GENERAL

1. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE EXISTING UTILITY INFORMATION SHOWN IS BASED ON THE TOPOGRAPHIC SURVEY PROVIDED BY VAN CLEEF ENGINEERING ASSOCIATES, LLC THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS PROJECT PRIOR TO CONSTRUCTION WORK.

2. PRIOR TO THE INITIATION OF SITE CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ANY EXISTING UTILITIES INCLUDING GAS, WATER, ELECTRIC, CABLE TV, COMMUNICATIONS, SANITARY SEWERS, AND STORM DRAINAGE SYSTEMS, ON AND / OR ADJACENT TO THE SITE. REMOVE OR CAP AS NECESSARY.

3. THE CONTRACTOR SHALL EXERCISE CAUTION IN AREAS OF BURIED UTILITIES AND SHALL CALL "NEW YORK 811" AT 1-800-272-4480 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO ARRANGE FOR FIELD LOCATIONS OF BURIED UTILITIES.

4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTION/REQUIREMENTS.

6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, ON ALL PRECAST AND MANUFACTURED ITEMS, TO THE OWNER'S ENGINEER FOR REVIEW. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

7. SAFETY:
   A. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL.

   B. LABOR SAFETY REGULATIONS SHALL CONFORM THE PROVISIONS SET FORTH BY OSHA.

   C. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.

   D. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AN R-O-W UTILIZATION PERMIT (IF REQUIRED) FOR CONSTRUCTION OF THE PROPOSED UTILITIES. THIS PERMIT MUST BE OBTAINED BY A DULY LICENSED PLUMBING CONTRACTOR (OR CLASS A GENERAL CONTRACTOR) PRIOR TO THE START OF CONSTRUCTION. THESE PLANS AND ANY SUBSEQUENT REVISIONS TO THESE PLANS THAT ARE ISSUED BY THE ENGINEER, WILL BE SUBJECT TO THE APPROVAL CONDITIONS OF THIS PERMIT.

9. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO THE REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.

10. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION.

11. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH ANY OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS/SUBCONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE GENERAL CONTRACTOR TO COORDINATE AND SCHEDULE HIS/HER ACTIVITIES ACCORDINGLY.

12. ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE SODDED.

13. ALL DISTURBED RIGHT-OF-WAY AND ADJACENT PROPERTIES SHALL BE RESTORED TO EQUAL OR BETTER CONDITION.

14. THE OWNER AND ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION NOR THE SAFETY PRECAUTIONS INCIDENT THERETO.

15. THE CONTRACTOR SHALL PROVIDE SUFFICIENT LIGHTING FOR THE WORK AREA AT NIGHT, WHEN NIGHT WORK IS REQUIRED.

16. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH OTHER CONTRACTORS WHO MIGHT BE WORKING CONCURRENTLY AT THE AIRPORT. ANY CONFLICTS IN PERFORMING WORK SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER FOR RESOLUTION.

17. UNLESS NOTED OTHERWISE, ALL CONSTRUCTION WASTE SHALL BE DISPOSED OF OFF AIRPORT PROPERTY. THE CONTRACTOR SHALL ACQUIRE ANY REQUIRED PERMITS FOR DISPOSAL OF THIS MATERIAL.

18. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO REDUCE EROSION TO THE PRACTICABLE MINIMUM AND TO PREVENT DAMAGING SILTATION OF WATER COURSES, STREAMS, LAKES OR RESERVOIRS. THE SURFACE AREA OF ERODIBLE LAND, EITHER ON OR OFF THE AIRPORT PROPERTY, EXPOSED TO THE ELEMENTS BY CLEARING, GRUBBING OR GRADING OPERATIONS, INCLUDING GRAVEL PITS, WASTE OR DISPOSAL AREAS AND HAUL ROADS, AT ANY TIME, FOR THIS CONTRACT, SHALL BE SUBJECT TO APPROVAL OF THE OWNER. THE DURATION OF SUCH EXPOSURE PRIOR TO FINAL TRIMMING AND FINISHING OF THE AREAS SHALL BE MINIMIZED. THE OWNER SHALL HAVE FULL AUTHORITY TO ORDER THE SUSPENSION OF ANY OPERATIONS PENDING ADEQUATE AND PROPER PERFORMANCE OF FINISHING AND MAINTENANCE WORK OR TO RESTRICT THE TRIMMING OF ERODIBLE LAND EXPOSED TO THE ELEMENTS.

19. THE DISTURBANCE OF LANDS AND WATERS THAT ARE OUTSIDE THE LIMITS OF CONSTRUCTION, AS STATED, IS PROHIBITED, EXCEPT IF FOUND NECESSARY AND APPROVED BY THE ENGINEER.

20. WHEN NECESSARY, CERTAIN OPERATIONS SHALL BE DELAYED UNTIL PROPER WIND OR CLIMATIC CONDITIONS EXIST, TO DISSIPATE OR INHIBIT POTENTIAL POLLUTANTS TO THE PROJECT, PER SATISFACTION OF THE CONSTRUCTION MANAGER.

21. UPON COMPLETION OF THE WORK AND BEFORE ACCEPTANCE OF FINAL PAYMENT, THE CONTRACTOR SHALL REMOVE ALL THE MACHINERY, EQUIPMENT, SURPLUS, TEMPORARY STRUCTURES, DISCARDED MATERIALS, SUCH AS RUBBISH, FROM THE SITE. THE CONTRACTOR SHALL LEAVE THE SITE IN NEAT AND PRESENTABLE CONDITION. MATERIALS CLEARED FROM THE SITE AND DEPOSITED ON ADJACENT PROPERTY WILL NOT BE CONSIDERED AS BEING DISPOSED OF SATISFACTORILY, UNLESS THE CONTRACTOR HAS OBTAINED WRITTEN PERMISSION FROM THE PROPERTY OWNER.

22. THE CONTRACTOR SHALL, AT A MINIMUM, HAVE A REGISTERED LAND SURVEYOR LAYOUT THE WORK AND PROVIDE A COPY OF THE SIGNED AND SEALED FIELD NOTES UPON COMPLETION OF THE WORK. FIELD NOTES SHALL BE MADE AVAILABLE TO THE ENGINEER AND THE CONSTRUCTION MANAGER AT ANY TIME, IF REQUESTED.

23. DUST CONTROL - THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO DUST CONTROL REQUIREMENTS OF THIS CONTRACT, OPERATIONS OF THE RUNWAYS, TAXIWAYS, AND APRONS ARE ESPECIALLY SENSITIVE TO DUST AND FOREIGN OBJECT DEBRIS (FOD). THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST AND FOD CONTROL WITHIN THE CONSTRUCTION AREA AND ADJACENT OPERATION AREA. THE CONTRACTOR SHALL PROVIDE A PAVEMENT VACUUM SWEEPER FOR KEEPING DEBRIS CLEAR AT ALL TIMES. NO ADDITIONAL PAYMENT SHALL BE MADE FOR DUST, DEBRIS AND FOD CONTROL. THE COST SHALL BE CONSIDERED AS INCIDENTAL TO THE WORK OF THIS PROJECT.

STORM DRAINAGE SYSTEM

1. STANDARD INDEXES REFER TO THE LATEST EDITION OF N.Y.S.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS."

2. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH N.Y.S.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.

3. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END SECTIONS, WHICH ARE NOT INCLUDED IN LENGTHS.

4. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED, SHALL BE TRAFFIC RATED FOR H-20 LOADINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY UPGRADES TO EXISTING DRAINAGE STRUCTURES.

5. CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.

GRADING TESTING AND INSPECTION

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE SOILS REPORT. UPON COMPLETION OF WORK THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.

2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS, THE VARIOUS AGENCIES AND PERMIT CONDITIONS. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.

ENVIRONMENTAL AND DRAINAGE

1. PRIOR TO AND DURING CONSTRUCTION, THE CONTRACTOR SHALL ENSURE POLLUTING, SILTING OR DISTURBING TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY ABOVE 29 NTU, ABOVE BACKGROUND LEVELS AT THE WATER QUALITY SAMPLING STATION. TURBIDITY CONTROL DEVICES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS TO ENSURE THAT CONSTRUCTION GENERATED TURBIDITY IS CONTAINED WITHIN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE INSPECTION REPORT TO THE OWNER'S AUTHORIZED REPRESENTATIVE (O.A.R.) WITHIN 24 HOURS OF THE INSPECTION. ALL TURBIDITY CONTROL DEVICES SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETE, AND WORK AREAS HAVE BEEN STABILIZED. AT NO TIME SHALL THE CONSTRUCTION SITE RUNOFF OR DEWATERING ACTIVITY RESULT IN EXCEEDING THE WATER QUALITY STANDARDS AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY(EPA) OR THE LOCAL WATER MANAGEMENT DISTRICT. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE OWNER'S AUTHORIZED REPRESENTATIVE (O.A.R.) FOR REVIEW AND APPROVAL, WITHIN TEN (10) DAYS OF NOTICE TO PROCEED, A WATER QUALITY CONTROL, MONITORING, MAINTENANCE AND REMEDIAL ACTION PLAN TO BE IMPLEMENTED BY THE CONTRACTOR DURING PERFORMANCE OF THE WORK. THIS WATER QUALITY CONTROL, MONITORING, MAINTENANCE AND REMEDIAL ACTION PLAN SHALL BE APPROVED BY THE O.A.R. PRIOR TO THE START OF CONSTRUCTION. ALL EROSION CONTROL MEASURES APPROVED BY THE O.A.R. MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. MONITORING TESTS SHALL BE CONDUCTED TWICE DAILY AT EACH POINT OF DISCHARGE DURING CONSTRUCTION. ALL MONITORING DATA SHALL BE SUBMITTED TO THE (O.A.R.) IN REPORT FORM WITHIN 24 HOURS OF ANALYSIS WITH DOCUMENTS CONTAINING THE FOLLOWING INFORMATION: (1) CERTIFIED TEST RESULTS (2) PERMIT NUMBER; (3) DATES OF SAMPLING AND ANALYSIS; (4) A STATEMENT DESCRIBING THE METHODS USED IN COLLECTION, HANDLING, STORAGE AND ANALYSIS OF THE SAMPLES; (5) A MAP INDICATING THE SAMPLING LOCATIONS AND (6) A STATEMENT BY THE INDIVIDUAL RESPONSIBLE FOR IMPLEMENTATION OF THE SAMPLING PROGRAM CONCERNING THE AUTHENTICITY, PRECISION, LIMITS OF DETECTION AND ACCURACY OF THE DATA. MONITORING REPORTS SHALL ALSO INCLUDE THE FOLLOWING INFORMATION FOR EACH SAMPLE THAT IS TAKEN:

   A. TIME OF DAY SAMPLES TAKEN.
   B. DEPTH OF WATER BODY.
   C. DEPTH OF SAMPLE; AND
   D. ANTECEDENT WEATHER CONDITIONS.

   THE OWNERS AUTHORIZED REPRESENTATIVE SHALL MONITOR THE IMPLEMENTATION OF THE PLAN FOR COMPLIANCE WITH THESE CONTRACT DOCUMENTS AND THE PERMITS ISSUED BY THE WATER MANAGEMENT DISTRICT. FAILURE TO COMPLY WITH STATE AND FEDERAL WATER QUALITY STANDARDS AT POINTS OF DISCHARGE INTO OFF PROJECT WATER BODIES OR JURISDICTIONAL WETLANDS SHALL CAUSE A STOP WORK ORDER TO THE CONTRACTOR BY THE O.A.R. SUCH ORDER SHALL BE IN EFFECT FOR THE ENTIRE PROJECT AND SHALL REMAIN IN EFFECT UNTIL THE CONTRACTOR DEMONSTRATES THAT THE WATER QUALITY AT THE AFFECTED POINT(S) HAS BEEN RESTORED TO ACCEPTABLE CONDITIONS. THE CONTRACTOR SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION OR TIME EXTENSION(S) DUE TO STOP WORK ORDER(S) ISSUED UNDER THIS PARAGRAPH.

   THE OWNER MAY CHOOSE TO UTILIZE THEIR OWN TESTING LABORATORY FIRM TO VERIFY THE CONTRACTORS' LAB TESTS.

2. IN ADDITION TO THE TURBIDITY AND EROSION CONTROL MEASURES SPECIFIED ABOVE, BEST MANAGEMENT PRACTICES FOR EROSION AND TURBIDITY CONTROL SHALL BE UTILIZED AT ALL TIMES DURING CONSTRUCTION. THESE PRACTICES SHALL INCLUDE THE USE AND MAINTENANCE OF STAKED HAY BALES, STAKED FILTER CLOTH AND OTHER SUITABLE MEANS SURROUNDING ALL CONSTRUCTION AREAS SUBJECT TO EROSION AS WELL AS THE USE OF FLOATING OR STAKED TURBIDITY SCREENS WHERE APPROPRIATE TO ISOLATE CONSTRUCTION AREAS FROM ADJACENT SURFACE WATERS. THE CONTRACTOR SHALL PROVIDE DAILY INSPECTION OF THE EROSION PROTECTION BARRIERS AND MAINTAIN THEM THROUGHOUT THE PERIOD OF CONSTRUCTION.

3. ALL SOD SHALL BE PLACED IN A STAGGERED PATTERN. SOD ON SLOPES STEEPER THAN 5:1 SHALL BE STAKED WITH WOODEN PEGS.

4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS IN EFFECT AT THE TIME OF BIDDING THAT ARE REQUIRED BY THE COUNTY OF ORANGE, THE STEWART INTERNATIONAL AIRPORT, THE FEDERAL AVIATION ADMINISTRATION (FAA), AND/OR THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) AND SHALL ADHERE TO THE MOST STRINGENT STANDARD.

5. THE LOCATION OF ALL EXISTING UTILITIES, AS SHOWN ON THESE PLANS, HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND FIELD VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL COORDINATE ALL NECESSARY LOCATIONS WITH THE PROPER UTILITY COMPANY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND REPAIRING ANY DAMAGE TO UTILITIES DURING CONSTRUCTION WITH NO ADDITIONAL PAY COMPENSATION.

6. PROJECT PAY ITEMS - THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL INCIDENTAL WORK REQUIRED TO COMPLETE THE PROJECT IS TO BE INCLUDED IN THE COSTS OF PERFORMING THESE ITEMS.

7. THE CONTRACTOR SHALL CONDUCT THEIR ACTIVITIES IN A SAFE AND SECURE MANNER AS SPECIFIED IN THE CONTRACTOR'S SAFETY AND SECURITY REQUIREMENTS.

8. ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION AREAS, STAGING AREAS OR HAUL ROUTES.

9. UNDERGROUND IMPROVEMENTS (I.E. STORM SEWER, SANITARY SEWER, ETC.). ALL CONFLICTS SHALL BE PRESENTED TO THE O.A.R. AT LEAST THIRTY (30) DAYS PRIOR TO THE START OF THE CONFLICTING IMPROVEMENT.

10. IF THE CONTRACTOR'S ACTIVITIES ARE DEEMED TO BE A HAZARD TO THE AIRFIELD, AVIATION OR VEHICULAR OPERATIONS BY THE O.A.R., THE O.A.R. SHALL ISSUE A STOP WORK ORDER TO THE CONTRACTOR. SUCH AN ORDER SHALL BE IN EFFECT UNTIL THE CONTRACTOR DEMONSTRATES THAT HAZARDOUS CONDITIONS HAVE BEEN ELIMINATED.

11. THE CONTRACTOR SHALL SUBMIT A DRAINAGE PLAN DESIGNED TO MAINTAIN OFF-PROJECT DRAINAGE THROUGH THE PROJECT SITE DURING CONSTRUCTION. THE PLAN SHALL INCLUDE BOTH CONVEYANCE AND EROSION CONTROL FOR ALL OFF-PROJECT RUNOFF AND UP STREAM POND DISCHARGE ENTERING THE PROJECT SITE. THESE PLANS SHALL BE SUBMITTED TO AND APPROVED BY THE O.A.R. PRIOR TO THE START OF CONSTRUCTION.

12. THE OFF-PROJECT DRAINAGE PLAN REFERENCED ABOVE SHALL BE INSTALLED AND APPROVED BY THE O.A.R. PRIOR TO THE START OF PROJECT CLEARING, GRUBBING AND EARTHWORK.

13. TEMPORARY DRAINS AND DRAINAGE DITCHES SHALL BE INSTALLED BY THE CONTRACTOR TO INTERCEPT OR DIVERT SURFACE WATER RUNOFF WHICH MAY AFFECT THE WORK. THESE DRAINS AND DITCHES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE CONTRACT. THE CONTRACTOR SHALL ALSO MAINTAIN THE WATER QUALITY STANDARDS (AS OUTLINED IN THE ENVIRONMENTAL AND DRAINAGE GENERAL NOTES 1 & 2), THROUGHOUT THE DURATION OF THE CONTRACT. THE CONTRACTOR SHALL RESTORE THE SITE TO IT'S ORIGINAL CONDITION UPON COMPLETION OF THE CONTRACT UNLESS OTHERWISE SPECIFIED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

PAVING, GRADING AND DRAINAGE

1. EXCAVATION, BACKFILLING, AND FILLING SHALL ADHERE TO PA SPECIFICATION 312323.

2. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THE GEOTECHNICAL REPORT PREPARED BY ANS GEO INC.

3. THE PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.

4. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. THE CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY THE OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING, AND IRRIGATION REQUIREMENTS.

5. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO THE START OF CONSTRUCTION.

6. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES.

7. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A REGISTERED LAND SURVEYOR.

8. FINAL GRADES SHOWN INCLUDE SOD HEIGHT.

9. THE CONTRACTOR SHALL MEET ALL APPLICABLE LOCAL AND FEDERAL LAWS WHEN DISPOSING OILS OR OTHER FLUIDS REMOVED FROM EQUIPMENT BEING SERVICED ON THE AIRPORT PROPERTY. IMMEDIATELY CLEAN ANY SPILLS AND DISPOSE THE MATERIAL OFF AIRPORT PROPERTY AT APPROVED DESIGNATED AREAS.

10. IF THE CONTRACTOR ENCOUNTERS OIL STAINS, UNUSUAL ODORS, OR BURIED WASTE, WORK SHALL BE STOPPED AND THE CONSTRUCTION MANAGER SHALL BE NOTIFIED IMMEDIATELY.

11. THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER AS TO PREVENT THE ENTRY OF FUELS, OILS, BITUMINOUS MATERIALS, CHEMICALS, SEWAGE OR OTHER HARMFUL MATERIALS INTO STREAMS, RIVERS, LAKES OR RESERVOIRS.

12. THE CONTRACTOR SHALL PROTECT EXITING FENCING, LIGHT POLES AND GATES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE FOR WHICH CONTRACTOR IS RESPONSIBLE AT CONTRACTOR'S EXPENSE.

13. THE CONTRACTOR SHALL SUBMIT A QUALITY CONTROL PLAN FOR OWNER'S REVIEW AND APPROVAL FOR MAJOR ITEMS OF WORK SUCH AS ASPHALT PAVING, BASE PLACEMENT, AND SUBGRADE PREPARATION. A QUALITY CONTROL OFFICER SHALL BE DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE OWNER. ALL COSTS ASSOCIATED WITH PREPARING THE QUALITY CONTROL PLAN AND QUALITY CONTROL TESTING SHALL BE INCLUDED IN THE UNIT PRICE FOR THE WORK ITEM AND PAID FOR BY THE CONTRACTOR.

DEFINITIONS

OBJECT FREE AREA (OFA). AN AREA ON THE GROUND CENTERED ON THE RUNWAY, TAXIWAY, OR TAXILANE CENTERLINE PROVIDED TO ENHANCE SAFETY OF AIRCRAFT OPERATIONS BY HAVING THE AREA FREE OF OBJECTS EXCEPT FOR THOSE OBJECTS THAT NEED TO BE LOCATED IN THE OFA FOR AIR NAVIGATION OR AIRCRAFT GROUND MANEUVERING PURPOSES. NO PERSONNEL, EQUIPMENT OR VEHICLES SHALL ENTER ANY ACTIVE TAXIWAY OFA WITHOUT APPROVAL FROM THE AIR TRAFFIC CONTROL TOWER.

OBSTACLE-FREE ZONE (OFZ). THE AIRSPACE ALONG THE RUNWAY AND EXTENDED RUNWAY CENTERLINE THAT IS REQUIRED TO BE CLEAR OF ALL OBJECTS, EXCEPT FOR FRANGIBLE VISUAL NAVAIDS THAT NEED TO BE LOCATED IN THE OFZ BECAUSE OF THEIR FUNCTION, IN ORDER TO PROVIDE CLEARANCE PROTECTION FOR AIRCRAFT LANDING OR TAKING OFF FROM THE RUNWAY AND FOR MISSED APPROACHES. WORK WITHIN THE OFZ IS ONLY PERMITTED DURING PERIODS OF THE RUNWAY CLOSURE.

PART 77 SURFACES. IMAGINARY SURFACES WITH THE PRIMARY SURFACES CENTERED ALONG THE RUNWAY CENTERLINE PLUS TRANSITIONAL SURFACES THAT LIMIT THE HEIGHTS OF OBSTRUCTIONS, INCLUDING CONSTRUCTION EQUIPMENT.

RUNWAY SAFETY AREA (RSA) . A DEFINED SURFACE SURROUNDING THE RUNWAY PREPARED OR SUITABLE FOR REDUCING THE RISK OF DAMAGE TO AIRPLANES IN THE EVENT OF AN UNDERSHOOT, OVERSHOOT OR EXCURSION FROM THE RUNWAY. WORK WITHIN THESE LIMITS SHALL BE LIMITED TO PERIODS OF RUNWAY CLOSURE WHICH SHALL GENERALLY OCCUR AT NIGHT FROM 9 PM TO 7 AM WHEN RUNWAY IS NOT CLOSED ON A 24 HOUR A DAY BASIS.

TAXIWAY SAFETY AREA (TSA). A DEFINED SURFACE ALONGSIDE THE TAXIWAY PREPARED OR SUITABLE FOR REDUCING THE RISK OF DAMAGE TO AN AIRPLANE UNINTENTIONALLY DEPARTING THE TAXIWAY. NO WORK SHALL OCCUR WITHIN ANY ACTIVE TAXIWAY SAFETY AREA. TAXIWAYS SHALL BE CLOSED IN ACCORDANCE WITH THE SAFETY AND SECURITY NOTES AND DETAILS CONTAINED HEREIN FOR ANY WORK REQUIRED WITHIN THE TSA.

DISPLACED THRESHOLD. THE PORTION OF PAVEMENT BEHIND THE DISPLACED THRESHOLD THAT MAY BE AVAILABLE FOR TAKEOFFS IN EITHER DIRECTION.

RUNWAY PROTECTION ZONE (RPZ) . AN AREA OFF THE RUNWAY END TO ENHANCE THE PROTECTION OF PEOPLE AND PROPERTY ON THE GROUND.

THRESHOLD. THE BEGINNING OF THAT PORTION OF THE RUNWAY AVAILABLE FOR LANDING. IN SOME INSTANCES, THE LANDING THRESHOLD MAY BE DISPLACED. CONSTRUCTION MANAGER. CONSTRUCTION MANAGER IS THE ENGINEER/ENGINEERING & CAPITAL IMPROVEMENTS DIRECTOR AS FURTHER DEFINED IN ARTICLE G-1 "DEFINITION OF TERMS" OF THE CONTRACT STANDARDS.

DRAINAGE SYSTEM TESTING AND INSPECTION

1. THE STORM DRAINAGE PIPING SYSTEM SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.

2. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE REINSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.

PROJECT RECORD DRAWINGS NOTES

1. CONSTRUCTION DOCUMENTS AND AS-BUILT DRAWINGS - COMPLETE AS-BUILT INFORMATION RELATIVE TO LOCATIONS AND ELEVATIONS OF STRUCTURES, LENGTHS AND INVERT OF PIPES, AND THE LIKE SHALL BE ACCURATELY RECORDED AND SUBMITTED TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE WORK. ALL INFORMATION SHALL BE ACQUIRED BY A REGISTERED LAND SURVEYOR AND INCLUDED IN A COMPLETE SIGNED AND SEALED AS-BUILT DRAWING SET.

2. THE CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT SET AT THE JOB SITE. THESE SHALL BE KEPT LEGIBLE AND CURRENT AS WELL AS BE AVAILABLE FOR INSPECTION AT ALL TIMES BY THE CONSTRUCTION MANAGER. SHOW ALL CHANGES OR WORK ADDED ON THESE RECORD DRAWINGS IN A CONTRASTING COLOR.

3. MARK-UP PROCEDURE - DURING PROGRESSION OF THE WORK, MAINTAIN A WHITE-PRINT SET OF CONTRACT DRAWINGS (BLUE-LINE OR BLACK-LINE) AND DRAWINGS WITH MARK-UPS OF ACTUAL INSTALLATIONS, WHICH VARY SUBSTANTIALLY FROM THE WORK, AS ORIGINALLY SHOWN. MARK THE APPROPRIATE DRAWING DEPICTING THE CURRENT PHYSICAL CONDITION FULLY AND ACCURATELY. MARKED-UP SHOP DRAWINGS SHALL BE CROSS-REFERENCED WITH CONTRACT DRAWINGS AT THE CORRESPONDING LOCATION. MARK WITH ERASABLE COLORED PENCIL, USING SEPARATE COLORS WHEN FEASIBLE TO DISTINGUISH BETWEEN CHANGES FOR DIFFERENT CATEGORIES OF WORK IN THE SAME LOCATION. MARK-UP ANY ADDITIONAL IMPORTANT INFORMATION, WHICH WAS EITHER SHOWN SCHEMATICALLY OR OMITTED FROM THE ORIGINAL DRAWINGS. PROVIDE ACCURATE INFORMATION ON CONCEALED WORK, SUCH AS WIRES OR UNDERGROUND PIPING, AT THE TIME OF THE PROJECT BECAUSE IT WILL BE DIFFICULT TO IDENTIFY OR MEASURE AT A LATER DATE. NOTE ALL ALTERNATE NUMBERS, CHANGE ORDER NUMBERS, AND SIMILAR IDENTIFICATION INFORMATION. REQUIRE EACH WORKER PREPARING MARK-UPS TO INITIAL AND DATE THE MARK-UP AS WELL AS INDICATE THE NAME OF THE FIRM. LABEL EACH SHEET "PROJECT RECORD" IN 1-1/2 INCH-HIGH LETTERS.

4. WHEN SHOWING CHANGES IN THE WORK, USE THE SAME LEGENDS AS USED ON THE ORIGINAL DRAWINGS. INDICATE EXACT LOCATIONS WITH DIMENSIONS AND EXACT ELEVATIONS FROM THE JOB DATUM. PROVIDE DIMENSIONS FROM A PERMANENT POINT.

5. THE CONTRACTOR SHALL SUBMIT BOTH SIGNED AND SEALED FULL SIZE AS-BUILT PLANS, DIGITAL AUTOCAD SURVEY FILES, AND A DIGITAL 3-DIMENSIONAL TOPOGRAPHIC MAP OF THE FACILITIES, SHOWING FINISHED GRADING. THESE DOCUMENTS WILL INCLUDE VERIFICATION OF ALL CONSTRUCTED FEATURES, LOCATIONS, AND CALLOUTS OF NEW FEATURES OR THOSE ADDED DURING CONSTRUCTION THAT DIFFER FROM THE ORIGINAL PLANS. THE DOCUMENTATION SHALL BE CONDUCTED BY A REGISTERED SURVEYOR AND BE CONTAINED ON ONE SET OF PLAN SHEETS LABELING RECORD DRAWING LOCATIONS OF UTILITIES (LOCATION AND DEPTH).

ACCESS AND STAG

MANAGEMENT OF EXCAVATED MATERIAL

1. SOIL TO BE EXCAVATED IS CLASSIFIED AS NON-HAZARDOUS CONTAMINATED HISTORIC FILL. REUSE EXCAVATED SOIL ON SITE DEEMED SUITABLE BY THE ENGINEER TO SATISFY GEOTECHNICAL OR STRUCTURAL REQUIREMENTS SPECIFIED ELSEWHERE AS PART OF THIS CONTRACT. ADDITIONALLY, SEGREGATE ALL EXCAVATED SOIL. SOIL THAT EXHIBITS EVIDENCE OF CONTAMINATION INCLUDING, BUT NOT LIMITED TO, SHEENS, STAINING AND ODORS SHALL BE SEGREGATED FROM SOIL NOT EXHIBITING SUCH EVIDENCE AND SHALL NOT BE REUSED ON-SITE.

2. IT SHALL BE ASSUMED THAT THE CONTAMINANT CONCENTRATIONS MEET THE ACCEPTANCE CRITERIA OF SITES MEETING THE REQUIREMENTS SPECIFIED IN NOTE 3. BELOW. THE SOIL SHALL NOT BE CLASSIFIED, DISPOSED OF, OR REUSED AS CLEAN FILL OR RESIDENTIAL FILL REGARDLESS OF THE TESTING RESULTS. WITHIN 30 DAYS OF ACCEPTANCE OF THE CONTRACTOR'S BID, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A MINIMUM OF THREE DISPOSAL FACILITIES THAT MEET THE CRITERIA SPECIFIED IN NOTE 3, INCLUDING RATES FOR TRANSPORTATION AND DISPOSAL.

3. BENEFICIALLY REUSE OR DISPOSE OF SOIL EXCAVATED UNDER THIS CONTRACT THAT IS EITHER EXCESS OR NOT SUITABLE (GEOTECHNICALLY OR STRUCTURALLY) FOR ON-SITE REUSE, AS RESTRICTED FILL ONLY AT SITES THAT ARE REGULATED BY A STATE AGENCY (E.G., BROWNFIELD, LANDFILL) AND HAVE A MATERIAL ACCEPTANCE PROTOCOL FOR SOIL AND A PERMIT APPROVED BY THAT STATE AGENCY. THE PROTOCOL SHALL INCLUDE APPLICATION FORMS, CERTIFICATION FORMS, SAMPLING REQUIREMENTS, AND ALLOWABLE CONCENTRATION LIMITS FOR ALL REGULATED PARAMETERS. SUBMIT THE PERMIT AND MATERIAL ACCEPTANCE PROTOCOL TO THE ENGINEER FOR APPROVAL. MINE RECLAMATION DISPOSAL OR REUSE FACILITIES IN NEW YORK STATE ARE NOT ACCEPTABLE. DISPOSAL OR REUSE FACILITIES PERMITTED UNDER 6 CRR-NY PART 360 ARE NOT ACCEPTABLE. SITES APPROVED BY A NEW JERSEY LICENSED SITE REMEDIATION PROFESSIONAL (LSRP) AS PART OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP) SITE REMEDIATION PROGRAM ARE NOT ACCEPTABLE.

4. SUBMIT TO THE ENGINEER FOR APPROVAL A SOIL STOCKPILE SAMPLING PLAN AT LEAST 2 WEEKS PRIOR TO THE DATE OF THE SAMPLING ACTIVITY. NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO THE COLLECTION OF SOIL SAMPLES. PERFORM REQUIRED SOIL SAMPLING AND TESTING IN ACCORDANCE WITH THE APPROVED STOCKPILE SAMPLING PLAN. ONCE A SOIL STOCKPILE HAS BEEN SAMPLED, ADDITIONAL SOIL MAY NOT BE ADDED TO IT; A NEW SOIL STOCKPILE SHALL BE CREATED.

5. SUBMIT TO THE ENGINEER FOR APPROVAL A SOIL STOCKPILE MANAGEMENT PLAN DESCRIBING MEASURES FOR SOIL CONTAINMENT WITHIN THE STOCKPILE AREA AND MAINTENANCE OF THE STOCKPILE AREA. MANAGE THE STOCKPILE TO REDUCE THE POTENTIAL FOR FUGITIVE EMISSIONS AND RUNOFF FROM THE STOCKPILE.

6. SUBMIT TO THE ENGINEER FOR APPROVAL, PRIOR TO THE REMOVAL OF SOIL OFF SITE, THE SUMMARY OF ANALYTICAL DATA COMPILED, LABORATORY ANALYTICAL DATA REPORT, REUSE OR DISPOSAL APPLICATION, AND REUSE APPROVAL OR DISPOSAL FACILITY ACCEPTANCE LETTER. THE SUMMARY OF ANALYTICAL DATA SHALL BE IN A SPREADSHEET TABLE FORMAT AND SHALLINCLUDE AT A MINIMUM THE FOLLOWING COLUMNS: PARAMETERS, CONCENTRATION RESULTS, FACILITY ACCEPTANCE CRITERIA, NEW JERSEY NON- RESIDENTIAL DIRECT CONTACT SOIL REMEDIATION STANDARDS, METHOD DETECTION LIMITS, QUALIFIERS, AND DATE(S) ANALYZED.

7. SUBMIT TO THE ENGINEER FOR APPROVAL INFORMATION ON THE TRANSPORTERS OF SOIL MATERIALS, INCLUDING CURRENT APPLICABLE STATE ISSUED WASTE TRANSPORTERS PERMITS AT LEAST 2 WEEKS PRIOR TO THE COMMENCEMENT OF TRUCKING ACTIVITIES.

8. SUBMIT DOCUMENTATION OF REUSE OR DISPOSAL OF SOIL MATERIALS (E.G., EXECUTED MANIFESTS, BILLS OF LADING) FOR ALL SOIL MATERIAL REMOVED AND TRANSPORTED FROM THE SITE. DOCUMENTS WILL BE SIGNED BY THE ENGINEER PRIOR TO THE REMOVAL OF SOIL OFF-SITE. EXECUTED MANIFESTS OR BILLS OF LADING SHALL BE SIGNED BY THE RECEIVING FACILITY. SUBMIT TO THE ENGINEER FOR APPROVAL COPIES OF MANIFESTS OR BILLS OF LADING, WITH ATTACHED CERTIFIED WEIGHT TICKETS, TO THE ENGINEER WITHIN 72 HOURS OF THE TRANSPORTATION OF SOIL OFF-SITE.

NEW YORK DEWATERING DISCHARGE NOTES

1. SUBMIT TO THE ENGINEER A DEWATERING DISCHARGE AND TREATMENT PLAN FOR APPROVAL. THE PLAN SHALL INCLUDE BUT NOT BE LIMITED TO, A GROUNDWATER DISCHARGE PLAN WITH MEANS AND METHODS, A CONTINGENCY PLAN FOR THE HANDLING OF PETROLEUM AND GENERAL PROCEDURES. THE PLAN SHALL INCLUDE BEST MANAGEMENT PRACTICES TO MINIMIZE POLLUTANTS AS REQUIRED IN NOTE 8 BELOW.

2. SOIL SEDIMENT FILTRATION BAGS SHALL BE USED INLINE WITH SETTLING TANKS OR FRACTIONATING TANKS AS NECESSARY PRIOR TO DISCHARGE OF GROUNDWATER TO CATCH BASINS OR SURFACE WATER. FURNISH AND INSTALL SETTLING OR FRACTIONATING TANKS THAT PROVIDE A MINIMUM 15 MINUTE WATER RETENTION TIME. FURNISH AND INSTALL DEWATERING FILTER BAGS CONSTRUCTED OF NON-WOVEN GEOTEXTILE AND CAPABLE OF FILTERING PARTICLES GREATER THAN 150 MICRONS.

3. DISCHARGE ALL EFFLUENT TO A CATCH BASIN APPROVED BY THE ENGINEER. THE CONTRACTOR MAY SUBMIT FOR APPROVAL AN ALTERNATE PLAN TO RECHARGE DEWATERING EFFLUENT ON SITE TO GROUNDWATER THROUGH INFILTRATION TRENCHES, INJECTION WELLS, OR OTHER APPROPRIATE METHODS. EFFLUENT SHALL NOT BE DISCHARGED THROUGH WETLANDS, PAVEMENT OR OTHER ADJACENT AREAS AND SHALL NOT CAUSE FLOODING OR PONDING ON SITE OR IN ADJACENT AREAS.

4. IF EFFLUENT FROM DEWATERING OPERATIONS EXHIBITS EVIDENCE OF PETROLEUM CONTAMINATION SUCH AS SHEEN, LIQUID-PHASE PRODUCT, ODOR OR FLOATABLES, THE CONTRACTOR SHALL CEASE DEWATERING OPERATIONS AND CONTACT THE ENGINEER.

5. THE CONTRACTOR SHALL ENSURE ALL NECESSARY PRECAUTIONS ARE TAKEN TO PRECLUDE CONTAMINATION OF ANY WETLAND OR WATERWAY BY SUSPENDED SOLIDS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, PAINTS, CONCRETE, LEACHATE OR ANY OTHER ENVIRONMENTALLY DELETERIOUS MATERIALS ASSOCIATED WITH THE PROJECT.

6. DEWATER THE EXCAVATION USING EITHER SUMPS OR WELL POINTS. THE EXCAVATION SHALL BE DEWATERED TO THE LIMITS OF EXCAVATION AND NO GREATER.

7. DURING EXCAVATION THE COMBINED RATED CAPACITY OF THE CONTRACTORS PUMPS ASSOCIATED WITH DEWATERING WELLS SHALL NOT EXCEED 45 GALLONS PER MINUTE. IF THIS PUMPING RATE IS EXCEEDED, THE CONTRACTOR SHALL OBTAIN A LONG ISLAND WATER WELL PERMIT IN NO EVENT SHALL THE DELAYS ENCOUNTERED IN OBTAINING SUCH A PERMIT BE A CAUSE FOR THE EXTENSION FOR THE COMPLETION OF THE WORK OF THE CONTRACTOR.

8. BEST MANAGEMENT PRACTICES MUST BE EMPLOYED TO PREVENT THE LOSS OF CONSTRUCTION MATERIALS, DEBRIS AND SEDIMENTS FROM ENTERING SURFACE WATER. SUCH PRACTICES MAY INCLUDE BUT ARE NOT LIMITED TO, CONSTRUCTION FENCING, STAKED HAY BALES, FILTER FABRIC, AND SILT FENCING.

9. SAMPLES OF THE DEWATERING EFFLUENT SHALL BE COLLECTED AT THE START OF DEWATERING. THE SAMPLES SHALL BE ANALYZED FOR THE SPDES PERMIT PARAMETERS. A 24-HOUR LABORATORY TURN-AROUND TIME SHALL BE REQUIRED. IF THE EFFLUENT SAMPLES EXCEED THE DISCHARGE CRITERIA LISTED BELOW, THE CONTRACTOR WILL BE REQUIRED TO EITHER TREAT THE EFFLUENT TO MEET STANDARDS OR TO DISPOSE OF THE WATER OFF SITE. INPUT THE INFORMATION FROM THE SPDES PERMIT INTO THIS TABLE

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN COMPLETED BY THE ENGINEER FOR THIS CONTRACT AND MUST BE IMPLEMENTED DURING CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE FOR IMPLEMETING THE REQUIREMENTS OF THE SWPPP AND THE REQUIREMENTS SET FORTH IN THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY PERMIT NO. GP-0-20-001.

2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES IMPLEMENTED AT THE CONSTRUCTION SITE SHALL BE IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" CURRENT EDITION), NYSDEC "NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL" (CURRENT EDITION) AND THE SWPPP. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN THEIR PROPER SEQUENCE BY THE CONTRACTOR PRIOR TO ANY MAJOR SOIL DISTURBANCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

3. REPAIR ALL DAMAGE INCURRED BY SOIL EROSION TO THE SATISFACTION OF THE ENGINEER.

4. MAINTAIN THE CONSTRUCTION SITE SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL DEVICES.

5. ERECT TEMPORARY EROSION CONTROL MEASURES AS DESCRIBED IN THE SWPPP AND/OR AS REQUIRED TO INTERCEPT AND DETAIN SEDIMENT DUE TO CONSTRUCTION ACTIVITIES.

6. IMMEDIATELY REMOVE ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT–OF–WAYS, AT NO ADDITIONAL COST TO THE LEASEHOLDER. PAVED ROADWAYS SHALL BE KEPT CLEAN AT ALL TIMES.

7. INSTALL A CRUSHED STONE, STABILIZED CONSTRUCTION ENTRANCE WHEREVER A CONSTRUCTION ACCESS INTERSECTS ANY PAVED SURFACE. VEHICLE TRACKING PAD SHALL BE CLEAN, CRUSHED STONE, 6-INCH THICK, AND AT LEAST 12 FEET WIDE BY 50 FEET LONG. IF IT'S NOT PRACTICAL TO INSTALL A STABILIZED CONSTRUCTION ENTRANCE, AN ALTERNATE METHOD TO PREVENT SOIL AND SEDIMENT FROM BEING TRACKED OFF THE CONSTRUCTION SITE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

8. SUBMIT FOR APPROVAL WITHIN 30 DAYS OF ACCEPTANCE OF THE CONTRACTOR'S BID A SITE-SPECIFIC SOIL EROSION AND SEDIMENT CONTROL PLAN IN CONFORMANCE WITH THE NYSDEC PERMIT NO. GP-0-20-001, THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" (CURRENT EDITION), THE "NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL" (CURRENT EDITION) AND THE SWPPP.

9. THE CONTRACTOR SHALL INSPECT, MAINTAIN, REMOVE AND DISPOSE OF TEMPORARY SEDIMENT BARRIERS AND ACCUMULATED SEDIMENT AT NO ADDITIONAL COST TO THE LEASEHOLDER. DAMAGED BARRIERS SHALL BE REPAIRED IMMEDIATELY.

10. REMOVE SEDIMENT BARRIERS ONLY AFTER UPSLOPE SURFACES HAVE BEEN STABILIZED AND/OR RESTORED. REMOVE BARRIER AND ACCUMULATED SILT TO FINISHED GRADE, AND RESTORE SURFACE TO PRE-EXISTING CONDITION OR AS SHOWN ON THE CONTRACT DRAWINGS.

11. THE CONTRACTOR SHALL PROVIDE A "TRAINED CONTRACTOR" AS DEFINED IN THE NYSDEC STORMWATER RULES AND THE NYSDEC PERMIT NO. GP-0-20-001 (SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY) TO BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE SWPPP PRACTICES. THE TRAINED CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING DEFICIENCIES, IMPLEMENTING CORRECTIVE ACTIONS WITHIN ONE BUSINESS DAY AND COMPLETING THE CORRECTIVE ACTION IN A REASONABLE TIME FRAME AS AGREED TO BY THE ENGINEER. WITHIN 30 DAYS OF ACCEPTANCE OF THE CONTRACTOR'S BID, SUBMIT TO THE ENGINEER FOR APPROVAL A COPY OF THE CERTIFICATE OF EROSION AND SEDIMENT CONTROL TRAINING FOR THE TRAINED CONTRACTOR(S).

12. THE CONTRACTOR SHALL PROVIDE A "QUALIFIED INSPECTOR" AS DEFINED IN THE NYSDEC STORMWATER RULES AND THE NYSDEC PERMIT GP-0-20-001 TO CONDUCT THE SITE INSPECTIONS AS SPECIFIED IN THE SWPPP AND AS REQUIRED BY THE NYSDEC PERMIT NO. GP-0-20-001. THE QUALIFIED INSPECTOR SHALL CONDUCT 2 INSPECTIONS WITHIN A 7-DAY PERIOD SEPARATED BY A MINIMUM OF 2 FULL CALENDAR DAYS. WITHIN 30 DAYS OF ACCEPTANCE OF THE CONTRACTOR'S BID, SUBMIT TO THE ENGINEER FOR APPROVAL THE QUALIFICATIONS AND CERTIFICATIONS OF THE QUALIFIED INSPECTOR(S).

13. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER ON A WEEKLY BASIS ELECTRONIC COPIES OF THE INSPECTION REPORTS PREPARED BY THE QUALIFIED INSPECTOR AND REPORTS ON REPAIRS/CORRECTIONS MADE, INCLUDING COLOR PHOTOGRAPHS AND INDICATION OF THE ELAPSED TIME BETWEEN THE IDENTIFICATION OF THE DEFICIENCY AND THE COMPLETION OF THE REPAIR MADE TO THE STORMWATER PROTECTION PRACTICES DURING CONSTRUCTION. THE INSPECTION REPORTS SHALL BE CERTIFIED AS ACCURATE BY A NEW YORK STATE PROFESSIONAL ENGINEER.

14. 14. THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER IN WRITING AND SHALL ENSURE ALL SUBCONTRACTORS HAVE READ AND WILL COMPLY WITH THE SWPPP.

CLEAN FILL NOTES

1. ALL IMPORTED BACKFILL MATERIAL (SOIL, STONE, ETC.) BROUGHT ON THE CONSTRUCTION SITE SHALL BE CERTIFIED CLEAN MATERIAL ACQUIRED FROM AN ENTITY PERMITTED TO PROVIDE SUCH CERTIFIED CLEAN MATERIAL. THE MATERIAL SHALL BE SAMPLED AND ANALYZED PRIOR TO USE ON THE CONSTRUCTION SITE OR THE PREMISES TO FULLY CHARACTERIZE THE PRESENCE OF ANY CONTAMINANTS; HOWEVER, CRUSHED STONE FROM A VIRGIN QUARRY SOURCE MAY BE IMPORTED WITHOUT ANALYTICAL RESULTS. SUBMIT TO THE _____ WRITTEN DOCUMENTATION INDICATING THE CONCENTRATION OF CHEMICAL CONSTITUENTS CONTAINED IN THE OFFSITE FILL MATERIAL. THE MATERIAL BROUGHT ON THE CONSTRUCTION SITE MUST MEET THE PHYSICAL CRITERIA AND MAXIMUM CONTAMINANT LEVELS OF GENERAL FILL DEFINED IN 6 NYCRR PART 360.13(F), UNLESS OTHERWISE APPROVED BY THE _____. THE IMPORTED MATERIAL SAMPLING PLAN MUST INCLUDE TESTING FOR PRESENCE OF 1,4-DIOXANE AND PFAS (I.E., PER- AND POLYFLUOROALKYL SUBSTANCES) CONTAMINANTS. RECYCLED CONCRETE AGGREGATE (RCA) IS NOT APPROVED TO BE USED AS BACKFILL, ASPHALT MILLINGS ARE NOT APPROVED TO BE USED AS BACKFILL.

2. SUBMIT TO ENGINEER FOR APPROVAL ANALYTICAL RESULTS IN ACCORDANCE WITH THE SAMPLING AND ANALYSIS REQUIREMENTS DEFINED IN 6 NYCRR PART 360.13(e) FROM A NEW YORK STATE DEPARTMENT OF HEALTH CERTIFIED LABORATORY. THE FOLLOWING SHALL BE PROVIDED WITHOUT LIMITATION:
   a. ANALYTICAL DATA SHALL BE IN AN EXCEL SPREAD SHEET FORMAT THAT COMPARES THE DATA TO THE LOWER OF PROTECTION OF PUBLIC HEALTH- RESIDENTIAL LAND USE AND PROTECTION OF GROUNDWATER IN 6 NYCRR PART 375-6.8(b);
   b. A COMPLETED CHAIN OF CUSTODY FOR THE SAMPLES;
   c. A SAMPLING PLAN FOR THE SAMPLES COLLECTED;
   d. THE CERTIFICATIONS OF THE ENTITY COMPLETING THE SAMPLING,
   e. THE SOURCE OF THE MATERIAL; AND
   f. A STATEMENT FROM A PROFESSIONAL ENGINEER OR PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF NEW YORK THAT, TO THE BEST OF THE AFFIANT'S KNOWLEDGE AND BELIEF, THE FILL MATERIAL BEING PROVIDED DOES NOT EXCEED THE LOWER OF PROTECTION OF PUBLIC HEALTH-RESIDENTIAL LAND USE AND PROTECTION OF GROUNDWATER IN 6 NYCRR PART 375-6.8(b), AND A DESCRIPTION OF THE STEPS TO CONFIRM SUCH.

3. THE ENGINEER RESERVES THE RIGHT TO PERFORM QUALITY ASSURANCE TESTING TO CONFIRM COMPLIANCE OF FILL MATERIALS RECEIVED FROM EACH SOURCE OF SUCH MATERIAL. MATERIAL BROUGHT ON THE CONSTRUCTION SITE NOT IN COMPLIANCE SHALL BE REMOVED FROM THE CONSTRUCTION SITE AND REPLACED WITH ACCEPTABLE MATERIAL

ABBREVIATIONS

A/C	AIR CONDITIONERS
BOL	BOLLARD
BW	BOTTOM OF WALL
COL	COLLECTION
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
DEPT	DEPARTMENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
E	EAST
EL	ELEVATION
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EX.	EXISTING
EXIT.	EXISTING
F.F.E.	FINISH FLOOR ELEVATION
GIS	GEOGRAPHIC INFORMATION SYSTEM
INC	INCORPORATED
INV	INVERT
LF	LINEAR FEET
IRS	IRON ROD SET
MH	MANHOLE
MB	MAIL BOX
N.	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NO	NUMBER
N.T.S.	NOT TO SCALE
NY	NEW YORK
OH	OVERHEAD
PROP.	PROPOSED
PSA	PRESSURE SWING ABSORPTION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
R/W	RIGHT-OF-WAY
RCP	REINFORCED CONCRETE PIPE
S	SOUTH
SEP	SEPARATION
SQ.FT.	SQUARE FEET
TRAV	TRAVEL POINT
TYP.	TYPICAL
TW	TOP OF WALL
W	WEST
WM	WATER MAIN
#	NUMBER

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REVISIONS		
MARK	DESCRIPTION	DATE

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AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

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Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

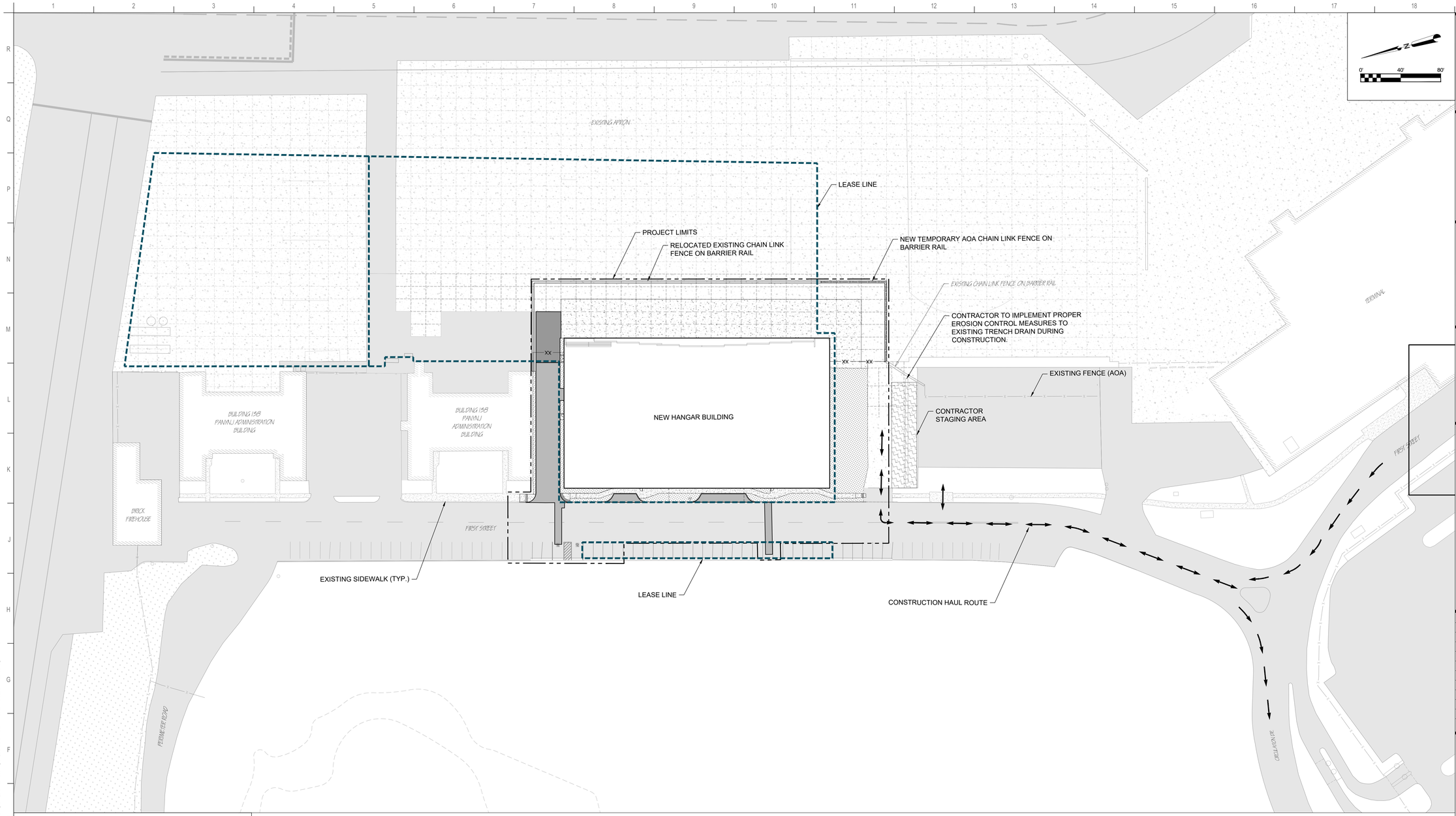
GENERAL NOTES AND ABBREVIATIONS

C003

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE (AOA)
- EXISTING CHAIN LINK FENCE
- NEW ASPHALT PAVEMENT
- NEW MILL AND OVERLAY PAVEMENT
- NEW CONCRETE
- NEW SOD
- CONTRACTOR STAGING AREA
- HAUL ROUTES/CONSTRUCTION ACCESS
- LEASE LANE
- XX XX NEW GALVANIZED STEEL CHAIN LINK FENCE

NOTES

1. SEE PHASING PLAN FOR ADDITIONAL HAUL ROUTE NOTES WITHIN SPECIFIC PROJECT PHASES.
2. REFER TO SAFETY AND SECURITY NOTES ON SHEET 050 FOR PROCEDURES ON SECURING THE AIR OPERATION AREA 9AOA) DURING CONSTRUCTION..
3. THE CONTRACTOR SHALL NOT HAUL MATERIALS OR EQUIPMENT ACROSS ANY ACTIVE RUNWAY OR TAXIWAY.
4. THE CONTRACTOR'S ACCESS TO THE CONSTRUCTION SITE AND HAUL ROADS ARE IDENTIFIED ON THE PLANS. THE CONTRACTOR SHALL NOT USE ANY ACCESS OR HAUL ROADS OTHER THAN THOSE APPROVED. THE CONTRACTOR MUST SUBMIT SPECIFIC PROPOSED ROUTES ASSOCIATED WITH CONSTRUCTION ACTIVITIES TO THE OWNER FOR EVALUATION AND APPROVAL AS PART OF THE SAFETY AND PHASING PLAN BEFORE BEGINNING CONSTRUCTION ACTIVITIES. THESE PROPOSED ROUTES MUST ALSO PROVIDE SPECIFICATIONS TO PREVENT INADVERTENT TO MOVEMENT AREAS. THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ENSURE THAT CONSTRUCTION TRAFFIC ON HUAL ROADS DOES NOT INTERFERE WITH AIRSPACE PROTECTION SURFACES OF OPERATIONAL RUNWAYS.
5. THE CONTRACTOR SHALL GIVE THE RIGHT-OF-WAY TO THE PUBLIC WHILE USING PUBLIC ROADS. THE CONTRACTOR SHALL NOT BLOCK ROADWAYS AND ACCESS TO BUSINESSES. THE CONTRACTOR SHALL PROVIDE FLAGGER TO DIRECT TRAFFIC IF TRUCKS OR VEHICLES ARE TEMPORARY APRKED ON PUBLIC OR AIRPORT OWNED ROADWAYS. MAINTENANCE OF TRAFFIC SHALL MEET ALL LOCAL REQUIREMENTS AND GUIDELINES.
6. ANY USE OF PRIVATE PROPERTY BY THE CONTRACTOR. INCLUDING PRIVATE OR LEASED ROADWAYS AND APRONS, SHALL BE COORDINATED IN ADVANCE WITH THE PROPERTY OWNER OR LEASE HOLDER FOR APPROVAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES FOR IMPROPER OR ILLEGAL USE OF PUBLIC OR PRIVATE PROPERTY IN THE PERFORMANCE OF THE WORK AT HIS/HER EXPENSE.
8. THE CONTRACTOR IS RESPONSIBLE FOR SECURING RGEIR STOCKPILE AND STAGING AREAS. EQUIPMENT, AND MATERIALS LOCATED ON AIRPORT PROPERTY.
9. TEMPORARY ROADS, HAULS, TRAFFIC AND WORK AREAS SHALL BE STABILIZED WITH DUST PALLIATIVE, PENETRATION ASPHALT, WOOD CHIPS, OR OTHER APPROVED MEASURES TO PREVENT OUST POLLUTION.
10. THE MAXIMUM ALLOWABLE HEIGHT OF CONSTRUCTION EQUIPMENT AND STOCKPILED MATERIALS IS GOVERNED BY FAA ADVISORY CIRCULAR (AC0 150/5372-2, CURRENT EDITION. WHEN EQUIPMENT IS EXPECTED TO PENETRATE THE FAR PART 77 SURFACE (FOR ANY RUNWAY IN OPERATION) OR WHEN CRANES WILL BE USED ON SITE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEASE SIXTY (60) DAYS PRIOR TO START OF CONSTRUCTION TO COORDINATE THE SUBMITTAL OF FAA FORM 7460-1 TO THE FAA AIRPORT DISTRICT OFFICE. PERMISSION TO USE CRANES SHALL BE ISSUED BY THE ENGINEER AFTER APPROVAL BY THE FAA. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ANY AND ALL FAA FINES INCURRED FOR OPERATING CRANES WITHOUT FAA APPROVAL. TWENTY-FOUR (24) HOURS NOTICE SHALL BE GIVEN TO AIRPORT PRIOR TO CRANE DEPLOYMENT.

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TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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Drawn By:	YY
Checked By:	MM

PROJECT LAYOUT PLAN AND SITE IMPROVEMENTS

C020

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GENERAL NOTES

1. THE TYPICAL DETAILS DEPICTED ON THE STANDARD SHEETS AND IN THE MUTCD, REFLECT THE MINIMUM REQUIREMENTS.
2. PROPOSED REVISIONS TO THE TRAFFIC CONTROL PLAN SHALL BE PROVIDED, IN WRITING, TO THE PANYNJ. FOR REVIEW AND APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE FIVE (5) WORK DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS, EXCEPT FOR CHANGES THAT ALTER THE SCOPE OF THE TRAFFIC CONTROL PLAN. SUCH CHANGES IN SCOPE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE THIRTY (30) WORKING DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.
3. THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS, AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS SHALL BE PROVIDED, IN WRITING, TO THE PANYNJ ENGINEER. THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO REGIONAL MANAGEMENT, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, AND THE LOCAL POLICE.
4. STANDARD SHEET 619-503 MAY BE USED FOR AN OFFSITE DETOUR SETUP FOR BOTH LONG TERM AND SHORT TERM WORK DURATIONS.
5. FOLLOW REGIONAL HIGH-VOLUME RESTRICTIONS. CONSULT WITH DOT ENGINEER IF EXCEPTION NEEDED.
6. PLAN AHEAD TO AVOID CONFLICTING WORK ZONES. CHECK FOR CONSTRUCTION PROJECTS, CLOSURES, & RESTRICTIONS AT WWW.511NY.ORG, WWW.DOT.NY.GOV/PROJECTS, AND WITH PANYNJ.
7. DOCUMENT AND REPORT WORK ZONE INCIDENTS USING EITHER THE DEPARTMENT'S WORK ZONE INCIDENT FORM, OR THE CONSTRUCTION INCIDENT REPORTING SYSTEM, AS APPROPRIATE.
8. CONSIDER CLOSURE WIDTH & CLEAR WIDTH FOR WIDE VEHICLES ON WIDE LOAD ROUTES.

ACTIVITY AREA

1. A 500' MINIMUM LONGITUDINAL DISTANCE SHALL BE MAINTAINED BETWEEN CONSTRUCTION OPERATIONS ON ALTERNATE SIDES OF THE ROADWAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. WHEN TWO OR MORE AREAS ARE ADJACENT, OVERLAP, OR ARE IN CLOSE PROXIMITY, THE CONTRACTOR SHALL ENSURE THERE ARE NO CONFLICTING SIGNS AND THAT LANE CONTINUITY IS MAINTAINED THROUGHOUT ALL WORK AREAS.

SIGNS

1. THE LOCATIONS OF THE SIGNS SHOWN ON THE WORK ZONE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE PANYNJ.
2. FOR LONG TERM WORK DURATIONS, ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGN LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER. ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT.
3. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S LINE OF SIGHT.
4. ~~SIGNS MOUNTED ON THE MEDIAN OF DIVIDED HIGHWAYS WHERE MEDIAN BARRIER IS IN PLACE MAY BE MOUNTED ON THE BARRIER WITH A GABBLE TYPE BRACKET OR OMMITED WITH THE APPROVAL OF THE DOT ENGINEER. LAYING THE SIGN DOWN IN A HORIZONTAL POSITION IS NOT PERMITTED.~~
5. THE DIMENSIONS OF WORK ZONE TRAFFIC CONTROL SIGNS ARE DESCRIBED IN THE MUTCD. ANY CHANGES TO THE DIMENSIONS SHALL BE APPROVED BY THE PANYNJ.
6. NYR9-12 SHALL BE USED IN PLACE OF NYR9-11 WHEN A REDUCED REGULATORY SPEED LIMIT SIGN IS AUTHORIZED.
7. ~~RIGID AND FLEXIBLE "ROLL-UP" SIGNS MAY BE USED FOR MOBILE, SHORT DURATION AND SHORT-TERM STATIONARY WORK. RIGID SIGNS MUST BE MOUNTED AT LEAST 5 FEET ABOVE GRADE (7 FEET WHERE THERE ARE PEDESTRIANS OR PARKED CARS). FLEXIBLE SIGNS SHALL BE MOUNTED AT LEAST ONE FOOT ABOVE GRADE. MESH SIGNS SHALL NOT BE USED. USE RETRO REFLECTORIZED RIGID SIGNS FOR NIGHTTIME WORK.~~

CHANNELIZING DEVICES

1. WHERE POSSIBLE ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2' LATERAL CLEARANCE TO THE TRAVELED WAY.

PUBLIC ACCESS

1. PROPERTY OWNERS WHOSE DRIVEWAYS WILL BE MADE INACCESSIBLE SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. FOR MULTIPLE ACCESS PROPERTIES, AT LEAST ONE DRIVEWAY SHALL BE OPEN AT ALL TIMES. ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE.
2. SUITABLE RAMPS SHALL BE INSTALLED TO MAINTAIN SMOOTH TRANSITIONS FROM RESIDENTIAL AND COMMERCIAL DRIVEWAYS TO AND FROM THE WORK AREA.

LANE CLOSURES

1. LANE CLOSURES SHALL BE LOCATED TO PROVIDE OPTIMUM VISIBILITY, I.E. BEFORE CURVES AND CRESTS, TO THE EXTENT CONDITIONS PERMIT.
2. THE ENGINEER MAY REQUIRE THAT ALL LANES BE RE-OPENED AT ANY TIME IF THE ROUTE IS NEEDED FOR EMERGENCY PURPOSES. THIS COULD INCLUDE INCIDENTS AT LOCATIONS OUTSIDE THE CONTRACT LIMITS.
3. ARROW PANELS SHALL BE LEGIBLE CONTINUOUSLY FROM ANY POINT WITHIN THE ROADWAY (INCLUSIVE OF SHOULDERS) FROM 1,500 FEET IN ADVANCE OF THE LANE CLOSURE TAPER TO THE BEGINNING OF THE LANE CLOSURE TAPER.

LANE WIDTHS

1. UNLESS AUTHORIZED BY THE ENGINEER, THE MINIMUM LANE WIDTHS FOR WORK ZONE TRAVEL LANES SHALL BE 10'.
2. A WRITTEN NOTE SHALL BE PROVIDED TO THE ENGINEER, A MINIMUM OF 21 CALENDAR DAYS IN ADVANCE OF PERFORMING ANY WORK THAT RESULTS IN THE REDUCED WIDTH OF AN EXISTING ROADWAY, SO THAT THE ENGINEER MAY NOTIFY THE PANYNJ.

PROTECTIVE VEHICLES

1. A PROTECTIVE VEHICLE IS A LARGE DUMP TRUCK, A LARGE RACK TRUCK OR OTHER VEHICLE HAVING A GROSS WEIGHT OF AT LEAST 24,000 POUNDS. IF THE PROTECTIVE VEHICLE ENCROACHES INTO THE TRAVEL LANE, OR IF IT REMAINS ENTIRELY ON THE SHOULDER OF ANY HIGH SPEED ROAD (45 MPH OR HIGHER), IT SHALL BE EQUIPPED WITH A DEPLOYED TRUCK/TRAILER MOUNTED IMPACT ATTENUATOR (TMIA, SEE TABLE 011-01 ON SHEET 619-11). PROTECTIVE VEHICLES MAY BE LOADED WITH SAND, GRAVEL, OR FINE AGGREGATE AS BALLAST TO ENHANCE THE VEHICLE'S GROSS WEIGHT. ANY BALLAST ADDED TO ENHANCE THE VEHICLE'S GROSS WEIGHT SHALL BE SECURED AS NOT TO BECOME DISLODGED IF IMPACTED.
2. A PROTECTIVE VEHICLE USED IN A MOVING OPERATION IS REFERRED TO AS A SHADOW VEHICLE.
3. A PROTECTIVE VEHICLE USED IN A STATIONARY OPERATION IS REFERRED TO AS A BARRIER VEHICLE.
4. IN A MOVING OPERATION OR A STATIONARY OPERATION THAT OCCUPIES A LOCATION FOR UP TO 1 HOUR, THE OPERATOR SHALL REMAIN IN THE PROTECTIVE VEHICLE WITH THE SAFETY BELT AND HEADREST PROPERLY ADJUSTED, MAINTAIN VEHICLE SPACING, AND KEEP THE WHEELS ALIGNED WITH THE LANE STRIPING. TWO-WAY RADIOS SHOULD BE USED TO COMMUNICATE BETWEEN THE OPERATOR AND THE WORK CREW.
5. IN A STATIONARY OPERATION THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR, ONCE THE PROTECTIVE VEHICLE HAS BEEN APPROPRIATELY PLACED, IT SHOULD BE UNOCCUPIED. UNOCCUPIED VEHICLE SHALL BE POSITIONED PARALLEL TO TRAFFIC, PARKING BRAKE SET, PLACED IN 2ND GEAR (MANUAL TRANSMISSIONS /ENGINE OFF) OR PARK / NEUTRAL (AUTOMATIC TRANSMISSIONS) AND HAVE THE FRONT WHEELS ALIGNED WITH THE LANE STRIPING AND LANE TO MAINTAIN LANE DISCIPLINE AND TO STAY IN LANE IF STRUCK.
6. WHEN A PROTECTIVE VEHICLE IS USED IN ADVANCE OF EITHER MOVING OR STATIONARY OPERATIONS TO DISPLAY SIGN MESSAGES, IT IS REFERRED TO AS AN ADVANCE WARNING VEHICLE. ADVANCED WARNING VEHICLES MAY BE OCCUPIED OR UNOCCUPIED. WHEN SIGNS ARE MOUNTED ON AN ADVANCED WARNING VEHICLE, THEY SHALL NOT OBSTRUCT VISIBILITY OF ANY LIGHTS (TAILLIGHTS OR WARNING LIGHTS) OR SIDE-VIEW MIRRORS ON THE VEHICLE.
7. NO WORK ACTIVITY, EQUIPMENT, VEHICLES AND/OR MATERIALS SHALL BE LOCATED BETWEEN THE PROTECTIVE VEHICLE AND THE ACTIVE WORK AREA (ROLL AHEAD DISTANCE).
8. PROTECTIVE VEHICLES MAY BE REQUIRED IN CONJUNCTION WITH POLICE PRESENCE IN THE WORK ZONE, TO BE INCLUDED IN THE UNIT BID PRICE FOR BASIC WORK ZONE TRAFFIC CONTROL, FOR CAPITOL CONSTRUCTION PROJECTS.
9. DIRECT VERBAL COMMUNICATION BETWEEN THE PROTECTIVE VEHICLES AND THE WORK VEHICLE(S) / EQUIPMENT SHALL BE UTILIZED WHERE AVAILABLE.

WORK DURATION DEFINITIONS

1. THERE ARE MAINLY FIVE WORK DURATIONS:
   - A. LONG-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS.
   - B. INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
   - C. SHORT-TERM IS STATIONARY DAYTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR WITHIN A SINGLE DAYLIGHT PERIOD.
   - D. SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR. IT CAN BE PERFORMED DURING THE DAYTIME OR AT NIGHT IN ACCORDANCE WITH NOTES N1 TO N10 NOTES ON NIGHTTIME WORK.
   - E. MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY WHERE THE WORK AT ANY SPECIFIC LOCATION COMPLETES WITHIN 15 MINUTES. IT IS USED FOR VEHICLE BASED OPERATIONS AND DOES NOT INVOLVE WORKERS ON FOOT. IT CAN BE PERFORMED DURING THE DAYTIME OR AT NIGHT IN ACCORDANCE WITH NOTES N1 TO N10 NOTES ON NIGHTTIME WORK.
2. SPECIAL OPERATIONS ARE WORK OPERATIONS THAT DO NOT FIT INTO ONE OF THE ABOVE FIVE CATEGORIES. SPECIAL OPERATIONS INCLUDE:
   - A. STOP AND GO OPERATIONS - WORK THAT COMPLETES WITHIN 5 MINUTES AND ALLOWS WORKERS ON FOOT.
   - B. OTHER OPERATIONS INCLUDING MOWING, MULCHING/HERBICIDE OPERATIONS, TEMPORARY ROAD/INTERSECTION CLOSURES, ETC.

ROADWAY TYPE DEFINITIONS

1. FREEWAY:
   - A. INTERSTATE: INTERREGIONAL HIGH-SPEED, HIGH-VOLUME, DIVIDED FACILITIES WITH COMPLETE CONTROL OF ACCESS.
   - B. PARKWAY: DIVIDED HIGHWAYS FOR NON-COMMERCIAL TRAFFIC WITH FULL CONTROL OF ACCESS, GRADE PARKWAY SEPARATIONS, INTERCHANGES, AND OCCASIONAL AT-GRADE INTERSECTIONS. PARKWAYS ARE DESIGNATED BY LAW.

ROADWAY TYPE DEFINITIONS (CONTINUED)

2. EXPRESSWAY: DIVIDED HIGHWAYS FOR THROUGH TRAFFIC WITH FULL OR PARTIAL CONTROL OF ACCESS AND GENERALLY WITH GRADE SEPARATIONS AT MAJOR CROSSROADS. ALL FREEWAY STANDARD SHEETS ARE APPLICABLE TO EXPRESSWAY.
3. NON-FREEWAY:
   - A. MULTILANE DIVIDED HIGHWAY
   - B. MULTILANE UNDIVIDED HIGHWAY
   - C. TWO-LANE TWO-WAY ROADWAY

ALL NON-FREEWAYS CAN BE EITHER URBAN OR RURAL:

URBAN: (MEETS MORE THAN 1 OF THE FOLLOWING CRITERIA)
- •HIGH DENSITY DEVELOPMENT
- •ON-STREET PARKING
- •VARIED BUILDING SETBACKS
- •MULTI-STORY AND LOW-TO MEDIUM-RISE STRUCTURES FOR RESIDENTIAL
- •COMMERCIAL, AND EDUCATIONAL USES, STRUCTURES THAT ACCOMMODATE MIXED USES: COMMERCIAL, RESIDENTIAL, AND PARKING
- •LIGHT INDUSTRIAL, AND SOMETIMES HEAVY INDUSTRIAL, LAND USE
- •PROMINENT DESTINATIONS WITH SPECIALIZED STRUCTURES, E.G., LARGE THEATERS, SPORTS FACILITIES OR CONFERENCE CENTERS
- •HIGH LEVELS OF PEDESTRIAN AND BICYCLIST ACTIVITY, WITH NEARLY CONTINUOUS SIDEWALKS AND MARKED CROSSWALKS
- •HIGHER DENSITY OF TRANSIT STOPS AND ROUTES
- •DRIVEWAY DENSITIES GREATER THAN 25 DRIVEWAYS/MILE ON EACH SIDE OF THE ROAD
- •MINOR COMMERCIAL DRIVEWAY DENSITIES OF 10 DRIVEWAYS/MILE OR GREATER
- •MAJOR COMMERCIAL DRIVEWAYS
- •HIGH DENSITY OF CROSS STREETS

RURAL: DOES NOT MEET MORE THAN ONE OF THE ABOVE CRITERIA.

NOTES FOR NIGHTTIME OPERATIONS:

N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.

N2. ALL SIGNS, STOP/SLOW PADDLES AND RED FLAGS USED TO WARN/ALERT/CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.

N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMETS AND NIGHTTIME APPAREL IN ACCORDANCE WITH §107-05A. HIGH VISIBILITY APPAREL AT ALL TIMES.

N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS OR FLASHING LED BEACONS AT ALL TIMES.

N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.

N6. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.

N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL EQUIPMENT, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.

N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJOINING THE ROADWAY.

N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL FROM THE DOT ENGINEER.

N10. SEE STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.

N11. FLAGGERS SHALL USE A FLASHLIGHT WITH RED GLOW CONE/RED LED BATON FOR FLAGGING IN NON-ILLUMINATED FLAGGER STATIONS DURING NIGHTTIME OPERATIONS.

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL GENERAL NOTES

APPROVED APRIL 8, 2022

Robert Limoges

ROBERT LIMOGES, P.E.
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ISSUED UNDER EI 22-008

619-010

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REVISIONS

MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
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Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

WORK ZONE TRAFFIC CONTROL GENERAL NOTES

C021 (1)

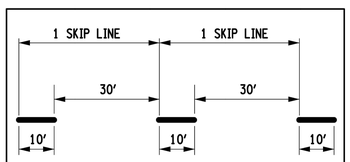
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WORK ZONE TRAFFIC CONTROL LEGEND	
SYMBOL	DESCRIPTION
	ARROW PANEL
	ARROW PANEL, CAUTION MODE
	ARROW PANEL TRAILER OR SUPPORT
	CHANGEABLE MESSAGE SIGN (PVMS)
	CHANNELIZING DEVICE
	CONE
	CRASH CUSHION/TEMPORARY IMPACT ATTENUATOR
	DIRECTION OF TEMPORARY TRAFFIC DETOUR
	DIRECTION OF TRAFFIC
	AUTOMATED FLAGGER ASSISTANCE DEVICE WITH OPERATOR
	FLAGGER
	FLAG TREE
	LUMINAIRE
	MOWER
	PARKWAY GRASS SHOULDER
	PAVEMENT MARKINGS THAT SHALL BE REMOVED FOR A LONG TERM PROJECT
PVMS	PORTABLE VARIABLE MESSAGE SIGN
	ORANGE FLAGS (MIN. 18" X 18")
	TRAILER FOR ARROW PANEL OR PORTABLE VARIABLE MESSAGE SIGN (PVMS)

WORK ZONE TRAFFIC CONTROL LEGEND	
SYMBOL	DESCRIPTION
	SIGN, TEMPORARY
	SPOTTER
	TEMPORARY POSITIVE BARRIER
	TEMPORARY POSITIVE BARRIER WITH WARNING LIGHTS
	TEMPORARY TRAFFIC SIGNAL HEAD
	TYPE III BARRICADE
	WARNING LIGHTS
	WORK AREA
	WORK VEHICLE
	WORK VEHICLE (MULCHING/HERBICIDE OPERATION)
	WORK VEHICLE (PAVEMENT MARKING)
	WORK VEHICLE (SIGNAL WORK)
PV	PROTECTIVE VEHICLE
PVL	PROTECTIVE VEHICLE LIGHT
PVH	PROTECTIVE VEHICLE HEAVY
	TRUCK/TRAILER MOUNTED IMPACT ATTENUATOR (TMIA)



EXISTING NORMAL BROKEN LANE LINE

DETAIL 011A - EXISTING SKIP LINES

ERRATA 2 EFF. 09/01/23
ISSUED WITH EB 23-016

ERRATA 1 EFF. 05/01/2023
ISSUED WITH EB 22-033

APPROVED DECEMBER 21, 2022

Robert Limoges

ROBERT LIMOGES, P.E.
DIRECTOR, OTSM

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
GENERAL TABLES AND LEGEND
(SHEET 1 OF 2)

ISSUED UNDER EI 22-033

619-011

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MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

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MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

WORK ZONE TRAFFIC CONTROL GENERAL TABLES AND LEGEND

C022 1

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TABLE 011-01: PROTECTIVE VEHICLE REQUIREMENTS [A,B]

CLOSURE TYPE	DURATION	MOBILE OPERATION AND STOP & GO				SHORT DURATION OPERATION				SHORT TERM OPERATION				INTERMEDIATE TERM OPERATION				LONG TERM OPERATION			
	ROAD TYPE & SPEED	FREEWAY	NON-FREEWAY			FREEWAY	NON-FREEWAY			FREEWAY	NON-FREEWAY			FREEWAY	NON-FREEWAY			FREEWAY	NON-FREEWAY		
			≥ 45 MPH	35 - 40 MPH	≤ 30 MPH		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH
	EXPOSURE CONDITIONS (SEE NOTE 1)																				
LANE CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC	PVH+TMIA	PVH+TMIA	PVL+TMIA	PVL	PVH+TMIA	PVH+TMIA	PVL+TMIA	PVL	PVH+TMIA	PVH+TMIA	PVL+TMIA	PVL	PVH+TMIA	PVH+TMIA	PVL+TMIA	SEE NOTE 2	PVH+TMIA	PVH+TMIA	PVL+TMIA	SEE NOTE 2
	-NO WORKERS ON FOOT -NO WORK VEHICLE EXPOSED TO TRAFFIC -OTHER HAZARDS EXPOSED (IE EQUIPMENT, MATERIALS)					PVH+TMIA	PVH+TMIA	PVL	PVL	PVH+TMIA	PVH+TMIA	PVL	SEE NOTE 2	PVH+TMIA	PVH+TMIA	SEE NOTE 2	SEE NOTE 2	PVH+TMIA	PVH+TMIA	SEE NOTE 2	SEE NOTE 2
SHOULDER CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC	PVH+TMIA	PVH+TMIA	PVL+TMIA	PVL	PVH+TMIA	PVH+TMIA	PVL	PVL	PVH+TMIA	PVH+TMIA	PVL	PVL	PVH+TMIA	PVH+TMIA	SEE NOTE 2	SEE NOTE 2	PVH+TMIA	PVH+TMIA	SEE NOTE 2	SEE NOTE 2
	-NO WORKERS ON FOOT -NO WORK VEHICLE EXPOSED TO TRAFFIC -OTHER HAZARDS EXPOSED (IE EQUIPMENT, MATERIALS, EXCAVATION)					PVH+TMIA	PVH+TMIA	PVL	PVL	PVH+TMIA	PVH+TMIA	PVL	SEE NOTE 2	PVH+TMIA	SEE NOTE 3	SEE NOTE 2	SEE NOTE 2	PVH+TMIA	SEE NOTE 3	SEE NOTE 2	SEE NOTE 2

LEGEND
PVL - PROTECTIVE VEHICLE LIGHT (MINIMUM GROSS WEIGHT 9,500 LBS. OR GREATER) (SEE NOTE 5)
PVH - PROTECTIVE VEHICLE HEAVY (MINIMUM GROSS WEIGHT 22,000 LBS. OR GREATER)
TMIA - TRUCK/TRAILER MOUNTED IMPACT ATTENUATOR

A. THESE PROTECTIVE VEHICLE REQUIREMENTS ARE NOT APPLICABLE TO PAVING AND MILLING OPERATIONS. A STANDARD BUFFER SPACE SHALL BE PROVIDED FOR THESE OPERATIONS IN ACCORDANCE WITH TABLE 011-03.

B. THESE PROTECTIVE VEHICLE REQUIREMENTS ARE NOT APPLICABLE TO FLAGGING OPERATIONS. PROTECTIVE VEHICLES WITH APPROPRIATE ROLL AHEAD DISTANCE MAY BE USED IN ADVANCE OF THE WORK AREA IF DEEMED NECESSARY PANYNJ.

NOTES
1. ~~THE EXPOSURE CONDITIONS ASSUME THERE IS NO POSITIVE PROTECTION PRESENT.~~
2. EITHER A PROTECTIVE LIGHT (PVL) OR THE STANDARD BUFFER SPACE (SEE TABLE 011-03 SHALL BE PROVIDED.
3. ~~EITHER A PROTECTIVE VEHICLE HEAVY (PVH) OR THE STANDARD BUFFER SPACE (SEE TABLE 011-03) SHALL BE PROVIDED.~~
4. ~~TRUCK/TRAILER MOUNTED IMPACT ATTENUATORS (TMIA) SHALL NOT BE MOUNTED/INSTALLED ON VEHICLES WITH A GROSS VEHICLE WEIGHT (GVW) LESS THAN WHAT IS MINIMALLY REQUIRED BY THE MANUFACTURER OF THE TMIA.~~
5. ~~THE USE OF A PROTECTIVE VEHICLE LIGHT (PVL) AS A SHADOW VEHICLE IS LIMITED TO NON FREEWAY ROADWAYS WHERE THE POSTED SPEED LIMITS IS ≤ 40 MPH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.~~

TABLE 011-02: TAPER LENGTHS & NUMBER OF CONES CHART

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	TAPER LENGTH: (FT.)/ * OF SKIP LINES/ * OF CHANNELIZING DEVICES — LATERAL SHIFT OF TRAFFIC FLOW PATH (FT.)									SHOULDER TAPER LENGTH: (FT.)/ * OF SKIP LINES/ * OF CHANNELIZING DEVICES — FOR SHOULDER WIDTH						
	4	5	6	7	8	9	10	[illegible]	12	≤ 4 FT.	5 - 7 FT.	8 FT.	9 FT.	10 FT.	11 FT.	[illegible]
25	[illegible]0/1/2	80/2/3	80/2/3	80/2/3	80/2/3	120/3/4	[illegible]	120/3/4	120/3/4	40/1/2	[illegible]	40/1/2	40/1/2	40/1/2	40/1/2	40/1/2
30	80/2/3	80/2/3	80/2/3	120/3/4	120/3/4	[illegible]	160/4/5	160/4/5	200/5/6	40/1/2	40/1/2	40/1/2	40/1/2	80/2/3	[illegible]	80/2/3
35	80/2/3	120/3/4	[illegible]	160/4/5	[illegible]	200/5/6	200/5/6	240/6/7	[illegible]	40/1/2	40/1/2	[illegible]	80/2/3	[illegible]	80/2/3	80/2/3
40	120/3/4	160/4/5	[illegible]	[illegible]	240/6/7	240/6/7	280/7/8	320/8/9	[illegible]	40/1/2	80/2/3	80/2/3	[illegible]	120/3/4	120/3/4	120/3/4
45	200/5/6	240/6/7	[illegible]	[illegible]	360/9/10	400/10/11	440/11/12	520/13/14	[illegible]	80/2/3	80/2/3	120/3/4	[illegible]	120/3/4	120/3/4	160/4/5
50	200/5/6	240/6/7	320/8/9	360/9/10	[illegible]	440/11/12	520/13/14	560/14/15	[illegible]	80/2/3	120/3/4	[illegible]	160/4/5	[illegible]	160/4/5	160/4/5
55	240/6/7	280/7/8	320/8/9	400/10/11	440/11/12	[illegible]	560/14/15	600/15/16	[illegible]	80/2/3	120/3/4	160/4/5	160/4/5	160/4/5	200/5/6	200/5/6
60	240/6/7	320/8/9	360/9/10	440/11/12	480/12/13	560/14/15	[illegible]	680/17/18	[illegible]	80/2/3	120/3/4	160/4/5	200/5/6	200/5/6	[illegible]	240/6/7
[illegible]	280/7/8	320/8/9	400/10/11	480/12/13	520/13/14	600/15/16	640/16/17	[illegible]	[illegible]	[illegible]	160/4/5	200/5/6	240/6/7	240/6/7	280/7/8	280/7/8

• THIS TABLE WAS CREATED WITH REFERENCE TO MUTCD TABLE 6H-4.
•• THE NUMBER OF CHANNELIZING DEVICES SHOWN IS CALCULATED BASED ON A 40FT DEVICE SPACING. THE NUMBER OF CHANNELIZING DEVICES CAN BE ADJUSTED AS NECESSARY.

TABLE 011-03 LONGITUDINAL BUFFER SPACE

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	DISTANCE (FT.)/ * OF SKIP LINES
25	155 / 4
30	200 / 5
[illegible]	250 / 6
40	[illegible]05 / 8
45	360 / 9
50	[illegible]25 / 11
[illegible]	495 / 13
65	645 / 16

• THIS TABLE IS THE SAME AS MUTCD TABLE 6C-2.

TABLE 011-04: ROLL AHEAD DISTANCE FOR PROTECTIVE VEHICLES

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	ROLL AHEAD DISTANCE (FT.)/* OF SKIP LINES FOR VEHICLES — PROTECTIVE VEHICLES WEIGHING 9,500 TO 21,999 LBS. GVW		PROTECTIVE VEHICLES WEIGHING 22,000 LBS. OR GREATER GVW	
	STATIONARY OPERATION	MOVING OPERATION (15 MPH MAX.)	STATIONARY OPERATION	MOVING OPERATION (15 MPH MAX.)
≥ 60	[illegible]00/5	[illegible]40/6	[illegible]60/4	200/5
[illegible]55	[illegible]60/4	200	[illegible]20/3	[illegible]/4
≤ 40	120/3	[illegible]20/3	80/2	120/3

TABLE 011-05 FLARE RATES FOR POSITIVE BARRIER

TYPE OF POSITIVE BARRIER	POSTED SPEED LIMIT				
	30 MPH	[illegible] MPH	50 MPH	55 MPH	[illegible] MPH
TEMPORARY POSITIVE BARRIER	8:1	11:1	14[illegible]	[illegible]6:1	20:1
BOX BEAM OR HEAVY POST CORRUGATED BEAM	7:1	[illegible]	[illegible]1:1	12:1	[illegible]5:1

TABLE 011-06 ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤ 30 MPH•)	100	100	100	AHEAD	AHEAD
[illegible] (35-40 MPH•)	200	200	200	AHEAD	[illegible]
URBAN (≥ 45 MPH•)	350	350	[illegible]	[illegible]00 FT.	AHEAD
RURAL	[illegible]	[illegible]	500	1500 FT.	1000 FT.
[illegible]	1000	1500	2640	1 [illegible]	[illegible] MILE

• PRECONSTRUCTION POSTED SPEED LIMIT.
•• THIS TABLE IS THE SAME AS MUTCD TABLE NY6H-3.

TABLE 011-07 TAPER LENGTH FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)
MERGING TAPER	L
SHIFTING TAPER	L/2
SHOULDER TAPER	L/3
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT. MIN -100 FT. MAX
DOWNSTREAM TAPER	50 FT. MIN -100 FT. MAX

• THIS TABLE IS THE SAME AS MUTCD TABLE 6C-3.

ERRATA 2 EFF. 09/01/23
ISSUED WITH EB 23-016

ERRATA 1 EFF. 05/01/2023
ISSUED WITH EB 22-033

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL GENERAL TABLES AND LEGEND (SHEET 2 OF 2)

APPROVED DECEMBER 21, 2022
Robert Limoges
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Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

WORK ZONE TRAFFIC CONTROL GENERAL TABLES AND LEGEND

C023 1

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WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
	E5-1	C	--------	72"X60"	72"X60"
ROAD WORK NEXT	G20-1	A	36"X18"	48"X24"	48"X24"
END ROAD WORK	G20-2	A	36"X18"	48"X24"	48"X24"
PILOT CAR FOLLOW ME	G20-4	A	36"X18"	-------	-------
WORK ZONE	G20-5aP	A	24"X18"	36"X24"	36"X24"
INTERSTATE 22 INTERSTATE 22	M1-1	G	1 OR 2 DIGITS 24"X24"	36"X36"	36"X36"
INTERSTATE 495	M1-1†	G	3 DIGITS 30"X24"	45"X36"	45"X36"
X XX	M1-4	B	1 OR 2 DIGITS 24"X24"	36"X36"	36"X36"
XXX	M1-4†	B	3 DIGITS 30"X24"	45"X36"	48"X36"
NORTH	M3-1				
EAST	M3-2				
SOUTH	M3-3	SEE NOTE 3	24"X12"	36"X18"	36"X18"
WEST	M3-4				
DETOUR	M4-8	A	24"X12"	36"X18"	36"X18"
END DETOUR	M4-8a	A	24"X18"	24"X18"	24"X18"
DETOUR DETOUR DETOUR	M4-9 M4-9L M4-9R	A	30"X24"	48"X36"	48"X36"
DETOUR DETOUR	M4-9a	A	30"X24"	30"X24"	-------
DETOUR DETOUR	M4-9b	A	30"X24"	30"X24"	-------
DETOUR DETOUR	M4-9c	A	30"X24"	30"X24"	-------
DETOUR	M4-10L	A	48"X18"	48"X18"	48"X18"
DETOUR	M4-10R				
	M5-1	SEE NOTE 3	21"X15"	30"X21"	30"X21"
	M5-2	SEE NOTE 3	21"X15"	30"X21"	30"X21"
	M6-1	SEE NOTE 3	21"X15"	30"X21"	30"X21"
	M6-2				
	M6-3				
	M6-4				
XX XX	NYM3-1	B	24"X24"	36"X36"	36"X36"
XX X	NYM3-2	B	30"X24"	45"X36"	45"X36"
XXXA	NYM3-3	B	30"X24"	45"X36"	45"X36"

WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
STATE LAW LICENSE SUSPENDED AFTER TWO WORK ZONE SPEEDING TICKETS	NYR9-11	B	24"X42"	48"X84"	48"X84"
STATE LAW FINES DOUBLED FOR SPEEDING IN WORK ZONES	NYR9-12	B	24"X36"	36"X54"	48"X72"
RIPPLE STRIPS	NYW4-17	A	36"X36"	48"X48"	48"X48"
WET PAINT	NYW8-30	A	18"X24"	48"X24"	48"X24"
STAY IN LANE	NYW8-31	A	48"X24"	48"X24"	48"X24"
DO NOT PASS	NYW8-32	A	48"X24"	48"X24"	48"X24"
LANE CLOSED	NYW8-33	A	48"X24"	48"X24"	48"X24"
STOP	R1-1		36"X36"	36"X36"	48"X48"
YIELD	R1-2	E	36"X36"X36"	48"X48"X48"	60"X60"X60"
SPEED LIMIT XX	R2-1	B	24"X30" OR 30"X36" (SEE NOTE 5)	36"X48"	36"X48"
END HIGHER FINES ZONE	R2-1a	B	24"X30"	36"X48"	36"X48"
END WORK ZONE SPEED LIMIT	R2-12	B	24"X36"	36"X54"	36"X54"
DO NOT PASS	R4-1	B	24"X30"	36"X48"	36"X48"
	R4-7	B	24"X30"	36"X48"	36"X48"
	R4-7c NARROW	B	18"X30"	-------	-------
	R4-8	B	24"X30"	36"X48"	36"X48"
	R4-8c NARROW	B	18"X30"	-------	-------
STAY IN LANE	R4-9	B	18"X30"	36"X48"	36"X48"
DO NOT ENTER	R5-1	E	36"X36"	36"X36"	48"X48"
	R8-3	E	24"X24"	36"X36"	48"X48"
PEDESTRIAN CROSSWALK	R9-8	B	36"X18"	36"X18"	-------
SIDEWALK CLOSED	R9-9	B	24"X12"	24"X12"	-------
SIDEWALK CLOSED USE OTHER SIDE	R9-10	B	24"X12"	24"X12"	-------
SIDEWALK CLOSED USE OTHER SIDE / SIDEWALK CLOSED USE OTHER SIDE	R9-10L R9-10R	B	24"X12"	24"X12"	-------
SIDEWALK CLOSED AHEAD CROSS HERE / SIDEWALK CLOSED AHEAD CROSS HERE	R9-11 R9-11a	B	24"X18"	24"X18"	-------
SIDEWALK CLOSED CROSS HERE / SIDEWALK CLOSED CROSS HERE	R9-11aL R9-11aR	B	24"X12"	24"X12"	-------
STOP WHEN RED	R10-6	B	24"X36"	24"X36"	-------

WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
ROAD CLOSED / BRIDGE CLOSED / BRIDGE OUT	R11-2	B	48"X30"	48"X30"	48"X30"
ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	R11-2 (MOD.)				
	R11-3a	B	60"X30"	60"X30"	-------
	W1-4L W1-4R	A	36"X36"	48"X48"	48"X48"
	W1-4bL W1-4bR	A	36"X36"	48"X48"	48"X48"
	W1-4L W1-4R	A	36"X36"	48"X48"	48"X48"
	W1-6L	A	48"X24"	60"X30"	60"X30"
	W1-6R	A			
	W1-8L	A (NO BORDER)	18"X24"	30"X36"	30"X36"
	W1-8R	A (NO BORDER)			
	W3-1	A[4]	36"X36"	48"X48"	48"X48"
	W3-2	A[4]	36"X36"	48"X48"	48"X48"
	W3-3	A[4]	36"X36"	48"X48"	48"X48"
BE PREPARED TO STOP	W3-4	A	36"X36"	48"X48"	48"X48"
	W3-5	A[4]	36"X36"	48"X48"	48"X48"
	W4-1L W4-1R	A	36"X36"	48"X48"	48"X48"
	W4-2L W4-2R	A	36"X36"	48"X48"	48"X48"

WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
SLOW TRAFFIC AHEAD	NYW23-1	A	36"X36"	48"X48"	48"X48"
WORK ZONE	G20-5aP	6F.12	24"X18"	36"X24"	36"X24"
EXIT OPEN	E5-2	6F.28	48"X36"	48"X36"	48"X36"
EXIT CLOSED	E5-2a	6F.28	48"X36"	48"X36"	48"X36"

COLOR CODE LEGEND

CODE	DESCRIPTION
A	BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND
B	BLACK LEGEND AND BORDER ON A WHITE BACKGROUND
C	WHITE LEGEND AND BORDER ON A GREEN BACKGROUND
D	WHITE LEGEND AND BORDER ON A RED BACKGROUND
E	RED LEGEND AND BORDER ON A WHITE BACKGROUND
F	BLACK LEGEND AND BORDER ON A FLOURESCENT YELLOW GREEN BACKGROUND
G	WHITE LEGEND AND BORDER ON A BLUE AND RED BACKGROUND

NOTES:

1. DIMENSIONS ARE SHOWN AS WIDTH X HEIGHT.
2. FOR SIGNAGE NOT SHOWN ON THESE TABLES REFER TO THE M.U.T.C.D.
3. COLORS FOR DIRECTION PLAQUES, ADVANCE TURN ARROWS, AND DIRECTIONAL ARROWS SHALL MATCH THE ROUTE OR INTERSTATE SIGN THAT THEY SUPPLEMENT AS PER THE M.U.T.C.D.
4. MULTICOLORED SYMBOL IMPOSED ON SIGN WITH BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND.
5. FOR R2-1 SIGN LARGER DIMENSIONS SHALL BE USED WHEN SIGN FACES MULTIPLE LANES ON A CONVENTIONAL ROAD.

NEW YORK STATE OF OPPORTUNITY. **Department of Transportation**

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL SIGN TABLE (SHEET 1 OF 3)

APPROVED DECEMBER 2, 2021

Robert Limoges

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STATE OF NEW YORK GRAHAM MICHAEL FELAND LICENSED PROFESSIONAL ENGINEER 109987
Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

WORK ZONE TRAFFIC CONTROL SIGN TABLE

C024 1

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WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
ROAD NARROWS	W5-1	A	36"X36"	48"X48"	48"X4
RAMP NARROWS	W5-4	A	36"X36"	48"X48"	"X48"
	W6-3	A	36"X36"	48"X48"	48"X48"
NEXT 7 MILES	W7-3aP	A	24"X18"	36"X30"	36"X30"
BUMP	W8-1	A	36"X36"	48"X4	48"X48"
PAVEMENT ENDS	W8-3	A	36"X36"	"X48"	48"X48"
LOOSE GRAVEL	-7	A	36"X36"	48"X48"	48"X48"
ROUGH ROAD	W8-8	A	36"X36"	48"X48"	48"X48"
LOW SHOULDER	W8-9	A	36 36"	48"X48"	48"X48"
NO CENTER LINE	W8-12		36"X36"	-------	-------
FALLEN ROCKS	W8-14	A	36"X36"	48"X48"	48"X48"
GROOVED PAVEMENT	W8-15	A	"X36"	48"X48"	48"X48"
	W8-17	A	36"X3	48"X48"	48"X48"
SHOULDER DROP-OFF	W8- p	A	24"X18"	30"X24"	30"X24"
NO SHOULDER	8-23	A	36"X36"	48"X48"	48"X48"
STEEL PLATE ON PAVEMENT	W8-24	A	36"X36"	48 48"	48"X48"
CENTER LANE CLOSED AHEAD	W9-3	A	36"X36"	48"X48	48"X48"
	W11-1L• W11-1R	A OR F	36"X36"	36"X36"	-------
	W11-2L• W11-2R	F	36"X36"	36"X36"	-----
	W11-15L• W11-15R	F	36"X36"	36"X36"	-----
IN LANE	NYW5-32P•	A	24"X18"	24"X18"	-------

WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
XX MPH	W13-1P	A	24"X2	30"X30"	30"X30"
RAM	W13-4	A	36"X36"	36"X36"	36"X36"
NO PASSING ZONE	W13-4P	A	48"X48"X36"	------	------
500 FEET	2P	A	24"X18"	X24"	-----
NEXT 500 FT	W16-4P	SEE NOTE 3 A OR F	30"X24"	------	------
	W16-5PL W16-5PR		24"X18"	------	------
	W16-7PL W16-7PR	SEE NOTE 3 A OR F	24"X12"	30"X	------
AHEAD	W16-9P	SEE NOTE 3 A OR F	24"X1	30"X1	------
ROAD WORK AHEAD / ROAD WORK XXX FT / ROAD WORK X MILE	W20-1	A	36"X36"	48"X48"	8"X48"
DETOUR XXX FT / DETOUR X MILE	W20-2	A	36"X36"	48"X48"	48"X48"
ROAD CLOSED AHEAD / ROAD CLOSED XXX FT / ROAD CLOSED X MILE	W20-3	A	36"X36"	48"X48"	48"X48"
ONE LANE ROAD AHEAD / ONE LANE ROAD XXX FT / ONE LANE ROAD X MILE	W20-4	A	36"X36"	48"X48"	48"X48"
LEFT LANE CLOSED AHEAD / LEFT LANE CLOSED XXX FT / LEFT LANE CLOSED X MILE / RIGHT LANE CLOSED AHEAD / RIGHT LANE CLOSED XXX FT / RIGHT LANE CLOSED X MILE	W20-5	A	36"X36"	48"X	48"X48"
2 LEFT LANES CLOSED AHEAD / 2 LEFT LANES CLOSED XXX FT / 2 LEFT LAN CLOS / 2 RIGHT CLOSED AHEAD / 2 RIGHT LANES CLOSED XXX FEET / 2 RIGHT LANES CLOSED X MILE	W20-5a	A	36"X36"	"X48"	48"X48
	W20-7	A	36"X36"	48"X48"	48"X48"

WORK ZONE TRAFFIC CONTROL SIGN TABLE

SIGN	SIGN DESIGNATION	COLOR CODE	NON-FREEWAY	EXPRESSWAY	FREEWAY
	W21-1	A	36"X36"	48"X48"	48" 48"
SLOW M G VEHICLE	W21-4	A	36"X18"	48"X24"	48"X24"
SHOULDER WORK	W21-5	A	36"X36"	48"X4	48"X48"
LEFT SHOULDER CLOSED / RIGHT SHOULDER CLOSED	21-5aL 1-5aR	A	36"X36"	48"X48"	48"X48"
LEFT SHOULDER CLOSED AHEAD / LEFT SHOULDER CLOSED XXX FT / LEFT SHOULDER CLOSED X MILE / RIGHT SHOULDER CLOSED AHEAD / RIGHT SHOULDER CLOSED XXX FT / RIGHT SHOULDER CLOSED X MILE	W21-5bL W21-5bR	A	6"X36"	48"X48"	48"X48"
MOWING AHEAD	W21-8	A	36 36"	48"X48"	48"X48"
BLASTING ZONE AHEAD / BLASTING ZONE XXX FT / BLASTING ZONE X MILE	2-1	A	36"X36"	48"X48"	48"X48"
TURN OFF 2-WAY RADIO AND CELL PHONE	W22-2	A	42"X36"	42" 6"	42"X36"
END BLASTIN ZONE	W22-3	A	42"X36"	42"X36"	42"X36"
SLOW TRAFFIC AHEAD	W23-1	A	48"X24"	48"X24"	3"X24"
NEW TRAFFIC PATTERN AHEAD	W23-2	A	36"X36"	48"X48"	48"X4

COLOR CODE LEGEND

CODE	DESCRIPTION
A	BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND
B	BLACK LEGEND AND BORDER ON A WHITE BACKGROUND
C	WHITE LEGEND AND BORDER ON A GREEN BACKGROUND
D	WHITE LEGEND AND BORDER ON A RED BACKGROUND
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NOTES:

1. DIMENSIONS ARE SHOWN AS WIDTH X HEIGHT.
2. FOR SIGNAGE NOT SHOWN ON THESE TABLES REFER TO THE M.U.T.C.D.
3. WHEN USED IN CONJUNCTION WITH A BICYCLE SIGN (W11-1) OR PEDESTRIAN CROSSING (W11-2) COLOR CODE SHALL MATCH.

• A FLOURESCENT YELLOW-GREEN BACKGROUND COLOR SHALL BE USED FOR THIS SIGN PLAQUE.

ERRATA 1 EFF. 05/01/24
ISSUED WITH EB 24-007

NEW YORK STATE OF OPPORTUNITY. | Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL SIGN TABLE (SHEET 2 OF 3)

APPROVED DECEMBER 2, 2021
Robert Limoges
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STATE OF NEW YORK GRAHAM MICHAEL FELAND LICENSED PROFESSIONAL ENGINEER 109997
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REVISIONS		
MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

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Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

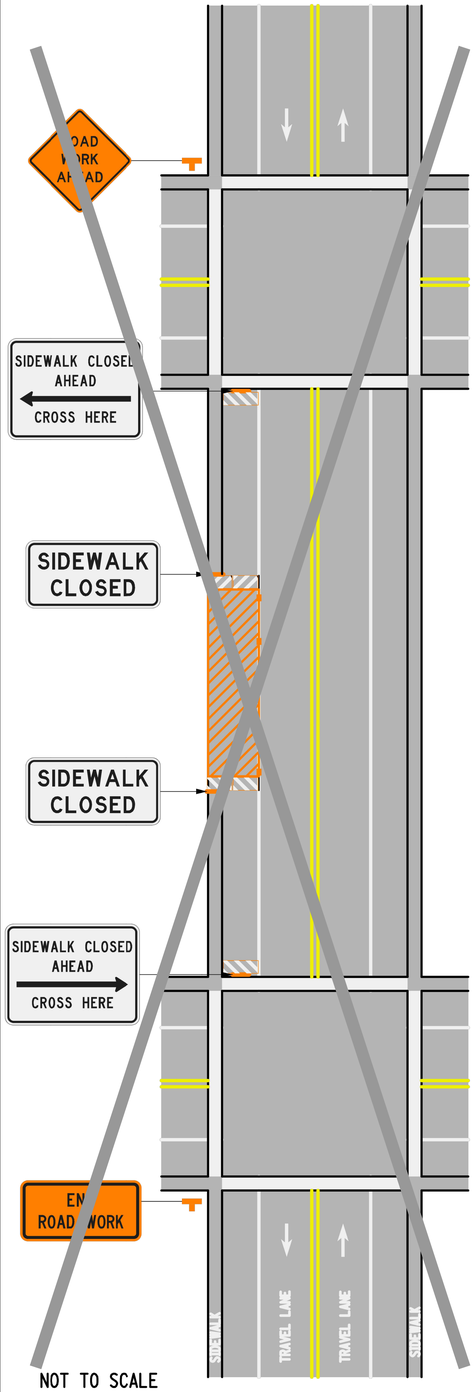
WORK ZONE TRAFFIC CONTROL SIGN TABLE

C025 1

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NOT TO SCALE

SIDEWALK DETOUR

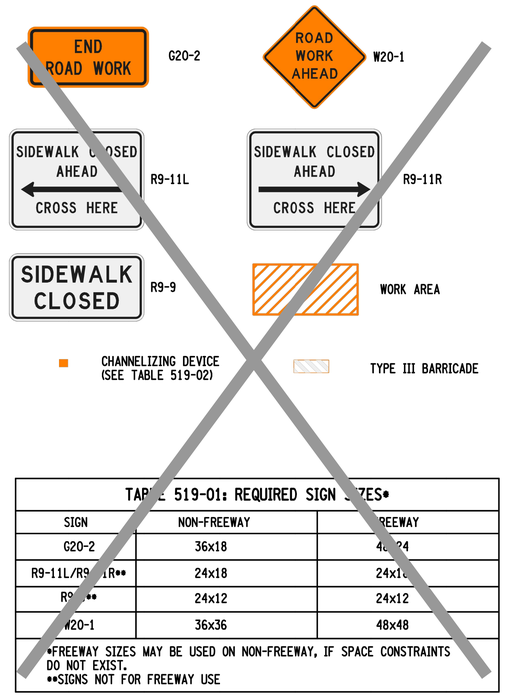


TABLE 519-01: REQUIRED SIGN SIZES•		
SIGN	NON-FREEWAY	FREEWAY
G20-2	36x18	48x24
R9-11L/R9-11R••	24x18	24x12
R9-9••	24x12	24x12
W20-1	36x36	48x48

•FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.
••SIGNS NOT FOR FREEWAY USE

NOTES:

1. LONG-TERM STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS. THIS SETUP CAN ALSO BE USED FOR INTERMEDIATE TERM WORK.
2. ANY ALTERNATIVE PEDESTRIAN FACILITY MUST HAVE AT LEAST THE SAME LEVEL OF ACCESSIBILITY AS THE ONE IT IS REPLACING.
3. ONLY THE WORK ZONE TRAFFIC CONTROL DEVICES RELATED TO PEDESTRIANS ARE SHOWN, OTHER DEVICES, SUCH AS LANE/SHOULDER CLOSURE SIGNING, ROAD NARROWS SIGNS (W5-1) OR NO PARKING SIGNS MAY BE USED TO CONTROL VEHICULAR TRAFFIC.
4. TYPE III BARRICADES SHALL BE THE FULL WIDTH OF THE PATH BEING CLOSED.
5. ACCESS TO BUSINESS ENTRANCES AND TRANSIT STOPS WILL NEED TO BE MAINTAINED. IF THE PEDESTRIAN FACILITY CURRENTLY HAS A TRANSIT STOP THAT WILL BE AFFECTED BY THE WORK ZONE, PRACTITIONERS SHOULD CONSULT THE TRANSIT AUTHORITIES THAT SERVICE THE AFFECTED STOP TO DETERMINE HOW TO ACCOMMODATE THE STOP.

NOTES ON NIGHTTIME WORK:

N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.

N2. ALL SIGNS, STOP/SLOW PADDLES AND RED FLAGS USED TO WARN/ALERT/CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.

N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMETS AND NIGHTTIME APPAREL IN ACCORDANCE WITH §107-05A. HIGH VISIBILITY APPAREL AT ALL TIMES.

N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS OR FLASHING LED BEACONS AT ALL TIMES.

N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.

N6. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.

N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL OR MECHANICAL EQUIPMENT, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.

N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJOINING THE ROADWAY.

N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL.

N10. AT NIGHT, EACH TYPE III CONSTRUCTION BARRICADE USED TO CLOSE A ROADWAY, A SEGMENT OF A ROADWAY OR A SIDEWALK SHALL BE EQUIPPED WITH ONE FLASHING WARNING LIGHT.

N11. SEE NIGHTTIME SAFETY BULLETIN, HDM §16.5.7, & STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.

TABLE 519-02: CHANNELIZING DEVICE APPLICATION FOR LONG-TERM STATIONARY WORK ZONES

WORK ZONE PROVISIONS	MAXIMUM DEVICE SPACING (CENTER TO CENTER)	CHANNELIZING DEVICE									
		DRUMS	STANDARD CONES	TALL CONES	EXTRA TALL CONES	TEMPORARY TUBULAR MARKERS	INTERIM TUBULAR MARKERS	VERTICAL PANELS	OVERSIZED VERTICAL PANELS	TYPE II BARRICADES	TYPE III BARRICADES
LONG-TERM STATIONARY WORK ZONES INVOLVE WORK THAT OCCUPIES A LOCATION FOR MORE THAN 3 CONSECUTIVE DAYS.											
SHOULDER/MERGING/ SHIFTING TAPERS	20 FT.	X							X	X	

NOTES: X= ALLOWED BLANK = NOT ALLOWED

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
SIDEWALK DETOUR/DIVERSION
LONG TERM OPERATION
(SHEET 1 OF 2)

APPROVED DECEMBER 2, 2021

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619-519

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REVISIONS		
MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
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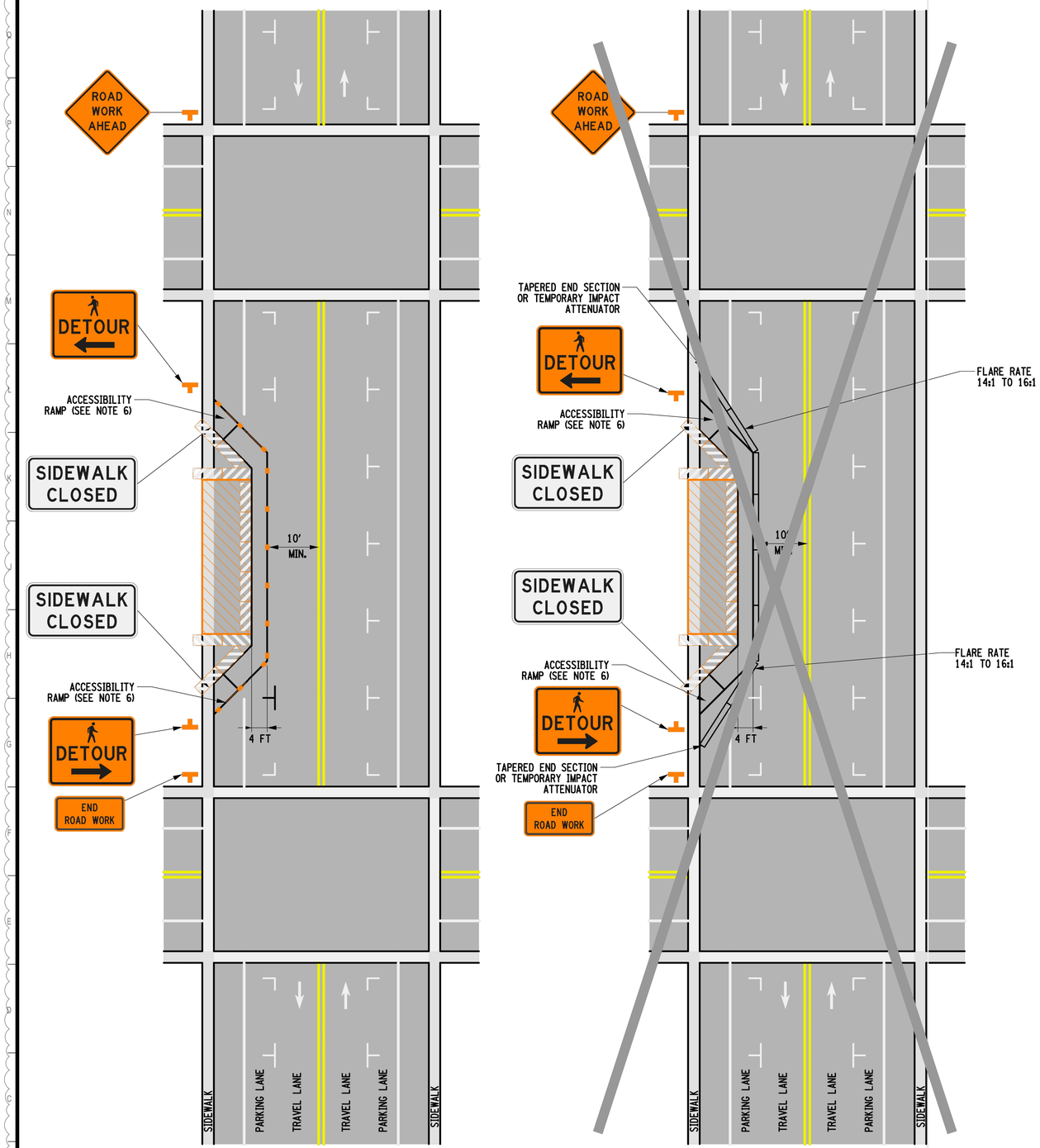
WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY

C026 1

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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DETAIL 519A: SIDEWALK DIVERSION - POSTED SPEED LIMIT < 45 MPH

DETAIL 519B: SIDEWALK DIVERSION - POSTED SPEED LIMIT ≥ 45 MPH

NOT TO SCALE

NOTES:

1. LONG-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS. THIS SETUP CAN ALSO BE USED FOR INTERMEDIATE TERM WORK.
2. ANY SIDEWALK DIVERSION MUST BE ADA COMPLIANT AND FOLLOW THE 2011 PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG). TEMPORARY RAMPS AND OTHER TEMPORARY PEDESTRIAN FACILITIES SHALL BE PAID FOR UNDER THE APPROPRIATE ITEM FOR HOT MIX ASPHALT (HMA) SIDEWALKS.
3. PROWAG SECTION R205 AND MUTCD PART 6 SHALL APPLY TO ALL TEMPORARY ALTERNATIVE PEDESTRIAN PATHWAYS.
4. ONLY THE WORK ZONE TRAFFIC CONTROL DEVICES RELATED TO PEDESTRIANS ARE SHOWN. OTHER DEVICES, SUCH AS LANE/SHOULDER CLOSURE SIGNING, ROAD NARROWS SIGNS (W5-4), OR NO PARKING SIGNS MAY BE USED TO CONTROL VEHICULAR TRAFFIC.
5. TYPE III BARRICADES SHALL BE THE FULL WIDTH OF THE PATH BEING CLOSED.
6. THE GRADE (RUNNING SLOPE) OF A TEMPORARY CURB RAMP FOR DESIGN AND LAYOUT SHALL BE A MAXIMUM OF 7.5%. THE GRADE FOR ADA ACCESSIBILITY AND WORK ACCEPTANCE SHALL BE A MAXIMUM OF 8.3%.
7. ACCESS TO BUSINESS ENTRANCES AND TRANSIT STOPS WILL NEED TO BE MAINTAINED. IF THE PEDESTRIAN FACILITY CURRENTLY HAS A TRANSIT STOP THAT WILL BE AFFECTED BY THE WORK ZONE, PRACTITIONERS SHOULD CONSULT THE TRANSIT AUTHORITIES THAT SERVICE THE AFFECTED STOP TO DETERMINE HOW TO ACCOMMODATE THE STOP.

NOTES ON NIGHTTIME WORK:

N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.

N2. ALL SIGNS, STOP/SLOW PADDLES AND RED FLAGS USED TO WARN/ALERT/CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.

N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMETS AND NIGHTTIME APPAREL IN ACCORDANCE WITH §107-05A. HIGH VISIBILITY APPAREL AT ALL TIMES.

N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS OR FLASHING LED BEACONS AT ALL TIMES.

N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.

N6. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.

N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL EQUIPMENT, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.

N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJOINING THE ROADWAY.

N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL.

N10. AT NIGHT, EACH TYPE III CONSTRUCTION BARRICADE USED TO CLOSE A ROADWAY, A SEGMENT OF A ROADWAY OR A SIDEWALK SHALL BE EQUIPPED WITH ONE FLASHING WARNING LIGHT.

N11. SEE NIGHTTIME SAFETY BULLETIN, HDM §16.5.7, & STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS.



G20-2 THIS SIGN SHALL BE LOCATED A MINIMUM DISTANCE OF 80 FT. AND MAXIMUM OF 400 FT. PAST THE END OF THE DOWNSTREAM TAPER



R9-9



W20-1



M4-9bL



M4-9bR

TYPE III BARRICADE

CHANNELIZING DEVICE (SEE TABLE 519-02 ON SHEET 1 OF 2)

PINNED TEMPORARY POSITIVE BARRIER

WORK AREA

TABLE 519-03: REQUIRED SIGN SIZES•

SIGN	NON-FREEWAY	FREEWAY
G20-2	36x18	48x24
M4-9bL/M4-9bR••	30x24	36x24
R9-9••	24x12	24x12
W20-1	36x36	48x48

•FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.
••SIGNS NOT FOR FREEWAY USE.

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
SIDEWALK DETOUR/DIVERSION
LONG TERM OPERATION
(SHEET 2 OF 2)

APPROVED DECEMBER 2, 2021

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REVISIONS		
MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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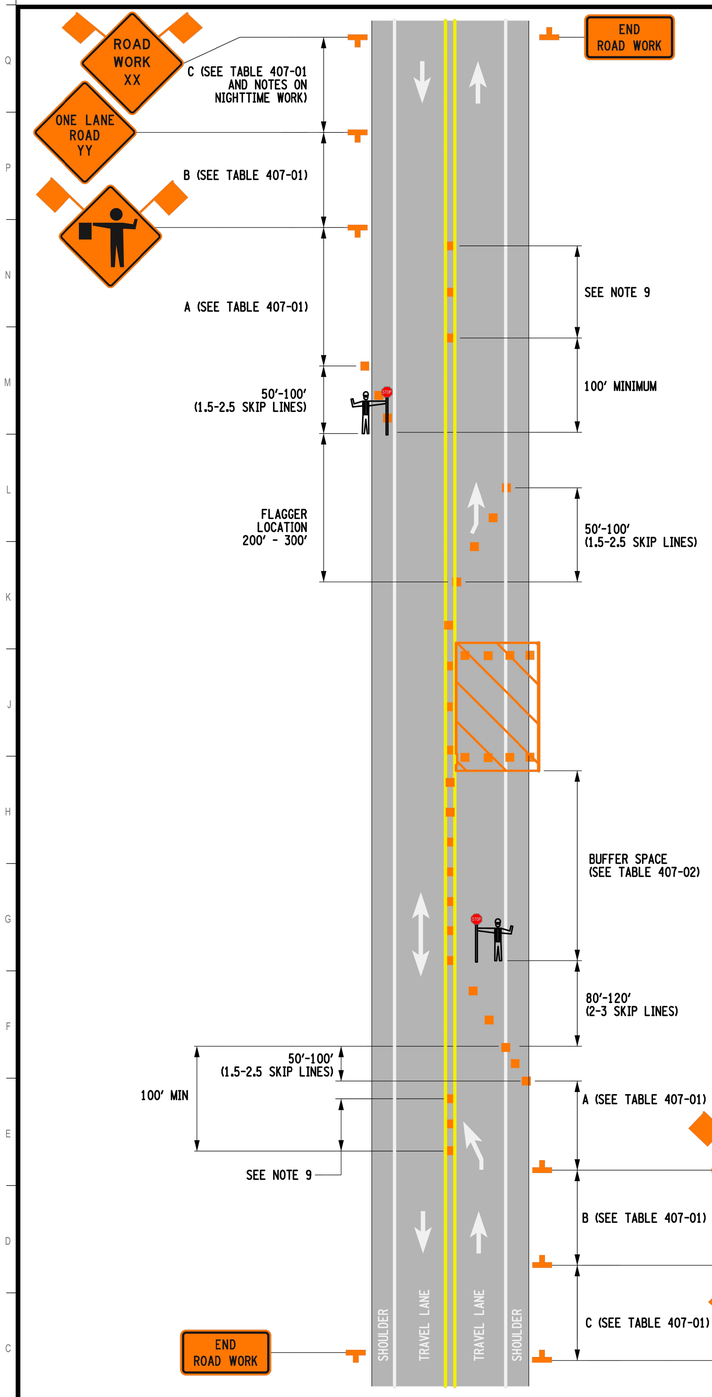
WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY

C027 1

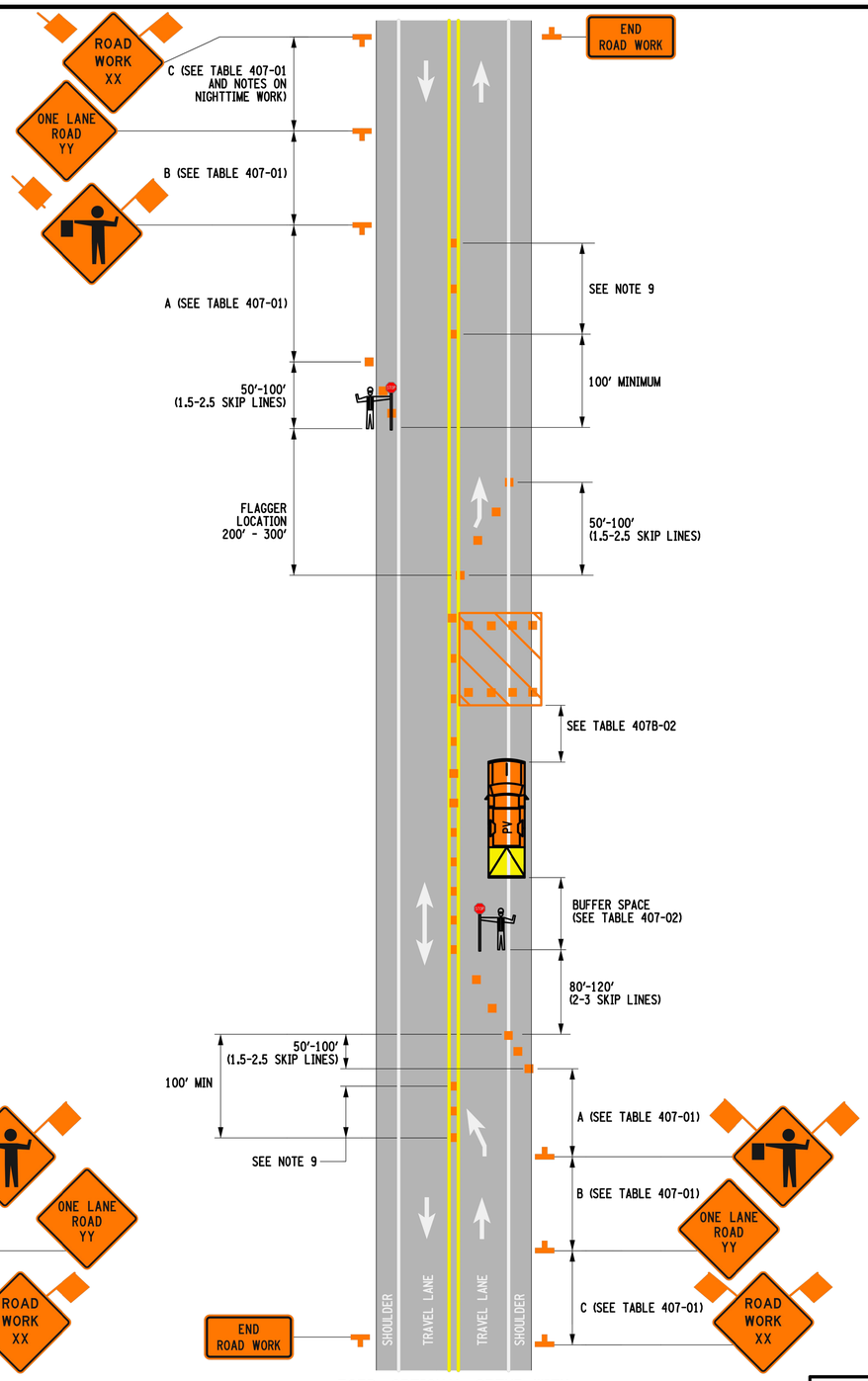
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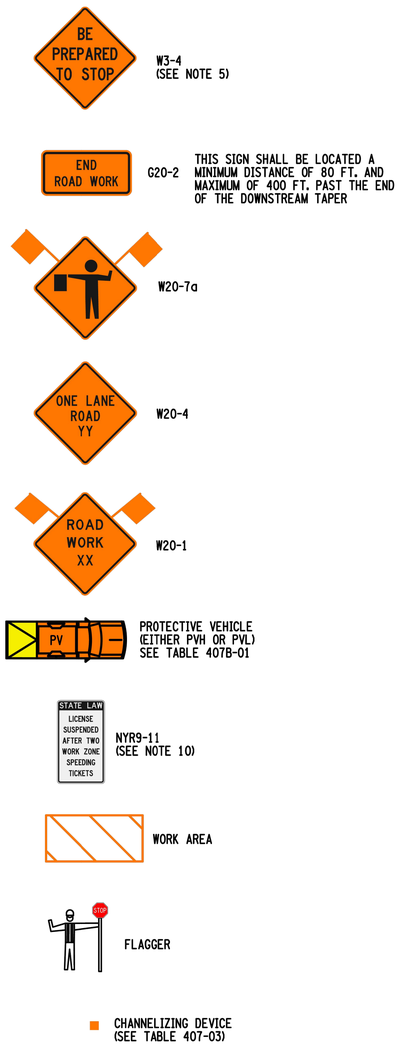


407A: REQUIRED SETUP



307B: OPTIONAL SETUP WITH PROTECTIVE VEHICLE (SEE NOTE 6)

NOT TO SCALE



REFER TO SHEET 2 OF 2 FOR TABLES AND NOTES

ERRATA 2 EFF. 09/01/23
ISSUED WITH EB 23-016

ERRATA 1 EFF. 01/01/23
ISSUED WITH EB 22-050

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY LANE CLOSURE WITH FLAGGERS INTERMEDIATE TERM OPERATIONS (SHEET 1 OF 2)

APPROVED DECEMBER 2, 2021
Robert Limoges
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619-407

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REVISIONS

MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY

C028 1

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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TABLE 407-01: ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤ 30 MPH•)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH•)	200	200	200	AHEAD	AHEAD
URBAN (≥ 45 MPH•)	[illegible]	[illegible]	[illegible]	1000 FT.	AHEAD
RURAL	500	500	500	[illegible]	[illegible]

• PRECONSTRUCTION POSTED SPEED LIMIT

TABLE 407-02: LONGITUDINAL BUFFER SPACE

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	LONGITUDINAL BUFFER SPACE DISTANCE (FT.)/ # OF SKIP LINES
25	155/4
30	200/5
[illegible]	[illegible]
40	305/8
45	360/9
[illegible]	[illegible]
55	495/13

TABLE 407-03: CHANNELIZING DEVICE APPLICATION FOR INTERMEDIATE-TERM STATIONARY WORK ZONES

WORK ZONE PROVISIONS	MAXIMUM DEVICE SPACING (CENTER TO CENTER)	MUTCD COMPLIANT CHANNELIZING DEVICE								
		DRUMS	STANDARD CONES	TALL CONES	EXTRA TALL CONES	TEMPORARY TUBULAR MARKERS	INTERIM TUBULAR MARKERS	VERTICAL PANELS	OVERSIZED VERTICAL PANELS	TYPE III BARRICADES
INTERMEDIATE-TERM STATIONARY WORK ZONES INVOLVE WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR										
SHOULDER/MERGING/ SHIFTING TAPERS	20 FT. •	X							X	
	40 FT.	X							X	
MARKING FOR TRANSVERSE BUMPS[1]	N/A	X[2]			X[2]				X[2]	
TRANSVERSE DEVICE WITHIN CLOSED TRAFFIC LANE AND/OR SHOULDER	800 FT.	X		X	X			X	X	O
REMOVAL OF EXISTING GUIDE RAIL	80 FT.	X		X	X	X		X	X	O
	40 FT.									

