



## Hillsboro, Oregon

| Revisions: |            |                  |
|------------|------------|------------------|
| No.        | Date       | Description      |
|            | 2013.12.06 | ISSUE FOR PERMIT |

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Project # 13114

Date: 2013.12.06



- 1 MP-2, RIBBED METAL PANEL WALL SYSTEM
- 2 MP-1 SMOOTH METAL PANEL SYSTEM
- 3 BUTTED GLAZING SYSTEM
- 4 BROW ASSEMBLY
- 5 ILLUMINATED CHANNEL LETTERS
- 6 ALIGN BUTTED GLAZING SYSTEM JOINT CENTERLINE  
TYP UON
- 7 FLASHING AT BROW SUPPORT PENETRATION THRU  
SYSTEM
- 8 BAR GRATING, SEE STRUCTURAL
- 9 MP-1 PANEL JOINT
- 10 BACKER ROD & SEALANT AT MP-1 ROOF JOINTS, TYP

A SEE EXTERIOR ELEVATIONS FOR METAL PANEL  
SYSTEM TYPE AND LOCATIONS

B CAR WASH BUILDING DATUM ELEVATION 0'-0" EQUALS  
USGS ELEVATION 214'-0"

C FINISH ALL EXPOSED STEEL P-1 UON

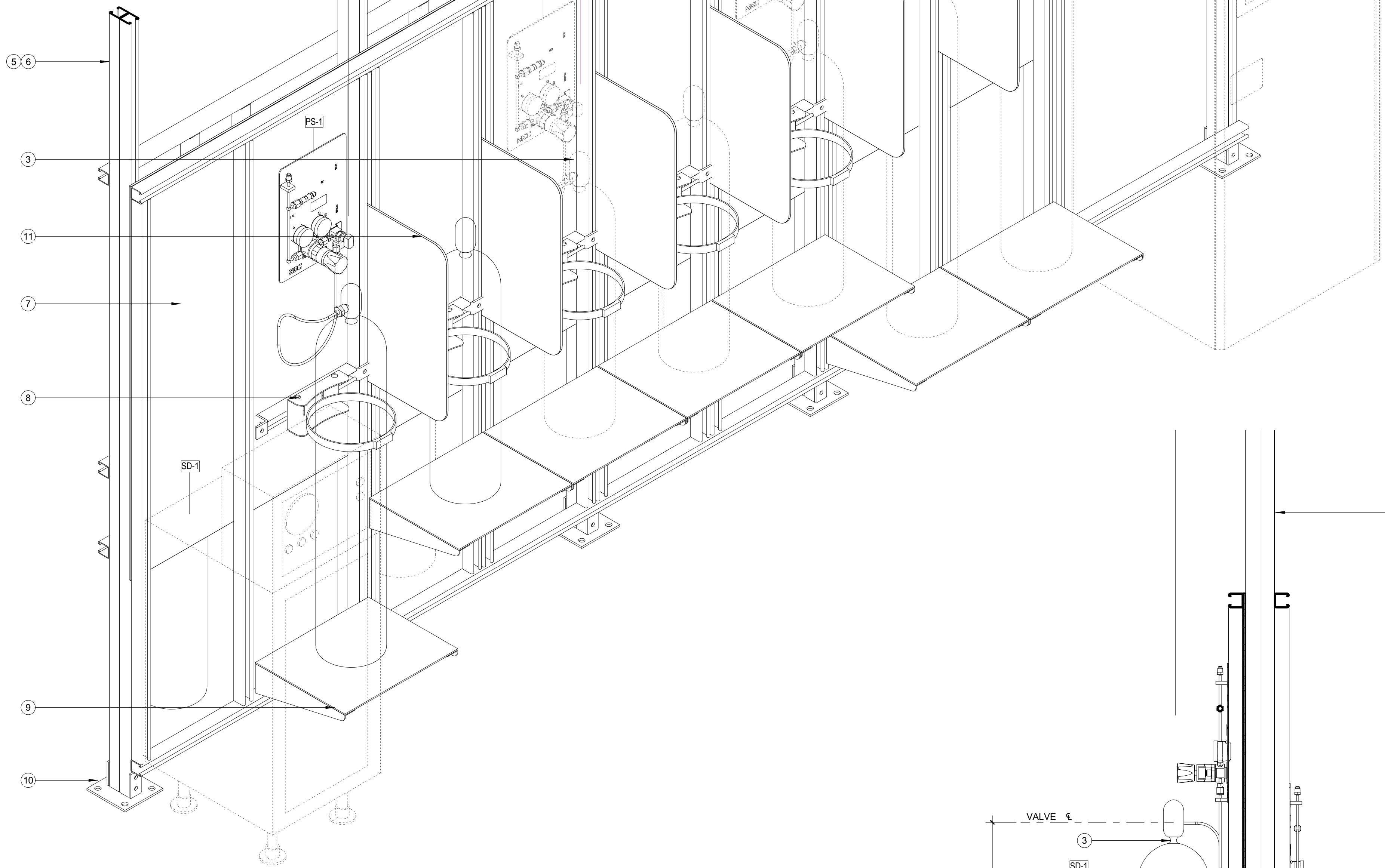


PYROPHORIC PAD GENERAL NOTES

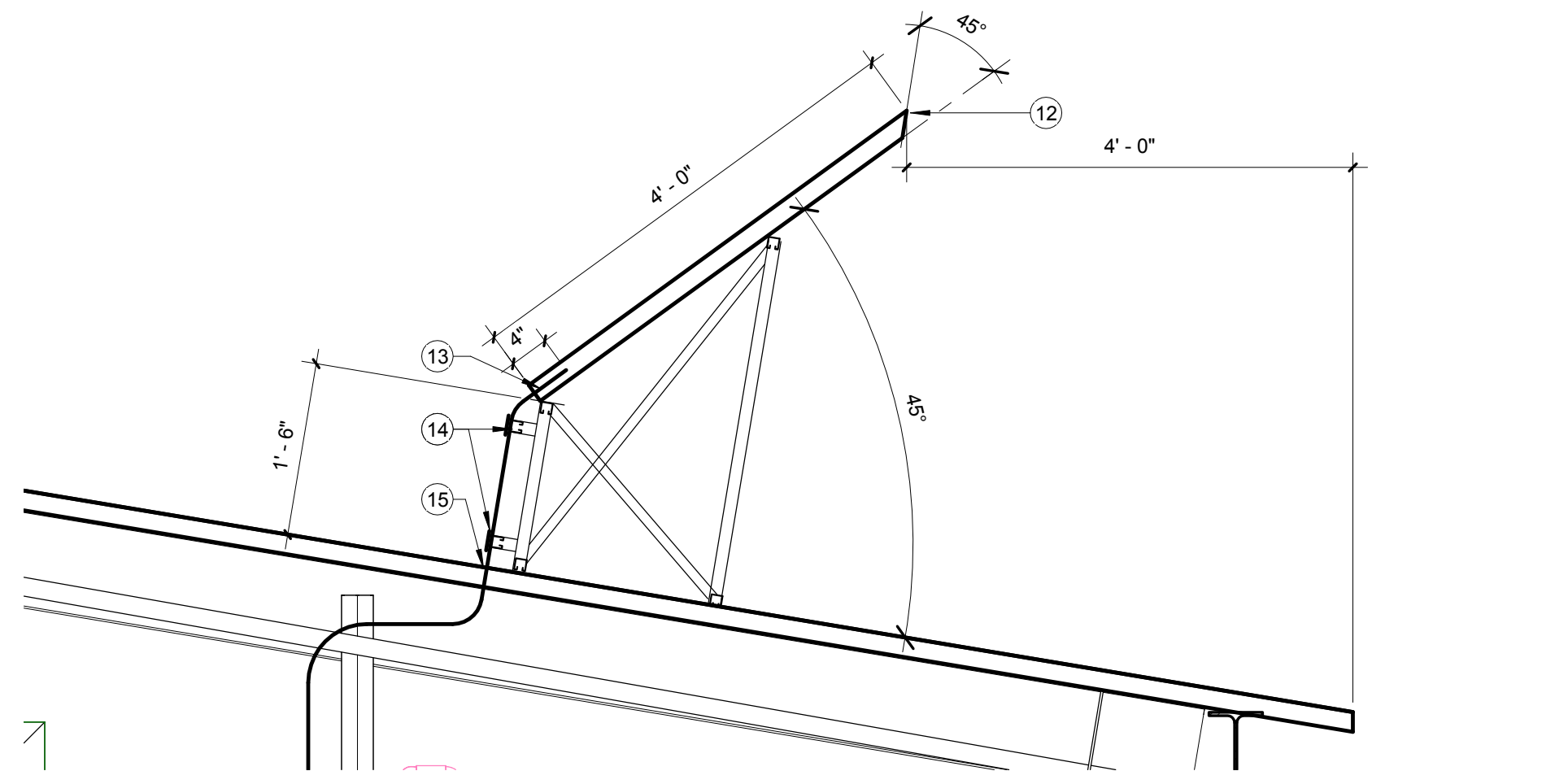
- A ALL SILANE CYLINDERS STORED OR DISPENSED FROM THIS FACILITY ARE TO BE STEEL CYLINDERS (REFERENCE CGA G 13, TABLE 3, NOTE 7)
- B FOR SILANE MIXTURES, THE MAXIMUM SILANE CONTENT PER CYLINDER SHALL BE BASED ON THE WEIGHT OF THE SILANE GAS CONTAINED IN THE CYLINDER. THIS QUANTITY SHALL BE ≤600FT3 (CALCULATED AT STP).
- C MAXIMUM STORAGE QUANTITY OF SILANE PER CYLINDER TO BE ≤600FT3 (CALCULATED AT STP). (REFERENCE CGA G 13)

KEYED NOTES

- 1 EGRESS GATES SHALL NOT BE PROVIDED WITH A LATCH OR LOCK UNLESS IT IS PANIC HARDWARE.
- 2 PURGE TANKS (4 PLACES)
- 3 SILANE TANKS (8 PLACES)
- 4 SILANE DESTRUCT CABINET (FUTURE)
- 5 ATTACH TO STRUCTURE ABOVE. SEE STRCUTURAL
- 6 SS SLOTTED CHANNEL STRUCTURAL FRAMING, TYP
- 7 1/4" SS GAS PANEL MOUNTING PLATE
- 8 ADJ SS CYLINDER RESTRAINT
- 9 SS ADJ SHELF, PROVIDE (8) PLACES, P2494 SS BRACKETS WITH 1/4" SS PLATE
- 10 SS METAL FRAMING FITTINGS, TYP
- 11 1/4" SS SEPARATION PLATE (TYP OF 6)
- 12 SS 2" SCHED 40 PIPE
- 13 PURGE VENT TUBING EXTEND 4" INTO PIPE
- 14 CUSH-A-CLAMP TO MATCH TUBE SIZE
- 15 PROVIDE SEALANT AT ROOF PENETRATION

