

# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

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REV # SHEET # SHEET DESCRIPTION

PROCESS AND INSTRUMENTATION DRAWINGS

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AUTHOR OF THE PROJECT:  
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 7905 Browning Road, suite 214  
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**CARGILL**  
 O2004 Project Luxury

OWNER:

**CARGILL**

COCOA & CHOCOLATE, INC.

12500 W. CARMEN AVE.

MILWAUKEE WI 53225



Document Title:  
 Process and Instrumentation Diagram's

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61

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# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

#### Document Numbering Standard

##### DRAWING & DOCUMENT NUMBER INFORMATION - P&ID / PIPING

###### DRAWING SIZE:

A - 8 1/2" x 11"  
 B - 12" x 18"  
 C - 18" x 24"  
 D - 24" x 36"  
 E - 34" x 44"

###### DRAWING / DOCUMENT TYPE:

A - ARCHITECTURAL  
 AU - AUTOMATION  
 BFD - BLOCK FLOW DIAGRAM  
 C - CIVIL  
 CS - SCHEDULES  
 D - DETAILS  
 DR - DRAINS  
 E - ELECTRICAL  
 ED - ELECTRICAL CONTROL WIRING DIAGRAM  
 EE - ELECTRICAL ELEMENTARY CONTROL  
 EG - ELECTRICAL GENERAL  
 EL - ELECTRICAL LEGEND  
 EP - ELECTRICAL PROTECTIVE RELAYING  
 ER - ELECTRICAL ROUTING  
 ES - ELECTRICAL SINGLE LINES  
 EV - ELECTRICAL VENDOR  
 EU - ELECTRICAL UNDERGROUND  
 G - GENERAL  
 H - HEAT TRANSFER EQUIPMENT  
 I - INSTRUMENTATION  
 IM - INSTRUMENT MOUNTING  
 IW - INSTRUMENT WIRING  
 L - MECHANICAL LAYOUT  
 M - MECHANICAL EQUIPMENT  
 P - PIPING  
 PFD - PROCESS FLOW DIAGRAM  
 UFD - UTILITIES FLOW DIAGRAM  
 PP - PLOT PLAN  
 PS - PIPING SUPPORTS  
 PD - PROCESS & INSTRUMENTATION DIAGRAM  
 UD - UTILITIES & INSTRUMENTATION DIAGRAM  
 S - STRUCTURAL  
 SC - STRUCTURAL CONCRETE  
 SP - STRUCTURAL PILING  
 SS - STRUCTURAL STEEL  
 SK - SKETCHES  
 U - UNDERGROUND  
 V - HVAC  
 VS - VESSELS  
 FF - FIRE FIGHTING  
 (SEE NOTE 2)

##### ELECTRONIC FILE STORAGE NAME

XX X-NNNNNN RevN.N(DWG OR APPROPRIATE EXTENSION)  
 (REVISION) (00,01,02,...)  
 (3 DIGIT SEQUENCE NUMBER)  
 (SEE NOTE 1)  
 (1 DIGIT AREA NUMBER)  
 (2 DIGIT DEPARTMENT NUMBER)  
 (PLANT LETTER)  
 (Drawing Type)

##### PHYSICAL DRAWING LABEL

XXX-NNNNNN  
 (3 DIGIT SEQUENCE NUMBER)  
 (SEE NOTE 1)  
 (1 DIGIT AREA NUMBER)  
 (2 DIGIT DEPARTMENT NUMBER)  
 (PLANT LETTER)  
 (Drawing Type)

##### PLANT LETTER :

01 - Milwaukee  
 02 - Georgetown  
 03 - Burlington

##### NOTES:

1. SEQUENCE NUMBER CAN BE ALPH-NUMERIC IF DESIRED
2. AUTOMATION DRAWINGS ARE TYPICALLY BUBBLE DIAGRAMS & NETWORK DRAWINGS.
3. REFER TO PLANT LETTER DRAWINGS FOR PLANT DEPARTMENT AND DEPARTMENT AREA INFORMATION.



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<b>CARGILL</b> O2004 Project Luxury	
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	<b>OWNER:</b> CARGILL COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225



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# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

Plant Letter

PLANT SPECIFIC DEPARTMENT TABLE	
RESERVED	00
BEAN DEPARTMENT	01
LIQUOR DEPARTMENT	02
RAW MATERIALS	03
REFINING	04
TANK FARM	05
MOLDING	06
WAREHOUSE	07
GENERAL	99

GENERAL	
GENERAL	0
ELECTRICAL	1
COOLING WATER	2
BOILER	3
COMPRESSED AIR	4
NATURAL GAS	5
FIRE SUPPRESSION GAS	6

RAW MATERIALS AREA TABLE	
UTILITY	0
SUGAR	1
MILK POWDER	2
DEXTROSE	3
COCOA	4
LIQUOR STORAGE	5
BUTTER STORAGE	6
MILK FAT	7
LECITHIN	8
MICRO-INGREDIENTS	9
MISC/MIXED USE	10

TANK FARM AREA TABLE	
UTILITY	0
DARK CHOCOLATE	1
MILK CHOCOLATE	2
COMPOUND	3
COCOA LIQUOR	4
COCOA BUTTER	5
MILK FAT	6
LECITHIN	7
WHITE COMPOUND	8
C-Blend	9

BEAN DEPARTMENT AREA TABLE	
BEAN DUMPING	-
BEAN CLEANING	-
MICRONIZER	-
WINNOWING	-
ROASTING	-
GRINDING	-

REFINING DEPARTMENT AREA TABLE	
UTILITY	0
LINE 1	1
LINE 2	2
LINE 3	3
LINE 4	4
DRY GRIND	5

MOLDING DEPARTMENT AREA TABLE	
UTILITY	0
BINDLER	1
MIKROVER 1	2
MIKROVER 2	3
D&E	4
KREUTER 1	5
KREUTER 2	6
PASTEL	7
TRAY LINE	8

CPD	
UTILITY	0
LINE X	1
LINE Y	2
LINE Z	3
BREAK-UP LINE	4

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Industrial Projects Services



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Plant letter

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*CARGILL PROJECT LUXURY ( PHASE III)  
MILWAUKEE, WISCONSIN  
P&ID's Project Luxury*

## *Instrumentation Standard*

Instrumentation Standard																															
LETTER	MEASURED VARIABLE	DISPLAY FUNCTION				DISPLAY SCAN FUNCTION		CONTROL FUNCTION				SWITCH FUNCTION						ALARM FUNCTION						OTHER FUNCTION							
		IND	TOT	TRANS.	IND/TRANS.	IND	REC	IND	REC	BLIND	VALVE	SELF ACT	HI-HI	HIGH	LOW-LOW	LOW	HI/LO	SHUT DOWN	HI-HI	HIGH	LOW-LOW	LOW	HI/LO	SHUT DOWN	VISUAL GLASS	TEST CONN	RELAY OR CONVERTER	IND LIGHT	PRIMARY ELEMENT	SAFETY DEVICE	
A	ANALYSIS	AI				AJI	AJR	AIC	ARC	AC	AV		ASHH	ASH	ASLL	ASL	ASHL		AAHH	AAH	AALL	AAL	AAHL			AO	AY	AL	AE		
B	BURNER	BI				BJI				BC								BA						BA			BY	BL	BE		
C	CONDUCTIVITY (ELECTRICAL)	CI		CT	CIT	CJI	CJR	CIC	CRC	CC	CV		CSHH	CSH	CSLL	CSL	CSHL		CAHH	CAH	CALL	CAL	CAHL				CY	CL	CE		
D	DENSITY OR SP GR	DI		DT	DIT	DJI	DJR	DIC	DRC	DC	DV		DSHH	DSH	DSLL	DSL	DSHL		DAHH	DAH	DALL	DAL	DAHL				DY	DL	DE		
E	VOLTAGE	EI				EJI	EJR	EIC	ERC	EC			ESHH	ESH	ESLL	ESL	ESHL		EAHH	EAH	EALL	EAL	EAHL				EY	EL	EE		
F	FLOW RATE	FI	FQI	FT	FIT	FJI	FJR	FIC	FRC	FC	FV	FICV	FSHH	FSH	FSLL	FSL	FSHL		FAHH	FAH	FALL	FAL	FAHL		FG		FY	FL	FE		
FF	FLOW RATIO	FFI				FFJI	FFJR	FFIC	FFRC	FFC			FFSHH	FFSH	FFSLL	FFSL	FFSHL		FFAHH	FFAH	FFALL	FFAL	FFAHL				FFY				
H	HAND							HIC		HC	HV	HCV															HY				
I	CURRENT	II				IJI	IJR	IIC	IRC	IC			ISHH	ISH	ISLL	ISL	ISHL		IAHH	IAH	IALL	IAL	IAHL				IY	IL	IE		
J	POWER	JI				JJI	JJR	JIC	JRC	JC			JSHH	JSH	JSLL	JSL	JSHL		JAHH	JAH	JALL	JAL	J AHL				JY	JL	JE		
K	TIME	KI						KIC		KC					KSLL	KSL					KALL	KAL						KY			
L	LEVEL	LI		LT	LIT	LJI	LJR	LIC	LRC	LC	LV	LCV	LSHH	LSH	LLSLL	LSL	LSHL		LAHH	LAH	LLALL	LAL	LAHL		LG		LY	LL	LE		
M	MOISTURE	MI				MJI	MJR	MIC	MRC	MC	MV		MSHH	MSH	MSLL	MSL	MSHL		MAHH	MAH	MALL	MAL	MAHL				MY	ML			
P	PRESSURE	PI		PT	PIT	PJI	PJR	PIC	PRC	PC	PV	PCV	PSHH	PSH	PSLL	PSL	PSHL		PAHH	PAH	PALL	PAL	PAHL			PO	PY	PL		PSV PSE	
PD	PRESSURE DIFFERENTIAL	PDI				PDJI	PDJR	PDIC	PDRC	PDC	PDV	PDCV	PDSHH	PDSH	PDSLL	PDSL	PDSHL		PDAHH	PDAH	PDALL	PDAL	PDAHL		PG		PDY				
S	SPEED OR FREQUENCY	SI				SJI	SJR	SIC	SRC	SC			ASHH	ASH	ASLL	ASL	ASHL		SAHH	SAH	SALL	SAL	SAHL				SY	SL	SE		
T	TEMPERATURE	TI		TT	TIT	TJI	TJR	TIC	TRC	TC	TV	TCV	TSHH	TSH	TSLL	TSL	TSHL		TAHH	TAH	TALL	TAL	TAHL			TW	TY	TL	TE	TSE	
TD	TEMPERATURE DIFFERENTIAL	TDI				TDJI	TDJR	TDIC	TDRC	TDC	TDC	TDC	TDSHH	TDSH	TDSLL	TDSL	TDSHL		TDAHH	TDAH	TDALL	TDAL	TDAHL				TDY				
U	MULTIVARIABLE	UI				UJI	UJR	UIC	URC	UC	UV		USHH	USH	USLL	USL	USHL		UAHH	UAH	UALL	UAL	UAHL				UY	UL	UE		
V	VIBRATION	VI				VJI	VJR	VIC	VRC	VC	VV		VSHH	VSH	VSLL	VSL	VSHL		VAHH	VAH	VALL	VAL	VAHL				VY	VL	VE		
W	WEIGHT	WI	WQ			WJI	WJR	WIC	WRC	WC	WV		WSHH	WSH	WSLL	WSL	WSHL		WAHH	WAH	WALL	WAL	WAHL				WY	WL	WE		
X	MOTION	XI											XSHH	XSH	XSSL	XSL	XSHL	XA	XAH	XAH	XALL	XAL	X AHL	XA			XY	XL			
Z	POSITION	ZI				ZJI	ZJR	ZIC	ZRC	ZC			ZSHH	ZSH	ZSLL	ZSL	ZSHL		ZAHH	ZAH	ZALL	ZAL	Z AHL				ZY	ZL		ZS	

# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

Instrumentation Standard

INSTRUMENTATION DEVICE AND FUNCTION SYMBOLS						
NO.	SHARED DISPLAY, SHARED CONTROL		C	D	LOCATION & ACCESSIBILITY	
	A	B				
	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	PLC	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE		
1						<ul style="list-style-type: none"> <li>LOCATED IN FIELD.</li> <li>NOT PANEL, CABINET, OR CONSOLE MOUNTED.</li> <li>VISIBLE AT FIELD LOCATION.</li> <li>NORMALLY OPERATOR ACCESSIBLE.</li> </ul>
2						<ul style="list-style-type: none"> <li>LOCATED IN OR ON FRONT OR IN REAR OF CENTRAL OR MAIN PANEL OR CONSOLE.</li> <li>LOCATED IN CABINET BEHIND PANEL.</li> <li>VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY.</li> <li>NOT VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY.</li> <li>NORMALLY OPERATOR ACCESSIBLE AT PANEL FRONT OR CONSOLE.</li> <li>NOT NORMALLY OPERATOR ACCESSIBLE AT PANEL FRONT OR CONSOLE.</li> </ul>
3						<ul style="list-style-type: none"> <li>LOCATED IN, IN REAR OR ON FRONT OF SECONDARY OR LOCAL PANEL OR CONSOLE.</li> <li>LOCATED IN FIELD CABINET.</li> <li>VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY.</li> <li>NOT VISIBLE ON FRONT OF PANEL OR ON VIDEO DISPLAY.</li> <li>NORMALLY OPERATOR ACCESSIBLE AT PANEL FRONT OR CONSOLE.</li> <li>NOT NORMALLY OPERATOR ACCESSIBLE AT PANEL FRONT OR CONSOLE.</li> </ul>

INSTRUMENT LOCATION PLAN SYMBOLS	
	INSTRUMENT LOCATION TAG

TYPICAL INSTRUMENT NUMBER P&ID/PIPING	
	ISA INSTRUMENT PREFIX LOOP SEQUENCE NUMBER XXX-NNN

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AUTHOR OF THE PROJECT:  
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7905 Browning Road, suite 214  
Pennsauken NJ, 08109

OWNER:  
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MILWAUKEE WI, 53225



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# CARGILL PROJECT LUXURY (PHASE III)

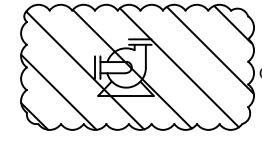
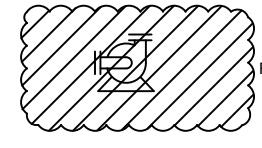
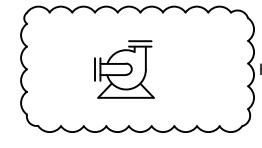
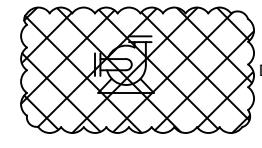
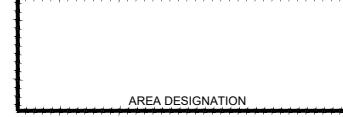
## MILWAUKEE, WISCONSIN

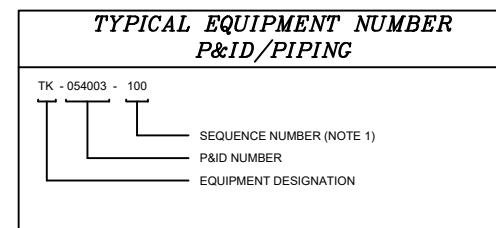
### P&ID's Project Luxury

#### Equipment TAG

EQUIPMENT NUMBERING—P&ID/PIPING	
DESIGNATION:	
AG	- AGITATORS
BG	- BAGGER
BL	- BLOWERS
BO	- BOILER
CB	- COMBUSER, BURNER
CF	- CENTRIFUGE
CL	- COLUMN
CM	- COMPRESSOR
CO	- CONCHE
CV	- CONVEYOR
CY	- CYCLONE
DA	- DAMPER
DC	- DISCHARGES (LIVE, VIBRATING BOTTOMS)
DO	- DOORS (MECHANICAL ACTUATED)
DR	- DRYER
DV	- DIVERTER VALVE
EH	- ELECTRIC HEATER
ES	- EXHAUST STACK
EV	- EXPANSION VESSEL
EW	- EYEWASH
EX	- EXTINGUISHER
FA	- FLAME ARRESTER
FH	- FIRED HEATER
FL	- FILTERS, BAGHOUSE, SCREENS, STRAINERS
FN	- FANS
FU	- FURNACE, T.O., INCINERATOR, AIR HEATERS, CONDENSERS
GN	- GENERATOR (ELECTRICAL)
HE	- EXCHANGERS, EVAP CHEST, COOLERS
HJ	- HEATING/COOLING JACKET
HO	- HOIST
HP	- HYDRAULIC POWER UNIT
IG	- IGNITER
JE	- JET, EJECTOR, JET COOKER
ME	- MISCELLANEOUS EQUIPMENT
MD	- MANUAL DOSING
MG	- MAGNETS
ML	- MILLS (GRINDER, IMPACT, HAMMER, ETC)
MO	- MOTOR
MX	- MIXERS, SPREADERS
PL	- PALLETIZER

EQUIPMENT NUMBERING—P&ID/PIPING	
DESIGNATION:	
PK	- PACKAGING MACHINE
PG	- PIGGING
PDI	- PIG DIVERTER
PR	- PRESS, LAROX, SCROLL
PU	- PUMPS
RE	- REACTORS
RV	- ROTARY VALVE
RR	- ROLL REFINER
SA	- MECHANIZED SAMPLERS
SC	- SCREW CONVEYOR
SE	- SIEVES
SI	- SILO, BIN FOR DRY MATERIAL
ST	- STEAM TRAPS
TK	- ATMOSPHERIC TANK
TP	- PRESSURE VESSEL, EVAPORATOR SEPARATOR
TW	- COOLING TOWER
VN	- VENT, VENT BOX, HOOD
VP	- VACUUM PUMP
VI	- VIBRATING DEVICE
WS	- LOAD CELL, TRUCK SCALE

SPECIAL EQUIPMENT DESIGNATIONS	
	VENDOR SUPPLIED EQUIPMENT PACKAGE
	O.U.S. OUT OF SERVICE (ABANDONED IN PLACE)
	FUTURE PLANNED FUTURE EQUIPMENT TO BE CONSIDERED IN DESIGN
	HOLD REQUIRES ADDITIONAL INFORMATION BEFORE DESIGN CAN BE FINALIZED
	DEMO TO BE DEMOLISHED
	AREA DESIGNATIONS: 1. OSHA PSM AREA 2. EPA RMP AREA 3. OSHA PSM / EPA RMP AREA 4. HHP AREA AREA DESIGNATION



NOTES:  
1. EQUIPMENT NUMBERS START AT 100 FOR EACH TYPE OF EQUIPMENT

Edited by	BFE	2021.02.06
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03	2021.02.06	BFE	Fourth Edition	2021.02.06	KDS	
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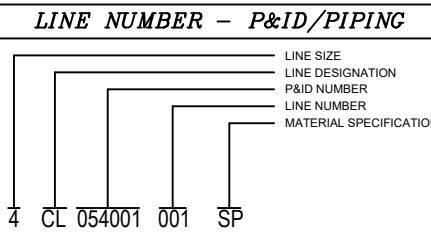
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# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

#### Piping Standard



**TYPICAL MANUAL VALVE AND SPECIAL PIPING DEVICE NUMBERING**

MANUAL VALVES AND SPECIAL PIPING DEVICE DESIGNATORS:

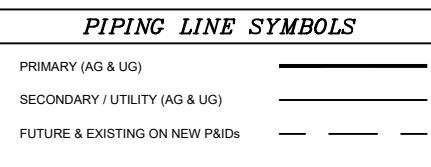
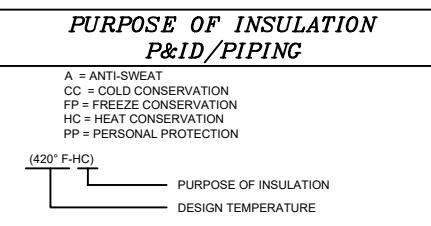
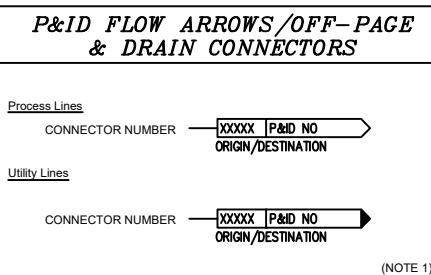
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SEQUENTIAL  
(STARTING AT 200 FOR  
MANUAL VALVES/SPECIAL PIPING DEVICES)  
P&ID NUMBER (NOT SHOWN,  
BUT IMPLIED ON P&ID DRAWINGS)  
MANUAL VALVES AND SPECIAL PIPING  
DEVICE DESIGNATOR (SEE BELOW)

**MATERIAL SPECIFICATION - P&ID/PIPING**

SYMBOL	MATERIAL DESCRIPTION	JOINTS	DESIGN PRESSURE	TEMP.	TYPICAL USES
SP1	SANITARY PIPING SS304 (NOT JACKETED AND PIGGED)	TRI-CLAMP	150 PSI	120° F	LECITHIN
SP2	SANITARY PIPING (JACKETED AND NOT PIGGED)	TRI-CLAMP	150 PSI	160° F	COCOA LIQUOR, COCOA BUTTER, MILK FAT, CHOCOLATE, LECITHIN
SP3	SANITARY PIPING (JACKETED AND PIGGED)	TRI-CLAMP	150 PSI	160° F	CHOCOLATE
SP4	SANITARY PIPING (NOT JACKETED AND NOT PIGGED)	TRI-CLAMP	150 PSI		DEXTROSE, COCOA POWDER, SUGAR, CHOCOLATE
SS1	STAINLESS STEEL PIPING	SW, BW	150 PSI	220° F	HOT WATER, COLD WATER, COMPRESSED AIR
SS2	STAINLESS STEEL TUBING	MORRIS COUPLING	30 PSI		SUGAR, COCOA POWDER, DEXTROSE

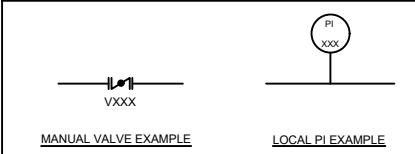
\* USE WITH PERMISSION ONLY (TYPICALLY NOT USED)  
¥ PREVIOUSLY 316 SS DUCT. SEE DP-1 AND DP-2  
§ PREVIOUSLY CEMENT-LINED DUCTILE IRON



VALVES AND SPECIAL PIPING DEVICE DESIGNATORS:

DESIGNATOR	DEVICE	SYMBOL ON P&ID
ACC	ACCUMULATOR	TEXT NEXT TO DEVICE
CHV	CHECK VALVE	TEXT NEXT TO DEVICE
CPL	SERVICE COUPLING	TEXT NEXT TO DEVICE
DAR	DETONATION ARRESTOR	TEXT NEXT TO DEVICE
DV	DIVERTER VALVE	INSTRUMENT BUBBLE
EXP	EXPANSION JOINT	TEXT NEXT TO DEVICE
FA	FLAME ARRESTOR	INSTRUMENT BUBBLE
FI	FLOW INDICATOR	INSTRUMENT BUBBLE
FXH	FLEXIBLE HOSE	TEXT NEXT TO DEVICE
LI	LEVEL GAUGE	INSTRUMENT BUBBLE
V	MANUAL VALVE	INSTRUMENT BUBBLE
PI	PRESSURE GAUGE	INSTRUMENT BUBBLE
PCV	PRESSURE CONTROL VALVE	INSTRUMENT BUBBLE
PSV	PRESSURE RELIEF VALVE	INSTRUMENT BUBBLE
PRV	PRESSURE REGULATING VALVE	TEXT NEXT TO DEVICE
RD	RUPTURE DISC	INSTRUMENT BUBBLE
RV	ROTARY VALVE	INSTRUMENT BUBBLE
FO	RESTRICTION ORIFICE	TEXT NEXT TO DEVICE
FCV	FLOW CONTROL VALVE	INSTRUMENT BUBBLE
SMP	SAMPLE DOOR OR BOX	TEXT NEXT TO DEVICE
SG	SIGHT GLASS	INSTRUMENT BUBBLE
SPL	SPECTACLE BLIND	TEXT NEXT TO DEVICE
SIL	SILENCER	TEXT NEXT TO DEVICE
SPB	SPRAY BALL	TEXT NEXT TO DEVICE
STR	Y TYPE STRAINER	TEXT NEXT TO DEVICE
TI	TEMPERATURE GAUGE	INSTRUMENT BUBBLE
VNT	CONSERVATION VENT	INSTRUMENT BUBBLE
XV	ON/OFF VALVE	INSTRUMENT BUBBLE

**P&ID EXAMPLES**

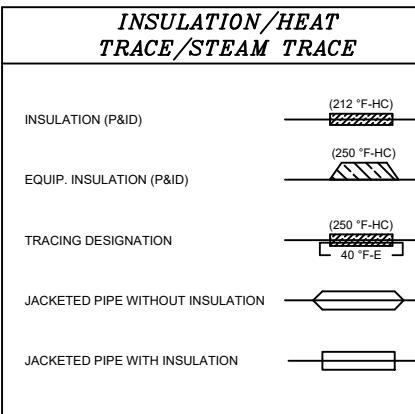


**LINE DESIGNATION - P&ID/PIPING**

SYMBOL	SERVICE
SU	SUGAR
LE	LECITHIN
ECL	EXISTING CHOCOLATE LINE
MI	MILK FAT
CF	COCONUT FAT
FCL	FINE COCOA LIQUOR
CH	CHOCOLATE LINE
CFM	CHOCOLATE FOR MOULDING
CB	COCOA BUTTER
CL	COCOA LIQUOR
CP	COCOA POWDER
CLS	COCOA LIQUOR WITH SUGAR
CA	COMPRESSED AIR
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CWS	COLD WATER SUPPLY
CWR	COLD WATER RETURN
MIC	MICRO-INGREDIENTS
DE	DEXTROSE
BL	C-BLEND
TW	TEMPERED WATER

**NOTES:**

1. FOR ALTERNATE CONNECTORS, REFER TO TABLE 5.3.2 IN ANSI / ISA - 5.1-2009



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O2004 Project Luxury

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Industrial Projects Services USA corp  
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**Group - IPS**  
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OWNER:  
**CARGILL**  
COCOA & CHOCOLATE, INC.  
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Document Title:  
**Piping standard**

Reference IPS :  
06E.C1.10.006

Sheet  
7

Reference CARGILL :  
PD 01-990006

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61

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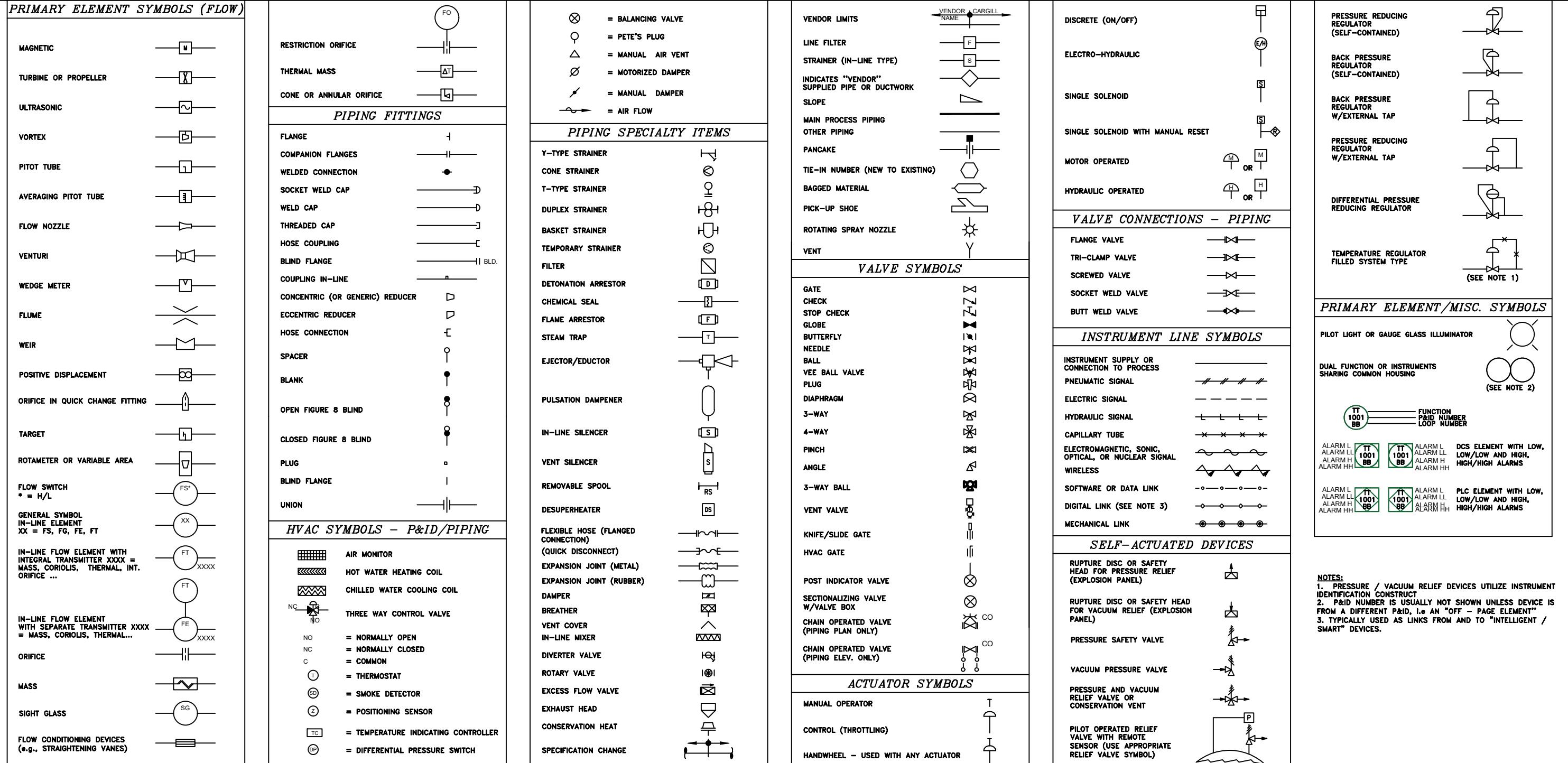
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# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