NOTES: X= ALLOWED, BLANK = NOT ALLOWED, O = OPTIONAL
1. - A TYPE 1 OBJECT MARKER MAY BE USED IN LIEU OF CHANNELIZING DEVICE.
2. - CHANNELIZING DEVICES SHALL BE EQUIPPED WITH A FLASHING WARNING LIGHT.

• SEE NOTE 4 ON SHEET 1 OF 2.

TABLE 407-04: REQUIRED SIGN SIZES•

SIGN	NON-FREEWAY	FREEWAY
G20-2	36x18	48x24
W3-4	36x36	[illegible]x48
W20-1	36x36	48x[illegible]
W20-4	36x36	[illegible]48
W20-7	36x36	48x48
WARNING FLAG	18x18	18x18

•FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.

TABLE 407B-01: PROTECTIVE VEHICLE REQUIREMENTS

CLOSURE TYPE	ROAD TYPE & SPEED / EXPOSURE CONDITIONS (SEE NOTE 1)	NON-FREEWAY ≥ 45 MPH	NON-FREEWAY 35 - 40 MPH	NON-FREEWAY ≤ 30 MPH
LANE CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC	PVH+TMIA	PVL+TMIA	SEE NOTE 2
	-NO WORKERS ON FOOT -NO WORK VEHICLE EXPOSED TO TRAFFIC -OTHER HAZARDS EXPOSED (IE EQUIPMENT, MATERIALS)	PVH+TMIA	SEE NOTE 2	SEE NOTE 2
SHOULDER CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR WORK VEHICLE EXPOSED TO TRAFFIC	PVH+TMIA	SEE NOTE 2	SEE NOTE 2
	-NO WORKERS ON FOOT -NO WORK VEHICLE EXPOSED TO TRAFFIC -OTHER HAZARDS EXPOSED (IE EQUIPMENT, MATERIALS, EXCAVATION)	SEE NOTE 3	SEE NOTE 2	SEE NOTE 2

LEGEND
PVL - PROTECTIVE VEHICLE LIGHT (MINIMUM GROSS WEIGHT 9,500 LBS. OR GREATER) (SEE NOTE 4)
PVH - PROTECTIVE VEHICLE HEAVY (MINIMUM GROSS WEIGHT 22,000 LBS. OR GREATER)
TMIA - TRUCK/TRAILER MOUNTED IMPACT ATTENUATOR

NOTES
1. THE EXPOSURE CONDITIONS ASSUME THERE IS NO POSITIVE PROTECTION PRESENT.
2. EITHER A PROTECTIVE LIGHT (PVL) OR THE STANDARD BUFFER SPACE (SEE TABLE 011-03 SHALL BE PROVIDED.
3. TRUCK/TRAILER MOUNTED IMPACT ATTENUATORS (TMIA) SHALL NOT BE MOUNTED/INSTALLED ON VEHICLES WITH A GROSS VEHICLE WEIGHT (GVW) LESS THAN WHAT IS MINIMALLY REQUIRED BY THE MANUFACTURER OF THE TMIA.
4. THE USE OF A PROTECTIVE VEHICLE LIGHT (PVL) AS A SHADOW VEHICLE IS LIMITED TO NON-FREEWAY ROADWAYS WHERE THE POSTED SPEED LIMITS IS ≤ 40 MPH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

TABLE 407B-02: ROLL AHEAD DISTANCE FOR PROTECTIVE VEHICLES

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	ROLL AHEAD DISTANCE (FT.)/• OF SKIP LINES FOR VEHICLES	
	STATIONARY OPERATION	
	PROTECTIVE VEHICLES WEIGHING 9,500 TO 21,999 LBS. GVW	PROTECTIVE VEHICLES WEIGHING 22,000 LBS. OR GREATER GVW
≤ 40	120/3	80/2

NOTES:
1. INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
2. WHEN A SIDE ROAD OR DRIVEWAY INTERSECTS THE ROADWAY WITHIN A WORK ZONE TRAFFIC CONTROL AREA, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES AND/OR FLAGGERS SHALL BE PLACED AS NEEDED. ADDITIONAL FLAGGERS SHALL BE LOCATED AT ALL INTERSECTIONS AND COMMERCIAL DRIVEWAYS LOCATED WITHIN OR NEAR THE ACTIVE WORK SPACE. NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
3. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 20' IN THE ACTIVE WORK SPACE.
4. CHANNELIZING DEVICES SHALL BE PLACED TRANSVERSELY A MINIMUM OF EVERY 800' AS SHOWN WHEN A PAVED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 800'.
5. IF THE TRAFFIC IS EXPECTED TO QUEUE PAST THE W20-4 SIGN, A W3-4 SIGN SHOULD BE ADDED HALFWAY BETWEEN THE W20-4 AND W20-1 SIGNS.
6. IF CONDITION WARRANTS, PROTECTIVE VEHICLE WITH APPROPRIATE ROLL AHEAD DISTANCE MAY BE USED IN ADVANCE OF THE WORK AREA. TO USE PROTECTIVE VEHICLE, BUFFER SPACE SHALL BE PROVIDED ACCORDINGLY, AND THE WHEELS SHALL BE ALIGNED WITH THE LANE STRIPING.
7. FLAGGER SIGN (W20-7a) AND ONE LANE ROAD AHEAD SIGN (W20-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURRING.
8. ALL FLAGGERS SHALL USE 24" (MIN.) OCTAGON SHAPED STOP/SLOW PADDLES HAVING 6' STAFF. THE PADDLE IS THE PREFERRED DEVICE, BUT THE FLAG MAY BE USED AT INTERSECTIONS WHERE THE STOP/SLOW PADDLE WOULD OFFER CONTRADICTING INFORMATION TO DRIVERS TRAVELING IN OPPOSITE DIRECTIONS/LEGS OF THE INTERSECTION OR DURING INCIDENT MANAGEMENT SITUATIONS.
9. CENTERLINE CONES MAY BE ADDED TO ENHANCE THE VISIBILITY OF THE FLAGGER STATION. IF CONES ARE USED, PLACE THEM 100 FT. (MINIMUM) FROM FLAGGER.
10. THE NY9-11 SIGN IS RECOMMENDED. WHEN USED, IT SHALL BE PLACED IN ADVANCE OF THE FIRST ADVANCE WARNING SIGN. THE PLACEMENT DISTANCE SHALL BE 1000' FOR POSTED SPEED LIMITS OF 45 MPH OR HIGHER, AND 300' - 500' FOR POSTED SPEED LIMITS OF LESS THAN 45 MPH.

NOTES FOR NIGHTTIME OPERATIONS:

N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.
N2. ALL SIGNS, STOP / SLOW PADDLES AND RED FLAGS USED TO WARN / ALERT / CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.
N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMET AND NIGHTTIME APPAREL IN ACCORDANCE WITH y107-05A. HIGH VISIBILITY APPAREL AT ALL TIMES.
N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS AT ALL TIMES.
N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.
N6. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS,INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.
N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.
N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJOINING THE ROADWAY.
N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL FROM THE DOT ENGINEER.
N10. SEE STANDARD SPECIFICATIONS y619 FOR ADDITONAL REQUIREMENTS AND CONSIDERATIONS.
N11. FLAGGERS SHALL USE A FLASHLIGHT WITH A RED GLOW CONE/RED LED BATON FOR FLAGGING IN NON-ILLUMINATED FLAGGER STATIONS DURING NIGHTTIME OPERATIONS.

ERRATA 1 EFF. 09/01/23
ISSUED WITH EB 23-016

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
LANE CLOSURE WITH FLAGGERS
INTERMEDIATE TERM OPERATION
(SHEET 2 OF 2)

APPROVED APRIL 8, 2022
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REVISIONS

MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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Drawn By: YY
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WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY

C029

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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TAXIWAY C

EXISTING APRON

LEASE LINE (TYP.)

PROJECT LIMITS

RELOCATED EXISTING CHAIN LINK FENCE ON BARRIER RAIL

NEW TEMPORARY AOA CHAIN LINK FENCE ON BARRIER RAIL

EXISTING CHAIN LINK FENCE ON BARRIER RAIL

CONSTRUCTION AREA - PHASE I

CONTRACTOR TO IMPLEMENT PROPER EROSION CONTROL MEASURES TO EXISTING TRENCH DRAIN DURING CONSTRUCTION.

EXISTING FENCE (AOA)

NEW HANGAR BUILDING

BUILDING 138
PANNILI ADMINISTRATION BUILDING

BUILDING 138
PANNILI ADMINISTRATION BUILDING

BRICK FIREHOUSE

FIRST STREET

SIDEWALK CLOSED

X-R9-9

TEMPORARY ACCESSIBILITY RAMP

W20-7
NYSDOT 619-012

ROAD WORK AHEAD

W20-1
NYSDOT 619-012

W20-1
NYSDOT 619-090

W20-7
NYSDOT 619-012

W20-1
NYSDOT 619-012

ROAD WORK XX

END ROAD WORK

W20-2
NYSDOT 619-012

5' TEMPORARY SIDEWALK

TYPE 3 BARRICADE (TYP.)

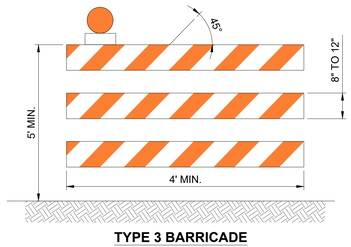
TRAFFIC DRUMS (TYP.)

TEMPORARY PAVEMENT MARKING TAPE

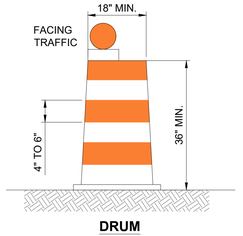
PAVEMENT END

EXISTING GATE

150'
50'
50'
80'
50'
120'
100'
100'
100'
100'
100'
100'
100'
13'
5'



TYPE 3 BARRICADE
N.T.S.



DRUM
N.T.S.

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE (AOA)
- EXISTING CHAIN LINK FENCE
- NEW ASPHALT PAVEMENT
- NEW MILL AND OVERLAY PAVEMENT
- NEW CONCRETE
- NEW SOD
- LEASE LANE
- XX XX NEW GALVANIZED STEEL CHAIN LINK FENCE

0' 40' 80'

HDg Architecture
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(PH): 407-739-9000

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MOHSEN DESIGN GROUP INCORPORATED
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TAMPA, FL 33618

STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109987
Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

MAINTENANCE OF TRAFFIC PLAN - PHASE I

C030

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

Plotted: C:\Users\Graham\MOHSEN DESIGN GROUP Dropbox\MDG\Projects\SWF\HDG23005-SWF-SFS Terminal and Hangar\05-Drawings\23005-SWF-SFS-C030-PH1.dwg - Graham

TAXIWAY C

EXISTING APRON

PROJECT LIMITS

RELOCATED EXISTING CHAIN LINK FENCE ON BARRIER RAIL

LEASE LINE

NEW TEMPORARY AOA CHAIN LINK FENCE ON BARRIER RAIL

EXISTING CHAIN LINK FENCE ON BARRIER RAIL

CONTRACTOR TO IMPLEMENT PROPER EROSION CONTROL MEASURES TO EXISTING TRENCH DRAIN DURING CONSTRUCTION.

EXISTING FENCE (AOA)

NEW HANGAR BUILDING

BUILDING 138
PANNILI ADMINISTRATION BUILDING

BUILDING 138
PANNILI ADMINISTRATION BUILDING

BRICK FIREHOUSE

FIRST STREET

TERMINAL

CONSTRUCTION AREA - PHASE II

TRAFFIC DRUMS (TYP.)

W20-1
NYSDOT 619-090

W20-1
NYSDOT 619-012

W20-7
NYSDOT 619-012

W20-4
NYSDOT 619-012

ROAD WORK XX

ONE LANE ROAD YY

END ROAD WORK

W20-2
NYSDOT 619-012

W20-7
NYSDOT 619-012

W20-7
NYSDOT 619-012

W20-4
NYSDOT 619-012

ONE LANE ROAD YY

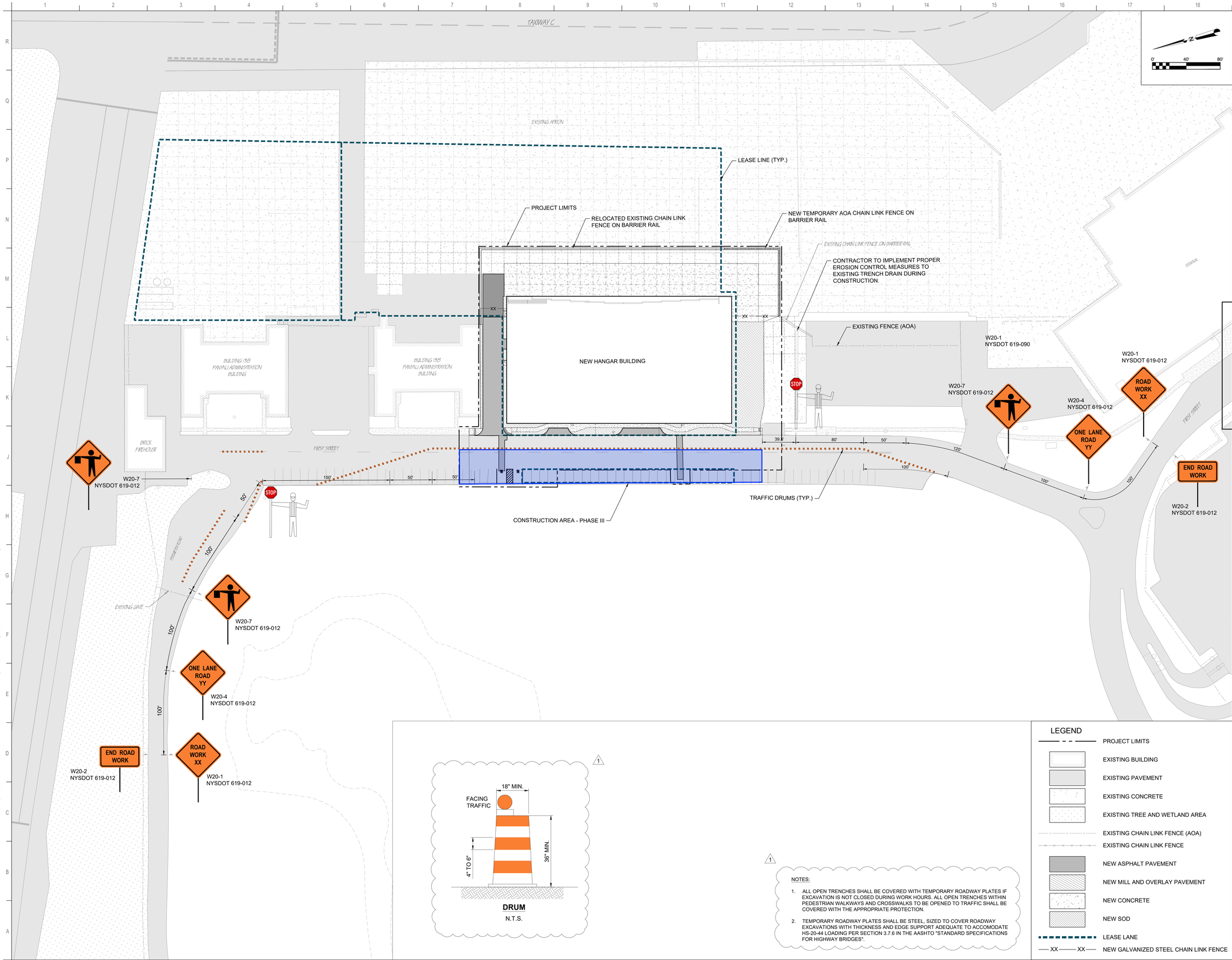
ROAD WORK XX

W20-1
NYSDOT 619-012

END ROAD WORK

W20-2
NYSDOT 619-012

150'
50'
50'
50'
80'
39.5'
120'
100'
100'
100



DRUM
N.T.S.

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE (AOA)
- EXISTING CHAIN LINK FENCE
- NEW ASPHALT PAVEMENT
- NEW MILL AND OVERLAY PAVEMENT
- NEW CONCRETE
- NEW SOD
- LEASE LANE
- XX XX NEW GALVANIZED STEEL CHAIN LINK FENCE

1

NOTES:

1. ALL OPEN TRENCHES SHALL BE COVERED WITH TEMPORARY ROADWAY PLATES IF EXCAVATION IS NOT CLOSED DURING WORK HOURS. ALL OPEN TRENCHES WITHIN PEDESTRIAN WALKWAYS AND CROSSWALKS TO BE OPENED TO TRAFFIC SHALL BE COVERED WITH THE APPROPRIATE PROTECTION.
2. TEMPORARY ROADWAY PLATES SHALL BE STEEL, SIZED TO COVER ROADWAY EXCAVATIONS WITH THICKNESS AND EDGE SUPPORT ADEQUATE TO ACCOMODATE HS-20-44 LOADING PER SECTION 3.7.6 IN THE AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES".

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109987

Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
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ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

MAINTENANCE OF TRAFFIC PLAN - PHASE III

C032

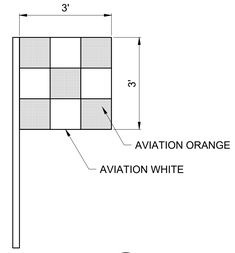
100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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SAFETY

1. CONTRACTOR SHALL BE FAMILIAR WITH THE FOLLOWING FAA SAFETY PROVISIONS AND IMPLEMENT THESE REQUIREMENTS DURING CONSTRUCTION. THE LATEST COPIES OF THESE GUIDELINES CAN BE OBTAINED FROM THE ENGINEER OR ON-LINE AT (WWW.FAA.GOV/REGULATIONS_POLICIES/).
   a) FAA ADVISORY CIRCULAR AC 150/5370-2G, "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION"
   b) FAA ADVISORY CIRCULAR AC 150/5210-5D, "PAINTING, MARKING AND LIGHTING OF VEHICLES USED ON AN AIRPORT
   c) CODE OF FEDERAL REGULATIONS, 14 CFR PART 77, SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE AIRSPACE
   d) FAA ADVISORY CIRCULAR AC 150/5210-24, "AIRPORT FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT"
   e) FAA ADVISORY CIRCULAR AC 150/5200-18C, "AIRPORT SAFETY SELF-INSPECTION"
   f) FAA ADVISORY CIRCULAR AC 150/5200-33B, "HAZARDOUS WILDLIFE ATTRACTIONS ON OR NEAR AIRPORTS"
2. CONTRACTOR SHALL COMPLY WITH THE SAFETY PLAN ASSOCIATED WITH THE CONSTRUCTION PROJECT AND ENSURE THAT CONSTRUCTION PERSONNEL ARE FAMILIAR WITH SAFETY PROCEDURES AND REGULATIONS ON THE AIRPORT.
3. CONTRACTOR SHALL PROVIDE A POINT OF CONTACT WHO WILL COORDINATE AN IMMEDIATE RESPONSE TO CORRECT ANY CONSTRUCTION-RELATED ACTIVITY THAT MAY ADVERSELY AFFECT THE OPERATIONAL SAFETY OF THE AIRPORT.
4. CONTRACTOR SHALL PROVIDE AN APPROVED SAFETY OFFICER/CONSTRUCTION INSPECTOR FAMILIAR WITH AIRPORT SAFETY TO MONITOR CONSTRUCTION ACTIVITIES.
5. CONTRACTOR SHALL RESTRICT MOVEMENT OF CONSTRUCTION VEHICLES TO CONSTRUCTION AREAS BY FLAGGING AND BARRICADING, OR PROVIDING ESCORTS, AS APPROPRIATE. NO EMPLOYEES OF ANY CONTRACTOR, SUBCONTRACTOR, OR OTHER CONSTRUCTION PERSONNEL WILL BE PERMITTED TO OPERATE VEHICLES OR EQUIPMENT ON AIRPORT PROPERTY UNTIL THEY HAVE COMPLETED THE OWNER'S DRIVERS TRAINING COURSE.
6. CONTRACTOR SHALL ENSURE THAT NO EMPLOYEES, EMPLOYEES OF SUBCONTRACTORS OR SUPPLIERS, OR OTHER PERSONS ENTER ANY PART OF THE AIR OPERATIONS AREAS (AOA) FROM THE CONSTRUCTION SITE UNLESS AUTHORIZED.
7. CONTRACTOR EMPLOYEES SHALL PARK AND SERVICE ALL CONSTRUCTION VEHICLES IN AN AREA DESIGNATED BY THE OWNER OUTSIDE THE RUNWAY SAFETY AREAS (RSA) AND OBSTACLE FREE ZONE (OFZ) AND NEVER ON A CLOSED TAXIWAY OR RUNWAY. EMPLOYEES SHALL ALSO PARK CONSTRUCTION VEHICLES OUTSIDE THE OBJECT FREE AREA (OFA) WHEN NOT IN USE BY CONSTRUCTION PERSONNEL (E.G., OVERNIGHT, ON WEEKENDS, OR DURING OTHER PERIODS WHEN CONSTRUCTION IS NOT ACTIVE).
8. CONTRACTOR PERSONNEL ENGAGED IN ACTIVITIES INVOLVING UNESCORTED OPERATION ON AIRCRAFT MOVEMENT AREAS SHALL OBSERVE THE PROPER PROCEDURES FOR COMMUNICATIONS.
9. CONTRACTOR SHALL PROMINENTLY MARK OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE WITH RED OR ORANGE FLAGS, AS APPROVED BY THE OWNER, AND LIGHT THEM WITH RED LIGHTS DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS.
10. OPEN TRENCHES OR EXCAVATIONS ARE NOT PERMITTED WITHIN A SAFETY AREA WHILE THE ASSOCIATED RUNWAY OR TAXIWAY IS OPEN. IF POSSIBLE, BACKFILL TRENCHES BEFORE THE RUNWAYS/TAXIWAYS ARE OPENED. IF THE RUNWAYS/TAXIWAYS MUST BE OPENED BEFORE EXCAVATIONS ARE BACKFILLED, COVER THE EXCAVATIONS APPROPRIATELY. COVERING FOR OPEN TRENCHES MUST BE DESIGNED TO ALLOW THE SAFE OPERATION OF THE HEAVIEST AIRCRAFT OPERATING ON THE RUNWAYS/TAXIWAY TO CROSS THE TRENCH WITHOUT DAMAGE TO THE AIRCRAFT
11. EXCAVATIONS AND OPEN TRENCHES ARE NOT PERMITTED WITHIN THE TSA OF AN ACTIVE TAXIWAY AND APRON PAVEMENT.
12. CONTRACTOR SHALL SEPARATE THE CONSTRUCTION SITE AND NONMOVEMENT AREAS IN WHICH NO PART OF AN AIRCRAFT MAY ENTER BY USING BARRICADES THAT ARE MARKED WITH DIAGONAL, ALTERNATING ORANGE AND WHITE STRIPES. BARRICADES MAY BE SUPPLEMENTED WITH ALTERNATING ORANGE AND WHITE FLAGS AT LEAST 3 FEET BY 3 FEET SQUARE AND MADE AND INSTALLED SO THEY ARE ALWAYS IN AN EXTENDED POSITION, PROPERLY ORIENTED, AND SECURELY FASTENED TO ELIMINATE JET ENGINE INGESTION AND/OR PROPELLER WASH DISPERSION.
13. STOCKPILED MATERIALS AND EQUIPMENT STORAGE ARE NOT PERMITTED WITHIN THE RSA AND OFZ OF AN OPERATIONAL RUNWAY. CONTRACTOR SHALL ENSURE THAT STOCKPILED MATERIALS AND EQUIPMENT ADJACENT TO THESE AREAS ARE PROMINENTLY MARKED AND LIGHTED DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS. THIS INCLUDES DETERMINING AND VERIFYING THAT MATERIALS ARE STORED AT AN APPROVED LOCATION TO PREVENT FOREIGN OBJECT DAMAGE AND ATTRACTION OF WILDLIFE.
14. CONTRACTOR MAY NOT USE OPEN-FLAME WELDING OR TORCHES UNLESS ADEQUATE FIRE SAFETY PRECAUTIONS ARE PROVIDED AND THE OWNER HAS APPROVED THEIR USE.
15. WASTE AND LOOSE MATERIALS, COMMONLY REFERRED TO AS FOD, ARE CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEARS, PROPELLERS, AND JET ENGINES. CONTRACTOR SHALL NOT LEAVE OR PLACE FOD ON OR NEAR ACTIVE AIRCRAFT MOVEMENT AREAS. MATERIALS TRACKED ONTO THESE AREAS MUST BE CONTINUOUSLY REMOVED DURING CONSTRUCTION. CONTRACTOR SHALL ALSO CAREFULLY CONTROL AND CONTINUOUSLY REMOVE WASTE OR LOOSE MATERIALS THAT MIGHT ATTRACT WILDLIFE.
16. ALL CONTRACTOR VEHICLES AND MOBILE EQUIPMENT OPERATING IN THE AOA SHALL BE IDENTIFIED BY THREE-FOOT (3') SQUARE ORANGE AND WHITE FLAGS WHENEVER SUCH VEHICLE AND EQUIPMENT ARE OPERATING ON THE AOA. IN ADDITION, SUCH VEHICLES AND EQUIPMENT SHALL HAVE THE CONTRACTOR'S NAME CLEARLY AFFIXED ON EACH SIDE OF SUCH VEHICLES AND EQUIPMENT. DURING THE HOURS BETWEEN SUNSET AND SUNRISE AND AT ALL TIMES WHEN VISIBILITY IS IMPAIRED, VEHICLES AND MOBILE EQUIPMENT SHALL ALSO BE EQUIPPED WITH A REVOLVING YELLOW BEACON LIGHT MOUNTED ON THE TOP OF THE VEHICLE OR EQUIPMENT. BEACON LIGHTS SHALL PROVIDE:
   a) THREE HUNDRED AND SIXTY DEGREE AZIMUTH COVERAGE.
   b) EFFECTIVE INTENSITY IN THE HORIZONTAL PLANE NOT LESS THAN 40 OR MORE
   c) THAN 400 CANDELAS. BEAM SPREAD MEASURED TO 1/10 PEAK INTENSITY EXTENDING FROM 10 DEGREES TO 15 DEGREES ABOVE THE HORIZONTAL.
   d) SIXTY TO NINETY FLASHES PER MINUTE.
17. NO CRANE SHALL BE ALLOWED ON THE WORK SITE UNTIL THE EQUIPMENT AND ITS INTENDED OPERATION ARE APPROVED BY THE OWNER.. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH:
   a) THE OWNER HAS FILED A 7460 (AIRSPACE ANALYSIS) WITH THE FAA FOR THE USE OF A CRANE ON THIS PROJECT WHICH GIVES SPECIFIC WORKING LIMITS WITHIN EACH PHASE.
   b) CONTRACTOR SHALL COORDINATE WITH OWNER AND OBTAIN THE AIRSPACE DETERMINATION AND ADHERE TO ALL REQUIREMENTS PRIOR TO MOBILIZATION OF THE CRANE.
18. WHEN ACCESS IS APPROVED BY THE OWNER, THE TIP OF THE CRANE BOOM SHALL BE IDENTIFIED BY THE ORANGE AND WHITE FLAG AND, IF APPROPRIATE, BY RED OBSTRUCTION LIGHTS.
19. DURING PERIODS OF SEVERE WEATHER CONDITIONS OR OTHER OPERATIONAL EMERGENCIES, THE OWNER MAY DIRECT THE CONTRACTOR TO RELINQUISH AREAS UNDER CONSTRUCTION AND TO PREPARE THE AREAS FOR AIRCRAFT OPERATIONS. IN THIS EVENT THE ENGINEER WILL SO DIRECT THE CONTRACTOR TO EVACUATE THE AREA AND THE ENGINEER WILL SPECIFY THE LIMITS OF THE AREA TO BE EVACUATED, THE TERM OF EVACUATION AND THE CONDITIONS GOVERNING THE RESTORATION WORK NECESSARY TO PREPARE THE AREA FOR AIRCRAFT OPERATION. THE CONTRACTOR SHALL PROMPTLY AND FULLY COMPLY WITH THE ENGINEER'S DIRECTIVE. SHOULD THE DIRECTIVE ENTAIL EXTRA WORK UNDER THE CONTRACT, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR WILL BE REIMBURSED FOR SUCH EXTRA WORK. SHOULD THE DIRECTIVE ENTAIL A DELAY IN THE COMPLETION OF THE CONTRACT OR ANY DEFINED SUBDIVISION OF THE CONTRACT, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR MAY BE GRANTED AN EXTENSION OF TIME.
20. VEHICULAR TRAFFIC SHALL NOT CROSS ACTIVE AIRCRAFT MOVEMENT AREAS (RUNWAYS, TAXIWAYS OR AIRCRAFT PARKING APRON). SEE CONSTRUCTION ACCESS, STAGING AND PHASING PLANS, SHEET (C040).
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACTIONS OF EMPLOYEES AND SUBCONTRACTORS. PERSONNEL WHO DO NOT ABIDE BY AIRPORT RULES AND REGULATIONS ARE SUBJECT TO PROSECUTION.
22. ALL ACCIDENTS CAUSING PERSONAL INJURY OR PROPERTY DAMAGE SHALL BE REPORTED TO THE OWNER IMMEDIATELY. THE CONTRACTOR(S) SHALL PROVIDE, AT THE SITE, SUCH EQUIPMENT AND MEDICAL FACILITIES AS ARE NECESSARY TO SUPPLY FIRST AID SERVICE TO ANYONE WHO MAY BE INJURED IN CONNECTION WITH THE PERFORMANCE OF THE WORK, WHETHER ON OR ADJACENT TO THE SITE. IN ADDITION, IF DEATH OR SERIOUS INJURIES OR SERIOUS DAMAGES ARE CAUSED, THE ACCIDENT SHALL BE REPORTED IMMEDIATELY BY TELEPHONE TO 911 DISPATCH.
23. THE CONTRACTOR'S EMPLOYEES, MUST HAVE A VALID GOVERNMENTAL IDENTIFICATION ON THEIR PERSON AT ALL TIMES. FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL RESULT IN THE EMPLOYEE BEING ESCORTED OFF THE AOA AND FINES MAY BE IMPOSED AT THE CONTRACTOR'S EXPENSE.
24. ANY DELAY IN CONSTRUCTION OF PROJECT DUE TO VIOLATION OF FEDERAL AND AIRPORT REGULATIONS SHALL BE ABSORBED BY THE CONTRACTOR AND ADDITIONAL APPROVED MEASURES BY THE CONTRACTOR SHALL BE EMPLOYED TO MAINTAIN THE ORIGINALLY APPROVED CONSTRUCTION SCHEDULE.
25. CONTRACTOR SHALL MONITOR GROUND FREQUENCY IF PERSONNEL AND EQUIPMENT ARE WORKING IN THE AIRPORT OPERATIONAL AREAS. AIRCRAFT SHALL HAVE THE RIGHT-OF-WAY AT ALL TIMES. CONTRACTOR SHALL MAKE ALL PERSONNEL FAMILIAR WITH THE LIMITS OF THE RUNWAY AND CONNECTORS TO ENSURE NO EQUIPMENT OR PERSONNEL ENTER THESE ACTIVE AREAS. ANY WORK INSIDE THE TAXIWAY SAFETY AREA (TSA) WILL REQUIRE TEMPORARY CLOSURE OF THE TAXIWAY.
26. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION PERSONNEL ARE FAMILIAR WITH SAFETY PROCEDURES AND REGULATIONS ON THE AIRPORT AND SHALL PROVIDE A POINT OF CONTACT WHO WILL COORDINATE AN IMMEDIATE RESPONSE TO CORRECT ANY CONSTRUCTION-RELATED ACTIVITY THAT MAY ADVERSELY AFFECT THE OPERATIONAL SAFETY OF THE AIRPORT.
27. CONTRACTOR SHALL IDENTIFY THE CONTRACTOR'S ON-SITE EMPLOYEES RESPONSIBLE DURING CONSTRUCTION. AT LEAST ONE OF THESE EMPLOYEES MUST BE ONSITE WHENEVER ACTIVE CONSTRUCTION IS TAKING PLACE.
28. CONTRACTOR SHALL CONDUCT INSPECTIONS SUFFICIENTLY FREQUENTLY TO ENSURE THAT THERE ARE NO ALTERED CONSTRUCTION ACTIVITIES THAT COULD CREATE POTENTIAL SAFETY HAZARDS.
29. CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY CONSTRUCTION GATES AS DIRECTED BY THE CONSTRUCTION MANAGER AT NO COST TO THE OWNER. GATES SHALL REMAIN LOCKED OR MONITORED BY A BADGED GATE GUARD AT ALL TIMES. CONTRACTOR SHALL SUPPLY THE CONSTRUCTION MANAGER WITH TWO COPIES OF THE GATE KEYS AT THE THE START OF THE PROJECT.
30. SHOULD AN AIRCRAFT EMERGENCY OCCUR ANYPLACE ON THE AIRPORT, THE CONTRACTOR WILL BE REQUIRED TO MOVE ALL PERSONNEL AND EQUIPMENT BEYOND THE SAFETY AREA OF THE RUNWAY AND TAXIWAYS AND TO REFRAIN FROM MOVING OUT OF THESE AREAS TO RESUME WORK UNTIL SPECIFICALLY AUTHORIZED BY AIRPORT PERSONNEL. THE AREA AROUND THE DOWNED AIRCRAFT SHALL BE EVACUATED AND NOT REENTERED BY THE CONTRACTOR UNTIL GIVEN PERMISSION, EXCEPT FOR LIFESAVING ACTIVITIES.



NOTE:
1. ALL VEHICLES SHALL BE EQUIPPED WITH A FLAG WHILE IN THE AOA
2. SEE SAFETY NOTES FOR CONSTRUCTION SAFETY FLAG MOUNTING LOCATION REQUIREMENT

4 CONSTRUCTION SAFETY FLAG
N.T.S.

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109987

Graham M Feland
Digitally signed by Graham M Feland
Date: 2024.06.28 14:37:37 -04'00'

REVISIONS		
MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date:	06/28/2024
MDG Project No.	HDG23005
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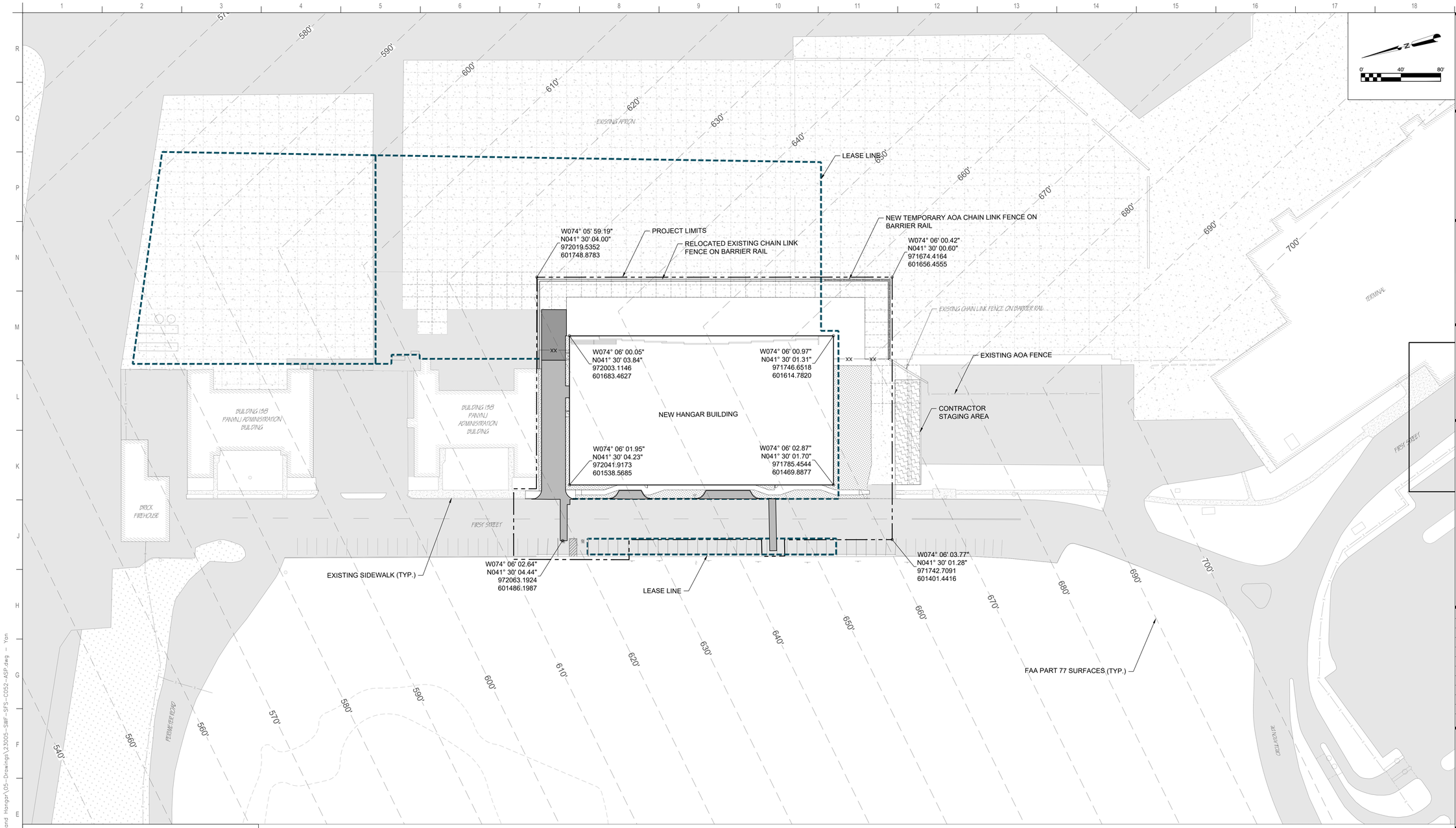
SAFETY AND SECURITY NOTES AND DETAIL

C050

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE (AOA)
- EXISTING CHAIN LINK FENCE
- NEW ASPHALT PAVEMENT
- NEW MILL AND OVERLAY PAVEMENT
- NEW CONCRETE
- NEW SOD
- CONTRACTOR STAGING AREA
- LEASE LANE
- XX XX NEW GALVANIZED STEEL CHAIN LINK FENCE

SAFETY NOTES:

1. PERSONNEL AND EQUIPMENT SHALL NOT ENTER THE AIRFIELD MOVEMENT AREA WITHOUT PRIOR APPROVAL OF THE CONSTRUCTION MANAGER, AND AIRPORT OPERATIONS.
2. THE MAXIMUM ALLOWABLE HEIGHT OF CONSTRUCTION EQUIPMENT AND STOCKPILED MATERIALS IS GOVERNED BY FAA ADVISORY CIRCULAR (AC) 150/5370-2, CURRENT EDITION. WHEN EQUIPMENT IS EXPECTED TO PENETRATE THE FAR PART 77 SURFACE (FOR ANY RUNWAY IN OPERATION) OR WHEN CRANES WILL BE USED ON SITE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST NINETY (90) DAYS PRIOR TO START OF CONSTRUCTION TO COORDINATE THE SUBMITTAL OF FAA FORM 7460-1 TO THE FAA AIRPORT DISTRICT OFFICE. PERMISSION TO USE CRANES SHALL BE ISSUED BY THE ENGINEER AFTER APPROVAL BY THE FAA. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ANY AND ALL FAA FINES INCURRED FOR OPERATING CRANES WITHOUT FAA APPROVAL. TWENTY-FOUR (24) HOURS NOTICE SHALL BE GIVEN TO AIRPORT PRIOR TO CRANE DEPLOYMENT. NO TIME EXTENSION WILL BE GRANTED FOR INADEQUATE NOTICE FOR USE OF A CRANE.
3. WORK WITHIN THE SAFETY AND OBJECT FREE AREAS WILL REQUIRE CLOSURE OF THE RUNWAY/TAXIWAY TO AIR TRAFFIC. A NOTAM MUST BE FILED BY AIRPORT MANAGEMENT AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF CLOSING RUNWAYS AND TAXIWAYS TO AIR TRAFFIC. CONTRACTOR SHALL NOTIFY AIRPORT MANAGEMENT AND CONSTRUCTION MANAGER WITH SUFFICIENT LEAD TIME FOR FILING A NOTAM.
4. ELEVATIONS SHOWN GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NVAD 88), AND DO NOT INDICATE THE AVAILABLE HEIGHT ABOVE EXISTING GROUND.
5. FAA PART 77 IMAGINARY AIRSPACE CONTOUR ELEVATION (TYP.). THE CONTOURS REPRESENT THE ALLOWABLE HEIGHT OF OBJECTS INCLUDING CONSTRUCTION EQUIPMENT RELATIVE TO THE RESPECTIVE RUNWAY CENTERLINE ELEVATION WHILE THE RUNWAY REMAINS OPEN. PENETRATIONS INTO THE SURFACES REQUIRE CLOSURE OF THE RUNWAY AND MUST BE COORDINATED WITH THE FAA AND THE AIRPORT WELL IN ADVANCE OF CLOSURE

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Graham M Feland

SIGNATURE AVIATION
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ORLANDO, FL 32801

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

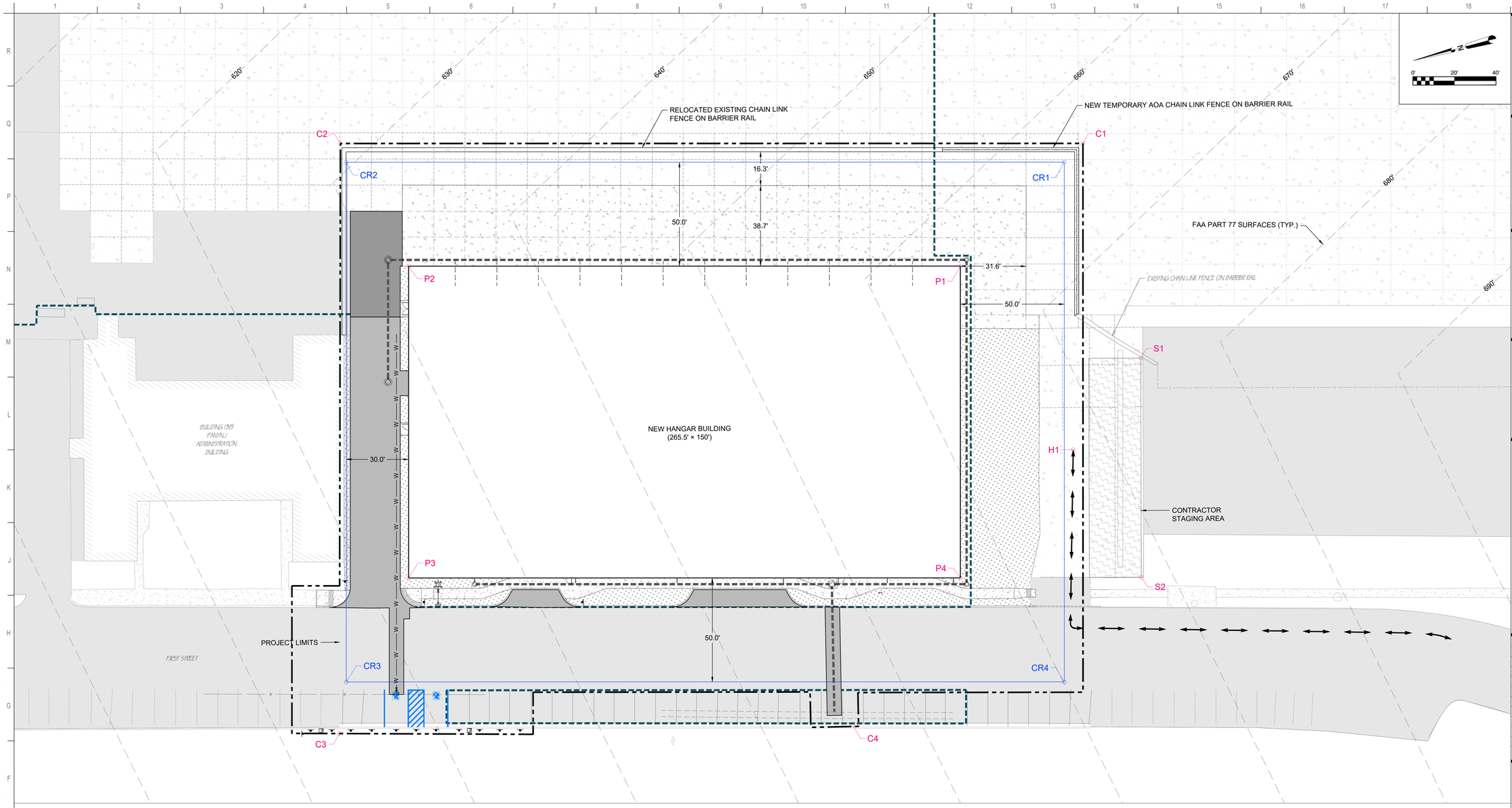
Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

AIRSPACE PROTECTION PLAN

C052

100% PERMIT SET

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LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
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- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING WATER PIPE
- EXISTING STORM PIPE
- NEW ASPHALT PAVEMENT
- NEW MILL AND OVERLAY PAVEMENT
- NEW SOD
- CONTRACTOR STAGING AREA
- EXISTING CHAIN LINK FENCE (AOA)
- HAUL ROUTES/CONSTRUCTION ACCESS
- LEASE LANE
- NEW TEMPORARY AOA CHAIN LINK FENCE ON BARRIER RAIL

SURVEY NOTES:

1. *THIS PLAN REPRESENTS EXISTING CONDITIONS OF THE FUTURE LEASE AREA OF SIGNATURE FLIGHT SUPPORT. SITE IS LOCATED WITHIN STEWART INTERNATIONAL AIRPORT AND IS A PORTION OF SECTION 91, LOT 24 IN BLOCK 1 AS SHOWN ON THE TAX MAP OF THE TOWN OF NEW WINDSOR, ORANGE COUNTY, NEW YORK.*
2. *THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON THE LOCATION OF AT GRADE UTILITIES AND MARK–OUT BY OTHERS. NOT ALL UTILITIES, INCLUDING THOSE ABANDONED OR NOT IN SERVICE, MAY BE SHOWN. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.*
3. *BOUNDARY INFORMATION IS NOT SHOWN ON THIS PLAN. THIS PLAN IS INTENDED TO SHOW TOPOGRAPHICAL DATA FOR AN INTERNAL LEASE AREA OF STEWART INTERNATIONAL AIRPORT.*
4. *THIS SURVEY IS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND MAY BE SUBJECT TO COVENANTS, RESTRICTIONS AND/OR EASEMENTS, EITHER WRITTEN OR IMPLIED, THAT ARE NOT SHOWN.*
5. *THE HORIZONTAL DATUM IS BASED UPON NAD 1983 (NY STATE PLANE COORDINATE SYSTEM EAST ZONE) PER AIRPORT CONTROL MONUMENTS (NGS PID AE2328 AND AE2329). UNITS ARE BASED ON US SURVEY FEET.*
6. *THE VERTICAL DATUM IS BASED UPON NAVD 1988 PER AIRPORT CONTROL MONUMENTS (NGS PID AE2328 AND AE2329).*

TEMPORARY CONSTRUCTION EQUIPMENT HEIGHT INFORMATION

POINT ID	DESCRIPTION	LATITUDE	LONGITUDE	SITE ELEV. (MSL)	MAXIMUM EQUIPMENT HEIGHT	OVERALL HEIGHT (MSL)	PART 77 ELEV. (MSL)
C1	SOUTH CORNER OF PROJECT	N41° 30' 00.60"	W74° 06' 00.42"	457'	25'	482'	664'
C2	NORTH-EAST CORNER OF PROJECT	N41° 30' 04.00"	W74° 05' 59.19"	458'	25'	483'	628'
C3	NORTH CORNER OF PROJECT	N41° 30' 04.74"	W74° 06' 02.79"	458'	25'	483'	614'
C4	SOUTH-WEST CORNER OF PROJECT	N41° 30' 02.38"	W74° 06' 03.59"	457"	25'	482'	646'
CR1	SOUTH CORNER OF CRANE	N41° 30' 00.70"	W74° 06' 00.51"	457'	150'	607'	664'
CR2	NORTH-EAST CORNER OF CRANE	N41° 30' 04.00"	W74° 05' 59.31"	458'	150'	608'	630'
CR3	NORTH CORNER OF CRANE	N41° 30' 04.35"	W74° 06' 02.48"	457'	150'	607'	616'
CR4	SOUTH-WEST CORNER OF CRANE	N41° 30' 01.35"	W74° 06' 03.68"	457'	150'	607'	660'
H1	CONSTRUCTION HAUL ROUTH	N41° 30' 01.02"	W74° 06' 02.28"	457'	25'	482'	668'
S1	SOUTH CORNER OF STAGING AREA	N41° 30' 00.60"	W74° 06' 01.83"	458'	25'	483'	668'
S2	SOUTH-WEST CORNER OF STAGING AREA	N41° 30' 00.87"	W74° 06' 03.17"	458'	25'	483'	675'

PERMANENT STRUCTURE HEIGHT INFORMATION

POINT ID	DESCRIPTION	LATITUDE	LONGITUDE	SITE ELEV. (MSL)	MAXIMUM FIXTURE HEIGHT	OVERALL HEIGHT (MSL)	PART 77 ELEV. (MSL)
P1	SOUTH CORNER OF BUILDING	N41° 30' 01.31"	W74° 06' 00.97"	458'	70.5'	528.5'	666'
P2	NORTH-EAST CORNER OF BUILDING	N41° 30' 03.84"	W74° 06' 00.05"	458'	70.5'	528.5'	632'
P3	NORTH CORNER OF BUILDING	N41° 30' 04.23"	W74° 06' 01.95"	458'	62'	520'	623'
P4	SOUTH-WEST CORNER OF BUILDING	N41° 30' 01.70"	W74° 06' 02.87"	458'	62'	520'	657'

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STATE OF NEW YORK
GRAHAM MICHAEL FELAND
109987
LICENSED PROFESSIONAL ENGINEER
Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

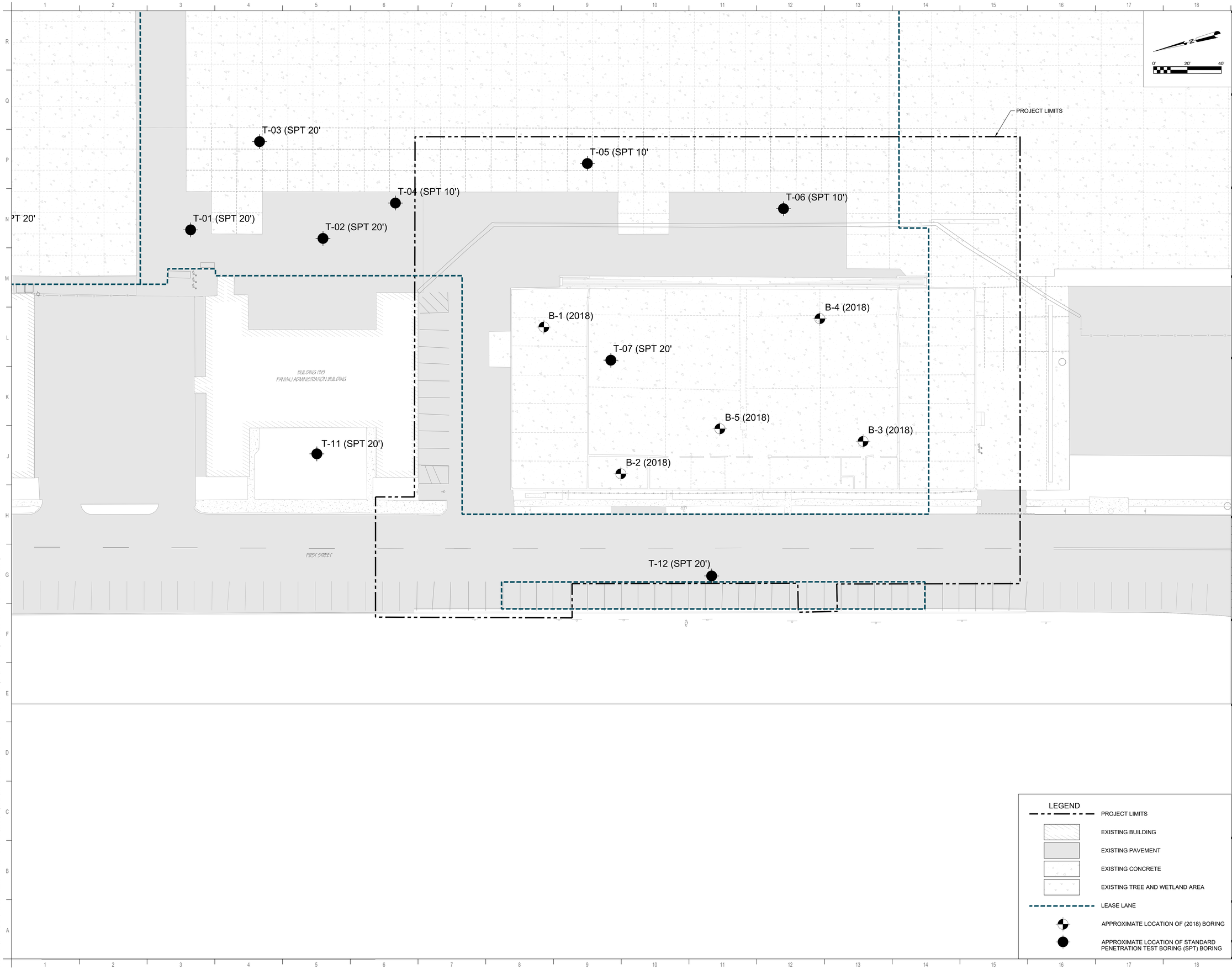
Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

AIRSPACE 7460 - PLAN

C053

100% PERMIT SET

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109697

Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

BORING LAYOUT PLAN

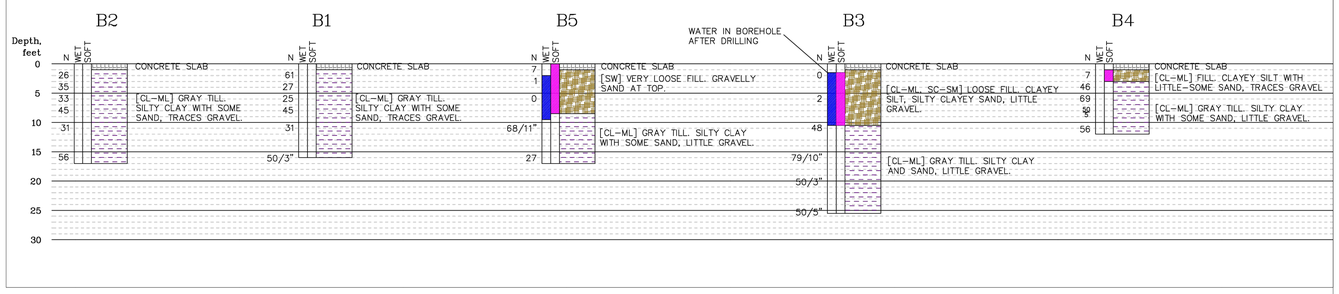
C060

100% PERMIT SET

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GENERALIZED SUBSURFACE PROFILE



Soil Boring Log — T-01

Client:	Van Cleef Engineering	**Drilling Firm:**	Diamond Drilling	**Coordinates:**	41.50151213 N, -74.09984574 E
Project:	Stewart Int. Airport- SFS Hangar Option 11	**Drill Crew:**	Tony Martin / Edward Rodriguez	**Horiz. Datum:**	WGS 84
Location:	New Windsor, NY	**Boring Start:**	9/28/2023 12:45:00 PM	**Elevation:**	Grade
Inspector:	Grant Libby	**Boring End:**	9/28/2023 2:55:00 PM	**Vert. Datum:**	N/A
Rig Model:	Diedrich D-25	**Sampler Type:**	Split Spoon	**Casing Type:**	Steel
Rig Type:	Trailer	**Sampler Length:**	24 inches	**Casing Length:**	5 feet
Drill Method:	Mud Rotary	**Sampler I.D.:**	1.375 inches	**Casing I.D.:**	4 inches
Hammer Type:	Safety	**Hammer Wt.:**	140 pounds	**Hammer Wt.:**	140 pounds
Drilling Fluid:	EZ mud	**Hammer Fall:**	30 inches	**Hammer Fall:**	30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Graphic Log	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	N-Value	Drilling & Strata Notes
0	R-1	23					24"- ASPHALT						
	S-1	7	24 50/5	> 50			Very dense, gray Silty medium to fine SAND, little coarse to fine Gravel, trace Clay, moist (TILL).	-	-	-			
5	S-2	9	11 20 25 33	45			Hard, gray to dark gray Silty CLAY, little fine Sand, trace coarse to fine Gravel, moist (TILL).	H	M	>4.5	0.45		Tested soil classification via Atterberg limit testing.
	S-3	2	39 50/5	> 50			Hard, dark gray Sandy CLAY, little Silt, trace fine Gravel, moist (TILL).	M	M	2.0	0.475		
	S-4	3	43 50/2	> 50			Hard, dark gray Clayey SILT, little fine Sand, trace coarse to fine Gravel, moist (TILL).	L	M	-	-		
10	S-5	11	12 40 52 50/3	92			Hard, dark gray Silty CLAY, little fine Sand, trace coarse to fine Gravel, moist (TILL).	M	M	>4.5	0.3		
	S-6	6	50 50/1	> 50			Hard, dark gray, Silty CLAY, little fine Sand, trace fine Gravel, moist (TILL).	H	M	>4.5	0.45		
15							End of boring due to Split Spoon refusal at 12.58 feet BGS. Borehole was filled with cement mix and topped with a 6-inch concrete patch.						
20													

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-02

Client:	Van Cleef Engineering	**Drilling Firm:**	Diamond Drilling	**Coordinates:**	41.50130955 N, -74.0999373 E
Project:	Stewart Int. Airport- SFS Hangar Option 11	**Drill Crew:**	Tony Martin / Edward Rodriguez	**Horiz. Datum:**	WGS 84
Location:	New Windsor, NY	**Boring Start:**	9/28/2023 8:40:00 AM	**Elevation:**	Grade
Inspector:	Grant Libby	**Boring End:**	9/28/2023 12:40:00 PM	**Vert. Datum:**	N/A
Rig Model:	Diedrich D-25	**Sampler Type:**	Split Spoon	**Casing Type:**	Steel
Rig Type:	Trailer	**Sampler Length:**	24 inches	**Casing Length:**	5 feet
Drill Method:	Mud Rotary	**Sampler I.D.:**	1.375 inches	**Casing I.D.:**	4 inches
Hammer Type:	Safety	**Hammer Wt.:**	140 pounds	**Hammer Wt.:**	140 pounds
Drilling Fluid:	EZ mud	**Hammer Fall:**	30 inches	**Hammer Fall:**	30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Graphic Log	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	N-Value	Drilling & Strata Notes
0	R-1	11					17"- ASPHALT						
	S-1	6	50 50/3	> 50			Very dense, brown to light gray medium to fine SAND, some coarse to fine Gravel, some Silt, trace Clay, moist (TILL).	-	-	-			Contains fill material mixed with asphalt fragments.
5	S-2	7	24 29 50/1	> 50			Very dense, gray Gravelly coarse to fine SAND, trace Silt, trace Clay, moist (TILL).	-	-	-			Contains fill material. Tested soil classification via Sieve analysis.
							End of boring at 5.75 feet BGS due to roller bit refusal. Borehole filled with cement mix and plugged with 6-inch concrete patch.						
10													
15													
20													

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-03

Client:	Van Cleef Engineering	**Drilling Firm:**	Diamond Drilling	**Coordinates:**	41.5013683 N, -74.09970042 E
Project:	Stewart Int. Airport- SFS Hangar Option 11	**Drill Crew:**	Tony Martin / Edward Rodriguez	**Horiz. Datum:**	WGS 84
Location:	New Windsor, NY	**Boring Start:**	10/2/2023	**Elevation:**	Grade
Inspector:	Diego Meglar	**Boring End:**	10/2/2023	**Vert. Datum:**	N/A
Rig Model:	Diedrich D-25	**Sampler Type:**	Split Spoon	**Casing Type:**	Steel
Rig Type:	Trailer	**Sampler Length:**	24 inches	**Casing Length:**	5 feet
Drill Method:	Mud Rotary	**Sampler I.D.:**	1.375 inches	**Casing I.D.:**	4 inches
Hammer Type:	Safety	**Hammer Wt.:**	140 pounds	**Hammer Wt.:**	140 pounds
Drilling Fluid:	EZ mud	**Hammer Fall:**	30 inches	**Hammer Fall:**	30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Graphic Log	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	N-Value	Drilling & Strata Notes
0	R-1	21					15"- CONCRETE						
							6"- ASPHALT						
	S-1	11	35 41 50/4	> 50			Very dense, dark gray coarse to fine GRAVEL, some fine Sand, moist (FILL).	-	-	-			
5	S-2	11	24 50/5	> 50			Hard, dark gray Silty CLAY, trace fine Sand, moist (TILL).	-	-	-			Tested soil classification via Atterberg limit testing.
	S-3	5	21 50/3	> 50			Hard, dark gray Gravelly SILT, trace fine Sand, moist (TILL).	-	-	-			
							End of boring at 7.75 feet BGS due to 3 consecutive split spoon refusals. Boring filled with cement mix and topped with 6-inch concrete patch.						
10													
15													
20													

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-04

Client:	Van Cleef Engineering	**Drilling Firm:**	Diamond Drilling	**Coordinates:**	41.50118197 N, -74.09990402 E
Project:	Stewart Int. Airport- SFS Hangar Option 11	**Drill Crew:**	Tony Martin / Edward Rodriguez	**Horiz. Datum:**	WGS 84
Location:	New Windsor, NY	**Boring Start:**	9/27/2023 2:00:00 PM	**Elevation:**	Grade
Inspector:	Grant Libby	**Boring End:**	9/27/2023 4:30:00 PM	**Vert. Datum:**	N/A
Rig Model:	Diedrich D-25	**Sampler Type:**	Split Spoon	**Casing Type:**	Steel
Rig Type:	Trailer	**Sampler Length:**	24 inches	**Casing Length:**	5 feet
Drill Method:	Mud Rotary	**Sampler I.D.:**	1.375 inches	**Casing I.D.:**	4 inches
Hammer Type:	Safety	**Hammer Wt.:**	140 pounds	**Hammer Wt.:**	140 pounds
Drilling Fluid:	EZ mud	**Hammer Fall:**	30 inches	**Hammer Fall:**	30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Graphic Log	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	N-Value	Drilling & Strata Notes
0	R-1	13					18"- ASPHALT						
	S-1	2	50/2	> 50			Very dense, dark gray Silty medium to fine SAND, trace coarse to fine Gravel, moist (FILL).	-	-	-			
5	S-2	9	41 43 50/4	> 50			Hard, dark gray Clayey SILT, little fine Gravel, trace fine Sand, moist (TILL).	H	L	-	-		Tested soil classification via Atterberg limit testing.
	S-3	11	33 37 50/3	> 50			Hard, dark gray Clayey SILT, trace fine Gravel, trace fine Sand, moist (TILL).	H	L	-	-		
							End of boring at 7.5 feet BGS due to roller bit refusal. Borehole was filled with cement mix and topped with 6-inch concrete patch.						
10													
15													
20													

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109687
Graham M Feland

REVISIONS		
MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date:	06/28/2024
MDG Project No.	HDG23005
Drawn By:	YY
Checked By:	MM

GEOTECHNICAL BORING LOG

C061

100% PERMIT SET

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Soil Boring Log — T-05

Client: Van Cleef Engineering
Project: Stewart Int. Airport- SFS Hangar Option 11
Location: New Windsor, NY
Inspector: Grant Libby

Drilling Firm: Diamond Drilling
Drill Crew: Tony Martin / Edward Rodriguez
Boring Start: 9/26/2023 4:00:00 PM
Boring End: 9/27/2023 1:50:00 PM

Coordinates: 41.50086648 N, -74.09992883 E
Horiz. Datum: WGS 84
Elevation: Grade
Vert. Datum: N/A

Rig Model: Diedrich D-25
Rig Type: Trailer
Drill Method: Mud Rotary
Hammer Type: Safety
Drilling Fluid: EZ mud

Sampler Type: Split Spoon
Sampler Length: 24 inches
Sampler I.D.: 1.375 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Casing Type: Steel
Casing Length: 5 feet
Casing I.D.: 4 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	Drilling & Strata Notes
	R-1	23				15"- CONCRETE 9"- ASPHALT					
	S-1	13	50 53 58 56	109		Hard, brown to gray SILT, some fine Sand, trace coarse to fine Gravel, trace Clay, moist (FILL).	H	L	-	-	5 inches Fill beneath Asphalt.
5	S-2	4	4/1 50/5	> 50		Hard, brown to gray SILT, some fine Sand, trace coarse to fine Gravel, trace Clay, moist (TILL). Very dense, gray Silty medium to fine SAND, little coarse to fine Gravel, trace Clay, wet (TILL).	-		-	-	
	S-3	10	18 31 24 25	55		Hard, dark gray Silty CLAY, little fine Sand, trace fine Gravel, moist (TILL).	H	M	>4.5	0.7	
	S-4	12	20 38 50 50/5	88		Hard, dark gray Silty CLAY, little coarse to fine Gravel, little fine Sand, moist (TILL).	H	M	>4.5	0.5	Tested soil classification via Atterberg limit testing.
10						End of boring at 9.92 feet BGS due to split spoon refusal. Borehole was backfilled with cement mix and topped with 6-inch concrete patch.					
15											
20											

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-06

Client: Van Cleef Engineering
Project: Stewart Int. Airport- SFS Hangar Option 11
Location: New Windsor, NY
Inspector: Grant Libby

Drilling Firm: Diamond Drilling
Drill Crew: Tony Martin / Edward Rodriguez
Boring Start: 9/26/2023 2:00:00 PM
Boring End: 9/26/2023 3:45:00 PM

Coordinates: 41.50057982 N, -74.10013206 E
Horiz. Datum: WGS 84
Elevation: Grade
Vert. Datum: N/A

Rig Model: Diedrich D-25
Rig Type: Trailer
Drill Method: Mud Rotary
Hammer Type: Safety
Drilling Fluid: EZ mud

Sampler Type: Split Spoon
Sampler Length: 24 inches
Sampler I.D.: 1.375 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Casing Type: Steel
Casing Length: 5 feet
Casing I.D.: 4 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	Drilling & Strata Notes
	R-1	14				14"- ASPHALT					
	S-1	6	55 50/4	> 50		Top: Very dense, gray coarse to fine GRAVEL, some Sand, moist (FILL). Bottom: Very dense, gray Gravelly coarse to fine SAND, trace Silt, trace Clay, moist (TILL).	-		-	-	Till, with intermixed fill material in top half of sample. Tested soil classification via Sieve analysis.
	S-2	4	50/4	> 50		Very dense, brown to gray Silty coarse to fine SAND, little coarse to fine Gravel, trace Clay, moist (TILL).	-		-	-	
5	S-3	2	38 50/1	> 50		Hard, gray Clayey SILT, little fine Sand, trace coarse to fine Gravel, moist (TILL).	H	L	-	-	
						End of boring at 5.7 feet BGS due to roller bit refusal. Borehole filled with cement mix and topped with 6-inch concrete patch.					
10											
15											
20											

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-07

Client: Van Cleef Engineering
Project: Stewart Int. Airport- SFS Hangar Option 11
Location: New Windsor, NY
Inspector: Sergio Motta

Drilling Firm: Diamond Drilling
Drill Crew: Tony Martin / Edward Rodriguez
Boring Start: 10/4/2023 9:02:00 AM
Boring End: 10/4/2023 11:17:00 AM

Coordinates: 41.500912 N, -74.100351 E
Horiz. Datum: WGS 84
Elevation: Grade
Vert. Datum: N/A

Rig Model: Diedrich D-25
Rig Type: Trailer
Drill Method: Mud Rotary
Hammer Type: Safety
Drilling Fluid: EZ mud

Sampler Type: Split Spoon
Sampler Length: 24 inches
Sampler I.D.: 1.375 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Casing Type: Steel
Casing Length: 5 feet
Casing I.D.: 4 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	Drilling & Strata Notes
	R-1	7				12"- CONCRETE					
	S-1	13	22 20 34 46	54		Hard, dark brown Sandy SILT, little coarse to fine Gravel, moist (TILL).	L	NP	1.0	0.05	
	S-2	24	15 52 56 60	108		Hard, brown Sandy SILT, little coarse to fine Gravel, trace Clay. moist (TILL).	L	L	0.5	0.1	Schist Fragments/crushed stone encountered.
5	S-3	12	25 48 50/0	> 50		Hard, light gray Gravelly CLAY, little Silt, trace fine Sand, wet (TILL).	H	L	3.0	0.2	Auger to 7 feet BGS. Rough drilling.
	S-4	12	20 55 50/0	> 50		Very dense, light gray Silty coarse to fine GRAVEL, little clay, trace fine Sand, wet (TILL).	-	-	-	-	Tough drilling. Very dense/Hard Till Zone after 7.5 feet BGS.
	S-5	1	50/1	> 50		Hard, light gray Clayey Silt, little coarse to fine Gravel, trace fine Sand, wet (TILL).	H	L	>4.5	0.2	Rough drilling.
10						End of boring due to auger refusal encountered at 9.5 feet BGS. Borehole backfilled with soil cuttings/ concrete mix and topped with a concrete Patch.					
15											
20											

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-11

Client: Van Cleef Engineering
Project: Stewart Int. Airport- SFS Hangar Option 11
Location: New Windsor, NY
Inspector: Grant Libby

Drilling Firm: Diamond Drilling
Drill Crew: Tony Martin / Edward Rodriguez
Boring Start: 9/26/2023 9:50:00 AM
Boring End: 9/26/2023 12:40:00 PM

Coordinates: 41.50140904 N, -74.10038197 E
Horiz. Datum: WGS 84
Elevation: Grade
Vert. Datum: N/A

Rig Model: Diedrich D-25
Rig Type: Trailer
Drill Method: Mud Rotary
Hammer Type: Safety
Drilling Fluid: EZ mud

Sampler Type: Split Spoon
Sampler Length: 24 inches
Sampler I.D.: 1.375 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Casing Type: Steel
Casing Length: 5 feet
Casing I.D.: 4 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	Drilling & Strata Notes
						0.5'- 8"- TOPSOIL					
	S-1	15	2 4 18 54	22		Very stiff, brown to gray Clayey SILT, little coarse to fine Gravel, little coarse to fine Sand, moist (TILL). Hard, gray Clayey SILT, little coarse to fine Gravel, little fine Sand, moist (TILL).	M	L	-	-	Tested soil classification via Atterberg limit testing.
	S-2	15	29 63 50/4	> 50			H	L	-	-	
5	S-3	9	39 50/4	> 50		Hard, gray to dark gray Clayey SILT, little fine Sand, trace coarse to fine Gravel, moist (TILL).	H	L	-	-	
	S-4	3	50/3	> 50		Hard, gray Clayey SILT, little coarse to fine Gravel, little fine Sand, moist (TILL).	H	L	-	-	
	S-5	19	41 43 56 50/5	99		Hard, gray SILT, some fine Sand, some Clay, trace coarse to fine Gravel, moist (TILL).	H	L	-	-	
10						End of boring at 9.92 feet BGS due to 3 consecutive Split Spoon refusals. Borehole filled with cement mix and topped with 6-inch concrete patch.					
15											
20											

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

Soil Boring Log — T-12

Client: Van Cleef Engineering
Project: Stewart Int. Airport- SFS Hangar Option 11
Location: New Windsor, NY
Inspector: Sergio Motta

Drilling Firm: Diamond Drilling
Drill Crew: Tony Martin / Edward Rodriguez
Boring Start: 10/4/2023 12:00:00 PM
Boring End: 10/4/2023 1:09:00 PM

Coordinates: 41.500845 N, -74.100856 E
Horiz. Datum: WGS 84
Elevation: Grade
Vert. Datum: N/A

Rig Model: Diedrich D-25
Rig Type: Trailer
Drill Method: Mud Rotary
Hammer Type: Safety
Drilling Fluid: EZ mud

Sampler Type: Split Spoon
Sampler Length: 24 inches
Sampler I.D.: 1.375 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Casing Type: Steel
Casing Length: 5 feet
Casing I.D.: 4 inches
Hammer Wt.: 140 pounds
Hammer Fall: 30 inches

Depth (ft)	Sample No.	Rec. (in)	Blows per 6"	N-Value	USCS Symbol	Visual Classification	Toughness	Plasticity	PP (tsf)	TV (tsf)	Drilling & Strata Notes
	R-1	2				12"- ASPHALT					
	S-1	22	15 20 30 45	50		Hard, gray Clayey SILT, little coarse to fine Gravel, trace fine Sand, moist (TILL).	H	L	1.25	0.15	Tested soil classification via Atterberg limit testing.
	S-2	16	20 24 39 50	63		Hard, gray Gravelly SILT, trace fine Sand, moist (TILL).	H	NP	>4.5	0.2	Tough drilling.
5	S-3	17	40 42 46 50	88		Hard, gray Gravelly SILT, trace fine Sand, moist (TILL).	H	NP	>4.5	-	Cobble fragments encountered.
	S-4	19	32 50 58 80	108		Hard, gray SILT, some coarse to fine Gravel, little fine Sand, trace Clay, moist (TILL).	H	M	>4.5	0.3	Cobble fragments encountered. Very dense/Hard Till Zone after 8.5 feet BGS.
	S-5	2	50/2	> 50		Very dense, dark gray coarse to fine GRAVEL, little Silt, trace fine Sand, wet (TILL).	-	-	-	-	Rough drilling
10						End of boring due to splitspoon refusal encountered at 9.2 feet BGS. Borehole backfilled with soil cuttings/ concrete mix and topped with a concrete Patch.					
15											
20											

In-Borehole Water Levels

Date / Time	Casing Tip (ft)	Bot. of Hole (ft)	Water Lvl (ft)

General Notes

▼ = Water Level (if observed)
BGS = Below Ground Surface
No Groundwater encountered.

Toughness: Low (L), Medium (M), High (H)
Plasticity: Non-Plastic (NP), Low (L), Medium (M), High (H)
PP = Pocket Penetrometer, measured in tons per square ft.
TV = Torvane (Shear Vane), measured in tons per square ft.

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109687

Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

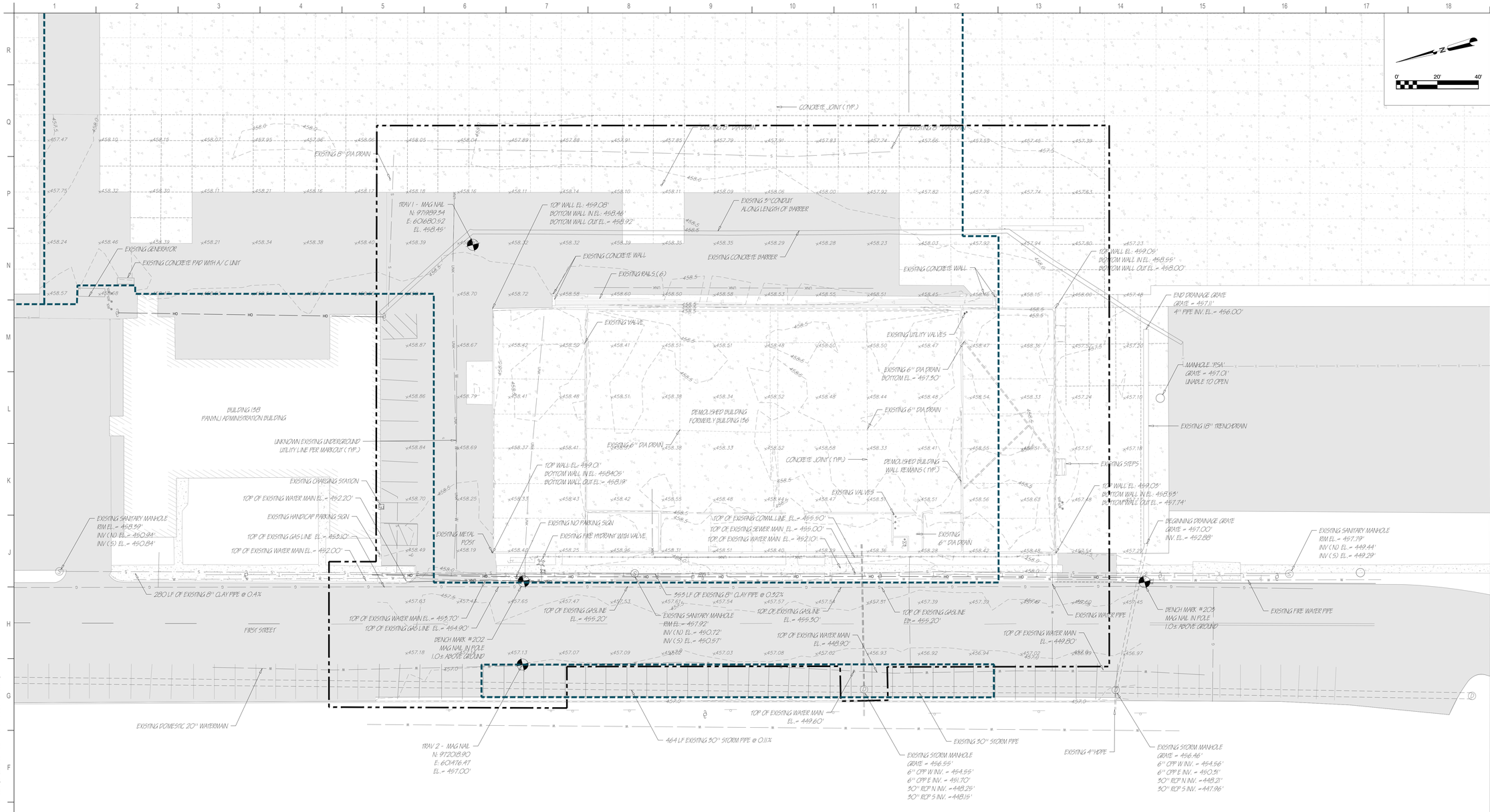
GEOTECHNICAL BORING LOG

C062

100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

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SURVEY NOTES:

1. THIS PLAN REPRESENTS EXISTING CONDITIONS OF THE FUTURE LEASE AREA OF SIGNATURE FLIGHT SUPPORT. SITE IS LOCATED WITHIN STEWART INTERNATIONAL AIRPORT AND IS A PORTION OF SECTION 91, LOT 24 IN BLOCK 1 AS SHOWN ON THE TAX MAP OF THE TOWN OF NEW WINDSOR, ORANGE COUNTY, NEW YORK.
2. THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON THE LOCATION OF AT GRADE UTILITIES AND MARK-OUT BY OTHERS. NOT ALL UTILITIES, INCLUDING THOSE ABANDONED OR NOT IN SERVICE, MAY BE SHOWN. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.
3. BOUNDARY INFORMATION IS NOT SHOWN ON THIS PLAN. THIS PLAN IS INTENDED TO SHOW TOPOGRAPHICAL DATA FOR AN INTERNAL LEASE AREA OF STEWART INTERNATIONAL AIRPORT.
4. THIS SURVEY IS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND MAY BE SUBJECT TO COVENANTS, RESTRICTIONS AND/OR EASEMENTS, EITHER WRITTEN OR IMPLIED, THAT ARE NOT SHOWN.
5. THE HORIZONTAL DATUM IS BASED UPON NAD 1983 (NY STATE PLANE COORDINATE SYSTEM EAST ZONE) PER AIRPORT CONTROL MONUMENTS (NGS PID AE2328 AND AE2329). UNITS ARE BASED ON US SURVEY FEET.
6. THE VERTICAL DATUM IS BASED UPON NAVD 1988 PER AIRPORT CONTROL MONUMENTS (NGS PID AE2328 AND AE2329).

SURVEY REFERENCES:

1. TAX MAPS FOR THE TOWN OF NEW WINDSOR, ORANGE COUNTY, NEW YORK, SECTION 91.
2. PLAN ENTITLED "STEWART AIR FORCE BASE CONSTRUCTION PROGRAM FY-1953 SQUADRON MAINTENANCE SHOPS" SHEETS 1-11, PREPARED BY US ARMY CORP OF ENGINEERS, DATED MARCH 5, 1953, LAST REVISED APRIL 16, 1954.
3. PLAN ENTITLED "PLAN & PROFILE STA. 43+82 TO 55+82, WATER TRANSMISSION MAINS, STATE OF NY, DEPT. OF TRANSPORTATION" PREPARED BY STETSON-HARZA, DATED 10/05/87.
4. PLAN ENTITLED "STEWART INTERNATIONAL AIRPORT 2011" PREPARED BY GEOD CORP, DATED APRIL 16, 2012 AND NUMBERED 067-164.

GENERAL NOTES:

1. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.
2. ONLY BOUNDARY SURVEY MAPS WITH THE SURVEYOR'S EMBOSSED SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE SURVEYOR'S ORIGINAL WORK AND OPINION.
3. CERTIFICATIONS ON THIS BOUNDARY SURVEY MAP SIGNIFY THAT THE MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS, INC. THE CERTIFICATION IS LIMITED TO PERSONS FOR WHOM THE BOUNDARY SURVEY MAP IS PREPARED, TO THE TITLE COMPANY, TO THE GOVERNMENTAL AGENCY, AND TO THE LENDING INSTITUTION LISTED ON THIS BOUNDARY SURVEY MAP.
4. THE CERTIFICATIONS LISTED HEREON ARE NOT TRANSFERABLE.
5. THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. IF ANY UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE SHOWN HEREON THEIR LOCATIONS ARE NOT COVERED BY THIS CERTIFICATE.

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- BENCHMARK AND TRAVEL POINT
- EXISTING CHAIN LINK FENCE
- LEASE LANE
- EXISTING BOLLARD
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- 457.90 EXISTING SPOT ELEVATION
- OH EXISTING OVERHEAD LINE
- E EXISTING ELECTRIC LINE UNDERGROUND
- G EXISTING GAS LINE
- S EXISTING SANITARY SEWER LINE
- W EXISTING WATER LINE
- UNK EXISTING UTILITY LINE (UNKNOWN)
- EXISTING STORM LINE
- 458.0 EXISTING CONTOURS

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LICENSED PROFESSIONAL ENGINEER
Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
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Checked By: MM

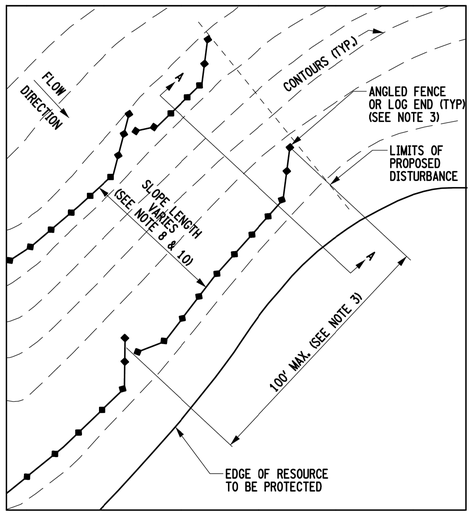
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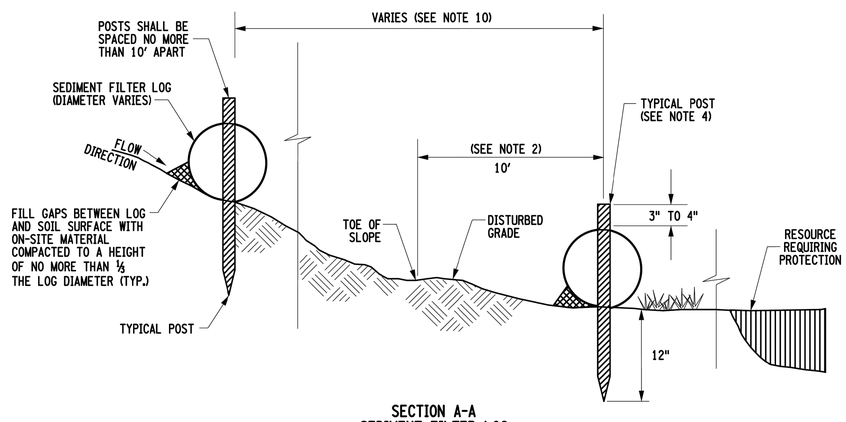
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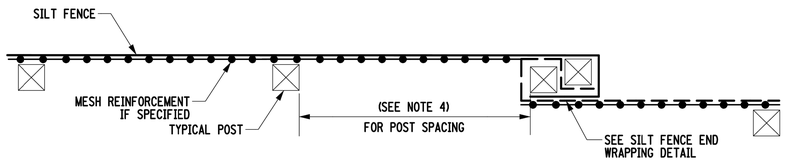
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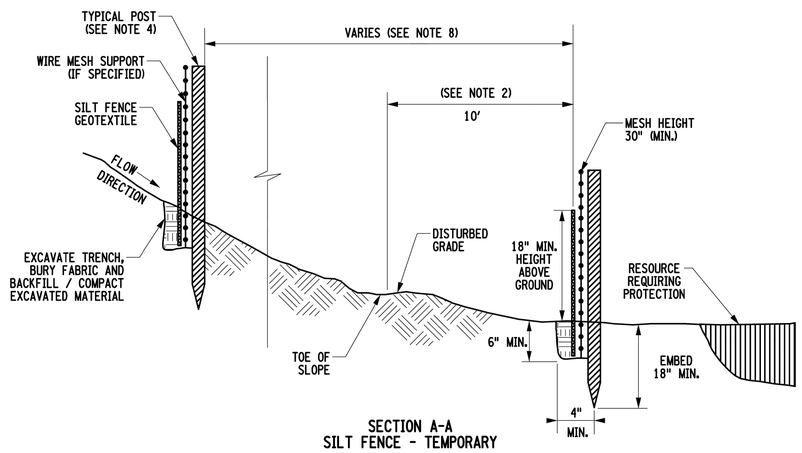
PLAN
EXAMPLE LAYOUT OF SILT FENCE OR SEDIMENT FILTER LOG



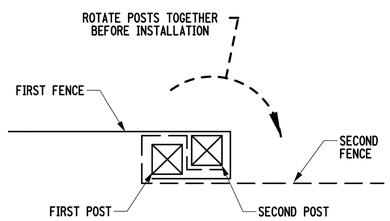
SECTION A-A
SEDIMENT FILTER LOG



PLAN
SILT FENCE PLACEMENT



SECTION A-A
SILT FENCE - TEMPORARY



SILT FENCE END WRAPPING DETAIL

APPLICATION NOTES

A. THE PRIMARY PURPOSE OF A SILT FENCE OR SEDIMENT FILTER LOG IS TO INTERCEPT SEDIMENT LADEN RUNOFF BY IMPOUNDING WATER BEHIND THE FENCE OR LOG SO THAT SEDIMENT FALLS OUT OF SUSPENSION.

B. IDENTIFY ONSITE AND OFFSITE RESOURCES THAT NEED TO BE PROTECTED USING THE SILT FENCE OR SEDIMENT FILTER LOG (E.G. WETLANDS, PONDS, WATERWAYS OR ENVIRONMENTALLY SENSITIVE AREAS). SILT FENCE OR SEDIMENT FILTER LOGS ARE TYPICALLY USED WITH EROSION OR SEDIMENT CONTROL MEASURES, SUCH AS MULCH AND/OR ROLLED EROSION CONTROL FABRIC.

C. SILT FENCE OR SEDIMENT FILTER LOGS SHALL NOT BE USED IN OR ACROSS A FLOWING CHANNEL, OR AREAS OF CONCENTRATED FLOW. DO NOT USE SILT FENCE OR SEDIMENT FILTER LOGS AS A PERIMETER CONTROL, TO DEFINE PROPERTY LINES, OR TO DELINEATE A RESOURCE.

GENERAL NOTES

1. SILT FENCE OR SEDIMENT FILTER LOGS SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM.
2. FOR LOCATIONS THAT WARRANT PLACEMENT OF SILT FENCE OR SEDIMENT FILTER LOGS AT THE BASE OF SLOPES, SILT FENCE OR SEDIMENT FILTER LOGS SHALL BE PLACED A MINIMUM OF 10 FEET FROM THE TOE OF THE SLOPE, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF THE SEDIMENT CONTAINMENT AREA.
3. THE ENDS OF A ROW OF SILT FENCE OR SEDIMENT FILTER LOGS SHALL BE ANGLED UP SLOPE TO PREVENT CHANNELIZED FLOW FROM BEING CONVEYED PAST THE ENDS OF THE FENCE. A SECTION OF SILT FENCE OR SEDIMENT FILTER LOGS SHOULD NOT EXCEED 100 FEET IN LENGTH.
4. WOOD POSTS FOR SILT FENCE SHALL HAVE A CROSS-SECTION AREA OF 3.5 SQUARE INCHES OR STEEL POSTS SHALL BE "T" OR "U" SHAPE AND 1.33 POUNDS/FEET (MINIMUM) FOR STEEL. SPACING FOR THE PROVIDED SILT FENCE POSTS SHALL BE AS DESIGNATED ON THE DEPARTMENT APPROVED LIST FOR SILT FENCE. THE LENGTH OF SILT FENCE POSTS SHALL BE 40 INCHES. WOOD POSTS FOR SEDIMENT FILTER LOGS SHALL BE NOMINAL 2x2. THE LENGTH OF FILTER LOG POSTS SHALL BE 16" GREATER THAN THE DIAMETER OF THE LOG.
5. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6" BELOW GROUND. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSLOPE SIDE OF THE FABRIC.
6. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED AND FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS, OR THE END POSTS OF TWO SECTIONS SHALL BE WRAPPED AS SHOWN IN THE DETAIL FOR SILT FENCE END WRAPPING.
7. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE ABOVE GROUND HEIGHT OR WHEN BULGES DEVELOP IN THE FABRIC. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
8. THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS (DISTANCE BETWEEN ROWS) FOR SILT FENCE INSTALLATION:

SILT FENCE MAXIMUM SLOPE LENGTH (FEET)			
SLOPE	STEEPNESS	STANDARD••	REINFORCED•••
•5-10%	20:1 TO 10:1	125	250
10-20%	10:1 TO 5:1	100	150
20-33%	5:1 TO 3:1	60	80
33-50%	3:1 TO 2:1	40	70
> 50%	> 2:1	20	30

• FOR SLOPES LESS THAN 5% SILT FENCE IS NOT REQUIRED UNLESS IN SENSITIVE AREAS OR HIGHLY ERODIBLE SOILS.

•• STANDARD SILT FENCE IS FABRIC ROLLS STAPLED TO WOODEN POSTS DRIVEN 18 INCHES INTO THE GROUND.

••• REINFORCED SILT FENCE IS FABRIC PLACED AGAINST WELDED WIRE MESH WITH ANCHORED STEEL POSTS DRIVEN 18 INCHES INTO THE GROUND.

9. INSTALLATION OF SILT FENCE OR SEDIMENT LOG, INCLUDING EXCAVATION, BACKFILL, AND COMPACTION OF SOIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM.
10. SEDIMENT FILTER LOG POSTS SHALL BE SPACED NO MORE THAN 10 FEET APART. ENDS OF LOGS SHALL BE OVERLAPPED BY 24 INCHES AND STAKED SIDE BY SIDE. THE MAXIMUM SLOPE LENGTH (DISTANCE BETWEEN ROWS) SHALL NOT EXCEED THE FOLLOWING LIMITS:

SEDIMENT FILTER LOG MAX SLOPE LENGTH (FEET)							
DIA. (IN.)	SLOPE %						
	2	5	10	20	25	33	50
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35

ERRATA 1
ISSUED WITH EB 17-023

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

LINEAR MEASURES

APPROVED JANUARY 26, 2017
/S/ RICHARD WILDER, P.E.
DEPUTY CHIEF ENGINEER (DESIGN)

ISSUED UNDER EB 17-001
209-01

NOTE: GEOTEXTILES SHALL ADHERE TO PA SPECIFICATION 313218.

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · 109987 · LICENSED PROFESSIONAL ENGINEER
Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

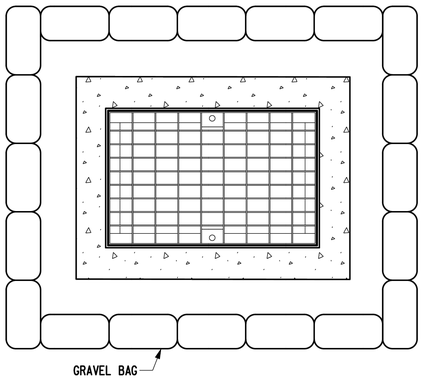
EROSION CONTROL DETAILS

C180

100% PERMIT SET

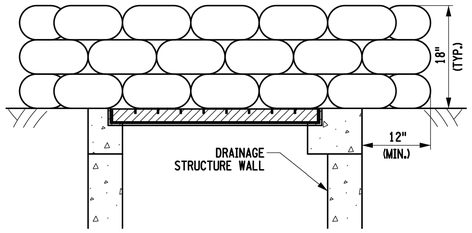
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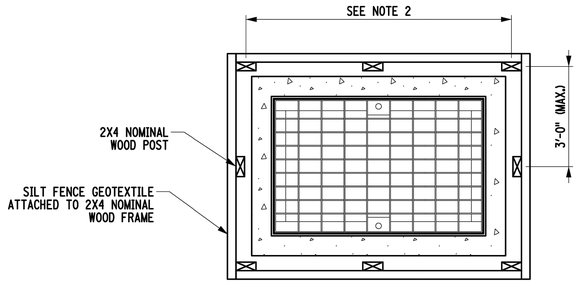
PLAN

DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (GRAVEL BAG)



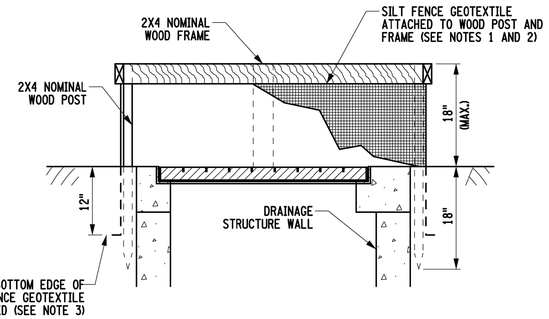
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DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (GRAVEL BAG)



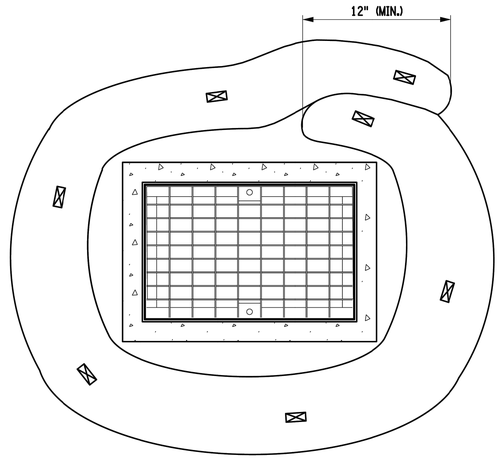
PLAN

DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (SILT FENCE)



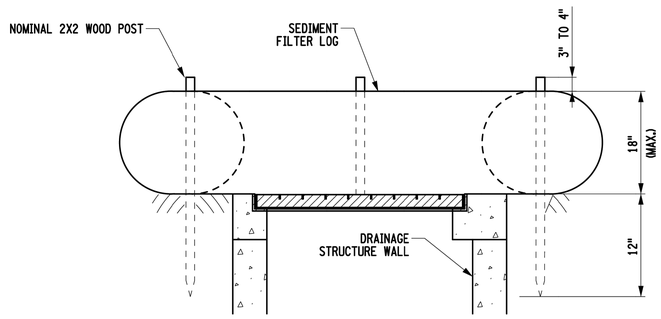
CROSS SECTION

DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (SILT FENCE)



PLAN

DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (SEDIMENT FILTER LOG)



CROSS SECTION

DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (SEDIMENT FILTER LOG)

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY TRAPPING WATER, THEREBY ALLOWING SEDIMENT TO FALL OUT OF SUSPENSION.

B. GRAVEL BAGS ARE FILLED WITH CLEAN STONE, RATHER THAN SAND, TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE.

C. THE TOP OF THE INLET PROTECTION SHALL BE SET TO ALLOW OVERFLOW INTO THE INLET AND NOT BYPASS TO UNPROTECTED RESOURCES.

D. DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY (SILT FENCE) SHALL NOT BE USED ALONG THE ACTIVE TRAVEL LANE OR SHOULDER.

E. DRAINAGE STRUCTURE INLET PROTECTION SHALL NOT BE USED WITHOUT UPSLOPE EROSION CONTROL.

F. MAXIMUM DRAINAGE AREA TO THE PRACTICE SHALL NOT EXCEED ONE ACRE.

GENERAL NOTES:

1. APPROVED SILT FENCE GEOTEXTILES §737-01, ARE LISTED ON THE DEPARTMENT'S APPROVED LIST. SILT FENCE GEOTEXTILE SHALL BE A SINGLE CONTINUOUS PIECE TO ELIMINATE JOINTS. OVERLAP GEOTEXTILE ENDS TO THE NEXT POST.

2. SPACE POSTS EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 3'. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT. POSTS SHALL BE DRIVEN CLOSE TO THE INLET TO MINIMIZE EXPOSED SOIL BETWEEN THE INLET AND THE PRACTICE. DRIVE POSTS A MINIMUM OF 18" INTO GROUND (SILT FENCE) OR A MINIMUM OF 12" (SEDIMENT FILTER LOG).

3. SILT FENCE GEOTEXTILE SHALL BE EMBEDDED 12" AND BACKFILLED. GEOTEXTILE SHALL BE SECURELY FASTENED TO POSTS AND FRAME.

4. GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW. GRAVEL BAGS SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE GRATE TO MINIMIZE EXPOSED SOIL BETWEEN THE INLET AND THE PRACTICE.

5. SEDIMENT FILTER LOGS SHALL BE SECURED TO THE SOIL SURFACE WITH WOODEN POSTS SPACED A MAXIMUM OF 2' APART. WHEN USED ON A PAVED SURFACE, THE LOG ENDS SHALL BE FASTENED WITH PLASTIC TIES OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

6. MEASURES SHALL BE INSPECTED AFTER EVERY RUNOFF EVENT AND REPAIRED AS NECESSARY. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE-HALF THE MEASURE HEIGHT (STORAGE CAPACITY). SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIALS.

ERRATA 1
ISSUED WITH EB 17-023

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

DRAINAGE STRUCTURE INLET PROTECTION (SHEET 1 OF 2)

APPROVED JANUARY 26, 2017	ISSUED UNDER EB 17-001
/S/ RICHARD WILDER, P.E. DEPUTY CHIEF ENGINEER (DESIGN)	209-03

NOTE: GEOTEXTILES SHALL ADHERE TO PA SPECIFICATION 313218.

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REVISIONS		
MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
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Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

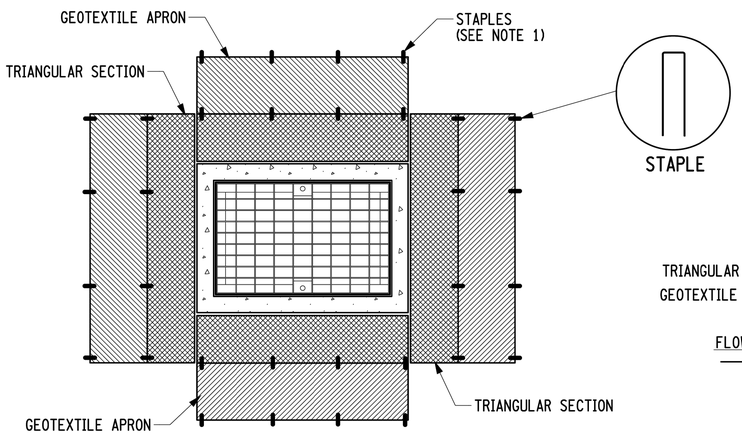
EROSION CONTROL DETAILS

C181

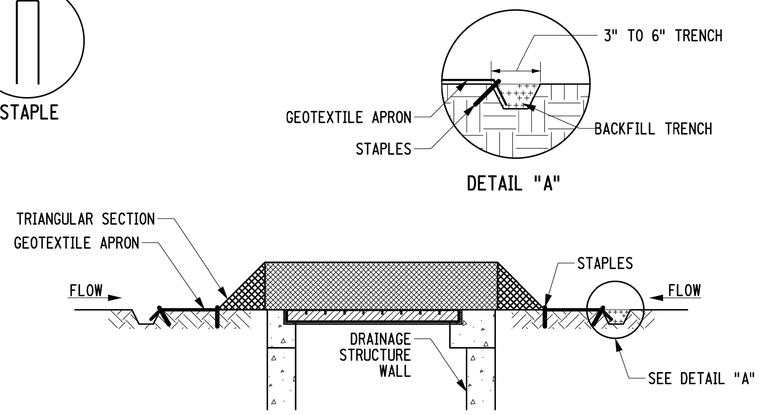
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PLAN
DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY
(PREFABRICATED)



CROSS SECTION
DRAINAGE STRUCTURE INLET PROTECTION - TEMPORARY
(PREFABRICATED)

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY TRAPPING WATER THEREBY ALLOWING SEDIMENT TO FALL OUT OF SUSPENSION.

B. THE TOP OF THE INLET PROTECTION SHALL BE SET TO ALLOW OVERFLOW INTO THE INLET AND NOT BYPASS.

C. THESE PRACTICES SHALL NOT BE USED WITHOUT UPSLOPE EROSION CONTROL.

D. CONCRETE BLOCK INLET PROTECTION SHALL NOT BE USED WITHIN THE ACTIVE RIGHT OF WAY.

E. CONCRETE BLOCK INLET PROTECTION OR AN APPROVED EQUAL IS APPLICABLE WHEN HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. THIS PRACTICE SHOULD NOT BE PLACED OUTSIDE THE ROADWAY'S CLEAR ZONE.

F. PRACTICE SHALL BE INSTALLED AS CLOSE AS PRACTICAL TO THE OUTSIDE DIMENSIONS OF THE OUTLET.

GENERAL NOTES:

1. SECURE THE ENDS OF THE APRON FOR THE PREFABRICATED DRAINAGE STRUCTURE INLET PROTECTION WITH STAPLES AS DETAILED IN THE PLAN VIEW OR AS RECOMMENDED BY THE MANUFACTURER'S LITERATURE.

2. INSPECT THE MEASURES AFTER EVERY RUNOFF EVENT AND MAKE REPAIRS AS NECESSARY

3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF THE HEIGHT OF THE PRACTICE. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.

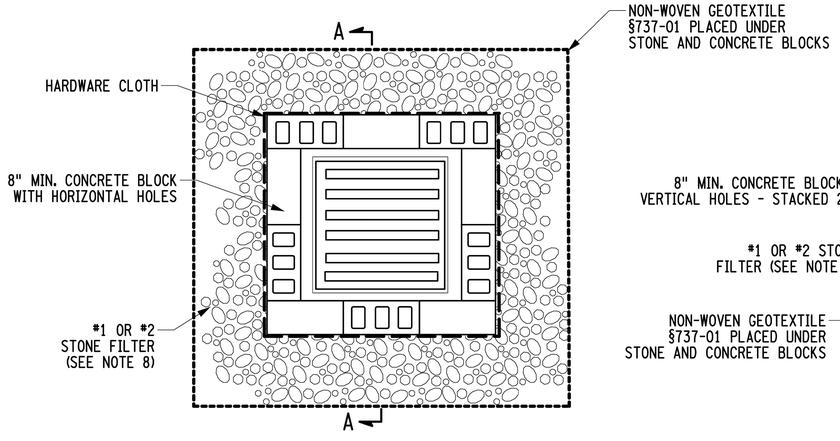
4. WEEP HOLES SHALL BE PROTECTED BY GEOTEXTILE AND STONE.

5. UPON STABILIZATION OF CONTRIBUTING AREA, WEEP HOLES SHALL BE SEALED AND GEOTEXTILE REMOVED.

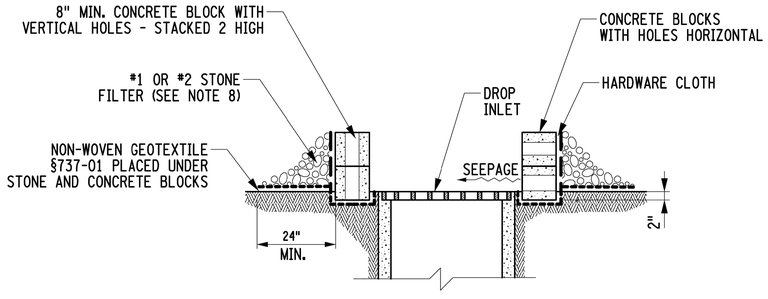
6. MAINTENANCE SHALL INCLUDE REPAIR AND RE-BUILDING INLET PROTECTION AS NEEDED TO ENSURE THAT IT FUNCTIONS AS ORIGINALLY INTENDED.

7. INLET PROTECTION - EXCAVATED, SHALL BE INSTALLED AT DRAINAGE LOW POINTS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. DRAINAGE AREA TO THE MEASURE SHALL BE LIMITED TO NO MORE THAN ONE ACRE.

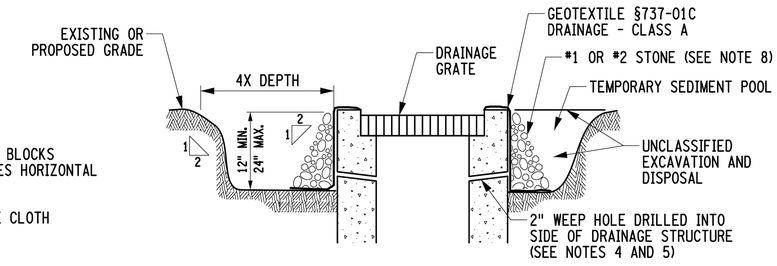
8. COARSE AGGREGATE FILTER FOR THE CONCRETE BLOCK INLET PROTECTION SHALL MEET THE GRADATION REQUIREMENTS OF THE SIZE DESIGNATION #1 OR #2 OF TABLE 703-04.



PLAN
DRAINAGE STRUCTURE INLET PROTECTION
(CONCRETE BLOCK)



SECTION A-A
DRAINAGE STRUCTURE INLET PROTECTION
(CONCRETE BLOCK)



INLET PROTECTION - EXCAVATED

NEW YORK STATE OF OPPORTUNITY. **Department of Transportation**

U.S. CUSTOMARY STANDARD SHEET

DRAINAGE STRUCTURE INLET PROTECTION
(SHEET 2 OF 2)

APPROVED JANUARY 26, 2017	ISSUED UNDER EB 17-001
/S/ RICHARD WILDER, P.E. DEPUTY CHIEF ENGINEER (DESIGN)	209-03

NOTE: GEOTEXTILES SHALL ADHERE TO PA SPECIFICATION 313218.

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REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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MDG Project No.	HDG23005
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Checked By:	MM

EROSION CONTROL DETAILS

C182

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RELOCATED EXISTING CHAIN LINK FENCE ON BARRIER RAIL

RELOCATED EXISTING CHAIN LINK FENCE ON BARRIER RAIL (PROVIDE SEDIMENT PROTECTION SEE DETAIL C903)

NEW TEMPORARY AOA CHAIN LINK FENCE ON BARRIER RAIL

CONCRETE JOINT (TYP.)

EXISTING 8" DIA DRAIN

PROTECT EXISTING 8" DIA DRAIN

PROJECT LIMITS

EXISTING 8" DIA DRAIN

RELOCATED EXISTING 3"CONDUIT ALONG LENGTH OF BARRIER (SEE SHEET C601 FOR RELOCATED CONDUIT)

REMOVE EXISTING CONCRETE WALL

REMOVE EXISTING CONCRETE WALL

CONTRACTOR TO IMPLEMENT PROPER EROSION CONTROL MEASURES TO EXISTING TRENCH DRAIN DURING CONSTRUCTION.

REMOVE EXISTING RAILS (6)

REMOVE EXISTING VALVES (2)

REMOVE EXISTING VALVE

REMOVE EXISTING 6" DIA DRAIN

REMOVE EXISTING WATER PIPE

BUILDING 138
PANNILI ADMINISTRATION BUILDING

REMOVE EXISTING 6" DIA DRAIN

REMOVE EXISTING 6" DIA DRAIN

REMOVE EXISTING STORM PIPE

REMOVE UNKNOWN EXISTING UNDERGROUND UTILITY LINES

DEMOLISH EXISTING STEPS

REMOVE EXISTING 6" DIA DRAIN

REMOVE EXISTING VALVES (6)

RELOCATE EXISTING CHARGING STATION

DEMOLISH EXISTING BOLLARDS

RELOCATE EXISTING FIRE HYDRANT, VALVE AND CAP REMAINING EXISTING WATER PIPE

REMOVE EXISTING WATER VALVE

REMOVE EXISTING PARKING SIGN

PROTECT EXISTING SANITARY SEWER MH RIM = 457.92'

DEMOLISH EXISTING CURB

CAP EXISTING WATER PIPE AT THIS POINT

EXISTING WATER PIPE

CONTRACTOR TO VERIFY LIMITS OF EXISTING WATERMAIN IF MAIN EXTENDS UNDER DEMOLITION AREA, CONTRACTOR TO PROTECT EXISTING MAIN

FIRST STREET

PAVEMENT OPEN CUT THROUGH TRAVEL LANES TO BE NO WIDER THAN 7 FEET SO AS NOT TO NEGATIVELY IMPACT THROUGH TRAFFIC AND PROPOSED MOT OPERATIONS

DEMOLISH EXISTING METAL POST

PROTECT EXISTING NO PARKING SIGN

PAVEMENT OPEN CUT THROUGH TRAVEL LANES TO BE NO WIDER THAN 7 FEET SO AS NOT TO NEGATIVELY IMPACT THROUGH TRAFFIC AND PROPOSED MOT OPERATIONS

REMOVE EXISTING 6" STORM PIPE AND PLUG AT MANHOLE

EXISTING 30" STORM PIPE

EXISTING 30" STORM PIPE

REMOVE EXISTING PARKING STRIPING

PROTECT EXISTING STORM MH GRATE = 456.55'

PROTECT EXISTING STORM MH GRATE = 456.46'

0' 15' 30'

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE
- LEASE LANE
- BOL — EXISTING BOLLARD
- MB — EXISTING MAIL BOX
- EXISTING SIGN
- S — EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- OH — EXISTING OVERHEAD LINE
- E — EXISTING ELECTRIC LINE UNDERGROUND
- G — EXISTING GAS LINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- D — EXISTING STORM MANHOLE
- S — EXISTING SANITARY SEWER LINE
- W — EXISTING WATER LINE
- UNK — EXISTING UTILITY LINE (UNKNOWN)
- EXISTING STORM LINE
- DEMOLISH EXISTING RAIL
- REMOVE EXISTING VALVE
- REMOVE EXISTING DRAIN
- REMOVE EXISTING BOLLARD
- DEMOLISH EXISTING CONCRETE
- DEMOLISH EXISTING PAVEMENT
- REMOVE EXISTING CHAIN LINK FENCE
- RELOCATED EXISTING BARRICADE WALL
- REMOVE EXISTING STORM PIPE
- REMOVE EXISTING WATER PIPE
- REMOVE EXISTING UNDERGROUND PIPE

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REVISIONS

MARK	DESCRIPTION	DATE

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AT: STEWART INTERNATIONAL AIRPORT (SWF)

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ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

EROSION CONTROL AND DEMOLITION PLAN

C201

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EXISTING CONCRETE JOINT (TYP.)

PROJECT LIMITS

EXISTING 8" DIA DRAIN

EXISTING 8" DIA DRAIN

EXISTING 8" DIA DRAIN

971995.8829
601721.8343

971706.1048
601643.8397

972023.3377
601716.2013

971999.2383
601709.6339

38.7'

NEW GALVANIZED STEEL CHAIN LINK FENCE
(SEE DETAIL, SHEET C902)

972006.9983
601684.4448

972006.0141
601684.1784

NEW GALVANIZED STEEL CHAIN LINK FENCE
(SEE DETAIL, SHEET C902)

972036.8177
601677.6517

972003.1334
601683.4069

971746.6705
601614.7262

EXISTING CHAIN LINK FENCE ON BARRIER RAIL

972036.5128
601667.0039

971722.2826
601583.8234

971752.6849
601592.2679

971754.4233
601585.7762

971716.1677
601582.1909

971717.9192
601575.7878

8.0' CONC.

31.0'

12.0'
PVMT.

24.0'

4.0'

BUILDING 193
PANTILI ADMINISTRATION BUILDING

NEW HANGAR
(265.5' × 150')

NEW CONCRETE CURB-TYPE I
(SEE DETAIL, SHEET C901)

6.0' CONC.

150.0'

SEE DRAINAGE PLAN AND UTILITY PLAN
FOR ALL DRAINAGE AND UTILITY IMPROVEMENTS

15.0' MIN. FIRE
SEPARATION DISTANCE

15.0' MIN. FIRE
SEPARATION DISTANCE

NEW CONCRETE CURB-TYPE I
(SEE DETAIL, SHEET C901)

971861.6910
601490.2641

971863.8259
601485.6597

6' CURB TRANSITION

972009.5427
601524.6615

972010.1994
601519.6612

971994.8083
601525.8918

971973.8254
601514.4753

971972.9049
601510.8815

971971.7587
601509.3668

PROPOSED 5.0'
SIDEWALK (TYP.)

5.0' (TYP.)

EXISTING MAIL BOX

44.0'

22.0'

22.0'

971849.5434
601481.8348

971842.7515
601485.1921

971844.0449
601480.3623

971797.4541
601473.0404

971785.4732
601469.8319

971751.9705
601455.1124

6.0'

972041.9361
601538.5126

972070.6803
601540.0098

6.0' RAMP

971995.0765
601520.1663

971910.7067
601497.5721

971868.2043
601486.1900

R10.0'

R10.0'

R10.0'

R10.0'

R10.0'

R10.0'

971951.0202
601508.9892

971965.9593
601507.8137

971913.3690
601494.8486

971824.6207
601475.1444

971785.2861
601464.6267

3.9'

971763.0745
601453.5179

SIDEWALK RAMP WITH DETECTABLE
WARNING (SEE DETAIL, SHEET C901)

972086.1862
601544.3914

972088.5348
601536.2515

972082.4460
601534.6137

972054.6548
601527.0187

972049.2566
601520.1163

3' CURB TRANSITION

972039.7251
601523.1564

972045.1786
601524.4720

972046.5399
601519.3887

971997.7388
601517.4429

971965.6864
601503.5366

971923.0216
601492.2333

971867.2839
601482.5962

971862.1430
601475.8707

971860.1901
601475.4195

971851.6783
601477.2304

971835.1589
601468.3507

971839.5599
601473.9690

971786.5801
601459.8021

971798.9528
601468.2706

SIDEWALK RAMP WITH DETECTABLE
WARNING (TYP.)(SEE DETAIL, SHEET C901)

7' OPEN CUT
EXISTING
PAVEMENT

EXISTING NO PARKING SIGN

7' OPEN CUT
EXISTING PAVEMENT

FIRST STREET

972065.4272
601486.7932

EXISTING 30" STORM PIPE

PAVEMENT OPEN CUT THROUGH TRAVEL
LANES TO BE NO WIDER THAN 7 FEET SO AS
NOT TO NEGATIVELY IMPACT THROUGH
TRAFFIC AND PROPOSED MOT OPERATIONS

PAVEMENT OPEN CUT THROUGH TRAVEL
LANES TO BE NO WIDER THAN 7 FEET SO AS
NOT TO NEGATIVELY IMPACT THROUGH
TRAFFIC AND PROPOSED MOT OPERATIONS

971857.7352
601420.7892

EXISTING SIGN (TYP.)

971864.5311
601422.4671

EXISTING STORM MANHOLE

EXISTING 30" STORM PIPE

EXISTING STORM MANHOLE

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE
- LEASE LANE
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- EXISTING STORM LINE
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- NEW CONCRETE
- NEW SOD
- NEW GALVANIZED STEEL CHAIN LINK FENCE

0' 15' 30'

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REVISIONS

MARK	DESCRIPTION	DATE

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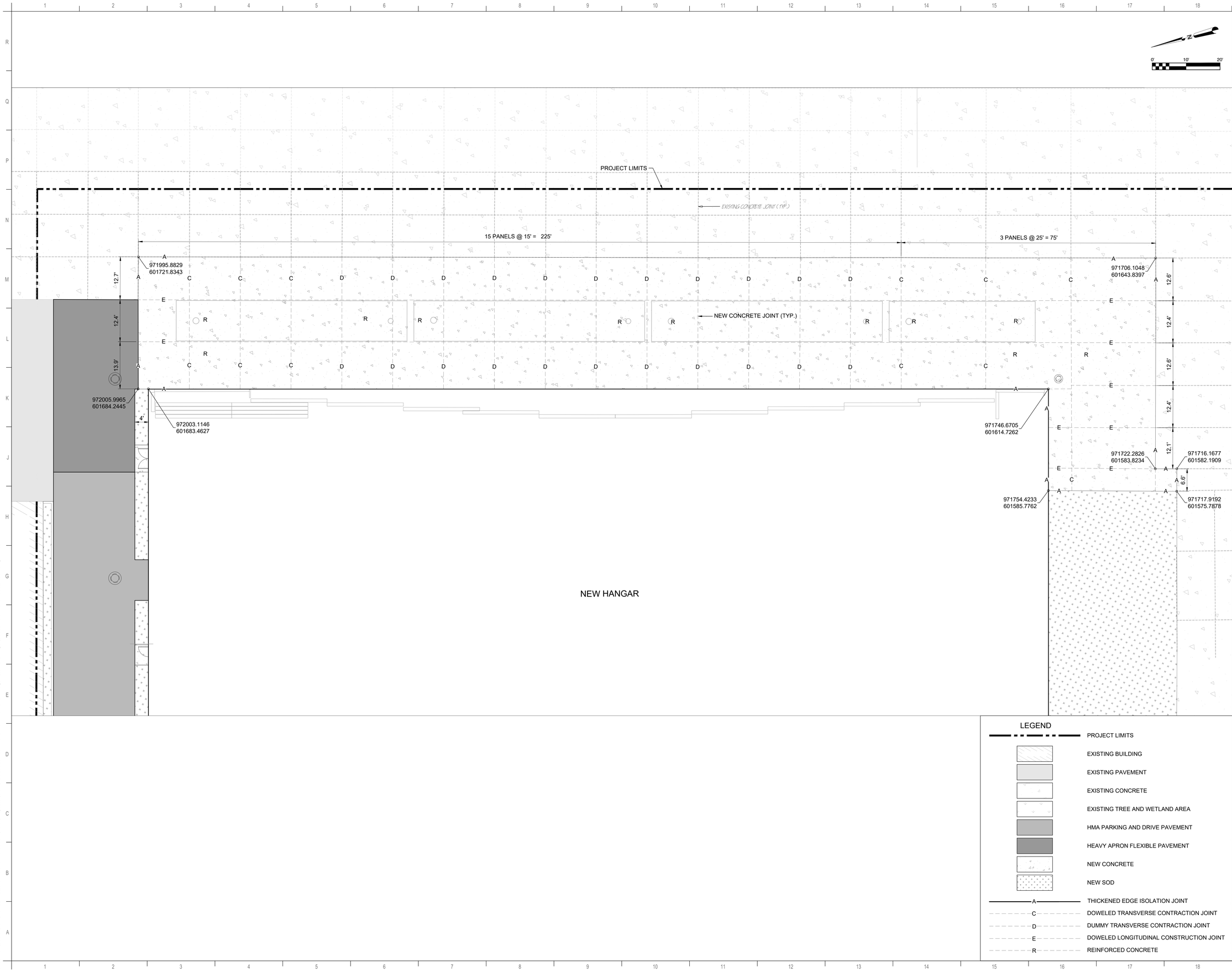
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MDG Project No. HDG23005
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SITE AND GEOMETRY PLAN

C301

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REVISIONS

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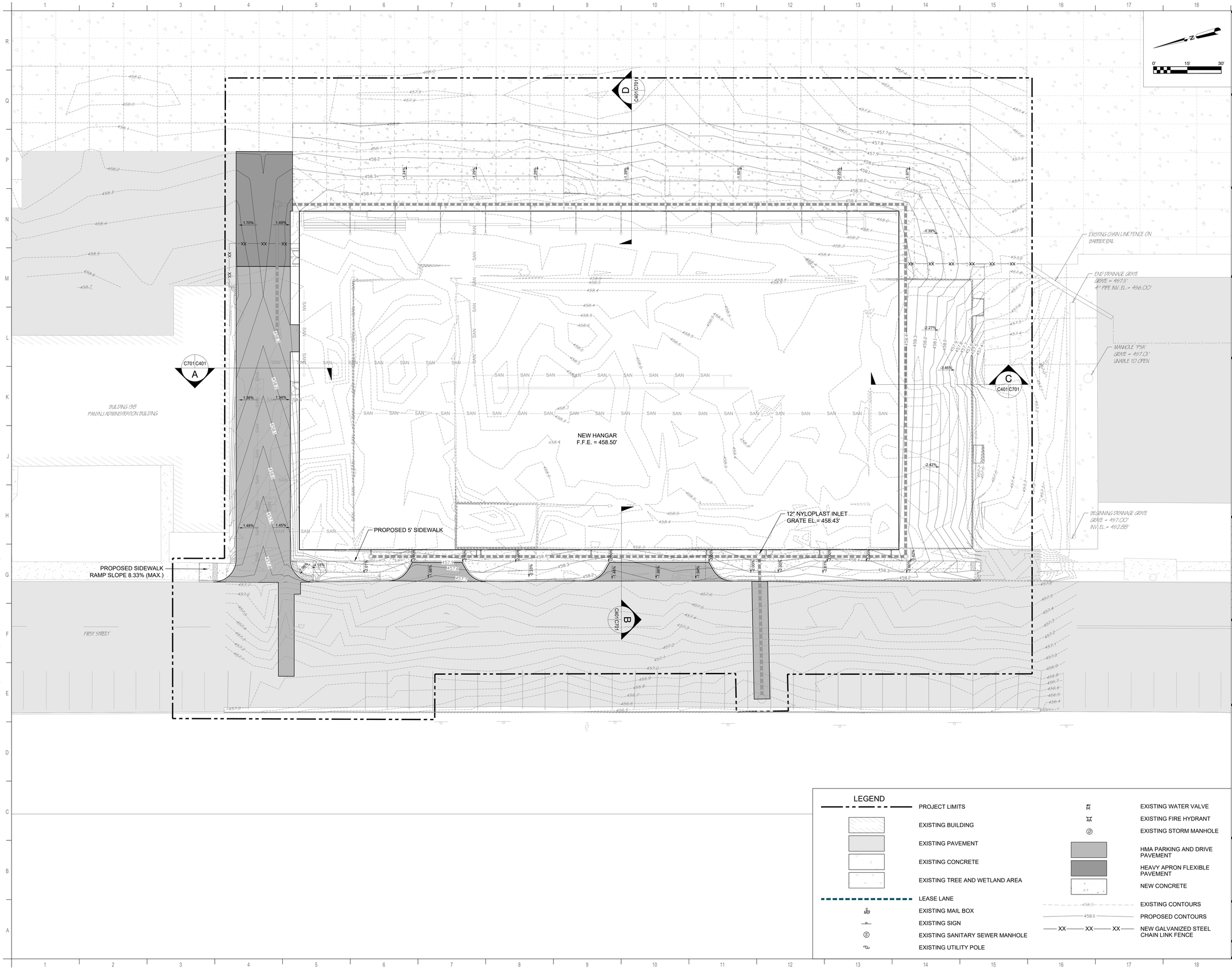
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CONCRETE JOINTING PLAN

C302

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LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- LEASE LANE
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- NEW CONCRETE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- NEW GALVANIZED STEEL CHAIN LINK FENCE

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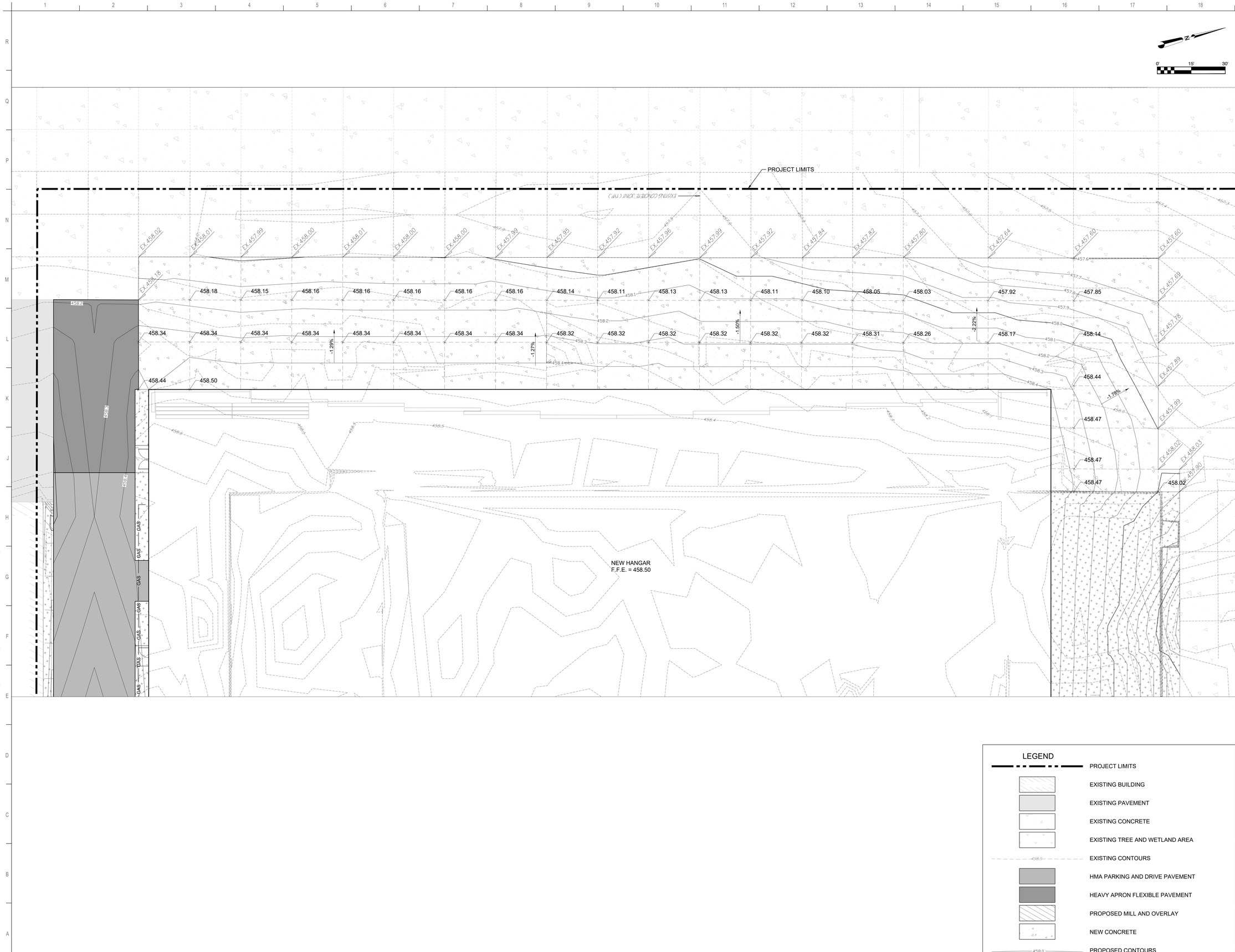
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GRADING PLAN

C401

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LICENSED PROFESSIONAL ENGINEER
109687

Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date:	06/28/2024
MDG Project No.	HDG23005
Drawn By:	YY
Checked By:	MM

CONCRETE JOINTING GRADING PLAN

C402

100% PERMIT SET

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CONTOURS
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- PROPOSED MILL AND OVERLAY
- NEW CONCRETE
- PROPOSED CONTOURS

Plotted: C:\Users\Yan\MOHSEN DESIGN GROUP Dropbox\MDG\Projects\SWF\HDG23005-SWF-SFS Terminal and Hangar\05-Drawings\23005-SWF-SFS-C402-GRD-CU.dwg - Yan

EXISTING CONCRETE JOINT (TYP.)