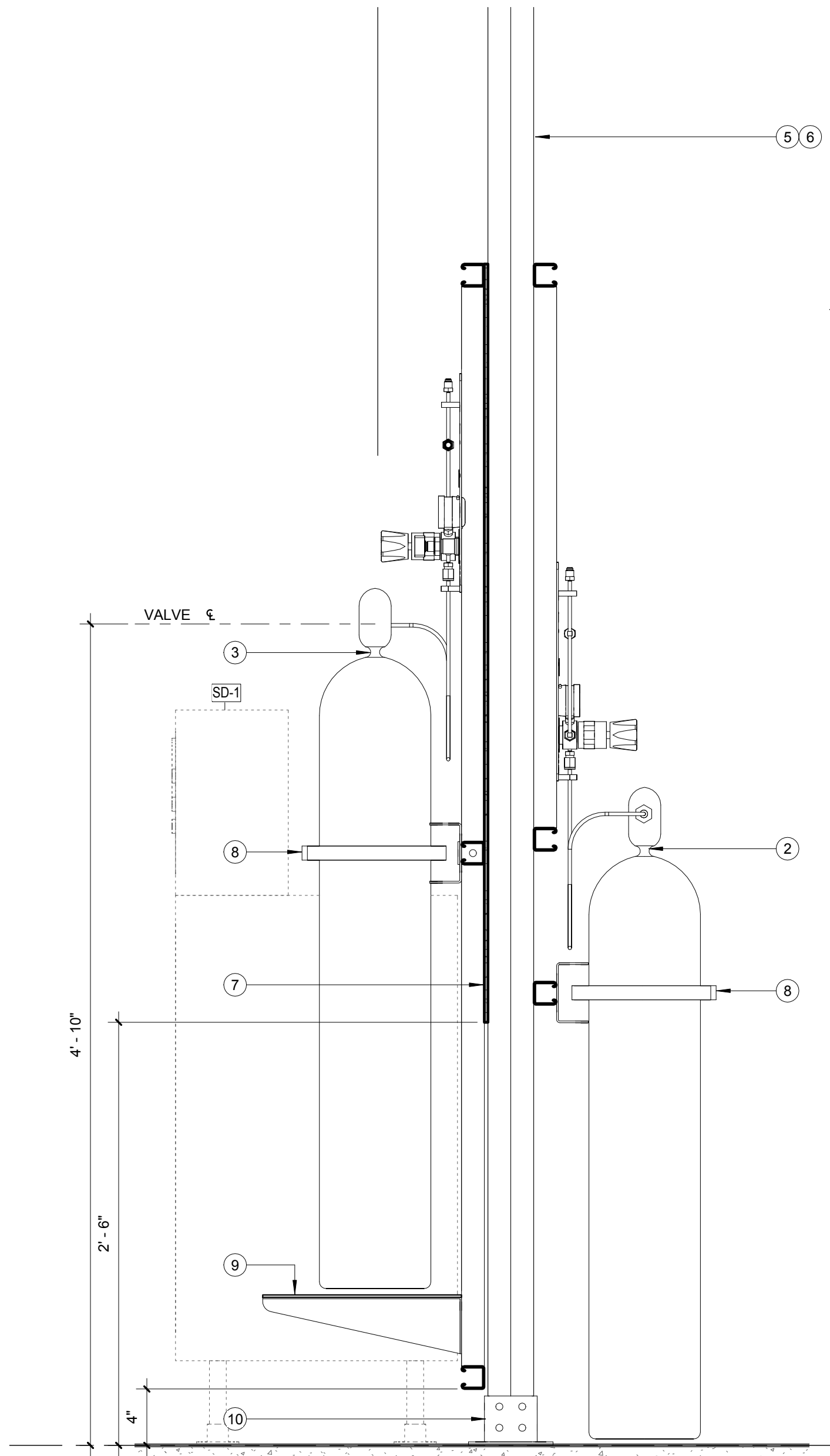


8 SILANE RACK ISOMETRIC

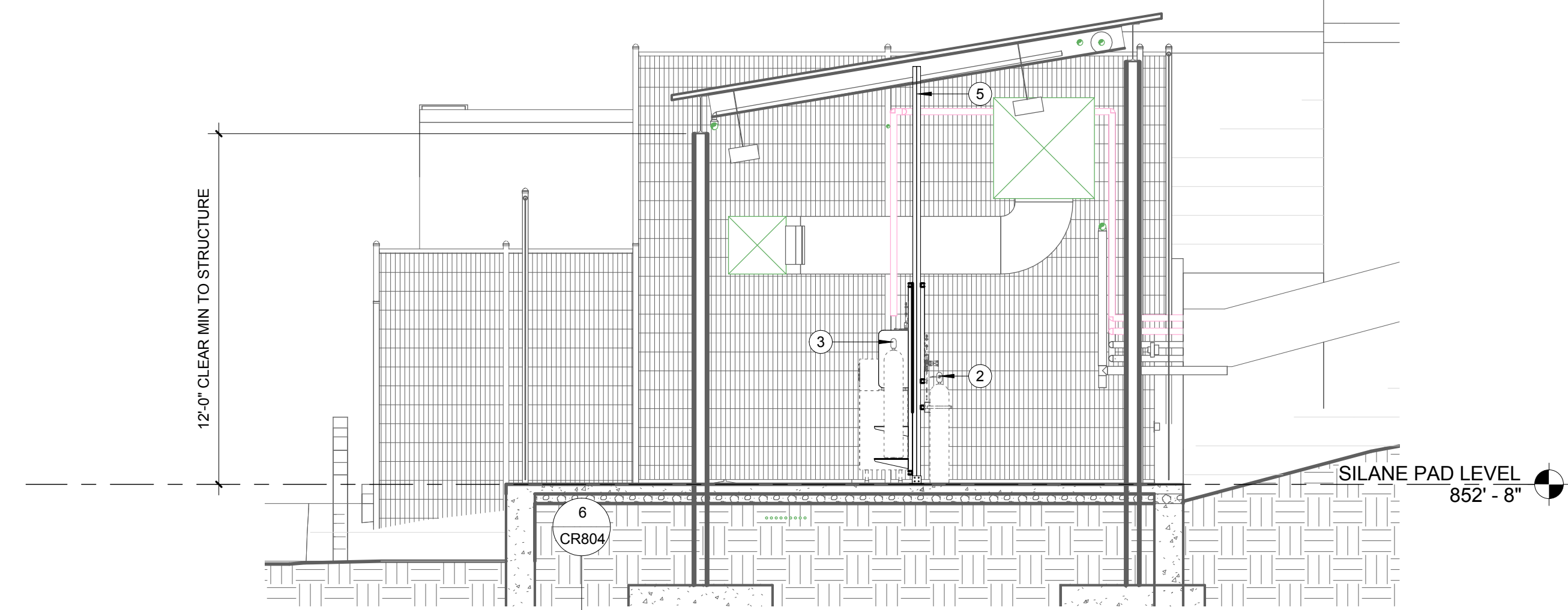


6 SILANE PURGE VENT DETAIL  
3/4" = 1'-0"

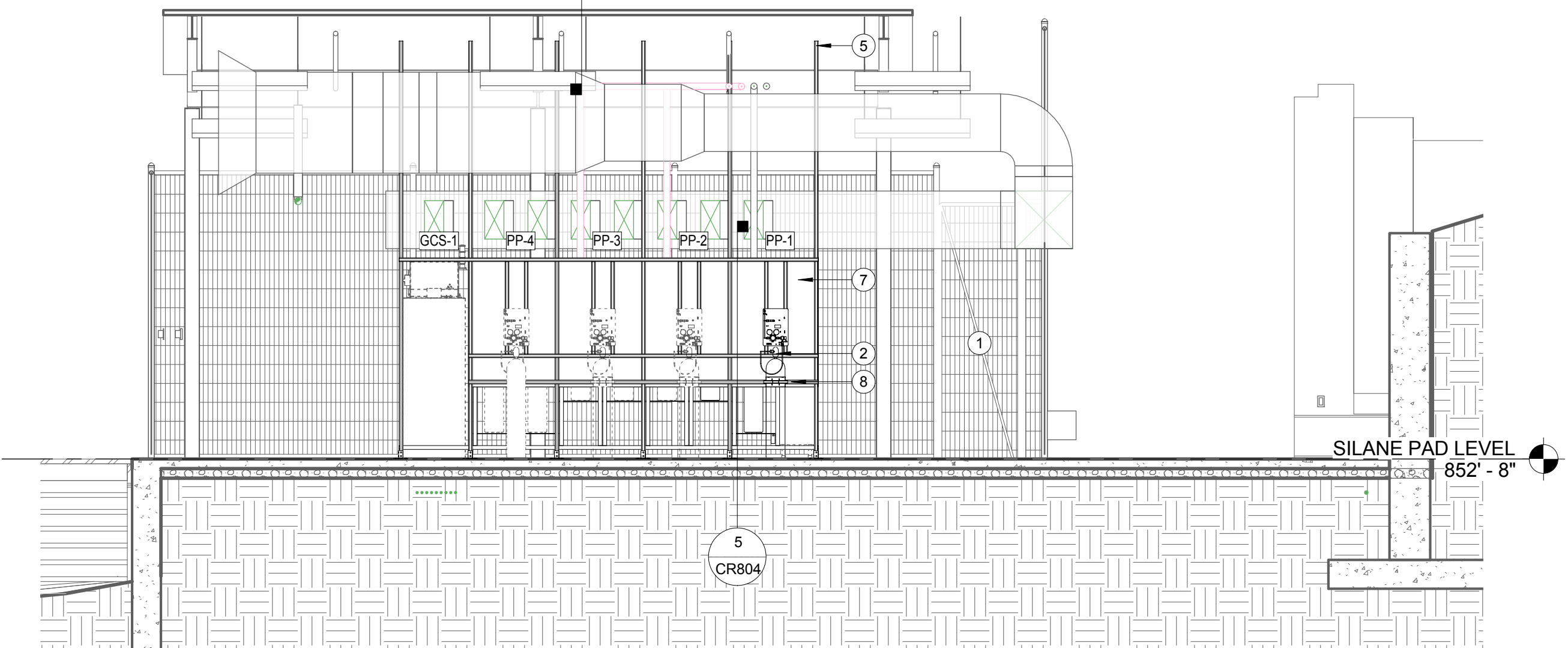
| PYROPHORIC PAD EQUIPMENT SCHEDULE |                         |                    |             |        |
|-----------------------------------|-------------------------|--------------------|-------------|--------|
| NO.                               | NAME                    | PROCESS GAS        | STICK COUNT | Note   |
| GCS-1                             | Gas Cabinet, Silane     | Silane             |             | Future |
| PP-1                              | Silane Purge Gas Panel  | Nitrogen           |             |        |
| PP-2                              | Silane Purge Gas Panel  | Nitrogen           |             | Future |
| PP-3                              | Silane Purge Gas Panel  | Nitrogen           |             | Future |
| PP-4                              | Silane Purge Gas Panel  | Nitrogen           |             | Future |
| PS-1                              | Silane Gas Panel        | Silane             |             | Future |
| PS-2                              | Silane Gas Panel        | Silane in Helium   |             | Future |
| PS-3                              | Silane Gas Panel        | Silane in Nitrogen |             | Future |
| SD-1                              | Silane Destruct Cabinet | Silane             |             | Future |



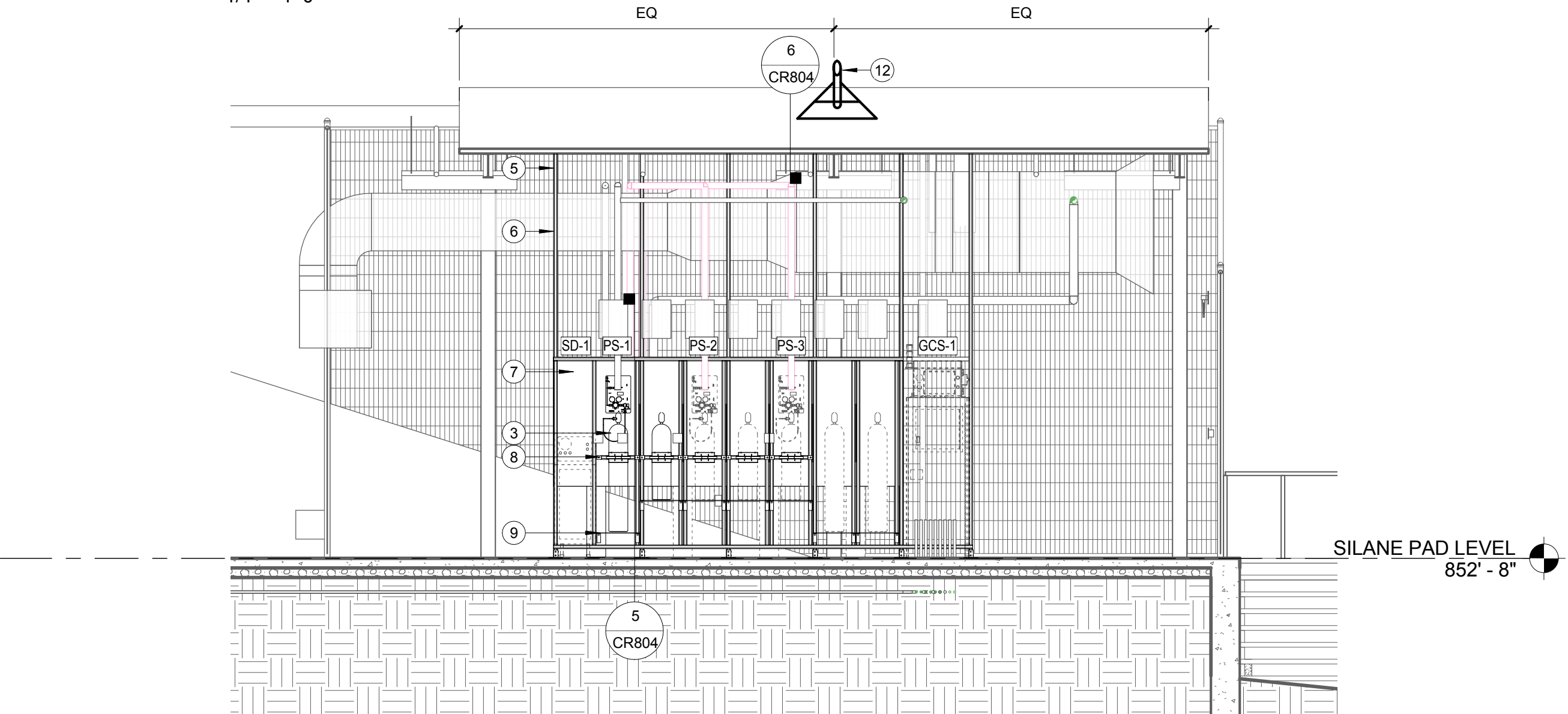
5 SILANE RACK SECTION  
1 1/2" = 1'-0"



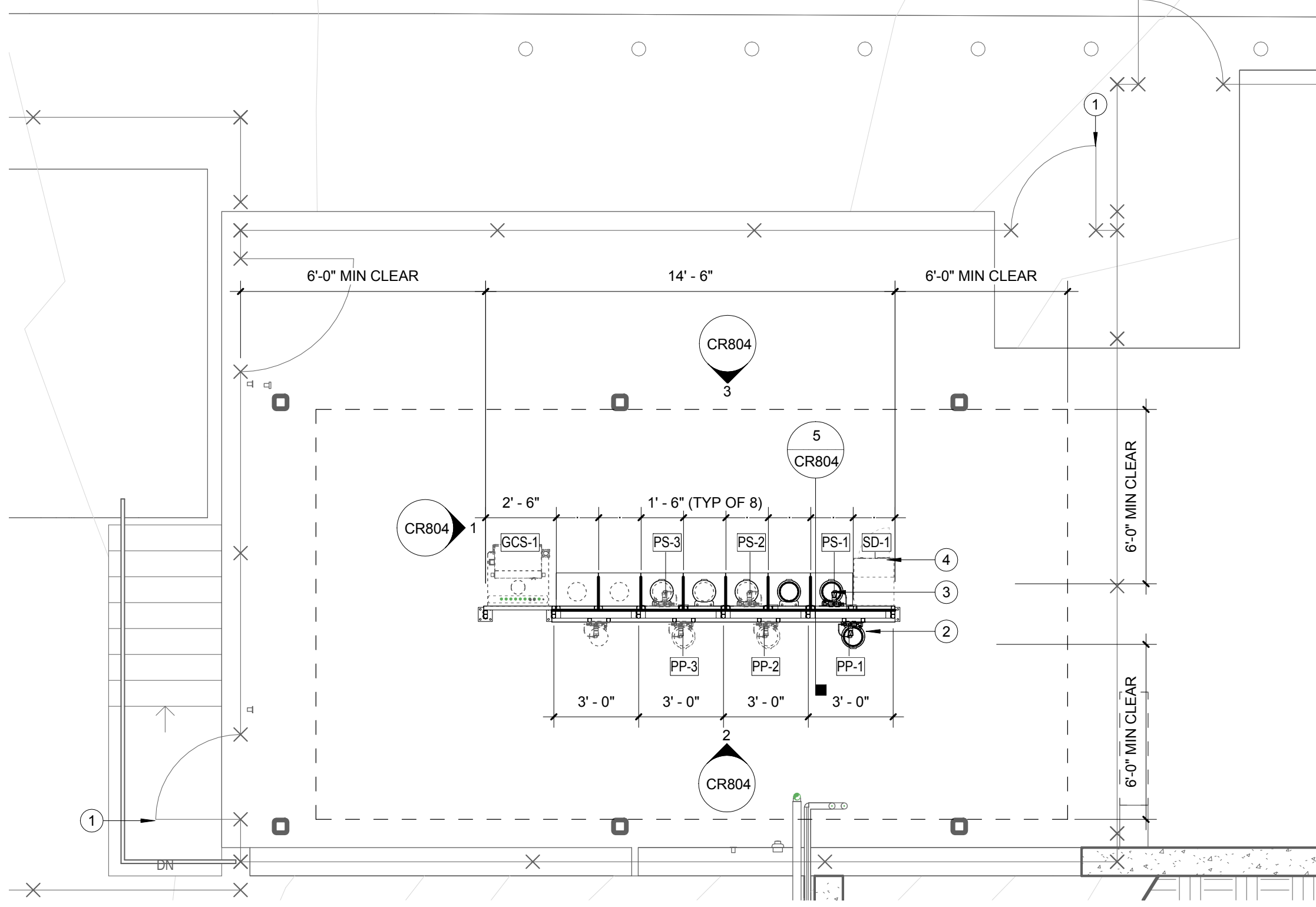
1 SILANE PAD ELEVATION  
1/4" = 1'-0"



2 SILANE PAD ELEVATION  
1/4" = 1'-0"



3 SILANE PAD ELEVATION  
1/4" = 1'-0"



4 SILANE PAD PLAN  
1/4" = 1'-0"



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Key Plan

Revisions

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

Drawing Name  
SILANE TANK RACK PLAN AND ELEVATIONS

Sheet Issue Date  
07/24/2013

Revision

Scott Hall

Drawn By  
JACOBS

Drawing No.  
CR804

Consultant Project No. 218010258

CMU Project No. 21973 CMU PO No.

7/22/2013 9:03:30 AM



Hillsboro, Oregon


$$1/8'' = 1'-0''$$

$$1/8'' = 1'-0''$$

$$1/8" = 1'-0"$$

$$1/8'' = 1'-0''$$

A SEE EXTERIOR ELEVATIONS FOR METAL PANEL  
SYSTEM TYPE AND LOCATIONS

B CAR WASH BUILDING DATUM ELEVATION 0'-0" EQUALS  
USGS ELEVATION 214'-0"

C FINISH ALL EXPOSED STEEL P-1 UON

- 1 MP-1 SMOOTH METAL PANEL SYSTEM
- 2 BUTTED GLAZING SYSTEM
- 3 7 5/8" WIDE CONCRETE CURB, TYPICAL UON
- 4 ILLUMINATED CHANNEL LETTERS
- 5 MP-2, RIBBED METAL PANEL WALL SYSTEM
- 6 OVERHEAD DOOR
- 7 GRATING OVER UNDERGROUND WATER RECLAIM TANK
- 8 MP-1 PANEL JOINT
- 9 PROCESS AIR LOUVER
- 10 GAS METER
- 11 ROOF OVERFLOW DRAIN NOZZLE
- 12 3'-6" BOLLARD, TYP
- 13 ALIGN BUTTED GLAZING SYSTEM JOINT CENTERLINE TO GRID LINE, TYP UON
- 14 BROW ASSEMBLY
- 15 40'-0" PAINTED STEEL SPIRES

| Revisions: |            |                  |
|------------|------------|------------------|
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EXTERIOR  
ELEVATIONS -  
CAR WASH  
BLDG

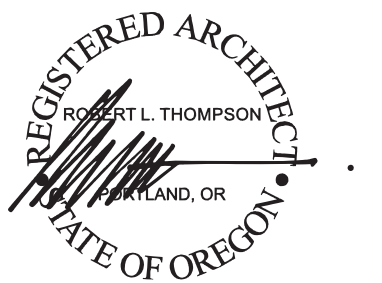
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# A401

