JSA/JEFFERSON LAB

CONSTRUCTION CHANGE REQUEST (CCR)

1 Subcontract No: 10-C0162 **Date: 9/27/2011**

2 Project Title: Technology and Engineering Development Facility Project

3 CCR No: 34 **PR No. FTCCL**

4 CCR Title: UPW Water room

5 Description:
Changes to the UPW water room to accommodate the additional equipment for the UPW system. Relocation of services originally shown in the water room due to reconfiguration. Add new water room to the TL annex to accommodate the make-up side of the UPW system.

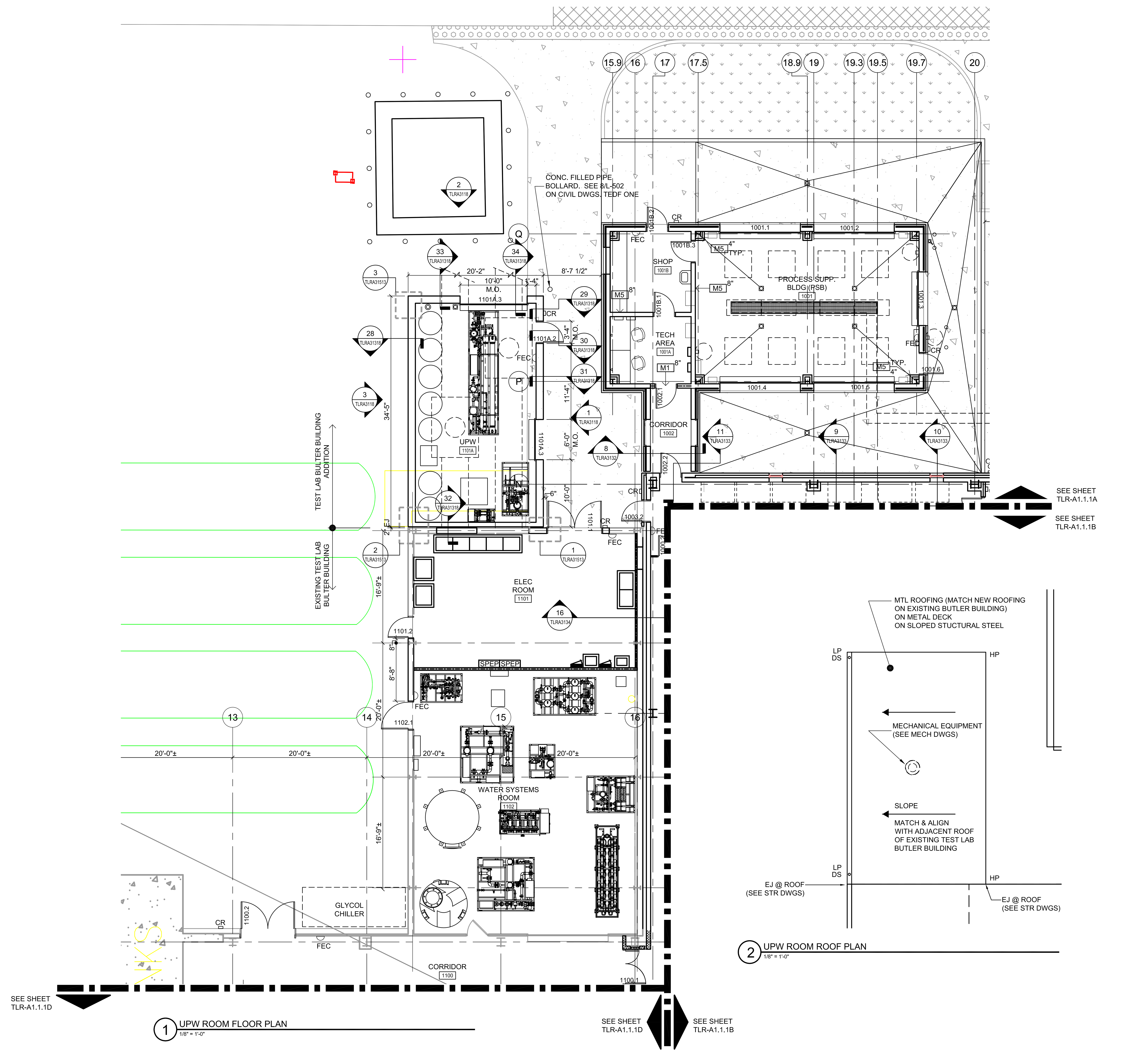
6 Changes in Drawings/Sketches:

TLR-A1.1.1K – Added UPW room floor plan and details. (New)
TLR-A3.1.1.8 – Added exterior elevations for UPW room. (New)
TLR-A3.1.3.18 – Added UPW room wall sections. (New)
TLR-A3.1.4.8 – Added UPW room wall section details. (New)
TLR-A3.1.5.13 – Added UPW room plan details. (New)
A4.0.5.9 – Added additional door and frame details associated with the UPW room. (New)
S3.24 – Added new structural foundation plan, roof framing plan, sections and details or the new UPS building. (New)
E5.3.1.4 – Revised layout for water room power requirements. Added UPW room power requirements. (New)
TLR-A1.1.2B – Updated mezzanine floor plan with boiler room layout, equipment, fire protection notes. Updated floor plan to include roof plan of UPW room. (Revised)
TLR-A3.1.3.7 – Added wall section #25. (Revised)
TLR-A4.1.1.1 – Updated door schedule with new UPW doors and door 1102.1. (Revised)
TLR-A4.1.1.2 – Updated door schedule with new mezzanine door. (Revised)
TLR-D1.1.1B – Added UPW interior finishes. (Revised)
TLR-M1.1.1A.1 – Added heating and ventilation for UPW room. Added process hot water supply/return piping serving UPW equipment. (Revised)
TLR-M1.1.1B – Revised chilled water supply/return for UPW water systems room 1102 layout. Added process hot water supply/return piping for UPW equipment. Added branch hot water supply/return piping to serve unit heater in UPW room. (Revised)
TLR-M2.1.2B1 – Added process hot water supply/return piping distribution. Added exhaust fan and transfer duct for boiler room 2000A. Added bypass feeder for process hot water system. (Revised)
TLR-M4.1.3 – Added schedules for 58-EF-3, 58-EF-9, and 58-UH-2. (Revised)
TLR-M7.9 – Added control diagrams for 58-EF-3, 58-EF-9 and 58-UH-2. (Revised)
TLR-P2.0.D – Revised underground UPW waste piping to exit south of building addition. (Revised)
TLR-P2.1.B – Revised and added floor drain piping for UPW boilers on mezzanine. (Revised)
TLR-P2.1.D – revised UPW waste piping on partial site plan. Revised floor drain locations in UPW rooms and reroute vent to sink. (Revised)
TLR-P2.2.D – Delete UPW piping to concrete slab. (Revised)
TLR-P2.3.B – Revised vent piping for UPW equipment on mezzanine. Added vent piping to boiler room. (Revised)
TLR-P2.4.B – Added boiler room and piping. Revised boiler layout to accommodate quantity of two (2). (Revised)

TLR-P2.4.D – Deleted UPW piping to concrete slab. (Revised)
TLR-P2.5.B – Delete and relocate storage tanks on concrete. (Revised)
TLR-P6.2.D1 – Revised UPW equipment layout and piping within Water room and new annex addition building. (Revised)
TLR-FP2.1.B – Added UPW fire protection. (Revised)
E0.2.5 – Added feeder to grey water pump skid. (Revised)
E0.301 – Revised feeders and equipment power to UPW and Water systems rooms #1101A and 1102, respectively. Added feeder for UPW room #1101A rooftop exhaust fan. Added feeder for primary circulation pump in boiler room #2000A(Revised)
E2P.1.1.B – Revised layout for UPW water systems room #1002 moved to new drawings E5.2.1.4 and added reference to new drawing E5.3.1.4. (Revised)
E2L.1.1.B – Added exit luminaries in Mail Electrical room #1101 and UPW water systems room #1102. Revised exit luminaries located in Service Corridor #1000 from type “X3” to type “X2”. Added interior luminaries, exit luminaries, lighting control and exterior luminaries for new UPW room #1101A. (Revised)
E2P.1.2.B – Added power for UPW boilers, primary circulation pump, secondary circulation pumps, exhaust fan, water heater, hot water circulation pump, and grey water pump skid. Added convenience receptacles within new Boiler room #2000A. (Revised)
E2L.1.2.B – Added luminaries and lighting controls in Boiler room #2000A. (Revised)

7 Changes in Specifications:

26 06 00 – Schedules for Electrical – Revised branch circuit panelboard directories for panels AP-1-1, EAP-MC-1, AP-HVAC-M-1 and EAP-HVAC-M-1.



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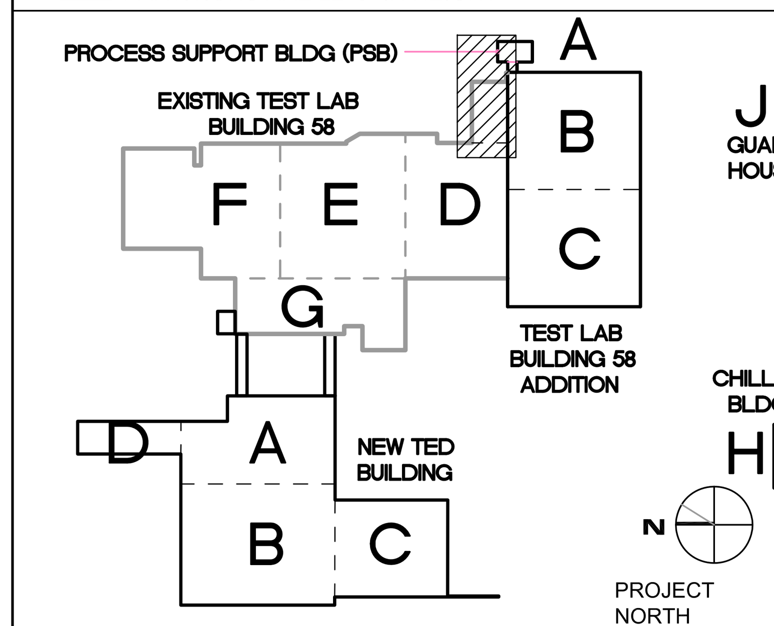
PLAN SYMBOLS KEY:

- EXISTING DOORS; NEW DOORS DOOR NUMBER; FRAME TYPE FOR GLAZED OPNGS — SEE DOOR AND FRAME DRAWING A4.0.4.1 & A4.0.4.2 AND DOOR SCHEDULES FOR MORE INFORMATION
- PARTITION TYPE; FURRING TYPE — SEE PARTITION KEY ON DRAWING A4.0.1.1 FOR MORE INFORMATION

DIMENSION STANDARD:
- DIMENSION TO FACE OF FINISH
- DIMENSION TO CENTERLINE

GENERAL NOTES:
1. ALIGN ALL NEW PARTITIONS EDGE TO EDGE OF EXISTING PARTITIONS TO REMAIN.
2. ALL INTERIOR WALL PARTITIONS ARE NON-RATED 8" MASONRY WITH GROUTED CORES. UNO.

M7 PARTITIONS ARE 16'-8" IN HEIGHT
M8 PARTITIONS ARE 22'-0" IN HEIGHT



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
		CCR NO. 34		09/26/11

REVISIONS

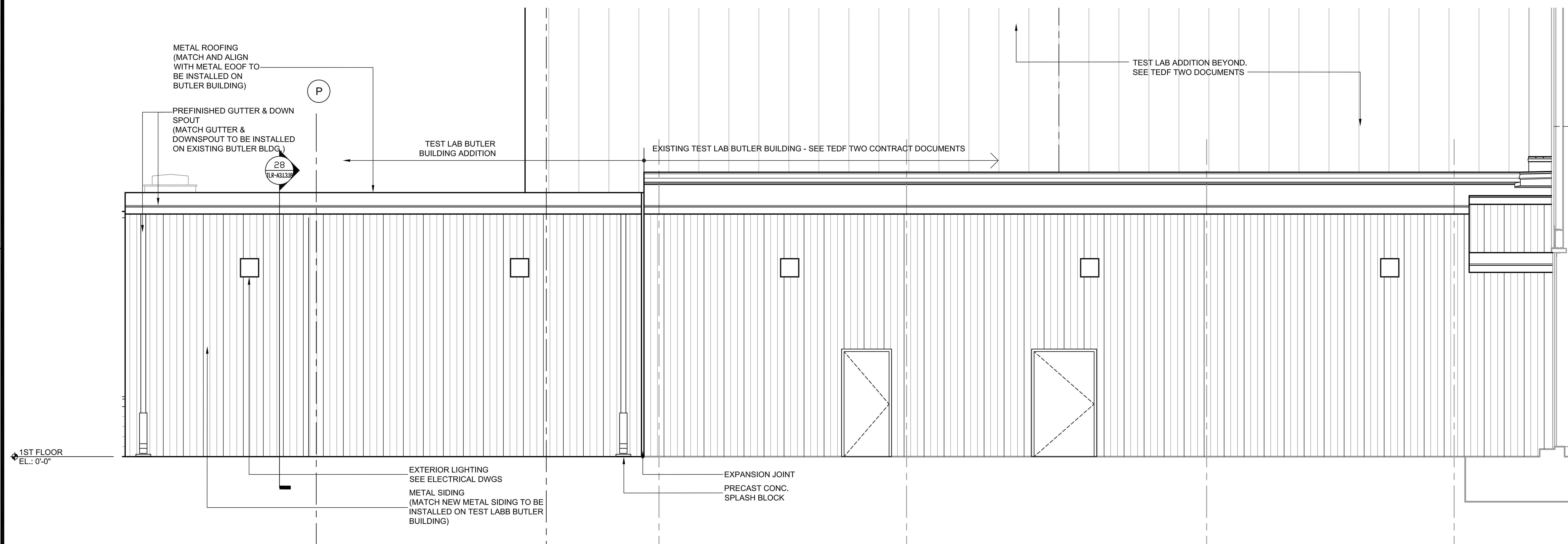
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED –	DATE –	DESIGNER –	DATE –
APPROVED –	–	DRAWN –	–
APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

Jefferson Lab

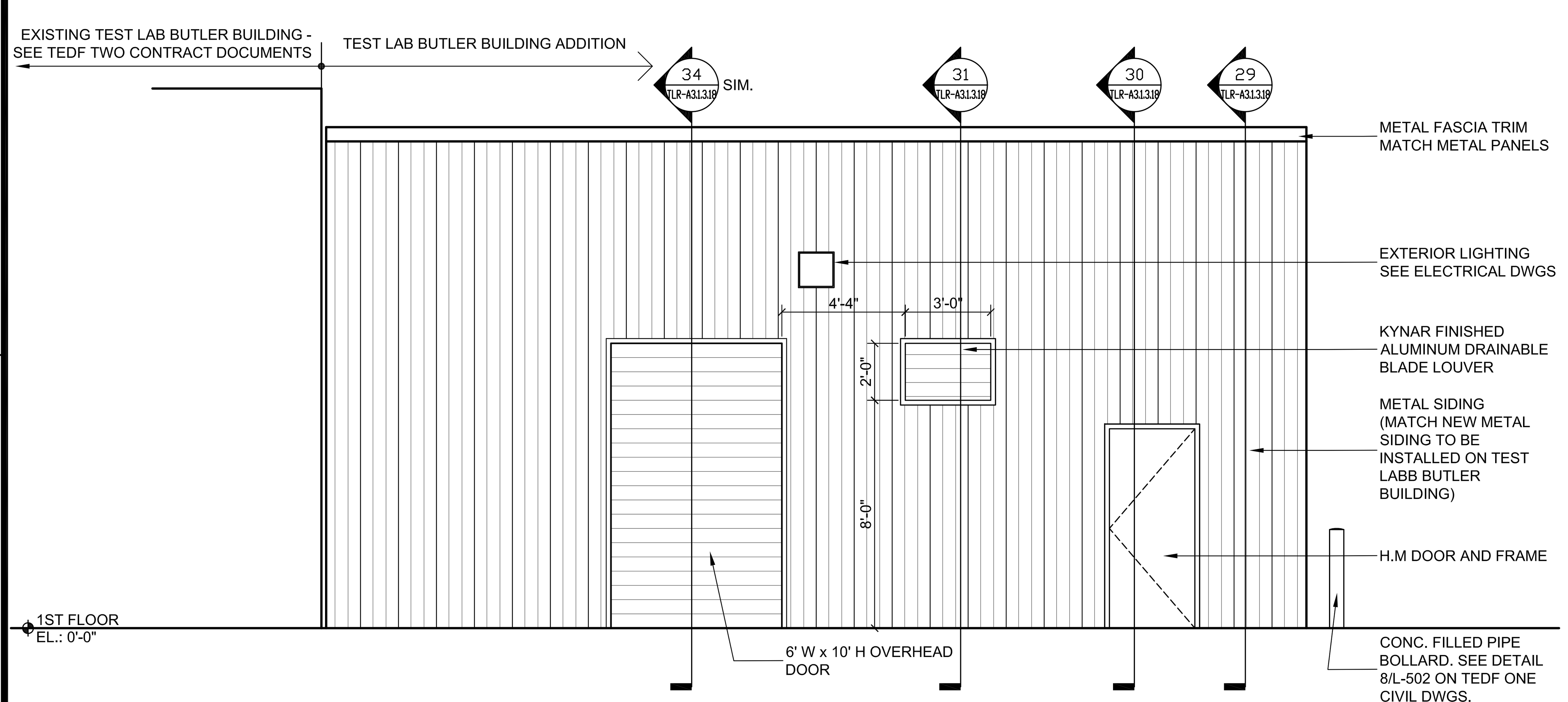
TITLE: UPW ROOM FIRST FLOOR - SEGMENT K

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"		TLR-A1.1.1K	-

CCR-034



3 NORTH ELEVATION - TEST LAB BUTLER BUILDING ADDITION
1/4" = 1'-0"



1 SOUTH ELEVATION - TEST LAB BUTLER BUILDING ADDITION
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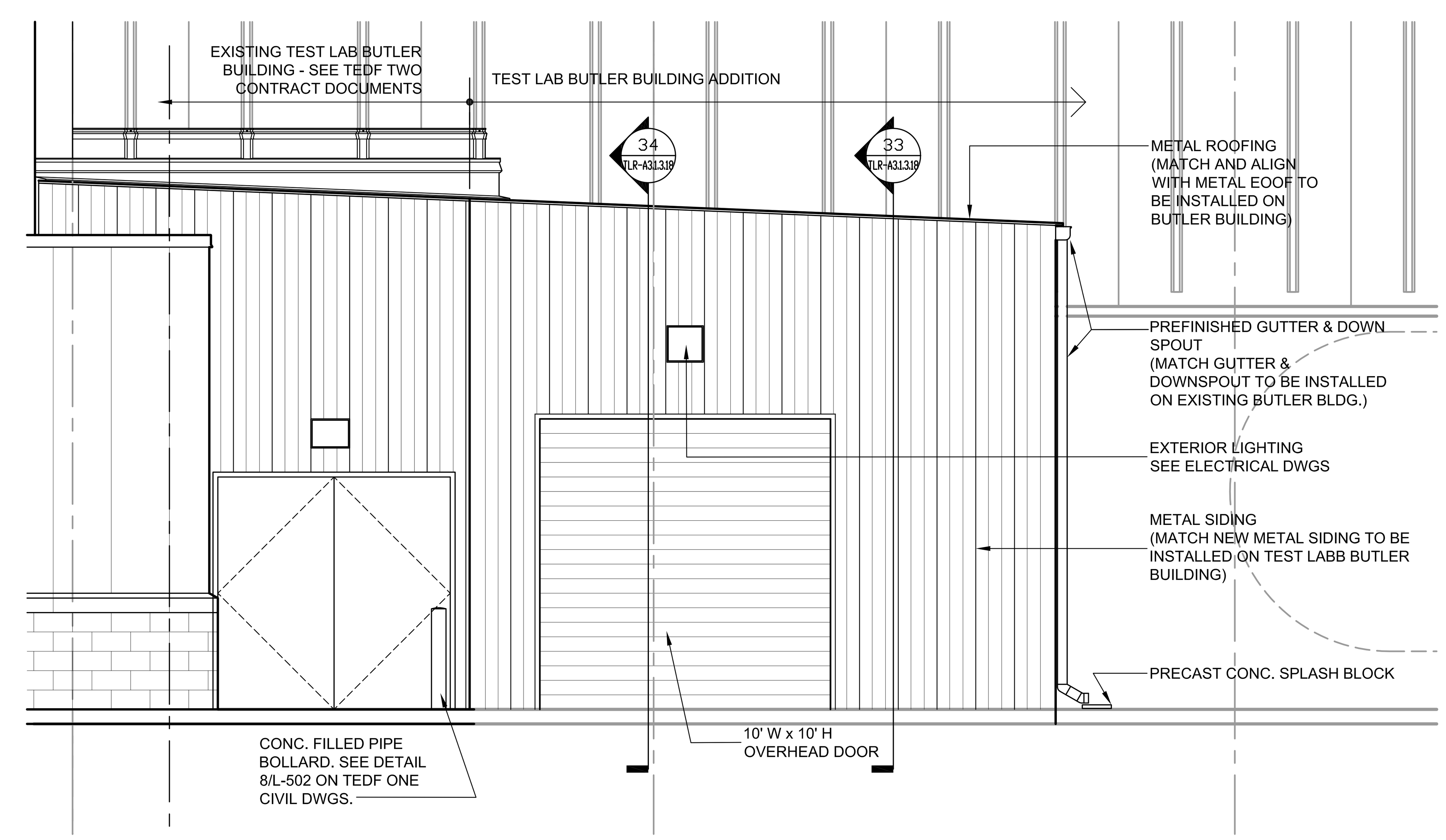

2 EAST ELEVATION - TEST LAB BUTLER BUILDING ADDITION
1/4" = 1'-0"

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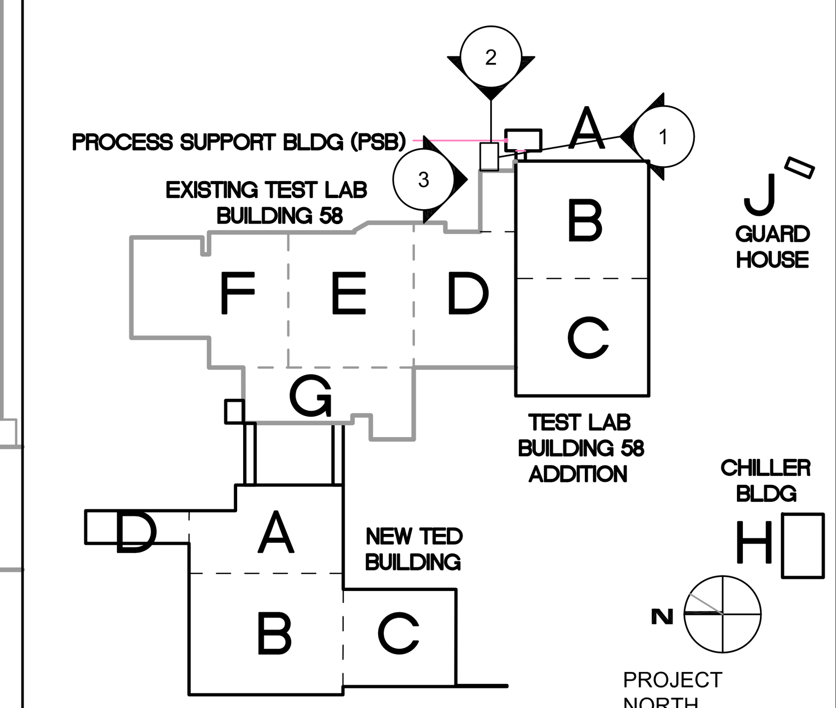
ELEVATION 0'-0" INDICATED ON ARCHITECTURAL DRAWINGS IS EQUIVALENT TO ACTUAL ELEVATION (+40'-0") INDICATED ON CIVIL DRAWINGS



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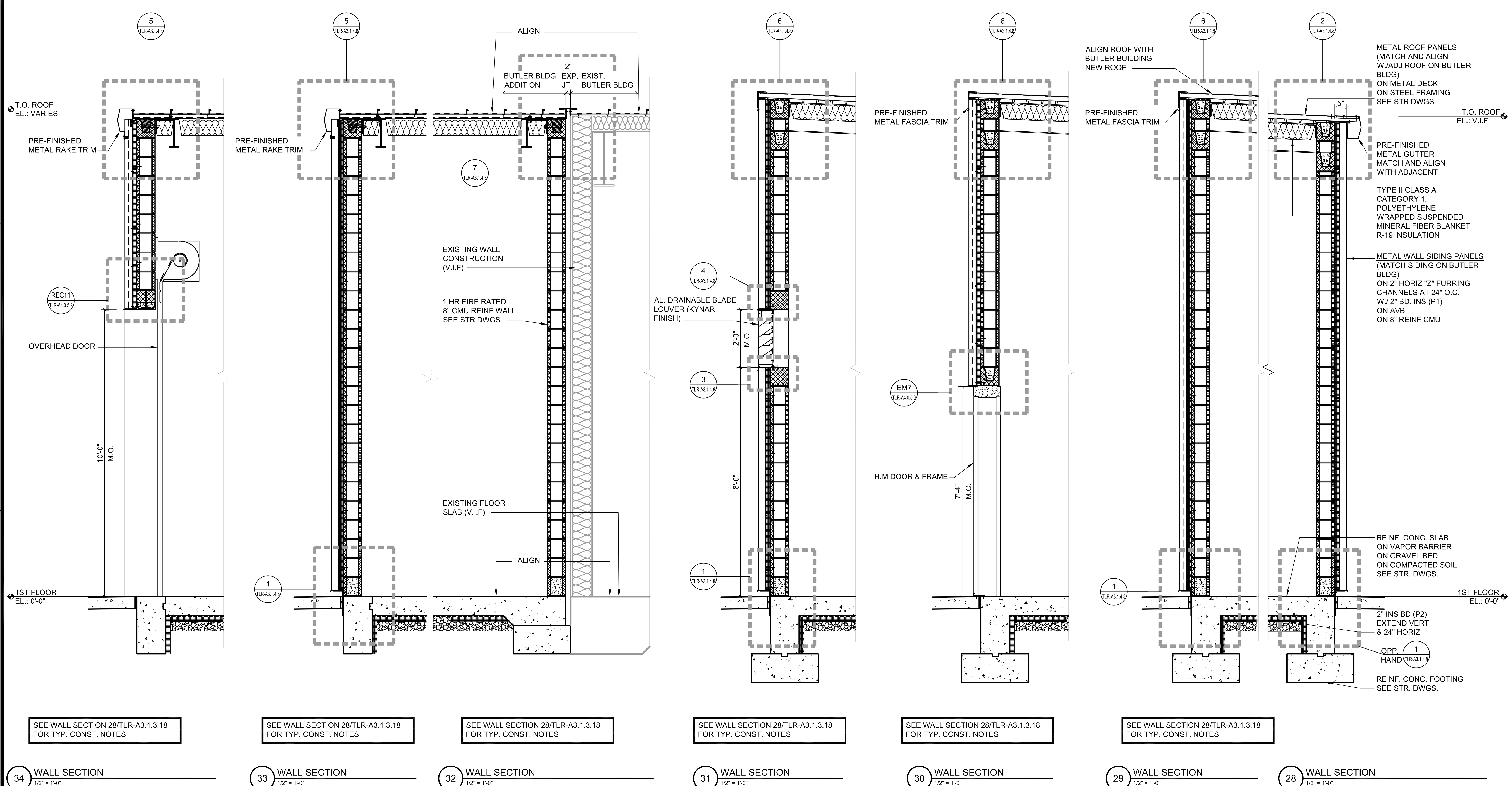
APPROVED –	–	APPROVED –	–

Jefferson Lab

TITLE:
TEST LAB RENOVATION
EXTERIOR ELEVATIONS

SCALE	DRAWING NUMBER	SHEET	REV
1/4" = 1'-0"	100024-088-A70B-STE	TLR-A3.1.1.8	–

CCR-034



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APPROVED –	–	APPROVED –	–

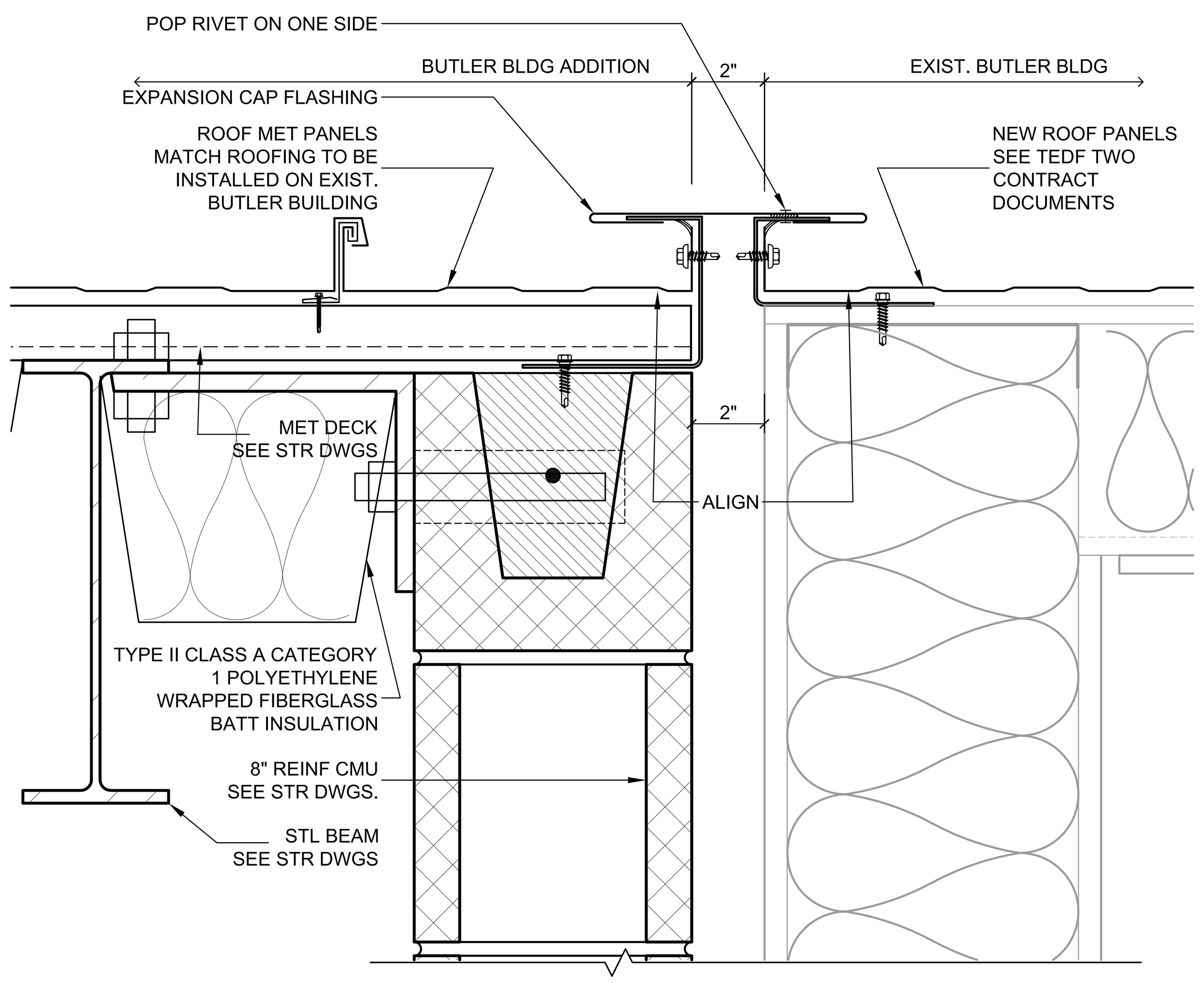
Jefferson Lab

TITLE:
TEST LAB RENOVATION - BUILDING 58
WALL SECTIONS

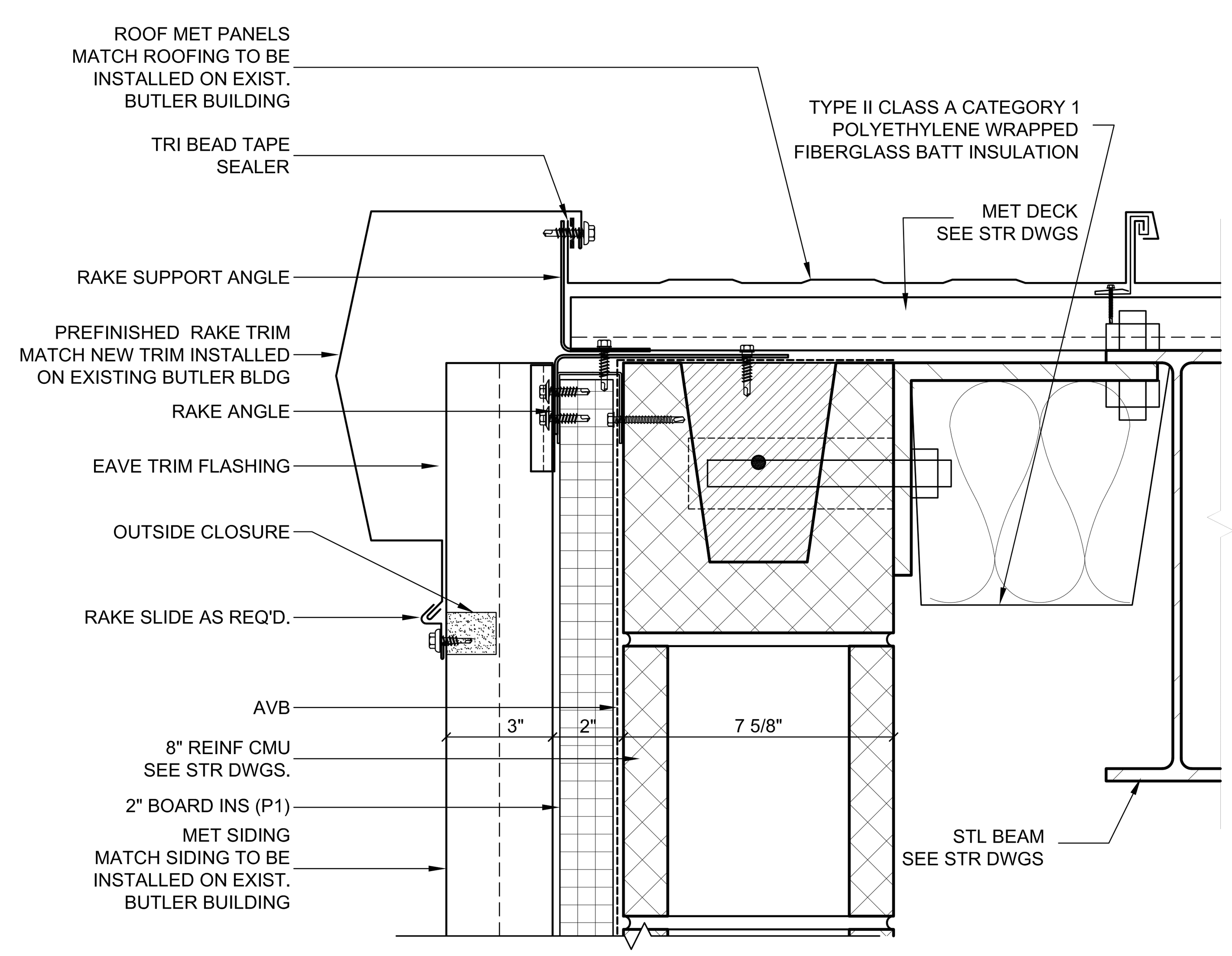
SCALE	DRAWING NUMBER	SHEET	REV
1/2" = 1'-0"	100024-123-A105-STE	TLR-A3.1.3.18	–