PROJECT LIMITS

EXISTING 8" DIA DRAIN

EXISTING 8" DIA DRAIN

EXISTING 8" DIA DRAIN

S-2
18" NYLOPLAST STRUCTURE H-20
TOP = 458.33'
INV. (S) = 453.85'
INV. (W) EL.= 454.95'

CONCRETE APRON

278 LF 12" STORM SEWER @0.6%

971742.9974
601616.8526

NEW GALVANIZED STEEL CHAIN LINK FENCE
(SEE DETAIL, SHEET C902)

NEW GALVANIZED STEEL CHAIN LINK FENCE
(SEE DETAIL, SHEET C902)

EXISTING CHAIN LINK FENCE ON BARRIER RAIL

15 LF OF 2" HANGAR DOOR DRAIN

58 LF 12" STORM SEWER @0.6%

S-3
18" NYOPLAST STRUCTURE H-20
GRATE = 458.32'
INV. (N) = 452.18'
INV. (W) = 452.08'

END DRAINAGE GRATE
GRATE = 457.11'
4" PIPE INV. EL = 456.00'

S-1
18" NYLOPLAST STRUCTURE H-20
TOP = 458.30'
INV. (E) = 454.30'

156 LF 12"
STORM SEWER @0.6%

MANHOLE "PSA"
GRATE = 457.01'
UNABLE TO OPEN

NEW HANGAR
F.F.E. = 458.50

SEE PLUMBING PLAN
FOR ALL INTERNAL UTILITIES

BUILDING 158
PANNILI ADMINISTRATION BUILDING

S-5
18" NYLOPLAST STRUCTURE H-10
GRATE EL.= 458.38'
INV. (W) = 454.83'

4" STORM DOWNSPOUT
TO BELOW GRADE (TYP.)

3 LF OF 4" PVC (C900)(TYP.)

12"×2"×12" TEE (TYP.)

172 LF 12"
STORM SEWER @0.6%

S-6
24" NYLOPLAST STRUCTURE H-10
GRATE EL.= 458.43'
INV. (W) = 448.71'
INV. (N) = 453.80'
INV. (S) = 450.65'

971845.9824
601482.9318

971783.3514
601466.1579

S-4
18" NYLOPLAST STRUCTURE H-10
GRATE = 458.37'
INV. (N) = 451.14'
INV. (SE) = 451.04'

BEGINNING DRAINAGE GRATE
GRATE = 457.01'
INV. EL = 452.83'

PROPOSED 4' SIDEWALK

NEW CAP

65 LF 12"
STORM SEWER @0.6%

FIRST STREET

60 LF OF 12" STORM SEWER @ 0.6%

EXISTING WATER PIPE

EXISTING WATER PIPE

BEGINNING 18" RCP STORM PIPE

EXISTING 30" STORM PIPE

EXISTING 30" STORM PIPE

EXISTING STORM MANHOLE
GRATE = 456.55'
6" CPP W INV. = 454.55'
30" RCP N INV. =448.25'
30" RCP S INV. =448.15'

NEW 12" PVC E INV. = 448.35'

EXISTING STORM MANHOLE
GRATE = 456.46'
6" CPP W INV. = 454.56'
6" CPP E INV. = 450.36'
30" RCP N INV. =448.21'
30" RCP S INV. =447.96'

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE
- LEASE LANE
- EXISTING BOLLARD
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING OVERHEAD LINE
- EXISTING ELECTRIC LINE UNDERGROUND
- EXISTING GAS LINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING UTILITY LINE (UNKNOW)
- EXISTING STORM LINE
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- NEW CONCRETE

NOTE: ALL STORMWATER PIPE MATERIAL SHALL COMPLY WITH PA SPECIFICTION 334160 "EXTERIOR STORMWATER DRAINAGE SYSTEMS"

0' 15' 30'

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

MDG MOHSEN DESIGN GROUP
MOHSEN DESIGN GROUP INCORPORATED
2202 N. WESTSHORE BLVD., SUITE 200
TAMPA, FL 33618

STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109987
Graham M Feland

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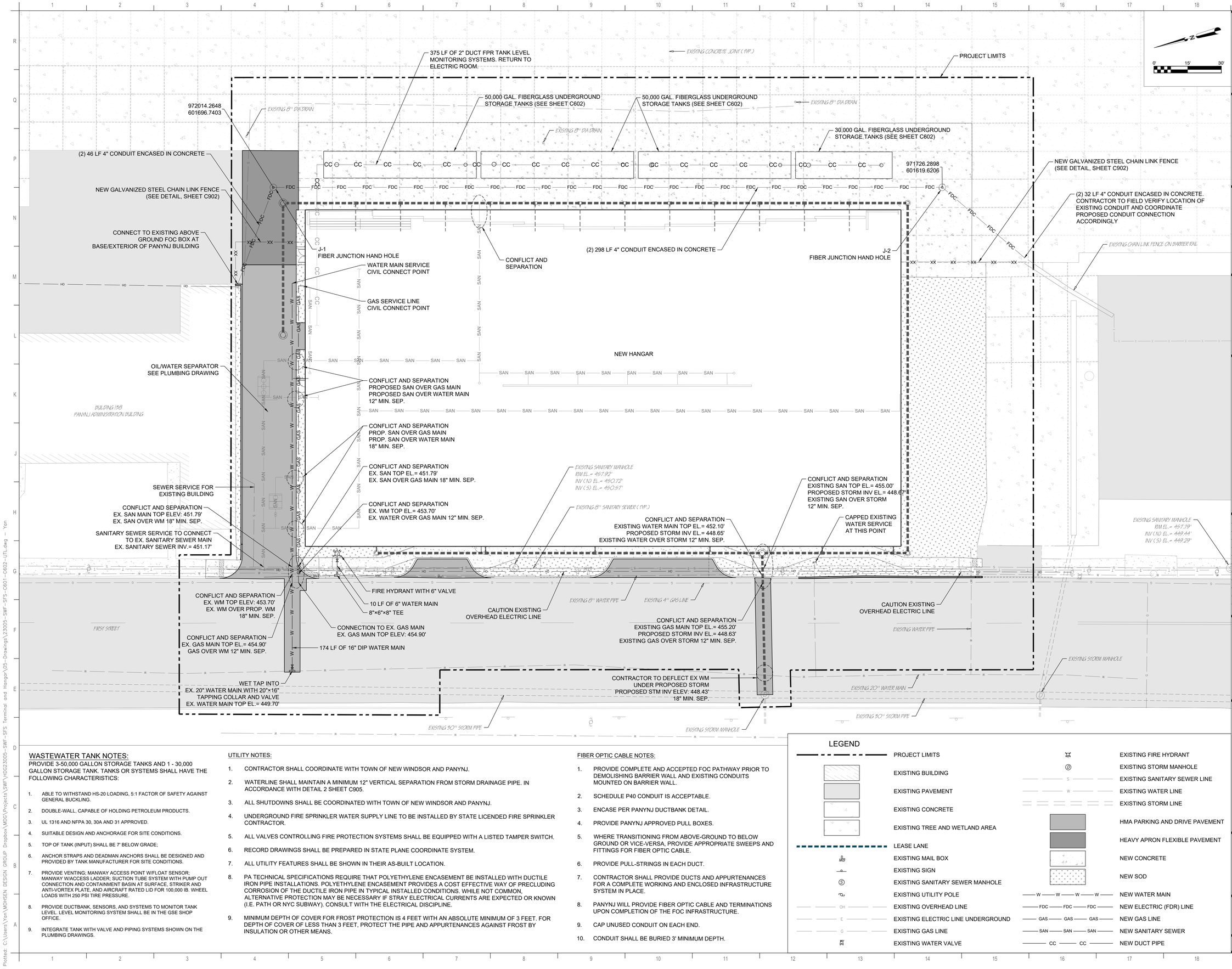
Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

DRAINAGE PLAN

C501

100% PERMIT SET

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WASTEWATER TANK NOTES:

PROVIDE 3-50,000 GALLON STORAGE TANKS AND 1 - 30,000 GALLON STORAGE TANK. TANKS OR SYSTEMS SHALL HAVE THE FOLLOWING CHARACTERISTICS:

1. ABLE TO WITHSTAND HS-20 LOADING, 5:1 FACTOR OF SAFETY AGAINST GENERAL BUCKLING.
2. DOUBLE-WALL, CAPABLE OF HOLDING PETROLEUM PRODUCTS.
3. UL 1316 AND NFPA 30, 30A AND 31 APPROVED.
4. SUITABLE DESIGN AND ANCHORAGE FOR SITE CONDITIONS.
5. TOP OF TANK (INPUT) SHALL BE 7' BELOW GRADE;
6. ANCHOR STRAPS AND DEADMAN ANCHORS SHALL BE DESIGNED AND PROVIDED BY TANK MANUFACTURER FOR SITE CONDITIONS.
7. PROVIDE VENTING; MANWAY ACCESS POINT W/FLOAT SENSOR; MANWAY W/ACCESS LADDER; SUCTION TUBE SYSTEM WITH PUMP OUT CONNECTION AND CONTAINMENT BASIN AT SURFACE, STRIKER AND ANTI-VORTEX PLATE, AND AIRCRAFT RATED LID FOR 100,000 IB. WHEEL LOADS WITH 250 PSI TIRE PRESSURE.
8. PROVIDE DUCTBANK, SENSORS, AND SYSTEMS TO MONITOR TANK LEVEL. LEVEL MONITORING SYSTEM SHALL BE IN THE GSE SHOP OFFICE.
9. INTEGRATE TANK WITH VALVE AND PIPING SYSTEMS SHOWN ON THE PLUMBING DRAWINGS.

UTILITY NOTES:

1. CONTRACTOR SHALL COORDINATE WITH TOWN OF NEW WINDSOR AND PANYNJ.
2. WATERLINE SHALL MAINTAIN A MINIMUM 12" VERTICAL SEPARATION FROM STORM DRAINAGE PIPE. IN ACCORDANCE WITH DETAIL 2 SHEET C905.
3. ALL SHUTDOWNS SHALL BE COORDINATED WITH TOWN OF NEW WINDSOR AND PANYNJ.
4. UNDERGROUND FIRE SPRINKLER WATER SUPPLY LINE TO BE INSTALLED BY STATE LICENDED FIRE SPRINKLER CONTRACTOR.
5. ALL VALVES CONTROLLING FIRE PROTECTION SYSTEMS SHALL BE EQUIPPED WITH A LISTED TAMPER SWITCH.
6. RECORD DRAWINGS SHALL BE PREPARED IN STATE PLANE COORDINATE SYSTEM.
7. ALL UTILITY FEATURES SHALL BE SHOWN IN THEIR AS-BUILT LOCATION.
8. PA TECHNICAL SPECIFICATIONS REQUIRE THAT POLYETHYLENE ENCASEMENT BE INSTALLED WITH DUCTILE IRON PIPE INSTALLATIONS. POLYETHYLENE ENCASEMENT PROVIDES A COST EFFECTIVE WAY OF PRECLUDING CORROSION OF THE DUCTILE IRON PIPE IN TYPICAL INSTALLED CONDITIONS. WHILE NOT COMMON, ALTERNATIVE PROTECTION MAY BE NECESSARY IF STRAY ELECTRICAL CURRENTS ARE EXPECTED OR KNOWN (I.E. PATH OR NYC SUBWAY). CONSULT WITH THE ELECTRICAL DISCIPLINE.
9. MINIMUM DEPTH OF COVER FOR FROST PROTECTION IS 4 FEET WITH AN ABSOLUTE MINIMUM OF 3 FEET. FOR DEPTH OF COVER OF LESS THAN 3 FEET, PROTECT THE PIPE AND APPURTENANCES AGAINST FROST BY INSULATION OR OTHER MEANS.

FIBER OPTIC CABLE NOTES:

1. PROVIDE COMPLETE AND ACCEPTED FOC PATHWAY PRIOR TO DEMOLISHING BARRIER WALL AND EXISTING CONDUITS MOUNTED ON BARRIER WALL.
2. SCHEDULE P40 CONDUIT IS ACCEPTABLE.
3. ENCASE PER PANYNJ DUCTBANK DETAIL.
4. PROVIDE PANYNJ APPROVED PULL BOXES.
5. WHERE TRANSITIONING FROM ABOVE-GROUND TO BELOW GROUND OR VICE-VERSA, PROVIDE APPROPRIATE SWEEPS AND FITTINGS FOR FIBER OPTIC CABLE.
6. PROVIDE PULL-STRINGS IN EACH DUCT.
7. CONTRACTOR SHALL PROVIDE DUCTS AND APPURTENANCES FOR A COMPLETE WORKING AND ENCLOSED INFRASTRUCTURE SYSTEM IN PLACE.
8. PANYNJ WILL PROVIDE FIBER OPTIC CABLE AND TERMINATIONS UPON COMPLETION OF THE FOC INFRASTRUCTURE.
9. CAP UNUSED CONDUIT ON EACH END.
10. CONDUIT SHALL BE BURIED 3' MINIMUM DEPTH.

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- LEASE LANE
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING OVERHEAD LINE
- EXISTING ELECTRIC LINE UNDERGROUND
- EXISTING GAS LINE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING STORM LINE
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- NEW CONCRETE
- NEW SOD
- NEW WATER MAIN
- NEW ELECTRIC (FDR) LINE
- NEW GAS LINE
- NEW SANITARY SEWER
- NEW DUCT PIPE

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

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REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

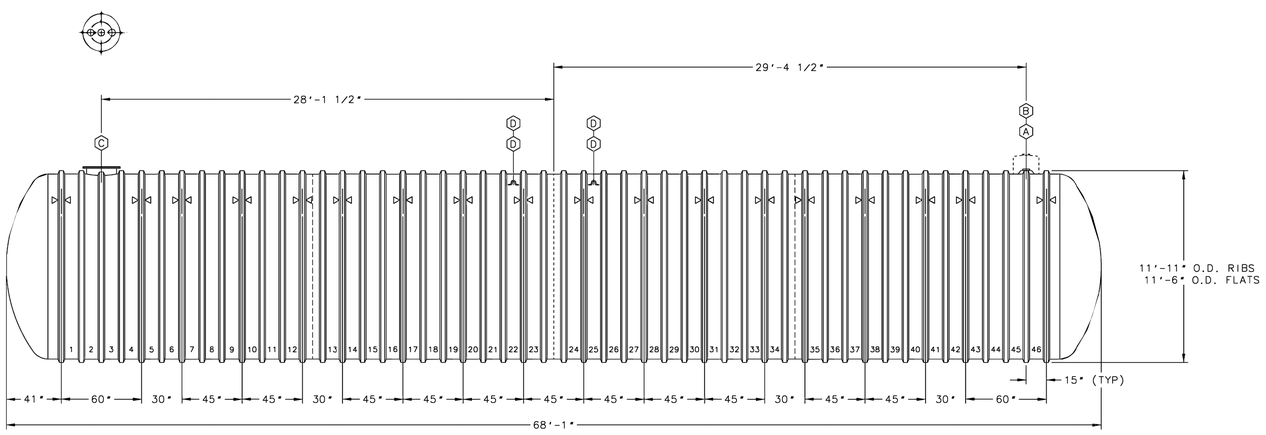
Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

UTILITY PLAN

C601

100% PERMIT SET

Plotted: C:\Users\Yon\MOHSEN DESIGN GROUP Dropbox\MDG\Projects\SWF\HDG23005--SWF--SFS Terminal and Hangar\05-Drawings\23005--SWF--SFS--C601--C602--UTL.dwg -- Yon

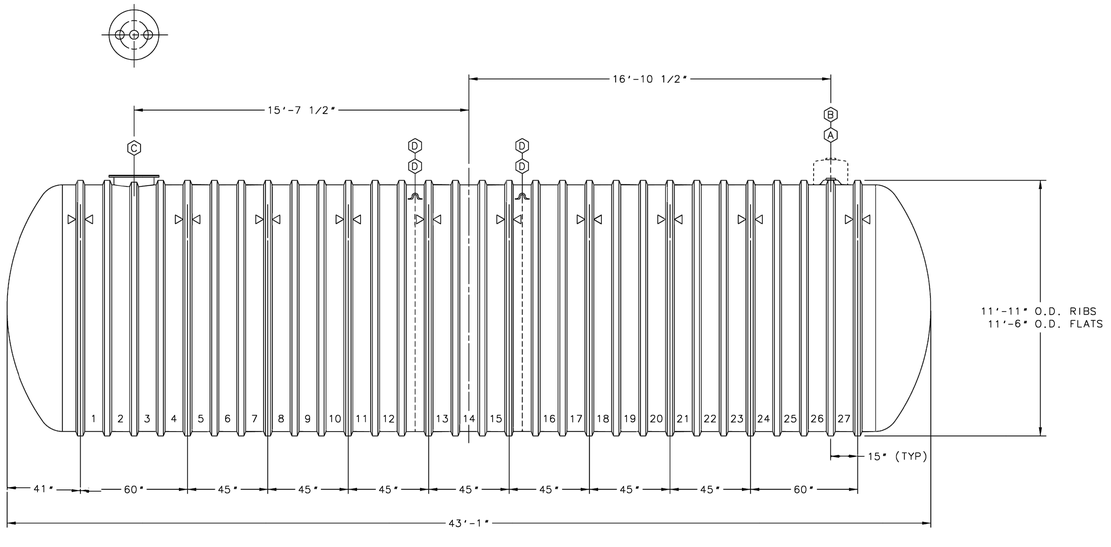


ITEM	QTY	DESCRIPTION
A	1	4" NPT MONITOR FITTING
B	1	OPTIONAL 18" DIA. HYDROSTATIC MONITORING RESERVOIR WITH 4" NPT FITTING
C	1	22" DIA. MANWAY WITH 3-4" NPT FITTINGS IN COVER & 4-12"x12" STRIKER PLATES
D	4	LIFTING LUG
⋈	18	HOLD DOWN STRAP LOCATION

XERXES

TITLE 12' DIA. DOUBLE-WALL
CAP. 50,000 GALLONS

DATE 8/23 DR. NO. S11-704.00



ITEM	QTY	DESCRIPTION
A	1	4" NPT MONITOR FITTING
B	1	OPTIONAL 18" DIA. HYDROSTATIC MONITORING RESERVOIR WITH 4" NPT FITTING
C	1	22" DIA. MANWAY WITH 3-4" NPT FITTINGS IN COVER & 4-12"x12" STRIKER PLATES
D	4	LIFTING LUG
⋈	10	HOLD DOWN STRAP LOCATION

XERXES

TITLE 12' DIA. DOUBLE-WALL CAP.
30,000 GALLONS

DATE 8/23 DR.NO. S11-700.00

HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · 109697 · LICENSED PROFESSIONAL ENGINEER

Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

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ORLANDO, FL 32801

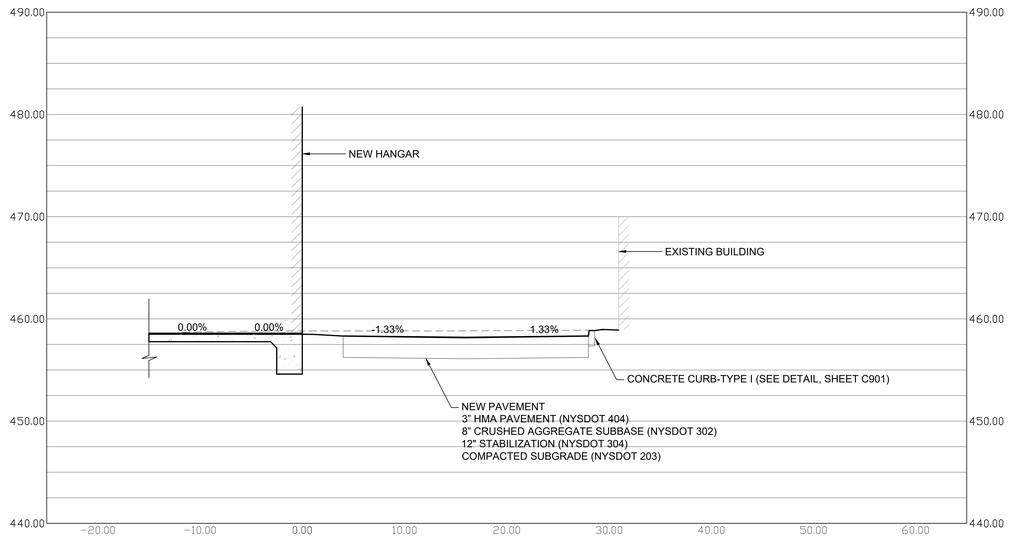
Issue Date: 06/28/2024
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Drawn By: YY
Checked By: MM

FIBERGLASS UNDERGROUND STORAGE TANKS

C602

100% PERMIT SET

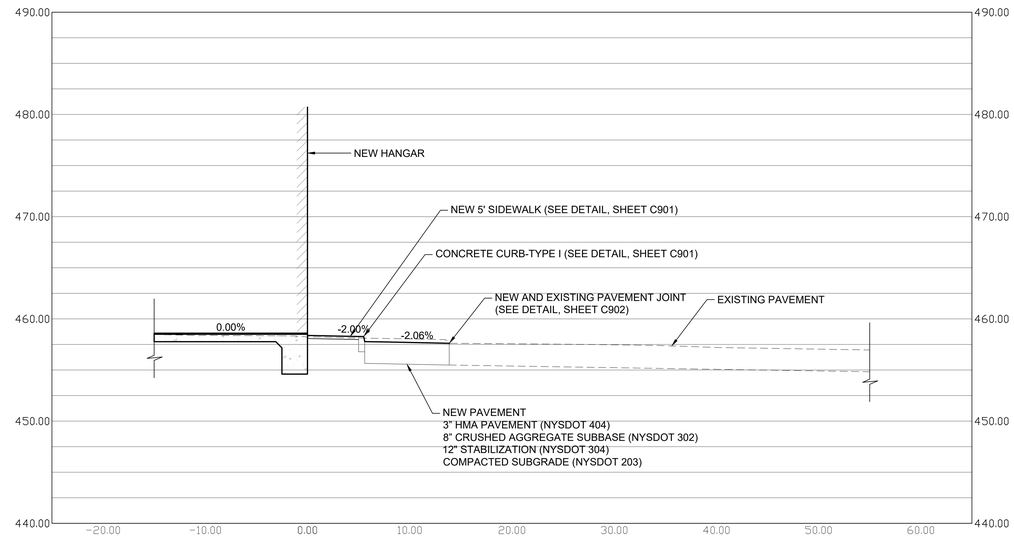
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A
C701 C401

Section A -- A

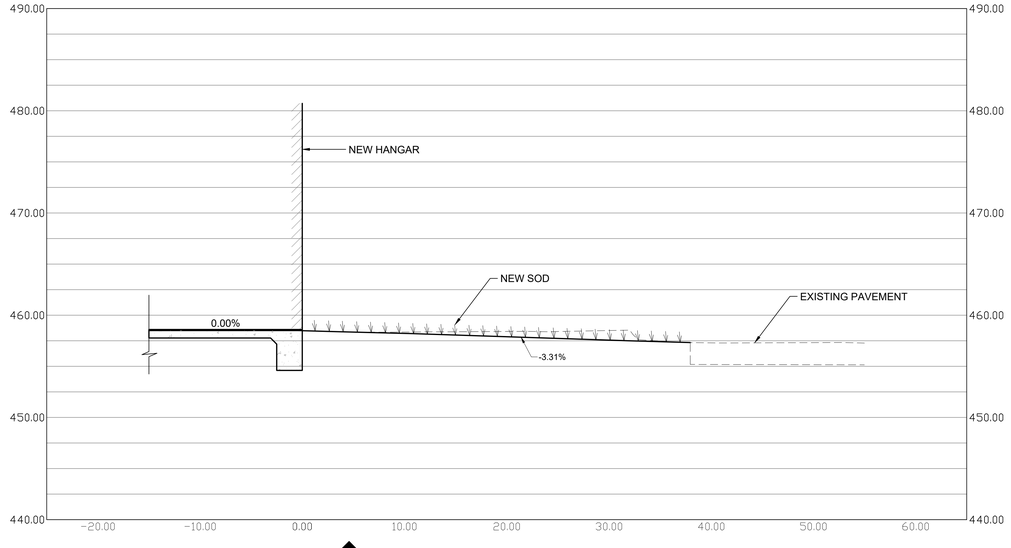
SCALE: HORZ. 1"= 6'
VERT. 1" = 6'



B
C701 C401

Section B -- B

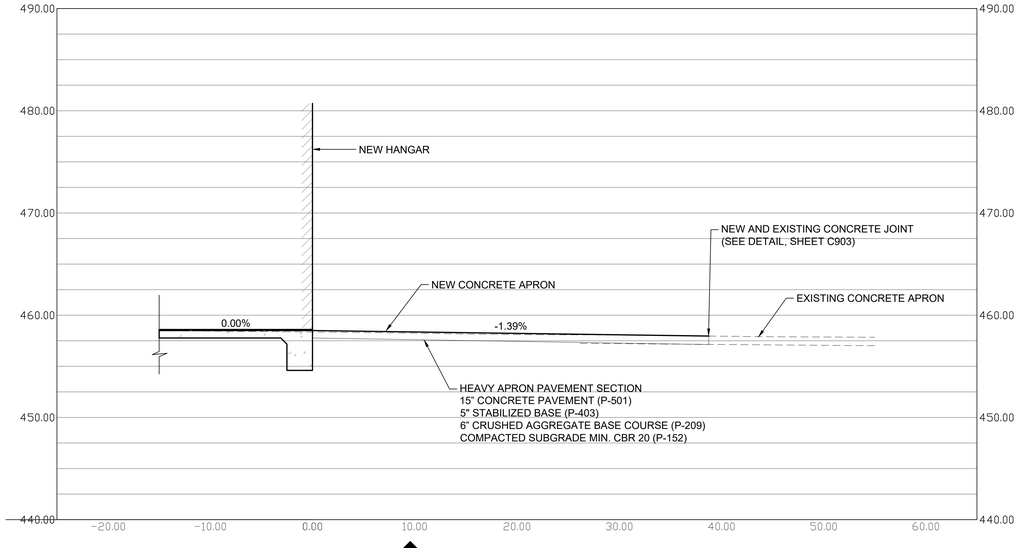
SCALE: HORZ. 1"= 6'
VERT. 1" = 6'



C
C701 C401

Section C -- C

SCALE: HORZ. 1"= 6'
VERT. 1" = 6'



D
C701 C401

Section D -- D

SCALE: HORZ. 1"= 6'
VERT. 1" = 6'

HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
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LICENSED PROFESSIONAL ENGINEER

Graham M Feland

REVISIONS

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SIGNATURE AVIATION

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ORLANDO, FL 32801

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SECTIONS

C701

100% PERMIT SET

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PROJECT LIMITS

NEW GALVANIZED STEEL CHAIN LINK FENCE (SEE DETAIL, SHEET C902)

NEW GALVANIZED STEEL CHAIN LINK FENCE (SEE DETAIL, SHEET C902)

EXISTING CHAIN LINK FENCE ON BARRIER RAIL

BUILDING 158
PANYNJ ADMINISTRATION BUILDING

NEW HANGAR
(265.5' × 150')

NEW CONCRETE CURB-TYPE I (SEE DETAIL, SHEET C901)

PROPOSED 6' WIDE TYPE LS CROSS WALK STRIPING (NYSDOT 685-01)

24" STOP BAR (NYSDOT 685-01)

972069.4585
601543.9544

STOP SIGN (R1-1)

MUTCD W11-2 & W16-7P BOTH MOUNTED ON BOTH SIDES OF POST

NEW CONCRETE CURB-TYPE I (SEE DETAIL, SHEET C901)

YIELD HERE TO PEDS SIGN MUTCD R1-5

EXISTING NO PARKING SIGN

NEW CONCRETE CURB-TYPE I (SEE DETAIL, SHEET C901)

PROPOSED 5.0' SIDEWALK (TYP.)

SIDEWALK RAMP WITH DETECTABLE WARNING (TYP.)(SEE DETAIL, SHEET C901)

CONTRACTOR TO RESTORE 6" YELLOW LANE LINE UPON COMPLETION OF OPEN-CUT

6" WHITE STRIPES (TYP.)

YIELD LINE MARKINGS (NYSDOT 608-01)

SIDEWALK RAMP WITH DETECTABLE WARNING (SEE DETAIL, SHEET C901)

PROPOSED 6' WIDE TYPE LS CROSS WALK STRIPING (NYSDOT 685-01)

6" WIDE BLUE STRIPES DIAGONAL STRIPES AT 45° ANGLE, 2' O.C.

6" WIDE BLUE STRIPES (TYP.)

YIELD LINE MARKINGS (NYSDOT 608-01)

EXISTING 6" YELLOW BROKEN LANE LINES

FIRST STREET

NEW CHARGING STATION

CONTRACTOR TO RELOCATE AND REUSE EXISTING CHARGING STATION

EXISTING SIGN (TYP.)

YIELD HERE TO PEDS SIGN MUTCD R1-5

RESERVED PARKING ELECTRIC VEHICLES ONLY — PANYNJ USE ONLY

CARPOOL PARKING ONLY

RESERVED PARKING — VAN ACCESSIBLE

NO STOPPING ANY TIME

RESERVED PARKING — VAN ACCESSIBLE

RESERVED PARKING ELECTRIC VEHICLES ONLY

RESERVED PARKING LOW-EMISSION FUEL-EFFICIENT VEHICLES ONLY (EXCL-EMISSION, HYBRID OR ALTERNATIVE FUEL VEHICLES)

NOTE:
ALL PAVEMENT MARKINGS TO CONFORM TO PANYNJ TRAFFIC PAVEMENT MARKING DESIGN AND DRAWINGS PREPARATION GUIDELINES (04/15/2022), UNLESS OTHERWISE NOTED.

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE
- LEASE LANE
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- EXISTING STORM LINE
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- NEW CONCRETE
- NEW SOD
- NEW GALVANIZED STEEL CHAIN LINK FENCE

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REVISIONS		
MARK	DESCRIPTION	DATE
1.	PERMIT COMMENTS.	06/28/24

TERMINAL AND HANGAR

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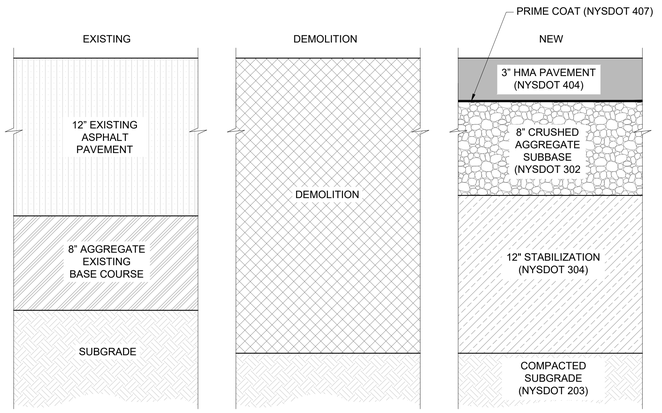
Issue Date: 06/28/2024
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Checked By: MM

SIGNAGE AND STRIPING PLAN

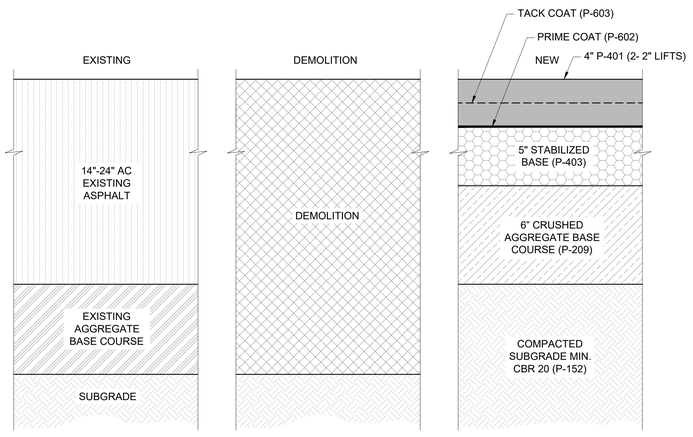
C801

100% PERMIT SET

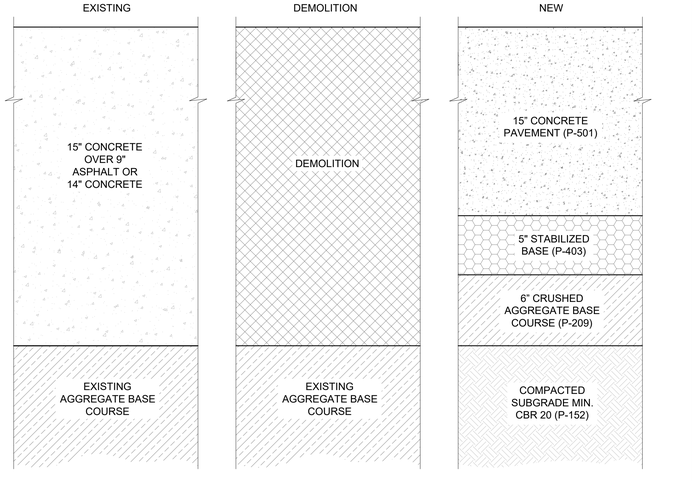
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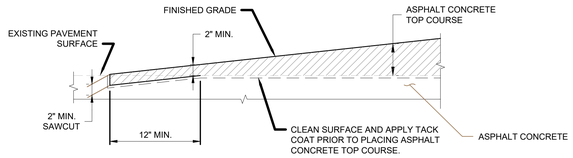
1 HMA PARKING AND DRIVE AREAS
N.T.S.



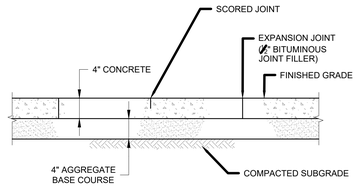
2 HEAVY APRON FLEXIBLE PAVEMENT SECTION
N.T.S.



3 HEAVY APRON RIGID PAVEMENT SECTION
N.T.S.



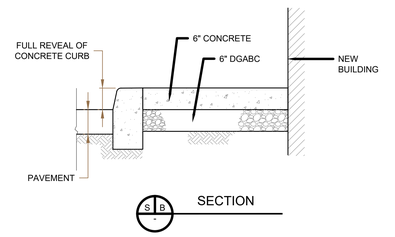
4 KEYWAY DETAIL
N.T.S.



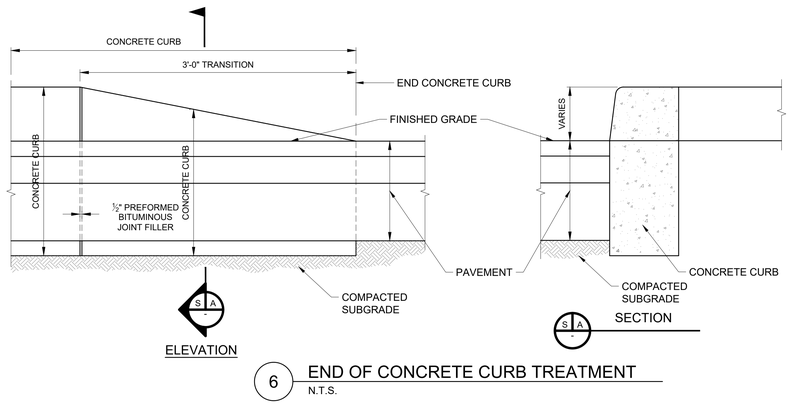
SIDEWALK NOTE:

UNLESS SHOWN ON THE CONTRACT DRAWINGS, SUBMIT THE LAYOUT OF EXPANSION AND SCORED JOINTS IN THE SIDEWALK AREA FOR APPROVAL BY THE ENGINEER.

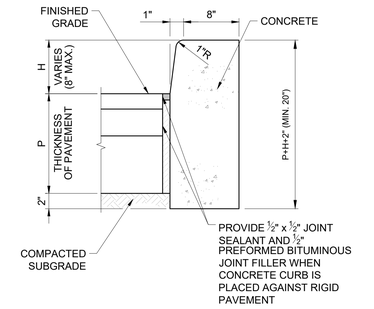
5 SIDEWALK DETAIL
N.T.S.



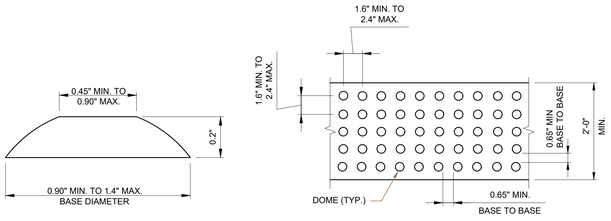
8 CONCRETE SIDEWALK WITH CURB DETAIL
N.T.S.



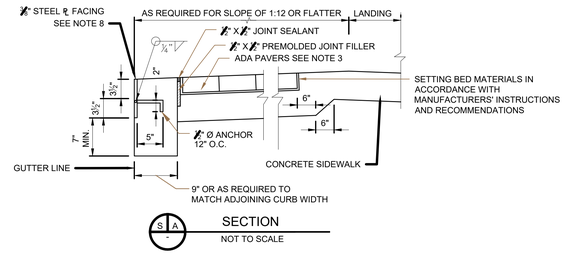
6 END OF CONCRETE CURB TREATMENT
N.T.S.



9 CONCRETE CURB-TYPE I
N.T.S. (NON-MOUNTABLE)



DETECTABLE WARNING SURFACE
NOT TO SCALE



NOTES:

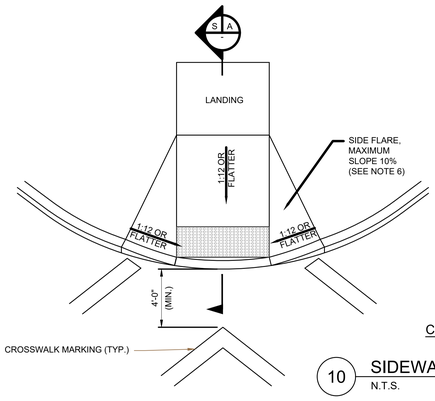
1. LOCATION OF DETECTABLE WARNING: DETECTABLE WARNING SURFACE SO THAT THE EDGE OF THE WARNING FIELD NEAREST TO THE STREET SURFACE IS 6" TO 9" FROM THE EDGE OF THE STREET, OR FROM THE FACE OF THE DROPPED CURB. WHERE A DROPPED CURB CONTINUES ACROSS THE BOTTOM OF THE CURB RAMP, EXTEND THE DETECTABLE WARNINGS THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
2. DOME ALIGNMENT: ALIGN DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL (SEE 'DOME DETAIL').
3. DETECTABLE WARNING SURFACE SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:

EMBEDDED DETECTABLE WARNING SURFACE
- A. STEP-SAFE AS MANUFACTURED BY TRANSPO INDUSTRIES, NEW ROCHELLE, NY
- B. ADA PAVERS AS MANUFACTURED BY WHITACRE-GREER BRICK, ALLIANCE, OHIO

SURFACE APPLIED WARNING SURFACE
- A. ADA ARMOR-TILE SURFACE APPLIED AS MANUFACTURED BY ENGINEERING PLASTICS, INC. WILLIAMSVILLE, NY
- B. TACTILE WARNING SYSTEM TILE AS MANUFACTURED BY ADA SOLUTIONS, INC. NORTH BILLERICA, MA.

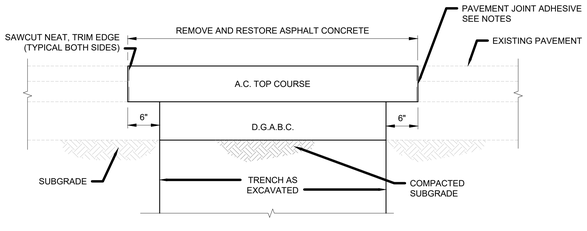
4. THE COLOR OF THE DETECTABLE WARNING SURFACE SHALL BE DARK GRAY UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
5. THE MAXIMUM CROSS SLOPE OF CURB RAMPS SHALL BE 2 PERCENT. CURB RAMP SURFACES SHALL GENERALLY LIE IN CONTINUOUS PLANES WITH A MINIMUM SURFACE WARP.
6. WHEN NOT PRACTICAL TO PROVIDE A LANDING THAT IS AT LEAST (5') WIDE (MEASURED FROM THE TOP OF THE CURB RAMP TO THE BACK OF THE SIDEWALK), THE LENGTH OF THE SIDE FLARES SHALL BE TWELVE (12) TIMES THE CURB HEIGHT MEASURED ALONG THE CURB LINE (SEE 'PARALLEL CURB RAMPS' DETAIL).
7. RAMP TRANSITIONS BETWEEN WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4" MAX).
8. REQUIRED WHERE STEEL FACED CURB IS SHOWN ON CONTRACT DRAWINGS. MATERIALS SHALL BE SIMILAR TO STEEL FACED CURB, SEE DETAIL. EXPOSED SURFACE OF STEEL SHALL BE GROUND SMOOTH.
9. LANDING SHALL HAVE A MINIMUM CLEAR DIMENSION OF A 5' BY 5' SQUARE. THE MAXIMUM CROSS SLOPE AT LANDINGS IS 2% IN ANY DIRECTION.

7 SIDEWALK CURB RAMP DETAILS
N.T.S.



CURB RAMP TYPE II

10 SIDEWALK CURB RAMP DETAILS
N.T.S.



PAVEMENT JOINT ADHESIVE NOTES:

FURNISH AND INSTALL ONE OF THE FOLLOWING PAVEMENT JOINT ADHESIVE OR APPROVED EQUAL.

1. CRAFCO PAVEMENT JOINT ADHESIVE #34524 AS MANUFACTURED BY CRAFCO, INC., CHANDLER, AZ
2. DEERY COLD JOINT ADHESIVE AS MANUFACTURED BY DEERY AMERICAN CORP., CHANDLER, AZ
3. DURA-FILL CJA AS MANUFACTURED BY P & T PRODUCTS, INC. SANDUSKY, OH
4. NUVO SPEC PAVEMENT JOINT ADHESIVE AS MANUFACTURED BY MAXWELL PRODUCTS, INC., SALT LAKE CITY, UT

FURNISH AND INSTALL PAVEMENT JOINT ADHESIVE IN ACCORDANCE WITH THE MANUFACTURE'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS. AT NO ADDITIONAL COST TO THE AUTHORITY, ARRANGE FOR THE PAVEMENT JOINT ADHESIVE TECHNICAL REPRESENTATIVE(S) TO BE PRESENT IN THE FIELD DURING THE FIRST DAY OF INSTALLATION.

11 FLEXIBLE PAVEMENT RESTORATION
N.T.S.

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

MDG MOHSEN DESIGN GROUP
MOHSEN DESIGN GROUP INCORPORATED
2202 N. WESTSHORE BLVD., SUITE 200
TAMPA, FL 33618

STATE OF NEW YORK · GRAHAM MICHAEL FELAND · 109987 · LICENSED PROFESSIONAL ENGINEER

Graham M Feland

REVISIONS		
MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

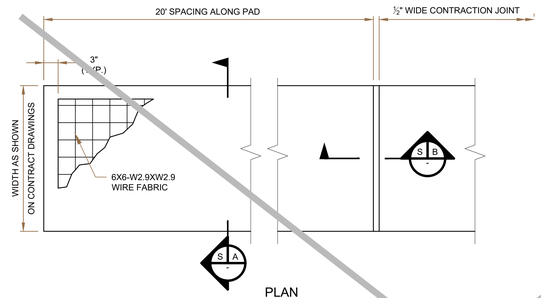
SITE DETAILS

C901

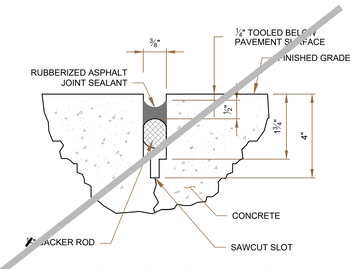
100% PERMIT SET

NOT RELEASED FOR CONSTRUCTION

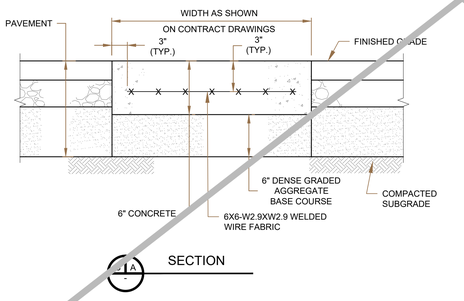
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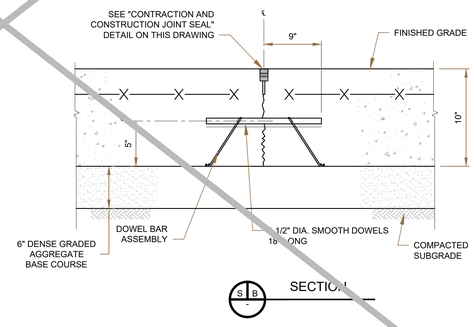
PLAN



CONTRACTION AND CONSTRUCTION JOINT SEAL DETAIL

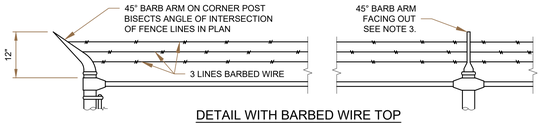


SECTION



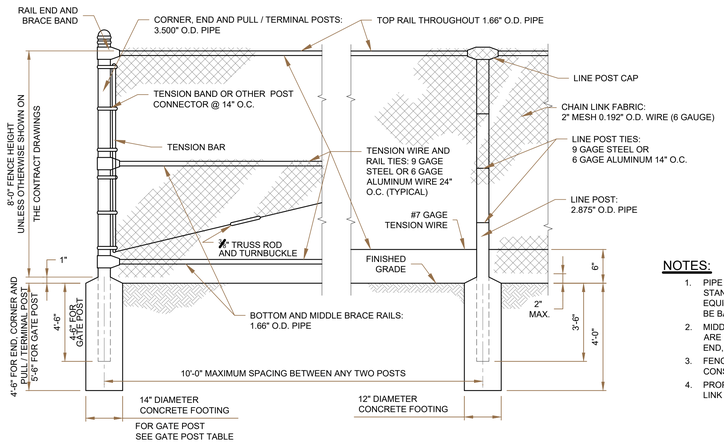
SECTION

1 CONCRETE DOLLY PAD
N.T.S.



DETAIL WITH BARBED WIRE TOP

GATE POSTS TABLE			
PIPE SIZE	SWING GATE OPENINGS		DIA. OF CONC. FOOTING
NOM. O.D. PIPE	SINGLE GATE	DOUBLE GATE	
2.875"	6' OR LESS	12' OR LESS	12"
4.000"	OVER 6' TO 12'	OVER 12' TO 24'	16"
6.625"	OVER 12' TO 18'	OVER 24' TO 36'	20"
8.625"	OVER 18' TO 24'	OVER 36' TO 48'	26"



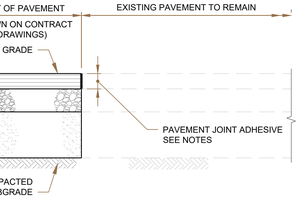
CORNER, END AND PULL / TERMINAL POST DETAIL

LINE POST DETAIL

NOTES:

1. PIPE SECTIONS SHOWN ARE ASTM F1083 FOR STANDARD WEIGHT (SCHEDULE 40) PIPE. EQUIVALENT STEEL SECTIONS FOR FRAME SHALL BE BASED ON PIPE SECTION SHOWN.
2. MIDDLE AND BOTTOM BRACE RAILS AND TRUSS ROD ARE REQUIRED ON ONE BAY EACH SIDE OF CORNER, END, PULL AND GATE POSTS ONLY.
3. FENCE TOPPED WITH BARBED WIRE SHALL BE CONSTRUCTED ONE FOOT INSIDE PROPERTY LINE.
4. PROPOSED FENCE TO COMPLY WITH PANYNJ CHAIN LINK FENCE AND GATES SPECFICIATION 323112.

2 GALVANIZED STEEL CHAIN LINK FENCE
N.T.S.



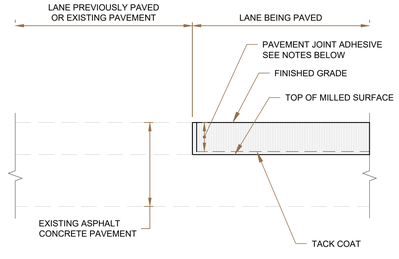
PAVEMENT JOINT ADHESIVE NOTES:

FURNISH AND INSTALL ONE OF THE FOLLOWING PAVEMENT JOINT ADHESIVE OR APPROVED EQUAL

1. CRAFCO PAVEMENT JOINT ADHESIVE #34524 AS MANUFACTURED BY CRAFCO, INC., CHANDLER, AZ
2. DEERY COLD JOINT ADHESIVE AS MANUFACTURED BY DEERY AMERICAN CORP., CHANDLER, AZ
3. DURA-FILL CJA AS MANUFACTURED BY P & T PRODUCTS, INC. SANDUSKY, OH
4. NUVO SPEC PAVEMENT JOINT ADHESIVE AS MANUFACTURED BY MAXWELL PRODUCTS, INC., SALT LAKE CITY, UT

FURNISH AND INSTALL PAVEMENT JOINT ADHESIVE IN ACCORDANCE WITH THE MANUFACTURE'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS. AT NO ADDITIONAL COST TO THE AUTHORITY, ARRANGE FOR THE PAVEMENT JOINT ADHESIVE MANUFACTURER'S TECHNICAL REPRESENTATIVE(S) TO BE PRESENT IN THE FIELD DURING THE FIRST DAY OF INSTALLATION.

3 ASPHALT CONCRETE PAVEMENT MEETING EXISTING ASPHALT CONCRETE PAVEMENT
N.T.S.



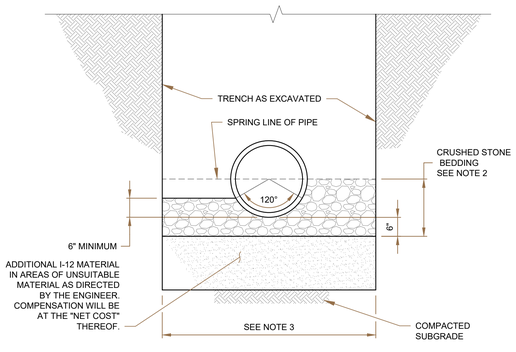
PAVEMENT JOINT ADHESIVE NOTES:

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4 ASPHALT CONCRETE PAVEMENT JOINT
N.T.S.

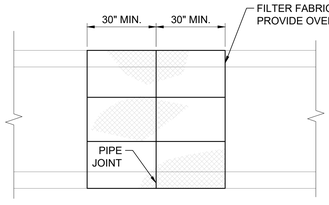


NOTES:

1. BACKFILL TRENCH TO THE SURROUNDING EXISTING GROUND ELEVATION OR PAVEMENT SUBGRADE, WHICHEVER IS LOWER.
2. FOR CORRUGATED HIGH DENSITY POLYETHYLENE AND CORRUGATED POLYPROPYLENE PIPES BRING CRUSHED STONE TO SPRING LINE OF PIPE.
3. PIPE OUTSIDE DIAMETER + 2'-0" FOR THE PIPES UP TO AND INCLUDING 18" INSIDE DIAMETER, PIPE OUTSIDE DIAMETER + 3'-0" FOR PIPES OVER 18" INSIDE DIAMETER AND STRUCTURES.

(STORM DRAINAGE, WATER SUPPLY AND SANITARY SEWER SYSTEMS)

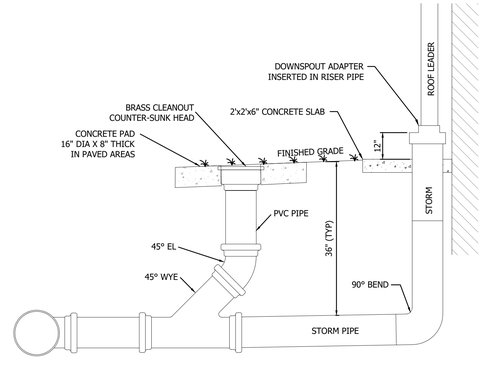
5 BEDDING DETAIL
N.T.S.



PIPE BEDDING NOTES:

1. BEDDING MATERIAL SHALL CONFORM TO NYSDOT STONE SPECIFICATION AND BE OBTAINED FROM NYSDOT APPROVED SOURCES.
2. NON-WOVEN FILTER FABRIC SHALL BE FURNISHED FROM NYSDOT APPROVED MATERIAL SUPPLIER.
3. ALL PIPE JOINTS SHALL BE GASKETED AND WRAPPED WITH FILTER FABRIC. REFER TO PIPE JOINT DETAIL.

6 PIPE JOINT DETAIL
N.T.S.



7 ROOF LEADER CONNECTION
N.T.S.

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

MDG MOHSEN DESIGN GROUP
MOHSEN DESIGN GROUP INCORPORATED
2202 N. WESTSHORE BLVD., SUITE 200
TAMPA, FL 33618

STATE OF NEW YORK
GRAHAM MICHAEL FELAND
109987
LICENSED PROFESSIONAL ENGINEER
Graham M Feland

REVISIONS		
MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION

201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

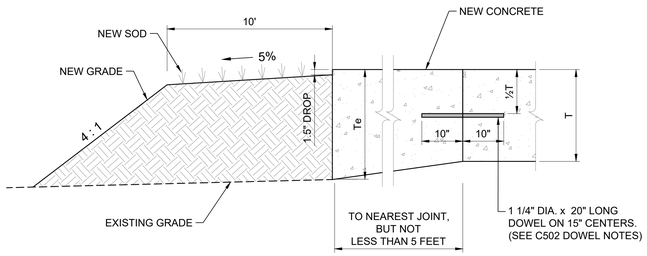
SITE DETAILS

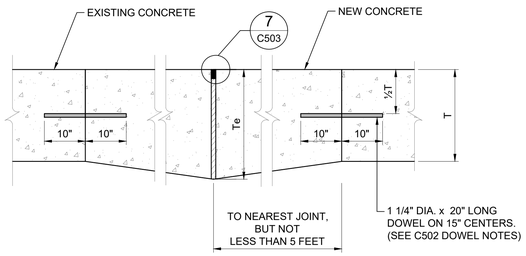
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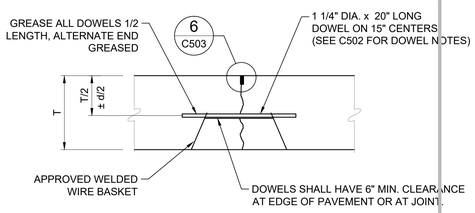
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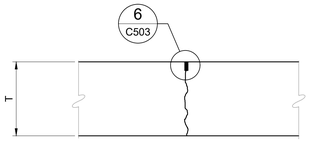




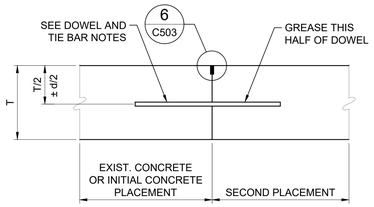
1 TYPE A - PCC THICKENED EDGE ISOLATION JOINT
N.T.S.



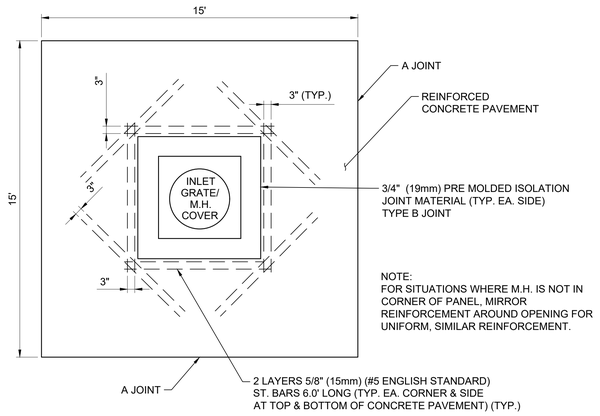
2 TYPE C - DOWELED TRANSVERSE CONTRACTION JOINT
N.T.S.



3 TYPE D - DUMMY TRANSVERSE CONTRACTION JOINT
N.T.S.



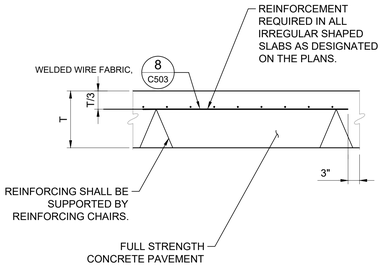
4 TYPE E - DOWELED LONGITUDINAL CONSTRUCTION JOINT
N.T.S.



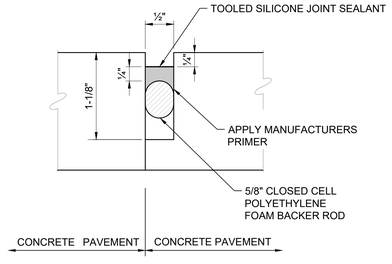
11 REINFORCING STEEL LAYOUT IN PAVEMENT SURROUNDING INLETS DETAIL
N.T.S.

DOWEL AND TIE BAR NOTES:

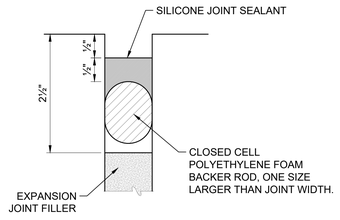
1. DOWEL OR TIE BAR INSERTERS SHALL NOT BE USED.
2. DRILLING METHOD SHALL MAINTAIN DRILL HOLES PARALLEL TO CONCRETE SURFACE AND NORMAL TO JOINT LINE WITHIN 1/4" ± AT END OF DOWEL BAR. USE GANG DRILL WITH 3 OR MORE DRILLS. DRILL HOLE MAXIMUM DEVIATION SHALL NOT EXCEED 1" HORIZONTAL HOLE DIAMETER TO BE APPROXIMATELY 1/4" LARGER THAN DOWEL. MINIMUM THREE DAYS CURE TIME AND 300 PSI FLEXURAL STRENGTH REQUIRED FOR DRILLING NEW CONCRETE.
3. AFTER DRILLING IS COMPLETE, AND PRIOR TO INSTALLATION OF DOWELS, THOROUGHLY CLEAN HOLES BY FLUSHING. ALLOW TO DRY. AIR BLOW TO REMOVE DRILLING DUST, CONCRETE CHIPS, AND ANY MATERIAL DETRIMENTAL TO DEVELOPING BOND.
4. INSERT EPOXY INTO BACK OF DOWEL HOLE BY INJECTION NOZZLE WITH SUFFICIENT EPOXY PLACED SO SLIGHT AMOUNT FORCED OUT WHEN DOWEL INSERTED AND TAPPED TO CORRECT POSITION. DOWEL SHALL BE TURNED WHEN INSERTED AND EPOXY SHALL BE SOLID AROUND BARS WITH NO VOIDS. INSTALL PLASTIC DOWEL RINGS TO RETAIN EPOXY. SMALL WEDGES MAY BE USED TO SUPPORT DOWEL IN CORRECT ALIGNMENT UNTIL EPOXY HARDENS. SUBMIT PROPOSED EPOXY INFORMATION FOR APPROVAL PRIOR TO STARTING WORK.
5. "T" = THICKNESS OF NEW CONCRETE PAVEMENT
6. "d" = DOWEL OR TIE-BAR DIAMETER



5 REINFORCED PCC PAVEMENT SECTION
N.T.S.



6 CONSTRUCTION & CONTRACTION JOINT
N.T.S.

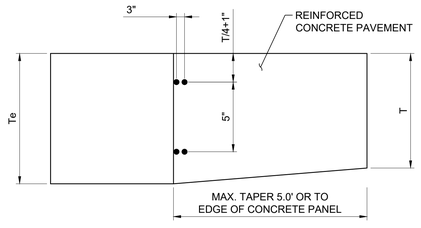


NOTE:
CONTRACTOR SHALL USE TEMPORARY CAP, BLOCKING OR OTHER MEANS TO FORM JOINT SEAL RECESS FOR EXPANSION JOINTS. REPEATED SAW CUTTING TO REMOVE FULL HEIGHT EXPANSION BOARD IS NOT ACCEPTABLE.

7 SILICONE EXPANSION JOINT DETAIL
N.T.S.

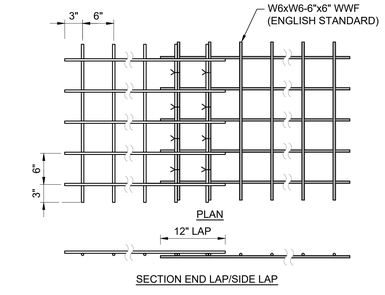
JOINT SEALING NOTES:

1. All CONCRETE SURFACES AND JOINTS SHALL BE FLUSHED CLEAN WITH WATER AFTER BOTH INITIAL AND FINAL SAW-CUTS, PRIOR TO SAWCUT SLURRY DRYING.
2. AFTER SECOND SAWCUT, JOINT FACES SHALL BE SAND BLASTED AND AIR-BLOWN.
3. SEAL RESERVOIR SHALL BE FORMED USING SECOND SAWCUT. SHOULDERED BLADE SHALL NOT BE USED WITH INITIAL SAWCUT.
4. INSERT TEMPORARY BACKER ROD AFTER INITIAL SAWCUT TO PREVENT DEBRIS INTRUSION.
5. FOR ALL JOINTS THE BACKER ROD MATERIAL SHALL BE COMPATIBLE WITH THE COLD POURED SEALANT AND SLIGHTLY OVERSIZED TO PREVENT MOVEMENT DURING THE JOINT SEALANT OPERATION.
6. TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED ONLY WHEN APPROVED BY THE ENGINEER.

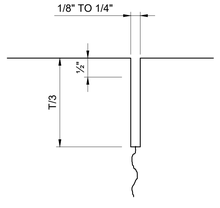


NOTE: SEE TABLE ON THIS SHEET FOR THICKNESS (T) AND OTHER REFERENCED DIMENSIONS.

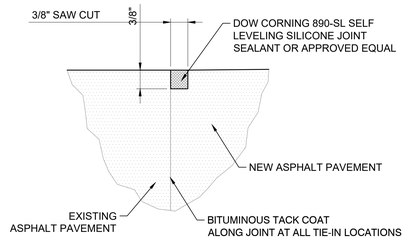
12 REINFORCING STEEL IN PAVEMENT SURROUNDING INLETS DETAIL
N.T.S.



8 WELDED WIRE FABRIC DETAIL
N.T.S.



9 INITIAL SAWCUT DETAIL FOR CONTRACTION JOINTS
N.T.S.



10 AC-AC JOINT SEAL
N.T.S.

MATERIAL SCHEDULE			
ITEM	SIZE	STANDARD	REMARKS
DOWELS/ DEFORMED BARS	1 1/4 INCH DIA x 20 INCHES LONG @ 15 INCHES O.C.	ASTM A 615 GRADE 40 OR 60	EPOXY COATED, INCLUDING ENDS, AASHTO M254
REINFORCED SLABS	6x6 W5.5 & W5.5 WELDED WIRE FABRIC	ASTM A 185	MESH SHALL BE SUPPLIED IN FLAT SHEETS ONLY. USE 6 INCH GRID OVERLAP
EXPANSION BOARD	1 INCH WIDTH x DEPTH REQUIRED	ASTM D 1751	USE REMOVABLE CAP FOR JOINT SEAL
DOWEL EPOXY	AS REQUIRED	ASTM C 881, TYPE IV, GRADE 3	CLASS C FOR INSTALLATION ABOVE 60 F CLASS B FOR INSTALLATION 40 F TO 60 F CLASS A FOR INSTALLATION BELOW 40 F
SILICONE SEALANT	SEE DETAILS	ASTM D 5893	TOOLED

TYPE	T	T/2	T/3	T/4	Te	T/4 + 1"
APRON PCC PAVEMENT	12"	6.0"	4.0"	3.0"	15.0"	4.0"

13 CONCRETE PAVEMENT THICKNESS TABLE
N.T.S.

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Graham M Feland

REVISIONS		
MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

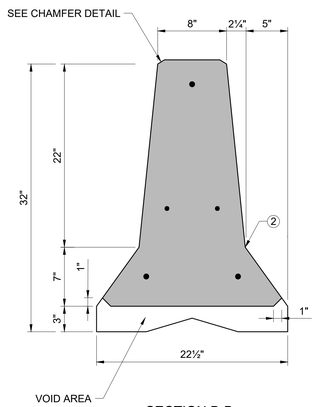
CONCRETE JOINTING DETAILS

C903

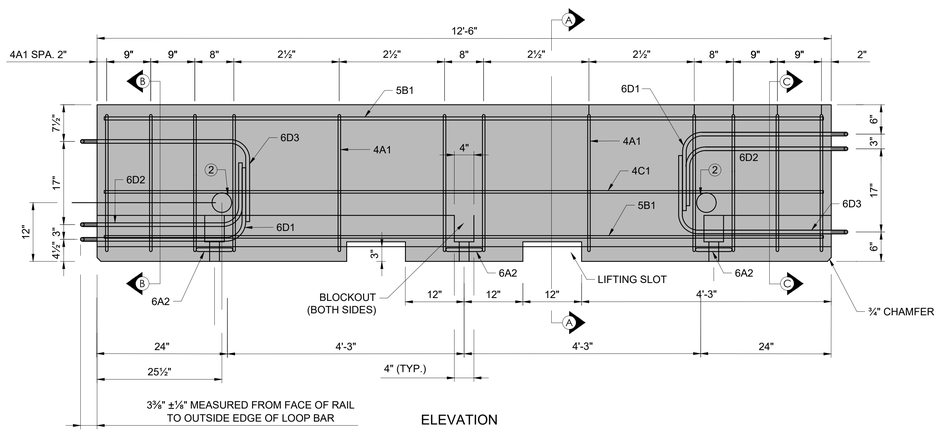
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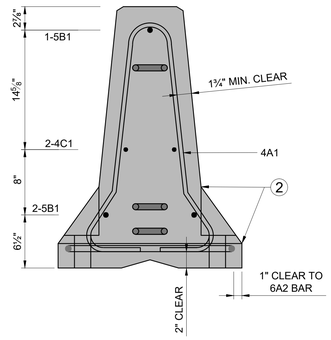
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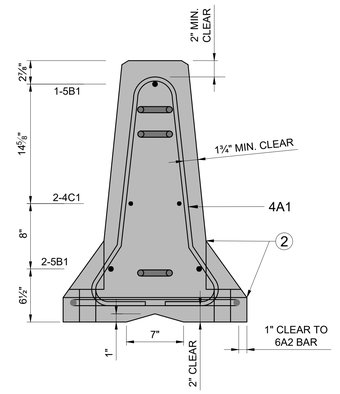
SECTION B-B
LIFTING SLOT



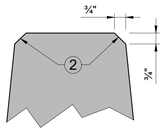
ELEVATION



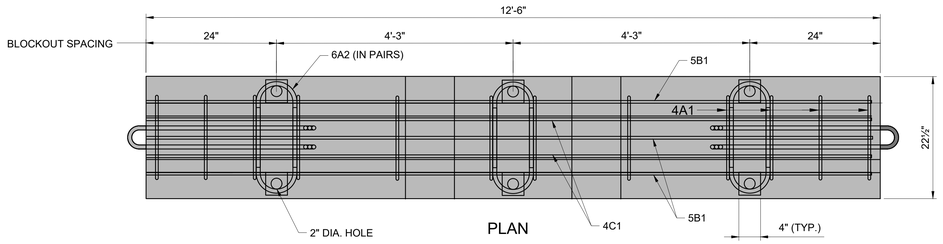
SECTION B-B
STIRRUP PLACEMENT



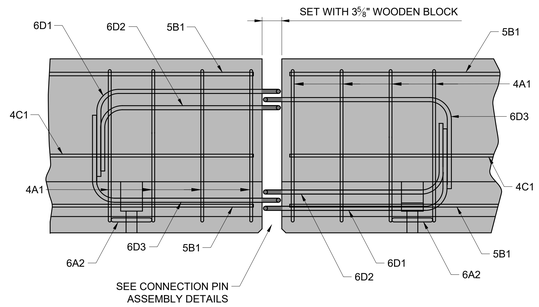
SECTION C-C
STIRRUP PLACEMENT



CHAMFER DETAIL



PLAN



BARRIER CONNECTION
(ELEVATION)

FOR LOOP BARS 6D1, 6D2, AND 6D3, USE $\frac{3}{8}$" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES, AND PASSING A 180 DEGREE BEND TEST USING A 3½" PIN BEND DIAMETER. INSTALL LOOPS WITHIN $\frac{1}{8}$" OF THE PLAN DIMENSIONS.

USE GRADE 60, ASTM A615 FOR ALL OTHER REINFORCEMENTS. DO NOT LIFT OR MOVE USING LOOP BARS 6D1, 6D2 OR 6D3.

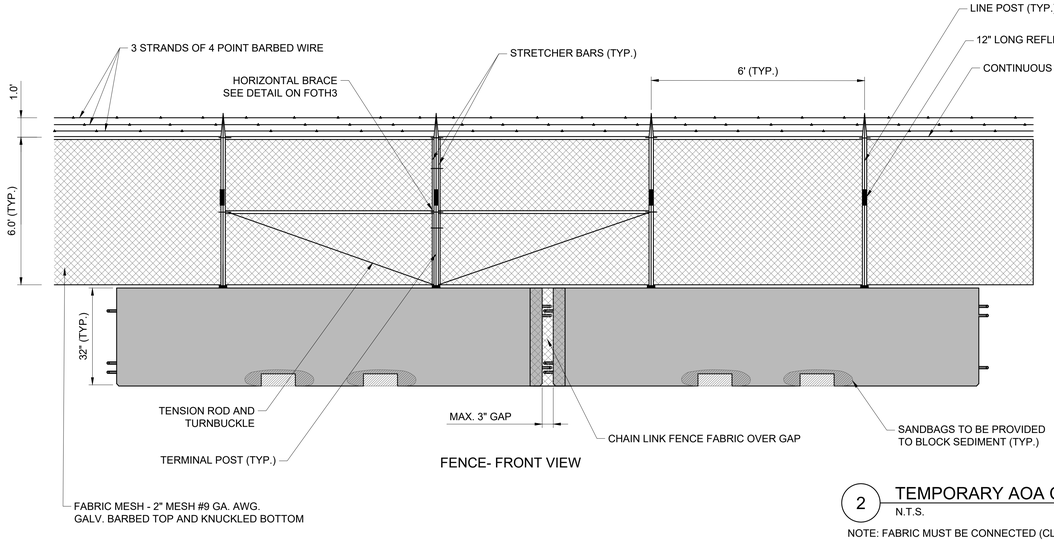
UNLESS STATED OTHERWISE IN THE PLANS, THE BARRIER RAIL SECTIONS SHALL BE THE PROPERTY OF THE CONTRACTOR. REMOVE FROM THE SITE UPON COMPLETION OF WORK.

① ESTIMATED QUANTITY OF CONCRETE FOR ONE TAPER SECTION IS 0.6 CUBIC YARDS.

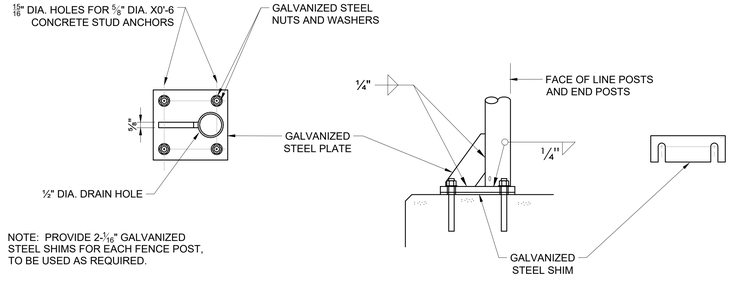
② LIFTING HOLE. 4 INCH DIAMETER PVC PIPE. 1 INCH RADIUS ALLOWED.

1 TEMPORARY BARRIER RAIL
N.T.S.

NOTE:
THE TEMPORARY AOA FENCE IS REQUIRED AT ALL TIMES WHEN AN EXISTING AOA GATE OR FENCE IS REMOVED.

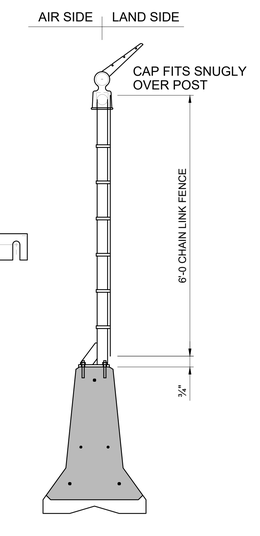


FENCE- FRONT VIEW



NOTE: PROVIDE 2-1/16" GALVANIZED STEEL SHIMS FOR EACH FENCE POST, TO BE USED AS REQUIRED.

TYPICAL PLATE CONNECTION DETAILS



FENCE- ELEVATION VIEW

2 TEMPORARY AOA CHAIN LINK FENCE ON BARRIER RAIL
N.T.S.

NOTE: FABRIC MUST BE CONNECTED (CLIPPED OR OTHERWISE SECURED) TO TOP OF BARRIER WALL.

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REVISIONS

MARK	DESCRIPTION	DATE

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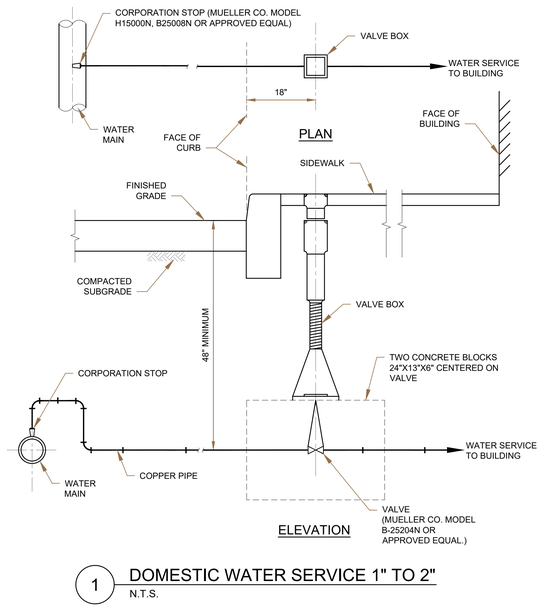
TEMPORARY CONSTRUCTION BARRIER RAIL AND FENCE DETAILS

C904

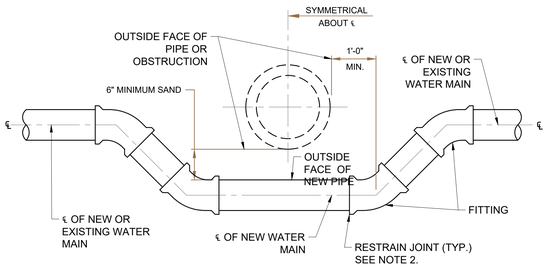
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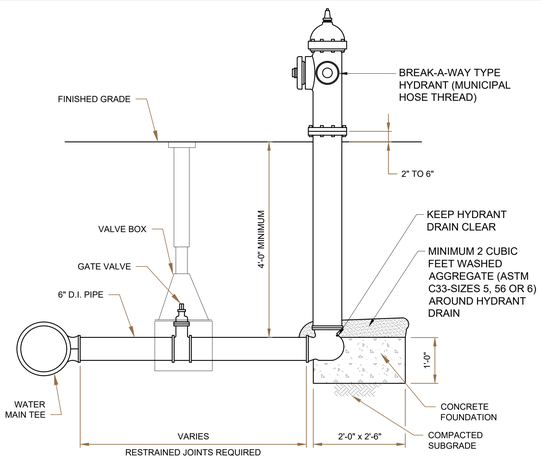
1 DOMESTIC WATER SERVICE 1" TO 2"
N.T.S.



WATER MAIN CROSSING OBSTRUCTION NOTES:

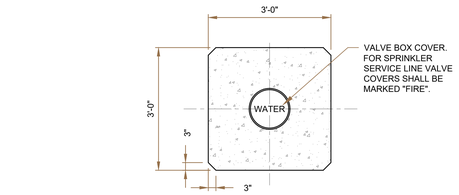
1. WATER MAIN CROSSING ABOVE STRUCTURE IS SIMILAR.
2. FOR RESTRAIN JOINT REQUIREMENTS, SEE "MINIMUM RESTRAIN LENGTH FOR WATER MAINS" DETAIL.

2 WATER MAIN CROSSING OBSTRUCTION
N.T.S.

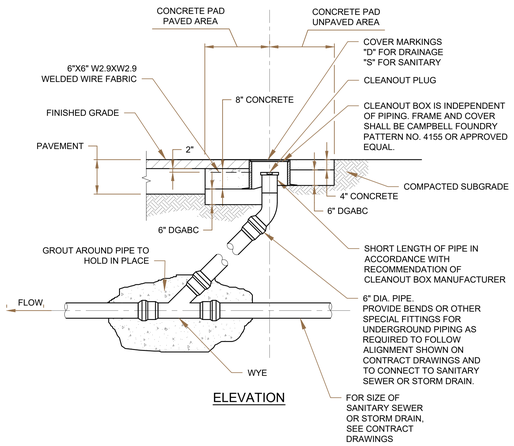


ELEVATION

3 FIRE HYDRANT CONNECTION
N.T.S.

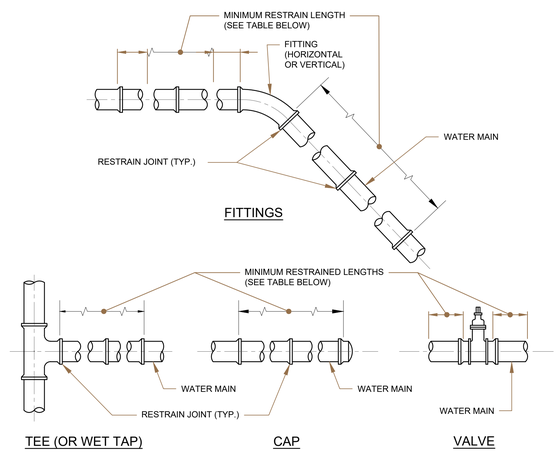


DETAIL OF CONCRETE PAD



ELEVATION

4 PIPE CLEANOUT
N.T.S.

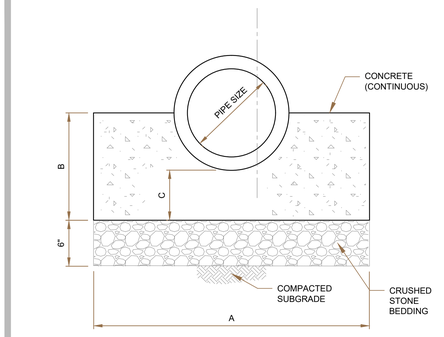


MINIMUM RESTRAIN LENGTH FOR WATER MAINS (IN FEET) ★

PIPE DIA. (IN.)	CAP OR VALVE	TEE (OR WET TAP)	HORIZONTAL FITTING AND VERTICAL FITTING UP				VERTICAL FITTING DOWN			
			90°	45°	22½°	11¼°	90°	45°	22½°	11¼°
4	42	27	12	5	3	2	42	18	9	5
6	59	44	17	7	4	2	59	25	12	6
8	78	63	22	10	5	3	78	33	16	8
10	93	78	27	11	6	3	93	39	19	10
12	110	95	31	13	7	4	110	46	22	11
16	142	126	40	17	8	4	142	59	29	14
20	172	156	47	20	10	5	172	72	35	17
24	202	186	55	23	11	6	202	84	41	20
30	243	226	65	27	13	7	243	101	49	24

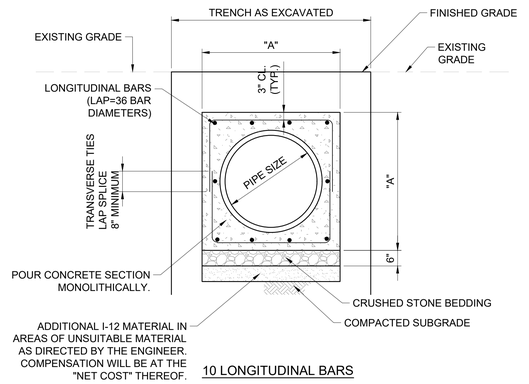
★ EXTEND RESTRAIN TO NEXT JOINT WHERE "MINIMUM RESTRAIN LENGTH" FALLS BETWEEN JOINTS OF THE WATER MAIN.

6 RESTRAINED LENGTHS FOR WATER MAIN
N.T.S.



PIPE SIZE	A	B	C
6"	1' - 6"	0' - 8"	0' - 5"
8"	1' - 8"	0' - 9"	0' - 5"
10"	1' - 11"	0' - 10"	0' - 5"
12"	2' - 2"	0' - 11"	0' - 5"
14" & 16"	2' - 6"	1' - 0"	0' - 6"
18"	2' - 10"	1' - 1"	0' - 6"
24"	3' - 4"	1' - 2"	0' - 6"

8 SANITARY SEWER CRADLE
N.T.S.



10 LONGITUDINAL BARS



8 LONGITUDINAL BARS

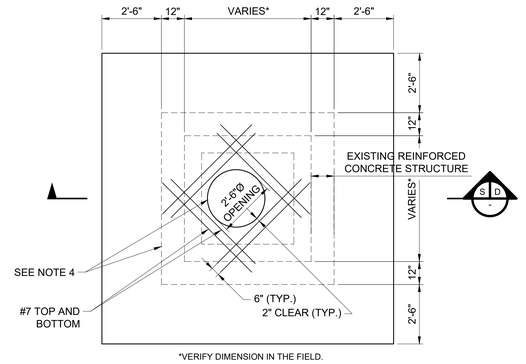
6 LONGITUDINAL BARS

TYPICAL SECTIONS

SCHEDULE

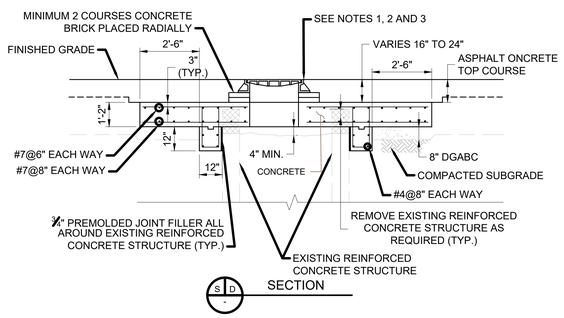
PIPE SIZE	"A"	LONGITUDINAL BARS	TRANSVERSE BARS
4"	1' - 4"	6-#4	#4 @ 18"O.C.
6"	1' - 6"		
8"	1' - 8"	6-#4	
12"	2' - 2"	8-#4	#4 @ 18"O.C.
16"	2' - 7"	8-#5	
20"	2' - 11"	10-#5	
24"	3' - 3"		
30"	3' - 10"	10-#6	#4 @ 12"O.C.
36"	4' - 6"		

5 REINFORCED CONCRETE ENCASEMENT FOR PIPE
N.T.S.



*VERIFY DIMENSION IN THE FIELD.

PLAN

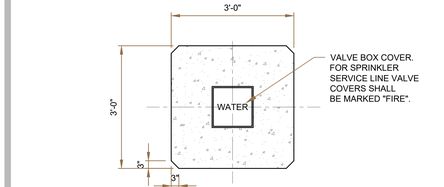


SECTION

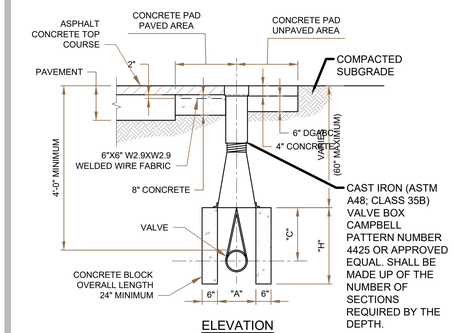
MANHOLE PROTECTIVE CONCRETE SLAB NOTES:

1. REMOVE EXISTING FRAME AND COVER.
2. MANHOLE, FRAME AND COVER SHALL BE CAMPBELL NO. 1511 DUCTILE IRON, EJ NO. 1240 OR APPROVED EQUAL. SEE "MANHOLE FRAME AND COVER AIRCRAFT TYPE" DETAIL.
3. LOCATE OPENING ADJACENT TO THE WALL WITH MANHOLE STEPS. IF NO STEPS ARE PRESENT CENTER OPENING.
4. REMOVE EXISTING REINFORCED CONCRETE TOP SLAB AND STRUCTURE AS REQUIRED.

7 MANHOLE PROTECTIVE CONCRETE SLAB
N.T.S.



DETAIL OF CONCRETE PAD



ELEVATION

SCHEDULE

PIPE SIZE	"A"	"C"	"H"	VALVE BOX BASE
1"-2"	12"	0'-6½"	1'- 1"	NO. 4 ROUND
4"	12"	1'-2½"	1'- 10"	NO. 4 ROUND
6"	12"	1'-5½"	2'- 2"	NO. 6 ROUND
8"	15"	1'-9"	2'- 6"	NO. 6 ROUND
10"	18"	2'-0½"	3'- 0"	NO. 160 OVAL
12"	21"	2'-4½"	3'- 5"	NO. 160 OVAL

9 VALVE BOX-TYPE NY
N.T.S.

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Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

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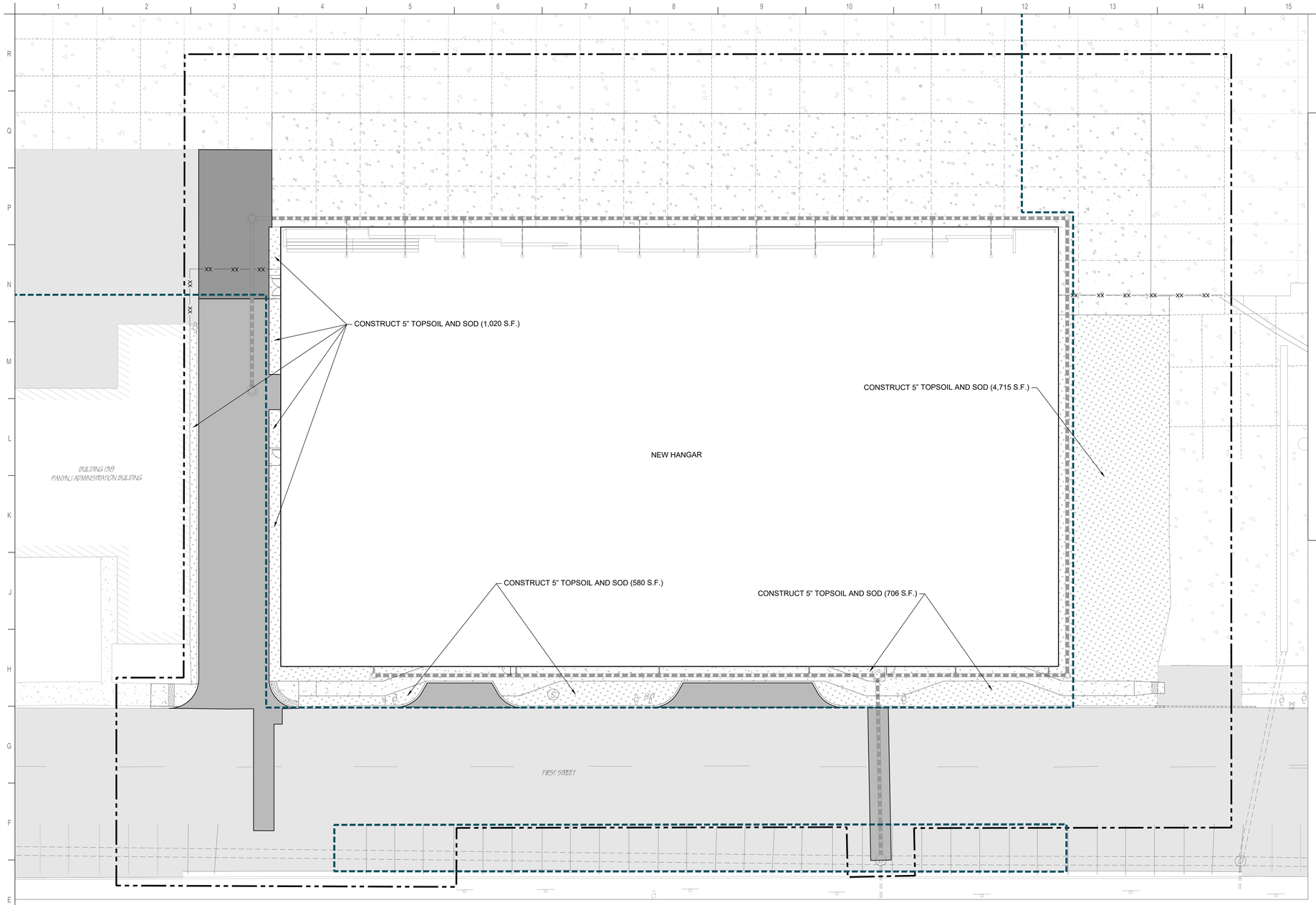
UTILITY DETAILS

C905

100% PERMIT SET

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0' 15' 30'

LEGEND

- PROJECT LIMITS
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING TREE AND WETLAND AREA
- EXISTING CHAIN LINK FENCE
- LEASE LANE
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM MANHOLE
- EXISTING STORM LINE
- HMA PARKING AND DRIVE PAVEMENT
- HEAVY APRON FLEXIBLE PAVEMENT
- NEW CONCRETE
- NEW SOD
- XX XX XX NEW GALVANIZED STEEL CHAIN LINK FENCE

GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL APPROVED SOD, MATERIAL, LABOR AND EQUIPMENT AND ANY OTHER SERVICES FOR THE PROPER INSTALLATION AND MAINTENANCE OF SOD AS DESIGNATED ON THE PLANS AND SPECIFICATIONS.
2. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SOD AND AS INDICATED ON THE LANDSCAPE PLANS.
3. THIS PLAN IS TO BE USED FOR LANDSCAPE PURPOSES ONLY.
4. IT IS IMPERATIVE THAT UTILITY COMPANIES ARE NOTIFIED PRIOR TO ANY EXCAVATION AND/OR CONSTRUCTION. CONTRACTOR SHALL CALL TO ORDER PUBLIC AND PRIVATE UTILITY MARK OUTS BY OTHERS.
5. THE CONTRACTOR, DURING THE PERFORMANCE OF ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT, IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS.
6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. FAILURE TO DO SO SHALL BE DONE AT THE CONTRACTOR'S OWN RISK.
7. ALL CONSTRUCTION DEBRIS INCLUDING EXCESS EXCAVATED MATERIAL, SCRAP WOOD, CONCRETE, ETC. SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL SOIL IMPORT OR EXPORT PERMIT(S) AND TESTING REQUIRED, INCLUDING FEES.
9. EVIDENCE OF COMPLIANCE AND MEETING OF THE CERTIFICATION STANDARDS MUST BE FURNISHED TO THE ENGINEER OR DESIGNATED REPRESENTATIVE FOR APPROVAL.
10. LOCAL SOD MATERIAL SUPPLIER - TALL FESCUE SOD (JOHNATHAN GREEN BLACK BEAUTY MIX) BY NEW ENGLAND PROGREENS & TURF OF NEW WINDSOR, NY, OR APPROVED EQUIVALENT.

MATERIALS

1. CONTRACTOR SHALL PROVIDE A HIGH-QUALITY SOD, PREFERABLY FROM A SINGLE SOURCE AND GROWN IN ACCORDANCE WITH THE SOD CERTIFICATION STANDARDS AS SET FORTH BY THE PORT AUTHORITY OF NEW JERSEY AND NEW YORK - ENGINEERING DEPARTMENT QUALITY ASSURANCE DIVISION.
2. SOD SHALL BE 95% ENDOPHYTE ENHANCED.
3. SOD MUST BE GROWN ON A LIGHT TEXTURED MINERAL SOIL. A LOAMY SAND SOIL IS THE ACCEPTABLE TYPE.
4. SOD SHALL BE HARVESTED WITH INDIVIDUAL PIECES CUT TO THE SOD GROWER'S STANDARD WIDTH AND LENGTH. SOD DESIGNATED AS "BIG ROLL" OR "MAXI-ROLL" (30 IN.-48 IN. WIDTH X 40 FT.-80 FT. LENGTH) IS ACCEPTABLE AND PREFERRED.
5. GRASS SOD SHALL BE MACHINE CUT WITH A UNIFORM SOIL THICKNESS OF ¼" AT THE TIME OF HARVESTING. SOD SHALL BE MAINTAINED IN A MOIST CONDITION FROM THE TIME OF HARVEST UNTIL PLANTED. GRASS SOD SHALL HAVE A HEALTHY AND DENSE ROOT SYSTEM AND BE FREE FROM NOXIOUS WEEDS. SOD WHICH HAS BECOME DISCOLORED WILL BE REJECTED AND REMOVED FROM SITE. CONTRACTOR SHALL INSTALL TOPSOIL AT A DEPTH OF 5" IN ALL AREAS WHERE SOD IS TO BE INSTALLED THE SOIL TEXTURE CLASS SHALL BE LOAM, SANDY CLAY LOAM, OR SANDY LOAM IN ACCORDANCE WITH THE USDA TEXTURE TRIANGLE. 100% OF SOIL SHALL PASS THROUGH A 0.375-INCH (3/8") SCREEN. TOPSOIL SHOULD NOT CONTAIN ADMIXTURES OF SUBSOIL, REFUSE, OR FOREIGN MATERIALS. IT SHALL BE REASONABLY FREE FROM ROOTS, HARD CLAY, COARSE GRAVEL, STONES LARGER THAN ONE INCH IN ANY DIMENSION, WEEDS, TALL GRASS, BRUSH, STICKS, STUBBLE, OR OTHER MATERIAL WHICH WOULD BE DETRIMENTAL TO THE PROPER DEVELOPMENT OF VEGETATIVE GROWTH. TOPSOIL SHOULD NOT BE SALVAGED FROM JOB SITE UNLESS IT CAN BE SHOWN TO MEET THE STANDARDS SET OUT IN THIS SPECIFICATION. REFER TO PLANS FOR QUANTITY.

EXECUTION:

1. REMOVE ALL DEBRIS INCLUDING CONSTRUCTION RESIDUES, ROCKS AND TREE STUMPS. UNDESIRABLE GRASSES AND WEEDS SHALL BE REMOVED WITH POST-EMERGENT HERBICIDE NO LESS THAN 14 DAYS PRIOR TO SOIL PREPARATION AND FINE GRADING. HERBICIDE SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO USE.
2. BY USING A DRAG FLOAT AND HAND GRADING, BREAK UP LUMPS AND PRODUCE A SMOOTH, EVEN GRADE FREE FROM UNSIGHTLY VARIATIONS, RIDGES, RUTS, DEPRESSIONS, AND HUMPS. RENDER SOIL LOOSE AND FINELY PULVERIZED. DO NOT TILL SOIL.
3. REMOVE AND DISPOSE (OFF SITE) ALL ROCKS (INCLUDING SURFACE STONES) AND CLODS ONE INCH OR LARGER. ALSO, REMOVE ALL STICKS, ROOTS, AND OTHER DEBRIS EXPOSED DURING SEED LAWN AREA PREPARATION.
4. LAY SOD WITH STAGGERED JOINTS AND WITH SEAMS TIGHTLY FITTED TOGETHER. DO NOT COVER ANY EXISTING SPRINKLER HEADS OR VALVE BOXES. WHEN LAYING SOD ADJACENT TO EXISTING TURF, THE CONTRACTOR SHALL MAINTAIN A SMOOTH TRANSITION, WITH NO OVERLAP OR VISIBLE EDGES. WATER THOROUGHLY AFTER LAYING SOD.
5. SOD SHALL BE INSTALLED FLUSH WITH FINAL SIDEWALK, ASPHALT AND SURROUNDING GRADES.
6. ROLL SOD AFTER LAYING WITH A LIGHTWEIGHT HAND ROLLER. ROLL IN CROSSED DIRECTIONS. REPEAT ROLLING OPERATION TWO DAYS AFTER LAYING. USE OF MECHANICAL ROLLERS MUST BE APPROVED BY OWNER'S REPRESENTATIVE.
7. SOD WHICH IS DISCOLORED OR DEHYDRATED WILL BE REJECTED AND REPLACED AT NO COST TO THE OWNER.
8. THE CONTRACTOR SHALL ENSURE ALL FINAL GRADE CONTOURS AND SLOPES ARE MAINTAINED, ALLOWING FOR POSITIVE DRAINAGE IN ALL GRASS AREAS. RECEIVE APPROVAL FOR FINE GRADING FROM OWNER'S REPRESENTATIVE BEFORE INSTALLING GRASS.
9. THE CONTRACTOR SHALL FLAG LOCATIONS OF EXISTING UNDERGROUND COMPONENTS OR EQUIPMENT, INCLUDING SPRINKLER HEADS AND VALVE BOXES (WHERE APPLICABLE), IN ORDER TO PREVENT DAMAGE.

SPECIAL PROVISIONS:

1. MAINTENANCE (GENERAL): UNTIL FINAL ACCEPTANCE AND A STAND OF GRASS IS ACHIEVED, CONTRACTOR MUST MAINTAIN LAWN BY MOWING, EDGING, WATERING, CULTIVATING, WEEDING, SPRAYING, CLEANING AND REPLACING AS NECESSARY TO KEEP GRASS IN A VIGOROUS, HEALTHY CONDITION.
2. ESTABLISH DENSE AREAS OF PERMANENT GRASSES, FREE FROM LUMPS AND DEPRESSIONS. REPLANT ANY PART OF THE AREAS THAT FAIL TO SHOW UNIFORM GROWTH. IN SEEDED AREAS, REPAIR RILLS, BARE AREAS, AND WASHOUTS IMMEDIATELY AND RE- SEED TO MAINTAIN PERMANENT COVER.
3. WATERING: APPLY 2 INCHES OF WATER AS A DEEP SOAKING EVERY 3 TO 7 DAYS TO ENCOURAGE A DEEP HEALTHY ROOT SYSTEM DURING DRY OR HOT PERIODS. AVOID FREQUENT, SHALLOW WATERING THAT RESULTS IN SHALLOW ROOTS, PERMITTING WEED GERMINATION AND GROWTH. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING SCHEDULE AND MAY SET UP A TEMPORARY IRRIGATION SYSTEM, IF NECESSARY, UNTIL FULL TURF ESTABLISHMENT.
4. FERTILIZE TWICE A YEAR, SPRING, AND FALL, WITH A COMPLETE FERTILIZER CONTAINING NITROGEN, PHOSPHATE, AND POTASSIUM. APPLY NITROGEN AT 2-4 POUNDS PER SQUARE FOOT PER YEAR. WATER THOROUGHLY AFTER FERTILIZATION.
5. WEEDING: REMOVE WEEDS AND FOREIGN GRASS FROM NEWLY ESTABLISHED AREAS AT LEAST ONCE A WEEK. IT IS BEST TO PULL WEEDS BY HAND USING A WEEDING TOOL; OR APPLY A BROADLEAF HERBICIDE, WHICH IS A NON-SELECTIVE HERBICIDE THAT REQUIRES CARE WHEN APPLYING. HERBICIDE MAY BE USED IF APPROVED BY OWNER AND CONTRACTOR SHALL ALWAYS FOLLOW MANUFACTURER'S DIRECTIONS WHEN USING HERBICIDE.
6. TALL FESCUE HAS AN OPTIMUM MOWING HEIGHT OF 2-3 INCHES FOR A HIGH-QUALITY LAWN. MOW REGULARLY WITH A SHARP ROTARY OR REEL MOWER, ALLOWING CLIPPINGS FROM FREQUENT MOWING TO REMAIN ON THE LAWN. NEVER REMOVE MORE THAN 1/3 OF THE SHOOT GROWTH AT ONE MOWING. LAWNS SHALL BE MOWED ONCE PER WEEK UNLESS THERE IS A DROUGHT CONDITION. IN THAT CASE, CEASE MOWING UNTIL THE RAIN BEGINS AND THE LAWN BEGINS TO GREEN AGAIN.
7. REQUEST FINAL PROVISIONAL ACCEPTANCE OF LAWN WHEN THE ABOVE REQUIREMENTS HAVE BEEN MET. CONTINUE MAINTENANCE OF ALL LAWN AREAS UNTIL FINAL ACCEPTANCE IS GIVEN BY THE OWNER'S REPRESENTATIVE. CONTINUED MAINTENANCE SHALL INCLUDE MOWING, EDGING, WATERING, FERTILIZING, AND REPAIR OF ERODED AREAS AS REQUIRED TO KEEP GRASS IN A HEALTHY, THRIVING CONDITION.

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STATE OF NEW YORK · GRAHAM MICHAEL FELAND · LICENSED PROFESSIONAL ENGINEER · 109687
Graham M Feland

REVISIONS

MARK	DESCRIPTION	DATE

TERMINAL AND HANGAR

AT: STEWART INTERNATIONAL AIRPORT (SWF)

SIGNATURE AVIATION
201 S. ORANGE AVE. SUITE 1100 S
ORLANDO, FL 32801

Issue Date: 06/28/2024
MDG Project No. HDG23005
Drawn By: YY
Checked By: MM

LANDSCAPING PLAN

C1001

100% PERMIT SET

Plotted: C:\Users\Yan\MOHSEN DESIGN GROUP Dropbox\MDG\Projects\SWF\HDG23005-SWF-SFS Terminal and Hangar\05-Drawings\23005-SWF-SFS-C1001-LSP.dwg - Yan

SIGNATURE AVIATION

SIGNATURE STEWART (SWF) HANGAR

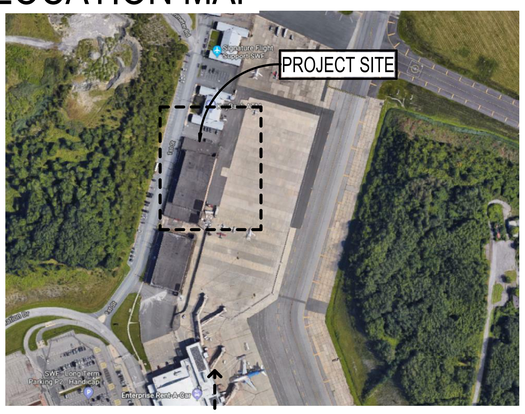
1188 1ST STREET, NEW WINDSOR, NY 12553

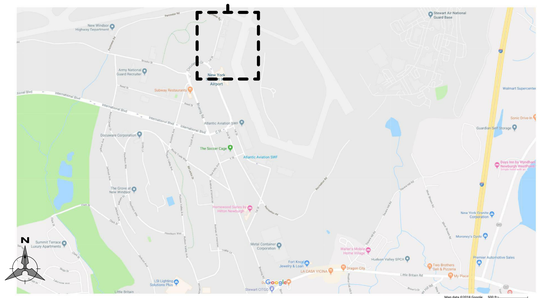
Design Team

Project Manager	Yonkers Industries
Architect of Record	HDg Architecture
Structural Engineering	BBM Structural
Mechanical Engineering	Thompson Engineering
Plumbing Engineering	Thompson Engineering
Electrical Engineering	AE Design
Civil Engineering	Moshen Design Group
Fire Protection	Veritas Fire Engineering

SUBMITTAL LOG	
DATE	DESCRIPTION
01-22-2024	SCHEMATIC DESIGN 30% SUBMITTAL
03-13-2024	CONSTRUCTION DOCUMENT 90% SUBMITTAL
05-08-2024	CONSTRUCTION DOCUMENT 95% SUBMITTAL
07-01-2024	PERMIT SET 100% SUBMITTAL

LOCATION MAP







100% PERMIT SET

07/01/2024

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SHEET NUMBER	SITE PLAN
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C003	GENERAL NOTES AND ABBREVIATIONS
C020	PROJECT LAYOUT PLAN AND SITE IMPROVEMENTS
C025	WORK ZONE TRAFFIC CONTROL
C026	WORK ZONE TRAFFIC CONTROL GENERAL NOTES
C027	MAINTENANCE OF TRAFFIC PLAN
C050	SAFETY AND SECURITY NOTES AND DETAIL
C052	AIRSPACE PROTECTION PLAN
C053	AIRSPACE 7460 - PLAN
C060	BORING LAYOUT PLAN
C061	GEOTECHNICAL BORING LOG
C062	GEOTECHNICAL BORING LOG
C101	EXISTING CONDITIONS
C180	EROSION CONTROL DETAILS
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C401	GRADING PLAN
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C602	FIBERGLASS UNDERGROUND STORAGE TANKS
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C801	SIGNAGE AND STRIPING PLAN
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C902	SITE DETAILS
C903	CONCRETE JOINTING DETAILS
C904	TEMPORARY CONSTRUCTION BARRIER RAIL AND FENCE DETAILS
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C1001	LANDSCAPING PLAN

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G006	TYPICAL PARTITION DETAILS
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G031	PARTITION TYPES & NOTES
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A461	ENLARGED FLOOR PLANS - TOILET
A462	TOILET ROOM ELEVATIONS
A500	DOOR SCHEDULE, DOOR & FRAME TYPES
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A510	DETAILS - DOOR/HANGER DOOR
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A521	DETAILS - EXTERIOR & ROOF
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A552	ROOF DETAILS
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S002	ABBREVIATIONS, SYMBOL LEGEND & WIND SCHEDULE
S101	FOUNDATION PLAN - HANGAR A
S201	FOUNDATION SECTIONS & DETAILS

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M001	MECHANICAL DETAILS AND SCHEDULES
M002	MECHANICAL DETAILS AND SCHEDULES
M100	OVERALL MECHANICAL PLAN
M200	ROOF MECHANICAL PLAN

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P002	PIPING DIAGRAMS
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P200	OVERALL DOMESTIC WATER PLAN
P300	OVERALL NATURAL GAS PLAN
P400	OVERAL PNEUMATIC PLAN
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E601	ELECTRICAL GROUNDING AND LOW VOLTAGE RISER
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E800	ELECTRICAL LIGHTING SCHEDULES
E801	ELECTRICAL LIGHTING CONTROLS SCHEDULES
E900	ELECTRICAL LIGHTING COMPLIANCE

DRAWING LIST - FIRE ALARM

SHEET NUMBER	SHEET TITLE
FA001	FIRE ALARM NOTES AND DETAILS
FA002	FIRE ALARM NOTES AND DETAILS
FA100	FIRE ALARM FLOOR PLAN

DRAWING LIST - FIRE PROTECTION

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FP002	FIRE PROTECTION NOTES AND DETAILS
FP003	FIRE PROTECTION NOTES AND DETAILS
FP200	FIRE PROTECTION HAZARD PLAN
FP300	FIRE PROTECTION NOTES AND DETAILS

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SEAL

REGISTERED ARCHITECT — STATE OF NEW YORK

REVISIONS		
MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

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SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

DRAWN BY: HDG CHECKED BY: HDG

COVER SHEET

G000

ABREVIATIONS

A	
&	AND
@	AT
A/E	ARCHITECT / ENGINEER
AB	ANCHOR BOLT
AC	AIR CONDITIONING
ACC	ACCESSIBLE
ACOUST	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
AD	AREA DRAIN
AD	ACCESS DOOR
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGGR	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ATTN	ATTENTION
AUTO	AUTOMATIC
AV	AUDIOVISUAL
B	
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF
BOB	BOTTOM OF BEAM
BOC	BOTTOM OF CURB
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BRKT	BRACKET
BSMNT	BASEMENT
BUR	BUILT UP ROOFING
C	
385	
C	CHANNEL
C/C	CENTER TO CENTER
CAB	CABINET
CAT	CATEGORY
CB	CATCH BASIN
CB	CEMENT BOARD
CBU	CEMENTITIOUS BACKER UNIT
CCTV	CLOSED CIRCUIT TELEVISION
CEM	CEMENT
CER	CERAMIC
CG	CORNER GUARD
CH	CHILLER
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
CTSK	COUNTERSUNK
CUST	CUSTODIAL
CW	COLD WATER
D	
D	DEEP, DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIMS	DIMENSIONS
DISP	DISPENSER
DIV	DIVISION
DMPF	DAMP PROOFING
DN	DOWN
DO	DOOR OPENING
DR	DOOR
DRN	DRAIN
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
DWR	DRAWER
E	
E	EAST
EA	EACH

ABREVIATIONS

EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINEER
EP	ELECTRICAL PANEL
EPDM	ETHYLENE PROPYLENE DIENE M-CLASS
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	
FA	FIRE ALARM
FB	FACE BRICK
FD	FLOOR DRAIN OR FIRE DEPARTMENT
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF&E	FURNITURE, FIXTURES AND EQUIPMENT
FFB	FLUSH FLOOR BOX
FFEL	FINISH FLOOR ELEVATION
FH	FULL HEIGHT OR FLAT HEAD
FHC	FIRE HOSE CABINET
FIN	FINISH
FIXT	FIXTURE
FLASH	FLASHING
FLR	FLOOR
FLUOR	FLUORESCENT
FND	FOUNDATION
FO	FACE OF OR FINISHED OPENING
FP	FIRE PROTECTION
FPG	FIREPROOFING
FR	FIRE RESISTANT
FRC	FIBER REINFORCED CONCRETE
FRP	FIBER REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FS	FLOOR SINK
FT	FEET/FOOT
FTG	FOOTING
FURN	FURNITURE
FURR	FURRING
FWC	FABRIC WALL COVERING
FWP	FABRIC WRAPPED PANEL
G	
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACT(OR)
GEN	GENERAL
GFRC	GLASS FIBER REINFORCED CONCRETE
GL	GLASS
GLAZ	GLAZING
GR	GRADE
GRAN	GRANULAR
GRD	GROUND
GRFG	GLASS FIBER REINFORCED GYPSUM
GSM	GALVANIZED SHEET METAL
GV	GAS VALVE
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	
H	HIG
HB	HOSE BIB
HC	HANDICAPPED OR HOLLOW CORE
HDWD	HARDWOOD
HDWR	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HNDRL	HANDRAIL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HRC	HOSE REEL CABINET
HT	HEIGHT
HTG	HEATING
HVAC	HEATING VENTILATION & AIR CONDITIONING
HW	HOT WATER
I	
ID	INSIDE DIAMETER
IN	INCH/INCHES
INCAND	INCANDESCENT
INCL	INCLUDED/INCLUDING
INFO	INFORMATION
INSUL	INSULATED OR INSULATION
INT	INTERIOR
INTERM	INTERMEDIATE
INV	INVERT
J	
JAN	JANITOR
JC	JANITOR'S CLOSET
JST	JOIST
JT	JOINT
K	
KIT	KITCHEN
KO	KNOCK OUT
L	
LAM	LAMINATE
LAV	LAVATORY
LB	POUND
LF	LINEAR FEET
LLH	LONG LEG HORIZONTAL

ABREVIATIONS

LLV	LONG LEG VERTICAL
LT	LIGHT
LTG	LIGHTING
LTWT	LIGHTWEIGHT
LVL	LEVEL
LVR	LOUVER
M	
MAINT	MAINTENANCE
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MED	MEDIUM
MEMBR	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION
N	
N	NORTH
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NR	NON RATED
NTS	NOT TO SCALE
O	
OFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OA	OUTSIDE AIR
OC	ON CENTER
OD	OUTSIDE DIAMETER
OD	OVERFLOW DRAIN
OF	OWNER FURNISHED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
P	
P	PAINT
PAV	PAVING
PBD	PARTICLE BOARD
PC	PRECAST
PDF	POWER DRIVEN FASTENER
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PI.	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT OR PAINTED
POL	POLISHED
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECT
PSF	POUNDS PER SQUARE FOOT
PT	POINT
PT	PRESSURE TREATED
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
Q	
QT	QUARRY TILE
QTY	QUANTITY
R	
R	RADIUS/RISER
RA	RETURN AIR
RAD	RADIUS
RB	RESILIENT BASE
RBR	RUBBER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESSED
RECPT	RECEPTACLE
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCED REINFORCING
REINF	REINFORCED
REL	RELOCATE
REM	REMOVABLE
REQ	REQUIRE/REQUIRED
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION/REVISED
RM	ROOM
RO	ROUGH OPENING
RTD	RATED
RTG	RATING
RWL	RAIN WATER LEADER

ABREVIATIONS

S	
S	SOUTH
SA	SUPPLY AIR
SAF	SELF ADHERED FLASHING
SC	SOLID CORE
SCHED	SCHEDULE
SD	STORM DRAIN
SECT	SECTION
SF	SQUARE FEET/FOOT
SH	SPRINKLER HEAD
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SJ	SAW JOINT
SM	SHEET METAL
SM	SURFACE MOUNTED
SP	STANDPIPE
SPEC	SPECIFIED OR SPECIFICATION
SPK	SPRINKLE
SPKR	SPEAKER
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
STA	STATION
STC	SOUND TRANSMISSION COEFFICIENT
STL	STEEL
STOR	STORAGE
STRG	STRINGER
STRUCT	STRUCTURAL
STRUCT	STRUCTURE OR STRUCTURAL
SUBCAT	SUBCATEGORY
SUSP	SUSPENDED
SYM	SYMMETRICAL
SYS	SYSTEM
T	
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TB	TOWEL BAR
TDC	TRAFFIC DECK COATING
TEL	TELEPHONE/TELECOM
TELE	TELEPHONE
TEMP	TEMPORARY
THK	THICKNESS
THRU	THROUGH
TKBD	TACK BOARD
TLT	TOILET
TMPD	TEMPERED
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE OR TOP OF CURB
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
U	
UL	UNDERWRITERS LABORATORY
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
URNL	URINAL
V	
VAC	VENTILATION AND AIR CONDITIONING
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VER	VERIFY
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VP	VISION PANEL
VR	VAPOR RETARDER
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	
W	WIDE OR WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WIN	WINDOW
WM	WIRE MESH
WP	WATERPROOF OR WATERPROOFING
WPM	WATERPROOF MEMBRANE
WS	WEATHER-STRIPPING
WSCT	WAINSCOT
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
Y	
YR	YEAR

1. EACH CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE DRAWINGS AND OBTAIN ALL MEASUREMENTS REQUIRED FOR PROPER EXECUTION OF WORK. WHEN VERIFICATION OF EXISTING DIMENSIONS IS REQUIRED, THE CONTRACTOR REQUIRING SAID VERIFICATION FOR THE CONSTRUCTION OR FABRICATION OF HIS MATERIAL SHALL BE THE CONTRACTOR RESPONSIBLE FOR THE PROCUREMENT OF THE FIELD INFORMATION.

2. PROVIDE ALL WOOD BLOCKING NECESSARY FOR THE ATTACHMENT OF MISCELLANEOUS EQUIPMENT INCLUDING BUT NOT LIMITED TO TOILET ACCESSORIES, DOOR HARDWARE, ELECTRICAL DEVICES, LABORATORY EQUIPMENT, GRAB BARS, HANDRAILS, CASEWORK, MILLWORK, TV AND ARTWORK.

3. THE TRANSITION OF DIFFERENT FLOORING MATERIALS AT A DOORWAY SHALL OCCUR AT THE CENTERLINE OF DOOR UNLESS INDICATED OTHERWISE.

4. ALL WALL SURFACES, DOOR FRAMES, BULKHEADS AND CEILINGS SHALL RECEIVE PAINT WHEN PAINT IS INDICATED ON THE FINISH SCHEDULE OR FINISH PLANS. PAINT SURFACES BEHIND MOVABLE EQUIPMENT AND FURNITURE SAME AS SIMILAR EXPOSED SURFACES. PAINT SURFACES BEHIND PERMANENTLY FIXED EQUIPMENT OR FURNITURE WITH PRIME COAT ONLY BEFORE FINAL INSTALLATION OF EQUIPMENT. PAINT ALL MECHANICAL AND ELECTRICAL EQUIPMENT EXPOSED IN FINISHED SPACES UNLESS INDICATED OTHERWISE.

5. REPAIR ALL SURFACES DAMAGED BY RENOVATION AND NEW CONSTRUCTION TO MATCH EXISTING ADJACENT OR CONTIGUOUS FINISH.

6. ALL CUTTING AND PATCHING AS A RESULT OF NEW CONSTRUCTION OR NEW PROJECT SHALL BE PERFORMED IN A WORKMANLIKE MANNER, AND SHALL MATCH IN COLOR, SHAPE, SIZE AND TEXTURE ADJACENT AND/OR CONTIGUOUS FINISHED SURFACES.

7. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED MEASUREMENTS. DO NOT SCALE DRAWINGS.

8. DETAILED DRAWINGS AND LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS.

9. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TAKEN FROM FACE OF CMU OR CONCRETE TO FACE OF WALL, OR FACE OF WALL TO FACE OF WALL.

10. DOORS NOT OTHERWISE DIMENSIONED SHALL BE 8" FROM FACE OF ADJACENT CMU OR CONCRETE WALL TO ROUGH DOOR OPENING, AND 4" FROM FACE OF ADJACENT STUD WALL TO ROUGH DOOR OPENING.

11. FOR CONSTRUCTION DETAILS NOT SHOWN, USE THE PRODUCT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND STANDARD DETAILS, IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATION REQUIREMENTS AND DESIGN INTENT.

12. PROVIDE FIRE EXTINGUISHERS (FE) AND FIRE EXTINGUISHER CABINETS (FEC) AS INDICATED ON THE PLANS. PROVIDE TYPE AND SIZE AS SPECIFIED.
MOUNT AT 42" AFF TO TOP OF FE AND 48" AFF TO TOP OF FEC. IN HANGARS, PROVIDE 'BC' FIRE EXTINGUISHERS.

GENERAL NOTES - ARCHITECTURE

COORDINATE WITH OWNER REPRESENTATIVE AND /OR WITH OWNER & AIRPORT OPERATIONS REPRESENTATIVE THE PHASING OF ALL WORK.

TO OCCUR WITH A MINIMUM OF OPERATIONAL DISRUPTION TO OTHER OCCUPIED ADJACENT BUILDINGS. COORDINATE ALL WORK REQUIRED TO CONNECT TO EXISTING UTILITIES WITH THE OWNERS REPRESENTATIVE.

COORDINATE LOCATION AND SIZE OF ALL REQUIRED OPENINGS IN EXISTING FLOOR SYSTEM WITH ARCHITECTURAL FLOOR PLAN AND WITH M.E.P. DRAWINGS.

GENERAL CONTRACTOR AND HIS/HER SUB-CONTRACTORS SHALL COMPLYWITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES AND THEIR CODES AND REGULATIONS FOR NEW CONSTRUCTION.

CONTRACTOR SHALL PROTECT ALL STRUCTURAL MEMBERS FROM DAMAGE.

PRIOR TO REMOVAL OR CUTTING OF OPENINGS THROUGH STRUCTURAL WALLS, SLABS, AND ROOF DECKS, CONTRACTOR WILL PROVIDE ADEQUATE SHORING FOR FLOORS AND OTHER STRUCTURAL LOADS. SUPPORTS SHALL NOT BE REMOVED UNTIL NEW STRUCTUAL SYSTEM IS IN PLACE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE OR ALTER ANY EXISTING STRUCTURAL MEMBERS. THE ARCHITECT AND OWNER SHALL BE NOTIFIED IMMEDIATELY IF ANY DAMAGE OCCURS OR DISCOVERED.

G.C. IS TO PROVIDE DUST BARRIERS TO PROTECT STORED MATERIALS ON SITE IN LOCATIONS AS COORDINATED WITH THE FACILITIES OWNER REPRESENTATIVE.

EXISTING UTILITIES ARE TO BE MAINTAINED DURING CONSTRUCTION. G.C. SHALL NOTIFY OWNER SERVICES REPRESENTATIVE OF ANY DISRUPTIONS 48 HRS. IN ADVANCE AND PROVIDE INTERIM UTILITIES AS REQUIRED.

CONTRACTORS STORAGE AND STAGING AREAS ON SITE SHALL BE AS DIRECTED BY THE AIRPORT FACILITIES MANAGER / REPRESENTATIVE.

LOCATE EXISTING UNDERGROUND UTILITIES IN THE AREAS OF WORK. IF UTILITIES ARE TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF PROTECTION DURING EARTHWORK OPERATIONS. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITES BE ENCOUNTERED DURING EXCAVATION, CONSULT THE ARCHITECT IMMEDIATELY FOR DIRECTIONS AS TO PROCEDURE. COOPERATE WITH OWNER AND UTILITY COMPANIES IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION. THE CONTRACTOR SHALL BEAR ALL EXPENSES OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK. INACTIVE OR ABANDONED UTILITES SHALL BE CAPPED IN ACCORDANCE WITH LOCAL RESTRICTIONS. REMOVE INACTIVE SERVICES (PLUMBING, MECHANICAL, ELECTRICAL, ETC.) AS REQUIRED TO MAINTAIN OPERATION.

ALL ELECTRICAL, MECHANICAL AND PLUMBING SERVICES LOCATED IN WALLS, CEILINGS, OR FLOORS TO BE REMOVED SHALL BE CAPPED AND REROUTED AS REQUIRED FOR NEW CONDITIONS AND IN ACCORDANCE WITH APPLICABLE CODES. SEE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL PROVIDE ALL NECESSARY NEW PLUMBING, MECHANICAL AND ELECTRICAL WORK AS REQUIRED.COORDINATE WITH CONSTRUCTION DOCUMENTS FOR NEW CONSTRUCTION.

IN AREAS WHERE NEW FLOOR FINISHES ARE SCHEDULED OR INDICATED, REMOVE ALL EXISTING FLOOR FINISHES & PREPARE AND CLEAN SLAB TO RECEIVE NEW FLOOR FINISHES IN ACCORDANCE WITH THE NEW FLOOR FINISH MANUFACTURERS' WRITTEN RECOMMENDATIONS UNLESS NOTED OTHERWISE. PROPER PREPARATION OF EXISTING SURFACES SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVAL OF ACCUMULATED ADHESIVES & MASTICS, FILLING AND REPAIR OF CRACKS & VOIDS, SURFACE RESTORATION, THOROUGH CLEANING, ETC. & OTHER PROCEDURES AS MAY BE RECOMMENDED BY MANUFACTURER OF NEW FLOORING.