Date: 2013.12.06



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# KAADY CAR WASH TV HWY

Hillsboro, Oregon

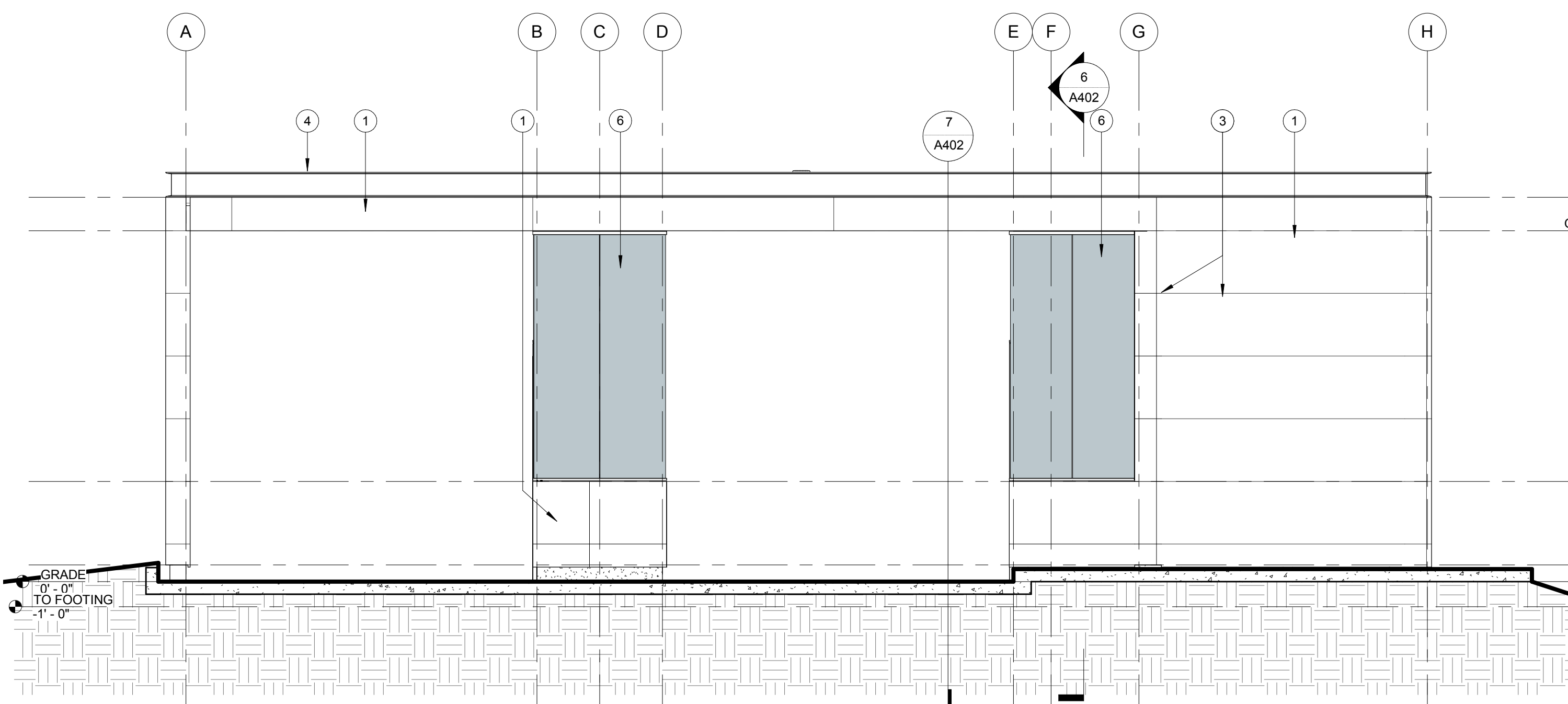
| Revisions: |                  |             |
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| No.        | Date             | Description |
| 2013.12.06 | ISSUE FOR PERMIT |             |

## EXTERIOR ELEVATIONS - CASHIER BLDG

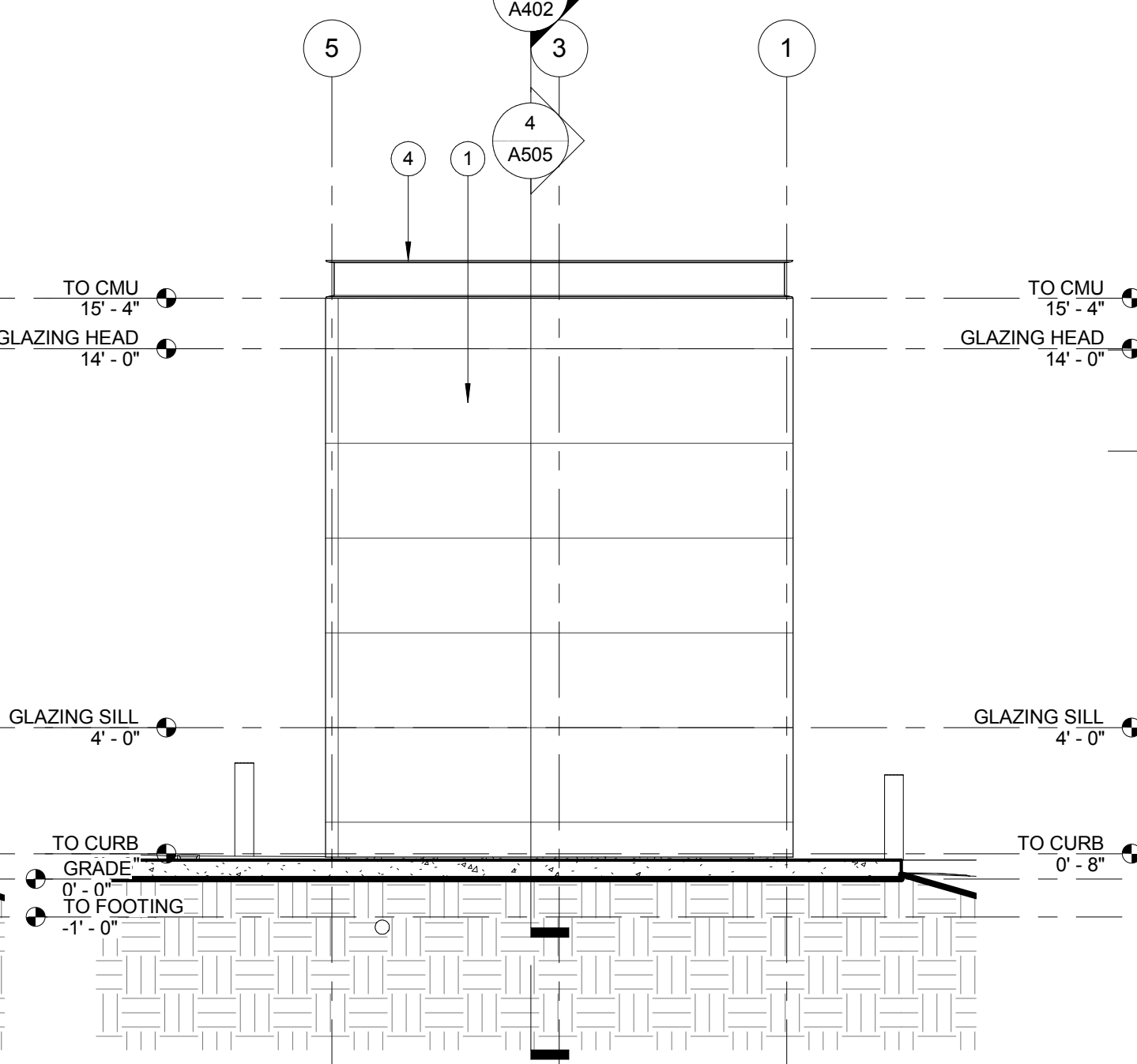
Project # 13114

# A402

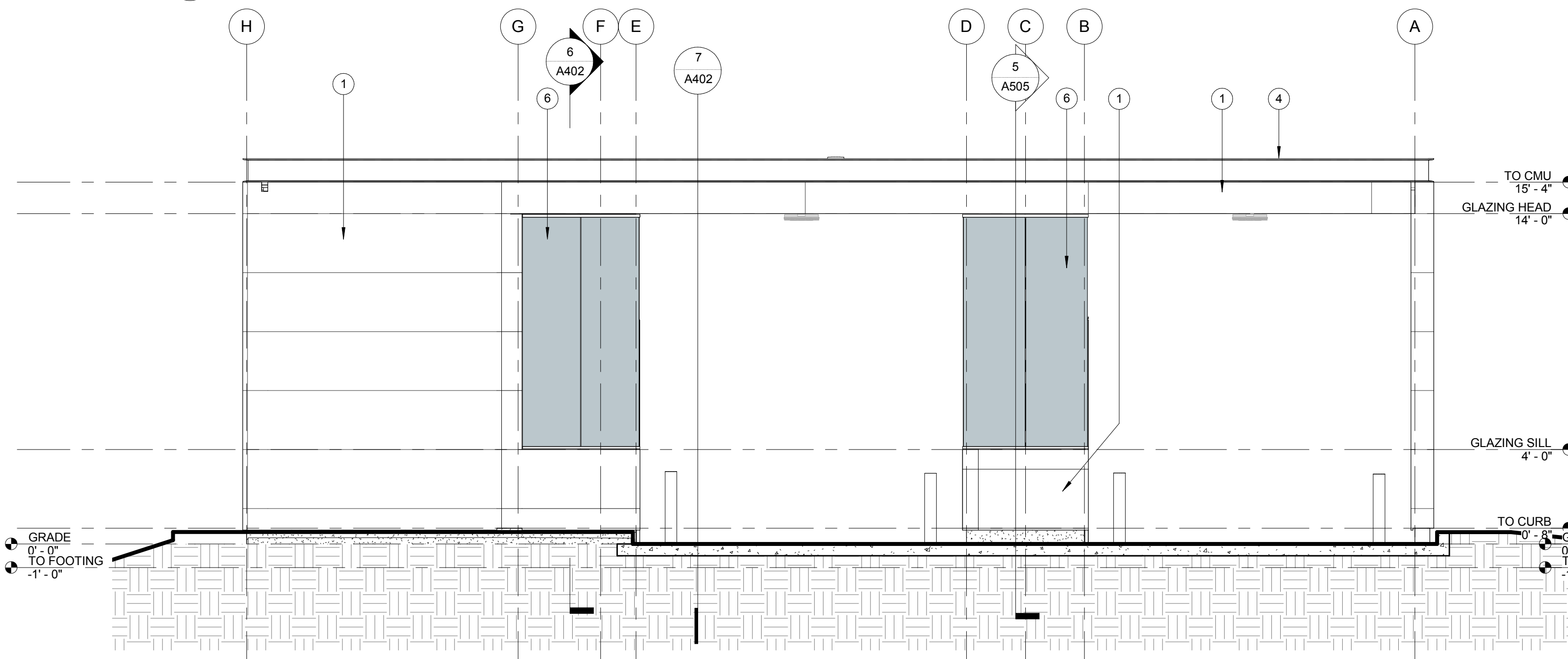
Date: 2013.12.06



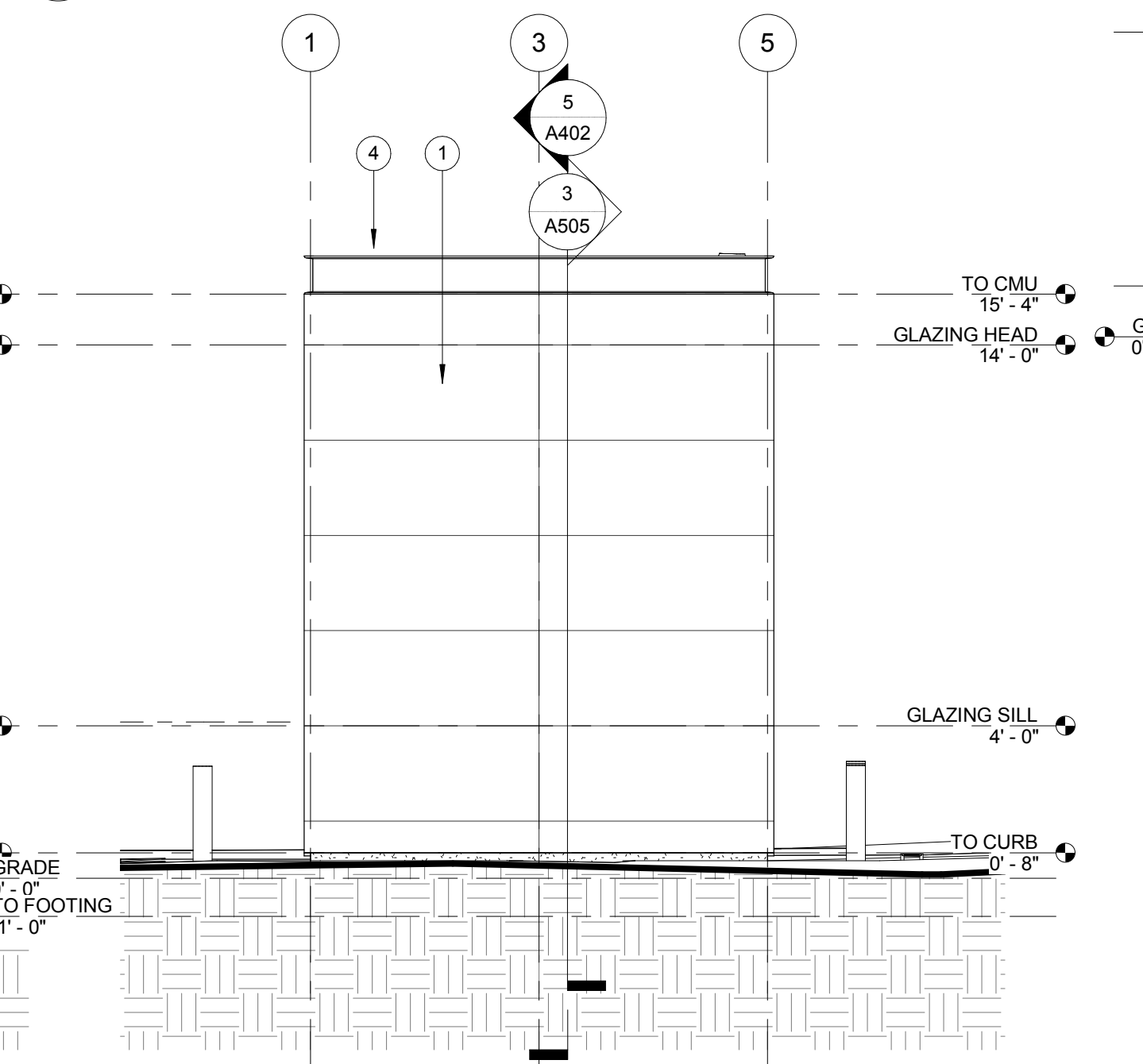
**1 CASHIER BUILDING SOUTH ELEVATION**  
1/4" = 1'-0"



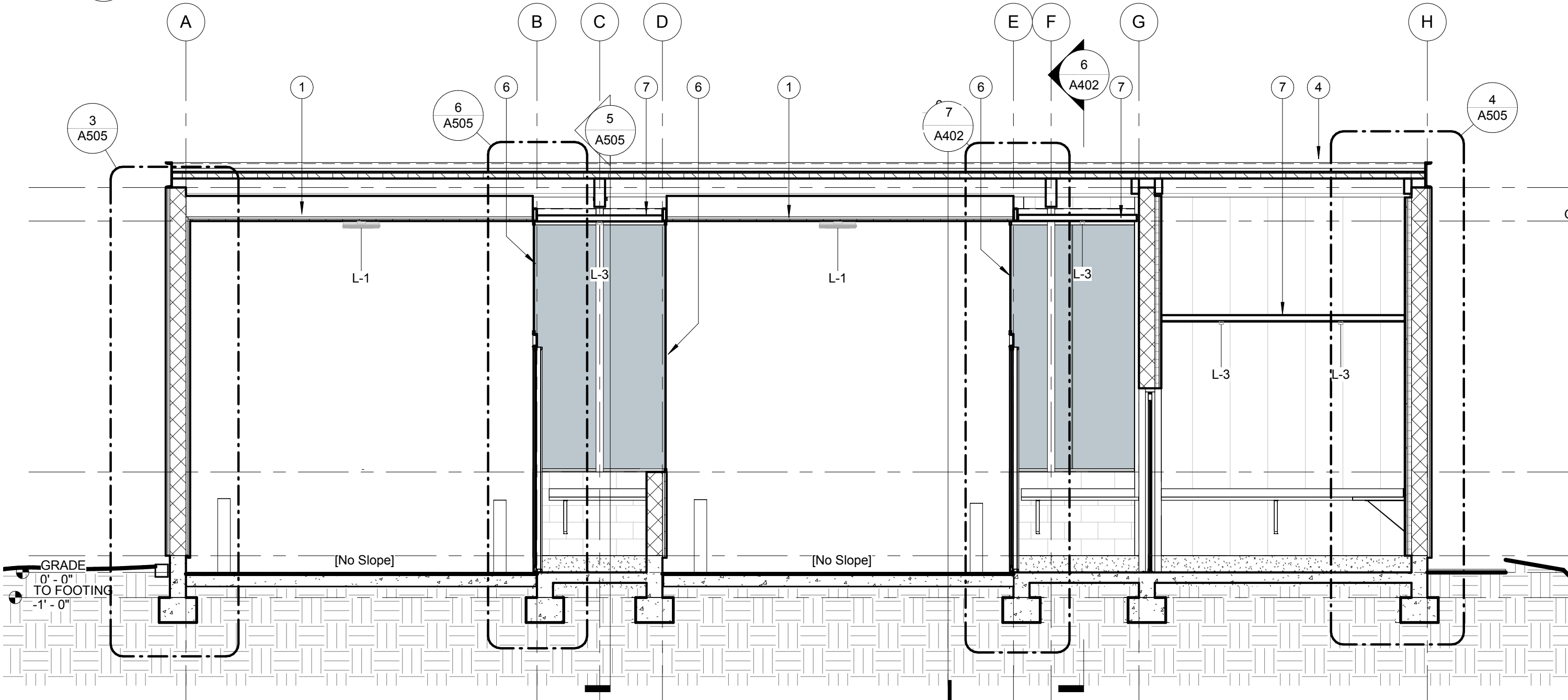
**2 CASHIER BLDG EAST ELEVATION**  
1/4" = 1'-0"



