REVISIONS				
REV.	REMARKS	DRAWN	DATE	APPROVED
A	ADDED WARM HELIUM LINE	N HUQUE	28NOV16	
B	ALTERED PUMP LINE AND WARM HELIUM LINE	N HUQUE	15MAR17	
C	ADDED CPV24MIX VALVE AND GHRP DIODES	N HUQUE	23AUG17	
	ALTERED CRVXLXX65 SET POINT	N HUQUE	23AUG17	

SHIELD SUPPLY 3.0 ATM 35K

SHIELD RETURN

4.5K SUPPLY 3.0 ATM

2K RETURN

TO GUARD VACUUM HEADER

COOLDOWN HEADER

CMVCMXX12

CMVCMXX65

CMVCMXX10

CPVCMXX_RT

CMVCMXX60

CMVCMXX66

CMVCMXX64

TRANSFER LINE

CEVCMXX_CD

CLVCMXX15

CFICMXX13

HOT WIRE MANOMETER

LIFT PLATE

CRVCMXX62 38 PSID

CRVCMXX61 15 PSID

CRVCMXX60 RD SP=43 PSIG

CMVCMXX63

CRVCMXX63 150 PSIG

CPICMXX10 30/30

CPICMXX11 0-50 TORR

CPICMXX12 0-5000 TORR

CMVCMXX62

CMVCMXX61

CMVCMXX11

CRVCMXX10 150 PSIG

CCVCMXX10

CCVCMXX61

CCVCMXX60

CRVCMXX11 150 PSIG

CMVXLXX13

2K RETURN (LINE B)

CFICMXX12

2K SUPPLY (LINE A)

CEVCMXX_IN

CLVCMXX10 Cv = 3.0

THIN WALL SS WINDOW

CFICMXX10

4.5K SUPPLY (LINE C)

4.5K RETURN (LINE D)

CCVCMXX11

CRVCMXX12 2 PSIG

LIFT PLATE

CFICMXX11

BAYONET BOX (DWG NO. JLXXXXXXX)

LCLS-II CRYOMODULE

° GHRP UPPER TD

RETURN HEADER

° GHRP LOWER TD

CTDCMXX70

CTDCMXX71

CTDCMXX22

CTDCMXX23

CEVCMXX_CD1

CLVCMXX11

CLLCMXX10

CEVCMXX_JT1

CLVCMXX12

CLLCMXX11

2-PHASE LINE

CAVITIES

COOLDOWN HEATER

CTDCMXX10

CTDCMXX11

CTDCMXX62

CTDCMXX63

CTDCMXX66

CTDCMXX67

CTDCMXX16

CTDCMXX17

SHIELD RETURN (LINE F)

SHIELD SUPPLY (LINE E)

BELLOWS

CTDCMXX68

CTDCMXX69

CTDCMXX24

CTDCMXX25

CEVCMXX_CD2

CLVCMXX13

CTDCMXX12

CTDCMXX13

CTDCMXX60

CTDCMXX61

CTDCMXX64

CTDCMXX65

CTDCMXX18

CTDCMXX19

LCLS-II CRYOMODULE

° GHRP UPPER TD

RETURN HEADER

° GHRP LOWER TD

CLLCMXX12

CEVCMXX_JT2

CLVCMXX14

CLLCMXX13

2-PHASE LINE

CAVITIES

COOLDOWN HEATER

2K RETURN CAP

2K SUPPLY CAP

BEAMLINE INTERCEPT

CTDCMXX72

CTDCMXX73

CTDCMXX14

CTDCMXX15

4.5K SUPPLY JUMPER

CTDCMXX20

CTDCMXX21

SHIELD SUPPLY JUMPER

LIFT PLATE

CRVCMXX63 2 PSIG

VRVCMXX60

FARADAY CUP

IFYCMXX60

VIPCMXX60

THIN TI WINDOW

CRVCMXX61 RD SP=15PSIG

RETURN END CAP (DWG NO. F1002627I)

LEGEND

- MANUAL VALVE (MV13-566)
- CHECK VALVE (CV12-567)
- RELIEF VALVE (RV12-521A SP 90 PSIG PREFERRED; RV13-521A SP 90 PSIG USED PRIOR TO 2006)
- SOLENOID VALVE (PO or PC SV13-04 PREFERRED; (SNS) SV6189 USED PRIOR TO 2006)
- FLOW CONTROL VALVE
- CONTROL VALVE (PV, EV OR HV12-568; PV- PNEUMATIC EV- ELECTRICAL HV- HYDRAULIC)
- RIGHT ANGLE VALVE
- RUPTURE DISC (RD SP=0.6#)
- WINDOW
- FLOW METER (FI)
- REDUCER
- CAP
- DRAIN/VENT
- HOSE CONN
- HEATER
- FLANGE
- FLEX CONN
- HEAT EXCHANGER
- MULTI PIPE TRANSFER LINES
- SHIELD
- PRESSURE INDICATOR (PI 1-967)

SEE ANSI/ISA-S5.1 FOR ADDITIONAL INSTRUMENTATION SYMBOLS & IDENTIFICATION

- BAYONET (PREFERRED; USED PRIOR TO 2006)

INSTRUMENT LINES

- CONNECTION TO PROCESS
- PNEUMATIC SIGNAL
- ELECTRIC SIGNAL
- LIQUID LEVEL (LL QR15C)

2K CIRCUIT - BLUE
4.5K CIRCUIT - GREEN
SHIELD CIRCUIT - RED
GUARD VACUUM - ORANGE

DIM & TOL PER ANSI Y14.5
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS DECIMAL ANGLES
± 1/64 .XX ± .01 ± .5°
.XXX ± .005

MATERIAL

FINISH

DEBURR & BREAK ALL SHARP EDGES UNLESS OTHERWISE NOTED

DO NOT SCALE DRAWING

DRAWN N. HUQUE 11/06/17

CHECKED DATE

APPR/ORIGINATOR DATE

APPROVED

ENGINEER

Thomas Jefferson National Accelerator Facility
NEWPORT NEWS, VIRGINIA
UNITED STATES DEPARTMENT OF ENERGY

TITLE
SRF
LCLS-II
TEST STAND
LCLS-II LERF TEST STAND P&ID

SIZE E | CAD I.D. NO. | DRAWING NO. JLXXXXXXX | REV. —

SCALE NONE | SHOWN ON | SHEET 1 OF 1

JLXXXXXXX SHT 1 REV —