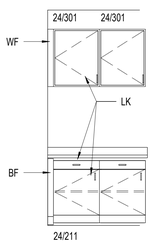
REMOVE ALL EXISTING WALL FINISHES ON PARTITIONS DESIGNATED TO REMAIN AND PATCH AND REPAIR ALL WALLS UNLESS NOTED OTHERWISE. COORDINATE WITH CONSTRUCTION DOCUMENTS FOR NEW CONSTRUCTION IN ACCORDANCE WITH SPECIFICATION SECTIONS RELATED TO CUTTING AND PATCHING, UNLESS NOTED OTHERWISE.

REMOVE FROM BUILDING SITE DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. TRANSPORT AND LEGALLY DISPOSE OF OFF SITE. PROVIDE THE OWNER WITH THE RIGHT OF FIRST REFUSAL FOR ITEMS THAT MAY BE SALVAGED OR RE-USED. LEGALLY DISPOSE OF ALL ITEMS THAT OWNER REFUSES. DO NOT BURN WASTE OR DEBRIS. DO NOT USE OWNER'S DUMPSTERS, TRASH RECEPTACLES, OR OTHER FACILITIES FOR DISPOSAL OF TRASH, DEBRIS, OR OTHER WASTE. ALL CONSTRUCTION DEBRIS IS TO BE REMOVED DAILY.

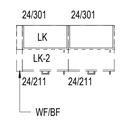
GENERAL NOTES

CASEWORK LEGEND

CASEWORK ELEVATION LEGEND



CASEWORK PLAN LEGEND



NOTE:
STANDARD CASEWORK MAY BE INDICATED IN PLAN OR ELEVATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON CONSTRUCTION & MATERIALS. REFER TO PLANS AND DETAILS FOR NON-STANDARD CASEWORK & MILLWORK CONSTRUCTION AND DETAILING.

CASEWORK TAG LEGEND

INDICATES WIDTH OF CABINET IN INCHES — 24 / 211 — INDICATES CABINET DESIGN SERIES STANDARD DESIGNATIONS BY ARCHITECTURAL WOODWORK INSTITUTE. SEE SPECIFICATIONS.

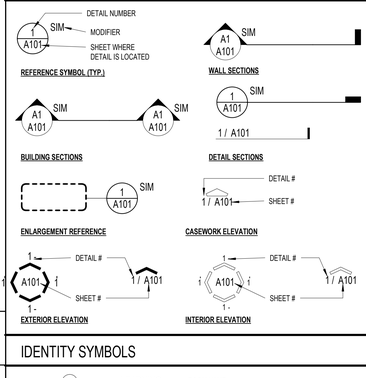
AF	ACCESSORY FILLER PANEL
BF	BASE CABINET FILLER PANEL
FF	FULL HEIGHT CABINET FILLER PANEL
WF	WALL CABINET FILLER PANEL
LK	DRAWER / DOOR LOCK
FP	FINISHED PANEL

ALL BASE CABINETS 24" DEEP U.N.O.
ALL WALL CABINETS 12" DEEP U.N.O.
ALL FULL HEIGHT CABINETS 24" DEEP U.N.O.

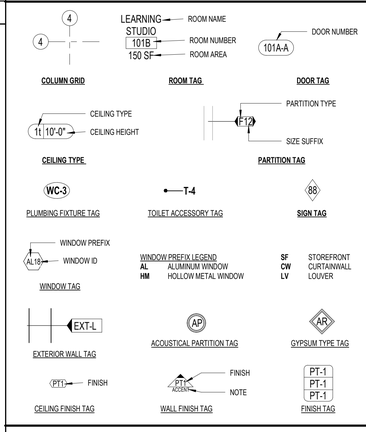
DRAWING CONVENTIONS

DRAWING CONVENTIONS

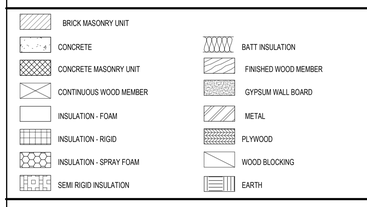
REFERENCE SYMBOLS



IDENTITY SYMBOLS

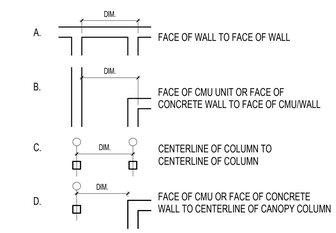


MATERIAL LEGEND



DIMENSIONING

1. DOORS NOT OTHERWISE DIMENSIONED SHALL BE:
   A. 8" FROM FACE OF ADJACENT MASONRY WALL TO ROUGH DOOR OPENING.
   B. 4" FROM FACE OF ADJACENT STUD WALL TO ROUGH DOOR OPENING.
2. SEE LARGE SCALE DETAILS FOR LOCATIONS AND ALIGNMENTS OF PARTITIONS NOT DIMENSIONED ON FLOOR PLANS.
3. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TAKEN FROM:



HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL

REVISIONS

MARK	DESCRIPTION	DATE

KEY PLAN



SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

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GENERAL INFORMATION AND ABBREVIATIONS

G001

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303: CHANGES IN LEVEL

303.1 GENERAL. WHERE CHANGES IN LEVEL ARE PERMITTED IN FLOOR OR GROUND SURFACES , THEY SHALL COMPLY WITH 303.

303.2 VERTICAL. CHANGES IN LEVEL OF 1/4 INCH HIGH MAXIMUM SHALL BE PREMITTED TO BE VERTICAL.



FIGURE 303.2 VERTICAL CHANGE IN LEVEL

303.3 BEVELED. CHANGES IN LEVEL BETWEEN 1/4 INCH HIGH MINIMUM AND 1/2 INCH HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2

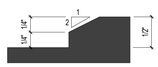


FIGURE 303.3 BEVELED CHANGE IN LEVEL

303.4 RAMPS. CHANGES IN LEVEL GREATER THAN 1/2 INCH HIGH SHALL BE RAMPED, AND SHALL COMPLY WITH 405 OR 406.

ADA - CHANGE IN LEVEL

307 PROTRUDING OBJECTS

307.1 GENERAL. PROTRUDING OBJECTS SHALL COMPLY WITH 307

307.2 PROTRUSION LIMITS. OBJECTS WITH LEADING EDGES MORE THAN 27 INCHES AND NOT MORE THAN 80 INCHES ABOVE FINISHED FLOOR OR GROUND SHALL PROTRUDE 4 INCHES MAXIMUM HORIZONTALLY INTO THE CIRCULATION PATH.

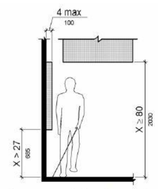


Figure 307.2 Limits of Protruding Objects

307.4 VERTICAL CLEARANCE. VERTICAL CLEARANCE SHALL BE 80 INCHES HIGH MINIMUM. GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE THE VERTICAL CLEARANCE IS LESS THAN 80 INCHES HIGH. THE LEADING EDGE OF SUCH GUARDRAIL OR BARRIERS SHALL BE LOCATED 27 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.

EXCEPTION: DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

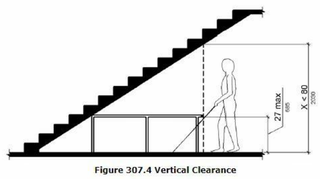


Figure 307.4 Vertical Clearance

ADA - PROTRUDING OBJECTS

308 REACH RANGES

308.1 GENERAL. REACH RANGES SHALL COMPLY WITH 308

308.2.1. UNOBSTRUCTED. WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

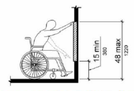


Figure 308.2.1 Unobstructed Forward Reach

308.2.2 OBSTRUCTED HIGH REACH. WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR FLOOR SPACE SHALL EXTEND BENEATH THE ELEMENT FOR A DISTANCE NO LESS THAN THE REQUIRED REACH DEPTH OVER THE OBSTRUCTION. THE HIGH FORWARD REACH SHALL BE 48 INCHES MAXIMUM WHERE THE REACH DEPTH IS 20 INCHES. WHERE REACH DEPTH EXCEEDS 20 INCHES, THE HIGH FORWARD REACH SHALL BE 44 INCHES MAXIMUM AND THE REACH DEPTH SHALL BE 25 INCHES MAXIMUM.

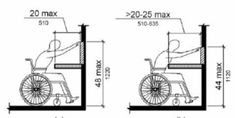


Figure 308.2.2 Obstructed High Forward Reach

308.3 SIDE REACH.

308.3.1 UNOBSTRUCTED. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48 INCHES MAXIMUM AND THE LOW SIDE REACH SHALL BE 15 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

EXCEPTIONS: 1. AN OBSTRUCTION SHALL BE PERMITTED BETWEEN THE CLEAR FLOOR OR GROUND SPACE AND THE ELEMENT WHERE THE DEPTH OF THE OBSTRUCTION IS 10 INCHES.

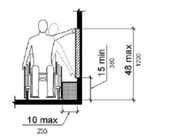


Figure 308.3.1 Unobstructed Side Reach

308.3.2 OBSTRUCTED HIGH REACH. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34" MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24 INCHES MAXIMUM. THE HIGH SIDE REACH SHALL BE 48 INCHES MAXIMUM FOR A REACH DEPTH OF 10 INCHES MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 10 INCHES, THE HIGH SIDE REACH SHALL BE 46 INCHES MAXIMUM FOR A REACH DEPTH OF 24 INCHES MAXIMUM.

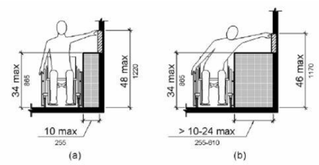
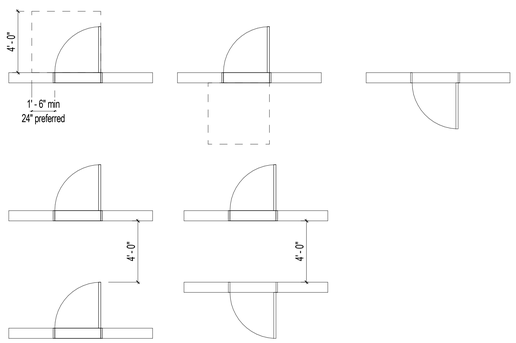


Figure 308.3.2 Obstructed High Side Reach

ADA - REACH REQUIREMENTS



ADA - Door Clearances

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MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

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SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
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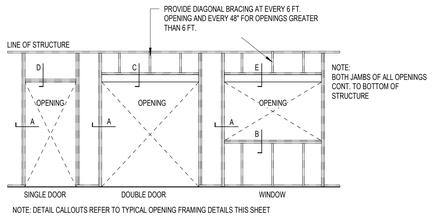
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ADA STANDARDS

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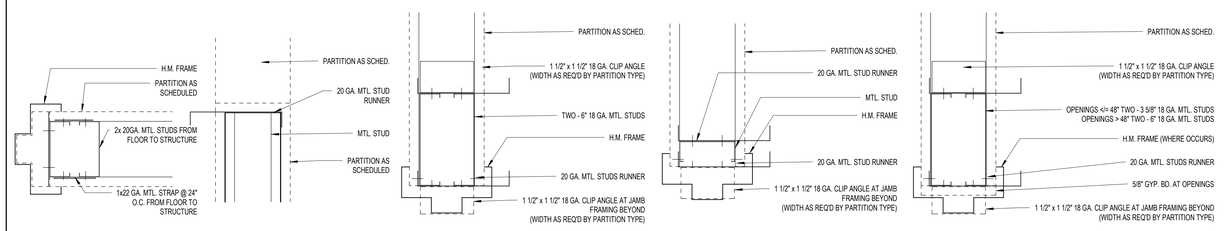
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NOTE: DETAIL CALLOUTS REFER TO TYPICAL OPENING FRAMING DETAILS THIS SHEET

N1 TYPICAL METAL STUD PARTITION DETAILS

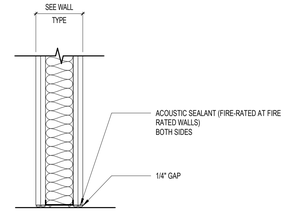
1/4" = 1'-0"



A - DOOR JAMB B - SILL C - DOUBLE DOOR HEADER D - SINGLE DOOR HEADER E - WINDOW / GYP. BD. OPENING HEADER

N5 TYPICAL OPENING FRAMING DETAILS

3" = 1'-0"



N15 ACOUSTICAL WALL AT PLATE

1 1/2" = 1'-0"

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KEY PLAN



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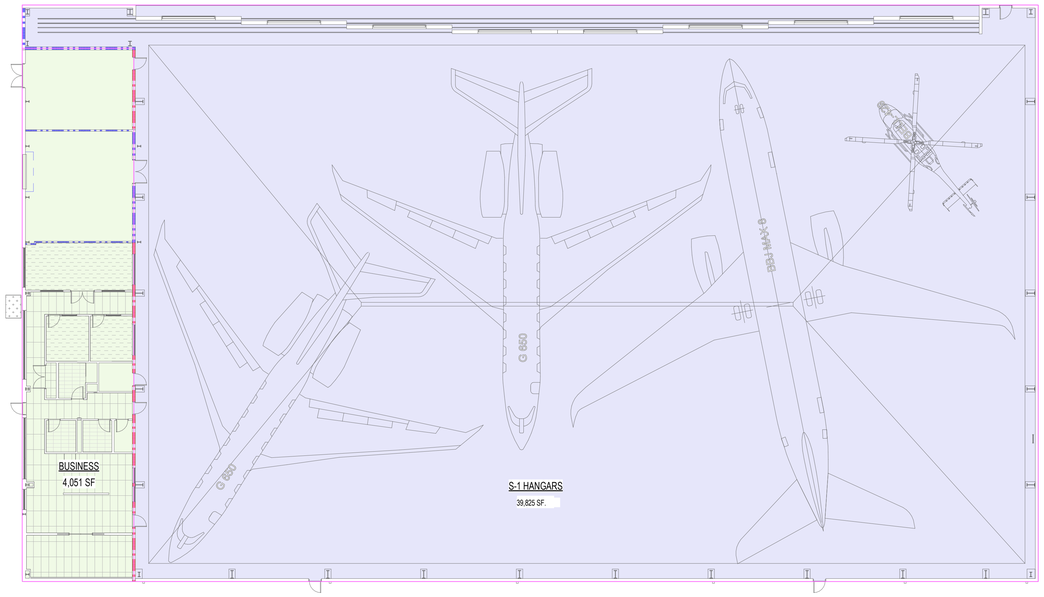
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TYPICAL PARTITION DETAILS

G006

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J1 — GROSS AREA PLAN - FIRST FLOOR

1/16" = 1'-0"

SECTION 403
MINIMUM PLUMBING FACILITIES

403.1 Minimum number of fixtures.

Plumbing fixtures shall be provided in the minimum nuber as shown in Table 403.1, based on the actual use of building or space.
Uses not shown in Table 403.1 shall be considered individually by the building official. The number of occupants shall be determined by the Building Code of New York State.

[NY] TABLE 403.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (See Sections 403.1.1 and 403.2)

NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410)	OTHER
			MALE	FEMALE	MALE	FEMALE			
2	Business	Building for the transaction of business, professional services, other services involving merchandise, office buildings, banks, ambulatory care, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		-------	1 per 100	1 service sink
8	Storage	Structures for the storage of goods, warehouses, storehouse and freight depots. Low and Moderate Hazard.	1 per 100		1 per 100		-------	1 per 1000	1 service sink

PROJECT SUMMARY

THIS PROJECT CONSISTS OF ONE NEW AIRCRAFT STORAGE HANGAR AND ASSOCIATED OFFICES.
THIS PROJECT IS PROPOSED TO BE CONSTRUCTED AT THE NEW YORK STEWART INTERNATIONAL AIRPORT (SWF).

APPLICABLE CODES & STANDARDS

BUILDING CODE OF NEW YORK STATE, (BCNYS) - 2020 EDITION

MECHANICAL CODE OF NEW YORK STATE (MCNYS) - 2020 EDITION

PLUMBING CODE OF NEW YORK STATE (PCNYS) - 2020 EDITION

FUEL GAS CODE OF NEW YORK STATE (FCNYS) - 2020 EDITION

PROPERTY MAINTENANCE CODE OF NEW YORK STATE (EBCNYS) - 2020 EDITION

THE AMERICANS WITH DISABILITIES ACT (ADA) - (2010 STANDARD)

THE PORT AUTHORITY OF NY & NJ TENANT CONSTRUCTION REVIEW MANUAL, DECEMBER 2015 (TCRM)

THE PORT AUTHORITY OF NY & NJ SUPPLEMENTARY TENANT CONSTRUCTION REQUIREMENTS

NFPA 409 (2022) - STANDARD ON AIRCRAFT HANGARS

NEW YORK STATE FIRE CODE - 2020 EDITION

NATIONAL ELECTRICAL CODE - 2017 EDITION

NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE - EDITION 2020

AUTHORITIES HAVING JURISDICTION

BUILDING:	PORT AUTHORITY OF NEW YORK & NEW JERSEY (PANYNJ)
FIRE / LIFE SAFETY:	PORT AUTHORITY OF NEW YORK & NEW JERSEY (PANYNJ)

OCCUPANCY CLASSIFICATION

(N.Y.S.B.C. Chapter 3 - Use & Occupancy Classification)

OCCUPANCY TYPE - BUSINESS (B) AND STORAGE (S-1)
MIXED USE OCCUPANCY PER N.Y.S.B.C. SECTIONS 508.4, 508.2.4, SECTION 508.3

NOTE: SEPARATION REQUIREMENT BETWEEN HANGAR (S-1) AND OFFICE (B) OCCUPANCIES IS **1HR** PER TABLE 508.4 AND PER NFPA 409.5.2.4 (MOST STRINGENT)

CONSTRUCTION TYPE

(N.Y.S.B.C. Chapter 6 - Types of Construction)

HANGAR:	TYPE II B CONSTRUCTION, SPRINKLERED (N.Y.S.B.C. TABLE 601) GROUP I CONSTRUCTION, SPRINKLERED (NFPA 409)

NOTE: SEPARATION REQUIREMENT BETWEEN HANGAR (S-1) AND OFFICE (B) OCCUPANCIES IS **1HR** PER TABLE 508.4 AND PER NFPA 409.5.2.4 (MOST STRINGENT)

FIRE RESISTANCE OF BLDG. ELEMENTS BY CONSTRUCTION TYPE

	OFFICES (B)	HANGAR (S-1)
PRIMARY STRUCT. FRAME:	0 HOURS	0 HOURS
BEARING WALLS - EXT:	0 HOURS	0 HOURS
BEARING WALLS - INT:	0 HOURS	0 HOURS
NONBEARING WALLS - EXT:	0 HOURS (TABLE 602)	0 HOURS (TABLE 602)
NONBEARING WALLS - INT:	0 HOURS	0 HOURS
FLOOR CONSTRUCTION:	0 HOURS	0 HOURS
ROOF CONSTRUCTION:	0 HOUR	0 HOURS
CORRIDORS:	0 HOUR	0 HOURS

BUILDING HEIGHT BY CONSTRUCTION TYPE

(N.Y.S.B.C. Chapter 5 - General Building Heights and Areas)

	HANGAR (S-1)	OFFICE (B)
ALLOWABLE HEIGHT:	3 STORIES / 75'- 0".	3 STORIES / 75' - 0"
ACTUAL BUILDING HEIGHT:	1 STORY / 65' - 6"	1 STORY / 18'-0"

BUILDING AREA BY CONSTRUCTION TYPE

(N.Y.S.B.C. Chapter 5 - General Building Heights and Areas)

	HANGAR (S-1)	OFFICE (B)
ALLOWABLE BUILDING AREA:	1 STORY / 70,000 SF	1 STORY/ 92,000 SF
PROPOSED BUILDING AREA:	35,415 SF	4,015 SF

[NY] 403.2 Separate facilities.

Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall no be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
3. Separate facilities shall no be required in mercantile occupancies in which the maximum occupant load is 100 or fewer.
4. Separate facilities shall no be required in bussiness occupancies in which the maximum occupant load is 25 or fewer.
5. Single-user toilet and bathing rooms provided in accordance with Section 403.1.2 shall be designated as gender neutral.
6. Separate facilities shall no be required where multiuser facilities designated for use by both sexes are provided in accordance with Section 403.1.3.

[NY] 403.1.1 Fixture calculations.

To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures for each sex, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of that sex in accordance with Table 403.1. Fractional numbers resulting from applying the fixture ratios of Table 403.1 shall be rounded up to the next whole number.

The plumbing fixtures located in single-user toilet facilities and bathing rooms, including family or assisteduse toilet and bathing rooms, shall contribute toward the total number of required plumbing fixtures for a building or tenant space, and shall be deducted proportionately, from the required gender ratios of Table 403.1.

The total number of fixtures shall be permitted to be based on any combination of single-user, multi-user, and separate facilities.

For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

Exception: The total occupant load shall not be required to be divided in half where approved statistical data indicates a distribution of the sexes of other than 50 percent of each sex.

OCCUPANT / EGRESS CAPACITY

THE CALCULATED OCCUPANT LOAD RESULTS IN A TOTAL BUILDING POPULATION FOR EGRESS OF **112 PEOPLE AS INDICATED BELOW.**

OCCUPANCY SCHEDULE

OCCUPANCY SCHEDULE			
NAME	AREA	FLOOR AREA PER OCCUPANT	OCCUPANT LOAD
S-1 HANGARS	39,825 SF.	500 SF	80
BUSINESS	4,051 SF	100 SF	41
Grand total			121

OFFICES EXITS

LEVEL	EXIT WIDTH - REQUIRED	EXIT WIDTH - PROVIDED
FIRST FLOOR	41 PERSONS X 0.2" = **8.2 INCHES**	**36 INCHES**
	-	-

HANGAR EXITS

LEVEL	EXIT WIDTH - REQUIRED	EXIT WIDTH - PROVIDED
HANGAR	119 PERSONS X 0.2" = **23.8 INCHES**	**72 INCHES**

EGRESS COMPONENTS

MIN. NUMBER OF EXITS FOR B- BUSINESS (OFFICES):	1 (PER N.Y.S.B.C. TABLE 1006.2.1)
MIN. NUMBER OF EXITS FOR S-1, STORAGE (HANGAR) :	2 (PER N.Y.S.B.C. TABLE 1006.2.1)
MAX. TRAVEL DISTANCE: W/ SPRINKLED BUILDINGS	BUSINESS (B) - 300 FT. (PER N.Y.S.B.C TABLE 1017.2 & NFPA 101 14.2.6.3) STORAGE (S1) - 250 FT. (PER N.Y.S.B.C TABLE 1017.2 & NFPA 101 14.2.6.3)
MAX. COMMON PATH OF TRAVEL:	75 FT. (PER F.B.C TABLE 1014.3 & NFPA 101 14.2.5.3)
MAX. DEAD END CORRIDOR:	50 FT. (PER N.Y.S.B.C. SECTION 1020.4)
MIN. CORRIDOR WIDTH:	44" CLEAR (PER N.Y.S.B.C. SECTION 1020.2) (TABLE 1020.2)
MIN. DOOR WIDTH:	0.2" PER PERSON (PER N.Y.S.B.C. 1005.3.2 & NFPA 7.3.3.1)

N.Y.S.B.C. - 1016 EXIT ACCESS THRU INTERVENING SPACES - 1016.2.5

NOTE: THE PROPOSED DESIGN COMPLIES WITH THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT (ADA).

PLUMBING CALCULATIONS

B (BUSINESS) = 41 OCCUPANTS
NY STATE PLUMBING CODE TABLE 403.1

4,051 SF / 100 = 41 TOTAL OCCUPANTS
41 / 2 = 21 MALE, 21 FEMALE

W/C MALE = 1 PER 25= 21/ 25= 0.84
W/C FEMALE = 1 PER 25= 21/ 25= 0.84

LAVS MALE = 1 PER 40= 21/ 40= 0.52
LAVS FEMALE = 1 PER 40 = 21/ 40=0.52

DRINKING FOUNTAINS = 1 PER 100

SERVICE SINK = 1 PER FLOOR

S-1 (STORAGE) = 80 OCCUPANTS
NY STATE PLUMBING CODE TABLE 403.1

39,825 SF / 500 = 80 TOTAL OCCUPANTS
80 / 2 = 40 MALE, 40 FEMALE

W/C MALE = 1 PER 100 = 40/ 100 = .4
W/C FEMALE = 1 PER 100 = 40/ 100 = .4

LAVS MALE = 1 PER 100 = 40/ 100 = .4
LAVS FEMALE = 1 PER 100 = 40/ 100 = .4

DRINKING FOUNTAINS = 1 PER 1,000

SERVICE SINK = 1 PER FLOOR

SUMMARY - REQUIRED

TOTAL W/C MALE = 0.84 + .4 = 2
TOTAL W/C FEMALE = 0.84 + .4 = 2

TOTAL LAVS MALE = .52 + .4 = 1
LAVS FEMALE = .52 + .4 = 1

TOTAL DRINKING FOUNTAINS = 2

SERVICE SINK = 1 PER FLOOR = 1

SUMMARY - PROVIDED

TOTAL W/C MALE = 1 WC + 1 URINAL + 1 WC UNISEX
TOTAL W/C FEMALE = 1 WC + 1 WC UNISEX

TOTAL LAVS MALE = 1
LAVS FEMALE = 1
LAVS UNISEX = 1

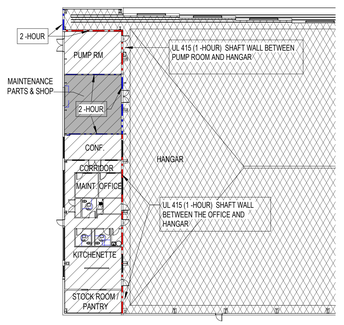
TOTAL DRINKING FOUNTAINS = 2

SERVICE SINK = 2

ASBESTOS NOTES:

1. If any suspect ACM is found during construction, all work in the area must cease and the PA REO must be notified, immediately. The material will be sampled and analyzed by a licensed firm and certified personnel in accordance with State regulations. All results will be submitted to the PA REO upon receipt. If it is determined that the material does not contain asbestos, the work in that area may continue. However, If the results indicate that the material contains asbestos, the area will be sectioned off with asbestos warning tape and an abatement plan will be submitted to the PA in accordance with the TCAP requirements.

2. Assume all existing painted surfaces are coated with lead containing paint (LCP). Contractor shall comply with the requirements of OSHA's lead- in- construction standard, 29 CFR Part 1926.62.



A15 — FIRE SEPARATION DIAGRAM

1" = 30'-0"

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL

REVISIONS

MARK	DESCRIPTION	DATE
1	Permit Comments	6/28/2024

KEY PLAN



SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

DRAWN BY: Author CHECKED BY: Checker

CODE SUMMARY & CALCULATIONS

G010

100% PERMIT SET

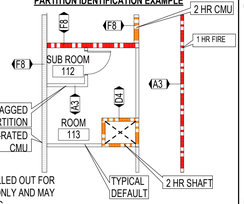
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PARTITION TAG EXAMPLE

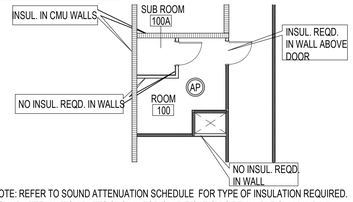


- GRAPHIC PARTITIONS ARE CALLED OUT FOR CLARIFICATION OF EXAMPLE ONLY AND MAY NOT BE CALLED OUT ON PLANS
- RATINGS AS SHOWN WILL BE INDICATED ON LIFE SAFETY PLANS ONLY.

PARTITION IDENTIFICATION EXAMPLE



ACOUSTIC PARTITION EXAMPLE

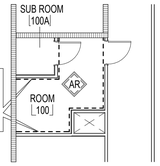


NOTE: REFER TO SOUND ATTENUATION SCHEDULE FOR TYPE OF INSULATION REQUIRED. SOUND ATTENUATION BATTS SHOWN FOR CLARIFICATION OF EXAMPLE ONLY AND WILL NOT BE GRAPHICALLY INDICATED ON PLANS

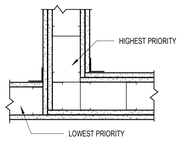
ABUSE RESISTANT GYPSUM BOARD EXAMPLE

PROVIDE ABUSE RESISTANT GYP. BD. TO HT. INDICATED IN GYP. BD. SCHED. ON TAGGED ROOM SIDE OF ALL GYP. BD. PARTITIONS.

IMPACT RESISTANT SIMILAR BUT WITH IR TAG: IR



NOTE: DASHED LINE AT ABUSE RESISTANT GYP. BD. SHOWN FOR CLARIFICATION OF EXAMPLE ONLY AND WILL NOT BE SHOWN ON PLANS



PARTITION PRIORITIES

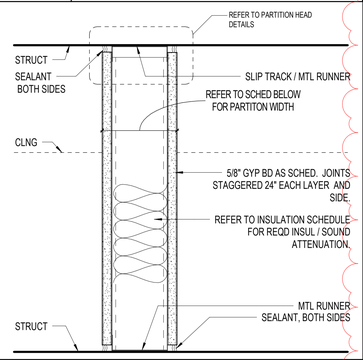
TWO HOUR FIRE AND SMOKE WALL	PRIORITY 1 (HIGHEST)
TWO HOUR FIRE WALL	PRIORITY 2
TWO HOUR SHAFT WALL	
ONE HOUR FIRE AND SMOKE WALL	PRIORITY 3
ONE HOUR FIRE WALL	PRIORITY 4
ONE HOUR SHAFT WALL	
SMOKE TIGHT WALL	PRIORITY 5
NON-RATED WALL	PRIORITY 6 (LOWEST)

TYPE "X" 5/8" GYPSUM BOARD	ALL LOCATIONS UNLESS NOTED BELOW OR DETAILED OTHERWISE
5/8" ABUSE RESISTANT GYPSUM BOARD	REFER TO FLOORPLANS FOR AR TAG. PROVIDE ABUSE RESISTANT GYP. BD. ON ALL WALLS ENCLOSING TAGGED ROOM TO 4'-0" A.F.F. UNLESS NOTED OTHERWISE. SEE ABUSE RESISTANT DIAGRAM.
5/8" IMPACT RESISTANT GYPSUM BOARD	REFER TO FLOORPLANS FOR IR TAG. PROVIDE IMPACT RESISTANT GYP. BD. ON ALL WALLS ENCLOSING TAGGED ROOM TO 4'-0" A.F.F. UNLESS NOTED OTHERWISE. SEE ABUSE RESISTANT DIAGRAM.
5/8" MOISTURE AND MOLD RESISTANT GYPSUM BOARD	"WET WALLS" NOT RECEIVING TILE WITH PLUMBING FIXTURES SUCH AS DRINKING FOUNTAINS, WATER CLOSETS, LAVATORIES, URINALS AND SIMILAR.
1/2" TILE BACKER BOARD	ALL WALLS RECIEVING TILE, U.N.O.
1/2" CEMENTITIOUS BACKER BOARD	WALLS EXPOSED DIRECTLY TO RUNNING WATER AND SCHEDULED TO RECEIVE TILE. - BATHTUBS, SHOWERS, SAUNAS, WATER THERAPY, ETC. NOTE: CEMENT BD. SHALL BE APPLIED OVER PARTITIONS WATER RESISTANT OR GLASS MAT GYPSUM BOARD AT RATED WALLS.

MISCELLANEOUS STUFFING INSULATION	WHERE DETAILED AND/OR NOTED, TO INFILL OPENINGS IN NON-RATED WALLS AROUND PIPES, STRUCTURAL COMPONENTS, CONDUITS AND SIMILAR. TO SEAL TOPS OF NON-RATED MASONRY WALLS TO DECK. AT EXPANSION JOINTS TO INSULATE.
UNFACED BATT INSULATION	WHERE DETAILED AND/OR NOTED, WITHIN STUD CAVITY OF ALL EXTERIOR WALLS WHERE INSULATION IS ENCAPSULATED UNLESS NOTED OR DETAILED OTHERWISE.
SEMI-RIGID FIBERGLASS INTERIOR INSULATION	WHERE DETAILED AND/OR NOTED, AT ALL EXTERIOR WALLS WHERE INSULATION IS NOT ENCAPSULATED UNLESS NOTED OR DETAILED OTHERWISE.
SOUND ATTENUATION BLANKETS (SAB)	WHERE DETAILED AND/OR NOTED, AT ALL NON-RATED PARTITIONS INDICATED TO BE ACOUSTICAL. REFER TO ACOUSTICAL PARTITION SCHEDULE AND PLANS FOR AP TAG.
MINERAL WOOL INSULATION	WHERE DETAILED AND/OR NOTED, AT ALL FIRE RATED PARTITIONS INDICATED TO BE ACOUSTICAL. REFER TO ACOUSTICAL PARTITION SCHEDULE AND PLANS FOR AP TAG.
SPRAY POLYURETHANE FOAM	WHERE DETAILED AND/OR NOTED, AT ALL **MASONRY** PARTITIONS INDICATED TO BE ACOUSTICAL. REFER TO ACOUSTICAL PARTITION SCHEDULE AND PLANS FOR AP TAG.

N18 PARTITION ID DIAGRAM

1/8" = 1'-0"



FLOOR PLAN DESIGNATION — A#

DESIGN CRITERIA REFER TO LIFE SAFETY PLANS FOR PARTITION RATINGS

RATING	UL DESIGN #	GRAPHIC	STC	STC W/ 3" SAB
NON-RATED	N/A		40	49
SMOKE RES.	N/A		40	49
1 HR.	U419		40	49

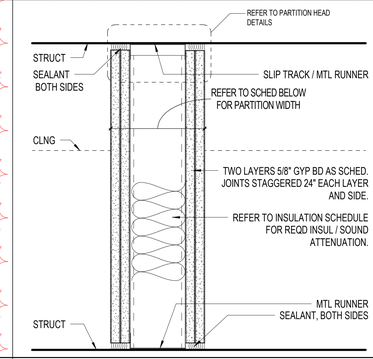
CONSTRUCTION

SUFFIX	STUD SIZE	OVERALL WIDTH	REMARKS
1	1 5/8"	2 7/8" *	* REFER TO UL FOR MIN. GYP BD THICKNESS AND REQ'D INSULATION.
2	2 1/2"	3 3/4" *	
3	3 5/8"	4 7/8"	
4	4"	5 1/4"	
6	6"	7 1/4"	
8	8"	9 1/4"	

PARTITION TYPE A

N15 ACOUSTIC PARTITION DIAGRAM

1/8" = 1'-0"



FLOOR PLAN DESIGNATION — B# — 2-HOUR SHAFTWALL

DESIGN CRITERIA REFER TO LIFE SAFETY PLANS FOR PARTITION RATINGS

RATING	UL DESIGN #	GRAPHIC	STC	STC W/ 3" SAB
2-HR	U412		50	55

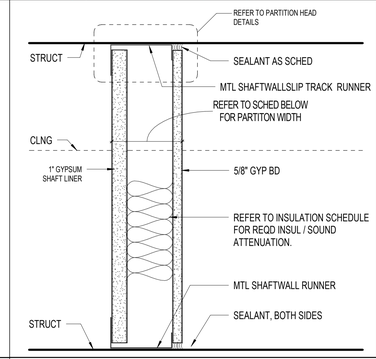
CONSTRUCTION

SUFFIX	STUD SIZE	OVERALL WIDTH	REMARKS
1	1 5/8"	2 7/8"	
2	2 1/2"	3 3/4"	
3	3 5/8"	4 7/8"	
4	4"	5 1/4"	
6	6"	7 1/4"	
8	8"	9 1/4"	

PARTITION TYPE B

N12 ABUSE RESISTANT GYP. BD. DIAGRAM

1/8" = 1'-0"



FLOOR PLAN DESIGNATION — C# — 1-HOUR SHAFTWALL

DESIGN CRITERIA REFER TO LIFE SAFETY PLANS FOR PARTITION RATINGS

RATING	UL DESIGN #	GRAPHIC	STC	STC W/ 3" SAB
1 HR.	U415 - SYSTEM A		40	49

CONSTRUCTION

SUFFIX	STUD SIZE	OVERALL WIDTH	REMARKS
2	2 1/2"	3 1/8"	
4	4"	4 5/8"	
6	6"	6 5/8"	AT WALLS TO RECEIVE TILE USE U415 - SYSTEM D, ADD THICKNESS OF CEMENT BD
8	8"	8 5/8"	

PARTITION TYPE C

N9 PARTITION PRIORITY LEGEND

NOT TO SCALE

N6 GYPSUM BD SCHEDULE

NOT TO SCALE

N3 INSULATION SCHEDULE

NOT TO SCALE

GRAPHIC PATTERN	WALL RATING
	SMOKE
	1 - HOUR
	2 - HOUR
	3 - HOUR

WALL RATING LEGEND

GENERAL NOTES - PARTITIONS

1. PARTITIONS ARE DISTINGUISHED ON FLOOR PLANS BY GRAPHIC AND TWO-PART SYMBOL DESIGNATIONS. THE ALPHANUMERIC SYMBOL INDICATES THE PARTITION TYPE AND THE NUMERIC CHARACTER DESIGNATES THE STUD, CMU OR CONCRETE WIDTH. REFER TO THE PARTITION TYPE DIAGRAMS.
2. PARTITIONS REQUIRED TO BE SMOKE AND/OR FIRE RESISTANT ARE DISTINGUISHED GRAPHICALLY ON THE LIFE SAFETY PLANS. REFER TO THE FIRE & SMOKE RESISTANCE LEGEND.
3. FLR, CLNG AND STRUCT DELINEATED IN THE PARTION TYPE SECTIONS ARE DIAGRAMMATIC AND DO NOT REFLECT EXACT CONSTRUCTION CONDITIONS OR GEOMETRY.
4. GYPSUM BOARD TYPES INDICATED IN THE PARTITION TYPE SECTIONS IS TYPICAL UNLESS NOTED OTHERWISE IN THE GYPSUM BOAD SCHEDULE FOR THE PARTITION LOCATION (EXAMPLE: A TYPE "A3" PARTITION AT A WET WALL WILL RECEIVE 5/8" MOISTURE AND MOLD RESISTANT GYP BD IN LIEU OF 5/8" GYP BD; A TYPE "A3" PARTITION SCHEDULED TO RECEIVE TILE WILL HAVE ½" TILE BACKER IN LIEU OF 5/8" GYP BD)
5. REFER TO PARTITION HEAD DETAILS FOR CONSTRUCTION AT RATED PARTITIONS. WHERE A SPECIFIC DETAIL IS NOTE PROVIDED, COORDINATE WITH ARCHITECT.
6. ALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD TO FACE OF GYPSUM BOARD. REFER TO PARTITION TYPE MATRICES FOR PARTITION WIDTH DIMENSIONS UNLESS INDICATED TO BE SHOWN ON PLANS.
7. SEALANT: REFER TO THE SEALANT SCHEDULE FOR SEALANT TYPES AT ALL PARTITIONS. ALL PARTITIONS SHALL HAVE SCHEDULED SEALANT AT THE HEAD, SILL, THRU-PENETRATIONS, OPENINGS AND JUNCTURES WITH DISSIMILAR MATERIALS.
8. INSULATION: REFER TO INSULATION SCHEDULE FOR INSULATION TYPE AT ALL PARTITIONS.
9. FOR PARTITONS DESIGNATED TO RECEIVE SOUND ATTENUATION BLANKETS (SAB), EXTEND SAB TO FULL HEIGHT OF PARTITION U.N.O. FLOOR TRACK TO BE SET IN A CONT BED OF SCHEDULED SEALANT.
10. IF NO SYMBOL DESIGNATION IS PROVIDED, STUD WALLS SHALL BE TYPE A3 AND MASONRY WALLS SHALL BE TYPE F8
11. REFER TO SPECIFICATIONS FOR MINIMUM STUD THICKNESS, MAXIMUM SPACING AND ALLOWABLE LIMITING HEIGHTS AND DEFLECTION CRITERIA FOR GYPSUM BOARD ASSEMBLIES.
12. FIRE RESISTANT AND SMOKE RESISTANT SMOKE BARRIER RATINGS ARE TO SURROUND ALL OPENINGS IN RATED PARTITIONS.
13. SMOKE RESISTANT, FIRE RESISTANT AND FIRE RESISTANT SMOKE BARRIER PARTITIONS SHALL EXTEND AND SEAL TO THE INSIDE FACE OF EXTERIOR SHEATHING, INCLUDING EXTENSIONS THROUGH SOFFITS.
14. EACH NEW FIRE WALL, FIRE BARRIER, FIRE PARTITION, SMOKE BARRIER, SMOKE PARTITION, OR ANY OTHER NEW WALL REQUIRED TO HAVE PROTECTED OPENINGS SHALL BE PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ABOVE ANY DECORATIVE CEILING AND IN CONCEALED SPACES WITH THE WORDING, "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS." SUCH SIGNS OR STENCILING SHALL BE IN 4 INCH HIGH LETTERS, 1/2 INCH STROKE, AND NOT MORE THAN 15 FEET ON CENTER OR AS REQUIRED BY LOCAL CODE
15. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING INFORMATION.
16. REFER TO CASEWORK AND TOILET ACCESSORY SHEETS FOR MOUNTING INFORMATION AND BACKING REQUIREMENTS.
17. DO NOT UTILIZE BULLNOSE BLOCK AT WALLS DESIGNATED TO RECEIVE CORNER GUARDS.
18. ALL PENETRATIONS THRU FIRE AND/OR SMOKE RATED PARTITION SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE PARTITION RATING. REFER TO SEALANT SCHEDULE
19. ALL PENETRATIONS THRU SOUND RATED PARTITION SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE PARTITION RATING. REFER TO SEALANT SCHEDULE

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL

REVISIONS

MARK	DESCRIPTION	DATE
1	Permit Comments	6/28/2024

KEY PLAN



SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION
SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

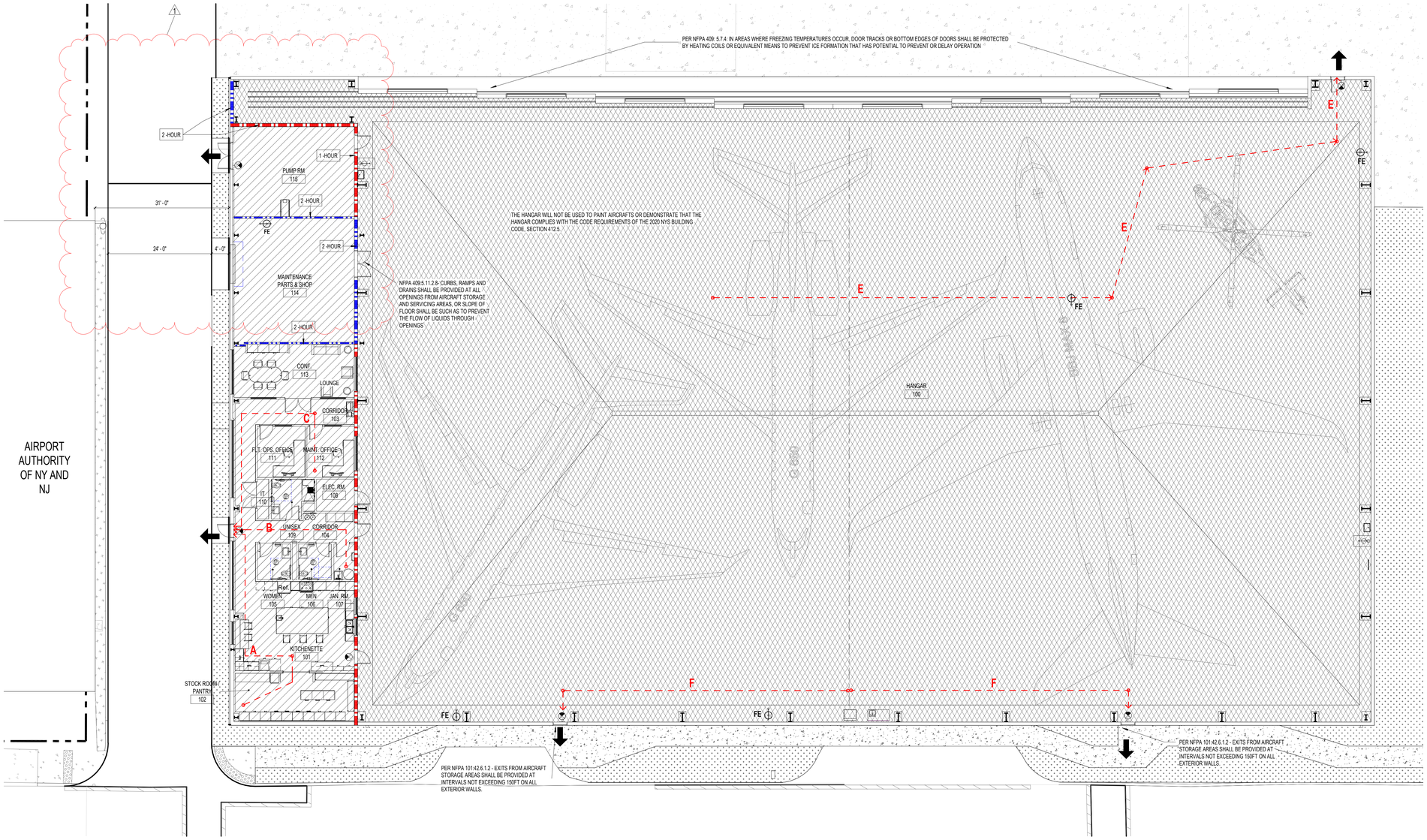
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PARTITION TYPES & NOTES

G031

100% PERMIT SET

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TRAVEL PATH ID -A- EGRESS PATH (SEE PLAN)

PRIMARY EGRESS

EXIT SIGN

FE FIRE EXTINGUISHER, WALL MOUNTED

FEC FIRE EXTINGUISHER IN SEMI-RECESSED CABINET

LOCK BOX- EXACT LOCATION TO BE COORDINATED WITH LOCAL FIRE DEPARTMENT. MOUNTING HT: 6'-8" A.F.F., TIE TO FIRE ALARM

DOOR CAPACITY TAG

1340 | 1340 | 1340 | 1340 — EGRESS CAPACITY OF DOOR PER LIFE SAFETY CODE; ARROW INDICATES DIRECTION OF TRAVEL

NOTES:
1. REFER TO SYSTEM DRAWINGS FOR LOCATION OF HEAT AND SMOKE DETECTORS
2. REFER TO MECHANICAL FOR LOCATION OF FIRE AND SMOKE DAMPERS
3. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXACT LOCATION OF EMERGENCY LIGHTING, FIRE ALARM STROBES, AND PULL STATIONS
4. REFER TO TRAVEL DISTANCE SCHEDULE FOR TRAVEL DISTANCES
5. PROVIDE GRAPHIC EVACUATION ROUTE DIAGRAMS FOR ALL OCCUPIED SPACES CLEARLY DESIGNATING THE EXIT ROUTE TO THE EXTERIOR OF THE BUILDING.
6. ALL DOORS IN A MEANS OF EGRESS TO BE EQUIPPED WITH LOCKING AND LATCHING HARDWARE THAT DOES NOT REQUIRE A KEY, TOOL OR SPECIAL KNOWLEDGE OR EFFORT FROM THE EGRESS SIDE TO OPEN. ALL HARDWARE MUST COMPLY WITH NFPA 101:7.2.1.6.
7. PROVIDE ACRYLIC SIGN IDENTIFYING THE USE OF THE EXTINGUISHER AS SECONDARY BACKUP MEANS TO THE AUTOMATIC FIRE-EXTINGUISHER SYSTEM CONSPICUOUSLY PLACED NEAR EACH PORTABLE FIRE EXTINGUISHER PER NFPA 96:10.2.2.
8. PERMANENTLY IDENTIFY ALL FIRE RATED/SMOKE WALLS/PARTITIONS IN ACCORDANCE WITH NYSBC 2017 SECTION 703.7.
9. DURING THE ENTIRE CONSTRUCTION PERIOD, PROVIDE ONE UL LISTED PORTABLE FIRE EXTINGUISHER AT ALL TIMES IN THE FOLLOWING SPACES: TERMINAL (1ST & 2ND FLOOR), HANGAR AND GSE.

TRAVEL DISTANCE SCHEDULE

TRAVEL PATH ID	TRAVEL DISTANCE
A	60' - 6"
B	34' - 6"
C	56' - 0"
E	247' - 0"
F	139' - 0"
Grand total: 21	539' - 0"

A1 — LIFE SAFETY PLAN - FLOOR PLAN

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"

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MARK	DESCRIPTION	DATE
1	Permit Comments	6/28/2024

KEY PLAN



SIGNATURE STEWART (SWF) HANGAR

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SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
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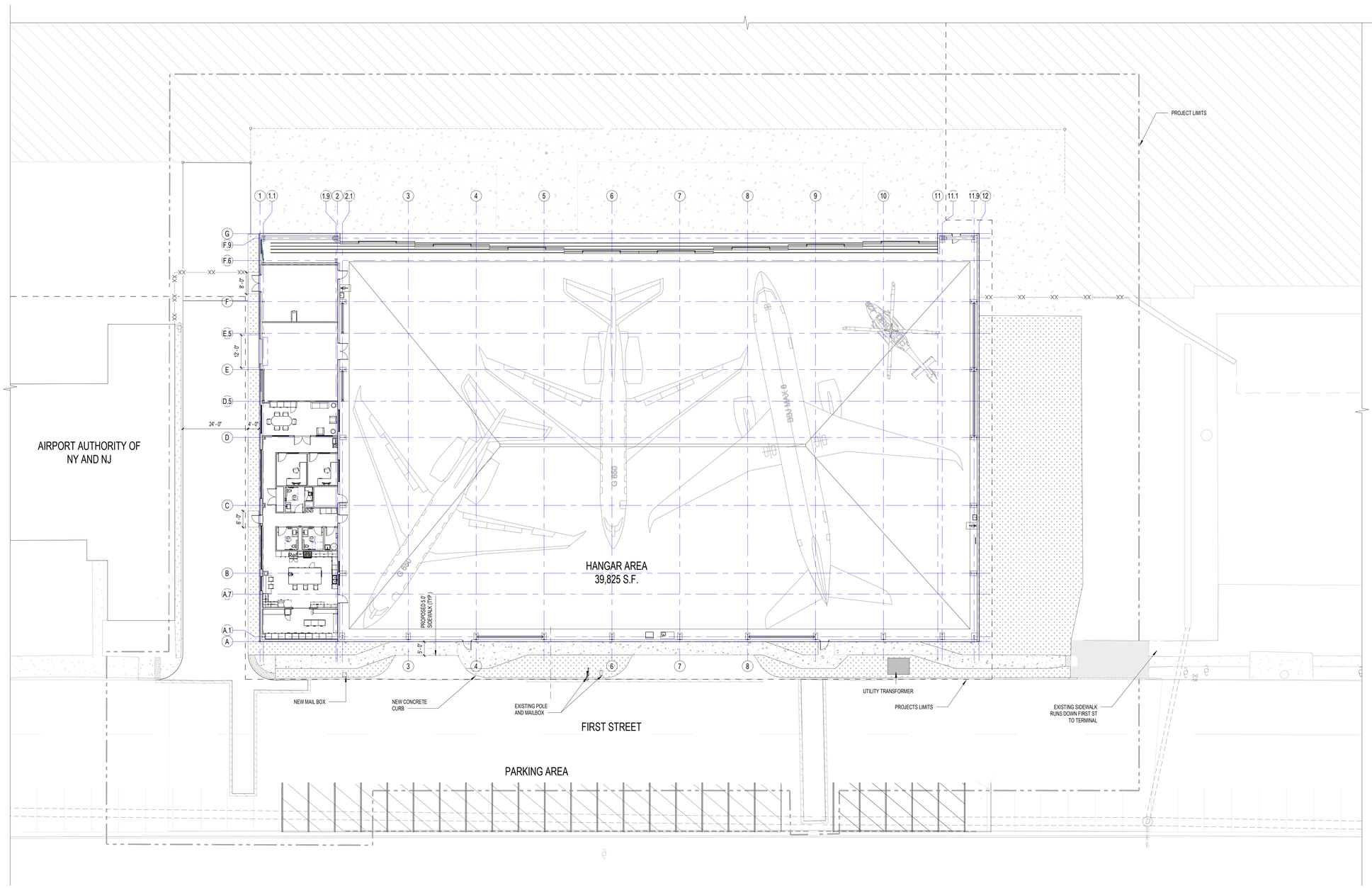
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LIFE SAFETY PLAN - FLOOR PLAN

G101

100% PERMIT SET



A1 SITE PLAN

1/16" = 1'-0"

0 8'-0" 16'-0" 32'-0"

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SITE PLAN

A010

100% PERMIT SET

PRE-ENGINEERED HANGAR DOOR SYSTEM. VERIFY RAIL TO RAIL DIMENSIONS W/ DOOR MANUFACTURER, TYP.

264' - 10"

7' - 6 5/8"

100' - 0"

PUMP RM

[No Slope]

MAINTENANCE PARTS & SHOP

100' - 4"

100' - 0"

CONF.

LOUNGE

150' - 2"

CORRIDOR

FLT. OPS. OFFICE

MAINT. OFFICE

18' - 2 1/2"

7' - 0"

3' - 1"

9' - 1"

RECESS SLAB FOR SHOWER INSERT APPROXIMATELY 1". COORDINATE ACTUAL RECESS SLAB DEPTH WITH SHOWER PRODUCT INSTALLATION INSTRUCTIONS AND TILE/MORTAR BED THICKNESS TO PROVIDE ADA COMPLAINT INSTALLATION WITH MAXIMUM 1/2" THRESHOLD HEIGHT AT FINISHED FLOOR".

3' - 5"

4' - 0"

IT

UNISEX

ELEC. RM.

9' - 2 1/2"

CORRIDOR

17' - 4"

5' - 1"

6' - 0 1/2"

WOMEN

MEN

JAN. RM.

HATCHED AREA DEFINES EXTENT OF SLAB SLOPED TO DRAIN. TYP.

8' - 0 1/2"

4' - 0"

3' - 5"

3' - 5"

4' - 0"

[No Slope]

3' - 5 5/8"

KITCHENETTE

STOCK ROOM / PANTRY

58' - 11 3/8"

67' - 1 1/2"

0.5% SLOPE DN.

HANGAR

112' - 8"

TRENCH DRAIN

1' - 0"

0.6% SLOPE DN.

8' - 8 5/8"

21' - 7 1/8"

0.6% SLOPE DN.

3' - 7 3/8"

0.5% SLOPE DN.

100' - 4"

100' - 0"

100' - 4"

J1 A301

A1 A352

A7

A6 A352

A1 A301

K1 A302

A1 A301

K1 A302

J1 A301

A1 EDGE OF SLAB PLAN - FLOOR PLAN

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

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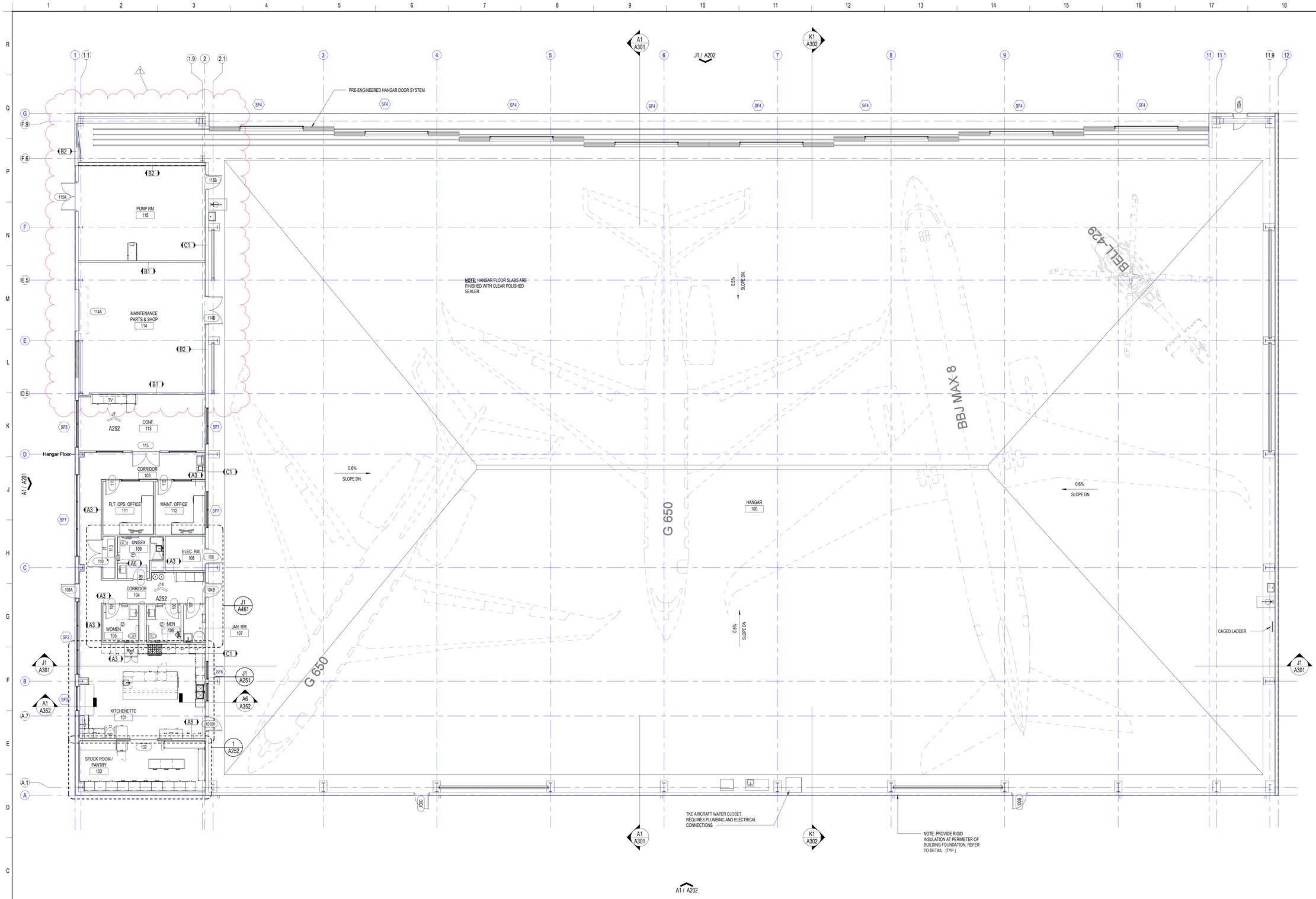
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EDGE OF SLAB FLOOR PLAN

A031

100% PERMIT SET



A1 FLOOR PLAN

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

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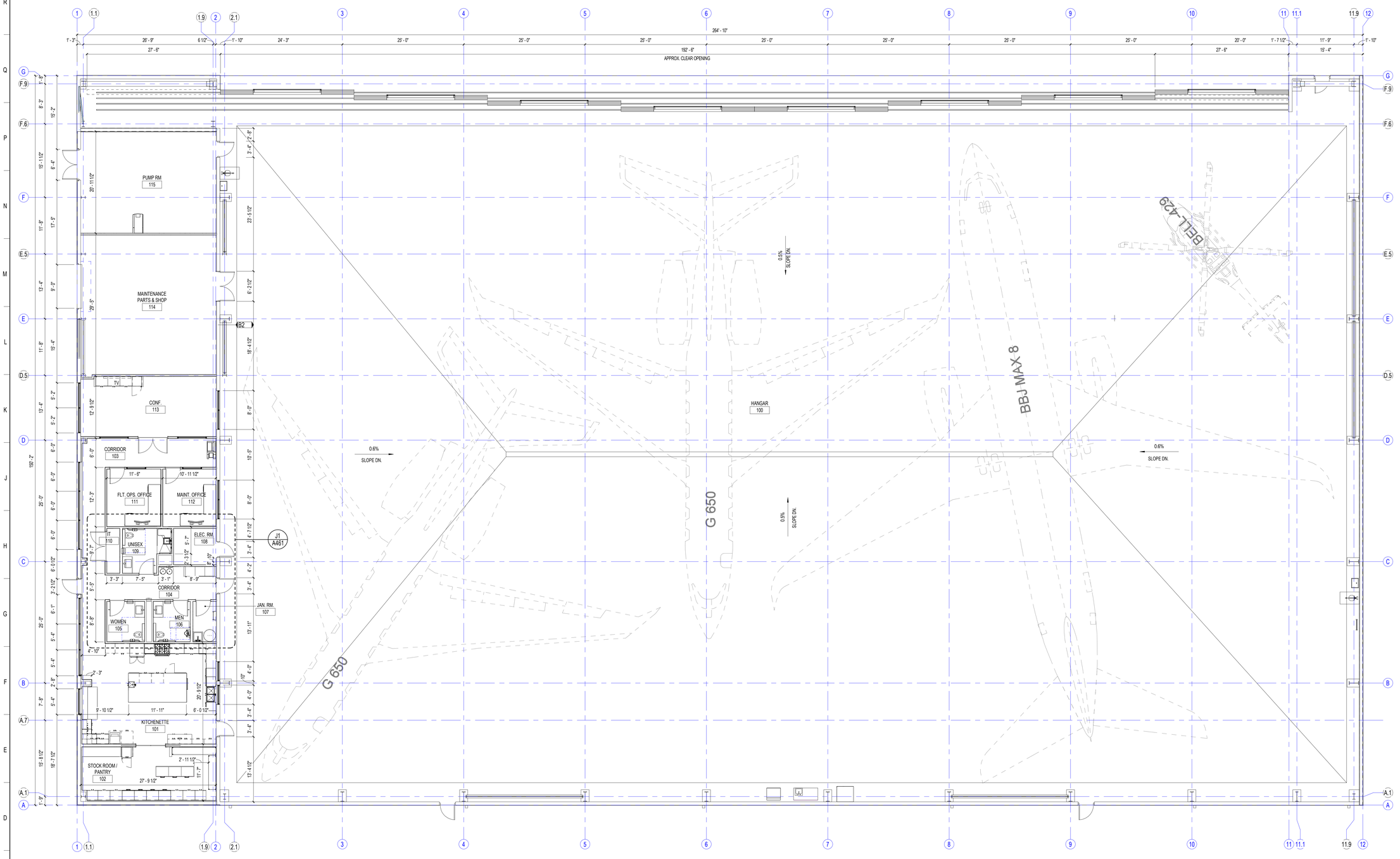
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ARCHITECTURAL FLOOR PLAN

A101

100% PERMIT SET



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DIMENSION FLOOR PLAN

A121

100% PERMIT SET

A1
DIMENSION FLOOR PLAN
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"

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CEILING LEGEND

- RECESSED CAN LIGHT, SEE ELECTRICAL FOR TYPE
- 2'x2' FLUORESCENT FIXTURE, SEE ELECTRICAL FOR TYPE
- 1' X 4' FLUORESCENT FIXTURE, SEE ELECTRICAL FOR TYPE
- DIFFUSER, SEE ELECTRICAL FOR TYPE
- RETURN, SEE ELECTRICAL FOR TYPE
- CEILING FAN, SEE ELECTRICAL FOR TYPE
- HIGH EXPANSION GENERATOR DOUBLE WITH CURB
- DRAFT CURTAINS
- HIGH BAY LIGHTS

GENERAL NOTES

1. ALL DIMENSIONS ARE TO THE CENTERLINE OF DEVICE, TYP.
2. ALL SOFFIT/CASED OPENINGS ARE TO ALIGN WITH THE FINISH FACE OF ADJACENT WALLS UNLESS NOTED OTHERWISE
3. ALL DEVICES ARE TO BE CENTERED IN CEILING TILES WHERE APPLICABLE UNLESS NOTED OTHERWISE
4. SEE CONSULTANT DOCUMENTS FOR LOCATIONS OF ALL WALL MOUNTED DEVICES. COORDINATE ALIGNMENT OF WALL DEVICES WITH EACH OTHER AND CEILING DEVICES WHERE POSSIBLE.
5. ALIGN DEVICES AS INDICATED WITH CENTRLINES.
6. ALL CEILING HEIGHTS ARE TO THE FINISHED FACE OF THE CEILING/PROJECT.
7. ARCHITECTURAL RCP DO NOT INDICATE ALL DEVICES IN THE CEILING/PROJECT. REFER TO MEP DOCUMENTS FOR ADDITIONAL DEVICES.

- A1 VARIES — SEE RCP FOR HEIGHTS — 24" x 24" ACOUSTICAL CEILING TILE, SEE SPECIFICATIONS
- C1 VARIES — SEE RCP FOR HEIGHTS — 5/8" GYPSUM BD ON 3-5/8" METAL STUD FRAMING
- F1 OPEN — EXPOSED STRUCTURE
- M1 VARIES — SEE RCP FOR HEIGHTS — METAL PANEL SOFFIT
- H1 VARIES — SEE RCP FOR HEIGHTS — ALUMINUM CANOPY SYSTEM ,SEE EXTERIOR FINISH SCHEDULE FOR TYPE AND COLOR
- LINER PANEL

CEILING LEGEND AND NOTES

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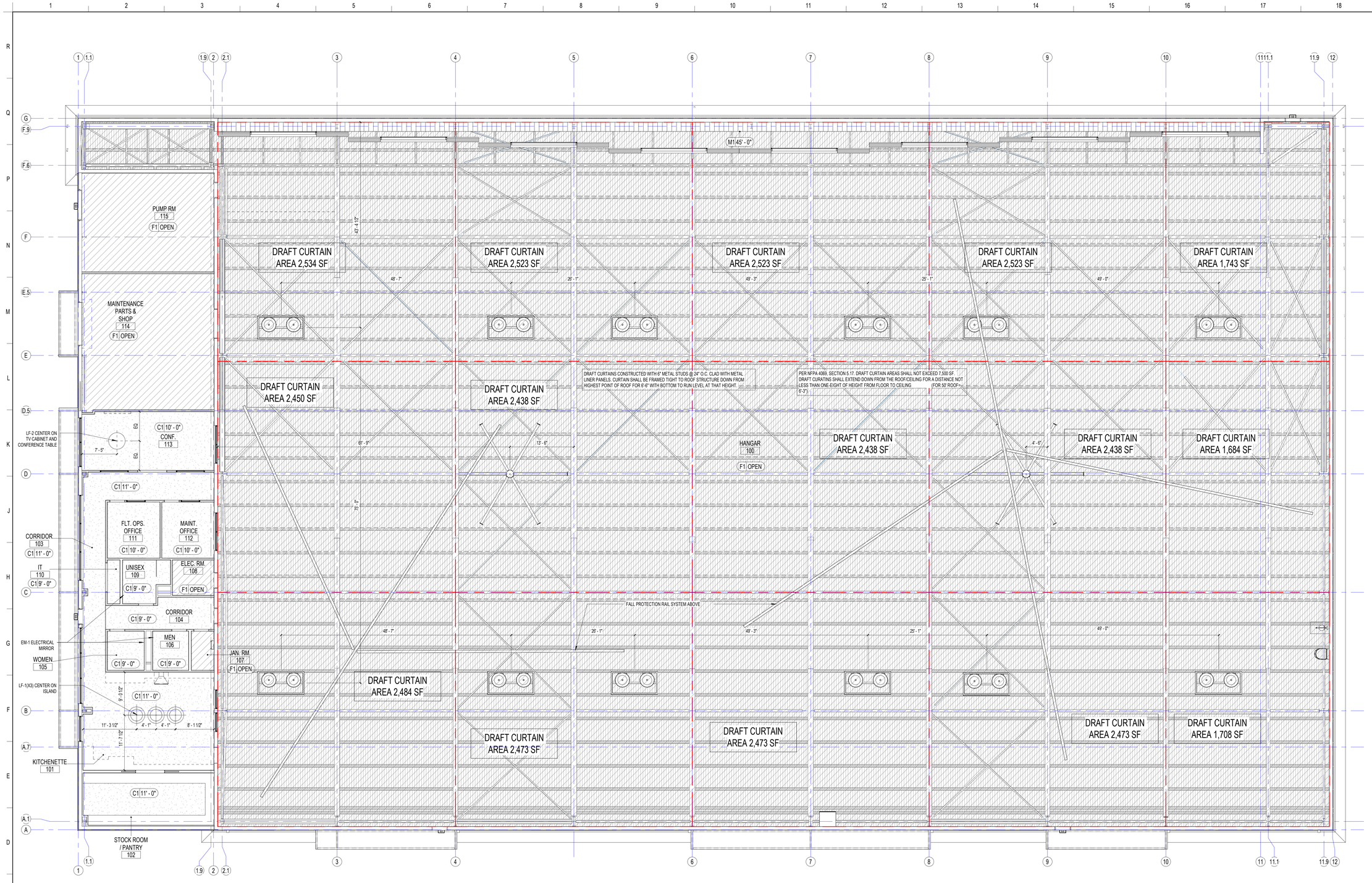
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CEILING LEGENDS, LIGHT FIXTURE TYPES & NOTES

A140

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A18 REFLECTED CEILING PLAN

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

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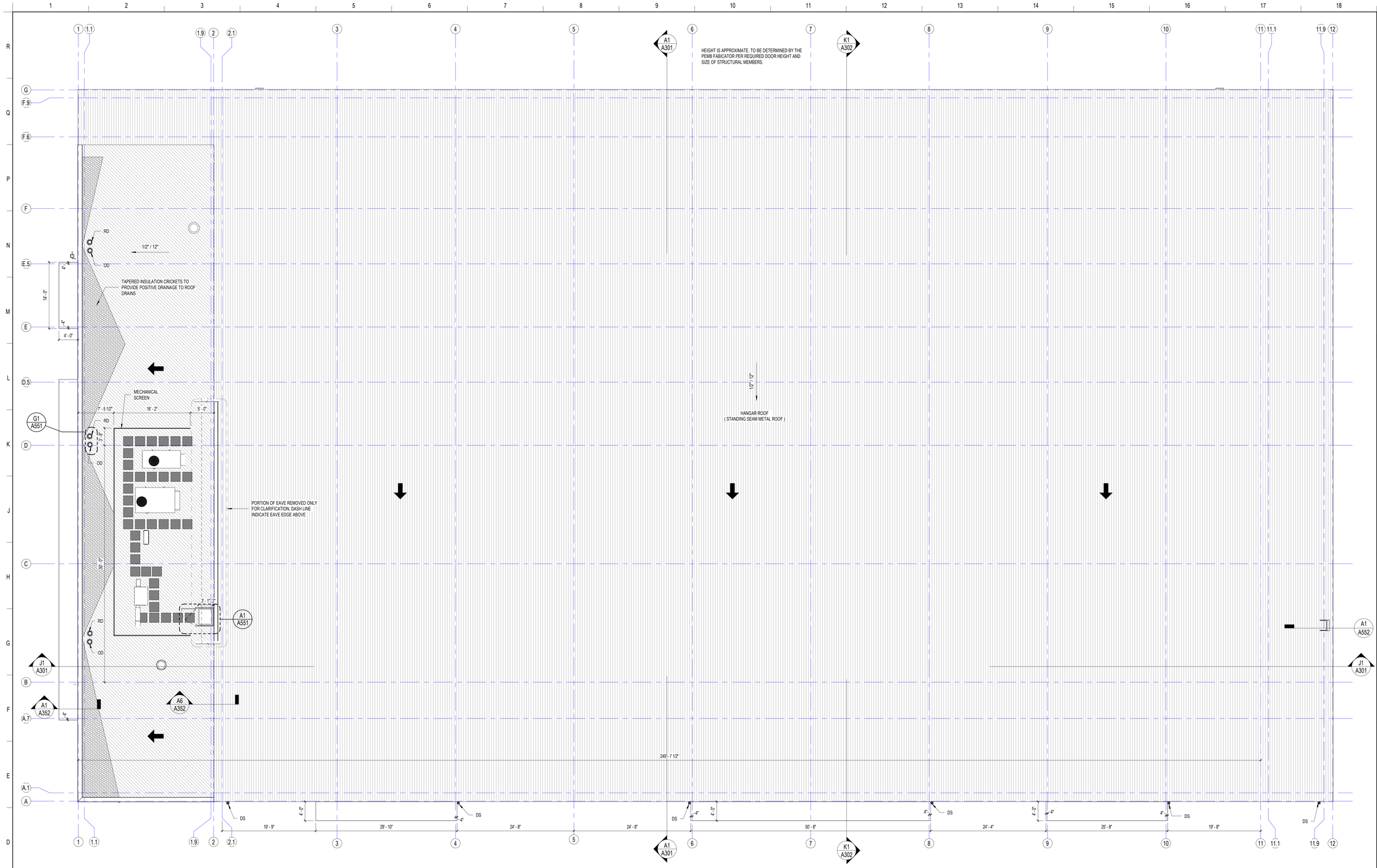
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REFLECTED CEILING PLAN

A141

100% PERMIT SET



SYMBOL	DESCRIPTION
	FULLY ADHERED TPO TPO ROOF MEMBRANE OVER COVER BOARD ON R-30 RIGID INSULATION ON STRUCTURAL METAL DECK
	CRICKET - SLOPED TO DRAIN AT 1/2" PER FT. TO PROVIDE POSITIVE DRAINAGE TO ROOF DRAINAGE SYSTEM
	PEMB INSULATED STANDING SEAM METAL ROOF PANELS ON SLOPED PEMB STRUCTURE
	ROOF WALKWAY PADS

SYMBOL	DESCRIPTION
G/DS	CONT. 8" X 8" ROOF GUTTER WITH 6" SQUARE DOWNSPOUT - SEE WALL SECTIONS
	ROOF ACCESS LADDER SEE TYP. DETAILS A1/A552
R.H.	36" x 36" ROOF HATCH WITH TELESCOPING SAFETY BAR SEE TYP. DETAIL A1/A551
	ROOF SLOPE DIRECTION
RD OD	ROOF DRAIN & OVERFLOW DRAIN

GENERAL NOTES:

1. PROVIDE MANUF. STANDARD DETAILS FOR ROOF PENETRATIONS
2. SEE. MECH & PLUMBING EQUIP. PLANS FOR EXTENT OF ROOFTOP EQUIPMENT, CURBS, VENTS, PIPES, AND CONDUITS PENETRATING THE ROOF.
3. PROVIDE CRICKETS TO PROVIDED POSITIVE DRAINAGE AROUND ALL ROOF TOP EQUIPMENT AND HATCHES. CRICKETS SHALL SLOPE AT 1/2" PER FT. MINIMUM.
4. OVERFLOW SCUPPERS (O.S.) SHALL BE INSTALLED WITH EACH CONDUCTOR HEAD AND DOWNSPOUT (CH/DS) UNLESS NOTED OTHERWISE.
5. PROVIDE CONCRETE SPLASH BLOCKS WHERE DOWNSPOUTS DISCHARGE ONTO ROOF BELOW.
6. COORDINATE WALL OPENINGS WITH SCUPPER REQUIREMENTS.
7. COORDINATE WALL MTD. ITEMS WITH EXTERIOR ELEVATIONS.
8. COORDINATE ALL ROOF DRAINAGE WITH CIVIL.
9. ALL WALKPADS SHALL BOUND THE PERIMETER OF ROOF MTD. EQUIPMENT AND ROOF HATCHES A MINIMUM OF 4'-0" ON EACH SIDE. INSTALL WALKPADS SUCH THAT CROSS DRAINAGE IS NOT IMPEDED.
10. REFER TO A-55# SERIES DRAWINGS FOR ROOF DETAILS. REFER TO WALL SECTIONS & DETAILS FOR ADDITIONAL ROOF DETAILING. ALUMINUM CANOPIES PROVIDED FOR REFERENCE ONLY. CANOPIES WILL BE INCLUDED IN THE NEXT SUBMITTAL (INTERIOR FIT-OUT).
11. REFER TO A1/A552 FOR ROOF LADDER DETAIL.
12. CONDUCTOR HEAD/DOWNSPOUT LOCATIONS TO BE COORDINATED WITH EXTERIOR ELEVATIONS.

A1 ROOF PLAN
1/8" = 1'-0"

ROOF LEGEND

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ROOF PLAN

A151

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FINISH PLAN LEGEND

FLOOR FINISH - T1

FLOOR FINISH - T2

FLOOR FINISH - T3

FLOOR FINISH - CPT1

FLOOR FINISH - CPT 2

FLOOR FINISH - CPT3

FLOOR FINISH - CPT 4

FLOOR FINISH - VCT-1

GENERAL FINISH NOTES

1. REFER TO ARCHITECTURAL AREA PLANS FOR INTERIOR ELEVATION TAGS.
2. REFER TO FINISH LEGEND & CODE SCHEDULES FOR FINISH TAG DESIGNATIONS.
3. REFER TO G-001 FOR WALL FINISH TAG DESCRIPTION.
4. REFER TO SHEET A160.2 FOR ALL INTERIOR TRANSITION DETAILS.
5. ROOMS LISTED WITH 'PTL' ARE TO BE PTL-1 U.N.O. IN SCHEDULE.
6. ROOMS LISTED WITH 'RB' ARE TO BE RB-1 U.N.O. IN SCHEDULE.
7. ANY LOCATION WHERE TWO FLOORING FINISHES COME IN A DOORWAY, EXTEND THE FLOORING TO MEET AT CENTERLINE OF DOOR.
8. FOR TRANSITIONS OF DIFFERENT THICKNESS, USE FLOOR LEVELING TRANSITION MATERIAL AND FEATHER OUT OVER 2'-0" TO PROVIDE AN EVEN TRANSITION- WHERE APPLICABLE. PRIOR TO FLOORING INSTALLATION, TEST CONCRETE SLAB FOR MOISTURE CONTENT BASED ON MANUFACTURERS RECOMMENDATION.
9. PAINT RECESS ELECTRICAL PANELS TO MATCH ADJACENT WALL.
10. ALL VINYL WALL BASE TO BE INSTALLED IN LENGTHS AS LONG AS FEASIBLE WITHOUT GAPS AT SEAMS. TOP OF BASE TO ALIGN WITH ADJACENT PIECE.
11. CONTRACTOR TO SECURE CUSTOME/SPECIAL LONG LEAD ITEMS FROM MANUFACTURER
12. VERIFY ALL FIELD DIMENSIONS/CONDITIONS PRIOR TO INSTALLATION.
13. ALL RESTROOM WALLS TO BE TILE U.N.O. REFER TO ELEVATIONS FOR TILE PATTERN. (TILE BEHIND ALL MIRRORS U.N.O. ALL PAINTED AREAS TO BE EPOXY PAINT PTE-1 U.N.O.)
14. PROVIDE STAINLESS STEEL CORNER GUARDS TO 48" HIGH-ALL OUTSIDE CORNERS AS INDICATED IN PLAN (BACK OF HOUSE AREAS).

ID-CARPET SCHEDULE

FINISH CODE	MANUFACTURER	MFG. LINE	STYLE NAME	STYLE NO.	COLOR	SIZE	TYPE	INSTALLATION	REP CONTACT	REMARKS
CPT-1	MOHAWK GROUP	SOCIAL CANVAS	UPLIFTING OTHERS	GT479	535 FLOW STATE	12" X 36"	PLANK CARPET TILE	MONOLITHIC	KIAH COLEMAN 407-725-6533	GLUE DOWN INSTALLATION. REFER TO FINISH PLAN FOR LOCATIONS
WOM-1	AMERICAN FLOOR MATS	WATERHOG PREMIER	WATERHOG PREMIER	DIAGONAL PATTERN	GREY ASH	18" X 18"	CARPET TILE			VESTIBULE WALK OFF MAATT-REFER TO FINISH PLAN FOR LOCATIONS

ID-PORCELAIN TILE AND BASE SCHEDULE

FINISH CODE	MANUFACTURER	MFG. LINE	COLOR	TYPE	SIZE	FINISH	GROUT MANUF	GROUT NO.	GROUT COLOR	REP CONTACT	REMARKS
PTB-1	SCHLUTER	DILEX-AH	BRUSHED BRASS ANODIZE	COVE BASE							COVE BASE, OUTSIDE CORNERS USE TRIM-1 FOR RESTROOM
PTF-1	GARDEN STATE TILE	PERUGIA	GREY	PORCELAIN FLOOR	24" X 48"	MATTE	CUSTOM BUILD PRODUCTS		543 DRIFTWOOD	MICHAEL HUBERT 407-982-0430	REFER TO FINISH PLAN FOR LOCATIONS
PTF-2	GARDEN STATE TILE	PERUGIA	GREY	PORCELAIN FLOOR	12" X 24"	MATTE	CUSTOM BUILD PRODUCTS		543 DRIFTWOOD	MICHAEL HUBERT 407-982-0430	REFER TO FINISH PLAN FOR LOCATIONS
PTW-1	GARDEN STATE TILE	PERUGIA	GREY	PORCELAIN WALL	24" X 48"	MATTE	CUSTOM BUILD PRODUCTS		543 DRIFTWOOD	MICHAEL HUBERT 407-982-0430	REFER TO ELEVATIONS FOR LOCATIONS
PTW-2	STP TILE	CORSICA	TURCHESE EGG 3D	PORCELAIN WALL	4"X4"	GLOSSY	CUSTOM BUILD PRODUCTS		543 DRIFTWOOD	SHANNON POLER 407-489-2314	INSTALL VERTICALL ON ACCENT ACCENT
TRIM-1	SCHLUTER	JOLLY	BRUSHED BRASS	TRIM	1/2"						TILE EDGE TRIM

ID-EPOXY FLOORING SCHEDULE

FINISH CODE	MANUFACTURER	MFG. LINE	STYLE NO.	COLOR	THICKNESS	REP CONTACT	REMARKS
EPX-1	SIKA	POUR EPOXY	DECODUR FLAKE UEF	LUCID		JUAN LEON 256-483-0968	REFER TO FINISH PLANS FOR LOCATIONS

ID-SEALED / STAINED CONCRETE SCHEDULE

FINISH CODE	MANUFACTURER	MFG. LINE	STYLE NO.	COLOR	FLAME SPREAD RATING	REMARKS
SC-1	REFER TO ARCH SPECS	SEALED CONCRETE REFER TO ARCHITECTURAL SPECS-SPEC SECTION 09 99 01				
SC-2	REFER TO ARCH SPECS	POLISHED CONCRETE REFER TO ARCHITECTURAL SPECS-SPEC SECTION 03 35 43				

ID-PAINT SCHEDULE

FINISH CODE	MANUFACTURER	COLOR	FINISH/SHEEN	TYPE	REP CONTACT	REMARKS
PTE-1	SHERWIN WILLIAMS	SW7006 EXTRA WHITE	EPOXY	LOW VOC - SEE SPECIFICATIONS		WET AREAS WALLS U.N.O
PTL-1	SHERWIN WILLIAMS	SW7006 EXTRA WHITE	EGGSHELL WALLS/ FLAT CEILING	LOW VOC - SEE SPECIFICATIONS		EGGSHELL FINISH TYPICAL WALLS , FLAT FINISH CEILINGS U.N.O
PTL-2	SHERWIN WILLIAMS	SW6185 ESCAPE GRAY	EGGSHELL	LOW VOC - SEE SPECIFICATIONS		ACCENT WALLS
PTL-3	SHERWIN WILLIAMS	SW2811 ROOKWOOD BLUE GREEN	EGGSHELL	LOW VOC - SEE SPECIFICATIONS		ACCENT WALLS
PTL-4	SHERWIN WILLIAMS	SW7006 EXTRA WHITE	GLOSSY	LOW VOC - SEE SPECIFICATIONS		TRIMS AND INTERIOR DOORS FRAMES
PTL-5	SHERWIN WILLIAMS	SW6403 ESCAPADE GOLD	EGGSHELL	LOW VOC - SEE SPECIFICATIONS		ACCENT WALLS
PTL-6	SHERWIN WILLIAMS	SW2803 ROOKWOOD TERRA COTTA	EGGSHELL	LOW VOC - SEE SPECIFICATIONS		ACCENT WALLS

ID-QUARTZ SURFACES SCHEDULE

FINISH CODE	MANUFACTURER	TYPE	COLOR	SIZE	REP CONTACT	REMARKS
QTZ-1	CAMBRIA	QUARTZ	BRITTANICCA WARM	SLAB	TANYA BARKER 689-231-2493	2CM VERTICAL APPLICATION ON WALLS AND 3CM FOR COUNTERTOPS RIMROCK EDGE- REFER TO DRAWINGS FOR LOCATIONS.

ID-WOOD SCHEDULE

FINISH CODE	MANUFACTURER	MFG. LINE	SPECIES	COLOR	SIZE	REMARKS
WD-1	BY GC	FLAT TRIM BASE	PAINT GRADE	PAINTED PTL-4	6" H	BASE MOULDING REFER TO DRAWINGS FOR LOCATION
WDS-1	BY GC	MILLWORK STAINED GRADE	STAINED GRADE - MAPLE	TO MATCH PL-1		PROVIDE PAINTED SAMPLE TO DESIGNER/ARCHITECT FOR APPROVAL-REFER TO DRAWINGS FOR LOCATION.

ID-PLASTIC LAMINATE SCHEDULE

FINISH CODE	MANUFACTURER	STYLE NO.	COLOR	FINISH/SHEEN	REP CONTACT	REMARKS
PL-1	WILSONARAT	PLASTIC LAMINATE	LANDMARK WOOD 7981	12 SOFT GRAIN		MILLWORK MAIN WOOD STAIN COLOR- REFER TO DRAWINGS FOR LOCATIONS

ID-MISC SCHEDULE

FINISH CODE	MANUFACTURER	TYPE	STYLE NAME	STYLE NO.	FINISH/SHEEN	SIZE	REP CONTACT	REMARKS
HWD-1	RUDUNEST STORE BY AMAZONE	CABINET PULL GOLD	CABINET HANDLE SQUARE DRAWER PULLS		GOLD	10" LONG		. CABINET PULLS, REFER TO ELEVATIONS FOR INSTALLATION DIRECTION.
HWD-2	IRON SUPPORTS	BRACKET	HIDDEN COUNTERTOP L BRACKET		RAW STEEL	16" LONG		ISLAND OVERHAND COUNTER SUPPORT BRACKETS. REFER TO DRAWINGS FOR LOCATION

ID-DECORATIVE LIGHT SCHEDULE

FINISH CODE	MANUFACTURER	TYPE	STYLE NAME	STYLE NO.	FINISH/SHEEN	SIZE	REP CONTACT	REMARKS
EM-1	LIRON LIGHTING	ELECTRICAL MIRROR	M05	3000K LED		36" DIA.	PAULA RAMIREZ 689-220-8244	RESTROOM MIRRORS -REFER TO DRAWINGS FOR LOCATION
LF-1	VISUAL COMFORT & CO	LARGE PENDANT	ELLIOT LARGE PENDANT	5353PGY LED	PORTLAND GRAY	30" DIA X 11.75" HIGH (6" CHAIN)		QUANTITY X3 OVER ISLAND- REFER TO RCP PLAN FOR LOCATIONS
LF-2	VISUAL COMFORT & CO	CHANDELIER	MELANGE LARGE FLOATING DISC CHANDELIER	KW 5602AB-ALB	ANTIQUE BURNISHED BRASS	14" H X 44.75"W (O/A HEIGHT 47.75")		CONFERENCE ROOM-REFER TO RCP FOR LOCATIONS
LF-3	BEULUX	RECESSED LINEAR CABINET LIGHTING	RECESSED EXTRUSION	JE08-SL-F-L360-IP00-CT30-EC-MCM-X	ANODIZED SILVER	78.74"L, 0.98"W, H 0.28"H (CUT TO SIZE)	PAULA RAMIREZ 689-220-8244	UPPER CABINETS UNDER LIGHTING-REFER TO DRAWINGS FOR LOCATIONS
LF-4	EKLIPSE ARCHITECTURAL LIGHTING	CABINET LIGHTING	PROXI	PXE-24V-2.5W-ACL-3000K-90CRI-(LENGTHS VARIOUS)		REFER TO DRAWINGS FOR VARIOUS LENGTHS	PAULA RAMIREZ 689-220-8244	PROVIDE DRIVERS AS NECESSARY. INTERNAL CABINET LIGHTING -REFER TO DRAWINGS FOR LOCATION
LF-5	BEULUX	TAPELIGHT	FLORENCE SURFCE MOUNT	JE02-SL-F-L360-IP00-CT30-EC-MC-X			PAULA RAMIREZ 689-220-8244	SURFACE MOUNT UNDER COUNTER ISLAND LIGHTING -REFER TO DRAWINGS FOR LOCATION

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REVISIONS

MARK	DESCRIPTION	DATE

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SIGNATURE STEWART (SWF) HANGAR

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SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
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ISSUE DATE: 06/12/2024
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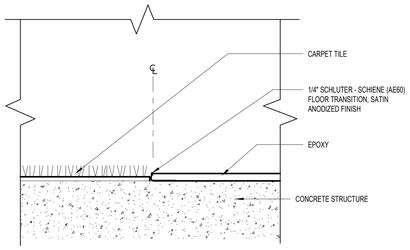
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FINISH SCHEDULE

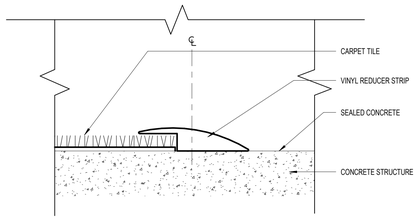
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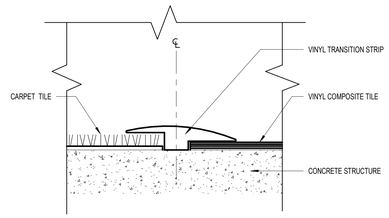
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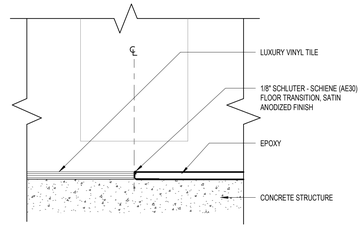
N1 — ID-CARPET TO EPOXY — 12" = 1'-0"



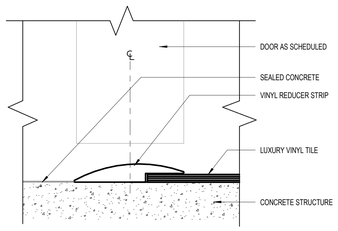
N5 — ID-CARPET TO SC — 12" = 1'-0"



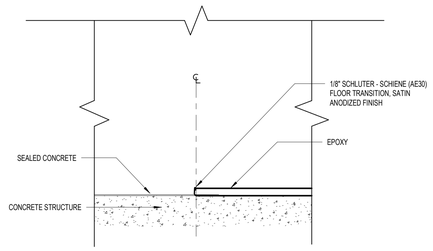
N9 — ID-CARPET TO VCT — 12" = 1'-0"



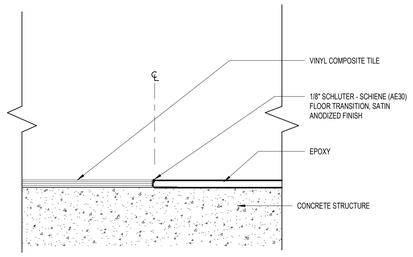
N13 — ID-LVT TO EPOXY — 12" = 1'-0"



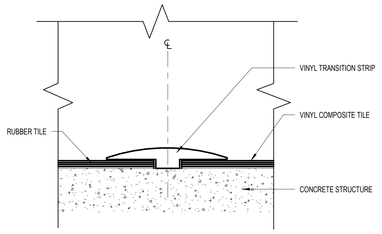
J1 — ID-LVT TO SC — 12" = 1'-0"



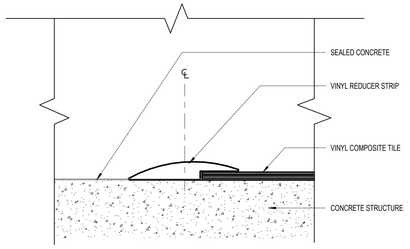
J5 — ID-SC TO EPOXY — 12" = 1'-0"



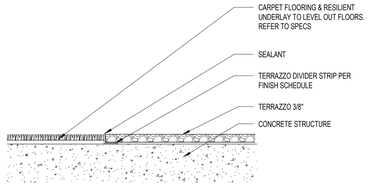
J9 — ID-VCT TO EPOXY — 12" = 1'-0"



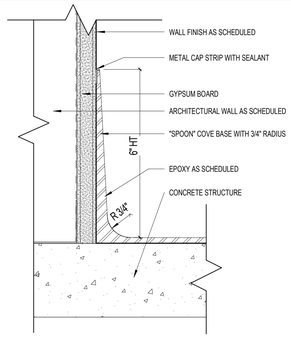
J13 — ID-VCT TO RUBBER — 12" = 1'-0"



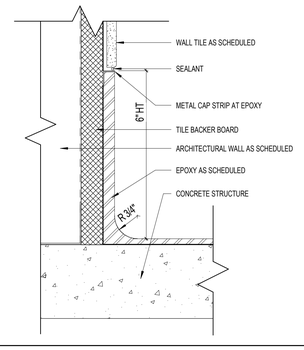
E1 — ID-VCT TO SC — 12" = 1'-0"



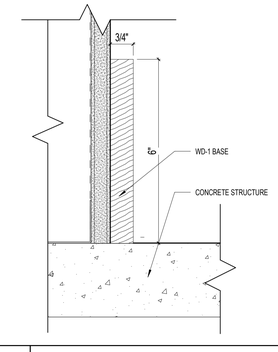
E5 — ID-CARPET W/O MATT TO EPOXY LOBBY — 3" = 1'-0"



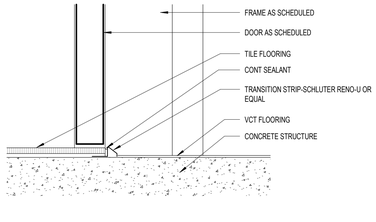
E9 — ID-EPOXY COVE BASE DETAIL — 6" = 1'-0"



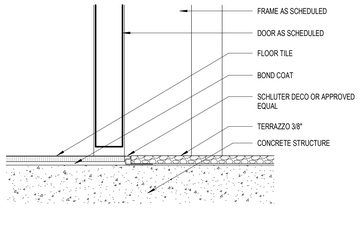
E12 — ID-EPOXY COVE BASE AT WALL TILE — 6" = 1'-0"



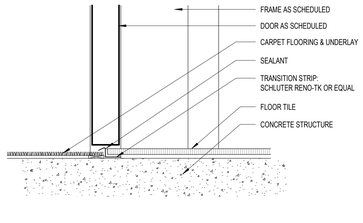
E16 — ID-WD BASE DETAIL — 6" = 1'-0"



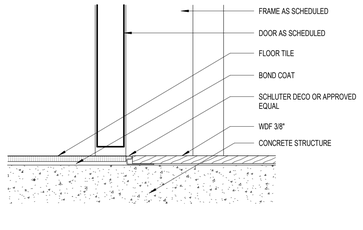
A1 — ID-TILE TO VCT — 3" = 1'-0"



A5 — ID-TILE TO TERRAZO — 3" = 1'-0"



A9 — ID-TILE TO CARPET — 3" = 1'-0"



A13 — ID-TILE TO WDF — 3" = 1'-0"

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KEY PLAN



SIGNATURE STEWART (SWF)
HANGAR

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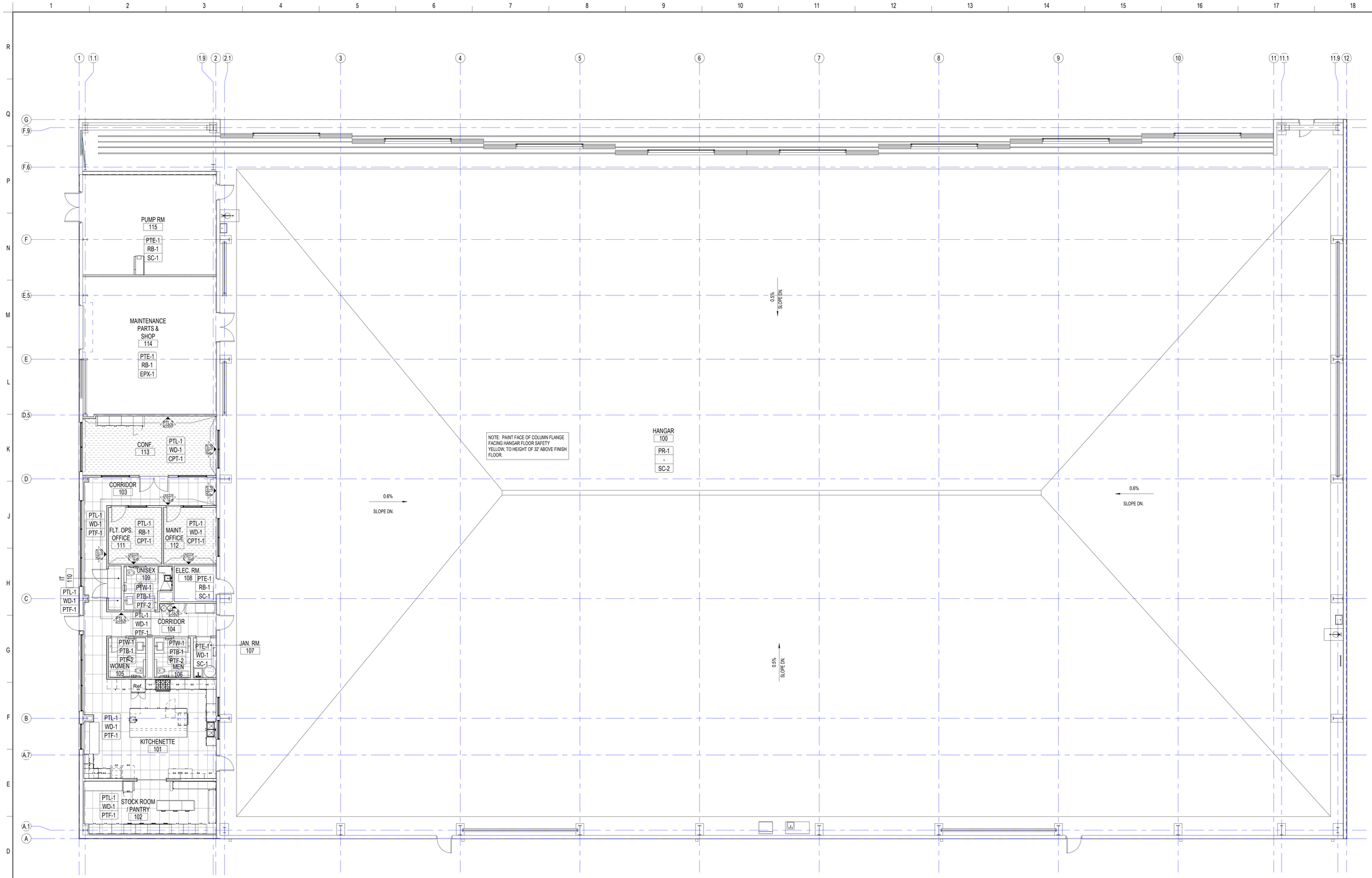
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TRANSITION DETAILS

A160.2

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N

A1 FINISH FLOOR PLAN

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

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FINISH FLOOR PLAN

A161

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EQUIPMENT SCHEDULE

TYPE MARK	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS			FINISH	PROVIDED BY	INSTALLED BY	TYPE COMMENTS
				WIDTH	DEPTH	HEIGHT				
E1	DUAL FUEL RANGE WITH GAS STOVE AND ELECTRIC OVEN	ZLINE	RAZ-36-CB	2' - 11 3/4"	2' - 3 1/2"	3' - 0 1/8"	STAINLESS STEEL WITH CHAMPAGNE BRONZE ACCENTS	CONTRACTOR	CONTRACTOR	AUTOGRAPH EDITION 36 IN. 4.6 CU. FT.
E2	RANGE HOOD WITH STAINLESS STEEL SHELL	ZLINE	8654STZ-36-CB	2' - 11 3/4"	2' - 5 1/8"	5' - 9 11/16"	STAINLESS STEEL WITH CHAMPAGNE BRONZE ACCENTS	CONTRACTOR	CONTRACTOR	STAINLESS STEEL
E3	TOUCHSTONE 151 CAN BEVERAGE FRIDGE WITH PANEL READY GLASS DOOR AND CHAMPAGNE BRONZE HANDLE	ZLINE	RBSPOZ-24-CB	1' - 11 7/8"	1' - 10 5/8"	2' - 10"		CONTRACTOR	CONTRACTOR	AUTOGRAPH EDITION 24 IN.
E4	36 IN. ANTON UNDER-MOUNT DOUBLE BOWL KITCHEN SINK WITH BOTTOM GRID	ZLINE	SR50D-36	3' - 0"	0' - 10"	1' - 7"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E5	30 IN. 1.2 CU. FT. BUILT-IN MICROWAVE DRAWER	ZLINE	MWDZ-30-SS-CB	2' - 5 3/4"	1' - 11 3/8"	1' - 3 3/4"	FINGERPRINT RESISTANT STAINLESS STEEL WITH CHAMPAGNE BRONZE ACCENTS	CONTRACTOR	CONTRACTOR	AUTOGRAPH EDITION
E6	3RD RACK TOP CONTROL TALL TUB DISHWASHER	ZLINE	DWVZ-SN-24-CB	1' - 11 1/2"	1' - 10 1/2"		FINGERPRINT RESISTANT STAINLESS STEEL WITH CHAMPAGNE BRONZE ACCENT HANDLE, 51DBA	CONTRACTOR	CONTRACTOR	AUTOGRAPH EDITION 24 IN.
E7	PRINTER / COPIER MACHINE	KONICA MINOLTA	BIZHUB 650i					OWNER	CONTRACTOR	
E8	15 IN. BOREAL UNDERMOUNT SINGLE BOWL BAR KITCHEN SINK	ZLINE	SUS-15	1' - 3"	0' - 7"	1' - 3"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E9	ISLAND/ KITCHEN SINK FAUCET	ZLINE		0' - 4"	0' - 10 1/4"	1' - 3"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E10	FREE-STANDING FRENCH DOOR REFRIGERATOR WITH ICE MAKER	ZLINE	RFMZ-36-CB	2' - 11 3/4"	2' - 5 1/8"	5' - 9 11/16"	STAINLESS STEEL WITH CHAMPAGNE BRONZE ACCENTS	CONTRACTOR	CONTRACTOR	
E11	ICE MACHINE AND BIN	MANITOWOC	UYFO140A 161	26"				CONTRACTOR	CONTRACTOR	W/GROWTH INHIBITOR/BIN LEVEL CONTROL/ARCTIC PURE WATER FILTERS AND AuCS
E12	COMPUTER MONITOR FOR OFFICE							OWNER	OWNER	
E13	SHOWER WITH EYEWASH	SEE PLUMBING	H-10735				STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E14	80" MONITOR/TV	SEE SPECS	SEE SPECS					OWNER	CONTRACTOR	CONTRACTOR TO PROVIDE INFRASTRUCTURE. SEE ELEVATION FOR MOUNTING HEIGHT.
E15	108-BOTTLE WINE COOLER WITH BEVERAGE CENTER DRAWERS AND DUAL ZONE COOLING	VINOTEMP	EL-BWC108-SS	1' - 11 1/2"	2' - 3"	6' - 5"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	STAINLESS STEEL
E16	TOUCHSTONE 151 CAN BEVERAGE FRIDGE WITH SOLID STAINLESS STEEL DOOR AND CHAMPANGE BRONZE HANDLE	ZLINE	RBSOZ-ST-24-CB	1' - 11 7/8"	1' - 11 1/4"	2' - 10"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	AUTOGRAPH EDITION 24 IN.
E17	POT FILLER	ZLINE		1' - 0"	0' - 8 1/2"	0' - 7"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E26	WORK TABLE WITH SINK	ADVANCE TABCO	TMG-248	5' - 0"	2' - 6"		STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E27	WATER FOUNTAIN / REFILLING STATION, BI- LEVEL	ELKAY	EZWS-EDFPBM117K	1' - 7"		2' - 10 5/8"	STAINLESS STEEL	CONTRACTOR	CONTRACTOR	
E28	STACKABLE WASHER AND DRYER	GE	GUD24ESSM /24GSSM	2' - 0"	2' - 3 1/2"	6' - 3"	STAINLESS STEEL WASHER	CONTRACTOR	CONTRACTOR	2.3 DOE CU.FT. AND 4.4 CU. FT. DRYER
E29	AIRCRAFT WATER CLOSET	TKE		3' - 5"	3' - 2"	4' - 6"		CONTRACTOR	CONTRACTOR	REQUIRES PLUMBING AND ELECTRICAL CONNECTIONS
E30	AIR COMPRESSOR	KAESER	SM 7.5 AIR CENTER	25"	48"	68"		CONTRACTOR	CONTRACTOR	

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HANGAR

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SIGNATURE AVIATION

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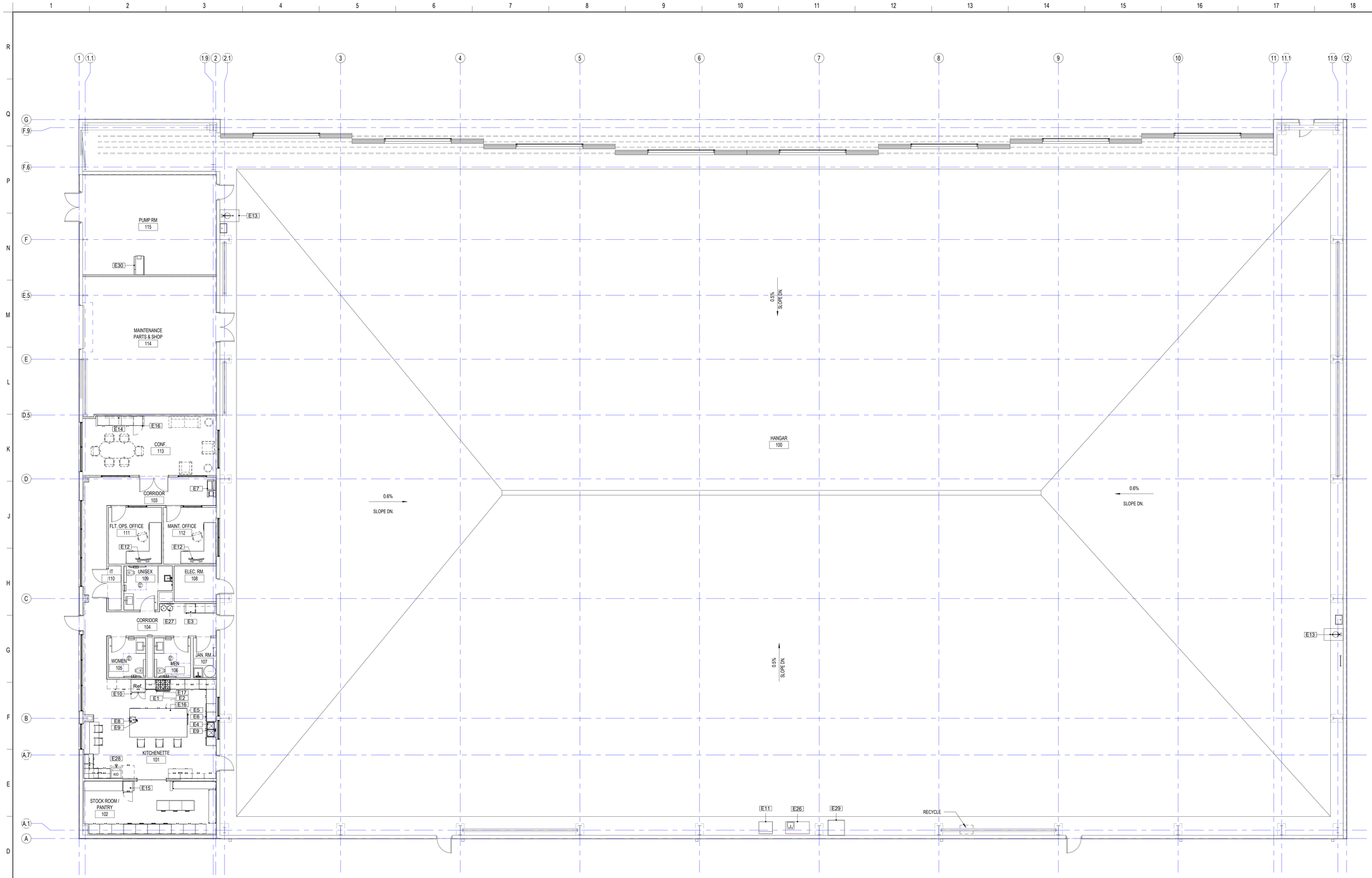
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EQUIPMENT SCHEDULE

A170

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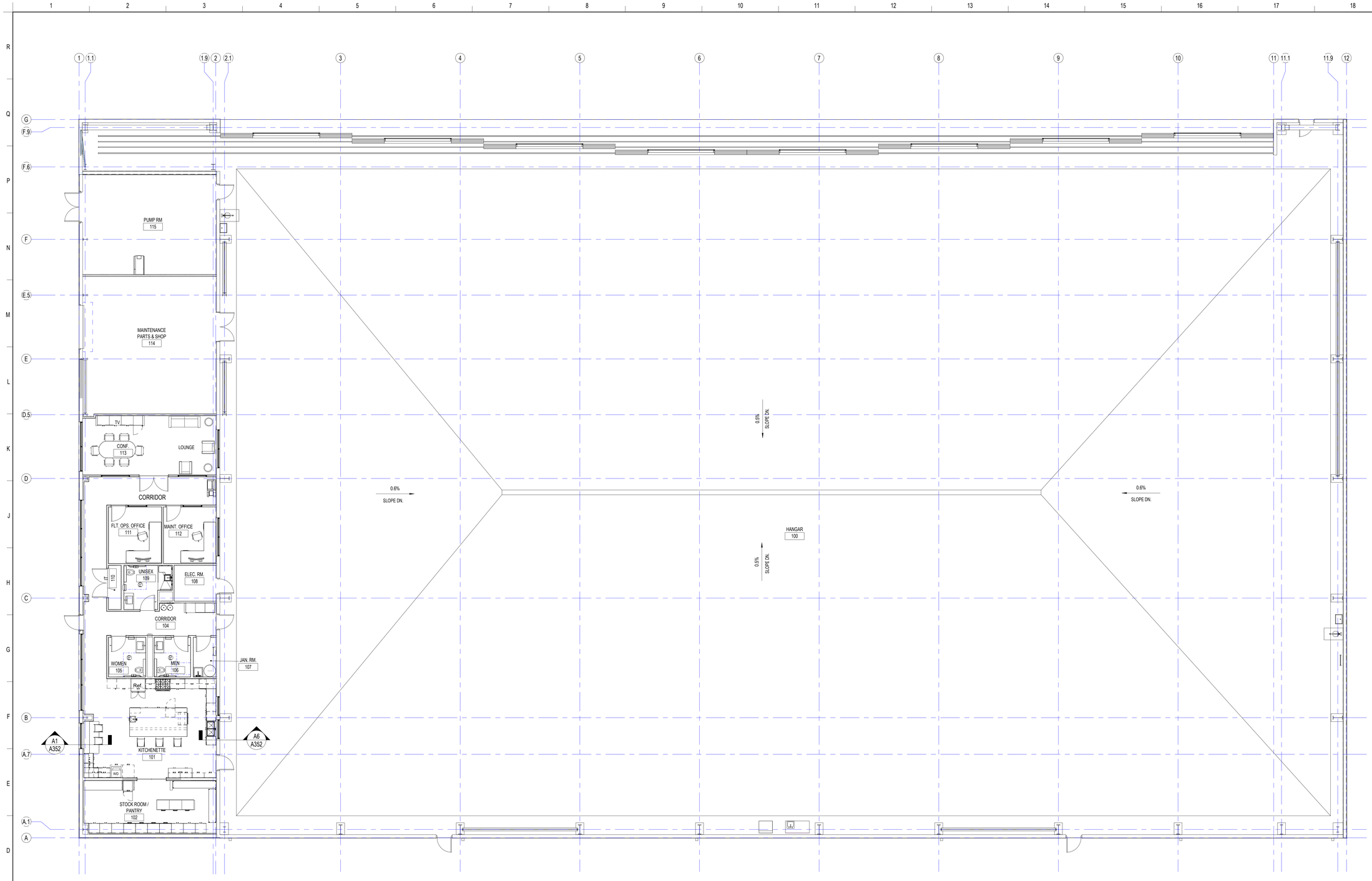
EQUIPMENT FLOOR PLAN

A171

100% PERMIT SET

A1
EQUIPMENT FLOOR PLAN
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"

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A1 FURNITURE PLAN

1/8" = 1'-0"

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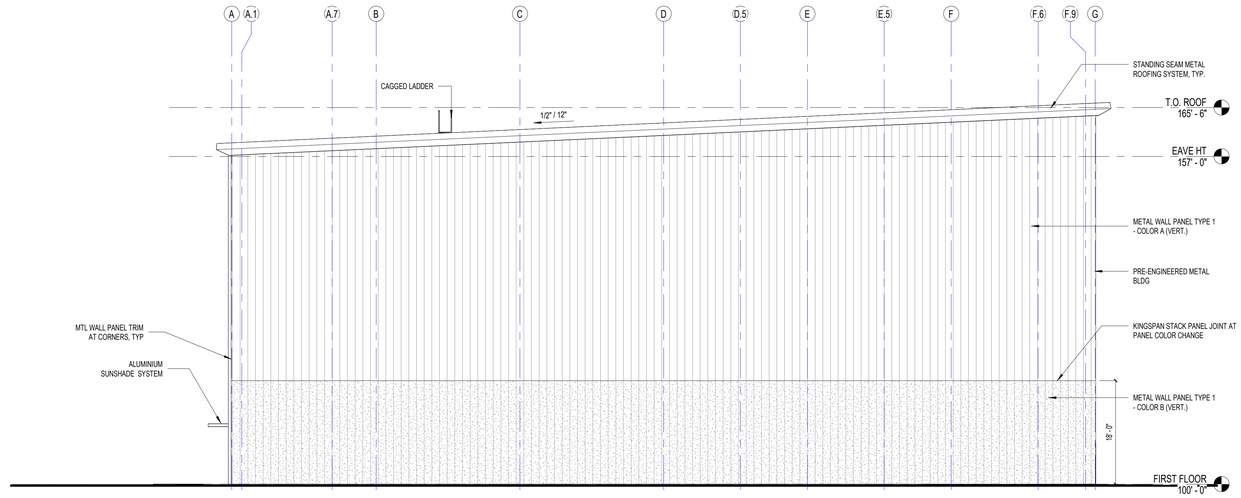
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FURNITURE PLAN

A181

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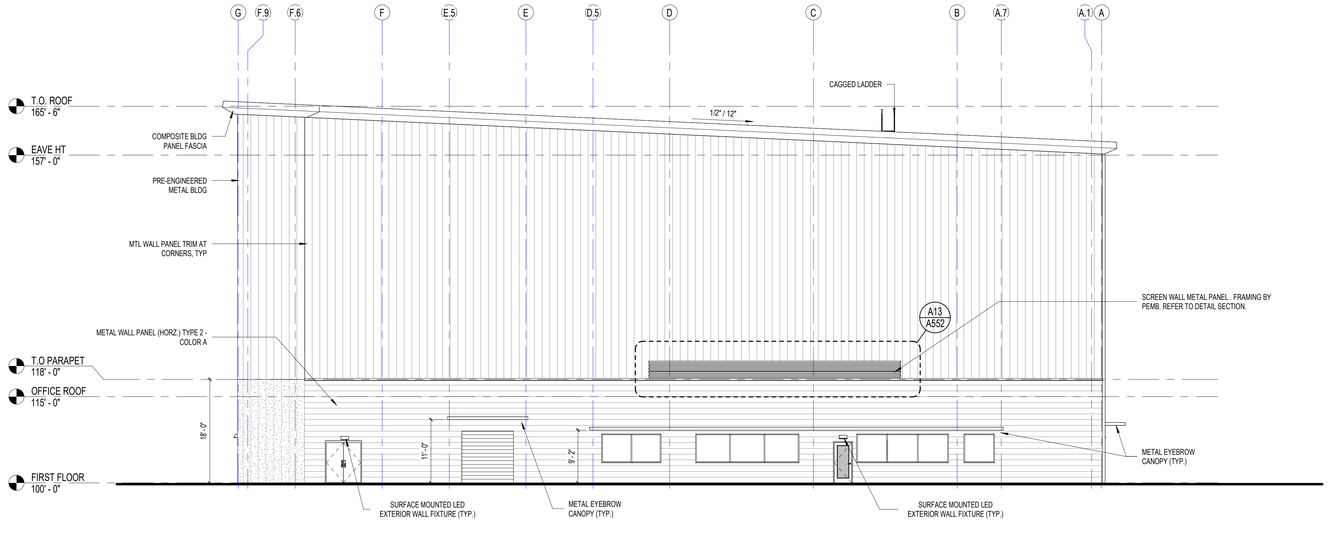
TAG	SYMBOL	DESCRIPTION	MANUFACTURER (BOD)	COLOR (BOD)
WP-1 COLOR A		METAL WALL PANEL (HANGAR WALLS VERTICAL RIBBED)	VARCO PRUDEN , PANEL RIB, SINGLE SKIN PANEL WITH BLANKET INSULATION	COLOR A: DOVE GRAY
WP-1 COLOR B		METAL WALL PANEL (HANGAR WALLS VERTICAL RIBBED)	VARCO PRUDEN , PANEL RIB, SINGLE SKIN PANEL WITH BLANKET INSULATION	COLOR B: ZINC GRAY
WP-1 COLOR C		METAL WALL PANEL (HANGAR DOORS VERTICAL RIBBED)	VARCO PRUDEN , PANEL RIB, SINGLE SKIN PANEL WITH BLANKET INSULATION	COLOR C: REGAL WHITE
WP-2		METAL WALL PANEL (HANGAR OFFICE- HORIZONTAL RIBBED)	TBD INSULATED KS SHADOWLINE	COLOR B: DOVE GRAY
WP-3		EQUIPMENT SCREEN HORIZONTAL CORRUGATED	PAC-CLAD/ PETERSEN 7.2 CORRUGATED PERFORATED	COLOR B: DOVE GRAY



H1 SOUTH ELEVATION

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"



A1 NORTH ELEVATION

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"

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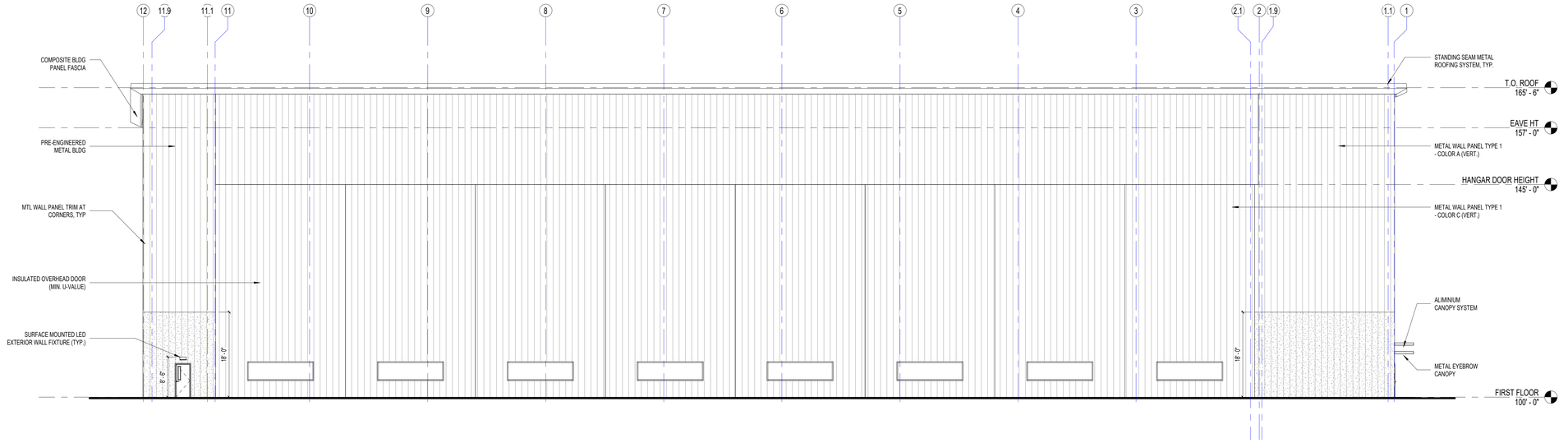
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EXTERIOR ELEVATIONS

A201

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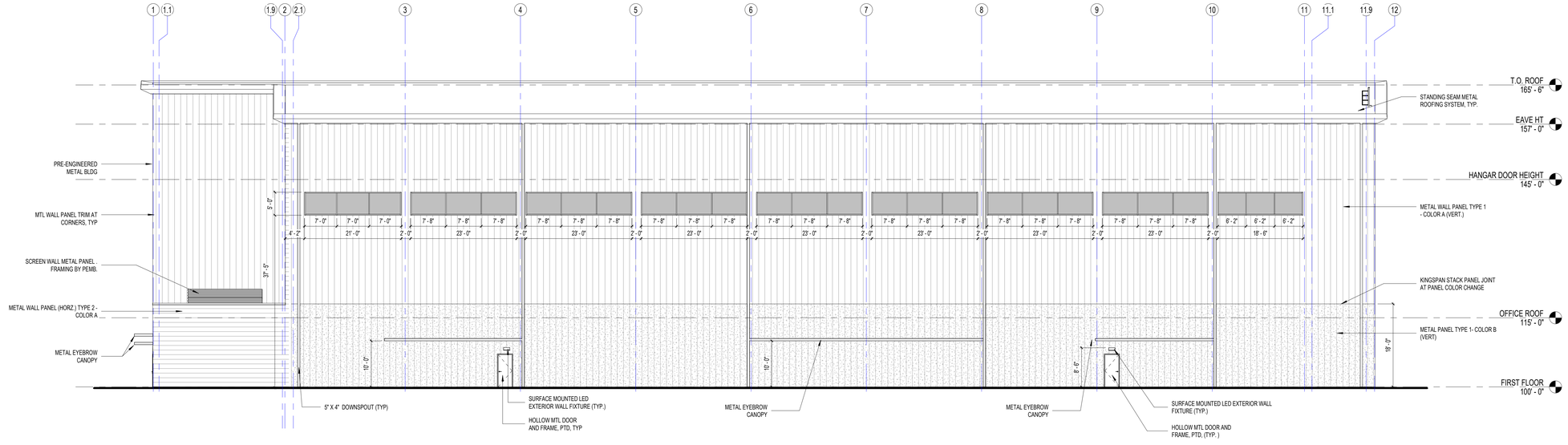
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J1 EAST ELEVATION

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"



A1 WEST ELEVATION

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"

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KEY PLAN



SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
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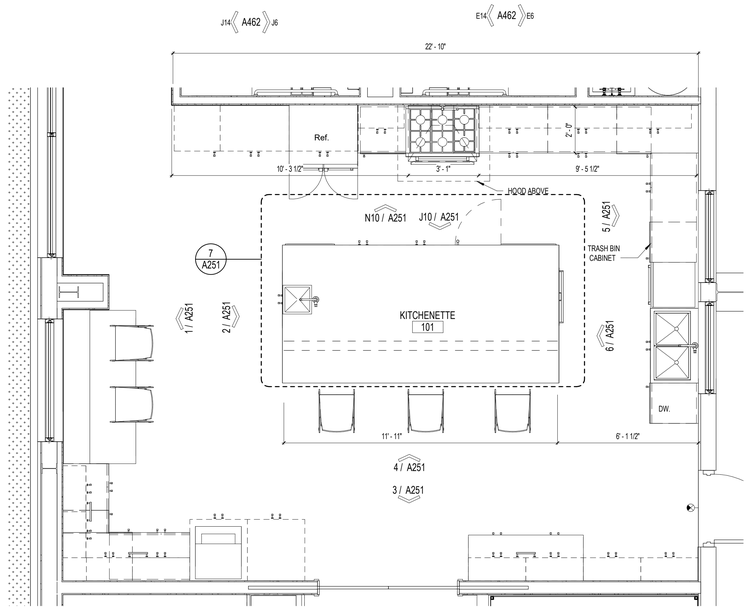
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EXTERIOR ELEVATION

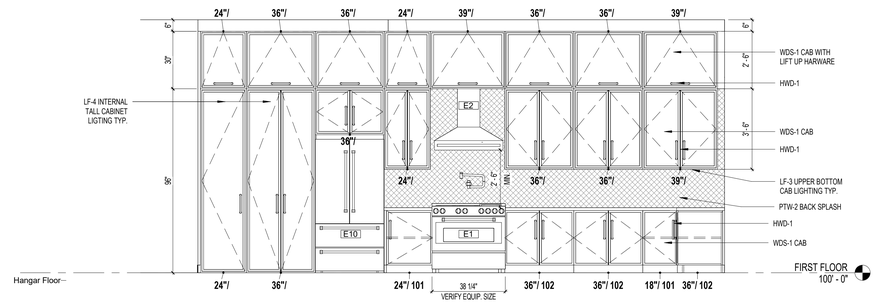
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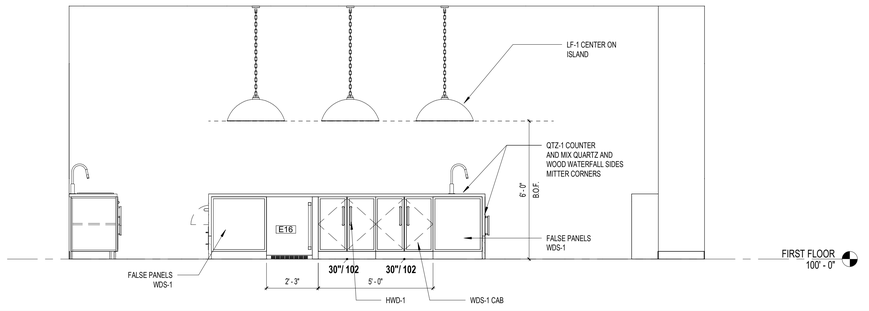
J1 KITCHENNETTE ENLARGED FLOOR PLAN

3/8" = 1'-0"