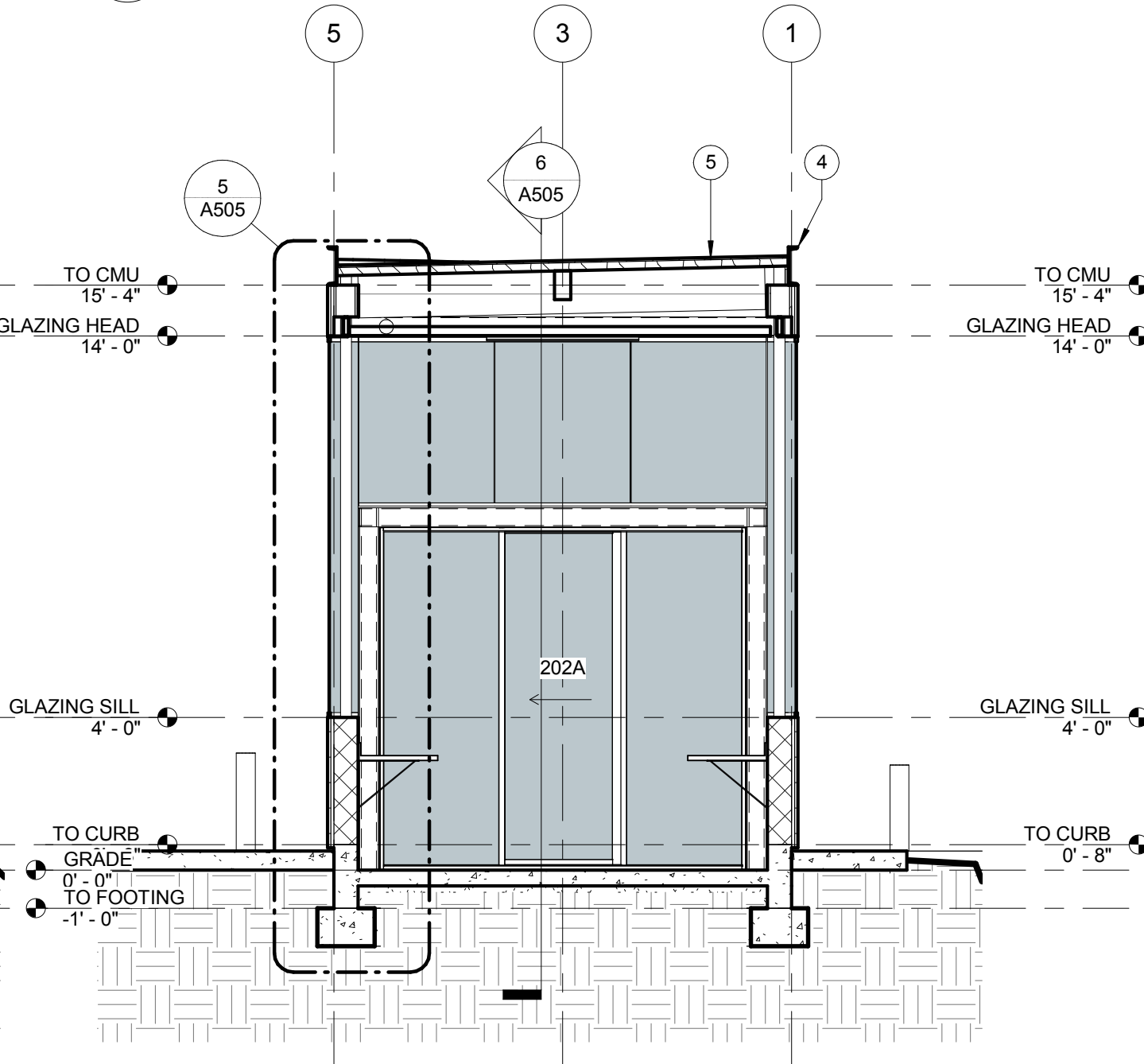
**3 CASHIER BUILDING NORTH ELEVATION**  
1/4" = 1'-0"



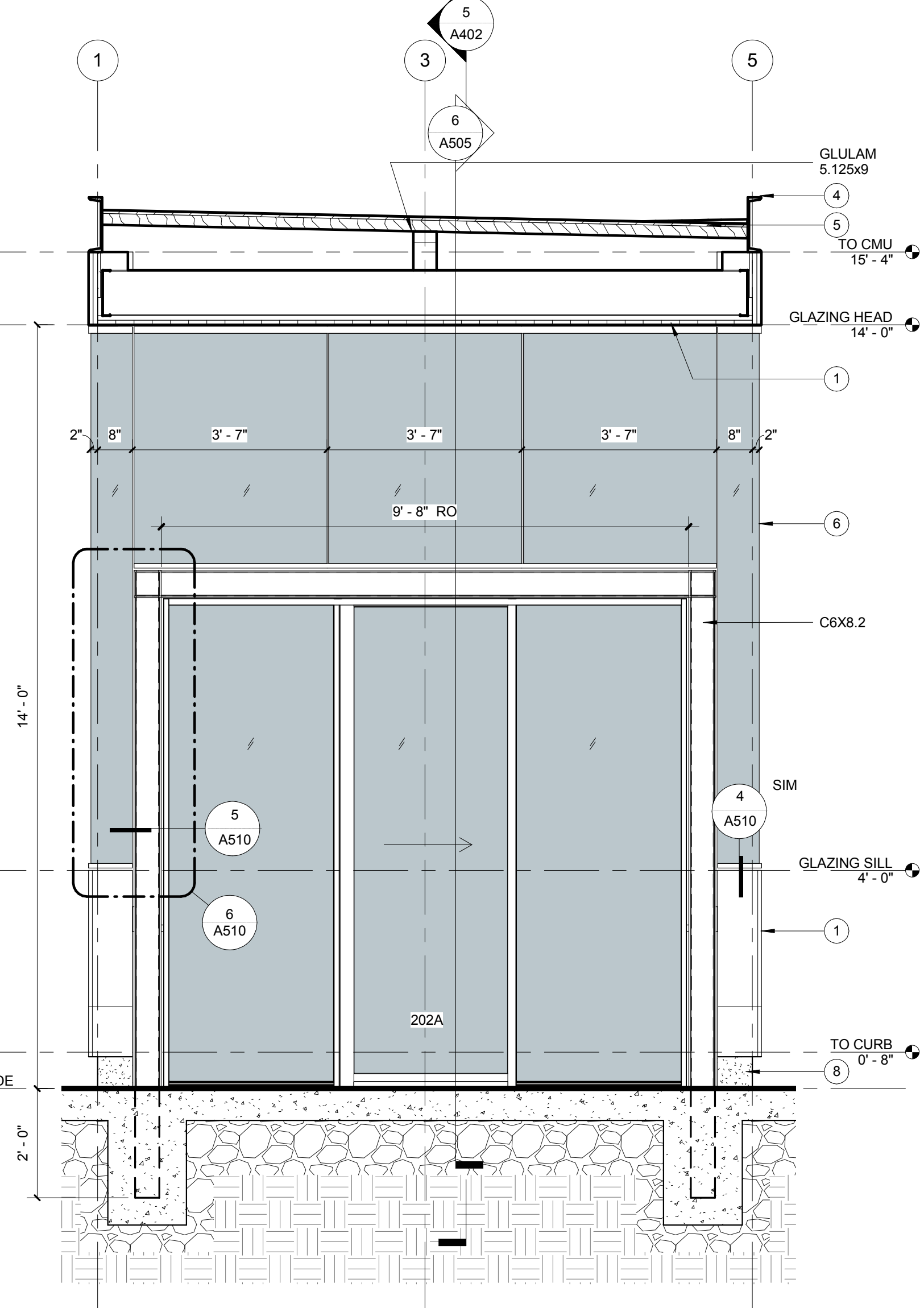
**4 CASHIER BUILDING WEST ELEVATION**  
1/4" = 1'-0"



**5 CASHIER BUILDING SECTION**  
1/4" = 1'-0"



**6 CASHIER BUILDING SECTION**  
1/4" = 1'-0"



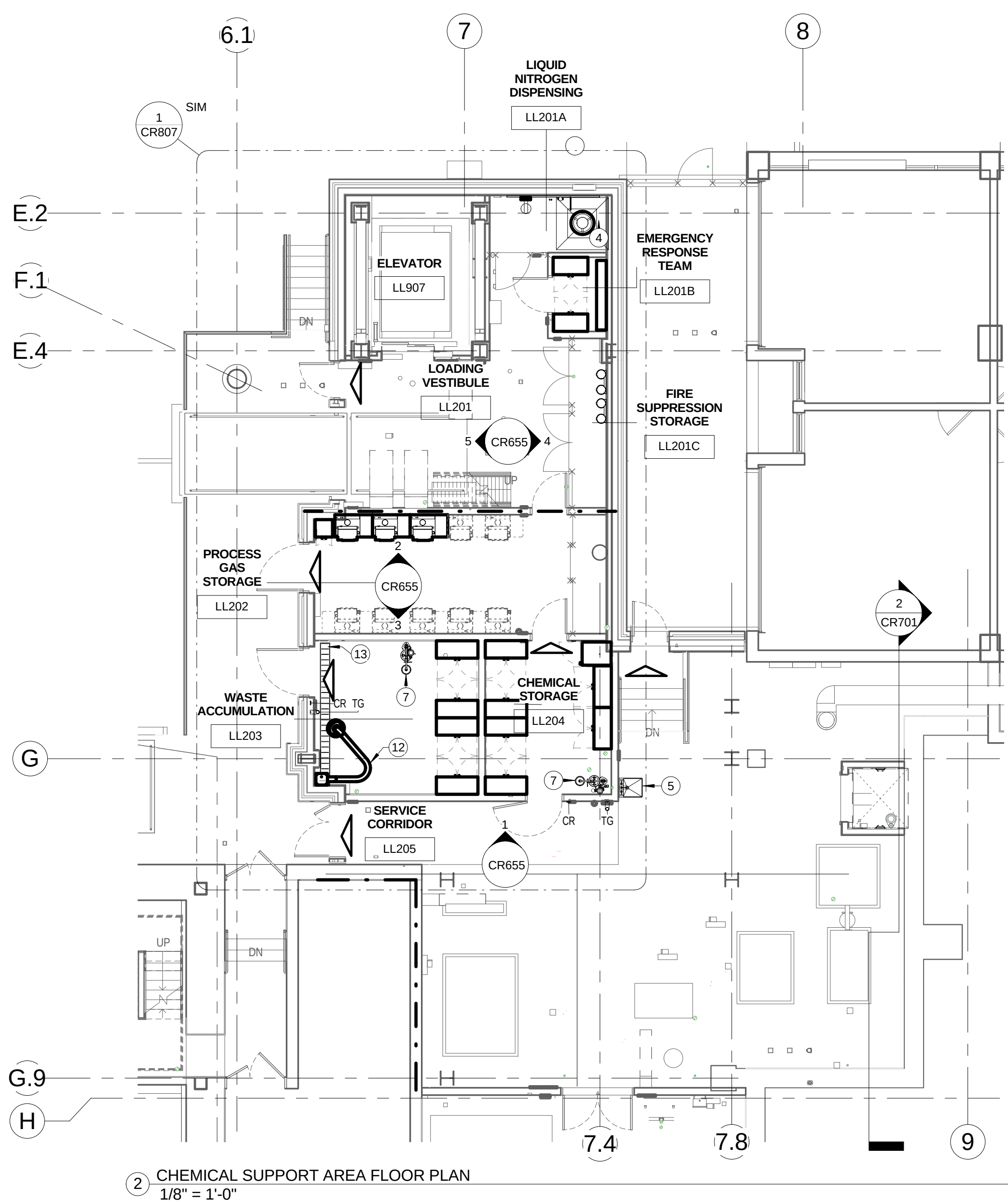
**7 BUILDING SECTION AT CASHIER**  
1/2" = 1'-0"

### GENERAL NOTES

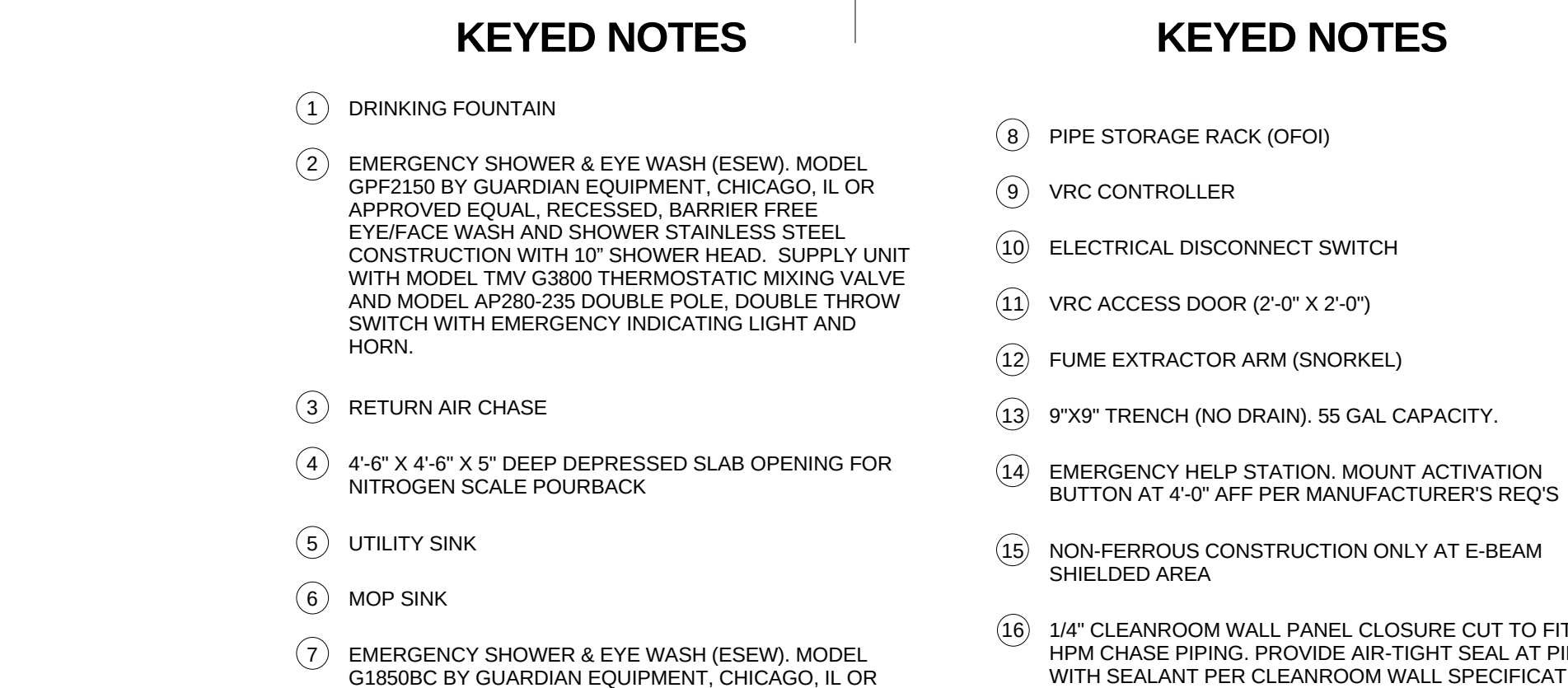
- SEE EXTERIOR ELEVATIONS FOR METAL PANEL SYSTEM TYPE AND LOCATIONS
- CAR WASH BUILDING DATUM ELEVATION 0'-0" EQUALS USGS ELEVATION 214'-0"
- FINISH ALL EXPOSED STEEL P-1 UON