#### Valves Standards



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File name :	O2004_06E.C1.08_P&ID's_Rev13_2022.05.23

Sheet 8  
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# CARGILL PROJECT LUXURY (PHASE III)

## MILWAUKEE, WISCONSIN

### P&ID's Project Luxury

#### Equipment Standards

DESIGNATION	SYMBOLS	DESIGNATION	SYMBOLS	DESIGNATION	SYMBOLS
JACKETED TANK		NOT-JACKETED TANK		REFINER	
GEAR PUMP		SILO		PIG LAUNCHER	
CENTRIFUGAL PUMP		MIXER		PIG RECEIVER	
MAGNET TRAP		MANUAL DOSING		AIR BLOWER	
CONCHE		PRE-REFINER		VIBRATING DEVICE	
SIEVE				PIG DIVERTER	
					CONVEYORS
				CONVEYOR BELT	
				SCREW CONVEYOR	
				MISCELLANEOUS	
				AGITATOR	

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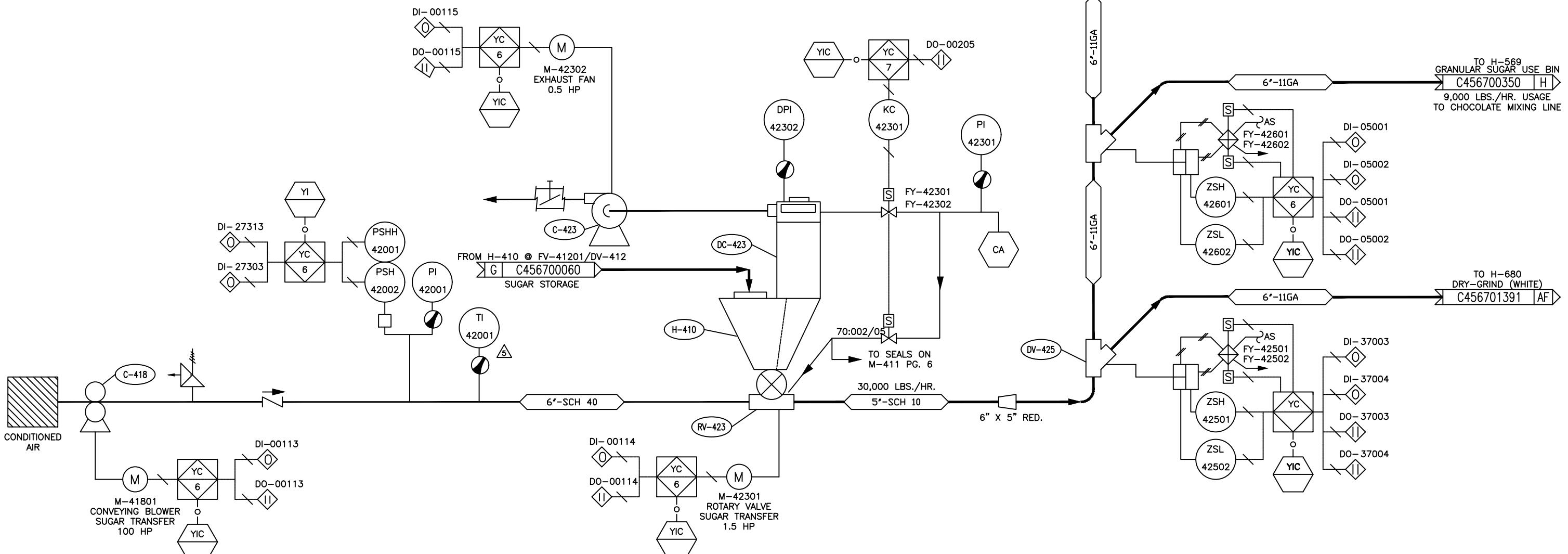
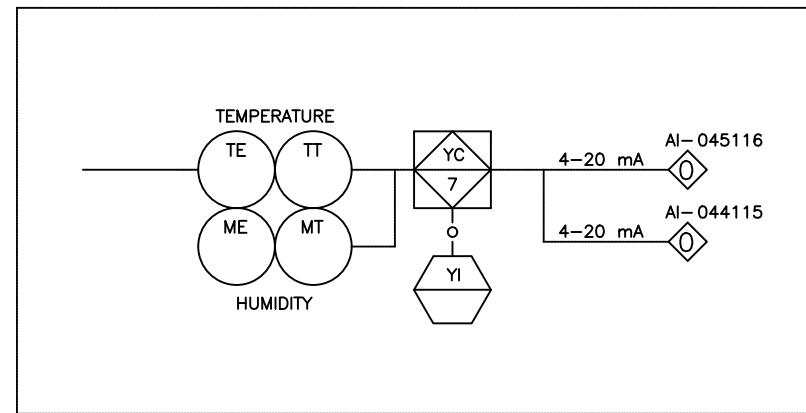
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Equipment symbols

Reference IPS : 06E.C1.10.008 Sheet 9  
Reference CARGILL : PD 01-990008 of 61  
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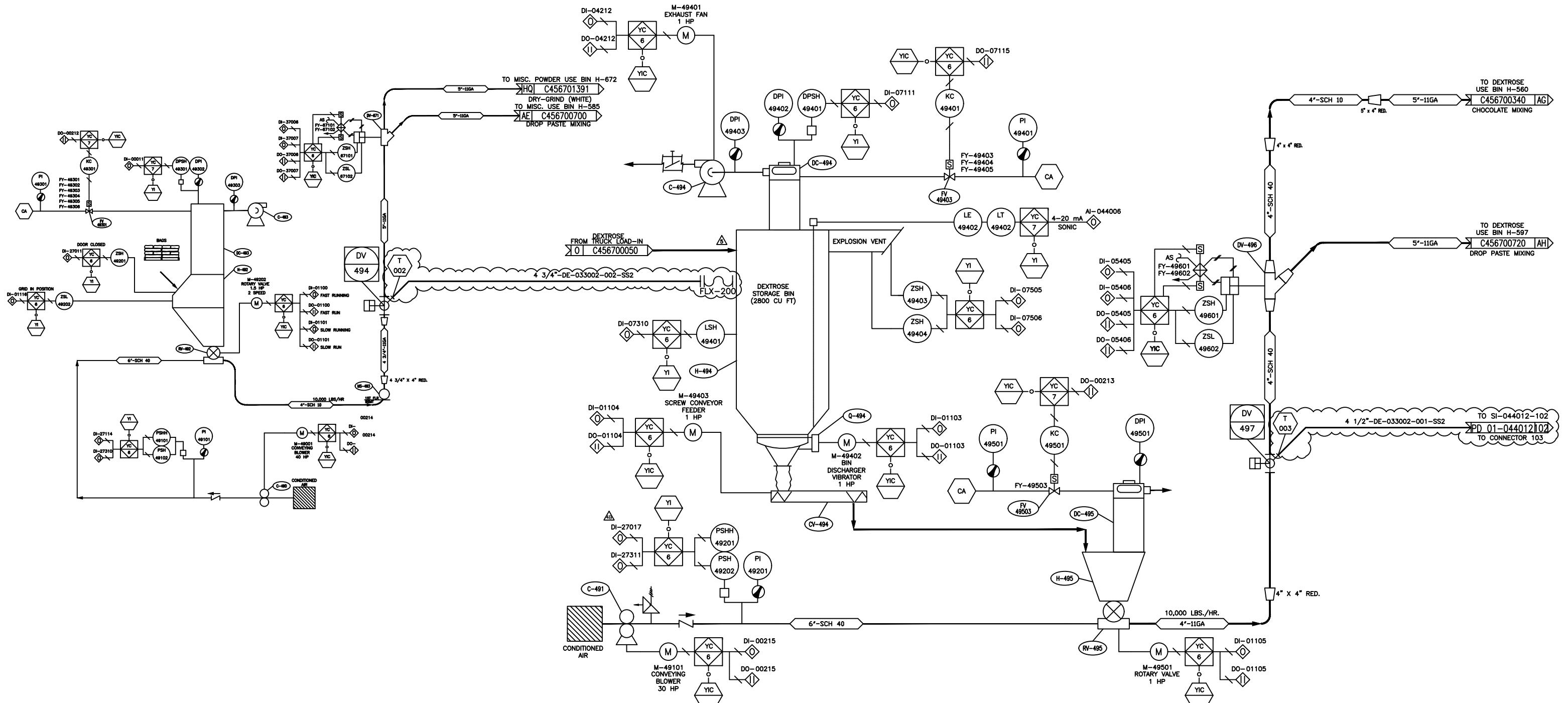
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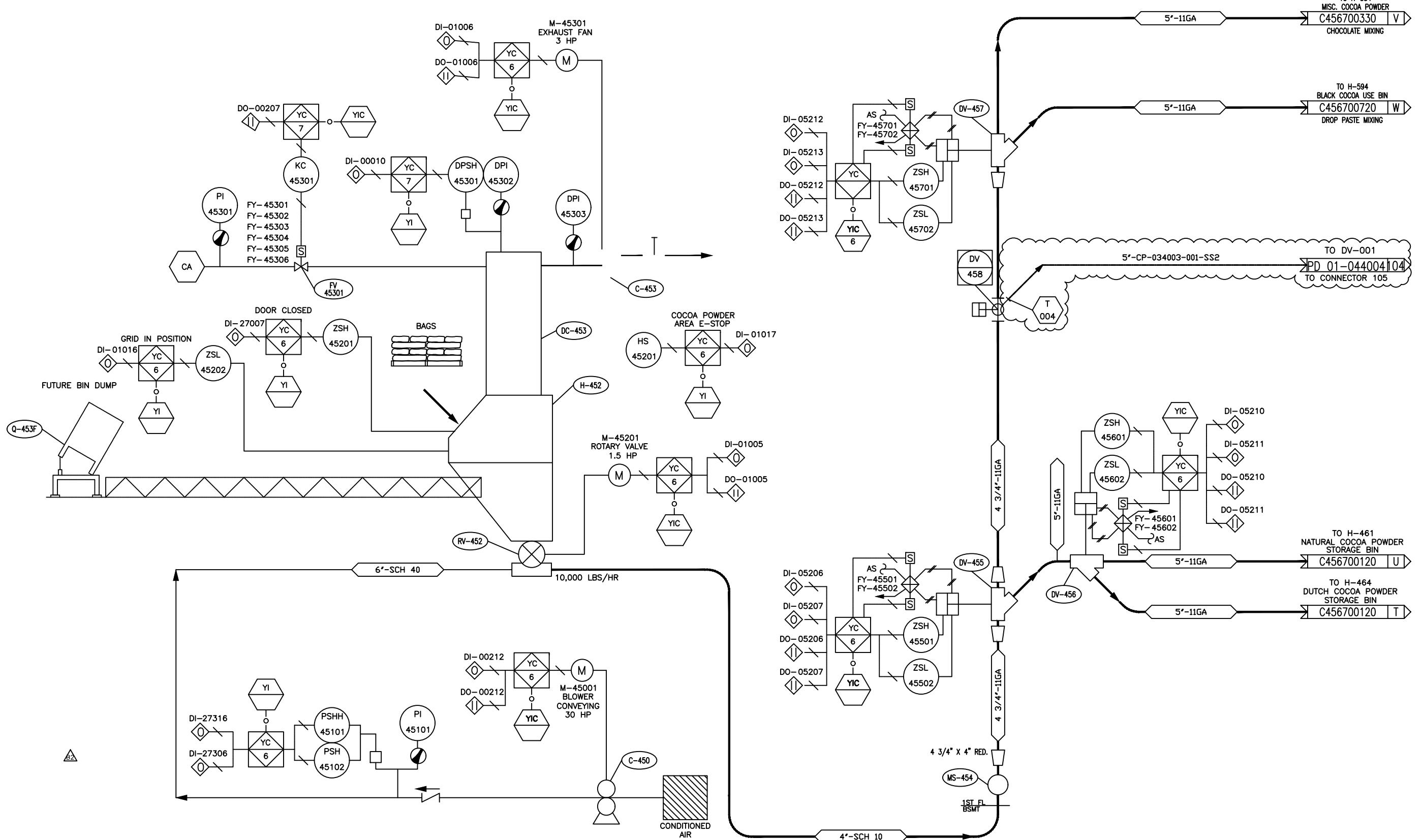
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Dextrose storage and transfer H-494 & H-495

Reference IPS : 06.E.C1.08.002	Sheet 11
Reference CARGILL : PD 01-033002	of 61
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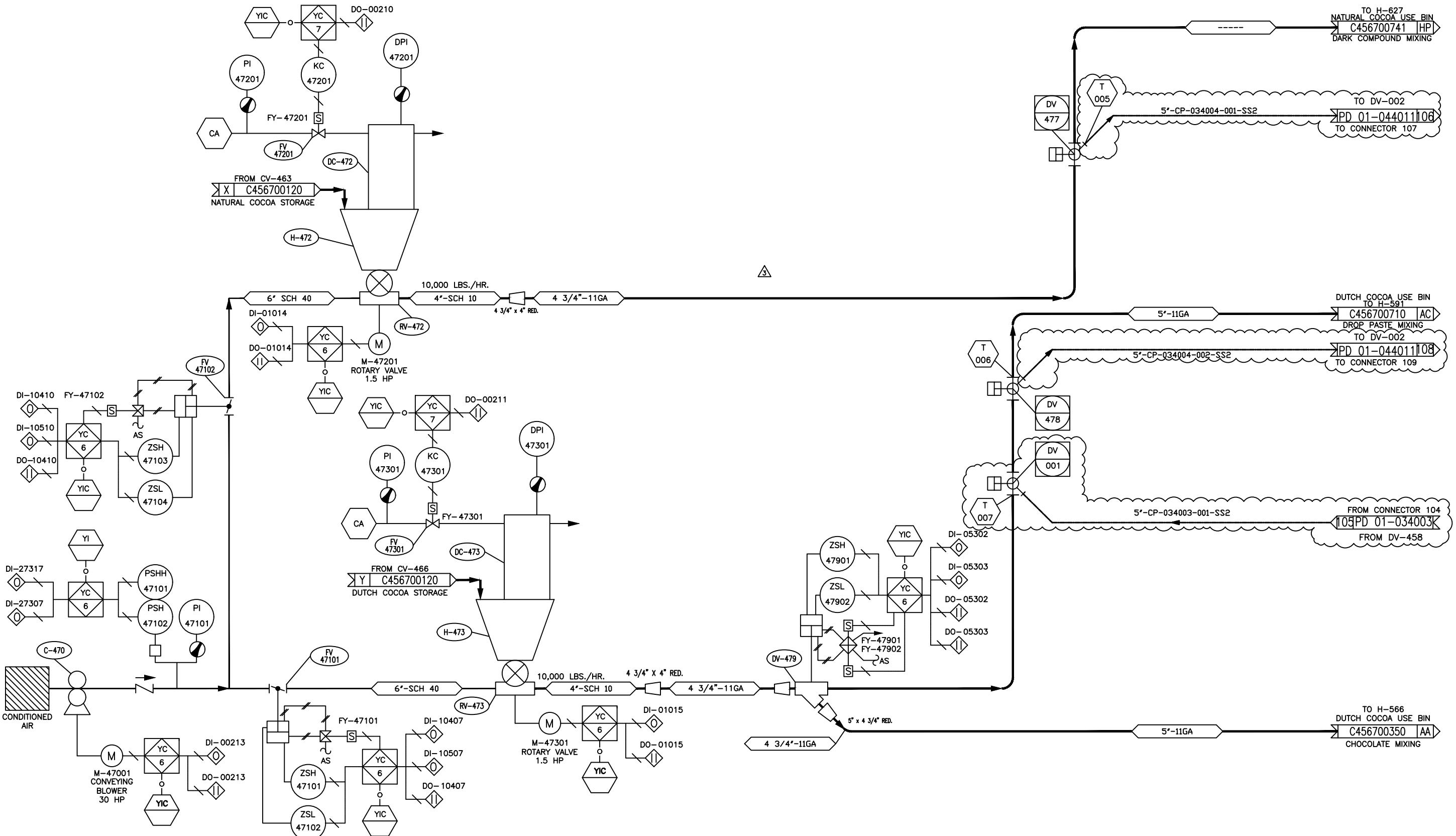
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Document Title: Cocoa powder dumping and transfer

Reference IPS : 06E.C1.08.003 Sheet 12  
Reference CARGILL : PD 01-034003 of 61  
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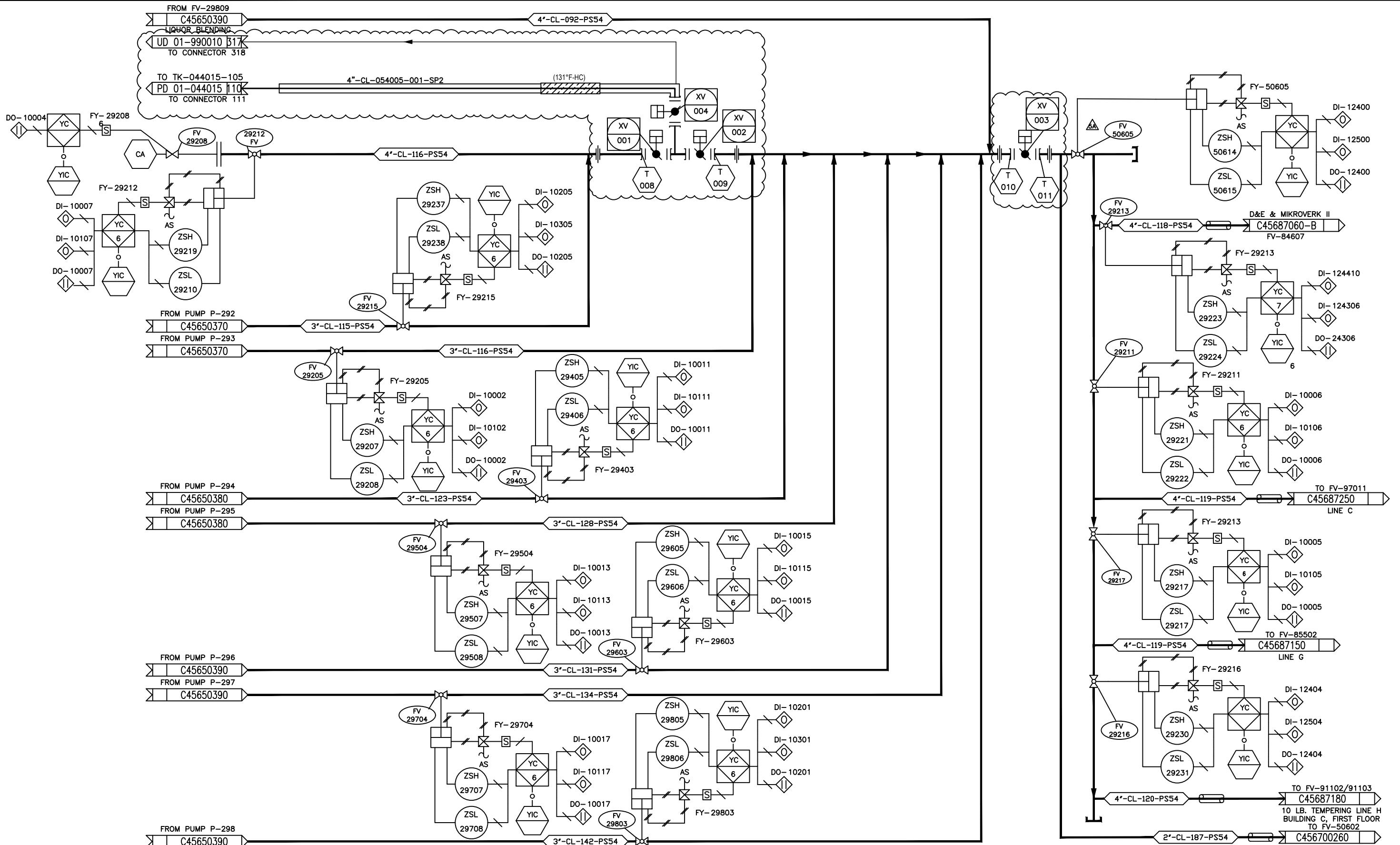
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**Chocolate system H-472 & H-473 cocoa powder transfer to use points**

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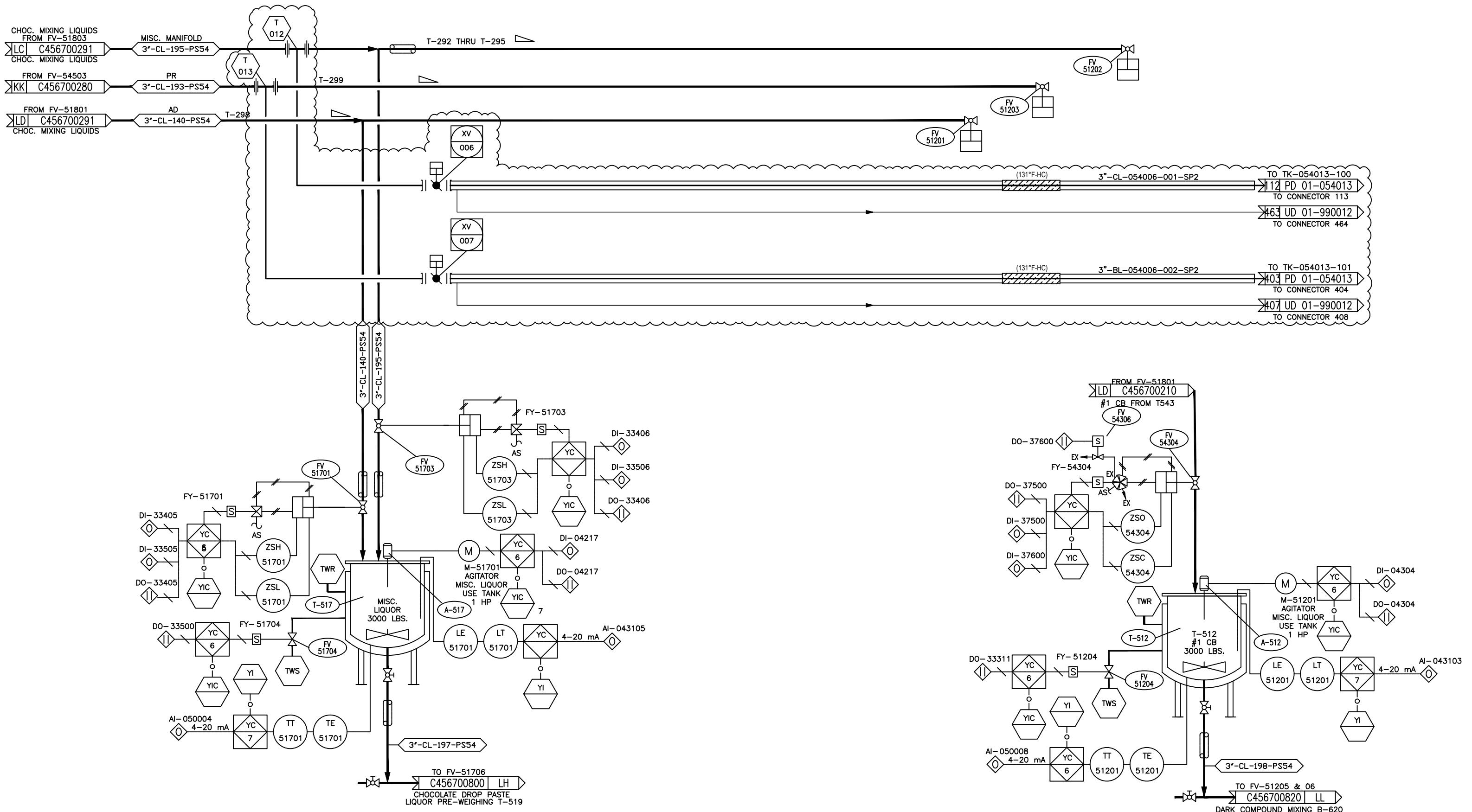
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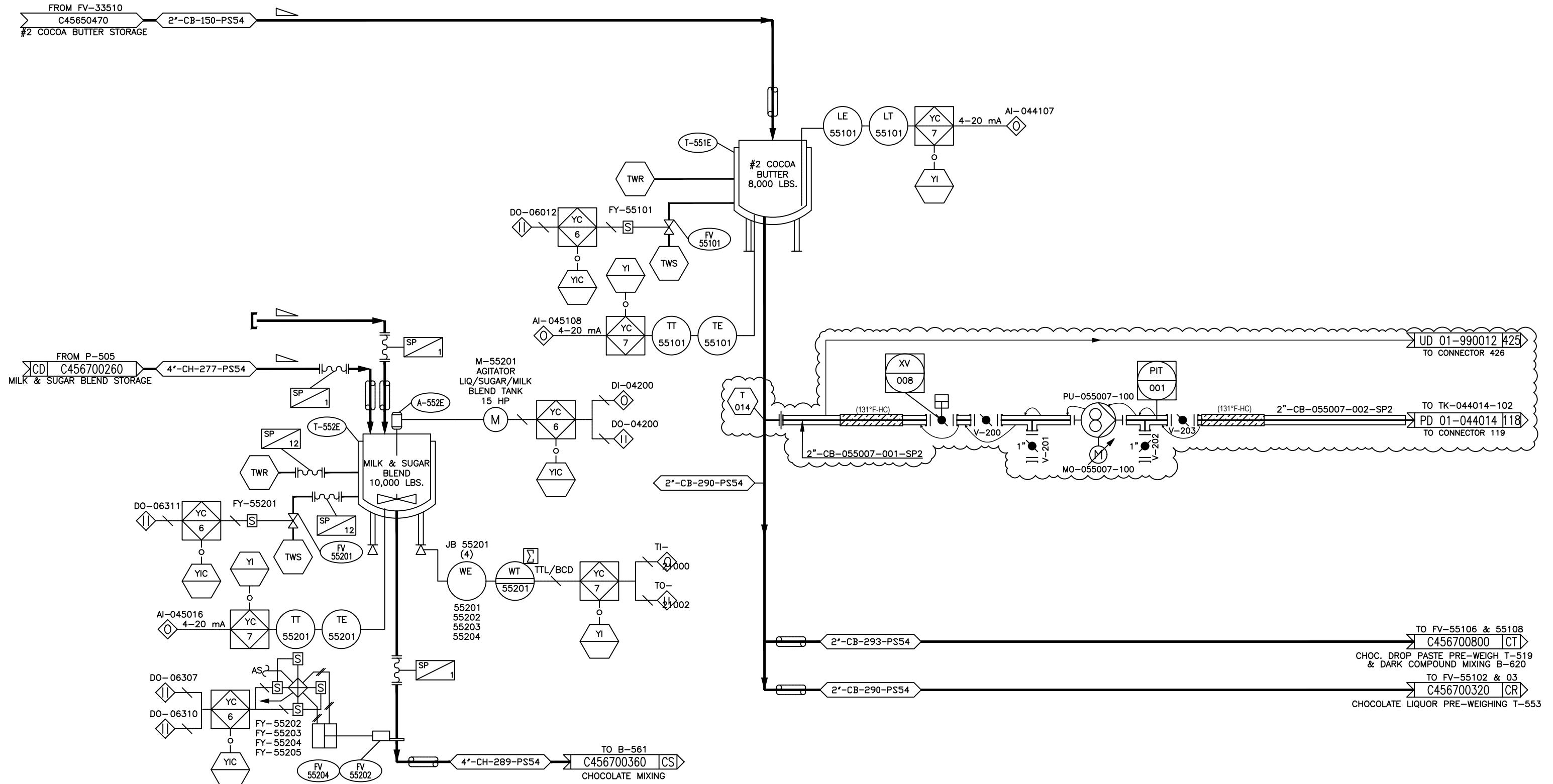
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Sheet 14