CCR-034

1 2 3 4 5 6



7 SECTION DETAIL
3" = 1'-0"



5 SECTION DETAIL
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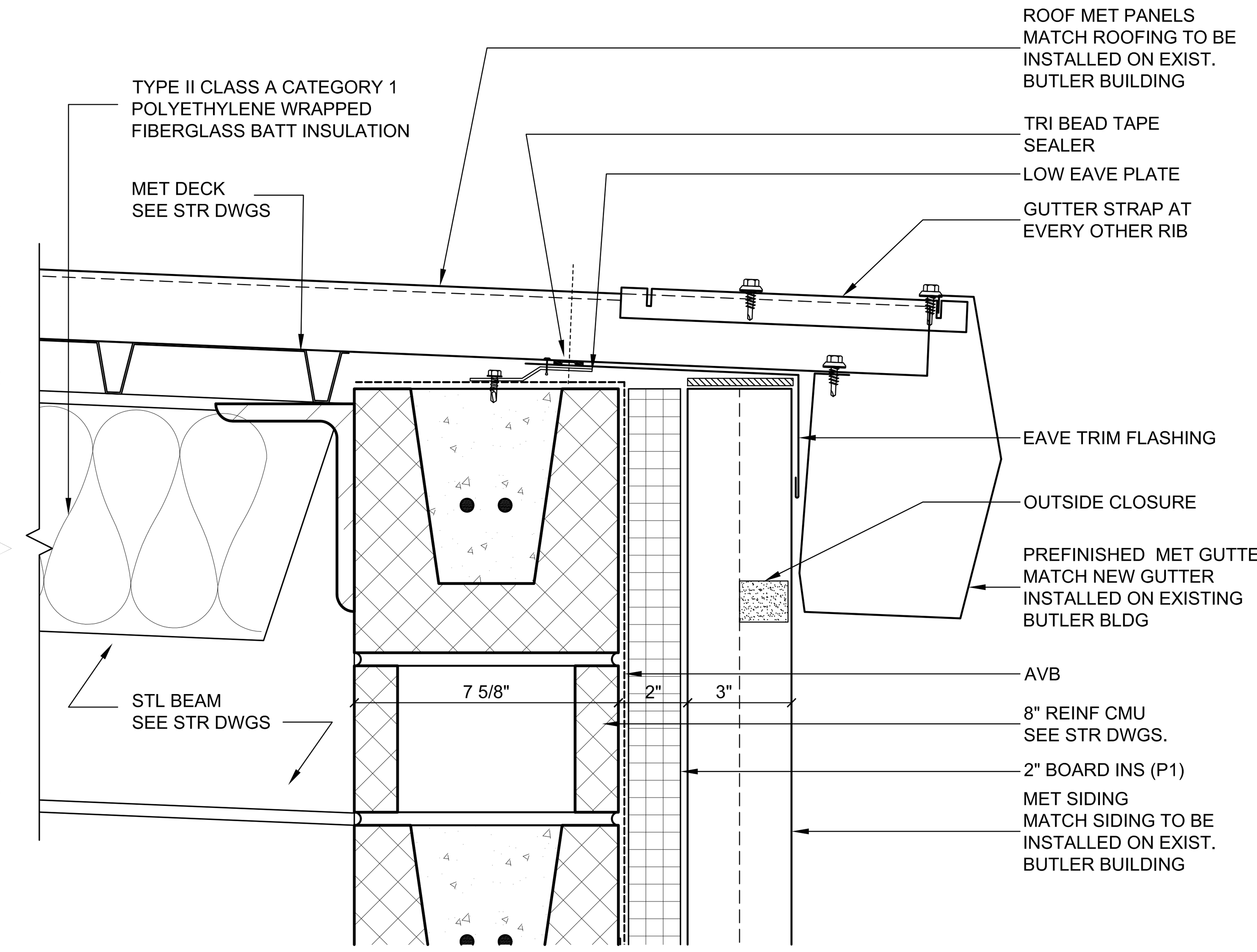

2 SECTION DETAIL
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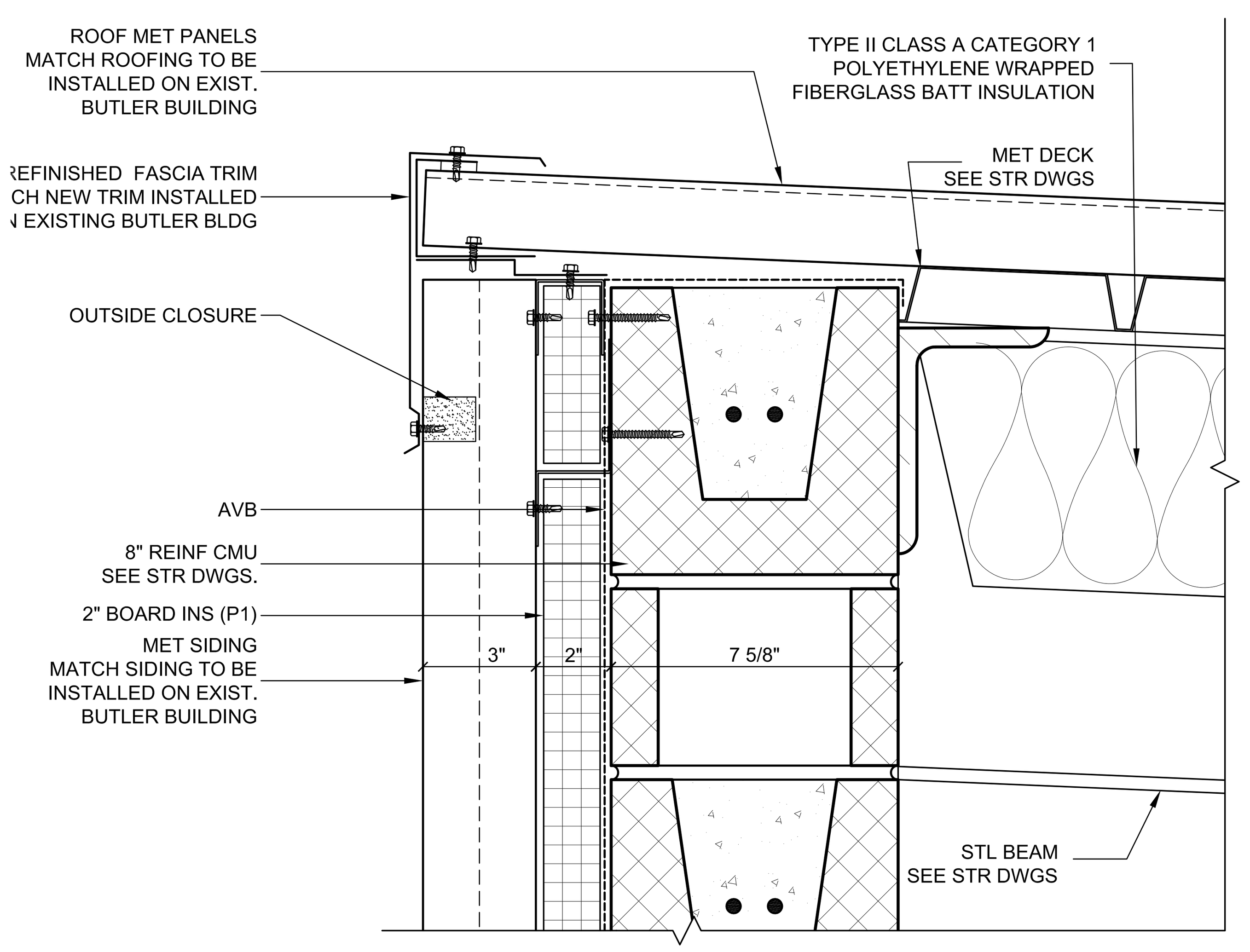

6 SECTION DETAIL
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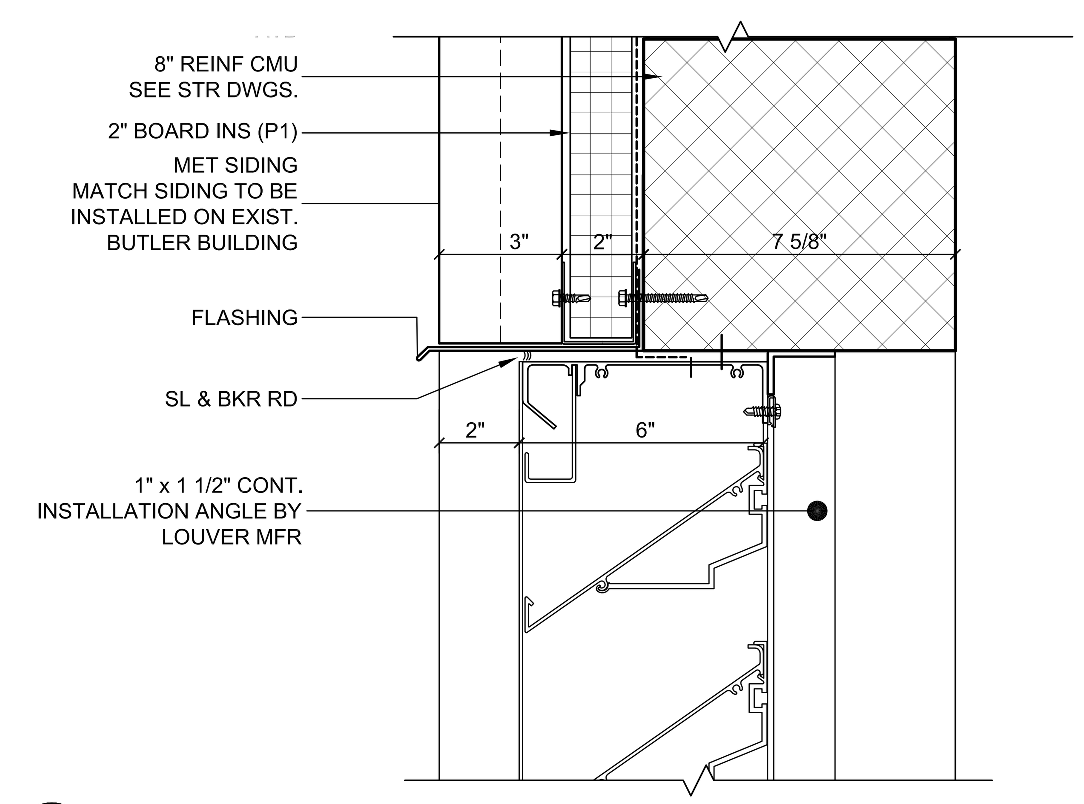
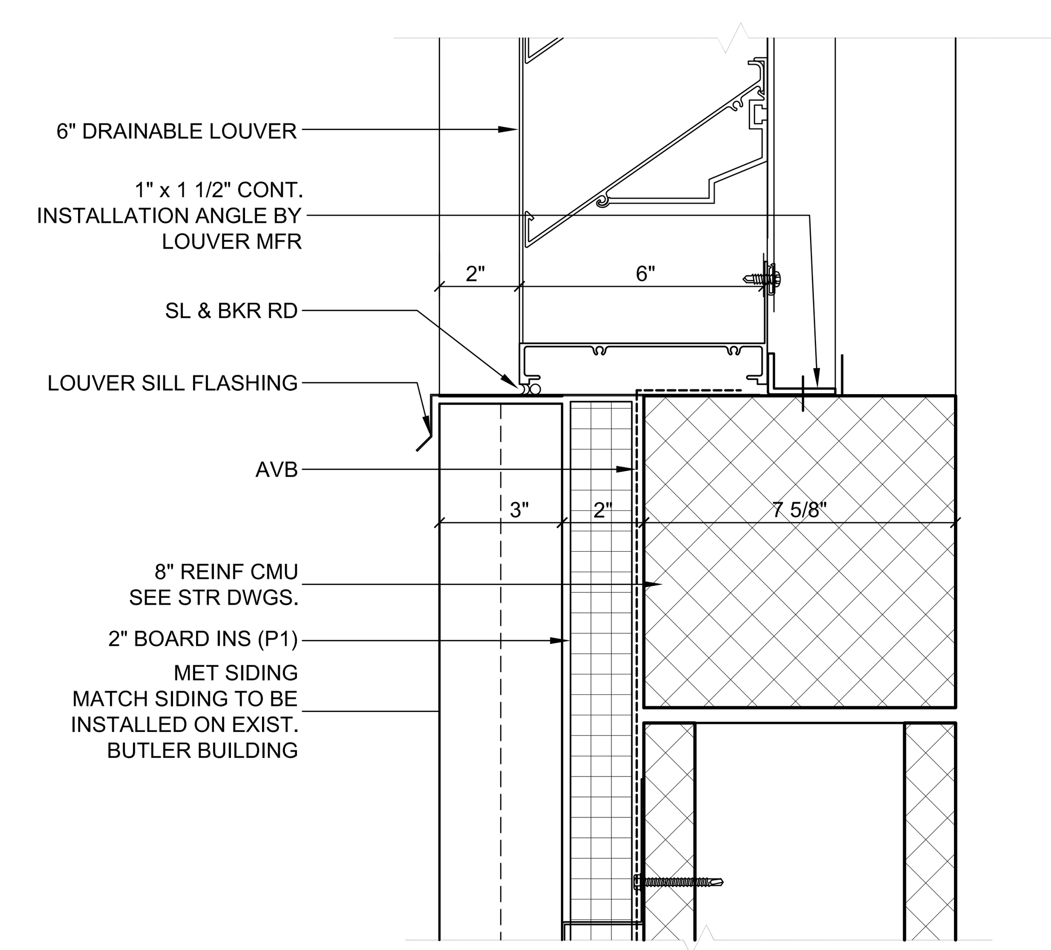
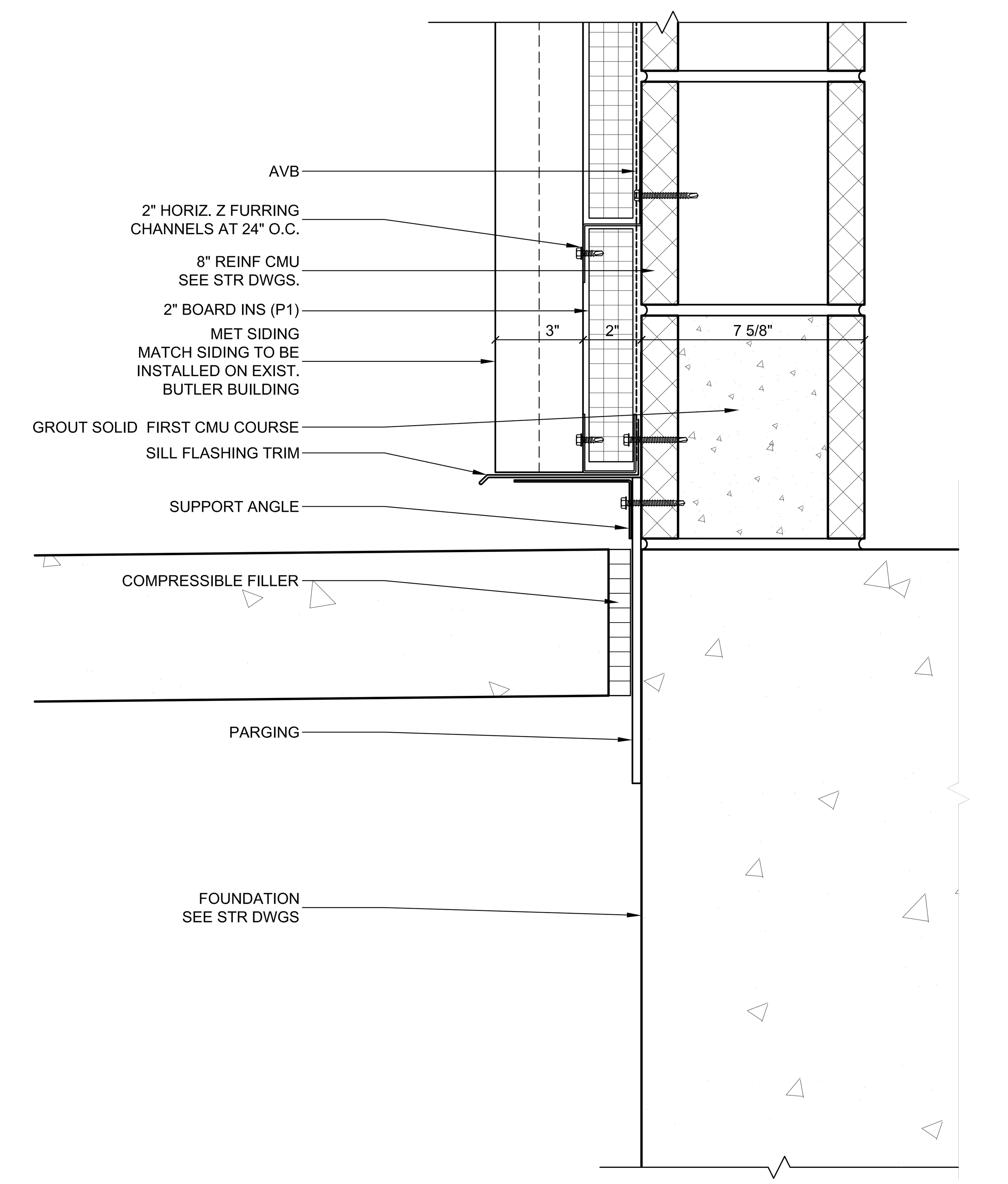


4 SECTION DETAIL
3" = 1'-0"



3 SECTION DETAIL
3" = 1'-0"



1 SECTION DETAIL
3" = 1'-0"

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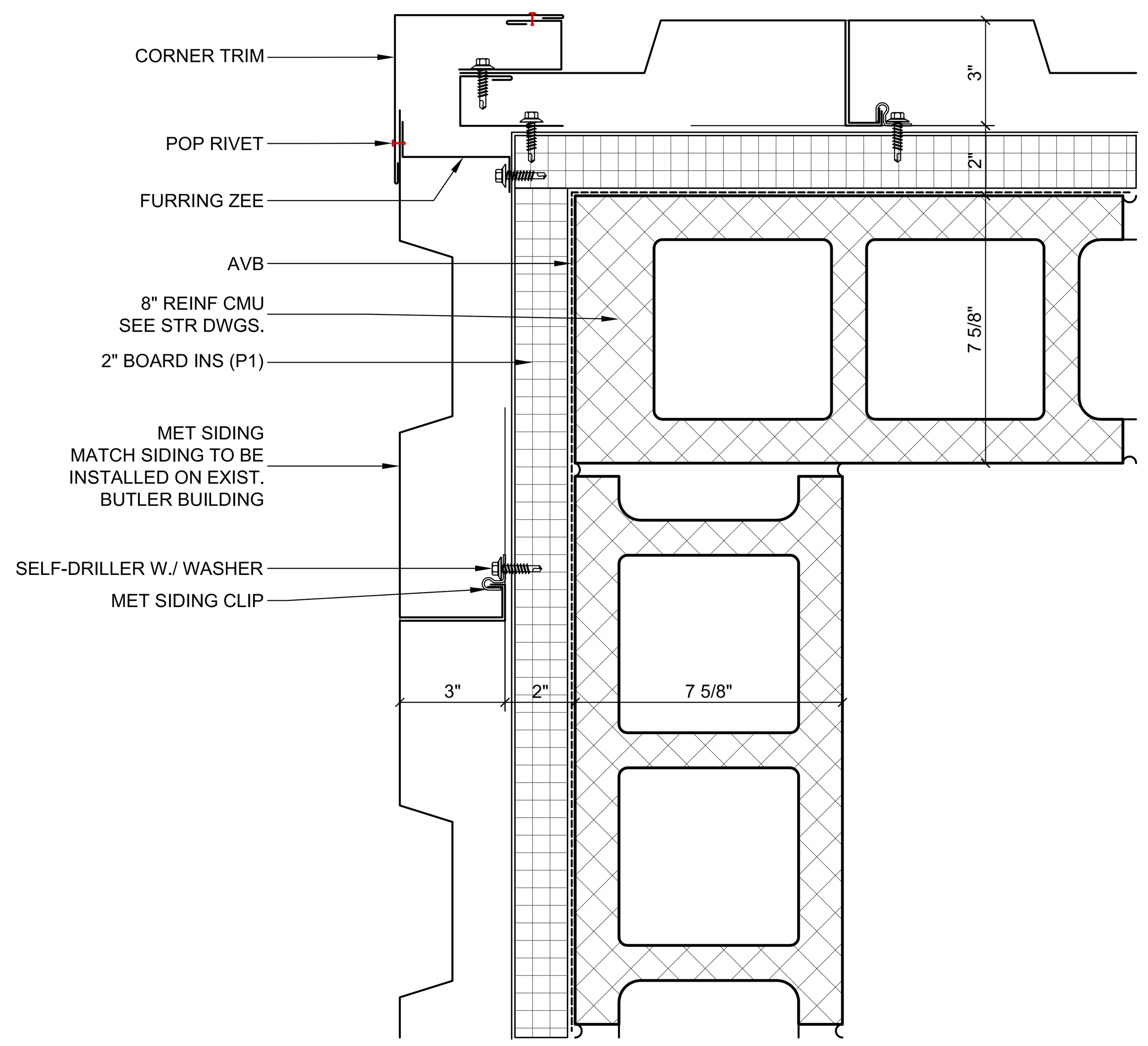
Jefferson Lab

TITLE:
TEST LAB RENOVATION - BUILDING 58
WALL SECTION DETAILS

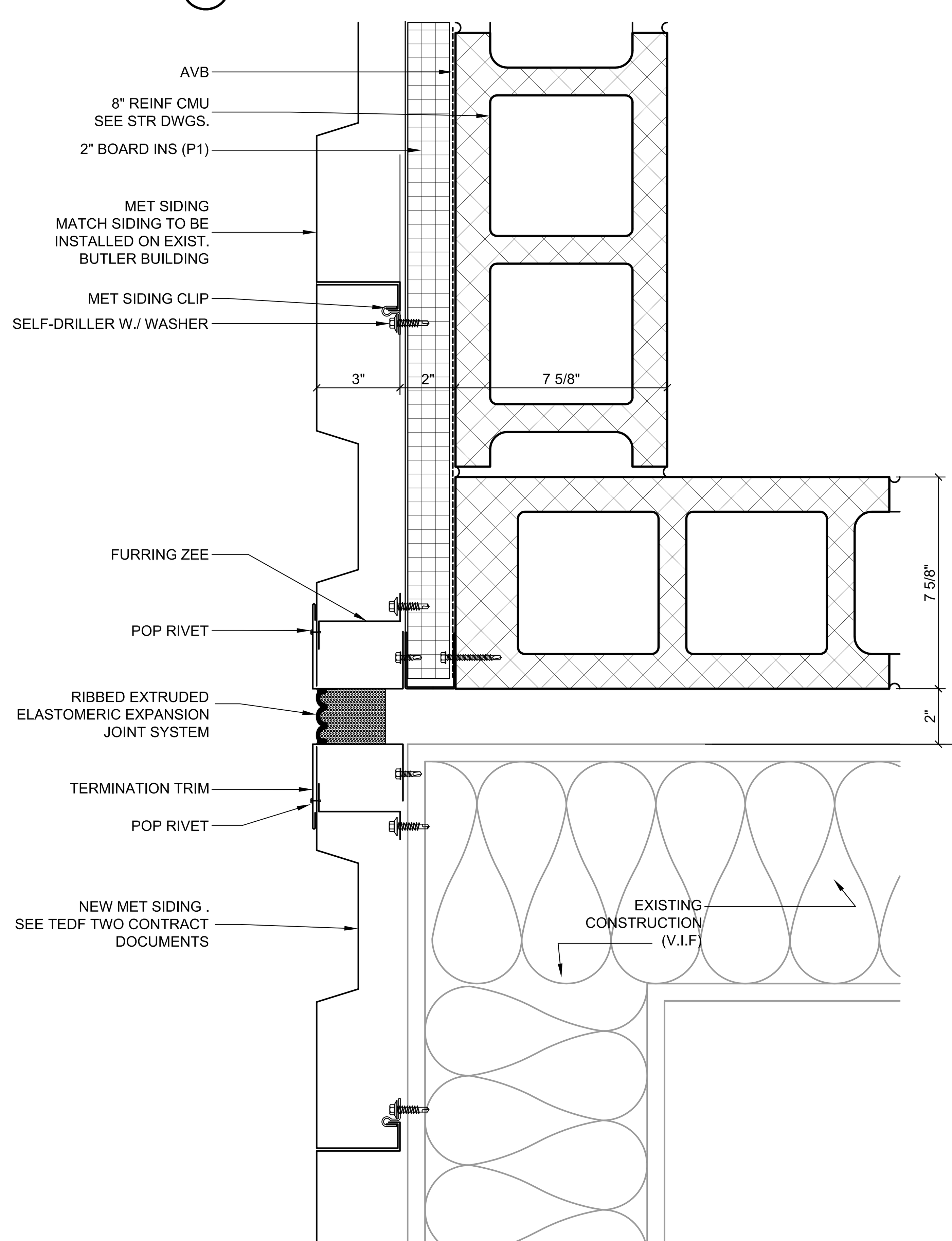
SCALE	DRAWING NUMBER	SHEET	REV
3" = 1'-0"	100024-132-A114-STE	TLR-A3.1.4.8	-

CCR-034

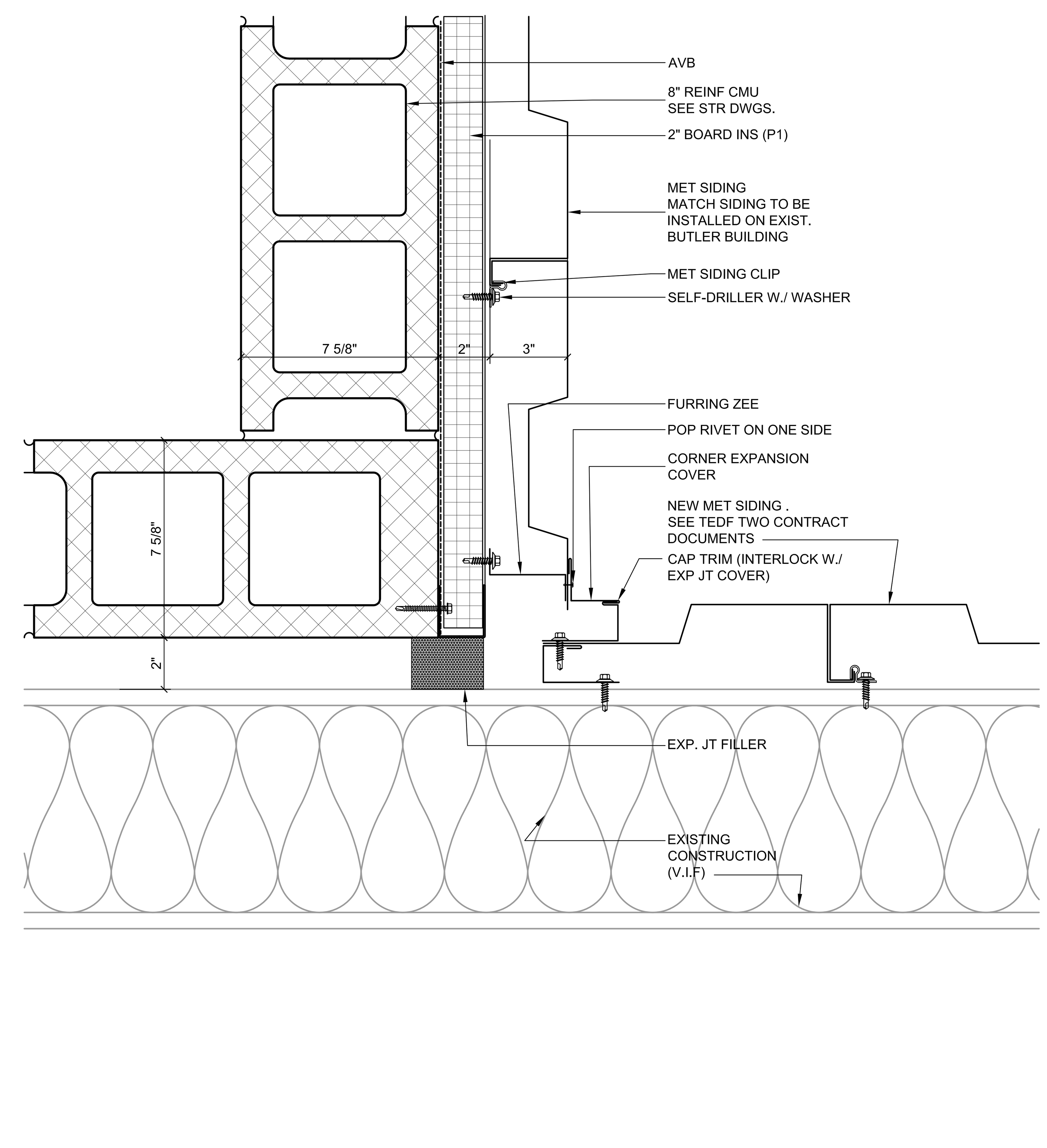
1 2 3 4 5 6



3 PLAN DETAIL
3" = 1'-0"



2 PLAN DETAIL
3" = 1'-0"



1 PLAN DETAIL
3" = 1'-0"

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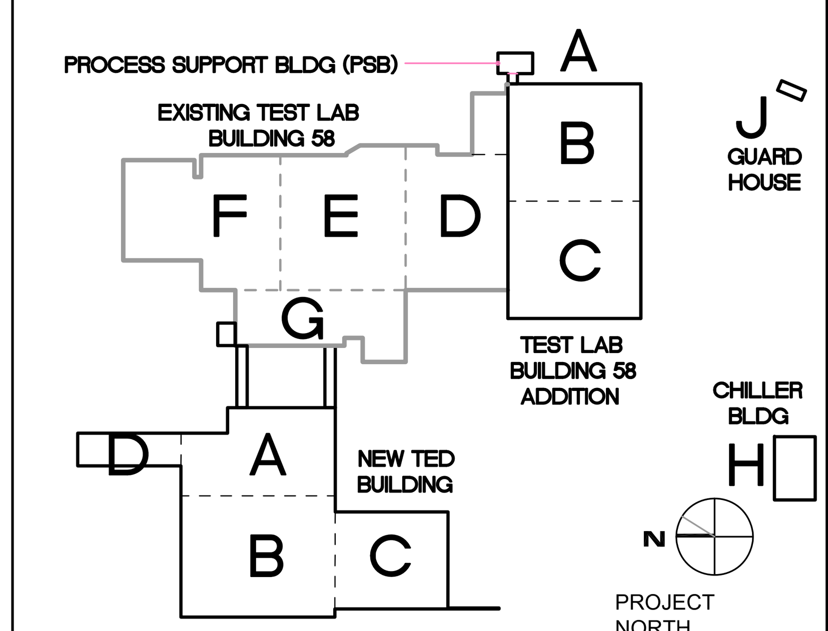
GENERAL NOTES:

PROVIDE ACCESSORIES FOR AVB PER SPEC SECTION 072600 AND AIB PER SPEC SECTION 072700.



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APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

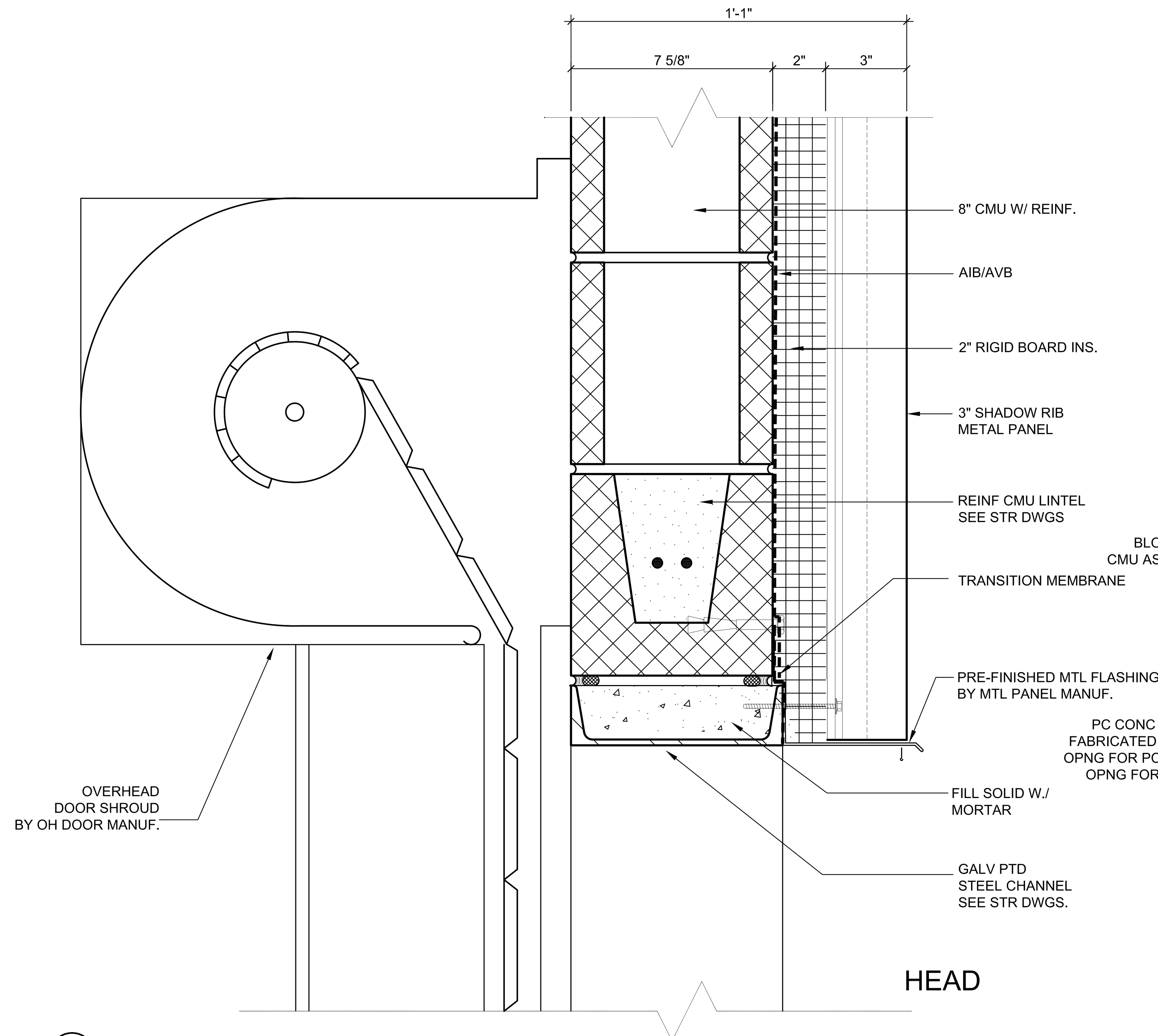
Jefferson Lab

TITLE:

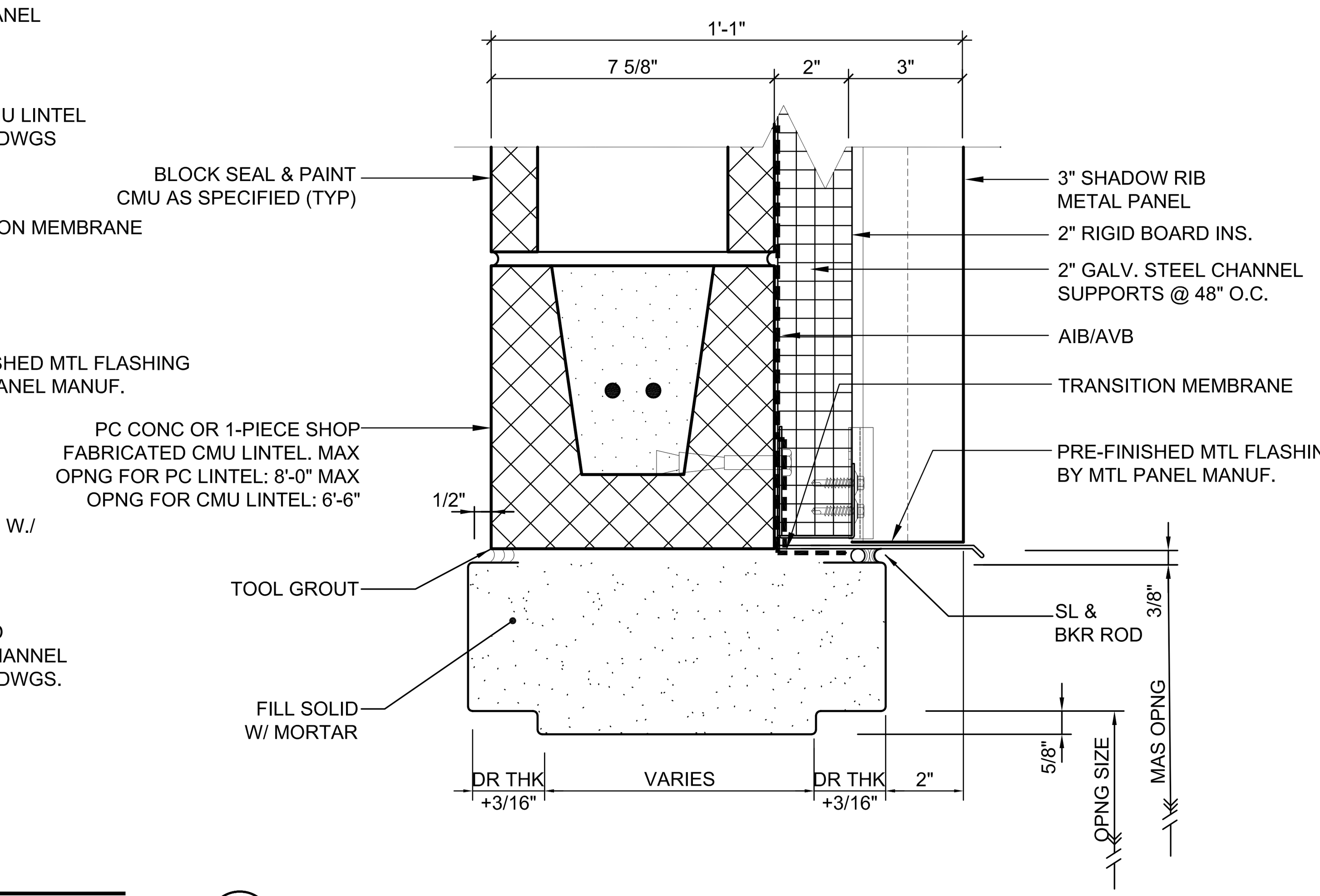
TEST LAB RENOVATION
PLAN DETAILS

SCALE	DRAWING NUMBER	SHEET	REV
3" = 1'-0"	100024-143-A125-STE	TLR-A3.1.5.13	--

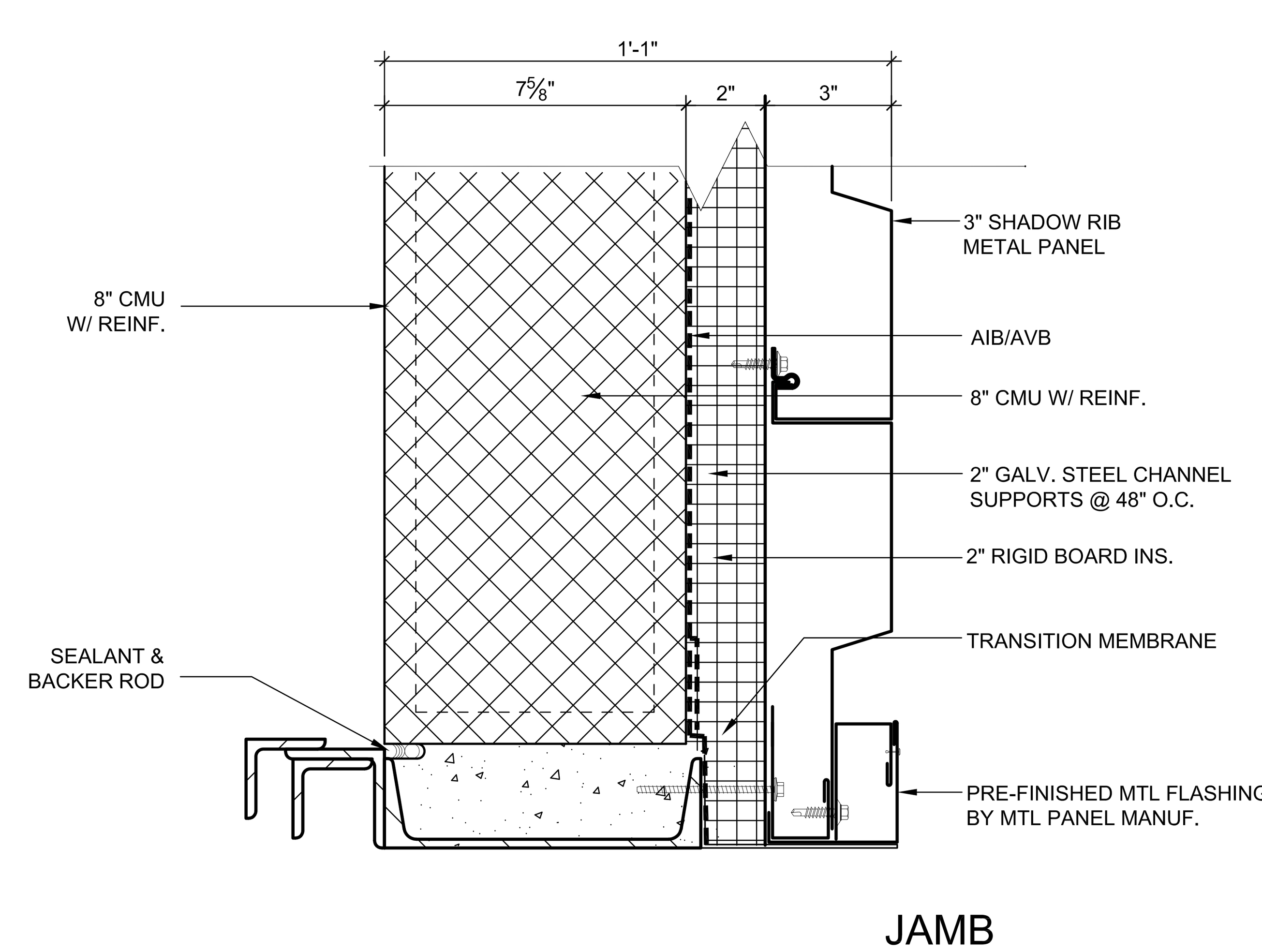
CCR-034



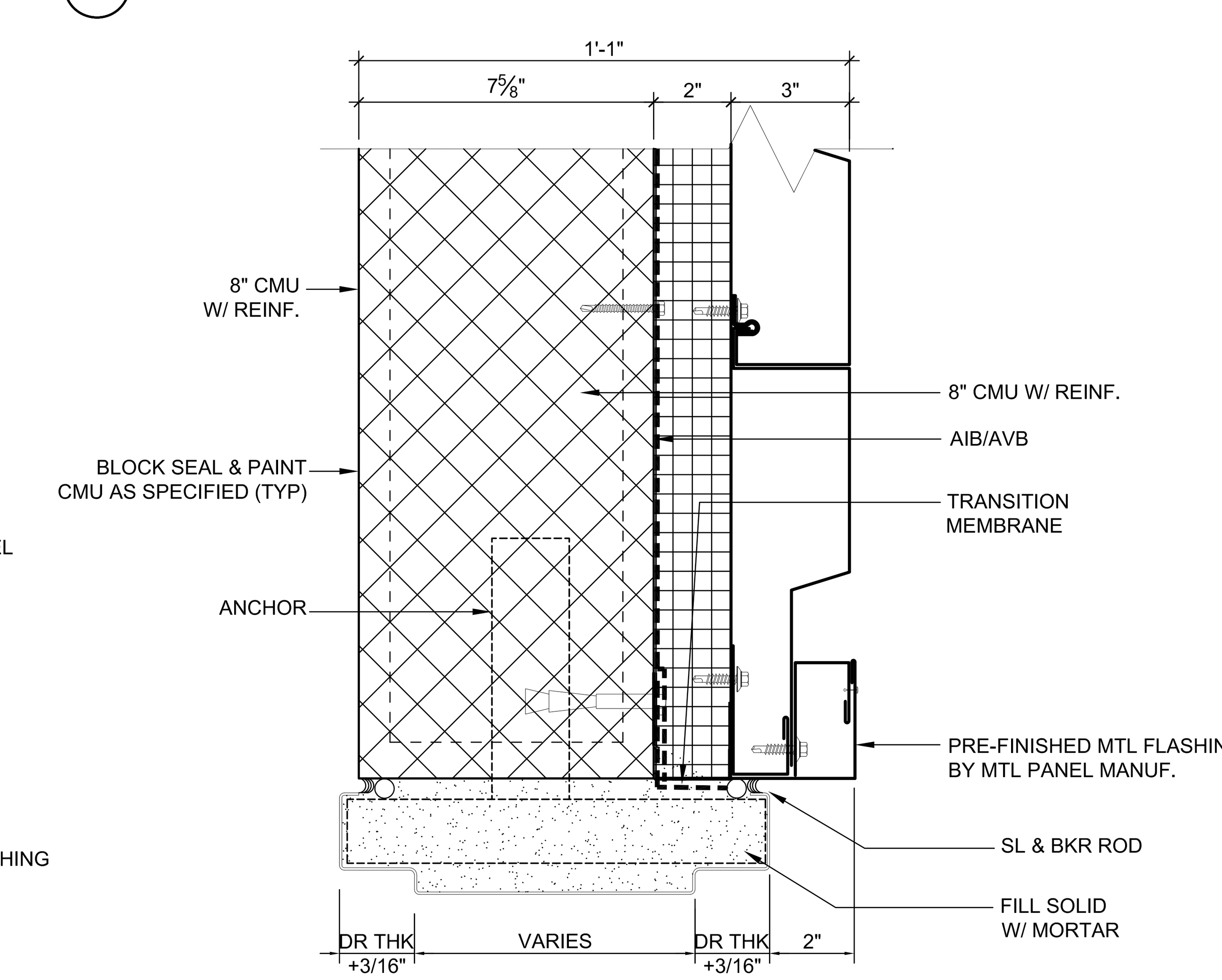
REC11 COILING DOOR @ CHANNEL FRAME IN MTL PANEL - UPW
3" = 1'-0"



EM7 HM FRAME IN EXTERIOR MASONRY WALL WITH MP - 4" HEAD



REC10 COILING DOOR JAMB DETAIL AT MTL PANEL - UPW
3" = 1'-0"



EM6 HM FRAME IN EXTERIOR MASONRY WALL WITH MP - JAMB

2

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APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

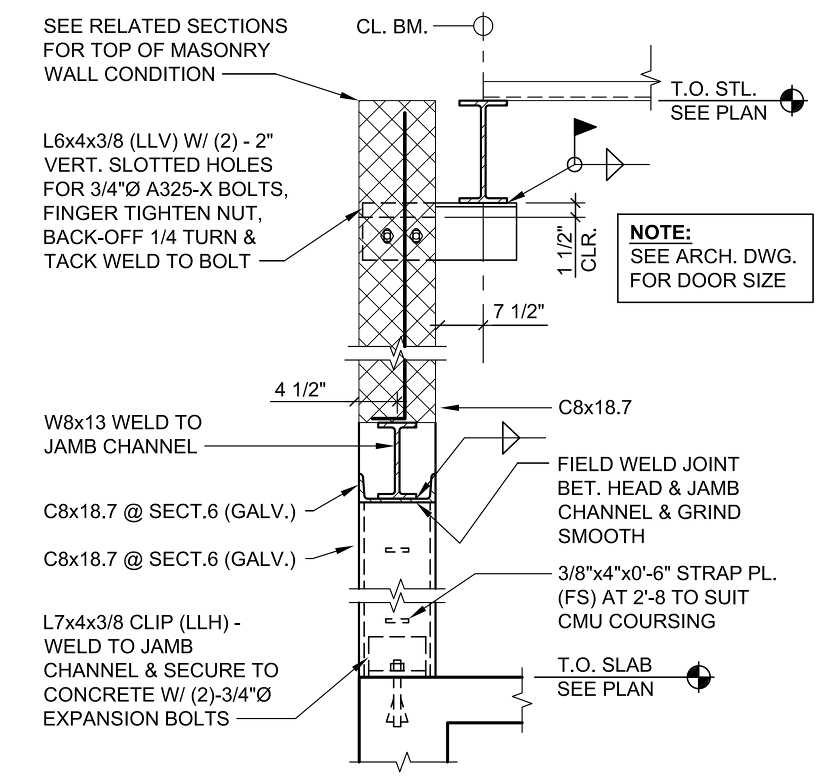
Jefferson Lab

TITLE:

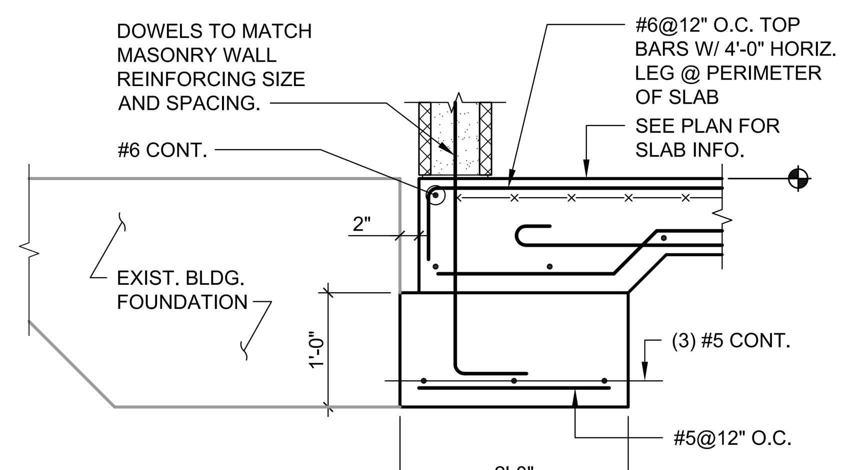
DOOR & FRAME DETAILS

SCALE	DRAWING NUMBER	SHEET	REV
3" = 1'-0"	100024-206-A188-STE	A4.0.5.9	–

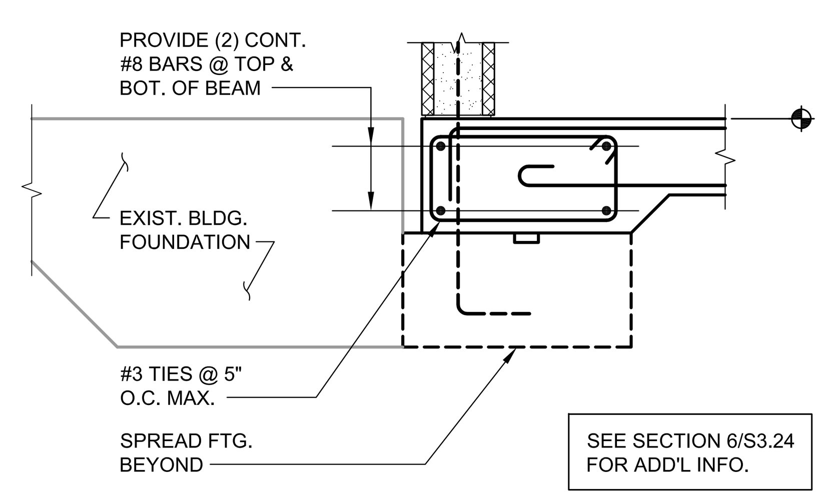
CCR-034



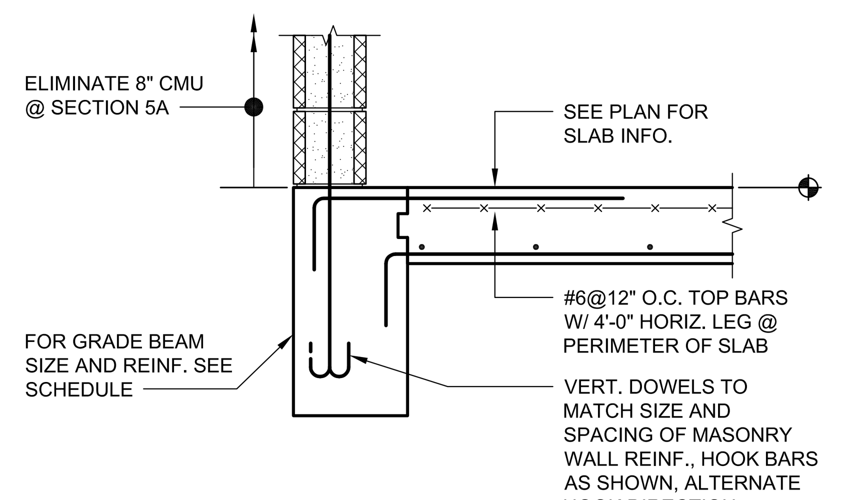
10 DETAIL
CHANNEL FRAME FOR OVERHEAD DOORS
NO SCALE S3.24



