



# Washington County, MD

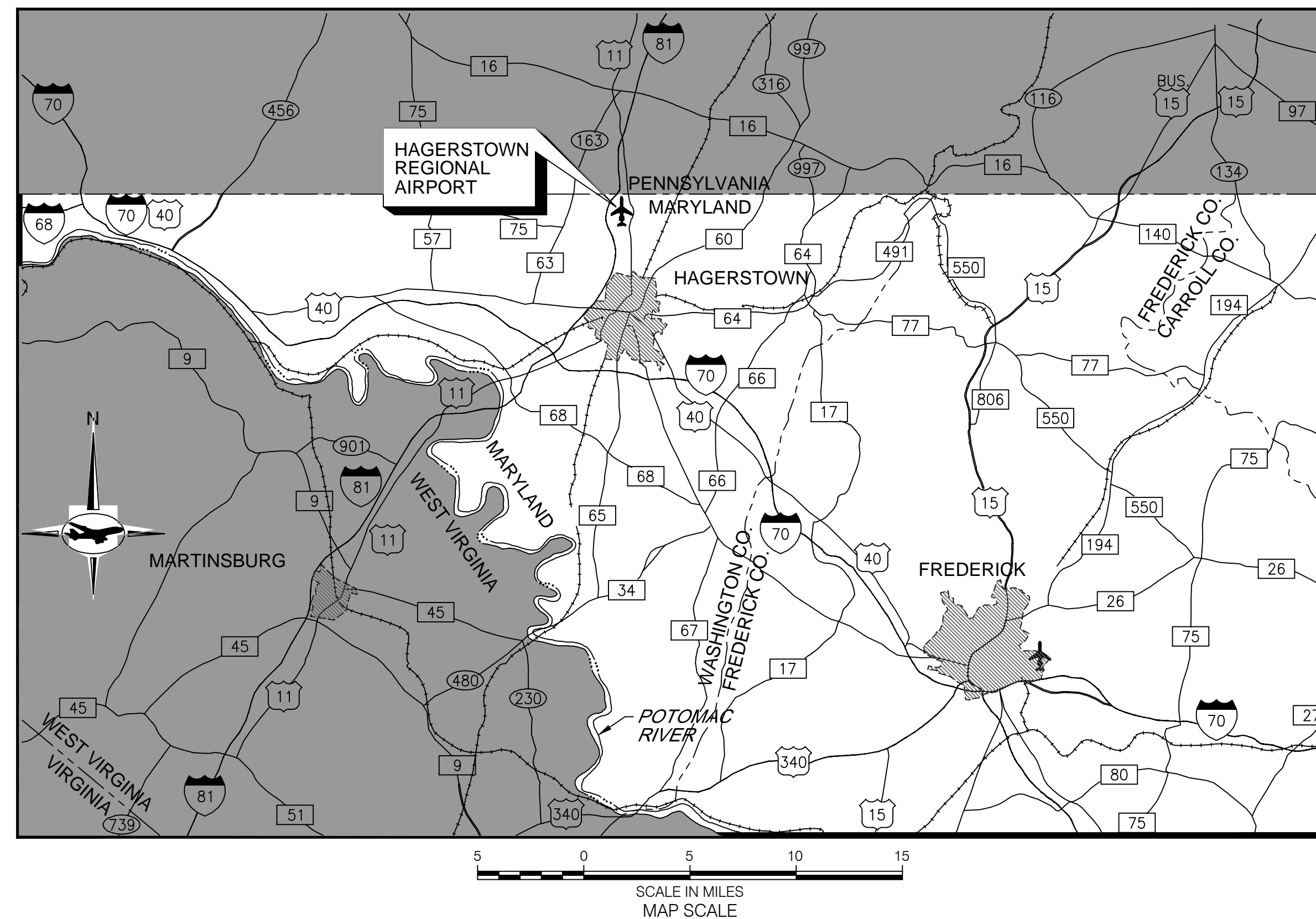
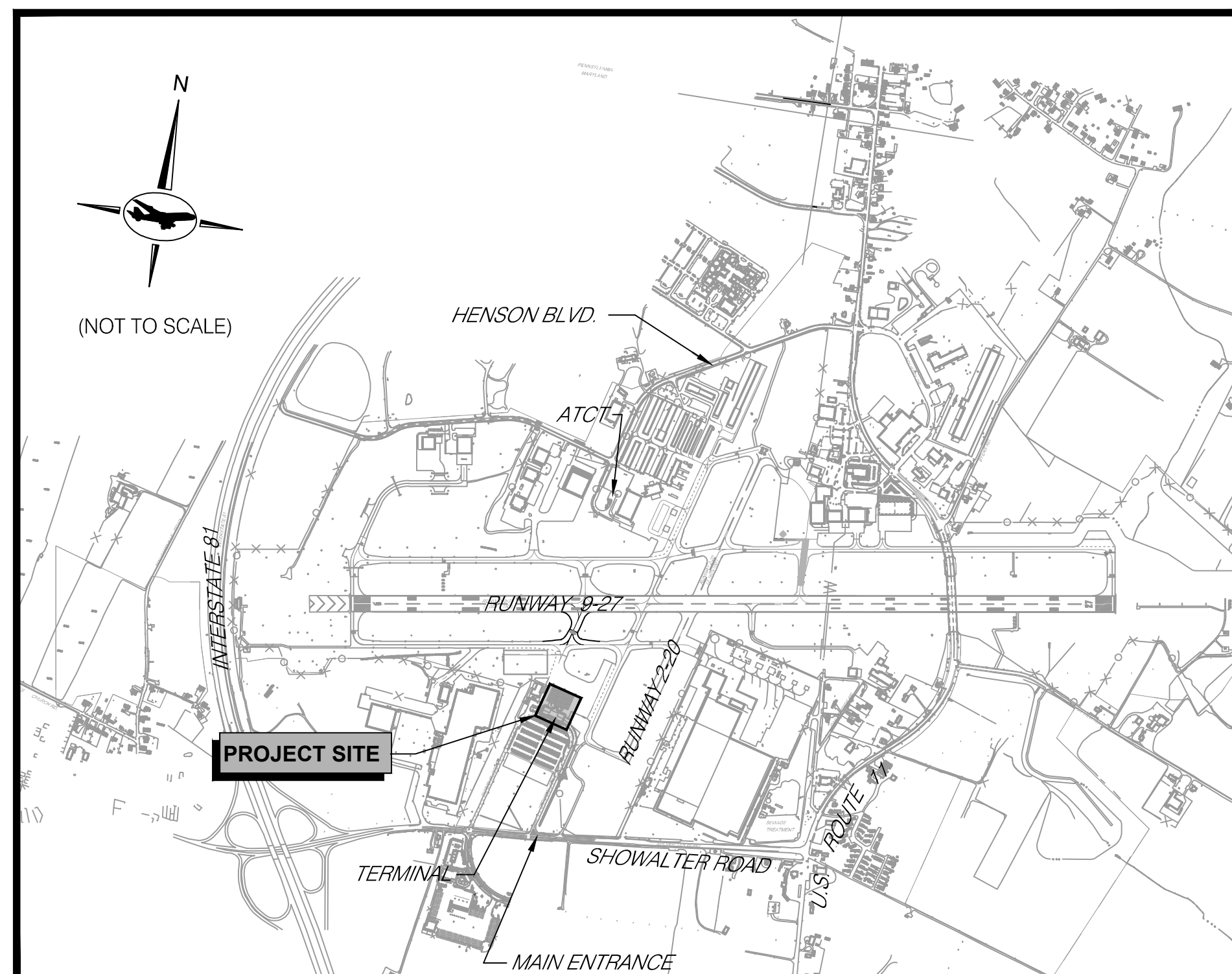
## HAGERSTOWN REGIONAL AIRPORT

### TERMINAL BUILDING EXPANSION A.I.P. No. 3-24-0019-059-2018 (DESIGN) BID No. PUR-1410 BID DOCUMENTS MARCH 2019

**MAA GRANT No. : MAA-GR-19-009**  
**GRADING PERMIT No. : GP-19-XXX**

#### VICINITY MAP

#### LOCATION MAP



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.  
6031 UNIVERSITY BLVD.  
SUITE 330  
ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602

**BFM**  
BUSHEY FEIGHT MORIN ARCHITECTS INC.  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301-733-5600 (FAX) 301-733-5612

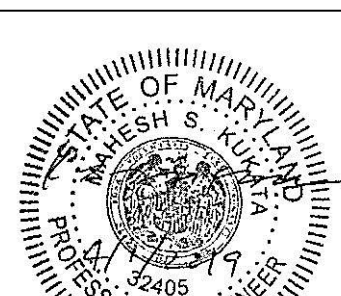
**QJL ENGINEERING**  
232 Horner Street  
Johnstown, PA 15902  
ph:(814)536-1651 fax:(814)536-5732

**FOX & ASSOCIATES, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
981 MT. AETNA ROAD  
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FAX: (301)733-1853  
82 WORMANS MILL COURT  
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**FOX & ASSOCIATES INC.**  
Est. 1968  
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**MS&A**  
Matonak Snyder & Associates  
STRUCTURAL ENGINEERS

931 B. Sweeney Drive  
Hagerstown, Maryland 21740  
Phone: 301-790-0111  
Fax: 301-790-0222  
www.msandassociates.com



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 32405  
Expiration Date: DEC 22, 2019

#### OWNER/DEVELOPER'S CERTIFICATION:

I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

MARCH 2019	GARRISON PLESSINGER
DATE	DEVELOPER (PRINTED NAME)
HAGERSTOWN REGIONAL AIRPORT	
18434 SHOWALTER ROAD	
HAGERSTOWN, MARYLAND 21740	DEVELOPER (SIGNATURE)
ADDRESS	240-313-2777
	TELEPHONE No.

\*FOR WASHINGTON COUNTY SCD SIGNATURES, PLEASE SEE CIVIL COVER SHEET CV00.001



**HAGERSTOWN REGIONAL AIRPORT**

APPROVED

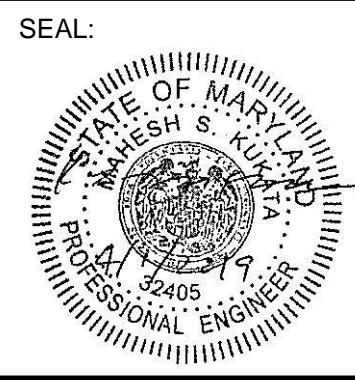
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FILE NAME: O:\HGR Projects\2018-1301\CAO\SHEETS\GN01.001\_Drawing Index.dwg PLOTTED: Monday, April 01, 2019 - 2:22pm USER: cmartin

SHEET NUMBER	SHEET NAME	SHEET TITLE	30%	90%	BID
GENERAL SERIES					
1	GN00.000	Cover Sheet	•	•	•
2	GN01.001	Drawing Index	•	•	•
3	GN02.100	General Project Layout	•	•	•
4	GN02.200	General Construction & Safety Notes	•	•	•
5	GN02.300	Maximum Equipment Height Plan	•	•	•
6	GN03.100	Construction Safety & Phasing Plan	•	•	•
7	GN03.101	Building Phasing - 1	•	•	•
8	GN03.102	Building Phasing - 2	•	•	•
9	GN03.103	Building Phasing - 3	•	•	•
10	GN03.104	MEP Phasing - 1			•
11	GN03.105	MEP Phasing - 2			•
12	GN03.106	MEP Phasing - 3			•
13	GN03.500	Safety Phasing Notes and Details	•	•	•
CIVIL SERIES					
14	CV00.001	Civil Cover Sheet, General Construction and Safety Notes	•	•	•
15	CV01.001	Existing Conditions/Demolition Plan	•	•	•
16	CV01.002	Final Conditions Plan	•	•	•
17	CV03.100	Site Plan	•	•	•
18	CV03.200	Grading/Sediment Control Plan	•	•	•
19	CV03.201	Drainage and Erosion and Sediment Control Notes and Details	•	•	•
20	CV05.100	Site Details		•	•
STRUCTURAL SERIES					
21	ST00.001	General Notes & Abbreviations	•	•	•
22	ST03.100	Foundation Plan	•	•	•
23	ST03.200	Roof Framing Plan	•	•	•
24	ST03.300	Enlarged Framing Plan			•
25	ST04.000	Typical Structural Details	•	•	•
26	ST05.001	Wall Details		•	•
ARCHITECTURAL SERIES					
27	AR01.000	General Notes, Abbreviations and Symbols	•	•	•
28	AR01.001	Partition Types	•	•	•
29	AR01.100	Life Safety Analysis		•	•
30	AR01.101	Life Safety Analysis	•	•	•
31	AR02.100	Demolition Plans	•	•	•
32	AR02.101	Demolition Reflected Ceiling Plan	•	•	•
33	AR02.102	Demolition Building Elevation	•	•	•
34	AR02.103	Demolition Building Section	•	•	•
35	AR03.100	Floor Plan	•	•	•
36	AR03.101	Enlarged Plan	•	•	•
37	AR03.102	Enlarged Plan	•	•	•
38	AR03.200	Roof Plan	•	•	•
39	AR03.201	Roof Details		•	•
40	AR03.202	Roof Details		•	•
41	AR03.203	Roof Details		•	•
42	AR03.204	Roof Details		•	•
43	AR03.205	Roof Details		•	•
44	AR03.206	Roof Details			•
45	AR03.207	Roof Details			•
46	AR03.300	Reflected Ceiling Plan	•	•	•
47	AR05.100	Exterior Elevations	•	•	•
48	AR05.101	Exterior Elevations	•	•	•
49	AR05.200	Interior Elevations	•	•	•
50	AR05.201	Interior Elevations		•	•
51	AR05.202	Interior Elevations		•	•
52	AR05.203	Interior Elevations			•
53	AR05.204	Interior Elevations			•
54	AR06.100	Building Sections	•	•	•
55	AR06.101	Buildling Sections	•	•	•
56	AR06.102	Building Sections	•	•	•
57	AR06.200	Wall Sections	•	•	•
58	AR06.201	Wall Sections	•	•	•
59	AR06.202	Wall Sections	•	•	•
60	AR06.203	Wall Sections		•	•
61	AR06.204	Wall Sections		•	•
62	AR08.101	Column Details		•	•
63	AR08.102	Column Details		•	•
64	AR08.103	Column Details		•	•
65	AR08.104	Exterior Details		•	•
66	AR08.105	Exterior Details			•
67	AR08.106	Exterior Details			•

68	AR08.200	Interior Details	•	•	•
69	AR08.201	Interior Details	•	•	•
70	AR08.202	Interior Details		•	•
71	AR08.203	Interior Details		•	•
72	AR08.204	Interior Details		•	•
73	AR08.300	Door and Window Frames	•	•	•
74	AR08.400	Floor Pattern Plan - First Floor	•	•	•
75	AR08.401	Flooring Details		•	•
76	AR09.100	Room Finish Schedule	•	•	•
FIRE PROTECTION SERIES					
77	FP00.001	General Notes, Abbreviations, and Symbols	•	•	•
78	FP02.100	First Floor Plan - Fire Protection Demolition	•	•	•
79	FP03.100	First Floor Plan - Fire Protection	•	•	•
PLUMBING SERIES					
80	PL00.001	General Notes, Abbreviations, and Symbols	•	•	•
81	PL01.100	Plumbing - Demolition Plan	•	•	•
82	PL02.100	Plumbing - Sanitary and Vent Piping	•	•	•
83	PL02.101	Plumbing - Water and Gas Piping	•	•	•
84	PL03.100	Plumbing - Roof Plan	•	•	•
85	PL04.100	Plumbing - Details	•	•	•
86	PL07.100	Plumbing - Riser Diagram	•	•	•
87	PL08.100	Plumbing Schedules	•	•	•
MECHANICAL SERIES					
88	ME00.001	Abbreviations, and Symbols - Mechanical	•	•	•
89	ME00.002	General Notes - Mechanical	•	•	•
90	ME02.100	Mechanical Demolition Floor Plan	•	•	•
91	ME02.101	Mechanical Demolition - Roof Plan	•	•	•
92	ME03.100	Ductwork Plan	•	•	•
93	ME03.101	Mechanical - Roof Plan	•	•	•
94	ME03.102	Mechanical - Piping Plan		•	•
95	ME05.000	Mechanical Details	•	•	•
96	ME05.100	Mechanical Hot Water Flow Diagram		•	•
97	ME09.000	Mechanical - Schedules	•	•	•
98	ME09.001	Mechanical - Schedules		•	•
ELECTRICAL SERIES					
99	EL00.001	General Notes, Abbreviations, and Symbols	•	•	•
100	EL02.100	First Floor Plan - Lighting Demolition	•	•	•
101	EL02.200	First Floor Plan - Power & Systems Demo	•	•	•
102	EL02.300	Roof Plan - Mechanical Power Demolition			•
103	EL03.100	First Floor Plan - Lighting	•	•	•
104	EL03.200	Lighting Control Details	•	•	•
105	EL03.300	Lighting Control Details			•
106	EL04.100	First Floor Plan - Power & Systems	•	•	•
107	EL04.200	First Floor Plan - Power Alt Bid 6			•
108	EL05.100	First Floor Plan - Mechanical Power	•	•	•
109	EL05.200	Roof Plan - Mechanical Power	•	•	•
110	EL05.300	First Floor Plan - Mechanical Power Alt Bid 6			•
111	EL05.400	Roof Plan - Mechanical Power Alt Bid 6			•
112	EL06.100	Electrical Riser Diagram	•	•	•
113	EL07.100	IT Conduit Routing Plan			•
114	EL09.100	Electrical Schedules	•	•	•
115	EL09.200	Electrical Schedules			•
116	EL09.300	Electrical Schedules Alt Bid 6			•
117	EL10.100	Electrical Site Plan Alt Bid 6			•
END OF DRAWING LIST					



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 32405  
Expiration Date: 12/22/2019

DESIGNED: R.M.G.	No.	DATE	DESCRIPTION
DRAWN: C.M.			
CHECKED: A.B.			
APPROVED: M.S.K.			

BID DOCUMENTS



PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>DRAWING INDEX</b>	
SCALE: AS SHOWN	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 (DESIGN) Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>GN01.001</b> <b>2 OF 117</b>







FILE NAME: O:\HGR Projects\2018-1301\CAO\SHEETS\GN02.200\_General Construction & Safety Notes.dwg PLOTTED: Monday, April 01, 2019 - 1:54pm USER: Rcoap1ert

GENERAL CONSTRUCTION NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS AND ANY RULES, REGULATIONS, STANDARDS OR SPECIFICATIONS REFERENCED THEREIN. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF WASHINGTON COUNTY (THE AIRPORT SPONSOR), THEIR AUTHORIZED REPRESENTATIVES, THE FEDERAL AVIATION ADMINISTRATION (FAA), AND OTHER GOVERNING AGENCIES.
2. THE PROJECT IS TO BE COMPLETED IN CLOSE CONFORMANCE WITH THE CONSTRUCTION PLANS AND CONTRACT SPECIFICATIONS AND SHALL BE CONSTRUCTED IN A TIMELY MANNER IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED PROJECT SCHEDULE. THE SCHEDULE SHALL PROVIDE FOR COMPLETION OF THE PHASES AS SHOWN ON THE PLANS AND DESCRIBED IN THE CONTRACT SPECIFICATIONS.
3. THE CONTRACTOR IS EXPECTED TO COMPLETE THE ENTIRE PROJECT ON TIME. THE IMPORTANCE OF THIS IS STRESSED BY THE INCLUSION OF LIQUIDATED DAMAGES IN THE SPECIFICATIONS.
4. HAGERSTOWN REGIONAL AIRPORT WILL BE IN OPERATION DURING THE CONSTRUCTION OF THIS PROJECT. COORDINATION OF WORK WITH THE AIRPORT AND AIRLINES (THROUGH THE AIRPORT DIRECTOR) IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS.
5. CONSTRUCTION AND MAINTENANCE OPERATIONS BY OTHERS WILL OCCUR CONCURRENTLY AND AT TIMES IN THE VICINITY OF CONSTRUCTION ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS AND COOPERATE WITH MAINTENANCE CREWS AND OTHER CONTRACTORS WORKING ON THE AIRPORT. COORDINATION WITH APPROPRIATE GOVERNMENT AND UTILITY AGENCIES IS ALSO REQUIRED.
6. ACCESS TO THE SITE - THE CONTRACTOR'S ACCESS POINTS TO THE SITE ARE SHOWN ON THE GENERAL PROJECT LAYOUT PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL VEHICLES AND PERSONNEL WHO ENTER THE AIRPORT PROPERTY. THE CONTRACTOR SHALL CONSULT WITH THE MAINTENANCE DEPARTMENT AT THE BEGINNING AND ENDING OF EACH WORK PERIOD.
7. HAUL ROUTES - THE CONTRACTOR'S ON-AIRPORT HAUL ROUTES ARE SHOWN ON THE GENERAL PROJECT LAYOUT. ANY DEBRIS (WHETHER CAUSED BY THE CONTRACTOR OR NOT) SHALL BE REMOVED IMMEDIATELY.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS, OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE PAVEMENTS USED AS HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES SHALL BE JOINTLY INSPECTED AND DETERMINED BY THE CONTRACTOR AND THE ENGINEER.

FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING THE WORK. THIS WORK IS CONSIDERED INCIDENTAL TO WORK AND NO SEPARATE PAYMENT WILL BE MADE. ALL ON-SITE ACCESS TO AIRPORT FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES.

8. CONTRACTOR'S STAGING AREA - AREA IS AVAILABLE FOR CONTRACTOR'S MOBILIZATION AND STORAGE. THE AREA IS SHOWN ON THE GENERAL PROJECT LAYOUT AND PHASING PLANS. THE CONTRACTOR'S STAGING AREA SHALL BE RETURNED TO ITS ORIGINAL STATE UPON COMPLETION OF USE.
9. DISPOSAL AREA - ALL MATERIALS THAT ARE SALVAGEABLE, INCLUDING BUILDING MATERIALS AND EXCAVATION, AND ARE DESIRED BY AIRPORT MAINTENANCE SHALL BE TURNED OVER TO THE AIRPORT. A DISPOSAL AREA FOR NONSALVAGEABLE MATERIAL WILL NOT BE AVAILABLE ON AIRPORT PROPERTY. THE CONTRACTOR'S WASTE MATERIALS, SHALL BE DISPOSED OF OFF AIRPORT PROPERTY. WASTE MATERIALS INCLUDE THOSE ITEMS WHICH ARE A DIRECT RESULT OF CONSTRUCTION. TRASH, (I.E. CUPS, CANS, ETC.) SHALL BE DISPOSED OF THROUGH PROPER SANITARY METHODS.
10. SAFETY - THE CONTRACTOR SHALL CONDUCT HIS ACTIVITIES IN A SAFE MANNER AS SPECIFIED IN THE SECTION TITLED, "CONTRACTORS SAFETY REQUIREMENTS DURING CONSTRUCTION" ON THIS SHEET.
11. PROTECTION OF AND REPAIR TO EXISTING CABLES - LOCATIONS OF KNOWN EXISTING AIRPORT UNDERGROUND CABLES ARE SHOWN ON THE PLANS AND MUST BE VERIFIED BY THE CONTRACTOR. REPAIR OF DAMAGED CABLES MUST BE STARTED IMMEDIATELY AND CONTINUED UNTIL COMPLETED. ALL SUCH REPAIRS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE AT THE CONTRACTOR'S EXPENSE. IF FAA CABLES ARE DAMAGED, REPAIRS SHALL BE DONE IN ACCORDANCE WITH FAA REQUIREMENTS AND IN THE PRESENCE OF AN FAA REPRESENTATIVE. THE FAA MAY ELECT TO HAVE THE REPAIR PERFORMED BY OTHERS IN WHICH CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE INCURRED COSTS OF REPAIRS.

12. CONSTRUCTION LIMITS - ALL CONTRACTOR VEHICLES AND TRAFFIC (UNLESS OTHERWISE AUTHORIZED) SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION LIMITS OR HAUL ROUTES. CONSTRUCTION, STORAGE AND STOCKPILING LIMITS ARE FURTHER DEFINED IN THE SECTION TITLED, "CONTRACTORS SAFETY REQUIREMENTS DURING CONSTRUCTION" ON THIS SHEET.
13. THE CONTRACTOR SHALL OBTAIN ALL THE PERMITS AND LICENSES REQUIRED FOR THE PROJECT WORK AT HIS OWN EXPENSE.
14. BASE MAPPING FOR THIS PROJECT IS BASED ON HISTORICAL MAPPING PROVIDED BY THE AIRPORT.
15. EXISTING AND PROPOSED GRADES - EXISTING GRADES SHOWN ON THE DRAWINGS ARE BELIEVED TO BE ACCURATE, BUT THE SPONSOR, OR ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THESE GRADES. IF THE CONTRACTOR DOES NOT CONCUR WITH THE ELEVATIONS GIVEN ON THE DRAWINGS, HE SHALL NOTIFY THE ENGINEER IN WRITING PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES. START OF WORK BY THE CONTRACTOR WITHOUT SUCH NOTIFICATION WILL BE INTERPRETED AS AN AGREEMENT BY THE CONTRACTOR WITH THE ACCURACY OF THE GRADES SHOWN ON THE PLANS.
16. PERMITS - THE CONTRACTOR MUST OBTAIN APPROPRIATE PERMITS FROM THE PROPER GOVERNMENT AGENCIES FOR ACCESS TO, AND TO USE THEIR ROADS FOR DELIVERY OF MATERIALS AND EQUIPMENT TO THE SITE. ANY DAMAGE TO OFF-SITE OR ON-SITE ROADS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. IF BLASTING IS REQUIRED TO FACILITATE EXCAVATION PROPER PERMITS MUST BE OBTAINED.

CONTRACTORS SAFETY REQUIREMENTS DURING CONSTRUCTION:

- A. FEDERAL AVIATION ADMINISTRATION (FAA) ADVISORY CIRCULARS (AC), ORDERS AND FEDERAL AVIATION REGULATIONS (F A R).
- THE FOLLOWING PUBLICATIONS CONTAIN DEFINITIONS/DESCRIPTIONS OF CRITICAL AIRPORT OPERATING AREAS. THE AREAS DEFINED BELOW PERTAIN TO AIRFIELD SAFETY REQUIREMENTS AND ARE REFERENCED THROUGHOUT THE CONTRACT DOCUMENTS. COPIES OF THESE PUBLICATIONS ARE AVAILABLE THROUGH THE FAA AND CAN BE REVIEWED AT THE OFFICES OF THE HAGERSTOWN REGIONAL AIRPORT.

1. AC 150/5370-2G, "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", CURRENT EDITION, SETS FORTH GUIDELINES TO ASSIST AIRPORT OPERATORS IN COMPLYING WITH F A R PART 139, "CERTIFICATION AND OPERATION: LAND AIRPORTS SERVING CERTAIN AIR CARRIERS" AND WITH THE REQUIREMENTS OF FEDERALLY FUNDED CONSTRUCTION PROJECTS.
2. F A R PART 77 "OBJECTS AFFECTING NAVIGABLE AIRSPACE, CURRENT EDITION:
- (A) ESTABLISHES STANDARDS FOR DETERMINING OBSTRUCTIONS TO NAVIGABLE AIRSPACE. CIVIL AIRPORT IMAGINARY SURFACES ARE DEFINED IN THE PUBLICATION AND ARE SHOWN ON THE SAFETY/PHASING NOTES AND DETAILS.
- (B) SETS FORTH REQUIREMENTS FOR NOTICE OF CERTAIN PROPOSED CONSTRUCTION OR ALTERATION. NOTICE OF CONSTRUCTION PROVIDES A BASIS FOR RECOMMENDATIONS FOR IDENTIFYING THE CONSTRUCTION OR ALTERATION IN ACCORDANCE WITH AC 70/7460-1L "OBSTRUCTION MARKING AND LIGHTING," CURRENT EDITION.
3. AC 150/5300-13A, CHANGE 1, "AIRPORT DESIGN", CURRENT EDITION, ESTABLISHES DESIGN, OPERATIONAL, AND MAINTENANCE STANDARDS FOR AIRPORTS. STANDARD TERMS DEFINED IN THIS AC AND USED IN THE CONTRACT PLANS AND SPECIFICATIONS ARE DEFINED BELOW:
- (A) OBSTACLE FREE ZONE (OFZ) - A VOLUME OF SPACE WHICH IS FREE OF ALL FIXED OBJECTS AND CLEAR OF VEHICLES IN THE PROXIMITY OF AN AIRPLANE CONDUCTING AN APPROACH, MISSED APPROACH, LANDING, TAKEOFF, OR DEPARTURE. AN OFZ TYPICAL SECTION IS SHOWN ON THE MAXIMUM EQUIPMENT HEIGHT PLAN.
- (B) RUNWAY PROTECTION ZONE (RPZ): A TRAPEZOIDAL AREA CENTERED ON THE RUNWAY BEGINNING AT A POINT 200 FEET BEYOND THE END OF THE AREA USABLE FOR TAKEOFF OR LANDING. THE RPZ IS SHOWN ON THE GENERAL PROJECT LAYOUT.
- (C) OBJECT FREE AREA (OFA): A TWO DIMENSIONAL GROUND AREA SURROUNDING RUNWAYS, TAXIWAYS, AND TAXILANES WHICH IS CLEAR OF OBJECTS EXCEPT FOR OBJECTS WHOSE LOCATION IS FIXED BY FUNCTION.
- (D) SAFETY AREA - THE SURFACE ADJACENT TO RUNWAYS, TAXIWAYS, AND TAXILANES OVER WHICH AIRCRAFT SHOULD, IN DRY WEATHER, BE ABLE TO CROSS AT NORMAL SPEEDS WITHOUT INCURRING SIGNIFICANT DAMAGE. A SAFETY AREA IS GRADED, DRAINED AND COMPACTED. IT IS FREE OF ANY HOLES, TRENCHES, BUMPS OR OTHER SIGNIFICANT SURFACE VARIATIONS OR OBJECTS OTHER THAN THOSE WHICH MUST BE THERE BECAUSE OF THEIR ESSENTIAL AERONAUTICAL FUNCTION. THE SAFETY AREA REQUIRES THE CAPABILITY OF SUPPORTING MAINTENANCE VEHICLES AND AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLES UNDER NORMAL (DRY) CONDITIONS.

B. GENERAL SAFETY REQUIREMENTS

1. THE CONTRACTOR SHALL ACQUAINT HIS SUPERVISORS AND EMPLOYEES WITH THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO HAGERSTOWN REGIONAL AIRPORT AND SHALL CONDUCT HIS CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES FOR SAFETY SPECIFIED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SAFETY DEVICES AS REQUIRED FOR THE PROTECTION OF HIS PERSONNEL.
2. PROTECTION OF ALL PERSONS SHALL BE PROVIDED THROUGHOUT THE PROGRESS OF THE WORK. THE WORK SHALL PROCEED IN SUCH A MANNER AS TO PROVIDE SAFE CONDITIONS FOR ALL WORKERS AND GOVERNMENT PERSONNEL. THE SEQUENCE OF OPERATION SHALL BE SUCH THAT MAXIMUM PROTECTION IS AFFORDED TO INSURE THAT PERSONNEL AND WORKERS IN THE WORK AREA ARE NOT SUBJECT TO ANY DANGEROUS CONDITIONS. THE CONTRACTOR MUST PROVIDE SAFETY MEASURES TO GUARD AGAINST INJURY.
3. DURING PERFORMANCE OF THIS CONTRACT, THE AIRPORT RUNWAYS, TAXIWAYS, AND AIRCRAFT PARKING APRONS SHALL REMAIN IN USE BY AIRCRAFT TO THE MAXIMUM EXTENT POSSIBLE. ALL AIRCRAFT TRAFFIC ON THESE AREAS SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC. THE OWNER RESERVES THE RIGHT TO ORDER THE CONTRACTOR AT ANY TIME TO VACATE ANY AREA NECESSARY TO MAINTAIN SAFE AIRCRAFT OPERATIONS. USE OF AREAS NEAR THE CONTRACTOR'S WORK WILL BE CONTROLLED TO MINIMIZE DISTURBANCE TO THE CONTRACTOR'S OPERATION. THE CONTRACTOR SHALL NOT ALLOW EMPLOYEES, SUBCONTRACTORS, SUPPLIERS, OR ANY OTHER UNAUTHORIZED PERSON TO ENTER OR REMAIN IN ANY AIRPORT AREA WHICH WOULD BE HAZARDOUS TO PERSONS OR TO AIRCRAFT OPERATIONS.

C. CONSTRUCTION AND FACILITIES MAINTENANCE

1. THE CONTRACTOR SHALL BE AWARE OF THE FOLLOWING TYPES OF SAFETY PROBLEMS AND/OR HAZARDS:
- (A) TRENCHES, HOLES, OR EXCAVATION ON OR ADJACENT TO ANY OPEN RUNWAY OR IN SAFETY AREAS.
- (B) UNMARKED/UNLIGHTED HOLES OR EXCAVATION IN ANY APRON, OPEN TAXIWAY, OPEN TAXILANE, OR RELATED SAFETY AREA.
- (C) MOUNDS OR PILES OF EARTH, CONSTRUCTION MATERIALS, TEMPORARY STRUCTURES, OR OTHER OBJECTS IN THE VICINITY OF THE OPEN RUNWAY, TAXIWAYS, TAXILANES, OR IN A RELATED SAFETY APPROACH OR DEPARTURE AREA.
- (D) VEHICLES OR EQUIPMENT, WHETHER OPERATING OR IDLE, ON ANY OPEN RUNWAY, TAXIWAY, TAXILANE, OR IN ANY RELATED SAFETY APPROACH OR DEPARTURE AREA.
- (E) VEHICLES, EQUIPMENT, EXCAVATION, STOCKPILES, OR OTHER MATERIALS WHICH COULD DEGRADE OR OTHERWISE INTERFERE WITH ELECTRONIC SIGNALS FROM RADIOS OR ELECTRONIC NAVIGATIONAL AIDS (NAVAIDS).
- (F) PAVEMENT DROP-OFFS OR PAVEMENT TURF-LIPS (EITHER PERMANENT OR TEMPORARY) WHICH COULD CAUSE DAMAGE TO AIRCRAFT IF CROSSED AT NORMAL OPERATING SPEEDS. THE NORMAL MAXIMUM DROP-OFF OR LIP IS 1-1/2 INCHES.
- (G) UNMARKED UTILITY, NAVAID, WEATHER SERVICE, RUNWAY LIGHTING, OR OTHER POWER OR SIGNAL CABLES THAT COULD BE DAMAGED DURING CONSTRUCTION.
- (H) OBJECTS, WHETHER OR NOT MARKED OR FLAGGED, OR ACTIVITIES ANYWHERE ON OR IN THE VICINITY OF AIRPORT WHICH COULD BE DISTRACTING, CONFUSING, OR ALARMING TO PILOTS DURING AIRCRAFT OPERATIONS.
- (I) UNFLAGGED/UNLIGHTED LOW VISIBILITY ITEMS SUCH AS TALL CRANES, DRILLS, AND THE LIKE ANYWHERE IN THE VICINITY OF ACTIVE RUNWAYS, OR IN ANY APPROACH OR DEPARTURE AREAS.
- (J) MISLEADING OR MALFUNCTIONING OBSTRUCTION LIGHTS OR UNLIGHTED/UNMARKED OBSTRUCTIONS IN THE APPROACH TO ANY ACTIVE RUNWAY.
- (K) INADEQUATE APPROACH/DEPARTURE SURFACES (THESE SURFACES ARE NEEDED TO ASSURE ADEQUATE LANDING/TAKEOFF CLEARANCE OVER OBSTRUCTIONS, OR WORK OR STORAGE AREAS).
- (L) INADEQUATE, CONFUSING OR MISLEADING (TO USER PILOTS) MARKING/LIGHTING OF RUNWAYS, TAXIWAYS, OR TAXILANES (INCLUDING DISPLACED OR RELOCATED THRESHOLDS).
- (M) WATER, SNOW, DIRT, DEBRIS, OR OTHER TRANSIENT ACCUMULATION WHICH TEMPORARILY OBSCURES PAVEMENT MARKINGS OR PAVEMENT EDGES, OR REDUCES VISIBILITY OF RUNWAY/TAXIWAY MARKINGS OR LIGHTING.
- (N) INADEQUATE OR IMPROPER METHODS OF MARKING, BARRICADING, AND LIGHTING OF TEMPORARILY CLOSED PORTIONS OF THE AIRPORT OPERATIONS AREA.
- (O) TRASH OR OTHER MATERIALS WITH FOREIGN OBJECT DAMAGE (FOD) POTENTIAL: WHETHER ON RUNWAYS, TAXIWAYS, OR APRONS; OR IN RELATED SAFETY AREAS.
- (P) INADEQUATE BARRICADING OR OTHER MARKING WHICH IS PLACED TO SEPARATE CONSTRUCTION OR MAINTENANCE AREAS FROM OPEN AIRCRAFT OPERATING AREAS.

- (Q) FAILURE TO CONTROL UNAUTHORIZED VEHICLE AND HUMAN ACCESS FROM ACTIVE AIRCRAFT OPERATING AREAS.
- (R) FAILURE TO MAINTAIN RADIO COMMUNICATION BETWEEN CONSTRUCTION/MAINTENANCE VEHICLES AND AIR TRAFFIC CONTROL TOWER.
- (S) CONSTRUCTION/MAINTENANCE ACTIVITIES OR MATERIALS WHICH COULD HAMPER THE RESPONSE OF AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) OR OTHER EMERGENCY EQUIPMENT FROM REACHING AIRCRAFT, ALL OR ANY PART OF THE RUNWAY/TAXIWAY SYSTEM, RUNWAY APPROACH AND DEPARTURE AREAS AND TO AIRCRAFT PARKING LOCATIONS.
- (T) BIRD ATTRACTANTS ON AIRPORT SUCH AS: EDIBLES (FOOD SCRAPS, ETC.), MISCELLANEOUS TRASH, OR PONDED WATER.

2. THE CONTRACTOR SHALL CONDUCT ACTIVITIES SO AS NOT TO VIOLATE ANY SAFETY STANDARDS CONTAINED HEREIN. THE CONTRACTOR SHALL INSPECT ALL CONSTRUCTION AND STORAGE AREAS AS OFTEN AS NECESSARY AND PROMPTLY TAKE ALL STEPS NECESSARY TO PREVENT/REMEDY ANY UNSAFE OR POTENTIALLY UNSAFE CONDITIONS OR ACTIVITIES DISCOVERED.
3. BEFORE ACTUAL COMMENCEMENT OF CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY, IN WRITING, AT LEAST 48 HOURS IN ADVANCE, THE AIRPORT DIRECTOR OF HIS INTENTIONS OF CONSTRUCTION, STATING THE PROPOSED TIME, DATE, AND AREA OF WHICH COMMENCEMENT IS TO OCCUR.

UPON COMPLETION OF WORK AND RETURN OF ALL RELATED AREAS TO STANDARD CONDITIONS, THE CONTRACTOR SHALL AGAIN NOTIFY THE AIRPORT DIRECTOR, IN WRITING, AND DESCRIBE THE AREA THAT IS COMPLETE AND AVAILABLE FOR NORMAL AIRPORT OPERATIONS.

THE AIRPORT DIRECTOR WILL BE RESPONSIBLE FOR ISSUING APPROPRIATE NOTICE TO AIRMEN (NOTAM) CONCERNING CONSTRUCTION ACTIVITY ON THE AIRFIELD.

D. MOTORIZED VEHICLES

THIS PROJECT INCLUDES WORK WITHIN THE AIRFIELD OPERATIONS AREA (AOA) (I.E.), THE SECURE PORTION OF THE AIRPORT.

E. RADIO COMMUNICATIONS

RADIO COMMUNICATIONS ARE NOT REQUIRED WITH THE AIR TRAFFIC CONTROL TOWER (ATCT).

F. DEBRIS

DEBRIS, WASTE, AND LOOSE MATERIAL (INCLUDING DUST AND DIRT) CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEAR OR PROPELLERS, OR BEING INGESTED IN JET ENGINES, SHALL NOT BE ALLOWED ON ACTIVE AIRCRAFT MOVEMENT AREAS OR ADJACENT GRASSED AREAS. MATERIALS OBSERVED TO BE WITHIN THESE AREAS SHALL BE REMOVED IMMEDIATELY AND/OR CONTINUOUSLY BY THE CONTRACTOR. THE CONTRACTOR SHALL HAVE A SWEEPING MACHINE AND OPERATOR ON SITE AND READY AT ALL TIMES DURING CONSTRUCTION ACTIVITY WHERE TRAVEL ON OR ACROSS RUNWAYS, RAMP AREAS, TAXIWAYS, OR AIRCRAFT APRONS IS REQUIRED. THE CONTRACTOR SHALL PROVIDE ADEQUATE PERSONNEL AND EQUIPMENT TO KEEP SUCH SURFACES CLEAR OF DEBRIS.

G. FLAGMEN

IN ACCORDANCE WITH THE SPECIFICATIONS, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH FLAGMEN AS NECESSARY TO CONTROL HIS TRAFFIC (UNLESS OTHERWISE DIRECTED BY THE ENGINEER).

H. MISCELLANEOUS

1. OPEN FLAME, WELDING OR TORCH CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN AND THE PROCEDURE PREVIOUSLY APPROVED BY THE ENGINEER.
2. EQUIPMENT AND STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT JET BLAST OR WIND CONDITIONS IN EXCESS OF 10 KNOTS.
3. THE CONTRACTOR SHALL PROVIDE BUCKET TYPE CONSTRUCTION BARRICADES WITH FLASHING YELLOW LIGHTS AS SHOWN ON THE DRAWINGS TO DELINEATE THE WORK AREAS WHEN CLOSED TO AIRPORT TRAFFIC. OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIAL LOCATED IN THE AOA SHALL BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED BY APPROVED LIGHT UNITS DURING HOURS OF LIMITED VISIBILITY AND DARKNESS.
4. ALL MATERIALS AND EQUIPMENT WHEN NOT IN USE SHALL BE PLACED IN APPROVED AREAS WHERE THEY WILL NOT CONSTITUTE A HAZARD TO AIRCRAFT OPERATIONS AND NOT PENETRATE CLEARANCE SURFACES DEFINED PREVIOUSLY AND SHOWN ON THE SAFETY/PHASING NOTES AND DETAILS SHEET SHALL BE PARKED AT THE STAGING AREA WHEN NOT IN USE.
5. UPON COMPLETION OF ANY STAGE/PHASE OF WORK, THE ENGINEER WILL ARRANGE A PHYSICAL INSPECTION OF THE AREA WITH AIRPORT OPERATIONS PERSONNEL PRIOR TO OPENING ANY PORTION OR WHOLE TAXIWAY OR RAMP AREA THAT HAS BEEN CLOSED FOR WORK OR USED FOR A CROSSING POINT OR HAUL ROUTE BY THE CONTRACTOR.

6. ENTRANCE TO THE AIRFIELD IS SUBJECT TO STRICT SECURITY REGULATIONS. ALL PERSONNEL ENTERING THE AIRFIELD MAY BE SUBJECT TO A BACKGROUND CHECK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL OF HIS EMPLOYEES WHO NEED TO HAVE ACCESS TO THE AIRFIELD, HAVE INFORMATION AVAILABLE FOR A BACKGROUND CHECK TO BE PERFORMED, DATING BACK TEN (10) YEARS VERIFYING REPRESENTATIONS MADE BY THE EMPLOYEE RELATING TO EMPLOYMENT.

7. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND AIRPORT DIRECTOR A CURRENT LIST OF ALL EMPLOYEES WORKING ON THE AIRPORT. THE LIST SHALL BE MAINTAINED CURRENT BY THE CONTRACTOR AND APPLIES TO BOTH THE CONTRACTOR AND SUBCONTRACTORS.

8. THE CONTRACTOR SHALL FAMILIARIZE HIS PERSONNEL WITH CLEARANCES NEEDED TO PROVIDE FOR THE SAFE OPERATION OF RUNWAYS AND TAXIWAYS AS SHOWN IN THE PLANS.

9. EXCEPT FOR EMERGENCIES, ALL CONTACT WITH AIRPORT PERSONNEL SHALL BE MADE THROUGH THE RESIDENT ENGINEER. FOR EMERGENCIES INVOLVING SAFETY (INJURIES, FIRES, SECURITY BREACHES, ETC.) THE CONTRACTOR SHALL MAKE DIRECT CONTACT WITH AIRPORT MANAGER FOLLOWED BY NOTIFICATION TO THE RESIDENT ENGINEER AS SOON AS POSSIBLE.

10. THE CONTRACTOR SHALL PROVIDE THE PHONE NUMBERS OF THREE PERSONNEL INCLUDING THE PROJECT SUPERINTENDENT, WHO MAY BE CONTACTED IN AN EMERGENCY. PERSONNEL SHALL BE ON CALL 24 HOURS PER DAY FOR MAINTAINING AIRPORT HAZARD LIGHTING AND BARRICADES.

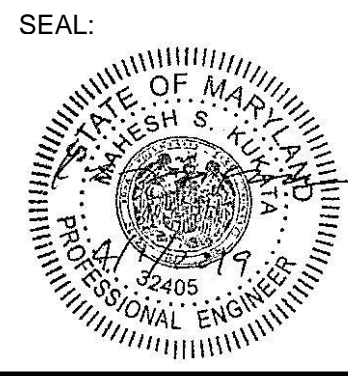
11. IN ACCORDANCE WITH THE SPECIFICATIONS, FEDERAL WAGE RATES SHALL BE POSTED OUTSIDE THE SITE FIELD OFFICE(S) IN A WEATHERPROOF ENCLOSURE.

I. UTILITIES

1. UNDERGROUND UTILITIES: THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE CONSIDERED TO BE ONLY ESTIMATED LOCATIONS. ALL UTILITY LOCATIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. IN THE EVENT ANY UTILITY IS DAMAGED THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FOR INCURRED COSTS OF REPAIRS.
2. THE CONTRACTOR SHALL ALSO NOTIFY "MISS UTILITY" AT 1-800-257-7777. THE COST ASSOCIATED WITH CONTACTING MISS UTILITY SHALL BE BORNE BY THE CONTRACTOR. ANY COSTS ASSOCIATED WITH DAMAGE TO UTILITIES SHALL BE BORNE BY THE CONTRACTOR.
3. UTILITIES NOTIFICATION: AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER, AND THE OWNER OF EACH UNDERGROUND UTILITY FACILITY AFFECTED.

J. SAFETY/SECURITY

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF/HERSELF WITH THE VARIOUS ASPECTS OF TRANSPORTATION SECURITY ADMINISTRATION (TSA) SECTION 1542 "AIRPORT SECURITY". ANY VIOLATION OF TSA SECTION 1542 BY THE CONTRACTOR AND ANY SUBSEQUENT FINES IMPOSED DUE TO THE VIOLATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE PROJECT SUPERVISORS SHALL HAVE WITH THEM AT ALL TIMES THE TELEPHONE NUMBERS FOR THE FOLLOWING PERSONS. IN THE EVENT OF AN EMERGENCY THESE PERSONNEL SHOULD BE CONTACTED IN DESCENDING ORDER:
- MR. GARRISON PLESSINGER, AIRPORT DIRECTOR  
MR. TERRY STOUFFER, AIRPORT MAINTENANCE SUPERVISOR  
MR. GENE BOLANOWSKI, OPERATIONS MANAGER  
MR. BOB HOOPENGARDNER, AIRPORT ARFF ADMINISTRATOR
- TELEPHONE NUMBERS WILL BE PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. ADDITIONAL CONTACTS MAY BE PROVIDED TO THE CONTRACTOR AT THAT TIME.



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 32405  
Expiration Date: 12/22/2019

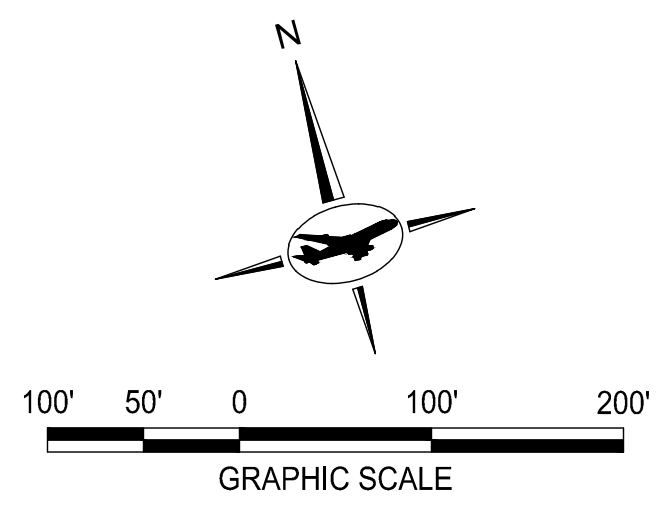
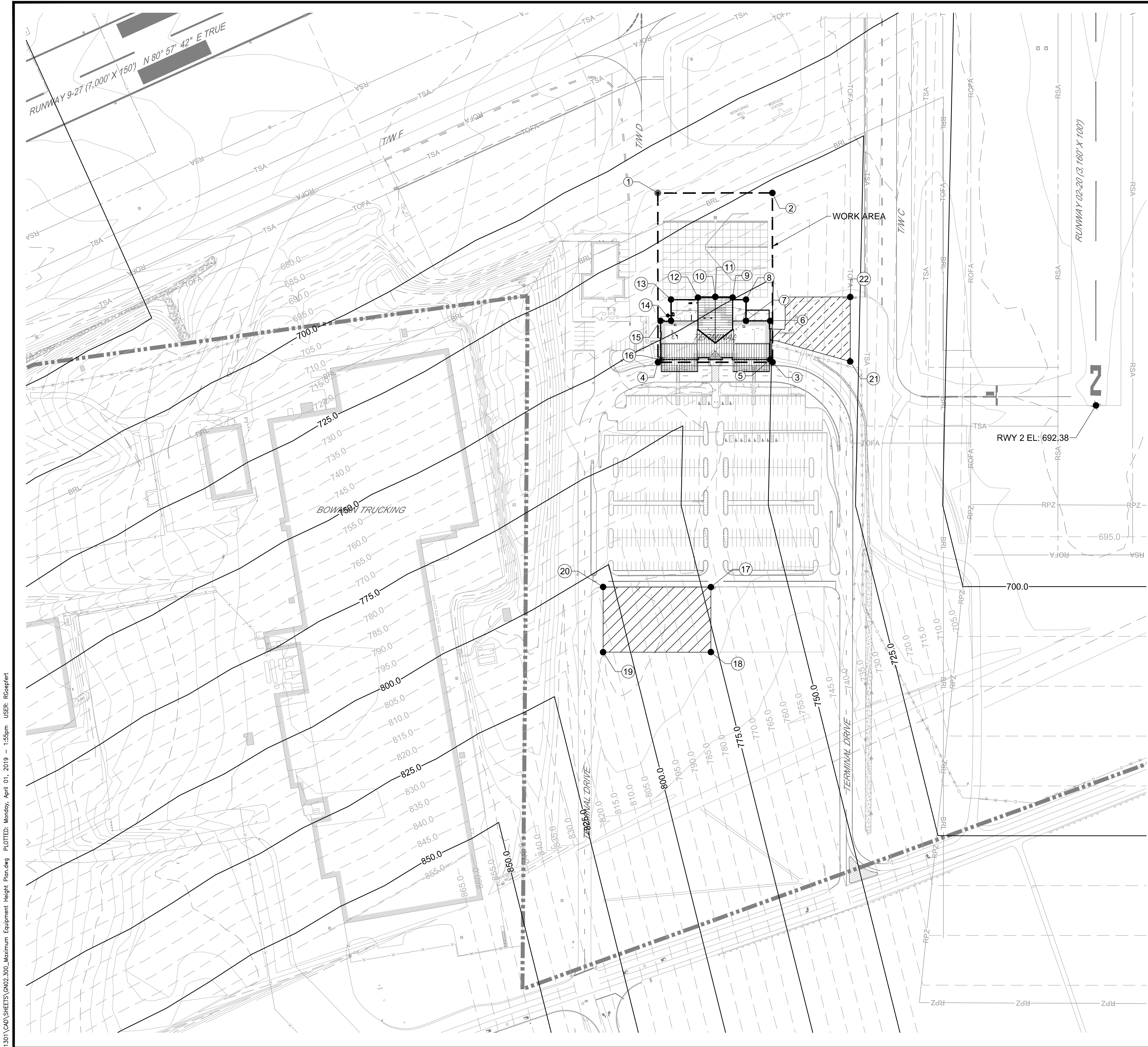
DESIGNED: R.M.G.	No.	DATE	DESCRIPTION
DRAWN: C.M.			
CHECKED: A.B.			
APPROVED: M.S.K.			



PROJECT TITLE:	TERMINAL BUILDING EXPANSION		FAA AIP No.: 3-24-0019-059-2018 (DESIGN) Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET TITLE:	GENERAL CONSTRUCTION & SAFETY NOTES		SHEET No.: GN02.200
SCALE:	AS SHOWN	DATE:	MARCH 2019
			4 OF 117



FILE NAME: O:\HGR Projects\2018-1301\CAO\Sheets\GN02.300\_Maximum Equipment Height Plan.dwg PLOTTED: Monday, April 01, 2019 - 1:55pm USER: RCooper1



FAR PART 77 NOTES:

- 1. THE OFZ SHALL GOVERN EQUIPMENT CLEARANCE DURING CONSTRUCTION ADJACENT TO AN ACTIVE RUNWAY. UNDER NO CIRCUMSTANCES SHALL ANY MEN OR EQUIPMENT PENETRATE THESE SURFACES UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE WITH THE ENGINEER, AND THE AIRPORT.
- 2. THE FAR PART 77 SURFACES (PRIMARY AND TRANSITIONAL) GOVERN STOCKPILE AND PARKED EQUIPMENT. UNDER NO CIRCUMSTANCES SHALL PARKED EQUIPMENT, STOCKPILES, OR OTHER ITEMS PENETRATE THESE SURFACES DURING CONSTRUCTION ADJACENT TO AN ACTIVE RUNWAY.

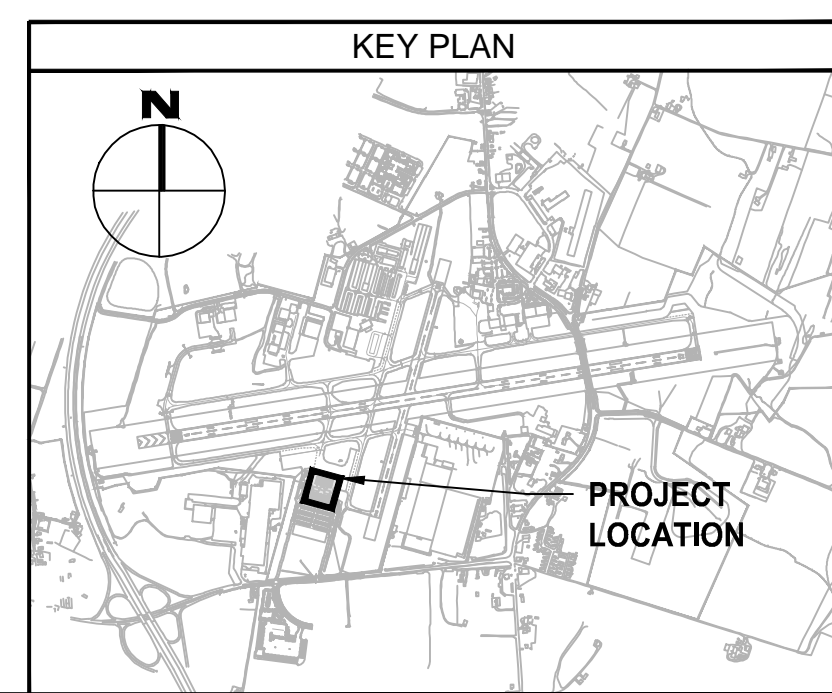
NOTES:

- 1. CONTRACTOR SHALL NOTIFY THE ENGINEER THREE (3) DAYS PRIOR TO USING ANY EQUIPMENT TALLER THAN 50' FOR COORDINATION WITH THE AIR TRAFFIC CONTROL TOWER.
- 2. ALL ELEVATIONS ARE PROVIDED ABOVE MEAN SEA LEVEL/NAVD88 DATUM.
- 3. ALL HEIGHTS SHOWN ON THIS PLAN ARE ABOVE GROUND LEVEL (AGL) WITH RESPECT TO THE SITE ELEVATIONS LISTED IN THE POINT TABLE.
- 4. OFZ CONTOURS NOT SHOWN FOR CLARITY.

POINT TABLE									
POINT #	NORTHING*	EASTING*	LATITUDE (N)	LONGITUDE (W)	SITE ELEV. (MSL)	FAR PART 77 ELEV.	OFZ ELEV.	MAX. ALLOWABLE HEIGHT (AGL)	DESCRIPTION
1	743542.18	1106535.57	39° 42' 21.39"	77° 43' 53.06"	688.20'	712.72'	815.50'	24.50'	WORK AREA
2	743481.69	1106757.48	39° 42' 20.81"	77° 43' 50.21"	688.80'	728.47'	833.50'	39.70'	WORK AREA
3	743153.98	1106668.15	39° 42' 17.57"	77° 43' 51.32"	689.20'	749.67'	853.00'	60.50'	WORK AREA
4	743214.47	1106446.25	39° 42' 18.15"	77° 43' 54.16"	689.90'	755.47'	853.00'	65.60'	WORK AREA
5	743160.06	1106664.85	39° 42' 17.63"	77° 43' 51.36"	689.30'	750.37'	853.00'	46.10'	BUILDING
6	743235.33	1106685.44	39° 42' 18.37"	77° 43' 51.11"	689.80'	750.70'	853.00'	45.90'	BUILDING
7	743248.15	1106638.75	39° 42' 18.50"	77° 43' 51.71"	689.90'	754.45'	853.00'	49.60'	BUILDING
8	743289.34	1106649.99	39° 42' 18.90"	77° 43' 51.57"	690.40'	751.80'	853.00'	46.40'	BUILDING
9	743300.28	1106625.15	39° 42' 19.01"	77° 43' 51.88"	690.40'	749.50'	853.00'	44.10'	BUILDING
10	743310.91	1106591.89	39° 42' 19.11"	77° 43' 52.31"	690.30'	746.92'	853.00'	41.60'	BUILDING
11	743310.91	1106591.89	39° 42' 19.11"	77° 43' 52.31"	690.30'	746.92'	853.00'	21.60'	HIGH ROOF
12	743318.65	1106557.92	39° 42' 19.19"	77° 43' 52.75"	690.20'	744.55'	853.00'	39.40'	BUILDING
13	743329.04	1106504.76	39° 42' 19.29"	77° 43' 53.43"	690.20'	741.08'	849.15'	35.90'	BUILDING
14	743287.87	1106493.51	39° 42' 18.88"	77° 43' 53.57"	690.00'	746.44'	853.00'	41.40'	BUILDING
15	743293.44	1106473.10	39° 42' 18.93"	77° 43' 53.83"	690.00'	745.11'	853.00'	40.10'	BUILDING
16	743218.18	1106452.53	39° 42' 18.19"	77° 43' 54.08"	689.90'	755.12'	853.00'	50.20'	BUILDING
17	742751.40	1106429.73	39° 42' 13.57"	77° 43' 54.33"	688.70'	772.30'	833.50'	83.60'	STAGE AREA
18	742625.57	1106395.28	39° 42' 12.32"	77° 43' 54.76"	688.50'	776.95'	853.00'	88.50'	STAGE AREA
19	742682.44	1106186.57	39° 42' 12.87"	77° 43' 57.43"	690.20'	807.87'	853.00'	117.70'	STAGE AREA
20	742808.67	1106221.13	39° 42' 14.12"	77° 43' 57.00"	691.40'	803.19'	853.00'	111.80'	STAGE AREA
21	743114.28	1106818.81	39° 42' 17.19"	77° 43' 49.39"	687.20'	727.39'	853.00'	40.20'	STAGE AREA
22	743239.11	1106852.97	39° 42' 18.42"	77° 43' 48.96"	687.90'	727.83'	853.00'	39.90'	STAGE AREA

\*HORIZONTAL DATUM: NAD83 MARYLAND STATE PLANE, US FOOT  
\*VERTICAL DATUM: NAV88 MARYLAND STATE PLANE, US FOOT

- LEGEND:
- 750.0' PART 77 MAJOR CONTOUR
  - 740.0' PART 77 MINOR CONTOUR
  - PROJECT LIMITS
  - LANDSIDE STAGING AREA AND STOCKPILE
  - AIRSIDE STAGING AREA
  - POINT ID





6031 UNIVERSITY BLVD.  
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ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602

SEAL:



Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 32405  
Expiration Date: 12/22/2019

DESIGNED: R.M.G.	No.	DATE	DESCRIPTION
DRAWN: C.M.			
CHECKED: A.B.			
APPROVED: M.S.K.			

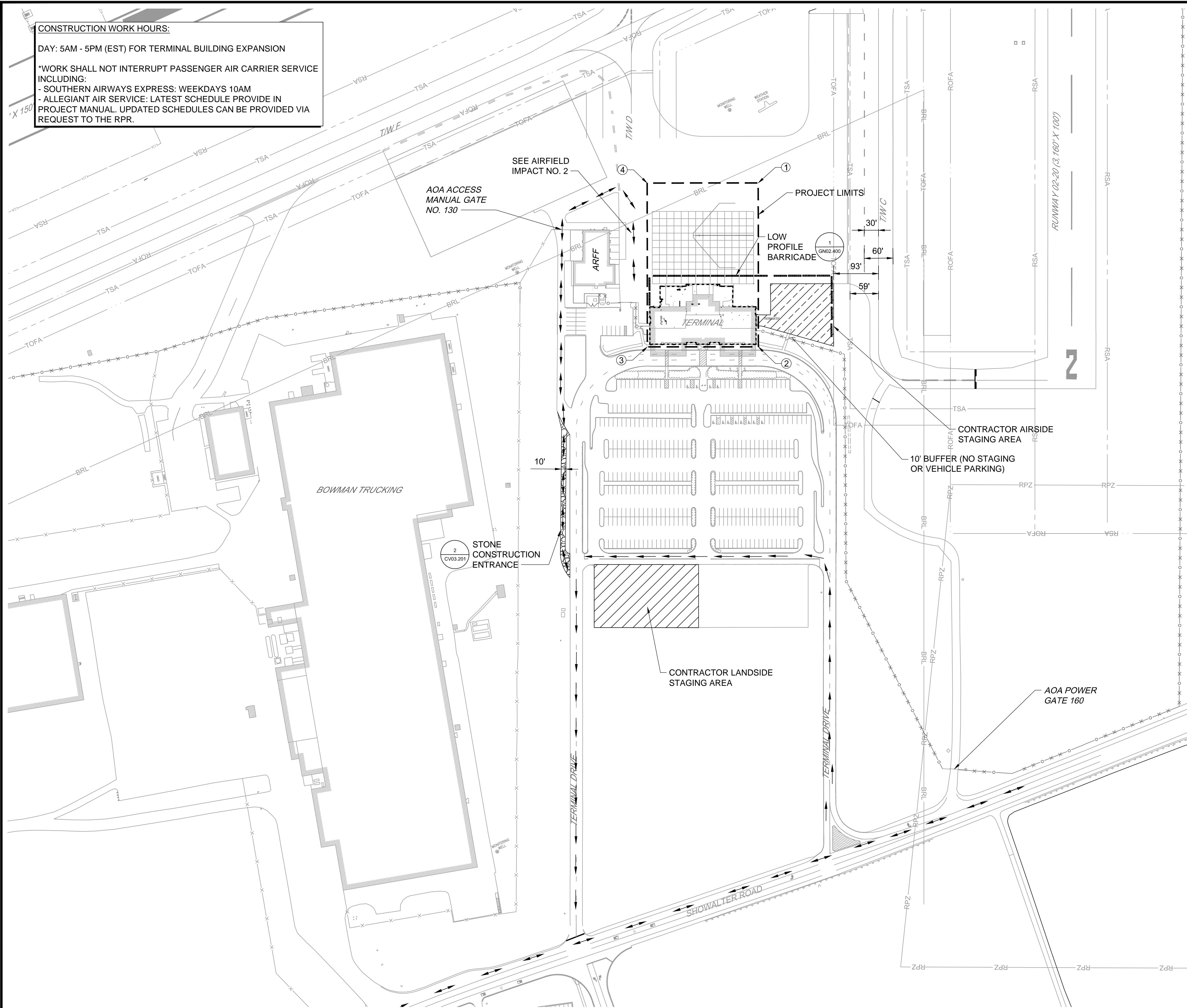


Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

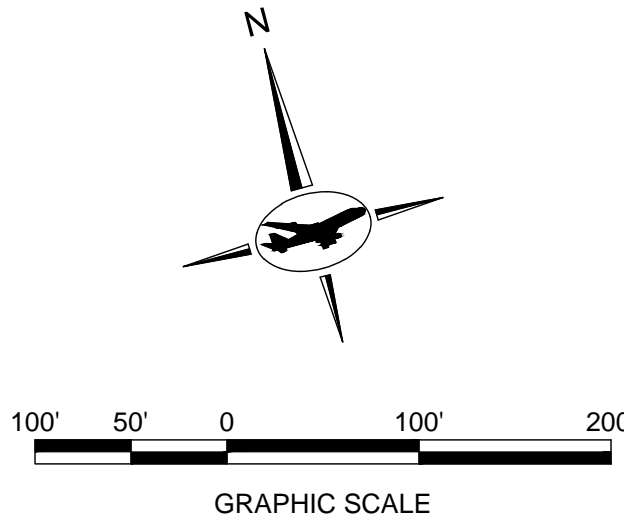
PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>		FAA AIP No.: 3-24-0019-059-2018 (DESIGN) Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET TITLE: <b>MAXIMUM EQUIPMENT HEIGHT PLAN</b>		
SCALE: AS SHOWN	DATE: MARCH 2019	SHEET No.: <b>GN02.300</b> 5 OF 117



FILE NAME: O:\HGR Projects\2018-1301\CAO\SHEETS\GN03.100\_Construction Safety & Phasing Plan.dwg PLOTTED: Monday, April 01, 2019 - 2:09pm USER: R00p1ert



**CONSTRUCTION WORK HOURS:**  
DAY: 5AM - 5PM (EST) FOR TERMINAL BUILDING EXPANSION  
\*WORK SHALL NOT INTERRUPT PASSENGER AIR CARRIER SERVICE INCLUDING:  
- SOUTHERN AIRWAYS EXPRESS: WEEKDAYS 10AM  
- ALLEGIAN AIR SERVICE: LATEST SCHEDULE PROVIDE IN PROJECT MANUAL. UPDATED SCHEDULES CAN BE PROVIDED VIA REQUEST TO THE RPR.



**NOTES:**

- CONTRACTOR SHALL NOT BE PERMITTED TO ENTER/ACCESS AOA WITHOUT PROPER CLEARANCES (SEE SHEET GN03.500).
- FOR ADDITIONAL REQUIREMENTS, SEE SHEET GN03.500.

**AIRFIELD IMPACTS:**

- TERMINAL PUBLIC AND STERILE AREAS WILL BE IMPACTED BY BUILDING EXPANSION IMPROVEMENTS. SEE GN03.101 THROUGH GN03.106 FOR DETAILED BUILDING AND MEP PHASING PLANS.
- CONSTRUCTION TRAFFIC CROSSES ACTIVE AIRFIELD PAVEMENTS. THE CONTRACTOR SHALL NOT IMPEDE THE APRON AREA IMMEDIATELY ADJACENT TO THE ARFF BUILDING TO ALLOW FOR TIMELY ARFF OPERATIONS.

**LANDSIDE IMPACTS:**

- GRAVEL LOT NOT AVAILABLE FOR LONG TERM PARKING.

**SPECIAL REQUIREMENTS:**

- TERMINAL SECURITY SHALL BE MAINTAINED AT ALL TIMES
- SEE GN03.101 THROUGH GN03.106 FOR DETAILED PLANS.

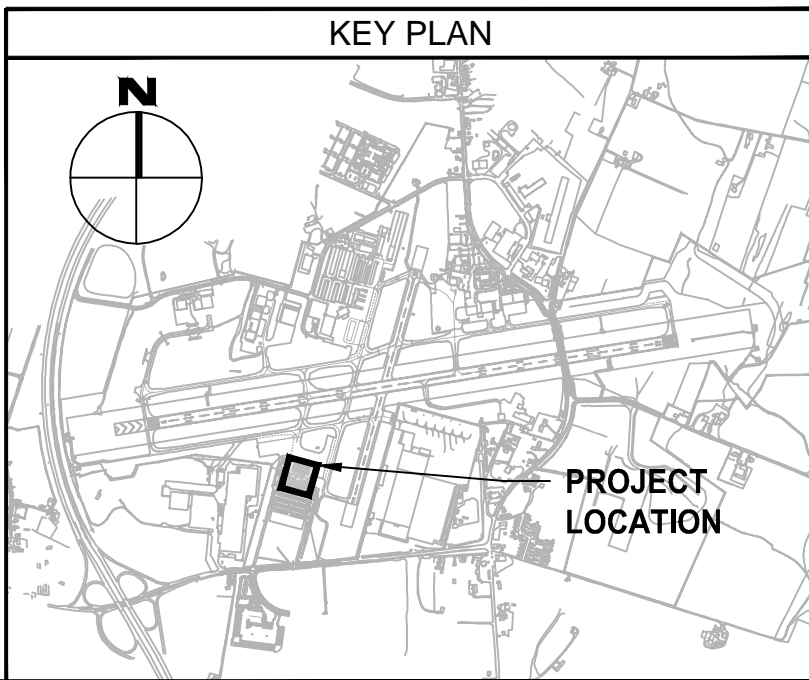
**MAJOR WORK ITEMS:**

- TERMINAL BUILDING EXPANSION
- UTILITY INSTALLATION
- PBB INSTALLATION

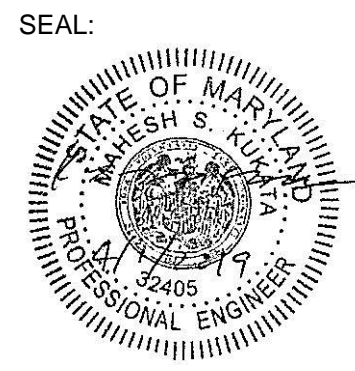
**LEGEND:**

- EXISTING AOA FENCE
- BRL BUILDING RESTRICTION LINE
- RPZ RUNWAY PROTECTION ZONE
- RSA RUNWAY SAFETY AREA
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- ROFA RUNWAY OBJECT FREE AREA
- HAUL ROUTE (ONE & TWO WAY ACCESS)
- PROJECT LIMITS
- PROJECT LIMITS
- LANDSIDE STAGING AREA
- AIRSIDE STAGING AREA
- LOW PROFILE BARRICADE (SEE GN02.400)

WORK AREA LIMITS			
POINT ID	LATITUDE	LONGITUDE	DESCRIPTION
1	N39° 42' 20.81"	W77° 43' 50.21"	WORK AREA
2	N39° 42' 17.57"	W77° 43' 51.32"	WORK AREA
3	N39° 42' 18.15"	W77° 43' 54.16"	WORK AREA
4	N39° 42' 21.39"	W77° 43' 53.06"	WORK AREA



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.  
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SUITE 330  
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PHONE: 410-465-9600  
FAX: 410-465-9602



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 32405  
Expiration Date: 12/22/2019

DESIGNED:	No.	DATE	DESCRIPTION
R.M.G.			
DRAWN:			
C.M.			
CHECKED:			
A.B.			
APPROVED:			
M.S.K.			



PROJECT TITLE:		TERMINAL BUILDING EXPANSION	
SHEET TITLE:		CONSTRUCTION SAFETY & PHASING PLAN	
SCALE:	AS SHOWN	DATE:	MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 (DESIGN)  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009  
SHEET No.:  
**GN03.100**  
6 OF 117

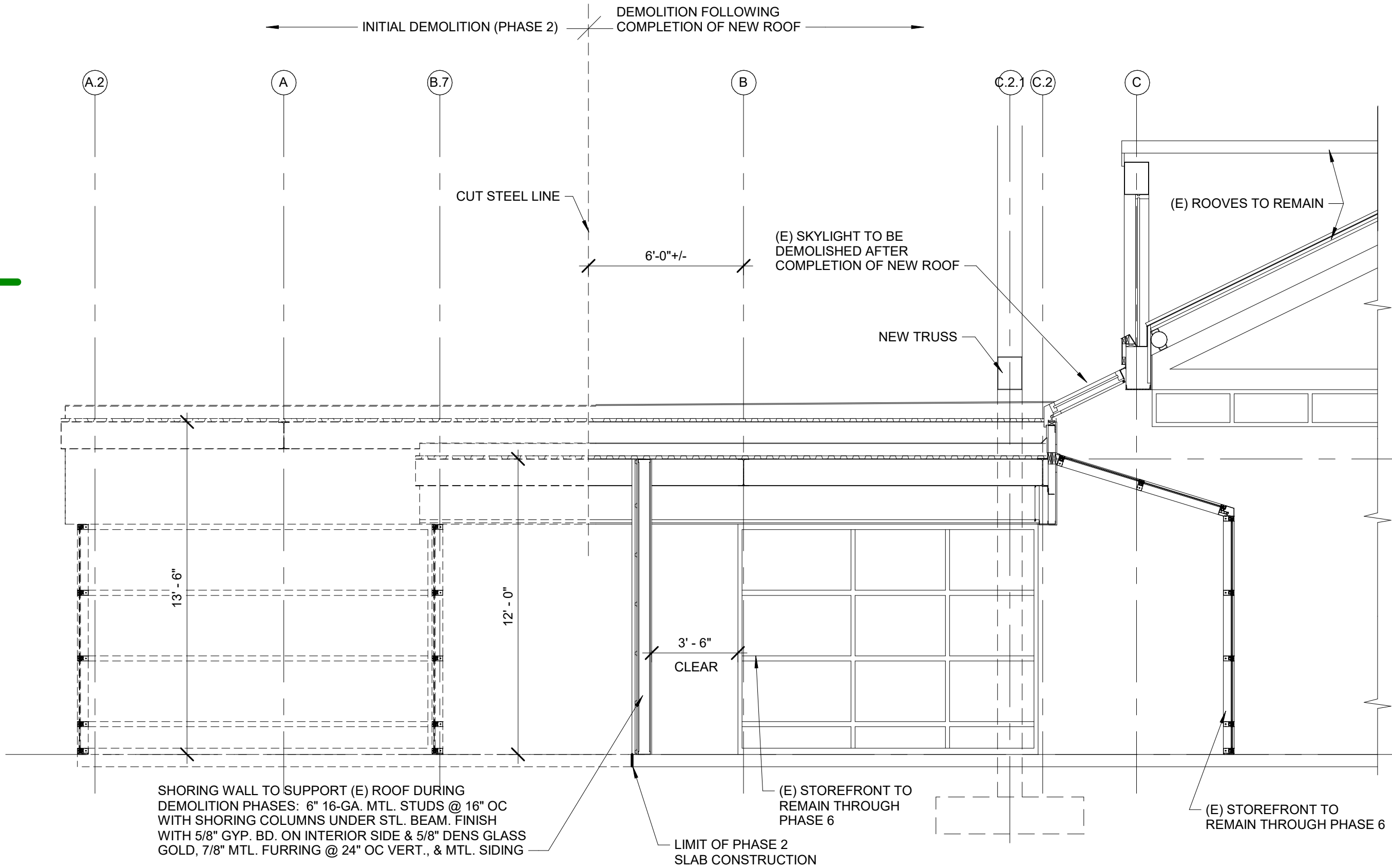


PHASING GENERAL NOTES

1. PHASING PLANS ARE INTENDED TO SERVE AS AN OUTLINE FOR THE SEQUENCE OF CONSTRUCTION. REFER TO ALL CONSTRUCTION DOCUMENTS FOR COMPLETE REQUIREMENTS OF CONSTRUCTION AND DEMOLITION.
2. REFER TO MEP PHASING PLANS FOR OUTLINE OF MEP SEQUENCING.
3. REFER TO SUMMARY OF WORK FOR NARRATIVE OF PHASES.
4. REFER TO SPECIFICATION SECTION 01 23 00 FOR LISTING OF ADD ALTERNATES. ADD ALTERNATES MAY NOT BE SHOWN ON THE PHASING PLANS BUT SHALL BE INCLUDED IN RELEVANT CONSTRUCTION/PHASE IF CONTRACTED.

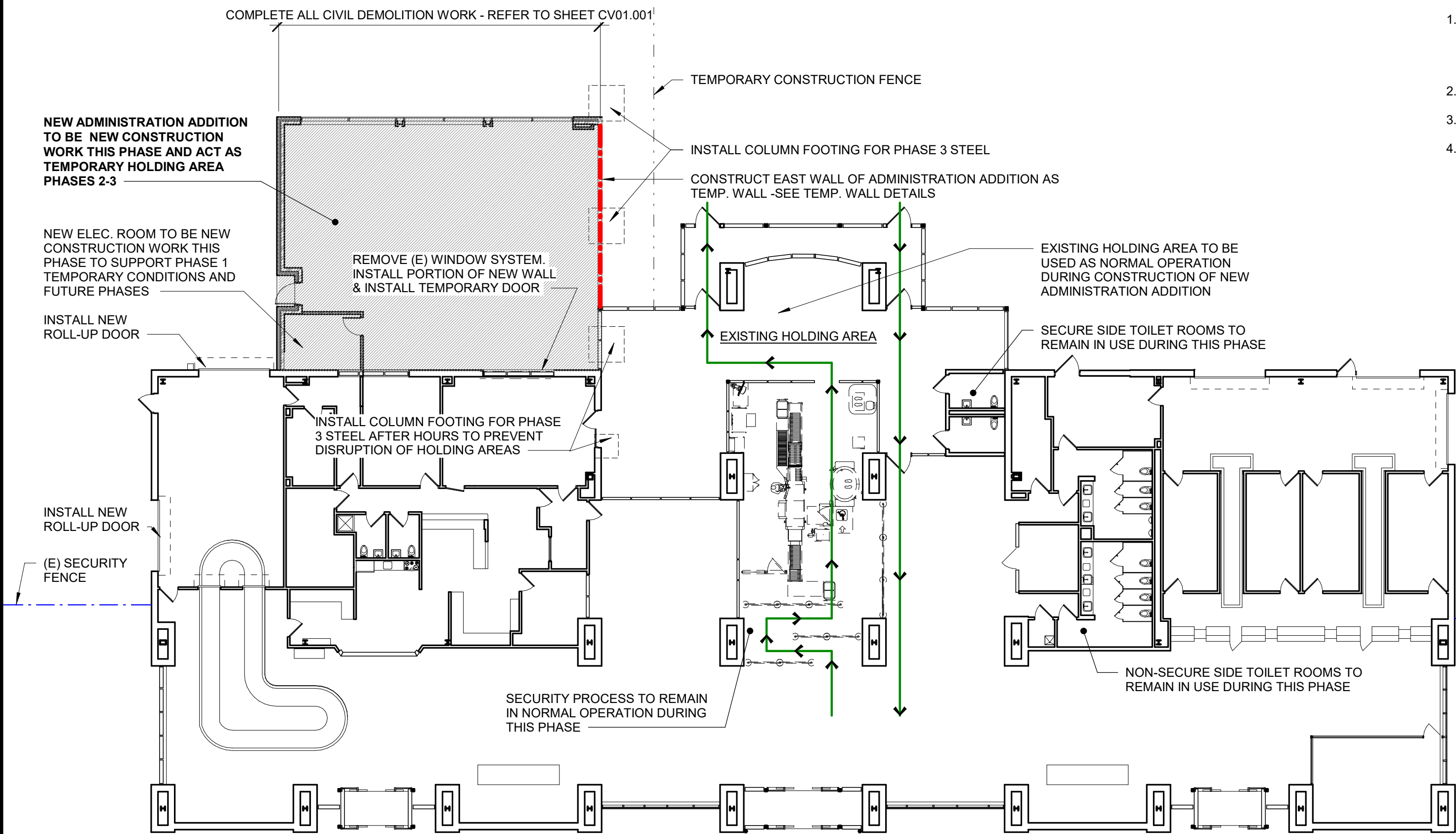
PASSENGER TRAVEL PATH

(E) SECURITY FENCE

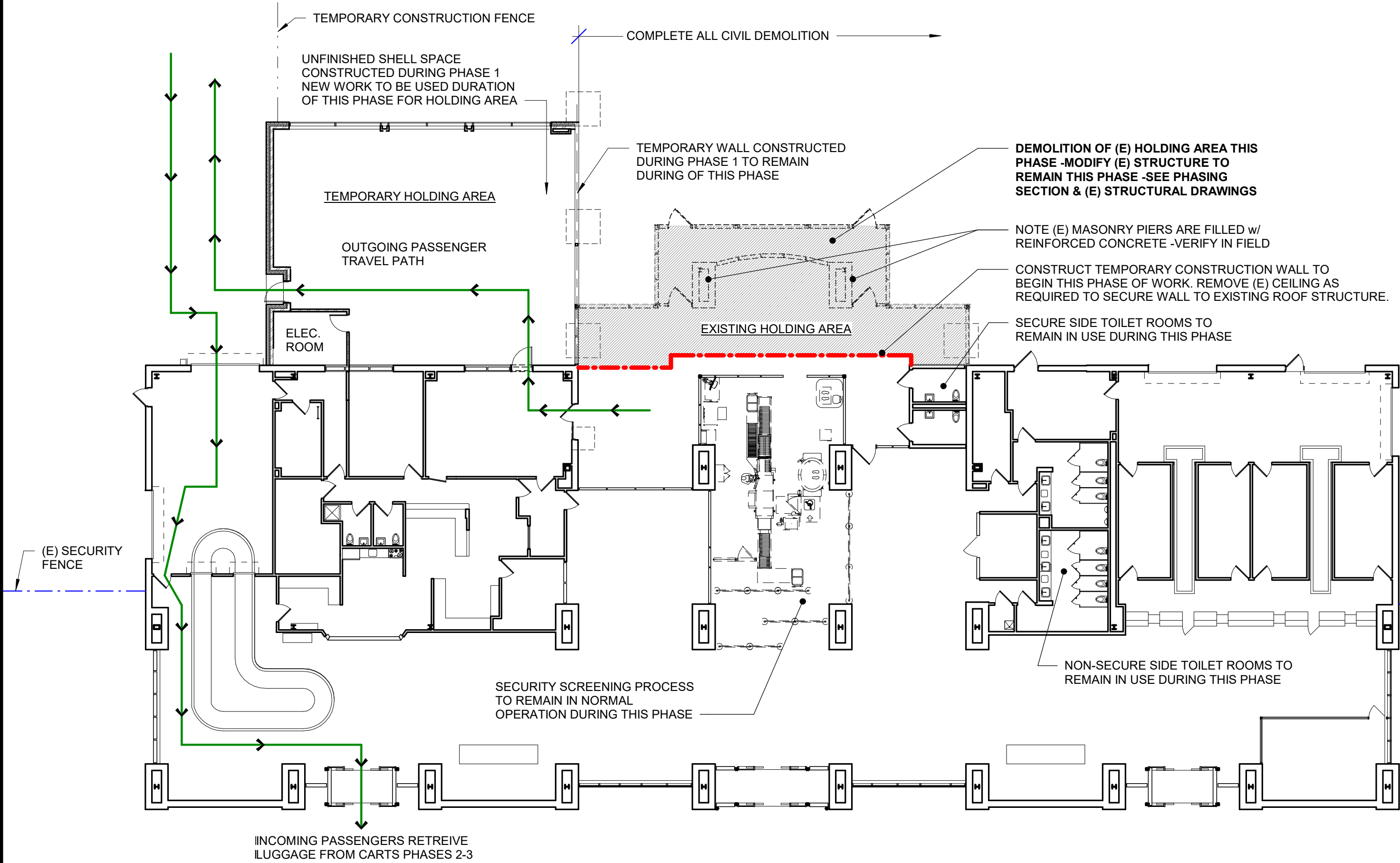


PHASING SECTION

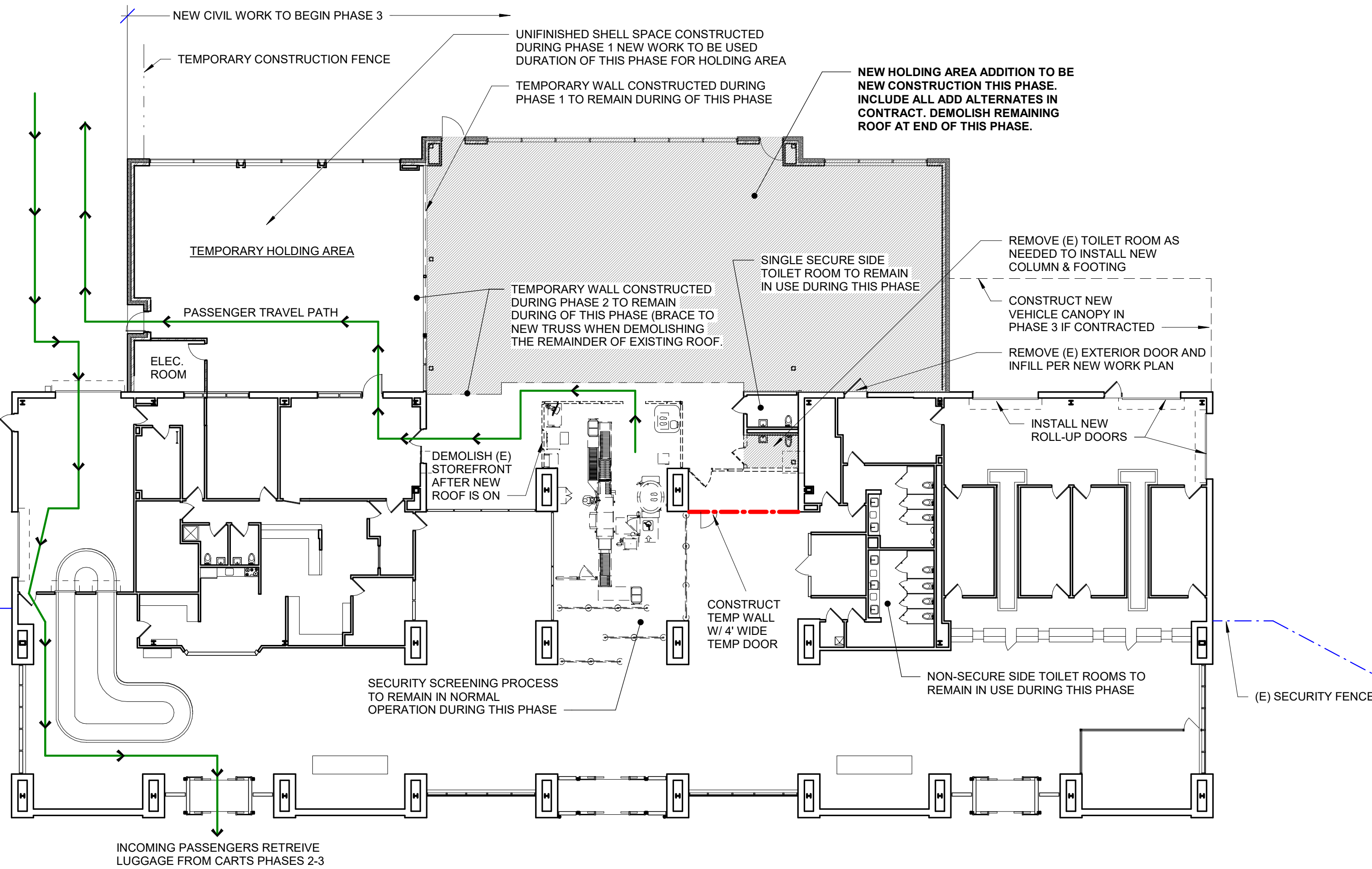
PHASE 1



PHASE 2



PHASE 3





**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.

6031 UNIVERSITY BLVD.  
SUITE 330  
ELLCOTT CITY, MD 21043  
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**BFM**

**BUSHEY FEIGHT MORIN ARCHITECTS**  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.  
  
License No. 6157  
Expiration Date: 09/07/2020

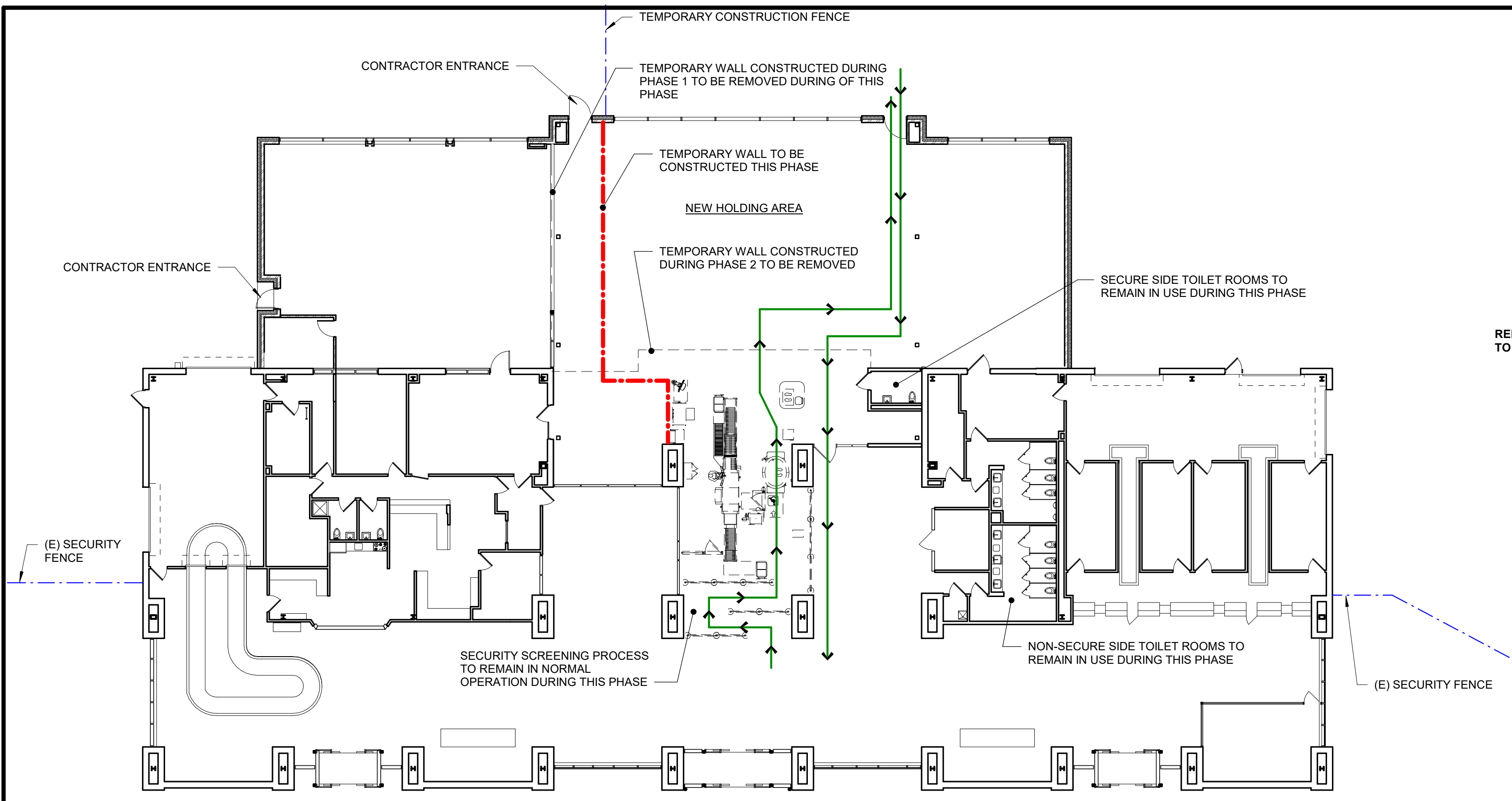
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APPROVED:			



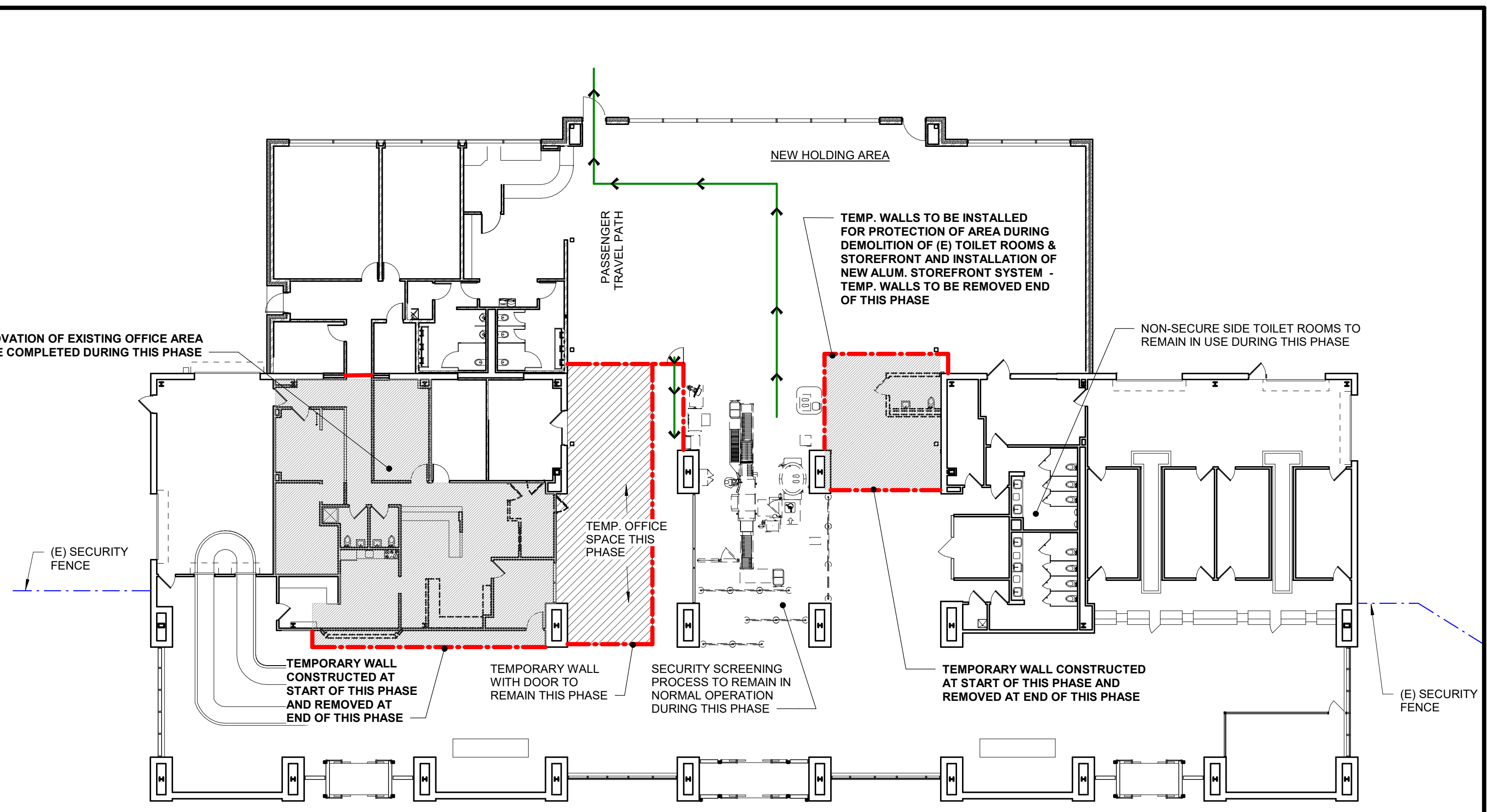
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SHEET TITLE:	BUILDING PHASING	
SCALE:	As indicated	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>GN03.101</b> 7 OF 117

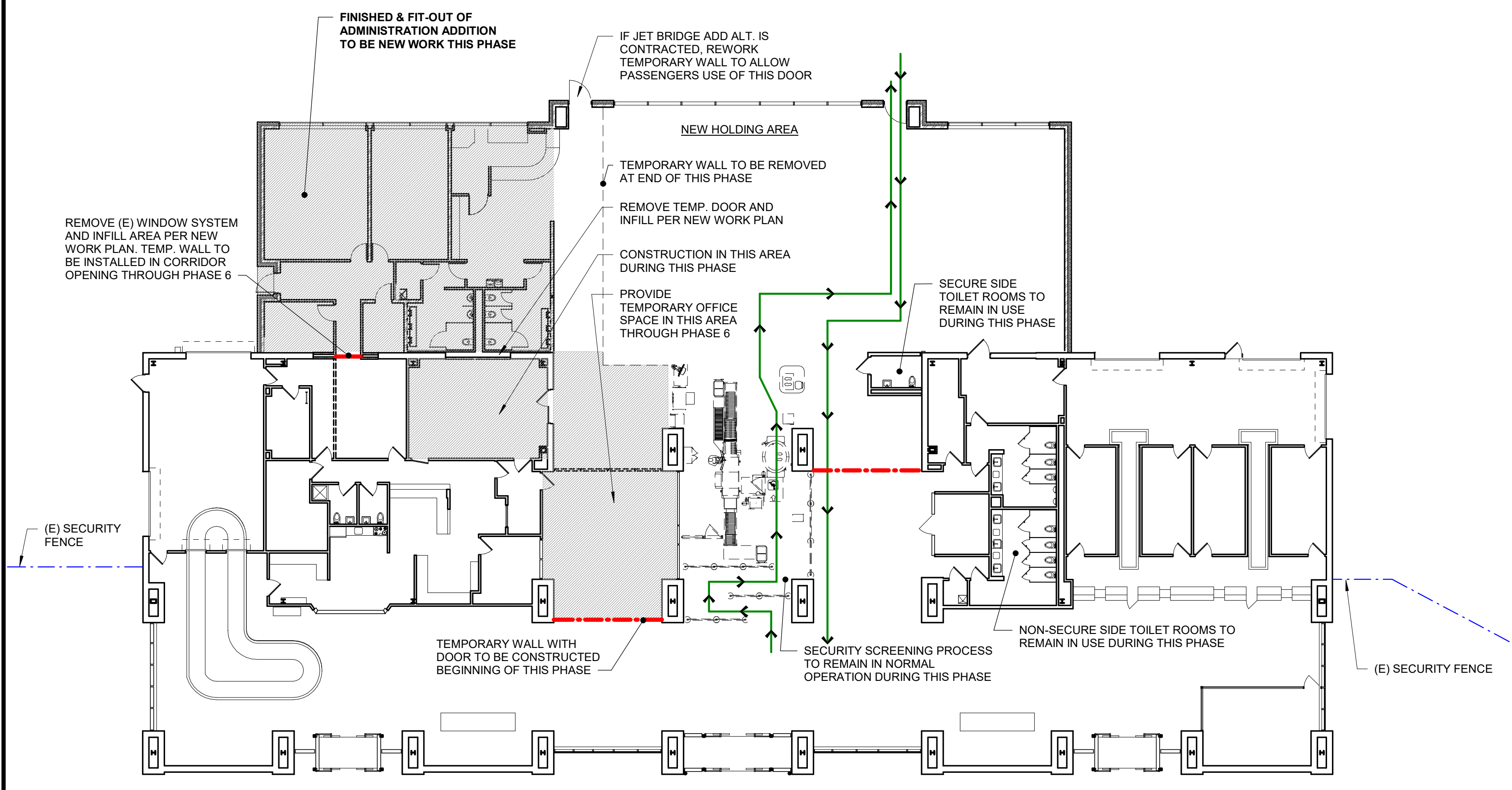




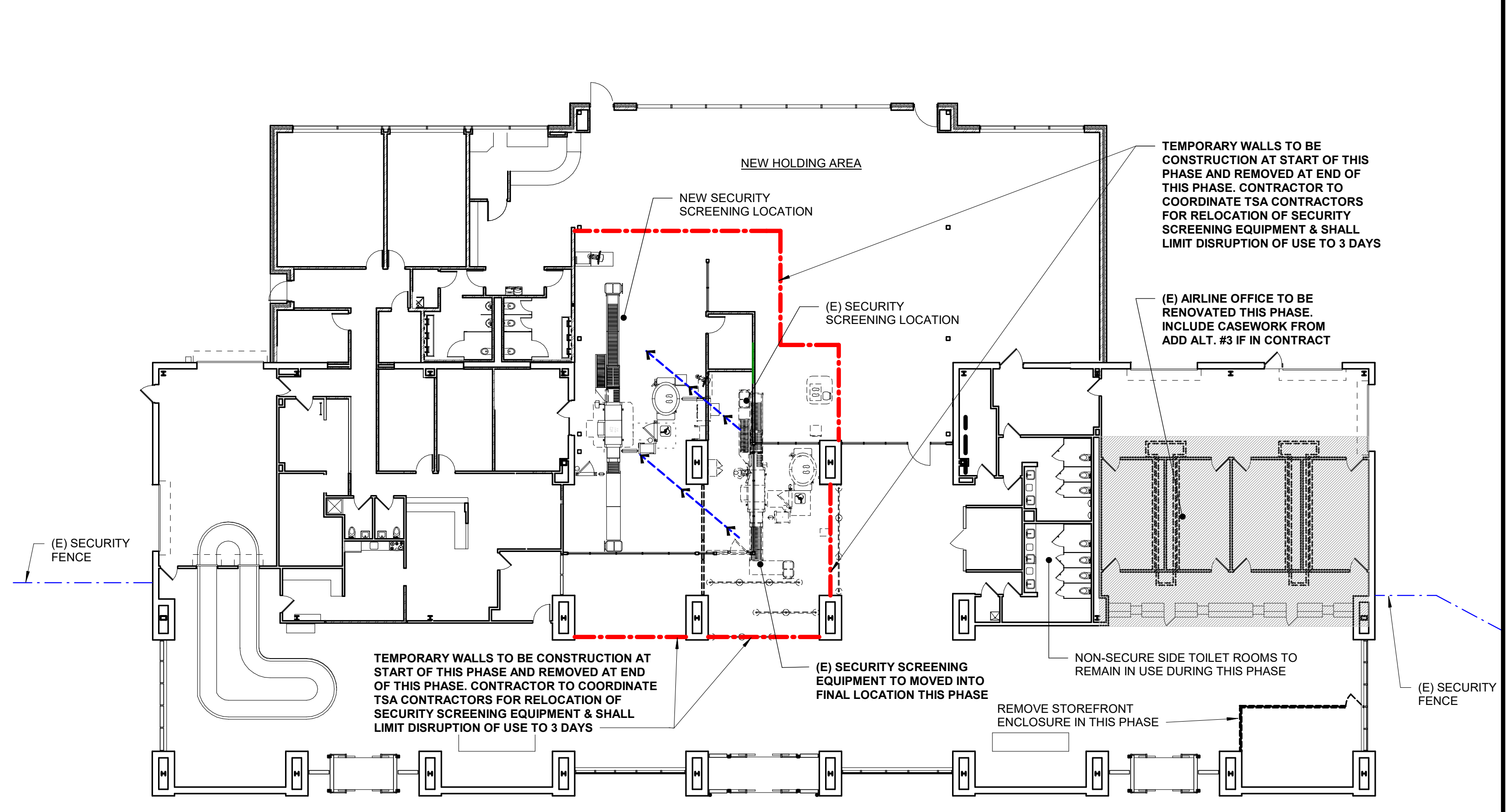
**PHASE 4**



**PHASE 6**

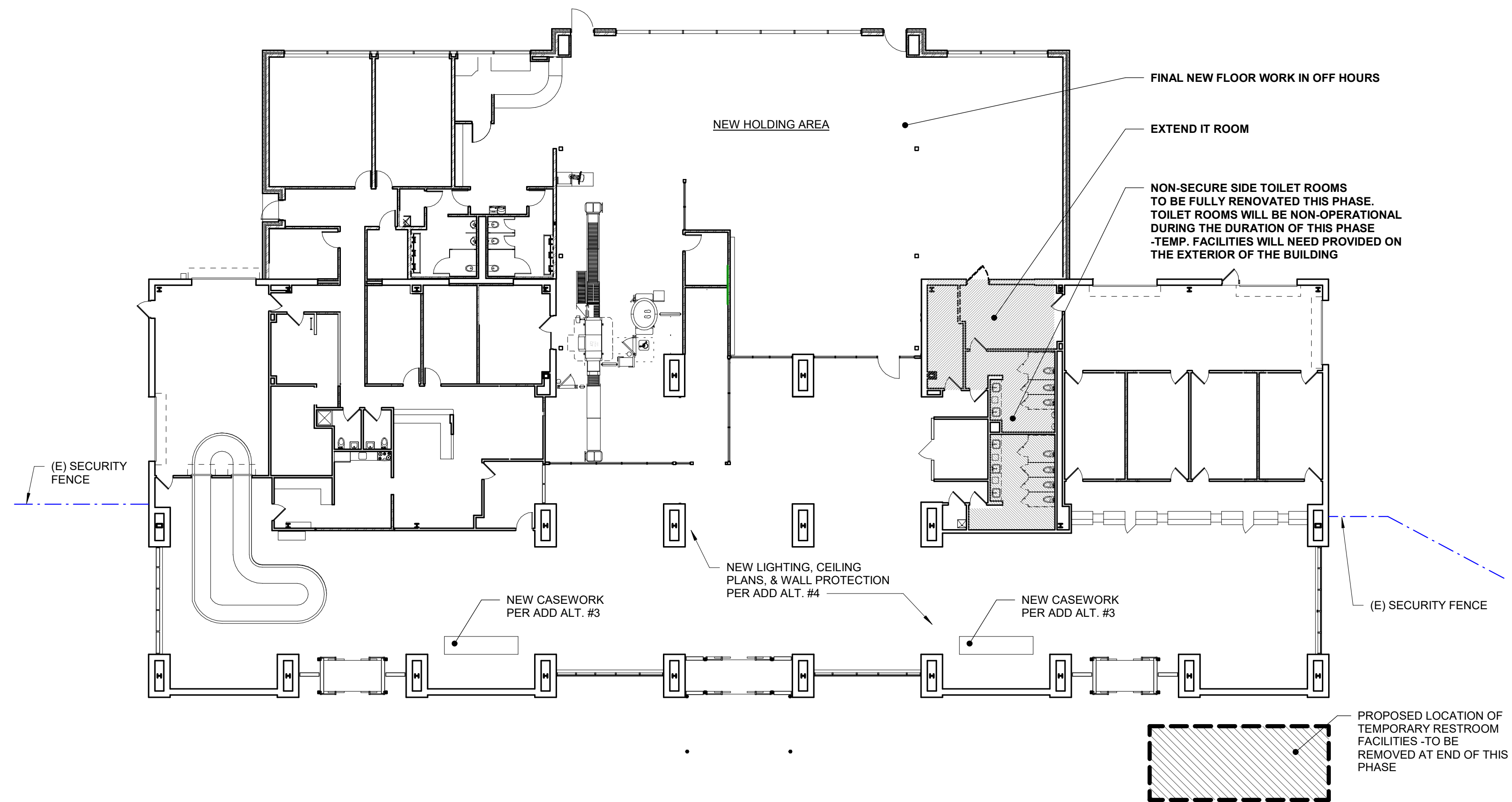


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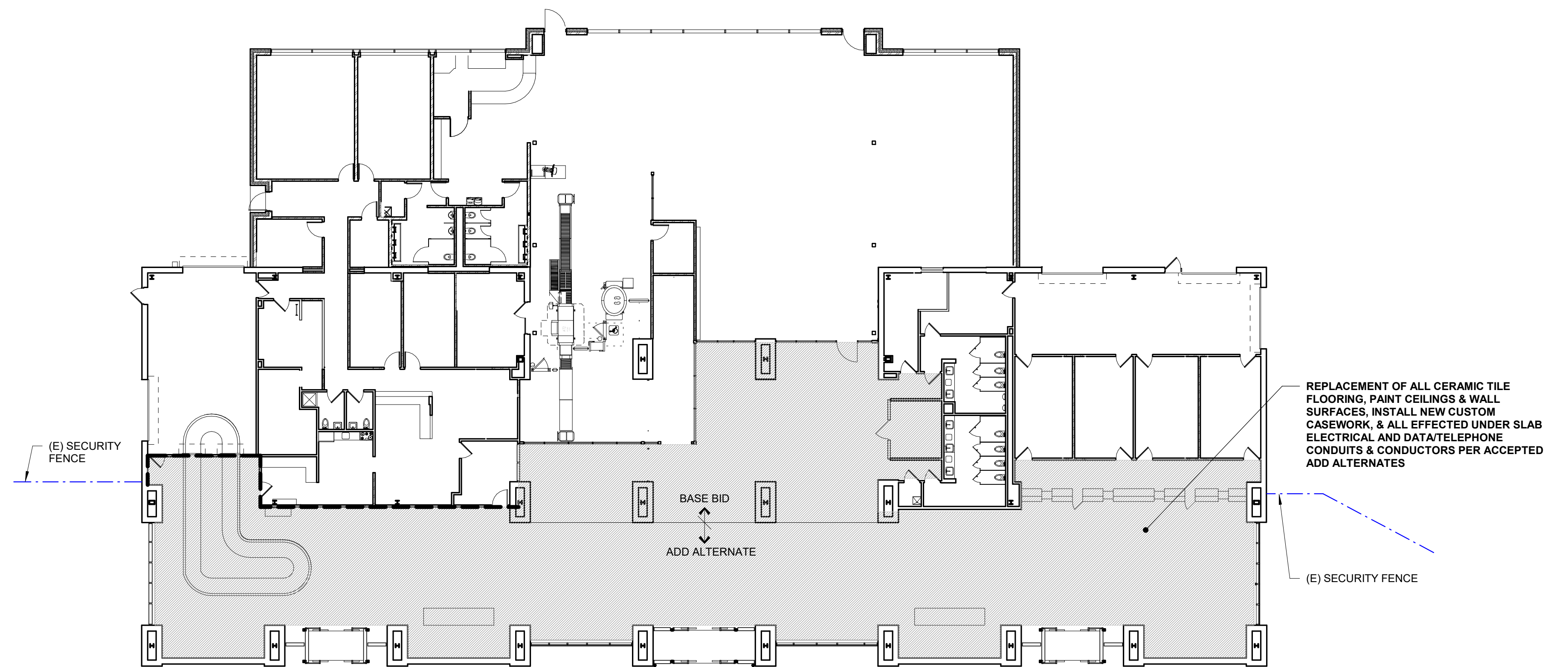


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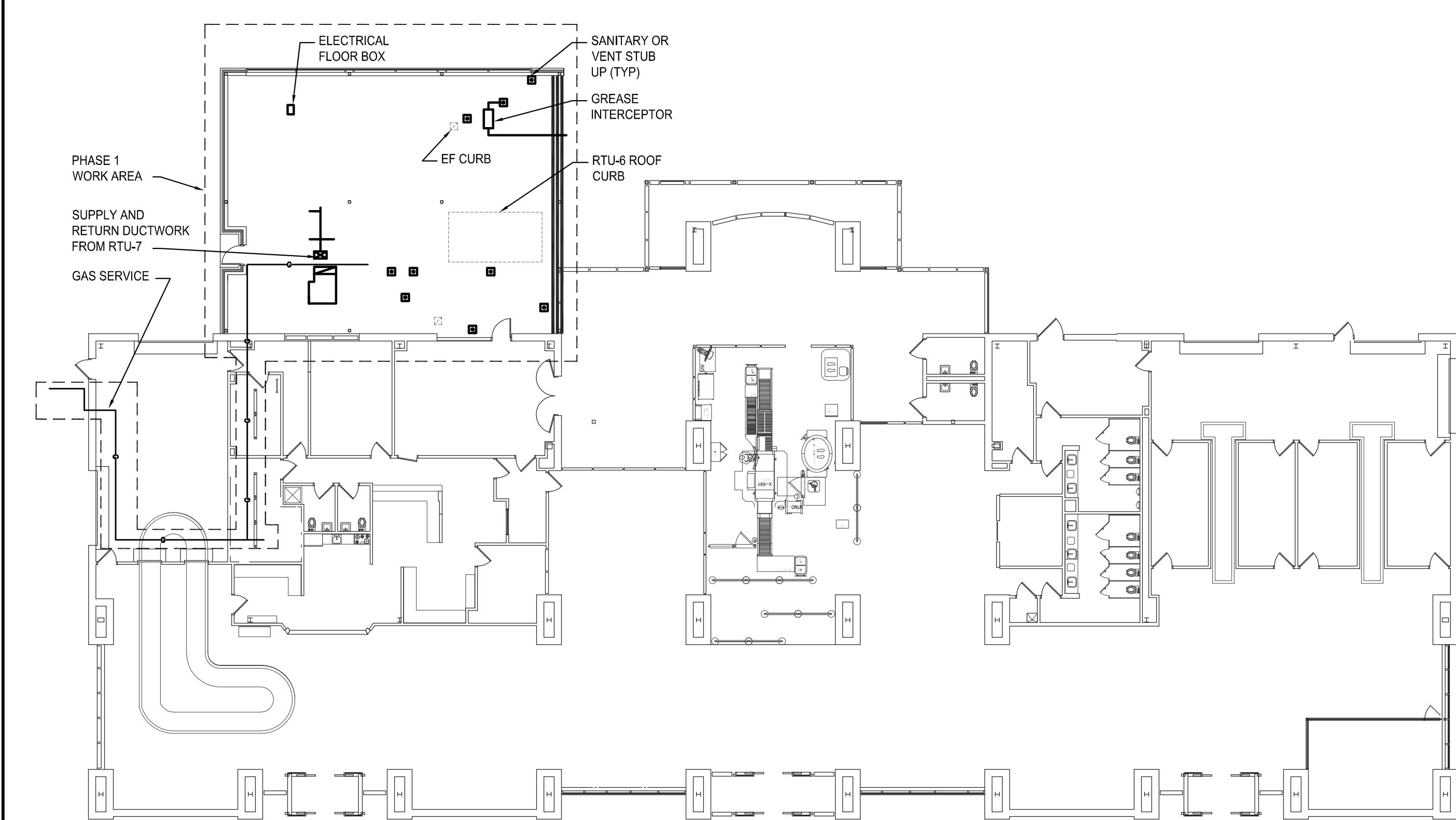


**PHASE 8**



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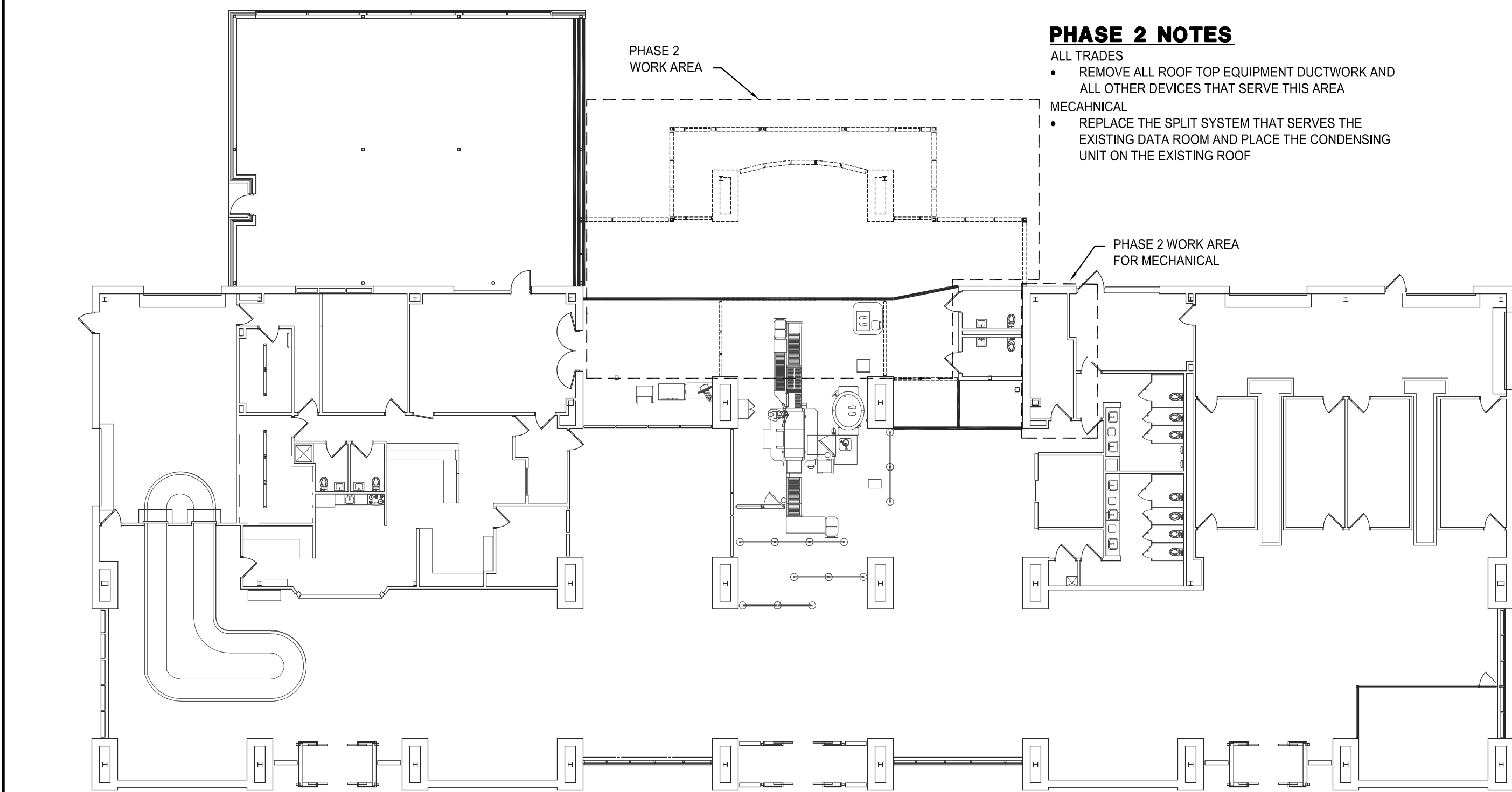




PHASE 1

PHASE 1 NOTES

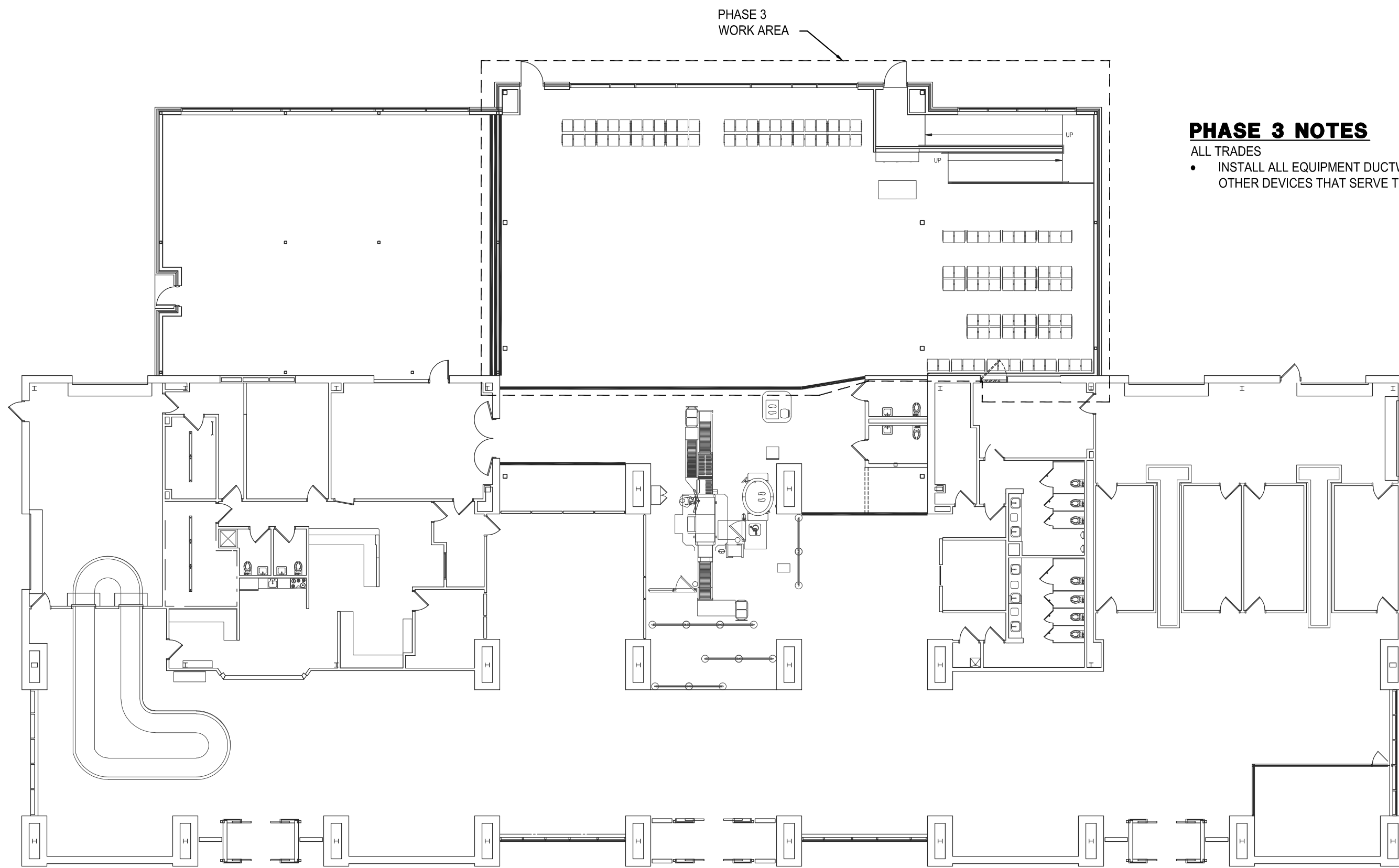
- MECHANICAL
- INSTALL RTU-7 ALONG WITH SUPPLY AND RETURN MAIN DUCTWORK
  - INSTALL ROOF CURBS FOR RTU-6, EXHAUST FANS, PIPE PORTAL
- ELECTRICAL
- INSTALL ALL UNDER FLOOR CONDUITS AND FLOOR BOX FOR FUTURE CONFERENCE ROOM
  - REMOVE EXISTING EXTERIOR LIGHT POLE AND WEST POWER UNIT
  - INSTALL EMERGENCY GENERATOR WITH ASSOCIATED PANELS AND CONDUITS (ALTERNATE BID NO 6)
  - EC SHALL PROVIDE TEMPORARY LIGHTING.
- PLUMBING
- INSTALL ALL UNDER FLOOR SANITARY AND VENT PIPING WITH BOX OUT OPEN AROUND ALL SANITARY AND VENT RISERS.
  - EXTEND THE SANITARY MAIN TO THE TEMPORARY WALL AND CAP FOR FUTURE EXTENSION.
  - INSTALL THE GREASE TAP AND ASSOCIATED UNDER FLOOR PIPING.
  - INSTALL THE NEW GAS LINE SERVICE AND EXTEND TO RTU-7
- FIRE PROTECTION
- INSTALL THE FIRE PROTECTION PIPING WITH UPRIGHT HEADS



PHASE 2

PHASE 2 NOTES

- ALL TRADES
- REMOVE ALL ROOF TOP EQUIPMENT DUCTWORK AND ALL OTHER DEVICES THAT SERVE THIS AREA
- MECHANICAL
- REPLACE THE SPLIT SYSTEM THAT SERVES THE EXISTING DATA ROOM AND PLACE THE CONDENSING UNIT ON THE EXISTING ROOF.



PHASE 3 NOTES

- ALL TRADES
- INSTALL ALL EQUIPMENT DUCTWORK, PIPING, AND ALL OTHER DEVICES THAT SERVE THIS AREA

PHASE NOTE

THE FMFP PHASING NOTES/PLANS ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE LOGISTICS NECESSARY TO SUPPORT THE DEMOLITION AND CONSTRUCTION STEPS OF THIS PROJECT. IT SHALL BE EACH INDIVIDUAL CONTRACTOR'S RESPONSIBILITY TO REFER TO THE ARCHITECTURAL PHASING PLANS AND SPECIFICATIONS FOR FULL OUTLINE AND DESCRIPTION OF PHASING STEPS. ALL TRADES' WORK SHALL FURTHER BE COORDINATED WITH THE RESIDENT PROJECT REPRESENTATIVE(RPR) TO INSURE THAT ALL SYSTEMS REMAIN ONLINE WHERE AND WHEN REQUIRED TO SUPPORT BOTH THE PROJECT SCHEDULE AND SHALL NOT INTERFERE WITH THE DAY TO DAY OPERATIONS OF THE AIRPORT. IF, AFTER REVIEW OF THE ARCHITECT'S PHASING AND FMFP DESIGN PLANS, THE CONTRACTOR DETERMINES THAT HE/SHE CAN COMPLETE SOME PORTION(S) EARLIER THAN PHASED, THIS SHALL BE BROUGHT UP TO THE ARCHITECT AND RPR FOR REVIEW AND ADVICE.

**ADCI** AIRPORT DESIGN CONSULTANTS INC. 6031 UNIVERSITY BLVD. SUITE 330 ELLICOTT CITY, MD 21043 PHONE: 410 - 465 - 9600 FAX: 410 - 465 - 9602

**CJL ENGINEERING** 232 Horner Street Johnstown, PA 15902 ph: (814)536-1651 fax: (814)536-5732 CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 25983  
Expiration Date: 3/30/2021

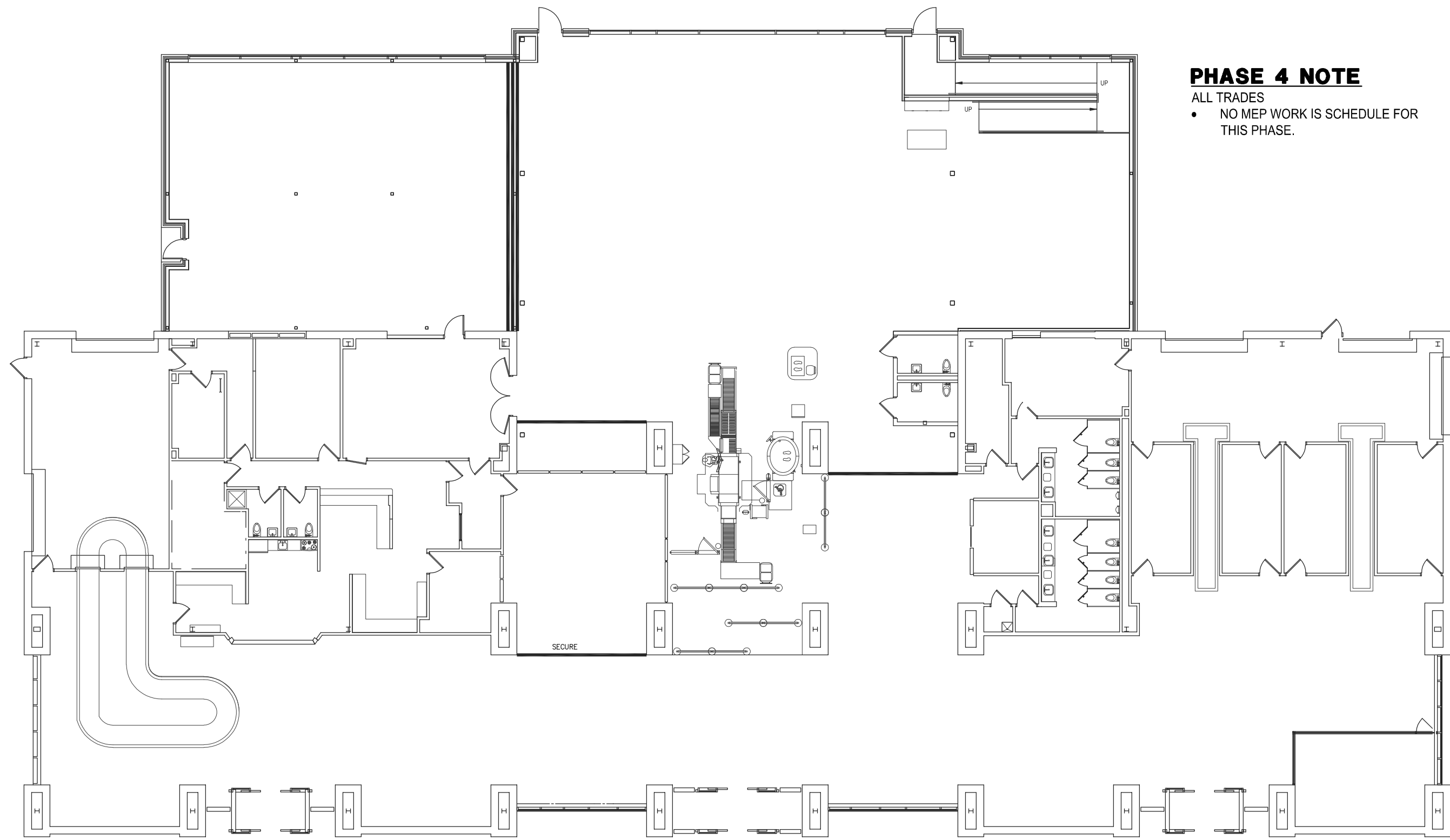
DESIGNED: JRK	No.	DATE	DESCRIPTION
DRAWN: JRK			
CHECKED: ABJT			
APPROVED: ABJT			



PROJECT TITLE:	
TERMINAL BUILDING EXPANSION	
SHEET TITLE:	
MEPFP PHASING - 1	
SCALE:	DATE:
1/16" = 1'-0"	MARCH 2019

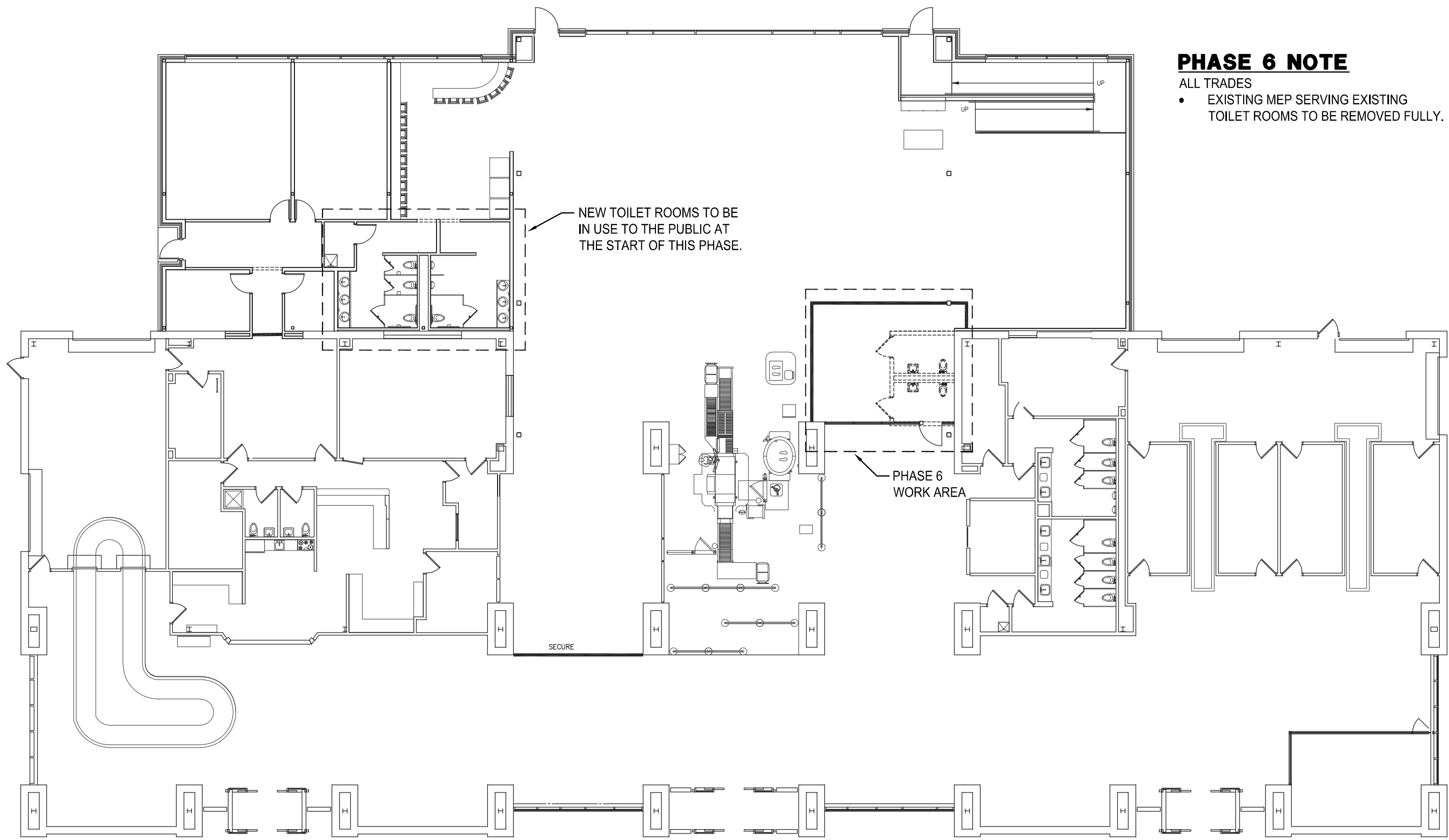
FAA AIP No.: 3 - 24 - 0019 - 059 - 2018 Bid No.: PUR - 1410 MAA Grant No.: MAA - GR - 19 - 009
SHEET No.: <b>GN03.104</b> 10 OF 117





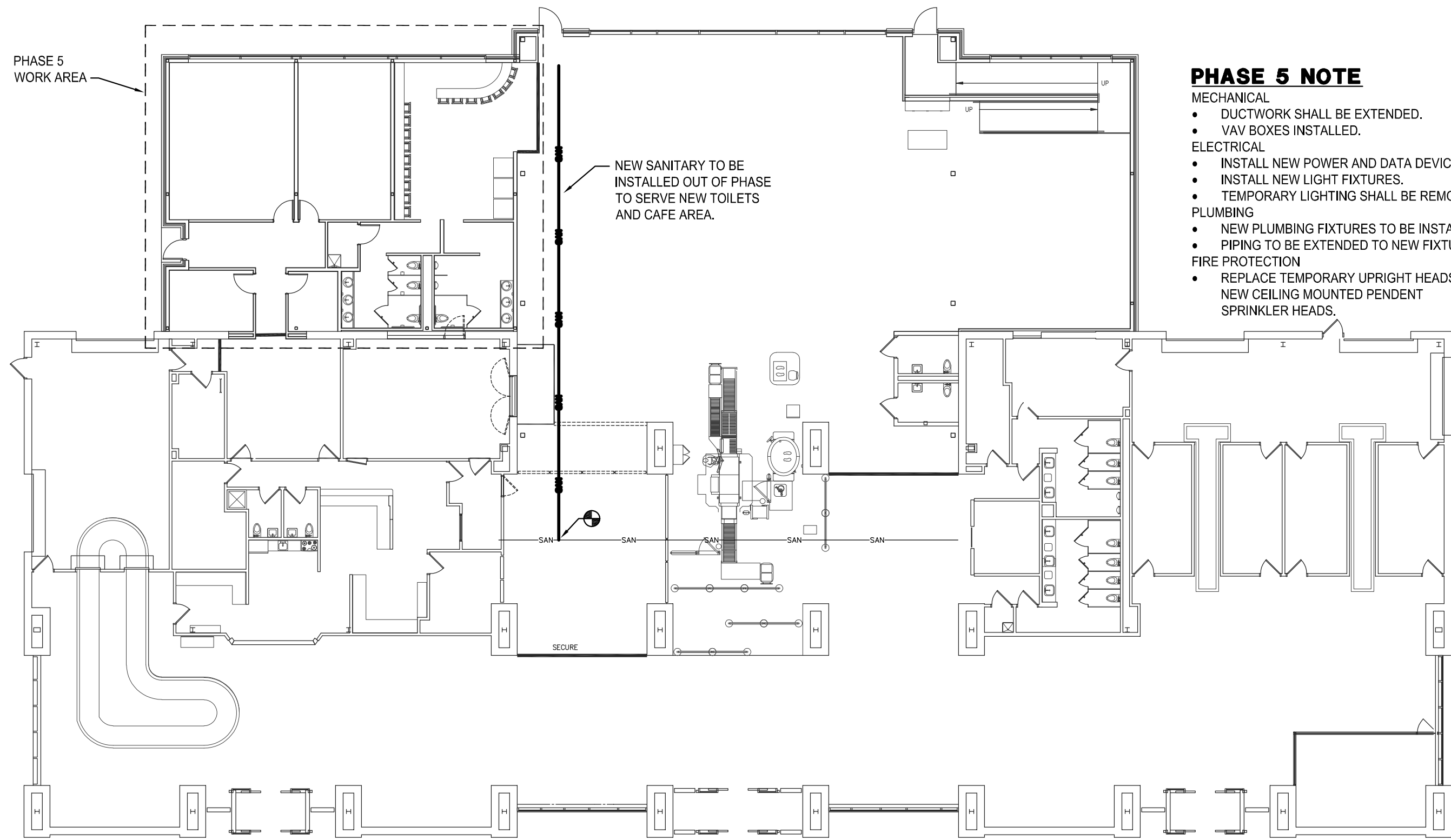
**PHASE 4 NOTE**  
ALL TRADES  
• NO MEP WORK IS SCHEDULE FOR THIS PHASE.

**PHASE 4**



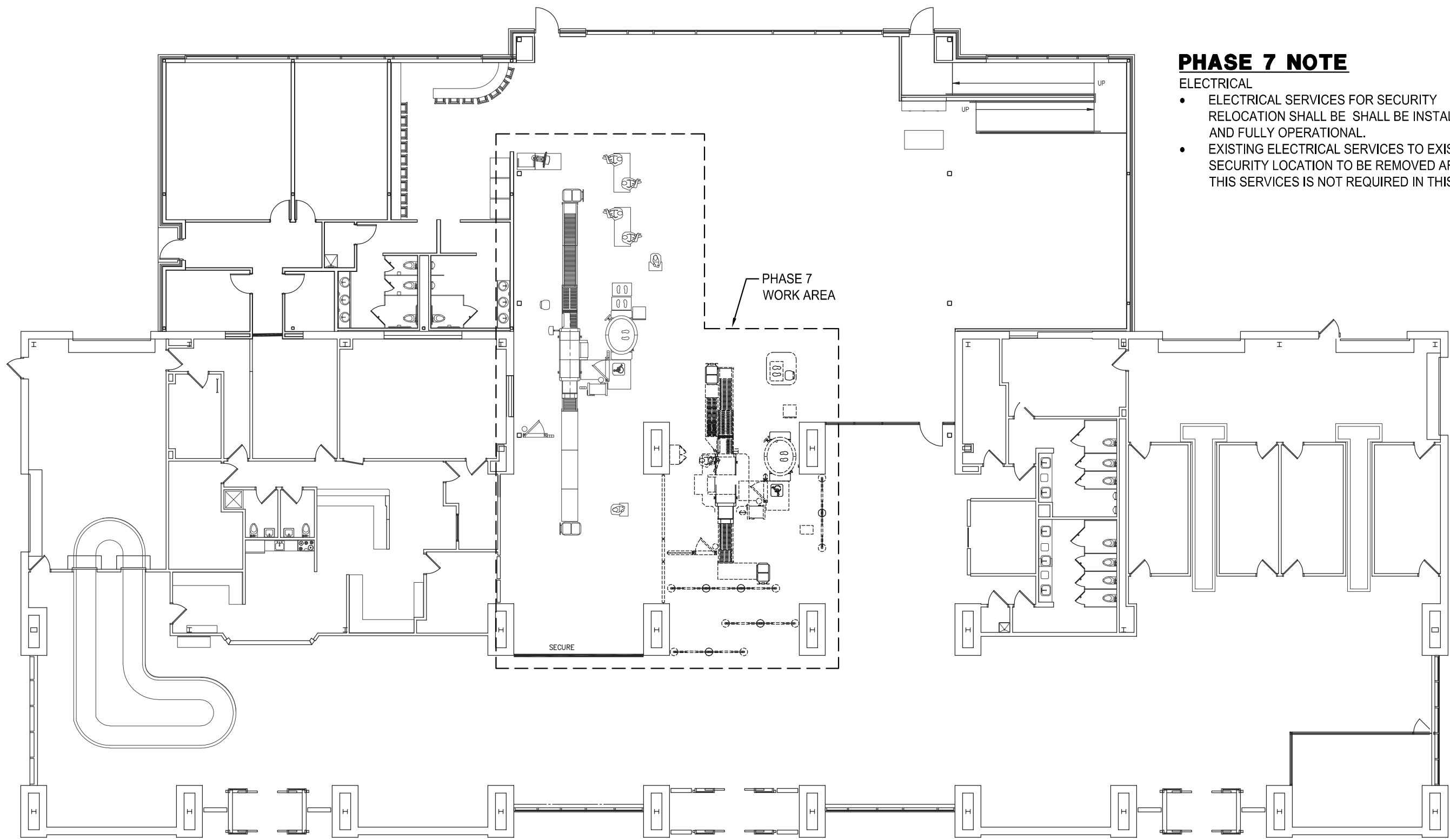
**PHASE 6 NOTE**  
ALL TRADES  
• EXISTING MEP SERVING EXISTING TOILET ROOMS TO BE REMOVED FULLY.

**PHASE 6**



**PHASE 5 NOTE**  
MECHANICAL  
• DUCTWORK SHALL BE EXTENDED.  
• VAV BOXES INSTALLED.  
ELECTRICAL  
• INSTALL NEW POWER AND DATA DEVICES.  
• INSTALL NEW LIGHT FIXTURES.  
• TEMPORARY LIGHTING SHALL BE REMOVED.  
PLUMBING  
• NEW PLUMBING FIXTURES TO BE INSTALLED.  
• PIPING TO BE EXTENDED TO NEW FIXTURES.  
FIRE PROTECTION  
• REPLACE TEMPORARY UPRIGHT HEADS WITH NEW CEILING MOUNTED PENDENT SPRINKLER HEADS.

**PHASE 5**



**PHASE 7 NOTE**  
ELECTRICAL  
• ELECTRICAL SERVICES FOR SECURITY RELOCATION SHALL BE SHALL BE INSTALLED AND FULLY OPERATIONAL.  
• EXISTING ELECTRICAL SERVICES TO EXISTING SECURITY LOCATION TO BE REMOVED AFTER THIS SERVICES IS NOT REQUIRED IN THIS AREA.

**PHASE 7**

**PHASE NOTE**  
THE FMPEP PHASING NOTES/PLANS ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE LOGISTICS NECESSARY TO SUPPORT THE DEMOLITION AND CONSTRUCTION STEPS OF THIS PROJECT. IT SHALL BE EACH INDIVIDUAL CONTRACTOR'S RESPONSIBILITY TO REFER TO THE ARCHITECTURAL PHASING PLANS AND SPECIFICATIONS FOR FULL OUTLINE AND DESCRIPTION OF PHASING STEPS. ALL TRADES WORK SHALL FURTHER BE COORDINATED WITH THE RESIDENT PROJECT REPRESENTATIVE TO INSURE THAT ALL SYSTEMS REMAIN ONLINE WHERE AND WHEN REQUIRED TO SUPPORT BOTH THE PROJECT SCHEDULE AND SHALL NOT INTERFERE WITH THE DAY TO DAY OPERATIONS OF THE AIRPORT. IF, AFTER REVIEW OF THE ARCHITECT'S PHASING AND FMPEP DESIGN PLANS, THE CONTRACTOR DETERMINES THAT HE/SHE CAN COMPLETE SOME PORTION(S) EARLIER THAN PHASED, THIS SHALL BE BROUGHT UP TO THE ARCHITECT AND RPR FOR REVIEW AND ADVISEMENT.



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.



**CJL ENGINEERING**

6031 UNIVERSITY BLVD.  
SUITE 330  
ELLCOTT CITY, MD 21043  
PHONE: 410 - 465 - 9600  
FAX: 410 - 465 - 9602

232 Horner Street  
Johnstown, PA 15902  
ph: (814)536-1651  
fax: (814)536-5732  
CJL Project # 18-0236

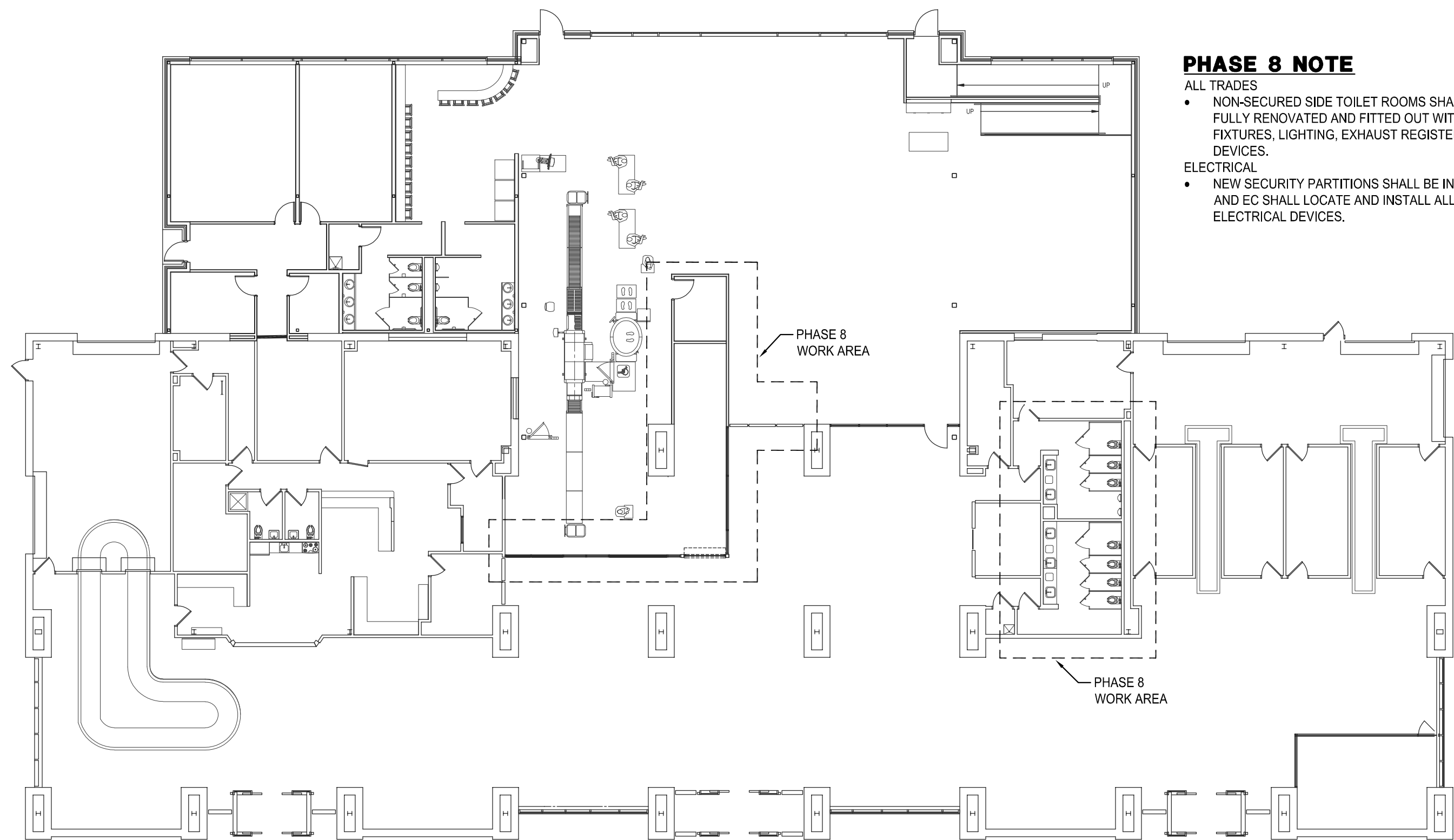
Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
  
License No. 25983  
Expiration Date: 3/30/2021

DESIGNED: JRK	No.	DATE	DESCRIPTION
DRAWN: JRK			
CHECKED: ABJT			
APPROVED: ABJT			

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>MEPFP PHASING - 2</b>	
SCALE: 1/16" = 1'-0"	DATE: MARCH 2019

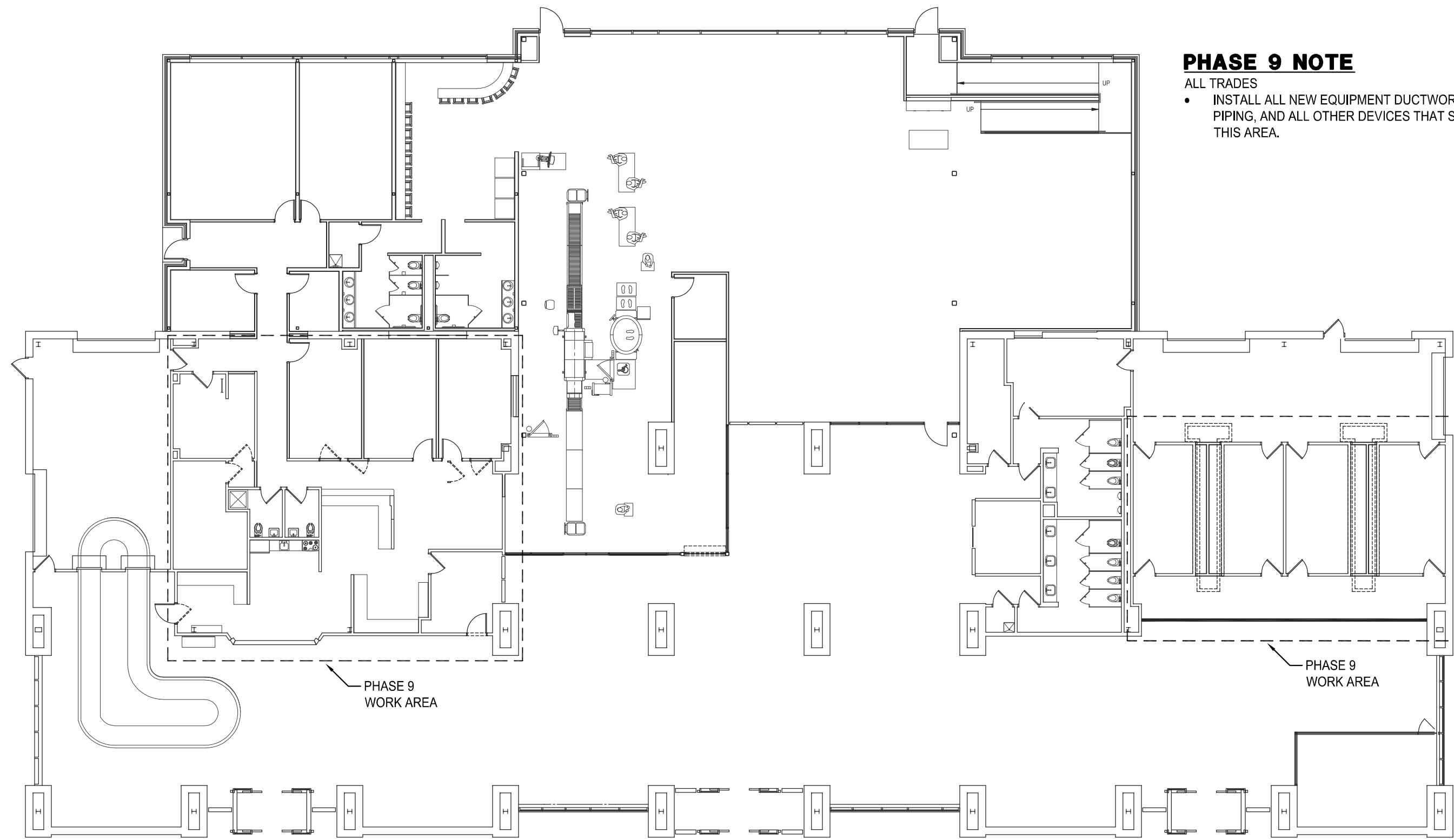
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SHEET No.: <b>GN03.105</b> 11 OF 117





- PHASE 8 NOTE**
- ALL TRADES
- NON-SECURED SIDE TOILET ROOMS SHALL BE FULLY RENOVATED AND FITTED OUT WITH NEW FIXTURES, LIGHTING, EXHAUST REGISTERS AND DEVICES.
- ELECTRICAL
- NEW SECURITY PARTITIONS SHALL BE INSTALLED AND EC SHALL LOCATE AND INSTALL ALL ELECTRICAL DEVICES.

**PHASE 8**



- PHASE 9 NOTE**
- ALL TRADES
- INSTALL ALL NEW EQUIPMENT DUCTWORK, PIPING, AND ALL OTHER DEVICES THAT SERVE THIS AREA.


**PHASE 9**

**PHASE NOTE**

THE FMFP PHASING NOTES/PLANS ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE LOGISTICS NECESSARY TO SUPPORT THE DEMOLITION AND CONSTRUCTION STEPS OF THIS PROJECT. IT SHALL BE EACH INDIVIDUAL CONTRACTOR'S RESPONSIBILITY TO REFER TO THE ARCHITECTURAL PHASING PLANS AND SPECIFICATIONS FOR FULL OUTLINE AND DESCRIPTION OF PHASING STEPS. ALL TRADES' WORK SHALL FURTHER BE COORDINATED WITH THE RESIDENT PROJECT REPRESENTATIVE(RPR) TO INSURE THAT ALL SYSTEMS REMAIN ONLINE WHERE AND WHEN REQUIRED TO SUPPORT BOTH THE PROJECT SCHEDULE AND SHALL NOT INTERFERE WITH THE DAY TO DAY OPERATIONS OF THE AIRPORT. IF, AFTER REVIEW OF THE ARCHITECT'S PHASING AND FMFP DESIGN PLANS, THE CONTRACTOR DETERMINES THAT HE/SHE CAN COMPLETE SOME PORTION(S) EARLIER THAN PHASED, THIS SHALL BE BROUGHT UP TO THE ARCHITECT AND RPR FOR REVIEW AND ADVISEMENT.



