. Primary Elements, Controllers, Recorders, etc.)
◯	⊖	⊖	INDICATING LIGHTS, ALARMS, AND HORNS
□	⊟	⊟	SHARED DISPLAY, CONTROL (i.e. Smart Display Screen, Dual Loop Controller, etc.)
⬡	⬡	⬡	COMPUTER FUNCTION
◇	⊠	⊠	PROGRAMMABLE LOGIC CONTROL
◯◯			INSTRUMENTS SHARING COMMON HOUSING
◇			UNDEFINED INTERLOCK LOGIC
⊖ /8			FUNCTION BLOCKS, DESIGNATORS (i.e. Convert (I/P), Bias (+), Multiplying (X), etc.)
⊖ IP1			INSTRUMENT OR FUNCTION LOCATION (OPTIONAL) (i.e. Instrument Panel #1 (IP1), etc.)
◯ VFD			INSTRUMENT OR FUNCTION MODIFIERS (OPTIONAL) (i.e. Variable Frequency Drive (VFD), etc.)
(XX)			ELECTRICAL MOTOR (XX = HORSEPOWER)

PIPE OR INSTRUMENT LINE SYMBOLS

SYMBOL	PIPE OR INSTRUMENT LINE DESCRIPTION
	FUTURE PIPELINES
———	PROCESS FLOW
———	INSTRUMENT SUPPLY (i.e. 100 psig Air Supply (AS-100), etc.)
//——//——//	PNEUMATIC ANALOG SIGNAL
——×——×——×	PNEUMATIC BINARY SIGNAL
— — — — —	ELECTRICAL ANALOG (OR UNDEFINED) SIGNAL
— ·— ·— ·—	ELECTRICAL BINARY SIGNAL
——×——×——×	CAPILLARY TUBE
——L——L——L	HYDRAULIC SIGNAL
——o——o——o	INTERNAL SYSTEM LINK (i.e. Software, Data Communication Link, etc.)
— — — —	VENDOR SUPPLIED

GENERAL HATCH PATTERN SYMBOLS

	DEMOLITION
	RELOCATION
	EQUIPMENT CLEARANCE

EQUIPMENT ABBREVIATIONS

AGT	AGITATOR		HEX	HEAT EXCHANGER
AHU	AIR HANDLING UNIT		HMI	HUMAN-MACHINE INTERFACE
AOB	AIR OPERATION BOX		INJ	INJECTOR
ARV	AIR RELEASE VALVE		IPP	INSTRUMENT POWER PANEL
BLR	BOILER		LBL	LABELER
BLW	BLOWER (C/W HEPA FILTER)		MCC	MOTOR CONTROL CENTER
BTS	BOTTLE STOS		MIX	MIXER
CAD	COMPRESSED AIR DRYER		OZG	OZONE GENERATOR
CAU	CHEMICAL ANALYSIS UNIT		OZM	OZONE MONITOR
CDU	CATALYTIC DESTRUCT UNIT		PAL	PALLETIZER
CFU	CHEMICAL FEED UNIT		PDP	POWER DISTRIBUTION PANEL
CH	CHILLER		PHT	PROPANE HEATER
CIP	C.I.P. SKID		PKR	PACKER
CMP	COMPRESSOR		PMP	PUMP
CT	COOLING TOWER		SB	SPRAY BALL
DBG	DEBAGGER		SFT	SOFTENER
DEA	DE-AERATOR		SG	SIGHT GLASS
DPL	DEPALLETIZER		SM	STATIC MIXER
DRM	DRUM		STK	VENT STACK
ECP	ELECTRICAL CONTROL PANEL		STR	STRAINER
FDP	FLOW DISTRIBUTION PANEL		STW	STRETCH WRAPPER
FG	FLOW GLASS (GAUGE)		SVP	SOLENOID VALVE PANEL
FLI	FILL LEVEL INSPECTION		SWG	SWITCHGEAR
FLR	FILLER		TCF	TRAY-CASE FORMER
FLT	FILTER		TNK	TANK
FM	FLOW METER		UNS	UNSCRAMBLER (SORTER)
GR	GENERAL REFERENCE		UVL	ULTRAVIOLET LIGHT UNIT
HCT	HOSE CABINET		VP	VAPORIZER

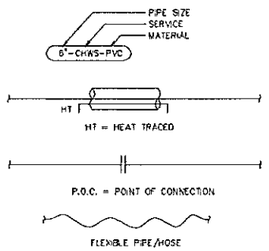
PIPE LINE SERVICE DESIGNATORS

ACID	ACID	LUBH	LUBE (HIGH CONCENTRATION)
AIR	COMPRESSED AIR	LUBL	LUBE (LOW CONCENTRATION)
AMEV	AMMONIA EVACUATION	MFW	MEMBRANE FILTERED WATER
BF	BOILER FEEDWATER	MUW	MAKE-UP WATER
BD	BOILER BLOWDOWN	NaCl	BRINE
CA	COMPRESSED AIR	NEUT	NEUTRALIZATION SOLUTIONS
CAUS	CAUSTIC	NIT	NITROGEN
CFU	CHEMICAL FEED UNIT	OF	OVERFLOW
CHL	CHLORINE	O2	OXYGEN
CHWR	CHILLED WATER RETURN	O3	OZONE
CHWS	CHILLED WATER SUPPLY	PW	PROCESS WASTE
CIPJ	C.I.P. JUMPER	PCWS	PROCESS COOLING WATER SUPPLY
CIPR	C.I.P. RETURN	PCWR	PROCESS COOLING WATER RETURN
CIPS	C.I.P. SUPPLY	ROW	R.O. WATER
CO2	CARBON DIOXIDE	SAN	SANITATION
COND	CONDENSATE RETURN	SCO2	STERILE CARBON DIOXIDE
COP	CLEANED OUT OF PLACE	SFW	SPRING WATER
CW	COOLING WATER	SSTM	STERILE STEAM
CWS	CITY WATER SUPPLY	STM	STEAM
DCW	DOMESTIC COLD WATER	STMV	STEAM VENT
DR	DRAIN	TWR	TOWER WATER RETURN
DW	DISTILLED WATER	TWS	TOWER WATER SUPPLY
GLYR	GLYCOL RETURN	USW	UTILITY SOFT WATER
GLYS	GLYCOL SUPPLY	UW	UTILITY WATER
HPCA	HIGH PRESSURE COMPRESSED AIR (600 PSIG)	VAC	VACUUM
HWR	HOT WATER RETURN	VT	VENT
HWS	HOT WATER SUPPLY	WW	WASTEWATER
KMNO4	POTASSIUM PERMANGANATE		
LPCA	LOW PRESSURE COMPRESSED AIR (120 PSIG OR LESS)		

PIPE MATERIAL

ABS	ACRYLONITRILE-BUTADIENE-STYRENE
CI	CAST IRON
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS40	CARBON STEEL SCH 40
CS80	CARBON STEEL SCH 80
CU	COPPER
DI	DUCTILE IRON
HDPE	HIGH DENSITY POLYETHYLENE
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE
RC	REINFORCED CONCRETE
SS10	STAINLESS STEEL SCH 10S
SST	STAINLESS STEEL TUBING
VC	VITRIFIED CLAY
WRH	WIRE REINFORCED HOSE

PIPE LINE DESIGNATORS



VALVE TAG SYMBOL

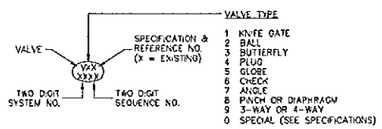
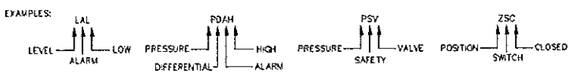


TABLE 1 – IDENTIFICATION LETTERS

DEFINITION OF THE INDIVIDUAL LETTER DESIGNATORS AS FUNCTIONAL IDENTIFIERS

	FIRST – LETTER		SUCCEEDING – LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION				
C	CONDUCTIVITY			CONTROL	
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G			GLASS, VIEWING DEVICE		
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M		MOMENTARY			MIDDLE, INTERMEDIATE
N					
O			ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR,	

EXAMPLES:



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WOODARD & CURRAN
41 Hutchins Drive | Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

DRAWN: GJW | DESIGN: FPM | CONTROL No.: 225408

SHIPYARD
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-01-12 | DWN: P. HENDRY | SCALE: N/A

WASTEWATER
LEGEND
GENERAL REFERENCE DRAWING

SIZE: D | SHEET NO.: SBC-GR-02 | REV. NO.: B

GENERAL EQUIPMENT SYMBOLS

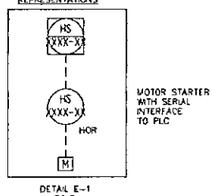
SYMBOL	GENERAL EQUIPMENT DESCRIPTIONS
	CENTRIFUGAL PUMP
	LOBE-STYLE POSITIVE DISPLACEMENT PUMP W/BEVEL SEAT-STYLE CONNECTIONS
	"GEAR W/I GEAR" POSITIVE DISPLACEMENT PUMP W/90° FLANGED INLRT/OUTLET CONFIGURATION
	SNE-STYLE POSITIVE DISPLACEMENT PUMP W/90° FLANGED INLET/OUTLET CONFIGURATION
	AIR ACTUATED DIAPHRAGM PUMP W/90° FLANGED INLET/OUTLET CONFIGURATION
	VACCUUM PUMP
	PERISTALIC PUMP
	CHEMICAL INJECTION PUMP
	ELECTRIC METERING PUMP
	FILTER
	METERING PUMP
	BAG FILTER
M	SUBVERSIBLE PUMP
	DIAPHRAGM PUMP
	PLATE AND FRAME HEAT EXCHANGER
M	MAGNETIC FLOW METER
	TURBINE FLOW METER
	VORTEX-SHEDDING FLOW METER
D	DISC FLOW METER
	ROTATING PISTON-STYLE POSITIVE DISPLACEMENT FLOW METER
TU	TURBINEMETER
	HOSE STATION
	EYE WASH STATION/SHOWER
	VERTICAL MIXER
	CORIOLIS MASS METER

GENERAL VALVE SYMBOLS

SYMBOL	DESCRIPTION
	GATE(N.C.) VALVE
	GATE VALVE
	BALL VALVE
	NEEDLE VALVE
	BUTTERFLY VALVE
	EXPANSION VALVE
	STRAIGHT-STYLE VALVE
	PINCH VALVE
	ANGLE-STYLE GLOBE
	PRESSURE RELIEF
	REDUCER
	AIR RELIEF
	AUTO BALL W/HORIZONTAL ACTUATOR
	AUTO BUTTERFLY W/HORIZONTAL ACTUATOR
	AUTO BUTTERFLY W/HORIZONTAL ACTUATOR
	THREE-WAY AUTO GLOBE
	THROTTLING CONTROL
S	TWO-WAY SOLENOID VALVE
S XX	THREE-WAY SOLENOID VALVE (i.e. XX = FO (Fail Open) or FC (Fail Close))
	PRESSURE REGULATING
	PRESSURE REGULATING W/GAUGE
	PRESSURE REGULATING W/ELECTRIC SHUTOFF
	CLA-VAL STYLE REGULATING
	CALABRATED BALANCING VALVE
	AIR FILTER REGUALTOR LUBRICATOR
	CHECK
	SPRING CHECK
	BACKFLOW PREVENTER
	BACKFLOW PREVENTER W/VENT
T	TRAP

SYMBOL	DESCRIPTION
	PLUG COCK/GAS STOP
	PRESSURE REDUCING VALVE
	ANGLE VALVE
	TRIPLE DUTY VALVE
	TRIPLE DUTY VALVE (ANGLE)
	CONTROL VALVE, PNEUMATIC
	CONTROL VALVE, PNEUMATIC, 3 WAY
	CONTROL VALVE, ELECTRIC
	CONTROL VALVE, ELECTRIC, 3 WAY
	COMPRESSED AIR CONNECTION
	TEMP AND PRESS RELIEF
	STOP COCK
	PLUG VALVE
	GLOBE VALVE
	DIAPHRAGM VALVE
M	MOTOR OPERATED VALVE
	THREE WAY VALVE
	AUTOMATIC ACTUATOR
PT	PRESSURE AND TEMPERATURE TEST PLUG (PETES PLUG)
PI 0101	PRESSURE GAUGE W/DIAPHRAGM
TI	TEMPERATURE INDICATOR
TW	THERMOMETER WELL
PI	PRESSURE GAUGE WITH GAUGE COCK & SNUBBER
	VACUUM BREAKER
	AIR VENT, AUTOMATIC
	AIR VENT, MANUAL
	SLIDE GATE
	STOP GATE
PDT 001	DIFFERENTIAL PRESSURE TRANSMITTER
LS 001	LEVEL SWITCH

TYPICAL MOTOR CONTROL P&ID REPRESENTATIONS



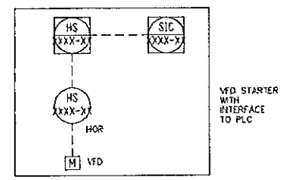
MOTOR STARTER WITH SERIAL INTERFACE TO PLC

DETAIL E-1
P&ID
REPRESENTATION

PIPING & MISCELLANEOUS SYMBOLS

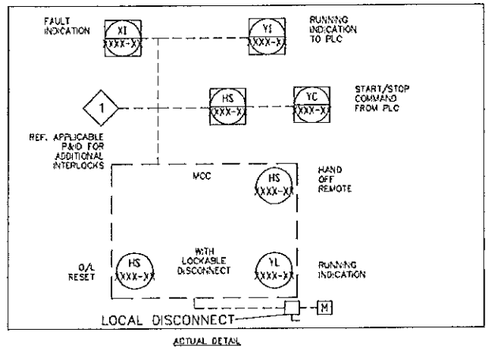
SYMBOL	DESCRIPTION
	FLANGE-STYLE CONNECTION
	UNION-STYLE CONNECTION
	END CAP
	END CAP (OPTIONAL)
	ORIFICE PLATE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	"Y"-STYLE INLINE STRAINER
	"Y"-STYLE INLINE STRAINER W/BLOWOFF
	STRAINER, "BUCKET" TYPE
	SUCTION DIFFUSER
Y XX	DRAIN (i.e. XX = HD (Hub Drain) or FD (Floor Drain))
CO	CLEANOUT PLUG
CO	CLEANOUT, FLOOR
	UNION
	FLEXIBLE PIPE COUPLING
	WATER HAMMER ARRESTOR
	RISER DOWN (ELBOW)
	RISER UP (ELBOW)
	RISE OR DROP
	TEE DOWN
	TEE UP
	TOP CONNECTION
	BOTTOM CONNECTION
	SIDE CONNECTION
	REMOVE EXIST TO THIS POINT
	TIE-IN TO EXIST AT THIS POINT
HB	HOSE BIBB
WH	WALL HYDRANT
YH	YARD HYDRANT
	FLOW IN DIRECTION OF ARROW
	PIPE SLOPE IN DIRECTION OF ARROW

SYMBOL	DESCRIPTION
	QUICK DISCONNECT
	HOSE CONNECTION
	BLIND FLANGE
M	MOTOR
	UNDEFINED INTERLOCK LOGIC (SEE SPECIFICATIONS FOR DESCRIPTION)
	FLOAT SWITCH
	IN-LINE STATIC MIXER
VFD	VARIABLE FREQUENCY DEVICE
120 V SP	POWER SUPPLY (VOLTAGE, PHASE)
	SPEC CHANGE
FS	FLOW SWITCH
	EXPANSION JOINT
	FLANGE TO GROOVE ADAPTER