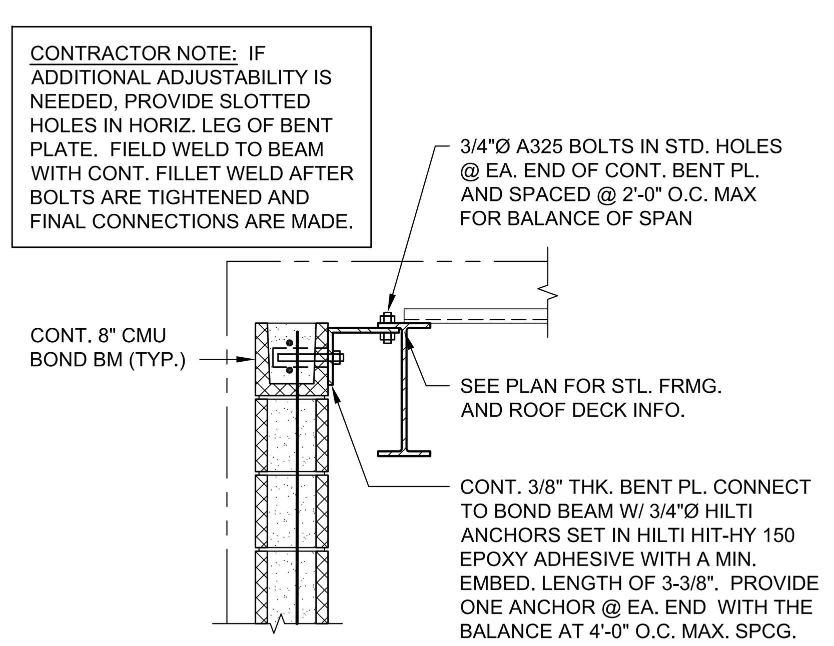
6 SECTION
3/4"=1'-0" S3.24



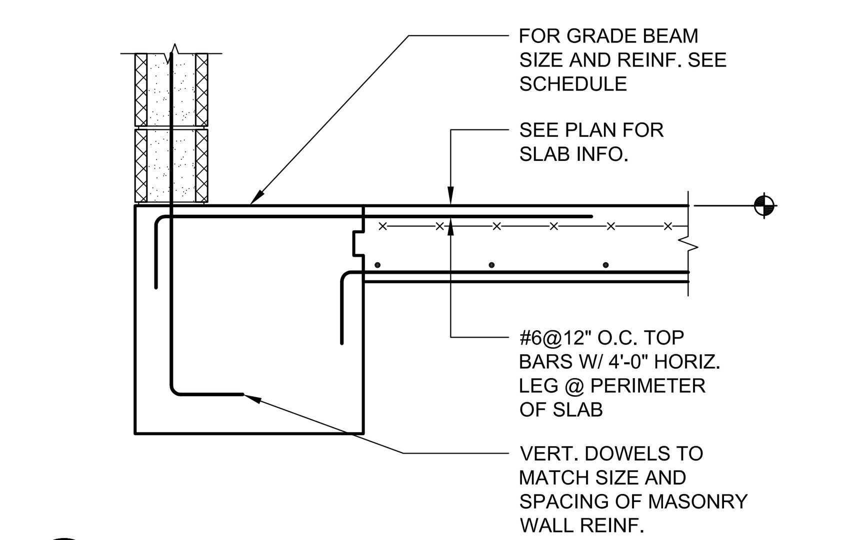
9 SECTION
3/4"=1'-0" S3.24



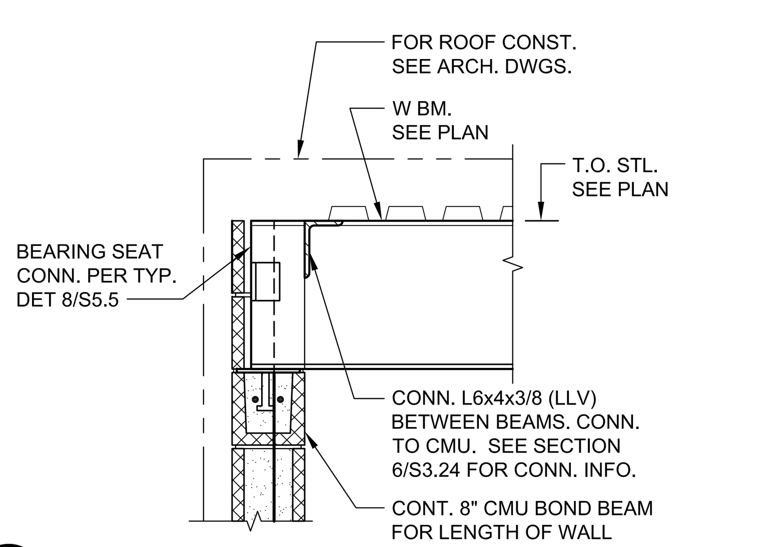
5 SECTION
3/4"=1'-0" S3.24



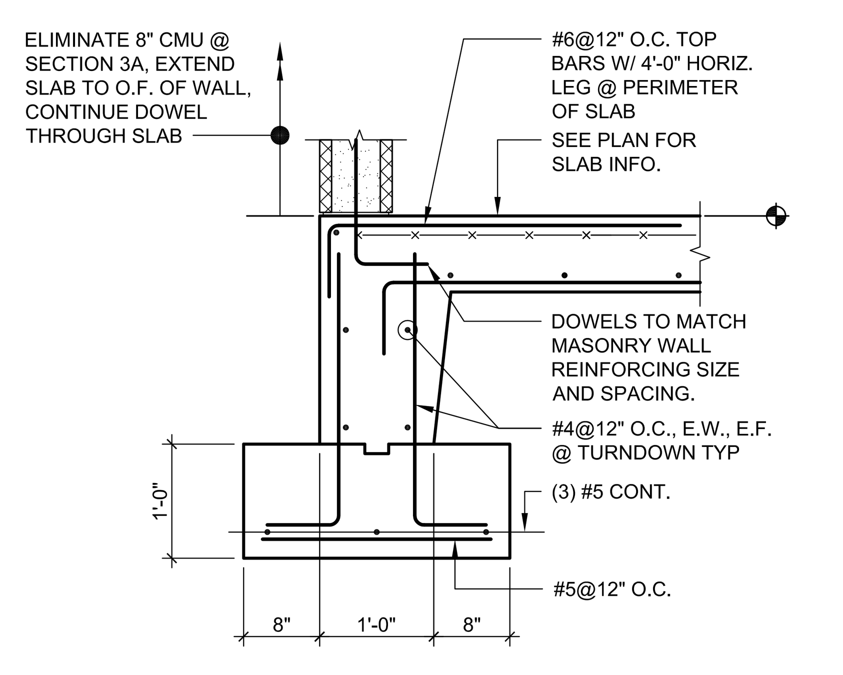
8 SECTION
3/4"=1'-0" S3.24



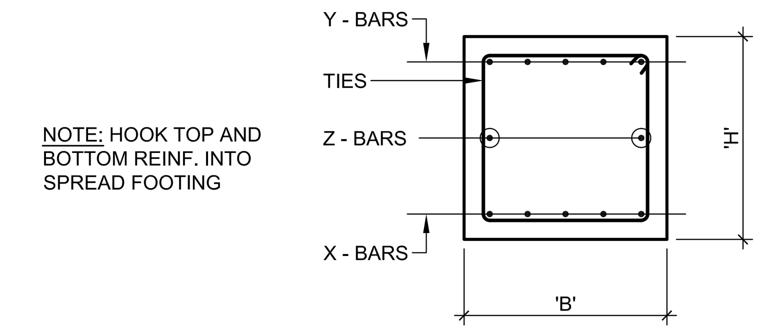
4 SECTION
3/4"=1'-0" S3.24



7 SECTION
3/4"=1'-0" S3.24



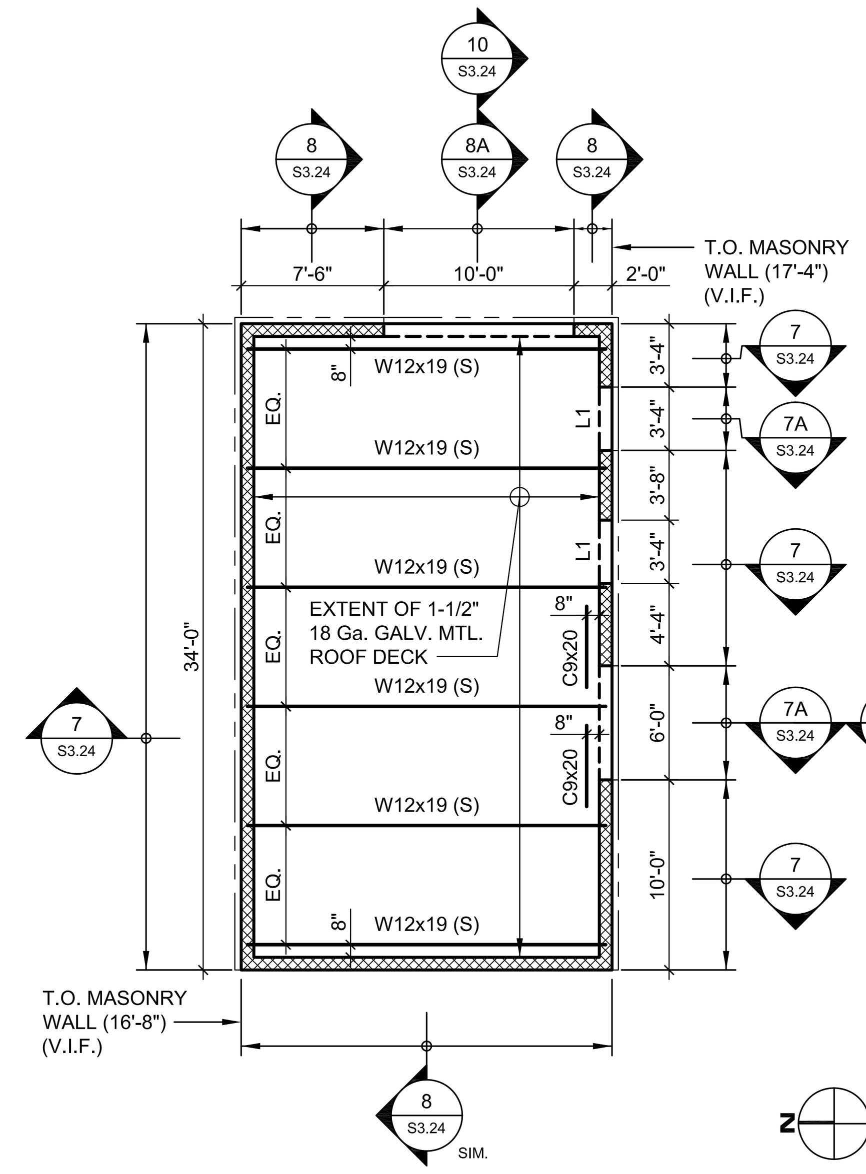
3 3A SECTION
3/4"=1'-0" S3.24



SPREAD FOOTING SCHEDULE				
PLAN DESIGNATION		F-1	F-2	F-3
FOOTING	SIZE N.-S.	3'-6"	4'-6"	5'-9"
	SIZE E.-W.	3'-6"	4'-6"	2'-0"
	THICKNESS	1'-0"	1'-0"	1'-0"
	REINF. N.-S.	5@12 B.	5@12 B.	5@12 B.
	SIZE E.-W.	5@12 B.	5@12 B.	5@12 B.

GRADE BEAM SCHEDULE (S3.23 ONLY)

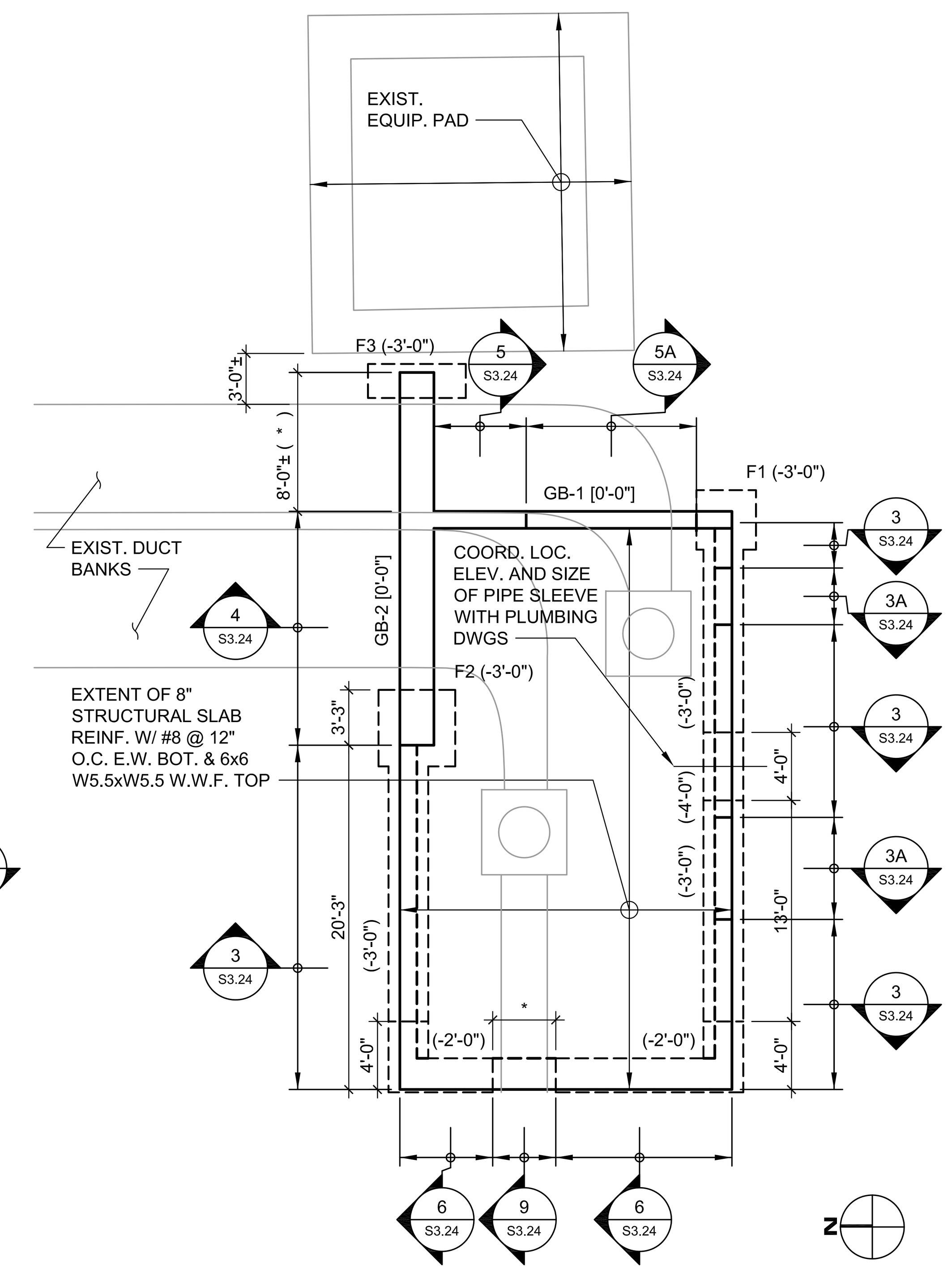
BM. NUMBER	'B'	'H'	X-BARS	Y-BARS	Z-BARS	TIES
GB-1	8"	24"	2 - #6	2 - #6	1 - #6 E.F.	3 - #3@3" O.C. EA. END, BAL. #3 @10" O.C.
GB-2	24"	24"	4 - #8	4 - #8	1 - #8 E.F.	3 - #3@3" O.C. EA. END, BAL. #3 @10" O.C.



2 UPW - ROOF FRAMING PLAN
1/8" = 1'-0"

(UNLESS NOTED OTHERWISE)

1. TOP OF STEEL ELEVATION AS INDICATED IN PLAN. TO BE COORD. WITH ROOF SLOPE OF EXISTING ADJACENT BUILDING.
2. PROVIDE 1-1/2 INCH - 18 GAUGE GALVANIZED METAL ROOF DECK. FOR SPAN OF DECK SEE PLAN.
3. BEAMS INDICATED THUS (S) ARE SLOPED. BEAMS FRAME FLUSH TOP.
4. CONSTRUCTION MANAGER/GENERAL CONTRACTOR TO COORDINATE SIZE AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND TYPICAL DETAILS.
5. PROVIDE C9x20 CHANNELS FOR ROLL-UP DOOR JAMB CONNECTION. COORDINATE LOCATION WITH DOOR REQUIREMENTS.
6. FOR ALL MASONRY LINTELS (L1) PROVIDE AN 8"x8" PRECAST LINTEL REINFORCED WITH (2) #5 BARS TOP AND BOTTOM MINIMUM. REFER TO MASONRY SPECIFICATION FOR ADDITIONAL INFO.
7. GROUT TOP 4 COURSES OF CMU WALL SOLID & PROVIDE REINF. FOR BOND BEAM @ EA. COURSE.
8. SEE DRAWING SG.1 AND SG.2 FOR ADDITIONAL NOTES AND DRAWING S5.1 THRU S5.8 FOR TYPICAL DETAILS.



1 UPW - FOUNDATION PLAN
1/8" = 1'-0"

(UNLESS NOTED OTHERWISE)

1. TOP OF FLOOR SLAB ELEVATION 0'-0" TO MATCH EXISTING SLAB ELEVATION. ACTUAL ELEVATION 40'-0"±.
2. PROVIDE AN 8 INCH CONCRETE SLAB ON GRADE. FOR EXTENTS AND REINFORCING SEE PLAN.
3. BOTTOM OF FOOTING ELEVATION INDICATED THUS (...) IN PLAN.
4. TOP OF GRADE BEAM ELEVATION INDICATED THUS [...] IN PLAN.
5. CONSTRUCTION MANAGER/GENERAL CONTRACTOR TO COORDINATE SIZE AND LOCATION OF ALL WALL OPENINGS AND/OR SLEEVES WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND TYPICAL DETAILS.
6. CONSTRUCTION MANAGER/GENERAL CONTRACTOR TO COORDINATE DIMS INDICATED THUS (*) WITH EXISTING SITE.
7. EXISTING DUCT BANKS AND SITE INFORMATION IS APPROXIMATE AND SHOWN FOR INFORMATION ONLY. CONSTRUCTION MANAGER/GENERAL CONTRACTOR TO VERIFY SITE INFO PRIOR TO BEGINNING WORK.
8. SEE DRAWING SG.1 AND SG.2 FOR ADDITIONAL NOTES AND DRAWING S5.1 THRU S5.8 FOR TYPICAL DETAILS.

EWING COLE
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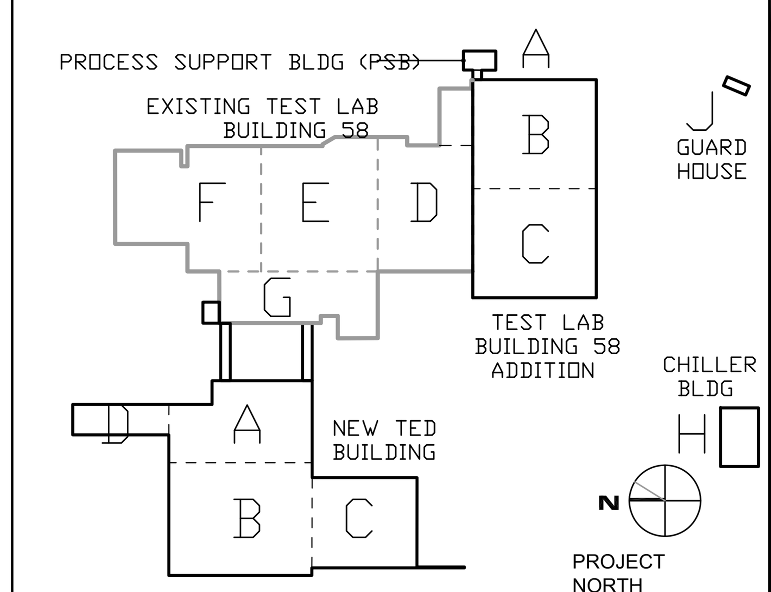
Tel: 215-923-2020 Fax: 215-574-0952

Structural Leader Peter Welsh, P.E.
Structural Designer Aitor Sanchez-Prado, P.E.
Structural Designer Jonathan Memmel, P.E.



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
		CCR NO. ~~35~~ 34		09/26/11

REVISIONS

FACILITY USERS	FACILITIES & LOGISTICS

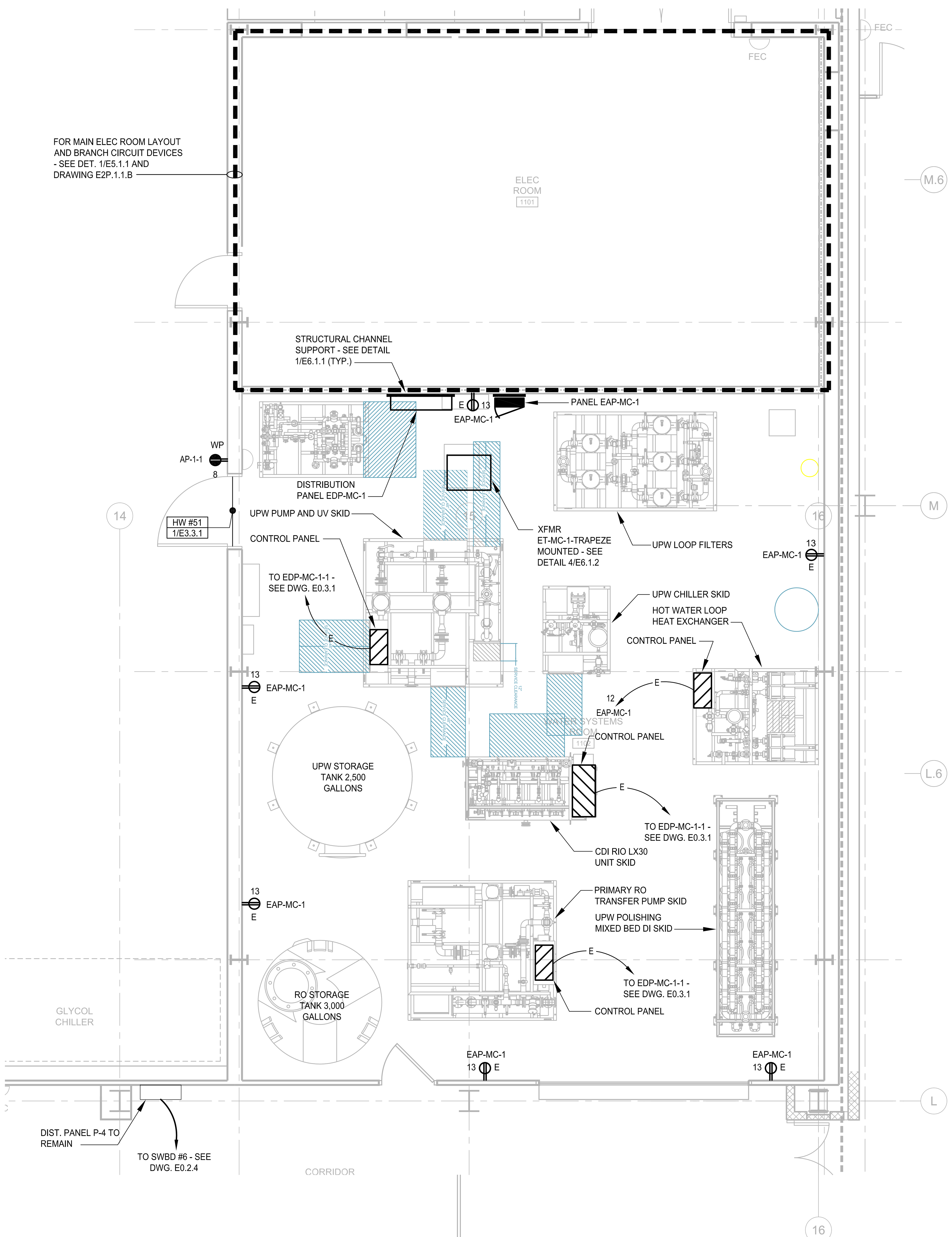
APPROVED	DATE	DESIGNER	DATE
--	--	LSB	09/23/11
APPROVED --	--	DRAWN LSB	09/23/11
APPROVED --	--	CHECKED AIS	09/23/11
APPROVED --	--	APPROVED AIS	09/23/11

Jefferson Lab

TITLE:
UPW BUILDING PLANS
SECTIONS AND DETAILS

SCALE	DRAWING NUMBER	SHEET	REV
AS NOTED	100024-369B-S52B-STE	S3.24	--

CCR-034



1 SECTION A WATER SYSTEMS ROOM #1102 DETAIL - POWER - NEW WORK

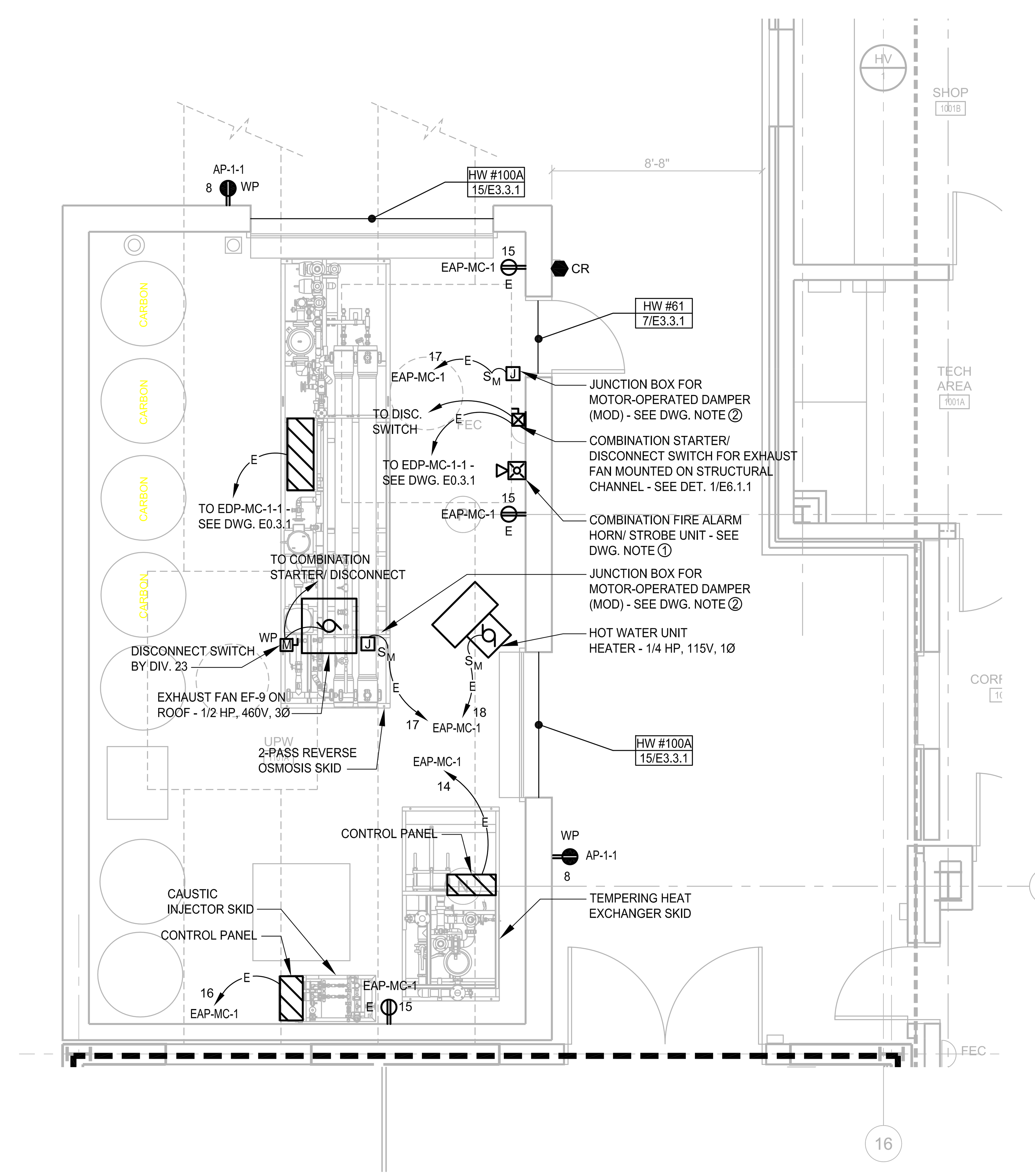
SCALE: 1/4" = 1'-0"

DRAWING NOTES:

1. CONNECT FIRE ALARM DEVICE TO NEAREST ANNUNCIATION BRANCH CIRCUIT. REFER TO FIRE ALARM DRAWINGS.
2. COORDINATE JUNCTION BOX LOCATION IN FIELD WITH DIVISION 23 CONTRACTOR.

GENERAL NOTES:

1. FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND DRAWING INDEX REFER TO DRAWINGS EG.1 AND EG.2.
2. NEW WORK NOTES ARE INDICATED BY THIS SYMBOL ○.
3. UNLESS OTHERWISE NOTED, CONNECT ALL 208/120V AND 480/277V NORMAL POWER WIRING DEVICES TO PANELBOARD DESIGNATED BY THE ELECTRICAL ZONE LINE.
4. ALL 20 AMPERE, SINGLE-POLE BRANCH CIRCUIT WIRE SIZES SHALL BE #12 AWG. WHERE BRANCH CIRCUIT LENGTHS EXCEED 100 FEET, PROVIDE #10 AWG.
5. ALL RECEPTACLES IN WORKSTATIONS WILL BE PROVIDED BY DIVISION 26 CONTRACTOR.
6. NUMERICAL DESIGNATION NEXT TO AN ELECTRICAL DEVICE INDICATES BRANCH CIRCUIT BREAKER AT PANELBOARD.
7. CONTRACTOR SHALL NOT WIRE GFI TYPE RECEPTACLES IN A THROUGH-FEED FASHION.
8. REFER TO FIRE ALARM DRAWINGS FOR LOCATIONS AND QUANTITIES OF DUCT MOUNTED SMOKE DETECTORS, ANNUNCIATION AND INITIATION DEVICES.
9. REFER TO PLUMBING DRAWINGS FOR LOCATIONS AND QUANTITIES OF MONITORED FIRE PROTECTION SYSTEM VALVES, WATER FLOW SWITCHES AND ELECTRIC BELLS.



2 SECTION A UPW ROOM #1101A DETAIL - POWER - NEW WORK

SCALE: 1/4" = 1'-0"

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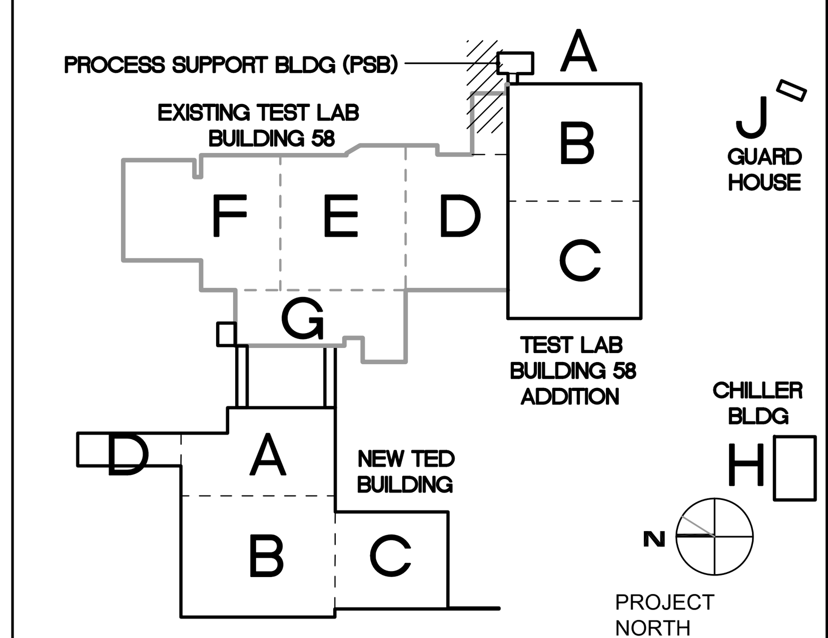


TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
1		CCR #34		09/26/11

REVISIONS

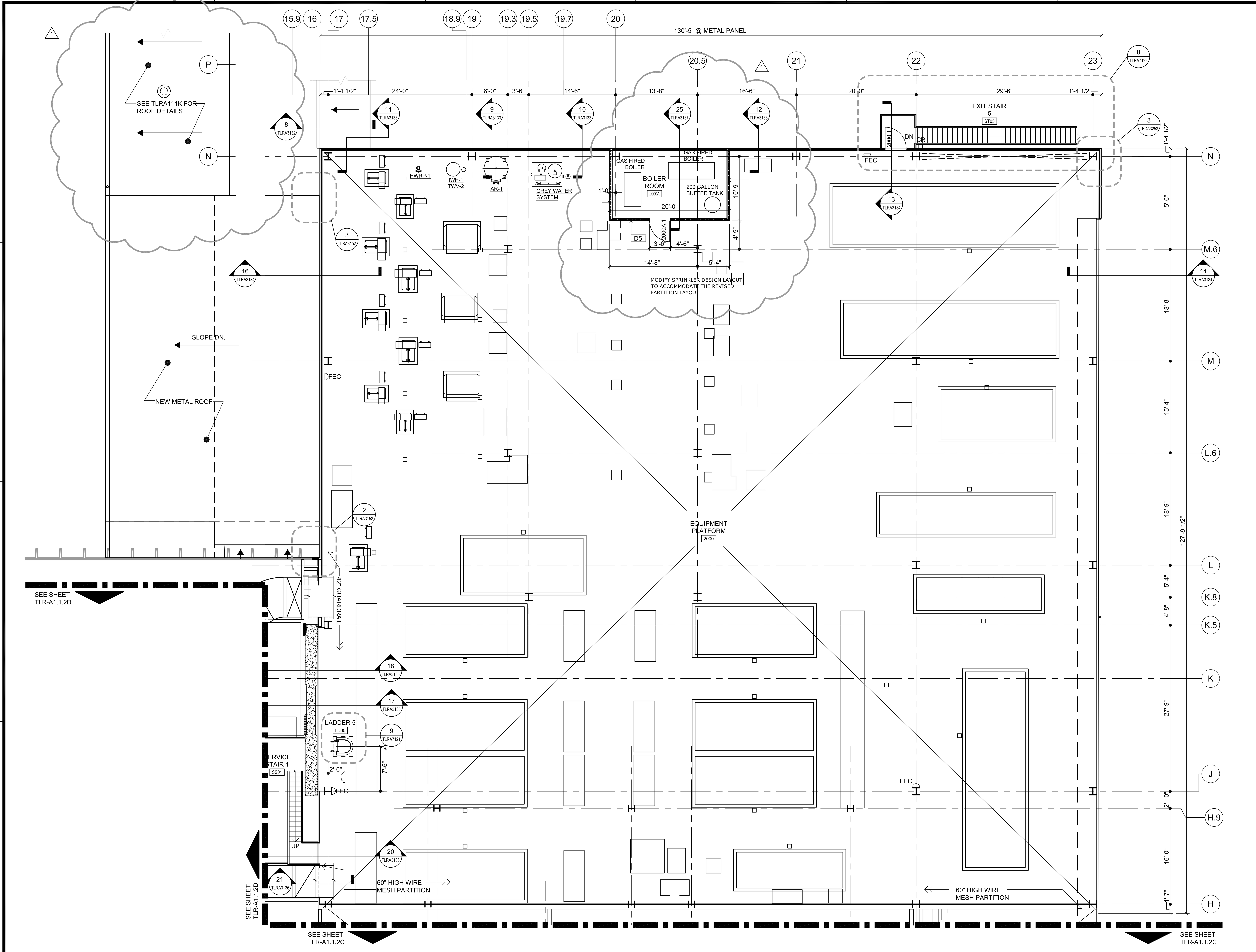
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED --	DATE --	DESIGNER --	DATE --
APPROVED --	--	DRAWN --	--
APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

Jefferson Lab

TITLE: TLR - BUILDING 58 - FIRST FLOOR PLAN - NEW WORK - POWER - SEGMENT A

SCALE	DRAWING NUMBER	SHEET	REV
AS NOTED	100024-750-E123A-STE	E5.3.1.4	--

CCR-034



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PLAN SYMBOLS KEY:

- EXISTING DOORS
- NEW DOORS DOOR NUMBER
- FRAME TYPE FOR GLAZED OPNGS

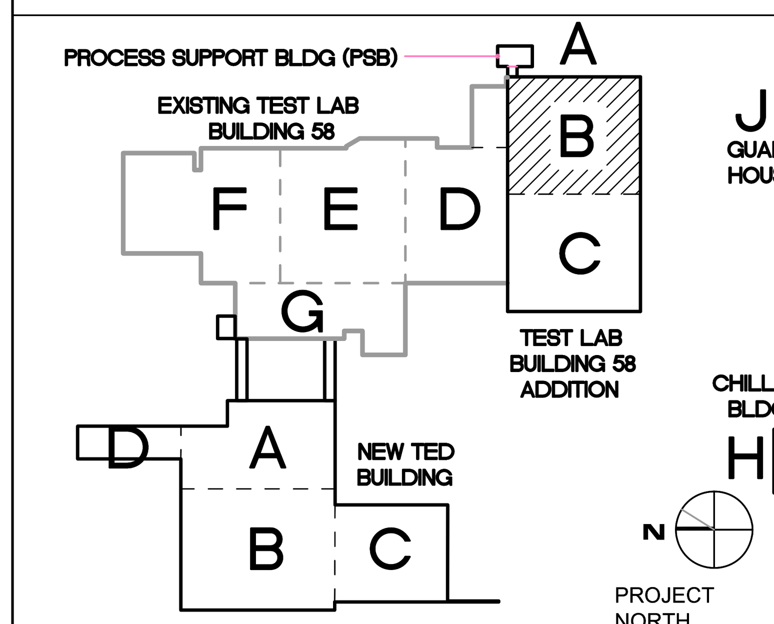
SEE DOOR AND FRAME DRAWING A4.0.4.1 & A4.0.4.2 AND DOOR SCHEDULES FOR MORE INFORMATION

- PARTITION TYPE
- FURRING TYPE

SEE PARTITION KEY ON DRAWING A4.0.1.1 FOR MORE INFORMATION

DIMENSION STANDARD:
- DIMENSION TO FACE OF FINISH
- DIMENSION TO CENTERLINE

GENERAL NOTES:
1. ALIGN ALL NEW PARTITIONS EDGE TO EDGE OF EXISTING PARTITIONS TO REMAIN.



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)
12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
1		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

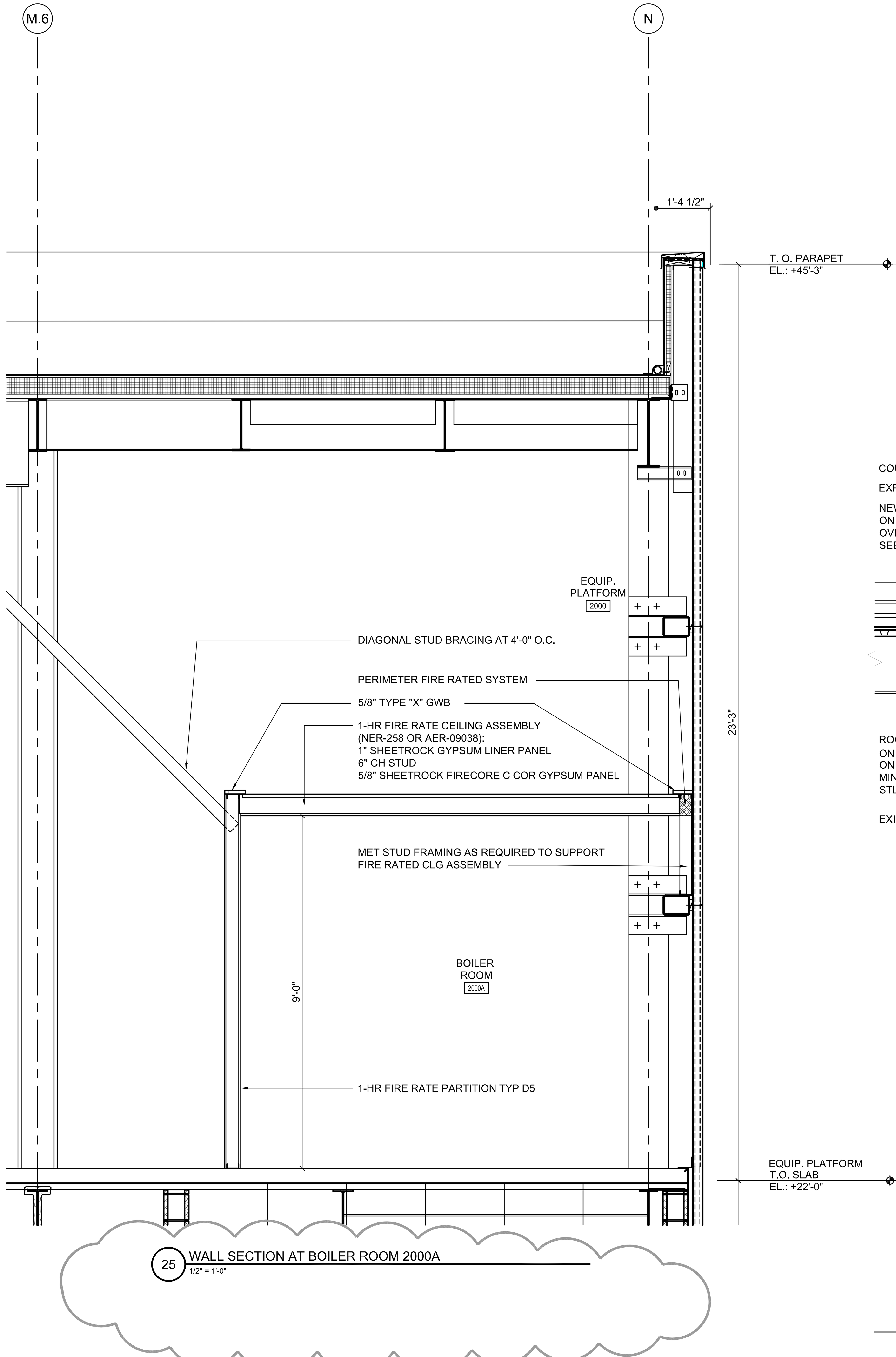
FACILITY USERS	DATE	FACILITIES & LOGISTICS	DATE
APPROVED	--	DESIGNER	--
APPROVED	--	DRAWN	--
APPROVED	--	CHECKED	--
APPROVED	--	APPROVED	--

Jefferson Lab

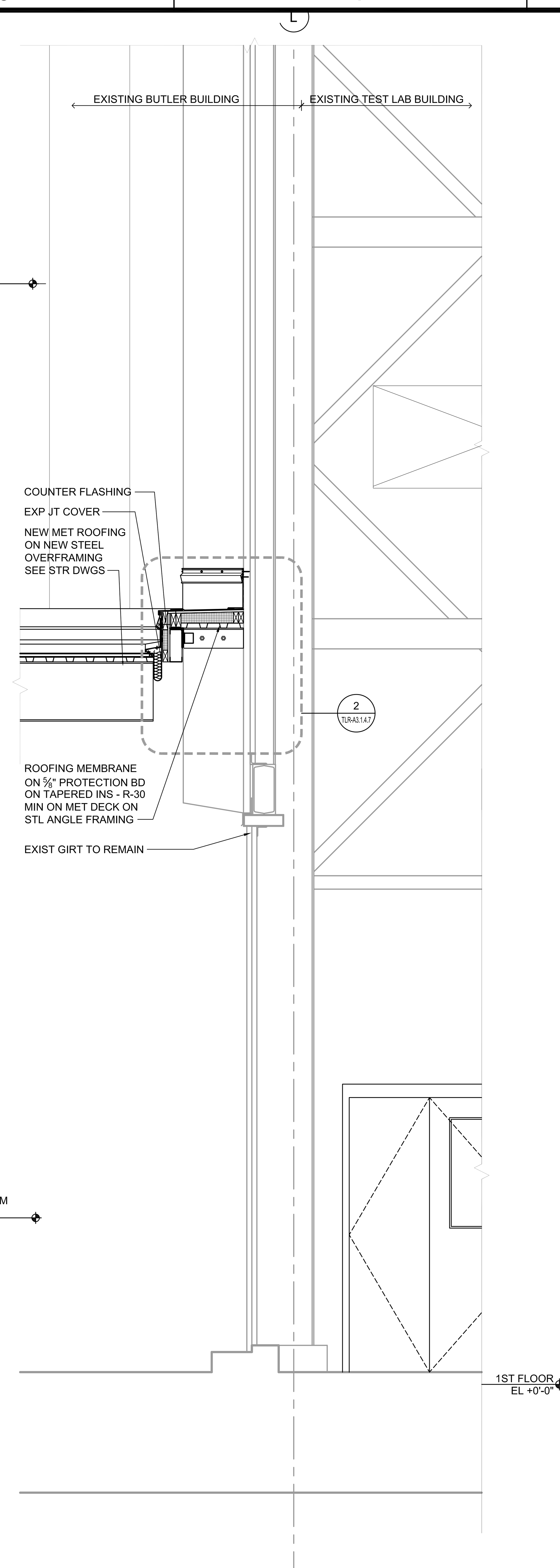
TITLE:
TEST LAB ADDITION - BUILDING 58
SECOND FLOOR - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-036-A18-STE	TLR-A1.1.2B	-

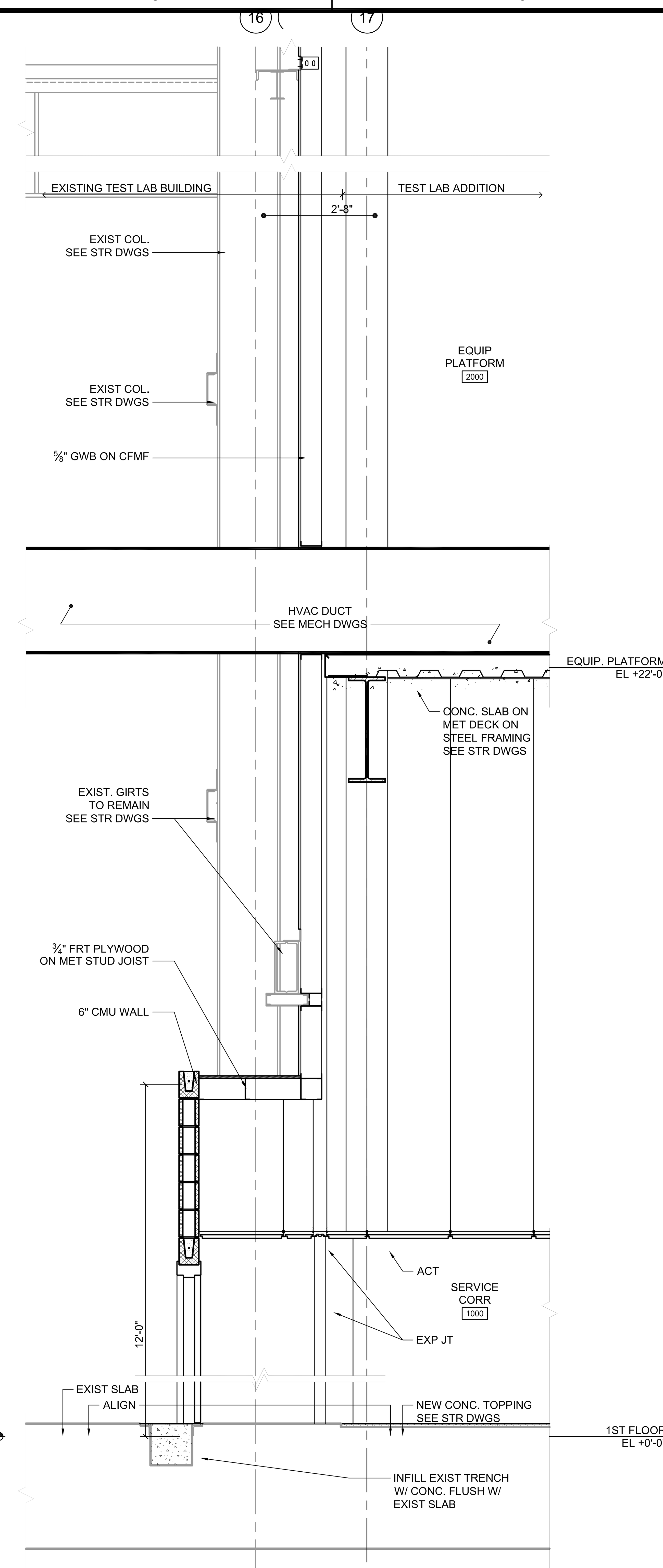
CCR-034



25 WALL SECTION AT BOILER ROOM 2000A
1/2" = 1'-0"



24 WALL SECTION
1/2" = 1'-0"



23 WALL SECTION
1/2" = 1'-0"

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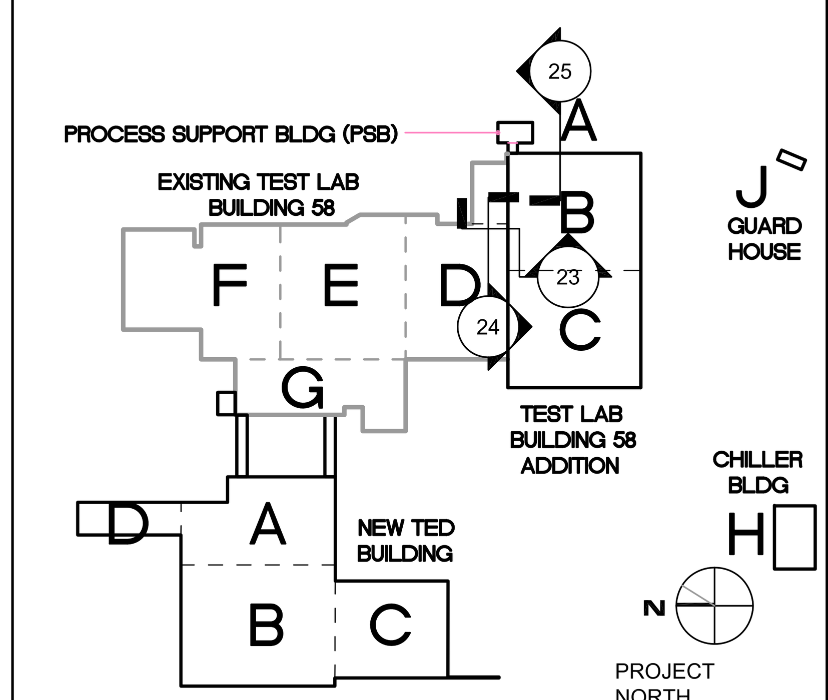