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License No. 25983  
Expiration Date: 3/30/2021

DESIGNED: JRK	No.	DATE	DESCRIPTION
DRAWN: JRK			
CHECKED: ABJT			
APPROVED: ABJT			



PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>MEPFP PHASING - 3</b>	
SCALE: 1/16" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3 - 24 - 0019 - 059 - 2018 Bid No.: PUR - 1410 MAA Grant No.: MAA - GR - 19 - 009
SHEET No.: <b>GN03.106</b> 12 OF 117



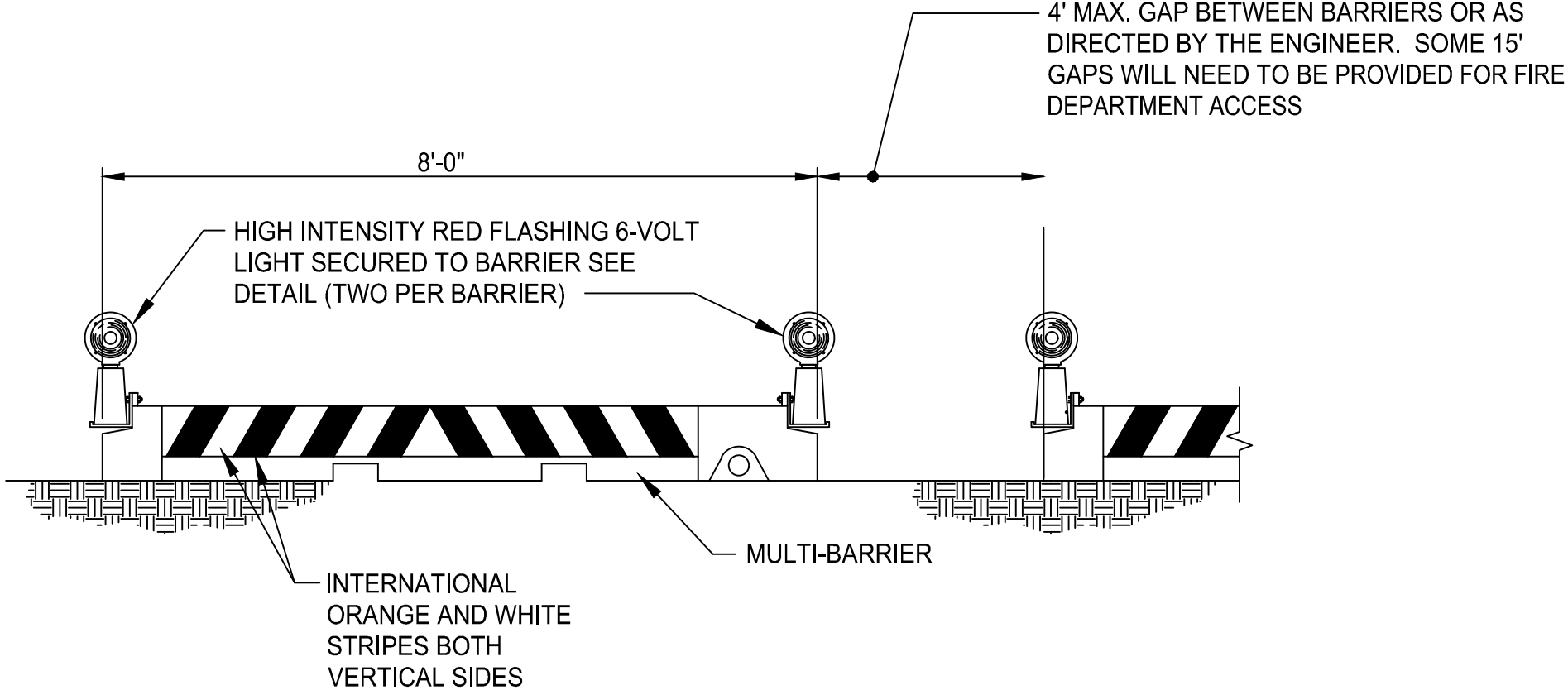
GENERAL PHASING NOTES:

1. THE INTENT OF THE PHASING PLAN IS TO MINIMIZE THE IMPACT OF CONSTRUCTION ON THE OPERATION OF THE AIRPORT. THE CONTRACTOR SHALL CONSTRUCT THE PROJECT AS OUTLINED IN THE PLANS UNLESS OTHERWISE APPROVED BY THE ENGINEER. ADJUSTMENTS TO THE PHASING PLAN MAY BE NECESSARY TO ACCOMMODATE UNFORESEEN PROBLEMS WITH AIRPORT OPERATION.
2. THE CONTRACTOR SHALL PROVIDE, MAINTAIN, MOVE, REMOVE (AS DIRECTED) CONSTRUCTION BARRIERS TO DELINEATE AREAS CLOSED TO AIRCRAFT TRAFFIC AND TO MARK ALL OPEN EXCAVATIONS, PAVEMENT DROP-OFFS ETC.
3. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE FOR REVIEW AND APPROVAL OF THE ENGINEER PRIOR TO STARTING CONSTRUCTION. STRICT ADHERENCE TO THE APPROVED SCHEDULE WILL BE ENFORCED TO AVOID CONFLICTS WITH OTHER CONSTRUCTION ACTIVITIES AND ADVERSE EFFECTS ON AIRPORT OPERATIONS.
4. ELECTRICAL WORK SHALL BE SEQUENCED TO MAINTAIN ALL ELECTRICAL SYSTEMS WITHOUT ANY INTERRUPTIONS. TEMPORARY WIRING IF REQUIRED SHALL BE INCIDENTAL TO THE CORRESPONDING ELECTRICAL. ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE ENGINEER AND THE AIRPORT MAINTENANCE DEPARTMENT.
5. EROSION AND SEDIMENT CONTROL DEVICES MUST BE IN PLACE PRIOR TO THE START OF GRADING OPERATIONS.
6. ACTIVE PAVEMENTS MUST BE KEPT CLEAR AND FREE OF DEBRIS AT ALL TIMES. THE CONTRACTOR MUST HAVE A VACUUM SWEEPER AND OPERATOR READY AT ALL TIMES DURING WORK ADJACENT TO ACTIVE AIRFIELD PAVEMENTS.
7. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE FAA ADVISORY CIRCULARS AND FEDERAL AVIATION REGULATIONS. PAY PARTICULAR ATTENTION TO FAA AC 5370-2G.
8. MAXIMUM EQUIPMENT HEIGHTS FOR ACTIVE WORK AREAS AND STAGING AREA ARE LIMITED BY FAR PART 77 AND OBSTACLE FREE ZONE (OFZ) SURFACES IDENTIFIED ON THIS SHEET.
9. DUST ON CONSTRUCTION PROJECTS IS A MAJOR PROBLEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON-SITE AT ALL TIMES ON A CONTINUOUS BASIS. THE CONTRACTOR MUST SUBMIT A DETAILED DUST CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK. THE COST FOR THIS WORK SHALL BE INCLUDED UNDER VARIOUS CONTRACT ITEMS.

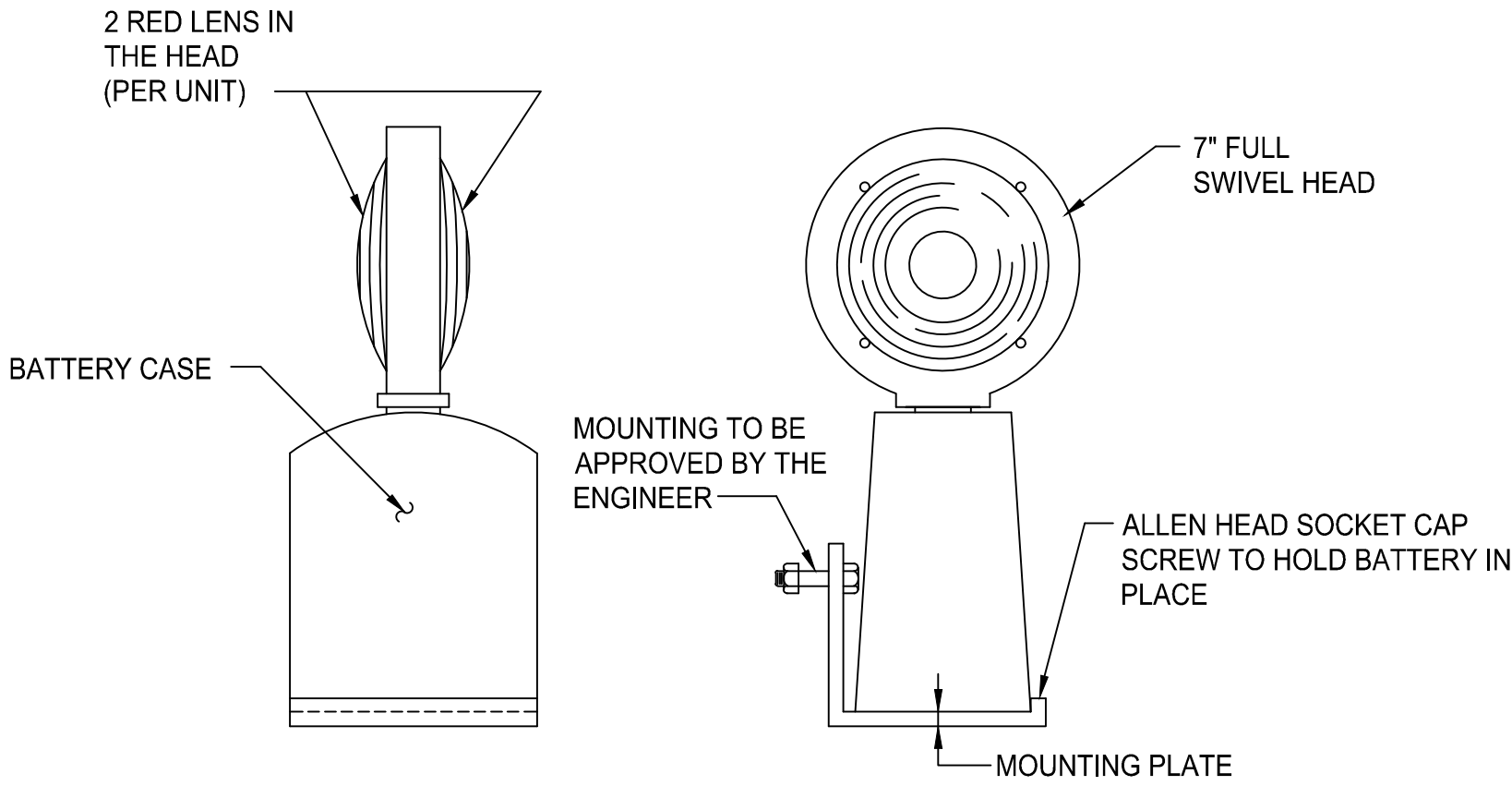
SUPERVISION:

THE PRIME CONTRACTOR SHALL HAVE THE PROJECT SUPERINTENDENT OR SOMEONE IN RESPONSIBLE CHARGE BE PRESENT AT ALL TIMES ON THE PROJECT SITE. THIS PERSON SHALL BE FAMILIAR WITH ALL TYPES OF CONSTRUCTION BEING PERFORMED AND SHALL BE THE SAME PERSON EACH DAY THROUGHOUT THE PROJECT. THE SUPERINTENDENT SHALL HAVE THE RESPONSIBILITY OF COORDINATING EACH DAY'S WORK WITH THE ENGINEER AND AIRPORT PERSONNEL AND SHALL HAVE AUTHORITY TO SCHEDULE AND ADJUST ALL WORKERS, PRIME AND SUB CONTRACTORS, TO ACCOMMODATE AIRPORT OPERATION AS DIRECTED BY THE ENGINEER AND/OR AIRPORT PERSONNEL.

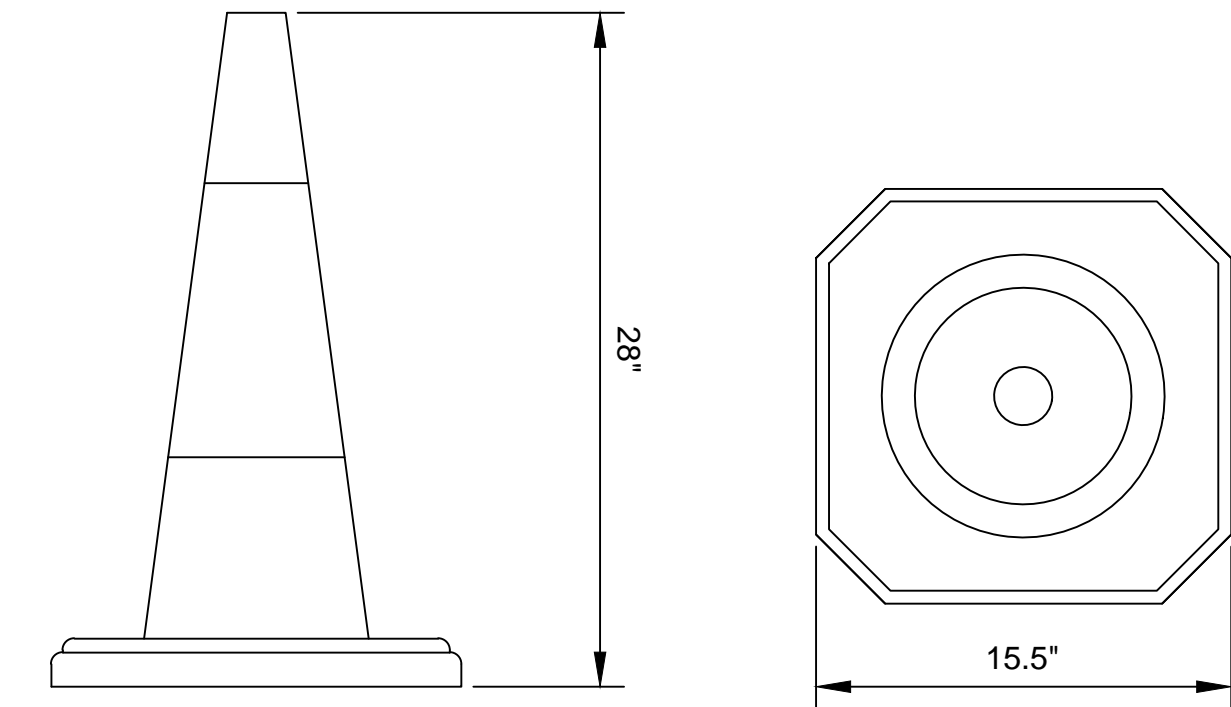
ALL WORK MUST BE PERFORMED WITH THE ENGINEER AND/OR AIRPORT PERSONNEL ON THE SITE. WORK DURING EVENINGS AND WEEKENDS MUST BE COORDINATED WITH THE ENGINEER AND AIRPORT PERSONNEL AT LEAST 7 DAYS IN ADVANCE, EXCLUDING EMERGENCIES AND INCLEMENT WEATHER CONDITIONS. ALL PERSONNEL SHALL CLEAR THE CONSTRUCTION AREA ONCE WORK HAS STOPPED FOR THE DAY. ALL MECHANICS NEEDING ACCESS TO THE AIR OPERATIONS AREA DURING EVENINGS AND WEEKENDS TO WORK ON CONSTRUCTION EQUIPMENT SHALL HAVE A PICTURED IDENTIFICATION BADGE, RECEIVE DRIVING PRIVILEGES, AND HAVE THEIR VEHICLES IDENTIFIED WITH THE CONTRACTOR NAME OR MAGNETIC PLACARD ISSUED BY THE AIRPORT OPERATIONS.



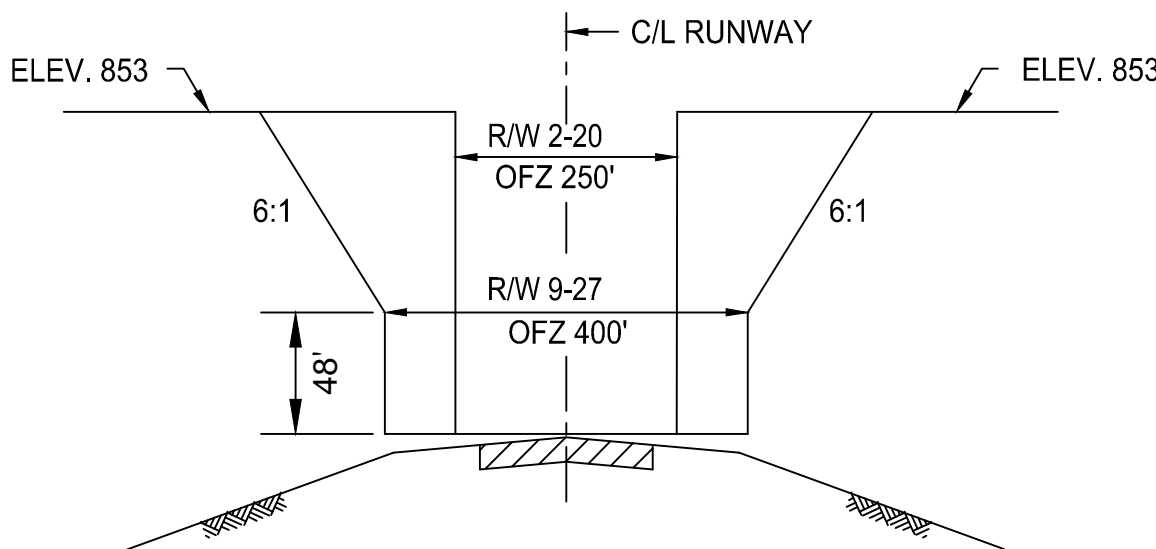
1 POLYETHYLENE CONSTRUCTION BARRIERS  
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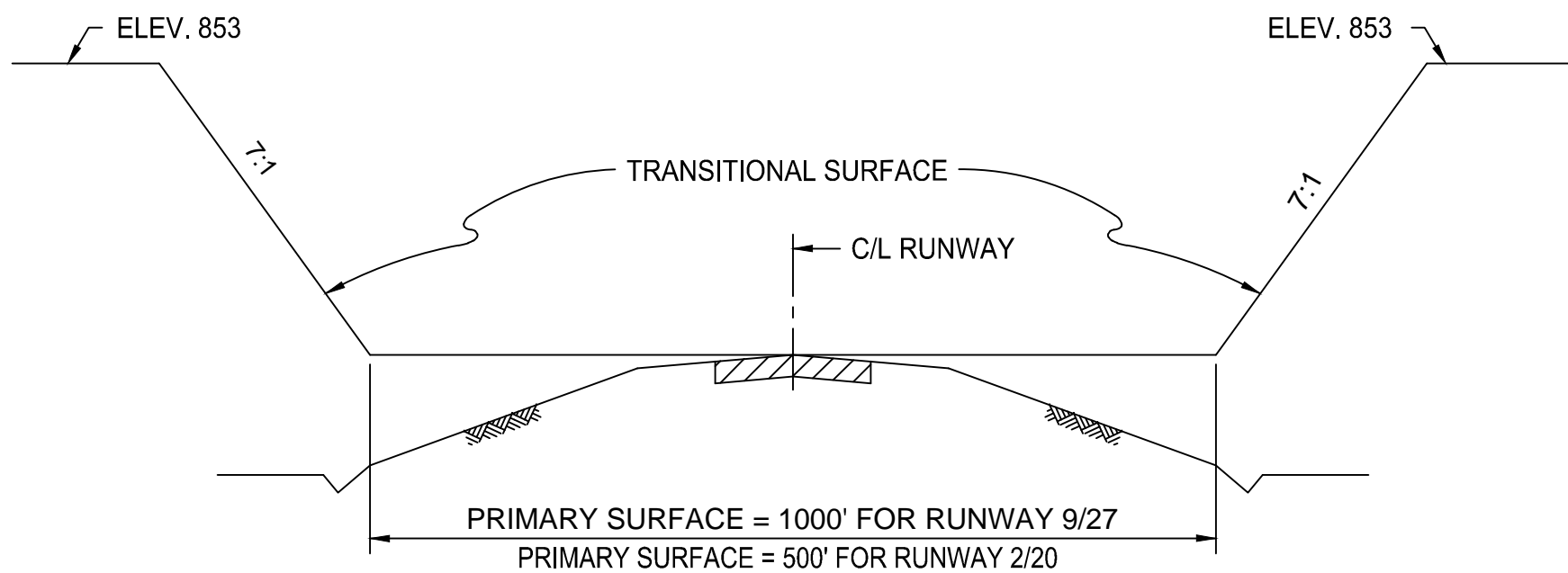
2 TEMPORARY BARRIER LIGHT DETAIL  
GN02.400 NOT TO SCALE



3 STANDARD 28" TRAFFIC CONE DETAIL  
GN02.400 (NOT TO SCALE)



4 TYPICAL SECTION OBSTACLE FREE ZONE  
GN02.400 NOT TO SCALE



5 TYPICAL SECTION F A R PART 77 IMAGINARY SURFACES  
GN02.400 NOT TO SCALE



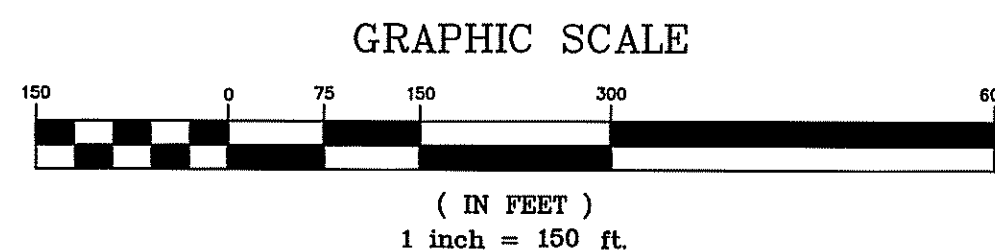
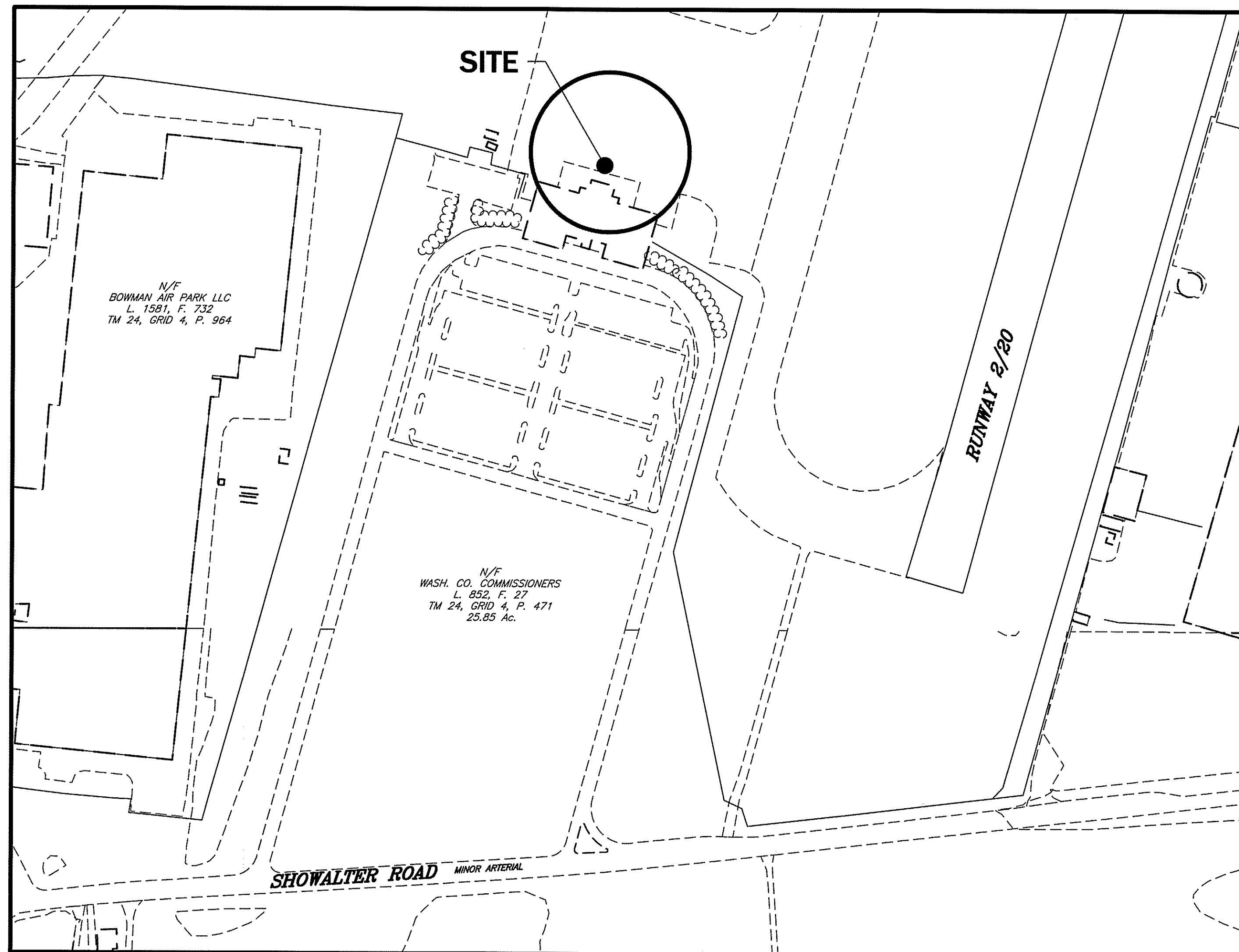
## GENERAL NOTES

1. NO SUBSURFACE INVESTIGATION HAS BEEN PERFORMED BY FOX & ASSOCIATES, INC. TO DETERMINE THE EXISTENCE OR LOCATION OF GROUND WATER, ROCK OR OTHER NATURAL OR MAN-MADE FEATURES, EXCEPT AS SPECIFICALLY INDICATED. NO ENVIRONMENTAL STUDIES HAVE BEEN CONDUCTED BY OUR FIRM.
2. EXISTING UTILITY INFORMATION SHOWN HEREON IS FROM DRAWINGS AND/OR OTHER SOURCES PROVIDED BY OWNERS OF THE VARIOUS UTILITIES EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT (1-800-257-7777) A MINIMUM OF 48 HOURS BEFORE BEGINNING ANY WORK SHOWN ON THESE DRAWINGS. ANY DAMAGE TO UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE UTILITY OWNER. HAND PIT EXCAVATION SHALL BE PROVIDED AS NEEDED BY CONTRACTOR TO LOCATE EXISTING UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE MUNICIPAL, COUNTY AND/OR STATE AUTHORITIES AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK WITHIN PUBLIC RIGHT (S) OF WAY.
4. THE CONTRACTOR SHALL VERIFY ALL SURFACE AND SUBSURFACE CONDITIONS (LOCATIONS AND ELEVATIONS) PRIOR TO BIDDING AND START OF CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER BEFORE PROCEEDING IF THEY AFFECT THE DESIGN FEASIBILITY OF THIS PROJECT. ANY DAMAGE TO FACILITIES, STRUCTURES, PAVEMENT OR OTHER MAN-MADE ITEMS ON OR ADJACENT TO THE SITE OR NOT SPECIFICALLY INDICATED FOR THE DEMOLITION SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR COMPLYING WITH ALL APPLICABLE LEGAL AND REGULATORY REQUIREMENTS. CONTRACTOR SHALL OBTAIN ANY BONDS REQUIRED BY COUNTY/STATE FOR WORK WITHIN COUNTY/STATE RIGHT-OF-WAYS.
6. TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT ARE UNOBTAINED DURING THE DESIGN STAGE, OR THAT ARE NEEDED TO TEMPORARILY CONTROL EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION PRACTICES.
7. FOX & ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR ANYTHING TO DO WITH CONSTRUCTION UNLESS CONTRACTED BY THE OWNER OR CONTRACTOR TO PERFORM A SPECIFIC SERVICE.
8. JOB SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. EXISTING UTILITIES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BEFORE BEGINNING CONSTRUCTION.
10. NO TITLE REPORT HAS BEEN CONDUCTED BY THIS COMPANY OR FURNISHED TO US BY OTHERS. PROPERTY LINE INFORMATION HAS BEEN TAKEN FROM DEED (S) OF RECORD AND NOT FIELD VERIFIED.
11. SITE CONTRACTOR MAY HAVE TO MODIFY FINISH GRADES SHOWN NEXT TO BUILDINGS DUE TO TYPE OF WALL CONSTRUCTION PROVIDED. GENERALLY A MINIMUM FINISH GRADE 6 INCHES BELOW FINISH FLOOR FOR MASONRY CONSTRUCTION AND 12 INCHES BELOW FINISH FLOOR FOR WOODSIDING CONSTRUCTION SHOULD BE MAINTAINED. CONTRACTOR MUST PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM ALL UNITS.
12. ALL GRADING FOR THIS PROJECT SHALL BE THE FULL RESPONSIBILITY OF THE PROPERTY OWNER.
13. ALL PROPOSED STORM DRAIN PIPES MUST BE PLACED ON 95% COMPACTED FILL ACCORDING TO MASHTO T1804 STANDARDS.
14. PARKING AND DRIVE AISLES SHALL BE MAINTAINED BY PROPERTY OWNER.
15. NO PERMANENT STRUCTURES (E.G. FENCES, SHEDS, PLAY EQUIPMENT, RETAINING WALLS) SHALL BE PERMITTED WITHIN ANY STORMWATER OR STORM DRAINAGE EASEMENT ON THIS PROPERTY.
16. THERE IS NO 100 YEAR FLOODPLAIN ON THIS SUBJECT PROJECT AREA AS SHOWN ON FEMA PANEL No. 24043C0128D EFFECTIVE DATE AUGUST 15, 2017.
17. THERE ARE NO KNOWN HABITATS OF THREATENED OR ENDANGERED SPECIES IDENTIFIED BY THE U.S. FISH AND WILDLIFE SERVICE PER 50 CFR AS REQUIRED TO BE SHOWN BY SECTION 314 OF THE SUBDIVISION ORDINANCE AND SECTION 4.21 OF THE ZONING ORDINANCE.
18. THERE ARE NO AREAS OF STEEP SLOPES AS DEFINED BY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT PER ARTICLE 28.631 ON THE LANDS SHOWN HEREON. THERE ARE NO WETLANDS ON THIS SITE PER MAPPING BY THE U.S. DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE.
19. A COMPLETE SET OF APPROVED PLANS AND A COPY OF THE THE GRADING PERMIT MUST BE ON SITE AND AVAILABLE FOR USE BY THE INSPECTOR, OR OTHER REPRESENTATIVES OF WASHINGTON COUNTY PUBLIC WORKS.
20. A PRE-CONSTRUCTION MEETING SHALL BE HELD FOR ALL PROJECTS REGARDLESS OF THE AMOUNT OF DISTURBANCE. CONTACT THE WASHINGTON COUNTY DIVISION OF PUBLIC WORKS - ENGINEERING & CONSTRUCTION AT 240-313-2400 FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION.
21. THERE ARE NO KNOWN FOREST CONSERVATION AREAS OR WETLANDS WITHIN 200 FT. OF THE PROPOSED CONSTRUCTION AREA.

## SITE PLAN

# HAGERSTOWN REGIONAL AIRPORT TERMINAL EXPANSION

SITUATE AT 18434 SHOWALTER ROAD, HAGERSTOWN, MD 21742  
ELECTION DISTRICT 13  
WASHINGTON COUNTY, MARYLAND



## OWNER / DEVELOPER

WASHINGTON COUNTY COMMISSIONERS  
100 WEST WASHINGTON STREET  
HAGERSTOWN, MD 21740  
240-313-2200

## Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 27053

Expiration Date: 01/15/20

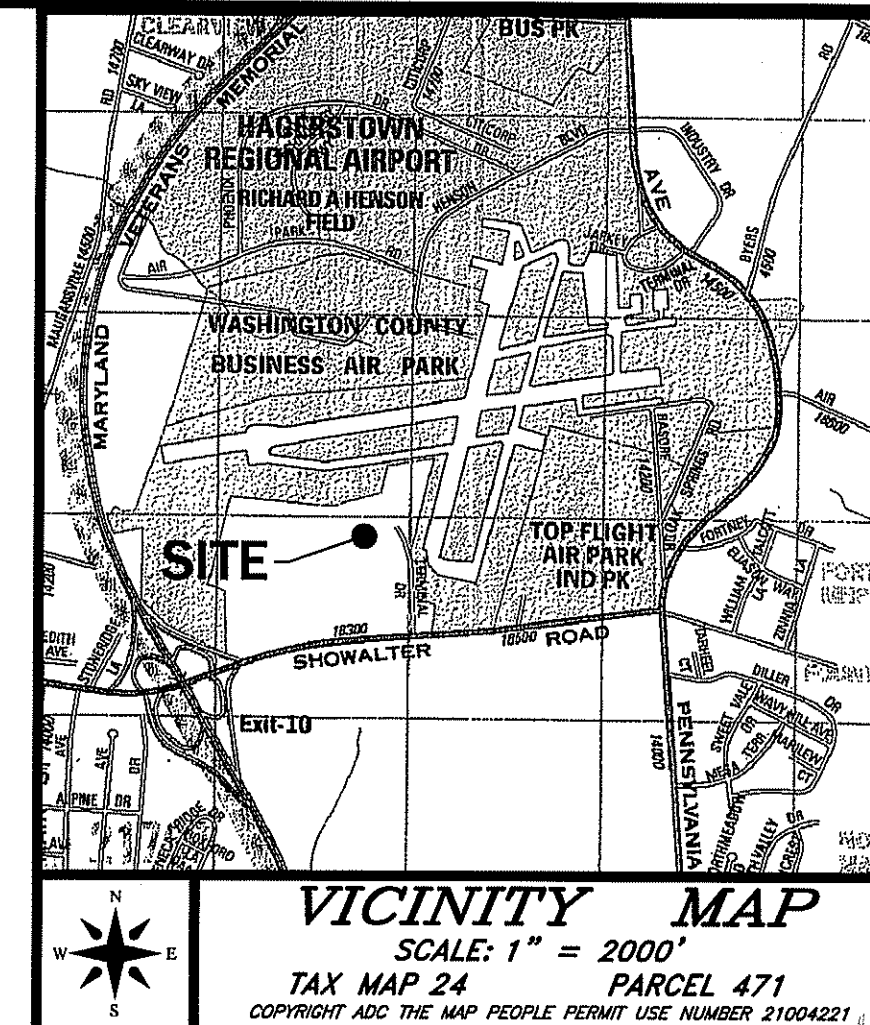
DESIGNED:	G.S.P.	No.	DATE	DESCRIPTION
DRAWN:	R.L.B.			
CHECKED:	G.S.P.			
APPROVED:	G.S.P.			



## INDEX OF SHEETS

COVER SHEET, GENERAL CONSTRUCTION AND SAFETY NOTES.....	1
EXISTING CONDITIONS PLAN/DEMOLITION PLAN.....	2
FINAL CONDITIONS PLAN.....	3
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SITE DETAILS.....	7

ADC MAP 10  
GRID B7



## AGENCY &amp; UTILITY CONTACTS

COUNTY D.P.W. - ENGINEERING AND CONSTRUCTION	ED NORMAN	(240) 313-2400
CITY UTILITIES DEPT., WATER & SEWER DIVISION	RICK USARY	(301) 739-8577 X 853
POTOMAC EDISON	DENSE PRICE	(301) 582-5271
WASH. CO. SCD	KEN BUCKLER	(301) 797-8821 X 3
AMERICAN CABLE	JULIE LUDWIG	(301) 797-1835
VERIZON	VONDA GRIFFIN	(301) 790-7135
COLUMBIA GAS		(800) 440-6111

## UTILITY NOTIFICATION:

THE SOIL CONSERVATION DISTRICT MAKES NO REPRESENTATION AS TO THE EXISTENCE OR NONEXISTENCE OF ANY UTILITIES AT THE CONSTRUCTION SITE. SHOWN ON THESE CONSTRUCTION DRAWINGS ARE UTILITIES WHICH HAVE BEEN IDENTIFIED. IT IS THE RESPONSIBILITY OF THE LANDOWNERS OR OPERATORS AND CONTRACTORS TO ASSURE THEMSELVES THAT NO HAZARD EXISTS OR DAMAGE WILL OCCUR TO UTILITIES. IT IS REQUIRED BY LAW THAT MISS UTILITY BE CONTACTED AT: PHONE No. 1-800-257-7777.

## DISTURBED AREA QUANTITIES

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 0.56 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE APPROXIMATELY 900 C.Y. OF EXCAVATION AND 900 C.Y. OF FILL.

\* THESE QUANTITIES ARE APPROXIMATE AND SHALL NOT BE USED BY THE CONTRACTOR FOR BIDDING PURPOSES.

## ENGINEER PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

2/25/19 27053  
DATE REG. NO. EXPIRES 1/25/20

## ENGINEER/ARCHITECT DESIGN CERTIFICATION

I HEREBY CERTIFY THIS PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAS BEEN DESIGNED IN ACCORDANCE WITH LOCAL ORDINANCES, COMAR 26.17.01.07, MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

2/25/19 27053  
DATE REG. NO. GORDON S. POFFENBERGER

## OWNER/DEVELOPERS CERTIFICATION FOR CO. DPW

I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT ORDINANCE OF WASHINGTON COUNTY AND THE POLICY ON CONSTRUCTION OF SUBDIVISION INFRASTRUCTURE FOR ACCEPTANCE AND OWNERSHIP BY WASHINGTON COUNTY (S-3).

2/27/19 GARRISON PLESSINGER, AIRPORT DIRECTOR  
DATE NAME SIGNATURE

## OWNER/DEVELOPER CERTIFICATION - SCD

I/WE CERTIFY ALL/ANY PARTIES RESPONSIBLE FOR CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL: BE DONE PURSUANT TO THIS PLAN AND RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SOIL EROSION AND SEDIMENT.

2/27/19 GARRISON PLESSINGER, AIRPORT DIRECTOR  
DATE NAME SIGNATURE

WASHINGTON COUNTY SOIL CONSERVATION DISTRICT  
SOIL EROSION AND SEDIMENT CONTROL PLAN APPROVAL

BY: [Signature]  
DATE: 3/18/19  
(PLAN IS VALID FOR TWO YEARS FROM DATE OF APPROVAL)

18-31422 D-6172 SP-19-005  
CIVIL SHEET 1 of 7

## PROJECT TITLE:

TERMINAL BUILDING EXPANSION

## SHEET TITLE:

COVER SHEET, GENERAL  
CONSTRUCTION and SAFETY NOTES

## SCALE:

1" = 150'

## DATE:

MARCH 2019

## FAA AIP No.: 3-24-0019-059-2018 (DESIGN)

Bld No.: PUR-1410

MAA Grant No.: MAA-GR-19-009

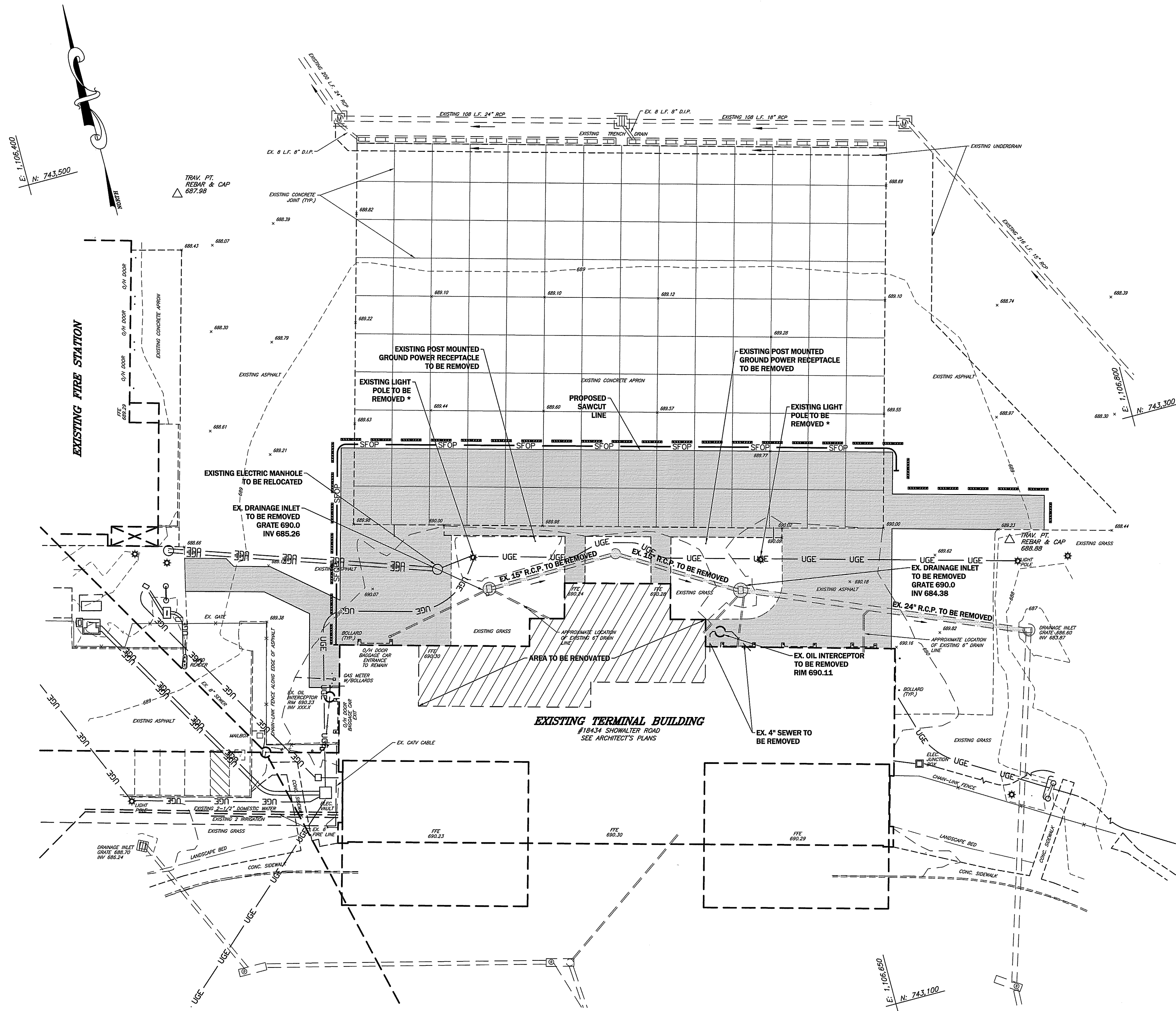
## SHEET No.:

CV00.001

14 OF 117



FILE NAME: H:\OTHER Work\Co-Airport\1531422 Terminal Expansion\Site Plan\02-Ex.dwg PLOTTED: Tuesday, March 26, 2019 - 8:09am USER: ruhman



\* NOTE: CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY LIGHTING OF RAMP DURING COMMERCIAL FLIGHT OPERATIONS. TO BE COORDINATED WITH AIRPORT MANAGEMENT

**LEGEND**

--- 689 --- EX. CONTOUR  
--- 690 --- EX. INDEX CONTOUR  
--- EX. FENCE  
--- 24" R.C.P. --- EX. STORM DRAIN  
[ ] EX. BUILDING STRUCTURE

S.S.M.H. SAN. SEWER MANHOLE  
INV. INVERT  
FFE FIRST FLOOR ELEVATION  
O/H OVERHEAD  
U/G UNDERGROUND  
R.C.P. REINFORCED CONCRETE PIPE

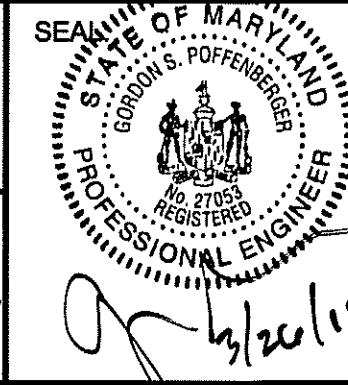
[ ] EXISTING BUILDING TO BE DEMOLISHED / RENOVATED  
[ ] EXISTING IMPERVIOUS COVER TO BE REMOVED

SP-19-005  
CIVIL SHEET 2 of 7

**ADCI**  
AIRPORT DESIGN CONSULTANTS, INC.  
6031 UNIVERSITY BLVD.  
SUITE 330  
ELICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602

**FOX & ASSOCIATES, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
881 MT. AENA ROAD  
HAGERSTOWN, MD 21740  
PHONE: (301)733-8503  
or (301)416-7250

32 WORMANS MILL COURT  
SUITE 'G'  
FREDERICK, MD 21701  
PHONE: (301)695-0880



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 27053  
Expiration Date: 01/25/20

DESIGNED: G.S.P.	No.	DATE	DESCRIPTION
DRAWN: R.L.B.			
CHECKED: G.S.P.			
APPROVED: G.S.P.			

**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**EXISTING CONDITIONS/DEMOLITION PLAN**

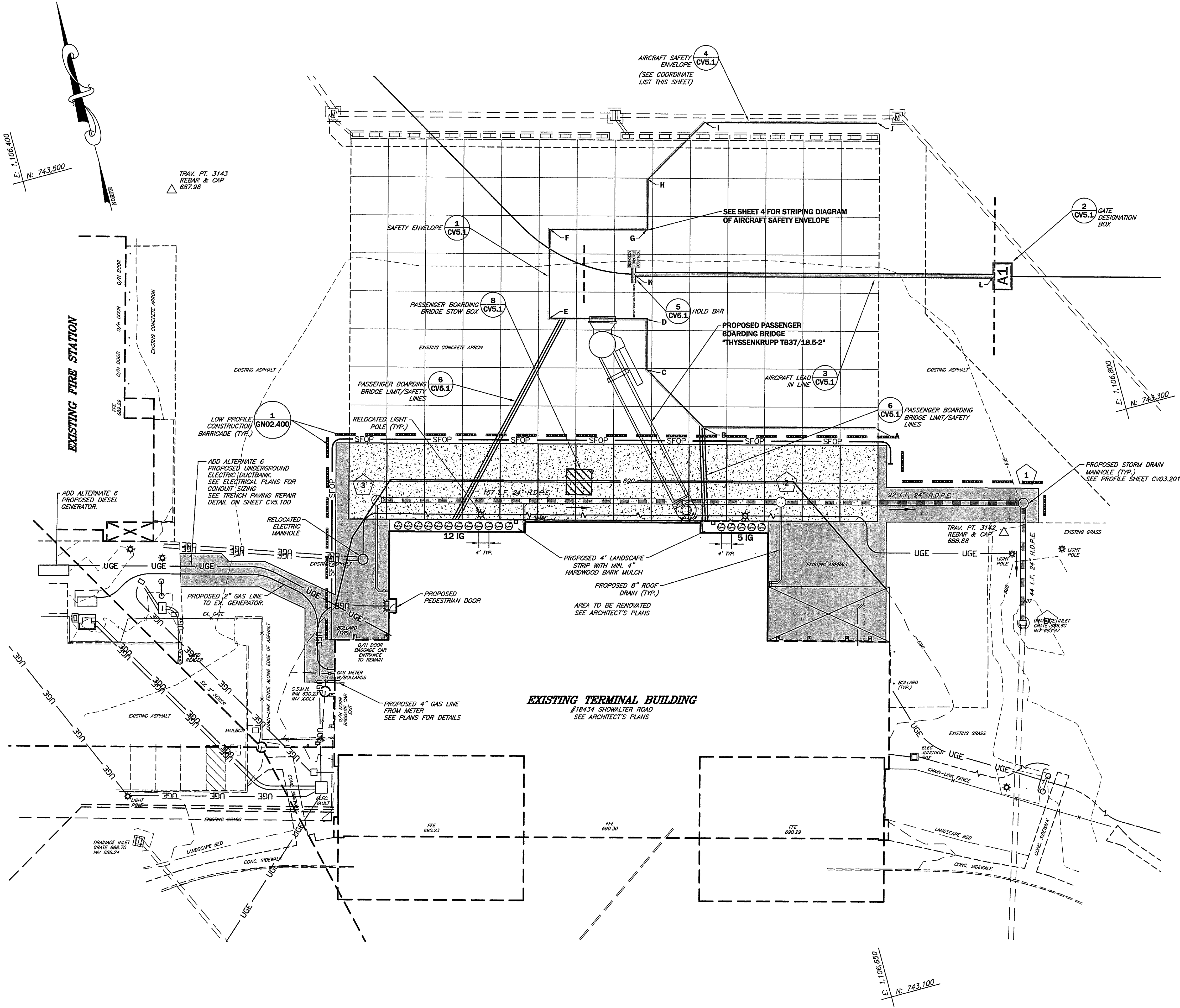
SCALE: 1" = 20'

DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 (DESIGN)  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
CV01.001  
15 OF 117





COORDINATE LIST

POINT NO.	NORTHING(Y)	EASTING(X)
A.	743318.25	1106701.94
B.	743336.36	1106635.75
C.	743364.18	1106619.88
D.	743383.33	1106629.12
E.	743393.57	1106587.59
F.	743427.81	1106597.06
G.	743417.57	1106634.49
H.	743436.72	1106639.72
I.	743452.59	1106667.54
J.	743434.48	1106733.74
K.	743401.82	1106624.84
L.	743364.06	1106762.82

BENCHMARK COORDINATES

POINT NO.	NORTHING(Y)	EASTING(X)	ELEV(Z)	DESCRIPTION
3142	743265.14	1106740.72	688.88	RC
3143	743481.90	1106456.28	687.98	RC

LANDSCAPE SCHEDULE

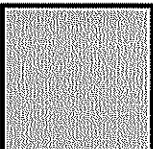
KEY	BOTANICAL NAME	COMMON NAME	QUAN.	SIZE	CONDITION
IG	ILEX GLABRA 'NIGRA'	INKBERRY HOLLY	17	1 GAL. CONTAINER	CONTAINER

SEE SHRUB PLANTING DETAIL ON CV05.100

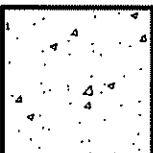
LEGEND



PROPOSED STORM DRAIN STRUCTURE  
SEE PROFILE SHEET CV03.201



PROPOSED BITUMINOUS CONCRETE PAVEMENT  
SEE TYPICAL BITUMINOUS SECTION  
SHEET CV05.100



PROPOSED PORTLAND CEMENT CONCRETE PAVING  
SEE TYPICAL CONCRETE SECTION  
SHEET CV05.100

FILE NAME: H:\OTHER\Wash-Co-Airport\1831422 Terminal Expansion\Site Plan\03-FINAL COND.dwg PLOTTED: Thursday, March 21, 2019 - 11:03am USER: ruhman

**ADCI**  
AIRPORT DESIGN CONSULTANTS, INC.

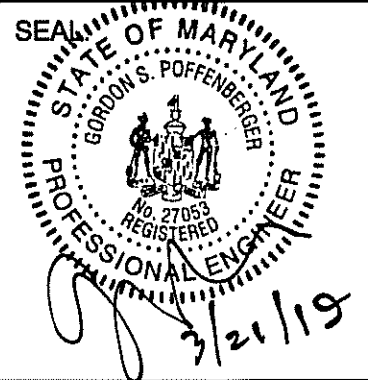
6031 UNIVERSITY BLVD.  
SUITE 330  
ELLICOTT CITY, MD 21043  
PHONE: 410-465-9800  
FAX: 410-465-9802

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881 MT. AETNA ROAD  
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or (301)416-7250

82 WORMANS MILL COURT  
SUITE 102  
FREDERICK, MD. 21701  
PHONE: (301)895-0880

**FOX & ASSOCIATES, INC.**  
Est. 1966



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 27053  
Expiration Date: 01/25/20

DESIGNED:	G.S.P.	No.	DATE	DESCRIPTION
DRAWN:	R.L.B.			
CHECKED:	G.S.P.			
APPROVED:	G.S.P.			

**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

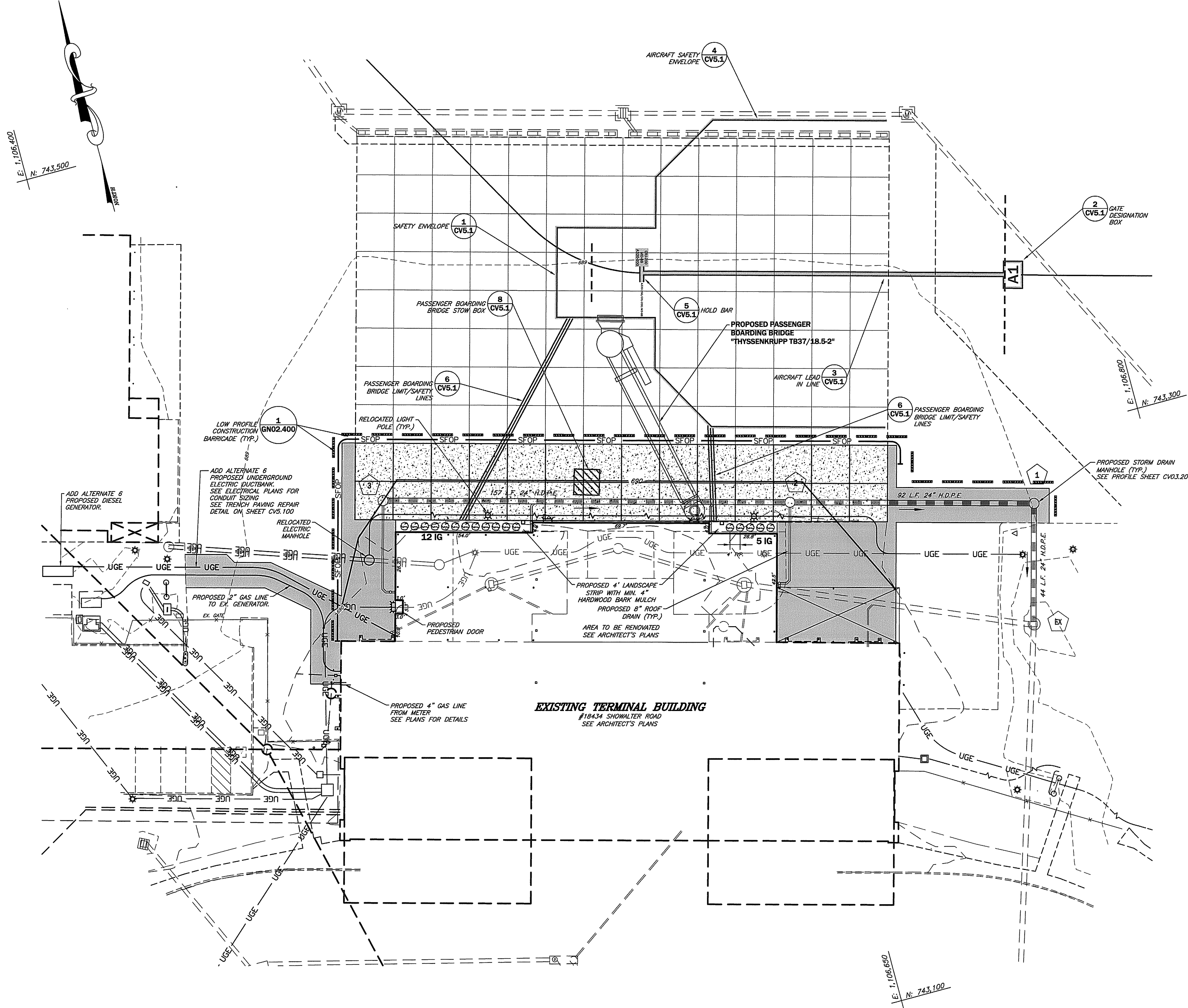
PROJECT TITLE:	TERMINAL BUILDING EXPANSION
SHEET TITLE:	FINAL CONDITIONS PLAN
SCALE:	1" = 20'
DATE:	MARCH 2019

SP-19-005  
CIVIL SHEET 3 of 7

FAA AIP No.: 3-24-0019-058-2018 (DESIGN)  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
CV01.002  
16 OF 117





**SITE DATA**

TAX MAP/PARCEL	24 / 471
ELECTION DISTRICT	13
ZONING	AP, AIRPORT DISTRICT
WATERSHED	CONOCOCHAGUE CREEK (02140504)
PARCEL ACREAGE	25.85 Ac. PER SDAT
FUNCTIONAL DESCRIPTION	EXIST. AIRPORT TERMINAL
MINIMUM BUILDING SETBACK LINES (MSL)	
FRONT	50' FROM SHOWALTER ROAD
SIDE	75'
REAR	75'
EXISTING TERMINAL BUILDING AREA	18,402 S.F.
PROPOSED BUILDING ADDITION	5,352 S.F.
NET INCREASE IN IMPERVIOUS COVER	3,068 S.F.
PROPOSED BUILDING HEIGHT	NO CHANGE
No. of EMPLOYEES	NO CHANGE
HOURS OF OPERATION	NO CHANGE
SITE USERS TRANSPORTATION	AUTOMOBILE
ON SITE PARKING/PAVEMENT/LANDSCAPE MAINTENANCE	BY OWNER (COUNTY)
PARKING REQUIRED	NO CHANGE
PARKING PROVIDED	NO CHANGE
PARKING LANDSCAPE REQUIREMENT	NO CHANGE
PARKING LANDSCAPE AREAS PROVIDED	NO CHANGE
HANDICAP PARKING REQUIRED & PROVIDED	5
FREIGHT & DELIVERIES	NO CHANGE
WATER	CITY OF HAGERSTOWN
SEWER	WASHINGTON COUNTY DEPT. OF WATER QUALITY
SOLID WASTE STORAGE & DISPOSAL	EX. DUMPSTER PAD AS SHOWN ON PLAN
PROJECTED EMISSIONS	NONE
EXISTING WATER ALLOCATION	18,831 GPD
EXISTING WATER USAGE	1,081 GPD
PROPOSED ADDITIONAL ALLOCATION	0 GPD

**LEGEND**

- PROPOSED STORM DRAIN STRUCTURE  
SEE PROFILE SHEET CV03.201
- PROPOSED BITUMINOUS CONCRETE PAVEMENT  
SEE TYPICAL BITUMINOUS SECTION  
SHEET CV05.100
- PROPOSED PORTLAND CEMENT CONCRETE PAVING  
SEE TYPICAL CONCRETE SECTION  
SHEET CV05.100

**LANDSCAPE SCHEDULE**

KEY	BOTANICAL NAME	COMMON NAME	QUAN.	SIZE	CONDITION
IG	ILEX GLABRA 'NIGRA'	INKBERRY HOLLY	17	1 GAL CONTAINER	CONTAINER

SEE SHRUB PLANTING DETAIL ON CV05.100

**CITY OF HAGERSTOWN UTILITIES DEPARTMENT - WATER & WASTEWATER DIVISIONS**

THIS APPROVAL IS FOR THE DESIGN AND LAYOUT OF THE PROPOSED WATER AND WASTEWATER SYSTEM IMPROVEMENTS. ALL WATER AND WASTEWATER SYSTEM IMPROVEMENTS SHALL BE CONSTRUCTED TO THE STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION. THIS APPROVAL DOES NOT GUARANTEE AVAILABILITY OF WATER OR WASTEWATER SERVICE. WATER AND WASTEWATER SERVICE IS AVAILABLE SUBJECT TO CONFORMANCE WITH ALL POLICIES AND STANDARDS IN EFFECT AT THE TIME OF APPLICATION FOR SERVICE. PAYMENT OF FEES AND APPROVAL OF THE WATER AND/OR WASTEWATER SERVICE APPLICATION. THE WATER DIVISION DOES NOT GUARANTEE A SPECIFIC WATER PRESSURE OR FLOW AT ANY METER OR FIRE HYDRANT. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR.

(SIGNATURE) (DATE)

**WASHINGTON COUNTY DEPARTMENT OF WATER QUALITY**

THIS APPROVAL IS FOR GENERAL CONFORMANCE WITH THE COUNTY'S REQUIREMENTS FOR DESIGN AND LAYOUT OF PROPOSED SEWER AND/OR WATER SYSTEM IMPROVEMENTS OR EXTENSIONS. ALL SEWER AND/OR WATER SYSTEM IMPROVEMENTS OR EXTENSIONS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE COUNTY'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF SANITARY SEWERS AND/OR WATER LINES. THIS APPROVAL DOES NOT GUARANTEE AVAILABILITY OF SEWER AND/OR WATER SERVICE. SEWER AND/OR WATER SERVICE AVAILABILITY IS SUBJECT TO CONFORMANCE WITH ALL RULES, POLICIES, AND REGULATIONS ESTABLISHED BY THE COUNTY AND IN EFFECT AT THE TIME APPLICATION FOR SERVICE IS MADE, AND/OR THE AVAILABILITY OF ALLOCATION REMAINING IN OTHER JURISDICTIONS' FACILITIES THAT MAY BE GRANTED TO THE COUNTY. THIS APPROVAL SHALL BE VALID FOR A PERIOD OF TWO YEARS.

BY: DATE:

SP-19-005  
CIVIL SHEET 4 of 7

**ADCI**  
AIRPORT DESIGN CONSULTANTS, INC.

6031 UNIVERSITY BLVD.  
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ELLCOTT CITY, MD 21043  
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FAX: 410-465-9602

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981 MT. AETNA ROAD  
HAGERSTOWN, MD. 21740  
PHONE: (301)733-8503  
or (301)416-7250

82 WORMANS MILL COURT  
SUITE 10  
FREDERICK, MD. 21701  
PHONE: (301)695-0880

Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 27053  
Expiration Date: 01/25/20

DESIGNED:	G.S.P.	No.	DATE	DESCRIPTION
DRAWN:	R.L.B.			
CHECKED:	G.S.P.			
APPROVED:	G.S.P.			

**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:

**TERMINAL BUILDING EXPANSION**

SHEET TITLE:

**SITE PLAN**

SCALE:

1" = 20'

DATE:

MARCH 2019

SHEET No.:

CV03.100

17 OF 117

FAA AIP No.: 3-24-0019-059-2018 (DESIGN)  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

FILE NAME: H:\OTHER\West-Co-Airport\1831422 Terminal Expansion\Site Plan\04-SP.dwg PLOTTED: Thursday, March 21, 2019 - 11:04am USER: buhrman



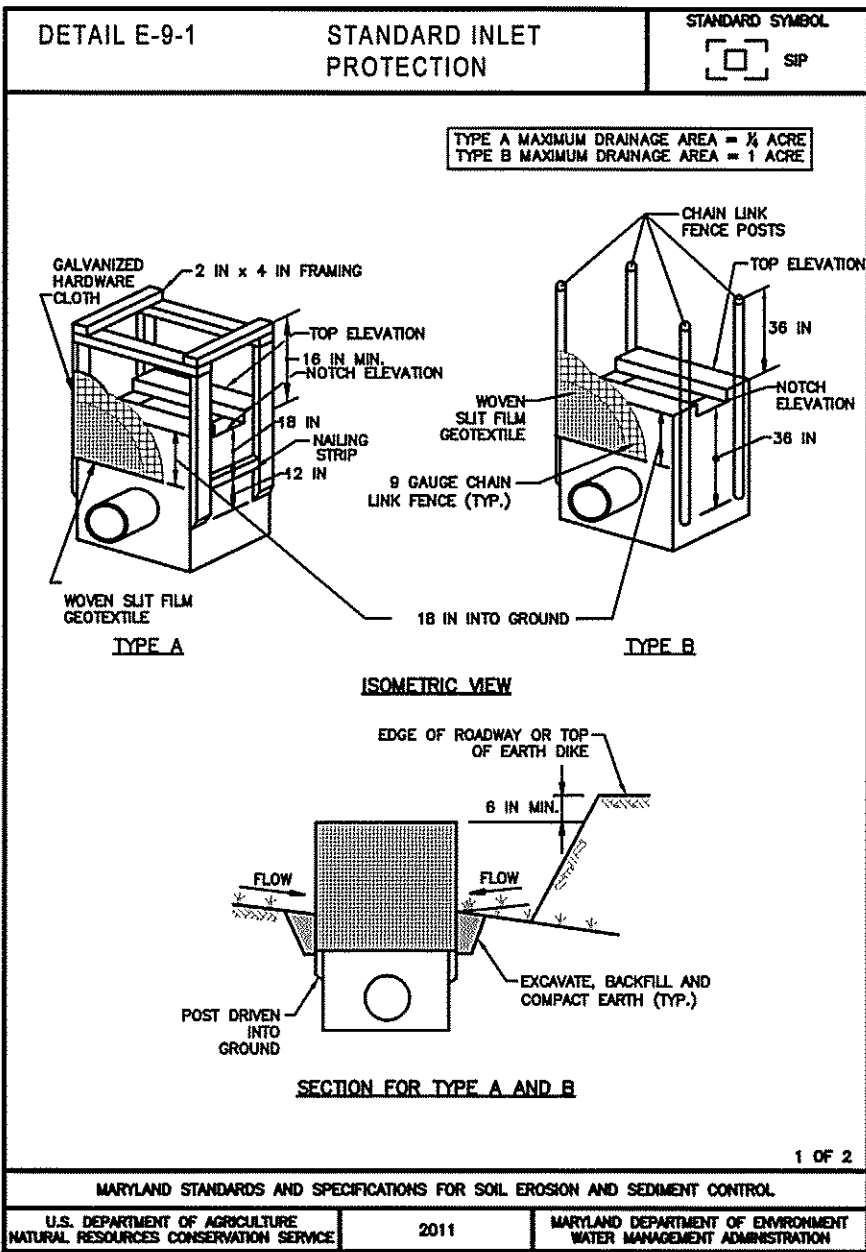
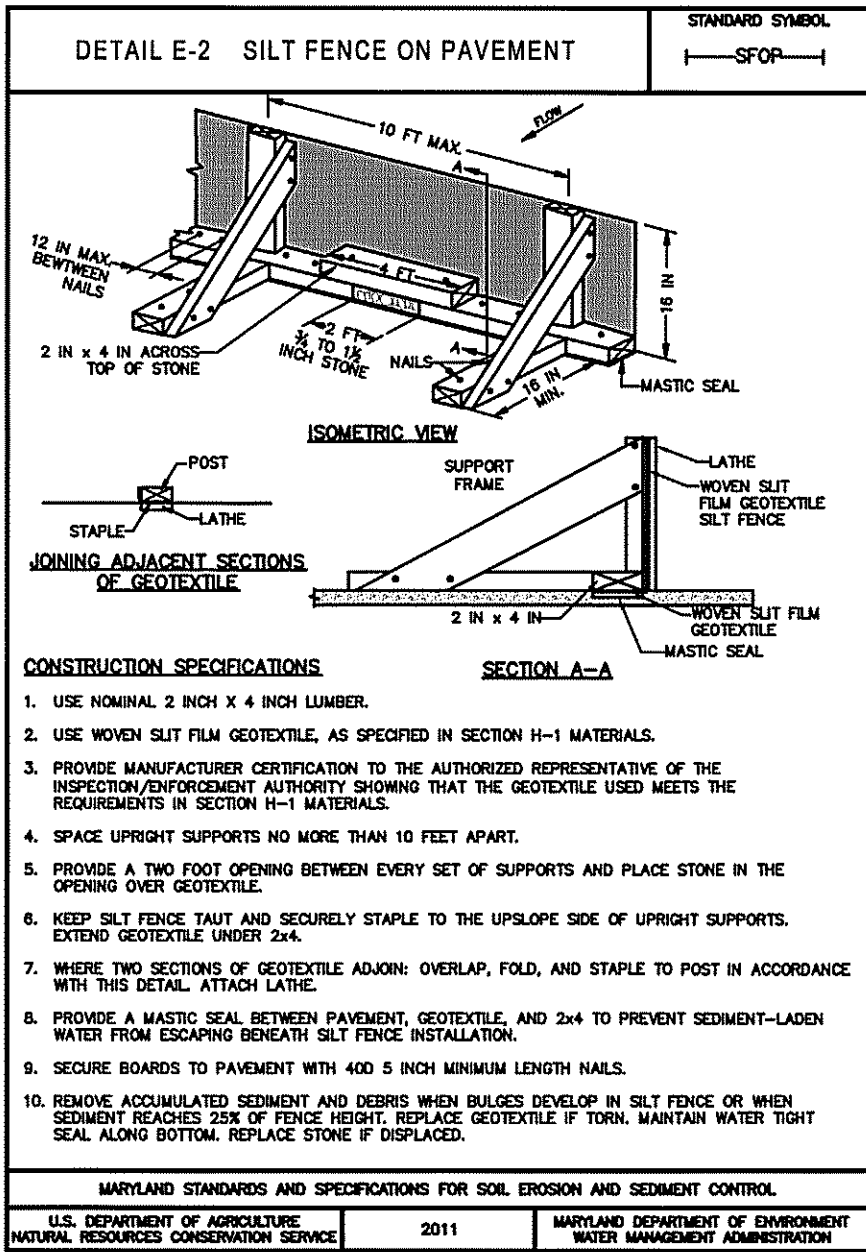




FILE NAME: H:\OTHER\Wash-Co-Mport\1831422 Terminal Expansion\Site Plan\06-SH-SEC.dwg PLOTTED: Thursday, March 21, 2019 - 10:10am USER: ruhman

**SCALE:**  
PLAN VIEW: N/A  
PROFILE: { HORZ. 1"=20'  
VERT. 1"=2'

DRAINAGE STRUCTURE SCHEDULE				
STRUCTURE No.	STRUCTURE TYPE	RIM OR T.G. ELEVATION	INVERT	REMARKS
1	48" MANHOLE	688.97	684.30	MD. S.H.A. STD. 383.01
2	48" MANHOLE	690.13	685.20	MD. S.H.A. STD. 383.01
3	48" MANHOLE	690.00	686.80	MD. S.H.A. STD. 383.01



## SEQUENCE OF CONSTRUCTION

### PHASE 1 - INITIAL DISTURBANCE

- CONTACT THE WASHINGTON COUNTY DPW - ENGINEERING & CONSTRUCTION AT (240) 313-2400 AND THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT AT (301) 787-6821 EXT. 3 FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE PRE-CONSTRUCTION MEETING.
- CONDUCT PRE-CONSTRUCTION MEETING.

### PHASE 2 - SITE WORK CONSTRUCTION

- INSTALL SILT FENCE ON PAVEMENT AS SHOWN ON PLAN.
- INSTALL INLET PROTECTION AS SHOWN. A TOPSOIL STOCKPILE WILL NOT BE NEEDED AS THE SITE IS PRACTICALLY 100% PAVED. ANY SPOIL AND/OR BORROW MUST COME FROM OR GO TO A SITE THAT HAS A CURRENT AND APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.
- SAWCUT EXISTING CONCRETE AND PAVING AS SHOWN ON PLAN.
- WORKING DOWNSTREAM AND PROCEEDING UPSTREAM, INSTALL PROPOSED STORM DRAIN SYSTEM.
- BEGIN SITE DEMOLITION.
- BEGIN UTILITY CONSTRUCTION.
- BEGIN FOOTER AND BUILDING ADDITION ERECTION.
- BEGIN INSTALLATION OF ASPHALT PAVING SECTION.
- BEGIN INSTALLATION OF CONCRETE.
- STABILIZE ALL GRASS AREAS, SEED AND MULCH.

### PHASE 3 - PROJECT CLOSE-OUT

- OBTAIN PERMISSION FROM SCD TO REMOVE PERIMETER CONTROLS. STABILIZE AREAS LEFT DISTURBED BY PERIMETER CONTROL REMOVAL. CONTACT THE WASH. CO. SCD AT 301-787-6821 EXT. 3 AND THE WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS-ENGINEERING & CONSTRUCTION AT 240-313-2400 TO SCHEDULE A FINAL SITE CLOSEOUT REVIEW MEETING.

## SOIL EROSION, SEDIMENT CONTROL & SEEDING NOTES

- ALL EROSION/SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND THE PROVISIONS OF THE APPROVED PLAN.
- ALL GRADING AND STABILIZATION SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL". SECTION B - GRADING AND STABILIZATION" AND THE PROVISIONS OF THE APPROVED PLAN.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES (B.M.P.'S) ARE TO BE CONSTRUCTED AND/OR INSTALLED PRIOR TO OR AT THE INITIATION OF GRADING IN ACCORDANCE WITH "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND THE APPROVED PLAN.
- A GRADING UNIT IS THE MAXIMUM CONTIGUOUS AREA ALLOWED TO BE GRADED AT A GIVEN TIME AND IS LIMITED TO 20 ACRES. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY AND/OR THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT (APPROVAL AUTHORITY). UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, TEMPORARY OR PERMANENT STABILIZATION MUST BE COMPLETED WITHIN:
  - THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
  - SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 7 DAY STABILIZATION REQUIREMENT, AS WELL AS, STANDARD B-1-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION. (AS APPLICABLE)
- ALL CONSTRUCTED CHANNELS AND SWALES SHALL HAVE SPECIFIED TREATMENT INSTALLED TO THE DESIGN FLOW DEPTH COMPLETED DOWNSTREAM TO UPSTREAM AS CONSTRUCTION PROGRESSES. AN INSTALLATION DETAIL SHALL BE SHOWN ON THE PLANS.
- ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS ARE TO BE MULCHED AND SEEDING WITHIN 3 DAYS OF INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
- ELECTRIC POWER, TELEPHONE, AND GAS LINES ARE TO BE COMPACTED, SEEDING AND MULCHED WITHIN 3 DAYS AFTER INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
- NO SLOPE SHALL BE GREATER THAN 2:1.
- AS REQUIRED BY SECTION B, OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, "ADEQUATE VEGETATIVE STABILIZATION" IS DEFINED AS 95 PERCENT GROUND COVER. THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT REQUIRES THE PROJECT ADHERE TO THIS FOR SCHEDULING OF THE FINAL SITE CLOSEOUT REVIEW, AND/OR THE RELEASE OF THE SITE FOR SOIL EROSION AND SEDIMENT CONTROL.

FOR SITES 1.0 ACRE OR MORE, THE FOLLOWING ARE REQUIRED:

- MARYLAND DEPARTMENT OF THE ENVIRONMENT, GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH A CONSTRUCTION ACTIVITY, N.D.E.S. PERMIT NUMBER MDRC, STATE DISCHARGE PERMIT NUMBER 14GP, OR AN INDIVIDUAL PERMIT.
- THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (GENERAL/INDIVIDUAL PERMIT - NOTICE OF INTENT - N.O.I.) APPLICATION AND PERMIT SHALL BE POSTED AND/OR AVAILABLE ON-SITE AT ALL TIMES.
- DURING CONSTRUCTION, ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES (B.M.P.'s) SHALL BE INSPECTED AND RECORDED ON THE "STANDARD INSPECTION FORM", "GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY" PER MARYLAND DEPARTMENT OF THE ENVIRONMENT (GENERAL/INDIVIDUAL PERMIT - NOTICE OF INTENT - N.O.I.).
- FOLLOWING CONSTRUCTION AND RELEASE OF THE SITE FOR SOIL EROSION AND SEDIMENT CONTROL BY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT, I.E., ALL PORTIONS OF A SITE HAVE BEEN PERMANENTLY STABILIZED, AND ALL STORMWATER DISCHARGES FROM THE CONSTRUCTION SITES THAT ARE AUTHORIZED BY THE PERMIT AREA ELIMINATED, AUTHORIZED PERMITTEE SHALL SUBMIT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, GENERAL/INDIVIDUAL PERMIT - NOTICE OF TERMINATION - N.O.T.

## PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 6B) FROM TABLE B.3					FERTILIZER RATE (10-20-20)			LIME RATE
No.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	
6	TALL FESCUE WHITE CLOVER PERENNIAL RYE GRASS	40 8 25	3/15 - 6/1 6/1 - 10/15	1/4" - 1/2"	45 LB/AC (1.0 LB/ 1000 S.F.)	80 LB/AC (2 LB/ 1000 S.F.)	80 LB/AC (2 LB/ 1000 S.F.)	2 TONS/AC (80 LB/ 1000 S.F.)

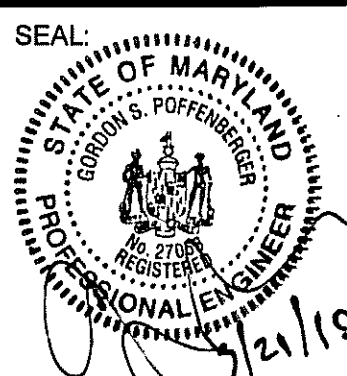
PERMANENT SEEDING SHALL COMPLY WITH SECTION B-4-5 OF THE 2011 MARYLAND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL

## TEMPORARY SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 6B) FROM TABLE B.1					FERTILIZER RATE (10-20-20)		LIME RATE
No.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS			
2	BARLEY (HORDEUM VULGARE)	96	3/1 - 5/15 6/1 - 9/30	1.0"	436 LBS./AC. (10 LBS/1000 S.F.)		2 TONS/AC. (80 LBS/1000 S.F.)

TEMPORARY SEEDING SHALL COMPLY WITH SECTION B-4-4 OF THE 2011 MARYLAND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL

SP-19-005  
CIVIL SHEET 6 of 7



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 27053  
Expiration Date: 01/25/20

DESIGNED:	G.S.P.	No.	DATE	DESCRIPTION
DRAWN:	R.L.B.			
CHECKED:	G.S.P.			
APPROVED:	G.S.P.			



PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>		FAA AIP No.: 3-24-0019-059-2018 (DESIGN) Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET TITLE: <b>DRAINAGE and EROSION and SEDIMENT CONTROL NOTES and DETAILS</b>		SHEET No.: <b>CV03.201</b>
SCALE: AS SHOWN	DATE: MARCH 2019	<b>19 OF 117</b>







STRUCTURAL NOTES:

GENERAL

- 1) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- 2) NOTES AND DIMENSIONS ON DRAWINGS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
- 3) ALL WORK SHALL BE IN ACCORDANCE WITH THE MORE STRINGENT REQUIREMENTS OF THE MINIMUM STANDARDS LISTED IN THE GOVERNING CODE OR AS INDICATED HEREON. THE GOVERNING CODE SHALL BE THE INTERNATIONAL BUILDING CODE 2015.
- 4) COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS WITH REGARD TO DIMENSIONS, OPENINGS, LOCATION OF EQUIPMENT, ETC.
- 5) THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION, INCLUDING ALL BRACING AND SHORING REQUIRED TO RESIST THE ACTUAL CONSTRUCTION LOADS.
- 6) ASTM SPECIFICATIONS LISTED SHALL BE THE LATEST EDITION.
- 7) DESIGN LIVE LOADS:
- |                                     |                        |
|-------------------------------------|------------------------|
| FLOOR AT GRADE                      | 250 PSF                |
| ELEVATED FLOOR SLABS                | 100 PSF                |
| ROOF LIVE LOAD                      | 30 PSF (NON-REDUCIBLE) |
| SNOW LOAD BASED ON GROUND SNOW LOAD | Pg=40 PSF              |
| ROOF SNOW LOAD                      | Pf=28 PSF              |
| Cs=1.0                              | Ct=1.0                 |
| RISK CATEGORY FOR WIND              | III                    |
| WIND LOAD BASED ON BASIC WIND SPEED | V=115 MPH              |
| WIND LOAD FOR MWFRS                 | 20 PSF                 |
| WIND LOAD FOR COMPONENTS & CLADDING | 25 PSF                 |
| RISK CATEGORY FOR SEISMIC           | III                    |
| SITE CLASS                          | C                      |
| SEISMIC DESIGN CATEGORY             | B                      |

FOUNDATION

- 1) FOUNDATION SUBSURFACE INVESTIGATION HAS BEEN PERFORMED FOR THIS PROJECT ON DECEMBER 11, 2018 BY:
- HILLIS-CARNES ENGINEERING ASSOCIATES  
10228 CERNERON LANE BLVD.  
WILLIAMSPORT, MD 21795  
WWW.HCEA.COM  
PH. (301) 582-4662  
FX. (301) 582-4614
- 2) FOOTINGS ARE DESIGNED BASED ON AN ALLOWABLE SOIL PRESSURE EQUAL TO 2500 PSF.
- 3) THE CONTRACTOR SHALL PROVIDE FOR ALL DE-WATERING, SHORING, BRACING, ETC. REQUIRED TO PLACE THE FOUNDATIONS AS INDICATED.
- 4) IF FOUNDATION MATERIAL IS UNCOVERED AND DETERMINED NOT TO BE CAPABLE OF SUPPORTING THE PRESSURE INDICATED, THE UNDERLYING MATERIAL SHALL BE OVER-EXCAVATED UNTIL COMPETENT MATERIAL IS FOUND AND BACKFILLED IN ACCORDANCE WITH THE SPECIFICATIONS, SOILS REPORT, OR AS DETAILED.

CONCRETE

- 1) ALL CONCRETE SHALL CONFORM WITH THE REQUIREMENTS OF THE A.C.I. 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE' (ACI 318, LATEST EDITION). STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTH (fc) UNLESS NOTED OTHERWISE:
- |                                  |          |
|----------------------------------|----------|
| CONCRETE FOR FOOTINGS            | 3000 PSI |
| CONCRETE FOR SLABS, WALLS, PIERS | 4000 PSI |
| EXTERIOR CONCRETE SLABS          | 4500 PSI |
- 2) CLEAR COVERAGE OVER OUTER REINFORCING BAR SHALL BE AS FOLLOWS:
- |  |          |
|--|----------|
| CONCRETE POURED DIRECTLY AGAINST EARTH | 3 INCHES |
| STRUCTURAL SLABS (TOP AND BOTTOM)      | 1 INCH   |
| FORMED CONCRETE WITH EARTH BACKFILL    | 2 INCHES |
| BEAMS-CLEAR TO MAIN REINFORCING        | 2 INCHES |
| COLUMNS-CLEAR TO MAIN REINFORCING      | 2 INCHES |
- 3) CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
- 4) PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE 1A OR TYPE 1 WITH AIR-ENTRAINING ADMXTURE IF CONCRETE IS IN CONTACT WITH SOIL OR SUBJECT TO FREEZING AND THAWING. TYPE 1 SHALL BE USED ELSEWHERE.
- 5) AGGREGATE FOR CONCRETE SHALL CONFORM TO ALL THE REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH THE PERMISSION OF THE STRUCTURAL ENGINEER.
- 6) EACH TRUCKLOAD OF CONCRETE SHALL BE TESTED FOR THE FOLLOWING:
- a) SLUMP OF 4"±1" IN ACCORDANCE WITH ASTM C143.
- b) AIR CONTENT OF 5% TO 7% IN ACCORDANCE WITH ASTM C231
- c) CYLINDER BREAK TESTING IN ACCORDANCE ASTM C39
- 7) GROUT SHALL BE PLACED USING LOW LIFT CONSTRUCTION: 4" MAX. FILL HEIGHT OR PRESSURE PUMPED FROM BOTTOM OF UNIT TO BE FILLED, 8" MINIMUM SLUMP.
- 8) CONSTRUCTION JOINTS OR CONTROL JOINTS IN SLABS SHALL BE LOCATED SUCH THAT SPACING BETWEEN JOINTS DOES NOT EXCEED 15 FEET ON CENTER. WHERE FEASIBLE, JOINTS SHALL BE LOCATED UNDER PARTITION WALLS OR OTHERWISE HIDDEN BY OTHER ARCHITECTURAL FEATURES.

REINFORCING STEEL

- 1) REINFORCING STEEL SHALL BE DEFORMED 'S' BARS CONFORMING TO ASTM DESIGNATION A-615 GRADE 60. TIES AND STIRRUPS MAY BE GRADE 40. REINFORCING STEEL TO BE WELDED SHALL BE DEFORMED 'W' BARS CONFORMING TO ASTM DESIGNATION A-706, AND SHALL BE WELDED IN CONFORMANCE WITH AWS D1.4.
- 2) ALL REINFORCING SHALL BE FABRICATED AND PLACED IN CONFORMANCE WITH THE A.C.I. 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE' (ACI 318, LATEST EDITION) AND THE 'MANUAL OF STANDARD PRACTICE FOR CONCRETE REINFORCEMENT' BY C.R.S.I.
- 3) ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- 4) WELDED WIRE FABRIC SHALL CONFORM WITH ASTM A-185. FABRIC SHALL BE SUPPLIED IN FLAT SHEETS ONLY.
- 5) MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF WHICHEVER IS GREATER.
- 6) REINFORCING SHALL BE SUPPORTED BY CHAIRS AS REQUIRED FOR PROPER PLACEMENT AND TO PREVENT DEFLECTION.
- 7) DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME SIZE, GRADE, AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED.
- 8) THE RATIO OF REINFORCEMENT TO CONCRETE IN SLABS SHALL BE NO LESS THAN 0.0018. THE RATIO OF REINFORCEMENT TO CONCRETE IN CRACK-CRITICAL SLABS SHALL BE NO LESS THAN 0.005.

MASONRY

- 1) CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF A.C.I. 'BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES' (ACI 530, LATEST EDITION) AND THE N.C.M.A. SPECIFICATION.
- 2) CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C90. USE OPEN END UNITS FOR BOND BEAM UNITS AT HORIZONTAL REINFORCING.
- 3) CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
- 4) MORTAR SHALL BE TYPE 'S' AND SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
- 5) GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL MASONRY CELLS WITHOUT SEGREGATION. GROUT SHALL BE PLACED USING LOW LIFT CONSTRUCTION: 4" MAX. FILL HEIGHT OR PRESSURE PUMPED FROM BOTTOM OF UNIT TO BE FILLED, 8" MINIMUM SLUMP.
- 6) PROVIDE A MINIMUM OF 1/2 INCH GROUT BETWEEN MAIN REINFORCING BARS AND WALLS OF MASONRY UNITS. LOW LIFT CONSTRUCTION SHALL BE FOLLOWED WITH A MAXIMUM POUR HEIGHT OF 4 FEET.
- 7) CELLS IN CONCRETE BLOCKS SHALL BE IN VERTICAL ALIGNMENT WITH THE FOOTING DOWELS PLACED TO MATCH THIS VERTICAL ALIGNMENT. FILL ALL CELLS SOLID BELOW LOWEST FINISH FLOOR OR FINISH GRADE, WHICHEVER IS AT A HIGHER ELEVATION.
- 8) HORIZONTAL JOINT REINFORCING SHALL CONSIST OF 9 GAGE TRUSS REINFORCING VERTICALLY SPACED 16 INCHES ON CENTER.
- 9) CONTROL JOINTS SHALL BE PLACED NOT TO EXCEED A MAXIMUM SPACING OF 24 FEET OR AS SHOWN.

STRUCTURAL STEEL

- 1) STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERRECTED IN ACCORDANCE WITH THE A.N.S.I./A.I.S.C. SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (ANSI/AISC 360, LATEST EDITION).
- 2) ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING ASTM DESIGNATIONS:
- |                              |                   |           |
|------------------------------|-------------------|-----------|
| WIDE-FLANGE SHAPES (W)       | ASTM A992         | Fy=50 KSI |
| TUBE SHAPES (HSS)            | ASTM A500 GRADE B | Fy=46 KSI |
| ROUND SHAPES (HSS)           | ASTM A500 GRADE B | Fy=42 KSI |
| PIPE SHAPES (P, SCHEDULE 40) | ASTM A53 GRADE B  | Fy=35 KSI |
| CHANNELS (C)                 | ASTM A36          | Fy=36 KSI |
| ANGLES (L)                   | ASTM A36          | Fy=36 KSI |
| PLATES & OTHER SHAPES        | ASTM A36          | Fy=36 KSI |
- 3) BEAM CONNECTIONS SHALL BE LONGEST PERMITTED BY BEAM WEB DEPTH OR AS REQUIRED BY DESIGN.
- 4) ALL BOLTS SHALL CONFORM TO ASTM DESIGNATION A325 UNLESS NOTED OTHERWISE. ALL NUTS SHALL CONFORM TO ASTM DESIGNATION A563 UNLESS NOTED OTHERWISE. ALL WASHERS SHALL CONFORM TO ASTM DESIGNATION F436.
- 5) ANCHOR BOLTS SHALL CONFORM TO ASTM DESIGNATION A36.
- 6) BOLT HOLES SHALL BE 1/16 INCH LARGER DIAMETER THAN NOMINAL SIZE OF BOLTS USED, UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS ARE DESIGNED FOR THE BEARING-TYPE CONDITION WITH THREADS INCLUDED IN THE SHEAR PLANE. BOLTS SHALL BE TIGHTENED TO THE SNUG-TIGHT CONDITION.
- 7) ALL WELDS SHALL BE MADE WITH 70 KSI ELECTRODES. STRUCTURAL STEEL SHALL BE WELDED IN CONFORMANCE WITH THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.1:01-1M, LATEST EDITION). REINFORCING STEEL SHALL BE WELDED IN CONFORMANCE WITH THE STRUCTURAL WELDING CODE - REINFORCING STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.4/D1.4M, LATEST EDITION)
- 8) ALL SHOP WELDS SHALL BE SHOP PAINTED. FIELD WELDS SHALL BE PAINTED TO MATCH. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE OR ARE ENCASED BY BUILDING FINISH MAY BE LEFT UNPAINTED UNLESS NOTED OTHERWISE. PRIMER SHALL BE USED ELSEWHERE. SEE SPECIFICATIONS.
- 9) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING FOR NEW AND EXISTING STRUCTURAL STEEL.
- 10) THE FABRICATOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
- 11) ALL STEEL MEMBERS, WELDMENTS, AND FASTENERS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123 OR ASTM A153. FABRICATIONS SHALL HAVE MINIMUM G90 COATING. A COMPATIBLE, ZINC-RICH PROTECTIVE COATING SHALL BE USED TO TOUCH UP DAMAGE TO THE GALVANIZED COATING AFTER ERECTION.
- 12) RAILS, KICKPLATE, LADDERS, AND SAFETY CAGES SHALL BE POWDER COATED SAFETY YELLOW. DAMAGE TO POWDER COATING FINISH SHALL BE REPAIRED WITH CORROSION RESISTANT PRIMER.

STEEL DECKING

- 1) THE STEEL DECKING SHALL BE OF THE TYPE AND GAGE AS CALLED FOR ON THE DRAWINGS. DECKING AND ALL ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS HAVING A MINIMUM YIELD STRENGTH OF 33 KSI AND CONFORMING TO ASTM A611 OR A446 AS SPECIFIED. THE STEEL SHEET SHALL HAVE A GALVANIZED FINISH OR MANUFACTURER'S STANDARD PAINTED FINISH. SEE SPECIFICATIONS. ALL WELDS SHALL BE PAINTED PRIOR TO INSTALLATION OF ROOFING MATERIAL, WOOD BLOCKING, ETC.
- 2) DECKING SHEETS SHALL SPAN A MINIMUM OF FOUR (4) SUPPORTS FOR A MINIMUM OF THREE (3) SPANS UNLESS NOTED OTHERWISE.
- 3) MINIMUM BEARING OF DECKING ON SUPPORTS SHALL BE TWO INCHES. SHEETS SHALL BE ATTACHED TO ALL SUPPORTING STEEL MEMBERS BY WELDING AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. UPON COMPLETION OF ERECTION, ALL WELDS IN EXPOSED DECK AREAS SHALL BE DE-SLAGGED, CLEANED AND PRIMED WITH A ZINC-RICH COATING.
- 4) STEEL DECK PANELS SHALL BE FASTENED AT EACH SUPPORT WITH PUDDLE WELDS OR #12 TEK SCREWS IN 36/4 PATTERN. PANELS SHALL BE FASTENED ALONG SIDE-LAPS WITH (3) #10 SCREWS PER SPAN.

COLD-FORMED METAL FRAMING

- 1) THE COLD-FORMED METAL FRAMING INDICATED SHALL BE MANUFACTURED BY DALE/INCOR OR APPROVED EQUIVALENT IN ACCORDANCE WITH ASTM 653. MINIMUM STUD SIZES AND GAUGES ARE INDICATED ON THE DRAWINGS. ALL LIGHT GAUGE MATERIALS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A924 WITH A MINIMUM G60 COATING.
- 2) COLD-FORMED METAL FRAMING COMPONENTS SHALL CONFORM TO ASTM DESIGNATION A653 S30, GRADE 33 OR GRADE 50 AS REQUIRED. ALL STRUCTURAL COLD-FORMED FRAMING, INCLUDING THAT USED IN THE CONSTRUCTION OF EXTERIOR WALLS, SHALL BE 18 GAUGE (43 MILS) OR HEAVIER.
- 3) ALL CONNECTIONS SHALL BE FASTENED AS INDICATED ON THESE DRAWINGS OR AS DESCRIBED HERE. WELDING SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE BY THE COLD-FORMED METAL FRAMING PROVIDER.
- a) SCREWS - #10 SELF-DRILLING OR SELF-TAPPING SCREWS MANUFACTURED BY HILTI, SIMPSON STRONGTIE, OR EQUAL, CONFORMING TO ASTM C1513, AND INSTALLED PER THE FASTENER MANUFACTURER'S SPECIFICATIONS. MINIMUM 1/2" LENGTH FOR LIGHT GAUGE TO LIGHT GAUGE CONNECTIONS. SCREWS SHALL BE SPACED A MINIMUM OF 1/2" BETWEEN ADJACENT SCREWS AND FROM METAL EDGES UNLESS OTHERWISE NOTED.
- b) POWDER ACTUATED FASTENERS (P A F) - 0.145 MINIMUM SHANK DIAMETER x 1 1/4" LONG P.A.F. MANUFACTURED BY RAMSET OR HILTI AND INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS FOR LIGHT GAUGE CONNECTIONS TO CONCRETE OR STEEL. P.A.F. SHALL BE SPACED A MINIMUM 3" FROM CONCRETE EDGES. P.A.F. SHALL BE SPACED A MINIMUM 1/2" FROM STEEL EDGES. THE P.A.F. POINT SHALL BE DRIVEN COMPLETELY THROUGH THE BACK SIDE OF THE STRUCTURAL STEEL MEMBER. MINIMUM P.A.F. EMBEDMENT IN CONCRETE SHALL BE 1 1/8".
- c) CONCRETE MASONRY ANCHORS - 1/4" DIAMETER x 2" LONG SELF DRILLING SCREW ANCHORS AS MANUFACTURED BY TAPCON, HILTI (Kwik Kon II) OR RAWL. INSTALL FASTENERS ACCORDING TO THE FASTENER MANUFACTURER'S SPECIFICATIONS FOR LIGHT GAUGE CONNECTIONS TO CONCRETE MASONRY.
- 4) LIGHT GAUGE FRAMING MEMBERS SHALL NOT BE CUT OR SPLICED UNLESS INDICATED ON THE SHOP DRAWINGS OR NOTED OTHERWISE.
- 5) BEARING WALL STUDS SHALL HAVE STUD BRIDGING AS REQUIRED BY STUD SUPPLIER, NOT TO EXCEED 4'-0" O.C. ALONG THE HEIGHT OF THE STUDS. NON-BEARING WALL STUDS SHALL HAVE STUD BRIDGING AS REQUIRED BY STUD SUPPLIER, NOT TO EXCEED 8'-0" O.C. ALONG THE HEIGHT OF THE STUDS.
- 6) EXTERIOR WALLS SHALL HAVE 6" 16 GAUGE STUDS SPACED 12" O.C. FOR THE FIRST 6'-0" FROM THE OUTSIDE CORNERS AT EACH FLOOR LEVEL AND SPACED 16" O.C. ELSEWHERE UNLESS NOTED OTHERWISE.
- 7) DOUBLE FULL HEIGHT STUDS SHALL BE PROVIDED AT ALL JAMBS UNLESS NOTED OTHERWISE ON THESE DRAWINGS OR ON SHOP DRAWINGS BY THE COLD-FORMED METAL SUPPLIER.
- 8) COLD-FORMED METAL FRAMING SHALL BE FULLY BRACED AS DESCRIBED BY THE COLD-FORMED METAL SUPPLIER.
- 9) COLD-FORMED FRAMING SUPPORTING COMPONENTS & CLADDING SHALL HAVE THE FOLLOWING DEFLECTION LIMITS AGAINST LATERAL LOADS, UNLESS MORE STRINGENT DEFLECTION LIMITS ARE RECOMMENDED BY THE COMPONENT OR CLADDING PROVIDER:
- |                                       |       |
|---------------------------------------|-------|
| BRICK, STONE, BRITTLE VENEERS         | L/600 |
| GLASS, CURTAINWALLS, STOREFRONTS      | L/360 |
| EXTERIOR INSULATION FINISHING SYSTEMS | L/240 |
| METAL PANELS                          | L/180 |

EPOXY ANCHORS & DOWELS

- 1) UNLESS NOTED OTHERWISE, ALL ANCHORS SHALL BE A36 THREAD RODS. UNLESS NOTED OTHERWISE, ALL DOWELS SHALL BE REINFORCING STEEL BARS PER THE CORRESPONDING NOTES ON THESE DRAWINGS.
- 2) EPOXY SHALL BE AS INDICATED ON THESE DRAWINGS OR AS DESCRIBED BELOW:
- a) MASONRY - HILTI HIT-HY 20 ADHESIVE OR APPROVED EQUAL BY SIKA OR SIMPSON STRONGTIE.
- b) CONCRETE - HILTI HIT-ICE/HIT-HY 150 ADHESIVE FOR APPLICATIONS EXPOSED TO WEATHER. HILTI HIT-HY 150 MAX ADHESIVE FOR APPLICATIONS SHIELDED FROM WEATHER.
- EQUIVALENT OR SUPERIOR PRODUCTS MAY BE SUBSTITUTED PROVIDED THAT THEY ARE APPROVED BY THE ENGINEER.
- 3) ANCHORS AND DOWELS SHALL BE PLACED IN COMPETENT CONCRETE OR MASONRY MATERIALS.
- 4) EPOXY ADHESIVES SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER SPECIFICATIONS.

SUBMITTALS

- THE FOLLOWING SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW:
- CONCRETE, GROUT, AND MORTAR MIX DESIGNS
  - CONCRETE & MASONRY REINFORCEMENT SHOP DRAWINGS
  - MASONRY UNIT CERTIFICATIONS
  - MASONRY REINFORCEMENT PRODUCT DATA
  - VENEER TIES PRODUCT DATA
  - STRUCTURAL STEEL MILL CERTIFICATIONS
  - STRUCTURAL STEEL SHOP DRAWINGS
  - STEEL JOIST SHOP DRAWINGS
  - STEEL DECK SHOP DRAWINGS
  - COLD-FORMED STEEL PRODUCT DATA AND SHOP DRAWINGS
  - ANCHORING EPOXY
  - MECHANICAL ROOF-TOP UNIT & CURBS PRODUCT DATA
  - STOREFRONT PRODUCT DATA AND SHOP DRAWINGS
  - METAL PANEL PRODUCT DATA AND SHOP DRAWINGS
  - EIFS PRODUCT DATA
  - RIGID BOARD INSULATION PRODUCT DATA
  - ENGINEERED WOOD PRODUCT DATA AND SHOP DRAWINGS
  - CORROSION INHIBITOR
  - CONCRETE SEALER
  - INJECTION EPOXY FOR CRACK REPAIRS
  - GUARDRAIL & ANCHOR SHOP DRAWINGS, STAINLESS STEEL MILL CERTIFICATION, AND WELDERS CERTIFICATE.

ABBREVIATIONS

ALT.	ALTERNATE
ARCH.	ARCHITECTURAL, ARCHITECT
B.O.	BOTTOM OF
BRG.	BEARING
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
DBL.	DOUBLE
DET.	DETAIL
DWG.	DRAWING
EA.	EACH
ELEV.	ELEVATION
EXCAV.	EXCAVATION
EXP.	EXPANSION
FIN.	FINISH
FL.	FLOOR
FND.	FOUNDATION
F.S.	FAR SIDE
FTG.	FOOTING
GA.	GAUGE
GYP.	GYPSPUM
GR.	GRADE
HORIZ.	HORIZONTAL
JT.	JOINT
KSI	KIPS PER SQUARE INCH
MAX.	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
MTL.	METAL
N.S.	NEAR SIDE
O.C.	ON CENTER
OPNG.	OPENING
PSF	POUNDS PER SQUARE FOOT
REINF.	REINFORCING
REQ'D	REQUIRED
SCHED.	SCHEDULE
SEC.	SECTION
SHT.	SHEET
SPA.	SPACES
T&B	TOP AND BOTTOM
T.O.	TOP OF
T.O.F.	TOP OF FOOTING
T.O.J.	TOP OF JOIST
T.O.P.	TOP OF PIER
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
W.W.F.	WELDED WIRE FABRIC

STRUCTURAL DRAWING INDEX

ST00.001	GENERAL NOTES & ABBREVIATIONS
ST03.100	FOUNDATION PLAN
ST03.200	ROOF FRAMING PLAN
ST03.300	ENLARGED FRAMING PLANS
ST04.000	TYPICAL STRUCTURAL DETAILS
ST05.000	WALL DETAILS



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FAX: 410-465-9602



931-B Sweeney Drive  
Hagerstown, Maryland 21740  
P: 301-790-0111  
F: 301-790-0222  
www.strengthengineering.com



Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No.

Expiration Date:

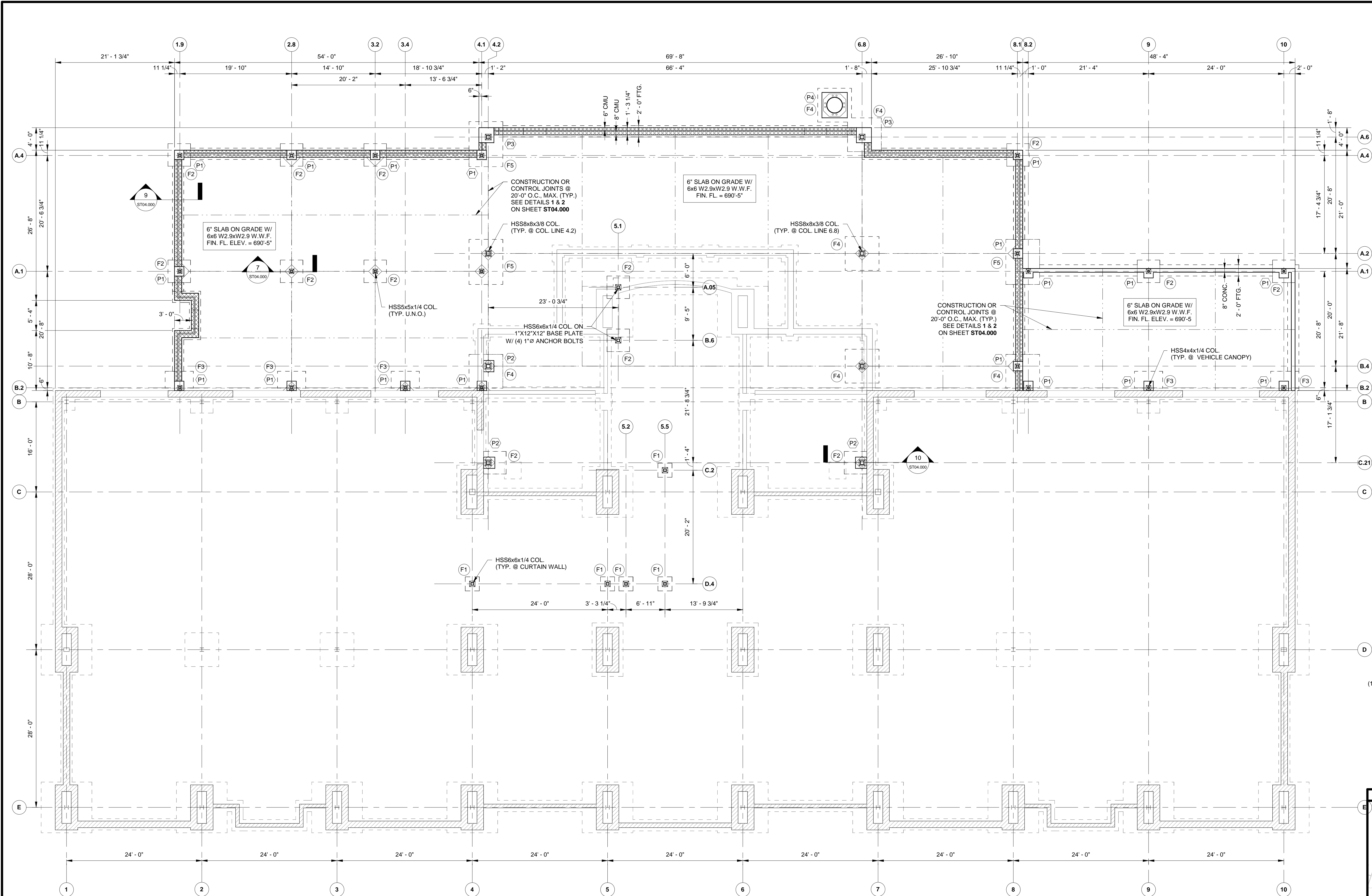
DESIGNED:	No.	DATE	DESCRIPTION
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APPROVED:			



PROJECT TITLE:	TERMINAL BUILDING EXPANSION
SHEET TITLE:	GENERAL NOTES & ABBREVIATIONS
SCALE:	DATE:
1" = 1'-0"	MARCH 2019

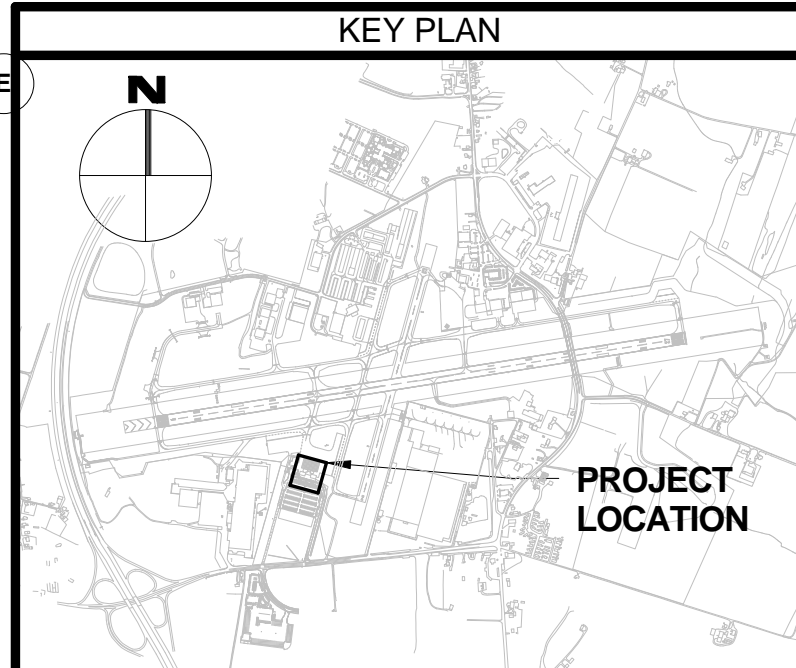
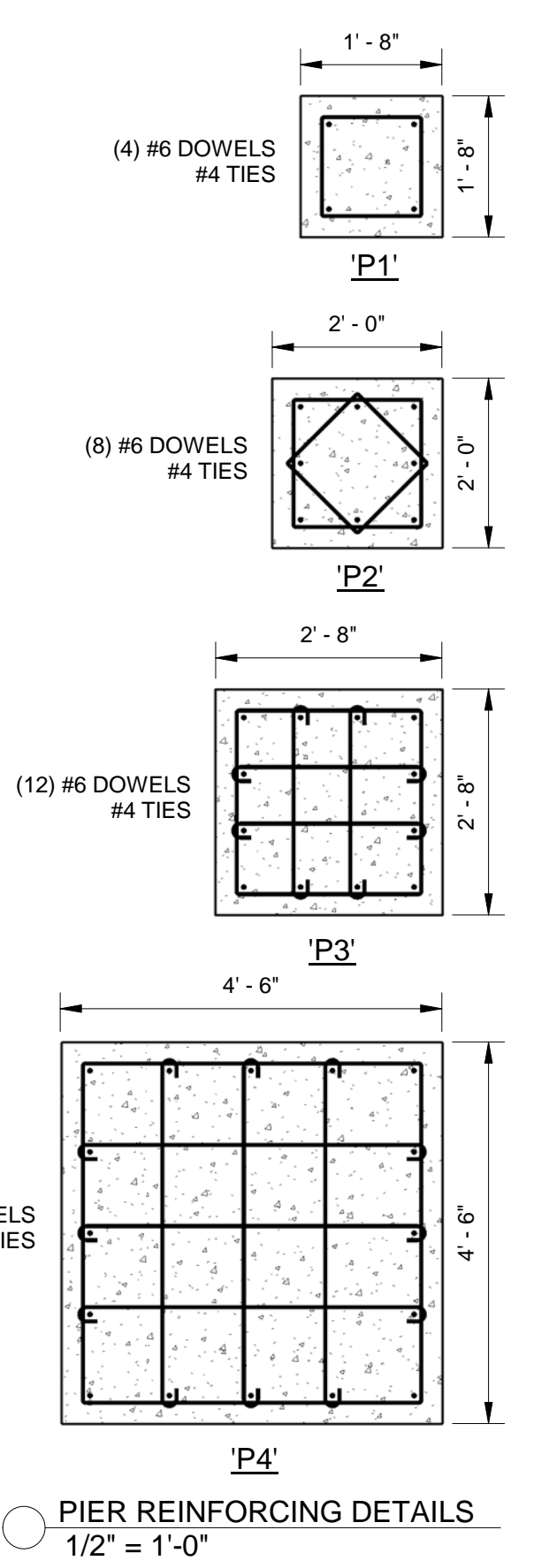
FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>ST00.001</b> 21 OF 117





FOOTING SCHEDULE		
FTG.	SIZE	BOTTOM REINFORCING
F1	2'-6" x 2'-6" x 1'-3"	(3) #5 BARS EA. WAY
F2	4'-0" x 4'-0" x 1'-3"	(6) #5 BARS EA. WAY
F3	3'-0" x 5'-0" x 1'-3"	(4) #5 BARS x (7) #5 BARS
F4	6'-0" x 6'-0" x 1'-6"	(9) #5 BARS EA. WAY
F5	6'-0" x 8'-0" x 1'-6"	(9) #5 BARS x (11) #5 BARS

PIER SCHEDULE		
PIER	SIZE	VERTICAL REINFORCING
P1	1'-8" x 1'-8"	(4) #6 DOWELS
P2	2'-0" x 2'-0"	(8) #6 DOWELS
P3	2'-6" x 2'-6"	(8) #6 DOWELS
P4	4'-6" x 4'-6"	(16) #6 DOWELS



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



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FAX: 410-465-9602



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No.  
Expiration Date:

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:			
CHECKED:			
APPROVED:			



Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**FOUNDATION PLAN**

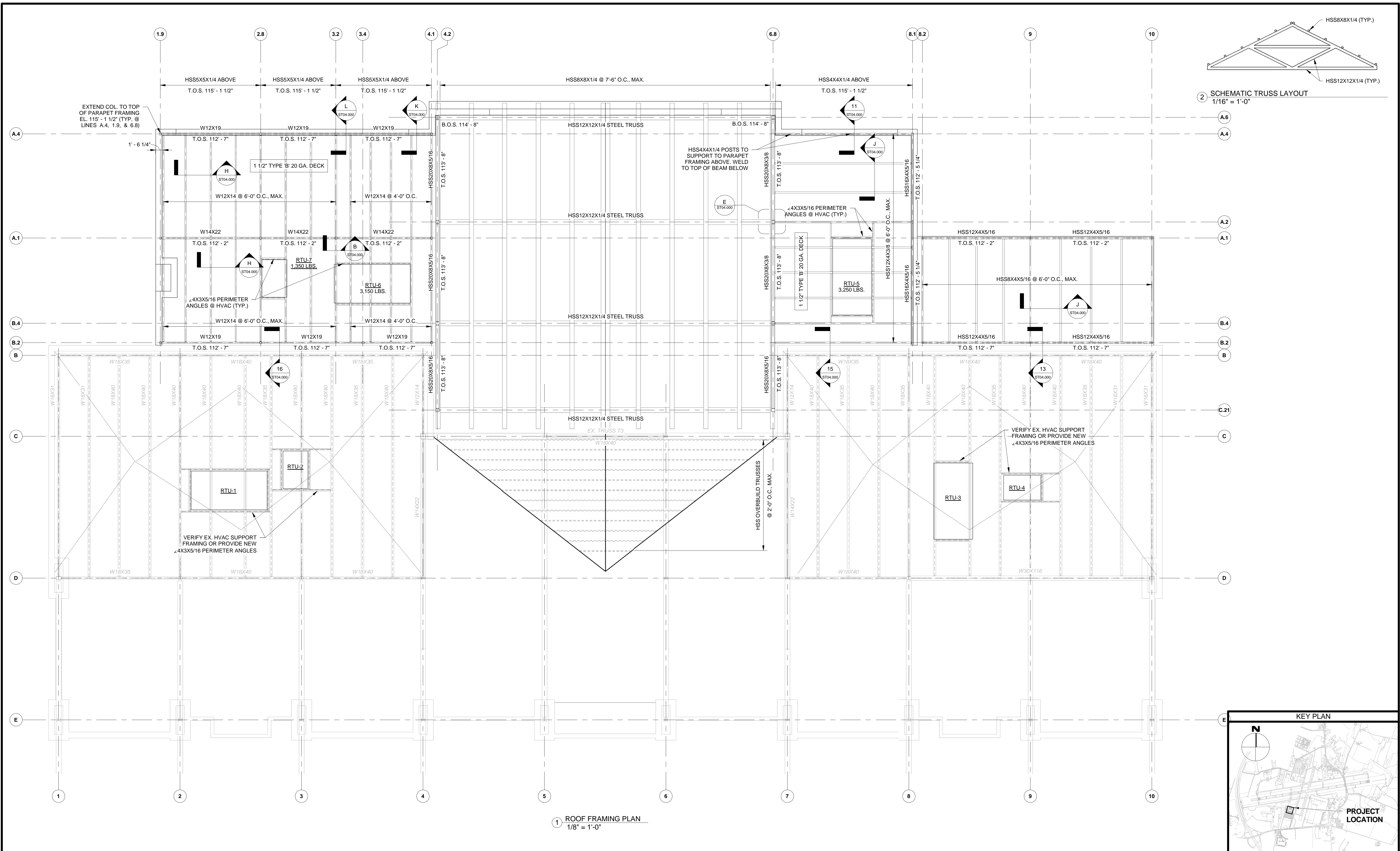
SCALE:  
As indicated

DATE:  
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FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

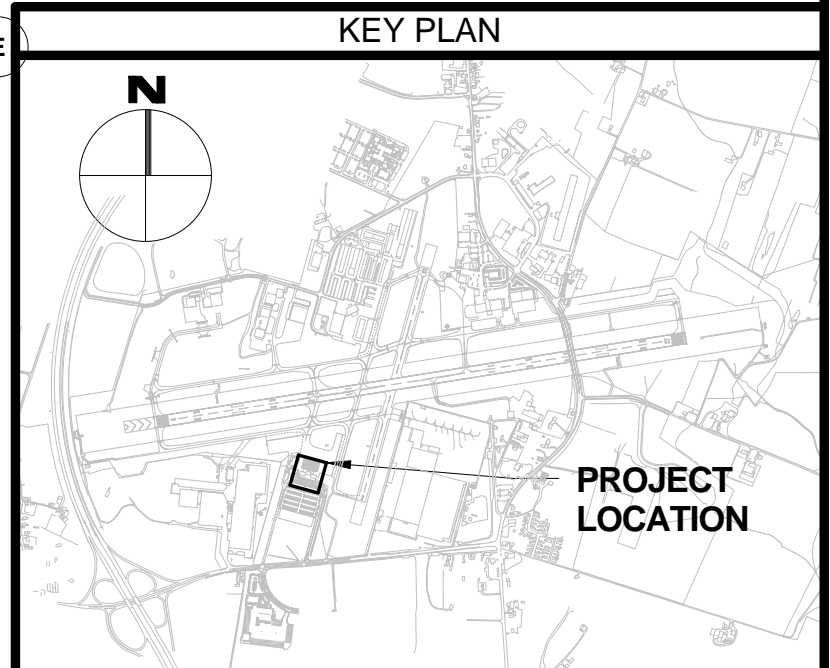
SHEET No.:  
**ST03.100**  
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1 ROOF FRAMING PLAN  
1/8" = 1'-0"

2 SCHEMATIC TRUSS LAYOUT  
1/16" = 1'-0"





6031 UNIVERSITY BLVD.  
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PHONE: 410-465-9600  
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931-B Sweeney Drive  
Hagerstown, Maryland 21740  
P: 301-790-0111  
F: 301-790-0222  
www.strengthengineering.com



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No.  
Expiration Date:

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:			
CHECKED:			
APPROVED:			



Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**ROOF FRAMING PLAN**

SCALE:  
As indicated

DATE:  
MARCH 2019

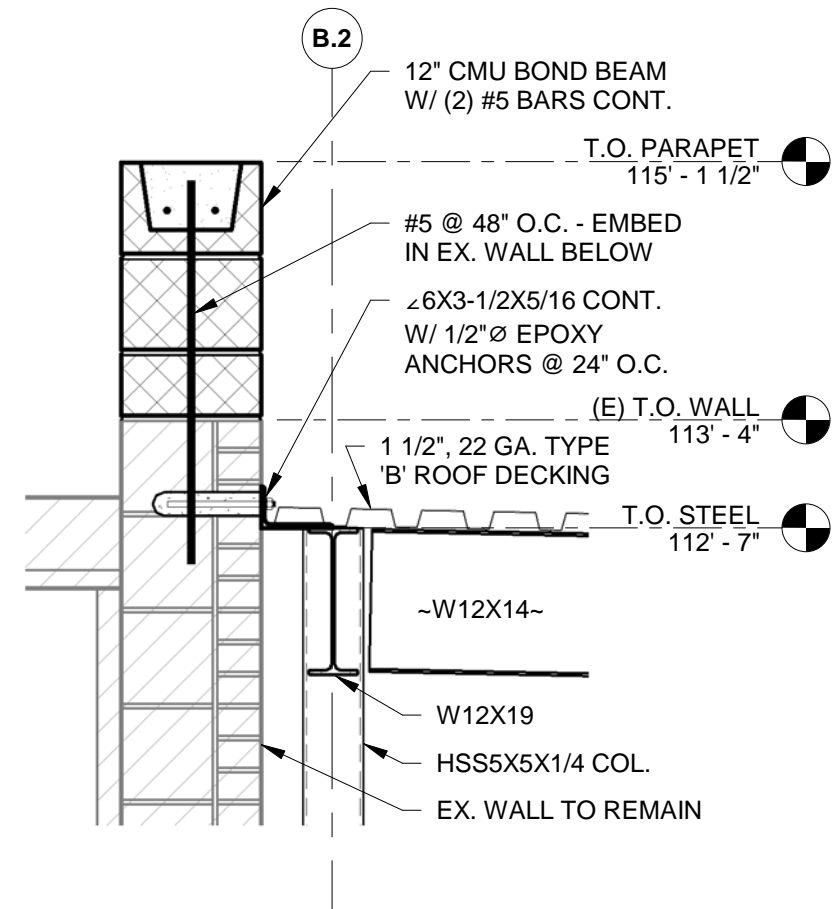
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**ST03.200**  
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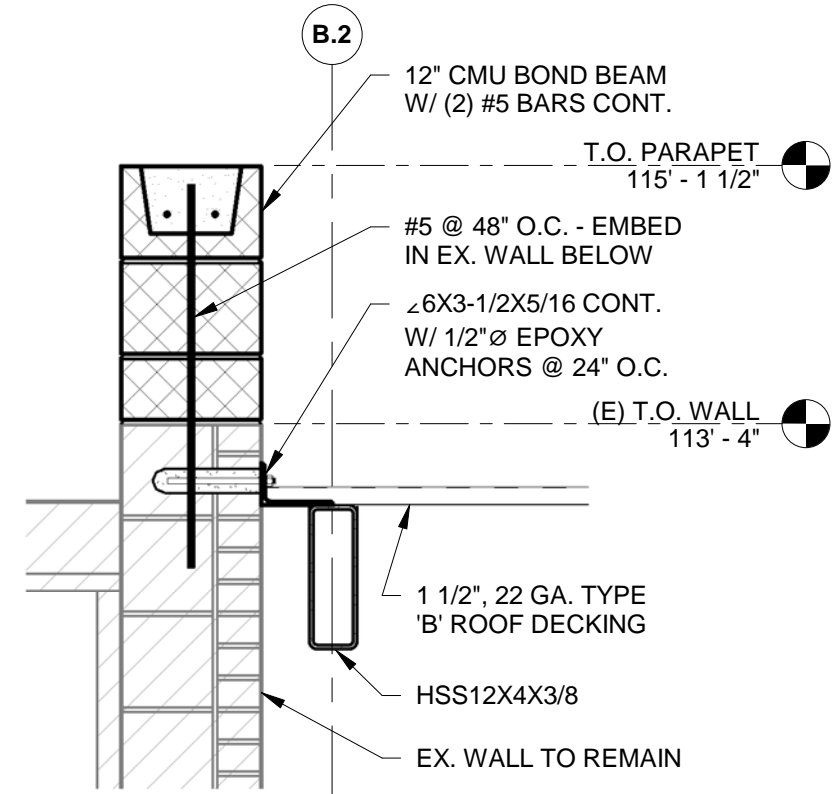




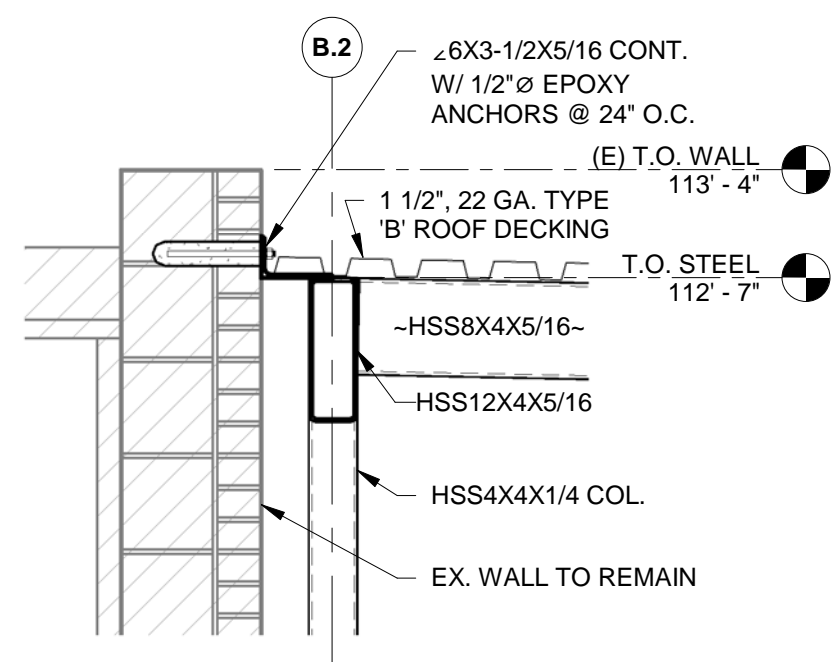




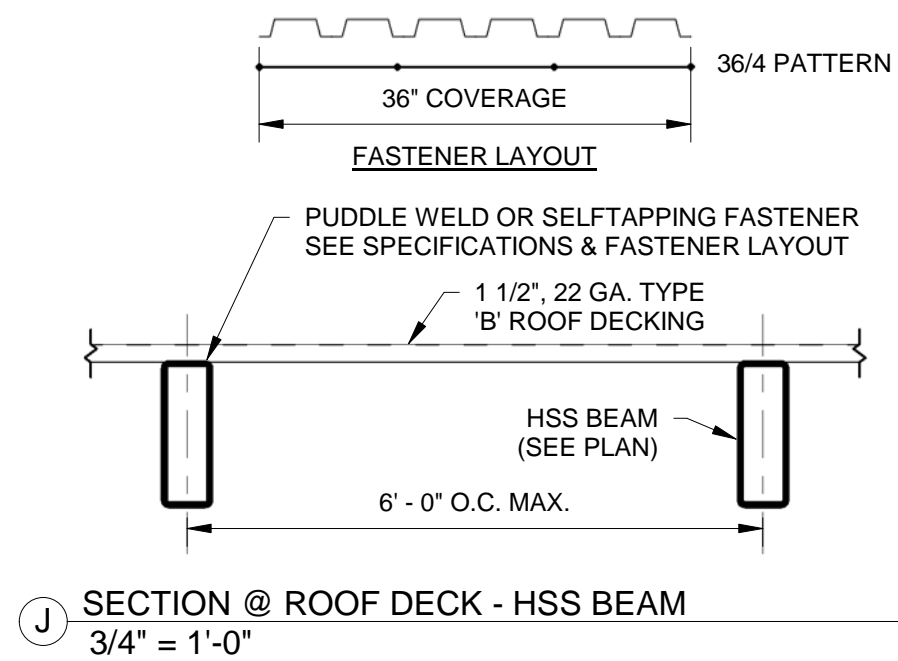
16 SECTION - NEW W BEAM TO EX. WALL  
3/4" = 1'-0"



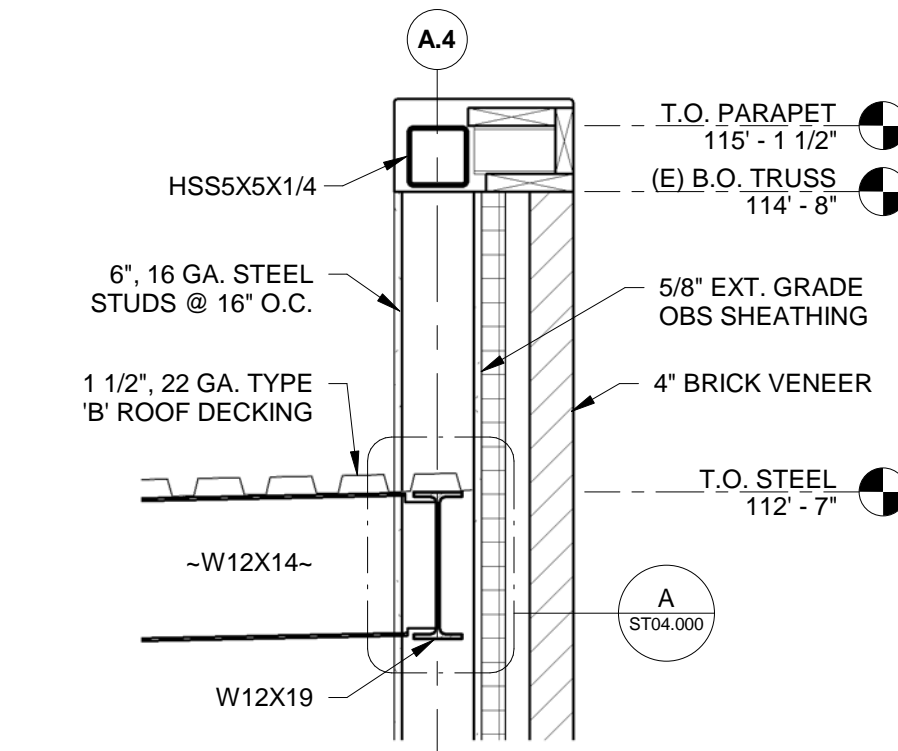
15 SECTION - NEW HSS BEAM TO EX. WALL  
3/4" = 1'-0"



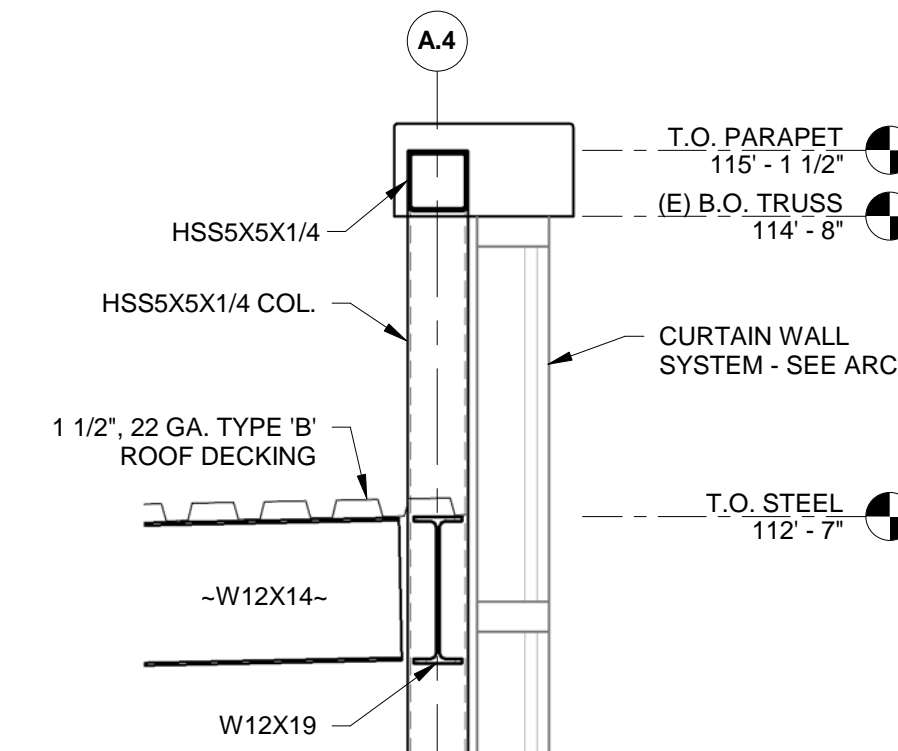
13 SECTION - CANOPY BEAM @ EX. WALL  
3/4" = 1'-0"



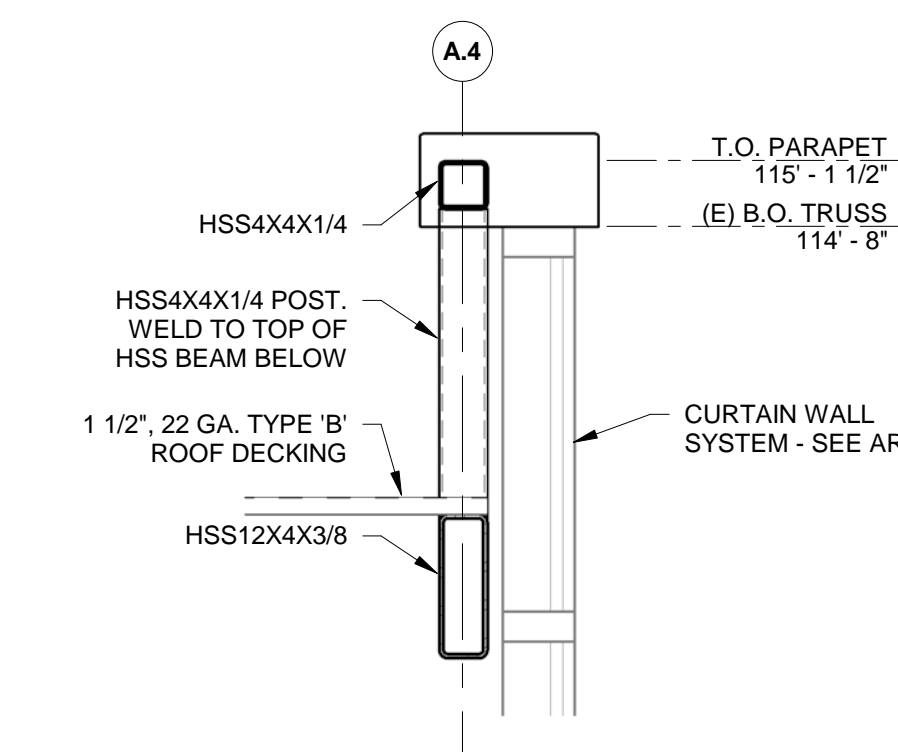
J SECTION @ ROOF DECK - HSS BEAM  
3/4" = 1'-0"



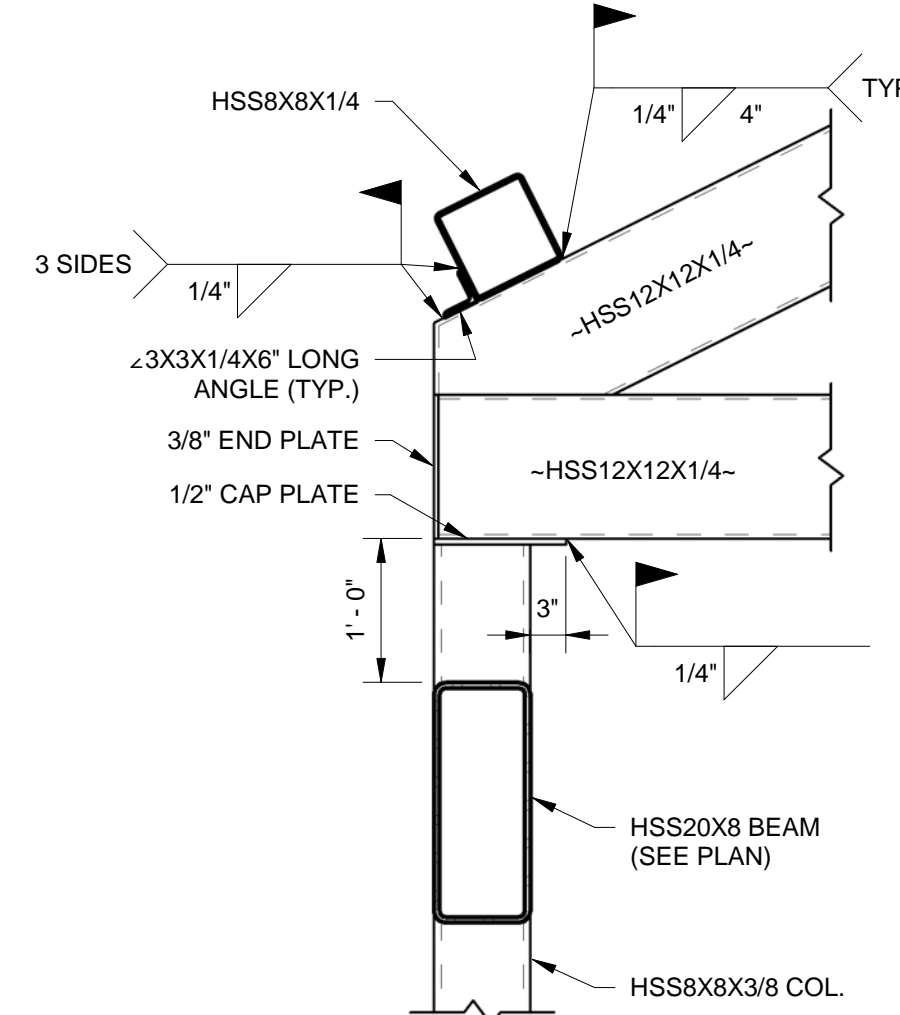
K SECTION - WALL @ COL. LINE A.4  
3/4" = 1'-0"



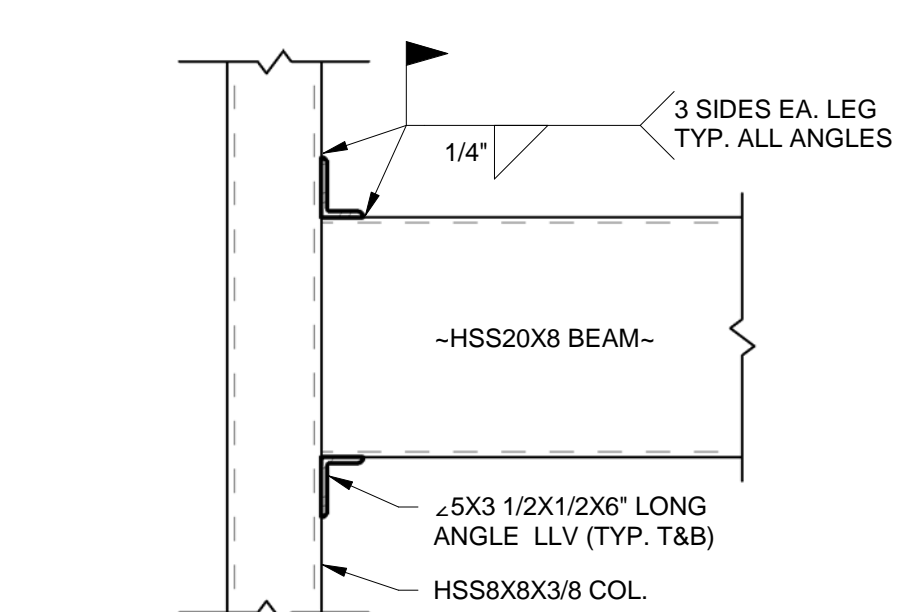
L SECTION - PARAPET @ COL. LINE A.4  
3/4" = 1'-0"



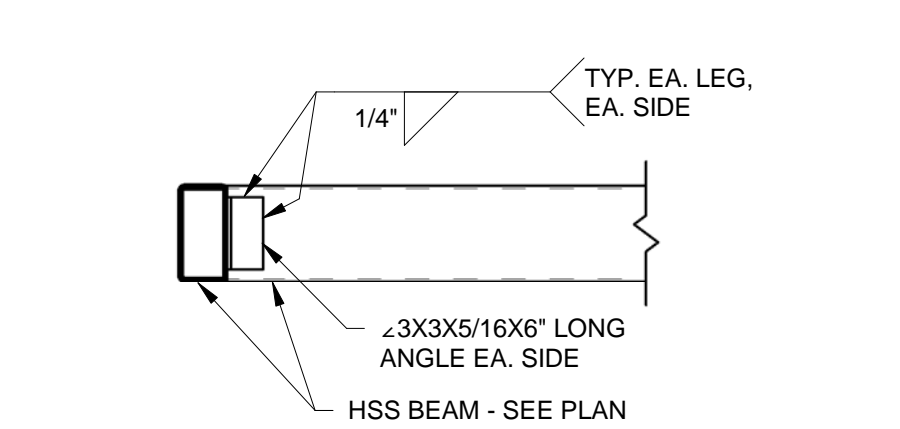
11 SECTION - HSS BEAM @ PARAPET  
3/4" = 1'-0"



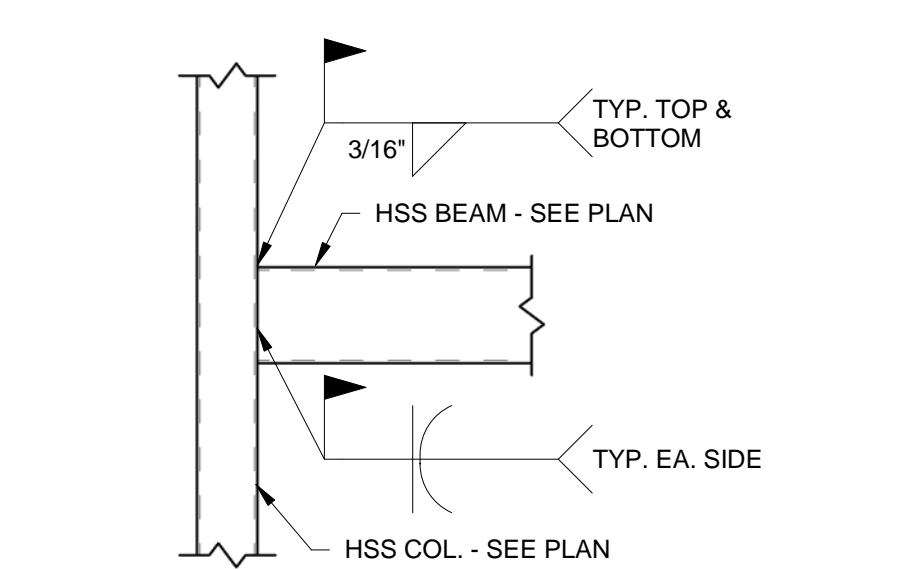
D HSS TRUSS TO COLUMN CONNECTIONS  
3/4" = 1'-0"



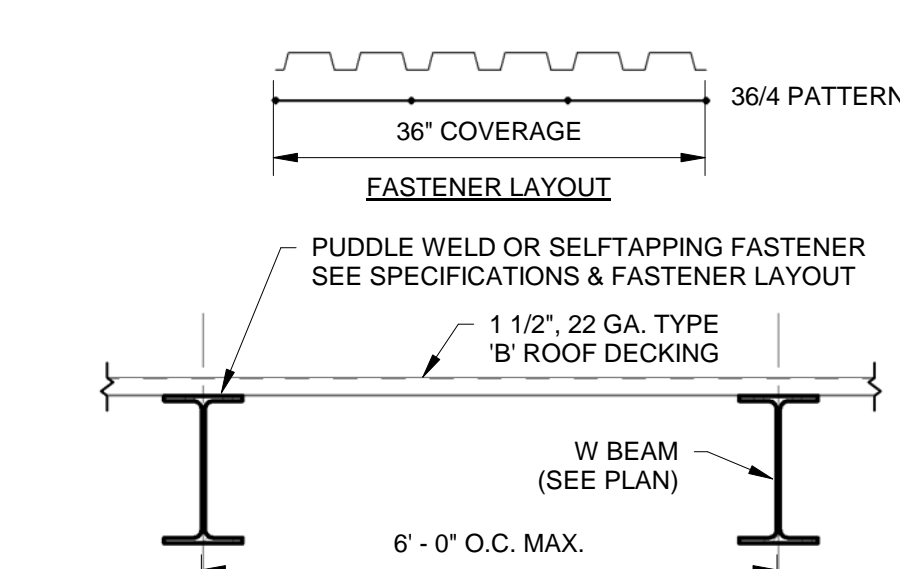
E HSS BEAM TO COLUMN CONNECTION  
3/4" = 1'-0"



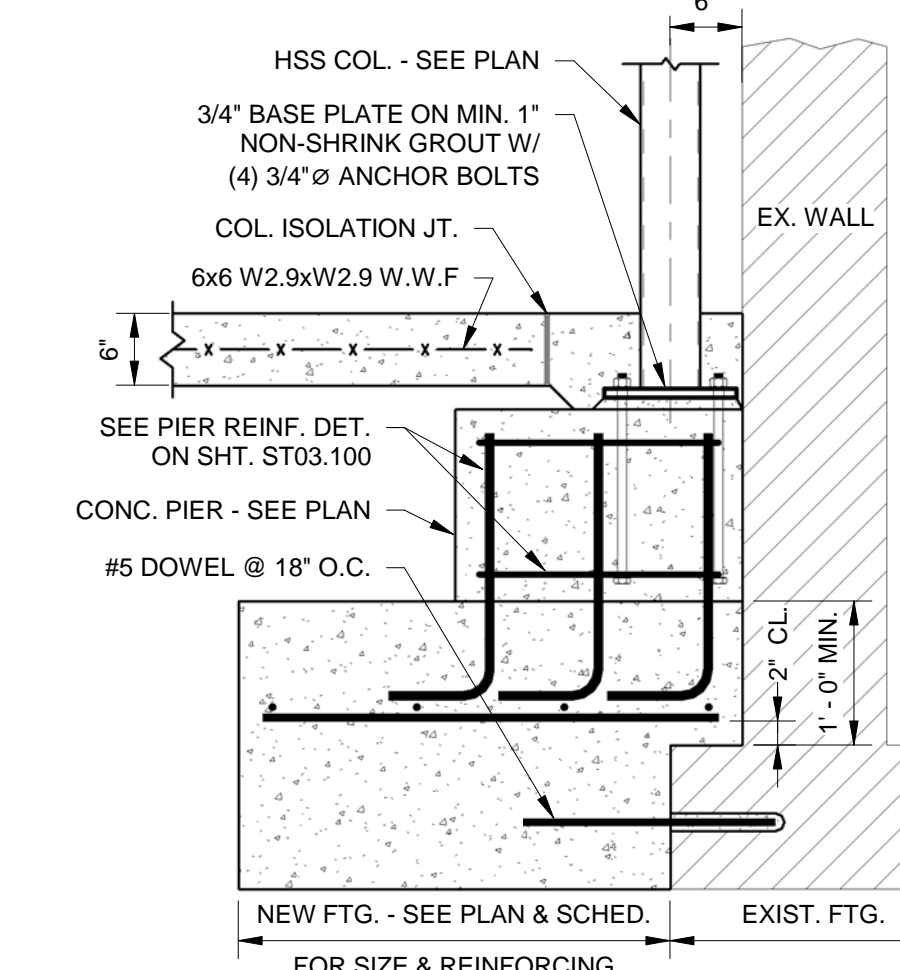
F HSS BEAM TO BEAM CONNECTION  
3/4" = 1'-0"



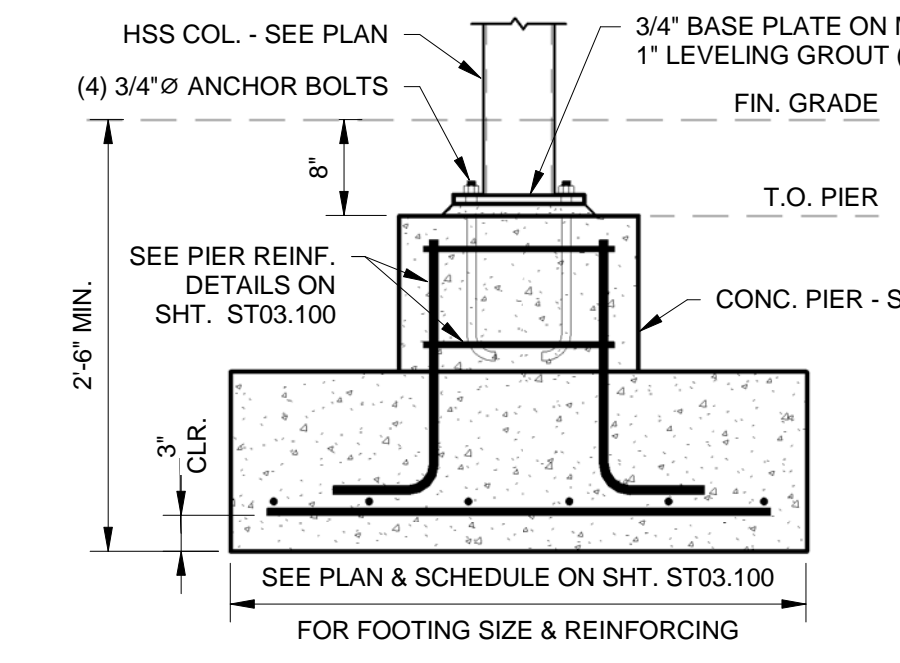
G HSS BEAM TO COL. CONNECTION  
3/4" = 1'-0"



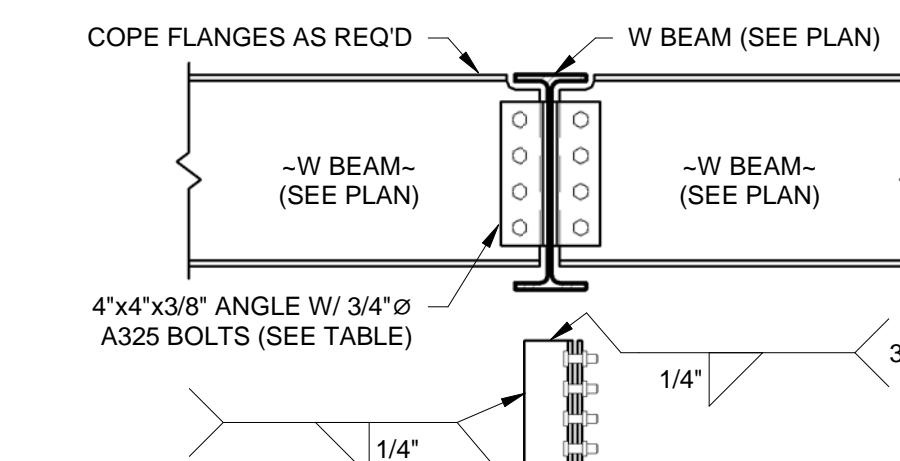
H SECTION @ ROOF DECK - W BEAM  
3/4" = 1'-0"



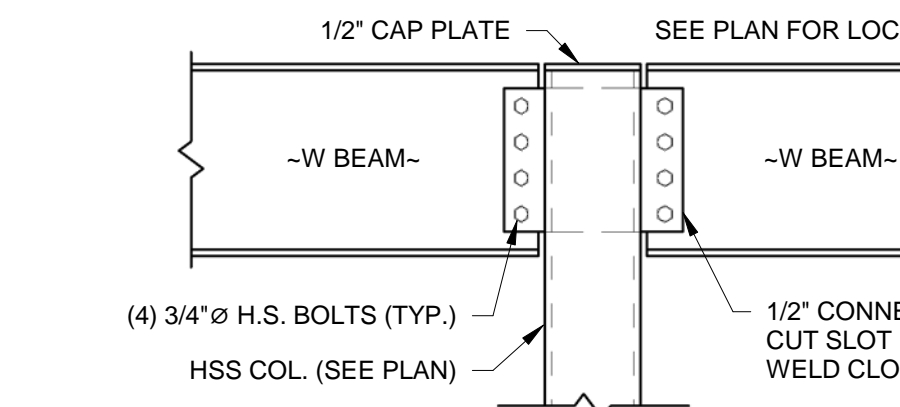
10 COLUMN FTG. @ EXISTING BLDG.  
3/4" = 1'-0"



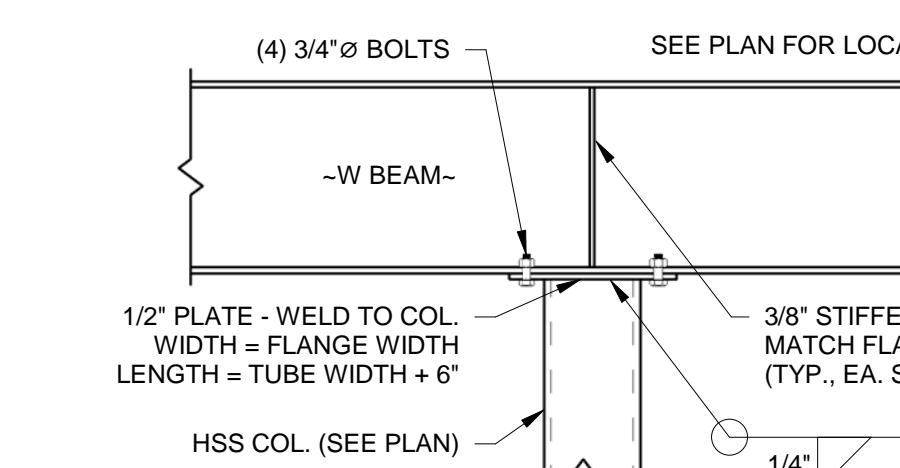
14 COLUMN FTG. @ VEHICLE CANOPY  
3/4" = 1'-0"



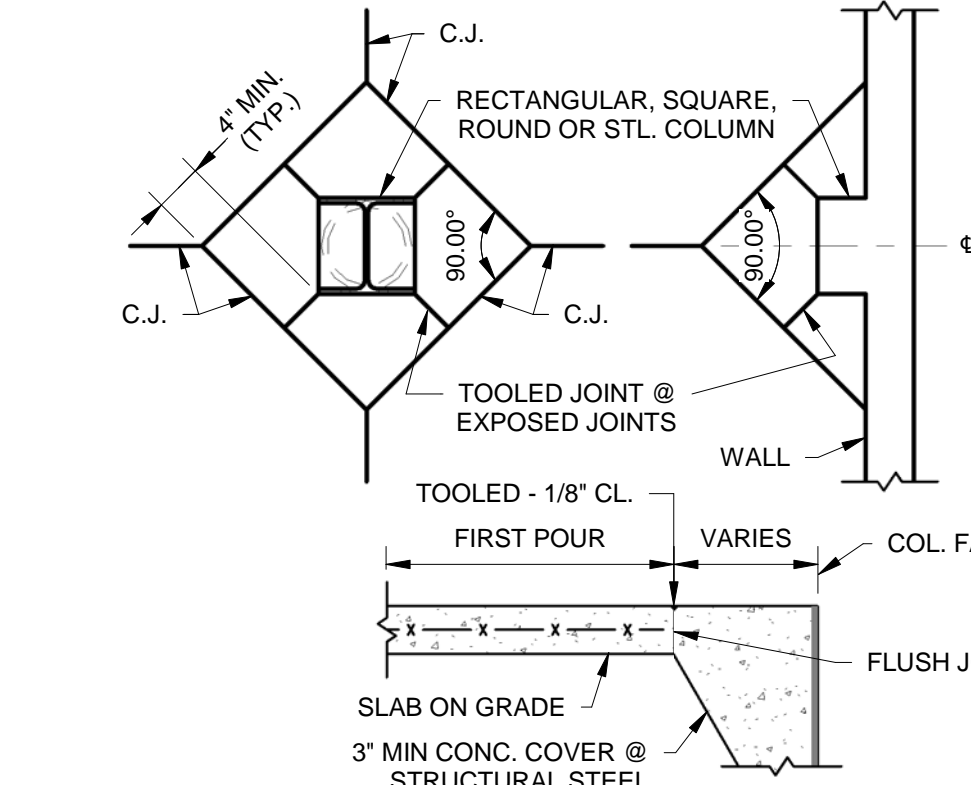
A BEAM TO BEAM CONNECTION  
3/4" = 1'-0"



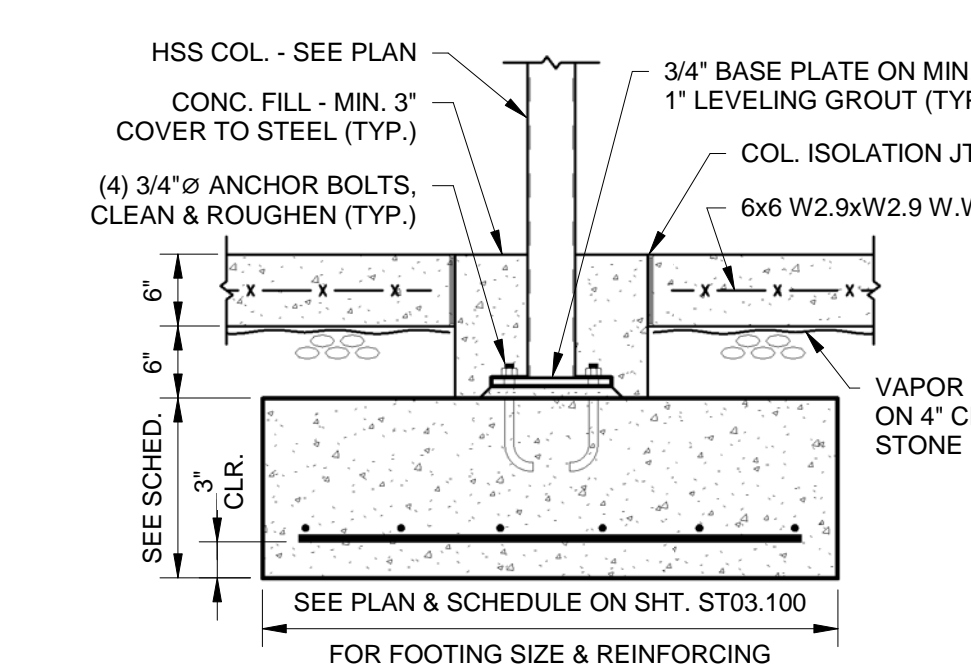
B BEAM TO COLUMN SIDE CONNECTION  
3/4" = 1'-0"



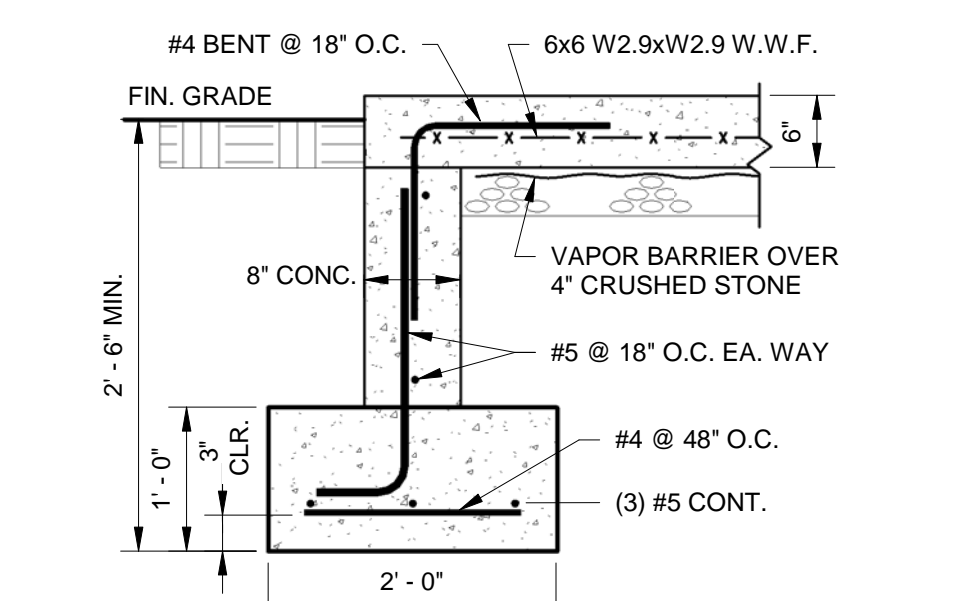
C BEAM TO COLUMN TOP CONNECTION  
3/4" = 1'-0"



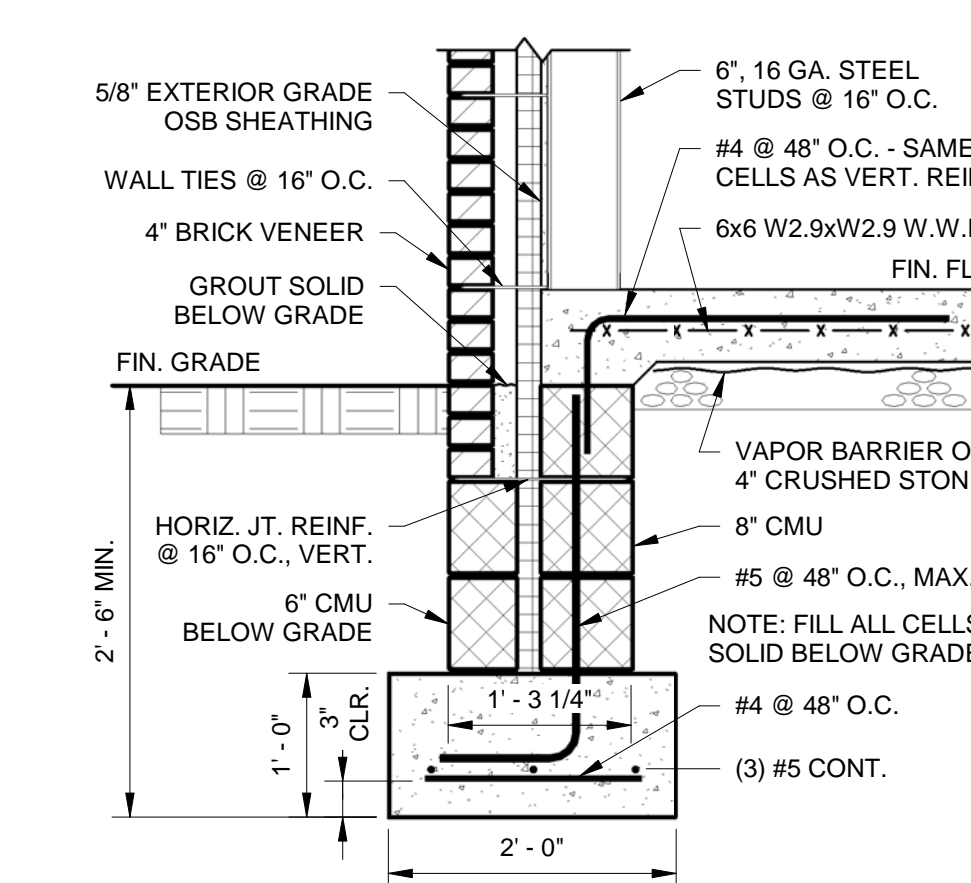
6 COLUMN ISOLATION JOINT  
3/4" = 1'-0"