### KEYED NOTES

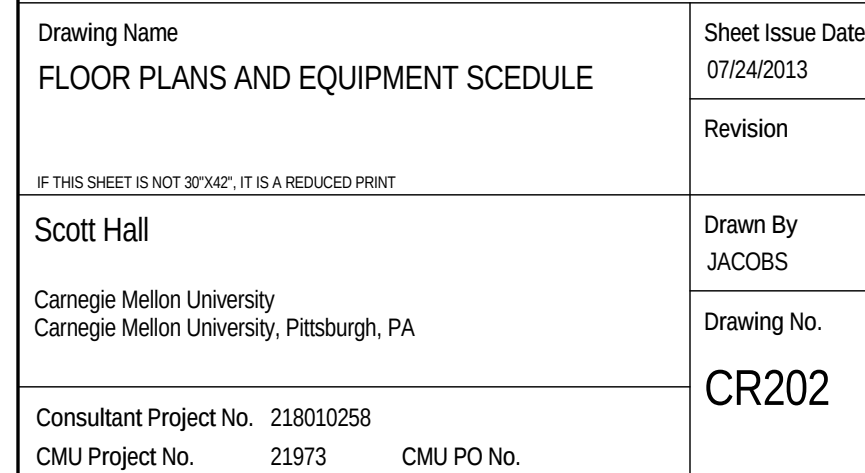
- MP-1 SMOOTH METAL PANEL SYSTEM
- 3'-6" BOLLARD, TYP
- MP-1 PANEL JOINT
- PAINTED STEEL CHANNEL C12X20.7
- 3" T&G ROOF DECKING
- BUTTED GLAZING SYSTEM
- PVC WALL/CEILING PANELING SYSTEM
- 7 5/8" WIDE CONCRETE CURB, TYPICAL UON



2 CHEMICAL SUPPORT AREA FLOOR PLAN  
1/8" = 1'-0"



|                                                                                       |                                                                                                             |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|  | EXIT ACCESS DOOR                                                                                            |
|  | 1-HR OCCUPANCY SEPARATION                                                                                   |
|  | WALL-MOUNTED FIRE EXTINGUISHER                                                                              |
|  | FIRE EXTINGUISHER CABINET,<br>STAINLESS STEEL JL AMBASSADOR<br>8115F10 RECESSED 5 LBS. OR<br>APPROVED EQUAL |
|  | WALL TYPE. SEE SHEET CR801                                                                                  |

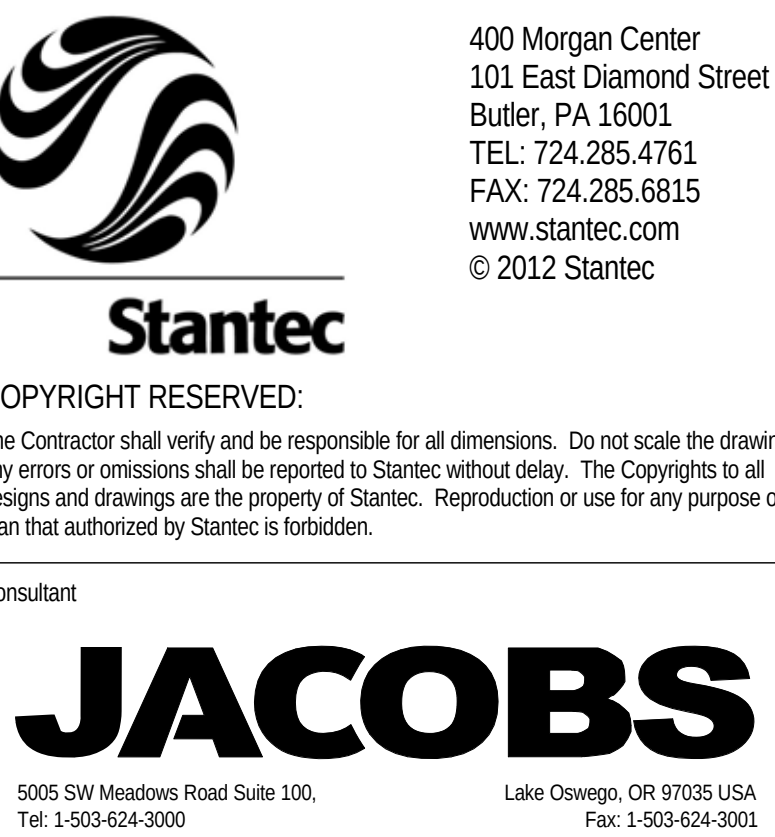


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7/22/2013 8:56:47 A



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7/24/2013

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## Key Plan

- ① EMERGENCY POWER OFF
- ② MOP SINK
- ③ PIPE STORAGE RACK (OFO)
- ④ EMERGENCY SHOWER & EYE WASH (ESEW). MODEL GPF2150 BY GUARDIAN EQUIPMENT. CHICAGO, IL OR APPROVED EQUAL. RECESSED, BARRIER FREE EYEFACE WASH AND SHOWER STAINLESS STEEL CONSTRUCTION WITH 10" SHOWER HEAD. SUPPLY UNIT WITH MODEL TMV G3800 THERMOSTATIC MIXING VALVE AND MODEL AP820-235 DOUBLE POLE, DOUBLE THROW SWITCH WITH EMERGENCY INDICATING LIGHT AND HORN.
- ⑤ ESEW ALARM
- ⑥ PLENUM SUPPORT ROD, TYP.
- ⑦ ALUM PLATE FLOORING
- ⑧ SLOTTED CHANNEL STRUCTURAL FRAMING, EMBED INTO CMU WALL OR STRUCTURE AS OCCURS, 8" AFF. 10'-0" TALL, TYP
- ⑨ VRC CONTROLLER
- ⑩ ELECTRICAL DISCONNECT SWITCH
- ⑪ MWS AMBER GLAZING FILM
- ⑫ CABLE TRAY RISER
- ⑬ BAR GRADE FLOORING
- ⑭ GUARDRAIL
- ⑮ BLANKING PANEL CLOSURE
- ⑯ SLOTTED CHANNEL STRUCTURAL FRAMING, TYP AT ALL CHASES AND SERVICE AISLES
- ⑰ EMERGENCY HELP STATION. MOUNT ACTIVATION BUTTON AT 4'-0" AFF PER MANUFACTURER'S REQ'S
- ⑱ AMBER GLAZING FILM
- ⑲ SIGHT-GUARD EGGRATE. ALUMMIL. 45-2448 OR APPROVED EQUAL

| No.                                                                                                                      | Date | Description                                |
|--------------------------------------------------------------------------------------------------------------------------|------|--------------------------------------------|
| <div> <div> Drawing Name<br/> <b>LEANROOM ELEVATIONS III</b> </div> <div> Sheet Issue Date<br/> 07/24/2013 </div> </div> |      |                                            |
| <div> THIS SHEET IS NOT 30"x42". IT IS A REDUCED PRINT </div>                                                            |      | Revision                                   |
| <div> <b>cott Hall</b><br/> Carnegie Mellon University<br/> Carnegie Mellon University, Pittsburgh, PA </div>            |      | <div> Drawn By<br/> JACOBS </div>          |
| <div> Project No. 218010258<br/> Client Project No. 21807 </div>                                                         |      | <div> Drawing No.<br/> <b>CR653</b> </div> |

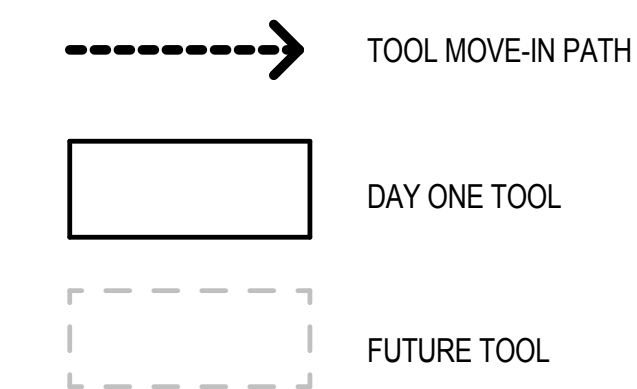


| UPPER CAMPUS LEVEL VMB SCHEDULE |                   |
|---------------------------------|-------------------|
| Tool Number                     | Process Gases     |
| V201                            | SiH4/He & SiH4/N2 |
| V202                            | (Future)          |
| V203                            | Hydrogen          |
| V204                            | Hydrogen          |
| V205                            | Methane (CH4)     |
| V206                            | Silane (SiH4)     |
| V207                            | Ammonia (NH3)     |
| V208                            | N2O               |
| V209                            | BCl3 & Cl2        |
| V210                            | (Future)          |
| V211                            | Hydrogen          |
| V212                            | Ammonia (NH3)     |
| V215                            | (Future)          |
| V216                            | (Future)          |
| V217                            | (Future)          |
| V218                            | (Future)          |
| V219                            | (Future)          |
| V220                            | (Future)          |

## GENERAL NOTES

- A SEE ARCHITECTURAL AND STRUCTURAL SHEETS FOR  
SHADED WORK
- B DIMENSIONS SHOWN ON THIS SHEET ARE TO EDGE OF  
PLENUM/CENTERLINE OF WALL BELOW, UON

LEGEND



### KEYED NOTES

- |   |                                                    |
|---|----------------------------------------------------|
| 1 | 6'-0" X 8'-0" OPENINGS FOR E-BEAM EQUIPMENT        |
| 2 | DEMOUNTABLE CONSTRUCTION FOR 8'-0" X 8'-0" OPENING |
| 3 | 8'-0" X 8'-0" DOUBLE DOOR OPENING                  |
| 4 | POWER AND LIGHTING PANELS - SEE ELECTRICAL         |
| 5 | CLEANROOM TABLE                                    |
| 6 | TABLE, CLEANROOM 7' X 2'-10"                       |
| 7 | EMERGENCY EYEWASH / SHOWER - SEE PLUMBING          |
| 8 | TEST BENCH, TYP AT TEST LAB                        |



|   |                                                           |
|---|-----------------------------------------------------------|
| A | SEE INTERIOR ELEVATIONS FOR WALL-MOUNTED DEVICE LOCATIONS |
| B | SEE ARCHITECTURAL AND STRUCTURAL SHEETS FOR SHADED WORK   |

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- 1 POWDER COATED EPOXY FINISHED, ALUMINUM GUARDRAIL, CONTINUOUS ALONG ENTIRE PERIMETER OF THE CEILING PLATE MODULES. GUARDRAIL ATTACHMENT TO PLENUM TOP: DESIGN, FURNISH & INSTALLATION BY PLENUM PROVIDER. ALLOW 2 WEEKS TO ALLOW FOR THE PLENUM, IN 6-8 WEEKS, DESIGN TO MEET LOCAL, CODE AND OSHA REQ'S
- 2 AIR HANDLING UNIT, SEE MECHANICAL
- 3 CLEANROOM 2'-0" X 4'-0" CEILING GRID & DUCTED FILTER
- 4 (B) 5'-0" FUME HOOD WORK STATIONS. SEE SPECIFICATION SECTION 11612
- 5 ATTACH GUARDRAIL SYSTEM TO WALL, GUARDRAIL AND ATTACHMENT PROVIDED BY PLENUM MANUFACTURER
- 6 CLEANROOM FLUSH-FILTERED CEILING GRID AND PLENUM SYSTEM SECTION 13042
- 7 POWDER COATED EPOXY FINISHED ALUMINUM BAR GRATE FLOORING. SEE DETAIL 0908H - SUPPLY FROM STRUCTURE WITH SST HARDWARE AS REQ'D - REFER TO STRUCTURAL
- 8 FRAMED OPENING, 3'-0" X 7'-0"
- 9 EXTENT OF E-BEAM ROOM SHIELDING, SHIELDING TO FORM A CONTINUOUS ENCLOSURE. SEE SHEET A680 FOR SHIELDING CONSTRUCTION DETAILS
- 10 SUPPORT FRAME, SEE STRUCTURAL

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**JACOBS ARCHITECTS/ENGINEERS, INC.**

**100%  
CONSTRUCTION  
DOCUMENTS**

| DRAWING ISSUE           |            |
|-------------------------|------------|
| CMF ADDENDUM #05        | 09.30.2011 |
| DP #006: ACEE MAIN BLDG | 01.13.2012 |

KEY PLAN

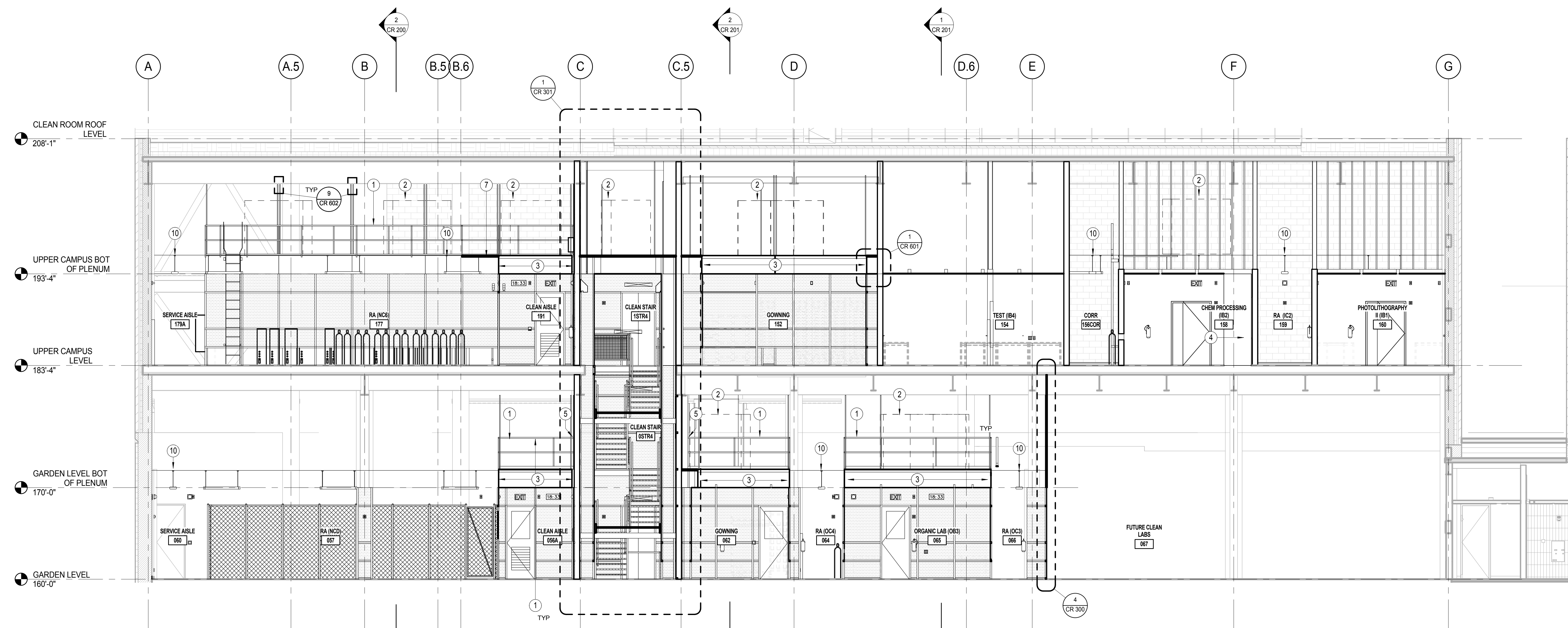
PRINCETON UNIVERSITY  
ANDLINGER CENTER FOR  
ENERGY AND ENVIRONMENT

PROJECT NUMBER: P8040

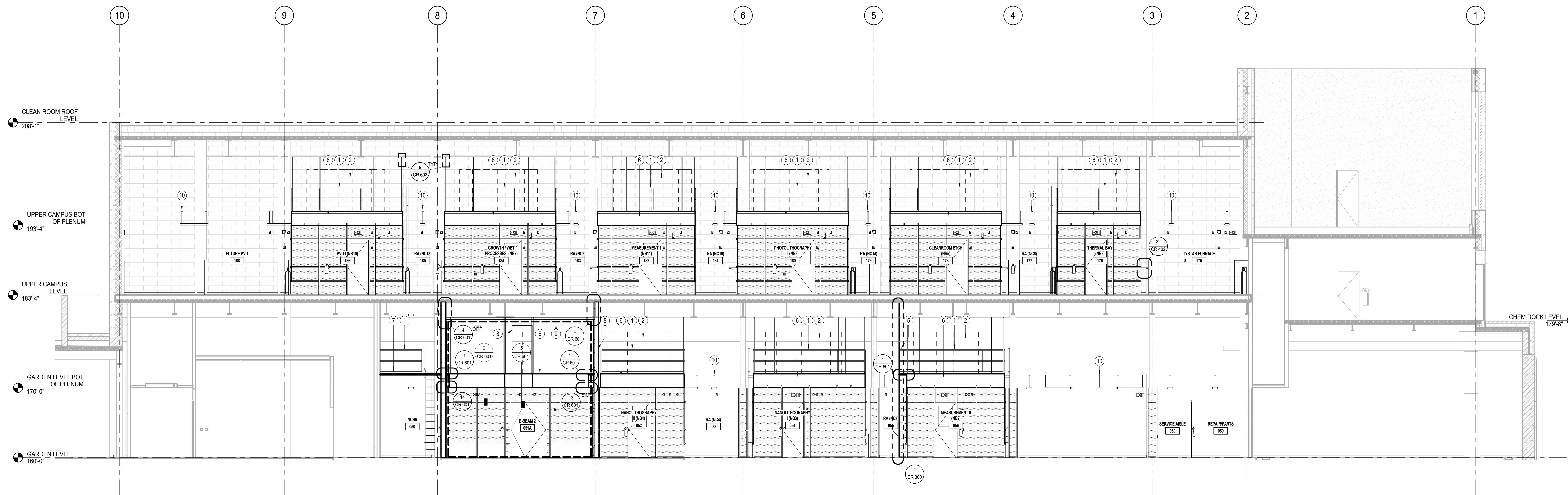
SEA

|           |              |
|-----------|--------------|
| DRAWN BY: |              |
| SCALE:    | As indicated |