TECHNICAL ENGINEERING &
DEVELOPMENT FACILITY
(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
1				
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS	DATE	FACILITIES & LOGISTICS	DATE
APPROVED --	--	DESIGNER --	--
APPROVED --	--	DRAWN --	--
APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

Jefferson Lab

TITLE:
TEST LAB ADDITION - BUILDING 58
WALL SECTIONS

SCALE	DRAWING NUMBER	SHEET	REV
1/2" = 1'-0"	100024-113-A95-STE	TLR-A3.1.3.7	-

CCR-034

TEST LAB RENOVATION & ADDITION FIRST FLOOR

DOOR SCHEDULE

NUMBER	OPNG SIZE	DOOR			FRAME			FIRE RATING	HW	ELEC			REMARKS
		TYPE	MATL	GLAZ	TYPE	MATL	GLAZ			P	S	F	
Space not found.2	PR 3'-0" x 10'-0"	90	CR	TG	CR	AL	--	--	20C	--	--	--	CLEAN ROOM
1000.2	SEE DOOR SCHEDULE SHEET TLRA4.1.1.0												
1000A.1													
1001.1													
1001.2													
1001.3													
1001.4													
1001.5													
1001.6													
1001B.1													
1001B.2													
1001B.3													
1001C.1	4'-0" x 7'-0"	80	WM	--	WM	WM	--	--	82	--	S	--	--
1002.1	3'-0" x 7'-0"	03	HM	NG	B	HM	--	45	7	--	--	--	--
1002.2	3'-0" x 7'-0"	05	HM	TG	B	HM	--	--	7	--	--	--	--
1003.1	2'-0"(3'-0") x 8'-4"	15	HM	NG	B	HM	--	90	71	--	S	--	--
1003.2	3'-0" x 7'-0"	01	HM	--	EM	HM	--	--	51	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1004.1	3'-0" x 7'-0"	05	HM	TG	EM	HM	--	--	61	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1004.2	10'-0" x 16'-0"	50	STL	--	REC	STL	--	--	100A	P	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1005.1	2'-0"(3'-0") x 8'-4"	15	HM	NG	B	HM	--		20C	--	--	--	--
1005.2	3'-0" x 7'-0"	01	HM	TG	EM	HM	--	--	51	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1005.3	2'-0"(3'-0") x 8'-4"	15	HM	NG	B	HM	--	90	21	--	--	--	--
1006.1	PR 3'-6" x 8'-4"	05	HM	TG	B	HM	--	--	72T	--	S	--	--
1007.1	1'-0"(3'-0") x 8'-4"	11	HM	--	B	HM	--	--	74	--	S	--	--
1009.1	2'-0"(3'-0") x 8'-4"	15	HM	TG	B	HM	--	--	73	--	S	--	--
1010.1	PR 2'-0" x 7'-0"	92	CR	--	CR	AL	--	--	28	--	--	--	CLEANROOM
1010.2	3'-0" x 7'-0"	92	CR		CR	AL	--	--	50E	--	--	--	CLEAN ROOM
1011.1	3'-0" x 8'-4"	05	HM	TG	B	HM	--	--	60BT	--	--	--	--
1012.1	PR 4'-0" x 8'-4"	05	HM	TG	B	HM	--	--	72T	--	--	--	--
1013.1	3'-0" x 7'-0"	01	HM	--	B	HM	--	--	15	--	--	--	--
1014.1	3'-0" x 7'-0"	01	HM	--	B	HM	--	--	5	--	--	--	--
1015.1	3'-0" x 7'-0"	01	HM	--	B	HM	--	--	15	--	--	--	--
1016.1	PR 3'-6" x 8'-4"	07	HM	TG	B	HM	--	--	72T	--	S	--	--
1017.1	3'-0" x 7'-0"	05	HM	TG	B	HM	--	--	15	--	--	--	--
1018.1	3'-0" x 7'-0"	05	HM	TG	EM	HM	--	--	65	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1019.1	PR 4'-0" x 10'-4"	05	HM	TG	B	HM	--	--	72XT	--	S	--	--
1019.2	PR 4'-0" x 10'-4"	01	HM	--	EM	HM	--	--	25	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1022.1	PR 3'-0" x 10'-4"	05	HM	TG	B	HM	--	--	72XT	--	S	--	--
1023.1	PR 4'-0" x 10'-4"	05	HM	TG	B	HM	--	--	72XT	--	S	--	--
1024.1	PR 3'-0" x 10'-4"	01	HM	--	EM	HM	--	--	75	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1025.1	PR 4'-0" x 10'-4"	05	HM	TG	B	HM	--	--	72XT	--	S	--	--
1040.1	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	71	--	S	--	CLEAN ROOM
1040.2	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	20	--	--	--	CLEAN ROOM
1041.1	4'-0" x 8'-0"	93	CR	--	CR	AL	--	--	100D	P	--	--	CLEAN ROOM
1041.2	4'-0" x 8'-0"	93	CR	--	CR	AL	--	--	100C	P	S	--	CLEAN ROOM
1042.1	3'-0" x 7'-0"	90	CR	TG	CR	AL	--	--	60	--	S	--	CLEAN ROOM
1042.2	3'-0" x 7'-0"	90	CR	TG	CR	AL	--	--	7	--	--	--	CLEAN ROOM
1043.1	5'-0" x 8'-0"	96	CR	TG	CR	AL	--	--	100E	P	--	--	CLEAN ROOM
1044.1	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	71	--	S	--	CLEAN ROOM
1045.1	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	20	--	--	--	CLEAN ROOM
1046.1	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	71	--	S	--	CLEAN ROOM
1046.2	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	20	--	--	--	CLEAN ROOM
1048.1	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	20	--	--	--	CLEAN ROOM
1048.2	2'-0"(3'-0") x 7'-0"	90	CR	TG	CR	AL	--	--	20	--	--	--	CLEAN ROOM
1048.3	3'-0" x 7'-0"	92	CR	--	CR	AL	--	--	50E	--	--	--	CLEAN ROOM
1049.1	3'-6" x 7'-0"	90	CR	TG	CR	AL	--	--	7A	--	--	--	CLEAN ROOM
1049.2	3'-6" x 7'-0"	90	CR	TG	CR	AL	--	--	7A	--	--	--	CLEAN ROOM
1050.1	PR 4'-0" x 8'-4"	05	HM	TG	PL	HM	--	--	72T	--	S	--	--
1050.2	3'-0" x 7'-0"	01	HM	--	A	HM	--	90	50E	--	--	--	
1051.1	16'-8" x 16'-0"	50A	SST	--	REC	STL	--	90	100	--	--	--	--
1051.2	26'-0" x 16'-0"	50A	SST	--	REC	STL	--	90	100	--	--	--	--
1051.3	16'-8" x 16'-0"	50A	SST	--	REC	STL	--	90	100	--	--	--	--
1053.1	2'-0"(3'-0") x 10'-0"	90	CR	TG	CR	AL	--	--	20	--	--	--	CLEAN ROOM

TEST LAB RENOVATION & ADDITION FIRST FLOOR (CONT.)

DOOR SCHEDULE

NUMBER	OPNG SIZE	DOOR			FRAME			FIRE RATING	HW	ELEC			REMARKS
		TYPE	MATL	GLAZ	TYPE	MATL	GLAZ			P	S	F	
1054.1	3'-0" x 7'-0"	90	CR	TG	CR	AL	--	--	60	--	S	--	CLEAN ROOM
1055.1	3'-0" x 7'-0"	90	CR	TG	CR	AL	--	--	7B	--	--	--	CLEAN ROOM
1056.1	3'-0" x 7'-0"	90	CR	TG	CR	AL	--	--	7B	--	--	--	CLEAN ROOM
1056.2	3'-0" x 7'-0"	90	CR	TG	CR	AL	--	--	7B	--	--	--	CLEAN ROOM
1056A.1	3'-0" x 7'-0"	92	CR	--	CR	AL	--	--	5A	--	--	--	--
1057.1	5'-7" x 8'-0"	96	CR	TG	CR	AL	--	--	100E	P	--	--	CLEAN ROOM AUTO SLIDER
1058.1	30'-0" x 7'-0"	95	CR	TG	CR	STL	--	--	100A	P	S	--	VERTICAL LIFT DOOR SEE A4.0.5.5
1058.2	30'-0" x 7'-0"	95	CR	TG	CR	STL	--	--	100	P	S	--	VERTICAL LIFT DOOR SEE A4.0.5.5
1058.3	3'-0" x 6'-8"	92	CR	--	CR	AL	--	--	5A	--	--	--	--
1059.1	PR 3'-0" x 10'-0"	90	CR	TG	CR	AL	--	--	72T	--	S	--	CLEAN ROOM
1100.1	2'-0"(3'-0") x 7'-4"	15	HM	TG	B	HM	--	--	55	--	--	--	--
1100.2	PR 4'-0" x 8'-4"	01	HM	--	CX	HM	--	--	70	--	S	--	--
1101.1	PR 4'-0" x 8'-0"	01	HM	--	ED	HM	--	--	59	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1101.2	3'-0" x 7'-0"	01	HM	--	ED	HM	--	--	65	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1102.1	4'-0" x 7'-0"	01	HM	--	ED	HM	--	--	51	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1103.1	PR 3'-0" x 8'-0"	05	HM	TG	B	HM	--	--	72T	--	--	--	--
1104.1	PR 3'-0" x 7'-0"	80	WM	--	WM	WM	--	--	86	--	S	--	SEE SPEC SECTION
1105.1	3'-0" x 7'-0"	92	CR	--	CR	AL	--	--	50E	--	--	--	CLEAN ROOM
1120.1	PR 3'-6" x 8'-0"	03	HM	NG	B	HM	--	90	58	--	--	--	--
1201.1	3'-0" x 8'-10"	23	AL	TG	IA 11	AL	TG / FILM	--	6T	--	--	--	--
1202.1	3'-0" x 8'-10"	06	WD	TG	IA	AL	--	--	6T	--	--	--	--
1203.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	5A	--	--	--	--
1204.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	15	--	--	--	--
1205.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	15	--	--	--	--
1207.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	5A	--	--	--	--
1208.1	3'-0" x 7'-0"	01	HM	--	B	HM	--	45	5A	--	--	--	--
1209.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	5A	--	--	--	--
1211.1	1'-0"(4'-0") x 7'-0"	15	HM	TG	A	HM	--	--	22A	--	--	--	--
1211.2	3'-0" x 7'-0"	01	HM	--	ED	HM	--	--	51	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1214.1	3'-0" x 8'-10"	23	AL	TG	IA 12	AL	TG / FILM	--	6T	--	--	--	--
1214.2	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	6T	--	--	--	--
1214.3	3'-9" x 6'-10"	23	AL	TG	SF 24	AL	--	--	40	--	--	--	SEE S24/TLR-A4411
1214.4	3'-9" x 6'-10"	23	AL	TG	SF 24	AL	--	--	40	--	--	--	SEE S24/TLR-A4411
1217.1	3'-6" x 7'-0"	01	HM	--	B	HM	--	60	5B	--		--	--
1221.1	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
1222.1	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
1223.1	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
1224.1	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
1225.1	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
1226.1	3'-0" x 8'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
1227.1	3'-0" x 8'-10"	23	AL	TG	IA 10	L	TG / FILM	--	6T	--	--	--	--
1227.2	3'-0" x 8'-10"	23	AL	TG	IA 10	AL	TG / FILM	--	6T	--	--	--	--
1300.1	PR 3'-0" x 7'-0"	23	AL	TG	IA	AL	--	--	26	--	--	--	--
1300.2	PR 3'-0" x 7'-0"	29	FG	TG	AG	--	--	--	33	--	--	--	FRAMELESS ALL GLASS DOOR
1300.3	PR 3'-0" x 7'-0"	23	AL	TG	CW 30	AL	--	--	56	--	--	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1300.4	PR 3'-0" x 7'-0"	23	AL	TG	CW 30	AL	--	--	73	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1310.1	PR 3'-6" x 8'-0"	05	HM	TG	A	HM	--	--	26	--	--	--	--
1310.2	PR 3'-6" x 8'-0"	05	HM	TG	A	HM	--	--	27	P	--	--	--
1310.3	PR 3'-0" x 7'-0"	23	AL	TG	CW 30	AL	--	--	73	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
1310.4	PR 3'-0" x 7'-0"	23	AL	TG	CW 30	AL	--	--	56	--	--	--	SEE EXTERIOR ELEVATIONS FOR DETAILS
ST01.1.1	3'-0" x 7'-0"	03	HM	NG	B	HM	--	60	50	--	--	--	--
ST02.1.1	3'-6" x 7'-0"	03	HM	NG	B	HM	--	60	50	--	--	--	--
ST02.1.2	3'-6" x 7'-0"	01	HM	--	EM	HM	--	--	65	--	S	--	SEE EXTERIOR ELEVATIONS FOR DETAILS

2

UPW ROOM

DOOR SCHEDULE

NUMBER	OPNG SIZE	DOOR			FRAME			FIRE RATING	HW	ELEC			REMARKS
		TYPE	MATL	GLAZ	TYPE	MATL	GLAZ			P	S	F	
1101A.2	3'-0" x 7'-0"	01	HM	--	EM	HM	--	--	61	--	S	--	
1101A.3	6'-0" x 10'-0"	50	STL	--	REC	STL	--	--	100A	P	S	--	*
1101A.3	10'-0" x 10'-0"	50	STL	--	REC	STL	--	--	100A	P	S	--	*

2

EWING COLE

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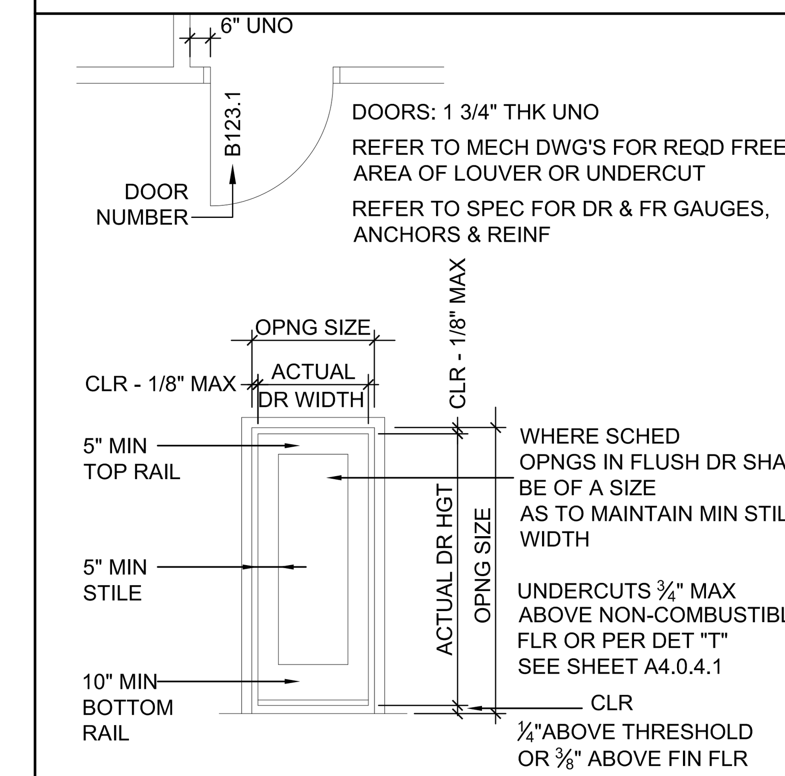

NOTE: DOOR TYPE NUMBERS, FRAME TYPES, AND HARDWARE NUMBERS MAY NOT BE CONSECUTIVE

GLAZING REQUIREMENTS:
1. ALL DOOR & SIDELITE GLAZING SHALL BE 1/4" UNO
2. ALL DOOR GLAZING SHALL BE TEMPERED GLASS (TG) UNO
3. ALL INTERIOR PARTITION OR SIDELITE GLAZING SHALL BE TEMPERED GLASS (TG) UNO
4. GLAZING IN ≥ 1 HOUR FIRE RATED DOORS SHALL BE 1/4" NON WIRE GLASS (NG), AND LIMITED TO 100 SQ INCHES
5. ALL EXTERIOR GLAZING IS TO BE INSULATED (IG) U.N.O.

DOOR SCHEDULE LEGEND:

GLAZING
- FG FLOAT GLASS
- IG INSULATED GLASS
- FRG FIRE RATED GLASS
- LG LAMINATED GLASS — SEE SPECIFICATIONS FOR TYPES
- PG PATTERNED GLASS — SEE SPECIFICATIONS FOR TYPES
- TG TEMPERED GLASS
- NG FIRE RATED NON-WIRE GLASS
- FILM FACTORY APPLIED FILM - ROOM SIDE OF GLASS

ELECTRICAL
- P POWER(120VAC and UP)
- S SECURITY RELATED(12 TO 24V)
- F FIRE ALARM RELATED(12 TO 24V)

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)
12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
		BULLETIN NO. 30		12/23/10
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED --	DATE --	DESIGNER --	DATE --
APPROVED --	--	DRAWN --	--
APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

Jefferson Lab

TITLE: TEST LAB RENOVATION & ADDITION FIRST FLOOR DOOR SCHEDULES

SCALE	DRAWING NUMBER	SHEET	REV
NTS	100024-209-A191-STE	TLR-A4.1.1.1	-

CCR-034

TEST LAB RENOVATION - BUILDING 58 SECOND FLOOR

DOOR SCHEDULE

NUMBER	OPNG SIZE	DOOR TYPE	DOOR MATL	DOOR GLAZ	FRAME TYPE	FRAME MATL	FRAME GLAZ	FIRE RATING	HW	ELEC P	ELEC S	ELEC F	REMARKS
2000.1	3'-6" x 7'-0"	01	HM	--	EG	HM	--	--	65	--	S	--	See exterior elevations for details
2000A.1	3'-6" x 7'-0"	01	HM	--	A	HM	--	45	4B	--	--	--	--
2200.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	45	3T	--	--	--	--
2201.1	3'-0" x 7'-10"	01	HM	--	A	HM	--	--	5AT	--	--	--	--
2202.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	15	--	--	--	--
2203.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	15	--	--	--	--
2204.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2205.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	45	5A	--	--	--	--
2207.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2208.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2209.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2211.1	3'-0" x 7'-0"	22	WD	TG	A	HM	--	--	1	--	--	--	--
2212.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2213.1	3'-0" x 7'-0"	22	WD	TG	A	HM	--	--	1	--	--	--	--
2214.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2215.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	5	--	--	--	--
2216.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2218.1	3'-0" x 7'-0"	02	WD	--	A	HM	--	--	1	--	--	--	--
2219.1	3'-0" x 7'-0"	02	WD	--	IA	AL	--	--	1	--	--	--	--
2221.1	3'-0" x 7'-10"	23	AL	TG	IA15	AL	TG / FILM	--	6T	--	--	--	--
2223.1	3'-0" x 7'-0"	01	HM	--	A	HM	--	--	5A	--	--	--	--
2224.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2225.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2226.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2227.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2228.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2232.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2233.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2234.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2235.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2236.1	3'-0" x 8'-10"	23	AL	TG	IA13	AL	TG / FILM	--	6T	--	--	--	--
2237.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2241.1	3'-0" x 7'-0"	01	HM	--	B	HM	--	--	5A	--	--	--	--
2242.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2243.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2244.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
2245.1	3'-0" x 7'-10"	02	WD	--	IA	AL	--	--	1T	--	--	--	--
3200.1	PR 3'-0" x 7'-0"	23	AL	TG	IA	AL	--	--	26	--	--	--	--
3200.2	PR 3'-0" x 7'-0"	23	AL	TG	IA	AL	--	--	26	--	--	--	--
ST01.2.1	3'-0" x 7'-0"	03	HM	NG	A	HM	--	60	50	--	--	--	--
ST02.2.1	3'-6" x 7'-0"	03	HM	NG	B	HM	--	60	50	--	--	--	--

2

EWING COLE

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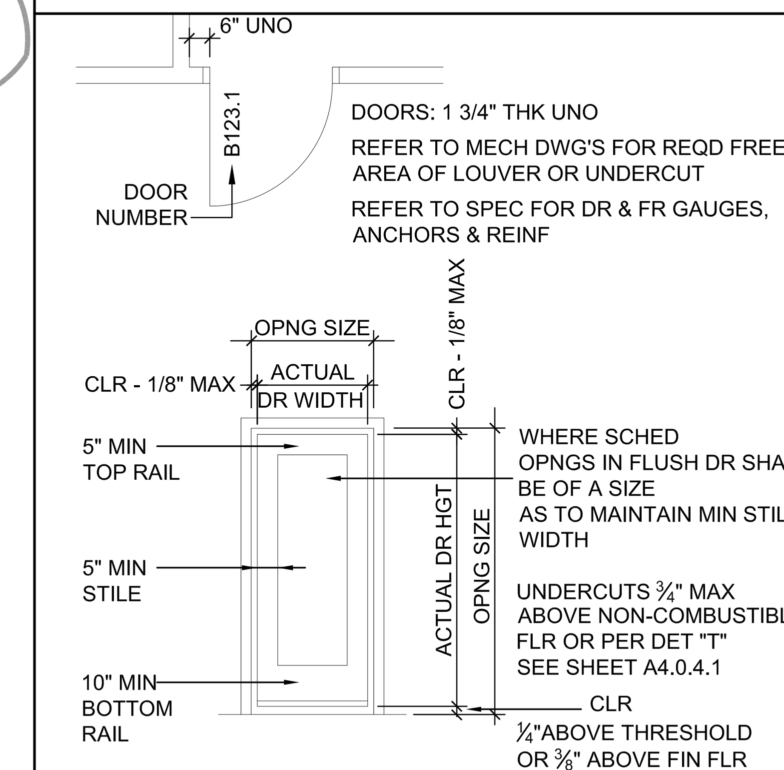

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DOOR SCHEDULE LEGEND:

GLAZING

FG FLOAT GLASS — IG INSULATED GLASS
FRG FIRE RATED GLASS
LG LAMINATED GLASS — SEE SPECIFICATIONS FOR TYPES
PG PATTERNED GLASS — SEE SPECIFICATIONS FOR TYPES
TG TEMPERED GLASS
NG FIRE RATED NON-WIRE GLASS
FILM FACTORY APPLIED FILM - ROOM SIDE OF GLASS

ELECTRICAL

P POWER(120VAC and UP)
S SECURITY RELATED(12 TO 24V)
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2		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
		BULLETIN NO. 30		12/23/10
		TEDF TWO - FINAL		05/24/10

REVISIONS

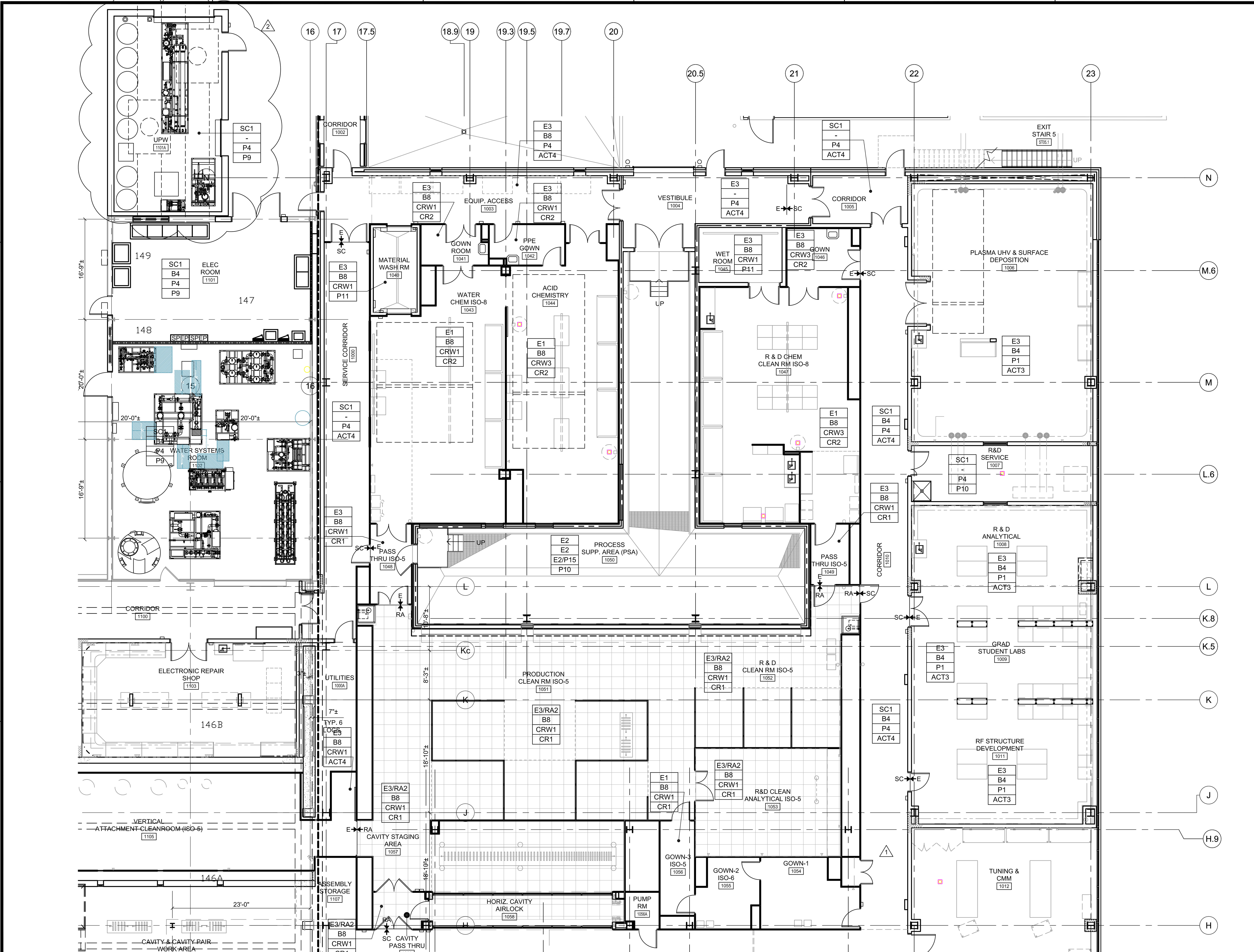
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED --	DATE --	DESIGNER --	DATE --
APPROVED --	--	DRAWN --	--
APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

Jefferson Lab

TITLE: TEST LAB RENOVATION & ADDITION SECOND FLOOR DOOR SCHEDULE

SCALE	DRAWING NUMBER	SHEET	REV
NTS	100024-210-A192-STE	TLR-A4.1.1.2	-

CCR-034



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TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
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REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
1		CONSOLIDATED SET		04/01/11
		BULLETIN NO. 34		02/16/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

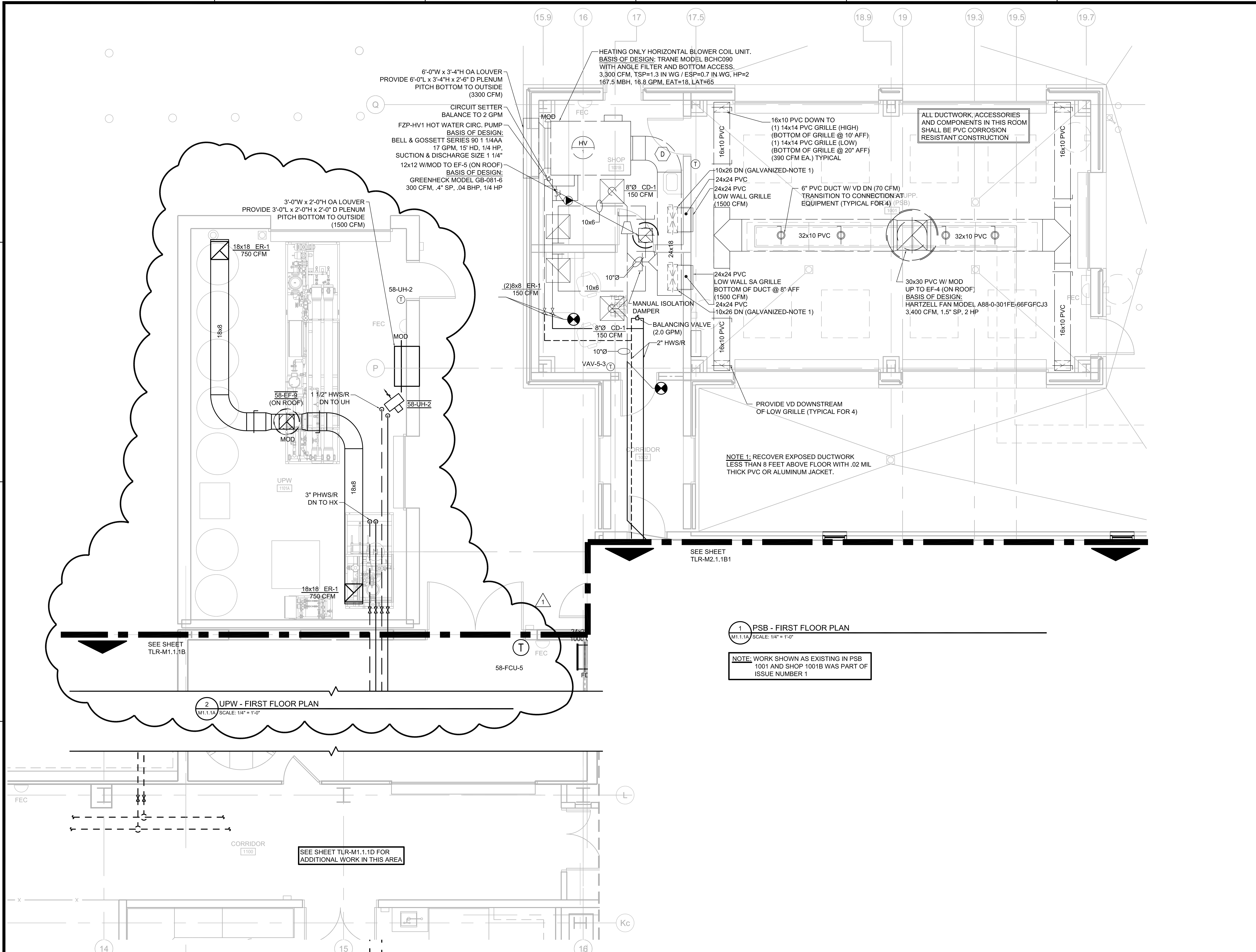
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER	DATE
APPROVED		DRAWN	
APPROVED		CHECKED	
APPROVED		APPROVED	

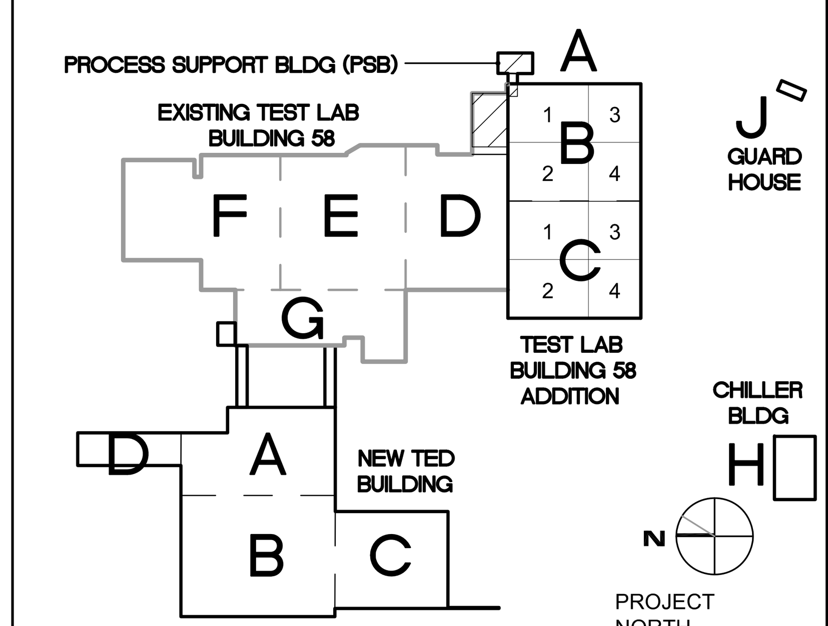
Jefferson Lab

TITLE: TEST LAB RENOVATION - BUILDING 58
FIRST FLOOR FINISH PLAN - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-304-I2-STE	TLR-D1.1.1B	-

CCR-034





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TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

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REV	ZONE	DESCRIPTION	APPR.	DATE
1		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10
		ISSUE NO. 1 / EPP		02/08/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED –	DATE –	DESIGNER –	DATE –
APPROVED –	–	DRAWN –	–
APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

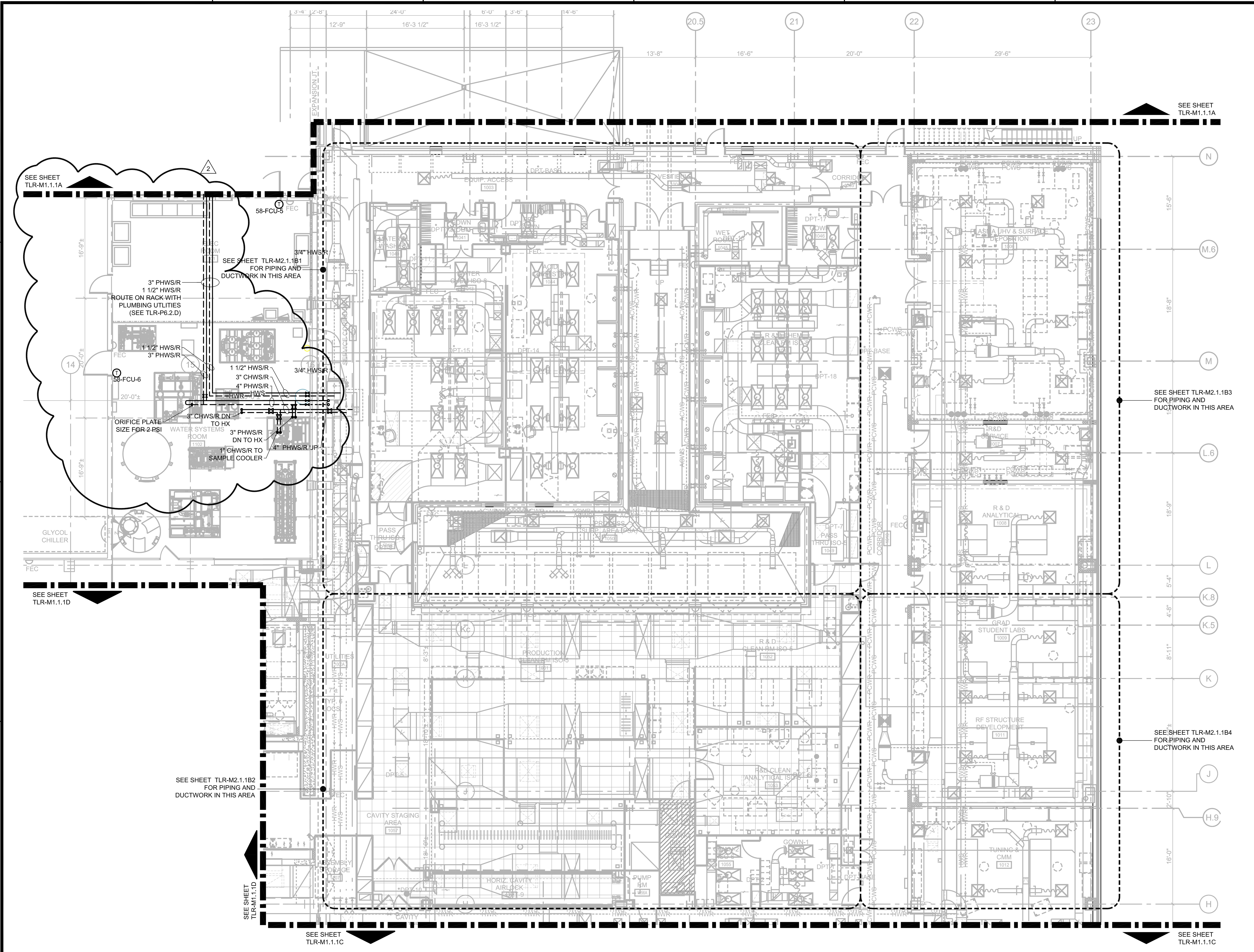
Jefferson Lab

TITLE:

BUILDING 58
HVAC - FIRST FLOOR - SEGMENT A

SCALE	DRAWING NUMBER	SHEET	REV
1/4" = 1'-0"	100024-392-M7-STE	TLR-M1.1.1A.1	–

CCR-034



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PROCESS SUPPORT BLDG (PSB)
EXISTING TEST LAB BUILDING 58
TEST LAB BUILDING 58 ADDITION
NEW TED BUILDING
GUARD HOUSE
CHILLER BLDG
PROJECT NORTH

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
1		BULLETIN NO. 44		03/31/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER	DATE
APPROVED		DRAWN	
APPROVED		CHECKED	
APPROVED		APPROVED	

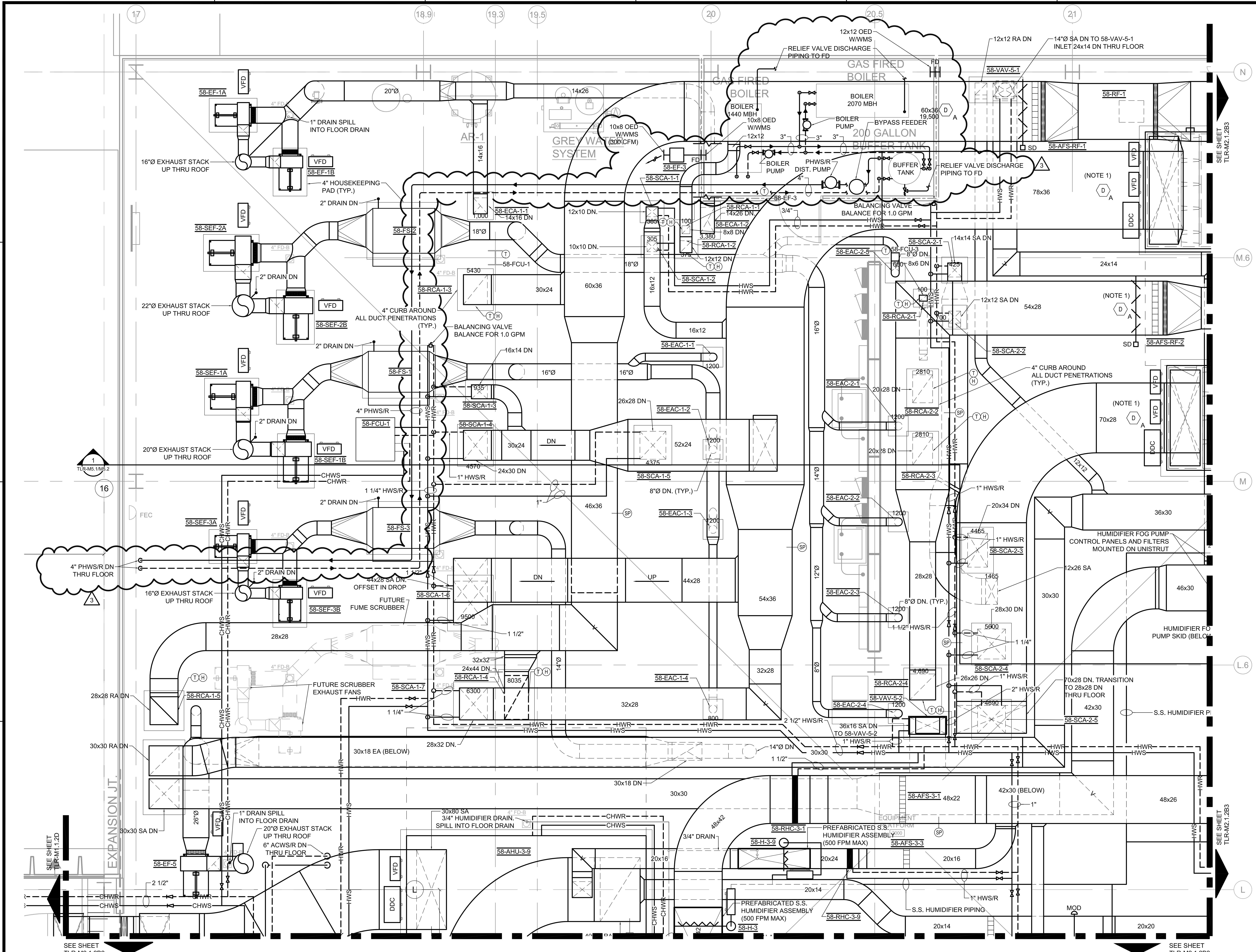
Jefferson Lab

TITLE:

BUILDING 58
HVAC - FIRST FLOOR - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-393-M8-STE	TLR-M1.1.1B	-

CCR-034



1. DUCT SMOKE DETECTORS SERVING CLEANROOM SPACES SHALL BE ASPIRATING TYPE. REFER TO DETAIL 2/FA5.1

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PROCESS SUPPORT BLDG (PSB)
EXISTING TEST LAB BUILDING 58
TEST LAB BUILDING 58 ADDITION
GUARD HOUSE
CHILLER BLDG
NEW TED BUILDING
PROJECT NORTH

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
3		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
2		BULLETIN NO. 44		03/31/11
1		BULLETIN NO. 32		01/21/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER	DATE
APPROVED		DRAWN	
APPROVED		CHECKED	
APPROVED		APPROVED	

Jefferson Lab

TITLE: TEST LAB ADDITION - BUILDING 58 HVAC - SEGMENT B-1

SCALE	DRAWING NUMBER	SHEET	REV
1/4" - 1'-0"	100024-428-M43-STE	TLR-M2.1.2B1	-

CCR-034

1 2 3 4 5 6

HUMIDIFIER SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	CFM	LOCATION	SERVICE	DISCHARGE LBS. STM/HR.	ELECTRIC KW	APPROXIMATE DUCT SIZE (WxH)	MAX. ABSORPT. DIST. (IN.)	REMARKS	BASIS OF DESIGN
58-H-OAU	3880	DUCT MOUNTED	OAU-1	52	21	36 x 18	18	ELECTRIC STEAM GENERATOR	DRISTEEM VM / ULTRASORB

NOTES:
1. PROVIDE MULTIPLE MANIFOLDS AS REQUIRED TO MEET MAXIMUM ABSORPTION DISTANCE.
2. COORDINATE CONTROLS WITH ATC CONTRACTOR.
3. ALL HUMIDIFIERS SHALL HAVE FULLY MODULATING STEAM OUTPUT & FULLY MODULATING HIGH LIMIT.
4. PROVIDE DRAIN COOLER.

HIGH PRESSURE HUMIDIFICATION SYSTEM SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TOTAL CFM	LOCATION	SERVICE	DISCHARGE LBS. STM/HR.	APPROXIMATE DUCT SIZE (WxH)	MAX. ABSORPT. DIST. (IN.)	REMARKS	BASIS OF DESIGN
58-H-1	10000	58-AHU-1	AHU-1	300	- - -	60	SEE 4/TLR-M4.1.2	MEE FOG
58-H-2	10000	58-AHU-2	AHU-2	300	- - -	60	SEE 4/TLR-M4.1.2	MEE FOG
58-H-3-1	7650	DUCT MOUNTED	AHU-3-1 - 3-7	210	48 x 42	60		MEE FOG
58-H-3-8	550	DUCT MOUNTED	AHU-3-8	15	12 x 12	60		MEE FOG
58-H-3-9	1,800	DUCT MOUNTED	AHU-3-9	50	20 x 24	60		MEE FOG
58-H-4	20,000	58-AHU-4	AHU-4	205	- - -	60	SEE 3/TLR-M4.1.2	MEE FOG

NOTES:
1. PROVIDE (1)FOG PUMP UNIT: 1575 LBS/HR FOG OUTPUT (3 HP, 4 GPM, 1000 PSI, 950 RPM) TOTAL OUTPUT SIZED TO ACHIEVE SCHEDULED LBS/HR CAPACITY COMPLETE WITH GAUGES, SAFETY DEVICE AND ELECTRICAL CONTROL PANEL AND PUMP COOLER
2. COORDINATE CONTROLS WITH BAS CONTRACTOR.
3. UNIT WILL BE FED WITH RO WATER PROVIDED BY SEPARATE ON SITE SYSTEM.
4. COMPONENTS SHALL BE 316 STAINLESS STEEL FOR USE WITH RO WATER.