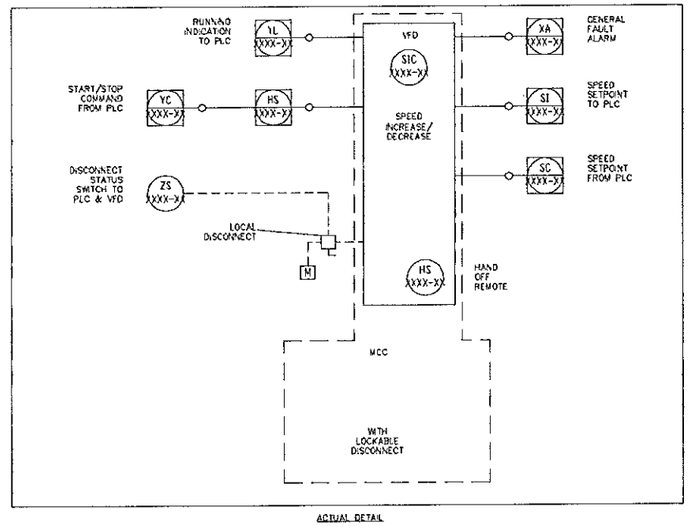


VFD STARTER WITH INTERFACE TO PLC

DETAIL E-2
P&ID
REPRESENTATION



ACTUAL DETAIL



ACTUAL DETAIL

REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
A	ISSUE FOR BID (REVIEW)	GJW	03-05-12

WOODARD & CURRAN
41 Hutchins Drive | Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

DRAWN GJW | DESIGN FIRM CONTROL NO.1

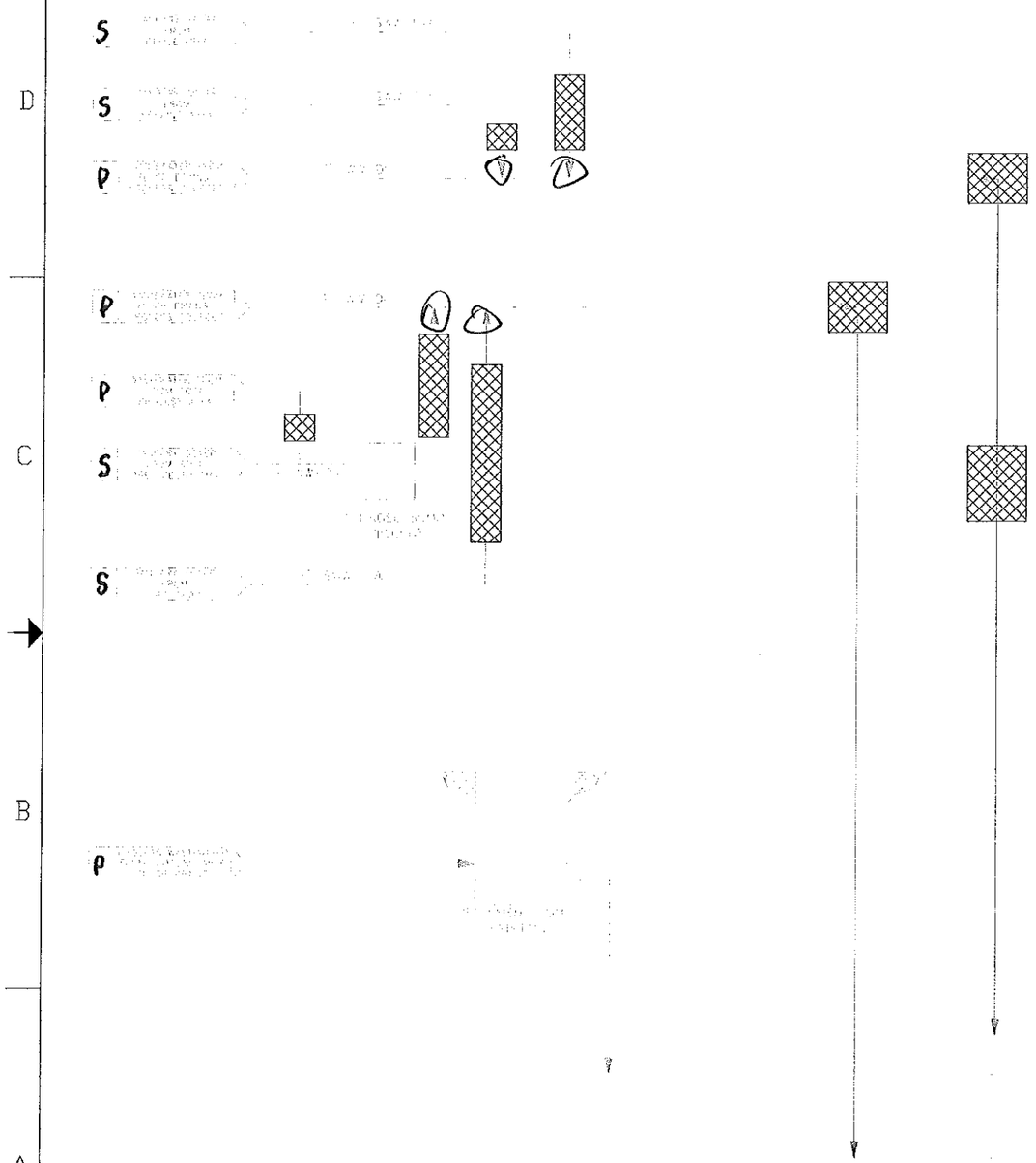
SHIPYARD
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE 02-01-12 | DWN. P. HENDRY | SCALE N/A

WASTEWATER
SYMBOLS
GENERAL REFERENCE DRAWING

SIZE D | SHEET NO.: SBC-GR-03 | REV. NO. B



OBJECTIVES:
1. SEPARATE SANITARY SEWER FROM PROCESS SEWER.
2. PROVIDE PROCESS SEWER CONSOLIDATION, EQULAIZATION, AND CENTRAL MONITORING.

REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
A	ISSUE FOR BID (REVIEW)	GJW	03-05-12

WOODARD & CURRAN

DRAWN: GJW | DESIGN REV | CONTROL NO.: 225408

SHIPYARD

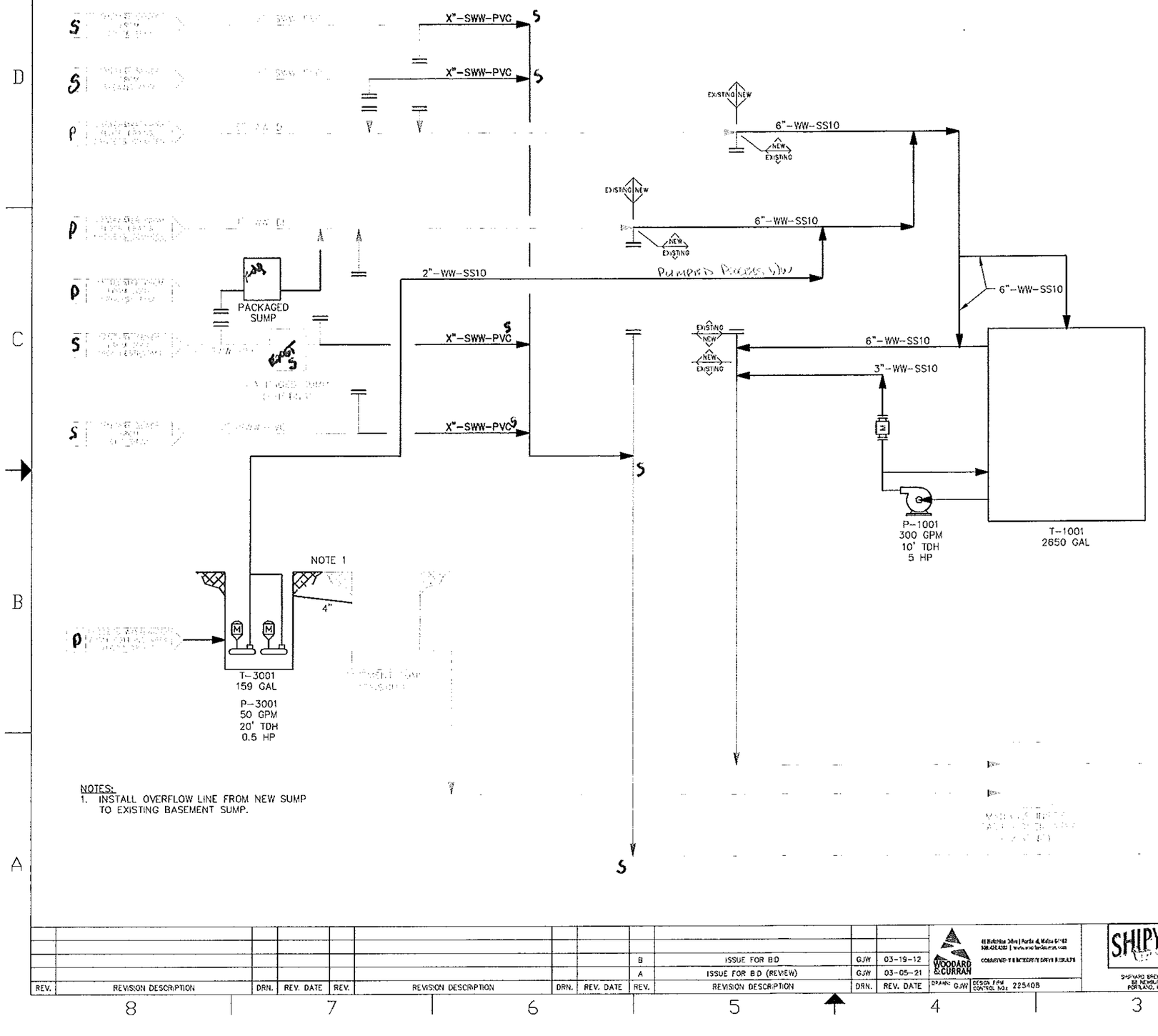
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 01-30-12 | DWN: P. HENDRY | SCALE: N/A