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PD 01-054005  
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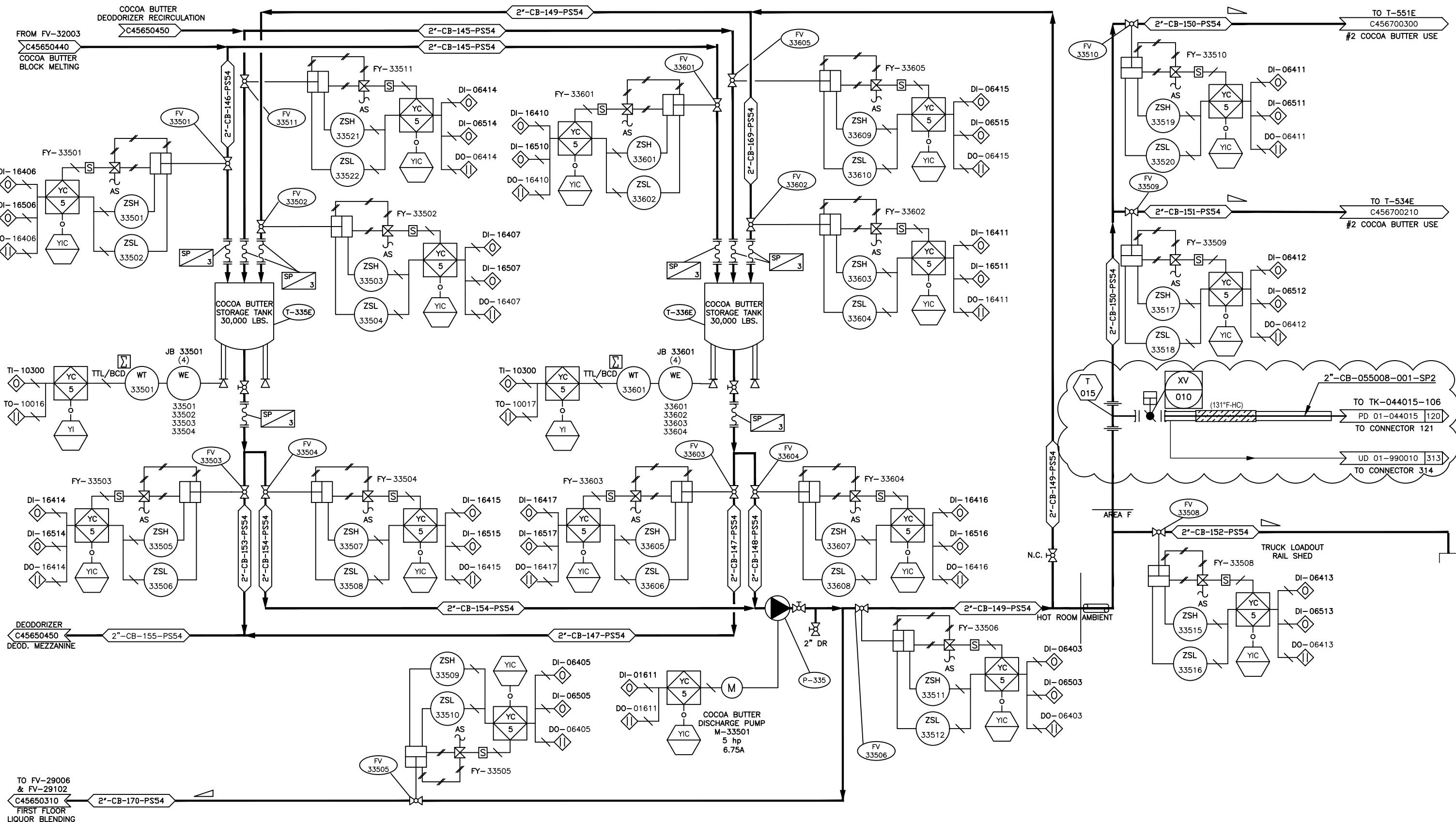
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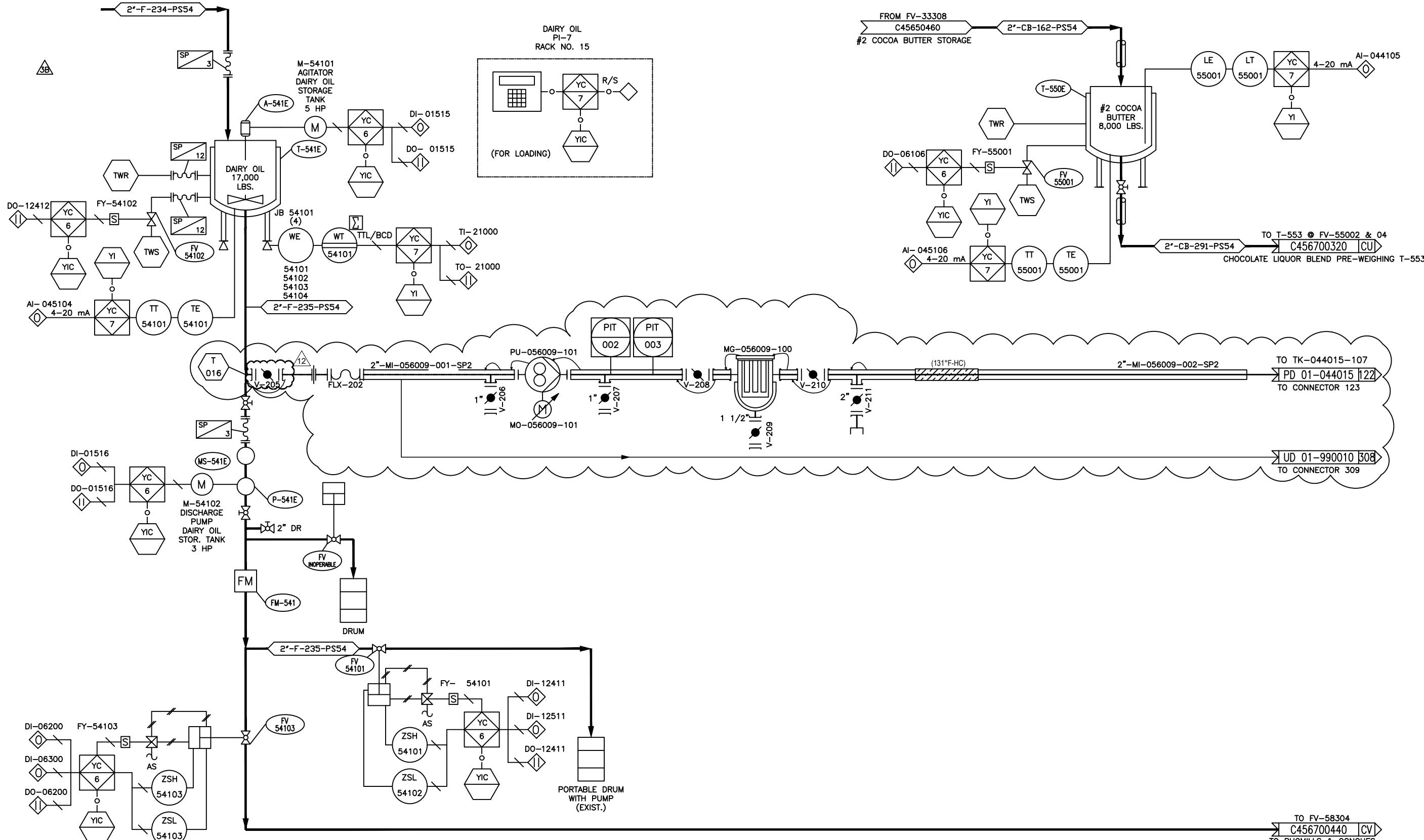
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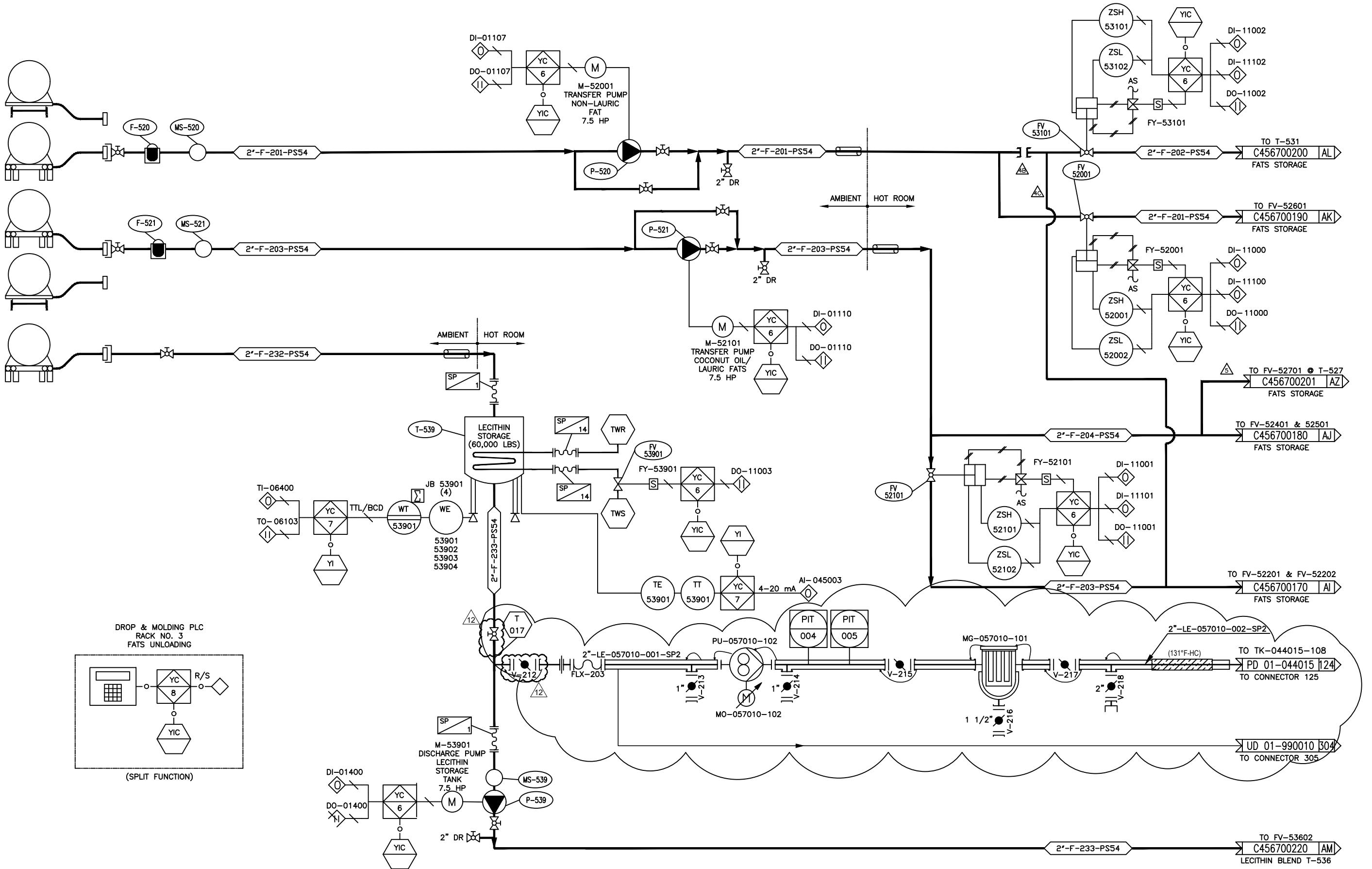
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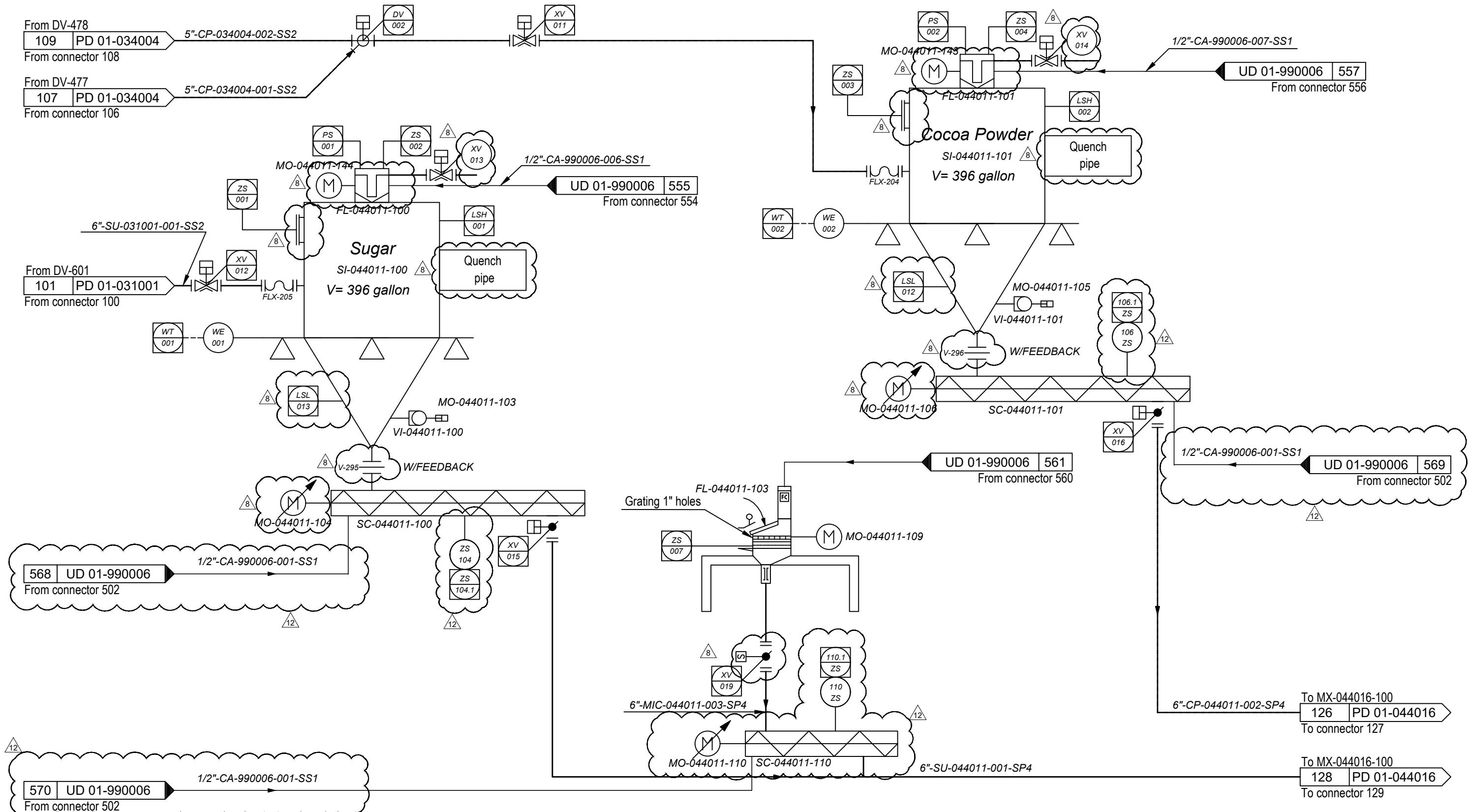
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Edited by	RBA	2022.04.05	Approved revision	09	2022.04.05	BFE	Valve position V-212 changed	2022.04.05	MCHT	CARGILL O2004 Project Luxury	Document Title:	Reference IPS :
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Approved by				06	2021.05.25	BFE	Issue For Approval	2021.05.25	KDS		61	
Original	C456700160			05	2021.04.19	BFE	Issue For Approval	2021.04.19	KDS			
Replaced by	PD 01-057010			Revision	Date	Name	Description	Date	Name			



Edited by	RBA	2022.04.
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Quality	MCHT	2022.04.
Approved by		
Original	.....	
Replaced by	.....	

Revisions	09	2022.04.05	RBA	Issue For Approval
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	06	2021.05.25	BFE	Issue For Approval
	05	2021.04.19	BFE	Issue For Approval
	Revision	Date	Name	Description

ANSWER

Approved revision

**CARGILL**  
O2004 Project Luxury

**AUTHOR OF THE PROJECT**  
**IPS USA**  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214

## Group - IPS

**S** OWNER:  
**CARGILL**  
COCOA & CHOCOLATE, INC.  
12500 W. CARMEN AVE.

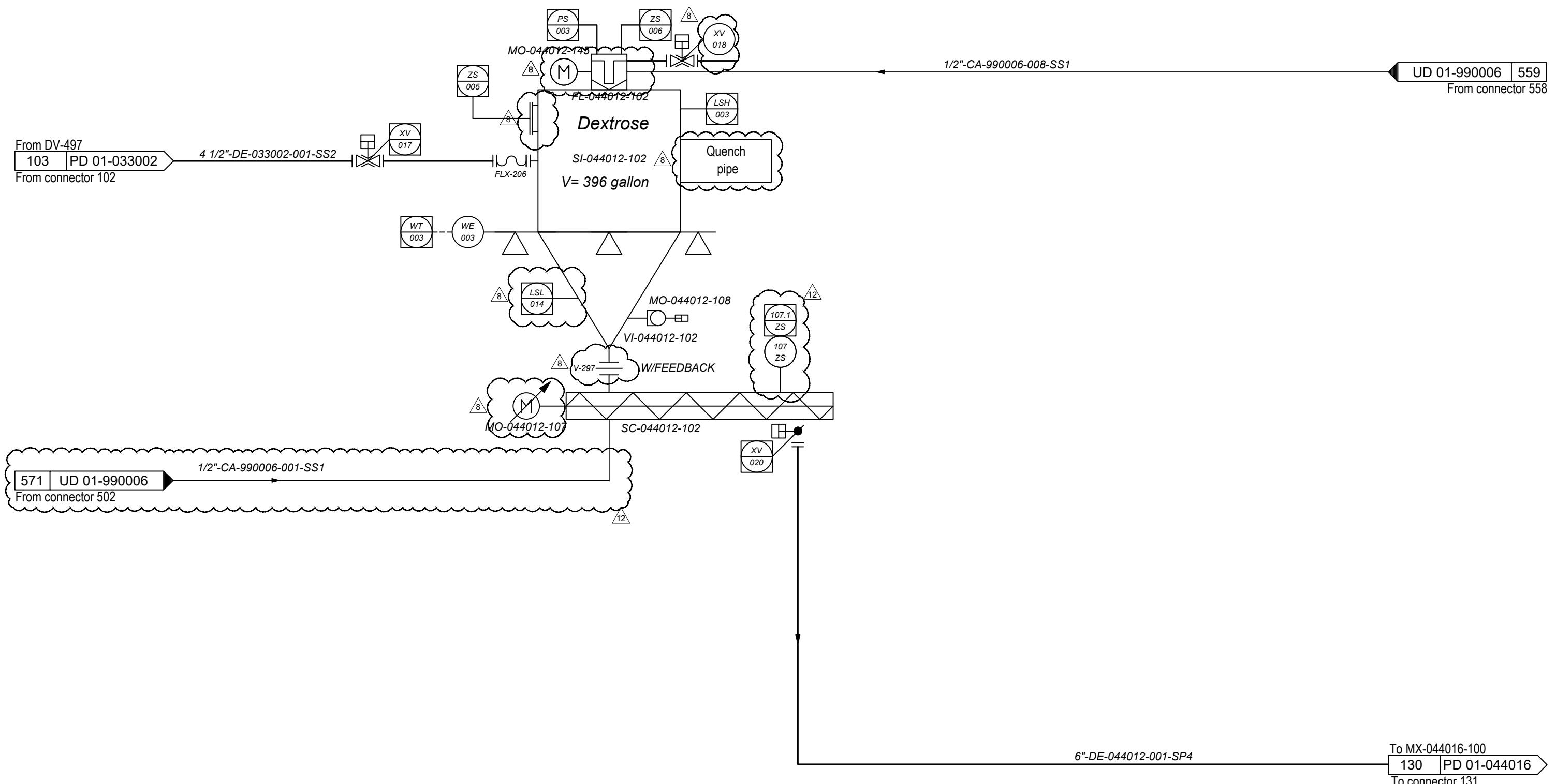
**Cargill**

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File name :

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of  
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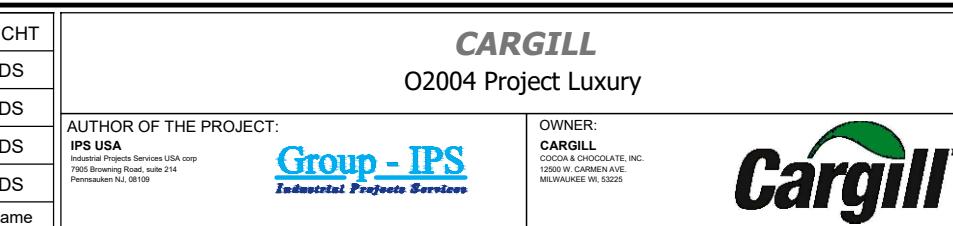
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Approved by	KDS	2022.04.0
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Replaced by	.....	

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Revision	Date	Name	Description	

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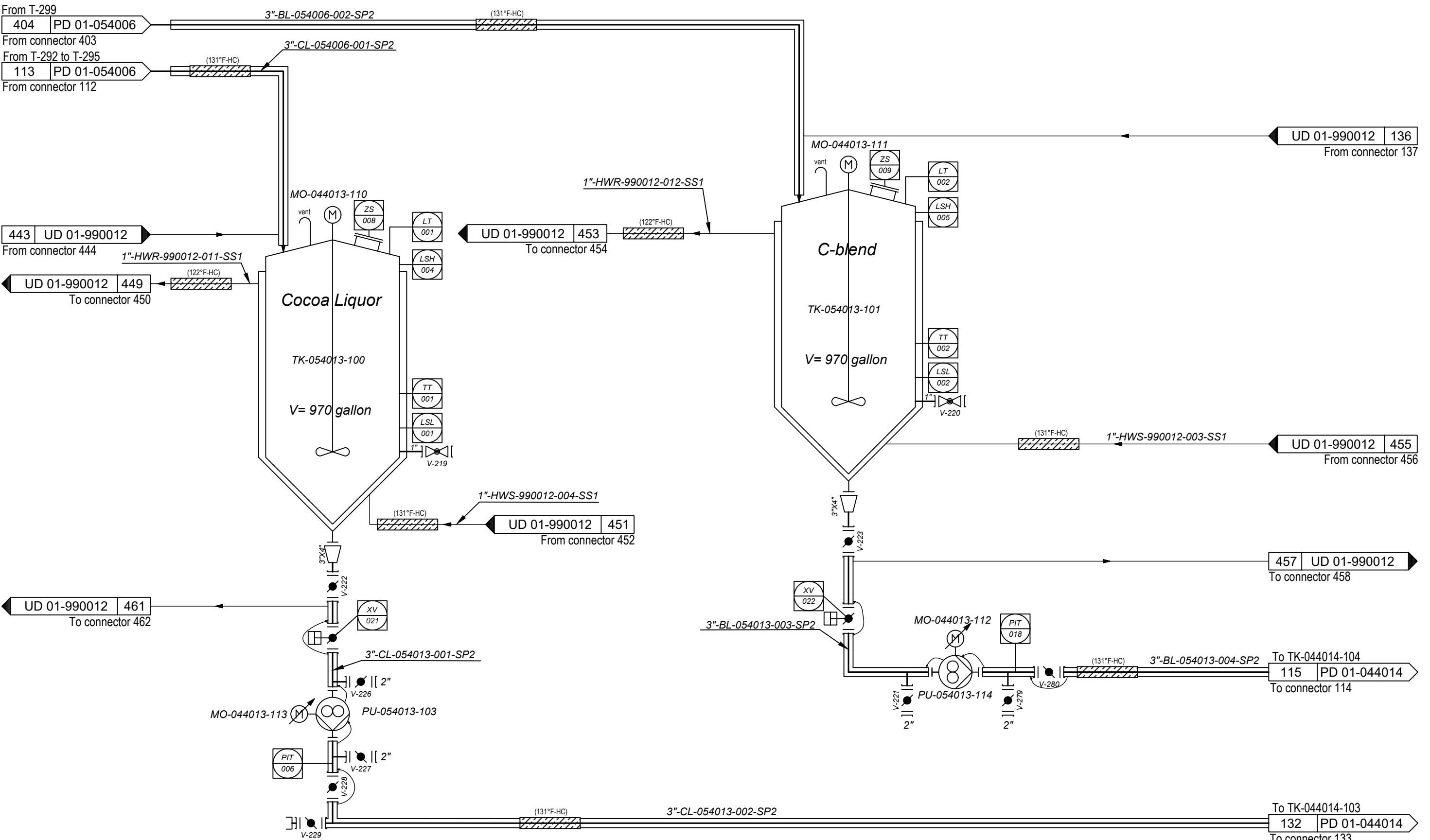


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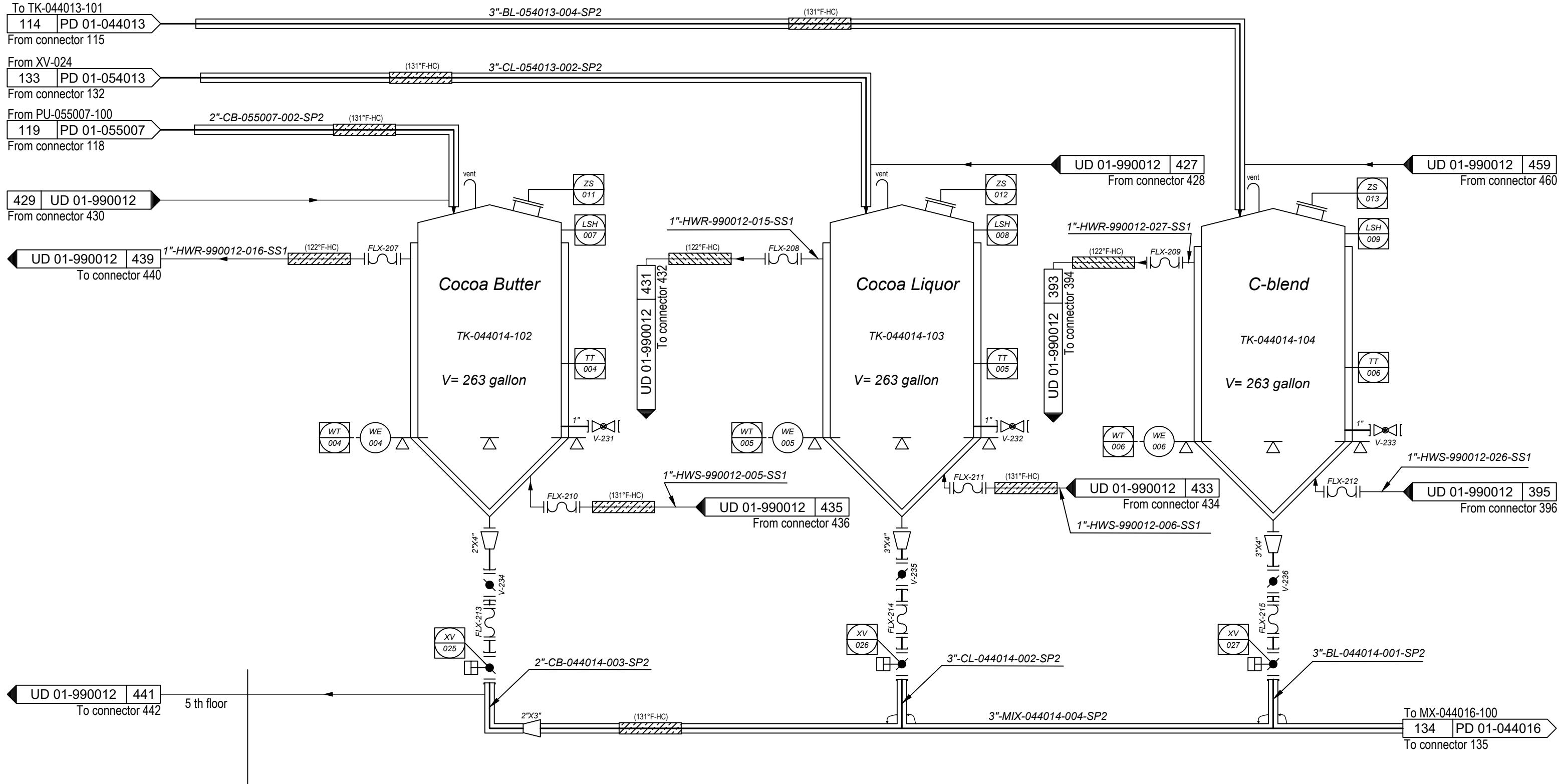
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ference CARGILL : PD 01-044012	of 61
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Approved by	KDS	2021.12.03		05	2021.04.19	BFE	Issue For Approval		2021.04.19	KDS		CARGILL COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI. 53225		
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Revision	Date	Name	Description	Date	Name									