PUMP SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE	LOCATION	SERVICE	GPM	TOTAL HEAD FT. WG	MAX. NPSHR FT. WG	OPER. TEMP. °F	SIZE IN. SUCT.	SIZE IN. DISCH.	EFF. %	RPM	HP	VFD	FOUND. TYPE	VIBRATION ISOLATION TYPE	VIBRATION ISOLATION DEFL. INCHES	REMARKS	BASIS OF DESIGN
CUP-PCWP-1	DBL SUCTION, SPLIT CASE	CHILLER BLDG 1900	CUP-CH-1	1920	50	8.4	42	8	6	75.3	1750	40	N	TYPE 3	FSNTL	1.5		B&G / VSC 6x8x10-1/2A
CUP-SCWP-1	DBL SUCTION, SPLIT CASE	CHILLER BLDG 1900	SECONDARY CHW	1920	115	9	42	8	6	82.3	1750	100	Y	TYPE 3	FSNTL	1.5		B&G /VSC 6x8x13-1/2A
CUP-SCWP-2	DBL SUCTION, SPLIT CASE	CHILLER BLDG 1900	SECONDARY CHW	1920	115	9	42	8	6	82.3	1750	100	Y	TYPE 3	FSNTL	1.5	SPARE (ALTERNATE NO. 4)	B&G /VSC 6x8x13-1/2A
58-HWP-1	INLINE	BOILER RM 1211	B-1	105	35	9.4	200	2	2	66.8	1750	2	N	NONE	--	--	REPLACES (E) 58-HWP-1	B&G / 60 2x7
58-HWP-2	INLINE	BOILER RM 1211	B-2	105	35	9.4	200	2	2	66.8	1750	2	N	NONE	--	--	REPLACES (E) 58-HWP-2	B&G / 60 2x7
58-HWP-3	INLINE	BOILER RM 1211	B-3	105	35	9.4	200	2	2	66.8	1750	2	N	NONE	--	--		B&G / 60 2x7
58-HWP-4	INLINE	BOILER RM 1211	B-4	105	35	9.4	200	2	2	66.8	1750	2	N	NONE	--	--		B&G / 60 2x7
58-HWP-5	BASE MOUNTED	BOILER RM 1211	SECONDARY HW	540	80	8	180	5	4	80.3	1750	20	Y	TYPE 3	FSNTL	1.5		B&G / 1510-4E
58-HWP-6	BASE MOUNTED	BOILER RM 1211	SECONDARY HW	540	80	8	180	5	4	80.3	1750	20	Y	TYPE 3	FSNTL	1.5	SPARE (ALTERNATE NO. 4)	B&G / 1510-4E
58-PCWP-1	BASE MOUNTED	BASEMENT B100	PROCESS COOLING	425	150	5.6	93	4	3	74.4	1750	30	Y	TYPE 3	FSNTL	1.5		B&G / 1510-3G
58-PCWP-2	BASE MOUNTED	BASEMENT B100	PROCESS COOLING	425	150	5.6	93	4	3	74.4	1750	30	Y	TYPE 3	FSNTL	1.5	SPARE (ALTERNATE NO. 4)	B&G / 1510-3G
58-ACP-1	VERT MULTI STAGE	BASEMENT B100	ACID CHILLED WATER	125	185	9	25	2 1/2	2 1/2	66.2	3500	15	Y	TYPE 1	FSNTL	1.5	30% PROPYLENE GLYCOL	GOULDS MODEL 33SVBB02M6DC
58-ACP-2	VERT MULTI STAGE	BASEMENT B100	ACID CHILLED WATER	125	185	9	25	2 1/2	2 1/2	66.2	3500	15	Y	TYPE 1	FSNTL	1.5	30% PROPYLENE GLYCOL/SPARE (ALTERNATE NO. 4)	GOULDS MODEL 33SVBB02M6DC
58-CWP-1	DBL SUCTION, SPLIT CASE	BASEMENT B100	SECONDARY CHW	1920	115	9	42	8	6	82.3	1750	100	Y	TYPE 3	FSNTL	1.5	REPLACES (E)58-CWP-1	B&G /VSC 6x8x13-1/2A
58-CWP-2	DBL SUCTION, SPLIT CASE	BASEMENT B100	SECONDARY CHW	1920	115	9	42	8	6	82.3	1750	100	Y	TYPE 3	FSNTL	1.5	REPLACES (E)58-CWP-2	B&G /VSC 6x8x13-1/2A
58-FZP-1	INLINE	EQUIP PLATFORM 2000	58-AHU-1 PREHEAT COIL	45	15	7.1	180	1 1/2	1 1/2	58	1750	0.5	N	N/A	--	--		B&G 60 1 1/2x5-1/4
58-FZP-2	INLINE	EQUIP PLATFORM 2000	58-AHU-3 PREHEAT COIL	45	15	7.1	180	1 1/2	1 1/2	58	1750	0.5	N	N/A	--	--		B&G 60 1 1/2x5-1/4
58-FZP-3	INLINE	EQUIP PLATFORM 2000	58-MAU-3 PREHEAT COIL	45	12	4.2	180	2	2	54.3	1725	0.33	N	N/A	--	--		B&G 90 2AA
58-FZP-4	INLINE	EQUIP PLATFORM 2000	58-AHU-4 PREHEAT COIL	65	15	5.7	180	2	2	61.7	1725	0.5	N	N/A	--	--		B&G 90 2AA
58-FZP-5	INLINE	EQUIP PLATFORM 2000	58-AHU-5 PREHEAT COIL	30	10	4.1	180	1 1/4	1 1/4	43.9	1725	0.25	N	N/A	--	--		B&G 90 1 1/4AA
58-FZP-6	INLINE	EQUIP PLATFORM 2000	58-AHU-6 PREHEAT COIL	25	10	3.4	180	1 1/4	1 1/4	43.8	1725	0.25	N	N/A	--	--		B&G 90 1 1/4AA

NOTES:
1. PUMPS TO BE NON-OVERLOADING AT EVERY POINT ON PUMP CURVE.

VARIABLE FREQUENCY DRIVE SCHEDULE

EQUIPMENT SERVED	DESCRIPTION	PHYSICAL LOCATION	HP (NOTE 2)	KW	VOLTS-Ø	TYPE	THD FILTER
58-AHU-1	AIR HANDLING UNIT - ACID CHEMISTRY CLEANROOM	MECH PLATFORM	50		460v-3Ø	12 PULSE	-
58-AHU-2	AIR HANDLING UNIT - R&D CHEMISTRY CLEANROOM	MECH PLATFORM	40		460v-3Ø	12 PULSE	-
58-MUA-3	AIR HANDLING UNIT - CLEANROOM MAKEUP UNIT	MECH PLATFORM	20		460v-3Ø	6 PULSE	LR
58-AHU-3-1	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-2	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-3	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-4	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-5	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-6	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-7	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	30		460v-3Ø	12 PULSE	-
58-AHU-3-8	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	15		460v-3Ø	6 PULSE	LR
58-AHU-3-9	AIR HANDLING UNIT - CLEANROOM	MECH PLATFORM	40		460v-3Ø	12 PULSE	-
58-AHU-4	AIR HANDLING UNIT - CLEANROOM SUPPORT AREAS	MECH PLATFORM	40		460v-3Ø	12 PULSE	-
58-AHU-5	AIR HANDLING UNIT - PROCESS EQUIPMENT AREAS	MECH PLATFORM	15		460v-3Ø	6 PULSE	LR
58-AHU-6	AIR HANDLING UNIT - CRYO ASSEMBLY	MECH PLATFORM	20		460v-3Ø	6 PULSE	LR
58-RF-1	58-AHU-1 RETURN FAN	MECH PLATFORM	10		460v-3Ø	6 PULSE	LR
58-RF-2	58-AHU-2 RETURN FAN	MECH PLATFORM	5		460v-3Ø	6 PULSE	LR
58-RF-3	58-AHU-3 RETURN FAN	MECH PLATFORM	3		460v-3Ø	6 PULSE	LR
58-RF-4	58-AHU-4 RETURN FAN	MECH PLATFORM	10		460v-3Ø	6 PULSE	LR
58-RF-5	58-AHU-5 RETURN FAN	MECH PLATFORM	3		460v-3Ø	6 PULSE	LR
58-RF-6	58-AHU-6 RETURN FAN	MECH PLATFORM	5		460v-3Ø	6 PULSE	LR
58-SEF-1A	SCRUBBER EXHAUST FAN	MECH PLATFORM	20		460v-3Ø	6 PULSE	LR
58-SEF-1B	SCRUBBER EXHAUST FAN	MECH PLATFORM	20		460v-3Ø	6 PULSE	LR
58-SEF-2A	SCRUBBER EXHAUST FAN	MECH PLATFORM	25		460v-3Ø	6 PULSE	LR
58-SEF-2B	SCRUBBER EXHAUST FAN	MECH PLATFORM	25		460v-3Ø	6 PULSE	LR
58-SEF-3A	SCRUBBER EXHAUST FAN	MECH PLATFORM	15		460v-3Ø	6 PULSE	LR
58-SEF-3B	SCRUBBER EXHAUST FAN	MECH PLATFORM	15		460v-3Ø	6 PULSE	LR
58-EF-1A	GENERAL EXHAUST - CHEMISTRY CLEANROOM	MECH PLATFORM	2		460v-3Ø	6 PULSE	LR
58-EF-1B	GENERAL EXHAUST - CHEMISTRY CLEANROOM	MECH PLATFORM	2		460v-3Ø	6 PULSE	LR
58-EF-5	GENERAL EXHAUST - PROCESS SUPPORT AREA	MECH PLATFORM	2		460v-3Ø	6 PULSE	LR
58-SF-1	COMBUSTION AIR FAN	BOILER ROOM	1		460v-3Ø	6 PULSE	LR
CUP-SCWP-1	SECONDARY CHW	CHILLER BLDG 1900	100		460v-3Ø	12 PULSE	-
CUP-SCWP-2	SECONDARY CHW (STANDBY)	CHILLER BLDG 1900 (STANDBY)	100		460v-3Ø	12 PULSE	-
58-HWP-5	SECONDARY HW	BOILER RM 1211	20		460v-3Ø	6 PULSE	LR
58-HWP-6	SECONDARY HW	BOILER RM 1211	20		460v-3Ø	6 PULSE	LR
58-PCWP-1	PROCESS COOLING	BASEMENT B100	30		460v-3Ø	12 PULSE	-
58-PCWP-2	PROCESS COOLING	BASEMENT B100	30		460v-3Ø	12 PULSE	-
58-ACP-1	ACID CHILLED WATER	BASEMENT B100	15		460v-3Ø	6 PULSE	LR
58-ACP-2	ACID CHILLED WATER	BASEMENT B100	15		460v-3Ø	6 PULSE	LR
58-CWP-1	SECONDARY CHW	CHILLER BLDG 1900	100		460v-3Ø	12 PULSE	-
58-CWP-2	SECONDARY CHW	CHILLER BLDG 1900	100		460v-3Ø	12 PULSE	-
CUP-CH-1	CHILLER	-	-	442	4160v-3Ø	NOTE 5	-

NOTES:
1. ALL VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY DIVISION 23. REFER TO DIVISION 26 FOR SPECIFICATIONS.
2. DIVISION 23 SHALL BE RESPONSIBLE FOR PROPER MATCHING THE SIZE OF VFD WITH SIZE OF MOTOR (SHALL BE THE SAME).
3. ALL VFD'S SHALL BE OF THE SAME MANUFACTURER.
4. LR = LINE REACTOR (5%)
5. VFD WITH INTERGRAL 24 PULSE HARMONIC FILTER PROVIDED BY CHILLER MANFACTURER (AS SPECIFIED 23 60 00).

WATER CHILLER SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE	LOCATION	NOM. CAPACITY TONS	EVAPORATOR GPM	EVAPORATOR PD / FT. WG	EVAPORATOR EWT °F	EVAPORATOR LWT °F	EVAPORATOR NO. OF PASSES	EVAPORATOR MAX. VEL. FPS	REF.	FOUL FACT	CONN. SIZE	CONDENSER GPM	CONDENSER PD / FT. WG	CONDENSER EWT °F	CONDENSER LWT °F	CONDENSER NO. OF PASSES	CONDENSER MAX. VEL. FPS	FOUL FACT	CONN. SIZE	COMPRESSOR MAX. KW INPUT	FOUND. TYPE	FULL LOAD KW/TON (MAX.)	APLV KW/TON (MAX.)	REMARKS	BASIS OF DESIGN
CUP-PCH-1	CENTRIFUGAL	NEW CUP	800	1917	13.5	52	42	2	5	R134-A	0.0001	12	2400	21	85	95	2	5	0.0001	12	445	TYPE 1	0.578	0.368	VSD W/ IEEE FILTER	YORK YK MAXE
58-PCH-1	SCROLL	BASEMENT	24.5	125	27.7	25	20	—	5	R410A	0.0001	6	78.5	9.7	85	95	—	5	0.0001	6	20 HP	TYPE 1	—	—	30% PROPYLENE GLYCOL (NOTE 1)	ARCTI CHILL PWCCMV0400D4-MM

NOTE 1: SCHEDULED CAPACITY IS FOR (1) PROCESS CHILLER MODULE. PROVIDE (1) MODULE WITH MASTER DISTRIBUTION PANEL FOR CAPACITY OF 4 TOTAL MODULES [(1) CURRENT - (3) FUTURE].

BOILER SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	LOCATION	TYPE	INPUT MBH	GROSS OUTPUT MBH	WATER GPM	WATER MAX PD	WATER EWT °F	WATER LWT °F	RELIEF VALVE SETTING PSIG	GAS BURNER CFH	GAS BTU/ CU. FT.	BURNER PRESS. IN. WG.	FLUE GAS VENT DIA./ IN.	FOUND. TYPE	VIBRATION ISOLATOR TYPE	VIBRATION ISOLATOR DEFL. INCHES	REMARKS	BASIS OF DESIGN
58-B-3	BLDG 58	FLEXIBLE WATERTUBE	2500	2088	105	2 FT	160	200	45	2500	1000	< 1 PSI	10	TYPE 1	NP	0.25		BRYAN AB250
58-B-4	BLDG 58	FLEXIBLE WATERTUBE	2500	2088	105	2 FT	160	200	45	2500	1000	<1 PSI	10	TYPE 1	NP	0.25		BRYAN AB250

NOTES:
1. PROVIDE BOILER WITH GAS TRAIN, RELIEF VALVE, FM & IRI SAFETY CONTROLS, COMPLETE CONTROL SYSTEM, BAROMETRIC DAMPER, MODULATING GAS BURNER AND BURNER CONTROL PANEL.
2. BURNER TO BE FULLY MODULATING WITH A 5:1 TURN DOWN.
3. PROVIDE BOILER WITH INTEGRAL CONDENSATE TREATMENT ASSEMBLY & SEALED COMBUSTION KIT.

FAN SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE	LOCATION	SERVICE	CFM	SP/ IN. WG	ROOF OPENING IN.X IN.	RPM	MOTOR MAX. BHP	MOTOR HP	VIBRATION ISOLATION TYPE	VIBRATION ISOLATION DEFL. INCHES	VFD	REMARKS	BASIS OF DESIGN
58-RF-1	MIXED FLOW	MECH PLATFORM	58-AHU-1	19,500	1.5	N/A	618	6.61	10	HSN	1 1/2 INCH	Y		GREENHECK QEI-40-II
58-RF-2	MIXED FLOW	MECH PLATFORM	58-AHU-2	11,000	1.2	N/A	765	3.01	5	HSN	1 1/2 INCH	Y		GREENHECK QEI-30-I
58-RF-3	MIXED FLOW	MECH PLATFORM	58-AHU-3	9,000	1.3	N/A	731	2.59	3	HSN	1 1/2 INCH	Y		GREENHECK QEI-30-II
58-RF-4	MIXED FLOW	MECH PLATFORM	58-AHU-4	14,000	1.8	N/A	845	6.6	10	HSN	1 1/2 INCH	Y		GREENHECK QEI-33-I
58-RF-5	MIXED FLOW	MECH PLATFORM	58-AHU-5	7,500	1.2	N/A	797	2	3	HSN	1 1/2 INCH	Y		GREENHECK QEI-27-II
58-RF-6	MIXED FLOW	MECH PLATFORM	58-AHU-6	11,000	1.4	N/A	800	5.5	5	HSN	1 1/2 INCH	Y		GREENHECK QEI-30-I
REF-1	CENT, UP	NEW CUP ROOF	EXHAUST	5000/2500	0.75	26.5x26.5	821	1.34	1.5	-	-	N	PROVIDE TWO SPEED MOTOR (50% REDUCTION)	GREENHECK CUBE-220-15
58-EF-1-1	ROOF TOP	ROOF	EXHAUST	180	0.5	19x19	1329	0.06	1/6	-	-			GREENHECK GB-071
58-EF-1-2	INLINE	ELEC 1208	EXHAUST	400	0.5	N/A	1265	0.1	1/4	HN	-	N		GREENHECK BSQ-90
58-EF-1-3	INLINE	ELEC 1212	EXHAUST	160	0.5	N/A	1422	0.09	1/4	HN	-	N		GREENHECK BSQ-70
58-EF-1-4	INLINE	CONTROL ROOM 1209	EXHAUST	300	0.5	N/A	1373	0.11	1/4	HN	-	N		GREENHECK BSQ-80
58-EF-2-1	INLINE	ELEC ROOM 2205	EXHAUST	240	0.5	N/A	1238	0.07	1/4	HN	-	N		GREENHECK BSQ-80
58-EF-1A	CENT	MECH PLATFORM	GEN EXH - CHEM	2200	2	N/A	1725	1.6	2	FSN	0.75 INCH	Y	CORRISION RESISTANT CONSTRUCTION	GREENHECK AFSW
58-EF-1B	CENT	MECH PLATFORM	GEN EXH - CHEM	2200	2	N/A	1725	1.6	2	FSN	0.75 INCH	Y	CORRISION RESISTANT CONSTRUCTION	GREENHECK AFSW
58-EF-4-1	INLINE	MECH PLATFORM	EXHAUST	2400	1	N/A	1170	0.72	1	HN	-	N		GREENHECK BSQ-180HP
58-EF-4-2	MIXED FLOW	AUX EQUIP RM 1024	EXHAUST	3,600	0.75	N/A	732	0.6	0.75	HN	-	N		GREENHECK QEI-22-II
58-EF-5	CENT	MECH PLATFORM	GEN EXH	3500	1.5	N/A	1005	1.14	1 1/2	FSN	0.75 INCH	Y	CORRISION RESISTANT CONSTRUCTION	GREENHECK 22-AFSW-41
58-EF-6	MIXED FLOW	AUX EQUIP RM 1024	CANOPY EXHAUST	1,600	1.25	N/A	1827	0.52	0.75	HN	-	N		GREENHECK QEI-12-I
58-EF-8-1	MIXED FLOW	INJECTOR CAVE	TRANSFER AIR	7,400	1	N/A	625	1.64	2	HN	-	N		GREENHECK QEI-30-II
58-EF-8-2	MIXED FLOW	INJECTOR CAVE	EXHAUST	4,400	1	N/A	865	0.98	1 1/2	HN	-	N		GREENHECK QEI-22-II
58-SF-1	MIXED FLOW	MECH 1211	COMBUSTION AIR	4,200	0.7	N/A	926	0.71	1	HN	-	Y		GREENHECK QEI-20-I
58-EF-3	INLINE	BOILER ROOM 2000A	EXHAUST	300	0.5	N/A	1373	0.11	1/4	HN	-	N		GREENHECK BSQ-80
58-EF-9	CENT	UPW	VENTILATION	1500	0.75	14.5x14.5	1565	0.37	0.5	-	-	N		GREENHECK GB-121

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NOTES:
1. FANS WITH SPEED CONTROLS SHALL BE SELECTED FOR SCHEDULED FAN PERFORMANCE AT MEDIAN AVAILABLE RPM.
2. ALL FANS TO BE BELT DRIVEN UNLESS NOTED OTHERWISE.
3. ALL FANS ARE TO BE PROVIDED WITH BACK DRAFT DAMPERS.
4. PROVIDE FANS WITH ALL OPTIONAL GUARDS, COVERS AND SAFETY DEVICES.
5. CENT = CENTRIFUGAL, PROP = PROPELLER, UTIL = UTILITY SET, UP = UPBLAST, CAB = CABINET

UNIT HEATER SCHEDULE

SYMBOL	TYPE	LOCATION	FAN (115V, 1Ø) CFM	FAN HP	FAN RPM	HEATING CAPACITY MBH	EAT °F	GPM	PD/ FT. WG	EWT °F	REMARKS
58-UH-1	EX	UPW	2500	1/4	1075	114	60	13.3	2.5	180	NOTE 5

NOTES:
1. AIR FLOW INCLUDES ALLOWANCES FOR ALL INTEGRAL PRESSURE DROPS (INCLUDING INTAKE AND DISCHARGE GRILLES, COILS AND FILTERS).
2. TYPES - EX = EXPOSED, VCAB = VERTICAL RECESSED CABINET, HCAB = HORIZONTAL CABINET.
3. UNIT SHALL BE CONTROLLED THRU DDC SYSTEM

SCRUBBER EXHAUST SYSTEM SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SCRUBBER

SYMBOL	AIRFLOW CFM	TYPE	PACKING DEPTH FT	RECIRCULATION SYSTEM GPM	RECIRCULATION SYSTEM PUMP HP	BASIS OF DESIGN
FS-1	5000	HORIZONTAL	5	30	3	KCH HEDRON HV
FS-2	6500	HORIZONTAL	5	40	3	KCH HEDRON HV
FS-3	3600	HORIZONTAL	5	25	3	KCH HEDRON HV

CORROSION RESISTAN FANS

SYMBOL	TYPE	LOCATION	SERVICE	CFM	SP/ IN. WG	RPM	MOTOR MAX. BHP	MOTOR HP	MOUNTING TYPE	MOUNTING VIBRATION ISOLATION	VFD	REMARKS	BASIS OF DESIGN
SEF-1A	CENTRIFUGAL	MECH PLATFORM	FUME HOODS	5000	11	3810	16.04	20	FSN	0.75	Y	PVC CONSTRUCTION - DIRECT DRIVE	KCH TYPE NH
SEF-1B	CENTRIFUGAL	MECH PLATFORM	FUME HOODS	5000	11	3810	16.04	20	FSN	0.75	Y	PVC CONSTRUCTION- DIRECT DRIVE (STANDBY)	KCH TYPE NH
SEF-2A	CENTRIFUGAL	MECH PLATFORM	FUME HOODS	6500	12.3	3029	21	25	FSN	0.75	Y	PVC CONSTRUCTION - DIRECT DRIVE	KCH TYPE NH
SEF-2B	CENTRIFUGAL	MECH PLATFORM	FUME HOODS	6500	12.3	3029	21	25	FSN	0.75	Y	PVC CONSTRUCTION- DIRECT DRIVE (STANDBY)	KCH TYPE NH
SEF-3A	CENTRIFUGAL	MECH PLATFORM	EP CABINETS	3600	11.6	3452	11.5	15	FSN	0.75	Y	PVC CONSTRUCTION - DIRECT DRIVE	KCH TYPE NH
SEF-3B	CENTRIFUGAL	MECH PLATFORM	EP CABINETS	3600	11.6	3452	11.5	15	FSN	0.75	Y	PVC CONSTRUCTION- DIRECT DRIVE (STANDBY)	KCH TYPE NH

CHEMICALS TO BE REMOVED

CHEMICAL	AVERAGE REMOVAL EFFICIENCY
HYDROFUORIC ACID	97-99%
SULFURIC ACID	99%
NITRIC ACID	85-90%

PLATE AND FRAME HEAT EXCHANGER SCHEDULE

SYMBOL	LOCATION	SERVICE	MBH	PROCESS WATER - HOT SIDE GPM	EWT °F	LWT °F	MAX PD/ PSI	FOULING FACTOR	CONN. SIZE SUP.	CONN. SIZE RET.	PROCESS WATER - HOT SIDE GPM	EWT °F	LWT °F	MAX PD/ PSI	FOULING FACTOR	CONN. SIZE SUP.	CONN. SIZE RET.	REMARKS
58-HX-1	BASEMENT B100	PROCESS CHILLED WATER	2125	425	93	83	8.5	0.0005	4	4	425	79	89	8.5	0.0005	4	4	
58-HX-2	BASEMENT B100	PROCESS CHILLED WATER	1275	255	85	74.9	9.7	0.0005	4	4	255	43	53	9.6	0.0005	4	4	

REHEAT COIL SCHEDULE

SYMBOL	CFM	FACE VELOCITY	APPROXIMATE DUCT SIZE (WxH)	MBH	EAT °F	LAT °F	WATER (NOTE 3) GPM	PD/FT.WG	VALVE	MIN. ROWS	APD (IN WG)	BASIS OF DESIGN
58-RHC-3-1	7000	500	48 x 42	189.0	55	80	18.9	5	2-WAY	1	0.15	HEATCRAFT
58-RHC-3-8	500	500	12 x 12	13.5	55	80	1.4	5	2-WAY	1	0.15	HEATCRAFT
58-RHC-3-9	1600	480	20 x 24	43.2	55	80	4.3	5	2-WAY	1	0.15	HEATCRAFT

EWING COLE
Federal Reserve Bank Building
100 North 6th Street
Philadelphia, PA 19106-1590
Tel: 215-923-2020 Fax: 215-574-0952

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)
12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
1		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS	DATE	FACILITIES & LOGISTICS	DATE
APPROVED --	--	DESIGNER	--
APPROVED --	--	DRAWN	--
APPROVED --	--	CHECKED	--
APPROVED --	--	APPROVED	--

Jefferson Lab

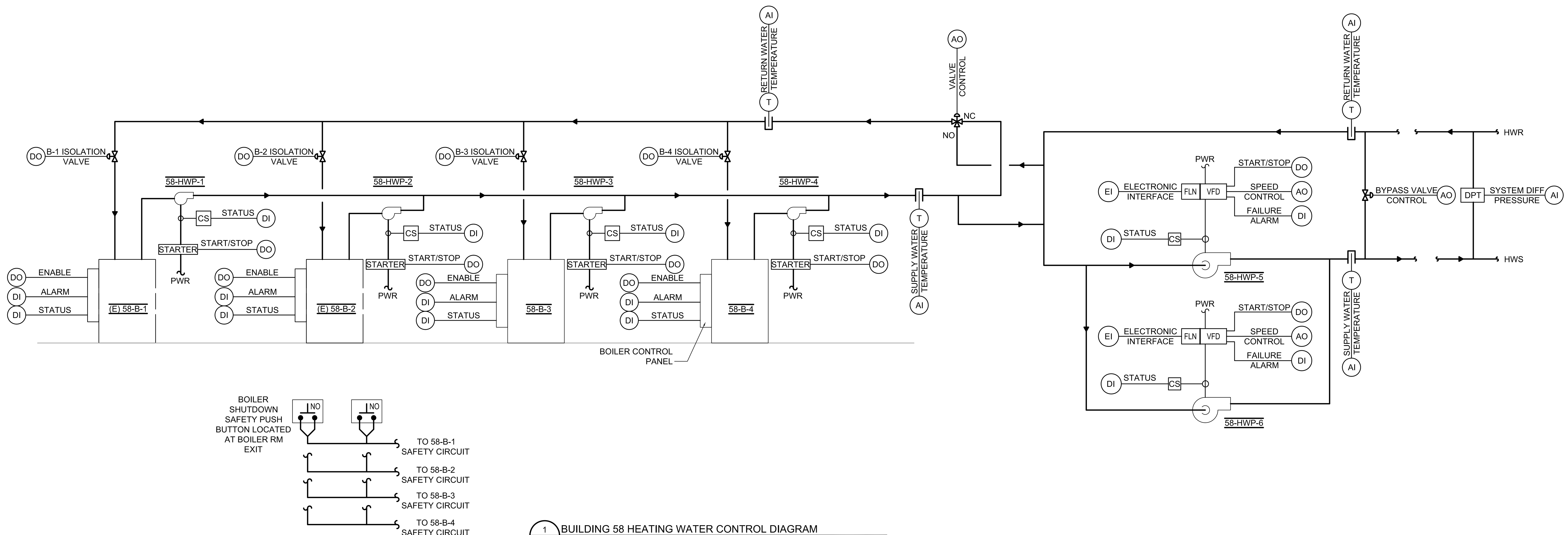
TITLE:
BUILDING 58
HVAC SCHEDULES

SCALE	DRAWING NUMBER	SHEET	REV
-	100024-455-M70-STE	TLR-M4.1.3	-

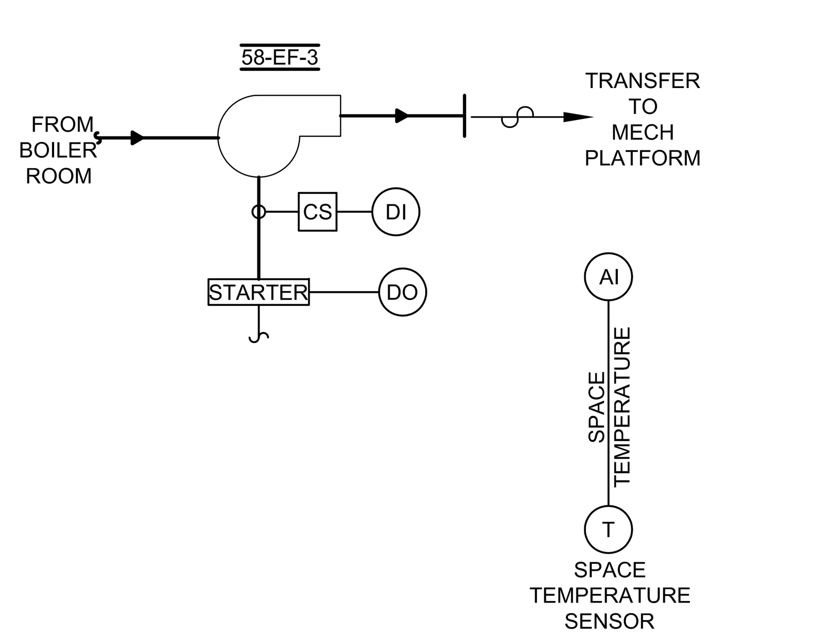
1 2 3 4 5 6

CCR-034

EWING COLE
Federal Reserve Bank Building
100 North 6th Street
Philadelphia, PA 19106-1590
Tel: 215-923-2020 Fax: 215-574-0952



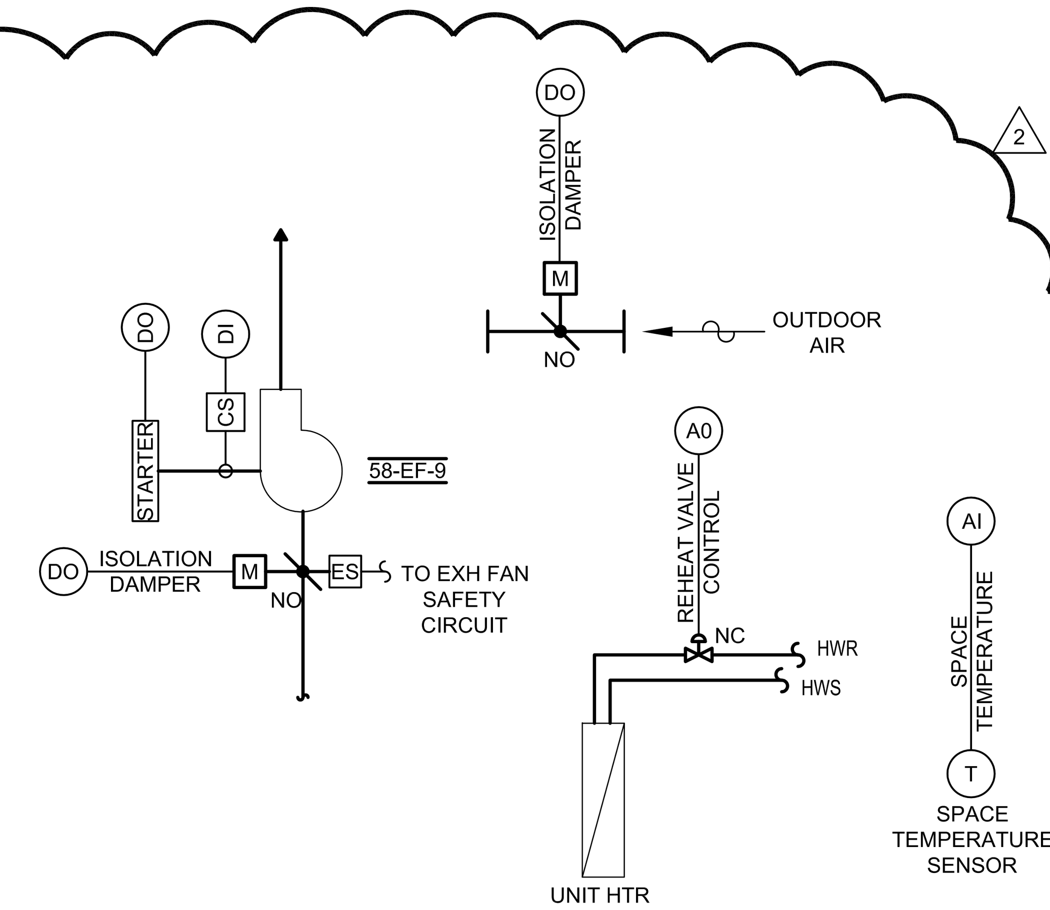
1 M7.9 BUILDING 58 HEATING WATER CONTROL DIAGRAM



4 M7.9 BOILER ROOM EXHAUST FAN

58-EF-3 SEQUENCE:

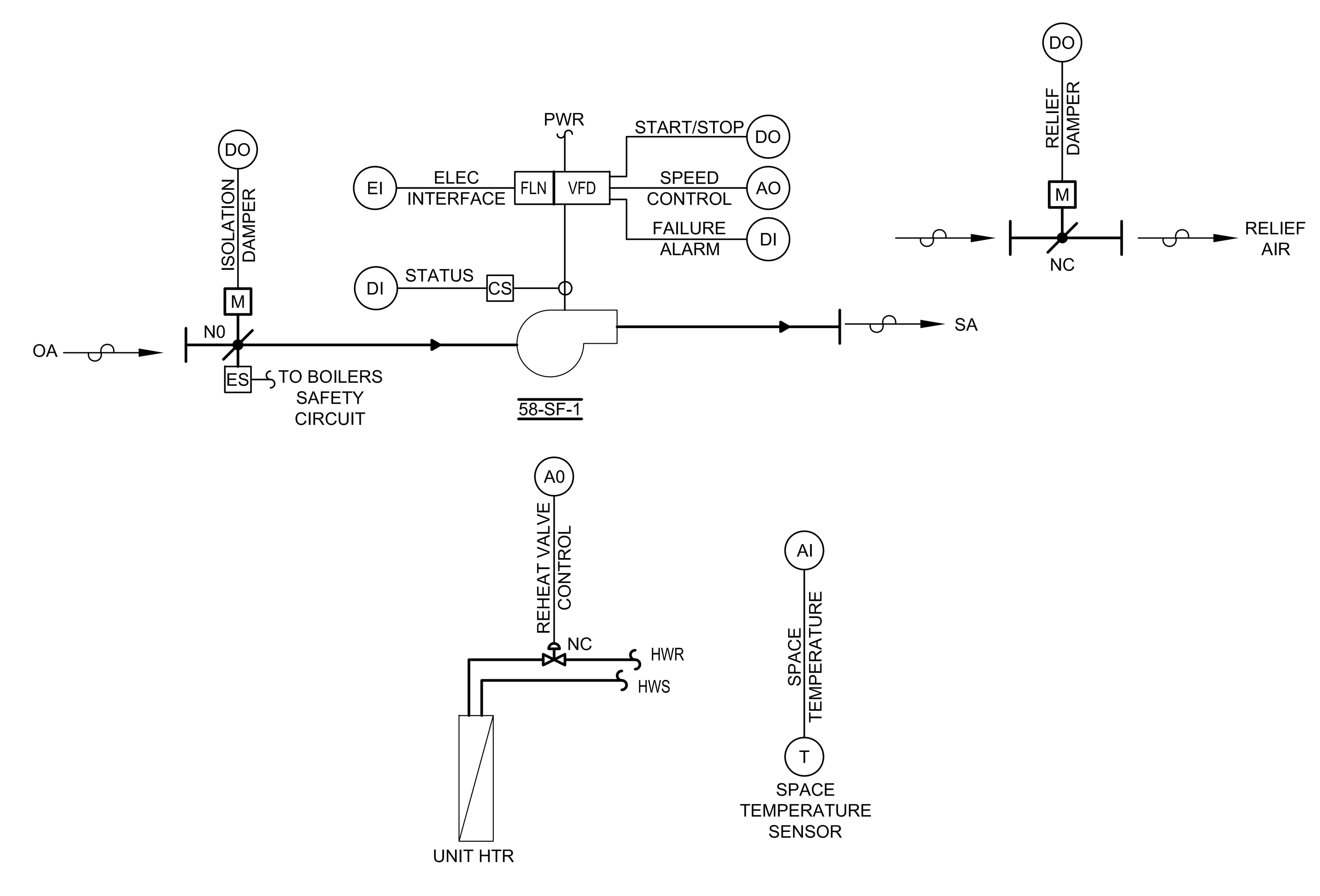
1. EXHAUST FAN SHALL RUN CONTINUOUSLY, BUT MAY BE STARTED AND STOPPED BY THE DDC SYSTEM.
2. DDC SYSTEM SHALL MONITOR SPACE TEMPERATURE.



3 M7.9 UPW VENTILATION

UPW ROOM VENTILATION SEQUENCE:
EXHAUST FAN (58-EF-9) SHALL RUN CONTINUOUSLY, BUT MAY BE STARTED OR STOPPED BY THE DDC SYSTEM.WHENEVER FAN IS DEENERGIZED, OUTDOOR AIR AND EXHAUST FAN ISOLATION DAMPERS SHALL CLOSE.

58-UH-2 SEQUENCE:
ON A FALL IN SPACE TEMPERATURE BELOW 60°F (REPROGRAMMABLE), TWO WAY VALVE IN THE HWR PIPING SERVING THE UNIT HEATER SHALL OPEN AND FAN SHALL BE ENERGIZED.