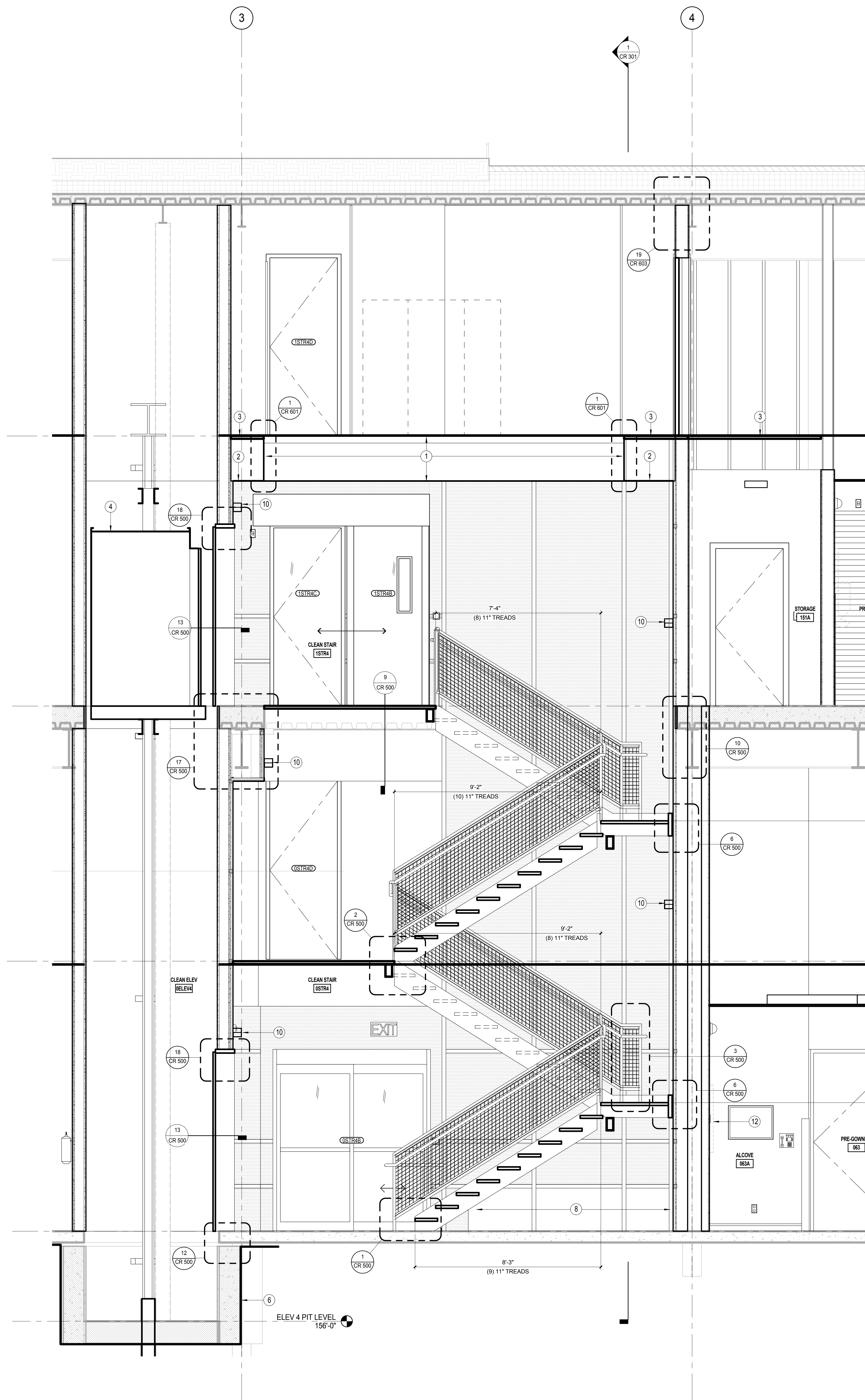
## CLEANROOM BUILDING SECTIONS

CR  
200

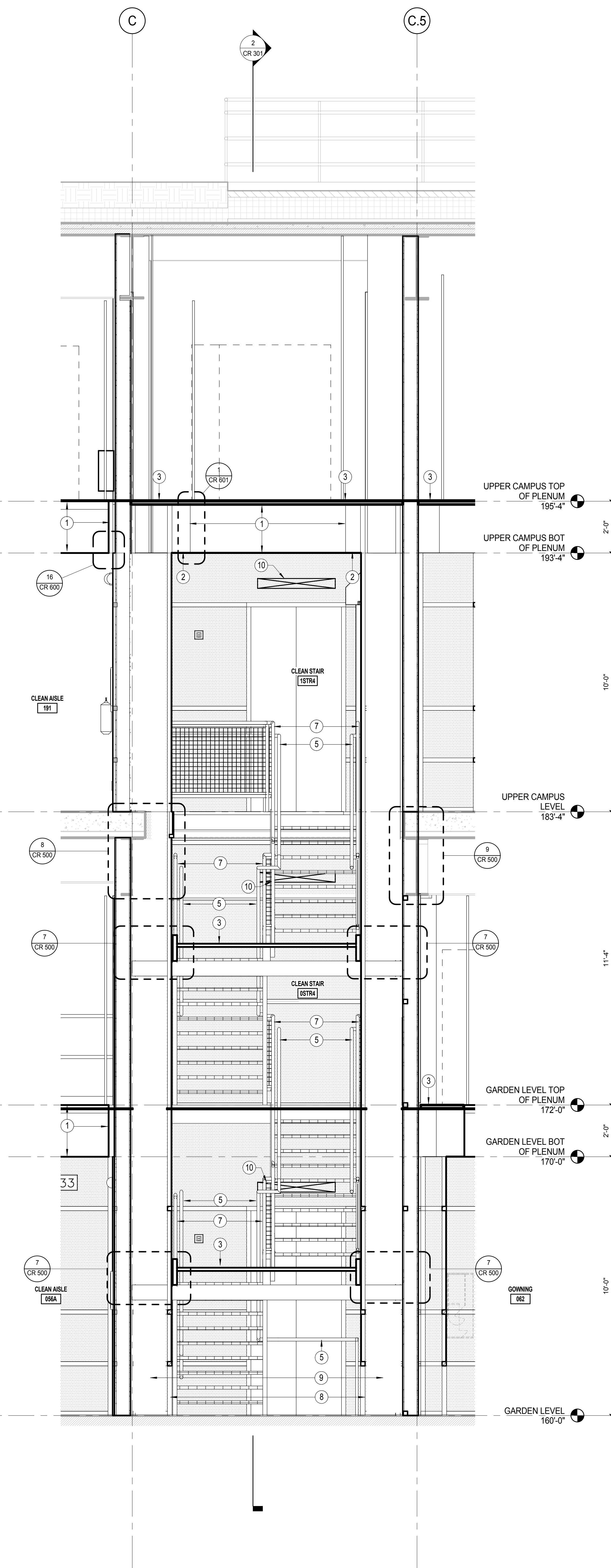
1 BUILDING SECTION - GRIDLINE 4  
3/16" = 1'-0"



2 BUILDING SECTION - GRIDLINE B  
3/16" = 1'-0"



2 ELEVATOR AND STAIR ENLARGED SECTION  
1/2" = 1'-0"



1 CLEANROOM STAIR ENLARGED SECTION  
1/2" = 1'-0"

### KEYED NOTES

- CLEANROOM 2'-0" X 4'-0" CEILING GRID & DUCTED FILTER
- CEILING BLANKING PANEL. SEE 1/CR601
- POWDER COATED EPOXY FINISH ALUMINUM BAR GRATE FLOORING. SEE DETAIL 1/CR601. SUPPORT FROM STRUCTURE WITH SST HARDWARE AS REQ'D - REFER TO STRUCTURAL
- ELEVATOR CAB. SEE DETAILS 11 & 16 SHEET CR500
- CONTINUOUS HANDRAIL
- ELEVATOR/VRC PIT. SEE 1/A323 FOR WATERPROOFING DETAILS
- 42" GUARDRAIL. SEE 3/CR500
- OPENING AT RETURN CHASE
- RETURN AIR CHASE
- LIGHTING FIXTURE TYPE 'FAN'. MOUNT 9'-0" AFF UCN
- 3'-0" X 6'-0" 45 MIN FIRE-RATED WINDOW
- LED DISPLAY (BY OWNER)

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DP #004: FOUNDATION 12.20.2011

KEY PLAN

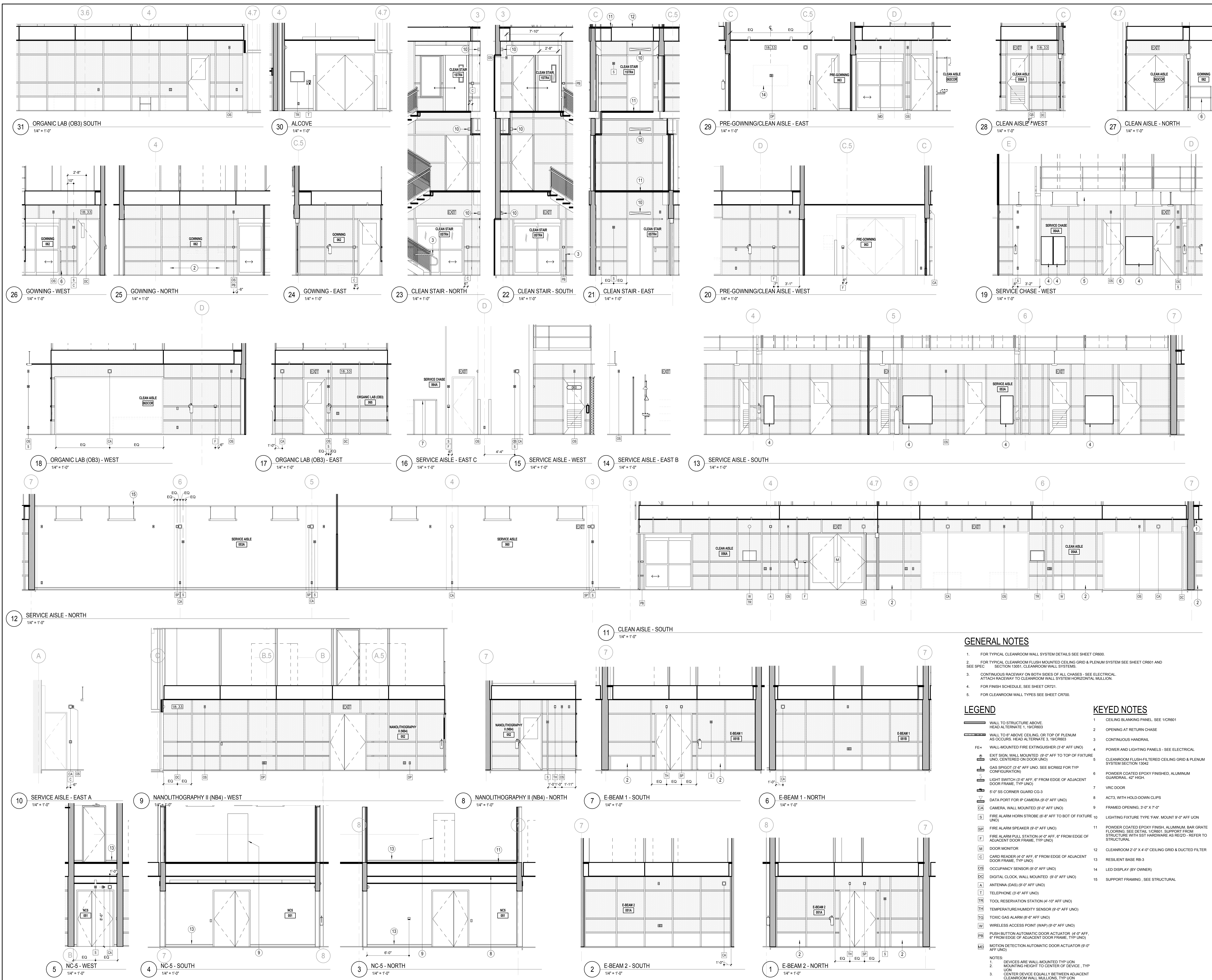
PRINCETON UNIVERSITY  
ANDLINGER CENTER FOR  
ENERGY AND ENVIRONMENT  
PROJECT NUMBER: PR040  
DCA REFERENCE NUMBER: 0033-11

SEAL

DRAWN BY: JJE  
SCALE: 1/2" = 1'-0"

CLEANROOM  
STAIR SECTIONS

CR  
301



- ### GENERAL NOTES
- FOR TYPICAL CLEANROOM WALL SYSTEM DETAILS SEE SHEET CR600.
  - FOR TYPICAL CLEANROOM FLUSH MOUNTED CEILING GRID & PLENUM SYSTEM SEE SHEET CR601 AND SECTION 13051, CLEANROOM WALL SYSTEMS.
  - CONTINUOUS RACEWAY ON BOTH SIDES OF ALL CHASES - SEE ELECTRICAL ATTACH RACEWAY TO CLEANROOM WALL SYSTEM HORIZONTAL MULLION.
  - FOR FINISH SCHEDULE, SEE SHEET CR721.
  - FOR CLEANROOM WALL TYPES SEE SHEET CR700.
- ### LEGEND
- |                                                                                               |                                                                                               |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| WALL TO STRUCTURE ABOVE HEAD ALTERNATE 1, 19CR803                                             | FE+ WALL-MOUNTED FIRE EXTINGUISHER (3'-6" AFF UNO)                                            |
| WALL TO 6" ABOVE CEILING, OR TOP OF PLENUM AS OCCURS, HEAD ALTERNATE 3, 19CR803               | EXIT SIGN, WALL MOUNTED (6'-0" AFF TO TOP OF FIXTURE UNO, CENTERED ON DOOR UNO)               |
| DATA PORT FOR IP CAMERA (9'-0" AFF UNO)                                                       | GAZ SPROUT (3'-6" AFF UNO, SEE 8CR602 FOR TYP CONFIGURATION)                                  |
| CAMERA, WALL MOUNTED (9'-0" AFF UNO)                                                          | LIGHT SWITCH (3'-6" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)                        |
| FIRE ALARM HORN STROBE (6'-0" AFF TO BOT OF FIXTURE UNO)                                      | 5'-0" SS CORNER GUARD CG-3                                                                    |
| FIRE ALARM SPEAKER (9'-0" AFF UNO)                                                            | DOOR MONITOR                                                                                  |
| FIRE ALARM PULL STATION (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)             | CARD READER (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)                         |
| DOOR MONITOR                                                                                  | DIGITAL CLOCK, WALL MOUNTED (9'-0" AFF UNO)                                                   |
| CARD READER (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)                         | ANTENNA (DAS) (9'-0" AFF UNO)                                                                 |
| DIGITAL CLOCK, WALL MOUNTED (9'-0" AFF UNO)                                                   | TELEPHONE (3'-6" AFF UNO)                                                                     |
| ANTENNA (DAS) (9'-0" AFF UNO)                                                                 | TOOL RESERVATION STATION (4'-10" AFF UNO)                                                     |
| TELEPHONE (3'-6" AFF UNO)                                                                     | TEMPERATURE/HUMIDITY SENSOR (9'-0" AFF UNO)                                                   |
| TOOL RESERVATION STATION (4'-10" AFF UNO)                                                     | TOXIC GAS ALARM (6'-6" AFF UNO)                                                               |
| TEMPERATURE/HUMIDITY SENSOR (9'-0" AFF UNO)                                                   | WIRELESS ACCESS POINT (WAP) (9'-0" AFF UNO)                                                   |
| TOXIC GAS ALARM (6'-6" AFF UNO)                                                               | PUSH BUTTON AUTOMATIC DOOR ACTUATOR (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO) |
| WIRELESS ACCESS POINT (WAP) (9'-0" AFF UNO)                                                   | MOTION DETECTION AUTOMATIC DOOR ACTUATOR (9'-0" AFF UNO)                                      |
| PUSH BUTTON AUTOMATIC DOOR ACTUATOR (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO) |                                                                                               |
| MOTION DETECTION AUTOMATIC DOOR ACTUATOR (9'-0" AFF UNO)                                      |                                                                                               |
- ### KEYED NOTES
- CEILING BLANKING PANEL, SEE 1CR601
  - OPENING AT RETURN CHASE
  - CONTINUOUS HANDRAIL
  - POWER AND LIGHTING PANELS - SEE ELECTRICAL
  - CLEANROOM FLUSH/FILTERED CEILING GRID & PLENUM SYSTEM SECTION 13042
  - POWDER COATED EPOXY FINISHED, ALUMINUM GUARDRAIL, 42" HIGH
  - VRC DOOR
  - ACT3, WITH HOLD-DOWN CLIPS
  - FRAMED OPENING, 3'-0" X 7'-0"
  - LIGHTING FIXTURE TYPE FAN, MOUNT 9'-0" AFF UNO
  - POWDER COATED EPOXY FINISH, ALUMINUM BAR GRATE FLOORING, SEE DETAIL 1CR601, SUPPORT FROM STRUCTURE WITH SST HARDWARE AS REQ'D - REFER TO STRUCTURAL
  - CLEANROOM 2'-0" X 4'-0" CEILING GRID & DUCTED FILTER
  - RESILIENT BASE RB-3
  - LED DISPLAY (BY OWNER)
  - SUPPORT FRAMING, SEE STRUCTURAL
- ### NOTES
- DEVICES ARE WALL-MOUNTED TYP UNO
  - MOUNTING HEIGHT TO CENTER OF DEVICE, TYP UNO
  - CENTER DEVICE EQUALLY BETWEEN ADJACENT CLEANROOM WALL MULLIONS, TYP UNO