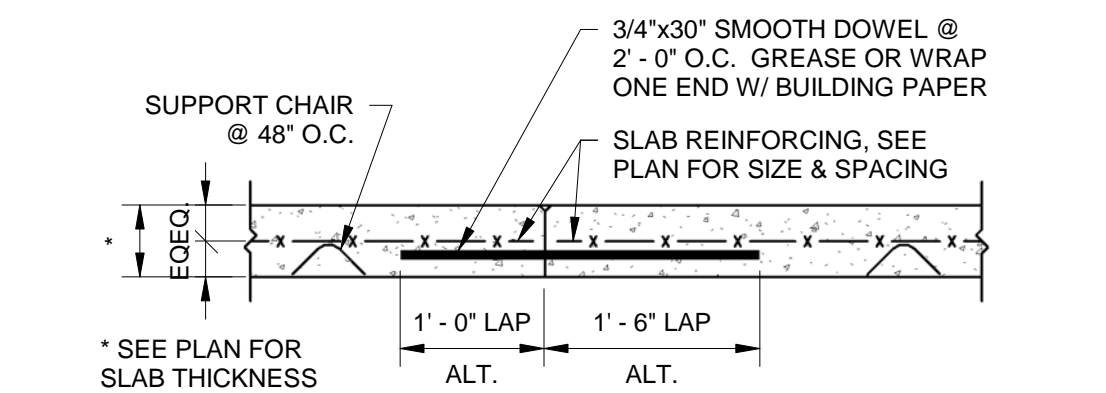
7 INTERIOR SPREAD COLUMN FTG.  
3/4" = 1'-0"



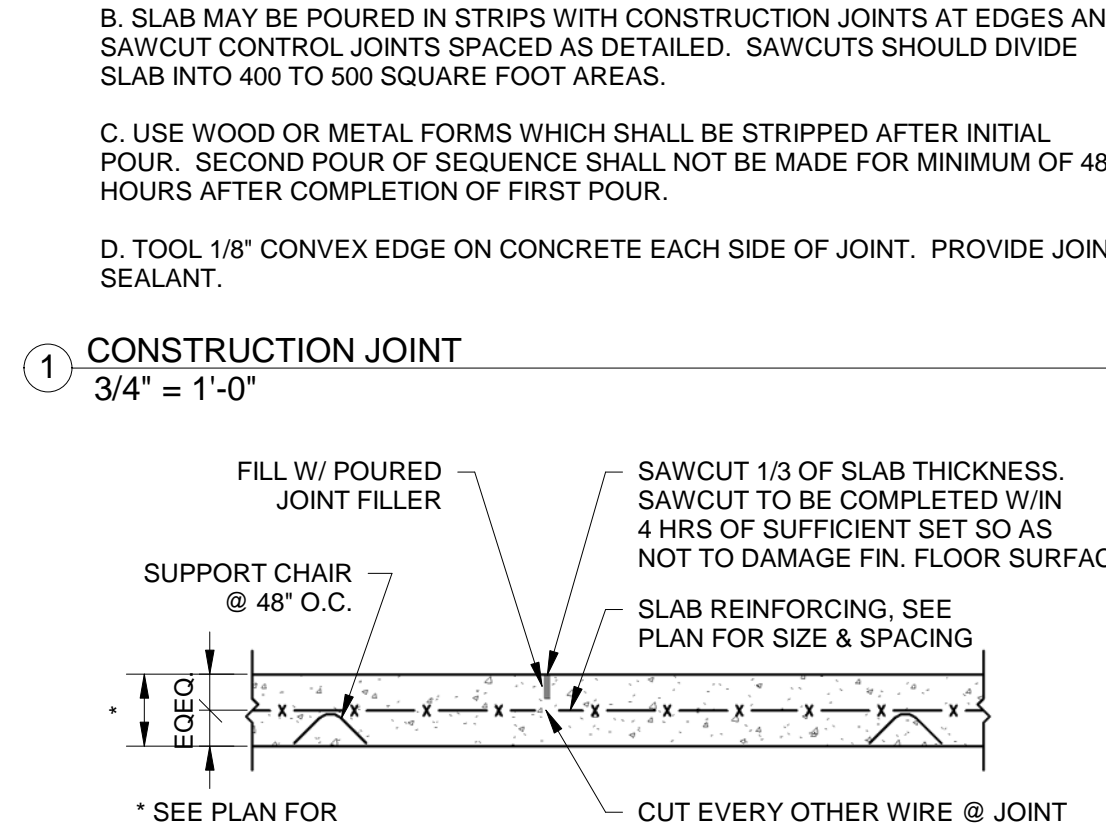
8 WALL FTG. @ VEHICLE CANOPY  
3/4" = 1'-0"



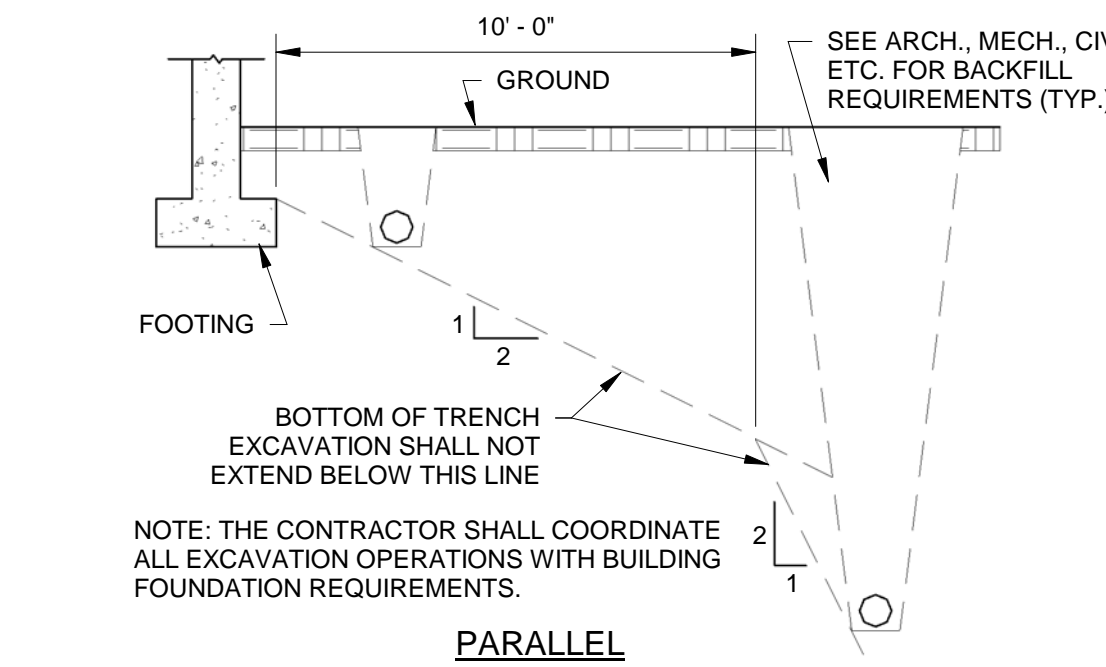
9 EXTERIOR WALL FTG.  
3/4" = 1'-0"



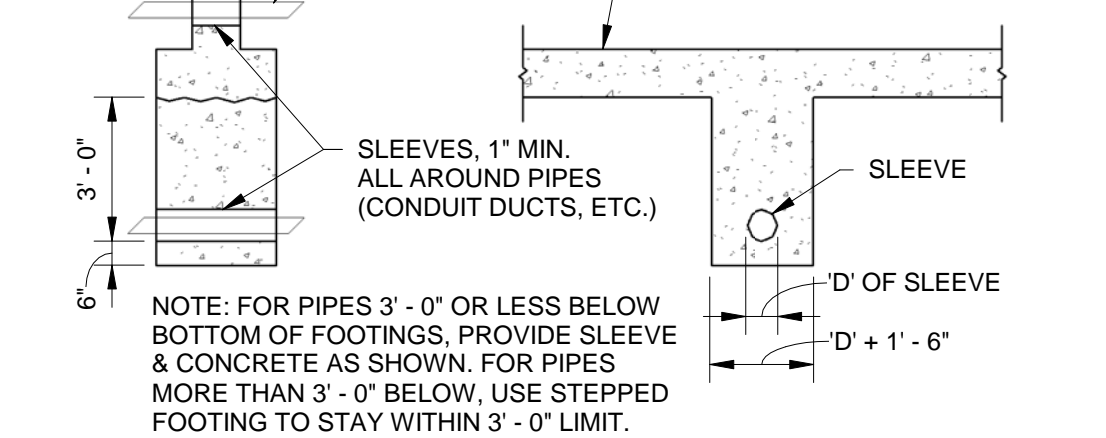
1 CONSTRUCTION JOINT  
3/4" = 1'-0"



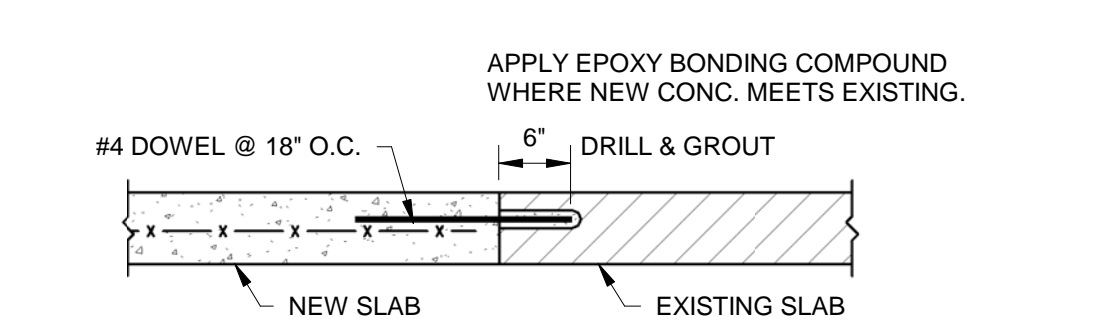
2 CONTROL JOINT  
3/4" = 1'-0"



3 EXCAVATION  
1/4" = 1'-0"

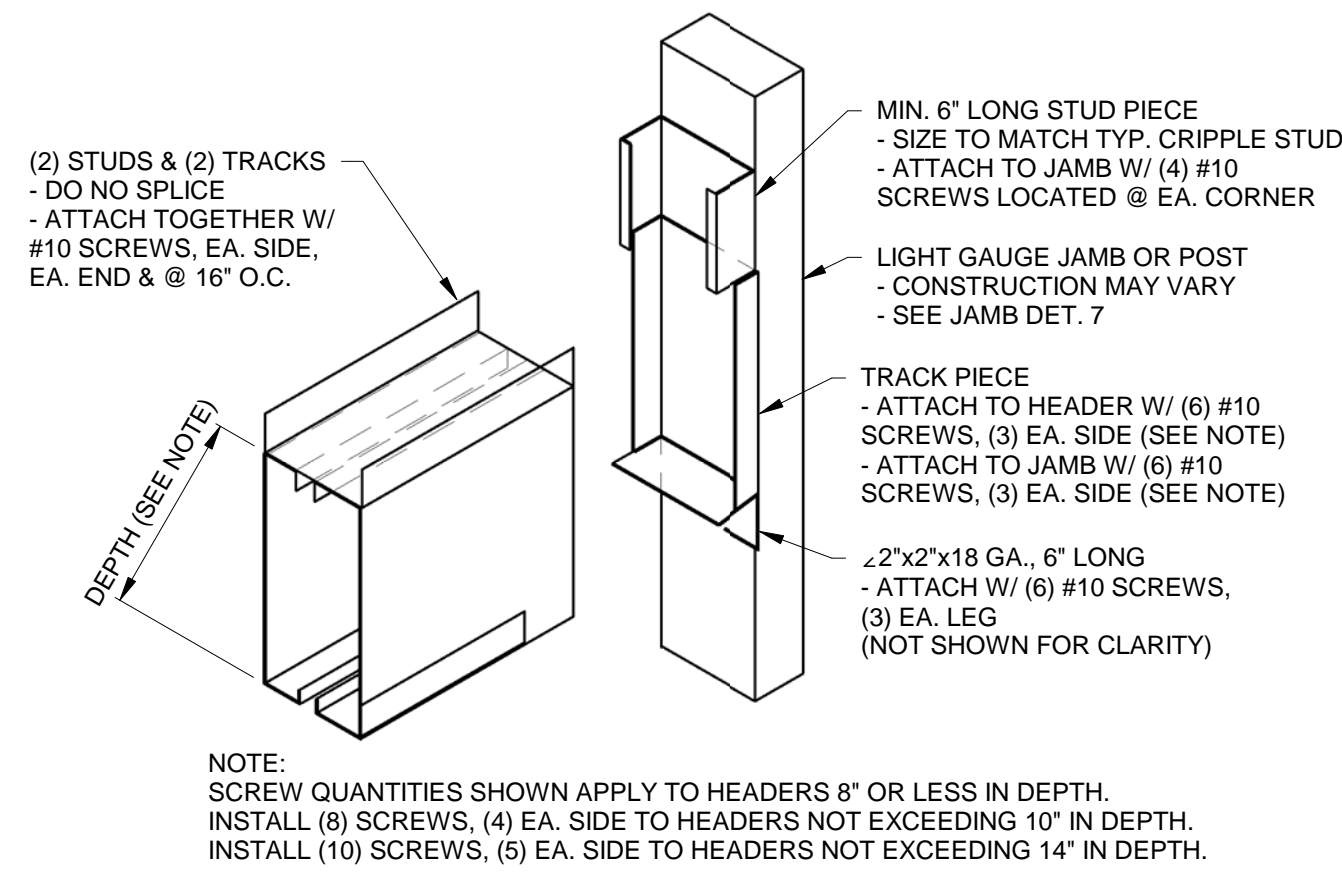


4 NEW/EXISTING SLAB TIE  
3/4" = 1'-0"

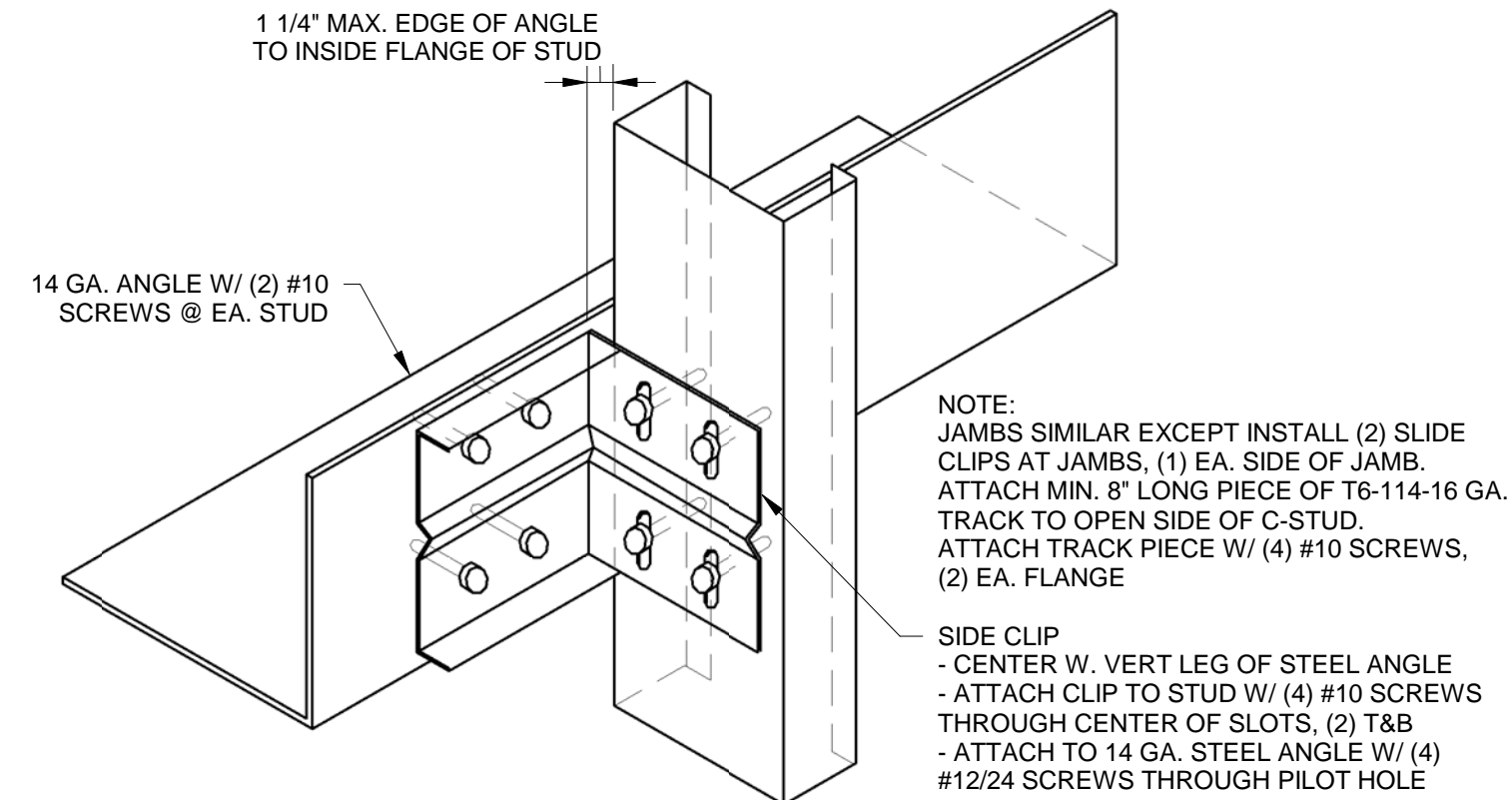


5 NEW/EXISTING FOOTING TIE  
3/4" = 1'-0"

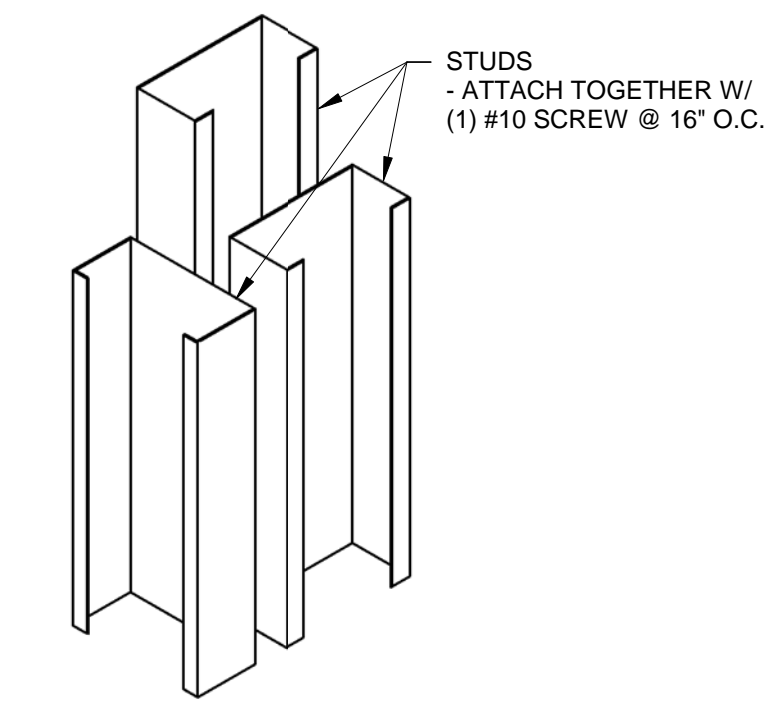




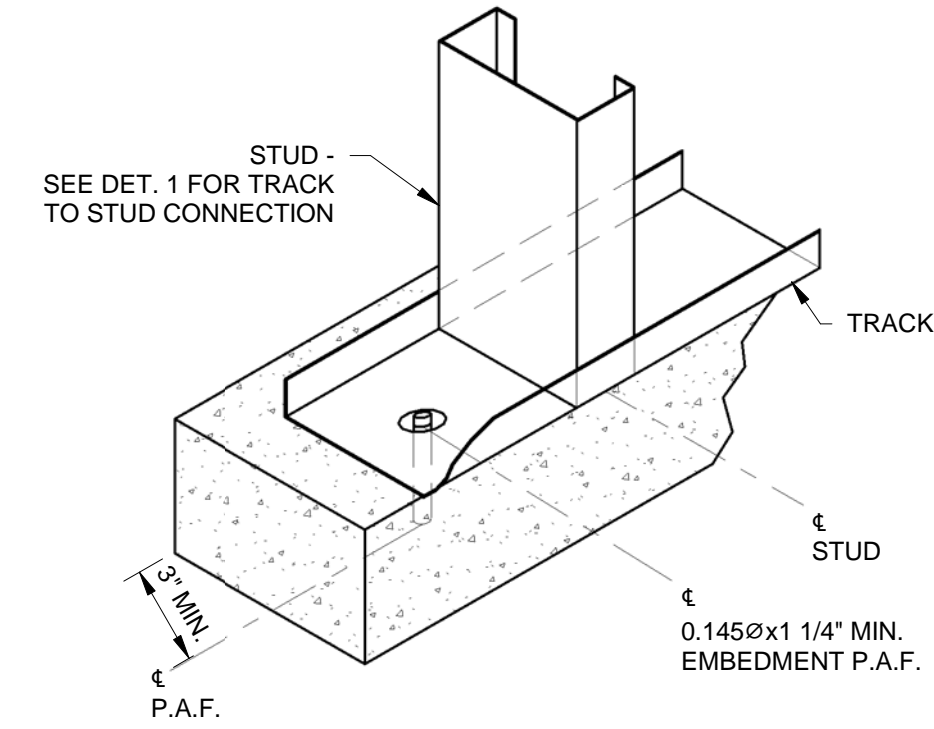
9 BOXED HEADER TO JAMB OR POST  
3/4" = 1'-0"



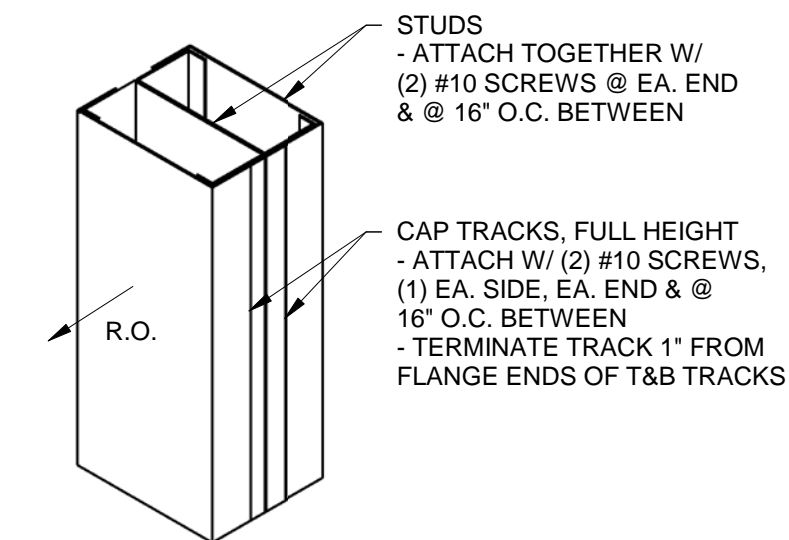
10 SIDE CLIP TO STEEL ANGLE  
3/4" = 1'-0"



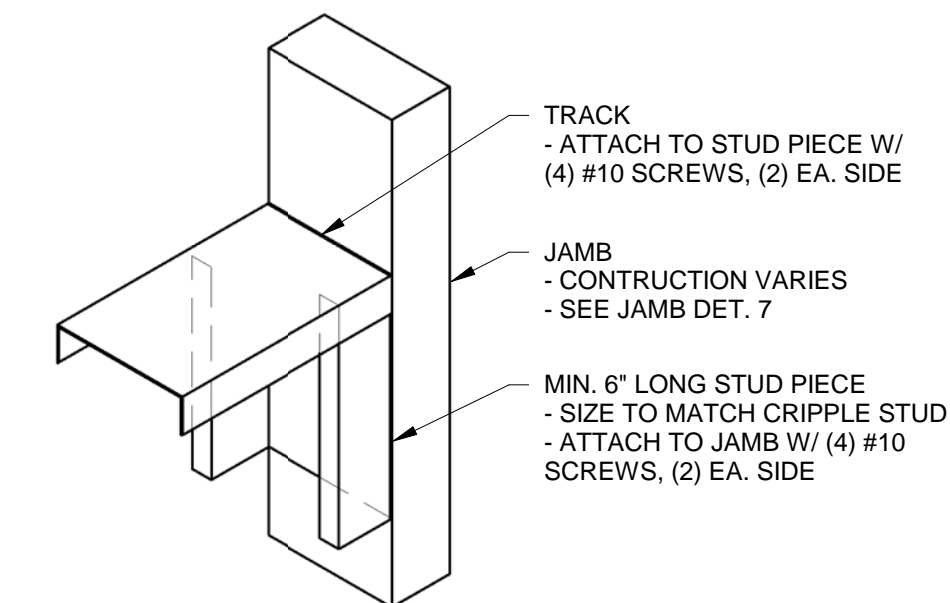
5 CORNER STUD LAYOUT  
3/4" = 1'-0"



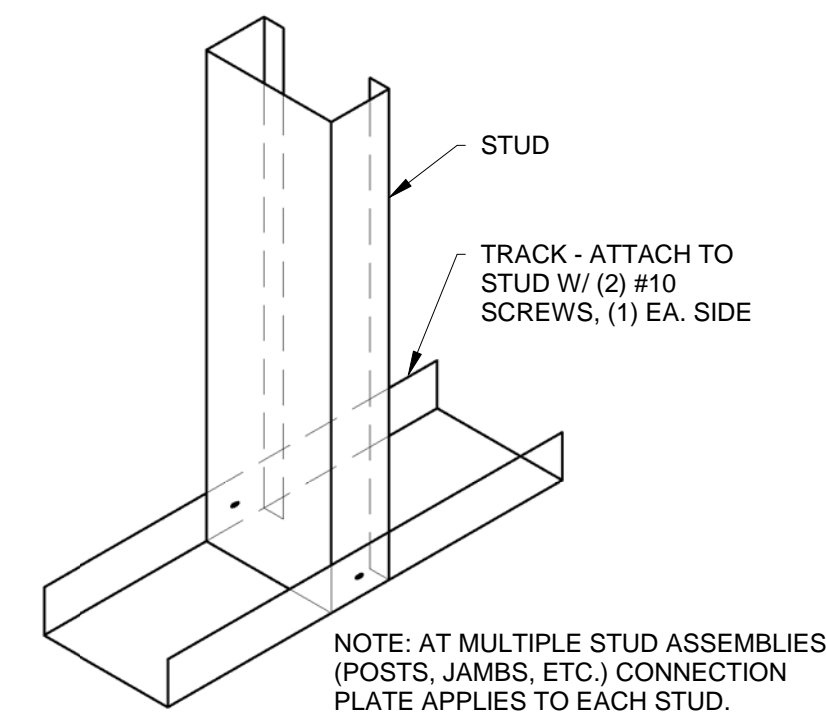
6 TRACK TO CONC. @ STUD W/ (1) PAF  
3/4" = 1'-0"



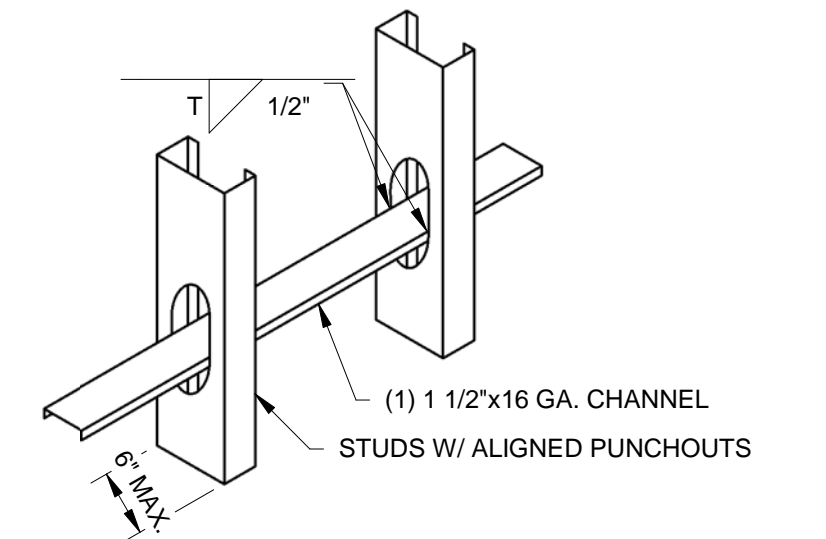
7 JAMB - (2) STUDS & (2) TRACKS  
3/4" = 1'-0"



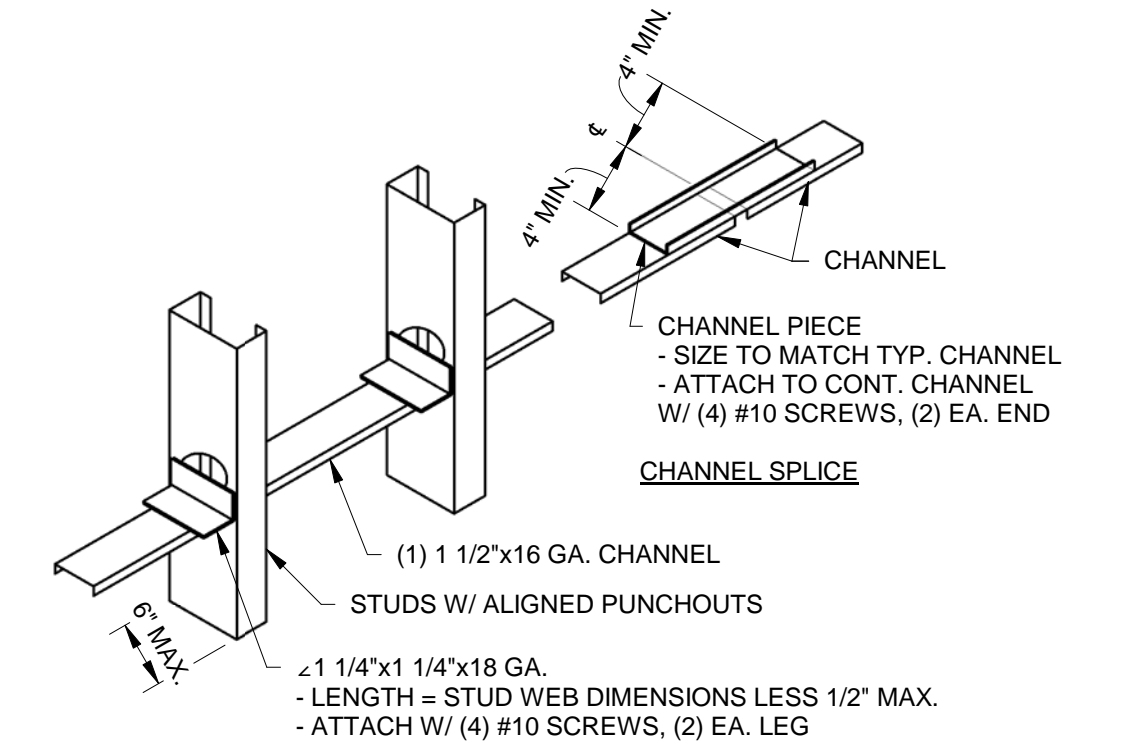
8 SILL TO JAMB  
3/4" = 1'-0"



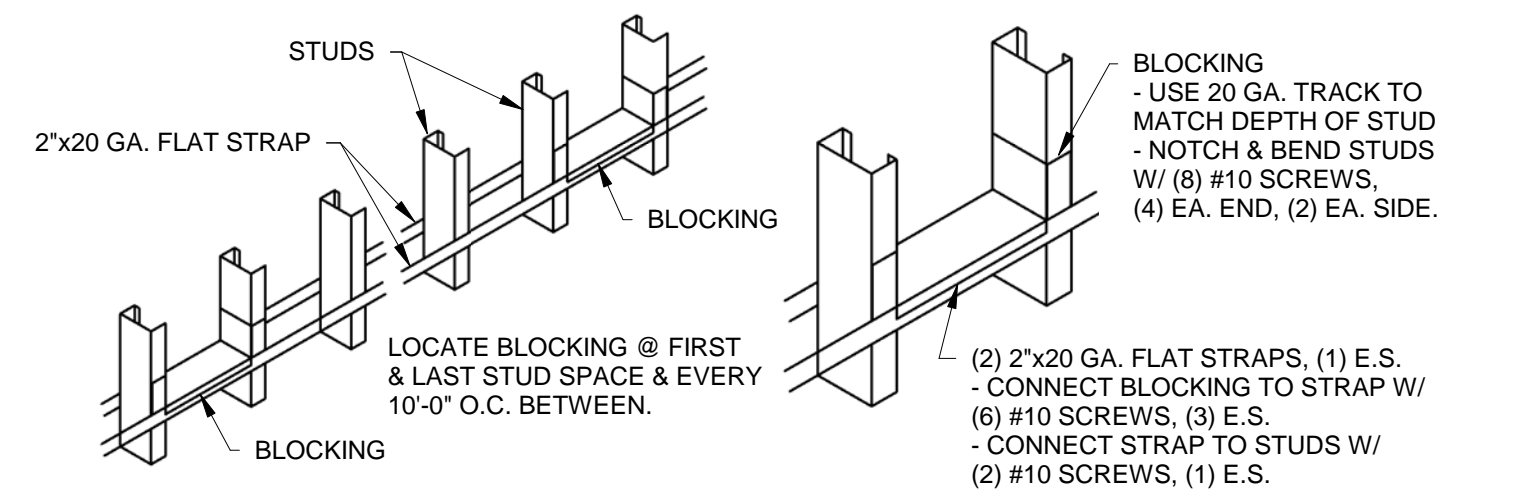
1 TRACK TO STUD  
3/4" = 1'-0"



2 CHANNEL THROUGH STUD PUNCHOUTS - WELDED  
3/4" = 1'-0"



3 CHANNEL THROUGH STUD PUNCHOUTS W/ CLIP ANGLE & SCREWS  
3/4" = 1'-0"



4 FLAT STRAPS & BLOCKING  
3/4" = 1'-0"



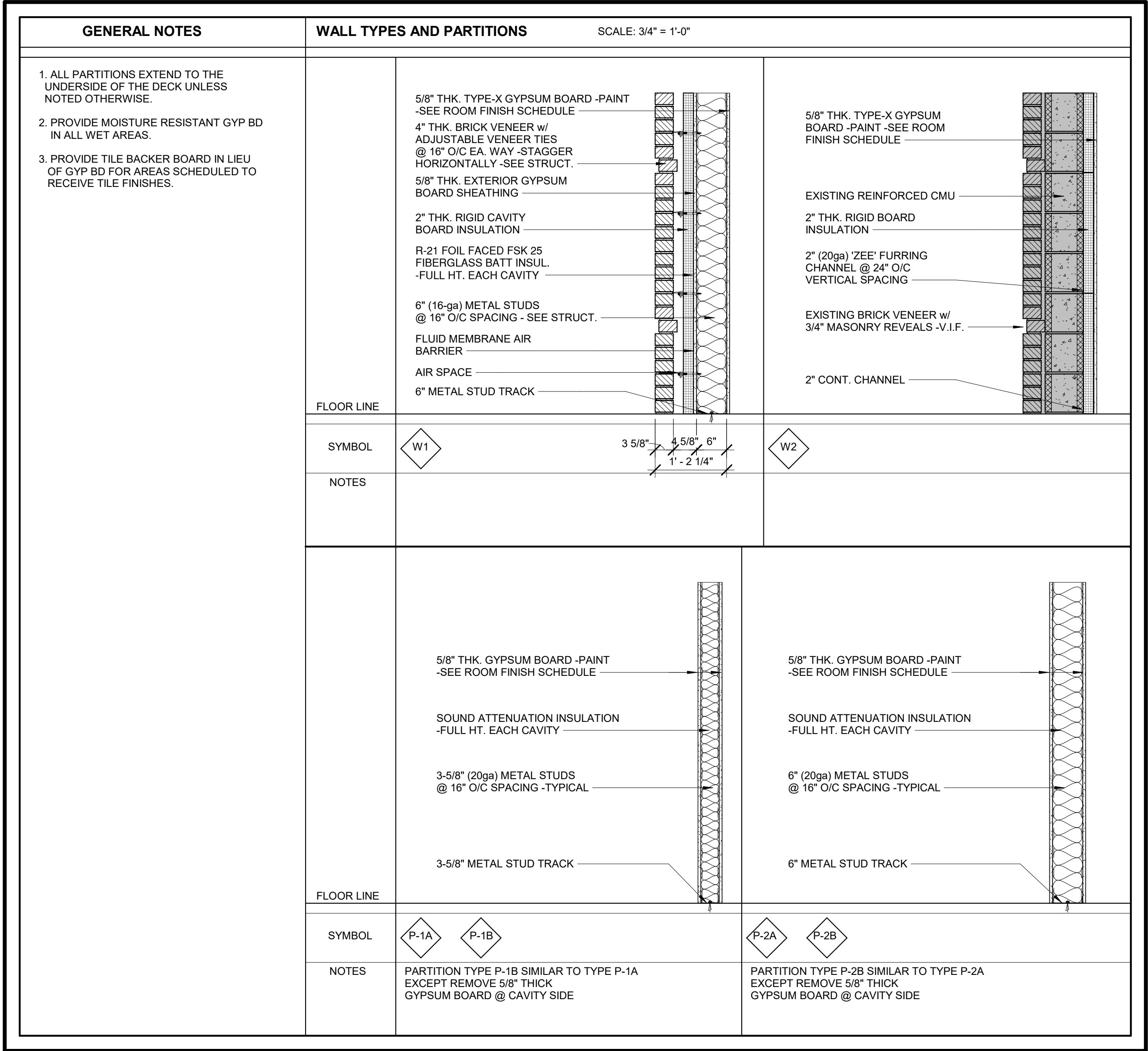
A, AMP	AMPERE	DWD	DRINKING WATER DISPENSER	LAV	LAVATORY	RI	RUBBER INSULATED	WS	WASTE STACK, WATER SURFACE, WATERSTOP
AB	ANCHOR BOLT, AUGER BOLT	DWG	DRAWING	LBS	POUNDS	RL	RAIN LEADER	WT	WEIGHT
ABS	AIR BREAK SWITCH	E	EAST	LC	LEAD COVERED	RM	ROOM	WWM	WELDED WIRE MESH
AC	ASBESTOS CEMENT	EA	EACH	LL	LIVE LOAD	RPM	REVOLUTIONS PER MINUTE	XFRMR	TRANSFORMER
	ASPHALTIC CONCRETE	EC	EMPTY CONDUIT	LLH	LONG LEG HORIZONTAL	RW	RIGHT OF WAY	X-STR	EXTRA STRENGTH
ACB	AIR CIRCUIT BREAKER	EF	EACH FACE	LLV	LONG LEG VERTICAL	RX	REMOVE EXISTING	YR	YEAR
ACSR	ALUMINUM CONDUSTER	EL, ELEV	ELEVATION	LT	LIGHT	S	SOUTH, SECTION MODULUS	1:2 SLOPE	1 VERTICAL TO 2 HORIZONTAL
	STEEL REINFORCED	ELEC	ELECTRIC	MACH	MACHINE	SAN	SANITARY SEWER	1 ON 2 SLOPE	1 VERTICAL ON 2 HORIZONTAL
ACST	ACOUSTIC	EMER	EMERGENCY	MAS	MASONRY	SATC	SUSPENDE ACOUSTICAL		
AD	AREA DRAIN	EMT	ELECTRICAL METALLIC TUBING	MATL	MATERIAL	SCH	SCHEDULE		
ADJ	ADJUSTABLE, ADJUST ADJACENT	EQ	EQUAL	MAX	MAXIMUM	SD	STORM DRAIN		
AFF	ABOVE FINISH FLOOR	EQUIP	EQUIPMENT	MB	MARKERBOARD	SECT	SECTION		
ALUM	ALUMINUM	EW	EACH WAY	MBH	THOUSAND BTU PER HOUR	SVC, SERV	SERVICE		
ALT	ALTERNATE	EWC	ELECTRIC WATER COOLER	MECH	MECHANICAL	SH	SHEET		
AP	ACCESS PANEL	(E), EXIST	EXISTING	MTL	METAL	1 PH	SINGLE PHASE		
APPROX	APPROXIMATE	EXP	EXPANSION, EXPOSED	MH	MANHOLE	SKCP	SUSPENDE KEENE'S CEMENT PLASTER		
ARCH	ARCHITECTURAL	EXP JT	EXPANSION JOINT	MIN	MINIMUM	SL	SLOPE		
ARR	ARRESTOR	EXT	EXTERIOR	MISC	MISCELLANEOUS	SMH	SANITARY MANHOLE		
ASPH	ASPHALT	F	FAHRENHEIT, FIRE	MO	MASONRY OPENING	SMK	SMOKE		
AWG	AMERICAN WIRE GAGE	FABX	FIRE ALARM BOX	MP	MEDIUM PRESSURE	SP	SINGLE POLE		
BTM	BOTTOM	FD	FLOOR DRAIN	MPH	MILES PER HOUR	SPC	SUSPENDE PLASTER CEILING		
BC	BOTTOM OF CURB	FDN	FOUNDATION	MTD	MOUNTED	SPDT	SINGLE POLE, DOUBLE THROW		
BCCMP	BITUMINOUS COATED	FDR	FEEDER	MTG	MEETING,MOUNTING	SPEC	SPECIFICATION		
	CORREGATED METAL PIPE	FE	FIRE EXTINGUISHER, FINISHED END	MWP	MEMBRANE WATERPROOFING	SPST	SINGLE POLE SINGLE THROW		
BD	BOARD	FF	FINISHED FLOOR	N	NORTH	SQ	SQUARE		
BIT	BITUMINOUS	FG	FIBERGLASS	NC	NON-CORROSIVE	SS, SST	STAINLESS STEEL		
BL	BASE LINE	FH	FIRE HYDRANT	NDC	NOSE DOWN CURVE	ST	STREAM, SINGLE THROW, STREET		
BLDG	BUILDING	FHC	FIRE HOSE CABINET	NEUT	NEUTRAL	STA	STATION		
BLK	BLOCK	FIG	FIGURE	NIC	NOT IN CONTRACT	STD	STANDARD		
BM	BEAM	FIN	FINISH	NO	NUMBER	STL	STEEL		
BSMT	BASEMENT	FJ	FELT JOINT	NOM	NOMINAL	STR	STRUCTURAL		
BTM	BOTTOM	FL	FLOOR, FLASHING	NTS	NOT TO SCALE	SUP	SUPPORT		
BTU	BRITISH THERMAL UNIT	FLUOR	FLUORESCENT	OA	OUTSIDE AIR	SUSP	SUSPENDE		
C, CND	CONDUIT	4 WAY	FOUR WAY	OC	ON CENTER	SW	SWITCH		
CAP	CAPACITY	FPM	FEET PER MINUTE	OCB	OIL CIRCUIT BREAKER	SWBD	SWITCHBOARD		
CB	CHALKBOARD	FR	FRAME	OD	OUTSIDE DIAMETER	SWGR	SWITCHGEAR		
CC	CENTER TO CENTER	FS	FULL SIZE	OFD	OVERFLOW DRAIN	T	TILE, TOP, TANGENT		
CEM	CEMENT	FT	FOOT, FEET	OH	OVERHANG	T & B	TOP & BOTTOM		
CFM	CUBIC FEET PER MINUTE	FTG	FOOTING	OPNG	OPENING	TB	TACKBOARD		
CI	CAST IRON	GA	GAGE	OPP	OPPOSITE	TC	TOP OF CURB		
CIP	CAST IRON PIPE	GALV	GALVANIZED	OVHD, OH	OVERHEAD	TEL	TELEPHONE		
CIR	CIRCULATING	GL	GLASS	P	PIPE, PERSON	TEMP	TEMPORARY		
CJ	CONTROL JOINT	GOV'T	GOVERNMENT	PB	PULL BOX	TERM	TERMINAL		
CKT	CIRCUIT	GPM	GALLONS PER MINUTE	PC	POINT OF CURVE	TF	TOP OF FOOTING		
CL	CENTERLINE	GR	GRADE	PF	PROFILE	3/C	THREE CONDUCTOR		
CL	CLEAR, CLEARANCE	GRD	GROUND	PI	POINT OF INTERSECTION	3/P	THREE POLE		
CLG	CEILING	GSU	GLAZED STRUCTURAL UNIT	PIV	POST INDICATOR VALVE	3 WAY	THREE WAY		
CMP	CORRUGATED METAL PIPE	GW	GROUND WATER	PJF	PREFORMED JOINT FILLER	TH	TOTAL HEAD (PUMPS)		
CMPA	CORRUGATED METAL PIPE ARCH	GYP	GYPSUM	PL	PROPERTY LINE	THRS	THRESHOLD		
CMU	CONCRETE MASONRY UNIT	HT, HGT	HEIGHT	PLAS	PLATE	THRU	THROUGH		
CO	CLEANOUT	HD	HARD DRAWN	PLNJ	PLASTER	TP	TEST PIT		
COL	COLUMN	HDW	HARDWARE		PAPER AND LEAD	TRANS	TRANSITION		
CONC	CONCRETE	HGSW	HORN GAP SWITCH		NEOPRENE JACKET	TS, TOS	TOP OF STEEL, TOP OF STONE, TOP OF SLAB		
COND	CONDUCTOR	HORIZ	HORIZONTAL	PLYWD	PLYWOOD	TT	TOTE TRAY STORAGE		
CONN	CONNECTION	HP	HORSEPOWER, HIGH POINT	PNL	PANEL	TW, TOW	TOP OF WALL, TEACHER'S WARDROBE		
CONST	CONSTRUCTION	HR	HOOR	PRELIM	PRELIMINARY	TYP	TYPICAL		

FAA AIP No.: 3-24-0019-059-2018  
 Bid No.: PUR-1410  
 MAA Grant No.: MAA-GR-19-009


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SHEET No.: **AR01.000**  
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10 BUILDING CODE ANALYSIS	AR01.101	LIFE SAFETY ANALYSIS
15 PHASING	GN03.101	BUILDING PHASING
15 PHASING	GN03.102	BUILDING PHASING
15 PHASING	GN03.103	BUILDING PHASING
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20 DEMOLITION	AR02.101	DEMOLITION REFLECTED CEILING PLAN
20 DEMOLITION	AR02.102	DEMOLITION BUILDING ELEVATION
20 DEMOLITION	AR02.103	DEMOLITION BUILDING SECTION
30 ARCHITECTURAL	AR03.100	FLOOR PLAN
30 ARCHITECTURAL	AR03.101	ENLARGED PLAN
30 ARCHITECTURAL	AR03.102	ENLARGED PLAN
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30 ARCHITECTURAL	AR05.202	INTERIOR ELEVATIONS
30 ARCHITECTURAL	AR05.203	INTERIOR ELEVATIONS
30 ARCHITECTURAL	AR05.204	INTERIOR ELEVATIONS
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30 ARCHITECTURAL	AR06.101	BUILDING SECTIONS
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30 ARCHITECTURAL	AR08.101	COLUMN DETAILS
30 ARCHITECTURAL	AR08.102	COLUMN DETAILS
30 ARCHITECTURAL	AR08.103	COLUMN DETAILS
30 ARCHITECTURAL	AR08.104	EXTERIOR DETAILS
30 ARCHITECTURAL	AR08.105	EXTERIOR DETAILS
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30 ARCHITECTURAL	AR08.200	INTERIOR DETAILS
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30 ARCHITECTURAL	AR08.203	INTERIOR DETAILS
30 ARCHITECTURAL	AR08.204	INTERIOR DETAILS
30 ARCHITECTURAL	AR08.300	DOOR AND WINDOW FRAMES
30 ARCHITECTURAL	AR08.400	FLOOR PATTERN PLAN -FIRST FLOOR
30 ARCHITECTURAL	AR08.401	FLOORING DETAILS
30 ARCHITECTURAL	AR09.100	ROOM FINISH SCHEDULE



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BUSHEY FEIGHT MORIN ARCHITECTS  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 6157  
Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:	BID DOCUMENTS		
CHECKED:			
APPROVED:			



Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: TERMINAL BUILDING EXPANSION	
SHEET TITLE: PARTITION TYPES	
SCALE: 3/4" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR01.001**  
28 OF 117



PROJECT DESCRIPTION

This project includes selective demolition to approximately 2,324 sf roof area with a building addition of approximately 5,554 sf. The combined additional floor space with a new roof over the demolished section totals 7,878 sf of new building roof cover. An additional roof over a 22' x 48' vehicle canopy equates to 1,056 sf.

The building addition provides a larger Hold Room with a capacity of approximately 300 occupants. The additional Hold Room area provides new amenities including new public toilets, bar and service counters, video displays and convenient charging stations.

An expanded TSA area of approximately 1,775 sf is relocated to provide space for passenger security processing within the expanded area.

The entire remaining areas of over 16,000 sf will require complete renovation for new floor, walls, and ceiling finishes with upgrades to electrical, mechanical, plumbing and sprinkler systems.

PROJECT INFORMATION

Project Name: Hagerstown Regional Airport

Project Location: Terminal Building Alterations & Addition  
18434 Showalter Road  
Hagerstown, MD 21742

Building Occupancy Classification: Group A-3 Assembly and Group B Business

Number of Stories: One Story

Existing Floor Area: 18,360 sf

New Floor Area: 5,550 sf

Total Floor Area: 23,910 sf

Building Construction Type: Type IIB - Noncombustible/Unprotected

DESIGN CRITERIA

Applicable Building Codes and Regulations

- 2015 IBC – International Building Code
- 2015 IMC – International Mechanical Code
- 2015 IPC – International plumbing Code
- 2014 NEC – National Electric Code
- 2015 NFPA 101 Life Safety Code
- Maryland Accessibility Code ADAAG

FIRE PROTECTION

- Supervised Automatic Sprinkler System
- Addressable Fire Alarm System

CODE ANALYSIS

2015 IBC International Building Code Analysis

- 302.1 Use and Occupancy Classification  
Assembly Use group 'A-3' Waiting Areas in Transportation Terminals

- 304.1 Business Group B – Civic Administration

- 311.1 Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

- 311.2 Moderate-hazard storage, Group S-1. Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of clothing, woolen wearing apparel.

Table 504.3 Allowable Building Height in Feet Above Grade Plane

Occupancy Classification	Type of Construction
A	Type II B 75

Table 504.4 Allowable Number of Stories Above Grade Plane

Occupancy Classification	Type of Construction
A-3	Type II B 3

Table 506.2 Allowable Area Factor (Square Feet)

Occupancy Classification	Type of Construction
A-3	Type II B S1 38,000
B	S1 92,000

Total Building Area: 23,910 sf

Use Groups 'A' and 'B' allowable areas are greater than the proposed building therefore no separation required.

- 508 Mixed Use and Occupancy

- 508.1 General. Where a building or portion thereof contains two or more occupancies or uses, the building or portion thereof shall comply with the applicable provisions of this section.

- 508.3 Mixed Occupancies. Each portion of a building shall be individually classified in accordance with Section 302.1.

Where a building contains more than one occupancy group, the building or portion thereof shall comply with Sections 508.3.1, 508.3.2, 508.3.3 or a combination of these sections.

- 508.3.1.2 Allowable Area and Height. The allowable area and height of the building shall be based on the allowable area and height for the main occupancy in accordance with Section 503.1.

- 508.3.1.3 Separation. No separation is required between accessory occupancies or the main occupancy.

Table 508.4 Required Separation of Occupancies (Hours)

Occupancy	S-1
A	1

Baggage Area – S-1 Occupancy

- 508.4.4 Separation. Individual occupancies shall be separated from adjacent occupancies in accordance with Table 508.4.

- 508.4.4.1 Construction. Required separations shall be fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, so as to completely separate adjacent occupancies.

Table 601 Fire-Resistance Rating Requirements for Building Elements (hours)

Building Element	Type II
Structural frame	B
Bearing walls	0
Exterior	0
Interior	0
Nonbearing walls and partitions	0
Exterior	0
Floor construction including supporting beams and joists	0
Roof construction including supporting beams and joists	0

- 707.1 General. Fire barriers installed as required elsewhere in this code or the International Fire Code shall comply with this section.

- 707.3 Fire-Resistance Rating. The fire-resistance rating of fire barriers shall comply with this section.

- 803.1 General. Interior wall and ceiling finishes shall be classified in accordance with ASTM E 84. Such interior finish materials shall be grouped in the following classes in accordance with their flame spread and smoke developed indexes.  
Class A: Flame spread 0-25; smoke-developed 0-450  
Class B: Flame spread 26-75; smoke-developed 0-450  
Class C: Flame spread 76-200; smoke-developed 0-450

Table 803.9 Interior Wall and Ceiling Finish Requirements by Occupancy

Group	Sprinklered		
	Exit enclosures and exit passageways	Corridors	Rooms and enclosed spaces
A-3	B	B	C

- 903.2.1.3 Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:  
1. The fire area exceeds 12,000 sf.  
2. The fire area has an occupant load of 300 or more.  
3. The fire area is located on floor other than the level of exit discharge.

- 906.1 General. Portable fire extinguishers shall be provided in occupancies and locations as required by the International Fire Code.  
Maximum travel distance to extinguisher: 75 feet

- 907.1 General. This section covers the application, installation, performance, and maintenance of fire alarm systems and their components.

- 907.1.2 Fire Alarm Shop Drawings. Shop drawings for fire alarm system be submitted for review and approval prior to system installation, and shall include, but not be limited to, all of the following where applicable to the system being installed.

- 907.2 Where Required – New Buildings and Structures. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in the new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

- 907.2.1 Group A. A manual fire alarm system shall be installed in Group A occupancies having an occupant load of 300 or more.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

Table 1004.1.2 Maximum Floor Area Allowances per Occupant

Function of Space	Occupant Load Factor
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross

- 1010.1.10 Panic and fire Exit Hardware  
Doors serving a Group H occupancy and doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.

- 1010.1.10.1 Installation. Where panic or fire exit hardware is installed, it shall comply with the following:  
1. Panic hardware shall be listed in accordance with UL 305.  
2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305.

- 1016.3 Common Path of Egress Travel. In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet.  
Exception 1: Group B: 100 feet maximum.

Table 1016.2 Exit Access Travel Distance

Occupancy	With Sprinkler System (Feet)
A, S-1	250
B	300

- 1020.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1020.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 for fire partitions.

Table 1020.1 Corridor Fire-Resistance Rating

Occupancy	Occupant Load Served by Corridor	Required Fire-Resistance Rating (hours)
		With sprinkler system
A, B	Greater than 30	0

- 1020.4 Dead Ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet in length.

2015 NFPA Life Safety Code Analysis

Chapter 12 New assembly Occupancies

- 12.1.1 Application. The requirements of this chapter shall apply to new buildings or portions thereof used as an assembly occupancy.

- 12.1.2 Multiple Occupancies.

- 12.1.2.1 General. Multiple occupancies shall be in accordance with 6.1.14.

- 12.1.6 Minimum Construction Requirements. The location of an assembly occupancy shall be limited as shown in Table 12.1.6.

- 12.1.7 Occupant Load

- 12.1.7.1 General. The occupant load, in number of persons for whom means of egress and other provisions are required, shall be determined on the basis of the occupant load factors of Table 7.3.1.2 that are characteristic of the use of the space or shall be determined as the maximum probable population of the space under consideration, whichever is greater.

- 12.1.7.1.2 In areas in excess of 10,000 ft², the occupant load shall not exceed one person in 7 ft².

- 12.2 Means of Egress Requirements.

- 12.2.1 General. All means of egress shall be in accordance with Chapter 7 and this chapter.

- 12.2.2.2.3 Any door in a required means of egress from an area having an occupant load of 100 or more persons shall be permitted to be provided with a latch or lock only if the latch or lock is panic hardware or fire exit hardware complying with 7.2.1.7.

Table 12.1.6 Construction Type Limitations

Type of Construction	LED
II (000)	Assembly, of any occupant load

- 12.2.3.6.1 Every assembly occupancy shall be provided with a main entrance/exit.

- 12.2.3.6.4 Access to the main entrance/exit shall be as follows:  
In assembly occupancies, other than those listed in 12.2.3.6.4(1), each level of the assembly occupancy shall have access to the main entrance/exit, and such access shall have the capacity to accommodate one-half of the occupant load of such levels.

- 12.2.3.7 Other Exits. Each level of an assembly occupancy shall have access to the main entrance/exit and shall be provided with additional exits of a width to accommodate not less than one-half of the total occupant load served by that level.

- 12.2.3.7.2 Additional exits shall be located as far apart as practicable and as far from the main entrance/exit as practicable.

- 12.2.3.7.4 In assembly occupancies where there is no well defined main entrance/exit, exits shall be permitted to be distributed around the perimeter of the building, provided that the total exit width furnishes not less than 100 percent of the width required to accommodate the permitted occupant load.

- 12.2.3.8 Minimum Corridor Width. The width of any exit access corridor serving 50 or more person shall be not less than 44 in.

- 12.2.4 Number of Exits

- 12.2.4.1 The number of exits shall be in accordance with Section 7.4, other than exits for fenced outdoor assembly occupancies in accordance with 12.2.4.4.

- 12.2.5 Arrangement of Means of Egress.

- 12.2.5.1 General.

- 12.2.5.1.1 Means of egress shall be arranged in accordance with Section 7.5.

- 12.2.5.1.2 A common path of travel shall be permitted for the first 20 ft from any point where the common path serves any number of occupants, and for the first 75 ft from any point where the common path serves not more than 50 occupants.

- 12.2.5.1.3 Dead-end corridors shall not exceed 20 ft.

- 12.2.7 Discharge from Exits.

- 12.2.7.2 The level of exit discharge shall be measured at the point of principal entrance to the building.

- 12.2.8 Illumination of Means of Egress. Means of egress, other than for private tents not exceeding 1200 ft², shall be illuminated in accordance with Section 7.8.

- 12.2.9 Emergency Lighting.

- 12.2.9.1 Emergency lighting shall be provided in accordance with Section 7.9.

- 12.2.10 Marking of Means of Egress.

- 12.2.10.1 Means of egress shall be provided with signs in accordance with Section 7.10.

- 12.3.3 Interior Finish

- 12.3.3.1 General. Interior finish shall be in accordance with Section 10.2.

- 12.3.3.2 Corridors, Lobbies, and enclosed Stairways. Interior wall and ceiling finish materials complying with Section 10.2 shall be Class A or Class B in all corridors and lobbies and shall be Class A in enclosed Stairways.

- 12.3.3.3 Assembly Areas. Interior wall and ceiling finish materials complying with Section 10.2 shall be Class A or Class B in general assembly areas having occupant loads of more than 300 and shall be Class A, Class B, or Class C in assembly areas having occupant loads of 300 or fewer.

- 12.3.3.5 Interior Floor Finish

- 12.3.3.5.2 Interior floor finish in exit enclosures and exit access corridors and in spaces not separated from them by walls complying with 12.3.6 shall be not less than Class II.

- 12.3.4 Detection, Alarm, and Communications Systems

- 12.3.4.1 General. Assembly occupancies with occupant loads of more than 300 and all theaters with more than one audience-viewing room shall be provided with an approved fire alarm system in accordance with 9.6.1 and 12.3.4.

- 12.3.4.2 Initiation

- 12.3.4.2.1 Initiation of the required fire alarm system shall be by manual means in accordance with 9.6.2.1(1), unless otherwise permitted by the following:  
(1) This requirement shall not apply to fire alarm systems initiated by means of an approved automatic fire detection system in accordance with 9.6.2.1(2) that provides fire detection throughout the building.  
(2) This requirement shall not apply to fire alarm systems initiated by means of an approved automatic sprinkler system in accordance with 9.6.2.1(3) that provides fire detection and protection throughout the building.

- 12.3.4.2.3 In assembly occupancies with occupant loads of more than 300, automatic detection shall be provided in all hazardous areas that are not normally occupied, unless such areas are protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

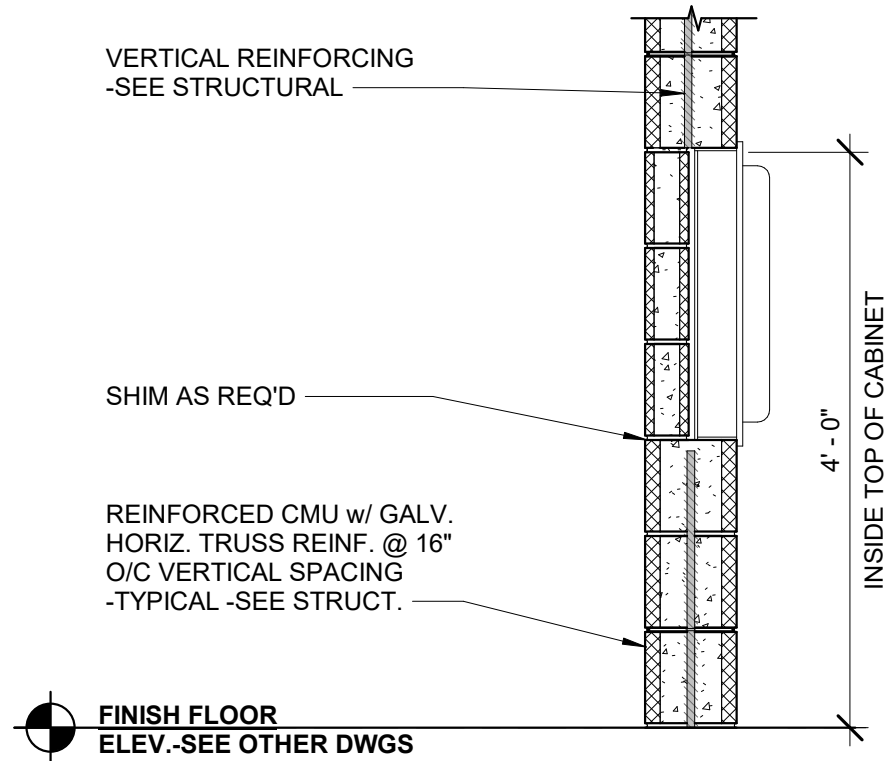
- 12.3.4.3 Notification. The required fire alarm system shall activate an audible and visible alarm in a constantly attended receiving station within the building when occupied for purposes of initiating emergency action.

- 12.3.4.3.4 The announcement shall be made via an approved voice communication or public address system, provided with an emergency power source that is audible above the ambient noise level of the assembly occupancy.

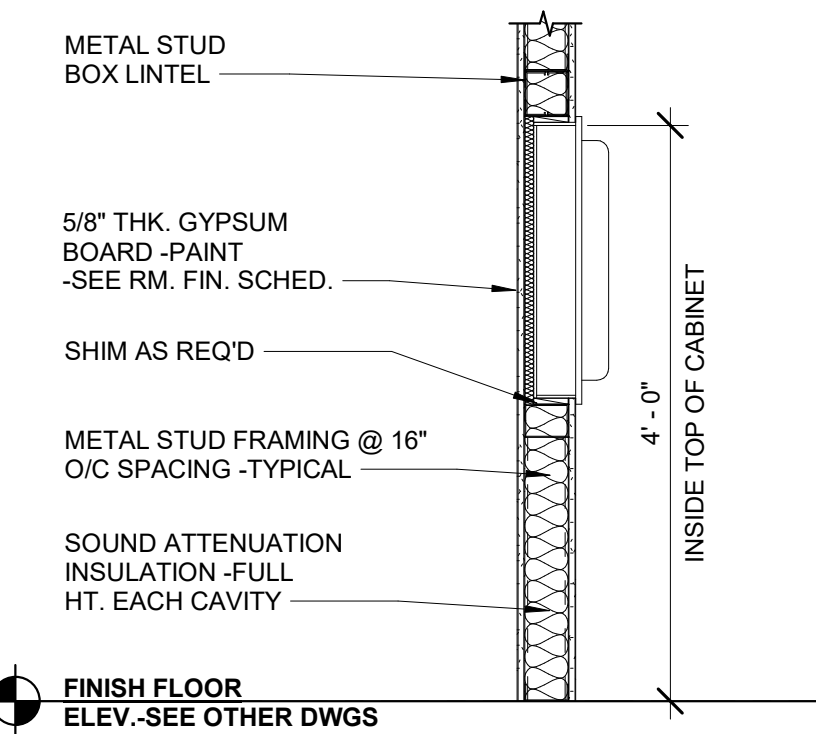
- 12.3.5 Extinguishment Requirements

- 12.3.5.2 Buildings containing assembly occupancies with occupant loads of more than 300 shall be protected by an approved, supervised automatic sprinkler system in accordance with Section 9.7 as follows:  
(1) Throughout the story containing the assembly occupancy.

- 12.3.6 Corridors. Interior corridors and lobbies shall be constructed in accordance with 7.1.3.1 and Section 8.3, unless otherwise permitted by the following:  
(1) Corridor and lobby protection shall not be required where assembly rooms served by the corridor or lobby have at least 50 percent of their exit capacity discharging directly to the outside, independent of corridors and lobbies.  
(2) Corridor and lobby protection shall not be required in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

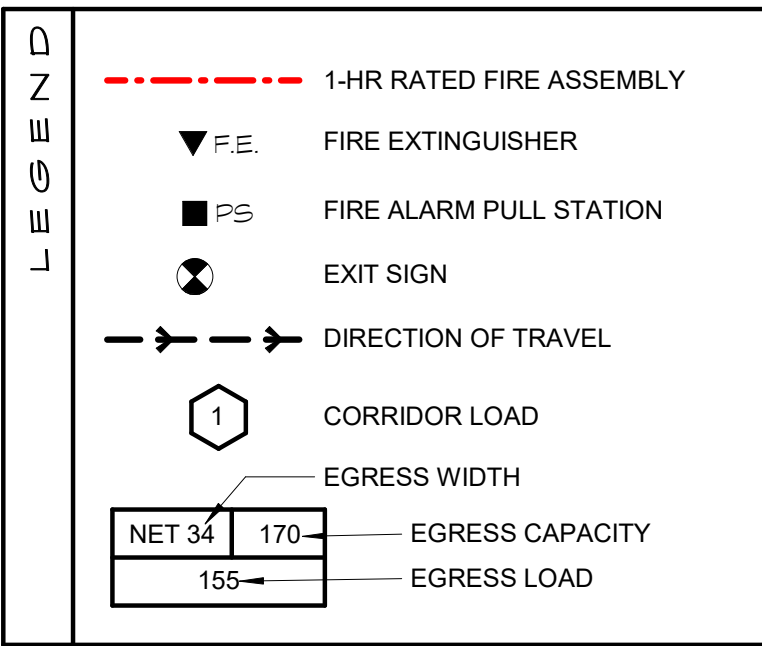
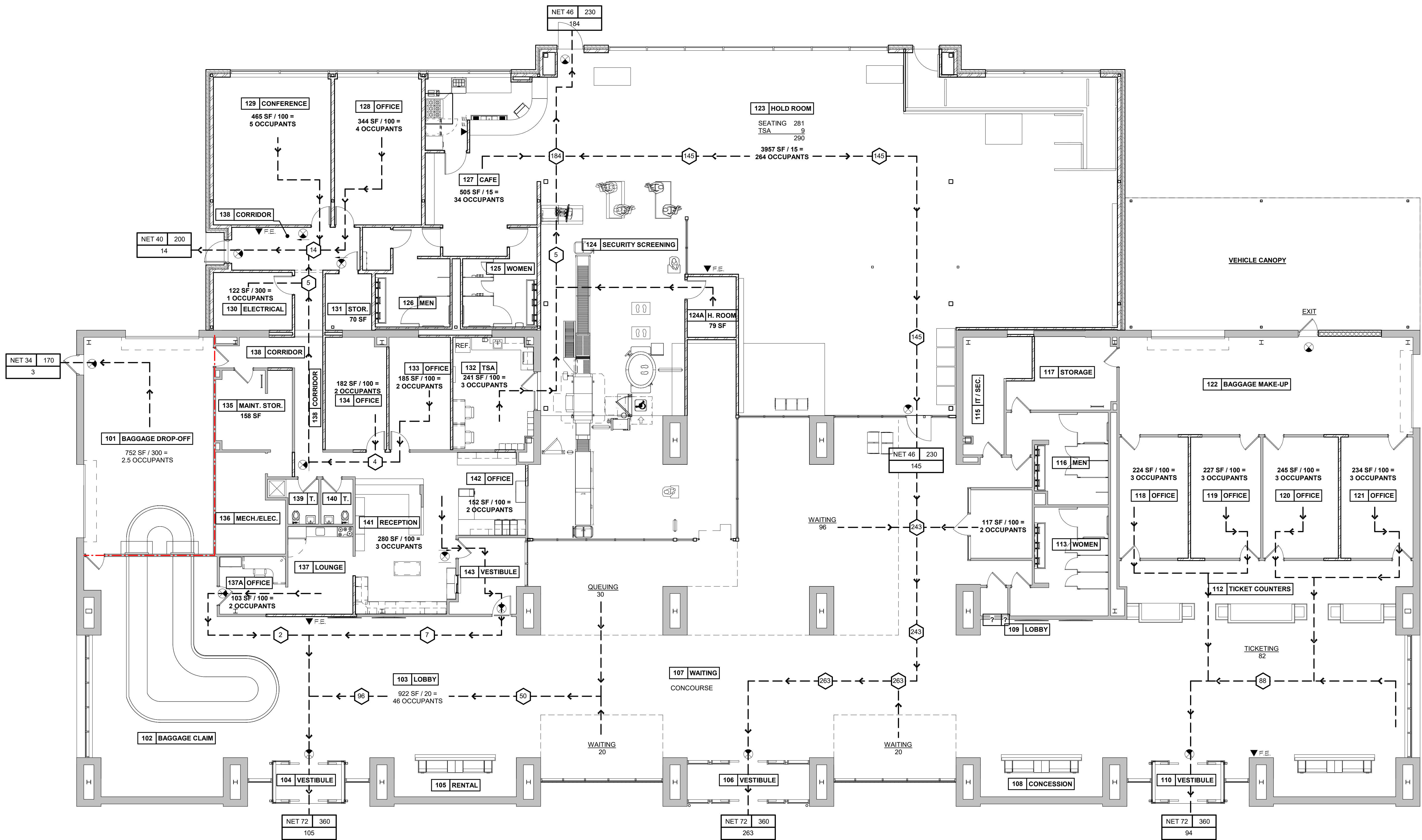


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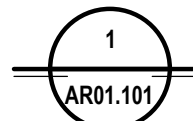


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DETAIL @ FIRE EXTINGUISHER CABINET  
3/4" = 1'-0"  
SCALE 0 1 2 3 FEET





OCCUPANT LOAD TABLE 1004.1.2	
<b>AIRPORT TERMINAL</b>	
BAGGAGE CLAIM	20 GROSS
BAGGAGE HANDLING	300 GROSS
CONCOURSE	100 GROSS
WAITING AREA	15 GROSS
<b>BUSINESS AREAS</b>	
OFFICES, ADMINISTRATIVE	100 GROSS
STORAGE, MECH. EQUIP.	300 GROSS



FIRST FLOOR EGRESS PLAN

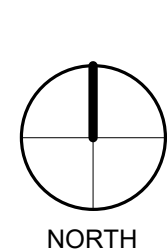
1/8" = 1'-0"

1/8" = 1'-0"

SCALE

FEET

TOTAL OCCUPANT LOAD = 663

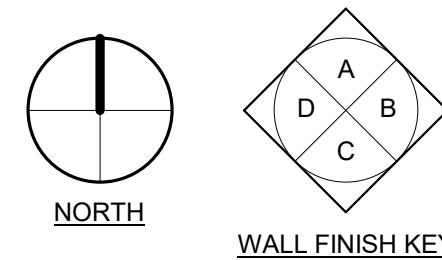
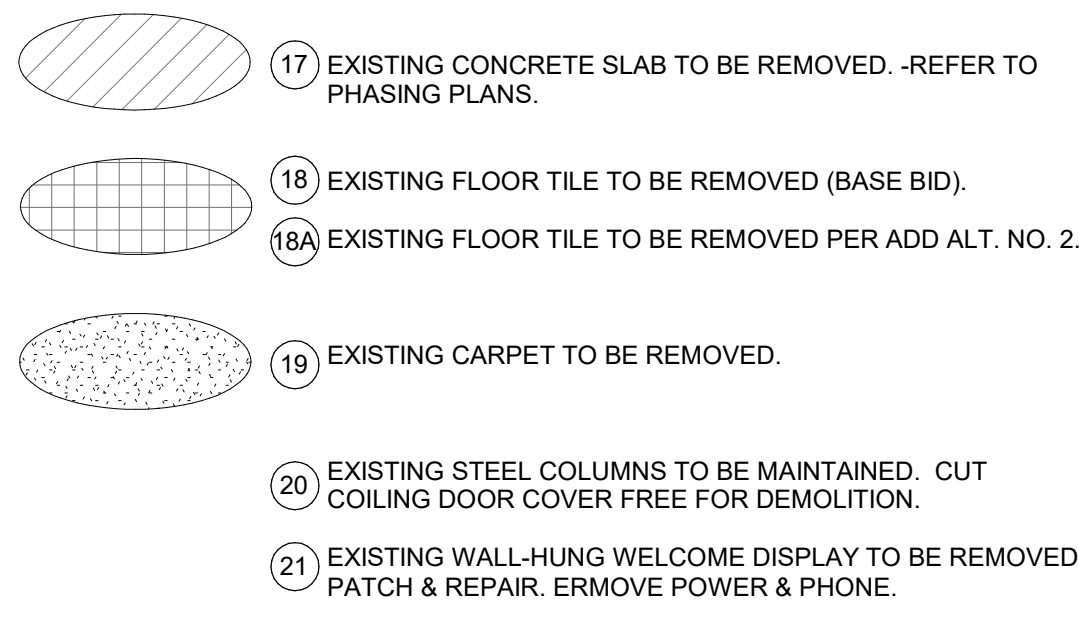


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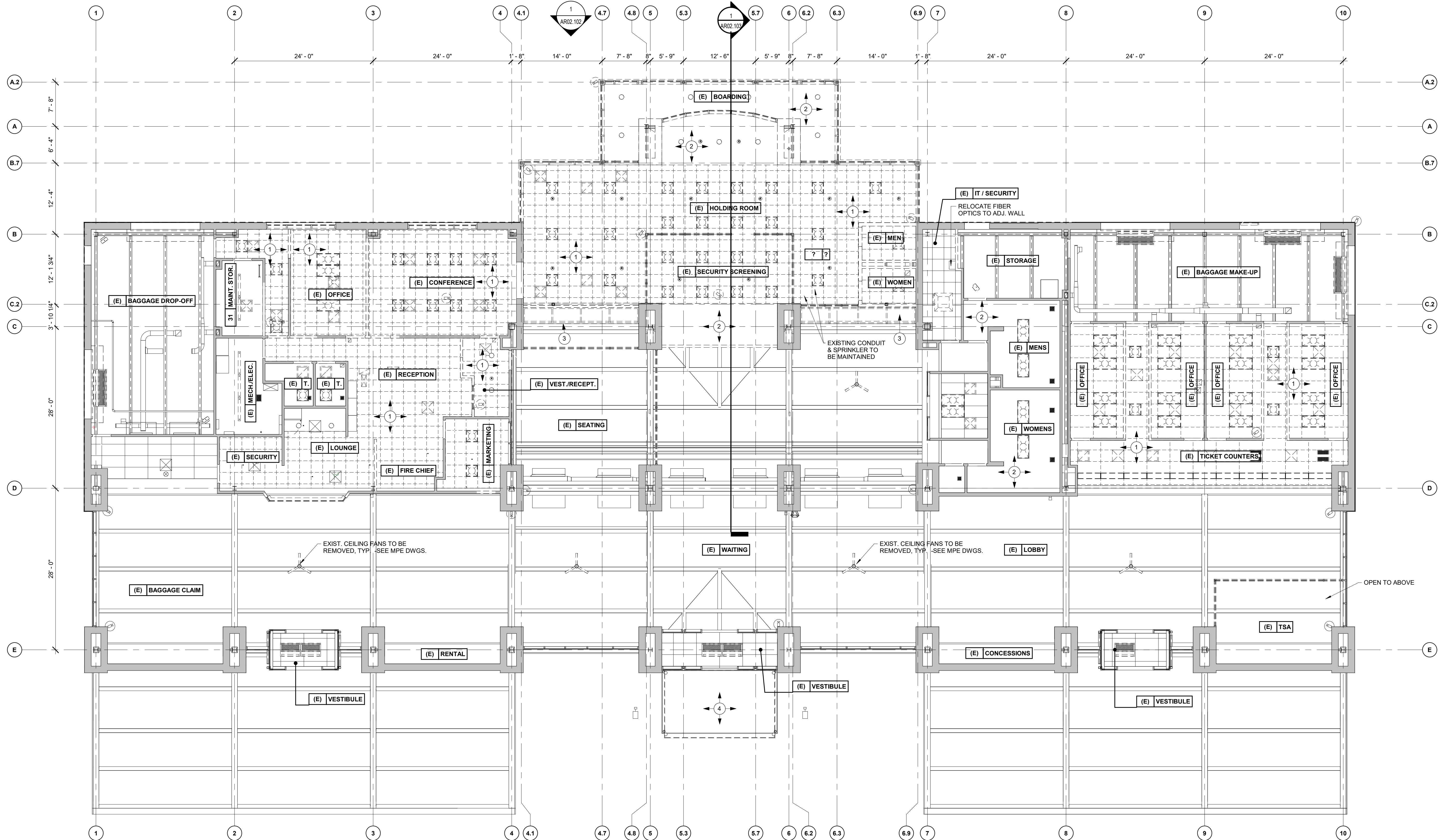


- AREAS OF DEMOLITION ARE DENOTED BY DASHED LINES UNLESS OTHERWISE DIRECTED. REFER TO PHASING PLANS FOR SEQUENCE OF DEMOLITION.
2. THE OWNER HAS FIRST REFUSAL RIGHTS ON ALL ITEMS & MATERIALS REMOVED. ALL ITEMS & MATERIALS NOT RETAINED BY THE OWNER SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR. (A.2)
3. ALL AREAS OF DEMOLITION SHALL BE PATCHED AND REPAIRED AS REQUIRED.
4. COORDINATE DEMOLITION WITH PROPOSED NEW CONSTRUCTION. (A)
5. COORDINATE SEQUENCING OF DEMOLITION WITH PHASING PLANS.
6. REMOVE EXISTING FINISHES WHERE NEW FINISHES ARE SCHEDULED. PREPARE EXISTING SURFACES ACCORDINGLY. (B.7)
7. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE BEGINNING DEMOLITION & CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL ACCESS ROADS AND PARKING AREAS. (B)
9. THE CONTRACTORS ARE RESPONSIBLE FOR INSPECTING THE JOB SITE PRIOR TO BEGINNING THE BID. ALL VISIBLE ASPECTS OF THE EXISTING CONDITIONS WILL BE CONSIDERED TO BE INCLUDED WITHIN THE BASE BID AND NOT CONSIDERED AS EXTRA WORK.
10. THE SELECTIVE DEMOLITION AS SHOWN ON THE DRAWINGS ARE DIAGRAMATIC, AND IN NO WAY ATTEMPT TO SHOW ALL EXISTING, FIXTURES CONNECTIONS AND FITTINGS AND OTHER MISCELLANEOUS ITEMS. THE COMPLETE REMOVAL OF ALL EXISTING OR ABANDONED MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS WILL BE REQUIRED BY THE CONTRACTOR AND DISPOSED OFF SITE ACCORDING TO ALL LOCAL CODES AND AUTHORITY. (C.2)  
(C)
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL THE CONTAINMENT OF DUST AND DEBRIS DURING THE DEMOLITION PERIOD.
12. THE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE BUILDING AT ALL TIMES AND TO PROVIDE AND BE RESPONSIBLE FOR SHORING AND BRACING REQUIRED THROUGHOUT THE CONSTRUCTION PERIOD.
13. PRIOR TO BEGINNING DEMOLITION, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A DEMOLITION PLAN OUTLINING THE DESIRED PLACEMENT OF DUMPSTERS, DUST AND DEBRIS CONTROL MEASURES AND SCHEDULE OF ACTIVITIES. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGNATED CITY OFFICIAL PRIOR TO EACH DEMOLITION ACTIVITY.
14. THE WORK DESCRIBED WITHIN THE CONTRACT DOCUMENTS SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND ALL MATERIALS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND TO WARRANTY REQUIREMENTS. (D)
15. REMOVE ALL ITEMS SCHEDULED TO BE DEMOLISHED AND DISPOSE OF PROPERLY OFF SITE.
16. SAWCUT (E) CONC. SLAB AND REMOVE ALL (E) UNDERGROUND/ABANDONED UNDERSLAB PIPING & CONDUITS. REFER TO ORIGINAL BUILDING DOCUMENTS FOR APPROXIMATE QUANTITY & LOCATION. VERIFY ACTUAL CONDITIONS IN THE FIELD. REFER TO MECH., PLUMB., AND ELEC., DRAWINGS FOR ADDITIONAL INFORMATION.
17. VERIFY EXTENT & REMOVE (E) PERIMETER FOUNDATION DRAIN AND ASSOCIATED STONE BACKFILL & FILTER CLOTH.

- 1 STEEL FRAMING TO BE REMOVED.
- 2 METAL STUD AND GYPSUM BOARD WALLS TO BE REMOVED.
- 3 MASONRY PIERS TO BE REMOVED.
- 4 HOLLOW METAL WINDOWS TO BE REMOVED.
- 5 EXISTING EQUIPMENT TO BE RELOCATED (BY TSA).
- 6 EXISTING CASEWORK TO BE REMOVED (BASE BID).
- 6A EXISTING CASEWORK TO BE REMOVED PER ADD ALT. No. 3.
- 7 EXISTING ALUMINUM STOREFRONT TO BE REMOVED.
- 8 EXISTING WALK OFF MAT TO BE REMOVED.
- 9 EXISTING CONVEYOR TO BE REMOVED.
- 10 FLUSH WOOD DOORS AND HOLLOW METAL FRAMES TO BE REMOVED.
- 11 EXISTING PLUMBING FIXTURES TO BE REMOVED.
- 12 EXISTING HOLLOW METAL DOOR & FRAME TO BE REMOVED.
- 13 EXISTING TOILET PARTITIONS TO BE REMOVED.
- 14 EXISTING SIGNAGE TO BE REMOVED.
- 15 EXISTING OVERHEAD DOOR & ASSOCIATED HARDWARE & TRIM TO BE REMOVED. PATCH & REPAIR ADJACENT MATERIALS AS REQUIRED.
- 16 EXISTING CANOPY COVER TO BE REPLACED PER ADD ALT. No. 5.

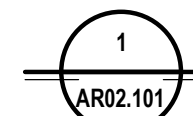






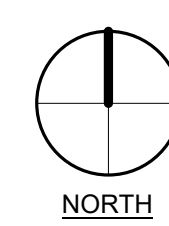
**GENERAL NOTES**

- 1 EXISTING SUSPENDED ACOUSTICAL TILE CEILING & GRID TO BE REMOVED.
- 2 EXISTING GYPSUM BOARD CEILING TO BE REMOVED.
- 3 EXISTING SKYLIGHTS TO BE REMOVED.
- 4 EXISTING CANOPY & STRUCTURE TO BE REMOVED.



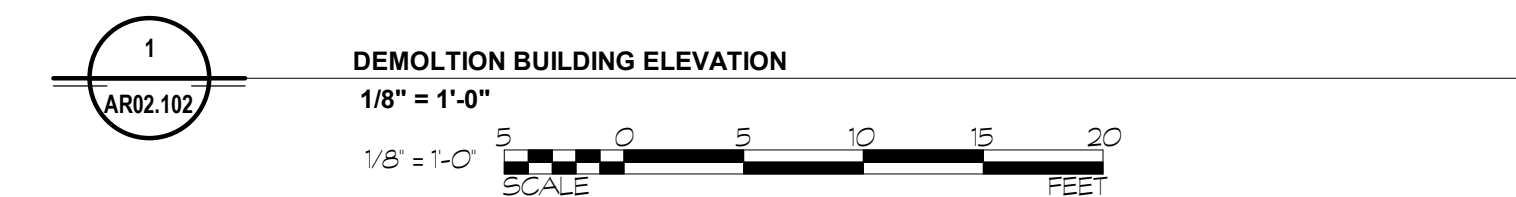
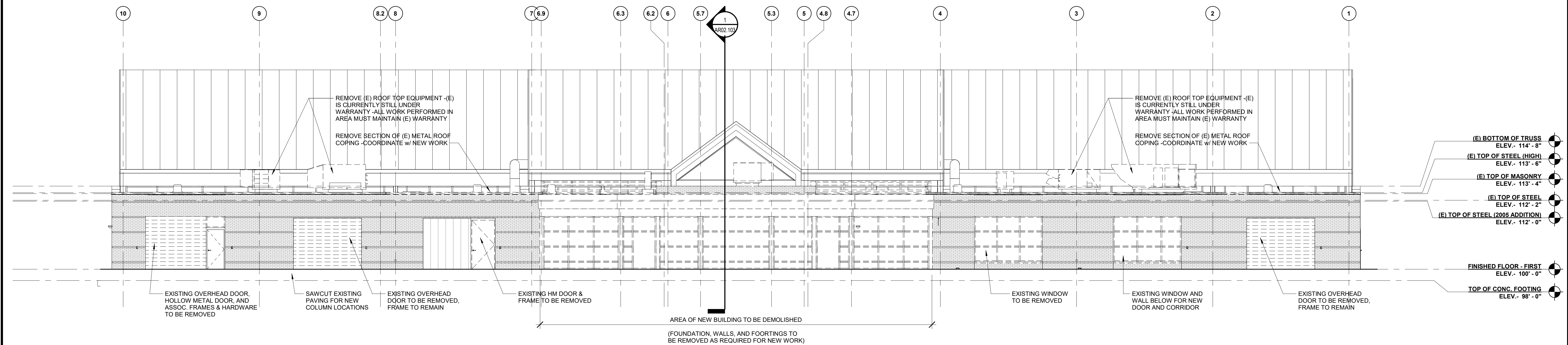
DEMOLITION - REFLECTED CEILING PLAN  
1/8" = 1'-0"


1/8" = 1'-0"  
SCALE  
0 5 10 15 20  
FEET




WALL FINISH KEY







6031 UNIVERSITY BLVD.  
SUITE 330  
ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602



BUSHEY FEIGHT MORIN ARCHITECTS  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 6157  
Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:	BID DOCUMENTS		
CHECKED:			
APPROVED:			

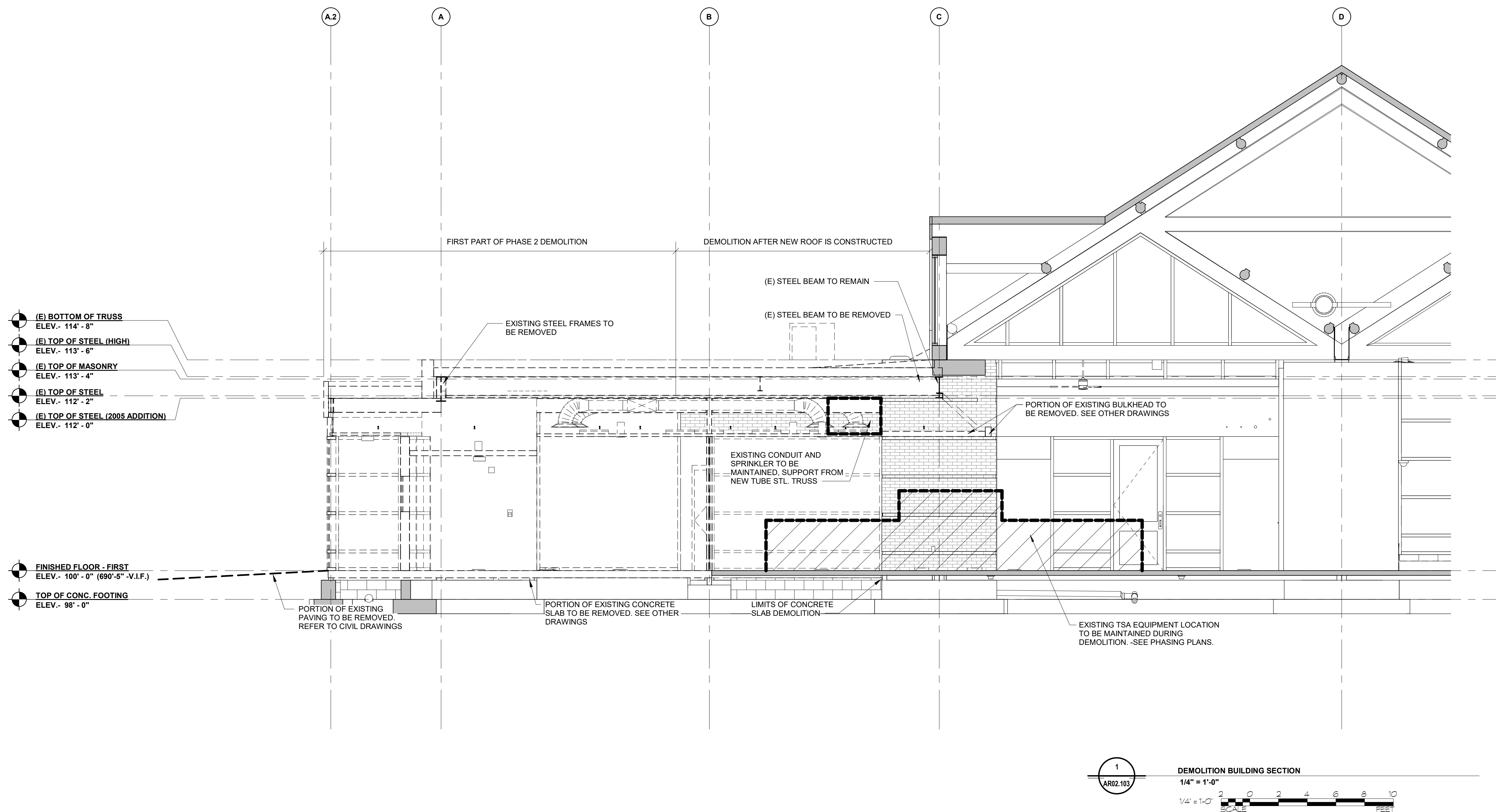


PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>DEMOLITION BUILDING ELEVATION</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR02.102**  
33 OF 117







6031 UNIVERSITY BLVD.  
SUITE 330  
ELLCOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602



BUSHEY FEIGHT MORIN ARCHITECTS  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 6157  
Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:	BID DOCUMENTS		
CHECKED:			
APPROVED:			

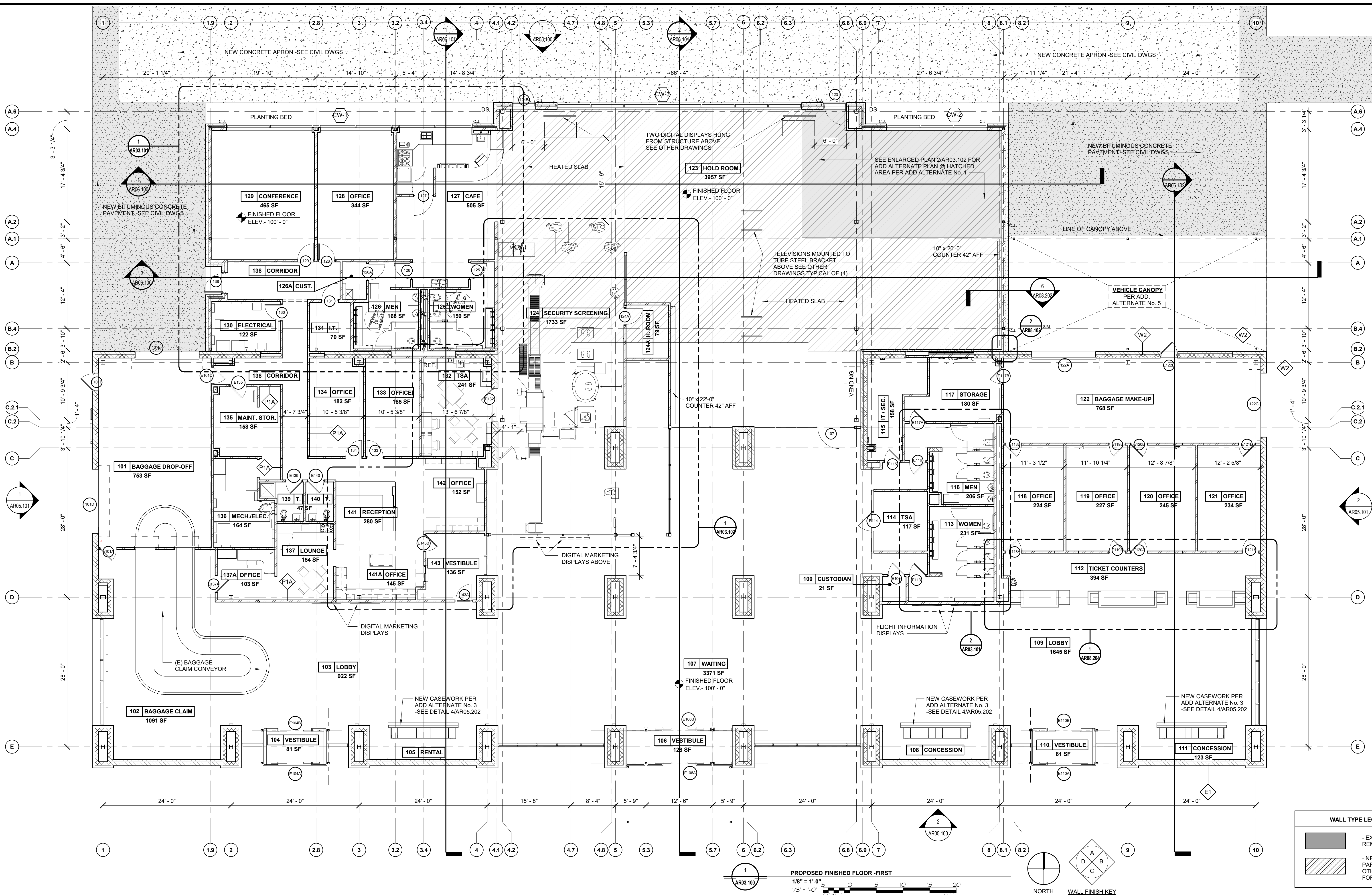


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SHEET TITLE: <b>DEMOLITION BUILDING SECTION</b>	
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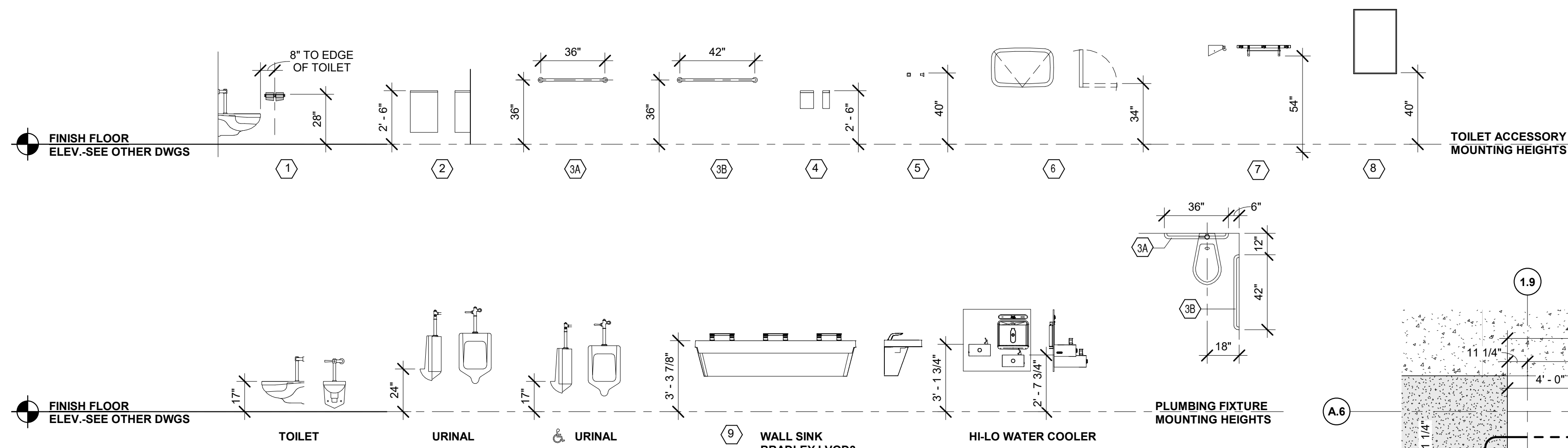
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Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR02.103**  
34 OF 117

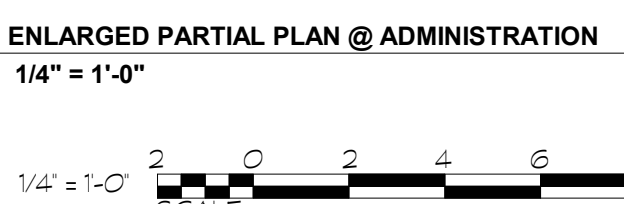
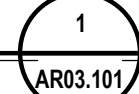
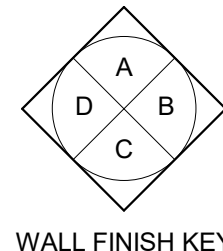
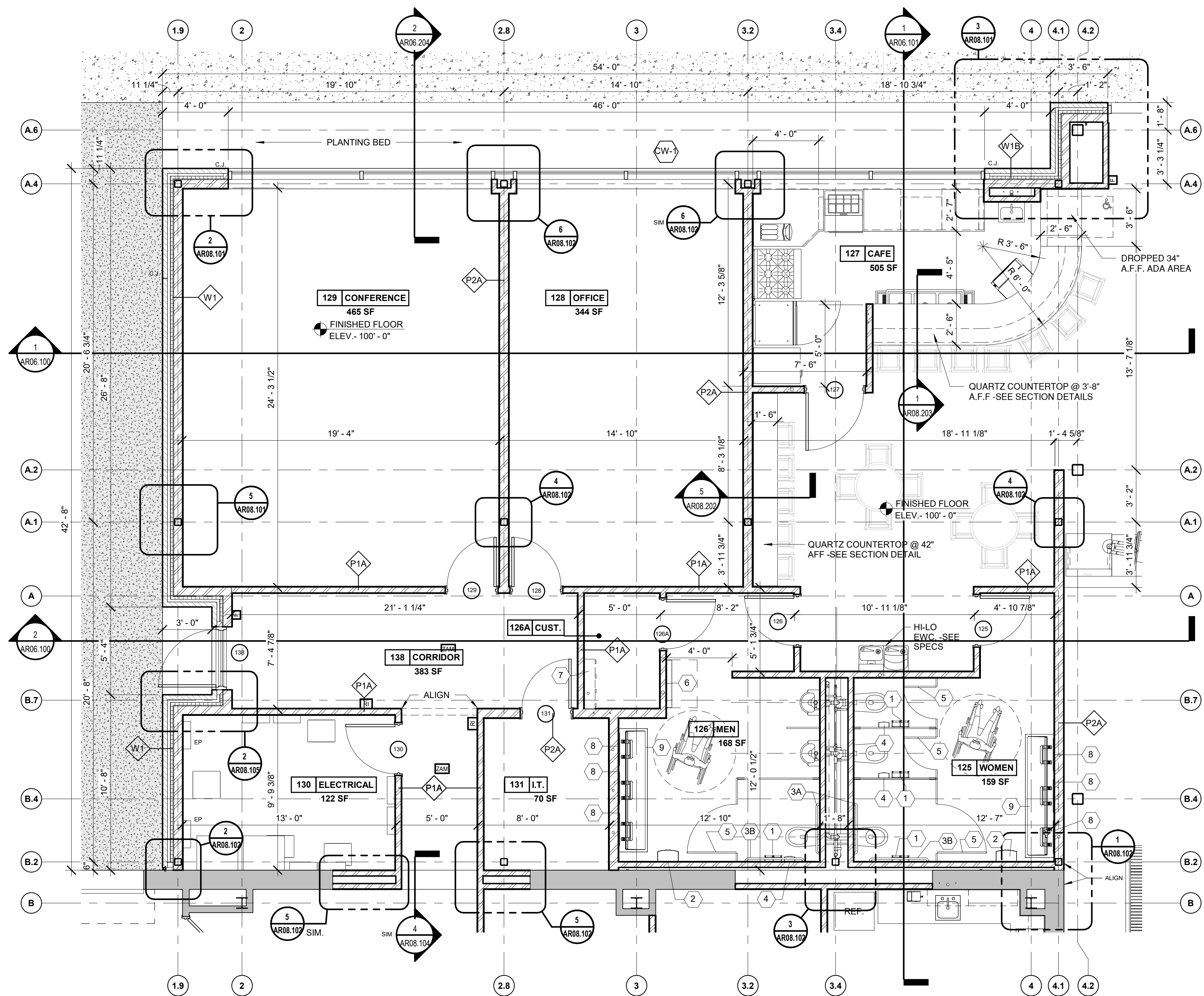
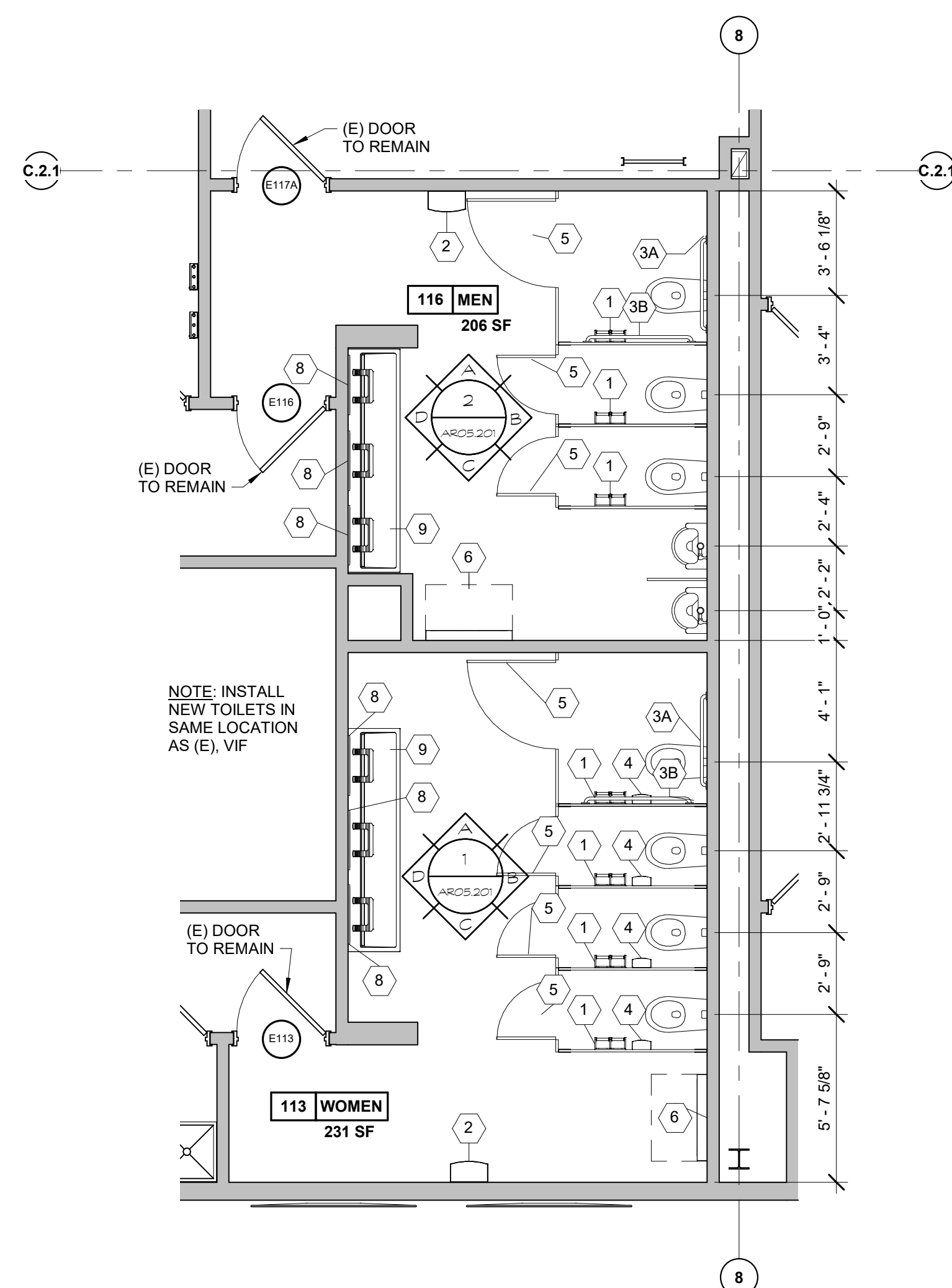








TOILET ACCESSORY LEGEND SEE SPECIFICATIONS	
1	TOILET PAPER DISPENSER - BOBRICK B-2740
2	WASTE RECEPTACLE - BOBRICK B-277
3A	36" HORIZONTAL GRAB BAR - BOBRICK B-6806-36
3B	42" HORIZONTAL GRAB BAR - BOBRICK B-6806-42
4	SANITARY NAPKIN DISPOSAL - BOBRICK B-35303
5	ROBE HOOK - BOBRICK B-76717
6	BABY CHANGING STATION - KOALA KARE KB-200-0155 GREY
7	MOP RACK w/SHELF - BOBRICK B-224 X 30
8	WALL HUNG MIRROR - BOBRICK B-1556 2436
9	WASHBAR (SOAP, WATER, & HAND DRYER) - TO BE USED WITH EVERO BASIN, COLOR "MYKONOS" - BRADLEY LVQD3



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301.733.5600 BFM PROJECT # 18045



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License No. 6157  
Expiration Date: 09/07/2020

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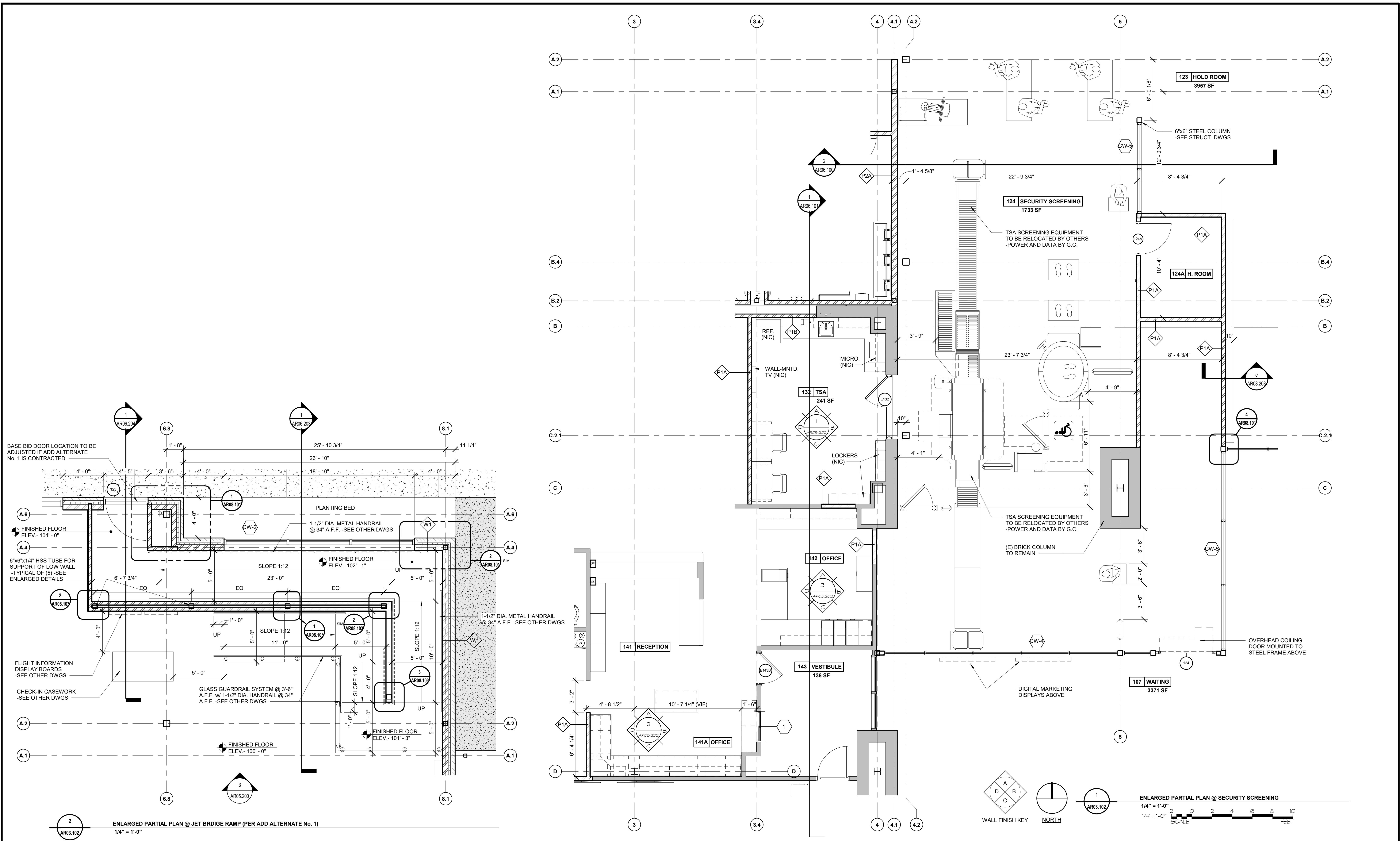
Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:	TERMINAL BUILDING EXPANSION
SHEET TITLE:	ENLARGED PLAN
SCALE:	1/4" = 1'-0"
DATE:	MARCH 2019

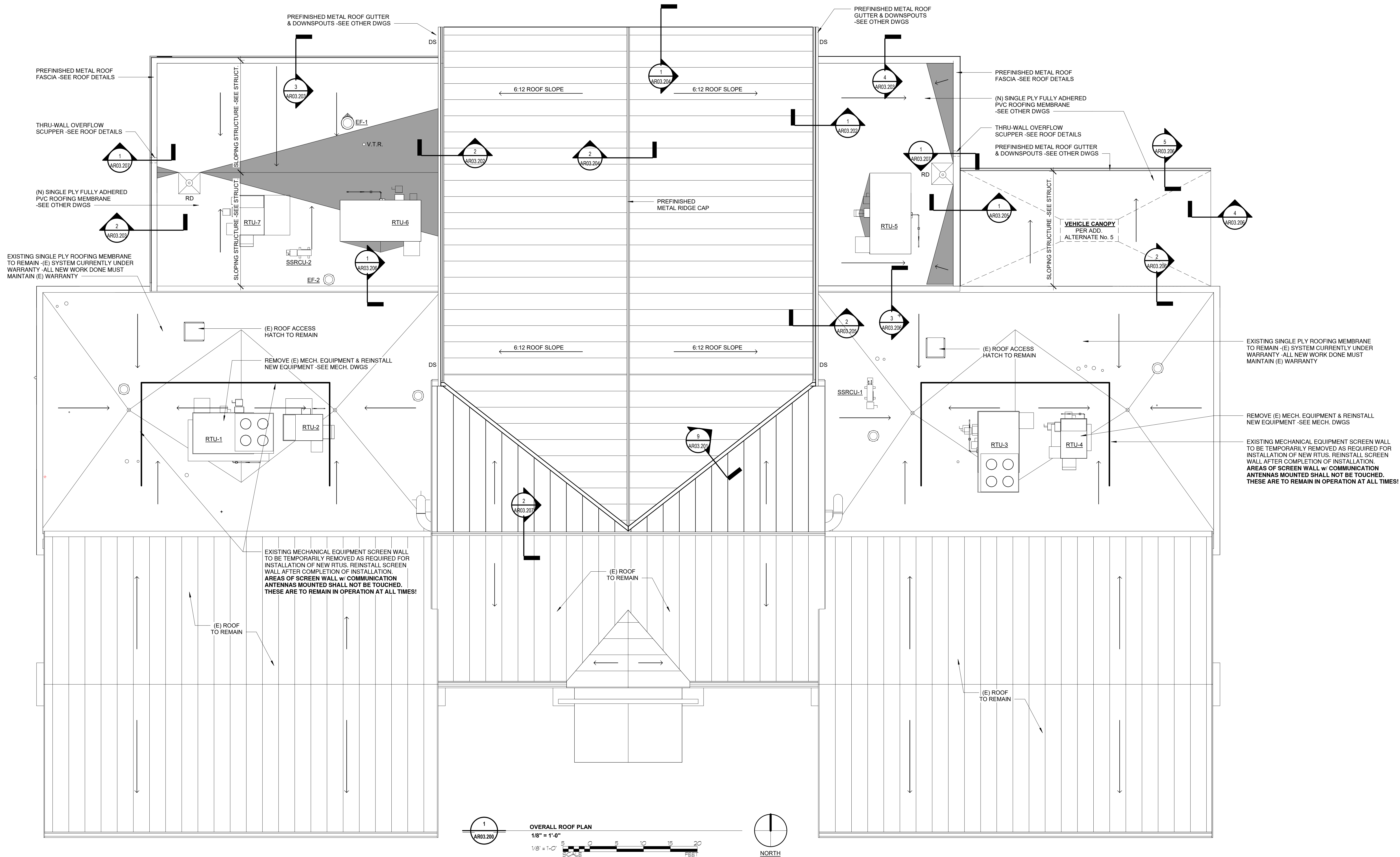
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Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR03.101**  
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1. VERIFY ALL CONDITIONS IN THE FIELD.
2. **ROOF ELEVATIONS** - SEE SECTIONS & WALL SECTIONS.
3. **COORDINATE** ROOFING WITH OTHER WORK, ESPECIALLY MECHANICAL, PLUMBING, AND ELECTRICAL.
4. **LOCATIONS AND DIMENSIONS** OF ROOF TOP EQUIPMENT SHOWN ARE APPROXIMATE. COORDINATE W/ MECHANICAL & VERIFY IN THE FIELD. PROVIDE ROOFING AS REQUIRED TO ACCOMMODATE THE ACTUAL EQUIPMENT INSTALLED.
5. **THE ENTIRE NEW ROOFING SYSTEM (INCLUDING FLASHINGS, TRIM, & ROOF WORK RELATED TO MECHANICAL, PLUMBING, AND ELECTRICAL)** SHALL BE COVERED BY THE SPECIFIED WARRANTIES.
6. **ALL WORK RELATED TO THE NEW ROOFING SYSTEM (INCLUDING ROOF WORK RELATED TO MECHANICAL, PLUMBING, ELECTRICAL, AND LIGHTNING PROTECTION)** SHALL BE PERFORMED BY THE ROOFING APPLICATOR OR A PARTY ACCEPTABLE TO THE ROOFING MANUFACTURERS AND QUALIFIED TO INSTALL ROOFING WITH THE SPECIFIED WARRANTY.
- 7A. **ALL NEW BLOCKING** SHALL BE PRESSURE TREATED (P.T.) AND 2 x 6 MINIMUM IN SIZE.
- 7B. **PULLOUT** - VERIFY THE SUBSTRATE CAN PROVIDE THE PULLOUT RESISTANCE REQUIRED FOR THE WIND UPLIFT RATING & WARRANTY SPECIFIED. IF NOT PROVIDE ATTACHMENT DOWN INTO THE ROOF DECK.
8. **INSULATION "R" VALUE** SHALL BE R-XX MINIMUM, BUT NOT LESS THAN SUM OF THE COMPONENTS COMPRISING EACH ROOF SYSTEM.
9. **THE EXISTING ROOFING SYSTEM** MAY BE UNDER WARRANTY. VERIFY WHERE NEW EQUIPMENT IS ADDED ON EXISTING ROOFS OR WHERE (E) OPENINGS ARE CLOSED OFF, PROVIDE ROOFING DETAILS & TIE-INS AS REQUIRED FOR THE EXISTING SYSTEM, & PATCH (E) ROOFING AS REQUIRED TO MAINTAIN THE (E) ROOFING WARRANTIES FULLY IN EFFECT. FURNISH THE OWNER WITH THE EXISTING WARRANTY ISSUER'S WRITTEN APPROVAL OF ANY ALTERATIONS AND/OR REPAIRS TO THE EXISTING ROOFING. CONFIRM THAT THE EXISTING WARRANTY REMAINS IN EFFECT FOLLOWING MODIFICATIONS.

10. **PVC MEMBRANE ROOFING SYSTEMS** - SEE XXX

11. **ROOF SLOPES** ON THE LOW SLOPE PORTION OF THE ROOF SHALL BE PROVIDED BY TAPERED INSULATION (1/4 IN PER FT. MIN.) ON LEVEL ROOF DECKS OR SLOPING DECK. SEE STRUCTURAL, THE ROOF PLAN, & WALL SECTIONS FOR CONFIGURATION.

12. **CRICKETS** - THE LAYOUT OF THE MAIN CRICKETS ARE SHOWN ON THE ROOF PLAN. COORDINATE. PROVIDE TAPERED INSULATION CRICKETS WITH A MINIMUM BACKSLOPE TWICE THE MAIN SLOPE AT ALL LOW POINTS TO DIRECT WATER TOWARD THE ROOF DRAINS & AT THE UPHILL SIDE(S) OF ANY OBSTRUCTIONS. ALSO PROVIDE CRICKETS ON THE UPHILL SIDE(S) OF ALL CURB MOUNTED ROOFTOP EQUIPMENT (EVEN IF NOT SHOWN ON THE ROOF PLAN).

13. **COUNTERFLASHING AND VERTICAL TERMINATION W/ SURFACE APPLIED REGLET** - LOCATE THE TOP OF THE REGLET AS CLOSE AS POSSIBLE BELOW CAVITY WALL FLASHING AND WEEPS. CONFIRM THE TOP OF THE MEMBRANE FLASHING WILL BE 8 in. MIN. ABOVE THE NEW ROOF SURFACE @ ALL POINTS. PROVIDE ROOFING, FLASHING, & TERMINATION. PROVIDE NEW PREFIN. MTL COPING COVERS PER THE SPECS. AT ANY CHANGES IN REGLET HEIGHT, EXTEND THE HIGHER METAL 8" BEYOND THE END OF THE LOWER METAL AND BEYOND THE VERTICAL EDGE OF THE MEMBRANE. SEAL THE VERTICAL EDGE OF THE MEMBRANE PER THE ROOFING MANUFACTURER'S RECOMMENDATIONS. IF THE HEIGHT CHANGE IS GREATER THAN 4", PROVIDE METAL TO COVER VERTICAL MEMBRANE EDGE LEFT EXPOSED. VERIFY THERE WILL BE 4 in. MIN. METAL COVERAGE OVER THE TOP OF THE MEMBRANE. WHERE THE MEMBRANE FLASHING CONTINUES UP THE WALL SEE OTHER ROOF NOTES.

14. **MEMBRANE APPLIED TO VERTICAL WALLS** - VERIFY THE VERTICAL SURFACES MEET THE MEMBRANE MANUFACTURER'S REQUIREMENTS FOR ATTACHMENT OF THE MEMBRANE. IF NOT PROVIDE EXTERIOR GRADE SHEATHING AS REQUIRED. PROVIDE ROOF MEMBRANE SECUREMENT @ THE BASE OF THE WALL PROVIDE MULTI-PART MEMBRANE FLASHING PER THE SINGLE-PLY ROOFING'S MANUFACTURER'S RECOMMENDATIONS. SEE OTHER NOTES FOR THE TOP TERMINATION OF THE FLASHING.

15. **HEIGHT ABOVE ROOF SURFACE FOR CURB MOUNTED AND OTHER ROOFTOP EQUIPMENT** - VERIFY THE CURB IS HIGH ENOUGH TO ALLOW TERMINATION OF THE FLASHING MEMBRANE 8" MIN. ABOVE THE HIGHEST POINT OF THE SURROUNDING NEW ROOF SURFACE. IF NOT RAISE THE CURB OR EQUIPMENT AS REQUIRED USING PRESSURE TREATED (PT) WOOD BLOCKING (2 x 6 MINIMUM). EXTEND DUCTWORK & LINES AS REQUIRED. SEE OTHER NOTES FOR ROOFING.

16. **CURB MOUNTED ROOF TOP EQUIPMENT** - SEE NOTE ABOVE FOR HEIGHT. PROVIDE ROOFING PER DETAILS. ON THE UPHILL SIDE(S) OF THE CURB, PROVIDE CRICKETS WITH A MINIMUM BACKSLOPE TWICE THE MAIN SLOPE. LOCATE DUCTS, LINES, PIPES, & CONDUITS (INCL. THOSE FOR CONVENIENCE OUTLETS) INSIDE THE CURB TO AVOID ADDITIONAL PENETRATIONS OF THE ROOF SURFACE. IF THAT IS NOT POSSIBLE, PROVIDE PENETRATION POCKETS PER XXX FOR LINES, PIPES, & CONDUITS. PROVIDE CURBS FOR ALL DUCTS OUTSIDE THE EQUIPMENT CURB. COORDINATE W/ MECHANICAL.

17. **ROOF DRAIN w/ 4 FT. x 4 FT. SUMP** - PROVIDE A SUMP OF 1/2 in. PER FOOT TAPERED INSULATION. PROVIDE FILL INSULATION BELOW SO THAT HIGH POINTS OF THE SUMP WILL BE FLUSH WITH THE ADJACENT BASE INSULATION. MAINTAIN A MINIMUM OF 1/4" PER FOOT POSITIVE SLOPE TO THE DRAIN AT ALL PARTS OF THE SUMP. PROVIDE THE ROOF/OVERFLOW DRAIN SIMILAR TO ROOF DETAILS. COORDINATE W/ MECHANICAL. SET THE OVERFLOW HEIGHT 2 in. ABOVE THE LOW POINT OF THE ROOF.

18. **PENETRATION POCKETS** - PROVIDE PER DETAIL.

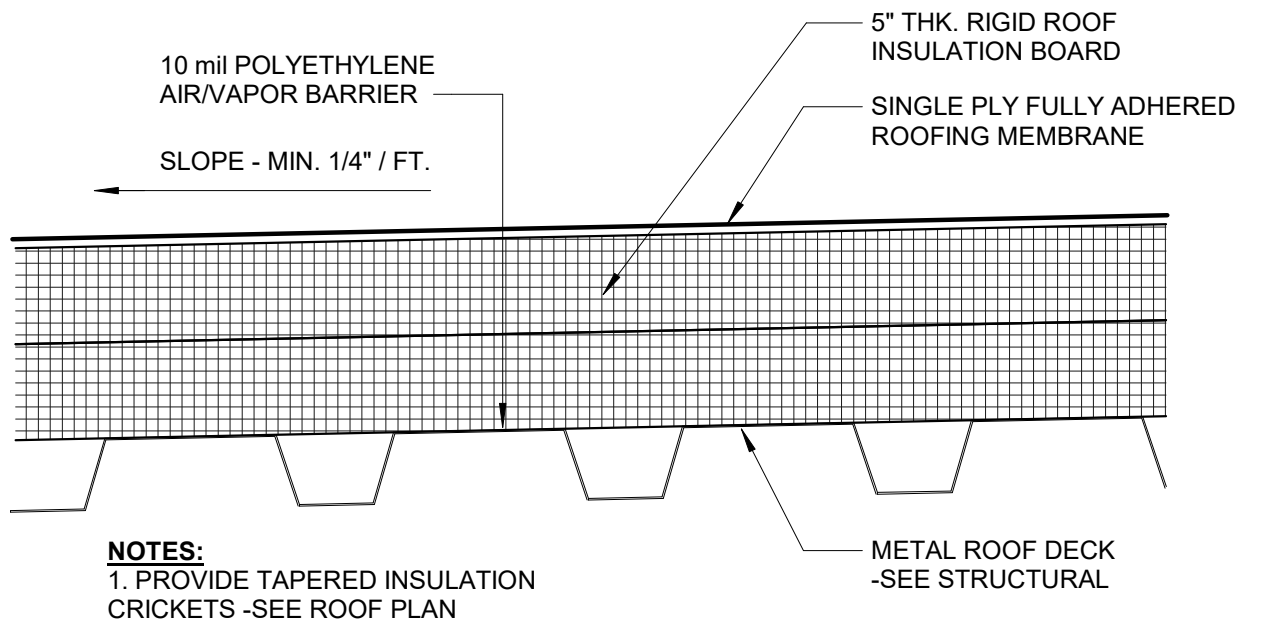
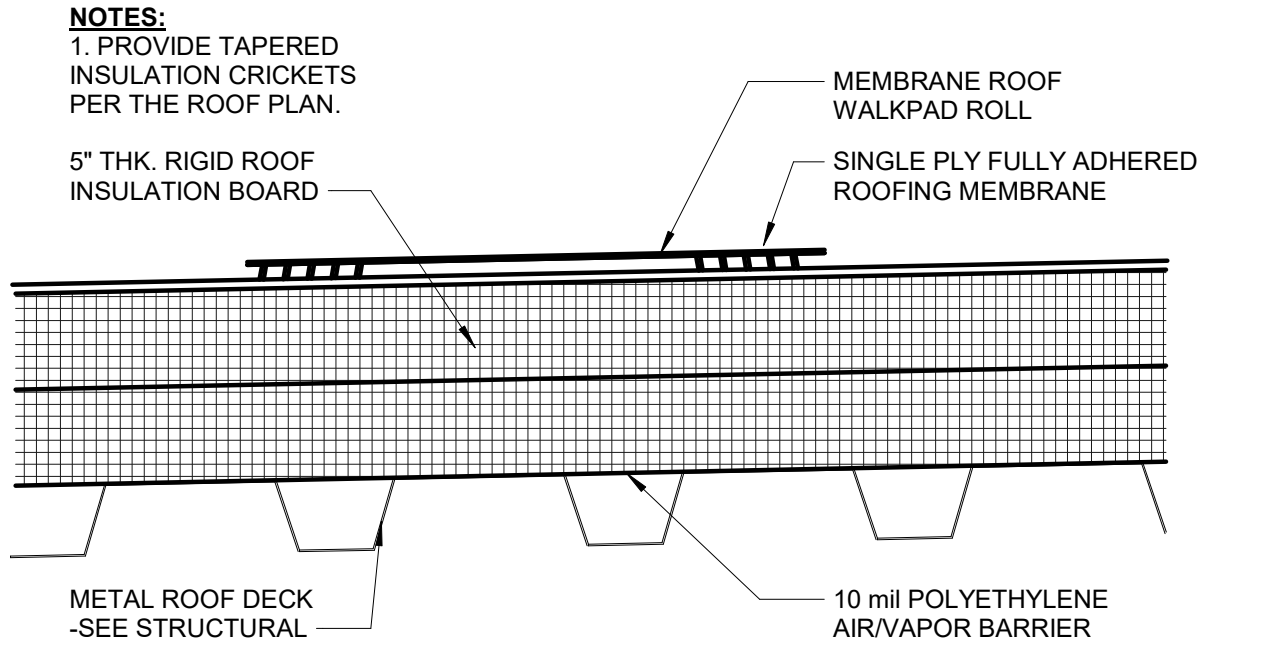
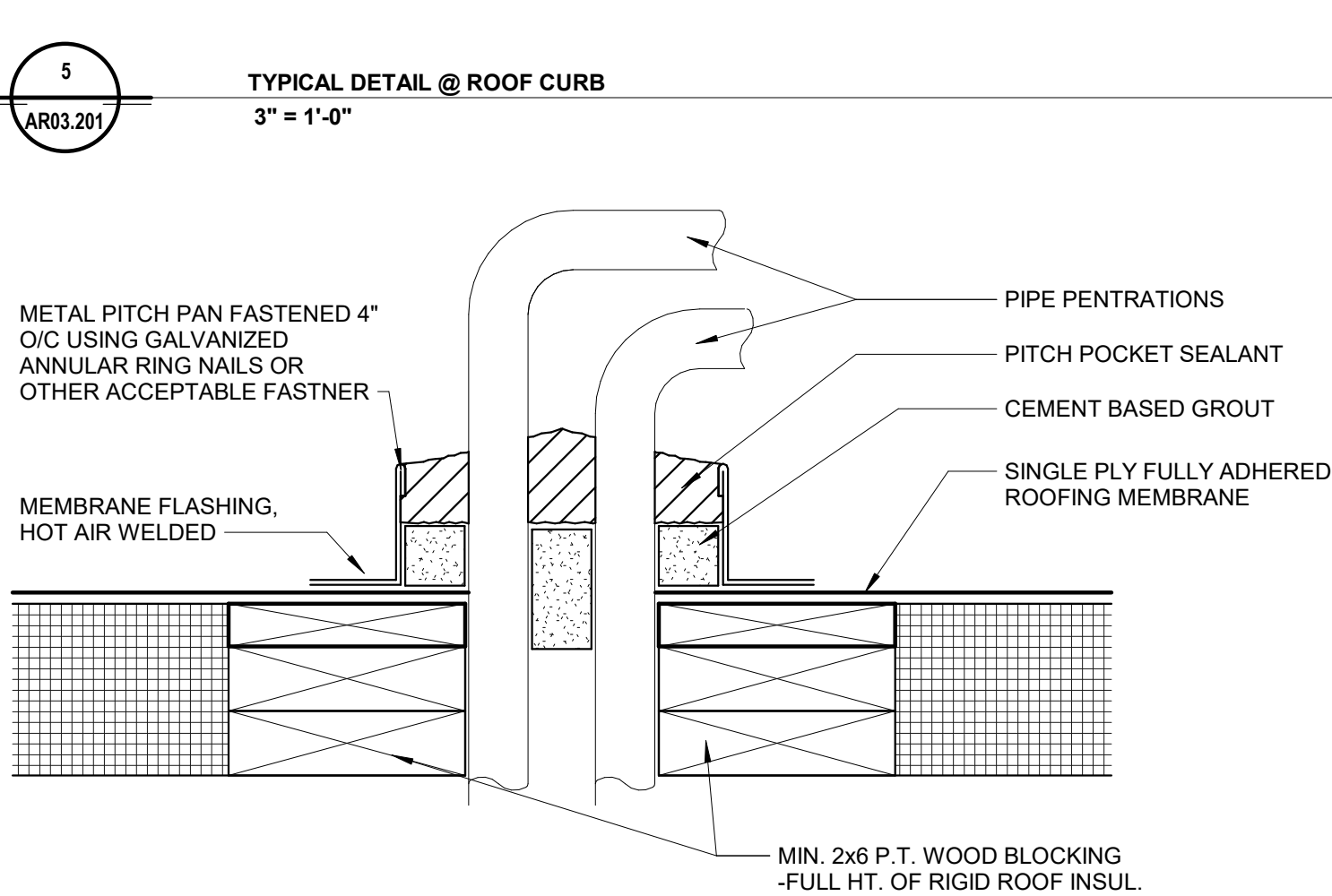
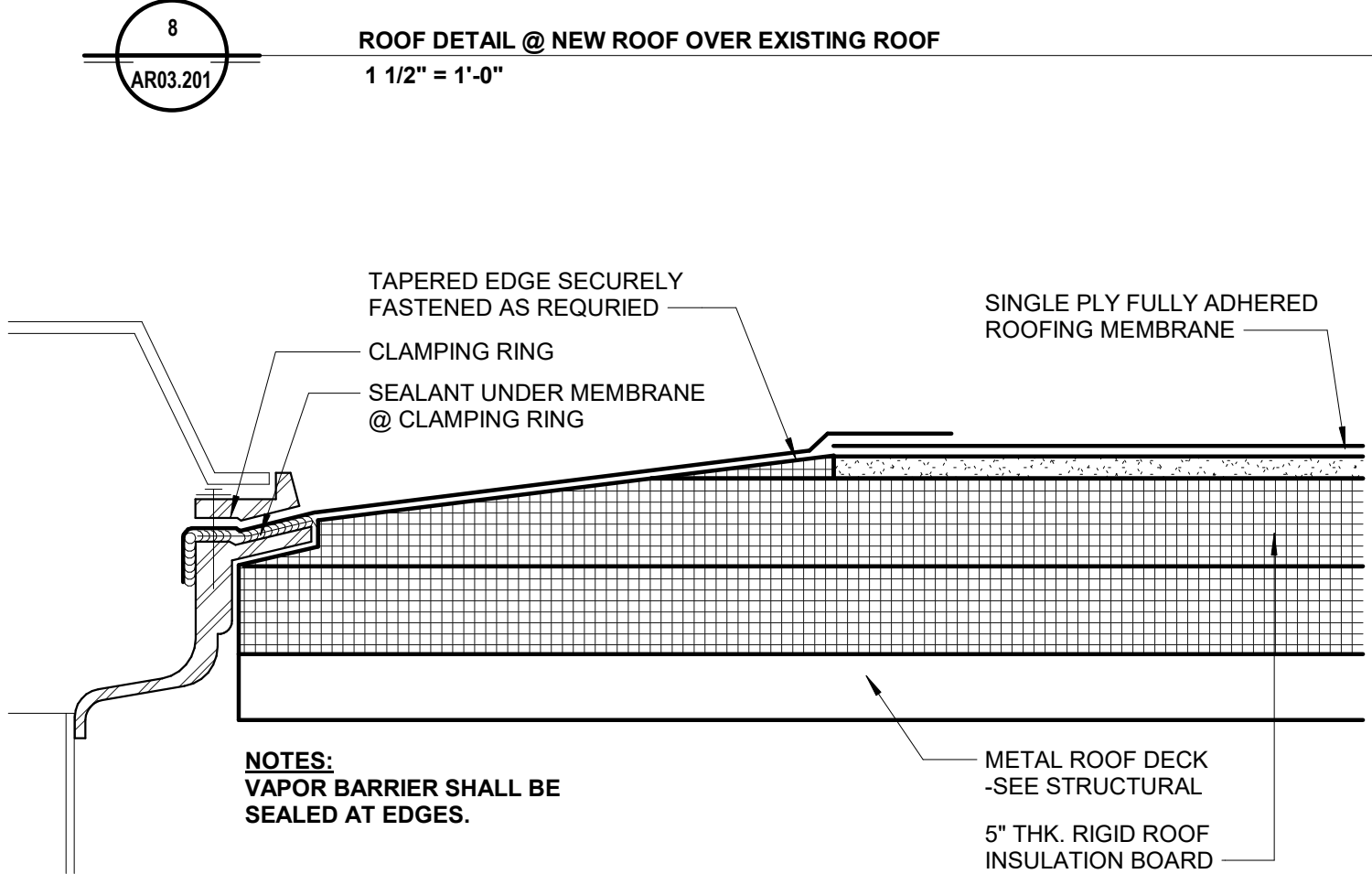
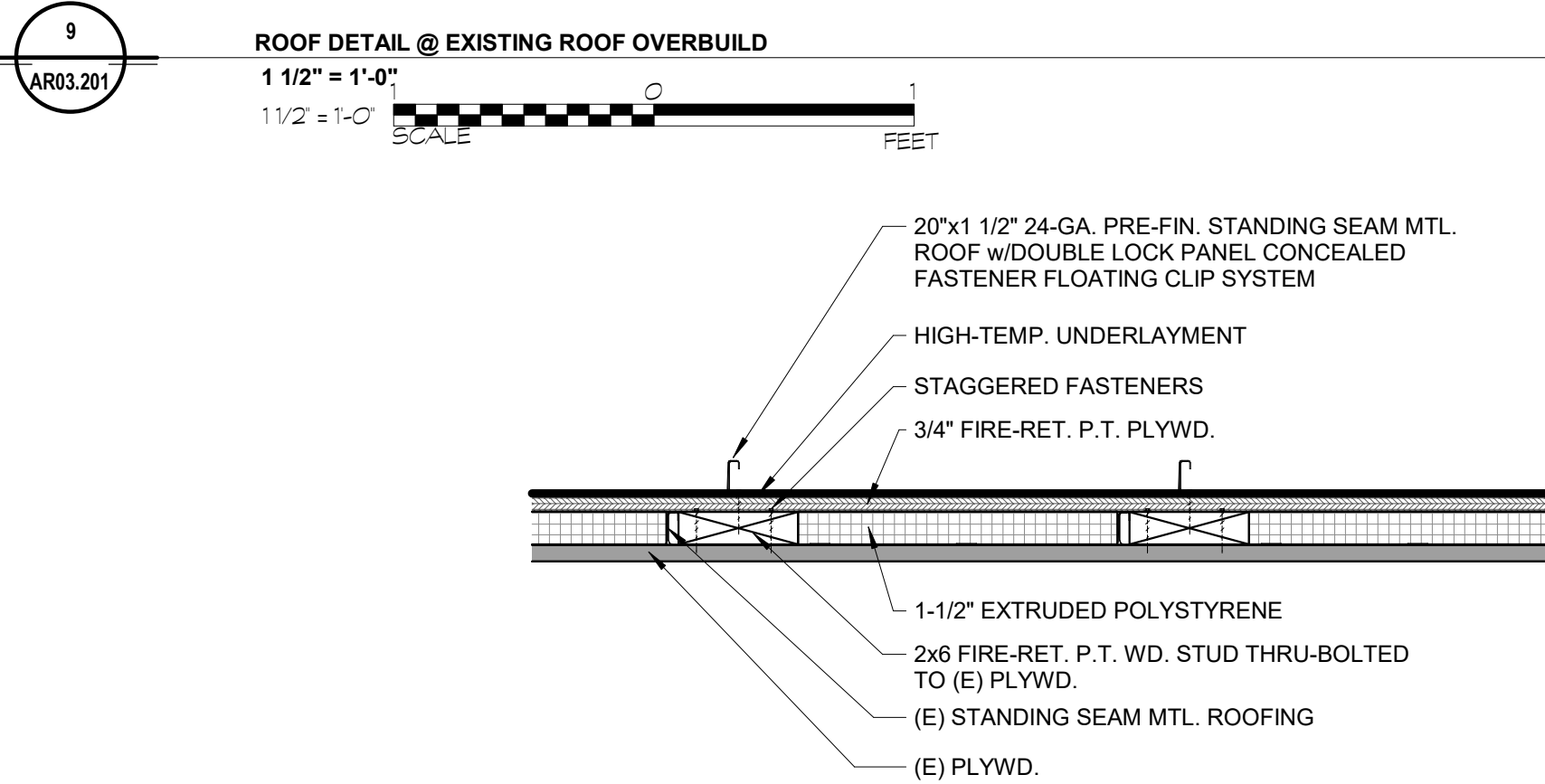
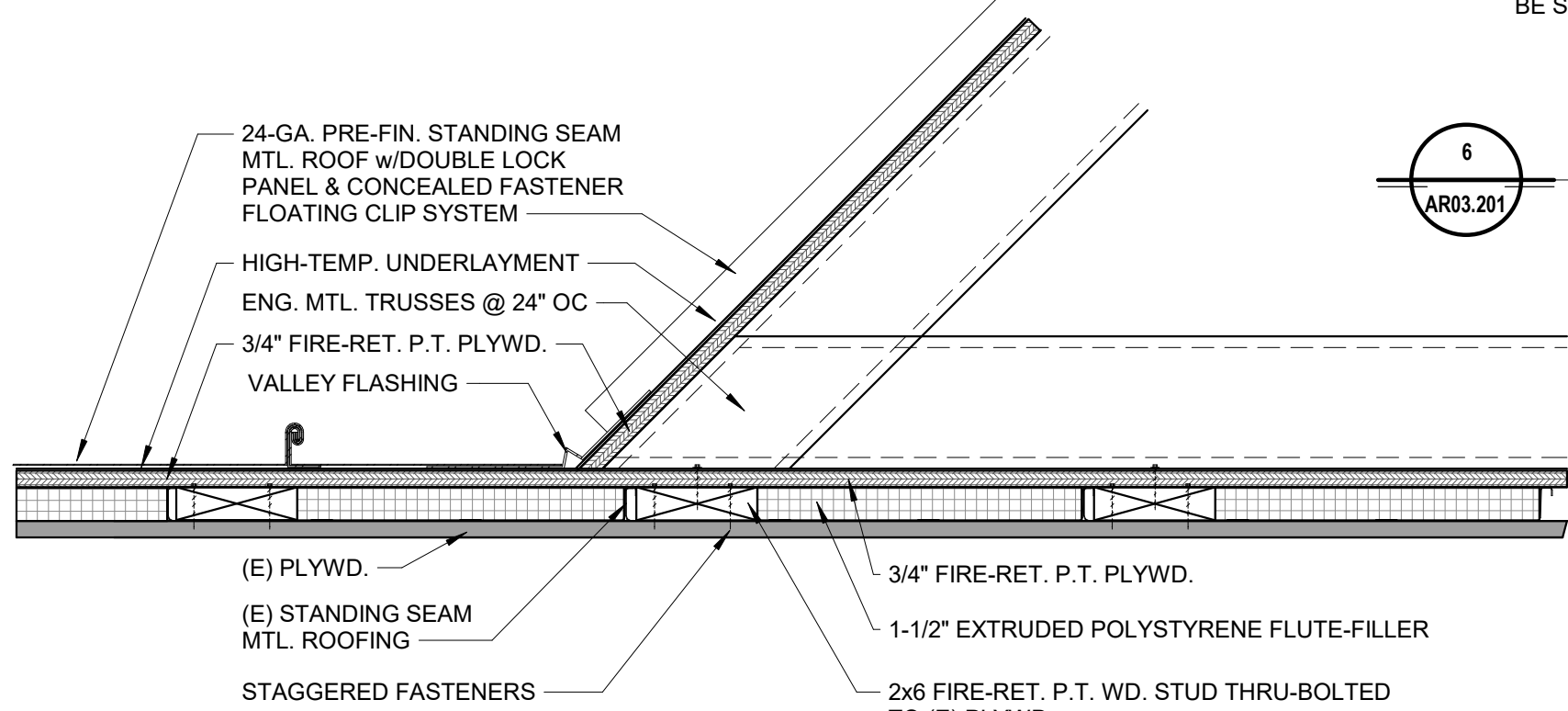
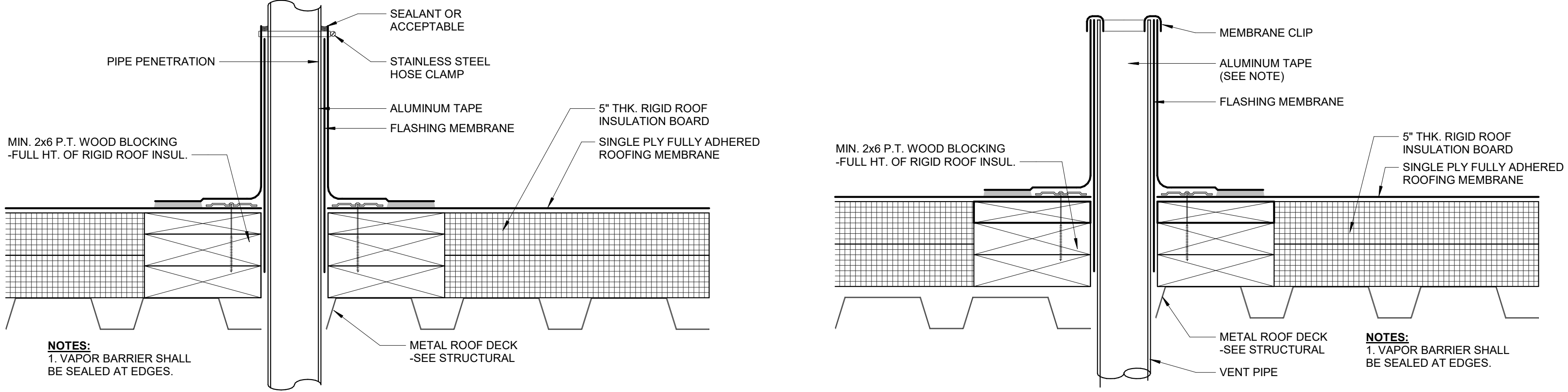
19. **COLD ROUND VENTS OR PIPES THROUGH THE ROOF** - VERIFY TOP IS 8" MINIMUM ABOVE THE ROOF SURFACE. EXTEND AS REQUIRED. PROVIDE ROOFING PER DETAIL 3/A1.6A & 4/A1.6A.

20. **WALKWAY PADS** - LOCATE PER ROOF PLAN. PROVIDE AS REQUIRED BY THE MEMBRANE ROOFING MANUFACTURER. COORDINATE PADS WITH ROOF SLOPES AND CRICKETS. LOCATE PADS TO ALLOW FOR FLOW OF WATER DOWN SLOPE AND ESPECIALLY AT VALLEYS. INTERRUPT PADS ON AN ANGLE AT VALLEYS. NOTIFY ARCHITECT IF WALKWAY LAYOUT SHOWN IMPEDES WATER FLOW. SEE 5/A1.6A

21. **PARAPETS** - PROVIDE NEW ROOFING AND METAL COPING COVERS PER ROOF DETAILS. SHEETS AXX-AXX. PROVIDE HORIZONTAL MEMBRANE SECUREMENT WITH P.T. WOOD BLOCKING AT INSIDE BASE OF PARAPET PER ROOF DETAILS. EXTEND MEMBRANE UP, OVER AND DOWN THE PARAPET. SEAL MEMBRANE TO THE EXTERIOR FACE OF THE WALL. SEE WALL SECTIONS.

22. **OVERFLOW PIPE** - PER DESIGN, ROOF DRAIN & OVERFLOW DRAIN AREA A COMBINED UNIT. -SEE PLUMBING.

23. **NEW DRIP EDGE w/O GUTTER** - PROVIDE 2 FT. OF TAPERED INSULATION (@ 1/2 IN. PER FT.) TO INCREASE THE SLOPE AT THE EAVE. REDUCE THE BASE INSULATION AS REQUIRED @ EAVE. PROVIDE ROOFING, DRIP EDGE PER XXX. LAP THE MEMBRANE OVER ANY FASCIA MATERIAL & SEAL. STRIP OVER THE ROOF EDGE.