WASTEWATER
WW EQUALIZATION SYSTEM – DEMO
BLOCK FLOW DIAGRAM

SIZE: D | SHEET NO.: SBC-WF-01-D | REV. NO.: B



NOTES:
1. INSTALL OVERFLOW LINE FROM NEW SUMP TO EXISTING BASEMENT SUMP.

REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
A	ISSUE FOR BID (REVIEW)	GJW	03-05-21

WOODARD & CURRAN
DRAWN GJW
DESIGN / CHK'D
CONTROL NO.: 225408

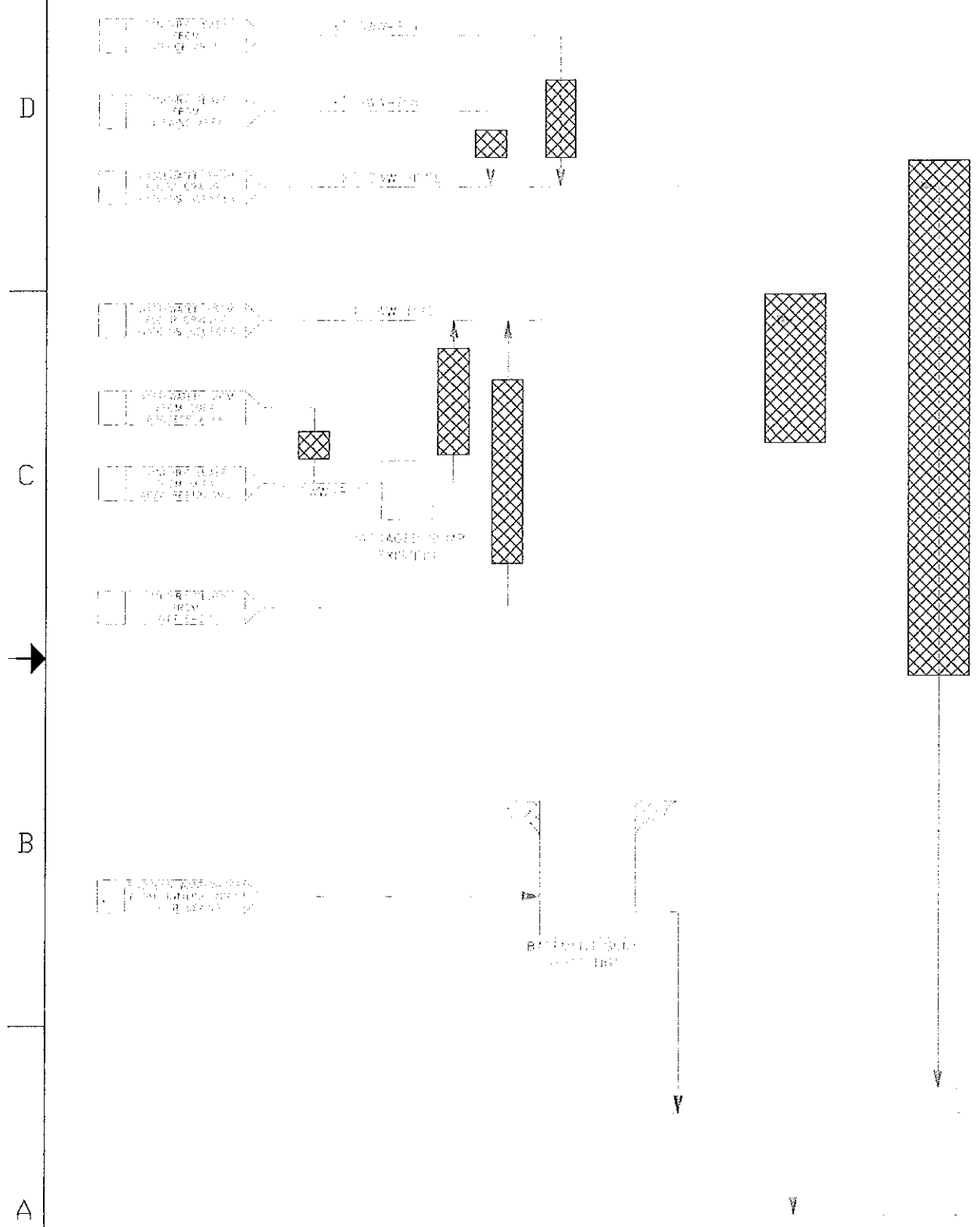
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE 01-30-12 | DWG. P. HENDRY | SCALE N/A

WASTEWATER
WW EQUALIZATION SYSTEM
BLOCK FLOW DIAGRAM

SIZE D | SHEET NO.: SBC-WF-01 | REV. NO. B



REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
A	ISSUE FOR BID (REVIEW)	GJW	03-05-12

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COMMITMENT & INTEGRITY DRIVE RESULTS

DRAWN: GJW | DESIGN FIRM CONTROL NO.: 22540B

SHIPYARD
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 01-30-12 | DWG: P. HENDRY | SCALE: N/A

WASTEWATER
WW EQUALIZATION SYSTEM - DEMO
PIPE AND INSTRUMENTATION DIAGRAM

SIZE: D | SHEET NO.: SBC-WP-01-D | REV. NO.: B

X"-SWW-PVC

X"-SWW-PVC

EXISTING NEW

6"-WW-SS10

NEW EXISTING

NOTE 1

EXISTING NEW

6"-WW-SS10

NOTE 3

NEW EXISTING

NOTE 1

2"-WW-SS10

PACKAGED SUMP

X"-SWW-PVC

NOTE 1

X"-SWW-PVC

NEW EXISTING

V41 1001

POSITION

ZS 1001

V41 1002

LEVEL

LSHH 1001

LSH 1001

6"

24"

6"

2"

6"

1"X3"

V21 1021

FLOW

FIT-1001 NOTE 2

POSITION

V41 1012

POSITION

E-1001

A 1001

V41 1011

4"X3"

3"

6"

LT 1001

LEVEL

2"

LSL 1001

LEVEL

2"

3"

V21 1101

V21 1103

V81 1102

V81 1104

LEVEL

LEVEL

LEVEL

NEW EXISTING

HLS 1101

LHC 1101

LLC 1101

M

M

4"

T-3001
159 GAL

P-3001/2
50 GPM
20' TDH
0.5 HP

T-1001
2650 GAL

P-1001
300 GPM
10' TDH
5 HP

NOTE:
1. CONTRACTOR SHALL INSTALL BLIND FLANGE AT PIPE BREAK.
2. INSTALL MAGNETIC FLOW METER 5 PIPE DIAMETERS BEFORE AND 3 PIPE DIAMETERS AFTER OF STRAIGHT PIPE FOR A SINGLE AXIS CHANGE. A TWO AXIS CHANGE HAS TWICE THE REQUIREMENTS.
3. CONNECT SUMP PIPING TO THE TOP OF PROCESS SEWER PIPING TO PREVENT BACKFILLING OF THE SUMP PIPING.

REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE
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DRAWN: GJW | DESIGN: FRW | CONTROL NO.: 225408

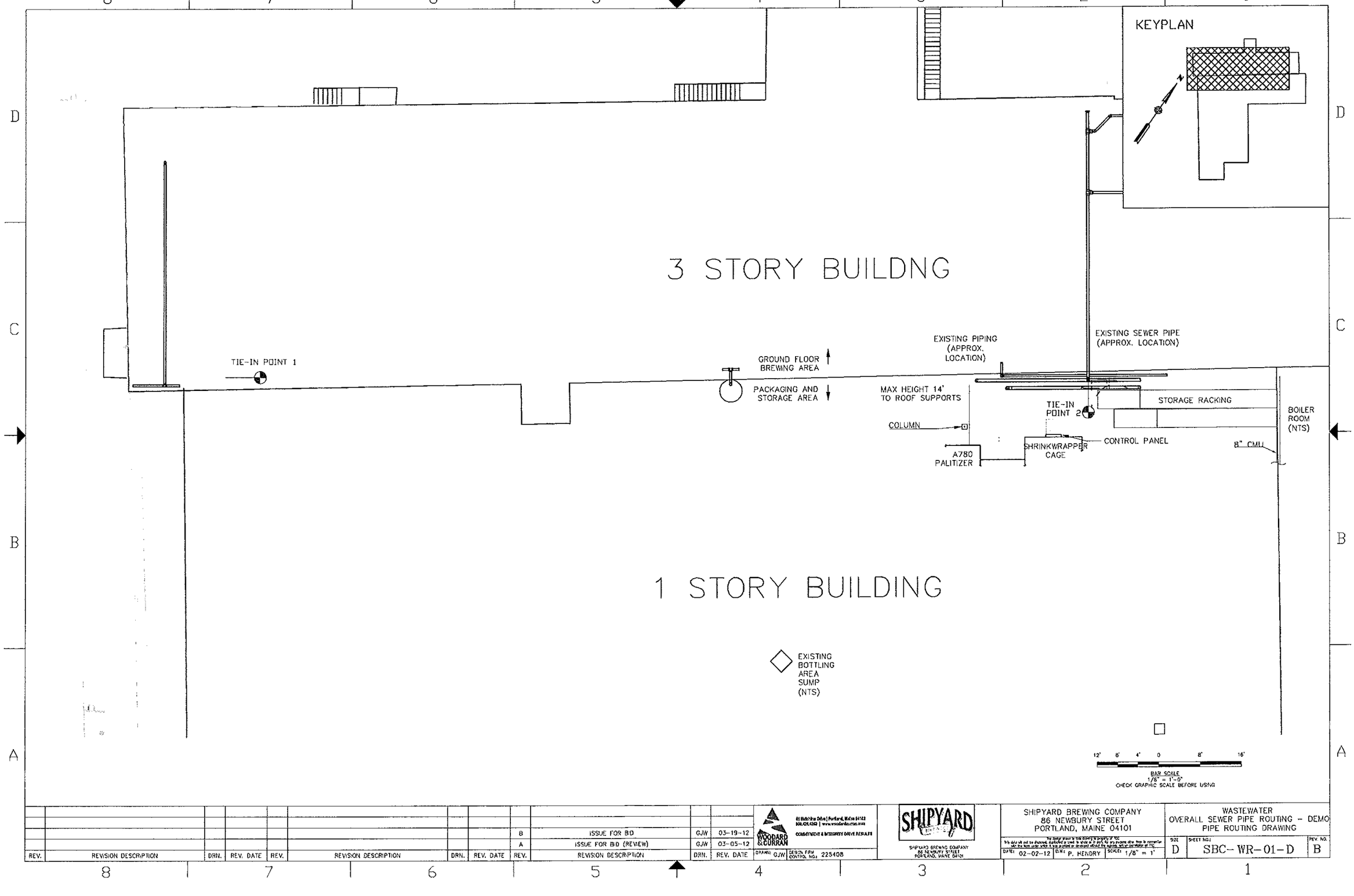
SHIPYARD
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 01-30-12 | D.W.G. P. HENDRY | SCALE: N/A

WASTEWATER
WW EQUALIZATION SYSTEM
PIPE & INSTRUMENTATION DIAGRAM

SIZE: D | SHEET NO.: SBC-WP-01 | REV. NO.: B



REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE
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DRAWN: GJW | DESIGN FIRM CONTROL No.: 225408

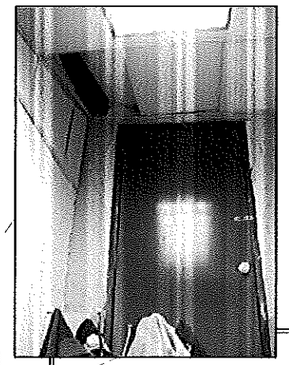
SHIPYARD BREWING COMPANY, 86 NEWBURY STREET, PORTLAND, MAINE 04101

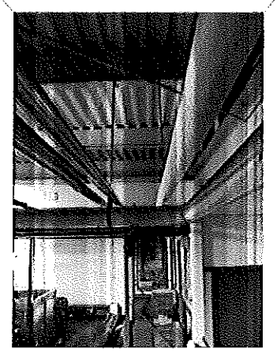
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

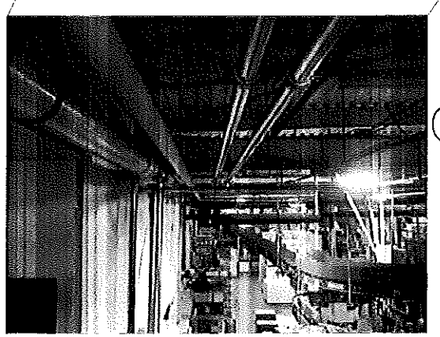
DATE: 02-02-12 | D.M.E. P. HENDRY | SCALE: 1/8" = 1'

SIZE: D | SHEET NO.: SBC-WR-01-D | REV. NO.: B

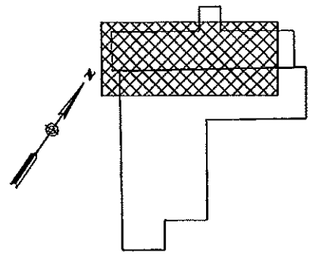
WASTEWATER
OVERALL SEWER PIPE ROUTING - DEMO
PIPE ROUTING DRAWING







KEYPLAN



3 STORY BUILDING

TIE-IN POINT

GROUND FLOOR BREWING AREA

PACKAGING AND STORAGE AREA

EXISTING PIPING (APPROX. LOCATION)

TIE-IN POINT 2

EXISTING SEWER PIPE (APPROX. LOCATION)

MAX HEIGHT 14' TO ROOF SUPPORTS

COLUMN

STORAGE RACKING

BOILER ROOM (NTS)

A780 PALITIZER

SHRINKWRAPPER CAGE

CONTROL PANEL

8" CMU

EXISTING BOTTLING AREA SUMP (NTS)

12' 8' 4' 0 8' 16'

BAR SCALE
1/8" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
A	ISSUE FOR BID (REVIEW)	GJW	03-05-12

WOODARD & CURRAN
45 Melville Drive | Portland, Maine 04103
207.774.2112 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

DRAWN: GJW | DESIGN PER CONTROL NO.: 225408

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

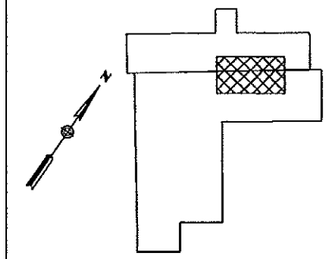
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-02-12 | D.M.E.: P. HENDRY | SCALE: 1/8" = 1'

WASTEWATER
OVERALL SEWER PIPE ROUTING
PIPE ROUTING DRAWING

SIZE: D | SHEET NO.: SBC- WR-01 | REV. NO.: B

KEYPLAN



GROUND FLOOR BREWING AREA

EXISTING PIPING (APPROX. LOCATION)