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100%  
CONSTRUCTION  
DOCUMENTS

DRAWING ISSUE  
GMP ADDENDUM #55 09.30.2011  
DP #005 ACCESS MAIN BLDG 01.13.2012

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ANDLINGER CENTER FOR  
ENERGY AND ENVIRONMENT

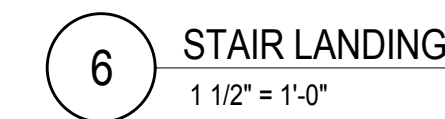
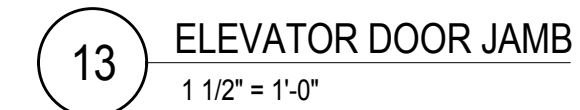
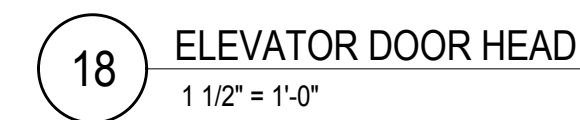
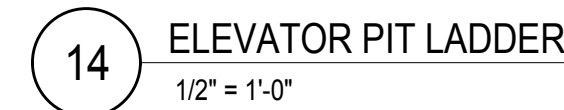
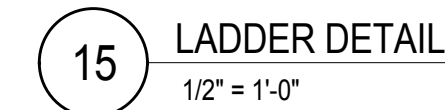
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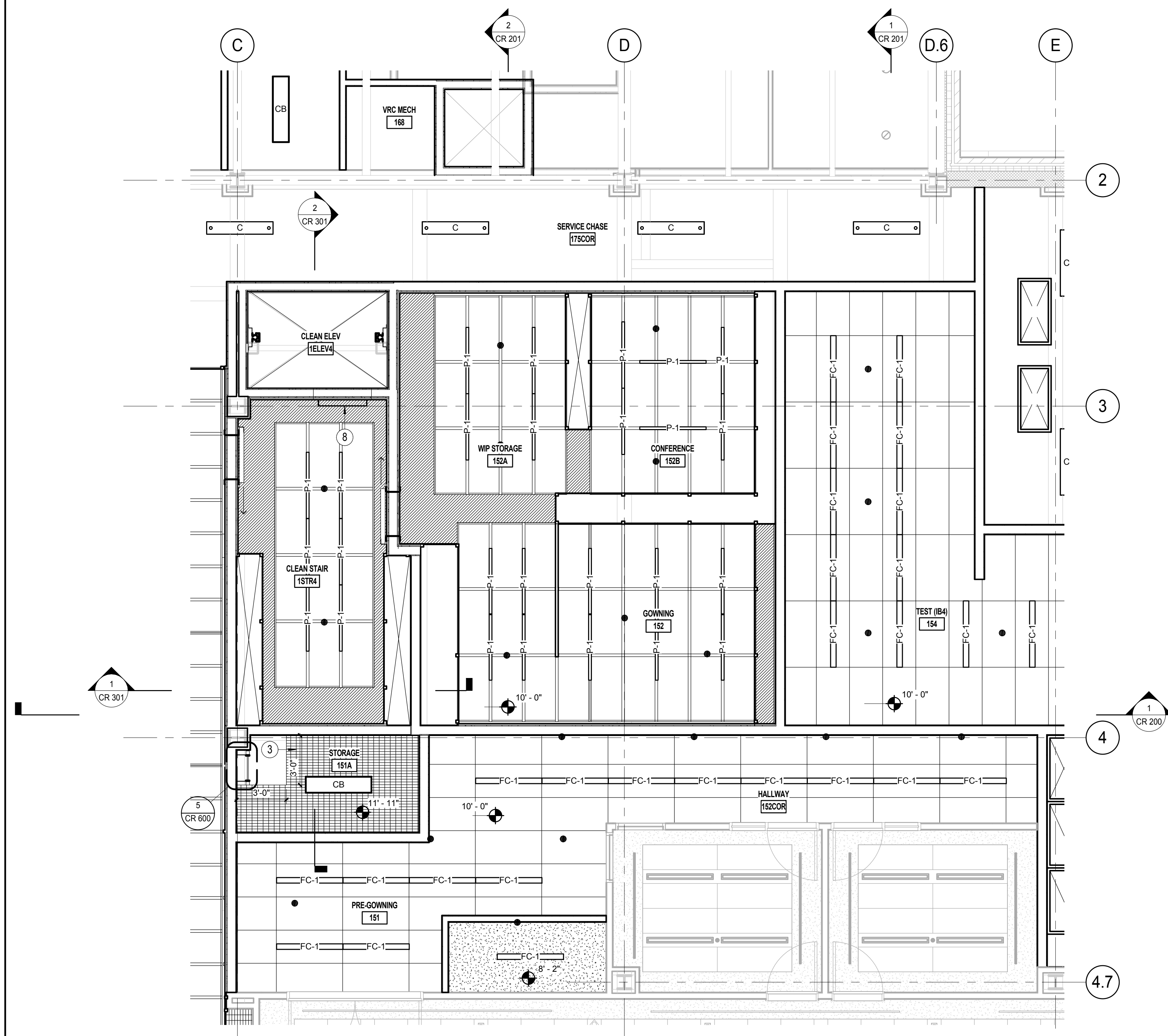
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DRAWN BY: J.E.  
SCALE: As Indicated

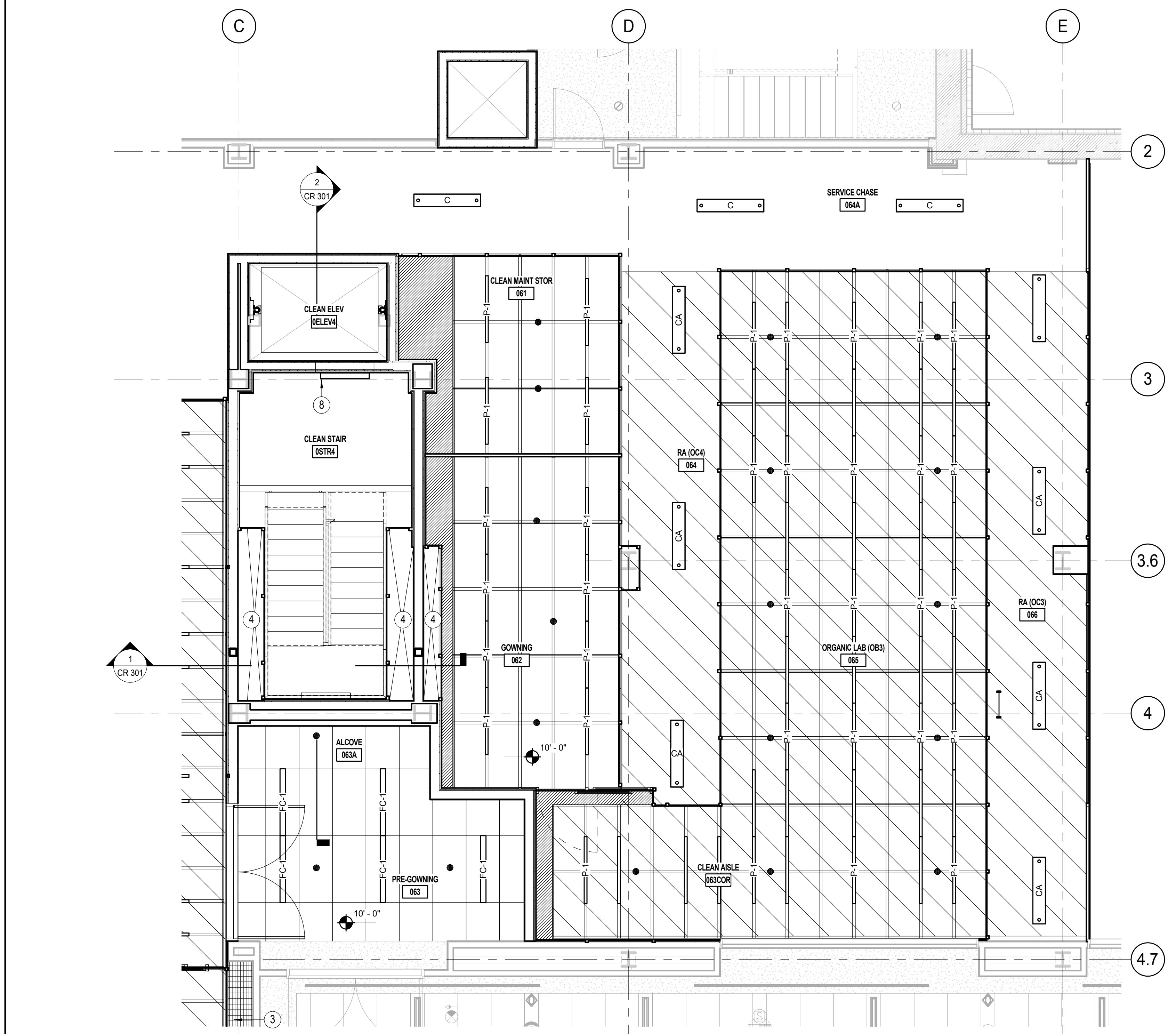
CLEANROOM  
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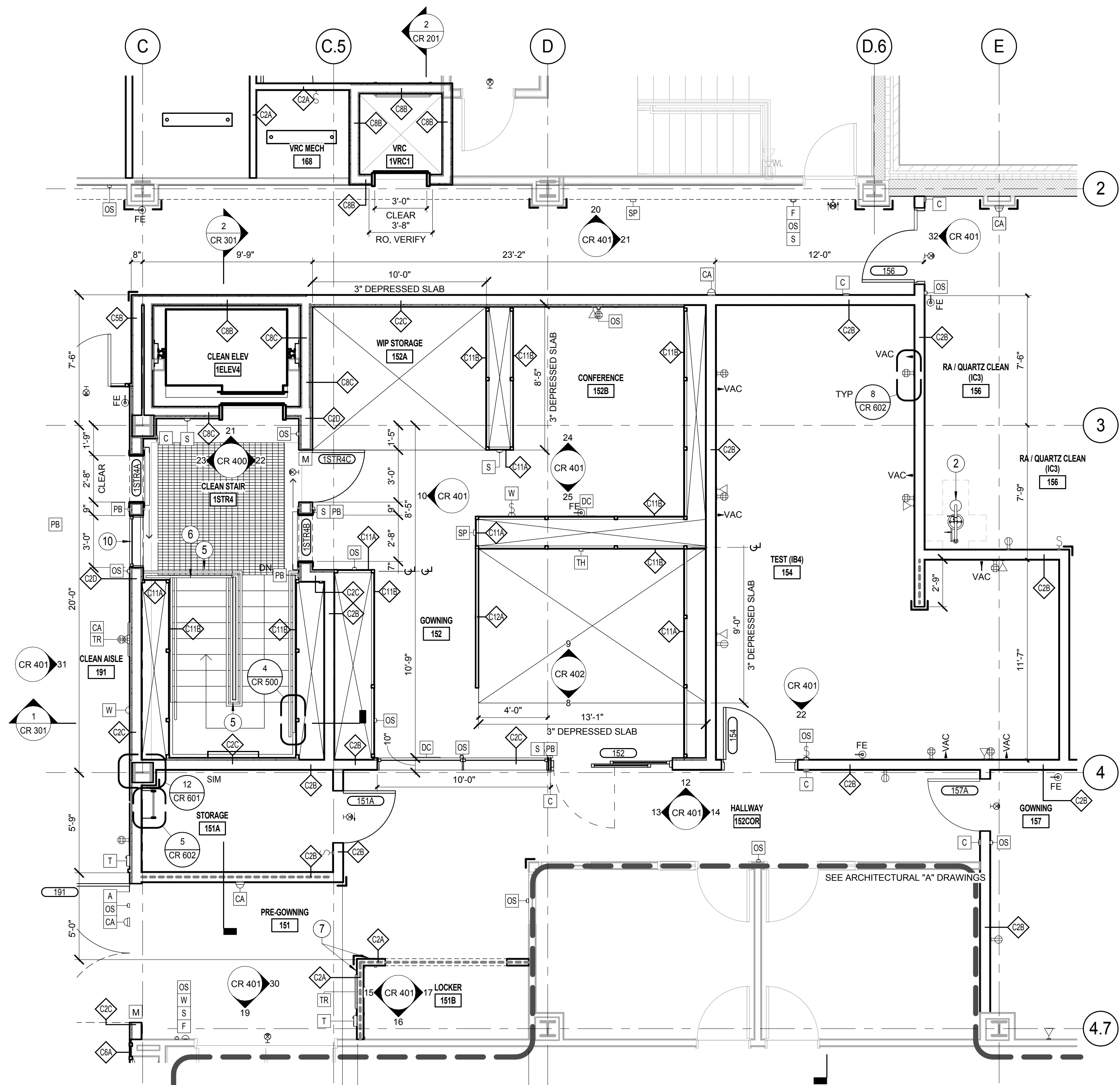




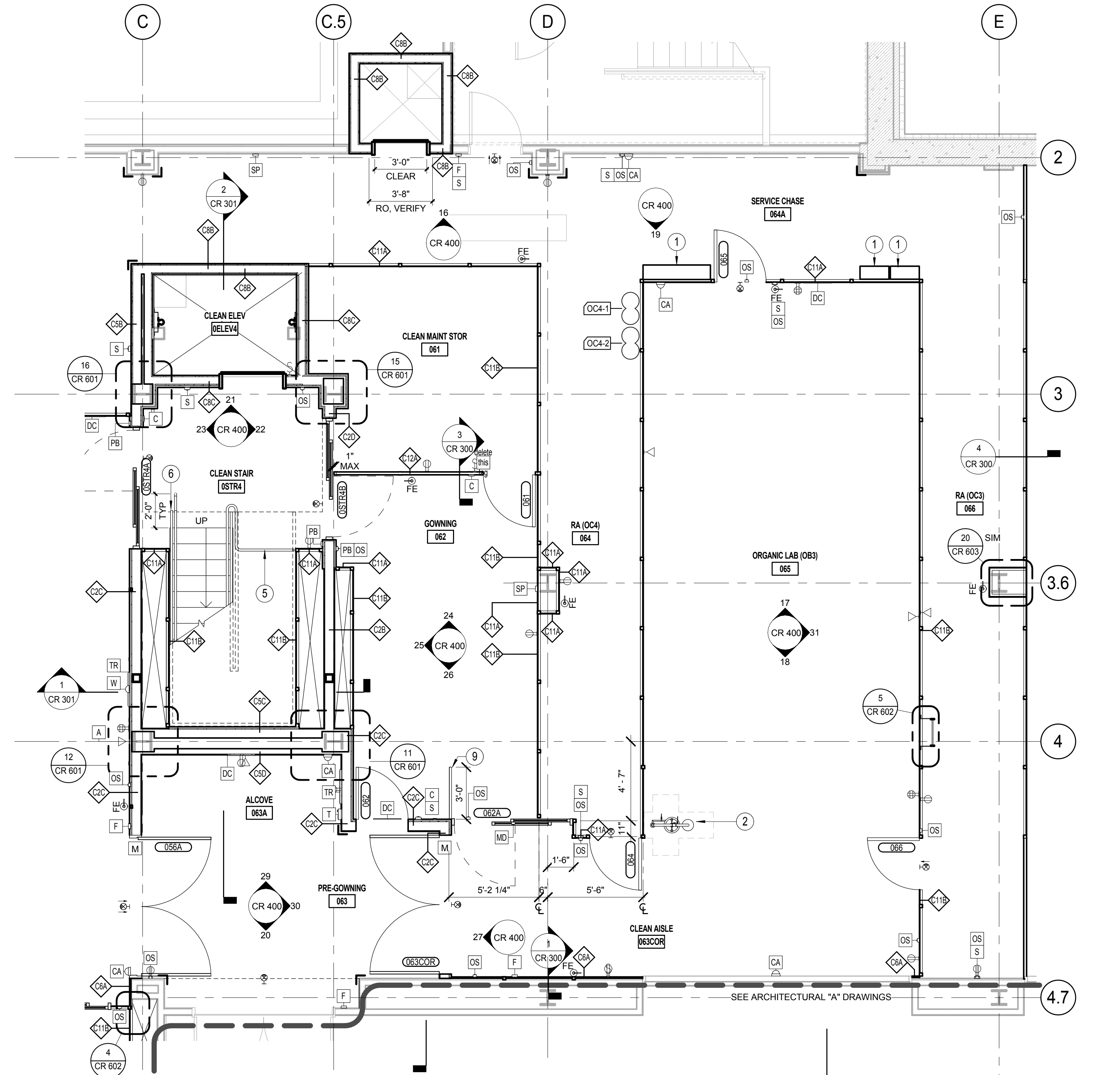
4 CLEANROOM UPPER CAMPUS LEVEL ENLARGED REFLECTED CEILING PLAN  
1/4" = 1'-0"



