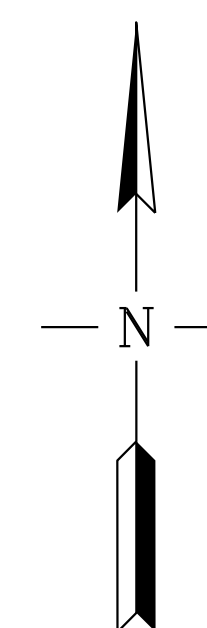


# MISSOULA, MONTANA MISSOULA INTERNATIONAL AIRPORT SSWC NEW CONSTRUCTION AND SITE IMPROVEMENTS

WORK LOCATION  
GPS COORDINATES  
46.938N, -114.119W



VICINITY MAP  
SCALE: N.T.S.

**PARSONS**

PTSI Managed Services Inc.  
955 L'ENFANT Plaza  
North, SW Suite 6100  
Washington, DC 20024  
202-651-2500  
202-488-0284 (Fax)



RELEASED FOR:  
CONSTRUCTION - 6-1-2019

TO BE USED FOR PERMITTING,  
CONSTRUCTION, OR BIDDING

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA</b>					
<b>ADM</b> <b>COVER SHEET</b> <b>&amp; VICINITY MAP</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	1705928
	ENGINEERING SERVICES				REV
DRAWN	NAVAIDS	DRAWING NO	MSO-D-ADM-G001		
CHECKED					

microstationg001.dgn  
 4/26/2019 4:46:48 PM  
 Bzozna CTR Kozak

ISSUED FOR: CONSTRUCTION  
 EDM: mso-d-adm-g001.dgn

DRAWING NUMBER

DRAWING TITLE

GENERAL DRAWINGS

MSO-D-ADM-G001	ADM COVER SHEET & VICINITY MAP
MSO-D-ADM-G002	ADM DRAWING INDEX
MSO-D-ADM-G003	ADM CODE ANALYSIS AND GENERAL CONSTRUCTION NOTES

CIVIL DRAWINGS

MSO-D-ADM-C001	ADM CIVIL NOTES
MSO-D-ADM-C002	ADM DEMOLITION SITE PLAN
MSO-D-ADM-C003	ADM PROPOSED SITE PLAN
MSO-D-ADM-C004	ADM ACCESS ROAD PROFILE & SECTIONS
MSO-D-ADM-C005	ADM ENLARGED PARKING LOT LAYOUT & LANDSCAPING PLAN
MSO-D-ADM-C006	ADM GRADING & SEDIMENT CONTROL PLAN
MSO-D-ADM-C007	ADM CIVIL DETAILS SHEET 1 OF 6
MSO-D-ADM-C008	ADM CIVIL DETAILS SHEET 2 OF 6
MSO-D-ADM-C009	ADM CIVIL DETAILS SHEET 3 OF 6
MSO-D-ADM-C010	ADM CIVIL DETAILS SHEET 4 OF 6
MSO-D-ADM-C011	ADM CIVIL DETAILS SHEET 5 OF 6
MSO-D-ADM-C012	ADM CIVIL DETAILS SHEET 6 OF 6

ARCHITECTURAL DRAWINGS

MSO-D-ADM-A001	ADM ARCHITECTURAL ABBREVIATIONS & LEGEND
MSO-D-ADM-A002	ADM GENERAL ACCESSIBILITY COMPLIANCE NOTES
MSO-D-ADM-A003	ADM GENERAL ACCESSIBILITY COMPLIANCE NOTES CONTINUED
MSO-D-ADM-A004	ADM ARCHITECTURAL DETAILS
MSO-D-ADM-A005	ADM FLOOR PLAN
MSO-D-ADM-A006	ADM EAST ELEVATION WEST ELEVATION
MSO-D-ADM-A007	ADM NORTH ELEVATION SOUTH ELEVATION
MSO-D-ADM-A008	ADM ARCHITECTURAL ROOF PLAN
MSO-D-ADM-A009	ADM BUILDING SECTION A
MSO-D-ADM-A010	ADM BUILDING SECTIONS B & C
MSO-D-ADM-A011	ADM WALL SECTIONS
MSO-D-ADM-A012	ADM WALL DETAILS
MSO-D-ADM-A013	ADM FURNITURE LAYOUT PLAN
MSO-D-ADM-A014	ADM FINISH ROOM SCHEDULES
MSO-D-ADM-A015	ADM HEAD AND JAMB SILL OPENING DETAILS
MSO-D-ADM-A016	ADM INTERIOR ELEVATIONS
MSO-D-ADM-A017	ADM FLOOR FINISHES PLAN
MSO-D-ADM-A018	ADM REFLECTED CEILING PLAN
MSO-D-ADM-A019	ADM ROOF DETAILS
MSO-D-ADM-A020	ADM PANEL DETAILS @ COLUMNS
MSO-D-ADM-A021	ADM OVERHEAD DOOR OPENING DETAILS

DRAWING NUMBER

DRAWING TITLE

STRUCTURAL DRAWINGS

MSO-D-ADM-S001	ADM STRUCTURAL GENERAL NOTES
MSO-D-ADM-S002	ADM WIND ZONE DIAGRAMS
MSO-D-ADM-S100	ADM FOUNDATION PLAN AND GROUND FLOOR
MSO-D-ADM-S101	ADM SLAB ON GOUND & FOOTING SECTIONS & DETAILS
MSO-D-ADM-S200	ADM COLUMN LAYOUT PLAN
MSO-D-ADM-S201	ADM BUILDING COLUMN ANCHOR BOLT DETAILS
MSO-D-ADM-S202	ADM FRAMING ELEVATION PART 1
MSO-D-ADM-S203	ADM FRAMING ELEVATION PART 2
MSO-D-ADM-S204	ADM BUILDING FLOOR PLAN
MSO-D-ADM-S205	ADM STRUCTURAL WALL SECTIONS
MSO-D-ADM-S300	ADM ROOF FRAMING PLAN
MSO-D-ADM-S400	ADM MISCELLANEOUS SECTIONS AND DETAILS SHEET 1 OF 3
MSO-D-ADM-S401	ADM MISCELLANEOUS SECTIONS AND DETAILS SHEET 2 OF 3
MSO-D-ADM-S402	ADM MISCELLANEOUS SECTIONS AND DETAILS SHEET 3 OF 3

MECHANICAL DRAWINGS

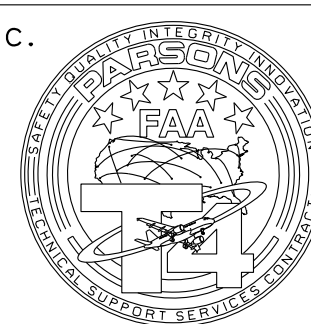
MSO-D-ADM-M001	ADM MECHANICAL NOTES AND LEGEND
MSO-D-ADM-M002	ADM HVAC FLOOR PLAN
MSO-D-ADM-M003	ADM MECHANICAL SCHEDULES
MSO-D-ADM-M004	ADM MECHANICAL DETAILS
MSO-D-ADM-M005	ADM MECHANICAL DETAILS
MSO-D-ADM-M006	ADM HVAC CONTROLS

PLUMBING DRAWINGS

MSO-D-ADM-P001	ADM PLUMBING SYMBOLS AND GENERAL NOTES
MSO-D-ADM-P002	ADM PLUMBING FLOOR PLAN
MSO-D-ADM-P003	ADM PLUMBING SCHEDULES AND CALCULATIONS
MSO-D-ADM-P004	ADM PLUMBING DETAILS

ELECTRICAL DRAWINGS

MSO-D-ADM-E001	ADM ELECTRICAL NOTES
MSO-D-ADM-E002	ADM ELECTRICAL DETAILS
MSO-D-ADM-E003	ADM ELECTRICAL SITE PLAN
MSO-D-ADM-E004	ADM ELECTRICAL LIGHTING PLAN
MSO-D-ADM-E005	ADM POWER PLAN
MSO-D-ADM-E006	ADM ELECRICAL RISER @ PANEL SCHEDULES

<b>PARSONS</b>					
PTSI Managed Services Inc. 955 L'ENFANT Plaza North, SW Suite 6100 Washington, DC 20024 202-651-2500 202-488-0284 (Fax)					
RELEASED FOR: <b>CONSTRUCTION - 6-1-2019</b>		DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b>		WESTERN SERVICE AREA	
TO BE USED FOR PERMITTING, CONSTRUCTION, OR BIDDING		ADM		DRAWING INDEX	
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	APVD
	<b>KEATRA FULLER</b>	<b>KEATRA FULLER</b>			
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	1705928
DRAWN	ENGINEERING SERVICES	DRAWING NO			REV
CHECKED	NAVAIDS	<b>MSO-D-ADM-G002</b>			

FACILITY DESCRIPTION & CODE ANALYSIS

I. FACILITY DESCRIPTION

THIS BUILDING IS A MIXED-USE, ADMINISTRATION AND WORKSHOP OCCUPANCY BUILDING FOR (4) FOUR EMPLOYEES. THE BUILDING WILL BE A SINGLE STORY, CONCRETE FOUNDATION ON GRADE, METAL FRAME SUPER STRUCTURE. THE EXTERIOR ENVELOPE USES INSULATED METAL PANEL EXTERIOR WALLS WITH ACCENT MASONRY VENEER. ARCHITECTURAL COMPONENTS CONSIST OF CANOPIED BUILDING ENTRANCES, OPERABLE ALUMINUM FRAMED GLAZING, METAL FRAMED EXTERIOR DOORS AND OVERHEAD SECTIONAL SERVICE DOORS. THE ROOF SYSTEM WILL BE STANDING SEAM METAL ROOF PANEL. THE EXTERIOR ENVELOPE'S TEXTURE, COLOR, ROOF SLOPE, AND WINDOW PLACEMENT ARE THE PRIMARY TOOLS USED TO ACHIEVE THE BUILDING'S FINAL ARCHITECTURAL STYLE TO MATCH THE LIGHT INDUSTRIAL VERNACULAR.

II. CODES OF RECORD

THE DESIGN AND CONSTRUCTION OF THE 2,874 GROSS SQUARE FOOT BUILDING SHALL COMPLY WITH THE REQUIREMENTS OF THE FAMILY OF INTERNATIONAL BUILDING CODES (IBC), 2012 EDITION AND THE NFPA 101, LIFE SAFETY CODE (LSC), 2012 EDITION. WHERE THE IBC AND NFPA 101 HAVE CONFLICTING REQUIREMENTS, THE MORE RESTRICTIVE CODE SHALL TAKE PRECEDENCE.

THE FOLLOWING DOCUMENTS WILL PROVIDE THE CRITERIA WHICH WILL GOVERN THE FIRE PROTECTION AND LIFE SAFETY DESIGN OF THE FACILITY.

- A. INTERNATIONAL BUILDING CODE (IBC), 2012 EDITION
B. INTERNATIONAL FIRE CODE (IFC), 2012 EDITION
C. INTERNATIONAL FIRE PROTECTION ASSOCIATION STANDARD 10 (NFPA 10), STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2013 EDITION.
D. FIRE PROTECTION ASSOCIATION STANDARD (NFPA 70), NATIONAL ELECTRICAL CODE, 2011 EDITION.
E. NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 90A (NFPA 90A), STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS, 2009 EDITION.
F. NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 101, (NFPA 101), THE LIFE SAFETY CODE, 2009 EDITION.
G. NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 110 (NFPA 110), STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS, 2010 EDITION.
H. FAA ORDER 4665.4A.

III. USE AND OCCUPANCY CLASSIFICATION

THIS BUILDING IS CLASSIFIED AS A NON-SEPARATED MIXED USE OF B AND S-1.

- A. STORAGE, GROUP S-1 (IBC SECTION 311.2)
B. BUSINESS, GROUP B (IBC SECTION 304.1)

IV. SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

INTERNATIONAL BUILDING CODE (IBC SECTION 311.2). THIS SECTION OF THE BUILDING IS CLASSIFIED AS A STORAGE GROUP OCCUPANCY AND WILL FALL UNDER THE MODERATE HAZARD GROUP (S-1) IN ACCORDANCE WITH THE REQUIREMENTS OF THE IBC. THE STORAGE BUILDING IS DESIGNED TO SERVE AN OCCUPANT LOAD OF 500 SQUARE FEET PER PERSON IN ACCORDANCE WITH IBC TABLE 1004.1.2. LIFE SAFETY CODE (NFPA 101 SECTION 42.1.1.1). THIS STORAGE BUILDING IS CLASSIFIED AS A STORAGE OCCUPANCY IN ACCORDANCE WITH THE REQUIREMENTS OF THE LSC. THE STORAGE BUILDING IS DESIGNED TO SERVE AN OCCUPANT LOAD OF 4 PEOPLE PER NFPA 101 TABLE 7.3.1.2 WHICH CONSIDERS THE OCCUPANT LOAD CALCULATION TO BE N/A (NOT APPLICABLE) AND THE MAXIMUM PROBABLE NUMBER OF OCCUPANTS PRESENT AT ANY ONE TIME SHOULD BE USED. INTERNATIONAL BUILDING CODE (IBC SECTION 304). THIS SECTION OF THE BUILDING IS CLASSIFIED AS BUSINESS GROUP B OCCUPANCY INCLUDES, AMONG OTHERS, THE USE OF A BUILDING OR STRUCTURE, OR PORTION THEREOF, FOR OFFICE, PROFESSIONAL OR SERVICE TYPE TRANSACTIONS (IBC SECTION 304.1).

V. GENERAL BUILDING HEIGHT AND AREA

- A. FOR ALLOWABLE HEIGHT (IBC SECTION 504.1) MAXIMUM PERMITTED: 3-STORIES PROVIDED: 1-STORY
B. ALLOWABLE AREA (IBC TABLE 503) MAXIMUM PERMITTED: 17,500 SQUARE FEET MAXIMUM PROVIDED: 2,847 SQUARE FEET

VI. TYPE OF CONSTRUCTION

- A. CONSTRUCTION TYPE (IBC TABLE 601) MINIMUM REQUIRED: V PROVIDED: IIB

VII. FIRE RESISTANCE RATED CONSTRUCTION

CONSTRUCTION: CONSTRUCTION IS INTENDED TO BE UNPROTECTED, COMBUSTIBLE.

- A. SEPARATION FROM OTHER BUILDINGS (IBC TABLE 602)
B. EXPOSURE PROTECTION (IBC TABLE 602)
C. STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, AND TRUSSES (IBC TABLE 601) REQUIRED: NONE PROVIDED: NONE
D. FLOORS, INCLUDING SUPPORTING BEAMS AND JOISTS (IBC TABLE 601) REQUIRED: NONE PROVIDED: NONE
E. ROOF, INCLUDING SUPPORTING BEAMS AND JOISTS (IBC TABLE 601) REQUIRED: NONE PROVIDED: NONE

INTERIOR FIRE RESISTANCE SEPARATION SHALL BE IN ACCORDANCE WITH THE IBC.

- A. STORAGE BUILDING SECTION EXTERIOR WALLS (IBC 705) REQUIRED: NONE PROVIDED: NONE
B. ADMINISTRATION BUILDING SECTION EXTERIOR WALLS (IBC 705) REQUIRED: NONE PROVIDED: NONE

VIII. INTERIOR FINISHES

INTERIOR FINISHES WILL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 101 CHAPTER 10 AND INC CHAPTER 8.

- A. MINIMUM OF CLASS A INTERIOR FINISHES WILL BE PROVIDED WITHIN THE BUILDING STORAGE AREA AND ADMINISTRATION AREA (NFPA 101 SECTION 42.3.3)
B. INTERIOR FLOOR FINISH WILL CONSISTS OF SEALED CONCRETE IN STORAGE AREAS AND CARPET AND CERAMIC TILE IN ADMINISTRATION AREAS.
C. SPECIFIC WALL AND FLOOR FINISHES ARE SHOWN ON THE BUILDING'S INTERIOR FINISH SCHEDULE.

IX. FIRE PROTECTION SYSTEM

- A. SUPPRESSION - THE FACILITY WILL NOT BE PROTECTED THROUGHOUT BY AUTOMATIC FIRE SPRINKLER SYSTEM.
B. FIRE ALARM SYSTEM FOR GROUP B IS NOT REQUIRED AS THE BUILDING IS AT GRADE AND OCCUPANT LOAD DOES NOT EXCEED 500 (IBC SECTION 907.2.2).
C. FIRE ALARM SYSTEM FOR GROUP S-1 IS NOT REQUIRED FOR THIS BUILDING (IBC SECTION 907.E).

X. MEANS OF EGRESS

MEANS OF EGRESS SHALL BE IN ACCORDANCE WITH NFPA 101.

- A. OCCUPANT LOAD (IBC - TABLE 1004.1.2) BUILDING TOTAL: 4 PEOPLE (2,279 SQUARE FEET, 570 SQUARE FEET PER PERSON).
B. NUMBER OF EXITS (NFPA 101 SECTION 42.2.4.1 (2) ERRATA 101-03-1). REQUIRED: 1 PROVIDED: 1
C. ONE EXIT IS REQUIRED BY IBC. TRAVEL DISTANCE FROM THE MOST REMOTE PORTION OF THE BUILDING DOES NOT EXCEED THE ALLOWABLE COMMON PATH OF 75 FEET (IBC SECTION 1006.2.1 AND IBC TABLE 1006.2.1)
D. EXIT DOORS MINIMUM WIDTH 32 INCHES (PER DOOR) PROVIDED: 32 INCHES (CLEAR WIDTH)
E. DEAD-END CORRIDOR (NFPA 101 SECTION 38.2.5.2) PERMITTED: 50 FEET (MAXIMUM) PROVIDED: NONE
F. EXIT SIGNS: EXIT SIGNS WILL BE INTERNALLY ILLUMINATED, LED TYPE.
1. EXIT SIGNS WILL HAVE INTEGRAL BATTERY BACKUP AND BE CONNECT TO THE EMERGENCY CIRCUIT.
2. SIGNS WILL BE LOCATED AT ALL BUILDING EXIT DOORS AND WHEREVER THE DIRECTION TO THE EXIT IS NOT READILY OBVIOUS.
G. EMERGENCY LIGHTING: ALL MEANS OF EGRESS, INCLUDING EXIT DISCHARGE WILL BE PROVIDED WITH EMERGENCY LIGHTING. EMERGENCY LIGHTING WILL BE PROVIDED VIA STANDARD FIXTURES WITH INTEGRAL BATTERY PACK UNITS. EMERGENCY LIGHTING WILL BE PROVIDED FOR A MINIMUM OF 1 1/2 HOURS IN THE EVENT OF INTERNAL POWER FAILURE. AVERAGE ILLUMINATION WILL NOT BE LESS THAN 10 LUX (1-FOOT CANDLE) WITH A MINIMUM OF 1 LUX (0.1 FOOT CANDLE) AT ANY POINT.

XI. ACCESSIBILITY

ACCESSIBILITY SHALL BE AS PER THE ARCHITECTURAL BARRIERS PORTION OF THE AMERICANS WITH DISABILITIES ACT AND ARCHITECTURAL BARRIERS ACT ACCESSIBILITY GUIDELINES, AS PUBLISHED BY THE UNITED STATES ACCESS BOARD, DATED JULY 23, 2004. THIS DOCUMENT IS AVAILABLE AT WWW.ACCESS-BOARD.GOV.

THE A/E IS RESPONSIBLE FOR CHECKING WHETHER THERE ARE LOCAL ACCESSIBILITY REQUIREMENTS. IF THEY EXIST, THE MOST STRINGENT WILL PREVAIL BETWEEN LOCAL CODES AND ABA. THE CRITERIA OF THESE STANDARDS SHOULD BE CONSIDERED A MINIMUM IN PROVIDING ACCESS TO THE PHYSICALLY DISABLED. WHERE DIMENSIONS FOR CLEARANCES ARE STATED, ALLOWANCE SHOULD BE MADE IN THE DESIGN FOR CONSTRUCTION TOLERANCES TO ENSURE THAT THE FINISHED CONSTRUCTION IS IN FULL COMPLIANCE.

FIRE EXTINGUISHERS

- A. FIRE EXTINGUISHERS SHALL BE INSTALLED IN ACCORDANCE WITH IBC SECTION 906.1. THE FIRE EXTINGUISHER WILL BE RATED FOR LIGHT (LOW) HAZARD OCCUPANCY FOR CLASS A FIRE HAZARDS PER TABLE 906.3(1). THE NUMBER AND LOCATION OF FIRE EXTINGUISHERS WILL BE COORDINATED AND DETERMINED BY THE AUTHORITY HAVING JURISDICTION LOCATIONS WILL BE CONSPICUOUS ALONG NORMAL PATHS OF TRAVEL AND SHALL BE IMMEDIATELY AVAILABLE FOR USE (IBC SECTION 906.6).

PARSONS logo and contact info. Department of Transportation Federal Aviation Administration ATO - TECHNICAL OPERATIONS ADM CODE ANALYSIS AND GENERAL CONSTRUCTION NOTES. Includes a table with columns for REV, APPROVED DATE, DESCRIPTION, JCN, REDLINE DATE, and APVD. Also includes a table for MISSOULA project details with columns for REVIEWED BY, SUBMITTED BY, PROJECT ENGINEER, DESIGNED, DRAWN, CHECKED, ISSUED BY, DATE, PROGRAM MANAGER, and REV.

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ISSUED FOR: CONSTRUCTION



GENERAL NOTES

- 1. ANY AND ALL DAMAGES TO EXISTING UTILITIES, FENCE AND ALL OTHER EXISTING STRUCTURES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND REPAIRED TO ORIGINAL CONDITION OR BETTER AND TO THE SATISFACTION OF THE RE AND GOVERNMENT, AT SUBCONTRACTOR'S EXPENSE.
2. VERIFY AND CHECK ALL DIMENSIONS, LOCATIONS, DETAILS AND ELEVATIONS SHOWN ON THESE DRAWINGS PRIOR TO START OF CONSTRUCTION. ANY UNCERTAINTIES AND DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO ATTENTION OF RE FOR CLARIFICATION PRIOR TO COMMENCING THAT WORK FEATURE.
3. MAINTAIN COMPLIANCE WITH AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS.
4. IN CASE OF DISCREPANCY BETWEEN THE SPECIFICATIONS AND CONSTRUCTION DOCUMENTS, THE TECHNICAL SPECIFICATIONS SHALL APPLY.
5. CONFINED ALL WORK EFFORTS WITHIN THE PROPERTY LINE UNLESS SPECIFICALLY AUTHORIZED IN WRITING TO DO OTHERWISE BY THE OWNER OR THE OWNER'S AUTHORIZED REPRESENTATIVE.
6. THE SUBCONTRACTOR SHALL CONTROL DUST, WASTE, AND DEBRIS RESULTING FROM OPERATIONS AT ALL TIMES.

CODES AND REFERENCES

- 1. INTERNATIONAL BUILDING CODE 2012
2. AMERICANS WITH DISABILITIES ACT-ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG), AND UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS).
3. MONTANA DEPARTMENT OF TRANSPORTATION EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL.
4. CLEAN WATER ACT (NPDES, STORM WATER MANAGEMENT, AND WETLANDS)
5. CLEAN DRINKING WATER ACT
6. MONTANA DEPARTMENT OF TRANSPORTATION DESIGN MANUAL
7. FAA ORDER 1053.1C ENERGY AND WATER MANAGEMENT PROGRAM FOR FAA BUILDINGS AND FACILITIES

SECURITY AND SAFETY NOTES

- 1. THE SUBCONTRACTOR SHALL ADHERE TO THE REQUIREMENTS AS SET FORTH IN THE APPROVED RISK MANAGEMENT PLAN.
2. STAGING AREA:
THE SUBCONTRACTOR'S STAGING AREA WILL BE AS SHOWN ON DRAWING C003 AND VERIFIED BEFORE CONSTRUCTION BEGINS. UPON COMPLETION OF THE PROJECT, THE SUBCONTRACTOR SHALL RESTORE THE STAGING AREA, INCLUDING REGRADING TOP SOIL, AND PLANTING SEED AND STRAW TO THE SATISFACTION OF PARSONS.
3. IN THE EVENT OF AN EMERGENCY, SUBCONTRACTOR SHALL CALL 911.

DRAINAGE NOTES

- 1. WHERE POSSIBLE, CONTROL STORM WATER RUNOFF TO NON-EROSIVE VELOCITIES. DURING CONSTRUCTION, SEDIMENT LADEN DRAINAGE MUST BE DIRECTED TO AN INSTALLED BEST MANAGEMENT PRACTICES (BMP) AND/ OR RECEIVE APPROPRIATE TREATMENT PRIOR TO LEAVING THE SITE.
2. UNEXCAVATED SOILS, IF BECOME SATURATED, WILL LOOSE STRENGTH AND WILL BE SUBJECT TO VOLUME EXPANSION. POSITIVE DRAINAGE SHALL BE PROVIDED IN THE FINAL CONDITION.

CLEARING AND GRUBBING NOTES

- 1. PRIOR TO GRADING THE SITE AND ACCESS ROAD IMPROVEMENT, THE AREA SHALL BE STRIPPED TO A MAXIMUM DEPTH OF 4" OF ANY EXISTING VEGETATION AND ALL LOOSE OR EXCESSIVELY ORGANIC MATERIALS, CRUSHED STONE, COBBLE, BOULDERS, AND OTHER DELETERIOUS MATERIALS. THESE MATERIALS SHALL BE EXCAVATED AND DISPOSED OF AT AN APPROVED OFF SITE AREA IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS. ALL PERMITS REQUIRED FOR OFF SITE DISPOSAL SHALL BE OBTAINED BY THE SUBCONTRACTOR.
2. ALL UNSUITABLE SOILS AND UNCONTROLLED FILLS (IF APPLICABLE) SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL. REMOVED MATERIAL MAY BE USED AS STRUCTURAL FILL PROVIDED IT MEETS THE REQUIREMENT OF THE SPECIFICATIONS.

SOILS

- 1. SOILS PARAMETERS WAS OBTAINED FROM GEOTECHNICAL ENGINEERING ANALYSIS REPORT CREATED BY WGM GROUP DATED NOVEMBER 28, 2018.

PROJECT DATUMS

- 1. THE EXISTING SITE FEATURES AND TOPOGRAPHICAL INFORMATION SHOWN ON THE PLANS WAS OBTAINED FROM A SURVEY PLAN SIGNED AND SEALED BY TERRITORIAL LANDWORKS.
2. THE DATUM IS BASED ON NAVD88-GEOD12B. THE BASIS OF BEARING IS BASED ON THE MONTANA STATE PLANE ZONE 2500.

EXCAVATION NOTES

- 1. EXCAVATED MATERIAL IS TO BE RE-USED FOR GRADING OR AS BACKFILL AGAINST FOUNDATION WALLS.
2. TRUCKS SHALL BE LOADED IN A MANNER SO AS TO AVOID LOSS OF LOADED MATERIAL OR ANY PORTION THEREOF DURING TRANSPORT IN ACCORDANCE WITH STATE LAW. ALL TRUCKS SHALL UTILIZE TARPS.
3. PROVIDE A WARNING SYSTEM SUCH AS BARRICADES, HAND OR MECHANICAL SIGNALS, OR LOGS WHEN MOBILE EQUIPMENT IS OPERATED ADJACENT TO AN EXCAVATION, OR WHEN SUCH EQUIPMENT MUST APPROACH THE EDGE OF AN EXCAVATION, AND THE OPERATOR DOES NOT HAVE A CLEAR AND DIRECT VIEW OF THE EDGE.
4. COORDINATE, MAINTAIN AND PROVIDE A SAFE ENVIROMENT DURING TRENCHING, EXCAVATION AND BACKFILL ACTIVITIES IN ACCORDANCE WITH OSHA SAFETY MANUALS, WHEN DEPTHS EXCEED 4 FEET, AN OSHA EXCAVATION QUALIFIED PERSON SHALL BE PROVIDED ON SITE WHO SHALL ENSURE PROPER "BENCHING" OF EXCAVATED SIDES ARE ESTABLISHED AND MAINTAINED DURING THE WORK. DETAILED DESIGN PLANS OF SOIL RETENTION SYSTEM PREPARED BY A P.E. SHALL BE SUBMITTED TO THE RE FOR APPROVAL IF BENCHING OF SIDES WILL NOT BE USED OR MAINTAINED.
5. PROVIDE BARRICADES ON ALL OPEN EXCAVATION AND TRENCHES.

SEDIMENT CONTROL NOTES

- 1. SUBCONTRACTOR SHALL PROVIDE AND MAINTAIN THE STABILIZED CONSTRUCTION ACCESS AND EXIT AS APPROPRIATE.
2. THE RE MAY DIRECT THE SUBCONTRACTOR TO ADD NEW MEASURES TO CONTROL SEDIMENT TRANSPORT AT ANY TIME DURING THE PROJECT.
3. AREA OF STOCKPILED MATERIALS WITHIN THE CONSTRUCTION AREA IS TO BE TREATED IN SUCH A MANNER AS TO PREVENT MOVEMENT.
4. PROVIDE AND MAINTAIN SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) IN ACCORDANCE WITH THE CONTRACT DOCUMENTS THROUGHOUT THE TERM OF THE WORK COVERED BY THIS CONTRACT. AT A MINIMUM USE, STORM WATER POLLUTION PREVENTION BMP'S AS SHOWN ON SEDIMENT CONTROL PLAN, SEE SHEET MSO-D-ADM-C006.

GRADING NOTES

- 1. UNLESS OTHERWISE APPROVED BY PARSONS, THE SUBCONTRACTOR SHALL CONSTRUCT ANY NEEDED ACCESS DRIVES SUCH THAT THE FINISH GRADE HAS POSITIVE DRAINAGE AND DOES NOT BLOCK RUNOFF. CROSS SLOPES SHALL NOT EXCEED 4.0%.
2. THE SUBCONTRACTOR SHALL HAUL ALL EXCESS UNSUITABLE EXCAVATED MATERIAL OFF SITE AND DISPOSE OF IT PROPERLY. PROCEDURES FOR HANDLING UNSUITABLE OR CONTAMINATED MATERIAL CAN BE FOUND IN THE SPECIFICATIONS.
3. EXCAVATED LEAN CLAY-SILT (CL-ML) SOILS SHALL NOT BE RE-USED ON SITES AS FILL BENEATH THE BUILDING SITE OR BENEATH THE PAVEMENT SURFACES.
4. STRUCTURAL FILL OR BACKFILL SHALL BE PLACED IN 6 INCH LOOSE LIFTS AT MOISTURE CONTENT WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT. LIFT SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95% OF MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D1557. IF STRUCTURAL FILL IS USED, IT SHOULD CONSIST OF A LOW TO MODERATE PLASTICITY SOIL THAT IS FREE OF ORGANIC MATERIAL OR DEBRIS.
5. ALL COMPACTION SHALL BE COMPLETED ON UNFROZEN SOILS.
6. SUBCONTRACTOR SHALL HAVE AN APPROVED PLAN TO PROTECT COMPACTED SOILS DURING CONSTRUCTION FROM FREEZING PRIOR TO PLACING SUBSEQUENT LIFTS.

SEQUENCE AND COORDINATION OF CONSTRUCTION

- 1. WITHIN 10 DAYS OF NOTICE OF AWARD THE SUBCONTRACTOR SHALL PREPARE A SEQUENCE OF CONSTRUCTION FOR REVIEW AND APPROVAL BY THE FAA AND PARSONS, THAT IS COORDINATED WITH ALL OTHER PROJECTS IN WORK AREA SUCH THAT THERE ARE NO KNOWN INTERFERENCES.
2. ANY SCHEDULE/ SEQUENCE INTERFERENCE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE RE AND PARSONS IN WRITING.
3. THE SCOPE OF WORK INCLUDES:
- GRAVEL AREAS WITHIN PROPERTY LINE AS SHOWN
- WIDEN EXISTING ACCESS DRIVEWAY AND PAVE
- PROVIDE NEW 58'-0" x 49'-6" STEEL BUILDING
- PROVIDE NEW 8 CAR PARKING LOT
- FURNISH AND INSTALL NEW FENCE AND AUTOMATED GATE

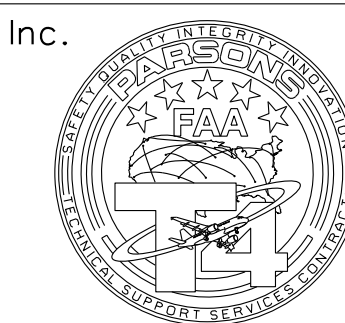
UTILITIES

- 1. SUBCONTRACTOR SHALL NOT EXCEED THE ALLOWABLE SPACING BETWEEN POWER CABLE AND OTHER UTILITIES LISTED BELOW.

TABLE 1. SPACING OF POWER CABLE DUCTS FROM OTHER UTILITIES.
Table with 3 columns: UTILITY TYPE, PARALLEL LINES, PERPENDICULAR CROSSINGS. Rows include WATER, GRAVITY SEWER, FORCE MAIN SEWER, STORM DRAIN, NATURAL GAS, STEAM OR HOT WATER, OPEN COMMUNICATIONS, SECURE COMMUNICATIONS, ELECTRICAL. Includes a note: \*TABLE TAKEN FROM FAA-C1391d.

PARSONS

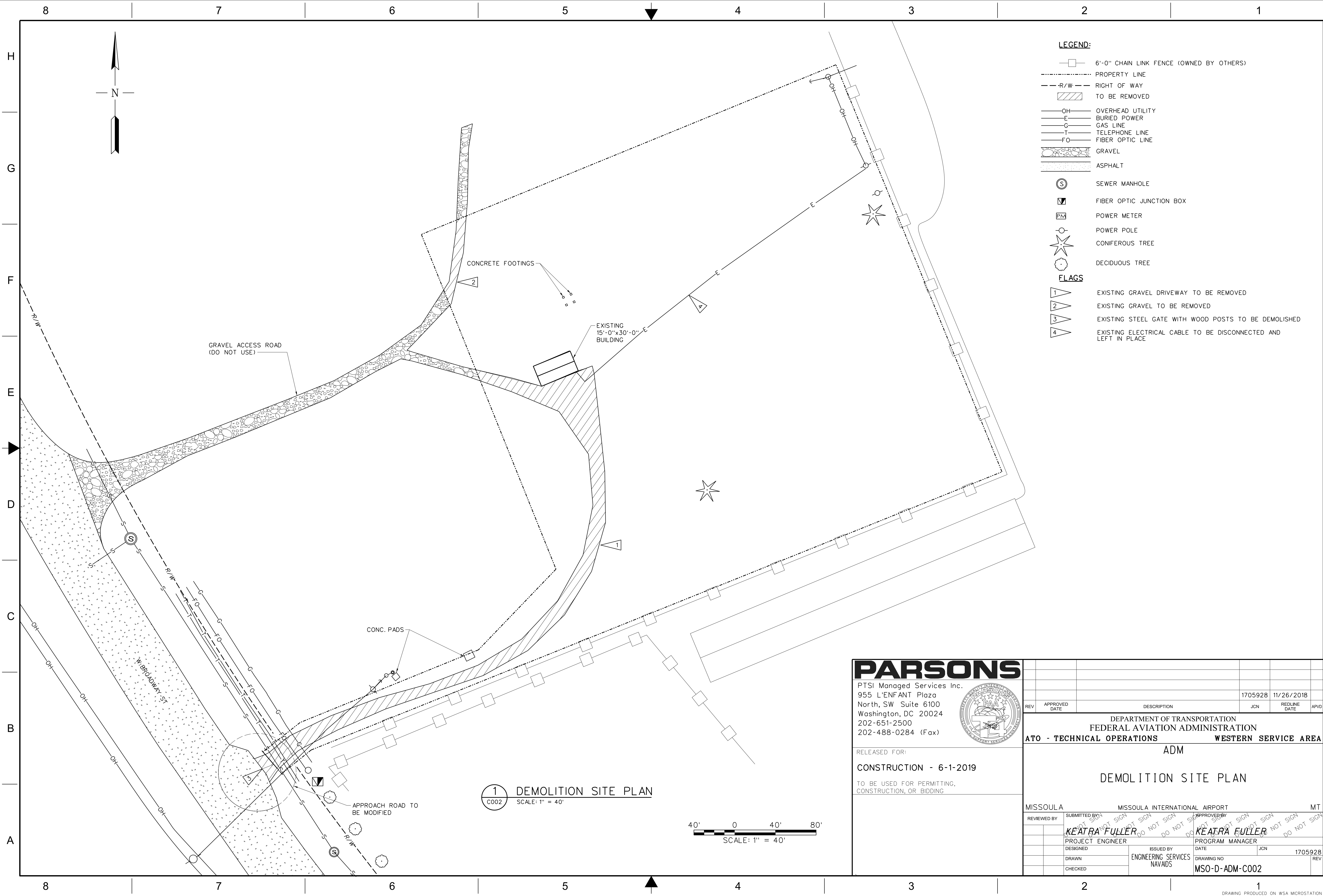
PTSI Managed Services Inc.
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North, SW Suite 6100
Washington, DC 20024
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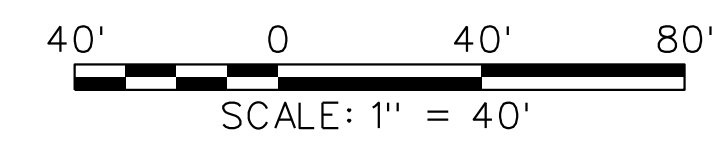
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- LEGEND:**
- 6'-0" CHAIN LINK FENCE (OWNED BY OTHERS)
  - PROPERTY LINE
  - - - R/W - - - RIGHT OF WAY
  - ▨ TO BE REMOVED
  - OH OVERHEAD UTILITY
  - E BURIED POWER
  - G GAS LINE
  - T TELEPHONE LINE
  - FO FIBER OPTIC LINE
  - GRAVEL
  - ASPHALT
  - ⊙ SEWER MANHOLE
  - ▣ FIBER OPTIC JUNCTION BOX
  - PM POWER METER
  - POWER POLE
  - ★ CONIFEROUS TREE
  - ⊙ DECIDUOUS TREE
  - FLAGS**
  - 1 EXISTING GRAVEL DRIVEWAY TO BE REMOVED
  - 2 EXISTING GRAVEL TO BE REMOVED
  - 3 EXISTING STEEL GATE WITH WOOD POSTS TO BE DEMOLISHED
  - 4 EXISTING ELECTRICAL CABLE TO BE DISCONNECTED AND LEFT IN PLACE

**1** DEMOLITION SITE PLAN  
 C002 SCALE: 1" = 40'



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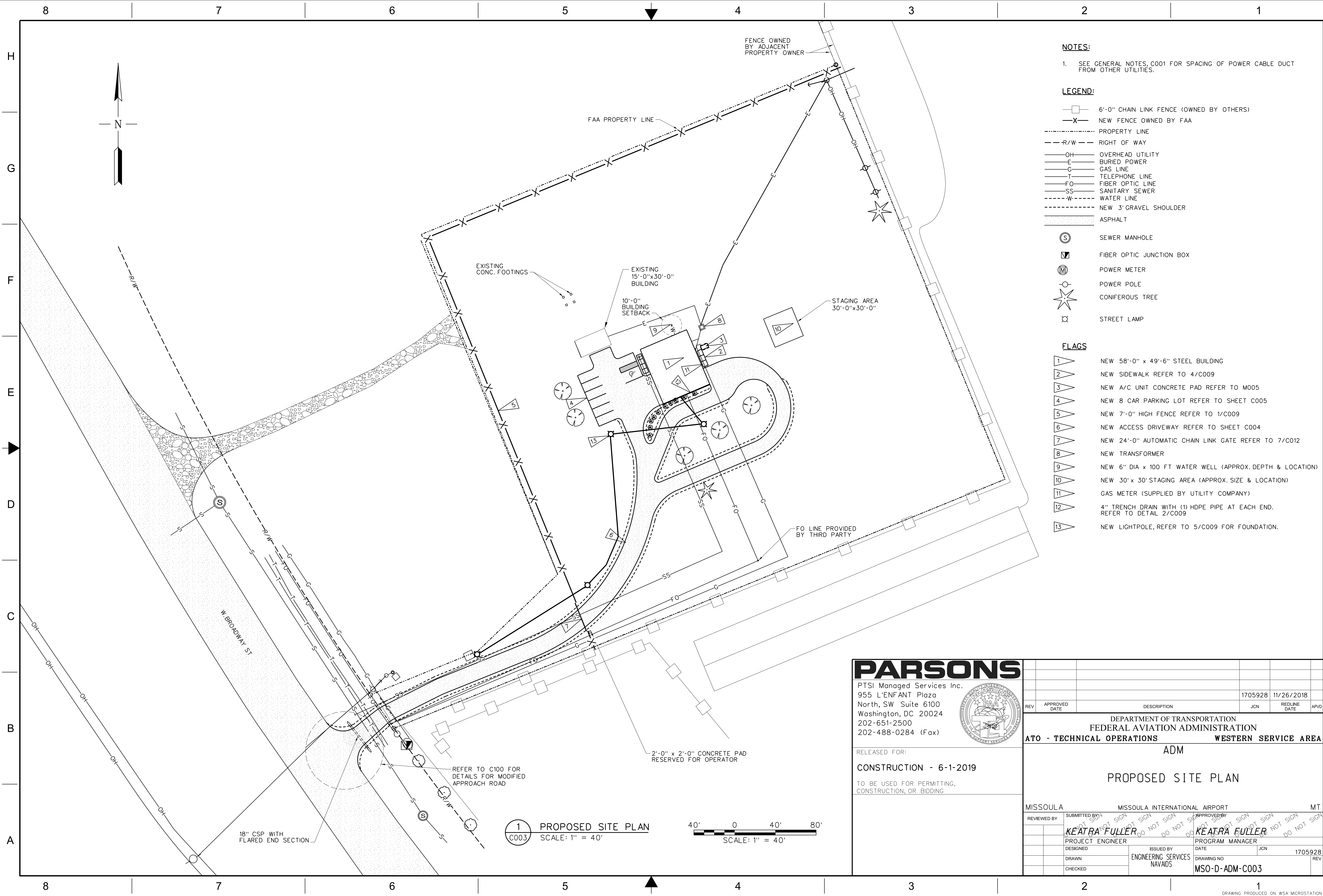
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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>DEMOLITION SITE PLAN</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT			MT
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	DATE	JCN	1705928	
DRAWN	ENGINEERING SERVICES	DRAWING NO			
CHECKED	NAVAIDS	MSO-D-ADM-C002			

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 Bzozna CTR Kozak

ISSUED FOR CONSTRUCTION  
 EDM: mso-d-adm-c002.dgn



**NOTES:**

- SEE GENERAL NOTES, C001 FOR SPACING OF POWER CABLE DUCT FROM OTHER UTILITIES.

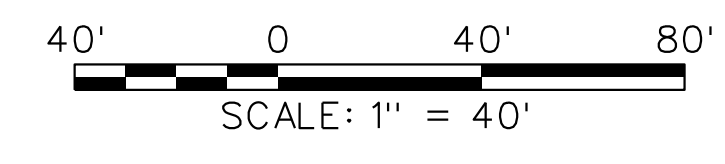
**LEGEND:**

- 6'-0" CHAIN LINK FENCE (OWNED BY OTHERS)
- NEW FENCE OWNED BY FAA
- PROPERTY LINE
- RIGHT OF WAY
- OVERHEAD UTILITY
- BURIED POWER
- GAS LINE
- TELEPHONE LINE
- FIBER OPTIC LINE
- SANITARY SEWER
- WATER LINE
- NEW 3' GRAVEL SHOULDER
- ASPHALT
- SEWER MANHOLE
- FIBER OPTIC JUNCTION BOX
- POWER METER
- POWER POLE
- CONIFEROUS TREE
- STREET LAMP

**FLAGS**

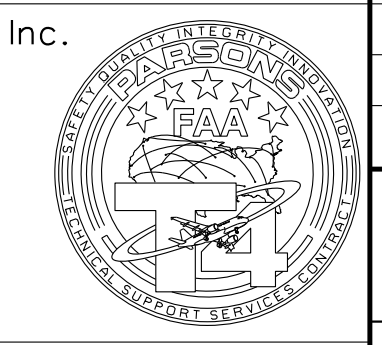
- NEW 58'-0" x 49'-6" STEEL BUILDING
- NEW SIDEWALK REFER TO 4/C009
- NEW A/C UNIT CONCRETE PAD REFER TO M005
- NEW 8 CAR PARKING LOT REFER TO SHEET C005
- NEW 7'-0" HIGH FENCE REFER TO 1/C009
- NEW ACCESS DRIVEWAY REFER TO SHEET C004
- NEW 24'-0" AUTOMATIC CHAIN LINK GATE REFER TO 7/C012
- NEW TRANSFORMER
- NEW 6" DIA x 100 FT WATER WELL (APPROX. DEPTH & LOCATION)
- NEW 30' x 30' STAGING AREA (APPROX. SIZE & LOCATION)
- GAS METER (SUPPLIED BY UTILITY COMPANY)
- 4" TRENCH DRAIN WITH (1) HDPE PIPE AT EACH END. REFER TO DETAIL 2/C009
- NEW LIGHTPOLE, REFER TO 5/C009 FOR FOUNDATION.

**1** PROPOSED SITE PLAN  
SCALE: 1" = 40'



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			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS**      **WESTERN SERVICE AREA**  
ADM

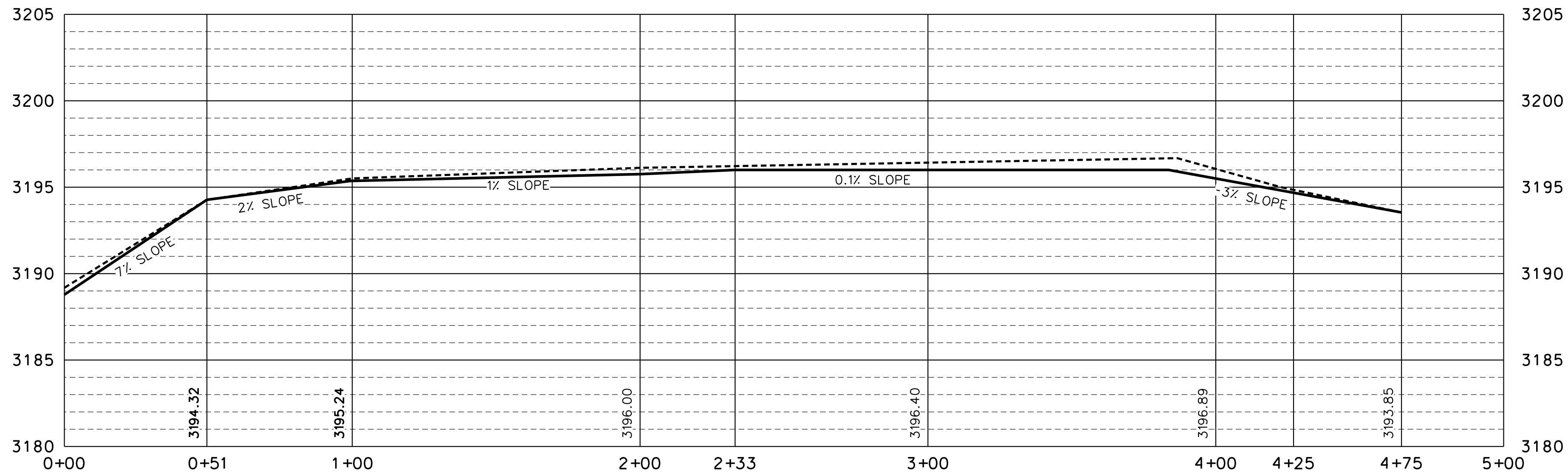
**PROPOSED SITE PLAN**

MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
DESIGNED BY	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	DATE
DRAWN	NAVAIDS	JCN
CHECKED		1705928
	DRAWING NO	REV
	MSO-D-ADM-C003	

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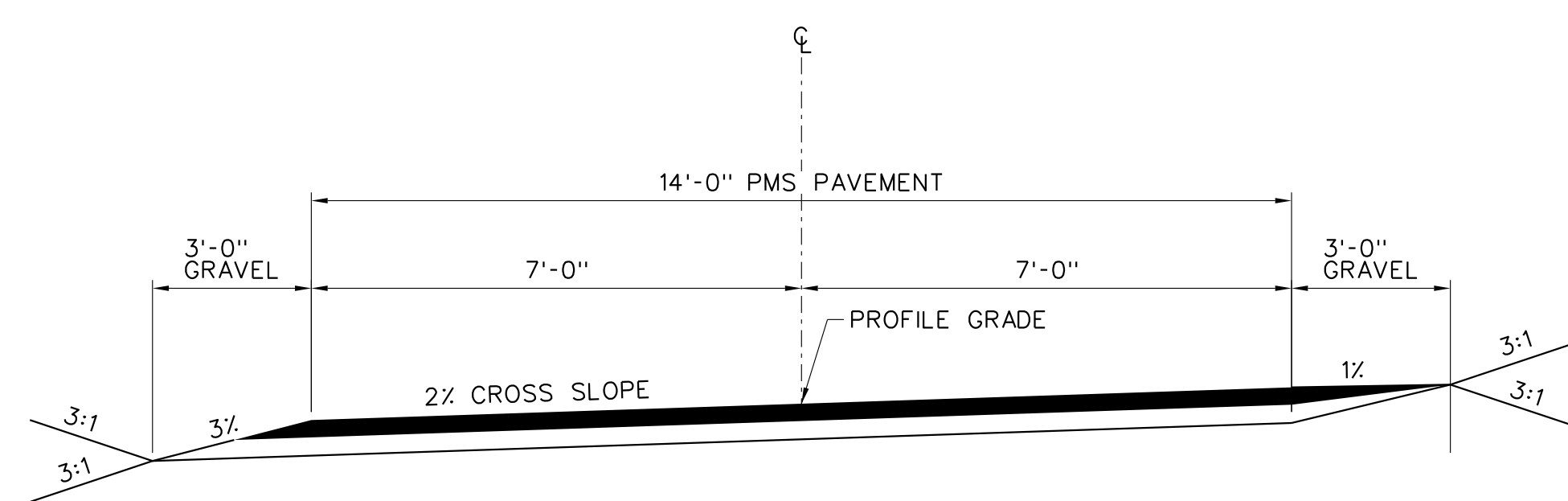
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**LEGEND:**  
 - - - - - EXISTING GRADE  
 ——— PROPOSED GRADE  
 3194.32 EXISTING ELEVATION (FT)  
 3195.24 PROPOSED ELEVATION (FT)

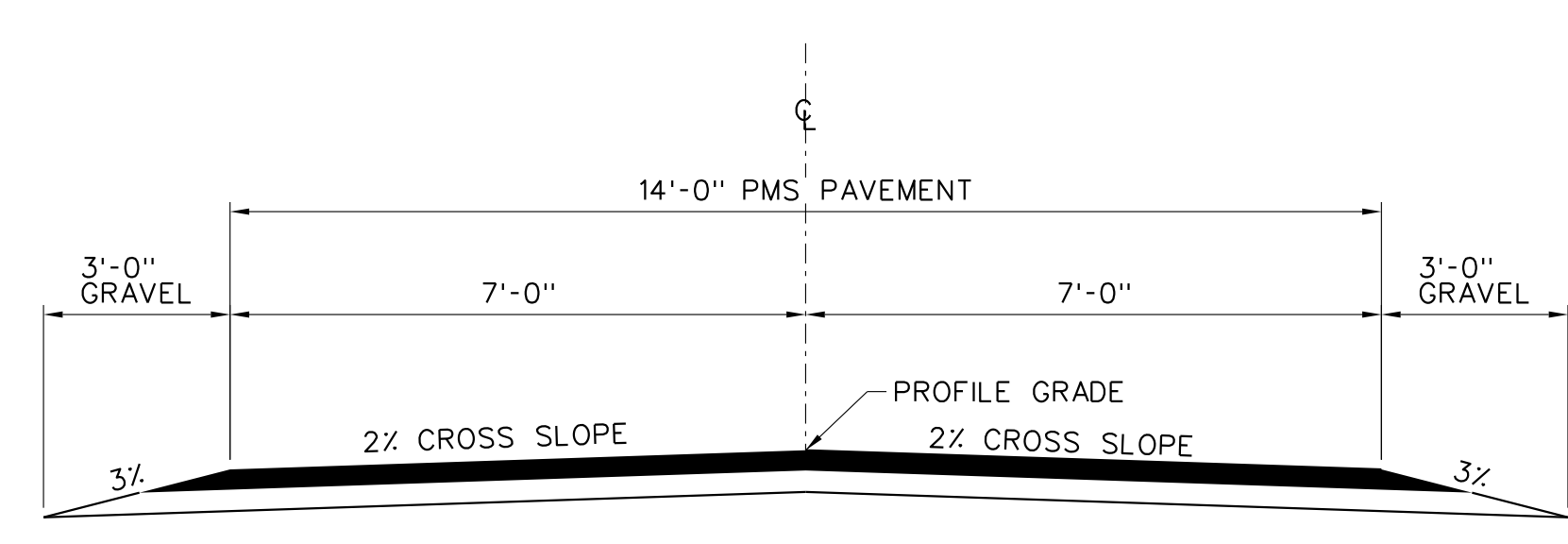


**APPROACH DRIVEWAY PROFILE**  
 SCALE: HOR: 1" = 30' VER: 1" = 5'

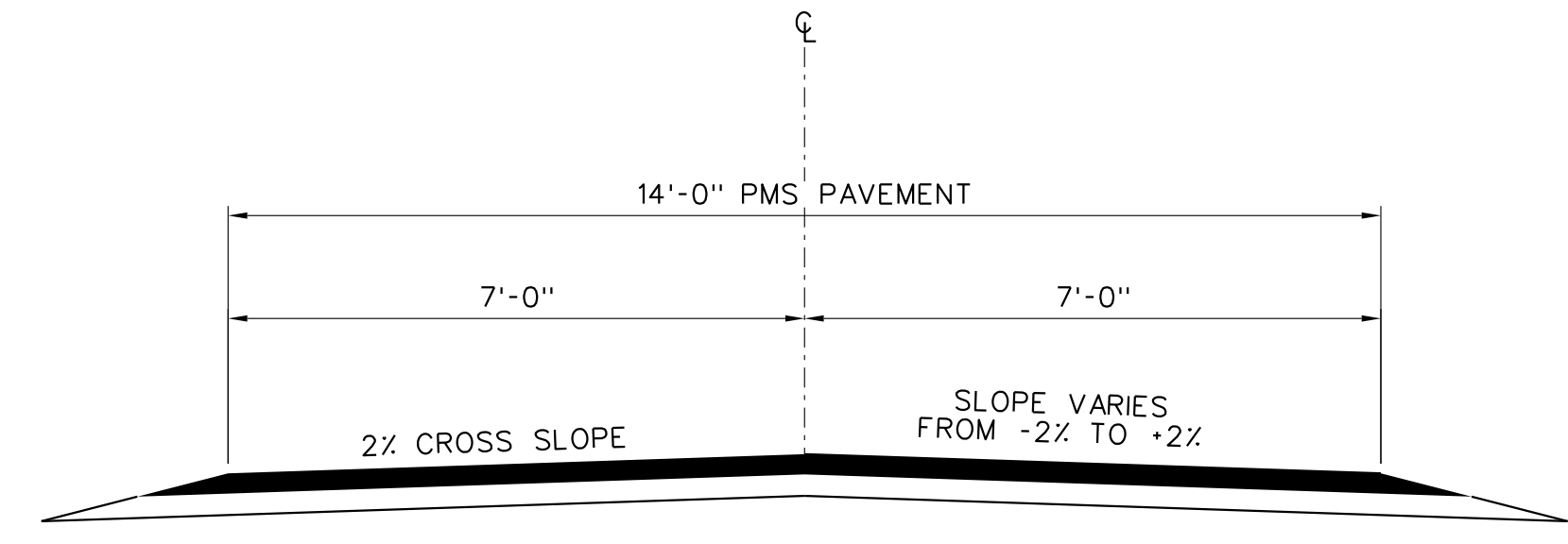
- GENERAL NOTES:**
1. COMPACT THE SUBGRADE TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95 PERCENT AT A MOISTURE CONTENT AT, OR UP TO 3 PERCENT OVER ITS OPTIMUM MOISTURE CONTENT.
  2. PROVIDE A WOVEN GEOTEXTILE MEETING OR EXCEEDING THE ENGINEERING CHARACTERISTICS OF PROPEX 200ST. PLACE IT ACROSS THE COMPACTED SUBGRADE, OVERLAPPING THE JOINTS BY AT LEAST 1 FOOT.
  3. PROVIDE 12 INCHES OF CRUSHED SUBBASE COURSE MATERIAL MEETING THE GRADATION PRESENTED IN THE SPECIFICATIONS.
  4. PLACE AND COMPACT 12 INCHES OF CRUSHED 2-INCH MINUS SUBBASE TO A STANDARD RELATIVE COMPACTION OF AT LEAST 98 PERCENT. THE SUBBASE MAY BE TOO COARSE TO OBTAIN A RELEVANT PROCTOR MOISTURE/DENSITY CURVE. IF 98 PERCENT OF THE PROCTOR'S MAXIMUM DRY DENSITY IS NOT ATTAINABLE IN THE FIELD, ESTABLISH THE MAXIMUM DRY DENSITY IN THE FIELD BY MAKING A NUMBER OF ROLLER PASSES AND MEASURING THE IN-PLACE DENSITY UNTIL THAT VALUE NO LONGER INCREASES UNDER REPEATED ROLLER PASSES USE A ROLLER COMPACTOR HAVING AN OPERATING WEIGHT OF AT LEAST 20,000 POUNDS TO ESTABLISH IN FIELD'S MAXIMUM DRY DENSITY.
  5. PROVIDE 8 INCHES OF CRUSHED BASE COURSE MATERIAL MEETING THE GRADATION PRESENTED IN THE SPECIFICATIONS.
  6. PLACE AND COMPACT 8 INCHES OF 3/4-INCH MINUS BASE COURSE TO A STANDARD RELATIVE COMPACTION OF AT LEAST 98 PERCENT.
  7. PLACE AND COMPACT THE ASPHALT CONCRETE PLANT MIX SURFACING IN TWO LIFTS TO AN AVERAGE RELATIVE COMPACTION (ASTM D2041) OF AT LEAST 93 PERCENT, AND NO INDIVIDUAL SAMPLE BEING LESS THAN 92 PERCENT.
  8. GRAVEL AREAS SHOWN ON C002 MAY BE DEEMED SUITABLE TO REUSE PROVIDED THAT IT IS CARRIED OFF SITE FOR CLEANING AND MEETS SPECIFICATIONS.



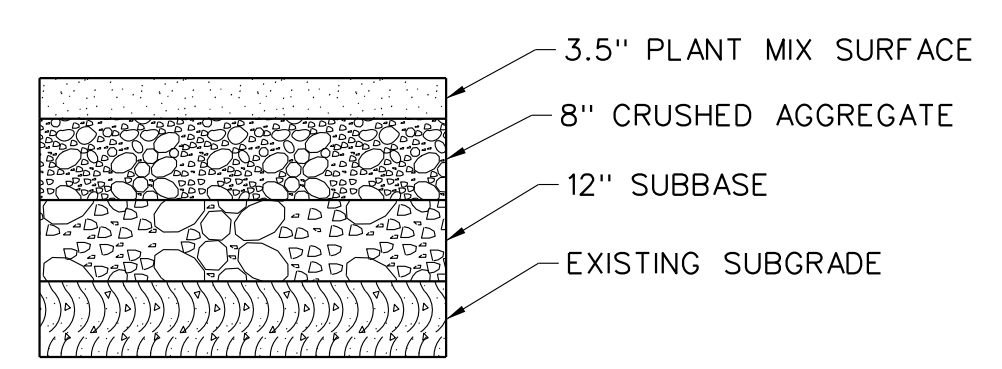
**CROSS SECTION STA 3+00 - STA 4+25**  
 NOT TO SCALE



**CROSS SECTION STA 0+00 - STA 2+75**  
 NOT TO SCALE

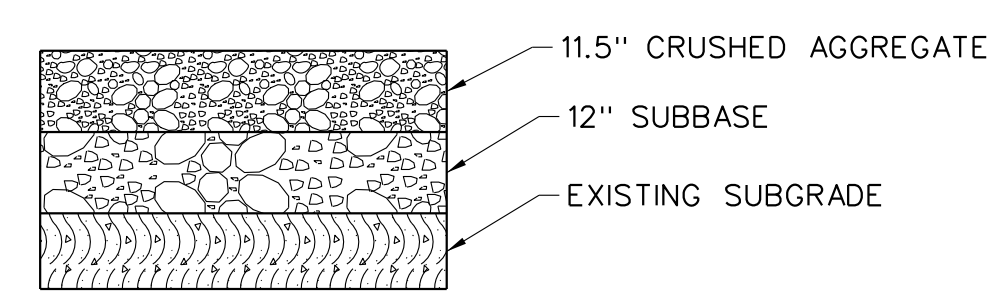


**TRANSITION SECTION STA 2+75 - STA 3+00**  
 NOT TO SCALE



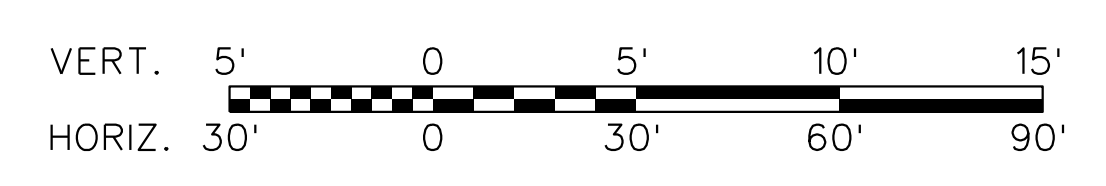
**TYPICAL PAVEMENT SECTION**  
 NOT TO SCALE

- SECTION NOTES:**
1. PMS SHALL BE COMMERCIAL PLANT MIX-PG 58-28 WITH LIFT THICKNESS 3'-5".
  2. CRUSHED AGGREGATE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D 1557 METHOD D.

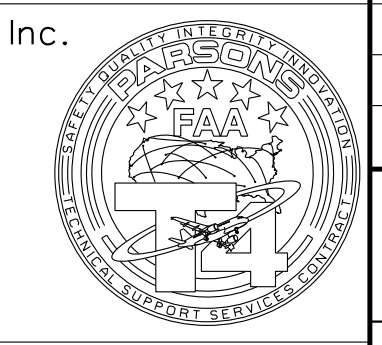


**TYPICAL GRAVEL SECTION**  
 NOT TO SCALE

- SECTION NOTES:**
1. CRUSHED AGGREGATE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D 1557 METHOD D.



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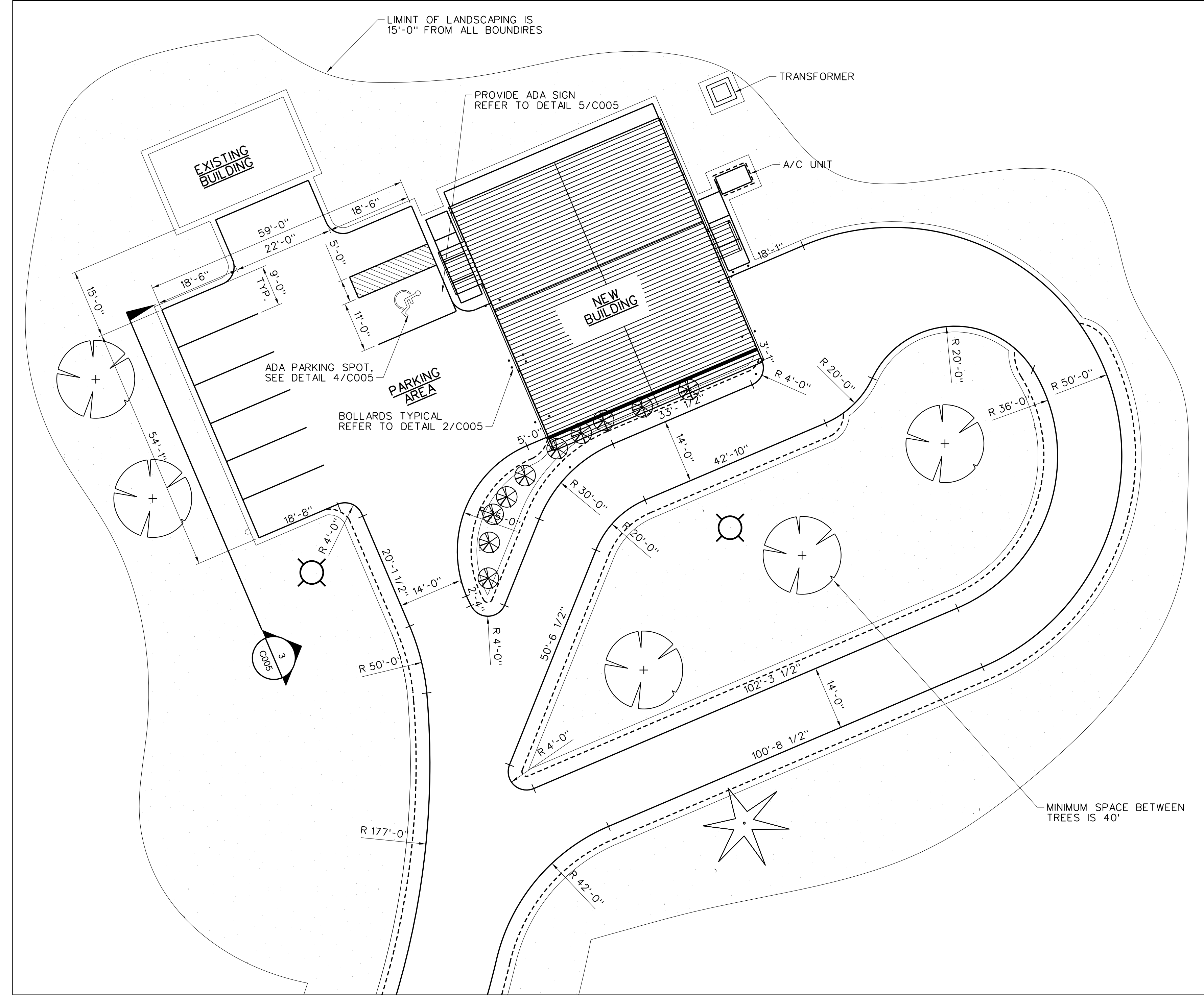
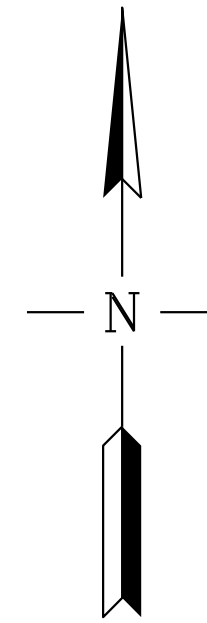
TO BE USED FOR PERMITTING,  
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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA</b>					
<b>ADM</b>					
<b>ACCESS ROAD PROFILE &amp; SECTIONS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-C004			

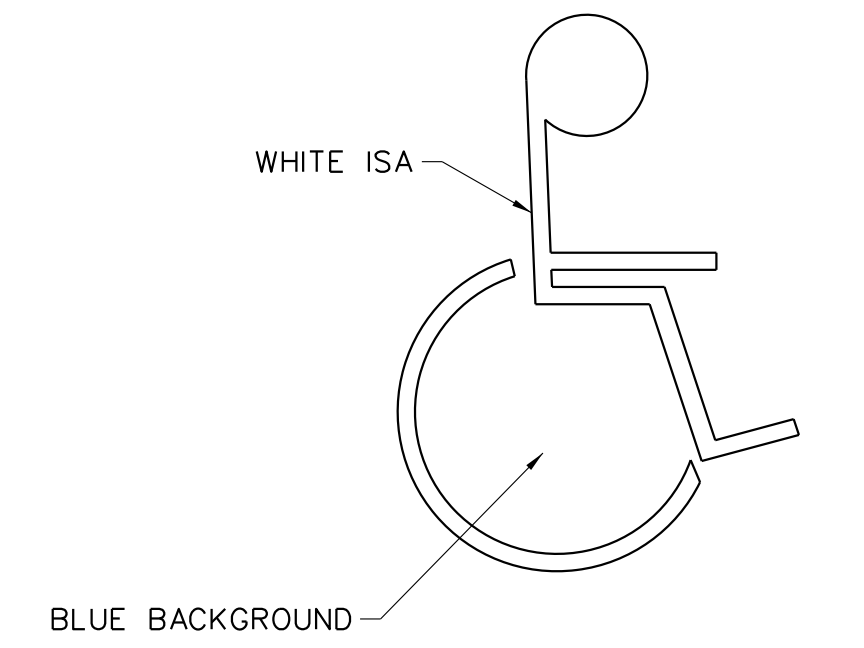
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ISSUED FOR CONSTRUCTION  
 EDM: mso-d-adm-c004.dgn





- LEGEND:**
- PROVIDE SOD ON SITE IN ALL HATCHED AREAS AND 15'-0" OFFSET FROM ALL BUILDINGS, ROADWAYS ETC.
  - PROVIDE 10 SHRUBS 15 GAL. PLANTING
  - PROVIDE 5 DECIDUOUS TREES
  - EXISTING CONIFEROUS TREE
  - STREET LAMP

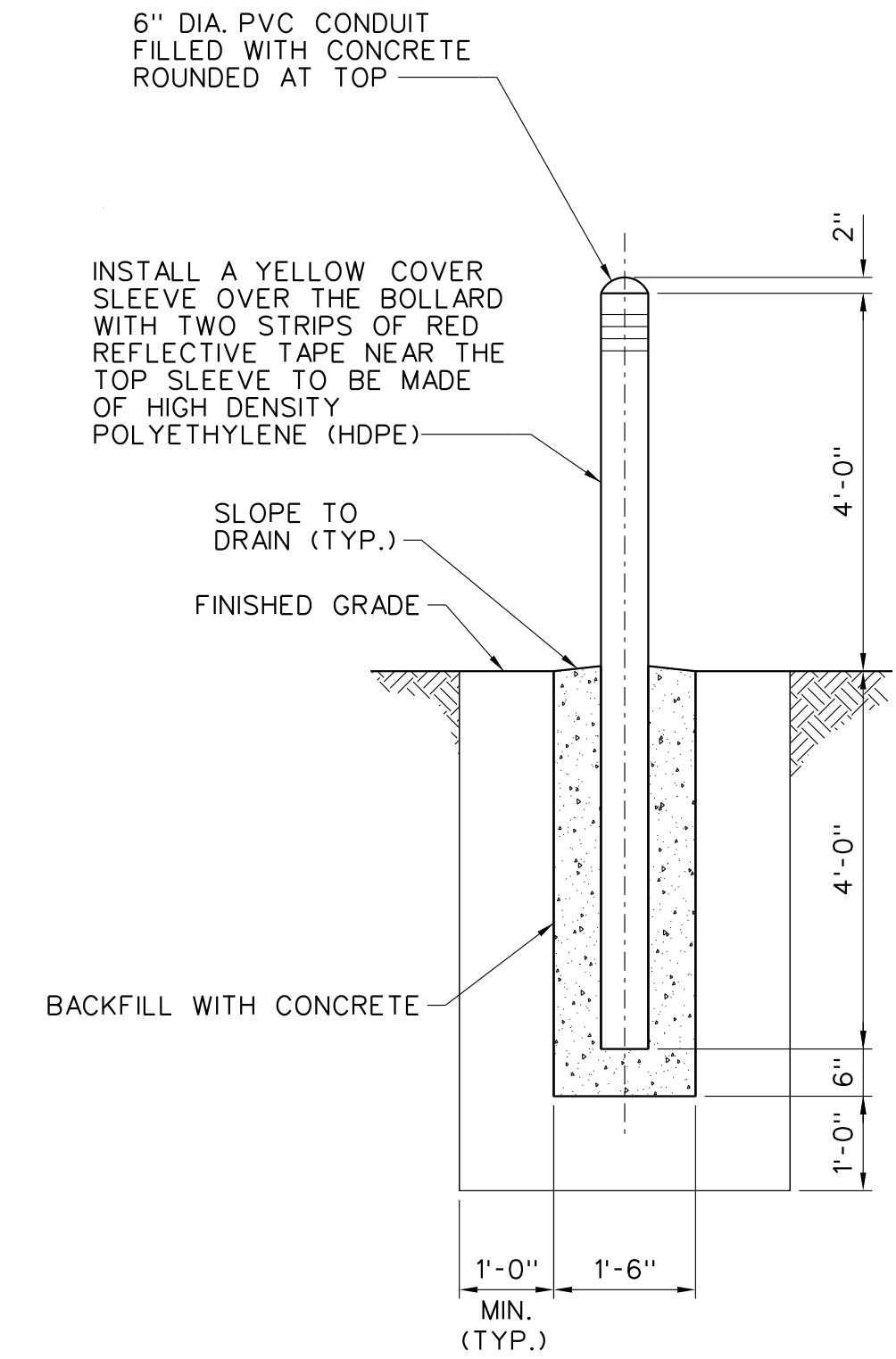


4 ISA MARKING C005 NOT TO SCALE

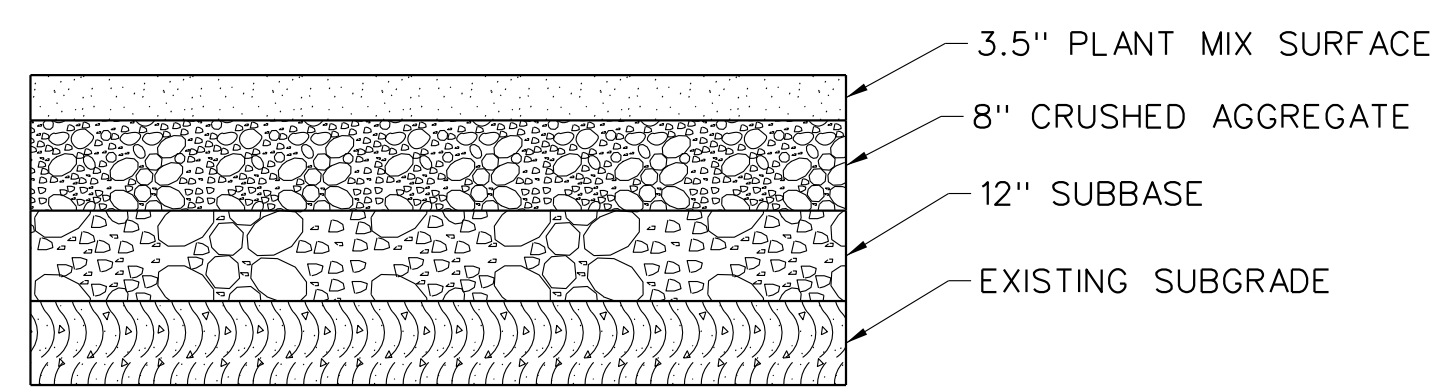


5 R7-8 PARKING SIGN C005 NOT TO SCALE

1 ENLARGED PARKING LOT LAYOUT C005 SCALE: 1" = 15'



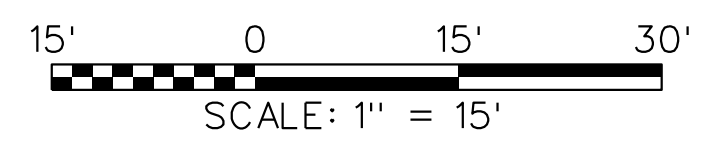
2 BOLLARD DETAIL C005 NOT TO SCALE



3 PAVEMENT SECTION C005 NOT TO SCALE

**PAVEMENT NOTES:**

1. ALL VEGETATION, ROCKS, DEBRIS, AND TOPSOIL SHALL BE REMOVED FROM THE AREA TO BE PAVED.
2. THE SUBGRADE SHALL BE PROPERLY SHAPED TO MEET TRUE LINES AND ELEVATIONS.
3. THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% MAXIMUM LABORATORY DENSITY.
4. PROVIDE A MAXIMUM SLOPE OF 2% OR 1/4" PER FOOT TO ALLOW ADEQUATE DRAINAGE.
5. PROVIDE A COMMERCIAL GRADE TRIFLURAIN (TRIFLURAN) SOIL STERILANT PRIOR TO PAVING FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION.