EXISTING SEWER PIPE 5" PIPE (APPROX. LOCATION)

TIE-IN POINT 2

GROUND FLOOR BREWING AREA

PVC PIPE AGAINST WALL – BOTTOM ELEVATION 2' 2"

PACKAGING AND STORAGE AREA

JACKETED PIPE – BOTTOM ELEVATION 8' 8"

JACKETED PIPE – BOTTOM ELEVATION 10' 3"

LOW-HANGING VALVE – ELEVATION 8' 11"

STORAGE RACKING

8" C

RAISED SECTION OF FLOOR

C

MAX HEIGHT 14' TO ROOF SUPPORTS

CONTROL PANEL

SHRINKWRAPPER CAGE (NTS)

A780 PALITIZER (NTS)

BAR SCALE
1/2" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE
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WOODARD & CURRAN
COMMITMENT & INTEGRITY DRIVE RESULTS
DRAWN: GJW | DESIGN FIRM CONTROL NO.: 225408

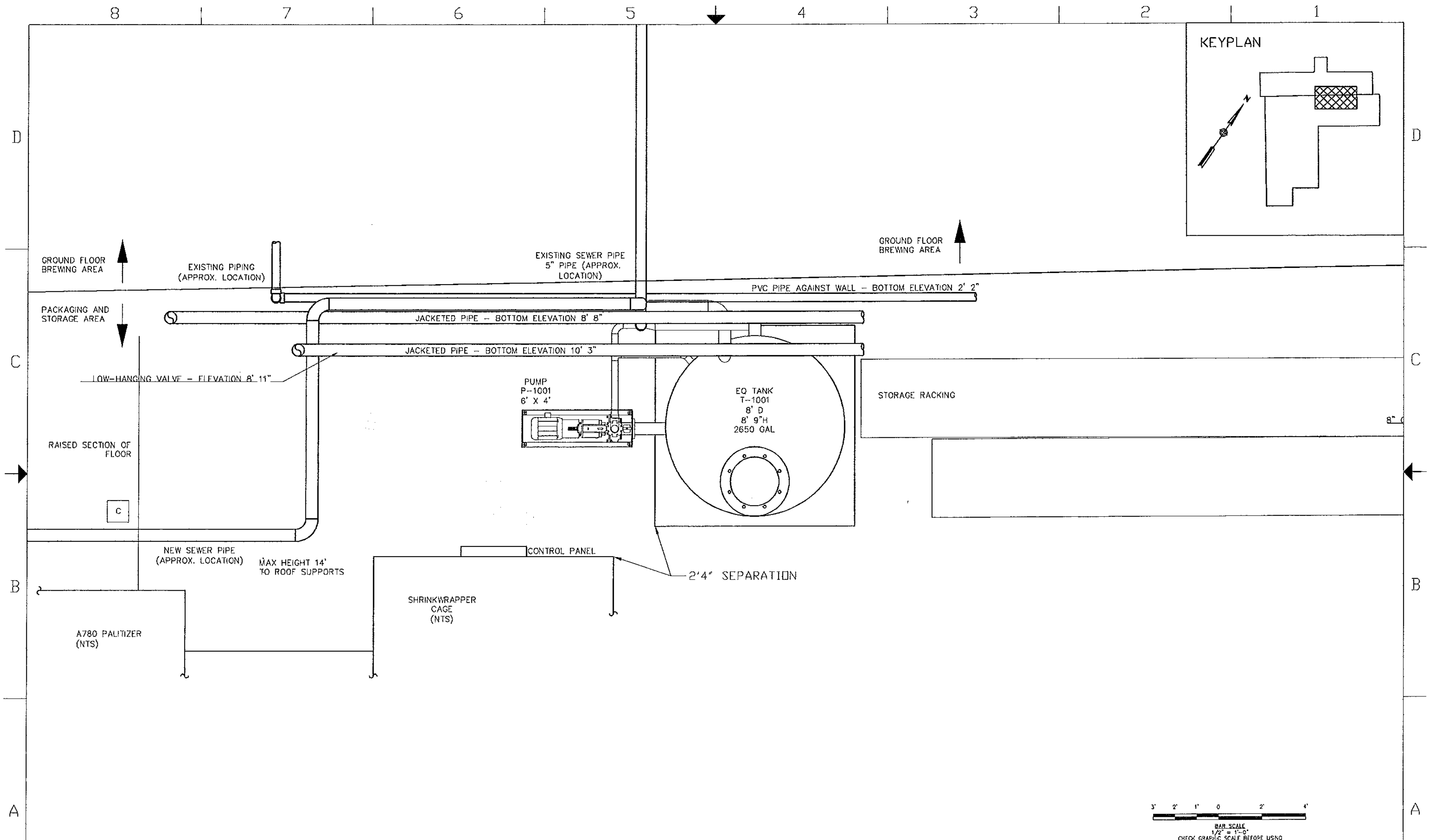
SHIPYARD
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-02-12 | D.W.: P. HENDRY | SCALE: 1/2" = 1'

WASTEWATER
WW EQ SYSTEM PIPE ROUTING – DEMO
PIPE ROUTING DRAWING

SIZE: D | SHEET NO.: SBC-WR-02-D | REV. NO.: B



REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE
								B	ISSUE FOR BID	GJW	03-19-12
								A	ISSUE FOR BID (REVIEW)	GJW	03-05-12

WOODARD & CURRAN — COMMITMENT & INTEGRITY DRIVE RESULTS
DRAWN: GJW | DESIGN FIRM CONTROL NO.: 225408

SHIPYARD — SHIPYARD BREWING COMPANY, 86 NEWBURY STREET, PORTLAND, MAINE 04101

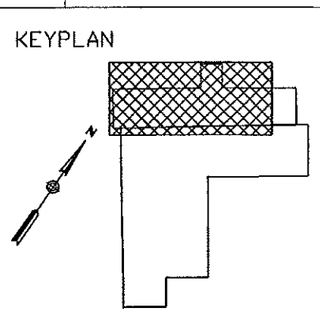
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-02-12 | D.M.: P. HENDRY | SCALE: 1/2" = 1'

WASTEWATER
WW EQ SYSTEM PIPE ROUTING
PIPE ROUTING DRAWING

SIZE: D | SHEET NO.: SBC- WR-02 | REV. NO.: B

KEYPLAN



RETAIL STORE BATHROOMS

TIE-IN POINT A

3 STORY BUILDNG

SODA AREA

TIE-IN POINT B

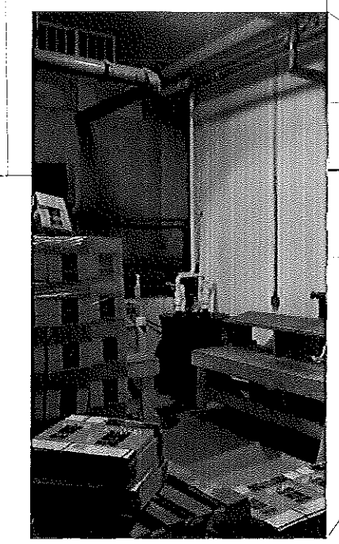
EXISTING SODA AREA SUMP

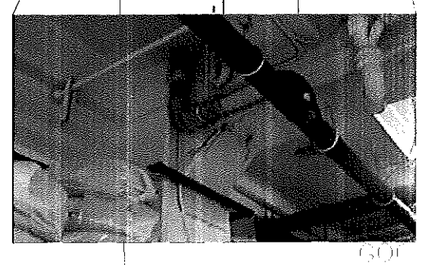
OFFICE AREA BATHROOMS

TIE-IN POINT D

BREWING AREA BATHROOMS

TIE-IN POINT C





DIRECTION OF PATH OF PIPE

BAR SCALE
1/2" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

REV.	REVISION DESCRIPTION	DRN.	REV. DATE
B	ISSUE FOR BID	GJW	03-19-12
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SHIPYARD BREWING COMPANY
86 NEWBURY STREET
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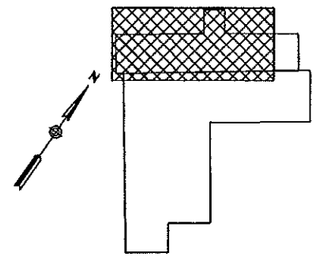
SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-02-12 | DWG: P. HENDRY | SCALE: 1/2" = 1'