2 CLEANROOM GARDEN LEVEL REFLECTED CEILING PLAN  
1/4" = 1'-0"



3 CLEANROOM UPPER CAMPUS LEVEL ENLARGED FLOOR PLAN  
1/4" = 1'-0"



1 CLEANROOM GARDEN LEVEL GOWNING ENLARGED FLOOR PLAN  
1/4" = 1'-0"

## FLOOR PLAN GENERAL NOTES

- A SEE ARCHITECTURAL FOR SHADED WORK OUTSIDE CLEANROOM SCOPE  
B SEE PLENUM PLANS FOR CLEANROOM WALL DIMENSIONS  
C SEE ARCHITECTURAL AND STRUCTURAL SHEETS FOR SHADED WORK

## FLOOR PLAN LEGEND

- WALL TO STRUCTURE ABOVE HEAD ALTERNATE 1, 19/CR603  
WALL TO 8" ABOVE CEILING, OR TOP OF PLENUM AS OCCURS. HEAD ALTERNATE 3, 19/CR603  
WALL-MOUNTED FIRE EXTINGUISHER (3'-6" AFF UNO)  
EXIT SIGN, WALL MOUNTED (8'-0" AFF TO TOP OF FIXTURE UNO, CENTERED ON DOOR UNO)  
GAS SPIGOT (3'-6" AFF UNO. SEE 8/CR602 FOR TYP CONFIGURATION)  
LIGHT SWITCH (3'-6" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)  
5'-0" SS CORNER GUARD CO-3  
DATA PORT FOR IP CAMERA (9'-0" AFF UNO)  
CAMERA, WALL MOUNTED (9'-0" AFF UNO)  
FIRE ALARM HORN STROBE (8'-8" AFF TO BOT OF FIXTURE UNO)  
FIRE ALARM SPEAKER (9'-0" AFF UNO)  
FIRE ALARM PULL STATION (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)  
DOOR MONITOR  
CARD READER (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)  
OCCUPANCY SENSOR (9'-0" AFF UNO)  
DIGITAL CLOCK, WALL MOUNTED (9'-0" AFF UNO)  
ANTENNA (DAS) (9'-0" AFF UNO)  
TELEPHONE (3'-6" AFF UNO)  
TOOL RESERVATION STATION (4'-10" AFF UNO)  
TEMPERATURE/HUMIDITY SENSOR (9'-0" AFF UNO)  
TOXIC GAS ALARM (8'-6" AFF UNO)  
WIRELESS ACCESS POINT (WAP) (9'-0" AFF UNO)  
PUSH BUTTON AUTOMATIC DOOR ACTUATOR (4'-0" AFF, 6" FROM EDGE OF ADJACENT DOOR FRAME, TYP UNO)  
MOTION DETECTION AUTOMATIC DOOR ACTUATOR (9'-0" AFF UNO)  
NOTES  
1. DEVICES ARE WALL-MOUNTED TYP UNO  
2. MOUNTING HEIGHT TO CENTER OF DEVICE, TYP UNO  
3. CENTER DEVICE EQUALLY BETWEEN ADJACENT CLEANROOM WALL MULLIONS, TYP UNO

## REFLECTED CEILING PLAN GENERAL NOTES

- A THE CLEANROOM LIGHTING LAYOUT INDICATED ON THIS DRAWING COMPLIES WITH ENERGY CODE REQUIREMENTS AT 1.4 WATTS/SQ. FT., EXCEPT IN AMBER LIGHT AREAS INDICATED.  
B AMBER LIGHT LEVELS ARE ABOUT 53 PERCENT OF WHITE LIGHT LEVELS IN THE CLEANROOM ENVIRONMENT. RECOMMENDED LIGHT LEVELS AT 5' AFF. IN THE CLEANROOM IS 50 TO 60 FOOT CANDLES.  
C AMBER LIGHTS IN 12, 14 AND 16 FOOT WIDE BAYS MEET THE RECOMMENDED FOOT CANDLE LIGHT LEVELS, BUT EXCEED THE ENERGY CODE ALLOWABLE AT APPROX 1.8 WATTS/SQ. FT.  
D REFERENCE PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR COORDINATION AS REQUIRED.  
E CONTRACTOR SHALL COORDINATE ALL PLUMBING, MECHANICAL, FIRE PROTECTION, AND ELECTRICAL WORK WITH CEILING HEIGHTS AND ARCHITECTURAL WORK. WHERE CEILINGS OCCUR, COORDINATE FINAL LOCATIONS WITH ARCHITECT.  
F REFERENCE ROOM FINISH SCHEDULE ON SHEET CR721 FOR CEILING MATERIAL AND FINISHES.  
G ALL CEILING MOUNTED OR RECESSED ITEMS SUCH AS SPRINKLER HEADS, GRILLES, LIGHTS, ETC SHALL BE CENTERED IN THE LAY-IN PANELS. WHERE GYPSUM BOARD CEILINGS OCCUR, INSTALL IN A CONSISTENT PATTERN.  
H SEE FLOOR PLANS FOR EXIT LIGHT LOCATIONS  
I SEE ARCHITECTURAL AND STRUCTURAL SHEETS FOR SHADED WORK

## REFLECTED CEILING PLAN LEGEND

- GYPSUM BOARD CEILING  
P-1-1 ATYP P-1 (FLUSH MOUNTED FLUORESCENT LIGHTING FIXTURE - FURNISHED WITH PLENUM SYSTEM)  
4" SEALED FLUORESCENT LIGHTING FIXTURE - RECESSED MOUNTED  
FC-1-1 TYPE FC-1  
4" SEALED FLUORESCENT LIGHTING FIXTURE - RECESSED MOUNTED  
FC-2-1 TYPE FC-2  
4" SEALED FLUORESCENT LIGHTING FIXTURE - RECESSED MOUNTED  
FC-3-1 TYPE FC-3 (AMBER)  
4" SEALED FLUORESCENT LIGHTING FIXTURE - RECESSED MOUNTED  
NOTE: FC-2 & FC-3 TO COMPLY WITH CLEANROOM CONSTRUCTION PROTOCOL SECTION 01503  
LITHONIA AFP-2-54TSHO WITH WGAFF  
FLUORESCENT LIGHTING FIXTURE - PENDANT MOUNTED  
LITHONIA AFP-2-54TSHO WITH WGAFF (AMBER)  
FLUORESCENT LIGHTING FIXTURE - PENDANT MOUNTED  
APPLETON MODEL VR3206U  
FLUORESCENT LIGHTING FIXTURE - FLUSH MOUNTED  
AMBER LIGHTING AREA. PROVIDE LIGHT TUBE COVERS FOR UV FILTRATION UP TO A WAVELENGTH OF 520 NANOMETERS  
ALUMINUM CEILING BLANK-OFF PANEL. SEE DETAIL CR601  
SPRINKLER HEAD  
2'-0" X 4'-0" SUPPLY AIR FILTER  
2'-0" X 4'-0" RETURN AIR GRILLE

## KEYED NOTES

- 1 POWER AND LIGHTING PANELS - SEE ELECTRICAL  
2 EMERGENCY EYEWASH / SHOWER - SEE PLUMBING  
3 POWDER COATED EPOXY FINISH ALUMINUM BAR GRATE FLOORING. SEE DETAIL 10CR61. SUPPORT FROM STRUCTURE WITH SST HARDWARE AS REQ'D - REFER TO STRUCTURAL  
4 RETURN AIR CHASE  
5 CONTINUOUS HANDRAIL  
6 42" GUARDRAIL. SEE 3/CR500  
7 WALL TYPE 2A WITH 3/8" STUD  
8 LIGHTING FIXTURE TYPE 'FAN'. MOUNT 9'-0" AFF UNO  
9 POWDER COATED EPOXY FINISHED, ALUMINUM GUARDRAIL, 42" HIGH.  
10 3'-0" X 6'-0" 45 MIN FIRE-RATED WINDOW  
11 LED DISPLAY (BY OWNER)

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### Key Plan

## Revisions

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

### Drawing Name

WALL TYPES AND DETAILS

Scott Hall  
Carnegie Mellon University  
Carnegie Mellon University, Pittsburgh, PA

Sheet Issue Date

07/24/2013

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Revision

Drawn By  
JACOBS

Drawing No.  
CB801

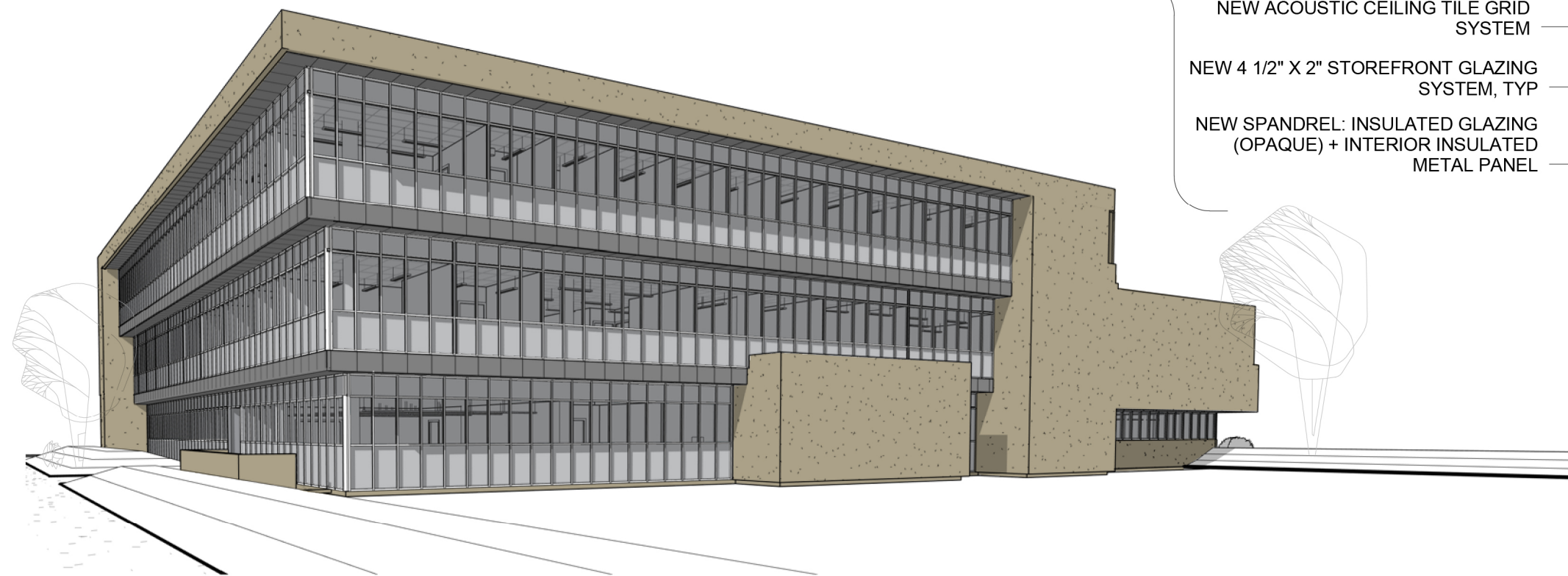
Consultant Project No. 218010258



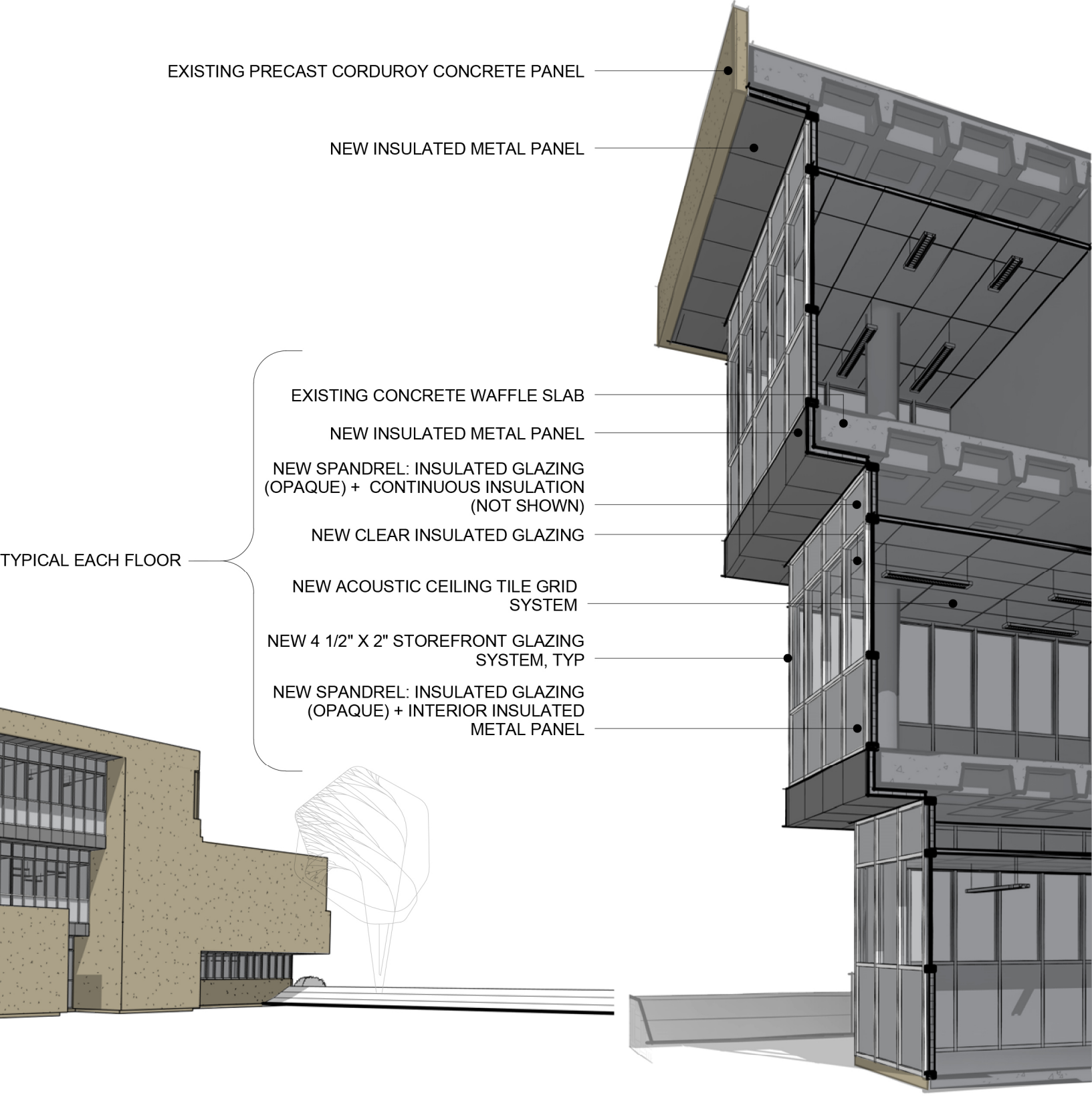
**Glazing Option 4 – Silver/Silver**

Date: July 09, 2014

Window: Silver  
Frame: Silver  
Metal Panel: Silver  
Metal Panel Spandrel: Dark Gray / Silver



OVERALL VIEW AT SOUTHWEST CORNER



SECTION AT SOUTHWEST CORNER