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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA					
ADM ENLARGED PARKING LOT LAYOUT & LANDSCAPING PLAN					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE		
	KEATRA FULLER	KEATRA FULLER	DATE		
DESIGNED	ISSUED BY	PROGRAM MANAGER	JCN	1705928	
DRAWN	ENGINEERING SERVICES	DRAWING NO			
CHECKED	NAVAIDS	MSO-D-ADM-C005			

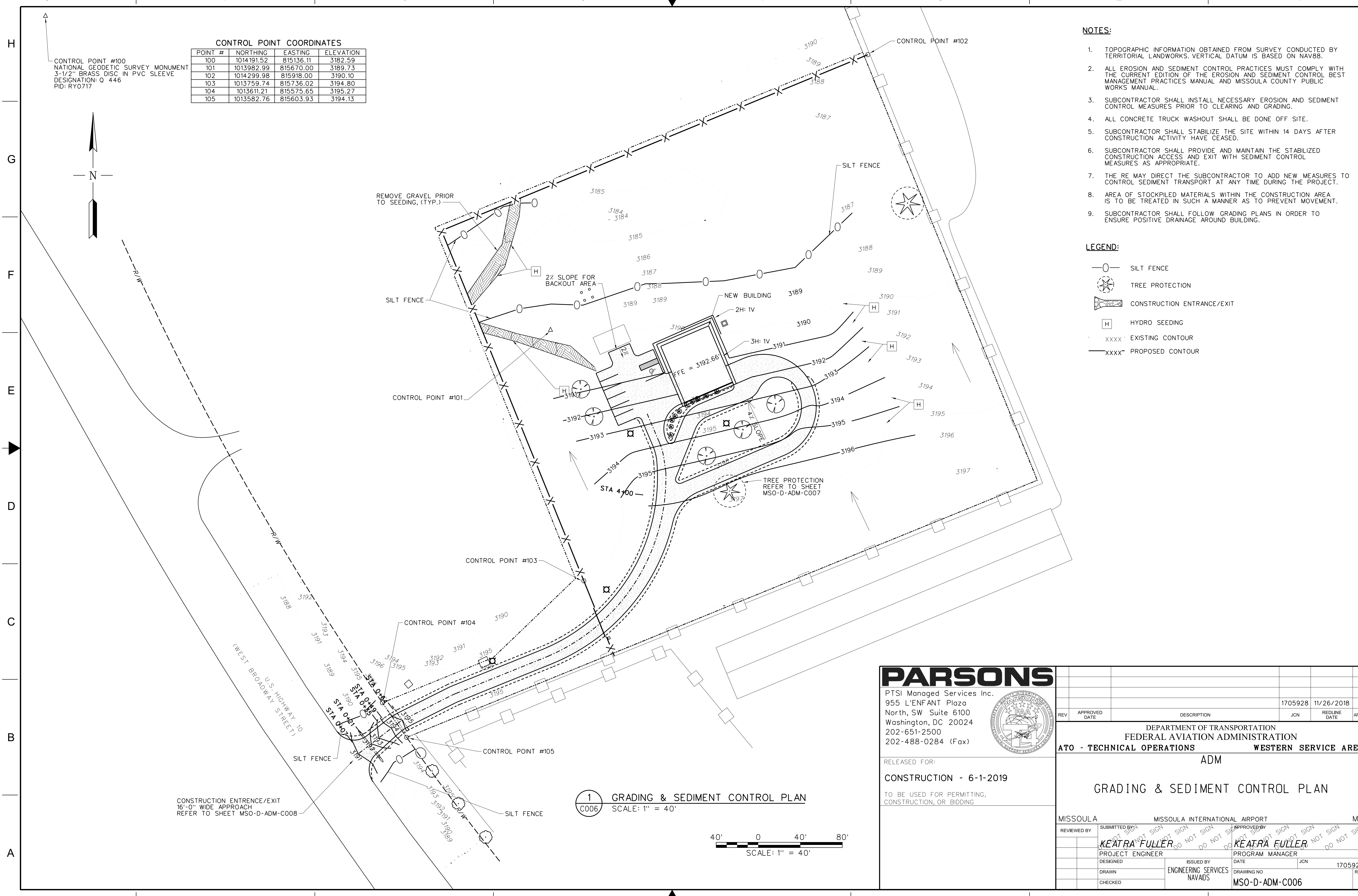
**CONTROL POINT COORDINATES**

POINT #	NORTHING	EASTING	ELEVATION
100	1014191.52	815136.11	3182.59
101	1013982.99	815670.00	3189.73
102	1014299.98	815918.00	3190.10
103	1013759.74	815736.02	3194.80
104	1013611.21	815575.65	3195.27
105	1013582.76	815603.93	3194.13

CONTROL POINT #100  
 NATIONAL GEODETIC SURVEY MONUMENT  
 3-1/2" BRASS DISC IN PVC SLEEVE  
 DESIGNATION: Q 446  
 PID: RY0717

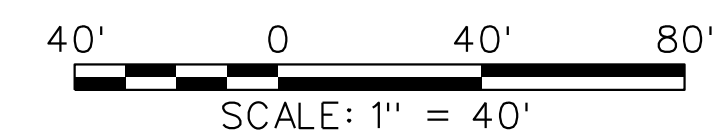
- NOTES:**
- TOPOGRAPHIC INFORMATION OBTAINED FROM SURVEY CONDUCTED BY TERRITORIAL LANDWORKS. VERTICAL DATUM IS BASED ON NAV88.
  - ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST COMPLY WITH THE CURRENT EDITION OF THE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL AND MISSOULA COUNTY PUBLIC WORKS MANUAL.
  - SUBCONTRACTOR SHALL INSTALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO CLEARING AND GRADING.
  - ALL CONCRETE TRUCK WASHOUT SHALL BE DONE OFF SITE.
  - SUBCONTRACTOR SHALL STABILIZE THE SITE WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAVE CEASED.
  - SUBCONTRACTOR SHALL PROVIDE AND MAINTAIN THE STABILIZED CONSTRUCTION ACCESS AND EXIT WITH SEDIMENT CONTROL MEASURES AS APPROPRIATE.
  - THE RE MAY DIRECT THE SUBCONTRACTOR TO ADD NEW MEASURES TO CONTROL SEDIMENT TRANSPORT AT ANY TIME DURING THE PROJECT.
  - AREA OF STOCKPILED MATERIALS WITHIN THE CONSTRUCTION AREA IS TO BE TREATED IN SUCH A MANNER AS TO PREVENT MOVEMENT.
  - SUBCONTRACTOR SHALL FOLLOW GRADING PLANS IN ORDER TO ENSURE POSITIVE DRAINAGE AROUND BUILDING.

- LEGEND:**
- SILT FENCE
  - TREE PROTECTION
  - CONSTRUCTION ENTRANCE/EXIT
  - HYDRO SEEDING
  - XXXXX EXISTING CONTOUR
  - XXXX— PROPOSED CONTOUR



CONSTRUCTION ENTRANCE/EXIT  
 16'-0" WIDE APPROACH  
 REFER TO SHEET MSO-D-ADM-C008

**1 GRADING & SEDIMENT CONTROL PLAN**  
 C006 SCALE: 1" = 40'



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			1705928	11/26/2018

DEPARTMENT OF TRANSPORTATION  
**FEDERAL AVIATION ADMINISTRATION**  
**ATO - TECHNICAL OPERATIONS**      **WESTERN SERVICE AREA**  
**ADM**

**GRADING & SEDIMENT CONTROL PLAN**

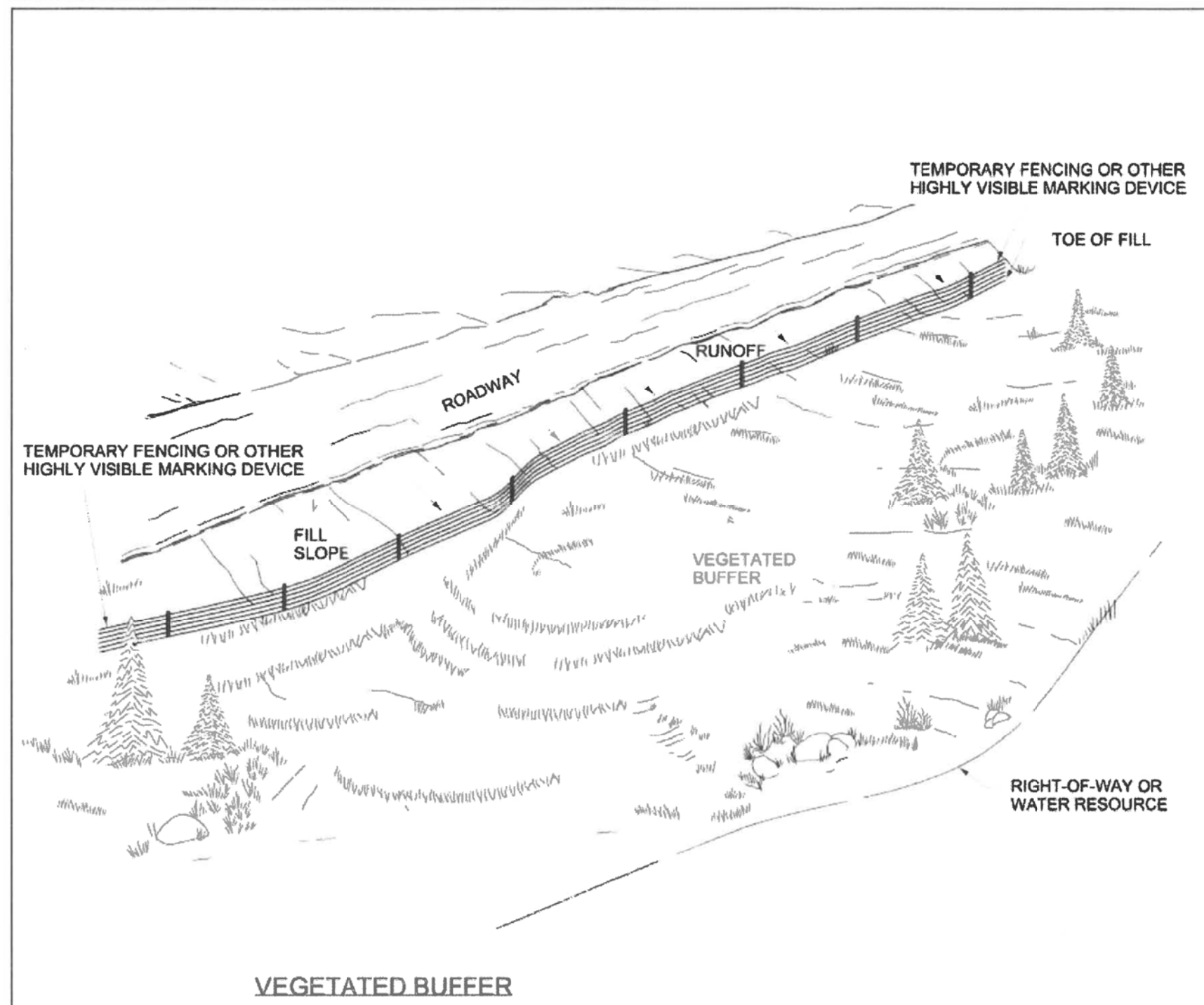
MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
PROJECT ENGINEER	DESIGNED	PROGRAM MANAGER
	ISSUED BY	DATE
	ENGINEERING SERVICES	JCN
	NAVAIDS	1705928
DRAWN	DRAWING NO	REV
CHECKED	MSO-D-ADM-C006	

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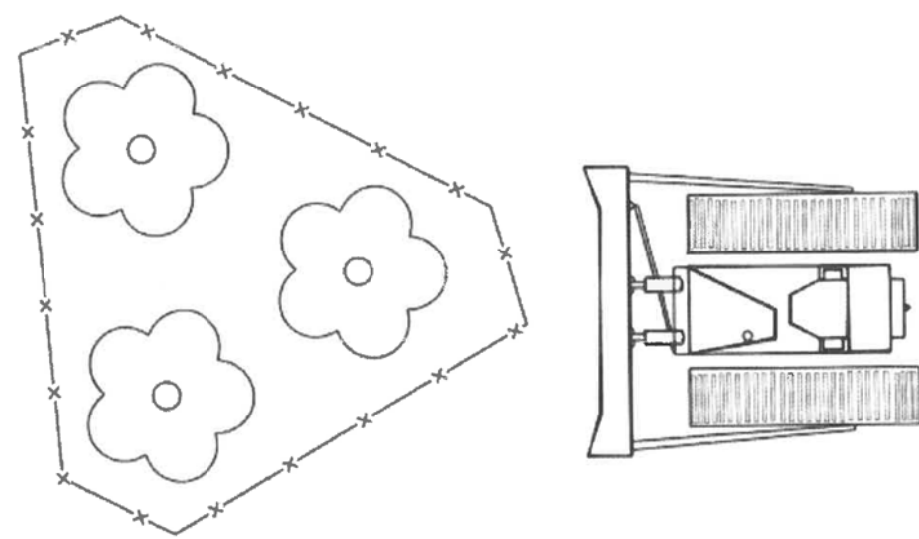
ISSUED FOR: CONSTRUCTION  
 EDM: mso-d-adm-c006.dgn



**SS-1 Preservation of Existing Vegetation/  
Vegetated Buffers**



VEGETATED BUFFER



PRESERVATION OF EXISTING VEGETATION

PRESERVATION OF EXISTING VEGETATION AND VEGETATED BUFFER  
SS-1



**SS-1 Preservation of Existing Vegetation/  
Vegetated Buffers**

**Definition and Purpose**

The identification and carefully-planned protection of existing natural vegetation (e.g., trees, shrubs, grasses, and forbs) within the construction area. The purpose of this BMP is to minimize the amount of bare soil exposed to erosive factors; reduce the velocity of storm water runoff; reduce erosion, sediment transport, and tracking; provide an area for runoff to permeate the soil; provide buffers, screens, and aesthetics values; provide biofiltration (capture/process of pollutants); and provide fully-developed habitat for wildlife. It is the most inexpensive form of erosion control.

**Objectives**

- Construction Site Planning
- Temporary Soil Stabilization
- Run-on and Runoff Control
- Temporary Sediment Control
- Snow Management
- Good Housekeeping
- Waste Management

**AT A GLANCE**

**Applications**

- Site Perimeter
- Exposed Areas
- Slopes
- Toe of Slopes
- Ditches
- Cut/Fill Transitions
- Inlets and Outlets
- Sediment Traps/Basins
- Near Water/Wetlands
- Pollution/Material Sources

**Alternative BMPs to Consider**

- Not applicable

**Use In Conjunction With**

- CP-1 Scheduling
- Secondary soil stabilization BMPs
- Secondary run-on and runoff control BMPs
- Secondary sediment control BMPs

**Limitations**

- Vegetated buffer must be within right-of-way.
- Protection of existing vegetation requires planning and may limit the area available for construction activities.
- Difficult to implement on sites with restricted access.
- If vegetative buffer zones are not wide enough, additional erosion and sediment control BMPs may be required when slopes have significant lengths or steepness.

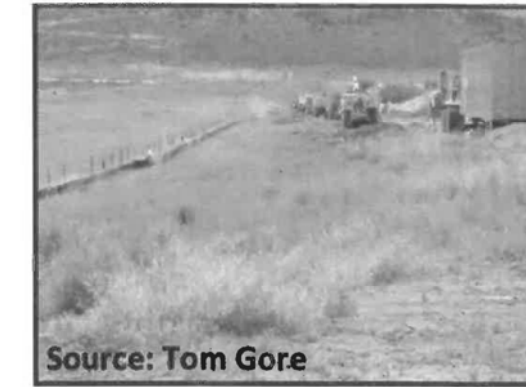
**Effectiveness**

- Preserving existing vegetation is the most effective BMP for soil stabilization and erosion control.



Source: Tom Gore

Mark areas to be preserved with high visibility, temporary fencing.



Source: Tom Gore

Vegetated buffer width will depend on site characteristics, right-of-way limits, and slope.

**SS-1 Preservation of Existing Vegetation/  
Vegetated Buffers**

**Materials**

- Highly-visible fencing.

**Design and Installation**

- Review project plans, as existing vegetation and/or wetland areas may already be designated as 'do not disturb'.
- Identify existing vegetation to preserve and vegetative buffers to maintain during project scheduling and sequencing.
- Preserve vegetation in clumps, blocks, or buffer strips.
- The vegetated buffer width to preserve should be determined after careful consideration of right-of-way limits, equipment access, slope, vegetation, soils, depth to impermeable layers, runoff sediment characteristics, type and quantity of storm water pollutants, and annual rainfall.
- The buffer width to preserve should increase as slope increases.
- Do not begin clearing and grubbing, grading, and other soil-disturbing construction activities prior to marking and fencing existing vegetation.
- Mark all areas to be preserved with highly-visible, temporary fencing to prevent construction traffic and equipment from disturbing designated vegetated areas.
- Wherever practicable, install temporary fencing around vegetation so all ground disturbance occurs outside the drip line of preserved trees and shrubs.
- Keep all construction equipment, construction materials, parking areas, and waste out of designated fenced areas.
- Keep equipment away from trees to prevent trunk and root damage.
- Do not allow removed trees to be felled, pushed, or pulled into any retained trees.

**Inspection and Maintenance**

- Provide regular inspections at the frequency required by the NPDES/MPDES storm water permit. If no storm water permit is required for the project, conduct inspections as specified in the contract.
- Ensure all project personnel are aware of areas to be preserved.
- Maintain or replace all fencing, as needed, for the duration of the work or until no longer needed.
- Ensure that existing vegetation remains healthy and undamaged.
- Evaluate the preserve-in-place vegetation for signs of stress and any damage from foot or vehicular traffic and address as necessary.
- Remove and replace trees or shrubs if they are damaged seriously enough to affect their survival.
- Remove any sediment that has encroached onto the vegetative buffer. Minimize disturbance to vegetation during sediment removal.

**Removal**

- Remove all temporary fencing and marking devices when no longer needed, or upon completion of the work.

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			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA					
ADM CIVIL DETAILS SHEET 1 OF 6					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
DRAWN	ENGINEERING SERVICES	DATE	JCN	1705928	
CHECKED	NAVAIDS	DRAWING NO	MSO-D-ADM-C007		

1 CIVIL DETAILS  
C007 NOT TO SCALE



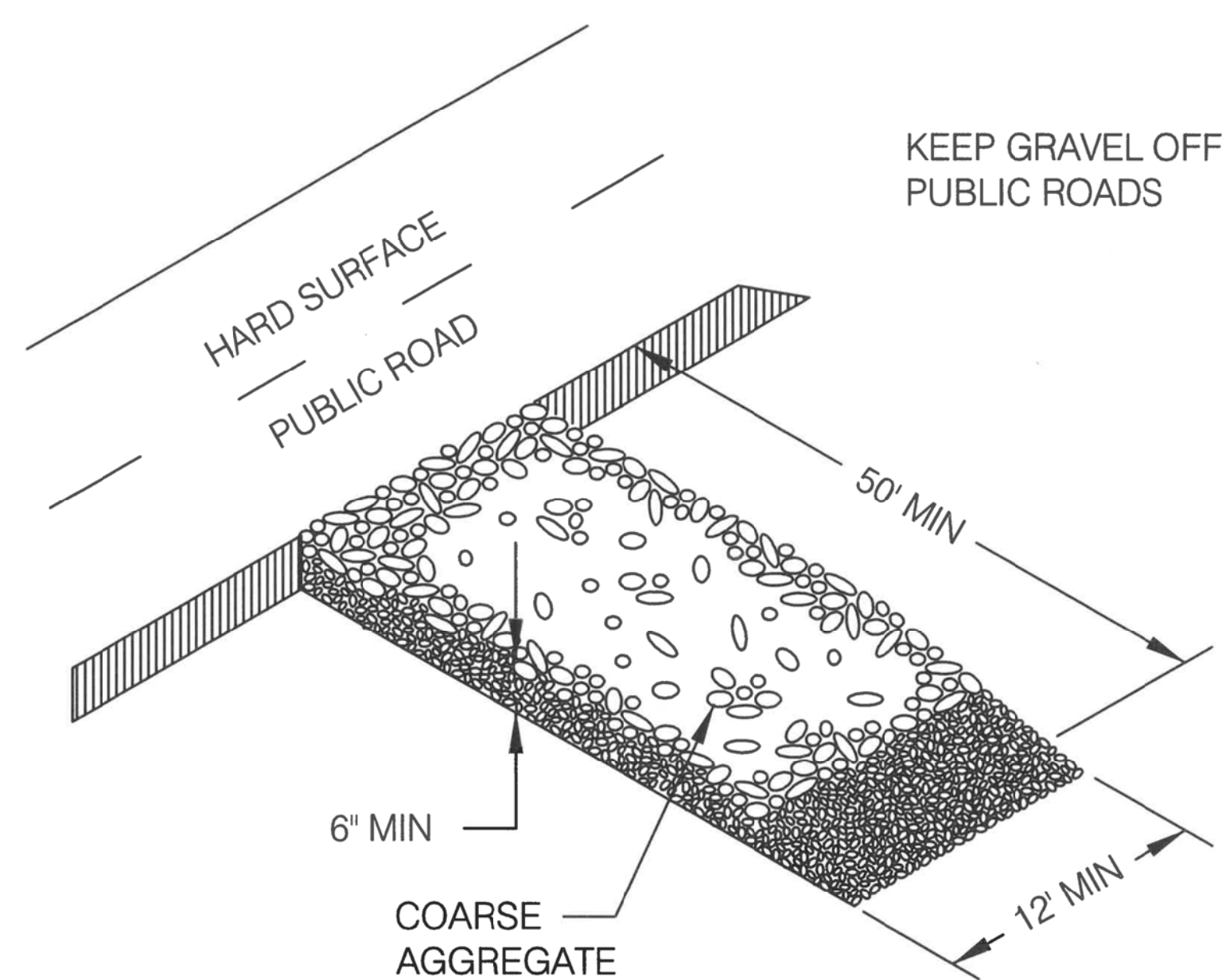
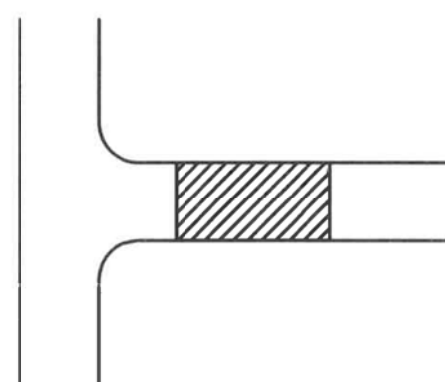
# TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

**DEFINITION**

A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE

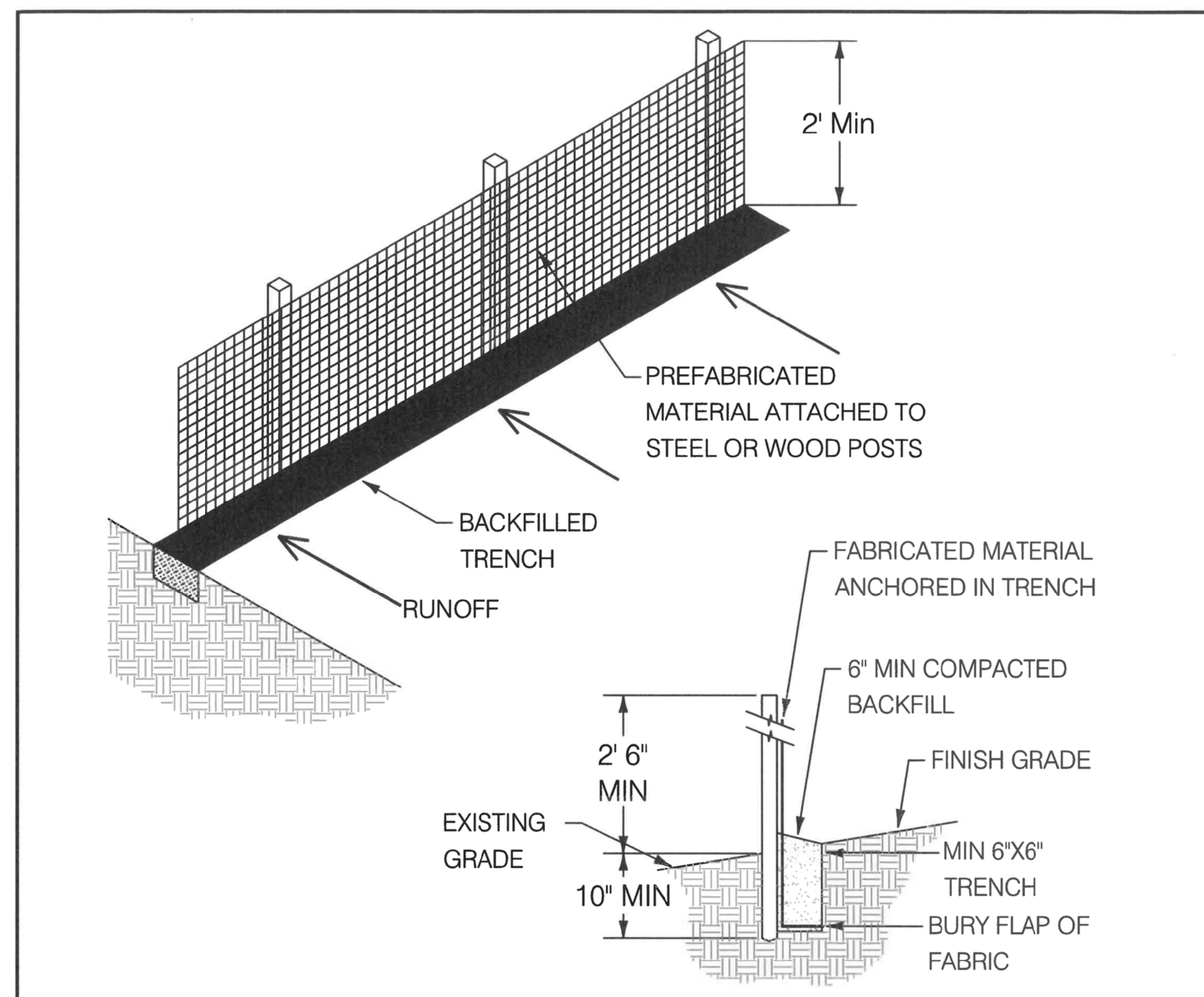
**PURPOSE**

TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PUBLIC ROADS BY MOTOR VEHICLES OR RUNOFF



APPROVED BY: TRE	DATE: 01/12/2010		DEPARTMENT OF PUBLIC WORKS	PAGE
REVISION NO.	DRAWN BY:		MCSO-#410	1 OF 1
			TEMPORARY GRAVEL CONSTRUCTION ENTRANCE	

1 CIVIL DETAILS  
C008 NOTE TO SCALE



**NOTES:**

1. SILT FENCE SHALL BE INSTALLED BEFORE ANY EARTH REMOVAL OR EXCAVATION TAKES PLACE.
2. SET POSTS MAXIMUM 8 FEET ON CENTER AND EXCAVATE 6"x6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
3. ATTACH FILTER FABRIC TO POSTS AND EXTEND IT INTO TRENCH.
4. BACKFILL AND COMPACT EXCAVATED SOIL.

APPROVED BY: TRE	DATE: 01/12/2010		DEPARTMENT OF PUBLIC WORKS	PAGE
REVISION NO.	DRAWN BY:		MCSO-#602	1 OF 1
			TYPICAL SILT FENCE INSTALLATION	

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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA</b>				
ADM <b>CIVIL DETAILS</b> SHEET 2 OF 6				
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	REV
	KEATRA FULLER	KEATRA FULLER	1705928	
DESIGNED	ISSUED BY	PROGRAM MANAGER	JCN	
DRAWN	ENGINEERING SERVICES	NAVAIDS		
CHECKED		DRAWING NO.		
		MSO-D-ADM-C008		

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**FENCE INSTALLATION NOTES**

**GENERAL NOTES:**

THIS DRAWING PROVIDES THE RECOMMENDED STANDARD PRACTICE FOR THE ERECTION OF A STEEL OR AN ALUMINUM CHAIN LINK FENCE (CLASS "F"). THE FENCE SHALL BE LOCATED AS SHOWN ON THE SITE PLAN DRAWINGS. IN ADDITION, THE SIZE AND LOCATION OF GATES SHALL BE SHOWN.

**ERECTION:**

ERECTION SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS DRAWING AND THE FOLLOWING.

**POSTS:**

LINE POSTS IN ANY ON SECTION OF FENCE SHALL BE UNIFORMLY SPACED AND (A SECTION OF FENCE BEING A RUN BETWEEN ANY TWO OF THE FOLLOWING: CORNER POSTS AND GATE POSTS) CORNER POSTS SHALL BE INSTALLED AT ANY POINT IN THE FENCE LINE WHERE THERE IS A DEFLECTION ANGLE IN EXCESS OF 10 DEGREES.

**STRETCHER BARS:**

ONE STRETCHER BAR SHALL BE INSTALLED AT EACH GATE POST. TWO STRETCHER BARS SHALL BE INSTALLED AT EACH CORNER POST. STRETCHER BARS SHALL BE ATTACHED TO THE FABRIC BY THREADING THROUGH THE FABRIC BY CLAMPS OR BY OTHER APPROVED POSITIVE MECHANICAL MEANS.

**FABRIC & FABRIC TIES:**

THE FABRIC SHALL BE PLACED ON THE OUTSIDE OF THE POSTS. THE BOTTOM OF THE FABRIC SHALL REACH WITHIN 2" OF THE FINISHED GRADE. THE FABRIC SHALL BE ATTACHED AS FOLLOWS:  
 - TO CORNER AND GATE POSTS WITH STRETCHER BARS Banded to Posts at 15" MAXIMUM SPACING.  
 - TO LINE POSTS WITH FABRIC TIES OR CLIPS AT 15" MAXIMUM SPACING.  
 - TO BOTTOM TENSION WIRE AND TOP RAILS WITH FABRIC TIES OR CLIPS AT 24" MAXIMUM SPACING.

**CHAIN LINK WIRE:**

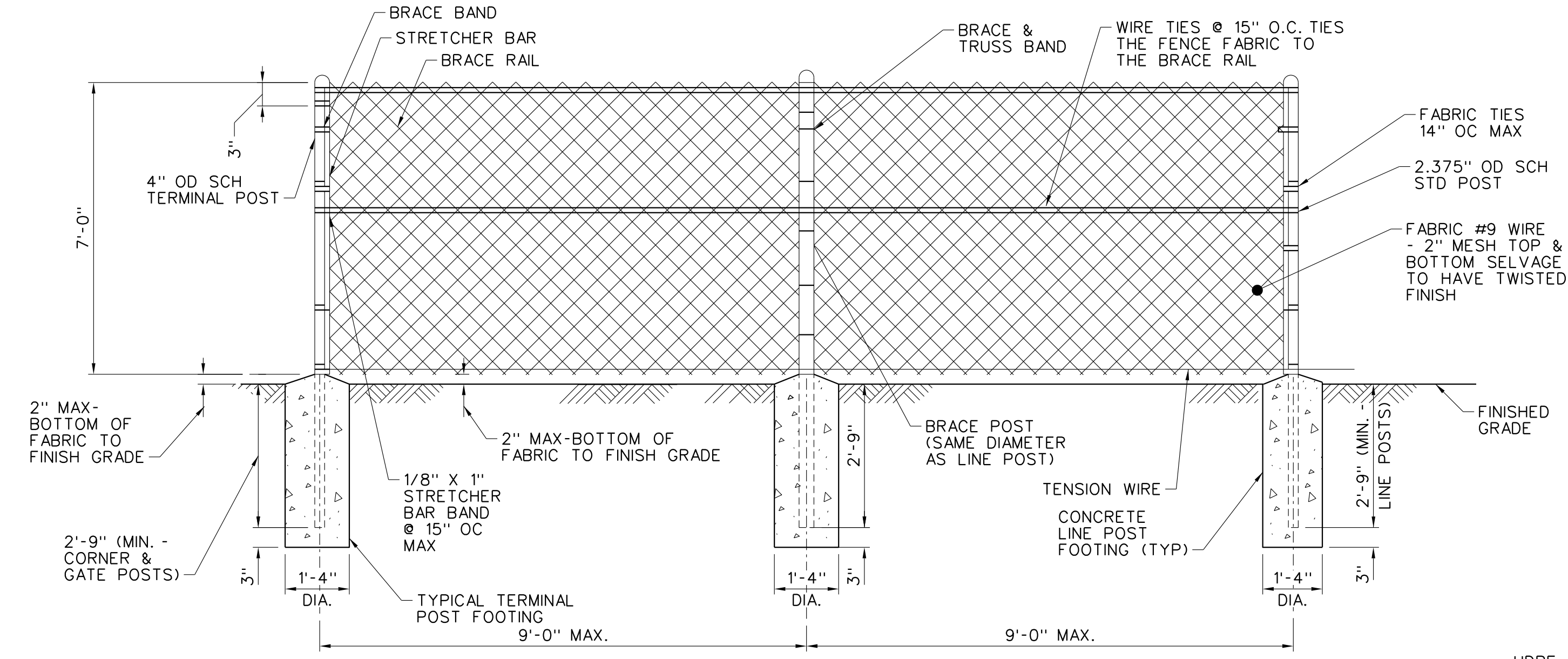
CHAIN LINK WIRE SHALL BE 2" x 2" SQUARES OF INTERWOVEN NO. 9 GAUGE GALVANIZED STEEL WIRE, WITH TOP SELVAGE TWISTED AND SHALL BE HEAVY GALVANIZED 2.0 OUNCES ZINC PER SQUARE FOOT COMPLYING WITH ASTM A392

**BOTTOM TENSION WIRE:**

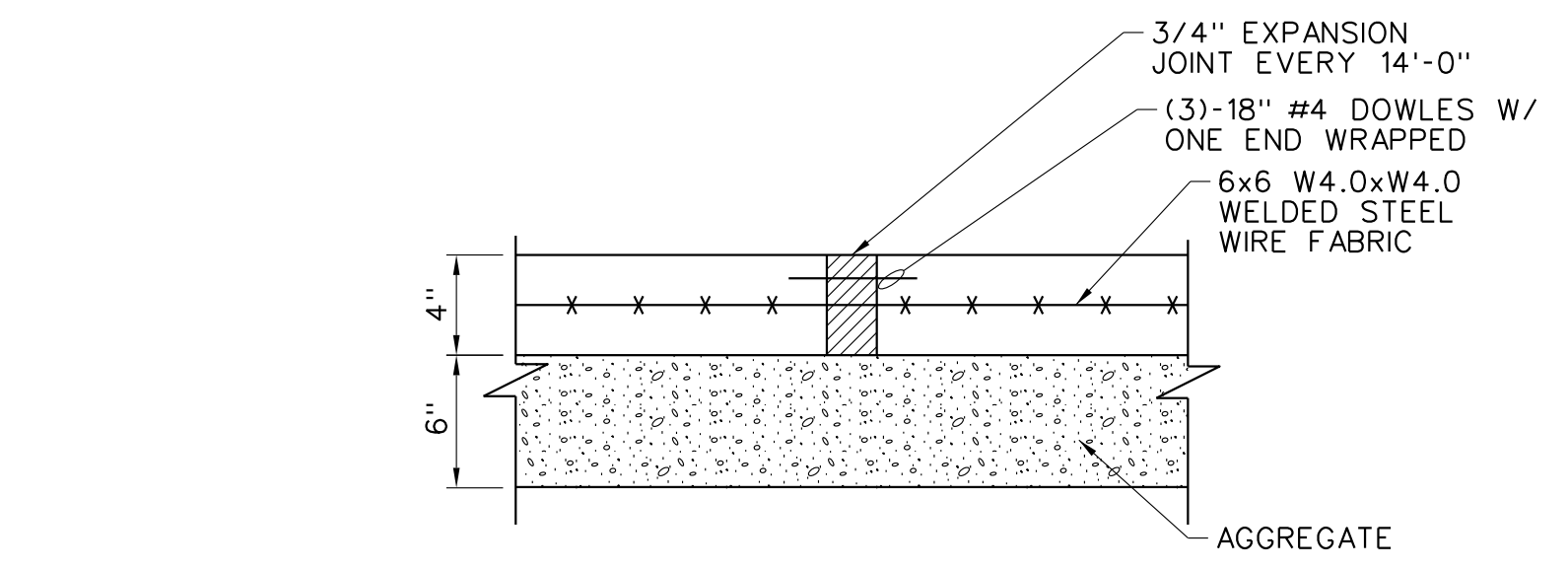
BOTTOM TENSION WIRE SHALL BE NO. 9 GAUGE GALVANIZED STEEL WIRE SECURED TO CORNER POSTS, GATE POSTS AND LINE POSTS USING NON-REMOVABLE CONNECTIONS.

**HORIZONTAL BRACE:**

FURNISH & INSTALL HORIZONTAL BRACE ONLY ON THOSE FENCE SECTIONS THAT ARE ADJACENT TO CORNER POSTS AND/OR GATE POSTS.

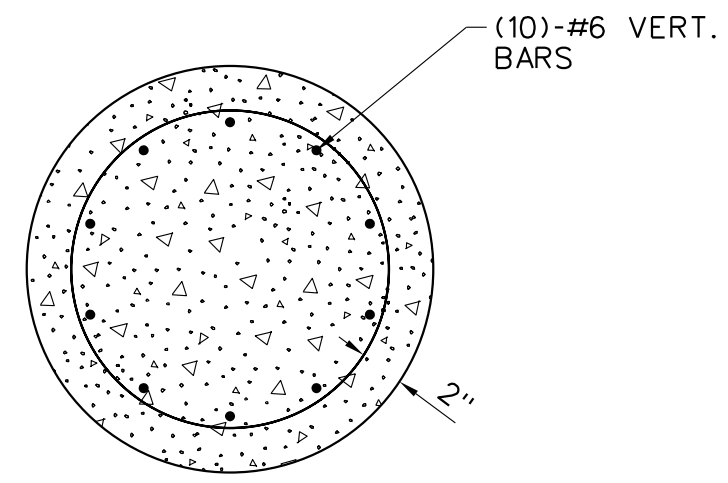


**1 FENCE DETAIL**  
C009 NOT TO SCALE

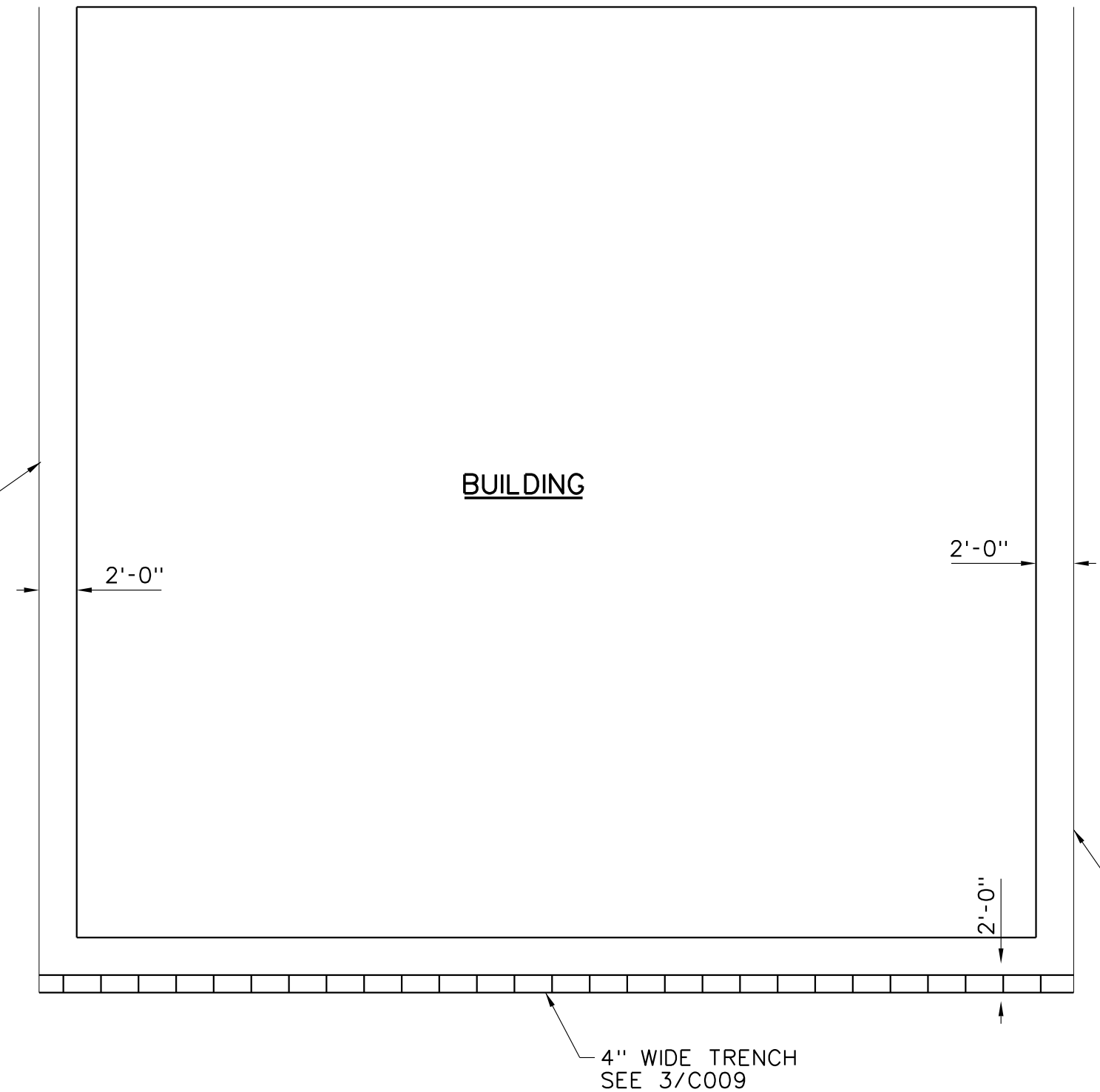


**4 SIDEWALK DETAIL**  
C009 NOT TO SCALE

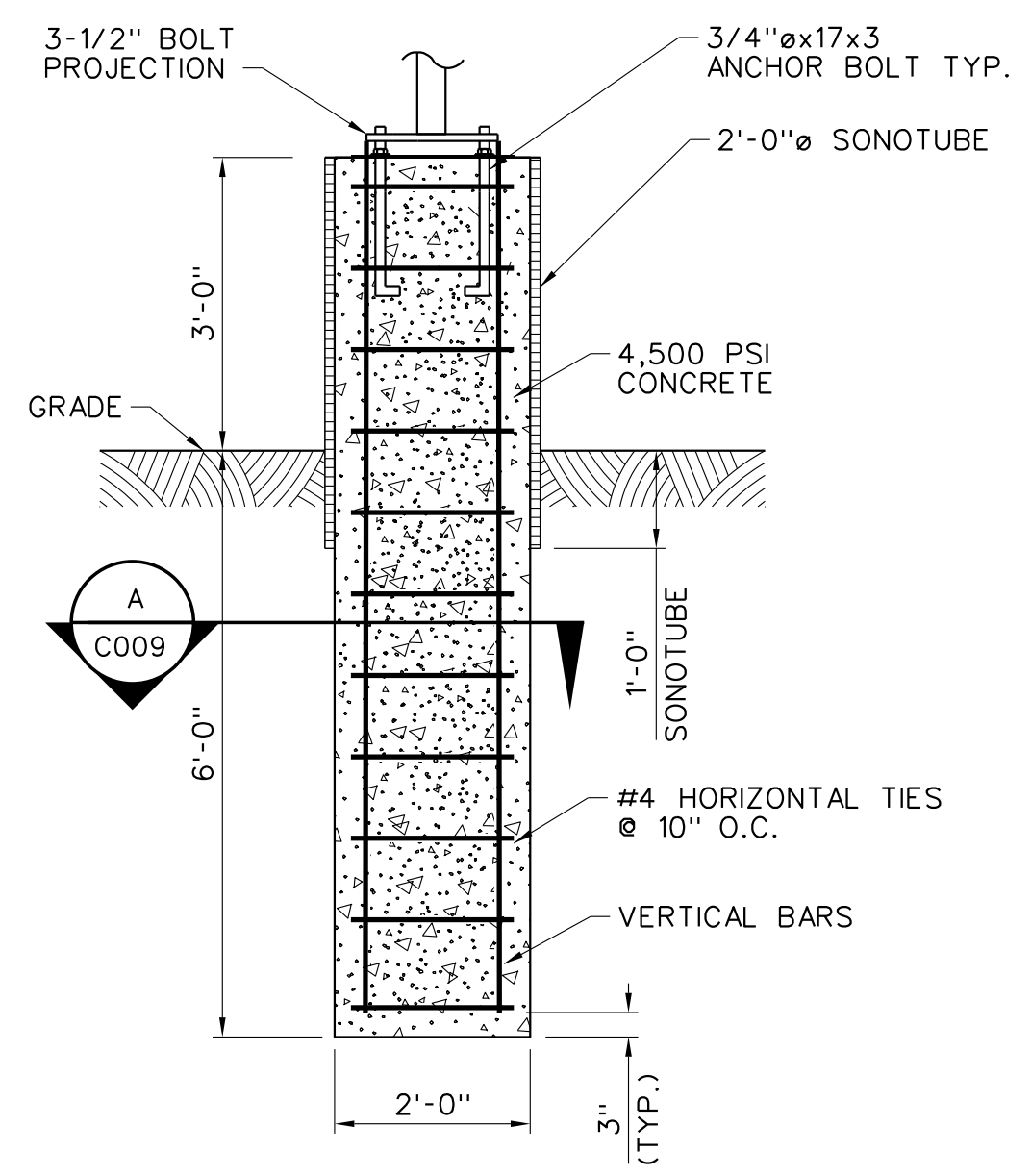
1. PRIOR TO PLACING GRANULAR BASE COURSE, COMPACT THE NATIVE SUBGRADE TO A STANDARD RELATIVE COMPACTION OF AT LEAST 95% AND TO A MOISTURE CONTENT AT OR UP TO 3% OVER THE OPTIMUM MOISTURE CONTENT.



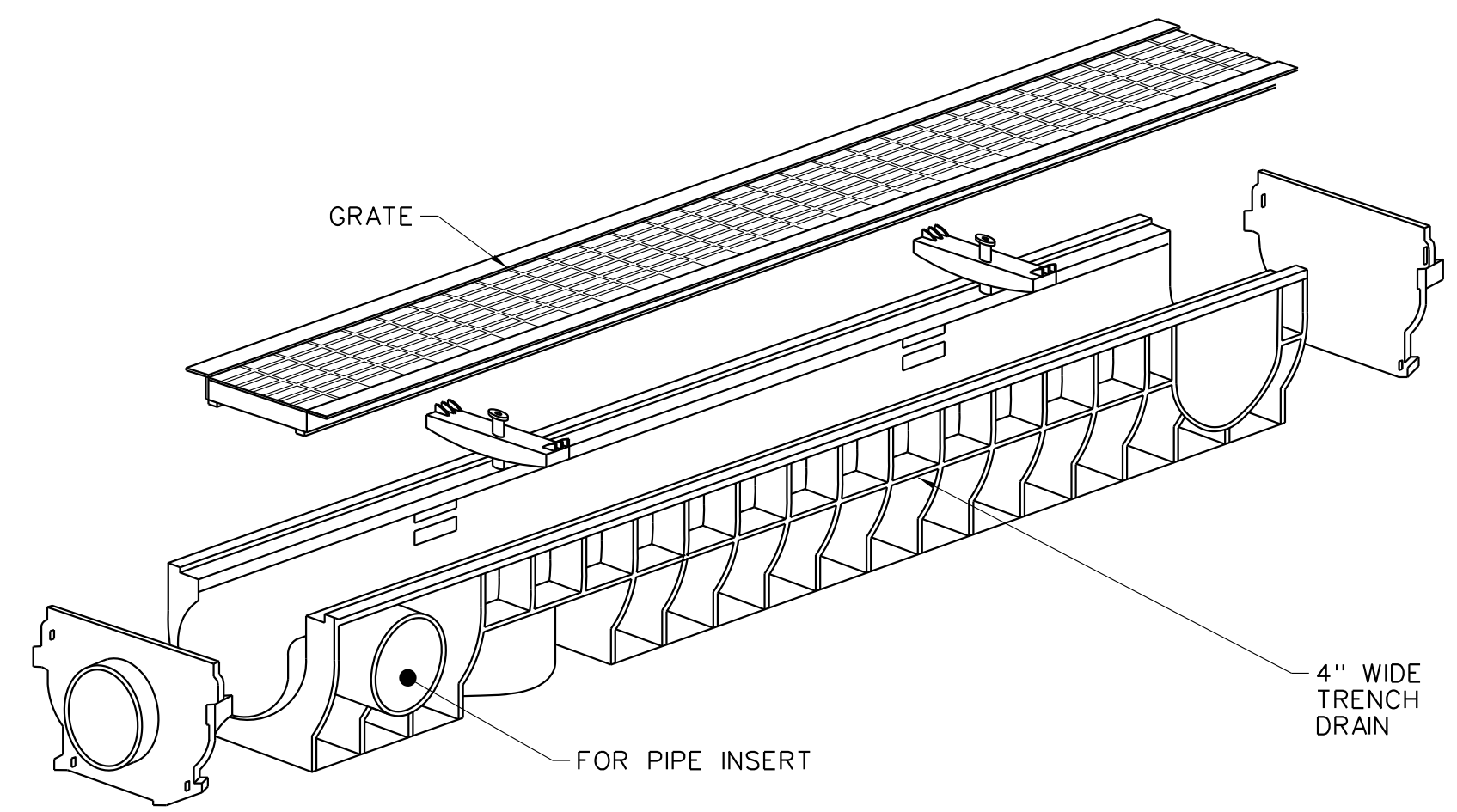
**A SECTION**  
C009 SCALE: 1" = 1'-0"



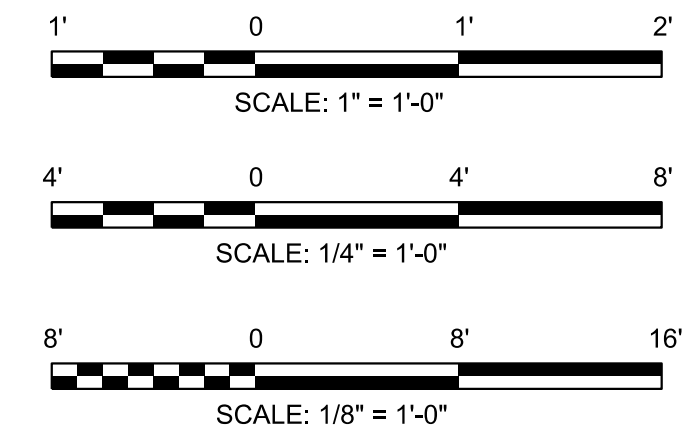
**2 TRENCH DRAIN AND HDPE LAYOUT**  
C009 NOT TO SCALE



**5 LIGHT POLE FOUNDATION DETAIL**  
C009 SCALE 1/2" = 1'-0"

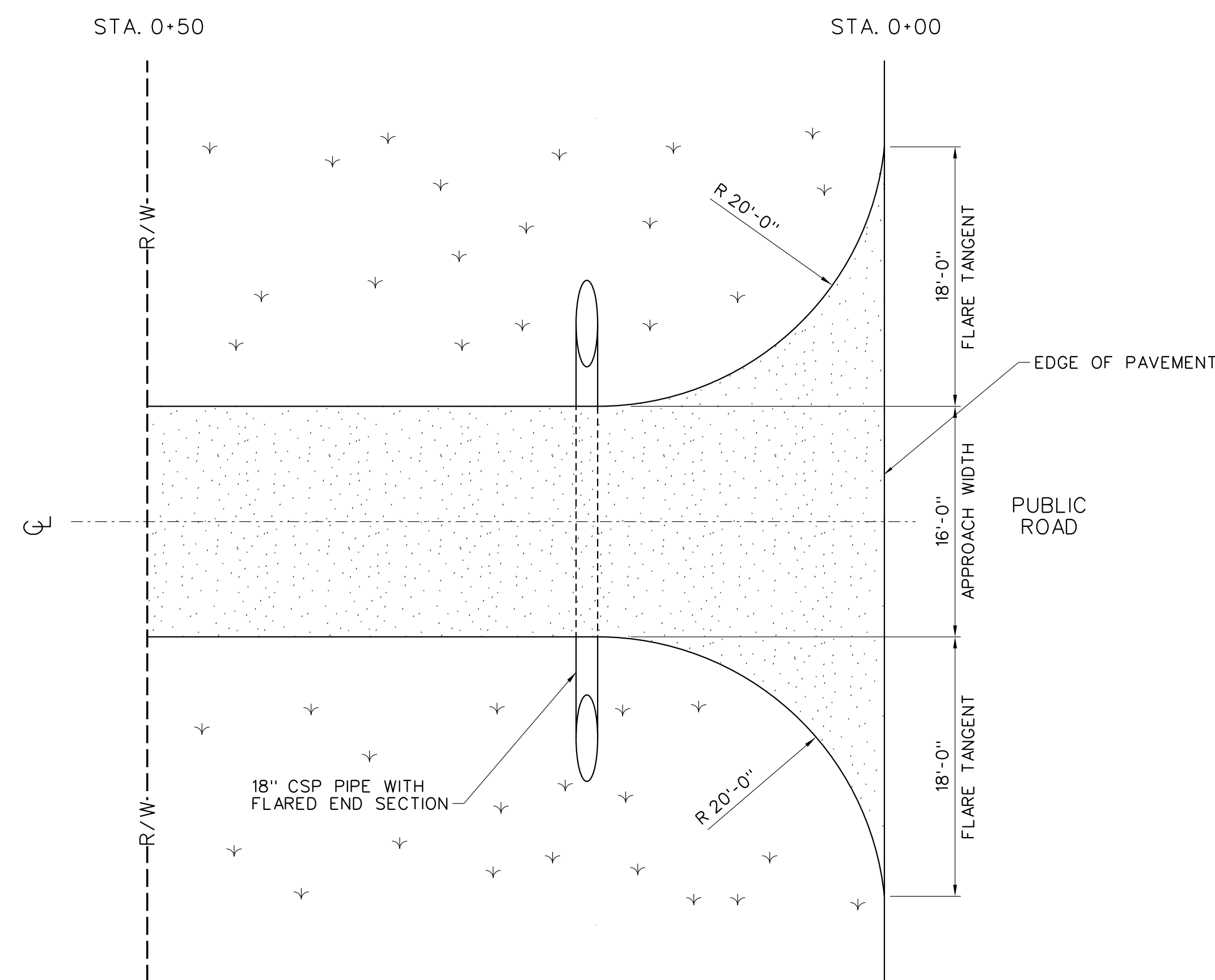


**3 TRENCH DRAIN DETAIL**  
C009 NOT TO SCALE

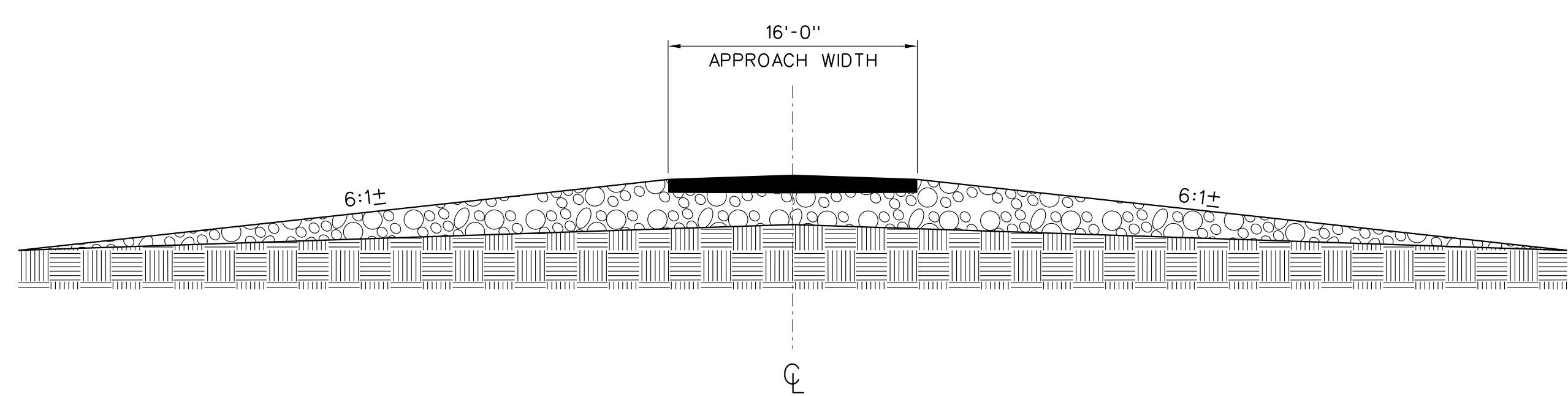


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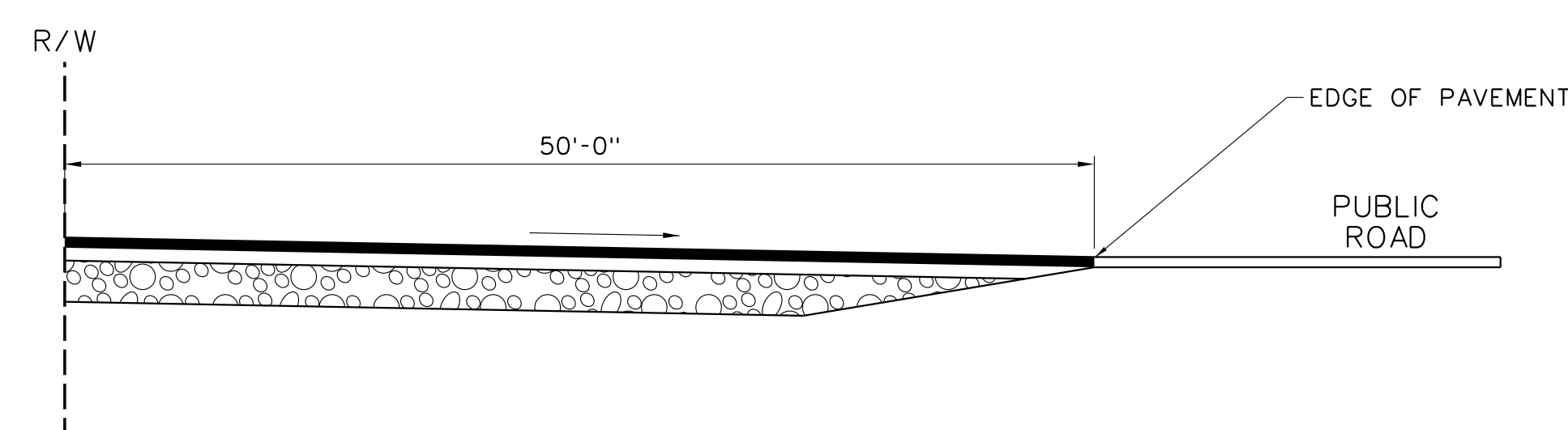
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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA							
ADM CIVIL DETAILS SHEET 3 OF 6							
MISSOULA		MISSOULA INTERNATIONAL AIRPORT				MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY					
	KEATRA FULLER	KEATRA FULLER					
DESIGNED BY	ISSUED BY	DATE	JCN	1705928			
	ENGINEERING SERVICES						
DRAWN	NAVAIDS	DRAWING NO	MSO-D-ADM-C009				
CHECKED		REV					



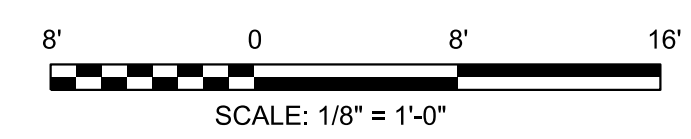
**1** APPROACH ROAD DETAIL  
 C010 SCALE: 1/8" = 1'-0"



**2** SECTION AT EDGE OF PAVEMENT  
 C010 SCALE: 1/8" = 1'-0"



**3** PROFILE VIEW  
 C010 SCALE: 1/8" = 1'-0"



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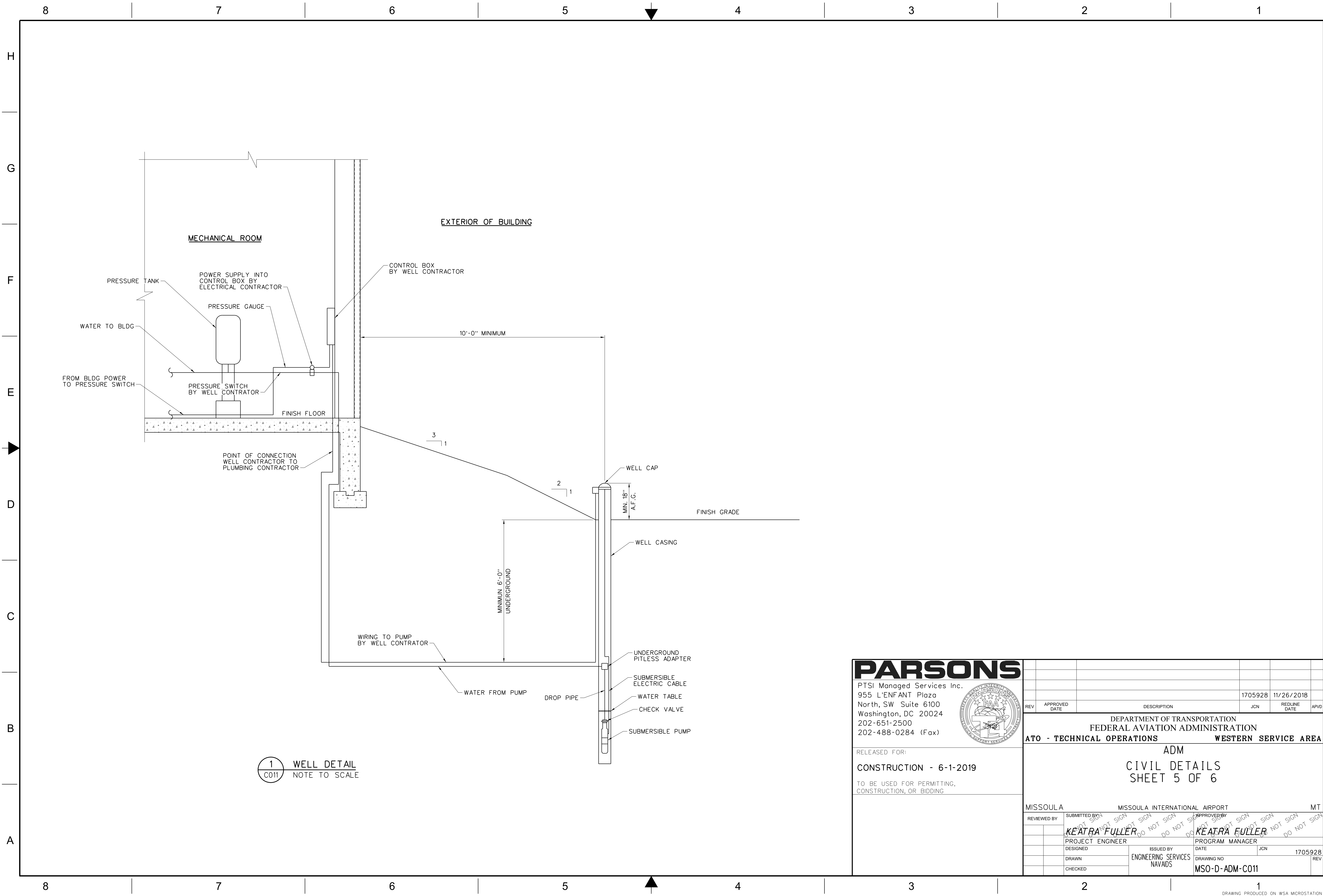


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MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
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1 WELL DETAIL  
C011 NOTE TO SCALE

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**ATO - TECHNICAL OPERATIONS**      **WESTERN SERVICE AREA**

ADM  
**CIVIL DETAILS**  
 SHEET 5 OF 6

MISSOULA      MISSOULA INTERNATIONAL AIRPORT      MT

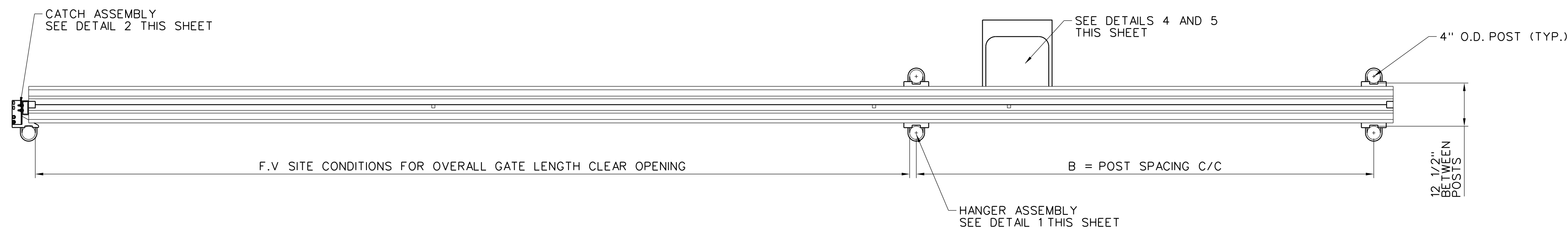
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DESIGNED	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	DATE
DRAWN	NAVAIDS	JCN
CHECKED		1705928
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DRAWING NO: MSO-D-ADM-C011

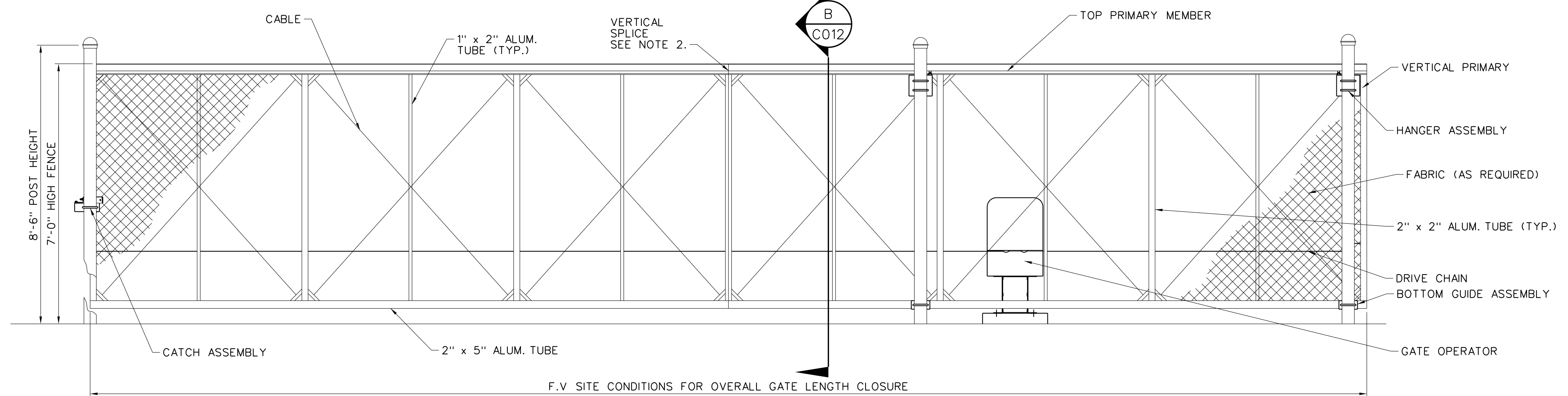
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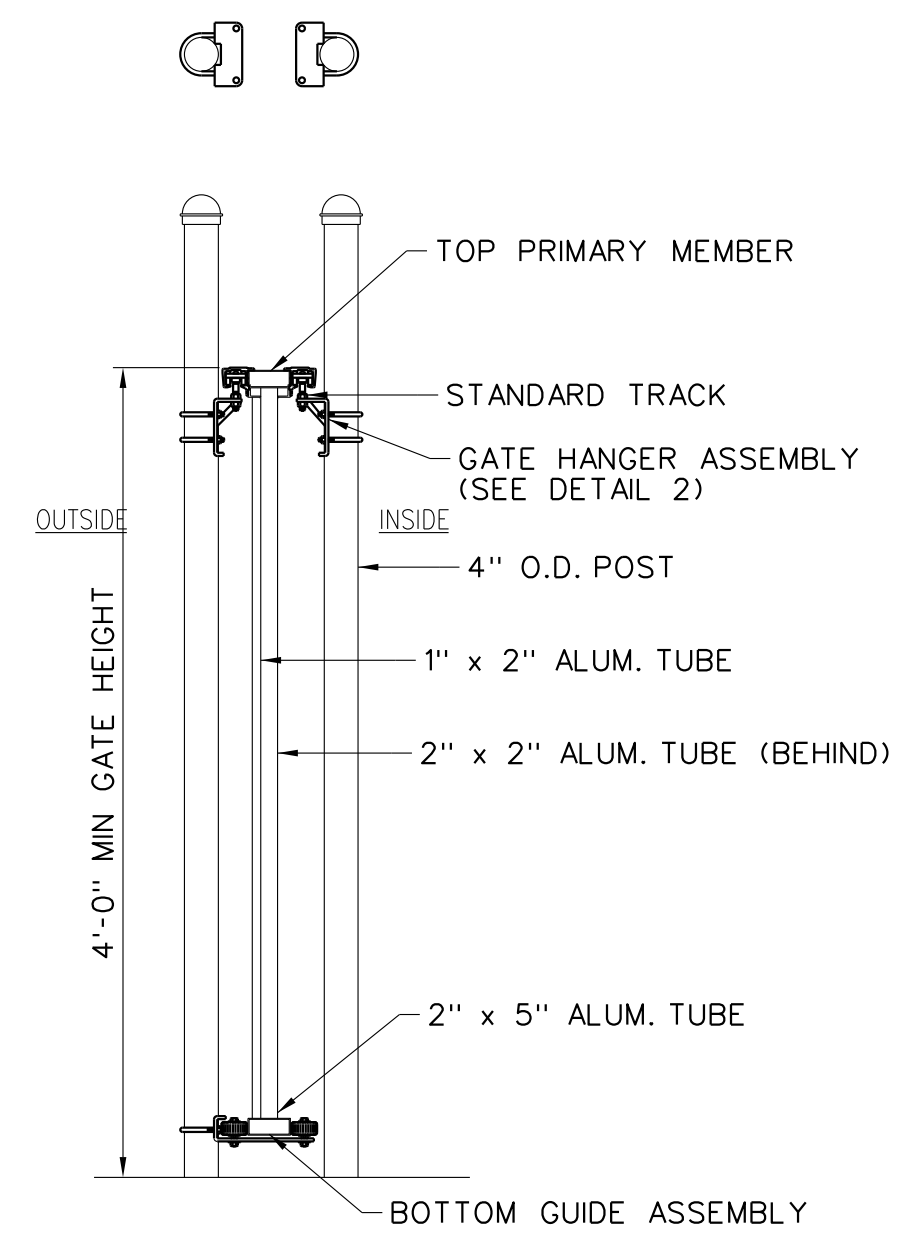
- NOTES:**
1. ALL FITTINGS PROVIDED FOR 4" O.D. POSTS.
  2. FOR GATES THAT REQUIRE TWO PIECE FABRICATION, A 5" ALUMINUM CHANNEL WILL BE SUBSTITUTED FOR THE 2" x 5" ALUM. TUBE, AND A VERTICAL SPLICE WILL BE ADDED.
  3. FIELD VERIFY EXISTING CONDITION TO CONFIRM FINAL FENCE LENGTH AND COSTRUCTUABILITY OF GATE.
  4. GATE TO MATCH MATERIAL AND FINISH OF PERIMETER FENCE.
  5. PROVIDE FOR REMOTE AND KEY PAD ACCESS PER OWNER REQUIREMENTS.
  6. REFERENCE CIVIL, ELECTRICAL DRAWINGS FOR ADDITIONAL SPECIFICATIONS.
  7. DESIGN IS INTENDED TO OPERATE IN INCLEMENT WEATHER AS SPECIFIED.