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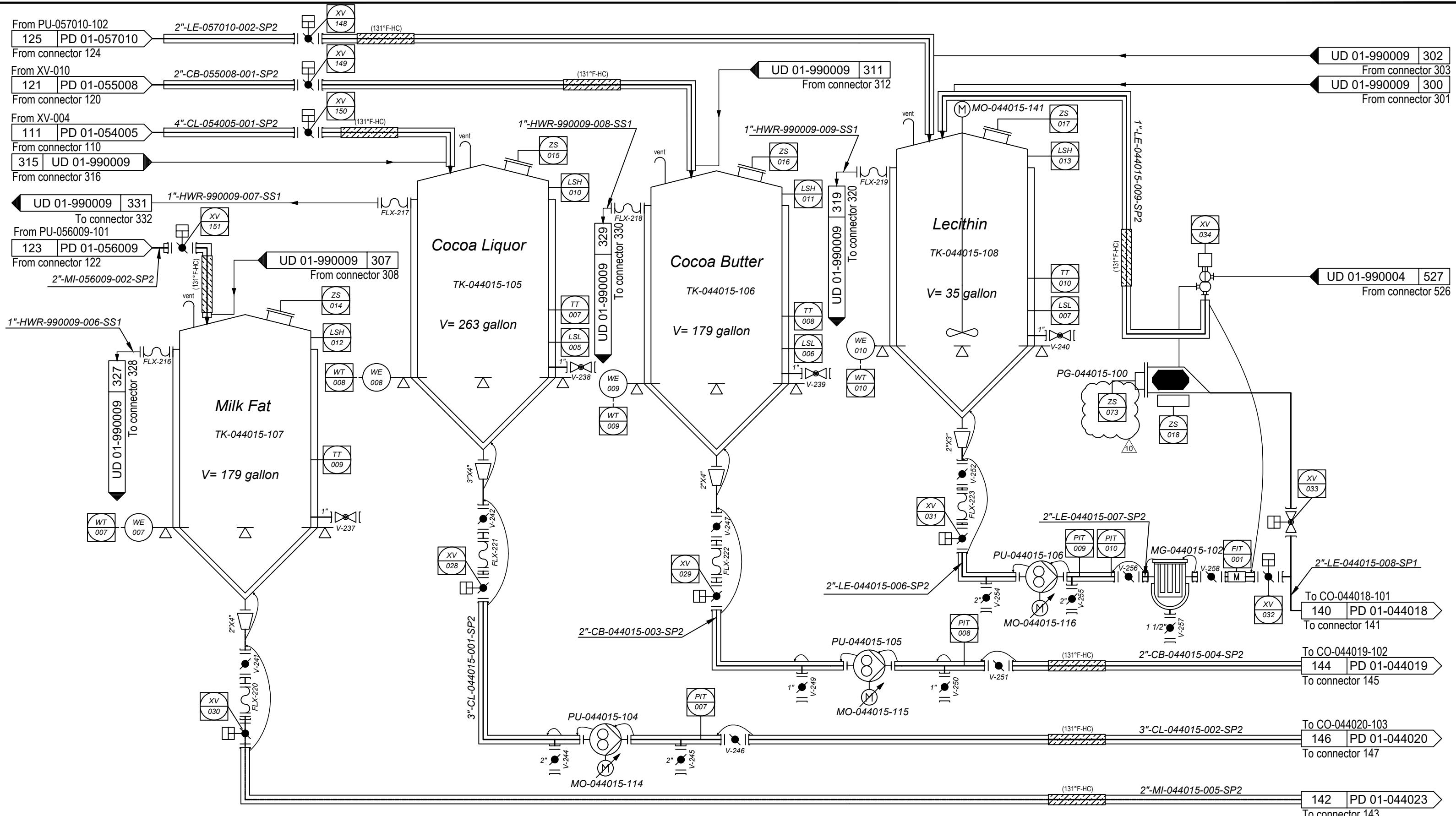
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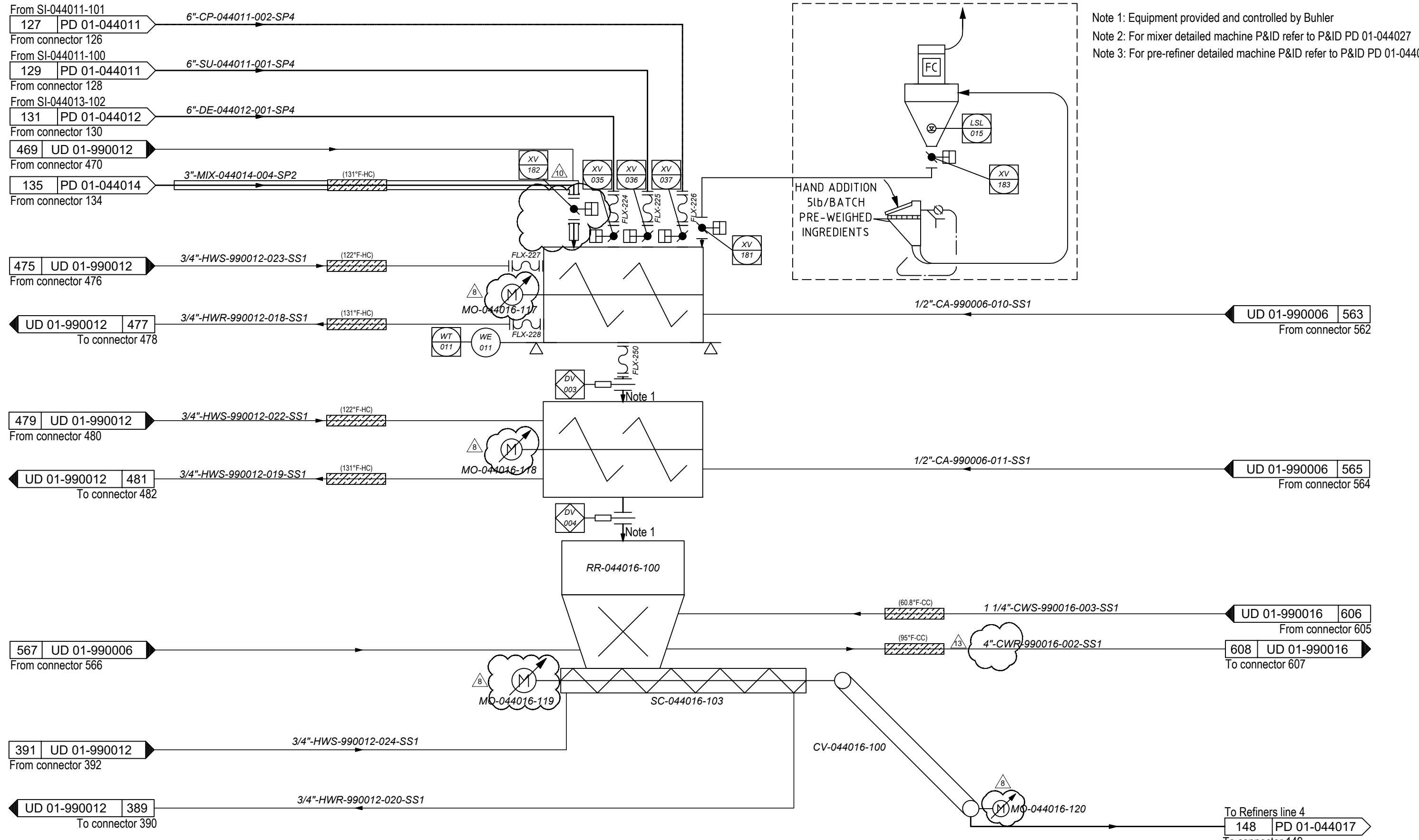
AUTHOR OF THE PROJECT:  
IPS USA  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington, NJ 08810

OWNER:  
CARGILL  
COCA & CHOCOLATE, INC.  
12500 W. CARMEN AVE.  
MILWAUKEE WI 53225

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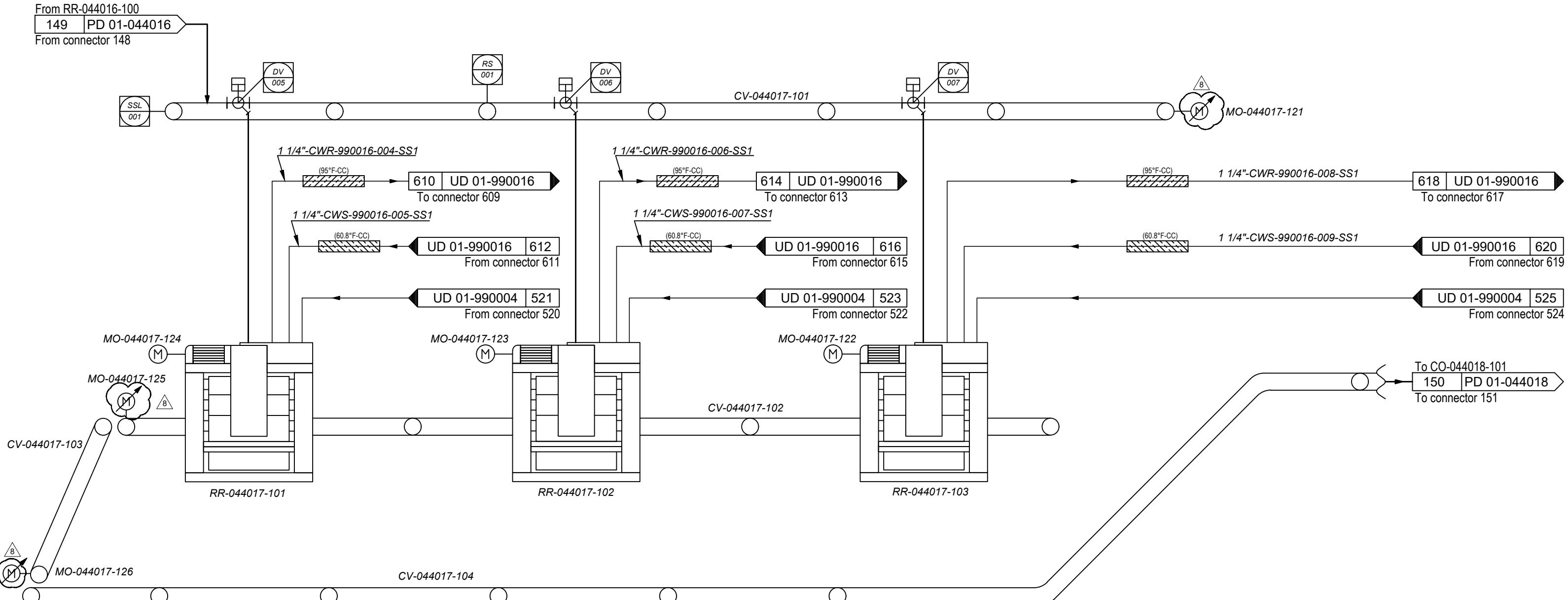


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Note 1: For refiner detailed machine P&ID refer to P&ID PD 01-044029  
PD 01-044030 , PD 01-044031.



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Quality	MCHT	2022.04.05
Approved by		
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Replaced by	.....	

Revisions	09	2022.04.05	RBA	Note added for buhler P&G
	08	2021.12.03	BFE	Issue For Approval
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100-1000

Approved revision	2022.04.05	MCHT	AUTHOR IPS USA Industrial Project Pennsauken NJ
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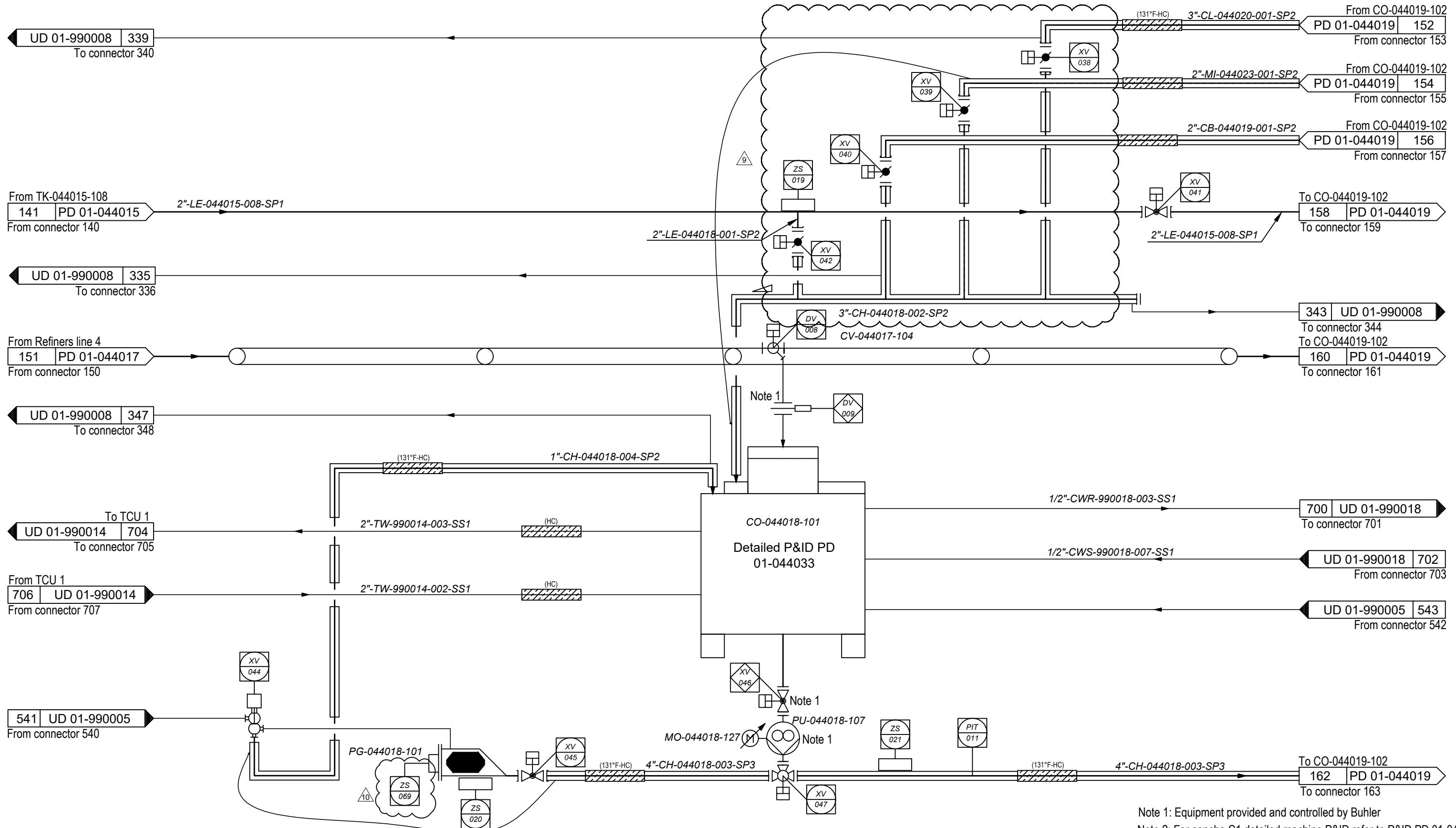


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Approved by		
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Replaced by	.....	

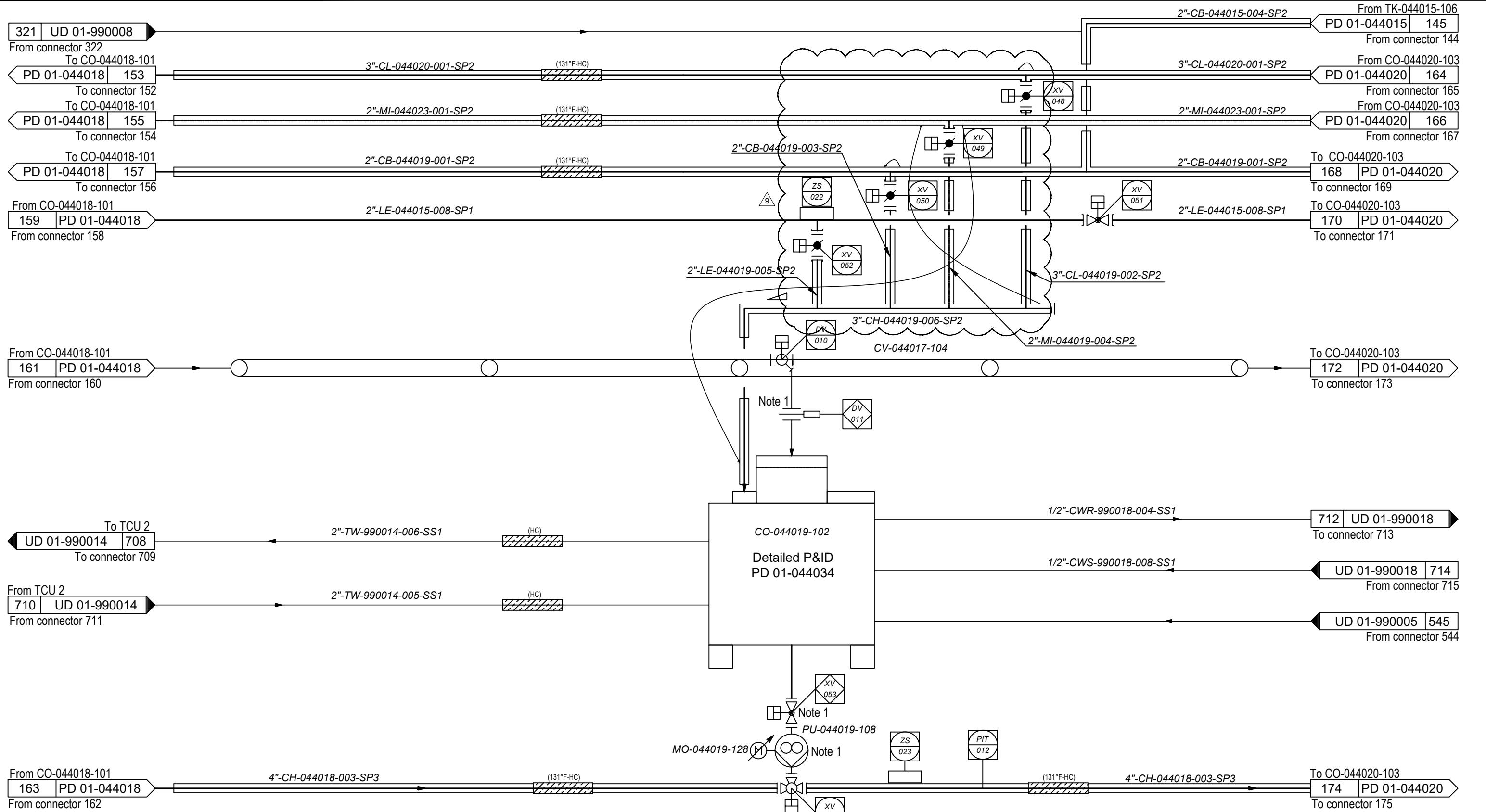
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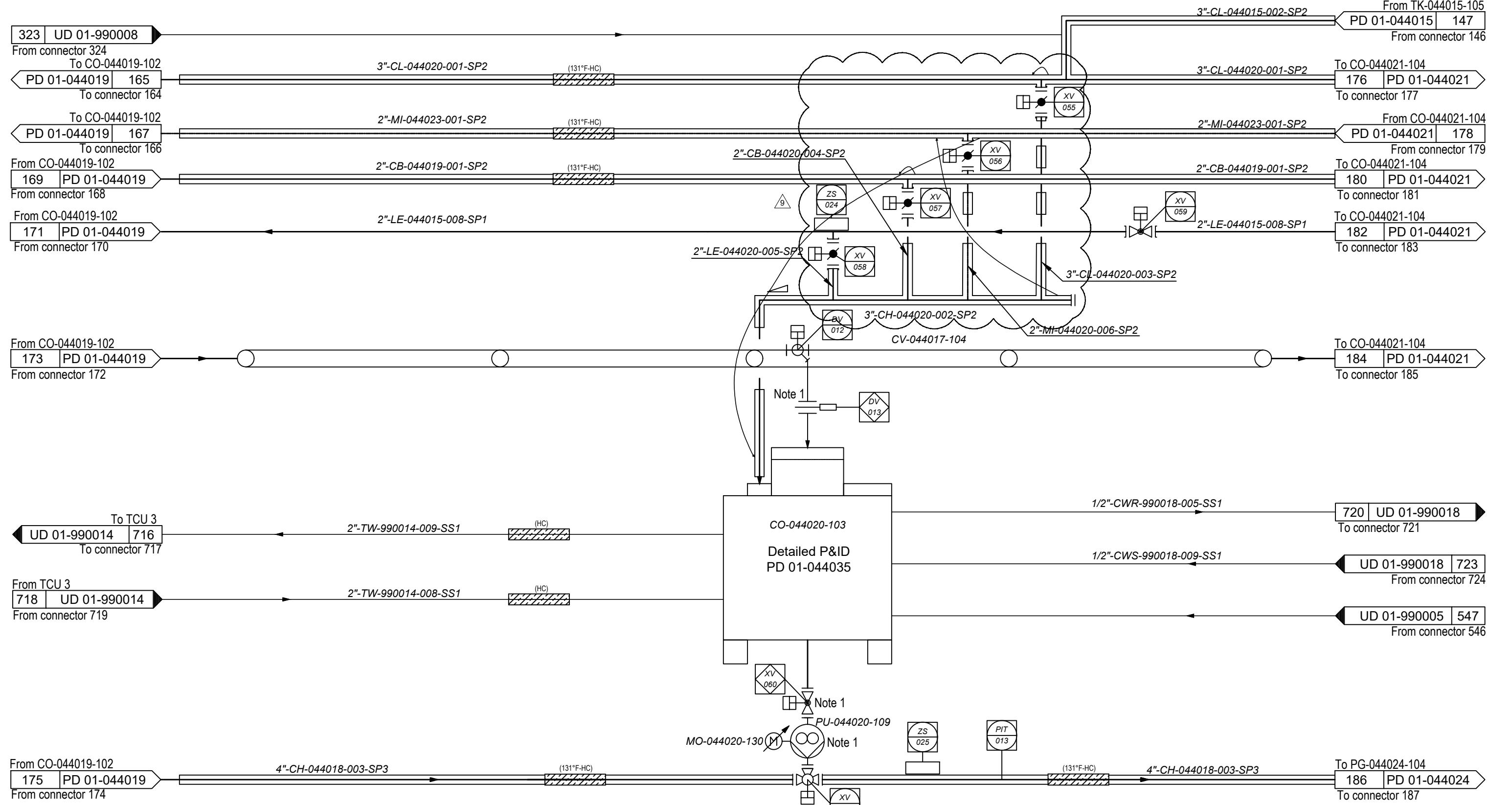
Note 1: Equipment provided and controlled by Buhler  
Note 2: For conche C1 detailed machine P&ID refer to P&ID PD 01-044030

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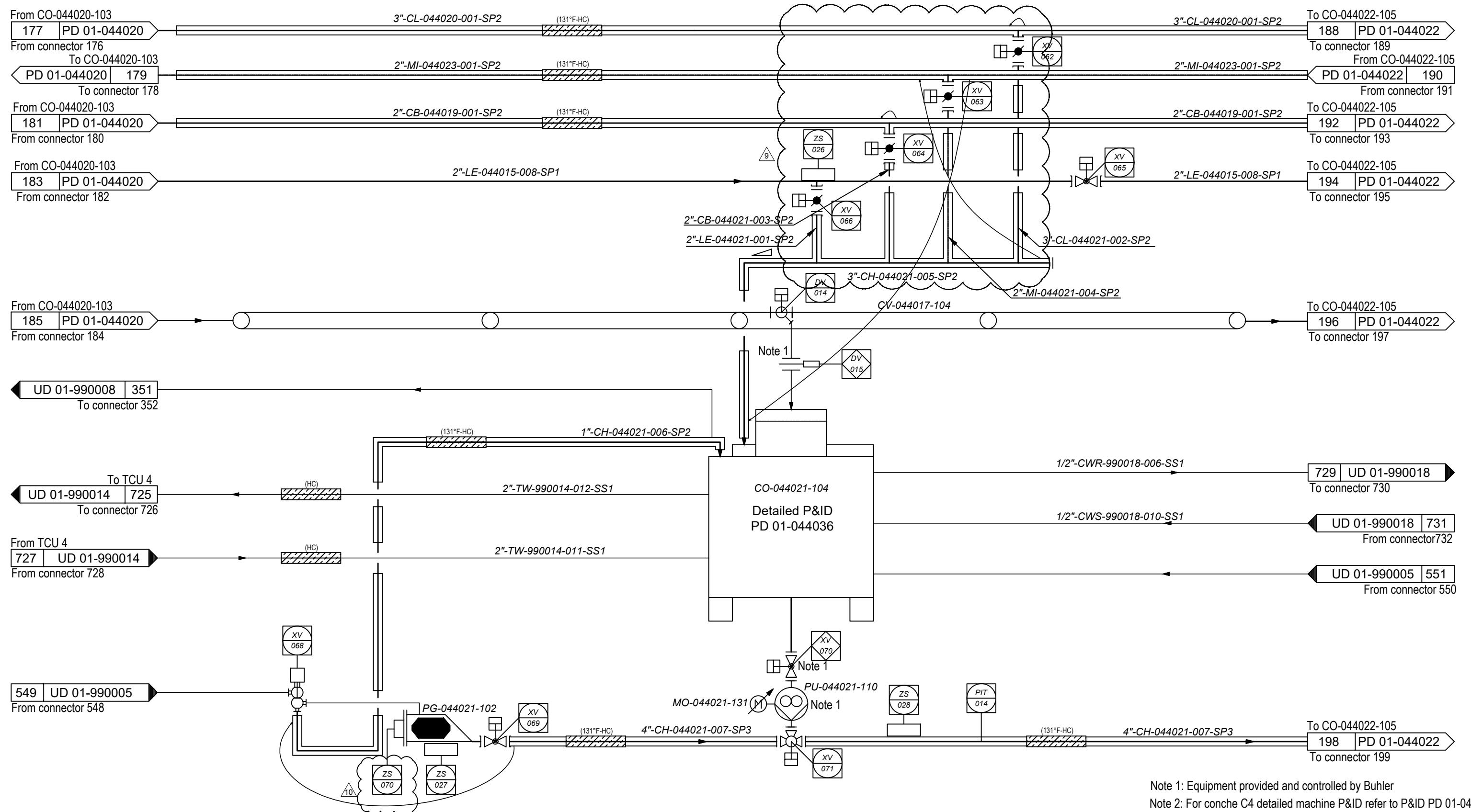
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Note 2: For conche C2 detailed machine P&ID refer to P&ID PD 01-044034

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Checked by	WKT	2022.04.05		09	2021.12.17	BFE	Issue For Approval		2021.12.17	KDS				
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Edited by	RBA	2022.04.05	Approved revision	10	2022.04.05	RBA	Note added for buhler P&ID	2022.04.05	MCHT	CARGILL		Document Title:	Reference IPS :	Sheet
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Original	.....			06	2021.05.25	BFE	Issue For Approval	2021.05.25	KDS	Industrial Projects Services USA corp		12500 W. CARMEN AVE. MILWAUKEE WI. 53225	File name :	
Replaced by	.....			Revision	Date	Name	Description	Date	Name	7905 Browning Road, suite 214 Pennsauken NJ. 08109		O2004_06E.C1.08_P&ID's_Rev13_2022.05.23		

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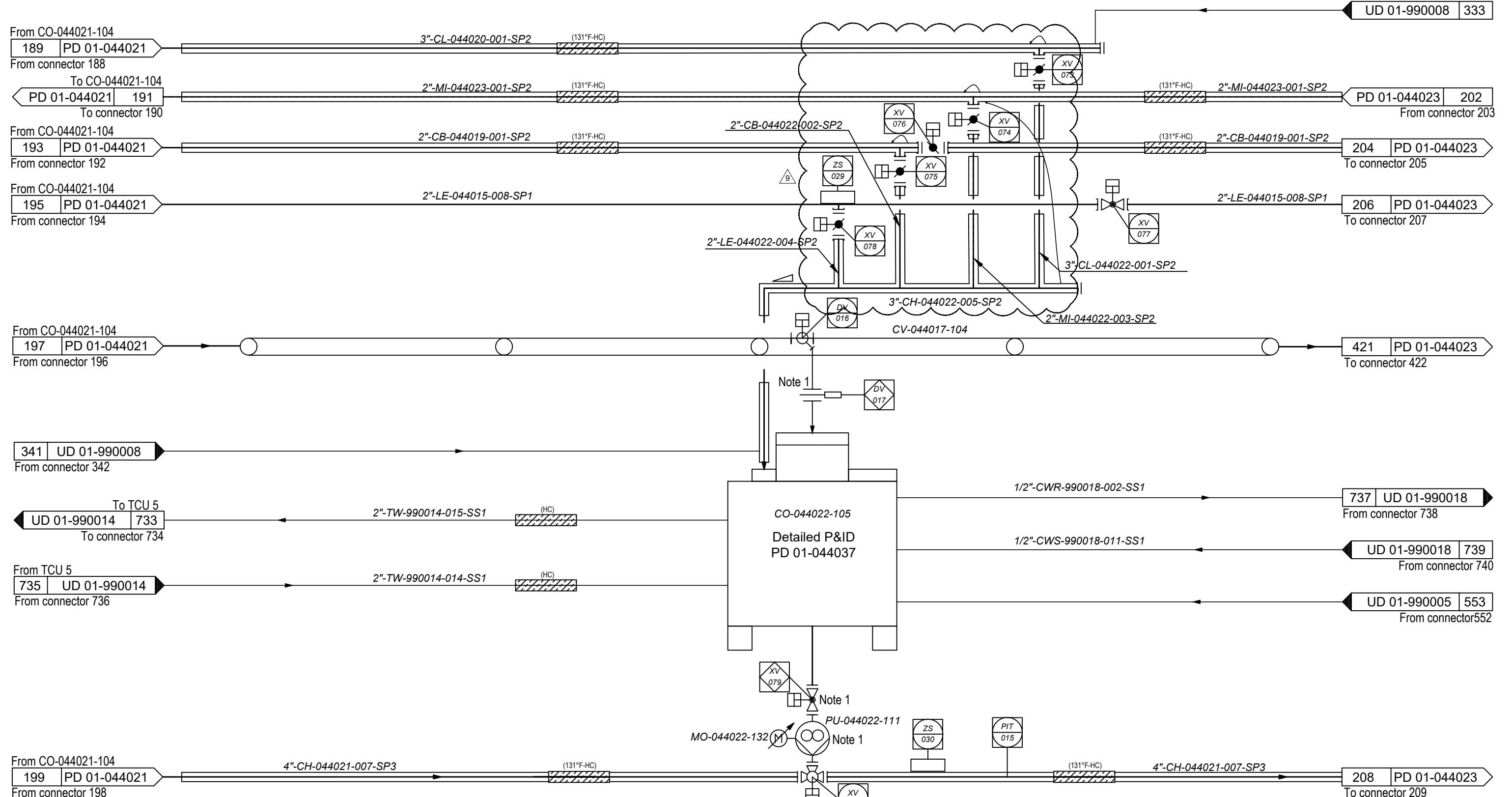