2 M7.9 BLDG 58 BOILER ROOM COMBUSTION CONTROL DIAGRAM

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)
12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
		CONSOLIDATED SET		04/01/11
1		BULLETIN NO. 44		03/31/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

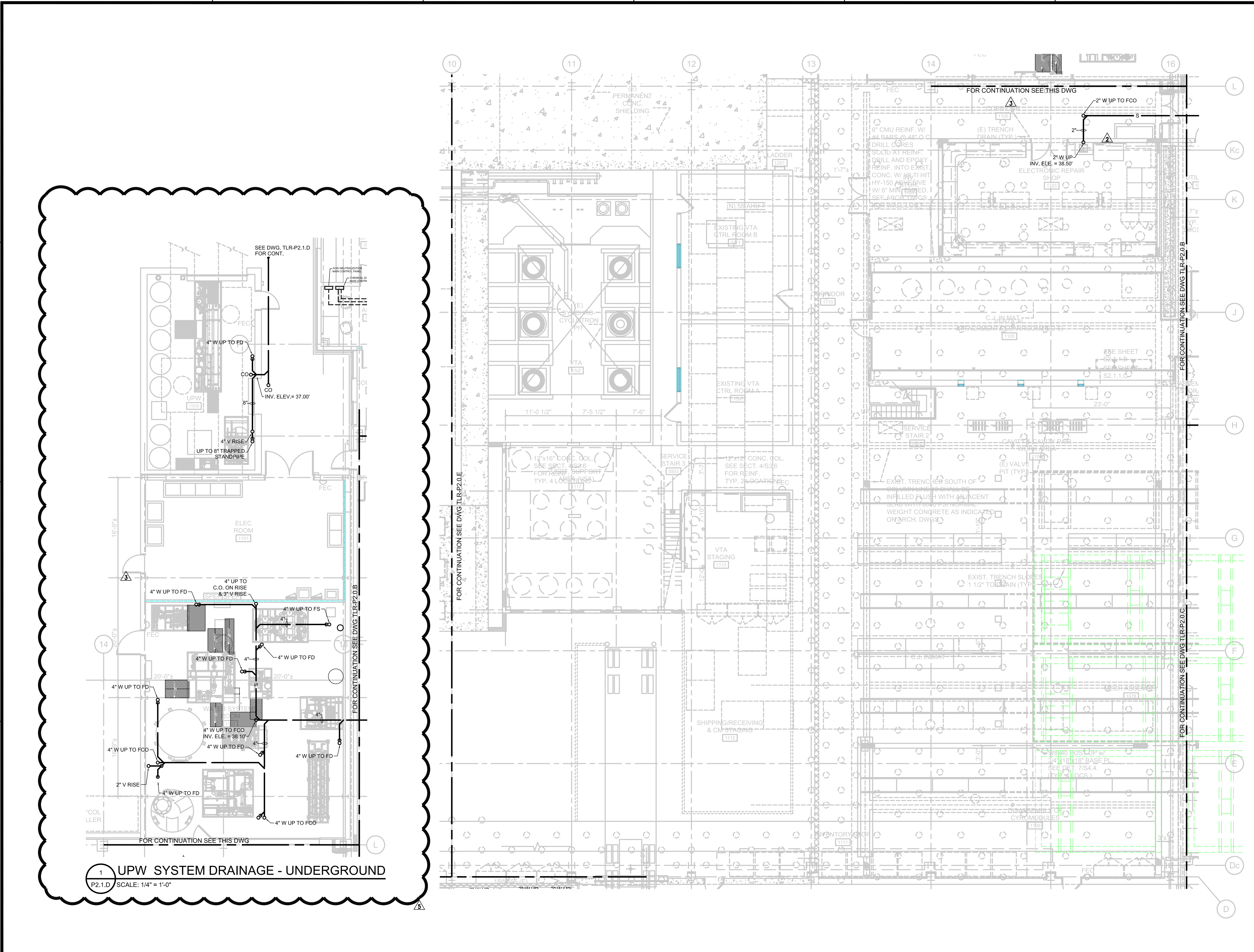
FACILITY USERS	DATE	FACILITIES & LOGISTICS	DATE
APPROVED –	–	DESIGNER –	–
APPROVED –	–	DRAWN –	–
APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

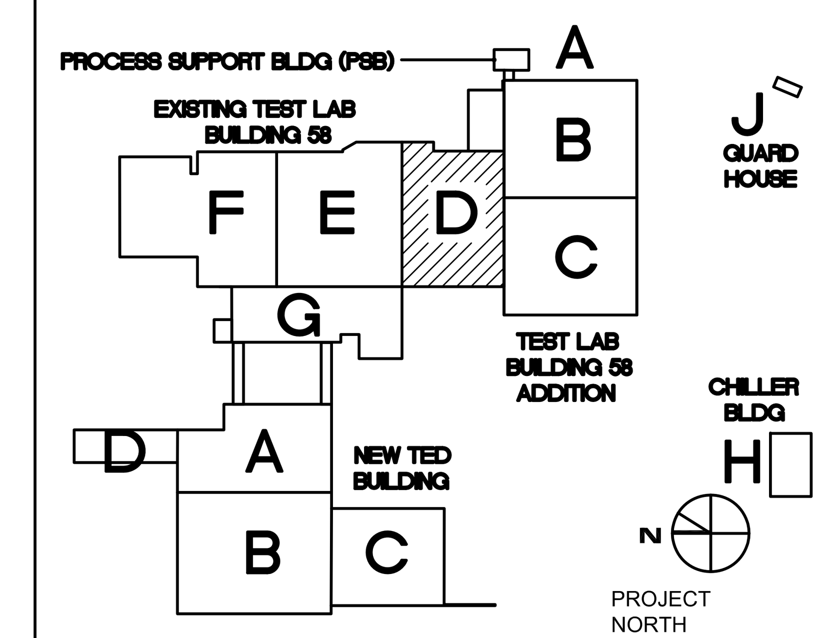
Jefferson Lab

TITLE: BUILDING 58 - HYDRONIC SYSTEM CONTROL DIAGRAM

SCALE	DRAWING NUMBER	SHEET	REV
–	100024-489-M104-STE	M7.9	–

CCR-034





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12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
5		CCR NO. 34		09/26/11
4		CCR #		09/02/11
3		UPW EQUIPMENT REVISION		08/10/11
		CONSOLIDATED SET		04/01/11
2		BULLETIN #22		10/29/10
1		BULLETIN #15		08/10/10
		TEDF TWO - FINAL		05/24/10

REVISIONS

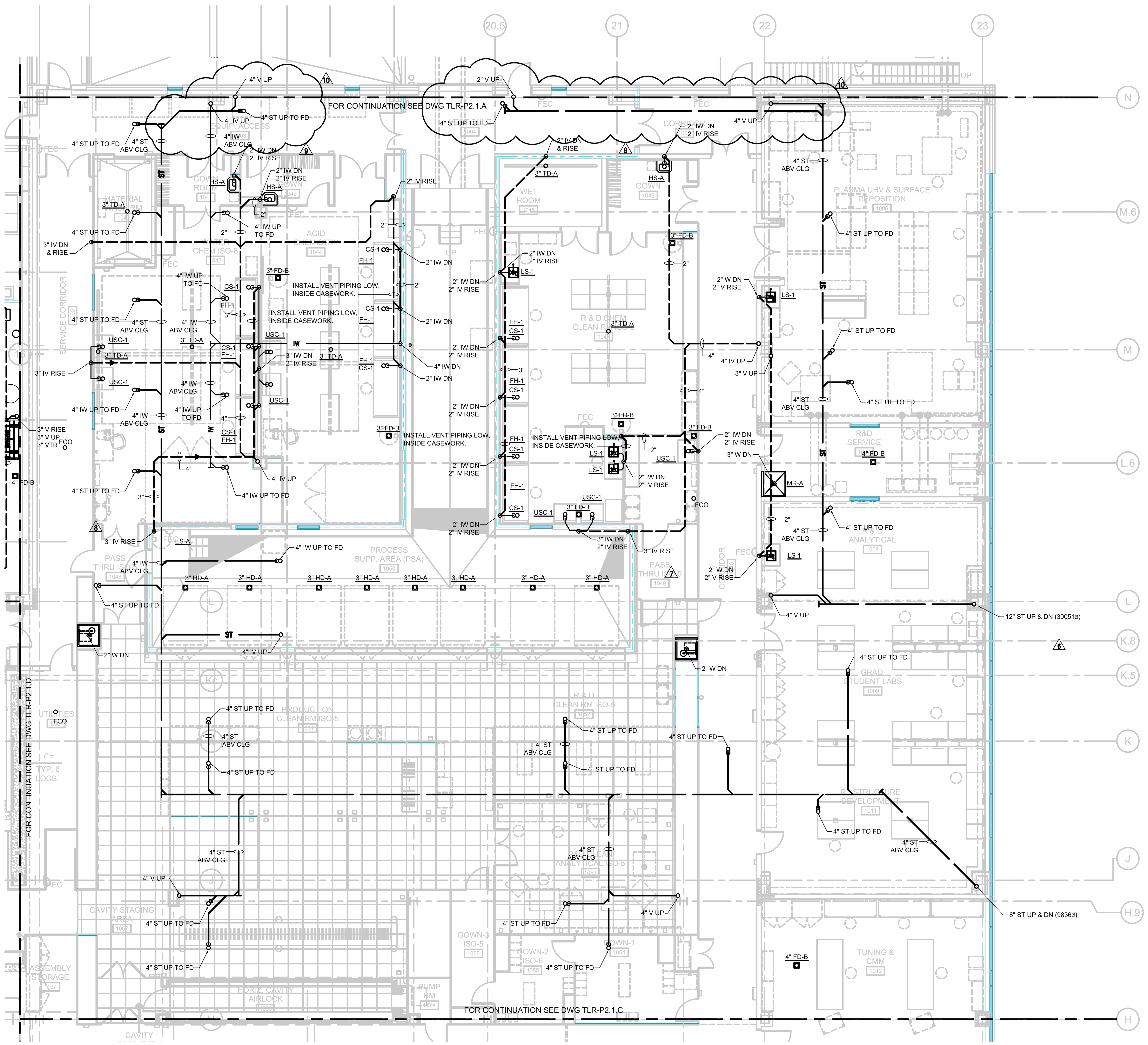
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JLC	DATE 6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE: UNDERGROUND - NEW WORK - WASTE, VENT, & STORM PIPING - SEGMENT D

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-509-P12-STE	TLR-P2.0.D	

CCR-034



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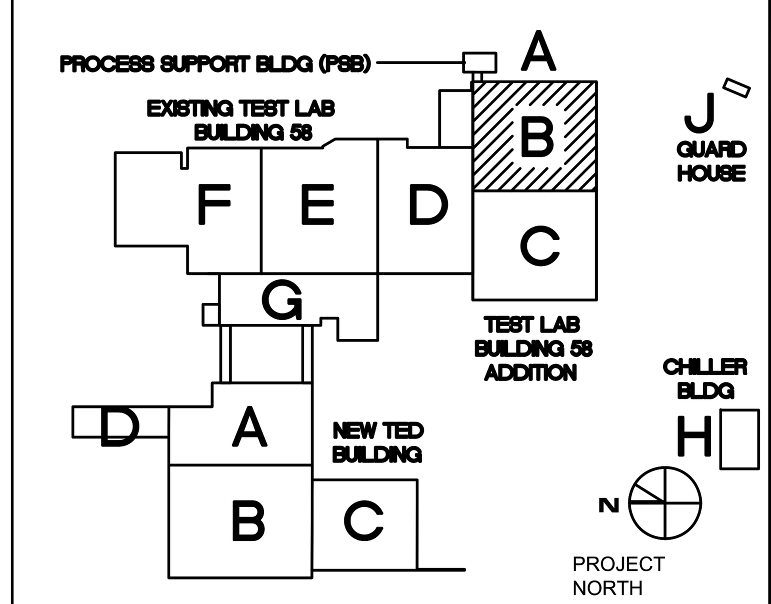


TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
10		CCR NO. 34		09/26/11
9		CCR #		09/02/11
8				
		CONSOLIDATED SET		04/01/11
7		BULLETIN NO. 32		01/21/11
6		RFI 192		12/20/10
		TEDF TWO - FINAL		05/24/10

REVISIONS

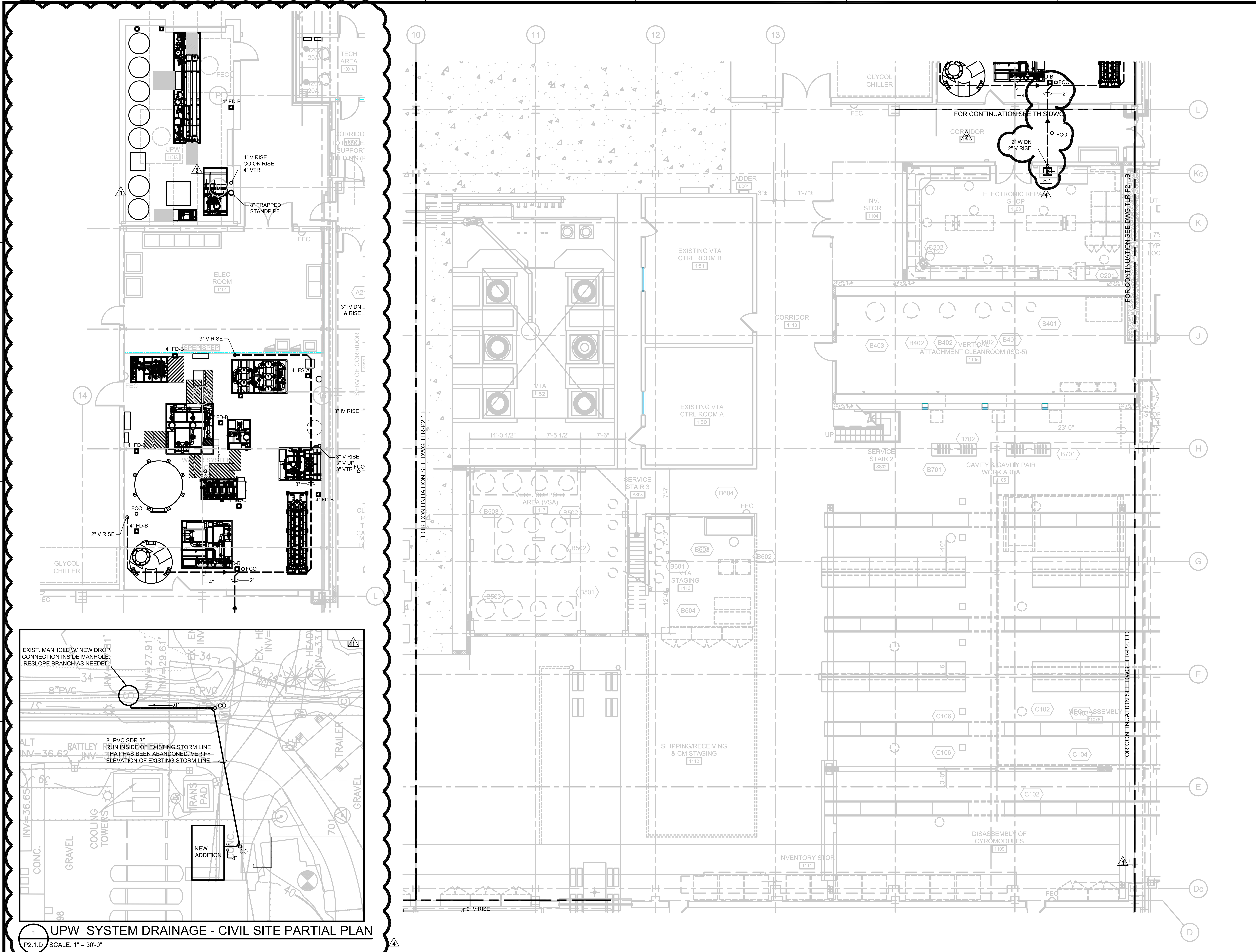
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JLC	DATE 6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE:
FIRST FLOOR - NEW WORK - WASTE, VENT, & STORM PIPING - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-512-P15-STE	TLR-P2.1.B	

CCR-034



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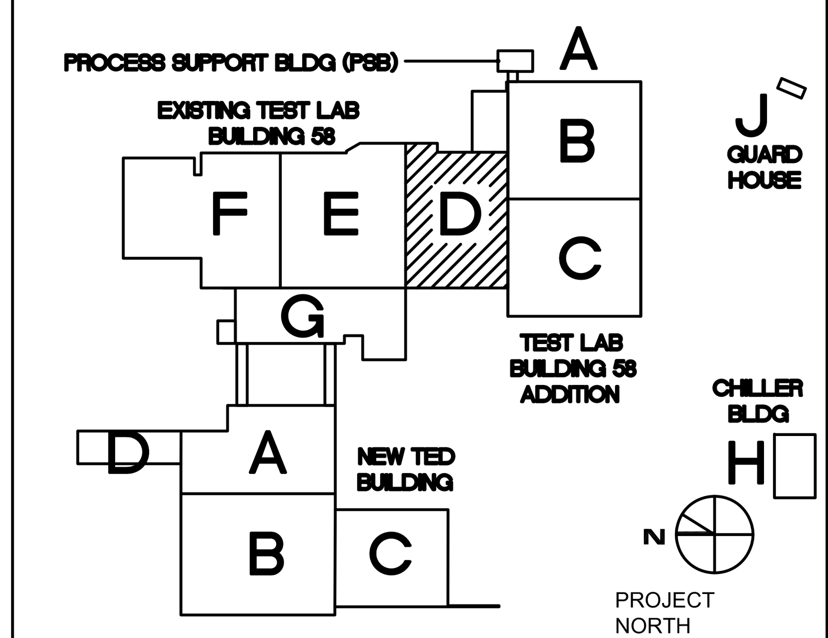

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

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REV	ZONE	DESCRIPTION	APPR.	DATE
4		CCR NO. 34		09/26/11
3		CCR #		09/02/11
2		UPW EQUIPMENT REVISION		08/10/11
1		BULLETIN NO. 48		06/08/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

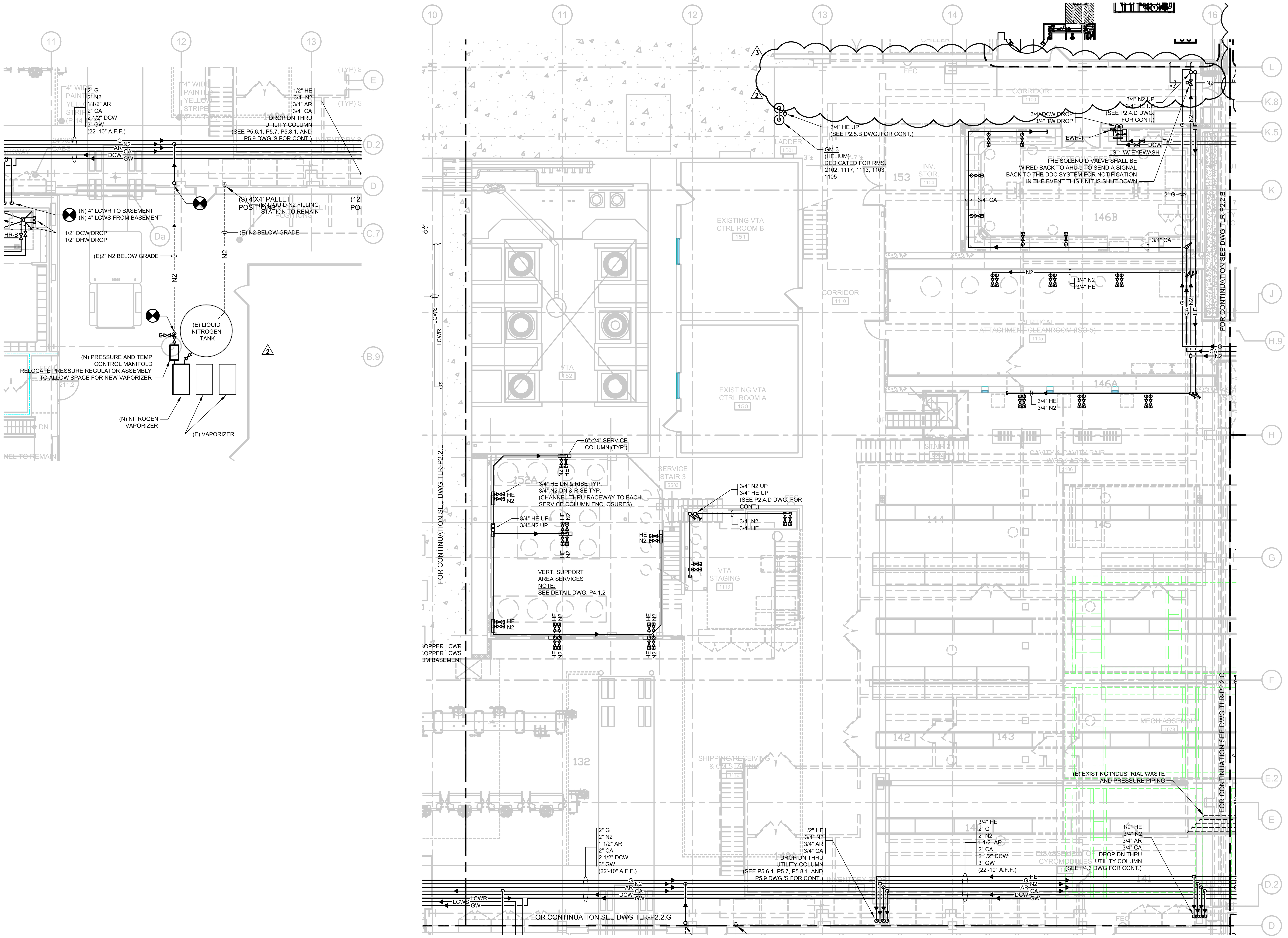
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JLC	DATE 6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE: FIRST FLOOR - NEW WORK - WASTE, VENT, & STORM PIPING - SEGMENT D

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-514-P17-STE	TLR-P2.1.D	

CCR-034



NOTE:
1. FINAL CONNECTION TO EQUIPMENT BY CONTRACTOR.

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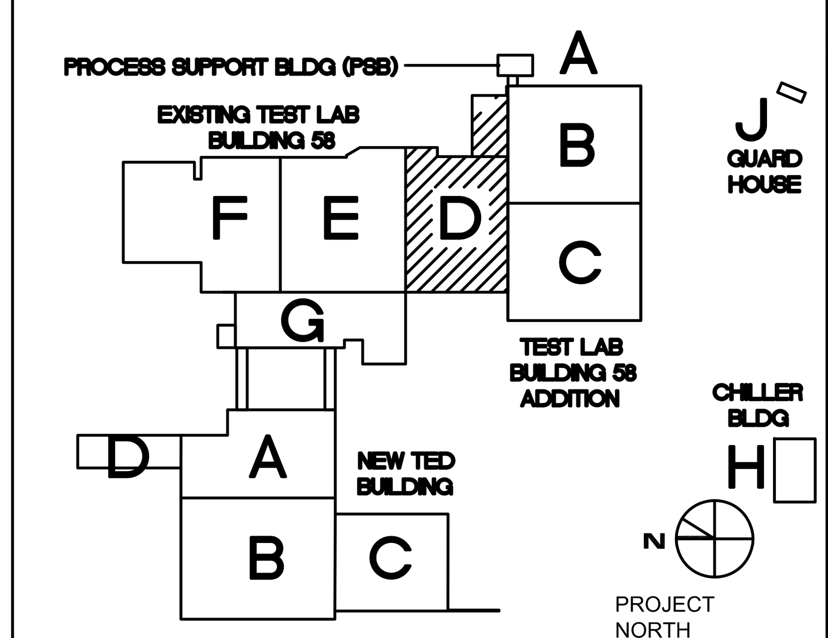
NOTES:

1. ALL CONNECTIONS / BRANCH PIPING SHALL COME OFF THE TOP OF PIPE AND NOT THE BOTTOM.
2. ALL BRANCH PIPING SUPPLYING A ROOM AND / OR EQUIPMENT SHALL BE EQUIPPED WITH A SHUT OFF VALVE.
3. OXYGEN DETECTOR SHALL BE LOCATED INSIDE OF THE LAB SPACE. DETECTORS SHALL BE PROVIDED BY JEFFERSON LAB. SEE TLR-M3.1.1



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
3		CCR NO. 34		09/26/11
2		CCR #		09/02/11
		CONSOLIDATED SET		04/01/11
1		ADDENDUM #1		08/20/10
		TEDF TWO - FINAL		05/24/10

REVISIONS

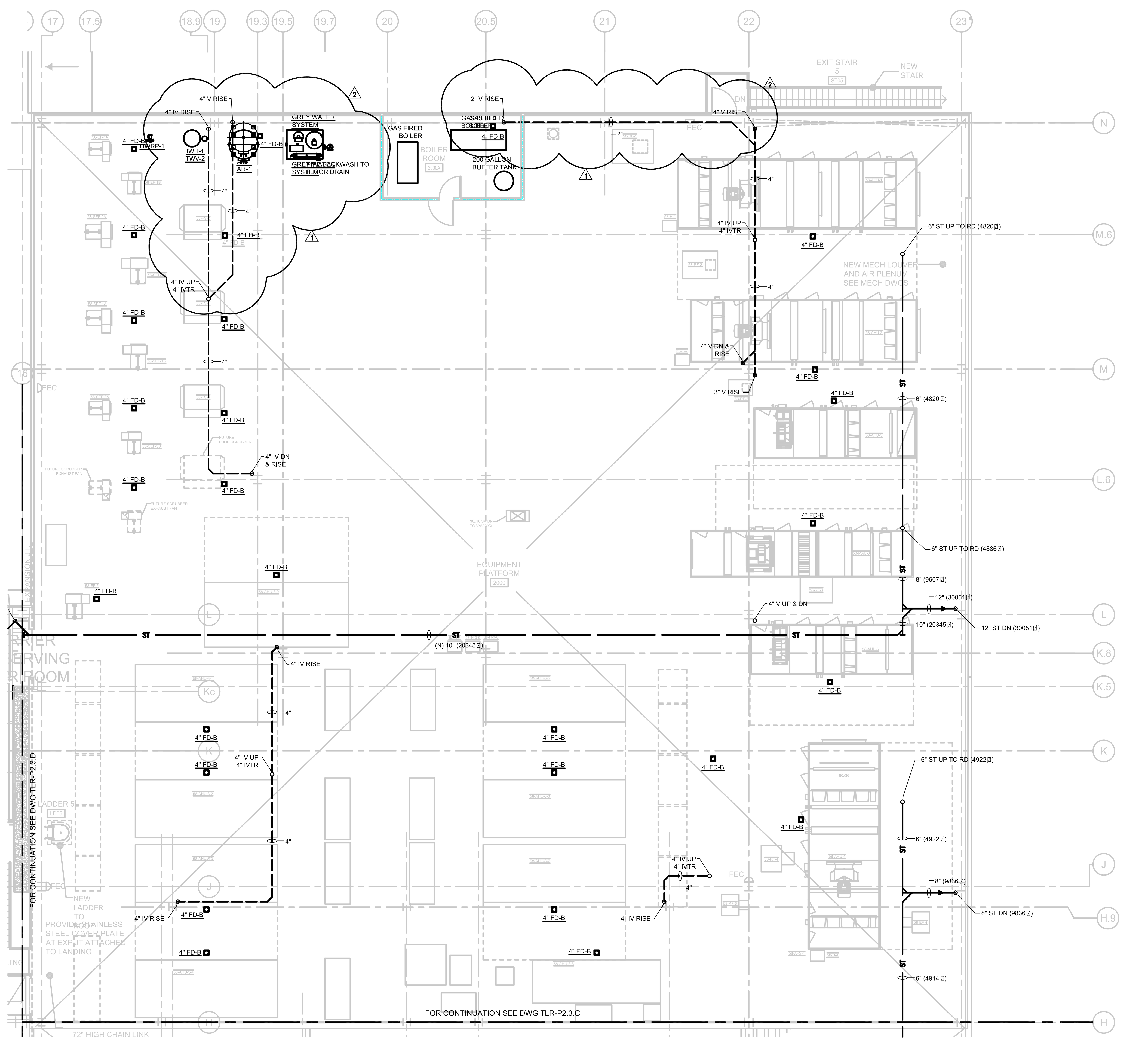
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JLC	DATE 6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE: FIRST FLOOR - NEW WORK - PRESSURE SERVICE PIPING - SEGMENT D

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-518-P21-STE	TLR-P2.2.D	

CCR-034



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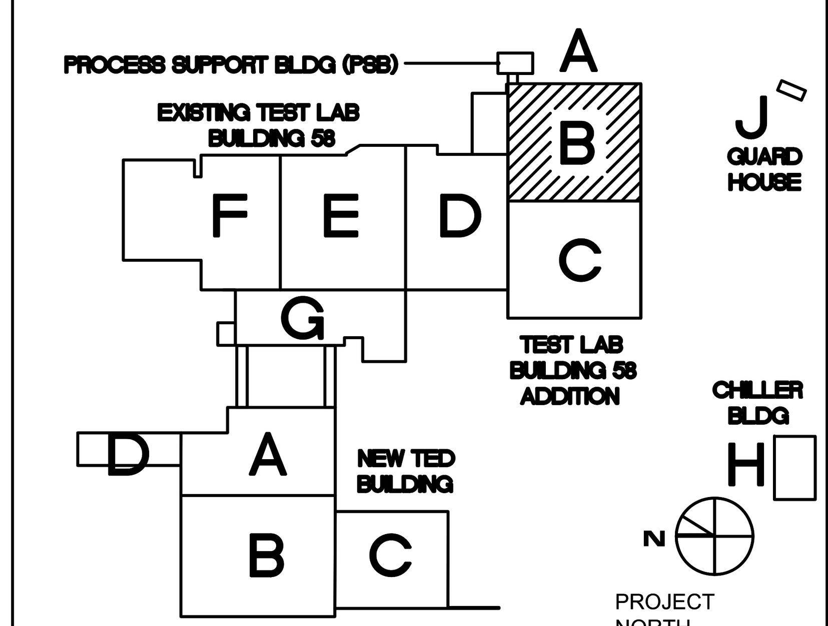


TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
1		CCR #		09/02/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS	FACILITIES & LOGISTICS

APPROVED	DATE		DATE
APPROVED		DESIGNER JLC	6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

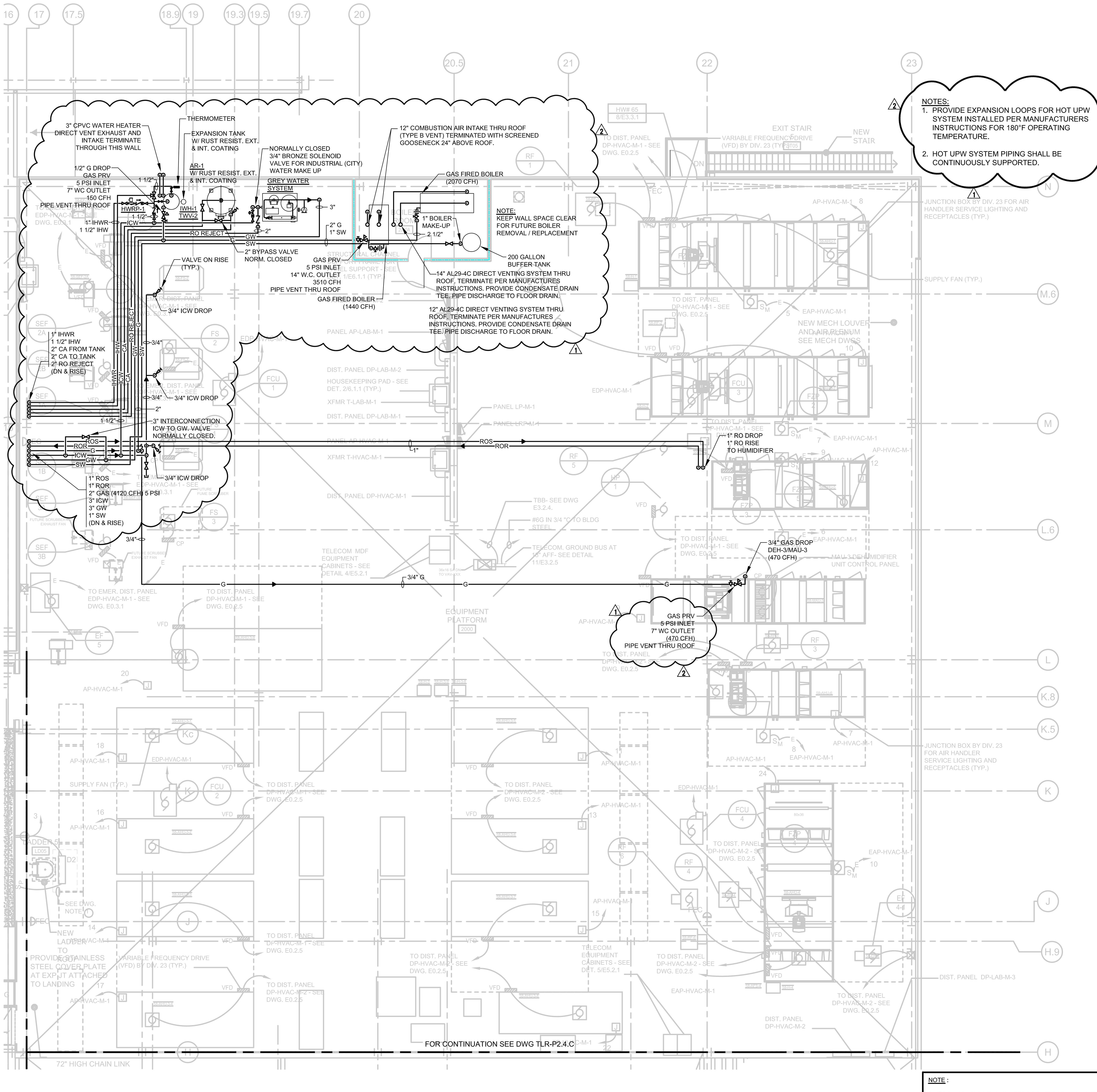
Jefferson Lab

TITLE:

SECOND FLOOR - NEW WORK - WASTE, VENT, & STORM PIPING - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-521-P24-STE	TLR-P2.3.B	

CCR-034



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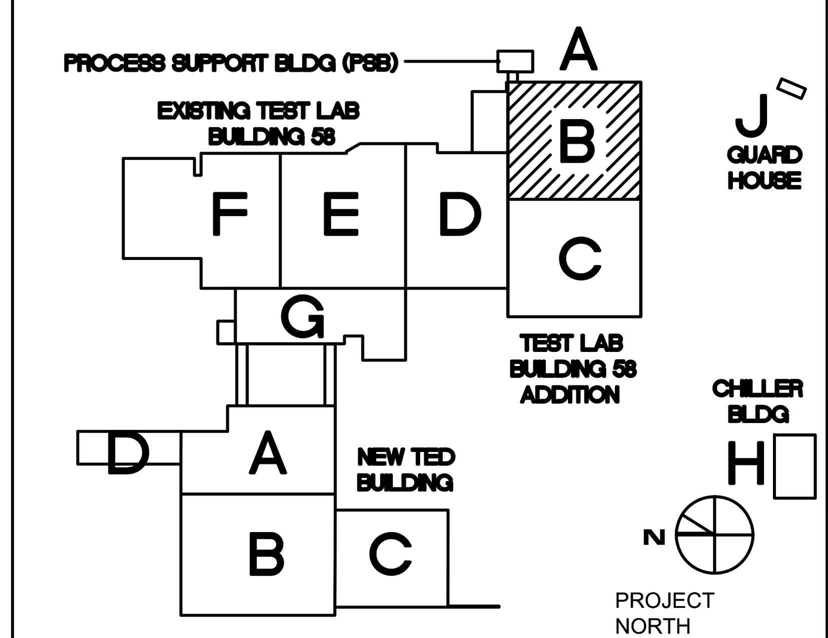

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)

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REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
1		CCR #		09/02/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS	FACILITIES & LOGISTICS

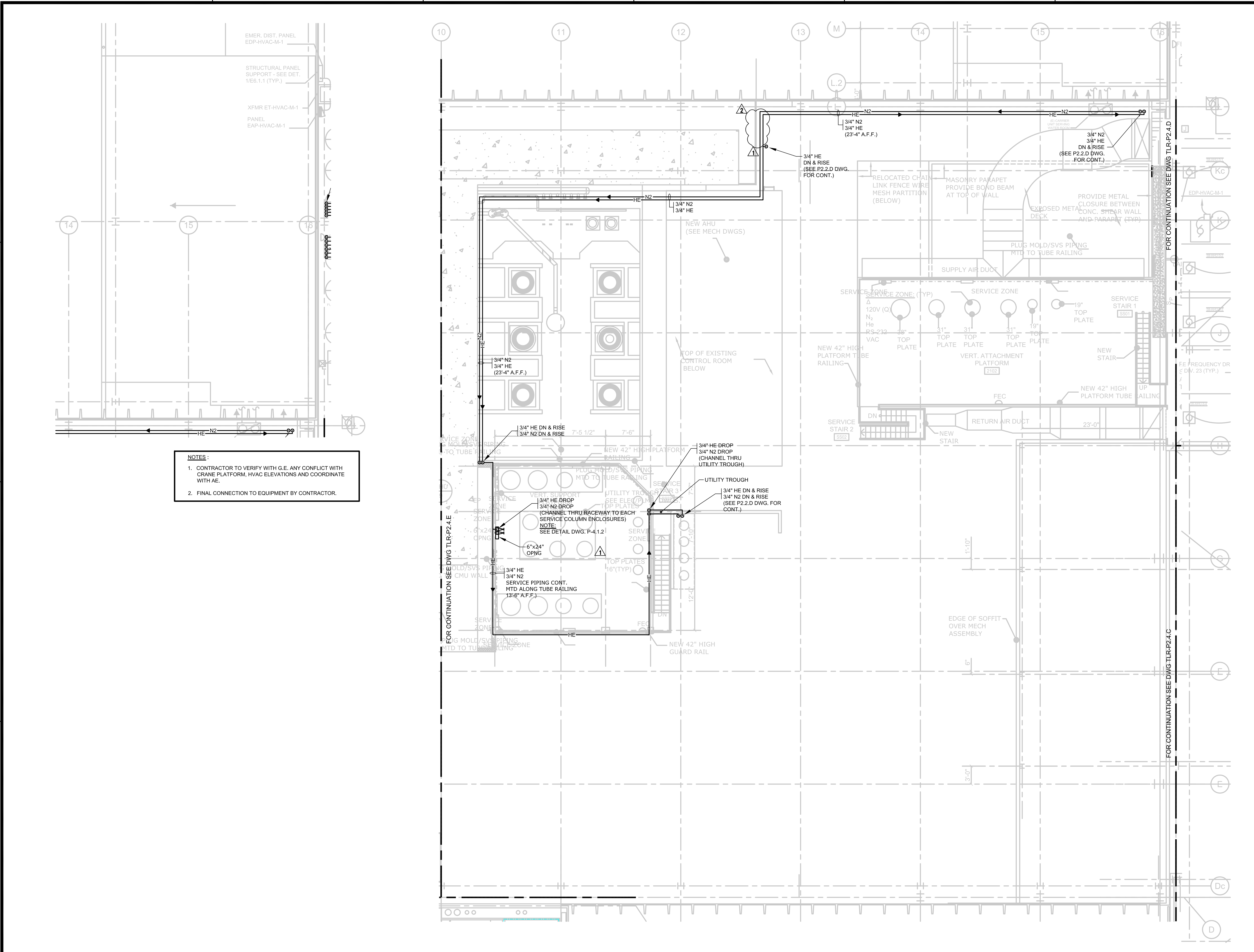
APPROVED	DATE		DATE
APPROVED		DESIGNER JLC	6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE: SECOND FLOOR - NEW WORK - PRESSURE SERVICE PIPING - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	1000-525-P28-STE	TLR-P2.4.B	

CCR-034



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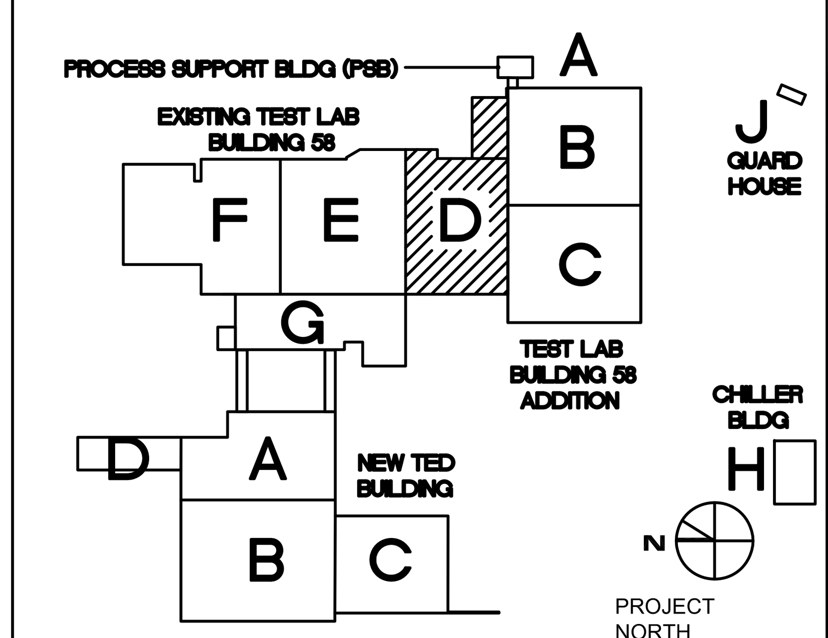


TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
1		CCR #		09/02/11
		CONSOLIDATED SET		04/01/11
		BULLETIN #1		06/23/10
		TEDF TWO - FINAL		05/24/10

REVISIONS

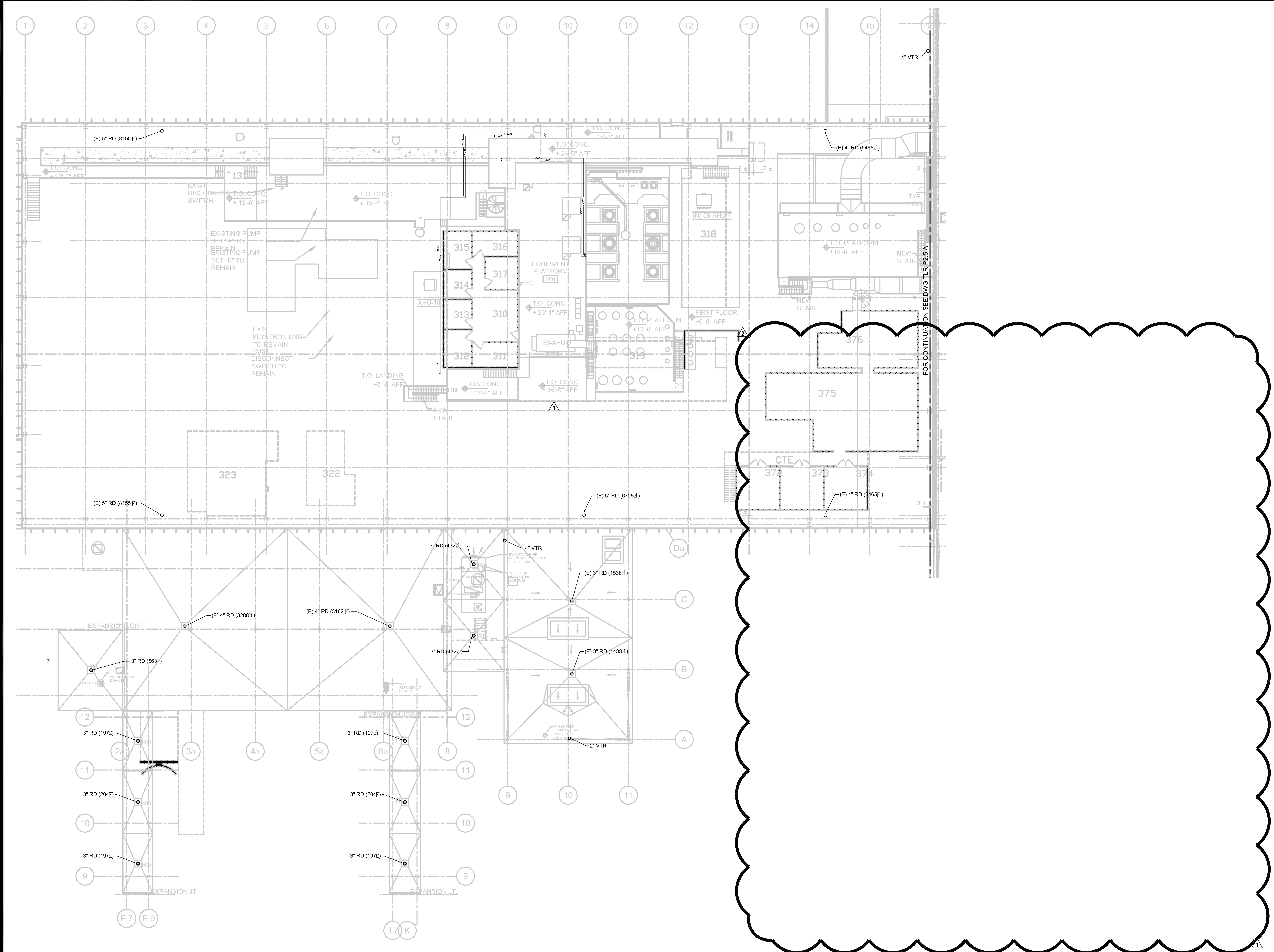
FACILITY USERS	DATE	FACILITIES & LOGISTICS	DATE
APPROVED		DESIGNER JLC	6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE: SECOND FLOOR - NEW WORK - PRESSURE SERVICE PIPING - SEGMENT D

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-526-P29-STE	TLR-P2.4.D	

CCR-034



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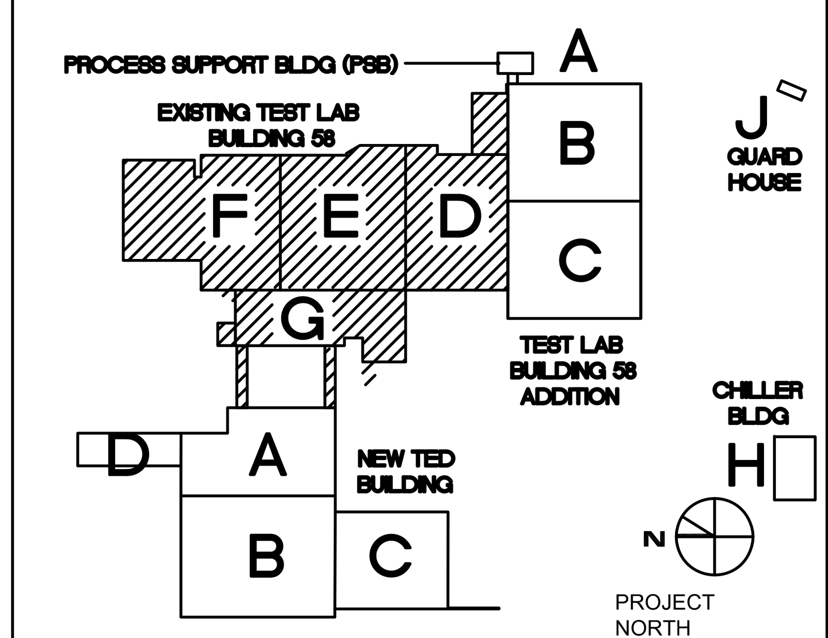
NOTES :

1. CONTRACTOR TO VERIFY WITH G.E. ANY CONFLICT WITH CRANE PLATFORM, HVAC ELEVATIONS AND COORDINATE WITH AE.
2. FINAL CONNECTION TO EQUIPMENT BY CONTRACTOR.