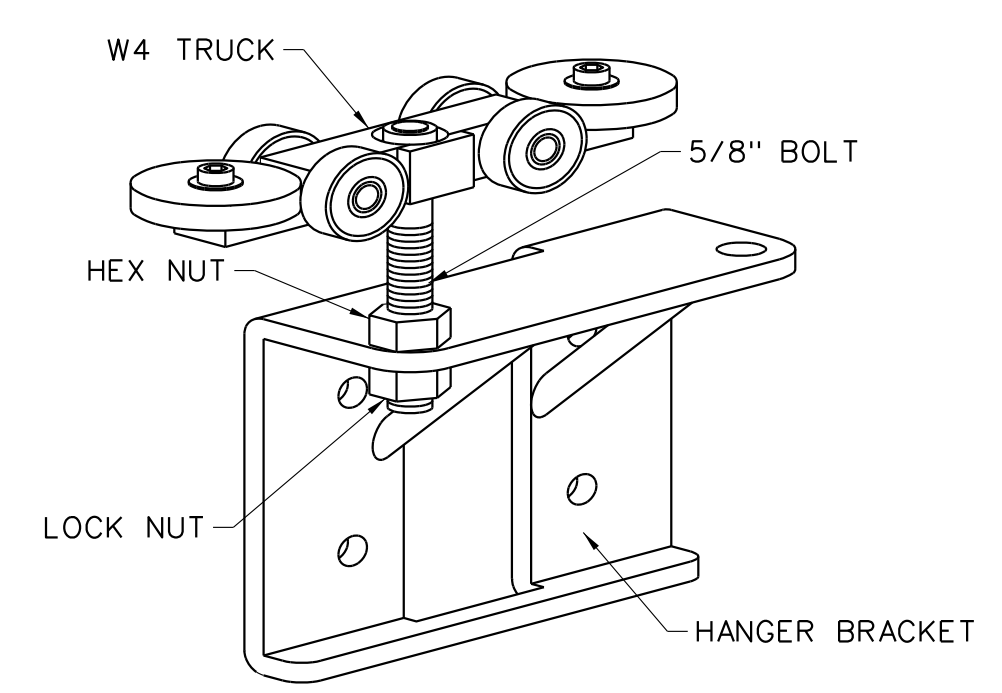
**PERIMETER FENCE GATE PLAN**  
SCALE: 1/2" = 1'-0"



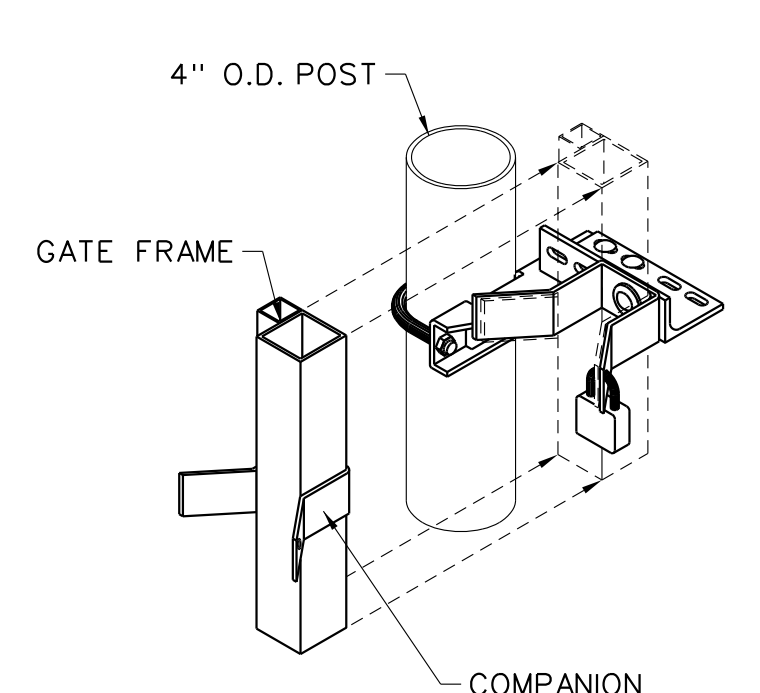
**PERIMETER FENCE GATE ELEVATION**  
SCALE: 1/2" = 1'-0"



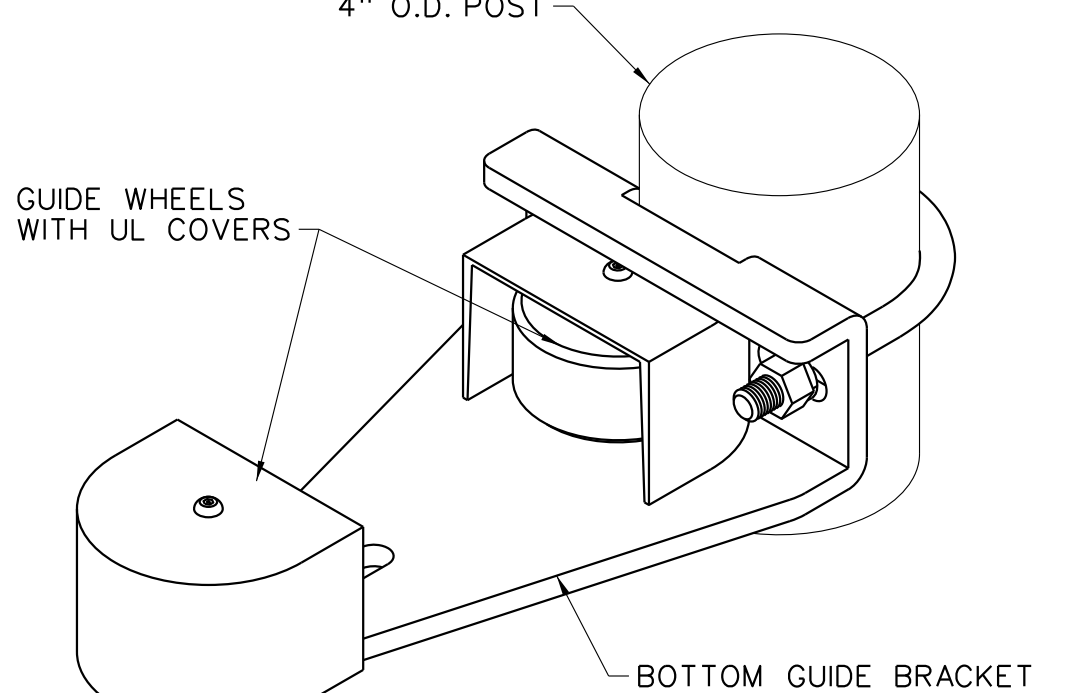
**PERIMETER FENCE GATE SECTION**  
SCALE: 1/2" = 1'-0"



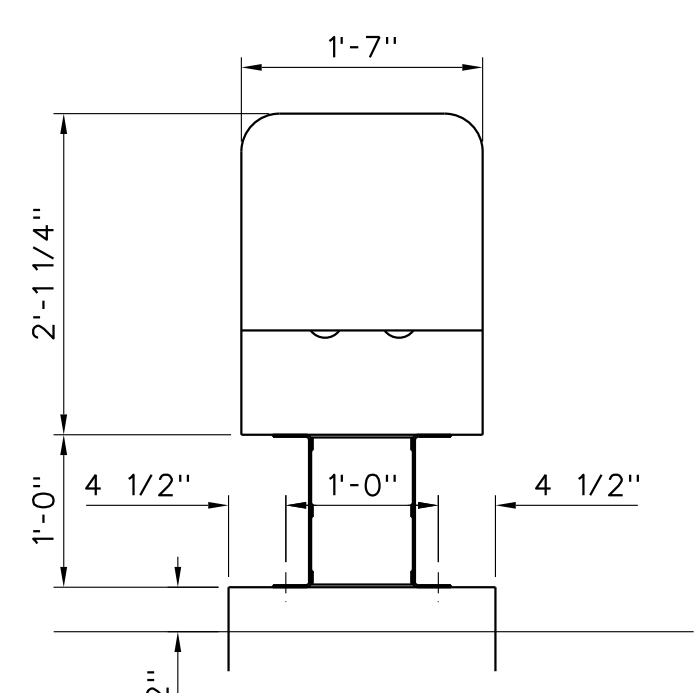
**1 GATE HANGER**  
SCALE: 3" = 1'-0"



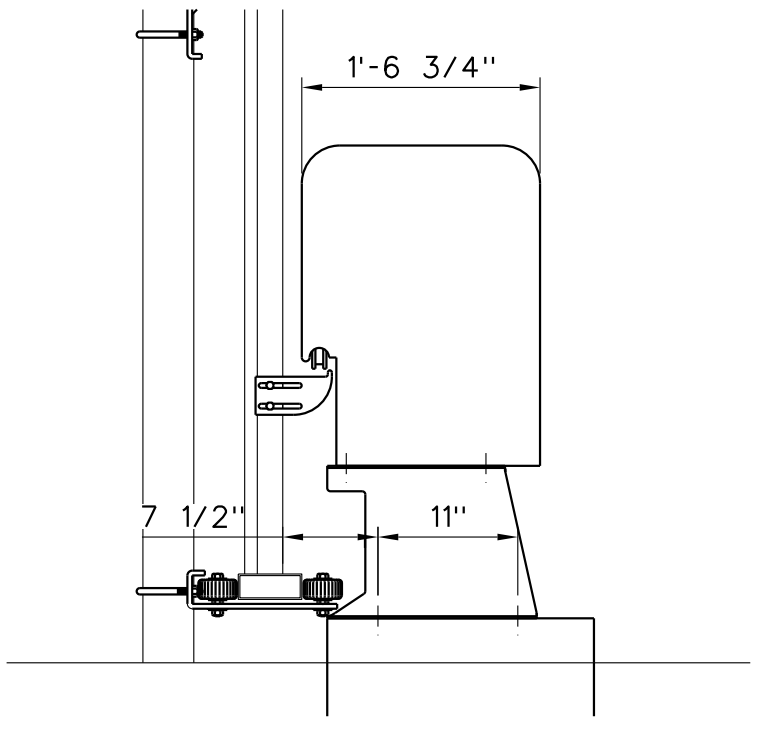
**2 GATE CATCH ASSEMBLY**  
SCALE: 3" = 1'-0"



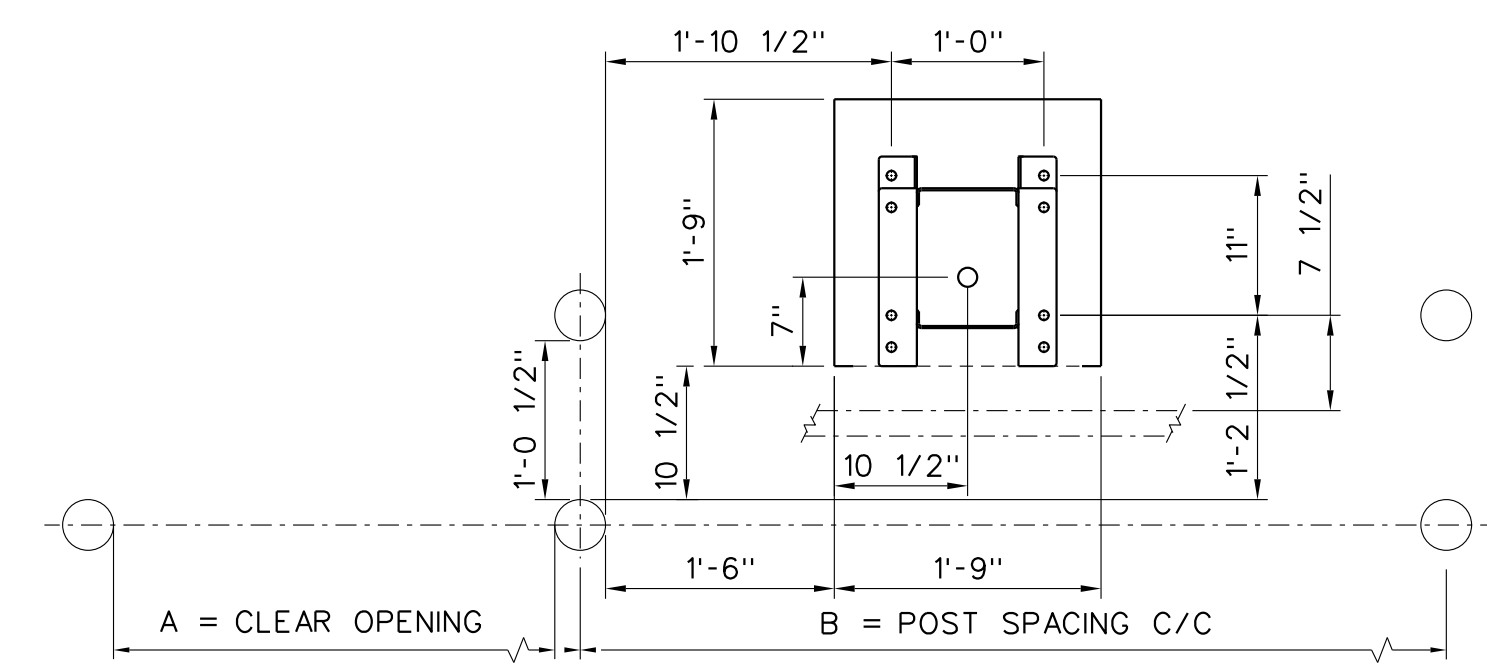
**3 GATE BOTTOM GUIDE**  
SCALE: 3" = 1'-0"



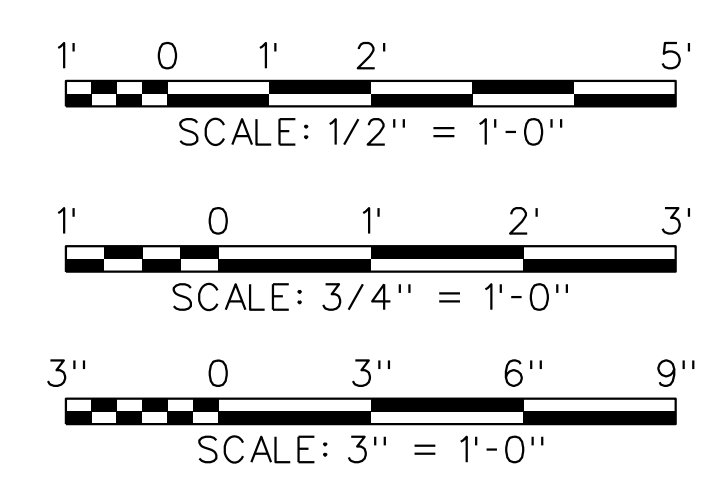
**4 OPERATOR FRONT ELEVATION**  
SCALE: 3/4" = 1'-0"



**5 OPERATOR SIDE ELEVATION**  
SCALE: 3/4" = 1'-0"



**6 OPERATOR CONCRETE PAD LAYOUT**  
SCALE: 3/4" = 1'-0"



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ADM  
**CIVIL DETAILS SHEET 6 OF 6**

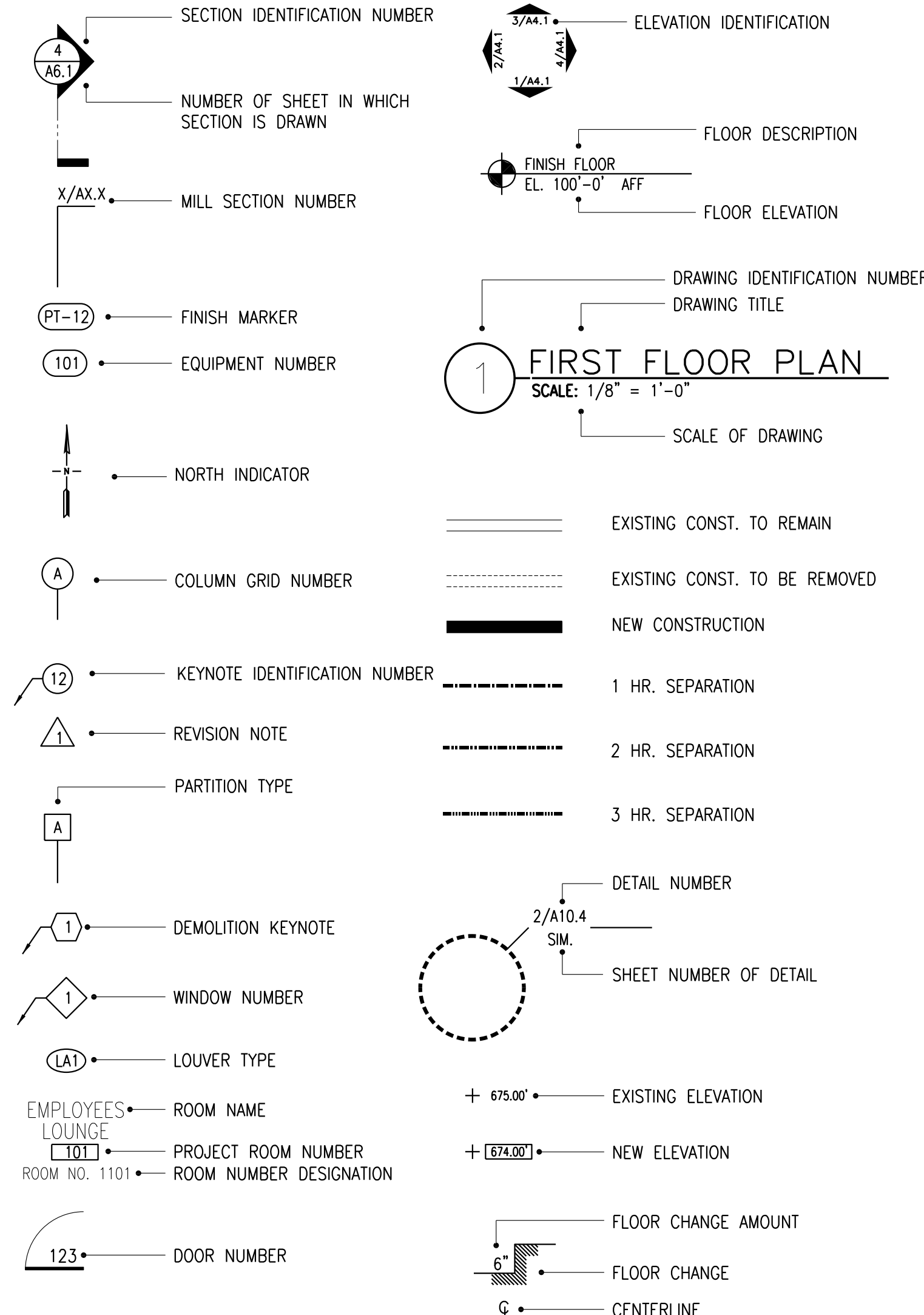
MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED SIGNATURE	APPROVED BY
	<i>KEATRA FULLER</i>	<i>KEATRA FULLER</i>
DESIGNED	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	
DRAWN	NAVAIDS	JCN
CHECKED		1705928
		REV
		MSO-D-ADM-C012

LIST OF ABBREVIATIONS

<b>A</b>	A.F.F. ABOVE FIN. FLOOR A.D. ACCESS DOOR A.P. ACCESS PANEL ACOUST. ACOUSTICAL ADJ. ADJUSTABLE AHU AIR HANDLER UNIT ALT. ALTERNATE ALUM. ALUMINUM APPROX. APPROXIMATE ANOD. ANODIZED ARCH. ARCHITECTURAL ASPH. ASPHALT ASSY. ASSEMBLY ATT. ATTENUATION @	<b>B</b>	BM. BEAM BET. BETWEEN BIT. BITUMINOUS BLK. BLOCK BD. BOARD BRKT. BRACKET BLDG. BUILDING B.U.R. BUILT UP ROOF	<b>C</b>	CAB. CABINET CPT. CARPET C.I.P. CAST IN PLACE C.I. CAST IRON CLG. CEILING CEM. CEMENT CTR. CENTER C.L. CENTERLINE CER. CERAMIC C.T. CERAMIC TILE CHAN. CHANNEL C.O. CLEAN OUT COL. COLUMN CONC. CONCRETE C.M.U. CONC. MAS. UNIT CONN. CONNECTION CONST. CONSTRUCTION C.J. CONTROL JOINT CONT. CONTINUOUS CSK. COUNTERSUNK CU. CUBIC C.U. CONDENSER UNIT	<b>D</b>	DEG. or ° DEGREE(S) DEPT. DEPARTMENT DET. DETAIL DIAG. DIAGONAL DIA. or ∅ DIAMETER DIM. DIMENSION DISP. DISPENSER DR. DOOR DBL. DOUBLE DN. DOWN DS. DOWNSPOUT DWR. DRAWER DWG. DRAWING D.F. DRINKING FOUNTAIN	<b>E</b>	EA. EACH E. EAST EIFS EXT. INSUL. FIN. SYS ELECT. ELECTRIC E.P. ELECT. PANEL ELEV. ELEVATION ENCL. ENCLOSURE EQ. EQUAL EQUIP. EQUIPMENT EXH. EXHAUST EXIST. EXISTING EXP. EXPANSION E.J. EXP. JOINT EXT. EXTERIOR	<b>F</b>	F.A.C.P. FIRE ALARM CTL. PNL F.O.C. FACE OF CONC. F.O.F. FACE OF FRAMING F.C.U. FAN COIL UNIT FIN. FINISH F.E. FIRE EXTINGUISHER F.E.C. F.E. CABINET FF FINISHED FLOOR F.H.C. FIRE HOSE CABINET FL'G. FLOORING FL. FLOOR F.D. FLOOR DRIAN FL.MTD. FLOOR MOUNTED FLOUR. FLOURESCENT FT. FOOT, OR FEET FT'G. FOOTING	<b>G</b>	GALV. GALVANIZED G.I. GALVANIZED IRON GA. GAUGE GEN. GENERAL CONTRACTOR G.C. GENERAL GL. GLASS G.B. GRAB BAR GR. GRADE GND. GROUND GYP. GYPSUM GYP. BD. GYPSUM BOARD	<b>H</b>	HCP HANDICAP HD'WD. HARDWOOD HD. HEAD HT. HEIGHT H.P.T. HIGH POINT H.C. HOLLOW CORE HH HEADROOM HEIGHT H.M. HOLLOW METAL HOR. HORIZONTAL H.B. HOSE BIBB HR. HOUR HSS HOLLOW STL. SECT.	<b>I</b>	IN. INCH INCL. INCLUDE INSUL. INSULATE INT. INTERIOR I.D. INSIDE DIAMETER	<b>J</b>	JT. JOINT	<b>K</b>	K.O. KNOCK OUT	<b>L</b>	LAM. LAMINATE LAV. LAVATORY L.H. LEFT HAND(ED) LT. LIGHT LT'WT. LIGHTWEIGHT L.F. LINEAR FEET L.P.T. LOW POINT LB. POUND	<b>M</b>	MACH. MACHINE M.H. MAN HOLE MAN. MANUAL MFG'R. MANUFACTURER MAS. MASONRY M.O. MASONRY OPENING MAT. MATERIAL MAX. MAXIMUM MECH. MECHANICAL M.E.P. MECH./ELECT./PLUMB MET. METAL MM. MILLIMETER MIN. MINIMUM MISC. MISCELLANEOUS MOD. MODIFIED MLD'G. MOLDING MTD. MOUNTED MNT'G. MOUNTING MULL. MULLION	<b>N</b>	NAT. NATURAL NOM. NOMINAL N. NORTH N/A NOT APPLICABLE N.I.C. NOT IN CONTRACT N.T.S. NOT TO SCALE NO. or NUMBER	<b>O</b>	O.C. ON CENTER OPN'G. OPENING OPP. OPPOSITE OPP. H. OPPOSITE HAND OA. OVERALL O.D. OUTSIDE DIAMETER O.H. OVERHEAD O.F.C.I. OWNER FURNISHED CONTRACTOR INSTALL O.F. & I. OWNER FURNISHED AND INSTALLED OFS. OVERFLOW SCUPPER	<b>P</b>	PNT. PAINT PR. PAIR P.T.D. PAPER TOWEL DISP. P.T.D.R. P.T.D. & RECEPTACLE P. BD. PARTICLE BOARD PART. PARTITION	<b>Q</b>	QT.Y. QUANTITY Q.T. QUARRY TILE	<b>R</b>	RAD. RADIUS REF. REFER or REFERENCE REFL. REFLECTED REG. REGISTER REINF. REINFORCED REQ'D. REQUIRED R.A. RETURN AIR REV. REVISED or REVISION R.O.W. RIGHT OF WAY R.H. RIGHT HAND(ED) RISER R.D. ROOF DRAIN RM. ROOM R.O. ROUGH OPENING	<b>S</b>	S.N.D. SANITARY NAPKIN DISP. S.N.D.R. S.N.D. & RECEPTACLE SCHED. SCHEDULE SCU. SCUPPER SECT. SECTION SERV. SERVICE SHT. SHEET S. & R. SHELF & ROD SIM. SIMILAR S.D. SOAP DISPENSER S.C. SOLID CORE S. SOUTH SPEC. SPECIFICATION SQ. SQUARE S.S. STAINLESS STEEL STD. STANDARD STL. STEEL STRUCT. STRUCTURAL S.A. SUPPLY AIR SUSP. SUSPENDED(ED)	<b>T</b>	TEL. TELEPHONE T.V. TELEVISION TEMP. TEMPERATURE T.C. TERRA COTTA TERR. TERRAZZO THK. THICK THRESH. THRESHOLD T.T.D. TOILET TISSUE DISP. T.P.D. TOILET PAPER DISP. T.O.B. TOP OF BEAM T.O.C. TOP OF CURB T.O.P. TOP OF PAVING T.O.SL. TOP OF SLAB T.O.STL. TOP OF STEEL T.O.W. TOP OF WALL T & G TONGUE & GROOVE T.B. TOWEL BAR T.H. TOWEL HOOK T. TREAD T. TRANSFORMER TRT'D TREATED TYP. TYPICAL	<b>U</b>	UNFIN. UNFINISHED U.O.N. UNLESS OTHERWISE NOTED UR. URINAL	<b>V</b>	V.B. VAPOR BARRIER VAR. VARIES V.T.R. VENT THROUGH ROOF VERT. VERTICAL V.C.T. VINYL COMPOSITION TILE V.W.C. VINYL WALL COVERING	<b>W</b>	W.T.W. WALL TO WALL W.H. WALL HUNG W.C. WATER CLOSET W.R. WATER RESISTANT W.P. WATER PROOF(ING) WT. WEIGHT W. WEST W. CH. WHEEL CHAIR WDW WINDOW	<b>Y</b>	YD. YARD
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**NOTE:**  
NOT ALL OF THESE ARCHITECTURAL ABBREVIATIONS MAY BE USED, AND MAY NOT BE THE SAME AS USED BY THE OTHER DISCIPLINES.

LEGEND



**1** FIRST FLOOR PLAN  
SCALE: 1/8" = 1'-0"



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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA

ADM  
ARCHITECTURAL ABBREVIATIONS & LEGEND

RELEASED FOR:  
CONSTRUCTION - 6-1-2019  
TO BE USED FOR PERMITTING, CONSTRUCTION, OR BIDDING

MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
PROJECT ENGINEER	PROGRAM MANAGER	
DESIGNED	ISSUED BY	DATE
	ENGINEERING SERVICES	JCN
DRAWN	NAVAIDS	1705928
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ISSUED FOR: CONSTRUCTION

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GENERAL ACCESSIBILITY COMPLIANCE NOTES

GENERAL NOTES:

- 1. MINIMUM CLEAR WIDTH OF ACCESSIBLE ROUTE TO BE 36" WIDE.
2. RUNNING SLOPE SHALL NOT EXCEED 1:20. CROSS SLOPE SHALL NOT EXCEED 1:50.
3. TO CHANGES IN LEVEL REQUIRE EDGE TO BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
4. THE HIGHEST OPERABLE PART OF CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE PLACED NO HIGHER THAN 3'-11 1/2" AND NO LOWER THAN 1'-3 1/2" ABOVE FINISHED FLOOR. THESE REQUIREMENTS SHALL APPLY TO CONTROLS AND OPERATING MECHANISMS WHICH ARE EXPECTED TO BE OPERABLE BY OCCUPANTS, VISITORS, OR OTHER USERS OF A BUILDING OR FACILITY AND MAY INCLUDE, BUT ARE NOT LIMITED TO, THERMOSTATS, LIGHT SWITCHES, ALARM ACTIVATING DEVICES, VENTILATORS AND ELECTRICAL OUTLETS.
5. PROVIDE SOLID BLOCKING AT ALL WALL MOUNTED ACCESSORIES.
6. REF. MEP. SITE PLANS FOR NEW ELECTRIC SERVICE, SITE LIGHTING AND OTHER UTILITIES.
7. CONTRACTOR OF WORK SHALL VERIFY IN THE FIELD ALL CONDITIONS BOTH NEW AND EXISTING WHICH AFFECT WORK TO BE DONE OR RELEVANT THERETO, INCLUDING, BUT NOT LIMITED TO PROPERTY LINE DIMENSIONS, SETBACK, EASEMENTS, RESTRICTIONS, EXACT LOCATIONS OF ALL CONSTRUCTION EXISTING AND NEW, DRIVEWAYS, WALKS, APRONS, UTILITIES, GRADES AND DRAINAGE. SHOULD ANY QUESTION OR DISCREPANCIES ARISE PRIOR TO BEGINNING CONSTRUCTION OR DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT FOR REVIEW AND CLARIFICATION BEFORE PROCEEDING WITH THAT PORTION OF THE WORK OR ANY PART RELATED THERETO.
8. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND REGULATION. THE LOCATION OF UTILITIES SHOWN ON THE SITE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL UTILITIES BEFORE STARTING CONSTRUCTION.
9. THE WORK AREA IS TO BE KEPT CLEAN AND ORDERLY AT ALL TIMES. REFUSE AND DEBRIS SHALL BE REMOVED ON A REGULAR BASIS.
10. INSTALL ALL MANUFACTURED ITEMS, MATERIALS AND EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
11. ALL DIMENSIONS ARE FROM FINISHED WALL TO FINISHED WALL UNLESS OTHERWISE NOTED BY "CLEAR" OR "HOLD". NOTIFY ARCHITECT OF ANY DISCREPANCY IN DIMENSIONS PRIOR TO BEGINNING NEW CONSTRUCTION.
12. ALL WOOD BLOCKING TO BE FIRE RETARDANT.
13. HANDICAPPED ACCESSIBLE TOILET ROOMS:
(A) GRAB BARS TO BE MOUNTED AT 35" A.F.F. AND BE CAPABLE OF WITHSTANDING 250 LBS.
(B) MIRROR IS TO BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40" A.F.F.
(C) TOP OF SEAT LID AT WATER CLOSET TO BE 17" TO 19" A.F.F.
(D) PROVIDE 29" MINIMUM LEG CLEARANCE AT LAVATORY. INSULATE DRAIN PIPING.
14. CONTROLS AND OPERATING MECHANISMS:
(A) GENERAL ALL CONTROLS AND DEVICES HAVING MECHANICAL OR ELECTRICAL OPERATING MECHANISMS WHICH ARE EXPECTED TO BE OPERATED BY OCCUPANTS, VISITORS, OR OTHER USERS OF A BUILDING OR FACILITY, SHALL COMPLY WITH DETAILS PROVIDED. SUCH MECHANISMS MAY INCLUDE, BUT RE NOT LIMITED TO THERMOSTATS, LIGHT SWITCHES, ALARM ACTIVATING UNITS, VENTILATORS, ELECTRICAL OUTLETS, ETC.
(B) HEIGHT, THE HIGHEST OPERABLE PART OF ALL CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE PLACED WITHIN AT LEAST ONE OF THE REACH RANGES PROVIDED IN THE DETAILS. EXCEPT WHERE OTHERWISE NOTED, ELECTRICAL AND COMMUNICATIONS SYSTEM RECEPTACLES ON WALLS SHALL BE MOUNTED NO LESS THAN 15 INCHES ABOVE THE FLOOR.
(C) OPERATION, CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN FIVE LBS.

DOORS

- 1. DOORWAYS SHALL HAVE A MINIMUM CLEAR OPENING OF 32 IN WITH THE DOOR OPEN 90 DEGREES, MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP.
2. OPENINGS MORE THAN 24" IN DEPTH SHALL PROVIDE A CLEAR OPENING OF 36" MIN.
3. THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 1/2 IN FOR OTHER TYPES OF DOORS. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
4. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS.
5. DOOR HARDWARE: HANDLES, KNOBS, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE THE FLOOR OR GROUND SURFACE AND SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR SEVERE TWISTING TO OPERATE. THE FORCE REQUIRED TO ACTIVATE DOOR HARDWARE SHALL BE NO GREATER THAN FIVE LBS. PREFERRED DESIGNS INCLUDE, BUT ARE NOT LIMITED TO, LEVER-OPERATED MECHANISM, PUSH-TYPE MECHANISMS AND U-SHAPED HANDLES. WHEN SCHEDULED, SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND VISIBLE FROM BOTH SIDES.
6. DOOR CLOSERS: IF A DOOR IS SCHEDULED TO HAVE A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE DOOR WILL TAKE AT LEAST THREE SECONDS TO MOVE TO AN OPEN POSITION OF APPROXIMATELY 12 DEGREES.
7. DOOR OPERATING FORCE: THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL COMPLY WITH THIS PARAGRAPH FOR HINGED DOORS, THE FORCE SHALL BE APPLIED PERPENDICULAR TO THE DOOR AT THE DOOR OR 30 INCHES FROM THE HINGED SIDE, WHICHEVER IS FURTHER FROM THE HINGE. FOR SLIDING OR FOLDING DOORS, THE FORCE SHALL BE APPLIED PARALLEL TO THE DOOR AT THE DOOR PULL OR LATCH.
(A) EXTERIOR HINGED DOORS SHALL NOT EXCEED 8.5 LBS. SLIGHT INCREASES IN OPENING FORCE SHALL BE ALLOWED WHERE 8.5 LBS. IS INSUFFICIENT TO COMPENSATE FOR AIR PRESSURE DIFFERENTIALS.
(B) SLIDING DOORS, FOLDING DOORS AND INTERIOR HINGED DOORS SHALL NOT REQUIRE A FORCE EXCEEDING FIVE LBS.
(C) FIRE DOORS MAY BE ADJUSTED TO THE MINIMUM OPENING FORCE ALLOWED BY THE GOVERNING AUTHORITY OR APPLICABLE BUILDING CODES.
8. IF AN AUTOMATIC DOOR IS USED, THEN IT SHALL COMPLY WITH ANSI/BHMA A156.10-1985. SLOWLY OPENING, LOW-POWERED, AUTOMATIC DOORS SHALL COMPLY WITH ANSI A156.19-1984. SUCH DOORS SHALL NOT OPEN TO BACK CHECK FASTER THAN 3 SECONDS AND SHALL REQUIRE NO MORE THAN 15 LBF (66.6N) TO STOP DOOR MOVEMENT. IF A POWER-ASSISTED DOOR IS USED, ITS DOOR-OPENING FORCE SHALL COMPLY WITH 4.13.11 AND ITS CLOSING SHALL CONFORM TO THE REQUIREMENTS IN ANSI A156.19-1984.

DRINKING FOUNTAINS AND WATER COOLERS

- 1. THE SPOUT SHALL BE WITHIN 3" FROM THE FRONT OF THE UNIT. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4 IN HIGH SO AS TO ALLOW THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER.
2. CONTROLS SHALL BE FRONT MOUNTED OR SIDE MOUNTED NEAR THE FRONT EDGE. CONTROLS SHALL BE OPERATED WITH ONE HAND AND WITH MAX. FORCE OF 5 LBS.

WATER CLOSETS

- 1. CLEAR FLOOR SPACE FOR WATER CLOSETS NOT IN STALLS SHALL COMPLY WITH \*12 SHEET A005 CLEAR FLOOR SPACE MAY BE ARRANGED TO ALLOW EITHER A LEFT-HANDED OR RIGHT-HANDED APPROACH.
2. THE HEIGHT OF WATER CLOSETS SHALL BE 17 IN TO 19 IN, MEASURED TO THE TOP OF THE TOILET SEAT.
3. GRAB BARS FOR WATER CLOSETS NOT LOCATED IN STALLS SHALL COMPLY WITH \*1 SHEET A005. THE GRAB BAR BEHIND THE WATER CLOSET SHALL BE 36 IN MINIMUM.
4. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC (REFERENCE CONTROL REQUIREMENTS). CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 44 IN ABOVE THE FLOOR.
5. TOILET PAPER DISPENSERS SHALL BE INSTALLED WITHIN REACH, AS SHOWN IN DRAWING 5 ABOVE.

ENTRANCES

- 1. ENTRANCES SHALL BE CONNECTED BY AN ACCESSIBLE ROUTE TO ACCESSIBLE PARKING. THEY SHALL ALSO BE CONNECTED BY AN ACCESSIBLE ROUTE TO ALL ACCESSIBLE SPACES OR ELEMENTS WITHIN THE BUILDING OR FACILITY.
2. A SERVICE ENTRANCE SHALL NOT BE THE SOLE ACCESSIBLE ENTRANCE.

HANDRAILS AND GRAB BARS

- 1. THE NOMINAL DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL OR GRAB BAR SHALL BE 1-1/4 IN TO 1-1/2 IN, OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. IF HANDRAILS OR GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2 IN. HANDRAILS MAY BE LOCATED IN A RECESS IF THE RECESS IS A MAXIMUM OF 3 IN DEEP AND EXTENDS AT LEAST 18 IN ABOVE THE TOP OF THE RAIL.
2. THE STRUCTURAL STRENGTH OF GRAB BARS, TUB AND SHOWER SEATS, FASTENERS, AND MOUNTING DEVICES SHALL MEET THE FOLLOWING SPECIFICATION:
A. BENDING STRESS IN A GRAB BAR OR SEAT INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
B. SHEAR STRESS INDUCED IN A GRAB BAR OR SEAT BY THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT. IF THE CONNECTION BETWEEN THE GRAB BAR OR SEAT AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL BE TOTALED FOR THE COMBINED SHEAR STRESS, WHICH SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS.
C. SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
D. TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
E. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
3. A HANDRAIL OR GRAB BAR AND ANY WALL OR OTHER SURFACE ADJACENT TO IT SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".

ALARMS

- 1. AT A MINIMUM, VISUAL SIGNAL APPLIANCES SHALL BE PROVIDED IN BUILDINGS AND FACILITIES IN EACH OF THE FOLLOWING AREAS: RESTROOMS AND ANY OTHER GENERAL USAGE AREAS (E.G., MEETING ROOMS), HALLWAYS, LOBBIES, AND ANY OTHER AREA FOR COMMON USE.
2. IF PROVIDED, AUDIBLE EMERGENCY ALARMS SHALL PRODUCE A SOUND THAT EXCEEDS THE PREVAILING EQUIVALENT SOUND LEVEL IN THE ROOM OR SPACE BY AT LEAST 15 DBA OR EXCEEDS ANY MAXIMUM SOUND LEVEL WITH A DURATION OF 60 SECONDS BY 5 DBA, WHICHEVER IS LOUDER. SOUND LEVELS FOR ALARM SIGNALS SHALL NOT EXCEED 120 DBA.
3. VISUAL ALARM SIGNAL APPLIANCES SHALL BE INTEGRATED INTO THE BUILDING OR FACILITY ALARM SYSTEM. IF SINGLE STATION AUDIBLE ALARMS ARE PROVIDED THEN SINGLE STATION VISUAL ALARM SIGNALS SHALL BE PROVIDED. VISUAL ALARM SIGNALS SHALL HAVE THE FOLLOWING MINIMUM PHOTOMETRIC AND LOCATION FEATURES:
A. THE LAMP SHALL BE A XENON STROBE TYPE OR EQUIVALENT.
B. THE COLOR SHALL BE CLEAR OR NOMINAL WHITE (I.E., UNFILTERED OR CLEAR FILTERED WHITE LIGHT).
C. THE MAXIMUM PULSE DURATION SHALL BE TWO-TENTHS OF ONE SECOND (0.2 SEC) WITH A MAXIMUM DUTY CYCLE OF 40 PERCENT. THE PULSE DURATION IS DEFINED AS THE TIME INTERVAL BETWEEN INITIAL AND FINAL POINTS OF 10 PERCENT OF THE MAXIMUM SIGNAL.
D. THE INTENSITY SHALL BE A MINIMUM OF 75 CANDELA.
E. THE FLASH RATE SHALL BE A MINIMUM OF 1 HZ AND A MAXIMUM OF 3 HZ.
F. THE APPLIANCE SHALL BE PLACED 80 IN ABOVE THE HIGHEST FLOOR LEVEL WITHIN THE SPACE OR 6 IN BELOW THE CEILING, WHICHEVER IS LOWER.
G. IN GENERAL, NO PLACE IN ANY ROOM OR SPACE REQUIRED TO HAVE A VISUAL SIGNAL APPLIANCE SHALL BE MORE THAN 50 FT FROM THE SIGNAL (IN THE HORIZONTAL PLANE). IN LARGE ROOMS AND SPACES EXCEEDING 100 FT ACROSS, WITHOUT OBSTRUCTIONS 6 FT ABOVE THE FINISH FLOOR, SUCH AS AUDITORIUMS, DEVICES MAY BE PLACED AROUND THE PERIMETER, SPACED A MAXIMUM 100 FT APART, IN LIEU OF SUSPENDING APPLIANCES FROM THE CEILING.
H. NO PLACE IN COMMON CORRIDORS OR HALLWAYS IN WHICH VISUAL ALARM SIGNALLING APPLIANCES ARE REQUIRED SHALL BE MORE THAN 50 FT FROM THE SIGNAL.

SPACE ALLOWANCES AND REACH RANGES

- 1. THE MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR PASSAGE SHALL BE 32" AT A POINT AND 36" CONTINUOUSLY.
2. THE MINIMUM WIDTH FOR TWO WHEELCHAIRS TO PASS IS 60".
3. THE MINIMUM SPACE REQUIRED FOR A STANDARD WHEELCHAIR TO MAKE A 180-DEGREE TURN IS A CLEAR SPACE OF 60" IN DIAMETER OR A T-SHAPED SPACE.

CLEAR FLOOR OR GROUND SPACE FOR WHEELCHAIRS

- 1. THE MINIMUM CLEAR FLOOR OR GROUND SPACE REQUIRED TO ACCOMMODATE A SINGLE, STATIONARY WHEELCHAIR AND OCCUPANT IS 30"x48".
2. IF THE CLEAR FLOOR SPACE ONLY ALLOWS FORWARD APPROACH TO AN OBJECT, THE MAXIMUM HIGH FORWARD REACH ALLOWED SHALL BE 48". THE MINIMUM LOW FORWARD REACH IS 15".
3. IF THE CLEAR FLOOR SPACE ALLOWS PARALLEL APPROACH BY A PERSON IN A WHEELCHAIR, THE MAXIMUM HIGH SIDE REACH ALLOWED SHALL BE 54" AND THE LOW SIDE REACH SHALL BE NO LESS THAN 9" ABOVE THE FLOOR.

GROUND AND FLOOR SURFACES

- 1. GROUND AND FLOOR SURFACES ALONG ACCESSIBLE ROUTES AND IN ACCESSIBLE ROOMS AND SPACES INCLUDING FLOORS, WALKS, RAMPS, STAIRS, AND CURB RAMPS, SHALL BE STABLE, FIRM, & SLIP-RESISTANT. SOFT OR LOOSE MATERIALS SUCH AS SAND, GRAVEL, BARK, MULCH OR WOOD CHIPS ARE NOT SUITABLE. COBBLESTONE AND OTHER IRREGULAR SURFACES HAVING A TEXTURE THAT CONSTITUTES AN OBSTACLE OR HAZARD, SUCH AS IMPROPERLY LAID FLAGSTONE, SHALL NOT BE A PART OF ACCESSIBLE ROUTES, SPACES AND ELEMENTS.
2. CHANGES IN LEVEL UP TO 1/4 IN MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4 IN AND 1/2 IN SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2. CHANGES IN LEVEL GREATER THAN 1/2 IN SHALL BE ACCOMPLISHED BY MEANS OF A RAMP THAT COMPLIES.
3. IF CARPET OR CARPET TILE IS USED ON A GROUND OR FLOOR SURFACE, THEN IT SHALL BE SECURELY ATTACHED; HAVE A FIRM CUSHION, PAD, OR BACKING, OR NO CUSHION OR PAD; AND HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT/JUNCUT PILE TEXTURE. THE MAXIMUM PILE THICKNESS SHALL BE 1/2 IN. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE.
4. IF GRATINGS ARE LOCATED IN WALKING SURFACES OR ALONG ACCESSIBLE ROUTES, THEN THEY SHALL HAVE SPACES NO GREATER THAN 1/2 IN WIDE IN ONE DIRECTION. IF GRATINGS HAVE ELONGATED OPENINGS, THEN THEY SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

DETECTABLE WARNINGS

- 1. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.

Bozema CTR Kousk

PARSONS logo and project information table including: PTSI Managed Services Inc., 955 L'ENFANT Plaza, North, SW Suite 6100, Washington, DC 20024. Project: MISSOULA INTERNATIONAL AIRPORT. Title: GENERAL ACCESSIBILITY COMPLIANCE NOTES. Date: 6-1-2019. Includes approval table with names like KEATRA FULLER and MISSOULA.

ISSUED FOR: CONSTRUCTION

GENERAL ACCESSIBILITY COMPLIANCE NOTES

URINALS

- 1. URINALS SHALL BE STALL-TYPE, OR WALL-HUNG WITH A TAPERED ELONGATED RIM MOUNTED AT A MAXIMUM OF 17 IN ABOVE THE FINISH FLOOR.
- 2. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC, AND SHALL BE MOUNTED NO MORE THAN 44 IN ABOVE THE FINISH FLOOR.

LAVATORIES AND MIRRORS

- 1. LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER THAN 34 IN ABOVE THE FINISH FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29 IN ABOVE THE FINISH FLOOR TO THE BOTTOM OF THE APRON. KNEE AND TOE CLEARANCE SHALL COMPLY WITH DRAWING 12 ABOVE.
- 2. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
- 3. LEVER-OPERATED, PUSH-TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. IF SELF-CLOSING VALVES ARE USED THE FAUCET SHALL REMAIN OPEN FOR AT LEAST 10 SECONDS.
- 4. MIRRORS SHALL BE ON ACCESSIBLE ROUTES AT LOCATIONS CONSISTENT WITH THAT OF OTHER MIRRORS IN THE SAME ROOM, AND SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE NO HIGHER THAN 40 IN ABOVE THE FINISH FLOOR.

SIGNAGE

- 1. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE-WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10 USING AN UPPER-CASE "X" FOR MEASUREMENT. LOWER CASE LETTERS ARE PERMITTED. MINIMUM CHARACTER HEIGHT IS 3 INCHES.
- 2. CHARACTERS AND NUMBERS ON OVERHEAD SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FROM WHICH THEY ARE TO BE READ. THE MINIMUM HEIGHT IS MEASURED USING AN UPPER CASE X. LOWER CASE CHARACTERS ARE PERMITTED.
- 3. LETTERS AND NUMERALS SHALL BE RAISED 1/32 IN, UPPER CASE, SANS SERIF OR SIMPLE SERIF TYPE AND SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8 IN HIGH, BUT NO HIGHER THAN 2 IN. PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6 IN MINIMUM IN HEIGHT.  
NOTE:  
BRAILLE CHARACTERS MAY BE USED IN ADDITION TO STANDARD ALPHABET CHARACTERS AND NUMBERS, BUT MAY NOT BE USED EXCLUSIVELY. IF USED, BRAILLE CHARACTERS SHALL BE PLACED TO THE LEFT OF STANDARD CHARACTERS. RAISED BORDERS AROUND RAISED CHARACTERS ARE DISCOURAGED.
- 4. THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND -- EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.
- 5. WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL. MOUNTING HEIGHT SHALL BE 60 IN ABOVE THE FINISH FLOOR TO THE CENTERLINE OF THE SIGN. MOUNTING LOCATION FOR SUCH SIGNAGE SHALL BE SO THAT A PERSON MAY APPROACH WITHIN 3 IN OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.
- 6. SYMBOLS OF ACCESSIBILITY.
  - A. FACILITIES SHALL USE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. THE SYMBOL SHALL BE DISPLAYED AS SHOWN IN DETAIL 13 ABOVE.
  - B. VOLUME CONTROL TELEPHONES. TELEPHONES REQUIRED TO HAVE A VOLUME SHALL BE IDENTIFIED BY A SIGN CONTAINING A DEPICTION OF A TELEPHONE HANDSET WITH RADIATING SOUND WAVES.
  - C. TEXT TELEPHONES SHALL BE IDENTIFIED BY THE INTERNATIONAL TDD SYMBOL. IN ADDITION, IF A FACILITY HAS A PUBLIC TEXT TELEPHONE, DIRECTIONAL SIGNAGE INDICATING THE LOCATION OF THE NEAREST TEXT TELEPHONE SHALL BE PLACED ADJACENT TO ALL BANKS OF TELEPHONES WHICH DO NOT CONTAIN A TEXT TELEPHONE. SUCH DIRECTIONAL SIGNAGE SHALL INCLUDE THE INTERNATIONAL TDD SYMBOL. IF A FACILITY HAS NO BANKS OF TELEPHONES, THE DIRECTIONAL SIGNAGE SHALL BE PROVIDED AT THE ENTRANCE (E.G., IN A BUILDING DIRECTORY).
  - D. ASSISTIVE LISTENING SYSTEMS. IN ASSEMBLY AREAS WHERE PERMANENTLY INSTALLED ASSISTIVE LISTENING SYSTEMS ARE REQUIRED, THE AVAILABILITY OF SUCH SYSTEMS SHALL BE IDENTIFIED WITH SIGNAGE THAT INCLUDES THE INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS.

SINKS

- 1. SINKS SHALL BE MOUNTED WITH THE COUNTER OR RIM NO HIGHER THAN 34 IN ABOVE THE FINISH FLOOR.
- 2. KNEE CLEARANCE THAT IS AT LEAST 27 IN HIGH, 30 IN WIDE, AND 19 IN DEEP SHALL BE PROVIDED UNDERNEATH SINKS.
- 3. EACH SINK SHALL BE A MAXIMUM OF 6-1/2 IN (165 MM) DEEP.
- 4. A CLEAR FLOOR SPACE AT LEAST 30 IN BY 48 IN, SHALL BE PROVIDED IN FRONT OF A SINK TO ALLOW FORWARD APPROACH. SINKS INSTALLED IN ALCOVES DEEPER THAN 24 IN REQUIRE ADDITIONAL MANEUVERING AREA. THE CLEAR FLOOR SPACE SHALL BE ON AN ACCESSIBLE ROUTE AND SHALL EXTEND A MAXIMUM OF 19 IN UNDERNEATH THE SINK.
- 5. HOT WATER AND DRAIN PIPES EXPOSED UNDER SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED SO AS TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS.
- 6. LEVER-OPERATED, PUSH-TYPE, TOUCH-TYPE, OR ELECTRONICALLY CONTROLLED MECHANISMS ARE ACCEPTABLE DESIGNS.

STORAGE

- 1. A CLEAR FLOOR SPACE AT LEAST 30 IN BY 48 IN, THAT ALLOWS EITHER A FORWARD OR PARALLEL APPROACH BY A PERSON USING A WHEELCHAIR SHALL BE PROVIDED AT ACCESSIBLE STORAGE FACILITIES. THIS CLEAR FLOOR SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE. IN STORAGE FACILITIES PERMITTING FULL ENTRY BY A WHEELCHAIR, AND ALLOWING A WHEELCHAIR TO TRAVEL CLEAR OF THE DOOR SWING, AN UNOBSTRUCTED TURNING SPACE SHALL BE PROVIDED WITHIN THE STORAGE FACILITY.
- 2. ACCESSIBLE STORAGE SPACES SHALL BE WITHIN AT LEAST ONE OF THE REACH RANGES SPECIFIED. CLOTHES RODS OR SHELVES SHALL BE A MAXIMUM OF 54 IN ABOVE THE FINISH FLOOR FOR A SIDE APPROACH. WHERE THE DISTANCE FROM THE WHEELCHAIR TO THE CLOTHES ROD OR SHELF EXCEEDS 10 IN (AS IN CLOSETS WITHOUT ACCESSIBLE DOORS) THE HEIGHT AND DEPTH TO THE ROD OR SHELF SHALL COMPLY WITH DRAWING 3 ABOVE.
- 3. TOUCH LATCHES AND U-SHAPED PULLS ARE ACCEPTABLE.

CONTROLS AND OPERATING SYSTEMS

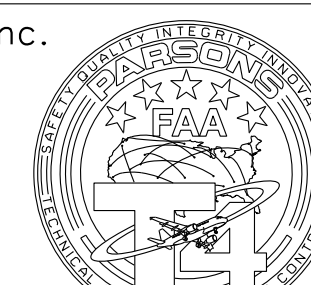
- 1. CLEAR FLOOR SPACE THAT ALLOWS A FORWARD OR A PARALLEL APPROACH BY A PERSON USING A WHEELCHAIR SHALL BE PROVIDED AT CONTROLS, DISPENSERS, RECEPTACLES, AND OTHER OPERABLE EQUIPMENT. CONTROLS AND OPERATING MECHANISMS LOCATED IN ALCOVES DEEPER THAN 24" REQUIRE ADDITIONAL MANEUVERING AREA.
- 2. CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.

PROTRUDING OBJECTS

- 1. OBJECTS PROJECTING FROM WALLS (FOR EXAMPLE, TELEPHONES) WITH THEIR LEADING EDGES BETWEEN 27 IN AND 80 IN ABOVE THE FINISHED FLOOR SHALL PROTRUDE NO MORE THAN 4 IN INTO WALKS, HALLS, CORRIDORS, PASSAGEWAYS, OR AISLES. OBJECTS MOUNTED WITH THEIR LEADING EDGES AT OR BELOW 27 IN ABOVE THE FINISHED FLOOR MAY PROTRUDE ANY AMOUNT. FREE-STANDING OBJECTS MOUNTED ON POSTS OR PYLONS MAY OVERHANG 12 IN MAXIMUM FROM 27 IN TO 80 IN ABOVE THE GROUND OR FINISHED FLOOR. PROTRUDING OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE OR MANEUVERING SPACE.
- 2. WALKS, HALLS, CORRIDORS, PASSAGEWAYS, AISLES, OR OTHER CIRCULATION SPACES SHALL HAVE 80 IN MINIMUM CLEAR HEAD ROOM.



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CONSTRUCTION, OR BIDDING

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA</b> ADM <b>GENERAL ACCESSIBILITY COMPLIANCE NOTES CONTINUED</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-A003			

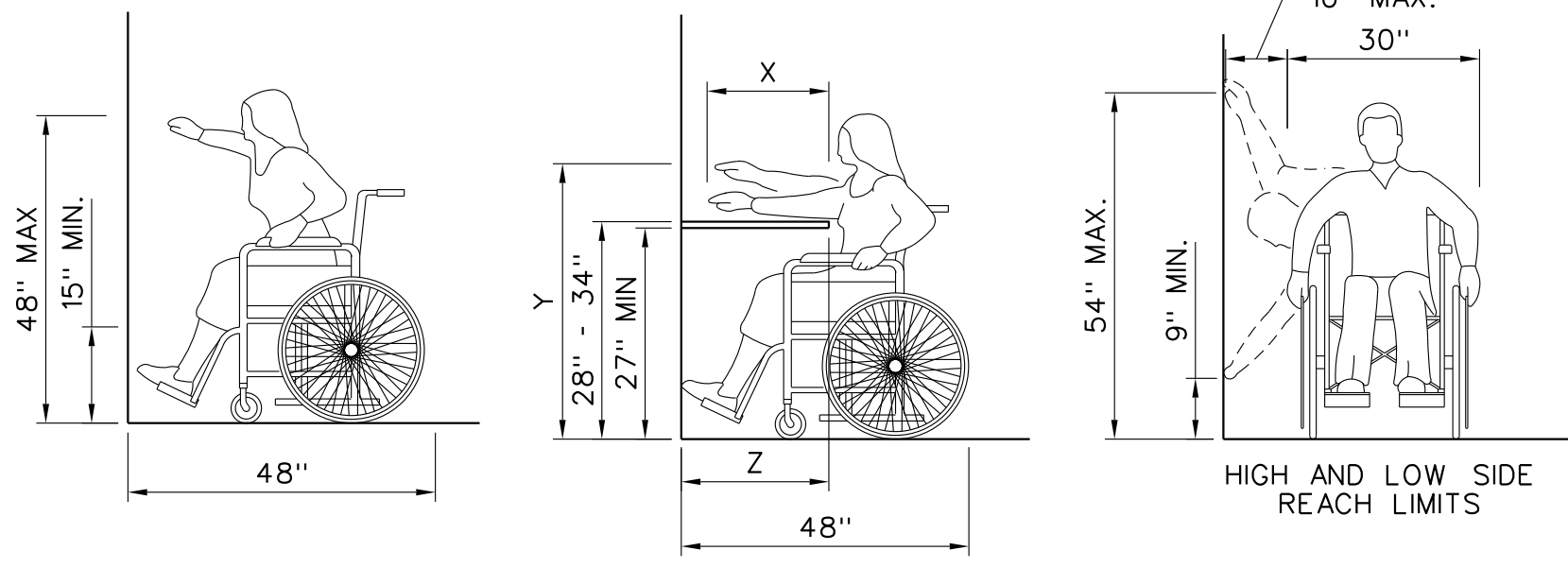
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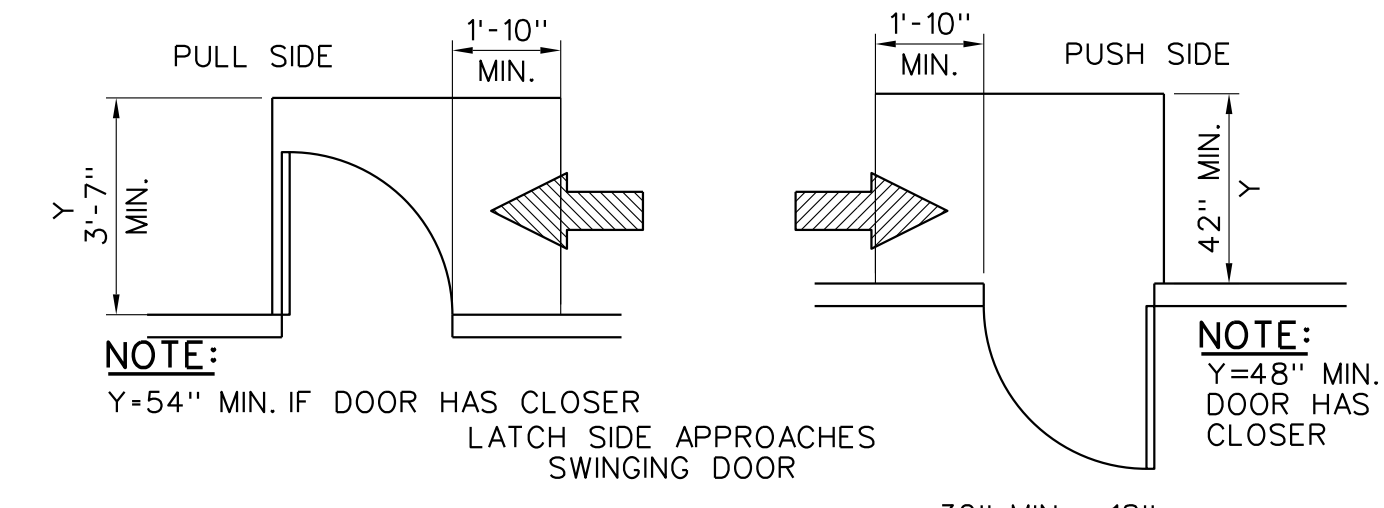


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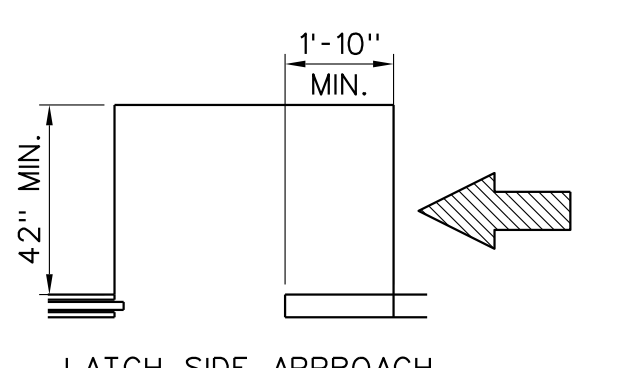


HIGH AND LOW SIDE REACH LIMITS

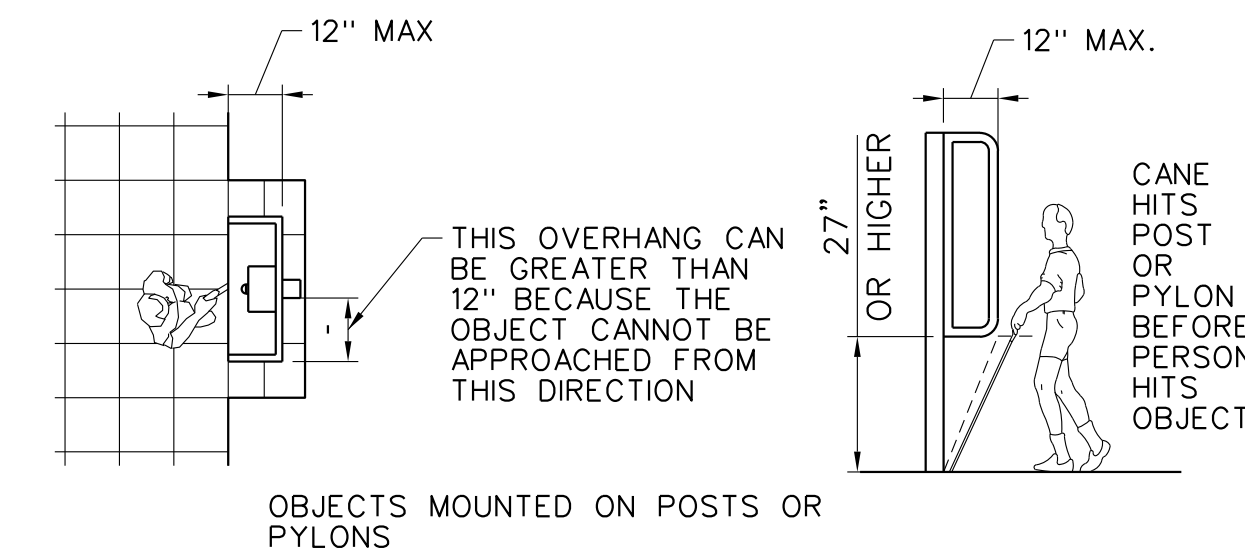


NOTE: Y=48" MIN. IF DOOR HAS CLOSER

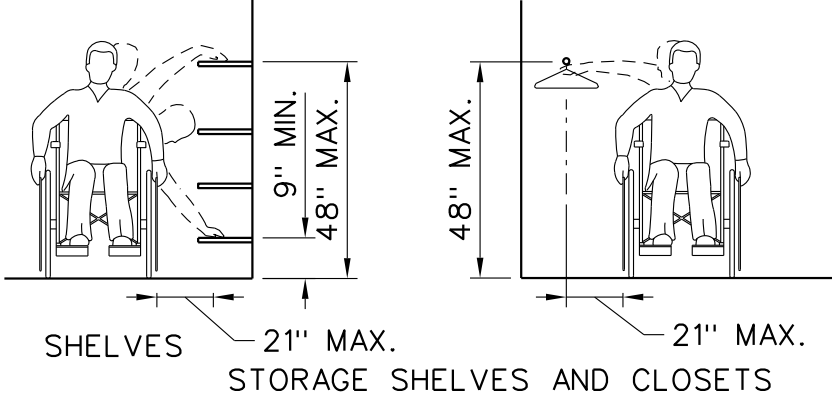
NOTE: Y=48" MIN. IF DOOR HAS CLOSER



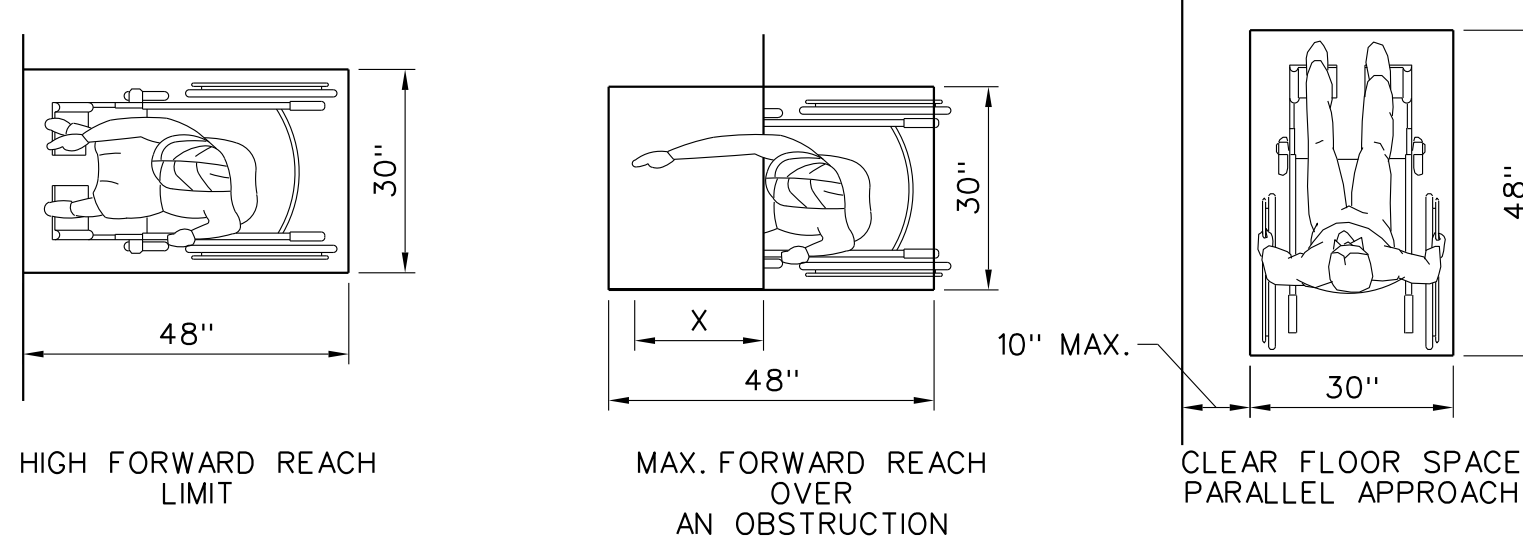
LATCH SIDE APPROACH SLIDING DOORS AND FOLDING DOORS



OBJECTS MOUNTED ON POSTS OR PYLONS



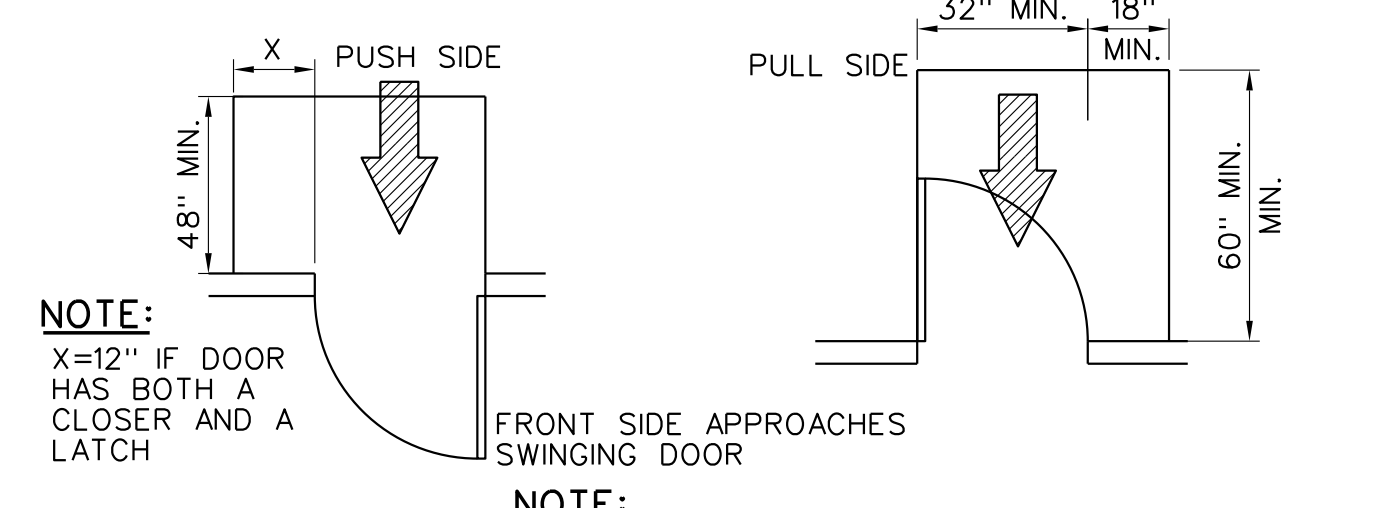
4 STORAGE NOT TO SCALE



HIGH FORWARD REACH LIMIT

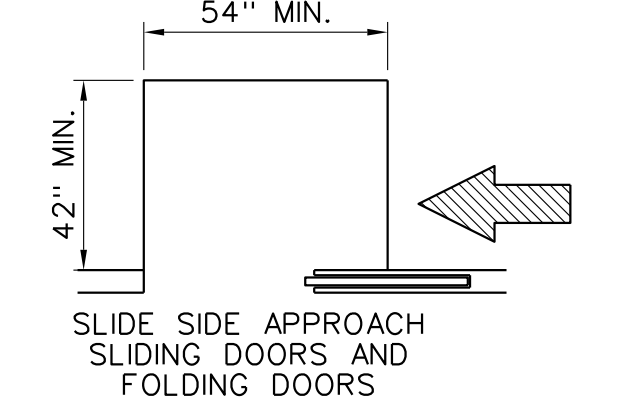
MAX. FORWARD REACH OVER AN OBSTRUCTION

CLEAR FLOOR SPACE PARALLEL APPROACH

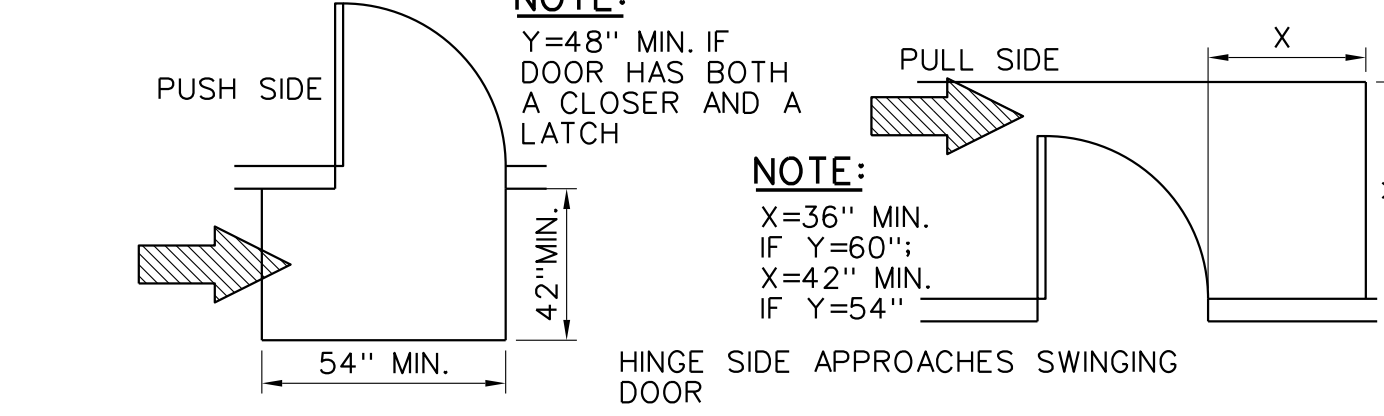


NOTE: X=12" IF DOOR HAS BOTH A CLOSER AND A LATCH

FRONT SIDE APPROACHES SWINGING DOOR

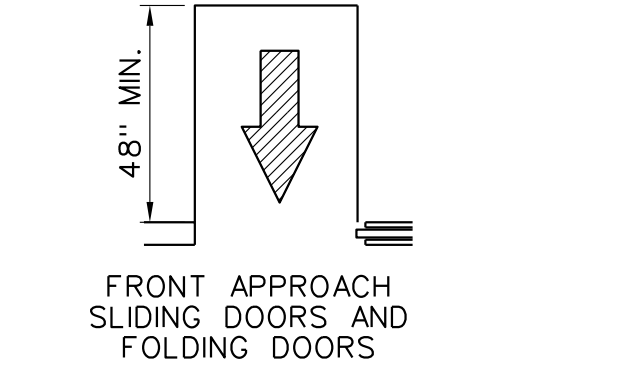


SLIDE SIDE APPROACH SLIDING DOORS AND FOLDING DOORS

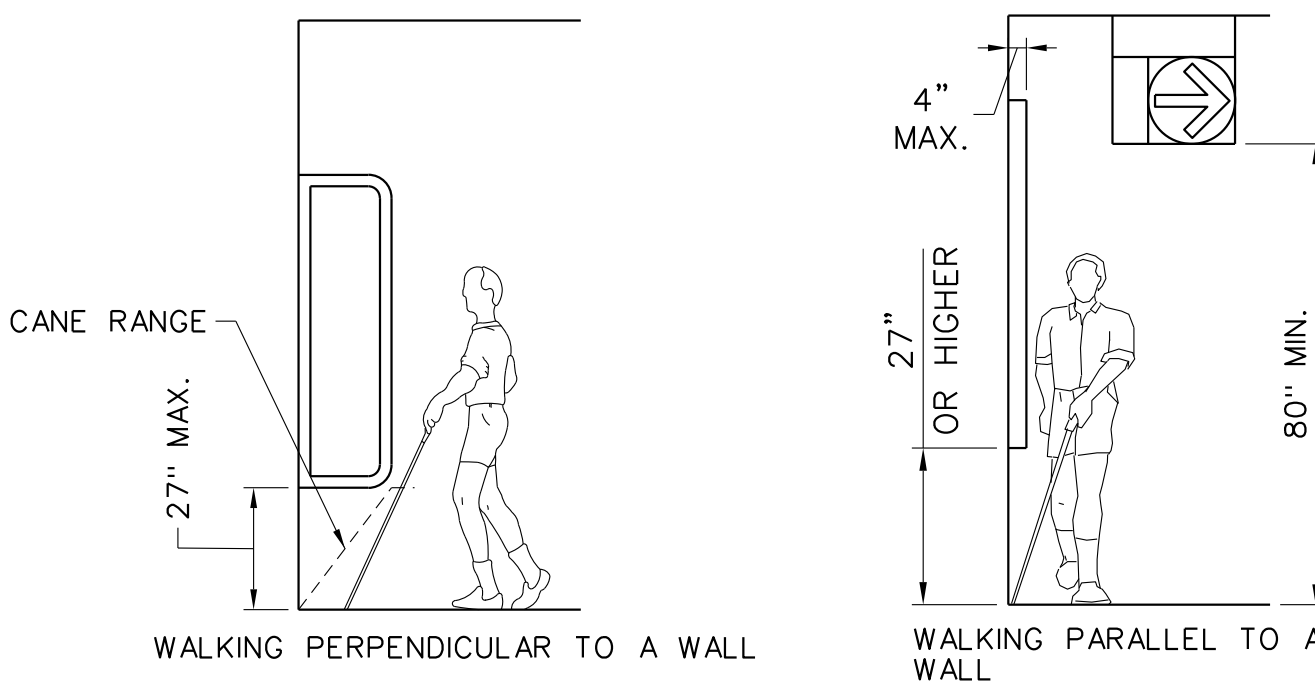


NOTE: X=48" MIN. IF DOOR HAS BOTH A CLOSER AND A LATCH

HINGE SIDE APPROACHES SWINGING DOOR



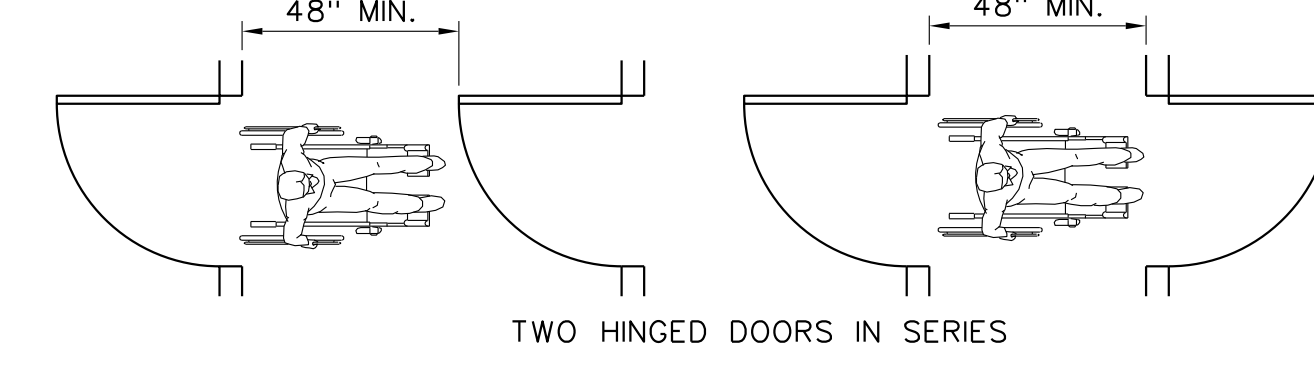
FRONT APPROACH SLIDING DOORS AND FOLDING DOORS