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License No. 6157  
Expiration Date: 09/07/2020

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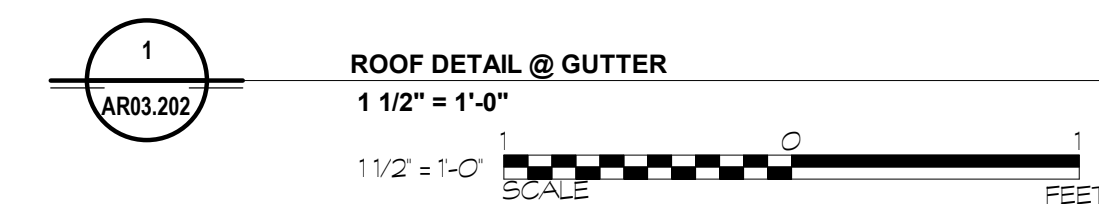
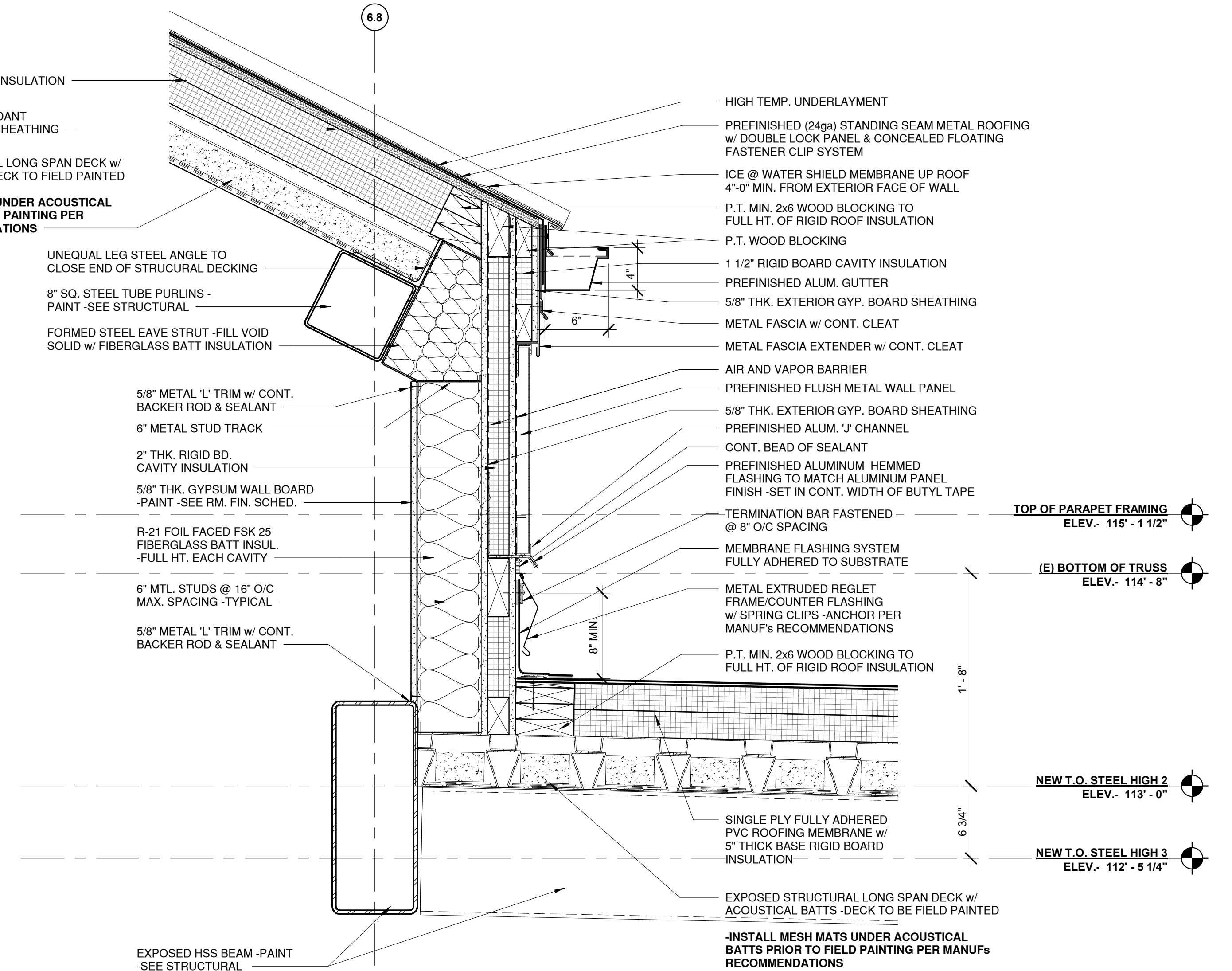
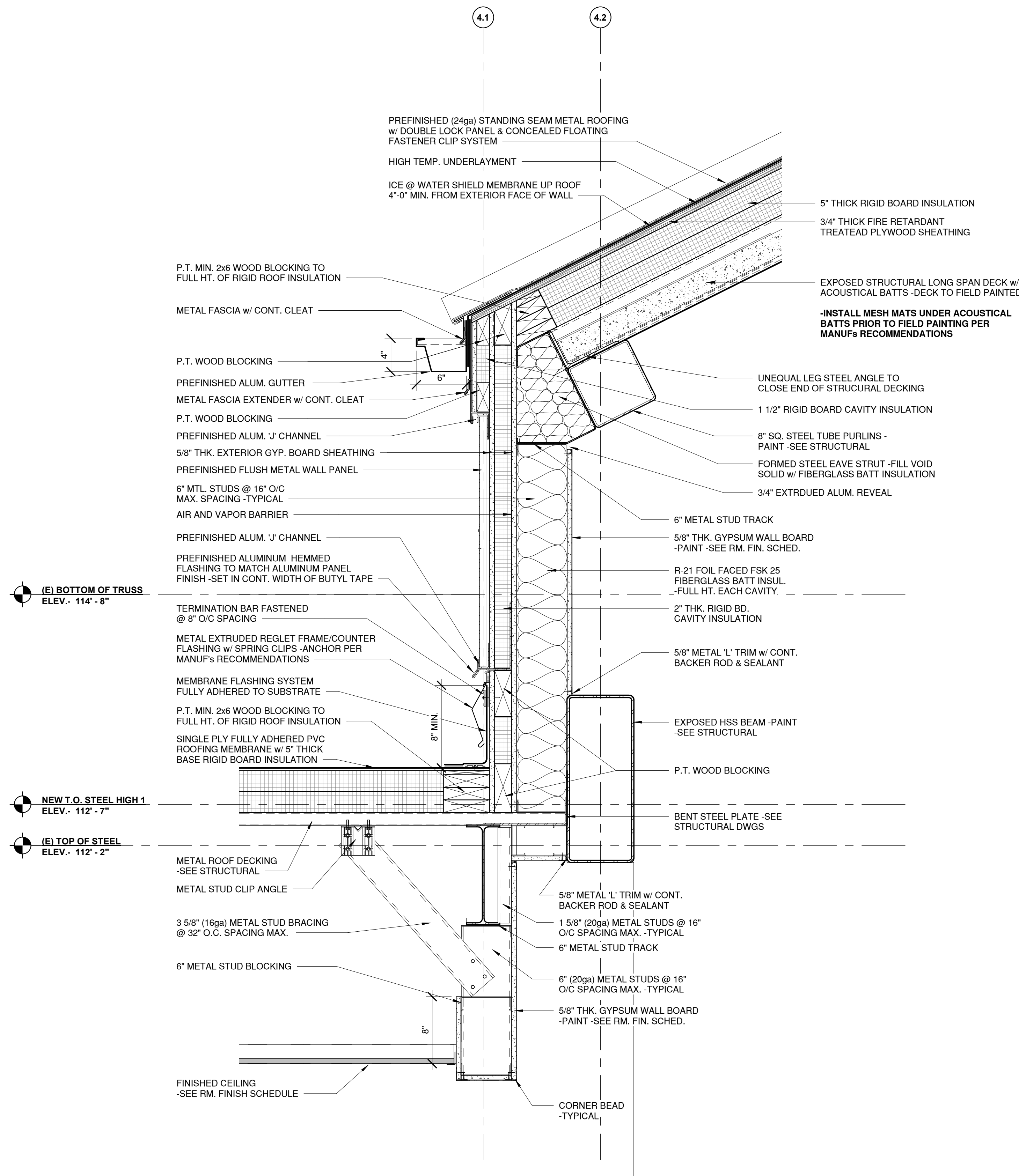


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SHEET TITLE: <b>ROOF DETAILS</b>	
SCALE: As indicated	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

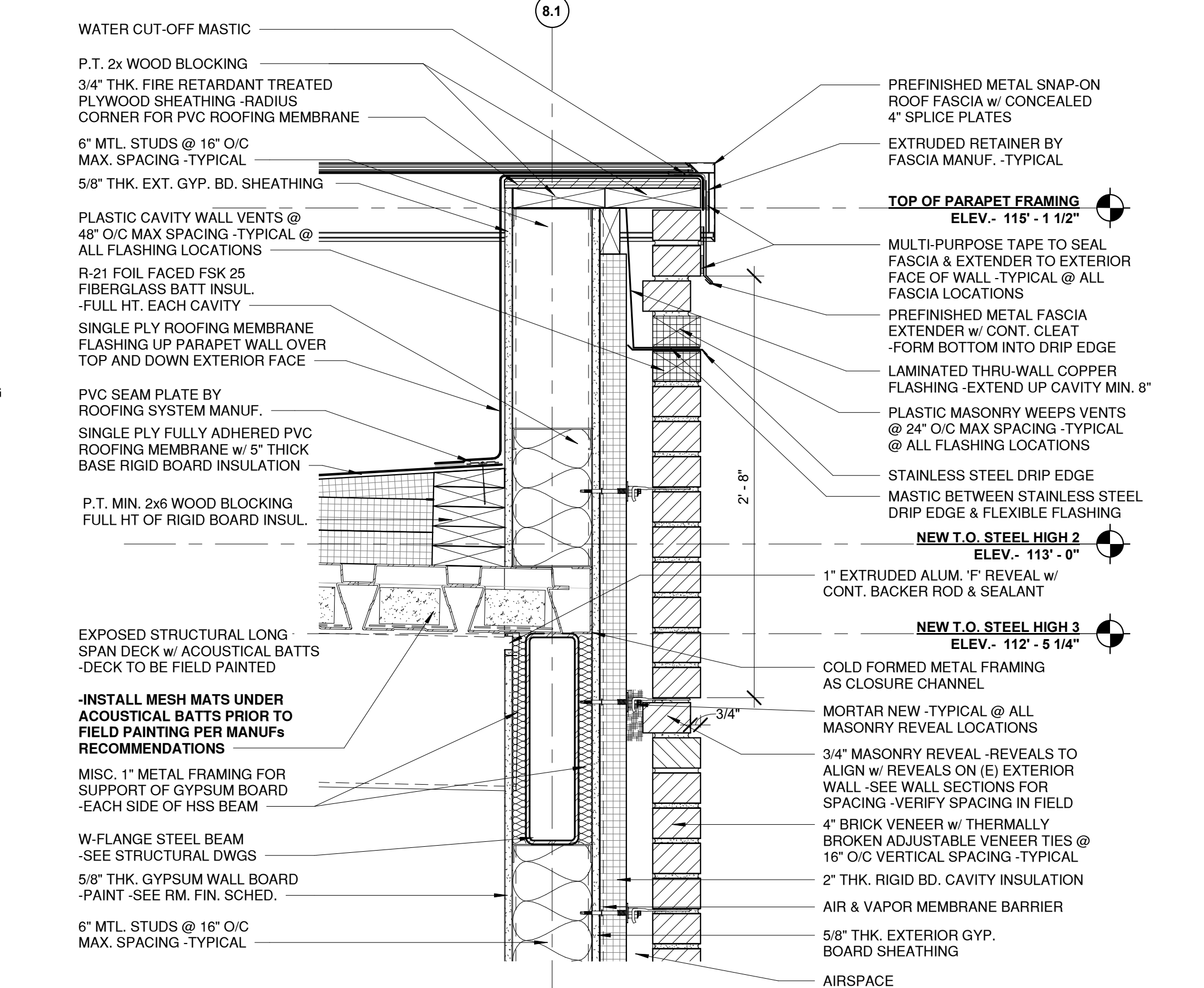
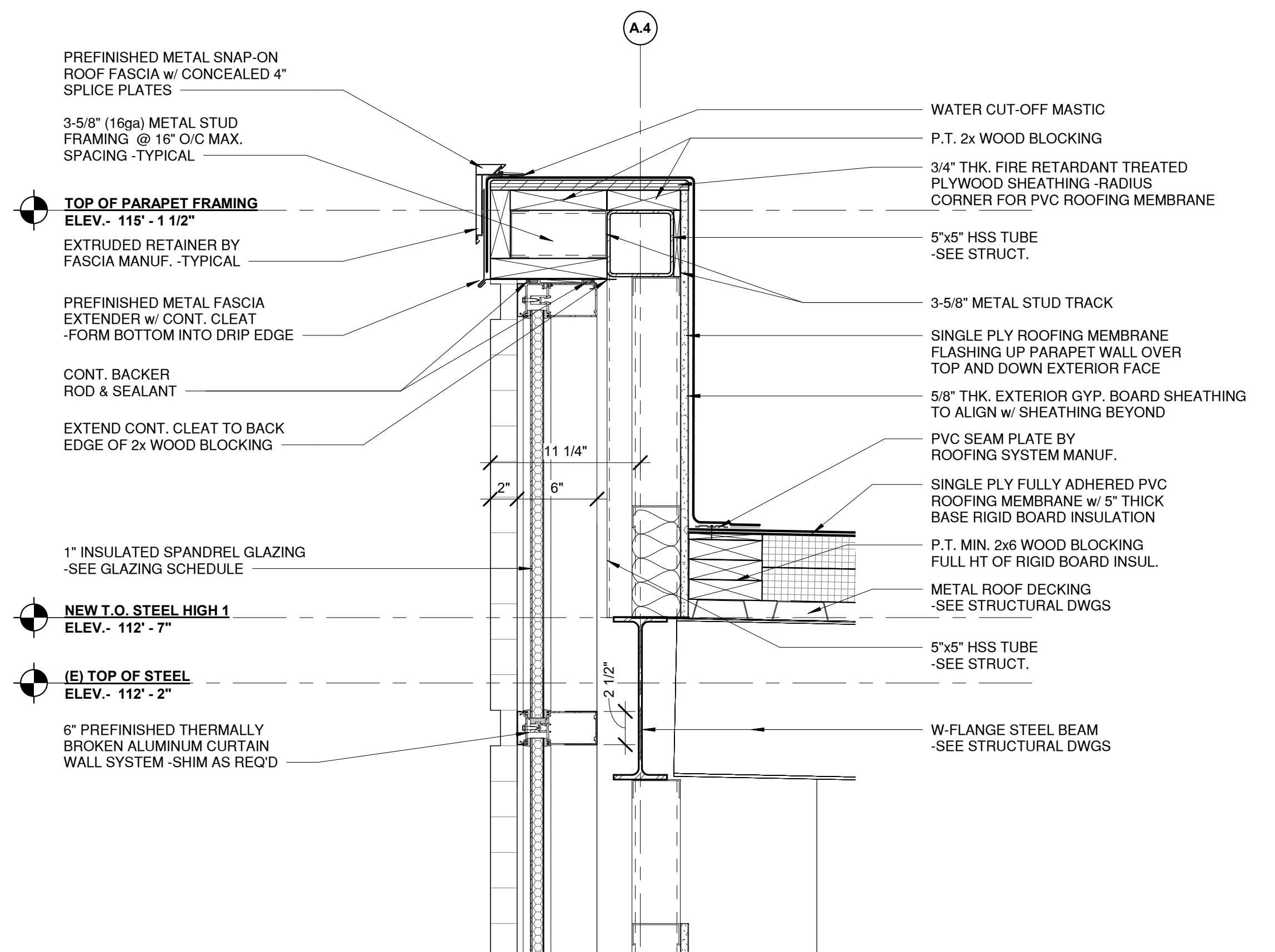
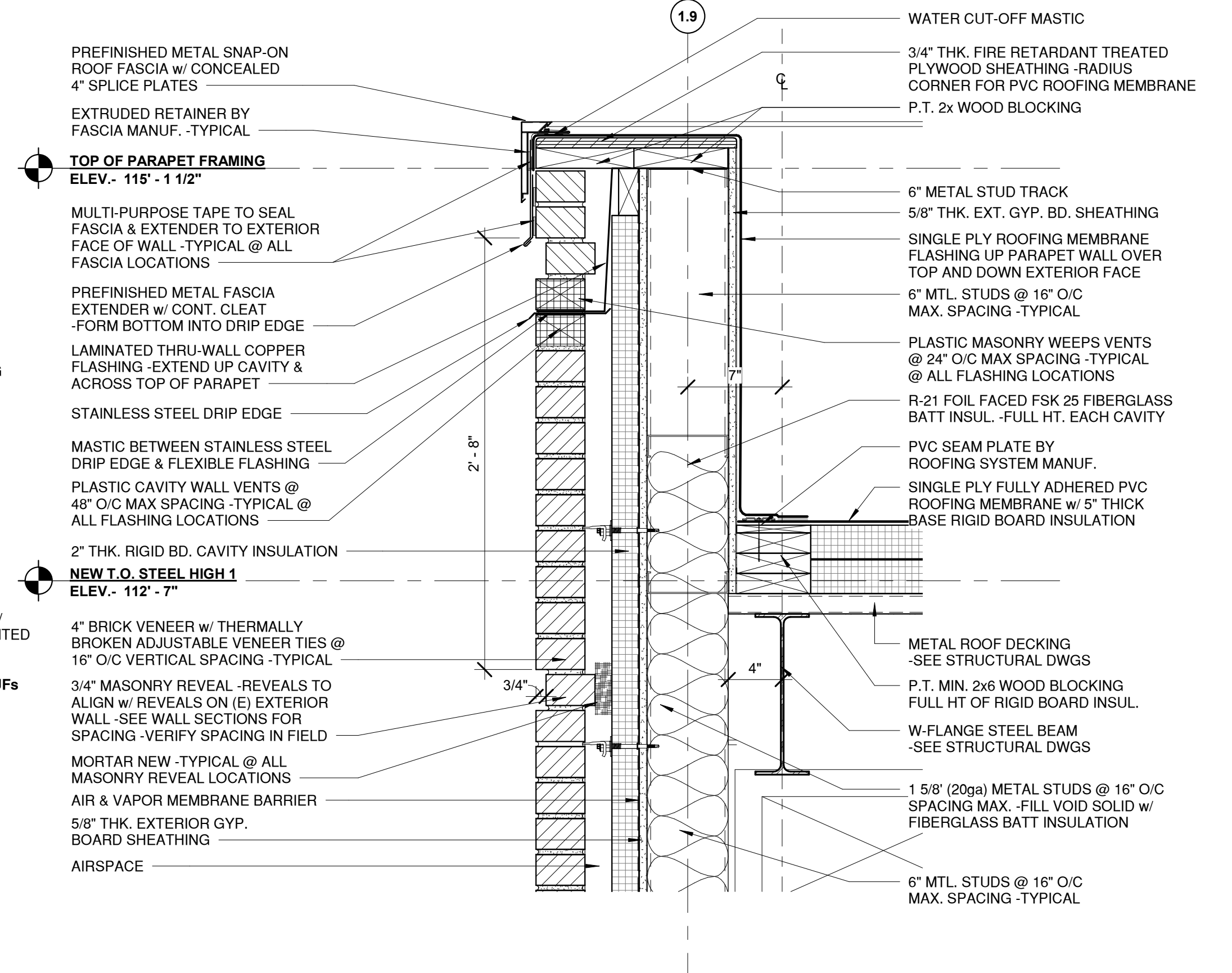
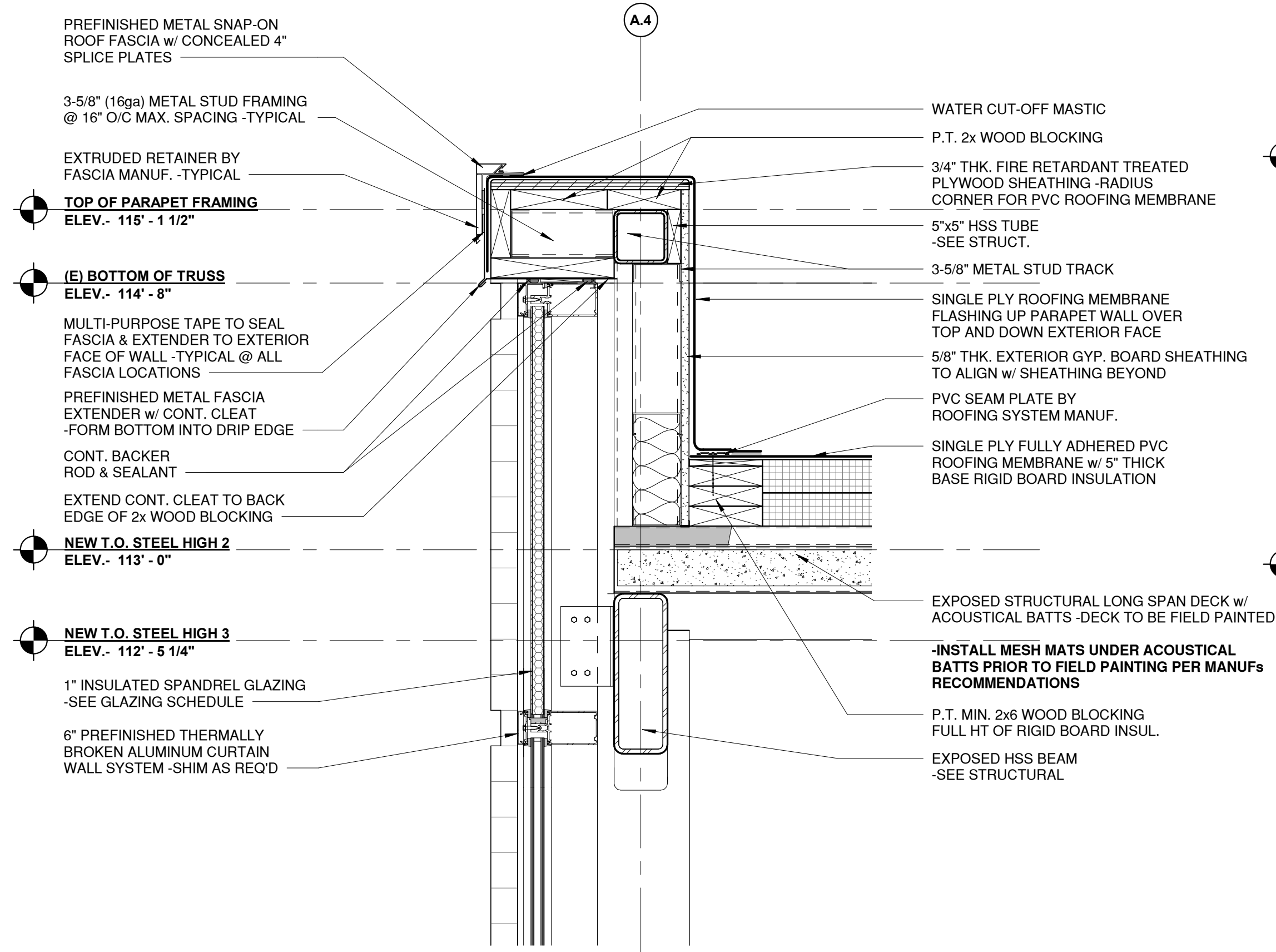
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**AR03.201**  
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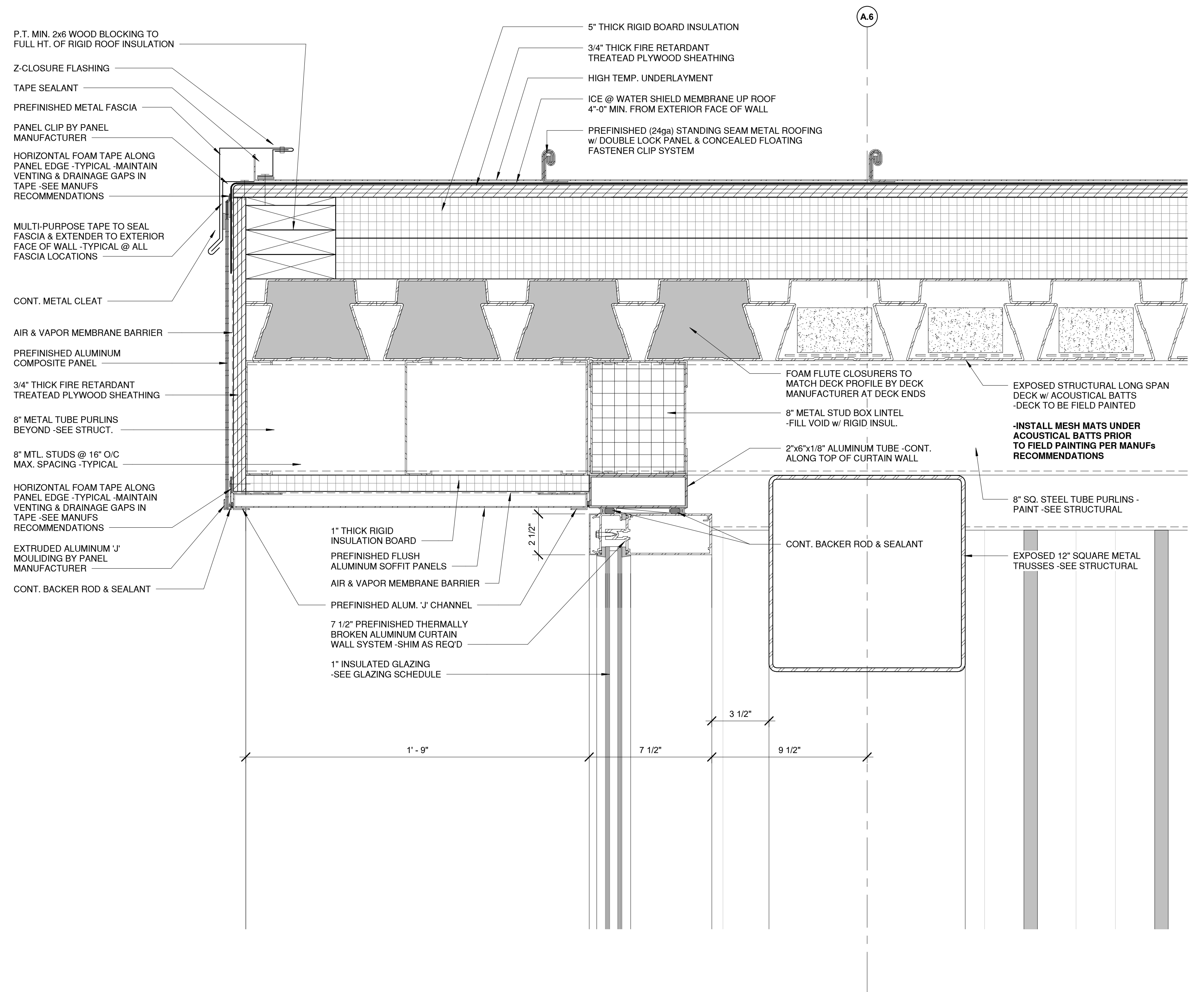
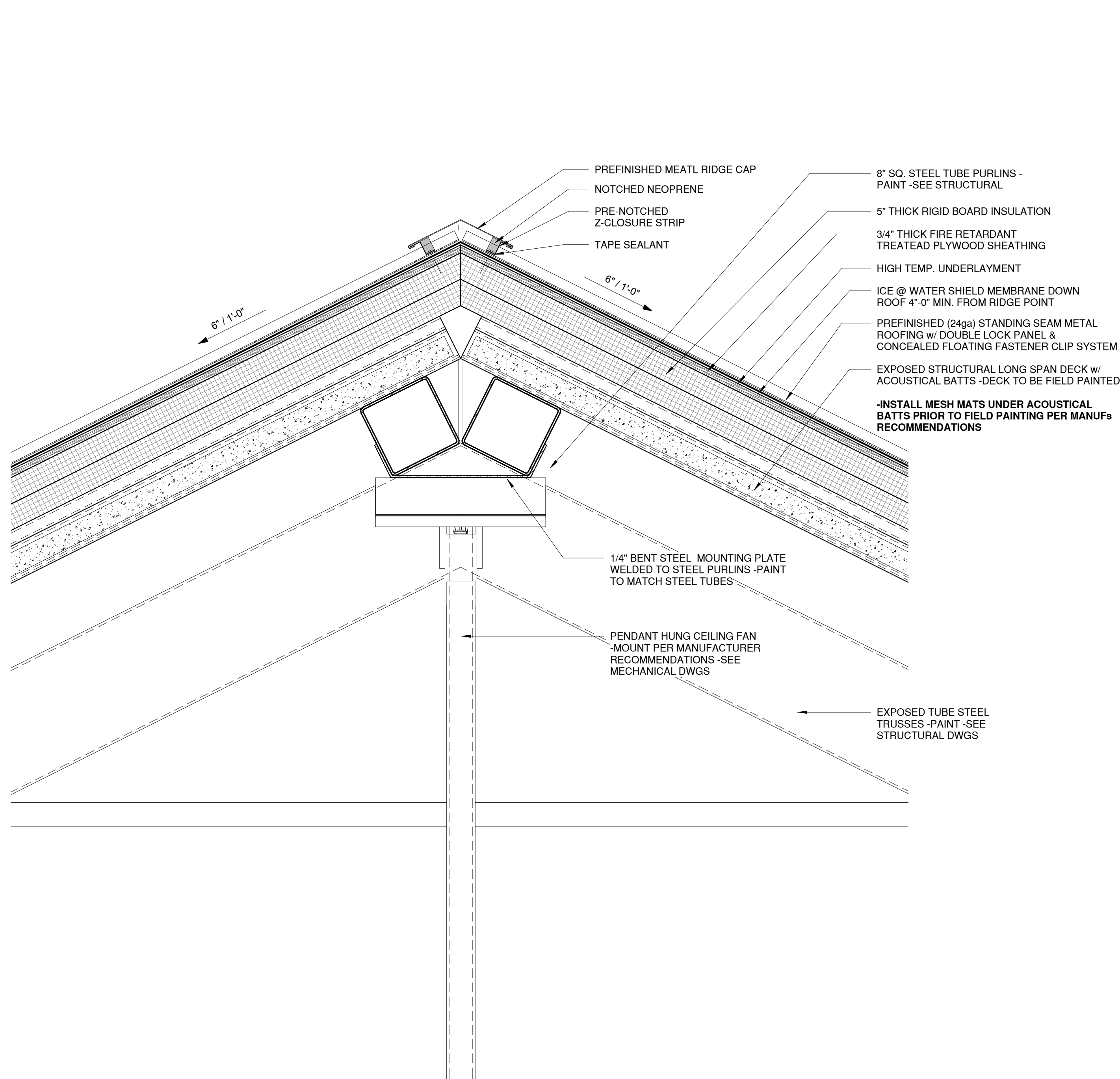


2  
AR03.202  
ROOF DETAIL @ GUTTER  
1 1/2" = 1'-0"





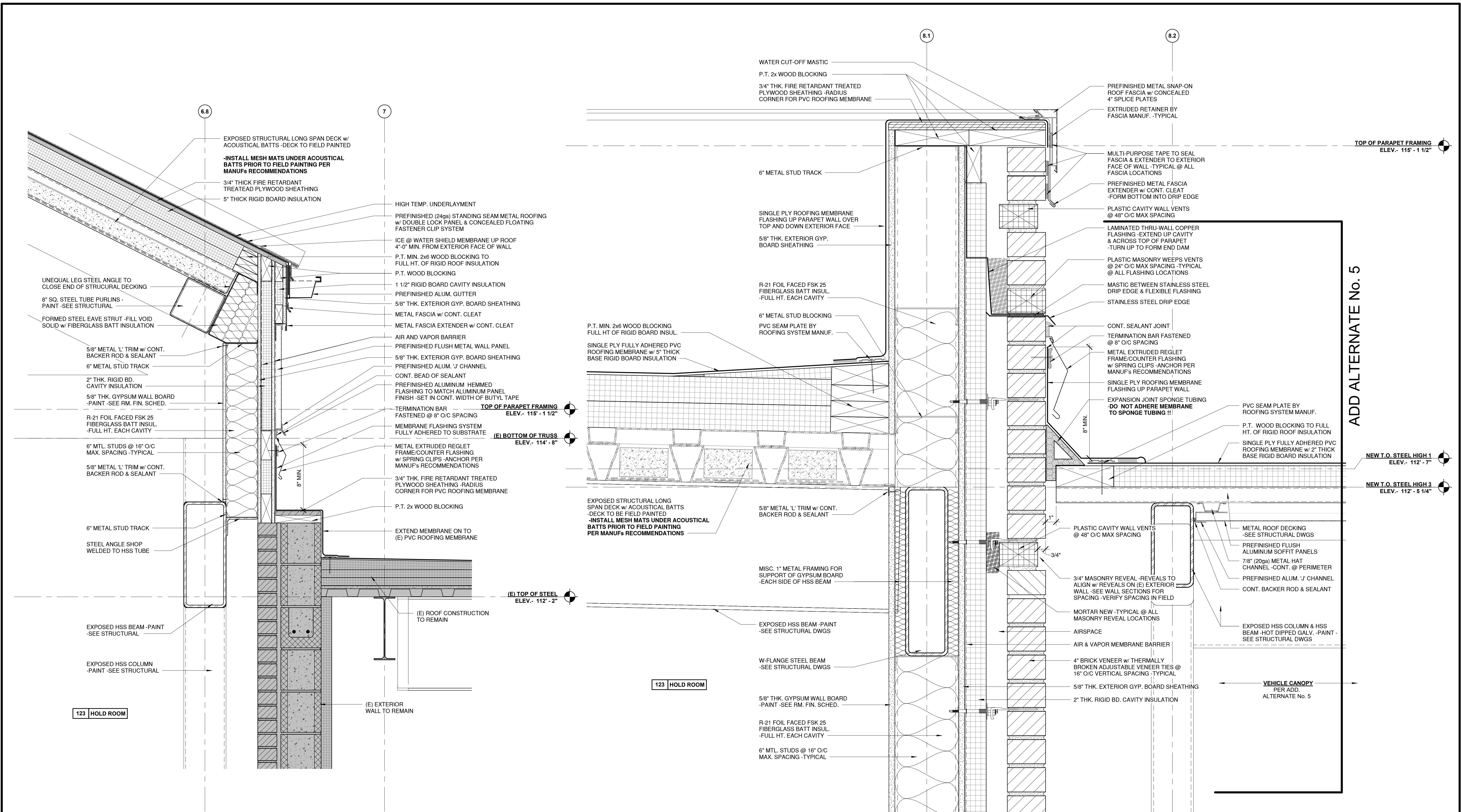




2  
AR03.204  
ROOF DETAIL @ METAL ROOFING RIDGE  
1 1/2" = 1'-0"  
1 1/2" = 1'-0"  
SCALE  
FEET


1  
AR03.204  
CURTAIN WALL DETAIL @ SOFFIT  
3" = 1'-0"  
3" = 1'-0"  
SCALE  
FEET






2  
AR03.205  
ROOF DETAIL @ ROOF CONNECTION TO (E)  
1 1/2" = 1'-0"  
1 1/2" = 1'-0" SCALE  
FEET

1  
AR03.205  
ROOF DETAIL @ CANOPY ROOF EXPANSION JOINT (PER ADD ALTERNATE No. 5)  
3" = 1'-0"  
3" = 1'-0" SCALE  
FEET



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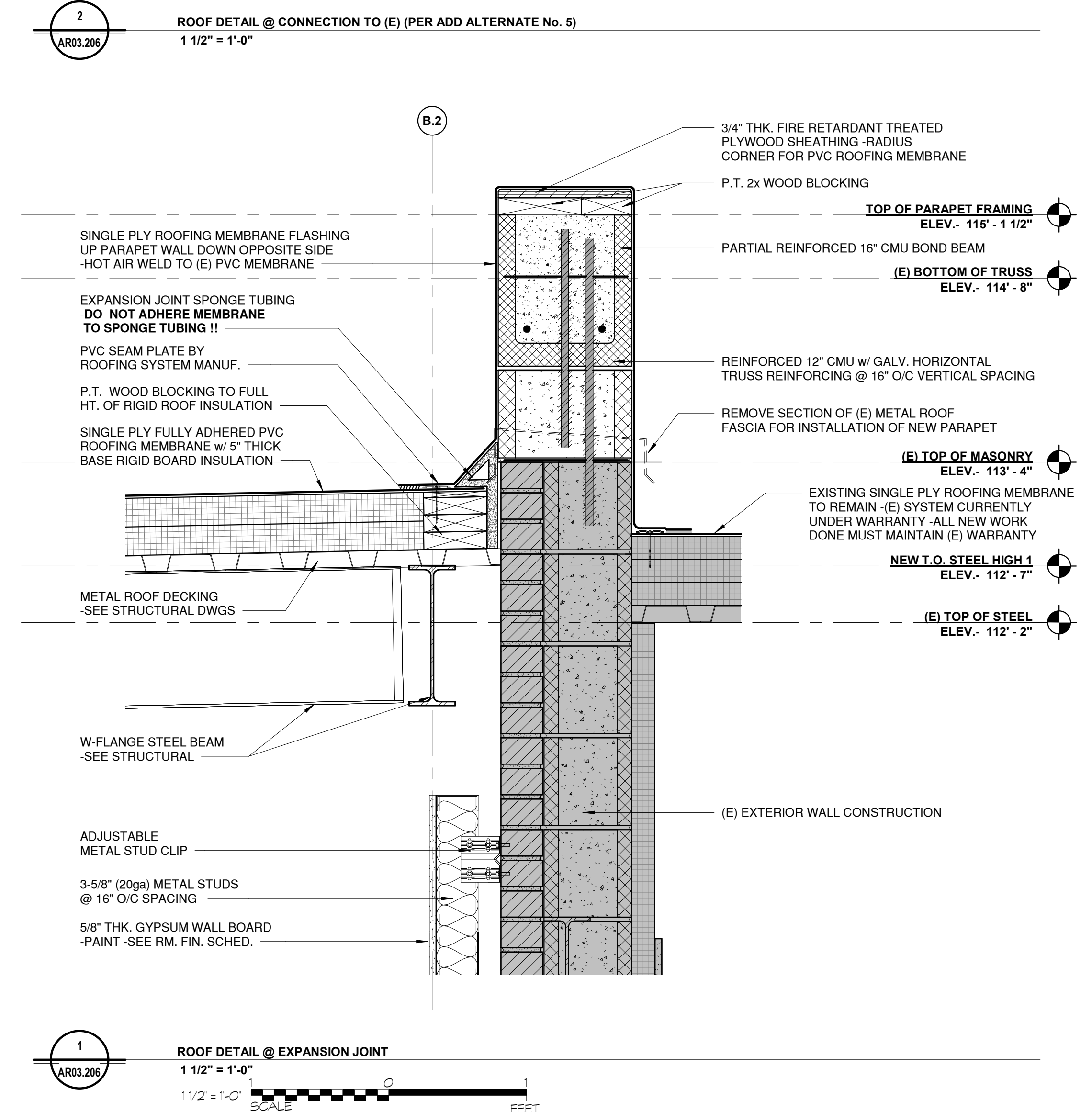
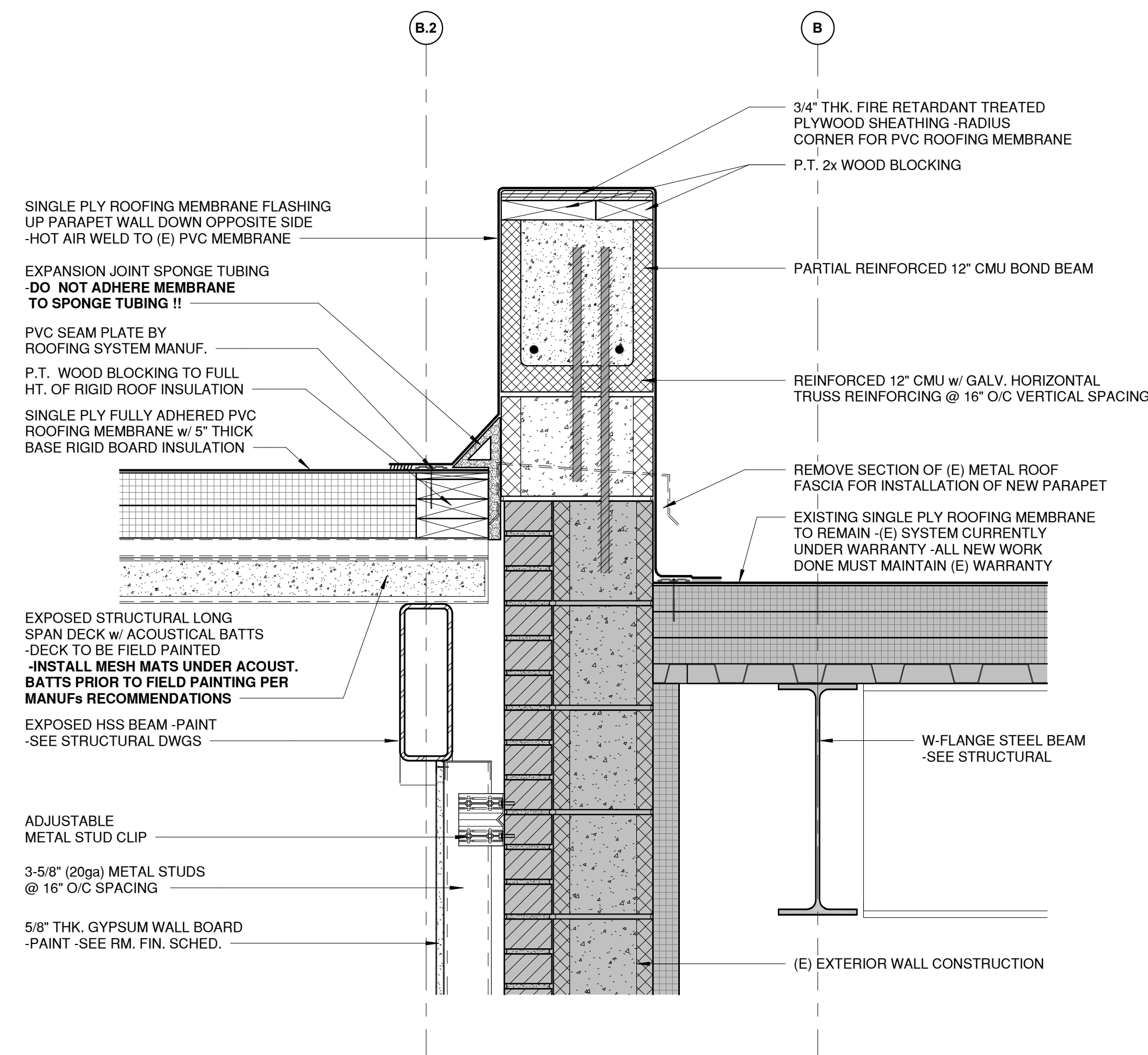
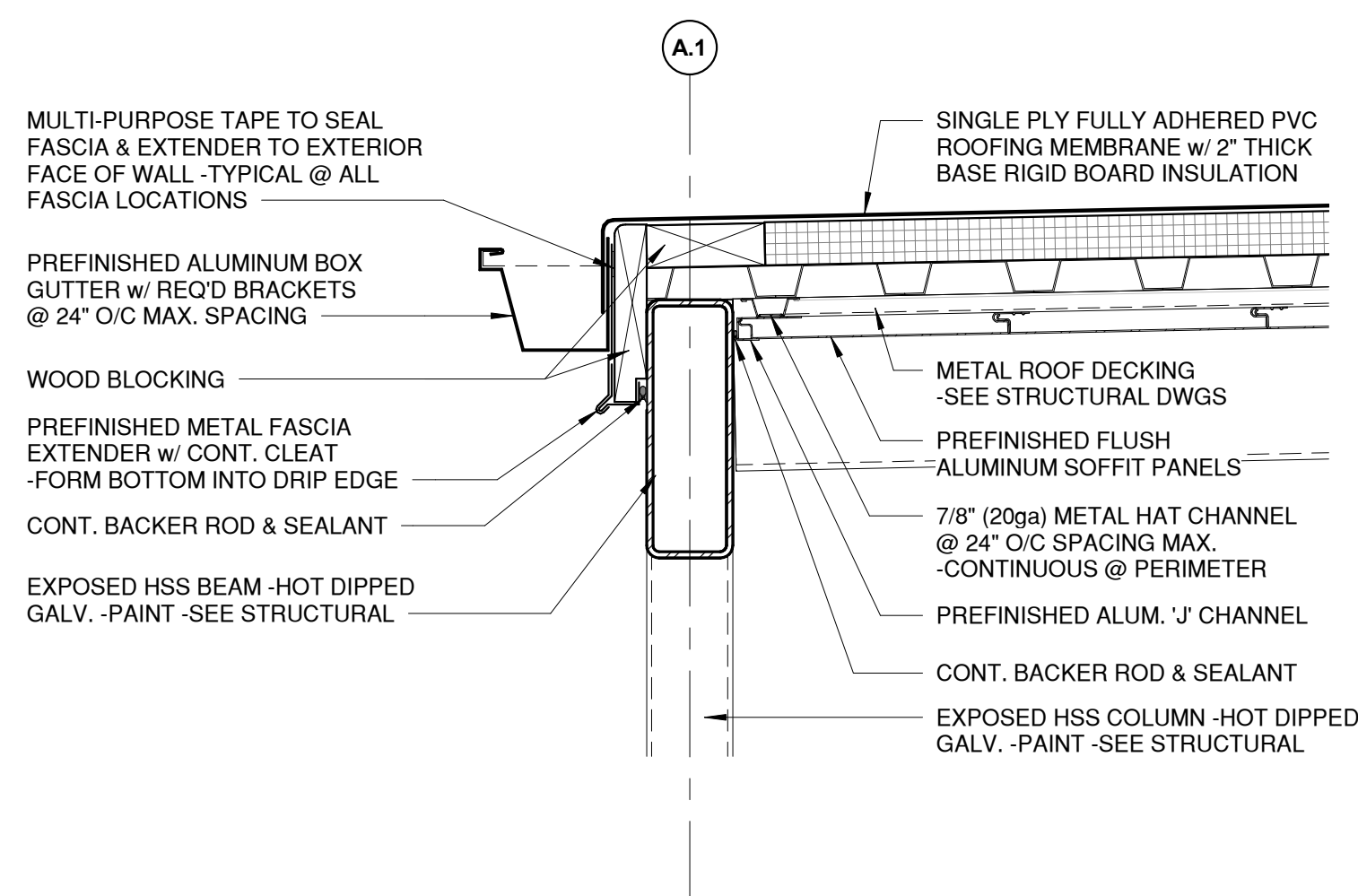
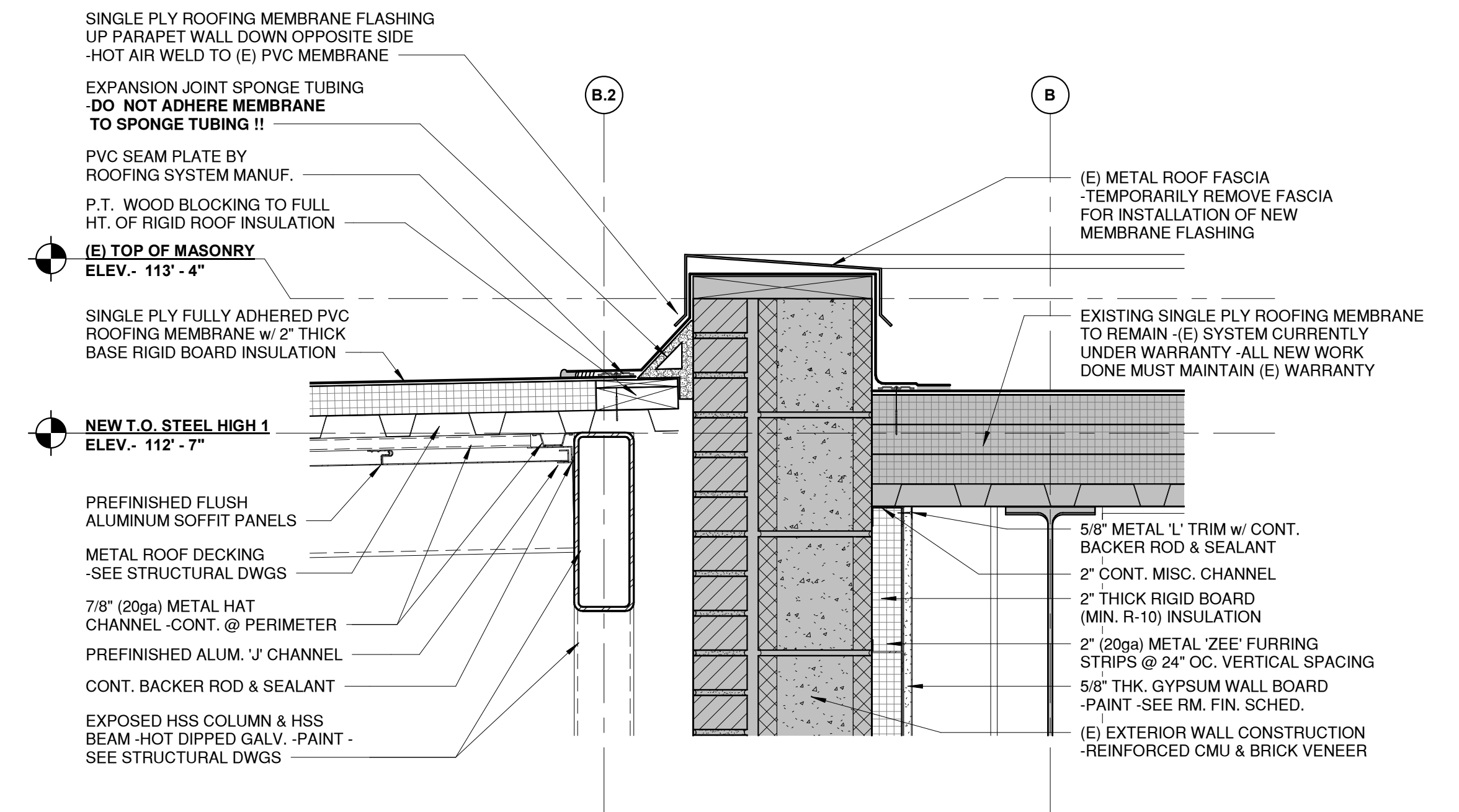
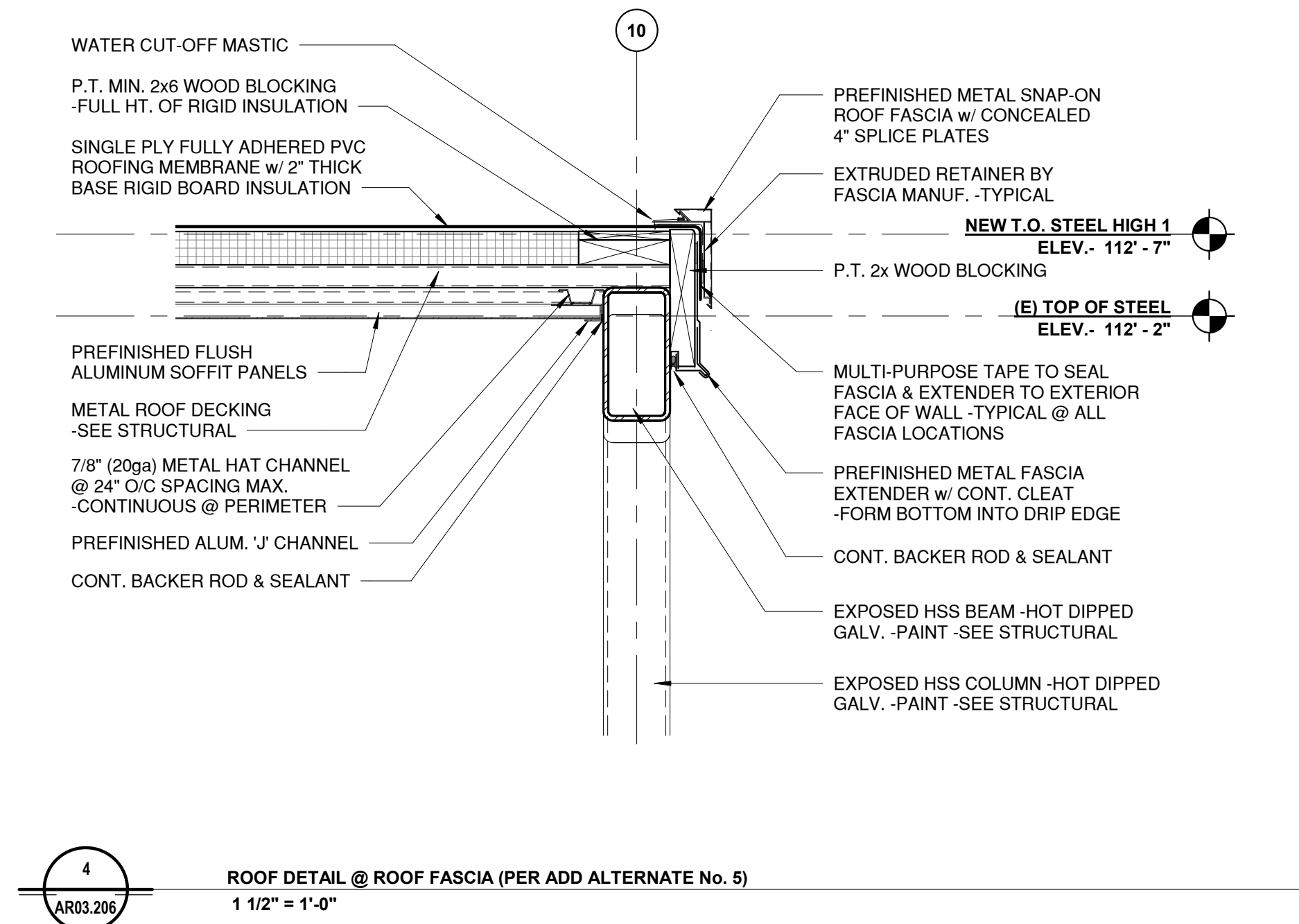
Washington County, MD  
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PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>ROOF DETAILS</b>	
SCALE: As indicated	DATE: MARCH 2019

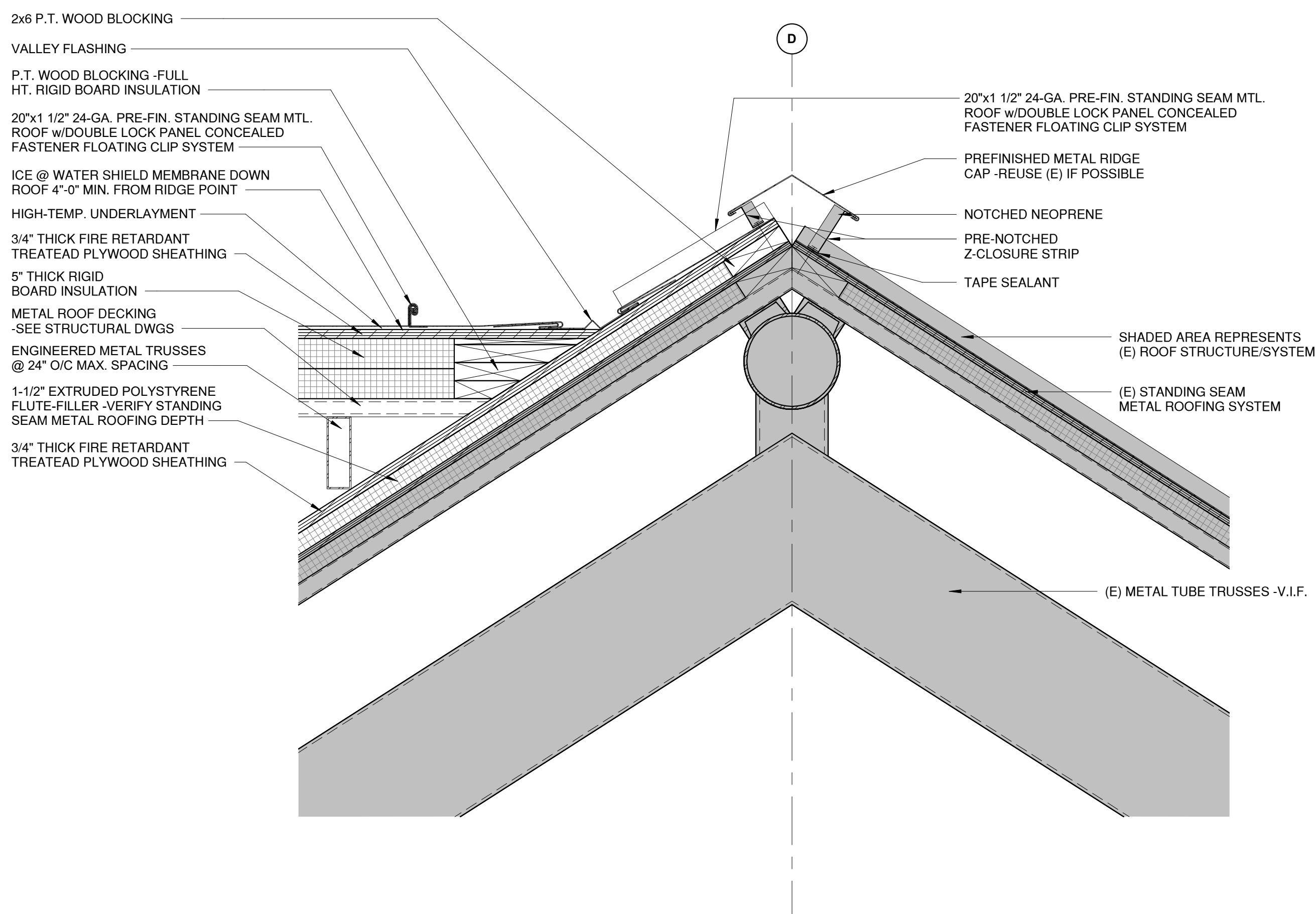
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MAA Grant No.: MAA-GR-19-009

SHEET No.:  
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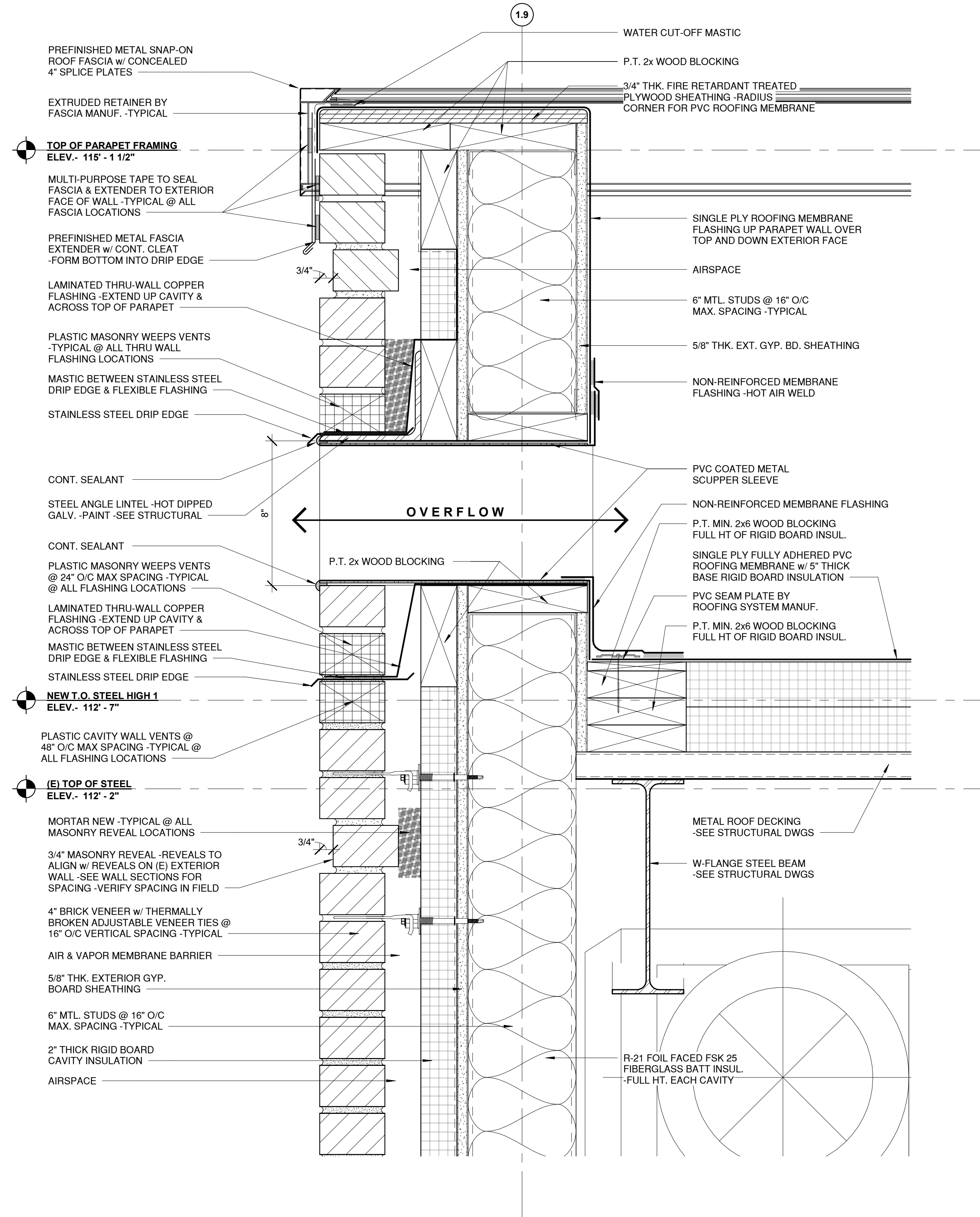






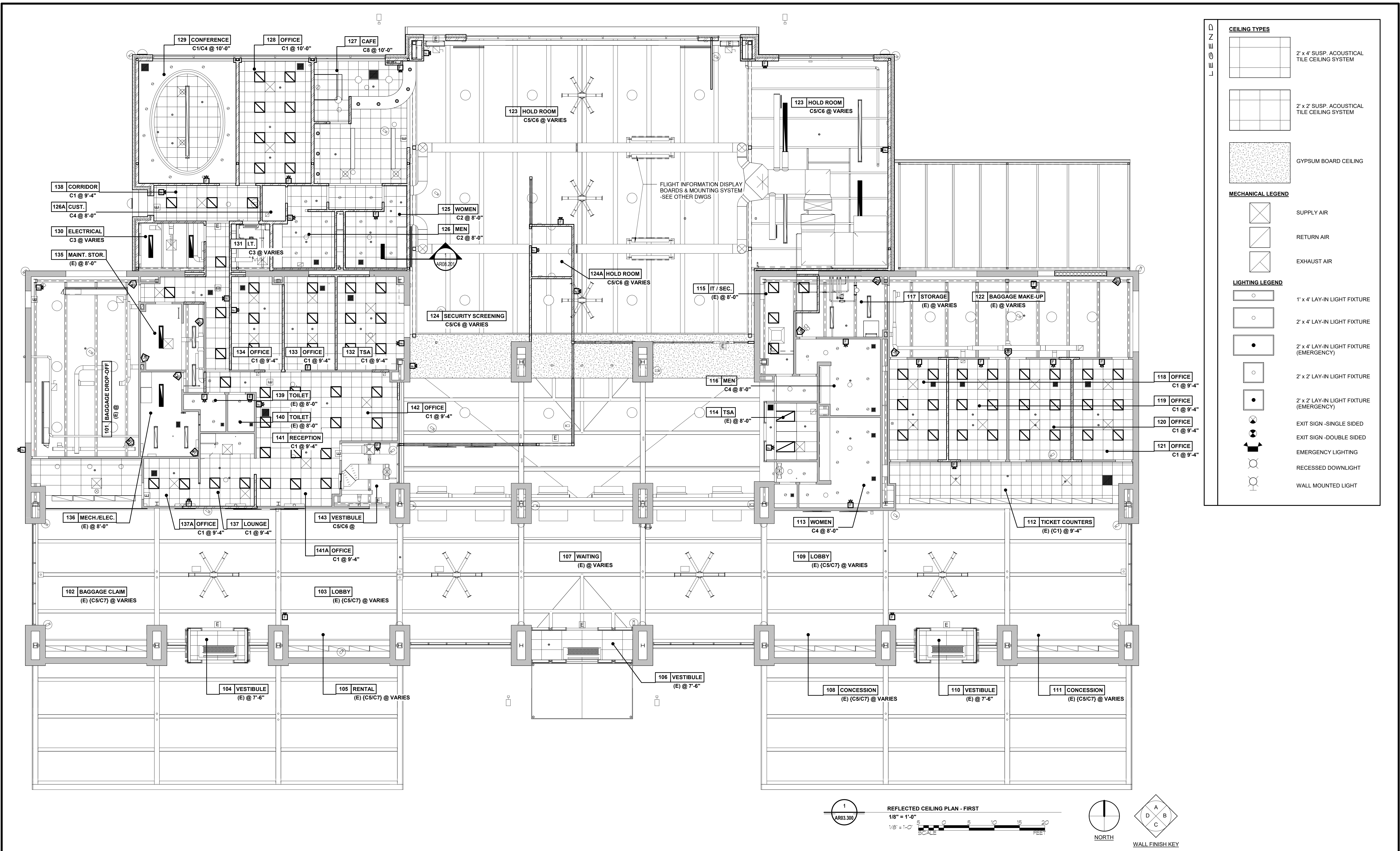


2  
AR03.207  
RIDGE DETAIL @ OVERBUILD  
1 1/2" = 1'-0"



1  
AR03.207  
ROOF DETAIL @ THRU-WALL SCUPPER  
3" = 1'-0"  
3" = 1'-0"  
SCALE  
FEET





**CEILING TYPES**

- 2' x 4' SUSP. ACOUSTICAL TILE CEILING SYSTEM
- 2' x 2' SUSP. ACOUSTICAL TILE CEILING SYSTEM
- GYPSUM BOARD CEILING

**MECHANICAL LEGEND**

- SUPPLY AIR
- RETURN AIR
- EXHAUST AIR

**LIGHTING LEGEND**

- 1' x 4' LAY-IN LIGHT FIXTURE
- 2' x 4' LAY-IN LIGHT FIXTURE
- 2' x 4' LAY-IN LIGHT FIXTURE (EMERGENCY)
- 2' x 2' LAY-IN LIGHT FIXTURE
- 2' x 2' LAY-IN LIGHT FIXTURE (EMERGENCY)
- EXIT SIGN - SINGLE SIDED
- EXIT SIGN - DOUBLE SIDED
- EMERGENCY LIGHTING
- RECESSED DOWNLIGHT
- WALL MOUNTED LIGHT

1  
AR03.300

REFLECTED CEILING PLAN - FIRST  
1/8" = 1'-0"  
1/8" = 1'-0"

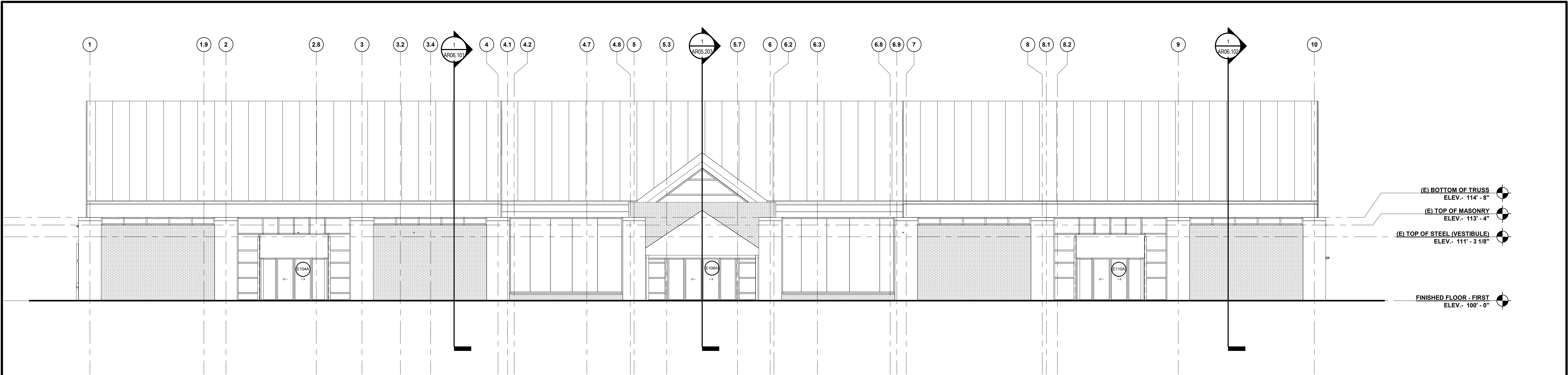
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NORTH

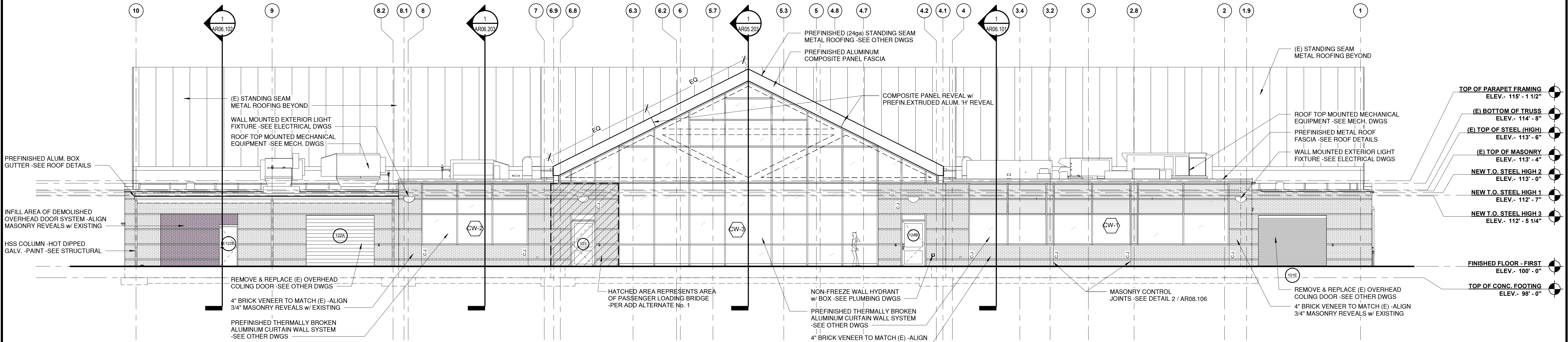
WALL FINISH KEY

<p>6031 UNIVERSITY BLVD. SUITE 330 ELLCOTT CITY, MD 21043 PHONE: 410-465-9600 FAX: 410-465-9602</p>	<p>BUSHEY FEIGHT MORIN ARCHITECTS 473 NORTH POTOMAC STREET HAGERSTOWN, MD 21740 301.733.5600 BFM PROJECT # 18045</p>	<p>Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 6157 Expiration Date: 09/07/2020</p>	<p>DESIGNED:</p> <p>DRAWN:</p> <p>CHECKED:</p> <p>APPROVED:</p>	<p>No. DATE DESCRIPTION</p> <p><b>BID DOCUMENTS</b></p>	<p>Washington County, MD HAGERSTOWN REGIONAL AIRPORT</p>	<p>PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b></p> <p>SHEET TITLE: <b>REFLECTED CEILING PLAN</b></p> <p>SCALE: As indicated</p> <p>DATE: MARCH 2019</p>	<p>FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009</p> <p>SHEET No.: <b>AR03.300</b> 46 OF 117</p>
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2  
AR05.100  
EXTERIOR BUILDING ELEVATION (SOUTH)  
1/8" = 1'-0"



1  
AR05.100  
EXTERIOR BUILDING ELEVATION (NORTH)  
1/8" = 1'-0"  
1/8" = 1'-0"  
SCALE 0 5 10 15 20 FEET



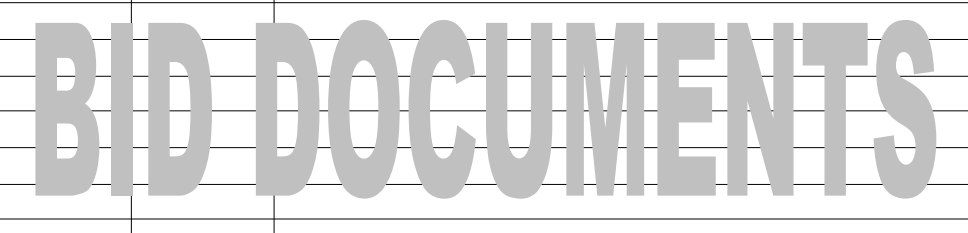
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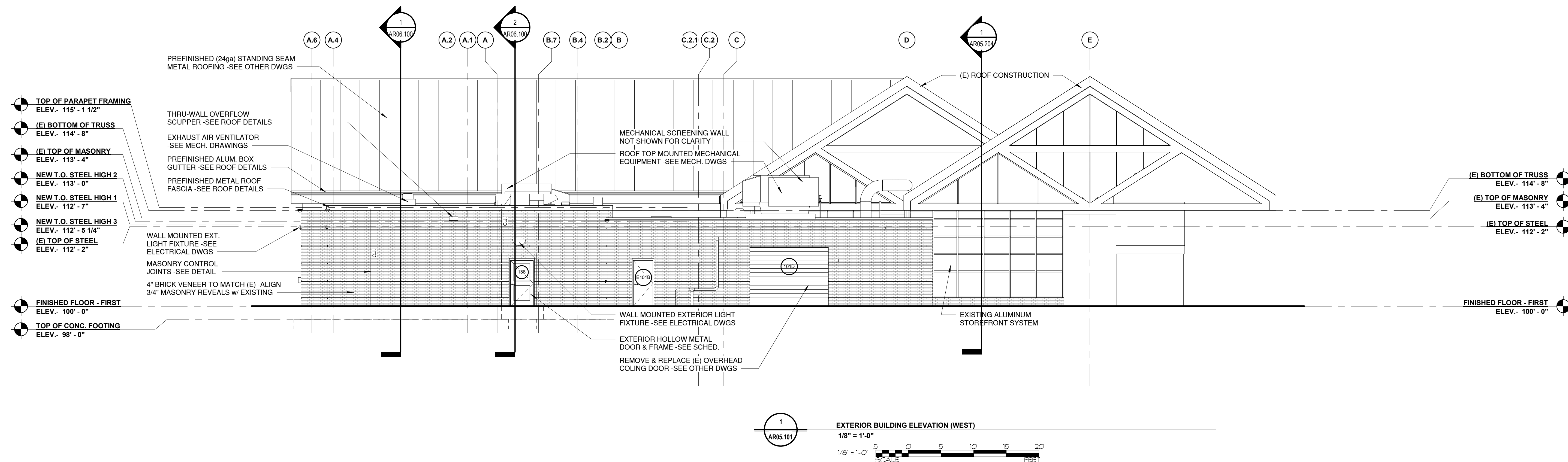
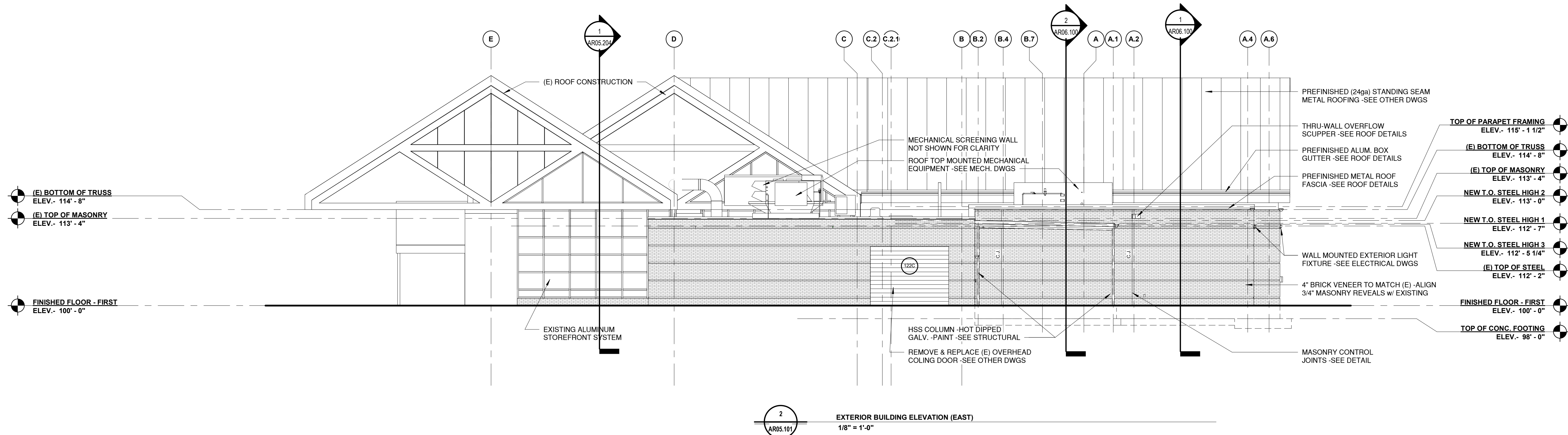
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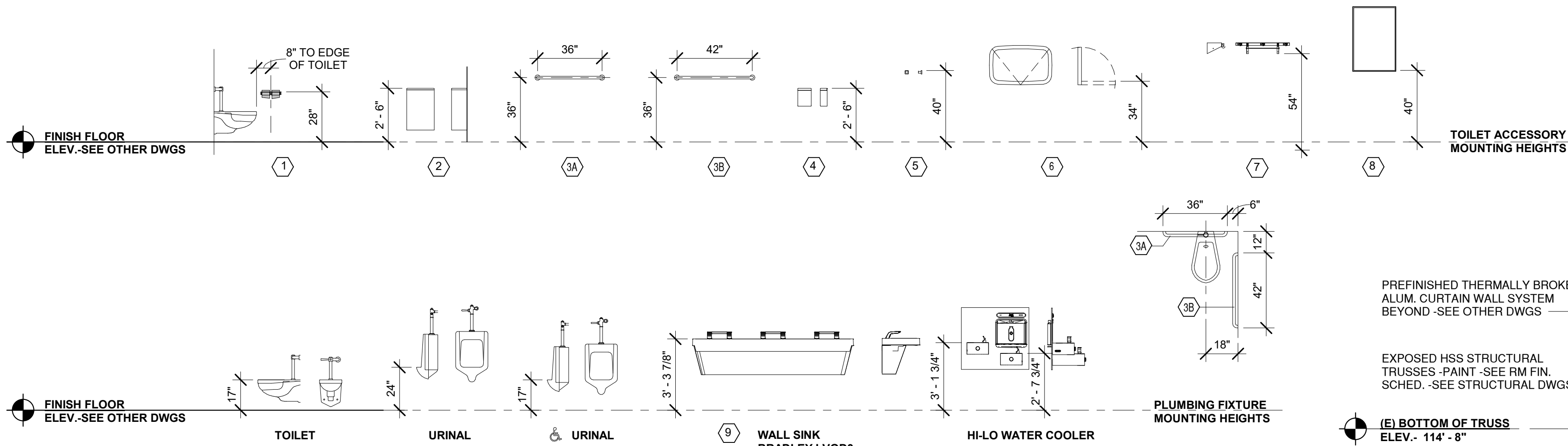
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SHEET TITLE: <b>EXTERIOR ELEVATIONS</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>AR05.100</b> 47 OF 117

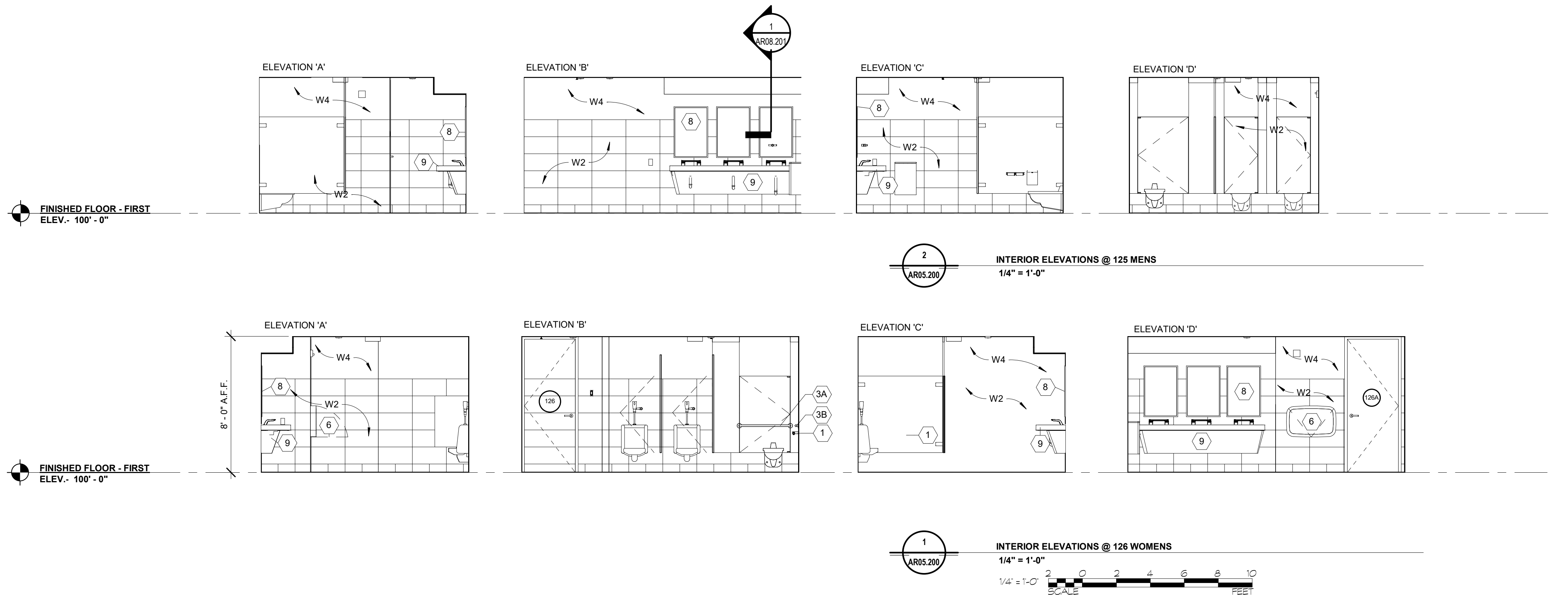
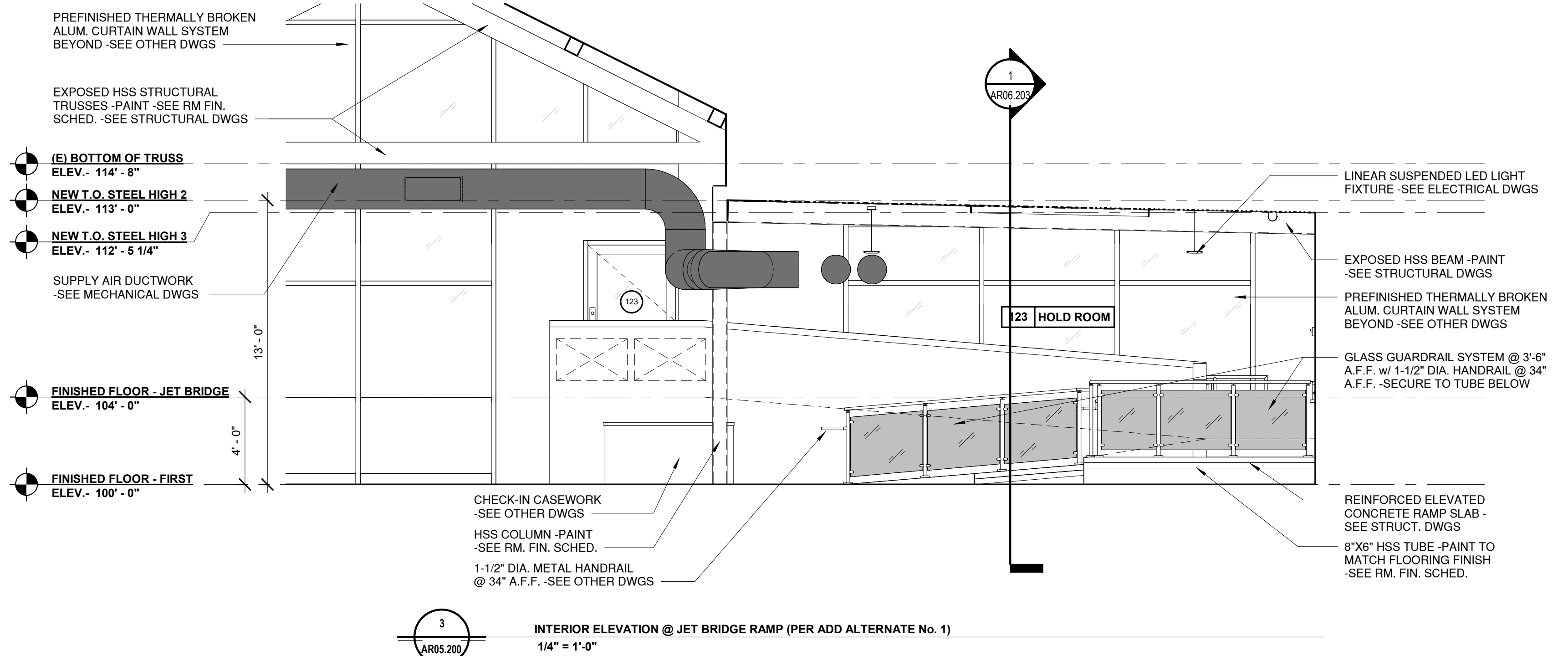




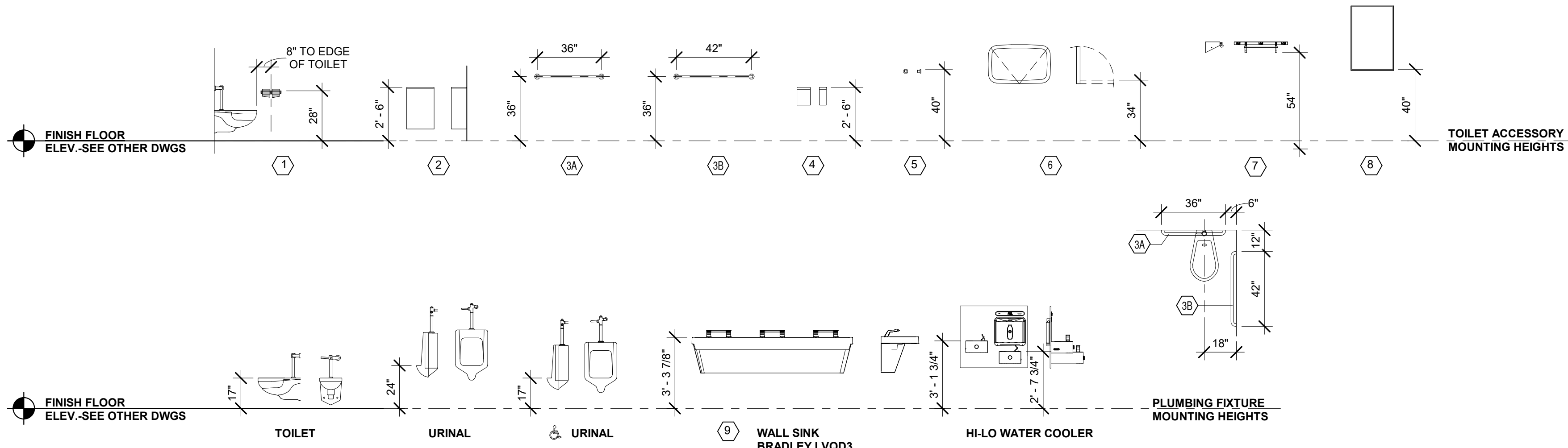




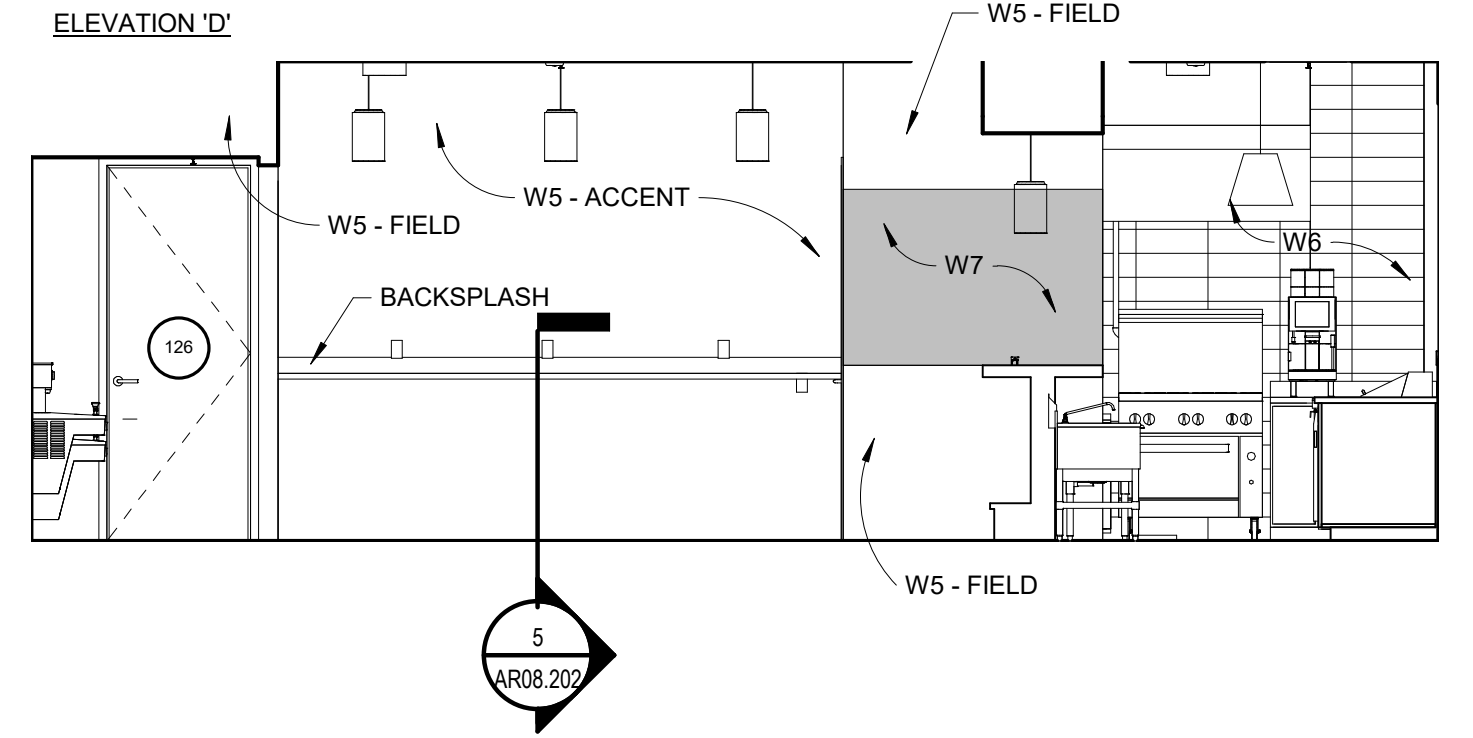
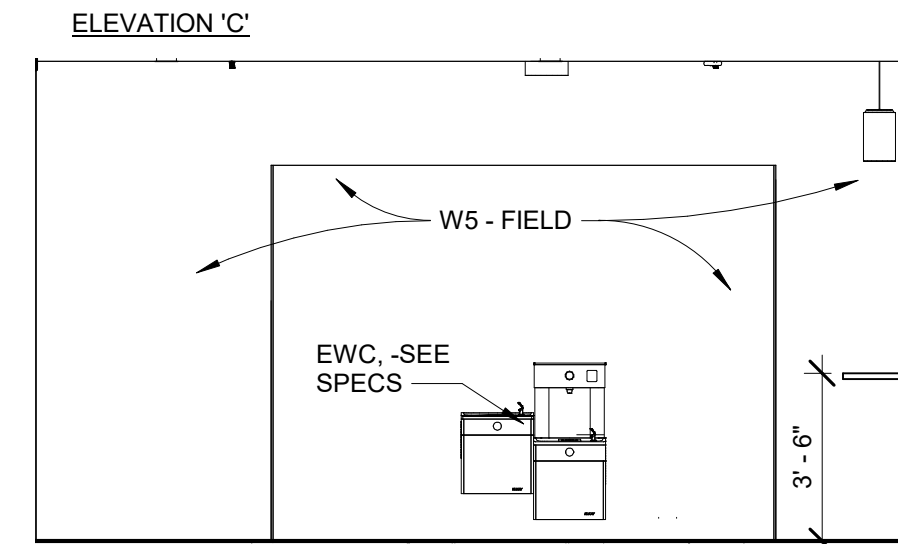
1	TOILET PAPER DISPENSER - BOBRICK B-2740
2	WASTE RECEPTACLE - BOBRICK B-277
3A	36" HORIZONTAL GRAB BAR - BOBRICK B-6806-36
3B	42" HORIZONTAL GRAB BAR - BOBRICK B-6806-42
4	SANITARY NAPKIN DISPOSAL - BOBRICK B-35303
5	ROBE HOOK - BOBRICK B-76717
6	BABY CHANGING STATION - KOALA KARE KB-200-0155 GREY
7	MOP RACK w/SHELF - BOBRICK B-224 X 30
8	WALL HUNG MIRROR - BOBRICK B-1556 2436
9	WASHBAR (SOAP, WATER, & HAND DRYER) - TO BE USED WITH EVERO BASIN, COLOR "MYKONOS" - BRADLEY LVQD3



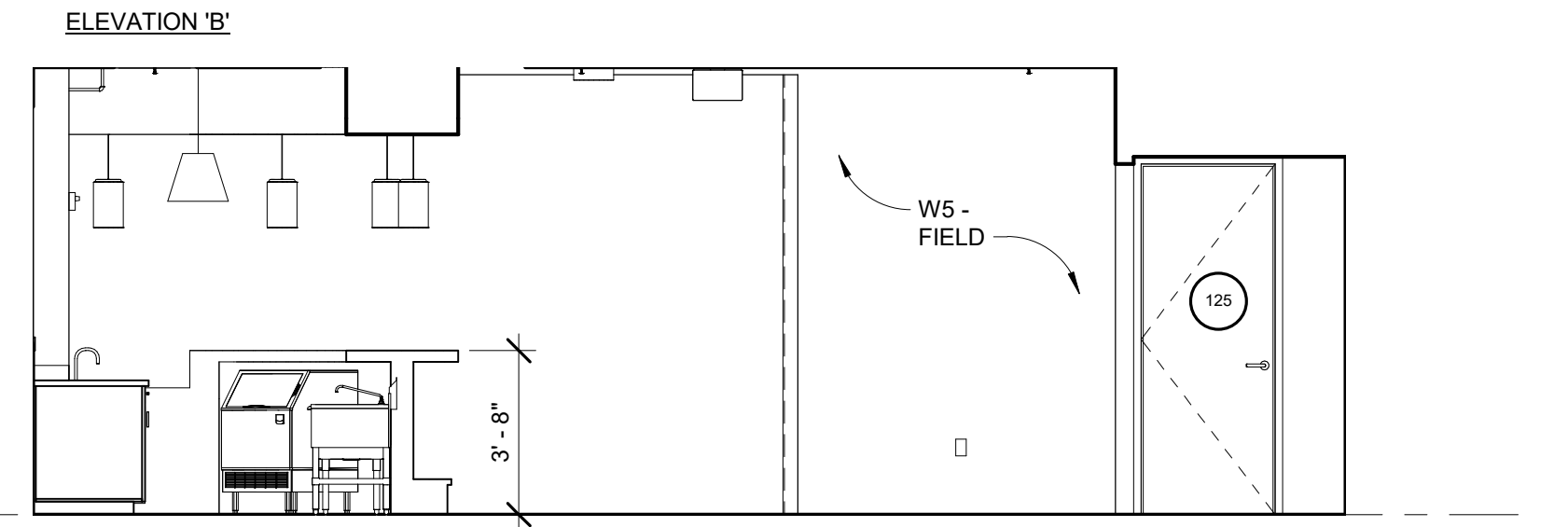
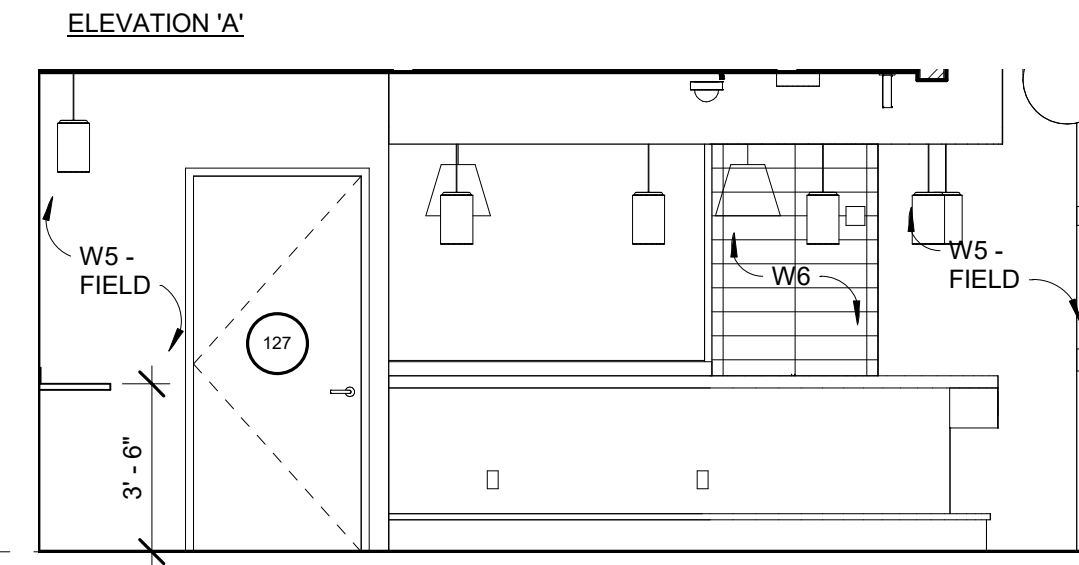




TOILET ACCESSORY LEGEND SEE SPECIFICATIONS	1	TOILET PAPER DISPENSER - BOBRICK B-2740
	2	WASTE RECEPTACLE - BOBRICK B-277
	3A	36" HORIZONTAL GRAB BAR - BOBRICK B-6806-36
	3B	42" HORIZONTAL GRAB BAR - BOBRICK B-6806-42
	4	SANITARY NAPKIN DISPOSAL - BOBRICK B-35303
	5	ROBE HOOK - BOBRICK B-76717
	6	BABY CHANGING STATION - KOALA KARE KB-200-0155 GREY
	7	MOP RACK w/SHELF - BOBRICK B-224 X 30
	8	WALL HUNG MIRROR - BOBRICK B-1556 2436
	9	WASHBAR (SOAP, WATER, & HAND DRYER) - TO BE USED WITH EVERO BASIN, COLOR "MYKONOS" - BRADLEY LVQD3



FINISHED FLOOR - FIRST  
ELEV.- 100' - 0"

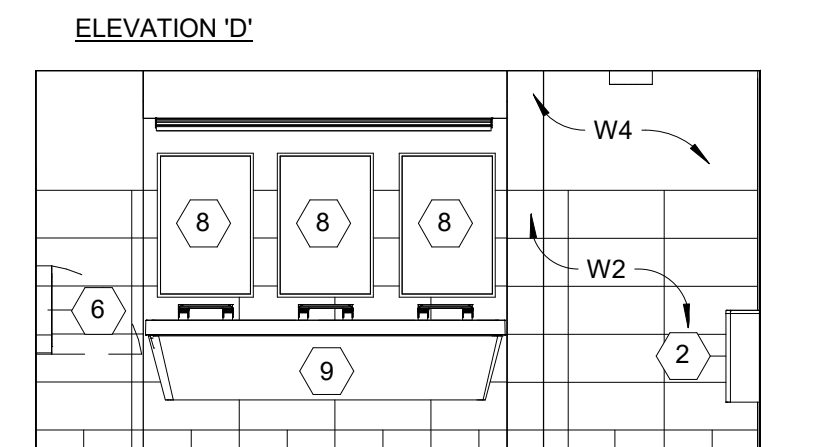
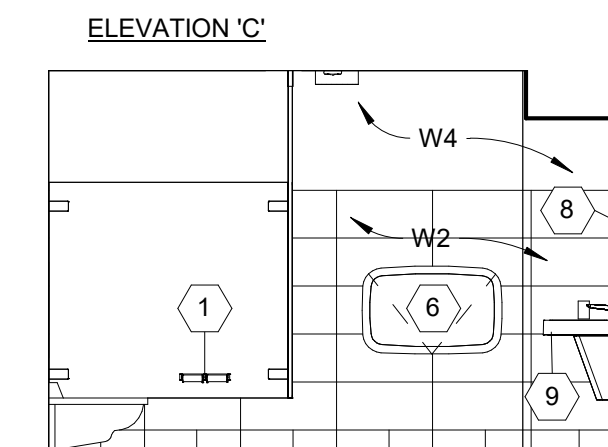
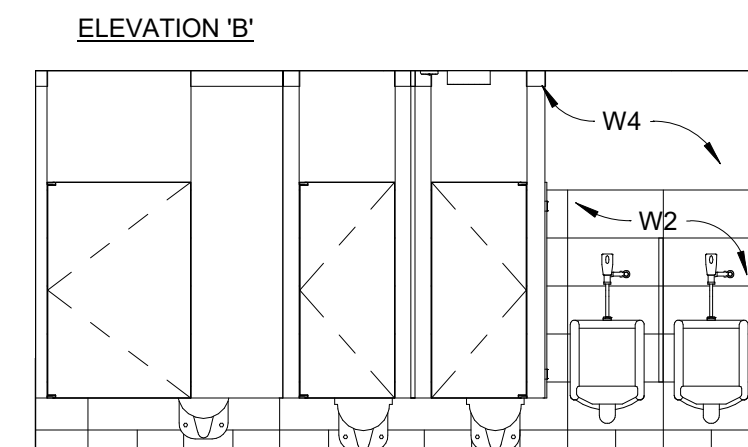
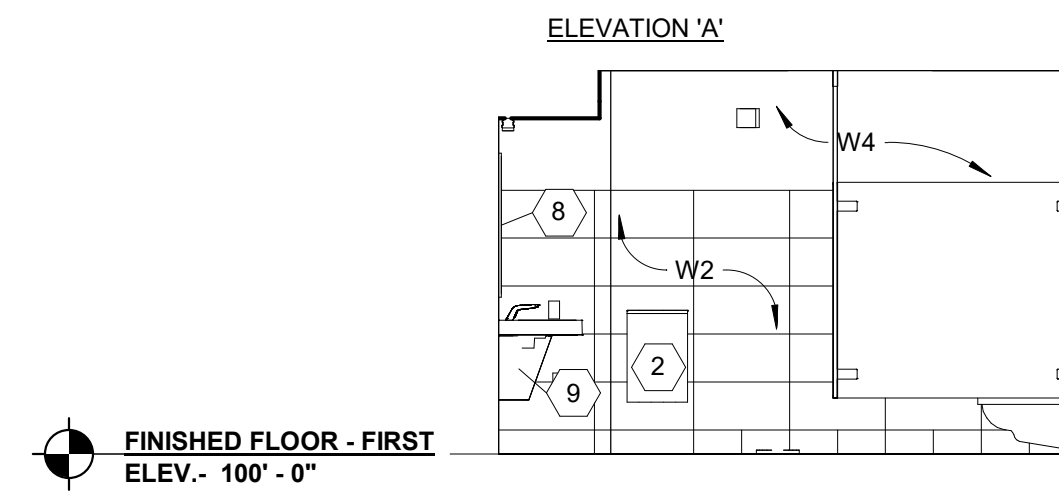


3

AR05.201

127 CAFE

1/4" = 1'-0"

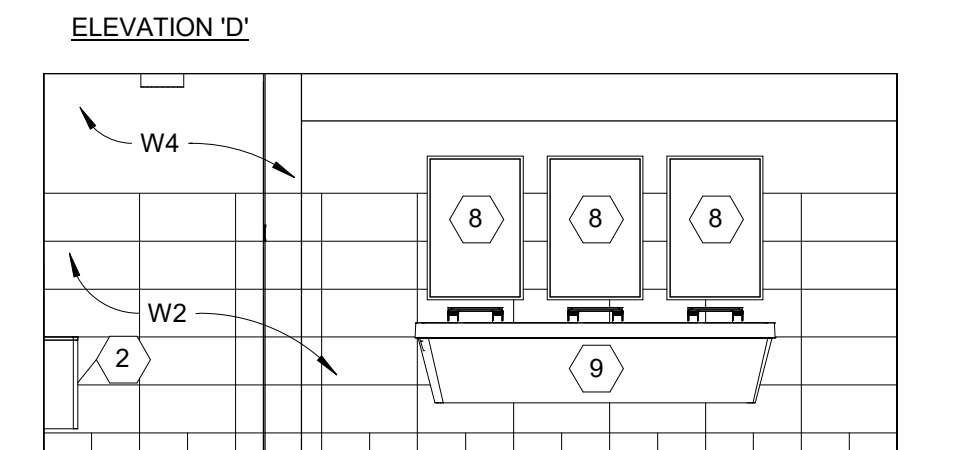
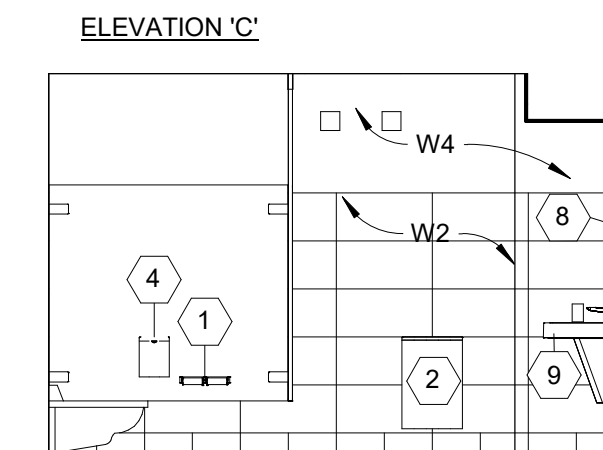
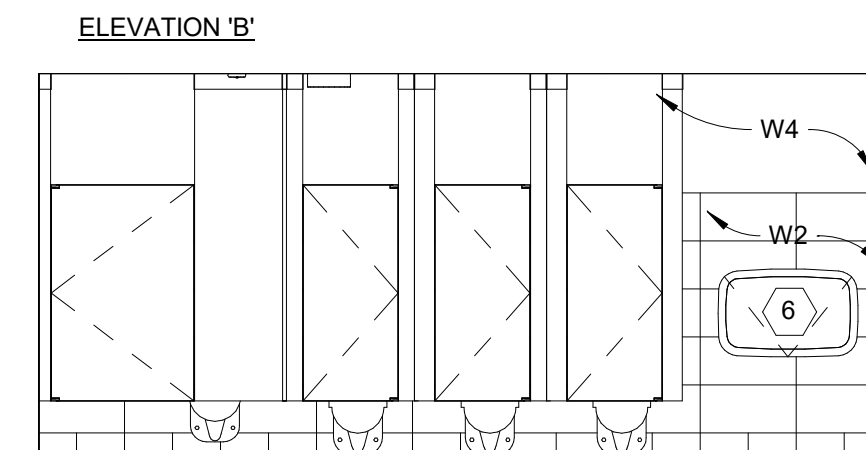
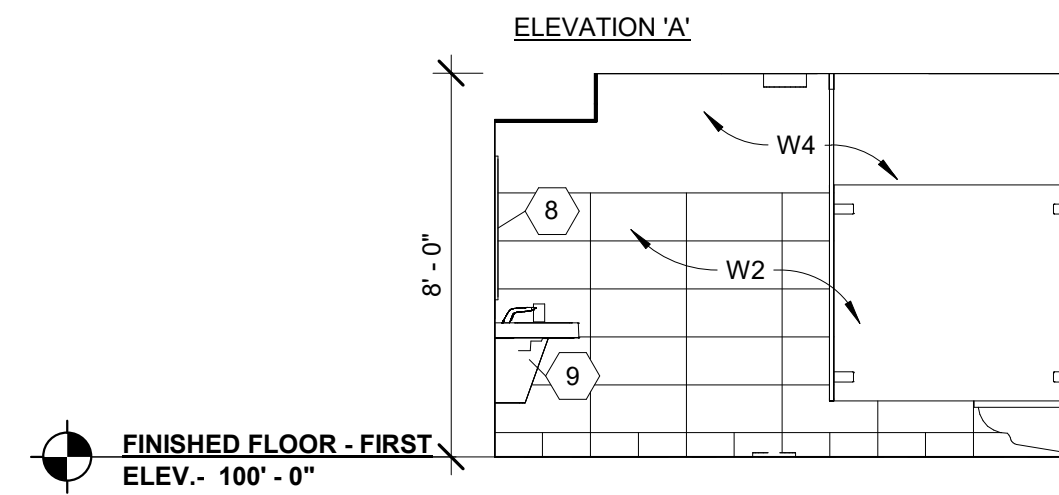


2

AR05.201

116 MEN

1/4" = 1'-0"

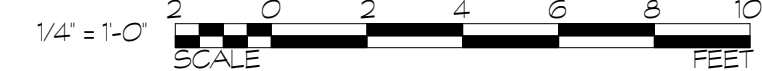


1

AR05.201

113 WOMEN

1/4" = 1'-0"



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.

6031 UNIVERSITY BLVD.  
SUITE 330  
ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602

**BFM**  
BUSHEY FEIGHT MORIN ARCHITECTS  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 6157  
Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:	BID DOCUMENTS		
CHECKED:			
APPROVED:			

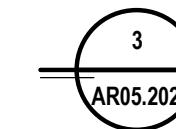
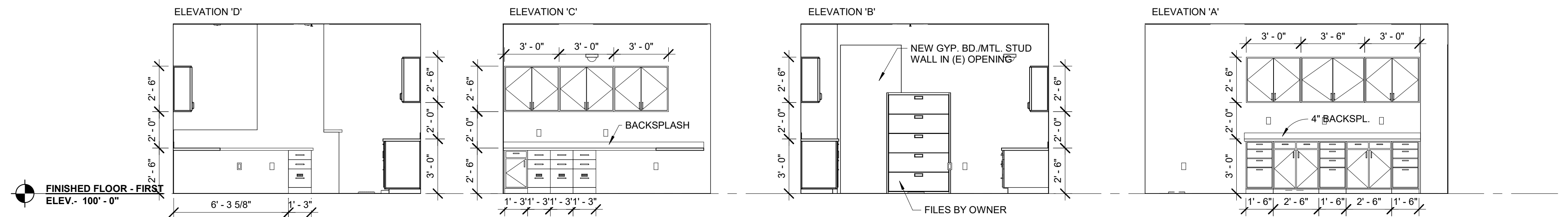


PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>INTERIOR ELEVATIONS</b>	
SCALE: 1/4" = 1'-0"	DATE: MARCH 2019

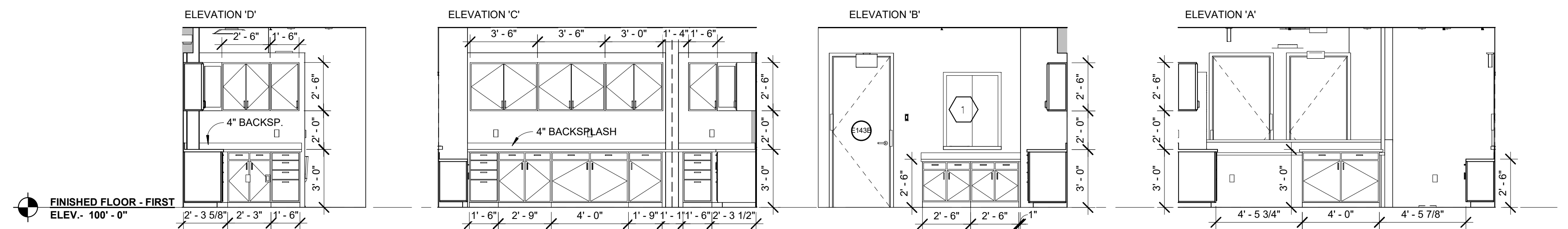
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR05.201**  
50 OF 117

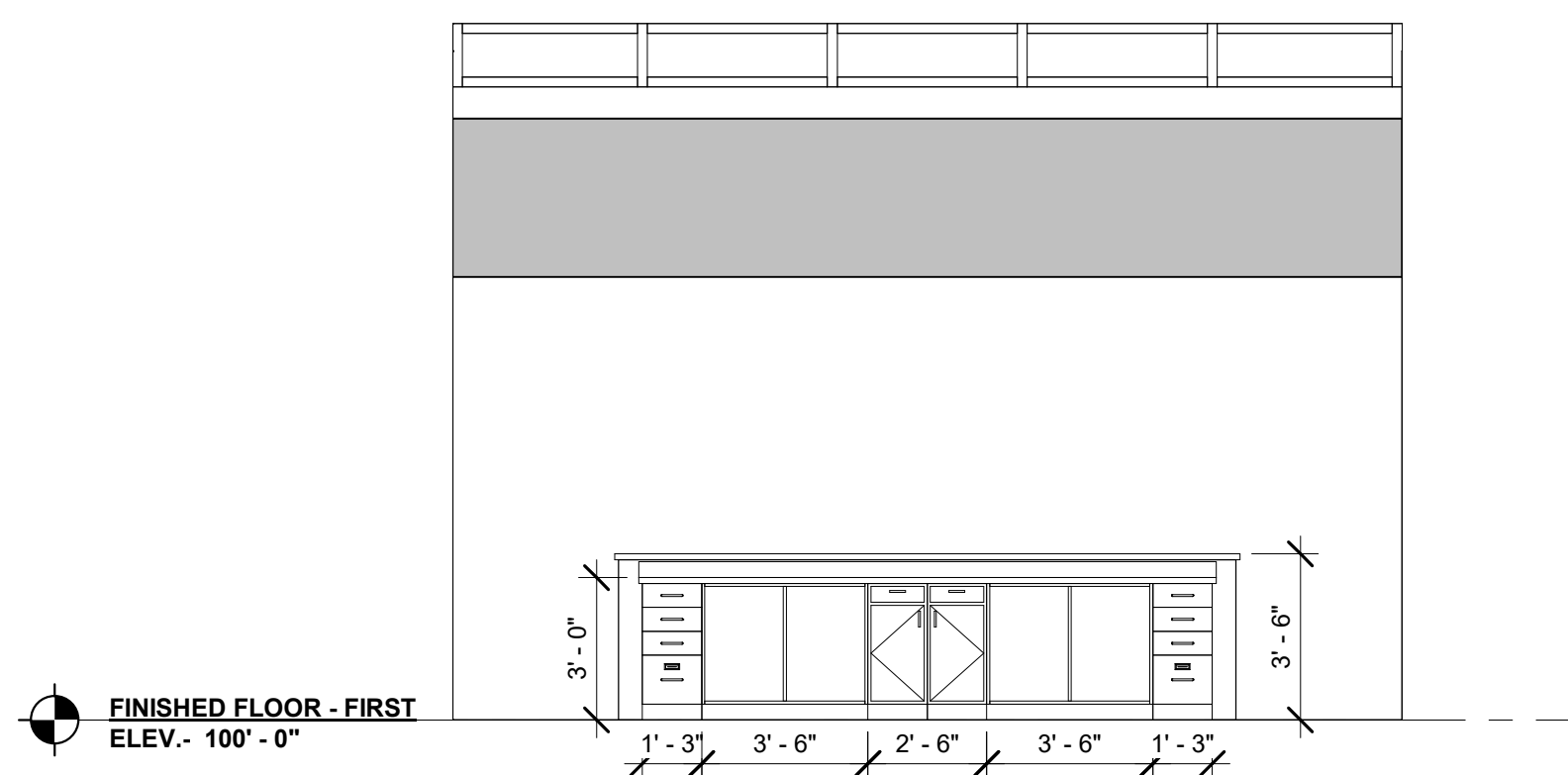




INTERIOR ELEVATIONS @ 142 OFFICE  
1/4" = 1'-0"

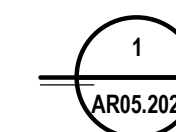
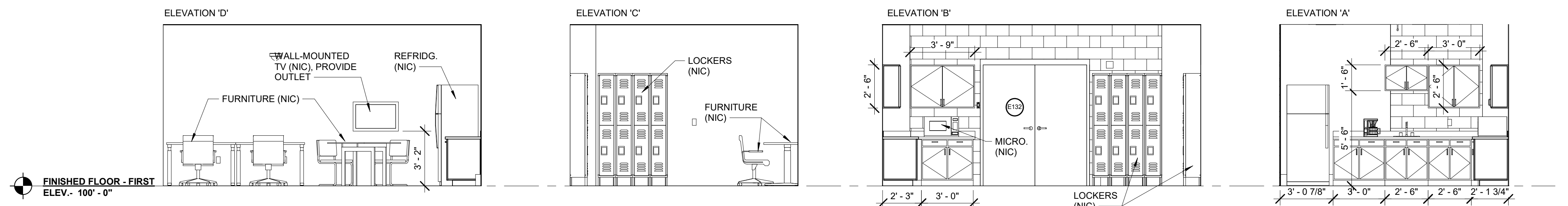


INTERIOR ELEVATIONS @ 141A OFFICE  
1/4" = 1'-0"

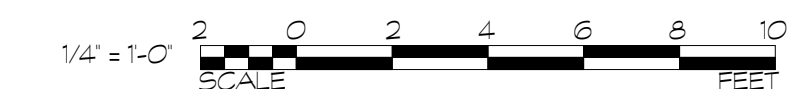


INTERIOR ELEVATION @ 105 RENTAL  
1/4" = 1'-0"

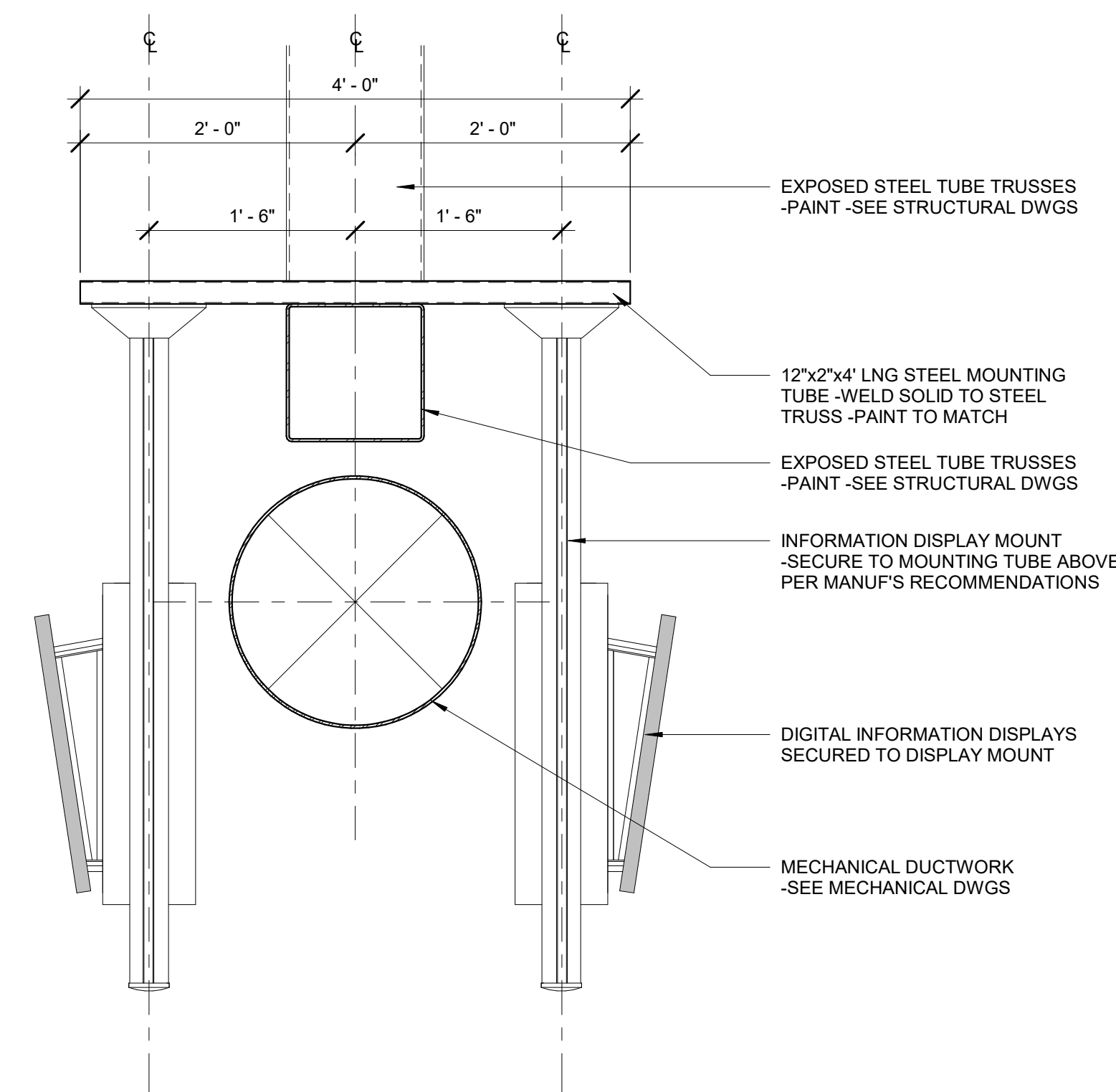
(108-CONCESSION AND 111-CONCESSION SIMILAR)



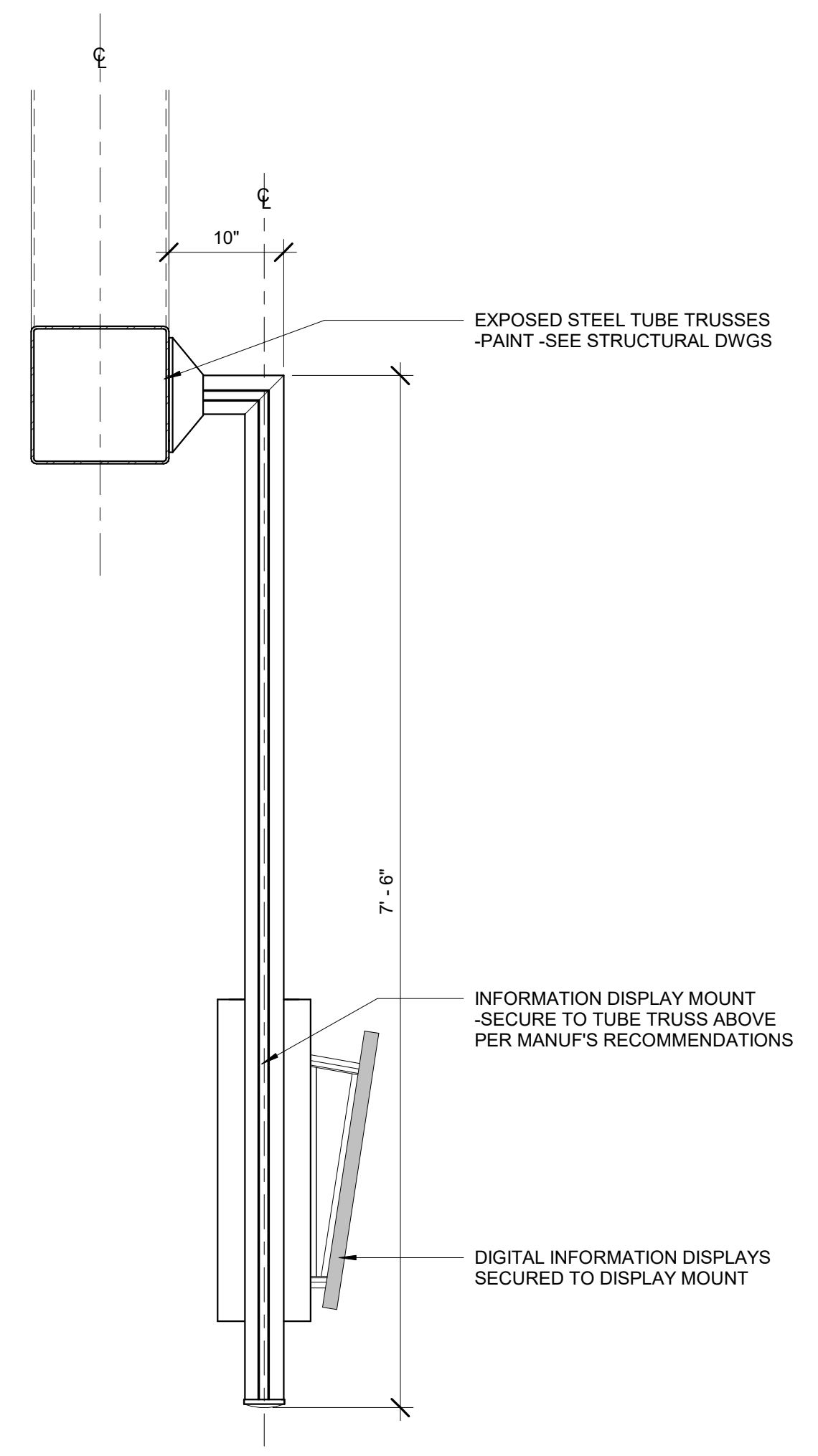
INTERIOR ELEVATIONS @ 132 TSA  
1/4" = 1'-0"



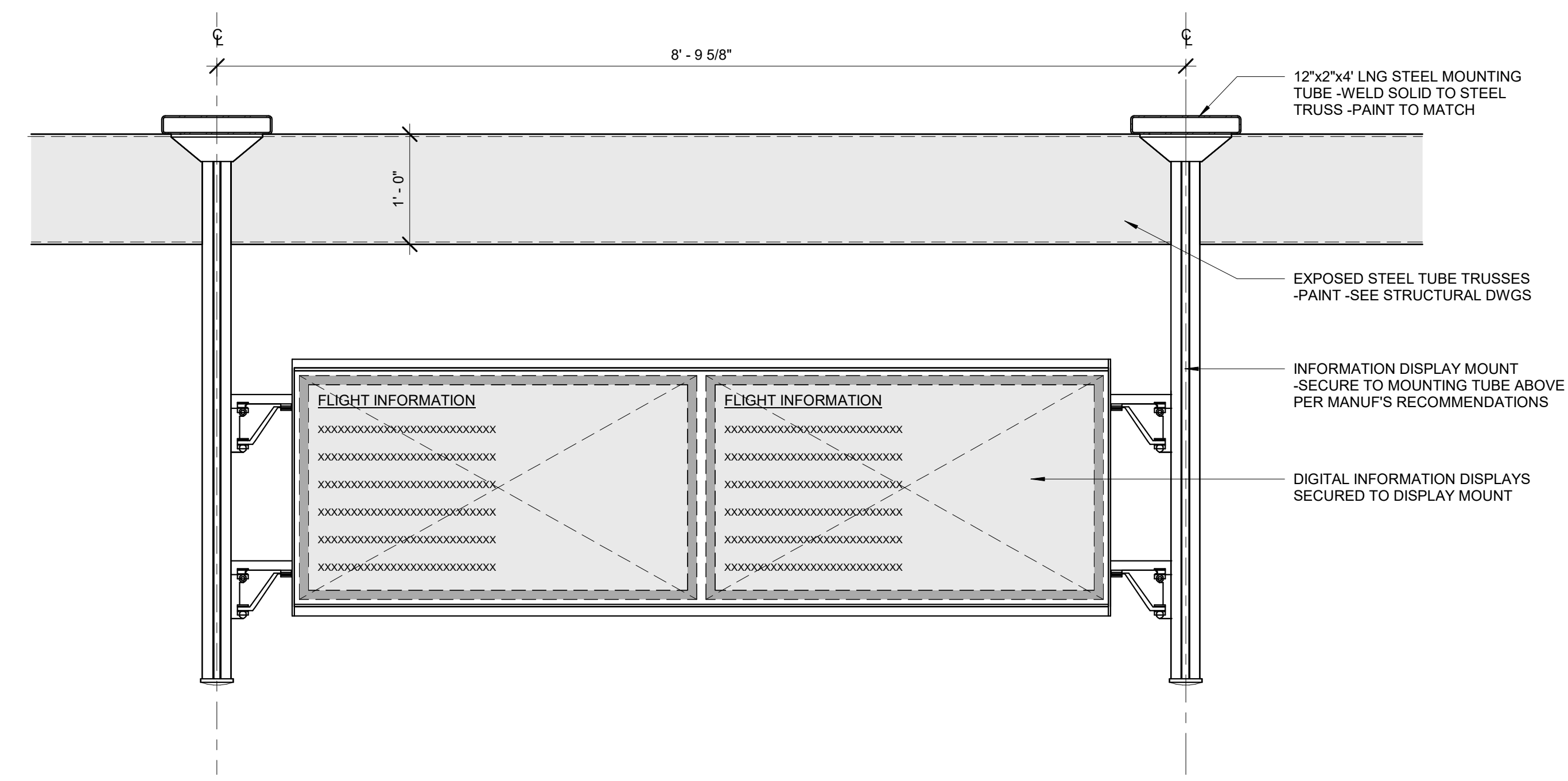




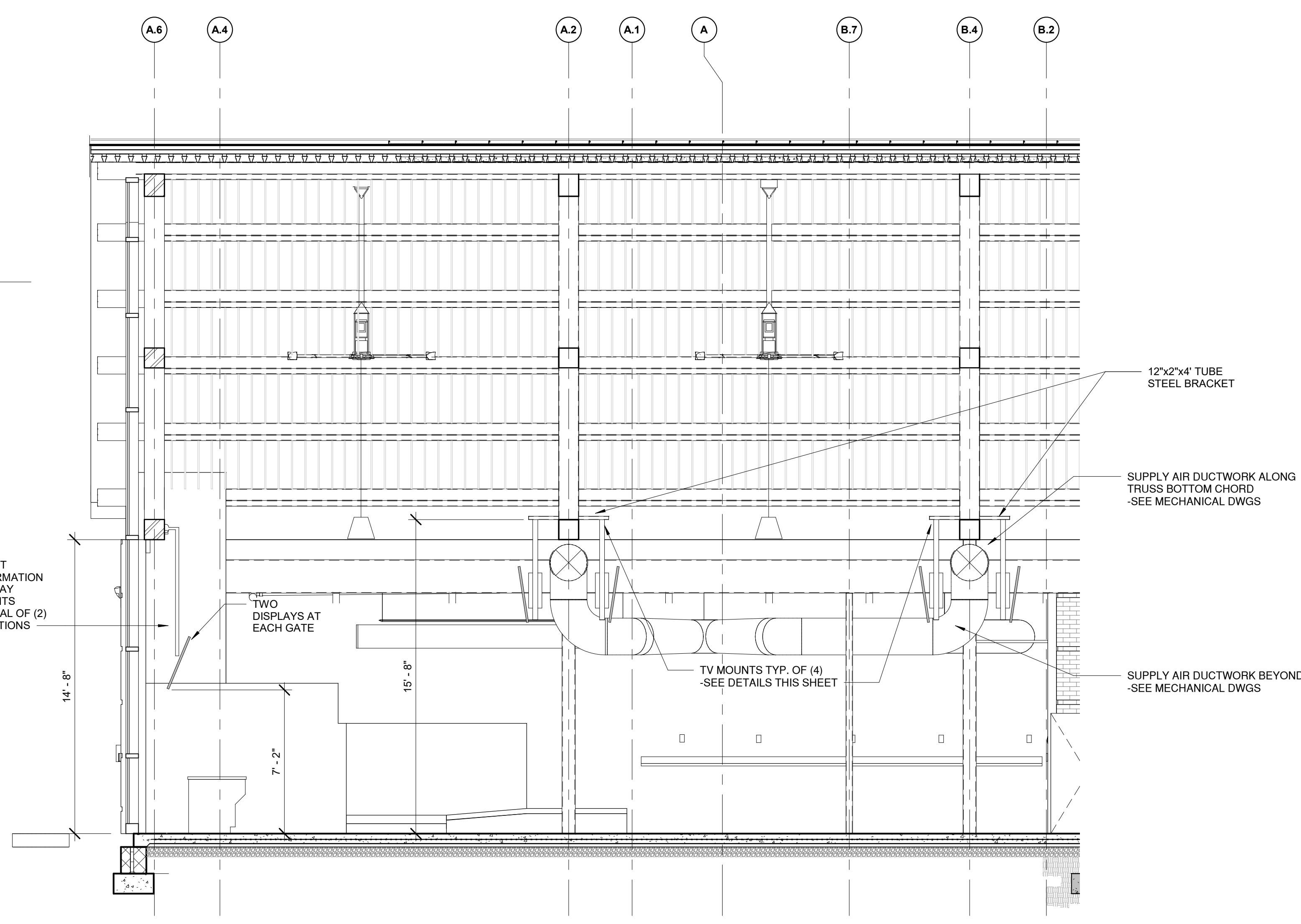
4  
AR05.203  
DETAIL @ INFORMATION BOARD MOUNTING  
1" = 1'-0"



2  
AR05.203  
DETAIL @ INFORMATION BOARD MOUNTING  
1" = 1'-0"



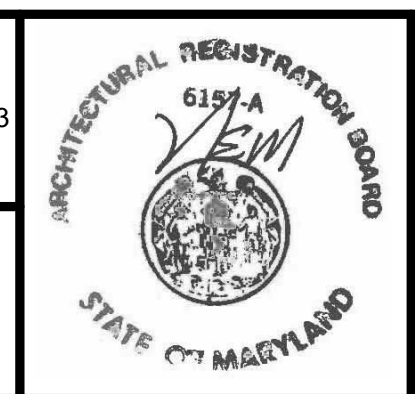
3  
AR05.203  
DETAIL @ INFORMATION BOARD MOUNTING  
1" = 1'-0"



1  
AR05.203  
OVERALL BUILDING SECTION  
1/4" = 1'-0"  
1/4" = 1'-0"  
SCALE 0 2 4 6 8 10 FEET

**ADCI**  
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**BFM**  
BUSHEY FEIGHT MORIN ARCHITECTS  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.  
License No. 6157  
Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:			
CHECKED:			
APPROVED:			

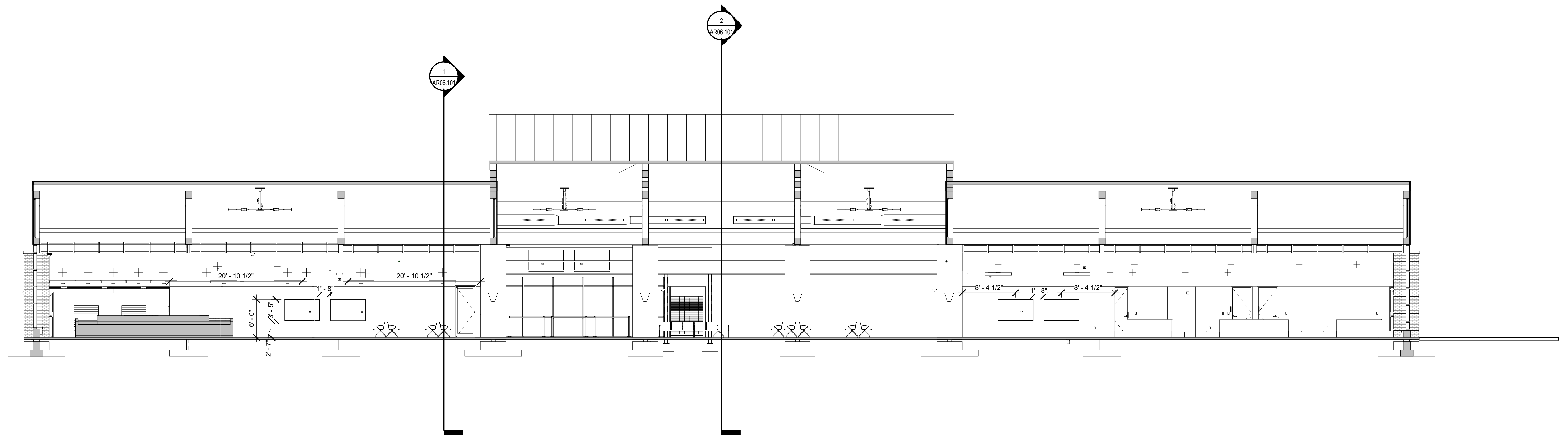


PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>INTERIOR ELEVATIONS</b>	
SCALE: As indicated	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR05.203**  
52 OF 117





1  
AR05.204

INTERIOR ELEVATION

1/8" = 1'-0"

1/8" = 1'-0"  
SCALE 0 5 10 15 20 FEET



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APPROVED:			

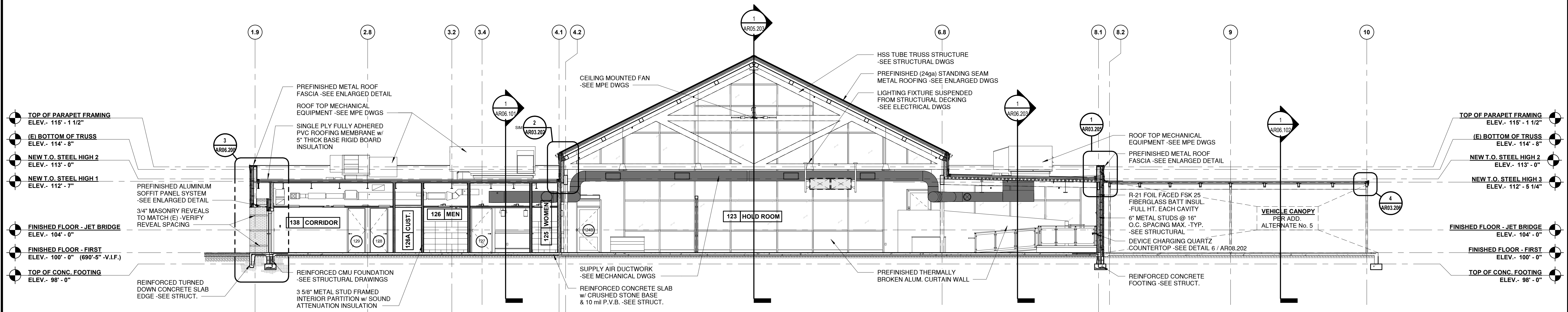


PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>INTERIOR ELEVATIONS</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

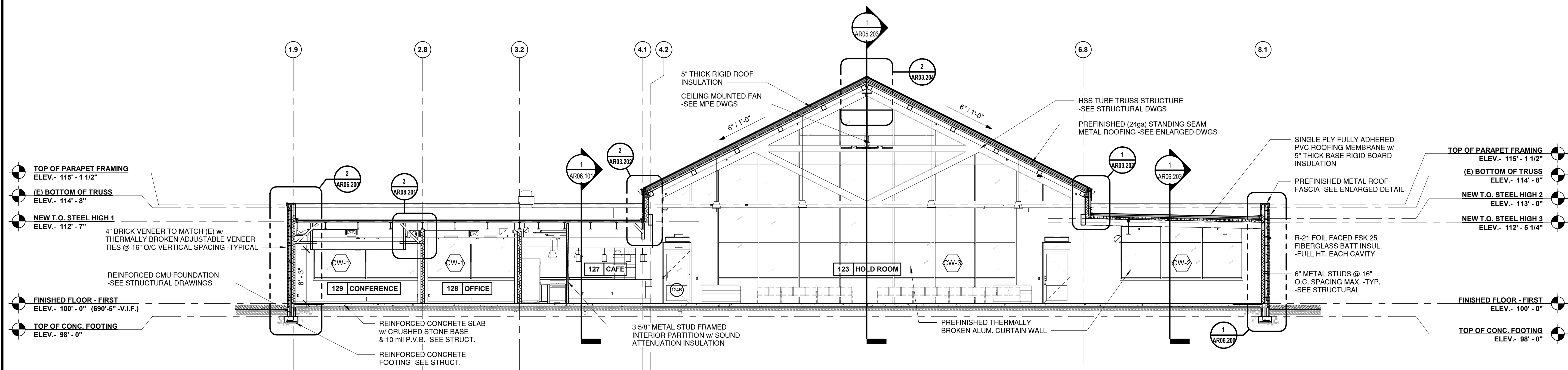
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR05.204**  
53 OF 117





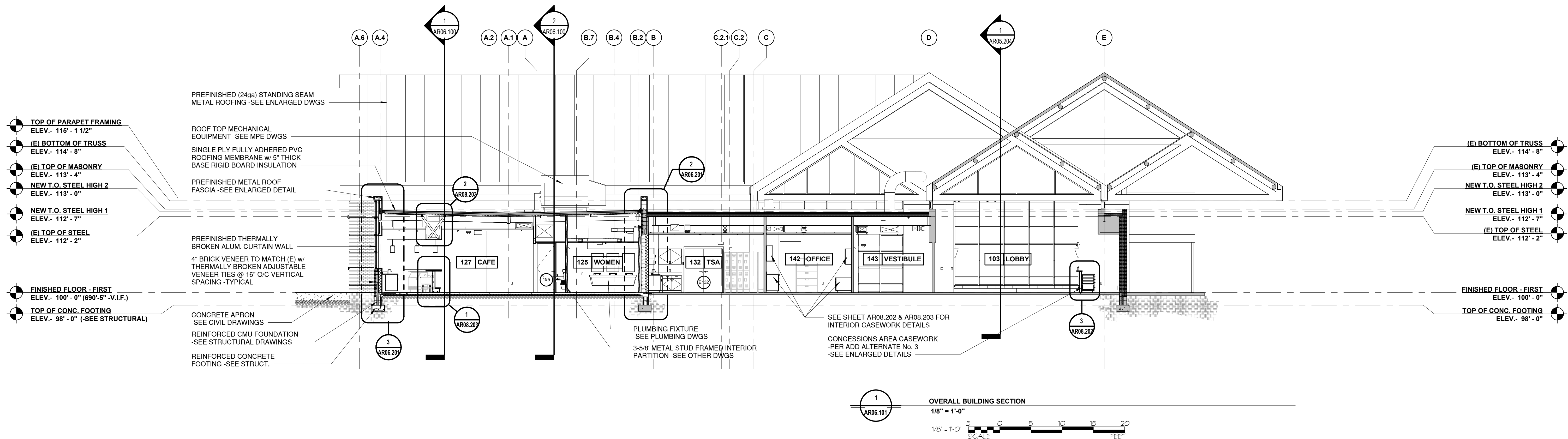
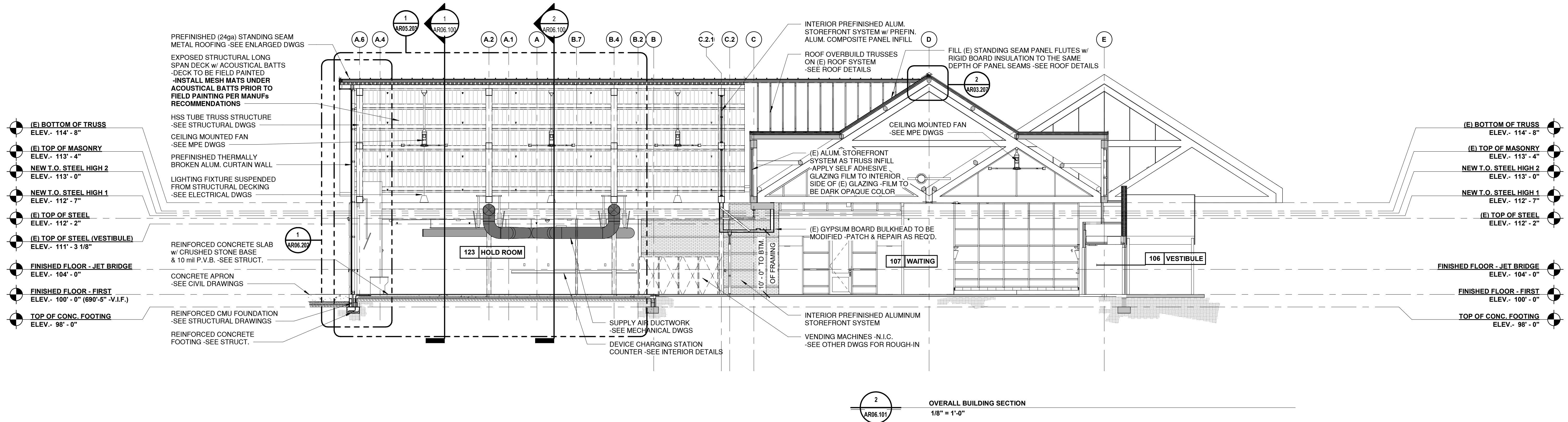
2  
AR06.100  
OVERALL BUILDING SECTION  
1/8" = 1'-0"



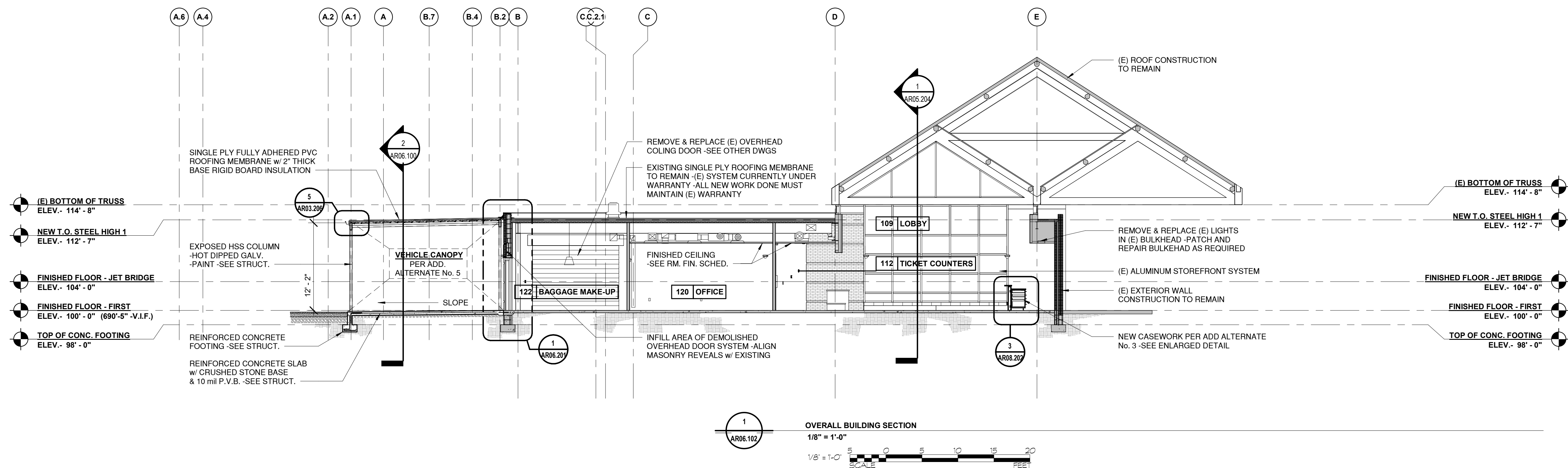
1  
AR06.100  
OVERALL BUILDING SECTION  
1/8" = 1'-0"

1/8" = 1'-0"  
SCALE  
0 5 10 15 20  
FEET

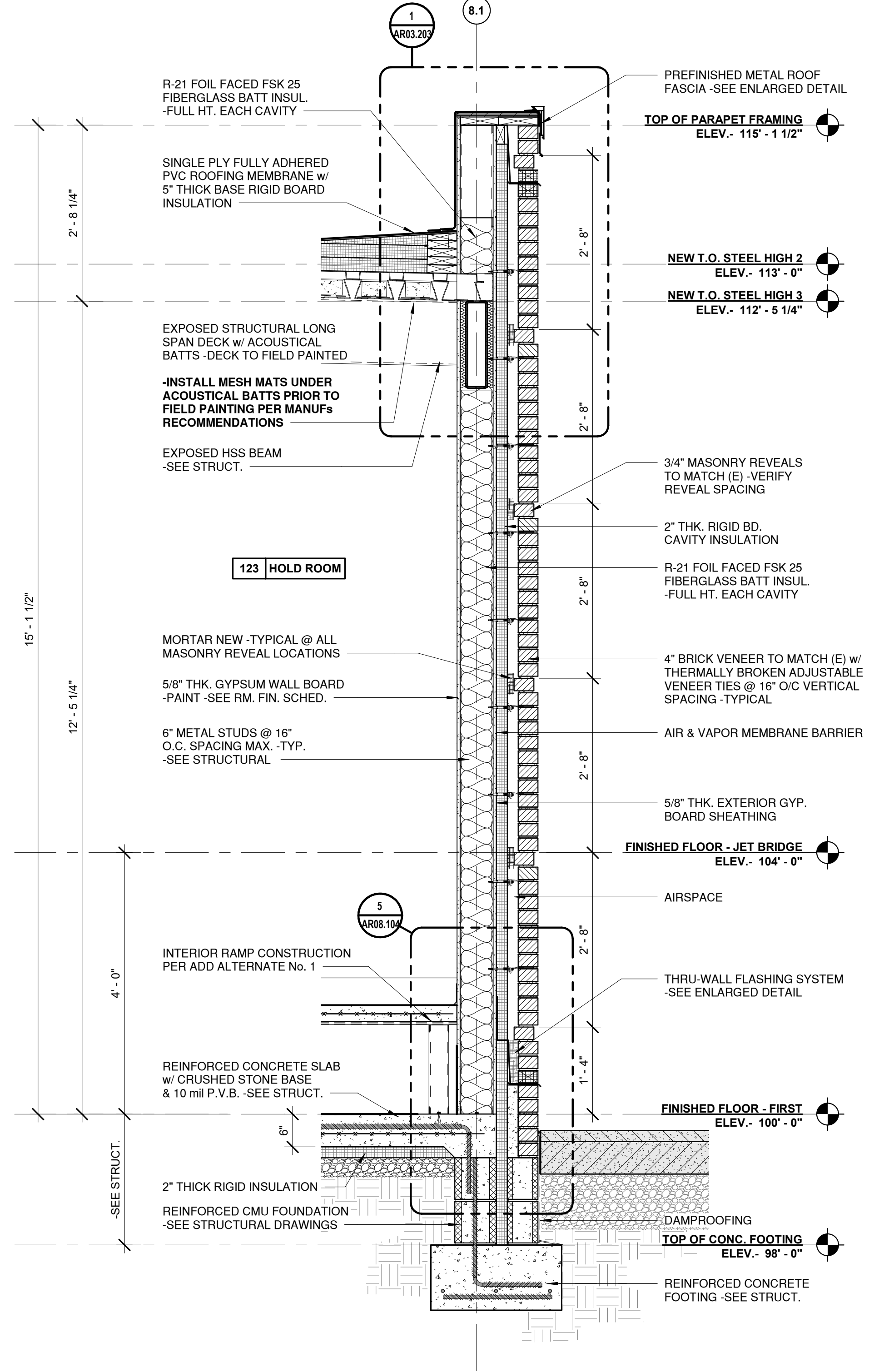
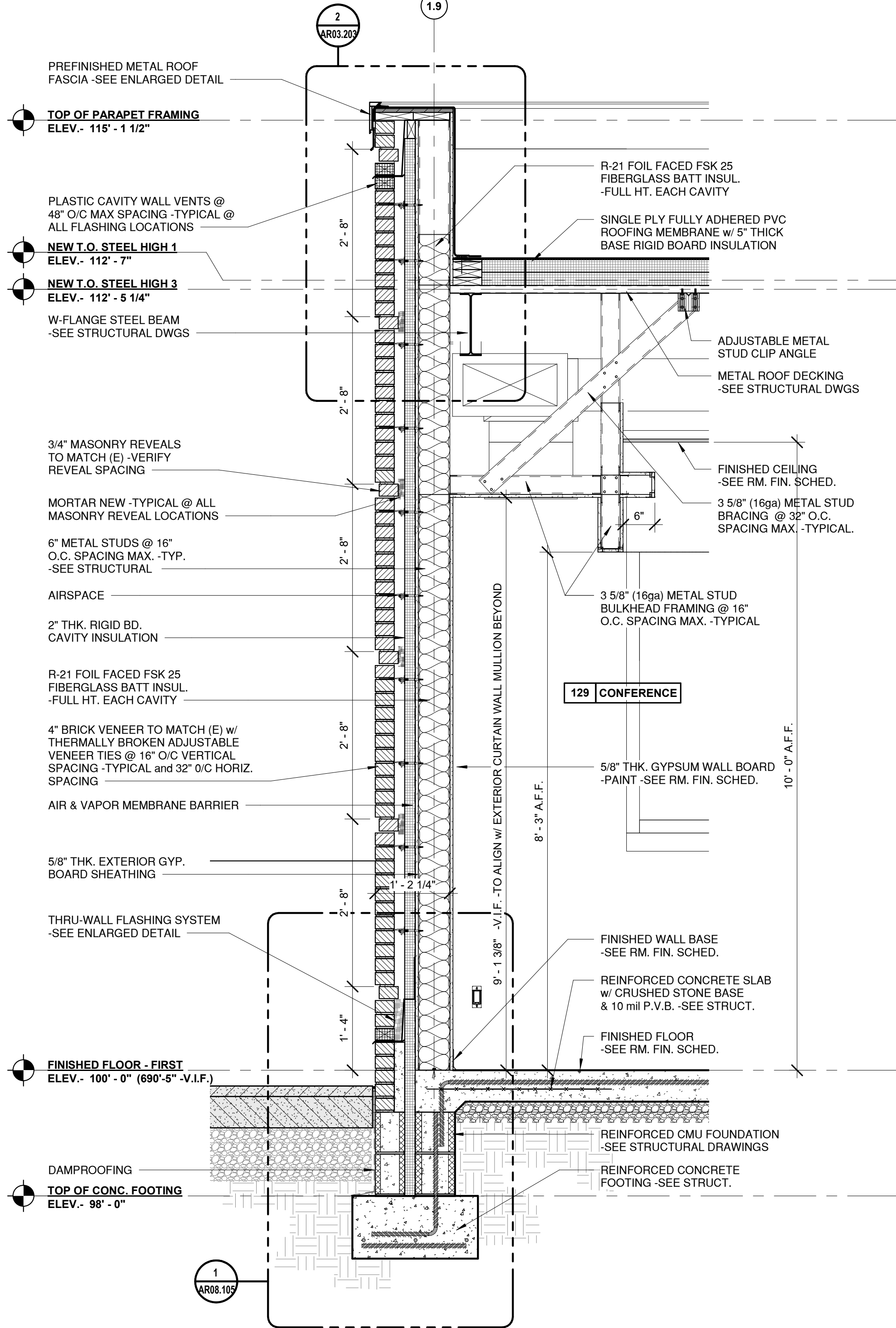
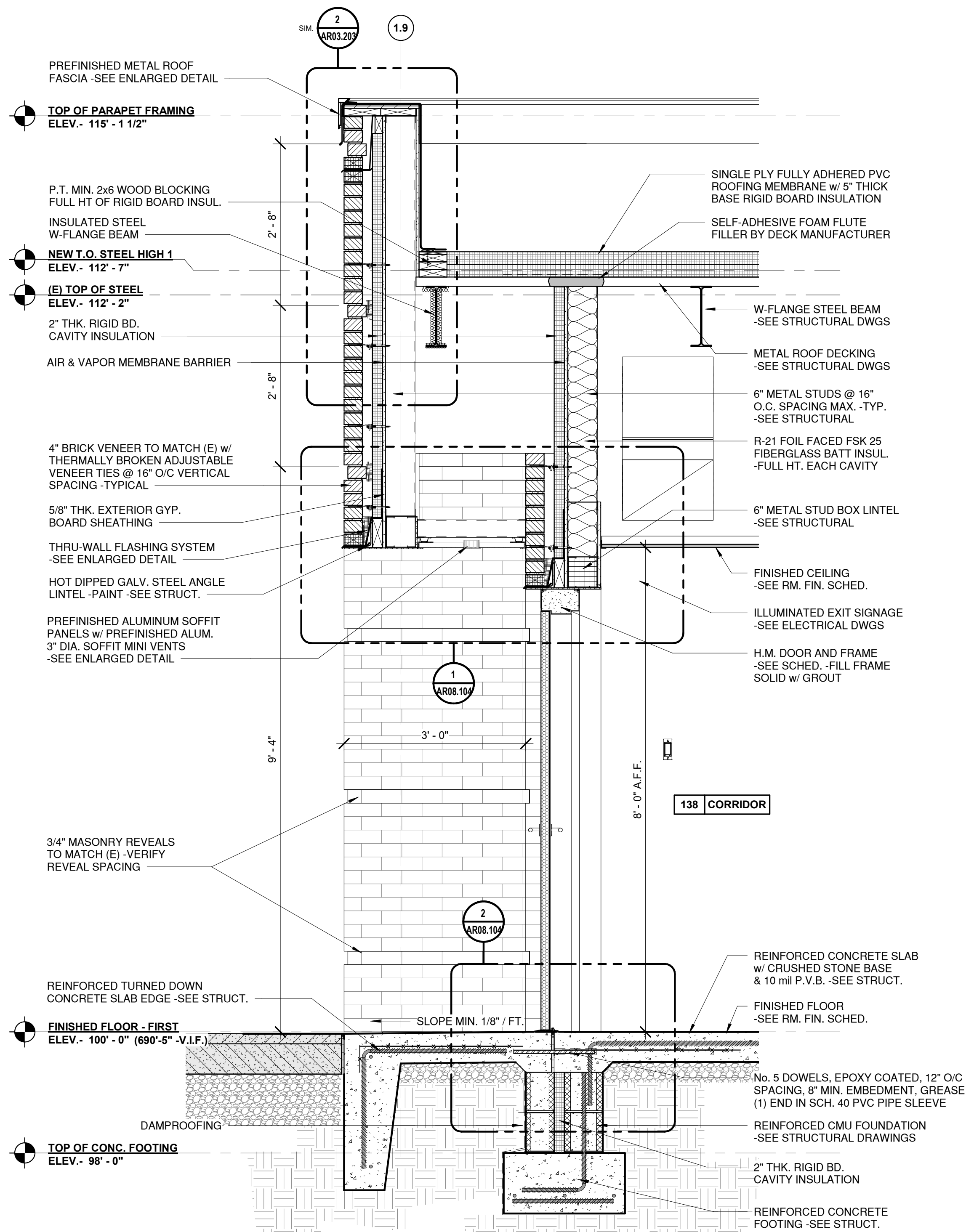










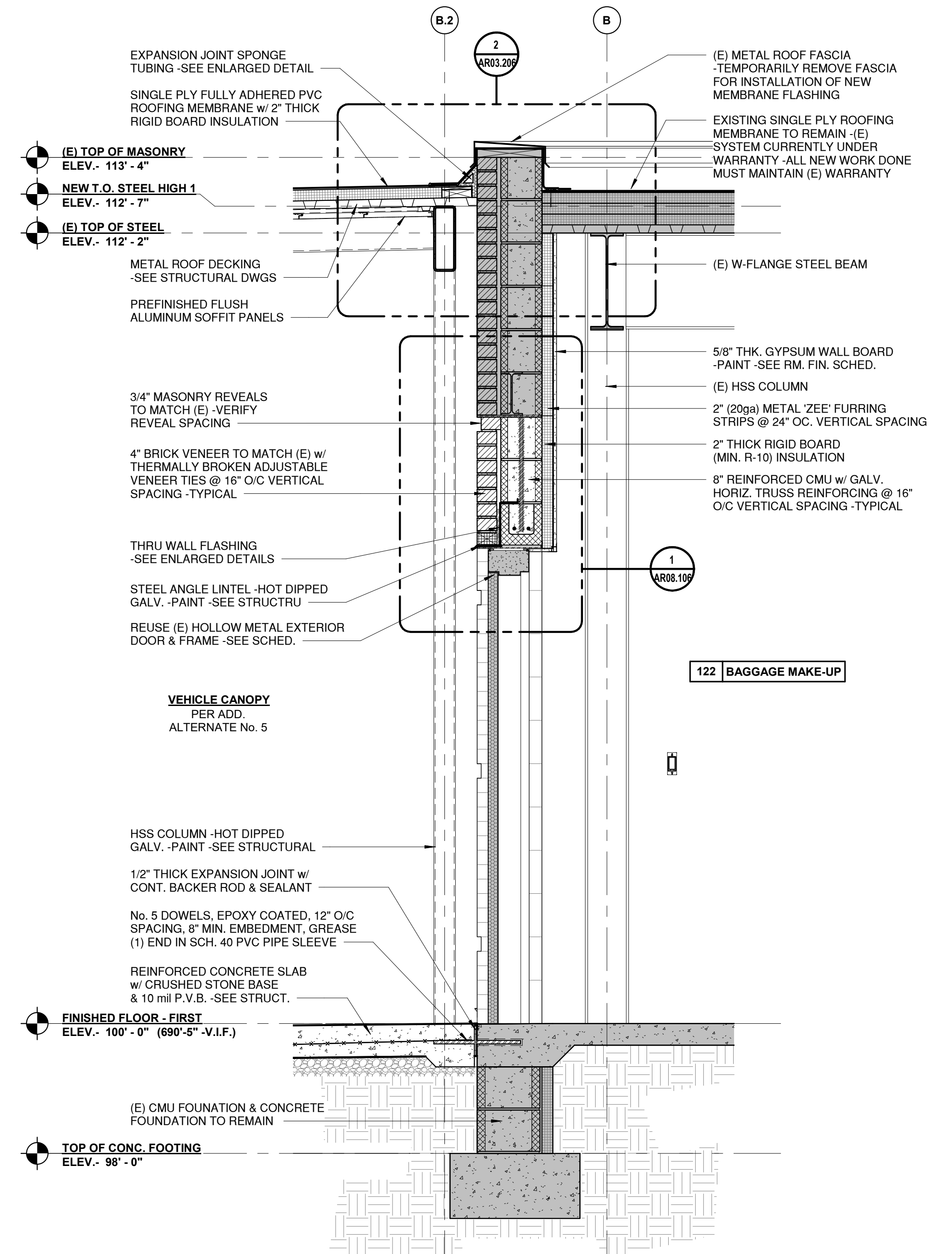
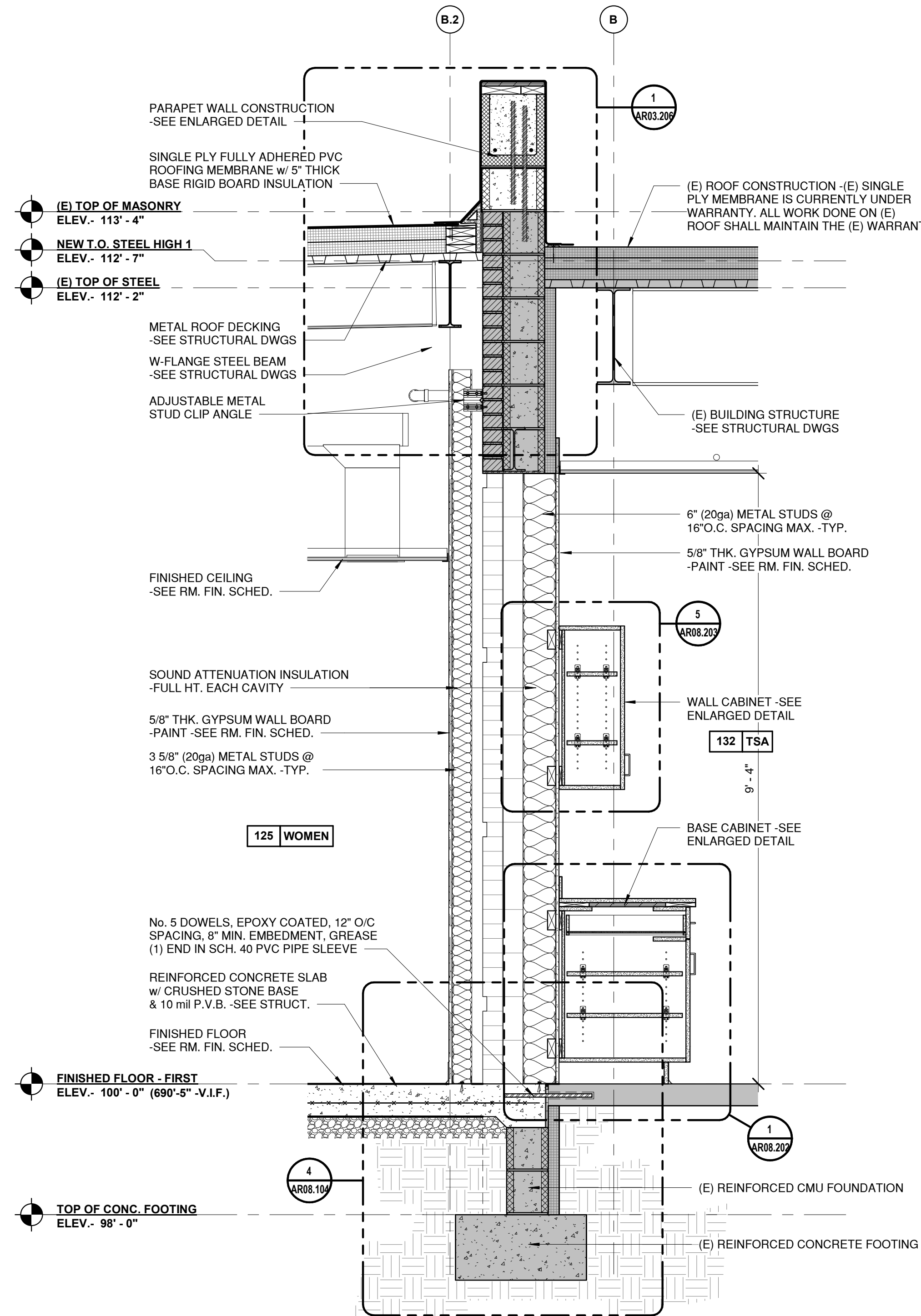
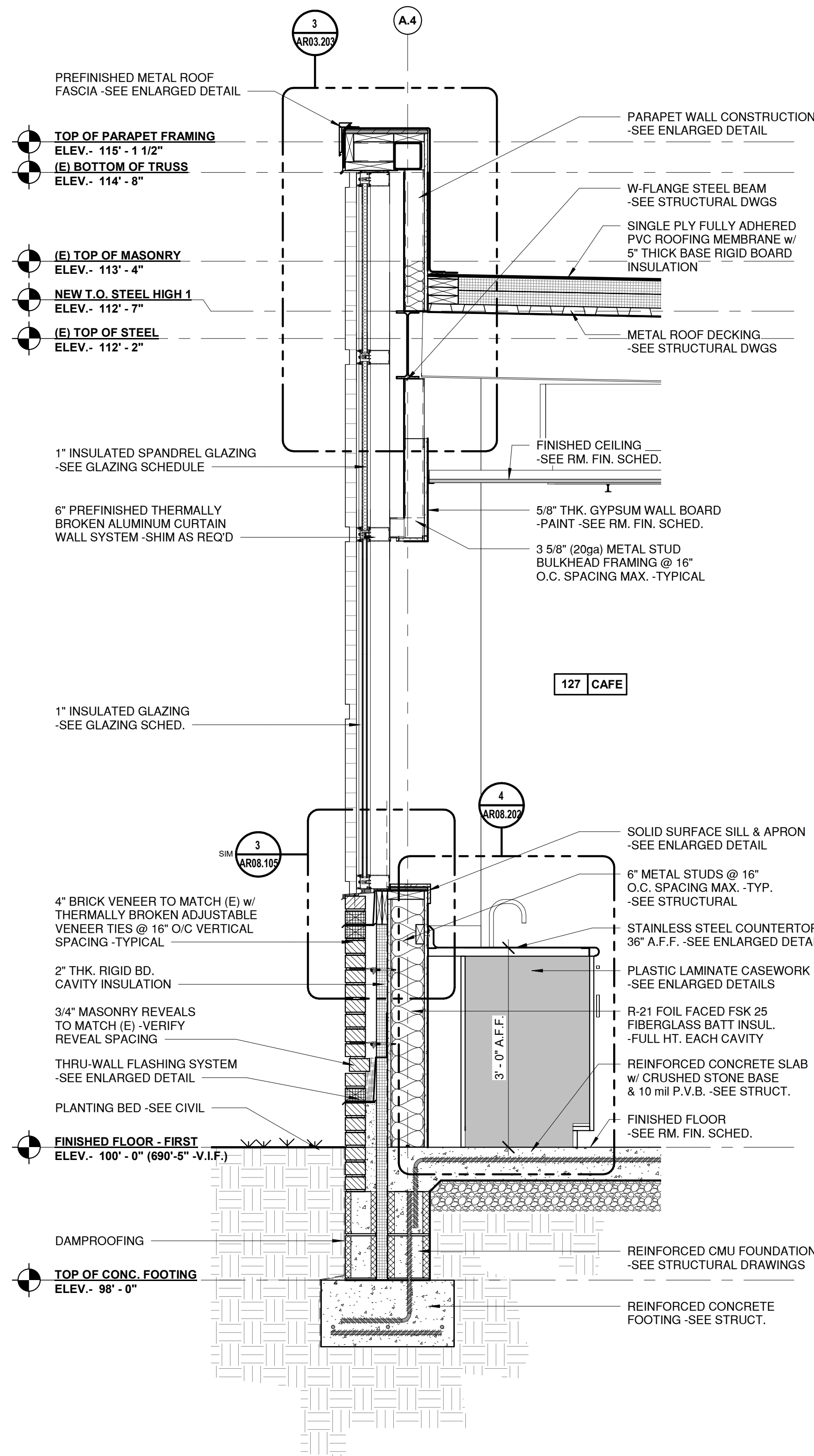