WASTEWATER
SANITARY SEWER ROUTING - DEMO
PIPE ROUTING DRAWING

SIZE: D | SHEET NO.: SBC-WR-03-D | REV. NO.: B

KEYPLAN



RETAIL STORE BATHROOMS

SANITARY SEWER

OFFICE AREA BATHROOMS

TIE-IN POINT D

BREWING AREA BATHROOMS

TIE-IN POINT C

3 STORY BUILDNG

SANITARY SEWER

SANITARY SEWER

TIE-IN POINT A

TIE-IN POINT B

EXISTING SODA AREA SUMP

PROCESS SEWER

SANITARY SEWER

PROCESS SEWER

12' 8' 4' 0 8' 16'

BAR SCALE
1/8" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE	REV.	REVISION DESCRIPTION	DRN.	REV. DATE
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DRAWN: GJW | DESIGN FIRM CONTROL NO.: 225408

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

SHIPYARD BREWING COMPANY
86 NEWBURY STREET
PORTLAND, MAINE 04101

DATE: 02-02-12 | DRN.: P. HENDRY | SCALE: 1/2" = 1'

WASTEWATER
SANITARY SEWER ROUTING
PIPE ROUTING DRAWING

SIZE: D | SHEET NO.: SBC-WR-03 | REV. NO.: B

WOODARD &CURRAN

Scope of Work

Process Installation

Issue for Bid

Revision B

Revision History

Shipyard Brewing

Portland Plant
Wastewater Improvement Project

Scope of Work
Mechanical Installation

Revision	Date	Initiated By	Description
A	March 2, 2012	Woodard & Curran	Issued for Bid (Review)
B	March 19, 2012	Woodard & Curran	Issued for Bid

TABLE OF CONTENTS

1. INTRODUCTION

1.1 PROJECT OVERVIEW

The Shipyard Brewing Company located in Portland, Maine is modifying to their wastewater discharge system. Woodard & Curran (W&C) is helping support this effort by providing the engineering design documents, engineering support during the install, and startup support. The contractor will be responsible for delivering a workable system constructed according to the required schedule, through safe practices per the drawings and specifications outlined in this scope of work.

1.2 INTENT OF CONTRACT DOCUMENTS

The work shall be performed and completed according to the contract documents. The contract documents provide the details for completing the Work in accordance with the terms of the Contract. Each Contract document is an integral part of the Contract, and a requirement occurring in one is as binding as though occurring in all. The Contract documents shall be interpreted as being explanatory and complementary in requiring complete work ready for use and occupancy or operation in satisfactory working condition with respect to the functional purposes of the installation.

The terms "Contractor", "The Contractor", "Mechanical Contractor" and "MC" are used interchangeably on all documents and drawings associated with this package and refer to the contractor responsible of this installation.

The Contractor shall do all of the work and furnish all labor, materials, tools, equipment, and appurtenances, except as otherwise herein expressly stipulated, necessary or proper for performing and completing the work herein required, including any Change Order work or disputed work directed by W&C in conformity with the true meaning and intent of the Contract drawings, Specifications, and all provisions of the Contract, within the time specified.

1.2.1 Document Precedence

The component Contract documents are intended to provide explanation for each other. Any work shown on the Drawings and not in the Specifications, or vice versa, is to be executed as if indicated in both. In case of conflict in the Contract, the following order of precedence will govern interpretation of the Contract:

1. Written Field Instructions or other written directives
2. Specifications
3. Lists
4. Scope of Work
5. Piping and Instrumentation Diagrams
6. Layout Drawings
7. Detail Drawings

1.3 REQUESTS FOR INFORMATION

1.3.1 General

The contractor shall work with the Woodard & Curran (W&C) representative to prepare a Request for Information (RFI) when additional information, clarification, or interpretation of the Contract is required. RFI's may also be used for apparent conflicts, inconsistencies, ambiguities, or omissions. RFI information shall be submitted to the W&C representative sufficiently in advance of the work to permit time for investigation and preparation of a response. Any work undertaken prior to the receipt of a response to an RFI will be at the Contractor's risk. RFI's shall not be used for submittals of material or equipment, or for waiving of requirements.

1.3.2 Procedure

The W&C representative will work with the contractor to create RFI's on as needed basis. The intent is to have the sequentially numbered RFI's submitted to the W&C representative during progress meetings. Each RFI shall clearly describe and specifically state what is being requested. A recommendation or proposed solution may be included when appropriate or expedient. The Contractor shall keep and maintain a written log of the RFI's.

2. GENERAL INSTALLATION INSTRUCTIONS

1. The Contractor must comply with OSHA regulations and applicable Shipyard Brewing Company procedures.
2. The Contractor shall provide all materials, labor, equipment and services necessary to completely install all equipment, to produce a complete and 100% operational system.
3. The Contractor shall unload, uncrate, store on site as required, prepare for installation, and otherwise professionally install all required equipment described in this specification to provide a complete installation.
4. The Contractor shall move, lift and install all equipment only as per manufacturers recommended procedures. Only drawings, manuals and procedures sent with the delivery of the equipment should be used for installation purposes.
5. In the absence of vendor documentation for equipment, the Contractor shall use his best experience and know-how in determining the precise details of the installation and obtain direction from the on-site project manager before any fabrication, anchoring or support installation.
6. All elevations are in reference to the finished floor near the new installation; this is considered the benchmark for material installation. The contractor is responsible to insure all installed materials are properly leveled and field-verify all specified elevations.
7. It is the Contractor's responsibility to prime and finish paint all miscellaneous items made of carbon steel to match adjacent surfaces.
8. Contractor shall not climb upon, walk on, or otherwise carelessly damage any equipment. The contractor will repair all damages incurred at no extra cost.
9. All refuse associated with the installation shall be disposed of on a daily basis. Working areas shall be kept "broom clean". The Contractor will be responsible to provide a trash dumpster for all materials, including crating, to be removed in the installation process. It is the Contractor's responsibility to ensure that the dumpster is replaced as soon as it is full.
10. The Contractor must sign in at the beginning of each shift and sign-out at the end of each shift. The Contractor shall also provide a weekly man-hour usage report to the on-site project Manager. Sign-in sheet and location will be provided by the on-site project Manager.
11. It is the Contractor's responsibility to advise the on-site project manager of any/all discrepancies prior to installation.
12. Propane fueled equipment shall not be allowed when rigging any equipment. If the contractor requires the use of propane lifts; they must have a scrubber system to purge any fumes.
13. Equipment Installation shall be considered complete when:

    - Equipment visually checked out for installation completeness.
    - Motors bumped and rotation checked.
    - Confirm that piping is complete.
    - I/O checked.
    - Valves stroked (auto and manual).
    - Equipment piping checked for leaks.
    - Ready to start water testing operation.

- Equipment alignment checked and machines anchored.
- Lubricants with corresponding MSDS shall be provided by the OEM.