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR NO. 34		09/26/11
1		CCR #		09/02/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JLC	DATE 6.12.09
APPROVED		DRAWN JLC	6.12.09
APPROVED		CHECKED FA	6.12.09
APPROVED		APPROVED	

Jefferson Lab

TITLE:
ROOF PLAN - NEW WORK
SEGMENTS D, E, F, & G

SCALE	DRAWING NUMBER	SHEET	REV
1/16" = 1'-0"	100024-529-P32-STE	TLR-P2.5.B	-

CCR-034

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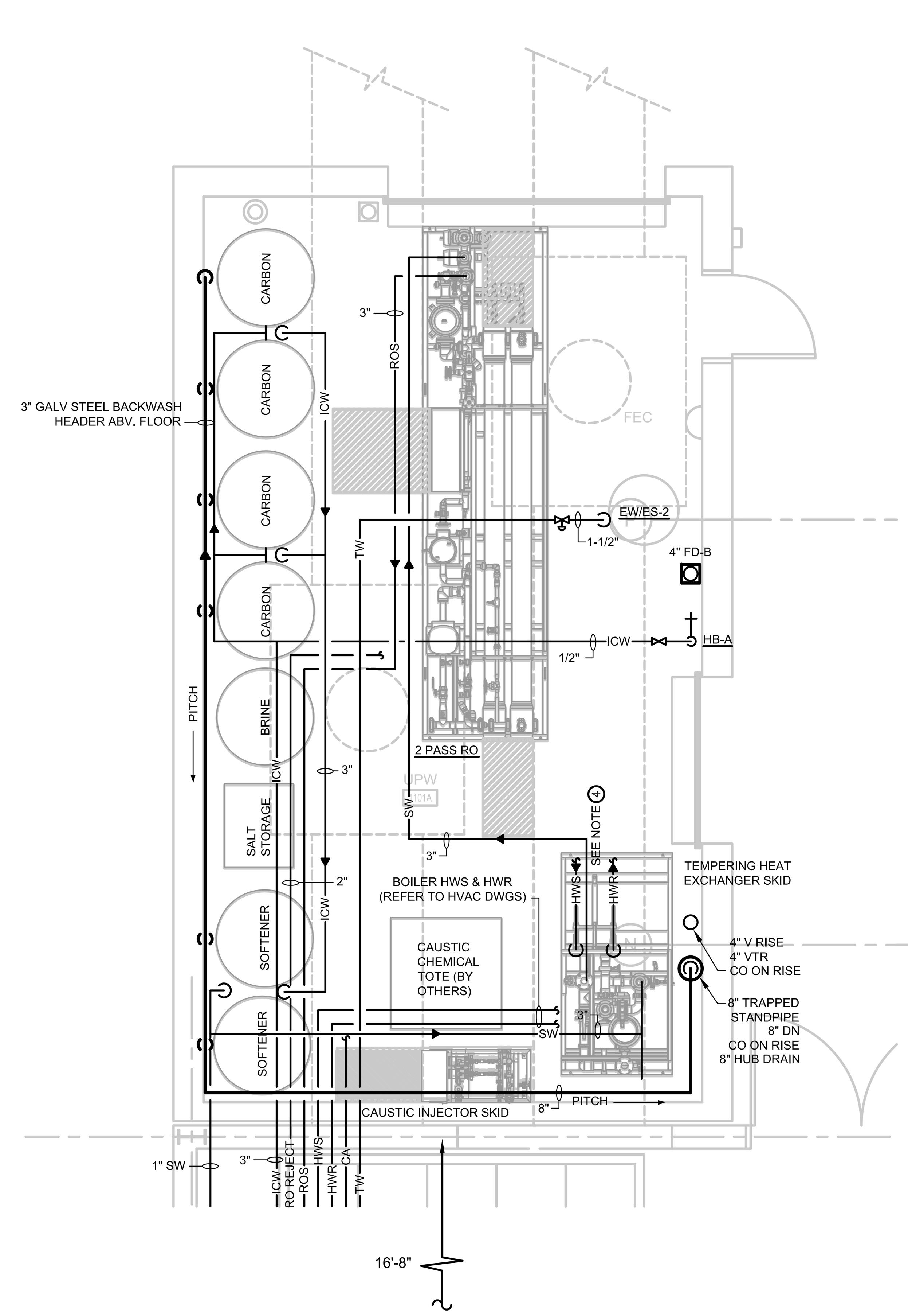
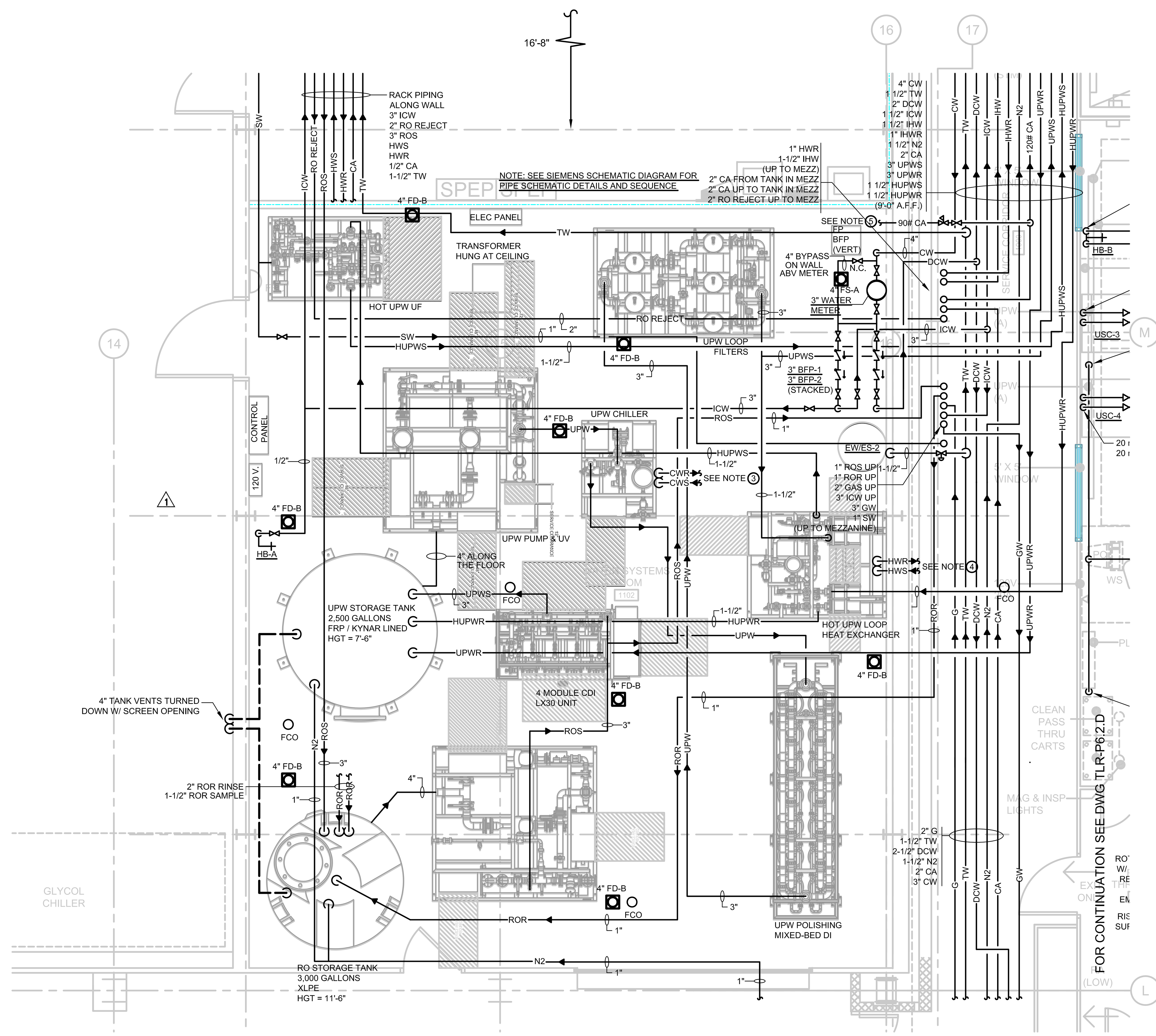
NOTE:

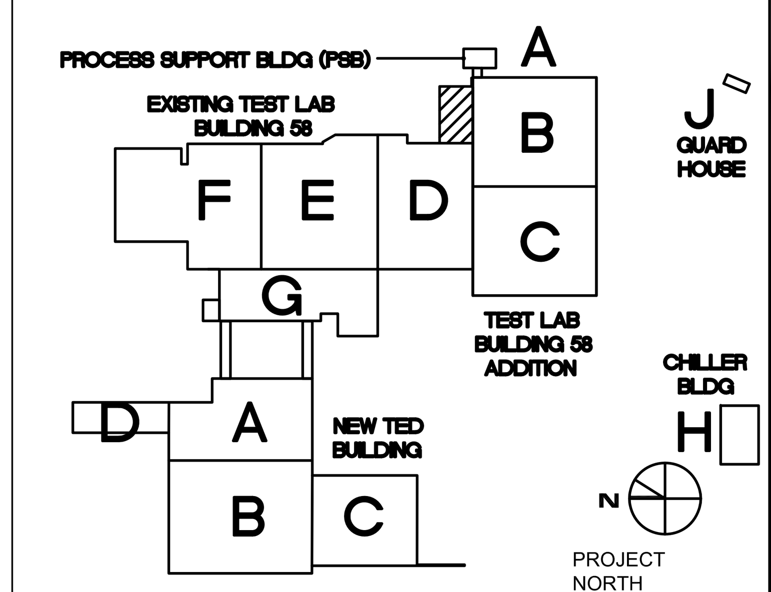
1. PROVIDE EXPANSION LOOPS FOR HOT UPW SYSTEM INSTALLED PER MANUFACTURERS INSTRUCTIONS FOR 180°F OPERATING TEMPERATURE.
2. HOT UPW SYSTEM PIPING SHALL BE CONTINOUOSLY SUPPORTED. 2
3. 100 GPM CHILLED WATER SUPPLY & RETURN. SEE HVAC DRAWINGS FOR CONTINUATION.
4. FROM PROCESS BOILER IN MEZZANINE. SEE HVAC DRAWINGS.
5. 1" CA WITH PRV. SET OUTLET PRESSURE TO 90 PSI FROM UPS SYSTEM.



3 P6.2.D UPW SYSTEMS ROOM - NEW ADDITION - PARTIAL PLAN
SCALE: 1/4" = 1'-0"



1 P6.2.D ULTRA PURE WATER SYSTEMS ROOM - PARTIAL PLAN
SCALE: 1/4" = 1'-0"



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
3		CCR NO. 34		09/26/11
2		CCR #		09/02/11
		CONSOLIDATED SET		04/01/11
1		BULLETIN NO. 44		03/31/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JLC	DATE 6.19.09
APPROVED		DRAWN JLC	6.19.09
APPROVED		CHECKED FA	6.19.09
APPROVED		APPROVED	

Jefferson Lab

TITLE: FIRST FLOOR - NEW WORK - PRESSURE SERVICE PIPING - WATER SYSTEMS ROOM

SCALE	DRAWING NUMBER	SHEET	REV
1/4" = 1'-0"	100024-576-P79-STE	TLR-P6.2.D	

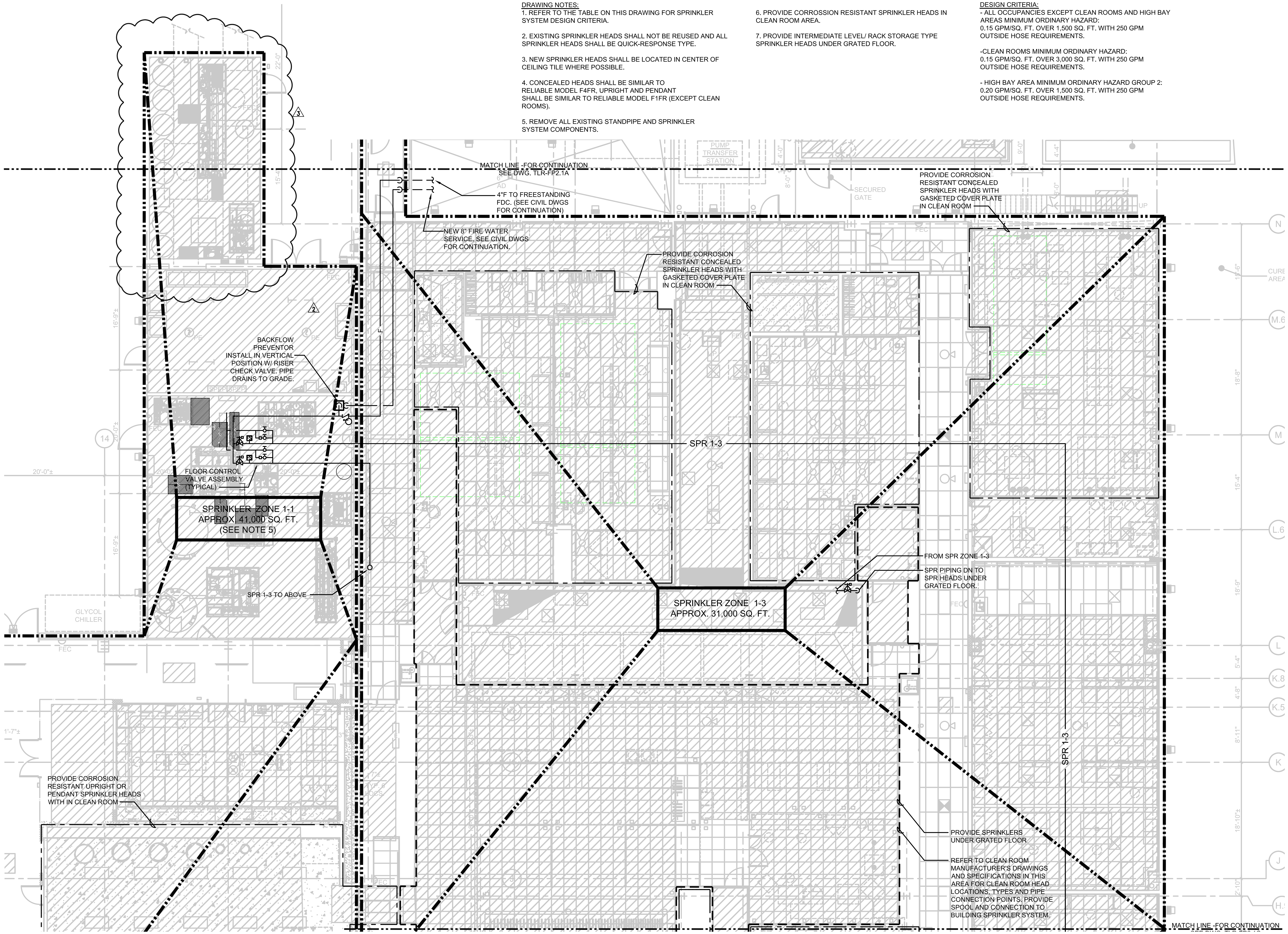
CCR-034

DRAWING NOTES:
1. REFER TO THE TABLE ON THIS DRAWING FOR SPRINKLER SYSTEM DESIGN CRITERIA.
2. EXISTING SPRINKLER HEADS SHALL NOT BE REUSED AND ALL SPRINKLER HEADS SHALL BE QUICK-RESPONSE TYPE.
3. NEW SPRINKLER HEADS SHALL BE LOCATED IN CENTER OF CEILING TILE WHERE POSSIBLE.
4. CONCEALED HEADS SHALL BE SIMILAR TO RELIABLE MODEL F4FR, UPRIGHT AND PENDANT SHALL BE SIMILAR TO RELIABLE MODEL F1FR (EXCEPT CLEAN ROOMS).
5. REMOVE ALL EXISTING STANDPIPE AND SPRINKLER SYSTEM COMPONENTS.
6. PROVIDE CORROSSION RESISTANT SPRINKLER HEADS IN CLEAN ROOM AREA.
7. PROVIDE INTERMEDIATE LEVEL/ RACK STORAGE TYPE SPRINKLER HEADS UNDER GRATED FLOOR.

DESIGN CRITERIA:
- ALL OCCUPANCIES EXCEPT CLEAN ROOMS AND HIGH BAY AREAS MINIMUM ORDINARY HAZARD:
0.15 GPM/SQ. FT. OVER 1,500 SQ. FT. WITH 250 GPM OUTSIDE HOSE REQUIREMENTS.

-CLEAN ROOMS MINIMUM ORDINARY HAZARD:
0.15 GPM/SQ. FT. OVER 3,000 SQ. FT. WITH 250 GPM OUTSIDE HOSE REQUIREMENTS.

- HIGH BAY AREA MINIMUM ORDINARY HAZARD GROUP 2:
0.20 GPM/SQ. FT. OVER 1,500 SQ. FT. WITH 250 GPM OUTSIDE HOSE REQUIREMENTS.



1 FIRST FLOOR PLAN- FIRE PROTECTION- SEGMENT B
SCALE: 1/8"=1'-0"

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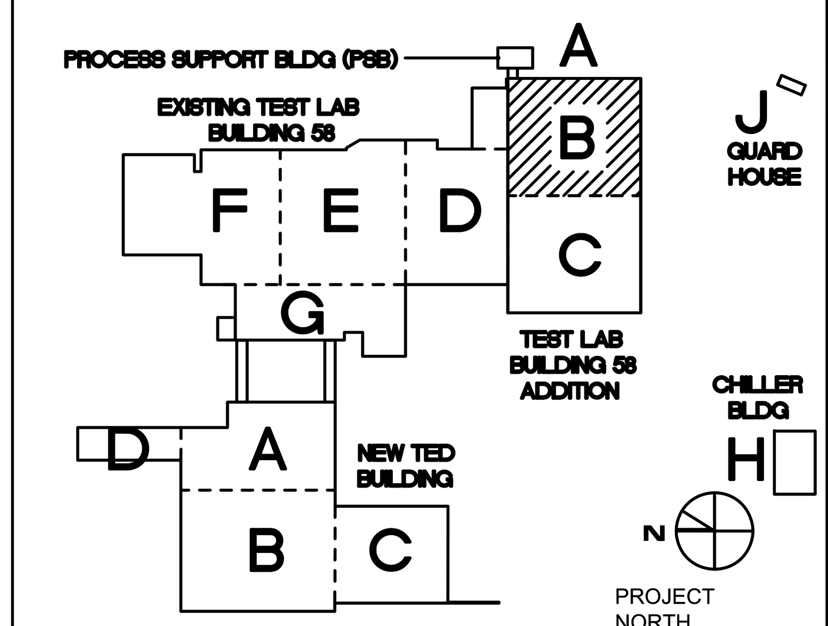
Engineering Leader Roger Rudy
Project Designer Joanne Sharma



TECHNICAL ENGINEERING & DEVELOPMENT FACILITY
(TEDF)

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REV	ZONE	DESCRIPTION	APPR.	DATE
3		CCR 34		09/26/11
2		UPW EQUIPMENT REVISION		08/10/11
		CONSOLIDATED SET		04/01/11
1		BULLETIN NO. 15		08/10/10
		TEDF TWO - FINAL		05/24/10
		ISSUE NO. 1 / EPP		02/08/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER JS	DATE 6.12.09
APPROVED		DRAWN JS	6.12.09
APPROVED		CHECKED RR	6.12.09
APPROVED		APPROVED	

Jefferson Lab

TITLE:
FIRST FLOOR PLAN -
FIRE PROTECTION - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-605-FP4-STE	TLR-FP2.1.B	-

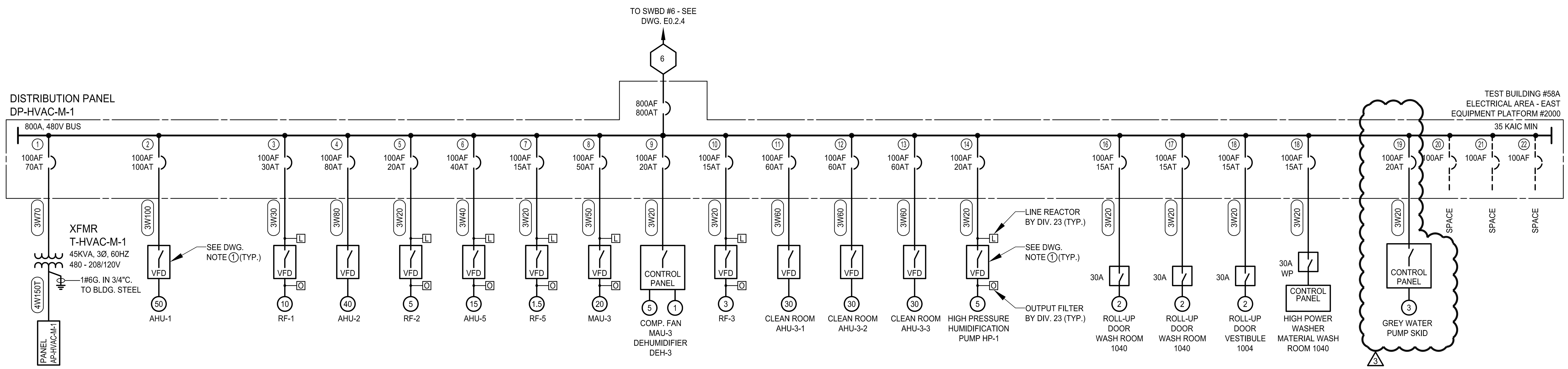
CCR-034

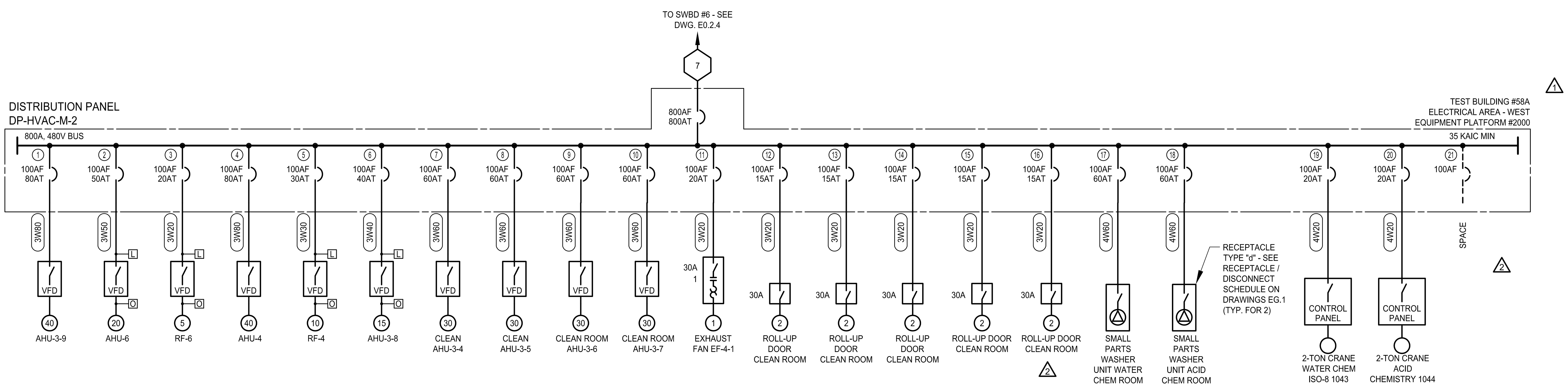
DRAWING NOTES:

1. VARIABLE FREQUENCY DRIVE (VFD), LINE REACTOR AND OUTPUT FILTER FURNISHED BY DIVISION 23; INSTALLED AND WIRED BY DIVISION 26. COORDINATE VFD ELECTRICAL CHARACTERISTICS, WIRING REQUIREMENTS AND LOCATION WITH DIVISION 23 IN FIELD.

GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES AND SIGNAL SYSTEMS SHOWN IN A LIGHT LINE WEIGHT ARE EXISTING TO REMAIN.
2. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES AND SIGNAL SYSTEMS SHOWN IN A DARK LINE ARE NEW WORK UNDER THIS CONTRACT.
3. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES AND SIGNAL SYSTEMS SHOWN IN A DARK, DASHED LINE ARE FUTURE WORK UNDER THIS CONTRACT.
4. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS, MOTOR CIRCUIT PROTECTORS (MCP), AND/OR SWITCHES ARE THREE (3) POLE.
5. UNLESS OTHERWISE NOTED, ALL MOTOR STARTERS SHALL BE SIZE NUMBER ONE (1).
6. ALL MOTOR CIRCUIT PROTECTOR (MCP) AMPACITIES ARE CONTINUOUS RATING AMPACITIES.
7. JUNCTION AND PULL BOXES ARE NOT NECESSARILY SHOWN ON THIS DRAWING AND SHALL BE PROVIDED WHERE NECESSARY AND SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 314.28 AND INSTALLED WHERE REQUIRED.
8. ALL SHORT CIRCUIT INTERRUPTING RATINGS SHOWN, WHETHER A.I.C. OR M.V.A. I.C. ARE CALCULATED RMS SYMMETRICAL VALUES AT THE LINE TERMINALS OF THE EQUIPMENT, WITH THE EXCEPTION OF 10,000 A.I.C. VALUES. THE WITHSTAND SHORT CIRCUIT CURRENT RATINGS OF PROTECTIVE DEVICES, TRANSFER SWITCHES AND BUS BRACINGS SHALL BE EQUAL TO OR GREATER THAN THE VALUES INDICATED.





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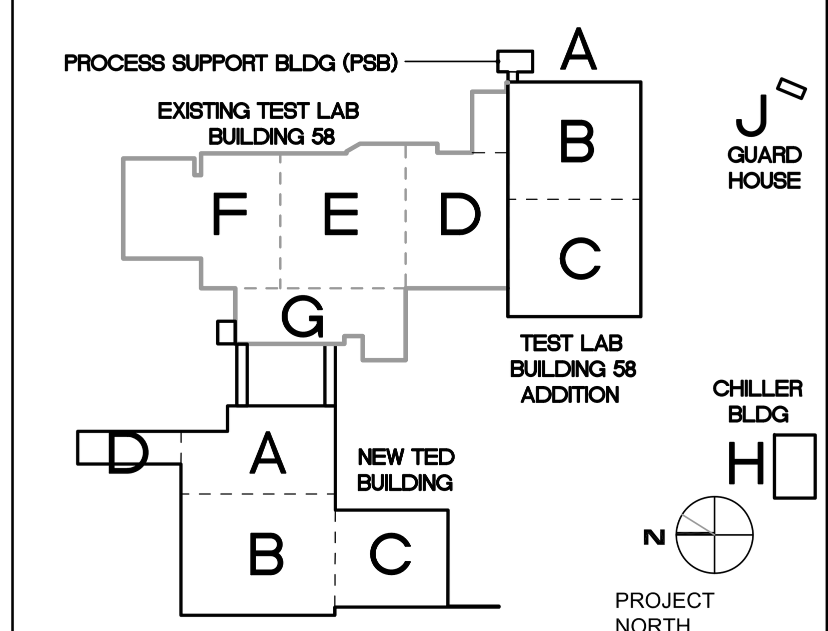


TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
3		CCR #34		09/26/11
		CONSOLIDATED SET		04/01/11
2		BULLETIN NO. 44		03/31/11
1		BULLETIN NO. 36		03/03/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED –	DATE –	DESIGNER –	DATE –
APPROVED –	–	DRAWN YB	–
APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

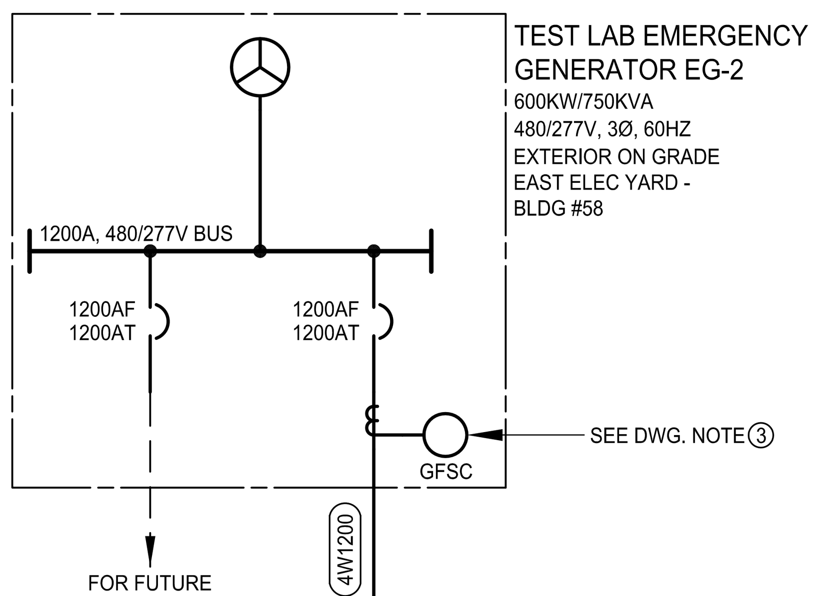
Jefferson Lab

TITLE:
SINGLE LINE DIAGRAM - NORMAL POWER - NEW WORK - DIST. PANEL DP-M-HVAC1 & 2

SCALE	DRAWING NUMBER	SHEET	REV
N/A	100024-640-E13-STE	E0.2.5	-

CCR-034

1 2 3 4 5 6



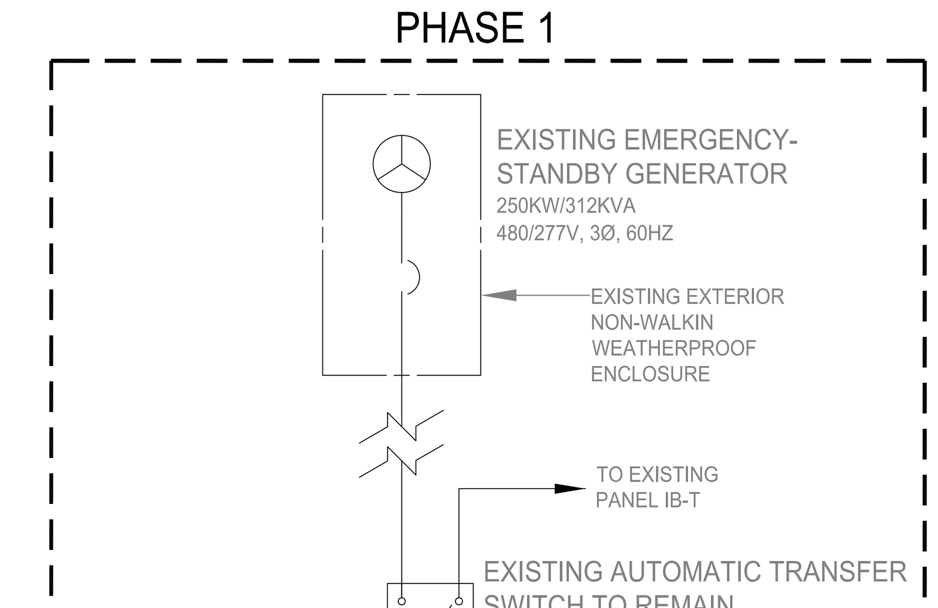
DRAWING NOTES:

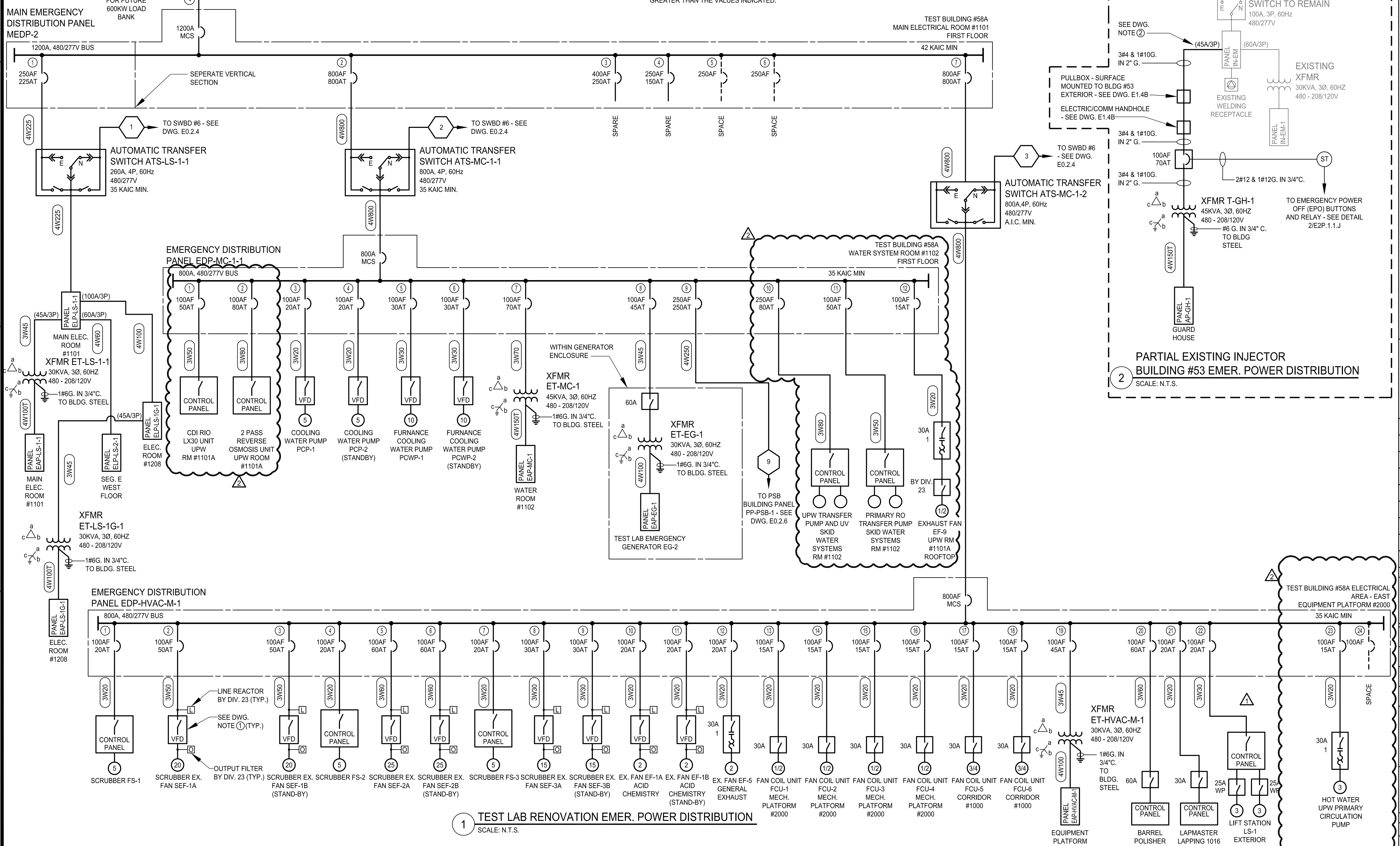
1. VARIABLE FREQUENCY DRIVE (VFD) LINE REACTOR AND OUTPUT FILTER FURNISHED BY DIVISION 23; INSTALLED AND WIRED BY DIVISION 26. COORDINATE VFD ELECTRICAL CHARACTERISTICS, WIRING REQUIREMENTS AND LOCATION WITH DIVISION 23 IN FIELD.
2. DISCONNECT AND REMOVE EXISTING 50AMPERE, 3-POLE SPARE CIRCUIT BREAKER AND RETURN TO OWNER. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE, SIZE AS SHOWN. NEW CIRCUIT BREAKER SHALL MATCH EXISTING TYPE, MANUFACTURER AND SHORT CIRCUIT RATING. VERIFY EXACT BREAKER POSITION IN FIELD. RETURN SPARE CIRCUIT BREAKER TO GOVERNMENT.
3. PROVIDE GROUND FAULT SENSING COIL AHEAD OF MAIN EMERGENCY DISCONNECT AS SHOWN IN ACCORDANCE WITH NEC. PROVIDE INSTRUCTIONS ON COURSE OF ACTION TO BE TAKEN IN THE EVENT OF AN INDICATED GROUND FAULT. THESE INSTRUCTIONS SHALL BE LOCATED NEAR SENSOR LOCATION IN MAIN EMERGENCY ELECTRICAL ROOM. COORDINATE EXACT LOCATION IN FIELD. GROUND FAULT SHALL ANNUNCIATE AT GENERATOR CONTROL PANEL AND AT GENERATOR REMOTE ANNUNCIATOR.

GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES AND SIGNAL SYSTEMS SHOWN IN A LIGHT LINE WEIGHT ARE EXISTING TO REMAIN.
2. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES AND SIGNAL SYSTEMS SHOWN IN A DARK LINE ARE NEW WORK UNDER THIS CONTRACT.
3. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES AND SIGNAL SYSTEMS SHOWN IN A DARK, DASHED LINE ARE FUTURE WORK UNDER THIS CONTRACT.
4. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS, MOTOR CIRCUIT PROTECTORS (MCP), AND/OR SWITCHES ARE THREE (3) POLE.
5. UNLESS OTHERWISE NOTED, ALL MOTOR STARTERS SHALL BE SIZE NUMBER ONE (1).
6. ALL MOTOR CIRCUIT PROTECTOR (MCP) AMPACITIES ARE CONTINUOUS RATING AMPACITIES.
7. JUNCTION AND PULL BOXES ARE NOT NECESSARILY SHOWN ON THIS DRAWING AND SHALL BE PROVIDED WHERE NECESSARY AND SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 314.28 AND INSTALLED WHERE REQUIRED.
8. ALL SHORT CIRCUIT INTERRUPTING RATINGS SHOWN, WHETHER A.I.C. OR M.V.A. I.C. ARE CALCULATED RMS SYMMETRICAL VALUES AT THE LINE TERMINALS OF THE EQUIPMENT, WITH THE EXCEPTION OF 10,000 A.I.C. VALUES. THE WITHSTAND SHORT CIRCUIT CURRENT RATINGS OF PROTECTIVE DEVICES, TRANSFER SWITCHES AND BUS BRACINGS SHALL BE EQUAL TO OR GREATER THAN THE VALUES INDICATED.

PHASE 1





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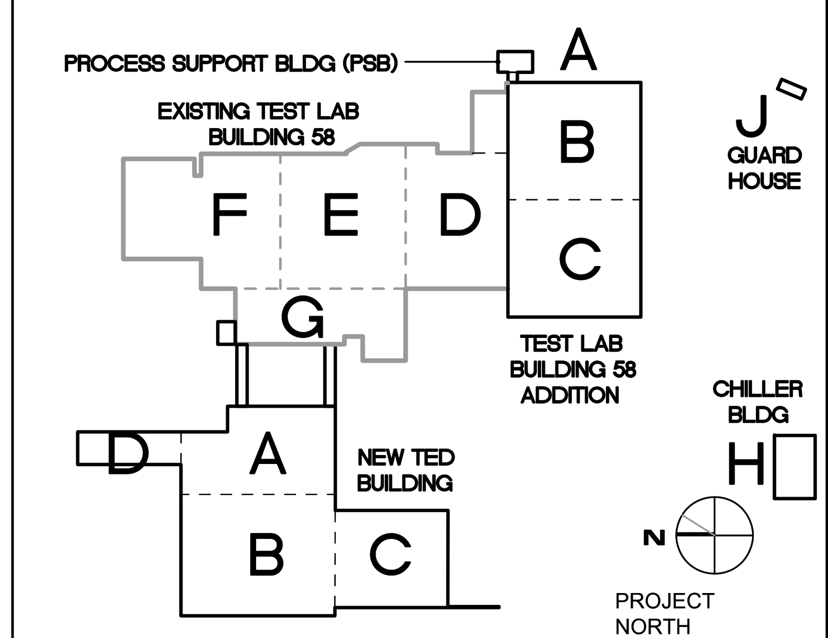


TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR #34		09/26/11
		CONSOLIDATED SET		04/01/11
1		BULLETIN No. 22		10/29/10
		TEDF TWO - FINAL		05/24/10
		ISSUE NO. 1 / EPP		02/08/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED –	DATE –	DESIGNER –	DATE –
APPROVED –	–	DRAWN YB	–
APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

Jefferson Lab

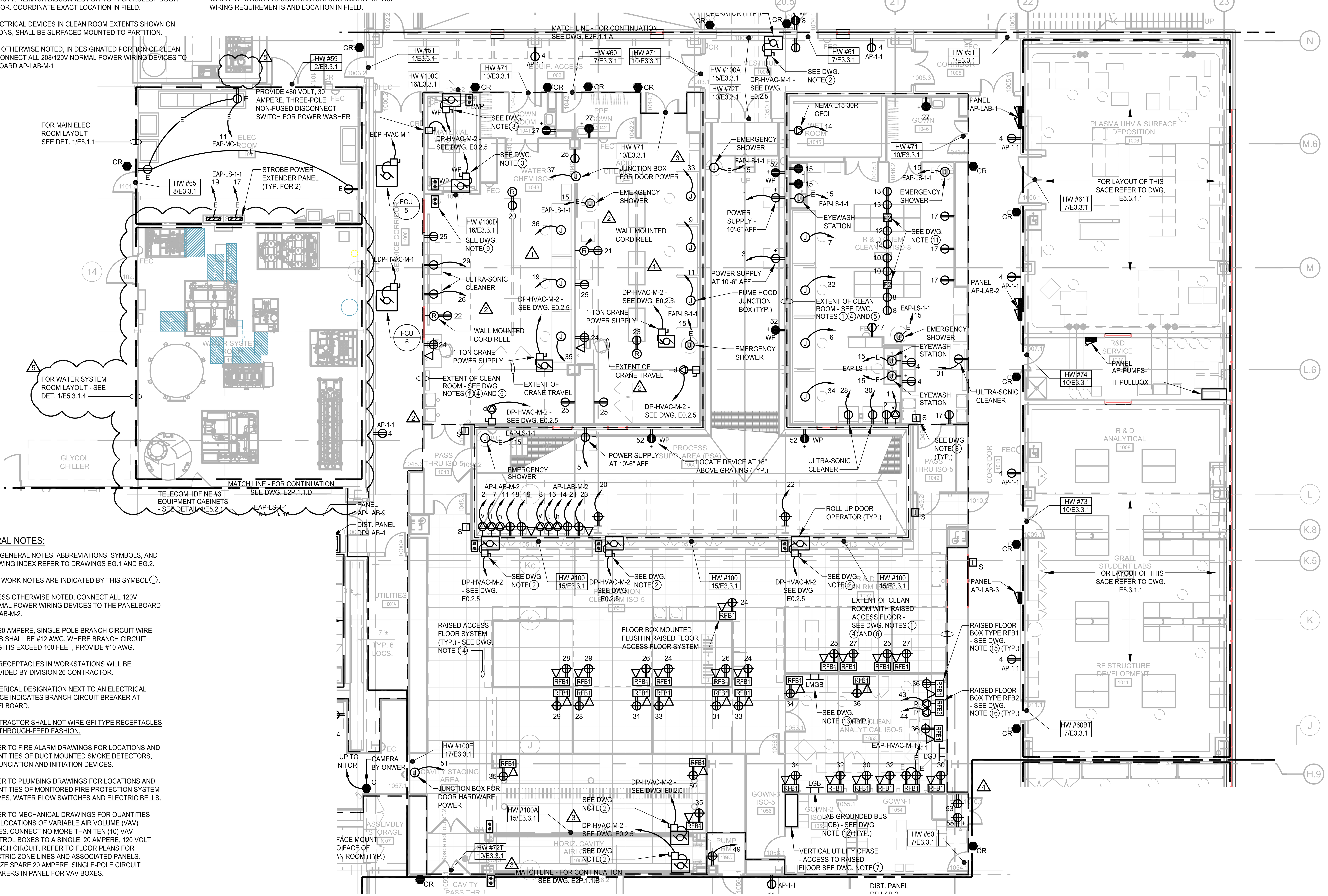
TITLE:
SINGLE LINE DIAGRAM - EMERGENCY POWER - NEW WORK - GEN EG-2 & PANEL MEDP-2

SCALE	DRAWING NUMBER	SHEET	REV
N/A	10024-642-E15-STE	E0.3.1	-

CCR-034

DRAWING NOTES:

1. ALL WALL AND CEILING PENETRATIONS IN AREAS DESIGNATES AS CLEAN ROOMS SHALL BE RUN IN CONDUIT. ALL CONDUITS AND PENETRATIONS SHALL BE SEALED INSIDE AND OUT IN ORDER TO MAINTAIN ROOM PRESSURIZATION. COORDINATE INSTALLATION OF ALL SECURITY, LAB MONITORING AND VOICE/DATA CABLING WITH OWNER PRIOR TO SEALING OF THESE CONDUITS AND PENETRATIONS AFTER CABLE INSTALLATION. ALL POINTS OF PENETRATION SHALL BE INSPECTED AND APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO ENERGIZING OF ANY DEVICES, LUMINAIRES AND EQUIPMENT.
2. PROVIDE 30 AMPERE, 480 VOLT, THREE-POLE NON-FUSED HEAVY-DUTY, NEMA 1 DISCONNECT SWITCH FOR ROLLUP DOOR OPERATOR. COORDINATE EXACT LOCATION IN FIELD.
3. PROVIDE 30 AMPERE, 480 VOLT, THREE-POLE NON-FUSED HEAVY-DUTY, NEMA 3R DISCONNECT SWITCH FOR ROLLUP DOOR OPERATOR. COORDINATE EXACT LOCATION IN FIELD.
4. ALL ELECTRICAL DEVICES IN CLEAN ROOM EXTENTS SHOWN ON PARTITIONS, SHALL BE SURFACED MOUNTED TO PARTITION.
5. UNLESS OTHERWISE NOTED, IN DESIGNATED PORTION OF CLEAN ROOM CONNECT ALL 208/120V NORMAL POWER WIRING DEVICES TO PANELBOARD AP-LAB-M-1.
6. UNLESS OTHERWISE NOTED, IN DESIGNATED PORTION OF CLEAN ROOM CONNECT ALL 208/120V NORMAL POWER WIRING DEVICES TO PANELBOARD AP-LAB-M-2.
7. ROUTE BRANCH CIRCUITS AND TELECOM. CABLING FROM RAISED ACCESS FLOOR CAVITY, UP UTILITY CHASE, AND TO RESPECTIVE PANEL OR IDF CABINET. REFER TO DRAWING E2.1.2A FOR IDF CABINET LOCATIONS.
8. INTERCOM STATION PROVIDED BY OWNER. PROVIDE JUNCTION BOX, 1" CONDUIT AND PULLCORD TO ACCESSIBLE CEILING FOR FUTURE CABLING. CONFIRM JUNCTION BOX TYPE WITH OWNER.
9. PUSHBUTTON FOR OVERHEAD ROLLUP DOOR CONTROL IS FURNISHED BY DOOR MANUFACTURER; INSTALLED AND WIRED BY DIVISION 26 CONTRACTOR. COORDINATE DEVICE WIRING REQUIREMENTS AND LOCATION IN FIELD.
10. CORD REEL MOUNTED TO UNDERSIDE OF STRUCTURE SUPPORTING THE CLEAN CANOPY. COORDINATE EXACT LOCATION IN THE FIELD WITH CLEAN CANOPY LOCATIONS AND OWNER.
11. POWER POLE SHALL BE TWO-COMPARTMENT STEEL WITH 12'-0" MINIMUM HEIGHT, CEILING TRIM FIT AND BASE FOOT. PROVIDE DEVICES AS SHOWN AND GRAY POLE FINISH. POLE SHALL BE MANUFACTURED BY WIREMOLD, MODEL # 30TP-412G OR APPROVED EQUAL.
12. SURFACE MOUNT LABORATORY GROUND BUS (LGB) BELOW FLOOR TILES ONTO RAISED ACCESS FLOOR SUPPORTS AT 10" AFF. REFER TO DETAIL 4/E3.1.3 AND DRAWING E3.1.3. COORDINATE EXACT LOCATION IN FIELD
13. SURFACE MOUNT LABORATORY MAIN GROUND BUS (LMGB) BELOW FLOOR TILES ONTO RAISED ACCESS FLOOR SUPPORTS AT 10" AFF. REFER TO DETAIL 3/E3.1.3 AND DRAWING E3.1.3. COORDINATE EXACT LOCATION IN FIELD
14. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUIT WIRING SHALL BE INSTALLED LIQUIDTITE FLEXIBLE METAL CONDUIT (SEALTITE) BELOW FLOOR SYSTEM. TELECOMMUNICATIONS CABLING SHALL BE INSTALLED IN CABLE TRAY SYSTEM. REFER TO DRAWING E2.1.1.A.
15. PROVIDE COMBINATION RAISED ACCESS FLOOR BOX WITH TYPE "RFB1" WITH 9 1/4" X 9 1/4" OVERALL DIMENSIONS, 4" DEPTH, MULTIPLE CONDUIT KNOCKOUTS AND SUITABLE FOR POWER/TELECOM. DEVICES. PROVIDE RAISED FLOOR BOX AS MANUFACTURED BY WIREMOLD, MODEL #AC8840 BOX WITH ONE (1) #P8840-2DP DUPLEX POWER PLATE, ONE (1) #C8004P-2DBP DUPLEX COMMUNICATIONS PLATE, TRIM PLATE AND OPERABLE COVER WITH GRAY FINISH. COORDINATE FLOOR TILE OPENINGS AND BOX LOCATION IN FIELD. APPROVED EQUAL MAY BE PROVIDED BY HUBBELL.
16. PROVIDE POWER RAISED ACCESS FLOOR BOX TYPE "RFB2" WITH 11 1/2" X 11 1/2" OVERALL DIMENSIONS, 5" DEPTH, MULTIPLE CONDUIT KNOCKOUTS AND SUITABLE FOR POWER DEVICES AS SHOWN. PROVIDE RAISED FLOOR BOX AS MANUFACTURED BY WIREMOLD, MODEL #AC10105-2 WITH ONE (1) MODEL #P10105 POWER DEVICE PLATE WITH FOUR (4) 1.56" DIAMETER OPENINGS, TRIM PLATE AND OPERABLE COVER WITH GRAY FINISH. COORDINATE FLOOR TILE OPENINGS AND BOX LOCATION IN FIELD. APPROVED EQUAL MAY BE PROVIDED BY HUBBELL.