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AR06.200  
EXTERIOR WALL SECTION  
3/4" = 1'-0"

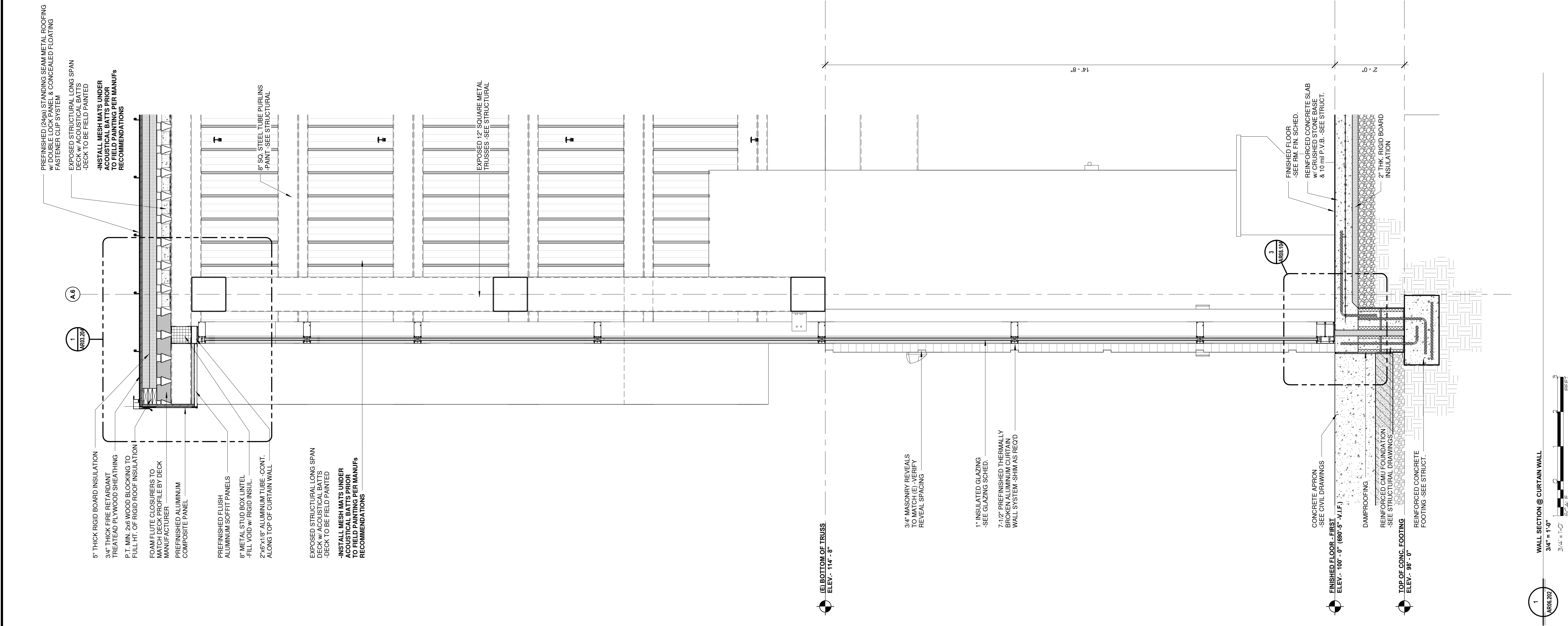
2  
AR06.200  
EXTERIOR WALL SECTION  
3/4" = 1'-0"


1  
AR06.200  
EXTERIOR WALL SECTION  
3/4" = 1'-0"












6031 UNIVERSITY BLVD.  
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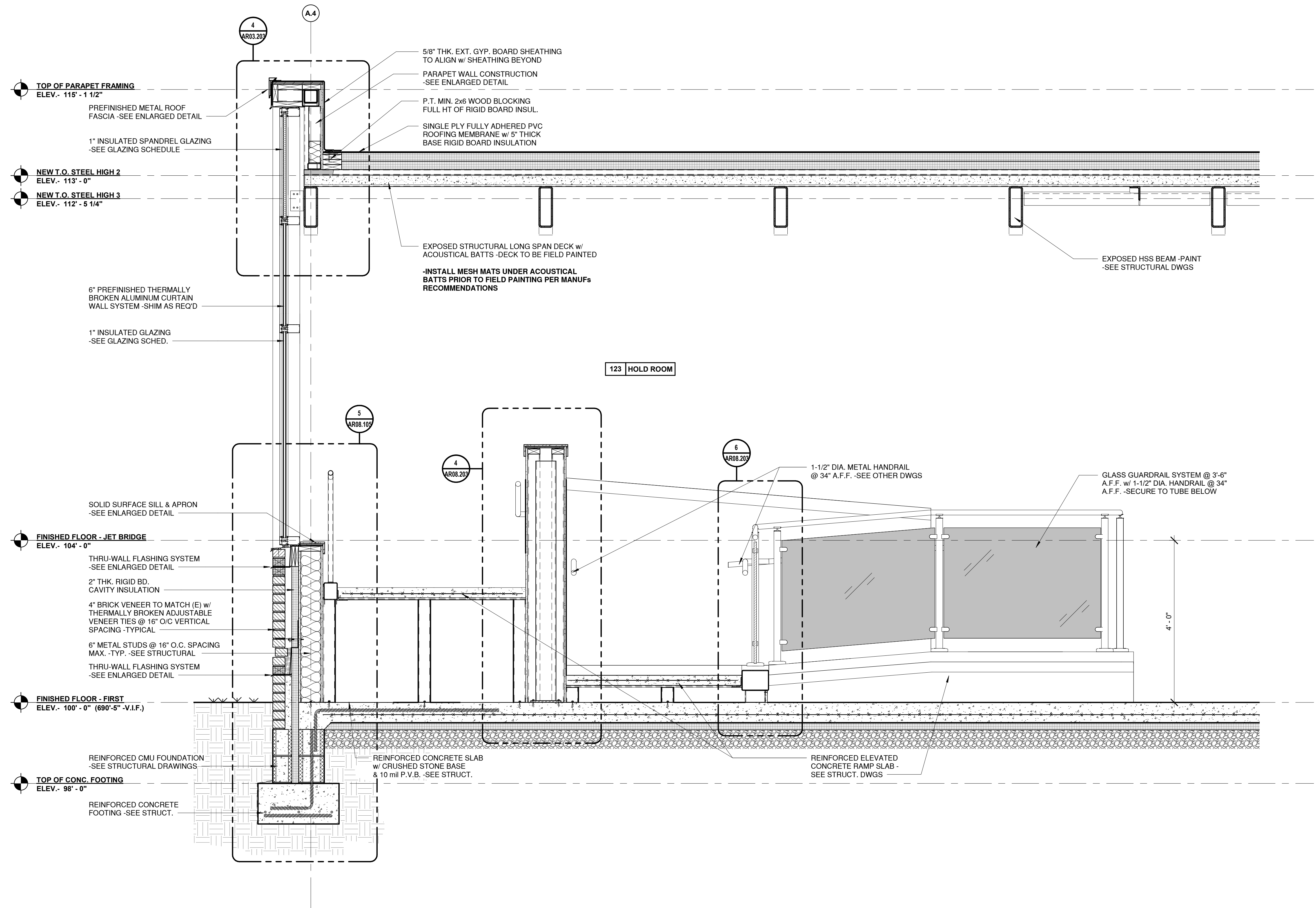
Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>WALL SECTIONS</b>	
SCALE: 3/4" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

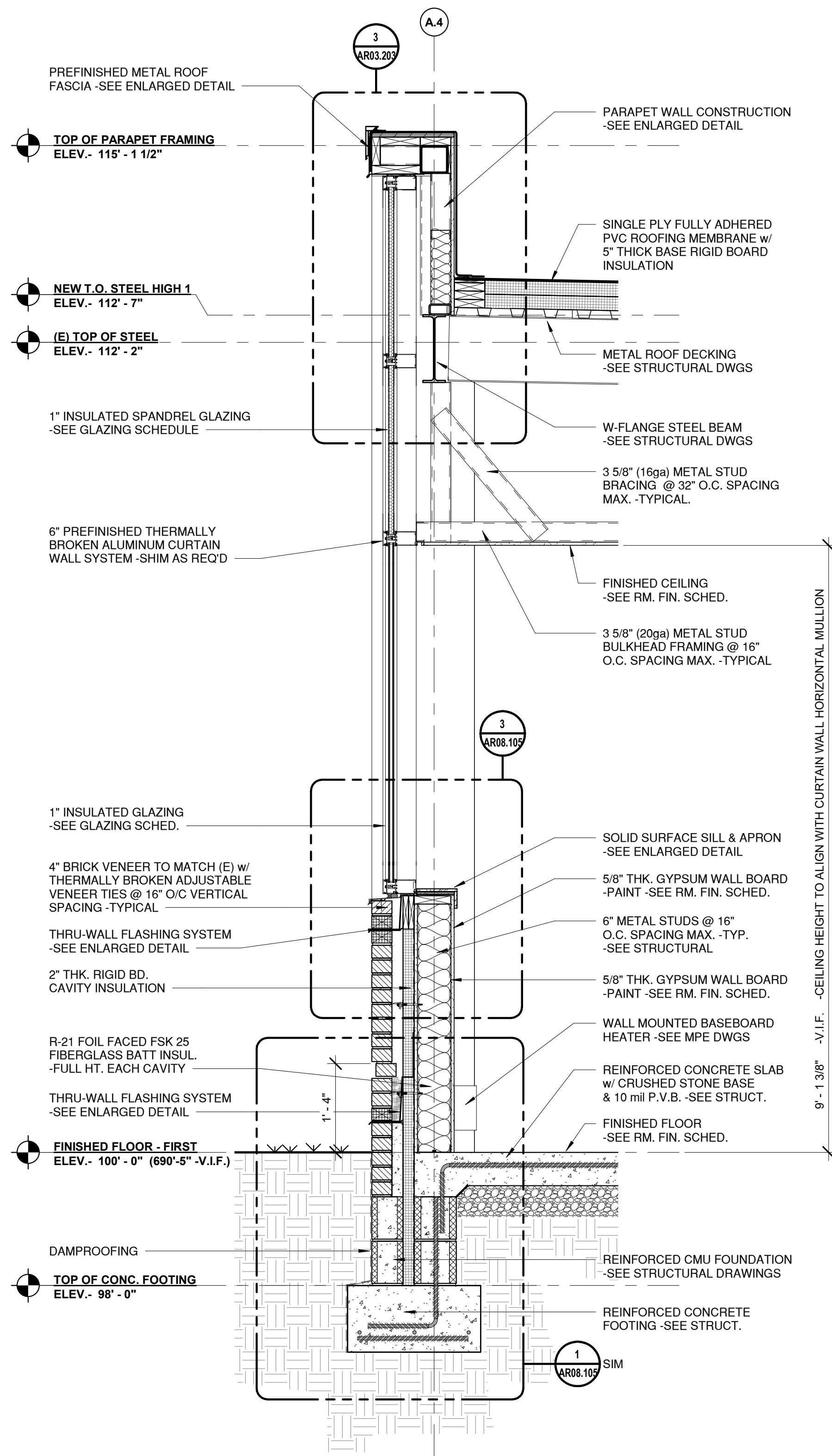
SHEET No.:  
**AR06.202**  
59 OF 117



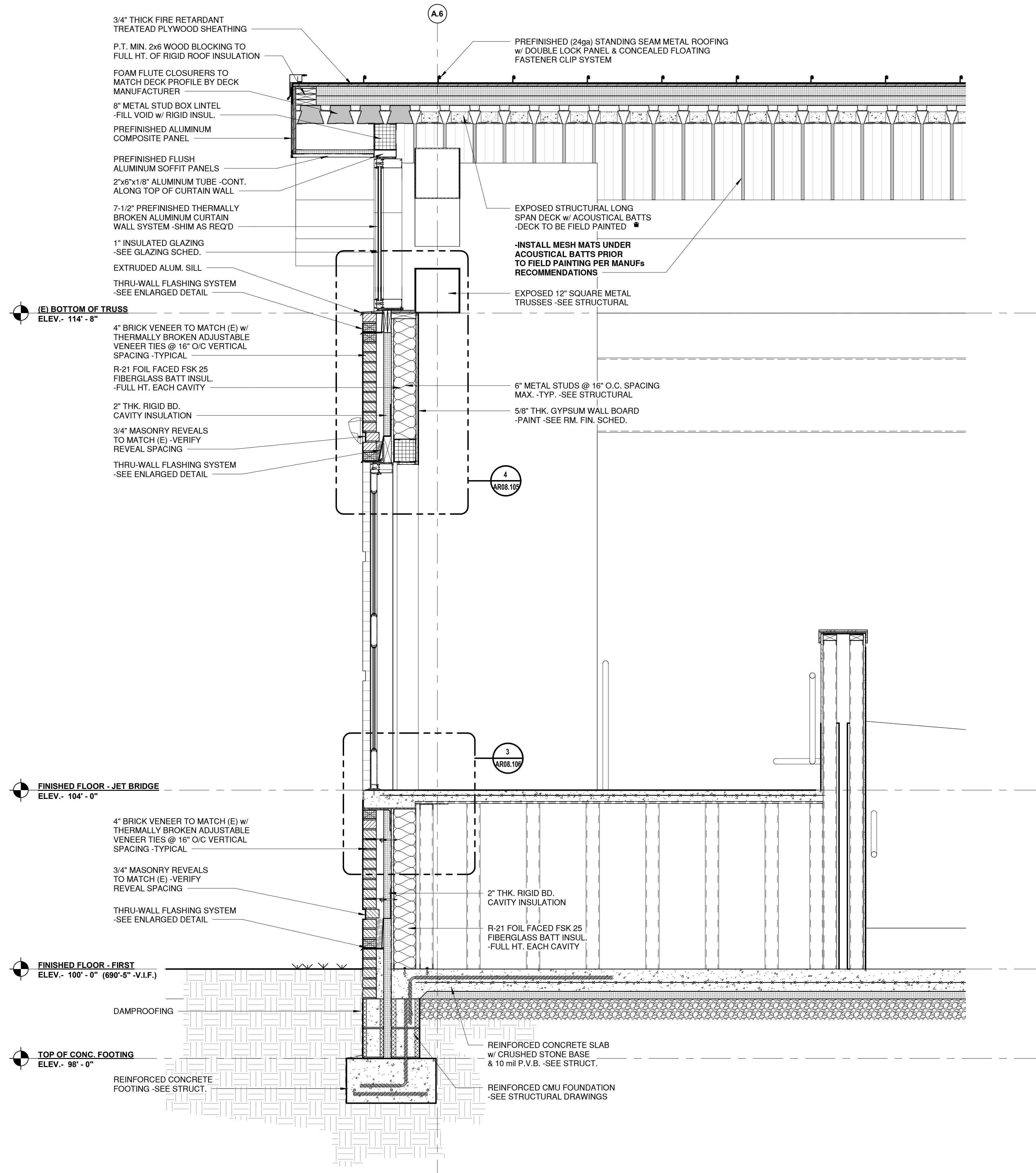


1  
AR06.203  
WALL SECTION @ JET BRIDGE RAMP (PER ADD ALTERNATE No. 1)  
3/4" = 1'-0"  
3/4" = 1'-0"  
SCALE  
1 2 3  
FEET



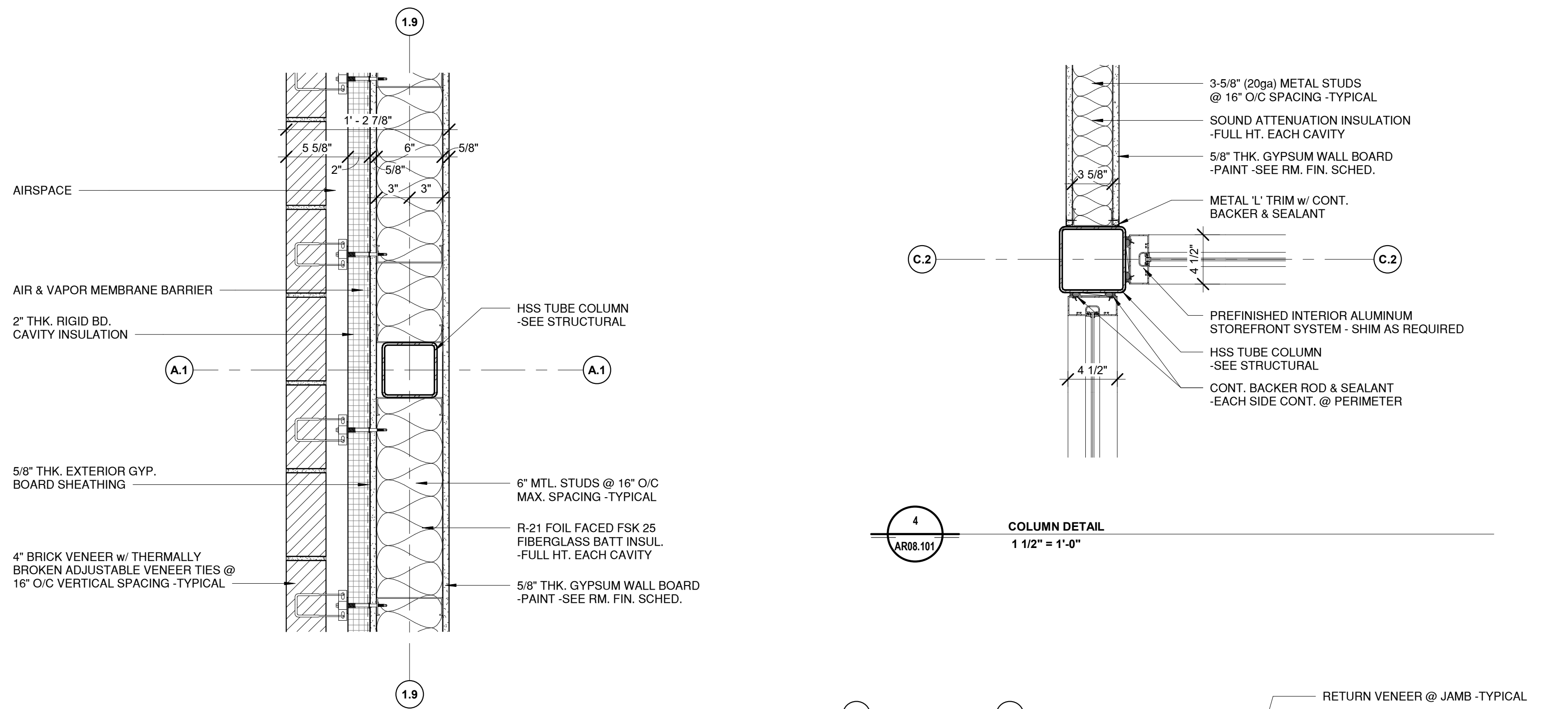


2 WALL SECTION @ CURTAIN WALL SILL  
3/4" = 1'-0"

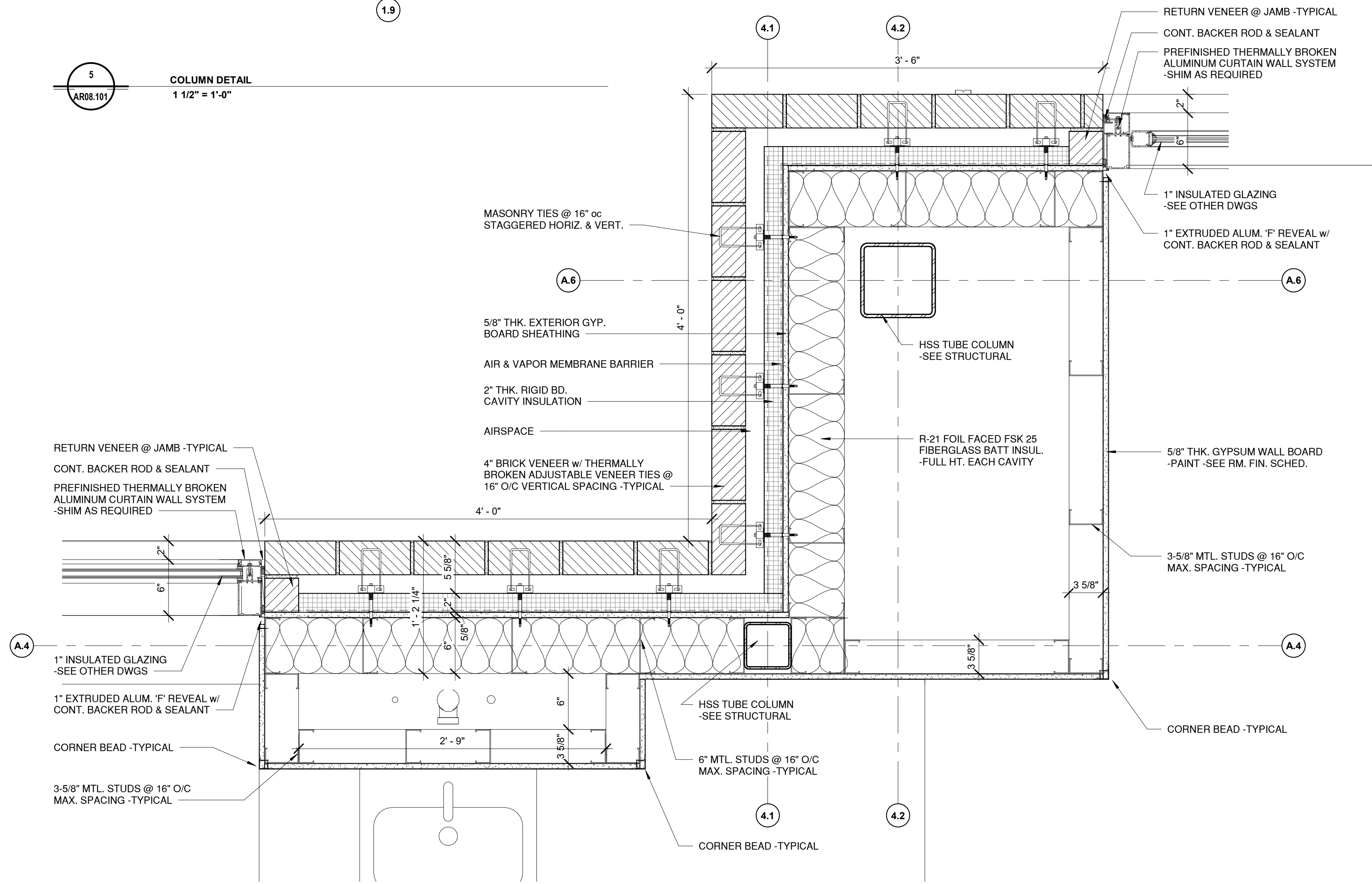


1 WALL SECTION @ JET BRIDGE RAMP (PER ADD ALTERNATE No. 1)  
3/4" = 1'-0"  
3/4" = 1'-0" SCALE



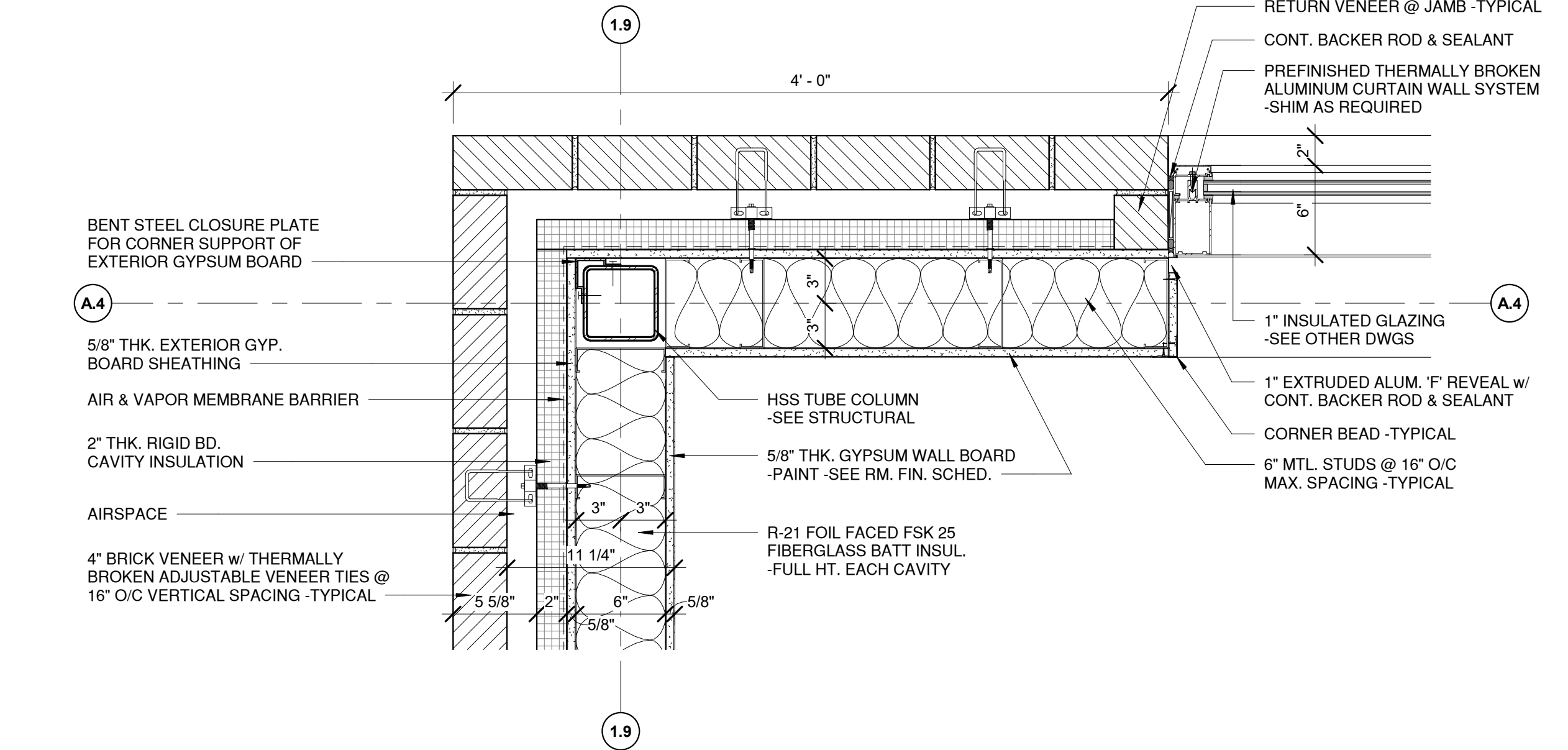


5  
AR08.101  
COLUMN DETAIL  
1 1/2" = 1'-0"

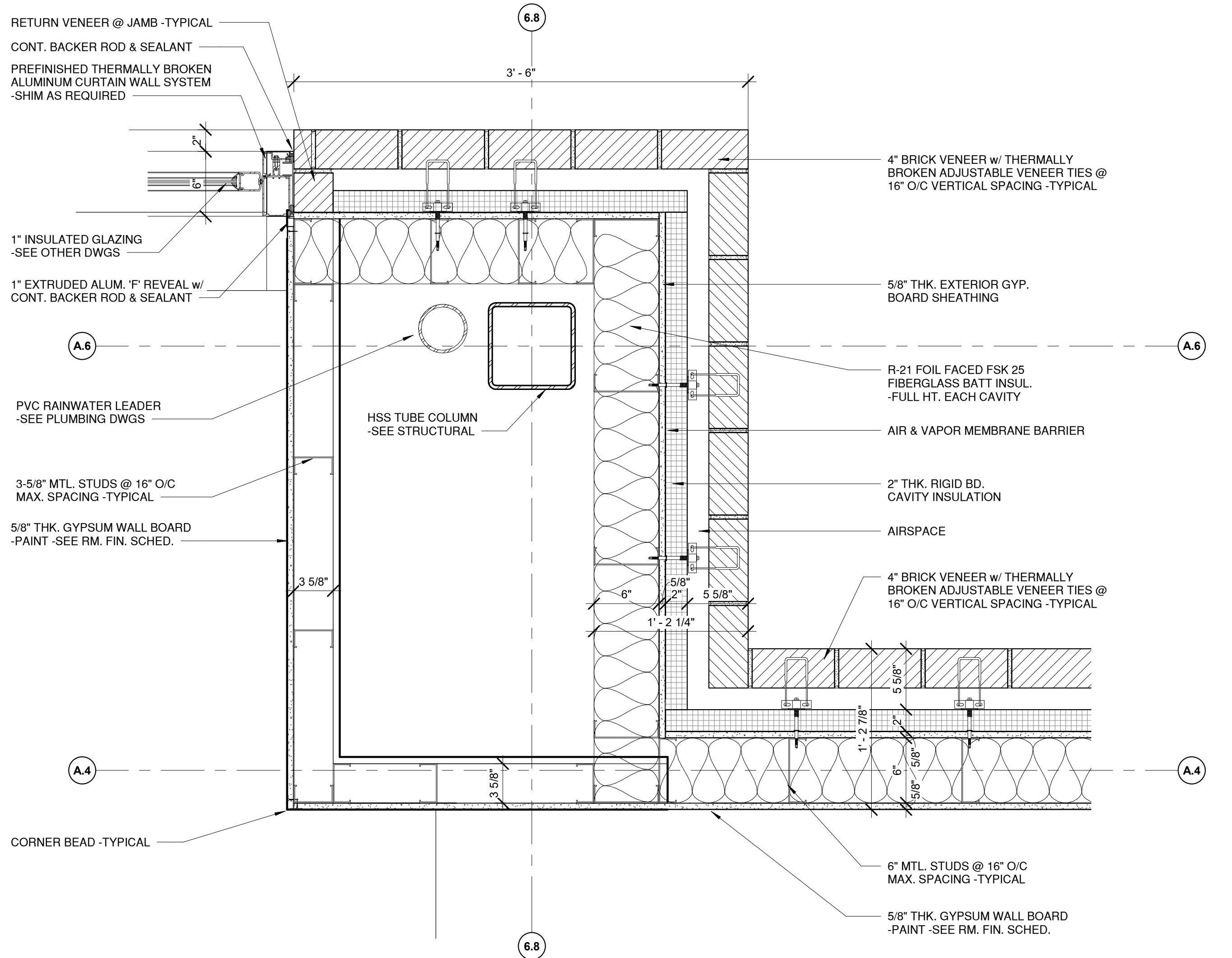


3  
AR08.101  
COLUMN DETAIL  
1 1/2" = 1'-0"

4  
AR08.101  
COLUMN DETAIL  
1 1/2" = 1'-0"

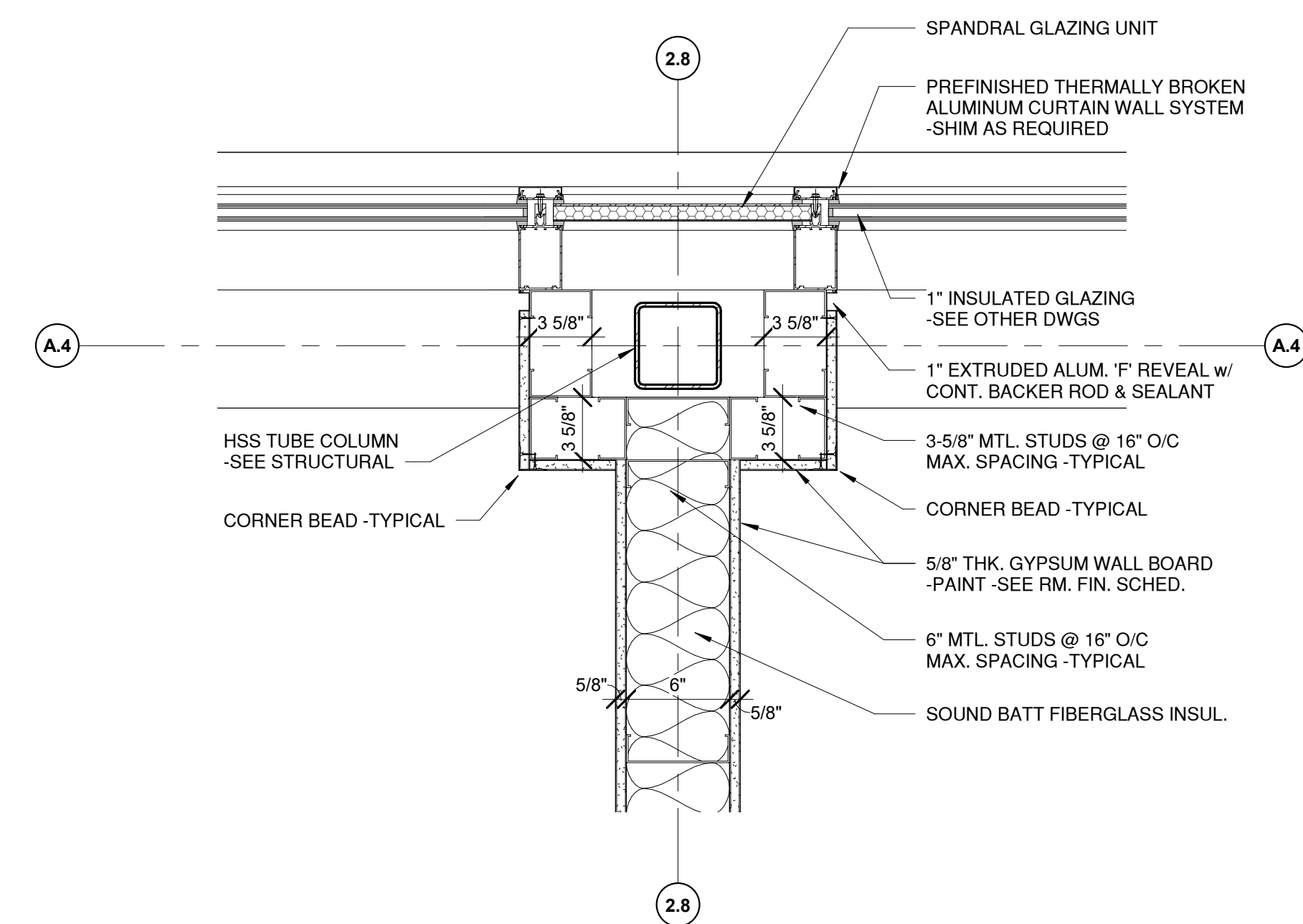


2  
AR08.101  
COLUMN DETAIL  
1 1/2" = 1'-0"

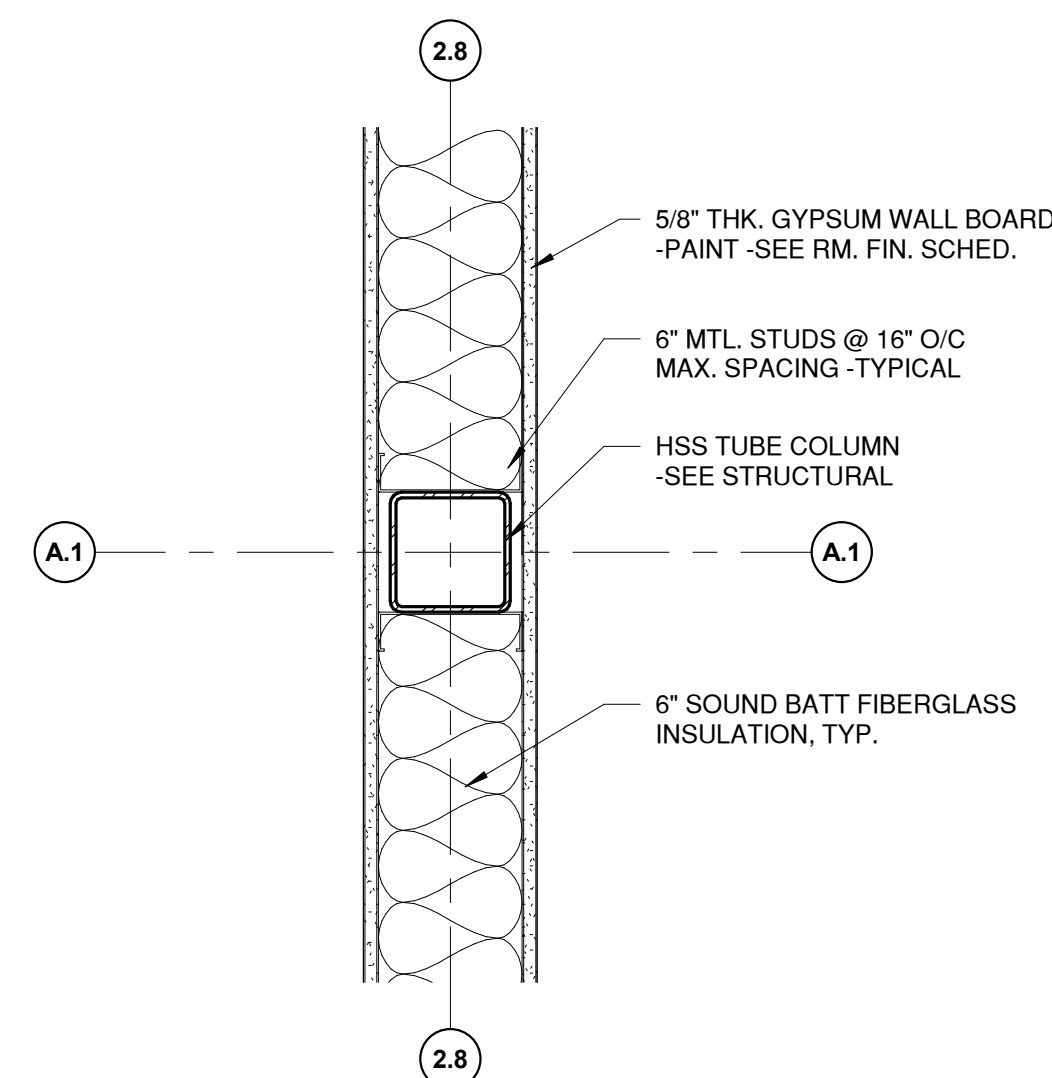


1  
AR08.101  
COLUMN DETAIL  
1 1/2" = 1'-0"

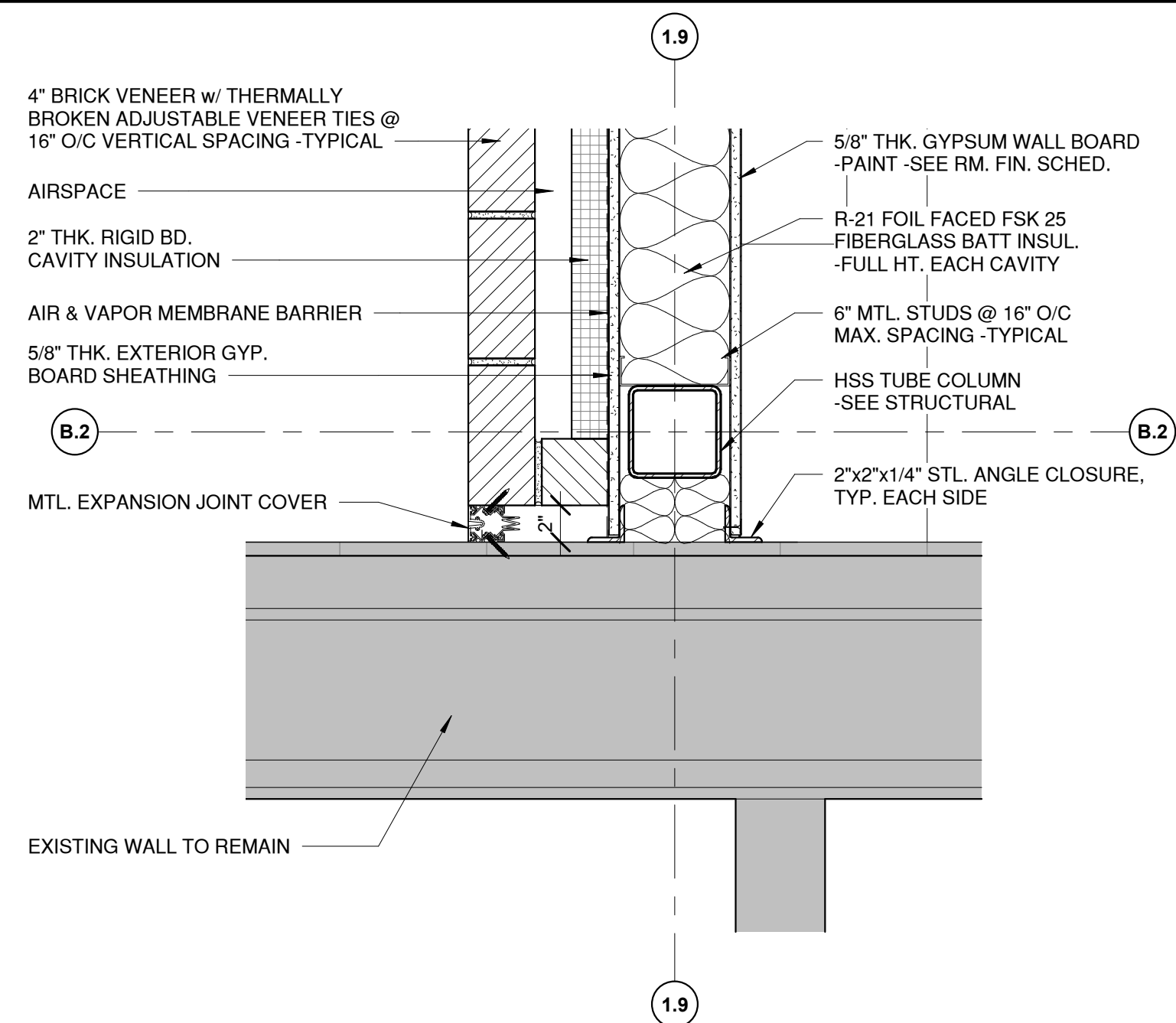




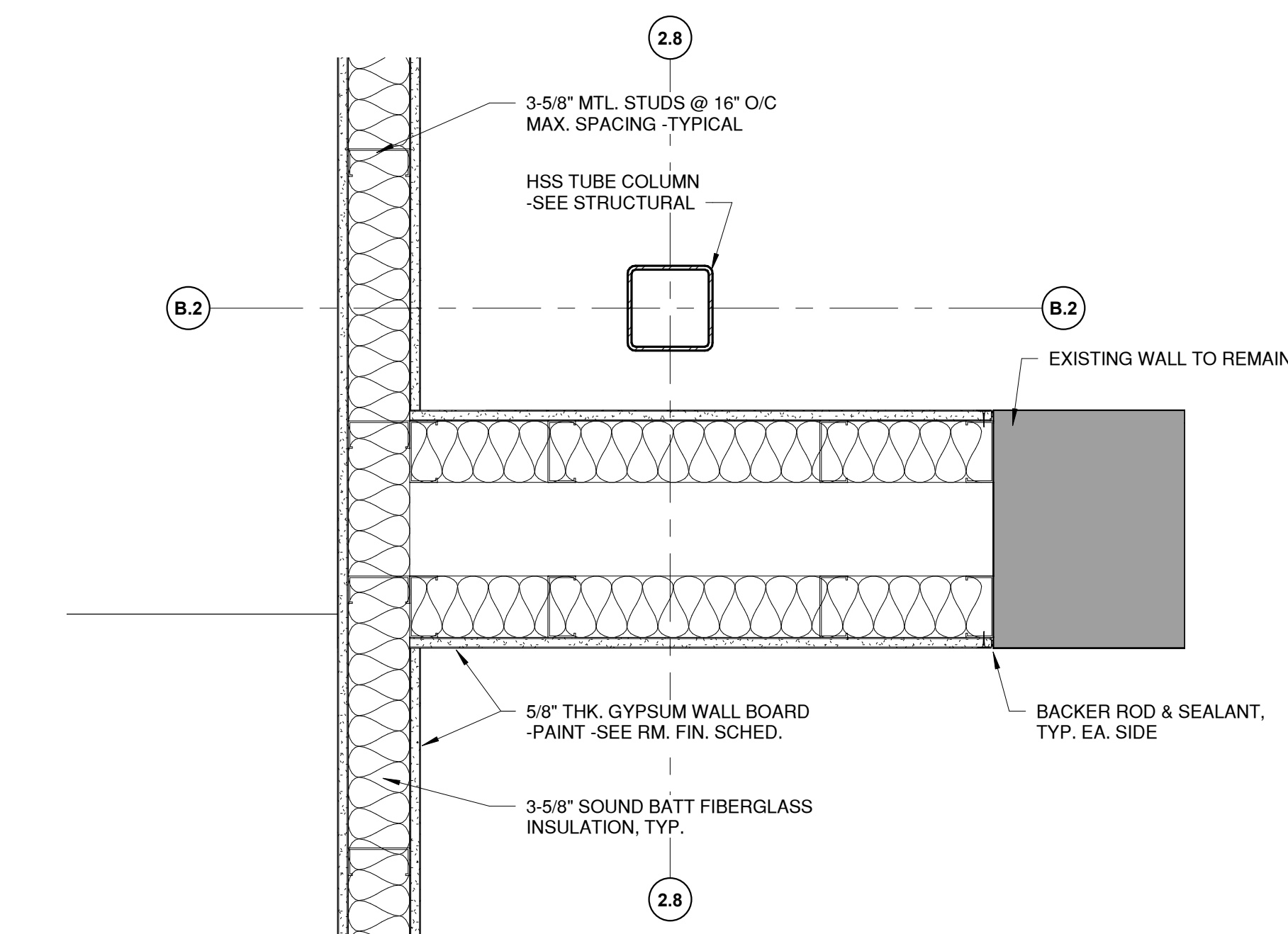
6  
AR08.102  
COLUMN DETAIL  
1 1/2" = 1'-0"



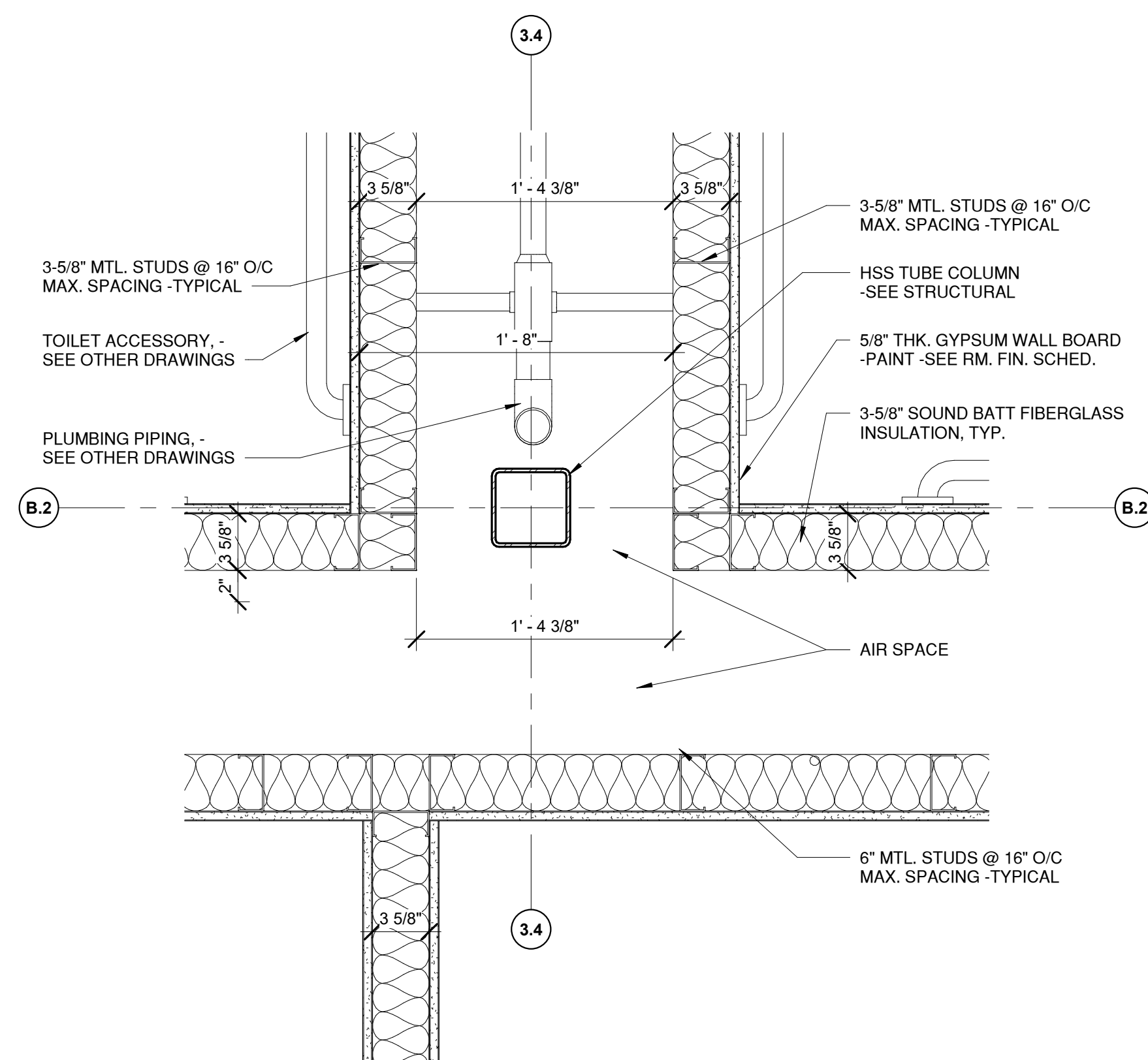
4  
AR08.102  
COLUMN DETAIL  
1 1/2" = 1'-0"



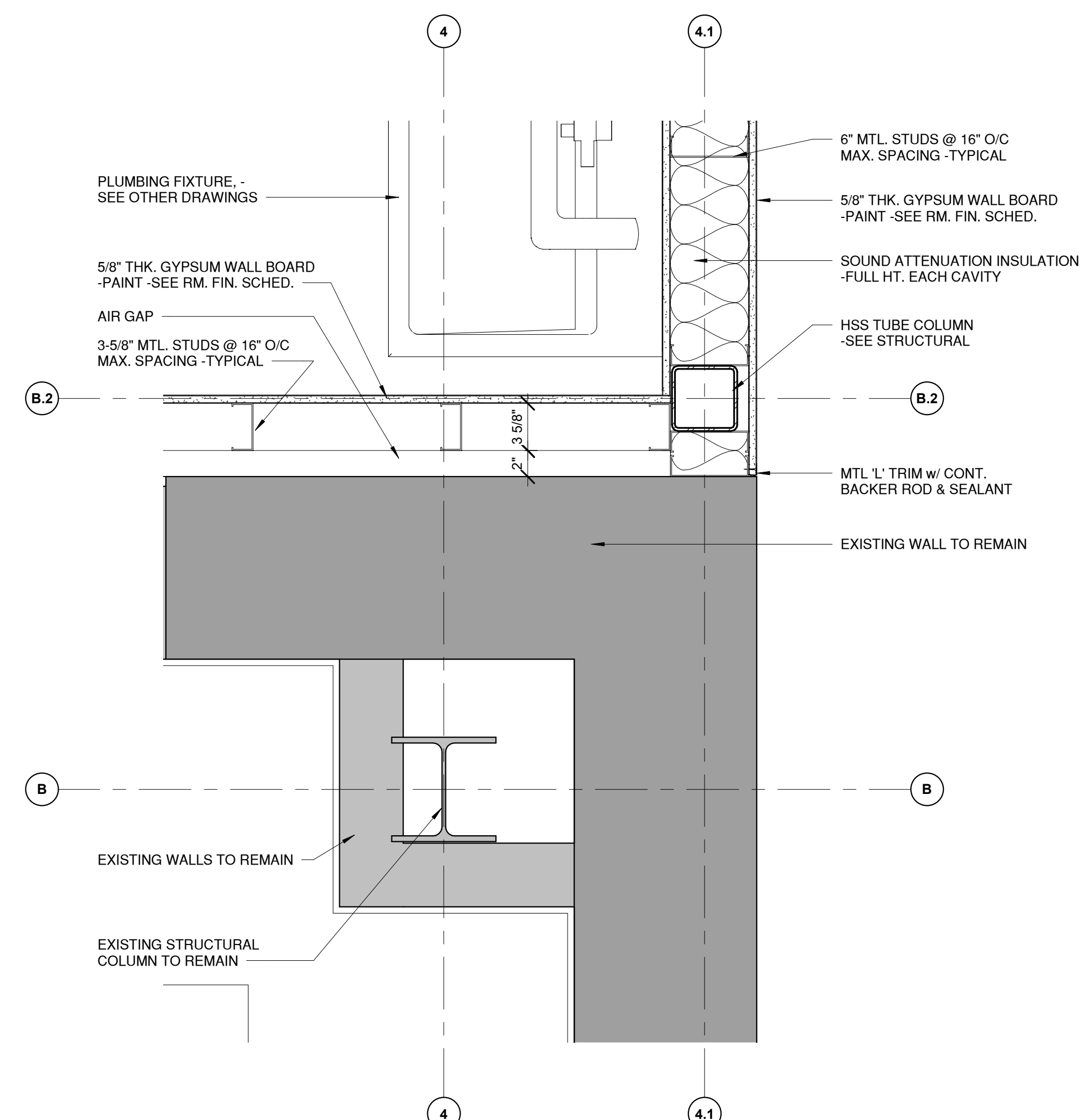
2  
AR08.102  
COLUMN DETAIL  
1 1/2" = 1'-0"



5  
AR08.102  
COLUMN DETAIL  
1 1/2" = 1'-0"

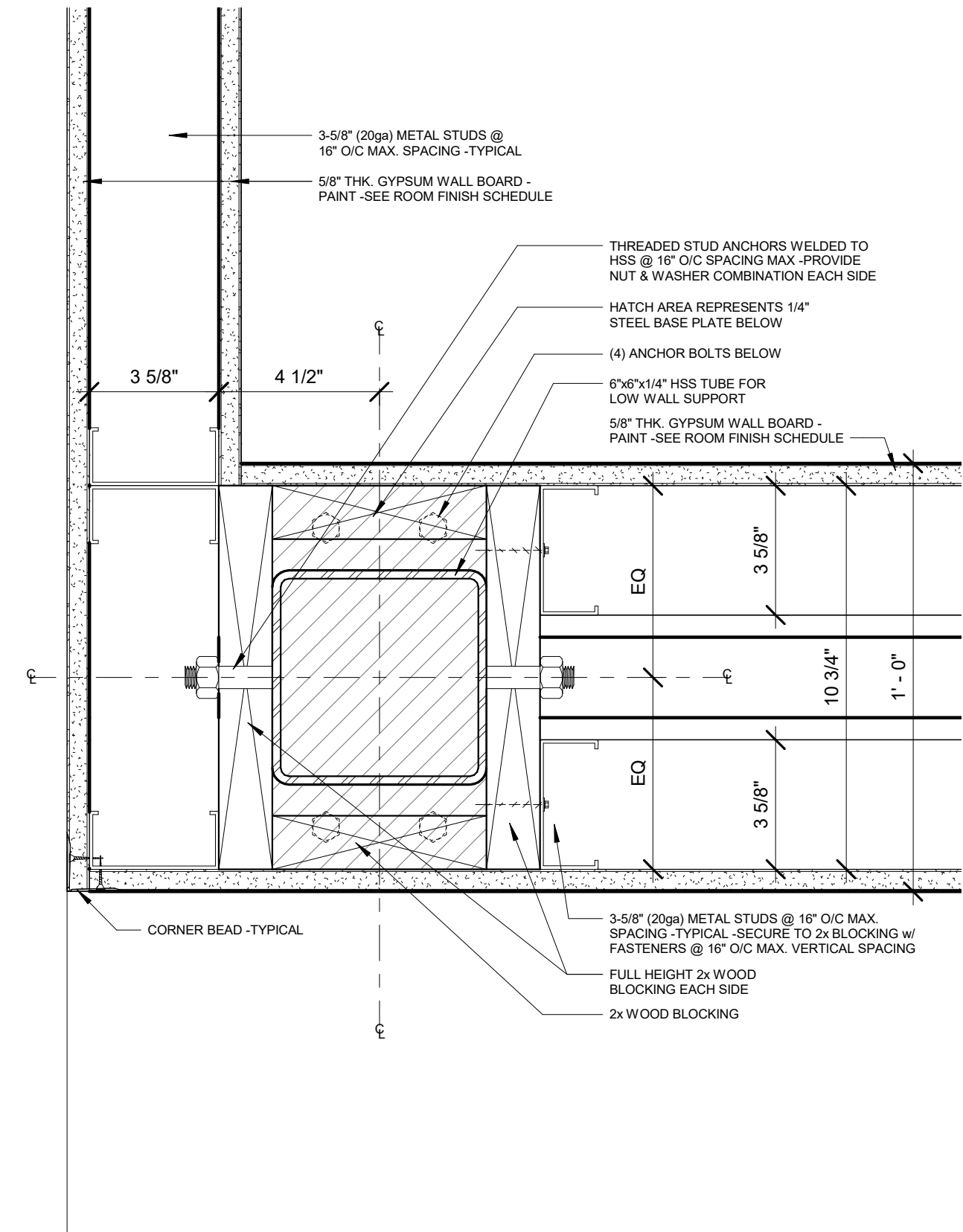


3  
AR08.102  
COLUMN DETAIL  
1 1/2" = 1'-0"

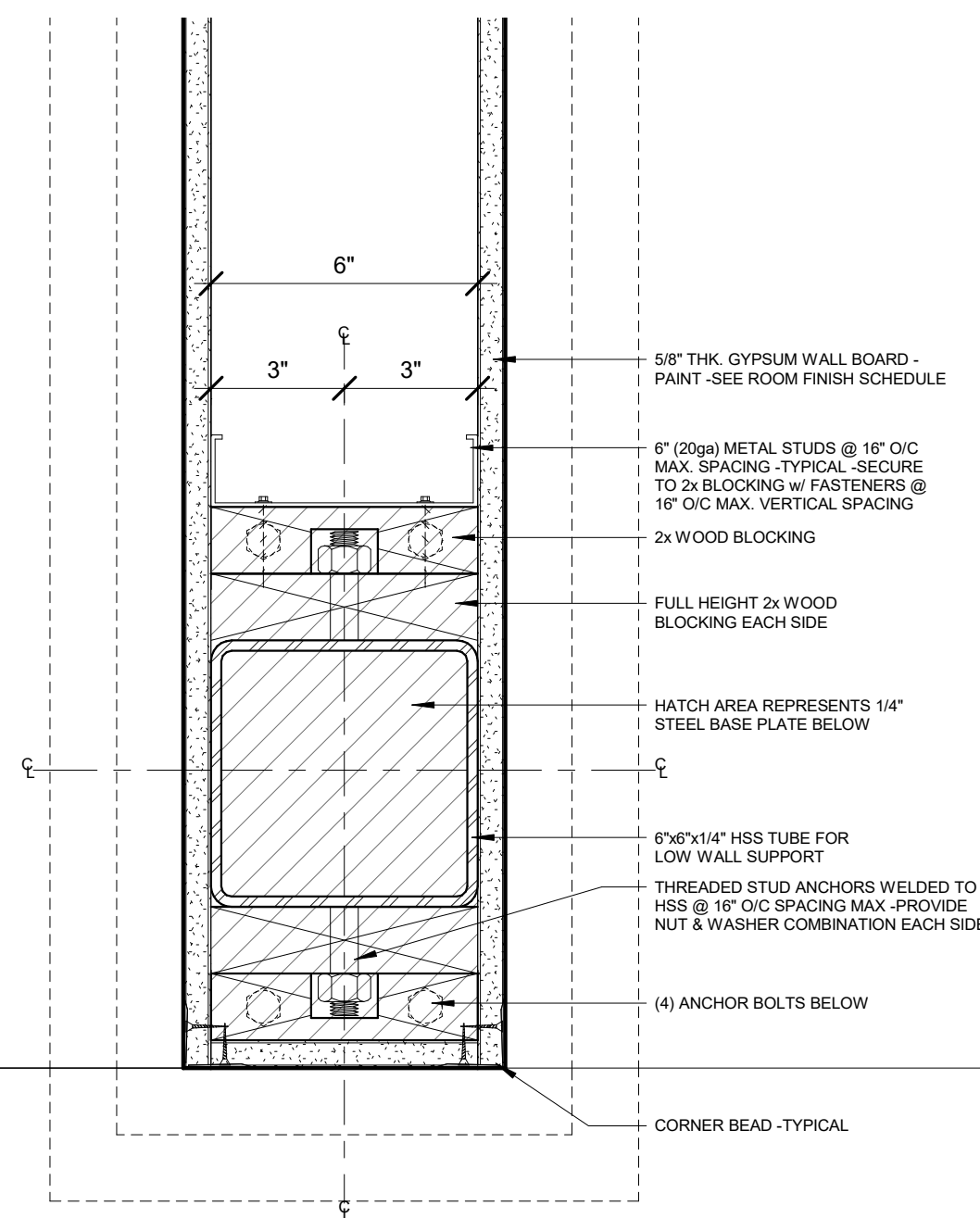


1  
AR08.102  
COLUMN DETAIL  
1 1/2" = 1'-0"  
1 1/2" = 1'-0" SCALE

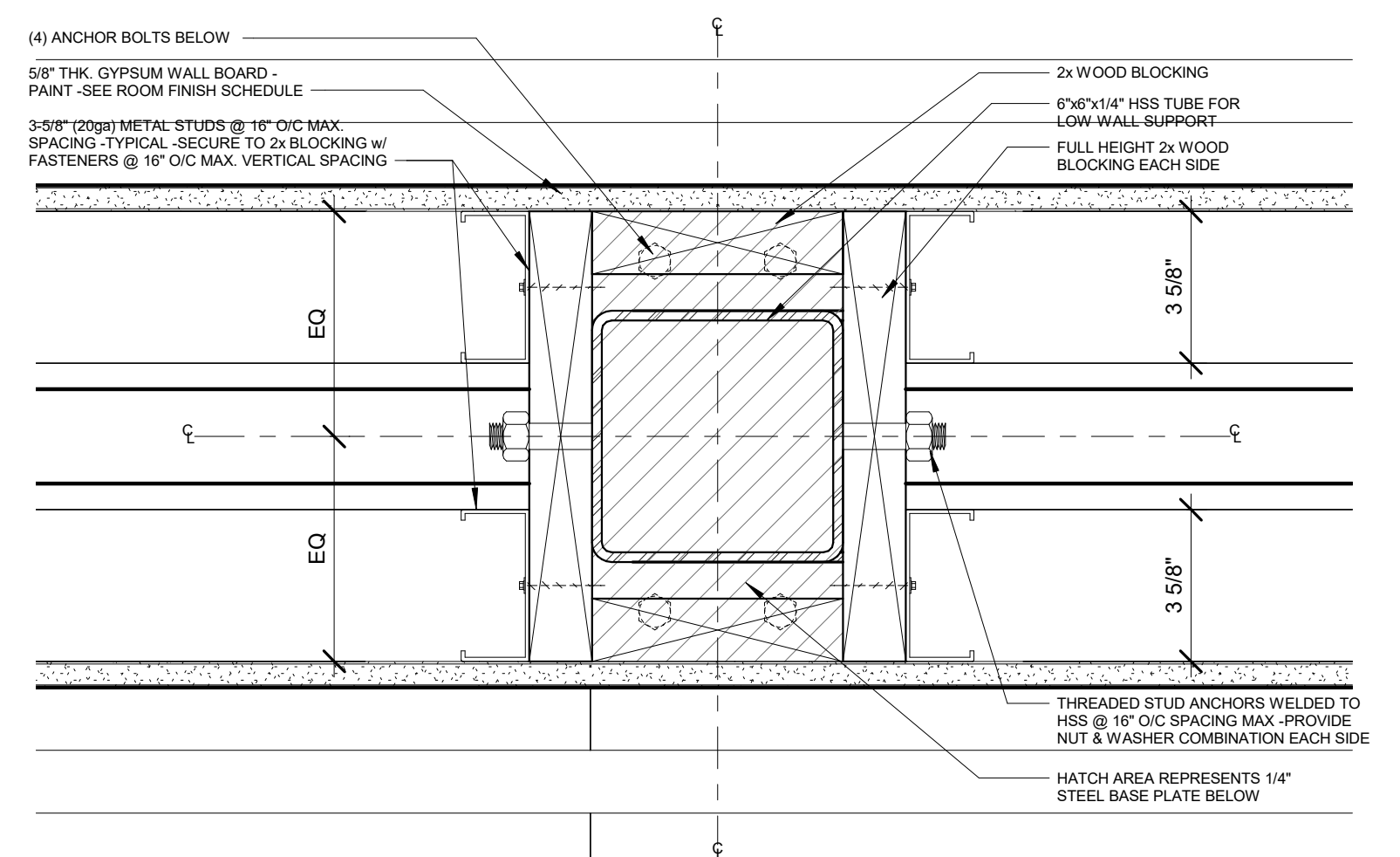




2  
AR08.103  
COLUMN DETAIL @ RAMP LOW WALL (PER ADD ALTERNATE No. 1)  
3" = 1'-0"

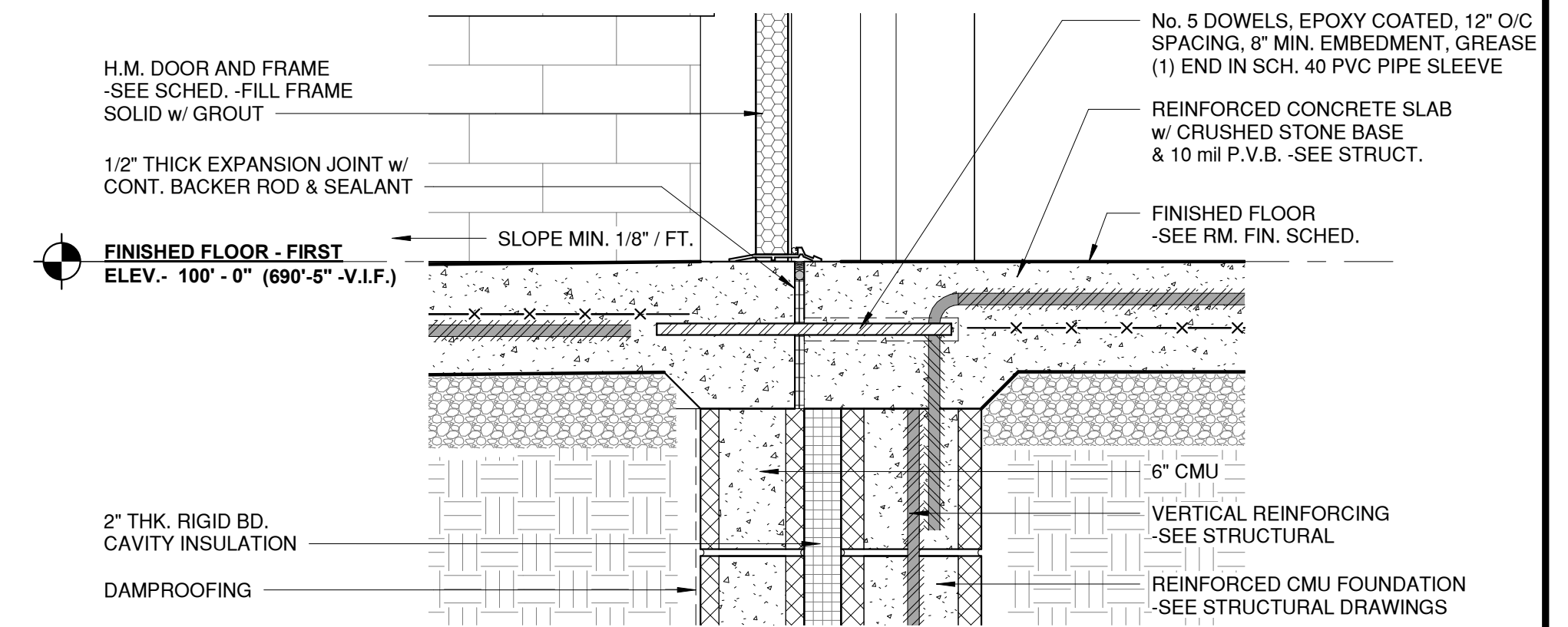
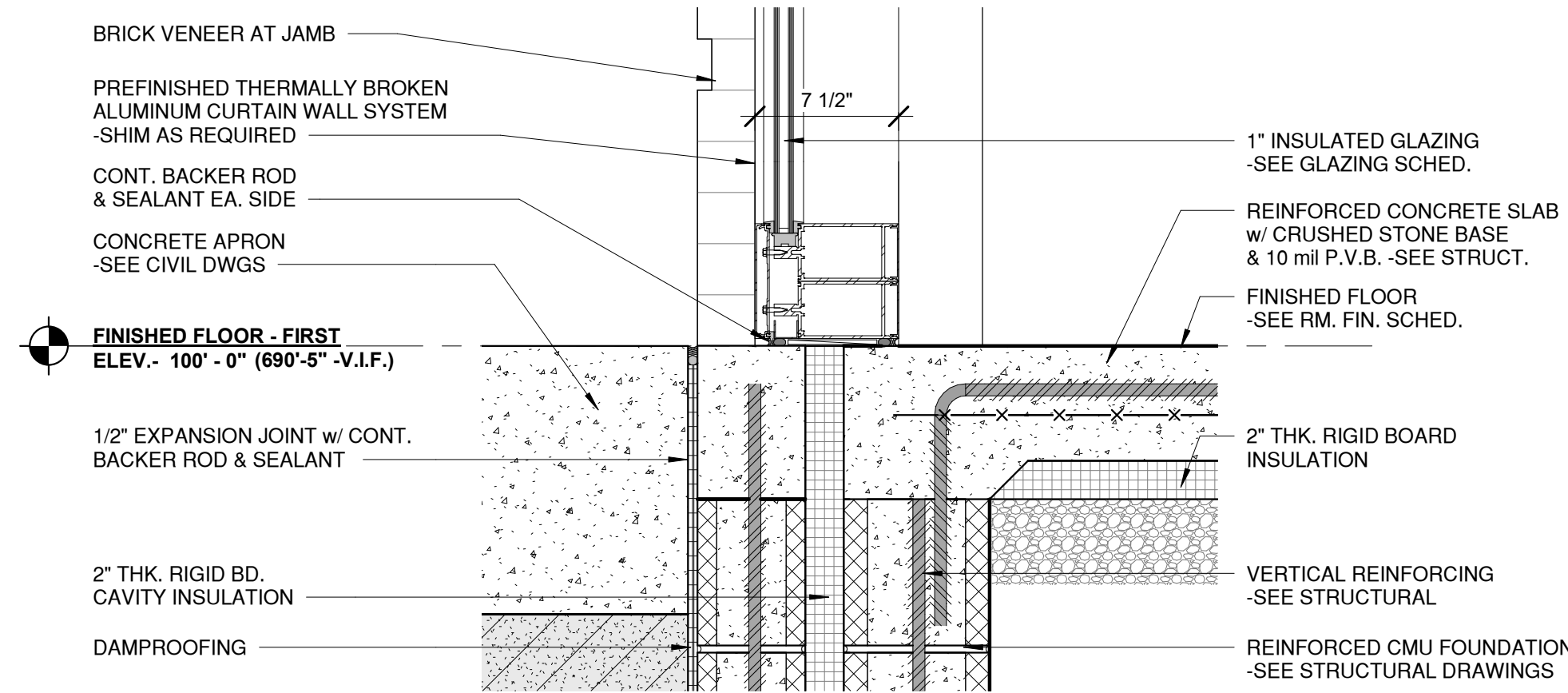
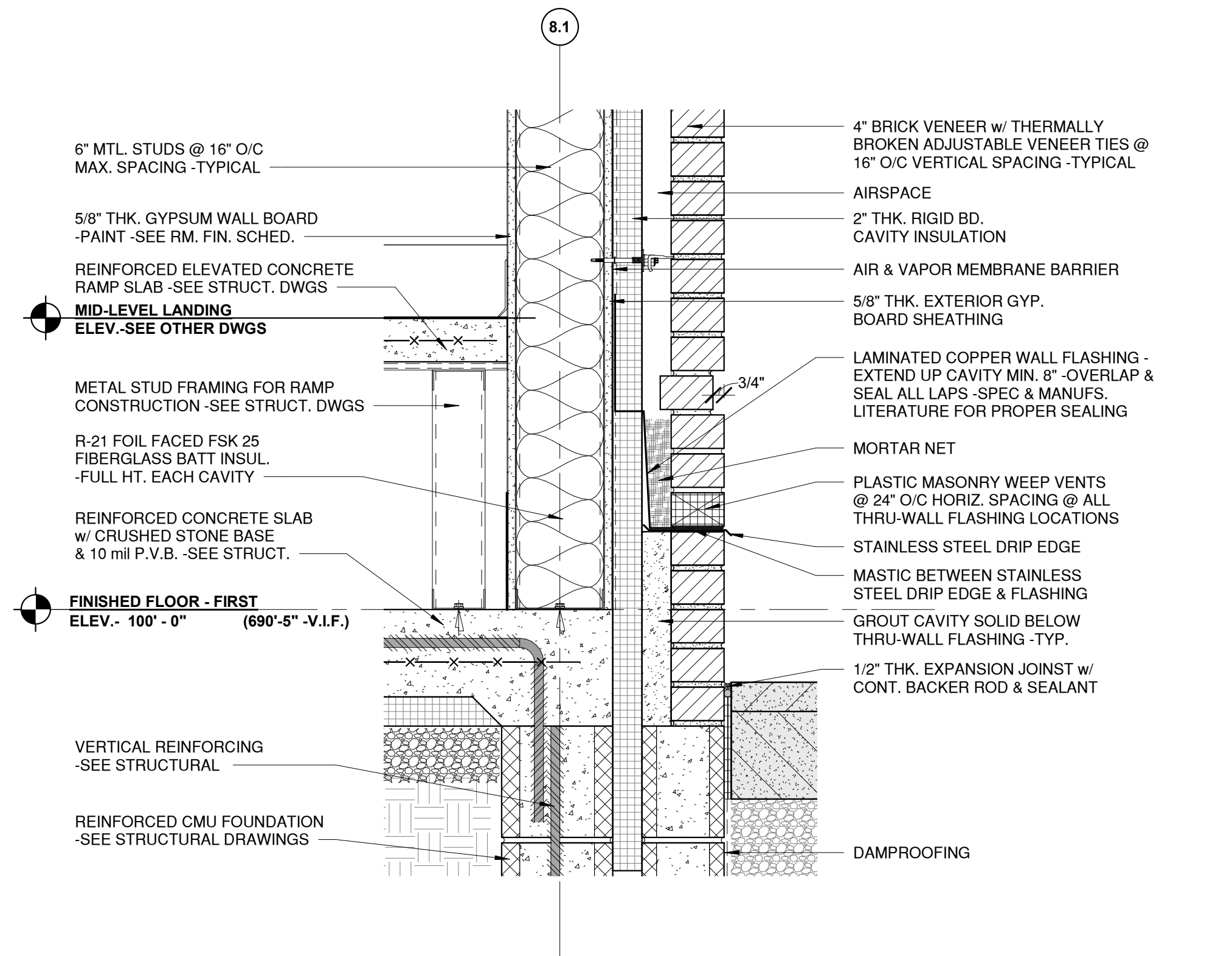


3  
AR08.103  
COLUMN DETAIL @ RAMP LOW WALL (PER ADD ALTERNATE No. 1)  
3" = 1'-0"

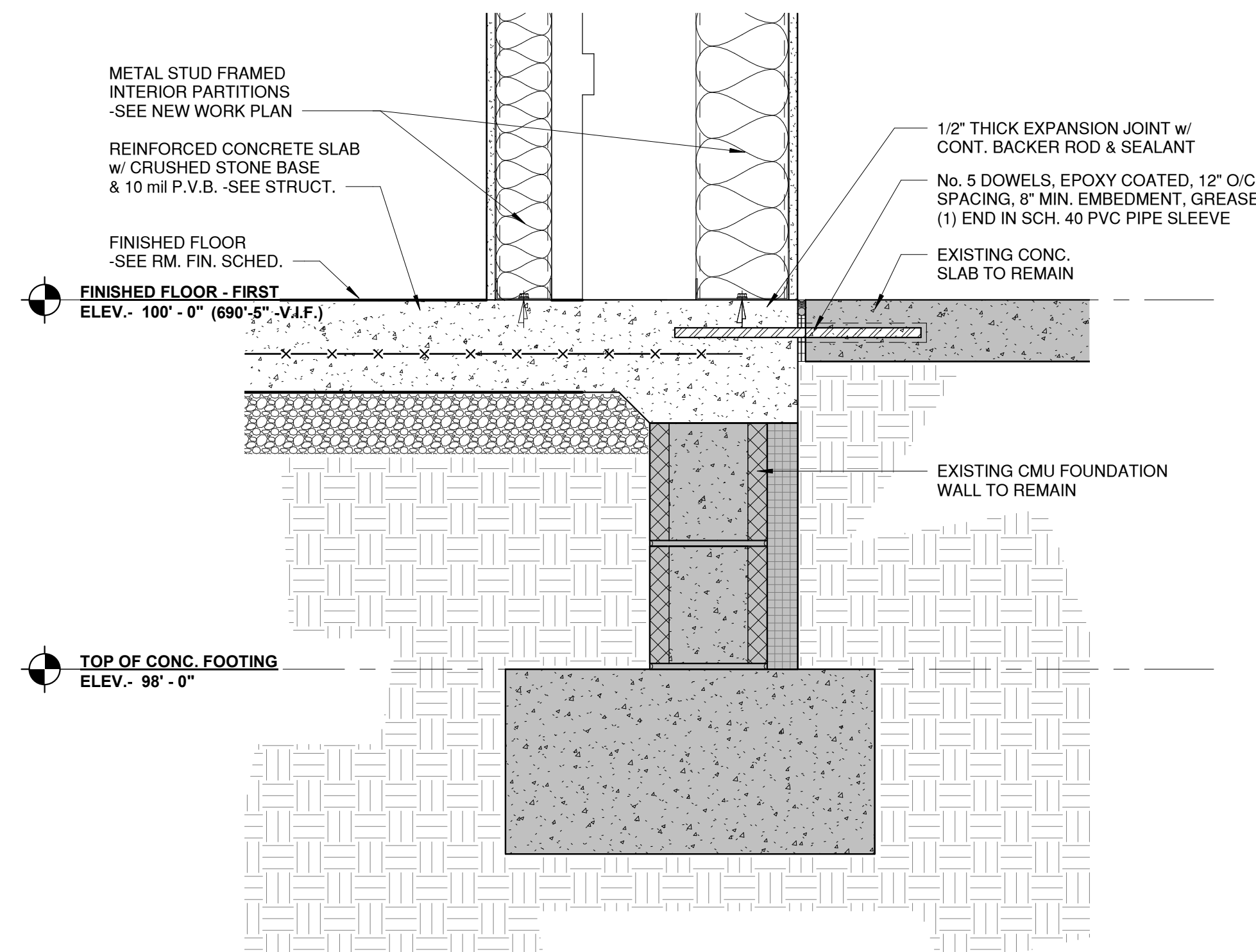


1  
AR08.103  
COLUMN DETAIL @ RAMP LOW WALL (PER ADD ALTERNATE No. 1)  
3" = 1'-0"  
SCALE  
3' = 1'-0"





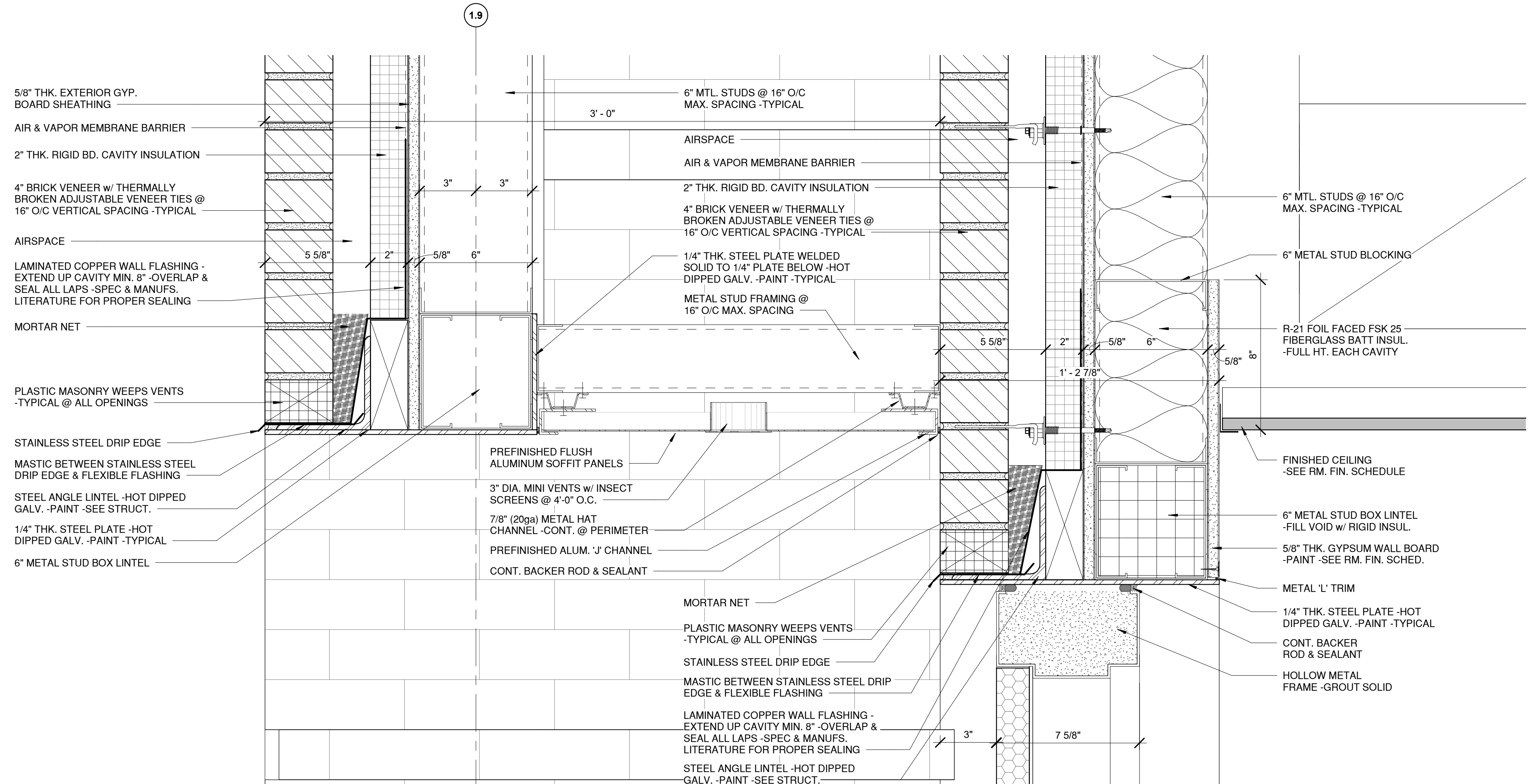
5  
AR08.104  
DETAIL @ INTERIOR RAMP SUPPORT  
1 1/2" = 1'-0"



4  
AR08.104  
SECTION DETAIL @ CONC. SLAB CONNECTION  
1 1/2" = 1'-0"

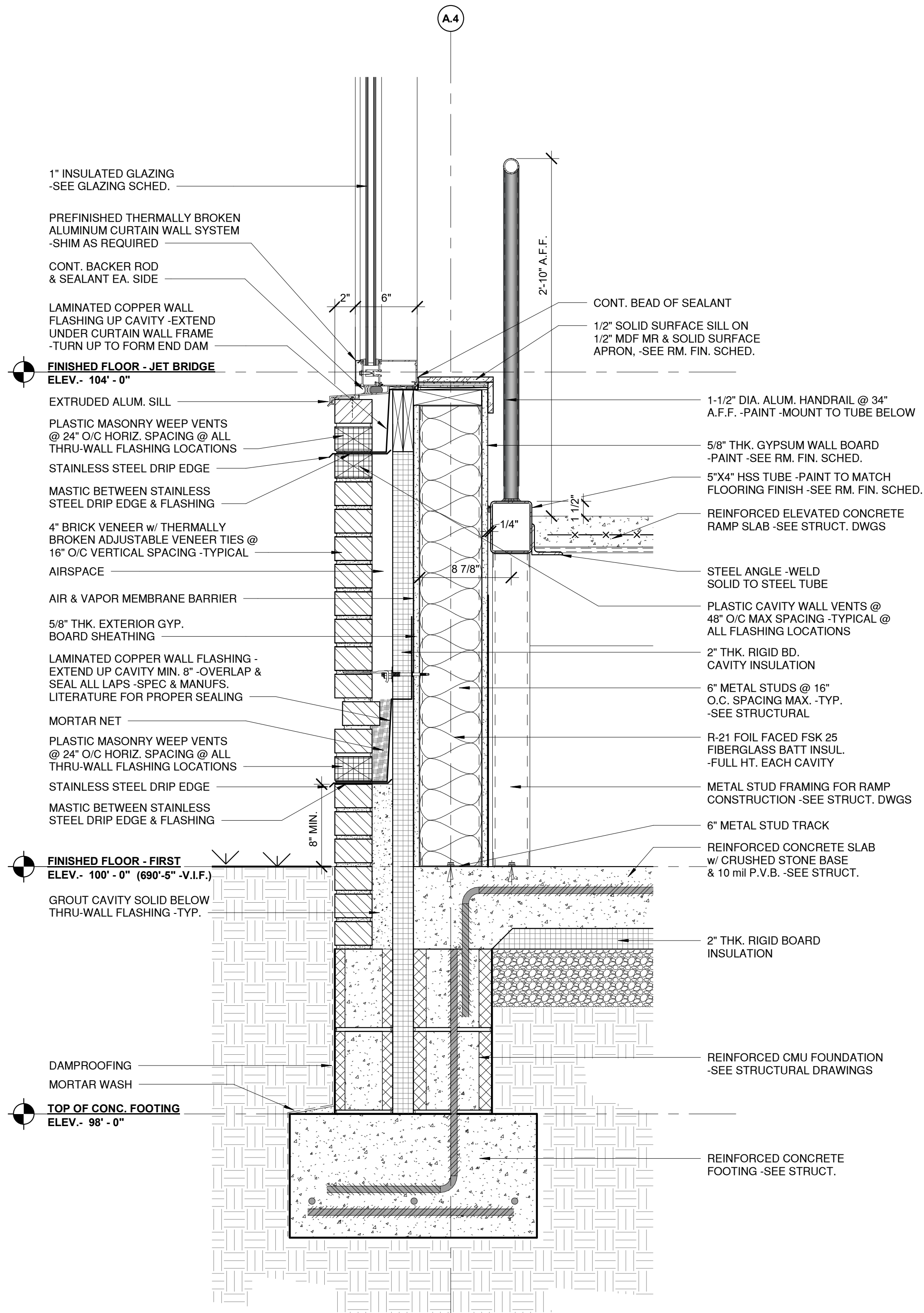
3  
AR08.104  
DETAIL @ EXTERIOR CURTAIN WALL SILL  
1 1/2" = 1'-0"

2  
AR08.104  
DETAIL @ CONCRETE SLAB  
1 1/2" = 1'-0"

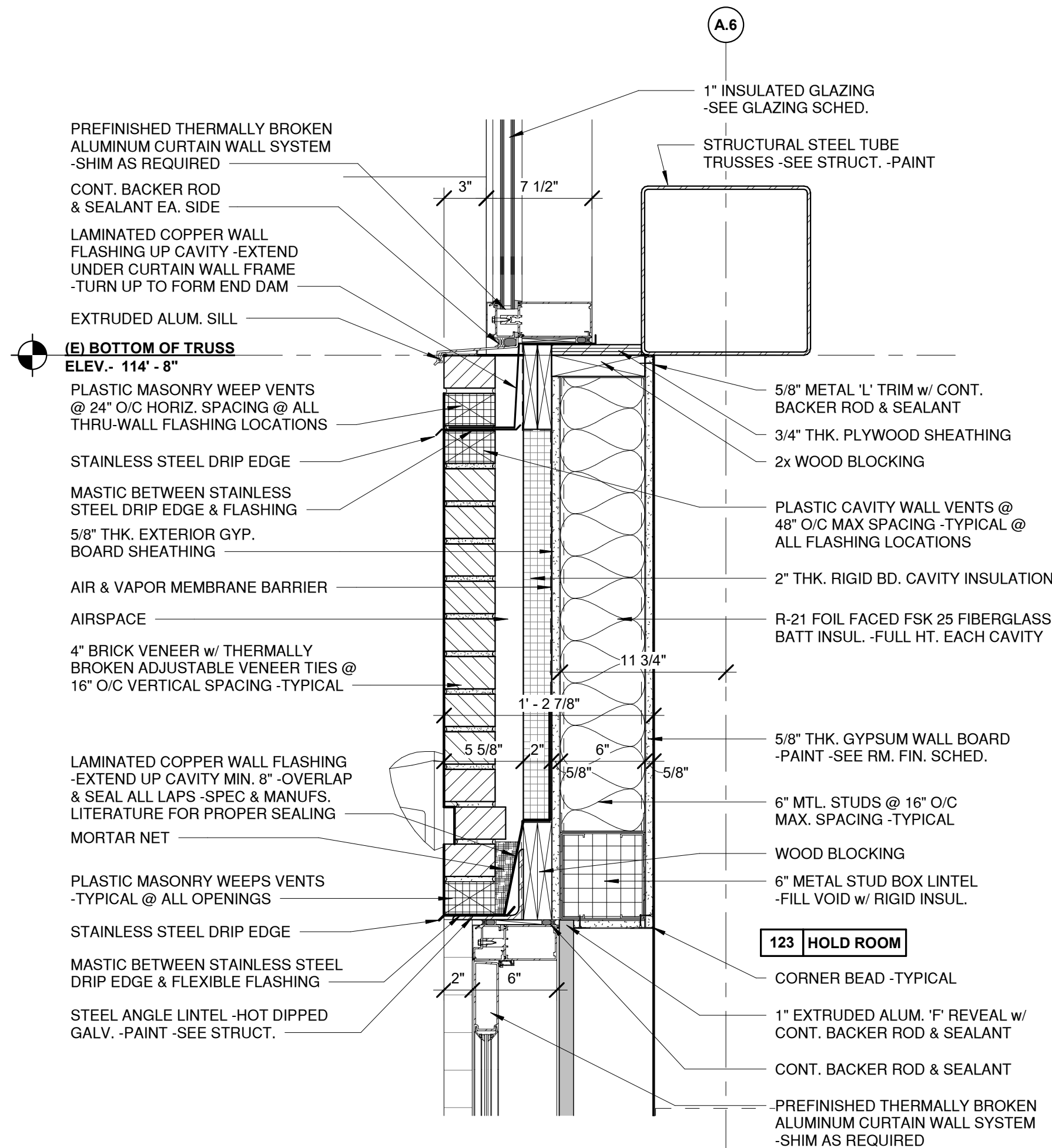


1  
AR08.104  
SECTION DETAIL @ SOFFIT PANELS  
3" = 1'-0"  
3" = 1'-0"  
SCALE  
FEET

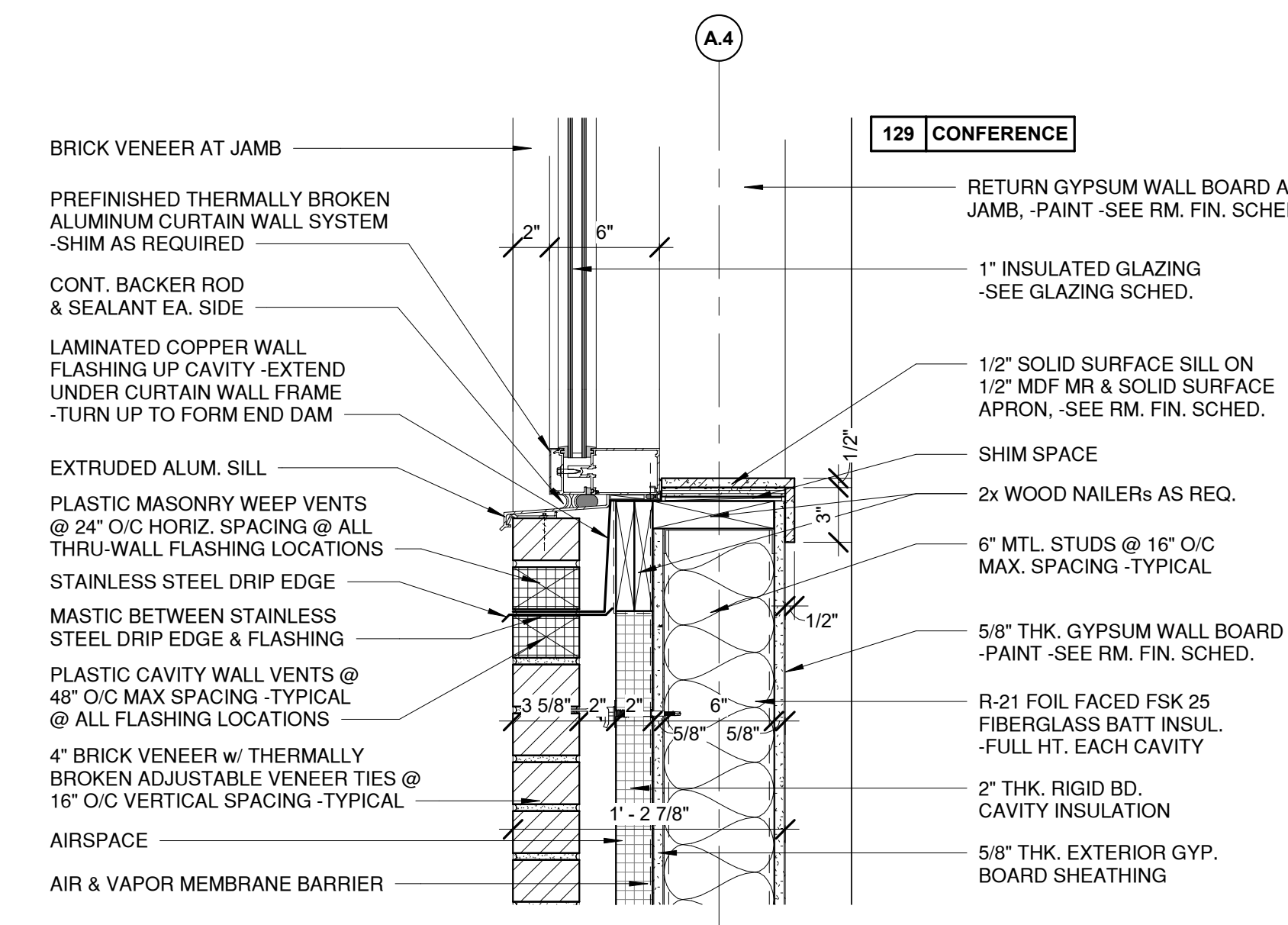




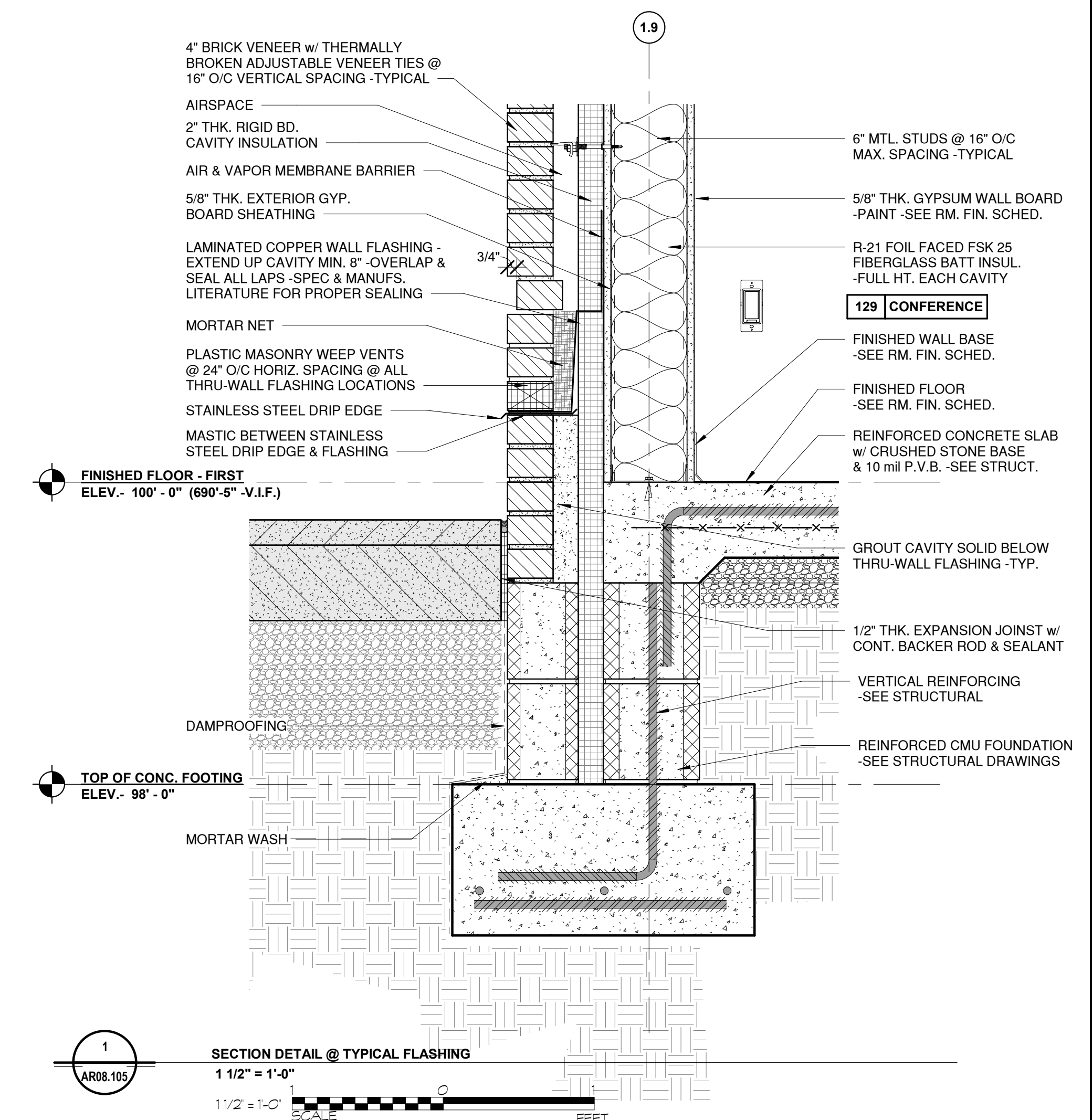
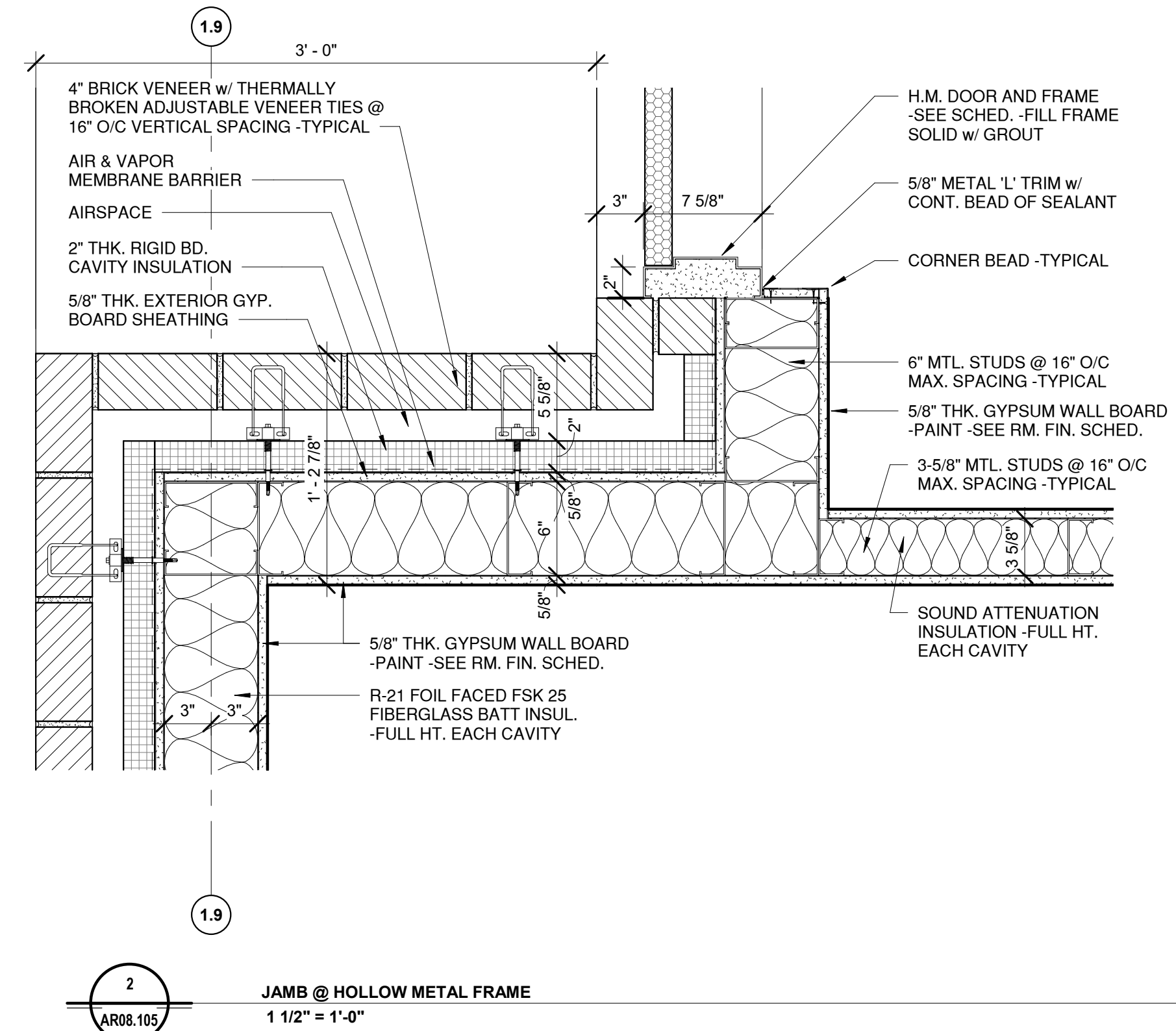
5  
AR08.105  
DETAIL @ ALUM. SILL @ INTERIOR RAMP  
1 1/2" = 1'-0"



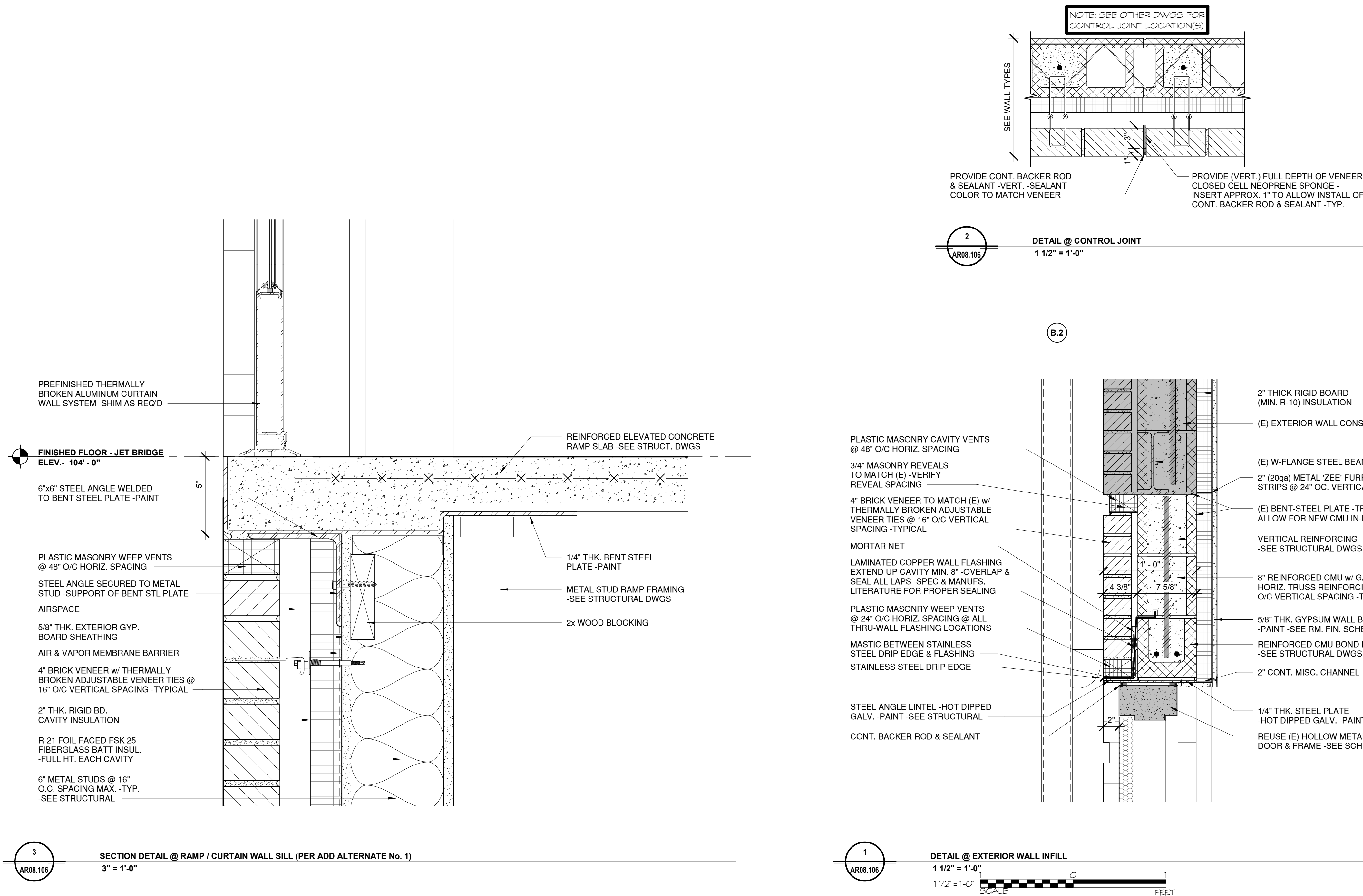
4  
AR08.105  
DETAIL @ EXTERIOR ALUM. CURTAIN WALL  
1 1/2" = 1'-0"



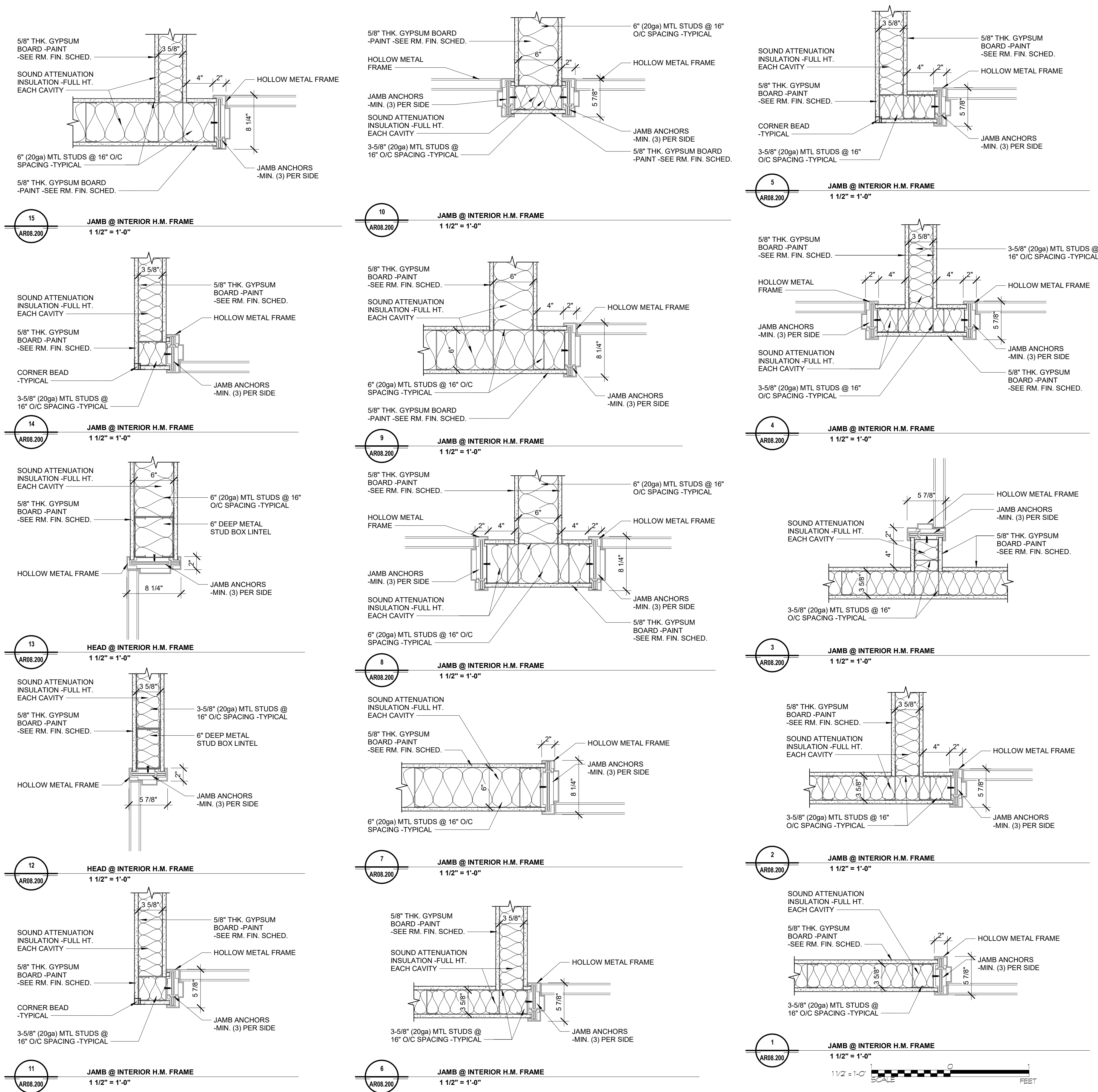
3  
AR08.105  
TYPICAL SILL DETAIL @ ALUM. FRAME  
1 1/2" = 1'-0"



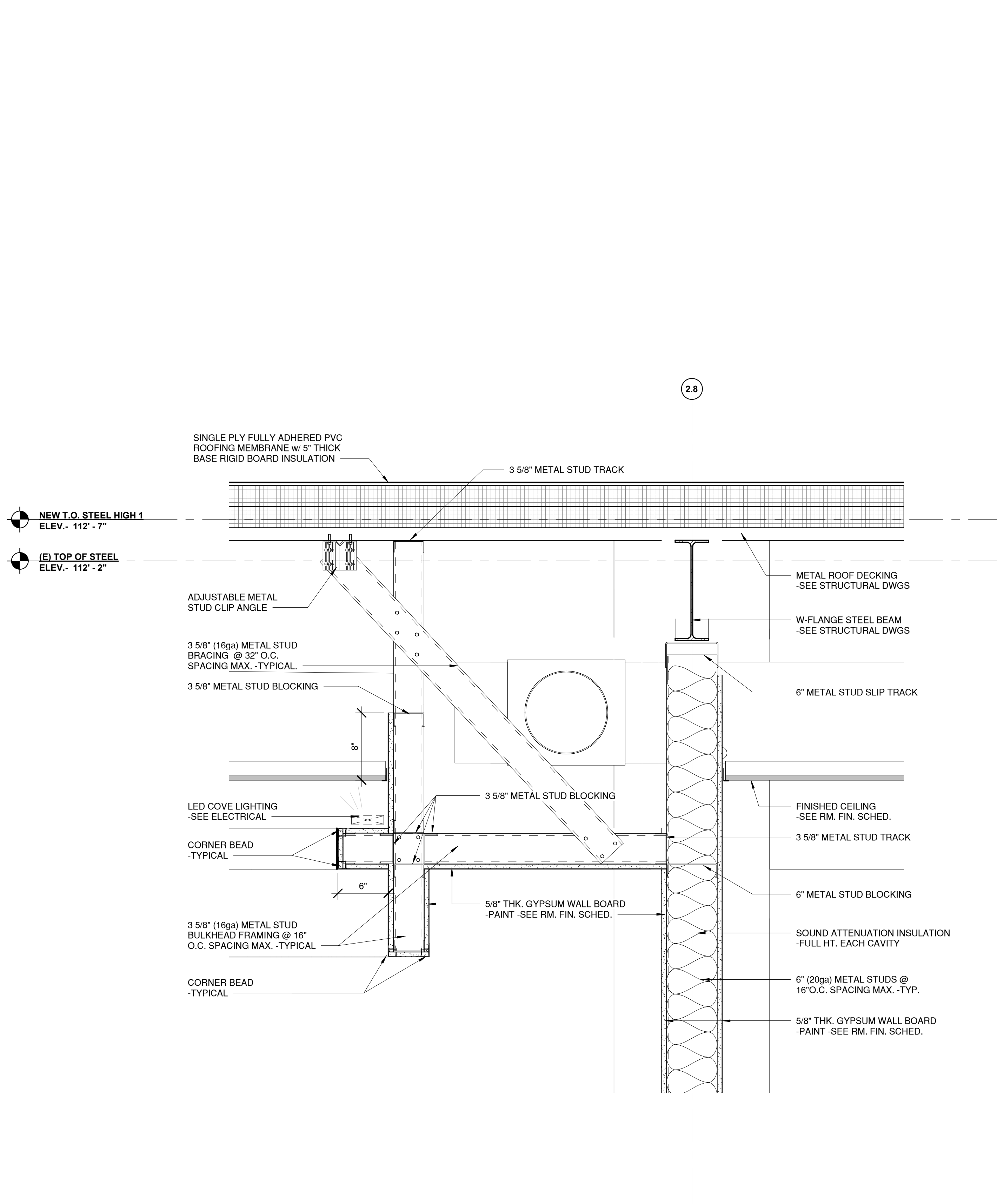




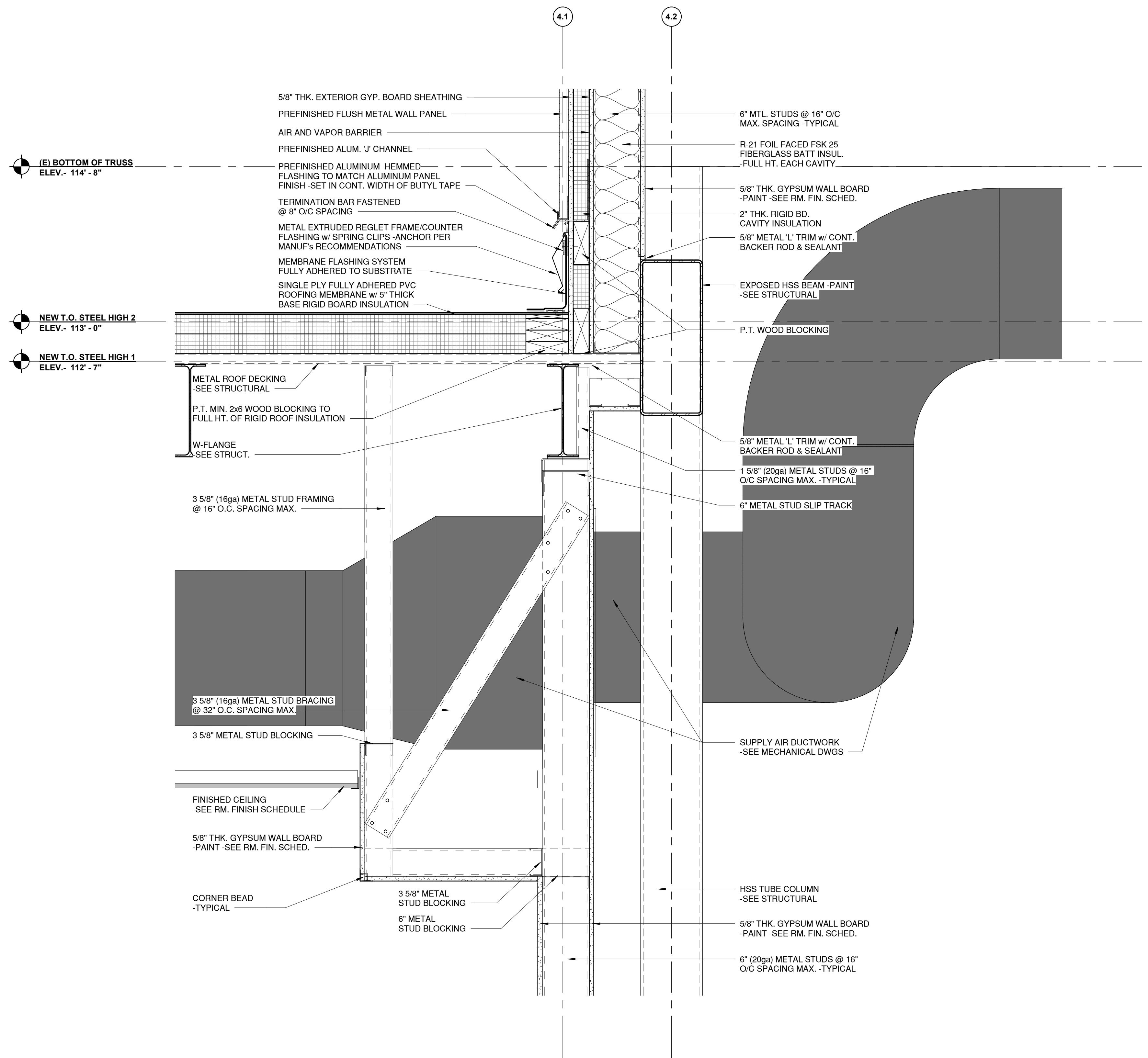






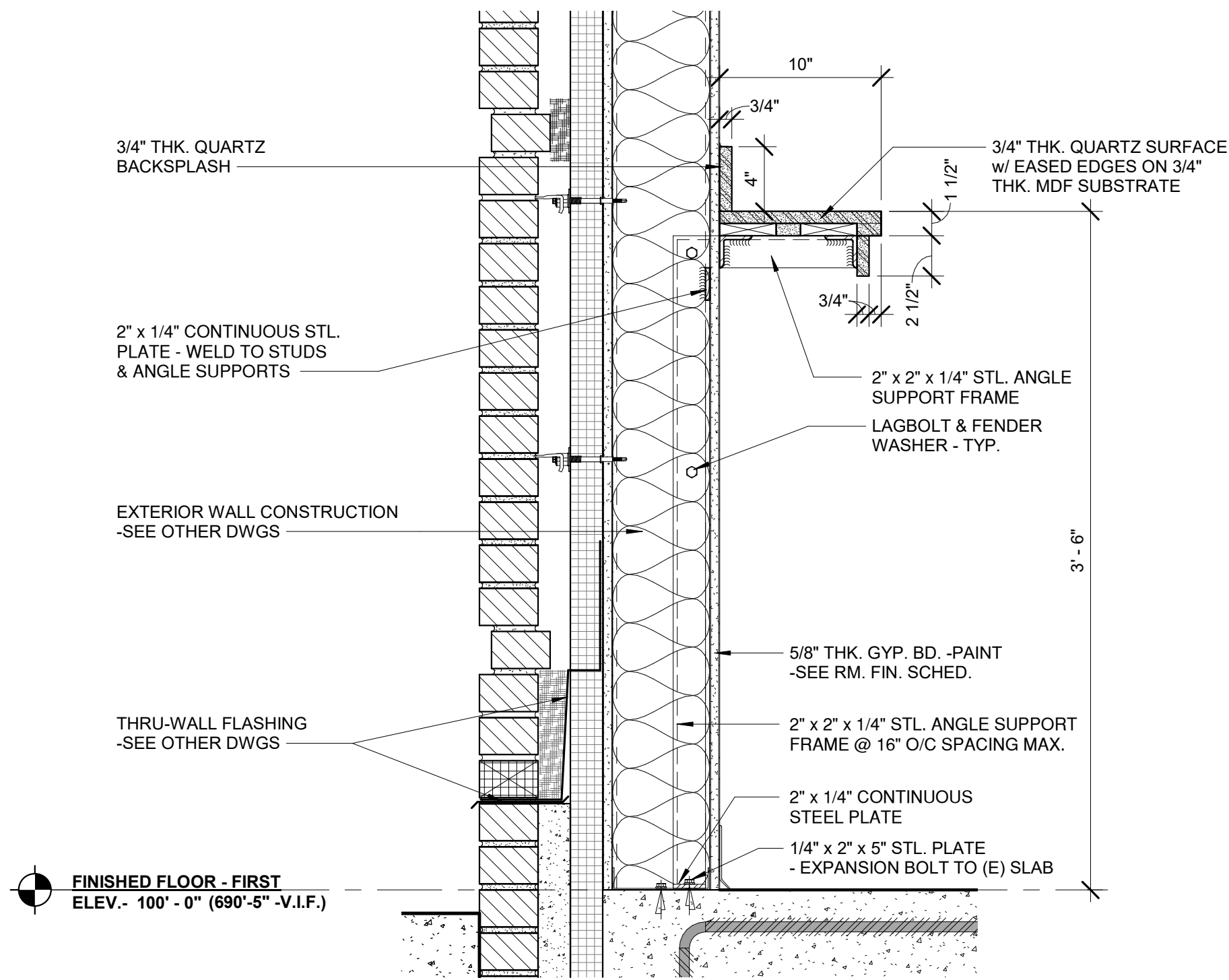


3  
AR08.201  
DETAIL @ GYPSUM BOARD BULKHEAD  
1 1/2" = 1'-0"

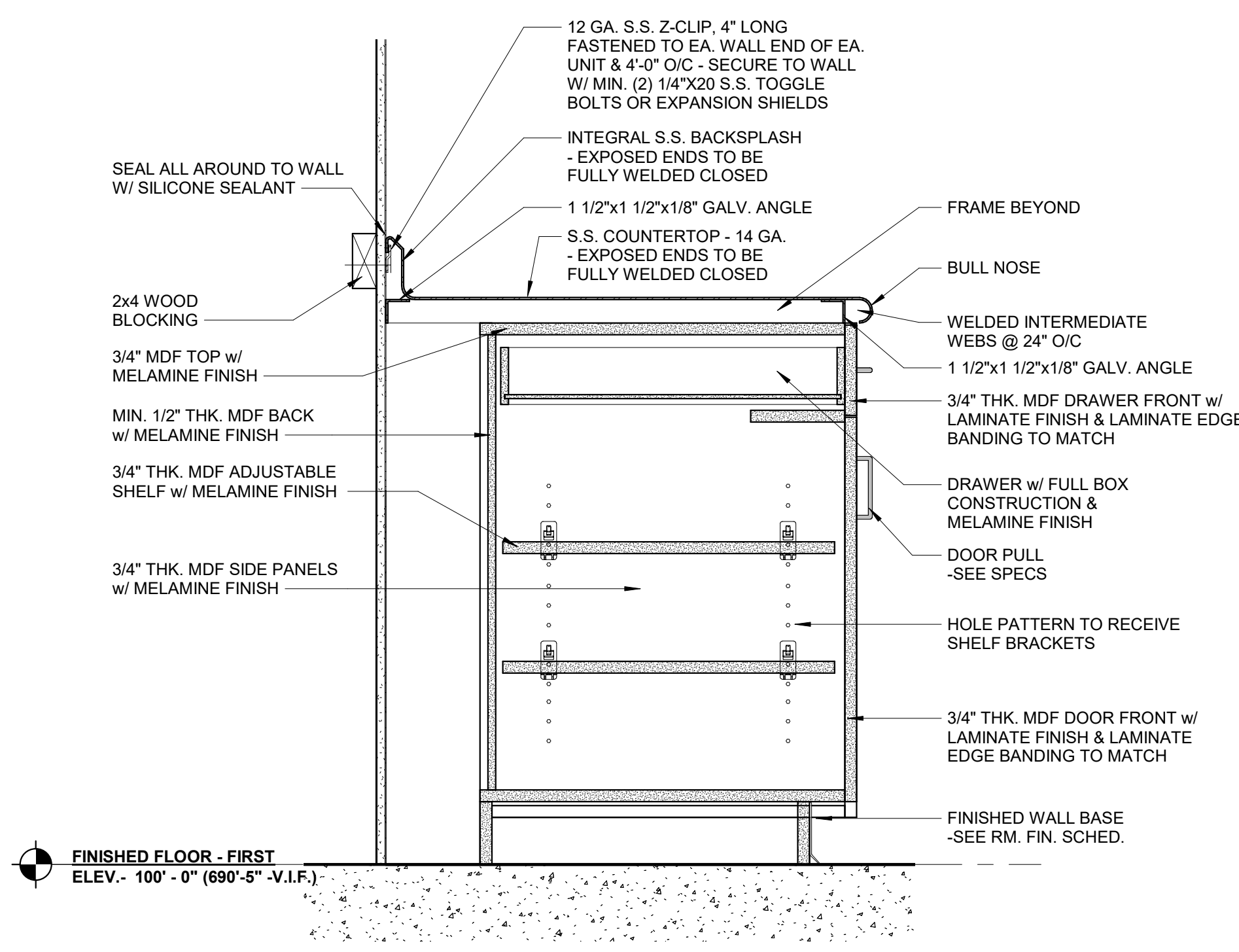


1  
AR08.201  
DETAIL @ GYPSUM BOARD BULKHEAD  
1 1/2" = 1'-0"  
1 1/2" = 1'-0"  
SCALE  
FEET

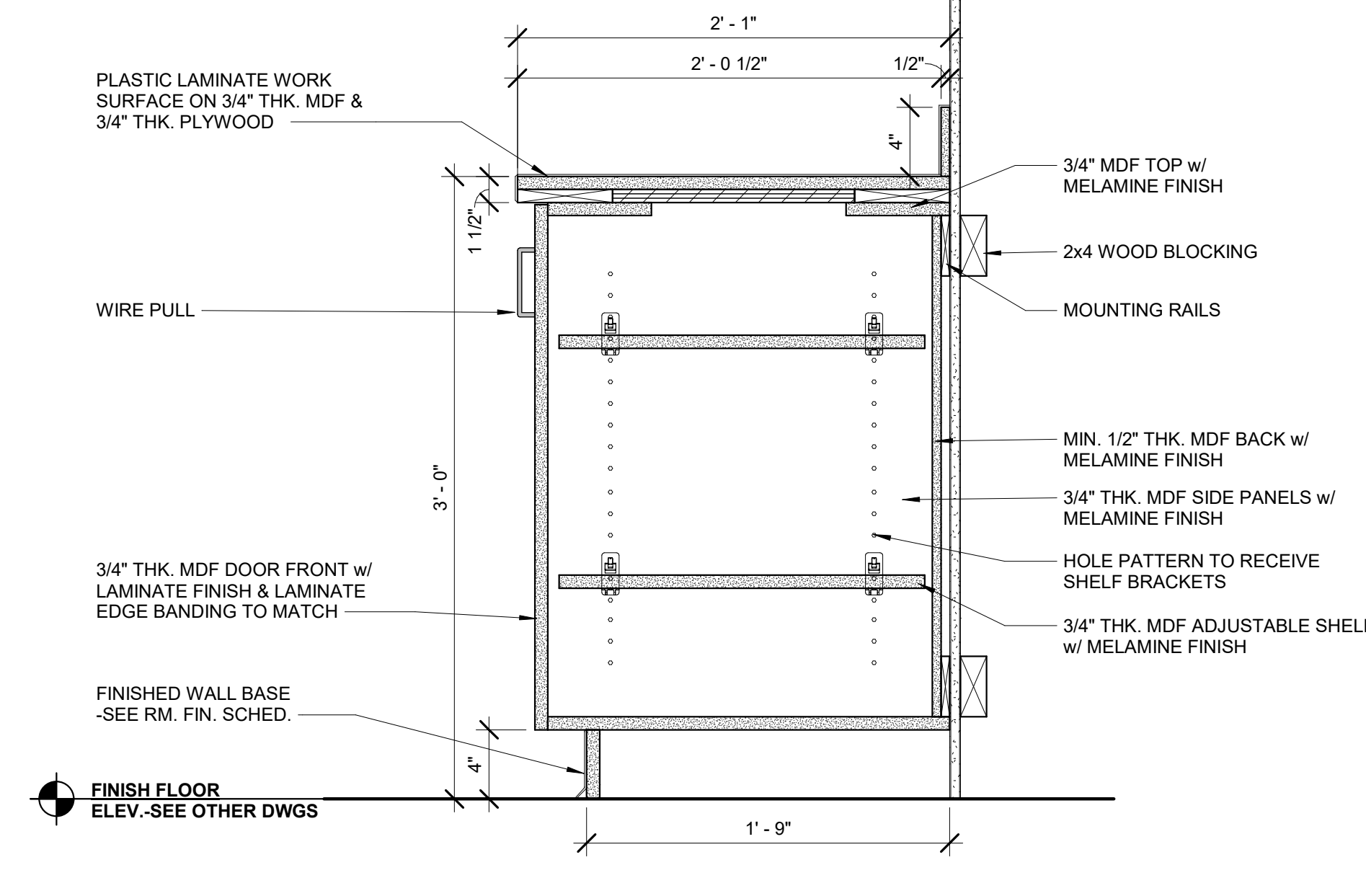




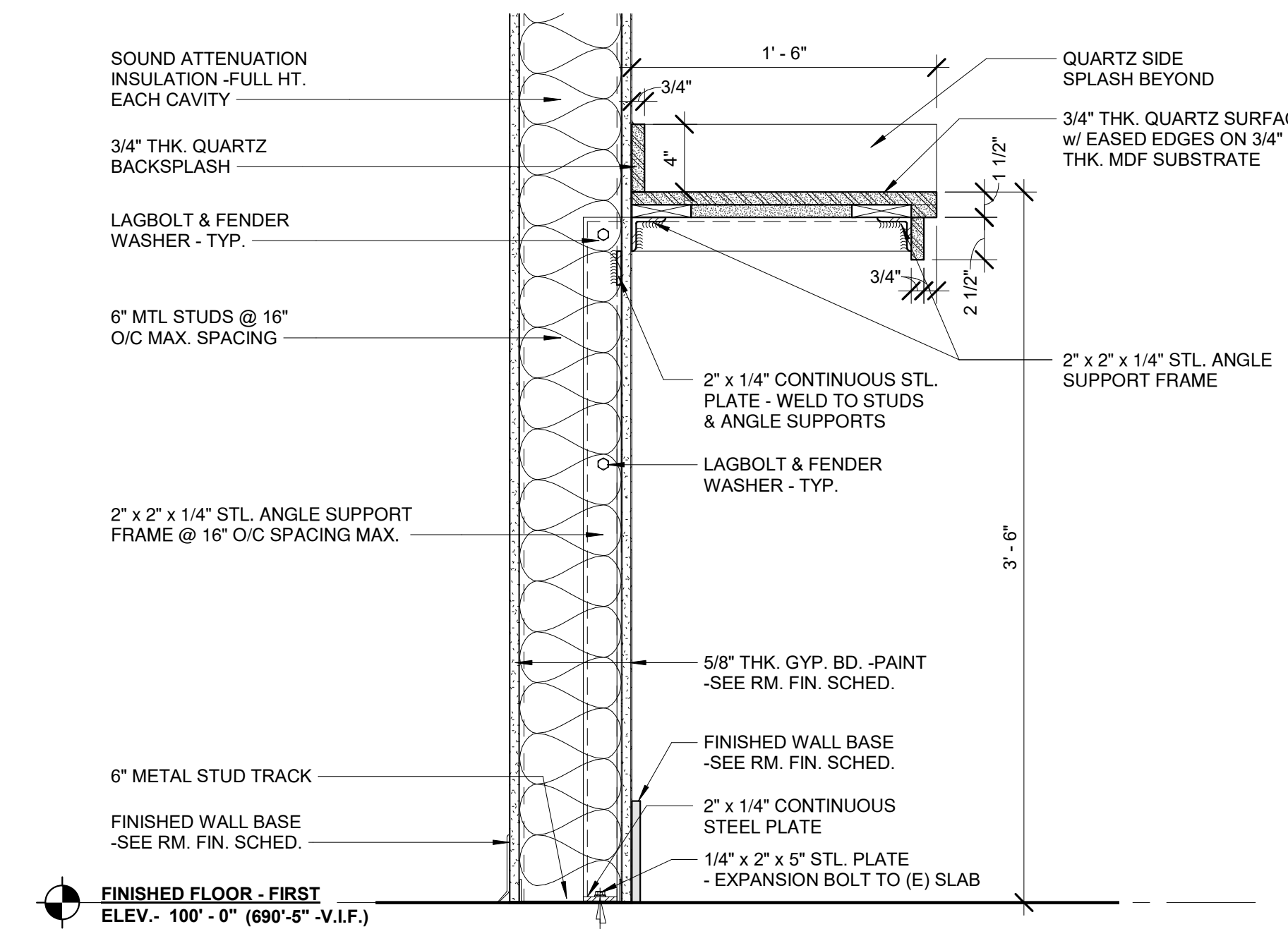
6 SECTION @ CHARGING STATION COUNTER  
1 1/2" = 1'-0"



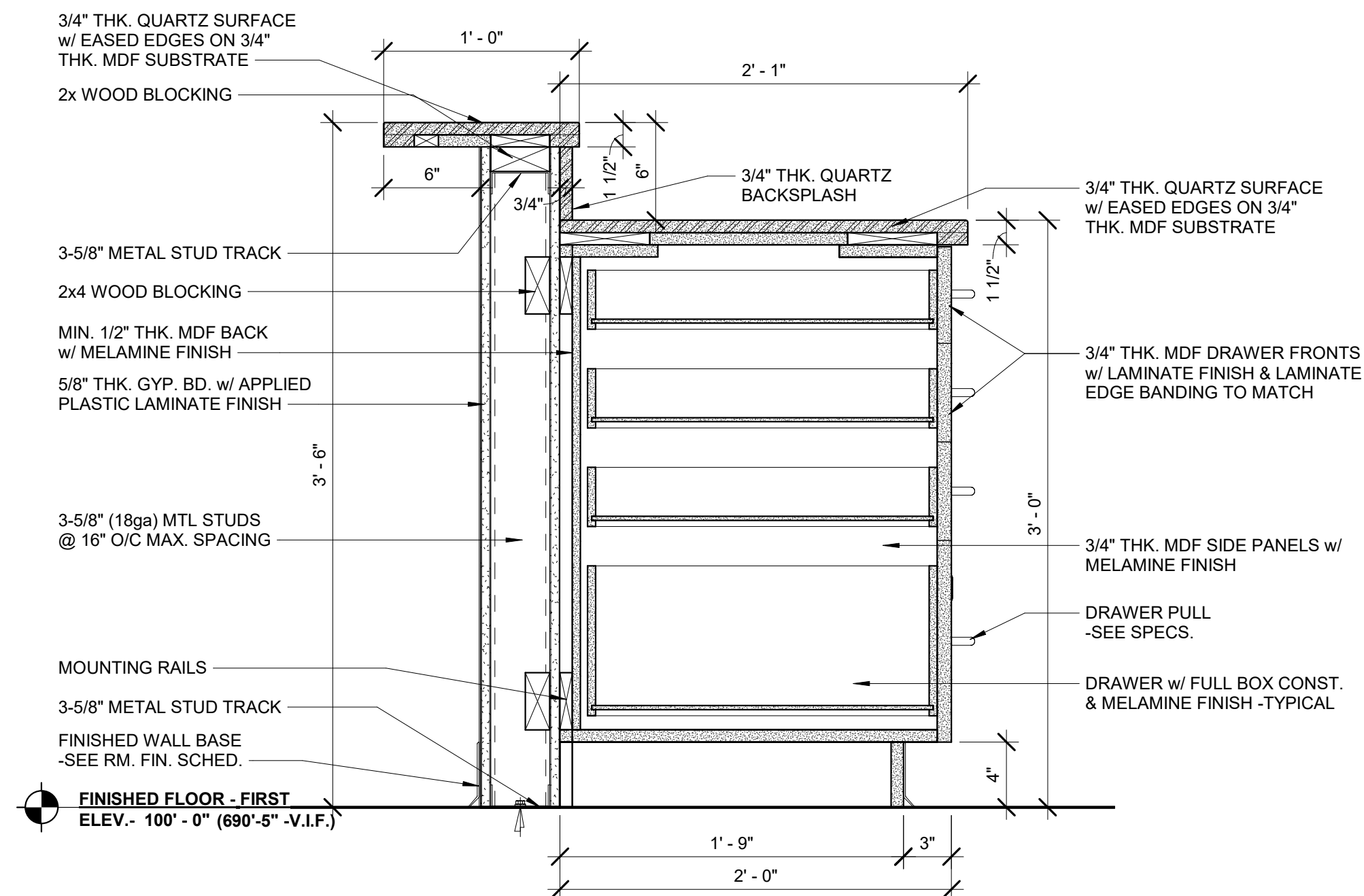
4 CASEWORK SECTION @ CAFE WORK COUNTER  
1 1/2" = 1'-0"



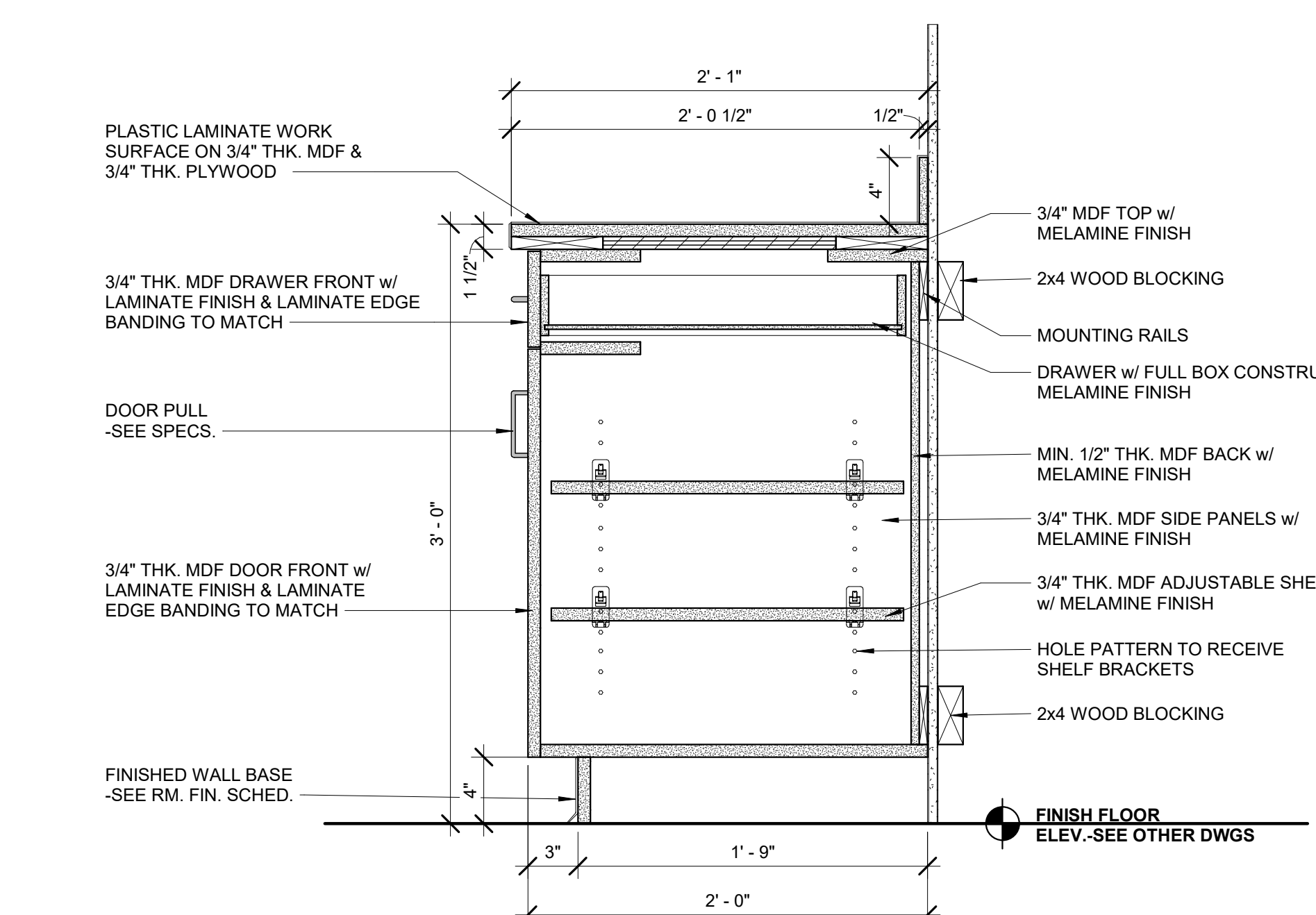
2 DETAIL @ TYPICAL BASE CABINET  
1 1/2" = 1'-0"



5 SECTION @ CHARGING STATION COUNTER  
1 1/2" = 1'-0"



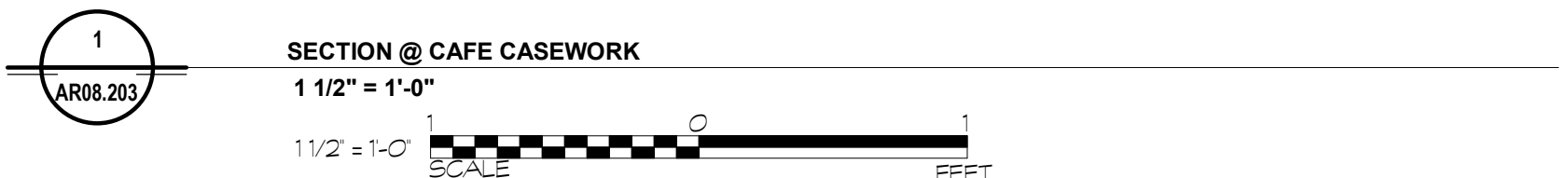
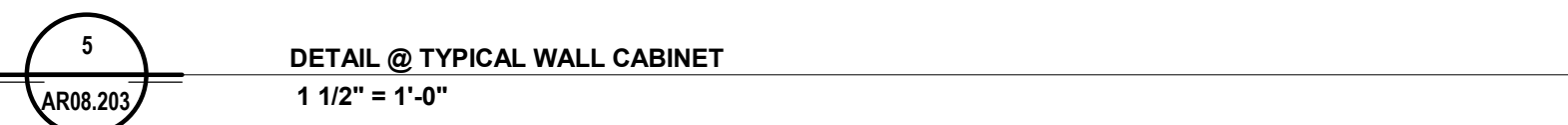
3 SECTION @ CONCESSIONS CASEWORK (PER ADD ALTERNATE No. 3)  
1 1/2" = 1'-0"



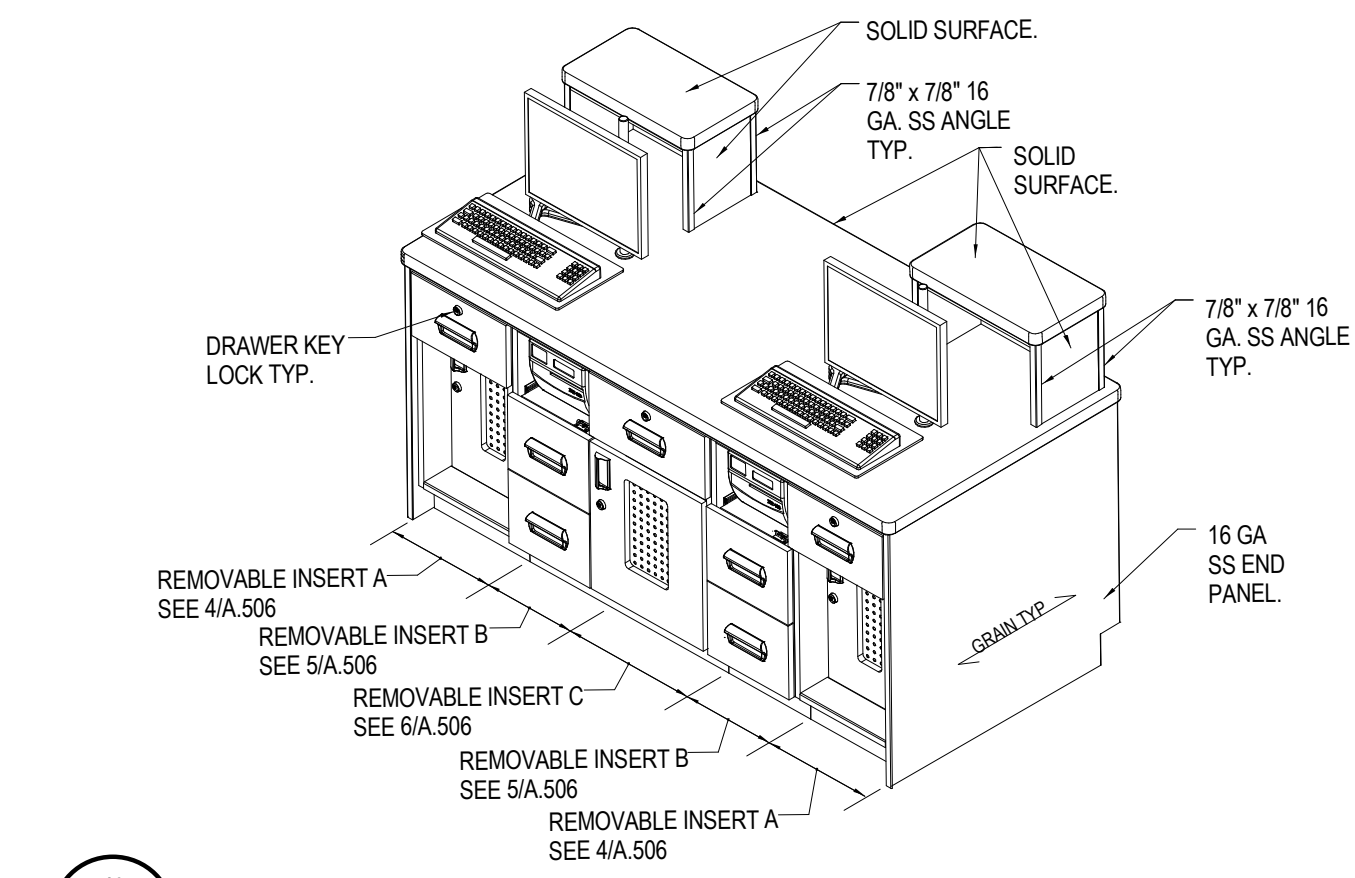
1 DETAIL @ TYPICAL BASE CABINET  
1 1/2" = 1'-0"



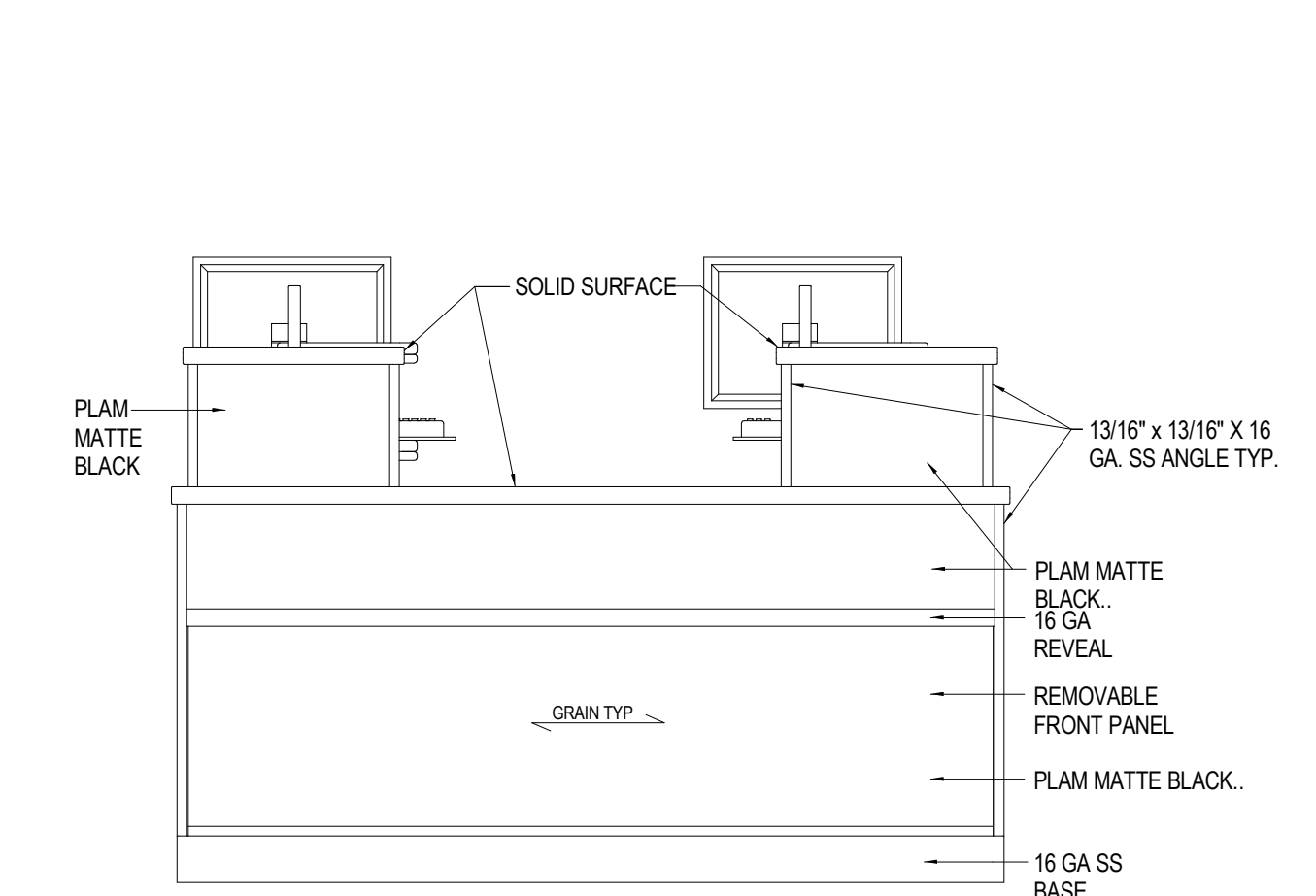




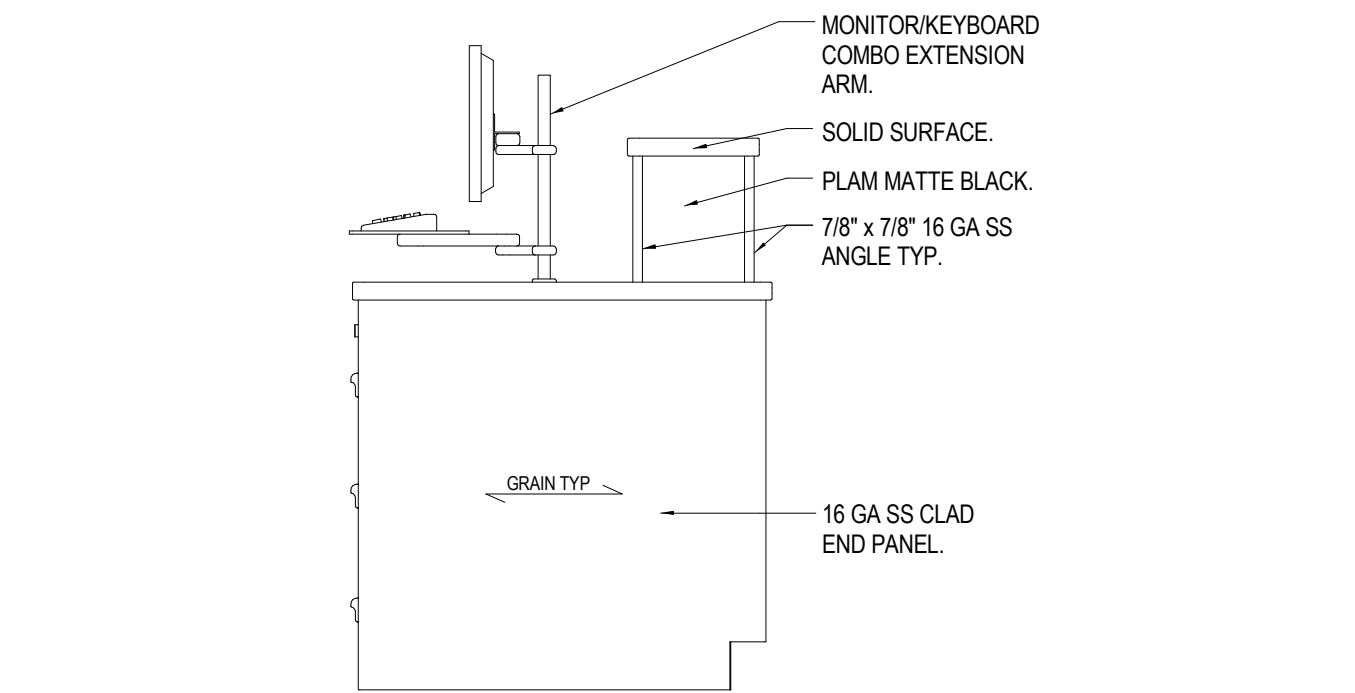




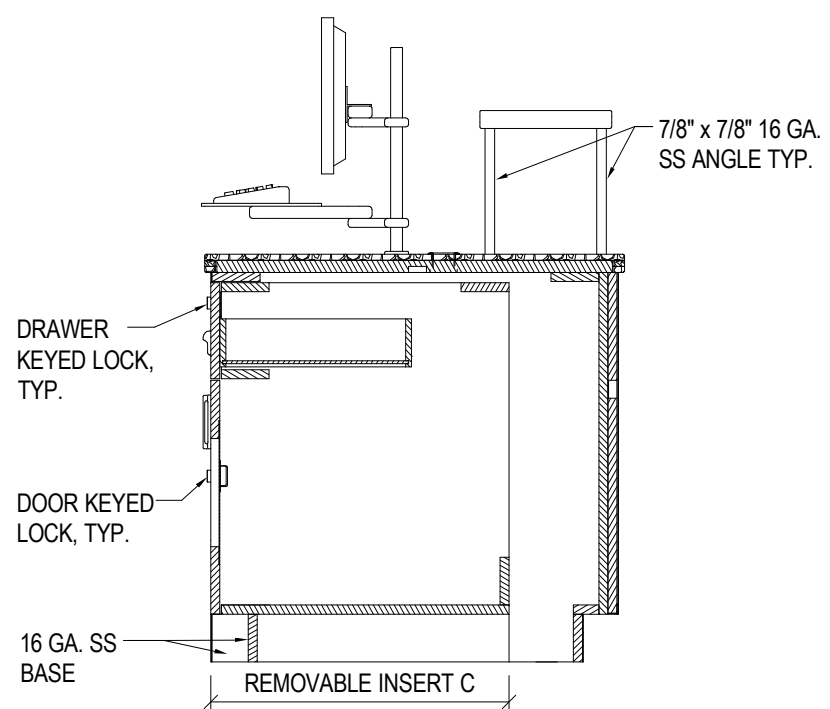
10  
AR08.204  
GATE COUNTER ISOMETRIC (BASE BID)  
3/4" = 1'-0"