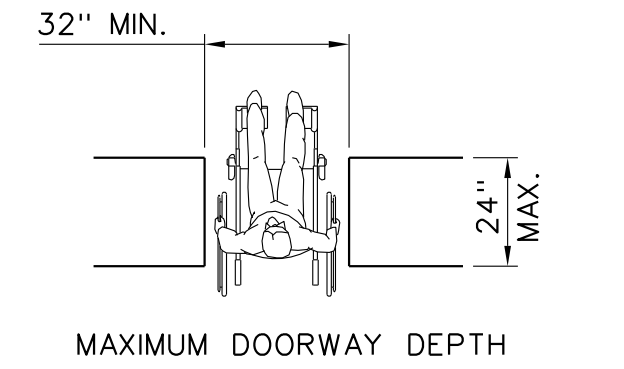
WALKING PERPENDICULAR TO A WALL

WALKING PARALLEL TO A WALL

3 PROTRUDING OBJECTS NOT TO SCALE



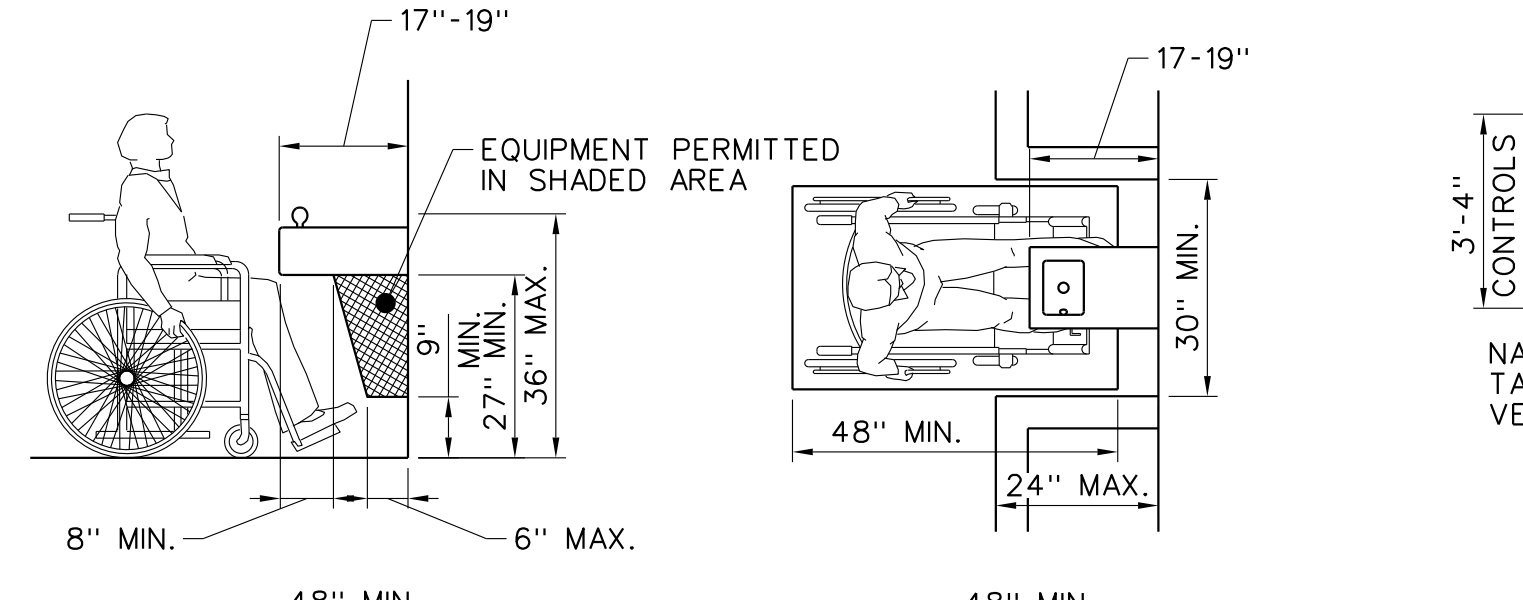
TWO HINGED DOORS IN SERIES



MAXIMUM DOORWAY DEPTH

1 REACH RANGES & CLEAR FLOOR SPACE NOT TO SCALE

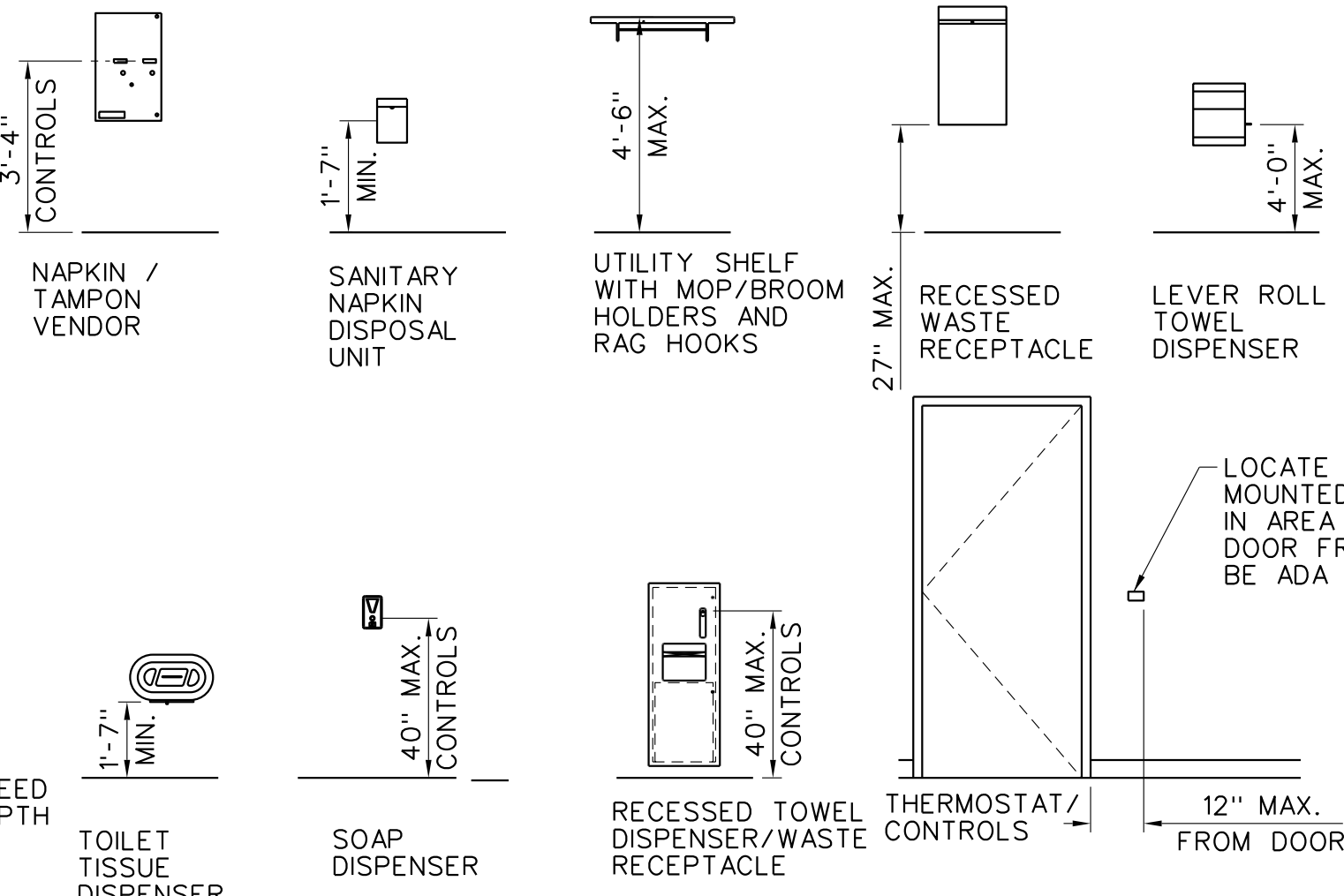
2 DOORS NOT TO SCALE



FREESTANDING FOUNTAIN OR COOLER

BUILT-IN FOUNTAIN OR COOLER

NOT TO EXCEED FOUNTAIN DEPTH



CONTROLS

NAPKIN / TAMPON VENDOR

SANITARY NAPKIN DISPOSAL UNIT

UTILITY SHELF WITH MOP/BROOM HOLDERS AND RAG HOOKS

RECESSED WASTE RECEPTACLE

LEVER ROLL TOWEL DISPENSER

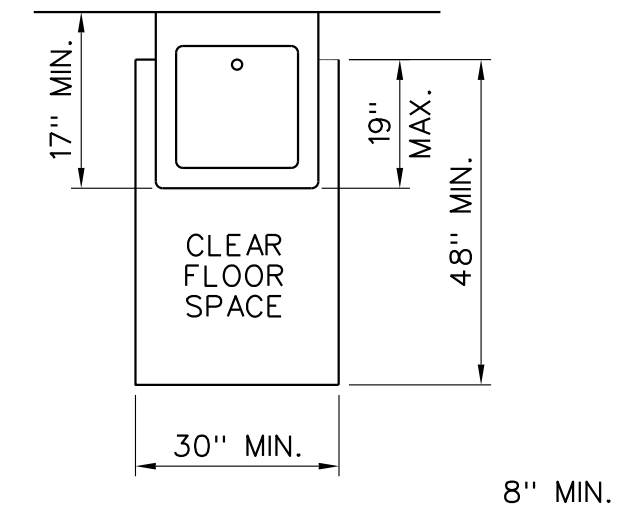
TOILET TISSUE DISPENSER

SOAP DISPENSER

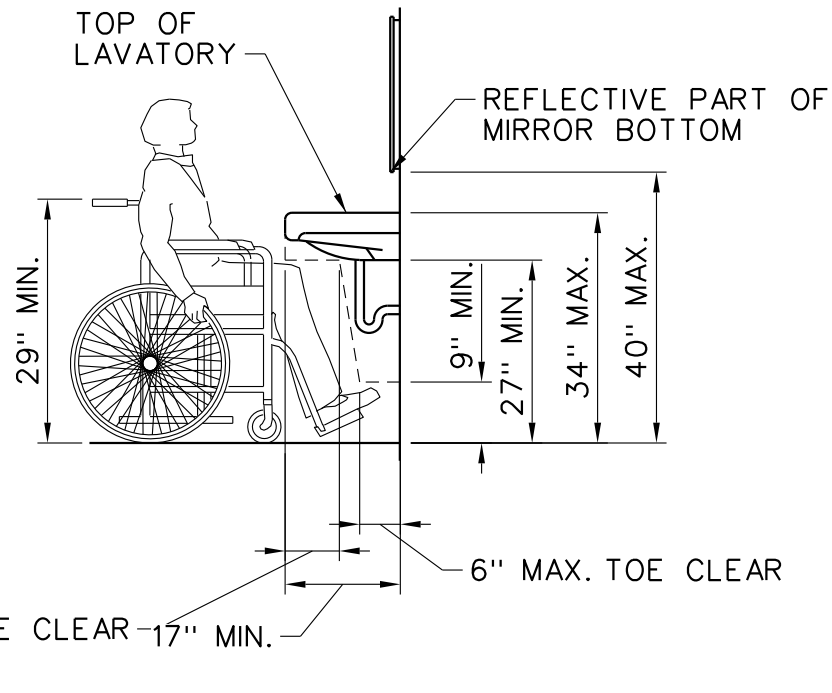
RECESSED TOWEL DISPENSER/WASTE RECEPTACLE

THERMOSTAT/CONTROLS

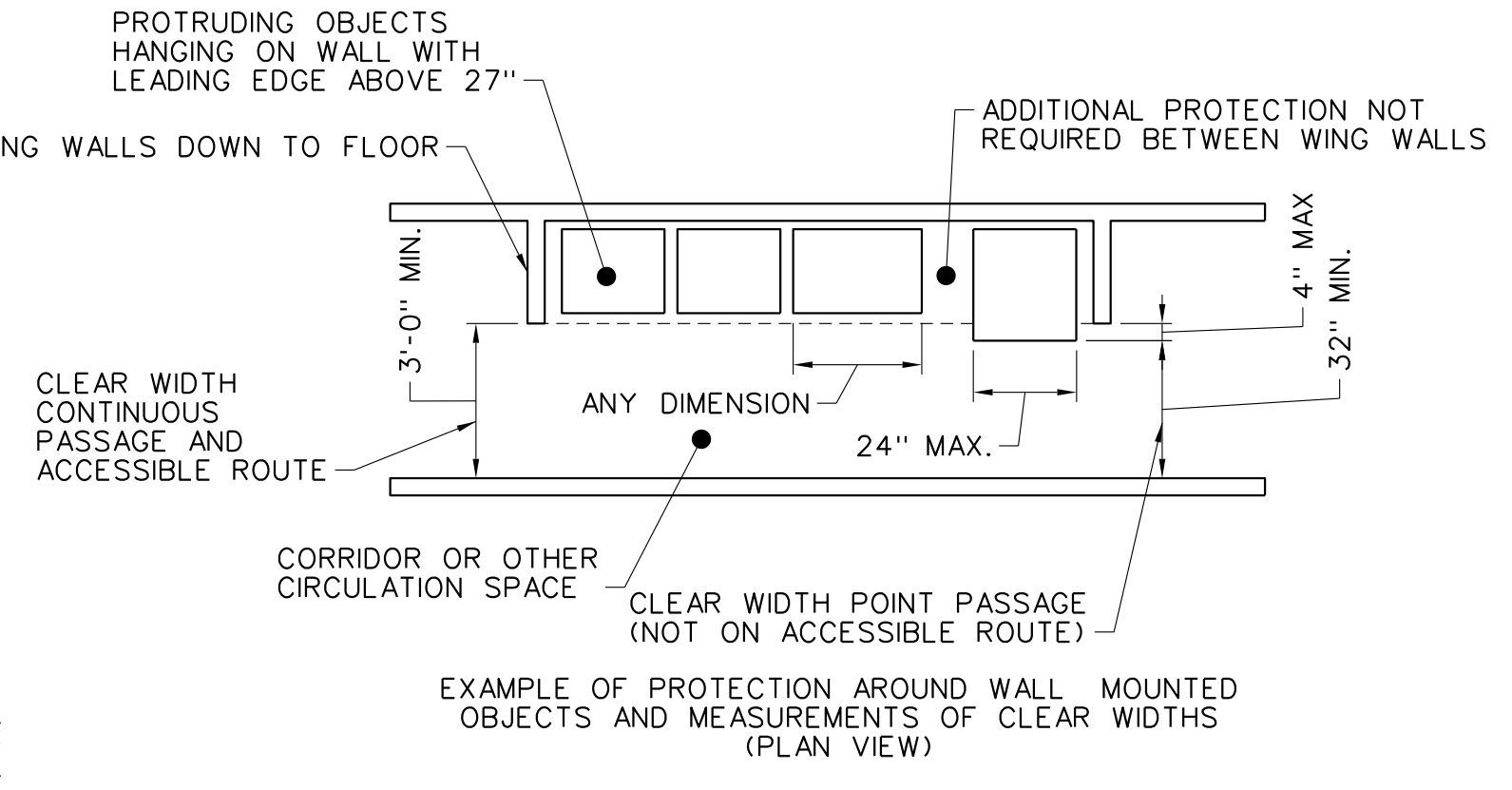
12" MAX. FROM DOOR



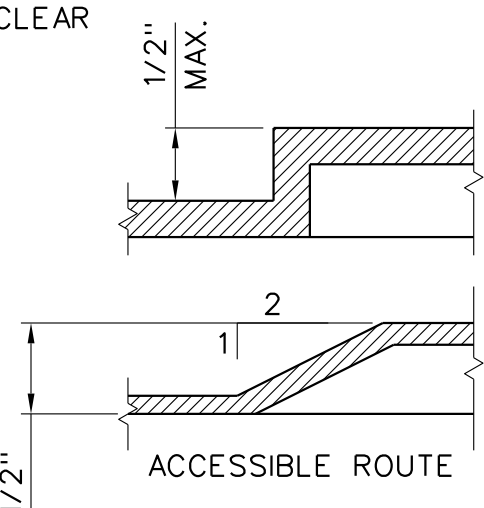
CLEAR FLOOR SPACE



7 LAVATORIES & MIRRORS NOT TO SCALE



EXAMPLE OF PROTECTION AROUND WALL MOUNTED OBJECTS AND MEASUREMENTS OF CLEAR WIDTHS (PLAN VIEW)

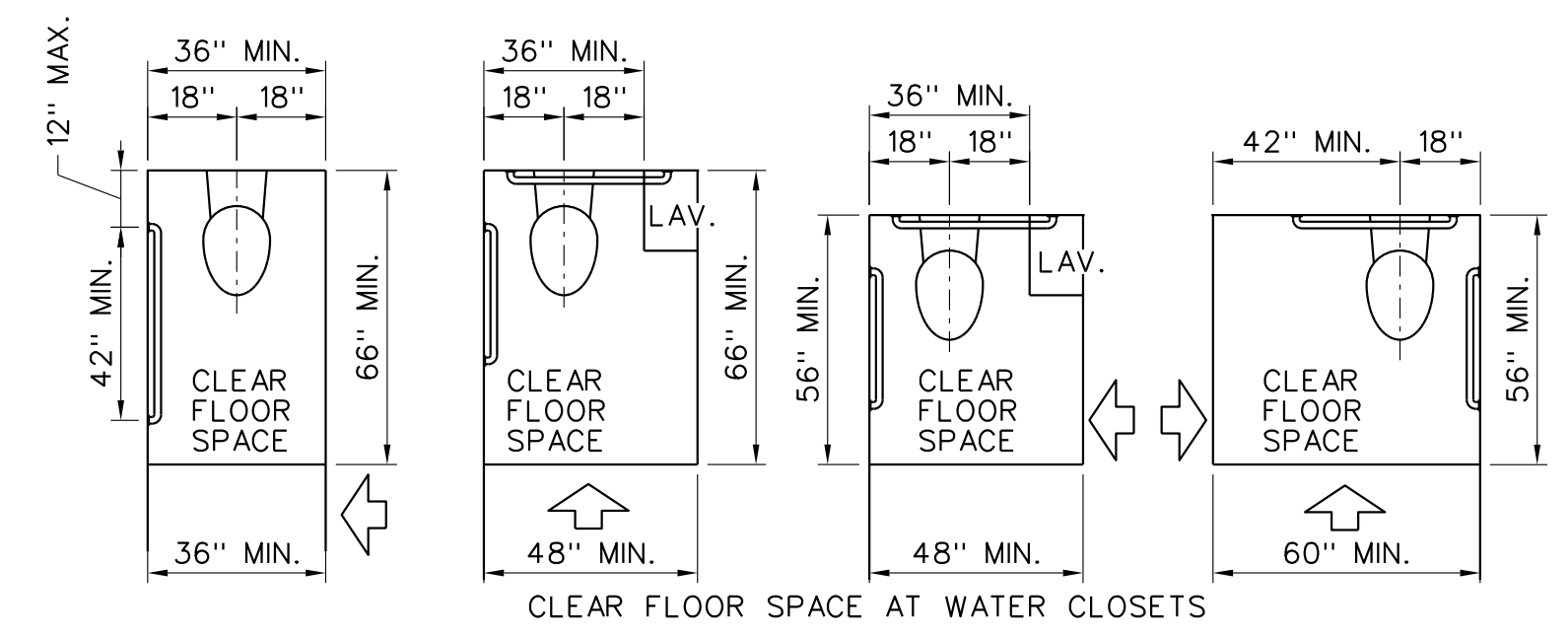


9 GROUND & FLOOR SURFACES NOT TO SCALE

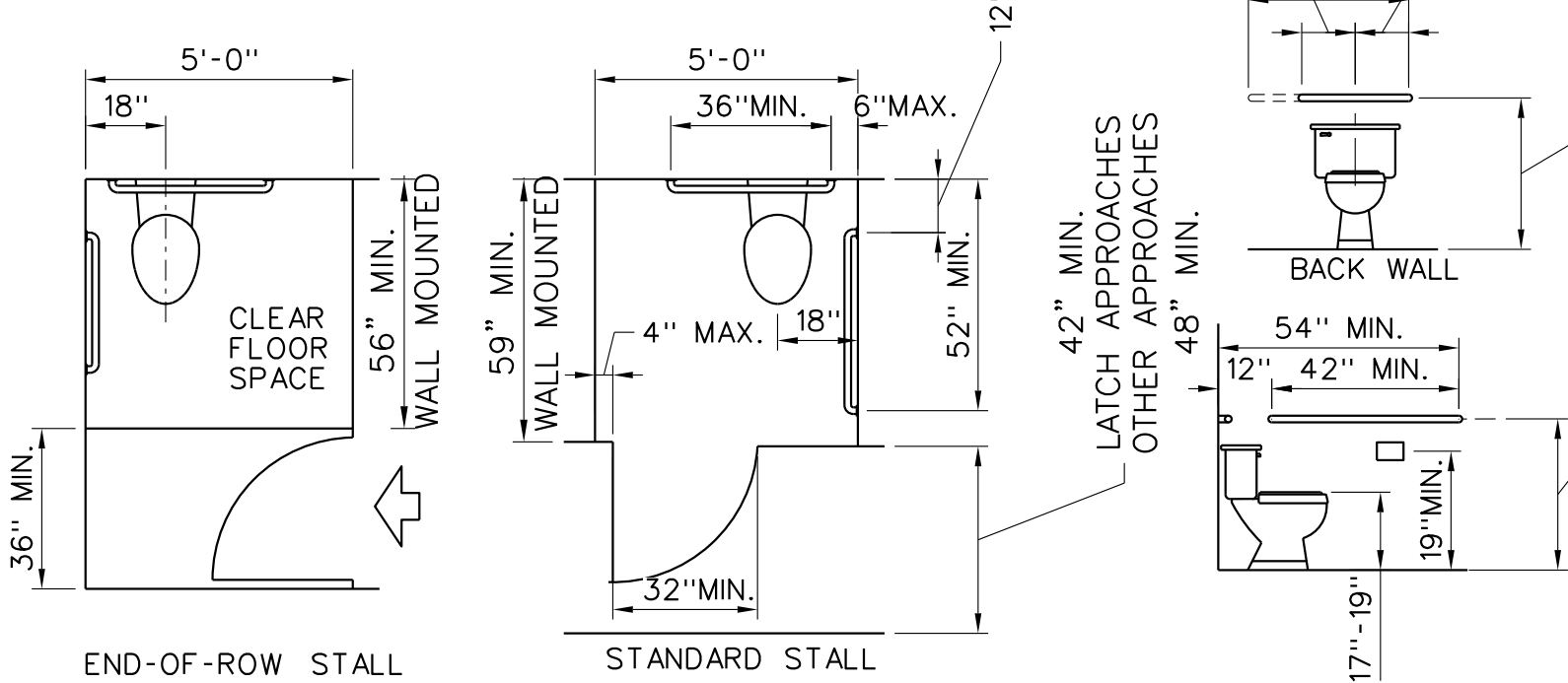
5 DRINKING FOUNTAINS NOT TO SCALE

6 CONTROLS & OPERATING SYSTEMS NOT TO SCALE

8 CURB RAMP SLOPE LIMITS SCALE: 1/8" = 1'-0"

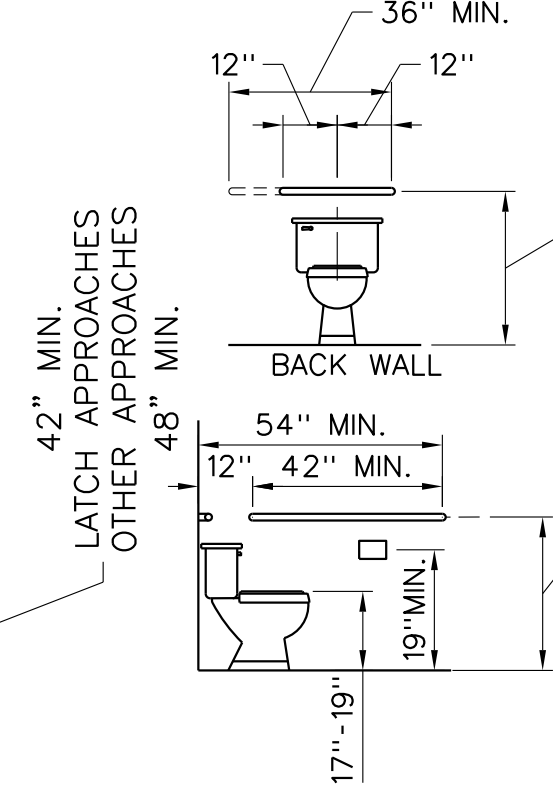


10 WATER CLOSETS NOT TO SCALE

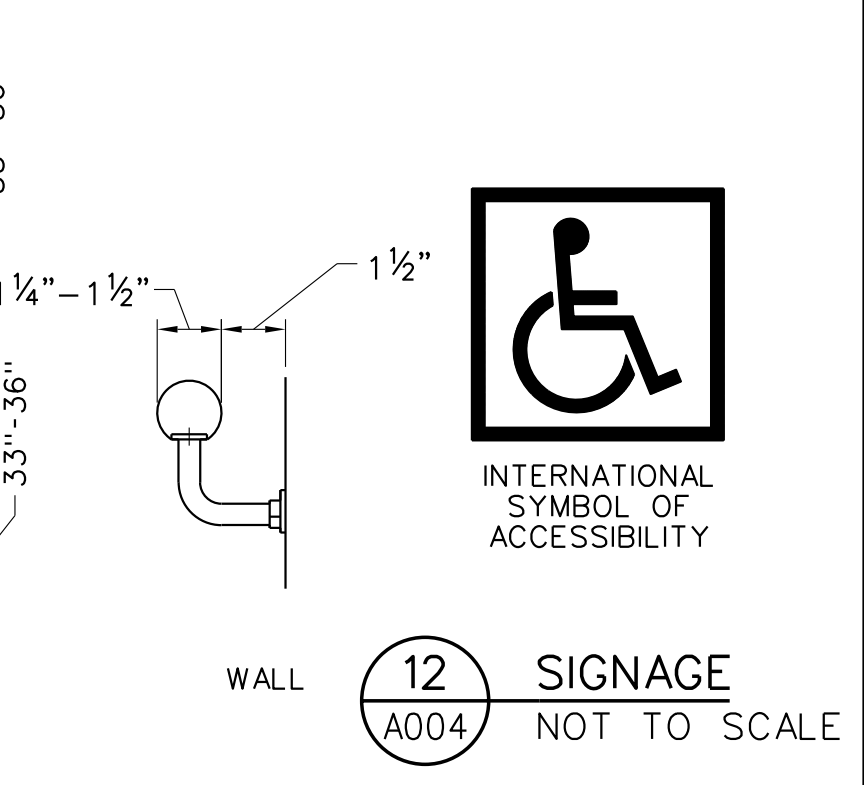


END-OF-ROW STALL

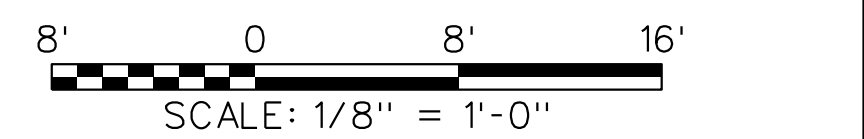
STANDARD STALL



11 GRAB BARS NOT TO SCALE



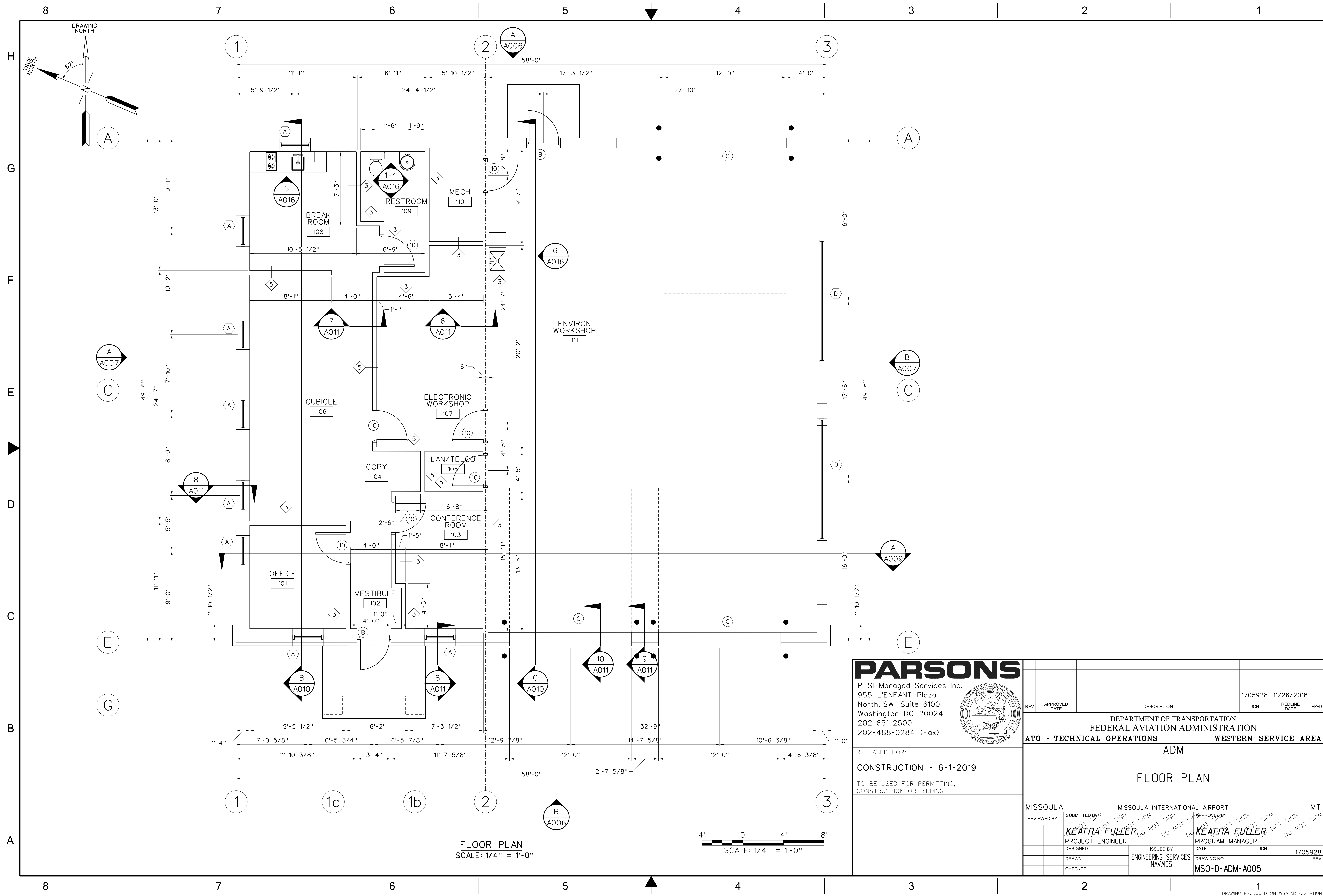
12 SIGNAGE NOT TO SCALE



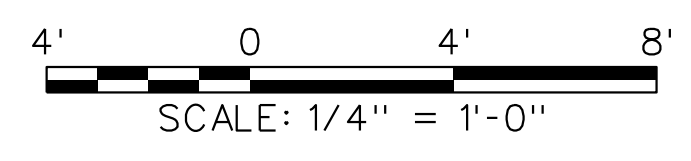
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North, SW Suite 6100  
Washington, DC 20024  
202-651-2500  
202-488-0284 (Fax)

REV	APPROVED DATE	DESCRIPTION	JCN	REDATE	APVD
				1705928	11/26/2018
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA					
ADM					
ARCHITECTURAL DETAILS					
MISSOULA					
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
KEATRA FULLER	KEATRA FULLER	KEATRA FULLER	DO NOT SIGN		
DESIGNED BY	ISSUED BY	PROGRAM MANAGER	DATE		
ENGINEERING SERVICES	NAVAIDS	1705928	DATE		
DRAWN	CHECKED	DRAWING NO	REV		
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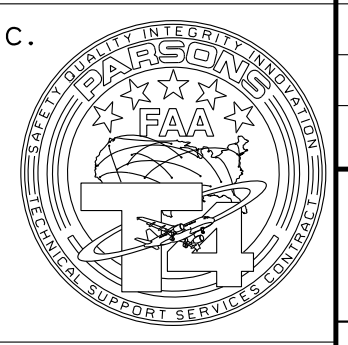




FLOOR PLAN  
SCALE: 1/4" = 1'-0"



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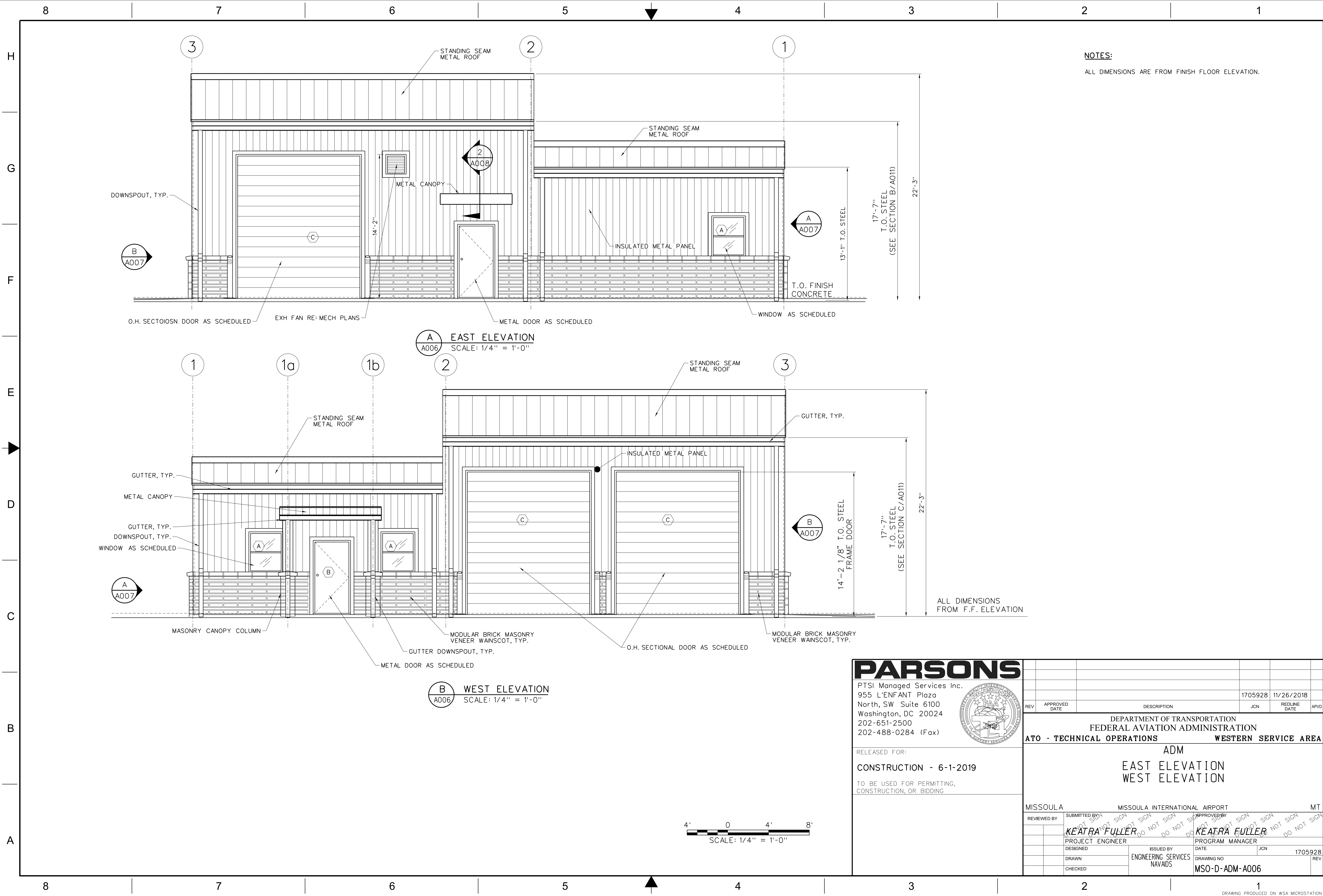
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**CONSTRUCTION - 6-1-2019**

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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b>					
<b>ADM</b> <b>FLOOR PLAN</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED BY	ISSUED BY	PROGRAM MANAGER	JCN	1705928	
	ENGINEERING SERVICES				
DRAWN	NAVAIDS	DRAWING NO			
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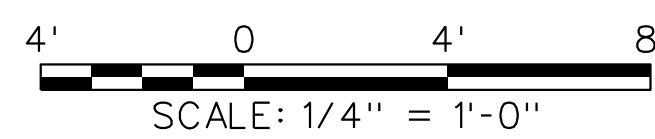
ISSUED FOR CONSTRUCTION  
 A



**NOTES:**  
ALL DIMENSIONS ARE FROM FINISH FLOOR ELEVATION.

**A** EAST ELEVATION  
SCALE: 1/4" = 1'-0"

**B** WEST ELEVATION  
SCALE: 1/4" = 1'-0"



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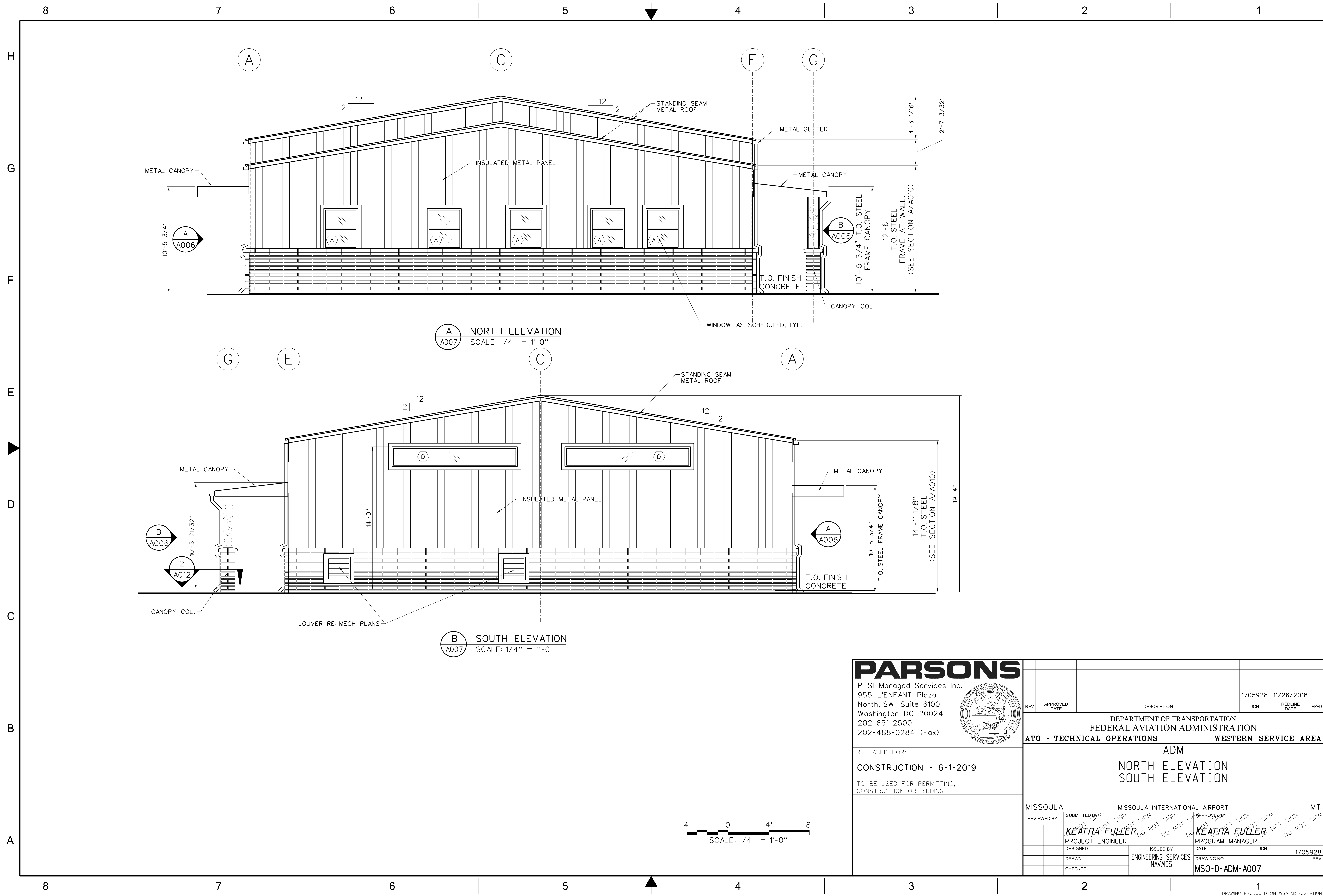
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**CONSTRUCTION - 6-1-2019**

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CONSTRUCTION, OR BIDDING

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			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION <b>FEDERAL AVIATION ADMINISTRATION</b> <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b>					
<b>ADM</b> <b>EAST ELEVATION</b> <b>WEST ELEVATION</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
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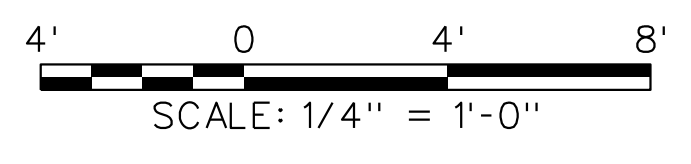
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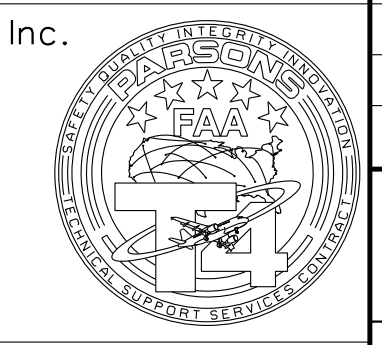


**A** NORTH ELEVATION  
A007  
SCALE: 1/4" = 1'-0"

**B** SOUTH ELEVATION  
A007  
SCALE: 1/4" = 1'-0"



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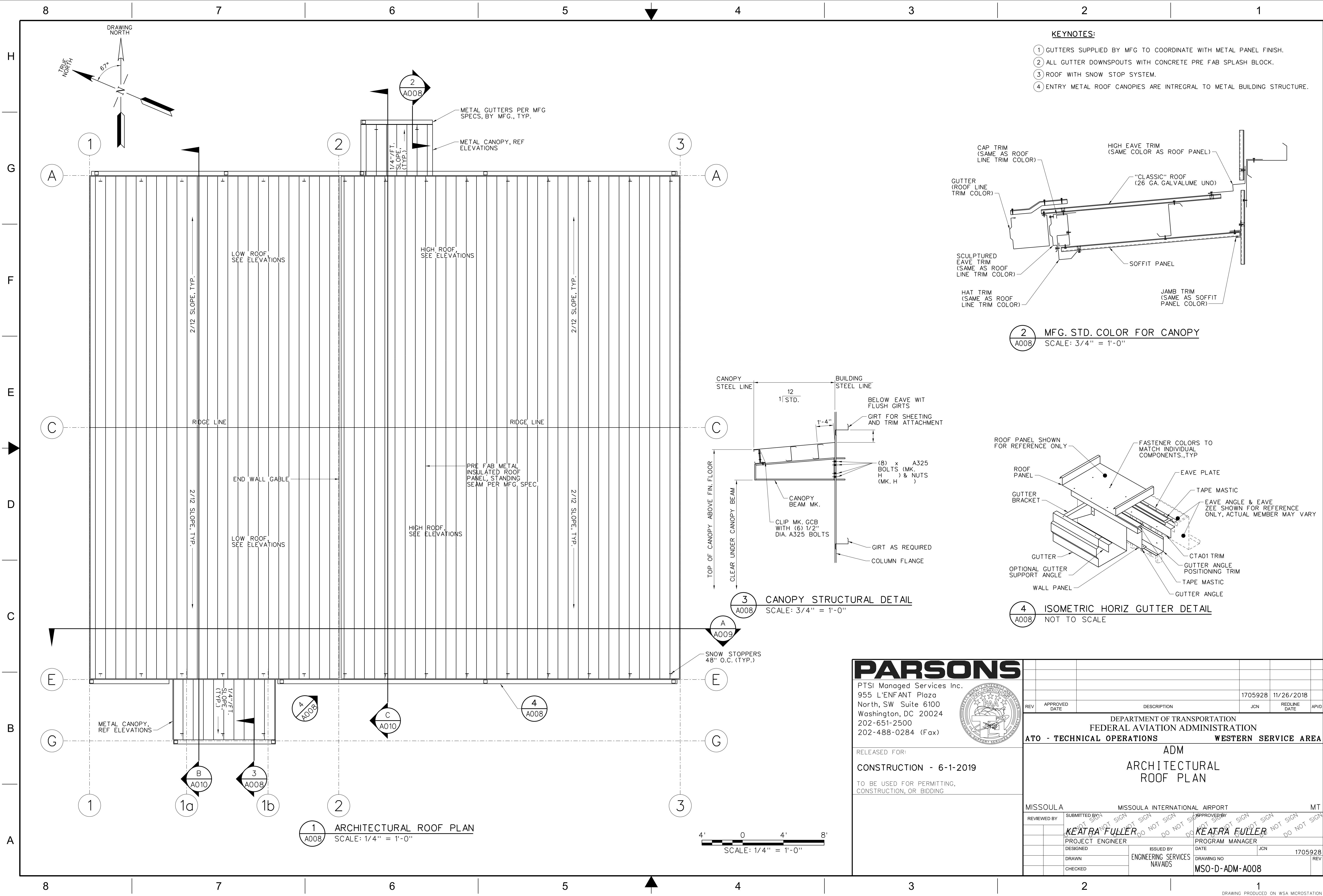
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DEPARTMENT OF TRANSPORTATION <b>FEDERAL AVIATION ADMINISTRATION</b> <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b>  <b>ADM</b> <b>NORTH ELEVATION</b> <b>SOUTH ELEVATION</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE		
	KEATRA FULLER	KEATRA FULLER	1705928		
DESIGNED	ISSUED BY	PROGRAM MANAGER	JCN	1705928	REV
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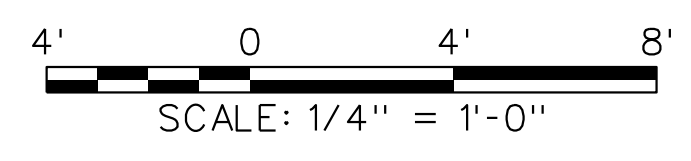
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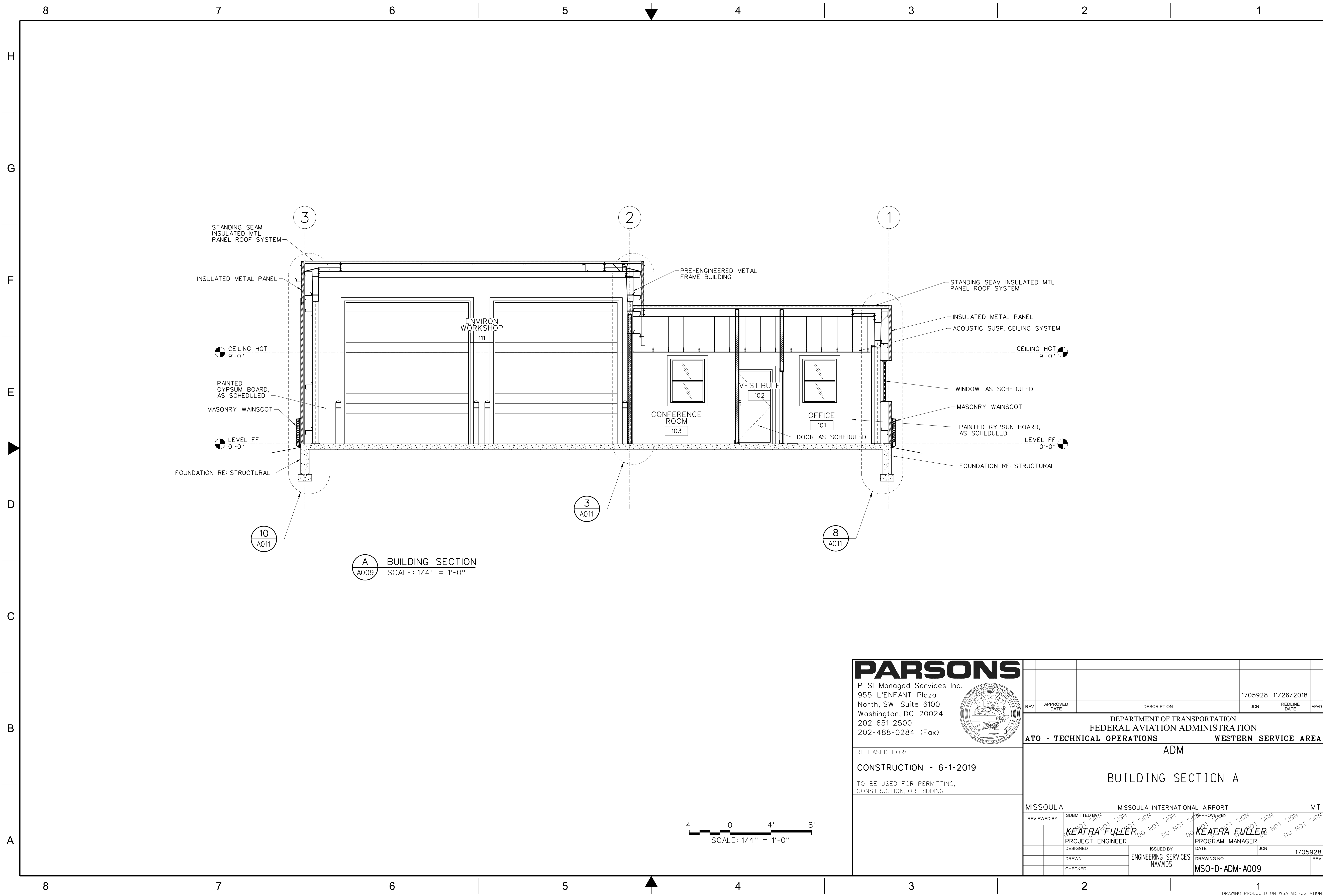
**PARSONS**  
 PTSI Managed Services Inc.  
 955 L'ENFANT Plaza  
 North, SW Suite 6100  
 Washington, DC 20024  
 202-651-2500  
 202-488-0284 (Fax)

REV	APPROVED DATE	DESCRIPTION	JCN	1705928	11/26/2018	APVD
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA						
ADM ARCHITECTURAL ROOF PLAN						
MISSOULA			MISSOULA INTERNATIONAL AIRPORT			MT
REVIEWED BY	SUBMITTED SIGN	NOT SIGN	DO NOT SIGN	APPROVED BY	DO NOT SIGN	DO NOT SIGN
	KEATRA FULLER			KEATRA FULLER		
DESIGNED	ISSUED BY	PROGRAM MANAGER	JCN	1705928	REV	
DRAWN	ENGINEERING SERVICES	NAVAIDS	DRAWING NO	MSO-D-ADM-A008		
CHECKED						

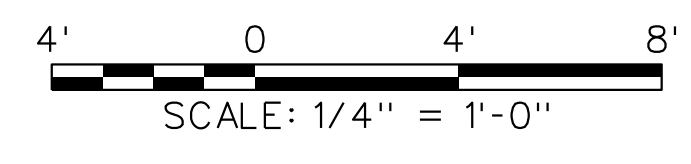


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 A



**A** BUILDING SECTION  
 A009 SCALE: 1/4" = 1'-0"



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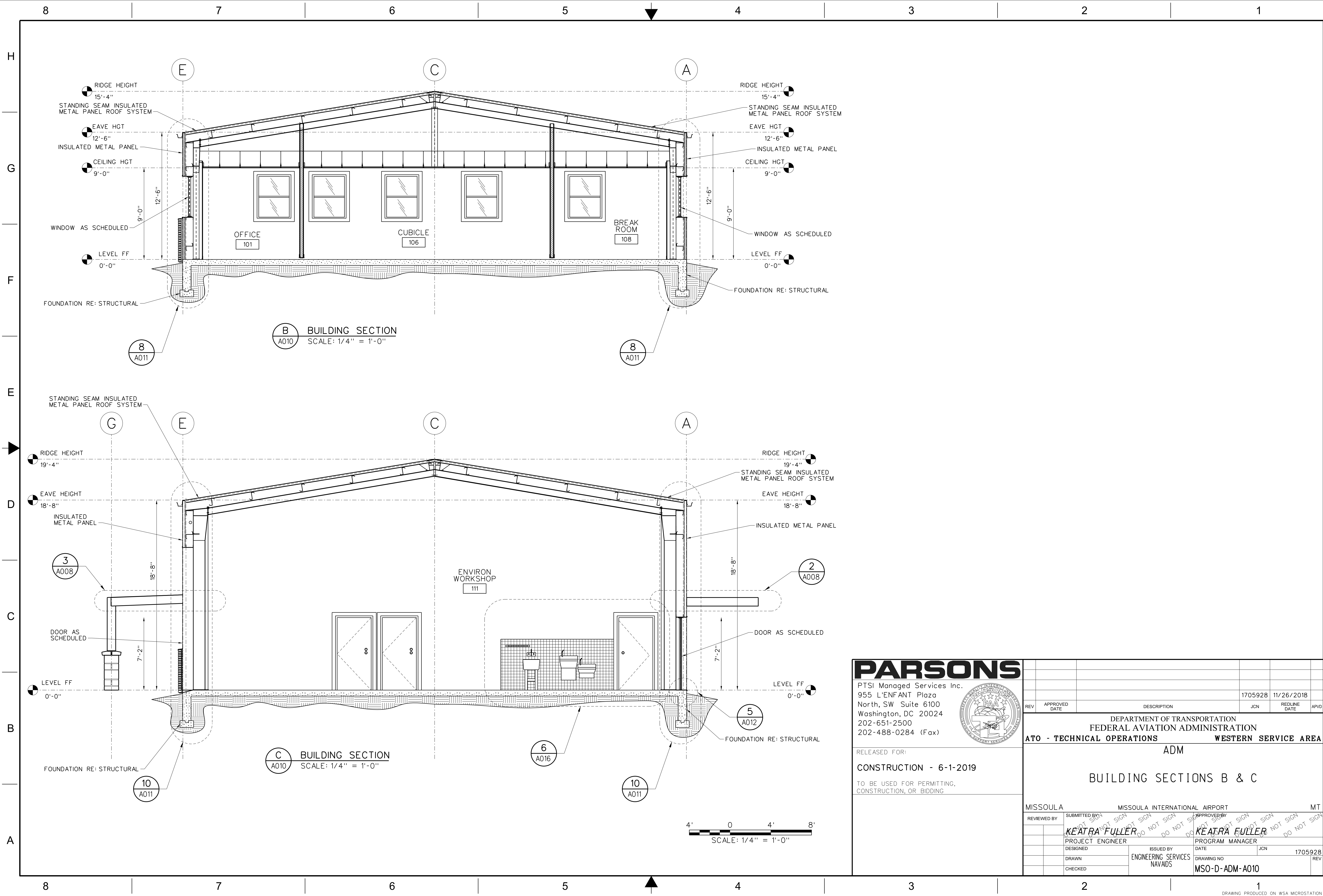
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**CONSTRUCTION - 6-1-2019**

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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM <b>BUILDING SECTION A</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	DATE	JCN	1705928	REV
	ENGINEERING SERVICES				
DRAWN	NAVAIDS	DRAWING NO	MSO-D-ADM-A009		
CHECKED					

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 Bzozna CTR Kozak

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 EDM: mso-d-adm-a009.dgn



**B BUILDING SECTION**  
SCALE: 1/4" = 1'-0"

**C BUILDING SECTION**  
SCALE: 1/4" = 1'-0"

**PARSONS**

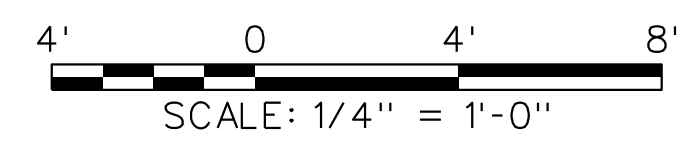
PTSI Managed Services Inc.  
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Washington, DC 20024  
202-651-2500  
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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION <b>FEDERAL AVIATION ADMINISTRATION</b> <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>BUILDING SECTIONS B &amp; C</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
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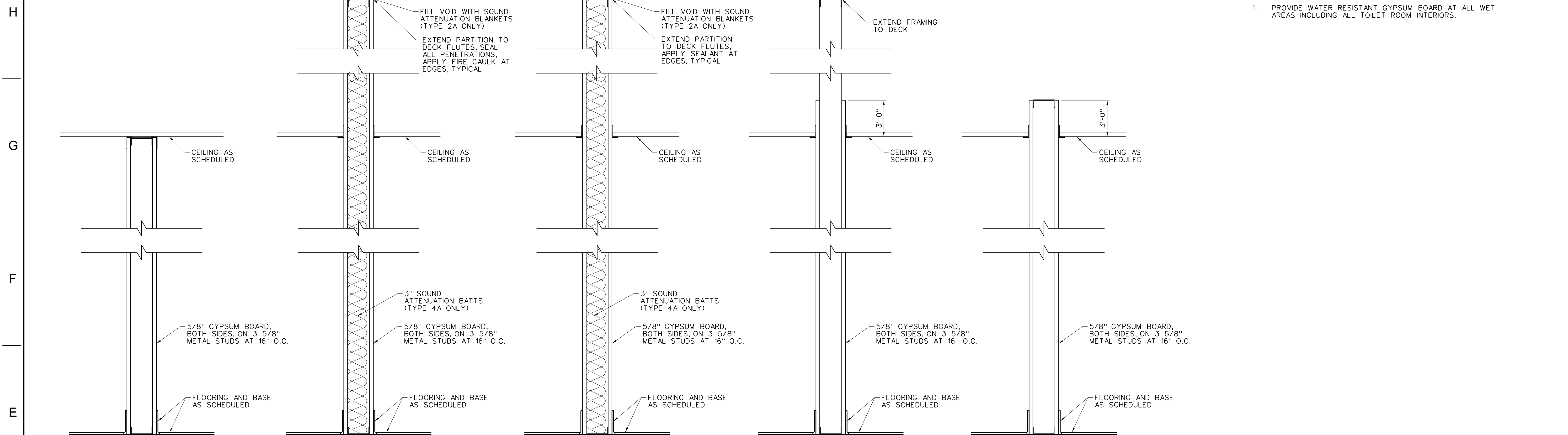


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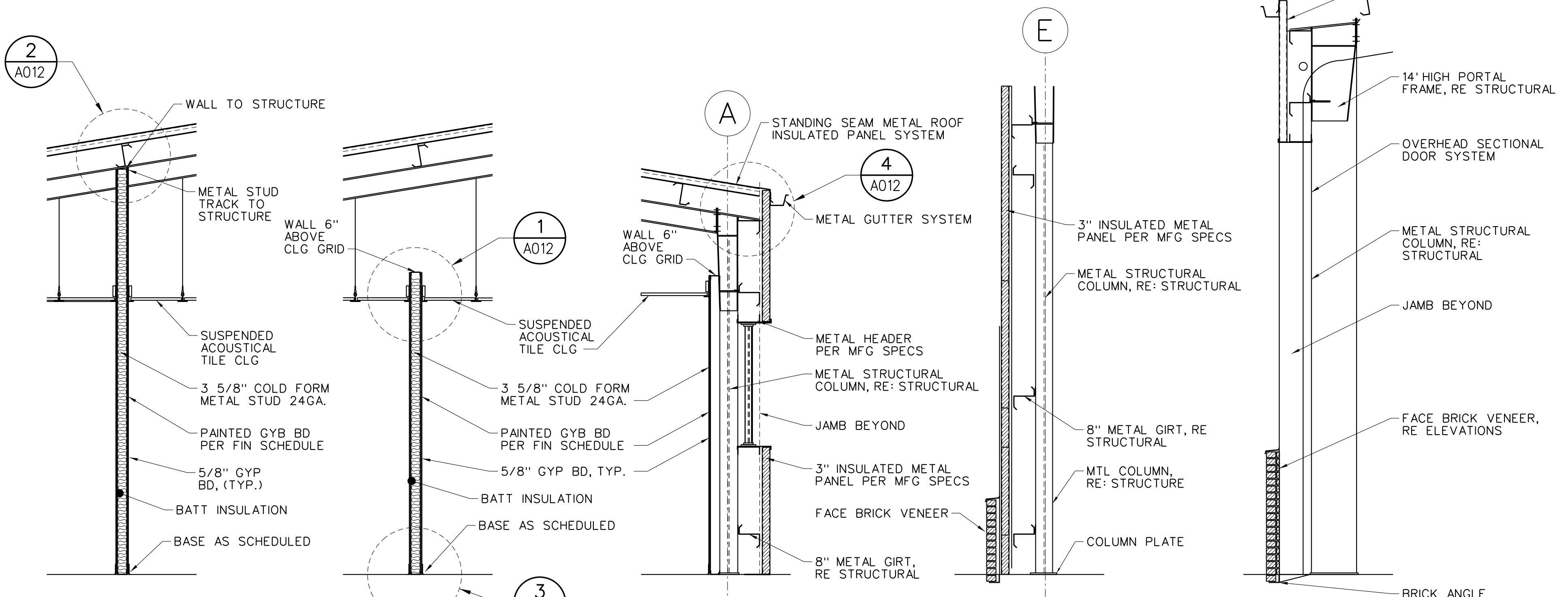


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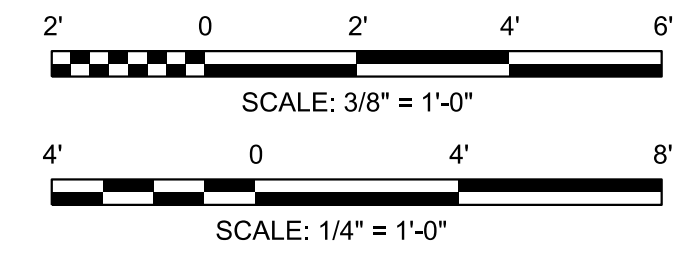


**NOTES:**  
 1. PROVIDE WATER RESISTANT GYPSUM BOARD AT ALL WET AREAS INCLUDING ALL TOILET ROOM INTERIORS.

1 N.R. PARTITION TYPE 1  
 SCALE: 1/4" = 1'-0"  
 2 1 HOUR PARTITION TYPE 2  
 SCALE: 1/4" = 1'-0"  
 3 N.R. PARTITION TYPE 3  
 SCALE: 1/4" = 1'-0"  
 4 N.R. PARTITION TYPE 4  
 SCALE: 1/4" = 1'-0"  
 5 N.R. PARTITION TYPE 5  
 SCALE: 1/4" = 1'-0"



6 WALL SECTION  
 SCALE: 3/8" = 1'-0"  
 7 WALL SECTION  
 SCALE: 3/8" = 1'-0"  
 8 WALL SECTION  
 SCALE: 3/8" = 1'-0"  
 9 WALL SECTION  
 SCALE: 3/8" = 1'-0"  
 10 WALL SECTION  
 SCALE: 3/8" = 1'-0"



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REV	APPROVED DATE	DESCRIPTION	1705928	11/26/2018	JCN	REDLINE DATE	APVD	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM								
<b>WALL SECTIONS</b>								
MISSOULA				MISSOULA INTERNATIONAL AIRPORT				MT
REVIEWED BY	SUBMITTED BY	NOT SIGN	NOT SIGN	NOT SIGN	NOT SIGN	NOT SIGN	APPROVED BY	
	KEATRA FULLER						KEATRA FULLER	
DESIGNED	ISSUED BY	PROGRAM MANAGER		DATE	JCN	1705928		
DRAWN	ENGINEERING SERVICES	DRAWING NO		1705928	REV			
CHECKED	NAVAIDS	MSO-D-ADM-A011						

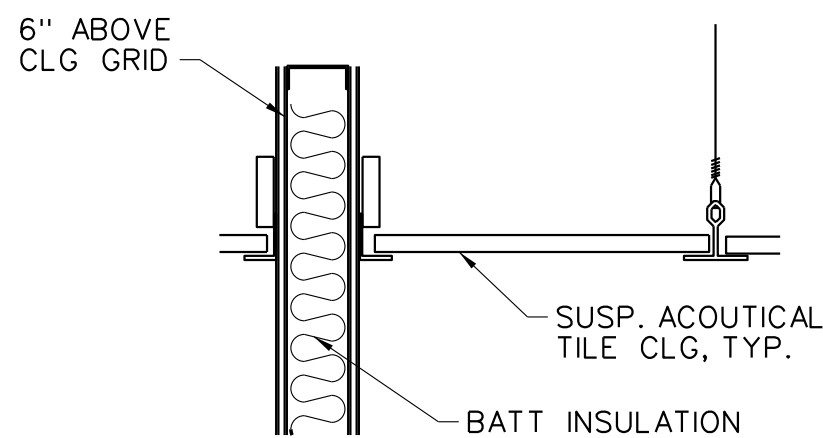
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ISSUED FOR CONSTRUCTION  
 ADM-011.dgn

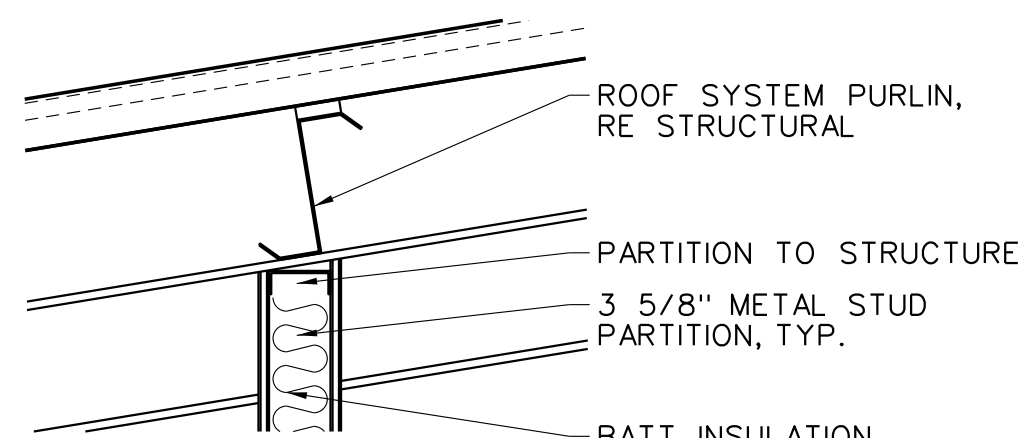
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8 7 6 5 4 3 2 1

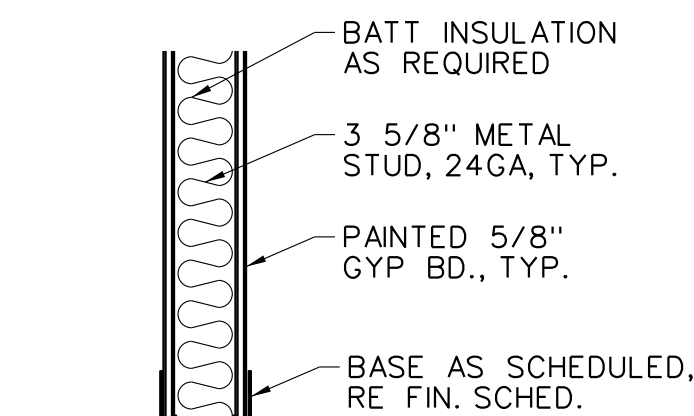
H  
G  
F  
E  
D  
C  
B  
A



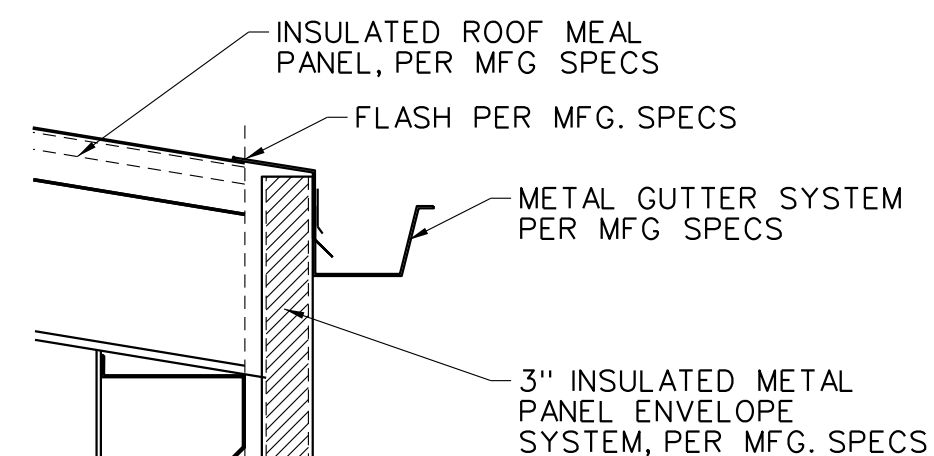
1 PARTITION WALL DTL.  
A012 SCALE: 1-1/2" = 1'-0"



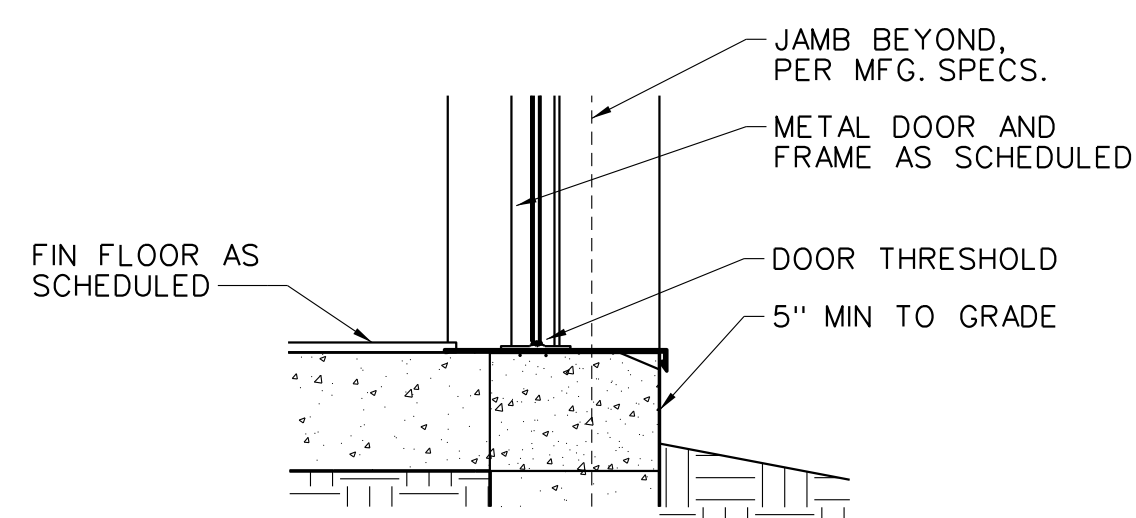
2 PARTITION TO STRUCTURE  
A012 SCALE: 1-1/2" = 1'-0"



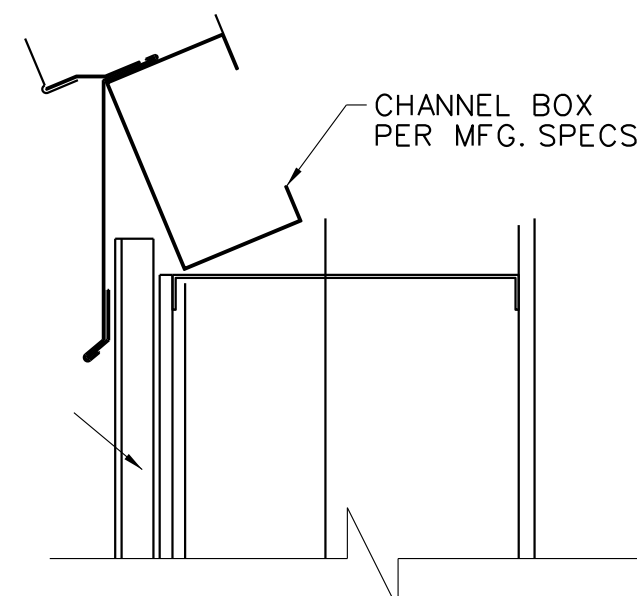
3 PARTITION BASE  
A012 SCALE: 1-1/2" = 1'-0"



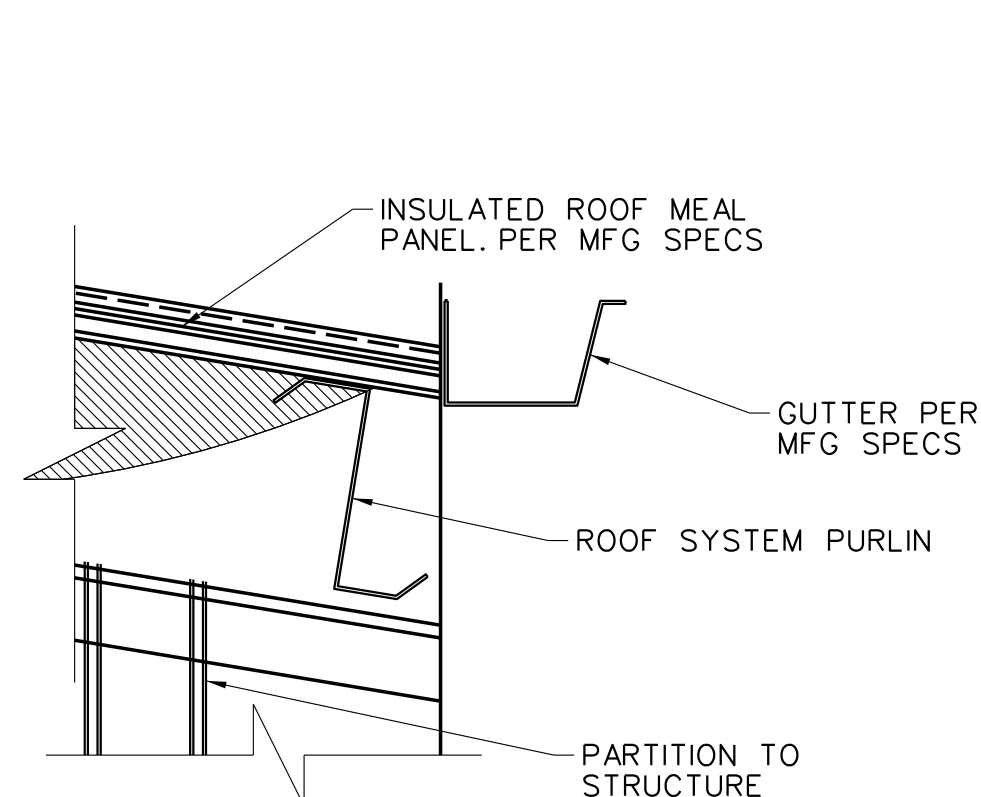
4 GUTTER  
A012 SCALE: 1-1/2" = 1'-0"



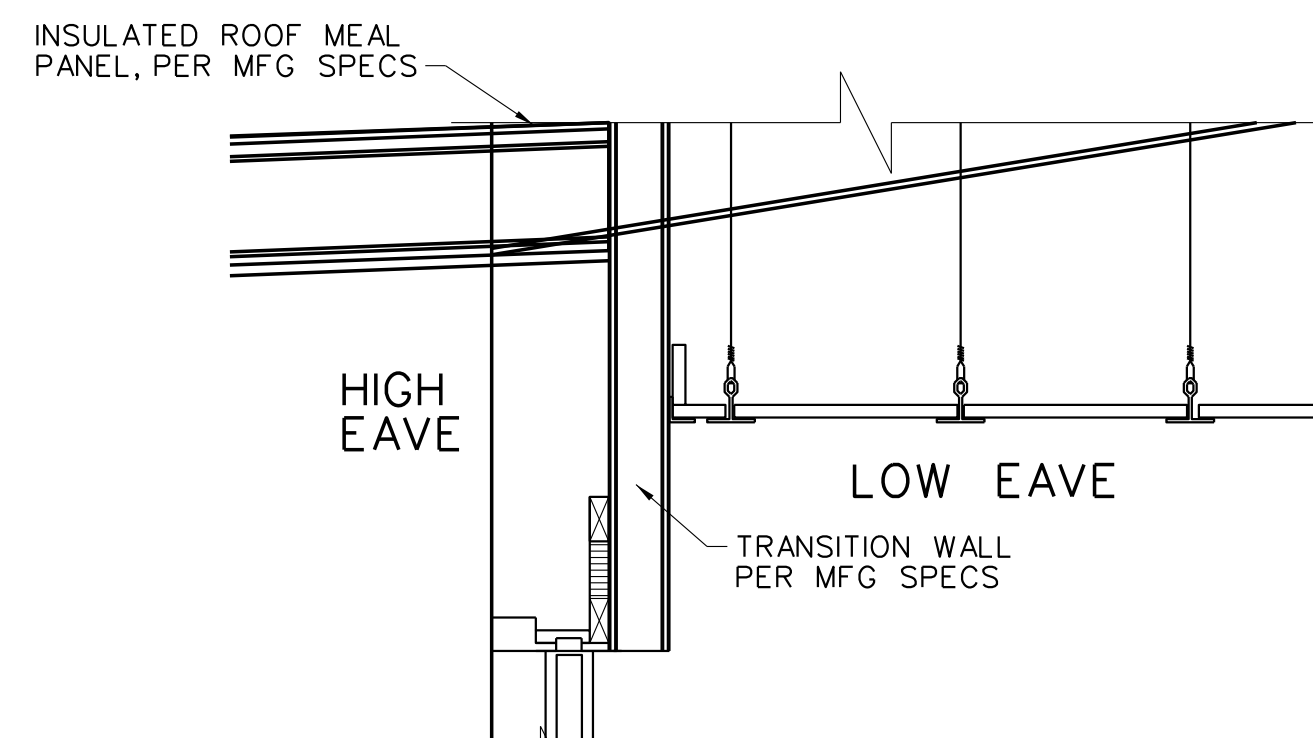
5 EXTERIOR DOOR THRESHOLD  
A012 SCALE: 1-1/2" = 1'-0"



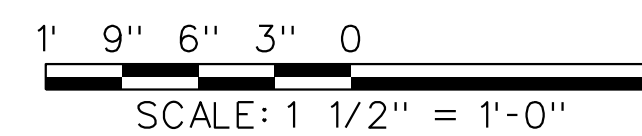
6 EAVE  
A012 SCALE: 1-1/2" = 1'-0"



7 ROOF  
A012 SCALE: 1-1/2" = 1'-0"



8 ROOF TRANSITION  
A012 SCALE: 1-1/2" = 1'-0"



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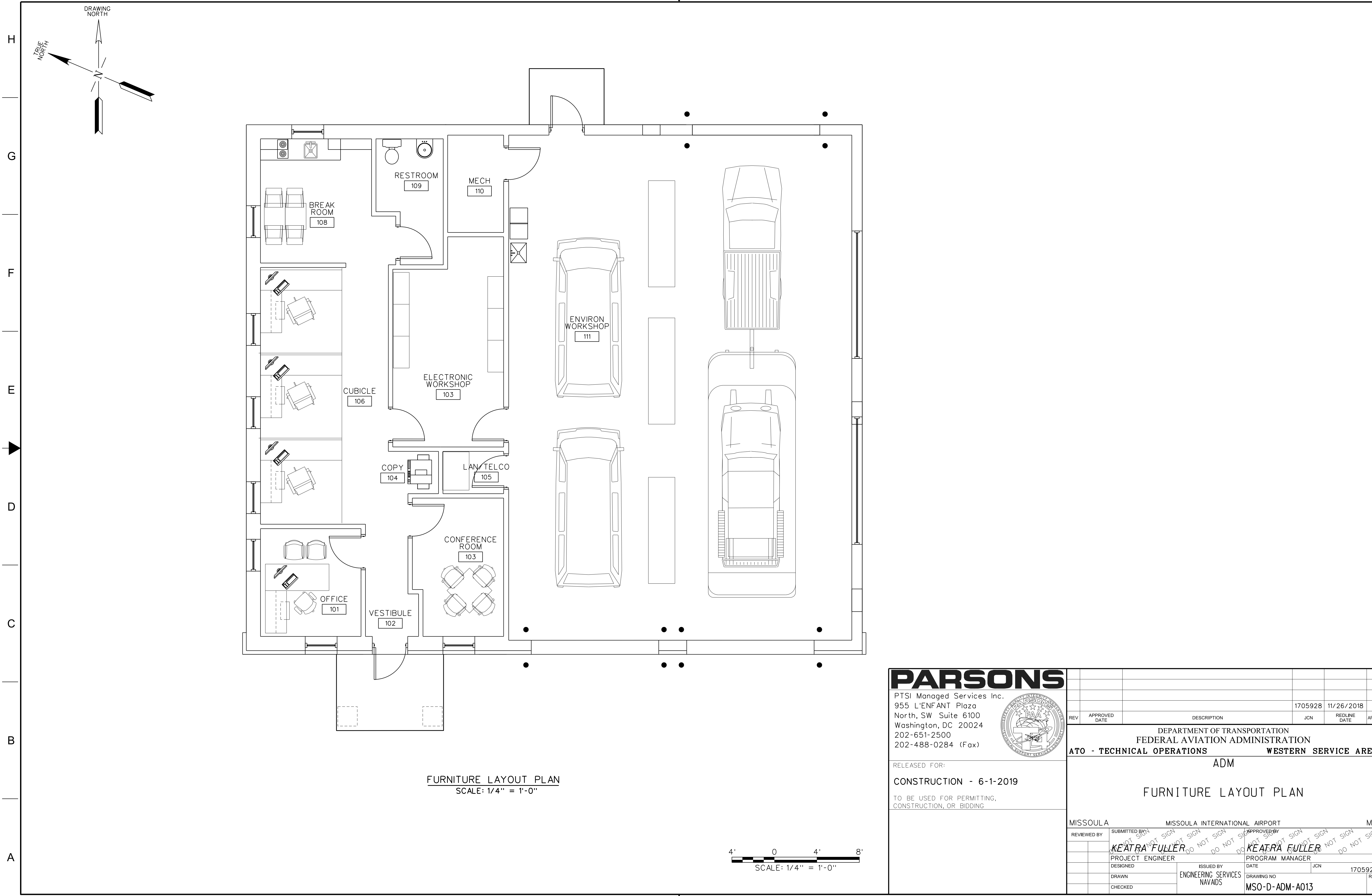
REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA</b>					
<b>ADM</b>					
<b>WALL DETAILS</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	1705928
	KEATRA FULLER	KEATRA FULLER			REV
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	1705928
	ENGINEERING SERVICES	NAVAIDS			REV
DRAWN	CHECKED	DRAWING NO	MSO-D-ADM-A012		

ISSUED FOR CONSTRUCTION

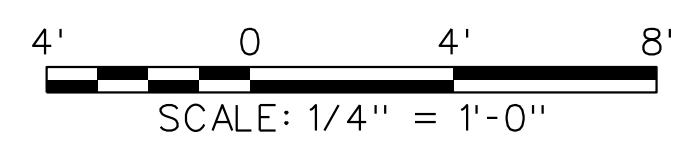
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8 7 6 5 4 3 2 1

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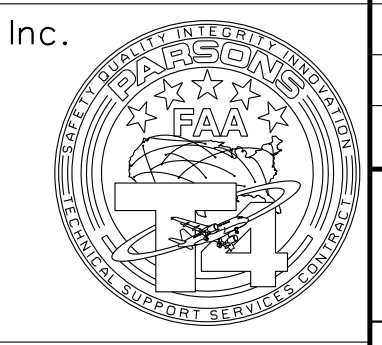


FURNITURE LAYOUT PLAN  
SCALE: 1/4" = 1'-0"



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			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA

ADM

FURNITURE LAYOUT PLAN

MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
DESIGNED	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	DATE
	NAVAIDS	JCN
DRAWN		1705928
CHECKED		REV
		DRAWING NO
		MSO-D-ADM-A013

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ISSUED FOR: CONSTRUCTION  
 EDM: mso-d-adm-a013.dgn



**INTERIOR FINISH SCHEDULE** NOTE: ALL WALL DIRECTIONS ARE BASED ON PLAN NORTH. REFER TO FLOOR PLAN FOR PLAN NORTH DIRECTION.