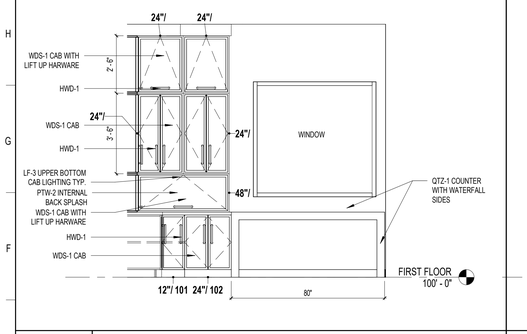
N10 KITCHENNETTE ELEVATION 1

3/8" = 1'-0"



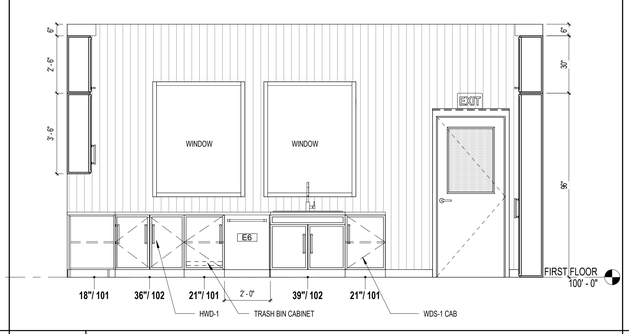
J10 KITCHENNETTE ELEVATION 2

3/8" = 1'-0"



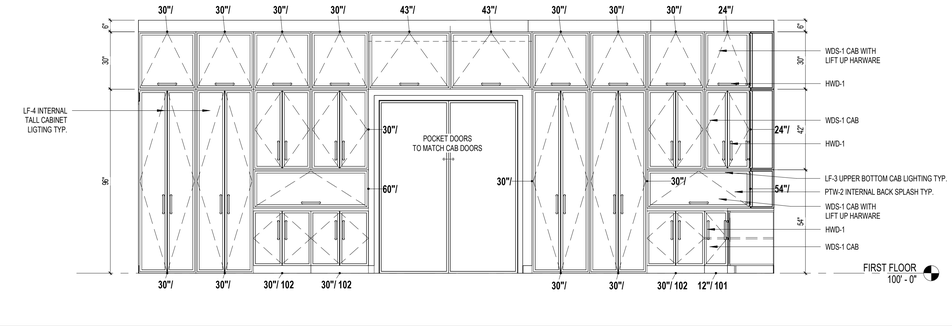
1 Elevation 1 - a

3/8" = 1'-0"



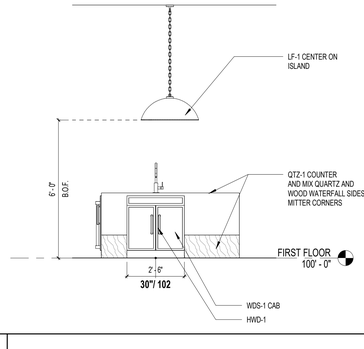
5 Elevation 4 - a

3/8" = 1'-0"



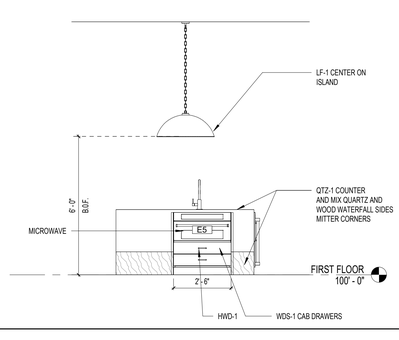
3 Elevation 6 - a

3/8" = 1'-0"



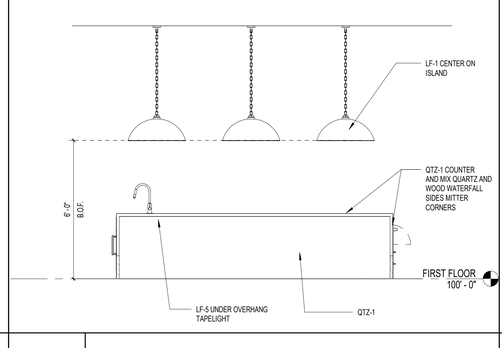
2 Elevation 2 - a

3/8" = 1'-0"



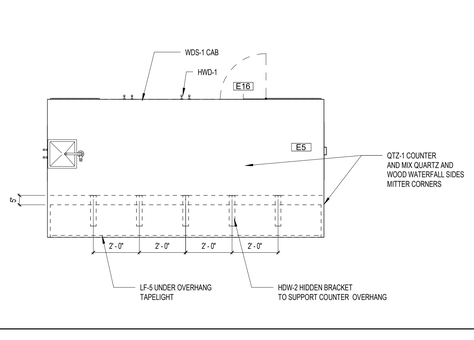
6 Elevation 5 - a

3/8" = 1'-0"



4 Elevation 3 - a

3/8" = 1'-0"



7 KITCHENNETTE ENLARGED FLOOR PLAN - Callout 1

3/8" = 1'-0"

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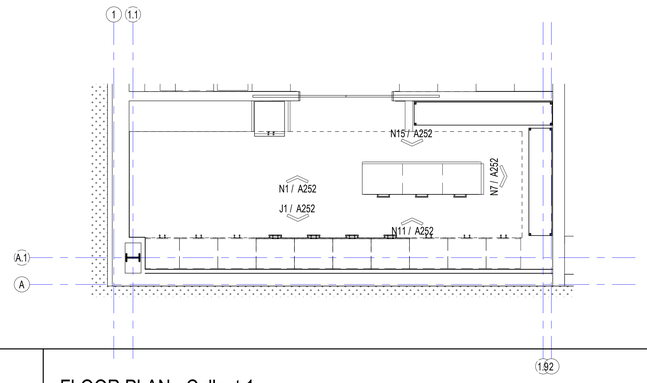
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INTERIOR ELEVATIONS

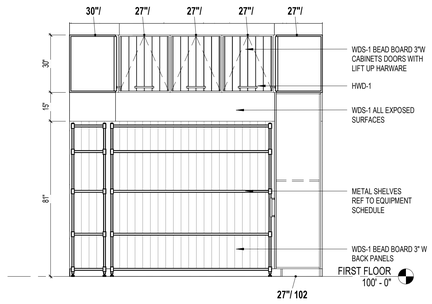
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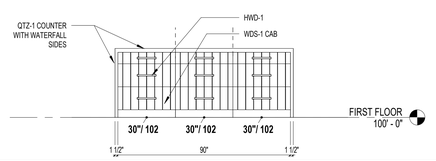


FLOOR PLAN - Callout 1



N7 — Elevation 9 - a

3/8" = 1'-0"



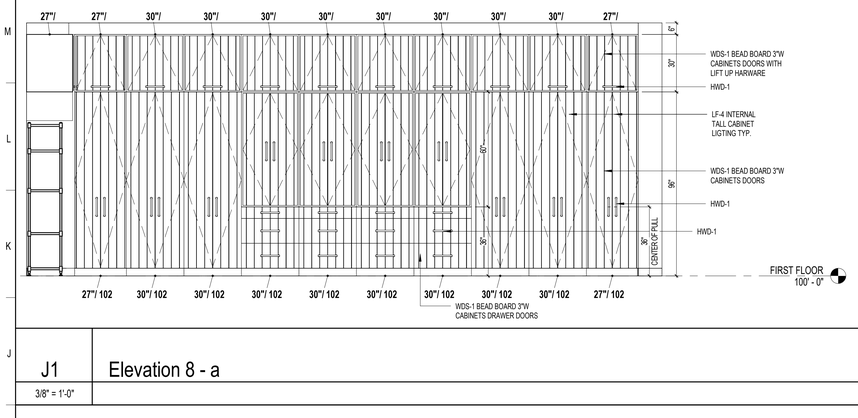
N11 — Elevation 10 - a

3/8" = 1'-0"



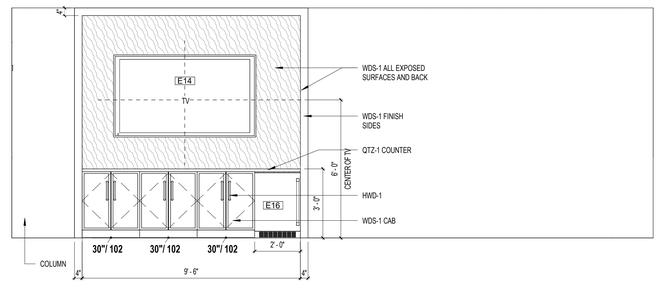
N15 — Elevation 12 - a

3/8" = 1'-0"



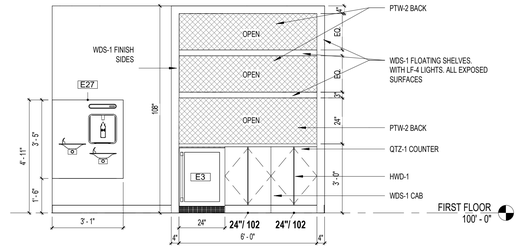
J1 — Elevation 8 - a

3/8" = 1'-0"



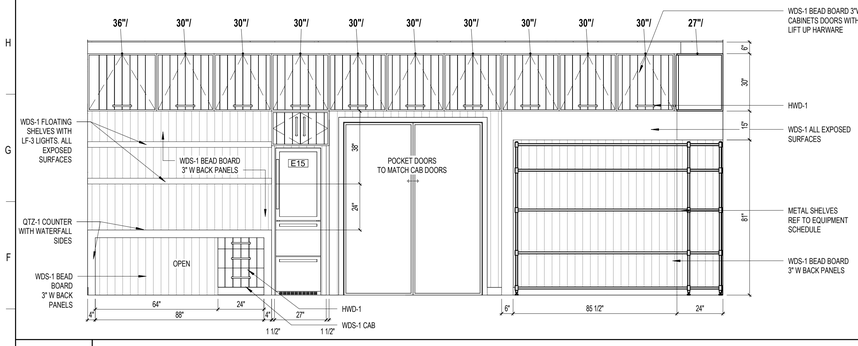
J7 — CONFERENCE ROOM - EAST

3/8" = 1'-0"



J14 — CORRIDOR - EAST

3/8" = 1'-0"



N1 — Elevation 7 - a

3/8" = 1'-0"

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HANGAR

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INTERIOR ELEVATIONS

A252

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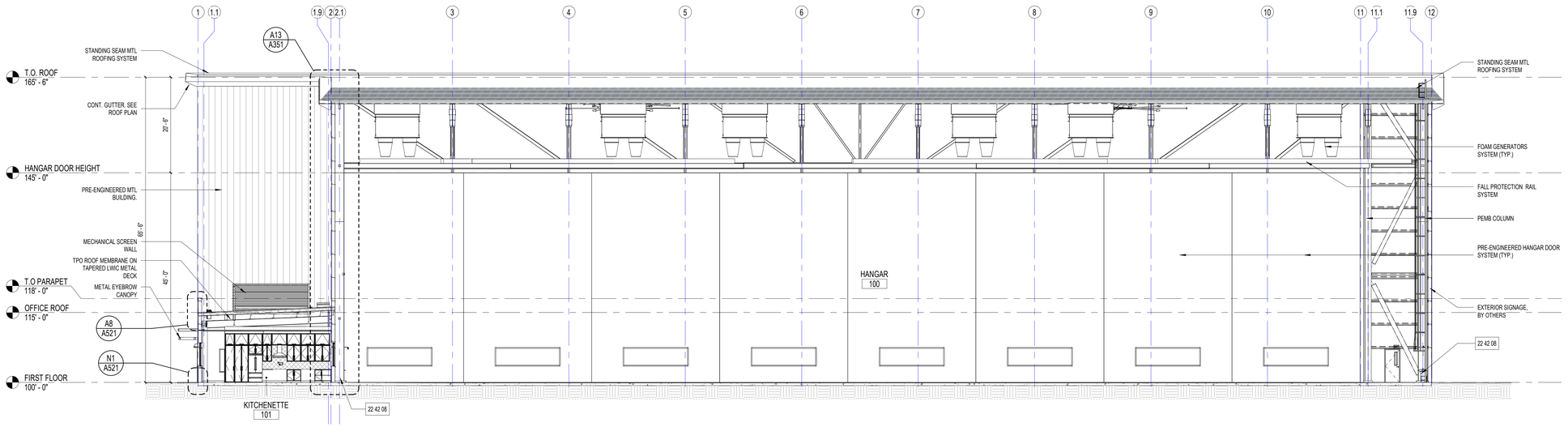
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KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
08 43 00.A10	GLAZED ALUMINIUM STOREFRONT
13 34 19.A1	METAL WALL PANELS-VERTICAL OVER PEMB GIRTS
13 34 19.A3	STANDING SEAM ROOFING SYSTEM
13 34 19.A4	ROOF PURLINS BY PEMB MANUFACTURER
13 34 19.A6	PEMB STRUCTURE, TYP. SEE LIFE SAFETY PLANS FOR ANY RATING REQUIREMENT FOR COLUMNS
22 42 07	EMERGENCY EYEWASH STATION. SEE PLUMBING
22 42 08	SERVICE SINK. SEE PLUMBING

GENERAL NOTES

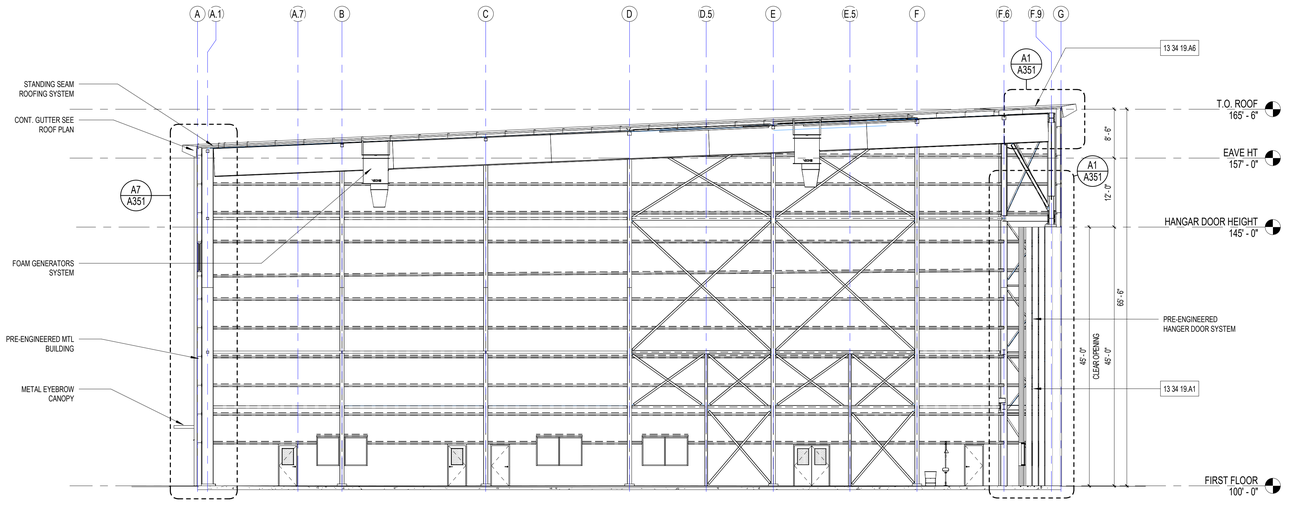
1. ALL EXPOSED CONDUITS, PIPING, WIRING, ETC ROUTING WITHIN THE HANGAR SPACE SHALL BE INSTALLED TIGHT TO THE CEILING AND/OR WALLS. ALL HORIZONTAL RUNS LOCATED WITHIN CEILING PLENUM AREA MUST BE INSTALLED A MINIMUM OF 3'-0" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE). WHERE INSTALLATION METHOD IS NOT POSSIBLE CONTRACTOR SHALL PROVIDE EXISTING CONDITIONS AND THE RECOMMENDED ALTERNATIVE SOLUTION PRIOR TO INSTALLATION FOR REVIEW BY ARCHITECT AND ENGINEER



J1 — BUILDING SECTION 1

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"



A1 — BUILDING SECTION 3

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"

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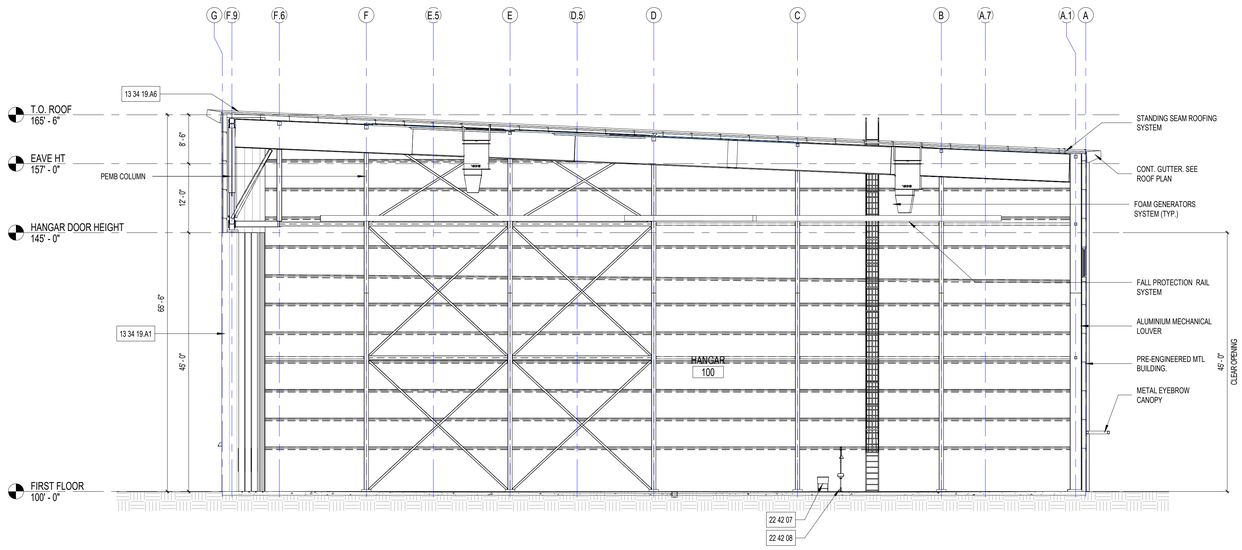
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BUILDING SECTIONS

A301

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GENERAL NOTES

1. ALL EXPOSED CONDUITS, PIPING, WIRING, ETC ROUTING WITHIN THE HANGAR SPACE SHALL BE INSTALLED TIGHT TO THE CEILING AND/OR WALLS. ALL HORIZONTAL RUNS LOCATED WITHIN CEILING PLENUM AREA MUST BE INSTALLED A MINIMUM OF 32'-0" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE). WHERE INSTALLATION METHOD IS NOT POSSIBLE CONTRACTOR SHALL PROVIDE EXISTING CONDITIONS AND THE RECOMMENDED ALTERNATIVE SOLUTION PRIOR TO INSTALLATION FOR REVIEW BY ARCHITECT AND ENGINEER

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
08 43 00.A10	GLAZED ALUMINIUM STOREFRONT
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13 34 19.A6	PEMB STRUCTURE, TYP. SEE LIFE SAFETY PLANS FOR ANY RATING REQUIREMENT FOR COLUMNS
22 42 07	EMERGENCY EYEWASH STATION. SEE PLUMBING
22 42 08	SERVICE SINK. SEE PLUMBING

K1

BUILDING SECTION 2

3/32" = 1'-0"

0 5'-4" 10'-8" 21'-4"

1. **HANGAR** - ALL EXPOSED CONDUITS, PIPING, WIRING, ETC ROUTING WITHIN THE HANGAR SPACE SHALL BE INSTALLED TIGHT TO THE CEILING AND/OR WALLS. ALL HORIZONTAL RUNS LOCATED WITHIN CEILING PLENUM AREA MUST BE INSTALLED A MINIMUM OF 28'-0" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE). WHERE INSTALLATION METHOD IS NOT POSSIBLE, CONTRACTOR SHALL PROVIDE EXISTING CONDITIONS AND THE RECOMMENDED ALTERNATIVE SOLUTION PRIOR TO INSTALLATION FOR REVIEW BY ARCHITECT AND ENGINEER.

GENERAL NOTES - SECTIONS

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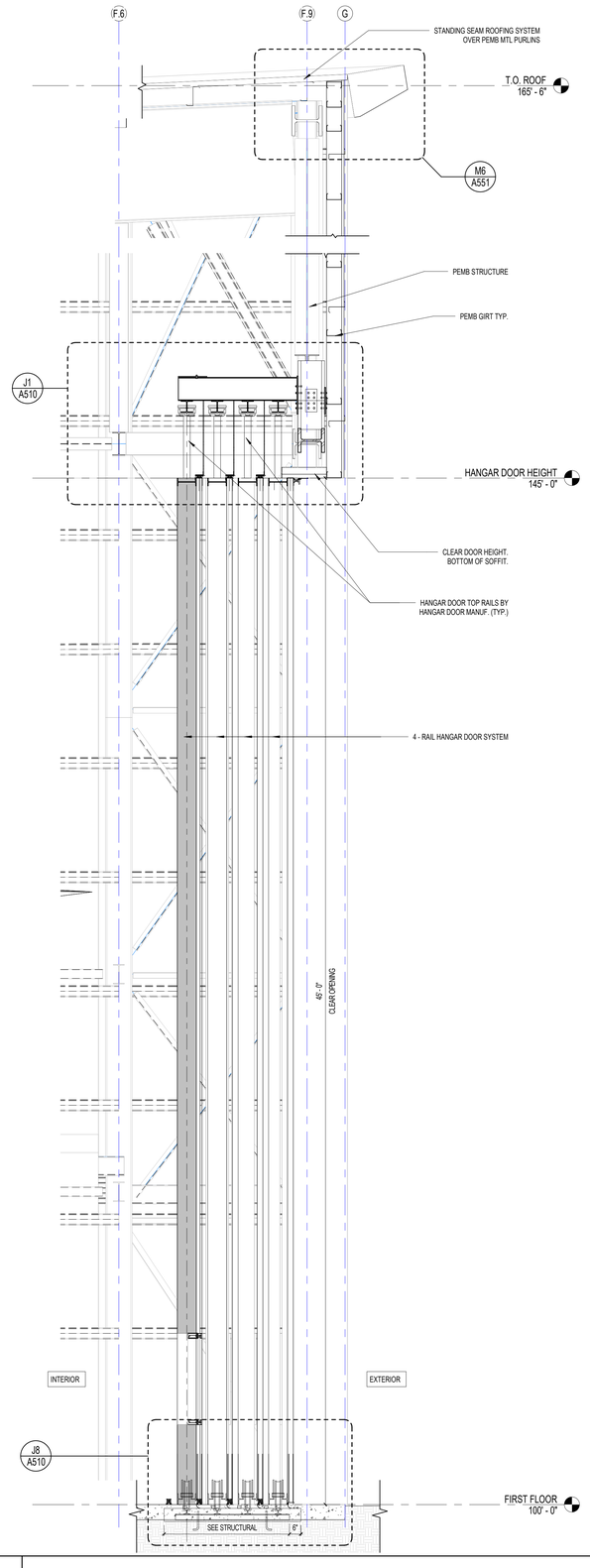
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BUILDING SECTIONS

A302

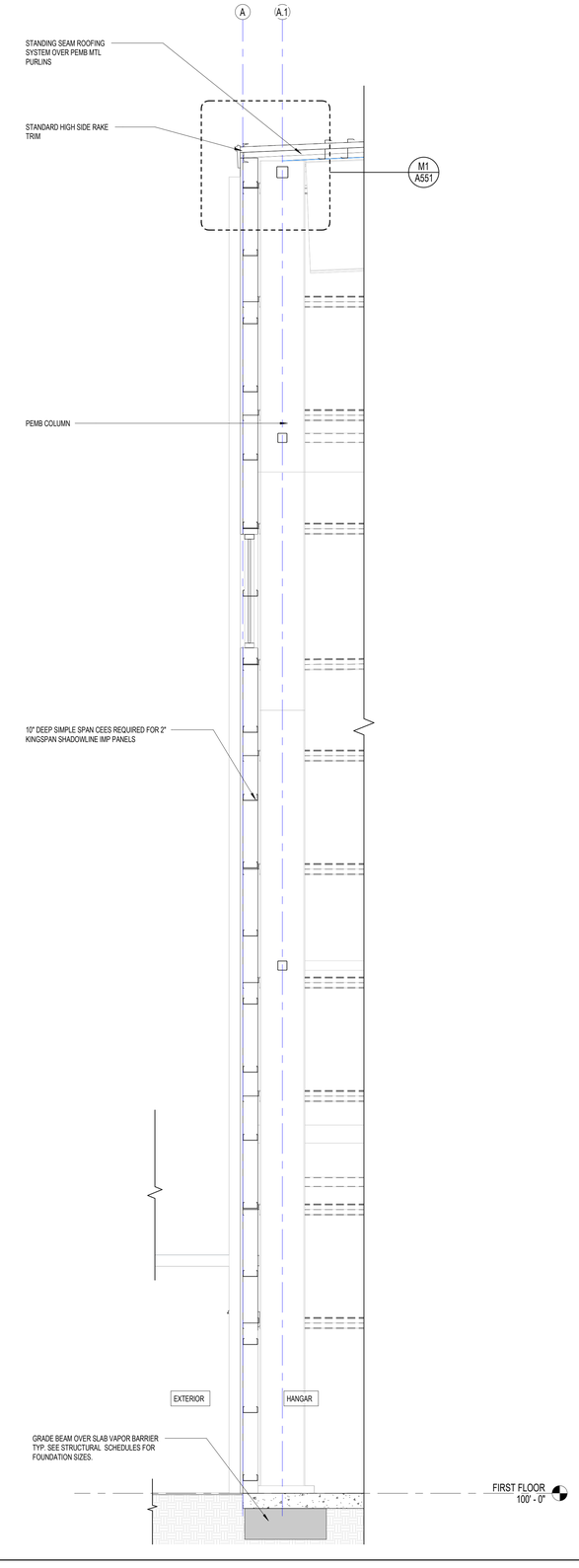
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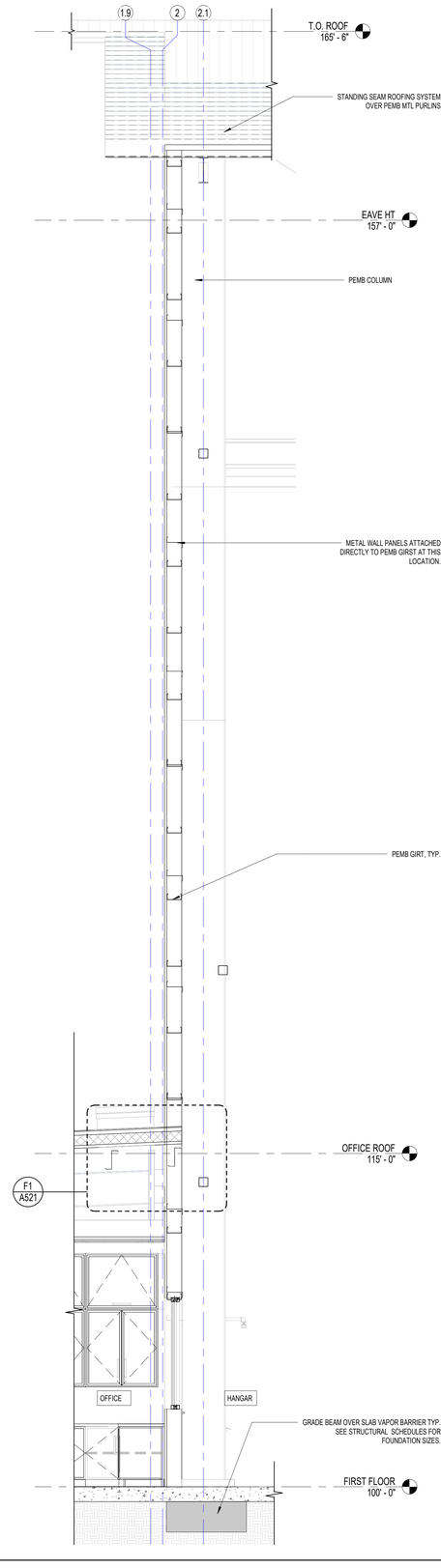
A1 WALL SECTION 1 - HANGAR

3/8" = 1'-0"



A7 WALL SECTION 2 - HANGAR

3/8" = 1'-0"



A13 WALL SECTION 3 - HANGAR

3/8" = 1'-0"

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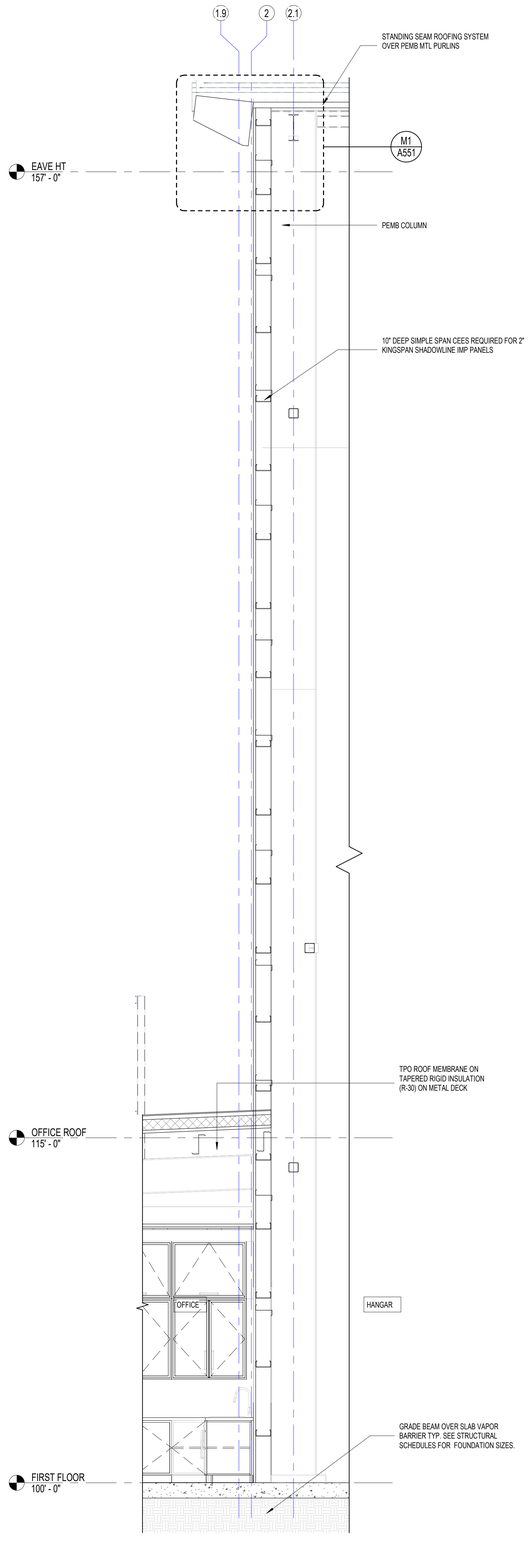
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WALL SECTIONS

A351

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A1 WALL SECTION 4 @ GRID LINE 1

3/8" = 1'-0"

A6 WALL SECTION 5 @ GRID LINE 2

3/8" = 1'-0"

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WALL SECTIONS

A352

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KITCHENETTE 3D View I



KITCHENETTE 3D VIEW II



KITCHENETTE 3D VIEW III



KITCHENETTE 3D VIEW IV

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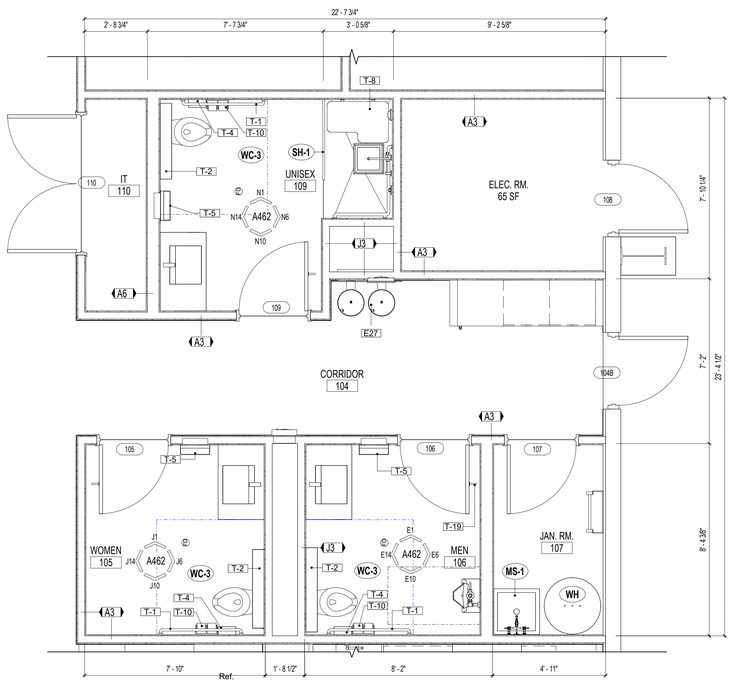
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KITCHENETTE 3D VIEWS

A460

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J1 ENLARGED TOILET PLAN - FIRST FLOOR

3/8" = 1'-0"

0 1'-4" 2'-8" 5'-4"

GENERAL NOTES:

1. ALL JANITORS FLOOR MOP SINKS TO RECEIVE 40" HIGH 18 GA SS WAINSCOT - SEE DESCRIPTION IN MOUNTING HEIGHT CHART ABOVE.
2. HEIGHTS TO COMPLY WITH ALL ADA REQUIREMENTS AND MANUFACTURER RECOMMENDATIONS.
3. ALL SINGLE USER TOILET ROOMS MUST BE SET UP TO BE HANDICAPPED ACCESSIBLE. ALL SUCH ROOMS SHALL HAVE HANDICAPPED TOILET, HANDICAPPED LAV AND GRAB BARS AND MIRRORS.

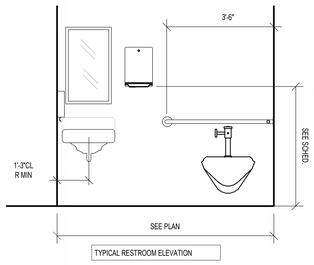
TOILET ACCESSORY SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING HEIGHT	REMARKS
T-1	GRAB BAR - 42 INCH	BOBRICK	B8606X42	SEE MOUNTING HEIGHT LEGEND	
T-2	GRAB BAR - 36 INCH	BOBRICK	B8606X36	SEE MOUNTING HEIGHT LEGEND	
T-4	SANITARY NAPKIN RECEPTACLE	BOBRICK	B-254		
T-5	RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	BOBRICK WASHROOM EQUIPMENT, INC.	B-3803	26" FROM F.F	
T-7	24" x 36" L-SHAPED HORIZONTAL GRAB BAR	BOBRICK WASHROOM EQUIPMENT, INC.	B-68616	<varies>	@ SHOWER
T-8	FOLDING SHOWER SEAT	BOBRICK WASHROOM EQUIPMENT, INC.	B-517 / B-518	<varies>	
T-10	TOILET PAPER DISPENSER	HARNEY HARDWARE	10202		

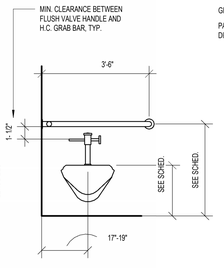
TOILET FIXTURES SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING HEIGHT	REMARKS
LAV-2	UNDER COUNTER MTD LAVATORY	REFER TO PLUMBING DRAWINGS		34" TO RIM	MIN. 29" AFF FOR KNEE CLEARANCE
MS-1	MOP SINK	REFER TO PLUMBING DRAWINGS	REFER TO PLUMBING DRAWINGS		PROVIDE S.S. WAINSCOT PANELS - SEE DIAGRAM BELOW
EWC-1	ELECTRIC WATER COOLER	REFER TO PLUMBING DRAWINGS		36" MAX TO SPOUT OUTLET	
SH-1	TILE SHOWER, REFER TO SHEET A462 TOILET ROOM ELEVATIONS AND A160 FINISH SCHEDULE.	-	-	-	SHOWER TO INCLUDE GRAB BARS, FOLDING SHOWER SEAT, HAND HELD SHOWER ASSEMBLY WITH SIDE BAR, PRESSURE BALANCING AND MIXING VALVE, SOAP DISH.
WC-3	WALL MOUNTED TOILET	REFER TO PLUMBING DRAWINGS	REFER TO PLUMBING DRAWINGS	17" - 19" TO SEAT	
EM-1	ROUND MIRROR	ARTFOMA		SEE MOUNTING HEIGHT LEGEND	COLOR - BLACK

ACCESSORY MOUNTING HEIGHTS

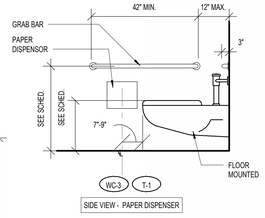


TYPICAL RESTROOM ELEVATION



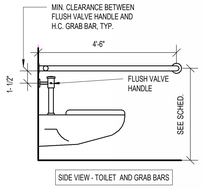
WC-3 T-2

FLUSH VALVE HEIGHT

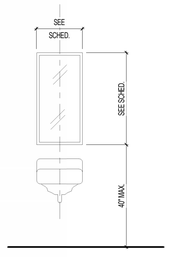


WC-3 T-1

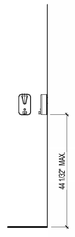
SIDE VIEW - PAPER DISPENSER



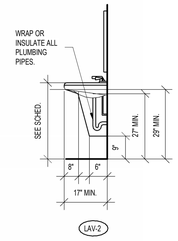
SIDE VIEW - TOILET AND GRAB BARS



MIRROR

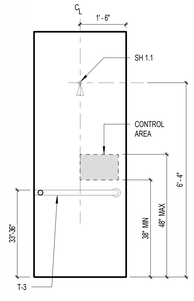


SOAP DISPENSER

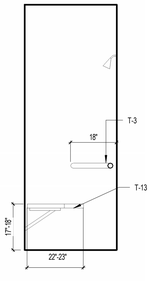


LAV-2

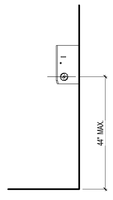
WALL HUNG SINKS / MIRROR



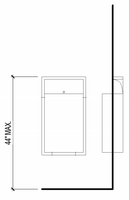
SHOWER ELEVATION 1



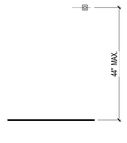
SHOWER ELEVATION 2



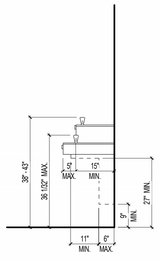
HAND TOWEL DISPENSER



WASTE RECEPTACLE



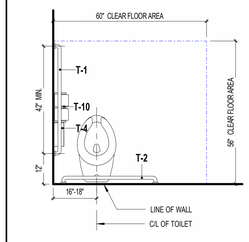
ROBE HOOK



ELECTRIC WATER COOLER

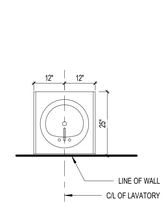
TYPICAL FIXTURE CONFIGURATIONS

NOTES
1. ALL TOILET ACCESSORIES SHOWN ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO ACCURATELY REFLECT THE SPECIFIED PRODUCT. REFER TO TOILED ACCESSORY SCHEDULE AND SPECIFICATIONS.
2. PLUMBING FIXTURES SHOWN ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO ACCURATELY REFLECT THE SPECIFIED PRODUCT. REFER TO PLUMBING FIXTURE SCHEDULE.
3. CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE REQUIRED INSTALLATION MOUNTING HEIGHTS AND CLEARANCES PRIOR TO INSTALLATION OF FIXTURES AND/OR ACCESSORIES.



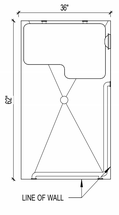
WC-3

ACCESSIBLE
WATER CLOSET

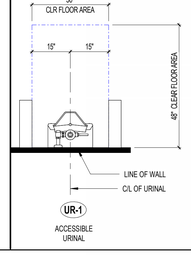


LAV-2

ACCESSIBLE
LAVATORY

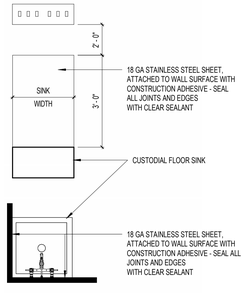


SHOWER



UR-1

ACCESSIBLE
URINAL



MS-1

MOP SINK

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL

REVISIONS

MARK	DESCRIPTION	DATE

KEY PLAN



SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

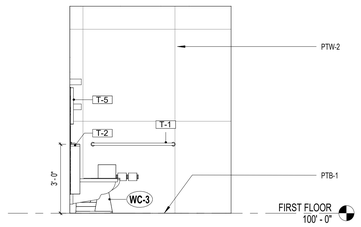
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ENLARGED FLOOR PLANS - TOILET

A461

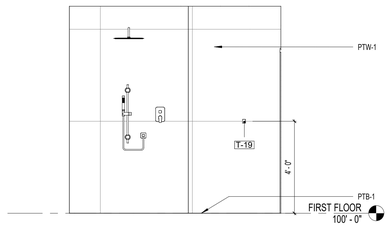
100% PERMIT SET

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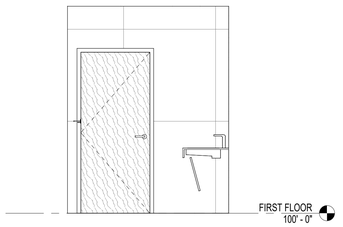
N1 UNISEX - A

3/8" = 1'-0"



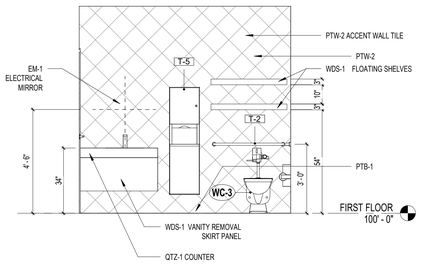
N6 UNISEX - B

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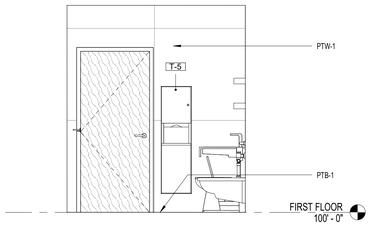
N10 UNISEX - C

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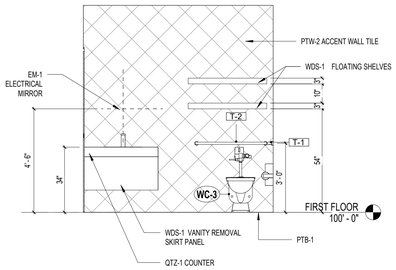
N14 UNISEX - D

3/8" = 1'-0"



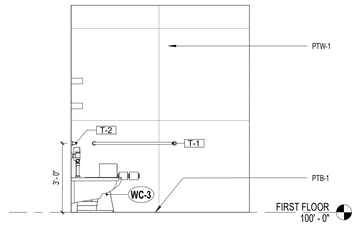
J1 WOMEN - A

3/8" = 1'-0"



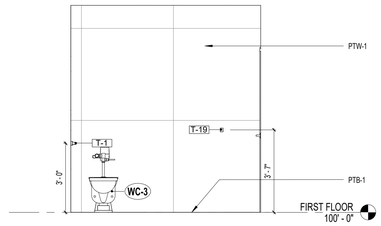
J6 WOMEN - B

3/8" = 1'-0"



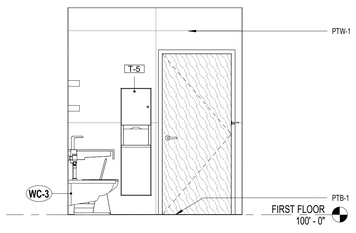
J10 WOMEN - C

3/8" = 1'-0"



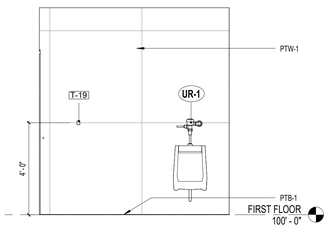
J14 WOMEN - D

3/8" = 1'-0"



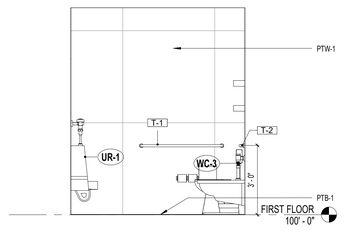
E1 MEN - A

3/8" = 1'-0"



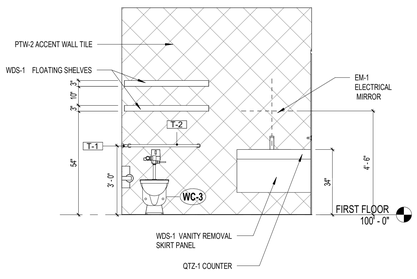
E6 MEN - B

3/8" = 1'-0"



E10 MEN - C

3/8" = 1'-0"



E14 MEN - D

3/8" = 1'-0"

HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL

REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

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TOILET ROOM ELEVATIONS

A462

100% PERMIT SET

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DOOR SCHEDULE

MARK	DESCRIPTION	HW SET	RATING	HEIGHT	WIDTH	DOOR FRAME TYPE	DOOR FRAME MATERIAL	DOOR PANEL TYPE	DOOR PANEL MATERIAL	GLAZING	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	COMMENTS
100A	HANGAR	6.0		7' - 0"	3' - 0"	3	HM	N	HM	GLASS	E10/A510	J12/A511	J16/A511	
100B	HANGAR	6.0		7' - 0"	3' - 0"	3	HM	F	HM	N/A	J9/A511	J12/A511	J16/A511	
100C	HANGAR	6.0		7' - 0"	3' - 0"	3	HM	F	HM	N/A	J9/A511	J12/A511	J16/A511	
101B	KITCHENETTE	5.0	45 min.	7' - 0"	3' - 0"	3	HM	G	HM	GL-2	E10/A510	J12/A511	J16/A511	45 MIN. FIRE RATED GLAZING
102	STOCK ROOM / PANTRY	9.0		7' - 6"	6' - 0"		WD		WD	N/A				POCKET DOOR
103A	CORRIDOR	6.0		7' - 0"	3' - 0"	1	HM	N	HM	GL-1	E10/A510	E8/A511	J16/A511	
104B	CORRIDOR	5.0	45 min.	7' - 0"	3' - 0"	3	HM	G	HM	GL-2	E10/A510	J12/A511	J16/A511	45 MIN. FIRE RATED GLAZING
105	WOMEN'S R.R.	2.0		7' - 0"	3' - 0"	1	HM	F	WD	N/A	J9/A511	J12/A511	J16/A511	
106	MEN'S R.R.	2.0		7' - 0"	3' - 0"	1	HM	F	WD	N/A	J9/A511	J12/A511	J16/A511	
107	JANITOR ROOM	1.0		7' - 0"	3' - 0"	1	HM	F	WD	N/A	J9/A511	J12/A511	J16/A511	
108	ELECTRICAL ROOM	3.0	45 min.	7' - 0"	3' - 0"	3	HM	F	HM	N/A	J9/A511	J12/A511	J16/A511	
109	UNISEX R.R.	2.0		7' - 0"	3' - 0"	1	HM	F	WD	N/A	J9/A511	J12/A511	J16/A511	
110	IT ROOM	1.0		7' - 0"	6' - 0"	2	HM	FG	WD	N/A	J9/A511	J12/A511	J16/A511	
111	FLT. OPS. OFFICE	7.0		7' - 0"	3' - 0"	1	HM	F	AL	GL-1	E10/A510	E8/A511	J16/A511	
112	MAINTENANCE OFFICE	7.0		7' - 0"	3' - 0"	1	HM	F	AL	GL-1	E10/A510	E8/A511	J16/A511	
113	CONFERENCE ROOM	10.0		7' - 0"	6' - 0"	2	HM	FG	GL-1	GLASS	E10/A510	J12/A511	J16/A511	
114A	MAINTENANCE PARTS & SHOP	8.0		9' - 0"	9' - 0"	MFG	STL	OHS	STL	N/A	N8/A510	N12/A510	N15/A510	CANISTER, OVERHEAD DOOR, HIGH SPEED OPENING/ CLOSING , INSULATED
114B	MAINTENANCE PARTS & SHOP	11.0	45 min.	7' - 0"	6' - 0"	2	HM	G (2)	HM	GL-2	E10/A510	J12/A511	J16/A511	45 MIN. FIRE RATED GLAZING
115A	PUMP ROOM	12.0		7' - 0"	6' - 0"	4	HM	F (2)	HM	N/A	D6/A510	E10/A510	J16/A511	
115B	PUMP ROOM	5.0	45 min.	7' - 0"	3' - 0"	3	HM	F	HM	N/A	J9/A511	J12/A511	J16/A511	

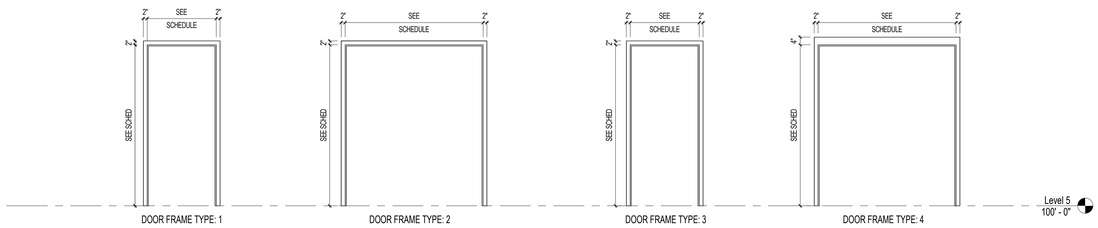
DOOR SCHEDULE COMMENTS

1. PROVIDE DRIP EDGE OVER DOOR
2. EGRESS ONLY DOOR
3. PANIC HARDWARE
4. INSTALL PER PEMB MANUFACTURER DETAILS
5. 180 DEGREE SWING
6. DUMPSTER GATE. REFER TO SHEET A572

GLAZING TYPE

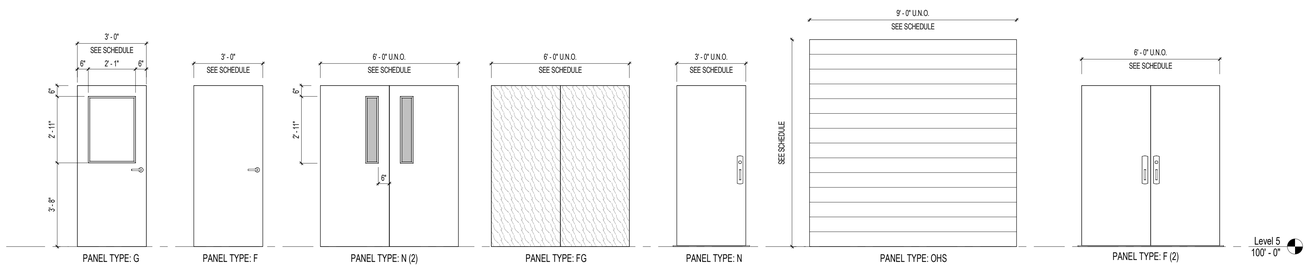
GL-1: INSULATED IMPACT RESISTANT GLAZING - CLEAR

INDICATES TYPE II SAFETY GLAZING PER TABLE 2406.2(1)



E9 DOOR FRAME TYPE

3/8" = 1'-0"



A9 DOOR PANEL TYP

3/8" = 1'-0"

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
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SEAL

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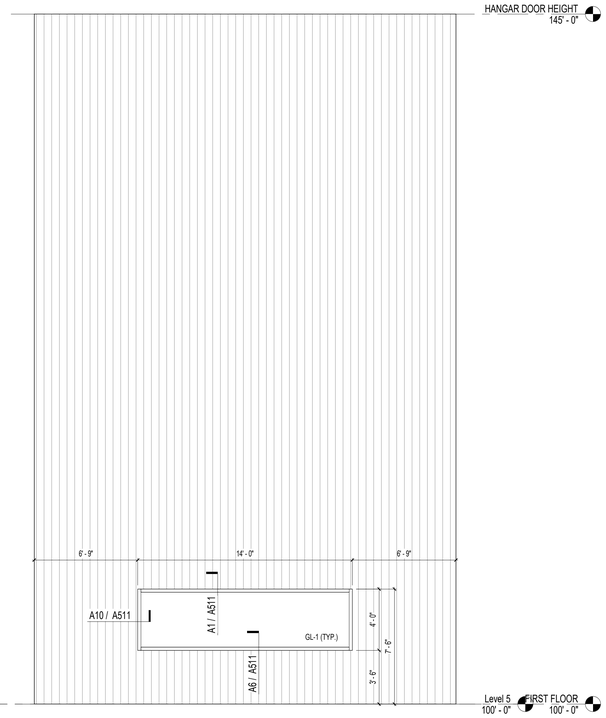
DRAWN BY: Author CHECKED BY: Checker

DOOR SCHEDULE, DOOR & FRAME TYPES

A500

100% PERMIT SET

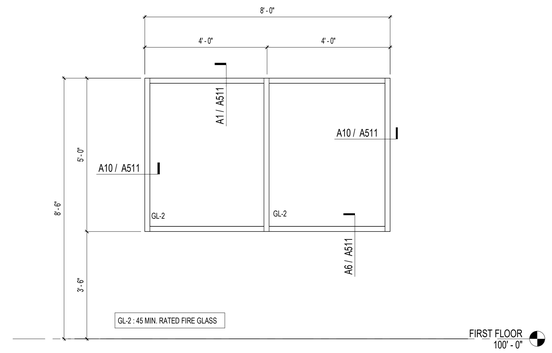
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SF4 — STOREFRONT ELEVATION - SF4

1/4" = 1'-0"

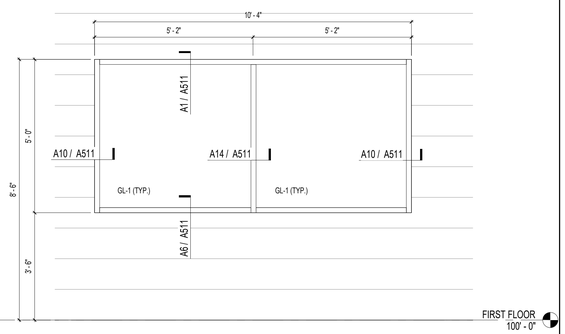
0 1'-0" 2'-0" 4'-0"



SF5 — STOREFRONT ELEVATION - SF5

1/2" = 1'-0"

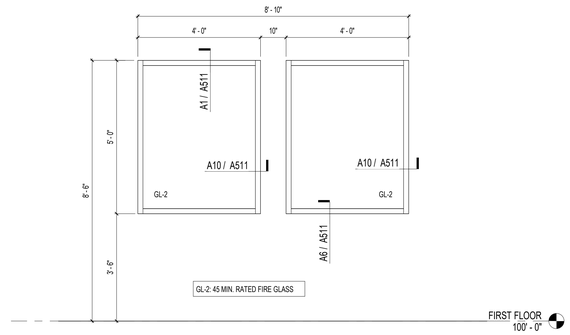
0 1'-0" 2'-0" 4'-0"



SF6 — STOREFRONT ELEVATION - SF6

1/2" = 1'-0"

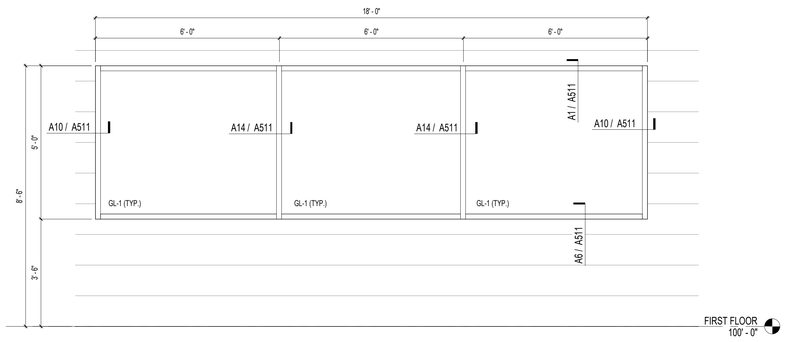
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SF1 — STOREFRONT ELEVATION - SF1

1/2" = 1'-0"

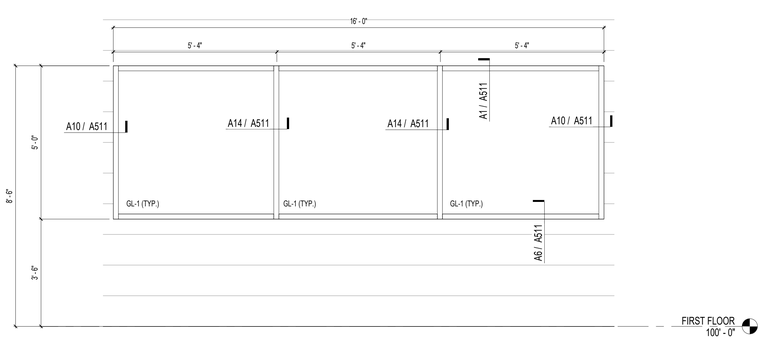
0 1'-0" 2'-0" 4'-0"



SF2 — STOREFRONT ELEVATION - SF2

1/2" = 1'-0"

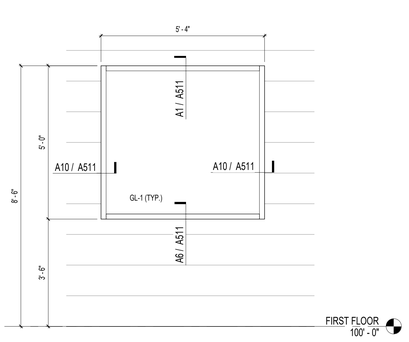
0 1'-0" 2'-0" 4'-0"



SF3 — STOREFRONT ELEVATION - SF3

1/2" = 1'-0"

0 1'-0" 2'-0" 4'-0"



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127 W. FAIRBANKS AVENUE, SUITE 140
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KEY PLAN



SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

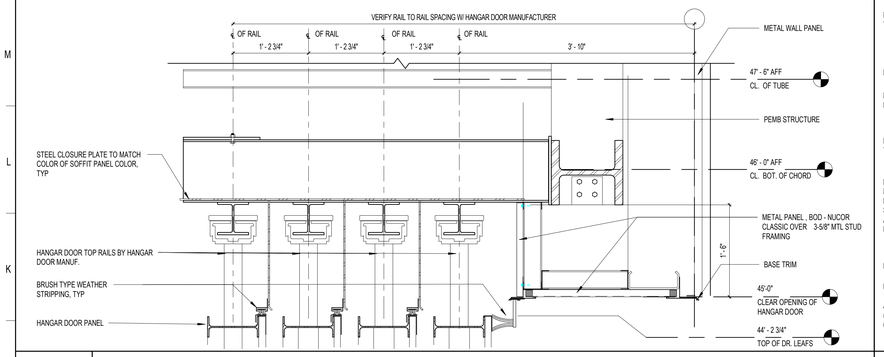
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STOREFRONT ELEVATIONS

A501

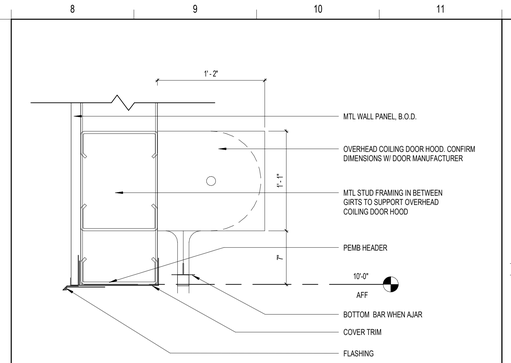
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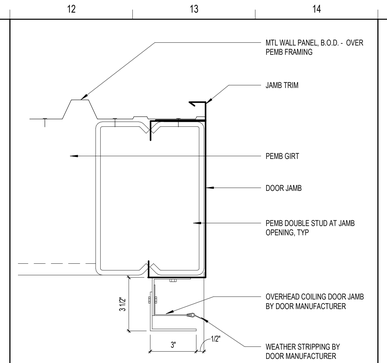
J1 — DETAIL-HANGAR DOOR (HEAD)

1" = 1'-0"



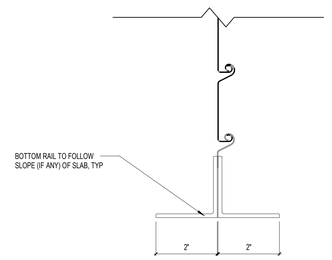
N8 — DOOR DETAIL-OVERHEAD COILING (HEAD)

1 1/2" = 1'-0"



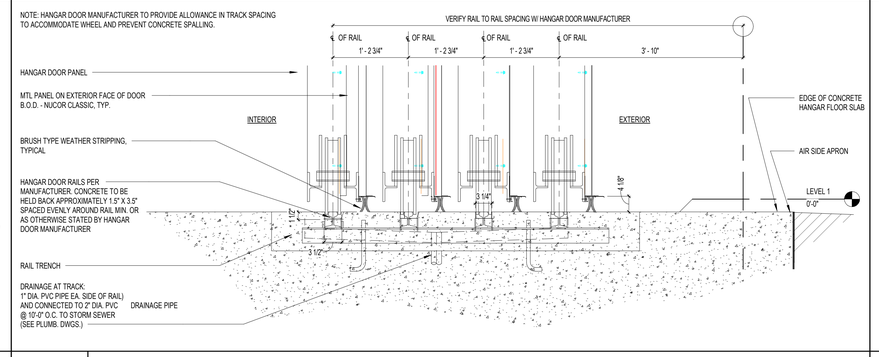
N12 — DOOR DETAIL-OVERHEAD COILING (JAMB)

3" = 1'-0"



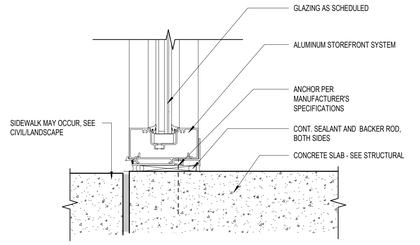
N15 — OVERHEAD COILING (SILL)

6" = 1'-0"



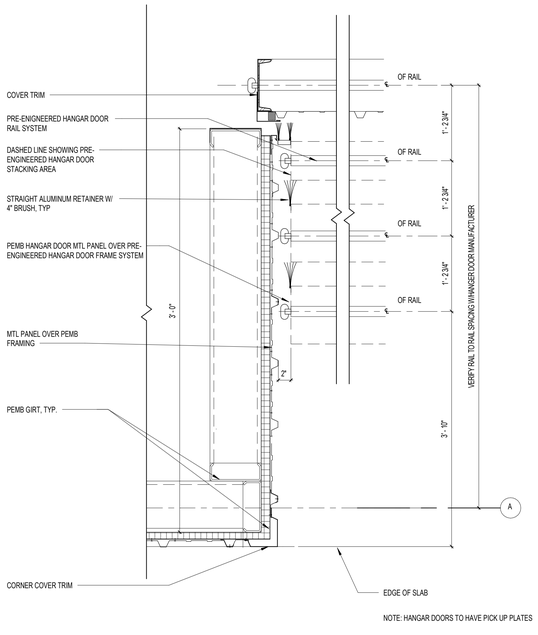
J8 — DETAIL-HANGAR DOOR (SILL)

1" = 1'-0"



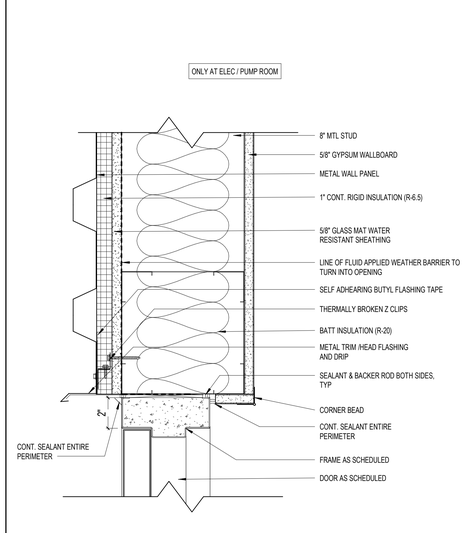
J15 — STOREFRONT DETAIL-SILL

3" = 1'-0"



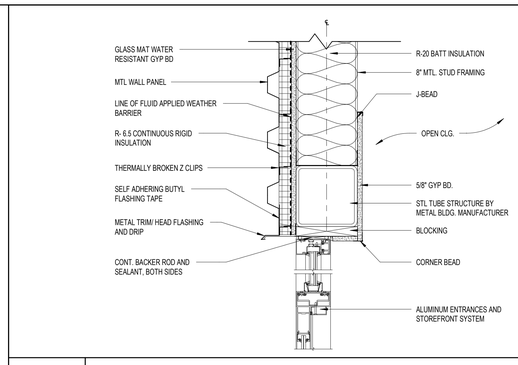
A1 — DETAIL- HANGAR DOOR JAMB

1" = 1'-0"



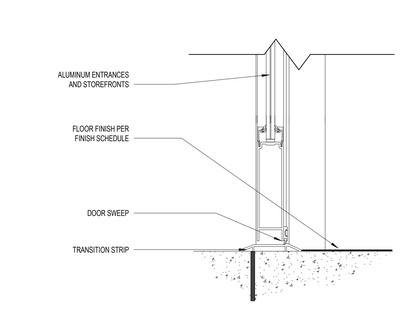
A6 — DOOR DETAIL- EXT. METAL STUD HM (HEAD)

3" = 1'-0"



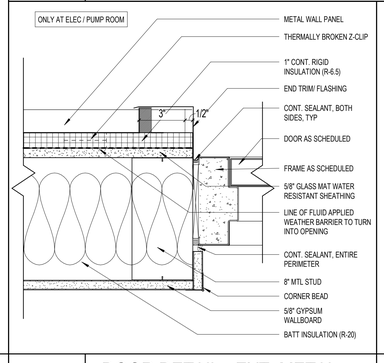
E10 — DOOR DETAIL- DOOR HEAD @ STOREFRONT

1 1/2" = 1'-0"



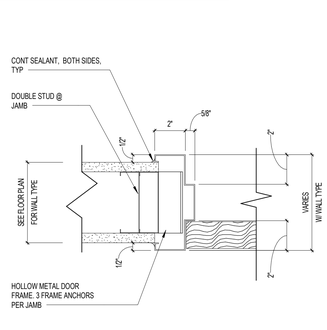
E15 — DOOR DETAIL-DOOR SILL @ STOREFRONT

3" = 1'-0"



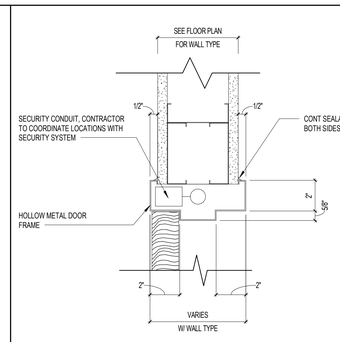
A10 — DOOR DETAIL - EXT. METAL STUD HM (JAMB)

3" = 1'-0"



A13 — DOOR DETAIL - HM (JAMB)-STUD

3" = 1'-0"



A16 — DOOR DETAIL - HM(HEAD)-STUD

3" = 1'-0"

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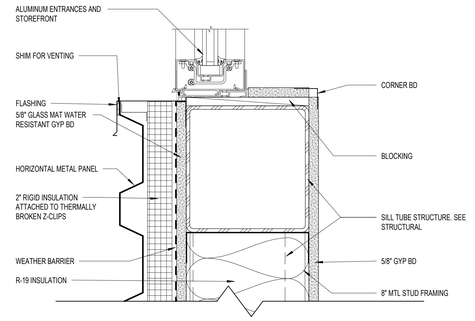
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DETAILS - DOOR/HANGER DOOR

A510

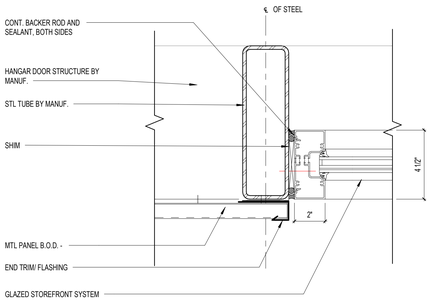
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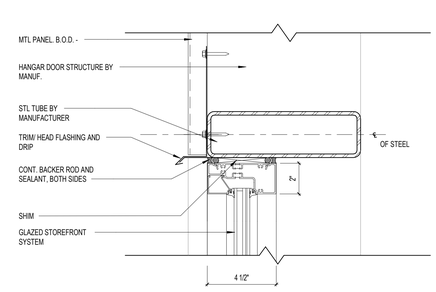
N1 — WINDOW DETAIL-STOREFRONT (SILL) - STUD WALL

3" = 1'-0"



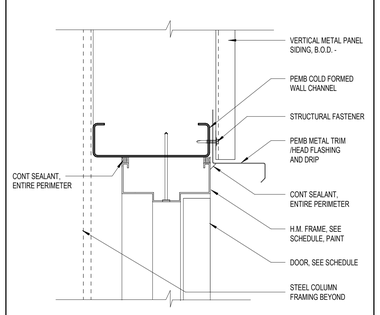
J1 — STOREFRONT DETAIL - HANGAR DOOR (JAMB)

3" = 1'-0"



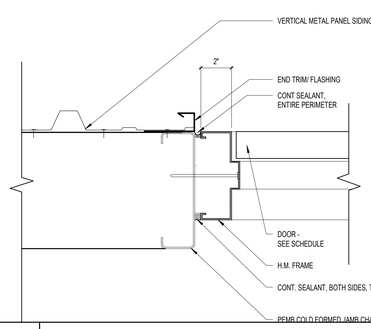
J5 — STOREFRONT DETAIL - HANGAR DOOR (HEAD)

3" = 1'-0"



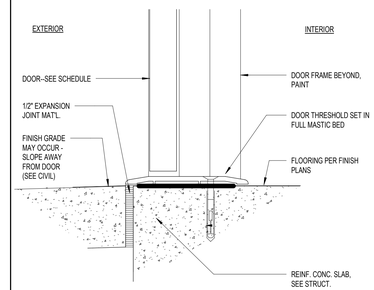
J9 — DOOR DETAIL-EXT PEMB HM(HEAD)

3" = 1'-0"



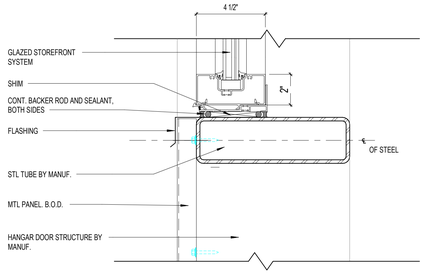
J12 — DOOR DETAIL - EXT PEMB HM (JAMB)

3" = 1'-0"



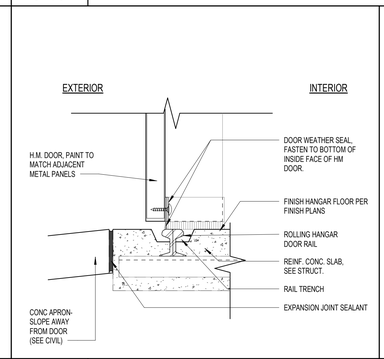
J16 — TYPICAL DOOR SILL / THRESHOLD

3" = 1'-0"



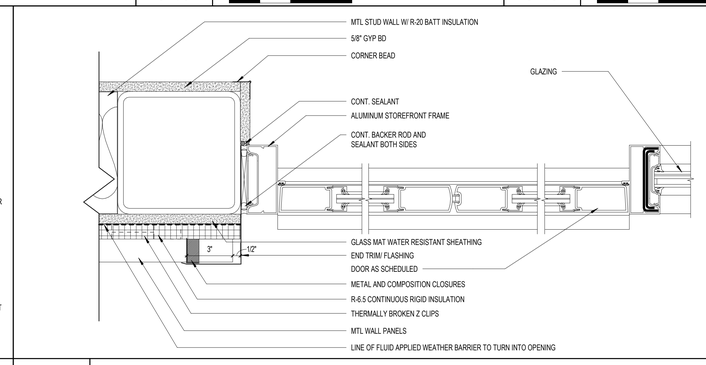
E1 — STOREFRONT DETAIL - HANGAR DOOR (SILL)

3" = 1'-0"



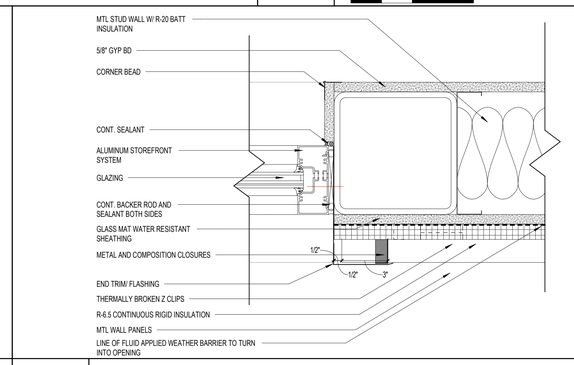
E5 — DOOR DETAIL- SILL @HD

3" = 1'-0"



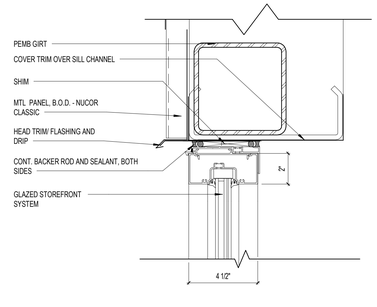
E8 — DOOR DETAIL - DOOR JAMB @ STOREFRONT

3" = 1'-0"



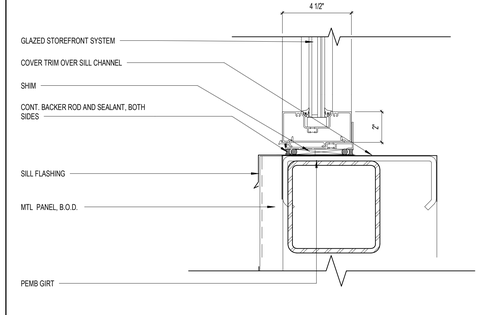
E14 — STOREFRONT DETAIL- JAMB- STUD WALL

3" = 1'-0"



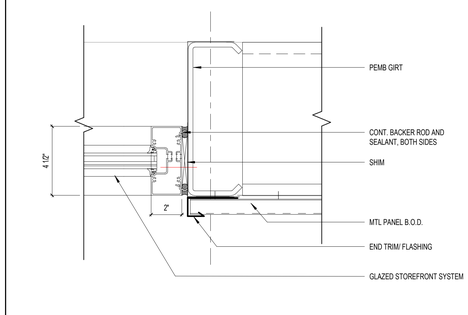
A1 — STOREFRONT DT - HANGAR WALL (HEAD)

3" = 1'-0"



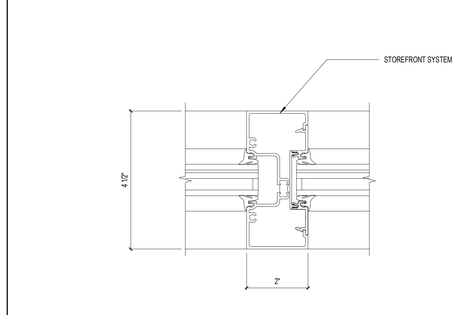
A6 — STOREFRONT DETAIL - HANGAR WALL (SILL)

3" = 1'-0"



A10 — STOREFRONT DETAIL-HANGER WALL (JAMB)

3" = 1'-0"



A14 — STOREFRONT DETAIL-MULLION (VERTICAL)

6" = 1'-0"

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HANGAR

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13485 Veteran's Way Suite 600
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ISSUE DATE: 06/12/2024
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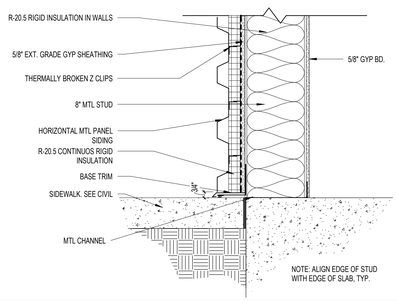
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DETAILS - DOOR / STOREFRONT

A511

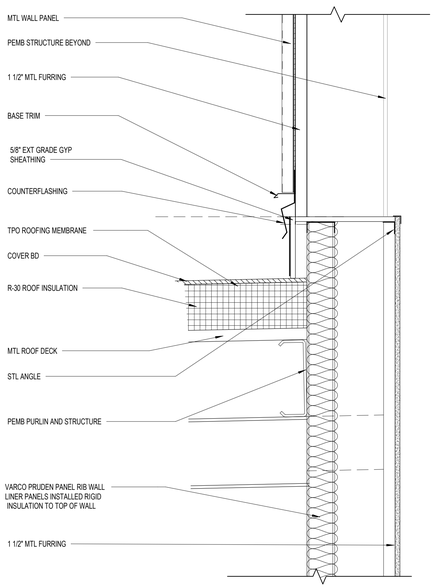
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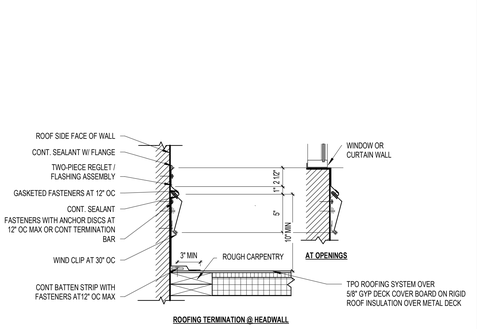
N1 DETAIL - WALL BASE (STUD WALL)

1 1/2" = 1'-0"



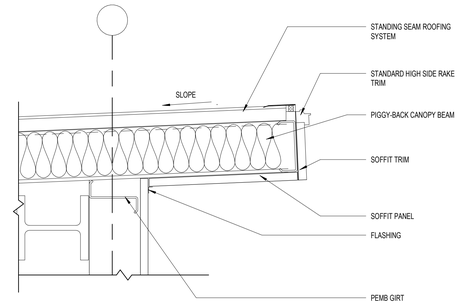
F1 WALL ROOF CONNECTION

1 1/2" = 1'-0"



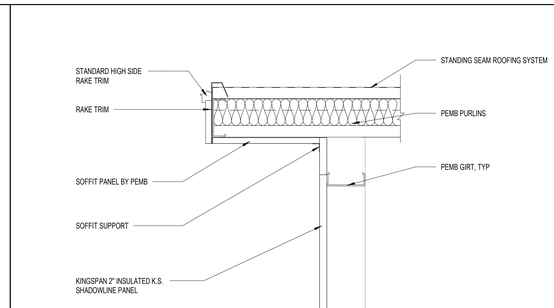
F5 REGLET AND COUNTERFLASHING (TPO)

1 1/2" = 1'-0"



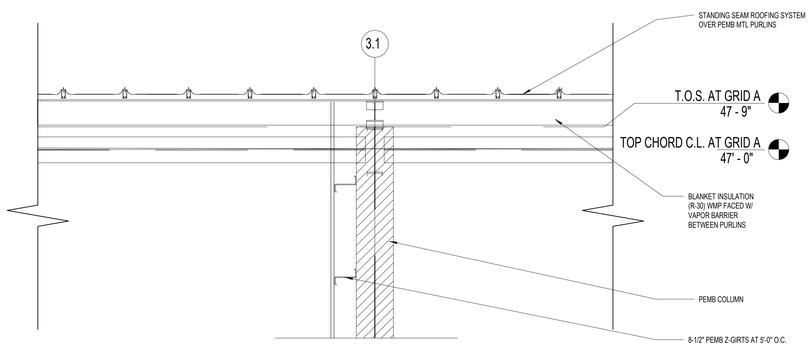
F9 DETAIL - ROOF EAVE HIGH SIDE

1" = 1'-0"



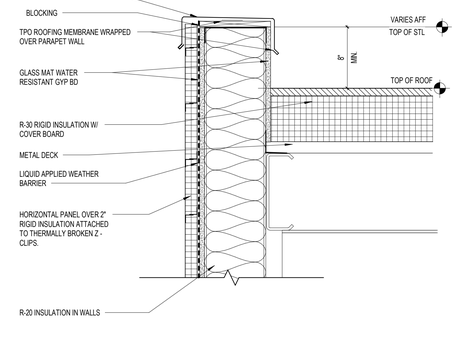
F14 DETAIL - ROOF EAVE - RAKE

3/4" = 1'-0"



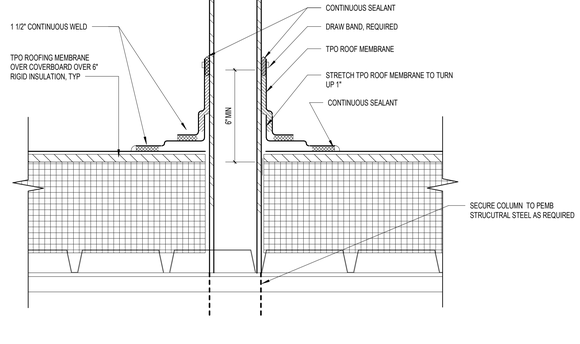
A1 DETAIL - ROOF

1/2" = 1'-0"



A8 DETAIL - PARAPET (STUD WALL)

1 1/2" = 1'-0"



A12 ROOF RACK SUPPORT DETAIL

3" = 1'-0"

0 2" 4" 8"

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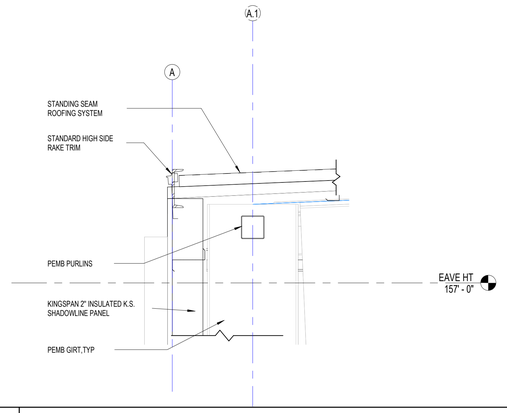
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DETAILS - EXTERIOR & ROOF

A521

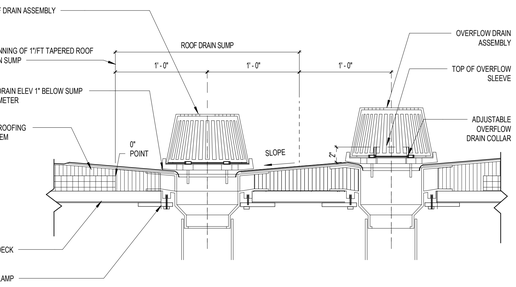
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M1 DETAIL - ROOF EAVE

3/4" = 1'-0"

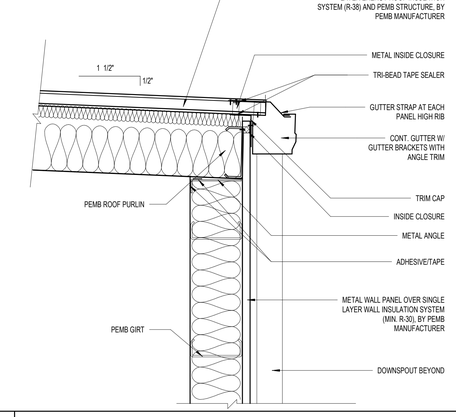


G1 ROOF OVERFLOW/DRAIN SUMP SECTION (TPO)

1 1/2" = 1'-0"

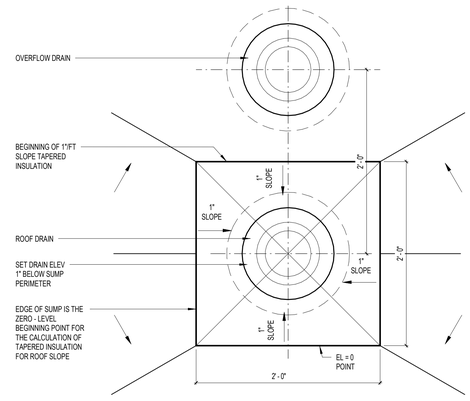
A6 ROOF HATCH FLASHING DETAIL

3" = 1'-0"



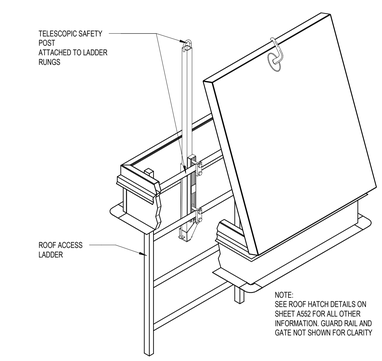
M6 DETAIL - ROOF EAVE - TYP. LOW EAVE W/GUTTER

1" = 1'-0"



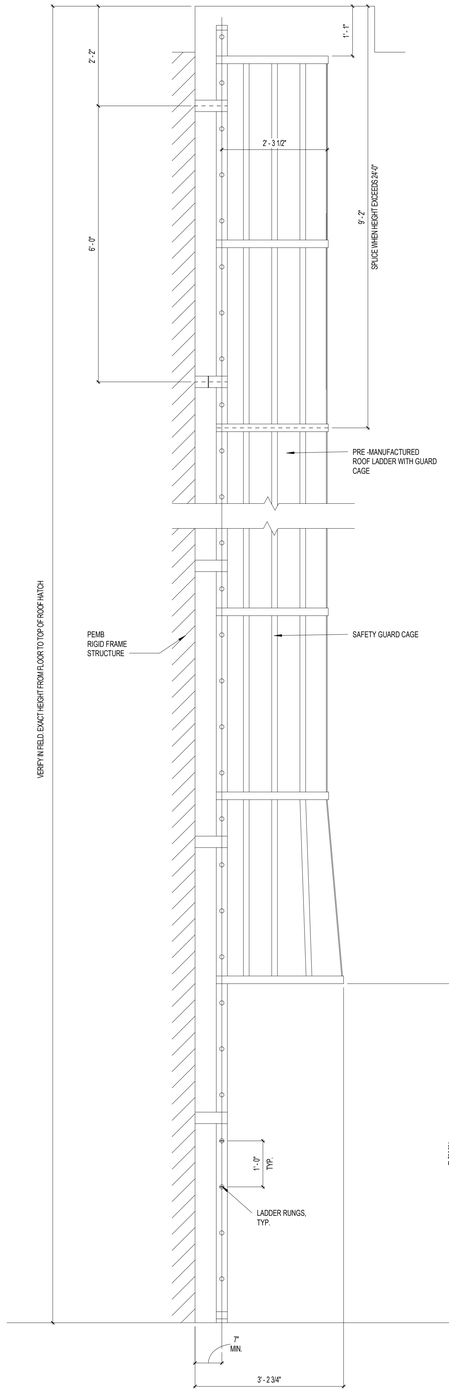
G6 ROOF DRAIN WITH ADJACENT OVERFLOW DRAIN (TPO)

1 1/2" = 1'-0"



A1 ROOF HATCH PERSPECTIVE

1 1/2" = 1'-0"



A11 ROOF CAGED LADDER/ HANGER

3/4" = 1'-0"

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SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 23715

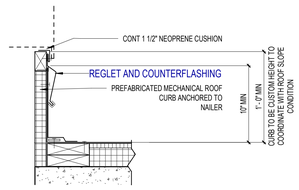
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ROOF DETAILS

A551

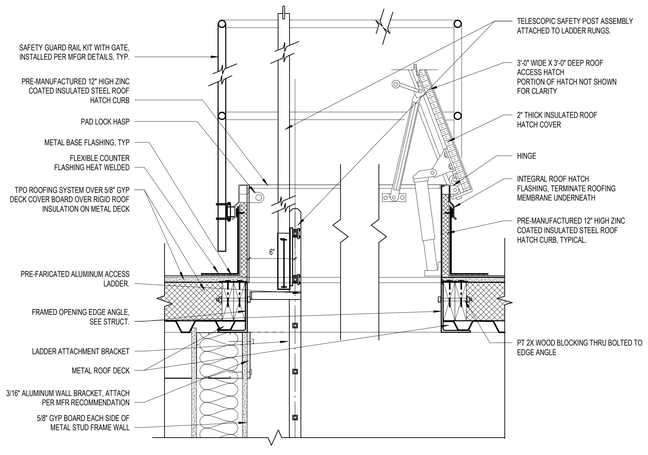
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Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/23715 - SWF HANGAR_A_(R2023).rvt



G1 EQUIPMENT CURB (SINGLE PLY)

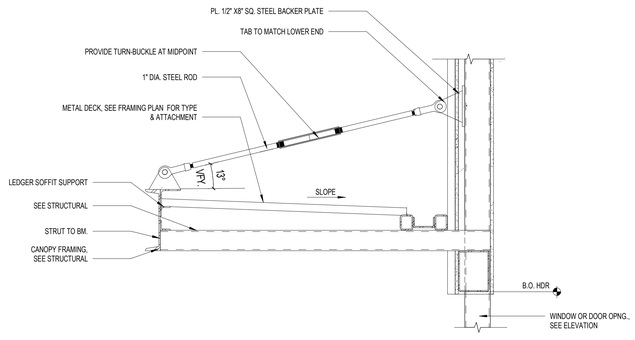
1 1/2" = 1'-0"



A1 INSULATED ROOF HATCH GUARD KIT/OFFICES

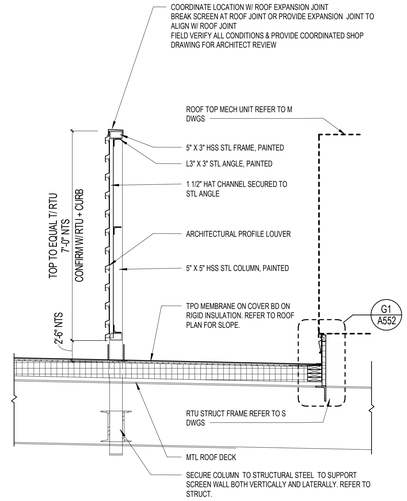
1 1/2" = 1'-0"

NOTES:
1. AT CONT CANOPY FRAMING MEMBERS, SPLICE AS REQ'D. W/ FULL STRENGTH WELD OVER SUPPORTS AND GRIND SMOOTH.



A7 AWNING FRAMING DETAIL

1" = 1'-0"



A13 MECHANICAL SCREEN WALL

1/2" = 1'-0"

0 2" 4" 8"

HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL

REGISTERED ARCHITECT STATE OF NEW YORK

REVISIONS

MARK	DESCRIPTION	DATE

KEY PLAN



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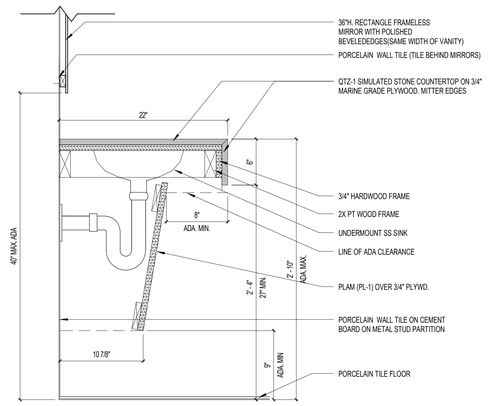
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ROOF DETAILS

A552

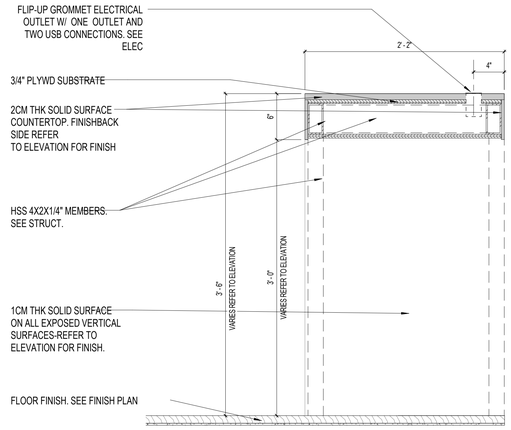
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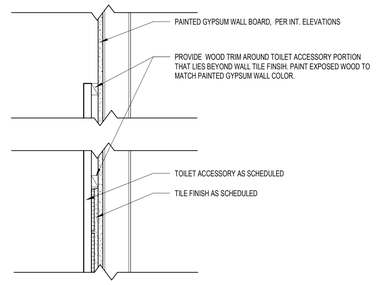
3 RESTROOM COUNTER SECTION @ LAV VIP FBO

1 1/2" = 1'-0"



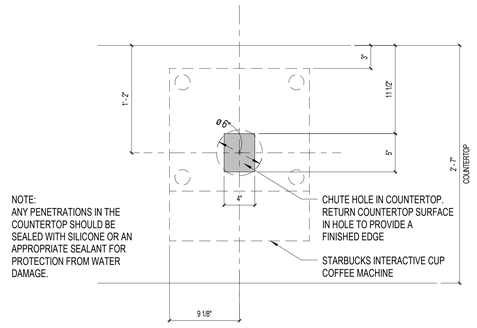
2 CHARGING STATION SECTION

1 1/2" = 1'-0"



N8 MIRROR TRIM DETAIL

1 1/2" = 1'-0"



1 COFFEE MACHINE COUNTER TOP DETAIL

1 1/2" = 1'-0"

HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL



REVISIONS

MARK	DESCRIPTION	DATE

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1188 1ST STREET, NEW WINDSOR, NY 12553

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13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/2024
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DETAILS - INTERIOR

A561

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UL ASSEMBLY: U415

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Design No. U415
BXUV.U415
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, systems, designs and assemblies.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- Materials must conform to the respective specifications detailed in the applicable design. Substitution of unlisted materials may result in hazardous conditions. Users of fire resistance assemblies are advised to consult the Online Certifications Directory for each product category and each group of assemblies. The Guide Information includes specific concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Clean Criteria and Allowable Variances

See General Information for Fire-resistance Ratings - CAN/ULC-S101 Certified for Canada
Clean Criteria and Allowable Variances

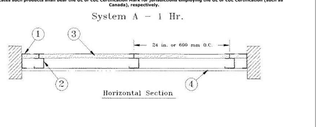
Design No. U415

September 27, 2018

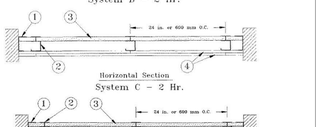
Nonbearing Wall Ratings — 1, 2 or 4 Hr

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

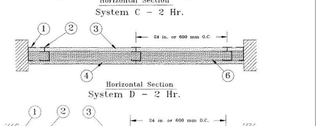
System A — 1 Hr.



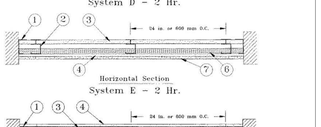
System B — 2 Hr.



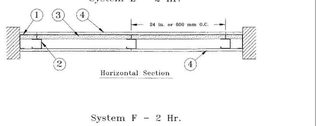
System C — 2 Hr.



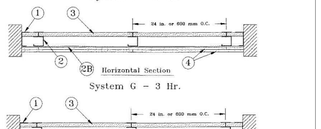
System D — 2 Hr.



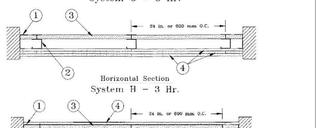
System E — 2 Hr.



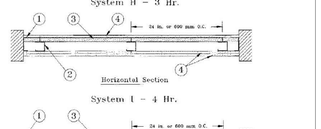
System F — 2 Hr.



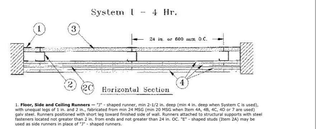
System G — 3 Hr.



System H — 3 Hr.



System I — 4 Hr.



1. **Floor, Side and Ceiling Runners** — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to length. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "B" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs** — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to length 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs** — (Not Shown) — "S" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "S" studs fabricated from min 25 MSG galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. (when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels** — (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25 MSG galv steel formed to provide 1/2 in. wide by 2-1/2 in. deep channel with 1/2 in. wide by 1 in. deep portion of channel attached to each intersecting "C-H" or "S" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type PBX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

2C. **Furring Channels** — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 1 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type PBX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-13/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item a.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Da) to studs (Item 2 or 3). Clips spaced max. 24 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type PBX-G gypsum wallboard, Type RB-LBG (Item 4A), Type X-Ray Shielded Gypsum (Item 4C), Type RPF-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7).

a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Eb. Ends of adjoining channels overlapped 8 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item a.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ea) to studs (Item 2 or 3). Clips spaced 24 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type PBX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item a.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ea) to studs (Item 2 or 3 or 3A). Clips spaced max. 24 in. OC, and secured to studs with No. 8 x 2-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type GENRICLIP

2G. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type PBX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPF-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7):

a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 8 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item a.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ga) to studs (Item 2 or 3). Clips spaced 24 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

RESILMOUL AMERICA — Type SonuClip

3. **Gypsum Board*** —

System A — 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S bugle-head steel screws spaced 24 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — Types AR, C, PRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULX, USGX, WRC, WRX. When ULIX is used insulation, Item 6, **Batts and Blankets*** is required and minimum stud depth is 4 in.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System B — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S bugle-head steel screws spaced 24 in. OC when installed horizontally or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S bugle-head steel screws spaced 16 in. OC when installed horizontally and staggered 6 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X2 or ULTRACODE

System C — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing.(or Items 1, 2 and 2). Requires min 3 in. thick mineral wool batts per Item 6.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

System D — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. when installed horizontally. Horizontal joints need not be backed by steel framing. Apply face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — Types AR, C, PRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX.

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, PRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, PRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, PRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Middle layer attached to studs with 1-1/4 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 12 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Middle layer attached to studs with 1-1/4 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Screws centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws 12 in. OC. Third layer applied vertically with Gra-Rock furring channels (Item 2C) with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S or S-12 pan head steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).

RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over stud and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S or S-12 pan head steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

4C. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10). Lead batten strips are not required when used with Item 2D and optional at remaining stud locations; Lead batten strips, min 2 in. wide, max 6 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with two min 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.093 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201D, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type KPF - Lead Lined Drywall

5. **Joint Tape and Compound** — (Not Shown)

Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) embedded in paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. **Batts and Blankets*** —

Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

System A With Type ULIX Gypsum Boards

Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZZI) Categories** for names of Classified companies.

Systems C & D

Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB

THERMAFIBER INC — Type SAFB, SAFB FF

7. **Cementitious Backer Units*** — (System G) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.

UNITED STATES GYPSUM CO — Type DCB

8. **Laminating Adhesive*** — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BFWK) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.

9. **Lead Batten Strips** — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with two min 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201D, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips** — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long, min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long, min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201D, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4C) and optional at remaining stud locations.

10. **Lead Discs or Tabs** — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over the screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201D, Grades "B, C or D". Lead tabs or discs to be installed underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201D, Grade "C".

10A. **Lead Discs** — (Not Shown, For use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201D, Grades "B, C or D".

11. **Lead Batten Strips** — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long, min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201D, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. **Lead Tube** — (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tube friction-fit around front face of stud, the stud lidded back flange, and the back face of the stud. Tube required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tube to have a purity of 99.9% meeting the Federal specification QQ-L-201D, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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14. **Framing Members* — Floor and Ceiling Runner** — Not Shown — In lieu of Item 1 — For use with Item 21, proprietary channel shaped runners, min width to accommodate stud size, fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

TELLING INDUSTRIES L L C — Viper-20™ Track

15. **Framing Members* — Floor and Ceiling Runner** — Not Shown — In lieu of Item 1 — For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

STEEL INVESTMENT GROUP L L C — AlphaTRAK

16. **Framing Members* — Floor and Ceiling Runners** — Not Shown — As an alternate to Item 1 — For use with Item 2O, proprietary channel shaped runners, min width to accommodate stud size, pre-punched, attached to floor and ceiling with fasteners spaced 24 in. OC max.

RONDO BUILDING SERVICES PTY LTD — Rondo Wall Track

17. **Framing Members* — Floor and Ceiling Runners** — Not Shown — As an alternate to Item 1 — For use with Item 2P, proprietary channel shaped runners, min width to accommodate stud size, pre-punched, attached to floor and ceiling with fasteners spaced 24 in. OC max.

OEG BUILDING MATERIALS — OEG Track

18. **Framing Members* — Floor and Ceiling Runner** — Not Shown — In lieu of Item 1 — For use with Item 2Q, proprietary channel shaped runners, min width to accommodate stud size, pre-punched, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper-20™ Track

19. **Framing Members* — Steel Studs** — As an alternate to Item 2 — proprietary-channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in length than assembly height. Spaced 24 in. OC max.

RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud

20. **Framing Members* — Steel Studs** — As an alternate to Item 2 — proprietary-channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in length than assembly height. Spaced 24 in. OC max.

OEG BUILDING MATERIALS — OEG Stud

21. **Framing Members* — Steel Studs** — As an alternate to Item 2 — For use with Item 2O, proprietary channel shaped steel studs, min width to accommodate stud size, fabricated from min 0.018 in. thick galv steel. Studs min 25 MSG (0.018 in. min. bare metal thickness). Studs cut to lengths 3/8 to 3/4 in. less than assembly height.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper-X

3. **Wood Structural Panel Sheathing** — (Optional, For use with Item 3 Only) — (Not Shown) — 4-ft wide, 7/16 in. thick wood structural panel (OSB) or (OSX) Sheathing manufactured and identified in accordance with DOC PS1 or PS2, or APA Standard PRP-108, conforming with exterior exposure durability requirements. Sheathing applied vertically over the steel studs, centered on studs, and staggered one stud space from wallboard joints. Attached to studs with No.8 wood self-drilling screws with a min. head diam. of 0.292 in. at maximum 6 in. OC in the perimeter and 12 in. OC in the field. When two layers applied, joints offset over studs or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 inch.

4. **Batts and Blankets*** — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.

See **Batts and Blankets** (BKNV or BZZI) Categories for names of Classified companies.

4A. **Batts and Blankets*** — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.

See **Batts and Blankets** (BKNV or BZZI) Categories for names of Classified companies.

4B. **Batts and Blankets*** — For use with Item 5K. Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.

See **Batts and Blankets** (BKNV or BZZI) Categories for names of Classified companies.

4C. **Fiber, Sprayed*** — (Optional) and as an alternate to Batts and Blankets (Item 4B) where insulation is required - Spray applied mineral fiber insulation applied to a min. thickness of 3-1/2 in. Insulation shall be applied by a contractor trained to fill the wall cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (BZAZ).

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5. **Gypsum Board*** — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge

Rating, Hr	Min Stud Depth, in. (mm)	No. of Layers Required of Panel	Min Thkns of Insulation (Item 4B)
1	3-5/8	1 layer, 5/8 in. thick	3-1/2 in.
2	3-5/8	2 layers, 1/2 in. thick	Optional
3	3-5/8	3 layers, 5/8 in. thick	Optional
4	3-5/8	4 layers, 1/2 in. thick	Optional
4	3-5/8	2 layers, 5/8 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, , FRX-G, IP-AR, IP-X2, IPC-AR, ULIX, ULX, thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. Type C, IP-X2, IPC-AR or; 5/8 in. Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or, X/X in. thick Types IP-X3 or ULTRACODE

5H. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only) to shed studs (Item 2A, (not to be used with Item 2B) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG shed studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 shed screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG shed studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 shed screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Horizontal joints need not be backed by steel framing. Vertical joints centered over shed studs and staggered 24 in. on adjacent layers. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5I. **Gypsum Board*** — (As an alternate to Item 5) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.

CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

USG MEXICO S A DE C V — Type ULIX

5J. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only) to shed studs (Item 2A, (not to be used with Item 2B) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud c

DESIGN CRITERIA

D1 ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE 2020 BUILDING CODE OF NEW YORK STATE (2018) INTERNATIONAL BUILDING CODE) WITH 2017 UNIFORM CODE SUPPLEMENT.

D2 DESIGN LOAD VALUES ARE INDICATED ON THE APPROPRIATE SHEETS AS FOLLOWS:
FOUNDATION DESIGN - SHEET S001
WIND DESIGN - SHEET S002
SEISMIC DESIGN - SHEET S002

D3 TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE STRUCTURAL PLANS AND SPECIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE.

D4 EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE COORDINATION BETWEEN THESE DRAWINGS AND THE BOUND STRUCTURAL SPECIFICATIONS. SHOULD THERE BE ANY DISCREPANCIES, THE CONTRACTOR SHALL THEN REQUEST A CLARIFICATION IN WRITING.

SPECIALTY ENGINEERING REQUIREMENTS

SE1 STEEL PAN STAIRS, SHIPS LADDERS AND OTHER ROOF ACCESS LADDERS SHALL BE DESIGNED BY THE FABRICATOR'S SPECIALTY ENGINEER AND SHALL INCLUDE STRINGERS, TREADS, HAND RAILINGS, PLATFORMS (AS REQUIRED), PAN INSERTS AND MISCELLANEOUS SUPPORTS AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED, DATED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. MINIMUM DESIGN LIVE LOAD SHALL BE 100 PSF FOR STEEL PAN STAIRS. SUBMITTALS SHALL INCLUDE THE JOINTING IN THE CONCRETE FILL AS REQUIRED TO MITIGATE PLASTIC SHRINKAGE CRACKING.

SE2 GUARDRAILS, HANDRAILS, POSTS AND SUPPORT CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR'S SPECIALTY ENGINEER. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED, DATED AND SEALED BY A ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. DUE CONSIDERATION SHALL BE GIVEN TO EXPANSION & CONTRACTION BY PROVIDING SLIP JOINTS AS REQUIRED. DESIGN LOADING(S) SHALL CONFORM TO ALL REQUIREMENTS OF THE BUILDING CODE (SEE DESIGN CRITERIA FOR THE APPLICABLE BUILDING CODE).

SE3 EXTERIOR CURTAIN WALLS SHALL BE DESIGNED BY THE VENDOR'S SPECIALTY ENGINEER AND SHALL INCLUDE FRAME, GLASS, GLAZING AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED, DATED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. DESIGN LOADING(S) SHALL CONFORM TO ALL REQUIREMENTS OF THE BUILDING CODE (SEE DESIGN CRITERIA FOR APPLICABLE BUILDING CODE). THE VENDOR SHALL PROVIDE WINDOW WALL REACTIONS TO THE ARCHITECT.

SE4 FLAGPOLES AND SITE LIGHTING POLES SHALL BE DESIGNED BY THE POLE VENDOR'S SPECIALTY ENGINEER AND SHALL INCLUDE POLES, FOUNDATIONS AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED, DATED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. MINIMUM DESIGN LOADS SHALL CONFORM TO ANSI NAAM FF1.00 "SPECIFICATIONS FOR DESIGN LOADS OF METAL FLAGPOLES".

SE5 PROVIDE ENGINEERED SUBMITTALS, SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION, FOR ALL MECHANICAL, ELECTRICAL AND PLUMBING SUPPORTS OR ATTACHMENTS NOT INCLUDED WITHIN THE CONSTRUCTION DOCUMENTS FOR ALL ITEMS THAT REQUIRE ANYTHING OTHER THAN THE MANUFACTURER'S STANDARD HARDWARE OR ARE EXPOSED TO WIND LOADS. AN EXAMPLE OF POSSIBLE ITEMS THAT THIS WOULD APPLY TO ARE, INCLUDING BUT NOT LIMITED TO, ROOFTOP AND/OR WALL MOUNTED DUCTS, PIPES AND TRANSFORMERS.

SLAB ON GRADE

SOG1 UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT, COMPACT INTERIOR FILL TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557). SOIL COMPACTION SHALL BE FIELD-CONTROLLED BY A REPRESENTATIVE TECHNICIAN OF A QUALIFIED LABORATORY. EACH LAYER OF FILL SHALL NOT EXCEED 12" THICK AND SHALL BE COMPACTED PRIOR TO PLACEMENT OF NEXT LAYER. EXCAVATION, BACKFILLING, AND FILLING SHALL ADHERE TO PA SPECIFICATION 312323.

SOG2 MAXIMUM SPACING OF CONTROL JOINTS (i.e. SAWCUT JOINT OR CONSTRUCTION JOINT) SHALL BE AS SET IN THE TABLE BELOW, OR AS NOTED ON PLANS. THE MORE STRINGENT SHALL APPLY. PATTERNS SHALL BE APPROXIMATELY SQUARE WITH A RATIO OF LONG SIDE TO SHORT SIDE NOT EXCEEDING 1.5 TO 1. SEE SLAB-ON-GRADE DETAILS FOR ADDITIONAL INFORMATION.

SLAB THICKNESS (IN)	★ 3/4" OR LARGER AGGREGATE SPACING (FT)
4	12
5	13
6	14
7 AND GREATER	15

★ MIX DESIGNS CONTAINING AGGREGATE LESS THAN 3/4" ARE NOT ACCEPTABLE.

SOG3 GENERAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF SJ'S AND CJ'S WITH ARCHITECTURAL FLOOR FINISHES TO ENSURE SLAB JOINTS DO NOT READ THROUGH.

FOUNDATIONS

F1 THE FOUNDATION AND SLAB-ON-GRADE DESIGN CONTAINED HEREIN IS BASED SOLELY UPON THE PROJECT'S GEOTECHNICAL REPORT (REPORT NUMBER TERMINAL 4 HANGAR OPTION 11, DATED 10/20/23, AS PREPARED BY ANS GEO.). BBM HAS RELIED EXCLUSIVELY ON THE CONTENTS AND RECOMMENDATIONS WITHIN THIS REPORT, BUT ACCEPTS NO RESPONSIBILITY WHATSOEVER FOR ITS CONTENTS OR ACCURACY. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL MAKE THEMSELVES FAMILIAR WITH THE REPORT BEFORE THE COMMENCEMENT OF CONSTRUCTION.

F2 FOUNDATION DESIGN IS BASED ON A NET ALLOWABLE SOIL BEARING PRESSURE OF 1,000 PSF, COMPACTION UNDER ALL FOUNDATIONS SHALL ALSO BE AS STATED IN NOTE SOG1.

F3 A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY-STANDARD SOIL DENSITY TESTS TO ENSURE CONFORMANCE WITH GEOTECHNICAL SOILS REPORT. SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

F4 CONTRACTOR, IN CONJUNCTION WITH GEOTECHNICAL FIELD REPRESENTATIVE, SHALL DETERMINE IF ANY UNSUITABLE CONDITIONS ARE DISCOVERED DURING EXCAVATION WHICH WOULD PREVENT ATTAINMENT OF THE DESIGN SOIL PRESSURE RECOMMENDED BY THE SOILS REPORT.

F5 FOOTINGS SHALL BE CAST TO THE SCHEDULED SIZE AND SHALL NOT BE OVERSIZED BY MORE THAN 6" ON ANY SIDE FOR FOOTING WIDTH OF AT LEAST 6'-0". FOR FOOTINGS LESS THAN 6'-0" IN WIDTH THE MAXIMUM OVERSIZING SHALL BE 3".

F6 CONTRACTOR SHALL BE PREPARED FOR AND SHALL INCLUDE COST OF FORMING FOUNDATIONS SHOULD THE EARTH NOT PROVIDE ADEQUATE BANK STABILITY.

GENERAL

G1 THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.

G2 THE GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, THE WORK PERSONS AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.

G3 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH.

G4 THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL MECHANICAL AND ELECTRICAL DRAWINGS FOR ANCHORED, EMBEDDED AND SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

G5 ALL SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED VIA ELECTRONIC MEDIA (i.e. PDF OR DWF FORMAT). HARD COPY SUBMITTALS WILL NOT BE ACCEPTED.

1. SUBMITTALS SHALL NOT BE SECURED IN ANY FORMAT THAT WILL PREVENT COMMENTS FROM BEING ADDED.
2. SUBMITTALS THAT ARE REQUIRED TO BE SIGNED AND SEALED SHALL BE SUBMITTED WITH A VISIBLE INK SEAL OR SHADED RAISED SEAL AT TIME OF FIRST SUBMITTAL.

G6 ANY SUBMITTALS RECEIVED BY ARCH/ENG THAT HAVE NOT BEEN CHECKED BY THE GC AND HIS SUB-CONTRACTOR SHALL BE RETURNED WITHOUT REVIEW.

G7 ALL SECTIONS AND DETAILS SHALL BE CONSTRUED TO BE TYPICAL OR SIMILAR UNLESS ANOTHER SECTION OR DETAIL IS NOTED.

G8 "BORA ERBILEN, P.E." ASSUMES NO RISK OR LIABILITY FOR THE SITE SAFETY OR WELL-BEING OF ANY CONTRACTOR, SUB-CONTRACTOR NOR THEIR EMPLOYEES DURING THE CONSTRUCTION OF THE PROJECT CONTAINED IN THESE DOCUMENTS.

G9 GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL SUPPLY ALL SUB-CONTRACTORS WITH THE STRUCTURAL GENERAL NOTE SHEETS AS WELL AS THE STRUCTURAL DRAWINGS.

G10 THE CONTRACTOR'S MEANS AND METHODS SHALL FULLY CONFORM TO THE REQUIREMENTS OF SEI/ASCE 37 (DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION) UNTIL ALL OF THE STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE RECEIVED THE INSPECTOR'S APPROVAL.

G11 REFER TO ARCHITECTURAL DRAWINGS FOR ROOF COVERINGS. ROOFS SHALL BE INSPECTED BY A LICENSED ENGINEER/ARCHITECT AND A REPRESENTATIVE OF THE ROOFING MANUFACTURER AND REPORTS SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT.

SPECIAL INSPECTIONS

SI1 SPECIAL INSPECTIONS ARE REQUIRED BY SECTION 1704 & 1705 OF THE APPLICABLE CODE FOR THE FOLLOWING STRUCTURAL SYSTEMS AND COMPONENTS; CONCRETE, MASONRY, STEEL, AND METAL DECK.

SI2 SPECIAL INSPECTIONS OF CONCRETE CONSTRUCTION SHALL BE PER TABLE 1705.3.

SI3 SPECIAL INSPECTIONS OF EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS SHALL BE PER SECTION 1705.6.

SI4 SPECIAL INSPECTIONS OF STEEL CONSTRUCTION INCLUDING METAL DECK SHALL BE PER TABLE 1705.2.

SI5 SPECIAL INSPECTIONS OF FABRICATED MEMBERS (STEEL) SHALL MEET THE REQUIREMENTS OF SECTION 1704.2.5 UNLESS THE FABRICATOR MEETS THE EXCEPTION OF SECTION 1704.2.5.1.

SI6 NO ADDITIONAL SPECIAL INSPECTIONS ARE REQUIRED FOR SEISMIC RESISTING ELEMENTS.

SI7 SPECIAL INSPECTIONS FOR WIND RESISTANCE SPECIFIED IN SECTIONS 1705.11.1 THROUGH 1705.11.3 ARE REQUIRED.

SI8 SEE SECTIONS AND THEIR TABLES MENTIONED IN NOTES SI2 THROUGH SI5 FOR PERIODIC OR CONTINUOUS INSPECTIONS.

PRE-ENGINEERED BUILDING

PE1 A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY-STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

PE2 ALL STRUCTURAL STEEL SHALL BE ASTM A50 UNLESS NOTED OTHERWISE.

PE3 "BORA ERBILEN, P.E." REQUIRE STRUCTURAL SUBMITTALS FOR REVIEW AS AN INDICATION THAT INTENT HAS BEEN UNDERSTOOD AND THAT SPECIFIED CRITERIA HAVE BEEN USED. STRUCTURAL SUBMITTALS SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA.

PE4 STRUCTURAL SUBMITTALS SHALL IDENTIFY THE PROJECT AND LIST LOADING AND OTHER DESIGN CRITERIA. FABRICATION AND ERECTION DRAWINGS SHALL INDICATE IN DETAIL THE CONSTRUCTION OF THE STANDARD STRUCTURE USED OR AS MODIFIED TO COMPLY WITH THE REQUIREMENTS OF THE PARTICULAR PROJECT. THEY SHALL INDICATE ALL CONNECTION DETAILS, OPENINGS AND OTHER SPECIAL DETAILS. THEY SHALL SHOW THE MAGNITUDE AND LOCATION OF BUILDING REACTIONS ON THE FOUNDATION UNDER ALL DESIGN CONDITIONS. CALCULATIONS SUPPORTING THE DESIGN SHALL BE SUBMITTED NOT ONLY FOR THE STANDARD STRUCTURE BUT FOR MODIFICATIONS AND FOR RELATED COMPONENTS REQUIRING STRUCTURAL DESIGN.

PE5 ANCHOR ROD DIAMETER SHALL BE DETERMINED BY METAL BUILDING MANUFACTURER. LENGTH AND TYPE OF ROD REQUIRED TO TRANSMIT LOADS TO FOUNDATION SHALL BE BY "BBM STRUCTURAL ENGINEERS."

PE6 FOUNDATION DESIGN REACTIONS HAVE BEEN INDICATED IN THE DRAWINGS. IF REACTIONS ARE HIGHER NOTIFY ARCHITECT AND ENGINEER IMMEDIATELY.

PE7 ALL COLUMNS BASES ARE DESIGNED AS "PIN" CONNECTED. NO MOMENT CONNECTED BASES ARE ALLOWED.

PE8 ROOF PURLINS SHALL BE BRACED AT TOP AND BOTTOM CHORDS AT THIRD POINTS, MINIMUM AND IN ACCORDANCE WITH A.I.S.I. ROOFING SHEETS SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR TOP CHORD BRACING, UNLESS DOCUMENTATION IS PROVIDED OTHERWISE.

PE9 NO FABRICATION SHALL BEGIN UNTIL METAL BUILDING MANUFACTURER RECEIVES REVIEWED, APPROVED SUBMITTALS FROM THE ENGINEER.

PE10 GRIND SLAB SMOOTH OF ANY IRREGULARITIES PRIOR TO PLACING FRAMING.

PE11 WHERE CLEAR SPAN FRAME BRACES AN EXTERIOR HARD WALL (I.E. CMU OR TILT-UP PANEL) ATTACHMENT TO WALL SHALL BE MADE AFTER DEAD LOAD IS APPLIED.

CONCRETE AND REINFORCING

C1 A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY STANDARD TESTING INCLUDING SLUMP TESTS AND CYLINDER BREAKS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

C2 CONCRETE WORK SHALL CONFORM TO ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

C3 ALL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

LOCATION	28 DAY STRENGTH	SLUMP	COARSE AGGREGATE(S)	COMMENTS	EXPOSURE CATEGORIES & CLASSES (PER ACI 318-14 SECTION 19.3.1)			
					F	S	W	C
FOUNDATIONS	4000 PSI	4" +/- 1"	1"		F1	S0	W1	C1
SLAB-ON-GRADE: FOOT TRAFFIC	3500 PSI	4" +/- 1"	1"		F1	S0	W0	C0
SLAB-ON-GRADE: INDUSTRIAL VEHICULAR TRAFFIC	4000 PSI (MIN CEMENT CONTENT = 520 lb/yd³)	4" +/- 1"	3/8" & 1 1/2"		F1	S0	W0	C0
ELEVATED SLABS (MTL DECK)	3000 PSI	4" +/- 1"	3/8" & 1"		F0	S0	W0	C0

NOTES:
1. SLUMP FOR RAMPS AND SLOPING SURFACES SHALL NOT EXCEED 4".
2. ALL CONC MIXES SHALL HAVE A MAXIMUM SAND TO TOTAL AGGREGATE RATIO OF 0.50.
3. A 2" OR 3" PUMP WILL NOT BE ALLOWED.
4. READY MIX SUPPLIER SHALL DESIGN THE MIXES THAT CONTAIN MULTIPLE AGGREGATES TO BE WELL GRADATED.
5. SLABS SHALL NOT BE AIR ENTRAINED.
6. FOR SLABS THAT SHALL RECEIVE MOISTURE SENSITIVE FLOORING:
   a. CONTRACTOR SHALL WORK WITH THE READY MIX SUPPLIER TO PROVIDE A MIX DESIGN THAT WILL BE AT OR BELOW 75% RELATIVE HUMIDITY AT THE TIME THE FLOORING IS SCHEDULED TO BE INSTALLED.
   b. DO NOT USE LIGHTWEIGHT AGGREGATES.
   c. PROVIDE A MIX WITH GOOD SELF-DESICCATING PROPERTIES. CONSIDER ADDING 2%-4% SILICA FUME.
   d. DO NOT HARD TROWEL THE SURFACE BUT INSTEAD PROVIDE A LIGHTLY TROWELLED SURFACE.

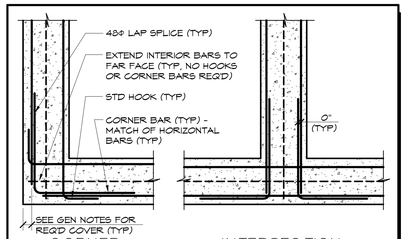
C4 CONCRETE MIX DESIGN SUBMITTALS:
1. EACH MIX DESIGN SHALL BE LABELLED TO INDICATE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (I.E. FOUNDATIONS, SLAB- ON-GRADE, COLUMNS, ETC.). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS.
2. PROPOSED MIX DESIGN SHALL BE IN ACCORDANCE WITH METHOD 1 OR METHOD 2 OF ACI 301. PROVIDE SUPPORTING DATA IN TABULAR FORM FOR EACH SEPARATE PROPOSED MIX.
3. SUBMIT CONCRETE MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE.

C5 REBAR SHALL CONFORM TO ASTM A615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 AND SHALL BE LAPPED MINIMUM ONE MESH + 2" WHERE SPLICED. ALL REINFORCING SHALL BE DOMESTICALLY PRODUCED. ALL REBAR THAT IS TO BE WELDED SHALL BE LOW ALLOY ASTM A706 GRADE 60.

C6 SPLICES AND ANCHORAGE OF REINFORCING SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):

WELDED WIRE FABRIC: 8"
ALL OTHER: #6 BAR & SMALLER: 48 DIA (12" MIN)
#7 BAR & LARGER: 60 DIA

C7 REINFORCEMENT IN WALLS, FOOTINGS AND BEAMS SHALL BE CONTINUOUS AND LAPPED 48 BAR DIA AT SPLICE UNLESS OTHERWISE NOTED. HOOK AND LAP ALL CORNER AND INTERSECTING BARS. (SEE REINF DEVELOPMENT DETAIL).

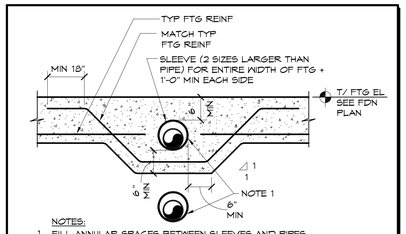


REINF DEVELOPMENT DETAIL

C8 COVER FOR REINFORCING SHALL BE AS FOLLOWS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 THRU #18 BARS:	2"
#5 BAR, W31 OR D31 WIRE AND SMALLER:	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:	
SLABS, WALLS, JOISTS:	
#14 AND #18 BARS:	1 1/2"
#11 BAR AND SMALLER:	3/4"

C9 FOOTING PENETRATION DETAILS:

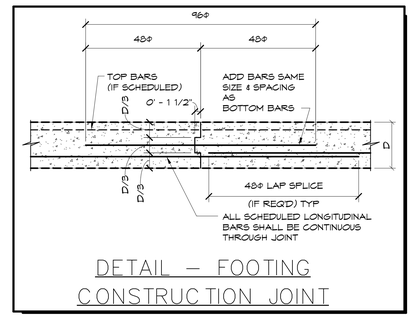


NOTES:
1. FILL ANNULAR SPACES BETWEEN SLEEVES AND PIPES WITH A COMPRESSIBLE MATERIAL AS REQUIRED BY THE PLUMBING CODE.
2. PIPE MUST BE 90° (±10°) TO WALL FTG.

DETAIL — FOOTING PENETRATIONS

C10 BASE CONSTRUCTION PRICE SUBMITTED BY CONTRACTOR/SUBCONTRACTOR SHALL INCLUDE 1000# OF BOTH #5 AND #6 REINFORCING STEEL AND 100 MAN HOURS (TOTAL) OF LABOR FOR INSTALLATION OF THIS REINFORCING AS DIRECTED BY THE ARCHITECT/ENGINEER.

C11 FOOTING CONSTRUCTION JOINT (IF REQUIRED):



DETAIL — FOOTING CONSTRUCTION JOINT

POST-INSTALLED ANCHORS

PIA1 POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER-OF-RECORD (SEOR) PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED AND PRODUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII). SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE SAME STATE AS PROJECT LOCATION. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT OR BETTER PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE.

PIA2 THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS. ADDITIONALLY, INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318-14 (SECTION 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED PRIOR TO COMMENCEMENT OF INSTALLATION.