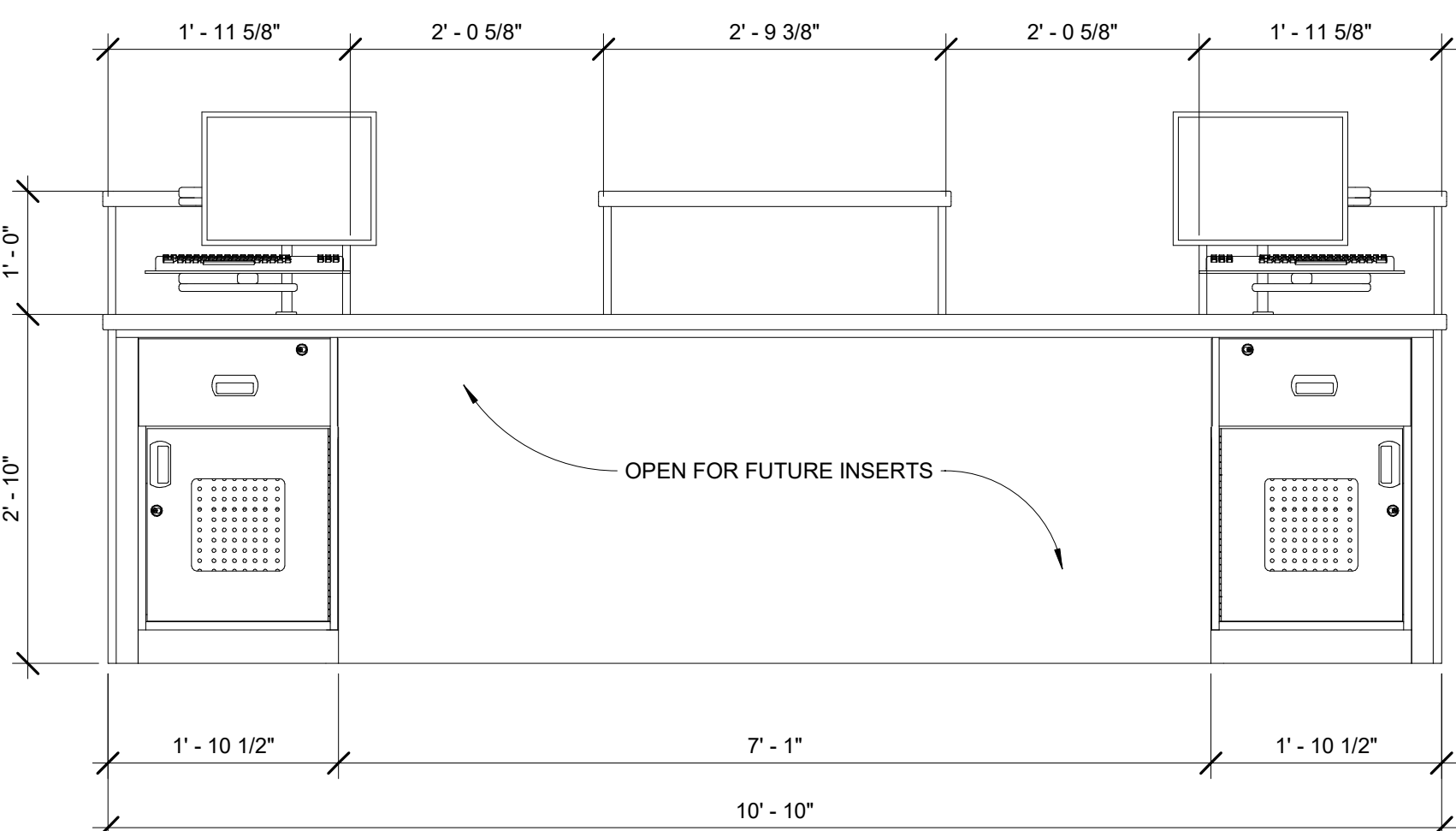
9  
AR08.204  
GATE COUNTER CUSTOMER ELEV (BASE BID)  
3/4" = 1'-0"



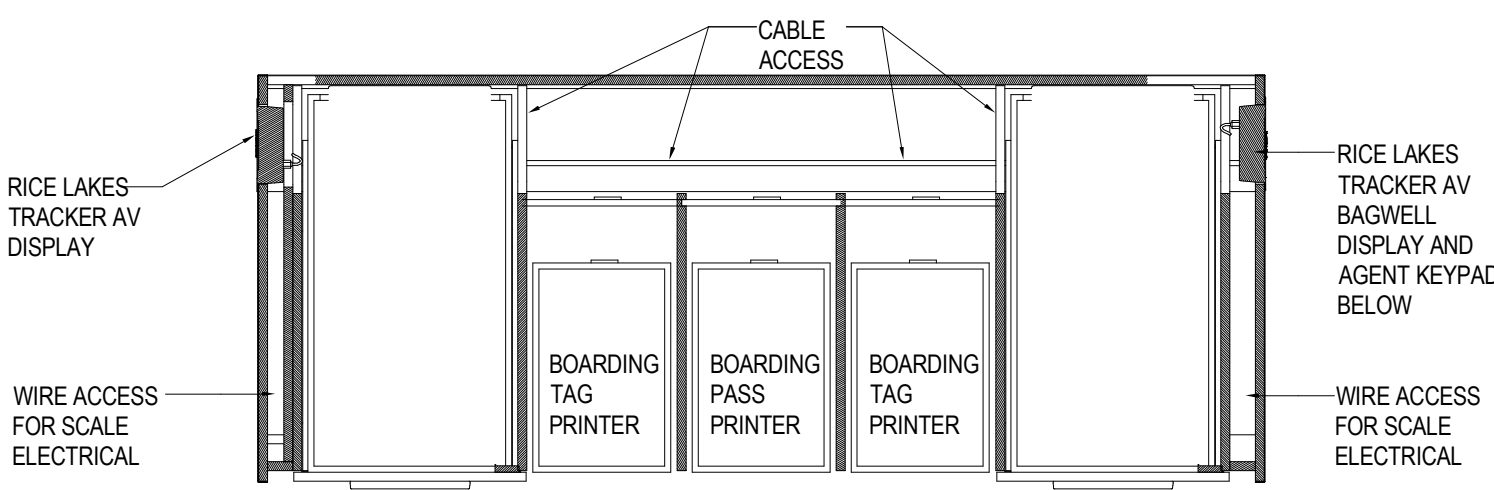
11  
AR08.204  
GATE COUNTER SIDE ELEV (BASE BID)  
3/4" = 1'-0"



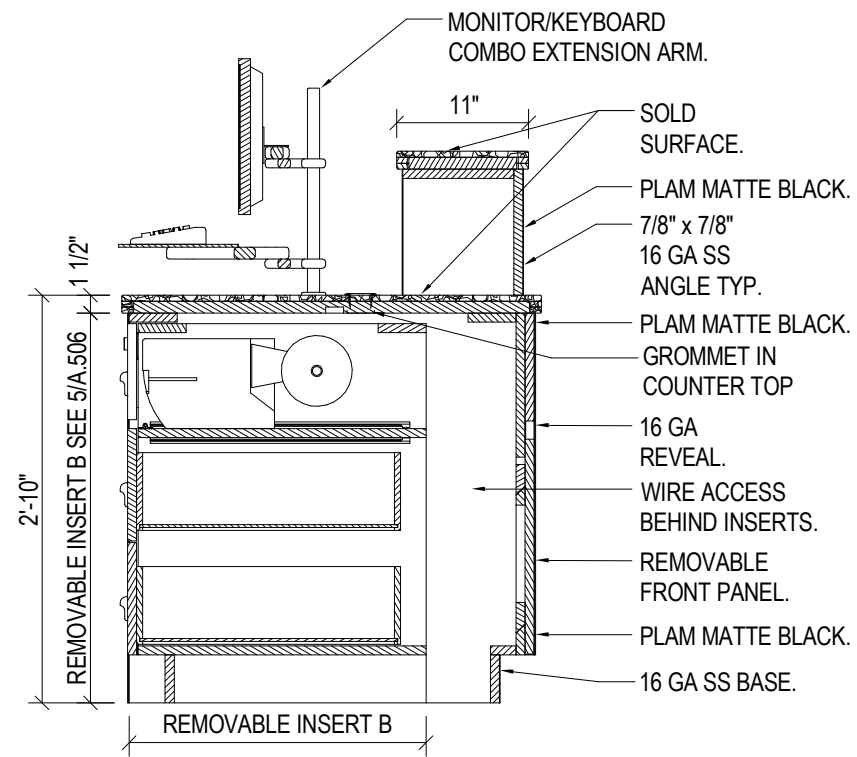
8  
AR08.204  
GATE COUNTER INSERT C SECTION (BASE BID)  
3/4" = 1'-0"



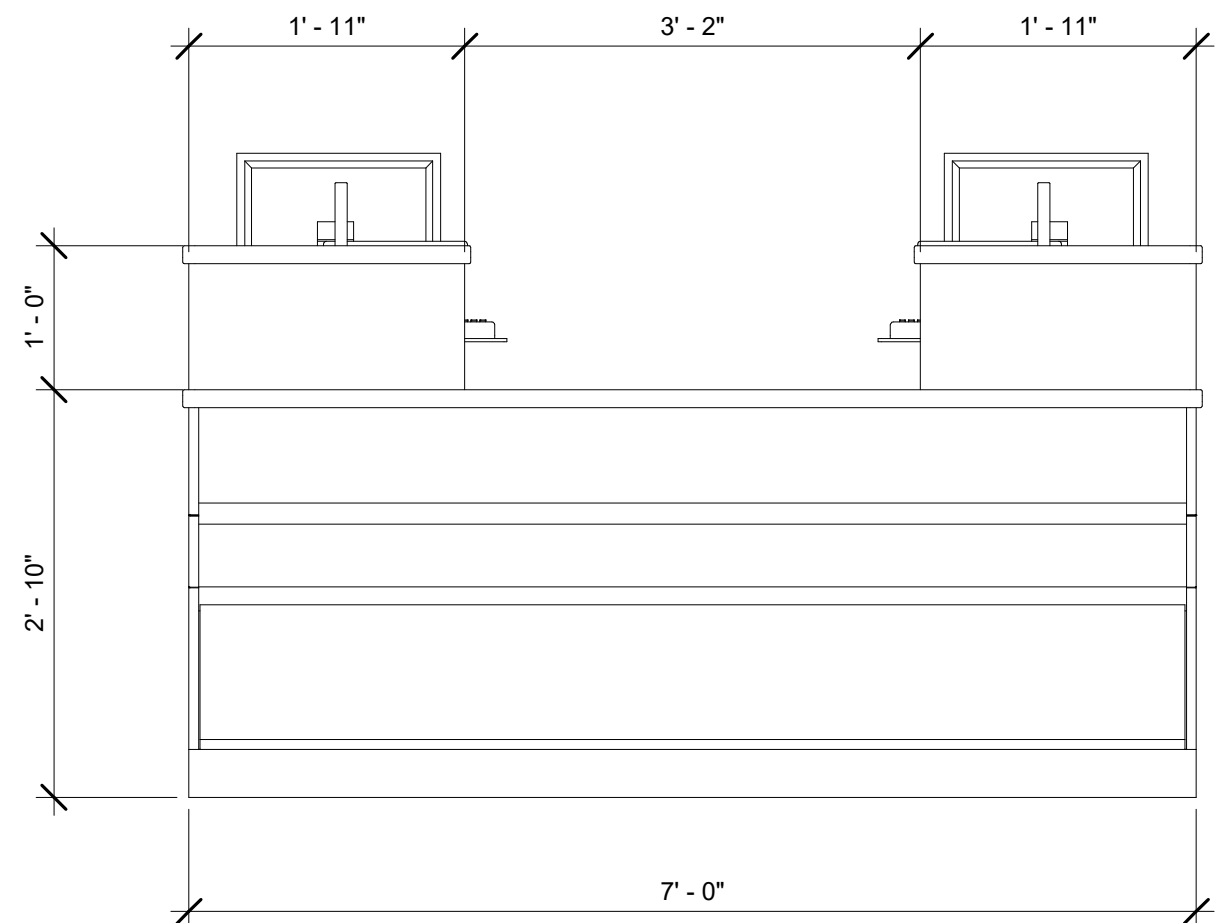
4  
AR08.204  
TICKET COUNTER AGENT ELEV 2 (ADD ALT. No. 3 / BASE BID - NO WORK)  
3/4" = 1'-0"



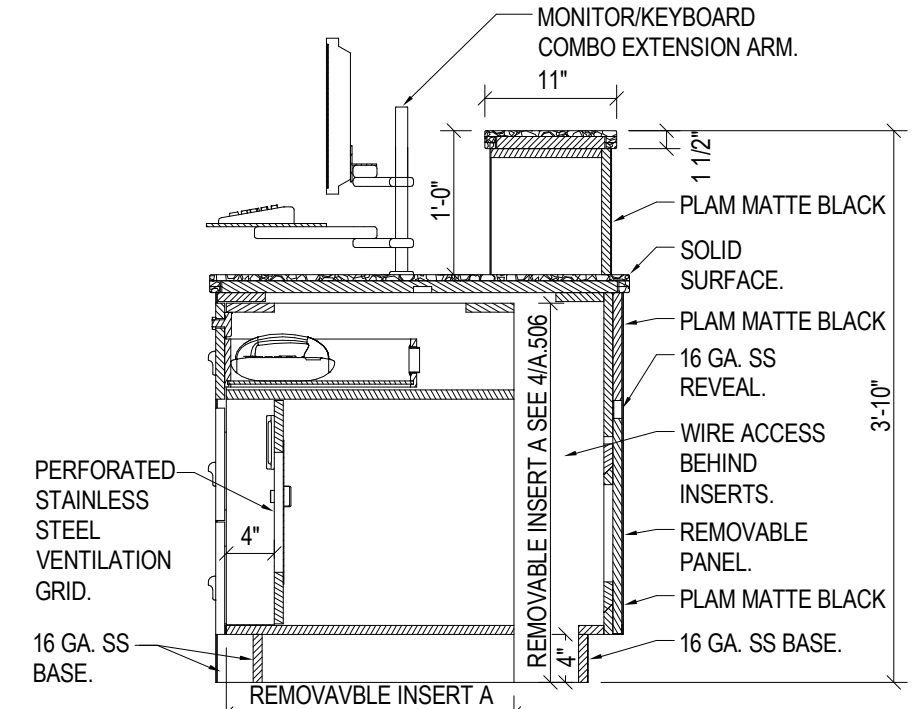
5  
AR08.204  
TICKET COUNTER SECTION A\_A (ADD ALT. No. 3 / BASE BID - NO WORK)  
3/4" = 1'-0"



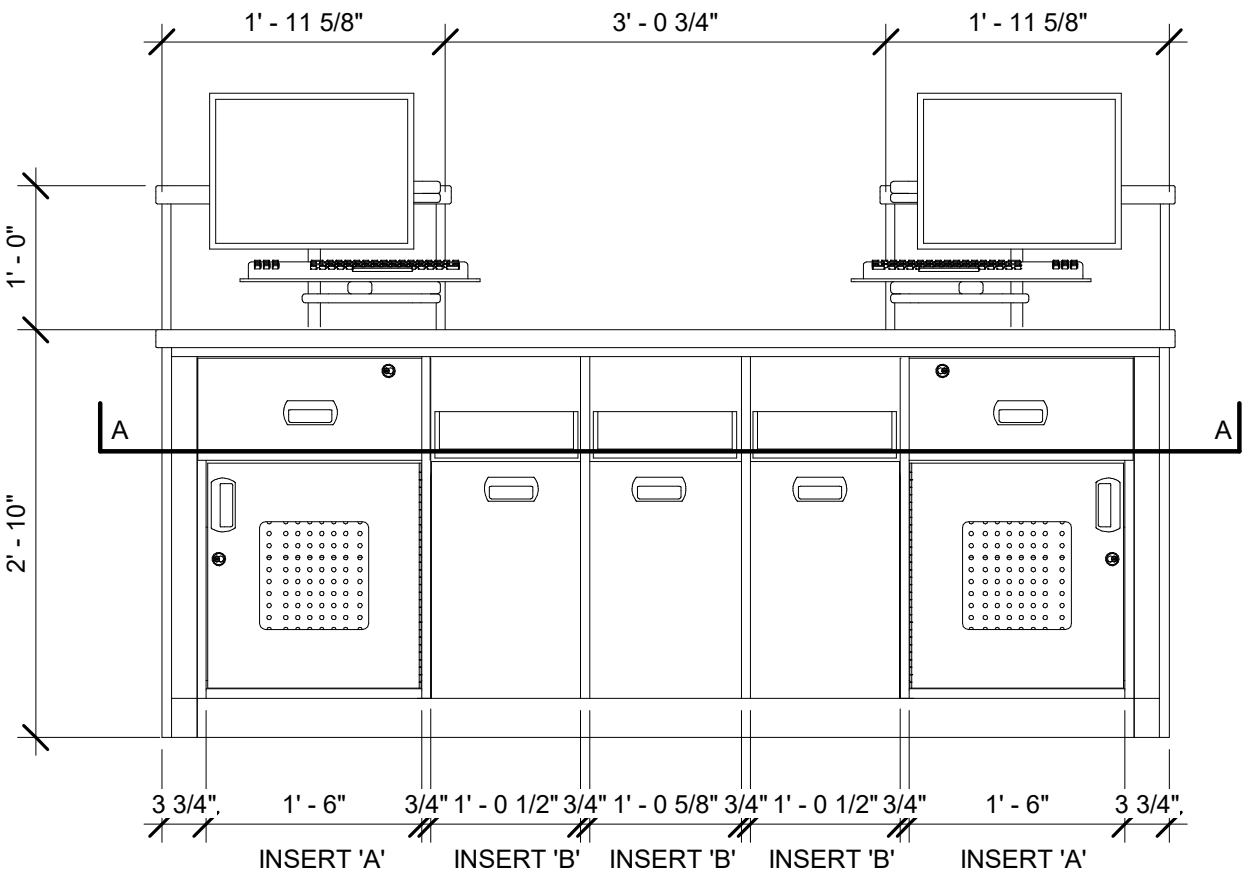
7  
AR08.204  
TICKET COUNTER INSERT B SECTION (ADD ALT. No. 3 / BASE BID - NO WORK)  
3/4" = 1'-0"



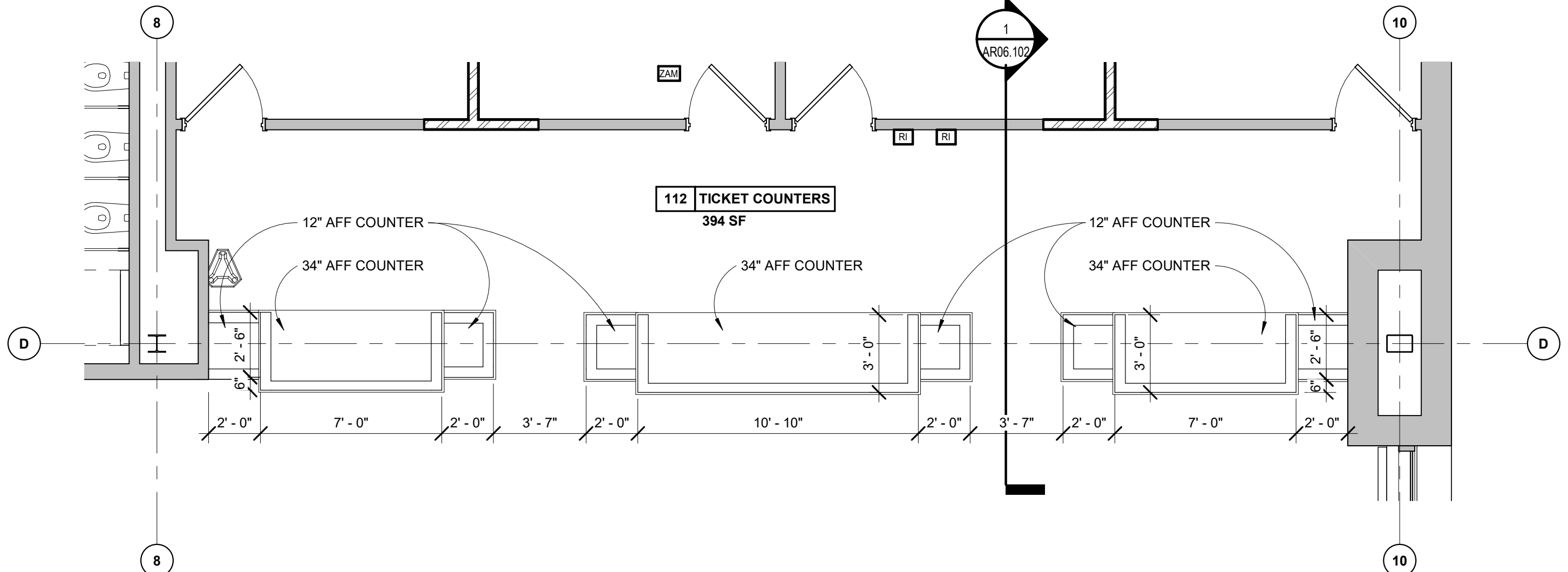
3  
AR08.204  
TICKET COUNTER CUST ELEV 1 (ADD ALT. No. 3 / BASE BID - NO WORK)  
3/4" = 1'-0"



6  
AR08.204  
TICKET COUNTER INSERT A SECTION (ADD ALT. No. 3 / BASE BID - NO WORK)  
3/4" = 1'-0"



2  
AR08.204  
TICKET COUNTER AGENT ELEV 1 (ADD ALT. No. 3 / BASE BID - NO WORK)  
3/4" = 1'-0"



1  
AR08.204  
ENLARGED PARTIAL PLAN @ TICKET COUNTER (ADD ALT. No. 3 / BASE BID - NO WORK)  
1/4" = 1'-0"



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.  
6031 UNIVERSITY BLVD.  
SUITE 330  
ELLCOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602

**BFM**  
BUSHEY FEIGHT MORIN ARCHITECTS  
473 NORTH POTOMAC STREET  
HAGERSTOWN, MD 21740  
301.733.5600 BFM PROJECT # 18045



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 6157  
Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:			
CHECKED:			
APPROVED:			



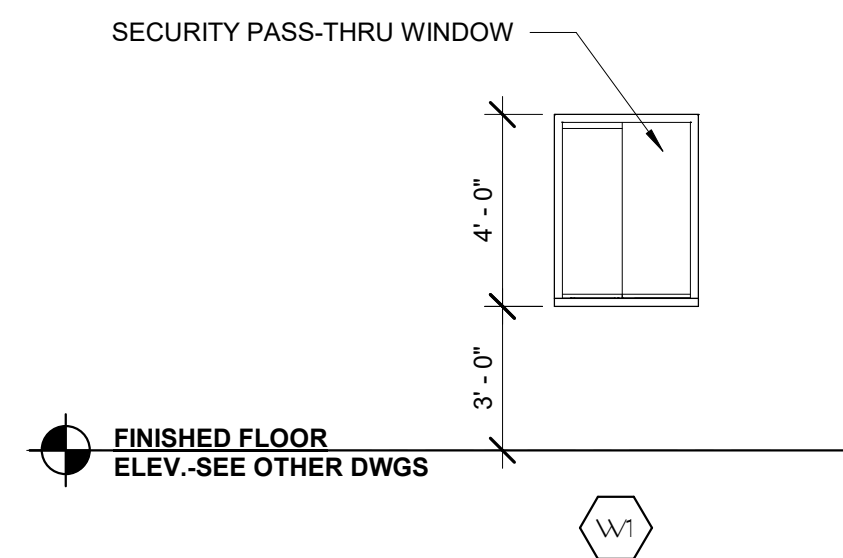
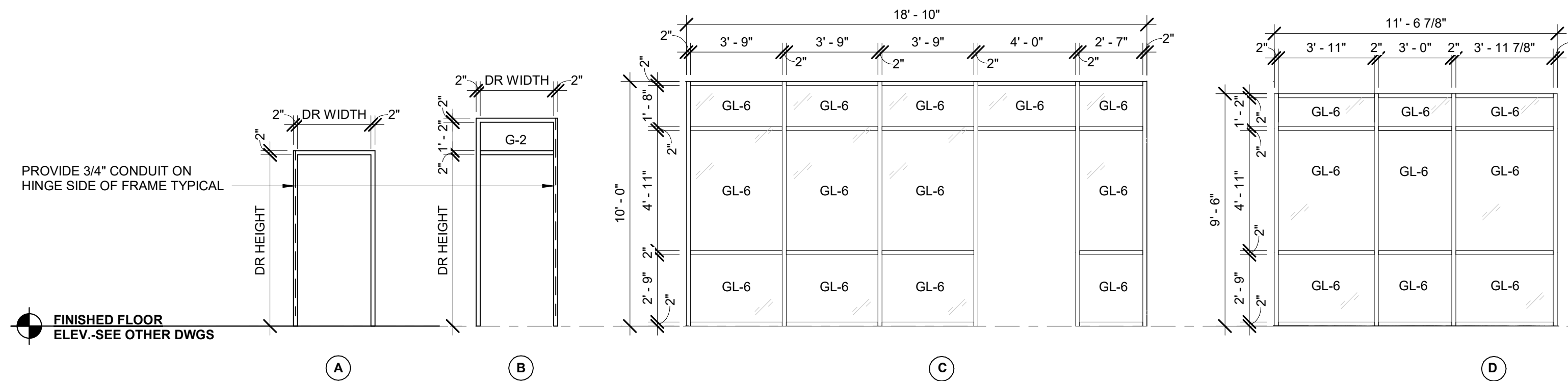
PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>INTERIOR DETAILS</b>	
SCALE: As indicated	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**AR08.204**  
72 OF 117



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Technical drawing of a window unit showing dimensions and labels.

**Dimensions:**

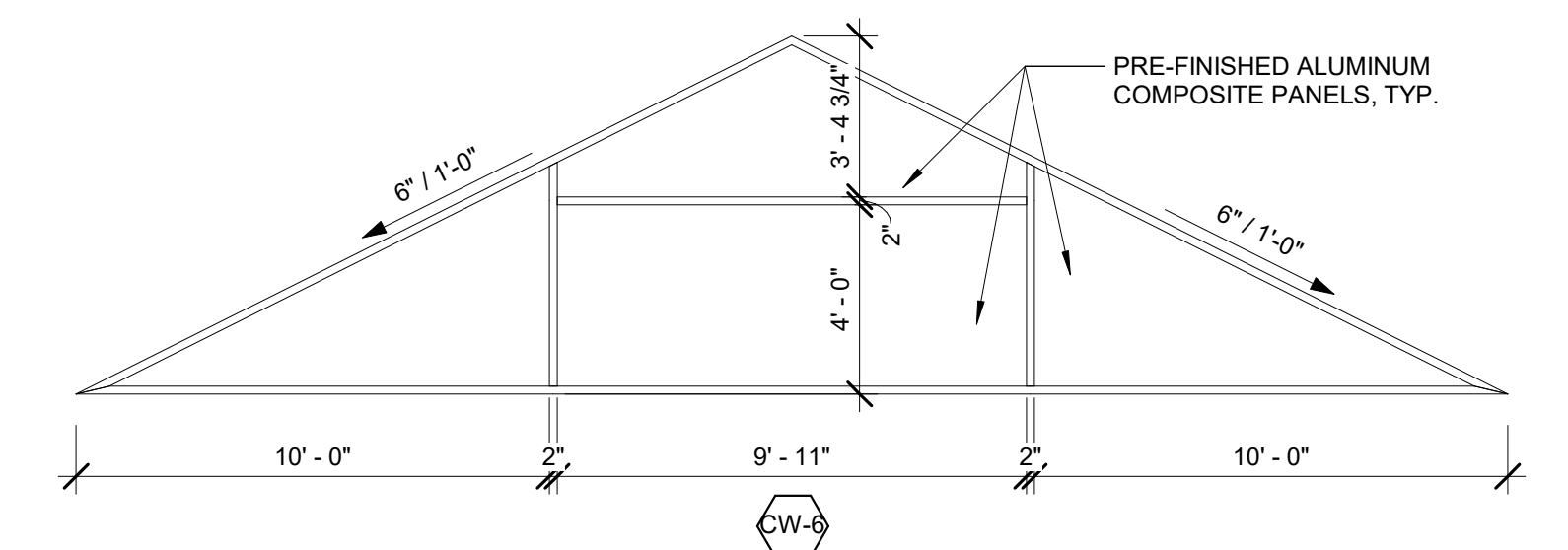
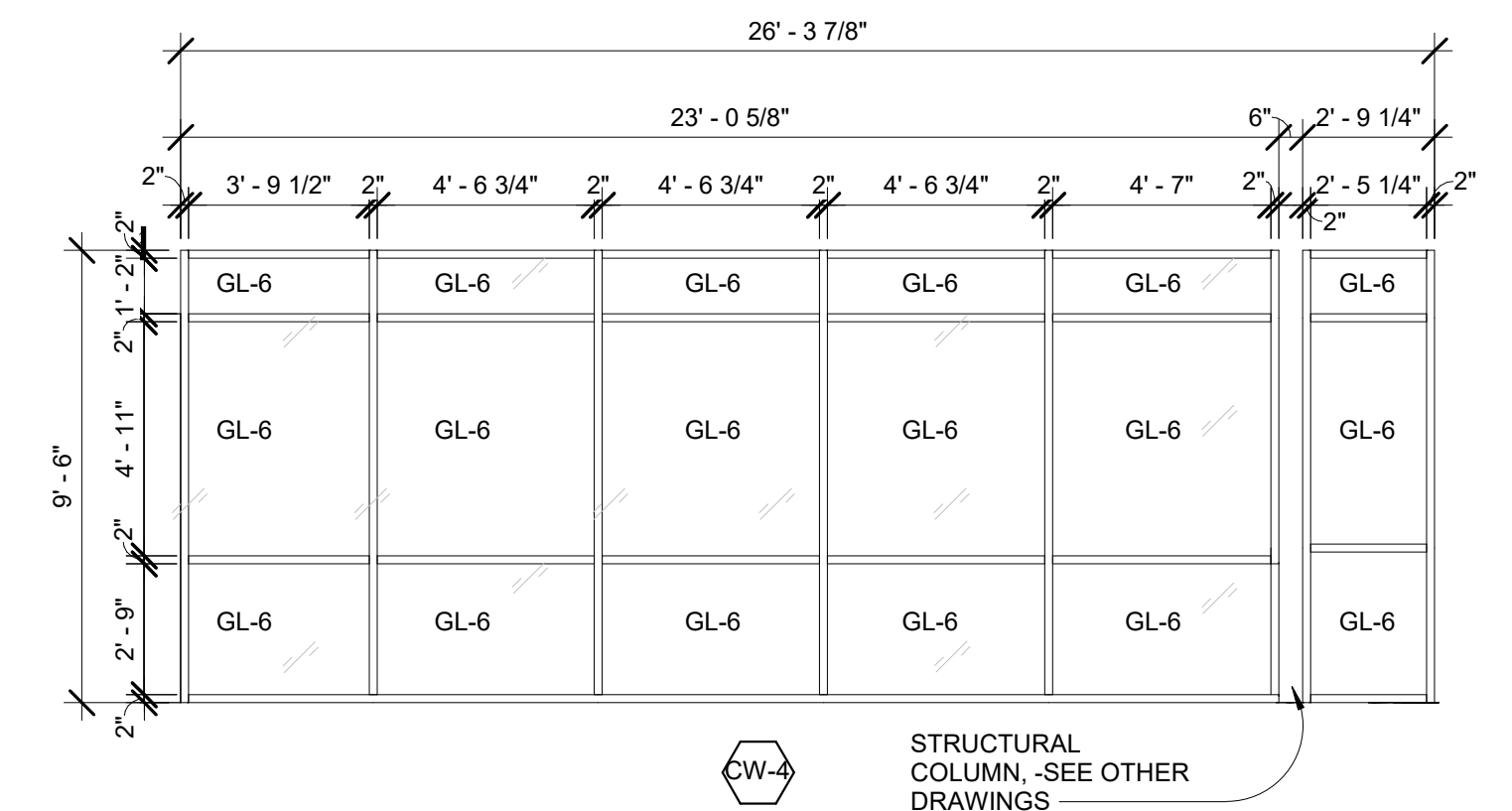
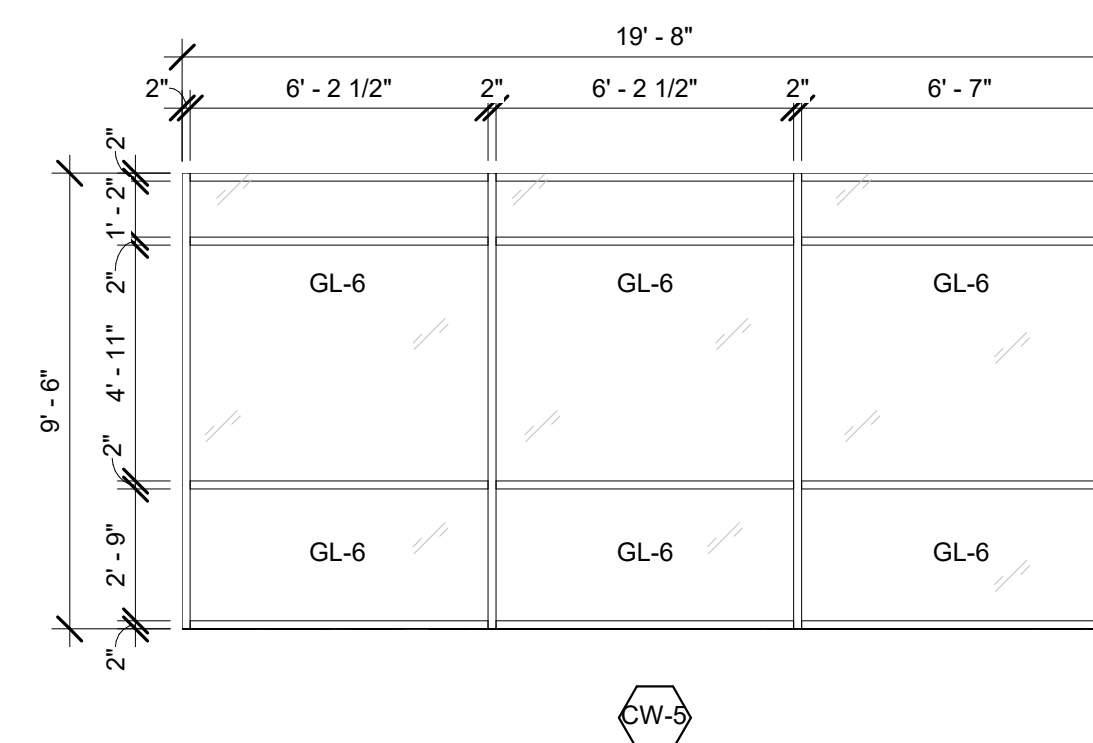
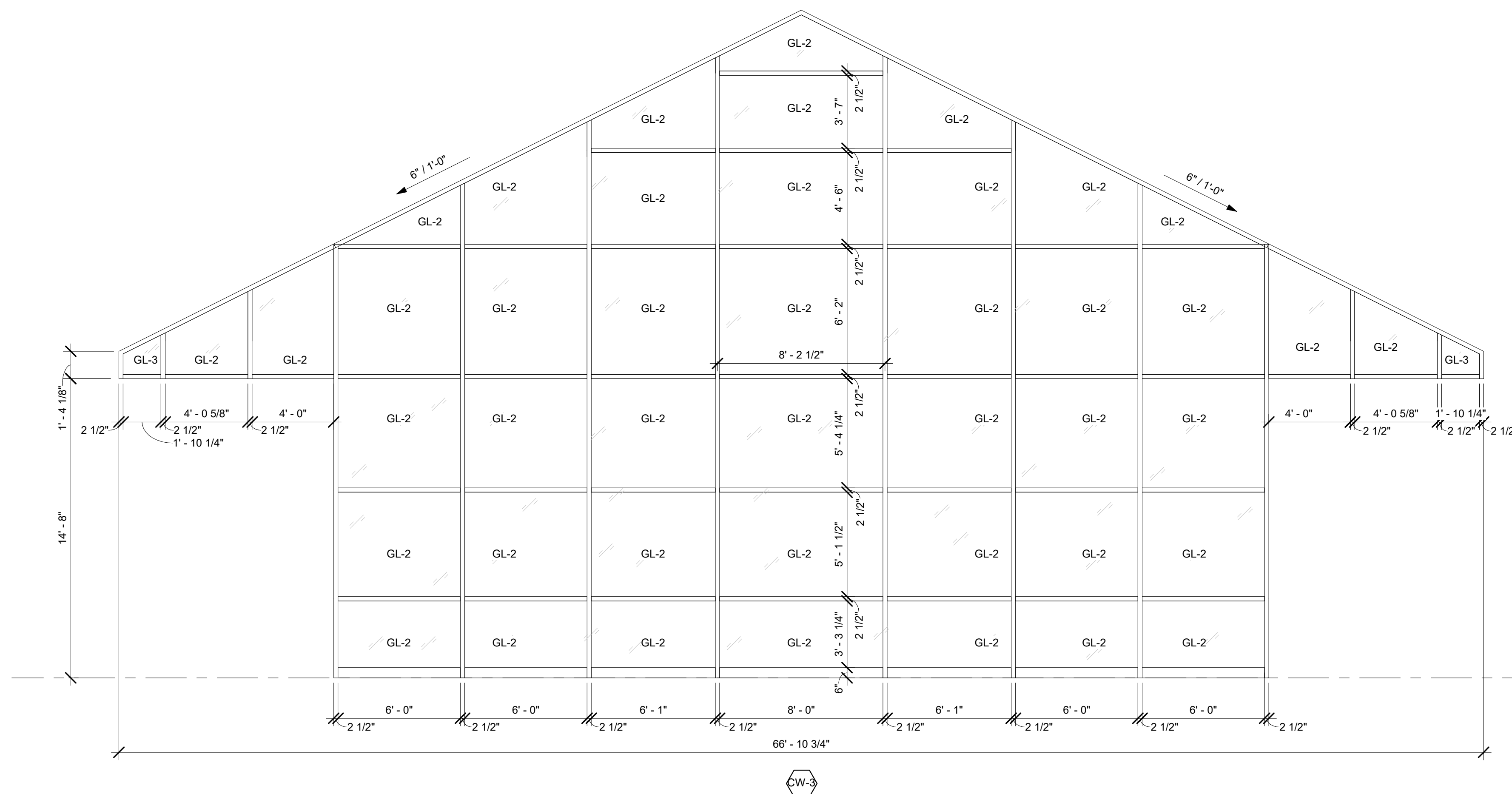
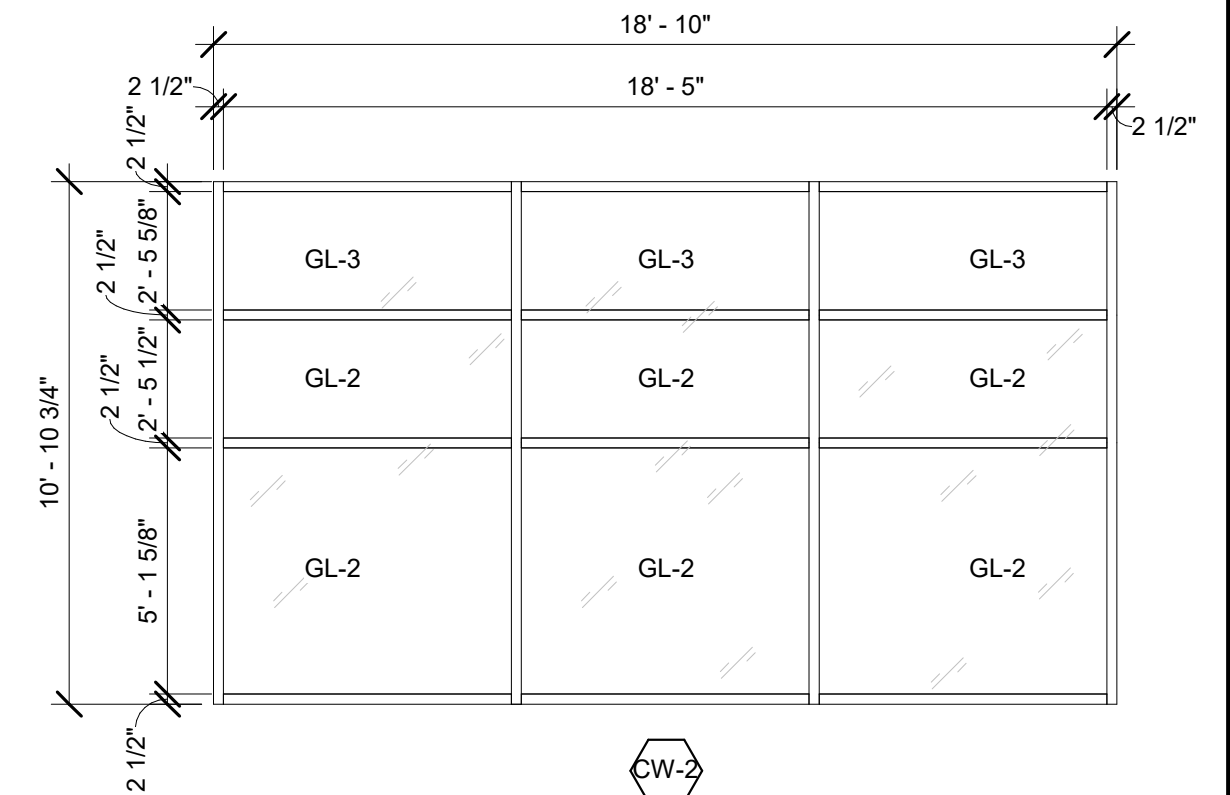
- Total width: 46' - 0"
- Top section width: 45' - 7"
- Left side height: 10' - 10 3/4"
- Bottom left vertical dimension: 5' - 15/8"
- Right side vertical dimension: 2 1/2"

**Labels:**

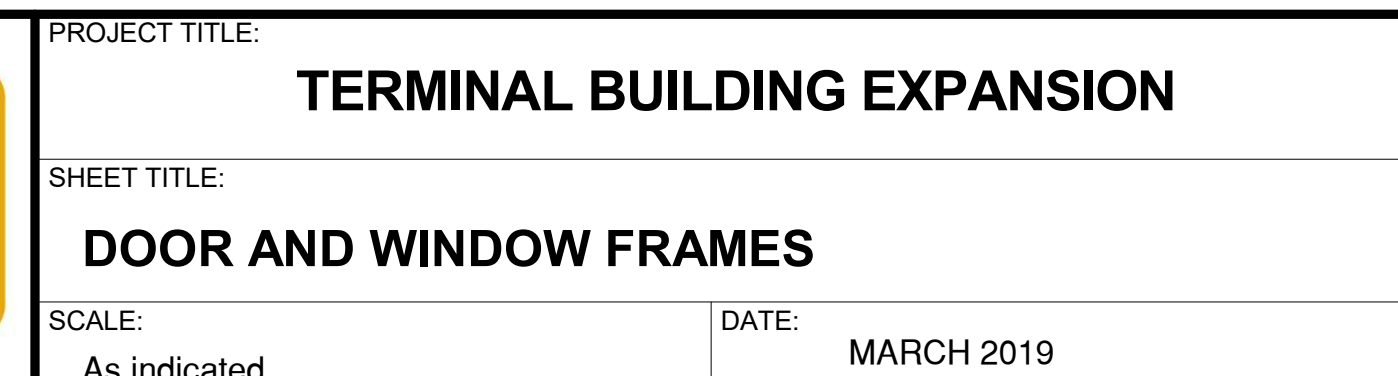
- GL-2 (bottom row)
- GL-3 (middle and top rows)

**Other markings:**

- CW-6 (bottom center)
- 2 1/2" (multiple locations indicating offsets or gaps)



DESIGNED:
DRAWN:
CHECKED:
APPROVED:

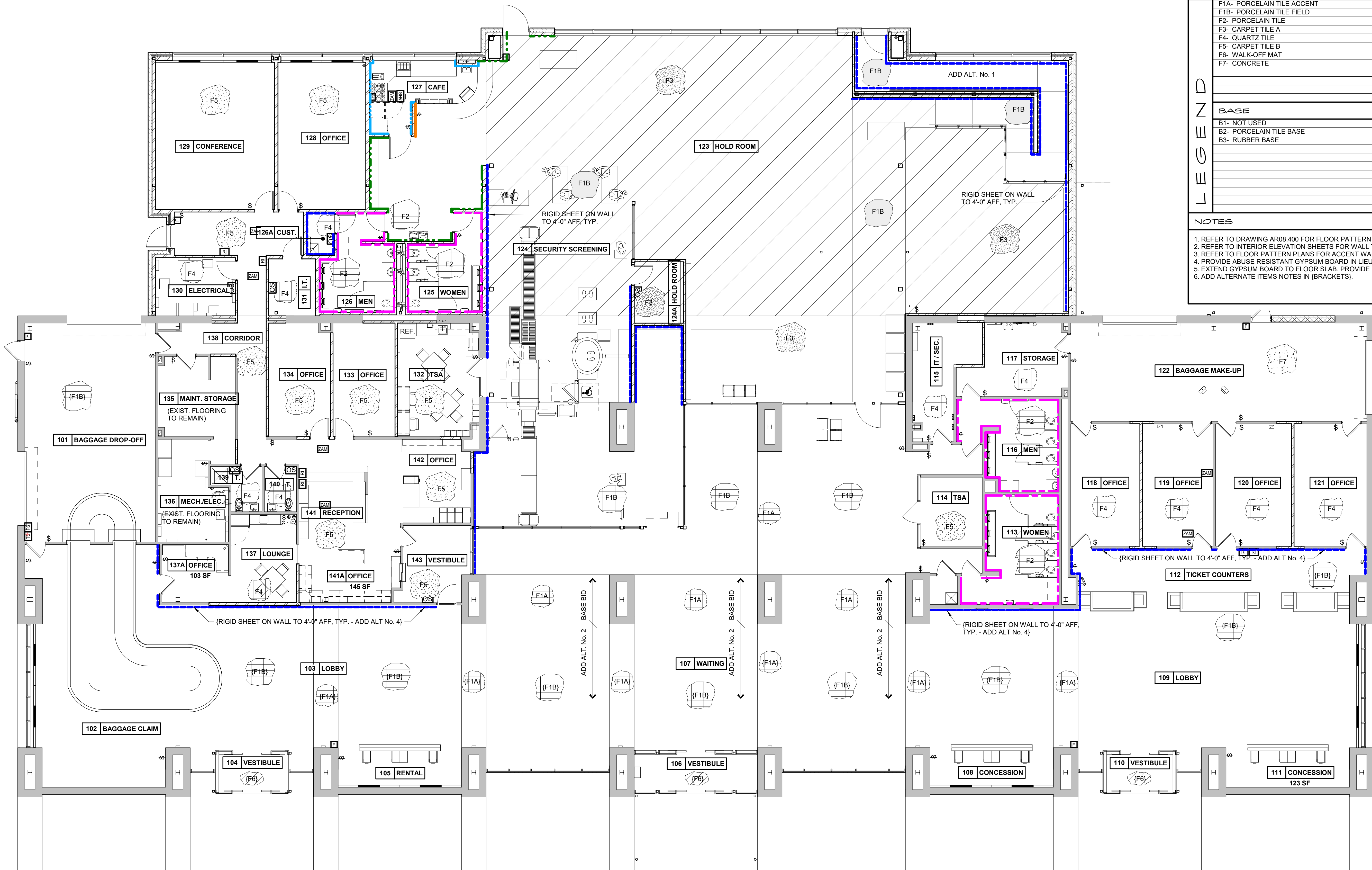
[illegible]

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

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SHEET No.: **AR08.300**  
**73 OF 117**





FLOORS	WALLS
F1A- PORCELAIN TILE ACCENT	W1- PAINT
F1B- PORCELAIN TILE FIELD	W2- PORCELAIN WALL TILE
F2- PORCELAIN TILE	W3- RIGID SHEET VINYL
F3- CARPET TILE A	W4- FLEXIBLE WALL PROTECTION
F4- QUARTZ TILE	W5- FLEXIBLE WALL PROTECTION
F5- CARPET TILE B	W6- CERAMIC WALLTILE
F6- WALK-OFF MAT	W7- CLEAR WRITE & ERASE PAINT
F7- CONCRETE	W8- RIGID SHEET VINYL TYPE 2
BASE	CEILING
B1- NOT USED	C1- ACOUSTICAL CEILING TILE - TYPE 1
B2- PORCELAIN TILE BASE	C2- ACOUSTICAL CEILING TILE - TYPE 2
B3- RUBBER BASE	C3- EXPOSED STRUCTURE
	C4- GYPSUM BOARD - PAINTED
	C5- CEILING FRAMEWORK - PAINTED
	C6- METAL DECKING (NEW) - PAINTED
	C7- METAL DECKING (EXISTING) - PAINTED
	C8- ACOUSTICAL CEILING TILE - TYPE 3
NOTES	
1. REFER TO DRAWING AR08.400 FOR FLOOR PATTERN PLAN.	
2. REFER TO INTERIOR ELEVATION SHEETS FOR WALL TILE PATTERNS.	
3. REFER TO FLOOR PATTERN PLANS FOR ACCENT WALL LOCATIONS.	
4. PROVIDE ABUSE RESISTANT GYPSUM BOARD IN LIEU OF STANDARD GYPSUM BOARD.	
5. EXTEND GYPSUM BOARD TO FLOOR SLAB. PROVIDE SEALANT AT JOINT BETWEEN WALL AND FLOOR FINISHES.	
6. ADD ALTERNATE ITEMS NOTES IN (BRACKETS).	

WALL FINISH LEGEND	
	W2 - PORCELAIN WALL TILE TO 5'-6" AFF
	W3 - RIGID SHEET VINYL TO 4'-0" AFF
	W4 - FLEXIBLE WALL PROTECTION TYPE 1
	W5 - FLEXIBLE WALL PROTECTION TYPE 2
	W6 - CERAMIC WALL TILE
	W7 - CLEAR WRITE & ERASE PAINT
	- HEATED CONCRETE SLAB
NOTES:	
1. REFER TO ROOM FINISH SCHEDULE FOR MORE INFORMATION.	
2. REFER TO INTERIOR ELEVATION SHEETS FOR WALL TILE PATTERNS.	

1  
AR08.400

FLOOR PATTERN PLAN - FIRST FLOOR  
1/8" = 1'-0"  
1/8" = 1'-0"  
SCALE 0 5 10 15 20  
FEET

NORTH

WALL FINISH KEY



MOTOR SPECIFICATIONS:

1/3 HP motor to include a TENV motor, reversing magnetic controller in NEMA 1 enclosure, planetary gearbox for drive reduction, electric brake and an auxiliary chain operator. Includes UL listed thermal overload protection, rotary limit switches, safety edge circuit and transformer with 24 volt control secondary, and delay on reverse. Pre-wired to a terminal block using color coding of the wires to facilitate troubleshooting. Motor is to include an internal lock sensor (motor mounted interlock).

CURRENT CHARACTERISTICS:

120 V 1 PH 60 HZ

Electrical current must be verified in writing before job is released for manufacture; current verified and found correct.

ELECTRICAL EQUIPMENT LIST:

- 1 - Key switch station, flush mounted w/ Best cylinder.
- 1 - Motor mounted interlock.

BOTTOM BAR LOCKING:

Center mounted turn handle bottom bar lock with shop installed standard mortise cylinder, 1" lg. x 1 5/32" dia., not masterkeyed. Hardware contractor to replace standard cylinder with masterkeyed cylinder in the field when required.

Operable coil side only.

QUANTITY & MARK:

001 001

MATERIAL & FINISH:

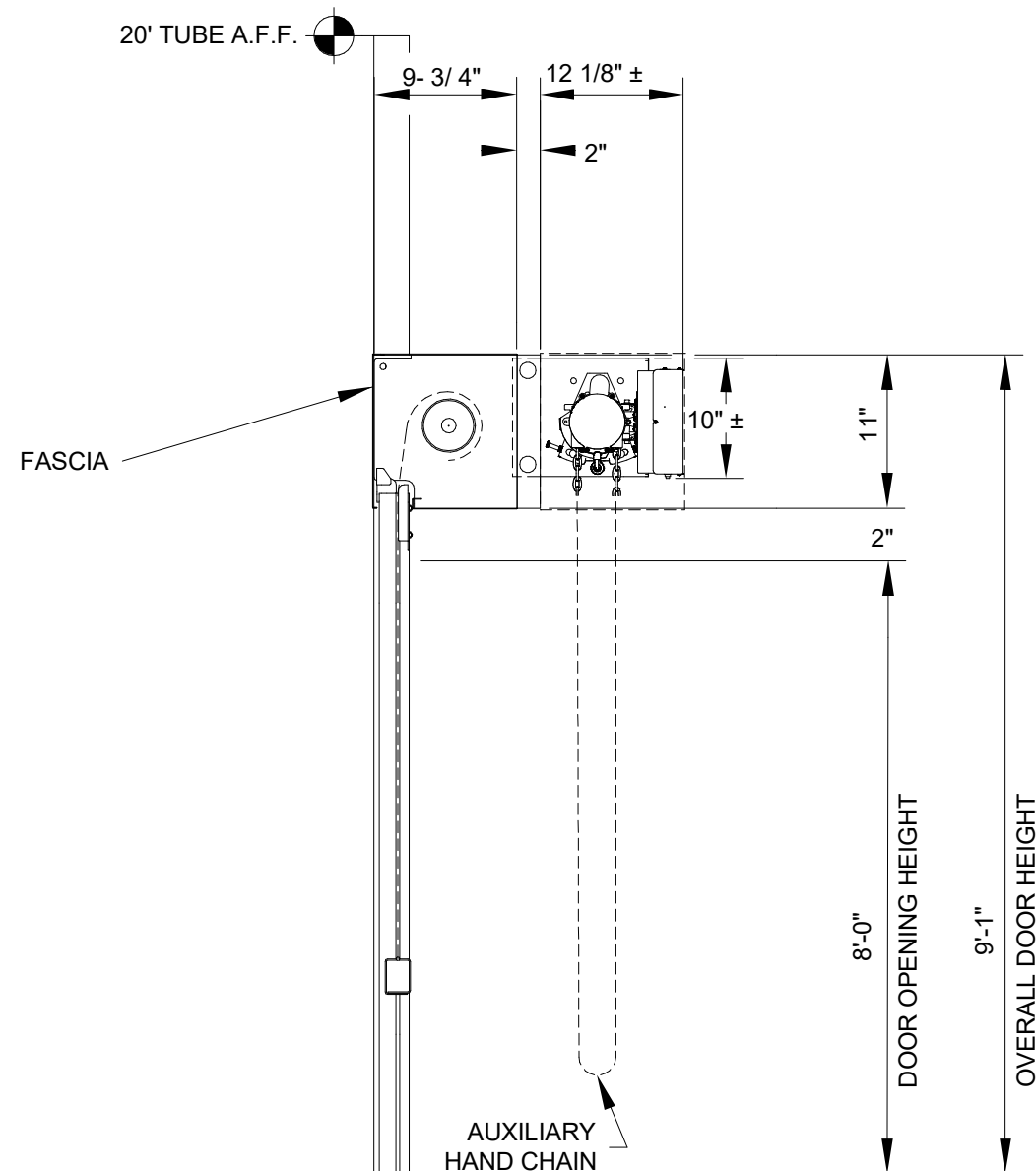
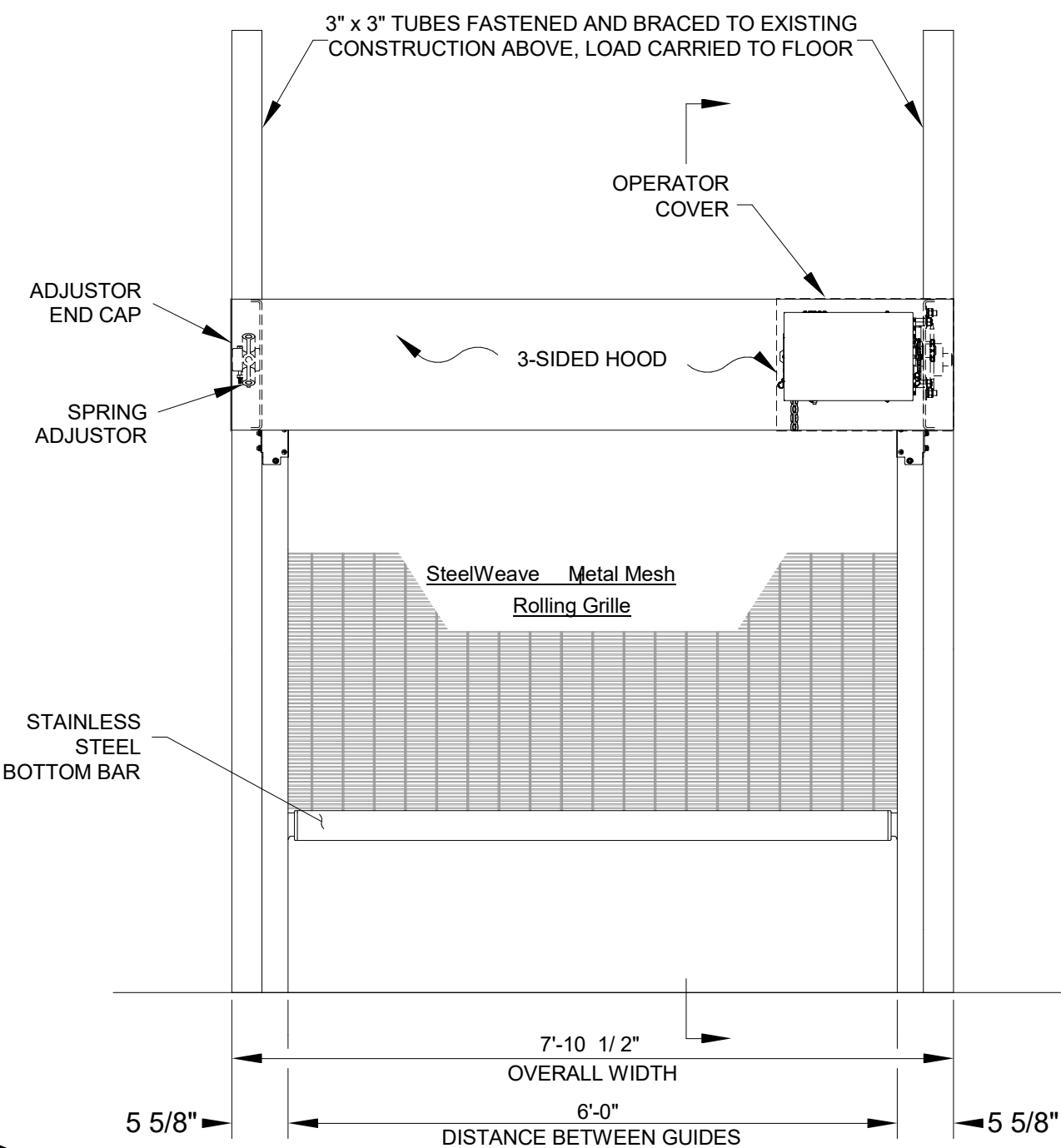
Curtain - Stainless steel, type 316 #4 finish

Bottom Bar - Stainless steel, #4 finish

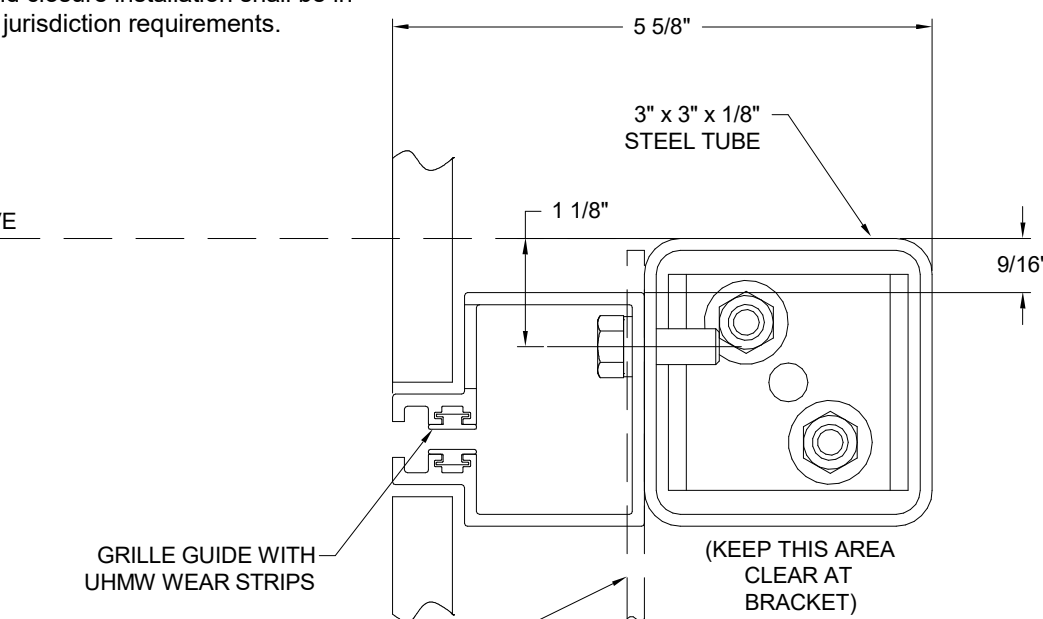
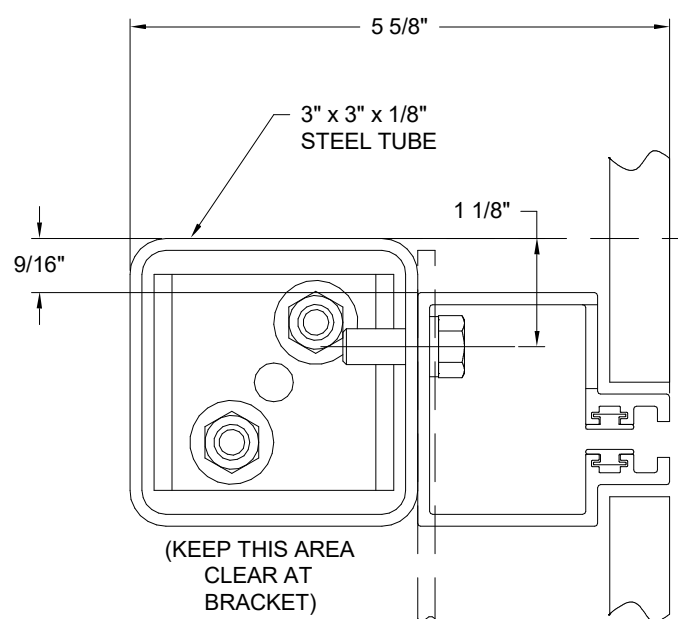
Guides - Extruded aluminum guide-Clear 204-R1 finish w/ Plain steel support tube-Unpainted

Hood - Stainless steel, #4 finish

Plain Steel - Polyester powder coating, color 20-7042

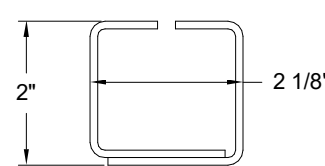


NOTE: Wall construction detail shown is for illustrative purposes only, does not imply compliance with building requirements, and must meet architectural specifications to properly support product. Products designed with wind load requirements must be properly fastened to structural members as specified in order to avoid catastrophic failure. Wall construction and closure installation shall be in accordance with the local authority having jurisdiction requirements.

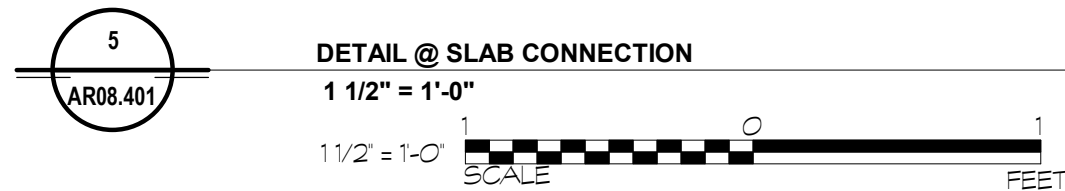
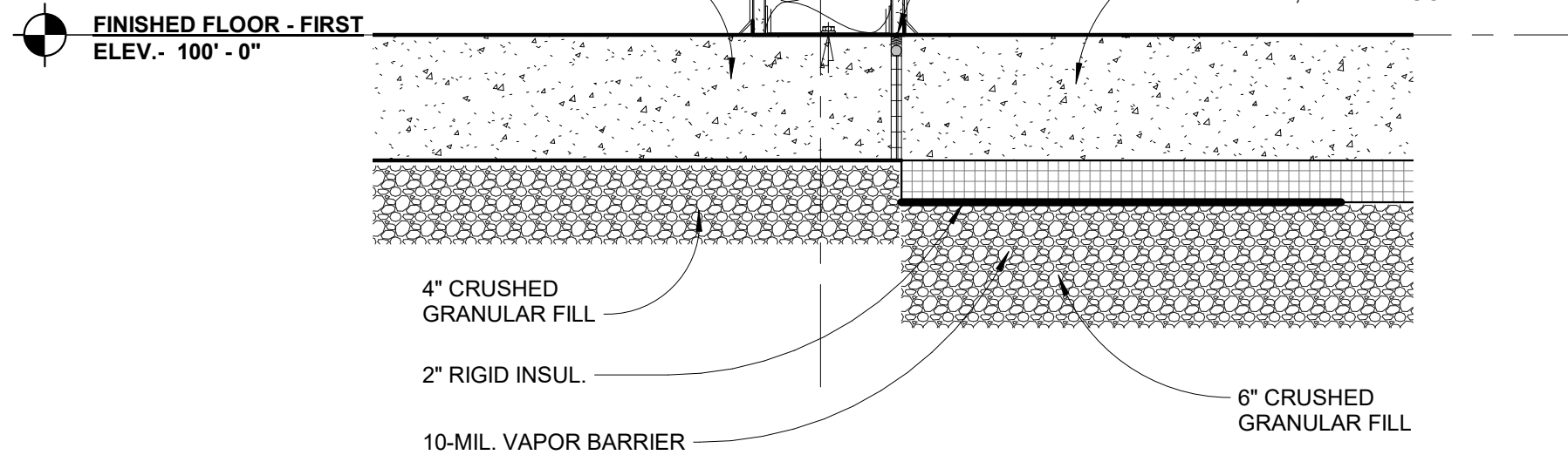
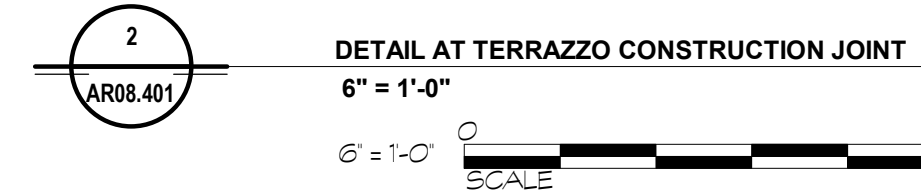
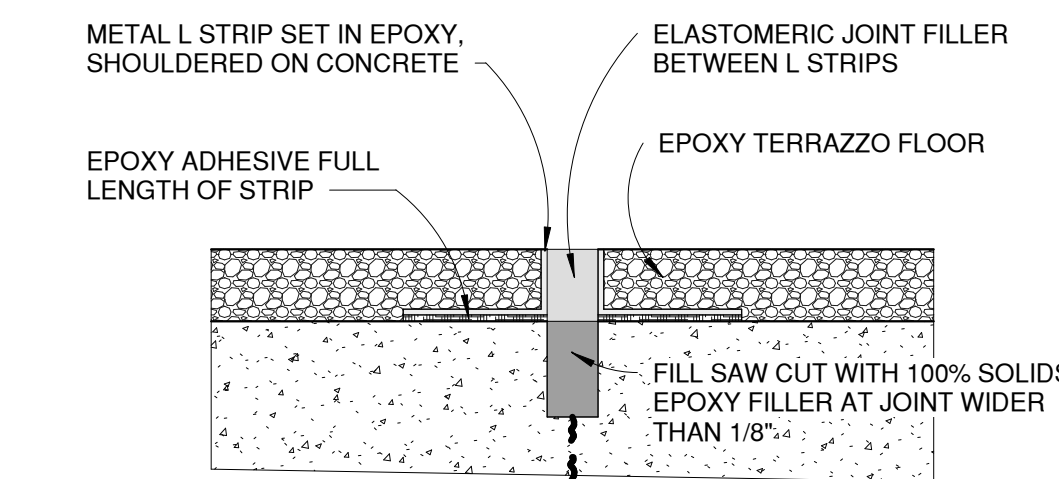
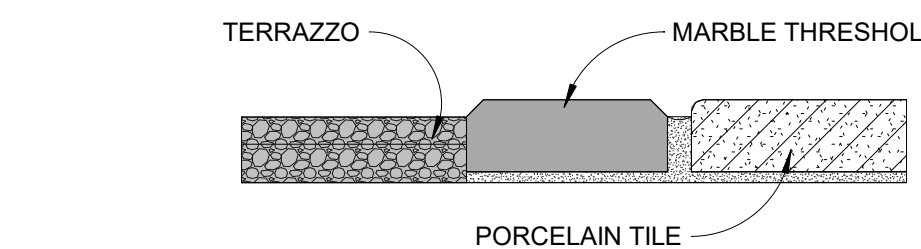
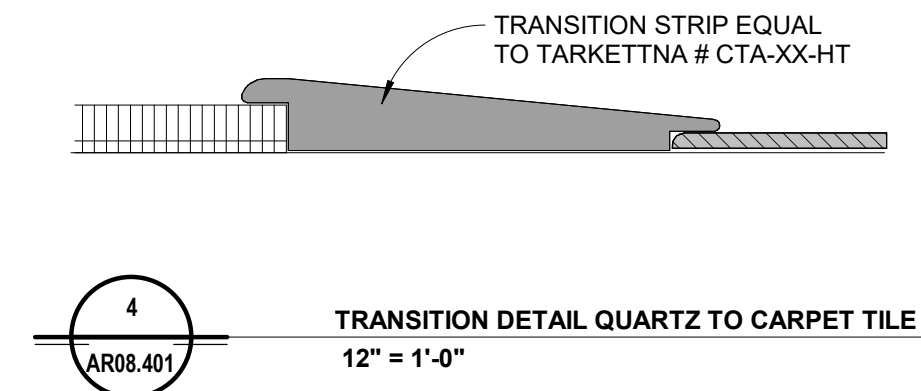
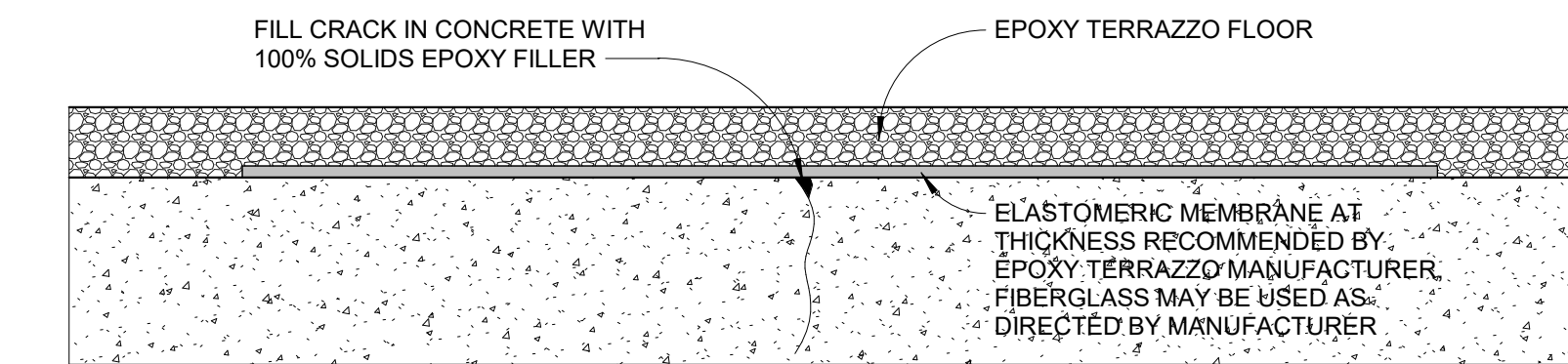
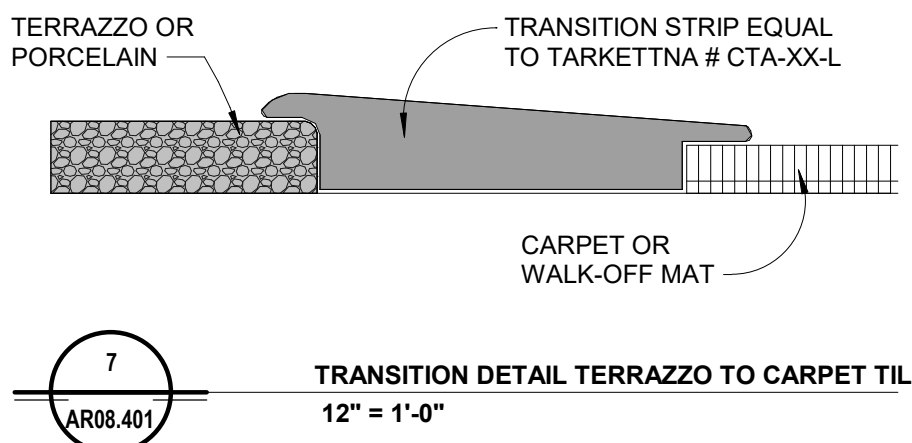
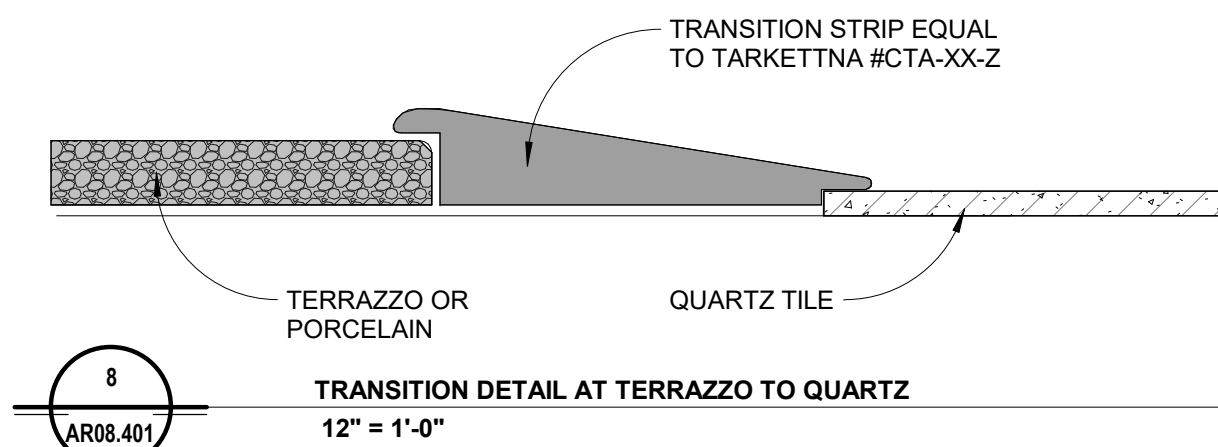
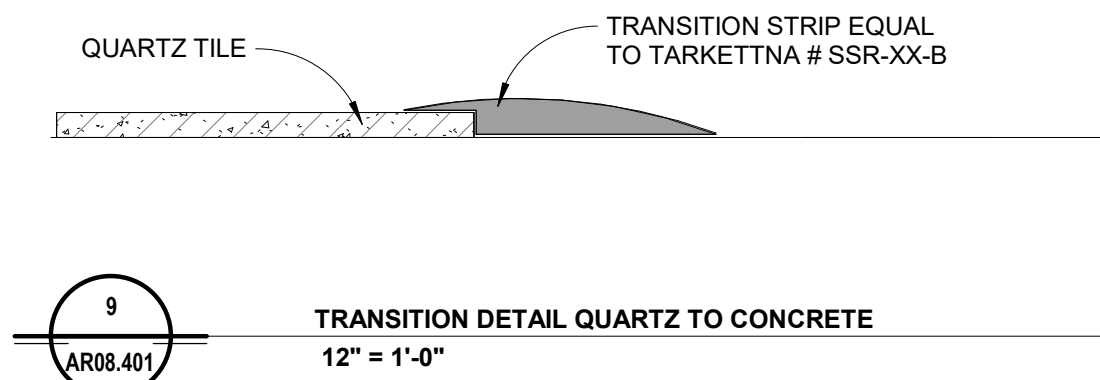
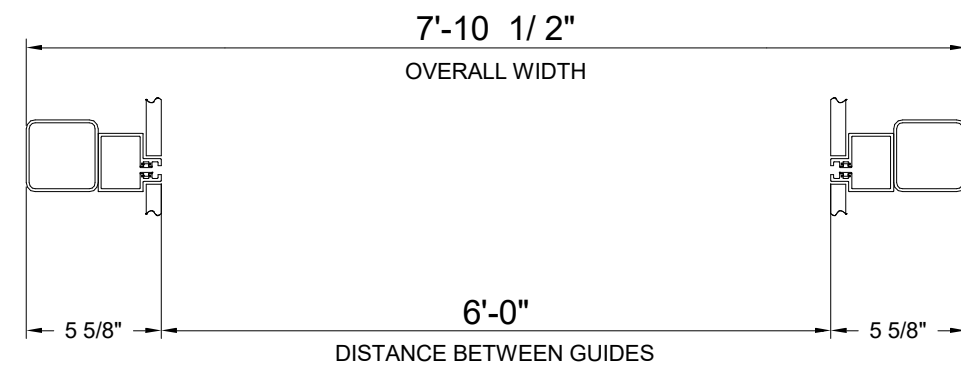


BOTTOM BAR DETAIL

CP1370, CP1372



PLAN OF OPENING





NO.	DOOR			FRAME				DETAILS			HARDWARE	SIGNAGE	LABEL	REMARKS	
	ROOM LOCATION	SIZE	TYPE	MATL	GLZ	TYPE	MATL	WIDTH	GLZ	JAMB					HEAD
101D	BAGGAGE DROP-OFF	12'- 0" x 9' - 0"	6	STL	-	-	STL	-	-	-	-	-			
101E	BAGGAGE DROP-OFF	12'- 0" x 9' - 0"	6	STL	-	-	STL	-	-	-	-	-			
107	WAITING	4'- 0" x 8' - 0"	4	ALUM	G-6	A	ALUM	4 1/2	G-6	-	-	-	2		
122A	BAGGAGE MAKE-UP	12'- 0" x 9' - 0"	6	STL	-	-	STL	-	-	-	-	-	3		
122C	BAGGAGE MAKE-UP	12'- 0" x 9' - 0"	6	STL	-	-	STL	-	-	-	-	-	3		
123	HOLD ROOM	4'- 0" x 8' - 0"	3	ALUM	G-2	A	ALUM	7 1/2"	G-2	1/AR08.101	4/AR08.105 (SIM)	+	4		Access Controlled Interior and exterior- PIN and Reader
123 (ADD ALTERNATE No. 1)	HOLD ROOM	4'- 0" x 8' - 0"	3	ALUM	G-2	A	ALUM	7 1/2"	G-2	1/AR08.101	4/AR08.105 *	3/AR08.106 *	8		Access Controlled Interior and exterior- PIN and Reader
124	SECURITY SCREENING	6'- 0" x 8' - 0"	5**	STL	-	-	**	-	-	-	-	-	**		
124A	HOLD ROOM	3'- 0" x 7' - 0"	1	SC WD	-	A	HM	5 7/8"	-	1&5/AR08.200	12/AR08.200	-	5		
124B	HOLD ROOM	4'- 0" x 8' - 0"	4	ALUM	G-2	B	ALUM	7 1/2"	G-2	3/AR08.101	4/AR08.105 (SIM)	-	6		Access Controlled Interior and exterior- PIN and Reader
125	WOMEN	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	1&11/AR08.200	12/AR08.200	-	7		
126	MEN	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	1&11/AR08.200	12/AR08.200	-	7		
126A	CUST.	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	1&3/AR08.200	12/AR08.200	-	8		
127	CAFE	3'- 6" x 7' - 10"	2	SC WD	G-6	A	HM	5 7/8"	-	1/AR08.200	12/AR08.200	-	9		
128	OFFICE	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	1&10/AR08.200	12/AR08.200	-	10		
129	CONFERENCE	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	1&10/AR08.200	12/AR08.200	-	11		
130	ELECTRICAL	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	1&5/AR08.200	12/AR08.200	-	12		Access Controlled- Reader
131	CORRIDOR	3'- 0" x 7' - 10"	1	SC WD	-	A	HM	5 7/8"	-	7&15/AR08.200	13/AR08.200	-	13		
133	OFFICE	3'- 0" x 7' - 10"	2	SC WD	-	A	HM	5 7/8"	-	1&4/AR08.200	12/AR08.200	-	10		
134	OFFICE	3'- 0" x 7' - 10"	2	SC WD	-	A	HM	5 7/8"	-	1&4/AR08.200	12/AR08.200	-	14		Access Controlled- Reader
138	CORRIDOR	3'- 6" x 7' - 0"	3	H.M.	G-2	A	H.M.	7 5/8"	-	2/AR08.105	1/AR08.104	2/AR08.104	15		
143A	LOBBY	3'- 0" x 8' - 0"	4	ALUM	G-6	A	ALUM	4 1/2	-	-	-	-	16		
E100	WAITING	3'- 0" x 7' - 10"	(E)	SC WD	-	(E)	(E)	(E)	-	-	-	-			
E101A	BAGGAGE CLAIM	3'- 0" x 7' - 0"	(E)	SC WD	-	(E)	(E)	(E)	-	-	-	-	17		Access Controlled- Reader
E101C	CORRIDOR	3'- 0" x 7' - 0"	(E)	SC WD	-	(E)	(E)	(E)	-	-	-	-			
E104A	VESTIBULE	6' - 1 1/2" x 7' - 6"	(E)	ALUM	-	(E)	(E)	(E)	-	-	-	-			
E104B	LOBBY	6' - 1 1/2" x 7' - 6"	(E)	ALUM	-	(E)	(E)	(E)	-	-	-	-			
E106A	VESTIBULE	6' - 1 1/2" x 7' - 6"	(E)	ALUM	-	(E)	(E)	(E)	-	-	-	-			
E106B	WAITING	6' - 1 1/2" x 7' - 6"	(E)	ALUM	-	(E)	(E)	(E)	-	-	-	-			
E110A	VESTIBULE	6' - 1 1/2" x 7' - 6"	(E)	ALUM	-	(E)	(E)	(E)	-	-	-	-			
E110B	LOBBY	6' - 1 1/2" x 7' - 6"	(E)	ALUM	-	(E)	(E)	(E)	-	-	-	-			
E113	WAITING	3'- 0" x 7' - 10"	(E)	SC WD	-	(E)	(E)	(E)	-	-	-	-			

Q Z W U W J	TYPE	DESCRIPTION
	G-1	NOT USED
	G-2	1" INSULATED GLASS, TEMPERED
	G-3	1" INSULATED GLASS, SPANDRAL
	G-4	NOT USED
	G-5	NOT USED
	G-6	1/4" SAFETY GLASS, CLEAR, TEMPERED

NO.	NAME	FLOOR	BASE	WALL				CEILING		REMARKS
				A	B	C	D	MAT'L	HT	
100	CUSTODIAN									
101	BAGGAGE DROP-OFF	(E)	B3	W1	W1	W1	W1	(E)		
102	BAGGAGE CLAIM	(E) (F1B)	-	(E) (W1/W3)	(E) (W1/W3)	(E)	(E)	(E) (C5/C7)		{W3 TO 4'-0" AFF WITH TRIM PIECE}
103	LOBBY	(E) (F1A/F1B)	-	(E) (W1/W3)	-	(E)	-	(E) (C5/C7)		{W3 TO 4'-0" AFF WITH TRIM PIECE}
104	VESTIBULE	(E) (F6)	(E) (B3)	-	(E) (W1)	-	(E) (W1)	(E)		
105	RENTAL	(E) (F1B)	-	-	(E)	(E)	(E)	(E) (C5/C7)		
106	VESTIBULE	(E) (F6)	(E) (B3)	-	(E) (W1)	-	(E) (W1)	(E)		
107	WAITING	(E) (F1A/F1B)	-	(E)	-	(E)	-	(E)		
108	CONCESSION	(E) (F1B)	-	-	(E)	(E)	(E)	(E) (C5/C7)		
109	LOBBY	(E) (F1A/F1B)	-	(E) (W1/W3)	(E)	(E)	-	(E) (C5/C7)		{W3 TO 4'-0" AFF WITH TRIM PIECE}
110	VESTIBULE	(E) (F6)	(E) (B3)	-	(E) (W1)	-	(E) (W1)	(E)		
111	CONCESSION	(E) (F1B)	-	-	(E)	(E)	(E)	(E) (C5/C7)		
112	TICKET COUNTERS	(E) (F1B)	-	(E) (W1/W3)	(E) (W1/W3)	-	(E) (W1/W3)	(E) (C1)		{W3 TO 4'-0" AFF WITH TRIM PIECE}
113	WOMEN	F2	B2	W2/W4	W2/W4	W2/W4	W2/W4	C4		W2 TO 5'-6" AFF
114	TSA	(E)	(E)	(E)	(E)	(E)	(E)	(E)		
115	IT / SEC.	(E)	(E)	(E)	(E)	(E)	(E)	(E)		
116	MEN	F2	B2	W2/W4	W2/W4	W2/W4	W2/W4	C4		W2 TO 5'-6" AFF
117	STORAGE	(E)	(E)	(E)	(E)	(E)	(E)	(E)		*SOME PATCH & REPAIR OF WALL 'A'
118	OFFICE	F4	B3	W1/W8	W1/W8	W1/W8	W1/W8	C1		W8 TO 4'-0" AFF WITH TRIM PIECE
119	OFFICE	F4	B3	W1/W8	W1/W8	W1/W8	W1/W8	C1		W8 TO 4'-0" AFF WITH TRIM PIECE
120	OFFICE	F4	B3	W1/W8	W1/W8	W1/W8	W1/W8	C1		W8 TO 4'-0" AFF WITH TRIM PIECE
121	OFFICE	F4	B3	W1/W8	W1/W8	W1/W8	W1/W8	C1		W8 TO 4'-0" AFF WITH TRIM PIECE
122	BAGGAGE MAKE-UP	F7	B3	W1	W1	W1	W1	(E)		
123	HOLD ROOM	F3/(F1B)	B3	W1/W3	W1/W3	W1	W1	C5/C6		{W3 ON RAMP WALLS}; W3 TO 4'-0" AFF WITH TRIM PIECE @ OTHER WALL, {F1B ON RAMP w/ABRASIVE STRIPS, B3 AT CARPET ONLY}
124	SECURITY SCREENING	F1	-	-	W1/W3	-	W1/W3	C5/C6		W3 TO 4'-0" AFF WITH TRIM PIECE
124A	HOLD ROOM	F3	B3	W1	W1	W1	W1	C5/C6		F3 O TOP OF F1
125	WOMEN	F2	B2	W2/W4	W2/W4	W2/W4	W2/W4	C2		W2 TO 5'-6" AFF
126	MEN	F2	B2	W2/W4	W2/W4	W2/W4	W2/W4	C2		W2 TO 5'-6" AFF
126A	CUST.	F4	B3	W1/W3	W1/W3	W1/W3	W1/W3	C4		W3 TO 4'-0" AFF WITH TRIM PIECE
127	CAFE	F2	B2	W1	W1	W1	W1/W4	C8		
128	OFFICE	F5	B3	W1	W1	W1	W1	C1		
129	CONFERENCE	F5	B3	W1	W1	W1	W1	C1/C4		
130	ELECTRICAL	F4	B3	W1	W1	W1	W1	C3		
131	I.T.	F4	B3	W1	W1	W1	W1	C3		
132	TSA	F5	B3	W1	W1	W1	W1	C1		
133	OFFICE	F5	B3	W1	W1	W1	W1	C1		
134	OFFICE	F5	B3	W1	W1	W1	W1	C1		
135	MAINT. STORAGE	(E)	(E)	(E)	(E)	(E)	(E)	(E)		
136	MECH./ELEC.	(E)	(E)	(E)	(E)	(E)	(E)	(E)		
137	LOUNGE	F4	B3	W1	W1	W1	W1	C1		
137A	OFFICE									

	FLOORS	WALLS
<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>	F1A- PORCELAIN TILE ACCENT F1B- PORCELAIN TILE FIELD F2- PORCELAIN TILE F3- CARPET TILE A F4- QUARTZ TILE F5- CARPET TILE B F6- WALK-OFF MAT F7- CONCRETE	W1- PAINT W2- PORCELAIN WALL TILE W3- RIGID SHEET VINYL W4- FLEXIBLE WALL PROTECTION W5- FLEXIBLE WALL PROTECTION W6- CERAMIC WALLTILE W7- CLEAR WRITE & ERASE PAINT W8- RIGID SHEET VINYL TYPE 2
	BASE	CEILING
	B1- NOT USED B2- PORCELAIN TILE BASE B3- RUBBER BASE	C1- ACOUSTICAL CEILING TILE - TYPE 1 C2- ACOUSTICAL CEILING TILE - TYPE 2 C3- EXPOSED STRUCTURE C4- GYPSUM BOARD - PAINTED C5- CEILING FRAMEWORK - PAINTED C6- METAL DECKING (NEW) - PAINTED C7- METAL DECKING (EXISTING) - PAINTED C8- ACOUSTICAL CEILING TILE - TYPE 3
NOTES		
1. REFER TO DRAWING AR08.400 FOR FLOOR PATTERN PLAN. 2. REFER TO INTERIOR ELEVATION SHEETS FOR WALL TILE PATTERNS. 3. REFER TO FLOOR PATTERN PLANS FOR ACCENT WALL LOCATIONS. 4. PROVIDE ABUSE RESISTANT GYPSUM BOARD IN LIEU OF STANDARD GYPSUM BOARD. 5. EXTEND GYPSUM BOARD TO FLOOR SLAB. PROVIDE SEALANT AT JOINT BETWEEN WALL AND FLOOR FINISHES. 6. ADD ALTERNATE ITEMS NOTES IN [BRACKETS].		

**ADCI**  
AIRPORT DESIGN CONSULTANTS, INC.

**BFM**

ARCHITECTURAL REGISTRATION BOARD  
6157-A  
VEM  
STATE OF MARYLAND

Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 6157

Expiration Date: 09/07/2020

DESIGNED:	No.	DATE	DESCRIPTION
DRAWN:	BID DOCUMENTS		
CHECKED:			
APPROVED:			



Washington County, MD

HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:	
TERMINAL BUILDING EXPANSION	
SHEET TITLE:	
ROOM FINISH SCHEDULE	
SCALE:	DATE:
12" = 1'-0"	MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

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SHEET No.: **AR09.100**  
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1. SOME LEGEND SYMBOLS MAY NOT BE USED. SEE FLOOR PLAN DRAWING FOR APPLICABLE DEVICES.
2. THESE NOTES ARE GENERAL IN NATURE AND PERTAIN TO THE PROJECT UNLESS OTHERWISE NOTED AS SUCH ON AN INDIVIDUAL DRAWING.
3. PRIOR TO BIDDING, THE CONTRACTOR SHALL EXAMINE ALL PROJECT DRAWINGS AND SPECIFICATIONS TO DEVELOP A COMPLETE UNDERSTANDING OF THE PROJECT SCOPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASKING ANY QUESTIONS OR CONDITIONS BEFORE BIDDING. FAILURE TO DO THIS WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM ALL REQUIRED WORK. THE CONTRACTOR SHALL ADVISE THE PROFESSIONAL OF ANY DISCREPANCIES WHICH WILL AFFECT THE PROJECT BEFORE BIDDING.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 13 AND ALL OTHER PERTINENT CODES AND REGULATIONS. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH NFPA 13, OTHER APPLICABLE CODES, MANUFACTURER'S WORK INSTRUCTIONS, AND ALL APPLICABLE INDUSTRY PRACTICES. ALL EQUIPMENT, DEVICES, AND MATERIALS SHALL BE UL LISTED AND FM APPROVED.
5. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL REQUIRED INFORMATION TO THE AUTHORITY HAVING JURISDICTION TO OBTAIN THE NECESSARY PERMITS AND APPROVALS. ALL FEES ASSOCIATED WITH THIS SUBMISSION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS AND BE RESPONSIBLE FOR ALL FEES CHARGED BY THE AUTHORITY HAVING JURISDICTION FOR SUCH INSPECTIONS.
6. REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS, ROOM FINISHES, FIRE WALLS, AND LIKE ITEMS. REFER TO THE CONTRACTOR DRAWINGS FOR STRUCTURAL MEMBERS. REFER TO OTHER TRADES PLANS TO UNDERSTAND THE EXTENT OF THEIR WORK AS REQUIRED.
7. DO NOT SCALE DRAWINGS. HOLD INDICATED DIMENSIONS WHERE SHOWN. RESOLVE ANY DISCREPANCIES WITH THE PROFESSIONAL PRIOR TO THE COMPLETION OF THE SHOP DRAWINGS.
8. THE EXISTING FIRE PROTECTION SYSTEM SHALL BE EXTENDED, MODIFIED, AND HYDRAULICALLY SIZED BY THE FIRE PROTECTION CONTRACTOR, AS NEEDED TO PROVIDE A COMPLETE FIRE PROTECTION SYSTEM. THE COMPLETE SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 13 AND APPLICABLE CODES. THE FIRE PROTECTION CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF EXISTING FIRE PROTECTION SYSTEM PIPING AND HEADS. ALL CUTTING AND PATCHING REQUIRED FOR THIS WORK SHALL BE BY THE FIRE PROTECTION CONTRACTOR.
9. THE CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS SHOWING PIPING, PIPE SIZES, AND SPRINKLER HEAD LAYOUTS, ALONG WITH SUPPORTING HYDRAULIC CALCULATIONS AND CATALOG CUT SHEETS TO THE PROFESSIONAL AND APPLICABLE STATE AGENCIES FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
10. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A WATER FLOW TEST AND SUBMITTING THE INFORMATION TO THE PROFESSIONAL PRIOR TO THE COMPLETION OF THE SHOP DRAWINGS.
11. THE LAYOUT OF THE DRAWINGS IS DIAGRAMMATIC. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN STRUCTURAL ELEMENTS AS WELL AS PIPING, DUCTWORK, ELECTRICAL, AND OTHER TRADES. ARCHITECTURAL WORK, PROVIDE OFFSETS, TRANSITIONS IN PIPING, AND AUXILIARY LOW POINT DRAINS AS REQUIRED TO AVOID INTERFERENCES AT NO ADDITIONAL COST TO THE PROJECT.
12. THE DRAWINGS MAY NOT SHOW ALL OF THE HEADS REQUIRED. ANY HEADS SHOWN ON THE DRAWINGS ARE INTENDED TO SHOW THE INTENT OF THE LAYOUT WITH RESPECT TO ARCHITECTURAL AND OTHER TRADES WORK. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR DETERMINING THE FINAL QUANTITY AND PLACEMENT OF ALL SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13.
13. ALL SPRINKLER HEAD TYPES AND FINISHES SHALL BE COORDINATED WITH THE ARCHITECT. SPRINKLER HEADS INSTALLED IN CEILING TILES ARE TO BE CENTERED IN THE TILE EACH WAY.
14. SPRINKLERS SHALL BE INSTALLED UNDER ALL DUCTS OR OBSTRUCTIONS GREATER THAN 48 INCHES IN WIDTH IN ACCORDANCE WITH NFPA 13.
15. ALL SPRINKLER HEADS SHALL BE SPACED THROUGHOUT THE BUILDING THAT ARE BELOW 7 FOOT CLEARANCE OR SUBJECT TO MECHANICAL DAMAGE SHALL BE EQUIPPED WITH HEAD GUARDS.
16. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE ROUTING OF THE SPRINKLER PIPING SUCH THAT ONLY PIPING SERVING ELECTRICAL AND TELECOM ROOMS SHALL ENTER THE ROOM ENCLOSURES. ADDITIONALLY, ROUTING OF PIPING DIRECTLY ABOVE ELECTRICAL EQUIPMENT SHALL BE AVOIDED.
17. ALL PIPING SHALL BE CONCEALED IN AREAS WITH CEILINGS. PIPING SHALL BE EXPOSED IN AREAS WITHOUT CEILINGS. CONTRACTOR SHALL COORDINATE ROUTINGS WITHIN THESE EXPOSED AREAS TO PRODUCE A SYMMETRIC AND AESTHETIC PIPE AND HEAD LAYOUT.
18. THE INSTALLED SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED IN ACCORDANCE WITH THE AREADENSITY METHOD REQUIREMENTS OF NFPA 13. THE ROOM DESIGN METHOD SHALL NOT BE USED.
19. ALL EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES AND ARCHITECTURAL AND STRUCTURAL FEATURES.
20. FIRE STOPPING FOR ALL PIPES PENETRATING FIRE RATED WALLS AND SEALING OF SMOKE BARRIERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE UL LISTING AND THE SPECIFICATIONS TO MAINTAIN THE RATING.
21. CONTRACTOR SHALL REPLACE IN KIND ALL CEILING TILES DAMAGED DURING INSTALLATION AT NO ADDITIONAL COST.
22. CONTRACTOR SHALL REPAINT OR REFINISH ANY AREA IN KIND IF INSTALLATION DEFACES EXISTING WALLS, FLOORS, OR CEILINGS.
23. AFTER ALL EQUIPMENT IS INSTALLED, IT SHALL BE TESTED IN ACCORDANCE WITH NFPA 13 AND THE SPECIFICATIONS. EQUIPMENT NOT OPERATING CORRECTLY SHALL BE FIELD TESTED AND REPAIRS MADE. THE CONTRACTOR, REPRESENTATIVE, PROFESSIONAL, AND AUTHORITY HAVING JURISDICTION SHALL BE PRESENT FOR THE TEST.

FAA AIP No.: 3-24-0019-059-2018  
 Bid No.: PUR-1410  
 MAA Grant No.: MAA-GR-19-009

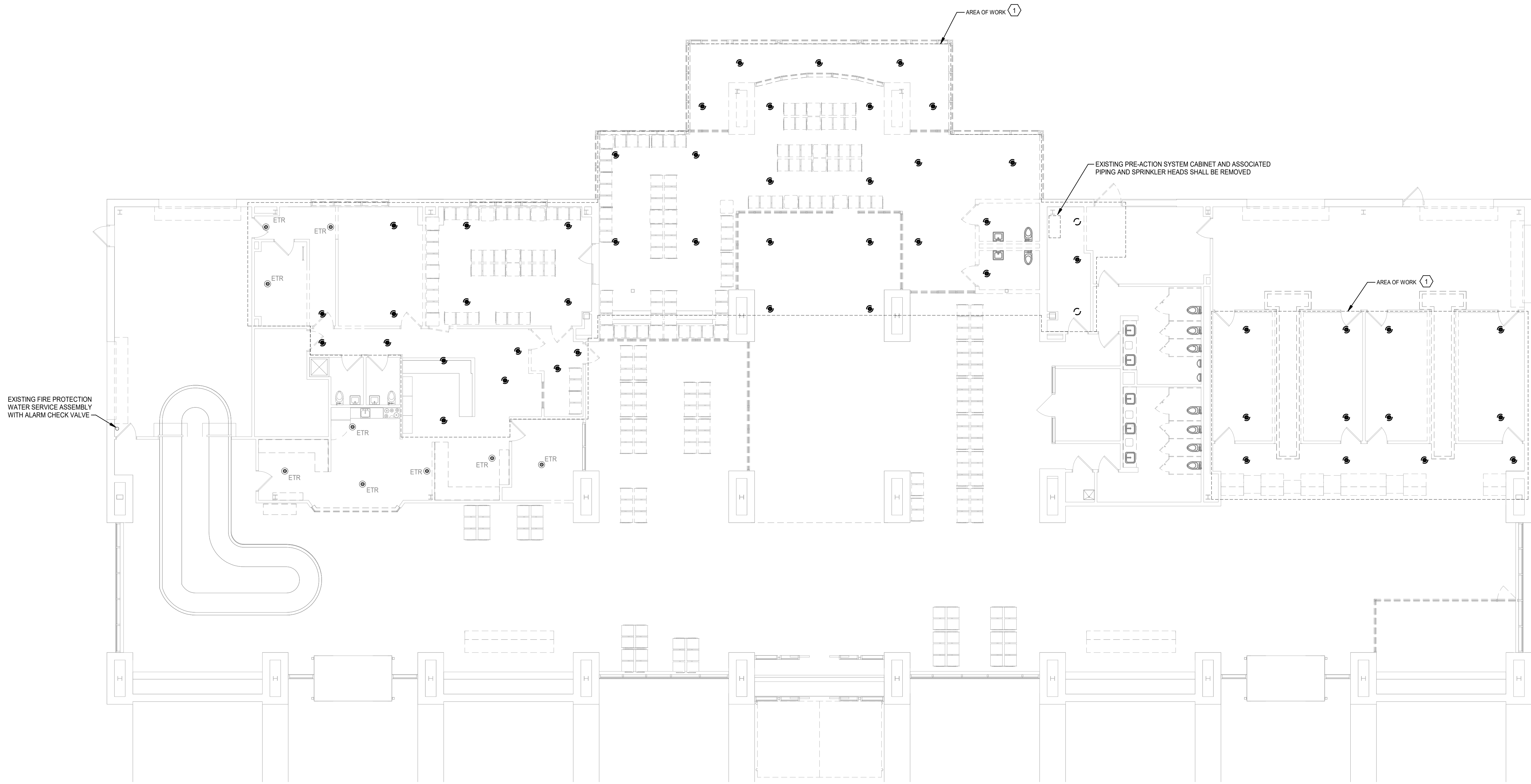
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SHEET No.: **FP00.001**  
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NUMBERED NOTES

1 REMOVE EXISTING SPRINKLER HEADS AND ASSOCIATED BRANCH SPRINKLER PIPING IN THE AREA OF WORK. CAP ANY EXISTING CONNECTION POINTS THAT WILL NOT BE REUSED FOR NEW SPRINKLER HEAD INSTALLATION. SPRINKLER HEADS INDICATED AS "ETR" SHALL BE EXISTING TO REMAIN.



1  
FP02.100  
FIRST FLOOR PLAN - FIRE PROTECTION DEMOLITION  
1/8" = 1'-0"

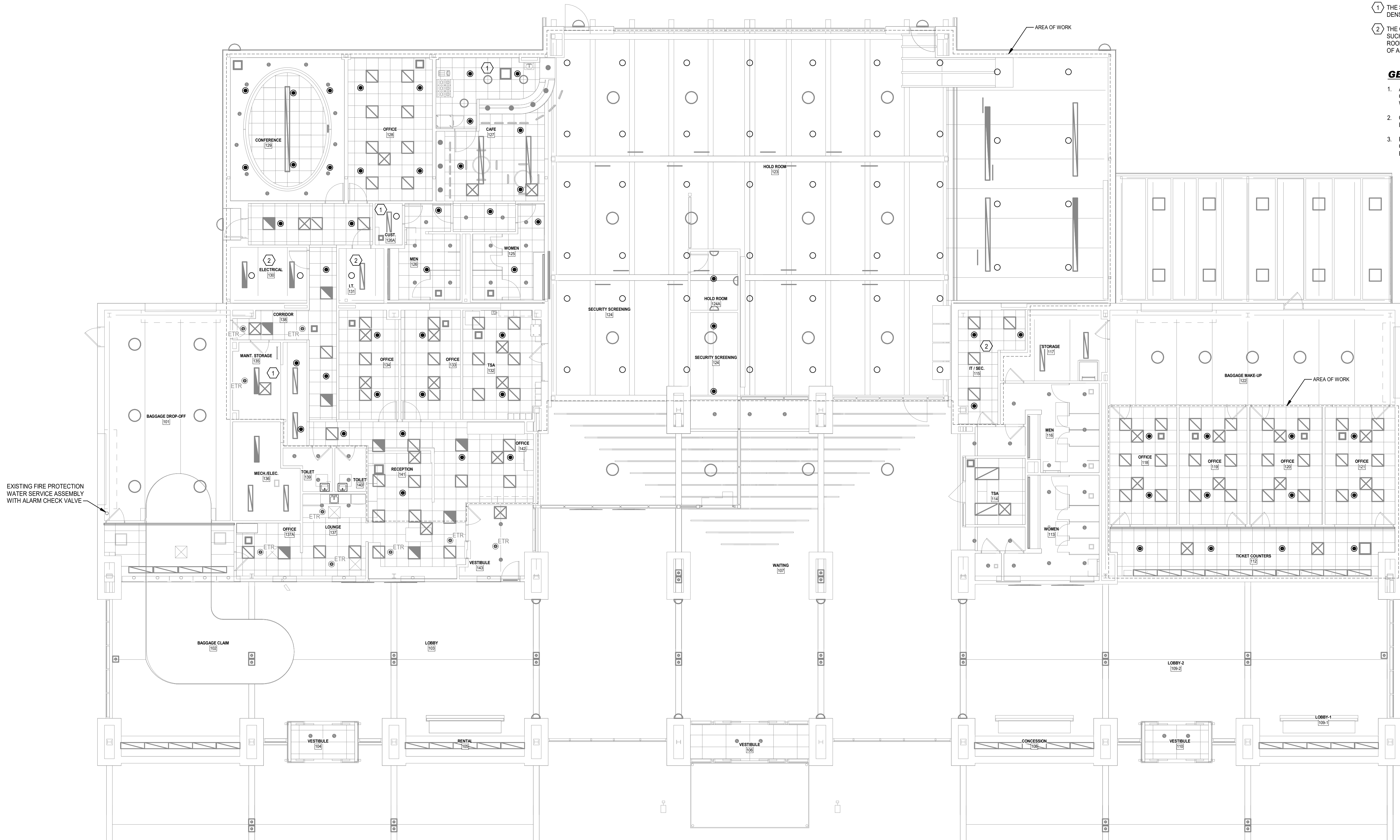


NUMBERED NOTES

- 1 THE SPRINKLER DESIGN IN THIS AREA SHALL COMPLY WITH THE AREA AND DENSITY REQUIREMENTS FOR ORDINARY HAZARD, GROUP 1 CLASSIFICATION.
- 2 THE CONTRACTOR IS RESPONSIBLE FOR THE ROUTING OF SPRINKLER PIPING SUCH THAT ONLY PIPING SERVING THIS ROOM IS PERMITTED TO ENTER THE ROOM. ROUTE PIPING SO THAT IT ENTERS THE ROOM OVER THE DOOR. ROUTING OF ANY PIPING ABOVE ELECTRICAL EQUIPMENT OR PANELS SHALL BE AVOIDED.

GENERAL NOTES

1. AREAS ON THIS DRAWING WHERE THE NFPA 13 SPRINKLER DESIGN HAZARD CLASSIFICATION IS NOT INDICATED SHALL BE DESIGNED IN ACCORDANCE WITH THE AREA AND DENSITY REQUIREMENTS FOR LIGHT HAZARD.
2. COORDINATE ALL SPRINKLER HEAD AND PIPING LOCATIONS WITH LIGHT FIXTURES, DUCTWORK, DIFFUSERS, CONDUIT, ETC.
3. PROVIDE NEW SPRINKLER HEADS AND NEW SPRINKLER BRANCH PIPING. CONNECT NEW BRANCH PIPING TO NEAREST EXISTING SPRINKLER SYSTEM PIPING OF ADEQUATE SIZE.



1  
FP03.100  
FIRST FLOOR PLAN - FIRE PROTECTION  
1/8" = 1'-0"

**ADCI**  
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**CJL ENGINEERING**

232 Horner Street  
Johnstown, PA 15902  
ph: (814)536-1651  
fax: (814)536-5732  
CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 25983  
Expiration Date: 3/30/2021

DESIGNED: JAK  
DRAWN: JAK  
CHECKED: JAK  
APPROVED: JMV

No. DATE DESCRIPTION

**BID DOCUMENTS**



PROJECT TITLE: **TERMINAL BUILDING EXPANSION**

SHEET TITLE: **FIRST FLOOR PLAN - FIRE PROTECTION**

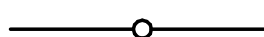
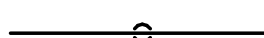





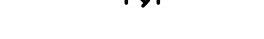


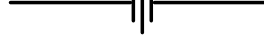


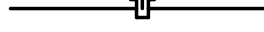
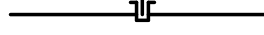
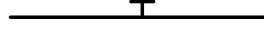
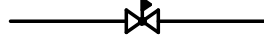
















SCALE: 1/8" = 1'-0"

DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.: **FP03.100**  
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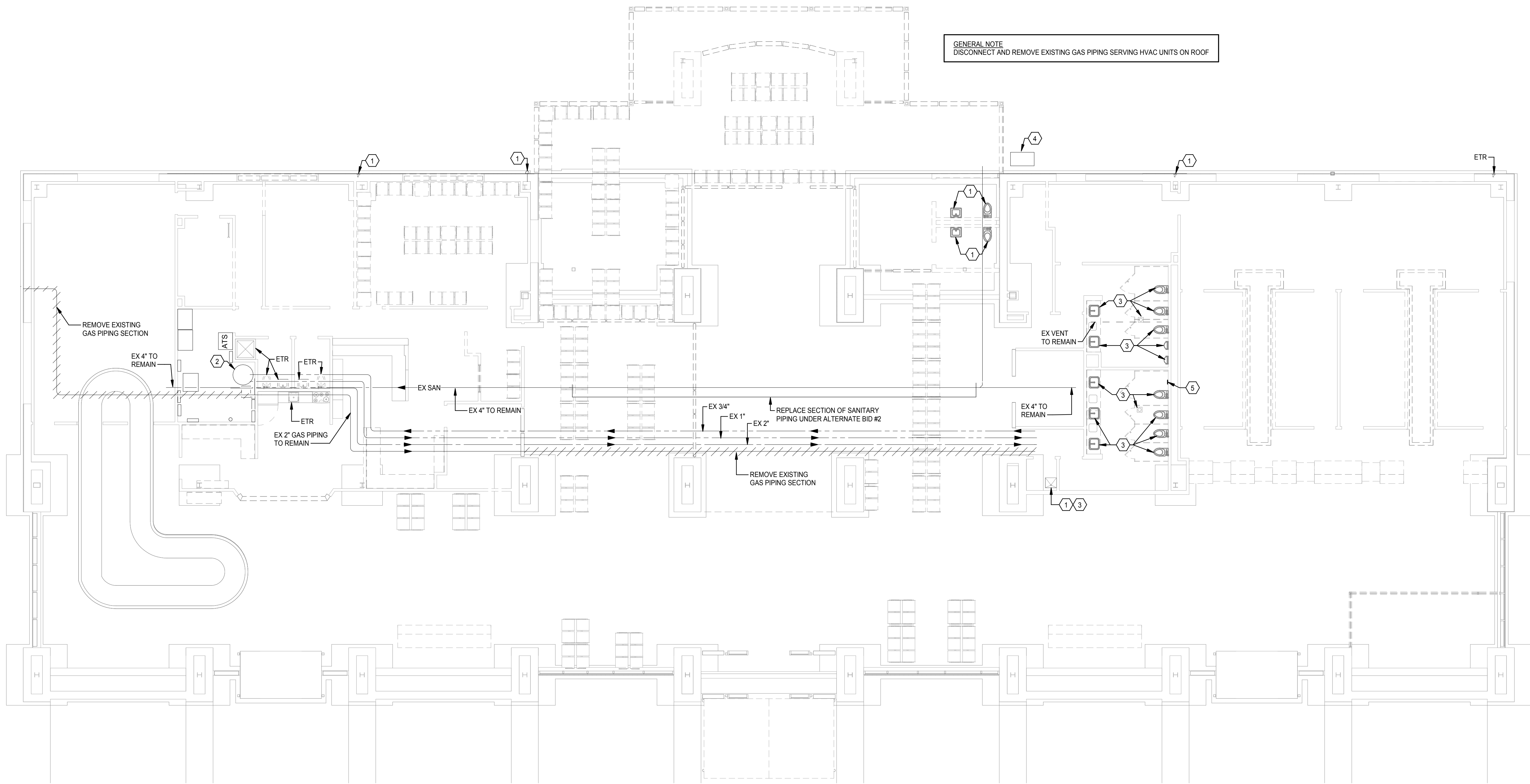
PLUMBING ABBREVIATIONS		PLUMBING ABBREVIATIONS (CONT.)		PLUMBING PIPING ABBREVIATIONS		PLUMBING SYMBOLS		ELECTRICAL REQUIREMENTS FOR PLUMBING EQUIPMENT		PROJECT GENERAL NOTES	
ABV	ABOVE	MAX	MAXIMUM	_____	COLD WATER PIPING (CW)		PIPE TEE UP	1. GENERAL REQUIREMENTS	A. PLUMBING CONTRACTOR SHALL PROVIDE MECHANICAL EQUIPMENT WITH VOLTAGES AND OTHER ELECTRICAL CHARACTERISTICS AS INDICATED ON THE DRAWINGS AND WITHIN THE SPECIFICATIONS.	1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.	26. ALL OPENINGS IN FIRE AND/OR SMOKE RATED CONSTRUCTION DUE TO PIPING, CONDUIT, ETC. SHALL BE FIRE STOPPED WITH AN APPROVED LISTED AND LABELED FIRE STOPPING MATERIAL.
AC	ABOVE CEILING	MBH	THOUSAND BTU's	_____F_____	FIRE PROTECTION PIPING (F OR FP)		PIPE TEE DOWN				
AHAP	AS HIGH AS POSSIBLE	MC	MECHANICAL CONTRACTOR	_____G_____	GAS PIPING (G)		PIPE ELBOW UP	B. ALL STARTERS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, AND VARIABLE FREQUENCY DRIVES, FOR EQUIPMENT PROVIDED UNDER DIVISION 22, SHALL BE FURNISHED UNDER DIVISION 22 AND INSTALLED UNDER DIVISION 26. FACTORY MOUNTED STARTERS, DISCONNECTS SWITCHES, AND VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 22. PLUMBING CONTRACTOR SHALL PROVIDE STARTERS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS AND VARIABLE FREQUENCY DRIVES IN ACCORDANCE WITH DIVISION 26.	C. PLUMBING CONTRACTOR SHALL SUBMIT WIRING DIAGRAMS TO THE ARCHITECT/ENGINEER FOR APPROVAL AND PROVIDE APPROVED DIAGRAMS TO THE ELECTRICAL CONTRACTOR SO THAT THE ELECTRICAL WORK MAY BE PROPERLY ACCOMPLISHED.	3. INSTALL ALL PLUMBING EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS AND APPLICABLE CODES AND REGULATIONS.	27. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING EQUIPMENT AND UTILITIES BEFORE COMMENCING WORK.
AP	ACCESS PANEL	NC	NORMALLY CLOSED	_____H_____	HOT WATER PIPING (HW)		PIPE ELBOW DOWN				
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS	NTS	NOT IN CONTRACT	_____I_____	HOT WATER RETURN PIPING (HWR)		DIRECTION OF FLOW	D. PLUMBING CONTRACTOR SHALL FULLY COOPERATE WITH THE OTHER DIVISIONS AND TRADES ON THE PROJECT, AND THEIR MANUFACTURERS, IN PROMPTLY PROVIDING THE INFORMATION REQUIRED FOR PROPER COORDINATION OF MOTOR PROTECTION, CONTROL EQUIPMENT AND WIRING, AND THE OTHER CHARACTERISTICS OF THE EQUIPMENT.	E. IT SHALL BE THE RESPONSIBILITY OF THE DIVISION 23 AND DIVISION 26 CONTRACTORS TO CHECK FOR ADEQUACY OF SUPPLY WIRING, OVERCURRENT PROTECTION, PROPER VOLTAGE, PHASE ROTATION AND FINAL LOCATION OF EQUIPMENT PROVIDED PRIOR TO THE RUNNING OF ANY CONDUIT OR WIRING. COORDINATE WITH DIVISION 26 TO ASSURE PROPER ELECTRICAL SERVICE IS PROVIDED TO EQUIPMENT UNDER DIVISION 22.	4. PROVIDE VIBRATION ISOLATION FOR ALL PLUMBING EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.	28. ALL OPENINGS IN FIRE AND/OR SMOKE RATED CONSTRUCTION DUE TO PIPING, CONDUIT, ETC. SHALL BE FIRE STOPPED WITH AN APPROVED LISTED AND LABELED FIRE STOPPING MATERIAL.
BF	BELOW FLOOR	N/A	NOT APPLICABLE	_____J_____	SANITARY PIPING (SAN)		BALL VALVE				
BLW	BELOW	PC	PLUMBING CONTRACTOR	_____K_____	STORM PIPING (ST)		STRAINER	F. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	G. PLUMBING CONTRACTOR SHALL SUBMIT WIRING DIAGRAMS TO THE ARCHITECT/ENGINEER FOR APPROVAL AND PROVIDE APPROVED DIAGRAMS TO THE ELECTRICAL CONTRACTOR SO THAT THE ELECTRICAL WORK MAY BE PROPERLY ACCOMPLISHED.	5. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO, AND WITHIN 50 FT OF ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS) THROUGHOUT MECHANICAL EQUIPMENT ROOMS.	29. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
BS	BALANCING STATION	PH	PHASE	_____L_____	UNDERGROUND WATER PIPING (W)		BALANCING VALVE				
CIRC	CIRCULATING	PRESS	PRESSURE	_____M_____	VENT PIPING (V)		CHECK VALVE	H. IT SHALL BE THE RESPONSIBILITY OF THE DIVISION 23 AND DIVISION 26 CONTRACTORS TO CHECK FOR ADEQUACY OF SUPPLY WIRING, OVERCURRENT PROTECTION, PROPER VOLTAGE, PHASE ROTATION AND FINAL LOCATION OF EQUIPMENT PROVIDED PRIOR TO THE RUNNING OF ANY CONDUIT OR WIRING. COORDINATE WITH DIVISION 26 TO ASSURE PROPER ELECTRICAL SERVICE IS PROVIDED TO EQUIPMENT UNDER DIVISION 22.	I. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	6. THE LOCATION OF EXISTING EQUIPMENT AND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.	30. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
CLG	CEILING	PRV	PRESSURE REDUCING VALVE	_____N_____			UNION, SCREWED				
CO	CLEAN OUT	PSIG	POUNDS PER SQUARE INCH GAUGE	_____O_____			CAPPED PIPE	J. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	K. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	7. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, HVAC WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.	31. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
CONT	CONTINUATION	QNTY	QUANTITY	_____P_____			CLEAN OUT				
CW	COLD WATER	RD	ROOF DRAIN	_____Q_____			PRESSURE GAUGE WITH SHUT OFF COCK	L. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	M. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	8. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO THE UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.	32. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
DEG (°)	DEGREE	REQD	REQUIRED	_____R_____			THERMOMETER WITH SEPARABLE WELL				
DIA (Ø)	DIAMETER	RWC	RAIN WATER CONDUCTOR	_____S_____			SAFETY OR RELIEF VALVE	N. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	O. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	9. CEILING AREAS DIRECTLY BELOW HEATING EQUIPMENT MUST BE KEPT CLEAR OF ALL OTHER UTILITIES, INCLUDING FIRE PROTECTION COMPONENTS, TO ALLOW FOR UNIT ACCESS FOR SERVICING AND/OR REMOVAL. WHERE PIPING, CONDUIT, AND LIKE ITEMS ARE SHOWN IN THIS AREA, IT IS THE ENGINEER'S INTENTION THAT THIS PIPING BE INSTALLED ABOVE THE EQUIPMENT AND THAT BRANCH VALVING, WHERE APPLICABLE, BE INSTALLED IN AN ACCESSIBLE LOCATION. PROVIDE NECESSARY OFFSETS, ETC., TO ACCOMPLISH THIS CLEARANCE REQUIREMENT.	33. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
DISCH	DISCHARGE	SAN	SANITARY	_____T_____			CONNECT TO EXISTING				
DWG	DRAWING	SCH	SCHEDULE	_____U_____			THERMOSTATIC MIXING VALVE	P. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	Q. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	10. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.	34. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
EC	ELECTRICAL CONTRACTOR	ST	STORM	_____V_____			EXTERIOR WALL HYDRANT				
EL	ELEVATION	STD	STANDARD	_____W_____			PIPE CONNECTION	R. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	S. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	11. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH THE STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR PROPER ACCURACY.	35. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
EQUIP	EQUIPMENT	SW	SWITCH	_____X_____			NEW SANITARY/STORM CONNECTION				
ETC	ETCETERA	TEMP	TEMPORARY	_____Y_____			PIPE BREAK	T. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	U. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	12. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.	36. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
ETR	EXISTING TO REMAIN	TYP	TYPICAL	_____Z_____			ROOF PENETRATION				
'F	FAHRENHEIT	V	VOLT OR VENT	_____AA_____			ROOF PENETRATION ON ROOF	V. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	W. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	13. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.	37. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
F	FIRE PROTECTION	WC	WATT OR UNDERGROUND WATER	_____AB_____			SITE CURB BOX				
FD	FLOOR DRAIN	W	WATT	_____AC_____			PRESSURE / FLOW SWITCH	X. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	Y. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	14. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION.	38. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
FLR	FLOOR	WC	WATER COLUMN	_____AD_____			WATER HAMMER ARRESTOR				
FPC	FIRE PROTECTION CONTRACTOR	WC	WATER COLUMN	_____AE_____			FLOOR DRAIN (FD)	Z. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AA. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	15. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 26 OF THE SPECIFICATION.	39. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
G	NATURAL GAS			_____AF_____			FLOOR SINK (FS)				
GA	GAUGE			_____AG_____			FUNNEL FLOOR DRAIN (FFD)	AB. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AC. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	16. CONCRETE HOUSEKEEPING PADS FOR PLUMBING EQUIPMENT SHALL BE SIZED AND LOCATED BY THE PLUMBING CONTRACTOR. MINIMUM CONCRETE PAD THICKNESS SHALL BE 6 INCHES. PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 3 INCHES ON EACH SIDE. CONCRETE HOUSEKEEPING PADS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR.	40. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
GAL	GALLONS			_____AH_____			NATURAL GAS COCK				
GC	GENERAL CONTRACTOR			_____AI_____			NUMBERED NOTE PER DRAWING	AD. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AE. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	17. REINFORCEMENT, DETAILING, AND PLACEMENT OF CONCRETE SHALL CONFORM TO ASTM 315 AND ACI 318. CONCRETE SHALL CONFORM TO ASTM C94. CONCRETE WORK SHALL CONFORM TO ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS". COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 3,000 PSI. TOTAL AIR CONTENT OF EXTERIOR CONCRETE SHALL BE BETWEEN 5 AND 7 PERCENT BY VOLUME. SLUMP SHALL BE BETWEEN 3 AND 4IN. CONCRETE SHALL BE CURED FOR 7 DAYS AFTER PLACEMENT.	41. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
GPH	GALLONS PER HOUR			_____AJ_____			EQUIPMENT BY OTHERS				
GPM	GALLONS PER MINUTE			_____AK_____			REVISION SEQUENCE NUMBER	AF. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AG. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	18. WHEN PLUMBING WORK IS SUBCONTRACTED, IT SHALL BE THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDED A PARTICULAR ITEM OF THE PLUMBING CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE PLUMBING CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PLUMBING CONTRACTOR, WHOSE DECISION SHALL BE FINAL.	42. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
HD	HEAD			_____AL_____							
HP	HORSEPOWER			_____AM_____				AH. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AI. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	19. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.	43. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
HR	HOOR			_____AN_____							
HTG	HEATING			_____AO_____				AJ. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AV. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	20. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.	44. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
HW	HOT WATER			_____AP_____							
HWR	HOT WATER RETURN			_____AQ_____				AV. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	AZ. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE EXCEPTION THAT CONNECTIONS TO MOTORS SHALL BE MADE THROUGH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH EQUIPMENT GROUNDING CONDUCTOR.	21. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED TO SERVICE VALVES AND OTHER CONCEALED PLUMBING EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION.	45. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
ID	INSIDE DIAMETER			_____AR_____							
IE	INVERT ELEVATION			_____AS_____				AZ. EQUIPMENT CONNECTIONS SHALL BE MADE THROUGH CONDUIT OR RACEWAYS IN ACCORDANCE WITH DIVISION 26, WITH THE			



NUMBERED NOTES

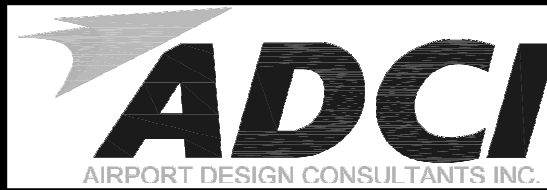
- 1 DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE AND ASSOCIATED PIPING THIS ROOM. CAP AND CONCEAL PIPING BELOW FINISHED FLOOR AND/OR ABOVE FINISHED CEILING.
- 2 DISCONNECT AND REMOVE EXISTING WATER HEATER.
- 3 DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE AND ASSOCIATED PIPING THIS ROOM. EXISTING PIPING IN WALL SHALL REMAIN FOR CONNECTION TO NEW FIXTURE.
- 4 DISCONNECT AND REMOVE EXISTING OIL INTERCEPTOR.
- 5 DISCONNECT AND REMOVE EXISTING CLEANOUT.

GENERAL NOTE  
DISCONNECT AND REMOVE EXISTING GAS PIPING SERVING HVAC UNITS ON ROOF



1  
PL01.100

FIRST FLOOR PLAN - DEMOLITION  
1/8" = 1'-0"



6031 UNIVERSITY BLVD.  
SUITE 330  
ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602



232 Horner Street  
Johnstown, PA 15902  
ph: (814)536-1651  
fax: (814)536-5732  
CJL Project # 16-0236

SEAL:



Professional Certification:

I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 25983

Expiration Date: 3/30/2021

DESIGNED: DAK

DRAWN: DAK

CHECKED: ARM

APPROVED: MRS

No.

DATE

DESCRIPTION



Washington County, MD

HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:

TERMINAL BUILDING EXPANSION

SHEET TITLE:

PLUMBING - DEMOLITION PLAN

SCALE:

1/8" = 1'-0"

DATE:

MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

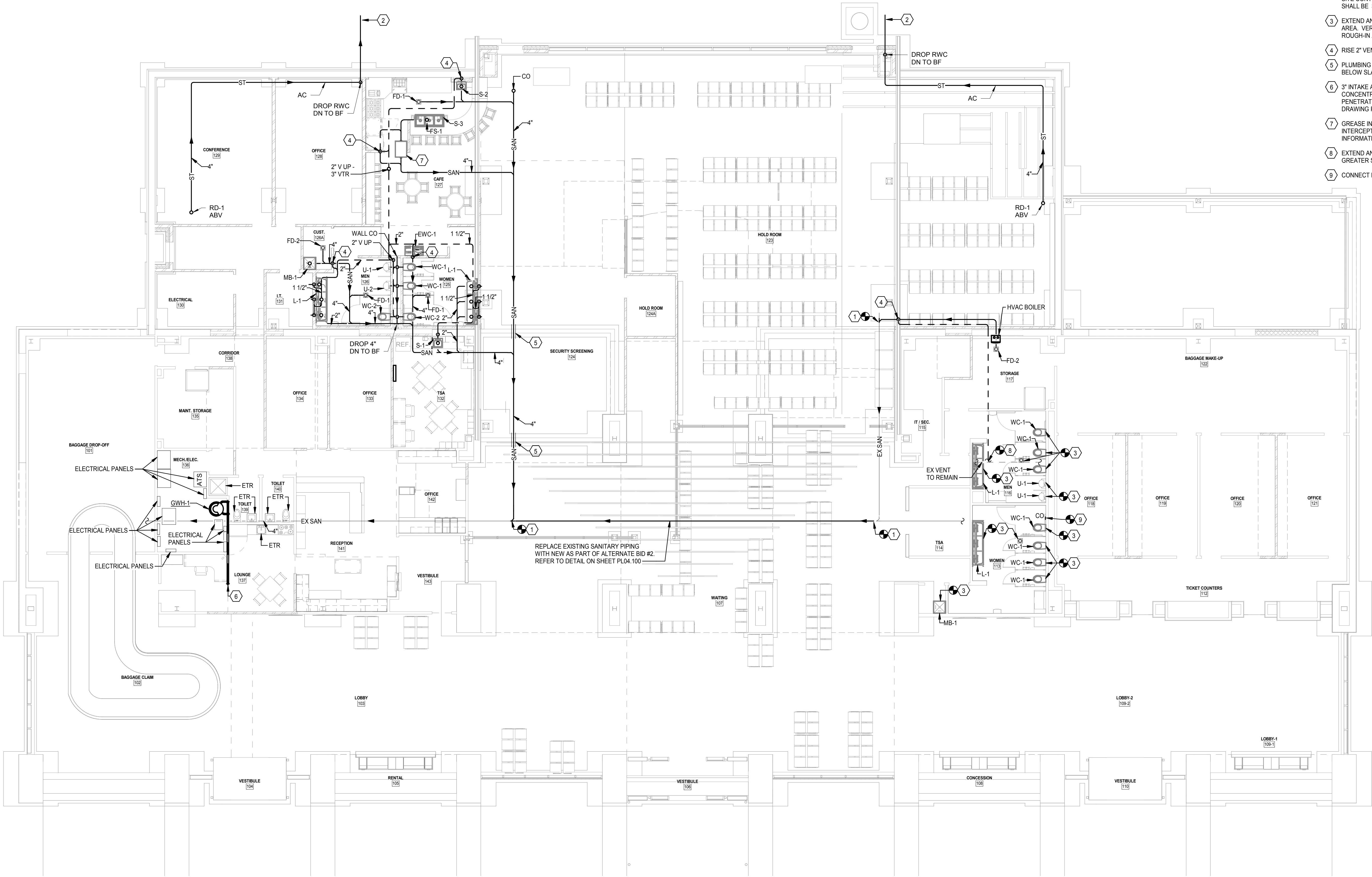
SHEET No.:

PL01.100  
81 OF 117



NUMBERED NOTES

- 1
- CONNECT NEW SANITARY PIPING, OF SIZE SHOWN, TO EXISTING SANITARY PIPING OF EQUAL OR GREATER SIZE, IN THIS AREA. VERIFY LOCATION IN FIELD.
- 2
- STUB-OUT 4" STORM SEWER 5'-0" FROM BUILDING. COORDINATE EXACT LOCATION WITH SITE CONTRACTOR. FINAL CONNECTION BY SITE CONTRACTOR. INVERT ELEVATION SHALL BE 3" BELOW FINISHED GRADE.
- 3
- EXTEND AND CONNECT NEW PLUMBING FIXTURE TO EXISTING FIXTURE ROUGH-IN, IN THIS AREA. VERIFY EXACT LOCATION OF EXISTING PIPING IN FIELD AND MODIFY EXISTING ROUGH-IN AS REQUIRED.
- 4
- RISE 2" VENT UP TO ABOVE CEILING.
- 5
- PLUMBING CONTRACTOR TO SLEEVE NEW SANITARY PIPING THRU EXISTING FOOTER BELOW SLAB.
- 6
- 3" INTAKE AND EXHAUST PIPING FOR WATER HEATER UP TO ROOF. PROVIDE CONCENTRIC VENT UNIT, AS PROVIDED BY WATER HEATER MANUFACTURER, FOR ROOF PENETRATION. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION. REFER TO DRAWING PL04.100 FOR DETAIL.
- 7
- GREASE INTERCEPTOR WITH FLOW CONTROL FITTING. REFER TO GREASE INTERCEPTOR DETAIL ON SHEET PL04.100. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 8
- EXTEND AND CONNECT NEW VENT PIPING TO EXISTING VENT PIPING, OF EQUAL OR GREATER SIZE, THIS AREA. VERIFY EXACT LOCATION IN FIELD.
- 9
- CONNECT NEW CLEANOUT TO EXISTING PIPING.



1

PL02.100

FLOOR PLAN - DRAINAGE & VENT PIPING

1/8" = 1'-0"

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CJL Project # 16-0236



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Expiration Date: 3/30/2021

DESIGNED: DAK  
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CHECKED: ARM  
APPROVED: MRS

No.	DATE	DESCRIPTION
BID DOCUMENTS		

Washington County, MD

HAGERSTOWN REGIONAL AIRPORT

HGR

PROJECT TITLE:  
TERMINAL BUILDING EXPANSION

SHEET TITLE:  
FLOOR PLAN - DRAINAGE AND VENT PIPING

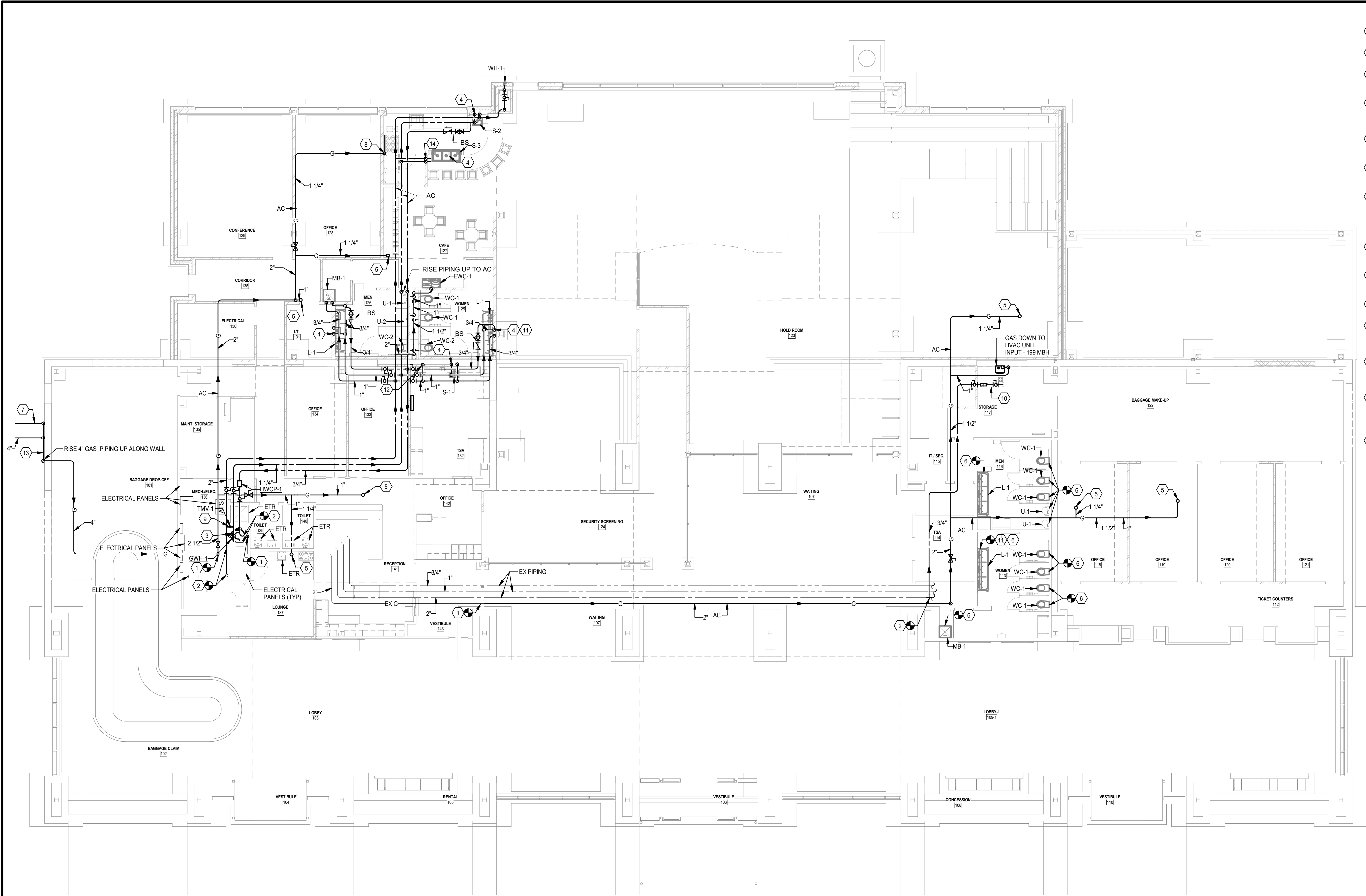
SCALE:  
1/8" = 1'-0"

DATE:  
MARCH 2019

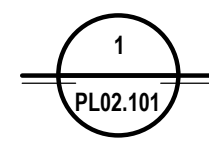
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
PL02.100  
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- NUMBERED NOTES**
- 1 EXTEND AND CONNECT NEW GAS PIPING, OF SIZE SHOWN, TO EXISTING GAS PIPING OF EQUAL OR GREATER SIZE. IN THIS AREA. VERIFY EXACT LOCATION IN FIELD.
  - 2 EXTEND AND CONNECT NEW WATER PIPING, OF SIZE SHOWN, TO EXISTING WATER PIPING OF EQUAL OR GREATER SIZE, IN THIS AREA. VERIFY EXACT LOCATION IN FIELD.
  - 3 GWH-1 PROVIDE NEW DOMESTIC WATER HEATER MOUNTED ON 4" CONCRETE HOUSEKEEPING PAD. REFER TO WATER HEATER PIPING SCHEMATIC ON SHEET PL4.100. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - 4 PROVIDE POINT-OF-USE THERMOSTATIC MIXING VALVE (TMV-2), ABOVE CEILING OR IN CASEWORK, THIS AREA. REDUCE TEMPERATURE FROM 125° TO 105°. REFER TO DETAIL AND SCHEDULE ON SHEET PLO8.100. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - 5 CONNECT GAS PIPING OF SIZE NOTED TO HVAC EQUIPMENT ON ROOF WITH SHUT-OFF VALVE AND PRESSURE REGULATOR. SET OUTLET PRESSURE OF REGULATOR TO HVAC EQUIPMENT MANUFACTURER REQUIREMENTS.
  - 6 EXTEND AND CONNECT NEW PLUMBING FIXTURE TO EXISTING FIXTURE ROUGH-INS. THIS AREA. VERIFY EXACT LOCATION OF EXISTING PIPING IN FIELD AND MODIFY EXISTING ROUGH-INS AS REQUIRED.
  - 7 2" GAS PIPING BELOW GRADE TO EXISTING GAS GENERATOR. CONNECT NEW GAS PIPING TO GENERATOR WITH SHUT-OFF VALVE AND PRESSURE REGULATOR. EMERGENCY GENERATOR TO HAVE SEPARATELY DEDICATED GAS MAIN FROM SERVICE AND SHALL BE VALVED SEPARATELY FROM BUILDING. GENERATOR APPROXIMATELY 150' AWAY. TOTAL GAS LOAD FOR GENERATOR IS 584 MBH. GAS PIPING TO EMERGENCY GENERATOR SHALL BE DELETED UNDER ALTERNATE BID #6.
  - 8 PROVIDE GAS VALVE AND CAP FOR 1-1/4" GAS PIPING. DROP DOWN TO APPROXIMATELY 24" ABOVE FINISHED FLOOR AND RUN GAS HEADER ALONG WALL AND PROVIDE CONNECTIONS FOR FUTURE APPLIANCE.
  - 9 MOUNT THERMOSTATIC MIXING VALVE (TMV-1) ON WALL 6'-6" ABOVE FINISHED FLOOR THIS AREA. SET DISCHARGE TEMPERATURE TO 125° F. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - 10 PROVIDE CAPPED 3/4" MAKE-UP LINE WITH RPZ AND BALL VALVES ON INLET AND OUTLET FOR HVAC UNIT. EXTENSIONS BEYOND ARE BY THE HVAC CONTRACTOR.
  - 11 TRAP PRIMER LOCATED AT OR ABOVE CEILING. DROP TRAP PRIMER PIPING DOWN IN WALL OR ALONG WALL TO BELOW FLOOR AND CONNECT TO FLOOR DRAIN. ALL TRAP PRIMER PIPING BELOW SLAB SHALL BE IN PIPE SLEEVE. REFER TO DETAIL ON SHEET PL04.100. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
  - 12 1/2" COLD WATER PIPING WITH VALVED DUAL CHECK BACKFLOW PREVENTER FOR WDV-1, WATER DISPENSING VALVE, THIS AREA. REFRIGERATOR PROVIDED BY OTHERS. FINAL CONNECTION BY PLUMBING CONTRACTOR. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL DRAWING AND ELEVATIONS.
  - 13 CONNECT NEW 4" GAS PIPING TO NEW GAS METER. GAS SERVICE METER ASSEMBLY SHALL BE COORDINATED WITH THE LOCAL GAS COMPANY BY THE PLUMBING CONTRACTOR. TOTAL BUILDING LOAD IS 2484 MBH. MINIMUM PRESSURE SHALL BE 2.8 OUNCES AND MAXIMUM PRESSURE SHALL BE 8 OUNCES (14" W.C.). COORDINATE SERVICE REQUIREMENTS WITH LOCAL GAS COMPANY.
  - 14 DROP 3/4" HOT AND COLD WATER PIPING DOWN IN WALL TO BELOW FIXTURE LEVEL.



**FLOOR PLAN - WATER & GAS PIPING**  
1/8" = 1'-0"

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APPROVED: MRS

No. DATE DESCRIPTION

**BID DOCUMENTS**



PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**FLOOR PLAN - WATER AND GAS PIPING**

SCALE:  
1/8" = 1'-0"

DATE:  
MARCH 2019

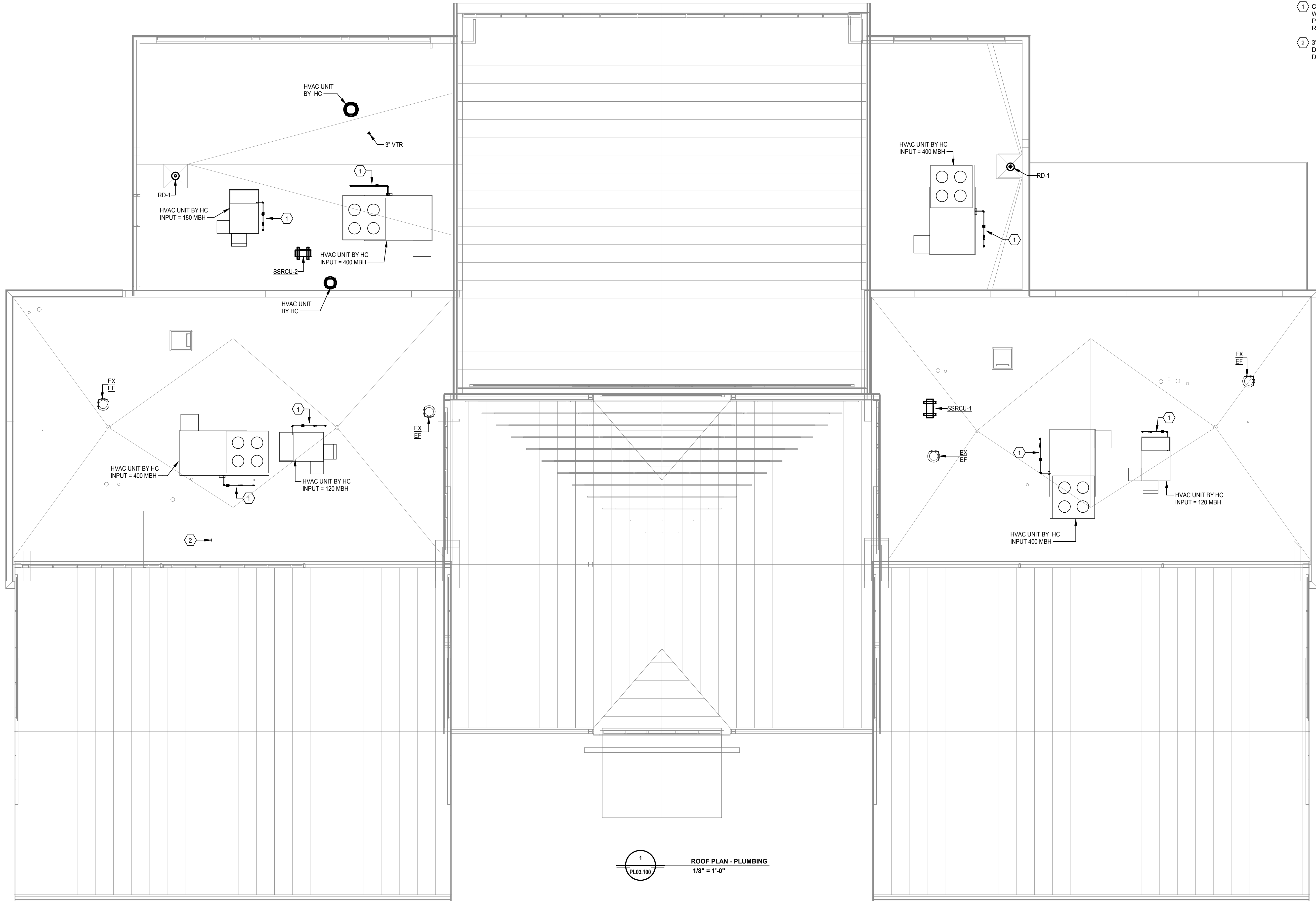
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**PL02.101**  
83 OF 117



NUMBERED NOTES

- 1 CONNECT GAS PIPING OF SIZE NOTED TO HVAC EQUIPMENT ON ROOF WITH SHUT-OFF VALVE AND PRESSURE REGULATOR. SET OUTLET PRESSURE OF REGULATOR TO HVAC EQUIPMENT MANUFACTURER REQUIREMENTS.
- 2 3" CONCENTRIC VENT PIPING FOR GAS-FIRED WATER HEATERS. REFER TO DRAWING PL02.100 FOR CONTINUATION. REFER TO DRAWING PL04.100 FOR DETAIL.



1  
PL03.100  
ROOF PLAN - PLUMBING  
1/8" = 1'-0"

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**BID DOCUMENTS**



PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**ROOF PLAN - PLUMBING**

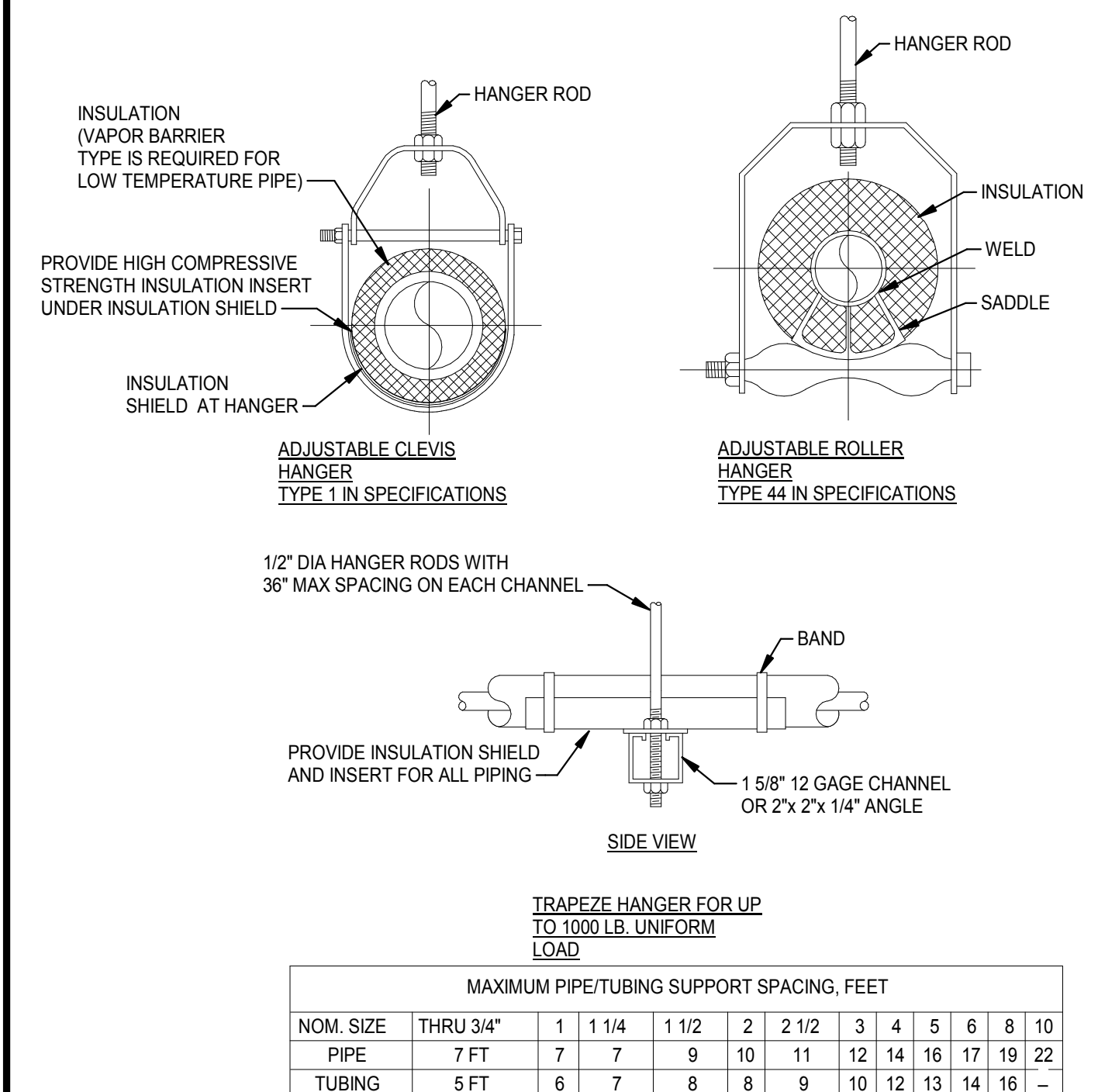
SCALE:  
1/8" = 1'-0"

DATE:  
MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**PL03.100**  
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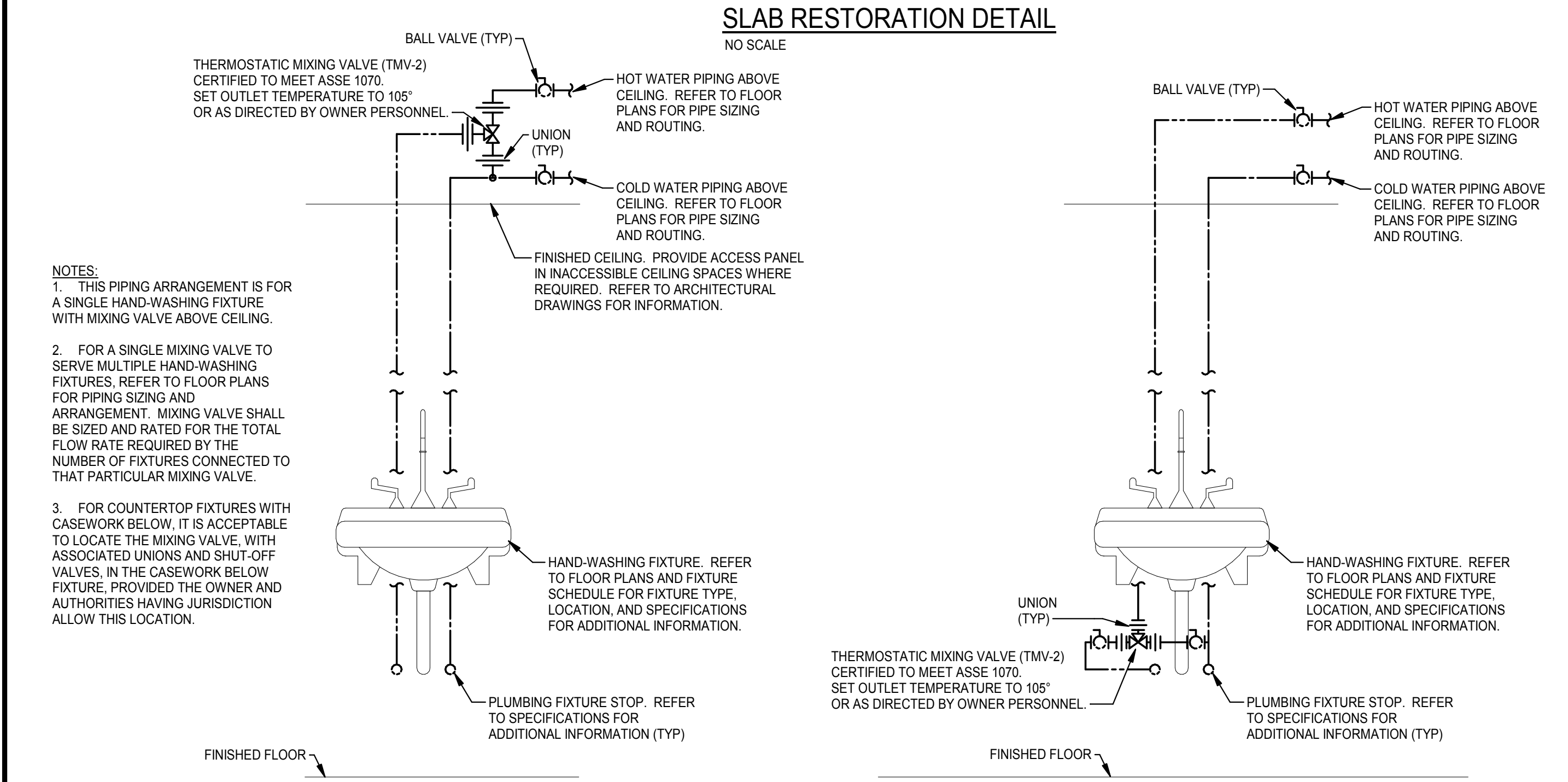
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

### PIPE HANGER AND SUPPORT DETAIL

NO SCALE

### VERTICAL PIPE HANGER AND SUPPORT DETAIL

NO SCALE

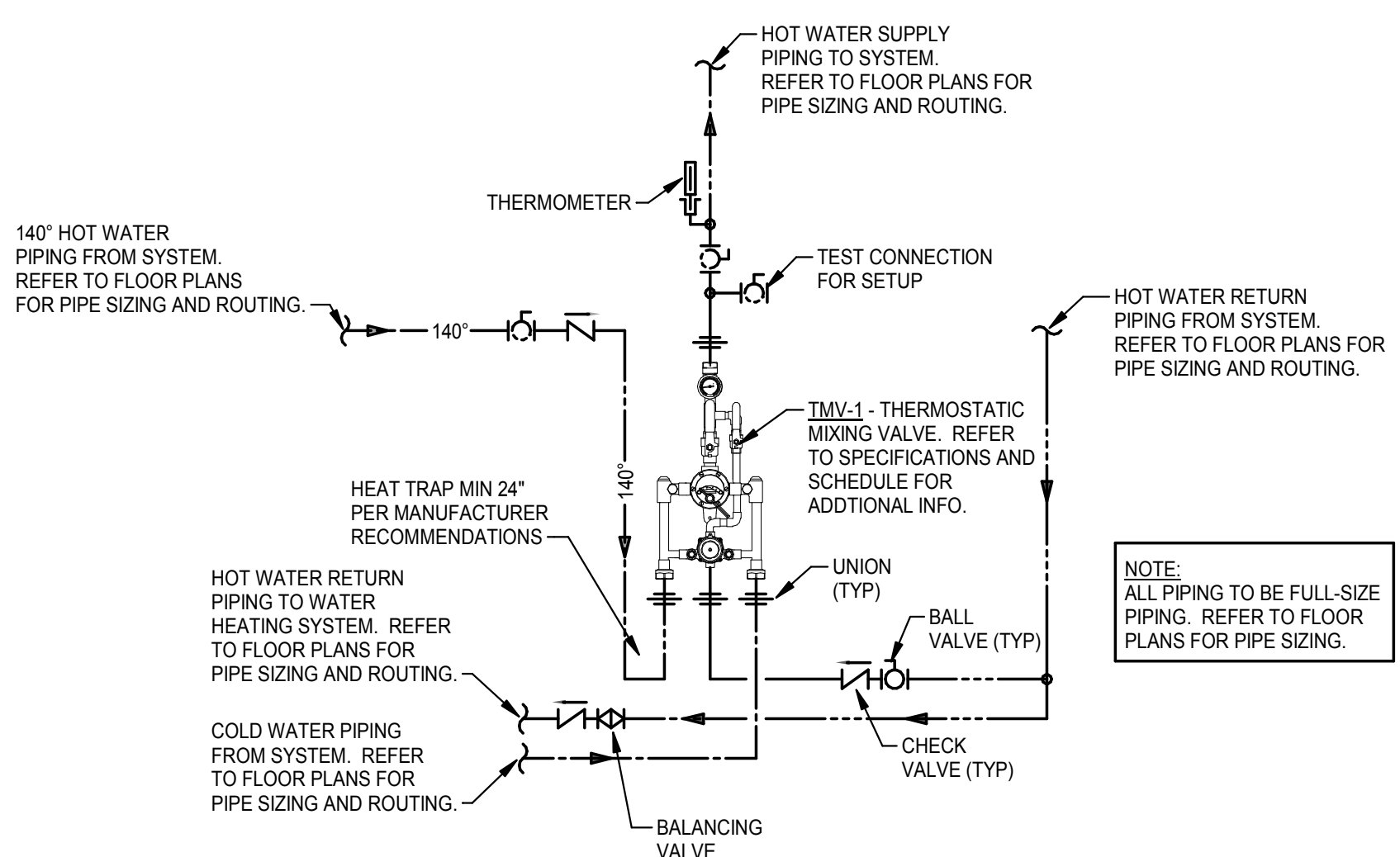


### FIXTURE THERMOSTATIC MIXING VALVE PIPING SCHEMATIC

NO SCALE

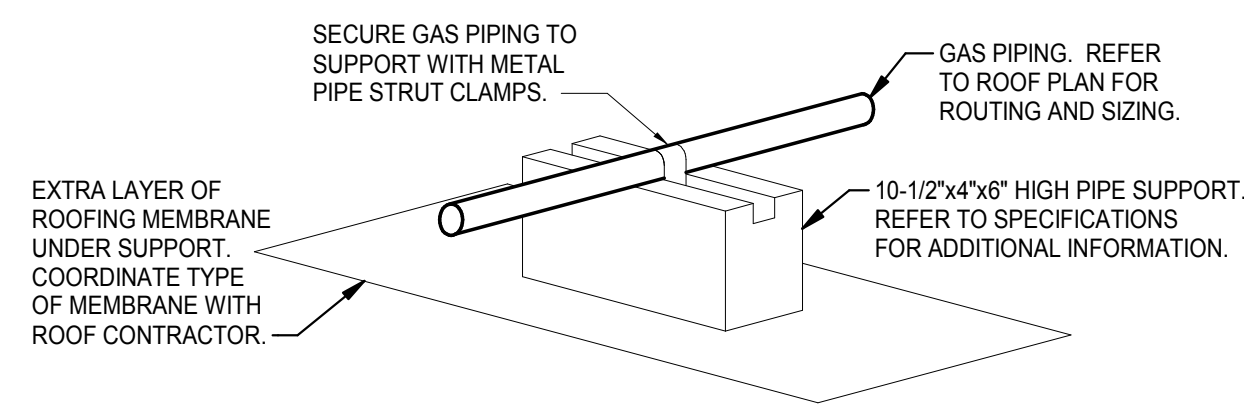
### FIXTURE THERMOSTATIC MIXING VALVE PIPING SCHEMATIC

NO SCALE



### TMV-1 - THERMOSTATIC MIXING VALVE SCHEMATIC

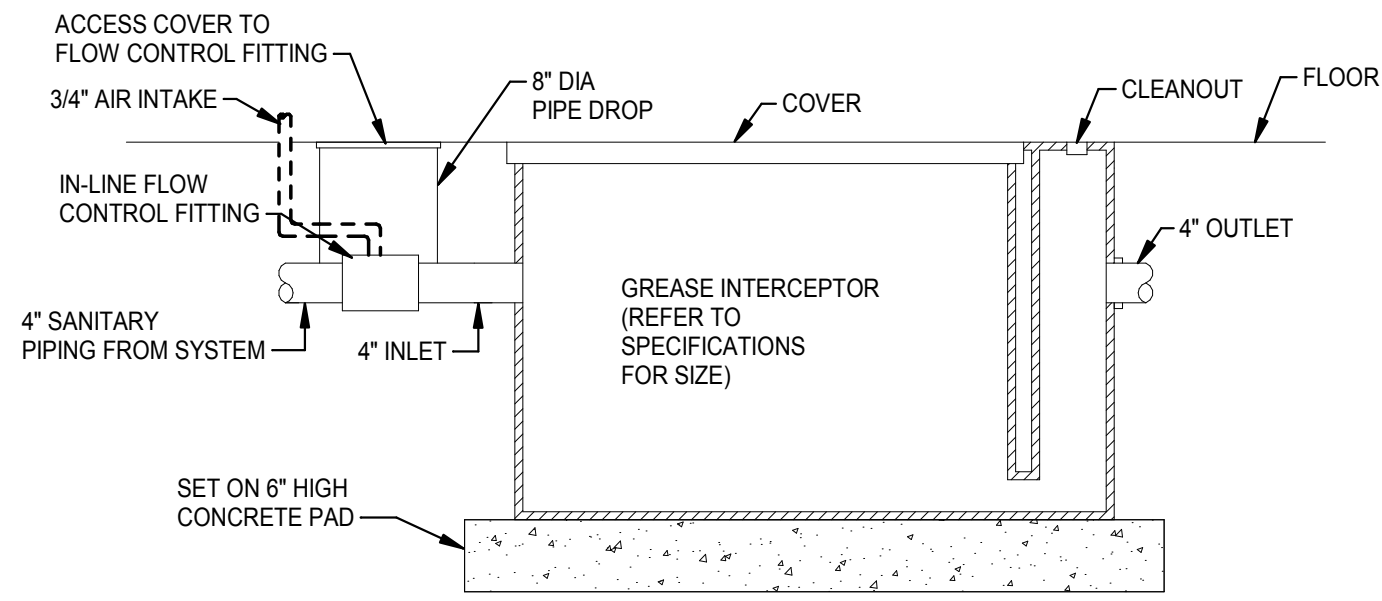
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### GAS PIPE SUPPORT DETAIL

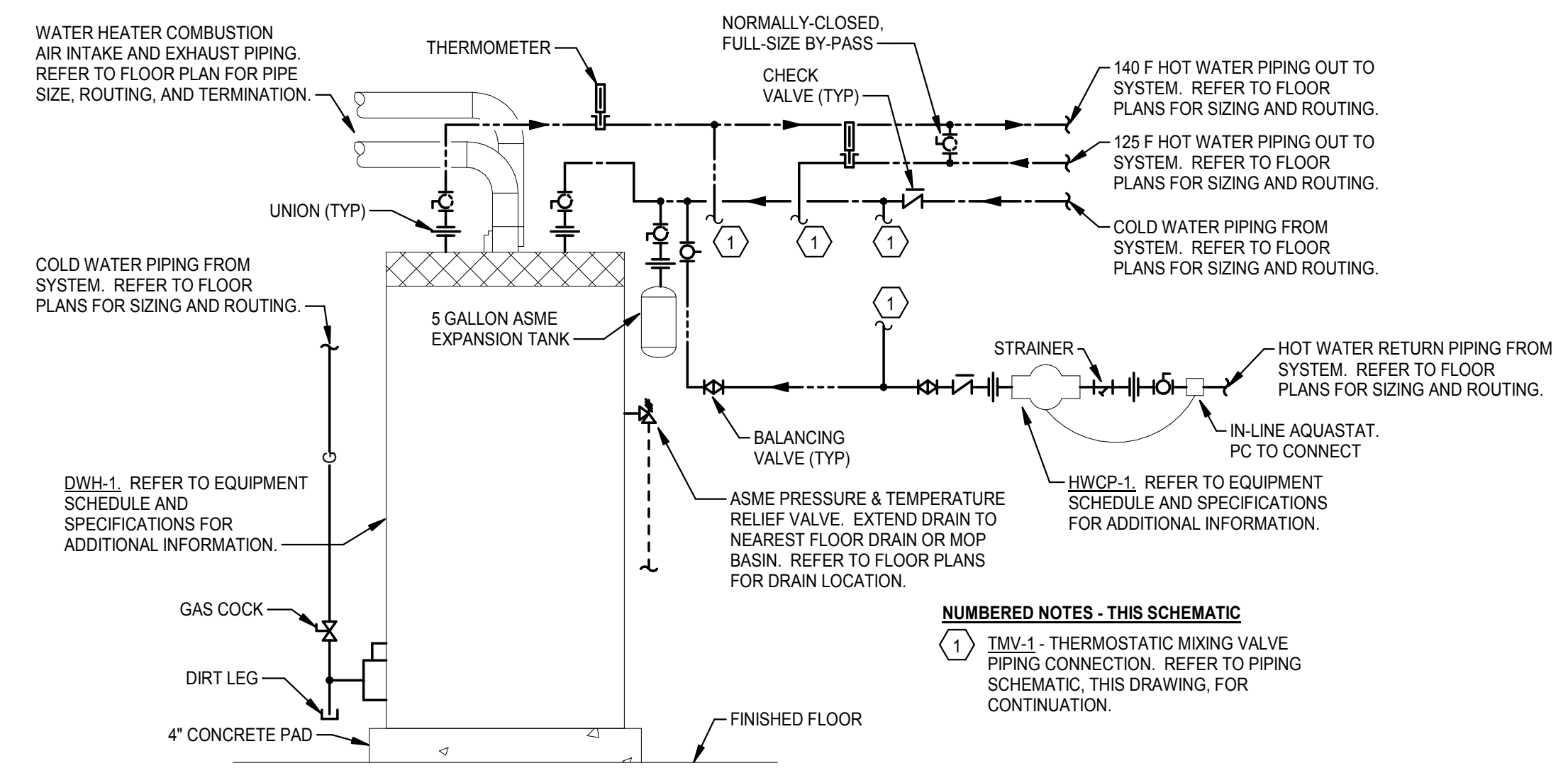
NO SCALE

- NOTES:
- SUPPORT SYSTEM SHALL BE THAT AS MANUFACTURED BY "ROOF TOP BLOX" OR APPROVED EQUAL, SEE SPECIFICATION.
  - ALL SUPPORTS, SUPPORT HARDWARE, BOLTING, SPACING, ETC. AS PER MANUFACTURER'S RECOMMENDATIONS.
  - SPACING OF PIPE SUPPORTS SHALL BE BASED UPON SIZE OF PIPE TO BE SUPPORTED.
    - FOR GAS PIPING LESS THAN OR EQUAL TO 1", SUPPORTS SHALL BE SPACED 8'-0" ON CENTER.
    - FOR GAS PIPING GREATER THAN 1", SUPPORTS SHALL BE SPACED 10'-0" ON CENTER.
  - WHERE APPLICABLE, CONTRACTOR SHALL CLEAR ROOF SPACE OF GRAVEL, ETC., FOR INSTALLTION OF SUPPORT.