ROOM NAME	ROOM NUMBER	FLOORING KEY	BASE KEY	WALL FINISH				CEILING	CEILING HEIGHT	REMARKS
				NORTH	SOUTH	WEST	EAST			
OFFICE	101	F 2	B 1	W 1	W 1	W 1	W 1	C 2	9'-0"	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
VESTIBULE	102	F 2	B 1	W 1	W 1	W 1	W 1	C 2	9'-0"	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
CONFERENCE ROOM	103	F 2	B 1	W 1	W 1	W 1	W 1	C 1	OPEN TO STRUCTURE	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
COPY	104	F 2	B 1	W 1	W 1	W 1	W 1	C 2	9'-0"	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
LAN/TELCO	105	F 1	B 1	W 1	W 1	W 1	W 1	C 1	OPEN TO STRUCTURE	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
CUBICLE AREA	106	F 2	B 1	W 1	W 1	W 1	W 1	C 2	9'-0"	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
ELEC. WORKSHOP	107	F 1	B 1	W 1	W 1	W 1	W 1	C 2	OPEN TO STRUCTURE	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
BREAKROOM	108	F 3	B 1	W 2 / W 3	W 1	W 1	W 1	C 2	9'-0"	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
RESTROOM	109	F 3	B 1	W 2 / W 3	W 2	W 2 / W 3	W 2 / W 3	C 3	9'-0"	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
MECHANICAL ROOM	110	F 1	B 1	W 1	W 1	W 1	W 1	C 1	OPEN TO STRUCTURE	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS
ENVIRON. WORKSHOP	111	F 1	B 1	W 4	W 4	W 2 / W 3	W 4	C 1	OPEN TO STRUCTURE	SEE NOTE IN CEILING FINISHES LEGEND FOR CEILING INSTRUCTIONS

**FLOORING KEY LEGEND**

F 1	SEALED CONCRETE
F 2	CARPET TILE
F 3	CERAMIC TILE

**BASE KEY LEGEND**

B 1	RUBBER BASE - CONTINUOUS ROLLS
C 1	TILE BASE

**WALL FINISHES LEGEND**

W 1	PAINTED GYPSUM BOARD
W 2	PAINTED MOISTURE-RESISTANT GYPSUM BOARD
W 3	WALL CERAMIC TILE
W 4	OPEN TO STRUCTURE

**CEILING FINISHES LEGEND**

C 1	OPEN TO STRUCTURE TO BE PAINTED - SEE NOTE BELOW
C 2	ACOUSTICAL TILE SUSPENDED CEILING SYSTEM
C 3	GYPSUM BOARD CEILING

ALL STRUCTURAL MEMBERS INCLUDING STEEL CHANNELS, ANGLES, ANCHORS, PLATES, ETC. WILL BE PAINTED. THE UNDERSIDE OF STEEL METAL DECKING WILL REMAIN FACTORY FINISHED PAINT. PROTECT DECKING AS REQUIRED DURING PAINTING ACTIVITIES.

**TOILET ACCESSORY SCHEDULE**

DESIGNATION	DESCRIPTION	REMARKS
TA1	SOAP DISPENSER	SEMI-RECESSED - AS SPECIFIED
TA2	MIRROR	AS SPECIFIED
TA3	TOILET PAPER DISPENSER	AS SPECIFIED
TA4	PAPER TOWEL DISPENSER	3'-0" A.F.F.
TA5A	36" GRAB BAR	3'-6" A.F.F.
TA5B	42" GRAB BAR	AS SPECIFIED
TA6	SANITARY NAPKIN DISPOSAL	AS SPECIFIED
TA7	TOILET SEAT COVER DISPENSER	AS SPECIFIED - SEE NOTE BELOW
TA8	MOP AND BROOM HOLDER	AS SPECIFIED
TA9		

MIRRORS (4 TOTAL) PROVIDE 1/4" THICK, PLATE GLASS MIRROR ABOVE VANITY IN MEN'S AND WOMEN'S. BOTTOM OF MIRROR AT 40" A.F.F., TOP OF MIRROR AT 7'-0" A.F.F. MIRROR WIDTH TO BE 2'-0".

**WINDOW SCHEDULE**

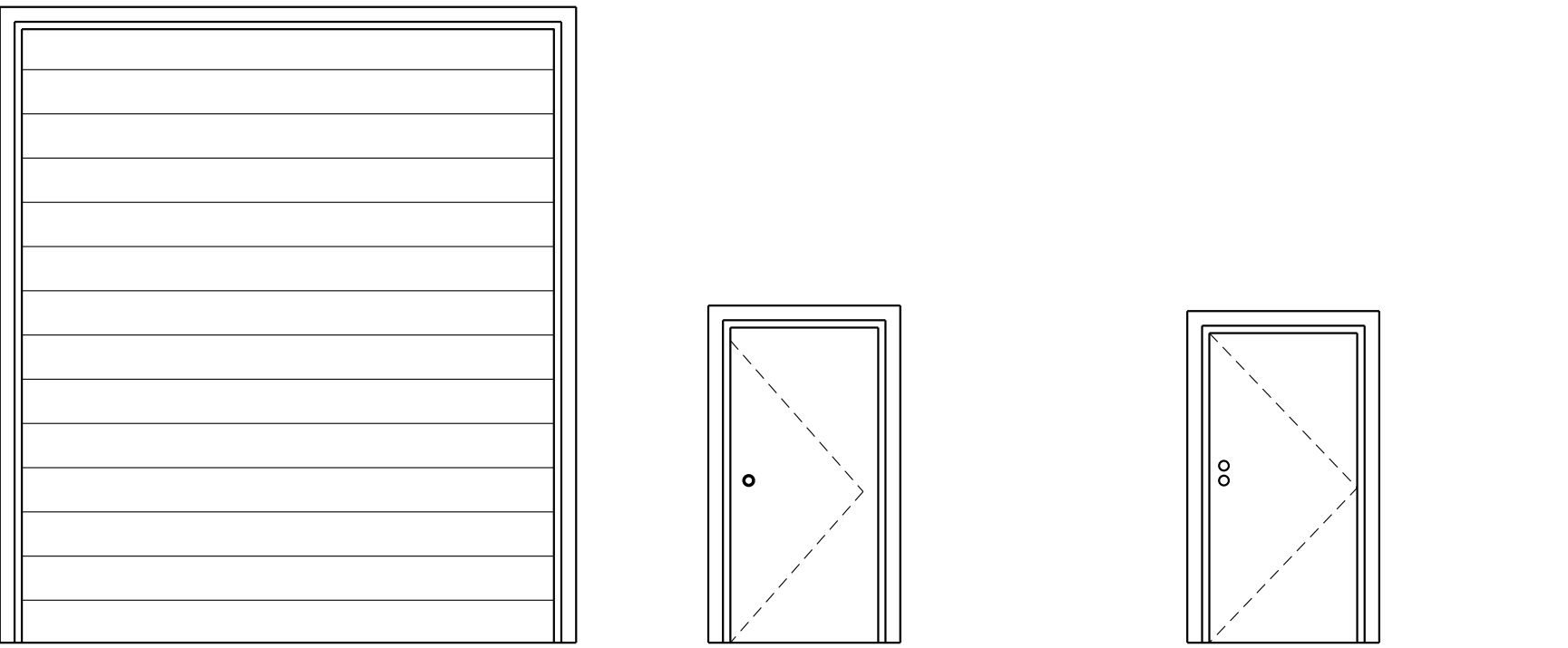
DESIGNATION	SIZE (NOM.)	TYPE	COMMENTS
A	3040	DOUBLE HUNG	REF. SPECIFICATIONS: ALUM FRAME
D	12020	FIXED WINDOW	REF. SPECIFICATIONS: ALUM FRAME

REFERENCE FLOOR PLAN AND EXTERIOR ELEVATIONS FOR LOCATION AND QUANTITY.

**DOOR SCHEDULE**

DESIGNATION	SIZE (NOM.)	TYPE	COMMENTS
B	3076	EXTERIOR	REF. SPECIFICATIONS: MTL. FRAME
C	120140	EXTERIOR	REF. SPECIFICATIONS: MTL. OVERHEAD SECTIONAL
10	3076	INTERIOR	REF. SPECIFICATIONS: MTL. FRAME, SOLID WOOD

REFERENCE FLOOR PLAN FOR LOCATION AND QUANTITY. HARDWARE SCHEDULE AS SPECIFIED. REFERENCE OWNER SECURITY KEYING REQUIREMENTS AND LOCKSET REQUIREMENTS.



DOOR TYPE C SECTIONAL  
DOOR TYPE 10 INTERIOR FLUSH WD7, MTL FRAME  
DOOR TYPE B EXTERIOR FLUSH MTL, MTL FRAME

**FINISHES NOTES:**  
ALL FINISHES COLOR SELECTION PER INTERIOR FINISHES PACKAGE.

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ATO - TECHNICAL OPERATIONS  
ADM  
WESTERN SERVICE AREA

**FINISH ROOM SCHEDULES**

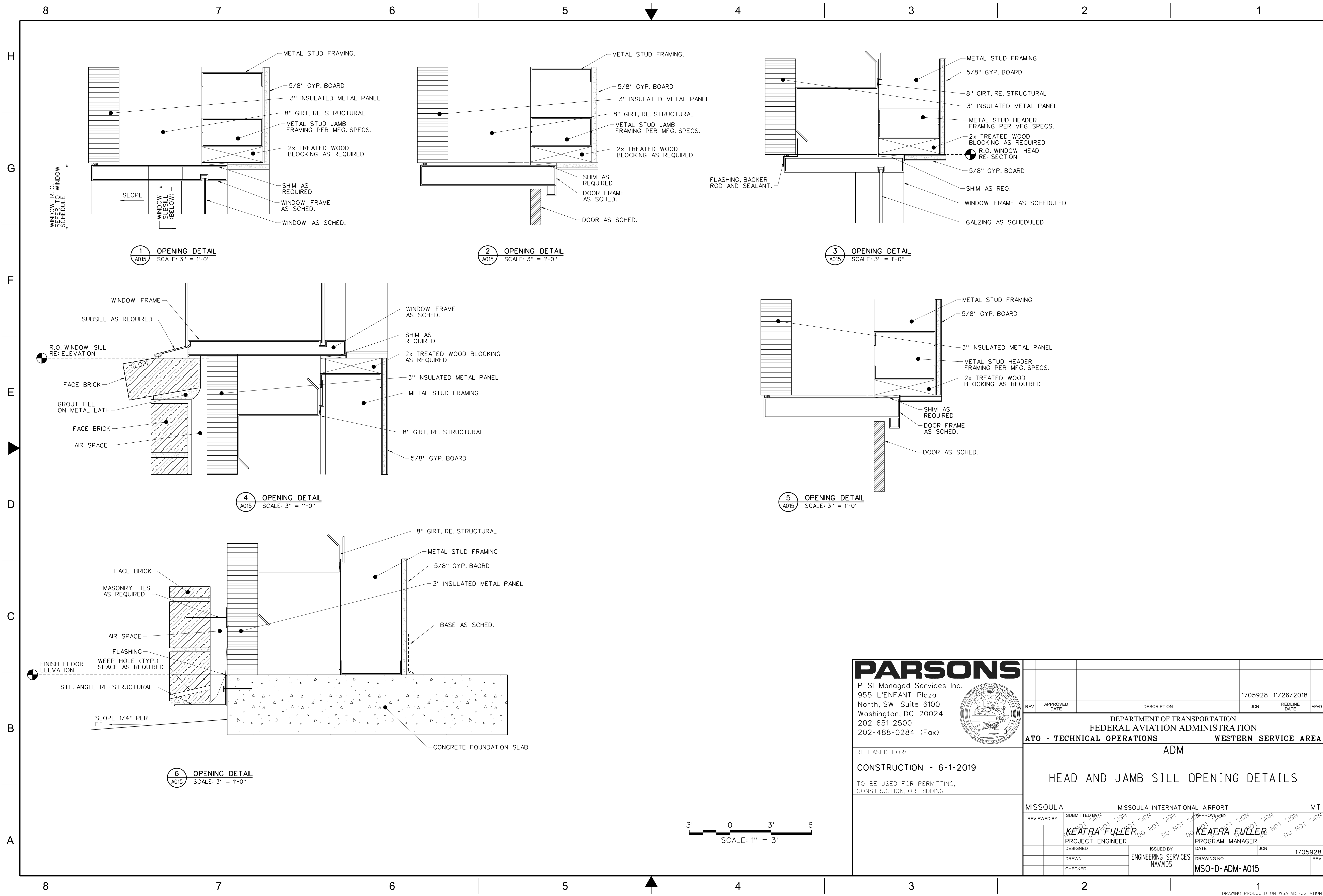
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REVIEWED BY: KEATRA FULLER PROJECT ENGINEER  
DESIGNED BY: KEATRA FULLER PROJECT ENGINEER  
DRAWN BY: ENGINEERING SERVICES  
CHECKED BY: NAVADS

APPROVED BY: KEATRA FULLER PROGRAM MANAGER  
DATE: 1705928  
ISSUED BY: ENGINEERING SERVICES  
DATE: 1705928  
DRAWING NO: MSO-D-ADM-A014

REV 1705928 11/26/2018 JCN

ISSUED FOR: CONSTRUCTION



1 OPENING DETAIL  
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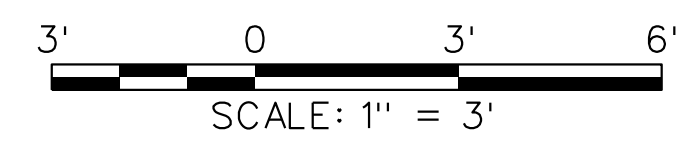
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A015 SCALE: 3" = 1'-0"

3 OPENING DETAIL  
A015 SCALE: 3" = 1'-0"

4 OPENING DETAIL  
A015 SCALE: 3" = 1'-0"

5 OPENING DETAIL  
A015 SCALE: 3" = 1'-0"

6 OPENING DETAIL  
A015 SCALE: 3" = 1'-0"



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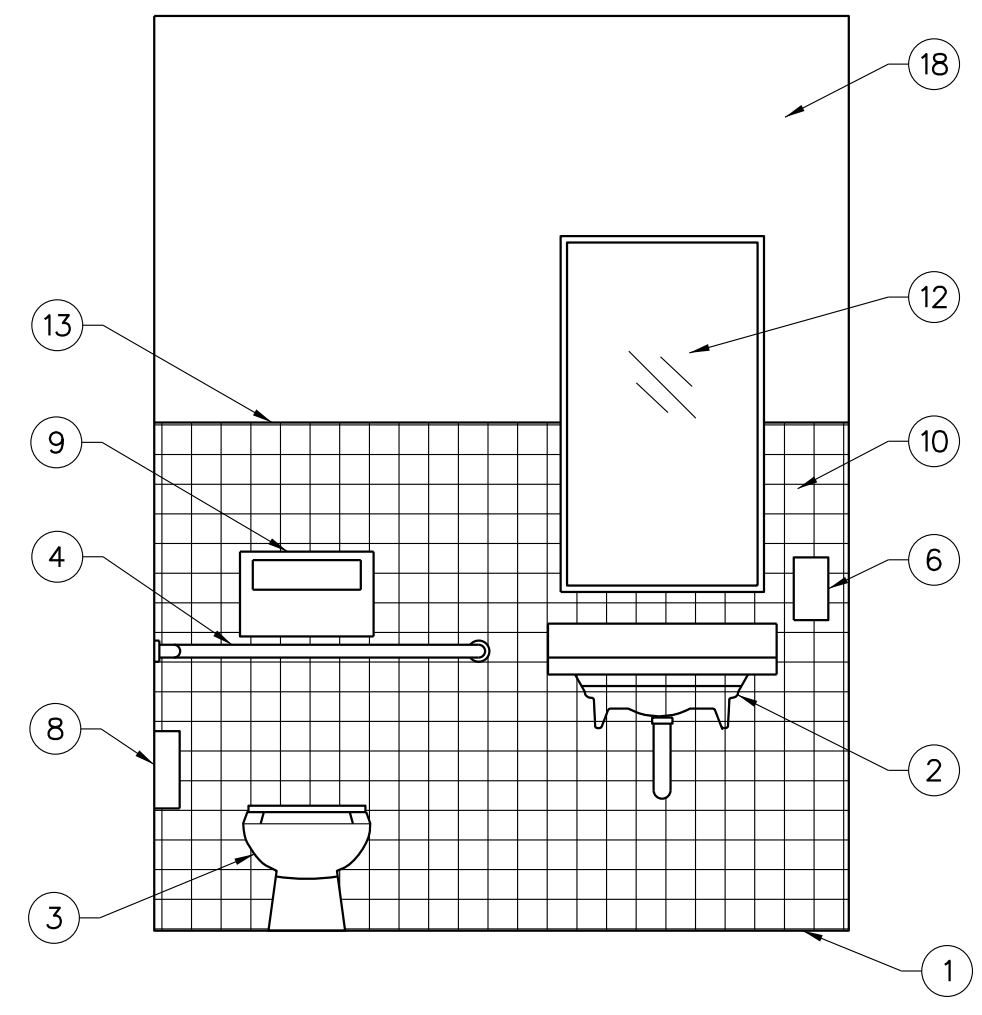
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**CONSTRUCTION - 6-1-2019**

TO BE USED FOR PERMITTING,  
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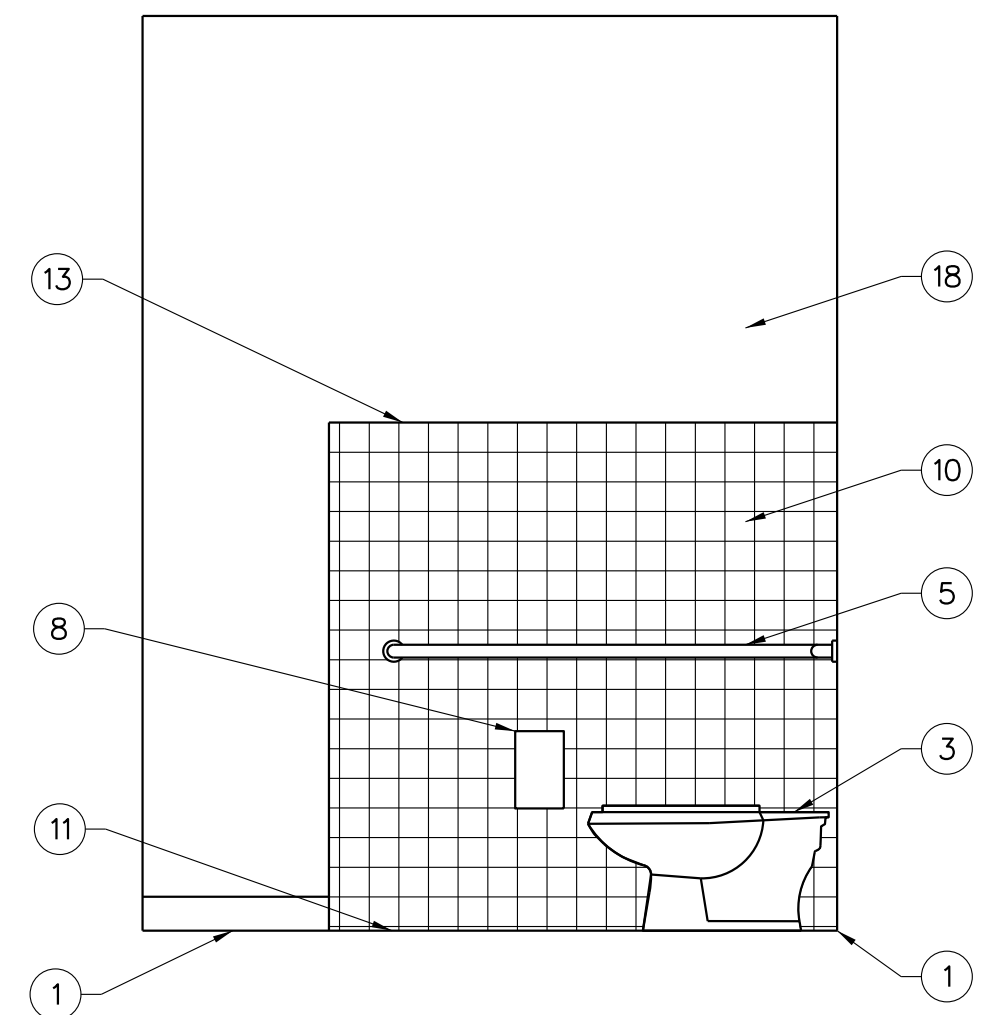
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			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA</b> ADM					
<b>HEAD AND JAMB SILL OPENING DETAILS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-A015			

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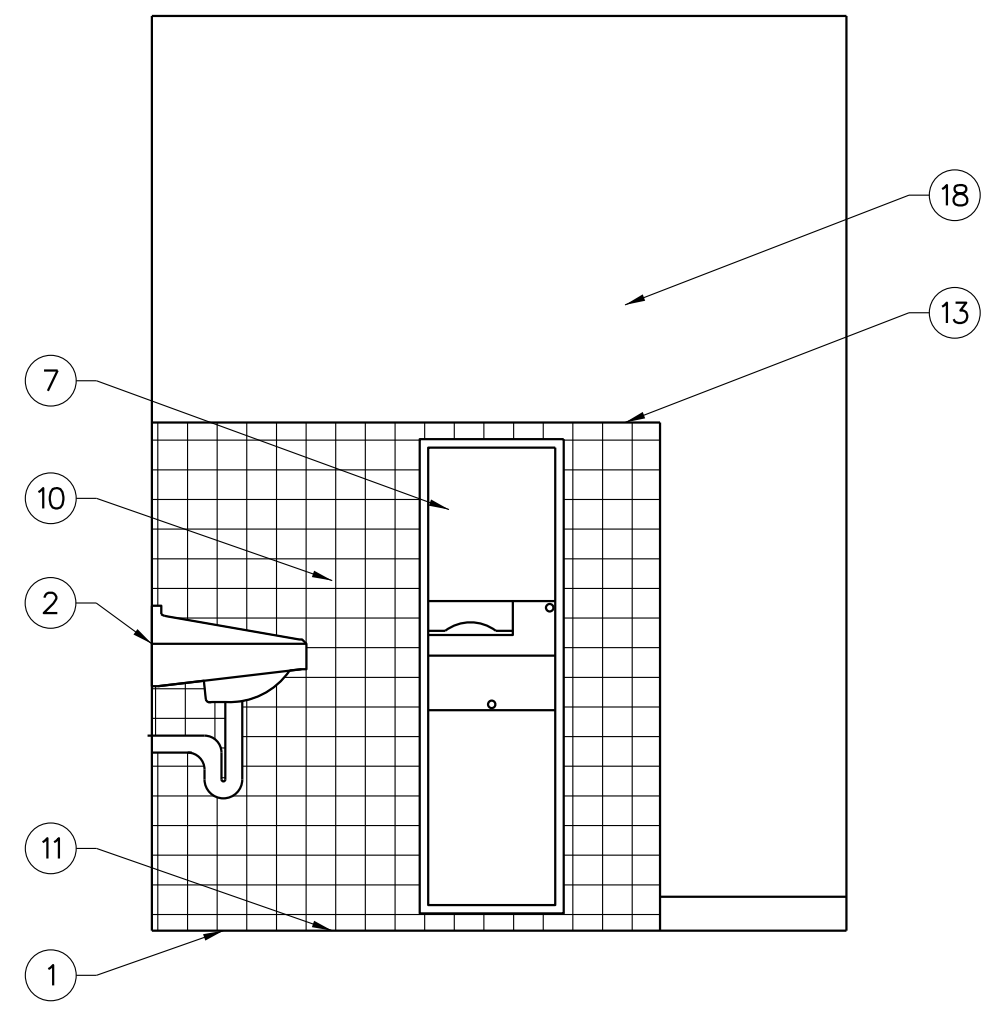
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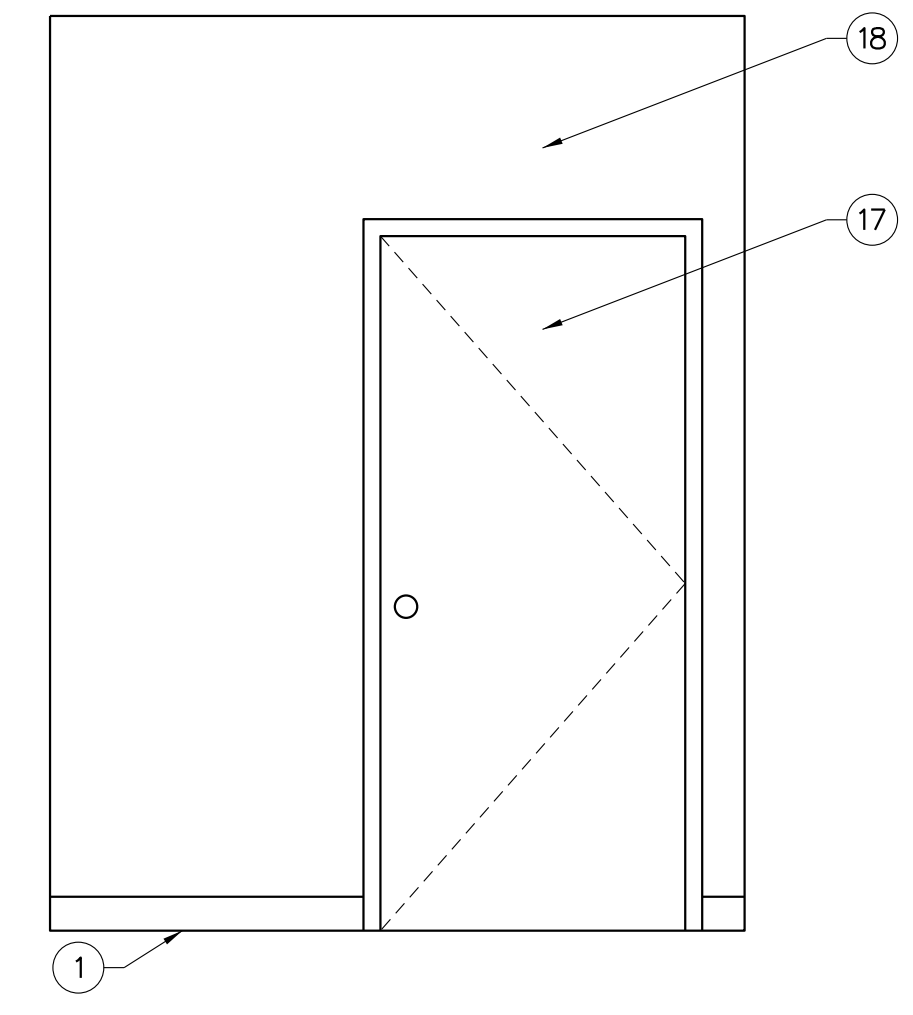
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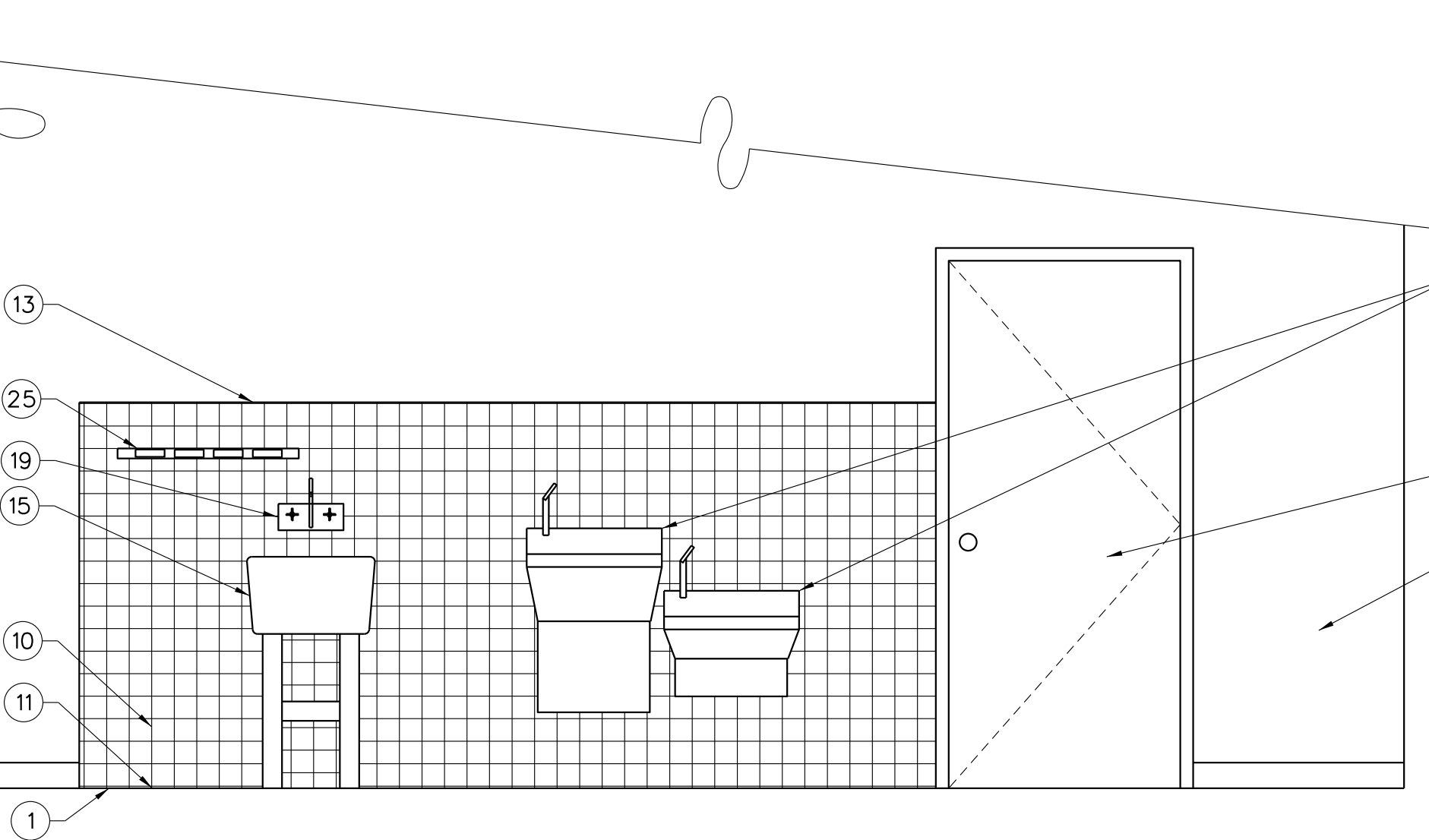


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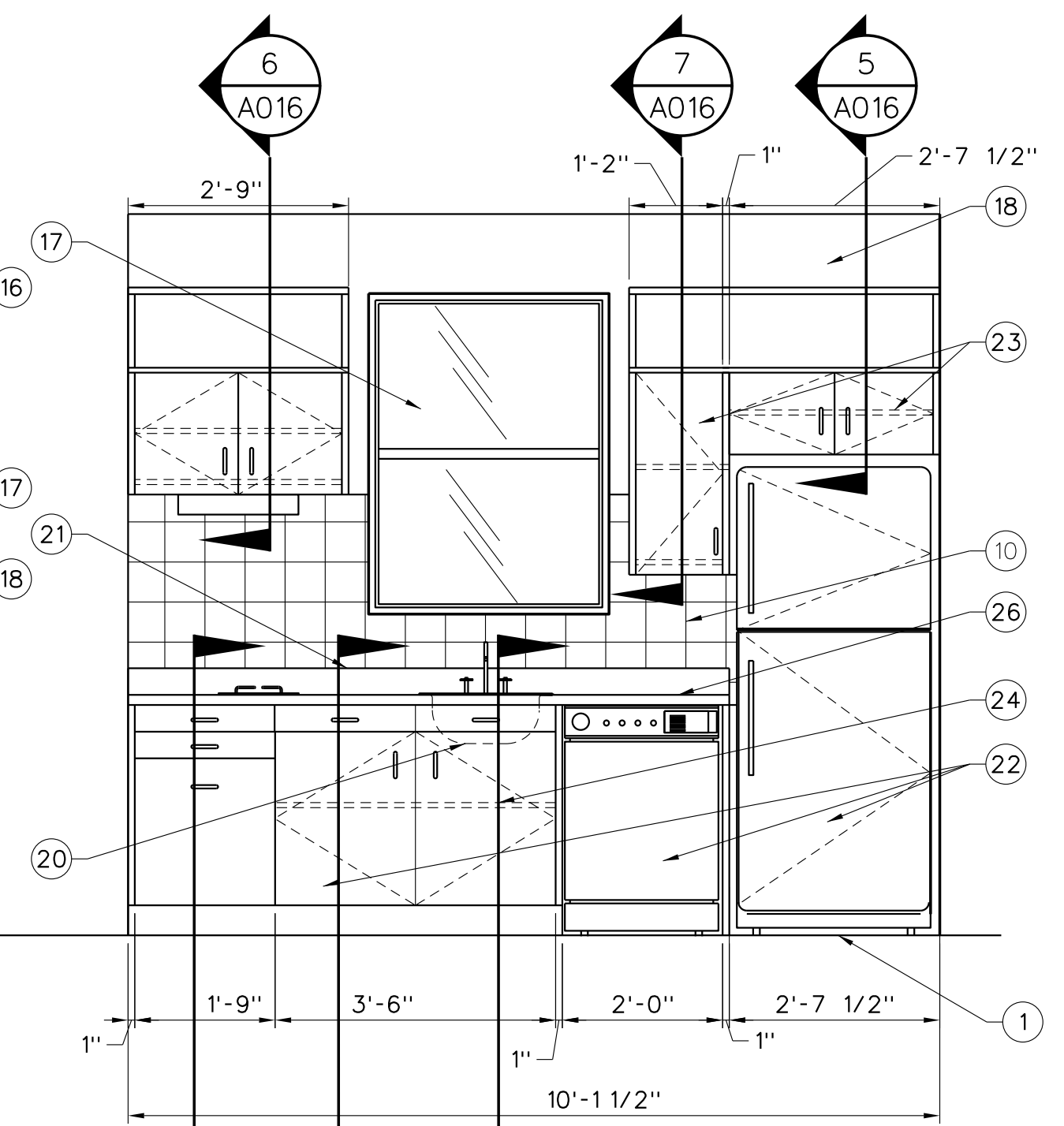


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A016 SCALE: 1/2" = 1'-0"

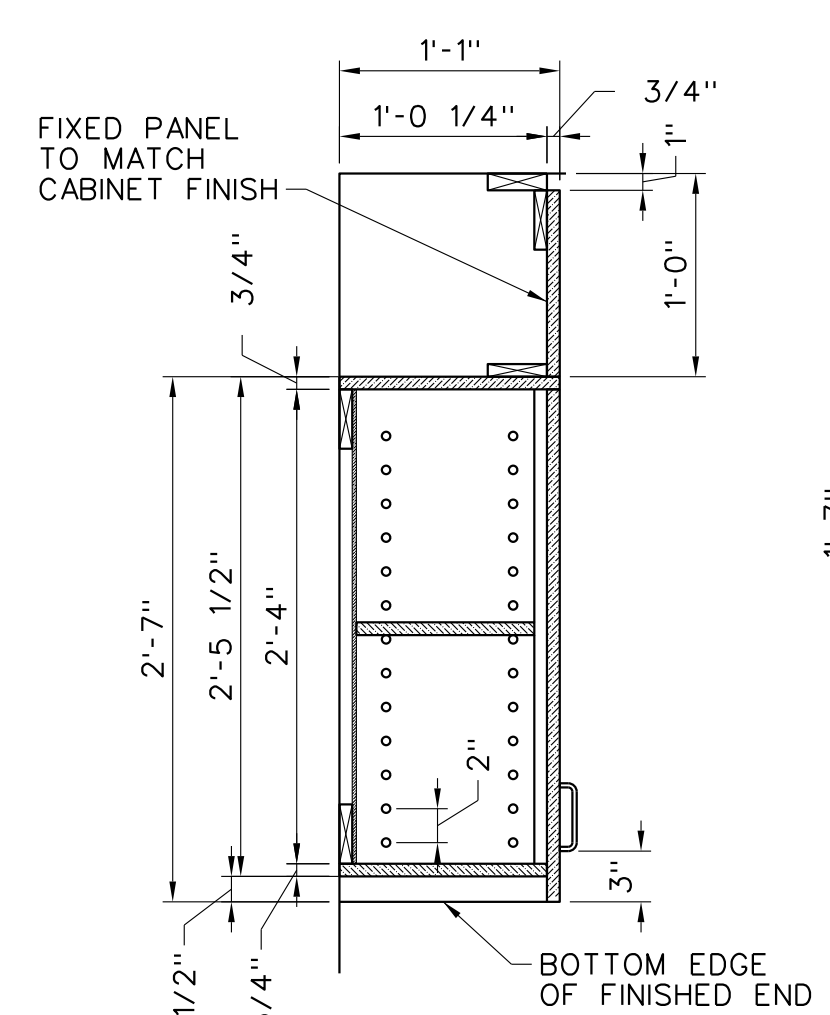
- KEYNOTES:**
- 1 SLIP RESISTANT SEALED AND STAINED CONCRETE FLOOR PER SPECIFICATIONS. COLOR PER FINISH SCHEDULE
  - 2 LAVATORY (TYP), PER SPECIFICATION
  - 3 FLOOR MOUNTED WATER CLOSET (TYP)
  - 4 TA-5A, 1-1/2" GRAB BAR (TYP)
  - 5 TA-5B, 1-1/2" GRAB BAR (TYP)
  - 6 TA-1, SOAP DISPENSER (TYP)
  - 7 TA-4, RECESSED PAPER TOWEL DISPENSER/DISPOSAL (TYP)
  - 8 TA-3, TOILET PAPER DISPENSER (TYP)
  - 9 TA-12, TOILET SEAT COVER DISPENSER (TYP)
  - 10 GLAZED CERAMIC TILE 4"x4" OVER WATER RESISTANT GYPSUM BOARD, COLOR PER FINISHED SCHEDULE. PER SPECIFICATION
  - 11 CERAMIC TILE COVE BASE (TYP)
  - 12 TA-2 MIRROR: 1/4" THICK PLATE GLASS, 2'W X 44"H, BOTTOM OF MIRROR AT 40" A.F.F. TOP OF MIRROR AT 7'-0" A.F.F., SURF. MOUNTED, PER SPECIFICATION
  - 13 EDGE BAND TERMINATION, GLAZED CERAMIC TILE, 2"x4" OVER WATER RESISTANT GYPSUM BOARD, COLOR PER FINISHED SCHEDULE. PER SPECIFICATION
  - 14 TA-6, SANITARY NAPKIN DISPOSAL (TYP) NOT SHOWN
  - 15 MOP SINK PER SPECS
  - 16 WATER FOUNTAIN, PER SPECIFICATION
  - 17 DOOR/WINDOW AS SCHEDULED
  - 18 PAINTED GYP BOARD, WET LOCATION
  - 19 WALL MOUNTED SERVICE SINK FAUCET, PER SPECIFICATION
  - 20 SINGLE BOWL S.S. SINK PER SPECIFICATIONS W DISPOSAL
  - 21 COUNTERTOP MOUNTED SINK FAUCET PER SPECIFICATIONS
  - 22 APPLIANCES PER SPECIFICATION, PER FFE PACKAGE: 20"W ELEC. BUILT-IN CERAMIC GLASS COOKTOP, 24"W DISHWASH, 30"W REF.
  - 23 30"H UPPER CABINET PER SPECIFICATIONS, PLYWOOD PLASTIC LAMINATE CLAD.
  - 24 36"H BASE CABINET PER SPECIFICATIONS, PLYWOOD PLASTIC LAMINATE CLAD W/ PLASTIC LAMINATE COUNTERTOP.
  - 25 TA-8 MOP AND BROOM HOLDER, PER SPECIFICATION
  - 26 PLASTIC LAMINATE COUNTERTOP PER SPECIFICATION, 4" POST-FORM BACK-SPLASH



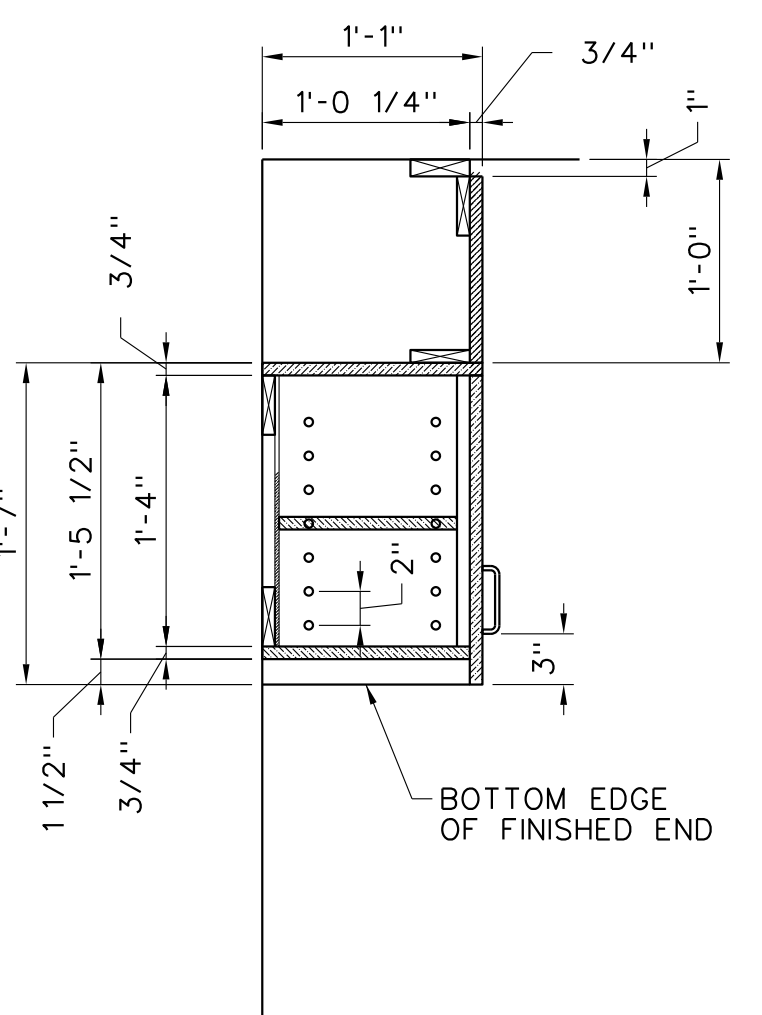
9 WORKSHOP ELEVATION  
A016 SCALE: 1/2" = 1'-0"



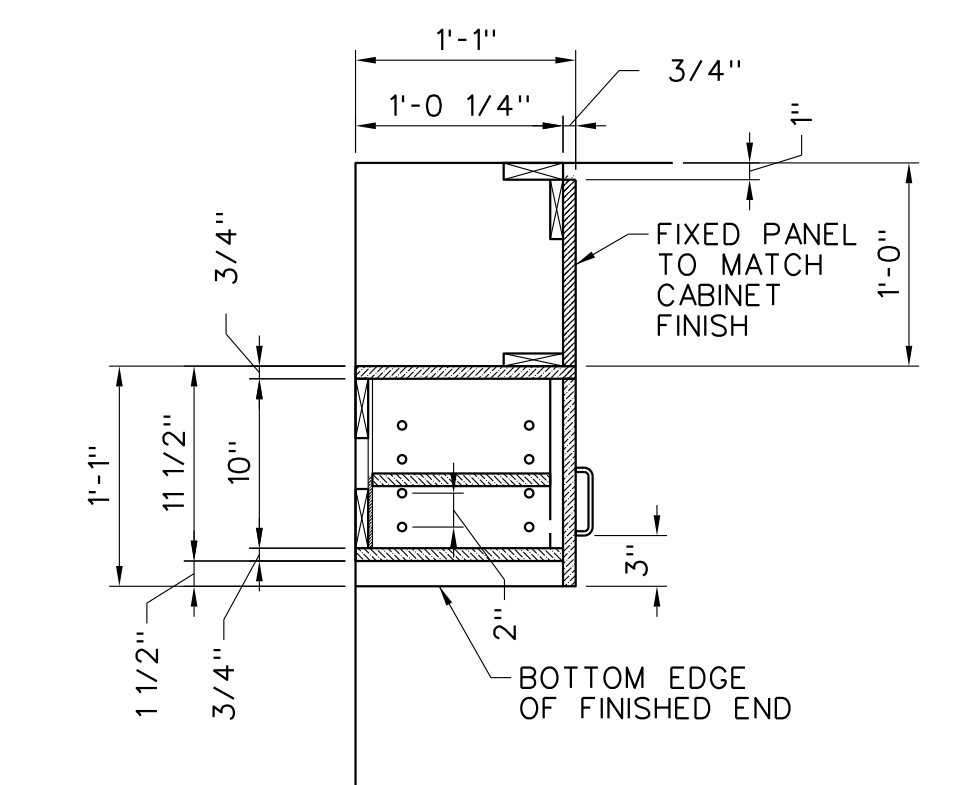
8 BREAKROOM KITCHEN INT. ELEVATION  
A016 SCALE: 1/2" = 1'-0"



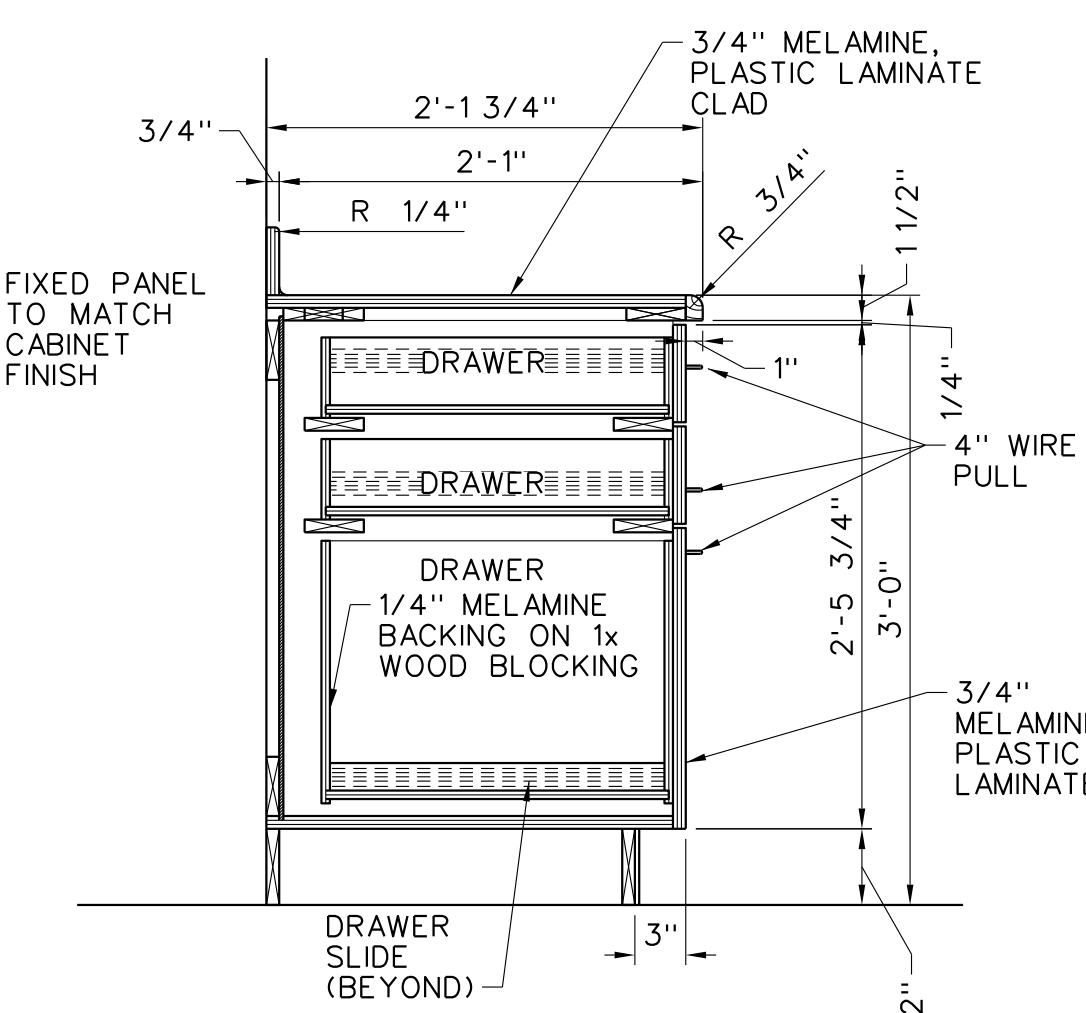
7 CABINET SECT. DTL.  
A016 SCALE: 1/2" = 1'-0"



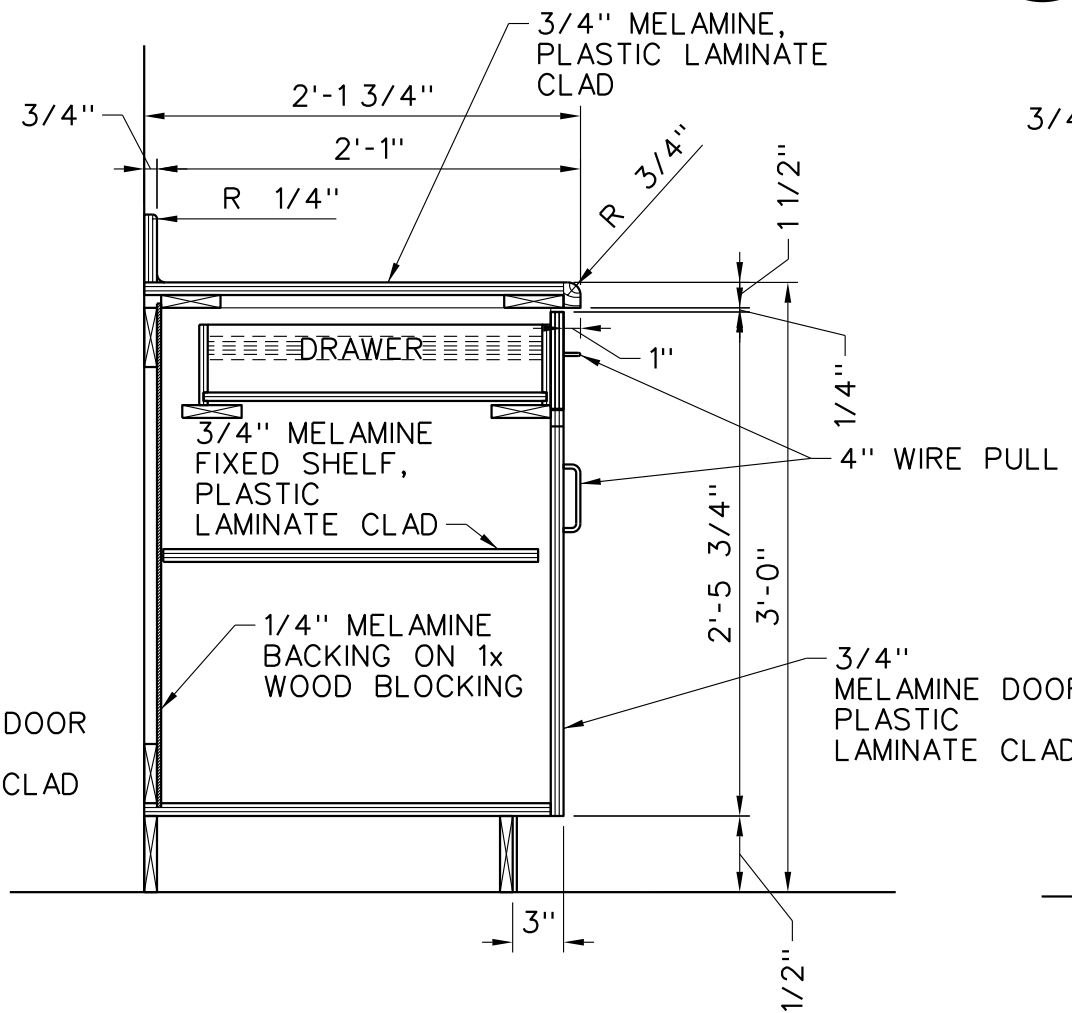
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A016 SCALE: 1/2" = 1'-0"



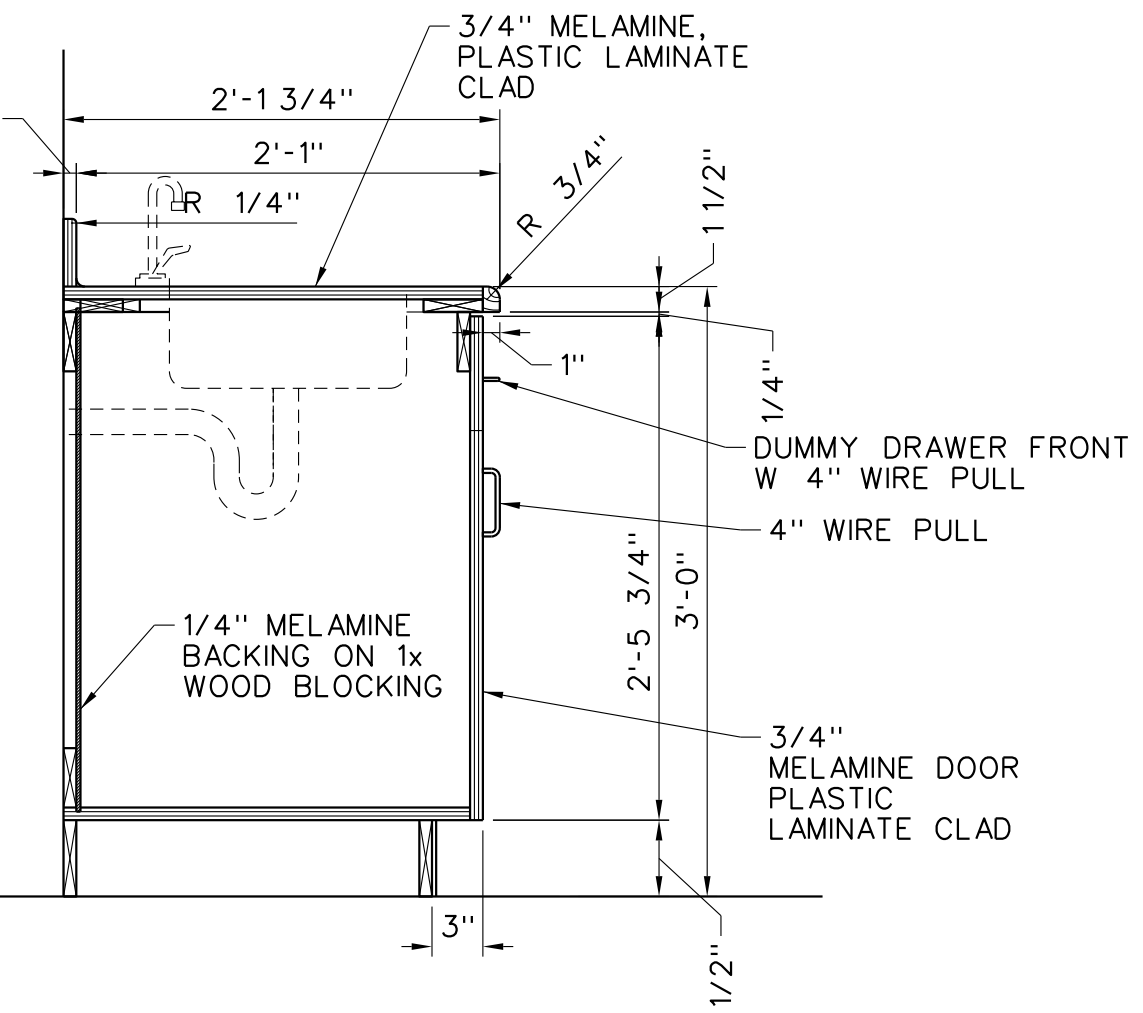
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A016 SCALE: 1/2" = 1'-0"



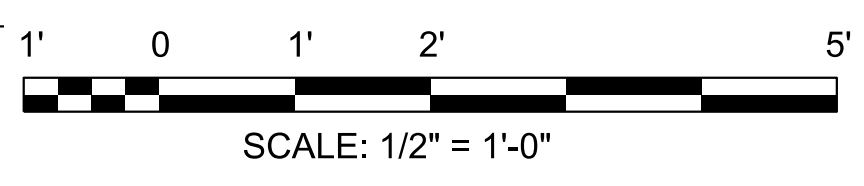
12 CABINET SECT. DTL.  
A016 SCALE: 1/2" = 1'-0"



11 CABINET SECT. DTL.  
A016 SCALE: 1/2" = 1'-0"



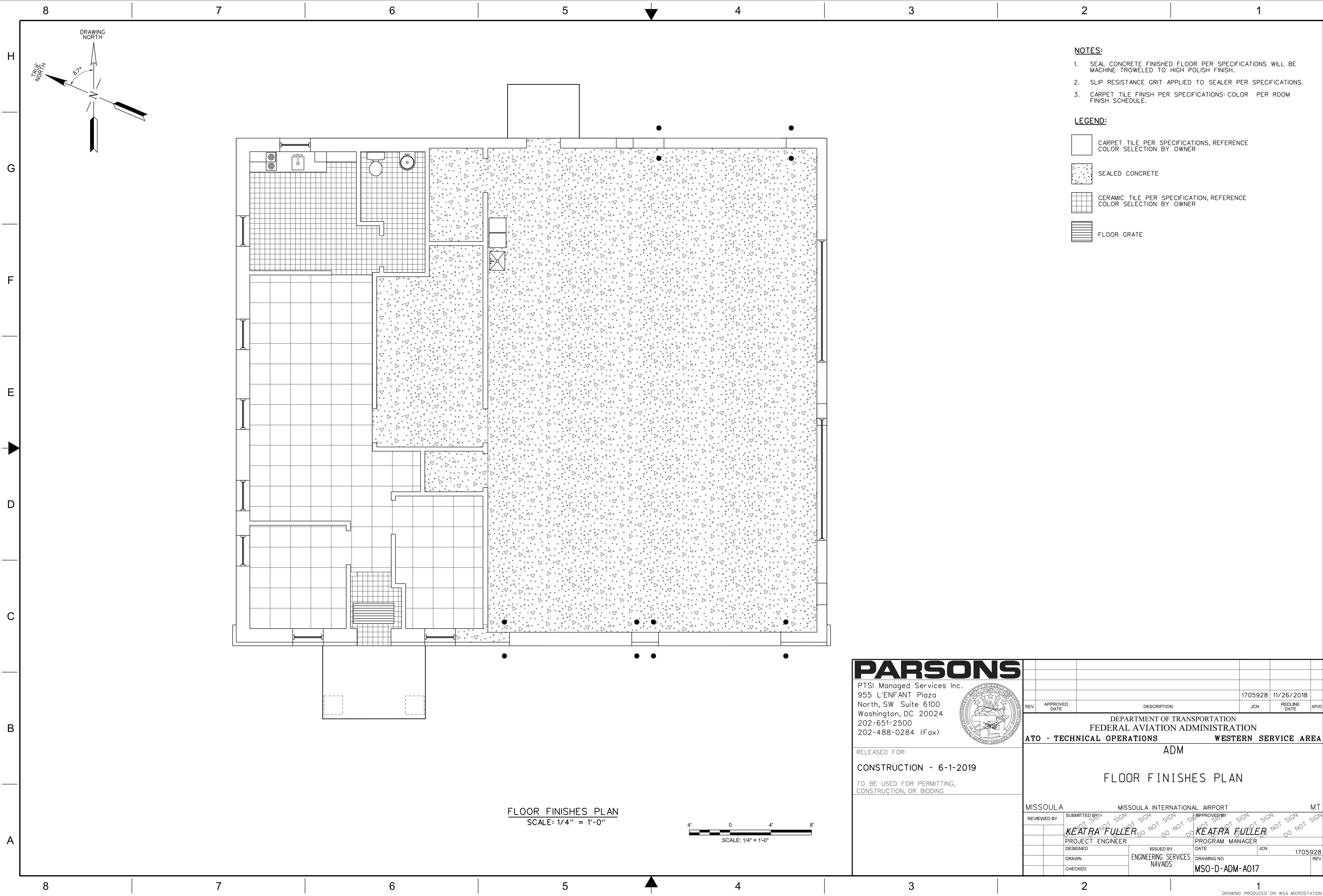
10 CABINET SECT. DTL.  
A016 SCALE: 1/2" = 1'-0"



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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>INTERIOR ELEVATIONS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	1705928
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	1705928
	ENGINEERING SERVICES	NAVAIDS			
DRAWN	CHECKED	DRAWING NO	MSO-D-ADM-A016	REV	

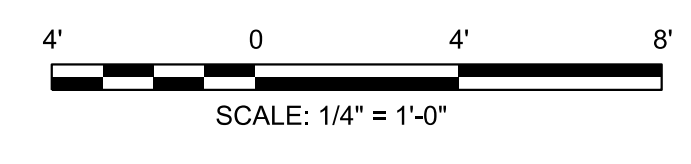




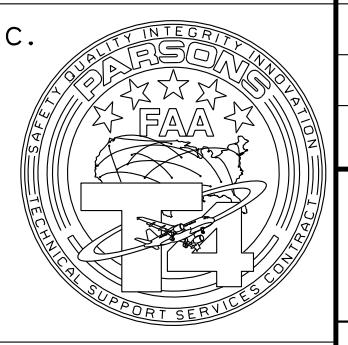
- NOTES:**
1. SEAL CONCRETE FINISHED FLOOR PER SPECIFICATIONS WILL BE MACHINE TROWELED TO HIGH POLISH FINISH.
  2. SLIP RESISTANCE GRIT APPLIED TO SEALER PER SPECIFICATIONS.
  3. CARPET TILE FINISH PER SPECIFICATIONS: COLOR PER ROOM FINISH SCHEDULE.