GENERAL NOTES:

1. FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND DRAWING INDEX REFER TO DRAWINGS EG.1 AND EG.2.
2. NEW WORK NOTES ARE INDICATED BY THIS SYMBOL ◯.
3. UNLESS OTHERWISE NOTED, CONNECT ALL 120V NORMAL POWER WIRING DEVICES TO THE PANELBOARD AP-LAB-M-2.
4. ALL 20 AMPERE, SINGLE-POLE BRANCH CIRCUIT WIRE SIZES SHALL BE #12 AWG. WHERE BRANCH CIRCUIT LENGTHS EXCEED 100 FEET, PROVIDE #10 AWG.
5. ALL RECEPTACLES IN WORKSTATIONS WILL BE PROVIDED BY DIVISION 26 CONTRACTOR.
6. NUMERICAL DESIGNATION NEXT TO AN ELECTRICAL DEVICE INDICATES BRANCH CIRCUIT BREAKER AT PANELBOARD.
7. CONTRACTOR SHALL NOT WIRE GFI TYPE RECEPTACLES IN A THROUGH-FEED FASHION.
8. REFER TO FIRE ALARM DRAWINGS FOR LOCATIONS AND QUANTITIES OF DUCT MOUNTED SMOKE DETECTORS, ANNUNCIATION AND INITIATION DEVICES.
9. REFER TO PLUMBING DRAWINGS FOR LOCATIONS AND QUANTITIES OF MONITORED FIRE PROTECTION SYSTEM VALVES, WATER FLOW SWITCHES AND ELECTRIC BELLS.
10. REFER TO MECHANICAL DRAWINGS FOR QUANTITIES AND LOCATIONS OF VARIABLE AIR VOLUME (VAV) BOXES. CONNECT NO MORE THAN TEN (10) VAV CONTROL BOXES TO A SINGLE, 20 AMPERE, 120 VOLT BRANCH CIRCUIT. REFER TO FLOOR PLANS FOR ELECTRIC ZONE LINES AND ASSOCIATED PANELS. UTILIZE SPARE 20 AMPERE, SINGLE-POLE CIRCUIT BREAKERS IN PANEL FOR VAV BOXES.

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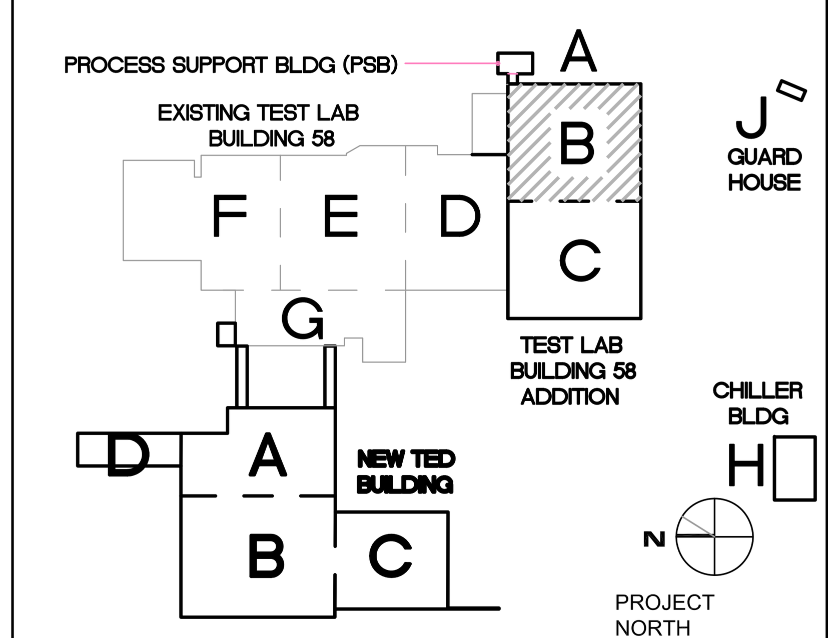

PROJECT NORTH

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
5		CCR # 34		09/26/11
4		BULLETIN #47		05/23/11
		CONSOLIDATED SET		04/01/11
3		BULLETIN NO. 44		03/31/11
2		BULLETIN NO. 36		03/03/11
1		BULLETIN #32		01/21/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED --	DATE --	DESIGNER --	DATE --
APPROVED --	--	DRAWN --	--
APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

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TITLE:
TLA - BUILDING 58 - FIRST FLOOR PLAN - NEW WORK - POWER - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-674-E47-STE	E2P.1.1.B	--

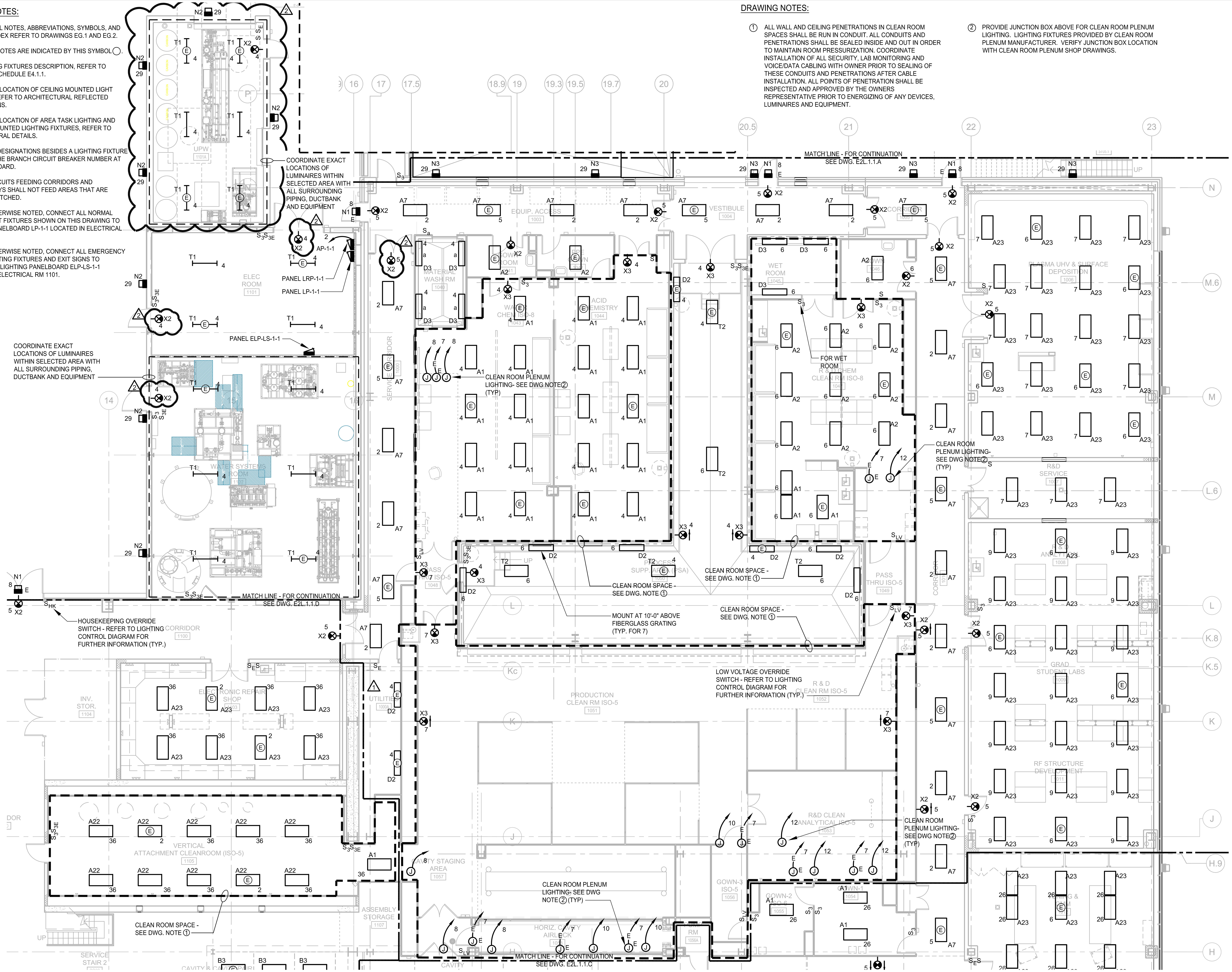
CCR-034

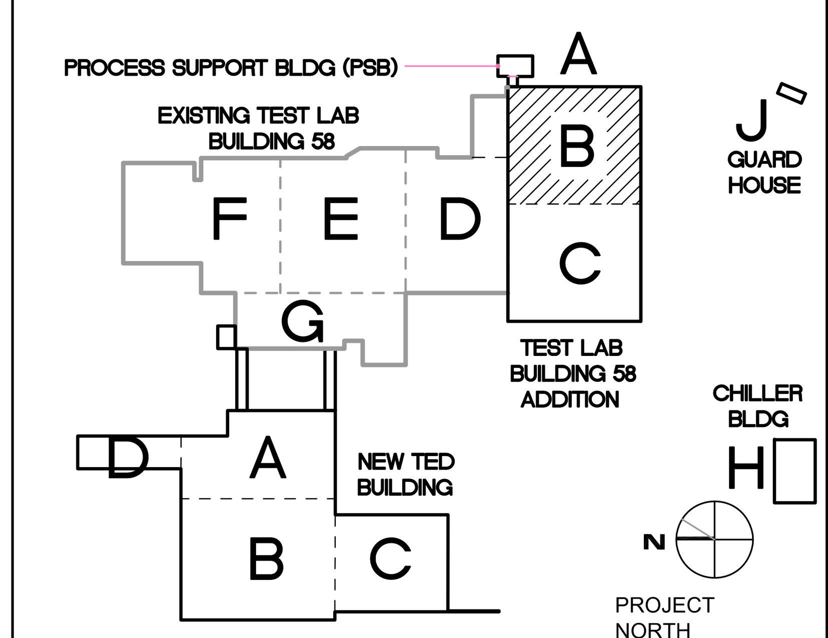
GENERAL NOTES:

1. FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND DRAWING INDEX REFER TO DRAWINGS EG.1 AND EG.2.
2. NEW WORK NOTES ARE INDICATED BY THIS SYMBOL ◯.
3. FOR LIGHTING FIXTURES DESCRIPTION, REFER TO LUMINAIRE SCHEDULE E4.1.1.
4. FOR ACTUAL LOCATION OF CEILING MOUNTED LIGHT FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.
5. FOR ACTUAL LOCATION OF AREA TASK LIGHTING AND SURFACE MOUNTED LIGHTING FIXTURES, REFER TO ARCHITECTURAL DETAILS.
6. NUMERICAL DESIGNATIONS BESIDES A LIGHTING FIXTURE INDICATES THE BRANCH CIRCUIT BREAKER NUMBER AT THE PANELBOARD.
7. BRANCH CIRCUITS FEEDING CORRIDORS AND PASSAGEWAYS SHALL NOT FEED AREAS THAT ARE LOCALLY SWITCHED.
8. UNLESS OTHERWISE NOTED, CONNECT ALL NORMAL POWER LIGHT FIXTURES SHOWN ON THIS DRAWING TO LIGHTING PANELBOARD LP-1-1 LOCATED IN ELECTRICAL RM 1101.
9. UNLESS OTHERWISE NOTED, CONNECT ALL EMERGENCY POWER LIGHTING FIXTURES AND EXIT SIGNS TO EMERGENCY LIGHTING PANELBOARD ELP-1-1 LOCATED IN ELECTRICAL RM 1101.

DRAWING NOTES:

1. ALL WALL AND CEILING PENETRATIONS IN CLEAN ROOM SPACES SHALL BE RUN IN CONDUIT. ALL CONDUITS AND PENETRATIONS SHALL BE SEALED INSIDE AND OUT IN ORDER TO MAINTAIN ROOM PRESSURIZATION. COORDINATE INSTALLATION OF ALL SECURITY, LAB MONITORING AND VOICE/DATA CABLING WITH OWNER PRIOR TO SEALING OF THESE CONDUITS AND PENETRATIONS AFTER CABLE INSTALLATION. ALL POINTS OF PENETRATION SHALL BE INSPECTED AND APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO ENERGIZING OF ANY DEVICES, LUMINAIRES AND EQUIPMENT.
2. PROVIDE JUNCTION BOX ABOVE FOR CLEAN ROOM PLENUM LIGHTING. LIGHTING FIXTURES PROVIDED BY CLEAN ROOM PLENUM MANUFACTURER. VERIFY JUNCTION BOX LOCATION WITH CLEAN ROOM PLENUM SHOP DRAWINGS.





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TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

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REV	ZONE	DESCRIPTION	APPR.	DATE
2		CCR #34		09/26/11
1		BULLETIN #47		05/23/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10
		ISSUE NO. 1 / EPP		02/08/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED –	DATE –	DESIGNER –	DATE –
APPROVED –	–	DRAWN –	–
APPROVED –	–	CHECKED –	–
APPROVED –	–	APPROVED –	–

Jefferson Lab

TITLE: TLA - BUILDING 58 - FIRST FLOOR PLAN - NEW WORK - LIGHTING - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-683-E56-STE	E2L.1.1.B	-

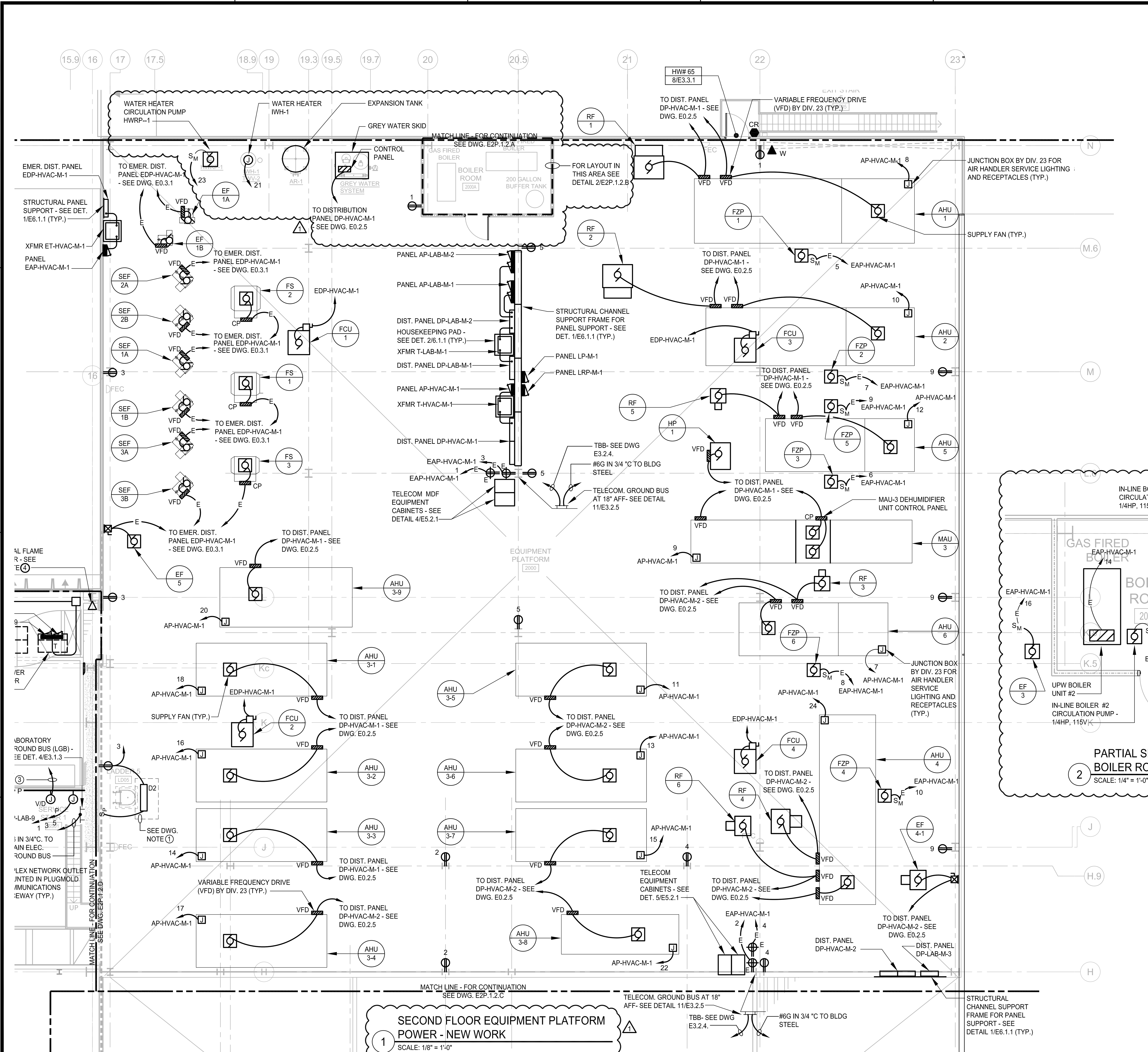
CCR-034

GENERAL NOTES:

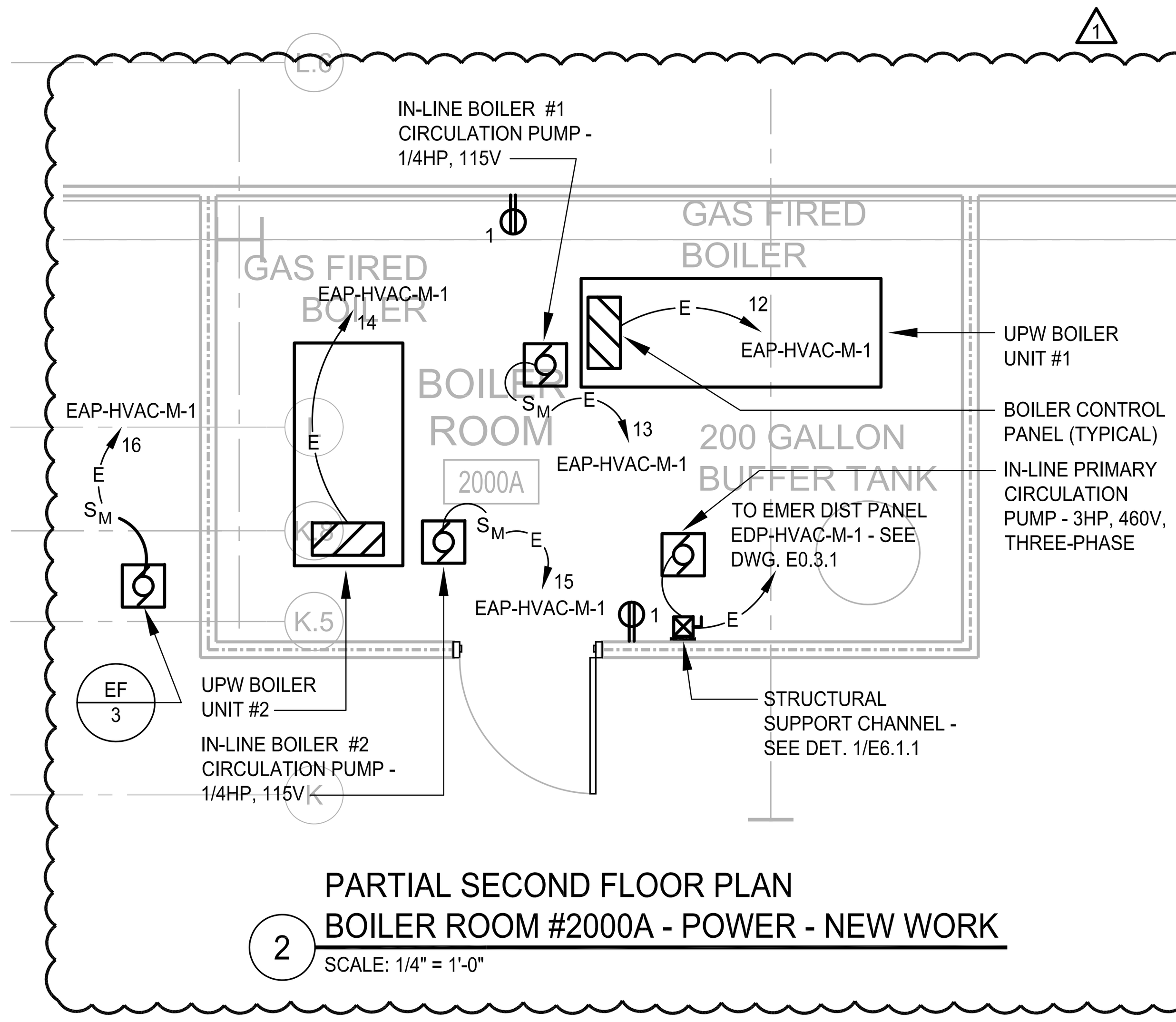
1. FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND DRAWING INDEX REFER TO DRAWINGS EG.1 AND EG.2.
2. NEW WORK NOTES ARE INDICATED BY THIS SYMBOL ○.
3. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL CONNECT ALL 120V NORMAL POWER WIRING DEVICES TO PANELBOARD AP-HVAC-M-1.
4. ALL 20 AMPERE, SINGLE-POLE BRANCH CIRCUIT WIRE SIZES SHALL BE #12 AWG. WHERE BRANCH CIRCUIT LENGTHS EXCEED 100 FEET, PROVIDE #10 AWG.
5. NUMERICAL DESIGNATION NEXT TO AN ELECTRICAL DEVICE INDICATES BRANCH CIRCUIT BREAKER AT PANELBOARD.
6. CONTRACTOR SHALL NOT WIRE GFI TYPE RECEPTACLES IN A THROUGH-FEED FASHION.
7. REFER TO FIRE ALARM DRAWINGS FOR LOCATIONS AND QUANTITIES OF DUCT MOUNTED SMOKE DETECTORS, ANNUNCIATION AND INITIATION DEVICES.
8. REFER TO PLUMBING DRAWINGS FOR LOCATIONS AND QUANTITIES OF MONITORED FIRE PROTECTION SYSTEM VALVES, WATER FLOW SWITCHES AND ELECTRIC BELLS.
9. REFER TO MECHANICAL DRAWINGS FOR QUANTITIES AND LOCATIONS OF VARIABLE AIR VOLUME (VAV) BOXES. CONNECT NO MORE THAN TEN (10) VAV CONTROL BOXES TO A SINGLE, 20 AMPERE, 120 VOLT BRANCH CIRCUIT. REFER TO FLOOR PLANS FOR ELECTRIC ZONE LINES AND ASSOCIATED PANELS. UTILIZE SPARE 20 AMPERE, SINGLE-POLE CIRCUIT BREAKERS IN PANEL FOR VAV BOXES.
10. U.O.N., ALL TELECOMMUNICATION DEVICES SHOWN ON THIS PLAN SHALL BE WIRED AND TERMINATED TO TELECOM. MDF CABINET AS SHOWN ON THIS DRAWING.

DRAWING NOTES:

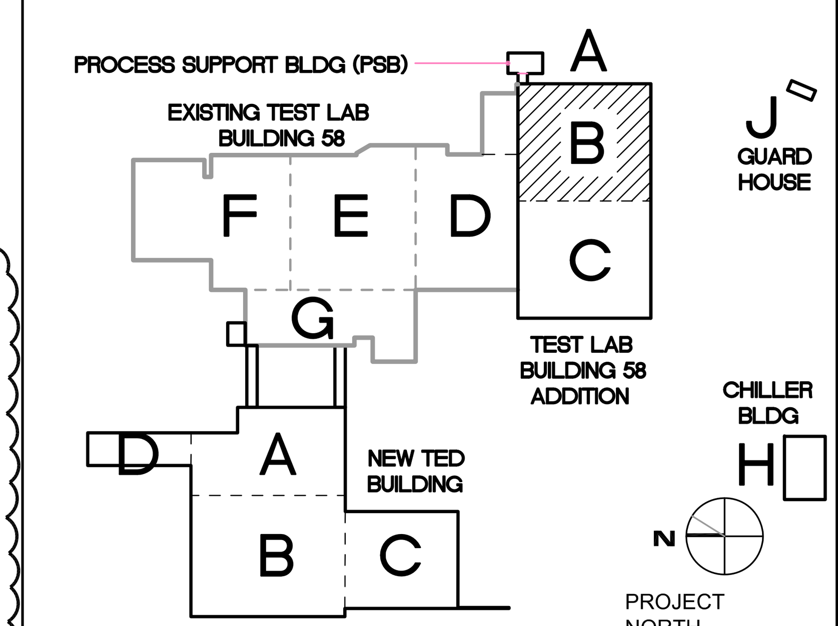
1. SURFACE MOUNT D2 LUMINAIRE TO UNDERSIDE OF THE MECHANICAL PLATFORM SLAB ADJACENT TO ISO-5 CLEAN ROOM PLENUM ACCESS LADDER. SEE LUMINAIRE SCHEDULE ON DWG. E4.1.1 FOR LIGHT FIXTURE DESCRIPTION.



1 SECOND FLOOR EQUIPMENT PLATFORM POWER - NEW WORK
SCALE: 1/8" = 1'-0"



2 PARTIAL SECOND FLOOR PLAN BOILER ROOM #2000A - POWER - NEW WORK
SCALE: 1/4" = 1'-0"



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△		CCR #34		09/26/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

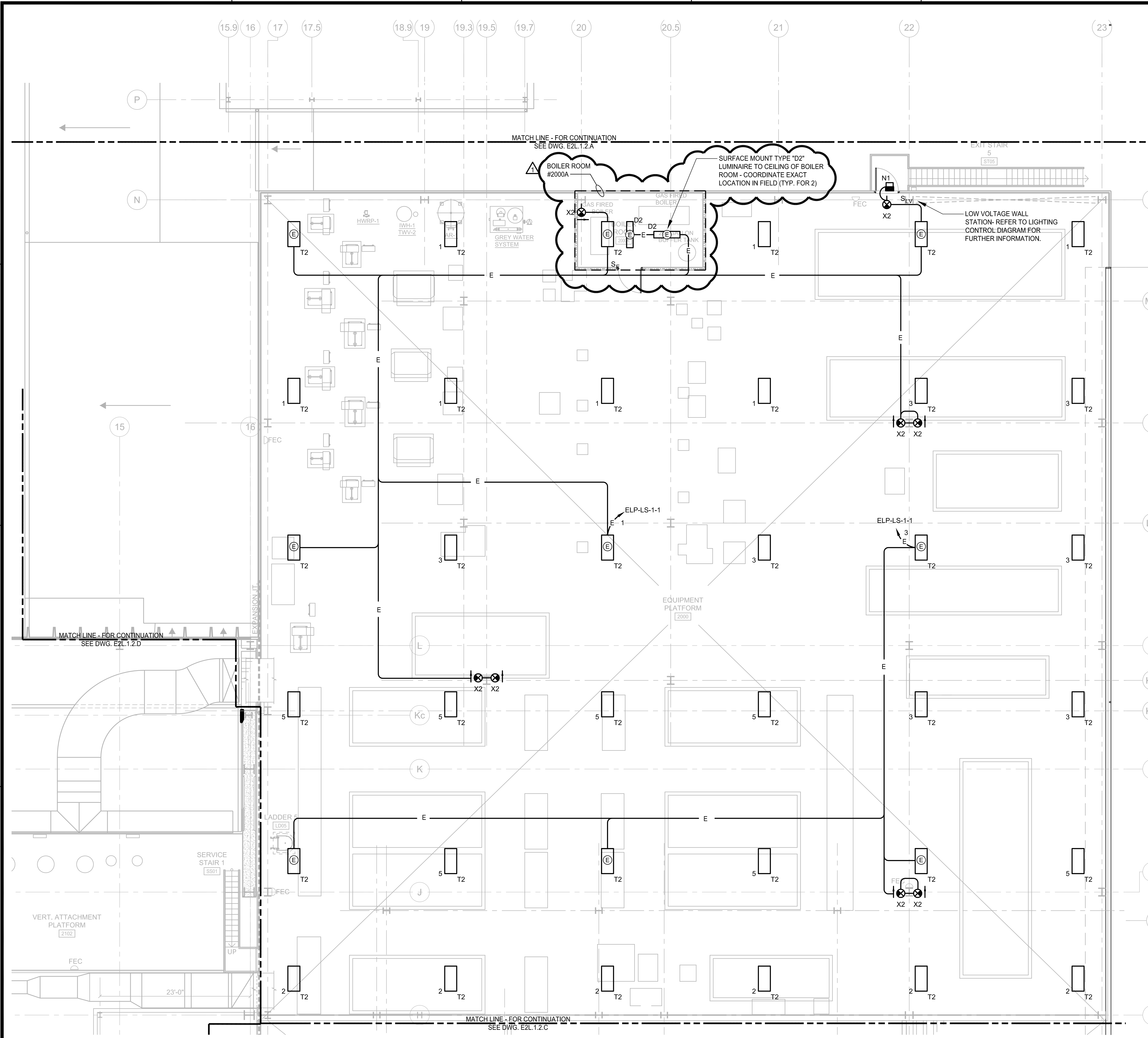
FACILITY USERS	DATE	FACILITIES & LOGISTICS	DATE
APPROVED		DESIGNER	
APPROVED		DRAWN	
APPROVED		CHECKED	
APPROVED		APPROVED	

Jefferson Lab

TITLE:
TLA - BUILDING 58 - SECOND FLOOR EQUIP PLATFORM PLAN - NEW WORK - POWER - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
AS NOTED	100024-695-E68-STE	E2P.1.2.B	-

CCR-034



GENERAL NOTES:

1. FOR GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND DRAWING INDEX REFER TO DRAWINGS EG.1 AND EG.2.
2. NEW WORK NOTES ARE INDICATED BY THIS SYMBOL ○.
3. FOR LIGHTING FIXTURES DESCRIPTION, REFER TO LUMINAIRE SCHEDULE E4.1.1.
4. FOR ACTUAL LOCATION OF CEILING MOUNTED LIGHT FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.
5. FOR ACTUAL LOCATION OF AREA TASK LIGHTING AND SURFACE MOUNTED LIGHTING FIXTURES, REFER TO ARCHITECTURAL DETAILS.
6. NUMERICAL DESIGNATIONS BESIDES A LIGHTING FIXTURE INDICATES THE BRANCH CIRCUIT BREAKER NUMBER AT THE PANELBOARD.
7. BRANCH CIRCUITS FEEDING CORRIDORS AND PASSAGEWAYS SHALL NOT FEED AREAS THAT ARE LOCALLY SWITCHED.
8. UNLESS OTHERWISE NOTED, CONNECT ALL NORMAL POWER LIGHT FIXTURES SHOWN ON THIS DRAWING TO LIGHTING PANELBOARD LP-M-1.
9. UNLESS OTHERWISE NOTED, CONNECT ALL EMERGENCY POWER LIGHTING FIXTURES AND EXIT SIGNS TO EMERGENCY LIGHTING PANELBOARD ELP-LS-1-1.

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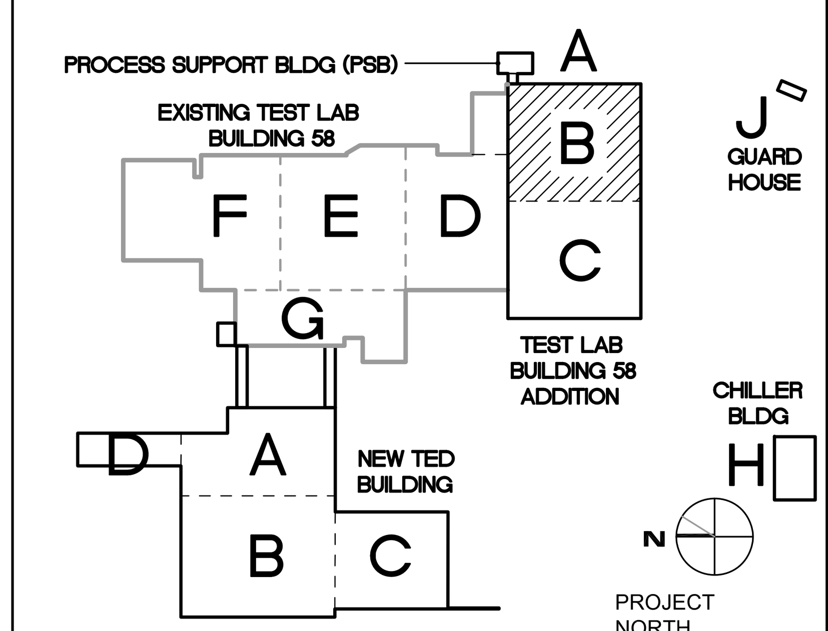

TECHNICAL ENGINEERING & DEVELOPMENT FACILITY

(TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE
1		CCR #34		09/26/11
		CONSOLIDATED SET		04/01/11
		TEDF TWO - FINAL		05/24/10

REVISIONS

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED --	DATE --	DESIGNER --	DATE --
APPROVED --	--	DRAWN --	--
APPROVED --	--	CHECKED --	--
APPROVED --	--	APPROVED --	--

Jefferson Lab

TITLE:
TLA - BUILDING 58 - SECOND FLOOR EQUIP PLATFORM PLAN - NEW WORK - LIGHTING - SEGMENT B

SCALE	DRAWING NUMBER	SHEET	REV
1/8" = 1'-0"	100024-701-E74-STE	E2L.1.2.B	-

CCR-034

PANEL: EAP-HVAC-M-1
SECTION: 1 OF 1
LOCATION: EQUIPMENT PLATFORM 2000
BUILDING #58A - EQUIPMENT PLATFORM

VOLTAGE: 208/120V
PHASE & WIRE: 3PH 4W
MAIN (AMPS): 100A, M.C.B.

[ ] NORMAL
[X] EMERGENCY
[ ] UPS

[X] NEW
[ ] EXISTING
KAIC RATING: 10
POLES: 30

NOTES	CKT NO.	C.B. A	C.B. P	DESCRIPTION	LOAD (KVA)	A	B	C	LOAD (KVA)	DESCRIPTION	C.B. A	C.B. P	CKT NO.	NOTES
	1	20	1	TELECOM LAB - EAST	0.75	1.50			0.75	TELECOM CABINET - WEST	20	1	2	
	3	20	1	TELECOM LAB - EAST	0.75		1.50		0.75	TELECOM CABINET - WEST	20	1	4	
	5	20	1	FZP-1	0.80			1.90	1.10	FZP-3	20	1	6	
	7	20	1	FZP-2	0.80	1.60			0.80	FZP-6	20	1	8	
	9	20	1	FZP-5	0.80		1.60		0.80	FZP-4	20	1	10	
	11	20	1	REC - R&D CLEAN 1053	0.72			1.22	0.50	*UPW BOILER #1*	20	1	12	
	13	20	1	*UPW BOILER #1 RECIRC PUMP*	0.75	1.25			0.50	*UPW BOILER #2*	20	1	14	
	15	20	1	*UPW BOILER #2 RECIRC PUMP*	0.75		1.50		0.75	*EXHAUST FAN 58-EF-3*	20	1	16	
	17	20	1	SPARE				0.00		SPARE	20	1	18	
	19	20	1	SPARE		0.00				SPARE	20	1	20	
	21	20	1	SPARE			0.00			SPARE	20	1	22	
	23	20	1	SPARE				0.00		SPARE	20	1	24	
	25	20	1	SPARE		0.00				SPARE	20	1	26	
	27	20	1	SPARE			0.00			SPARE	20	1	28	
	29	20	1	SPARE				0.00		SPARE	20	1	30	
				LOAD SUMMARY PER PHASE (KVA)		4.35	4.60	3.12						
				TOTAL CONNECTED LOAD (KVA)			12.07							

OPTIONS AND ACCESSORIES - (X) INDICATES SELECTION

[ ] MULTIPLE SECTION PANEL
[ ] RECESSED
[X] SURFACE
[ ] 200% RATED NEUTRAL
[ ] ISOLATED GROUND BUS

CONTACTOR CONTROLLED [ ]
FEED THRU LUGS [ ]
SUB FEED MAIN LUGS (DOUBLE LUGS) [ ]
CONTROLLABLE CIRCUIT BREAKER PANEL [ ]
INTEGRAL TVSS DEVICE [ ]

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PANEL: AP-HVAC-M-1
SECTION: 1 OF 1
LOCATION: EQUIPMENT PLATFORM 2000
BUILDING #58A - EQUIPMENT PLATFORM

VOLTAGE: 208/120V
PHASE & WIRE: 3PH 4W
MAIN (AMPS): 150A, M.C.B.

X NORMAL
EMERGENCY
UPS

X NEW
EXISTING
KAIC RATING: 10
POLES: 42

NOTES	CKT NO.	C.B. A	C.B. P	DESCRIPTION	LOAD (KVA)	A	B	C	LOAD (KVA)	DESCRIPTION	C.B. A	C.B. P	CKT NO.	NOTES
	1	20	1	REC - EQ PLATFORM 2000 - EAST	0.36	0.72			0.36	REC - EQ PLATFORM 2000 - COL 20	20	1	2	
	3	20	1	REC - EQ PLATFORM 2000 - NORTH	0.54		0.90		0.36	REC - EQ PLATFORM 2000 - WEST	15	1	4	
	5	20	1	REC - EQ PLATFORM 2000 - COL 20.5	0.54			1.08	0.54	REC - EQ PLATFORM 2000 - SOUTH	15	1	6	
	7	20	1	AHU-6 - LTG/REC	0.50	1.00			0.50	AHU-1 - LTG/REC	20	1	8	
	9	20	1	MAU-3 - LTG/REC	0.50		1.00		0.50	AHU-2 - LTG/REC	20	1	10	
	11	20	1	AHU-3-5 - LTG/REC	0.50			1.00	0.50	AHU-5 - LTG/REC	20	1	12	
	13	20	1	AHU-3-6 - LTG/REC	0.50	1.00			0.50	AHU-3-3 - LTG/REC	15	1	14	
	15	20	1	AHU-3-7 - LTG/REC	0.50		1.00		0.50	AHU-3-2 - LTG/REC	20	1	16	
	17	20	1	AHU-3-4 - LTG/REC	0.50			1.00	0.50	AHU-3-1 - LTG/REC	20	1	18	
	19	20	1	REC - ROOF TOP	0.36	0.86			0.50	AHU-3-9 - LTG/REC	15	1	20	
	21	20	1	*DOMESTIC WATER HEATER*	0.40		0.90		0.50	AHU-3-8 - LTG/REC	20	1	22	
	23	20	1	*DOMESTIC WATER CIRC PUMP HPRC-1*	0.58			1.08	0.50	AHU-4 - LTG/REC	20	1	24	
	25	20	1	SPARE		0.00				SPARE	20	1	26	
	27	20	1	SPARE			0.00			SPARE	20	1	28	
	29	20	1	SPARE				0.00		SPARE	20	1	30	
	31	20	1	SPARE		0.00				SPARE	20	1	32	
	33	20	1	SPARE			0.00			SPARE	20	1	34	
	35	20	1	SPARE				0.00		SPARE	20	1	36	
	37	20	1	SPARE		0.00				SPARE	20	1	38	
	39	20	1	SPARE			0.00			SPARE	20	1	40	
	41	20	1	SPARE				0.00		SPARE	20	1	42	
				LOAD SUMMARY PER PHASE (KVA)		3.58	3.80	4.16						
				TOTAL CONNECTED LOAD (KVA)		11.54								

OPTIONS AND ACCESSORIES - (X) INDICATES SELECTION

MULTIPLE SECTION PANEL	CONTACTOR CONTROLLED
RECESSED	FEED THRU LUGS
X SURFACE	SUB FEED MAIN LUGS (DOUBLE LUGS)
200% RATED NEUTRAL	CONTROLLABLE CIRCUIT BREAKER PANEL
ISOLATED GROUND BUS	INTEGRAL TVSS DEVICE

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PANEL:	AP-1-1	VOLTAGE: 208/120V	[X] NORMAL / [X] NEW
SECTION:	1 OF 1	PHASE & WIRE: 3PH 4W	[ ] EMERGENCY / [ ] EXISTING
LOCATION:	MAIN ELECTRICAL ROOM 1101	MAIN (AMPS): 250A, M.C.B.	[ ] UPS / KAIC RATING: 14
	BUILDING #58A - FIRST FLOOR		POLES: 42

NOTES	CKT NO.	C.B. A	C.B. P	DESCRIPTION	LOAD (KVA)	A	B	C	LOAD (KVA)	DESCRIPTION	C.B. A	C.B. P	CKT NO.	NOTES
	1	20	1	SWITCHGEAR #2 HEATERS		0.10			0.10	LRP-1-1 POWER	20	1	2	
	3	20	1	SWITCHGEAR #2 HEATERS			1.44		1.44	GEN REC - CORRIDOR	20	1	4	
	5	20	1	SWITCHGEAR #2 HEATERS - FUTURE				0.00	0.00	*SPARE*	20	1	6	
	7	20	1	GEN REC - TOILETS 1013/1015	1.26	1.62			0.36	GEN REC - EXTERIOR	20	1	8	
1	9	20	1	EWC - TLA CORRIDOR	1.00		1.18		0.18	GEN REC - TLA EXTERIOR	20	1	10	
	11	20	1	GEN REC - TLA CORRIDOR	0.90			1.20	0.30	DWH-1 - JC 11014	20	1	12	
	13	20	1	SPARE		0.00				SPARE	20	1	14	
	15	20	1	SPARE			0.00			SPARE	20	1	16	
	17	20	1	SPARE				0.00		SPARE	20	1	18	
	19	20	1	SPARE		0.00				SPARE	20	1	20	
	21	20	1	SPARE			0.00			SPARE	20	1	22	
	23	20	1	SPARE				0.00		SPARE	20	1	24	
	25	20	1	SPARE		0.00				SPARE	20	1	26	
	27	20	1	SPARE			0.00			SPARE	20	1	28	
	29	20	1	SPARE				0.00		SPARE	20	1	30	
	31	20	1	SPARE		0.00				SPARE	20	1	32	
	33	20	1	SPARE			0.00			SPARE	20	1	34	
	35	20	1	SPARE				0.00		SPARE	20	1	36	
	37	20	1	SPARE		0.00				SPARE	20	1	38	
	39	20	1	SPARE			0.00			SPARE	20	1	40	
	41	20	1	SPARE				0.00		SPARE	20	1	42	
				LOAD SUMMARY PER PHASE (KVA)		1.72	2.62	1.20						
				TOTAL CONNECTED LOAD (KVA)		5.54								

OPTIONS AND ACCESSORIES - (X) INDICATES SELECTION

[ ] MULTIPLE SECTION PANEL	CONTACTOR CONTROLLED [X]
[ ] RECESSED	FEED THRU LUGS [ ]
[X] SURFACE	SUB FEED MAIN LUGS (DOUBLE LUGS) [ ]
[ ] 200% RATED NEUTRAL	CONTROLLABLE CIRCUIT BREAKER PANEL [ ]
[ ] ISOLATED GROUND BUS	INTEGRAL TVSS DEVICE [X]

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PANEL NOTES:

1 - PROVIDE GFCI BREAKER

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PANEL:	EAP-MC-1	VOLTAGE:	208/120V	☐ NORMAL	X NEW
SECTION:	1 OF 1	PHASE & WIRE:	3PH 4W	X EMERGENCY	☐ EXISTING
LOCATION:	WATER ROOM #1102	MAIN (AMPS):	150A, M.C.B.	☐ UPS	KAIC RATING: 10
	BUILDING #58A - FIRST FLOOR				POLES: 42

NOTES	CKT NO.	C.B. A	C.B. P	DESCRIPTION	LOAD (KVA)	A	B	C	LOAD (KVA)	DESCRIPTION	C.B. A	C.B. P	CKT NO.	NOTES
	1	20	1	REC - VERT. SUPPORT PLAT.	0.36	0.72			0.36	REC - VERT. ATTACH PLATFORM 2102	20	1	2	
	3	20	1	REC - VERT. SUPPORT PLAT.	0.36		0.72		0.36	REC - VERT. ATTACH PLATFORM 2102	20	1	4	
	5	20	1	REC - VERT. SUPPORT PLAT.	0.36			0.72	0.36	REC - VERT. ATTACH PLATFORM 2102	20	1	6	
	7	20	1	REC - VERT. SUPPORT PLAT.	0.36	0.72			0.36	REC - VTA AREA 152	20	1	8	
1	9	20	1	ELEC. LAB #1103 EPO RELAY	0.10		0.46		0.36	REC - VTA AREA 152	20	1	10	
	11	20	1	REC - ELEC RM 1101	0.54			0.78	0.24	*UPW HX RIO CONTROL PANEL*	20	1	12	
	13	20	1	REC - WATER RM 1102	1.08	1.32			0.24	*UPW TEMPERING SKID PANEL*	20	1	14	
	15	20	1	*REC - WATER RM 1101A*	0.54		0.78		0.24	*CAUSTIC INJECTOR SKID PANEL*	20	1	16	
	17	20	1	*UPW RM 1101A DAMPERS*	0.20			0.95	0.75	*UPW RM 1101A UNIT HEATER*	20	1	18	
	19	20	1	SPARE		0.00				SPARE	20	1	20	
	21	20	1	SPARE			0.00			SPARE	20	1	22	
	23	20	1	SPARE				0.00		SPARE	20	1	24	
	25	20	1	SPARE		0.00				SPARE	20	1	26	
	27	20	1	SPARE			0.00			SPARE	20	1	28	
	29	20	1	SPARE				0.00		SPARE	20	1	30	
	31	20	1	SPARE		0.00				SPARE	20	1	32	
	33	20	1	SPARE			0.00			SPARE	20	1	34	
	35	20	1	SPARE				0.00		SPARE	20	1	36	
	37	20	1	SPARE		0.00				SPARE	20	1	38	
	39	20	1	SPARE			0.00			SPARE	20	1	40	
	41	20	1	SPARE				0.00		SPARE	20	1	42	
				LOAD SUMMARY PER PHASE (KVA)		2.76	1.96	2.45						
				TOTAL CONNECTED LOAD (KVA)		7.17								

OPTIONS AND ACCESSORIES - (X) INDICATES SELECTION

☐	MULTIPLE SECTION PANEL	CONTACTOR CONTROLLED	☐
☐	RECESSED	FEED THRU LUGS	☐
X	SURFACE	SUB FEED MAIN LUGS (DOUBLE LUGS)	☐
☐	200% RATED NEUTRAL	CONTROLLABLE CIRCUIT BREAKER PANEL	☐
☐	ISOLATED GROUND BUS	INTEGRAL TVSS DEVICE	☐

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PANEL NOTES:

1 - PROVIDE CIRCUIT BREAKER HANDLE LOCK.

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