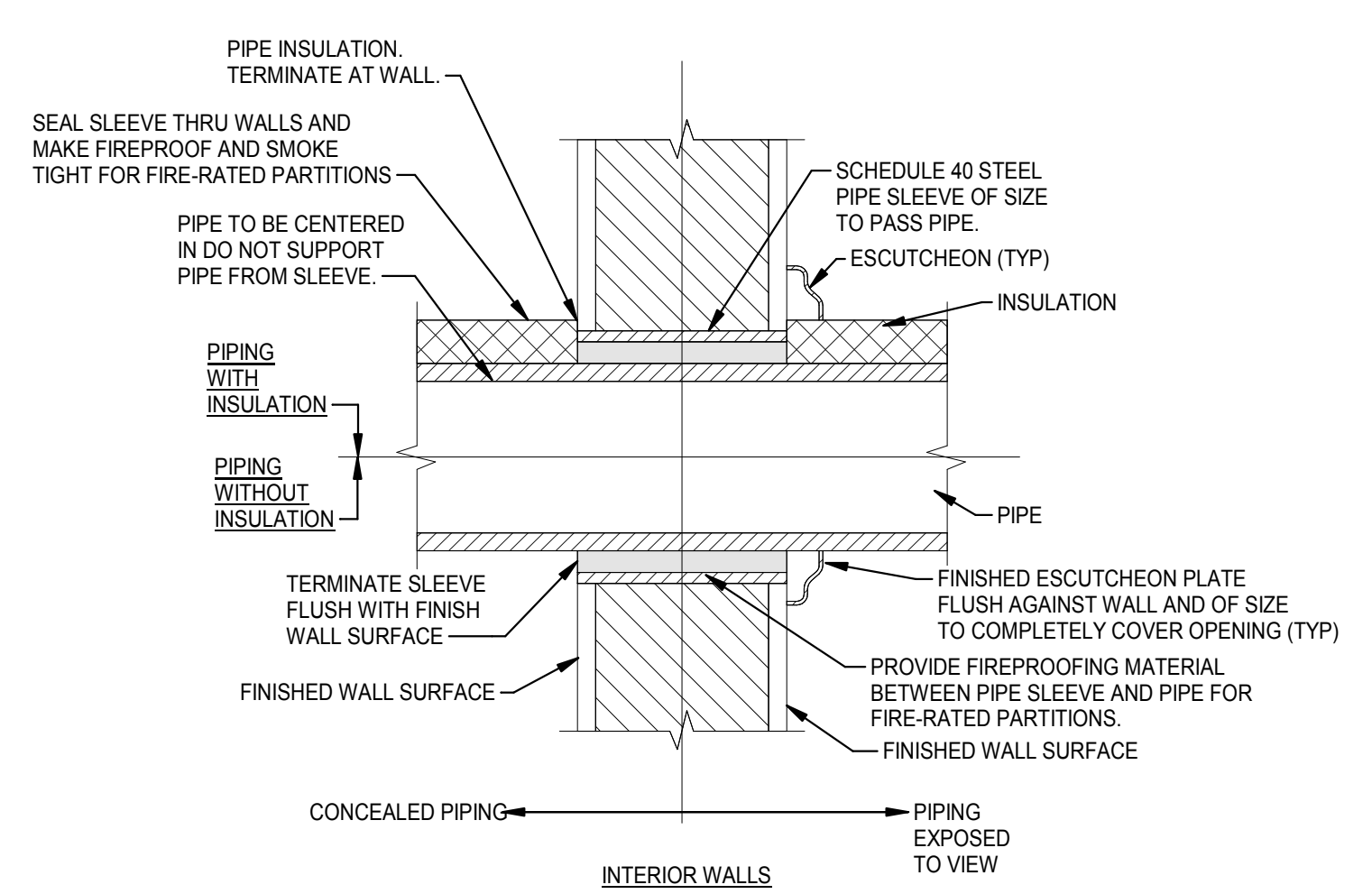
### INTERIOR GREASE INTERCEPTOR DETAIL

NO SCALE



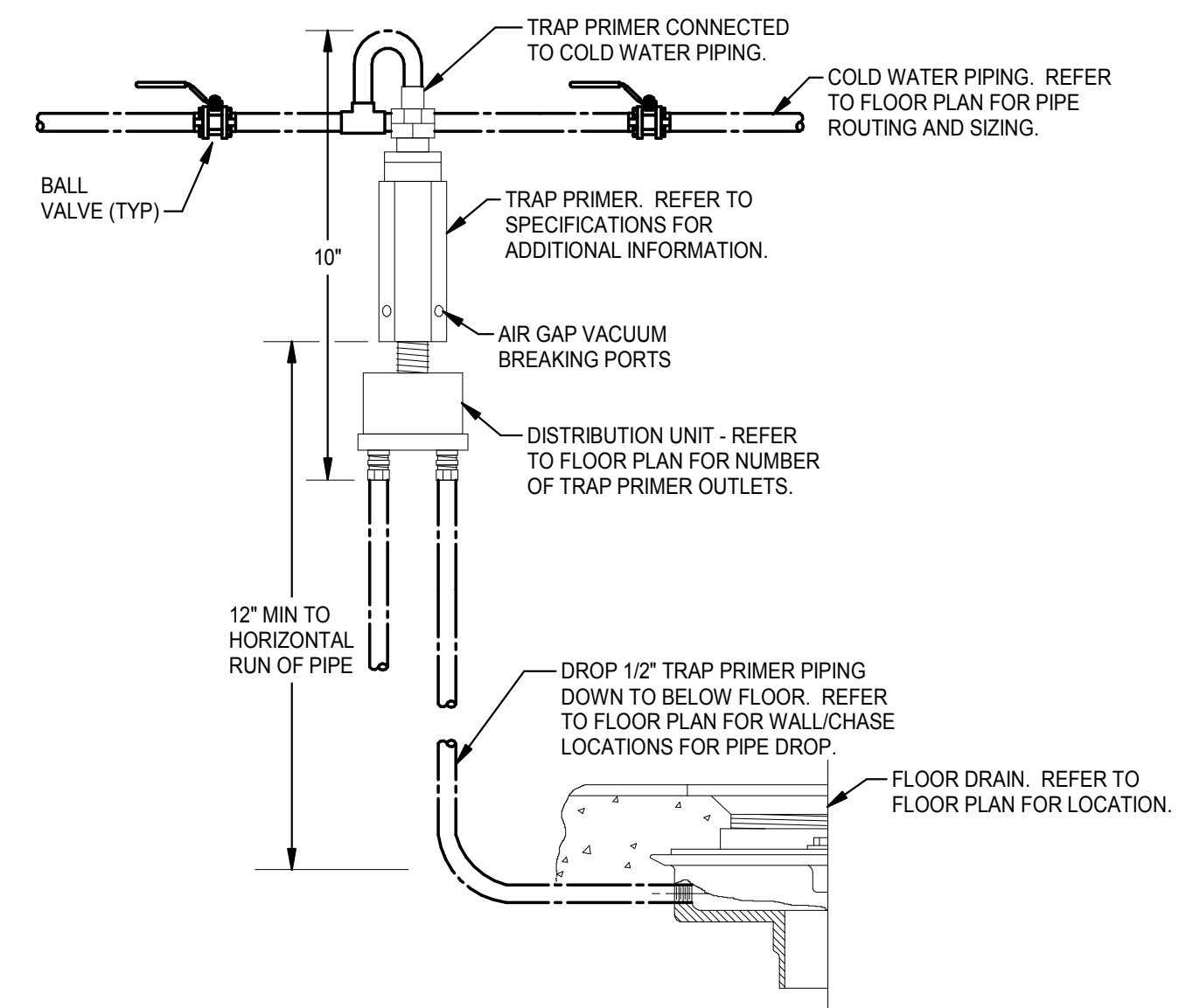
### GAS-FIRED WATER HEATER PIPING SCHEMATIC

NO SCALE



### PIPE SLEEVE THRU WALL DETAIL

NO SCALE



### TRAP PRIMER PIPING SCHEMATIC

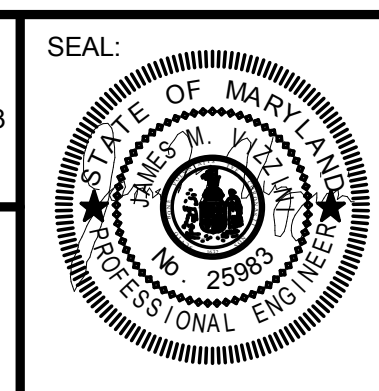
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**BID DOCUMENTS**

**Washington County, MD**

HAGERSTOWN REGIONAL AIRPORT

HGR

PROJECT TITLE:

**TERMINAL BUILDING EXPANSION**

SHEET TITLE:

**PLUMBING - DETAILS**

SCALE: AS INDICATED

DATE: MARCH 2019

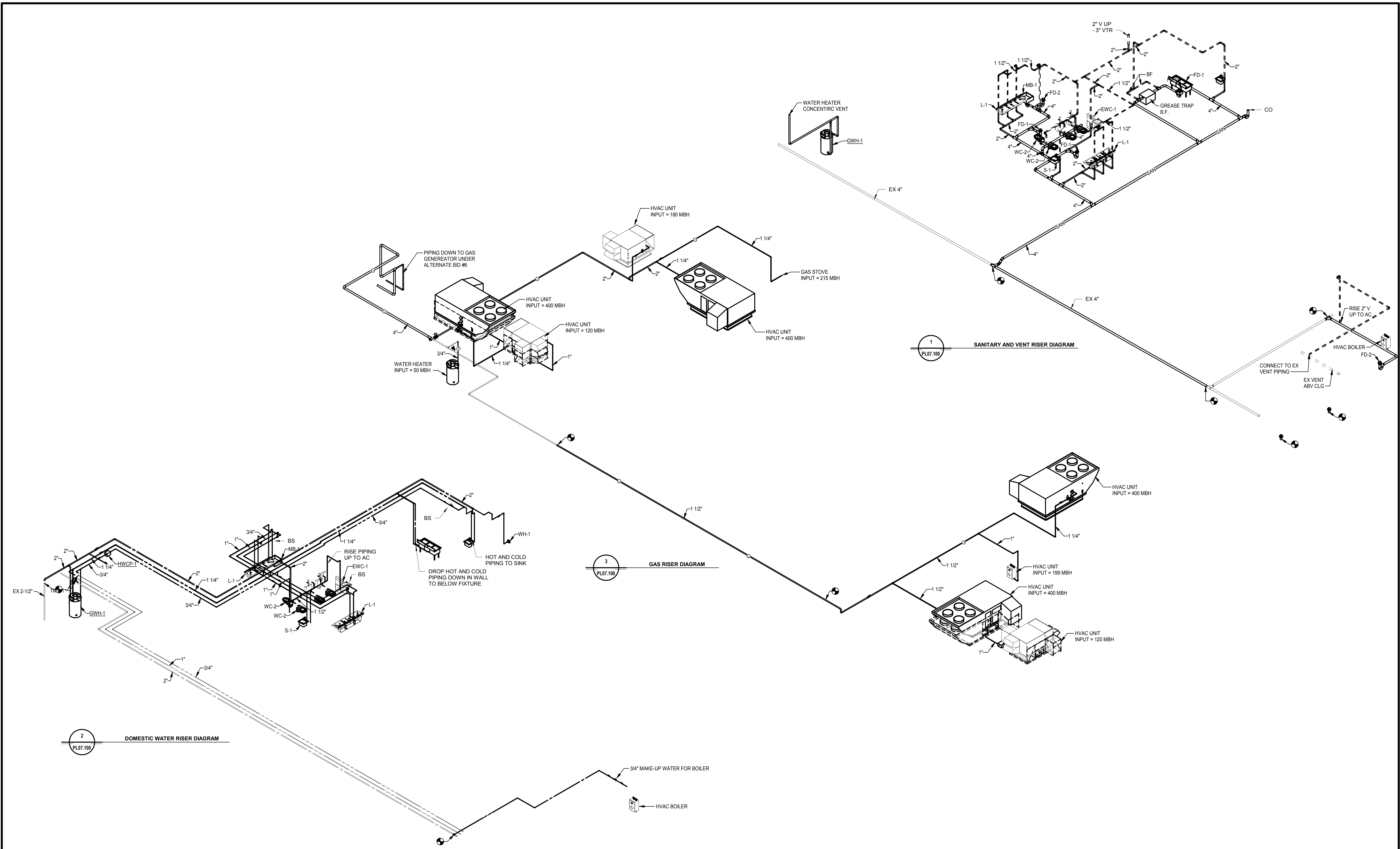
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:

**PL04.100**

**85 OF 117**







PLUMBING FIXTURE SCHEDULE				
ID #	FIXTURE DESCRIPTION	SANITARY, SOIL, & VENT CONNECTION	WATER SUPPLY CONNECTION	NOTES
EW-C-1	WALL-MOUNTED, DUAL-HEIGHT WATER COOLER	1 1/2" W & V	1/2" CW	NOTE 1
L-1	WALL MOUNTED 3-STATION LAVATORY SYSTEM WITH BATTERY-OPERATED SENSOR FAUCET - ADA	1 1/2" W & V	1/2" HW & CW	NOTE 1
MB-1	24"x24" FLOOR MOUNTED MOP BASIN	1 1/2" W & V	1/2" HW & CW	NOTE 1
S-1	18x18 DROP IN STAINLESS STEEL SINK - ADA HEIGHT	1 1/2" W & V	1/2" HW & CW	NOTE 1
S-2	KITCHEN SINK WITH GOOSENECK FAUCET	1 1/2" W & V	1/2" HW & CW	NOTE 1
S-3	TRIPLE BOWL SINK	(3x) 2" W & V	1/2" HW & CW	NOTE 1
U-1	WALL MOUNTED FLUSH VALVE URINAL- STANDARD	2" W & V	3/4 CW	NOTE 1
U-2	WALL MOUNTED FLUSH VALVE URINAL - ADA	2" W & V	3/4 CW	NOTE 1
WC-1	WALL MOUNTED WATER CLOSET WITH MANUAL FLUSH VALVE - STANDARD HEIGHT	4" W & 2" V	1" CW	NOTE 1
WC-2	WALL MOUNTED WATER CLOSET WITH MANUAL FLUSH VALVE - ADA HEIGHT	4" W & 2" V	1" CW	NOTE 1
WH-1	EXTERIOR, FREEZE-PROOF, WALL HYDRANT	---	3/4" CW	NOTE 1

NOTES:  
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

DOMESTIC HOT WATER CIRCULATING PUMP SCHEDULE						
ID #	SYSTEM DESCRIPTION	GPM	TDH	POWER	ELEC CHAR	NOTES
HWCP-1	DOMESTIC HOT WATER LOOP	2 GPM	20'	40 W	120V - 1 PH - 60 HZ	NOTE 1

NOTES:  
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

DOMESTIC WATER HEATER SCHEDULE						
ID #	DESCRIPTION	SYSTEM	STORAGE	LOAD	ELEC CHAR	NOTES
GW-H-1	HI-EFF GAS-FIRED WATER HEATER	DOMESTIC HOT WATER	60 GALLONS	120 MBH	120V - 1 PH - 60 HZ	NOTE 1,2

NOTES:  
1. WATER HEATER TO BE SET AT 140° F.  
2. REFER TO DRAWING PL04:100 FOR PIPING SCHEMATIC.

THERMOSTATIC MIXING VALVE SCHEDULE							
ID #	LOCATION	CONNECTION SIZE		TEMPERATURES			NOTES
		INLET CONN	OUTLET CONN	INLET TEMP	OUTLET TEMP	DELTA T	
TMV-1	MECHANICAL ROOM	1 1/4"	1 1/4"	140	125	15	1
TMV-2	POINT-OF-USE	1/2"	1/2"	125	105	20	1

NOTES:  
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

PLUMBING DRAIN SCHEDULE				
ID #	DRAIN DESCRIPTION	DRAINAGE & VENT CONNECTION	WATER SUPPLY CONNECTION	NOTES
FD-1	FINISHED AREA FLOOR DRAIN	4" WASTE	1/2" TRAP PRIMER	NOTE 1
FD-2	JANITOR'S CLOSET AREA FLOOR DRAIN	4" WASTE	1/2" TRAP PRIMER	NOTE 1
FS-1	12"x12", 4" OUTLET, NO GRATE, FLOOR SINK	4" WASTE	1/2" TRAP PRIMER	NOTE 1
RD-1	4" ROOF DRAIN	4" STORM	---	NOTE 1

NOTES:  
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION



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HAGERSTOWN REGIONAL AIRPORT

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TERMINAL BUILDING EXPANSION

SHEET TITLE:  
PLUMBING SCHEDULES

SCALE:  
AS INDICATED

DATE:  
MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**PL08.100**  
87 OF 117



HVAC ABBREVIATIONS		HVAC ABBREVIATIONS (CONTINUED)		HVAC ABBREVIATIONS (CONTINUED)		HVAC EQUIPMENT ABBREVIATIONS	
AAV	AUTOMATIC AIR VENT	FCD	FLOW CONTROL DEVICE	PSF	POUNDS PER SQUARE FOOT	B	BOILER
ABS	ABSOLUTE	FCV	FLOW CONTROL VALVE	PSIA	POUNDS PER SQUARE INCH ABSOLUTE	CF	CEILING FAN
ABV	ABOVE	FD	FIRE DAMPER	PSIG	POUNDS PER SQUARE INCH GAUGE	DWH	DOMESTIC WATER HEATER
AC	ALTERNATING CURRENT	FLG	FLANGE	PT	PRESSURE TAP	EAC	ELECTRIC AIR CURRTAIN
AFF	ABOVE FINISHED FLOOR	FLR	FLOOR	PV	PLUG VALVE	EBB	ELECTRIC BASE BOARD RADIATION
AHJ	AUTHORITY HAVING JURISDICTION	FNL	FUNNEL			EF	EXHAUST FAN
ALT	ALTERNATE OR ALTITUDE	FNL DR	FUNNEL DRAIN	QNTY	QUANTITY	P	PUMP
ALUM	ALUMINUM	FO	FLAT OVAL	R	THERMAL RESISTANCE	RFM	RADIANT FLOOR MANIFOLD
AMP	AMPERE	FPF	FINS PER FOOT	RA	RETURN AIR	RTU	ROOF TOP UNIT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	FPI	FINS PER INCH	RD	ROOF DRAIN	SSAHU	SPLIT SYSTEM AIR HANDLING UNIT
APD	AIR PRESSURE DROP	FPM	FEET PER MINUTE	REFRIG	REFRIGERANT	SSRCU	SPLIT SYSTEM REMOTE CONDENSING UNIT
APPROX	APPROXIMATELY	FPS	FEET PER SECOND	REQD	REQUIRED	VFD	VARIABLE FREQUENCY DRIVE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS	FR	FROM	RET	RETURN	VVB	VARIABLE AIR VOLUME BOX
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	FSC	FOOD SERVICE CONTRACTOR	REV	REVOLUTIONS		
ATC	AUTOMATIC TEMPERATURE CONTROL	FSD	COMBINATION FIRE-SMOKE DAMPER	RGC	RETURN AIR GRILLE CEILING MOUNTED		
ATM	ATMOSPHERE	FT	FEET	RGW	RETURN AIR GRILLE WALL MOUNTED		
AUTO	AUTOMATIC	FTG	FITTING	RH	RELATIVE HUMIDITY		
AUX	AUXILIARY	FW	FEED WATER	RPM	REVOLUTIONS PER MINUTE		
AVG	AVERAGE			RPS	REVOLUTIONS PER SECOND		
AWG	AMERICAN WIRE GAUGE	GA	GAUGE	RRC	RETURN AIR REGISTER CEILING MOUNTED		
		GAL	GALLONS	RRW	RETURN AIR REGISTER WALL MOUNTED		
BAS	BUILDING AUTOMATION SYSTEM	GI	GELNERAL CONTRACTOR	RV	RELIEF VALVE		
BC	BALANCING COCK	GLV	GLOBE VALVE	RWC	RAIN WATER CONDUCTOR		
BDD	BACK DRAFT DAMPER	GPD	GALLONS PER DAY				
BFV	BUTTERFLY VALVE	GPH	GALLONS PER HOUR	S	SECOND		
BGD	BLAST GATE DAMPER	GPM	GALLONS PER MINUTE	SA	SUPPLY AIR		
BHP	BRAKE HORSE POWER	GR	GRILLE OR GRAINS	SAT	SATURATED		
BJ	BALL JOINT	GRAV	GRAVITY	SCFM	CFM AT STANDARD CONDITIONS		
BLDG	BUILDING	GV	GATE VALVE	SCH	SCHEDULE		
BLW	BELOW			SDC	SUPPLY AIR DIFFUSER CEILING MOUNTED		
BO	BLOW OFF	HC	HVAC CONTRACTOR	SEER	SEASONALLY ENERGY EFFICIENT RATIO		
BTU	BRITISH THERMAL UNIT	HDR	HEADER	SENS	SENSIBLE		
BV	BALL VALVE	Hg	MERCURY	SG	SPECIFIC GRAVITY		
		HORIZ	HORIZONTAL	SH	SENSIBLE HEAT		
C	CELSIUS	HP	HORSE POWER	SP	STATIC PRESSURE		
CAP	CAPACITY	HPD	HIGH PRESSURE DRIP	SPEC	SPECIFICATION		
CART	CARTRIDGE	HR	HOOR	SQ FT	SQUARE FEET		
CCW	COUNTER CLOCKWISE	HTG	HEATING	SRW	SUPPLY AIR REGISTER WALL MOUNTED		
CENTR	CENTRIFUGAL	HTRS	HEATERS	SS	STAINLESS STEEL		
CFH	CUBIC FEET PER HOUR	HW	HOT WATER (PLUMBING)	STD	STANDARD		
CFM	CUBIC FEET PER MINUTE	HWR	HOT WATER RETURN (PLUMBING)	STR	STRAINER		
CHKV	CHECK VALVE	HZ	FREQUENCY (HERTZ)	SUCT	SUCTION		
CI	CAST IRON			SUP	SUPPLY		
CIRC	CIRCULATING	IBT	INVERTED BUCKET TRAP	SV	SAFETY VALVE		
CKT	CIRCUIT	ID	INSIDE DIAMETER	SW	SWITCH		
CLG	CEILING	IDT	INSULATED DUCT TRANSITION				
CO	CLEAN OUT	IER	INVERTED ECCENTRIC REDUCER	TAB	TEST, ADJUST AND BALANCE		
COEFF	COEFFICIENT	IME	INSULATED METAL ENCLOSURE	TCV	TEMPERATURE CONTROL VALVE		
COL	COLUMN	INSUL	INSULATION	TDV	TRIPLE DUTY VALVE		
CONC	CONCRETE	IPLV	INTEGRATED PART LOAD VALVE	TEMP	TEMPERATURE OR TEMPORARY		
COND	CONDENSATE	IPS	IRON PIPE SIZE	TGC	TRANSFER AIR GRILLE CEILING MOUNTED		
CONN	CONNECTION	IRI	INDUSTRIAL RISK INSURERS	TGW	TRANSFER AIR GRILLE WALL MOUNTED		
CONST	CONSTRUCTION	IVS	ISOLATED VALVE STATION	TH	TOTAL HEAT OR THERMOMETER		
CONT	CONTINUATION			TK	TANK		
CONTR	CONTRACTOR	JT	JOINT	TONS	TONS OF REFRIGERATION		
CR	CONCRETE REDUCER			TOT	TOTAL		
CU FT	CUBIC FEET	KEM	KITCHEN EQUIPMENT MANUFACTURER	TRANS	TRANSITION		
CU IN	CUBIC INCH	KW	KILOWATT	TSP	TOTAL STATIC PRESSURE		
CW	CLOCKWISE/COLD WATER	KWH	KILOWATT HOUR	TSTAT	THERMOSTAT		
				TT	THERMOSTATIC TRAP		
DB	DRY BULB TEMPERATURE	LAT	LEAVING AIR TEMPERATURE	TV	TURNING VANES		
dB	DECIBEL	LBS	POUNDS	TW	TEMPERATURE WELL		
dBa	DECIBEL A-WEIGHTED	LDB	LEAVING DRY BULB	TYP	TYPICAL		
DC	DIRECT CURRENT	LF	LINEAR FEET				
DEG	DEGREE	LH	LATENT HEAT	UG	UNDERGROUND		
DENS	DENSITY	LIQ	LIQUID	UNO	UNLESS NOTED OTHERWISE		
DHW	DOMESTIC HOT WATER	LP	LOW PRESSURE	V	VOLT		
DIA	DIAMETER	LPD	LOW PRESSURE DRIP	VAC	VACUUM		
DIFF	DIFFUSER	LSDR	LINEAR SLOT DIFFUSER RETURN	VCD	VOLUME CONTROL DAMPER		
DISCH	DISCHARGE	LSDS	LINEAR SLOT DIFFUSER SUPPLY	VEL	VELOCITY		
DN	DOWN	LTG	LIGHTING	VFS	VENTURI		
DO	DITTO	LWB	LEAVING WET BULB	VOL	VOLUME		
DPR	DAMPER	LWCO	LOW WATER CUT OFF	VP	VELOCITY PRESSURE		
DPT	DEW POINT TEMPERATURE	MAV	MANUAL AIR VENT	VTR	VENT THRU ROOF		
DR	DRAIN	MAX	MAXIMUM				
DS	DISCONNECT SWITCH	MBH	THOUSAND BTU's	W	WATT		
DSC	DRAFT SEQUENCE CONTROL	MC	MECHANICAL CONTRACTOR	W/	WITH		
DWG	DRAWING	MCF	THOUSAND CUBIC FEET	WB	WET BULB		
DX	DIRECT EXPANSION	MGR	MANUFACTURER	WG	WATER GAUGE		
		MH	MANHOLE	WL	WATER LINE		
EA	EACH OR EXHAUST AIR	MIN	MINIMUM	WP	WEATHERPROOF		
EAT	ENTERING AIR TEMPERATURE	MOD	MOTOR OPERATED DAMPER	WPD	WATER PRESSURE DROP		
EC	ELECTRICAL CONTRACTOR	MPD	MEDIUM PRESSURE DRIP	WPS	WATER PRESSURE SWITCH		
EDB	ENTERING DRY BULB	MPH	MILES PER HOUR	WT	WEIGHT		
EER	ENERGY EFFICIENCY RATIO	MTD	MOUNTED	WTD	WATER TEMPERATURE DIFFERENCE		
EFF	EFFICIENCY	MTL	METAL				
EGC	EXHAUST AIR GRILLE CEILING MOUNTED	MTR	MOTOR	ZCV	ZONE CONTROL VALVE		
EGW	EXHAUST AIR GRILLE WALL MOUNTED						
EL	ELEVATION						
ELECT	ELECTRIC	N/A	NOT APPLICABLE				
ENCLOS	ENCLOSURE	NC	NORMALLY CLOSED OR NOISE CRITERIA				
ENT	ENTERING	NIC	NOT IN CONTRACT				
EQUIP	EQUIPMENT	NLPV	NOMINAL PART LOAD VALUE				
ER	ECCENTRIC REDUCER	NO	NORMALLY OPEN OR NUMBER				
ERC	EXHAUST AIR REGISTER CEILING MOUNTED	NTS	NOT TO SCALE				
ERW	EXHAUST AIR REGISTER WALL MOUNTED						
ESP	EXTERNAL STATIC PRESSURE	OA	OUTSIDE AIR				
ETC	ETCETERA	OD	OUTSIDE DIAMETER				
EWB	ENTERING WET BULB	OPER	OPERATED				
EWI	ENTERING WATER TEMPERATURE	OPNG	OPENING				
EX	EXISTING	%	PERCENT				
EXH	EXHAUST	PC	PLUMBING CONTRACTOR				
EXIST	EXISTING	PD	PRESSURE DROP				
EXP	EXPANSION	PG	PRESSURE GAUGE WITH COCK				
		PH	PHASE				
F	FAHRENHEIT	PPD	PERFORATED PLATE DAMPER				
F&T	FLOAT AND THERMOSTATIC	PPM	PARTS PER MILLION				
FA	FACE AREA OR FREE AREA	PRESS	PRESSURE				
FAT	FINAL AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE				
FC	FLEXIBLE CONNECTION OR FORWARD CURVED	PS	PIPE SUPPORT				

HVAC PIPING ABBREVIATIONS

RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RHG	REFRIGERANT HOT GAS DISCHARGE
	DOMESTIC COLD WATER / MAKE-UP WATER
G	NATURAL GAS
HWS	HOT WATER SUPPLY (HEATING)
HWR	HOT WATER RETURN (HEATING)

HVAC SYMBOLS

T	THERMOSTAT
TS	TEMPERATURE SENSOR
+	LINE VOLTAGE THERMOSTAT
P	PRESSURE MONITOR
CO2	CARBON DIOXIDE SENSOR
DPX	DIFFERENTIAL PRESSURE SENSOR (AIR)
DPX	DIFFERENTIAL PRESSURE SENSOR (WATER)
	CONNECTION POINT - NEW TO EXISTING
	DISCONNECTION POINT
X	NUMBERED NOTES
	REVISION SEQUENCE
S1 200	GRILLE, REGISTER AND DIFFUSER TAG
TAG	AIRFLOW
	SUPPLY DIFFUSER - 4-WAY BLOW
	SUPPLY DIFFUSER - 3-WAY BLOW
	SUPPLY DIFFUSER - 2-WAY BLOW
	SUPPLY DIFFUSER - 1-WAY BLOW
	AIR FLOW ARROW
	LINEAR SLOT DIFFUSER
	WALL MOUNTED SUPPLY GRILLE / REGISTER
	WALL MOUNTED RETURN OR EXHAUST GRILLE / REGISTER
	CEILING MOUNTED RETURN OR EXHAUST GRILLE / REGISTER
24/12	INTERIOR CLEAR DUCTWORK DIMENSIONS, WIDTH/HEIGHT
	SUPPLY DUCT TOWARD VIEWER
	SUPPLY DUCT AWAY FROM VIEWER
	RETURN OR EXHAUST DUCT TOWARD VIEWER
	RETURN OR EXHAUST DUCT AWAY FROM VIEWER
	OUTSIDE AIR DUCT TOWARD VIEWER
	OUTSIDE AIR DUCT AWAY FROM VIEWER
D	CHANGE IN DUCT ELEVATION DROP INDICATED BY "D"
R	CHANGE IN DUCT ELEVATION RISE INDICATED BY "R"
	FLEXIBLE DUCT
	FLEXIBLE CONNECTION
	MANUAL VOLUME DAMPER
	EXIST DUCTWORK/EQUIPMENT TO BE DEMOLISHED

HVAC SYMBOLS CONTINUED

M	MOTORIZED CONTROL DAMPER
FD	FIRE DAMPER DYNAMIC; VERTICAL OR HORIZONTAL
SD	SMOKE DAMPER
F/SD	COMBINATION FIRE / SMOKE DAMPER
	TRANSITION; SYMMETRIC
	TRANSITION; ASYMMETRIC
	TRANSITION; RECTANGULAR TO ROUND (RW = 1.5)
	MITERED ELBOW WITH TURNING VANES
	TEE, BOOT ENTRY BRANCH
	TEE, ROUND BRANCH
	TEE, CONICAL ROUND BRANCH
	SINGLE DUCT AIR TERMINAL UNIT (CONSTANT OR VARIABLE VOLUME)
	SINGLE DUCT AIR TERMINAL UNIT WITH REHEAT COIL (CONSTANT OR VARIABLE VOLUME)

HVAC PIPING SYMBOLS

	PIPE TEE UP
	PIPE TEE DOWN
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	DIRECTION OF FLOW
	FLANGE
	UNION, SCREWED
	CAPPED PIPE
CO	CLEAN OUT
Y	FUNNEL DRAIN
	VALVE
	BALL VALVE
	STRAINER
	PRESSURE GAUGE WITH SHUT OFF COCK
	THERMOMETER / INSTRUMENT WELL
	PRESSURE / TEMPERATURE PORT
	SAFETY OR RELIEF VALVE
	FLEXIBLE CONNECTION / VIBRATION ISOLATION
	AUTOMATIC AIR VENT
Y	FLOOR DRAIN
Ø	PRESSURE REDUCING VALVE

HVAC ELECTRICAL SYMBOLS

①	DUCT MOUNTED SMOKE DETECTOR
	MOTOR STARTER
	DISCONNECT SWITCH
\$M	TOGGLE SWITCH
\$PL	SWITCH W/ PILOT LIGHT
\$ES	EMERGENCY PUSH BUTTON SWITCH
\$	EMERGENCY BREAK GLASS STATION
VFD	VARIABLE FREQUENCY DRIVE
	MOTOR CONTROL CENTER



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SEAL:

Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.  
  
License No. 25983  
Expiration Date: 3/30/2021

DESIGNED: JRK

DRAWN: JRK

CHECKED: BKR

APPROVED: JMV

No.

DATE

DESCRIPTION

BID DOCUMENTS



Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:  
TERMINAL BUILDING EXPANSION

SHEET TITLE:  
ABBREVIATIONS, AND SYMBOLS - MECHANICAL

SCALE:  
As indicated

DATE:  
MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
ME00.001  
88 OF 117



PROJECT GENERAL NOTES

- 1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- 2. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
- 3. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS AND APPLICABLE CODES AND REGULATIONS.
- 4. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
- 5. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO, AND WITHIN 50 FT OF ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS) THROUGHOUT MECHANICAL EQUIPMENT ROOMS. DO THE SAME FOR SUPPORTS OF STEAM MAINS WITHIN 50 FT OF BOILER OR PRESSURE-REDUCING VALVES.
- 6. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS OF STEAM MAINS WITHIN 50 FT OF BOILER OR PRESSURE-REDUCING VALVES.
- 7. THE LOCATION OF EXISTING EQUIPMENT AND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
- 8. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
- 9. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO THE UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
- 10. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
- 11. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH THE STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR PROPER ACCURACY.
- 12. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.
- 13. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
- 14. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
- 15. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 26 OF THE SPECIFICATION.
- 16. WHEN MECHANICAL WORK IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDED A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.
- 17. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.

PROJECT GENERAL NOTES (CONTINUED)

- 18. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- 19. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION.
- 20. ALL EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL BE SUPPORTED AS DETAILED, SPECIFIED AND REQUIRED TO PROVIDE A VIBRATION-FREE INSTALLATION.
- 21. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOISTS GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.
- 22. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM A METAL DECK.
- 23. ALL ROOF-MOUNTED EQUIPMENT CURBS FOR EQUIPMENT PROVIDED BY THE MECHANICAL CONTRACTOR SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
- 24. LOCATIONS AND SIZES OF FLOOR, WALL AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
- 25. ALL OPENINGS IN FIRE AND/OR SMOKE RATED CONSTRUCTION DUE TO DUCTWORK, PIPING, CONDUIT, ETC. SHALL BE FIRE STOPPED WITH AN APPROVED LISTED AND LABELED FIRE STOPPING MATERIAL.
- 26. ALL AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH AIR HANDLING UNIT AND ROOFTOP UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET WITH A "P" TRAP AND PIPED TO THE NEAREST DRAIN. SEE THE DETAILS SHOWN ON THE DRAWINGS OR THE CONTRACT SPECIFICATIONS FOR THE DEPTH OF THE AIR CONDITIONING CONDENSATE TRAP.
- 27. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING EQUIPMENT AND UTILITIES BEFORE COMMENCING WORK.

SHEET METAL GENERAL NOTES

- 1. ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE INTERNAL. CLEAR DIMENSIONS AND DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR DUCT LINING THICKNESS WHERE SPECIFIED.
- 2. CERTAIN ITEMS SUCH AS RISES AND DROPS IN DUCTWORK, ACCESS DOORS, VOLUME DAMPERS, ETC. ARE INDICATED ON THE CONTRACT DOCUMENT DRAWINGS FOR CLARITY FOR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS.
- 3. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 4. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHALL BE OVERHEAD, TIGHT TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION IF REQUIRED.
- 5. PROVIDE ALL 90-DEGREE SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED. ELBOWS IN DISHWASHER, KITCHEN, AND LAUNDRY EXHAUSTS SHALL BE OF UNVANED SMOOTH RADIUS CONSTRUCTION WITH A RADIUS EQUAL TO 1-1/2 TIMES THE WIDTH OF THE DUCT. PROVIDE ACCESS DOORS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.
- 6. PROVIDE ACCESS DOORS IN DUCTWORK TO PROVIDE ACCESS FOR ALL SMOKE DETECTORS, FIRE DAMPERS, SMOKE DAMPERS, VOLUME DAMPERS, HUMIDIFIERS, COILS, AND OTHER ITEMS LOCATED IN THE DUCTWORK THAT REQUIRE SERVICE AND/OR INSPECTION.
- 7. PROVIDE ACCESS DOORS IN DUCTWORK FOR THE OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, AND MECHANICAL EQUIPMENT.
- 8. SEE SPECIFICATIONS FOR DUCTWORK GAUGES, BRACING, HANGERS, AND OTHER REQUIREMENTS.
- 9. RUNS OF FLEXIBLE DUCT SHALL NOT EXCEED 5 FEET.
- 10. LOCATE ALL MECHANICAL EQUIPMENT (SINGLE DUCT, DUAL DUCT, VARIABLE VOLUME, CONSTANT VOLUME AND FAN POWERED BOXES, FAN COIL UNITS, CABINET HEATERS, UNIT HEATERS, UNIT VENTILATORS, COILS, STEAM HUMIDIFIERS, ETC.) FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVES.
- 11. FIELD-ERECTED AND FACTORY-ASSEMBLED AIR HANDLING UNIT COILS SHALL BE ARRANGED FOR REMOVAL FROM THE UPSTREAM SIDE WITHOUT DISMANTLING SUPPORTS. PROVIDE GALVANIZED STRUCTURAL STEEL SUPPORTS FOR ALL COILS (EXCEPT THE LOWEST COIL) IN BANKS OVER TWO COILS HIGH TO PERMIT THE INDEPENDENT REMOVAL OF ANY COIL.
- 12. ALL AIR HANDING UNITS SHALL OPERATE WITHOUT MOISTURE CARRYOVER.
- 13. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS (SUPPLY, RETURN, AND EXHAUST) CONNECTED TO AIR HANDLING UNITS, FANS, AND OTHER EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE INDICATED.
- 14. ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRAPS. GROUNDING STRAPS SHALL BE BOLTED OR SOLDERED TO BOTH THE EQUIPMENT AND THE DUCT.
- 15. COORDINATE DIFFUSERS, REGISTER AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.
- 16. UNLESS OTHERWISE SHOWN, LOCATE ALL ROOM THERMOSTATS AND HUMIDISTATS 42" (CENTERLINE) ABOVE THE FINISHED FLOOR. NOTIFY THE PROFESSIONAL OF ANY ROOMS WHERE THE PRECEDING LOCATION CANNOT BE MAINTAINED OR WHERE THERE IS A QUESTION ON LOCATION.
- 17. EXTERIOR LOUVERS ARE INDICATED FOR INFORMATION ONLY. LOUVER SIZES, LOCATIONS, AND DETAILS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.

HVAC PIPING GENERAL NOTES

- 1. ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 2. PROVIDE AN AIR VENT AT THE HIGH POINT OF EACH DROP IN THE HEATING WATER, CHILLED WATER, AND OTHER CLOSED-WATER PIPING SYSTEMS. ALL PIPING SHALL GRADE TO LOW POINTS. PROVIDE HOSE END DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND LOW POINTS.
- 3. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO THE UNDERSIDE OF THE STRUCTURE OR SLAB, WITH SPACE FOR INSULATION IF REQUIRED.
- 4. INSTALL PIPING SO ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- 5. ALL VALVES SHALL BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON THE EQUIPMENT SIDE OF THE VALVE IS REMOVED.
- 6. ALL BALANCING VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND THE MAXIMUM ADJUSTABLE STOPS (MEMORY STOPS).
- 7. ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE THE FULL SIZE OF THE PIPE BEFORE REDUCING IN SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.
- 8. PROVIDE A LINE SIZE STRAINER UPSTREAM OF EACH AUTOMATIC VALVE. PROVIDE A SHUTOFF VALVE ON EACH SIDE OF A STRAINER.
- 9. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG PIPING RUNS (100 FT OR MORE) TO PERMIT DISASSEMBLY FOR ALTERNATION AND REPAIRS.
- 10. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.
- 11. PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS, AND OTHER EQUIPMENT WHICH REQUIRES VIBRATION ISOLATION EXCEPT WATER COILS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE OR AS INDICATED ON THE DRAWINGS.
- 12. SLOPE REFRIGERANT PIPING ONE PERCENT IN THE DIRECTION OF OIL RETURN. LIQUID LINES MAY BE INSTALLED LEVEL.
- 13. INSTALL HORIZONTAL REFRIGERANT HOT GAS DISCHARGE PIPING WITH 1/2 INCH PER 10 FEET DOWNWARD SLOPE AWAY FROM THE COMPRESSOR.
- 14. INSTALL HORIZONTAL REFRIGERANT SUCTION LINES WITH 1/2 INCH PER 10 FEET DOWNWARD SLOPE TO THE COMPRESSOR, WITH NO LONG TRAPS OR DEAD ENDS THAT MAY CAUSE OIL TO SEPARATE FROM THE SUCTION GAS AND RETURN TO THE COMPRESSOR IN DAMAGING SLUGS.



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CJL Project # 16-0236

Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 25983

Expiration Date: 3/30/2021

DESIGNED: JRK	No.	DATE	DESCRIPTION
DRAWN: JRK			
CHECKED: BKR			
APPROVED: MRS			



Washington County, MD

HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:		TERMINAL BUILDING EXPANSION
SHEET TITLE:		GENERAL NOTES - MECHANICAL
SCALE:	DATE:	
As indicated	MARCH 2019	

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**ME00.002**  
89 OF 117



NUMBERED NOTES

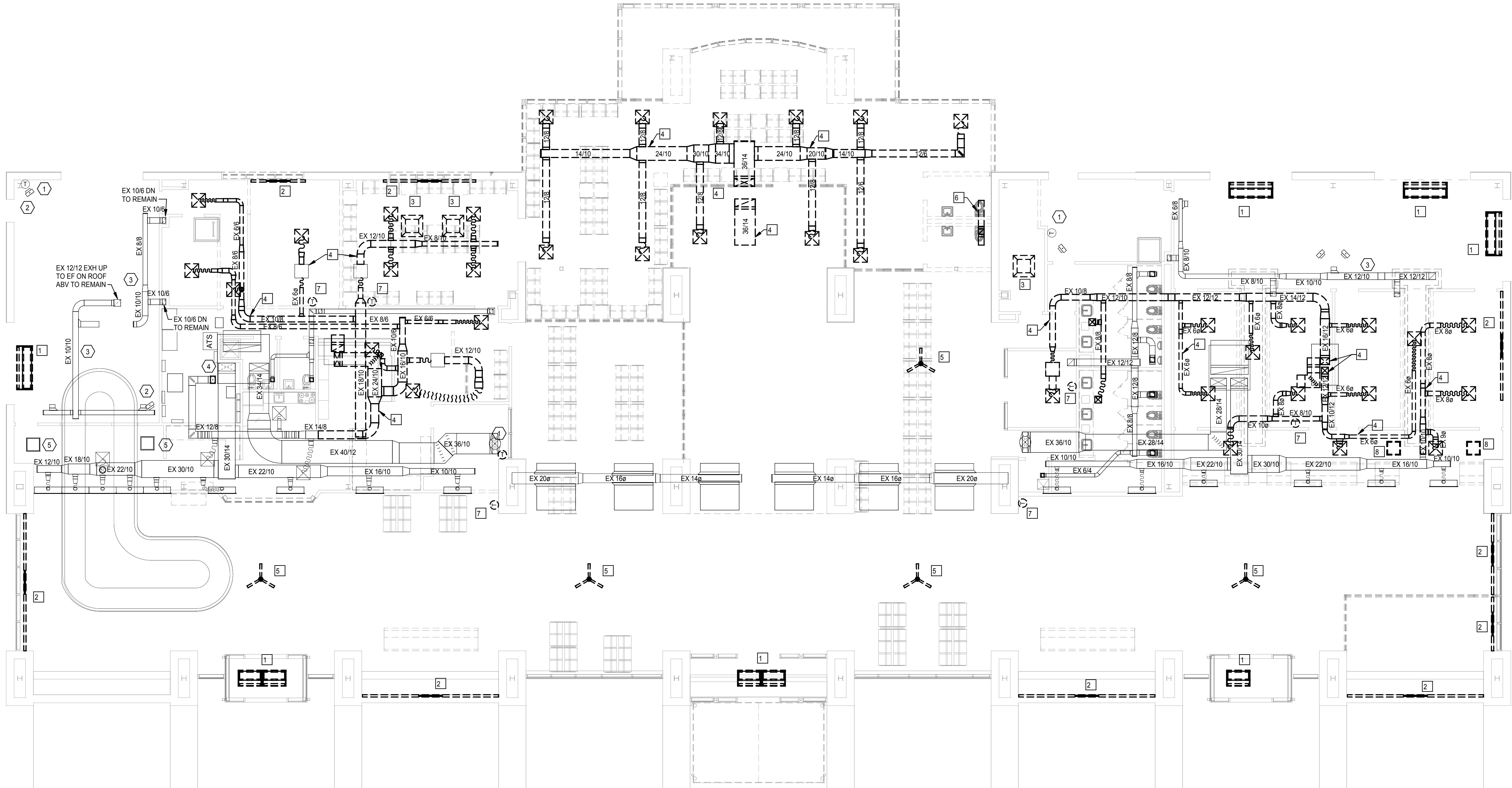
- 1 EX T\*STAT TO REMAIN  
2 EX HUH TO REMAIN  
3 EX EXH DUCTWORK, GRILLES, REGISTERS AND DAMPERS TO REMAIN  
4 EX SA DUCTWORK, DIFFUSERS, REGISTERS, LINEAR SLOT DIFFUSERS AND DAMPERS TO REMAIN  
5 EX RA DUCTWORK, BOOTS, TRANSFER DUCTS, GRILLES, REGISTERS AND DAMPERS TO REMAIN

DEMOLITION NOTES

- 1 DISCONNECT AND REMOVE AIR CURTAIN AND ALL ASSOCIATED CONTROLS, WIRING, MOUNTING HARDWARE AND ACCESSORIES.  
2 DISCONNECT AND REMOVE ELECTRIC BASEBOARD AND ALL ASSOCIATED CONTROLS, WIRING AND ACCESSORIES.  
3 DISCONNECT AND REMOVE SPLIT SYSTEM CEILING CASSETTE, REFRIGERANT PIPING, CDL PIPING AND ALL ASSOCIATED CONTROLS, WIRING, MOUNTING HARDWARE AND ACCESSORIES.  
4 DISCONNECT AND REMOVE SUPPLY AND RETURN DUCTWORK, RISERS, DAMPERS, DIFFUSERS, GRILLES AND ALL ASSOCIATED CONTROLS, WIRING, MOUNTING HARDWARE AND ACCESSORIES.  
5 DISCONNECT AND REMOVE EXISTING CEILING FANS AND ASSOCIATED CONTROLS.  
6 DISCONNECT AND REMOVE EXISTING EXHAUST DUCT WITH ASSOCIATED EXHAUST FAN AND CONTROLS.  
7 DISCONNECT AND REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED WIRING.  
8 DISCONNECT AND REMOVE EXISTING RETURN GRILLE.

PHASING NOTE

THIS JOB IS BEING DONE IN MULTIPLE PHASES. THE HC SHALL REFER TO ARCHITECTURAL PHASING PLANS AND COORDINATE HIS WORK WITH THE PHASE IN CONSTRUCTION. IF IT IS REQUIRED TO DO WORK OUT OF PHASE HC SHALL COORDINATE THIS WITH THE ARCHITECT, BUILDING OWNER & ALL PARTIES INVOLVED. AT NO TIME SHOULD ANY OCCUPIED AREAS BE WITH OUT SERVICE DURING CONSTRUCTION.



1  
ME02.100  
MECHANICAL DEMOLITION - FLOOR PLAN  
1/8" = 1'-0"

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CJL Project # 16-0236



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I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.  
License No. 25983  
Expiration Date: 3/30/2021

DESIGNED: JRK  
DRAWN: JRK  
CHECKED: BKR  
APPROVED: MRS

No. DATE DESCRIPTION  
**BID DOCUMENTS**



PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**MECHANICAL DEMOLITION FLOOR PLAN**

SCALE:  
1/8" = 1'-0"

DATE:  
MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**ME02.100**  
90 OF 117

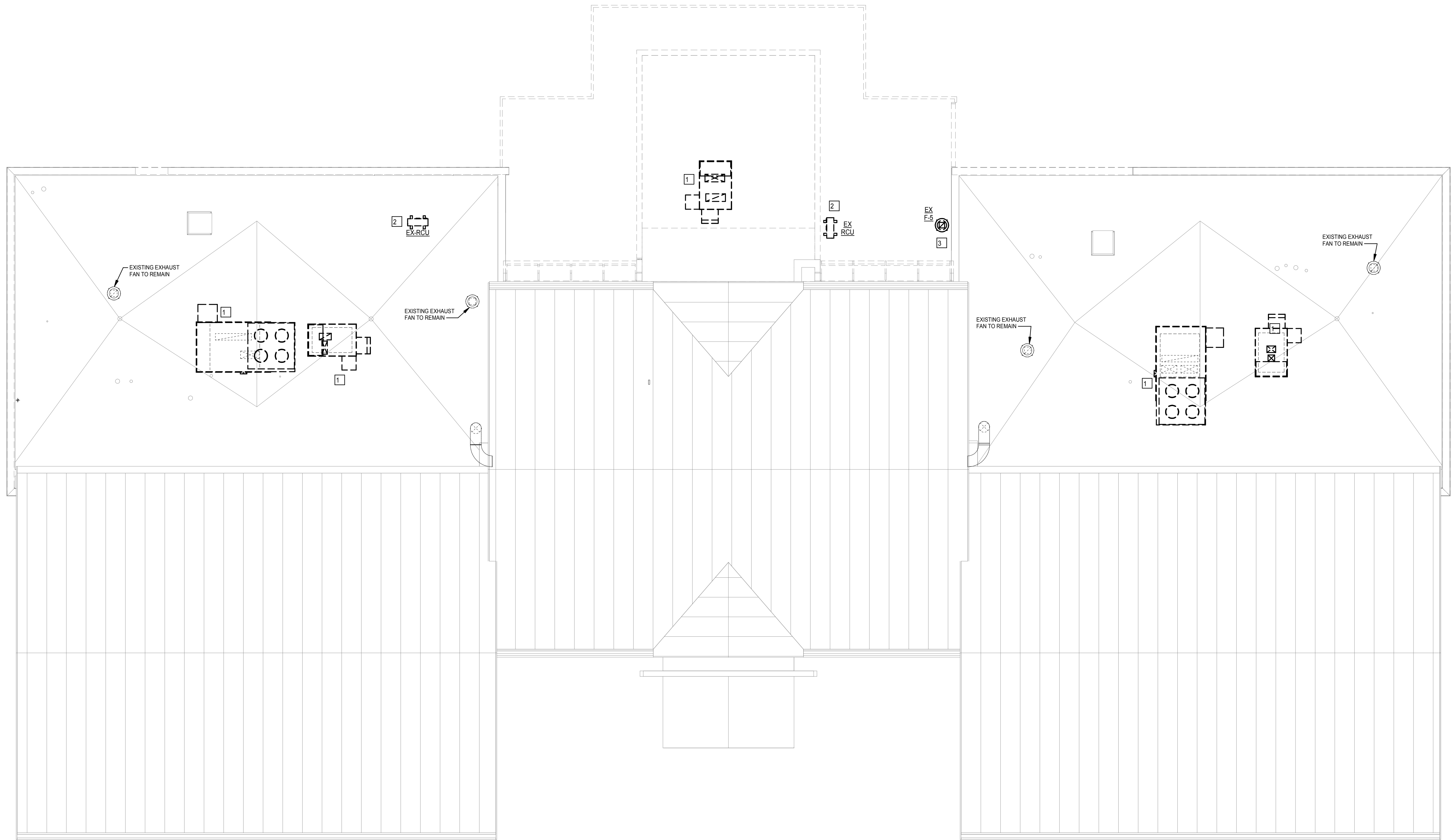


DEMOLITION NOTES

- 1 DISCONNECT AND REMOVE RTU AND ALL ASSOCIATED DUCT, CONTROLS, WIRING, EQUIPMENT RAILS, PIPING PORTALS, MOUNTING HARDWARE AND ACCESSORIES.
- 2 DISCONNECT AND REMOVE RCU AND ALL ASSOCIATED REFRIGERANT PIPING, CONTROLS, WIRING, EQUIPMENT RAILS, PIPING PORTALS, MOUNTING HARDWARE AND ACCESSORIES.
- 3 DISCONNECT EXISTING EXHAUST FAN AND ASSOCIATED ROOF CURB.

PHASING NOTE

THIS JOB IS BEING DONE IN MULTIPLE PHASES. THE HC SHALL REFER TO ARCHITECTURAL PHASING PLANS AND COORDINATE HIS WORK WITH THE PHASE IN CONSTRUCTION. IF IT IS REQUIRED TO DO WORK OUT OF PHASE HC SHALL COORDINATE THIS WITH THE ARCHITECT, BUILDING OWNER & ALL PARTIES INVOLVED. AT NO TIME SHOULD ANY OCCUPIED AREAS BE WITH OUT SERVICE DURING CONSTRUCTION.



1  
ME02.101

MECHANICAL DEMOLITION - ROOF PLAN  
1/8" = 1'-0"



6031 UNIVERSITY BLVD.  
SUITE 330  
ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602



232 Horner Street  
Johnstown, PA 15902  
ph: (814)536-1651  
fax: (814)536-5732  
CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents  
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Expiration Date: 3/30/2021

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No.	DATE	DESCRIPTION
BID DOCUMENTS		



Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: **TERMINAL BUILDING EXPANSION**

SHEET TITLE: **MECHANICAL DEMOLITION - ROOF PLAN**

SCALE: 1/8" = 1'-0"      DATE: MARCH 2019

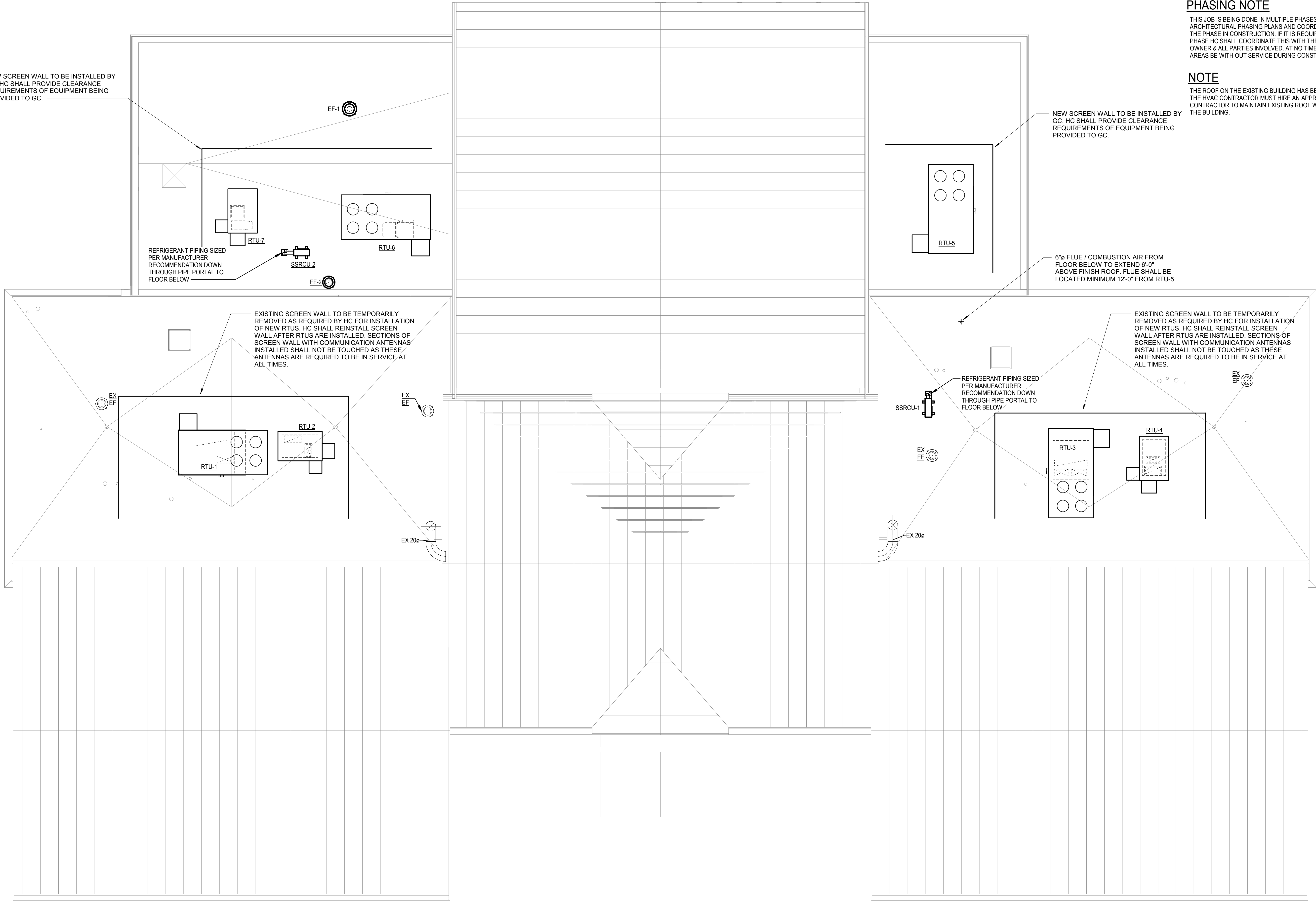
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.: **ME02.101**  
**91 OF 117**









PHASING NOTE

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NOTE

THE ROOF ON THE EXISTING BUILDING HAS BEEN RECENTLY REDONE. THE HVAC CONTRACTOR MUST HIRE AN APPROVED ROOFING SUB-CONTRACTOR TO MAINTAIN EXISTING ROOF WARRANTY THROUGH OUT THE BUILDING.

1  
ME03.101

MECHANICAL - ROOF PLAN  
1/8" = 1'-0"



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.

6031 UNIVERSITY BLVD.  
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ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
FAX: 410-465-9602



**CJL ENGINEERING**

232 Horner Street  
Johnstown, PA 15902  
ph: (814)536-1651  
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CJL Project # 16-0236



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**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**MECHANICAL - ROOF PLAN**

SCALE:  
1/8" = 1'-0"

DATE:  
MARCH 2019

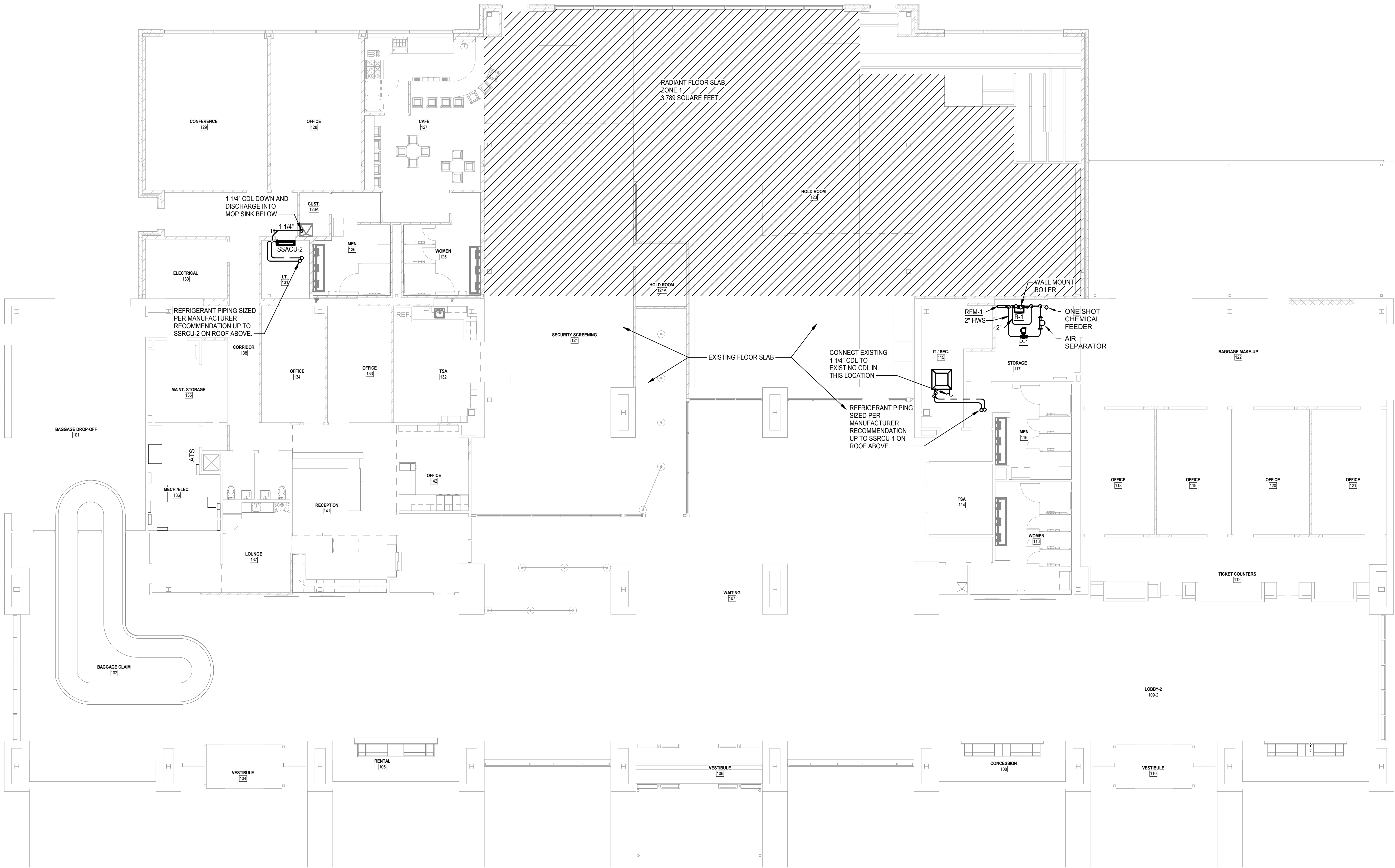
FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**ME03.101**  
93 OF 117



PHASING NOTE

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1  
ME03.102  
MECHANICAL - FIRST FLOOR - PIPING  
1/8" = 1'-0"



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BID DOCUMENTS		

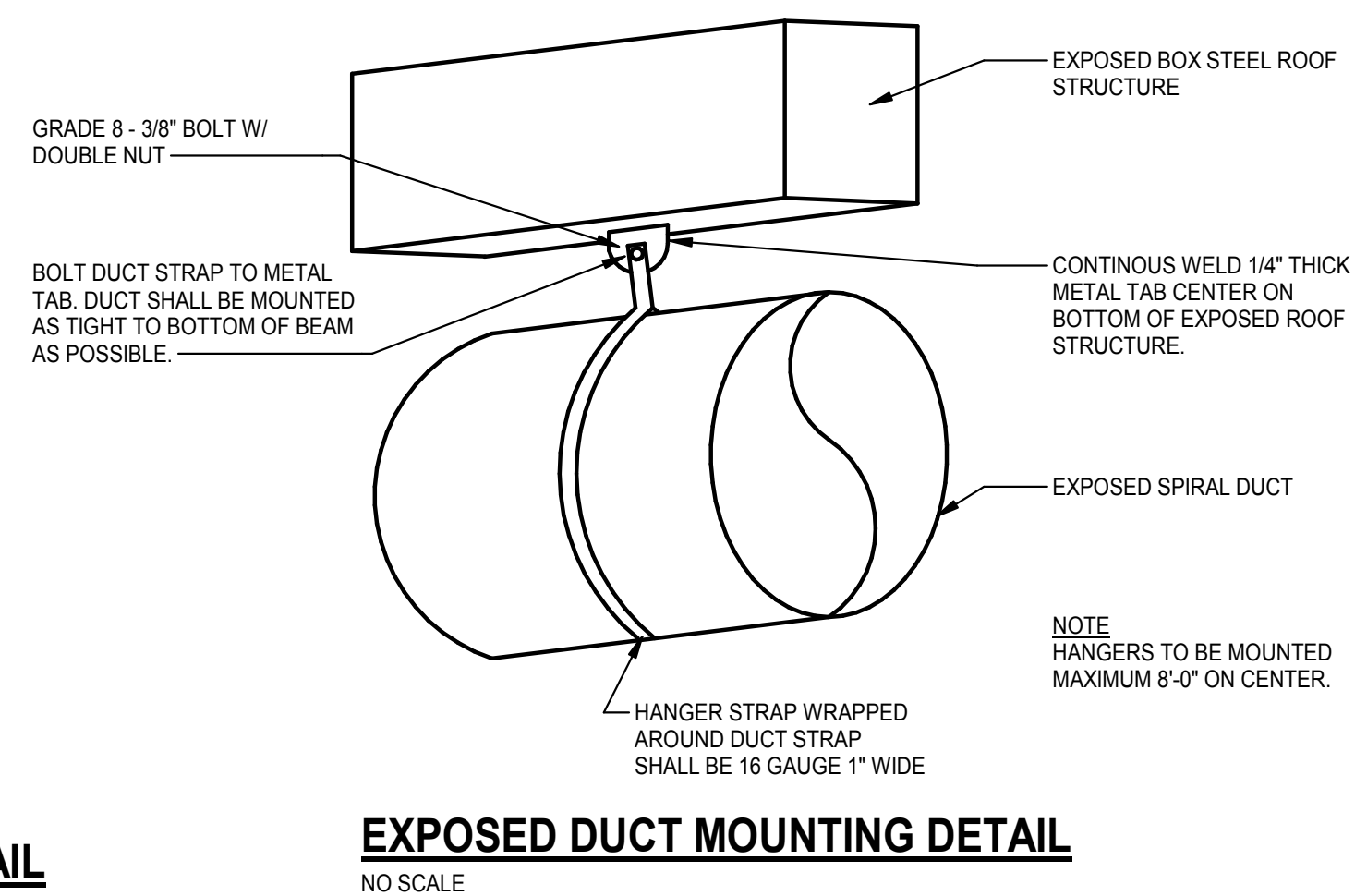
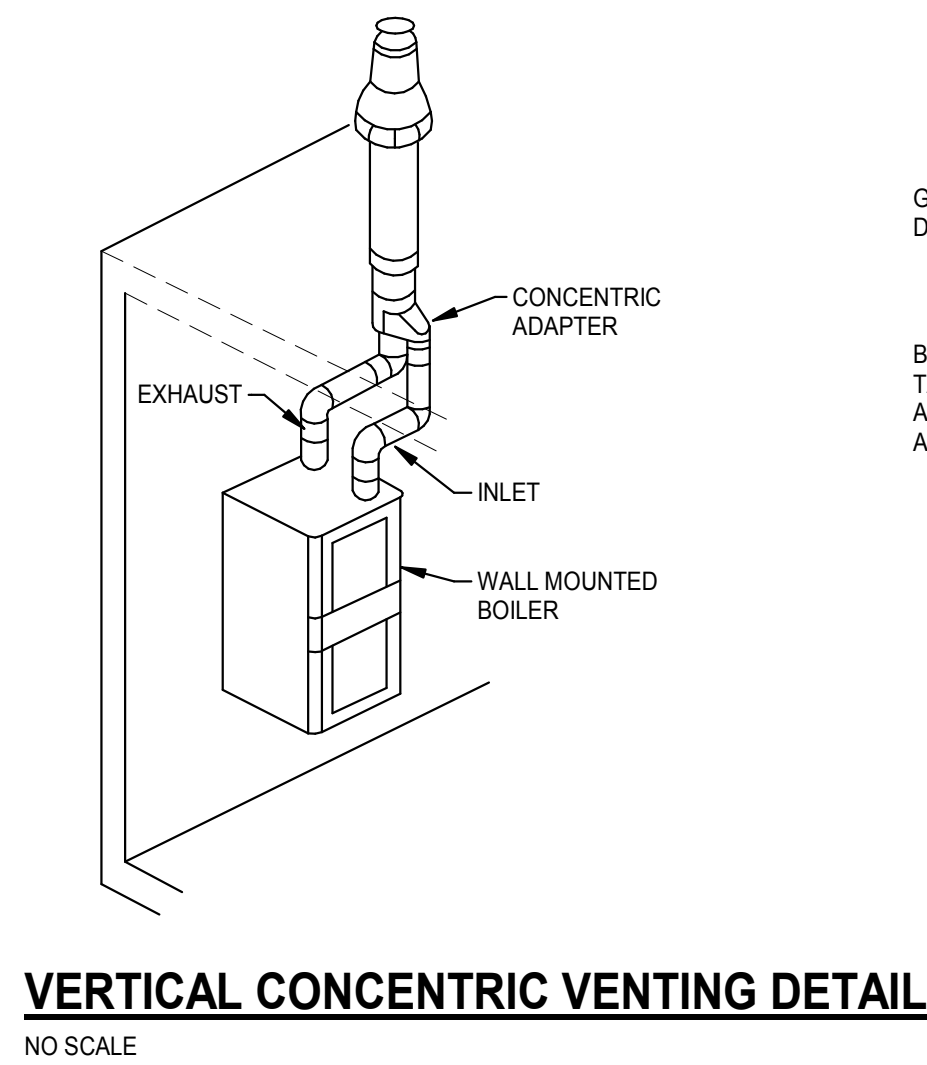
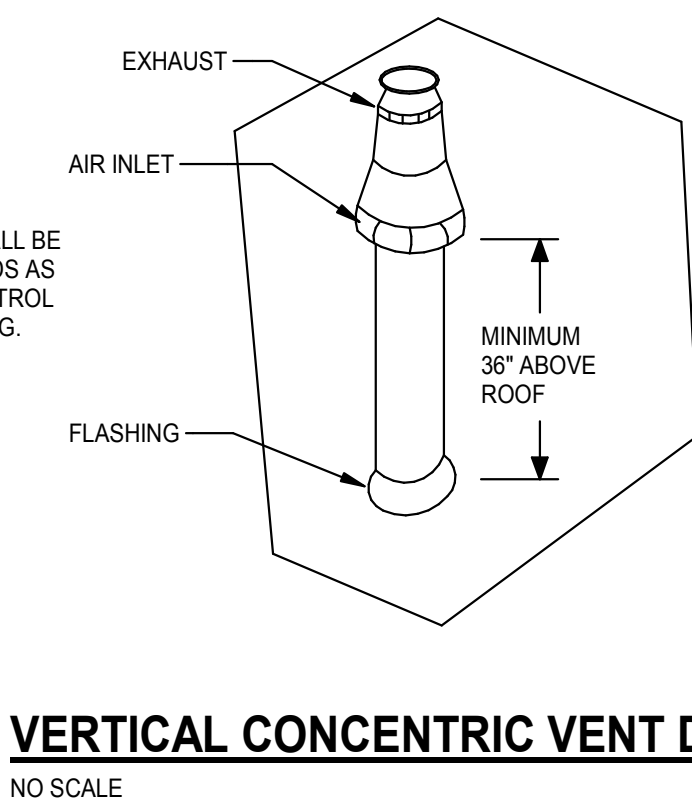
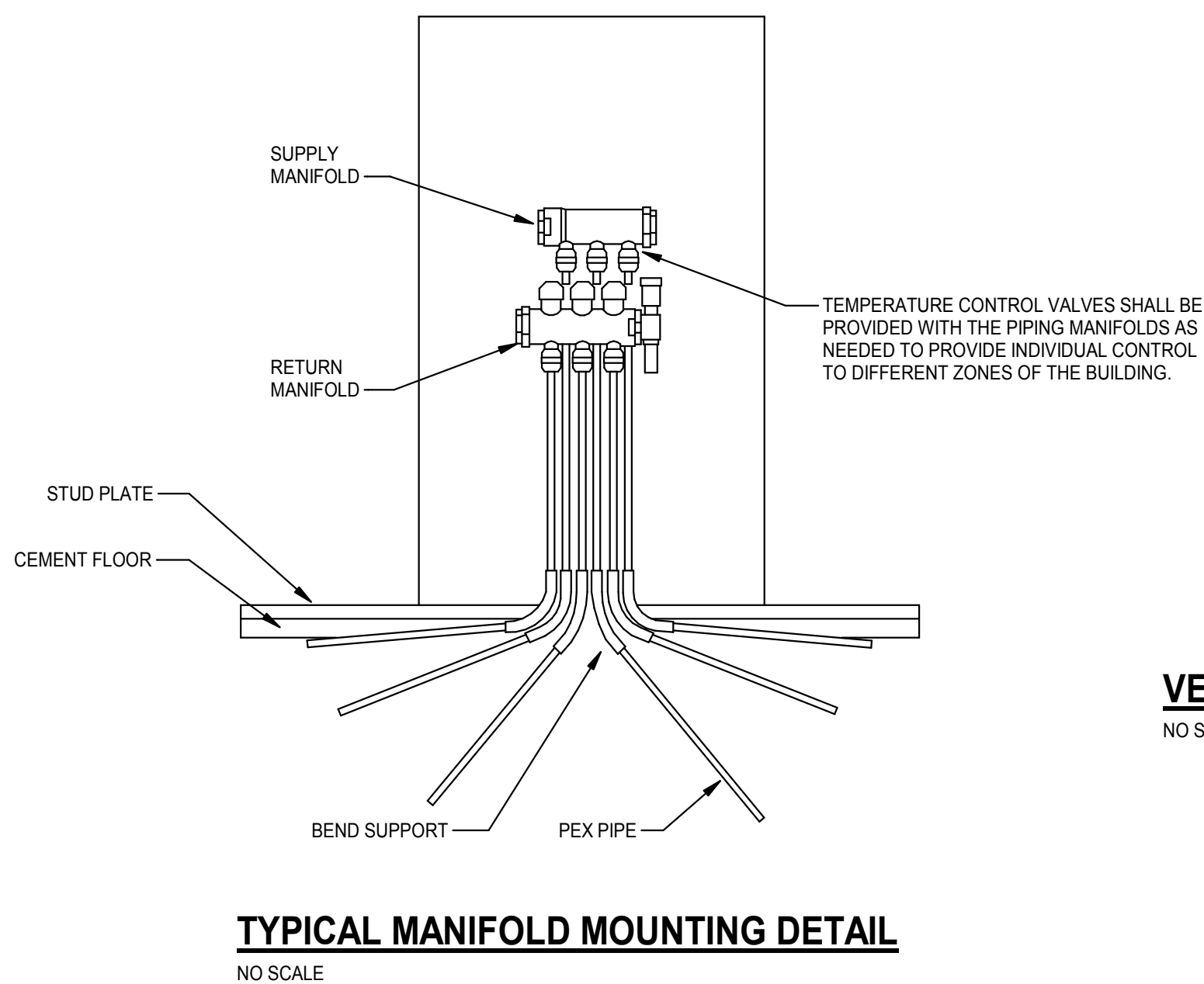
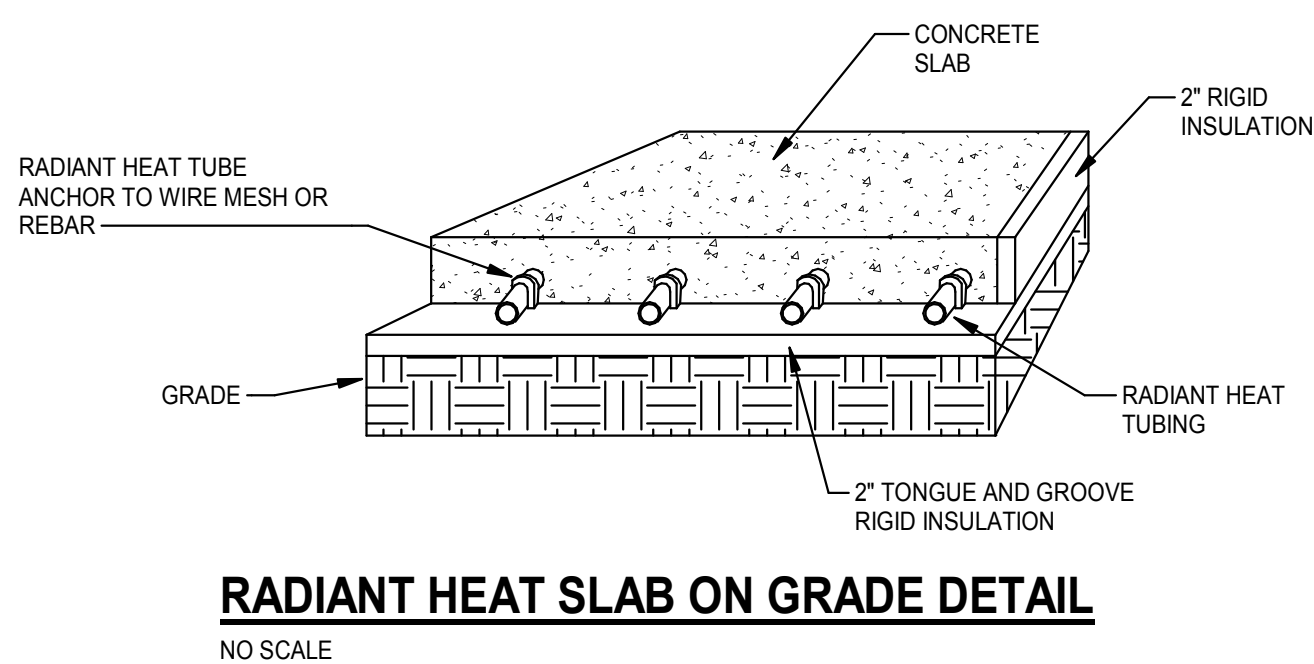
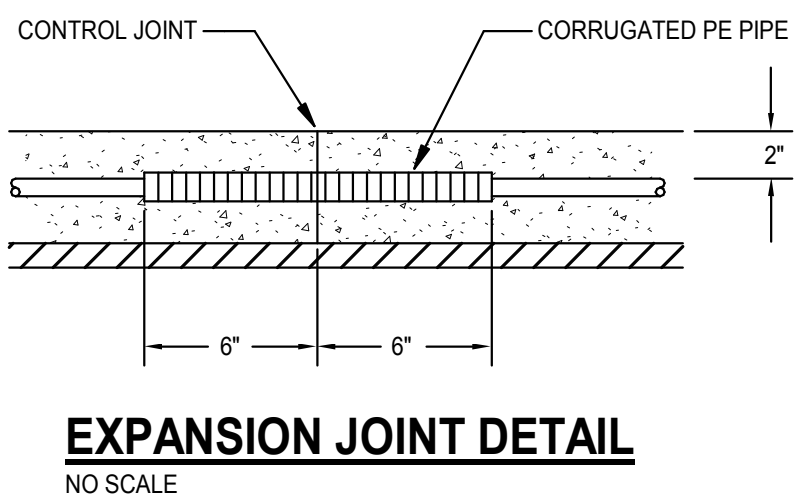
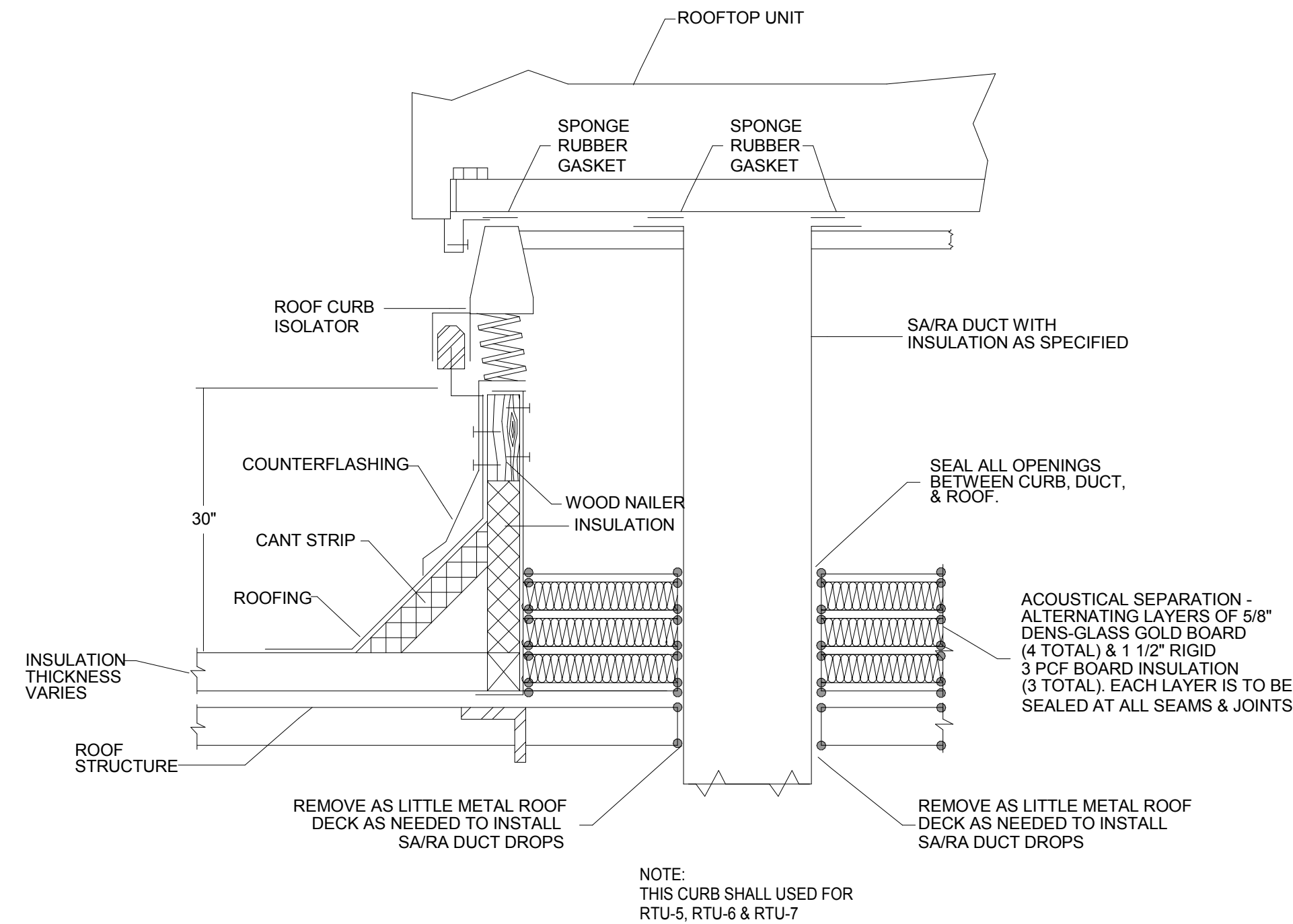
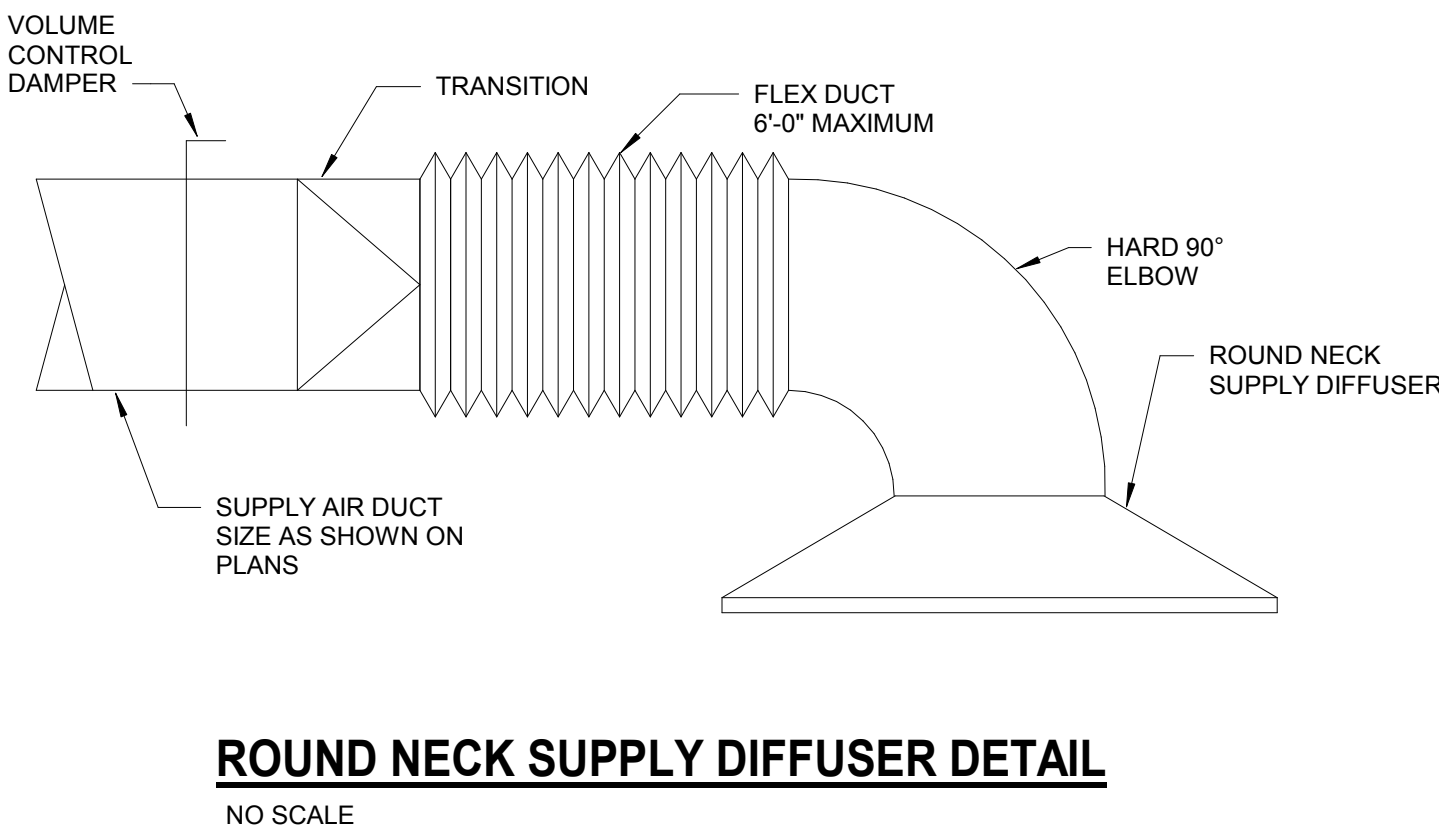
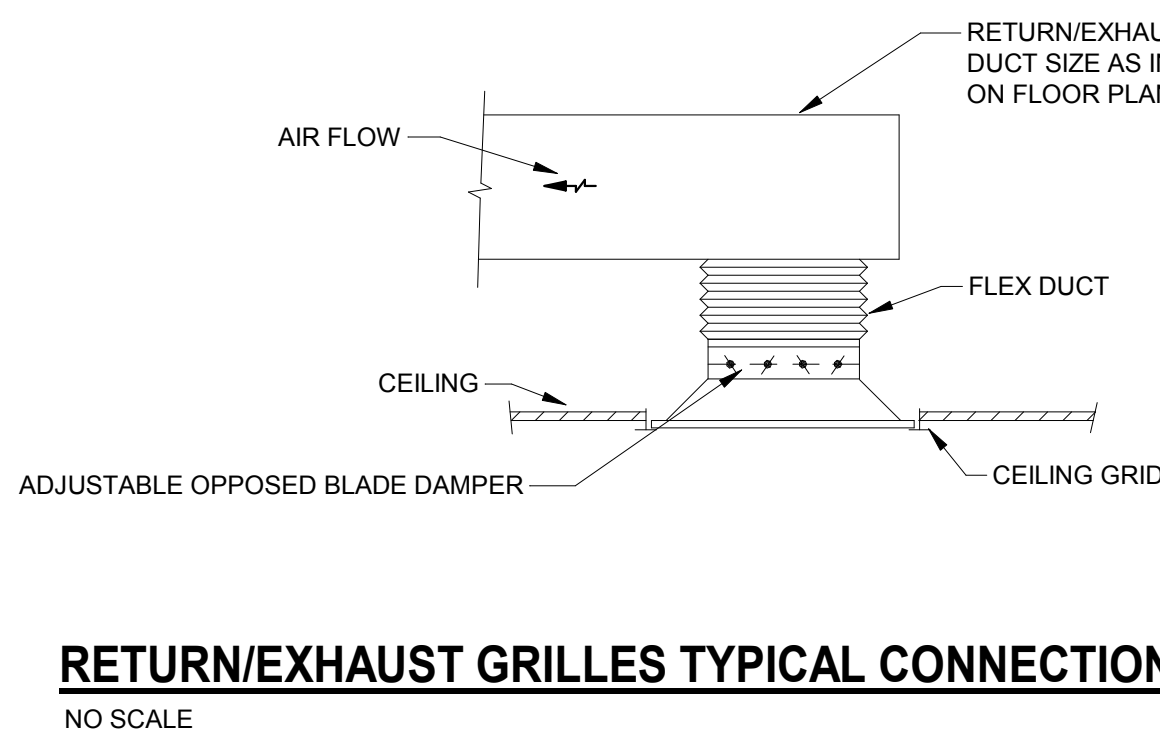
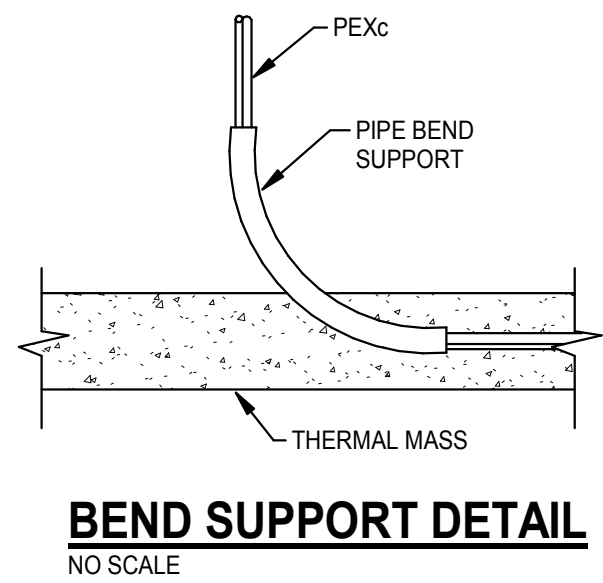
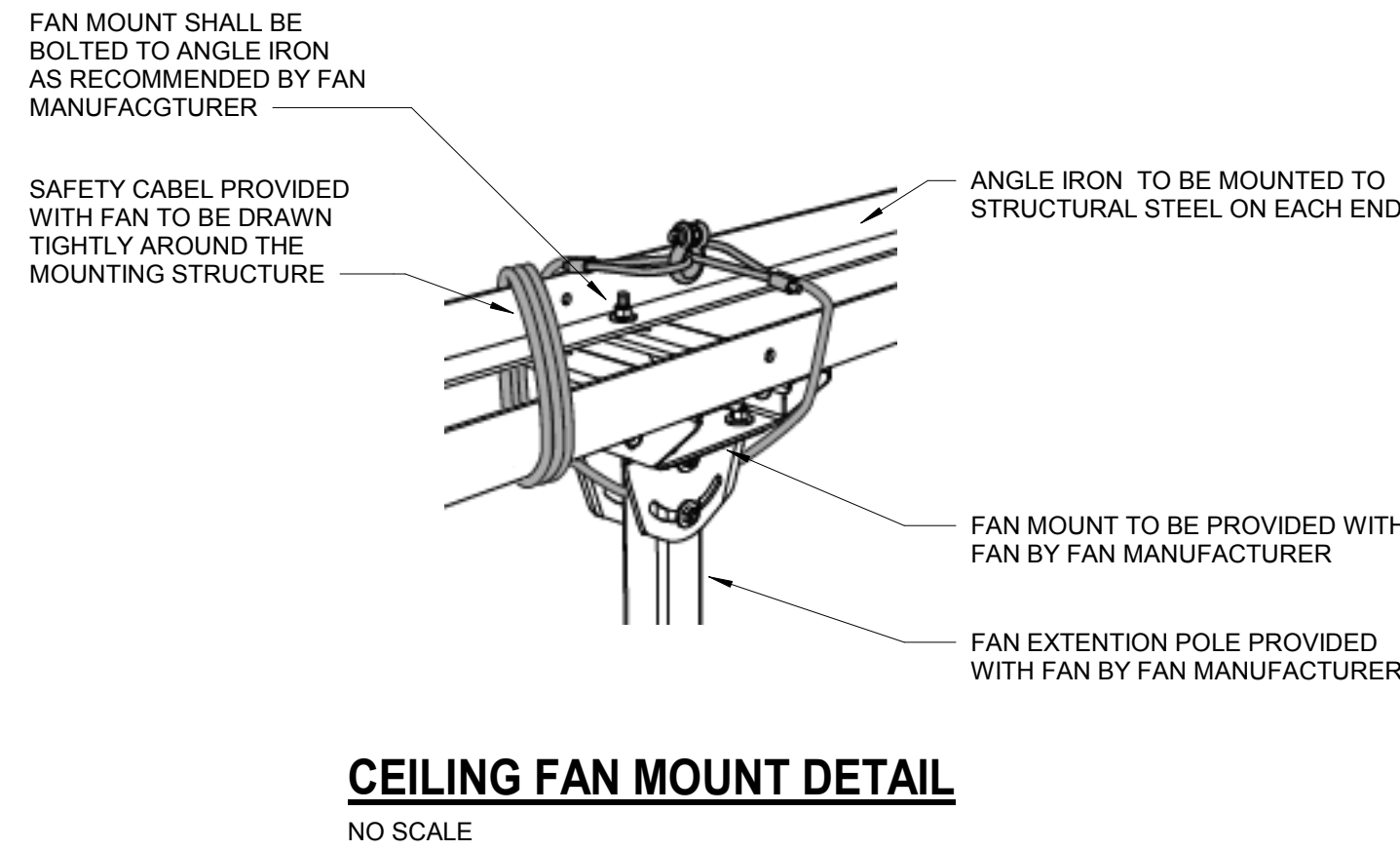
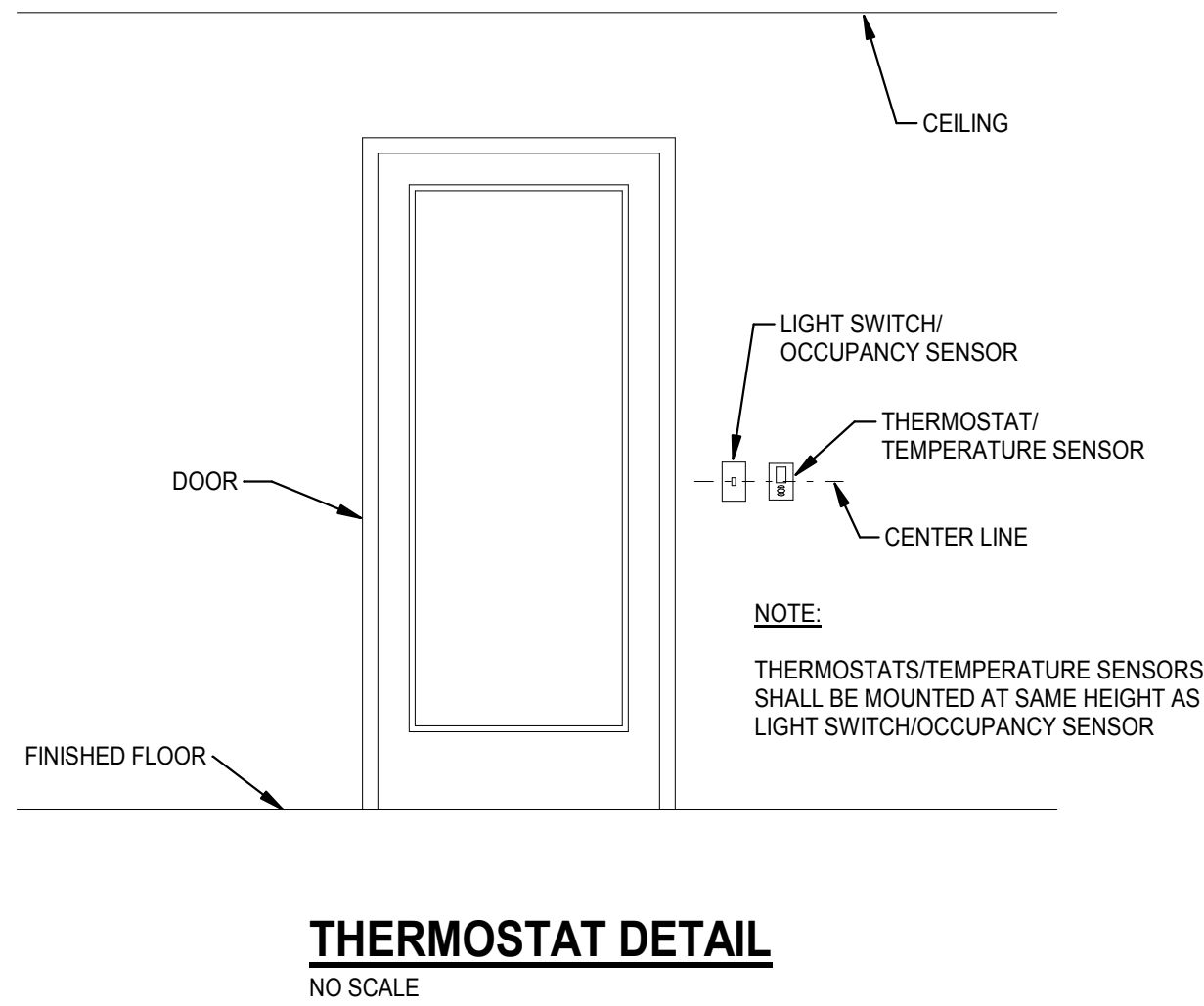
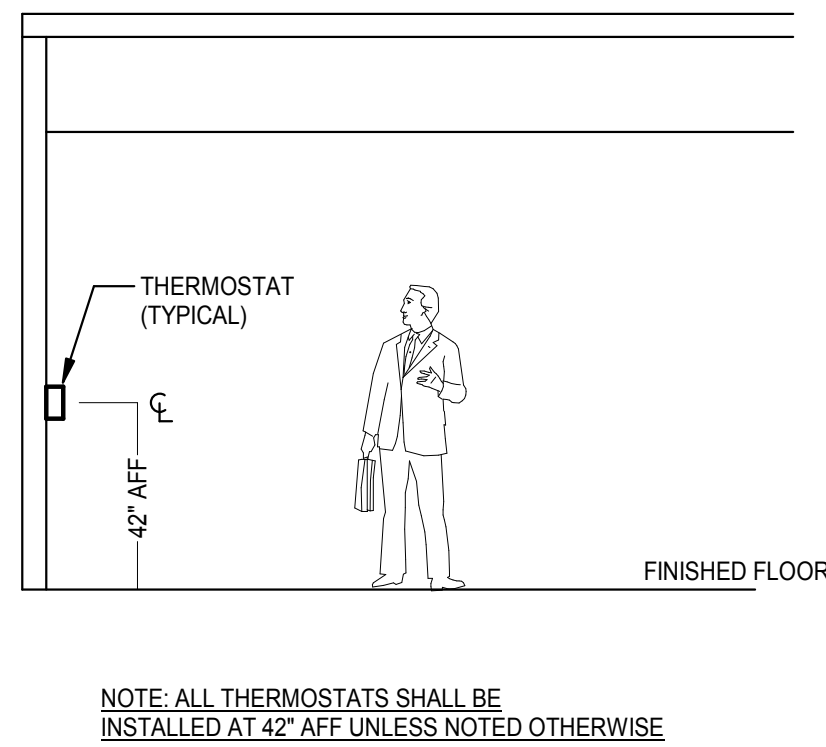
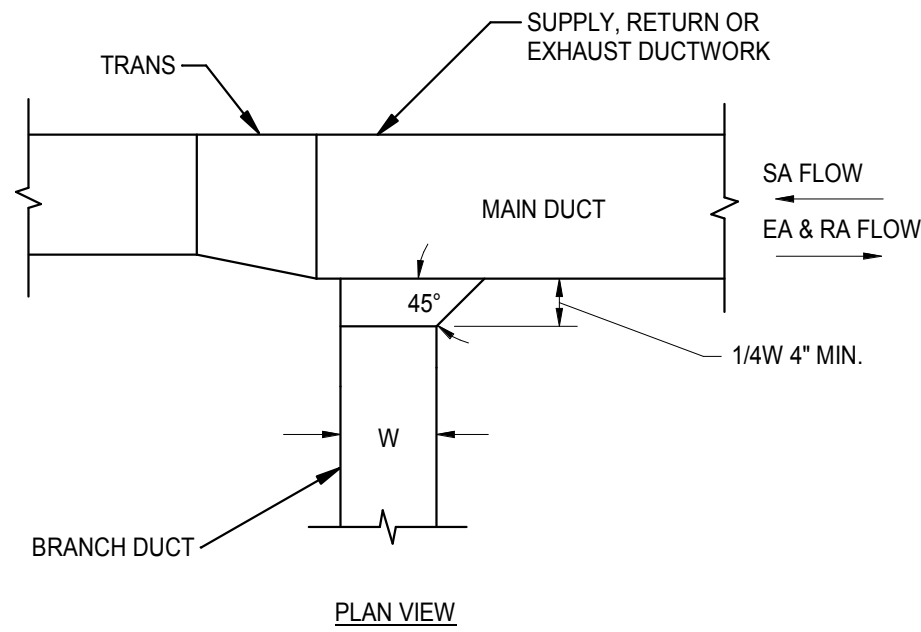
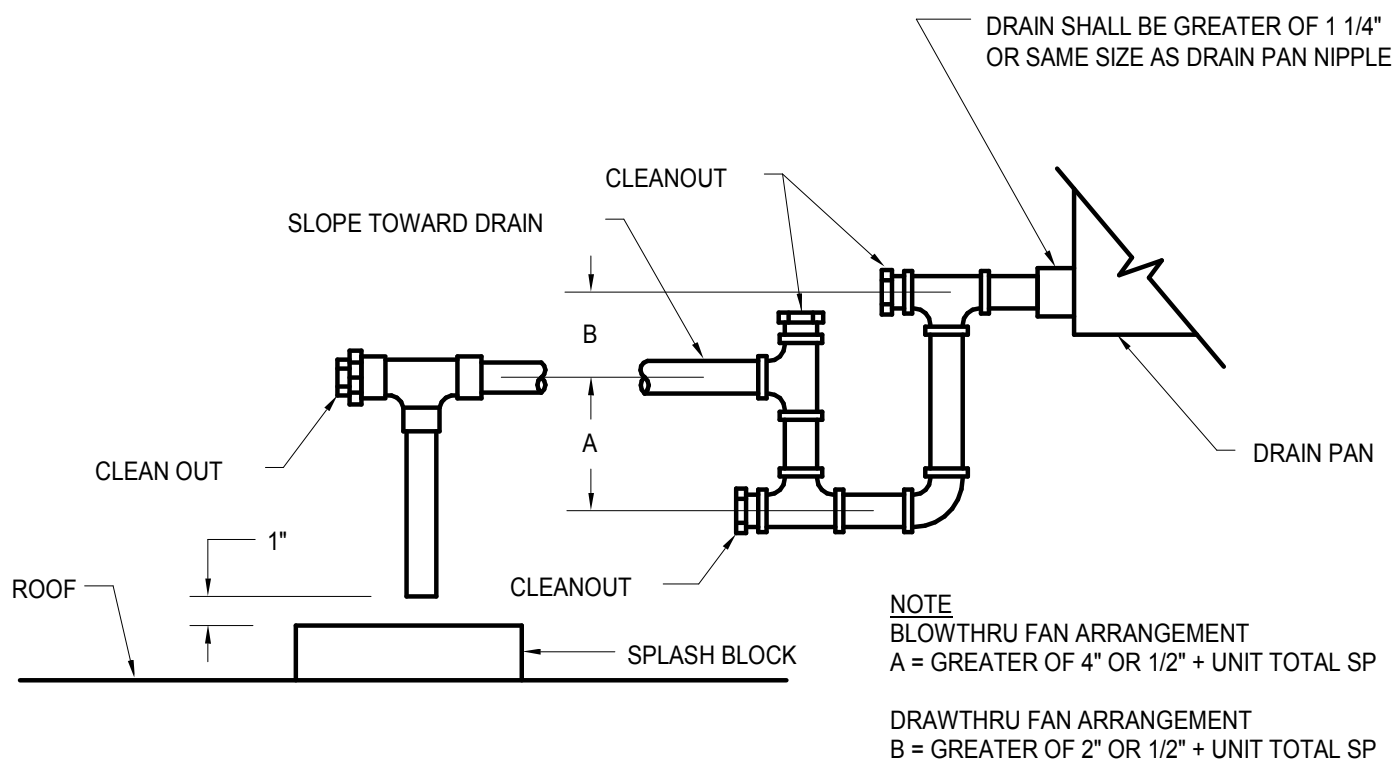


**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

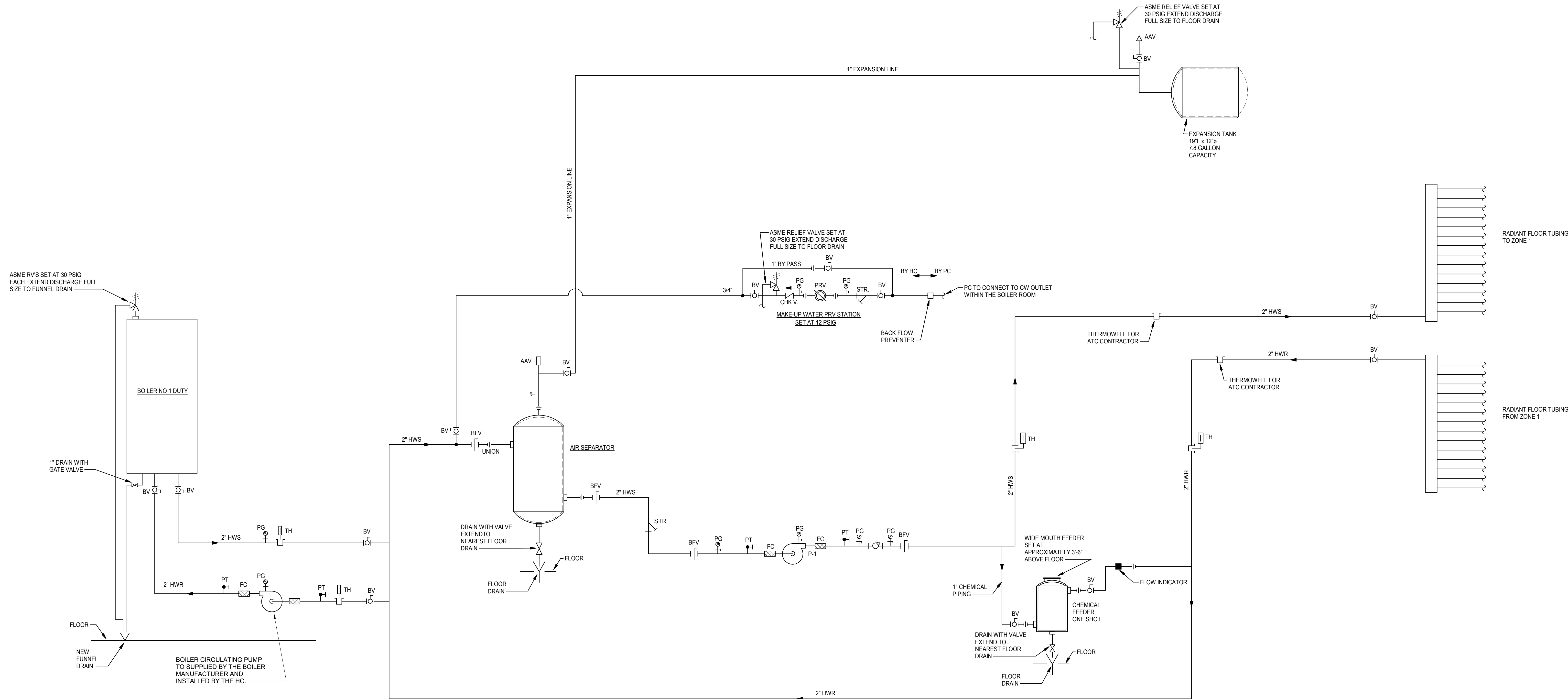
PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>MECHANICAL - PIPING PLAN</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>ME03.102</b> 94 OF 117









**HOT WATER SCHEMATIC FLOW DIAGRAM**  
NOT TO SCALE



EXHAUST FAN SCHEDULE															
NUMBER	SERVES	TYPE	ROOF OPENING	CFM	FAN RPM	MOTOR RPM	EXTERNAL STATIC PRESSURE (IN. WG)	TIP SPEED	DRIVE	BHP	HP	ELECT CHAR	AMPS	BASIS OF DESIGN	REMARKS
EF-1	CAFE HOOD	UB	18.5" x 18.5"	900	1567	1725	1.0	6000	DIRECT	0.31	1/2	1-60-120	3.2	GREENHECK	SEE NOTES
EF-2	MEN & WOMEN TOILET 125 & 126	B	14.5" x 14.5"	570	1136	1725	0.375	3,328	BELT	0.09	1/4	1-60-120	5.8	GREENHECK	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS GREENHECK . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - ALL BELT DRIVEN FANS SHALL BE ADJUSTED TO PROVIDED SYSTEM CFM..
  - EF-1 SHALL BE INTERLOCKED WITH HEAT SENSOR IN HOOD. WHEN HEAT SENSOR SENSES HEAT THE EXHAUST FAN SHALL ENERGIZE AND RUN AT CFM LISTED ON SCHEDULE. HEAT SENSOR SHALL BE FURNISHED AND INSTALLED BY KITCHEN HOOD SUPPLIER. CONTRACTOR SHALL WIRE FROM FAN TO HEAT SENSOR FOR CONTROL OF EXHAUST FAN.

CEILING FAN SCHEDULE															
NUMBER	SERVES	TYPE	FAN DIAMETER	CFM	FAN RPM	MOTOR RPM	MAX AFFECTED AREA (SQ FEET)	DRIVE	dBA	WATTS	ELECT CHAR	AMPS	WEIGHT	BASIS OF DESIGN	REMARKS
CF-1	HOLD ROOM	HVLS	8'-0"	28600	142	142	11,300	DIRECT	45	500	3-60-208	2.5	170 LBS	GREENHECK DS	SEE NOTES
CF-2	HOLD ROOM	HVLS	8'-0"	28600	142	142	11,300	DIRECT	45	500	3-60-208	2.5	170 LBS	GREENHECK DS	SEE NOTES
CF-3	WAITING	HVLS	8'-0"	28600	142	142	11,300	DIRECT	45	500	3-60-208	2.5	170 LBS	GREENHECK DS	SEE NOTES
CF-4	BAGGAGE CLAIM	HVLS	10'-0"	46,700	136	136	13,600	DIRECT	49	500	3-60-208	7.0	180 LBS	GREENHECK DS	SEE NOTES
CF-5	LOBBY	HVLS	10'-0"	46,700	136	136	13,600	DIRECT	49	500	3-60-208	7.0	180 LBS	GREENHECK DS	SEE NOTES
CF-6	LOBBY	HVLS	10'-0"	46,700	136	136	13,600	DIRECT	49	500	3-60-208	7.0	180 LBS	GREENHECK DS	SEE NOTES
CF-7	LOBBY	HVLS	10'-0"	46,700	136	136	13,600	DIRECT	49	500	3-60-208	7.0	180 LBS	GREENHECK DS	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS GREENHECK . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - FANS TO BE CONTROLL BY DDC SYSTEM.
  - EACH FAN TO BE PROVIDED WITH VFD TO CONTROL SPEED OF FAN.

BASE BOARD SCHEDULE (ELECTRIC)								
NUMBER	LENGTH	WATTS	BTU	ELECT CHAR	AMPS	MOUNTING	BASIS OF DESIGN	REMARKS
EBB-1	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-2	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-3	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-4	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-5	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-6	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-7	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-8	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-9	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-10	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-11	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES
EBB-12	6'-0"	1500	5118	1-60-120V	12.5	WALL	BERKO DBBSL	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS BERKO . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - EACH PAIR OF HEATERS TO BE PROVIDED WITH ONE BUILT-IN SINGLE POLE THERMOSTAT TO CONTOL BOTH HEATERS. THERMOSTAT TO BE TAMPER RESISTANT AND ADJUSTABLE THROUGH OUTLET GRILLE.

GAS FIRED RTU SCHEDULE																																		
NUMBER	SYSTEM CFM	OA CFM	OA %	SUPPLY FAN DATA							EMERGENCY POWER		COMMERCIAL POWER		NATURAL GAS HEATING DATA							DX COOLING COIL DATA							UNIT LENGTH	UNIT WIDTH	UNIT HEIGHT	UNIT WEIGHT (LBS)	REMARKS	
				NO. OF FANS	ESP	BHP	HP	DRIVE	RPM	VFD	MCA	MOP	ELECT CHAR	MCA	MOP	ELECT CHAR	EAT °F	LAT °F	TEMP RISE °F	INPUT MBH	OUTPUT MBH	NOM TONS	EAT °F DB	WB	DB	WB	TOT MBH	SENS MBH						EER
RTU-1	6000	3600	60	1	1.25	5.10	7.5	BELT	935	YES	13.8	20	3-60-480	49.5	60	3-60-480	30.0	79.1	49.1	400.0	320.0	25	86.4	68.9	55.6	52.8	302.50	200.50	10.6	15' - 1"	7' - 8"	4' - 5"	3350	SEE NOTES
RTU-2	2260	452	20	1	1.75	2.09	3.0	BELT	1484	YES	6.0	10	3-60-480	14.9	20	3-60-480	60.0	99.3	39.3	120.0	96.0	7.5	78.8	63.2	51.6	49.8	85.20	66.30	11.5	7' - 5"	4' - 11"	3' - 6"	1200	SEE NOTES
RTU-3	6000	3000	50	1	1.25	5.10	7.5	BELT	935	YES	13.8	20	3-60-480	49.5	60	3-60-480	37.5	86.6	49.1	400.0	320.0	25	84.5	67.6	55.0	53.0	299.00	200.70	10.6	15' - 1"	7' - 8"	4' - 5"	3350	SEE NOTES
RTU-4	2000	300	15	1	1.25	1.25	1.5	BELT	1135	YES	3.8	6	3-60-480	8.3	10	3-60-480	63.7	108.6	44.9	120.0	97.0	4	77.8	62.4	55.4	53.0	54.20	48.30	12.0	8' - 5"	4' - 11"	3' - 6"	1100	SEE NOTES
RTU-5	8095	2267	28	1	1.25	7.31	10.0	BELT	1008	YES	17.5	30	3-60-480	56.0	65	3-60-480	54.0	90.6	36.6	400.0	320.0	25	80.6	66.4	56.1	54.4	296.60	213.80	10.6	15' - 1"	7' - 8"	4' - 5"	3250	SEE NOTES
RTU-6	5000	1400	28	1	1.25	3.57	5.0	BELT	1037	YES	9.5	15	3-60-480	37.5	40	3-60-480	54.0	113.3	59.3	400.0	320.0	15	80.6	66.4	56.5	54.7	179.70	130.10	12.2	15' - 1"	7' - 8"	4' - 5"	3150	SEE NOTES
RTU-7	2855	713	25	1	1.75	2.21	3.0	BELT	1084	YES	6.0	10	3-60-480	22.8	25	3-60-480	56.2	102.9	46.7	180.0	144.0	8.5	80.0	66.0	55.6	54.0	103.80	75.30	11.5	7' - 5"	4' - 11"	4' - 3"	1350	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS JOHNSON CONTROLS . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - HEATING CAPACITY BASED ON 0°F AMBIENT AIR.
  - COOLING CAPACITY BASED ON 94°F DB / 74°F WB AMBIENT AIR.
  - ROOFTOP UNITS RTU-1, RTU-2, RTU-3 & RTU-4 SHALL BE MOUNTED ON CURB ADAPTERS TO EXISTING ROOF CURBS. HC SHALL FIELD VERIFY EXISTING ROOF CURB DIMENTIONS AND CORRIDNATE CURB ADAPTERS SIZES WITH THE NEW ROOFTOP UNITS.
  - ROOFTOP UNITS RTU-5, RTU-6 & RTU-7 SHALL BE MOUNTED ON A FACTORY FABRICATED ROOF CURB FURNISHED WITH UNIT. ROOF CURB BE 24" HIGH.
  - THE HC SHALL PROVIDE CONDENSATE TRAP AS DETAILED AND EXTEND 1 1/4" CONDENSATE DRAIN LINE TO ROOF DRAIN.
  - DUCT CONNECTIONS SHALL BE MADE TO UNIT WITH FLEXIBLE CONNECTIONS.
  - ROOFTOP UNITS RTU-2, RTU-4 & RTU-7 SHALL BE VARIABLE VOLUME UNITS.
  - ROOFTOP UNITS RTU-1, RTU-3, RTU-5 & RTU-6 SHALL BE CONSTANT VOLUME UNITS WITH HOT GAS RE-HEAT.
  - THE SUPPLY FAN FOR RTU-2, RTU-4 & RTU-7 SHALL HAVE A FACTORY INSTALLED VFD.
  - ALL ROOFTOP UNITS SHALL HAVE DUAL POINT POWER. COMPRESSORS & CONDENSER FANS SHALL BE ONE CIRCUIT LABELED COMMERCIAL POWER. SUPPLY FAN, EXHAUST FAN, CONTROL POWER AND GAS HEAT SHALL BE CONNECTED TO A SECOND CIRCUIT LABELED EMERGENCY POWER.
  - ROOFTOP UNITS SHALL BE PROVIDED WITH FULLY MODULATING GAS BURNERS.

DIFFUSER/REGISTER/GRILLE SCHEDULE												
NUMBER	NECK SIZE	TYPE	CFM RANGE	MODULE SIZE	SLOTS	SLOT WIDTH	ACTIVE LENGTH	MAX PD (FT)	MAX NC	BASIS OF DESIGN	MOUNTING	REMARKS
E1	8"x8"	EGC	0-140	-	-	-	-	0.050	<15	PRICE 630	SURFACE	-
E2	10"x10"	EGC	145-270	-	-	-	-	0.052	15	PRICE 630	SURFACE	-
R1	10"x10"	RGC	145-270	-	-	-	-	0.052	15	PRICE 630	SURFACE	-
R2	12"x12"	RGC	275-450	-	-	-	-	0.066	19	PRICE 630	SURFACE	-
R3	14"x14"	RGC	455-590	-	-	-	-	0.059	19	PRICE 630	SURFACE	-
R4	16"x16"	RGC	595-800	-	-	-	-	0.062	20	PRICE 630	SURFACE	-
R5	20"x20"	RGC	1045-1390	-	-	-	-	0.074	24	PRICE 630	SURFACE	-
R6	22"x22"	RGC	1395-1555	-	-	-	-	0.062	22	PRICE 630	SURFACE	-
S1	6"ø	SDC	0-140	24"x24"	-	-	-	0.050	<15	PRICE ASPD	LAY-IN	-
S2	8"ø	SDC	145-240	24"x24"	-	-	-	0.050	<15	PRICE ASPD	LAY-IN	-
S3	10"ø	SDC	245-330	24"x24"	-	-	-	0.066	<15	PRICE ASPD	LAY-IN	-
S4	12"ø	SDC	335-470	24"x24"	-	-	-	0.076	<15	PRICE ASPD	LAY-IN	-
S5	14"ø	SDC	475-640	24"x24"	-	-	-	0.088	<15	PRICE ASPD	LAY-IN	-

AIR CURTAIN HEATER SCHEDULE (ELECTRIC)													
NUMBER	NOZZLE WIDTH	CFM	AVERAGE OUTLET VELOCITY	HEATER DATA			FAN INFO		ELECTRICAL INFO				REMARKS
				MBH	KW	ELECT CHAR	FAN QTY	HP (EACH)	ELECT CHAR	MCA	MOP	BASIS OF DESIGN	
EAC-1	3' - 4 1/4"	1212	2115	25.60	7.5	3-60-208	1	0.2	3-60-208	22.5	30	BERNER INTERNATIONAL	SEE NOTES
EAC-2	3' - 4 1/4"	1212	2115	25.60	7.5	3-60-208	1	0.2	3-60-208	22.5	30	BERNER INTERNATIONAL	SEE NOTES
EAC-3	7' - 0"	3310	2115	40.94	12.0	3-60-208	2	0.5	3-60-208	41.9	60	BERNER INTERNATIONAL	SEE NOTES
EAC-4	7' - 0"	3310	2115	40.94	12.0	3-60-208	2	0.5	3-60-208	41.9	60	BERNER INTERNATIONAL	SEE NOTES
EAC-5	7' - 0"	3310	2115	40.94	12.0	3-60-208	2	0.5	3-60-208	41.9	60	BERNER INTERNATIONAL	SEE NOTES
EAC-6	12' - 0"	6048	1728	0.00	0.0	NA	4	0.5	3-60-480	5.6	15	BERNER INTERNATIONAL	SEE NOTES
EAC-7	12' - 0"	6048	1728	0.00	0.0	NA	4	0.5	3-60-480	5.6	15	BERNER INTERNATIONAL	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS BERNER INTERNATIONAL . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - EAC-2 SHALL BE INSTALLED UNDER AN ALTERNATE BID.
  - ALL AIR CURTAINS SHALL HAVE SINGLE POINT POWER CONNECTION.
  - EAC-1 & EAC-2 SHALL BE WALL MOUNTED LOW PROFILE TYPE MANUFACTURER BY BERNER INTERNATIONAL MODEL ALCO8-1042E OR APPROVED EQUAL.
  - EAC-3, EAC-4, EAC-5 SHALL BE CEILING FULL RECESSED MOUNTED MANUFACTURER BY BERNER INTERNATIONAL MODEL ARD12-2084E OR APPROVED EQUAL.
  - ALL AIR CURTAINS SHALL HAVE FANS ACTIVATED BY A DOOR SWITCH AND / OR ACTIVATED BY THE THERMOSTAT.



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**CJL ENGINEERING**

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CJL Project # 18-0236

SEAL:



Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 25983

Expiration Date: 3/30/2021

DESIGNED: JRK

DRAWN: JRK

CHECKED: BKR

APPROVED: MRS

No.	DATE	DESCRIPTION
BID DOCUMENTS		



**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:

TERMINAL BUILDING EXPANSION

SHEET TITLE:

MECHANICAL - SCHEDULES

SCALE:

DATE:

MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:

ME09.000

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SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE																	
NUMBER	SERVES	CFM	COOLING DATA				HEATING DATA			SEER	ELECT CHAR	MCA	RECESS	MOUNTING	BASIS OF DESIGN	REMARKS	
			NOMINAL TONS	EAT DB °F	EAT WB °F	MAX MBH	MIN MBH	INPUT KW	MAX MBH								MIN MBH
SSACU-1	IT / SECURITY	490	2.0	80	67	24.0	12.0	N/A	N/A	N/A	13.6	1-60-208	1.0	FULL	CEILING	mitsubishi PLA-A24BA	SEE NOTES
SSACU-2	STORAGE / DATA	370	1.5	80	67	18.0	8.0	N/A	N/A	N/A	15.3	1-60-208	1.0	NONE	WALL	mitsubishi PKA-A18HA	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS MITSUBISHI ELECTRIC . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER. SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - COOLING CAPACITIES BASED ON 95°F AMBIENT TEMP.
  - UNIT SHALL BE FURNISHED WITH INTEGRAL CONDENSATE PUMP.
  - UNIT SHALL AUTOMATICALLY RESTART IN THE EVENT OF A POWER FAILURE. UNIT MANUFACTURER TO PERFORM START UP CHECK AFTER INSTALLATION.
  - THESE SYSTEMS SHALL HAVE ONE ELECTRICAL CONNECTION TO THE OUTDOOR UNIT PROVIDED BY THE ELECTRICAL CONTRACTOR. THE HEATING CONTRACTOR SHALL PROVIDE AND INSTALL THE POWER/ CONTROL WIRING FROM THE OUTDOOR UNIT TO THE INDOOR UNIT. THE INDOOR UNIT SHALL BE FURNISHED WITH A LOCAL MOTOR SENTIAL SWITCH FOR SERVICING.
  - ALL REFRIGERANT AND GAS PIPING SHALL BE SIZED, INSTALLED, AND INSULATED, AS RECOMMENDED BY UNIT MANUFACTURER.
  - REFRIGERANT LINES SHALL BE EXTENDED NO FURTHER THAN RECOMMENDED BY UNIT MANUFACTURER.
  - SPLIT SYSTEM SSACU-1 & SSACU-2 SHALL BE ON EMERGENCY POWER.

SPLIT SYSTEM REMOTE CONDENSING UNIT SCHEDULE												
NUMBER	SERVES	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	CFM	ELECTRICAL REQUIREMENTS					BASIS OF DESIGN	WEIGHT (LBS)	REMARKS
					ELECT CHAR	MCA	MOP	COMPRESSOR RLA	FAN FLA			
SSRCU-1	SSACU-1	24.0	N/A	1940	1-60-208	18.0	30	12.0	0.75	mitsubishi PUY-A24NHA3	163	SEE NOTES
SSRCU-2	SSACU-2	18.0	N/A	1200	1-60-208	13.0	20	12.0	0.35	mitsubishi PUY-A18NHA3	97	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS MITSUBISHI ELECTRIC . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - UNIT SHALL BE BOLTED TO ROOF MOUNTED EQUIPMENT RAIL OF LENGTH REQUIRED TO MAKE UNIT STABLE. EQUIPMENT RAIL BY HC.
  - UNIT SHALL HAVE LOW AMBIENT CONTROLS.
  - UNIT SHALL AUTOMATICALLY RESTART IN THE EVENT OF A POWER FAILURE. UNIT MANUFACTURER TO PERFORM START UP CHECK AFTER INSTALLATION.
  - ALL REFRIGERANT AND GAS PIPING SHALL BE SIZED, INSTALLED AND INSULATED AS RECOMMENDED BY UNIT MANUFACTURER.
  - REFRIGERANT LINES SHALL BE EXTENDED NO FURTHER THAN RECOMMENDED BY UNIT MANUFACTERER.
  - SPLIT SYSTEM SSRCU-1 & SSRCU-2 SHALL BE ON EMERGENCY POWER.

VARIABLE VOLUME BOX SCHEDULE (ELECTRIC)																				
NUMBER	LOCATION		UNIT SIZE		CFM		STATIC PRESSURE			NC LEVELS		ELECTRIC HEATING COIL								
	RM. NO.	RM. NAME	SIZE	OUTLET	MAX	MIN	INLET	DOWN	MIN	RAD	DISCH	CFM	KW	STEPS OF CONTROL	EAT °F	FAT °F	ELECT CHAR	MCA	MOP	REMARKS
EVVB-01	138	CORRIDOR	6ø	12x8	225	70	0.5	0.15	0.03	-	12	150	2.0	SCR	55	97.1	1-60-277	9.0	15	SEE NOTES
EVVB-02	129	CONFERENCE	10ø	14x13	800	240	0.5	0.15	0.05	11	12	440	6.0	SCR	55	98.1	3-60-480	9.0	15	SEE NOTES
EVVB-03	129	CONFERENCE	10ø	14x13	550	165	0.5	0.15	0.02	-	-	290	4.0	SCR	55	98.6	1-60-277	18.1	20	SEE NOTES
EVVB-04	126	MEEN	12ø	16x15	0	385	0.5	0.15	0.06	16	14	650	9.0	SCR	55	98.8	3-60-480	13.5	15	SEE NOTES
EVVB-05	114	TSA	8ø	12x10	360	110	0.5	0.15	0.03	11	12	180	2.5	SCR	55	98.9	1-60-277	11.3	15	SEE NOTES
EVVB-06	118	OFFICE	8ø	12x8	220	70	0.5	0.15	0.03	-	12	110	1.5	SCR	55	98.1	1-60-277	6.8	15	SEE NOTES
EVVB-07	119	OFFICE	8ø	12x8	220	70	0.5	0.15	0.03	-	12	110	1.5	SCR	55	98.1	1-60-277	6.8	15	SEE NOTES
EVVB-08	120	OFFICE	10ø	14x13	640	195	0.5	0.15	0.03	-	11	320	4.5	SCR	55	99.4	3-60-480	6.8	15	SEE NOTES
EVVB-09	120	OFFICE	6ø	12x8	220	70	0.5	0.15	0.03	-	12	110	1.5	SCR	55	98.1	1-60-277	6.8	15	SEE NOTES
EVVB-10	121	OFFICE	6ø	12x8	300	90	0.5	0.15	0.06	13	13	150	2.0	SCR	55	97.1	1-60-277	9.0	15	SEE NOTES
EVVB-11	135	MAINT. STORAGE	6ø	12x8	220	70	0.5	0.15	0.03	-	12	150	2.0	SCR	55	97.1	1-60-277	9.0	15	SEE NOTES
EVVB-12	134	OFFICE	6ø	12x8	230	70	0.5	0.15	0.03	-	12	150	2.0	SCR	55	97.1	1-60-277	9.0	15	SEE NOTES
EVVB-13	133	OFFICE	10ø	14x13	580	175	0.5	0.15	0.03	-	-	300	4.0	SCR	55	97.1	1-60-277	18.1	20	SEE NOTES
EVVB-14	142	OFFICE	10ø	14x13	750	250	0.5	0.15	0.06	12	12	440	6.0	SCR	55	98.1	1-60-277	9.0	15	SEE NOTES
EVVB-15	141A	OFFICE	8ø	12x10	0	165	0.5	0.15	0.06	16	17	270	3.5	SCR	55	96.0	1-60-277	15.8	20	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS KRUEGER . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.

CONDENSING BOILER SCHEDULE									
NUMBER	MIN INPUT (MBH)	MAX INPUT (MBH)	GROSS OUTPUT (MBH)	ELECT CHAR	STANDARD PRESSURE (IN W/C/PSI)		BASIS OF DESIGN	WEIGHT (LBS)	REMARKS
					MIN	MAX			
B-1	28.40	199.00	189.0	1-60-120	3.0	11.6	RAYPAK	190	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS RAYPAK . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.
  - BOILER SHALL BE SUPPLIED WITH BOILER CIRCULATING PUMP FURNISHED BY THE MANUFACTURER AND INSTALLED IN THE FIELD BY THE HC. HC TO COORDINATE WITH LOCATION OF PUMP WITH THE EC. THE EC SHALL SUPPLY POWER TO THE PUMP.

PUMP SCHEDULE														
PUMP NO.	OPERATION (DUTY/STAND-BY)	TYPE	LOCATION	OPERATING CONDITIONS			NPSH REQ'D	IMPELLER SIZE	MOTOR DATA				BASIS OF DESIGN	REMARKS
				GPM	HEAD (FT)	EFF%			HP	BHP	RPM	ELECT CHAR		
P-1	DUTY	INLINE	STORAGE 117	20	25	53.9	4.08	5"	0.5	0.239	1800	1-60-120	BELL & GOSSETT	SEE NOTES

- NOTES:
- THE MANUFACTURER BASIS OF DESIGN IS BELL & GOSSETT . ANY DEVIATION FROM WHAT IS SCHEDULED, EVEN THOUGH THE THE MANUFACTURER IS LISTED IN THE SPECIFICATION AS AN EQUIVALENT MANUFACTURER, SHALL BE THIS CONTRACTORS RESPONSIBILITY FOR COORDINATION, ADDITIONAL WORK FOR THIS OR OTHER TRADES AT NO ADDITIONAL COST TO THE PROJECT.

RADIANT FLOOR ZONING SCHEDULE										
MANIFOLD NUMBER	SCHEDULE OF ZONES	FLOOR AREA (SQ FT)	LOOPS/LENGTH	GPM	BTU	EW'T °F	FLUID TEMP DROP °F	WPD (FT HD)	TUBING SIZE TO ZONE	TUBING ON CENTER
RFM-1	ZONE 1	3,789	14 @ 400'-0"	19.2	170505.00	120	20	10.8	5/8"	9"

- NOTES:
- IF CARPET IS TO BE INSTALLED IN AREAS OF RADIANT FLOORING, DO NOT USE EURETHANE PADDING. RUBBER PADDING IS ACCEPTABLE.
  - IF WOOD FLOORING IS TO BE INSTALLED IN AREAS OF RADIANT FLOORING, WOOD FLOORING MUST BE BROUGHT TO SITE AND DRIED OUT AT LEAST 3 WEEKS PRIOR TO INSTALLATION.



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CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
  
License No. 25983  
Expiration Date: 3/30/2021

DESIGNED: JRK  
  
DRAWN: JRK  
  
CHECKED: BKR  
  
APPROVED: MRS

No.	DATE	DESCRIPTION

BID DOCUMENTS



PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**MECHANICAL - SCHEDULES**

SCALE: DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**ME09.001**  
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POWER

	PANELBOARD
	GENERATOR
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	TRANSFORMER (DRAWN TO SIZE)
	POWER SUPPLY
	JUNCTION BOX
	JUNCTION BOX - CEILING
	PULL BOX
	EMERGENCY POWER OFF PUSH BUTTON
	NON-FUSIBLE SAFETY SWITCH
	FUSIBLE SAFETY SWITCH
	MOTOR STARTER - FURNISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL AND PROVIDE POWER CONNECTION
	COMBINATION STARTER/DISCONNECT - FURNISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL AND PROVIDE POWER CONNECTION
	VARIABLE FREQUENCY DRIVE - FURNISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL AND PROVIDE POWER CONNECTION
	MOTOR
	MOTOR STARTING SWITCH
	MECHANICAL CEILING FAN
	MECHANICAL SPLIT SYSTEM CASSETTE
	POWER POLE FOR TSA EQUIPMENT
	REMOTE GENERATOR ANNUNCIATOR

TELECOMMUNICATIONS

	TELEPHONE OUTLET(S) @ 18" AFF. U.N.O. WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO TELEPHONE TERMINAL BOARD IF NO ACCESSIBLE CEILING AVAILABLE. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	DATA OUTLET(S) @ 18" AFF. U.N.O. WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO DATA EQUIPMENT RACK IF NO ACCESSIBLE CEILING AVAILABLE. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	COMBINATION TELEPHONE/DATA OUTLET(S) @ 18" AFF. U.N.O. WITH 1" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO TELE/DATA TERMINAL AREA IF NO ACCESSIBLE CEILING AVAILABLE. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	WALL MTD. TELEPHONE OUTLET WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING OR TO TELEPHONE TERMINAL BOARD IF NO ACCESSIBLE CEILING AVAILABLE. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	DATA OUTLET FOR WIRELESS ACCESS POINT. PROVIDE DEVICE BACK BOX AND 3/4" RACEWAY TERMINATED ABOVE ACCESSIBLE CEILING. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	DATA OUTLET FOR WIRELESS ACCESS POINT. PROVIDE DEVICE BACK BOX AND 3/4" RACEWAY TERMINATED ABOVE ACCESSIBLE CEILING. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	DATA OUTLET FOR DOOR SECURITY. PROVIDE DEVICE BACK BOX AND 3/4" RACEWAY TERMINATED ABOVE ACCESSIBLE CEILING. CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.

RECEPTACLES

	SINGLE 125V-20A RECEPTACLE
	DUPLEX 125V-20A RECEPTACLE
	DUPLEX EMERGENCY RECEPTACLE
	DUPLEX RECEPTACLE FOR FREEZER
	DUPLEX RECEPTACLE FOR VENDING MACHINE
	DUPLEX RECEPTACLE GROUND FAULT INTERRUPTER TYPE
	DUPLEX RECEPTACLE FOR TELEVISION/ DISPLAY
	DUPLEX RECEPTACLE GROUND FAULT INTERRUPTER TYPE. INSTALL IN WEATHERRESITANT HOUSING
	DOUBLE DUPLEX RECEPTACLE
	DOUBLE DUPLEX EMERGENCY RECEPTACLE
	DUPLEX RECEPTACLE FOR MICROWAVE, MT. AS DIRECTED BY ARCHITECT
	DUPLEX RECEPTACLE WITH (2) USB INSERTION OUTLETS.
	RECEPTACLE ELECTRIC WATER COOLER GROUND FAULT INTERRUPTER TYPE
	SPECIAL RECEPTACLE - COORDINATE EXACT TYPE WITH EQUIPMENT AT SITE
	DUPLEX RECEPTACLE FOR ICE MACHINE
	FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE & TELEDATA OUTLET AND COVER PLATE. DATA CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	EMERGENCY FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE & TELEDATA OUTLET AND COVER PLATE. DATA CABLING AND NUMBER OF DROPS BY OWNER'S VENDOR.
	INDICATES MOUNT DEVICE 6"-8" ABOVE COUNTER TOP

MISCELLANEOUS

	BRANCH CIRCUIT WIRING CONCEALED IN WALLS OR ABOVE CEILING
	HOME RUN BACK TO PANEL
	CONDUIT EXPOSED ON WALLS OR CEILING
	EXISTING CONDUIT TO REMAIN - REMOVE EXISTING CONDUCTORS & INSTALL NEW CONDUCTORS AS INDICATED
	CONDUIT TURNED DOWN

LIGHTING

	LIGHTING FIXTURE - SEE FIXTURE SCHEDULE FOR MORE INFORMATION
	NORMAL/EMERGENCY LIGHTING FIXTURE - SEE FIXTURE SCHEDULE FOR MORE INFORMATION
	DOWNLIGHT
	LIGHTING FIXTURE ON NORMAL/EMERGENCY
	WALL WASHER
	WALL MOUNTED LIGHT FIXTURE
	PENDANT MOUNTED HIGH BAY FIXTURE
	INTERIOR DIRECTIONAL LIGHTING FIXTURE
	TRACK LIGHTING
	LIGHT FIXTURE WITH CENTER LAMP ON NORMAL/EMERGENCY CIRCUIT & OUTSIDE LAMP(S) ON NORMAL CIRCUIT
	EXIT SIGN - DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS
	WALL PACK/ WALL SCONCE
	INDIRECT LED UPLIGHT FIXTURE
	EMERGENCY INDIRECT LED UPLIGHT FIXTURE
	SINGLE POLE SWITCH
	LOW VOLTAGE SWITCH
	LOW VOLTAGE SWITCH. # INDICATES THE NUMBER OF SCENE BUTTONS.
	DIMMER SWITCH
	CEILING MOUNTED OCCUPANCY SENSOR
	WALL MOUNTED OCCUPANCY SENSOR
	CORNER MOUNTED OCCUPANCY SENSOR
	ROOM CONTROLLER
	POLE MOUNTED SITE LIGHTING FIXTURE- NUMBER OF FIXTURES PER POLE AS INDICATED ON DRAWINGS
	POLE TOP MOUNTED SITE LIGHTING FIXTURE
	EXTERIOR DIRECTIONAL LIGHTING FIXTURE

AUDIO/VISUAL

	PA SYSTEM EQUIPMENT RACK
	MICROPHONE JACK. PROVIDED BY OWNER'S VENDOR. EC TO PROVIDE BACK BOX WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	PA SYSTEM SPEAKER CEILING MOUNTED. PA SYSTEM SPEAKERS TO BE PROVIDED BY OWNER'S VENDOR. EC TO PROVIDE BACKBOX AND RACEWAY FROM PA SYSTEM CONTROL PANEL.
	PA SYSTEM SPEAKER WALL MOUNTED. PA SYSTEM SPEAKERS TO BE PROVIDED BY OWNER'S VENDOR. EC TO PROVIDE BACKBOX AND 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	TELEVISION/DISPLAY BACK BOX. PROVIDE (2) 1" CONDUITS FROM THE BOX LOCATION TO ABOVE NEAREST ACCESSIBLE CEILING COORDINATE BACK BOX FINAL LOCATION WITH THE OWNER'S VENDOR PRIOR TO ROUGH-IN. MOUNTING BRACKET AND TUBE STEEL MOUNTING BRACKET SUPPLIED BY OTHERS.
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL
	ZONE ADDRESSABLE MODULE
	ANSUL SYSTEM HOOK UP, FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND WIRE HOOK UP FOR BOTH POWER AND FIRE ALARM CONNECTIONS AS REQUIRED.
	FIRE ALARM PULL STATION
	FIRE ALARM STROBE - WALL MOUNTED
	FIRE ALARM HORN/STROBE - WM
	DUCT DETECTOR - PROVIDED BY EC. INSTALLED BY MC AND CONNECTED BY EC
	FLOW SWITCH - PROVIDED BY OTHERS, AND CONNECTED BY EC
	TAMPER SWITCH - PROVIDED BY OTHERS, AND CONNECTED BY EC
	REMOTE INDICATOR / TEST STATION
	DAMPER MOTOR PROVIDED INTEGRAL TO DAMPER ASSEMBLY BY M.C. E.C. TO PROVIDE 120V POWER AND FIRE ALARM CONNECTION

FIRE ALARM

SECURITY & DOOR CONTROL

	SECURITY CAMERA. PROVIDED BY OTHERS. EC TO PROVIDE BACK BOX WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	CARD READER. PROVIDED BY OTHERS. EC TO PROVIDE BACK BOX WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	CARD READER WITH KEYPAD. PROVIDED BY OTHERS. EC TO PROVIDE BACK BOX WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	DOOR CONTACTS. PROVIDED BY OTHERS. EC TO PROVIDE BACK BOX WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	ELECTRIC STRIKE. PROVIDED BY OTHERS. EC TO PROVIDE BACK BOX WITH 3/4" RACEWAY TERMINATED ABOVE NEAREST ACCESSIBLE CEILING.
	INTRUSION DETECTION DEVICE.
	SECURITY SYSTEM CONTROL PANEL

DENOTATIONS & ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
C	CEILING MOUNTED
CF	COFFEE MAKER
DD	DOUBLE DEVICE
DM	DEMOLISH
E	EMERGENCY
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
F	FIRE ALARM
FSS	FUSED SAFETY SWITCH
GF	GROUND FAULT INTERRUPTER
GC	GENERAL CONTRACTOR
K	KEY
LV	LOW VOLTAGE
M	MOTOR
MC	MECHANICAL CONTRACTOR
MW	MICROWAVE
NE	NORMAL/EMERGENCY
NFSS	NON-FUSED SAFETY SWITCH
PA	PAGING SYSTEM
PC	PLUMBING CONTRACTOR
PRN	PRESENT LOCATION/ REPLACED WITH NEW
REF	REFRIGERATOR
REL	RELOCATE
RED	RELOCATED
S	SOUND SYSTEM
SEC	SECURITY SYSTEM
SL	SINGLE LINE
SS	SURGE SUPPRESSION
T	TELEPHONE
TL	TWIST LOCK
TP	TAMPER PROOF
UGC	UNDERGROUND COMMUNICATIONS
UGE	UNDERGROUND ELECTRIC
UF	UNDERGROUND FIBER
UT	UNDERGROUND TELEPHONE
W	WALL MOUNTED
WG	WIRE GUARD
WP	WEATHERPROOF
WR GF	WEATHER RESISTANT/GROUND FAULT INTERRUPTER
XR	EXISTING TO BE REMAIN

GENERAL PROJECT NOTES

- UNLESS OTHERWISE NOTED, PROVIDE ALL EQUIPMENT SHOWN ON THE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL SYMBOLS SHOWN ON THE PLANS WITH THE SYMBOL LIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE INTENT OF ANY SYMBOL THAT IS SHOWN ON THE PLANS AND NOT INDICATED ON THE SYMBOL LIST WITH THE ELECTRICAL ENGINEER.
- COORDINATE THE FINAL LOCATIONS OF ALL LIGHT FIXTURES WITH THE ARCHITECT'S REFLECTED CEILING PLANS. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE CONSTRUCTION AREA THREE (3) WORKING DAYS NOTICE BEFORE COMMENCE DGGING. NOTIFY THE LOCAL OR STATE AUTHORITY HAVING JURISDICTION AND WAIT THE REQUIRED TIME BEFORE COMMENCING TO DIG.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE PROFESSIONAL IF A SYMBOL IS USED ON THE PROJECT BUT DOES NOT SHOW IN THE SYMBOL LIST PRIOR TO BID.
- THE CONTRACTOR SHALL COORDINATE CONDUIT RUNS, CABLE TRAY, LIGHTING FIXTURES AND OTHER EQUIPMENT LOCATIONS WITH THE OTHER TRADE CONTRACTORS TO AVOID CONFLICTS.
- CONDUIT/WIRING THAT MAY BE CONCEALED IN WALLS THAT ARE BEING REMOVED (WHETHER OR NOT SUCH CONDUIT/WIRING IS SPECIFICALLY INDICATED) SHALL BE CAPPED AT THE APPROPRIATE LOCATION UNLESS SUCH CONDUIT/WIRING MUST REMAIN AS PART OF AN ACTIVE SYSTEM. THE STATUS OF SUCH CONDUIT/WIRING AS TO BE ACTIVE OR INACTIVE SHALL BE VERIFIED BY THIS CONTRACTOR BEFORE ANY DISCONNECTION, CAPPING, OR RELOCATION WORK IS PERFORMED. EXISTING CONDUIT/WIRING THAT MUST REMAIN AS A PART OF AN ACTIVE SYSTEM SHALL BE RELOCATED AND REARRANGED AS REQUIRED TO MAINTAIN CONTINUITY OF THAT CIRCUIT. UNLESS NOTED OTHERWISE, ALL SUCH CONDUIT/WIRING SHALL BE CONCEALED.
- CUT, PATCH, AND RESTORE ALL OPENINGS IN EXISTING STRUCTURE REQUIRED FOR ELECTRICAL WORK. CONTRACTOR SHALL ALSO REMOVE PORTIONS OF EXISTING CEILINGS, WALLS, AND FLOORS NECESSARY FOR REMODELING AND RESTORING SUCH CEILINGS, WALLS AND FLOORS AFTER ELECTRICAL WORK INSTALLATION IS COMPLETE.
- E.C. SHALL BE RESPONSIBLE FOR TEMPORARILY FEEDING AND BACKFEEDING ELECTRICAL DISTRIBUTION EQUIPMENT, PANELBOARDS, BRANCH CIRCUITS, SYSTEMS AND ANY OTHER ELECTRICAL EQUIPMENT TO MAINTAIN CONTINUITY DURING VARIOUS PHASES OF CONSTRUCTION. COORDINATE WORK WITH NEW WORK DRAWINGS.
- MAINTAIN CONTINUITY OF FIRE ALARM, SECURITY AND ALL SYSTEMS AS REQUIRED DURING VARIOUS PHASES OF WORK.
- WIRING FOR CONTINUITY OF POWER AND SYSTEMS ADJACENT AREAS SHALL REMAIN UNDISTURBED OR BE RECONNECTED AS REQUIRED TO MAINTAIN SERVICE. PATCH AND PAINT ALL OPENINGS LEFT IN EXISTING CONSTRUCTION TO MATCH SURROUNDING CONSTRUCTION.
- REMOVE ABANDONED CONDUIT, WIRE, JUNCTION BOXES, WORK LIGHTS, ETC WITHIN DEMOLITION AREA EVEN THOUGH THEY ARE NOT SHOWN ON PLAN.
- THE CONTINUITY OF EXISTING CIRCUITS THAT MAY BE INTERRUPTED BY THE ALTERATIONS, EVEN THOUGH THEY MAY NOT BE INDICATED ON THE PLAN SHALL BE MAINTAINED.
- THE REMOVAL OR RELOCATION OF EXISTING ELECTRICAL EQUIPMENT PRESENTLY CONCEALED IN EXISTING CONSTRUCTION SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVAL OR RELOCATION.