- LEGEND:**
- CARPET TILE PER SPECIFICATIONS, REFERENCE COLOR SELECTION BY OWNER
  - SEALED CONCRETE
  - CERAMIC TILE PER SPECIFICATION, REFERENCE COLOR SELECTION BY OWNER
  - FLOOR GRATE

**FLOOR FINISHES PLAN**  
SCALE: 1/4" = 1'-0"



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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS**      **WESTERN SERVICE AREA**

**ADM**

**FLOOR FINISHES PLAN**

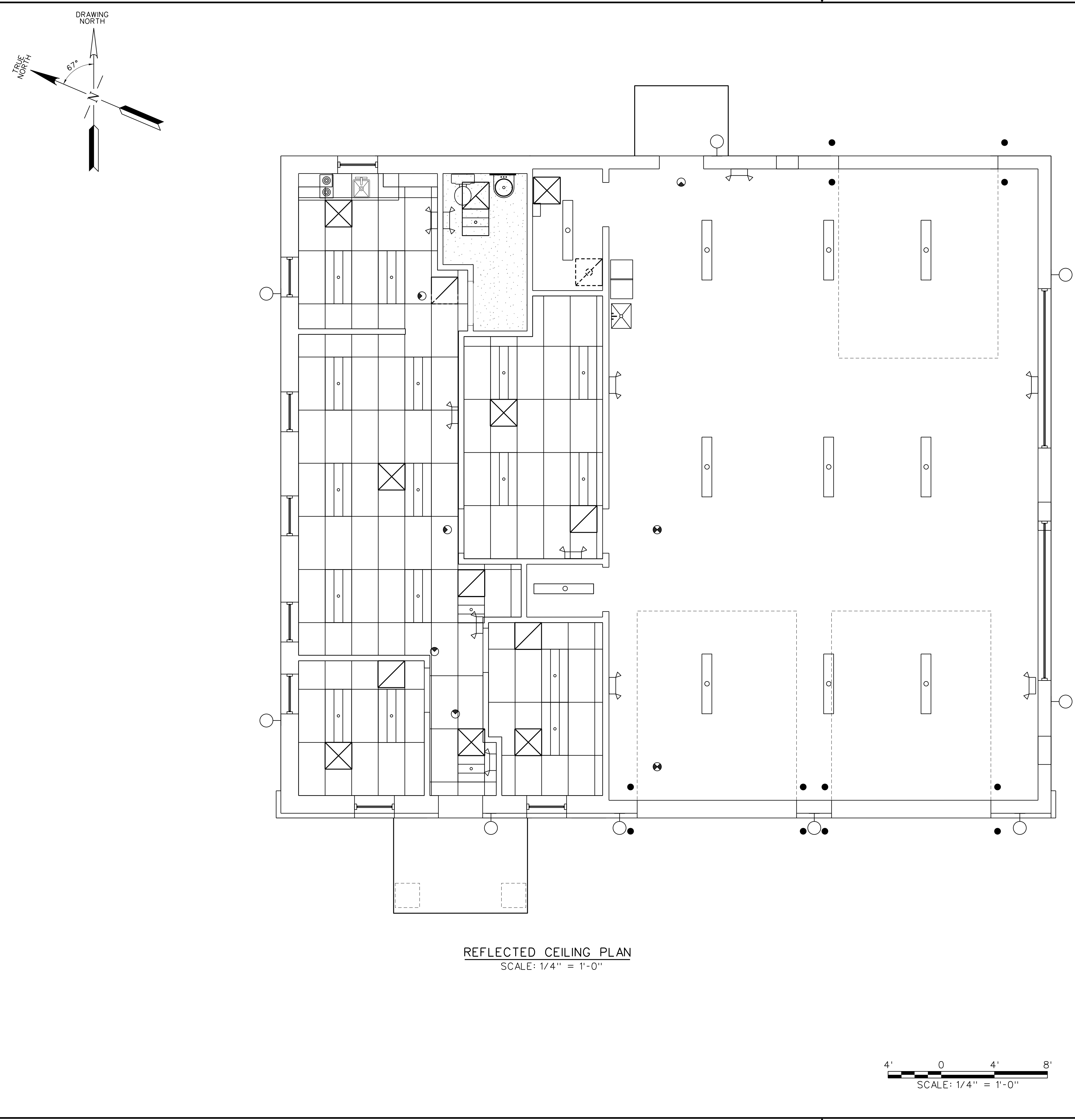
MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	<i>KEATRA FULLER</i>	<i>KEATRA FULLER</i>
DESIGNED	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	
DRAWN	DATE	JCN
	NAVAIDS	1705928
CHECKED	DRAWING NO	REV
	MSO-D-ADM-A017	

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8 7 6 5 4 3 2 1

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G  
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D  
C  
B  
A



**SYMBOL KEY:**

- 2x4 ACOUSTIC CEILING TILE
- GYPSUM BOARD CEILING

**REFLECTED CEILING PLAN**  
SCALE: 1/4" = 1'-0"

4' 0 4' 8'  
SCALE: 1/4" = 1'-0"

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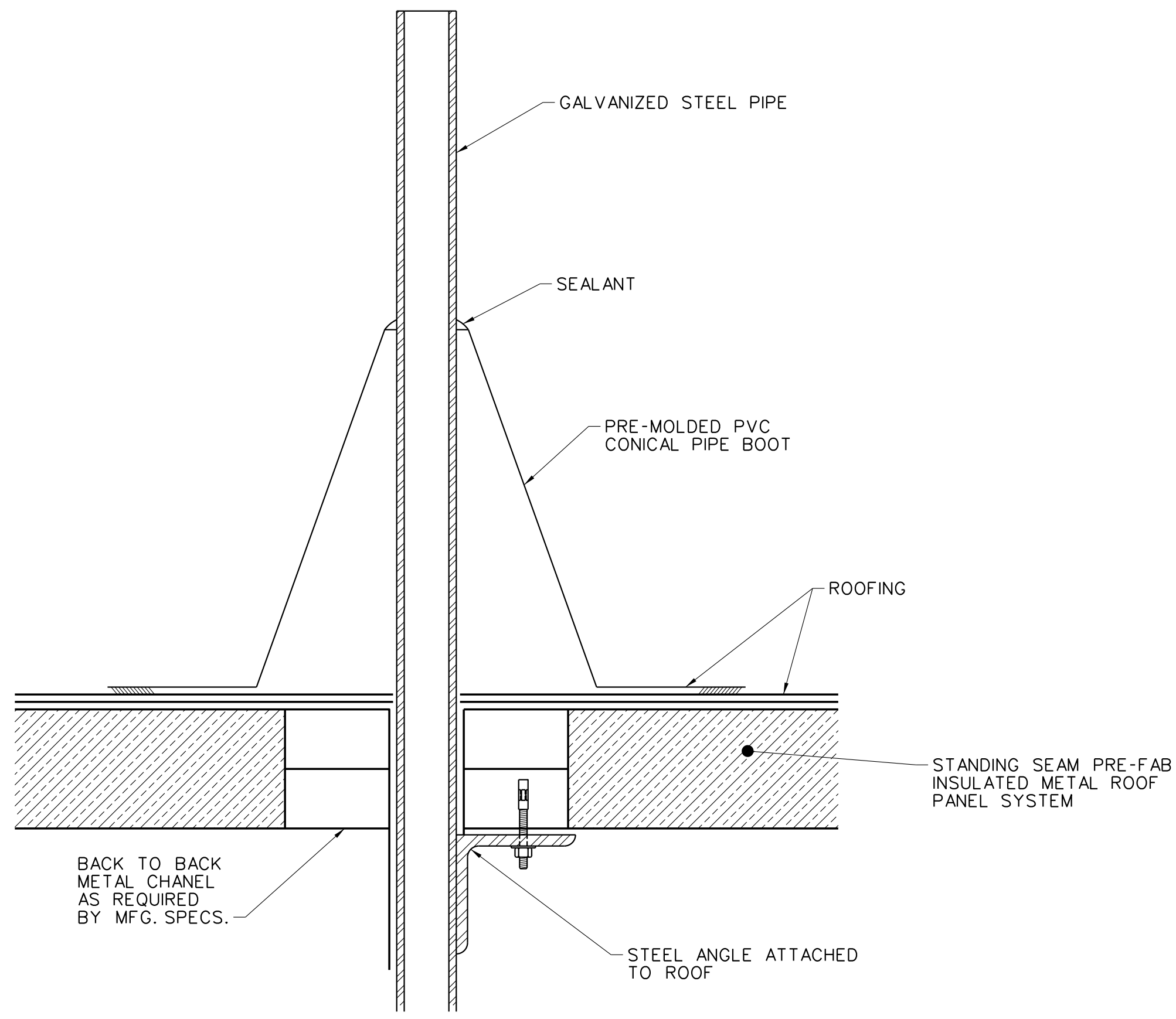
RELEASED FOR:  
**CONSTRUCTION - 6-1-2019**

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CONSTRUCTION, OR BIDDING

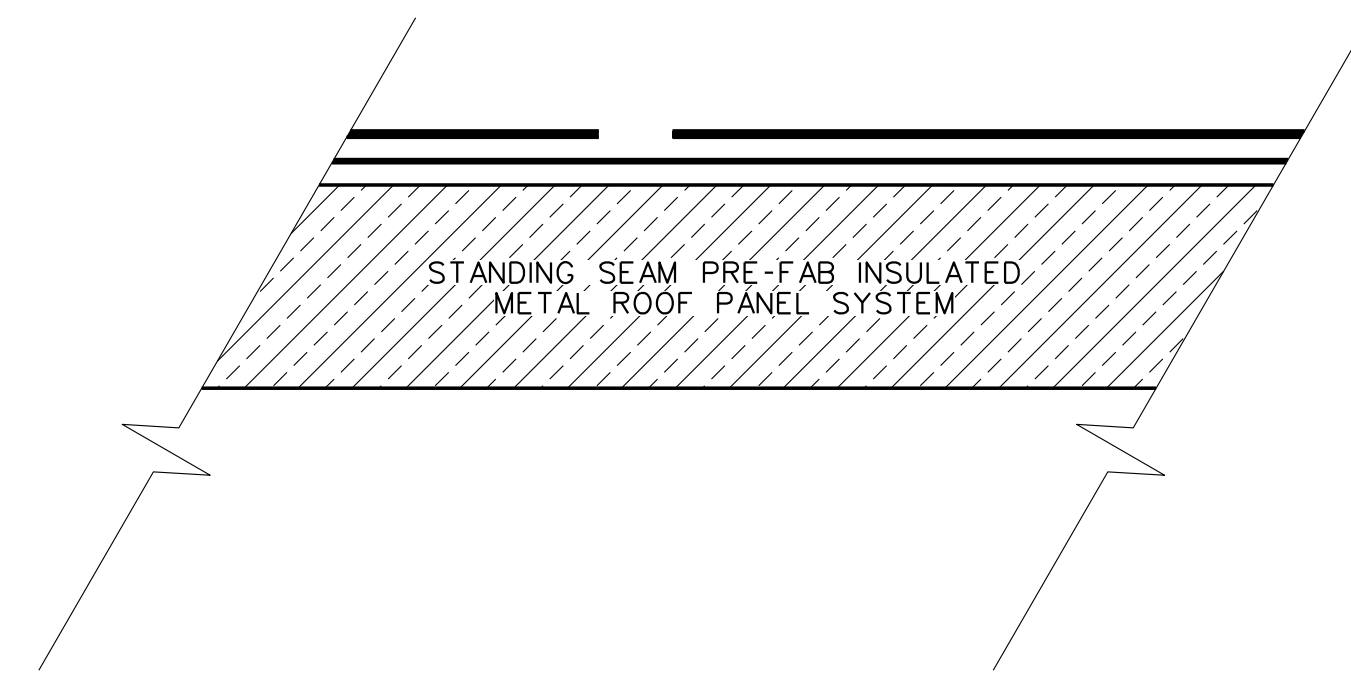
REVIEWED BY		SUBMITTED BY		APPROVED BY	
		KEATRA FULLER		KEATRA FULLER	
PROJECT ENGINEER		PROGRAM MANAGER		DATE	
DESIGNED		ISSUED BY		JCN	
DRAWN		ENGINEERING SERVICES		DRAWING NO	
CHECKED		NAVAIDS		MSO-D-ADM-A018	
				1705928	
				REV	

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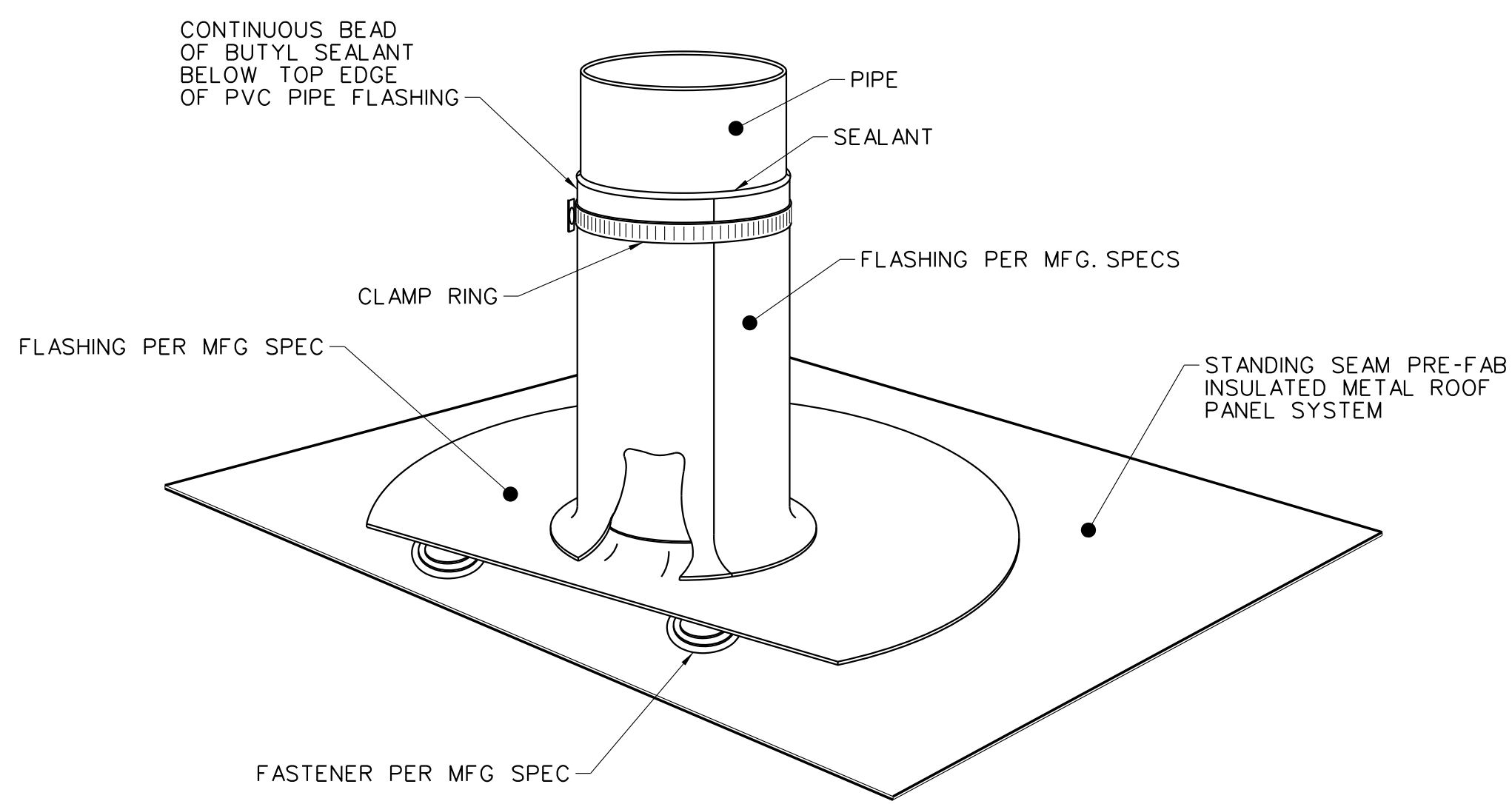
ISSUED FOR: CONSTRUCTION



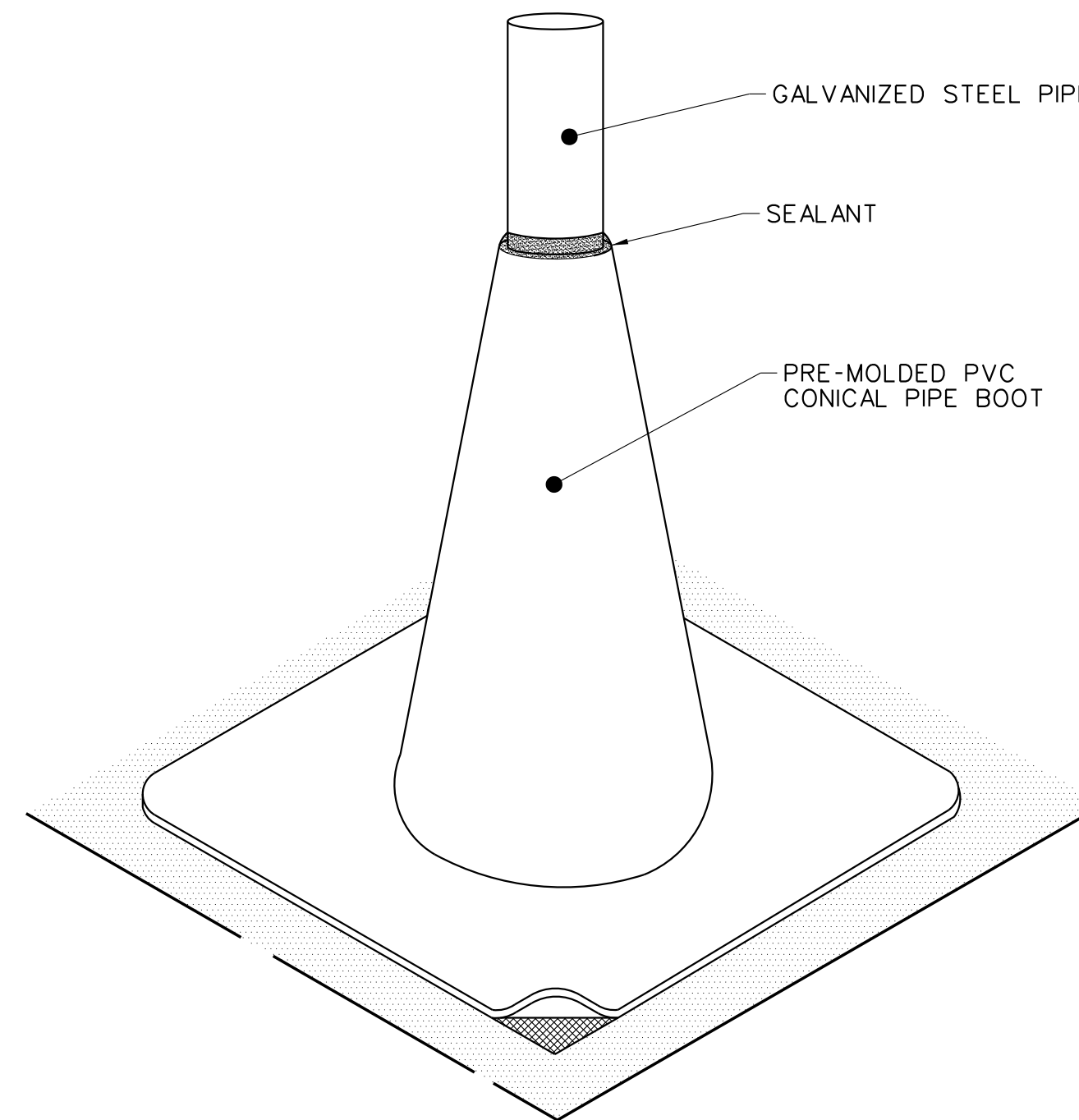
**1** PIPE PENETRATION THROUGH ROOF  
A019 SCALE: 3" = 1'-0"



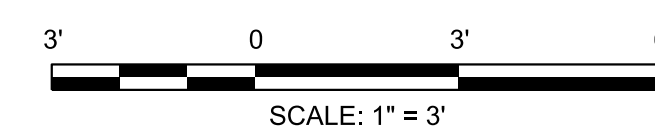
**2** ROOFING SECTION DETAIL  
A019 SCALE: 3" = 1'-0"



**3** PIPE FLASHING DETAIL  
A019 NOT TO SCALE



**4** PIPE BOOT DETAIL  
A019 NOT TO SCALE



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**CONSTRUCTION - 6-1-2019**

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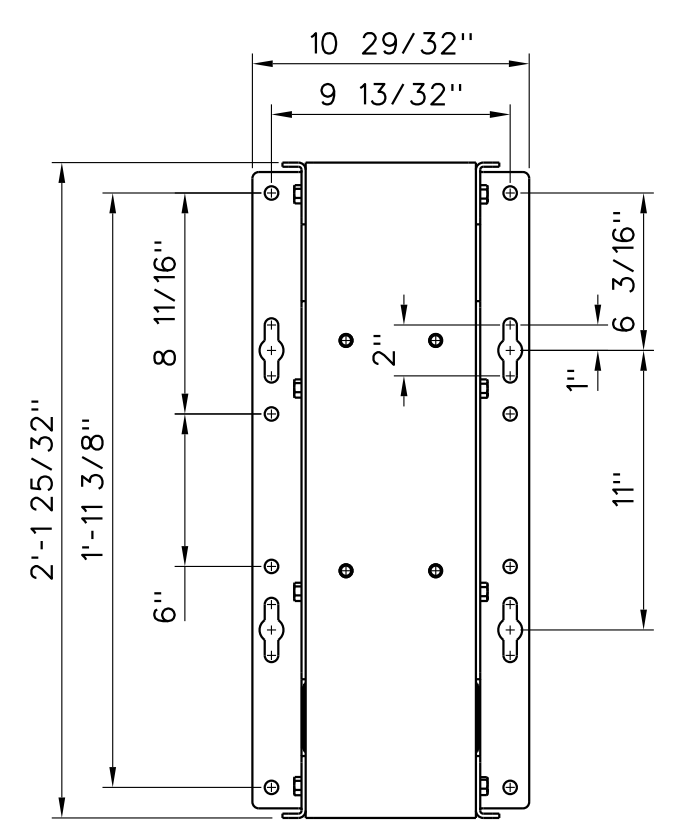
REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA</b>					
<b>ADM</b>					
<b>ROOF DETAILS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	REV
	KEATRA FULLER	KEATRA FULLER			1705928
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	REV
	ENGINEERING SERVICES				
DRAWN	NAVAIDS	DRAWING NO	1705928		
CHECKED		MSO-D-ADM-A019			

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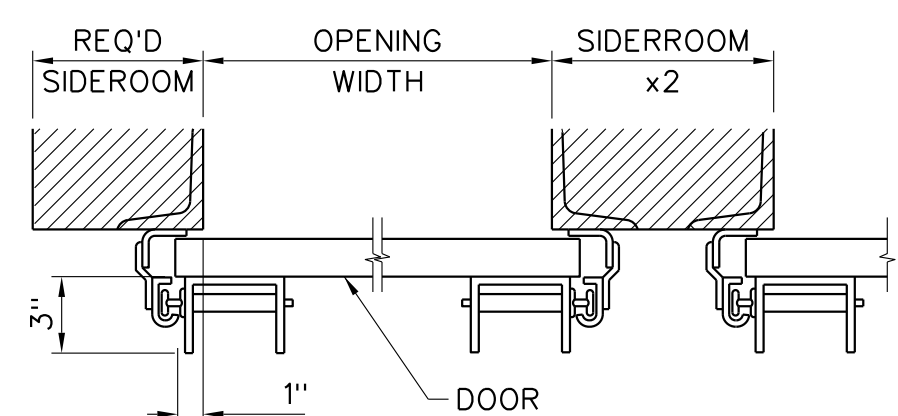
ISSUED FOR CONSTRUCTION  
 EDK:msc-cr-adm-0019.dgn



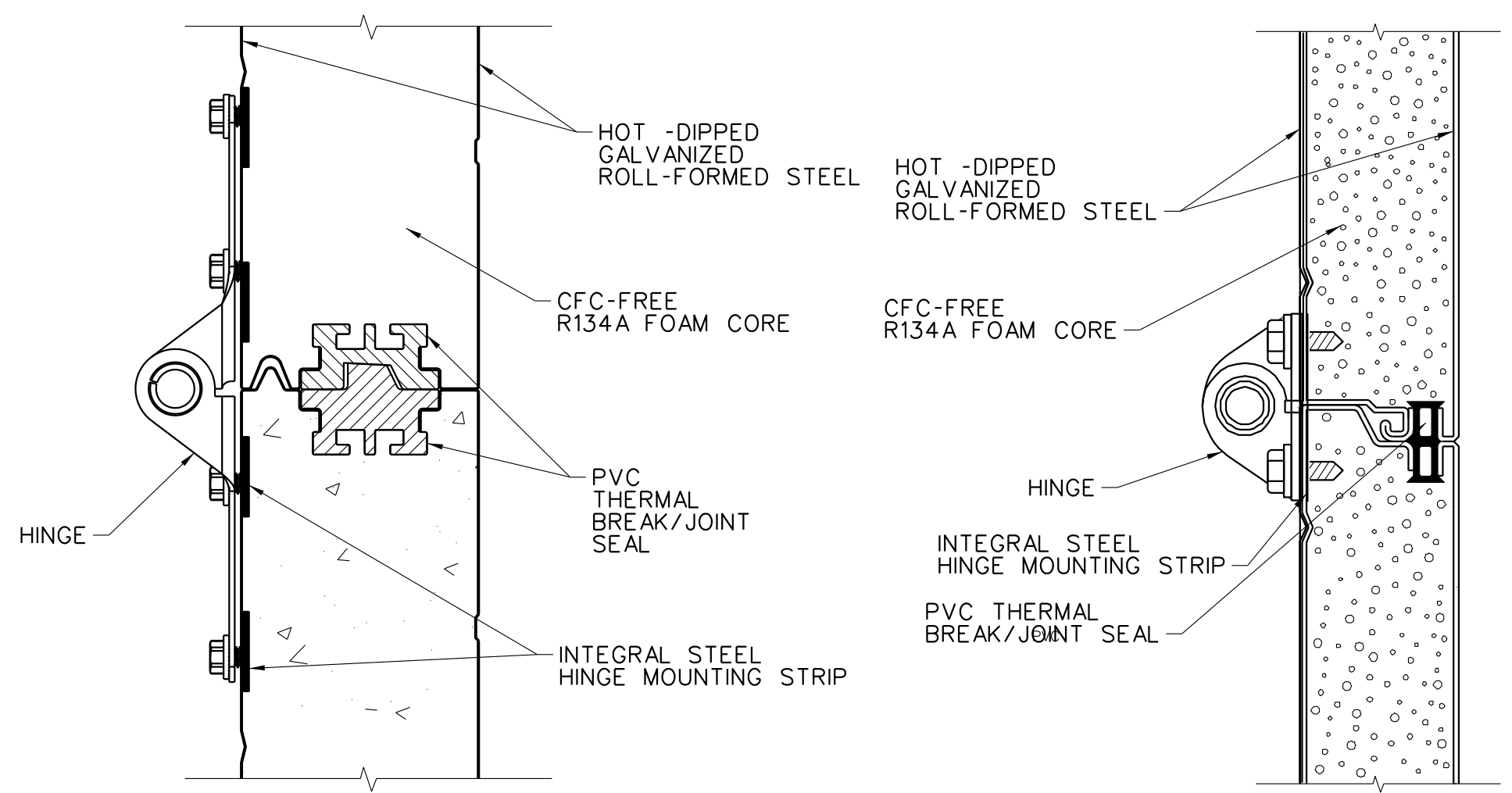




**5** DETAIL @ MOTOR MOUNTING PLATE  
A021 SCALE: 1 1/2" = 1'-0"

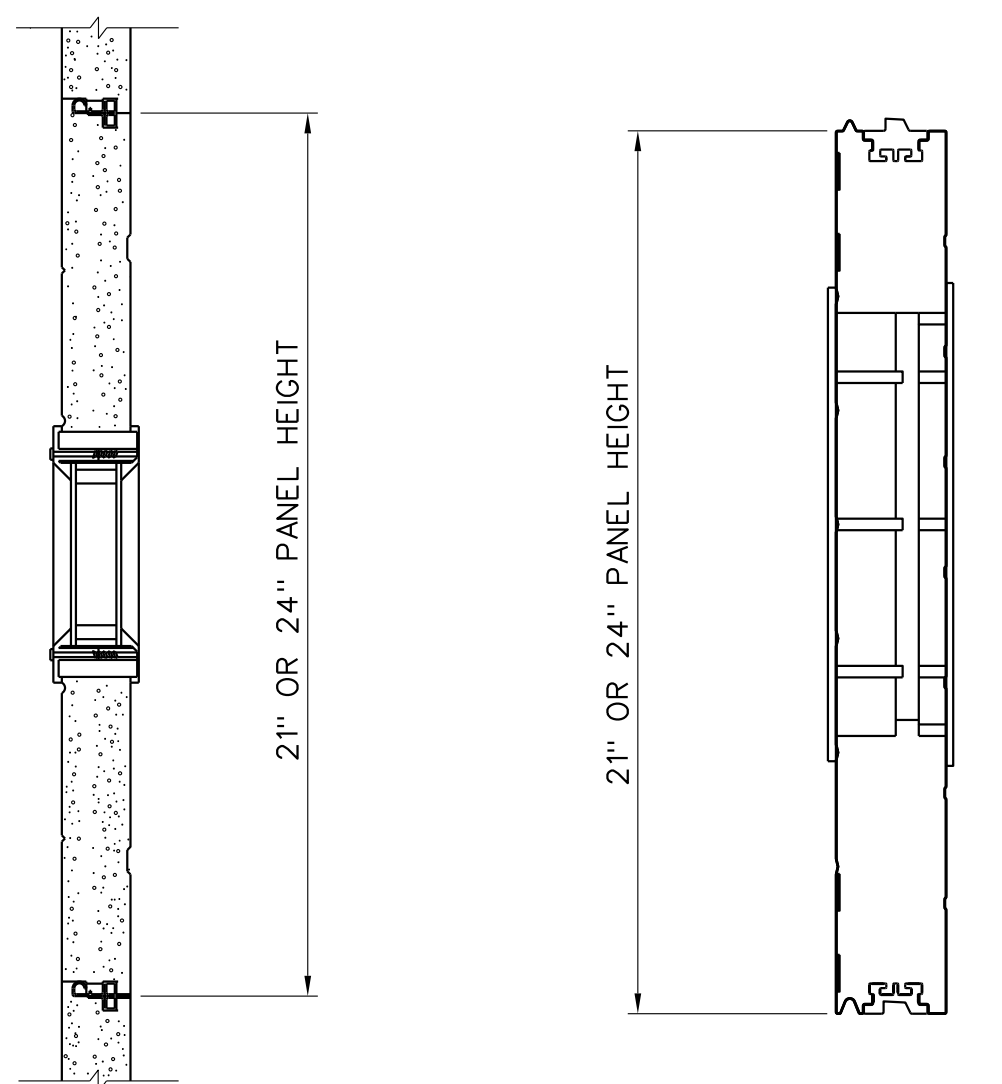


**4** DETAIL @ JAMB BETWEEN SECT. DOORS  
A021 SCALE: 1 1/2" = 1'-0"

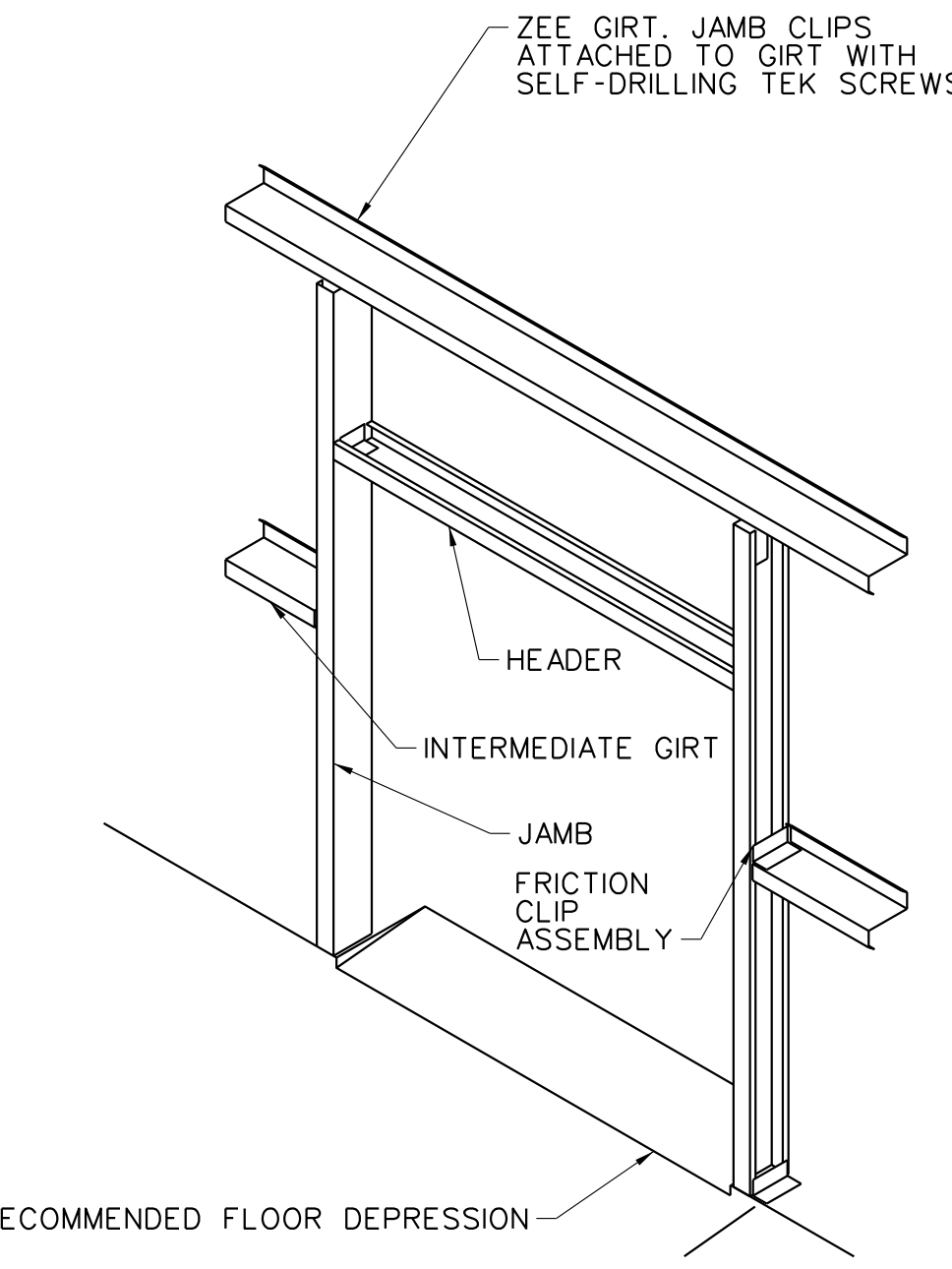


**3** DETAIL @ SECT. DOOR  
A021 SCALE: 3" = 1'-0"

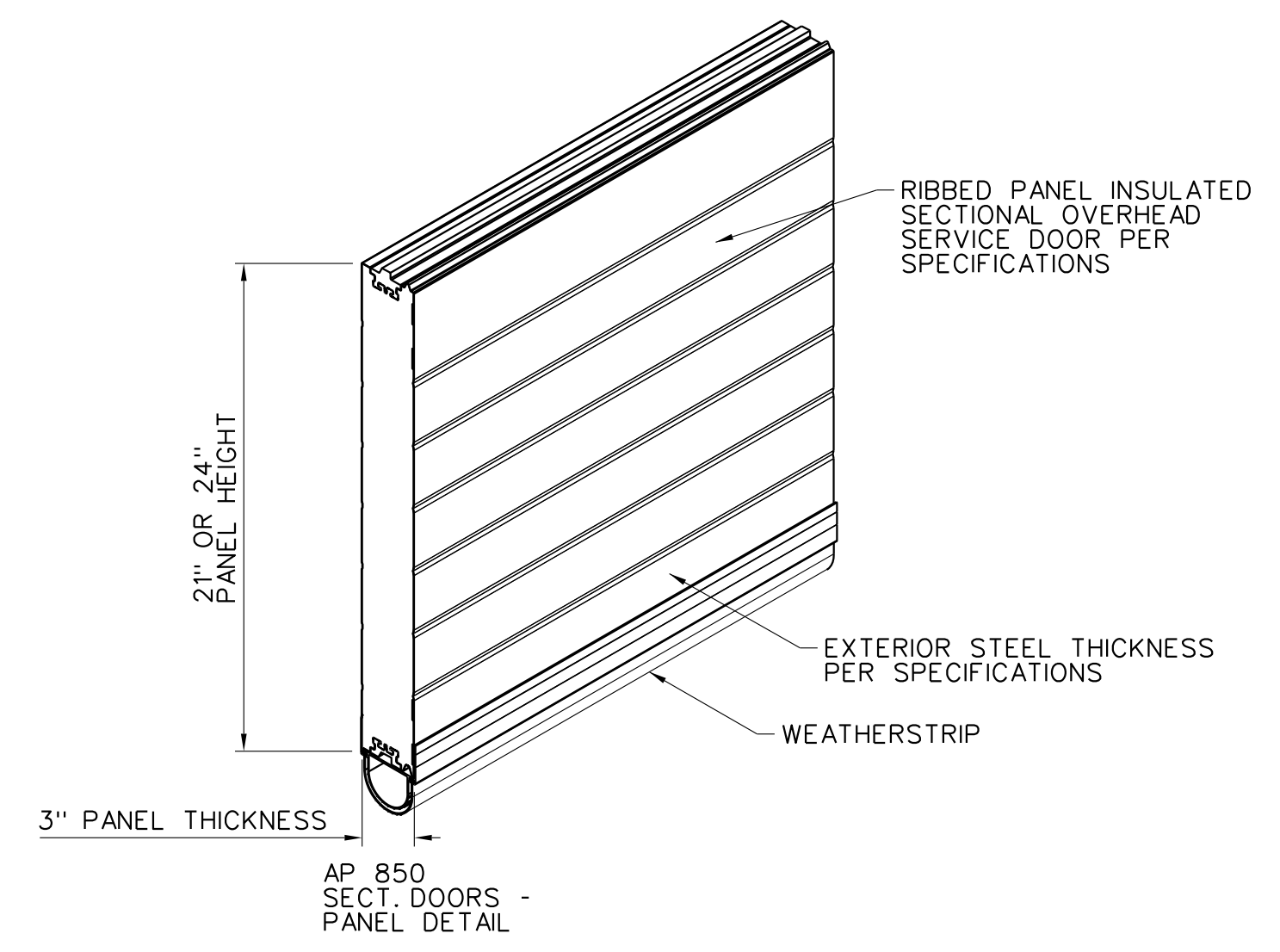
**2** DETAIL @ SECT. DOOR  
A021 SCALE: 3" = 1'-0"



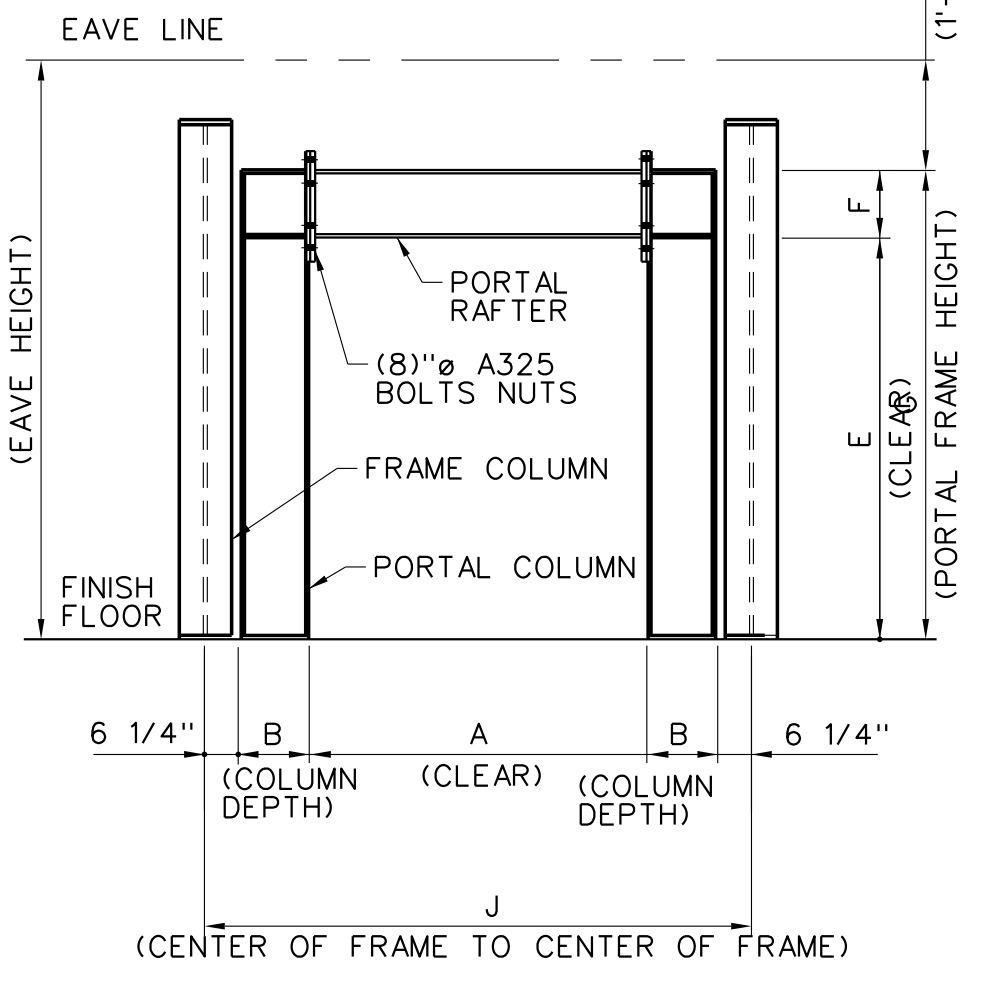
**1** DETAIL @ SECT. DOOR  
A021 SCALE: 3" = 1'-0"



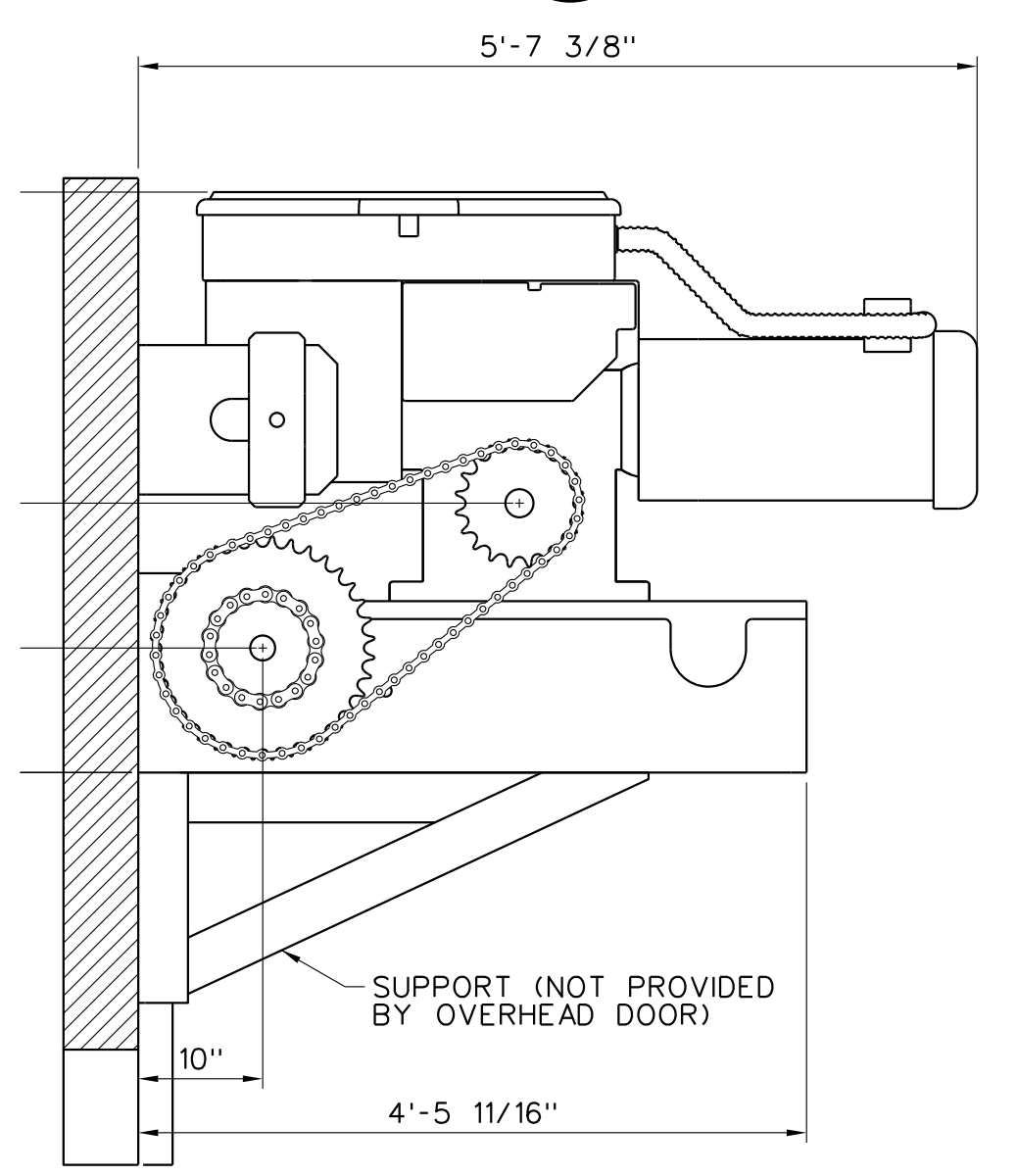
**10** DETAIL @ HEADER  
A021 NOT TO SCALE



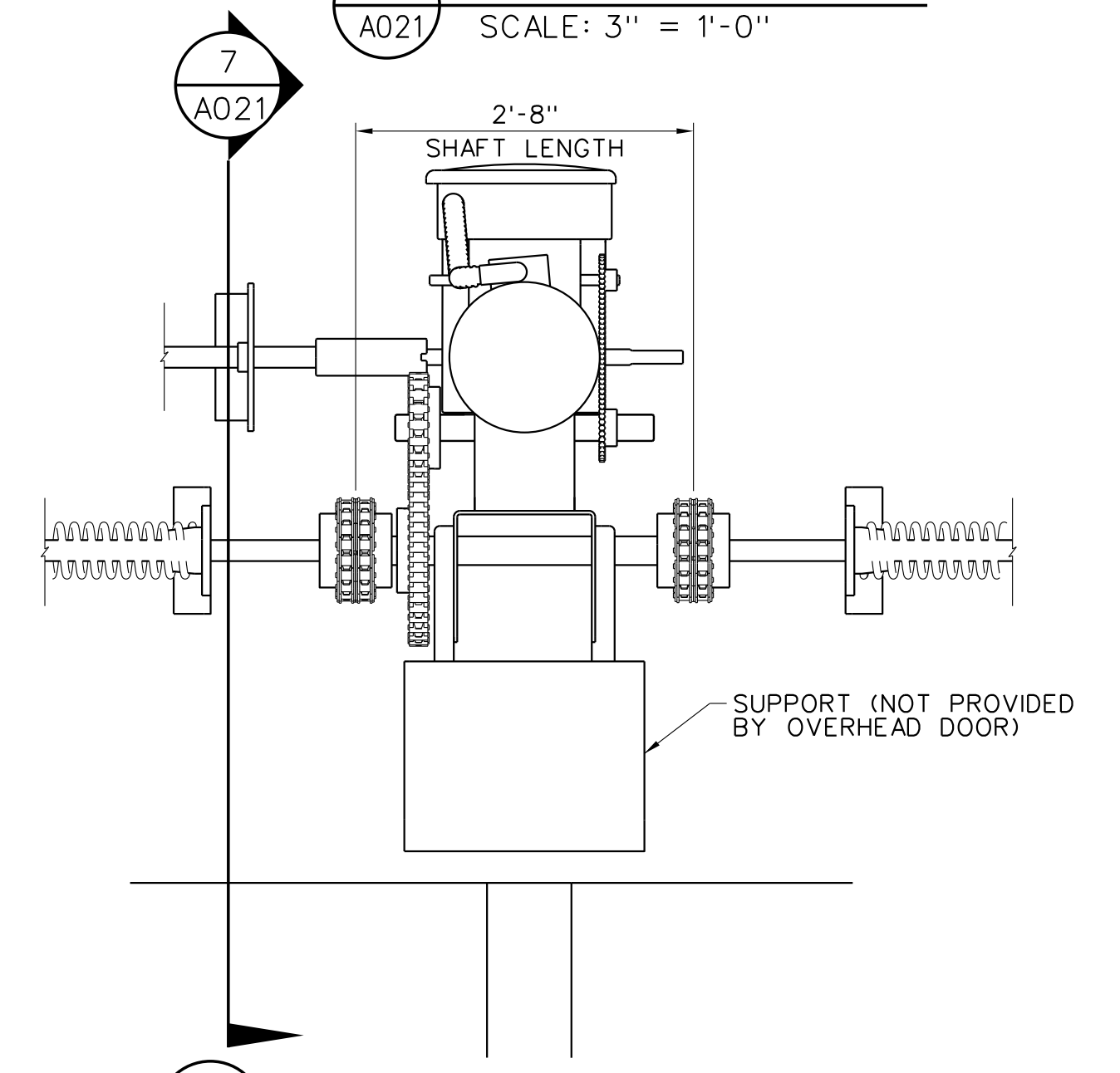
**9** DETAIL @ DOOR  
A021 SCALE: 1 1/2" = 1'-0"



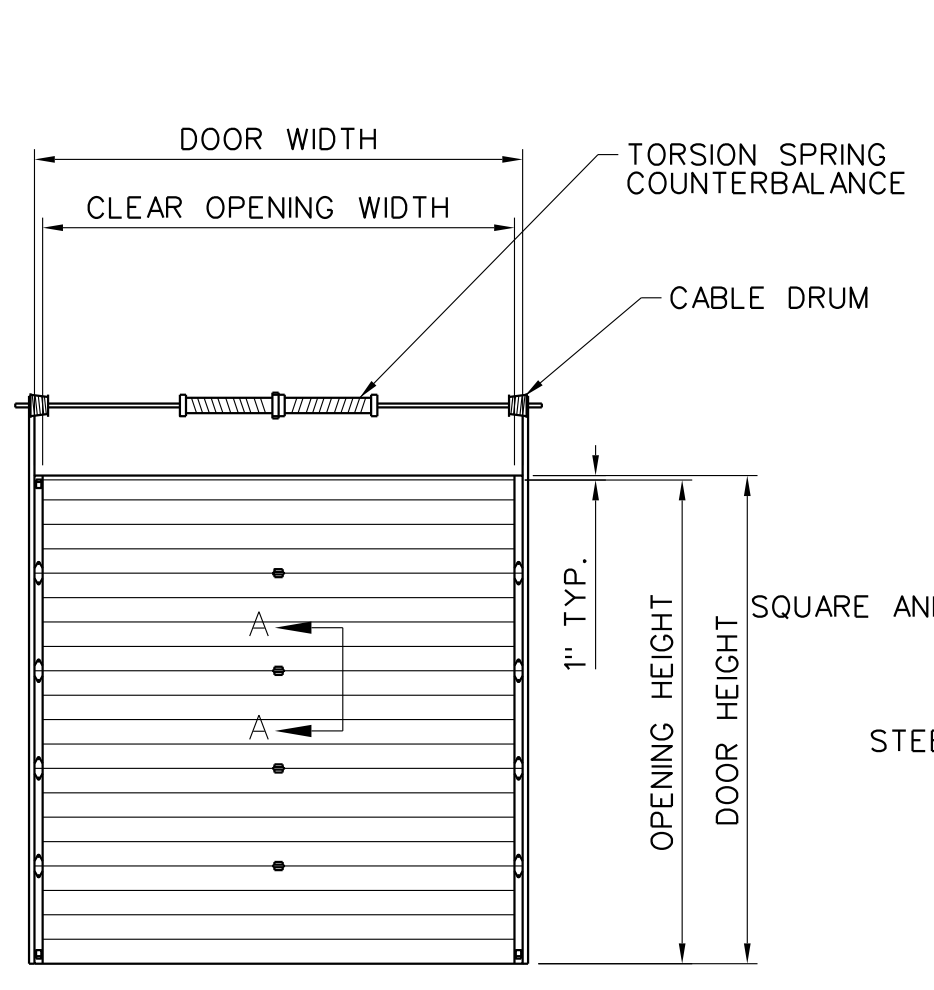
**8** DETAIL @ PORTAL FRAME  
A021 NOT TO SCALE



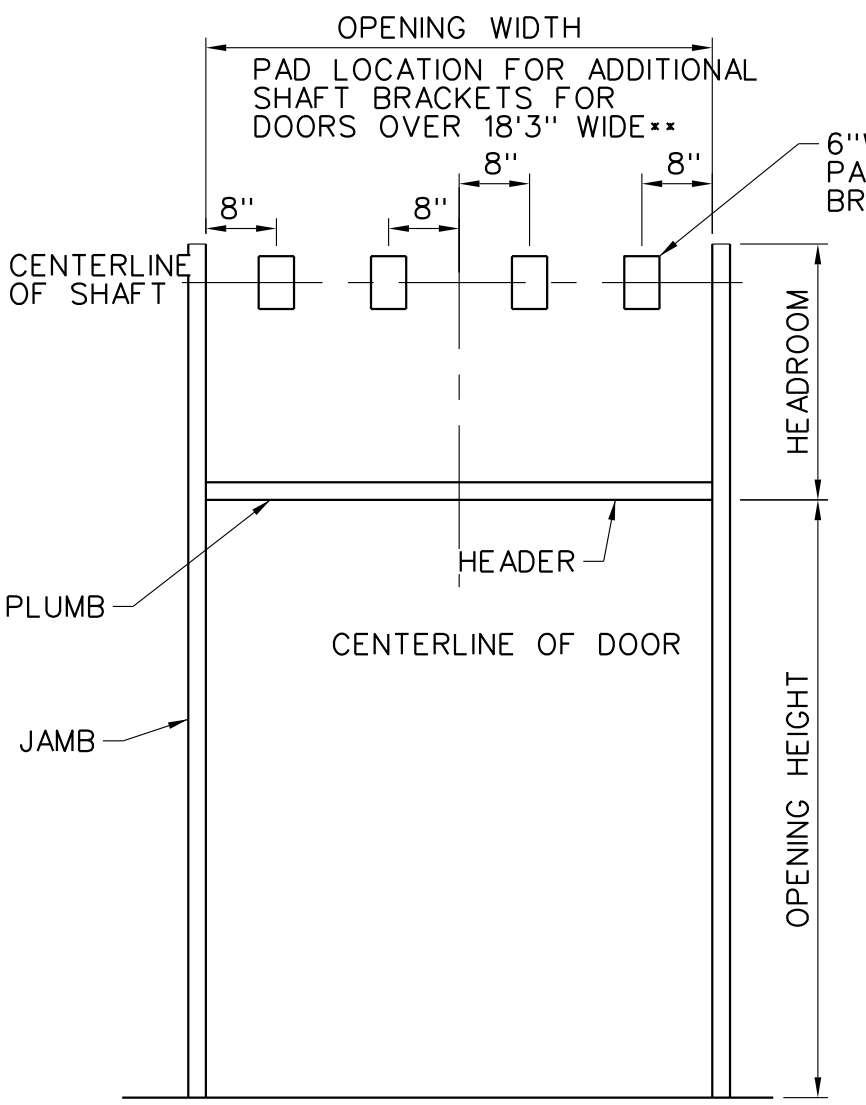
**7** DETAIL @ MOTOR  
A021 SCALE: 3/4" = 1'-0"



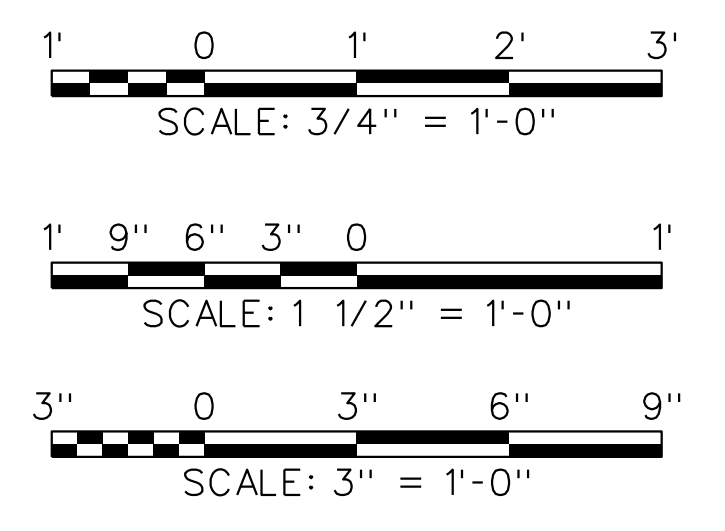
**6** DETAIL @ MOTOR  
A021 SCALE: 3/4" = 1'-0"



**12** DETAIL @ DOOR  
A021 NOT TO SCALE



**11** DETAIL @ R.O.  
A021 NOT TO SCALE



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**CONSTRUCTION - 6-1-2019**

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1705928		11/26/2018	
REV	APPROVED DATE	DESCRIPTION	APVD
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA			
ADM OVERHEAD DOOR OPENING DETAILS			
MISSOULA		MISSOULA INTERNATIONAL AIRPORT	
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT
	KEATRA FULLER	KEATRA FULLER	
PROJECT ENGINEER	ISSUED BY	PROGRAM MANAGER	
DESIGNED	ENGINEERING SERVICES	DATE	JCN 1705928
DRAWN	NAVAIDS	DRAWING NO	REV
CHECKED		MSO-D-ADM-A021	

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GENERAL NOTES

- 1. CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS WITH THOSE SHOWN ON ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL NOTIFY PARSONS OF ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND RECEIVE WRITTEN CLARIFICATIONS OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
2. USE WRITTEN DIMENSIONS. DO NOT USE SCALED DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT PARSONS FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
3. THE SUBCONTRACTOR IS TO REVIEW ARCHITECTURAL DRAWINGS FOR ITEMS THAT MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS, ALL OPENINGS IN FLOORS, ROOFS, OR STRUCTURAL MEMBERS THAT ARE NOT DETAILED PER THE STRUCTURAL DRAWINGS MUST BE REVIEWED BY THE SUBCONTRACTOR BEFORE PROCEEDING.
4. THE SUBCONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES IN ACCORDANCE WITH NATIONAL, STATE, AND LOCAL SAFETY REQUIREMENTS. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETCETERA IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY PARSONS. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE COMPLETION OF ALL GRAVITY AND LATERAL FRAMING, ROOF AND FLOOR DIAPHRAGMS AND FINISH MATERIALS.
5. VAPOR BARRIER SHALL NOT LESS THAN 15 MIL AND MEET OR EXCEED ALL REQUIREMENTS OF ASTM E1745-22 CLASS A, B, & C. OVERLAP ALL JOINTS A MINIMUM OF 6" AND SEAL WITH MANUFACTURER'S APPROVED SEALANT TAPE. SEAL TAPE TO STRUCTURE. PROTECT VAPOR BARRIER FROM DAMAGE AFTER INSTALLATION. SEAL ANY RIPS, TEARS OR PUNCTURES. PLACE PROTECT AND REPAIR SHEET IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.

FOUNDATION NOTES:

- 1. THE FOUNDATION IS BASED ON GEOTECHNICAL ENGINEERING REPORT GENERATED BY WGM GROUP, DATED NOVEMBER 28, 2018. BORING LOGS ATTACHED TO SPECIFICATIONS.
2. THE BUILDING IS SUPPORTED ON SPREAD FOOTINGS AND PAD FOOTINGS BEARING ON SUB-GRADE.
3. THE BOTTOM OF ALL FOOTINGS AND SLABS TO BEAR ON SOLID NATIVE, INORGANIC, UNDISTURBED SOIL OR APPROVED COMPACTED FILL. SEE GEOTECH REPORT ATTACHED TO SPECIFICATIONS.
4. THERE SHALL BE A MINIMUM COMPACTION TO 95% OF THE MAXIMUM DRY DENSITY (ASTM D698 STANDARD PROTOR) OF ALL BACKFILL OF SOIL UNDER SLABS ON GRADE.
5. NO CONCRETE SHALL BE PLACED IN EXCAVATION CONTAINING WATER OR ON FROZEN SOIL.
6. ALL FOOTINGS SHALL BE CENTERED UNDER WALLS AND COLUMNS, UNLESS INDICATED OTHERWISE.
7. FROST DEPTH IS 62".

DESIGN CRITERIA

- APPLICABLE CODES AND REFERENCES:
A. 2012 INTERNATIONAL BUILDING CODE
B. ACI 318-11 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
C. ACI 360R-06, DESIGN OF SLABS ON GROUND
D. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
E. AMERICAN WELDING SOCIETY STANDARD AND SPECIFICATIONS (AWS) 2015: AWS D1.1 STRUCTURAL WELDING CODE STEEL
F. AISC STEEL CONSTRUCTION MANUAL, 14TH EDITION
G. AISC 360-10, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
2. DEAD LOAD: SELFWEIGHT OF APPLICABLE MATERIALS
3. LIVE LOAD: 125 PSF
4. SEISMIC:
SEISMIC IMPORTANCE FACTOR: 1
MAPPED SPECTRAL RESPONSE ACCELERATION, SS: 0.490
MAPPED SPECTRAL RESPONSE ACCELERATION, SI: 0.149
DESIGN SPECTRAL ACCELERATION, SDS: 0.460
DESIGN SPECTRAL ACCELERATION, SDI: 0.219
SITE CLASS: D
SEISMIC DESIGN CATEGORY: D
5. WIND (ASCE 7-10):
RISK CATEGORY:
WIND SPEED: 120 MPH (STRENGTH LEVEL, 3-SEC GUST)
EXPOSURE CATEGORY: C
6. SOIL DESIGN PARAMETERS:
A) NET ALLOWABLE SOIL BEARING PRESSURE 2000 PSF
B) NORMAL WATER ELEVATION: GROUNDWATER TABLE WAS NOT ENCOUNTERED DURING SUBSURFACE INVESTIGATION AND IS EXPECTED TO BE AT LEAST 65 FT. BELOW THE GROUND SURFACE.

PREFABRICATED METAL BUILDINGS

- 1. METAL BUILDING FRAMING, INCLUDING RIGID FRAMES, PURLINS, RAFTER BEAMS, GIRT'S, LATERAL BRACING AND METAL ROOFING AND SIDING SHALL BE DESIGNED FOR THE LOADS INDICATED ON THESE DRAWINGS. MINIMUM COLLATERAL DEAD LOAD SHALL BE 5 PSF, UNLESS NOTED OTHERWISE.
2. ALL DESIGNS SHALL BE DONE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, BY PROFESSIONAL ENGINEERS REGISTERED IN THE STATE THE PROJECT IS LOCATED AND SUBMIT FOR APPROVAL.

CONCRETE NOTES

- 1. CONCRETE PROPERTIES DESIGNED FROM DESIGNATED EXPOSURE CATEGORY F CLASS F2 AS DESCRIBED IN ACI 318, UNLESS NOTED OTHERWISE.
A. MINIMUM COMPRESSIVE STRENGTH, Fc = 4,500 PSI AT 28 DAYS, NORMAL WEIGHT.
B. MAXIMUM WATER/CEMENT RATIO LIMIT (W/CM): 0.45
C. AIR CONTENT W/3/4" AGGREGATE SIZE = 6% ± 1.5%
2. MINIMUM SLUMP PER ACI 318 ± 1" FOR SLABS AND FOOTINGS.
3. CONCRETE SHALL BE READY MIXED IN ACCORDANCE W/ASTM C94. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE 1 OR II. NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33.
4. CURING COMPOUND SHALL CONFORM TO ASTM C309, TYPE 2, CLASS B.
5. TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C172 SHALL BE PERFORMED ON AT LEAST ONE COMPOSITE SAMPLE FOR EACH 100 CUBIC YARD OR FRACTION THEREOF OF EACH CONCRETE MIXTURE PLACED EACH DAY. CAST AND LABORATORY AND/OR CURE AT LEAST TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE ACCORDING TO ASTM C 31/ C 31M. TEST ONE SET OF TWO SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS ACCORDING TO ASTM C39/39M. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TEST AT AGE INDICATED. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TEST EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND ON COMPRESSIVE-STRENGTH TEST VALUE FAILS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.
6. ALL DETAILING FABRICATION AND ERECTION OF REINFORCING SHALL CONFORM TO LATEST EDITION OF ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315) AND THE CURRENT "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
7. REINFORCING STEEL:
ASTM A615 - GRADE 60 FOR #3, GRADE 60 FOR #4 AND LARGER.
ASTM A706 - WHERE WELDING IS REQUIRED, AT SHEAR WALL BOUNDARY ELEMENTS (TRIM BARS) AND LATERAL FRAME ELEMENTS.
ASTM A185 - WELDED WIRE REINFORCEMENT
8. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT PER ACI 318.
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3
B. CONCRETE EXPOSED TO EARTH OR WEATHER:
NO. 6 THROUGH NO. 18 BARS 2
NO. 5 BAR, W31 WIRE, AND SMALLER 1-1/2
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
NO. 14 AND NO. 18 BARS 1-1/2
NO. 11 BAR AND SMALLER 3/4
BEAMS, COLUMNS:
PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS 1-1/2
SHELLS, FOLDED PLATE MEMBERS:
NO. 6 BAR AND LARGER 3/4
NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER 1/2
9. PROVIDE BAR SUPPORT AND SPACERS TO SUPPORT ALL REINFORCEMENT IN PROPER LOCATIONS AND WIRE ADEQUATELY AT INTERSECTION TO HOLD BARS FIRMLY IN POSITION WHILE CONCRETE IS PLACED. BAR SUPPORTS AND SPACERS WHICH REST ON OR EXPOSED SURFACES SHALL BE HOT DIPPED GALVANIZED OR PLASTIC COATED.
10. ALL BENDS OF REINFORCEMENT AND ALL BARS SPACERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SP-66, AMERICAN CONCRETE INSTITUTE DETAILING MANUAL (LATEST EDITION).
11. REINFORCING BAR DESIGNATION NUMBERS CONFORM TO THE NUMBERING SYSTEM OF THE CONCRETE REINFORCING STEEL INSTITUTE.
12. REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS UNLESS NOTED OTHERWISE.
13. THE EMBEDMENT AND SPLICE TABLE SHALL BE USED IN DETERMINING LAP SPLICES AND EMBEDMENT LENGTHS WHERE LENGTHS ARE NOT OTHERWISE INDICATED. SPLICE LENGTHS SHALL BE BASED ON THE SMALLER BAR BEING LAPPED. THE CONTRACTOR WILL BE ALLOWED TO MAKE SPLICES IN ADDITION TO THOSE INDICATED IN THE DRAWINGS, WHERE ESSENTIAL TO CONTRACTIBILITY, SUBJECT TO APPROVAL BY THE CONTRACTING OFFICER.
14. SLAB REINFORCEMENT SHALL EXTEND THROUGH ALL CONSTRUCTION JOINTS, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTIONS

- 1. THE FOLLOWING SPECIAL INSPECTIONS ARE REQUIRED BY DESIGN PER THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) SECTIONS 1704 THROUGH 1705.
A. GENERAL (SECTION 1704.1) - THE OWNER SHALL EMPLOY ONE OR MORE QUALIFIED SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED UNDER SECTION 1704 OF THE IBC. SPECIAL INSPECTION SHALL BE IN ADDITION TO THE INSPECTIONS REQUIRED PER SECTION 110 OF THE IBC.
B. STEEL CONSTRUCTION (SECTION 1705.2) - THE SPECIAL INSPECTION FOR STEEL ELEMENTS OF BUILDINGS AND STRUCTURES SHALL BE AS REQUIRED BY SECTION 1705.2 OF THE IBC. CONTINUAL AND PERIODIC SPECIAL INSPECTION REQUIREMENTS PERFORMED AS REQUIRED PER TABLE 1705.2. WELDING INSPECTION AND INSPECTOR QUALIFICATION SHALL BE IN COMPLIANCE WITH AWS D1.1.
C. CONCRETE CONSTRUCTION (SECTION 1705.3) - THE SPECIAL INSPECTIONS AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY SECTION 1704.4 OF THE IBC. CONTINUAL AND PERIODIC SPECIAL INSPECTION REQUIREMENTS PERFORMED AS REQUIRED PER TABLE 1705.3. MATERIAL TESTING WILL BE PERFORMED UNDER THE GENERAL CONTRACTOR'S SUPERVISION ACCORDING TO THE REQUIREMENTS OF CHAPTER 3 AND 5 OF THE ACI 318.
D. SOILS (SECTION 1705.6) - SPECIAL INSPECTIONS FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE AS REQUIRED PER TABLE 1705.6. SPECIAL INSPECTIONS OF SOILS SHALL BE PERFORMED IN CONJUNCTION WITH THE APPROVED PROJECT GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS.
E. CONTRACTOR RESPONSIBILITY (SECTION 1705.4) - EACH CONTRACTOR RESPONSIBLE FOR THE LATERAL SYSTEM OR COMPONENTS REQUIRING SPECIAL INSPECTION SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT PER SECTION 1705.4 OF THE IBC.
F. STRUCTURAL OBSERVATIONS (SECTION 1704.5) - PER IBC SECTION 1704.5 OBSERVATIONS WILL BE PERFORMED ON ITEMS AS NOTED ABOVE BY THE SPECIAL INSPECTOR DESIGNATED BY THE OWNER. BCI WILL PERFORM PERIODIC OBSERVATION OF CONSTRUCTION AS PART OF STANDARD CONSTRUCTION ADMINISTRATION SERVICES.

STRUCTURAL STEEL

- 1. STRUCTURAL STEEL CONSTRUCTION, FABRICATION, AND ERECTION SHALL CONFORM WITH THE LATEST AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES 14TH EDITION" AND APPLICABLE PROVISIONS OF AWS "STRUCTURAL WELDING CODE".
2. STEEL FABRICATOR SHALL HAVE A MINIMUM OF 5 YEARS STEEL FABRICATION EXPERIENCE ON PROJECTS OF SIMILAR SIZE AND COMPLEXITY.
3. STEEL ERECTOR SHALL HAVE A MINIMUM OF 5 YEARS STEEL ERECTION EXPERIENCE ON PROJECTS SIMILAR SIZE AND COMPLEXITY.
4. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:
A. WIDE FLANGE SECTIONS: ASTM A992, Fy = 50 ksi
B. CHANNELS, PLATES, BARS, ANGLES: ASTM A36, Fy = 36 ksi
C. RECTANGULAR HSS SECTIONS: ASTM A500, GRADE B, Fy = 46 ksi
D. ROUND HSS SECTIONS: ASTM A500, GRADE B, Fy = 42 ksi
E. STEEL PIPE: ASTM A53, GRADE B, Fy = 35 ksi
F. ANCHOR ROD MATERIAL: ASTM F1554, GRADE 36
G. BOLTS FOR FRAMED CONSTRUCTION: ASTM A325-N
H. EXPANSION ANCHORS: 'KWIK BOLT T2' OR APPROVED EQUAL
I. ADHESIVE ANCHORS: INSTALLATION AND EMBEDMENT PER MANUFACTURER'S RECOMMENDATION OR AS NOTED PER PLANS
I. CONCRETE EMBEDMENT: HILTI "HAS-E" THREADED ROD WITH "HIT-HY 200" ADHESIVE OR APPROVED EQUAL
II. GROUTED MASONRY EMBEDMENT: HILTI "HAS-E" THREADED ROD WITH "HIT-HY 70" ADHESIVE OR APPROVED EQUAL
III. UNGROUTED MASONRY AND BRICK EMBEDMENT: HILTI "HAS-E" THREADED ROD WITH "HIT-HY 70" ADHESIVE WITH SCREEN TUDE OR APPROVED EQUAL
J. POWDER ACTUATED FASTENERS STEEL TO CONCRETE: HILTI "X-U P8" OR APPROVED EQUAL
K. POWDER ACTUATED FASTENERS STEEL TO STEEL: HILTI "X-U P8" OR APPROVED EQUAL
L. SHEAR CONNECTOR STUDS: ASTM A108, GRADE 1015, Fy = 65 ksi
5. FRAMED CONNECT INS SHALL CONSIST OF SNUG -TIGHTENED JOIST WITH STANDARD HOLES IN ALL PLIES OF THE JOINT AND 3/4" DIAMETER ASTM A325-N BOLTS, UNLESS NOTED OTHERWISE.
6. WELDING ELECTRODES OR WIRES: E70XX UNLESS NOTED OTHERWISE. WELDING SHALL CONFORM TO CURRENT AWS " CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION". ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER.
7. MINIMUM FILLET WELD SEIZES, UNLESS NOTED OTHERWISE:
THICKNESS OF THINNER PART JOINT: MIN. FILLET WELD SIZE:
3/16" - 1/2" 3/16"
1/2" - 3/4" 1/4"
>3/4" 5/16" (VERIFY PREHEAT REQUIREMENTS)
MAXIMUM FILLET WELD SIZES, UNLESS NOTED OTHERWISE:
THICKNESS OF MATERIAL JOINED: MAX. FILLET WELD SIZE:
<1/4" THICKNESS OF MATERIAL
1/4" AND GREATER THICKNESS OF MATERIAL MINUS 1/16"
WHEN END RETURNS ARE USED, THE LENGTH OF THE RETURN SHALL BE AT LEAST TWICE THE NOMINAL WELD SIZE., BUT SHALL NOT EXCEED FOUR TIMES THE NOMINAL WELD SIZE.
8. ALL COPES, BLOCKS, CUT, AND CUTTING OF STRUCTURAL MEMBERS SHALL HAVE ALL REINFORCED CORNERS SHAPED, NOTCH-FREE, TO A RADIUS OF 1/2" MINIMUM.
9. PROPER ACCESS SHALL BE PROVIDED FOR SHOP AND FIELD CONNECTIONS THAT REQUIRE SPECIAL INSPECTION.
10. ALL EXPOSED STEEL SHALL BE PAINTED UNLESS NOTED OTHERWISE. ALL SURFACES SHALL BE GIVEN A SHOP COAT OF APPROVED PRIMER TO MINIMUM DRY THICKNESS OF 5 MILS. TOUCH UP PAINT OF ALL FIELD WELDS AND SERIOUS ABRASIONS TO THE SHOP COAT WITH PAINT COMPATIBLE WITH THE SHOP COAT. DO NOT PAINT SURFACES THAT ARE TO BE FIRE-PROOFED, EMBEDDED IN CONCRETE, WELDED, OR IN A SLIP-CRITICAL OR FULLY TENSIONED CONNECTION.
11. FOR MISCELLANEOUS STEEL NOT SHOWN ON THESE DRAWINGS, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS, PROVIDE HOLES FOR BLOCKING IN BEAMS, CHANNELS, AND ANGLES AS SHOWN ON ARCHITECTURAL AND OTHER DRAWINGS.
12. FIELD WELDED STUD CONNECTORS SHALL BE WELD TO STEEL MEMBERS WITH AUTOMATICALLY TIMED STUD WELDING EQUIPMENT CONNECTED TO A SUITABLE POWER SOURCE.
13. ALL STEEL LOCATED AT OR BELOW GRADE SHALL HAVE ASPHALTIC EMULSION APPLIED TO PROTECT AGAINST WATER AND OXIDATION.
14. MEMBER CAMBER SHALL BE INSTALLED BASED ON AN APPROXIMATE ARC. IT IS NOT ACCEPTABLE TO USE A SINGLE KINK AT MID-SPAN FOR CAMBER.
15. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY FABRICATION OR ERECTION ISSUES DURING CONSTRUCTION AND AWAIT WRITTEN APPROVAL FROM THE ENGINEER BEFORE PROCEEDING WITH FIELD MODIFICATIONS. THE USE OF A GAS CUTTING TORCH IS NOT ACCEPTABLE FOR FIELD MODIFICATIONS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

PARSONS logo and contact information. Table with columns: REV, APPROVED DATE, DESCRIPTION, JCN, REDLINE DATE, APVD. Includes project details: MISSOULA INTERNATIONAL AIRPORT, ADM, STRUCTURAL GENERAL NOTES, MSO-D-ADM-S001, and dates: 6-1-2019, 1705928, 11/26/2018.