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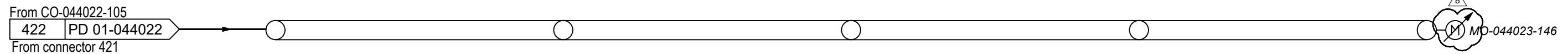
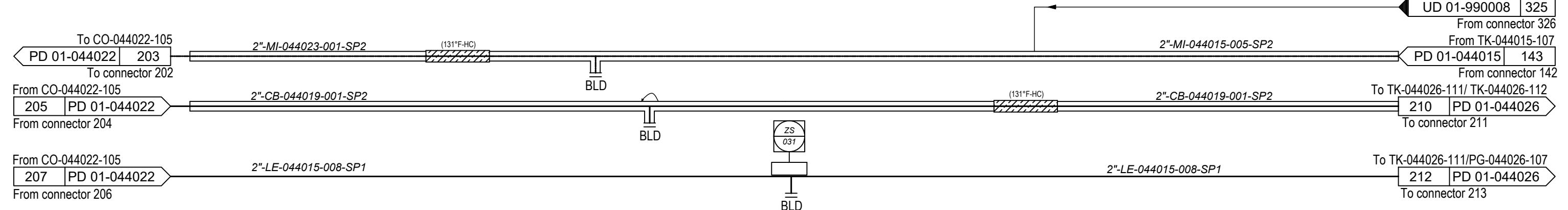
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Note 1: Equipment provided and controlled by Buhler

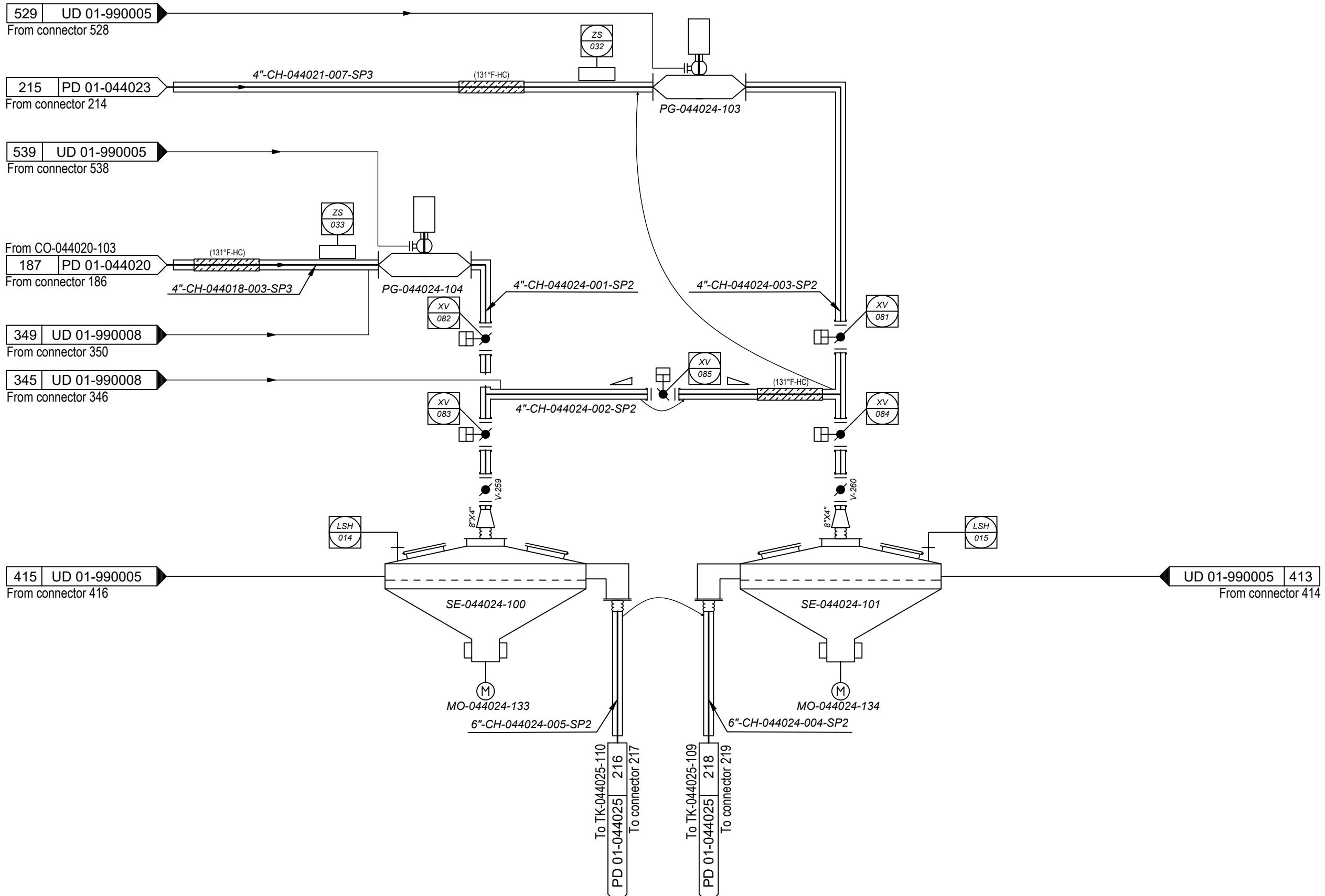
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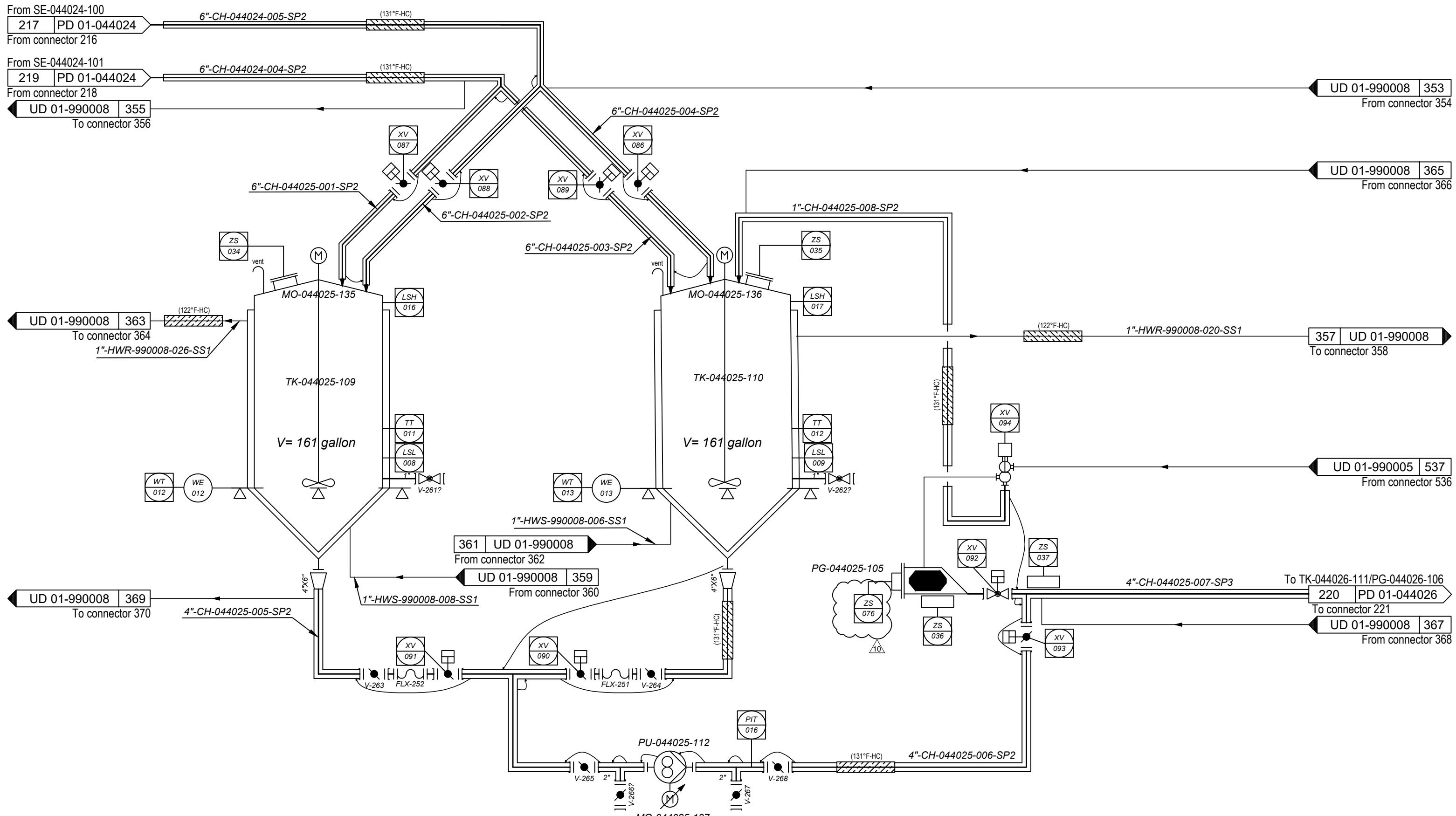
Note 1: Spool piece located at future tie in for conche 6

Edited by	BFE	2021.12.03	Revisions	08	2021.12.03	BFE	Issue For Approval	Approved revision	2021.12.03	KDS	CARGILL O2004 Project Luxury	AUTHOR OF THE PROJECT: IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington NJ 088109	OWNER: CARGILL COCA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI 53225	Document Title:	Reference IPS :	Sheet
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Replaced by	.....			Revision	Date	Name	Description		Date	Name	O2004_06.E.C1.08_P&ID's_Rev13_2022.05.23					

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Original .....				04	2021.03.25	BFE	Fifth Edition		2021.03.25	KDS		AUTHOR OF THE PROJECT:	IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington NJ, 08810	
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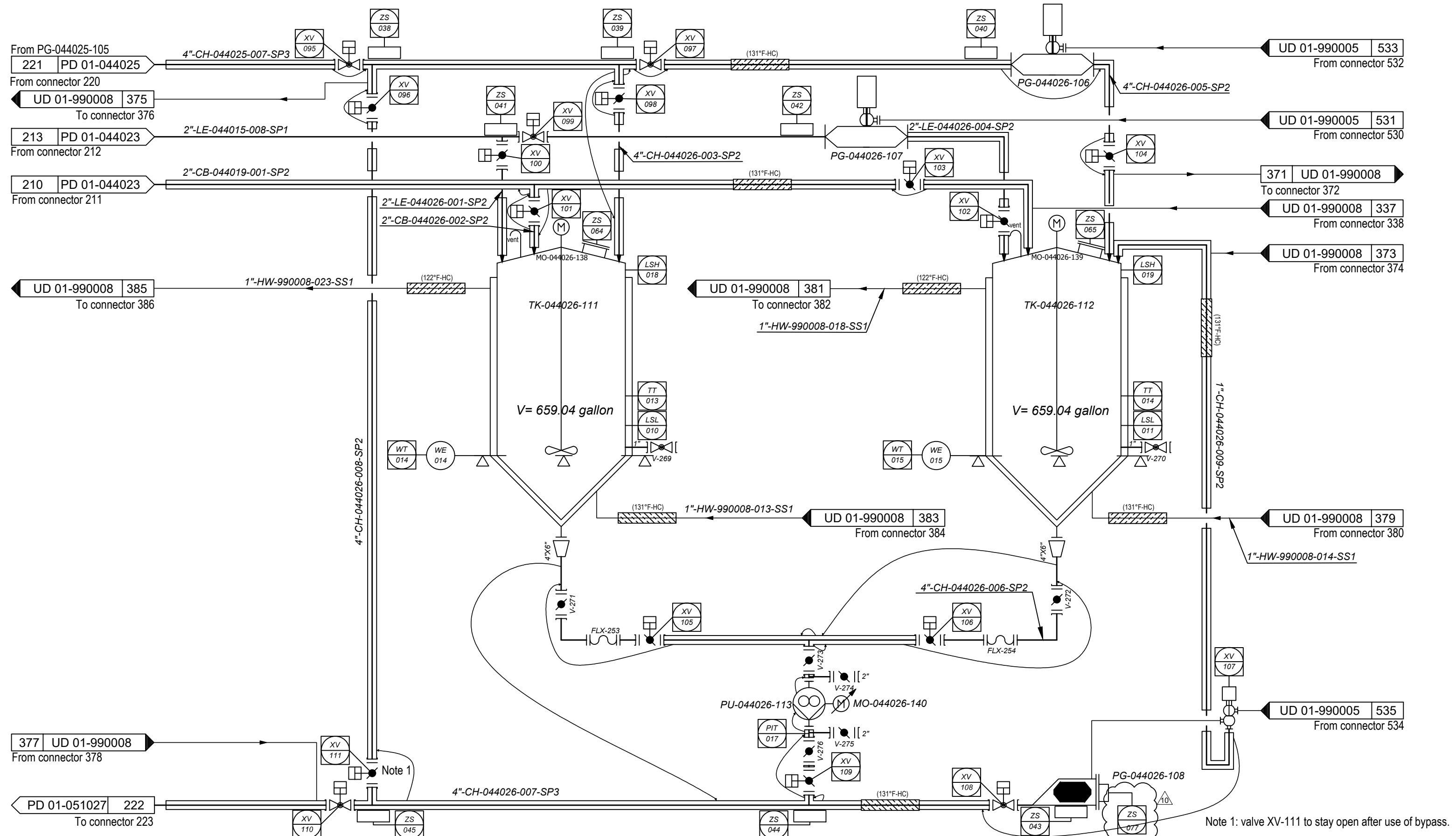
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Industrial Projects Services

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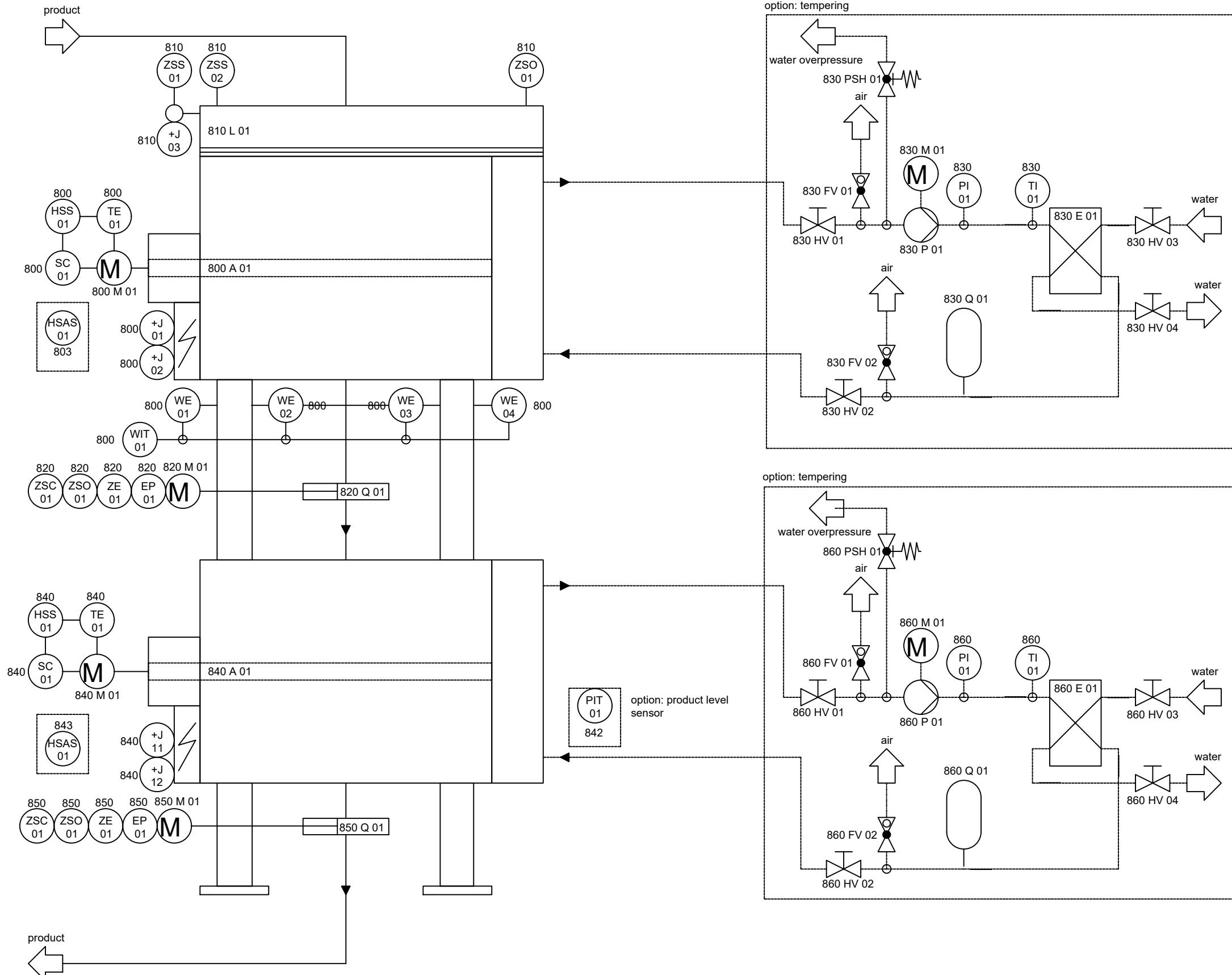
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Revision	Date	Name	Description		Date	Name	Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennsauken NJ, 08109		COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225			

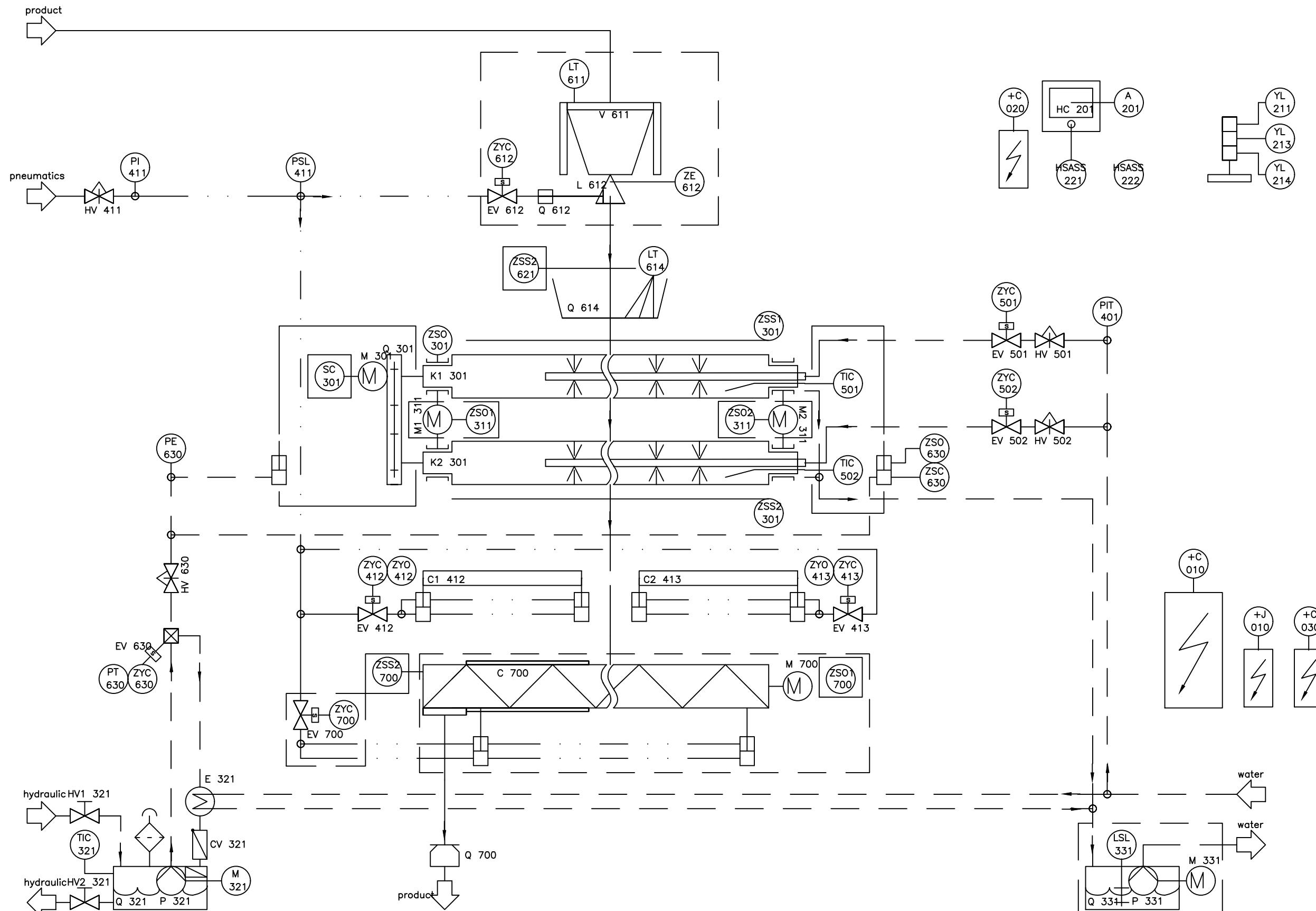
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Industrial Projects Services

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Mixers

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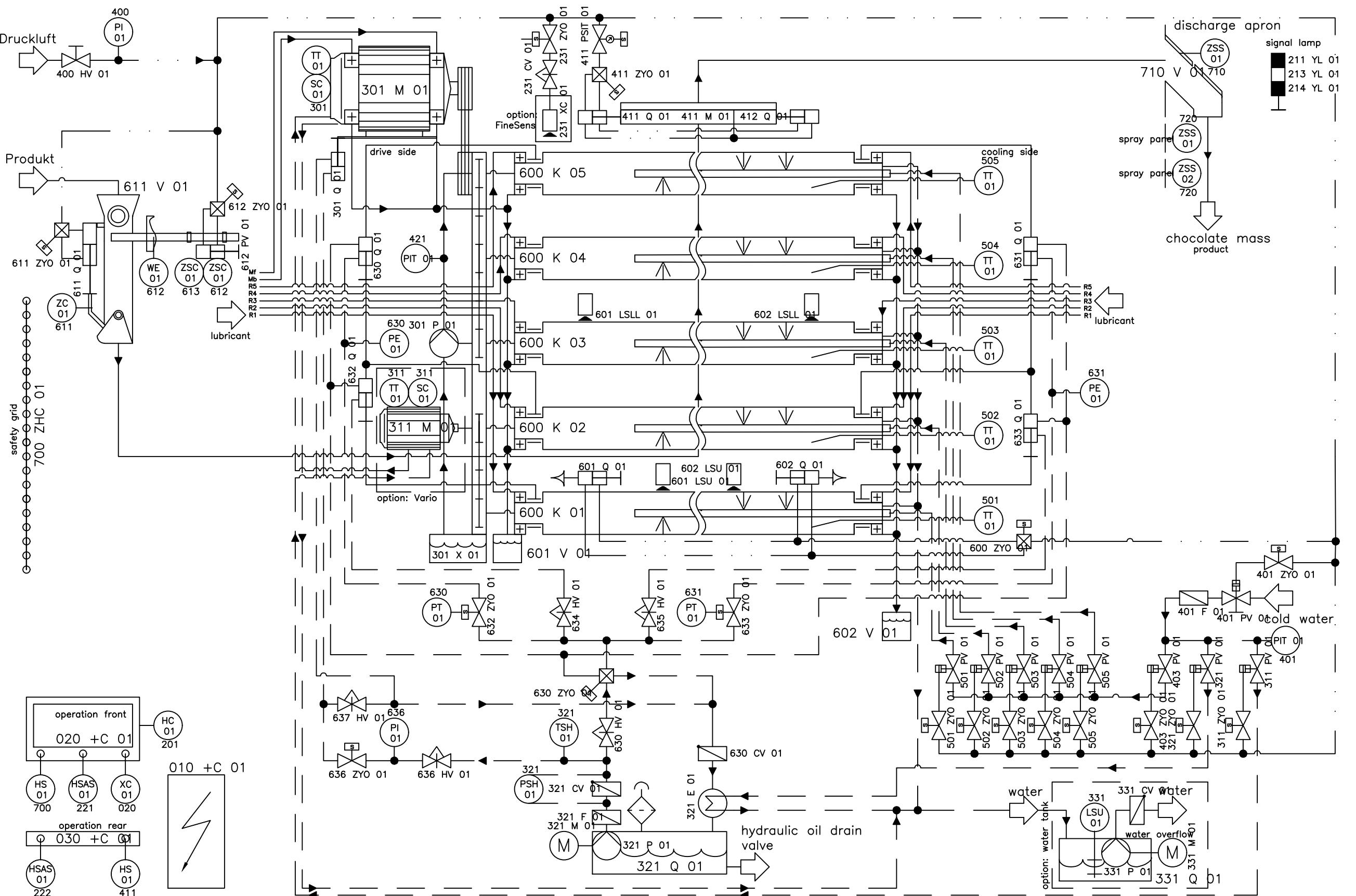
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CARGILL O2004 Project Luxury					
AUTHOR OF THE PROJECT: IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington NJ, 088109			OWNER: CARGILL COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225		
<b>Group - IPS</b> <small>Industrial Projects Services</small>			<b>Cargill™</b>		

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Checked by WKT 2022.04.05

Quality MCHT 2022.04.05

Approved by

Original .....

Replaced by .....

Revisions

					Approved revision
00	2022.04.05	RBA	Buhler P&ID	2022.04.05	MCHT
Revision	Date	Name	Description	Date	Name

Approved revision

**CARGILL**  
O2004 Project Luxury

AUTHOR OF THE PROJECT:  
**IPS USA**  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington, NJ 08819

OWNER:  
**CARGILL**  
COCOA & CHOCOLATE, INC.  
12500 W. CARMEN AVE.  
MILWAUKEE WI 53225

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Document Title:  
**Refiner 1**  
**RR-044017-101**

Reference IPS :  
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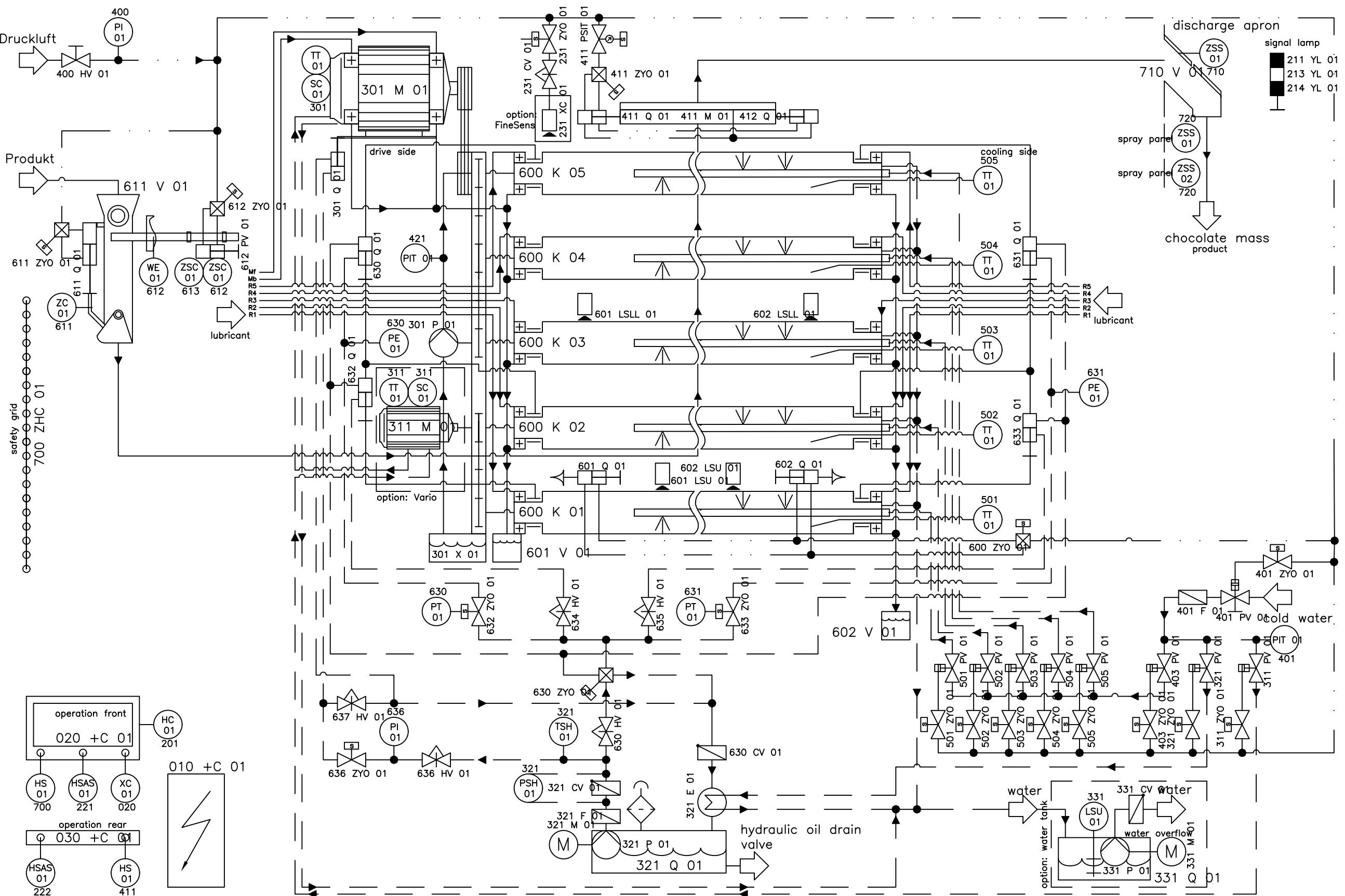
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PD 01-044029

of  
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File name :

O2004\_06.E.C1.08\_P&ID's\_Rev13\_2022.05.23

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Checked by	WKT	2022.04.05		
Quality	MCHT	2022.04.05		
Approved by				
Original .....				
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Revisions	Approved revision				
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Revision	Date	Name	Description	Date	Name