GENERAL ELECTRICAL NOTES

- COMPLY WITH "GENERAL CONDITIONS" SET FORTH IN THE DOCUMENTS.
- WORK SHALL COMPLY WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- OBTAIN AND PAY FOR ALL PERMITS REQUIRED BY LOCAL ORDINANCES.
- GUARANTEE THE ELECTRICAL WORK FOR ONE YEAR FROM DATE OF FINAL CERTIFICATE.
- SUBMIT SHOP DRAWINGS FOR EQUIPMENT.
- SALVAGED ELECTRICAL EQUIPMENT, NOT DESIGNATED BY THE OWNER FOR HIS USE, SHALL BE REMOVED FROM THE PREMISES BY THIS CONTRACTOR.
- PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE TO EXAMINE FIRST HAND THE EXISTING CONDITIONS. ANY CLARIFICATIONS REQUIRED SHALL BE REQUESTED AT THAT TIME.
- REMOVE ALL DEAD WIRE, CONDUIT, AND BOXES NOT NECESSARY TO THE NEW LAYOUT.
- ALL NEW WIRING REQUIRED SHALL BE IN EMT CONDUIT WITH COMPRESSION FITTINGS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIALS AND LABOR REQUIRED TO PERFORM THIS WORK IN A NEAT AND WORKMANLIKE MANNER WITH ALL DEBRIS REMOVED FROM THE BUILDING. HE SHALL EXERCISE CARE TO CREATE A MINIMUM AMOUNT OF DUST AND DIRT AND SHALL PROVIDE DROP CLOTHS AND OTHER DUST PROOFING MATERIAL TO PREVENT DUST AND DIRT FROM ENTERING OTHER PARTS OF THE BUILDING OR DAMAGING EQUIPMENT. THIS CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE CAUSED BY HIM, HIS EMPLOYEES OR SUB-CONTRACTORS AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF THE SAME WITHOUT ADDITIONAL COMPENSATION.
- NO POWDER ACTUATED FASTENING DEVICE SHALL BE USED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- THE CONTRACTOR AND HIS SUB-CONTRACTORS SHALL KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL AT THE END OF EACH DAY THE WORK AREA SHALL BE LEFT IN A CLEAN CONDITION AS DEFINED BY THE ARCHITECT.
- DURING ANY DRILLING OPERATION, AN INDUSTRIAL TYPE VACUUM MUST BE USED TO ELIMINATE DUST. IN ADDITION, A PLUNGER HEAD OR EQUIVALENT MUST BE USED WITH THE DRILL AND VACUUM WHEN DRILLING OVERHEAD.
- PROVIDE AS-BUILT DRAWINGS TO OWNER UPON COMPLETION OF THE PROJECT.

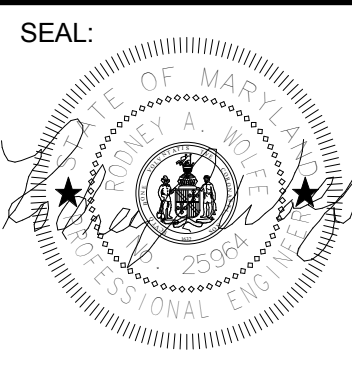
SOME OF THESE SYMBOLS MAY NOT BE USED UNDER THIS PROJECT. SEE THE CONTRACTOR NOTES FOR ADDITIONAL REQUIREMENTS.



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fax: (814)536-5732  
CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
  
License No. 25964  
Expiration Date: 2/23/2021

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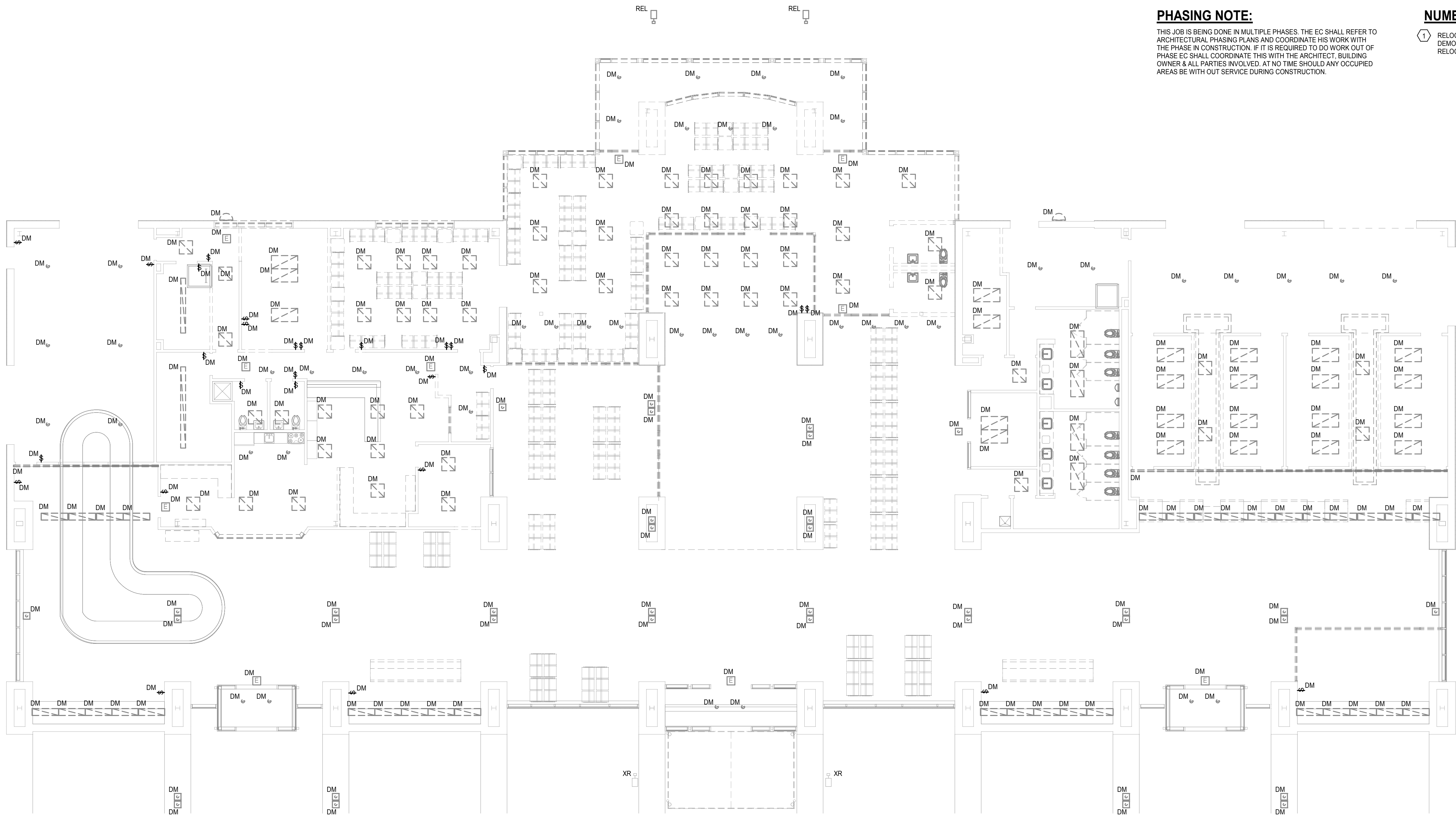
Washington County, MD  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS</b>	
SCALE: AS INDICATED	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**EL00.001**  
**99 OF 117**





**PHASING NOTE:**

THIS JOB IS BEING DONE IN MULTIPLE PHASES. THE EC SHALL REFER TO ARCHITECTURAL PHASING PLANS AND COORDINATE HIS WORK WITH THE PHASE IN CONSTRUCTION. IF IT IS REQUIRED TO DO WORK OUT OF PHASE EC SHALL COORDINATE THIS WITH THE ARCHITECT, BUILDING OWNER & ALL PARTIES INVOLVED. AT NO TIME SHOULD ANY OCCUPIED AREAS BE WITH OUT SERVICE DURING CONSTRUCTION.

**NUMBERED NOTES**

- 1 RELOCATE EXISTING LIGHT POLES. LIGHTING FIXTURE HEADS SHALL BE DEMOLISHED. REMOVE EXISTING CONCRETE POLE BASES. COORDINATE RELOCATION OF THE LIGHT POLE WITH THE SITE CONTRACTOR.

1  
EL02.100  
FIRST FLOOR PLAN - LIGHTING DEMOLITION  
1/8" = 1'-0"



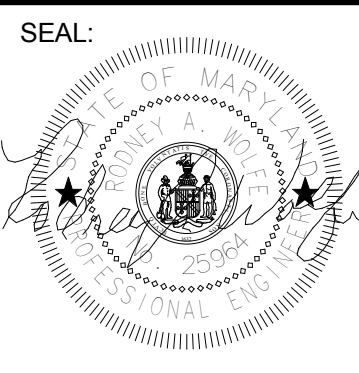
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BID DOCUMENTS



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PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>FIRST FLOOR PLAN - LIGHTING DEMOLITION</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**EL02.100**  
100 OF 117



NUMBERED NOTES

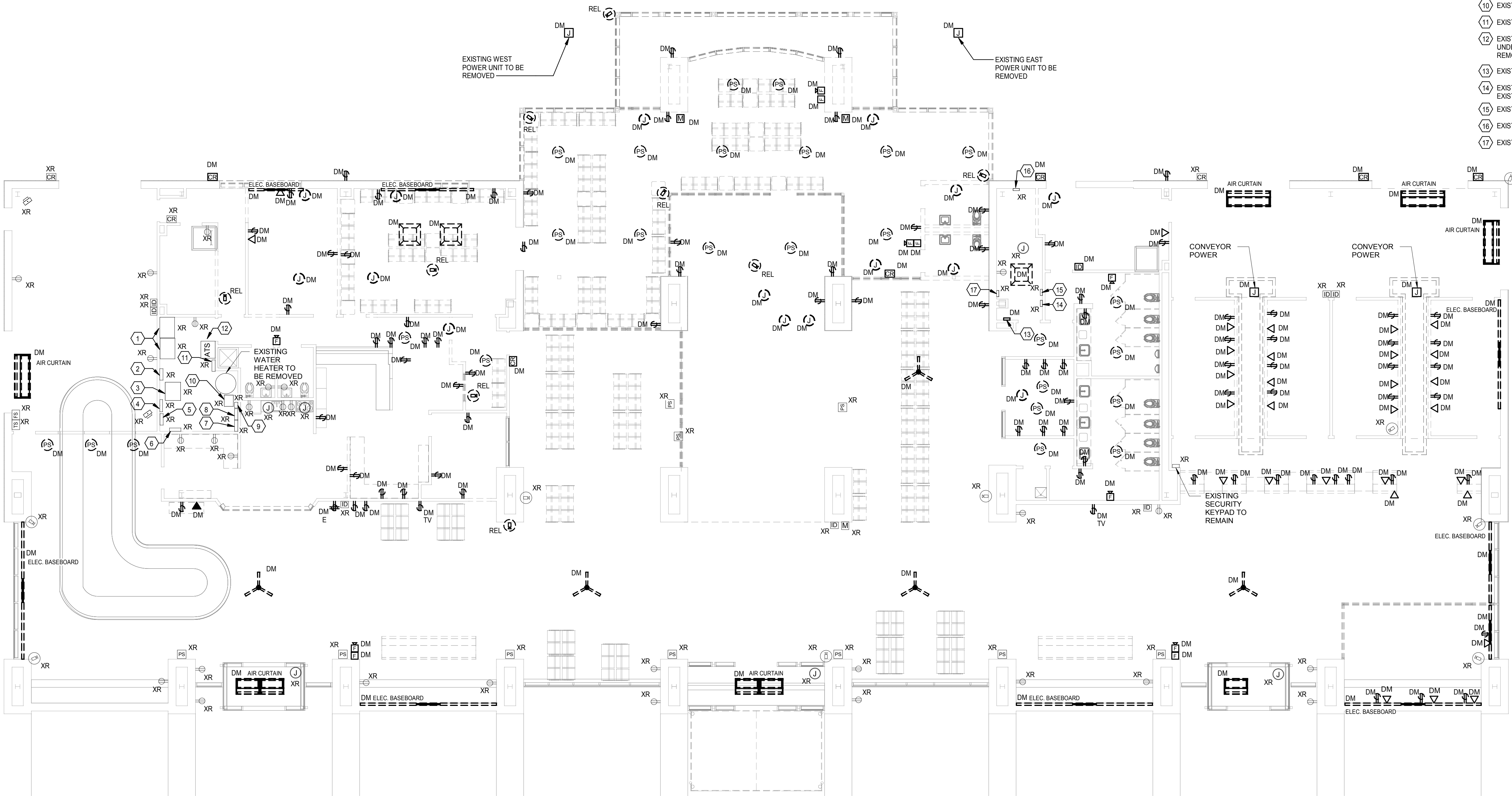
- EXISTING MAIN DISTRIBUTION BOARD. 600A, 480/277V, 3PHASE, 4 WIRE.
- EXISTING PANEL 'L'. 125A, 480/277V, 3PHASE, 4 WIRE.
- EXISTING TRANSFORMER 'T1'. 150KVA, 480-208/120V, 3PHASE.
- EXISTING DISCONNECT SWITCH FOR WIREWAY.
- EXISTING PANEL 'R2'. 225A, 120/208V, 3PHASE, 4 WIRE.
- EXISTING PANEL 'R1'. 225A, 120/208V, 3PHASE, 4 WIRE.
- EXISTING PANEL 'R3'. 125A, 120/208V, 3PHASE, 4 WIRE.
- EXISTING EMERGENCY PANEL 'ER'. 90A, 120/208V, 3PHASE, 4 WIRE.
- EXISTING EMERGENCY LOAD CENTER. 60A, 120/208V, 3PHASE, 4 WIRE.
- EXISTING TRANSFORMER 'T2'. 30KVA, 480-208/120V, 3PHASE.
- EXISTING EMERGENCY PANEL 'EL'. 50A, 480/277V, 3PHASE, 4 WIRE.
- EXISTING AUTOMATIC TRANSFER SWITCH. 70A, 480/277V, 3PHASE, 4 WIRE. UNDER ALT BID 6 EXISTING AUTOMATIC TRANSFER SWITCH SHALL BE REMOVED.
- EXISTING FIRE ALARM CONTROL PANEL TO BE REMOVED.
- EXISTING GENERATOR REMOTE PANEL TO REMAIN. UNDER ALT BID 6 EXISTING GENERATOR REMOTE PANEL SHALL BE REMOVED.
- EXISTING CARD ACCESS AND CCTV EQUIPMENT TO REMAIN.
- EXISTING SECURITY PANEL TO REMAIN.
- EXISTING PAGING RACK TO REMAIN.

GENERAL NOTES

- REMOVE AND DISCONNECT POWER CONNECTION TO MECHANICAL EQUIPMENT BEING DEMOLISHED. REMOVE EXISTING DISCONNECT SWITCH, VFD, WIRE, AND CONDUIT SERVING MECHANICAL EQUIPMENT BACK TO THE CIRCUIT BREAKER. CIRCUIT BREAKER IN EXISTING PANEL TO BECOME A SPARE UNLESS BEING REUSED UNDER NEW WORK. PROVIDE UPDATE TYPE WRITTEN PANEL DIRECTORY.

PHASING NOTE:

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1  
EL02.200

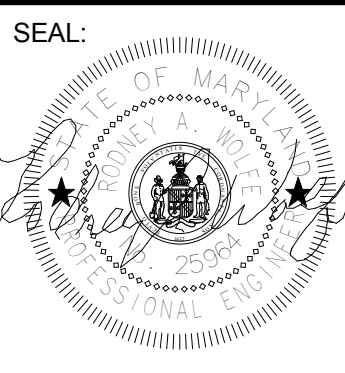
FIRST FLOOR PLAN - POWER & SYSTEMS DEMOLITION  
1/8" = 1'-0"

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fax: (814)536-5732  
CJL Project # 18-0236



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 25964  
Expiration Date: 2/23/2021

DESIGNED:	No.	DATE	DESCRIPTION
DJB			
DRAWN:			
DJB			
CHECKED:			
TCB			
APPROVED:			
TCB			

**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

**BID DOCUMENTS**

**HGR**

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>FIRST FLOOR PLAN - POWER &amp; SYSTEMS DEMO</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>EL02.200</b> 101 OF 117

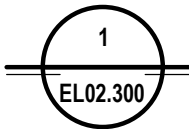
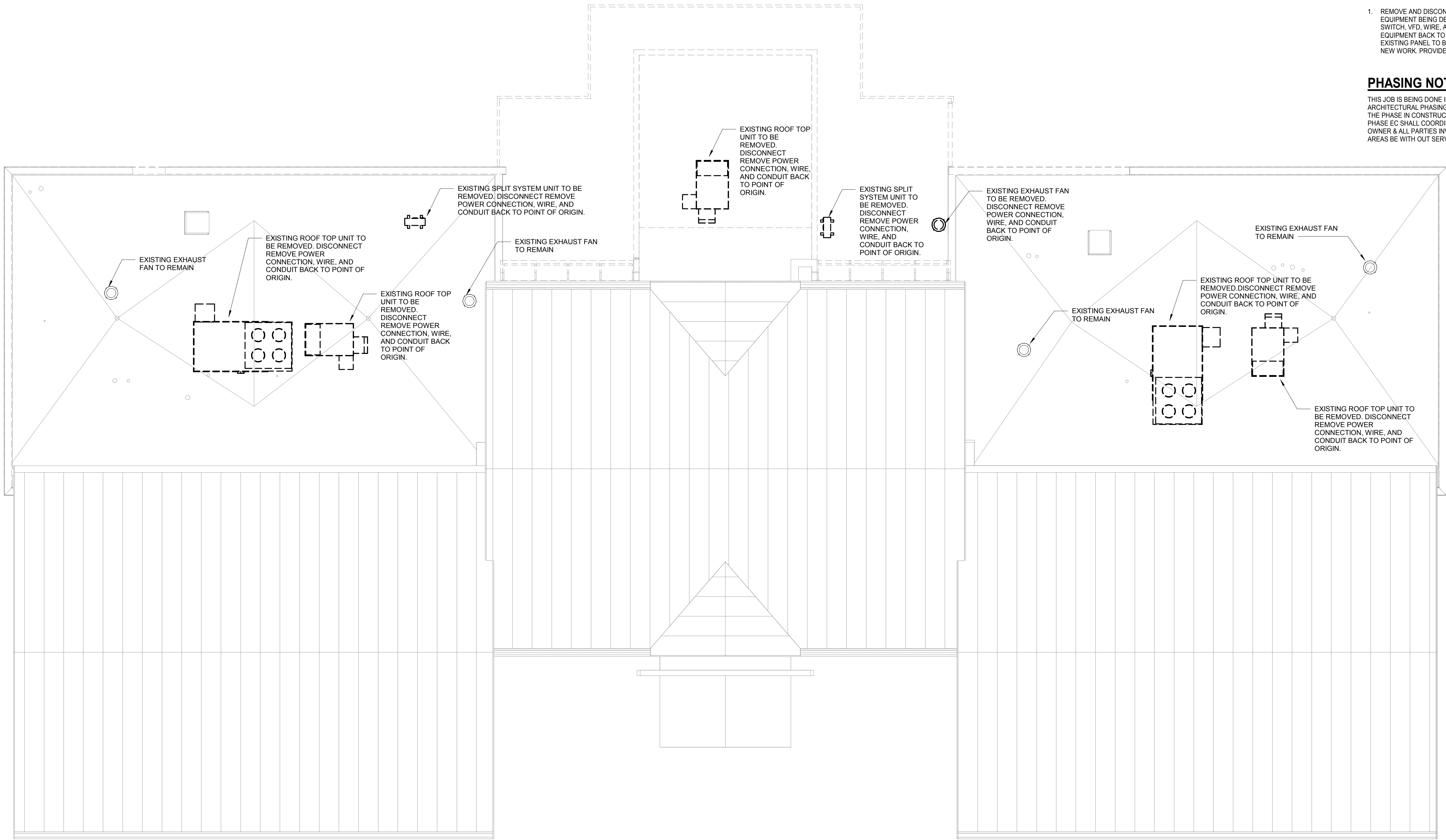


GENERAL NOTES:

1. REMOVE AND DISCONNECT POWER CONNECTION TO MECHANICAL EQUIPMENT BEING DEMOLISHED. REMOVE EXISTING DISCONNECT SWITCH, VFD, WIRE, AND CONDUIT SERVING MECHANICAL EQUIPMENT BACK TO THE CIRCUIT BREAKER. CIRCUIT BREAKER IN EXISTING PANEL TO BECOME A SPARE UNLESS BEING REUSED UNDER NEW WORK. PROVIDE UPDATE TYPE WRITTEN PANEL DIRECTORY.

PHASING NOTE:

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ROOF PLAN - MECHANICAL POWER DEMOLITION  
1/8" = 1'-0"



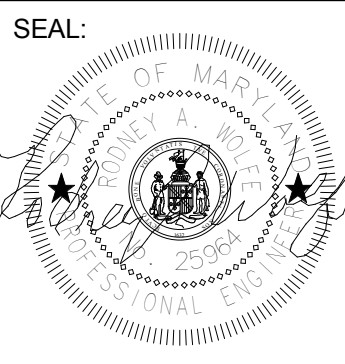
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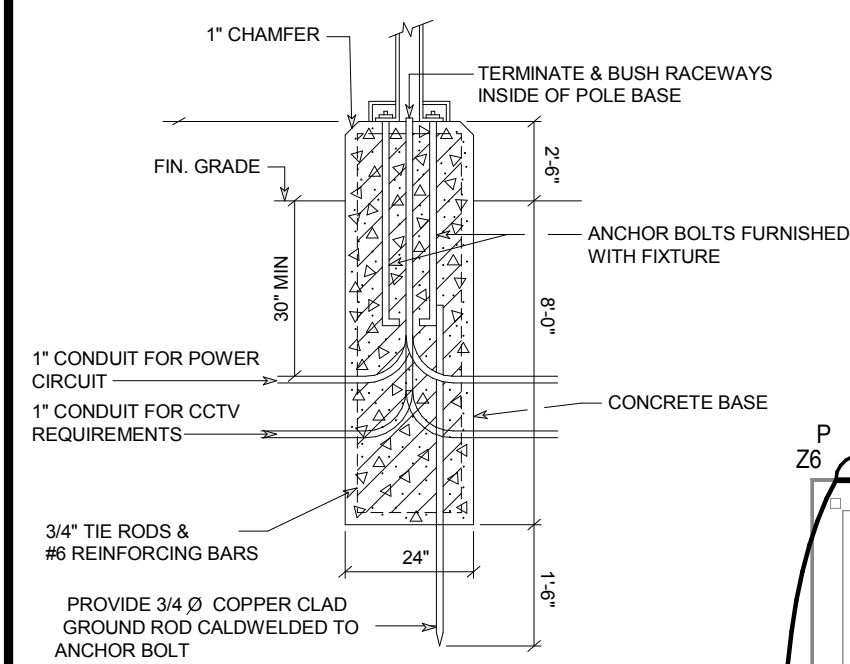
**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>ROOF PLAN - MECHANICAL POWER DEMOLITION</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

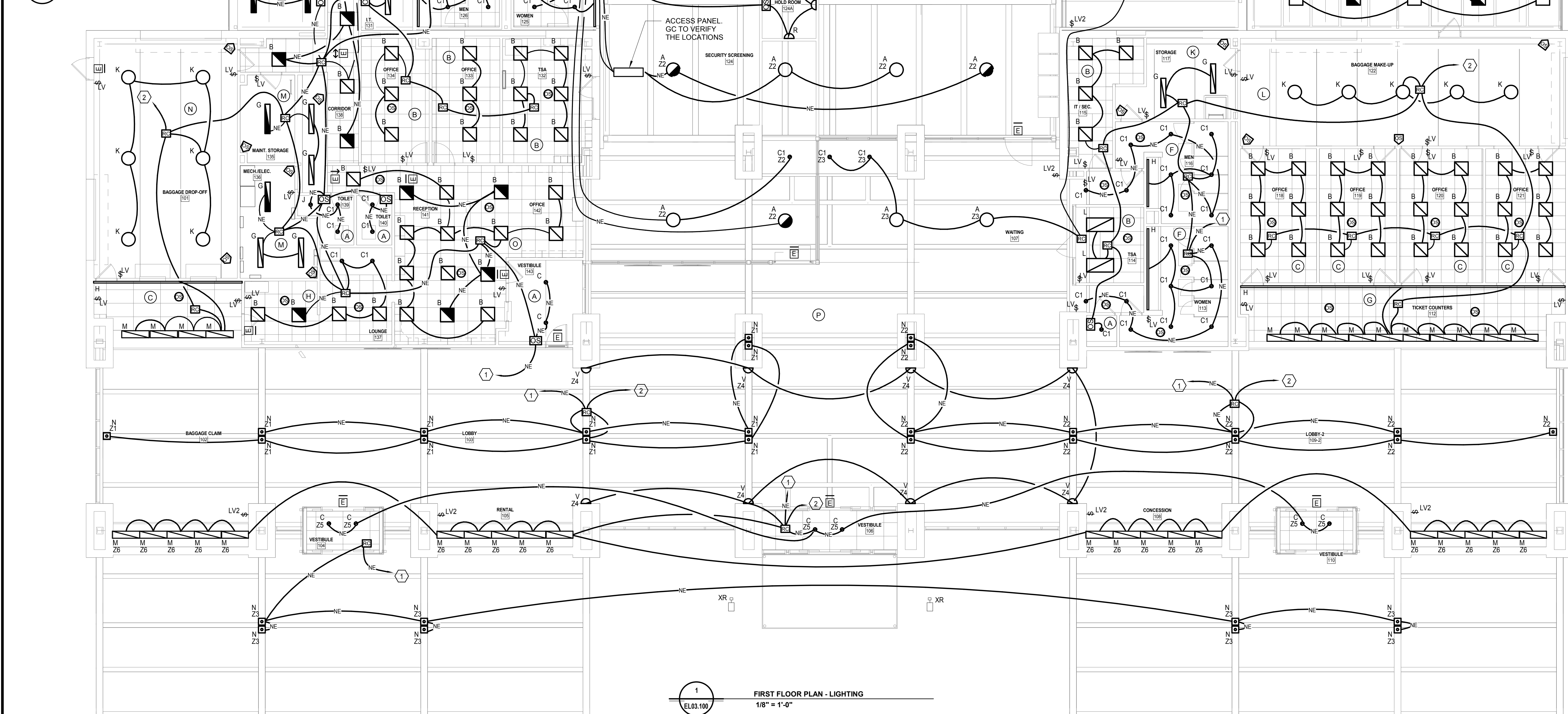
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**EL02.300**  
102 OF 117



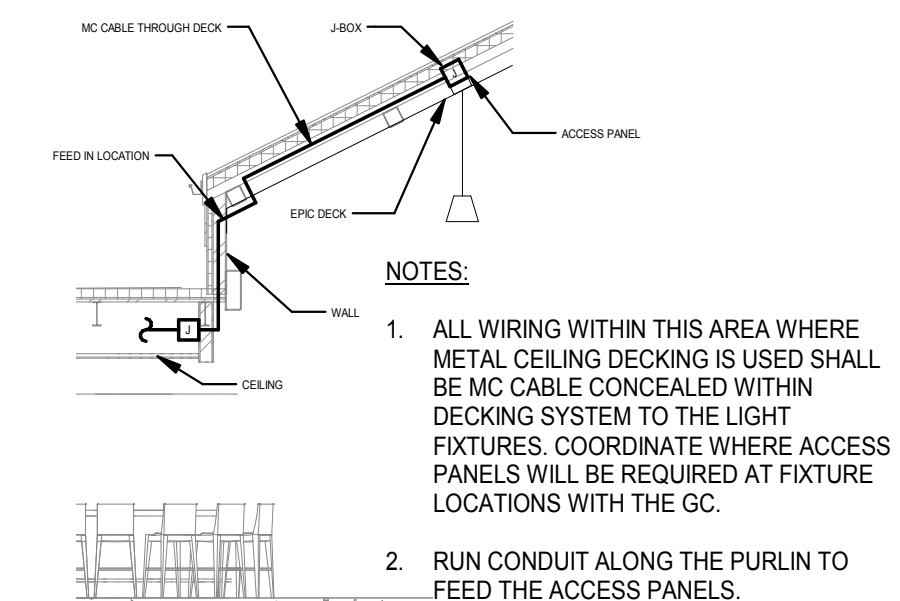
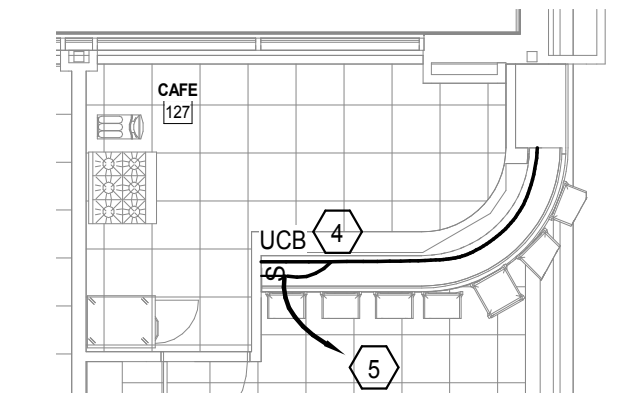


- NOTES - LIGHTING POLE FOUNDATION:**
- ANCHOR BOLTS SHALL EXTEND 8" MIN. BELOW FORMED SECTION. 4 ANCHOR BOLTS REQUIRED. 1" DIAMETER BY 40" LONG.
  - INSTEAD OF DIGGING A 2'-6" SQUARE HOLE FOR FOUNDATION A 2'-6" ROUND AUGER MAY BE USED.
  - TOP OF FORMS SHOULD BE LEVEL IN BOTH DIRECTIONS
  - ALL ANCHOR BOLTS, NUTS, STEEL SPRING LOCK WASHERS, AND TOP 8" OF ANCHOR BOLTS SHALL BE GALVANIZED.
  - GROUND ROD 1/2"x8" MIN. COPPER CLAD STEEL. MAX. RESISTANCE SHALL BE 25 OHMS.
  - LEAVE 30" OF NO. 4 GROUND WIRE COILED ABOVE FOUNDATION
  - FIXTURE BASE SHALL HAVE A 24" OFFSET FROM WALKING PATH.
  - PROVIDE (4) NO. 4 REBARS FOR REINFORCEMENT.

**4 LIGHT POLE BASE DETAIL**  
EL03.100  
NOTE TO SCALE



**1 FIRST FLOOR PLAN - LIGHTING**  
EL03.100  
1/8" = 1'-0"



**LIGHTING CONTROL NOTE:**

1. ZONING CONTROL - "X Z#"
- LIGHT FIXTURE TYPE → ZONE NUMBER

**LIGHTING CONTROL NOTE:**

- (X) 'X' DENOTES LETTER OF LIGHTING CONTROL DETAIL TO REFERENCE FOR AREA IN WHICH THE TAG IS LOCATED. REFER TO DRAWING EL03.200 & EL03.300 FOR MORE INFORMATION.

**GENERAL NOTE:**

- CONNECT ALL EXIT SIGNS TOGETHER AND CIRCUIT TO EXISTING 20A-1P CIRCUIT BREAKER IN EXISTING EMERGENCY PANEL 'EL' PREVIOUSLY SERVING LIGHTING. MADE AVAILABLE DUE TO RENOVATIONS. CIRCUIT TO THE EXISTING 20A-1P CIRCUIT BREAKER UTILIZING #10 AWG.
- ALL EXIT SIGNS MUST BE CONNECTED TO NORMAL/EMERGENCY POWER CIRCUIT AHEAD OF SWITCHING AND LIGHTING CONTROL PANELS.

**NUMBERED NOTES:**

- CONNECT TO EXISTING EMERGENCY 20A-1P CIRCUIT BREAKER IN PANEL 'ER' PREVIOUSLY SERVING LIGHTING. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT.
- CONNECT TO EXISTING NORMAL 20A-1P CIRCUIT BREAKER IN PANEL 'L' PREVIOUSLY SERVING LIGHTING. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT.
- CONNECT TO EXISTING CIRCUIT PREVIOUSLY SERVING THE EXISTING FIXTURES. CONNECT TO EXISTING LIGHTING CONTROL RELAY PREVIOUSLY SERVING THE EXISTING FIXTURES. PROVIDE WIRE AND CONDUIT EXTENSIONS AS NECESSARY FOR A COMPLETE WORKING SYSTEM. COORDINATE ROUTING OF CONDUIT WITH SITE CONTRACTOR PRIOR TO PERFORMING ANY WORK. NEW LED FIXTURE HEAD SHALL BE MOUNTED TO THE RELOCATED POLE. COORDINATE LIGHTING POLE BASE WITH THE STRUCTURAL CONTRACTOR.
- COORDINATE UNDERCOUNTER BAR LIGHTING AND SWITCH LOCATION WITH THE ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- CONNECT TO THE LINE SIDE OF THE NEAREST NORMAL CIRCUIT.

**PHASING NOTE:**

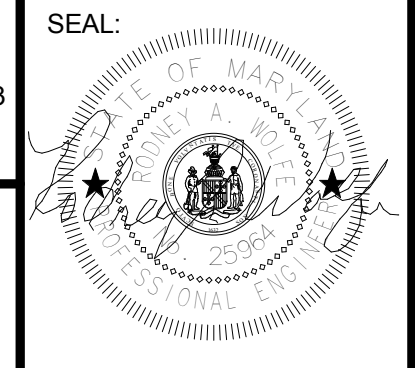
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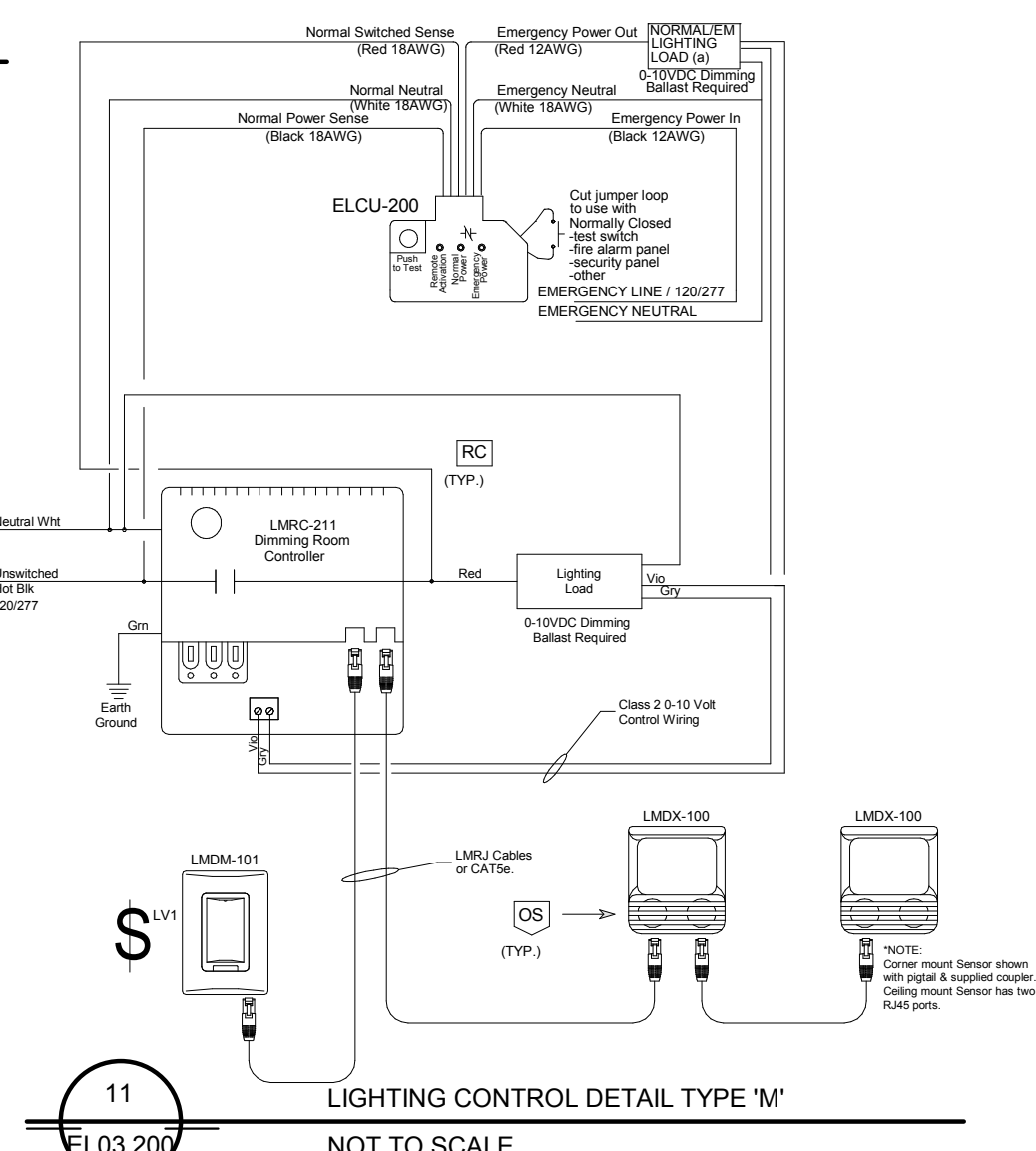
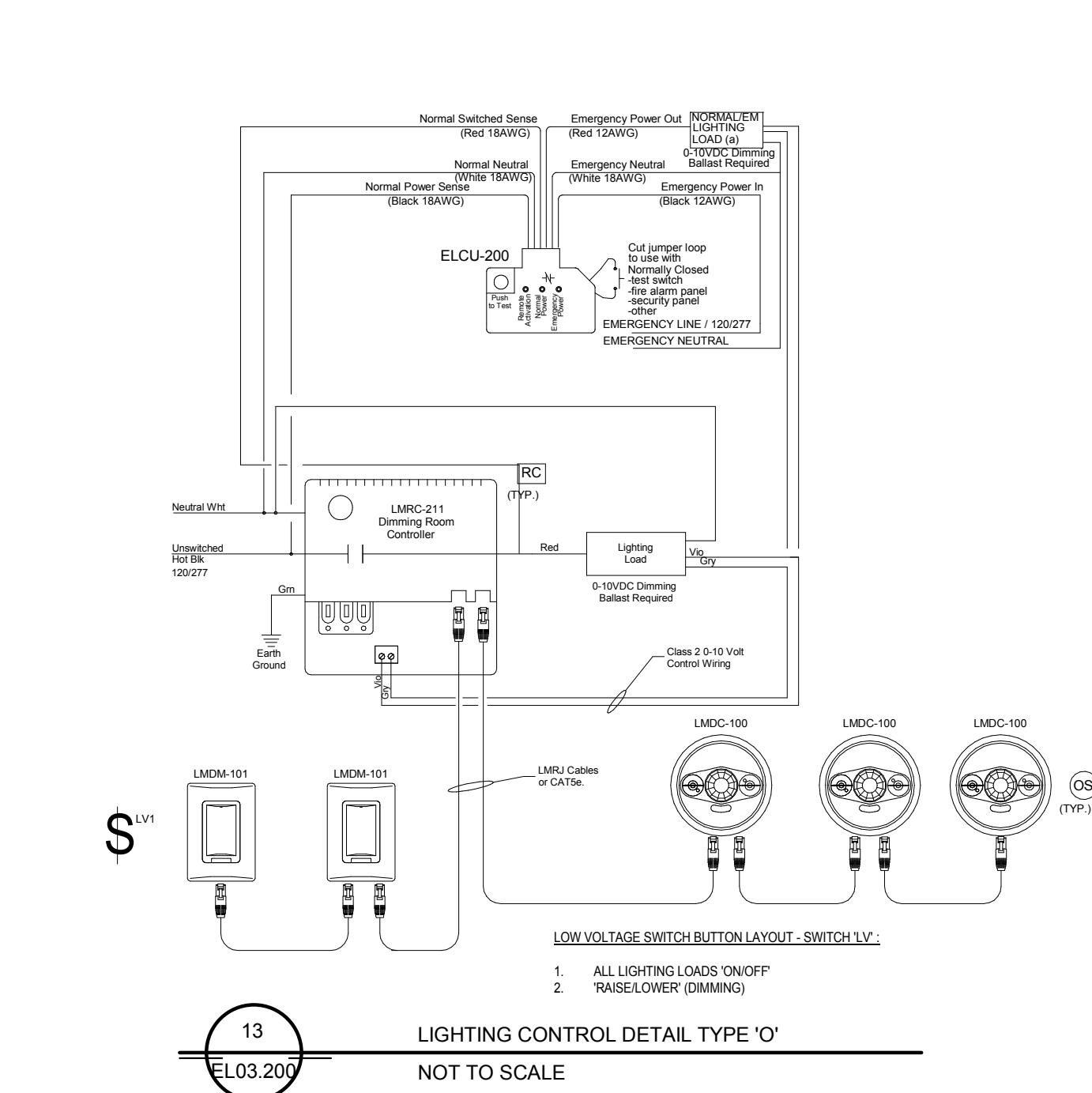
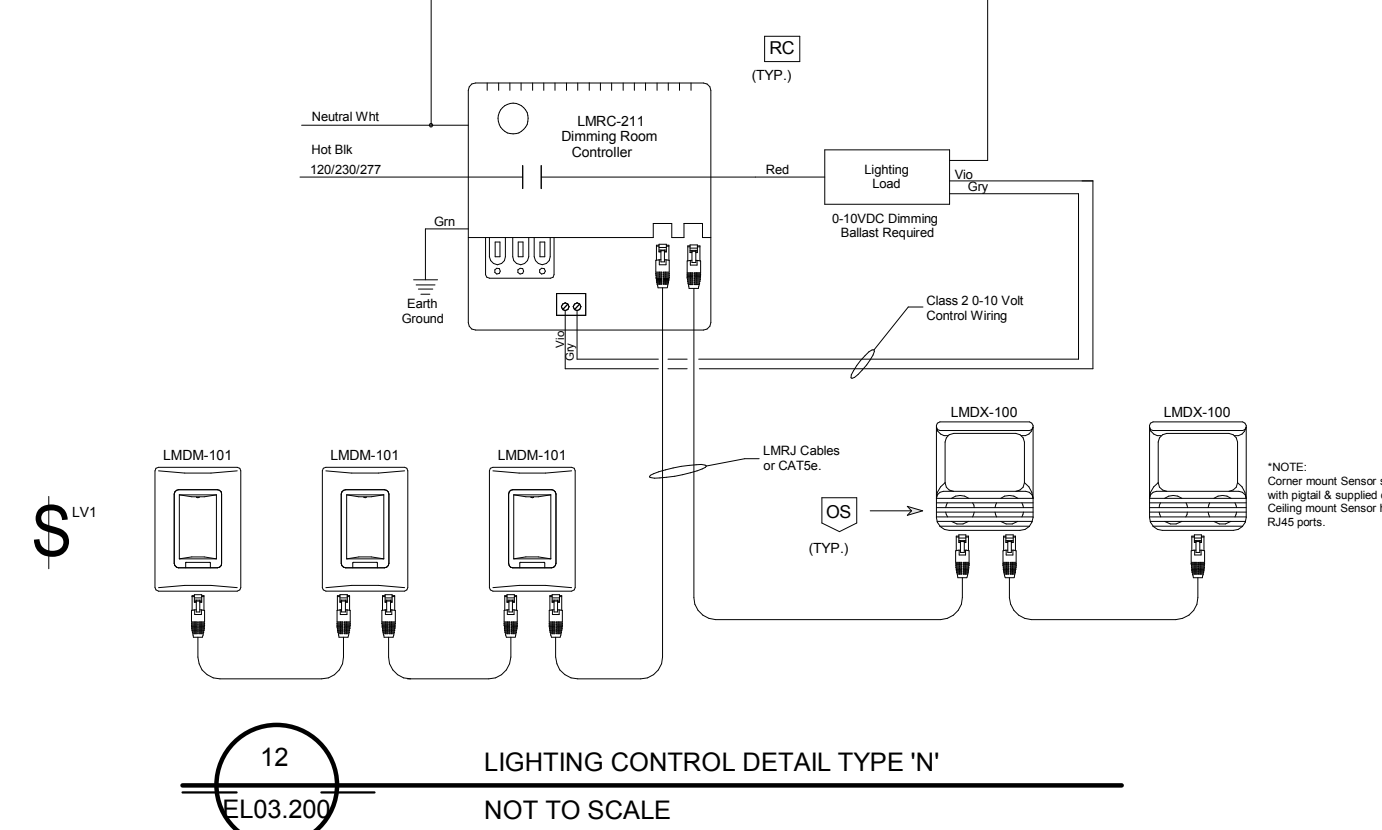
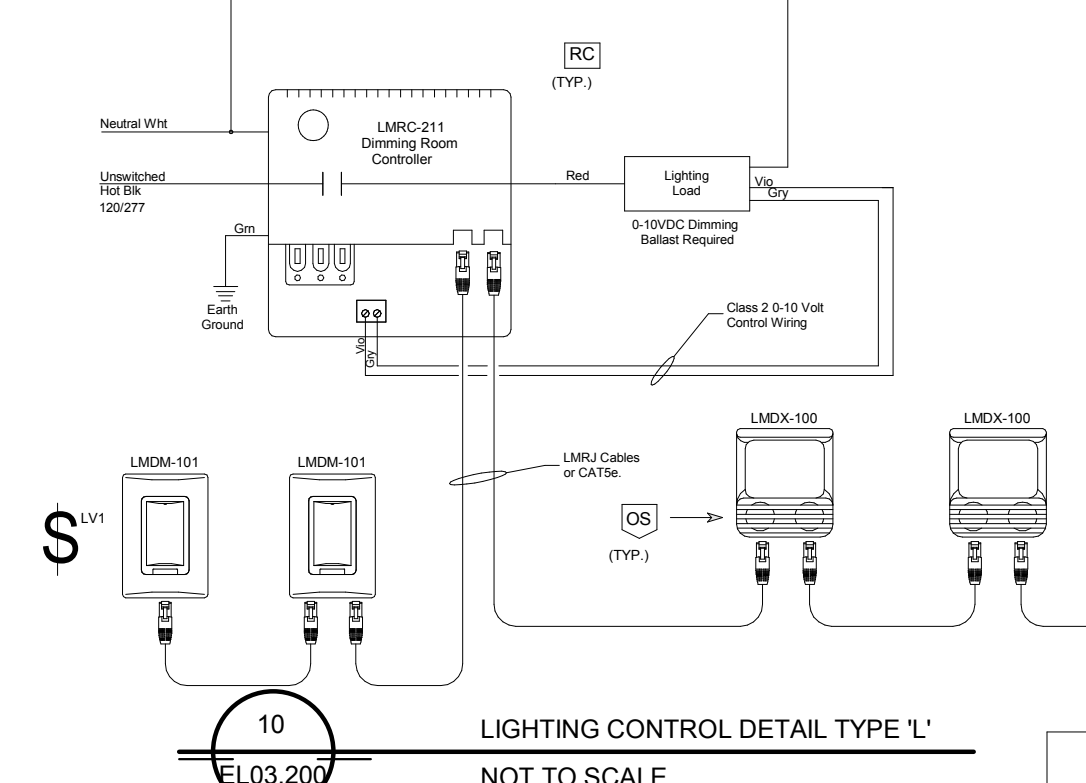
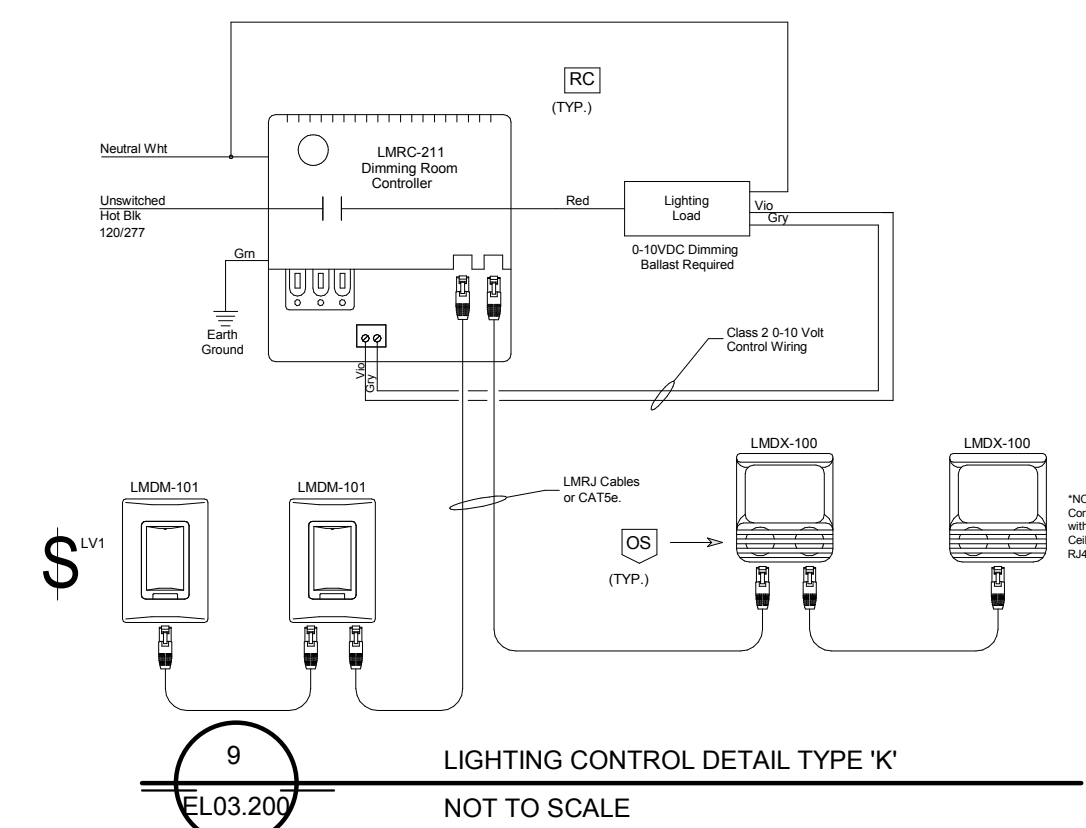
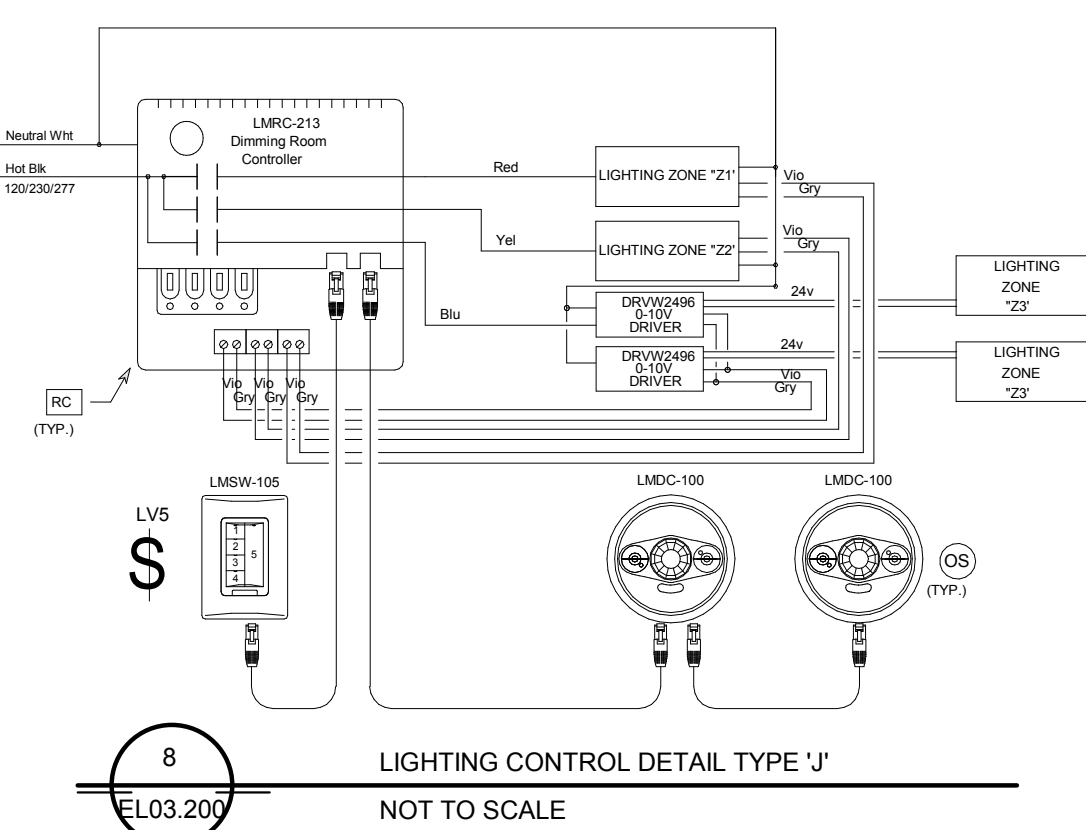
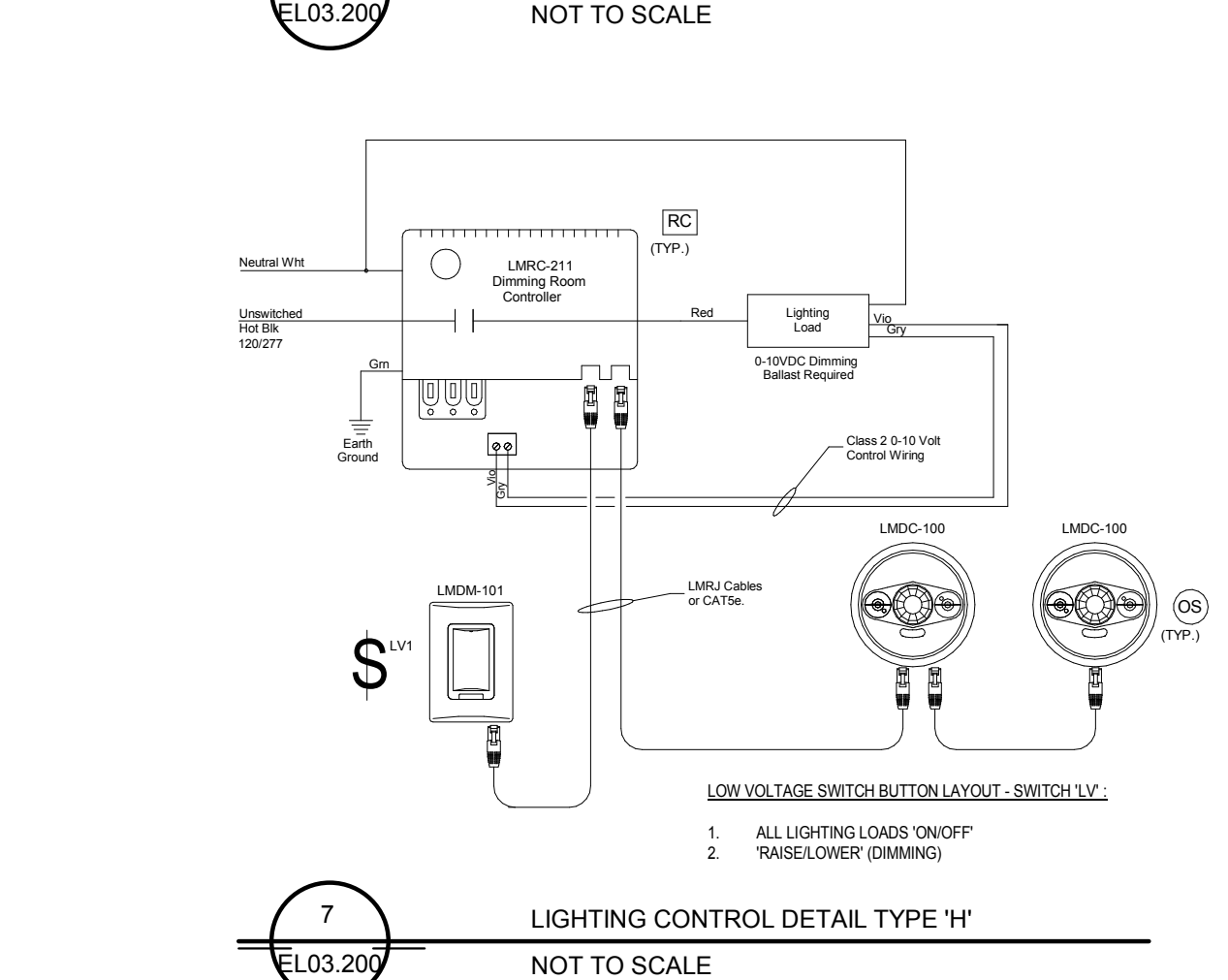
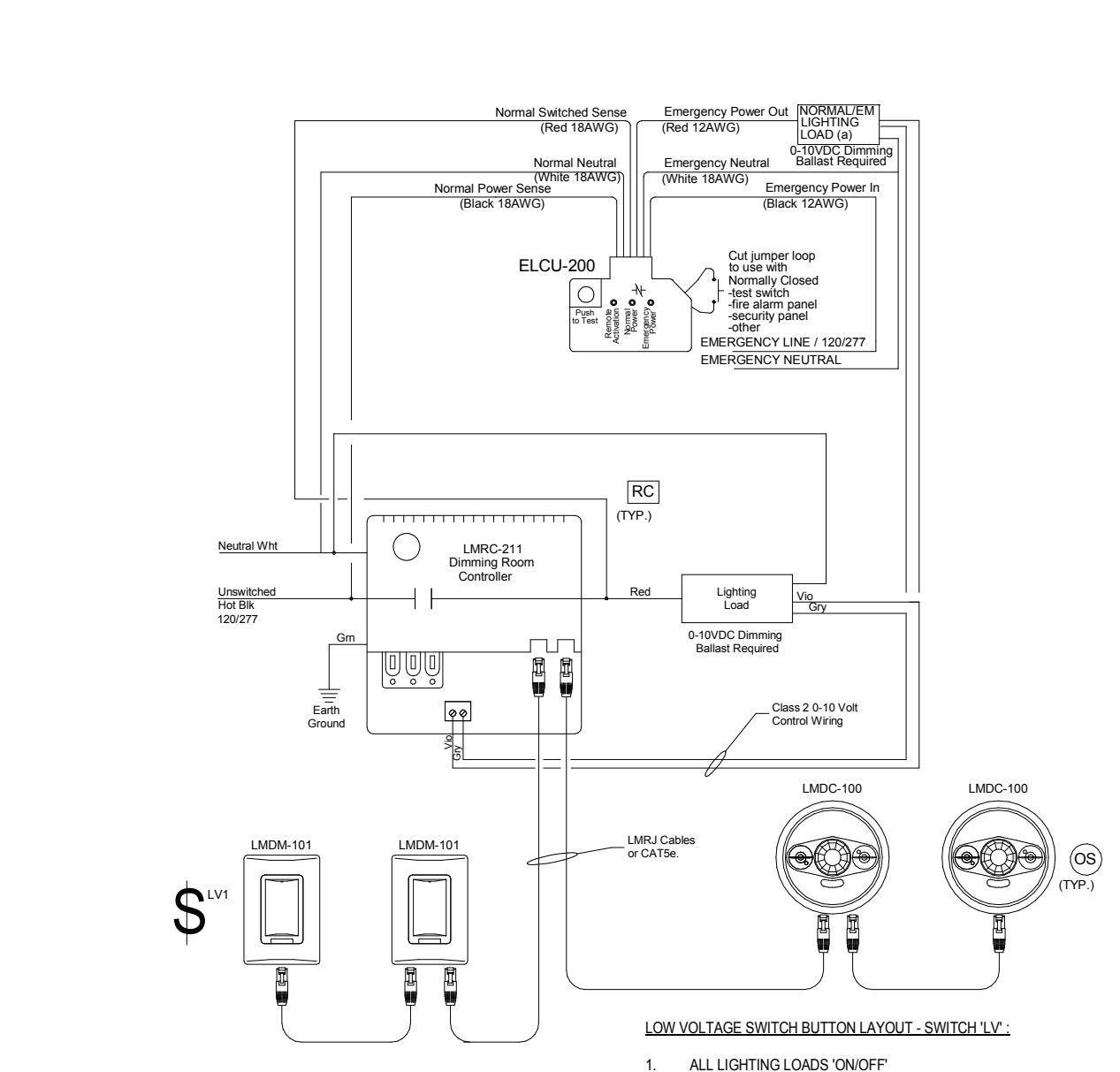
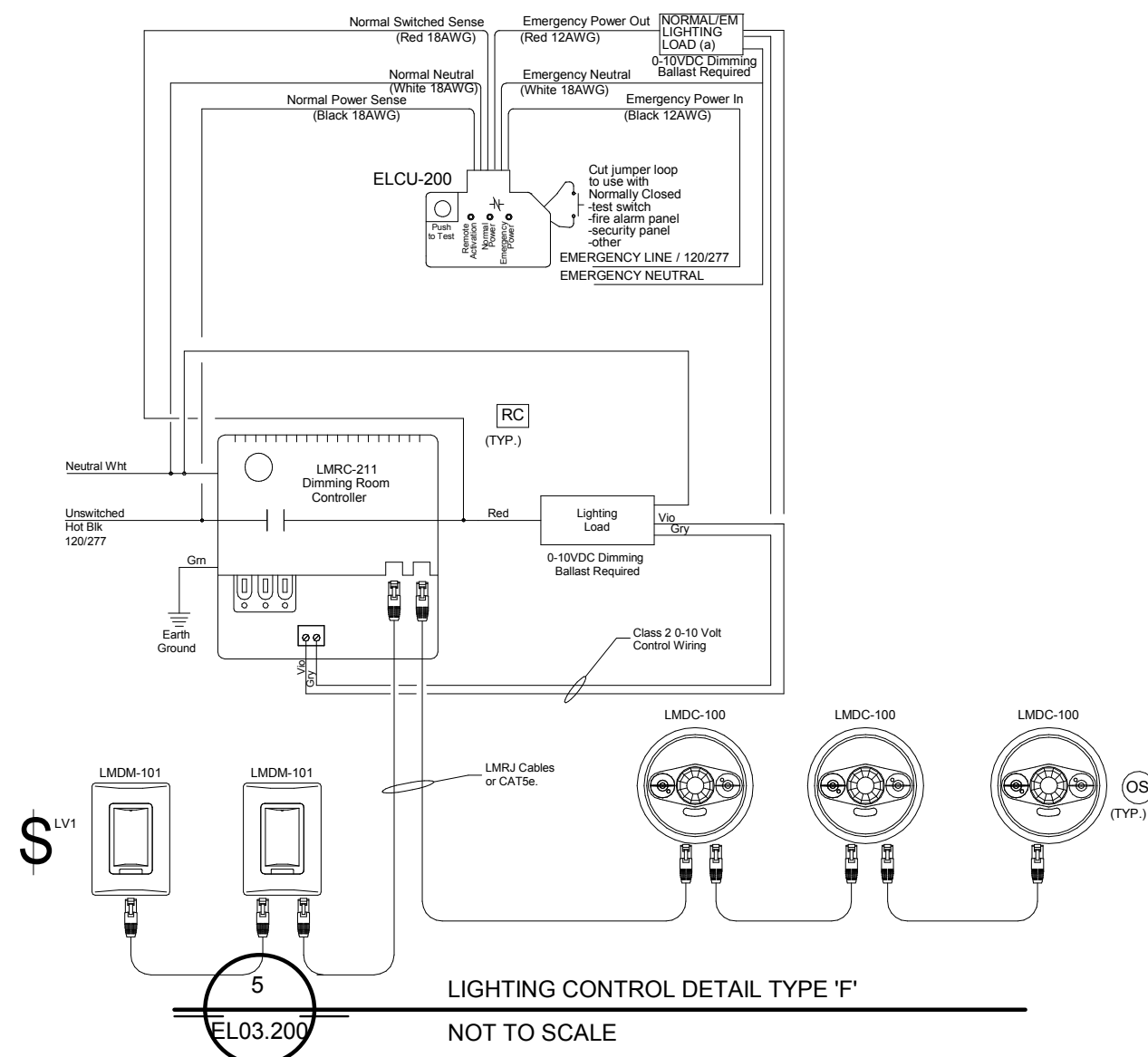
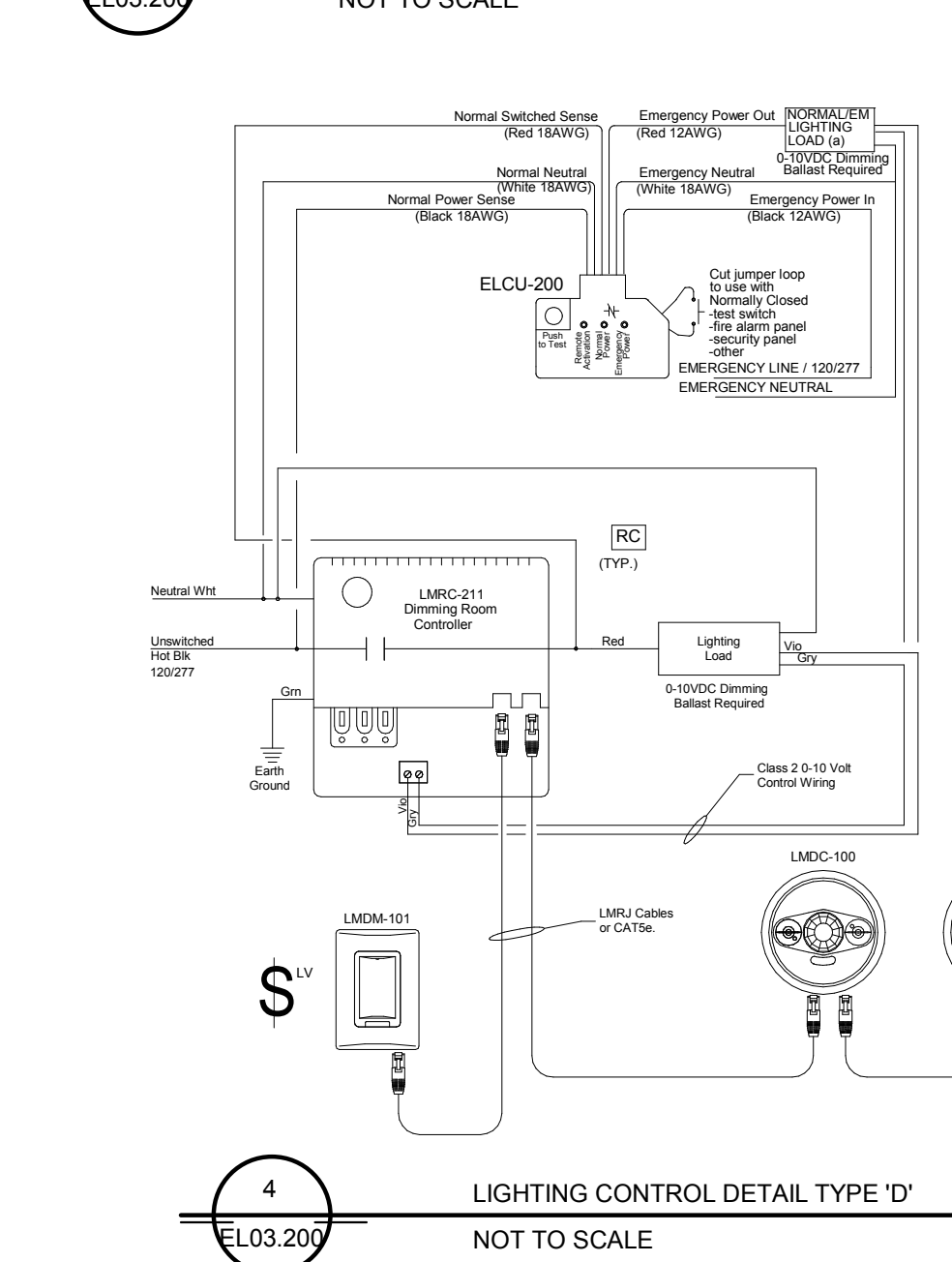
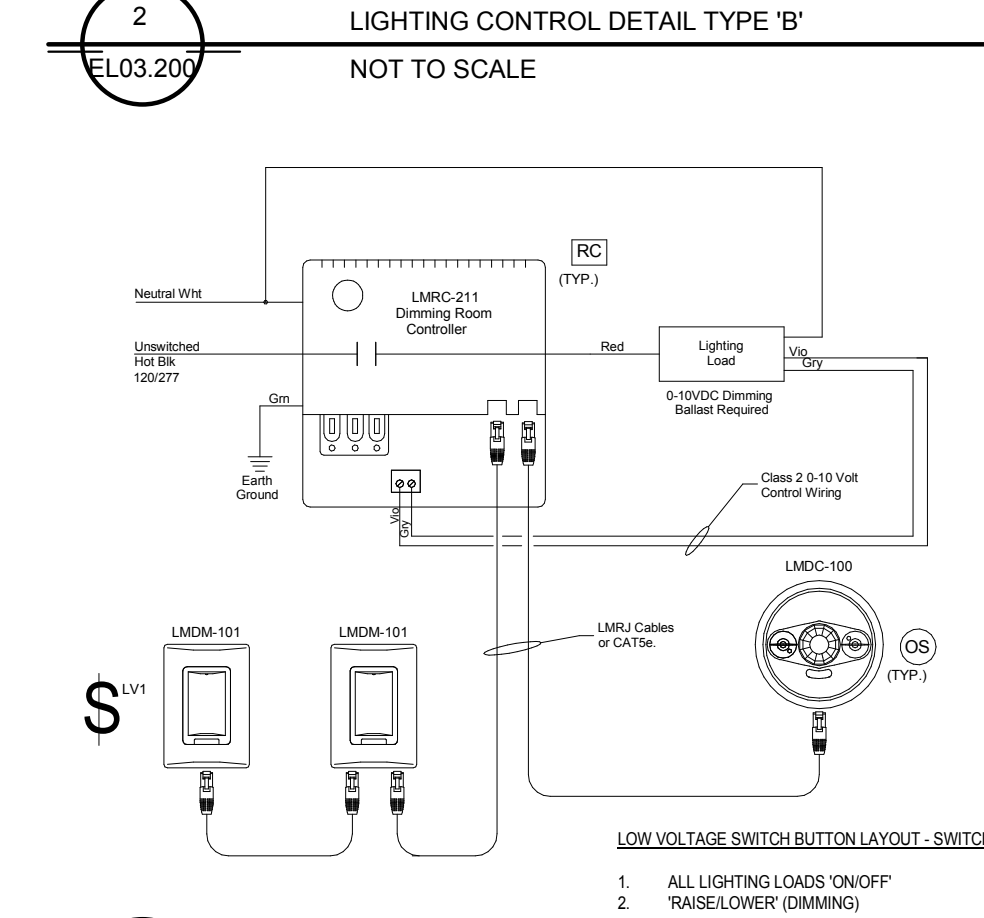
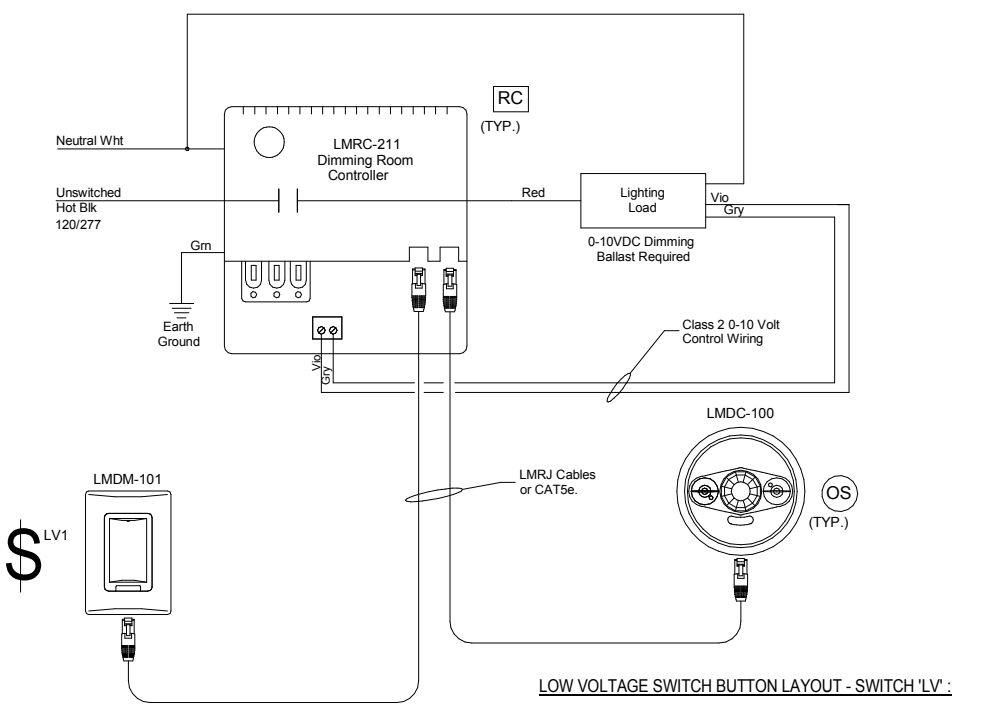
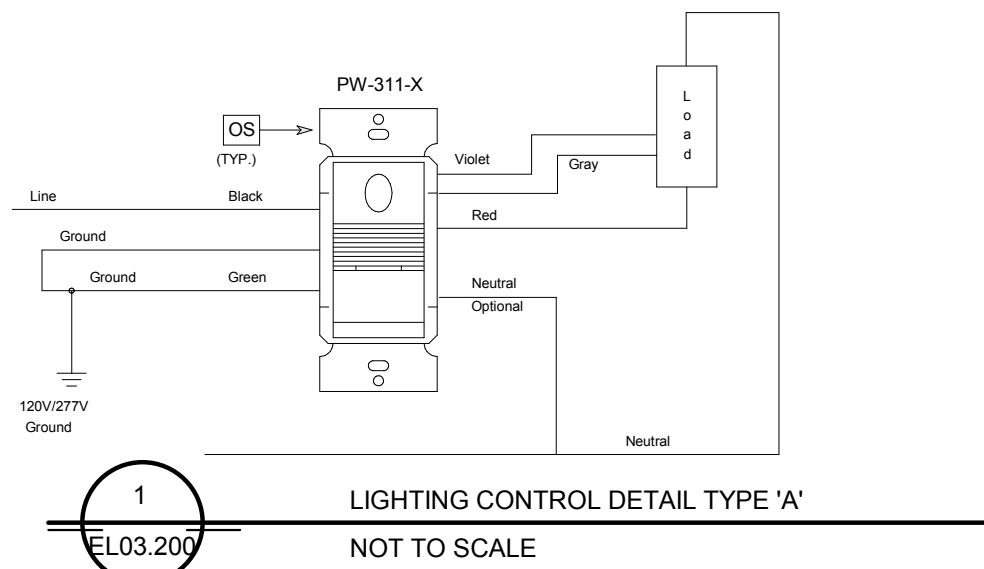
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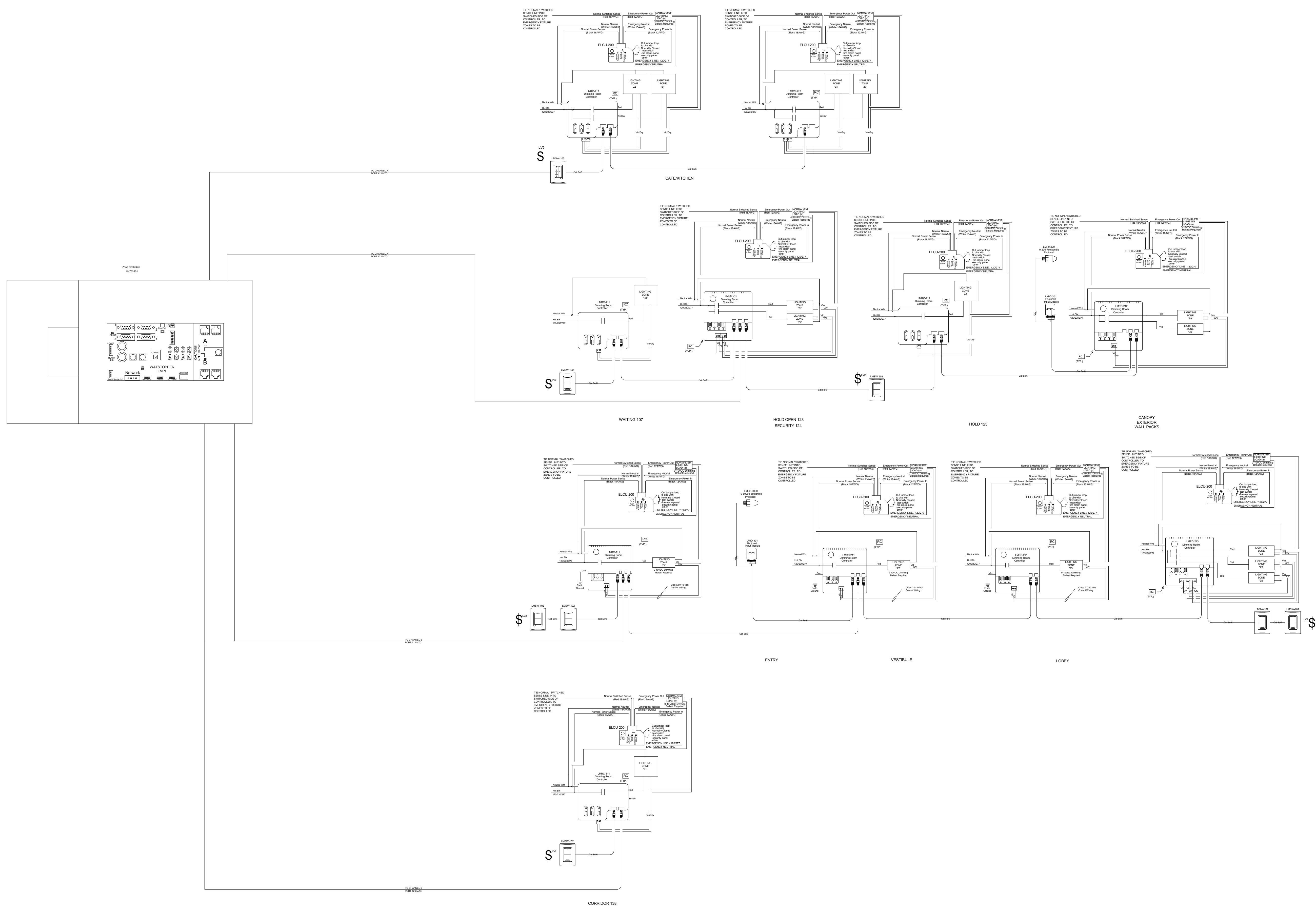


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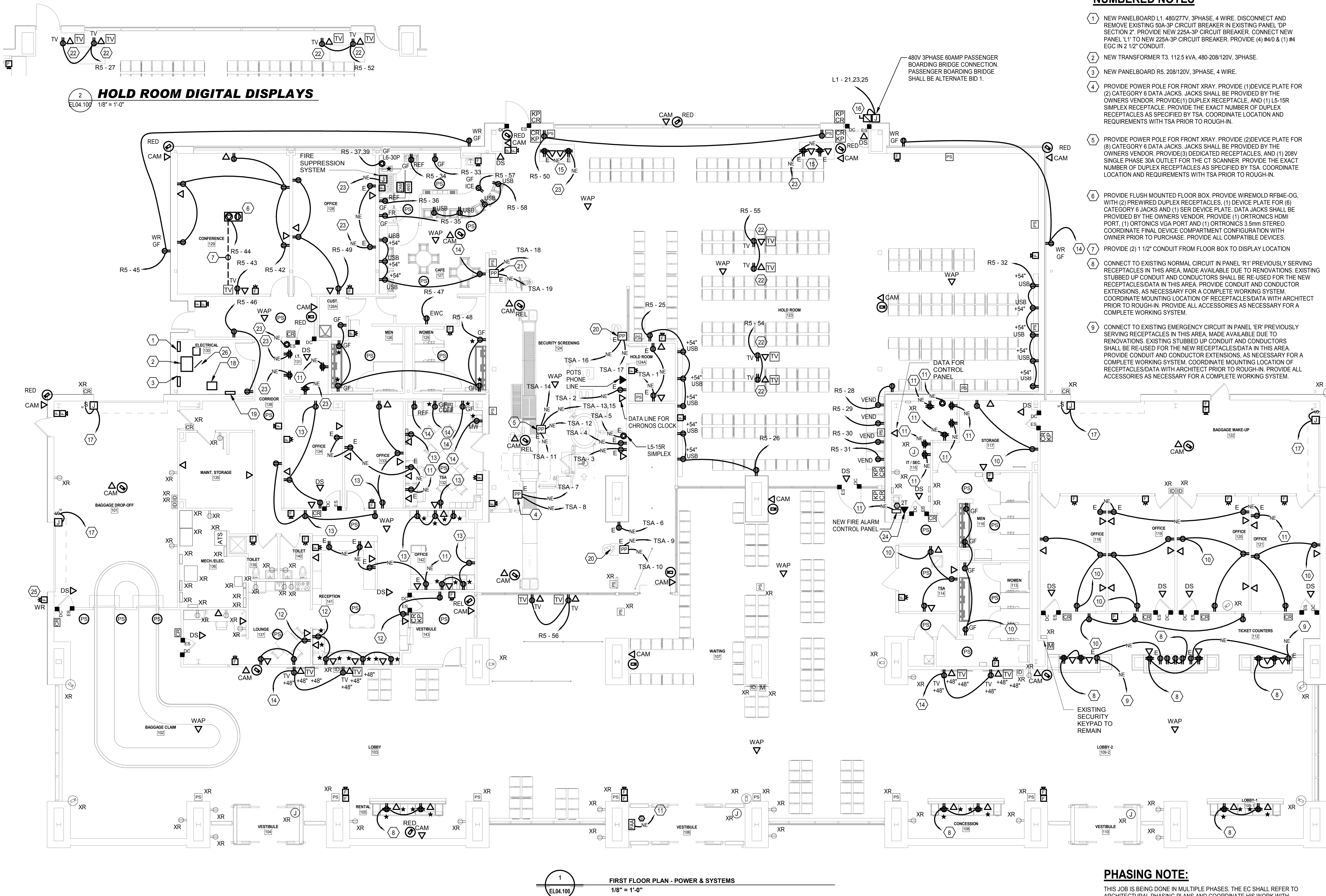




1  
EL03.300

LIGHTING CONTROL DETAIL TYPE 'P'  
NOT TO SCALE





### NUMBERED NOTES

- 1 NEW PANELBOARD L1. 480/277V, 3PHASE, 4 WIRE. DISCONNECT AND REMOVE EXISTING 50A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 2'. PROVIDE NEW 225A-3P CIRCUIT BREAKER. CONNECT NEW PANEL 'L1' TO NEW 225A-3P CIRCUIT BREAKER. PROVIDE (4) #4/0 & (1) #4 EGC IN 2 1/2" CONDUIT.
- 2 NEW TRANSFORMER T3. 112.5 kVA, 480-208/120V, 3PHASE.
- 3 NEW PANELBOARD R5. 208/120V, 3PHASE, 4 WIRE.
- 4 PROVIDE POWER POLE FOR FRONT XRAY. PROVIDE (1) DEVICE PLATE FOR (2) CATEGORY 6 DATA JACKS. JACKS SHALL BE PROVIDED BY THE OWNERS VENDOR. PROVIDE (1) DUPLEX RECEPTACLE. AND (1) L5-15R SIMPLEX RECEPTACLE. PROVIDE THE EXACT NUMBER OF DUPLEX RECEPTACLES AS SPECIFIED BY TSA. COORDINATE LOCATION AND REQUIREMENTS WITH TSA PRIOR TO ROUGH-IN.
- 5 PROVIDE POWER POLE FOR FRONT XRAY. PROVIDE (2) DEVICE PLATE FOR (8) CATEGORY 6 DATA JACKS. JACKS SHALL BE PROVIDED BY THE OWNERS VENDOR. PROVIDE (3) DUPLEX RECEPTACLES. AND (1) 120V SINGLE PHASE 30A OUTLET FOR THE CT SCANNER. PROVIDE THE EXACT NUMBER OF DUPLEX RECEPTACLES AS SPECIFIED BY TSA. COORDINATE LOCATION AND REQUIREMENTS WITH TSA PRIOR TO ROUGH-IN.
- 6 PROVIDE FLUSH MOUNTED FLOOR BOX. PROVIDE WIREMOLD RFB4E-0G. WITH (2) PREWIRED DUPLEX RECEPTACLES, (1) DEVICE PLATE FOR (6) CATEGORY 6 JACKS AND (1) SER DEVICE PLATE. DATA JACKS SHALL BE PROVIDED BY THE OWNERS VENDOR. PROVIDE (1) ORTRONICS HDMI PORT. (1) ORTRONICS VGA PORT AND (1) ORTRONICS 3.5mm STEREO. COORDINATE FINAL DEVICE COMPARTMENT CONFIGURATION WITH OWNER PRIOR TO PURCHASE. PROVIDE ALL COMPATIBLE DEVICES.
- 7 PROVIDE (2) 1 1/2" CONDUIT FROM FLOOR BOX TO DISPLAY LOCATION
- 8 CONNECT TO EXISTING NORMAL CIRCUIT IN PANEL 'R1' PREVIOUSLY SERVING RECEPTACLES IN THIS AREA. MADE AVAILABLE DUE TO RENOVATIONS. EXISTING STUBBED UP CONDUIT AND CONDUCTORS SHALL BE RE-USED FOR THE NEW RECEPTACLES/DATA IN THIS AREA. PROVIDE CONDUIT AND CONDUCTOR EXTENSIONS, AS NECESSARY FOR A COMPLETE WORKING SYSTEM. COORDINATE MOUNTING LOCATION OF RECEPTACLES/DATA WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE ALL ACCESSORIES AS NECESSARY FOR A COMPLETE WORKING SYSTEM.
- 9 CONNECT TO EXISTING EMERGENCY CIRCUIT IN PANEL 'ER' PREVIOUSLY SERVING RECEPTACLES IN THIS AREA. MADE AVAILABLE DUE TO RENOVATIONS. EXISTING STUBBED UP CONDUIT AND CONDUCTORS SHALL BE RE-USED FOR THE NEW RECEPTACLES/DATA IN THIS AREA. PROVIDE CONDUIT AND CONDUCTOR EXTENSIONS, AS NECESSARY FOR A COMPLETE WORKING SYSTEM. COORDINATE MOUNTING LOCATION OF RECEPTACLES/DATA WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE ALL ACCESSORIES AS NECESSARY FOR A COMPLETE WORKING SYSTEM.
- 10 CONNECT TO EXISTING 20A-1P CIRCUIT BREAKER IN PANEL 'R1'. PREVIOUSLY SERVING RECEPTACLE LOADS. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION.
- 11 CONNECT TO EXISTING EMERGENCY 20A-1P CIRCUIT BREAKER IN PANEL 'ER'. PREVIOUSLY SERVING RECEPTACLE LOADS. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION.
- 12 CONNECT TO EXISTING 20A-1P CIRCUIT BREAKER IN PANEL 'R2'. PREVIOUSLY SERVING RECEPTACLE LOADS. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION.
- 13 CONNECT TO EXISTING 20A-1P CIRCUIT BREAKER IN PANEL 'R3'. PREVIOUSLY SERVING RECEPTACLE LOADS. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION.
- 14 PROVIDE NEW 20A-1P CIRCUIT BREAKER IN PANEL 'R3'. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION. PROVIDE (4) #12 & (1) #12 EGC IN 3/4" CONDUIT.
- 15 RUN CONDUITS TO EACH DEVICE UNDER FLOOR SLABS TO WALL AND CONCEAL IN WALL TO ABOVE NEAREST ACCESSIBLE CEILING.
- 16 PROVIDE 60A-3P DISCONNECT SWITCH FUSED AT 60A.
- 17 CONNECT TO EXISTING CIRCUIT PREVIOUSLY SERVING THE ELECTRIC GARAGE DOORS.
- 18 NEW EMERGENCY TRANSFORMER TSA. 15 kVA, 480-208/120V, 3PHASE. PROVIDE NEW 40A-3P CIRCUIT BREAKER IN PANEL 'EL'. CONNECT NEW TRANSFORMER 'TSA' TO NEW 40A-3P CIRCUIT BREAKER IN PANEL 'EL'.
- 19 NEW EMERGENCY PANELBOARD TSA. 208/120V, 3PHASE, 4 WIRE.
- 20 PROVIDE POWER POLE FOR TDC/CAT. PROVIDE (1) DEVICE PLATE FOR (4) CATEGORY 6 DATA JACKS. JACKS SHALL BE PROVIDED BY THE OWNERS VENDOR. PROVIDE (2) DEDICATED DUPLEX RECEPTACLES. PROVIDE THE EXACT NUMBER OF DUPLEX RECEPTACLES AS SPECIFIED BY TSA. COORDINATE LOCATION AND REQUIREMENTS WITH TSA PRIOR TO ROUGH-IN.
- 21 PROVIDE POWER POLE FOR AVS/ETD/BLS. PROVIDE (2) DEVICE PLATES FOR (8) CATEGORY 6 DATA JACKS. JACKS SHALL BE PROVIDED BY THE OWNERS VENDOR. PROVIDE (2) DEDICATED DUPLEX RECEPTACLES. PROVIDE THE EXACT NUMBER OF DUPLEX RECEPTACLES AS SPECIFIED BY TSA. COORDINATE LOCATION AND REQUIREMENTS WITH TSA PRIOR TO ROUGH-IN.
- 22 ALL WIRING FOR THE TELEVISIONS WHERE METAL CEILING DECKING IS USED SHALL BE MC CABLE CONCEALED WITHIN DECKING SYSTEM DOWN TO THE TUBE STEEL MOUNTING BRACKET TO THE TELEVISION. COORDINATE WHERE ACCESS PANELS WILL BE REQUIRED AT TELEVISION LOCATIONS WITH THE GC. RUN CONDUIT ALONG THE PURLIN TO FEED THE ACCESS PANELS.
- 23 PROVIDE NEW 20A-1P CIRCUIT BREAKER IN EMERGENCY SUB PANEL. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION. PROVIDE (4) #12 & (1) #12 EGC IN 3/4" CONDUIT.
- 24 EGC TO PROVIDE (2) DEDICATED TELEPHONE LINES FOR THE FIRE ALARM CONTROL PANEL.
- 25 WEATHER RESISTANT FIRE ALARM STROBE AT FIREMAN'S CONNECTION. VERIFY EXACT LOCATION WITH FIRE PROTECTION CONTRACTOR.
- 26 PROVIDE 200A-3P DISCONNECT SWITCH, FUSED AT 175A FOR TRANSFORMER 'T3'. REFER TO RISER DIAGRAM FOR MORE INFORMATION. DISCONNECT AND REMOVE EXISTING 30A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 2'. PROVIDE NEW 175A-3P CIRCUIT BREAKER. CONNECT NEW DISCONNECT SWITCH TO NEW 175A-3P CIRCUIT BREAKER. PROVIDE (3) #2/0 & (1) #6 EGC IN 2" CONDUIT.

### FIRE ALARM SYSTEM NOTES:

1. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN IN PLACE UNTIL THE NEW FIRE ALARM SYSTEM IS FULLY OPERABLE. ONCE THE NEW FIRE ALARM SYSTEM IS FULLY FUNCTIONAL, THE EXISTING FIRE ALARM SYSTEM AND DEVICES CAN BE REMOVED.
2. THE FIRE ALARM SYSTEM SHALL MEET ALL LOCAL AND NATIONAL CODES INCLUDING IBC, NFPA, AND STATE BUILDING CODES.
3. ALL FIRE ALARM SYSTEM WIRING SHALL BE RUN IN RACEWAY. NO WIRING OTHER THAN THAT DIRECTLY ASSOCIATED WITH THE FIRE ALARM SYSTEM AND ITS AUXILIARY FUNCTION SHALL BE PERMITTED IN FIRE ALARM RACEWAYS.
4. THE MINIMUM FIRE ALARM SYSTEM WIRE SIZE SHALL BE #14 AWG FOR INDICATING CIRCUITS AND #16 AWG FOR INITIATING AND ANNUNCIATION CIRCUITS. THE MINIMUM CONDUIT SIZE SHALL BE 3/4".
5. ALL VISUAL, AUDIO, AND AUDIO/VISUAL DEVICES MUST BE SYNCHRONIZED.

### PHASING NOTE:

THIS JOB IS BEING DONE IN MULTIPLE PHASES. THE EC SHALL REFER TO ARCHITECTURAL PHASING PLANS AND COORDINATE HIS WORK WITH THE PHASE IN CONSTRUCTION. IF IT IS REQUIRED TO DO WORK OUT OF PHASE EC SHALL COORDINATE THIS WITH THE ARCHITECT, BUILDING OWNER & ALL PARTIES INVOLVED. AT NO TIME SHOULD ANY OCCUPIED AREAS BE WITH OUT SERVICE DURING CONSTRUCTION.

1  
EL04.100  
FIRST FLOOR PLAN - POWER & SYSTEMS  
1/8" = 1'-0"





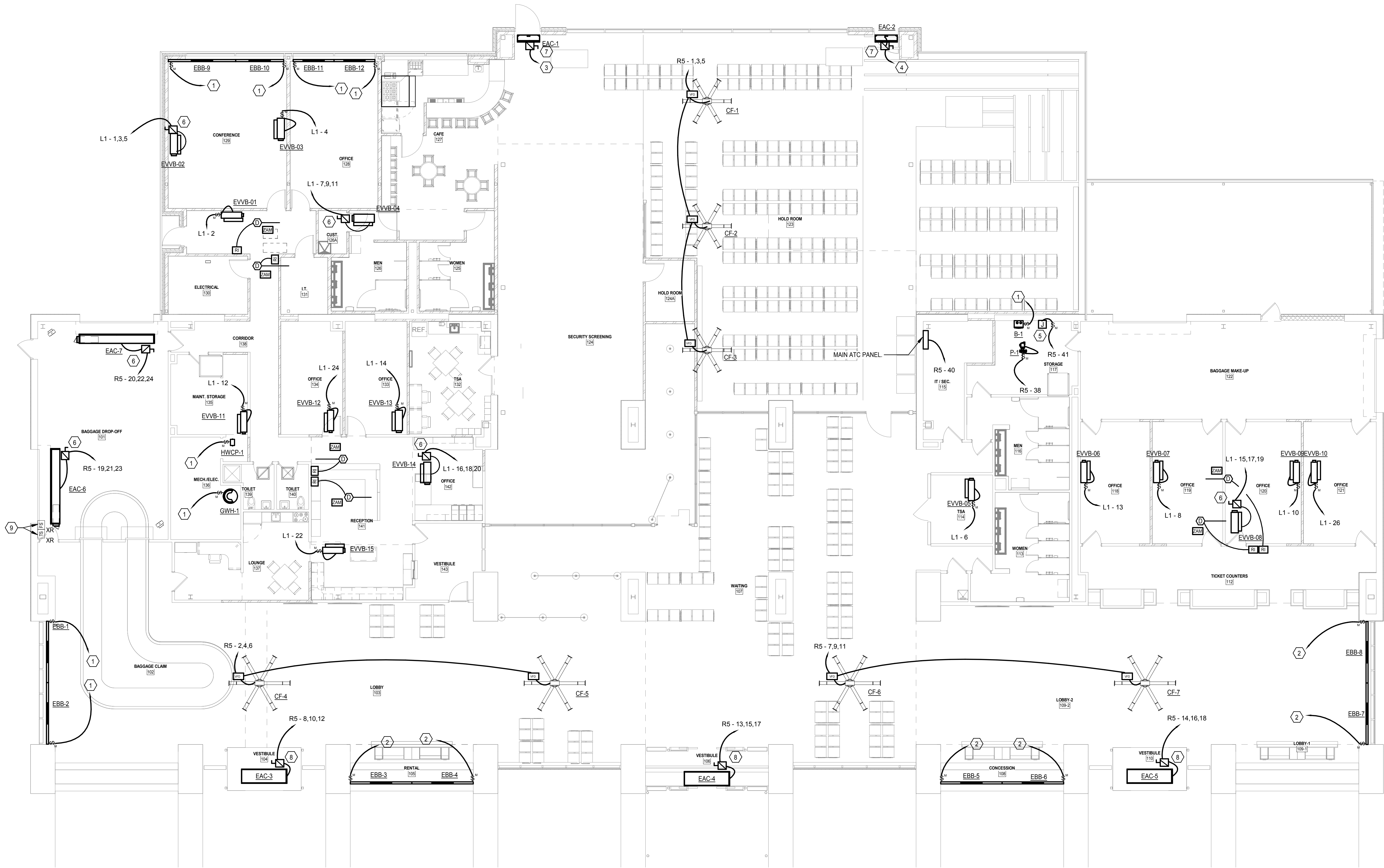


NUMBERED NOTES

- CONNECT TO EXISTING 20A-1P CIRCUIT BREAKER IN PANEL 'R1'. PREVIOUSLY SERVING RECEPTACLE LOADS. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION.
- PROVIDE NEW 20A-1P CIRCUIT BREAKER IN PANEL 'R2'. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION. PROVIDE (4) #12 & (1) #12 EGC IN 3/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 100A-3P CIRCUIT BREAKER IN EXISTING PANEL 'R2' AND ASSOCIATED EAST POWER UNIT. PROVIDE NEW 30A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING EAST POWER UNIT AND CIRCUIT. CONNECT NEW EAC-2 TO NEW 30A-3P CIRCUIT BREAKER. PROVIDE (4) #10 & (1) #10 EGC IN 3/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 100A-3P CIRCUIT BREAKER IN EXISTING PANEL 'R2' AND ASSOCIATED WEST POWER UNIT. PROVIDE NEW 30A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING WEST POWER UNIT AND CIRCUIT. CONNECT NEW EAC-2 TO NEW 30A-3P CIRCUIT BREAKER. PROVIDE (4) #10 & (1) #10 EGC IN 3/4" CONDUIT.
- PROVIDE POWER TO BOILER CIRCULATING PUMP. COORDINATE FINAL LOCATION OF THE PUMP WITH THE HC.
- PROVIDE 30A-3P DISCONNECT SWITCH FUSED AT 20A.
- PROVIDE 30A-3P DISCONNECT SWITCH FUSED AT 30A.
- PROVIDE 60A-3P DISCONNECT SWITCH FUSED AT 60A.
- TIE EXISTING TAMPER AND FLOW SWITCHES INTO NEW FIRE ALARM SYSTEM.

PHASING NOTE:

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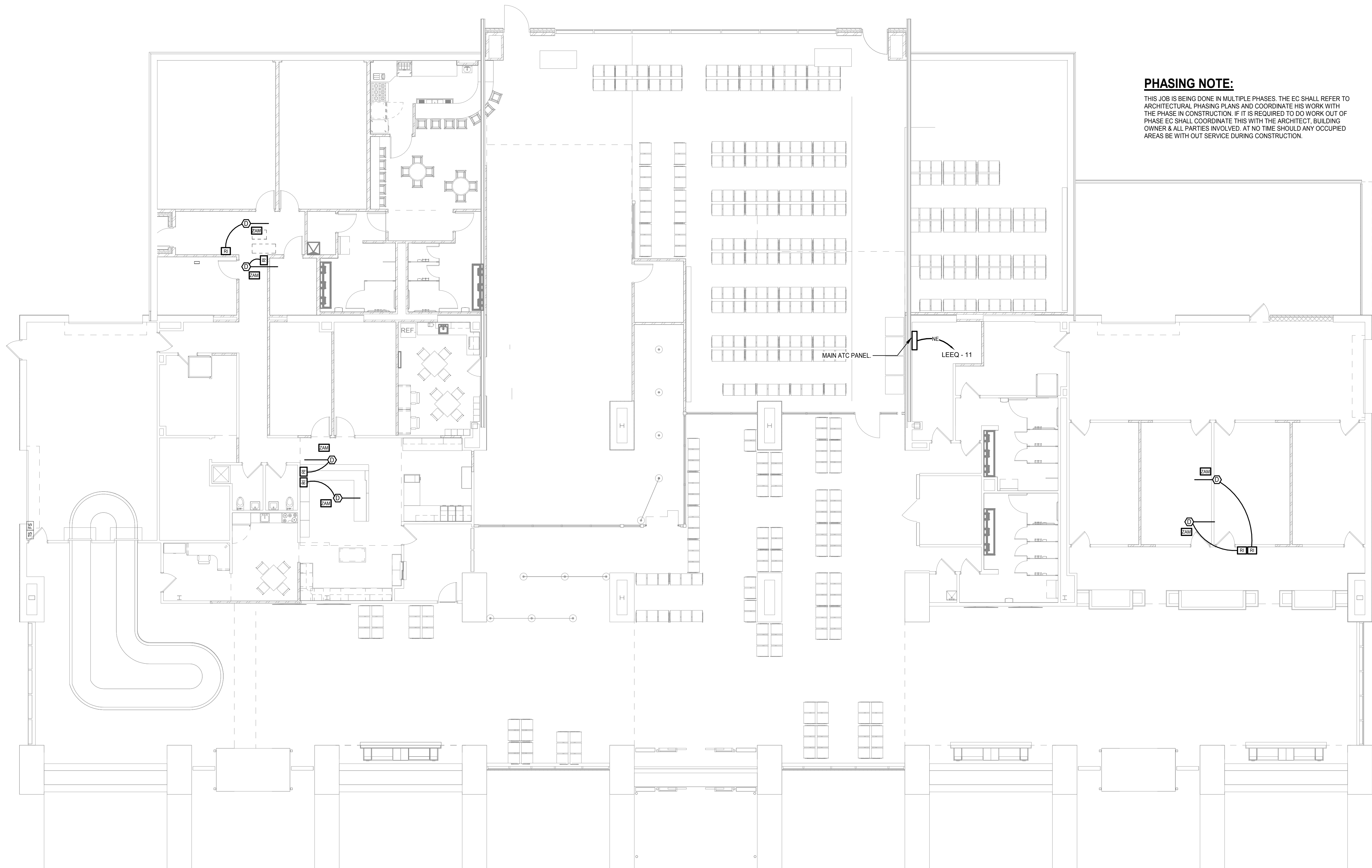


1  
EL05.100  
FIRST FLOOR PLAN - MECHANICAL POWER  
1/8" = 1'-0"



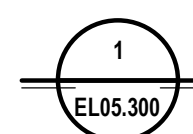






**PHASING NOTE:**

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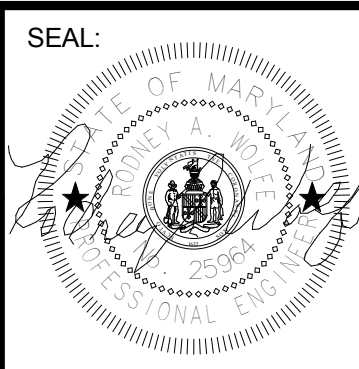
**FIRST FLOOR PLAN - MECHANICAL POWER ALT BID 6**  
1/8" = 1'-0"

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CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.  
  
License No. 25964  
Expiration Date: 2/23/2021

DESIGNED: DJB
DRAWN: DJB
CHECKED: TCB
APPROVED: TCB

No.	DATE	DESCRIPTION
BID DOCUMENTS		



Washington County, MD

HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**FIRST FLOOR PLAN - MECHANICAL POWER ALT BID 6**

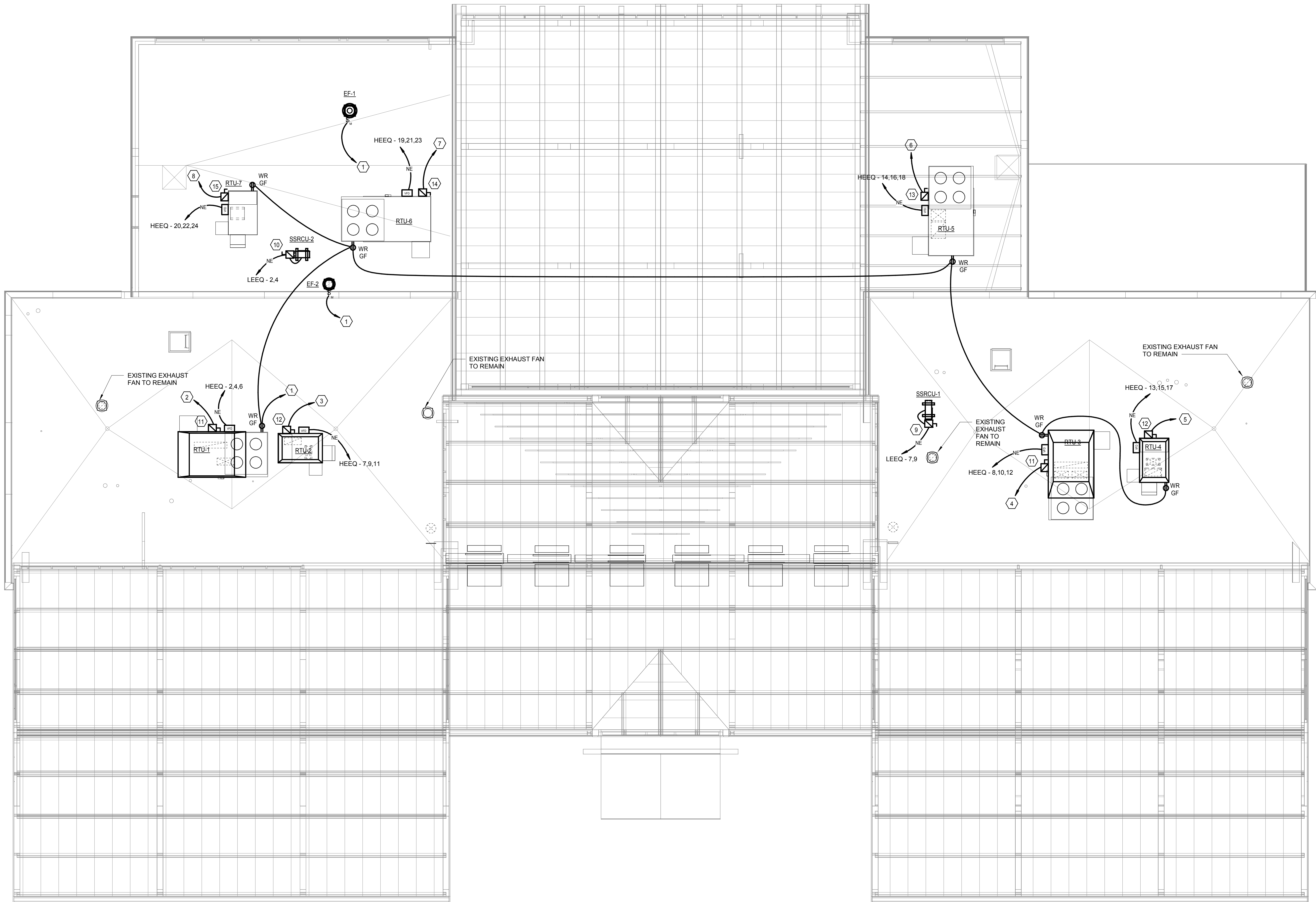
SCALE:  
1/8" = 1'-0"

DATE:  
MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**EL05.300**  
110 OF 117





**NUMBERED NOTES**

- CONNECT TO EXISTING 20A-1P CIRCUIT BREAKER IN PANEL 'R2'. PREVIOUSLY SERVING RECEPTACLE LOADS. MADE AVAILABLE DUE TO RENOVATIONS. SPARE CIRCUIT BREAKERS ARE ACCEPTABLE TO BE UTILIZED. PROVIDE NEW WIRE AND CONDUIT FROM PANELBOARD AND EQUIPMENT CONNECTION.
- DISCONNECT AND REMOVE EXISTING 150A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED RTU-1. PROVIDE NEW 60A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING RTU-1 AND CIRCUIT. CONNECT NEW RTU-1 TO NEW 60A-3P CIRCUIT BREAKER. PROVIDE (4) #4 & (1) #10 EGC IN 1 1/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 50A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED RTU-2. PROVIDE NEW 20A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING RTU-2 AND CIRCUIT. CONNECT NEW RTU-2 TO NEW 20A-3P CIRCUIT BREAKER. PROVIDE (4) #12 & (1) #12 EGC IN 3/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 125A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED RTU-3. PROVIDE NEW 60A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING RTU-3 AND CIRCUIT. CONNECT NEW RTU-3 TO NEW 60A-3P CIRCUIT BREAKER. PROVIDE (4) #4 & (1) #10 EGC IN 1 1/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 50A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED RTU-4. PROVIDE NEW 20A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING RTU-4 AND CIRCUIT. CONNECT NEW RTU-4 TO NEW 20A-3P CIRCUIT BREAKER. PROVIDE (4) #12 & (1) #12 EGC IN 3/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 50A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED RTU-5. PROVIDE NEW 70A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING RTU-5 AND CIRCUIT. CONNECT NEW RTU-5 TO NEW 70A-3P CIRCUIT BREAKER. PROVIDE (4) #4 & (1) #8 EGC IN 1 1/4" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 70A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED VESTIBULE HEATER. PROVIDE NEW 40A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING VESTIBULE HEATER AND CIRCUIT. CONNECT NEW RTU-6 TO NEW 40A-3P CIRCUIT BREAKER. PROVIDE (4) #8 & (1) #10 EGC IN 1" CONDUIT.
- DISCONNECT AND REMOVE EXISTING 70A-3P CIRCUIT BREAKER IN EXISTING PANEL 'DP' SECTION 1" AND ASSOCIATED VESTIBULE HEATER. PROVIDE NEW 30A-3P CIRCUIT BREAKER IN EXISTING SPACE MADE AVAILABLE DUE TO REMOVAL OF EXISTING VESTIBULE HEATER AND CIRCUIT. CONNECT NEW RTU-7 TO NEW 30A-3P CIRCUIT BREAKER. PROVIDE (4) #6 & (1) #10 EGC IN 1" CONDUIT.
- PROVIDE 30A-2P DISCONNECT SWITCH FUSED AT 30A.
- PROVIDE 30A-2P DISCONNECT SWITCH FUSED AT 20A.
- PROVIDE 60A-3P DISCONNECT SWITCH FUSED AT 60A.
- PROVIDE 30A-3P DISCONNECT SWITCH FUSED AT 20A.
- PROVIDE 100A-3P DISCONNECT SWITCH FUSED AT 65A.
- PROVIDE 60A-3P DISCONNECT SWITCH FUSED AT 40A.
- PROVIDE 30A-3P DISCONNECT SWITCH FUSED AT 25A.

**GENERAL NOTE:**

1. CONDUIT RUN TO THE RTU'S SHALL BE RUN THROUGH THE CURB.

**PHASING NOTE:**

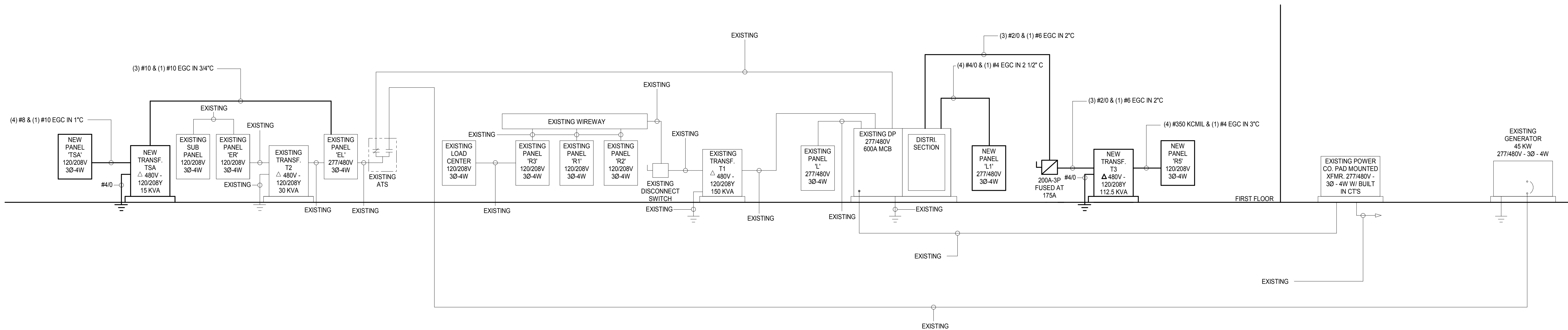
THIS JOB IS BEING DONE IN MULTIPLE PHASES. THE EC SHALL REFER TO ARCHITECTURAL PHASING PLANS AND COORDINATE HIS WORK WITH THE PHASE IN CONSTRUCTION. IF IT IS REQUIRED TO DO WORK OUT OF PHASE EC SHALL COORDINATE THIS WITH THE ARCHITECT, BUILDING OWNER & ALL PARTIES INVOLVED. AT NO TIME SHOULD ANY OCCUPIED AREAS BE WITH OUT SERVICE DURING CONSTRUCTION.

1  
EL05.400  
ROOF PLAN - MECHANICAL POWER ALT BID 6  
1/8" = 1'-0"

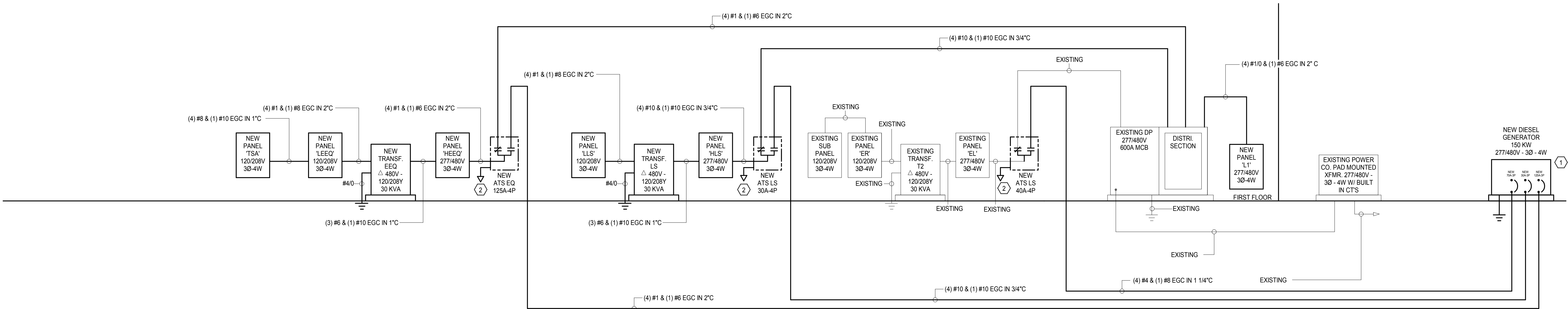


NUMBERED NOTES

- 1 EXISTING 45KW GENERATOR TO REMAIN OPERATIONAL UNTIL THE NEW GENERATOR IS INSTALLED AND WORKING. UPON THE INSTALLATION OF THE NEW GENERATOR, THE EXISTING GENERATOR CAN BE REMOVED. ALL CONDUITS FROM THE EXISTING GENERATOR SHALL BE CAPPED.
- 2 EMERGENCY GENERATOR START AND CONTROLS CIRCUITING TO GENERATOR MASTER CONTROLLER LOCATED ON THE GENERATOR. PROVIDE CONTROL WIRING PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS. WIRING MUST BE 2 HOUR FIRE RATED.



1  
EL06.100 RISER DIAGRAM  
NOT TO SCALE

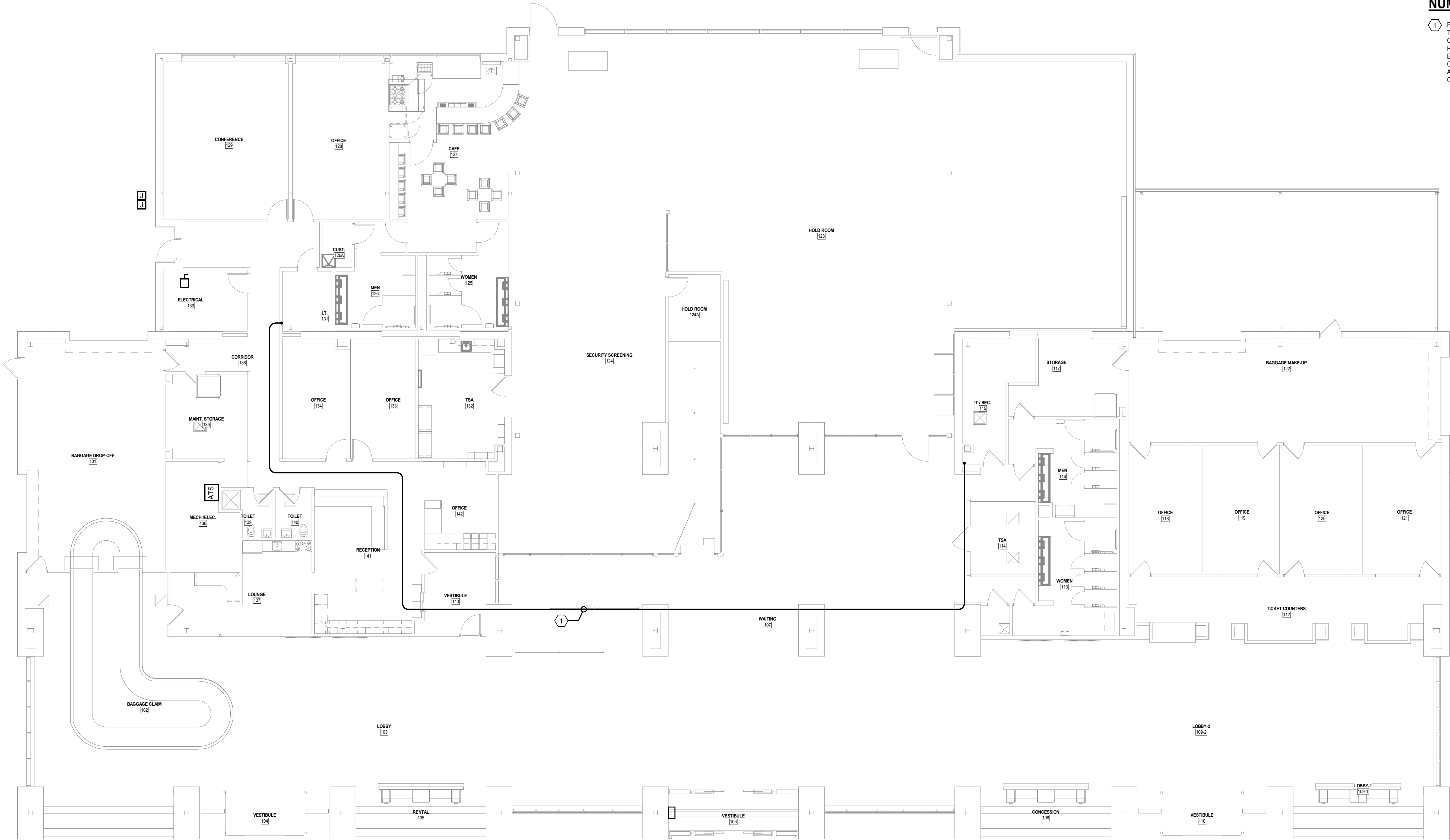


2  
EL06.100 RISER DIAGRAM ALT BID 6  
NOT TO SCALE



NUMBERED NOTES

1 PROVIDE (2) 2" CONDUITS WITH MAXCELL FLEXIBLE FABRIC INNERDUCT. THERE SHALL BE (1) FOR FIBER CABLE, (1) FOR PHONE CABLE, (1) FOR COAX CABLE, (1) FOR CAT6A, AND (1) SPARE. COORDINATE ALL REQUIREMENTS WITH OWNER'S IT VENDOR. CONDUIT SHALL BE ROUTED BETWEEN THE EXISTING IT/SEC. ROOM 115 AND NEW IT ROOM 131. COORDINATE THE EXACT CONDUIT ROUTING WITH THE OWNER AND ARCHITECT PRIOR TO ROUGH-IN. PROVIDE PULL STRINGS IN ALL CONDUITS AND DUCT LINER CELLS.



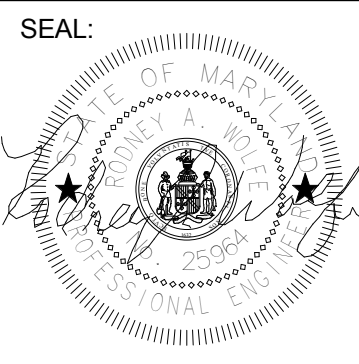
1 IT CONDUIT ROUTING PLAN  
EL07.100 1/8" = 1'-0"

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fax: (814)536-5732  
CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.  
  
License No. 25964  
Expiration Date: 2/23/2021



DESIGNED: Designer	No.	DATE	DESCRIPTION
DRAWN: Author			
CHECKED: Checker			
APPROVED: Approver			

**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>IT CONDUIT ROUTING PLAN</b>	
SCALE: 1/8" = 1'-0"	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018 Bid No.: PUR-1410 MAA Grant No.: MAA-GR-19-009
SHEET No.: <b>EL07.100</b> 113 OF 117



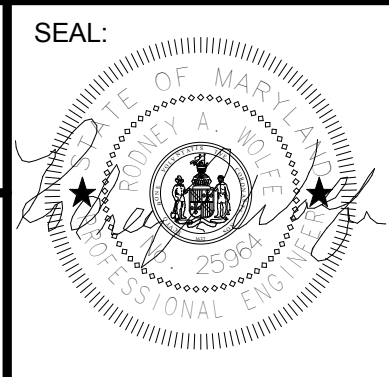
LIGHTING FIXTURE SCHEDULE								
MARK	DESCRIPTION	WATTAGE	MANUFACTURER	CATALOG NUMBER	BALLAST VOLTAGE	MOUNTING	REMARKS	EQUIVALENT MANUFACTURERS
A	ARCHITURAL LED ROUND HIGH BAY	87W LED	PHILIPS DAY-BRITE	RB10L840-277-ST-ARR16SL16CL	277V	SUSPENDED	COORDINATE EXACT MOUNTING HEIGHT ABOVE FINISHED FLOOR AND LENGTH OF SUSPENSION CABLE REQUIRED WITH ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH IN. PROVIDE AND MOUNT TO A SWIVEL CANOPY.	METALUX HUBBELL
B	2X2 LED FLAT PANEL	30W LED	ELITE	22-FPL1-LED-3000L-DIM10-MVOLT-40-K-85	UNV	RECESSED	----	METALUX HUBBELL
C	6" LED DOWNLIGHT	14W LED	HE WILLIAMS	6DR-TL-L15-8-40-DIM-UNV-O-M-OF-X-F-MWT-N	UNV	RECESSED	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE.	HALO COMM PRESCOLITE
C1		9W LED	HE WILLIAMS	6DR-TL-L10-8-40-DIM-UNV-O-M-OF-X-F-MWT-N	UNV	RECESSED	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE.	HALO COMM PRESCOLITE
D	LED LINEAR PENDANT	4.6W/FT LED	AXIS	B6DLED-500-80-40-SO-XX-XF-277-DP-1-CT9(XX)	UNV	PENDANT	COORDINATE EXACT MOUNTING HEIGHT ABOVE FINISHED FLOOR AND LENGTH OF SUSPENSION CABLE REQUIRED WITH ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH IN. IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE. IN CATALOG 'XX' INDICATES LENGTH AS SHOWN ON THE DRAWINGS.	NEORAY ALW
F	6" LED CYLINDER	15W LED	HE WILLIAMS	LC6-L11C-XF-XF-M-CMX-X-DIM-277	277V	PENDANT	COORDINATE LENGTH OF SUSPENSION CABLE REQUIRED WITH ARCHITECT. IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE.	VANTAGE PRESCOLITE
G	4' LED STRIP FIXTURE	26W LED	PHILIPS DAY-BRITE	FSS-4-30L-840-277-DIM	277V	PENDANT	FIXTURE SHALL BE SUSPENDED FROM CEILING VIA CHAIN. CHAIN LENGTH SHALL BE COORDINATE WITH ARCHITECT PRIOR TO PURCHASE.	METALUX COLUMBIA
H	LED PERIMETER GRAZE	3.3W/FT LED	PHILIPS LEDALITE	4909-L-A-K-P-S-N-XX-7-2-E	277V	RECESSED	IN CATALOG NUMBER 'XX' INDICATES FIXTURE LENGTH SHOWN ON THE DRAWING	NEORAY LITECONTROL
J	6" LED SHOWER DOWNLIGHT	9W LED	HE WILLIAMS	6DR-TL-L10-8-40-DIM-UNV-O-M-OF-X-F-WET/CC-N	UNV	RECESSED	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE.	HALO PRESCOLITE
K	INDUSTRIAL LED ROUND	56W LED	GE LIGHTING	EG2R-0-A5-P-S-40-05-WHITE-D	UNV	SURFACE	MOUNT FIXTURE TO EXISTING UNISTRUT. PROVIDE ALL MOUNTING ACCESSORIES FOR A COMPLETE WORKING SYSTEM	MCGRAW EDISON BEACON
L	2X4 LED FLAT PANEL	30W LED	ELITE	24-FPL1-LED-3000L-DIM10-MVOLT-40-K-85	UNV	RECESSED	----	METALUX HUBBELL
M	1X4 LED FLAT PANEL	20W LED	ELITE	14-FPL1-LED-2000L-DIM10-MVOLT-40-K-85	UNV	RECESSED	----	METALUX HUBBELL
N	INDIRECT LED UPLIGHT FIXTURE	337W LED	ELLIPTIPAR	S432-5216-4-XF-M-00-0-40-ZX	277V	WALL	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE. COORDINATE MOUNTING HEIGHT AND LOCATIONS PRIOR TO ROUGH IN.	AMETRIX OR APPROVED EQUAL
P	EXTERIOR LED WALL PACK	36W LED	HE WILLIAMS	VWP-V-L30-T3-XF-SDGL-SF-DIM-UNV	UNV	WALL	COORDINATE LENGTH OF SUSPENSION CABLE REQUIRED WITH ARCHITECT. IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE.	LUMARK HUBBELL
R	LED WALL SCONCE	24W LED	SCOTT ARCHITECTURAL LIGHTING	S3867-L24-35K-BA-277V	UNV	WALL	COORDINATE EXACT MOUNTING HEIGHT WITH THE ARCHITECT PRIOR TO ROUGH-IN.	ASL EVERGREEN
S	RECESSED LINEAR FIXTURE	4.3W/FT LED	AXIS	B6RLED-500-80-40-FL-XX-XF-277-DP-1-TB9	277V	RECESSED	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE. IN CATALOG NUMBER 'XX' INDICATES FIXTURE LENGTH AS SHOWN ON THE DRAWINGS	CORONET ALW
T	ARCHITECTURAL KITCHEN PENDANT	47W LED	KENALL	EPLB-16-E-PM-ACA-XF-47L-35K8-DC-C-DV-RMH	UNV	SUSPENDED	COORDINATE EXACT MOUNTING HEIGHT ABOVE FINISHED FLOOR AND LENGTH OF SUSPENSION CABLE REQUIRED WITH ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH IN. IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE.	METALUX BMK OR APPROVED EQUAL
U	SURFACE MOUNTED EXTERIOR CANOPY FIXTURE	50W LED	KENALL	MS15FD-PP-XX-50L40K-DV-9500	UNV	SURFACE	----	FAILSAFE LUMINAIRE
V	WALL WASHING SCONCE MOUNTED AT TOP OF STONE PIERS	19W LED	PATHWAY	C74WLB78V-20-35K-N-L9/35K-N-L5-D-8-XF	UNV	WALL	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE. COORDINATE MOUNTING HEIGHT AND LOCATIONS PRIOR TO ROUGH IN.	CONTECT WAC
W	EXTERIOR POLE MOUNTED FIXTURE	228W LED	PHILIPS GARDCO	PFF-92L-700-NW-G1-SF-A33-277-DD-F1-XF	277V	POLE	IN CATALOG NUMBER 'XF' INDICATES FINISH TO BE SELECTED BY THE ARCHITECT PRIOR TO PURCHASE. MOUNT NEW LED HEAD TO EXISTING RELOCATED POLE. PROVIDE ALL ACCESSORIES NECESSARY FOR MOUNTING THE NEW LED FIXTURE TO THE EXISTING RELOCATED POLE.	MCGRAW EDISON BEACON
Z	CONFERENCE COVE LIGHT	3W/FT LED	ACOLYTE	NL-67-24-35-S-FLEX	24V	COVE	FIXTURE LENGTH TO BE AS SHOWN ON THE DRAWING. PROVIDE DRVW2496-10 DIMMING DRIVING WITH FIXTURE. REFER TO LIGHTING CONTROL TYPE J FOR MORE INFORMATION	ALLOY LED NOVAFLEX
UCB	UNDER COUNTER BAR LIGHT	15W LED	ACOLYTE	RB-68-24-1.5-35	24V	SURFACE	FIXTURE LENGTH TO BE AS SHOWN ON THE DRAWING. PROVIDE DRVW-24200 ELV DRIVER.	ALLOY LED NOVAFLEX
	LED EXIT SIGN	2W LED	EVENLITE	RZR-AC-R-1	277V	WALL/CEILING	DIRECTIONAL ARROWS AS SHOWN ON THE FLOOR PLAN. COORDINATE MOUNTING WITH THE FLOOR PLANS.	EXITRONIX MULE
	LED EXIT SIGN	2W LED	EVENLITE	RZR-AC-R-2	277V	WALL/CEILING	DIRECTIONAL ARROWS AS SHOWN ON THE FLOOR PLAN. COORDINATE MOUNTING WITH THE FLOOR PLANS.	EXITRONIX MULE



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Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
  
License No. 25964  
Expiration Date: 2/23/2021

DESIGNED: DJB	No.	DATE	DESCRIPTION
DRAWN: DJB			
CHECKED: TCB			
APPROVED: TCB			



Washington County, MD

HAGERSTOWN REGIONAL AIRPORT

PROJECT TITLE: <b>TERMINAL BUILDING EXPANSION</b>	
SHEET TITLE: <b>ELECTRICAL SCHEDULES</b>	
SCALE: AS INDICATED	DATE: MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**EL09.100**  
**114 OF 117**



Panel: R5

Location: ELECTRICAL 130

Supply From: T3

Mounting: Surface

Enclosure: Type 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 65 kAIC

Mains Type: MCB

Mains Rating: 400 A

MCB Rating: 350 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	CF-1,2, & 3	20	3	0.90			1.68					CF-4 & 5	2
3					0.90		1.68		3	20	4		
5						0.90		1.68			6		
7	CF-6 & 7	20	3	1.68			4.02					EAC-3	8
9					1.68		4.02		3	60	10		
11						1.68		4.02			12		
13	EAC-4	60	3	4.02			4.02					EAC-5	14
15					4.02		4.02		3	60	16		
17						4.02		4.02			18		
19	EAC-6	20	3	0.68			0.68					EAC-7	20
21					0.68		0.68		3	20	22		
23						0.68		0.68			24		
25	RECEPTACLES - HOLD ROOM 123	20	1	0.72			0.54			1	20	RECEPTACLES - HOLD ROOM 123	26
27	RECEPTACLES - HOLD ROOM 123	20	1		0.50			0.48		1	20	VENDING MACHINE - HOLD ROOM 123	28
29	VENDING MACHINE - HOLD ROOM 123	20	1			0.30			0.30	1	20	VENDING MACHINE - HOLD ROOM 123	30
31	VENDING MACHINE - HOLD ROOM 123	20	1	0.30			0.90			1	20	RECEPTACLES - HOLD ROOM 123	32
33	RECEPTACLE - CAFE 127	20	1		0.18				0.76	1	20	UC REFRIGERATOR - CAFE 127	34
35	FREEZER - CAFE 127	20	1			0.66			0.66	1	20	REFRIGERATOR - CAFE 127	36
37	ICE MAKER - CAFE 127	20	2	2.40			1.18			1	20	P-1	38
39					2.40		0.50		1	20	MAIN ATC CONTROL PANEL	40	
41						0.20		0.90	1	20	RECEPTACLES - CONFERENCE 129	42	
43	BOILER CIRCULATING PUMP	20	1		0.25			0.36		1	20	FLOOR BOX - CONFERENCE 129	44
45	EXTERIOR RECEPTACLES	20	1		0.36			0.36		1	20	RECEPTACLES - CORRIDOR 138, IT 131,....	46
47	EWC - CAFE 127	20	1			0.18			0.90	1	20	RECEPTACLES - WOMEN 125, MEN 126,....	48
49	RECEPTACLES - OFFICE 128	20	1	0.54			0.36			1	20	RECEPTACLES - HOLD ROOM 123	50
51	SSRCU-2	20	2		1.08			0.50		1	20	DISPLAYS - HOLD ROOM 123	52
53					1.08		0.50	1	20	DISPLAYS - HOLD ROOM 123	54		
55						0.50	1	20	DISPLAYS - WAITING 107	56			
57	UNDER BAR ICE MAKER	20	1		0.80			0.72		1	20	UNDER BAR USB RECEPTACLES	58
59	Spare	20	1			0.00			0.00	1	20	Spare	60
61	Spare	20	1	0.00			0.00			1	20	Spare	62
63	Spare	20	1		0.00			0.00		1	20	Spare	64
65	Spare	20	1			0.00			0.00	1	20	Spare	66
67	Spare	20	1	0.00			0.00			1	20	Spare	68
69	Spare	20	1		0.00			0.00		1	20	Spare	70
71	Spare	20	1			0.00			0.00	1	20	Spare	72
73	Spare	20	1	0.00			0.00			1	20	Spare	74
75	Spare	20	1		0.00			0.00		1	20	Spare	76
77	Spare	20	1			0.00			0.00	1	20	Spare	78
79	Spare	20	1	0.00			0.00			1	20	Spare	80
81	Spare	20	1		0.00			0.00		1	20	Spare	82
83	Spare	20	1			0.00			0.00	1	20	Spare	84
Total Load:				25.97 KVA		26.32 KVA		23.36 KVA					
Total Amps:				220 A		223 A		195 A					

Panel: TSA BASE BID

Location:

Supply From: TSA

Mounting: Recessed

Enclosure: Type 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 65 kAIC

Mains Type: MCB

Mains Rating: 100 A

MCB Rating: 40 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	RECEPTACLES - HOLD ROOM	20	1	0.36			0.18			1	20	DURESS ALARM RECEIVER	2
3	AIT	20	1		0.18			0.18		1	20	CO-LOCATED ETD	4
5	WTMD	20	1			1.00			0.18	1	20	DURESS ALARM REPEATER	6
7	QUE CONV. AND CONVENIENCE	20	1	0.18			0.18			1	20	WTMD	8
9	TDC/ETD	20	1		0.18			0.18		1	20	TDC/ETD	10
11	AT XRAY	20	1			0.20			0.20	1	20	AIT	12
13	CT SCANNER	30	2	2.50			0.20			1	20	CO-LOCATED ETD	14
				2.50			0.18		1	20	STSO	16	
17						0.18			0.18	1	20	ETD/BLS/AVS	18
19	ETD/BLS/AVS	20	1	0.18			0.00			1	20	Spare	20
21	Spare	20	1		0.00			0.00		1	20	Spare	22
23	Spare	20	1			0.00			0.00	1	20	Spare	24
25	Spare	20	1	0.00			0.00			1	20	Spare	26
27	Spare	20	1		0.00			0.00		1	20	Spare	28
29	Spare	20	1			0.00			0.00	1	20	Spare	30
Total Load:				4.03 kVA		3.90 kVA		1.94 kVA					
Total Amps:				36 A		35 A		16 A					

Panel: L1 BASE BID													
Location:				Volts: 480/277 Wye				A.I.C. Rating: 65 kAIC					
Supply From: EXISTING DP SECTION I				Phases: 3				Mains Type: MCB					
Mounting: Recessed				Wires: 4				Mains Rating: 225 A					
Enclosure: Type 1										MCB Rating: 225 A			
Notes:													
CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	EVVB-02	20	3	2.00			1.99			1	20	EVVB-01	2
3					2.00			4.01		1	20	EVVB-03	4
5						2.00			2.50	1	20	EVVB-05	6
7	EVVB-04	20	3	3.00			1.51			1	20	EVVB-07	8
9					3.00			1.51		1	20	EVVB-09	10
11						3.00			1.99	1	20	EVVB-11	12
13	EVVB-06	20	1	1.51			4.01			1	20	EVVB-13	14
15	EVVB-08	20	3		1.50			2.00					16
17						1.50			2.00	3	20	EVVB-14	18
19				1.50			2.00						20
21	PASSENGER BOARDING BRIDGE - ALTERNATE BID 1	60	3		13.29			3.50		1	20	EVVB-15	22
23						13.29			1.99	1	20	EVVB-12	24
25				13.29			1.99			1	20	EVVB-10	26
27	RTU-2	20	3		1.33			3.06					28
29						1.33			3.06	3	20	RTU-1	30
31				1.33			3.06						32
33	RTU-4	20	3		0.84			3.06					34
35						0.84			3.06	3	20	RTU-3	36
37				0.84			3.06						38
39	RTU-6	20	3		2.10			3.88					40
41						2.10			3.88	3	30	RTU-5	42
43				2.10			3.88						44
45	Spare	20	1		0.00			1.33					46
47	Spare	20	1			0.00			1.33	3	20	RTU-7	48
49	Spare	20	1	0.00			1.33						50
51	Spare	20	1		0.00			0.00		1	20	Spare	52
53	Spare	20	1			0.00			0.00	1	20	Spare	54
55	Spare	20	1	0.00			0.00			1	20	Spare	56
57	Spare	20	1		0.00			0.00		1	20	Spare	58
59	Spare	20	1			0.00			0.00	1	20	Spare	60
Total Load:				48.39 kVA		46.39 kVA		43.87 kVA					
Total Amps:				176 A		169 A		158 A					



Panel: HEEQ

Location: ELECTRICAL 130

Supply From: ATS EQ

Mounting: Surface

Enclosure: Type 1

Volts: 480/277 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 65 KAIC

Mains Type: MCB

Mains Rating: 125 A

MCB Rating: 125 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT	
1	TRANSFORMER EEQ	60	3	10.46			3.06					RTU-1	2	
3					11.40			3.06			3		20	4
5						6.82			3.06				6	
7	RTU-2	20	3	1.33			3.06					RTU-3	8	
9					1.33			3.06			3		20	10
11						1.33			3.06				12	
13	RTU-4	20	3	0.84			3.88					RTU-5	14	
15					0.84			3.88			3		30	16
17						0.84			3.88				18	
19	RTU-6	20	3	2.10			1.33					RTU-7	20	
21					2.10			1.33			3		20	22
23						2.10			1.33				24	
25	Spare	20	3	0.00			0.00					Spare	26	
27					0.00			0.00			3		20	28
29									0.00				30	
Total Load:				26.05 kVA		26.99 kVA		22.41 kVA						
Total Amps:				96 A		99 A		81 A						

Panel: LEEQ																																									
Location:														Volts: 120/208 Wye														A.I.C. Rating: 65 KAIC													
Supply From: TEQ														Phases: 3														Mains Type: MCB													
Mounting: Recessed														Wires: 4														Mains Rating: 100 A													
Enclosure: Type 1																												MCB Rating: 100 A													
Notes:																																									
CKT	Circuit Description												Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description												CKT						
1	PANEL TSA												40	3	4.28			1.08				2	20	SSRCU-2												2					
3																3.90			1.08																						
5																	1.94			0.36	1	20	Receptacle OFFICE 128												6						
7	SSRCU-1												20	2	1.50			0.72				1	20	Receptacle HOLD ROOM 123												8					
9																1.50			0.72				1	20	Receptacle HOLD ROOM 123												10				
11															ATC PANEL												20	1			0.50			0.18	1	20	Receptacle TICKET COUNTERS 112				
13	Receptacle Room 120, 121												20	1	0.72			0.72				1	20	Receptacle OFFICE 132												14					
15	Receptacle TICKET COUNTERS 112												20	1		0.36				2.40	1	20	COUNTY IT TWIST LOCK RECEPTACLE												16						
17	Receptacle OFFICE 142												20	1			0.72				2.40	1	20	COUNTY IT TWIST LOCK RECEPTACLE												18					
19	NEW RENTAL IT RACK												20	1	0.36				0.36			1	20	AVIS/BUDGET IT RACK												20					
21	ALLEGIAN IT RACK												20	1		0.36				0.36		1	20	TSA IT RACK												22					
23	COUNTY IT RACK												20	1			0.36				0.36	1	20	SOUTHERN IT RACK												24					
25	SPARE IT RACK												20	1	0.36				0.36			1	20	COUNTY IT RACK												26					
27	NEW AIRLINE IT RACK												20	1		0.36				0.36		1	20	NEW AIRLINE IT RACK												28					
29	Spare												20	1			0.00				0.00	1	20	Spare												30					
31	Spare												20	1	0.00				0.00			1	20	Spare												32					
33	Spare												20	1		0.00				0.00		1	20	Spare												34					
35	Spare												20	1			0.00				0.00	1	20	Spare												36					
37	Spare												20	1	0.00				0.00			1	20	Spare												38					
39	Spare												20	1		0.00				0.00		1	20	Spare												40					
41	Spare												20	1			0.00				0.00	1	20	Spare												42					
Total Load:						10.46 KVA						11.4 KVA						6.82 KVA																							
Total Amps:						92 A						100 A						57 A																							

Panel: TSA ALT BID 6

Location:

Supply From: LLEQ

Mounting: Recessed

Enclosure: Type 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 65 kAIC

Mains Type: MCB

Mains Rating: 100 A

MCB Rating: 40 A

Notes:

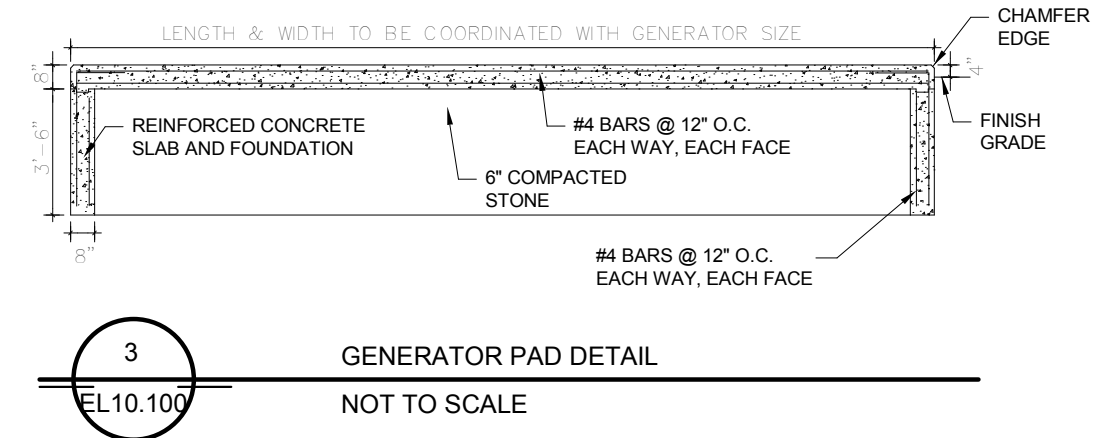
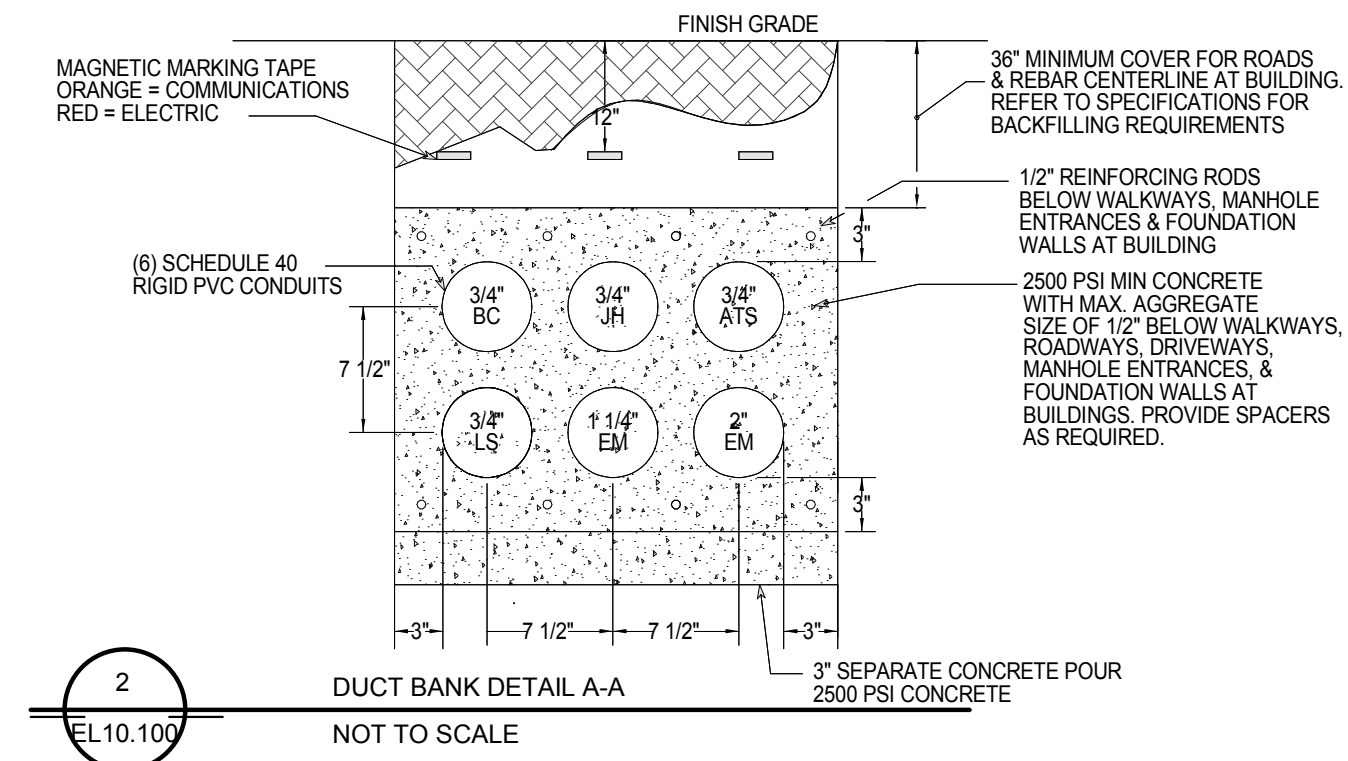
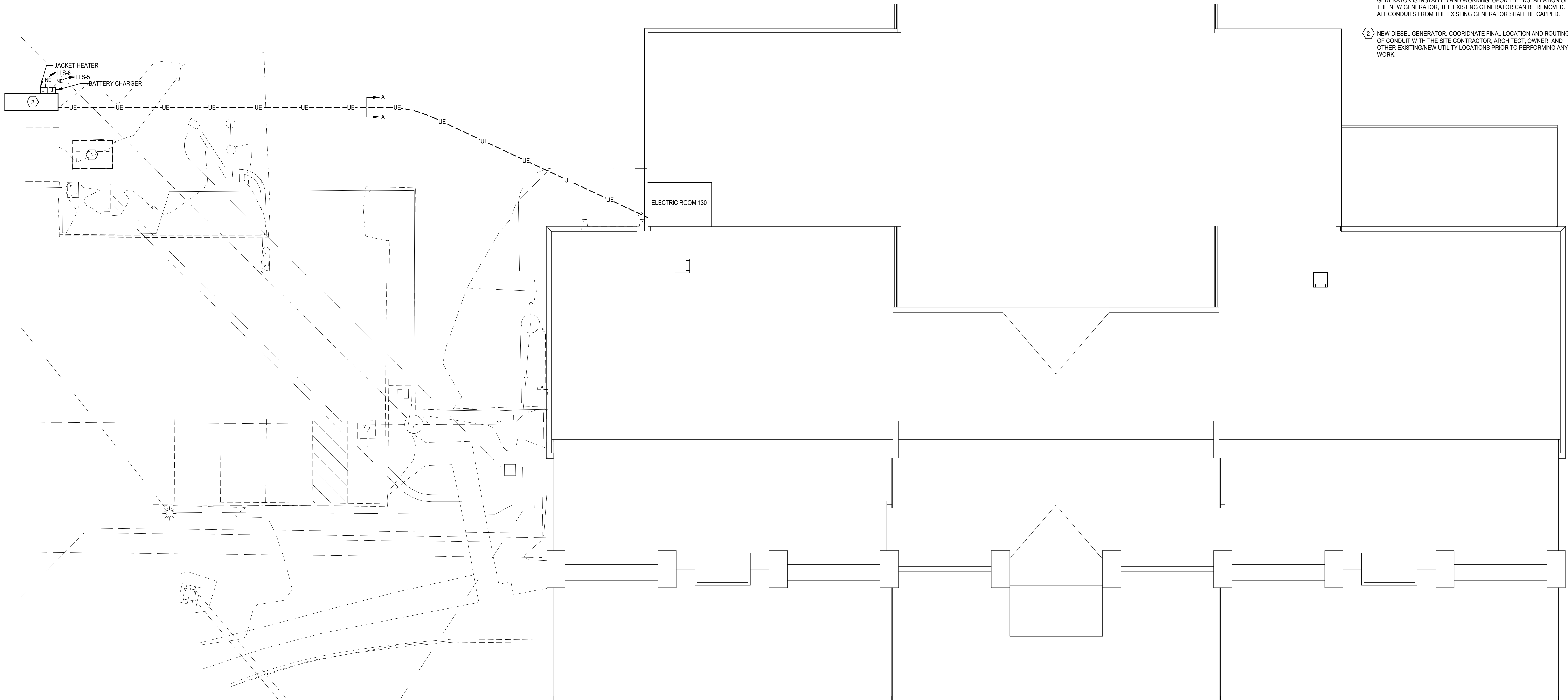
CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT	
1	RECEPTACLES - HOLD ROOM	20	1	0.36			0.18				1	20	DURESS ALARM RECEIVER	2
3	AIT	20	1		0.18			0.18			1	20	CO-LOCATED ETD	4
5	WTMD	20	1			1.00			0.18		1	20	DURESS ALARM REPEATER	6
7	QUE CONV. AND CONVENIENCE	20	1	0.18			0.18				1	20	WTMD	8
9	TDC/ETD	20	1		0.18			0.18			1	20	TDC/ETD	10
11	AT XRAY	20	1			0.20			0.20		1	20	AIT	12
13	CT SCANNER	30	2	2.50			0.20				1	20	CO-LOCATED ETD	14
15					2.50			0.18			1	20	STSO	16
17	STSO	20	1			0.18			0.18		1	20	ETD/BLS/AVS	18
19	ETD/BLS/AVS	20	1	0.18			0.00				1	20	Spare	20
21	Spare	20	1		0.00			0.00			1	20	Spare	22
23	Spare	20	1			0.00			0.00		1	20	Spare	24
25	Spare	20	1	0.00			0.00				1	20	Spare	26
27	Spare	20	1		0.00			0.00			1	20	Spare	28
29	Spare	20	1			0.00			0.00		1	20	Spare	30
Total Load:				4.03 kVA		3.90 kVA		1.94 kVA						
Total Amps:				36 A		35 A		16 A						

Panel: HLS														Location: ELECTRICAL 130														Volts: 480/277 Wye														A.I.C. Rating: 65 kAIC													
														Supply From: ATS LS														Phases: 3														Mains Type: MCB													
														Mounting: Surface														Wires: 4														Mains Rating: 100 A													
														Enclosure: Type 1																												MCB Rating: 30 A													
Notes:																																																							
CKT	Circuit Description										Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description										CKT																								
1	TRANSFORMER LS										20	3	1.50			0.55				1	20	LIGHTING										2																							
3													0.25			0.71			1	20	LIGHTING										4																								
5														1.00			0.47			1	20	LIGHTING										6																							
7											LIGHTING										20	1	2.70			0.38			1	20	LIGHTING										8														
9	LIGHTING										20	1			3.71			3.71			1	20	LIGHTING										10																						
11	LIGHTING										20	1				0.17			0.03	1	20	EXIT SIGNS										12																							
13	Spare										20	1	0.00			0.00				1	20	Spare										14																							
15	Spare										20	1		0.00				0.00			1	20	Spare										16																						
17	Spare										20	1				0.00			0.00			1	20	Spare										18																					
19	Spare										20	1	0.00				0.00				1	20	Spare										20																						
21	Spare										20	1				0.00				1	20	Spare										22																							
23	Spare										20	1			0.00			0.00			1	20	Spare										24																						
25	Spare										20	1	0.00				0.00				1	20	Spare										26																						
27	Spare										20	1		0.00				0.00			1	20	Spare										28																						
29	Spare										20	1			0.00				0.00	1	20	Spare										30																							
Total Load:														5.11 kVA				8.37 kVA				1.68 kVA																																	
Total Amps:														20 A				32 A				6 A																																	

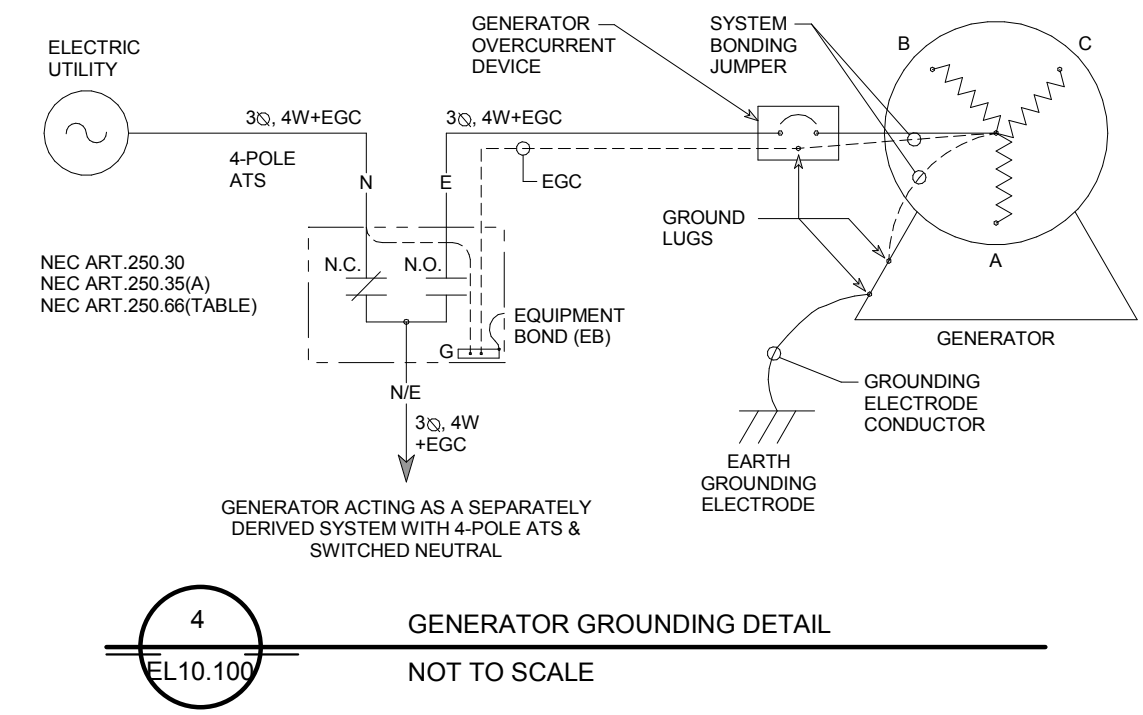


NUMBERED NOTES

- 1 EXISTING 45KW GENERATOR TO REMAIN OPERATIONAL UNTIL THE NEW GENERATOR IS INSTALLED AND WORKING. UPON THE INSTALLATION OF THE NEW GENERATOR, THE EXISTING GENERATOR CAN BE REMOVED. ALL CONDUITS FROM THE EXISTING GENERATOR SHALL BE CAPPED.
- 2 NEW DIESEL GENERATOR. COORDINATE FINAL LOCATION AND ROUTING OF CONDUIT WITH THE SITE CONTRACTOR, ARCHITECT, OWNER, AND OTHER EXISTING/NEW UTILITY LOCATIONS PRIOR TO PERFORMING ANY WORK.



1 ELECTRICAL SITE PLAN ALT BID 6  
1" = 10'-0"



**ADCI**  
AIRPORT DESIGN CONSULTANTS INC.

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ELLICOTT CITY, MD 21043  
PHONE: 410-465-9600  
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**CJL ENGINEERING**

232 Horner Street  
Johnstown, PA 15902  
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fax: (814)536-5732  
CJL Project # 16-0236



Professional Certification:  
I hereby certify that these documents  
were prepared or approved by me,  
and that I am a duly licensed  
professional engineer under the laws  
of the State of Maryland.

License No. 25964  
Expiration Date: 2/23/2021

DESIGNED: DJB  
DRAWN: DJB  
CHECKED: TCB  
APPROVED: TCB

No.	DATE	DESCRIPTION
BID DOCUMENTS		

**Washington County, MD**  
HAGERSTOWN REGIONAL AIRPORT

HGR

PROJECT TITLE:  
**TERMINAL BUILDING EXPANSION**

SHEET TITLE:  
**ELECTRICAL SITE PLAN ALT BID 6**

SCALE:  
AS INDICATED

DATE:  
MARCH 2019

FAA AIP No.: 3-24-0019-059-2018  
Bid No.: PUR-1410  
MAA Grant No.: MAA-GR-19-009

SHEET No.:  
**EL10.100**  
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