PIA3 CONCRETE ANCHORS:

A. MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:
   1. DEWALT "POWER-STUD+ SD1" (ICC-ES ESR-2818)
   2. DEWALT "POWER-STUD+ SD2" (ICC-ES ESR-2502)
   3. DEWALT "POWER-STUD+ SD6" (ICC-ES ESR-3471) (316 STAINLESS STEEL)
   4. DEWALT "SCREW-BOLT+" (ICC-ES ESR-3889)
   5. DEWALT "SNAKE+" (ICC-ES ESR-2272)
   6. DEWALT "MINI-UNDERCUT+" (ICC-ES ESR-3912)
   7. HILTI KWIK BOLT-TZ2 EXPANSION ANCHOR SAFE SET SYSTEM WITH SI-AT-A22 TOOL WITH ADAPTIVE TORQUE FOR APPLICABLE SIZES (ICC-ES ESR-4266)
   8. HILTI HUS EZ SCREW ANCHOR (ICC-ES ESR-3056)
   9. SIMPSON STRONG-TIE "STRONG-BOLT 2" (ICC-ES ESR-3037)
   10. SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
   11. SIMPSON STRONG-TIE "STAINLESS STEEL TITEN HD" (IAPMO UES ER-493) (316 OR 304 STAINLESS STEEL)

B. ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL BE INSPECTED AS FOLLOWS: AT THE ONSET OF EACH APPLICATION, A MANUFACTURER'S REPRESENTATIVE MUST BE PRESENT TO WITNESS AT LEAST FIVE COMPLETE INSTALLATIONS. INSTALLERS MUST BE TRAINED BY THE MANUFACTURER AND MANUFACTURER SHALL SUBMIT DOCUMENTATION TO THE CONTRACTOR INDICATING TRAINING HAS TAKEN PLACE. TRAINED INSTALLERS SHALL PROVIDE WRITTEN DOCUMENTATION TO THE CONTRACTOR THAT ALL ANCHORS HAVE BEEN INSTALLED PER THE MPII. CONTRACTOR SHALL SUBMIT THIS DOCUMENTATION TO THE SEOR. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING MINIMUM AGE OF 21 DAYS. HOLES SHALL BE DRY AT THE TIME OF INSTALLATION. ADHESIVES SHALL HAVE MAX IN-SERVICE SHORT-TERM TEMPERATURE OF 150°F, AND MAX IN-SERVICE LONG-TERM TEMPERATURE OF 110°F. PRIOR TO INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS RESISTING SUSTAINED TENSION LOADS, INSTALLERS ARE REQUIRED TO BE CERTIFIED IN ACCORDANCE WITH THE ACI / CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM AND MUST BE CONTINUOUSLY INSPECTED. ANCHORS SHALL ALSO HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC308. PRE-APPROVED ADHESIVE ANCHORS INCLUDE THE FOLLOWING PRODUCTS:
   1. DEWALT "PURE 110+" (ICC-ES ESR-3298)
   2. DEWALT AC200+ GOLD (ICC-ES ESR-4027)
   3. HILTI
      a. HILTI HIT-HY 200 V3 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD PER ICC ESR-4868.
      b. HILTI HIT-HY 200 V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) WITH HAS-E THREADED ROD PER ICC ESR-4868.
      c. HILTI HY 200 V3 ADHESIVE ANCHOR USING TRADITIONAL CLEANING METHOD, 2 BLOWS OF COMPRESSED AIR (90 PSI MINIMUM, OIL FREE COMPRESSOR), 2 BRUSHES WITH SAME SIZE AS HOLE WIRE BRUSH AND 2 MORE BLOWS, (2x2x2 CLEANING METHOD) PER ICC ESR-4868.
      d. HILTI HIT-RE 500-V3 EPOXY ADHESIVE ANCHORING SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-2322 FOR SLOW CURE APPLICATIONS.
   4. SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4057)
   5. SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-2508)
   6. SIMPSON STRONG-TIE "AT-XP" (IAPMO UES ER-263)
   7. SIMPSON STRONG-TIE "ET-HP" (ICC-ES ESR-3312)

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BORA ERBILEN, P.E.
Licensed Professional Engineer No. 097940

REVISIONS

MARK	DESCRIPTION	DATE

Bora Erbilen
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DN: c=US, o=BBM Structural Engineers, dnQualifier=A01410D000001787 30C71FC000415E4E, cn=Bora Erbilen
Date: 2024.07.10 08:45:40 -04'00'

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/27/2024
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STRUCTURAL GENERAL NOTES

S001

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ABBREVIATIONS

AAC	AUTOCLAVED AERATED CONCRETE
AB	ANCHOR BOLT
ABV	ABOVE
A.C.I.	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
A.I.S.I.	AMERICAN IRON AND STEEL INSTITUTE
AL	ALUMINUM
ALT	ALTERNATE
AR	ANCHOR ROD
ARCH	ARCHITECT(URAL)
ASD	ALLOWABLE STRESS DESIGN
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
A.W.S.	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BB	BOND BEAM
BLDG	BUILDING
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BP	BASE PLATE
BRDG	BRIDGING
BRG	BEARING
BRK	BRICK
BS	BOTH SIDES
BTJ	BOLTED TIE JOIST
BTWN	BETWEEN
C/C	CENTER TO CENTER
CANT	CANTILEVER
CB	CONCRETE BEAM
CC	CONCRETE COLUMN
CFMF	COLD FORMED METAL FRAMING
CFS	COLD-FORMED STEEL
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT (OR CONTROL JOINT)
℄, CL	CENTERLINE
CLR	CLEAR(ANCE)
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CSK	COUNTER SINK
CTR	CENTER
CTRD	CENTERED
CY	CUBIC YARD
DBA	DEFORMED BAR ANCHOR
DIA	DIAMETER
DIAG	DIAGONAL
DL	DEAD LOAD
DN	DOWN
DTL	DETAIL
DWG	DRAWING
DWL	DOWEL
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
ENG	ENGINEER
EOS	EDGE OF SLAB
EL	ELEVATION
EQ	EQUAL
EQ SP	EQUAL SPACE(S) (ING)
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
F/	FACE OF
FBC	FLORIDA BUILDING CODE
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISHED FLOOR
FIN	FINISH
FL	FLOOR
FLG	FLANGE
FMG	FRAMING
FS	FAR SIDE
FT	FOOT
FTG	FOOTING
ga	GAUGE
GALV	GALVANIZE(D)
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GFC	GROUT FILLED CELL(S) / COURSE
GLB	GLU-LAM BEAM
GR	GRADE
HC	HOLLOW-CORE
HDG	HOT DIPPED GALVANIZED
HK	HOOK
HORIZ	HORIZONTAL
HP	HIGH POINT
HS	HEADED STUD
HSS	HOLLOW STRUCTURAL SECTION
ID	INSIDE DIAMETER
IF	INSIDE FACE
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP
KO	KNOCK-OUT
lb, #	POUND(S)
LG	LONG
LL	LIVE LOAD
LLBB	LONG LEG BACK-TO-BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNTL	LINTEL
LSL	LONG SLOTTED
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW POINT
LRFD	LOAD & RESISTANCE FACTOR DESIGN
LW	LONG WAY
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBM	METAL BUILDING MFR
MC	MASONRY COLUMN
MCJ	MASONRY CONTROL JT
MCN	MOMENT CONNECTION
ME	MONOLITHIC EDGE
MECH	MECHANICAL
MEZZ	MEZZANINE
MF	MONOLITHIC FOOTING
MFR	MANUFACTURE(ER)
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MS	METAL STUD
MTL	METAL
MWF	MONOLITHIC WALL FOOTING
NIC	NOT IN CONTRACT
NS	NEAR SIDE
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OHD	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
PAF	POWDER-ACTUATED FASTENER(S)
PB	PRE-CAST BEAM
PEMB	PRE-ENGINEERED METAL BUILDING
PERP	PERPENDICULAR
PC	PRECAST
PL, PL	PLATE
PLS	PLACES
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNL	PANEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTN	PARTITION
R	RADIUS
RC	REINFORCED CONCRETE
REF	REFERENCE
REINF	REINFORCE(D) (ING)
REQ	REQUIRE
REQD	REQUIRED
RF	ROOF
RM	ROOM
RP	RADIUS POINT
RTN	RETURN
R/W	REINFORCED WITH
SCH	SCHEDULE
SDI	STEEL DECK INSTITUTE
SECT	SECTION
SF	STEPPED FOOTING
SHT	SHEET
SHW	SHEAR WALL
SIM	SIMILAR
SJ	SAWCUT JOINT
SJI	STEEL JOIST INSTITUTE
SL	SLOPE
SLBB	SHORT LEG BACK-TO-BACK
SOG	SLAB ON GRADE
SP	SPACE(S)
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT SLOTTED
STD	STANDARD
STIFFR	STIFFENER
STL	STEEL
STR	STRENGTH
STRL	STRUCTURAL
SW	SHORT WAY
SYMM	SYMMETRICAL
SYP	SOUTHERN YELLOW PINE
T&B	TOP AND BOTTOM
TB	TIE BEAM
TC	TIE COLUMN
TEMP	TEMPERATURE
THK	THICK
TOPG	TOPPING
TRANS	TRANSVERSE
TYP	TYPICAL
T/	TOP OF
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VERT	VERTICAL
WD	WOOD
WF	WALL FOOTING
WO	WINDOW OPENING (MASONRY)
WP	WORKING POINT
WS	WATERSTOP
WWF	WELDED WIRE FABRIC
W/	WITH

K1 — ABBREVIATIONS

3/4" = 1'-0"

SEISMIC DESIGN CRITERIA

OCCUPANCY CATEGORY	II
IMPORTANCE FACTOR	1.0
SOIL SITE CLASS	C
SPECTRAL RESPONSE ACCELERATION, S_s	0.229g
SPECTRAL RESPONSE ACCELERATION, S_1	0.057g
SITE COEFFICIENT, F_a	1.3
SITE COEFFICIENT, F_v	1.5
5% DAMPED SPECTRAL RESPONSE ACCELERATION, S_{DS}	0.198
5% DAMPED SPECTRAL RESPONSE ACCELERATION, S_{D1}	0.057
SEISMIC DESIGN CATEGORY	B
STRUCTURAL SYSTEM = C.4: STEEL ORDINARY MOMENT FRAME (R=3 1/2, Ω_0=3, C_d=3)	
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE	
SEISMIC RESPONSE COEFFICIENT, C_s	0.0566
DESIGN BASE SHEAR (kips)	18.0

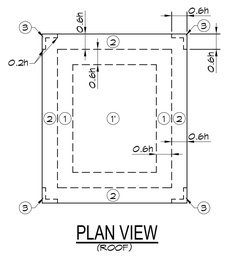
NOTE:
LATERAL DESIGN IS GOVERNED BY WIND.

K10 — SEISMIC DESIGN CRITERIA

3/4" = 1'-0"

A1 — SYMBOL LEGEND

3/4" = 1'-0"



PLAN VIEW
(ROOF)

NOTES:
1. A (Kd) OF 0.85 HAS BEEN USED IN THE DEVELOPMENT OF THESE VALUES. THE USE OF THESE VALUES SHALL ONLY BE APPLIED WHEN USED IN CONJUNCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTIONS 2.3 AND 2.4 OF ASCE 7-16.
2. PRESSURES AND SUCTIONS ON SOFFITS SHALL BE THE SAME AS CORRESPONDING WALL ZONES 4 & 5.
3. IF THE STRUCTURE IS AN EHPA OR IS INSURED BY FACTORY MUTUAL (FM) THE GROSS UPLIFT DESIGN PRESSURES SHOWN HEREIN SHALL BE DOUBLE FOR ROOF COVERINGS.
4. THE "ULTIMATE" WIND LOADS SHOWN IN THE COMPONENTS AND CLADDING SCHEDULE SHALL BE MULTIPLIED BY 0.6 TO REDUCE THEM DOWN TO "SERVICE" LEVEL ALL TESTED ASSEMBLIES, INCLUDING BUT NOT LIMITED TO DOORS, WINDOWS AND ROOF ASSEMBLIES.
5. PARAPET WIND LOADS ARE BASED ON A "SOLID" PARAPET WITH NO INTERNAL PRESSURE. ACTUAL PARAPET CONSTRUCTION MAY DICTATE THAT INTERNAL PRESSURE BE ADDED TO THE EXTERNAL PRESSURE IN ACCORDANCE WITH ASCE 7-16 SECTION 30.6.
6. UPLIFT VALUES FOR ZONE 2 MAY BE USED IN LIEU OF ZONE 3 FOR CORNER ZONES IF PARAPET HEIGHT WITH RESPECT TO FINISHED ROOF IS GREATER THAN 3 ft.

WIND DESIGN CRITERIA

Ultimate Design Wind Speed	115 mph
Service Design Wind Speed	89.1 mph
Risk Category	II
Exposure Category	C
Enclosure Classif.	Enclosed Building
Internal pressure Coef.	+/-0.18

COMPONENT AND CLADDING ULTIMATE WIND PRESSURES

h = 65 ft a = 15 ft

Roof Area	Surface Pressure (psf) 10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf
Negative Zone 1	-62.0	-57.9	-52.5	-48.4	-44.3	-41.0	-38.9	-38.9
Negative Zone 1'	-38.6	-38.6	-38.6	-38.6	-30.7	-26.7	-24.1	-19.1
Negative Zone 2	-81.9	-76.6	-69.6	-64.3	-59.1	-54.9	-52.1	-52.1
Negative Zone 3	-111.5	-101.0	-97.1	-76.6	-66.0	-57.5	-52.1	-52.1
Positive All Zones	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Overhang Zone 1&1'	-56.1	-55.1	-53.9	-52.9	-44.3	-37.4	-33.0	-33.0
Overhang Zone 2	-75.9	-69.9	-59.6	-52.6	-45.6	-39.9	-36.3	-36.3
Overhang Zone 3	-105.6	-93.3	-77.1	-64.0	-52.5	-42.6	-36.3	-36.3

Overhang soffit pressure equals adj wall pressure (which includes internal pressure of 5.9 psf)

Parapet Area		Solid Parapet Pressure (psf) 10 sf	20 sf	50 sf	100 sf	200 sf	500 sf
CASE A:	Zone 2 :	0.0	0.0	0.0	0.0	0.0	0.0
	Zone 3 :	0.0	0.0	0.0	0.0	0.0	0.0
CASE B :	Interior zone :	0.0	0.0	0.0	0.0	0.0	0.0
	Corner zone :	0.0	0.0	0.0	0.0	0.0	0.0

Wall Area	Surface Pressure (psf) 10 sf	100 sf	200 sf	500 sf
Negative Zone 4	-38.6	-33.4	-31.5	-24.7
Negative Zone 5	-47.5	-37.0	-33.9	-24.7
Positive Zone 4 & 5	35.6	30.4	28.5	28.7

A10 — WIND SCHEDULE

12" = 1'-0"

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BORA ERBILEN, P.E.
Licensed Professional Engineer No. 097940

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Orlando, FL 32827

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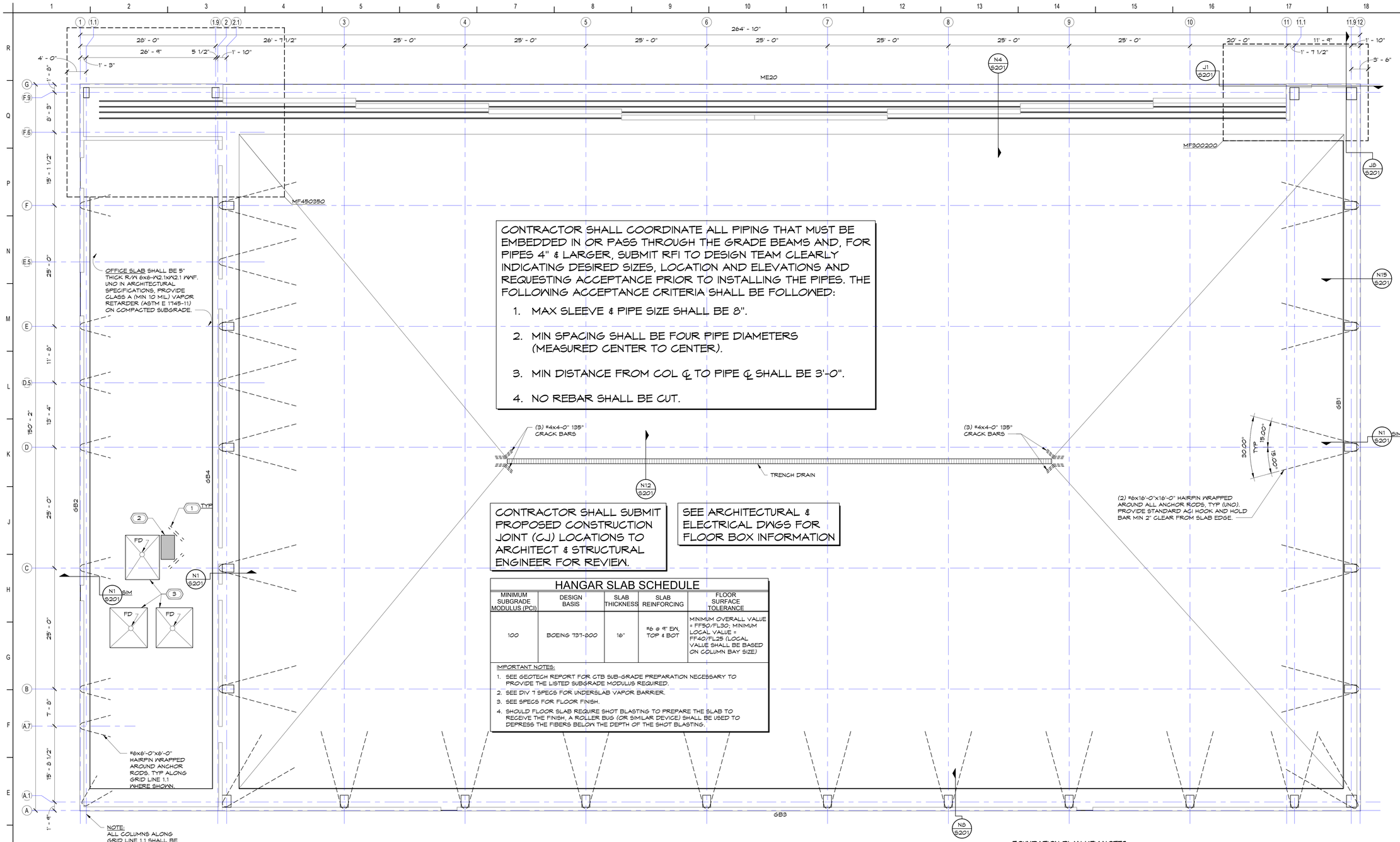
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ABBREVIATIONS, SYMBOL LEGEND & WIND SCHEDULE

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CONTRACTOR SHALL COORDINATE ALL PIPING THAT MUST BE EMBEDDED IN OR PASS THROUGH THE GRADE BEAMS AND, FOR PIPES 4" & LARGER, SUBMIT RFI TO DESIGN TEAM CLEARLY INDICATING DESIRED SIZES, LOCATION AND ELEVATIONS AND REQUESTING ACCEPTANCE PRIOR TO INSTALLING THE PIPES. THE FOLLOWING ACCEPTANCE CRITERIA SHALL BE FOLLOWED:

1. MAX SLEEVE & PIPE SIZE SHALL BE 8".
2. MIN SPACING SHALL BE FOUR PIPE DIAMETERS (MEASURED CENTER TO CENTER).
3. MIN DISTANCE FROM COL ℄ TO PIPE ℄ SHALL BE 3'-0".
4. NO REBAR SHALL BE CUT.

CONTRACTOR SHALL SUBMIT PROPOSED CONSTRUCTION JOINT (CJ) LOCATIONS TO ARCHITECT & STRUCTURAL ENGINEER FOR REVIEW.

SEE ARCHITECTURAL & ELECTRICAL DWGS FOR FLOOR BOX INFORMATION

HANGAR SLAB SCHEDULE

MINIMUM SUBGRADE MODULUS (PCI)	DESIGN BASIS	SLAB THICKNESS	SLAB REINFORCING	FLOOR SURFACE TOLERANCE
100	BOEING 737-800	16"	#6 @ 9" EW, TOP & BOT	MINIMUM OVERALL VALUE = FF50/FL30; MINIMUM LOCAL VALUE = FF40/FL25 (LOCAL VALUE SHALL BE BASED ON COLUMN BAY SIZE)

IMPORTANT NOTES:

1. SEE GEOTECH REPORT FOR CTB SUB-GRADE PREPARATION NECESSARY TO PROVIDE THE LISTED SUBGRADE MODULUS REQUIRED.
2. SEE DIV 7 SPECS FOR UNDERSLAB VAPOR BARRIER.
3. SEE SPECS FOR FLOOR FINISH.
4. SHOULD FLOOR SLAB REQUIRE SHOT BLASTING TO PREPARE THE SLAB TO RECEIVE THE FINISH, A ROLLER BUG (OR SIMILAR DEVICE) SHALL BE USED TO DEPRESS THE FIBERS BELOW THE DEPTH OF THE SHOT BLASTING.

PRE-ENGINEERED METAL BUILDING DESIGN BASIS

LIVE LOAD			COLLATERAL LOAD		DEFLECTION						BUILDING CODE
					WIND / SEISMIC LOAD					WIND	
SNOW LOAD	PURLINS	FRAMES	UNIFORM	CONCENTRATED	HORIZONTAL (DRIFT)	HORIZONTAL (WALL GIRTS SUPPORTING METAL SIDING)	HORIZONTAL (WALL SIDING)	TOTAL LOAD	DEAD LOAD	LIVE LOAD / WIND LOAD	
								ROOF	TRUSS	TRUSS	
30 PSF (GROUND) F_s = 26 PSF P_m = 20 PSF C_e = 1.0 I_s = 1.0	20 PSF (NON-REDUCIBLE)	20 PSF (REDUCIBLE)	8 PSF (HANGAR AREAS)	SEE MECH DWGS FOR ROOF TOP EQUIPMENT	H/100 (MTL PANEL WALLS)	L/180	L/240	L/240 (PURLINS & ROOF PANELS)	+/- 3" (SEE NOTES 2 & 5)	3" UP / 6" DOWN (SEE NOTE 5)	ULTIMATE WIND VELOCITY: 115 MPH RISK CATEGORY: II EXPOSURE: C INTERNAL PRESSURE COEFFICIENT: +/- 0.18 (ENCLOSED)	REFERENCE NOTE D1 ON SHEET S001

NOTES:

1. PEMB MFR MUST SUBMIT SIGNED & SEALED CALCULATIONS.
2. CONTROL DEAD LOAD DEFLECTION OF TRUSS WITH CAMBER.
3. SEE SPECIFICATION SECTION 01 23 00 FOR BID ALTERNATES.
4. SEE ARCH DWGS FOR FALL PROTECTION THAT SHALL BE SUSPENDED FROM THE ROOF. PROVIDE ALL NECESSARY DESIGN & SUPPORTS FULLY COORDINATED WITH THE FALL PROTECTION SYSTEM MFR. SWAY BRACING SHALL BE PROVIDED AS WELL.
5. TRUSS DEFLECTIONS SHALL BE COORDINATED WITH DOOR MFR.
6. SEE MECH DWGS FOR 500lb FAN LOCATIONS. PROVIDE ALL NECESSARY DESIGN & SUPPORTS.

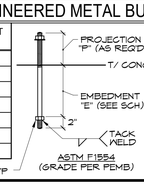
FOUNDATION PLAN KEY NOTES:

1. (2) #4x4'-0" LONG @ 3" OC PLACED 2" CLR FROM CORNER, CENTERED IN SLAB (TYP WHERE SHOWN).
2. SHADED AREA INDICATES SLAB DEPRESSION, SEE DETAIL E15/S201, REF ARCH FOR EXACT SIZE, LOCATION AND DEPTH OF DEPRESSION.
3. ISOLATED SLOPE IN CONCRETE SLAB, REF ARCH FOR EXACT SIZE & LOCATION. MAITAIN STRUCTURAL SLAB THICKNESS THROUGHOUT ENTIRE LENGTH OF SLOPE.

PRE-ENGINEERED METAL BUILDING ANCHOR ROD SCHEDULE

DIAMETER "D" ,	MIN. EMBEDMENT "E" ,,
5/8"	8"
3/4"	11"
7/8"	12"
1"	16"
1 1/8"	18"
1 1/4"	32"
1 1/2"	36"

HEAVY HEX NUT, TYP



* ROD DIAMETER BY METAL BUILDING MFR.
** EMBEDMENT BY "BORA ERBILEN, P.E.".

NOTES:

1. SEE GEN NOTES FOR ADD'L ANCHOR ROD INFO.
2. DEVELOPS FULL TENSILE CAPACITY OF SINGLE ROD WITHOUT EDGE DISTANCE OR GROUPING REDUCTIONS.
3. IT SHALL BE ACCEPTABLE TO PROVIDE A HEAVY HEX HEAD BOLT IN LIEU OF THE THREADED ROD WITH HEAVY HEX NUT AT BOTTOM.

PLAN NORTH

A1 FOUNDATION PLAN - HANGAR A

1/8" = 1'-0"

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BORA ERBILEN, P.E.
Licensed Professional Engineer No. 097940

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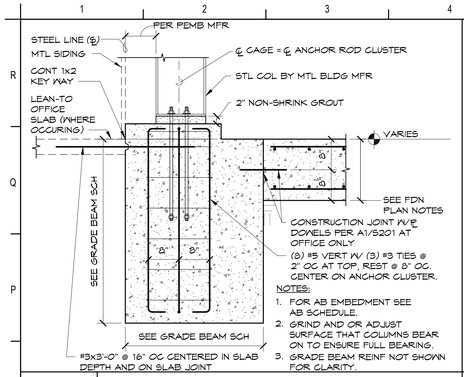
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FOUNDATION PLAN - HANGAR A

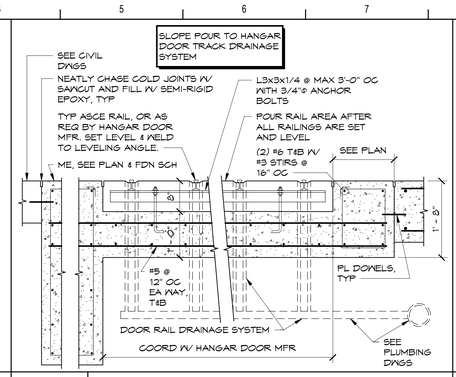
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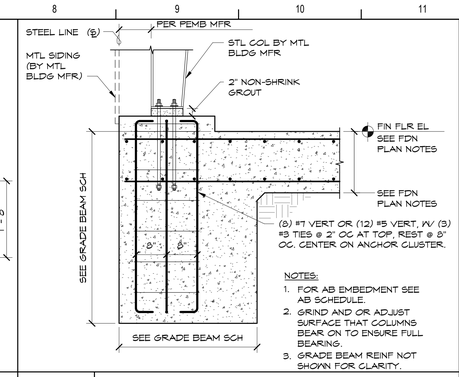
N1 SECTION @ END WALL COL FTG

3/4" = 1'-0"



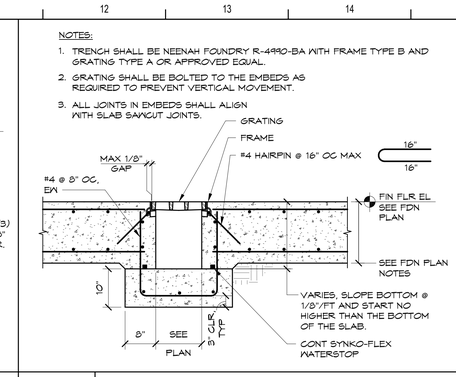
N4 SECTION @ HANGAR DOOR

3/4" = 1'-0"



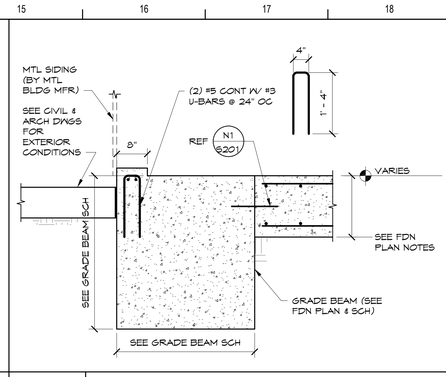
N8 SECTION @ COL FTG

3/4" = 1'-0"



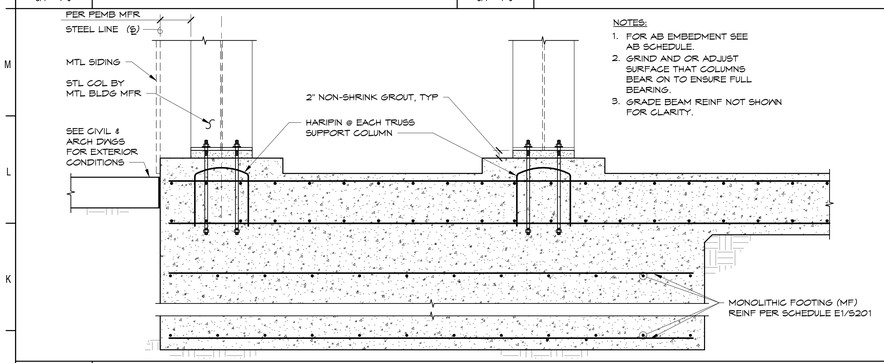
N12 SECTION @ TRENCH DRAIN

3/4" = 1'-0"



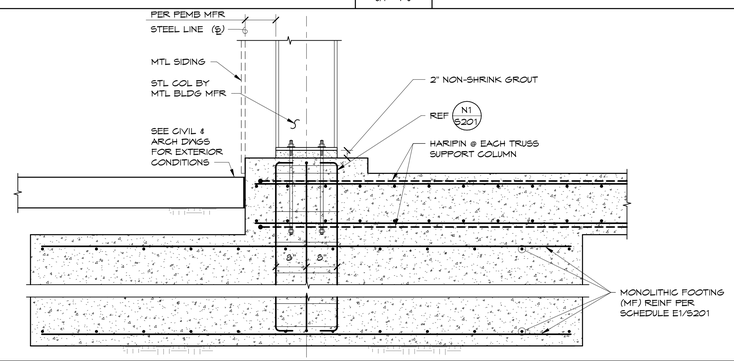
N15 SECTION @ CURB @ END WALLS

3/4" = 1'-0"



J1 SECTION @ BASE OF TRUSS SUPPORT COLUMNS

3/4" = 1'-0"



J8 SECTION @ BASE OF TRUSS SUPPORT COLUMN

3/4" = 1'-0"

FOUNDATION SCHEDULE

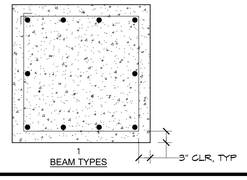
MARK	SIZE (L x W x D)	REINFORCING	REMARKS
MF300200	30'-0"X20'-0"X4'-0"	(30) #10 SYN & (20) #10 LN, TOP & BOT	MONOLITHIC FOOTING
MF450350	45'-0"X35'-0"X4'-0"	(45) #10 SYN & (35) #10 LN, TOP & BOT	MONOLITHIC FOOTING
ME20	CONTX2'-0"X4'-0"	(3) #5 CONT, TOP & BOT	MONOLITHIC EDGE, ADD #5 @ 12" OC EF SKIN REINF

E1 FOUNDATION SCHEDULE

12" = 1'-0"

GRADE BEAM SCHEDULE

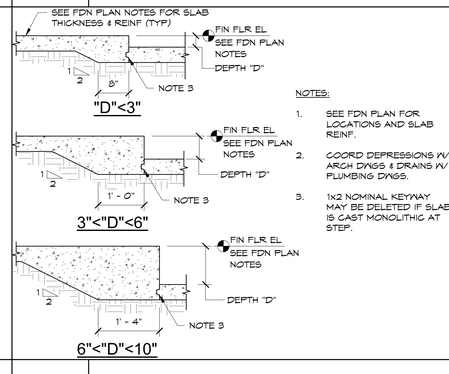
MARK	TYPE	NOMINAL SIZE (W"xD")	REINFORCING			STIRRUPS		COMMENTS
			BOT	MID	TOP	SIZE	SPACING	
GB1	1	42"X48"	(5) #8	(4) #5	(5) #8	#3	12"	
GB2	1	24"X48"	(3) #8	(4) #5	(3) #8	#3	12"	
GB3	1	54"X48"	(7) #8	(4) #5	(7) #8	#3	10"	
GB4	1	66"X48"	(8) #8	(4) #5	(8) #8	#3	10"	



1
BEAM TYPES

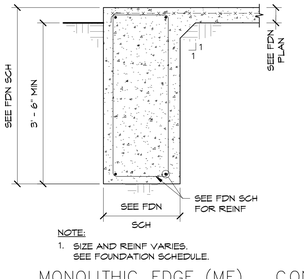
E8 GRADE BEAM SCHEDULE

3/4" = 1'-0"

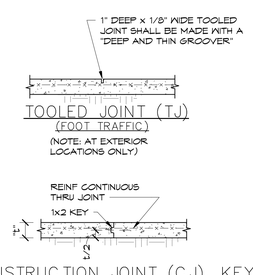


E15 SLAB-ON-GRADE FLR DEPRESSION DETAILS

3/4" = 1'-0"

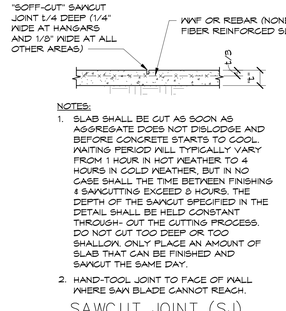


MONOLITHIC EDGE (ME)
(ALL SLABS)

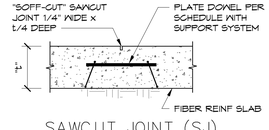


TOOLED JOINT (TJ)
(FOOT TRAFFIC)
(NOTE: AT EXTERIOR LOCATIONS ONLY)

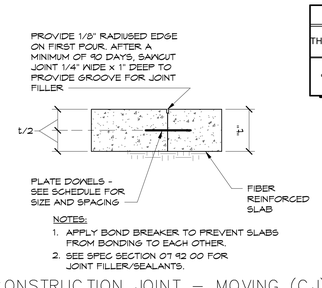
CONSTRUCTION JOINT (CJ), KEYED
(FOOT TRAFFIC)



SAWCUT JOINT (SJ)
(OFFICES, PUMP ROOM, AND HANGAR)



SAWCUT JOINT (SJ)
(HANGAR)



CONSTRUCTION JOINT - MOVING (CJ)
(HANGAR)

PLATE DOWEL SCHEDULE

SLAB THICKNESS (IN)	DOWELED SAWCUT JOINTS	DOWELED CONSTRUCTION JOINTS
9 TO 12	3/4"X2 1/2"X12" PLATE DOWEL @ 20" OC (PNA PD3 BASKET ASSEMBLY)	3/4"X4 1/2"X4 1/2" PLATE DOWEL @ 20" OC (PNA DIAMOND DOWEL)

A1 SLAB-ON-GRADE DETAILS (FOOT TRAFFIC AND AIRPLANE TRAFFIC)

3/4" = 1'-0"

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Licensed Professional Engineer No. 097940

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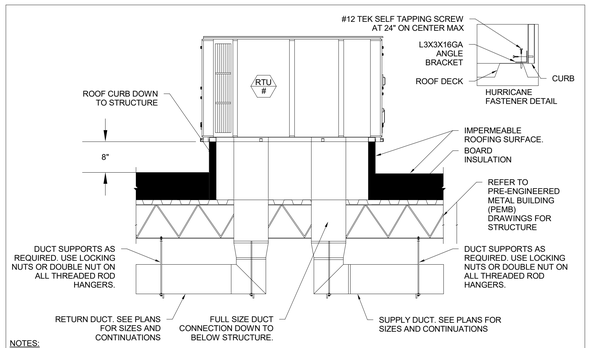
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FOUNDATION SECTIONS & DETAILS

S201

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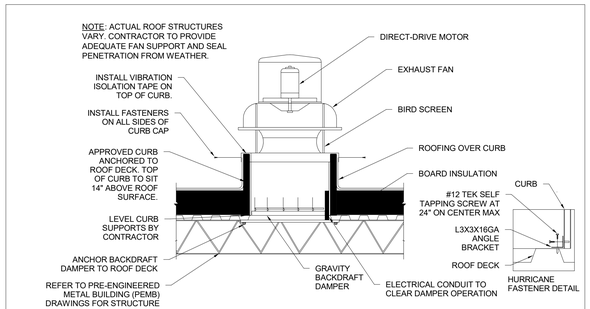


NOTES:

1) MOUNT THERMOSTAT ON WALL OR COLUMN 48" AFF.
2) INTERNALLY LINED DUCT WITH 1" THICK ACOUSTIC INSULATION
3) REFER TO ARCHITECTURAL AND PEMB FOR ADDITIONAL DETAILS.
4) SECURE CURB TO ROOF STRUCTURE AND RTU TO CURB WITH FASTENERS AS DETAILED.
5) INSTALL 3/8" THICK FOAM TAPE BETWEEN CURB AND RTU FOR VIBRATION ISOLATION AND TO PREVENT AIR LEAKAGE.

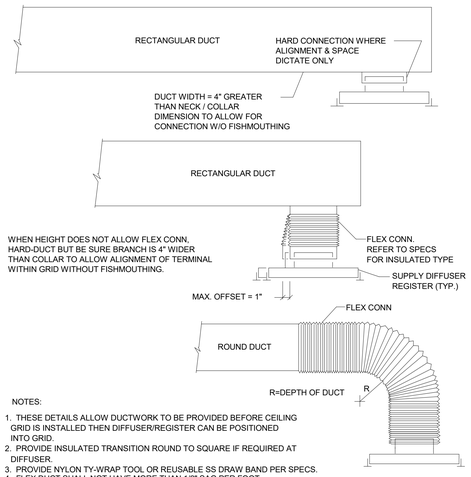
1 ROOF TOP UNIT DETAIL

SCALE N.T.S.



2 EXHAUST FAN DETAIL (DIRECT)

SCALE N.T.S.

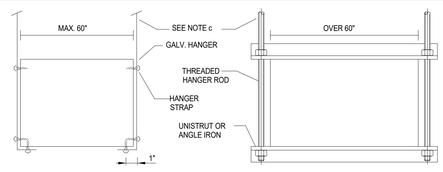


NOTES:

1. THESE DETAILS ALLOW DUCTWORK TO BE PROVIDED BEFORE CEILING GRID IS INSTALLED THEN DIFFUSER/REGISTER CAN BE POSITIONED INTO GRID.
2. PROVIDE INSULATED TRANSITION ROUND TO SQUARE IF REQUIRED AT DIFFUSER.
3. PROVIDE NYLON TY-WRAP TOOL OR REUSABLE SS DRAW BAND PER SPECS.
4. FLEX DUCT SHALL NOT HAVE MORE THAN 1/2" SAG PER FOOT.
5. LENGTH OF FLEX DUCT SHALL NOT EXCEED 6'-0" WITH UP TO ONE BEND.
6. PROVIDE DUCT MOUNTED VOLUME DAMPER WHENEVER POSSIBLE. TRY TO AVOID NECK DAMPERS.

3 DIFFUSER CONNECTION DETAIL

SCALE N.T.S.



NOTES:

1. ON DUCTS OVER 48" WIDE, BOTTOM SHALL BE BRACED BY ANGLE. FOR CROSS SECTION AREA MORE THAN 8 SQ FT, DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.
2. CUTTING AND PATCHING SHALL BE LIMITED TO A MINIMUM AS REQUIRED FOR PROPER INSTALLATION.
3. SUPPORTS SHALL BE SPACED AND SIZED AS PER SMACNA.

4 DUCT HANGER SUPPORT DETAIL

SCALE N.T.S.

SPECIFICATIONS

1. Follow all local and state codes/ordinances and general conditions of contract. Pay all required fees and obtain all required permits. Submit these plans to building department for plan review. Implement all code review required changes into installation.
2. Equipment, insulation and controls shall be provided as required by the adopted energy code.
3. Visit site to verify existing conditions prior to ordering equipment, providing price quote and/or fabricating ductwork or piping. Change orders will not be considered for non-compliance.
4. Contractor shall purchase, receive, uncrate, assemble, insure, and install in conformance to manufacturer's recommendations all Mechanical equipment.
5. Mechanical drawings are schematic and not to be scaled. Refer to architectural, certified drawings, and site measurements for all dimensions prior to duct and piping fabrication.
6. As-built scale drawings shall be provided by contractor and submitted to division 15 Engineer at completion showing all piping, duct, and equipment changes.
7. Contractor shall check shop drawings for 100% compliance with contract documents. Submit four (4) copies to division 15 engineer for review prior to ordering.
8. Base bid on specified equipment as shown on plans and in specifications. Substitutions will be processed as change-orders after bidding with all electrical, building alterations, flue requirements and dollar amounts included.
9. Extra costs or change orders allowed only if approved in writing by engineer with dollar amount prior to ordering equipment or fabricating ductwork or piping. No extensions of completion time unless agreed upon by all parties.
10. Provide 2 operating manuals to owner and engineer for all systems and equipment including manufacturer's maintenance manuals. Include lubrication, filter types and sizes, starting and stopping procedures. List contractor's telephone numbers.
11. Supports and anchors shall be provided for Mechanical work. No chain, tape, or wire.
12. Sleeves shall be provided for all pipe and ducts thru walls, floors, and ceilings.
13. Conceal all work in finished areas.
14. Cut and patch to match adjacent areas. No structural member shall be cut or notched.
15. Electrical: confirm voltage, phase, and ampacity with electrical contractor prior to ordering equipment. All 24v controls including interlock wiring for Mechanical equipment by division 15 contractor. Provide magnetic starters for all 3-phase motors with protection on all three leads. Electrical equipment to automatically restart after power failure. All wire in conduit per NEC latest edition.
16. Vibration isolation shall be provided for all equipment. Provide UL listed flexible duct connections on all fans
17. Temperature control shall be by equipment manufacturer 24v low voltage. Provide all transformers, relays, thermostats, min 18 ga. low voltage wiring in conduit per NEC for a complete operating system.
18. Provide condensate pumps as required where gravity drain condensate is not possible. Provide condensate acid neutralization for all condensate drains to sanitary sewer.
19. Ductwork shall be galvanized sheet metal with 45 max reducing fitting, 20 max increasing fittings. All construction and installation shall be per SMACNA and code standards.
20. Grease duct shall be listed factory duct, or field fabricated to code. Field fabricated grease duct shall be welded 10 gauge steel and shall be fully wrapped with city approved 3" fire wrap. All grease duct shall have cleanouts at each change of direction and each building level penetrated by duct run. All horizontal grease ducts less than 75 feet developed length shall slope at ¼" per linear foot back to hood, or to an approved grease reservoir/pollution control unit/ grease exhaust fan. Horizontal grease ducts in excess of 75 feet developed length shall slope at 1" per linear foot.
21. All environmental air exhaust (not considered hazardous or noxious) shall discharge a minimum of 3' from property lines and operable openings, and a minimum of 10' from mechanical air intakes. Product conveying exhaust outlets shall discharge a minimum of 10' from property lines, operable openings, and above adjoining grade. Product conveying exhaust outlets shall discharge a minimum of 3' from exterior walls and roofs.
22. Duct insulation for all rectangular HVAC supply/return ducts shall be internally lined. Duct insulation for all round/ovular spiral HVAC supply/return ducts that are located in unconditioned spaces shall be internally lined. Liner shall be Schuller Permacote 1.5" thick ul-181 class-1 EPA registered anti-microbial fiberglass liner attached with stic-klips 12" oc each way and 100% coverage of flame proof adhesive. Duct exposed to weather to be insulated with liner at 3" thickness. Increase duct interior dimension to allow for liner. Elbows for rectangular duct shall be provided multi-blade turning vanes or 1.5 centerline radius. Round ducts shall be externally wrapped with 1.5" thick Halstead insul-tube ul-181 class-1 covered fiberglass strapped and taped in place. Exposed spiral duct is not to be insulated on exterior. Flexible ductwork shall be limited to 6ft or max allowed by local code. Flexible ductwork shall be provided with UL listed and plenum rated Thermaflex FlexFlow elbow supports at inlet/outlet connections.
23. All return air plenum materials shall be plenum rated or shall be enclosed in a plenum rated enclosure.
24. Seal duct joints and seams with 3-m heat-duct or equivalent per code. Spiral duct joints shall be sealed using approved connectors and 100%silicone sealant
25. Provide balancing dampers in accessible locations as required. Test and air balance all systems to attain quantities shown on plans. Air CFM flow rates shall be adjusted as required based on site altitude. Balance with dampers at conical spin-in fittings at main trunk with registers/diffusers wide open or provide dampers at registers/diffusers as required due to inaccessibility of manual balancing dampers. Motors to draw 95% max nameplate amps. Tabulate all motors, grilles, registers, and diffusers with full type-written test and balance report submitted to engineer for approval prior to final payment. Balance airflow within 5% of noted CFM
26. Fire dampers and fire smoke dampers where noted on plan or where required; Provide Greenheck or equal listed damper approved for application. No dampers shall be installed in hazardous, range, or grease exhaust ducts. Ducts 4" or less in diameter penetrating fire rated assemblies do not require fire dampers, provide approved fire caulking at penetrations. All fire/smoke dampers shall be 120v rated and wired by electrical contractor and shall be interlocked with fire protection controls. Provide remote test stations as required by code.
27. Gas piping shall be schedule 40 black iron with Vega MegaPress-connect fittings complying with ANSI LC-4/CSA6.32-12 inside building and from meter to building where not buried. Verify gas line routing with architect and building department prior to installation. Costs involved in gas service shall be included in bid. Provide line size valve immediately prior to entering building. Provide equipment regulators to suit pressure supplied and gas equipment requirements. Gas piping on roof shall run on B-Line C-Port supports per code. Paint all exposed gas piping per code. Prior to each piece of equipment, provide gas valve, union, dirt leg, all accessible per code.
28. Requests for information (RFI's) from contractor shall include at least one proposed solution which complies with the intent of these contract documents.
29. Fire caulk fire rated wall/ceiling/floor penetrations with HILTI or equal listed fire caulk.
30. Guarantee all labor and new equipment per this contract for one year from the date of acceptance by owner.

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	AIR FLOW DIRECTION		RECTANGULAR SUPPLY AIR DUCT UP/DOWN
	CONNECT NEW TO EXISTING		RECTANGULAR RETURN AIR DUCT UP/DOWN
	24X24 DIFFUSER ROUND NECK		RECTANGULAR EXHAUST AIR DUCT UP/DOWN
	24X24 DIFFUSER SQUARE NECK		RECTANGULAR SUPPLY AIR DUCT UP/DOWN
	ROUND DIFFUSER		RECTANGULAR RETURN AIR DUCT UP/DOWN
	SLOT DIFFUSER		RECTANGULAR EXHAUST AIR DUCT UP/DOWN
	24X24 RETURN GRILL		TYPICAL BRANCH DUCT 45° TAKE-OFF
	24X12 RETURN GRILL		TYPICAL RECTANGULAR DUCT ELBOW WITH TURNING VANES
	CONICAL SPIN-IN FITTING FOR MED PRESS DUCT		TYPICAL RADIUS ELBOW RECTANGULAR/ROUND DUCT
	STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT		DUCT TRANSITION
	CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT WITH DAMPER		EXHAUST AIR DUCT UP
	FLEXIBLE DUCT		
	MANUAL VOLUME DAMPER W/LOCKING QUADRANT		
M	MOTORIZED DAMPER		

AIR DEVICE NUMBER (SEE SCHEDULE) — NECK SIZE IN INCHES — DEVICE SIZE — CFM

1 6 / 100 / 24X24

GAS FIRED ROOFTOP HVAC UNIT SCHEDULE

PLAN CODE	MANUFACTURER	MODEL #	COOLING DATA 95F AMBIENT, 80F DB RET, 62F WB RET				HEATING DATA		FAN DATA			ELECTRICAL DATA							
			NOMINAL ARI TONS	MBH TOTAL	MBH SENSIBLE	EER (SEER2)	IEER	MBH INPUT	AFUE %	CFM AT ALT	E.S.P. " WC	OSA INTAKE MIN. SETTING CFM	VOLTS	PHASE	MCA	MOCP	WT. (LBS) INC. CURB	AREA SERVED	DIMENSIONS INC. CURB (LxWxH)	NOTES
RTU 1	TRANE	YHC092F4	7.5	89.0	62.4	12.6	14.5	200	80	3,000	1.1	REFER TO OSA CALCS	460	3	20.0	25	1400	SEE PLANS	89"x54"x65"	1, 2, 3, 5, 6, 8, 9, 10, 12, 15, 16, 17, 18, 19, 21, 22, 23, 24
RTU 2	TRANE	YHC036E4	3.0	37.1	25.1	(15.0)	-	120	80	1,200	0.94	REFER TO OSA CALCS	460	3	12.0	15	850	SEE PLANS	70"x45"x55"	1, 2, 3, 5, 6, 8, 9, 10, 12, 15, 16, 17, 22, 23, 24

1. EQUIPMENT SCHEDULE BASED ON TRANE. ACCEPTABLE ALTERNATES INCLUDE CARRIER, DAIKIN, LENNOX, TEMPMASTER, AMBIT/STRONG, AAON, OR YORK.
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.
3. HIGH EFFICIENCY, MULTI-SPEED DIRECT DRIVE FAN MOTOR.
4. MERV-8 FILTERS.
5. MERV-13 FILTERS.
6. 7 DAY PROGRAMMABLE THERMOSTAT WITH AUTO CHANGE-OVER, SET FAN TO ON DURING OCCUPIED HOURS. 5-DEGREE DEAD-BAND. COOLING AND ECONOMIZER OPERATION SHALL BE CONTROLLED TO MAINTAIN SPACE COOLING SETPOINT. GAS HEATING SECTION SHALL STAGE ON TO MAINTAIN SPACE HEATING SETPOINT.
7. PROVIDE WITH DRY BULB ECONOMIZER. AIR SIDE ECONOMIZER SHALL MODULATE THE OUTDOOR AIR DAMPER UP TO 100% OPEN AS THE FIRST STAGE OF COOLING WHEN OUTDOOR AIR ENTHALPY IS LESS THAN RETURN AIR ENTHALPY. PROVIDE BAROMETRIC RELIEF OR POWERED EXHAUST FOR RELIEF DURING ECONOMIZER MODE. SET MINIMUM POSITION FOR OSA CFM SHOWN. FAULT DETECTION AND DIAGNOSTICS REQUIRED.
8. PROVIDE WITH COMPARATIVE ENTHALPY ECONOMIZER. AIR SIDE ECONOMIZER SHALL MODULATE THE OUTDOOR AIR DAMPER UP TO 100% OPEN AS THE FIRST STAGE OF COOLING WHEN OUTDOOR AIR ENTHALPY IS LESS THAN RETURN AIR ENTHALPY. PROVIDE BAROMETRIC RELIEF OR POWERED EXHAUST FOR RELIEF DURING ECONOMIZER MODE. SET MINIMUM POSITION FOR OSA CFM SHOWN. FAULT DETECTION AND DIAGNOSTICS REQUIRED.
9. BURNER SHALL BE DESIGNED TO FIRE NATURAL GAS, 6"-14" W.C.
10. STAINLESS STEEL HEAT EXCHANGER.
11. HIGH ALTITUDE KIT.
12. COMPRESSOR: ANTI-SHORTCYCLE, HIGH/LOW PRESSURE SWITCHES, CRANKCASE HEATER.
13. HOT GAS BYPASS. HOT GAS BYPASS CAPACITY SHALL NOT EXCEED 50% RATED CAPACITY.
14. HOT GAS REHEAT.
15. HAIL GUARD ON CONDENSER COILS.
16. 18" HIGH FACTORY ROOF CURB. FLASH INTO ROOF.
17. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT.
18. SPACE CO2 SENSORS INSTALLED BY MC. REFER TO PLANS FOR QUANTITY AND LOCATION. REFER TO DEMAND BASED VENTILATION CONTROL FOR DETAIL.
19. IONIZED SMOKE DETECTOR AND REMOTE SENSOR FURNISHED AND INSTALLED IN RETURN DUCT BY MC. INTERLOCK WITH FIRE ALARM SYSTEM.
20. PROVIDE WITH BACNET CONTROL BOARD WITH FAULT DETECTION OUTPUT.
21. POWERED CONVENIENCE OUTLET AND STEP DOWN TRANSFORMER BY MANUFACTURER.
22. FACTORY MOUNTED DISCONNECT.
23. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING.
24. DESIGN LEAVING AIR TEMPERATURES: 55F DB COOLING, 95F DB HEATING.

GAS FIRED SPACE HEATER SCHEDULE

PLAN CODE	MANUFACTURER	MODEL #	HEATING DATA			FAN DATA			ELECTRICAL DATA						
			TYPE AT ALT	INPUT MBH @ SL	EFFICIENCY %	CFM AT ALT	E.S.P. " WC	OSA INTAKE MIN. SETTING CFM	VOLTS	PHASE	FLA	HP	WT. (LBS)	AREA SERVED	NOTES
GSH 1	CAMBRIDGE	S1850	DIRECT	1850	92	8,565	0.19	100%	460	3	11.1	7.5	2200	100 - HANGAR	1, 2, 3, 4, 5, 6, 7, 9, 11, 16, 17, 18, 19, 20, 21

1. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.
2. DIRECT DRIVE FAN MOTOR.
3. AIRFLOW PROVING CONTACT.
4. FILTER SECTION. MERV-8 FILTERS.
5. 7 DAY PROGRAMMABLE SPACE THERMOSTAT. SET FAN TO ON DURING OCCUPIED HOURS. GAS HEATING SECTION SHALL STAGE ON TO MAINTAIN SPACE HEATING SETPOINT.
6. BURNER SHALL BE DESIGNED TO FIRE NATURAL GAS, 6"-14" W.C.
7. STAINLESS STEEL HEAT EXCHANGER.
8. HIGH ALTITUDE KIT.
9. LOW GAS PRESSURE SWITCH, FREEZE PROTECTION.
10. 24" HIGH FACTORY ROOF CURB. FLASH INTO ROOF.
11. UNDER ROOF MOUNTING PACKAGE.
12. THROUGH WALL MOUNTING PACKAGE.
13. INDOOR VERTICAL MOUNTING PACKAGE.
14. OUTDOOR VERTICAL MOUNTING PACKAGE.
15. 1-WAY FACTORY DIRECTIONAL ELBOW DISCHARGE.
16. 3-WAY FACTORY DIRECTIONAL ELBOW DISCHARGE.
17. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT.
18. EXHAUST FAN CONTACT.
19. FACTORY MOUNTED DISCONNECT.
20. VERIFY VOLTAGE, PHASE, AND HP WITH EC PRIOR TO ORDERING.
21. DESIGN LEAVING AIR TEMPERATURE: 160F DB HEATING.

FAN SCHEDULE

PLAN CODE	MANUFACTURER	MODEL	TYPE	AREA SERVED	FAN DATA							ELECTRICAL DATA			WT (LBS)	FAN CONTROL	NOTES
					CFM AT ALTITUDE	S.P. " WC	RPM	SYSTEM TYPE	BLADE TYPE	DRIVE	ROOF (WALL) OPENING	VOLTS	PHASE	HP (WATTS)			
EF 1&2	GREENHECK	AER-20-VG	SIDEWALL PROPELLER	SEE PLANS	4250	0.3	1436	EXHAUST	PROP	DIRECT	(22.5"X22.5")	115	1	1	150	E	1, 2, 5, 6, 7, 8, 11, 13, 15, 16 INTERLOCK TO OPERATE WITH GSH-1.
EF 3	GREENHECK	G-140-VG	ROOF CENTRIFUGAL	SEE PLANS	1500	0.3	1200	EXHAUST	BI	DIRECT	18.5"X18.5"	115	1	1/2	90	G	1, 2, 3, 5, 6, 7, 8, 14, 15, 16
KEF 1	GREENHECK	CUE-100HP-VG	ROOF CENTRIFUGAL	SEE PLANS	800	1.0	2411	EXHAUST	BI	DIRECT	15.5"X15.5"	115	1	1/2	100	E	1, 2, 4, 6, 7, 8, 14, 15, 16, PROVIDE WITH 24"H VENTED CURB, GREASE CUP, INTERLOCK TO OPERATE WITH GH-1.

1. EQUIPMENT SCHEDULE BASED ON GREENHECK. ACCEPTABLE ALTERNATES INCLUDE COOK, CAPTIVEAIRE, NAILOR, OR ACME.
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, SCREENS, ROOF CAPS, OR DAMPERS.
3. 18" FACTORY ROOF CURB. FLASH INTO ROOF.
4. INTEGRAL GRAVITY BACKDRAFT DAMPER.
5. 120V MOTORIZED BACKDRAFT DAMPER. FAIL OPEN.
6. ECM OR SPEED CONTROLLER. PROVIDE WITH VFD AS REQUIRED.
7. FACTORY VIBRATION ISOLATORS.
8. 1/4" GALVANIZED MESH BIRD SCREEN.
9. DUCT FROM FAN OUTLET TO EXTERIOR. SEE PLANS.
10. SMACNA OUTLET ROOF CAP.
11. WALL HOUSING FLUSH TO EXTERIOR WITH ACCESS GUARD SCREEN.
12. WEATHER HOOD.
13. FLUSH LOUVER.
14. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT.
15. DISCONNECT SWITCH.
16. VERIFY VOLTAGE, PHASE, AND MOTOR HP WITH EC PRIOR TO ORDERING.
A. SEPARATE WALL SWITCH (NOT WITH LIGHTS).
B. SWITCH ON WITH ROOM LIGHTS.
C. 7-DAY TIME CLOCK SET ON DURING OCCUPIED HOURS.
D. TO OPERATE CONTINUOUSLY.
E. INTERLOCK TO OPERATE WITH EQUIPMENT NOTED.
F. SEPARATE WALL TIMER FOR SUMMER/TIME VENTILATION ONLY.
G. LINE VOLTAGE COOLING ONLY THERMOSTAT. SET TO 85F.

DUCTLESS FAN COIL UNIT SCHEDULE

PLAN CODE	MANUFACTURER	MODEL	TYPE	COOLING DATA SEE CU SCHEDULE		HEATING DATA	FAN DATA					ELECTRICAL		OUTDOOR AIR CFM	AREA SERVED	Notes
				NOMINAL ARI TONS	CU-#	MBH TOTAL	CFM @ ALT.	E.S.P. " W.C.	HP	MCA	WATTS	VOLTS	PHASE			
DFC 1	SAMSUNG	RNS09ABC	WALL MOUNTED	0.75	CU-1	-	392	-	-	1	27	208/230	1	-	SEE PLANS	1, 2, 3, 6, 7, 8, 9, 10, 11, 12

1. EQUIPMENT SCHEDULE BASED ON SAMSUNG. ACCEPTABLE ALTERNATES INCLUDE CARRIER, MITSUBISHI, AND LENNOX.
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.
3. HIGH EFFICIENCY, MULTI-SPEED DIRECT DRIVE FAN MOTOR.
4. MERV-8 FILTERS.
5. MERV-13 FILTERS.
6. WIRELESS REMOTE THERMOSTAT
7. FACTORY LINE SET. VERIFY REQUIRED LENGTH PRIOR TO ORDERING.
8. GRAVITY DRAIN IF POSSIBLE. PROVIDE CONDENSATE PUMP AS REQUIRED.
9. VERIFY SINGLE POINT CONNECTION TO OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT
10. FACTORY MOUNTED DISCONNECT.
11. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING.
12. COOLING ONLY OPERATION

AIR COOLED CONDENSING UNIT SCHEDULE

PLAN CODE	MANUFACTURER	MODEL	COOLING DATA 95F AMBIENT, 80F DB RET, 62F WB RET					HEATING DATA	COMPRESSOR/FAN DATA			ELECTRICAL DATA						
			NOMINAL ARI TONS	MBH TOTAL	MBH SENSIBLE	EER (SEER2)	REFRIGERANT	MBH TOTAL	CONDENSER FAN CFM (@ 0.0" SP)	COMPRESSOR STAGES	SOUND RATING (DB)	VOLTS	PHASE	MCA	MOCP	WT. (LBS) INC. CURB	EQUIPMENT SERVED	NOTES
CU 1	SAMSUNG	RXS09ACC	0.75	9	9	(24.5)	R-410A	-	-	1	45	208/230	1	12	20	100	DFC-1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

1. EQUIPMENT SCHEDULE BASED ON SAMSUNG. ACCEPTABLE ALTERNATES INCLUDE CARRIER, MITSUBISHI, AND LENNOX.
2. COMPRESSOR: ANTI-SHORTCYCLE, HIGH/LOW PRESSURE SWITCHES, CRANKCASE HEATER, START ASSIST.
3. ELECTRONIC EXPANSION VALVE, FILTER DRIER.
4. SOUND ATTENUATING BLANKET OR EQUAL ON COMPRESSORS.
5. LOW AMBIENT CONTROL TO -40F WITH WIND BAFFLES, 0F WITHOUT WIND BAFFLES.
6. HAIL GUARD OR WIND BAFFLE KIT.
7. 18" QUICK SLING MOUNTING RAIL.
8. VERIFY SINGLE POINT CONNECTION TO OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT
9. FACTORY MOUNTED DISCONNECT.
10. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING.
11. COOLING ONLY OPERATION
12. COASTAL RATED

ELECTRIC UNIT HEATER SCHEDULE

PLAN CODE	MANUFACTURER	MODEL	WATTS	BTU/H	ELECTRICAL DATA		WT. (LBS)	CFM @ S.L.	AREA SERVED	EQUIPMENT CONTROL	DIMENSIONS	NOTES
					VOLTS	PHASE						
EUH 1	MODINE	HER 50	5,000	17,100	208	1	40	380	SEE PLANS	B	15" X 17.5" X 17.5" H	1, 3, 4, 6, 7, 8

1. EQUIPMENT SCHEDULE BASED ON MODINE. ACCEPTABLE ALTERNATES INCLUDE REZNOR, INDEECO, AND TRANE.
2. EXPLOSION PROOF UNIT.
3. THERMAL CUTOUT.
4. FAN DELAY.
5. WALL MOUNTING KIT.
6. HANGING MOUNTING KIT.
7. DISCONNECT SWITCH.
8. VERIFY VOLTAGE, PHASE, AND KW WITH EC PRIOR TO ORDERING.
A. INTEGRAL THERMOSTAT
B. LINE-VOLTAGE SINGLE STAGE THERMOSTAT
C. LINE-VOLTAGE 2-STAGE THERMOSTAT
D. LOW-VOLTAGE SINGLE STAGE THERMOSTAT
E. SUMMER/WINTER SWITCH

CEILING FAN SCHEDULE

PLAN CODE	MANUFACTURER	MODEL	TYPE	AREA SERVED	FAN DATA						ELECTRICAL DATA			WT (LBS)	FAN CONTROL	NOTES:
					SIZE	S.P. " WC	RPM	FINISH	BLADE TYPE	DRIVE	VOLTS	PHASE	HP (WATTS)			
FAN 1-2	BIG ASS FANS	BA6-24	STRUCTURE MOUNTED	SEE PLANS	24 FT	-	61	ALUM	AIRFOIL	GEAR	460	3	2.0	250	B	1, 2, 3, 4, 5, 6, ONE CONTROLLER TO OPERATE BOTH HANGAR FANS

1. EQUIPMENT SCHEDULE BASED ON BIG ASS FANS. ACCEPTABLE ALTERNATES INCLUDE GREENHECK, HUNTER, AND EPIC.
2. MOUNT PER MANUFACTURER RECOMMENDATIONS.
3. MOUNT FAN APPROXIMATELY 1' IN BETWEEN THE NEAREST FOUR SPRINKLER HEADS, MAINTAINING 3 FT VERTICAL CLEARANCE TO NEAREST SPRINKLER DEFLECTOR.
4. INTERLOCK FAN RELAY TO SHUT DOWN OPERATION OF FAN WITH FIRE ALARM ACTIVATION
5. VERIFY VOLTAGE, PHASE, AND MOTOR HP WITH EC PRIOR TO ORDERING.
6. COORDINATE LOCATION AND MOUNTING HEIGHT WITH OWNER/ARCHITECT, STRUCTURE, COLUMNS, AND RACKING. PROVIDE PROPER DOWNROD LENGTH.
A. STANDARD WALL CONTROLLER
B. SMARTSENSE WALL CONTROLLER AND UPPER TEMPERATURE SENSOR
C. SEPARATE WALL SWITCH
D. 24-HOUR DIGITAL TIMER
E. THERMOSTAT

ENERGY RECOVERY VENTILATOR UNIT SCHEDULE

PLAN CODE	MANUFACTURER	MODEL #	SUMMER (COOLING) DATA 95F AMBIENT, 70F DB RET, 58F WB RET		WINTER (HEATING) DATA -10F AMBIENT, 70F DB RET, 53F WB RET		FAN DATA			ELECTRICAL DATA				WT. (LBS) INC. CURB	AREA SERVED	DIMENSIONS INC. CURB (LxWxH)	NOTES
			NOMINAL SUPPLY TEMPERATURE (DEG F)	OSA ENTHALPY RECOVERY RATIO (%)	NOMINAL SUPPLY TEMPERATURE (DEG F)	OSA ENTHALPY RECOVERY RATIO (%)	SUPPLY CFM @ ALT	EXHAUST CFM @ ALT	E.S.P. (" W.C.)	VOLTS	PHASE	MCA	MOCP				
ERV 1	GREENHECK	ERV-10-20L-VG	74.4	85.8	54.0	79	600	600	0.75	208	1	21.9	25	300	SEE PLANS	46"x34"x28"	1, 2, 5, 6, 7, 8, 11, 12, 15 (2 KW), 19, 20

1. EQUIPMENT SCHEDULE BASED ON GREENHECK. ACCEPTABLE ALTERNATES INCLUDE COOK, RENEWAIRE, AAON, OR YORK.
2. POLYMER ENERGY RECOVERY WHEEL TYPE.
3. FIBER ENERGY RECOVERY CORE TYPE.
4. POLYMER ENERGY RECOVERY CORE TYPE.
5. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR WHEEL/CORE.
6. HIGH EFFICIENCY, MULTI-SPEED DIRECT DRIVE FAN MOTORS.
7. MERV-8 FILTERS.
8. 7-DAY TIME CLOCK SET TO ON DURING OCCUPIED HOURS.
9. SUPPLY AND EXHAUST AIRFLOW MONITORING.
10. DIRTY FILTER SENSOR.
11. 18" FACTORY ROOF CURB. FLASH INTO ROOF.
12. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT.
13. TIMED EXHAUST FROST CONTROL.
14. MODULATING WHEEL FROST CONTROL.
15. ELECTRIC PREHEAT FROST CONTROL. SEE NOTES FOR HEATER SIZE.
16. OUTDOOR AIR DAMPER.
17. RETURN AIR DAMPER.
18. POWERED CONVENIENCE OUTLET AND STEP DOWN TRANSFORMER BY MANUFACTURER.
19. FACTORY MOUNTED DISCONNECT.
20. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING.

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06/28/2024

REVISIONS

MARK	DESCRIPTION	DATE
1	PERMIT COMMENTS	6/28/2024

Key Plan

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 VETERANS WAY, SUITE 600
ORLANDO, FLORIDA 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 2023-177

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MECHANICAL DETAILS AND SCHEDULES

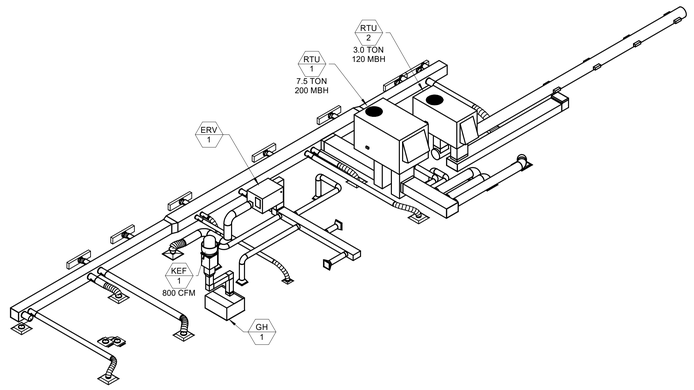
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APPLICABLE CODES

2020 BUILDING CODE OF NEW YORK STATE
2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE
2020 MECHANICAL CODE OF NEW YORK STATE
2020 PLUMBING CODE OF NEW YORK STATE
2020 FUEL GAS CODE OF NEW YORK STATE
2015 TENANT CONSTRUCTION REVIEW MANUAL



1 MECHANICAL ISOMETRIC

TYPE I HOOD SCHEDULE

PLAN CODE GH #	MANUFACTURER	MODEL	TYPE	DIMENSIONS	EXHAUST DATA				SUPPLY DATA		ELECTRICAL DATA		FIRE PROTECTION SYSTEM	WT (LBS)	NOTES
					COOKING LOAD	EXHAUST RATE (CFM/FT)	SP (" W.C.)	TOTAL CFM	SP (" W.C.)	TOTAL CFM	VOLTS	PHASE			
GH 1	GREENHECK	GXEW-48-S	WALL CANOPY	48"L X 39"W X 24"H	HEAVY	200	0.58	800	-	-	115	1	ANSUL R-102	200	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15

1. EQUIPMENT SCHEDULE BASED ON GREENHECK. ACCEPTABLE ALTERNATES INCLUDE CAPTIVEAIRE.
2. MOUNT SUCH THAT THE BOTTOM OF HOOD IS AT 80" A.F.F.
3. TYPE 430 STAINLESS STEEL. ALL WELDS SHALL BE LIQUID TIGHT.
4. PROVIDE WITH STAINLESS STEEL FILTERS.
5. PROVIDE WITH GREASE TROUGH.
6. ROUND LED LIGHTS.
7. SUPPLY/MAKEUP AIR NOT ENTERING THROUGH HOOD. SEE PLANS.
8. INTEGRAL SUPPLY PLENUM.
9. CONSTRUCT IN ACCORDANCE WITH UL 710 AND NFPA 96.
10. BEAR NSF SEAL OF APPROVAL.
11. FURNISH COMPLETE WITH PRE-PIPED INTEGRAL FIRE PROTECTION SYSTEM INCLUDING UTILITY CABINET, TANK, PIPING, PULL STATION, AND ACTUATOR. ALL EXPOSED PIPING SHALL BE CHROME-PLATED.
12. INSTALL AUTOMATIC FIRE SUPPRESSION SYSTEM PER UL 300 AND NFPA 96 INCLUDING AUTOMATIC SHUT-OFF OF ALL POWER AND GAS TO ALL EQUIPMENT UNDER HOOD.
13. INSTALL PER MANUFACTURERS INSTRUCTIONS. MAINTAIN ALL REQUIRED CLEARANCES.
14. EC TO PROVIDE JUNCTION BOX AND WIRING TO HOOD.
15. VERIFY VOLTAGE AND PHASE WITH EC PRIOR TO ORDERING.

EXTERIOR LOUVER SCHEDULE

PLAN CODE LVR #	MANUFACTURER	MODEL #	TYPE	CONSTRUCTION	APPLICATION	CFM	SIZE (IN.)	PD (" W.C.)	FINISH	QUANTITY	NOTES
LVR 1	GREENHECK	ESD-435X	WEATHER	ALUMINUM	INTAKE	1,500	36"X36"H	0.015	SEE ARCH	1	1, 2, 3, 5, INTERLOCK TO OPEN DAMPER WITH EF-3

1. VERIFY FINAL LOCATION WITH ARCHITECT. COORDINATE OPENING WITH STRUCTURAL.
2. PRESSURE DROP NOT TO EXCEED SCHEDULE VALUE
3. 120V MOTORIZED BACKDRAFT DAMPER. FAIL OPEN.
4. 1/4" GALVANIZED MESH BIRD SCREEN.
5. INSECT SCREEN.
6. SECURITY BARS
7. FILTER RACK. MERV-8 FILTERS.

AIR DEVICE SCHEDULE

PLAN CODE # X XXX	MANUFACTURER	MODEL # / SERIES	TYPE	CONSTRUCTION	NOMINAL CFM	SIZE (INCHES) * NO FILLER PANELS ALLOWED	FINISH	NOTES
1 X XXX	PRICE	SCD	CEILING DIFFUSER	STEEL	SEE PLANS	SEE PLANS	SEE ARCH	2
2 X XXX	PRICE	TBD3	SLOT SUPPLY DIFFUSER	STEEL	SEE PLANS	4 FT LONG	SEE ARCH	2, 7, 12, 14, 17
3 X XXX	PRICE	PDF	PERFORATED CEILING DIFFUSER	ALUMINUM	SEE PLANS	SEE PLANS	STANDARD	2, 6
4 X XXX	PRICE	81	RETURN GRILLE	ALUMINUM	SEE PLANS	SEE PLANS	STANDARD	2, 9, 19
5 X XXX	PRICE	81	EXHAUST REGISTER	ALUMINUM	SEE PLANS	SEE PLANS	STANDARD	2, 9, 19
6 X XXX	PRICE	ATG	DOOR/WALL TRANSFER GRILLE	ALUMINUM	SEE PLANS	SEE PLANS	STANDARD	2
7 X XXX	PRICE	SDG	SPIRAL DUCT SUPPLY DIFFUSER	STEEL	SEE PLANS	SEE PLANS	STANDARD	4, 5

AIR DEVICE NUMBER (SEE SCHEDULE) — NECK SIZE IN INCHES
DEVICE SIZE — CFM
1 6 / 100 / 24X24

* CONTRACTOR SHALL PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO BALANCE AIR DEVICES TO VALUES SHOWN ON PLANS

1. T-BAR CEILING TYPE.
2. SURFACE MOUNT, GYPBOARD WALL/CEILING.
3. SURFACE MOUNT, DOOR.
4. DUCT MOUNTED.
5. MULTI-BLADE DAMPER.
6. ADJUSTABLE BLADES DAMPER.
7. REMOTE BALANCING DAMPER.
8. PERFORATED 4-WAY.
9. CUBE CORE. 1/2" X 1/2" X 1".
10. FILTER GRILLE.
11. FIXED CORE.
12. ENGINEERED SUPPLY PLENUM. INLET TO MATCH NECK SIZE ON PLANS.
13. ENGINEERED RETURN PLENUM. OUTLET TO MATCH NECK SIZE ON PLANS. IF NO NECK SIZE IS LISTED, PROVIDE FULL SIZE RECTANGULAR PLENUM OPENING.
14. 1" SLOT.
15. 3/4" SLOT.
16. 1 SLOT.
17. 2 SLOT.
18. FRAMELESS. MOUNT FLUSH TO GYPBOARD.
19. SQUARE TO ROUND ADAPTOR. MATCH RECTANGULAR AND NECK DIMENSIONS ON PLANS.
20. PRESSURE RELIEF DOLLAR.
21. 24 VAC INPUT. PROVIDE TR115 115/24, 20 VA, TRANSFORMER ON MASTER DIFFUSER ONLY.

OUTSIDE AIR CALCULATIONS: **IMC Code** (table 403.3)

HVAC SYSTEM: **RTU-1** — **7.5 Ton Cooling** — Total SA = **3,000 CFM** — Set OSA min set = **22.0%**

Room Type:	Room Name and Room #	Az AREA (sqft)	Rp OSA per person	Ra OSA CFM per sqft	Default Occ People per 1000sqft	Pz # of People	If all Return Air is at Ceiling Level: Total min OSA CFM req'd	Effectiveness Factor = 0.8: Total minimum OSA CFM req'd	Total Room Supply Air (SA) CFM	Total OSA CFM Provided	Result:
Break Rooms (ASHRAE62.1 2016 T.6.2.2.1)	101 - Kitchenette (PARTIAL)	234	5.0	0.12	50	12	87	108	900	198	Complies.
Occupiable Storage Rooms (ASHRAE62.1	102 - Stock Room/Pantry	300	5.0	0.06	2	1	21	26	475	105	Complies.
Corridors	103 - Corridor	342	0.0	0.06	0.0	0.0	21	26	400	88	Complies.
Corridors	104 - Corridor	134	0.0	0.06	0.0	0.0	8	10	50	11	Complies.
Toilet Rooms (EXHAUST)	105 - Women	64					0	0	50	11	Complies.
Toilet Rooms (EXHAUST)	106 - Men	63					0	0	100	22	Complies.
Toilet Rooms (EXHAUST)	109 - Unisex	81					0	0	100	22	Complies.
Office	111 - Flt. Ops. Office	120	5.0	0.06	5	1	10	13	125	28	Complies.
Office	112 - Maint. Office	119	5.0	0.06	5	1	10	13	125	28	Complies.
Conference	113 - Conf.	376	5.0	0.06	50	19	117	146	675	149	Complies.
							Totals =	Total min OSA reqd floor RA: 273	Total min OSA CFM required: 341	Total SA: 3,000	Total OSA Provided: 660	

Total Floor Area = **1,833** sqft

OUTSIDE AIR CALCULATIONS: **IMC Code** (table 403.3)

HVAC SYSTEM: **GSH-1** — **0.0 Ton Cooling** — Total SA = **8,565 CFM** — Set OSA min set = **100.0%**

Room Type:	Room Name and Room #	Az AREA (sqft)	Rp OSA per person	Ra OSA CFM per sqft	Default Occ People per 1000sqft	Pz # of People	If all Return Air is at Ceiling Level: Total min OSA CFM req'd	Effectiveness Factor = 0.8: Total minimum OSA CFM req'd	Total Room Supply Air (SA) CFM	Total OSA CFM Provided	Result:
Warehouses	100 - Hangar	33,813	10.0	0.06	0.0	0.0	2,029	2,536	8,565	8,565	Complies.
							Totals =	Total min OSA reqd floor RA: 2,029	Total min OSA CFM required: 2,536	Total SA: 8,565	Total OSA Provided: 8,565	

Total Floor Area = **33,813** sqft

OUTSIDE AIR CALCULATIONS: **IMC Code** (table 403.3)

HVAC SYSTEM: **RTU-2** — **3.0 Ton Cooling** — Total SA = **1,200 CFM** — Set OSA min set = **20.0%**

Room Type:	Room Name and Room #	Az AREA (sqft)	Rp OSA per person	Ra OSA CFM per sqft	Default Occ People per 1000sqft	Pz # of People	If all Return Air is at Ceiling Level: Total min OSA CFM req'd	Effectiveness Factor = 0.8: Total minimum OSA CFM req'd	Total Room Supply Air (SA) CFM	Total OSA CFM Provided	Result:
Occupiable Storage Rooms (ASHRAE62.1	114 - Maintenance Parts & Shop	808	5.0	0.06	2	2	57	71	1,200	240	Complies.
							Totals =	Total min OSA reqd floor RA: 57	Total min OSA CFM required: 71	Total SA: 1,200	Total OSA Provided: 240	

Total Floor Area = **808** sqft

OUTSIDE AIR CALCULATIONS: **IMC Code** (table 403.3)

HVAC SYSTEM: **ERV-1** — **0.0 Ton Cooling** — Total SA = **600 CFM** — Set OSA min set = **100.0%**

Room Type:	Room Name and Room #	Az AREA (sqft)	Rp OSA per person	Ra OSA CFM per sqft	Default Occ People per 1000sqft	Pz # of People	If all Return Air is at Ceiling Level: Total min OSA CFM req'd	Effectiveness Factor = 0.8: Total minimum OSA CFM req'd	Total Room Supply Air (SA) CFM	Total OSA CFM Provided	Result:
Break Rooms (ASHRAE62.1 2016 T.6.2.2.1)	101 - Kitchenette (PARTIAL)	334	5.0	0.12	50	17	124	154	600	600	Complies.
							Totals =	Total min OSA reqd floor RA: 124	Total min OSA CFM required: 154	Total SA: 600	Total OSA Provided: 600	

Total Floor Area = **334** sqft

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06/28/2024

REVISIONS

MARK	DESCRIPTION	DATE
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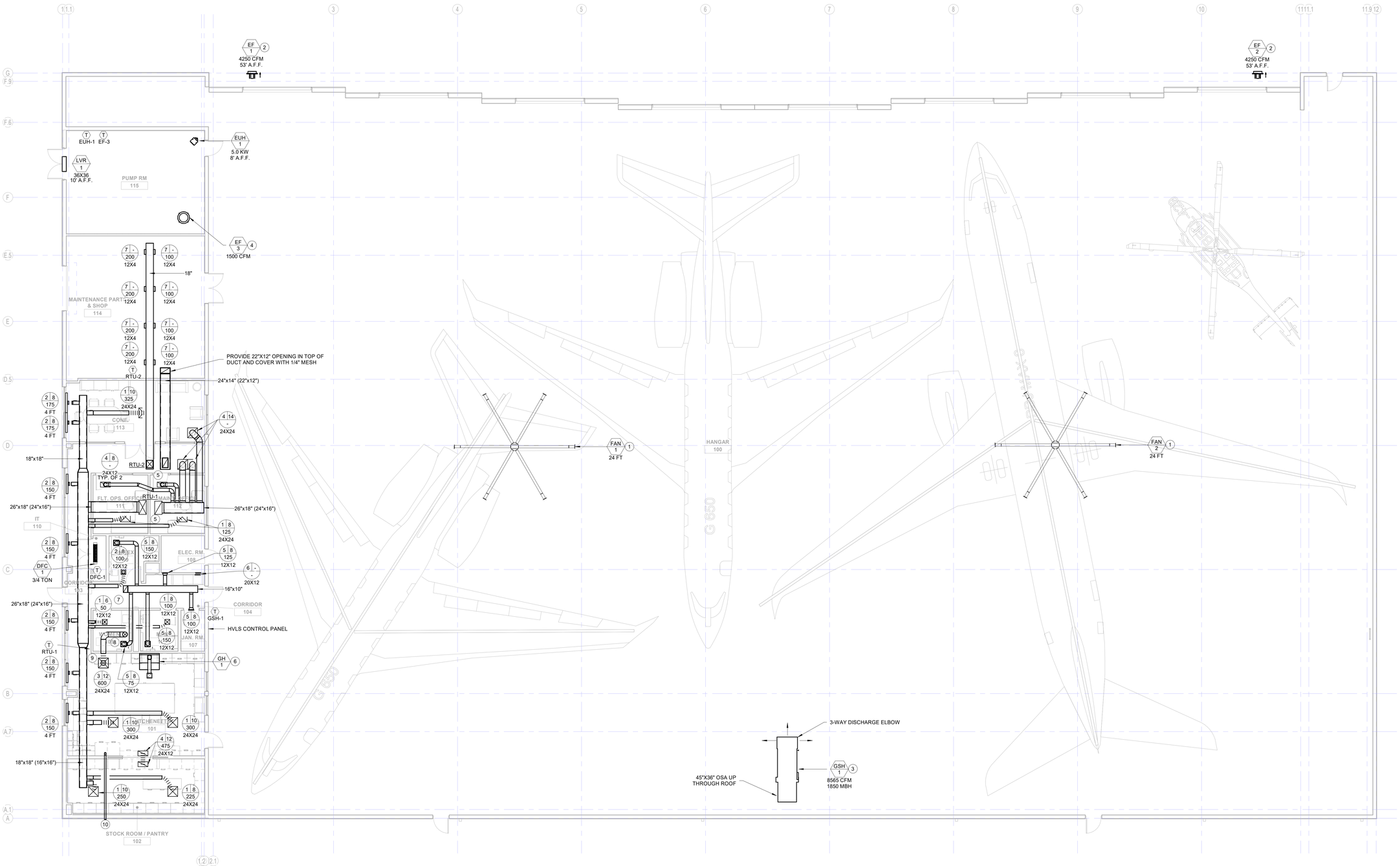
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MECHANICAL DETAILS AND SCHEDULES

M002

100% PERMIT SET



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

MECHANICAL GENERAL NOTES

1. ALL ROOFTOP EQUIPMENT TO BE INSTALLED A MINIMUM OF 10 FEET FROM BUILDING EDGE UNLESS 42" PARAPET IS PROVIDED.
2. ALL EXHAUST, FLUES, AND VENT OUTLETS TO DISCHARGE A MINIMUM OF 10 FEET FROM ANY OUTSIDE AIR INTAKE.
3. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. MAINTAIN ALL CLEARANCES.
4. ALL RETURN PLENUM MATERIALS TO BE PLENUM RATED.

= CONNECT TO EXISTING

MECHANICAL SHEET NOTES

1. INTERLOCK FAN RELAY TO SHUT DOWN OPERATION OF FAN WITH FIRE ALARM ACTIVATION.
2. MOUNT EXHAUST FAN IN HANGAR WALL AT ELEVATION SHOWN.
3. MOUNT SPACE HEATER SUCH THAT THE BOTTOM OF DISCHARGE DUCT/ELBOWS ARE 45" A.F.F. VERIFY ALL EQUIPMENT WILL BE CLEAR OF AIRCRAFT COMPONENTS.
4. PROVIDE FULL SIZE EXHAUST FAN CONNECTION DOWN THROUGH ROOF TO 12" BELOW STRUCTURE AND COVER OPENING WITH 1/4" MESH.
5. PROVIDE FULL SIZE ROOFTOP UNIT CONNECTIONS DOWN THROUGH ROOF AND TRANSITION TO DUCTWORK AS SHOWN.
6. PROVIDE FULL SIZE HOOD CONNECTION UP THROUGH ROOF TO KEF-1. TRANSITION TO EXHAUST FAN CONNECTION SIZE AT ROOF. PROVIDE 3" FIRE WRAP INSULATION ON ALL GREASE DUCT OR APPROVED PREFABRICATED GREASE EXHAUST DUCT.
7. 16"X10" EXHAUST UP TO ROOF. SEE SHEET M200.
8. 12" OSA DOWN FROM ROOF. SEE SHEET M200.
9. ANSUL SWITCH LOCATION. MOUNT BETWEEN 42"-48" A.F.F.
10. PROVIDE 4" ROUND DRYER EXHAUST DUCT THROUGH SIDE WALL TO MANUFACTURERS RECOMMENDED TERMINATION. DO NOT EXCEED MAXIMUM DEVELOPED LENGTH PUBLISHED BY DRYER MANUFACTURER. MAINTAIN 10' SEPARATION FROM ANY OUTSIDE AIR INTAKES.

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06/28/2024

REVISIONS

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OVERALL MECHANICAL PLAN

M100

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

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ROOF MECHANICAL PLAN

M200

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2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

2020 MECHANICAL CODE OF NEW YORK STATE

2020 PLUMBING CODE OF NEW YORK STATE

2020 FUEL GAS CODE OF NEW YORK STATE

2015 TENANT CONSTRUCTION REVIEW MANUAL

SAND AND OIL SEPARATOR CALCULATIONS

NUMBER OF PARKING SPACES	10
1-3 VEHICLES	6 CU. FT.
1 ADDITIONAL CU. FT. PER VEHICLE UP TO 10 VEHICLES	7 CU. FT.
0.15 ADDITIONAL CU. FT. PER VEHICLE ABOVE 10 VEHICLES	0 CU. FT.
CU. FT. REQUIREMENT	13 CU. FT.
GAL. REQUIREMENT	**97 GAL.**

GREASE INTERCEPTOR CALCULATIONS (2018 UPC)

FIXTURE	QUANTITY	DRIANAGE F.U.	TOTAL DRIANAGE F.U.
DISHWASHER	1	2.0	2.0
FLOOR DRAIN	1	2.0	2.0
COMMERCIAL SINK W/ FOOD WASTE	1	3.0	3.0
HAND SINK	1	2.0	2.0
		TOTAL D.F.U =	9.0
		MINIMUM GREASE INTERCEPTOR SIZE (TABLE 1014.3.6) =	**750**

1

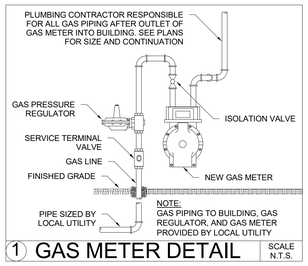
SPECIFICATIONS

1. Follow all Local and state codes/ordinances and general conditions of contract. Pay all required fees and obtain all required permits. Submit these plans to building department for plan review. Implement all code review required changes into installation.
2. Equipment, insulation and controls shall be provided as required by the Adopted energy code.
3. Visit site to verify existing conditions prior to ordering equipment, providing price quote or fabricating piping. Change orders for non-compliance will not be accepted.
4. Plumbing drawings are schematic and not to be scaled. Refer to architectural, certified drawings, and site measurements for all dimensions prior to duct and piping fabrication.
5. Contractor shall purchase, receive, uncrate, assemble, insure, and install in conformance to manufacturer's recommendations all Plumbing equipment. Plumbing Contractor shall install and final connect owner furnished equipment as indicated.
6. Provide 2 operating manuals to owner and engineer for all systems and equipment including manufacturer's maintenance manuals. Include lubrication, filter types and sizes, starting and stopping procedures. List contractor's telephone numbers.
7. Supports and anchors shall be provided for plumbing work. No chain, tape, or wire.
8. Sleeves shall be provided for all pipe through walls, floors, and ceilings. Provide chrome plated escutcheons for piping penetrations in finished areas.
9. Conceal all work in finished areas.
10. Cut and patch to match adjacent areas. No structural member shall be cut or notched.
11. Any pressure reducing valves should be arranged, tested, and maintained per FM Global Property Loss Prevention Data Sheet 3-11; *Pressure Reducing Valves*. Immediately after installation and once a year after that, conduct a full flow test on the valve. The annual performance Test Record of Pressure Reducing Valves Form (Form 2707 should be used for all full flow tests.
12. Electrical: confirm voltage, phase, and ampacity with electrical contractor prior to ordering equipment. All 24v controls including interlock wiring for plumbing equipment by division 15 contractor. Provide magnetic starters for all 3-phase motors with protection on all three leads. Electrical equipment to automatically restart after power failure. All wire in conduit per NEC latest edition.
13. Excavate for all mechanical work. Compact to 95% AASHO or proctor density in 6" maximum lifts at optimum moisture content. Rework if any settlement within first years guarantee.
14. Valves shall be provided to isolate each piece of equipment and for all rough-ins excluding waste and vent. Water valves shall be Apollo ball valve line-size rated for 200 psig wog. Gas valves shall be AGA listed line-size lubricated.
15. Waste and vent piping shall be cast iron no-hub listed for location installed. Schedule-40 plastic PVC may be used if code approved. Provide cleanouts 50'-0" min oc of appropriate type inside buildings. Vent through roof with a total cross sectional area to equal to or greater than building sewer main shall be provided.
16. Pipe each evaporative pan drain with p-trap 3/4" minimum to waste. Provide condensate pumps as required where gravity drain condensate is not possible. Provide condensate acid neutralization for all condensate drains to sanitary sewer.
17. Water piping shall be type-L copper (or approved PEX piping and fittings where allowed by local codes) above grade with no-lead ASTM B32 solder and ASMT B813 flux soldered joint (or with Viega ProPress fittings where allowed by local codes.) Buried piping or piping within 6" of grade shall be 15% silver sil-phos brazed joint type-K. Insulate all hot and cold water lines routed in ceiling or crawl space with 1/2" thick preformed fiberglass (1" for circulated Hot Water lines) with UL-181 class-1 plenum rated jacket. Route all piping inboard of building insulation to avoid freezing. Electric heat trace all piping located in unheated areas with Chromalox 7.0 watts/ft mi cable and 1" thick fiberglass piping insulation with cover (do not route PEX piping in unheated areas) .
18. Insulate all horizontal roof drain piping with 1.5" fiberglass insulation with UL-181 class-1 plenum rated jacket.
19. Pressure test all piping per code but to at least 150% max working pressure.
20. Fire caulk fire rated wall/ceiling/floor penetrations with HILTI or equal listed fire caulk.
21. Guarantee all labor and new equipment for one year from the date of acceptance by owner.

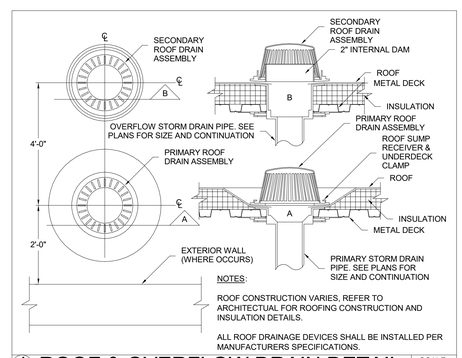
PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	MANUFACTURER	MODEL N0.	CW	HW	WASTE	VENT	REMARKS	NOTES
WC1	WATER CLOSET - FLUSH VALVE	ZURN	Z5615	1"	-	3"	2"	1.1 GPF, TRIM KIT, ZTR6200-ONE FLUSH VALVE, ZURN ZN1201-N WALL CARRIER ADA COMPLIANT	1, 5, 6, 10, 12
L1	LAVATORY	ELKAY	ELUH1511	1/2"	1/2"	1.5"	1.5"	UNDERMOUNT, KOHLER TOUCHLESS K-7517-VS FAUCET (.35 GPM), SLOAN ESD-410-SF SOAP DISPENSER	4, 7, 8, 10, 12, 15 (110 DEG F), ADA COMPLIANT
U1	URINAL	ZURN	Z5755	3/4"	-	2"	1.5"	WALL HUNG, ZURN ZER6003 SERIES BATTERY POWERED FLUSH VALVE, 0.125 GPF	2, 6, 10, 12, 17
S1	BREAK ROOM SINK	ZLINE	SR50D-36	1/2"	1/2"	2"	1.5"	UNDERMOUNT, DELTA 9659-DST FAUCET (1.5 GPM), IN-SINK-ERATOR BADGER 5 (1/2 HP)	4, 7, 8, 10, 12, 15 (120 DEG F) 1
S2	HAND SINK - ADA	ZLINE	SUS-15 (SINGLE COMP.)	1/2"	1/2"	2"	1.5"	UNDERMOUNT, DELTA FAUCET 1903-DST	4, 7, 10, 12, 15 (110 DEG F), ADA COMPLIANT
PF	POT FILLER	ZLINE	GEM-FPF	3/4"	-	-	-	REFER TO ARCHITECTURAL FOR FINISH	
IMB	ICE MAKER WALL BOX	SIOUX CHIEF	696 Series Ox Box	1/2"	-	-	-	ABS HOUSING, HAMMER ARRESTER, LEAD-FREE VALVE, ICE MAKER STANDARD PACK	PROVIDE FIRE RATED MODEL IF INSTALLED WITHIN FIRE RATED WALL OR PARTITION
CMB	COFFEE MAKER WALL BOX	SIOUX CHIEF	696 Series Ox Box	1/2"	-	-	-	ABS HOUSING, HAMMER ARRESTER, LEAD-FREE VALVE, WATTS SD-3 DOUBLE-CHECK BACKFLOW PREVENTER, AND INLINE FILTER	PROVIDE FIRE RATED MODEL IF INSTALLED WITHIN FIRE RATED WALL OR PARTITION
DWB	DISHWASHER WALL BOX	SIOUX CHIEF	696 Series Ox Box	-	1/2"	-	-	ABS HOUSING, HAMMER ARRESTER, LEAD-FREE VALVE	PROVIDE FIRE RATED MODEL IF INSTALLED WITHIN FIRE RATED WALL OR PARTITION
WB	WALL BOX	OX BOX	Washing Machine Standard Pack	1/2"	1/2"	3	1.5"	ABS HOUSING, SEPARATE DRAIN BOX FIRE RATED MODEL FOR FIRE RATED WALLS	20
S3	UTILITY SINK	ELKAY	B1C18X18X	1/2"	1/2"	1.5"	1.5"	FLOOR MOUNT, ELKAY LK940ATD18L2H DECK FAUCET (1.5 GPM)	2, 4, 7, 8, 10, 11, 12
S4	UTILITY SINK	ULINE	H-8966R	1/2"	1/2"	1.5"	1.5"	FLOOR MOUNT, FACTORY PROVIDED FAUCET, PROVIDE AERATOR TO LIMIT FLOW TO 1.5 GPM	2, 4, 7, 8, 10, 11, 12
MS	MOP SINK	FIAT	TSB-100	1/2"	1/2"	3"	1.5"	FIAT 830-AA FAUCET WITH BRACE, PAIL HOOK (1.5 GPM)	6, 8, 10, 12
HC1	HOSE BIBB	WOODFORD	24P	1/2"	-	-	-	WITH VACUUM BREAKER	VERIFY LOCATION
HC2	HOSE BIBB (FREEZE-PROOF)	WOODFORD	B67	3/4"	-	-	-	FLUSH NON-FREEZE BOX TYPE, ALL BRASS WITH ROUGH BRASS BOX COVER, SELF DRAINING BODY W/ DOUBLE CHECK BACKFLOW PREVENTER	VERIFY LOCATION
TD	TRENCH DRAIN	NEENAH FOUNDRY	R-4990-BA (GRATE)	-	-	-	-	AIRCRAFT RATED, GRAY IRON CLASS 35 GRATE WITH EPOXY COATING	REFER TO STRUCTURAL FOR TRENCH DRAIN DETAILS
FS1	FLOOR SINK	ZURN	Z1901	-	-	3"	1.5"	4" DEEP SEAL TRAP, 12X12, ACID RESISTANT, DOME STRAINER, FULL GRATE	16
FS2	FLOOR SINK	ZURN	Z1901	-	-	3"	1.5"	4" DEEP SEAL TRAP, 12X12, ACID RESISTANT, DOME STRAINER, HALF GRATE	16
FD	FLOOR DRAIN	ZURN	Z400 TYPE N	-	-	SEE PLAN	SEE PLAN	DEEP SEAL TRAP, BRASS GRATE	16
SH	SHOWER - TILE WALLS (ADA)	AQUATIC	SB6036	1/2"	1/2"	2"	1.5"	ADA COMPLIANT, KOHLER K-304 MIXING VALVE (120 DEG F), HANDHELD KOHLER ADA SHOWERING PACKAGE (1.5 GPM), SHOWER DRAIN	14, 16, GRAB BARS AND SEAT, SHOWER DRAIN, 60"X36" PAN (VERIFY WITH ARCH)
ESH	EMERGENCY SHOWER/EYE WASH	ULINE	H-10735	1"	1"	-	-	PROVIDE WITH MIXING VALVE (70 DEG F). COMPLY WITH ANSI Z358.1-2009 STANDARD	
DF	DRINKING FOUNTAIN	ELKAY	EZWS-EDFPBM117K	1/2"	-	1.5"	1.5"	HI/LOW WATER COOLER, 370 W, 4.0 FLA EZH20 BOTTLE FILLING STATION	2, 10, 12
RPBFP	BACKFLOW PREVENTER	WATTS	LF009	-	-	-	-	REDUCED PRESSURE TYPE, TWO CHECK VALVES, ONE RELIEF VALVE, INLET/OUTLET VALVES, STRAINER, TEST COCK, DRAIN FUNNEL	UNIT SHALL HAVE ASSE APPROVAL
PRV	PRESSURE REDUCING VALVE	WATTS	LF223					PILOT-OPERATED, BRASS, LEAD FREE	NSF/ANSI 372
RD	ROOF DRAIN	ZURN	Z121	-	-	SEE PLAN	-	CAST IRON DOME STRAINER, 12"D	1
OD	OVERFLOW DRAIN	ZURN	Z121	-	-	SEE PLAN	-	CAST IRON DOME STRAINER 2" EXTERNAL DAM FOR OVERFLOW, 12"D	
WH 1	WATER HEATER	STATE	SUF100 150NE	1.5"	1.5"	-	-	100 GALLON, 150 MBH S.L. NATURAL GAS INPUT SEE DETAIL, 120V/1P, 27.75"DIA X 75.5" H	12, 13, 3" PVC COMBUSTION AIR INTAKE AND CPVC VENT SET TEMPERATURE TO 140 DEG F
WH 2	WATER HEATER	STATE	GTS-910-NIEA	1"	1"	-	-	TANKLESS, 0.5 GPM MINIMUM, 380 MBH S.L. NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H	12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT
WH 3	WATER HEATER	STATE	ES6 2 SSUS K	3/4"	3/4"	-	-	2.5 GALLON, 1.5 KW ELECTRICAL INPUT SEE DETAIL, 120V/1□, 13.75"L X 11"D X 13.75"H	12, 13
CP 1	CIRCULATION PUMP	GRUNDFOS	UP 15-10 B7	-	1/2"	-	-	3 GPM @ 3 FT HD, 115V/1P, 1/25 HP. BRASS HOUSING, SS IMPELLER, SEE DETAIL	
SOI 1	SAND-OIL INTERCEPTOR	PRE-CAST	1500 GALLON	-	-	6"	3"	1500 GALLON	
GI 1	GREASE INTERCEPTOR	PRE-CAST	800 GALLON	-	-	3"	3"	800 GALLON	

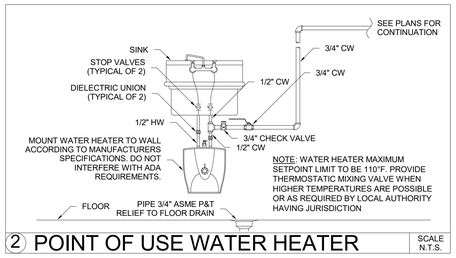
NOTES: 1 - Open Front Seat 2 - Wall Carrier 3 - UL Listed Trap Primer With VAC Breaker 4 - Handicap Trap Wrap 5 - Bolt Caps 6 - Vacuum Breaker 7 - Chrome Plated Cast Brass P-Trap With Clean-Out 8 - Open Grid Drain 9 - Pop-Drain 10 - Angle Supply With Stops 11 - 1/2 GPM Flow Limiters 12 - Anchors, Supports Trim Complete 13 - UL and AGA Listed, Reg Stat. High Limit Safety, ASME P&T Relief To Drain, ASHRAE 90A80 Insulation 14 - 2.5 GPM Flow Limiters 15 - Provide Thermostatic Mixing Valve 16 - Provide UL Listed Trap Primer With VAC Breaker or ASSE Certified Trap Seal Where Required 17 - Water Hammer Arrester (HA1), Sioux Chief Hydra-Rester Part No. 652-AS, 1/2" male sweat, 1-11 water supply units



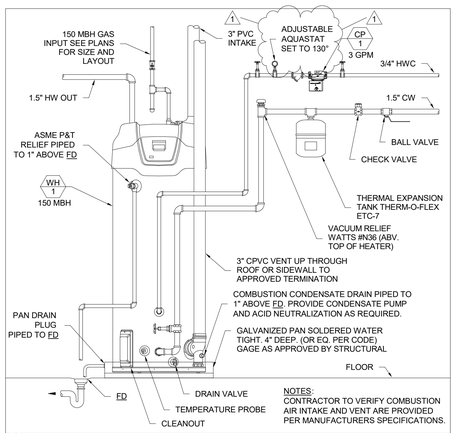
1 GAS METER DETAIL — SCALE N.T.S.



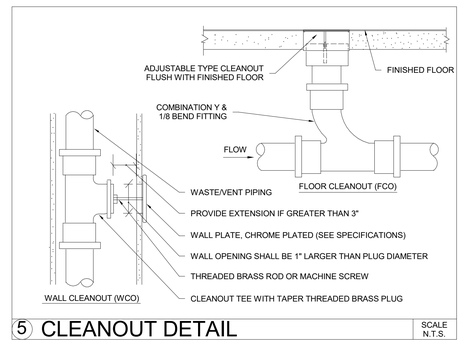
4 ROOF & OVERFLOW DRAIN DETAIL — SCALE N.T.S.



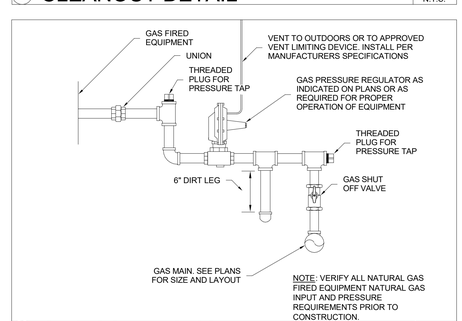
2 POINT OF USE WATER HEATER — SCALE N.T.S.



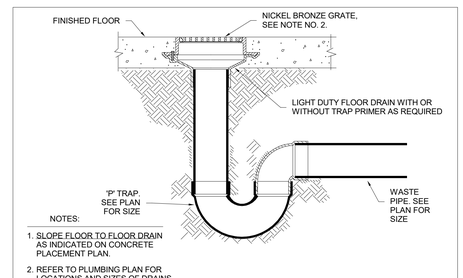
3 WATER HEATER DETAIL — SCALE N.T.S.



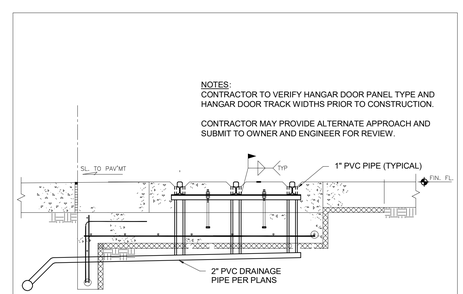
5 CLEANOUT DETAIL — SCALE N.T.S.



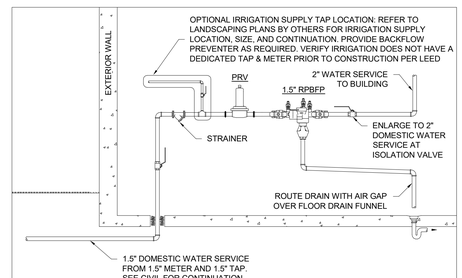
6 GAS CONNECTION DETAIL — SCALE N.T.S.



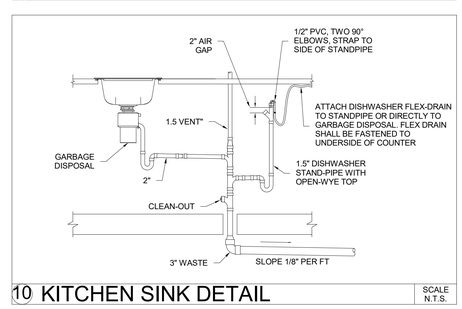
7 LIGHT DUTY FLOOR DRAIN DETAIL — SCALE N.T.S.



8 HANGAR DOOR TRACK DRAIN — SCALE N.T.S.



9 WATER ENTRY DETAIL — SCALE N.T.S.



10 KITCHEN SINK DETAIL — SCALE N.T.S.

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Key Plan

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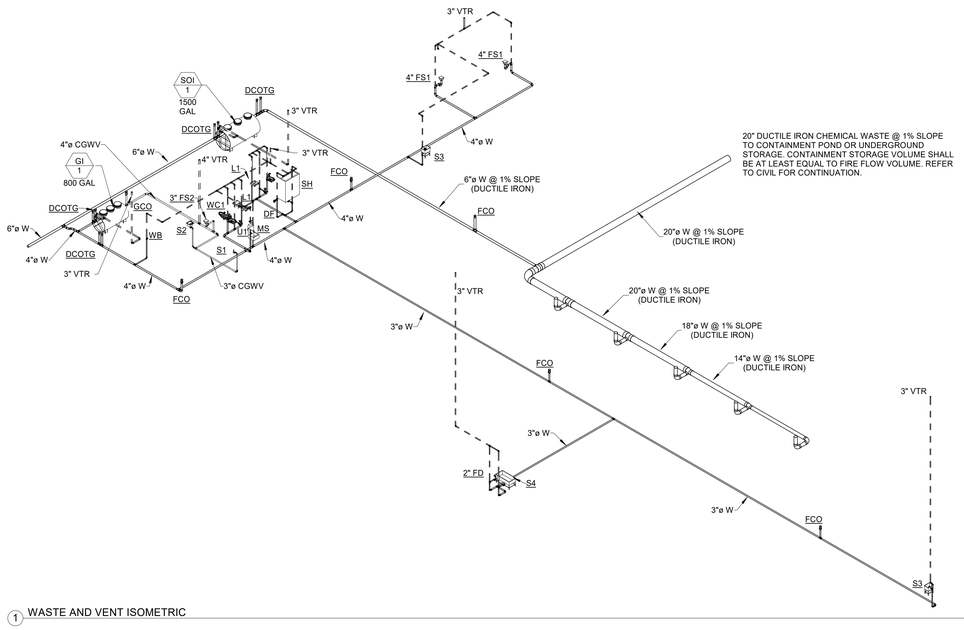
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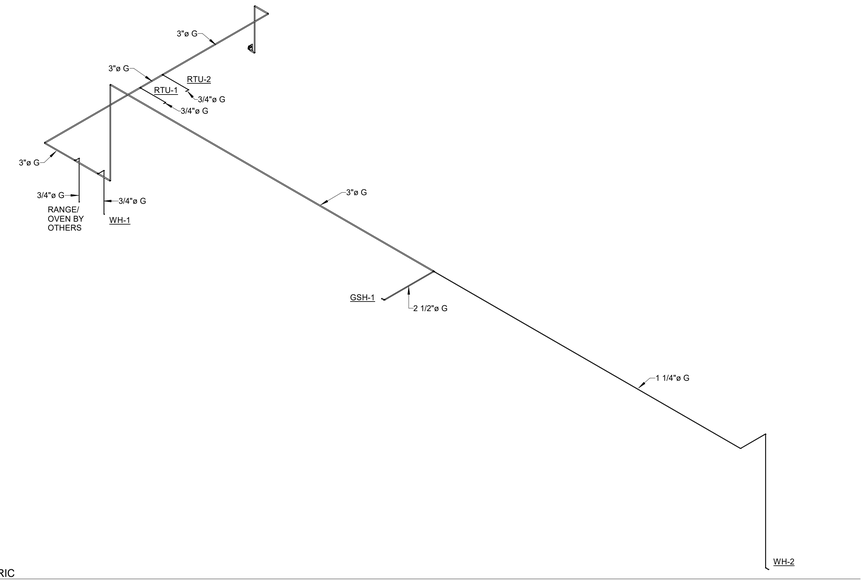
PLUMBING DETAILS AND SCHEDULES

P001

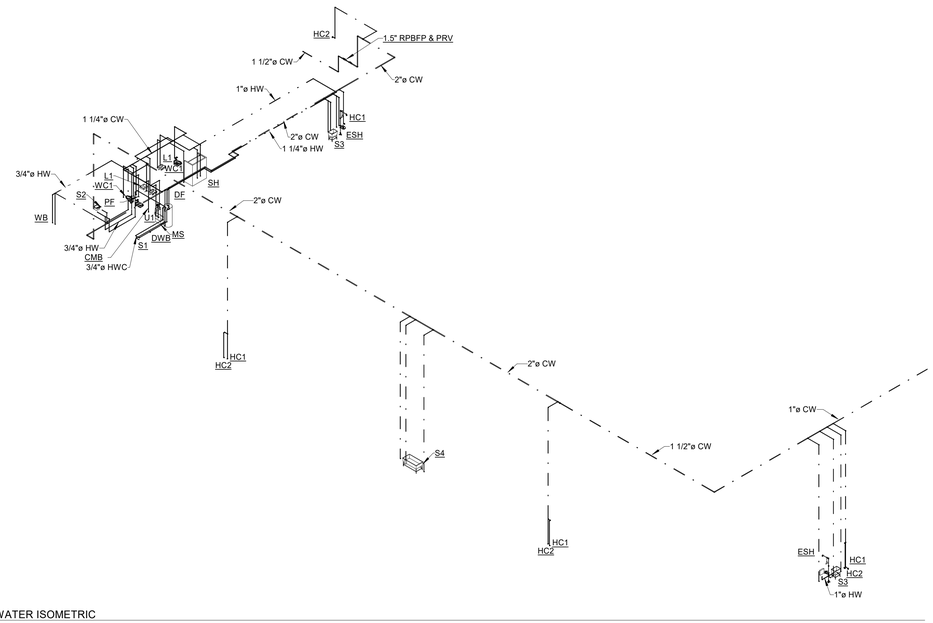
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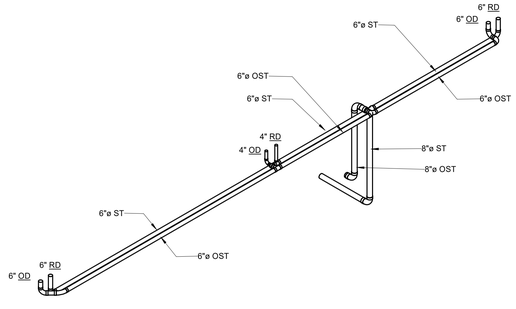
1 WASTE AND VENT ISOMETRIC



3 NATURAL GAS ISOMETRIC



2 DOMESTIC WATER ISOMETRIC



4 STORM ISOMETRIC

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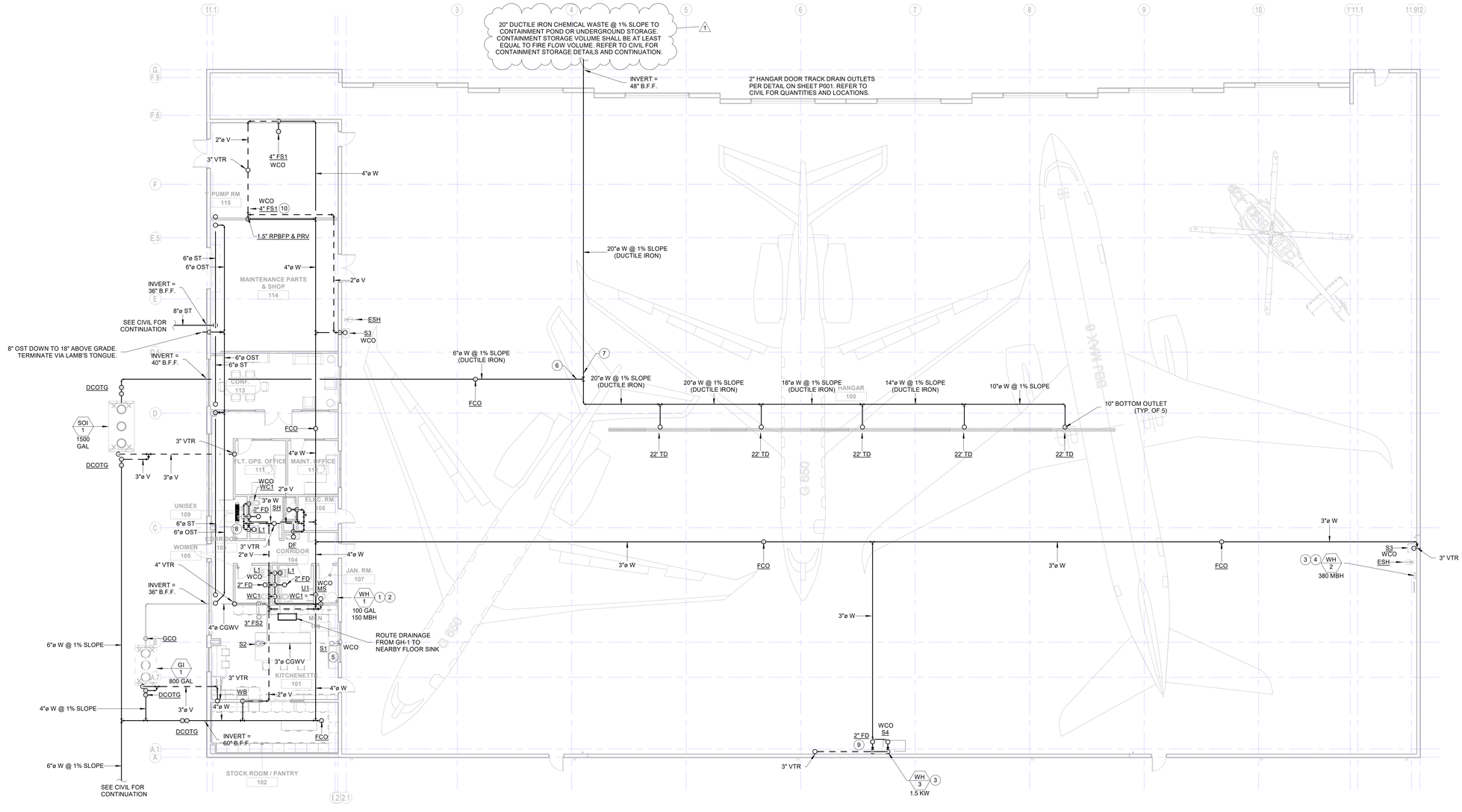
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PIPING DIAGRAMS

1 P002

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1 OVERALL WASTE AND VENT PLAN
1" = 10'-0"

WASTE AND VENT GENERAL NOTES

1. WASTE PIPING 2" DIAMETER OR SMALLER TO BE SLOPED AT A MINIMUM OF 1/4" PER FOOT. ALL OTHER WASTE PIPING TO BE SLOPED AT A MINIMUM 1/8" PER FOOT.
2. VERIFY ACTUAL SIZE, LOCATION, FLOW DIRECTION, AND INVERT OF EXISTING WASTE AND VENT PIPING PRIOR TO CONSTRUCTION.
3. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. MAINTAIN ALL REQUIRED CLEARANCES.

= CONNECT TO EXISTING

PLUMBING SHEET NOTES

1. WATER HEATER P&T RELIEF TO INDIRECT DRAIN TO MOP SINK. RAISE WATER HEATER 18" A.F.F.
2. PROVIDE 3" PVC COMBUSTION AIR INTAKE AND CPVC VENT UP THROUGH ROOF TO MANUFACTURERS TERMINATIONS. PROVIDE CONDENSATE PUMP AND ACID NEUTRALIZATION AS REQUIRED.
3. WATER HEATER P&T RELIEF TO INDIRECT DRAIN TO SLOPED HANGAR FLOOR. RAISE WATER HEATER 18" A.F.F. MINIMUM.
4. PROVIDE 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT UP THROUGH ROOF TO MANUFACTURERS TERMINATIONS. PROVIDE CONDENSATE PUMP AND ACID NEUTRALIZATION AS REQUIRED.
5. DISHWASHER TO INDIRECT DRAIN TO KITCHEN SINK STANDPIPE VIA AIR GAP. SEE DETAIL ON SHEET P001.
6. 6" RED-WHITE VALVE CORPORATION ELECTRIC ACTUATED (MODEL 3PT) BUTTERFLY VALVE (MODEL 938) INTERLOCKED WITH FIRE ALARM SYSTEM. INSTALL WITHIN ACCESSIBLE AIRCRAFT RATED VALVE BOX SIZED PER VALVE MANUFACTURER RECOMMENDATIONS. VALVE TO BE NORMALLY OPEN AND SHALL CLOSE DURING FIRE ALARM EVENT. VALVE SHALL FAIL CLOSE IN EVENT OF POWER FAILURE.
7. 20" RED-WHITE VALVE CORPORATION ELECTRIC ACTUATED (MODEL 3PT) BUTTERFLY VALVE (MODEL 938) INTERLOCKED WITH FIRE ALARM SYSTEM. INSTALL WITHIN ACCESSIBLE AIRCRAFT RATED VALVE BOX SIZED PER VALVE MANUFACTURER RECOMMENDATIONS. VALVE TO BE NORMALLY CLOSED AND SHALL OPEN DURING FIRE ALARM EVENT. VALVE SHALL FAIL OPEN IN EVENT OF POWER FAILURE.
8. ROUTE CONDENSATE FROM DFC-1 TO NEARBY MOP SINK. PROVIDE CONDENSATE PUMP AS REQUIRED.
9. PROVIDE 2"H DAM AROUND FLOOR DRAIN GRATE TO AVOID SAND OR OIL CONTAMINATION. INDIRECT DRAIN ICE MAKER TO FLOOR DRAIN.
10. INDIRECT DRAIN COMPRESSOR DRYER CONDENSATE TO NEARBY FLOOR SINK.

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Key Plan

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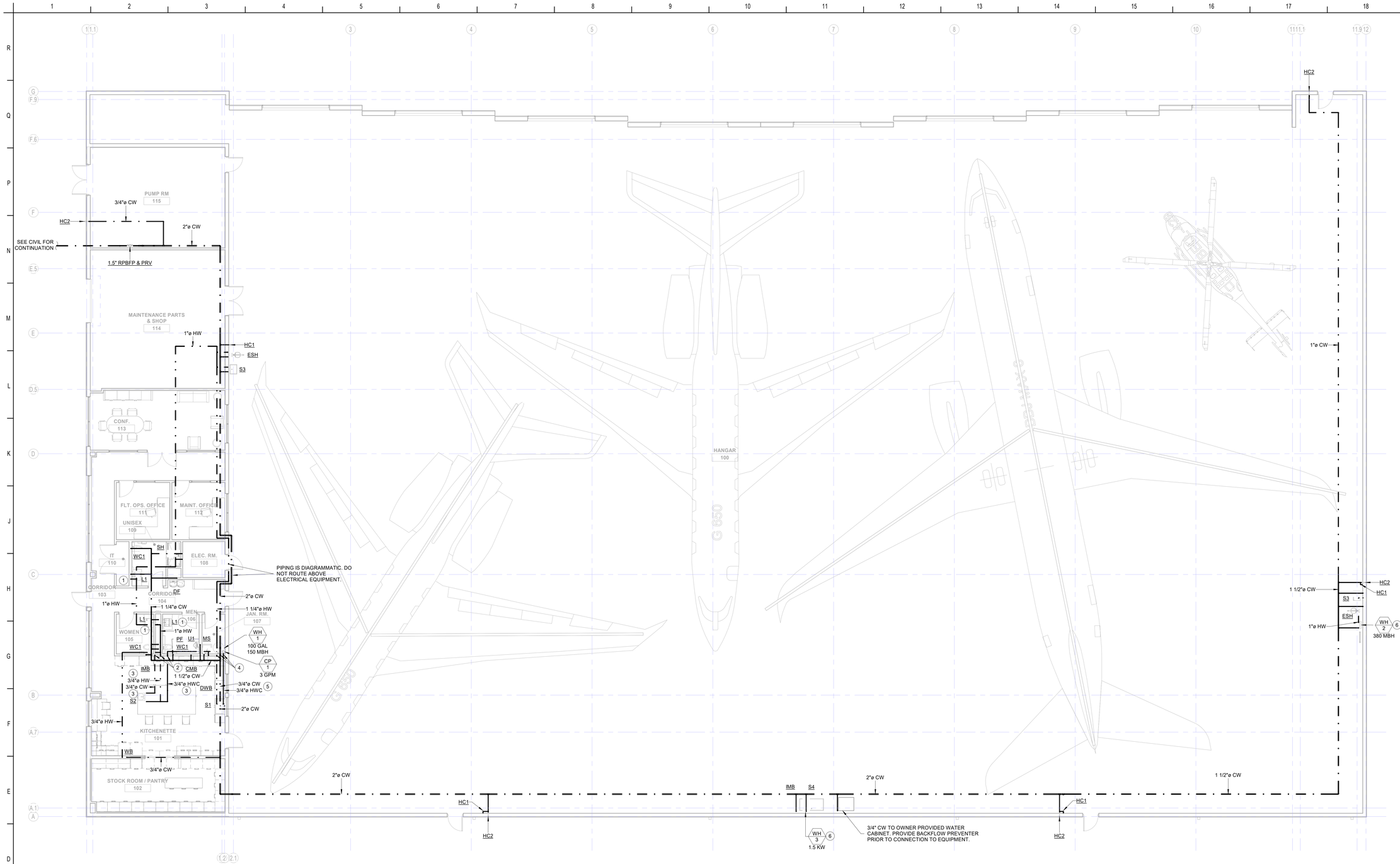
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OVERALL WASTE AND VENT PLAN

P100

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1 OVERALL DOMESTIC WATER PLAN
1/8" = 1'-0"

PLUMBING SHEET NOTES

1. HOT WATER CIRCULATION LOOP SHALL PASS WITHIN 6" OF LAVATORY ANGLE STOP PER IECC REQUIREMENTS.
2. ROUTE 3/4" CW, 3/4" HW, AND 3/4" HWC PIPING DOWN WALL TO BELOW FLOOR.
3. ROUTE PIPING BELOW UNDER FLOOR AS SHOWN. PROVIDE SLEEVE FOR EASE OF MAINTENANCE AND INSTALLATION.
4. ROUTE 3/4" CW, 3/4" HW, AND 3/4" HWC PIPING DOWN WALL TO BELOW COUNTER.
5. ROUTE PIPING BELOW COUNTER AS SHOWN.
6. VERIFY ALL EQUIPMENT IS 18" A.F.F. MINIMUM.

WATER GENERAL NOTES

1. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. MAINTAIN ALL CLEARANCES.
2. MINIMUM DOMESTIC WATER SIZING TO BE 3/4" WHEN SERVING MULTIPLE FIXTURES AND 1/2" WHEN SERVING SINGLE FIXTURES. NO 1/2" TEES ALLOWED.
3. VERIFY ACTUAL SIZE AND LOCATION OF UTILITY CONNECTIONS PRIOR TO CONSTRUCTION.
4. DOMESTIC WATER SHALL BE DISINFECTED AS PER IPC 610.

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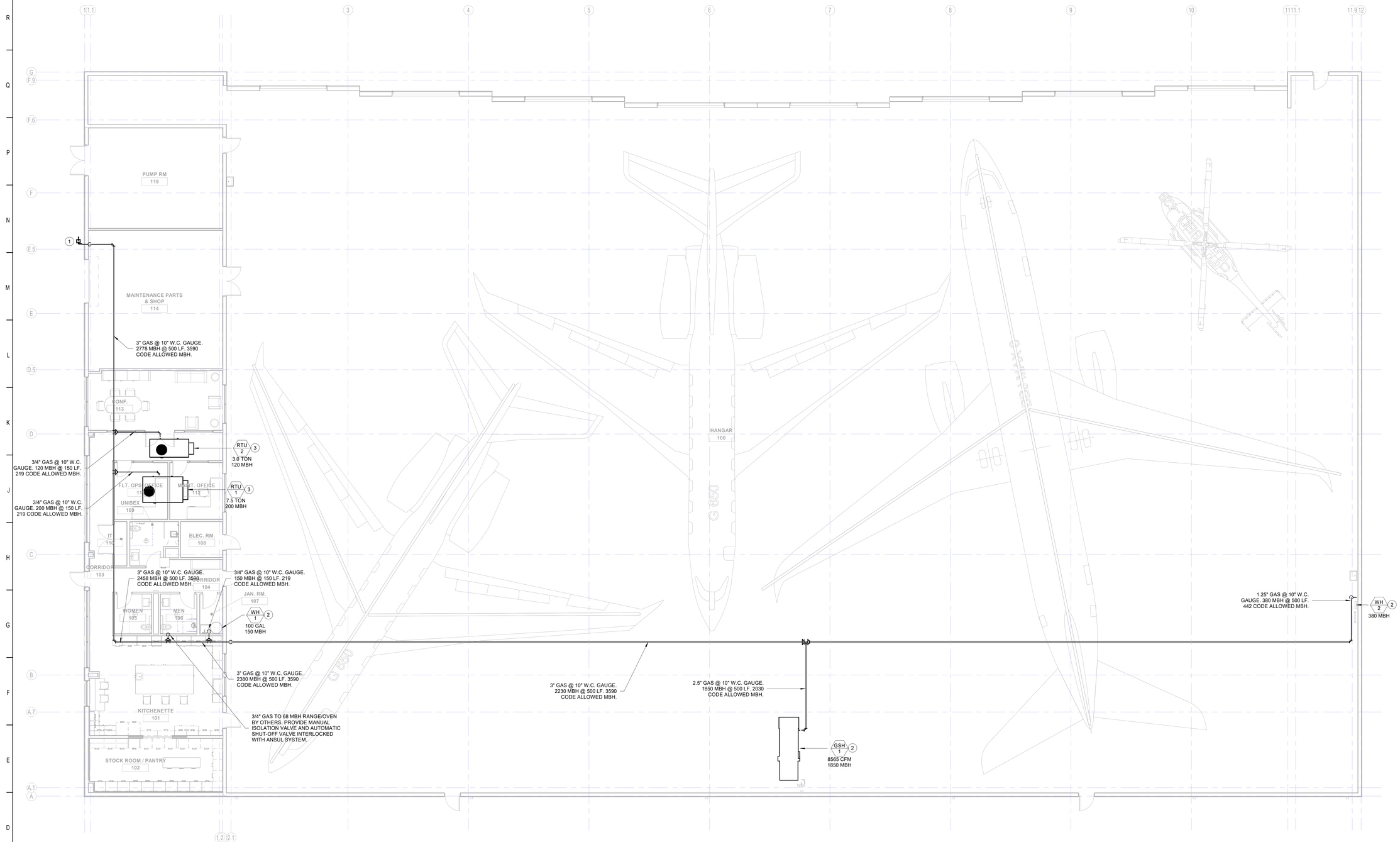
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OVERALL DOMESTIC WATER PLAN

P200

100% PERMIT SET

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1 OVERALL NATURAL GAS PLAN
1/8" = 1'-0"

PLUMBING SHEET NOTES	
1	NEW GAS METER BY LOCAL UTILITY. PROVIDE 10" W.C. METERING PRESSURE. VERIFY TOTAL CONNECTED LOAD OF 2810 MBH. TOTAL DEVELOPED LENGTH NOT TO EXCEED 500 LF.
2	PROVIDE GAS ISOLATION VALVE.
3	PROVIDE GAS ISOLATION VALVE ON ROOF.