14. Staging of equipment and materials will be coordinated with the onsite project Manager.
15. The Contractor will be responsible for coordination of equipment delivery with applicable vendors and/or shipping companies for equipment listed in the mechanical section of the Equipment List with "MC" in the installation column.
16. The Contractor is responsible for cleaning all construction debris from the work area. The Contractor is responsible for cleaning all equipment prior to use the satisfaction of the Owner. All surfaces shall be vacuumed. Vacuum shall have a HEPA filter. All soiled, grease stained, or otherwise contaminated, surfaces shall be scrubbed clean using a detergent approved by the plant's onsite project Manager. After cleaning of contaminated surfaces with detergent and water, all surfaces, even those not cleaned with detergent, shall be wiped down with a cotton wipe
17. The Contractor shall supply and install all stainless steel supports, hangers, solid round support rods, nylok nuts and associated fittings for all piping installed by The Contractor as stated on this scope of work and on the drawings.
18. All welds must be continuous, ground smooth, free of weld splatter or occlusions.
19. All stainless steel components are to be cleaned, bright, free of marks, burrs, scratches, etc.
20. Fastening hardware is to be stainless steel, nonmetallic, or corrosion-resistant.
21. Unistruts and upturned angles are not acceptable.
22. Remove all material protruding from floor. Grind all metal studs and anchors even with floor surface.
23. The Contractor is responsible for all temporary power. 110-120 VAC may be pulled off available breakers in the facility.
24. The Contractor is responsible for obtaining hot work permits and using protective screens prior to any welding.
25. The Contractor is responsible for drilling and sealing all wall/ceiling penetrations. The Contractor shall supply and install sleeves and steel frame openings for all pipes passing through walls/ceilings. The Contractor shall fill the gap between the wall/ceiling and the pipe with appropriate sealant to maintain the wall fire rating. The Contactor shall also supply and install escutcheon plates with an inner diameter to closely fit around the pipe and an outer diameter that completely covers the opening (including the sleeve).
26. The Contractor shall provide all measures for the protection of structure and property. The Contractor shall repair to "as new or better" condition any properties that he damages during the course of the work. For example, non-marking tires must be used on all lifting equipment.
27. The Contractor shall make provisions as required to prevent marking, scratching, etc. of the floor while moving, rigging and locating equipment in the area. The Contractor shall also protect the floor in the work area during any cutting, pipe threading, etc.
28. The contractor shall provide all necessary protection and materials in order to avoid disturbing plant operations and manufacturing activities. For instance, poly walls or visqueen walls when performing work in production areas, etc.

29. The Contractor is responsible for utilizing dimensions to columns and walls as provided in the drawings.
30. The Contractor is responsible for tagging all installed equipment, instrumentation and valving as specified in the Equipment List. Tags shall be phenolic and indelible including equipment description and tag number.
31. The Contractor shall dispose of any and all refuse in the appropriate manner.

3. DEMOLITION

3.1 OVERVIEW

Although demolition of existing equipment does not form an integral part of this project; the contractor is responsible for dismantling all temporary equipment and/or structures required during the installation phase of the project. Additionally, the contractor shall be responsible for coordinating sewer tie ins, as shown on the drawings, to minimize plant downtime.

4. INSTALLATION

4.1 OVERVIEW

All work associated with this project shall be accomplished in accordance with all documents listed below:

1. W&C Contract Documents
2. Scope of Work – Process Modification (this document).
3. Project Schedule
4. Drawings

Including, but not limited to, The Process Construction Specification, drawing illustrations, specifics outlined above, and any local codes and ordinances. The Process Contractor shall be responsible to perform this work.

The installation drawings are intended to represent only the general scope of work. This scope does not address the sequence of specific equipment installation. The Mechanical Contractor will be responsible for providing on-site project manager with a detailed schedule and sequence of equipment installation for completing the project within the milestones established by the Owner.

The Wastewater System Installation shall be done in accordance with the approved manufacturer's shop and/or erection drawings.

Note: All vendor documents submitted as part of this construction package are the most accurate available at this time and are provided as a reference only. Only final vendor drawings and installation procedures delivered with the equipment are to be used for installation. The Contractor is to install all equipment per the vendor's drawings, documentation and installation instructions provided with the equipment. Should any discrepancies between the information provided with this package and provided with the equipment, the Contractor is to notify on-site project manager immediately for resolution before proceeding.

All work required to install the listed equipment and ancillary components are included in this scope of work.

4.2 WASTEWATER EQUALIZATION SYSTEM INSTALLATION INSTRUCTIONS

4.2.1 Isolation of Sanitary Sewer from Process Wastewater

Block Flow Drawing:	WF-01/01D
P&ID Drawing:	WP-01/01D
Equipment Layout Drawing:	N/A
Pipe Routing Drawing	WR-03/01D
Detail Drawing:	N/A

Contractor's responsibility:

- Break and cap connections of existing sanitary sewer lines to process wastewater line.
- Install new dedicated sanitary sewer line from raw material storage area to retail store and tie in existing sanitary sewer lines. The Contractor shall provide all supplies and work to install the new dedicated sanitary sewer line including all associated piping, valves, fittings, and supports, per applicable pluming codes.
- Install new sump system to collect sanitary waste water from the soda area bathrooms and tie into new sanitary sewer line.
- Connect the new sanitary sewer line to discharge to the City through the Hancock Street manhole.
- Isolate process wastewater from discharging to the City through the Hancock Street manhole.

4.2.2 Installation of New Bottling Area Sump

Block Flow Drawing:	WF-01/01D
P&ID Drawing:	WP-01/01D
Equipment Layout Drawing:	N/A
Pipe Routing Drawing:	WR-01/01D
Detail Drawing:	N/A

Contractor's responsibility:

- Cut existing floor and install new sump basin (T-3001).
- Connect the discharge of existing trench drain piping to the new sump basin (T-3001) and install an overflow line from the new sump baisin (T-3001) to the existing sump.
- Install new sump pump (P-3001) and float switches (HLS-1101, LHC-1101, LLC-1101) in the new sump basin (T-3001).
- Install new pipe run connecting the new sump and the equalization tank. The Contractor shall provide all supplies and work to install the connecting piping and valves between new bottling area sump (T-3001) and the wastewater equalization tank (T-1001) including all associated piping, valves (V04-1101,V06-1102), and supports required to make the system operational.

4.2.3 Installation of Process Wastewater Header

Block Flow Drawing:	WF-01/01D

P&ID Drawing:	WP-01/01D
Equipment Layout Drawing:	N/A
Pipe Routing Drawing:	WR-01/01D, WR-02/02D
Detail Drawing:	N/A

Contractor's responsibility:

- Install new process wastewater line from bottling room break area to the location of the wastewater equalization tank area. The Contractor shall provide all supplies and work to install the new process wastewater header including all associated piping, valves, fittings, and supports, per applicable pluming codes.
- Tie the new line into the former Hancock Street wastewater line to send process wastewater to the equalization system, after the sanitary sewer is isolated.
- Tie the new line into the existing wastewater line, in the area of the wastewater equalization system, which discharges to the loading dock manhole.

4.2.4 Equalization Equipment

Block Flow Drawing:	WF-01/01D
P&ID Drawing:	WP-01/01D
Equipment Layout Drawing:	WL-01
Pipe Routing Drawing:	WP-02/02D
Detail Drawing:	WD-01

Contractor's responsibility:

- The Contractor shall provide all supplies and work to install the Wastewater Equalization system, including all associated piping, valves, supports, instrumentation required to make the system operational Installation tasks include, but are not limited to, the following:

4.2.4.1 Tank Installation

- Install Equalization Tank (T-1001) housekeeping pad.
- Set and anchor the Wastewater Equalization Tank (T-1001) on housekeeping pad.
    - Install level instrumentation (LSH/LSHH-1001, LSL-1001, LIT-1001) on Wastewater Equalization Tank as shown on the P&ID
    - Install tank fittings on the Wastewater Equalization Tank (T-1001) as shown on the P&ID (including expansion joints, vent, and caps)

4.2.4.2 Process Equipment Installation

- The Contractor shall provide all supplies and work to install the connecting piping, equipment and valves in the Wastewater Equalization Tank area as shown on the P&ID, including all associated piping, valves, supports, instrumentation required to make the system operational:
    - Install a pump stand for the recirculation and discharge pump (P-1001).

- Install and mount the recirculation and discharge pump (P-1001).
- Install control valves (V04-1012, V04-1011)
- Install pressure indicator (PI-1001) with gauge guard (E-1001)
- Install flow element and flow indicating transmitter (FE/FIT-1001)

4.2.5 Cleaning and Inspection

Cleaning and inspection shall include:

- The Contractor shall provide all supplies, material and work to fully clean the areas of work. These areas shall be left in new condition before contractor demobilization.
- The Contractor shall guarantee the modified areas are free of debris, dirt, splatter or any other material that shall impact the operation of the surrounding equipment.
- The Contractor shall allow time and materials for an inspection that shall be conducted by W&C and Shipyard Brewing Company after the work is complete. The Contractor shall be responsible for completing any punch list items that arise after such inspection.

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End of Scope of Work

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