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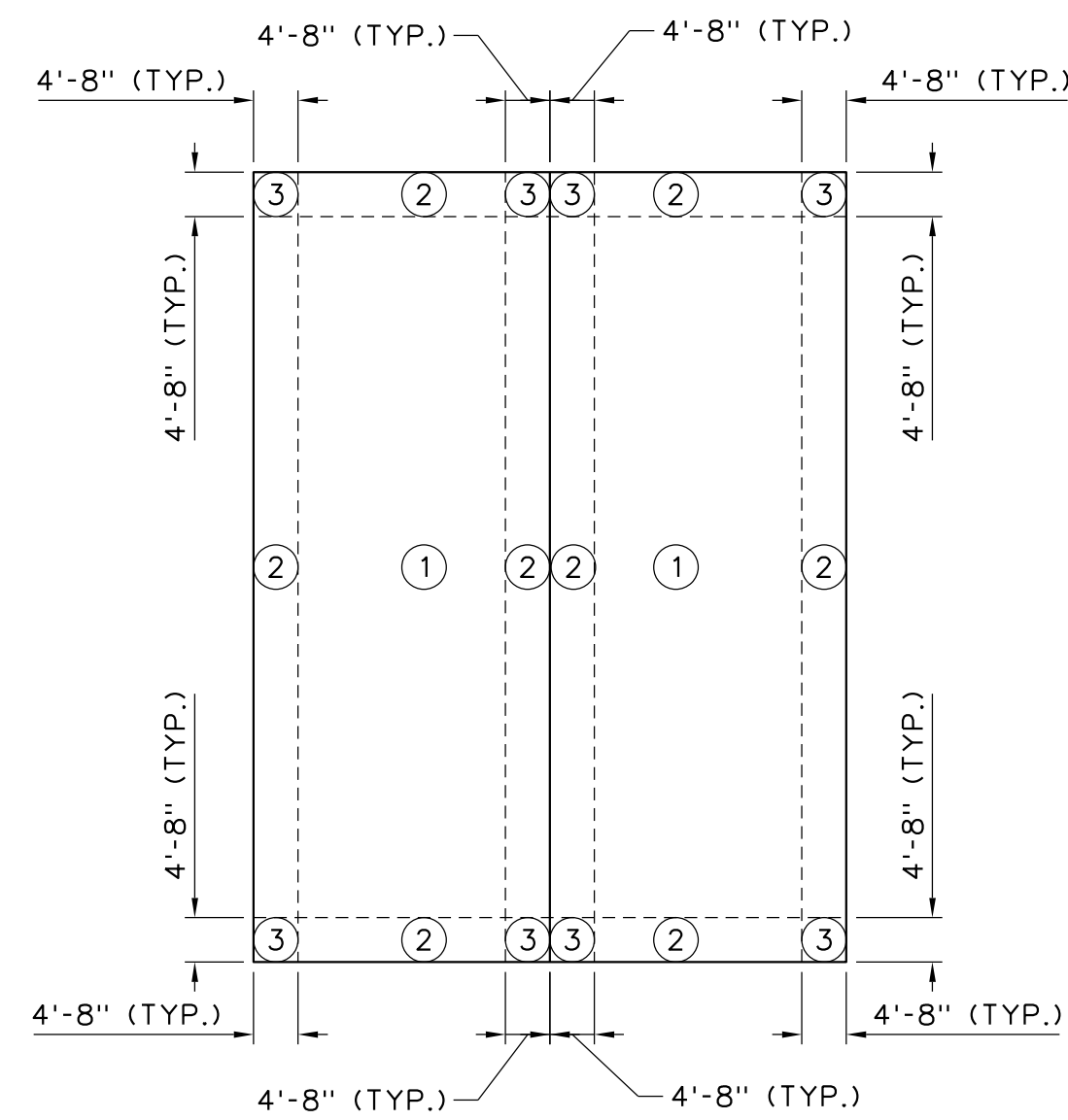


MWFRS STRENGTH LEVEL PRESSURE (PSF)								
WIND DIRECTION	TRANS	TRANS	TRANS	TRANS	LONG	LONG	LONG	LONG
LOAD CASE	1	2	3	4	5	6	7	8
GCpi	GCpi(+)	GCpi(+)	GCpi(-)	GCpi(-)	GCpi(+)	GCpi(+)	GCpi(-)	GCpi(-)
WINDWARD WALL	13.0	13.0	22.3	22.3	13.0	13.0	22.3	22.3
LEEWARD WALL	-15.7	-15.7	-6.4	-6.4	-14.9	-14.9	-5.6	-5.6
SIDE WALLS	-20.1	-20.1	-10.8	-10.8	-20.1	-20.1	-10.8	-10.8
WINDWARD ROOF	-22.8	-8.6	-13.5	0.7				
LEEWARD ROOF	-14.0	-14.0	-4.7	-4.7				
WINDWARD ROOF EDGE 0 TO 10 FT					-24.5	-8.6	-15.2	0.7
WINDWARD ROOF EDGE 10 FT TO 20 FT					-24.5	-8.6	-15.2	0.7
WINDWARD ROOF EDGE 20 FT TO 40 FT					-15.7	-8.6	-6.4	0.7
WINDWARD ROOF EDGE > 40 FT					-11.3	-8.6	-1.9	0.7

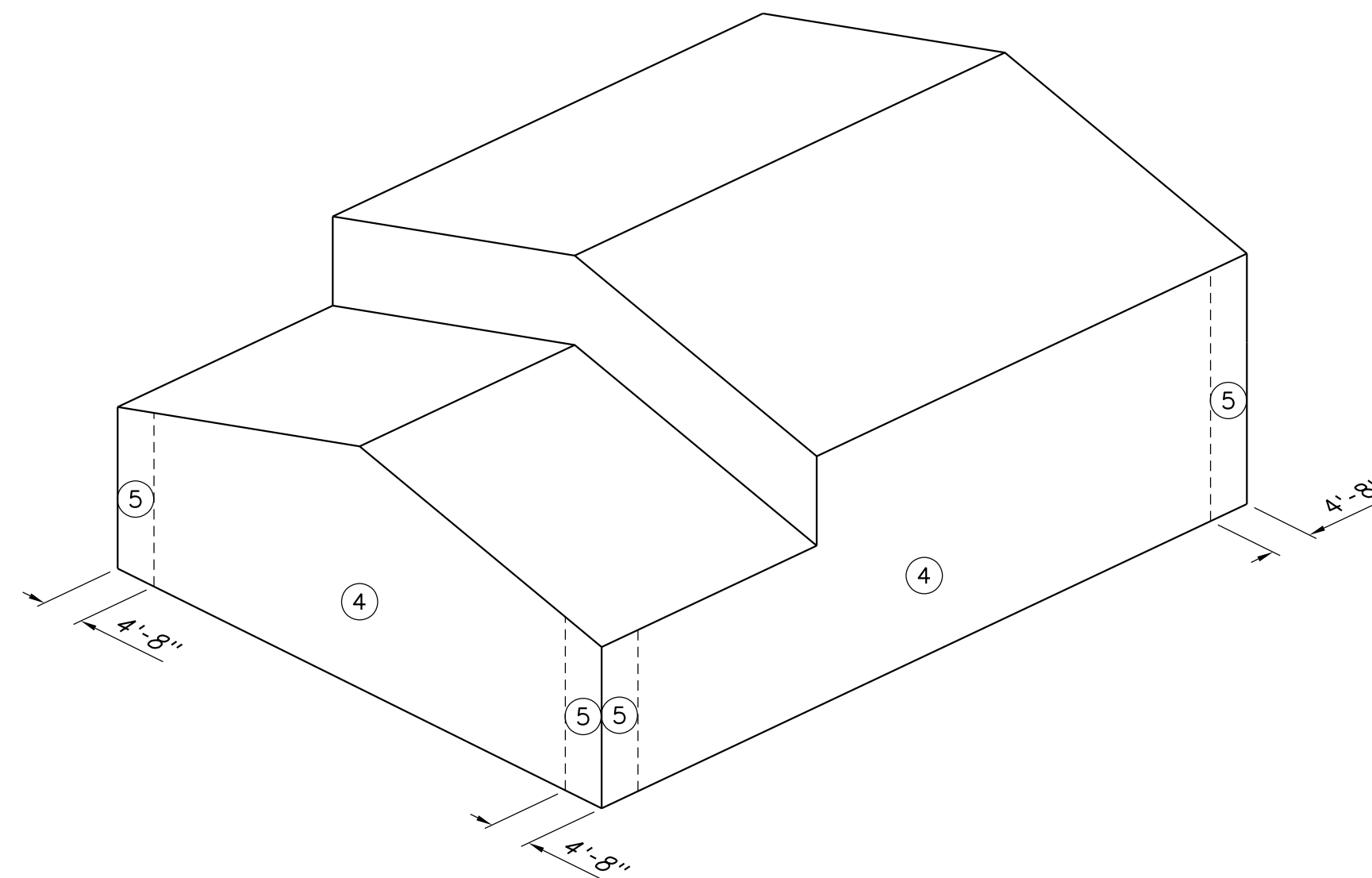
COMPONENTS & CALDDING: STRENGTH LEVEL GROSS ROOF PRESSURE (PSF)												
AREA (SF)	10		20		50		100		200		>=500	
SURFACE PRESSURE	POS	NEG	POS	NEG	POS	NEG	POS	NEG	POS	NEG	POS	NEG
ZONE 1	17.6	-28.0	16.1	-27.2	14.0	-26.2	12.5	-25.4	12.5	-25.4	12.5	-25.4
ZONE 2	17.6	-48.8	16.1	-44.9	14.0	-39.7	12.5	-35.8	12.5	-35.8	12.5	-35.4
ZONE 3	17.6	-72.2	16.1	-67.5	14.0	-61.3	12.5	-56.6	12.5	-56.6	12.5	-56.6
ZONE 3 OH		-96.0		-86.7		-74.3		-64.9		-64.9		-64.9

COMPONENTS & CALDDING: STRENGTH LEVEL GROSS WALL PRESSURE (PSF)												
AREA (SF)	10		20		50		100		200		>=500	
SURFACE PRESSURE	POS	NEG	POS	NEG	POS	NEG	POS	NEG	POS	NEG	POS	NEG
ZONE 4	28.0	-30.4	26.8	-29.1	25.1	-27.5	23.9	-26.2	22.7	-25.0	21.0	-23.4
ZONE 5	28.0	-37.4	26.8	-34.9	25.1	-31.6	23.9	-29.1	22.7	-26.6	21.0	-23.4

1 WIND PRESSURE PER ASCE 7-10  
S002 NOTE TO SCALE



2 PLAN OF MULTISPAN MODULE  
S002 NOTE TO SCALE



3 ELEVATION OF MULTISPAN MODULE  
S002 NOTE TO SCALE

**PARSONS**

PTSI Managed Services Inc.  
955 L'ENFANT Plaza  
North, SW Suite 6100  
Washington, DC 20024  
202-651-2500  
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CONSTRUCTION - 6-1-2019

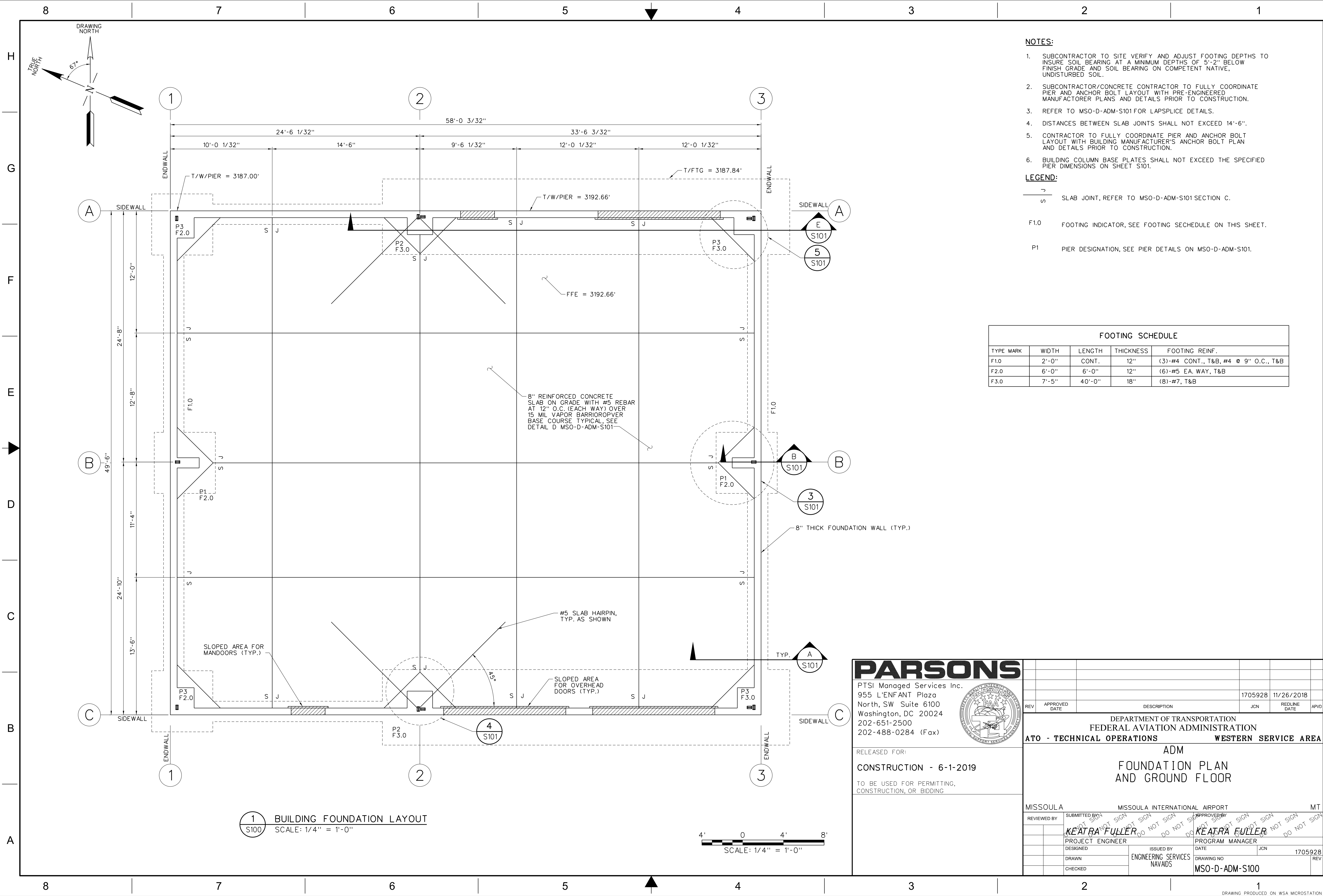
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CONSTRUCTION, OR BIDDING

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM <b>WIND ZONE DIAGRAMS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO	MSO-D-ADM-S002		
CHECKED		REV			

ISSUED FOR CONSTRUCTION

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EDM: mso-d adm-s002.dgn



- NOTES:**
- SUBCONTRACTOR TO SITE VERIFY AND ADJUST FOOTING DEPTHS TO INSURE SOIL BEARING AT A MINIMUM DEPTHS OF 5'-2" BELOW FINISH GRADE AND SOIL BEARING ON COMPETENT NATIVE, UNDISTURBED SOIL.
  - SUBCONTRACTOR/CONCRETE CONTRACTOR TO FULLY COORDINATE PIER AND ANCHOR BOLT LAYOUT WITH PRE-ENGINEERED MANUFACTURER PLANS AND DETAILS PRIOR TO CONSTRUCTION.
  - REFER TO MSO-D-ADM-S101 FOR LAPSPICE DETAILS.
  - DISTANCES BETWEEN SLAB JOINTS SHALL NOT EXCEED 14'-6".
  - CONTRACTOR TO FULLY COORDINATE PIER AND ANCHOR BOLT LAYOUT WITH BUILDING MANUFACTURER'S ANCHOR BOLT PLAN AND DETAILS PRIOR TO CONSTRUCTION.
  - BUILDING COLUMN BASE PLATES SHALL NOT EXCEED THE SPECIFIED PIER DIMENSIONS ON SHEET S101.

- LEGEND:**
- SLAB JOINT, REFER TO MSO-D-ADM-S101 SECTION C.
  - F1.0 FOOTING INDICATOR, SEE FOOTING SCHEDULE ON THIS SHEET.
  - P1 PIER DESIGNATION, SEE PIER DETAILS ON MSO-D-ADM-S101.

FOOTING SCHEDULE				
TYPE MARK	WIDTH	LENGTH	THICKNESS	FOOTING REINF.
F1.0	2'-0"	CONT.	12"	(3)-#4 CONT., T&B, #4 @ 9" O.C., T&B
F2.0	6'-0"	6'-0"	12"	(6)-#5 E.A. WAY, T&B
F3.0	7'-5"	40'-0"	18"	(8)-#7, T&B



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**CONSTRUCTION - 6-1-2019**

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			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA**

ADM  
**FOUNDATION PLAN AND GROUND FLOOR**

MISSOULA MISSOULA INTERNATIONAL AIRPORT MT

REVIEWED BY: KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN)

DESIGNED BY: KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN)

PROJECT ENGINEER: KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN)

ISSUED BY: ENGINEERING SERVICES NAVAIDS

DATE: JCN 1705928

DRAWING NO: MSO-D-ADM-S100

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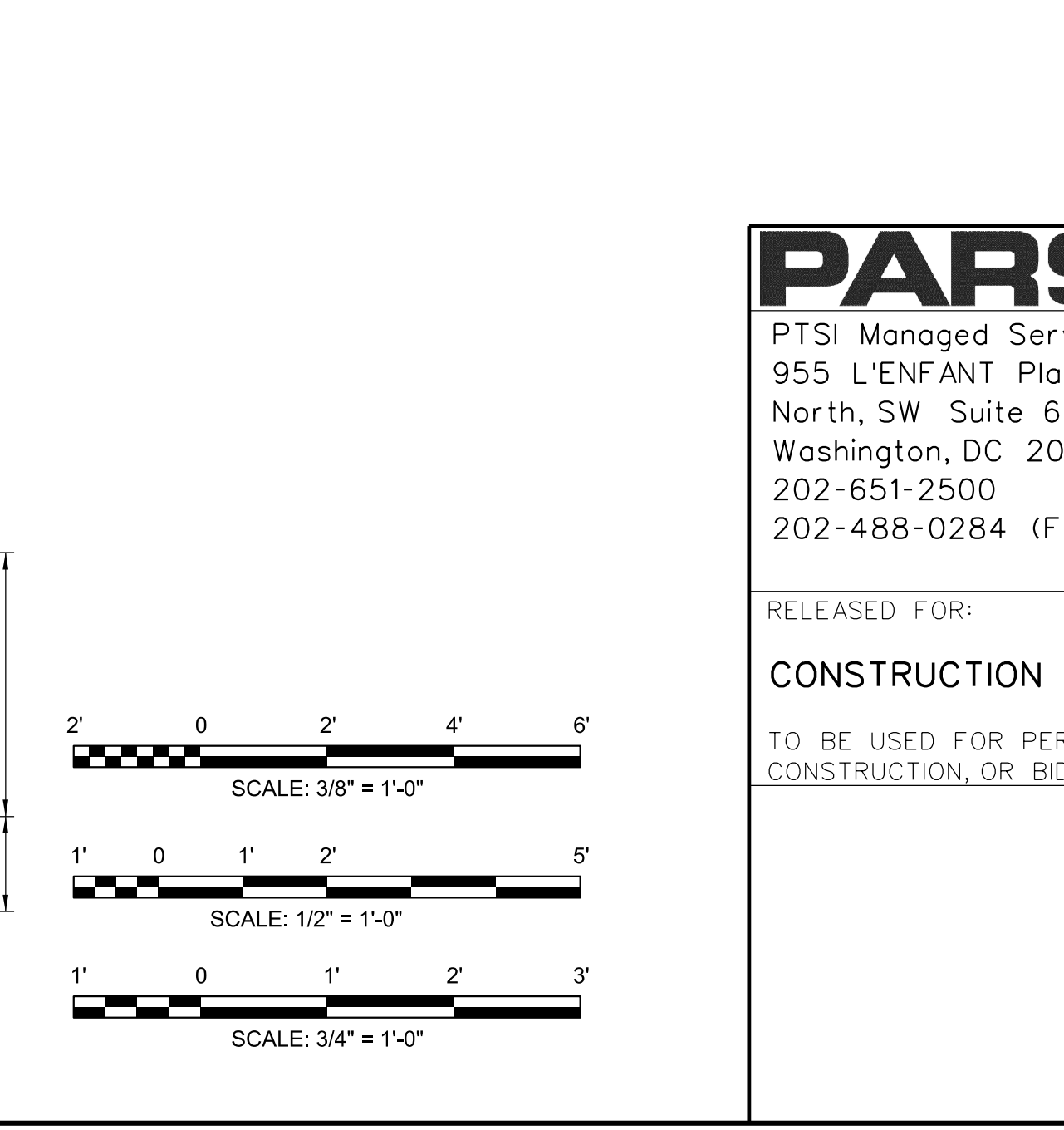
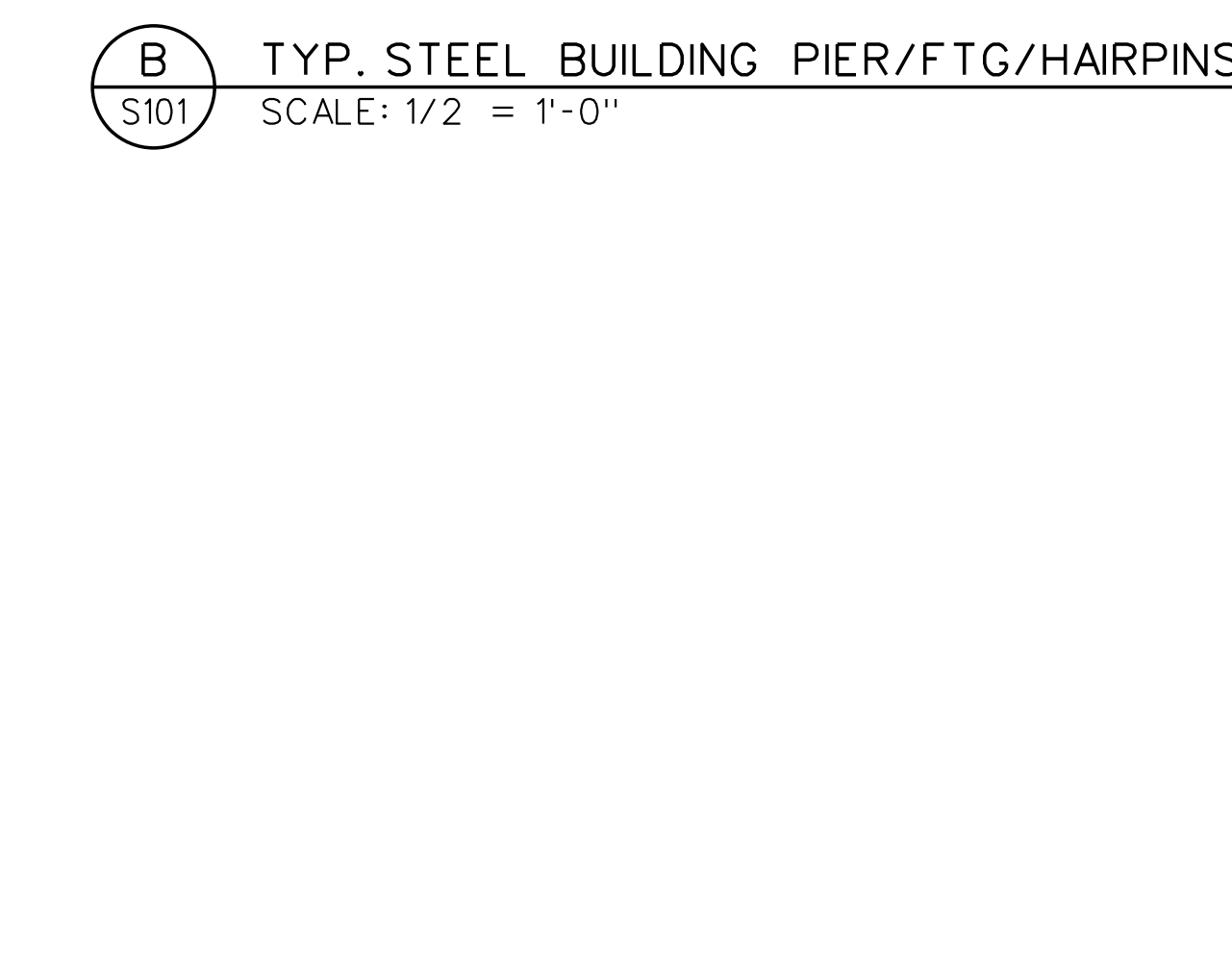
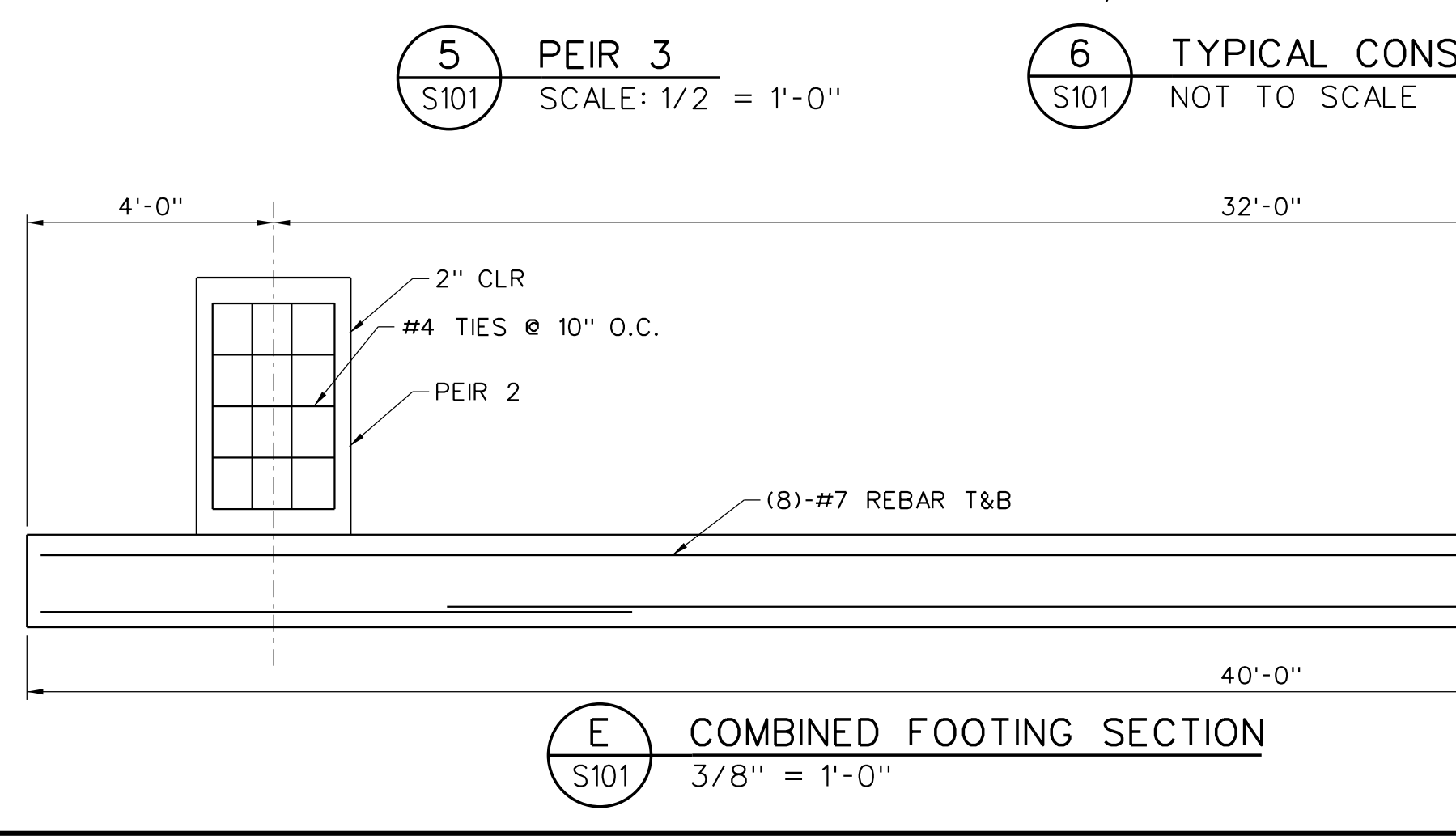
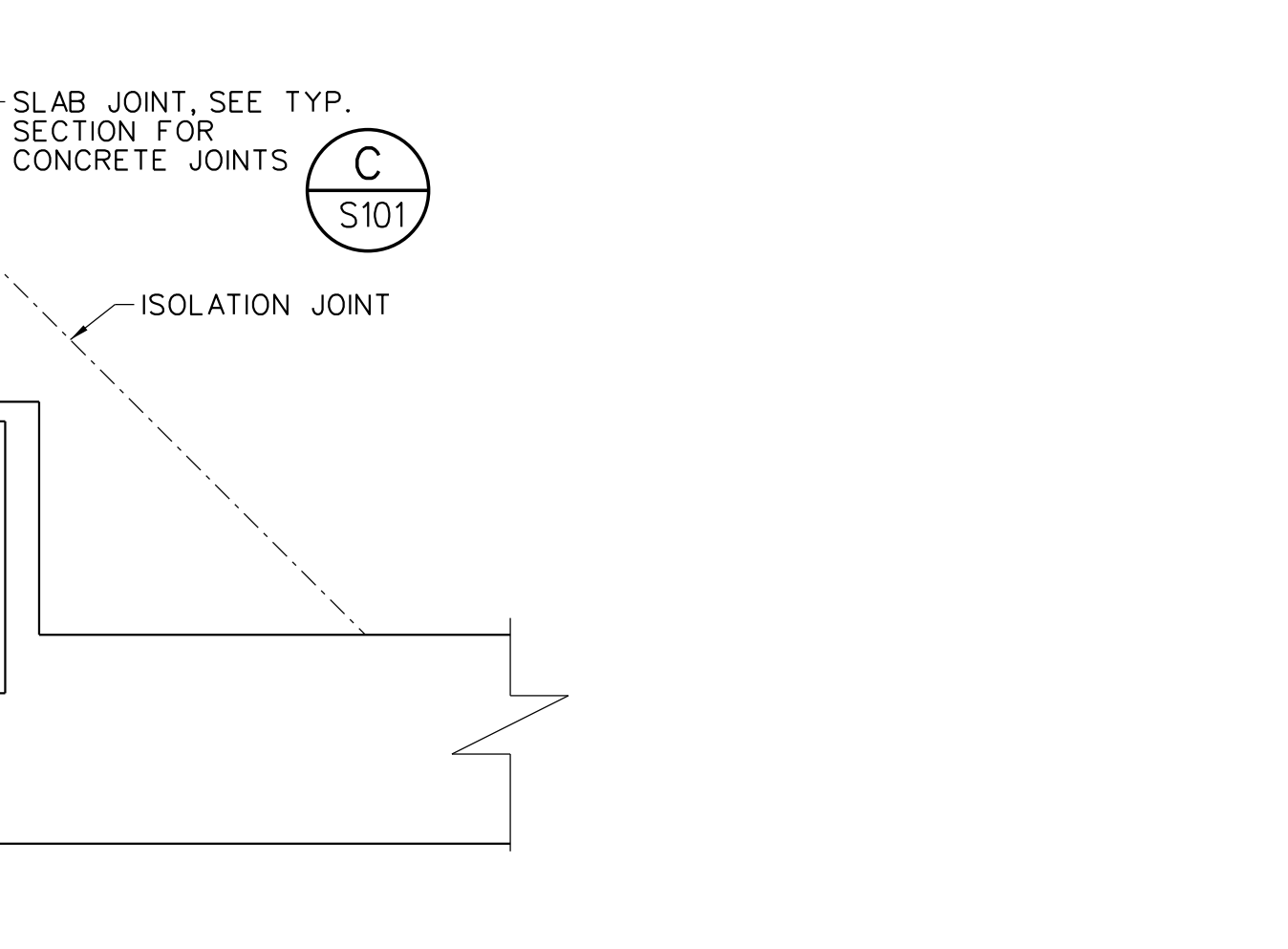
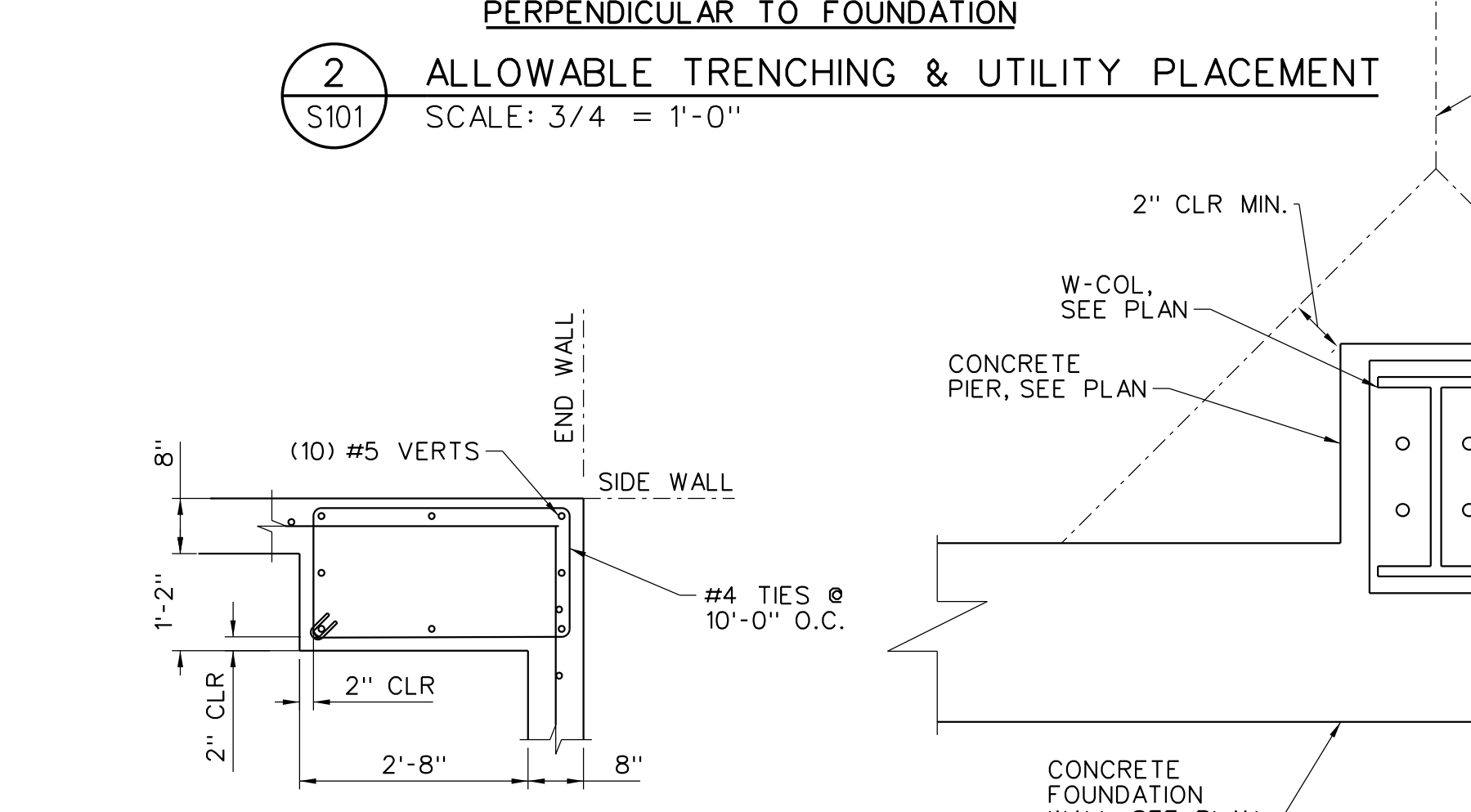
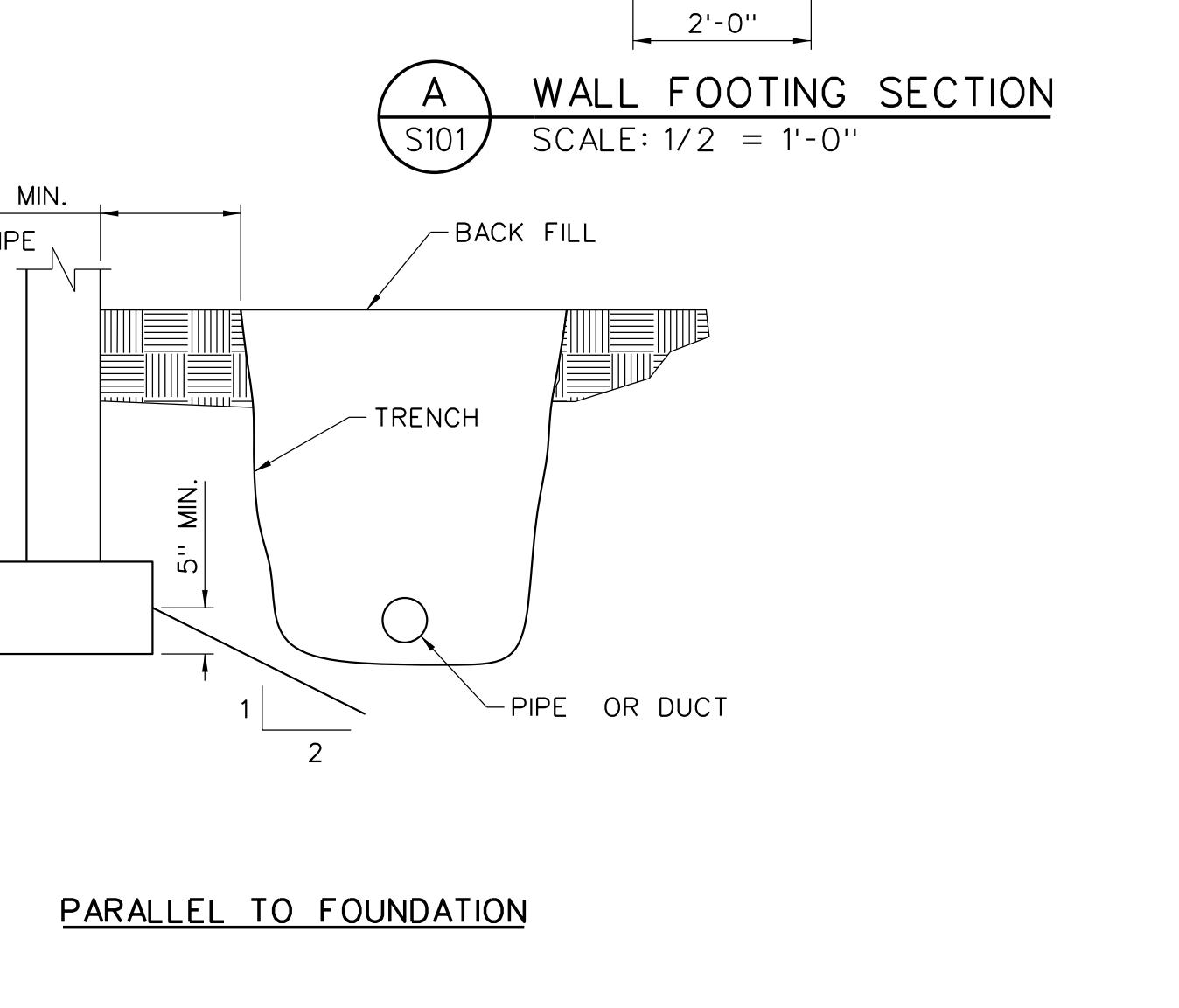
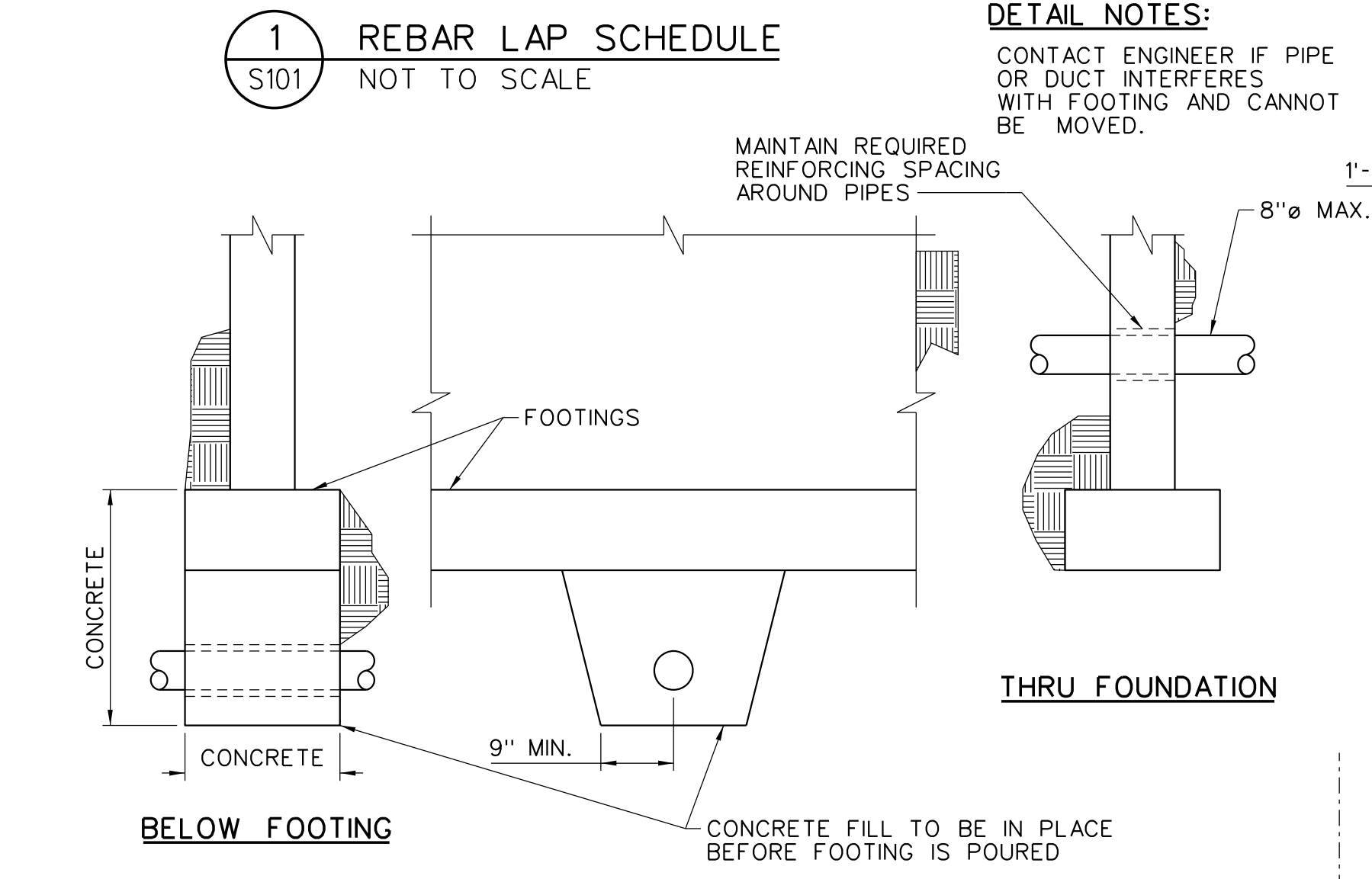
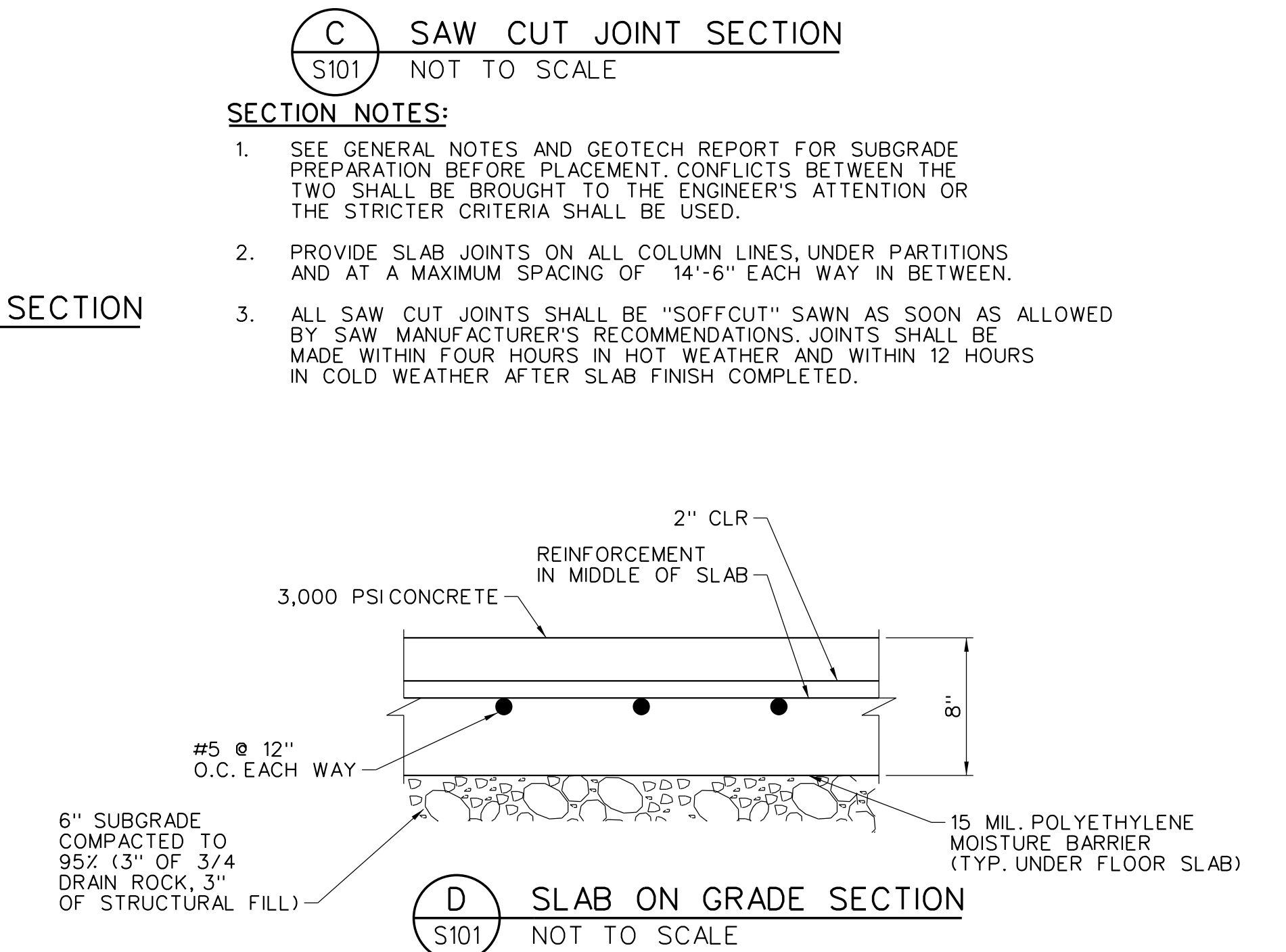
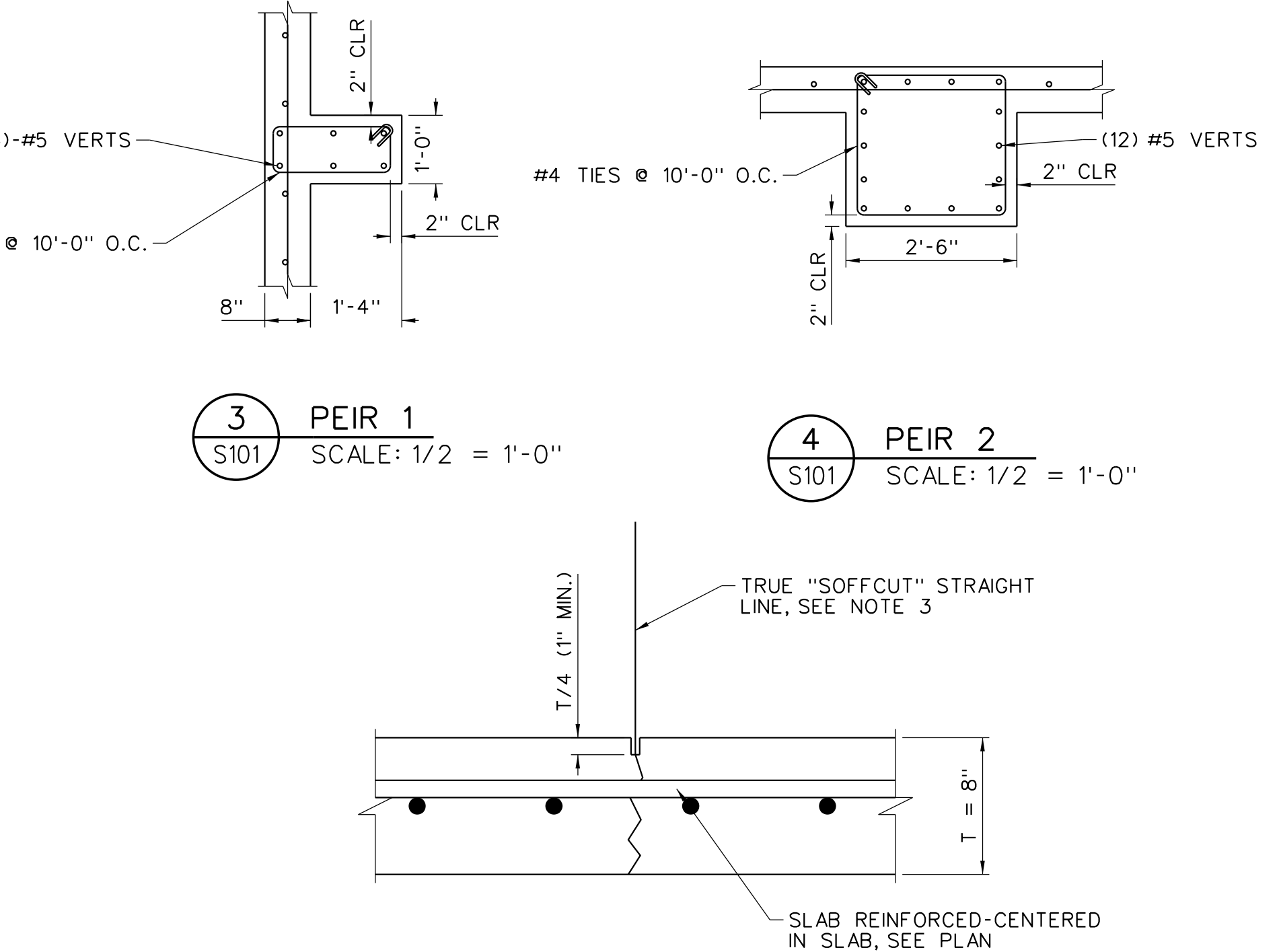
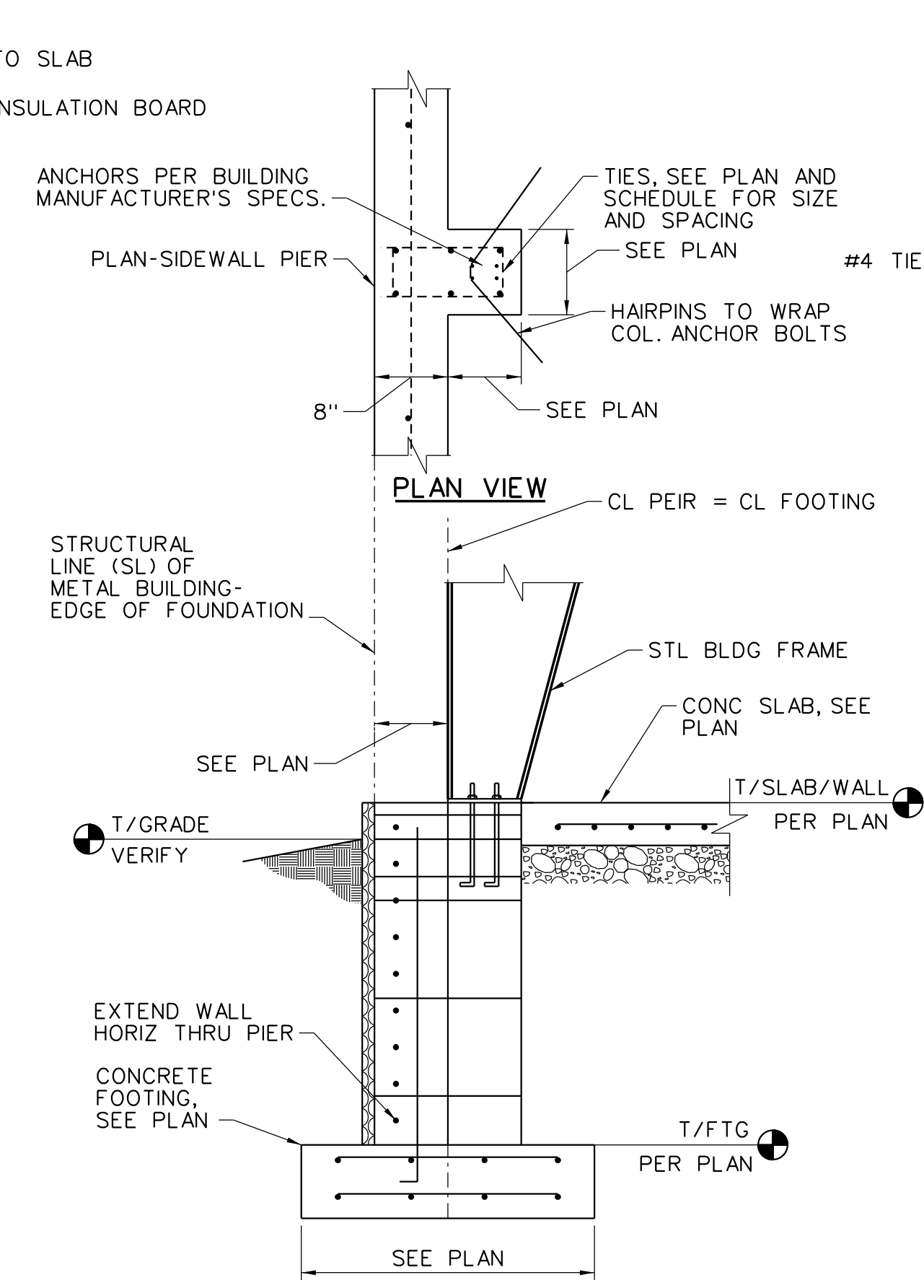
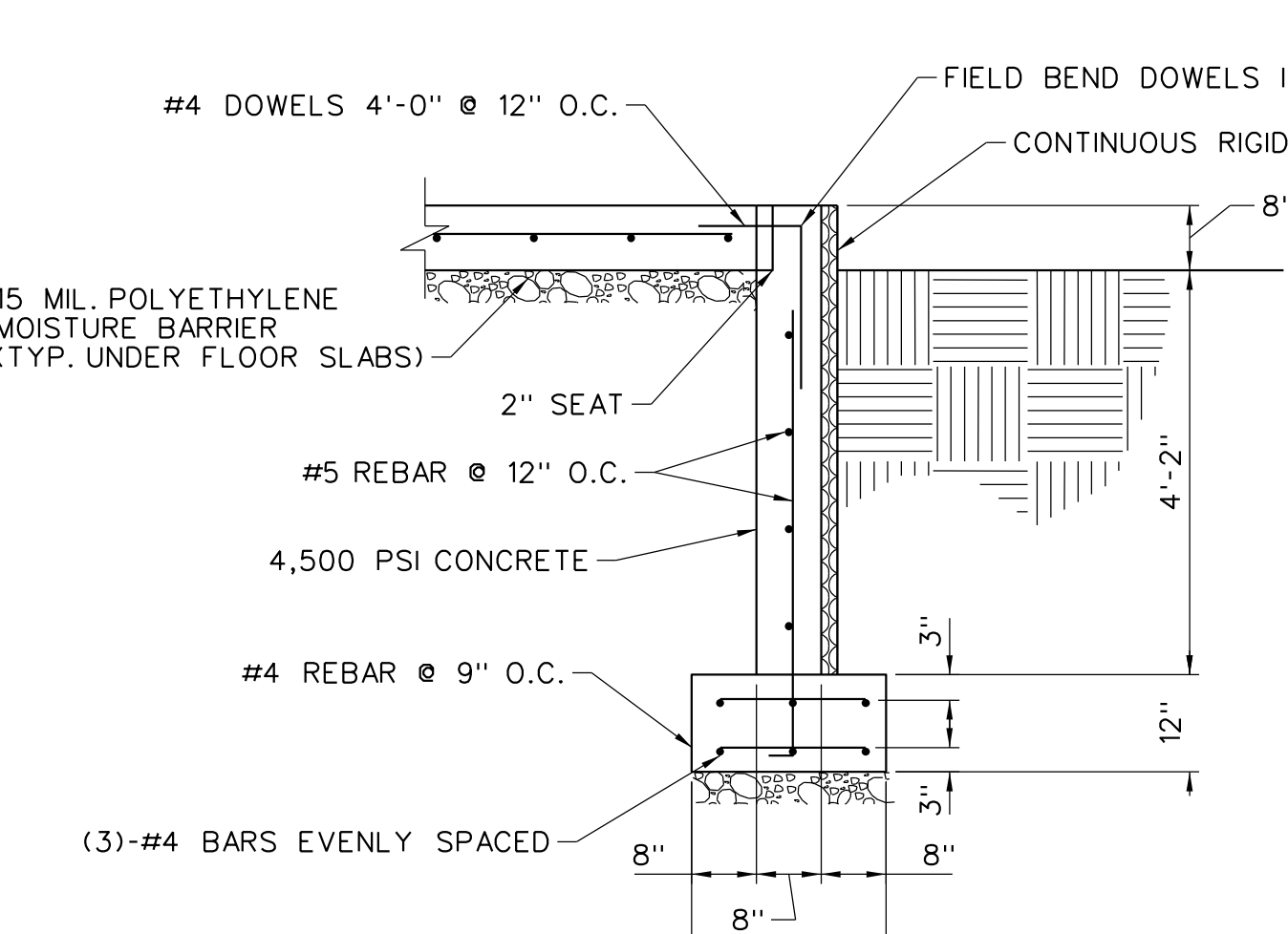
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**SPLICE LENGTH TABLE (4500 PSI)**

BAR SIZE	t < 12", Ld (INCHES)	t > 12", Ld (INCHES)	t < 12", CLASS A SPLICE, LENGTH = 1.0Ld (INCHES)	t < 12", CLASS B SPLICE, LENGTH = 1.3Ld (INCHES)	t > 12", CLASS A SPLICE, LENGTH = 1.0Ld (INCHES)	t > 12", CLASS B SPLICE, LENGTH = 1.3Ld (INCHES)
3	15	18	15	19	18	24
4	19	25	19	25	25	32
5	24	31	24	31	31	40
6	29	37	29	37	37	48
7	42	54	42	54	54	70
8	48	62	48	62	62	80
9	54	70	54	70	70	90
10	60	77	60	77	77	100
11	66	85	66	85	85	111

1. t = THICKNESS OF FRESH CONCRETE BELOW THE BOTTOM SURFACE OF A BAR.  
2. Ld = DEVELOPMENT LENGTH OF BAR.  
3. CLASS A SPLICE DOES NOT APPLY TO THIS PROJECT.



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TO BE USED FOR PERMITTING,  
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			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS** **WESTERN SERVICE AREA**

ADM  
**SLAB ON GROUND & FOOTING SECTIONS & DETAILS**

MISSOULA MISSOULA INTERNATIONAL AIRPORT MT

REVIEWED BY: KEATRA FULLER (NOT SIGN) KEATRA FULLER (NOT SIGN)

DESIGNED BY: KEATRA FULLER (NOT SIGN) DATE: DATE

DRAWN BY: ENGINEERING SERVICES NAVALS

CHECKED BY: KEATRA FULLER (NOT SIGN) DATE: DATE

PROGRAM MANAGER: KEATRA FULLER (NOT SIGN) JCN: 1705928

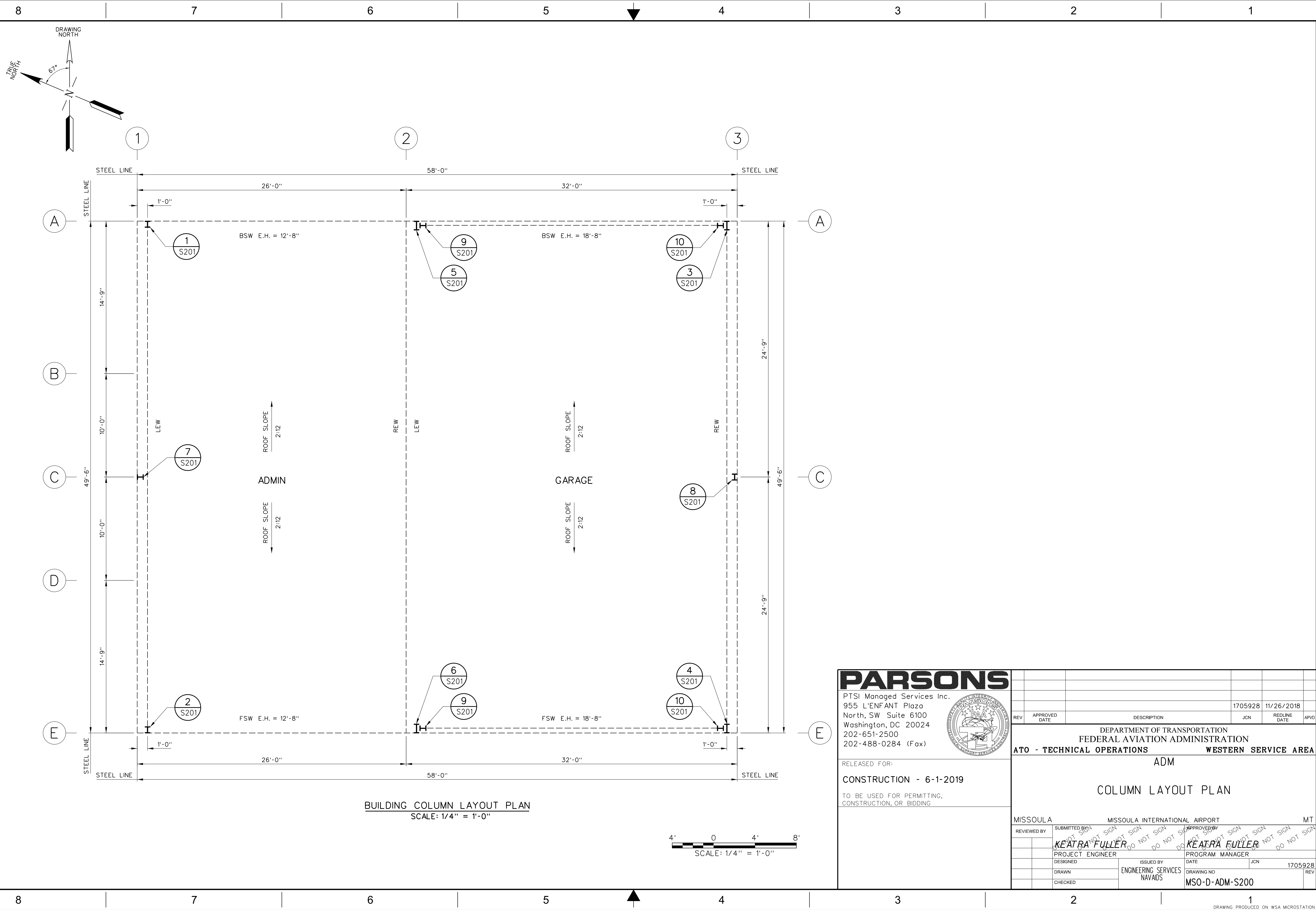
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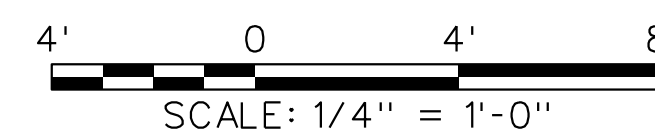
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BUILDING COLUMN LAYOUT PLAN  
SCALE: 1/4" = 1'-0"



**PARSONS**

PTSI Managed Services Inc.  
955 L'ENFANT Plaza  
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Washington, DC 20024  
202-651-2500  
202-488-0284 (Fax)



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DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA

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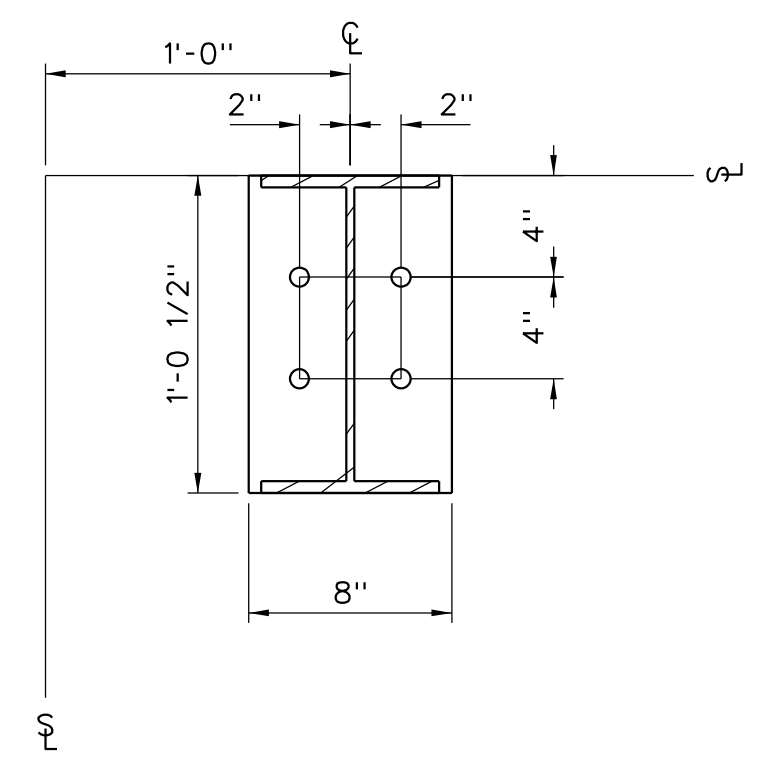
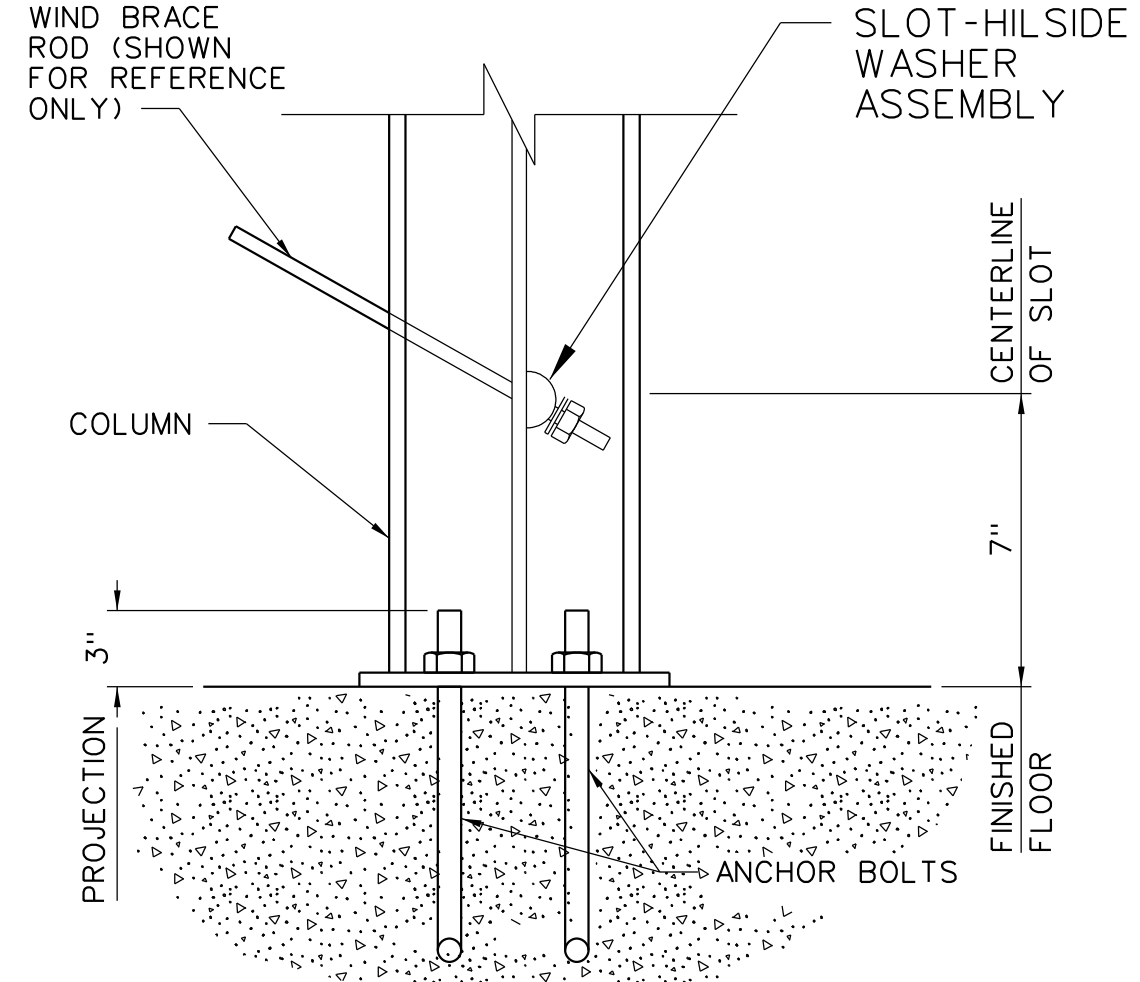
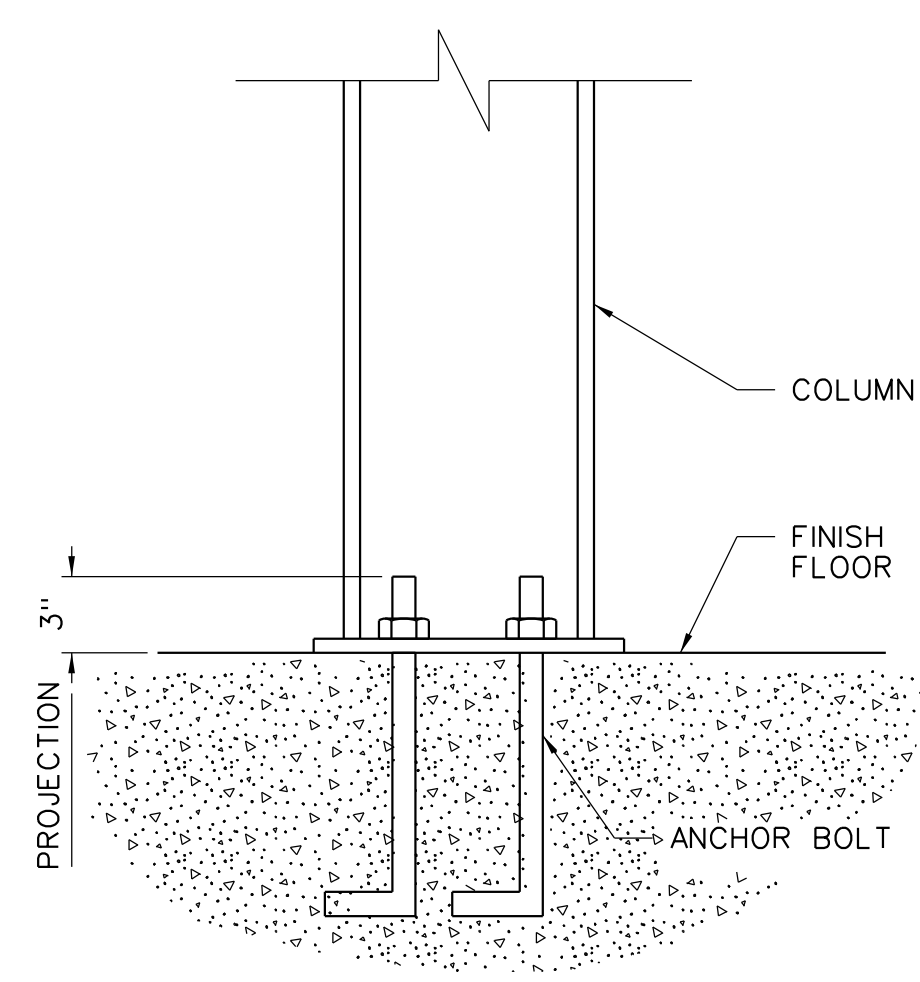
**COLUMN LAYOUT PLAN**

MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
DESIGNED	ISSUED BY	DATE
	ENGINEERING SERVICES	JCN
DRAWN	NAVAIDS	1705928
CHECKED		REV
		DRAWING NO
		MSO-D-ADM-S200

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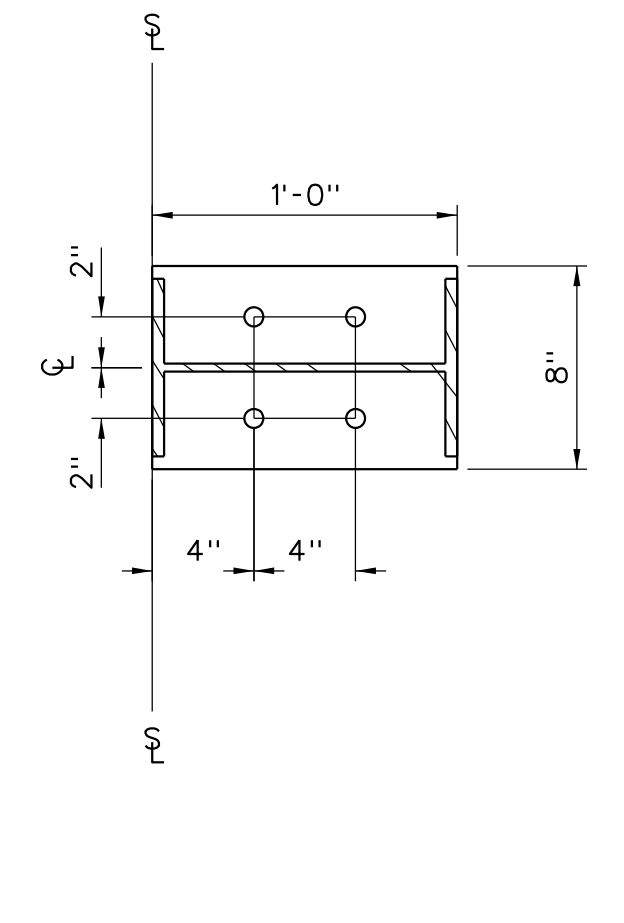
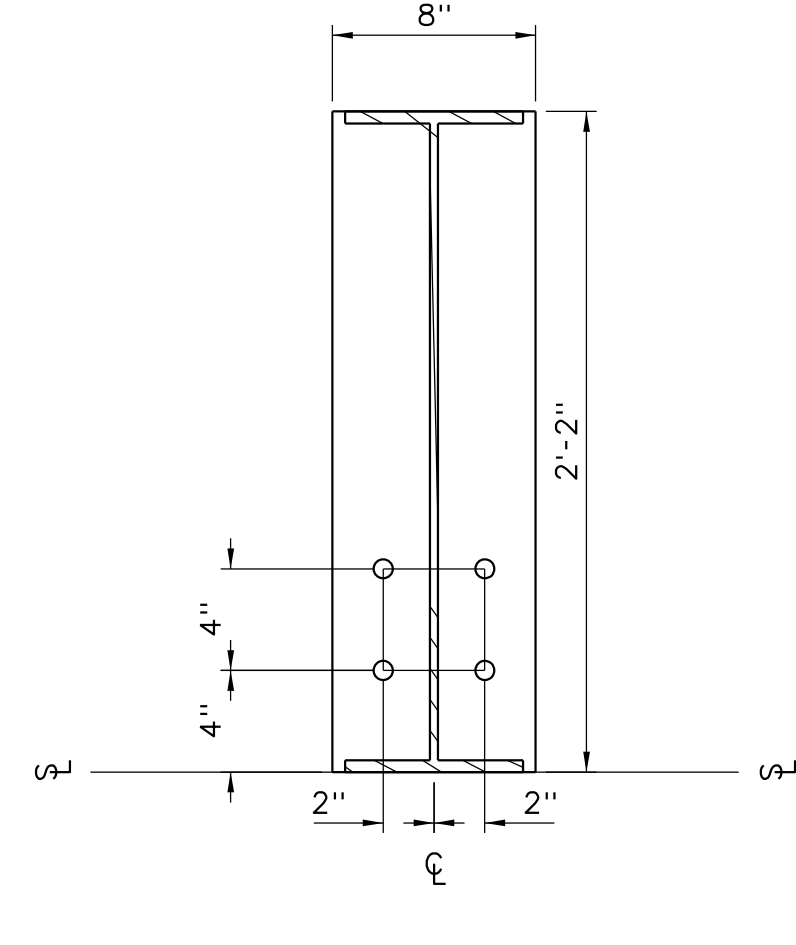
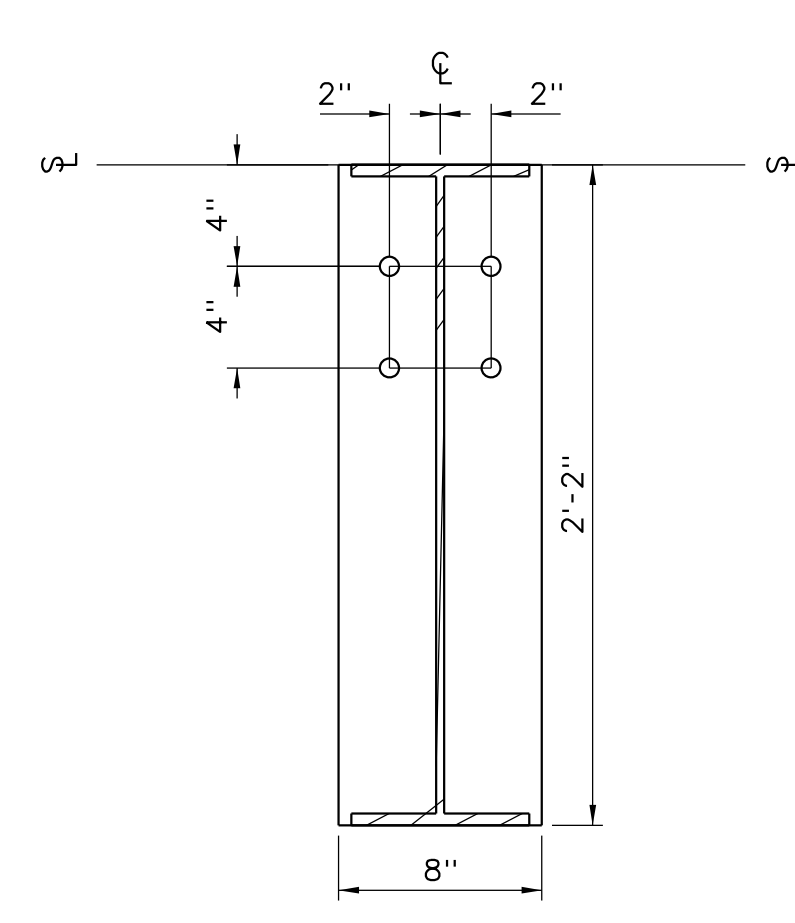
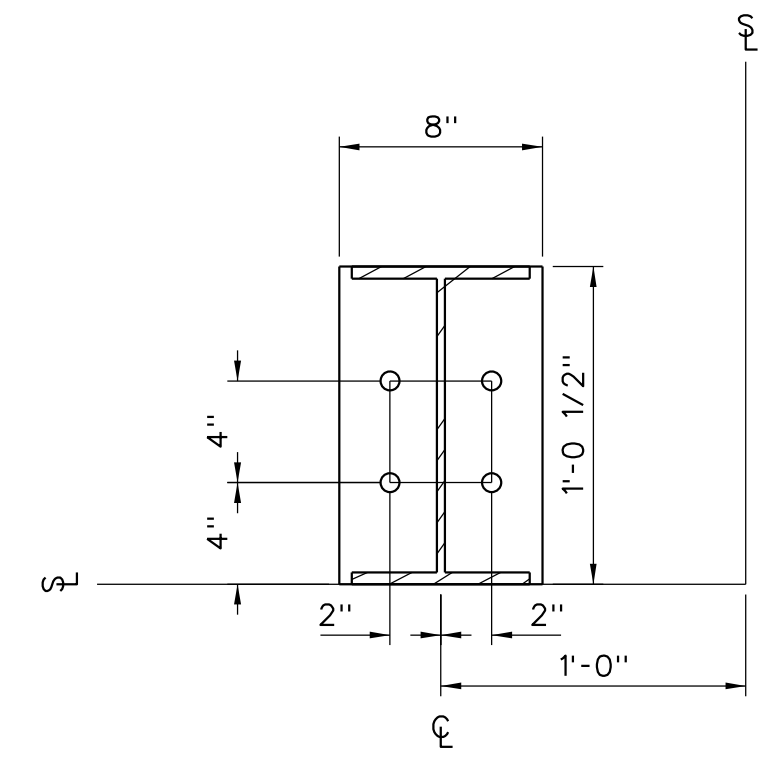
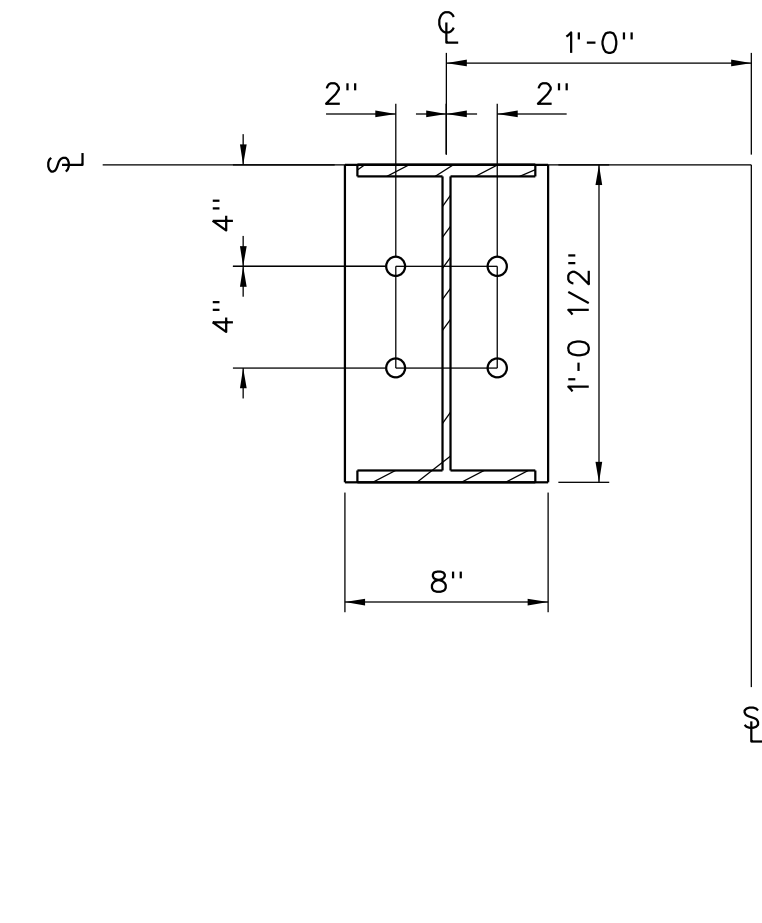
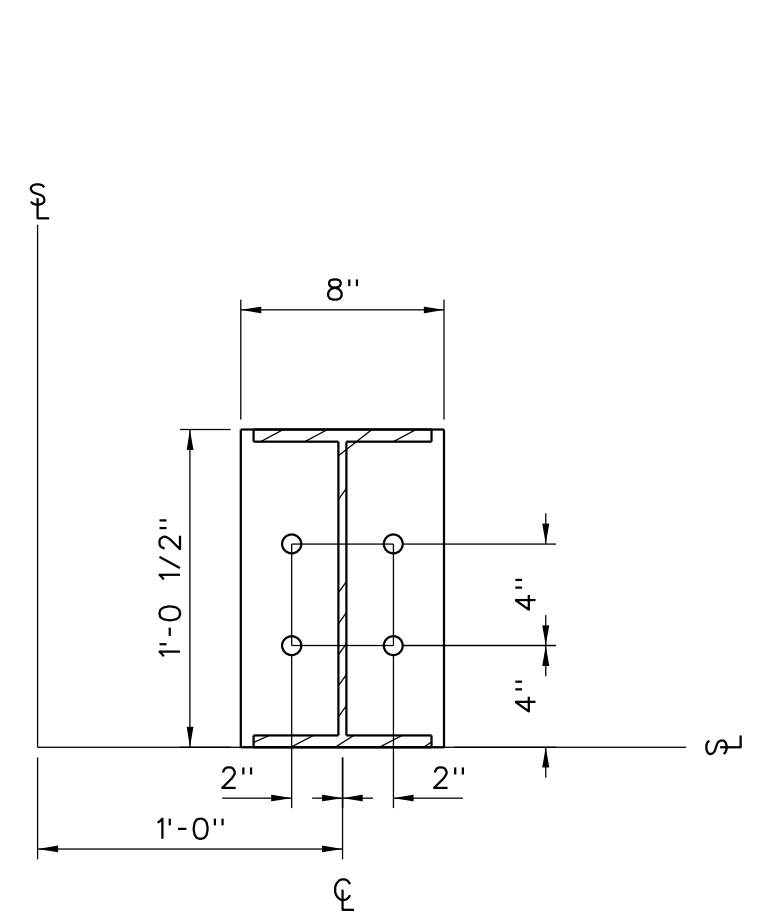
**NOTES:**  
 1. COORDINATE ALL ANCHOR BOLTS SIZE AND LOCATIONS WITH THE BUILDING MANUFACTURER'S DRAWINGS.