GAS GENERAL NOTES	
1.	ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS. MAINTAIN ALL CLEARANCES.
2.	VERIFY ACTUAL SIZE AND LOCATION OF UTILITY CONNECTIONS PRIOR TO CONSTRUCTION.

= CONNECT TO EXISTING

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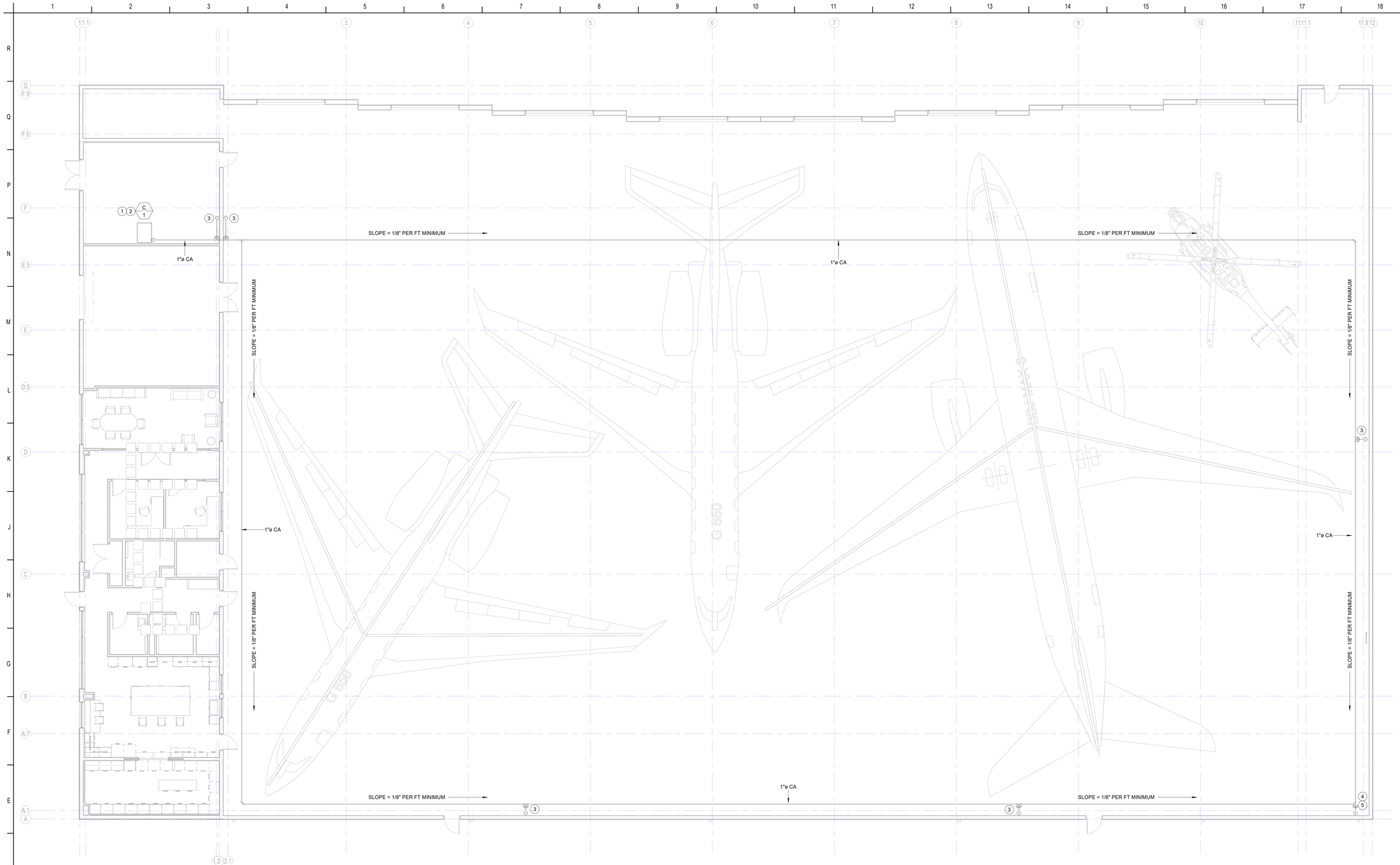
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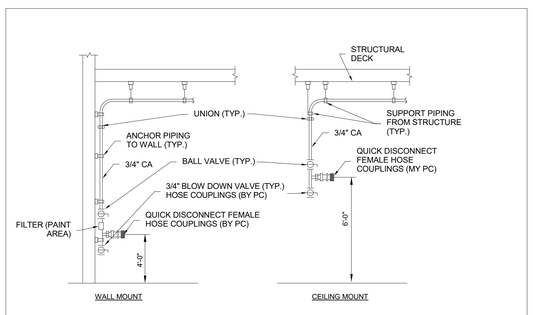
OVERALL NATURAL GAS PLAN

P300

100% PERMIT SET

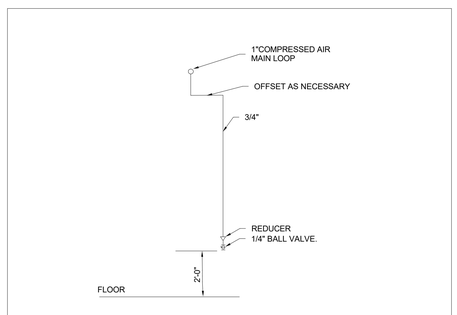
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2 COMPRESSED AIR CONNECTION DETAILS

SCALE N.T.S.



3 COMPRESSED AIR BLOW DOWN

SCALE N.T.S.

1 OVERALL PNEUMATIC PLAN

1/8" = 1'-0"

COMPRESSED AIR EQUIPMENT SCHEDULE

EQUIPMENT TAG	MODEL NO., DESCRIPTION, ACCESSORIES
C 1	KAESER MODEL SM 7.5 AIRCENTER, ROTARY SCREW, INTEGRATED DRYER, INTEGRATED FILTER, INTEGRATED RECEIVER, 26.5 SCFM @ 160 PSI GAUGE PRESSURE, DESIGNED FOR 500 FT ELEVATION 7.5 HP, 240V-3 PHASE

PLUMBING SHEET NOTES

1. COORDINATE FINAL COMPRESSOR LOCATION WITH OWNER, ARCHITECT, AND ALL TRADES. PROVIDE 160 PSIG SUPPLY PRESSURE.
2. CONNECT 1" COMPRESSED AIR LINE TO AIR COMPRESSOR.
3. 3/4" COMPRESSED AIR LINE DOWN TO 48" A.F.F. PROVIDE "Y" FITTING WITH QUICK RELEASE CONNECTIONS. COORDINATE LOCATION WITH OWNER.
4. PROVIDE ISOLATION VALVE.
5. PROVIDE DROP LEG MOISTURE TRAP AT END OF MAIN AS SHOWN.

WATER GENERAL NOTES

1. ALL COMPRESSED AIR LINES HAVE AN INTERNAL PRESSURE OF 160 PSIG. PRESSURE MUST BE REGULATED PRIOR TO CONNECTING TO EQUIPMENT. VERIFY PRESSURE RATING FOR ALL EQUIPMENT PRIOR TO CONSTRUCTION.
2. ALL COMPRESSED AIR LINES TO BE TRANSAIR ALUMINUM PIPING OR EQUIVALENT. PIPING SHALL BE RATED FOR 185 PSIG MINIMUM. BUILDING TO OPERATE BETWEEN 45F AND 115F AT ALL TIMES.
3. COMPRESSED AIR FITTINGS SHALL BE RATED FOR MINIMUM 185 PSIG. FITTINGS SHALL BE SOCKET TYPE.
4. INSTALL COMPRESSED AIR PIPING PER MANUFACTURERS SPECIFICATIONS.
5. ALL BRANCH LINES TO BE PIPED FROM THE TOP OF THE COMPRESSED AIR PIPING MAIN.
6. CONTRACTOR AND OWNER ARE RESPONSIBLE TO VERIFY PROPOSED PIPING SYSTEM IS COMPATIBLE WITH ANY OILS PRESENT IN THE AIR COMPRESSOR.

= CONNECT TO EXISTING

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STATE OF NEW YORK
RICHARD ALLAN BABA
100892
LICENSED PROFESSIONAL ENGINEER
06/28/2024

REVISIONS

MARK	DESCRIPTION	DATE

Key Plan

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 VETERANS WAY, SUITE 600
ORLANDO, FLORIDA 32827

ISSUE DATE: 06/12/2024
COMM. NO.: 2023-177

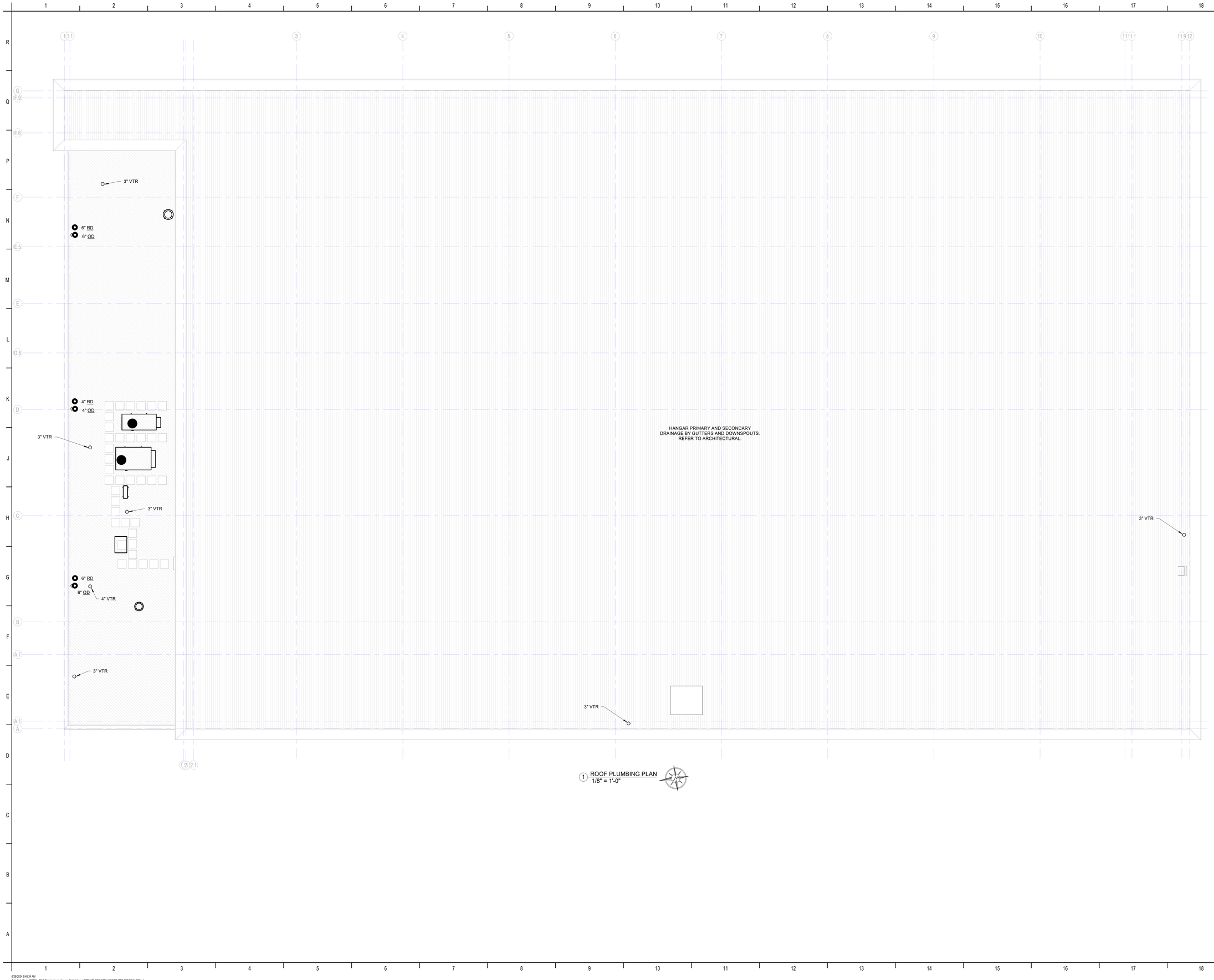
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OVERALL PNEUMATIC PLAN

P400

100% PERMIT SET

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Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/2023-177-SFS SWF HANGAR-MEP-CENTRAL-R23.rvt



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

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ROOF PLUMBING PLAN

P500

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FIRE ALARM

FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR/GRAPHIC MAP
FA-RPS	FIRE ALARM REMOTE POWER SUPPLY
C	CONTROL MODULE
M	MONITOR MODULE
	MANUAL PULLDOWN STATION
S	WALL MOUNTED ADA STROBE
	ADA HORN OR SPEAKER WITH STROBE
	MINI HORN / STROBE
MH	ELECTROMAGNETIC DOOR HOLD OPEN
FS	SPRINKLER FLOW SWITCH
TS	SPRINKLER TAMPER SWITCH
T	THERMAL DETECTOR
S	PHOTOELECTRIC SMOKE DETECTOR
	DUCT SMOKE DETECTOR, SUPPLY OR RETURN
TS	REMOTE INDICATING LIGHT (TEST SWITCH)
D	120V. MOTORIZED SMOKE DAMPER
RA	RESCUE ASSISTANCE PHONE
F	FIRE FIGHTERS PHONE JACK

DISTRIBUTION AND RACEWAY

MDC	MAIN DISTRIBUTION CENTER (MDC)
	SURFACE MTD PANELBOARD
	RECESSED PANELBOARD
T	TRANSFORMER
	BRANCH CIRCUIT HOMERUN
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT EXPOSED OR CONCEALED IN WALL OR CEILING
	RACEWAY UP
	RACEWAY DOWN
	CAPPED CONDUIT
	CURRENT TRANSFORMER
	CIRCUIT BREAKER SWITCH
	FUSED SWITCH
	GROUNDING ELECTRODE CONDUCTOR
M	METER
GFP	GROUND FAULT PROTECTION

SYSTEMS

	TTB, MDF OR IDF SYSTEM BACKBOARD
	TELECOMMUNICATION OUTLET
	FLOOR MOUNTED TELECOMMUNICATION OUTLET
	TELEVISION OUTLET
	CABLE TRAY (LENGTH AS INDICATED ON DRAWINGS)
WAP	WIRELESS ACCESS POINT

LIGHTING FIXTURES

A1 a	LUMINAIRE TYPE, REFERENCING LUMINAIRE SCHEDULE, TYPICAL ALL FIXTURES. SUBSCRIPT, IF SHOWN, REFERENCES WALL SWITCH OR RELAY/ZONE CONTROL
	WALL MOUNTED LUMINAIRE
	SURFACE OR PENDANT MOUNTED LUMINAIRE
	RECESSED LUMINAIRE
	RECESSED DOWNLIGHT LUMINAIRE
	SURFACE CEILING LUMINAIRE
	PENDANT LUMINAIRE
	ARROW INDICATES DIRECTIONAL LUMINAIRE
	MONOPOINT LUMINAIRE
	SURFACE OR PENDANT TRACK LUMINAIRE REFER TO FIXTURE SCHEDULE FOR HEAD QTY.
	LED TAPE LUMINAIRE
	FESTOON LIGHTING
	RECESSED MULTI-HEAD LUMINAIRE
	FLOOR OR TABLE LAMP
	EXIT LUMINAIRE - SHADED INDICATES FACE / DIRECTIONAL ARROWS AS SHOWN
	BATTERY PACK EMERGENCY LUMINAIRE
	HATCH INDICATES EMERGENCY LUMINAIRE
K	PORCELAIN KEYLESS LAMP HOLDER
	STEP LIGHT TYPE LUMINAIRE
	IN-GRADE UPLIGHT
	BOLLARD LUMINAIRE
	PEDESTRIAN POLE OR POST TOP LUMINAIRE
	EXTERIOR AREA LIGHT

WIRING DEVICES

	DUPLEX RECEPTACLE
	FOUR PLEX RECEPTACLE
	SINGLE RECEPTACLE
	COMBO RECEPTACLE/SWITCH
	SWITCHED DUPLEX RECEPTACLE
	EMERGENCY POWERED DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED RECEPTACLE DUPLEX/QUAD
CLG CLG	CEILING MOUNTED RECEPTACLE DUPLEX/QUAD
SR	SURFACE RACEWAY
	CLOCK RECEPTACLE
J	JUNCTION BOX
J	WALL MOUNTED J-BOX
J	FLOOR MOUNTED JUNCTION BOX
	MOLDED CASE CIRCUIT BREAKER IN ENCLOSURE
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC CONTROLLER (STARTER)
	COMBINATION STARTER/DISCONNECT SWITCH
HP	MOTOR
R	RELAY
TC	TIME CLOCK
$TO	THERMAL OVERLOAD SWITCH
$	SINGLE POLE SWITCH, LINE VOLTAGE
$3	3-WAY SWITCH, LINE VOLTAGE
$4	4-WAY SWITCH, LINE VOLTAGE
$K	KEY OPERATED SWITCH
$D	DIMMER SWITCH, LINE VOLTAGE
$DOOR	RECESSED DOOR SWITCH
X	LIGHTING CONTROL DEVICE, REFER TO DETAILS FOR CONTROL INTENT

ABBREVIATIONS AND SYMBOLS

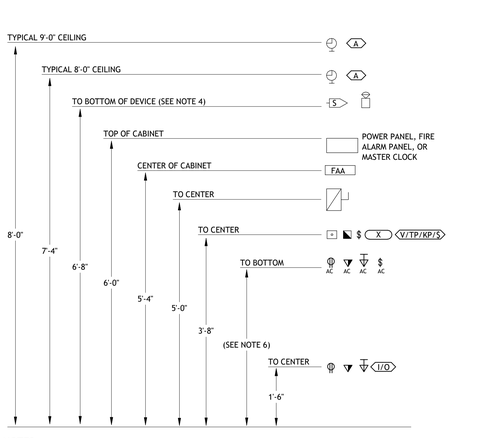
A	AMPERE(S)
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BFF	BELOW FINISHED FLOOR
BOF	BOTTOM OF FIXTURE
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCT	CORRELATED COLOR TEMPERATURE
CLG	CEILING
CT	CURRENT TRANSFORMER
DED	DEDICATED CIRCUIT
DISC	DISCONNECT
DW	DISHWASHER
DWG(S)	DRAWING(S)
(E)	EXISTING TO REMAIN
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
(ER)	EXISTING TO BE RELOCATED
EM	EMERGENCY
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
F	FUSE
FLA	FULL LOAD AMPS
FS	SPRINKLER FLOW SWITCH
G	GROUND
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HP	HORSEPOWER
IDF	INTERMEDIATE DISTRIBUTION FACILITY
IG	ISOLATED GROUND
ISC	SHORT CIRCUIT CURRENT
KVA	KILOVOLT AMPERE(S)
KW	KILOWATT(S)
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPERE(S)
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION CENTER
MDF	MAIN DISTRIBUTION FACILITY
MLO	MAIN LUGS ONLY
MTS	MANUAL TRANSFER SWITCH
MW	MICROWAVE
NC	NORMALLY CLOSED
NL	NIGHT LIGHT - SEE GENERAL NOTES
NO	NORMALLY OPEN
OAE	OR APPROVED EQUAL
OFH	OVERALL FIXTURE HEIGHT
OH	OVERHEAD
P	POLE
PART	PARTIAL CIRCUIT
PH	PHASE
PNL	PANEL
RCPT	RECEPTACLE
REF	REFRIGERATOR
RFD	RECESSED FIXTURE DEPTH
(R)	EXISTING TO BE REMOVED
(RL)	RELOCATED LOCATION
SPD	SURGE PROTECTION DEVICE
TS	SPRINKLER TAMPER SWITCH
UC	UNDER COUNTER/CABINET
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT(S)
W	WATT(S) OR WIRE
WFD	WALL FIXTURE DEPTH
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER
X	POOL EQUIPMENT SCHEDULE NOTATION
X	KITCHEN EQUIPMENT SCHEDULE NOTATION
X X	MECHANICAL EQUIPMENT SCHEDULE NOTATION
X	DETAIL NOTE
X	DELTA REVISION NOTE
X	ELECTRICAL WIRE SIZE
T1	LIGHTING CONTROLS SEQUENCE OF OPERATION

ELECTRICAL GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
2. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
3. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
4. ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS, EXCEPT AS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
6. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
7. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
8. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
9. ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
10. ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT THEIR WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT-DESIGNER OR THEIR REPRESENTATIVE.
11. E.C. IS TO REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ALL FIRE RATED PENETRATION INSTALLATION REQUIREMENTS. E.C. IS TO NOTIFY ENGINEER AND ARCHITECT PRIOR TO INSTALLING ANY FIXTURES WITHIN A FIRE RATED CEILING OR WALL. FIRE RATING MUST BE MAINTAINED FOR THIS TYPE OF INSTALLATION WITH DRYWALL TENTING.
12. E.C. SHALL PROVIDE SELECTIVE COORDINATION PER THE 2020 NEC ARTICLE 700.32 BASED ON ELECTRICAL EQUIPMENT TO BE INSTALLED, TO 0.10 SECONDS, DURING THE SUBMITTAL PROCESS. PROVIDE ARC FLASH STUDY FOR NEW EQUIPMENT AND PLACE LABELS ON ELECTRICAL EQUIPMENT PRIOR TO TURNING OVER TO OWNER.
13. SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS, FOR EXAMPLE, ALL LIGHTING FIXTURES, PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
14. SUBMIT ELECTRONIC COPIES OF THE FOLLOWING SHOP DRAWINGS FOR REVIEW:
    A. SWITCH BOARD, PANELBOARDS, AND METERING EQUIPMENT
    B. DISCONNECTS
    C. LIGHT FIXTURES
    D. LIGHTING CONTROLS
    E. TRANSFORMERS
    F. PROVIDE "AS-BUILT" DRAWINGS AND SUBMIT TO ARCHITECT/DESIGNER.
15. PROVIDE THE FOLLOWING INFORMATION, PER 2020 BUILDING CODE OF NEW YORK STATE (IECC 2018) TO THE PARTY RESPONSIBLE FOR PROJECT COMMISSIONING PLAN (COMMISSIONING AGENT/ MECHANICAL ENGINEER) AND ELECTRICAL ENGINEER:
    A. CUTSHEETS FOR ALL INSTALLED LIGHTING AND LIGHTING CONTROLS.
    B. OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF INSTALLED LIGHTING, REQUIRED ROUTINE MAINTENANCE ACTIONS, CLEANING AND RECOMMENDED RELAMPING SHALL BE CLEARLY IDENTIFIED.
    C. SCHEDULE FOR INSPECTING AND RECALIBRATING ALL LIGHTING CONTROLS. INSPECTION OF ALL LIGHTING CONTROLS SHALL BE PERFORMED PRIOR TO ELECTRICAL ENGINEER'S COMMISSIONING SITE VISIT. RECALIBRATION OF LIGHTING CONTROLS SHALL BE PERFORMED FOLLOWING SITE VISIT AND SHALL BE BASED UPON THE RECOMMENDATIONS OF THE ELECTRICAL ENGINEER.
16. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
17. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO SUBMIT A COMPLETE CONSTRUCTION DRAWING SET TO THE ELECTRICAL UTILITY COMPANY WITHIN 10 DAYS OF AWARD OF CONTRACT. COORDINATE TIMELINE OF THE REVIEW, APPROVAL, ALL ASSOCIATED DOWN TIME, CONSTRUCTION SCHEDULING, DELIVERY, AND INSTALLATION OF THE UTILITY TRANSFORMER. NOTIFY OWNER OF SCHEDULING CONFLICTS.
18. THE CONTRACTOR SHALL PROVIDE NEW TYPE WRITTEN PANEL DIRECTORIES FOR ALL NEW PANELS. PANELBOARD SHALL BE MARKED WHERE THE SOURCE OF POWER SUPPLY ORIGINATES, AND IF SERIES COMBINATION SYSTEMS ARE UTILIZED AND THEIR LISTED AMPERE RATING.
19. DO NOT SHARE NEUTRAL CONDUCTORS FOR MULTIWIRE BRANCH CIRCUITS. WHERE SHARED NEUTRAL CONDUCTORS ARE REQUIRED (SUCH AS POWERED FURNITURE SYSTEMS), HANDLE TIES SHALL BE PROVIDED ON THE CIRCUIT BREAKERS, WITH SHARED NEUTRALS, SUCH THAT IT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS. ALL HANDLE TIES ARE REQUIRED TO BE INDICATED ON THE PANELBOARD SHOP DRAWINGS.
20. SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
21. ALL SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD BY THE ELECTRICAL CONTRACTOR WITH THE MAXIMUM AVAILABLE FAULT CURRENT AS INDICATED WITHIN THESE DOCUMENTS. THE FIELD MARKING(S) SHALL COMPLY WITH ELECTRICAL SPECIFICATIONS FOR READABILITY AND DURABILITY.
22. PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED DISTRIBUTION SYSTEM.
    A. UTILIZE RIGID POLYVINYL CHLORIDE CONDUIT (PVC) IN THE FOLLOWING LOCATIONS:
        - UNDERGROUND
    B. UTILIZE ELECTRICAL METALLIC TUBING (EMT), MINIMUM SIZE OF 3/4", IN THE FOLLOWING LOCATIONS:
        - SERVICE & FEEDERS
        - POWER CIRCUIT HOMERUN
        - BRANCH CIRCUITS IN CONCEALED OR EXPOSED LOCATIONS
        - TELEPHONE/DATA/CATV ROUGH-IN
23. ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED.
24. ALL WIRING NOT INSTALLED IN CONDUIT AND INSTALLED IN THE CEILING SPACE SHALL BE PLENUM RATED.
25. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SPECIAL OUTLET BOXES THAT MAY BE REQUIRED TO ENCLOSE RECEPTACLES.
26. IN EXPOSED AND SUSPENDED CEILING APPLICATIONS, ROUTE CONDUIT AS CLOSE TO STRUCTURAL SLAB OR DECK AS POSSIBLE, AND SUPPORT CONDUIT AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SYSTEM UNLESS IT HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
27. ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS. GENERAL CONTRACTOR SHALL PAINT CONDUIT TO MATCH ADJACENT FINISHES.
28. WHERE FLOOR FITTINGS REQUIRE PENETRATION OF THE FLOOR SLAB, THEY SHALL BE STANDARD DEVICE LISTED BY UL FOR THE PURPOSE AND HAVE A UL FIRE RATING EQUAL TO THE FLOOR RATING. FLOOR SERVICE BOXES SHALL BE MODULAR, ADJUSTABLE FLUSH TYPE, DUAL SERVICE UNITS SUITABLE FOR WIRING METHOD USED. COMPARTMENT BARRIERS SHALL SEPARATE POWER FROM LOW VOLTAGE CABLING. PROVIDE RECTANGULAR SERVICE PLATE WITH SATIN FINISH.
29. LUMINAIRES SHOWN AS SHADED SHALL BE PROVIDED WITH EMERGENCY BATTERY BACKUP POWER. EMERGENCY LUMINAIRES SHALL SENSE UNSWITCHED POWER TO THE SPACE AND OPERATE AUTOMATICALLY UPON LOSS OF NORMAL POWER. ALL SHADED LUMINAIRES WITH LED SOURCES SHALL BE PROVIDED WITH 90 MINS OF BACKUP POWER VIA INTEGRAL BATTERY OR EXTERNAL MINI/MICRO INVERTERS AS SPECIFIED IN THE LUMINAIRE SCHEDULE. ALL EMERGENCY LUMINAIRES WITH INTEGRAL BATTERY, EMERGENCY LIGHTING UNITS, AND INVERTERS SHALL HAVE INTEGRAL OR REMOTE TEST SWITCHES WITH VISIBLE INDICATOR LIGHTS, AS INDICATED IN THE FIXTURE SCHEDULE. THE EMERGENCY BATTERY OR INVERTER SHALL BE CONNECTED TO THE UNSWITCHED LEG OF THE LIGHTING CIRCUIT INDICATED TO DETECT THE LOSS OF NORMAL POWER.
30. CIRCUIT ALL EMERGENCY LIGHTING UNITS (FROG EYES) AND EXIT SIGNS TO NEAREST LOCAL AREA LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHLEGS, UNLESS OTHERWISE NOTED.
31. ALL DIMMED LIGHTING CIRCUITS ARE TO RECEIVE DEDICATED NEUTRALS. DO NOT SHARE NEUTRALS ON DIMMED LIGHTING CIRCUITS.
32. PROVIDE OWNER WITH A COMPLETE LISTING OF ALL LAMPS UTILIZED ON THE PROJECT INCLUDING MANUFACTURER AND CATALOG INFORMATION. PROVIDE A SUGGESTED SOURCE, INCLUDING CONTACT NAME AND PHONE NUMBER, FOR REORDERING.
33. THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING FIXTURES.
34. ROUGH-IN FOR MECHANICAL EQUIPMENT SHALL ONLY OCCUR AFTER MECHANICAL EQUIPMENT SUBMITTALS ARE THOROUGHLY REVIEWED FOR CHANGES. NOTIFY ENGINEER OF ANY DISCREPANCIES.
35. EC SHALL COORDINATE ELECTRIC WATER COOLER RECEPTACLE PLACEMENT SUCH THAT THE RECEPTACLE IS ACCESSIBLE WITHIN THE WATER COOLER SHROUD, YET CONCEALED BY THE SHROUD PER NEC 422.33(A). PROVIDE 5mA GFCI CIRCUIT BREAKER IN ELECTRICAL PANEL PER NEC SECTION 422.
36. THE POWER AND CONTROL REQUIREMENTS FOR ALL EQUIPMENT CONNECTIONS SHALL BE CONFIRMED WITH APPROVED SHOP DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN. FINAL POWER REQUIREMENTS, DIMENSIONED ROUGH-IN LOCATIONS, LOW VOLTAGE SYSTEM CONNECTIONS, ETC. SHALL BE CONFIRMED AND MODIFIED AS REQUIRED.
37. ALL DEVICES IN OR ABOVE COUNTERS SHALL HAVE LOCATIONS AND MOUNTING HEIGHTS CONFIRMED WITH ARCHITECTURAL ELEVATIONS & OWNER PRIOR TO ROUGH-IN. ANY ADJUSTMENTS TO MOUNTING HEIGHTS REQUIRED BY LACK OF COORDINATION WILL BE AT THE CONTRACTOR'S EXPENSE.
38. CONTRACTOR SHALL CONDUCT FUNCTIONAL TESTING OF LIGHTING CONTROLS EQUIPMENT AS REQUIRED BY 2020 BUILDING CODE OF NEW YORK STATE, SECTION C408.3 (IECC 2018, SECTION C408.3). AFTER THIS TESTING IS OBSERVED AND COMPLETED, THE REGISTERED DESIGN PROFESSIONAL OR COMMISSIONING AUTHORITY SHALL PROVIDE DOCUMENTATION TO THE AHJ THAT CERTIFIES THAT THE INSTALLATION MEETS THE DOCUMENTED PERFORMANCE CRITERIA OF SECTION C405. TO INQUIRE ABOUT CERTIFIED COMMISSIONING SERVICES PROVIDED BY AE DESIGN, INC. CALL (303) 296-3034.
39. IDENTIFY EACH RECEPTACLE WITH PANELBOARD IDENTIFICATION AND CIRCUIT NUMBER. USE HOT, STAMPED, OR ENGRAVED MACHINE PRINTING WITH BLACK-FILLED LETTERING ON FACE OF PLATE, AND DURABLE WIRE MARKERS OR TAGS INSIDE OUTLET BOXES.
40. UNLESS OTHERWISE NOTED, ALL GFCI RECEPTACLES SHALL HAVE TEST/RESET SWITCHES INTEGRAL TO RECEPTACLE DEVICE.
41. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A LIGHTNING PROTECTION SYSTEM PER LIGHTNING PROTECTION SYSTEMS NOTES BELOW AND SPECIFICATIONS.

LIGHTNING PROTECTION SYSTEM NOTES

ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A LIGHTNING PROTECTION SYSTEM WITH AN UNDERWRITER'S LABORATORIES LISTED MASTER C LABEL. REFER TO PERFORMACE SPECIFICATION SECTION 26 4113 FOR SYSTEM REQUIREMENTS. COORDINATE ALL GROUND ROD LOCATIONS ON ROOF WITH ARCHITECT WHILE DEVELOPING SUBMITTALS. COORDINATE ALL DOWN CONDUCTOR LOCATIONS WITH ARCHITECT AND MANUFACTURER DURING SUBMITTALS. SUBMITTALS REQUIRE FULL ROOF PLANS WITH ALL GROUND ROD (AND ALL OTHER EQUIPMENT) TO BE INDICATED FOR REVIEW PRIOR TO SUBMITTAL APPROVAL.



NOTES:

1. WHERE MULTIPLE LINE VOLTAGE DEVICES ARE SHOWN ADJACENT TO EACH OTHER, THEY ARE ALL TO SHARE THE SAME JUNCTION BOX, UP TO FOUR GANGS.
2. WHERE MORE THAN FOUR DEVICES ARE SHOWN ADJACENT TO EACH OTHER, DEVICES ARE TO STACK VERTICALLY ABOVE ONE ANOTHER IN TWO ROWS IN AS SMALL OF GANG BOXES AS POSSIBLE. I.E. SIX DEVICES WILL USE TWO THREE GANG BOXES, FIVE DEVICES WILL USE ONE THREE GANG AND ONE TWO GANG BOX. WHEN DIMMERS ARE GANGED TOGETHER, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR DE-RATING.
3. BACK-TO-BACK JUNCTION BOXES IN COMMON WALLS ARE NOT PERMITTED. JUNCTION BOXES SHALL BE SEPARATED BY AT LEAST ONE STUD WHEREVER POSSIBLE.
4. AUDIBLE/VISUAL FIRE ALARM DEVICES SHOWN ARE TO BE MOUNTED AT 90" OR 6" BELOW CEILING, WHICHEVER IS LOWER. ADA STROBES TO BE MOUNTED AT 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER.
5. MAXIMUM ELEVATION FOR ALL LOAD CENTER CIRCUIT BREAKERS SHALL NOT EXCEED 48" AFF, WITHIN DWELLING UNITS.
6. THE E.C. SHALL REFER TO ARCHITECTURAL ELEVATIONS TO COORDINATE ALL COUNTER HEIGHTS. ALL "AC" DEVICES SHALL HAVE BOTTOM OF BACK-BOX MOUNTED 4" ABOVE THE BACK/SIDE SPLASH.

1 | DEVICE MOUNTING HEIGHT
E000 | NTS

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Project #: 6468.00

SEAL



REVISIONS

MARK	DESCRIPTION	DATE

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SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715

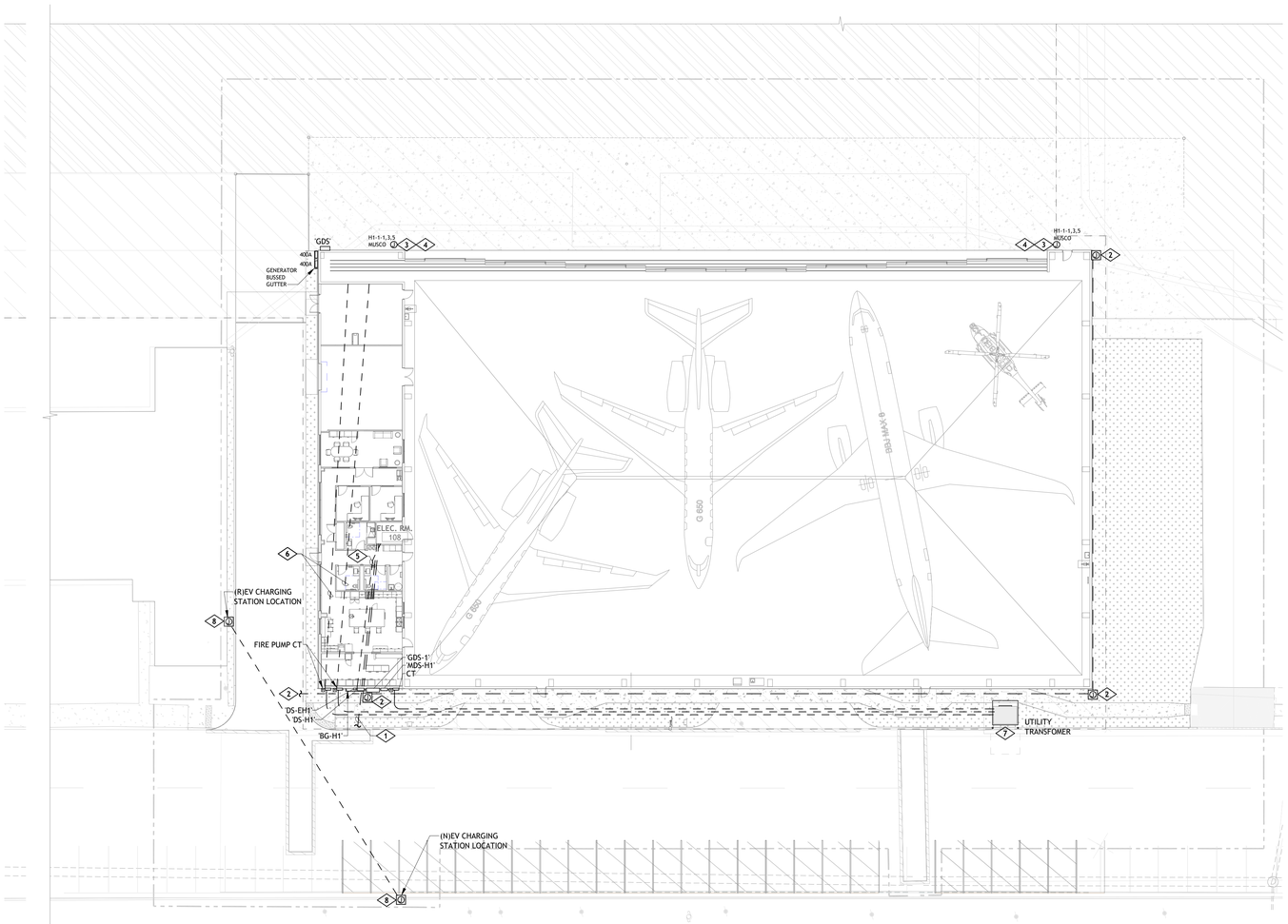
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ELECTRICAL COVER SHEET

E000

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Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/6468.00 - Signature SWF Terminal and Hangar - Electrical Central.rvt



1 | ELECTRICAL SITE PLAN
E010 | 1" = 20'-0"

NORTH

SITE GENERAL NOTES

A.	ALL EXTERIOR LIGHTING CIRCUITS SHALL UTILIZE A MINIMUM OF WIRE SIZE #8AWG COPPER, UON.
B.	UNDERGROUND SITE LIGHTING BRANCH CIRCUITS INCLUDING THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE UPSIZED TO ACCOMMODATE VOLTAGE DROP PER NEC 250.122(B).

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	APPROXIMATE ANTICIPATED ROUTING OF LOW VOLTAGE CONDUIT SYSTEMS BETWEEN ELECTRICAL ROOM LOCATION AND SITE TELEPHONE AND CATV COMPANY UTILITY POLE LOCATIONS. PROVIDE UNDERGROUND CONDUIT PER LOW VOLTAGE RISER DIAGRAM A MINIMUM OF 30" BELOW GRADE, REFER TO DETAIL #2/E601.
2	APPROXIMATE LOCATION OF EXISTING UNDERGROUND CCTV CONDUIT ROUTED TO EXISTING SIGNATURE TERMINAL IS LOCATED AT PLAN NORTHEAST CORNER OF BUILDING. PRIOR TO ANY DEMOLITION OR CONCRETE SLAB POUR, EC SHALL LOCATE EXACT CCTV ROUTING TO EXISTING SIGNATURE TERMINAL AND REVISE ROUTING UNDERGROUND TOWARDS 1ST STREET. PROVIDE TIER 22 IN-GRADE JUNCTION BOX AS NECESSARY, SIZED AS NECESSARY. ROUTING SHALL BE TO NEW HANGAR AND CONTINUE BACK TO EXISTING SIGNATURE TERMINAL. COORDINATE ALL REQUIREMENTS AND SCHEDULE OF REROUTING WITH SIGNATURE FLIGHT SUPPORT. REFER TO #2/E601 FOR ADDITIONAL INFORMATION.
3	PROVIDE 480V/3PH POWER CONNECTION TO APRON LIGHTING POLE. LIGHTING POLE SYSTEM, COMPONENTS INCLUDE, BUT ARE NOT LIMITED TO: CONCRETE BASE, POLE, ARMS, HEADS, DISTRIBUTION CENTER, WIRING, AND OVERCURRENT PROTECTION. EC SHALL PROVIDE FINAL WIRING CONNECTION AND COORDINATE INSTALLATION WITH GC. LIGHTING CONTROL PHOTOCELL/CONTACTOR SHALL BE PROVIDED BY MUSCO AND EC SHALL PROVIDE CONNECTION TO PHOTOCELL/CONTACTOR.
4	(1) FAA L-810 LISTED DUAL L810 RED OBSTRUCTION LIGHT SHALL BE INCLUDED ON EACH AIRSIDE LIGHT POLE. ALL OBSTRUCTION LIGHTS SHALL BE CONNECTED AND HAVE THEIR OWN 120V/1PH CIRCUIT ON PANEL L1-1 AND SHALL BE CONTINUOUSLY OPERATIONAL PER FAA REGULATION.
5	REFER TO ONE-LINE DIAGRAM AND ELECTRICAL POWER PLAN FOR UNDERGROUND FEEDER/CONDUIT REQUIREMENTS.
6	APPROXIMATE UNDERGROUND ROUTING OF FEEDERS TO FIRE PUMP/CONTROLLER.
7	ANTICIPATED LOCATION OF BUILDING TRANSFORMER AND CONCRETE PAD. CENTRAL HUDSON GAS AND ELECTRIC (CHG&E) SHALL FURNISH AND PROVIDE TRANSFORMER AND STAKE TRENCH AND EQUIPMENT LOCATIONS. CONTRACTOR SHALL PERFORM ALL TRENCHING AND BACKFILLING WORK PER CHG&E DIRECTION ON THE PRIMARY AND SECONDARY SIDE OF THE TRANSFORMER. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL CONDUIT AND EQUIPMENT PAD AS REQUIRED BY CHG&E. THE CONTRACTOR SHALL FURNISH AND INSTALL THE CONDUIT/CABLING ON THE SECONDARY SIDE OF THE TRANSFORMER. CHG&E SHALL MAKE ALL CONNECTIONS ON THE PRIMARY AND SECONDARY CABLING AT THE TRANSFORMER LANDINGS. ALL COSTS FOR WORK DESCRIBED ABOVE TO BE PERFORMED BY CHG&E SHALL BE BILLED TO THE PROJECT METER TO BY PAID BY THE OWNER.
8	EXISTING EV CHARGERS AT PANYNJ BUILDING SHALL BE RELOCATED FROM EXISTING LOCATION TO NEW LOCATION SHOWN. CONTRACTOR SHALL REVIEW THE EXISTING CHARGER AND REQUIREMENTS, REMOVE THE EV CHARGER, EXTEND THE EXISTING FEED TO THE NEW LOCATION, PROVIDE APPROPRIATE PEDESTAL/BASE/STRUCTURE AND RE-INSTALL FIXTURE. PROVIDE TIER 22 IN-GRADE JUNCTION BOX AT REMOVED EV CHARGER LOCATION, SIZED AS NECESSARY. COORDINATE EXACT LOCATION OF NEW EV CHARGER WITH CIVIL DRAWINGS AND PANYNJ. TOTAL DISTANCE OF CIRCUIT EXTENSION SHALL BE VERIFIED WITH VOLTAGE DROP PRIOR TO ROUGH-IN. CONTRACTOR SHALL ACCOUNT FOR ANY VOLTAGE DROP OR PROVIDE CONDUCTOR SIZE, EV CHARGER INFORMATION WITH LOAD REQUIREMENTS, BREAKER FEEDING CIRCUIT, AND CIRCUIT DISTANCE FROM EXISTING BUILDING PANEL TO NEW EV LOCATION FOR ENGINEER TO VERIFY IF VOLTAGE DROP WILL REQUIRE UPSIZING OF CONDUCTORS. COORDINATE EXACT EV REQUIRMENTS, INCLUDE BASE REQUIREMENTS WITH MANUFACTURER'S INSTALLATION GUIDE.

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AE DESIGN
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1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 6468.00

SEAL



REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

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ELECTRICAL SITE PLAN

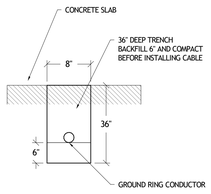
E010

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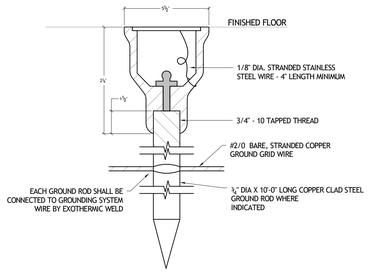
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STATIC GROUND NOTES

A.	REFER TO #1/E601 FOR BUILDING GROUNDING DETAIL, NOTES, AND DIAGRAMS.
B.	THE INSTALLED GROUND SYSTEM SHALL BE REQUIRED TO ACHIEVE A RESISTANCE OF NOT MORE THAN 3 OHMS. WHERE MINIMUM RESISTANCE CANNOT BE ACHIEVED USING THE GROUNDING ELEMENTS SHOWN, THE CONTRACTOR SHALL ADD ADDITIONAL GROUND RODS OR PROVIDE GROUND ENHANCING MATERIALS UNTIL 3 OHM OR LESS GROUND RESISTANCE IS ACHIEVED.
C.	STATIC GROUNDING ELECTRODE SHALL BE LOCATED AT 30" BELOW GRADE. CONNECT STATIC GROUNDING ELECTRODE CONDUCTOR TO SERVICE ENTRANCE GROUNDING ELECTRODE.
D.	THE INSTALLED PERIMETER GROUND RING SHALL NOT BE BACKFILLED UNTIL AFTER INSPECTION.



2 | HANGAR STATIC GROUND LOOP DETAIL
E100 | NTS



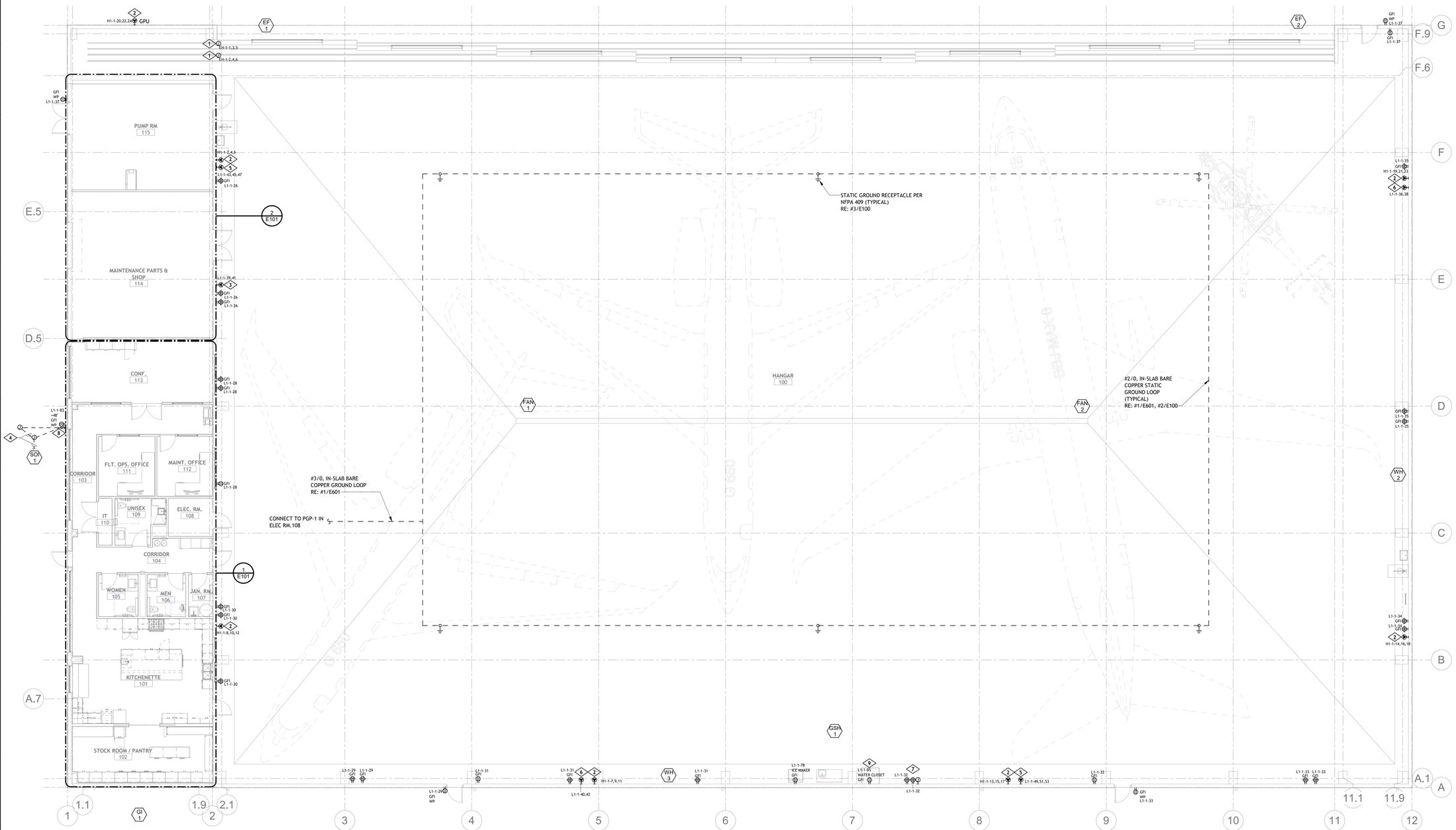
3 | STATIC GROUNDING RECEPTACLE DETAIL
E100 | NTS

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	HANGAR DOOR OPERATORS: PROVIDE 30A/3P NEMA 1 FUSED DISCONNECT SWITCH WITH 30A FRS-R FUSES. PROVIDE 30A CONNECTION (3#10, 1#10G, 3/4"C). COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED, PRIOR TO INSTALLATION. COORDINATE CONTROLS AND CONTROLS LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
2	PROVIDE 480V 100A/3P CONNECTION (4#1, 1#8G, 1-1/2"C) FOR HANGAR EQUIPMENT. COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED.
3	PROVIDE 240V 40A/2P CONNECTION (2#8, 1#10G, 1"C) FOR HANGAR EQUIPMENT. COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
4	PROVIDE (1) 1" SCHEDULE 40 PVC CONDUIT FROM FIRE ALARM CONTROL PANEL TO EAST MOST BUTTERFLY VALVE BOX FOR FIRE ALARM CABLING. TERMINATE AT 2-GANG WEATHERPROOF JUNCTION BOX WITH BLANK COVER WITHIN VALVE BOX ENCLOSURE. EXTEND (2) 1/2"C FROM JUNCTION BOX TO EACH ACTUATOR VALVE CONDUIT ENTRY. REFER TO SHEET P200 FOR VALVE CONTROL INTENT. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH PLUMBING CONTRACTOR. ROUTING SHOWN IS DIAGRAMMATIC ONLY.
5	PROVIDE 240V 60A/3P CONNECTION (3#4, 1#10G, 1"C) FOR HANGAR EQUIPMENT. COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
6	PROVIDE 240V 60A/2P CONNECTION (2#4, 1#10G, 1"C) FOR HANGAR EQUIPMENT. COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
7	PROVIDE (2) QUADRAPLEX AS SHOWN/CIRCUITED AND 2"C FOR LOW VOLTAGE REQUIREMENTS ROUTED BACK TO IT ROOM 110 FOR IDF WALL CABINET. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER IT DEPARTMENT PRIOR TO ROUGH-IN.
8	PROVIDE RECEPTACLE AND SWITCH IN 2-GANG WEATHER PROOF BOX WITH IN-USE WEATHERPROOF COVER. SWITCH SHALL SERVE AS LOCAL DISCONNECTING MEANS FOR ELECTRIC ACTUATED BUTTERFLY VALVES AT SAND OIL INTERCEPTOR. PROVIDE (2) 1/2"C WITH 2#12, 1#12G FROM SWITCH TO EACH VALVE. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR.
9	COORDINATE EXACT HEIGHT, LOCATION, AND REQUIREMENTS WITH WATER CLOSET SHOP DRAWINGS PRIOR TO ROUGH-IN. ELECTRICAL CONNECTION SHALL NOT BE LESS THAN 24" IN HANGAR SPACE.

POWER GENERAL NOTES

A.	UNLESS OTHERWISE NOTED, ALL CIRCUIT NUMBERS INDICATED ON THIS SHEET SHALL REFER TO CIRCUIT ORIGINATING IN PANELBOARDS BASED UPONG THE FOLLOWING CONVENTION, (THIS SHEET ONLY): HP-# = CIRCUIT TO PANEL 'HP'
B.	AIRCRAFT BATTERY CHARGING STATION SHALL COMPLY WITH 2020 NEC 513.10(B).
C.	ALL OUTLETS LOCATED WITHIN OPEN HANGAR SPACE SHALL BE MOUNTED AT NO LESS THAN +24". WHERE NOT INDICATED, MOUNT AT +24" UNLESS OTHERWISE NOTED.
D.	OPEN HANGAR SPACE IS IDENTIFIED AS CLASS 1 DIVISION 2 LOCATION UP TO 18" AFF PER NEC 513. ALL ELECTRICAL DEVICES, SYSTEMS, COMPONENTS, AND INSTALLATIONS MEANS SHALL BEE NEC 501 AND 513 REQUIREMENTS FOR CLASS 1, DIVISION 2 AREAS UP TO 18" AFF.
E.	120V, 20A FEEDS WITH FULL 16A LOAD SHALL UTILIZE FEEDER SIZED INDICATED BELOW: #12 CU UP TO 65' — #6 CU FROM 160'-250' #10 CU FROM 65'-100' — #4 CU FROM 250'-380' #8 CU FROM 100'-160' — #2 CU FROM 380'-588'



1 | LEVEL 1 - POWER PLAN
E100 | 1/8" = 1'-0"

NORTH

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07/01/2024
092599

REVISIONS

MARK	DESCRIPTION	DATE

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HANGAR

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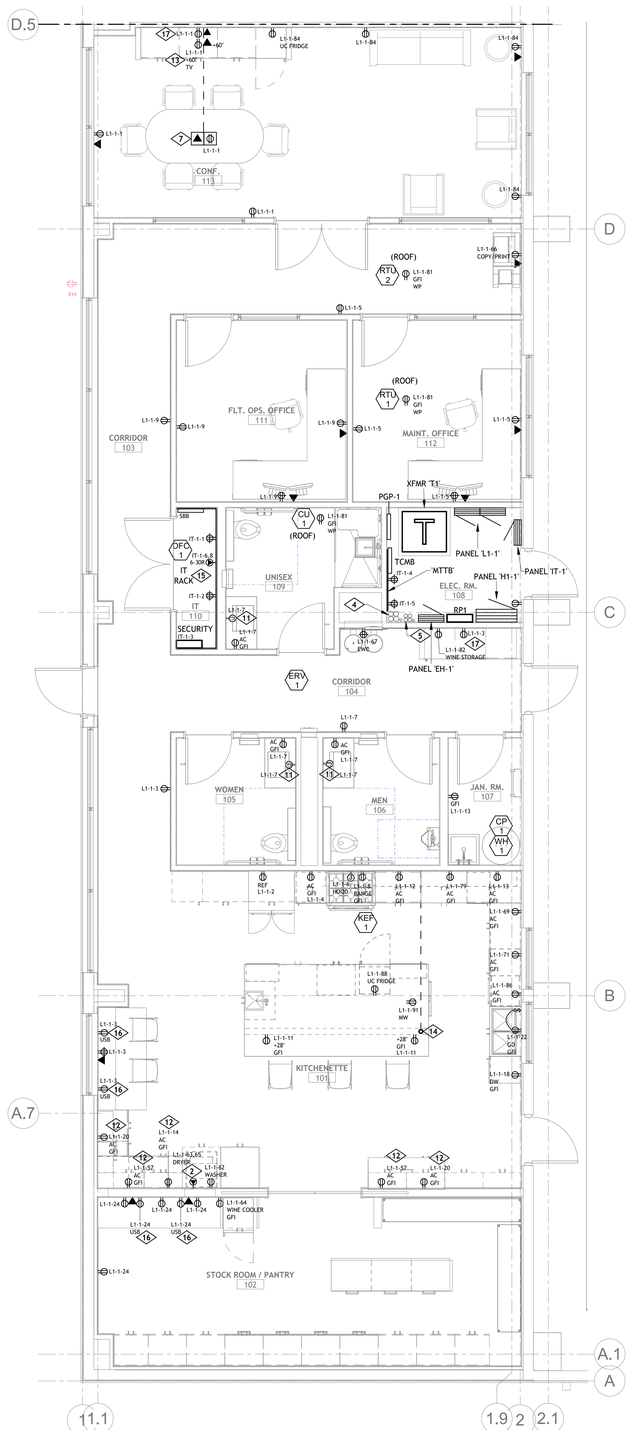
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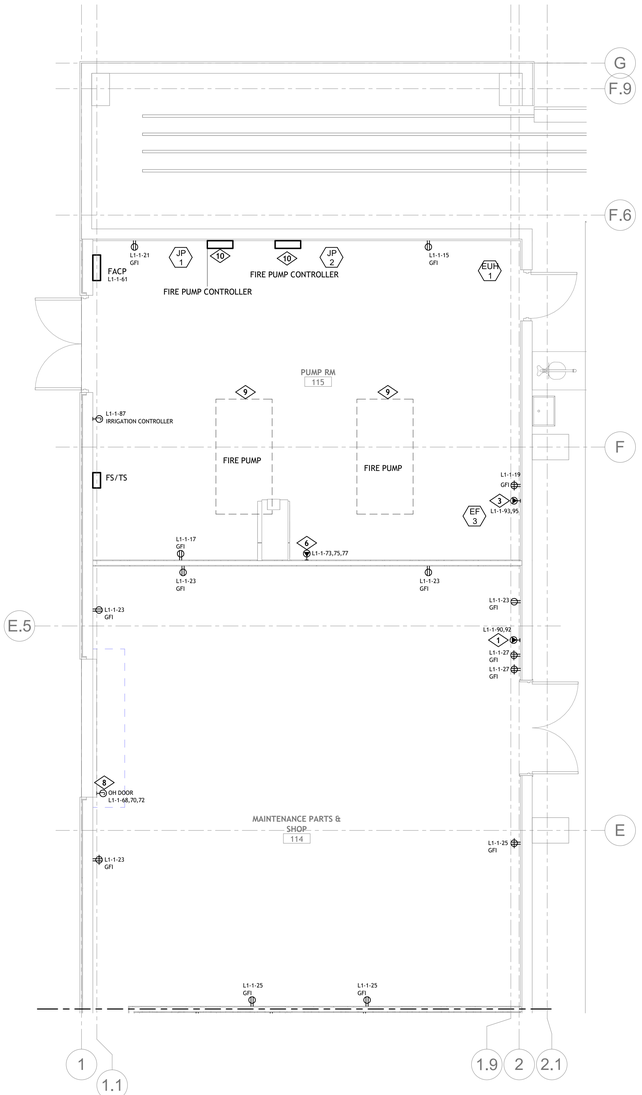
ELECTRICAL POWER PLAN

E100

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1 | ENLARGED POWER PLAN OFFICE

E101 | 1/4" = 1'-0"

NORTH

2 | ENLARGED POWER PLAN SHOP

E101 | 1/4" = 1'-0"

NORTH

POWER GENERAL NOTES

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KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	PROVIDE 240V 40A/2P CONNECTION (2#8, 1#10G, 1"C) FOR HANGAR EQUIPMENT. COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
2	ELECTRICAL CONNECTION FOR RESIDENTIAL DRYER ANTICIPATED TO BE 240V, 30A/2P. PROVIDE NEMA 6-30R AND 2#10, 1#10G IN 3/4"C. COORDINATE EXACT NEMA PLUG CONFIGURATION AND RECEPTACLE MOUNTING HEIGHT WITH OWNER PROVIDED EQUIPMENT PRIOR TO ROUGH-IN. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
3	PROVIDE 240V 60A/2P CONNECTION (2#4, 1#10G, 1"C) FOR HANGAR EQUIPMENT. COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
4	LOW VOLTAGE CONDUITS STUBBED INTO ELECTRICAL ROOM. REFER TO #2/E601 AND ELECTRICAL SITE PLAN FOR MORE INFORMATION.
5	INCOMING UNDERGROUND ELECTRICAL CONDUITS FROM BG-H1. PROVIDE AS INDICATED IN ONE-LINE DIAGRAM AND (2) 3"C SPARE.
6	PROVIDE 208V 40A/3P CONNECTION (3#8, 1#10G, 1"C) FOR AIR COMPRESSOR CONNECTION. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
7	PROVIDE RECESSED, TWO-GANG, RECTANGULAR CORROSION RESISTANT FLOOR BOX, HUBBELL SYSTEM ONE CFB2G10OCR OR APPROVED EQUAL. FLOOR BOX SHALL BE TYPE THAT IS FLUSHED WITH FINISHED FLOOR WHILE DEVICE IS PLUGGED IN AND COVER CLOSED. PROVIDE WITH 24GCCVR**, COLOR BY ARCHITECT. FLOOR BOX SHALL HAVE 2#12, 1#12G, 3/4"C TO ONE GANG FOR POWER AND 1-1/2"C TO OTHER GANG FOR LOW-VOLTAGE CABLING. COORDINATE EXACT LOCATION WITH ARCHITECT AND EXACT CONDUIT ROUTING WITH SIGNATURE FLIGHT SUPPORT I.T. DEPARTMENT PRIOR TO ROUGH-IN.
8	PROVIDE 208V 20A/3P CONNECTION (3#12,1#12G,3/4"C) FOR HIGHSPEED OVERHEAD DOOR OPERATOR. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE BUCK BOOST TRANSFORMER FOR 208V TO 240V AS NECESSARY.
9	REFER TO ELECTRICAL ONE-LINE DIAGRAM (#1/E600) FOR FIRE PUMP ELECTRICAL INFORMATION.
10	REFER TO ONE-LINE DIAGRAM FOR UNDERGROUND INCOMING FEED TO FIRE PUMP CONTROLLER.
11	PROVIDE POWER FOR ILLUMINATED MIRROR AND CONNECT TO ROOM LIGHTING CONTROL FOR OCCUPANCY ON/OFF. COORDINATE EXACT LOCATION WITH MIRROR MANUFACTURER'S INSTALLATION GUIDE PRIOR TO ROUGH-IN. REFER TO LIGHTING PLANS FOR ADDITIONAL INFORMATION AND INTERIOR DRAWINGS FOR ILLUMINATED MIRROR SPECIFICATIONS AND REQUIREMENTS.
12	PROVIDE RECEPTACLE ABOVE COUNTER WITHIN CABINET, FLUSH WITH CABINETRY.
13	COORDINATE EXACT HEIGHT OF TV/MONITOR POWER AND DATA REQUIREMENTS WITH SIGNATURE LOW VOLTAGE INSTALLER AND ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
14	ROUTE ELECTRICAL CIRCUIT TO ISLAND UNDER FLOOR FROM ISLAND WALL TO NEAREST WALL TO ABOVE CEILING BACK TO ELECTRICAL ROOM. COORDINATE EXACT LOCATION OF ISLAND WALL WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN. ALL ELECTRICAL CIRCUIT ROUTING THROUGH MILLWORK SHALL BE COORDINATED WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
15	COORDINATE EXACT LOCATION AND LAYOUT OF IT ROOM EQUIPMENT WITH SIGNATURE FLIGHT SUPPORT I.T. DEPARTMENT PRIOR TO ROUGH-IN.
16	PROVIDE IN-COUNTER FLIP-UP COMBINATION RECEPTACLE/USB PORT DEVICE WITH (2) USB AND SINGLE RECEPTACLE, MOCKETT CAT# PCS36A/UC (OR APPROVED EQUIVALENT), FINISH SHALL BE BY INTERIORS. SEE ARCHITECTURAL DETAILS FOR DEVICE MOUNTING REQUIREMENTS AND COORDINATE WITH COUNTER TOP/MILLWORK MANUFACTURER FOR ANY COUNTERTOP PENETRATION REQUIREMENTS TO SAFELY INSTALL DEVICE IN COUNTER. DEVICES ARE FACTORY-CORDED. PLUG MOCKETT DEVICES INTO RECEPTACLE BELOW COUNTER AND FASTEN CORDS TIGHT TO BOTTOM OF COUNTER SUCH THAT NO CORD IS VISIBLE/HANGING.
17	LOCATE RECEPTACLE WITHIN CABINET, FLUSH WITH BACK OF CABINET. COORDINATE EXACT LOCATION WITH ARCHTECT/INTERIORS PRIOR TO ROUGH-IN. GROMMET AT COUNTERTOP WILL ALLOW FOR POWER FOR APPLIANCES ABOVE COUNTER.

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ELECTRICAL POWER PLAN - OFFICE/ELEC

E101

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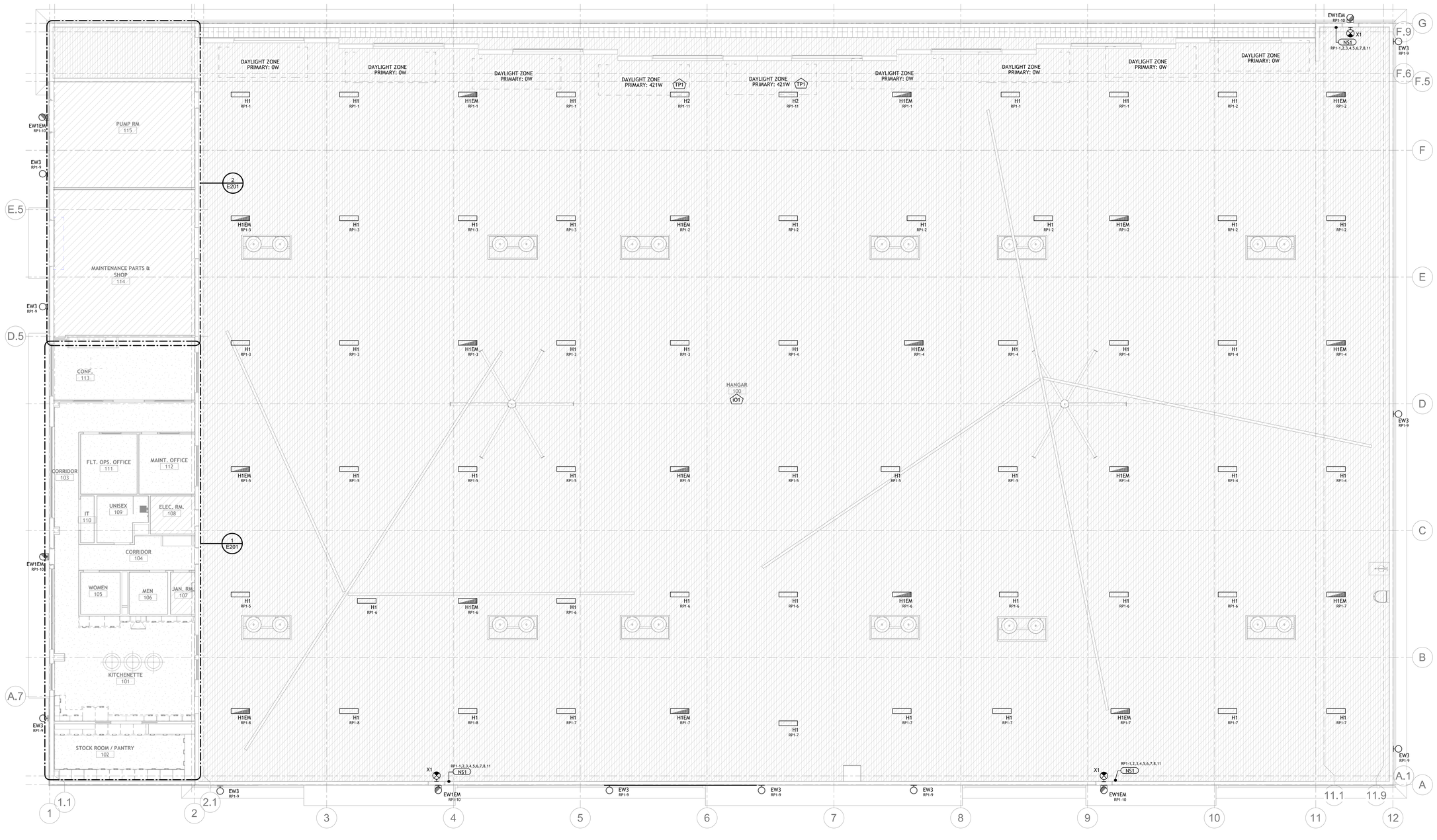
SITE SEQUENCE OF OPERATIONS

THE FOLLOWING CONTROL SEQUENCE OF OPERATIONS ARE UTILIZED FOR EXTERIOR LIGHTING IN THIS PLAN. REFER TO PLAN AND/OR ZONE/RELAY SCHEDULE FOR SPECIFIC ASSOCIATED SEQUENCE.

ET1

LIGHTING GENERAL NOTES

A.	DAYLIGHT ZONE LIGHTING POWER DENSITY IS SHOWN ON PLAN FOR REFERENCE ONLY. PHOTOCELLS FOR DAYLIGHT HARVESTING SHALL ONLY BE PROVIDED IF SHOWN ON PLAN.
B.	ALL FIXTURES WITH HATCHING AND/OR DESIGNATED AS 'EM' SHALL BE PROVIDED WITH INTEGRAL BATTERY BACKUP. BATTERY SHALL ENGAGE ONLY AFTER COMPLETE LOSS OF POWER TO THE CIRCUIT.
C.	CIRCUIT ALL EMERGENCY LIGHTING UNITS AND EXIT SIGNS TO NEAREST LINE VOLTAGE CIRCUITS, AHEAD OF ALL SWITCH LEGS.
D.	ALL EXIT SIGNS AND EMERGENCY BATTERY DRIVERS SHALL BE WIRED AHEAD OF LOCAL SWITCHING AND CIRCUITED TO LOCAL AREA LIGHTING CIRCUIT.



1 | LEVEL 1 - LIGHTING PLAN
E200 | 1/8" = 1'-0"

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ELECTRICAL LIGHTING PLAN

E200

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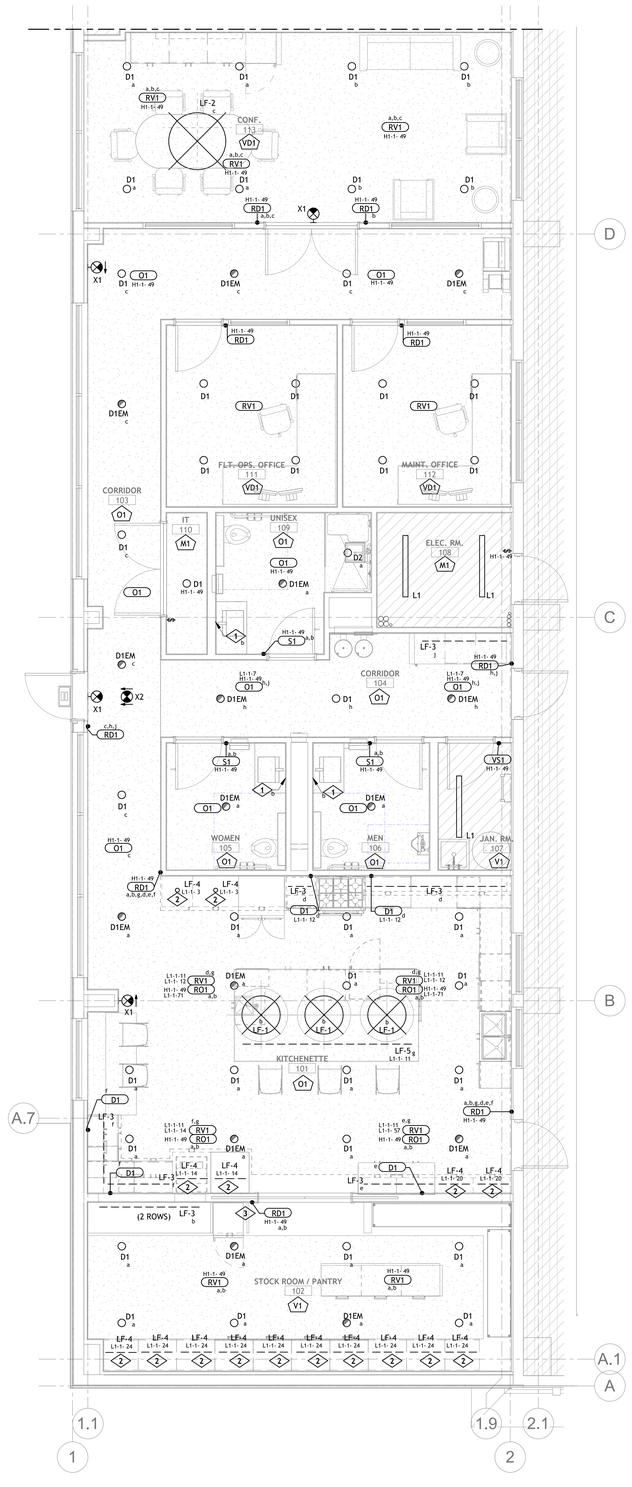
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LIGHTING GENERAL NOTES

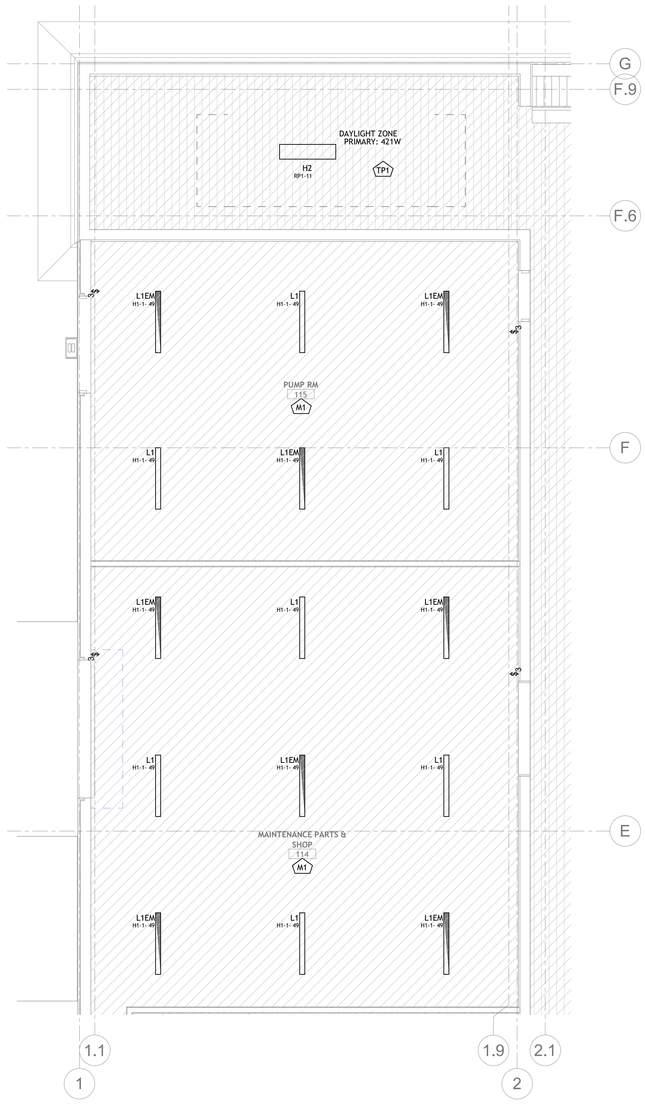
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B.	ALL FIXTURES WITH HATCHING AND/OR DESIGNATED AS 'EM' SHALL BE PROVIDED WITH INTEGRAL BATTERY BACKUP. BATTERY SHALL ENGAGE ONLY AFTER COMPLETE LOSS OF POWER TO THE CIRCUIT.
C.	CIRCUIT ALL EMERGENCY LIGHTING UNITS AND EXIT SIGNS TO NEAREST LINE VOLTAGE CIRCUITS, AHEAD OF ALL SWITCH LEGS.
D.	ALL EXIT SIGNS AND EMERGENCY BATTERY DRIVERS SHALL BE WIRED AHEAD OF LOCAL SWITCHING AND CIRCUITED TO LOCAL AREA LIGHTING CIRCUIT.

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	CONNECT ILLUMINATED MIRROR TO LIGHTING CONTROLS. REFER TO POWER PLANS AND INTERIOR DRAWINGS FOR ADDITIONAL INFORMATION.
2	PROVIDE ELECTRICAL CONNECTION TO INTERNAL CABINET LIGHTING AND INTEGRATED CONTROLS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH INTERIOR DRAWINGS AND CABINET INSTALLER PRIOR TO ROUGH-IN.
3	COORDINATE EXACT LOCATION OF SWITCH WITH ARCHITECT PRIOR TO ROUGH-IN.



1 | LEVEL 1 - LIGHTING ENLARGED PLAN OFFICE
E201 | 1/4" = 1'-0"



2 | LEVEL 1 - LIGHTING ENLARGED PLAN SHOP
E201 | 1/4" = 1'-0"

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AE DESIGN
Integrated Lighting, Technology, and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 6468.00

SEAL
STATE OF NEW YORK
BERNARD E. MILLER
LICENSED PROFESSIONAL ENGINEER
07/01/2024

REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715
DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL LIGHTING PLAN - OFFICE/ELEC

E201

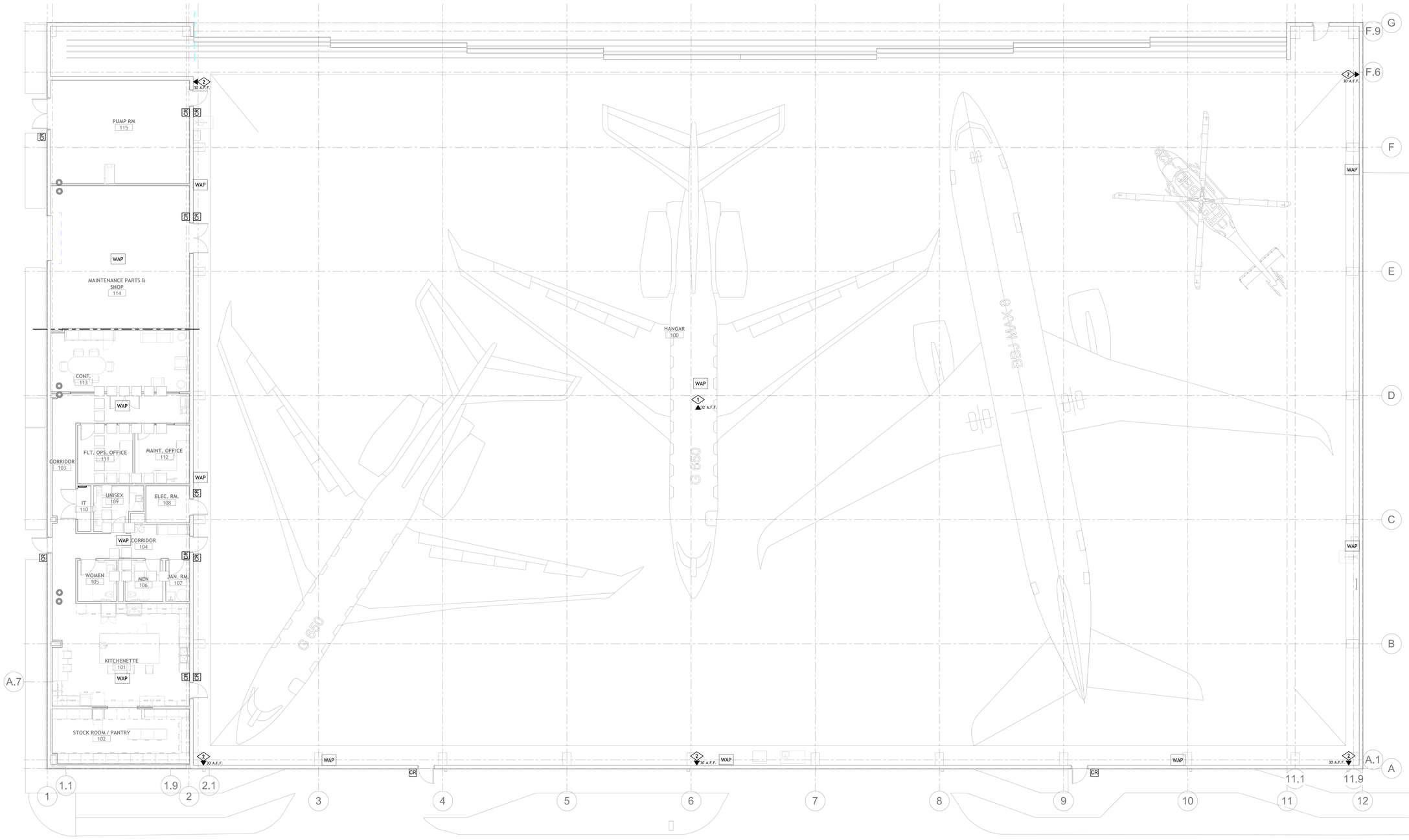
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KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1	PROVIDE INTERIOR CCTV BACK BOX. BACK BOX TO BE PENDANT MOUNTED. COORDINATE EXACT BACK BOX AND CONDUIT ROUTING/LOCATION AND MOUNTING HEIGHT WITH SECURITY CONTRACTOR PRIOR TO INSTALLATION. DEVICE BY SECURITY VENDOR. SEE LOW VOLTAGE RISER DIAGRAM (#2/E601) FOR MORE DETAILS.
2	PROVIDE INTERIOR CCTV BACK BOX. BACK BOX TO BE MOUNTED FLUSH WITH INTERIOR FINISH. WALL-MOUNTING HEIGHT +96" OR AS OTHERWISE INDICATED. COORDINATE EXACT BACK BOX AND CONDUIT ROUTING/LOCATION AND MOUNTING HEIGHT WITH SECURITY CONTRACTOR PRIOR TO INSTALLATION. DEVICE BY SECURITY VENDOR. SEE LOW VOLTAGE RISER DIAGRAM (#2/E601) FOR MORE DETAILS.

SECURITY GENERAL NOTES

A.	ALL EXTERIOR JUNCTION/DEVICE BOXES SHALL BE PROVIDED WITH WEATHERPROOF GASKETING AND SHALL BE RATED FOR WET LOCATIONS.
B.	ALL ADDITIONAL SECURITY SYSTEM/CAMERA EQUIPMENT MANDATED BY THE AIRPORT SHALL BE DESIGNED AND ENGINEERED BY THE AIRPORT AND SHALL BE COORDINATED WITH SIGNATURE FLIGHT SUPPORT.
C.	ALL LOCATIONS AND QUANTITIES OF POWER AND COMMUNICATION BACK BOXES/DEVICES SHALL BE COORDINATED/VERIFIED WITH ARCHITECT AND SIGNATURE FLIGHT SUPPORT TEAM.
D.	ALL CCTV AND LOW-VOLTAGE WIRING SHALL BE RUN IN CONDUIT.
E.	CCTV CAMERA BACKBOXES SHALL BE FLUSH-MOUNTED IN CEILING UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECT AND SIGNATURE FLIGHT SUPPORT PRIOR TO ROUGH-IN. CCTV CAMERAS AND SIGNAL WIRING BY OTHERS.
F.	ALL LOW-VOLTAGE EQUIPMENT AND CABLING SHALL BE PROVIDED BY ALTERNATE OWNER VENDOR. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOW-VOLTAGE SYSTEMS INFRASTRUCTURE AND LOW-VOLTAGE CONDUIT PULL STRINGS.
G.	SIGNATURE IT DEPARTMENT WILL NEED TO BE CONTACTED FOR APPROPRIATE LABELING SCHEME FOR ALL OSP CABLING WHICH WILL NEED TO BE LABELED AT ALL TERMINATION POINTS, J-BOXES, ENCLOSURES, AND MANHOLES THAT THE CABLE PASSES THROUGH.



1 | LEVEL 1 - SECURITY PLAN
E300 | 1/8" = 1'-0"

NORTH

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

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ELECTRICAL SECURITY PLAN

E300

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Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/6468.00 - Signature SWF Terminal and Hangar - Electrical Central.rvt

FAULT CURRENT CALCULATION SCHEDULE

POINT	LOCATION DESCRIPTION	LENGTH (L) (ft)	VOLTAGE (EL-L)	VOLTAGE (EL-N)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	Isc AT EQUIP (Sph) OR (L-L)	FUSE LET THRU (LT)	POINT
F0	UTILITY XFMR												--	56,500	--	F0
F1	MDS-H1	215	480	277	3	350	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	22736	2	56,500	28,769	----	F1
F2	GDS-1	5	480	277	3	350	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	19703	2	28,769	28,395	----	F2
F3	BG-H1	5	480	277	3	350	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	19703	2	28,395	28,030	----	F3
F4	DS-EH1	5	480	277	3	1	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	7292	1	28,030	26,212	----	F4
F5	EH-1	65	480	277	3	1	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	7493	1	26,212	14,399	----	F5
F6	DS-H1	5	480	277	3	350	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	19703	2	28,030	27,675	----	F6
F7	H1-1	65	480	277	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	27,675	22,444	----	F7
F8	T1 PRIMARY	5	480	277	3	2X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	10755	1	22,444	21,629	----	F8
F9	T2 SECONDARY			----							----			7,338	----	F9
F10	L1-1	5	208	120	3	3X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	12843	2	7,338	7,252	----	F10
F11	IT-1	5	208	120	3	1	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	7292	1	7,252	6,963	----	F11
F12	FIRE CT	225	480	277	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	56,500	21,342	----	F12
F13	FIRE PUMP CONTROL PANEL	145	480	277	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	21,342	15,234	----	F13
F14	FIRE CT	230	480	277	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	56,500	21,051	----	F14
F15	FIRE PUMP CONTROL PANEL	145	480	277	3	3X	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	13923	2	21,051	15,085	----	F15

NOTES:
1. ALL CALCULATIONS WERE DONE USING BUSSMAN "POINT-TO-POINT" METHOD.
2. REFER TO PLANS FOR ASSUMED UTILITY TRANSFORMER SIZE UTILIZED FOR CALCULATIONS.
3. TRANSFORMER IMPEDANCES USED IN THE CALCULATIONS WERE TAKEN FROM EATONS PUBLISHED IMPEDANCES FOR DOE 2016 DRY-TYPE TRANSFORMERS.
4. CONDUCTOR LENGTHS INDICATED IN THIS SCHEDULE ARE FOR THE PURPOSES OF FAULT CURRENT CALCULATIONS ONLY. THESE LENGTHS ASSUME WORST CASE SHORTEST DISTANCE CONDITIONS AND SHOULD NOT BE UTILIZED BY THE ELECTRICAL CONTRACTOR FOR BIDDING PURPOSES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ESTIMATING AND MEASURING ACTUAL FIELD CONDITION LENGTHS AS PART OF THE BID PROCESS.
5. PRIOR TO PANELBOARD SHOP DRAWING SUBMITTALS, CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO VERIFY AVAILABLE FAULT AT TRANSFORMER IS NO HIGHER THAN CALCULATED AND DISTANCES ARE LESS THAN SHOWN.

FEEDER SCHEDULE

KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS	KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS
SERVICE ENTRANCE FEEDERS		SDS XFMR FEEDERS (NOTE 1)	
400N	2[4#3/0, 2"C]	30S	4#10, 1#8G, 3/4"C
600N	2[4#350, 3"C]	50S	4#6, 1#8G, 1-1/4"C
800N	2[4#500, 3-1/2"C]	100S	4#1, 1#6G, 1-1/2"C
1000N	3[4#400, 3-1/2"C]	150S	4#1/0, 1#6G, 2"C
1200N	4[4#350, 3"C]	250S	4#250, 1#2G, 3"C
1600N	5[4#400, 3-1/2"C]	400S	2[4#3/0, 1#2G, 2"C]
2000N	6[4#400, 3-1/2"C]	500S	2[4#250, 1#1/0G, 3"C]
2500N	7[4#500, 3-1/2"C]	800S	2[4#500, 1#2/0G, 3-1/2"C]
3000N	8[4#500, 3-1/2"C]	1000S	3[4#400, 1#4/0G, 3-1/2"C]
3500N	10[4#500, 3-1/2"C]	1600S	5[4#400, 1#350G, 3-1/2"C]
4000N	11[4#500, 3-1/2"C]	2500S	7[4#500, 1#500G, 3-1/2"C]
EQUIPMENT FEEDERS			
20NG	4#12, #12G, 3/4"C	20G	3#12, #12G, 3/4"C
30NG	4#10, 1#10G, 3/4"C	30G	3#10, 1#10G, 3/4"C
40NG	4#8, 1#10G, 1"C	40G	3#8, 1#10G, 1"C
50NG	4#6, 1#10G, 1-1/4"C	50G	3#6, 1#10G, 1"C
60NG	4#4, 1#10G, 1-1/4"C	60G	3#4, 1#10G, 1"C
70NG	4#4, 1#8G, 1-1/4"C	70G	3#4, 1#8G, 1-1/4"C
80NG	4#3, 1#8G, 1-1/4"C	80G	3#3, 1#8G, 1-1/4"C
90NG	4#2, 1#8G, 1-1/2"C	90G	3#2, 1#8G, 1-1/4"C
100NG	4#1, 1#8G, 1-1/2"C	100G	3#1, 1#8G, 1-1/2"C
110NG	4#1, 1#6G, 2"C	110G	3#1, 1#6G, 1-1/2"C
125NG	4#1/0, 1#6G, 2"C	125G	3#1/0, 1#6G, 1-1/2"C
150NG	4#1/0, 1#6G, 2"C	150G	3#1/0, 1#6G, 1-1/2"C
175NG	4#2/0, 1#6G, 2"C	175G	3#2/0, 1#6G, 2"C
200NG	4#3/0, 1#6G, 2-1/2"C	200G	3#3/0, 1#6G, 2"C
225NG	4#4/0, 1#4G, 2-1/2"C	225G	3#4/0, 1#4G, 2"C
250NG	4#250, 1#4G, 3"C	250G	3#250, 1#4G, 2-1/2"C
300NG	4#350, 1#4G, 3"C	300G	3#350, 1#4G, 2-1/2"C
350NG	4#500, 1#3G, 3-1/2"C	350G	3#500, 1#3G, 3"C
400NG	2[4#3/0, 1#3G, 2-1/2"C]	400G	2[3#3/0, 1#3G, 2"C]
450NG	2[4#4/0, 1#2G, 2-1/2"C]	450G	2[3#4/0, 1#2G, 2"C]
500NG	2[4#250, 1#2G, 3"C]	500G	2[3#250, 1#2G, 2-1/2"C]
600NG	2[4#350, 1#1G, 3"C]	600G	2[3#350, 1#1G, 2-1/2"C]
700NG	2[4#500, 1#1/0G, 3-1/2"C]	700G	2[3#500, 1#1/0G, 3"C]
800NG	2[4#500, 1#1/0G, 3-1/2"C]	800G	2[3#500, 1#1/0G, 3"C]
1000NG	3[4#400, 1#2/0G, 3-1/2"C]	1000G	3[3#400, 1#2/0G, 3"C]
1200NG	4[4#350, 1#3/0G, 3"C]	1200G	4[3#350, 1#3/0G, 3"C]
1600NG	5[4#400, 1#4/0G, 3-1/2"C]	1600G	5[3#400, 1#4/0G, 3"C]
2000NG	6[4#400, 1#250G, 3-1/2"C]	2000G	6[3#400, 1#250G, 3"C]
GROUNDING CONDUCTORS		ABBREVIATIONS	
G8	1#8, 3/4" C	MECH	SEE MECH SCHEDULE
G6	1#6, 3/4" C	XFMR	SEE XFMR SCHEDULE
G4	1#4, 3/4" C		
G2	1#2, 3/4" C		
G10	1-1/0, 3/4" C		
G20	1-2/0, 3/4" C		
G30	1-3/0, 3/4" C		

NOTES:
1. FEEDER FOR SECONDARY OF SEPARATELY DERIVED SYSTEM (SDS). GROUND SIZE PER NEC 250.66.
2. ALL CONDUCTORS ARE SINGLE CONDUCTOR COPPER THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON NEC TABLE 310.16.
3. ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C1.

TRANSFORMER SCHEDULE - COPPER WINDINGS (2016 DOE EFFICIENCY STANDARDS)

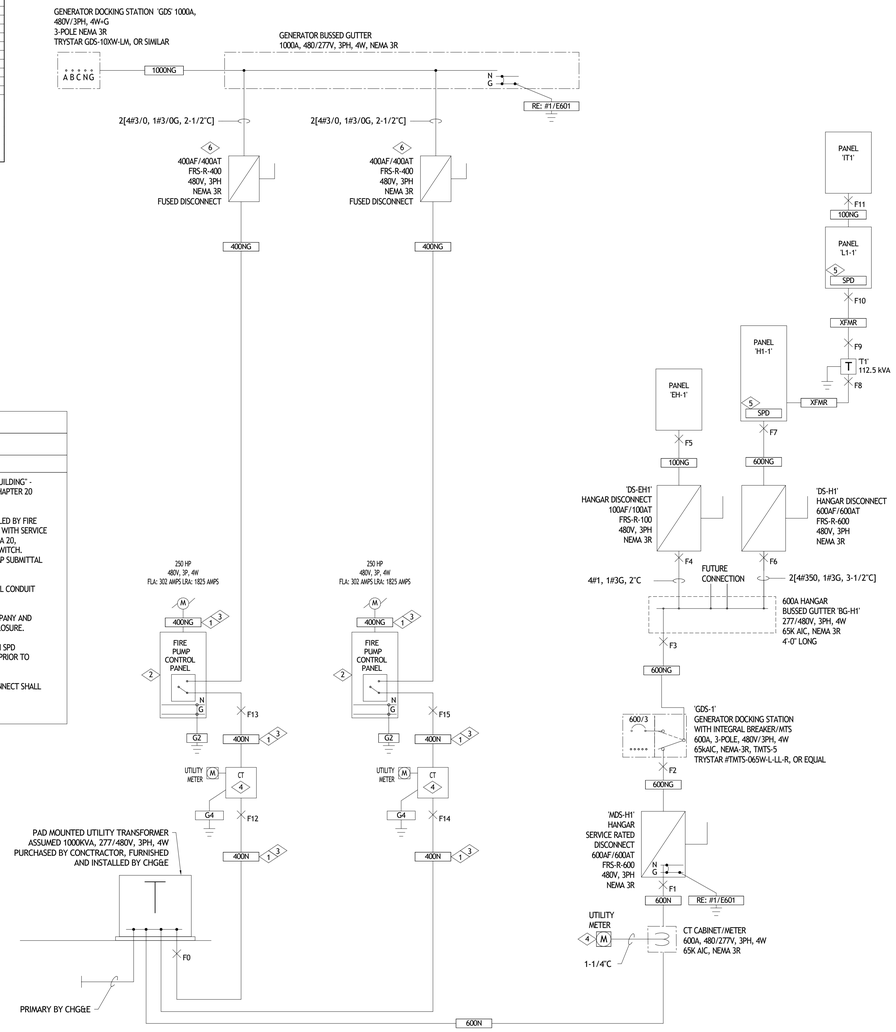
KVA RATING	PRIMARY FLA	SECONDARY FLA	PRIMARY PROTECTION	PRIMARY FEEDER	SECONDARY PROTECTION	SECONDARY FEEDER	GROUNDING ELECTRODE CONDUCTOR (GEC)	TRANSFORMER IMPEDANCE	APPROX. DIMENSIONS HIGH	WIDE	DEEP	APPROX. WEIGHT	SPECIFIC NOTES
3	3.6	8.3	15A/3P	3#12, 1#12G, 3/4"C	15A/3P	4#12, 1#8G, 3/4"C	1#8, 3/4"C	4.57%	15	15	11	140LBS	1,2
6	7.2	16.7	15A/3P	3#12, 1#12G, 3/4"C	20A/3P	4#12, 1#8G, 3/4"C	1#8, 3/4"C	4.57%	15	15	11	145LBS	1,2
9	10.8	25.0	15A/3P	3#12, 1#12G, 3/4"C	30A/3P	4#10, 1#8G, 3/4"C	1#8, 3/4"C	4.57%	20	20	15	245LBS	1,2
15	18.1	41.7	25A/3P	3#10, 1#10G, 3/4"C	50A/3P	4#6, 1#8G, 1-1/4"C	1#8, 3/4"C	2.88%	26	21.88	17.75	250LBS	
30	36.1	83.3	45A/3P	3#6, 1#10G, 1"C	100A/3P	4#1, 1#6G, 1-1/2"C	1#6, 3/4"C	2.56%	36.88	24.88	21.13	415LBS	
45	54.2	125.0	70A/3P	3#4, 1#8G, 1-1/4"C	150A/3P	4#1/0, 1#6G, 2"C	1#6, 3/4"C	3.44%	36.88	24.88	21.13	478LBS	
75	90.3	208.3	125A/3P	3#1, 1#6G, 1-1/2"C	250A/3P	4#250MCM, 1#2G, 3"C	1#2G, 3/4"C	3.21%	43	30.54	24	676LBS	
112.5	135.4	312.5	175A/3P	3#2/0, 1#6G, 2"C	400A/3P	2[4#3/0, 1#2G, 2-1/2"C]	1#2G, 3/4"C	3.63%	51	34.5	31.5	1263LBS	
150	180.5	416.7	225A/3P	3#4/0, 1#4G, 2"C	500A/3P	2[4#250MCM, 1#1/0G, 3"C]	1#1/0G, 3/4"C	3.39%	51	34.5	31.5	1410LBS	
225	270.8	625.0	350A/3P	3#500MCM, 1#3G, 3"C	800A/3P	2[4#500MCM, 1#2/0G, 3-1/2"C]	1#2/0G, 3/4"C	4.34%	60	38	33.5	1745LBS	
300	361.0	833.3	450A/3P	2[3#4/0, 1#2G, 2"C]	1000A/3P	3[4#400MCM, 1#3/0G, 3-1/2"C]	1#3/0G, 3/4"	3.48%	66.18	42.18	33.5	2354LBS	
500	601.7	1388.9	750A/3P	2[3#500MCM, 1#1/0G, 3"C]	1600A/3P	5[4#400MCM, 1#3/0G, 3-1/2"C]	1#3/0G, 3/4"	4.57%	60	56	36	3450LBS	1,2
750	902.5	2083.3	1200A/3P	3[3#350MCM, 1#3/0G, 3"C]	2500A/3P	7[4#500MCM, 1#3/0G, 3-1/2"C]	1#3/0G, 3/4"	4.57%	74	56	41	3950LBS	1,2

GENERAL NOTES:
A. ALL TRANSFORMERS ARE 480V, 3PHASE, DELTA PRIMARY AND 208Y/120V, 3PHASE SECONDARY.
B. ALL CONDUCTORS ARE THWN, COPPER, SEE PLANS FOR INCREASED CONDUCTOR SIZE DUE TO VOLTAGE DROP.
C. BONDING AND GROUNDING CONDUCTORS ARE TO BE INSTALLED PER NEC 250.30 - GROUNDING SEPERATELY DERIVED ALTERNATING CURRENT SYSTEMS.
D. WEIGHT SHOWN FOR REFERENCE ONLY, AND MAY VARY BY MANUFACTURER.

SPECIFIC NOTES:
A. TRANSFORMER IMPEDANCE IS THE ASSUMED VALUE AND IS USED FOR FAULT-CURRENT CALCULATIONS. IF SUBMITTED TRANSFORMER IS OF A DIFFERENT VALUE, REVISED CALCULATIONS MAY BE REQUIRED.
B. EC TO FIELD VERIFY WEIGHTS OF NON DOE 2016 AS THEY MAY VARY BY MANUFACTURER.

TRANSFORMER NOTES

A.	ALL TRANSFORMERS ARE 480V, 3PH, DELTA PRIMARY AND 208Y/120V, 3 PHASE SECONDARY.
B.	ALL CONDUCTORS ARE THWN, COPPER SEE PLANS FOR INCREASED CONDUCTOR SIZE DUE TO VOLTAGE DROP.
C.	BONDING AND GROUNDING CONDUCTORS ARE TO BE INSTALLED PER NEC 250.30 GROUNDING SEPARATELY DERIVED ALTERNATING CURRENT SYSTEMS.



KEY VALUE	
1	SERVICE CONDUCTORS SHALL RUN 'OUTSIDE OF BUILDING' - UNDER SLAB OR CONCRETE ENCASED PER NFPA CHAPTER 20 6-3.1.1 AND NEC 695.6(A) AND (B).
2	FIRE PUMP CONTROLLER (FURNISHED AND INSTALLED BY FIRE PROTECTION CONTRACTOR) SHALL BE FURNISHED WITH SERVICE RATED MAIN DISCONNECT SWITCH, SIZED PER NFPA 20, CHAPTER 10 AS WELL AS AUTOMATIC TRANSFER SWITCH. VERIFY FIRE PUMP REQUIREMENTS WITH FIRE PUMP SUBWITTAL PRIOR TO ROUGH-IN.
3	CONDUCTORS SHALL BE INSTALLED IN RIGID METAL CONDUIT SEE NOTE 1 FOR ROUTING REQUIREMENTS.
4	EC SHALL COORDINATE WITH LOCAL UTILITY COMPANY AND PROVIDE APPROVED CT CABINET AND METER ENCLOSURE.
5	COORDINATE FEEDER BREAKER SERVING SPD WITH SPD MANUFACTURER'S RECOMMENDATION/INSTALLER PRIOR TO ROUGH-IN.
6	IN ACCORDANCE WITH NEC 695.4(B)(3)(b), DISCONNECT SHALL BE LOCKABLE IN THE CLOSED POSITION.

1 | ELECTRICAL ONE-LINE DIAGRAM
E600 | NO SCALE

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

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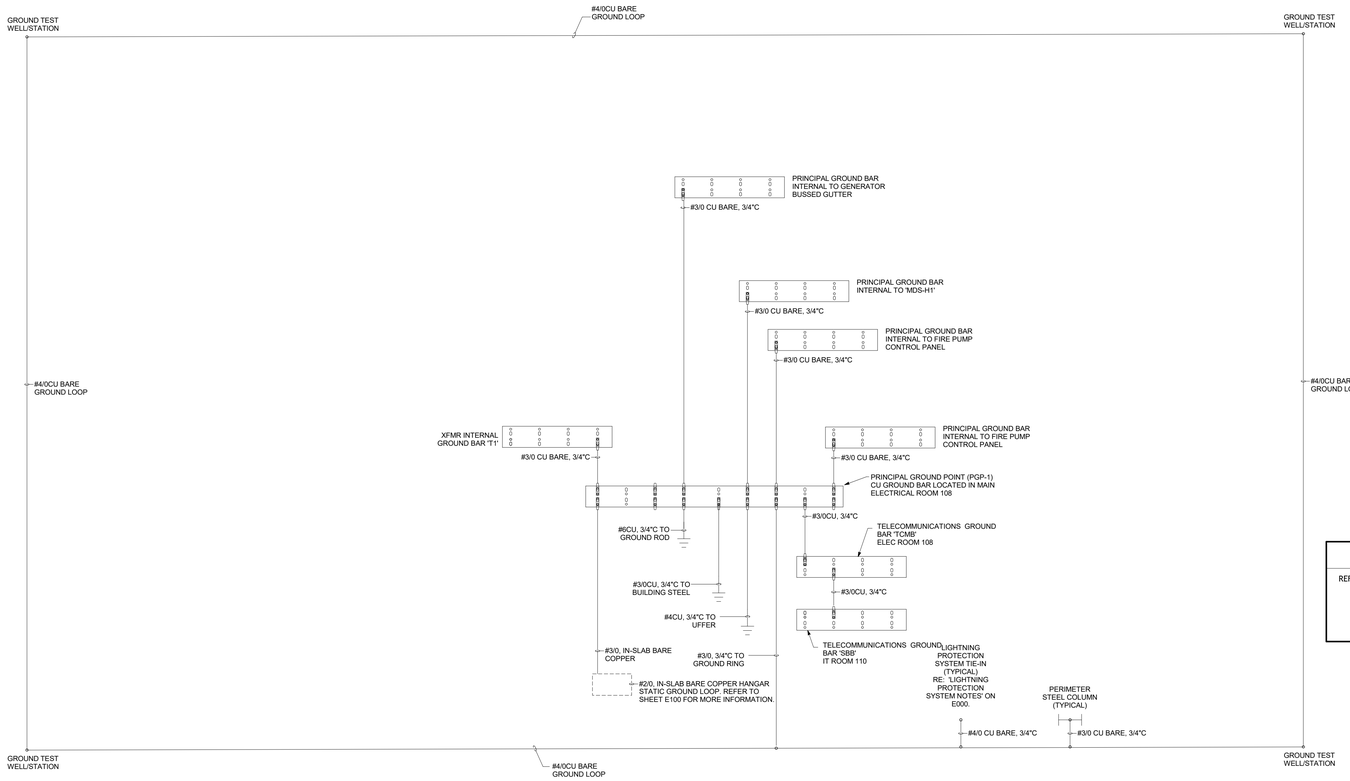
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ELECTRICAL ONE LINE DIAGRAM

E600

100% PERMIT SET



1 | ELEC DISTRIBUTION GROUNDING ONE-LINE DIAGRAM & NOTES

E601 | NTS

GROUNDING ELECTRODE SYSTEMS NOTES

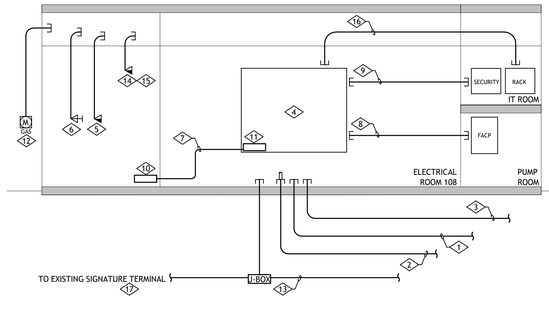
1. METAL UNDERGROUND WATER PIPE - MAKE CONNECTION TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTRACT WITH THE EARTH FOR 10' OR AND ELECTRICALLY CONTINUOUS TO THE POINTS OF CONNECTION TO THE GROUNDING ELECTRODE CONDUCTOR AND BONDING CONDUCTORS. CONNECTION POINT TO BE AT A MAXIMUM OF 5' OF THE POINT OF ENTRANCE ON THE INTERIOR OF THE BUILDING.
2. BUILDING STEEL - THE METAL FRAME OF THE BUILDING OR STRUCTURE, WHERE ANY OF THE FOLLOWING METHODS ARE USED TO MAKE AN EARTH CONNECTION:
   A. 10' OR MORE OF A SINGLE STRUCTURAL METAL MEMBER IN DIRECT CONTACT WITH THE EARTH OR ENCASED IN CONCRETE THAT IS IN DIRECT CONTACT WITH THE EARTH.
   B. THE STRUCTURAL METAL FRAME IS BONDED TO ONE OR MORE OF THE GROUNDING ELECTRODES INDICATED ON THESE PLANS.
   C. THE STRUCTURAL METAL FRAME IS BONDED TO A DRIVEN GROUND ROD, WHICH HAS BEEN TESTED TO PROVIDE A RESISTANCE TO GROUND OF 25 OHMS OR LESS.
3. UFER GROUND (CONCRETE-ENCASED ELECTRODE) - AN ELECTRODE ENCASED BY AT LEAST 2" OF CONCRETE, LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST 20' OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2" IN DIAMETER, OR CONSISTING OF AT LEAST 20' OF BARE COPPER CONDUCTOR NOT SMALLER THAN NO. 4 AWG. REINFORCING BARS SHALL BE PERMITTED TO BE BONDED TOGETHER BY THE USUAL STEEL TIE WIRES OR OTHER EFFECTIVE MEANS.
4. GROUND ROD - ROD IS TO BE 8FT IN LENGTH AND SHALL BE MADE OF IRON OR STEEL AT LEAST 5/8" DIAMETER. INSTALLATION METHODS FOR GROUND ROD SHALL BE IN COMPLIANCE WITH THE NEC SUCH THAT AT LEAST 8' OF LENGTH IS IN CONTACT WITH THE EARTH.
5. GROUND RING - GROUND RING ENCIRCLE THE ENTIRE STRUCTURE AND SHALL BE INSTALLED NOT LESS THAN 36 INCHES BELOW THE FINISH GRADE.
6. REFER TO E100 FOR ADDITIONAL INFORMATION ON HANGAR STATIC GROUND LOOP REQUIREMENTS.

LIGHTNING PROTECTION SYSTEM NOTES

REFER TO COVERSHEET AND ELECTRICAL SPECIFICATIONS FOR LIGHTNING PROTECTION SYSTEM INFORMATION.

GENERAL NOTES

1. PROVIDE EMT FOR ALL CABLING ROUTED THROUGH AREAS WITH EXPOSED STRUCTURAL CEILINGS AND THROUGH INACCESSIBLE CEILINGS, COORDINATE CONDUIT SIZE REQUIREMENTS WITH CABLE INSTALLER.
2. ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS, PAINT CONDUIT TO MATCH ADJACENT FINISHES.
3. PROVIDE PULLCORD FOR ALL CONDUIT INSTALLED FOR CABLE.
4. PROVIDE PULLBOXES AS REQUIRED BY ABLE INSTALLER FOR RUNS EXCEEDING MAXIMUM PULL DISTANCE, AS IDENTIFIED BY CABLE INSTALLER.
5. FOR ALL FREELY RUN ARMORED METALLIC FIBER OPTIC CABLING, CONTRACTOR SHALL GROUND CABLING ARMOR TO THE NEAREST PBB OR SBB.
6. PROVIDE SLEEVES AND CONDUIT BETWEEN FLOORS FOR ROUTING OF CABLE. COORDINATE CONDUIT SIZE WITH CABLE INSTALLER. COORDINATE LOCATION OF RACEWAY WITH ARCHITECT AND CABLE INSTALLER.
7. ALL CONDUIT AND CABLING IN CRAWL SPACE IS TO BE SUPPORTED BY AND TIGHT TO STRUCTURE ABOVE WHERE CONDUIT TRANSITIONS FROM BEING SUPPORTED BY STRUCTURE INTO SOIL. ADD LOOP AND/OR FLEXIBLE CONDUIT FOR ANTICIPATED SOIL MOVEMENT.
8. NOTE THAT ALL UNDERGROUND CONDUIT BENDS ARE TO BE GALVANIZED RIGID CONDUIT. UNDERGROUND CONDUIT EXTENDING ABOVE SLAB IS ALSO TO BE GALVANIZED RIGID CONDUIT. REFER TO SPECIFICATIONS FOR FULL CONDUIT REQUIREMENTS.



2 | LOW VOLTAGE RISER DIAGRAM

E601 | NTS

KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
1.	NEW (1) 4" PVC CONDUIT ROUTED 30" BELOW GRADE FOR CONNECTION TO SITE TELEPHONE SERVICE POINT. ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT SIZING, ROUTING, AND QUANTITY WITH SERVICE PROVIDER PRIOR TO INSTALLATION.
2.	NEW (1) 2" PVC CONDUIT WITH INNER DUCT ROUTED 30" BELOW GRADE FOR CONNECTION TO SITE FIBER OPTIC SERVICE POINT. ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT SIZING, ROUTING, AND QUANTITY WITH SERVICE PROVIDER PRIOR TO INSTALLATION.
3.	NEW (1) 4" PVC CONDUIT ROUTED 30" BELOW GRADE FOR CONNECTION TO SITE CATV SERVICE POINT. ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT SIZING, ROUTING, AND QUANTITY WITH SERVICE PROVIDER PRIOR TO INSTALLATION.
4.	MAIN TELEPHONE TERMINAL BOARD 'MTTB' SHALL CONSIST OF 3/4", FIRE-RETARDANT TREATED PLYWOOD INSTALLED FLOOR TO CEILING IN ROOM, FOR LENGTHS AS INDICATED ON THE PLAN DRAWINGS. ALL RECEPTACLE DEVICES SHOWN IN BACKBOARD ON PLANS SHALL BE FLUSH MOUNT, UON.
5.	NEW TYPICAL WORK AREA COMMUNICATIONS OUTLET FOR STRUCTURED CABLE TERMINATIONS. PROVIDE 2" DEEP, 2-GANG BOX WITH 1-GANG PLASTER RING. PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING AND BUSH END. RECEPTACLE FACEPLATE, JACK, CABLING, AND TERMINATIONS BY OTHERS.
6.	NEW TYPICAL WORK AREA OUTLET FOR CABLE TV TERMINATION. PROVIDE 2" DEEP, 2-GANG BOX WITH 1-GANG PLASTER RING. PROVIDE 1-1/4" CONDUIT TO ACCESSIBLE CEILING AND BUSH END. CATV RECEPTACLE FACEPLATE, JACK, CABLING, AND TERMINATIONS BY OTHERS.
7.	PROVIDE #3/0AWG GREEN COPPER GROUNDING CONDUCTOR (TYPICAL) BETWEEN GROUNDING BUSSES AS INDICATED.
8.	ROUTE (1) 1/2" CONDUIT FOR FIRE ALARM CONTROL PANEL COMMUNICATIONS CABLING RACEWAY.
9.	ROUTE (1) 1/2" CONDUIT FOR SECURITY ALARM CONTROL PANEL COMMUNICATIONS CABLING RACEWAY.
10.	PRINCIPAL GROUND POINT NEAR ELECTRICAL SERVICE EQUIPMENT.
11.	TELECOMMUNICATIONS MAIN GROUNDING BAR 'TCMGB' FUNCTIONING AS INTERSYSTEM BONDING TERMINATION DEVICE, COMPLYING WITH NEC 250.94.
12.	PROVIDE (1) 1" RACEWAY WITH PULL STRING, FROM UTILITY GAS METER COMMUNICATIONS OUTLET TO MTTB, FOR STRUCTURED CABLE TERMINATION. PROVIDE 2" DEEP, 2-GANG BOX WITH 1-GANG PLASTER RING, FOR GAS TRANSPORT SERVICE METERING CONNECTION TO UTILITY PROVIDERS TRANSLATION SYSTEM. PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING AND BUSH END. RECEPTACLE FACEPLATE, JACK, CABLING, AND TERMINATIONS BY OTHERS.
13.	EXISTING CCTV CONDUIT FROM GA TERMINAL TO EXISTING SIGNATURE TERMINAL IS ROUTED UNDERGROUND. TRANSITION OCCURS NEAR SOUTH-EAST CORNER OF NEW HANGAR (NORTHEAST CORNER IN THIS SITE PLAN SET). PROVIDE NEW (2) 4" PVC CONDUIT FOR CCTV CABLING FROM TRANSITION POINT OUT TO FIRST STREET AND FEED NEW HANGAR IT ROOM VIA FIRST STREET. ALSO, RECONNECT/EXTEND TO EXISTING SIGNATURE TERMINAL AS REQUIRED. REFER TO SITE PLAN FOR ADDITIONAL INFORMATION.
14.	COORDINATE EXACT CAMERA BACKBOX AND CONDUIT ROUTING/LOCATION AND MOUNTING HEIGHT WITH SECURITY CONTRACTOR PRIOR TO ROUGH-IN. CAMERA DEVICES BY OTHERS.
15.	NEW TYPICAL CAMERA OUTLET AS INDICATED ON SECURITY PLANS FOR STRUCTURED CABLE TERMINATIONS. PROVIDE 2" DEEP, 2-GANG BOX WITH 1-GANG PLASTER RING. RECEPTACLES FACEPLATE, JACK, CABLING, AND TERMINATIONS BY OTHERS. PROVIDE PULLSTRING AND WEATHERPROOF FACEPLATE AS APPLICABLE.
16.	PROVIDE (2)4"C AND 2"C FROM ELECTRICAL ROOM TO IT ROOM FOR LOW VOLTAGE REQUIREMENTS. COORDINATE WITH OWNER'S I.T. INSTALLER FOR EXACT REQUIREMENTS.
17.	COORDINATE LOCATION OF TIE-IN WITH EXISTING UNDERGROUND ROUTING OF CCTV CABLING FROM GA TERMINAL TO EXISTING TERMINAL WITH SIGNATURE FLIGHT SUPPORT AND SWF AIRPORT PRIOR TO DEMOLITION OR WORK COMMENCEMENT.

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Project #: 6468.00

SEAL



REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL GROUNDING AND LOW VOLTAGE RISER

E601

100% PERMIT SET

7/1/2024 10:55:57 AM
Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/6468.00 - Signature SWF Terminal and Hangar - Electrical Central.rvt

KITCHENETTE EQUIPMENT NOTES

A	FOR HOODS PROVIDED WITH FIRE SUPPRESSION SYSTEM, ALL ELECTRICAL EQUIPMENT UNDER HOOD SHALL BE CONNECTED TO A SHUNT TRIP STYLE CIRCUIT BREAKER. ACTIVATION OF FIRE SUPPRESSION SYSTEM SHALL OPEN SHUNT TRIP CIRCUIT BREAKERS OF EQUIPMENT LOCATED UNDER HOOD. PROVIDE 120V POWER TO ALL SOLENOID VALVES. TIE SUPPRESSION SYSTEM INTO FIRE ALARM CONTROL PANEL AS REQUIRED. E.C. TO PROVIDE CONTROL WIRING FOR GAS SHUTDOWN SOLENOID FOR GAS OPERATED EQUIPMENT LOCATED BELOW HOOD.
B	ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL LAMPS AND SWITCHING FOR FIXTURES INTEGRAL TO KITCHENETTE EQUIPMENT.
C	PRIOR TO ROUGH-IN, REFER TO KITCHENETTE EQUIPMENT SHOP DRAWINGS FOR FINAL CONNECTION REQUIREMENTS INCLUDING ROUGH-IN HEIGHTS AND LOCATIONS, SPECIFIC POWER REQUIREMENTS, AND RECEPTACLE NEMA CONFIGURATIONS.
D	PROVIDE ALL REQUIRED J-BOXES, OUTLETS, AND DISCONNECTS REQUIRED FOR A COMPLETE INSTALLATION.
E	ELECTRICAL CONTRACTOR SHALL PROVIDE CONTROL WIRING FOR EXHAUST FAN AND MAKE-UP AIR FAN INTERLOCK AS REQUIRED BY THE MECHANICAL/KITCHEN CONTRACTOR.
F	ELECTRICAL CONTRACTOR SHALL PROVIDE FIXTURES AND CONTROLS WITHIN MILLWORK, AS DESIGNATED BY INTERIORS AND COORDINATED WITH THE MILLWORK CONTRACTOR. NO CONDUIT, WIRING, OR POWER SUPPLY/DRIVER SHALL BE EXPOSED. COORDINATE WITH ARCHITECT FOR LOCATIONS OF POWER SUPPLY, DRIVERS, AND/OR CONTROLS PRIOR TO ROUGH-IN.
G	DEVICE FACEPLATES ARE TO BE STAINLESS STEEL.
H	ALL 15 OR 20 AMP RECEPTACLES WITHIN THE KITCHENETTE SHALL BE GFCI TYPE OR PROVIDED WITH GFCI BREAKER WHEN NOT ACCESSIBLE AS DEFINED BY NEC.
I	WHERE RECEPTACLES ARE SHOWN TO BE WITHIN A CABINET, THE RECEPTACLE SHALL BE MOUNTED FLUSH WITH CABINET SURFACE WITH JUNCTION BOX EXTENSION SUPPLIED AS NECESSARY.

MECHANICAL EQUIPMENT SCHEDULE

KEY		EQUIPMENT DESCRIPTION	LOAD	ELECTRICAL	MOCP/MFS	FEEDER	DISCONNECT	PANEL	CIRCUIT	NOTES
CP	1	CIRCULATION PUMP	1/25 HP	120 V/1-30 VA	15A	2#12, 1#12G, 3/4"C	30A/1P	L1-1	58	
CU	1	CONDENSING UNIT	12 MCA	208 V/1-2246 VA	20A	2#12, 1#12G, 3/4"C	30A/2P	IT-1	7,9	1
DFC	1	DUCTLESS FAN COIL UNIT	27 W	208 V/1-27 VA	15A	2#12, 1#12G, 3/4"C	PROVIDED WITH UNIT	IT-1	7,9	1
EF	1	EXHAUST FAN	1 HP	120 V/1-1920 VA	30A	2#10, 1#10G, 3/4"C	30A/1P	L1-1	55	
EF	2	EXHAUST FAN	1 HP	120 V/1-1920 VA	30A	2#10, 1#10G, 3/4"C	30A/1P	L1-1	59	
EF	3	EXHAUST FAN	1/2 HP	120 V/1-1176 VA	20A	2#12, 1#12G, 3/4"C	30A/1P	L1-1	52	
ERV	1	ENERGY RECOVERY VENTILATOR UNIT	21.9 MCA	208 V/1-3644 VA	25A	2#10, 1#10G, 3/4"C	30A/2P	L1-1	48,50	2
EUH	1	ELECTRIC WALL HEATER	9.6 FLA	208 V/1-5000 VA	15A	2#12, 1#12G, 3/4"C	PROVIDED WITH UNIT	L1-1	74,76	
FAN	1	CEILING FAN	2 HP	480 V/3-2827 VA	15A	3#12, 1#12G, 3/4"C	30A/3P	H1-1	32,34,36	
FAN	2	CEILING FAN	2 HP	480 V/3-2827 VA	15A	3#12, 1#12G, 3/4"C	30A/3P	H1-1	32,34,36	
GSH	1	GAS FIRED SPACE HEATER	11.1 FLA	480 V/3-9228 VA	20A	3#12, 1#12G, 3/4"C	30A/3P	H1-1	37,39,41	
JP	1	JOCKEY PUMP	10 HP	480 V/3-11640 VA	25A	3#10, 1#10G, 3/4"C	30A/3P	H1-1	31,33,35	
JP	2	JOCKEY PUMP	10 HP	480 V/3-11640 VA	25A	3#10, 1#10G, 3/4"C	30A/3P	H1-1	43,45,47	3
KEF	1	KITCHEN EXHAUST FAN	1/2 HP	120 V/1-1176 VA	20A	2#12, 1#12G, 3/4"C	30A/1P	L1-1	54	4
RTU	1	ROOFTOP HVAC UNIT	20.0 MCA	480 V/3-13302 VA	25A	3#10, 1#10G, 3/4"C	30A/3P	H1-1	25,27,29	
RTU	2	ROOFTOP HVAC UNIT	12.0 MCA	480 V/3-7981 VA	15A	3#12, 1#12G, 3/4"C	30A/3P	H1-1	26,28,30	
WH	1	WATER HEATER	5 FLA	120 V/1-600 VA	15A	2#12, 1#12G, 3/4"C	30A/1P	L1-1	58	
WH	2	WATER HEATER	1.48 FLA	120 V/1-178 VA	15A	2#12, 1#12G, 3/4"C	30A/1P	L1-1	60	
WH	3	WATER HEATER	1.5 KW	120 V/1-1500 VA	20A	2#12, 1#12G, 3/4"C	30A/1P	L1-1	89	

MECHANICAL EQUIPMENT GENERAL NOTES

A.	REFER TO MECHANICAL PLANS FOR SPECIFIC EQUIPMENT LOCATIONS AND REQUIREMENTS.
B.	PRIOR TO ROUGH-IN, COORDINATE ALL MECHANICAL EQUIPMENT POWER AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR'S FINAL SHOP DRAWINGS.
C.	PROVIDE ALL 120V CONTROL WIRING, REFER TO SPECIFICATIONS FOR FURTHER CONTROL WIRING CLARIFICATION.
D.	FOR ANY VAV SYSTEM COORDINATE POWER REQUIREMENTS WITH MECHANICAL CONTRACTOR AND PROVIDE 120V CONNECTIONS AT EACH VAV BOX, OR AT CENTRAL CONTROL PANEL LOCATION(S) AS REQUIRED. IF EXACT QUANTITIES AND LOCATIONS FOR CONTROL PANELS ARE NOT KNOWN AT BID TIME, E.C. IS TO INCLUDE ONE 120V CONNECTION AT EACH VAV DEVICE IN THE BASE BID PRICE AND PROVIDE A CREDIT DURING CONSTRUCTION IF LESS CONNECTIONS ARE REQUIRED.
E.	EXTERIOR DISCONNECT SWITCHES ARE TO BE PROVIDED AS NEMA 3R EQUIPMENT UNLESS OTHERWISE NOTED.
F.	PROVIDE WEATHERPROOF 120 VOLT GFCI RECEPTACLES WITHIN 25' OF ALL ROOFTOP HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT. CIRCUIT TO SPARE CIRCUIT ON NEAREST 120V PANELBOARD OR AS INDICATED ON PLANS.
G.	PROVIDE DUCT DETECTION ON ALL RETURN AIR SYSTEMS OF 2,000 CFM OR GREATER, AND FOR ALL SUPPLY AIR SYSTEMS 15,000 CFM OR GREATER, INCLUDING THOSE SYSTEMS SERVING MULTIPLE FLOORS. PROVIDE ADDITIONAL DUCT DETECTORS AND INSTALL REMOTE INDICATOR LIGHTS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
H.	FOR ANY BOILER MECHANICAL SYSTEM, E.C. IS TO PROVIDE AN EMERGENCY PUSHBUTTON OFF AND ANY CONTROL WIRING REQUIRED. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR AND EQUIPMENT PRIOR TO INSTALLATION.
I.	EC TO PROVIDE HAND/OFF/AUTO STARTERS FOR ALL MOTORS WHEN NOT INDICATED AS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR ON THE MECHANICAL PLANS. SIZE OF STARTER TO BE BASED UPON SIZE OF MOTOR HORSEPOWER INDICATED.