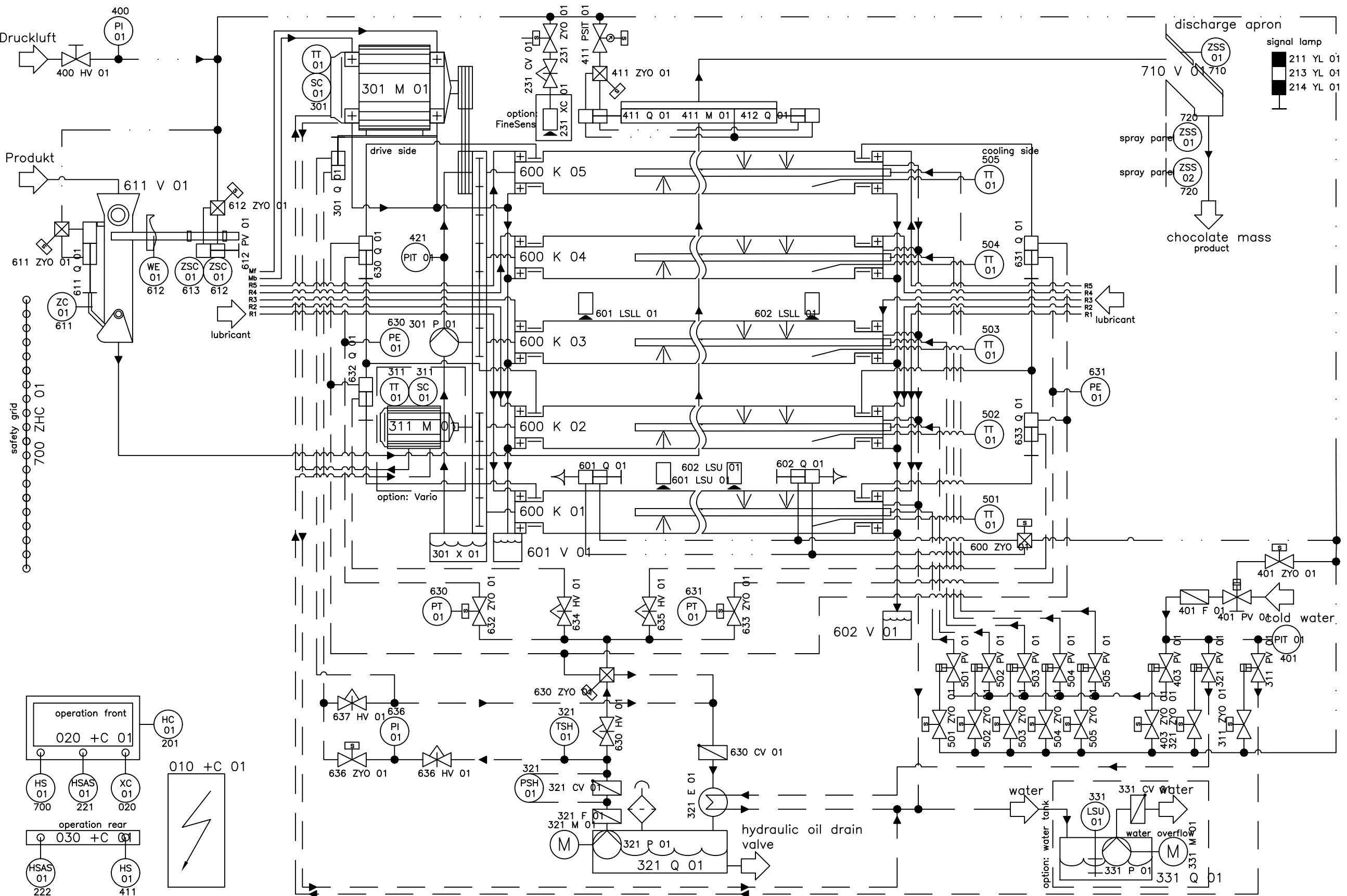
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O2004 Project Luxury	
AUTHOR OF THE PROJECT:	
IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington, NJ 08519	OWNER: CARGILL COCA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225
<b>Group - IPS</b> <small>Industrial Projects Services</small>	<b>Cargill™</b>

Document Title:  
**Refiner 2**  
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Reference IPS :  
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Sheet 39

Reference CARGILL :  
PD 01-044030  
of 61

File name :  
O2004\_06.E.C1.08\_P&ID's\_Rev13\_2022.05.23



Edited by	RBA	2022.04.05		
Checked by	WKT	2022.04.05		
Quality	MCHT	2022.04.05		
Approved by				
Original .....				
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Revisions	Approved revision				
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Revision	Date	Name	Description	Date	Name

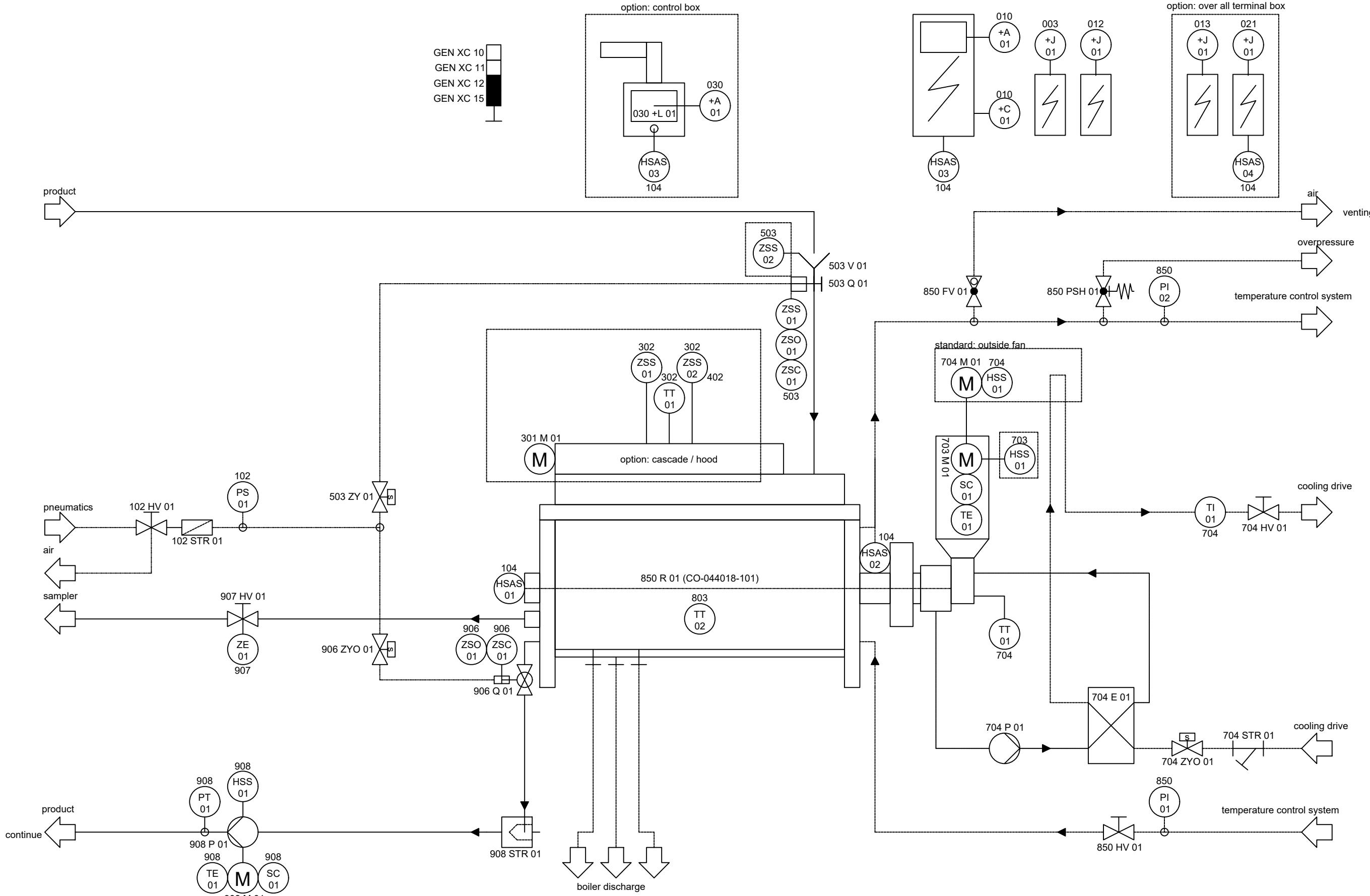
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<b>Group - IPS</b> Industrial Projects Services			<b>Cargill™</b>		

Document Title:  
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Sheet 40

Reference CARGILL :  
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of 61

File name :  
O2004\_06.E.C1.08\_P&ID's\_Rev13\_2022.05.23



Edited by	RBA	2022.04.05						Reference IPS :	Sheet
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Revision	Date	Name	Description			Date	Name		

**CARGILL**  
O2004 Project Luxury

AUTHOR OF THE PROJECT:  
**IPS USA**  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington NJ, 08810

OWNER:  
**CARGILL**  
COCOA & CHOCOLATE, INC.  
12500 W. CARMEN AVE.  
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**Group - IPS**  
Industrial Projects Services

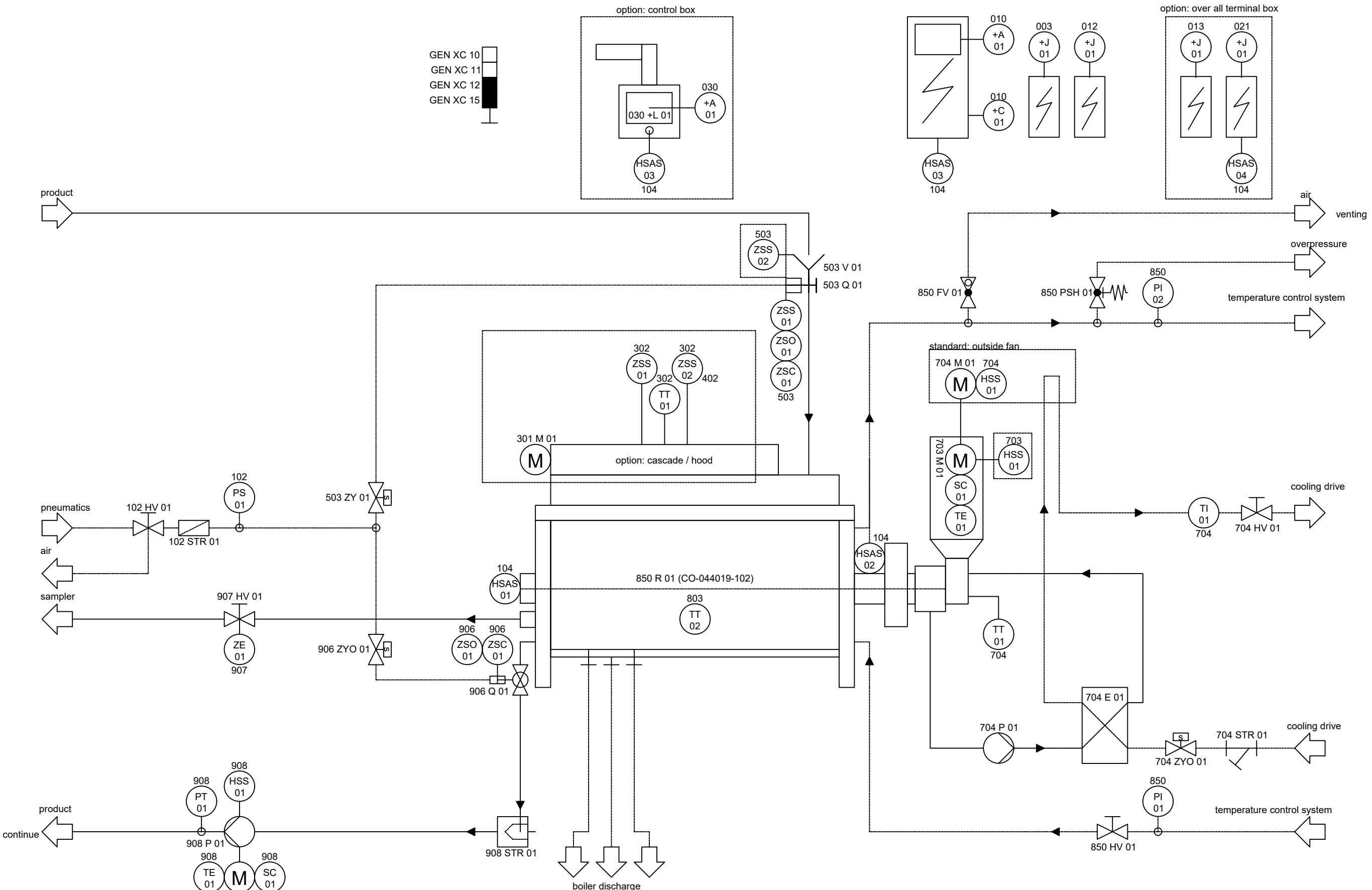
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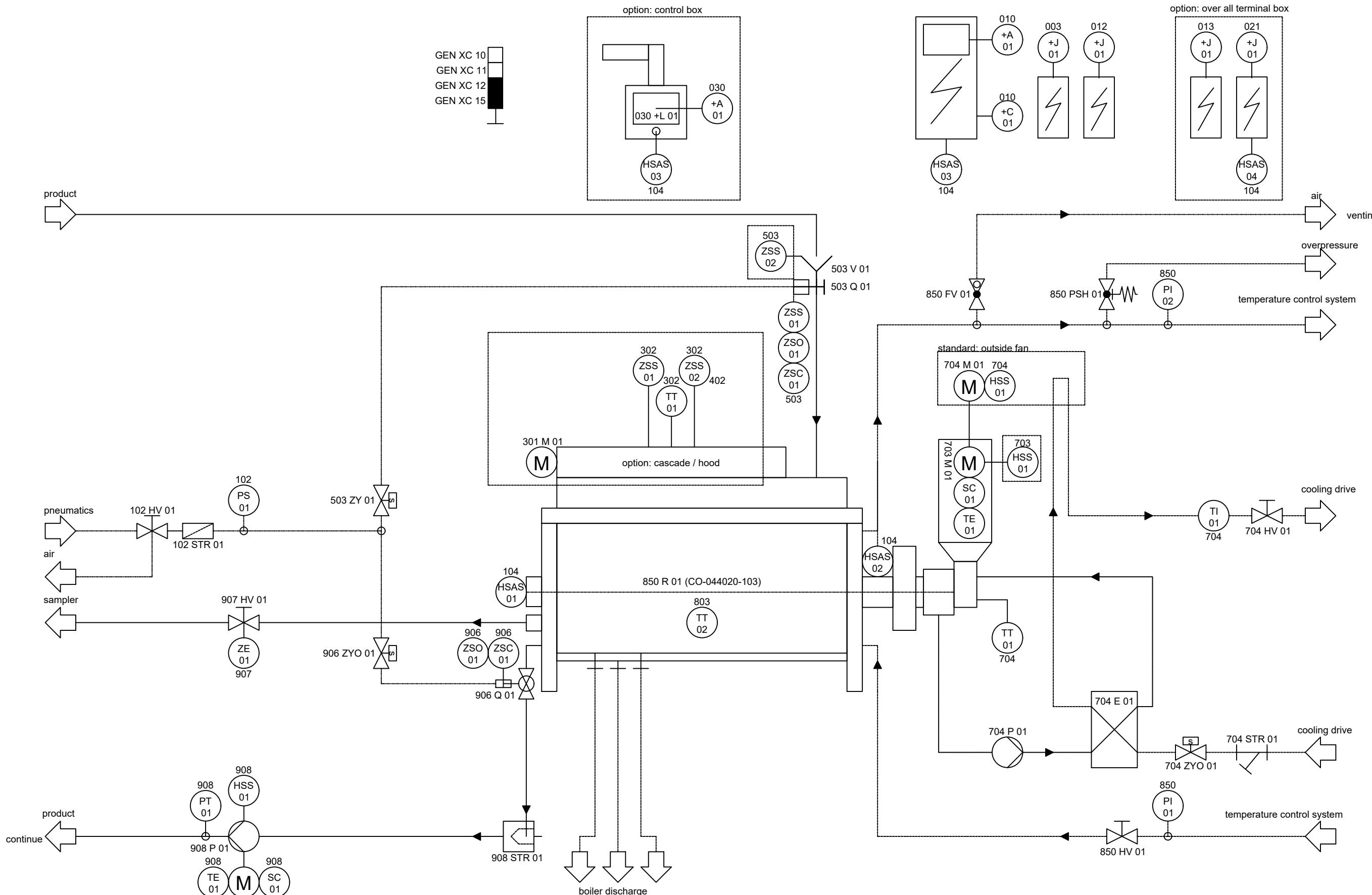
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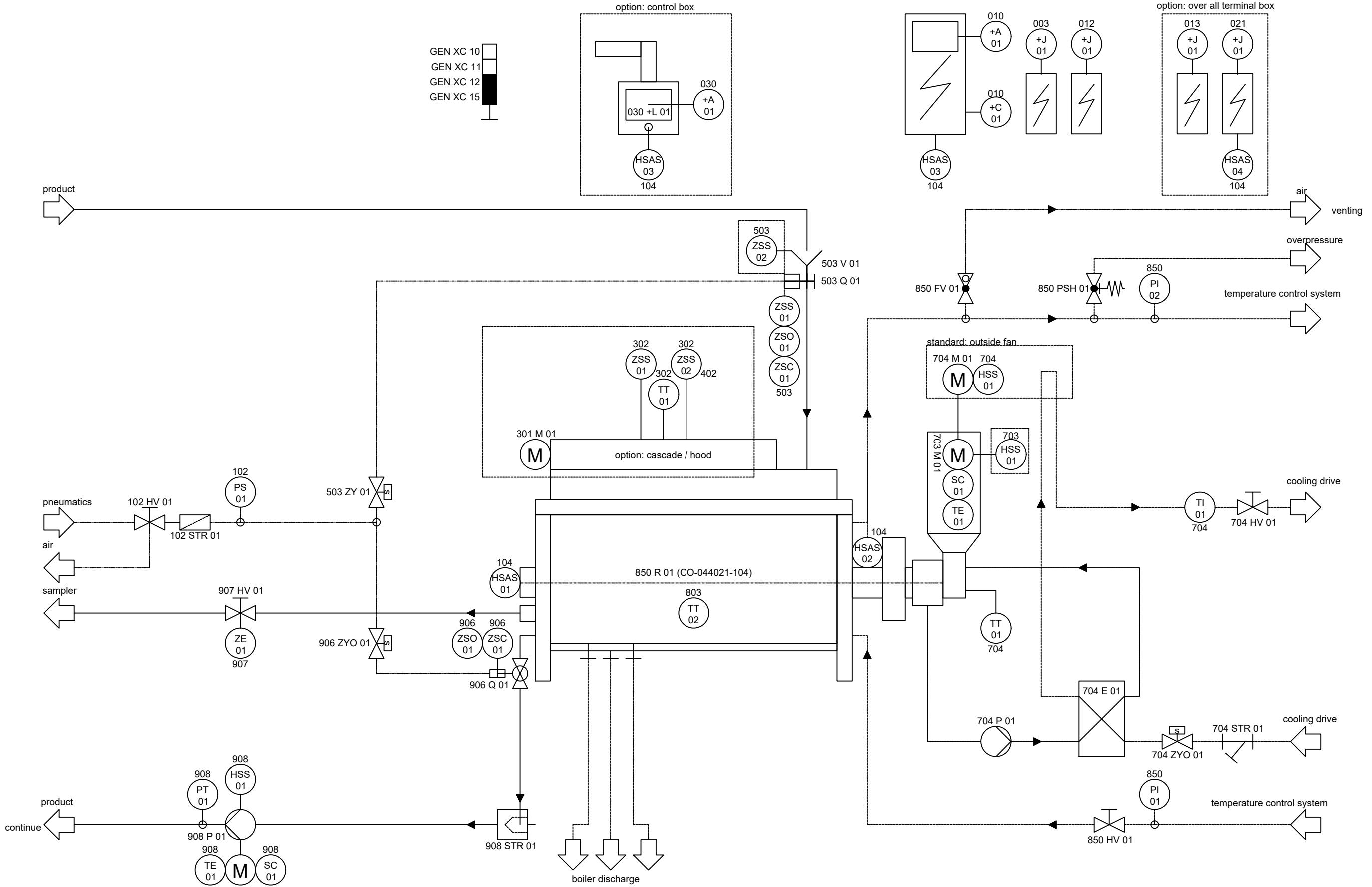
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00	2022.04.05	RBA	Buhler P&ID		Approved revision	2022.04.05 MCHT	AUTHOR OF THE PROJECT: IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennsauken NJ, 08109	OWNER: CARGILL COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225	Cargill™	
Revision	Date	Name	Description			Date	Name			

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				Date	Name					

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Checked by	WKT	2022.04.05		
Quality	MCHT	2022.04.05		
Approved by				
Original .....				
Replaced by .....				

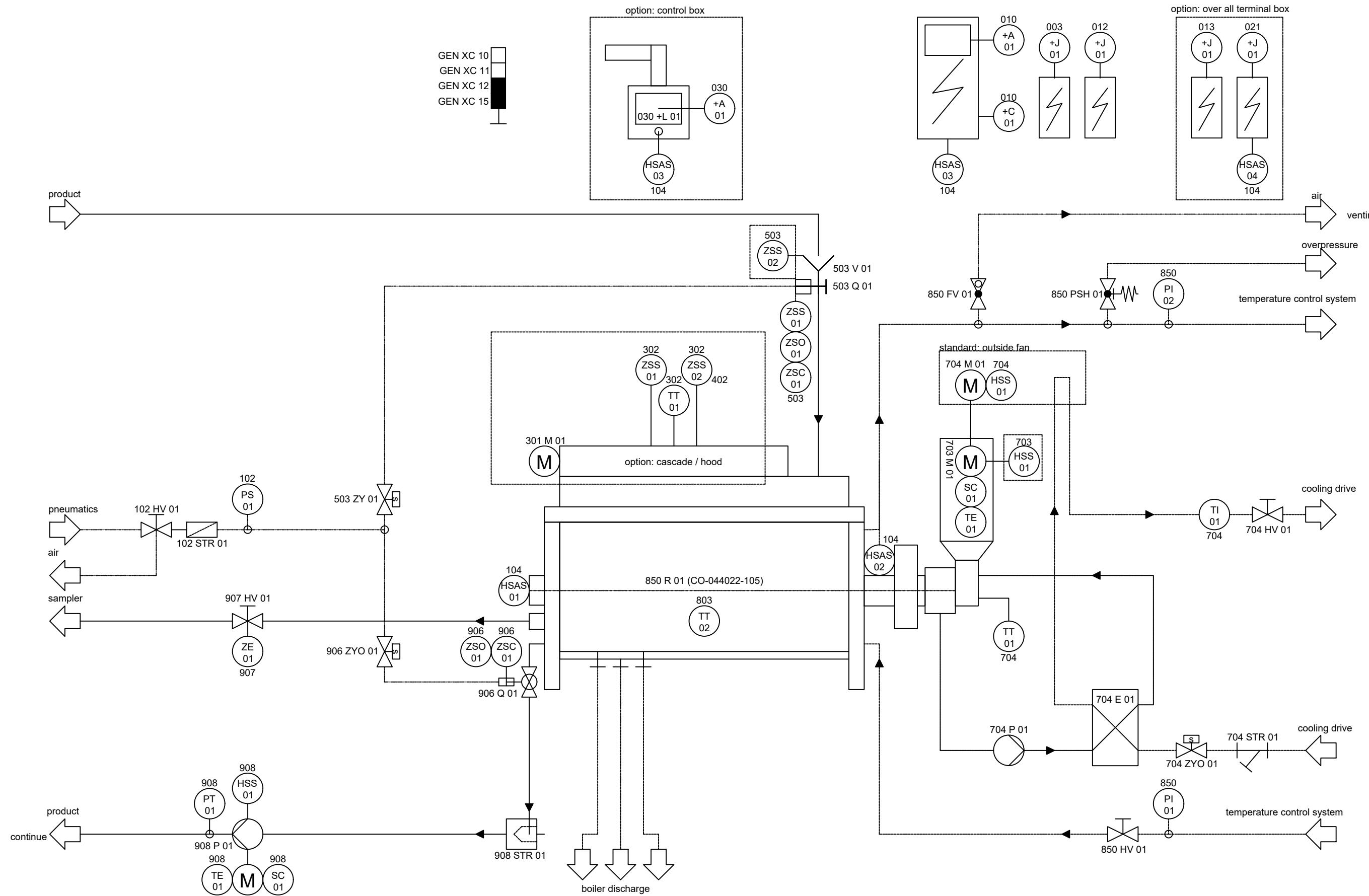
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	00	2022.04.05	RBA	Buhler P&ID	2022.04.05 MCHT
Revision	Date	Name	Description	Date	Name

<b>CARGILL</b> O2004 Project Luxury					
AUTHOR OF THE PROJECT: <b>IPS USA</b> Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennsauken NJ, 08109	<b>Group - IPS</b> Industrial Projects Services			OWNER: <b>CARGILL</b> COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225	

Document Title:  
Conche C4  
CO-044021-104

Reference IPS :	--	Sheet
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PD 01-044036	61	
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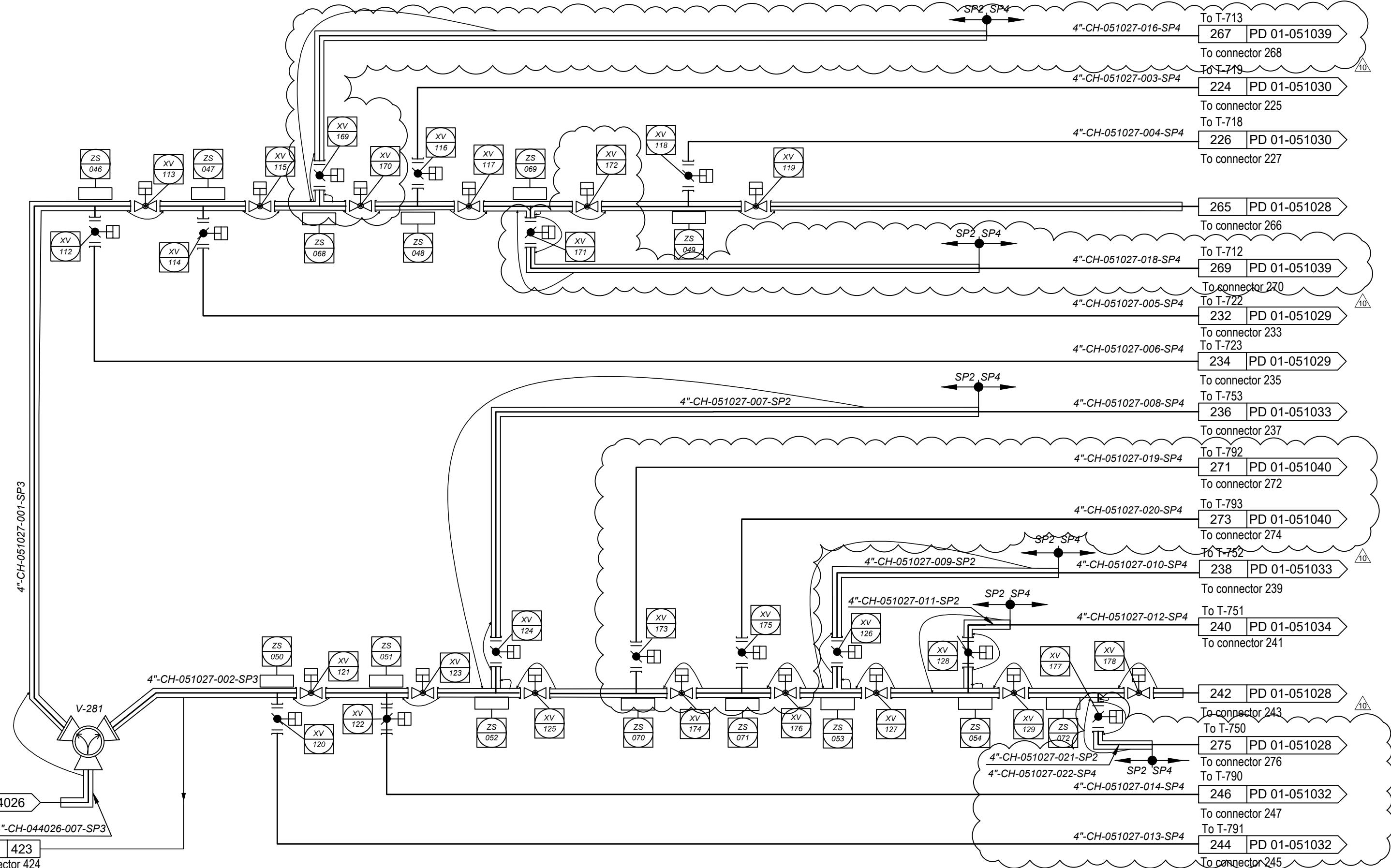
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Replaced by .....						
Revisions		00	2022.04.05	RBA	Buhler P&ID	
Revision	Date	Name	Description			
					Date	Name
					Approved revision	
						AUTHOR IPS USA Industrial Project 7905 Browning Pensacola, FL

The logo features the word "CARGILL" in a large, bold, black, sans-serif font at the top. Below it, the text "O2004 Project Luxury" is displayed in a smaller, black, serif font. To the right of the text is a stylized green and blue swoosh graphic.

Document Title:  
**Conche C5**  
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Reference IPS :	Sheet
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Reference CARGILL :	of
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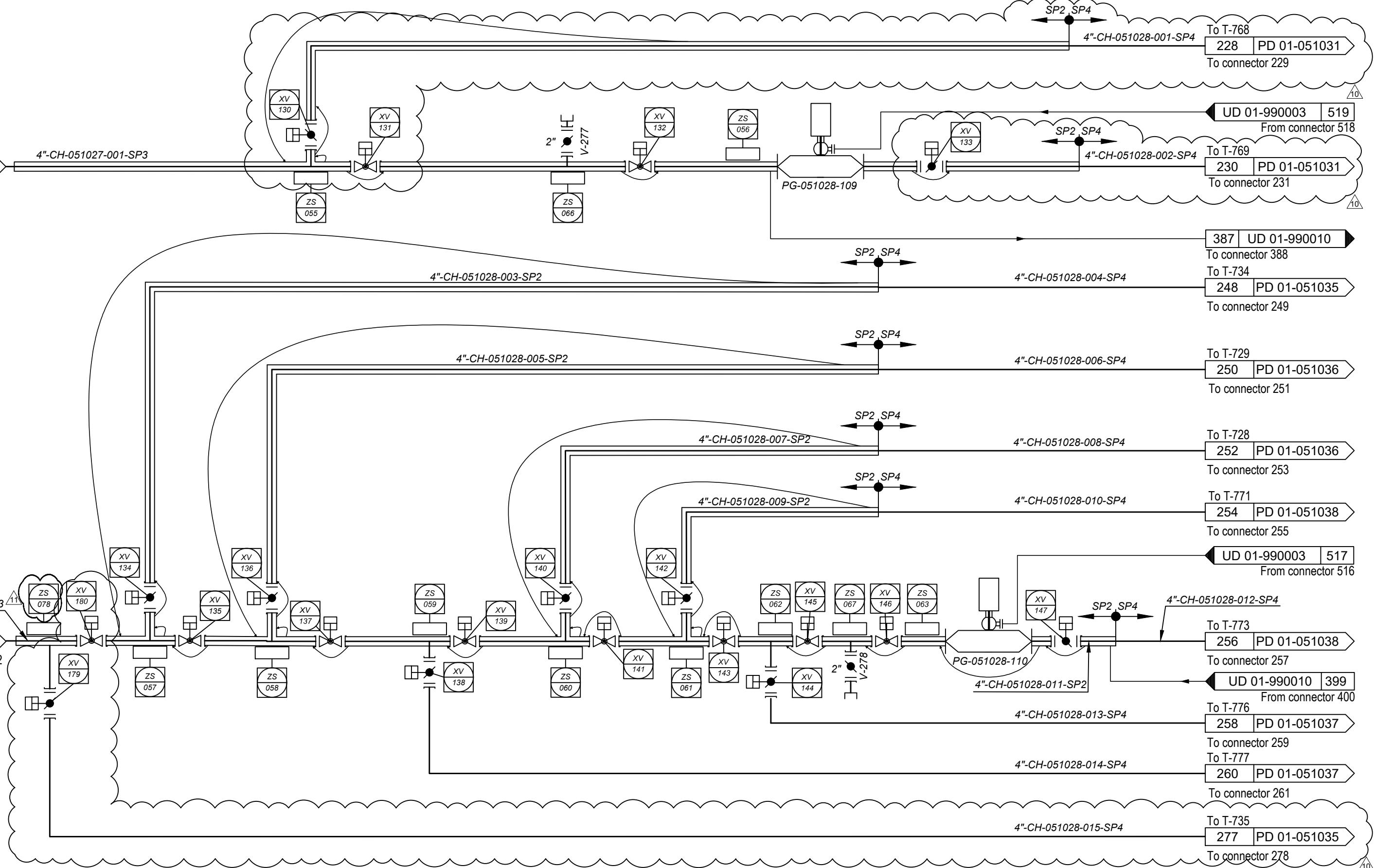
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Approved by	MCO	2022.01.24		06	2021.05.25	BFE	Issue For Approval		2021.05.25	KDS		61		
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Replaced by .....				Revision	Date	Name	Description		Date	Name				

**Group - IPS**  
Industrial Projects Services

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Dark chocolate\_new pigged lines

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Edited by	ABB	2022.03.12			
Checked by	WKT	2022.03.12			
Quality	MCHT	2022.03.12			
Approved by	MCO	2022.03.12			
Original .....					
Replaced by .....					

Revisions

Approved revision	10	2022.03.12	ABB	Update Tag Pig Detector	2022.03.12	MCHT
09	2022.01.24	BFE		Issue For Approval	2022.01.24	MCHT
08	2021.12.03	BFE		Issue For Approval	2021.12.03	KDS
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06	2021.05.25	BFE		Issue For Approval	2021.05.25	KDS
				Description	Date	Name

Approved revision

Revision Date Name Description Date Name

AUTHOR OF THE PROJECT:  
IPS USA  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington NJ 08810

Group - IPS  
Industrial Projects Services

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O2004 Project Luxury

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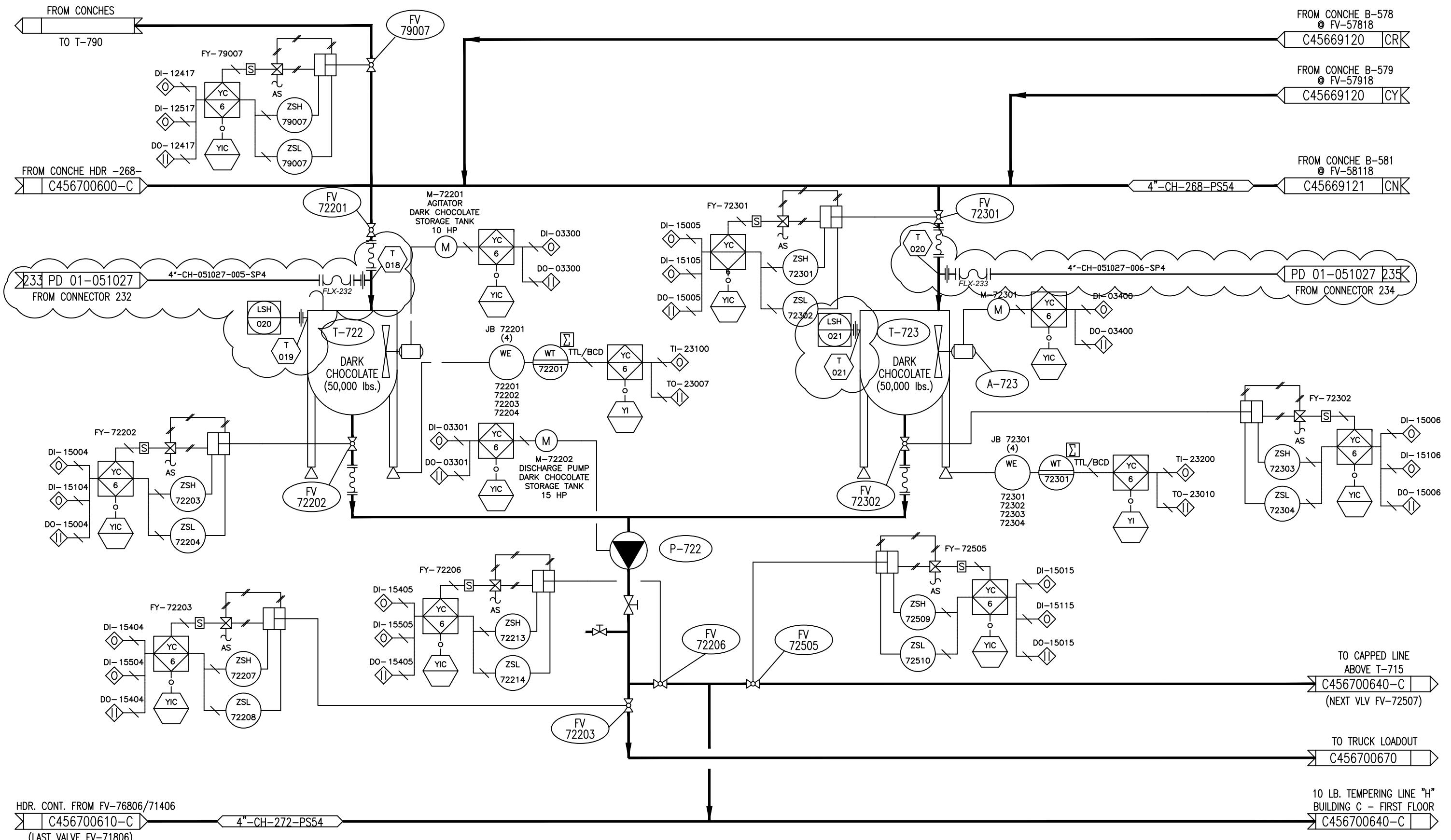
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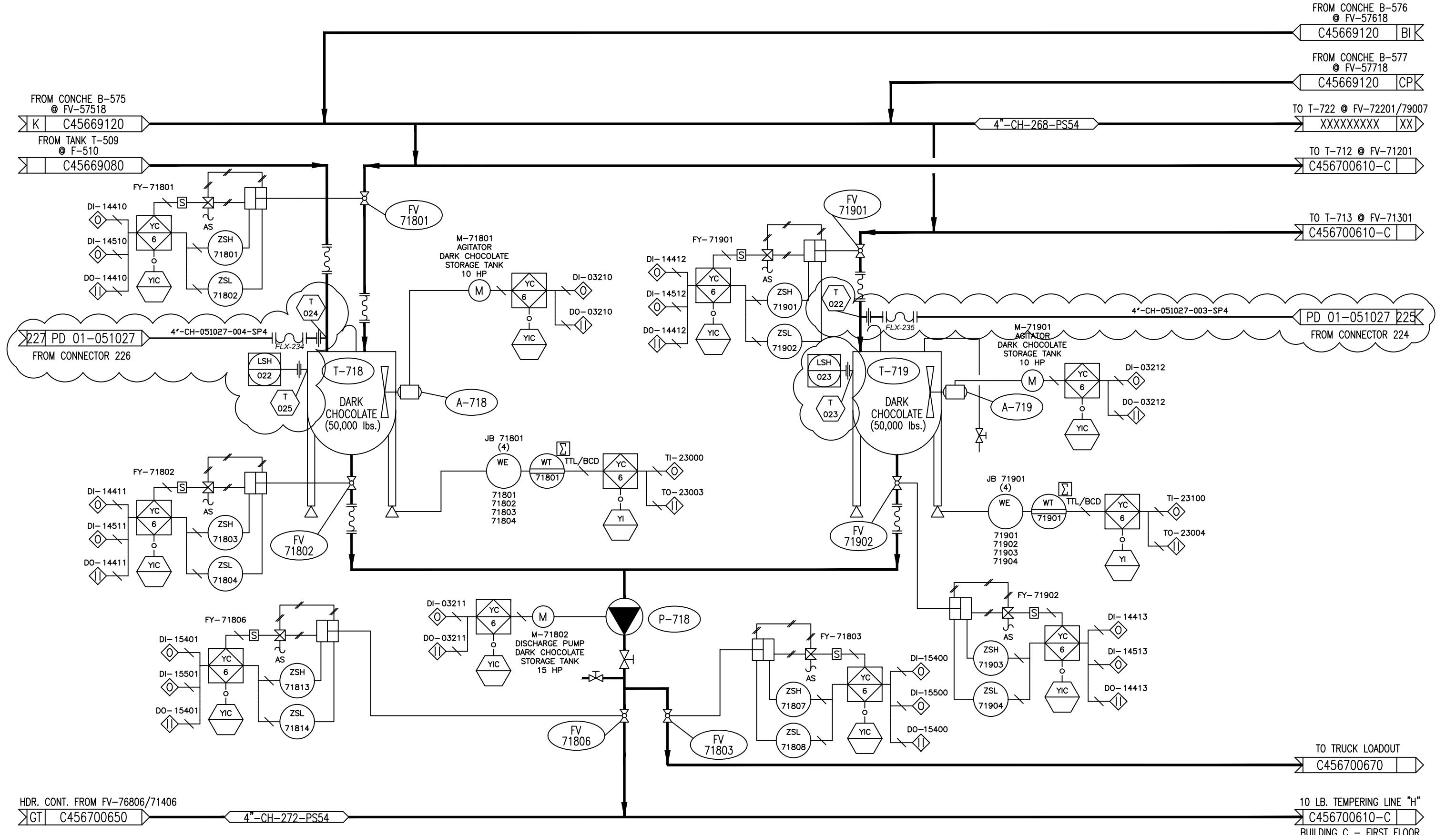
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Sheet 47

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PD 01-051028  
of 61

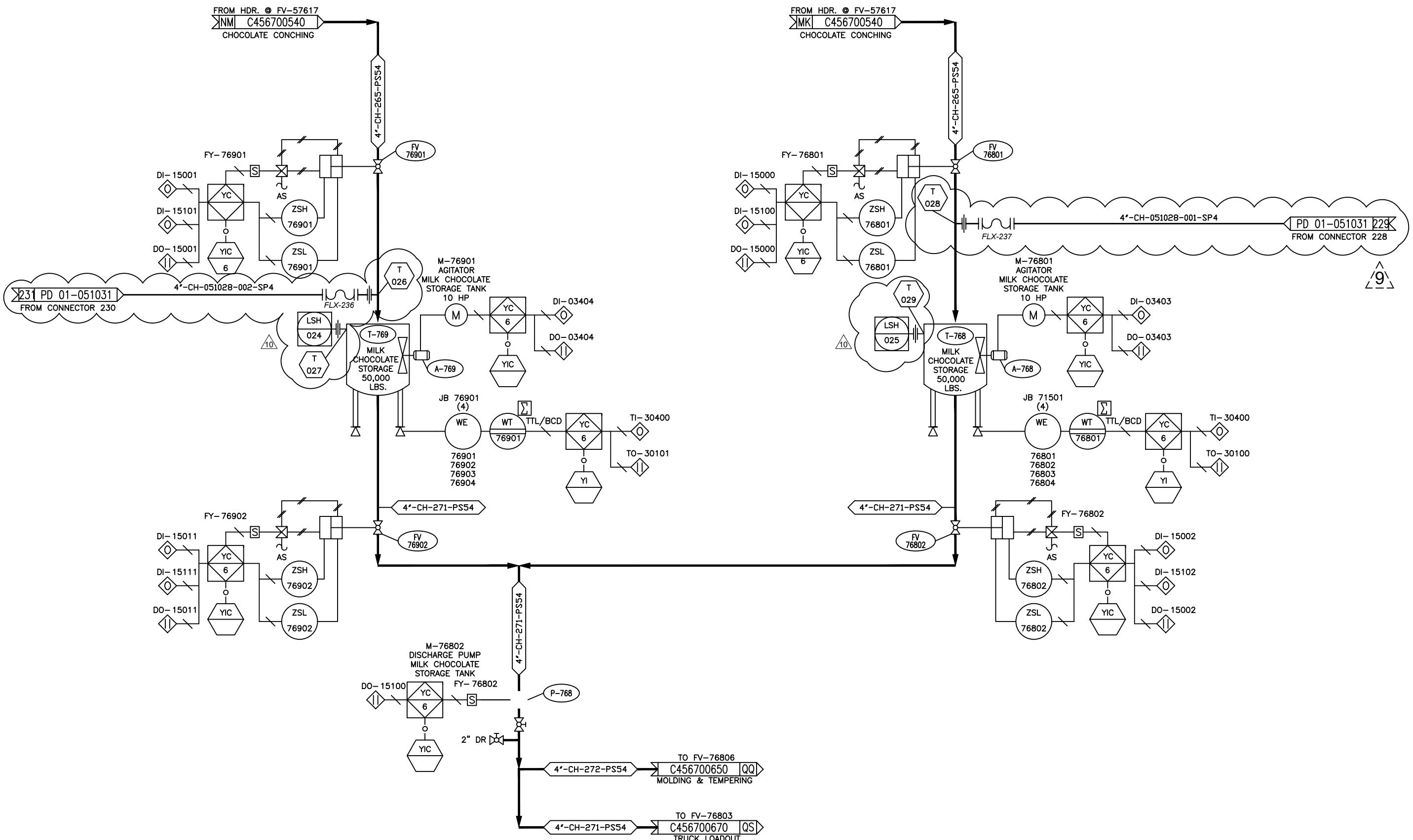
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Replaced by	PD 01-051030													
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Checked by	WKT	2022.01.24
Quality	MCHT	2022.01.24
Approved by	MCO	2022.01.24
Original	C456700591	
Replaced by	PD 01-051031	

Revisions	09	2022.01.24	RBA	Issue For Approval	Approved revision	2022.01.24	MCHT	
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05	05	2021.04.19	BFE	Issue For Approval				
Revised	Date	Name	Description			Date	Name	

**CARGILL**  
O2004 Project Luxury

AUTHOR OF THE PROJECT:  
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Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington NJ 08819

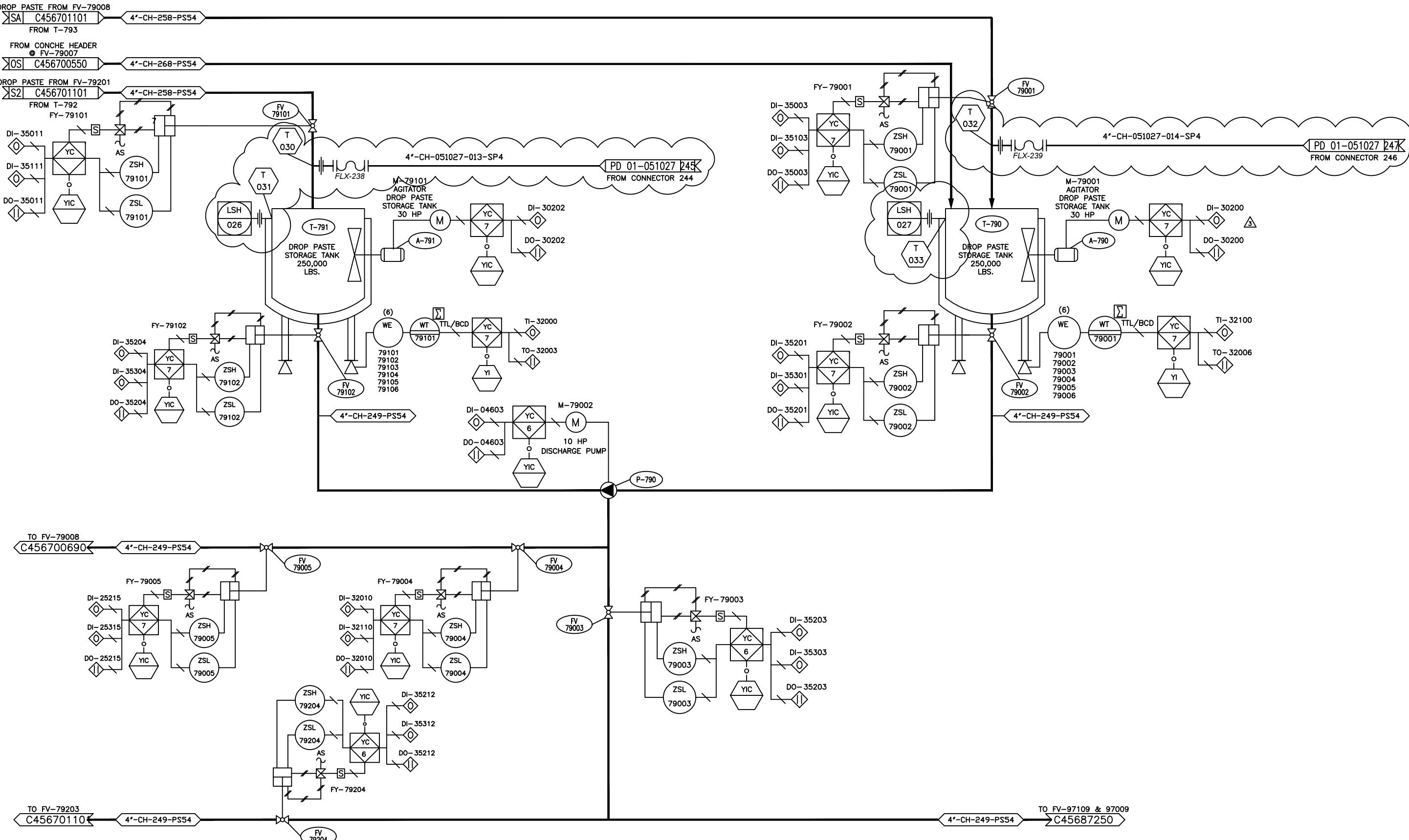
OWNER:  
**CARGILL COCOA & CHOCOLATE INC.**  
12500 W. CARMEN AVE.  
MILWAUKEE WI 53225

**Group - IPS**  
Industrial Projects Services

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Document Title: T-768 & T-769 Milk chocolate storage

Reference IPS : 06E.C1.08.031 Sheet 50  
Reference CARGILL : PD 01-051031 of 61  
File name : O2004\_06E.C1.08\_P&ID's\_Rev13\_2022.05.23



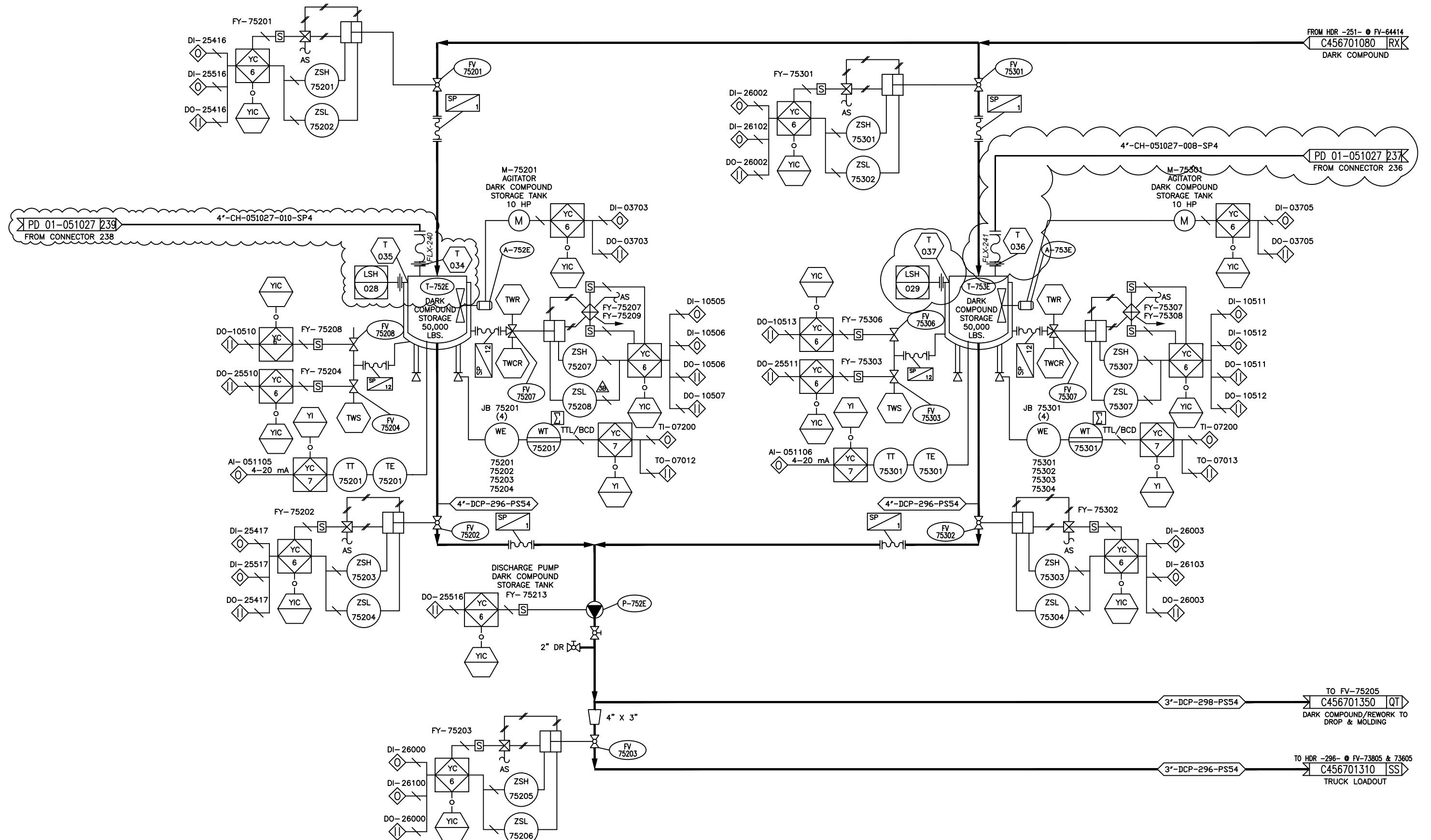
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Replaced by	PD 01-051032			Revision	Date	Name	Description		Date	Name		Revision	Date	Name	Description	Date	Name

AUTHOR OF THE PROJECT:  
**IPS USA**  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Peninsular NJ, 08109

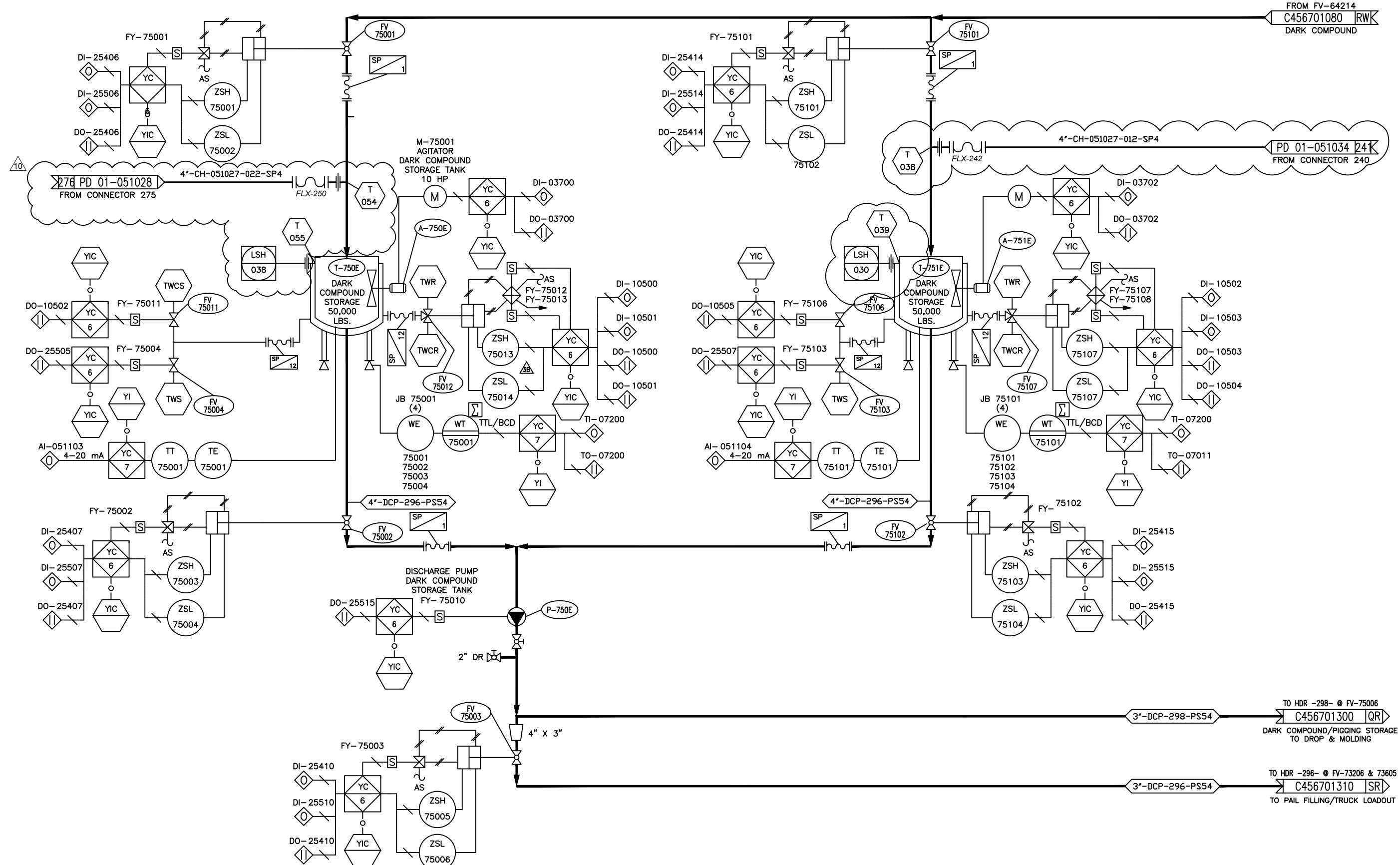
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Checked by	WKT	2021.12.03		07	2021.11.03	BFE	Issue For Approval		2021.11.03	KDS			
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Replaced by	PD 01-051033												
	Revision	Date	Name		Description				Date	Name			



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Revision	Date	Name	Description		Date	Name				