MECHANICAL EQUIPMENT SPECIFIC NOTES

1.	CU-1 TO SUPPLY POWER TO INDOOR DFC-1. EC SHALL PROVIDE EXACT WIRE SIZE, TYPE, AND FINAL CONNECTION REQUIREMENTS TO INDOOR UNIT PER MANUFACTURER REQUIREMENTS FOR COMPLETE AND FUNCTIONAL SYSTEM.
2.	UNIT PROVIDED WITH INTEGRAL STEP DOWN TRANSFORMER FOR CONVENIENCE OUTLET (120V).
3.	COORDINATE EXACT ELECTRICAL REQUIREMENTS WITH JOCKEY PUMP SHOP DRAWINGS PRIOR TO ROUGH-IN.
4.	REFER TO KITCHENETTE EQUIPEMENT NOTES FOR ADDITIONAL INFORMATION.

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MARK	DESCRIPTION	DATE

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HANGAR

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SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL SCHEDULES

E700

100% PERMIT SET

PANEL: H1-1

LOCATION: ELEC. RM. 108
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: FULLY RATE TO AT LEAST 25K AIC
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

Notes:

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	L	MUSCO LIGHTING	20	3		1840	3333						3	100	HANGAR EQUIPMENT	E	2
3	--	--	--	--				1840	3333				--	--	--	--	4
5	--	--	--	--						1840	3333		--	--	--	--	6
7	E	HANGAR EQUIPMENT	100	3		3333	3333						3	100	HANGAR EQUIPMENT	E	8
9	--	--	--	--				3333	3333				--	--	--	--	10
11	--	--	--	--						3333	3333		--	--	--	--	12
13	E	HANGAR EQUIPMENT	100	3		3333	3333						3	100	HANGAR EQUIPMENT	E	14
15	--	--	--	--				3333	3333				--	--	--	--	16
17	--	--	--	--						3333	3333		--	--	--	--	18
19	E	HANGAR EQUIPMENT	100	3		3333	3333						3	100	HANGAR EQUIPMENT	E	20
21	--	--	--	--				3333	3333				--	--	--	--	22
23	--	--	--	--						3333	3333		--	--	--	--	24
25	M	RTU-1	25	3		4434	2660						3	15	RTU-2	M	26
27	--	--	--	--				4434	2660				--	--	--	--	28
29	--	--	--	--						4434	2660		--	--	--	--	30
31	M	JP-1	25	3		3880	1884						3	15	FAN-1&2	M	32
33	--	--	--	--				3880	1884				--	--	--	--	34
35	--	--	--	--						3880	1884		--	--	--	--	36
37	E	GSH-1	20	3		3076	2916						1	20	HANGAR LIGHTING	L	38
39	--	--	--	--				3076	2916				1	20	HANGAR LIGHTING	L	40
41	--	--	--	--						3076	972		1	20	HANGAR LIGHTING	L	42
43	M	JP-2	25	3		3880	3240						1	20	HANGAR LIGHTING	L	44
45	--	--	--	--				3880	2916				1	20	HANGAR LIGHTING	L	46
47	--	--	--	--						3880	2916		1	20	HANGAR LIGHTING	L	48
49	L	OFFICE LIGHTING	20	1		1801	2916						1	20	HANGAR LIGHTING	L	50
51	--	SPARE	20	1				0	2916				1	20	HANGAR LIGHTING	L	52
53	--	SPARE	20	1						0	285		1	20	EXTERIOR LIGHTING	L	54
55	--	BUSSED SPACE	--	1		--	32924						3	175	PANEL 'T1-1' VIA XFMR 'T1'	L; E;...	56
57	--	BUSSED SPACE	--	1				--	35783				--	--	--	--	58
59	--	BUSSED SPACE	--	1						--	35611		--	--	--	--	60
				Total Load:		88786 VA		89519 VA		84772 VA							
				Total Amps:		323 A		325 A		306 A							

CB TYPE LEGEND

GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT
AFCI: ARC FAULT CIRCUIT INTERRUPTER
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER
HC(-ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION
HT#: HANDLE TIE WITH GROUPING #
ST: SHUNT TRIP
LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND

N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

LOAD TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:	29629 VA	37037 VA		
RECEPTACLE:	22860 VA	16430 VA	**TOTAL CONN. LOAD:**	263077 VA
MOTOR:	63286 VA	66611 VA	**TOTAL EST. LOAD:**	267380 VA
EQUIPMENT:	147302 VA	147302 VA	**TOTAL CONN.:**	316 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	322 A
CONTINUOUS:				
EXISTING:				

NOTES:

PANEL: L1-1

LOCATION: ELEC. RM. 108
SUPPLY FROM: T1
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: FULLY RATED TO AT LEAST 10K AIC
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

Notes:
(2) SECTIONS, 60-POLES EACH

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	R	CONF-113 RCPT	20	1		900	750						1	20	KITCHENETTE - 101 REF.	E	2
3	L; R	HALL CONV. RCPT. UC LIGHTING	20	1				1106	180				1	20	KITCHENETTE - 101 AC RCPT	R	4
5	R	MAINT OFFICE -112 RCPT	20	1						900	200		1	20	RANGE HOOD	E	6
7	E; R	CONV. RCPT, RESTROOM	20	1		1320	600					ST	1	20	RANGE	E	8
9	R	FLT OPS OFFICE - 111 RCPT	20	1				900	--			ST	1	--	SHUNT TRIP	--	10
11	L; R	KITCHENNETTE - 101 ISLAND RCPT	20	1						392	210		1	20	KITCHENNETTE - 101 AC RCPT	L; R	12
13	R	KITCHENNETTE - 101 AC RCPT	20	1		360	242						1	20	KITCHENNETTE - 101 AC RCPT	L; R	14
15	R	PUMP ROOM - 115 DED RCPT	20	1				180	12				1	20	LTG - CONFERENCE 113	L	16
17	R	PUMP ROOM - 115 DED RCPT	20	1						180	900		1	20	DISHWASHER	E	18
19	R	PUMP ROOM - 115 DED RCPT	20	1		360	380						1	20	KITCHENNETTE - 101 AC RCPT	L; R	20
21	R	PUMP ROOM - 115 DED RCPT	20	1				180	1176				1	20	GARBAGE DISPOSAL	M	22
23	R	MAINT. PARTS RM - 114 RCPT	20	1						1080	1180		1	20	STOCK ROOM 103 - RCPT	L; R	24
25	R	MAINT. PARTS RM - 114 RCPT	20	1		720	1080						1	20	HANGAR RCPT	R	26
27	R	MAINT. PARTS RM - 114 RCPT	20	1				720	900				1	20	HANGAR RCPT	R	28
29	R	HANGAR/OUTDOOR RCPT	20	1						900	1080		1	20	HANGAR RCPT	R	30
31	R	HANGAR RCPT	20	1		900	2000						1	20	HANGAR RCPT	E	32
33	R	HANGAR/OUTDOOR RCPT	20	1				1080	720				1	20	HANGAR RCPT	R	34
35	R	HANGAR RCPT	20	1						1080	1500		2	60	HANGAR EQUIPMENT	E	36
37	R	HANGAR /OUTDOOR RCPT	20	1		540	1500						--	--	--	--	38
39	E	HANGAR EQUIPMENT	40	2				2000	1500				2	60	HANGAR EQUIPMENT	E	40
41	--	--	--	--						2000	1500		--	--	--	--	42
43	E	HANGAR EQUIPMENT	60	3		2000	0						1	20	SPARE	--	44
45	--	--	--	--				2000	0				1	20	SPARE	--	46
47	--	--	--	--						2000	1822		2	25	ERV-1	M	48
49	E	HANGAR EQUIPMENT	60	3		2000	1822						--	--	--	--	50
51	--	--	--	--				2000	1176				1	20	EF-3	M	52
53	--	--	--	--						2000	1176		1	20	KEF-1	M	54
55	M	EF-1	25	1		1920	0						1	20	SPARE	--	56
57	L; R	KITCHENNETTE - 101 AC RCPT	20	1				373	630				1	15	WH-1, CP-1	E; M	58
59	M	EF-2	25	1						1920	178		1	15	WH-2	E	60
61	E	FIRE ALARM CONTROL PANEL	15	1		500	180					GFCI	1	20	KITCHENNETTE - WASHER	R	62
63	E	KITCHENNETTE - DRYER	30	2				1500	900				1	20	STOCK ROOM 103 - WINE COOLER	E	64
65	--	--	--	--						1500	900		1	20	CORRIDOR 103 - COPY/PRINT	E	66
67	E	EWC	15	1	GFCI	500	667						3	20	OH DOOR	M	68
69	R	KITCHENNETTE - 101 AC RCPT	20	1				180	667				--	--	--	--	70
71	L; R	KITCHENNETTE - 101 AC RCPT, LTG	20	1						200	667		--	--	--	--	72
73	E	AIR COMPRESSOR	50	3		2667	2500						2	15	EUH-1	E	74
75	--	--	--	--				2667	2500				--	--	--	--	76
77	--	--	--	--						2667	1000		1	20	HANGAR ICE MAKER	E	78
79	R	KITCHENNETTE - 101 AC RCPT	20	1		180	0						1	20	SPARE	--	80
81	R	ROOFTOP EQUIPMENT RCPT	20	1				540	900				1	20	WINE STORAGE	E	82
83	R	SOI-1 CTRL. RCPT	20	1						180	1440		1	20	CONF LOUNGE, UC FRIDGE - RCPT	E; R	84
85	E	HANGAR - WATER CLOSET	20	1		400	180						1	20	KITCHENNETTE - 101 AC RCPT	R	86
87	E	IRRIGATION CONTROLLER	20	1				200	900			GFCI	1	20	KITCHENNETTE - 101 UC REF.	E	88
89	E	WH-3	20	1						1500	2000		2	40	HANGAR EQUIPMENT	E	90
91	E	KITCHENNETTE - 101 MW	20	1	GFCI	900	2000						--	--	--	--	92
93	E	HANGAR EQUIPMENT	60	2				6000	0				1	20	SPARE	--	94
95	--	--	--	--						0	0		1	20	SPARE	--	96
97	--	SPARE	20	1		0	0						1	20	SPARE	--	98
99	--	SPARE	20	1				0	0				1	20	SPARE	--	100
101	--	SPARE	20	1						0	0		1	20	SPARE	--	102
103	--	SPARE	20	1		0	0						1	20	SPARE	--	104
105	--	SPARE	20	1				0	0				1	20	SPARE	--	106
107	--	SPARE	20	1						0	0		1	20	SPARE	--	108
109	--	BUSSED SPACE	--	1		--	--						1	--	BUSSED SPACE	--	110
111	--	BUSSED SPACE	--	1				--	--				1	--	BUSSED SPACE	--	112
113	--	BUSSED SPACE	--	1						--	--		1	--	BUSSED SPACE	--	114
115	--	BUSSED SPACE	--	1		--	2857						3	100	PANEL 1T-1'	E; Spa...	116
117	--	BUSSED SPACE	--	1				--	1997				--	--	--	--	118
119	--	BUSSED SPACE	--	1						--	1360		--	--	--	--	120
				Total Load:		32924 VA		35783 VA		35611 VA							
				Total Amps:		274 A		302 A		300 A							

CB TYPE LEGEND

GFCI: 5mA GROUND FAULT CIRCUIT INTERRUPTER
GFEP: 30mA GROUND FAULT PROTECTION FOR EQUIPMENT
AFCI: ARC FAULT CIRCUIT INTERRUPTER
CAFCI: COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER
HC(-ON/OFF): HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION
HT#: HANDLE TIE WITH GROUPING #
ST: SHUNT TRIP
LOCK: PERMANENTLY LOCKABLE BREAKER

CIRCUIT PHASE CODE LEGEND

N1. EXISTING LOAD ON EXISTING CIRCUIT BREAKER.
N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

LOAD TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:	315 VA	394 VA		
RECEPTACLE:	22860 VA	16430 VA	**TOTAL CONN. LOAD:**	104318 VA
MOTOR:	13069 VA	13980 VA	**TOTAL EST. LOAD:**	98878 VA
EQUIPMENT:	68074 VA	68074 VA	**TOTAL CONN.:**	290 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	274 A
CONTINUOUS:				
EXISTING:				

NOTES:

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

AE DESIGN
Integrated Lighting, Technology, and Electrical Solutions
1900 Wazee Street #205 | Denver, CO 80202 | 303.296.3034
aedesign-inc.com
Project #: 6468.00

SEAL



REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL PANEL SCHEDULES

E701

100% PERMIT SET

PANEL: IT-1

LOCATION: ELEC. RM. 108
SUPPLY FROM: L1-1
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: FULLY RATED TO AT LEAST 10K AIC
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: N/A

Notes:

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	R	IT - 110 RCPT	20	1		360	360						1	20	IT - 110 RCPT	R	2
3	E	IT - 110 RCPT	20	1				500	360				1	20	ELEC RM - 108 RCPT	R	4
5	R	ELEC RM - 108 RCPT	20	1						360	1000		2	30	6-30R RCPT IT - 110	E	6
7	E; M	AC - SPLIT SYSTEM (CU-1/DFC-1)...	20	2		1137	1000						--	--	--	--	8
9	--	--	--	--				1137	0				1	20	SPARE	--	10
11	--	SPARE	20	1						0	0		1	20	SPARE	--	12
13	--	SPARE	20	1		0	0						1	20	SPARE	--	14
15	--	SPARE	20	1				0	0				1	20	SPARE	--	16
17	--	SPARE	20	1						0	0		1	20	SPARE	--	18
19	--	BUSSED SPACE	--	1		--	--						1	--	BUSSED SPACE	--	20
21	--	BUSSED SPACE	--	1				--	--				1	--	BUSSED SPACE	--	22
23	--	BUSSED SPACE	--	1						--	--		1	--	BUSSED SPACE	--	24
25	--	BUSSED SPACE	--	1		--	--						1	--	BUSSED SPACE	--	26
27	--	BUSSED SPACE	--	1				--	--				1	--	BUSSED SPACE	--	28
29	--	BUSSED SPACE	--	1						--	--		1	--	BUSSED SPACE	--	30
				Total Load:		2857 VA		1997 VA		1360 VA							
				Total Amps:		25 A		17 A		11 A							

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N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

LOAD TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:				
RECEPTACLE:	1440 VA	1440 VA	**TOTAL CONN. LOAD:**	6213 VA
MOTOR:	27 VA	34 VA	**TOTAL EST. LOAD:**	6220 VA
EQUIPMENT:	4746 VA	4746 VA	**TOTAL CONN.:**	17 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	17 A
CONTINUOUS:				
EXISTING:				

NOTES:

PANEL: EH-1

LOCATION: ELEC. RM. 108
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: FULLY RATED TO AT LEAST 25K AIC
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

Notes:

CKT	LOAD TYPE	LOAD DESCRIPTION	TRIP	POLES	CB TYPE	A		B		C		CB TYPE	POLES	TRIP	LOAD DESCRIPTION	LOAD TYPE	CKT
1	E	HANGAR DOOR OPERATOR	30	3		3500	3500						3	30	HANGAR DOOR OPERATOR	E	2
3	--	--	--	--				3500	3500				--	--	--	--	4
5	--	--	--	--						3500	3500		--	--	--	--	6
7	--	SPARE	20	1		0	0						1	20	SPARE	--	8
9	--	SPARE	20	1				0	0				1	20	SPARE	--	10
11	--	SPARE	20	1						0	0		1	20	SPARE	--	12
13	--	BUSSED SPACE	--	1		--	--						1	--	BUSSED SPACE	--	14
15	--	BUSSED SPACE	--	1				--	--				1	--	BUSSED SPACE	--	16
17	--	BUSSED SPACE	--	1						--	--		1	--	BUSSED SPACE	--	18
19	--	BUSSED SPACE	--	1		--	--						1	--	BUSSED SPACE	--	20
21	--	BUSSED SPACE	--	1				--	--				1	--	BUSSED SPACE	--	22
23	--	BUSSED SPACE	--	1						--	--		1	--	BUSSED SPACE	--	24
25	--	BUSSED SPACE	--	1		--	--						1	--	BUSSED SPACE	--	26
27	--	BUSSED SPACE	--	1				--	--				1	--	BUSSED SPACE	--	28
29	--	BUSSED SPACE	--	1						--	--		1	--	BUSSED SPACE	--	30
				Total Load:		7000 VA		7000 VA		7000 VA							
				Total Amps:		25 A		25 A		25 A							

CB TYPE LEGEND

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N2. NEW LOAD ON EXISTING CIRCUIT BREAKER.
N3. NEW LOAD ON NEW CIRCUIT BREAKER. CIRCUIT BREAKER AND AIC RATING TO MATCH EXISTING.

LOAD TYPE:	LOAD	DEMAND LOAD	PANEL TOTALS	
LIGHTING:				
RECEPTACLE:			**TOTAL CONN. LOAD:**	21000 VA
MOTOR:			**TOTAL EST. LOAD:**	21000 VA
EQUIPMENT:	21000 VA	21000 VA	**TOTAL CONN.:**	25 A
KITCH EQUIP:			**TOTAL EST. DEMAND:**	25 A
CONTINUOUS:				
EXISTING:				

NOTES:

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Integrated Lighting, Technology, and Electrical Solutions
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13485 Veteran's Way Suite 600
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ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: Author CHECKED BY: Checker

ELECTRICAL PANEL SCHEDULES

E702

100% PERMIT SET

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMP QUAN.	LAMP WATTAGE	LAMP / CCT / CRI	MAX WATTAGE	LUMEN OUTPUT	DIMMING / MIN LEVEL	FIXTURE FINISH	MOUNTING	BOF/RFD/OFH	NOTES
D1	6" RECESSED SQUARE DOWNLIGHT	LITHONIA OR EQUAL	LDN6SQ 30/20 LS6 AR LD TRW MVOLT GZ10	277 V	1	23 W	LED / 3000K / 90 CRI	23 VA	2000	0-10V	WHITE	RECESSED	5-11/16" RFD	1
D1EM	6" RECESSED SQUARE DOWNLIGHT WITH INTEGRAL 90 MINUTE BATTERY BACKUP AND REMOTE TEST SWITCH	LITHONIA OR EQUAL	LDN6 30/20 LS6 AR LD TRW MVOLT GZ10 ELRSD	277 V	1	23 W	LED / 3000K / 90 CRI	23 VA	2000	0-10V	WHITE	RECESSED	5-11/16" RFD	1
D2	6" RECESSED SQUARE DOWNLIGHT, WET LOCATION RATED	LITHONIA OR EQUAL	WF6-SQS-LED-30K-90CRI-MW-WF8643-PANU	277 V	1	14 W	LED / 3000K / 90 CRI	14 VA	1110	0-10V	WHITE	RECESSED	1.18" RFD	1
H1	COMPACT HIGH BAY LED WITH INTEGRATED OCCUPANCY SENSOR	LITHONIA OR EQUAL	CPHB 48000LM SEF GCL MD MVOLT GZ10 40K 90CRI LSXR6 DWH	277 V	1	324 W	LED / 4000K / 90 CRI	324 VA	48000	0-10V	WHITE	PENDANT	45' 0" BOF	
H1EM	COMPACT HIGH BAY LED WITH INTEGRAL OCCUPANCY SENSOR AND 90 MINUTE BATTERY BACKUP	LITHONIA OR EQUAL	CPHB 48000LM SEF GCL MD MVOLT GZ10 40K 90CRI LSXR6 E15WMCP DWH	277 V	1	324 W	LED / 4000K / 90 CRI	324 VA	48000	0-10V	WHITE	PENDANT	45' 0" BOF	
H2	COMPACT HIGH BAY LED WITH INTEGRATED OCCUPANCY SENSOR, DIMMING, AND PHOTOCELL	LITHONIA OR EQUAL	CPHB 48000LM SEF GCL MD MVOLT GZ10 40K 90CRI LSXR6 ADC DWH	277 V	1	324 W	LED / 4000K / 90 CRI	324 VA	48000	0-10V	WHITE	PENDANT	45' 0" BOF	
L1	4' LINEAR LED FIXTURE	LITHONIA OR EQUAL	CLX LED LINEAR-L48-5000LM-SEF-WDL-MVOLT-GZ10-3000K-90CRI-HC36 M12	277 V	1	32 W	LED / 3000K / 90 CRI	32 VA	4124	0-10V	WHITE	SUSPENDED CEILING	11'-0"	
L1EM	4' LINEAR LED FIXTURE WITH BATTERY BACKUP	LITHONIA OR EQUAL	CLX LED LINEAR-L48-5000LM-SEF-WDL-MVOLT-GZ10-3000K-90CRI-EL14L-HC36 M12	277 V	1	32 W	LED / 3000K / 90 CRI	32 VA	4124	0-10V	WHITE	SUSPENDED CEILING	11'-0"	
LF-1	DECORATIVE LED PENDANT (BY INTERIORS)	(BY INTERIORS)	--	120 V	1	7 W	LED / 3000K / 90 CRI	7 VA	650	DIMMING	--	PENDANT	--	3
LF-2	DECORATIVE PENDANT (BY INTERIORS)	(BY INTERIORS)	--	120 V	1	12 W	LED / 3000K / 90 CRI	12 VA	1200	DIMMING	--	PENDANT	--	3
LF-3	LINEAR UNDER CABINET LIGHTING (BY INTERIORS)	(BY INTERIORS)	--	120 V	1	3 W	LED / 3000K / 90 CRI	3 VA	360/FT	SWITCHING	--	SURFACE	0.28" OFH	3,4
LF-4	IN CABINET LINEAR LIGHTING WITH AUTOMATIC ON/OFF CONTROLS (BY INTERIORS)	(BY INTERIORS)	--	120 V	1	3 W	LED / 3000K / 90 CRI	5 VA	240/FT	SWITCHING	--	SURFACE	0.25" OFH	3,4
LF-5	LED LIGHT STRIP IN CHANNEL (BY INTERIOR)	(BY INTERIORS)	--	120 V	1	3 W	LED / 3000K / 90 CRI	3 VA	342/FT	SWITCHING	--	SURFACE	0.28" OFH	3,4
X1	WALL MOUNTED LED EXIT SIGN	LITHONIA	LQM-S-W-R-MVOLT-ELN	277 V	1	4 W	LED / RED	4 VA	--	--	WHITE	WALL SURFACE	7' 6" TO BOF	6
X2	CEILING MOUNTED LED EXIT SIGN	LITHONIA	LQM-S-W-R-MVOLT-ELN	277 V	1	4 W	LED / RED	4 VA	--	--	WHITE	CEILING SURFACE	--	6
EW1EM	EXTERIOR WALL PACK WITH INTEGRAL EM BATTERY	LITHONIA OR EQUAL	DSXW1-LED-10C-530-40K-T4M-MVOLT-E20WC-HS-DBLXD	277 V	1	19 W	LED / 4000K / 80 CRI	19 VA	1970	SWITCHING	BLACK	WALL SURFACE	ABOVE DOOR ENTRY, HEIGHT TO MATCH ARCHITECTURAL DRAWINGS	1
EW3	EXTERIOR LED WALL MOUNTED AREA LIGHT, TYPE III	LITHONIA OR EQUAL	DSXW1-LED-10C-40K-T3M-MVOLT-HS-DBLX	277 V	1	19 W	LED / 4000K / 80 CRI	19 VA	2010	SWITCHING	BLACK	WALL SURFACE	HEIGHT TO MATCH ARCHITECTURAL DRAWINGS	1

LIGHTING FIXTURE GENERAL NOTES

A.	BOF = BOTTOM OF FIXTURE HEIGHT, RFD = RECESSED FIXTURE DEPTH, OFH = OVERALL FIXTURE HEIGHT
B.	ALL INTERIOR FIXTURES/LAMPS SHALL HAVE MATCHING COLOR TEMPERATURE 3000K AND 90CRI. VERIFY THESE REQUIREMENTS PRIOR TO SUBMITTING SHOP DRAWINGS TO ENGINEER.
C.	ALL REFLECTOR LAMPS TO BE PROVIDED AS WIDE FLOOD DISTRIBUTION, UON.
D.	LUMENS LISTED ARE DELIVERED LUMENS, NOT INITIAL.
E.	FOR ALL SPECIFIED LUMINAIRES, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MOUNTING HARDWARE, ACCESSORIES, COMPONENTS, LEADER/JUMPER CABLES, WIRE FEED, CONNECTORS, END CAPS, REMOTE POWER SUPPLIES, CONTROLS, AND ANY OTHER NECESSARY COMPONENT AS REQUIRED FOR INSTALLING A SECURE AND FULLY FUNCTIONAL SYSTEM.
F.	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHT FIXTURES TO ENSURE COMPATIBILITY WITH SPECIFIED FIXTURES. NOTIFY SPECIFIER OF ANY DISCREPANCIES.
G.	ALL FINISH SELECTIONS SHALL BE VERIFIED BE ARCHITECT/INTERIOR DESIGNER/OWNER AS PART OF THE SUBMITTAL PROCESS. UNLESS OTHERWISE NOTED, EC SHALL ASSUME STANDARD LUMINAIRE FINISH OPTION FOR PRICING.
H.	ALL MOUNTING HEIGHTS SHALL BE VERIFIED WITH ARCHITECT/ARCHITECTURAL ELEVATIONS PRIOR TO ANY ROUGH-IN.
I.	CONDUIT FOR LIGHTING/CONTROLS SHALL NOT BE EXPOSED/VISIBLE. COORDINATE ALL POWER PACKS, DRIVER, REMOTE DRIVER, AND TYPICAL ABOVE CEILING CONTROL DEVICE LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

LIGHTING FIXTURE SPECIFIC NOTES

1.	ARCHITECT TO CONFIRM FIXTURE FINISH PRIOR TO FIXTURE PROCUREMENT.
2.	EC TO CONFIRM FIXTURE MOUNTING HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION.
3.	REFER TO INTERIOR DRAWINGS FOR FULL SPECIFICATIONS AND REQUIREMENTS.
4.	COORDINATE DRIVER/REMOTE DRIVER LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN.
5.	FIXTURE CONTROLLED AUTOMATICALLY VIA CABINET DOORS OPENING/CLOSING.
6.	COLOR AS REQUIRED BY AHJ.

ALTERNATES AND VALUE ENGINEERED LIGHTING FIXTURES AND LIGHTING CONTROLS:

A CONTRACTOR RESPONSIBILITIES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPATIBILITY OF ALTERNATE OR VALUE-ENGINEERED LIGHTING ALTERNATE OR VALUE-ENGINEERED LIGHTING CONTROLS, INCLUDING DIMMING COMPATIBILITY.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPATIBILITY OF ALTERNATE OR VALUE-ENGINEERED EMERGENCY LIGHTING SYSTEM WITH THE SPECIFIED, ALTERNATE OR VALUE-ENGINEERED LIGHTING CONTROLS AND FIXTURES, INCLUDING INVERTERS AND UL924 TRANSFER DEVICES REQUIRED FOR A FULLY FUNCTIONAL SYSTEM.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A LIST OF THE FOLLOWING ITEMS FOR THE SPECIFED FIXTURE AND PROPOSED ALTERNATES OR VALUE-ENGINEERED LIGHTING FIXTURES PRIOR TO REVIEW. FAILURE TO PROVIDE REQUESTED ITEMS WILL RESULT IN ADDITIONAL WORK BILLED AT HOURLY RATES (SEE D3) :
   - CUTSHEETS, AND SUMMARIZED TABLE FIXTURE WATTAGE, DELIVERED LUMEN OUTPUT, DISTRIBUTION/BEAM ANGLE, COLOR TEMPERATURE (CCT), COLOR RENDERING INDEX (CRI)

B PRIOR APPROVAL REQUEST TO BID:

1. THE CONTRACTOR IS REQUIRED TO CALL THE ENGINEER OF RECORD / LIGHTING DESIGNER TO REQUEST APPROVAL TO SUBMIT ALTERNATE OR VALUE-ENGINEERED LIGHTING FIXTURES AND LIGHTING CONTROL SYSTEMS. AE DESIGN'S OFFICE PHONE NUMBER IS (303) 296-3034.
2. THE CONTRACTOR IS REQUIRED TO SUBMIT PRELIMINARY SUBMITTAL DRAWINGS OF ALL ALTERNATE OR VALUE-ENGINEERED LIGHTING FIXTURES AND LIGHTING CONTROLS FOR PRIOR APPROVAL FROM THE ENGINEER OF RECORD / LIGHTING DESIGNER 10-DAYS PRIOR TO BID DATE. SUBMITTALS RECEIVED LESS THAN 10-DAYS PRIOR TO BID DATE WILL NOT BE CONSIDERED.
3. ALTERNATES OR VALUE-ENGINEERED LIGHTING FIXTURES OF ANY EXTERIOR LIGHTING FIXTURES ARE REQUIRED TO INCLUDE AN EXTERIOR PHOTOMETRIC PLAN SHOWING COMPLIANCE WITH THE LOCALLY ADOPTED EXTERIOR LIGHTING ORDINANCE/CODE.
4. ALTERNATES OR VALUE-ENGINEERED LIGHTING FIXTURES FOR EMERGENCY APPLICATIONS ARE REQUIRED TO MATCH OR EXCEED THE SPECIFIED LUMEN OUTPUT AND MATCH SPECIFIED DISTRIBUTION OR COMPLY WITH LIGHT LEVELS REQUIRED FOR EGRESS ILLUMINATION AS REQUIRED PER NFPA 101. SPECIFIC CONCERNS ON THE PART OF THE ENGINEER MAY RESULT IN REQUEST FOR PHOTOMETRIC CALCULATIONS TO BE PROVIDED FOR ALTERNATE OR VAULE-ENGINEERED LIGHTING FIXTURES.

C BID PRICING BREAKOUT REQUIREMENTS:

1. THE CONTRACTOR IS REQUIRED TO PROVIDE SEPARATE LINE ITEMS IN THE BASE BID FOR LIGHTING FIXTURES AND LIGHTING CONTROLS.
2. THE CONTRACTOR IS REQUIRED TO CARRY THE "AS SPECIFIED" LIGHTING FIXTURES AND LIGHTING CONTROLS IN THEIR BASE BID. ALL ALTERNATE OR VALUE-ENGINEERED LIGHTING FIXTURES AND LIGHTING CONTROLS ARE TO BE INDICATED AS A NET CHANGE IN COST TO THE BASE BID.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE UNIT PRICING FOR EACH "AS SPECIFIED" AND EACH ALTERNATE OR VALUE-ENGINEERED LIGHTING FIXTURE AND LIGHTING CONTROLS. LUMP SUM COST SAVINGS WILL NOT BE ACCEPTED.

D SUBMITTAL REVIEW AND DOCUMENT:

1. THE CONTRACTOR IS REQUIRED TO PAY FOR ANY INCURRED HOURS REQUIRED TO UPDATE THE PERMIT/CONSTRUCTION DOCUMENTS DUE TO ALTERNATE OR VALUE-ENGINEERED LIGHTING FIXTURES AND CONTROLS BY THE ENGINEER OF RECORD / LIGHTING DESIGNER. HOURLY RATE SHALL BE BILLED AT $175.00/HR.
2. THE CONTRACTOR IS REQUIRED TO PAY FOR ANY INCURRED HOURS TO UPDATE THE ENERGY COMPLIANCE DOCUMENTATION BY THE ENGINEER OF RECORD / LIGHTING DESIGNER. HOURLY RATE SHALL BE BILLED AT $175.00/HR.
3. THE CONTRACTOR IS REQUIRED TO PAY FOR THE ADDITIONAL HOURS REQUIRED OF THE ENGINEER OF RECORD / LIGHTING DESIGNER TO REVIEW ALTERNATE OR VALUE-ENGINEERED LIGHTING FIXTURES AND CONTROLS. HOURLY RATE SHALL BE BILLED AT $175.00/HR.

HDg Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
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(PH): 407-739-9000

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Project #: 6468.00

SEAL



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SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
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ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL LIGHTING SCHEDULES

E800

100% PERMIT SET

7/1/2024 10:55:59 AM
Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/6468.00 - Signature SWF Terminal and Hangar - Electrical Central.rvt

LIGHTING SEQUENCE OF OPERATION

CONTROL SEQUENCE	ON	OFF	SENSOR TYPE	TIME OUT	DIMMING	CONTROLLED RECEPTACLE	DAYLIGHT HARVESTING	TARGET ILLUMINANCE (FC)	NOTES
ET1	TIMECLOCK AUTOMATIC ON 30 MINUTES PRIOR TO SUNSET	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER SUNRISE	NONE	N/A	SWITCHING	NO	NO	--	
IO1	AUTOMATIC ON UPON OCCUPANCY VIA INTEGRAL SENSOR	AUTOMATIC OFF	INTEGRAL OCCUPANCY	15 MINUTES	SWITCHING	NO	NO	--	
M1	MANUAL ON	MANUAL OFF	NONE	N/A	SWITCHING	NO	NO	--	MANUAL CONTROL HAS BEEN PROVIDED FOR SAFETY OF THE OCCUPANTS RELATED TO MAINTENANCE OF EQUIPMENT
O1	AUTOMATIC ON	AUTOMATIC OFF	OCCUPANCY	15 MINUTES	SWITCHING	NO	NO	--	
TP1	TIMECLOCK AUTOMATIC ON 30 MINUTES PRIOR TO BUSINESS HOURS, OVERRIDE WITH PHOTOCELL BELOW TARGET ILLUMINANCE	TIMECLOCK AUTOMATIC OFF 30 MINUTES AFTER CLOSE OF BUSINESS, OVERRIDE WITH PHOTOCELL ABOVE TARGET ILLUMINANCE	PHOTOCELL	N/A	DIMMING	NO	YES		PHOTOCELL OVERRIDE FUNCTIONALITY DURING TIMECLOCK ON HOURS ONLY
V1	MANUAL ON	AUTOMATIC OFF	VACANCY	15 MINUTES	SWITCHING	NO	NO	--	
VD1	MANUAL ON	AUTOMATIC OFF	VACANCY	15 MINUTES	DIMMING	NO	NO	--	

LIGHTING CONTROLS NAMING CONVENTION

SYSTEM TYPE:
N = NETWORKED
R = ROOM CONTROLLER
W = WIRELESS
- THE ABSENCE OF LETTERS UNDER 'SYSTEM TYPE' INDICATES A WIRED STANDALONE SYSTEM
- THE ABSENCE OF 'W' MEANS THE SYSTEM IS WIRED

SENSOR TYPE:
O = OCCUPANCY
V = VACANCY
P = PHOTOCELL

DEVICES:
D = DIMMER
S = SWITCH
H = HUB
U = UNIQUE DEVICE TYPE

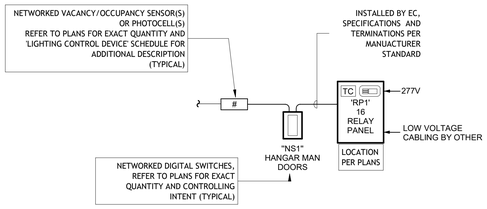
NUMBERING:
1,2,3... = QUANTITY AS REQUIRED FOR DIFFERENT HARDWARE, DEVICE CHARACTERISTICS, OR MOUNTING CONDITIONS.

LIGHTING RELAY SCHEDULE - RP1

RELAY ID	RELAY DESCRIPTION	DIMMING / SWITCHING	VOLTAGE	PANEL-CIRCUIT	CONTROL SEQUENCE
RP1-1	HANGAR	0-10V	277 V	H1-1-44	IO1
RP1-2	HANGAR	0-10V	277 V	H1-1-46	IO1
RP1-3	HANGAR	0-10V	277 V	H1-1-48	IO1
RP1-4	HANGAR	0-10V	277 V	H1-1-38	IO1
RP1-5	HANGAR	0-10V	277 V	H1-1-50	IO1
RP1-6	HANGAR	0-10V	277 V	H1-1-40	IO1
RP1-7	HANGAR	0-10V	277 V	H1-1-52	IO1
RP1-8	HANGAR	0-10V	277 V	H1-1-42	IO1
RP1-9	EXTERIOR LTG	SWITCHING	277 V	H1-1-54	ET1
RP1-10	EXTERIOR EM LTG	SWITCHING	277 V	H1-1-54	ET1
RP1-11	HANGAR - PHOTOCELL	0-10V	277 V	H1-1-44	IO1
RP1-12	SPARE	0-10V	277 V		
RP1-13	SPARE	0-10V	277 V		
RP1-14	SPARE	0-10V	277 V		
RP1-15	SPARE	0-10V	277 V		
RP1-16	SPARE	0-10V	277 V		

LIGHTING CONTROL DEVICES

TYPE	DESCRIPTION	NOTES	DETAILS
NETWORKED COMPONENTS			
NS1	NETWORKED DIMMING BUTTON STATION, PROGRAM RELAY ZONES AS INDICATED ON PLANS		
ROOM CONTROLLED COMPONENTS			
RD1	ROOM CONTROLLER MANUAL DIMMER, EC SHALL COORDINATE MINIMUM LEVEL FOR DIMMING WITH THAT NOTED ON LUMINAIRE FIXTURE SCHEDULE		
RO1	ROOM CONTROLLER, CEILING MOUNT OCCUPANCY SENSOR		
RV1	ROOM CONTROLLER CEILING MOUNT VACANCY SENSOR		
STANDALONE CONTROL SYSTEMS			
D1	LOW VOLTAGE MANUAL DIMMER		
O1	CEILING MOUNTED, LOW VOLTAGE OCCUPANCY SENSOR		
S1	LOW VOLTAGE ON/OFF SWITCH		
VS1	WALLSWITCH MOUNT, OCCUPANCY SENSOR SET TO VACANCY MODE, ON/OFF SWITCH		



2 | RELAY PANEL RISER DIAGRAM
E801 | NTS

LIGHTING CONTROL NOTES

GENERAL CONTROL NOTES

G1	THE LIGHTING CONTROL SYSTEM CONSISTS OF THE FOLLOWING: a. STAND-ALONE CONTROLS b. ROOM CONTROLLER CONTROLS c. NETWORKED RELAY BASED LIGHTING CONTROL PANEL SYSTEM AND NETWORKED DISTRIBUTED LIGHTING CONTROLS
G2	ALTERNATE MANUFACTURER'S WILL BE REVIEWED ACCORDING TO THE NOTES PROVIDED IN THE LIGHTING FIXTURE SCHEDULE.
G3	ALL WIRING DIAGRAMS WITHIN THESE DRAWINGS ARE PROVIDED TO COMMUNICATE THE DESIGN INTENT. SYSTEM SHALL BE WIRED ACCORDING TO THE APPROVED SHOP DRAWINGS.
G4	ALL STRUCTURED CABLE WIRING SHOWN ON RISER DIAGRAMS IS INTENDED TO BE BY CONTROL MANUFACTURER APPROVED STANDARD STRUCTURED CABLING, UNLESS OTHERWISE NOTED. EC SHALL PROVIDE ALL CABLING WITHIN THE LIGHTING CONTROL SYSTEM, CABLING BETWEEN THE NETWORKED HEAD-END AND THE BUILDINGS COMMUNICATION NETWORK SHALL BE PROVIDED BY THE LOW VOLTAGE CONTRACTOR/OWNER.
G5	ALL MANUALLY DIMMED LIGHT LOADS SHALL BE CAPABLE OF DIMMING LIGHTS TO OFF SETTING. DIMMING COMPATIBILITY BETWEEN THE CONTROLS AND LIGHT FIXTURES SHALL BE COORDINATED BY THE EC TO ENSURE THAT LIGHTING IS ABLE TO DIM TO LEVEL NOTED ON LIGHTING FIXTURE SCHEDULE.
G6	LIGHTING CONTROL SYSTEM SHALL INCLUDE A MINIMUM OF (4) HOURS OF MANUFACTURER'S REPRESENTATIVE TIME ON SITE FOR SYSTEM CHECK-OUT AND OWNER TRAINING. ELECTRICAL CONTRACTOR SHALL VIDEO RECORD TRAINING SESSION AND PROVIDE COPY OF VIDEO TO OWNER AS PART OF PROJECT COMPLETION SUBMITTALS.
G7	ALL DIGITAL SWITCHES FOR OVERRIDE CONTROL OF LIGHTING CONTROL SYSTEM(S) SHALL HAVE A MAXIMUM SETTING OF 2 HOURS PER IECC REQUIREMENTS.
G8	FINAL OCCUPANCY AND DAYLIGHT SENSOR LOCATION SHALL BE PROVIDED BY MANUFACTURER AND LOCATED PER APPROVED SHOP DRAWINGS AND DEVICE REQUIREMENTS. LOCATIONS INDICATED IN THESE DRAWINGS SHALL BE REVIEWED AND ALTERED AS NECESSARY FOR CORRECT OPERATION BY MANUFACTURER. IF OPERATIONS OF SENSORS DOES NOT MEET THE INTENT OUTLINED IN THESE DOCUMENTS THE MANUFACTURER REPRESENTATIVE SHALL PROVIDE FIELD RECTIFICATION SERVICES AS NECESSARY IN ORDER TO RECONFIGURE SYSTEM TO MEET OUTINED INTENT.
G9	OCCUPANCY SENSORS SHALL BE COORDINATED SUCH THAT THE MOUNTING IS NOT WITHIN 6' OF AIR RETURN SYSTEMS.
G10	PHOTOCELL SENSORS SHALL BE COORDINATED SUCH THAT THE DEVICE(S) ARE NOT WITHIN PROXIMATY TO INDIRECT LIGHTING OR WHERE SUBJECT TO VEILING REFLECTIONS FROM GLASS OR WATER SURFACES.
G11	WHERE APPLICABLE, WALLSTATIONS WITH MORE THAN ONE GANG SHALL BE CONGREGATED TOGETHER UNDER A SINGLE FACEPLATE, UON.

STANDALONE LIGHTING CONTROL GENERAL NOTES

S1	APPROVED STANDALONE LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. LEVITON b. nLIGHT/SENSORSWITCH c. LUTRON

ROOM CONTROLLER GENERAL NOTES

R1	APPROVED ROOM CONTROLLER LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. CRESTRON b. nLIGHT c. LUTRON
R2	REFER TO ELECTRICAL LIGHTING LAYOUTS FOR LAYOUT OF DEVICES CONNECTED TO ROOM CONTROLLERS. ROOM CONTROLLER COMPONENTS ARE INDICATED IN THE "LIGHTING CONTROL DEVICE" SCHEDULE, THESE COMPONENTS START WITH THE DESIGNATION 'R'.
R3	ROOM CONTROLLER HEAD END EQUIPMENT LOCATIONS ARE INDICATED IN SPACES, HOWEVER DRAWINGS ARE DIAGRAMMATIC AND EXACT QUANTITIY OF ROOM CONTROLLER HEAD END EQUIPMENT PIECES VARIES FROM MANUFACTURER TO MANUFACTURER BASED ON DIMMING UTILIZATION, QUANTITY OF RELAYS, NUMBER OF INPUT DEVICES, QUANTITY OUTPUT ZONES AND RECEPTACLE CONTROL.

NETWORKED RELAY BASED LIGHTING CONTROL PANEL SYSTEM

N1	APPROVED NETWORKED RELAY BASED LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. CRESTRON b. nLIGHT c. LUTRON
N2	REFER TO ELECTRICAL LIGHTING LAYOUTS FOR LAYOUT OF DEVICES CONNECTED TO DISTRIBUTED LIGHTING CONTROL SYSTEM. DISTRIBUTED COMPONENTS ARE INDICATED IN THE "LIGHTING CONTROL DEVICE" SCHEDULE, THESE COMPONENTS START WITH THE DESIGNATION 'N'.
N3	RELAY BASED CONTROL PANELS SHALL BE PROVIDED BASED ON THE QUANTITY OF RELAYS INDICATED IN THE SYSTEM RISER DIAGRAM. COMPONENTS PROVIDED SHALL BE CAPABLE OF PROVIDING FUNCTIONALITY IN ACCORDANCE WITH SEQUENCE OF OPERATIONS' SCHEDULE.
N4	LIGHTING CONTROL SYSTEM SHALL BE DIGITAL AND CONSIST OF A MASTER LIGHTING CONTROL PANEL AND ADDITIONAL SLAVE LIGHTING CONTROL PANELS. REFER TO RELAY PANEL SCHEDULE FOR DIMMING REQUIREMENTS.
N5	RELAY PANELS SHALL BE PRE-WIRED, PRE-ASSEMBLED, PRE-PROGRAMMED AND LISTED TO UL916 OR UL924 WHEN USED WITH CENTRAL INVERTER OR LIFE SAFETY GENERATOR (DEPENDING ON NORMAL OR EMERGENCY OPERATION). PANELS SHALL BE PROVIDED WITH DUAL VOLTAGE POWER SUPPLY AND 16 GAGE BARRIERS TO SEPARATE HIGHER AND LOWER VOLTAGES, NORMAL AND EMERGENCY POWER.
N6	ELECTRICAL CONTRACTOR SHALL COORDINATE PRE-PROGRAMMING SCHEDULE OF OPERATIONS WITH OWNER PRIOR TO PREPARING SUBMITTALS.
N7	STANDARD RELAYS SHALL HAVE A NORMALLY CLOSED (NC) CONTACT RATED FOR 120/277V, 20A. STANDARD RELAYS SHALL BE ZERO-CROSS TYPE, NO EXCEPTIONS.
N8	ALL INCANDESCENT LIGHTING RELAYS SHALL BE CONTROLLED BY A NC/SOFTSTART RELAY.
N9	RELAY PANEL ELECTRONICS SHALL PROVIDE CURRENT VISUAL STATUS AND CONTROL OF EACH RELAY OR ZONE. ALL SYSTEM CONTROL ELECTRONICS SHALL STORE PROGRAMMING IN A NON-VOLATILE MEMORY AND PROVIDE 10 YEAR BATTERY BACKUP FOR TIME OF DAY.
N10	LIGHTING CONTROL PANELS SHALL BE CONTROLLED BY A 32-CHANNEL DIGITAL TIMECLOCK (DTC) THAT CONTROLS AND PROGRAMS THE ENTIRE LIGHTING CONTROL SYSTEM. THE DTC SHALL SUPPLY ALL TIME FUNCTIONS AND ACCEPT OTHER INPUTS. THE DTC SHALL ACCEPT CONTROL LOCALLY USING BUILT IN BUTTON PROMPTS AND USE OF AN 8 LINE 21 LETTER DISPLY FORM A COMPUTER/ MODEM/ ETHERNET/ INTERNET. ALL COMMANDS SHALL BE IN ENGLISH.
N11	NETWORKED LIGHTING SWITCH INPUT LOCATIONS SHALL BE CAPABLE OF REMOTE PROGRAMMING.
N12	STANDARD LIGHTING CONTROL SYSTEM SOFTWARE, PRE-INSTALLED INTO THE DTC, SHALL CONSIST OF AND USE STANDARD GRAPHICAL MANAGEMENT SOFTWARE PAGES.
N13	LIGHTING CONTROL SYSTEM INTERFACES TO INCLUDE A DRY CONTACT INPUT INTERFACE, BMS INTERFACE AND ETHERNET/INTERNET INTERFACE. EC SHALL COORDINATE THE OPERATION AND INSTALLATION OF LOW VOLTAGE CONNECTIONS BETWEEN LIGHTING CONTROL SYSTEM AND ANY ADDITIONAL ETHERNET BASED INTERFACES WITH LOW VOLTAGE CONTRACTOR/OWNER.

NETWORKED DISTRIBUTED LIGHTING CONTROLS

N1	APPROVED DISTRIBUTED NETWORK BASED LIGHTING CONTROLS TO BE PROVIDED BY ONE OF THE FOLLOWING PRE-APPROVED MANUFACTURERS: a. CRESTRON b. nLIGHT c. LUTRON
N2	REFER TO ELECTRICAL LIGHTING LAYOUTS FOR LAYOUT OF DEVICES CONNECTED TO DISTRIBUTED LIGHTING CONTROL SYSTEM. DISTRIBUTED COMPONENTS ARE INDICATED IN THE "LIGHTING CONTROL DEVICE" SCHEDULE, THESE COMPONENTS START WITH THE DESIGNATION 'N'.
N3	DISTRIBUTED LIGHTING CONTROL HEAD-ENDS/HUBS SHALL BE PROVIDED BASED ON THE QUANTITY OF ZONES INDICATED IN THE NETWORKED LIGHTING CONTROL ZONE SCHEDULE. COMPONENTS PROVIDED SHALL BE CAPABLE OF PROVIDING FUNCTIONALITY IN ACCORDANCE WITH SEQUENCE OF OPERATIONS' SCHEDULE.
N4	ALL COMPONENTS OF NETWORKED DISTRIBUTED LIGHTING CONTROL SYSTEM REQUIRING LINE VOLTAGE CONNECTIONS SHALL BE FED FROM LOCAL UNSWITCHED LIGHTING CIRCUIT.
N5	ALL REMOTE LOAD CONTROLLERS SUCH AS POWER PACKS AND RELAY DEVICES SHALL BE LOCATED IN AN ACCESSIBLE LOCATION.

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Project #: 6468.00

SEAL
STATE OF NEW YORK
GEORGE E. MILLER
LICENSED PROFESSIONAL ENGINEER
07/01/2024
092299

REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL LIGHTING CONTROLS SCHEDULES

E801

100% PERMIT SET

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: 6468.00 - Signature SWF Hangar
Project Type: New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-PUMP RM (Common Space Types:Electrical/Mechanical)	581	0.43	250
2-OFFICE 111 (Common Space Types:Office - Enclosed)	131	0.93	122
3-MAINT SHOP (Common Space Types:Workshop)	802	1.14	914
4-OFFICE 112 (Common Space Types:Office - Enclosed)	130	0.93	121
5-STOCK ROOM/ PANTRY (Common Space Types:Storage)	302	0.63	190
6-KITCHENETTE 101 (Common Space Types:Food Preparation)	563	1.06	597
7-ELEC RM 108 (Common Space Types:Electrical/Mechanical)	65	0.43	28
8-JAN RM 107 (Common Space Types:Storage)	39	0.63	25
9-WOMEN 105 (Common Space Types:Restrooms)	64	0.85	54
10-MEN 106 (Common Space Types:Restrooms)	62	0.85	53
11-UNISEX 109 (Common Space Types:Restrooms)	80	0.85	68
12-CONF 113 (Common Space Types:Conference/Meeting/Multipurpose)	344	1.07	368
13-CORR 103 (Common Space Types:Corridor/Transition <8 ft wide)	333	0.66	220
14-CORR 104 (Common Space Types:Corridor/Transition >=8 ft wide)	133	0.66	88
15-HANGAR 100 (Manufacturing:High Bay (25-50 ft. Floor to Ceiling Height))	34147	0.75	25610
16-IT 110 (Common Space Types:Electrical/Mechanical)	24	0.43	10
		Total Allowed Watts =	28718

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-PUMP RM (Common Space Types:Electrical/Mechanical)				
LED: L1: Other:	1	6	32	192
2-OFFICE 111 (Common Space Types:Office - Enclosed)				
LED: D1: Other:	1	4	23	92
3-MAINT SHOP (Common Space Types:Workshop)				
LED: L1: Other:	1	9	32	288
4-OFFICE 112 (Common Space Types:Office - Enclosed)				
LED: D1: Other:	1	4	23	92
5-STOCK ROOM/ PANTRY (Common Space Types:Storage)				
LED: D1: Other:	1	8	23	184
LED: LF3: Other:	1	6	3	18
6-KITCHENETTE 101 (Common Space Types:Food Preparation)				
LED: D1: Other:	1	15	23	345
LED: LF1: Other:	1	3	7	21
LED: LF4: Other:	1	6	2	12
LED: LF3: Other:	1	22	3	66
LED: LF5: Other:	1	11	3	33
7-ELEC RM 108 (Common Space Types:Electrical/Mechanical)				
LED: L1: Other:	1	2	32	64
8-JAN RM 107 (Common Space Types:Storage)				
LED: L1: Other:	1	1	32	32
9-WOMEN 105 (Common Space Types:Restrooms)				
LED: D1: Other:	1	1	23	23
10-MEN 106 (Common Space Types:Restrooms)				
LED: D1: Other:	1	1	23	23
11-UNISEX 109 (Common Space Types:Restrooms)				
LED: D1: Other:	1	1	23	23
LED: D2: Other:	1	1	14	14
LED: W1: Other:	1	1	27	27
12-CONF 113 (Common Space Types:Conference/Meeting/Multipurpose)				
LED: D1: Other:	1	8	23	184
LED: LF2: Other:	1	1	12	12
13-CORR 103 (Common Space Types:Corridor/Transition <8 ft wide)				
LED: D1: Other:	1	8	23	184
14-CORR 104 (Common Space Types:Corridor/Transition >=8 ft wide)				
LED: D1: Other:	1	3	23	69
LED: LF3: Other:	1	6	3	18
15-HANGAR 100 (Manufacturing:High Bay (25-50 ft. Floor to Ceiling Height))				
LED: H1: Other:	1	64	324	20736
LED: H2: Other:	1	3	324	972
16-IT 110 (Common Space Types:Electrical/Mechanical)				
LED: D1: Other:	1	1	23	23
			Total Proposed Watts =	23747

Interior Lighting PASSES: Design 17% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Trevor Williams - Project Designer — *Trevor Williams* — 06/12/2024
Name - Title — Signature — Date

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI16][1]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

HDg Architecture
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aedesign-inc.com
Project #: 6468.00

SEAL

STATE OF NEW YORK · JEFFREY E. MILLER · LICENSED PROFESSIONAL ENGINEER · 070112024 · 092299

REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: 06/12/24
COMM. NO.: 23715

DRAWN BY: TW, BYF CHECKED BY: BJJ

ELECTRICAL LIGHTING COMPLIANCE

E900

100% PERMIT SET

7/1/2024 10:56:01 AM
Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/6468.00 - Signature SWF Terminal and Hangar - Electrical Central.rvt

1. THE COMBINED REQUIREMENTS OF THESE DRAWINGS AND SPECIFICATIONS ARE APPLICABLE TO THE DESIGN AND INSTALLATION OF THIS SYSTEM.
2. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL DESIGN, ARRANGEMENT AND EXTENT OF SYSTEMS. DO NOT SCALE DRAWINGS NOR USE AS SHOP DRAWINGS. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF ALL WORK, THE CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
3. CONTRACTOR IS RESPONSIBLE FOR MAKING AND OBTAINING APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
4. THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT." THE LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT. POWER CIRCUIT SHALL MEET ALL REQUIREMENTS OF NFPA 71, NEC AND TCRM (2015).
5. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED TECHNICAL REPRESENTATIVE.
6. ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
7. PROJECT WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME THAT WORK IS NOT ACTIVELY BEING PERFORMED.
8. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NEC.
9. ALL WIRING SHALL BE INSTALLED ACCORDING TO 2017 NFPA 70 (NEC).
10. ALL FIRE ALARM CIRCUITS SHALL BE INSTALLED IN RED EMT CONDUIT RACEWAYS INCLUDING RED COVER PLATE FOR JUNCTION BOX LABEL "FA".
11. EXACT ROUTING OF CONDUITS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS.
12. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
13. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
14. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
15. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
16. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
17. INSTALL CEILING MOUNTED DEVICES AND APPLIANCES IN THE CENTER OR QUARTER POINT OF CEILING TILES, WHERE APPLICABLE.
18. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY DIRECTED OTHERWISE.
19. PROVIDE MODULES TO INTERFACE WITH BUILDING PA SYSTEM AND ACCESS CONTROL SYSTEMS.
20. PROVIDE SIGNAGE PER ALL LOCAL CODE AMENDMENTS
21. PROVIDE SHUT DOWN MODULES FOR BIG ASS FANS DURING SPRINKLER OR FOAM ACTIVATION
22. PROVIDE ZONE LIST ON SUBMITTAL DRAWINGS
23. PROVIDE ZONE LIST AT PANEL INCLUDING DEVICE ADDRESS LIST DESCRIPTION
24. THE MINIMUM REQUIRED NUMBER AND LOCATIONS OF NOTIFICATION APPLIANCES ARE SHOWN. CONTRACTOR SHALL ADD NOTIFICATION AS REQUIRED TO MEET AUDIBILITY AND INTELLIGIBILITY REQUIREMENTS OF NFPA 72 AS REQUIRED BASED ON THE PERFORMANCE OF THE SELECTED EQUIPMENT. THE NUMBER AND LOCATION OF NOTIFICATION APPLIANCES SHALL NOT BE REDUCED.
25. ANY EQUIPMENT SPECIFIED ON THE DRAWINGS HAS BEEN SELECTED AS THE BASIS FOR DESIGN. THE USE OF REVIEWED OR SPECIFIED EQUALS SHALL BE COORDINATED BY THE CONTRACTOR FOR SPACE REQUIREMENTS, EQUIPMENT DIMENSIONS AND PERFORMANCE.
26. FURNISH AND INSTALL A FULLY ADDRESSABLE AND ANALOG FIRE DETECTION AND ALARM SYSTEM THROUGHOUT THE AREA OF WORK.
27. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND INSTALLING SLEEVES, INSERTS AND SUPPORTS AS REQUIRED FOR HIS WORK AND/OR CORE DRILL REQUIREMENTS.
28. CONTRACTOR SHALL PROVIDE SUBMITTALS ON ITEMS LISTED IN EQUIPMENT LIST PROVIDED IN EACH SECTION OF SPECIFICATION TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO THE ORDER, PURCHASE OR INSTALLATION OF THESE SAME ITEMS.
29. FIRE ALARM CONTRACTOR SHALL COORDINATE WITH APPROPRIATE VENDORS FOR SYSTEM INTERFACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. COORDINATION SHALL INCLUDE BUT NOT BE LIMITED TO: AUDIO VISUAL, MECHANICAL HVAC, ELECTRICAL, AND AUTOMATIC SPRINKLER SYSTEMS.
30. ADDRESSABLE CONTROL MODULES SHALL BE INSTALLED TO SHUT DOWN FIRE/SMOKE DAMPERS UPON FIRE ALARM SIGNAL. VERIFY LOCATION OF FIRE/SMOKE DAMPERS WITH MECHANICAL CONTRACTOR.
31. INSTALL CEILING MOUNTED DEVICES AND APPLIANCES IN THE CENTER OR QUARTER POINT OF CEILING TILES, WHERE APPLICABLE.
32. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY DIRECTED OTHERWISE.
33. ALL EXPOSED CONDUITS, PIPING, WIRING, ETC ROUTING WITHIN THE HANGAR SPACE SHALL BE INSTALLED TIGHT TO THE CEILING AND/OR WALLS. ALL HORIZONTAL RUNS LOCATED WITHIN CEILING PLENUM AREA MUST BE INSTALLED A MINIMUM OF 32'-0" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE). WHERE INSTALLATION METHOD IS NOT POSSIBLE CONTRACTOR SHALL PROVIDE EXISTING CONDITIONS AND THE RECOMMENDED ALTERNATIVE SOLUTION PRIOR TO INSTALLATION FOR REVIEW BY ARCHITECT AND ENGINEER.
34. CONTACT HOLLAND HOLLAND SMITH - GENERAL MANAGER - ALARM & DETECTION PORTFOLIO @ VIKING GROUP INC. EMAIL: HSMITH@VIKINGCORP.COM, PHONE: (832) 993-6219, WEB:HTTPS://WWW.VIKINGGROUPINC.COM

SMOKE DETECTION:
SMOKE DETECTOR SHALL BE LOCATED AT THE FIRE ALARM CONTROL PANEL.
SMOKE DETECTORS SHALL BE LOCATED IN ELEVATOR LOBBIES, ELEVATOR MACHINE ROOM, AND AT TOP OF SHAFT FOR ELEVATOR CONTROL PURPOSES AS ALLOWED BY CODE.
MANUAL PULL STATIONS:
MANUAL PULL STATIONS SHALL BE DUAL ACTION TYPE.
MANUAL STATIONS SHALL BE MOUNTED WITH THE OPERATING MECHANISM AT 48" ABOVE FINISHED FLOOR.
DUCT SMOKE DETECTION:
DUCT SMOKE DETECTORS SHALL BE INTELLIGENT ANALOG/ADDRESSABLE TYPE, WHICH SHALL REPORT TO THE FIRE ALARM SYSTEM AS A"SUPERVISORY" TYPE DEVICE.
DUCT SMOKE DETECTORS SHALL BE LOCATED WITHIN FIVE FEET OF EACH SMOKE DAMPER OR FIRE/SMOKE DAMPER USED FOR CONTROL PURPOSES UNLESS AN ALTERNATE METHOD FROM IMC 607.3.3.2 CAN BE APPLIED.

FIRE PROTECTION SYSTEM SUBMITTAL

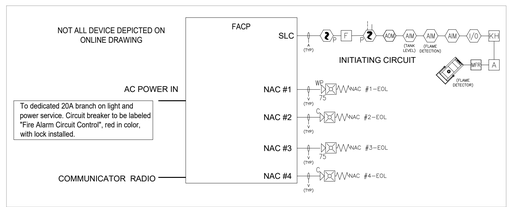
FIRE ALARM PROJECT SCOPE
THE SCOPE OF THIS PROJECT IS TO PROVIDE A COMPLETE DETECTION AND ALARM SYSTEM UTILIZING IR FLAME DETECTION SYSTEM TO ACTIVATE THE HIGH EXPANSION FOAM SYSTEM AND THE OVERHEAD WET SPRINKLER SYSTEM.

THE NEW FIRE ALARM PANEL SHALL BE ADDRESSABLE AND SHALL MONITOR THE IR FLAME DETECTION, CONTROL VALVES, NOTIFICATION, ALL NECESSARY MODULES FOR AV, CARD ACCESS, SPRINKLER SYSTEM AND FIRE PUMPS. SEE DRAWINGS CONCEPTUAL DEVICE AND SEQUENCE OF OPERATION. REFER TO SUPPRESSION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. SHALL HAVE ABILITY TO SEND SIGNALS TO PORT AUTHORITY

DESIGN CRITERIA & CODE ANALYSIS

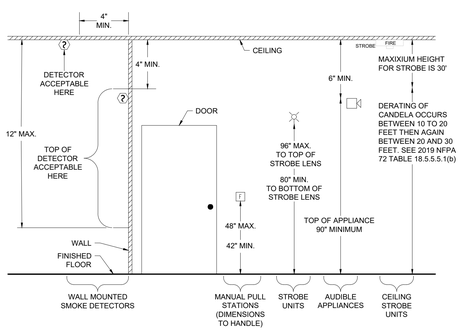
OCCUPANCY GROUP: S-1 Group I Hangar , OFFICE SHOPS

NUMBER OF STORIES: 1
ALARM SYSTEM TYPE: ADDRESSABLE
SPRINKLER SYSTEM TYPE: WET / FOAM
NEC 2020
NFPA 70 2017
NFPA 72 2016
NFPA 409 2022
NEW YORK BUILDING CODE 2020
FEDERAL AVIATION REGULATIONS - TITLE 147 PART 139 CERTIFICATION OF AIRPORTS SUBPART D - OPERATIONS
TENANT CONSTRUCTION REVIEW MANUAL 2015 (TCRM)
FIRE DEPARTMENT
PORT AUTHORITY NY NJ



PROPOSED ONE LINE

FIRE ALARM PROJECT GENERAL NOTES



TYPICAL DEVICE MOUNTING HEIGHTS

MAP FIRE ALARM MAP
FACP FIRE ALARM CONTROL PANEL
AES FIRE ALARM 1-WAY RADIO
NACPS FIRE ALARM POWER SUPPLY
FAA FIRE ALARM REMOTE ANNUNCIATOR
DOC DOCUMENT BOX
F PULL STATION
A ABORT SWITCH
F FOAM SYSTEM RELEASE (YELLOW)(YELLOW SIGN)
REMOTE INDICATING LIGHT
SMOKE DETECTOR
DUCT DETECTOR
CEILING MOUNT STROBE ONLY
WALL MOUNT STROBE ONLY
WALL MOUNT HORN/STROBE
CEILING MOUNT HORN/STROBE
WP WEATHERPROOF HORN/STROBE
WF WATERFLOW
TS TAMPER SWITCH
VS VALVE SUPERVISORY SWITCH
FIRE DEPARTMENT CONNECTION
I/O INPUT/OUPUT MODULE
MM MONITOR MODULE
CR CONTROL RELAY MODULE
FLAME DETECTOR
RTS REMOTE TEST SWITCH

DEVICE LEGEND

System Inputs

	Actuate Alarm Audible Signal Indicator	Actuate Alarm Visual Indicator	Actuate Supervisory Audible Signal Indicator	Actuate Supervisory Visual Indicator	Actuate Trouble Audible Signal Indicator	Actuate Trouble Visual Indicator	Actuate Zone Visual Indicator on Annunciator	Actuate All Interior Horn/Strobes	Actuate Exterior Horn/Strobes	Silence Horn/Strobe	Transmit Alarm Signal	Transmit Supervisory Signal	Transmit Trouble Signal	Transmit Point ID & Condition to Supervisory Station	Actuate Solenoid for Suppression System(Cross-Zoned)	Actuate 90 second Timer	ABORT Foam Discharge (Deadman Switch)	Shutdown HVLS Fans	Actuate Solenoid for Suppression System(Cross-Zoned)	Door Release		
Control Panel Annunciation																						
Notification																						
Releasing																						
Safety Controls																						
1 Smoke Detector - FACP	X	X					X	X			X							X	X	X		
2 Heat Detector	X	X					X	X			X							X	X	X		
3 Pull Station	X	X					X	X			X							X	X	X		
3a Hangar Water Flow Switch	X	X					X	X			X							X	X			
3b Office Water Flow Switch	X	X					X	X			X							X	X			
4 Foam Hose Flow Switch	X	X					X	X			X							X	X			
4 Sprinkler Tamper Switch			X	X						X	X											
5 1 Flame Detector	X	X					X	X			X							X	X			
6 2 Flame Detectors								X			X				X			X	X			
7 End of Releasing Countdown Timer (suppression)											X					X						
8 Manual Pull Station Foam Release	X	X					X	X			X				X			X	X	X		
9 Suppression System Manual Abort Switches				X	X					X	X						X					
10 Fire Pump Loss of Phase			X	X							X											
11 Fire Pump Phase Reversal			X	X							X											
12 Fire Pump Running			X	X							X											
13 Fire Pump Controller Trouble			X	X							X											
14 Fire Pump Power Transfer			X	X							X											
15 Kitchen Hood			X	X							X											
16																						
17 Key Lock Box (If Required)			X	X							X											
18 Ground Fault					X	X						X	X									
19 Open Circuit					X	X						X	X									
20 Notification Appliance Short Circuit					X	X						X	X									
21 Low Battery					X	X						X	X									
22 AC Power Failure (1 Hour Delay)					X	X						X	X									
23 SILENCE									X				X									

PROPOSED SEQUENCE OF OPERATIONS

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(PH): 407-739-9000

SEAL
STATE OF NEW YORK
RICHARD ALAN SABA
100892
LICENSED PROFESSIONAL ENGINEER
06/28/2024

REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE:June 12th, 2024.
COMM. NO.: 23715

DRAWN BY: BE CHECKED BY:KM

FIRE ALARM NOTES AND DETAILS

FA001

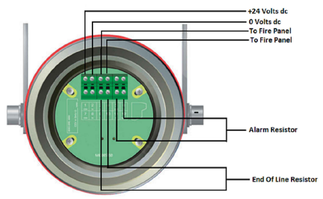
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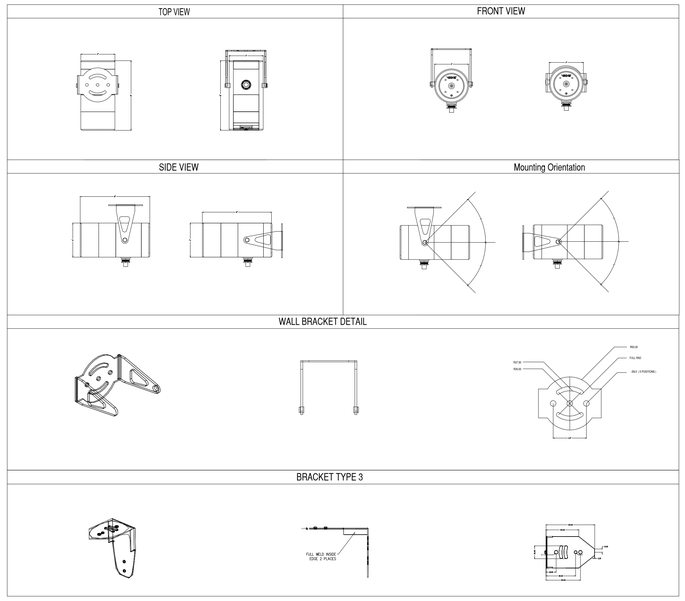
Relay Output
2 Pair Termination

1	+24 Vdc
2	0 Vdc
3	To Fire Panel
4	To Fire Panel
5	
6	
7	
8	
9	EOL
10	
11	ALRM
12	

NOTE:
If no Alarm resistors required by the control system/fire panel, use a wire to short the terminals 11 & 12



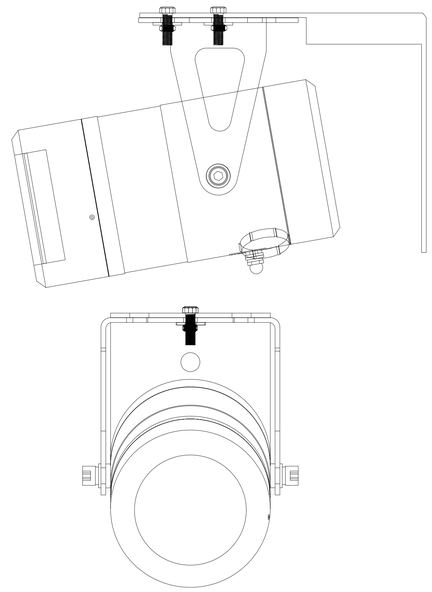
NOTE:
EOL and Alarm resistors values are defined by the client and the control system/fire panel which the detectors are being integrated into.





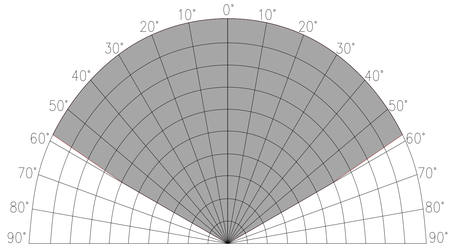
LED Colour	Status	Indicator
Green	Healthy	
Steady OFF	24V/0V Terminals Polarity Reversed	
Steady OFF	No Power/Major Internal Fault	
Steady Yellow	Fault	
Red	Alarm	

LED Status Diagnostic Chart

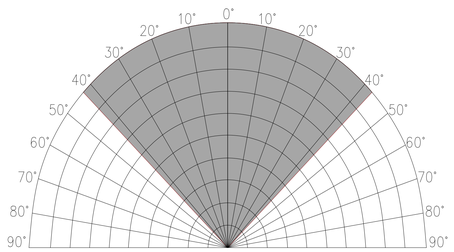


VSF 300 MOUNTING OPTIONS

Horizontal Field of view to a 0.1 m2 N-heptane pan fire with an alarm response time of less than 10 seconds. 100%= 60 meters.



Vertical Field of view to a 0.1 metre2 N-heptane pan fire with an alarm response time of less than 10 seconds 100%= 60 meters.



VSF 300 FIELD OF VIEWS

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(PH): 407-739-9000

SEAL



REVISIONS

MARK	DESCRIPTION	DATE

SIGNATURE STEWART (SWF)
HANGAR

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SIGNATURE AVIATION

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FIRE ALARM NOTES AND DETAILS

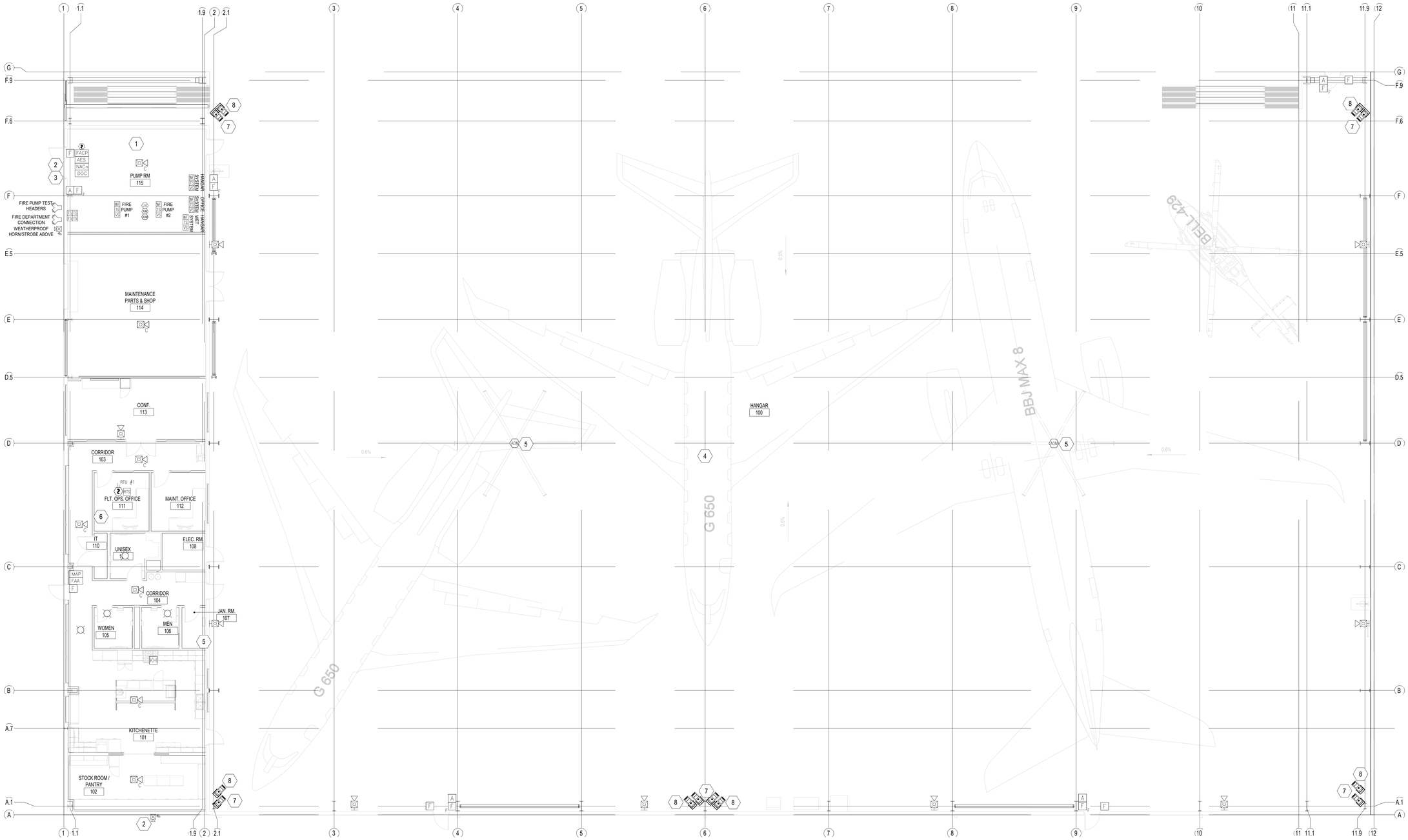
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KEYNOTE ⟨XX⟩

1. NOT ALL MODULES SHOWN
2. OUTSIDE HORN/STROBE FDC
3. FIELD LOCATED FINAL FDC LOCATION WITH AHJ
4. HANGAR IS PROTECTED BY A FLAME DETECTOR ABOVE AND BELOW WINGS (12 DETECTORS) UNITIZING VSF-300 FLAME DETECTORS
5. MODULES TO SHUT DOWN FANS
6. COORDINATE DUCT CONNECTION WITH MECHANICAL CONTRACTOR
7. FLAME DETECTOR ABOVE WING
8. FLAME DETECTOR BELOW WING

FLAME DETECTORS ABOVE AIRCRAFT MOUNTING HEIGHT AT 25'-0" AFF
FLAME DETECTORS ABOVE AIRCRAFT MOUNTING HEIGHT AT 8'0" AFF



FIRE ALARM PLAN

1/8" = 1'-0"

0' 1' 4' 8' 12' 16'

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FIRE ALARM FLOOR PLAN

FA100

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LIGHT HAZARD
0.10 GPM / 1500 SQ. FT
100 GPM HOSE
WET SYSTEM

ORDINARY GROUP 1
HAZARD
0.15 GPM / 1500 SQ. FT
250 GPM HOSE
WET SYSTEM

ORDINARY GROUP 2
HAZARD
0.20 GPM / 1500 SQ. FT
250 GPM HOSE
WET SYSTEM

GROUP I HANGAR
WET PIPE SPRINKLER
.17 GPM / 15000 SQ. FT
500 GPM HOSE &
HIGH EXPANSION FOAM 3
CUBIC FT PER MIN.
500 GPM HOSE HANGAR

SPRINKLER HAZARD

CODE ANALYSIS

OCCUPANCY S-1 Group I Hanger, OFFICE SHOPS
NUMBER OF STORIES: 1
SPRINKLER SYSTEM TYPE: WET /FOAM
NFPA 13 STANDARD OF INSTALLATION OF SPRINKLER SYSTEM: 2016
NFPA 11 STANDARD OF LOW EXPANSION FOAM: 2016
NFPA 16 STANDARD OF FOAM WATER SPRINKLER AND FOAM WATER SPRAY SYSTEMS: 2016
NFPA 20 STANDARD OF STATIONARY PUMPS FOR FIRE PROTECTION: 2016
NFPA 409 STANDARD FOR AIRCRAFT HANGARS: 2022
PORT AUTHORITY OF NY & NJ 2015 TENANT CONSTRUCTION REVIEW MANUAL
2020 NEW YORK STATE PLUMBING CODE

NEW WINDSOR BUILDING DEPARTMENT
FIRE DEPARTMENT
PORT AUTHORITY NJ NY

GENERAL NOTES:

1. IT IS ANTICIPATED THAT THE AIRPORTS WATER SUPPLY AND PRESSURE IS ADEQUATE FOR FIRE PROTECTION NEEDS FOR THIS PROJECT.
2. TERMINAL AND GSE/OFFICE SPACE DESIGN SHALL BE BASED ON LIGHT/ORDINARY HAZARD OCCUPANCY PER NFPA 13 2016. HANGAR DESIGN SHALL BE BASED ON NFPA 409 2022
3. ALL MATERIALS, FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13 AND PROJECT SPECIFICATIONS.
4. COORDINATION WITH OTHER TRADE SHALL BE DONE.
5. PROVIDE AIR VENT ON ALL WET PIPE SYSTEMS AT HIGHEST POINT OF SYSTEM. PROVIDE PRESSURE RELIEF VALVE PER NFPA 13
6. FOLLOW ALL PORT AUTHORITY OF NY & NJ AND NEW WINDSOR AIRPORT SYSTEM DESIGN MANUAL REQUIREMENTS FOR GROUNDING, SPRINKLERS AND FIRE ALARM.
7. ALL PIPING PENETRATIONS SHALL BE FIRE CAULKED AND HAVE ESCUTCHEONS ON BOTH SIDE OF PENETRATIONS
8. THE WELDING OF PIPE OR FITTINGS ON THE JOB SITE PREMISES IS PROHIBITED.
9. ALL SPRINKLERS SHALL BE INSTALLED ACCORDING TO THEIR LISTING SPACING AND OBSTRUCTION REQUIREMENTS.
10. SPRINKLER DEFLECTORS SHALL BE INSTALLED PARALLEL TO ROOF/CEILING SLOPE PER NFPA 13; 8.6.4.2.1, UNLESS OTHERWISE NOTED.
11. PIPE OR FITTINGS, AND COMPONENTS, INSTALLED IN CORROSIVE ATMOSPHERES, SUCH AS DRAIN PIPE OR HANGER ALL-THREAD ROD EXPOSED TO WEATHER CONDITIONS, SHALL BE GALVANIZED OR OTHER APPROVED CORROSION-RESISTIVE MATERIAL.
12. SPRINKLER HEAD LAYOUT AND PIPING ARE DIAGRAMMATICAL IN NATURE AND IS UP TO THE AWARDED SPRINKLER CONTRACTOR AND HYDRAULIC CALCULATIONS TO DETERMINE CORRECT SPACING AND PIPING ROUTING WITH COORDINATION WITH OTHER TRADES

HANGERS & SUPPORTS:

A. HANGER DETAILS ARE OUTLINED WITHIN THESE DRAWINGS.
B. ALL HANGERS, ASSEMBLIES, SIZES, AND SPACING SHALL BE PER NFPA 13 SEISMIC BRACING IS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 WHERE REQUIRED.
C. ALL PIPE SUPPORTS SUCH AS PIPE STANDS SHALL BE GALVANIZED.
D. PIPING LINES OF 3" TO 8" DIAMETER SHALL BE SUPPORTED FROM TWO JOISTS IF THE LINES RUN PARALLEL TO THE JOISTS.
E. PIPING LINES OF 5" THRU 8" DIAMETER SHALL BE SUPPORTED FROM EVERY JOIST, AND LINES OF 4" OR SMALLER SHALL BE SUPPORTED FROM EVERY OTHER JOIST IF THE LINES RUN PERPENDICULAR TO THE JOISTS.
F. THE HANGERS SHALL BE SUPPORTED FROM JOIST PANEL POINTS WHEREVER POSSIBLE. SEE DETAILS ON STRUCTURAL DRAWINGS FOR ADDITIONAL BRACING REQUIREMENTS WHEN THE HANGER IS LOCATED MORE THAN 6" FROM THE PANEL POINT.
G. FOR LOAD CONDITIONS NOT COVERED ABOVE, OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO FABRICATION.

SPRINKLERS:

A. PENDENT SPRINKLERS INSTALLED WITHIN ACOUSTICAL CEILING TILES SHALL BE INSTALLED "CENTER OF TILE", AND WILL BE INSTALLED IN A SYMMETRICAL PATTERN AND COORDINATED WITH CEILING FIXTURES.
B. ALL PENDENT SPRINKLER SHALL BE CONCEALED AND SHALL MATCH THE ADJACENT CEILING COLOR - SPRINKLER HEADS SHALL BE SENJU RC-QR 5.6k(MATCH ESCUTCHEON COLORS PER ARCHITECTURAL AND INTERIOR DESIGN COLORS CHOSEN)
C. ALL UPRIGHT SPRINKLERS IN MECHANICAL ROOMS, AND ELECTRICAL ROOMS SHALL HAVE HEAD GUARDS
D. QUICK RESPONSE SPRINKLERS SHALL BE USED THROUGHOUT UNLESS OTHERWISE NOTED
E. THE DESIGN SHALL GIVE FULL CONSIDERATION TO BLIND SPACES, OTHER SYSTEM PIPING, ELECTRICAL EQUIPMENT, HVAC DUCTWORK, AND ALL OTHER TYPES OF OBSTRUCTIONS WHICH COULD PREVENT THE PROPER INSTALLATION AND OPERATION OF THE SPRINKLER SYSTEM
F. WHERE CONCEALED HEADS CAN NOT BE USED VERIFY WITH GENERAL CONTRACTOR, ARCHITECT, PROJECT ENGINEERS AND OWNERS REP

PIPE:

A. ALL FIRE SUPPRESSION PIPE IS TO BE SCH. 40, STEEL, A53 FOR ALL PIPE SIZES OR EQUAL.
B. ALL PIPE IN ALL AREAS IS TO BE "BLACK" STEEL
C. ANY PIPE USED FOR DRAINS OR PIPE EXITING BUILDING WALLS SHALL BE GALVANIZED.
D. ANY GROOVED END PIPE WILL BE "ROLL" GROOVED. "CUT " GROOVE PIPING SHALL NOT BE PERMITTED.
E. PIPE SLEEVES WILL BE INSTALLED AS NECESSARY AND/OR AS INDICATED.
F. FIRE CAULKING WILL BE PERFORMED AS NECESSARY AND/OR AS INDICATED.
G. FIRE DEPARTMENT CONNECTION SHALL BE FINALIZED WITH LOCAL FIRE DEPARTMENT

FITTINGS:

A. ALL FITTINGS SHALL HAVE A STANDARD "BLACK" OR FACTORY "PAINTED FINISH", UNLESS NOTED.
B. ANY FITTINGS LOCATED OUTSIDE BUILDINGS SHALL BE "GALVANIZED"
C. THREADED FITTINGS SHALL BE BLACK CAST IRON INSIDE BUILDINGS.
D. THREADED FITTINGS LOCATED OUTSIDE BUILDINGS SHALL BE MALLEABLE IRON GALVANIZED.
E. GROOVED FITTINGS ARE TO BE EQUAL TO "VICTAULIC" STYLE PRODUCTS. UNLESS NOTED OTHERWISE.

FIRE PUMP ROOM:

A. FIRE PUMP ROOM SHALL BE PROTECTED AS ORDINARY II
B. SHALL HAVE 2 HOUR RATED WALLS
C. MAINTAIN MINIMUM 40°
D. UNLESS THE REQUIREMENTS OF 4.19.2 THROUGH 4.19.4 ARE MET, WHERE PIPE PASSES THROUGH WALLS, CEILINGS, OR FLOORS OF THE FIRE PUMP ROOM ENCLOSURE, THE HOLES SHALL BE SIZED SUCH THAT THE DIAMETER OF THE HOLE IS NOMINALLY 2 IN. (50 MM) LARGER THAN THE PIPE.

UNDERGROUND NOTES:

A. ALL MATERIALS, TESTING, METHOD OF RESTRAINT, & INSPECTION SHALL CONFORM TO THE REQUIREMENTS OF NFPA 13 & 24.
B. FITTING RESTRAINTS, THRUST BLOCKS, AND RODDING SHALL CONFORM TO NFPA 24. THRUST BLOCKS SHALL BE DESIGNED FOR A 1500 PSF SOIL BEARING CAPACITY AND 200 PSI TEST PRESSURE.
C. ALL UNDERGROUND PIPING SHALL BE ADEQUATELY SUPPORTED. ALL UNDERGROUND PIPING SHALL BE BURIED AT LEAST 12 INCHES BELOW THE AVERAGE LOCAL FROST DEPTH OR A MINIMUM OF 36 INCHES BELOW FINISH GRADE, IF FROST IS NOT APPLICABLE. (SUPPLY PIPE TO PUMP SHALL BE BURIED A MINIMUM OF 8' BELOW GRADE.)
D. ALL WATER LINES FOR FIRE SPRINKLER SYSTEMS SHALL BE TESTED AT 200 PSI FOR TWO (2) HOURS MINIMUM.
E. ALL EXTERIOR MATERIALS SHALL BE PROPERLY PROTECTED AGAINST EXPOSURE.
F. ALL WIRING BY OTHERS.
G. UNDERGROUND PIPING SHALL BE FLUSHED AS PER NFPA 24 BEFORE CONNECTING TO THE OVERHEAD FIRE SPRINKLER PIPING.
H. COMPLY WITH ALL LOCAL CODE REQUIREMENTS PRIOR TO CONNECTION TO THE FIRE SERVICE WATER SYSTEM.

GENERAL NOTES

FIRE SPRINKLER PROJECT SCOPE NARRATIVE

THIS PROJECT CONSISTS OF PROVIDING AND INSTALLING A FIRE PROTECTION SYSTEM FOR A NEW HANGAR AND ATTACHED OFFICE SPACES

THIS PROJECT CONSISTS OF PROVIDING AND INSTALLING A FIRE PROTECTION SYSTEM FOR 2 NEW AIRCRAFT STORAGE HANGARS AND ASSOCIATED OFFICES INCLUDING 2 - UL/FM LISTED ELECTRIC FIRE PUMPS RATED AT 2000 GPM AT 80 PSI PRESSURE BOOST IN ACCORDANCE WITH NFPA 20 2016.

SYSTEM SHALL BE FED FROM A 16" SERVICE LINE FROM A CITY WATER MAIN TO THE FIRE PUMP ROOM.

THE BASIS OF THE DESIGN IS CALCULATING THE OVERHEAD WET SYSTEM AT .17 GPM/SQ. FT /15,000 SQ FT IN, AND CALCULATING THE FOAM SYSTEM AREA

THE FIRE PUMPS SHALL BE PROVIDED WITH AUTOMATIC SEQUENTIAL STARTING
INSTALLATION OF A NEW WET CMDA SYSTEM IN THE OFFICE AND AUXILIARY AREAS, A NEW WET SUPPRESSION SYSTEM IN THE HANGAR AREA IN ACCORDANCE WITH NFPA 409 2022 FOR A GROUP I HANGAR SECTION 6.1, 8.2.4, WHICH INCLUDES A WET PIPE OVERHEAD SYSTEM DESIGNED FOR A DENSITY OF .17 GPM/SF OVER 15,000 SQUARE FEET. SPRINKLERS TO BE QUICK RESPONSE K5.6 OR K8.0 AND HAVING A TEMPERATURE RATING OF 175 DEGREE F. QUICK-RESPONSE SPRINKLERS HAVING A TEMPERATURE RATING OF 93.3°C (200°F) SHALL BE PERMITTED IN AREAS SUBJECT TO HIGH AMBIENT TEMPERATURES.

AN AUTOMATIC HIGH EXPANSION FOAM SYSTEM IN ACCORDANCE WITH NFPA 409 UTILIZING A BLADDER TANK SYSTEM WITH PROPORTIONER AND HEF GENERATORS WITH A MINIMUM APPLICATION RATE OF 3 CUBIC FEET PER MINUTE PER SQUARE FOOT FOR A MINIMUM OF 12 MINUTES, UTILIZE A HOSE STREAM ALLOWANCE OF 500 GPM AT SOURCE.

CLOSED-HEAD WATER SPRINKLER SYSTEMS AND LOW-LEVEL FOAM PROTECTION SYSTEMS. THE WATER SUPPLY FOR THE COMBINATION OF CLOSED-HEAD WATER SPRINKLER SYSTEMS AND LOW-LEVEL FOAM PROTECTION SYSTEMS SHALL HAVE A MINIMUM DURATION OF 45 MINUTES.

FOAM GENERATORS ARE ANTICIPATED TO USE OUTSIDE AIR,
CEILING GENERATORS ARE PREFERRED. VIKING CURB STYLE AND ROOF VENT SHALL BE USED

PER NFPA 409 SECTION 5.6 THE BUILDINGS VERTICAL STRUCTURAL STEEL MEMBERS SHALL BE PROTECTED BY DISCHARGE DEVICES AND PIPING OF SUCH SIZE AND ARRANGEMENT AS TO DISCHARGE A NET RATE OF NOT LESS THAN 0.25 GPM/FT2 OVER THE WETTED AREA. IF HEADS ARE WITHIN CALCULATED REMOTE AREA HEADS MUST BE INCLUDED. HEADS SHALL BE DESIGNED AND INSTALLED ON OPPOSITE SIDE OF BEAMS 10'-0 APART.

DRAFT STOPS ARE REQUIRED IN GROUP 1 HANGARS PER NFPA 409 5.17 - SEE ARCHITECTURAL DRAWINGS

HIGH EXPANSION FOAM NARRATIVE

HIGH EXPANSION FOAM FOR HANGAR IN ACCORDANCE WITH NFPA 409 2022.
APPLICATION RATE TO BE A PER 8.2.5.4. MINIMUM OF 3 CUBIC FEET/MINUTE/SF
UTILIZE 3% XMAX CONCENTRATE AT MINIMUM 12 MINUTE DURATION AND PER 6.2.10.4 CLOSED-HEAD WATER SPRINKLER SYSTEMS AND LOW-LEVEL FOAM PROTECTION SYSTEMS.
THE WATER SUPPLY FOR THE COMBINATION OF CLOSED-HEAD WATER SPRINKLER SYSTEMS AND LOW-LEVEL FOAM PROTECTION SYSTEMS SHALL HAVE A MINIMUM DURATION OF 45 MINUTES.

PER NFPA 409 SECTION 8.2.9.1 PLACE 2 HAND HELD FOAM WATER HOSE LINES AT 60 GPM EACH FOR 20 MINUTE DURATION - 3% AFFF. A FLUORINE FREE FOAM CONCENTRATE (USP- SFFF) FIELD LOCATED ON EACH SIDE OF HANGAR ALLOWING THE HAND HOSE SYSTEMS SHALL BE ARRANGED TO PERMIT APPLICATION OF WATER OR OTHER EXTINGUISHING AGENTS ON EACH SIDE AND INTO THE INTERIOR OF THE AIRCRAFT LOCATED IN EACH AIRCRAFT STORAGE AND SERVICING AREA. AT LEAST TWO HOSE LINES SHALL BE DESIGNED TO BE OPERATED SIMULTANEOUSLY.-FIELD LOCATED

SYSTEM VALVE SHALL BE FLOW CONTROL TYPE TO ALLOW FOR AN ABORT SWITCH TO STOP THE HEF DISCHARGE.

SYSTEM SHALL ACHIEVE COVERAGE OF ENTIRE AIRCRAFT STORAGE AND SERVICING AREA TO WITHIN 5 FEET OF THE PERIMETER WALLS AND DOORS WITHIN 3 MINUTES OF SYSTEM ACTUATION.

EQUIPMENT NARRATIVE

2 - 2000 GPM AT 80 PSI ELECTRIC FIRE PUMPS. PUMPS STARTED AUTOMATICALLY BY EITHER A DROP IN PRESSURE OR SIGNAL FROM DETECTION CONTROL PANEL.
JOCKEY MAINTENANCE PUMP TO BE PROVIDED TO MAINTAIN PRESSURE IN SYSTEM.
NO HIGH PILED STORAGE OR HAZARDOUS MATERIALS IN SHOP/GARAGE AREAS
ACROSS THE LINE SOFT START - REDUCE VOLTAGE CONTROLLERS WITH TRANSFER SWITCH
JOCKEY PUMP 25 GPM @ 130 PSI 7.5 - 15HP

DESIGN CRITERIA PER NFPA 13 2016 ED., NFPA 409 2022, AND LOCAL AHJ REQUIREMENTS. COORDINATE UNDERGROUND FIRE LINE FOR FIRE PROTECTION WITH CIVIL DRAWINGS.

QUICK RESPONSE SPRINKLER HEADS SHALL BE USED FOR ALL AREAS PER NFPA 13. ALL TEMPERATURES AND SPRINKLER RESPONSE, AND K-FACTORS SHALL BE PER NFPA 13 AND NFPA 409
MAX SPACING PENDENTS = 225 SQ. FT.
MAX SPACING UPRIGHTS (LIGHT HAZARD) = 225 SQ. FT.
MAX SPACING SIDEWALL = PER 8.7.2.2.1
MAX SPACING UPRIGHTS (ORDINARY HAZARD) = 130 SQ. FT.
PROVIDE SPACING FOR HANGAR PER NFPA 409 CHAPTER 6.

DESIGN IS BASED USING VIKING GENERATORS @ 60 PSI AND 185 GPM (16669 CFM) DESIGN BASED ON HAVING 1 8" FLOW CONTROL VALVE AND 8 (PAIRED) FOAM GENERATORS.

- FOAM TO BE XMAX 3% CONCENTRATE
- SYSTEM ACTIVATION THROUGH CROSS ZONE FLAME DETECTION.
- DETECTION WITH WATER FLOW OF OVERHEAD SYSTEM.
- REPLACEMENT SUPPLY FOAM SHALL BE STORED ON SITE.
- FOAM CONCENTRATE PIPING GOING TO AND FROM TANK TO BE STAINLESS STEEL AS REQUIRED BY NFPA 409.
- CONTAINMENT TANK SEE CIVIL DRAWINGS & MECHANICAL DRAWINGS
- GENERATORS PROVIDE 1 FOOT PER SECOND PER GENERATOR OF FOAM COVERAGE ON THE HANGAR FLOOR - PER CUT SHEET

CONTACT ROBERT L COONTS, SET, CFI-I, GENERAL MANAGER - SPECIAL HAZARDS PORTFOLIO
EMAIL: BOB COONTS RCOONTS@VIKINGCORP.COM
OR
JOSHUA OVERHOLT - MS, CFPS, SPECIAL HAZARDS PRODUCT MANAGER @ 269-945-8230
EMAIL: JOVERHOLT@VIKINGCORP.COM

SPRINKLER HEAD LEGEND

SYM	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	LOCATION	LOCATION
◉	PEND	WHITE	155	5.60	1/2"	VK4621	VIKING	VK4621	OFFICE	CONCEALED
◎	UPR	BRASS	175	5.60	1/2"	VK3001	VIKING	VK3001	PUMP RM / PARTS	EXPOSED
⊠	UPR	BRASS	175	5.60/8.0	1/2"	VK3001	VIKING	VK3001	HANGAR	EXPOSED

OR EQUIVALENT

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HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL
STATE OF NEW YORK · ROLAND ALLAN SEAL · 100852 · LICENSED PROFESSIONAL ENGINEER
06/28/2024

REVISIONS

MARK	DESCRIPTION	DATE
1	PERMIT COMMENTS	6/28/2024

SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: June 12th, 2024
COMM. NO.: 23715

DRAWN BY: BE CHECKED BY: KM

FIRE PROTECTION
NOTES AND DETAILS

FP001

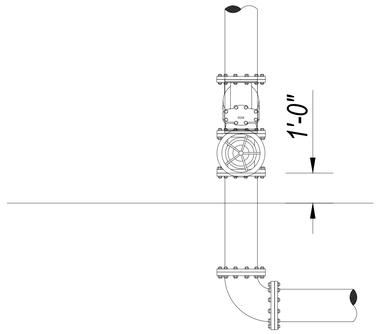
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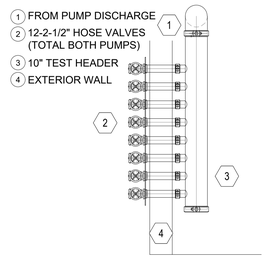
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1. HANGAR 1 WET PIPE SYSTEM
2. HANGAR 1 FOAM
3. HANGAR 1 OFFICE SPACE

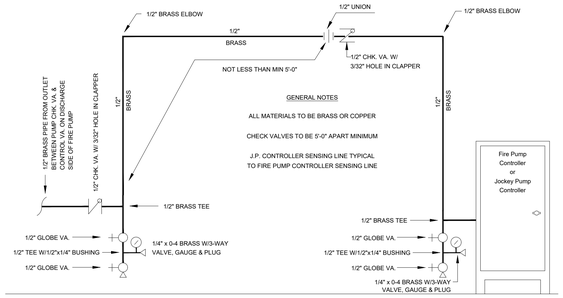
COORDINATE WITH FIRE ALARM CONTRACTOR

PROPOSED ZONE LIST



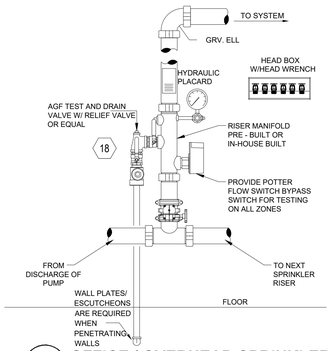


FIRE PUMP TEST HEADERS



FIRE PUMP / JOCKEY PUMP CONTROLLER SCHEMATIC

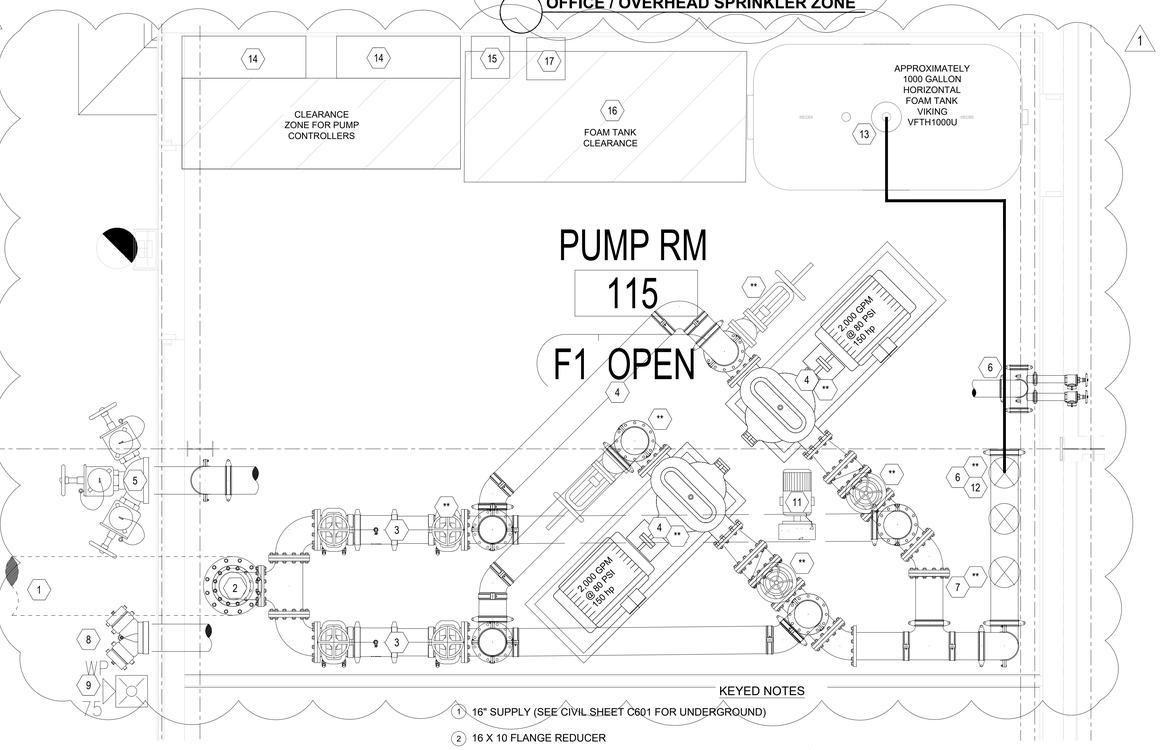
N.T.S.



OFFICE / OVERHEAD SPRINKLER ZONE

SPRINKLER HEAD LEGEND

SYM	POSITION	FINISH	TEMP	K	NPT	S/N	MFG	MODEL#	LOCATION	LOCATION
	PEND	WHITE	155	5.60	1/2"	VK4621	VIKING	VK4621	OFFICE	CONCEALED
	UPR	BRASS	175	5.60	1/2"	VK3001	VIKING	VK3001	PUMP RM / PARTS	EXPOSED
	UPR	BRASS	175	5.60/8.0	1/2"	VK3001	VIKING	VK3001	HANGAR	EXPOSED
								OR EQUIVALENT		



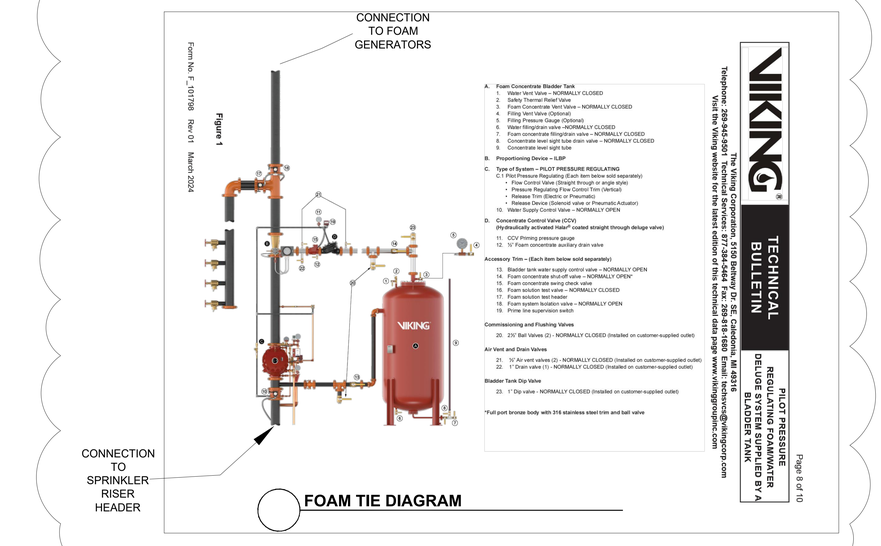
PUMP ROOM LAYOUT

** PROVIDE FIRE ALARM CONNECTION FLOW SWITCH AND TAMPERS ON ALL VALVES

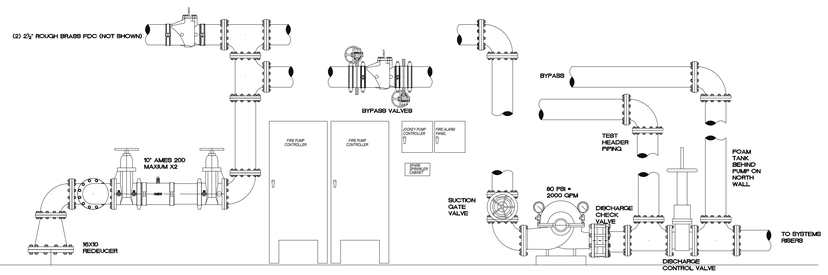
KEYED NOTES

1. 16" SUPPLY (SEE CIVIL SHEET C601 FOR UNDERGROUND)
2. 16 X 10 FLANGE REDUCER
3. 2 - 10" AMES M200 BACKFLOW PREVENTOR
4. 2-ELECTRICAL FIRE PUMPS - 80 psi @ 2000 gpm - 480V, 150HP/300HP, 10x8x16A SSC - SOFT START - REDUCE VOLTAGE START
5. FIRE PUMP TEST HEADERS - 12-2-1/2" HOSE VALVES (MINIMUM 8" TEST HEADER)
6. FOAM SYSTEM TEST HEADER
7. WET SYSTEMS TO OFFICE
8. FIRE DEPARTMENT CONNECTION - AHJ TO APPROVE FINAL LOCATION - 6-WAY FLUSH MOUNT
9. OUTSIDE HORN/STROBE BY OTHERS - ABOVE FDC
10. OVERHEAD WET SPRINKLER SYSTEM HANGARS
11. JOCKEY PUMP - 208-230/460 VOLT 25 GPM 130 PSI 7.5-10HP
12. 8" VIKING FLOW CONTROL VALVE FOR FOAM SYSTEM 1 PER HANGAR
13. FOAM BLADDER TANK - HORIZONTAL
14. 2- FIRE PUMP CONTROLLERS - WITH TRANSFER SWITCH - MASTER CONTROL
15. JOCKEY PUMP CONTROLLER
16. CLEARANCE ZONE FOR BLADDER TANK
17. FIRE ALARM PANEL

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FOAM TIE DIAGRAM



FIRE PUMP ELEVATION VIEW

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HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL



06/28/2024

REVISIONS

MARK	DESCRIPTION	DATE
1	PERMIT COMMENTS	6/28/2024

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: June 12th, 2024
COMM. NO.: 23715

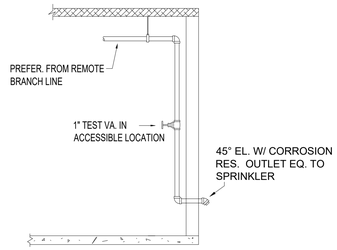
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FIRE PROTECTION NOTES AND DETAILS

FP002

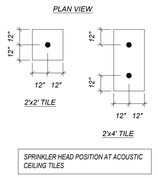
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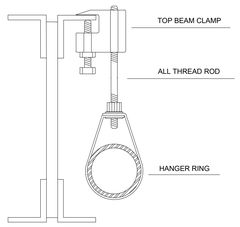


WET PIPE SYSTEM TEST CONNECTION

AUX DRAIN/ TEST CONNECTION

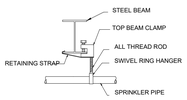


SPRINKLER HEAD POSITION



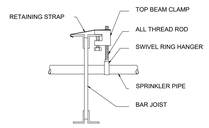
MAXIMUM DISTANCE BETWEEN HANGERS							
NOMINAL PIPE	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
STEEL PIPE EXCEPT THREADED LIGHTWALL	12-0	12-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	12-0	12-0	12-0	12-0	N/A	N/A	N/A

HANGER DETAIL



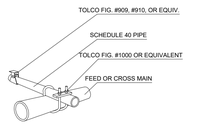
TYPICAL HANGER DETAIL

NOT TO SCALE



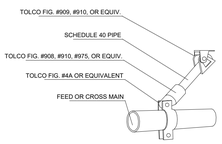
TYPICAL HANGER DETAIL

NOT TO SCALE



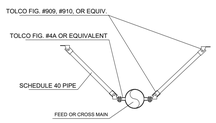
LATERAL SWAY BRACE

NOT TO SCALE



LONGITUDINAL SWAY BRACE

NOT TO SCALE



PLAN VIEW FOUR-WAY BRACE

NOT TO SCALE

EARTHQUAKE PROTECTION NOTES

1. ALL EARTHQUAKE BRACING TO BE IN ACCORDANCE WITH NFPA-13.
2. LISTED FLEXIBLE COUPLINGS SHALL ONLY BE INSTALLED WHERE REQUIRED BY NFPA-13.
3. FLEXIBLE COUPLING SHALL BE LOCATED IN ACCORDANCE WITH NFPA-13 AS FOLLOWS:

A. WITHIN 24" OF THE TOP AND BOTTOM OF ALL RISERS.
B. WITHIN 12" ABOVE AND 24" BELOW FLOORS IN MULTISTORY BUILDINGS.
C. WITHIN 1 FOOT OF ALL CONCRETE AND MASONARY WALL PENETRATIONS UNLESS CLEARANCE IS PROVIDED PER 9.3.4.
D. WITHIN 24" OF BUILDING EXPANSION JOINTS.
E. WITHIN 24" OF THE TOP OF DROPS EXCEEDING 15 FEET IN LENGTH TO PORTIONS OF SYSTEMS SUPPLYING MORE THEN ONE SPRINKLER, REGARDLESS OF PIPE SIZE.
F. ABOVE AND BELOW ANY INTERMEDIATE POINTS OF SUPPORT FOR A RISER OR OTHER VERTICAL PIPE.

4. CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING EXTENDED THROUGH WALLS, FLOORS, PLATFORMS, AND FOUNDATIONS, INCLUDING DRAINS, FIRE DEPARTMENT CONNECTIONS, AND OTHER AUXILIARY PIPING PER 9.3.4 OR FLEXIBLE COUPLINGS SHALL BE PROVIDED.
5. LONGITUDINAL SWAY BRACING SPACED AT A MAXIMUM OF 80 FEET SHALL BE PROVIDED FOR FEED AND CROSS MAINS AND NOT MORE THAN 40' FROM THE END.
6. TOPS OF RISERS OVER 3 FEET SHALL BE SECURED AGAINST DRIFTING IN ANY DIRECTION UTILIZING A FOUR-WAY BRACE.
7. LATERAL SWAY BRACING SPACED AT A MAXIMUM OF 40 FEET SHALL BE PROVIDED FOR FEED AND CROSS MAINS AND NOT MORE THAN 6 FEET FROM THE END. (NOT REQUIRED WHEN RODS ARE LESS THEN 6 IN. LONG)
8. BRACING SHALL BE ATTACHED DIRECTLY TO FEED AND CROSS MAINS.
9. THE LAST LENGTH OF PIPE AT THE END OF FEED OR CROSS MAIN SHALL BE PROVIDED WITH A LATERAL BRACE. LATERAL BRACES SHALL BE ALLOWED TO ACT AS LONGITUDINAL BRACES IF THEY ARE WITHIN 24 INCHES OF THE CENTERLINE OF THE PIPING BRACED.
10. SWAY BRACING IS NOT REQUIRED FOR BRANCH LINES 2" AND SMALLER.
11. THE END SPRINKLER ON EACH BRANCH LINE SHALL BE RESTRAINED AGAINST EXCESSIVE MOVEMENT BY APPROVED MEANS.
12. C-TYPE CLAMPS (INCLUDING BEAM AND LARGE FLANGE CLAMPS), WITH OR WITHOUT RETAINING STRAPS, SHALL NOT BE USED TO ATTACH BRACES TO THE BUILDING STRUCTURE.

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1

STATIC 86 PSI
RESIDUAL 85 PSI
FLOW 1350 GPM
10% REDUCTION
STATIC 77.40 PSI
RESIDUAL 76.40 PSI
FLOW 1430 GPM

10% SAFETY REQUIRED ON ALL SYSTEMS

FLOW TEST IS FROM JAN. 2024 AND USED FOR ESTIMATION PURPOSES ONLY

HYDRANT FLOW TEST

MINIMUM SPRINKLER WATER SUPPLY REQUIREMENTS
15000 SQ.FT. x .17 GPM/SQ.FT (2550 gpm)+ PRESS BALANCE (20%) = 3,060.00 GPM
OVERHEAD FOAM GENERATOR (2220) + 10% WATER PRESS BALANCE = 2,442.00 GPM
TOTAL WATER DEMAND = 5,502.00 GPM

HYDRAULIC CALCULATIONS ESTIMATES ARE BASED ON A JAN 2024 FIRE HYDRANT FLOW TEST

CONTAINMENT FOR 12 MINUTES = 66,024 GALLONS

.17 OVER 15000 SF IS MINIMUM FLOW OF 2,550 GPM, ADD 20% FOR OVERAGE, OR 3,060 GPM

FOAM 2,442 GPM @ 60 PSI

OVERHEAD AND FOAM COMBINED MINIMUM FLOW OF 5,247 GPM

END HEAD PRESSURE IS 9.22 PSI (100 X .17/5.6)2
VALVE LOSS = 5.5 PSI
ELEVATION 50' X .433 = 21.65 PSI
FOAM PRESSURE = 60 PSI
UG LOSS = 12 PSI

TOTAL FIXED LOSSES 110 PSI

2-80 PSI 2500 GPM FIRE PUMP WILL BE REQUIRED

FIRE PROTECTION DESIGN ESTIMATE INFORMATION - OVERHEAD WET WITH HEF

MINIMUM SPRINKLER WATER SUPPLY REQUIREMENTS
15000 SQ.FT. x .17 GPM/SQ.FT (2550 gpm) = 3,060.00 GPM (45 MIN =137700)
HAND HOSE LINES (2400gpm) = 2,400.00 gallons
GULFSTREAM G550 - fuel (6600gal) = 6,600.00 gallons
OVERHEAD FOAM GENERATOR (2220 gpm) =2442.00 GPM - (12 MIN = 29,304)
TOTAL WATER DEMAND = 176,004 GALLONS OF CONTAINMENT

DEPENDENT ON ACTUAL FLOWS FROM ACTUAL FIRE SPRINKLER SHOP DRAWINGS BY INSTALLING CONTRACTOR

ESTIMATED ANTICIPATED CONTAINMENT TANK CALCULATION

HDg
Architecture
127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000

SEAL



06/28/2024

REVISIONS		
MARK	DESCRIPTION	DATE
1	PERMIT COMMENTS	6/28/2024

SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE AVIATION

SIGNATURE FLIGHT SUPPORT
13485 Veteran's Way Suite 600
Orlando, FL 32827

ISSUE DATE: June 12th, 2024
COMM. NO.: 23715

DRAWN BY: BE CHECKED BY: KM

FIRE PROTECTION
NOTES AND DETAILS

FP003

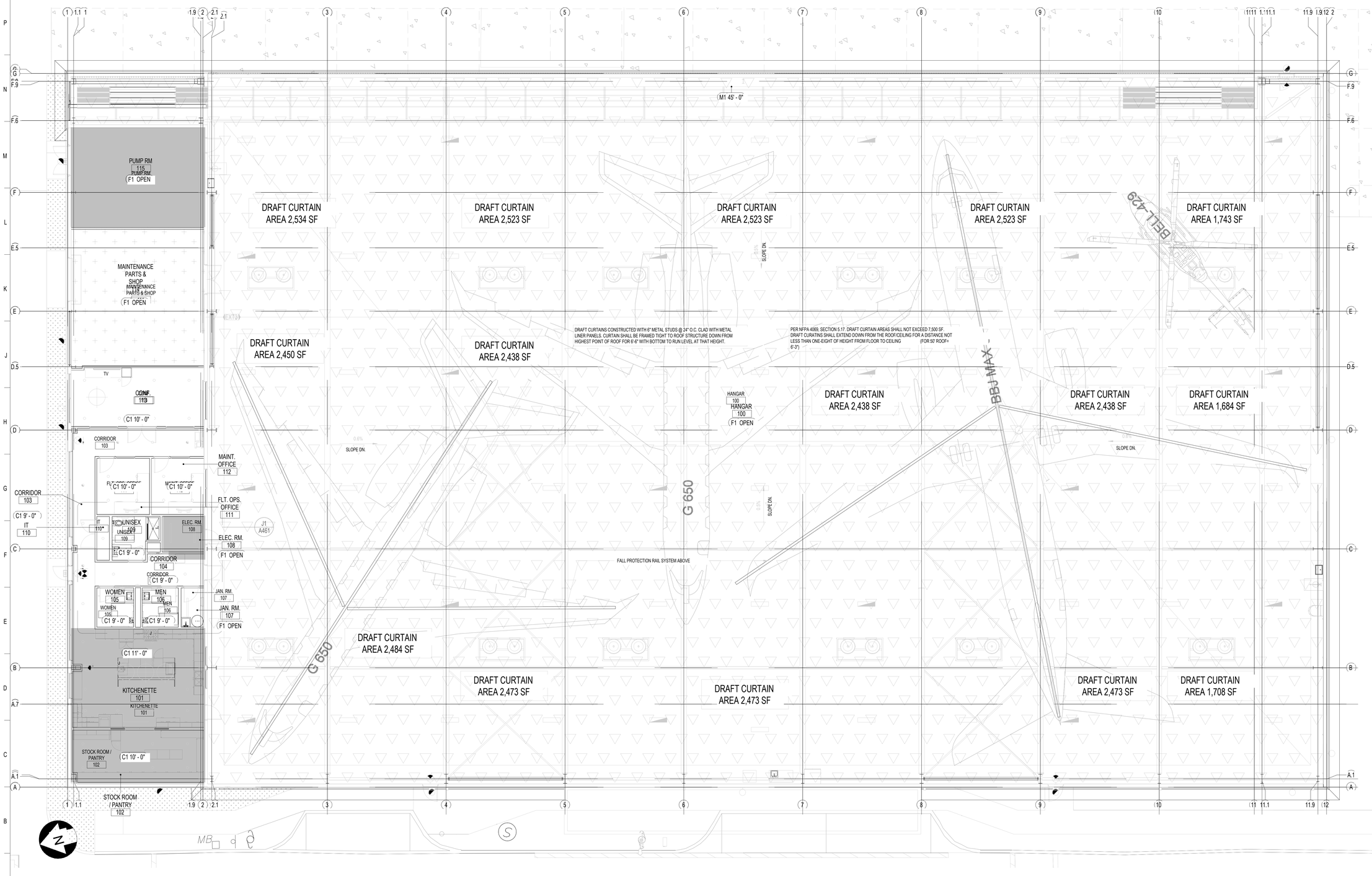
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THE BIDDING CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE COMPLEXITIES OF THIS BUILDING. THESE DRAWINGS ARE DIAGRAMMATIC ONLY. THE AWARDED CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCTION OF ALL DESIGN AND SUBMITTAL DOCUMENTS AND OBTAINING ALL REQUIRED PERMITS AND APPROVALS .

SPRINKLER HAZARD LEGEND

- LIGHT HAZARD .10 GPM / 1500 SQ. FT 100 GPM HOSE WET SYSTEM
- ORDINARY GROUP 1 HAZARD .15 GPM / 1500 SQ. FT 250 GPM HOSE WET SYSTEM
- ORDINARY GROUP 2 HAZARD .20 GPM / 1500 SQ. FT 250 GPM HOSE WET SYSTEM
- GROUP I HANGAR WET PIPE SPRINKLER .17 GPM / 15000 SQ. FT 500 GPM HOSE & HIGH EXPANSION FOAM 3 CUBIC FT PER MIN. 500 GPM HOSE HANGAR



FIRE SPRINKLER HAZARD PLAN

1/8" = 1'-0"

0' 1' 4' 8' 12' 16'

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STATE OF NEW YORK · ROLAND ALLAN PEAK · 100852 · LICENSED PROFESSIONAL ENGINEER

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FIRE PROTECTION HAZARD PLAN

FP200

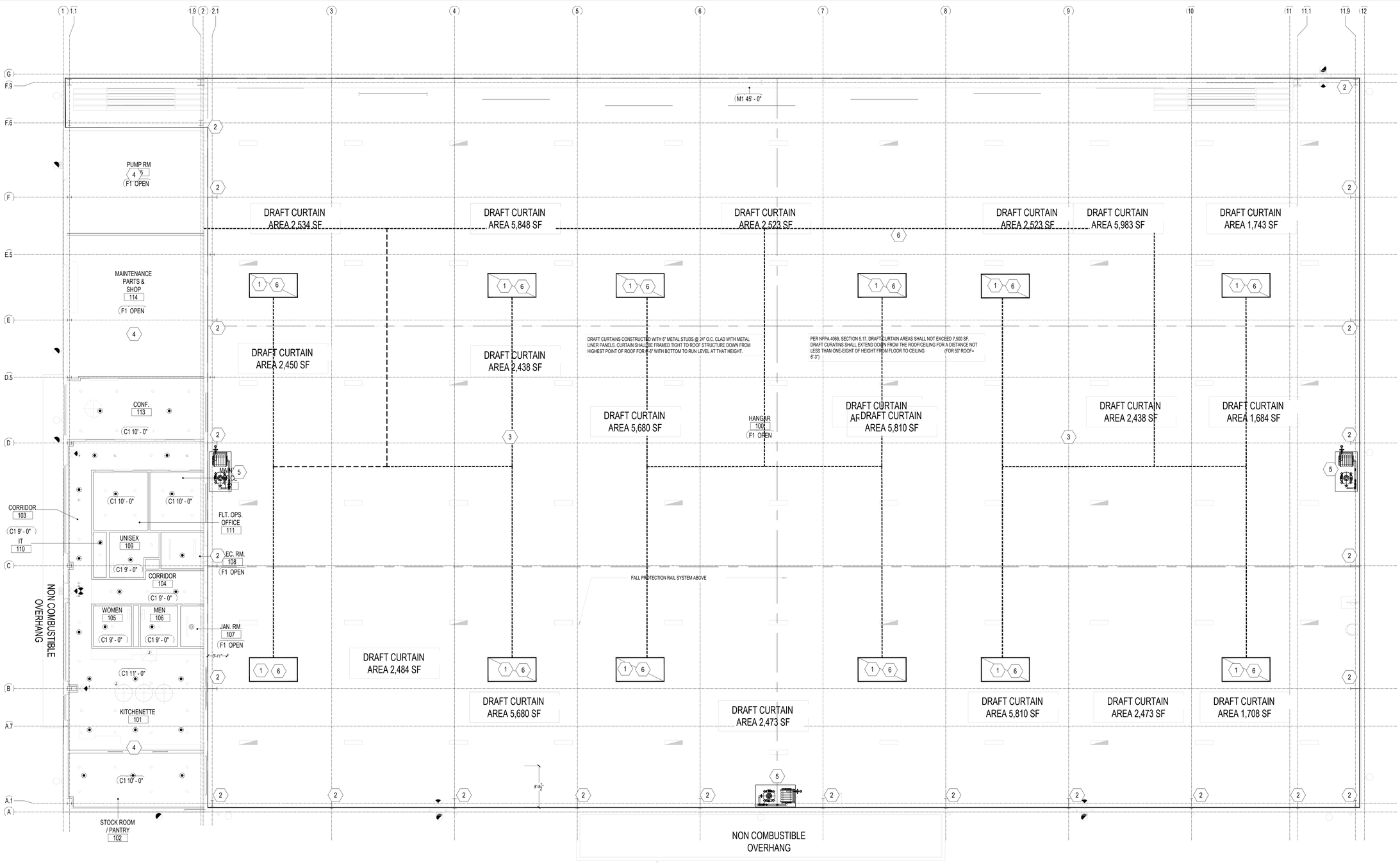
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KEYNOTE

1. THE HEF GENERATOR LOCATIONS ARE COORDINATED WITH STRUCTURAL, MECHANICAL, ARCHITECT AND GC.
2. PROVIDE COLUMN PROTECTION PER NFPA 409
3. COORDINATE SPACING WITH HVLS FANS - CONTRACTOR TO DO FINAL COORDINATION WITH GENERAL CONTRACTOR AND HVLS CONTRACTOR TO ENSURE ARE CENTERED APPROXIMATELY BETWEEN 4 SPRINKLER HEADS PER NFPA 13 19.2.7.
4. OFFICE SYSTEM SHALL BE ON A SEPARATE ZONE
5. FOAM HAND HELD LINES
6. HEF FOAM GENERATORS - MODEL VGH10000 - PAIRED - PIPING PLAN COORDINATED WITH STRUCTURE



FIRE SPRINKLER PLAN

1/8" = 1'-0"

0' 1' 4' 8' 12' 16'

SPRINKLER HEAD LEGEND

SYM	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	LOCATION	LOCATION
◉	PEND	WHITE	155	5.60	1/2"	VK4621	VIKING	VK4621	OFFICE	CONCEALED
◎	UPR	BRASS	175	5.60	1/2"	VK3001	VIKING	VK3001	PUMP RM / PARTS	EXPOSED
▩	UPR	BRASS	175	5.60/8.0	1/2"	VK3001	VIKING OR EQUIVALENT	VK3001	HANGAR	EXPOSED

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