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AUTHOR OF THE PROJECT:  
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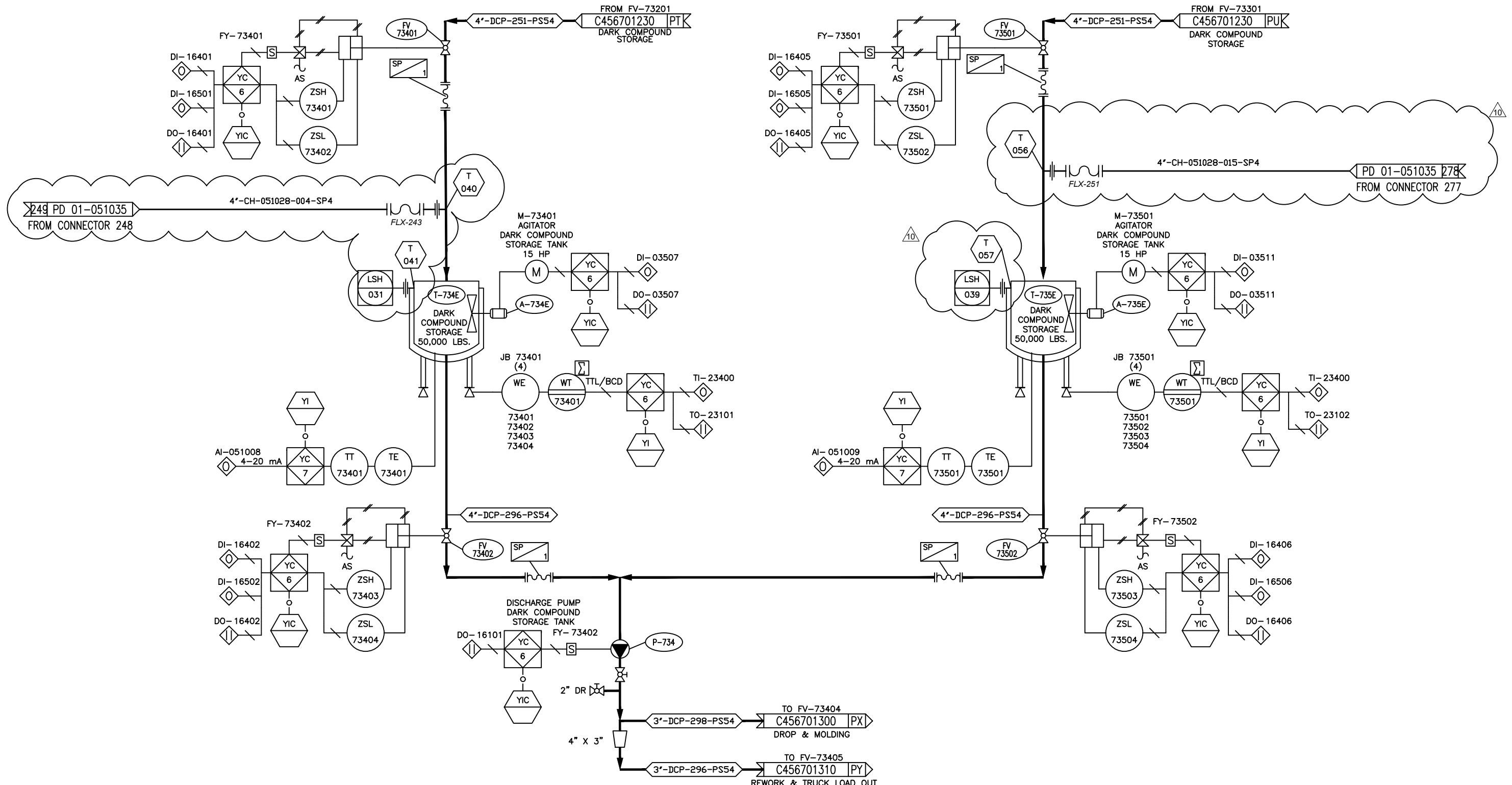
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T-750 & T-751 Dark compound storage

Reference IPS :  
06E.C1.08.034  
Sheet 53

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PD 01-051034  
of 61

File name :  
O2004\_06E.C1.08\_P&ID's\_Rev13\_2022.05.23

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Edited by	RBA	2022.01.24
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Original	C456701240	
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Revisions

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08	2021.12.03	BFE	Issue For Approval
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05	2021.04.19	BFE	Issue For Approval

Approved revision

Date

Name

Description

Date

Name

Approved revision

Date

Name

**CARGILL**  
O2004 Project Luxury  
AUTHOR OF THE PROJECT:  
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Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennsauken NJ, 08109

**Group - IPS**  
Industrial Projects Services

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Document Title:  
**T-734 & T-735 Dark compound storage**

Reference IPS :  
06E.C1.08.035

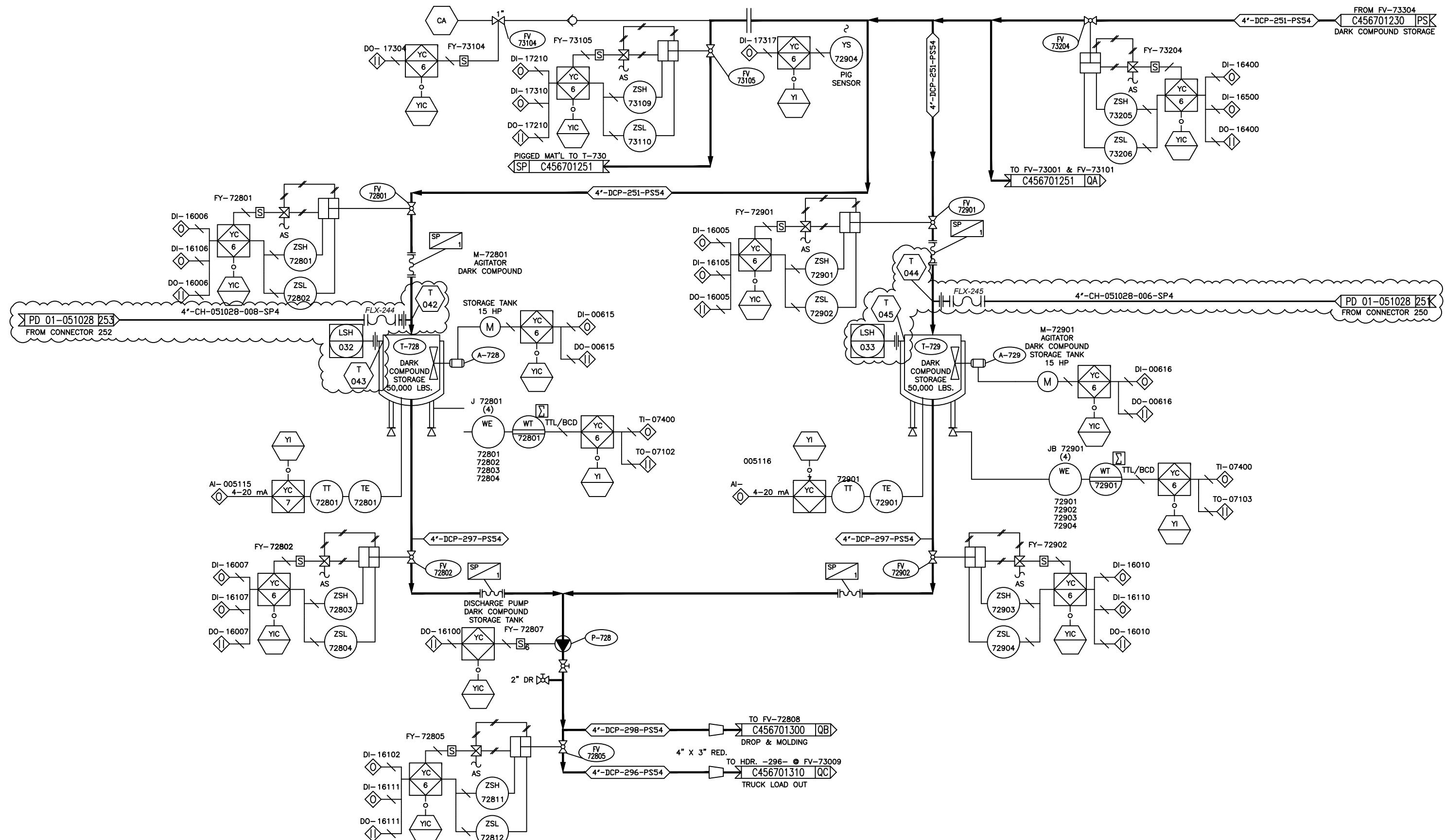
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61

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O2004\_06E.C1.08\_P&ID's\_Rev13\_2022.05.23

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Revisions

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06	2021.05.25	BFE	Issue For Approval		2021.05.25	KDS
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04	2021.03.25	BFE	Fifth Edition		2021.03.25	KDS
			Description		Date	Name

Approved revision

Date

Name

Description

Date

Name

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AUTHOR OF THE PROJECT:  
IPS USA  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington NJ, 08810

OWNER:  
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COCOA & CHOCOLATE, INC.  
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MILWAUKEE WI, 53225



Industrial Projects Services



Document Title:  
T-728 & T-729 Dark compound storage

Reference IPS :  
06E.C1.08.036

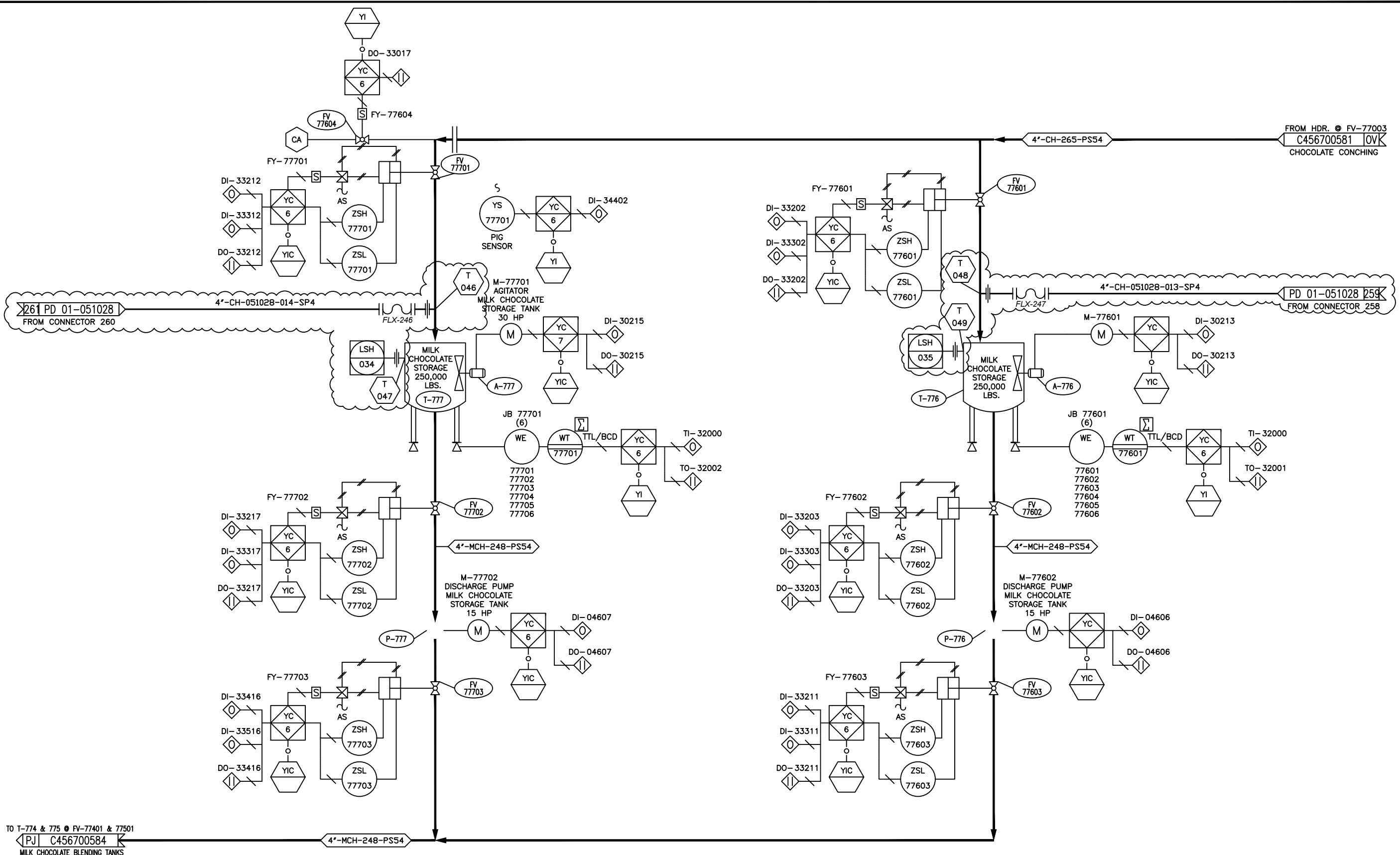
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Reference CARGILL :  
PD 01-051036

of  
61

File name :  
O2004\_06E.C1.08\_P&ID's\_Rev13\_2022.05.23

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Approved by	KDS	2021.12.03
Original	C456700583	
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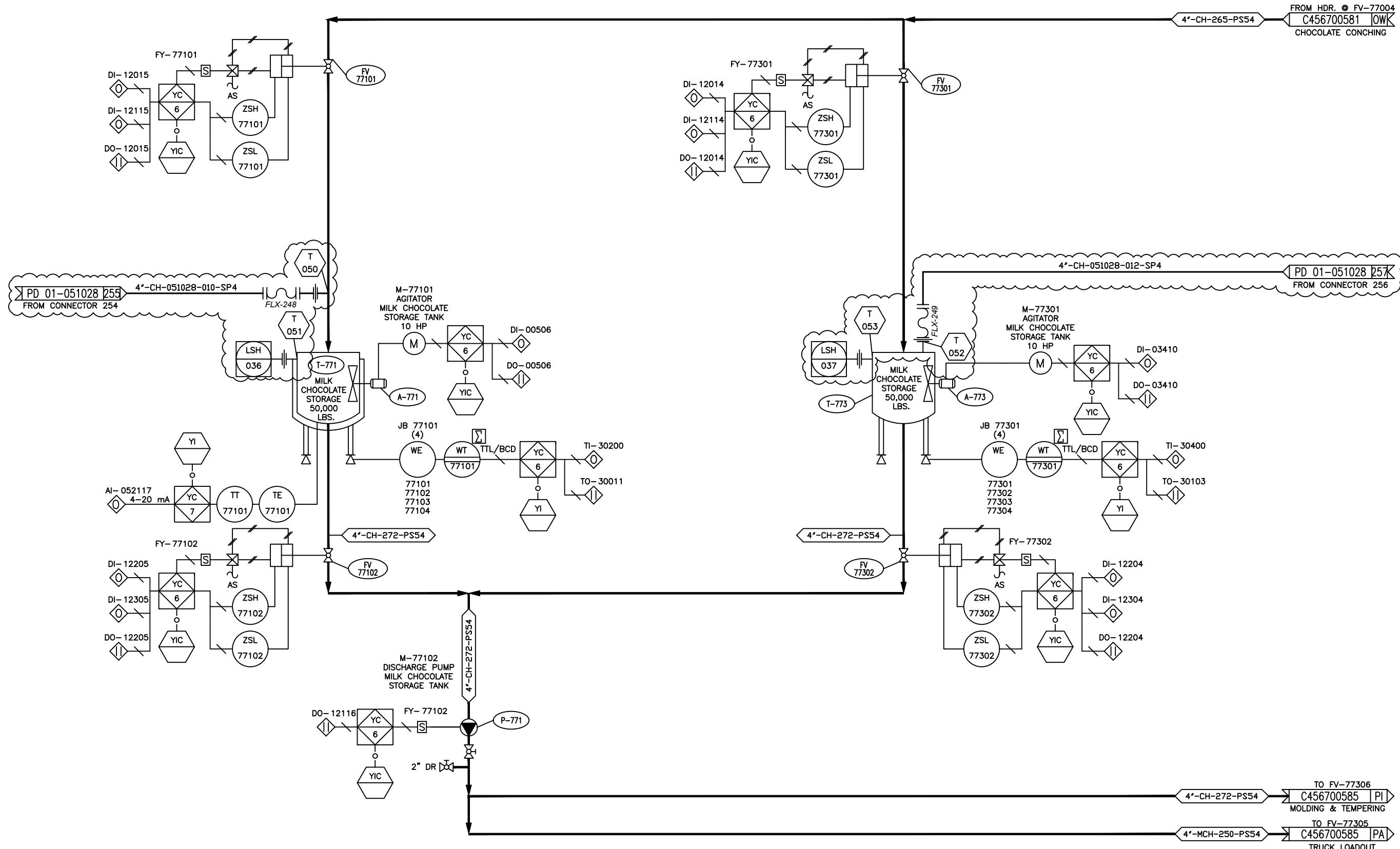
Revisions	08	2021.12.03	BFE	Issue For Approval	Approved revision	2021.12.03	KDS
	07	2021.11.03	BFE	Issue For Approval		2021.11.03	KDS
	06	2021.05.25	BFE	Issue For Approval		2021.05.25	KDS
	05	2021.04.19	BFE	Issue For Approval		2021.04.19	KDS
	04	2021.03.25	BFE	Fifth Edition		2021.03.25	KDS
				Description		Date	Name

<b>CARGILL</b> O2004 Project Luxury			
<b>AUTHOR OF THE PROJECT:</b> IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington NJ, 08810			
<b>OWNER:</b> CARGILL COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225		<b>Group - IPS</b> Industrial Projects Services	

Document Title:	T-776 & T-777 Dark chocolate storage
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Reference IPS :	06E.C1.08.037	Sheet
Reference CARGILL :	of	
PD 01-051037		61
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<b>CARGILL</b> O2004 Project Luxury		
AUTHOR OF THE PROJECT: IPS USA Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington NJ, 08810		
Group - IPS Industrial Projects Services	OWNER: CARGILL COCA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225	<b>Cargill™</b>

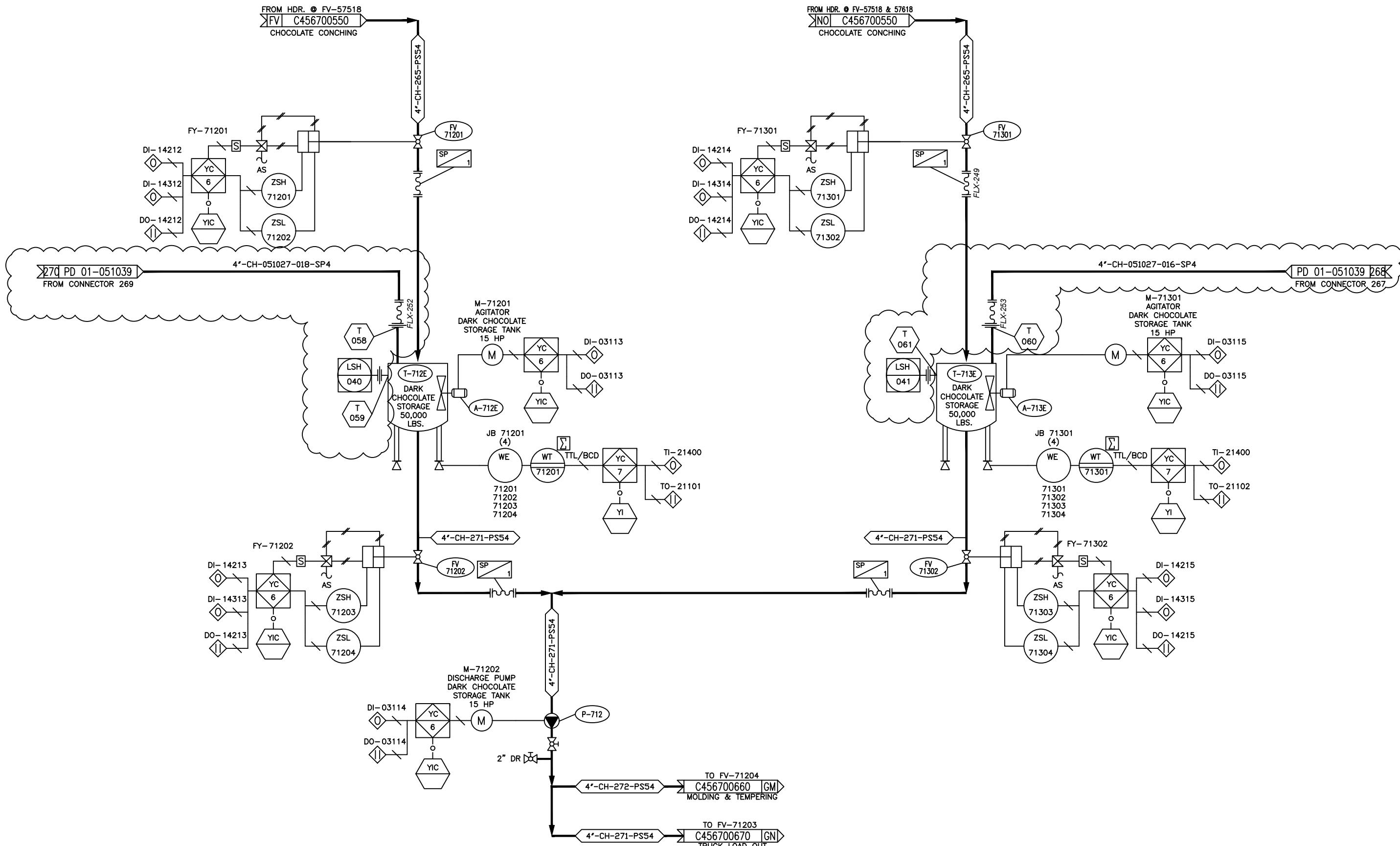
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T-771 & T-773 Dark chocolate storage

Reference IPS :  
06.E.C1.08.038  
Sheet 57

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Revision	Date	Name	Description	Approved	Date	Name	
00	2022.01.24	RBA	Fifth Edition	2022.01.24	MCHT		

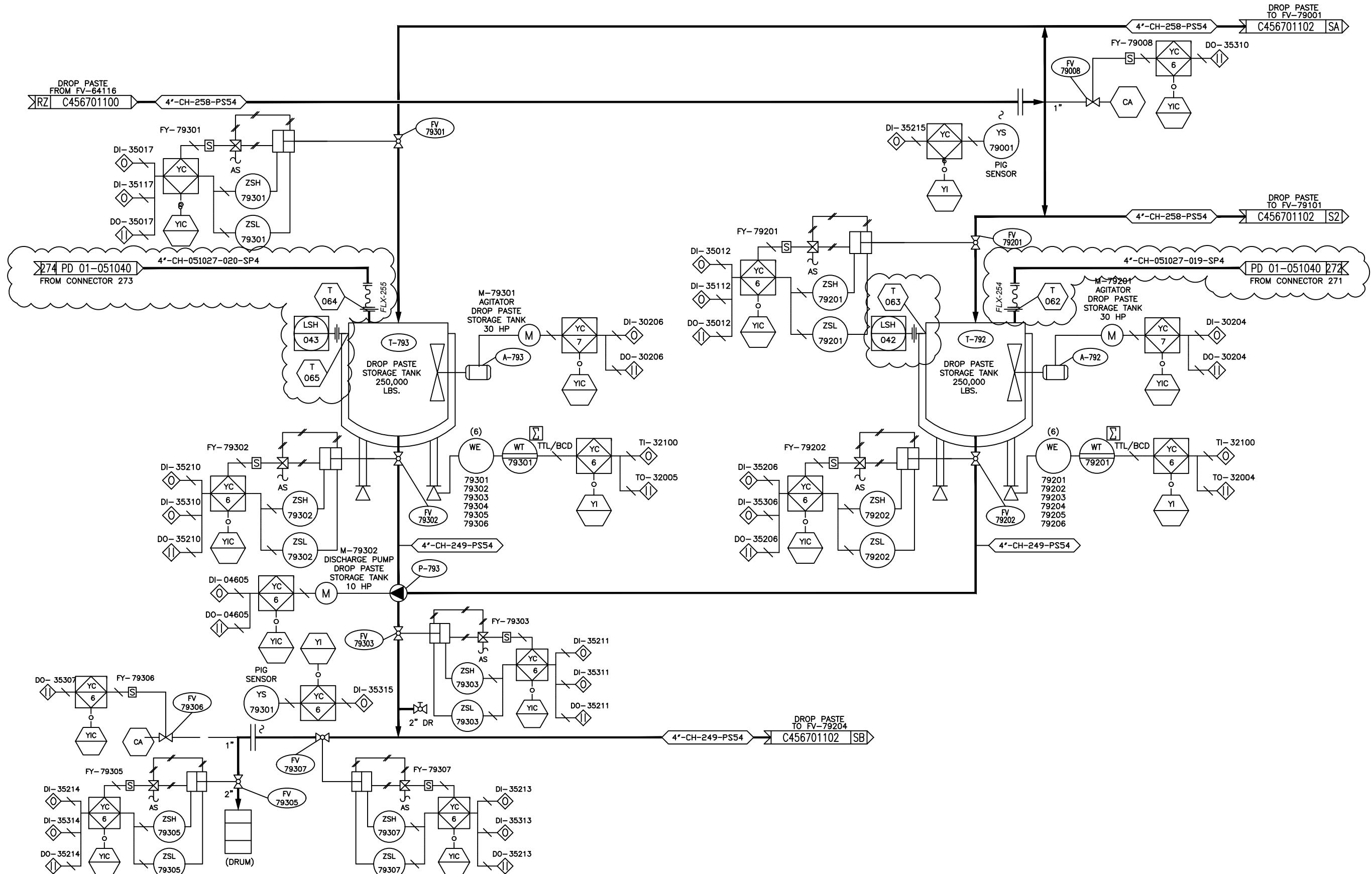
<b>CARGILL</b> O2004 Project Luxury		
AUTHOR OF THE PROJECT: <b>IPS USA</b> Industrial Projects Services USA corp 7905 Browning Road, suite 214 Pennington, NJ 08510		
OWNER: <b>CARGILL</b> COCOA & CHOCOLATE, INC. 12500 W. CARMEN AVE. MILWAUKEE WI, 53225	<b>Group - IPS</b> Industrial Projects Services	<b>Cargill</b>

Document Title:  
**T-712 & T-713 Dark chocolate storage**

Reference IPS :  
06E.C1.08.039  
Sheet 58

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of 61

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**CARGILL**  
O2004 Project Luxury

AUTHOR OF THE PROJECT:  
**IPS USA**  
Industrial Projects Services USA corp  
7905 Browning Road, suite 214  
Pennington NJ, 08810

OWNER:  
**CARGILL**  
COCOA & CHOCOLATE, INC.  
12500 W. CARMEN AVE.  
MILWAUKEE WI, 53225



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**T-792 & T-793 Dark chocolate storage**

Reference IPS :  
06E.C1.08.040  
Sheet 59

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PD 01-051040  
of 61

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O2004\_06E.C1.08\_P&ID's\_Rev13\_2022.05.23

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### Tie-ins List

Tie-ins No.	Tie-ins Placement	Fluid	P&IDs Number	Tie-ins No.	Tie-ins Placement	Fluid	P&IDs Number
T-001	Level 6	Sugar	PD 01-031001	T-028	Level 1	Chocolate	PD 01-051031
T-002	Level 6	Dextrose	PD 01-033002	T-029	Level 1	Chocolate	PD 01-051031
T-003	Level 6	Dextrose	PD 01-033002	T-030	Level 1	Chocolate	PD 01-051032
T-004	Level 6	Cocoa Powder	PD 01-034003	T-031	Level 1	Chocolate	PD 01-051032
T-005	Level 6	Cocoa Powder	PD 01-034004	T-032	Level 1	Chocolate	PD 01-051032
T-006	Level 6	Cocoa Powder	PD 01-034004	T-033	Level 1	Chocolate	PD 01-051032
T-007	Level 6	Cocoa Powder	PD 01-034004	T-034	Level 1	Chocolate	PD 01-051033
T-008	Level 1	Cocoa Liquor	PD 01-054005	T-035	Level 1	Chocolate	PD 01-051033
T-009	Level 1	Cocoa Liquor	PD 01-054005	T-036	Level 1	Chocolate	PD 01-051033
T-010	Level 1	Cocoa Liquor	PD 01-054005	T-037	Level 1	Chocolate	PD 01-051033
T-011	Level 1	Cocoa Liquor	PD 01-054005	T-038	Level 1	Chocolate	PD 01-051034
T-012	Level 6	Cocoa Liquor	PD 01-054006	T-039	Level 1	Chocolate	PD 01-051034
T-013	Level 6	C-blend	PD 01-054006	T-040	Level 1	Chocolate	PD 01-051035
T-014	Level 6	Cocoa Butter	PD 01-055007	T-041	Level 1	Chocolate	PD 01-051035
T-015	Level 1	Cocoa Butter	PD 01-055008	T-042	Level 1	Chocolate	PD 01-051036
T-016	Level 2	Milk Fat	PD 01-056009	T-043	Level 1	Chocolate	PD 01-051036
T-017	Level 1	Lecithin	PD 01-057010	T-044	Level 1	Chocolate	PD 01-051036
T-018	Level 1	Chocolate	PD 01-051029	T-045	Level 1	Chocolate	PD 01-051036
T-019	Level 1	Chocolate	PD 01-051029	T-046	Level 1	Chocolate	PD 01-051037
T-020	Level 1	Chocolate	PD 01-051029	T-047	Level 1	Chocolate	PD 01-051037
T-021	Level 1	Chocolate	PD 01-051029	T-048	Level 1	Chocolate	PD 01-051037
T-022	Level 1	Chocolate	PD 01-051030	T-049	Level 1	Chocolate	PD 01-051037
T-023	Level 1	Chocolate	PD 01-051030	T-050	Level 1	Chocolate	PD 01-051038
T-024	Level 1	Chocolate	PD 01-051030	T-051	Level 1	Chocolate	PD 01-051038
T-025	Level 1	Chocolate	PD 01-051030	T-052	Level 1	Chocolate	PD 01-051038
T-026	Level 1	Chocolate	PD 01-051031	T-053	Level 1	Chocolate	PD 01-051038
T-027	Level 1	Chocolate	PD 01-051031				

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		Date	Name	Date	Name		
		Description					



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Tie-ins list

Reference IPS :  
06E.C1.08.041  
Sheet 60

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of 61

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Revision	Date	Name	Description	Date	Name		



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