**A** TYPICAL COLUMN BASE PLATE SECTION  
 S201 NOT TO SCALE

**B** TYPICAL COLUMN BASE PLATE SECTION AT SLOT-HILLSIDE WASHER LOCATION  
 S201 NOT TO SCALE

**1** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE



**2** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

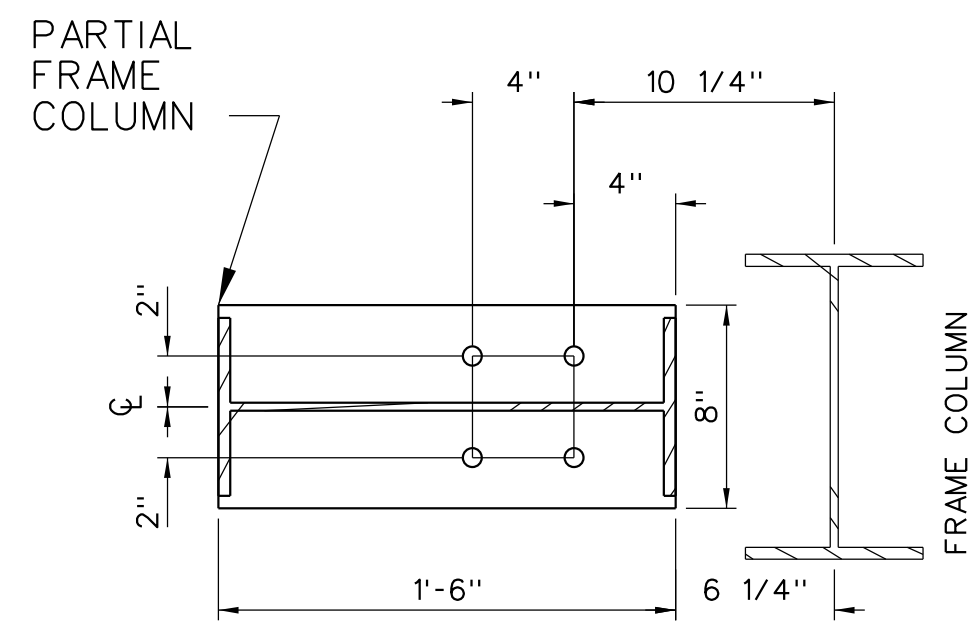
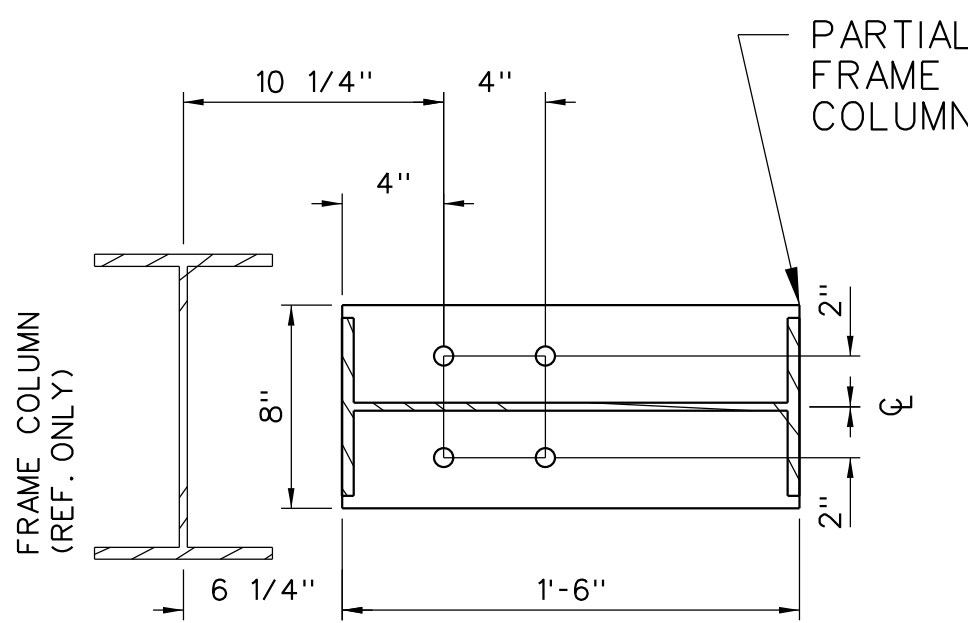
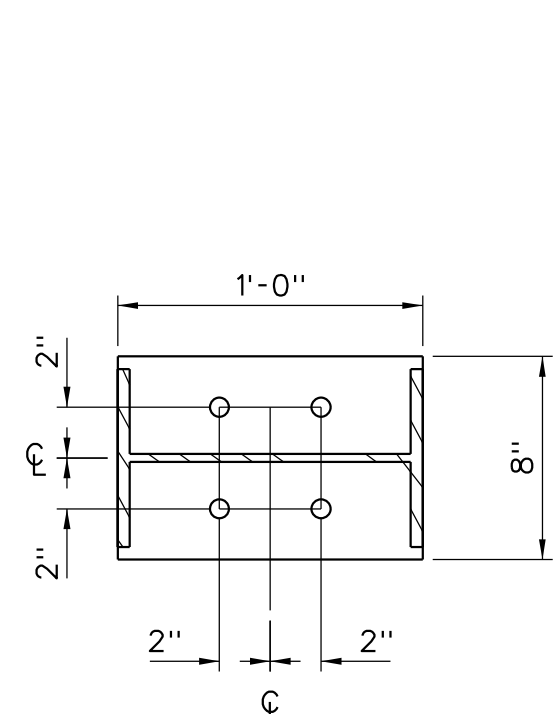
**3** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

**4** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

**5** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

**6** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

**7** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE



**8** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

**9** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

**10** (4)-3/4"Ø ANCHOR BOLTS WITH A 3" PROJECTION  
 S201 NOT TO SCALE

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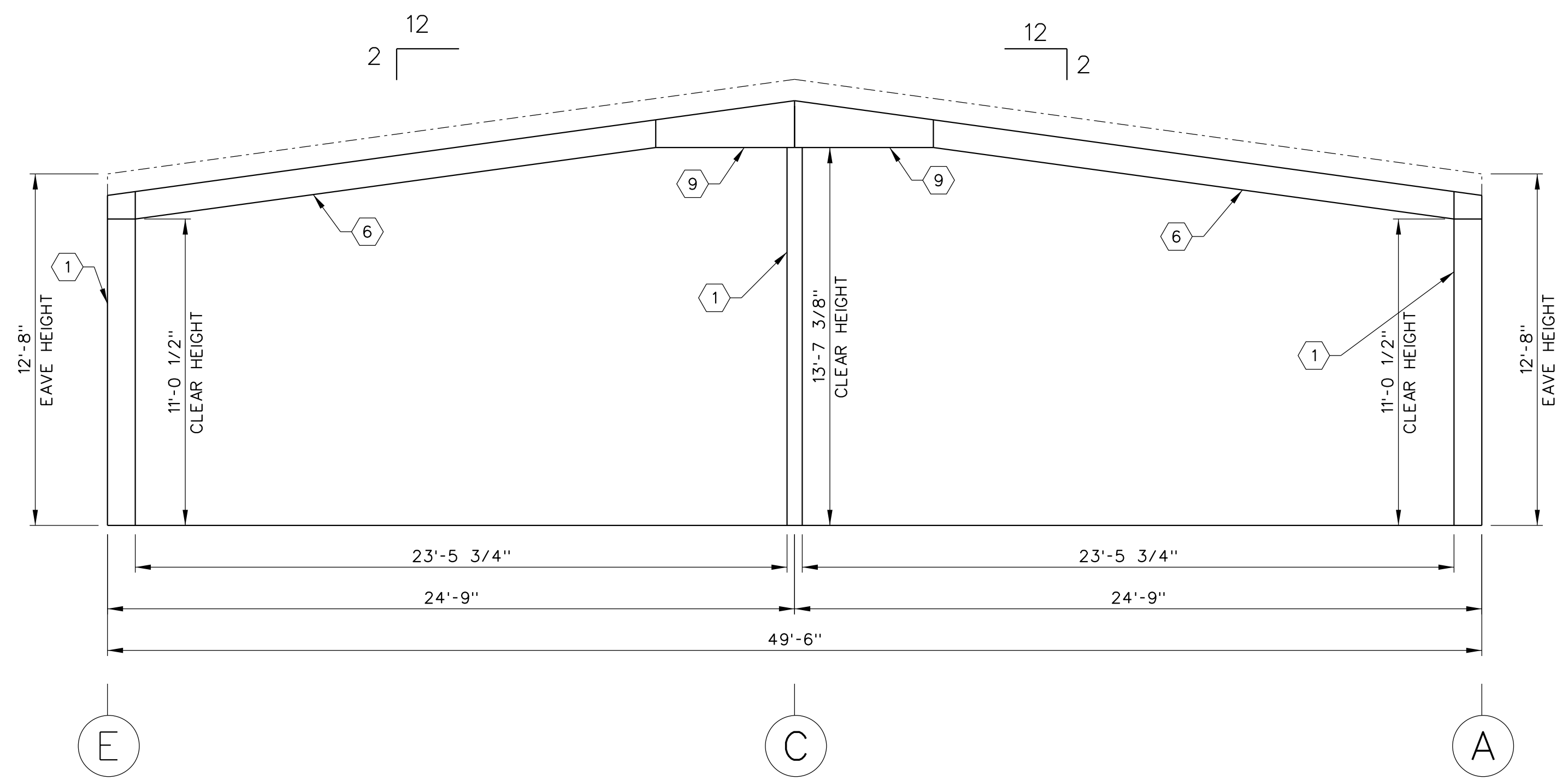
REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b>					
ADM <b>BUILDING COLUMN ANCHOR BOLT DETAILS</b>					
MISSOULA SUBMITTED BY: KEATRA FULLER PROJECT ENGINEER DESIGNED: KEATRA FULLER DRAWN: ENGINEERING SERVICES CHECKED: NAVAIDS			MISSOULA INTERNATIONAL AIRPORT APPROVED BY: KEATRA FULLER PROGRAM MANAGER DATE: JCN 1705928 DRAWING NO: MSO-D-ADM-S201 REV:		

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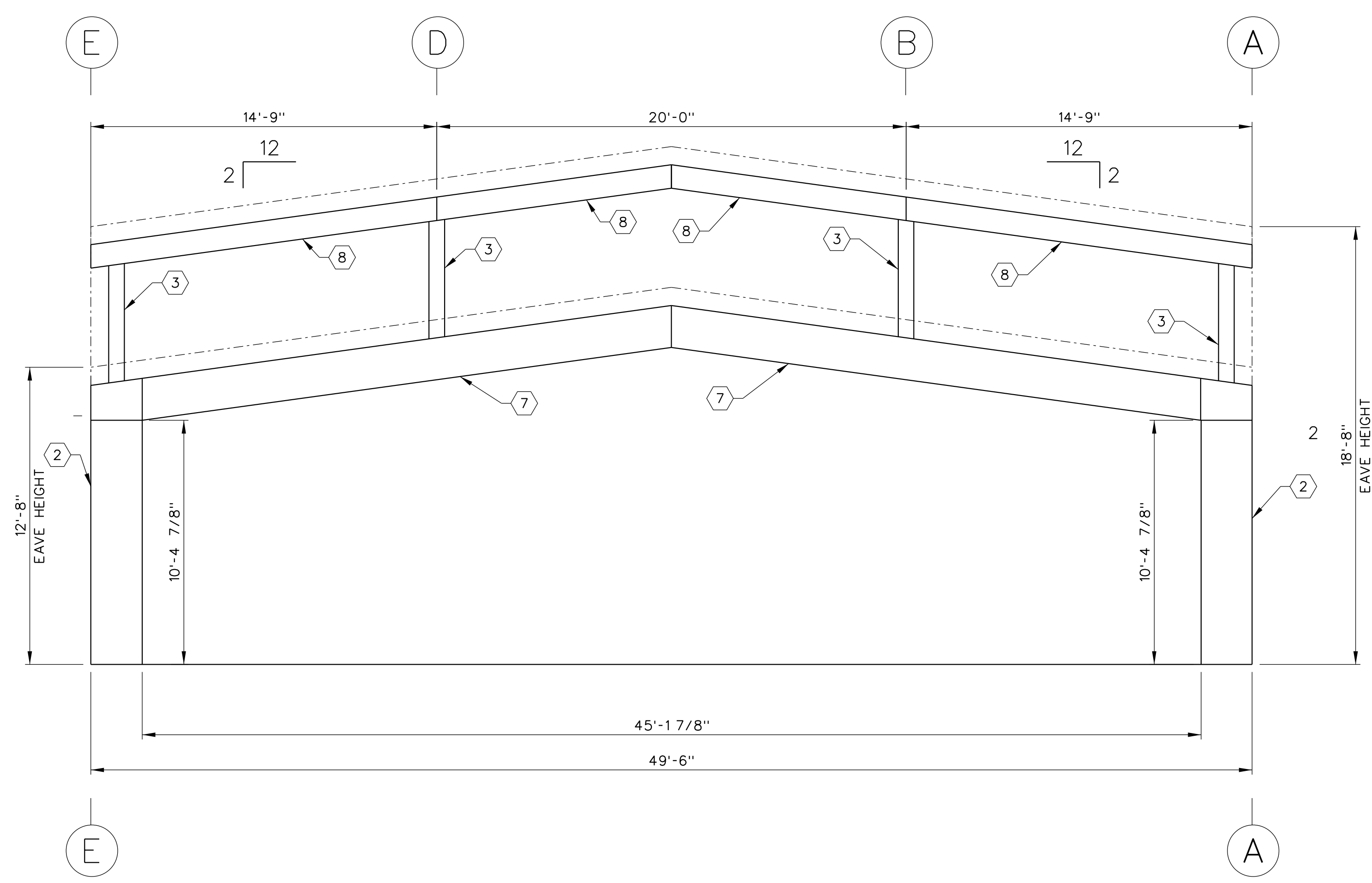
ISSUED FOR CONSTRUCTION  
 EDW:msc-af-9dm-s201.dgn

8 7 6 5 4 3 2 1

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FRAME ELEVATION @ LINE 1  
SCALE: N.T.S.



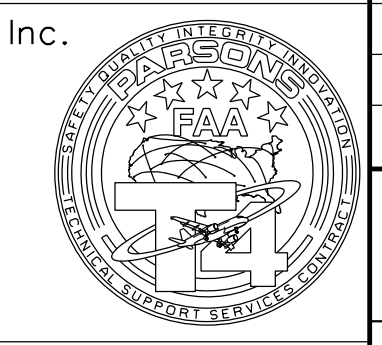
FRAME ELEVATION @ LINE 2  
SCALE: N.T.S.

ID	TOP FLANGE		BOTTOM FLANGE		WEB			TYPE
	WIDTH (in)	THICK (in)	WIDTH (in)	THICK (in)	DEPTH1 (in)	THICK (in)	DEPTH TOP (in)	
1	6	0.25	6	0.25	12	0.25	12	COLUMN
2	6	0.25	6	0.25	26	0.25	15	COLUMN
3	6	0.25	6	0.25	6	0.25	6	COLUMN
4	6	0.25	6	0.25	12	0.25	24	COLUMN
5	6	0.25	6	0.25	18	0.25	18	COLUMN
6	6	0.25	6	0.25	12	0.25	12	BEAM
7	6	0.25	6	0.25	18	0.25	18	BEAM
8	6	0.25	6	0.25	8	0.25	8	BEAM
9	6	0.25	6	0.25	18	0.25	12	BEAM
10	6	0.25	6	0.25	24	0.25	12	BEAM

MATERIAL SCHEDULE

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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA  
ADM

MISSOULA MISSOULA INTERNATIONAL AIRPORT MT

REVIEWED BY: KEATRA FULLER (DO NOT SIGN)  
SUBMITTED BY: KEATRA FULLER (DO NOT SIGN)  
APPROVED BY: KEATRA FULLER (DO NOT SIGN)

DESIGNED: KEATRA FULLER (DO NOT SIGN)  
PROJECT ENGINEER: KEATRA FULLER (DO NOT SIGN)  
PROGRAM MANAGER: KEATRA FULLER (DO NOT SIGN)

ISSUED BY: ENGINEERING SERVICES  
NAVAIDS

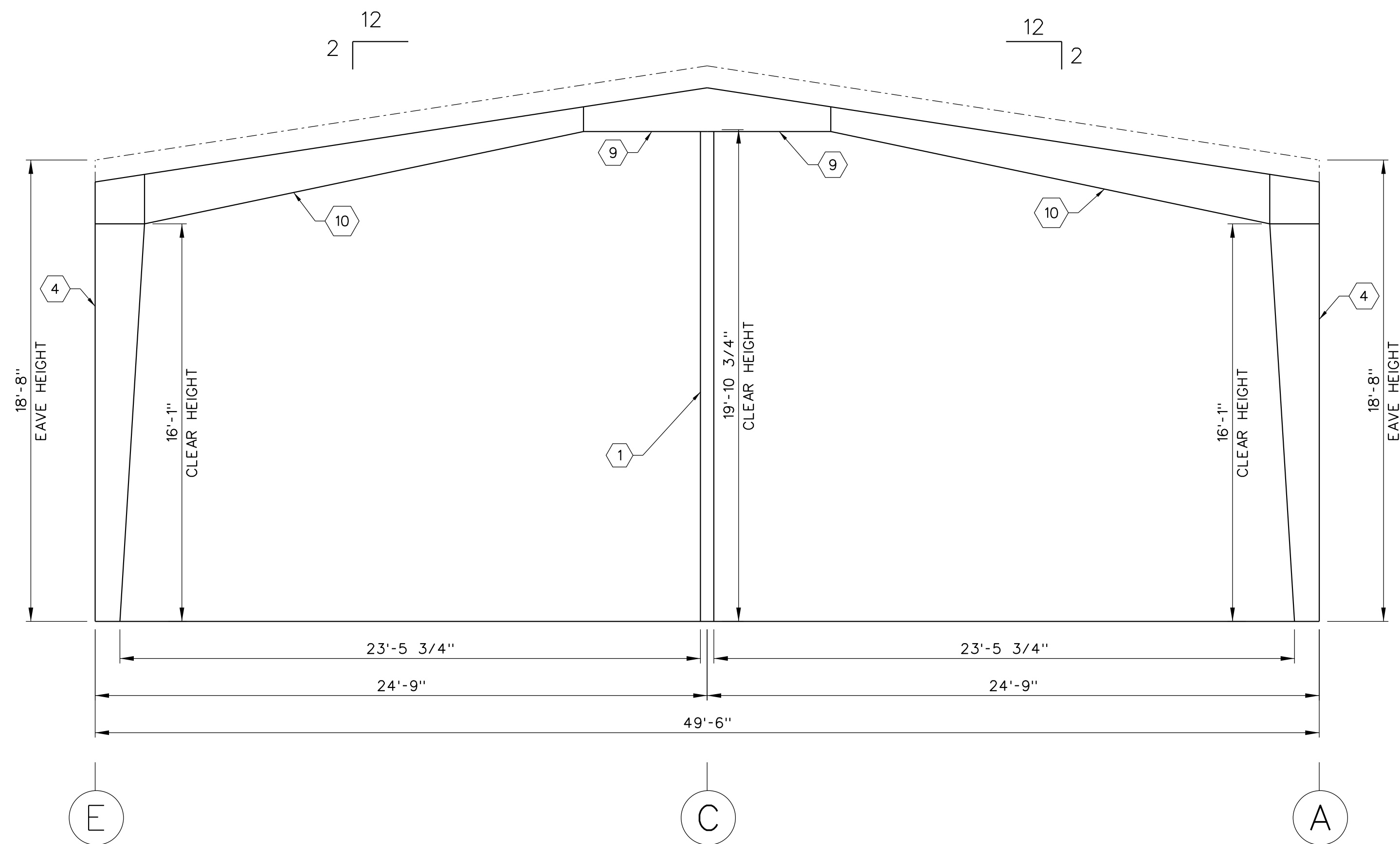
DRAWING NO: MSO-D-ADM-S202  
DATE: 1705928  
JCN: 1705928  
REV: 1

ISSUED FOR CONSTRUCTION

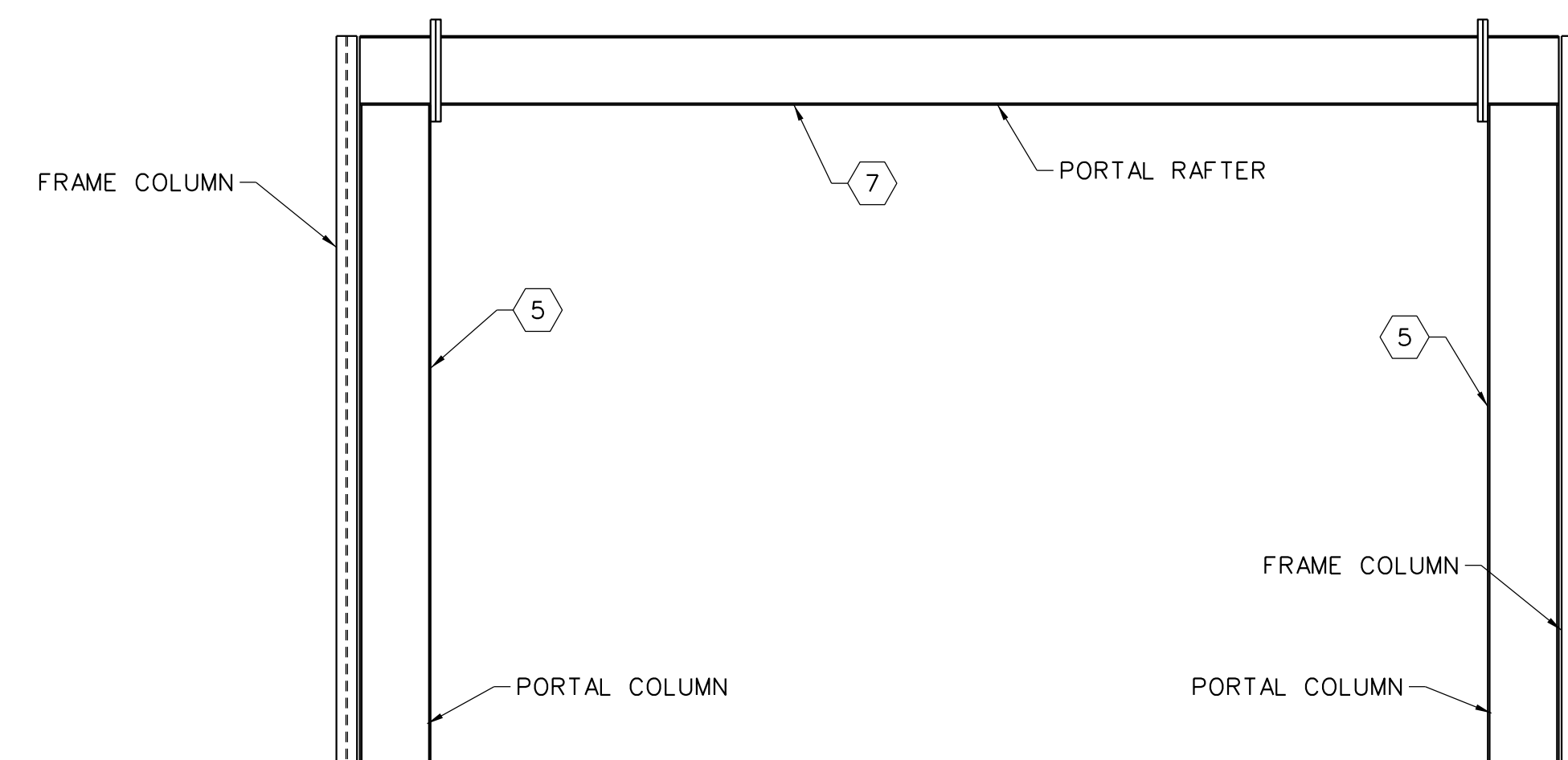
8 7 6 5 4 3 2 1

ID	TOP FLANGE		BOTTOM FLANGE		WEB			TYPE
	WIDTH (in)	THICK (in)	WIDTH (in)	THICK (in)	DEPTH1 (in)	THICK (in)	DEPTH TOP (in)	
①	6	0.25	6	0.25	12	0.25	12	COLUMN
②	6	0.25	6	0.25	26	0.25	15	COLUMN
③	6	0.25	6	0.25	6	0.25	6	COLUMN
④	6	0.25	6	0.25	12	0.25	24	COLUMN
⑤	6	0.25	6	0.25	18	0.25	18	COLUMN
⑥	6	0.25	6	0.25	12	0.25	12	BEAM
⑦	6	0.25	6	0.25	18	0.25	18	BEAM
⑧	6	0.25	6	0.25	8	0.25	8	BEAM
⑨	6	0.25	6	0.25	18	0.25	12	BEAM
⑩	6	0.25	6	0.25	24	0.25	12	BEAM

MATERIAL SCHEDULE



FRAME ELEVATION @ LINE 3  
SCALE: N.T.S.



PORTAL FRAME E (BETWEEN E2 AND E3)  
SCALE: N.T.S.

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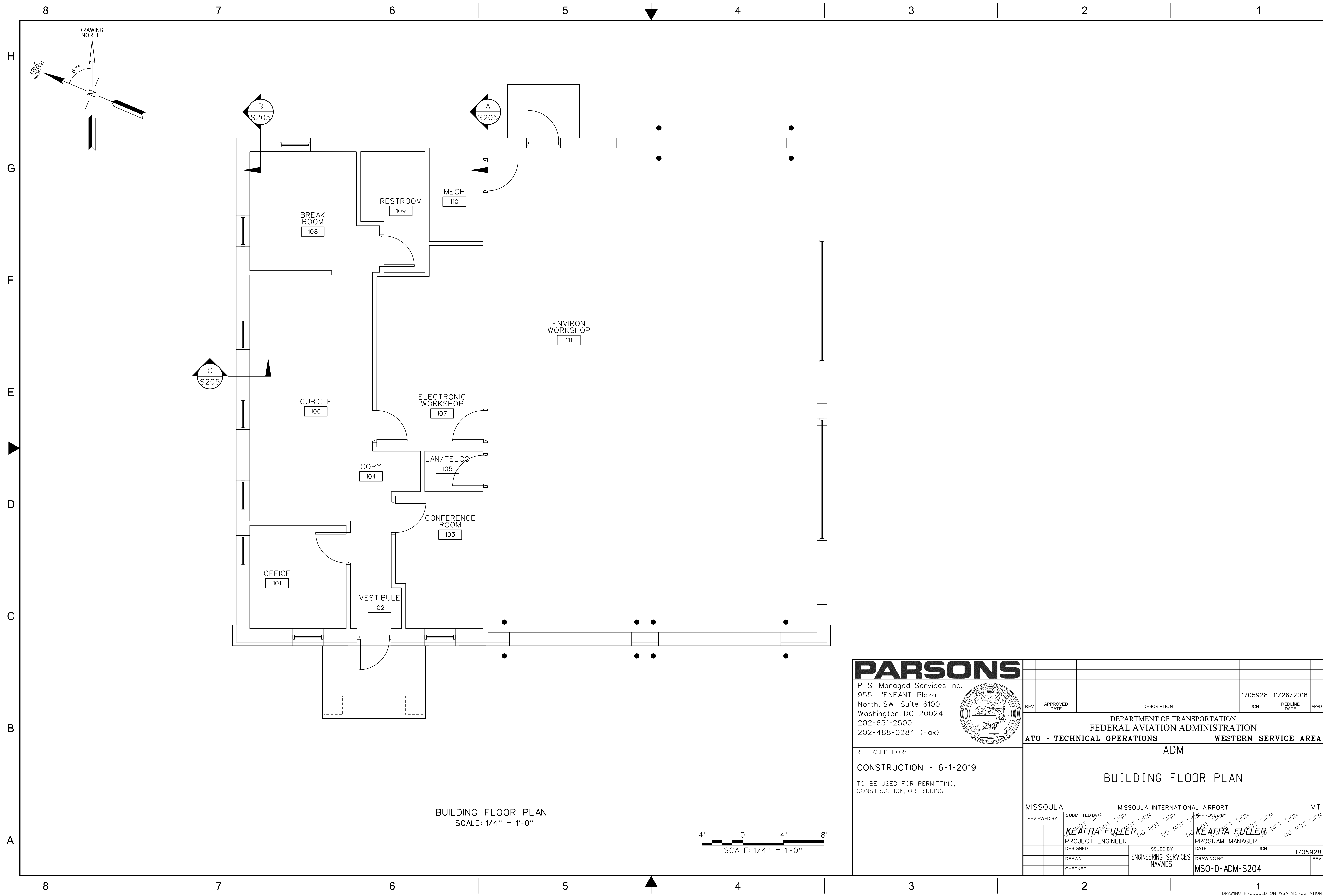
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CONSTRUCTION, OR BIDDING

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>FRAMING ELEVATION PART 2</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	REV
	KEATRA FULLER	KEATRA FULLER		1705928	
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	REV
	ENGINEERING SERVICES				
DRAWN	NAVAIDS	DRAWING NO	MSO-D-ADM-S203		
CHECKED					

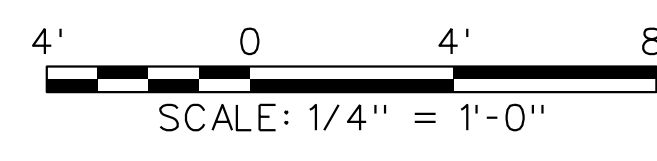
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**BUILDING FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



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			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS**      **WESTERN SERVICE AREA**

**ADM**

**BUILDING FLOOR PLAN**

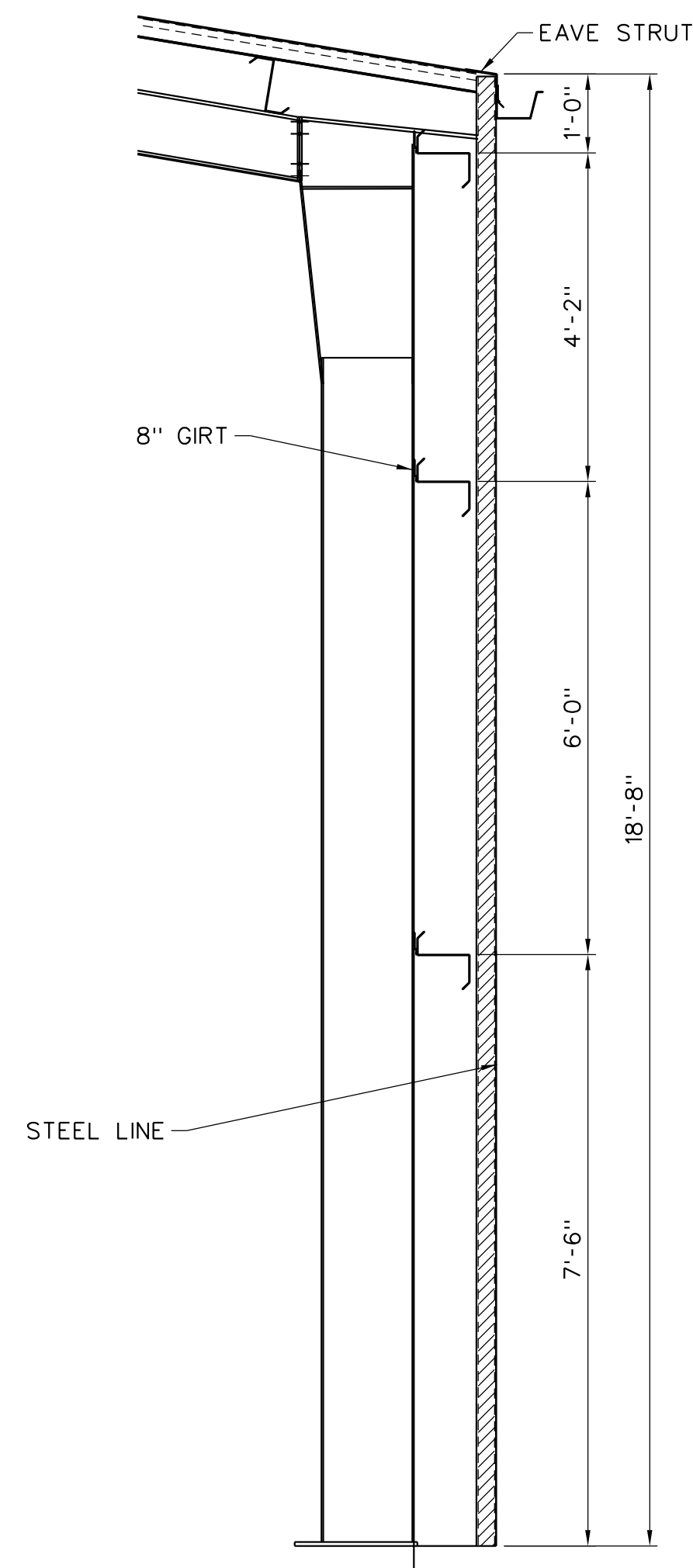
MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
DESIGNED	ISSUED BY	DATE
	ENGINEERING SERVICES	JCN
DRAWN	NAVAIDS	1705928
CHECKED	DRAWING NO	REV
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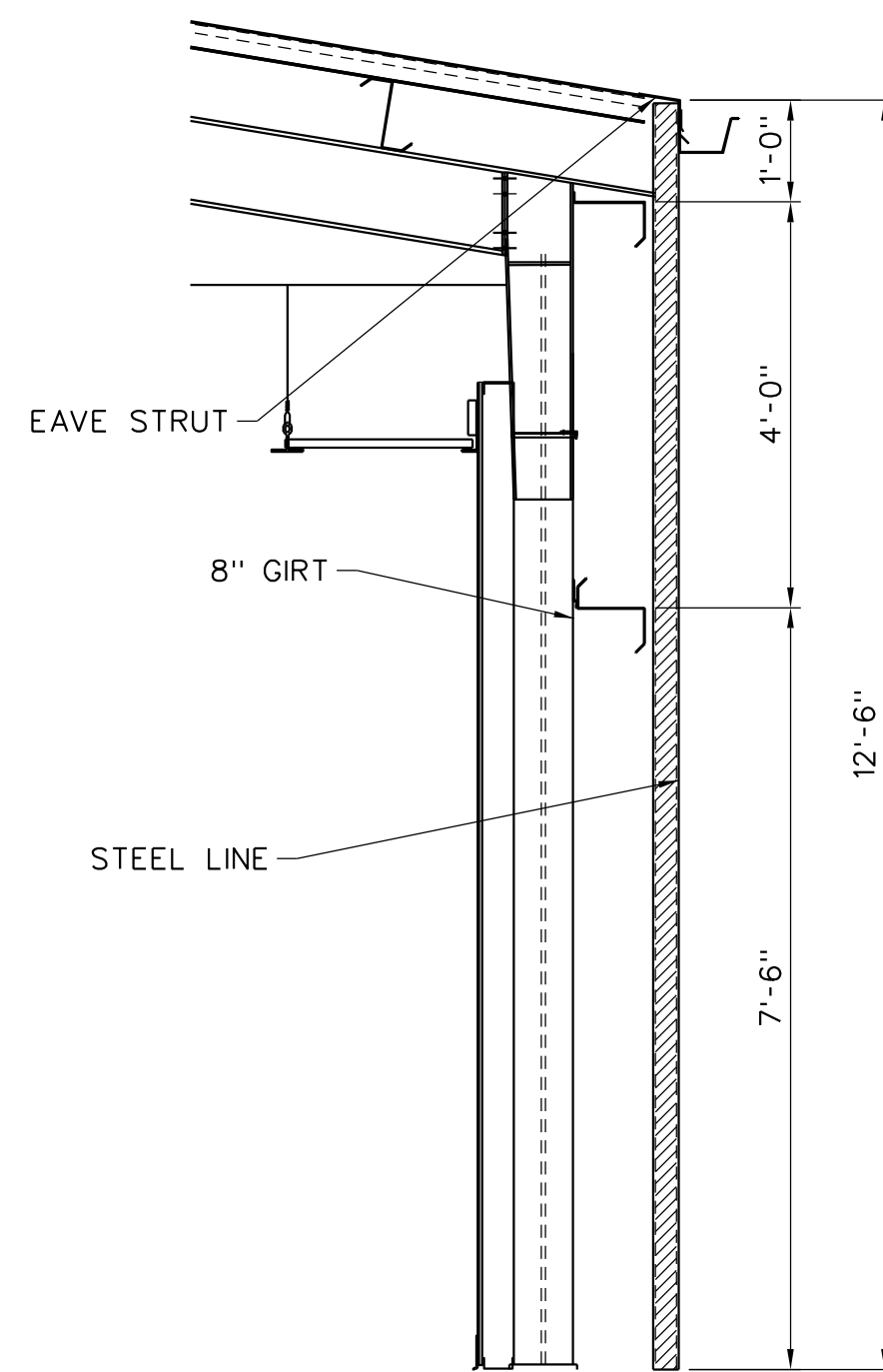
ISSUED FOR CONSTRUCTION

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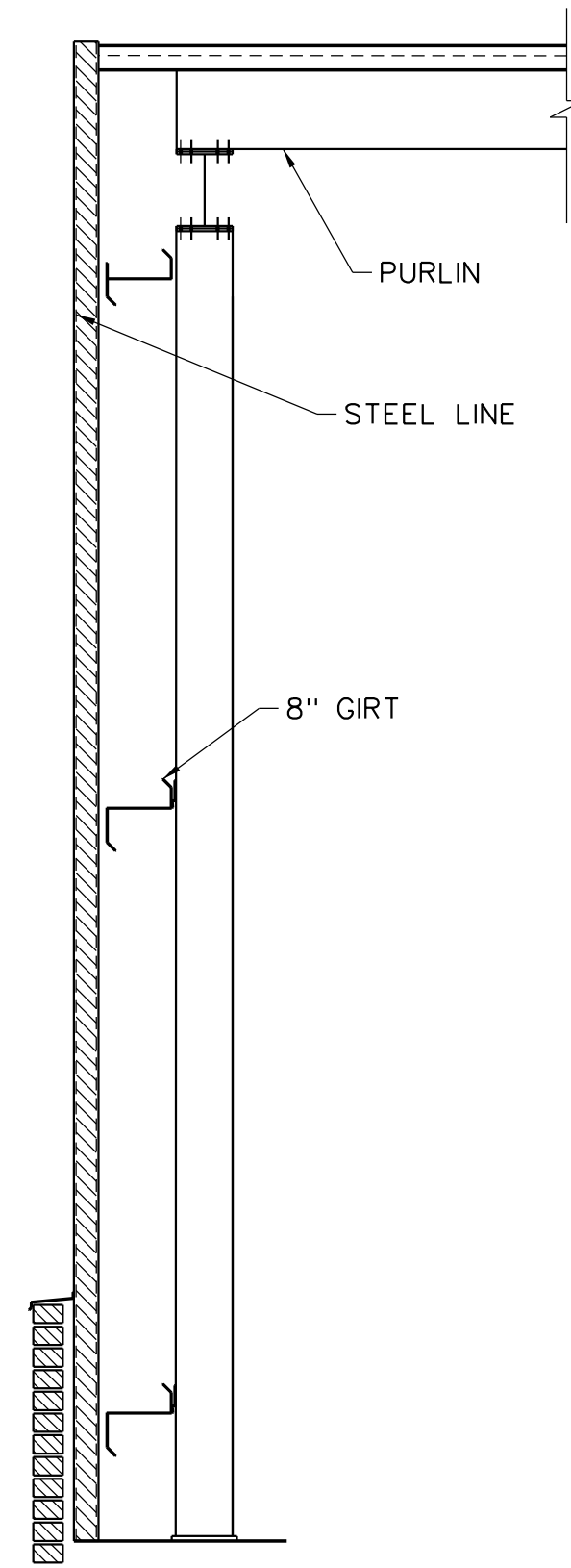
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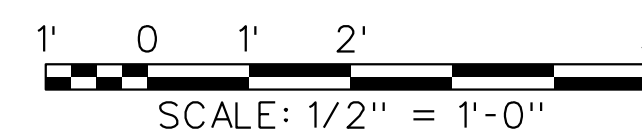
**A** STEEL LINE 2 WALL SECTION  
S205 SCALE: 1/2" = 1'-0"



**B** STEEL LINE 1 WALL SECTION  
S205 SCALE: 1/2" = 1'-0"



**C** WALL SECTION  
S205 SCALE: 1/2" = 1'-0"



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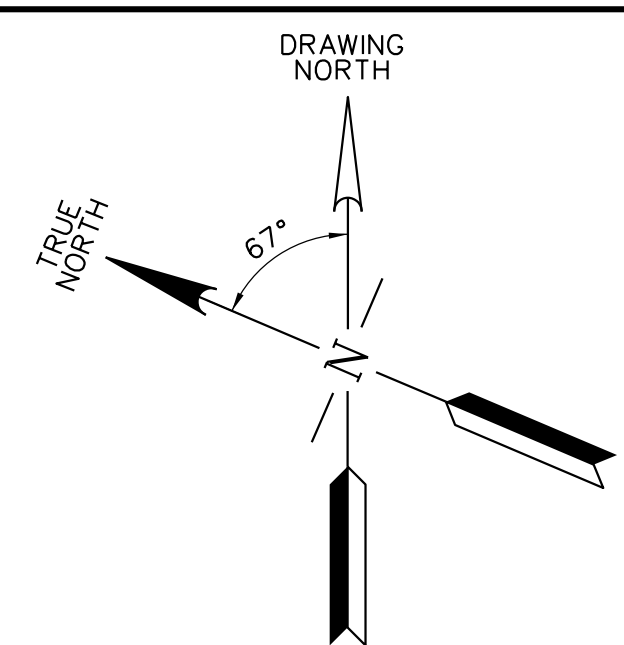
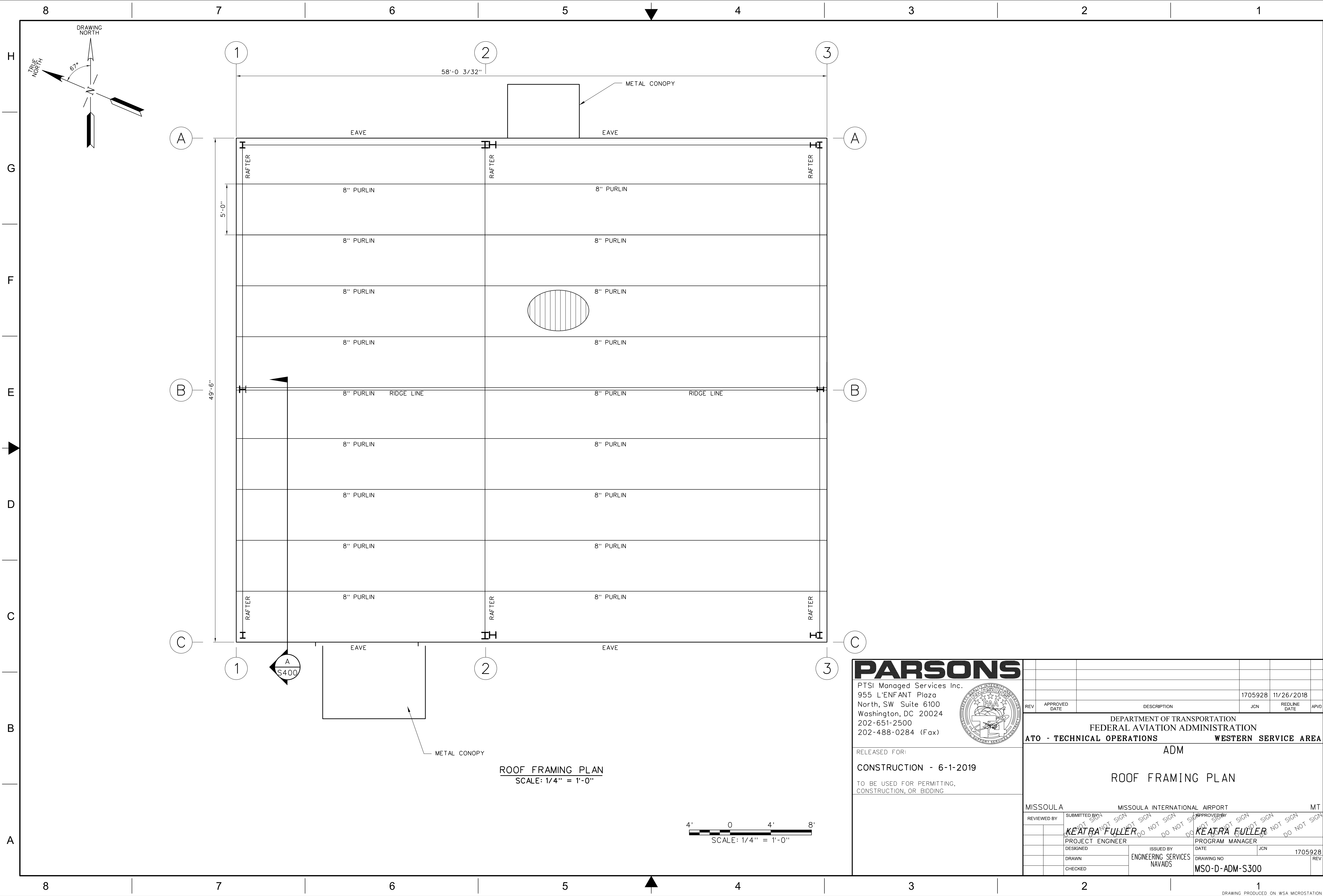
TO BE USED FOR PERMITTING,  
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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>STRUCTURAL WALL SECTIONS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	1705928
	KEATRA FULLER	KEATRA FULLER			REV
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	1705928
DRAWN	ENGINEERING SERVICES	NAVAIDS	DRAWING NO		REV
CHECKED			MSO-D-ADM-S205		

ISSUED FOR CONSTRUCTION

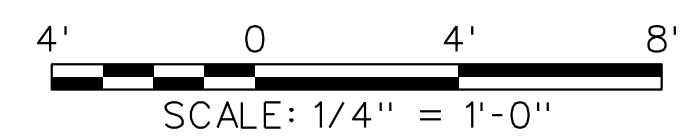
micro-station-205.dgn 4/26/2019 4:33:03 PM Healy CTR Guide

8 7 6 5 4 3 2 1



A  
S400

**ROOF FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



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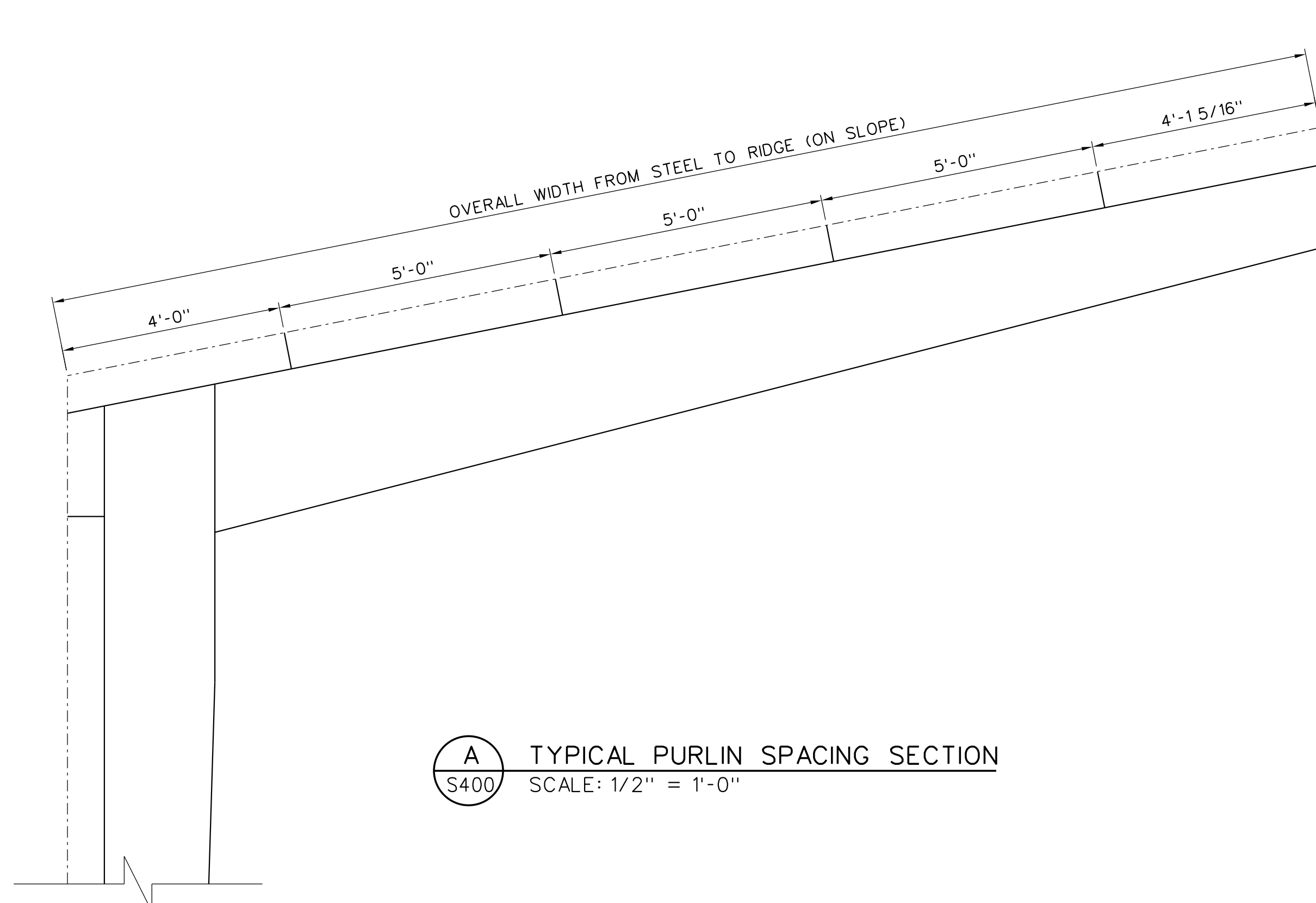
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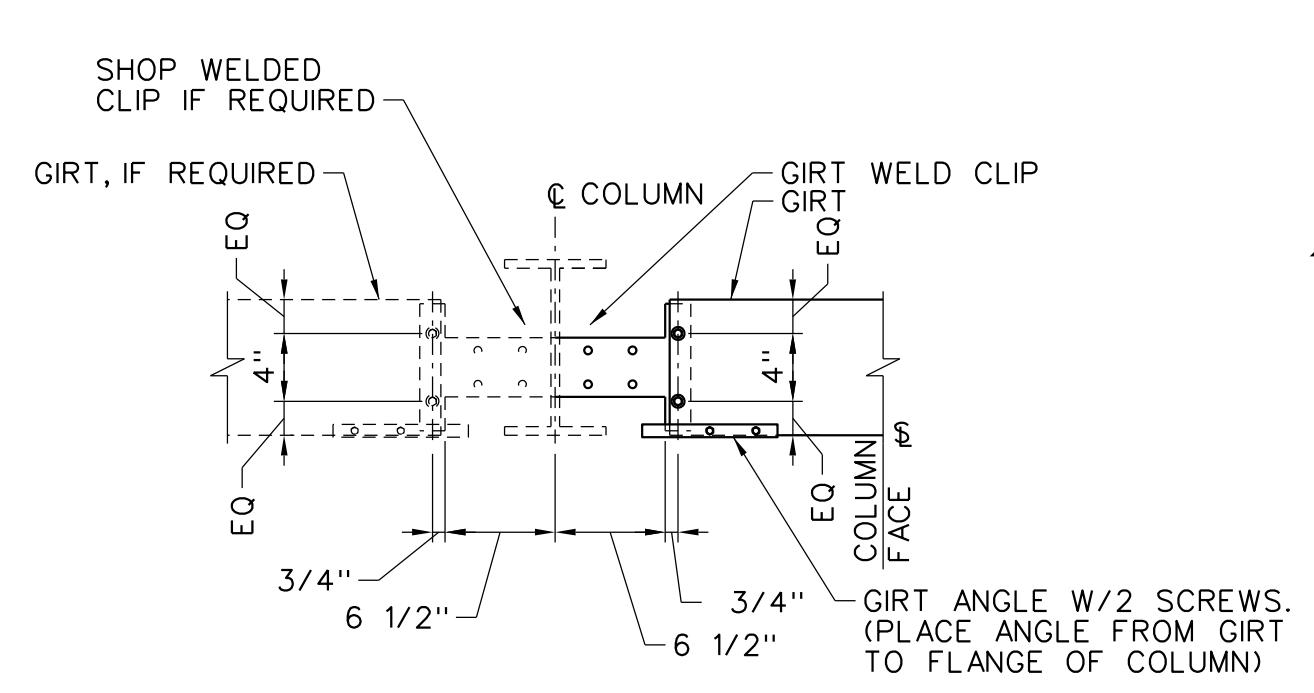
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DEPARTMENT OF TRANSPORTATION <b>FEDERAL AVIATION ADMINISTRATION</b> <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b>					
<b>ADM</b> <b>ROOF FRAMING PLAN</b>					
MISSOULA      MISSOULA INTERNATIONAL AIRPORT      MT					
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	DATE	JCN	1705928	
	ENGINEERING SERVICES				
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		<b>MSO-D-ADM-S300</b>			

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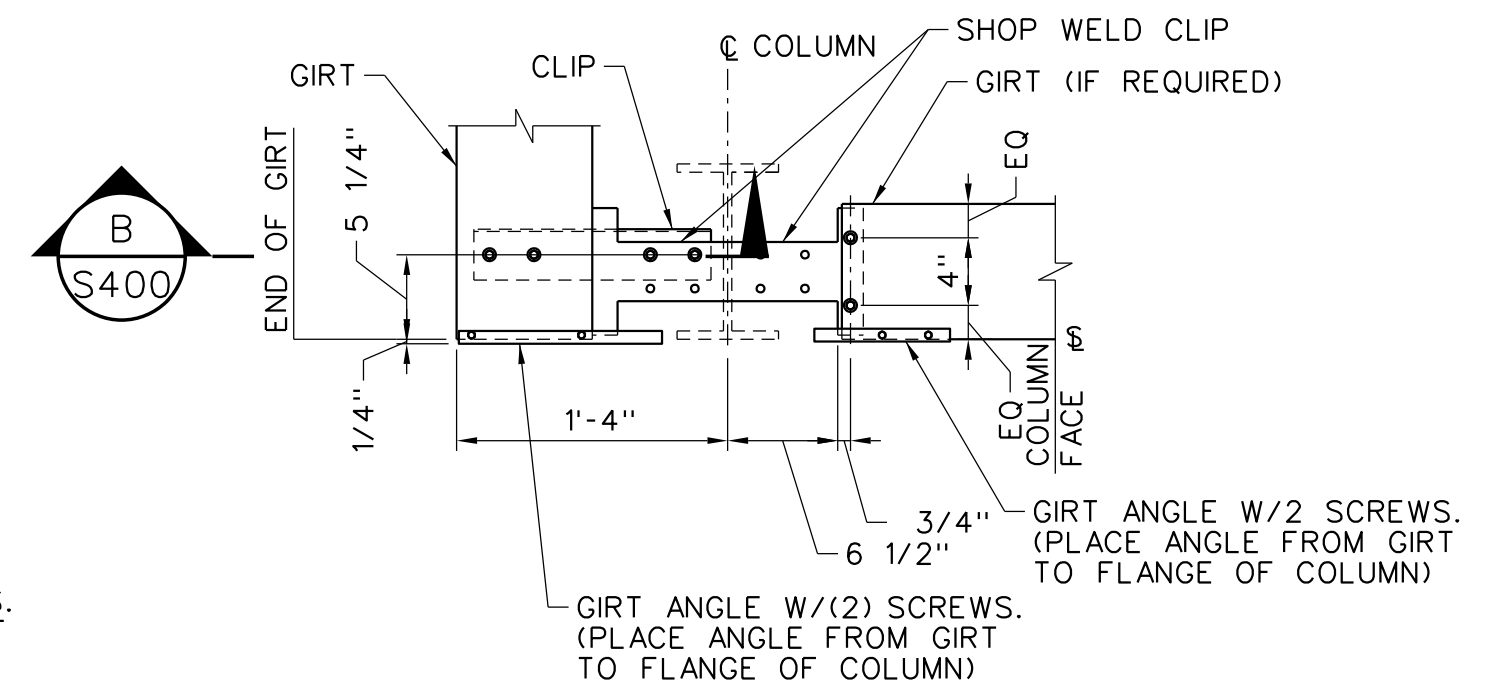


**A** TYPICAL PURLIN SPACING SECTION  
S400 SCALE: 1/2" = 1'-0"



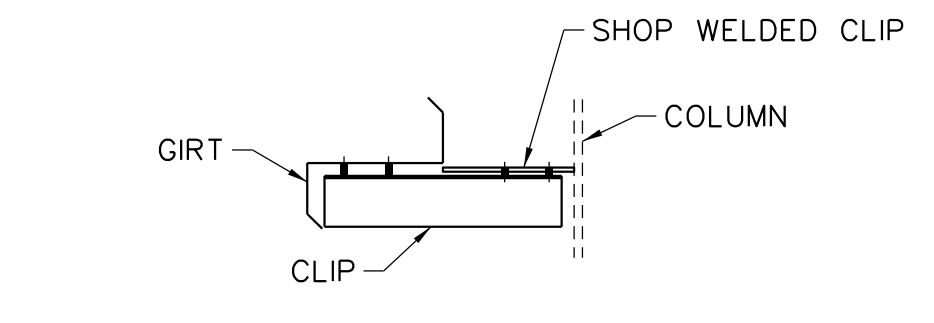
**1** WELDED GIRT CLIP DETAIL  
S400 SCALE: 1" = 1'-0"

NOTES:  
RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE

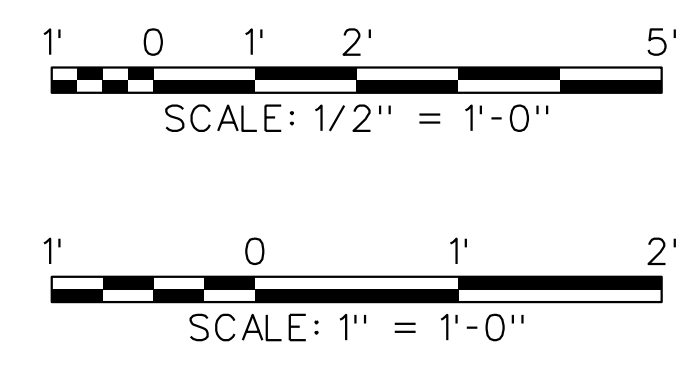


**2** FLUSH GIRTS AT CORNER  
S400 SCALE: 1" = 1'-0"

NOTES:  
RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE



**B** FLUSH GIRTS AT CORNER SECTION  
S400 SCALE: 1" = 1'-0"



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			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM MISCELLANEOUS SECTIONS AND DETAILS SHEET 1 OF 3					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-S400			

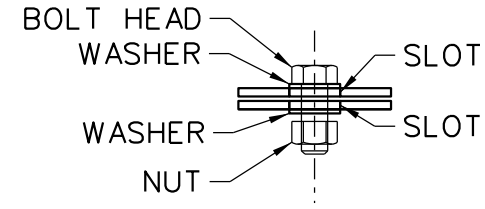


**TYPICAL WASHER REQUIREMENTS**  
**ERECTOR NOTES**

(UNLESS NOTED OTHERWISE ON DRAWINGS)

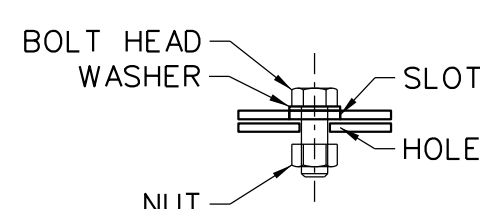
**NOTES:**

NO WASHERS REQUIRED AT LAPPED PURLINS OR GIRTS.



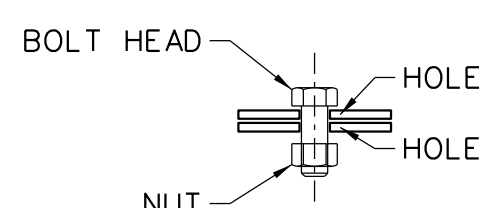
**SLOT TO SLOT CONNECTIONS**

WASHER ARE REQUIRED ON BOTH SIDES OF MATERIAL IF SLOTS ARE USED ON BOTH SIDES (SEE DETAIL AT RIGHT FOR LAPPED ZEE MEMBERS)



**SLOT TO HOLE CONNECTIONS**

ONE WASHER REQUIRED ON SLOTTED SIDE ONLY.



**HOLE TO HOLE CONNECTIONS**

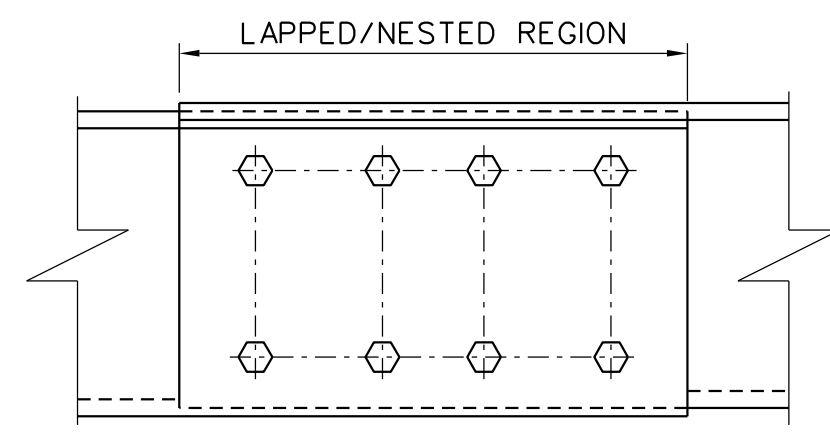
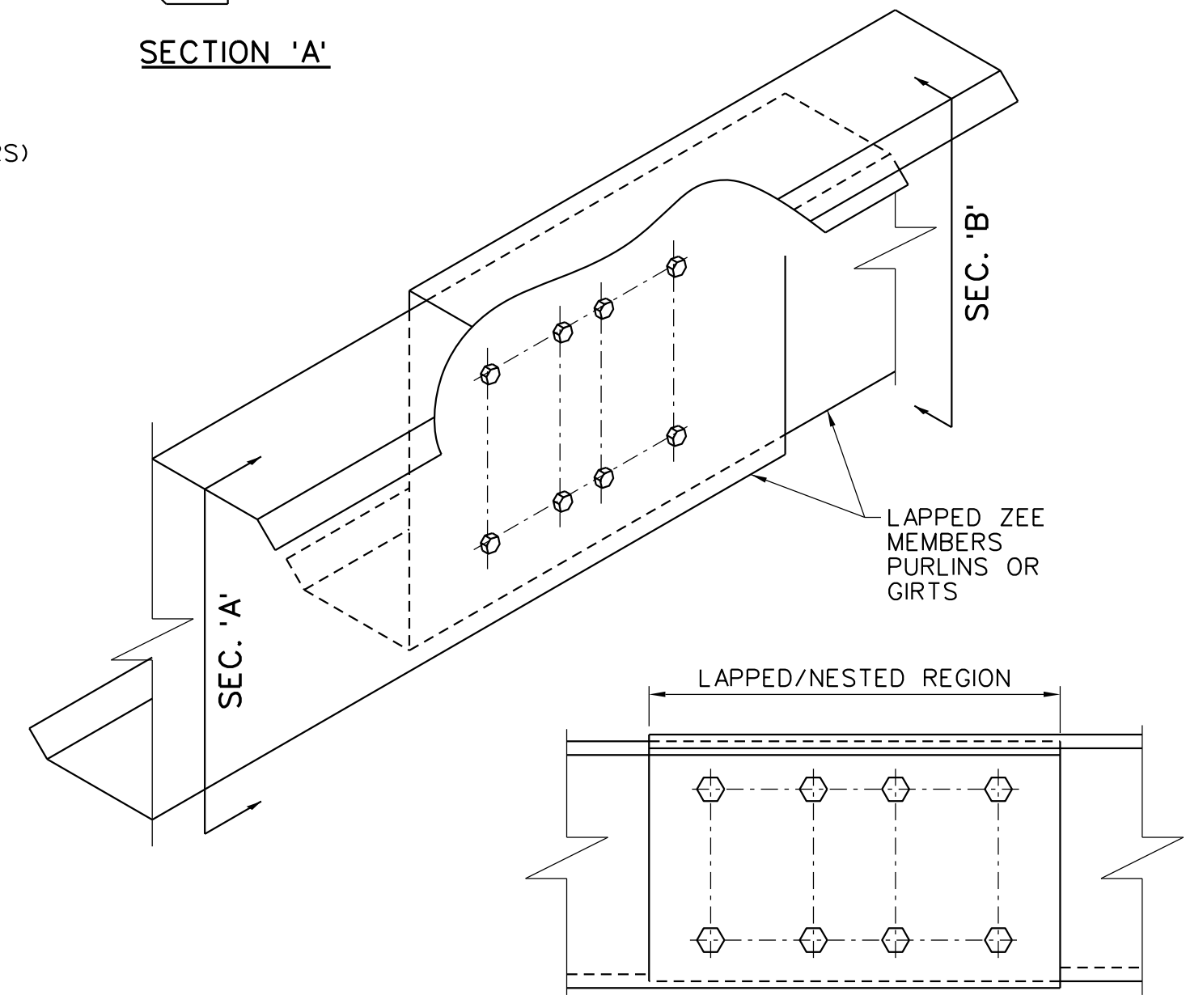
NO WASHERS ARE REQUIRED WHEN SLOTS ARE NOT USED.

**WASHER PART NUMBERS**

- H0200 - 1/2" FLAT WASHER
- H0210 - 5/8" FLAT WASHER
- H0220 - 3/4" FLAT WASHER
- H0230 - 7/8" FLAT WASHER
- H0240 - 1" FLAT WASHER
- H0250 - 1-1/8" FLAT WASHER
- H0260 - 1-1/4" FLAT WASHER

BOLT/NUT ASSEMBLY REQUIRED AT LAPPED ZEE MEMBERS. (NO WASHERS REQUIRED)

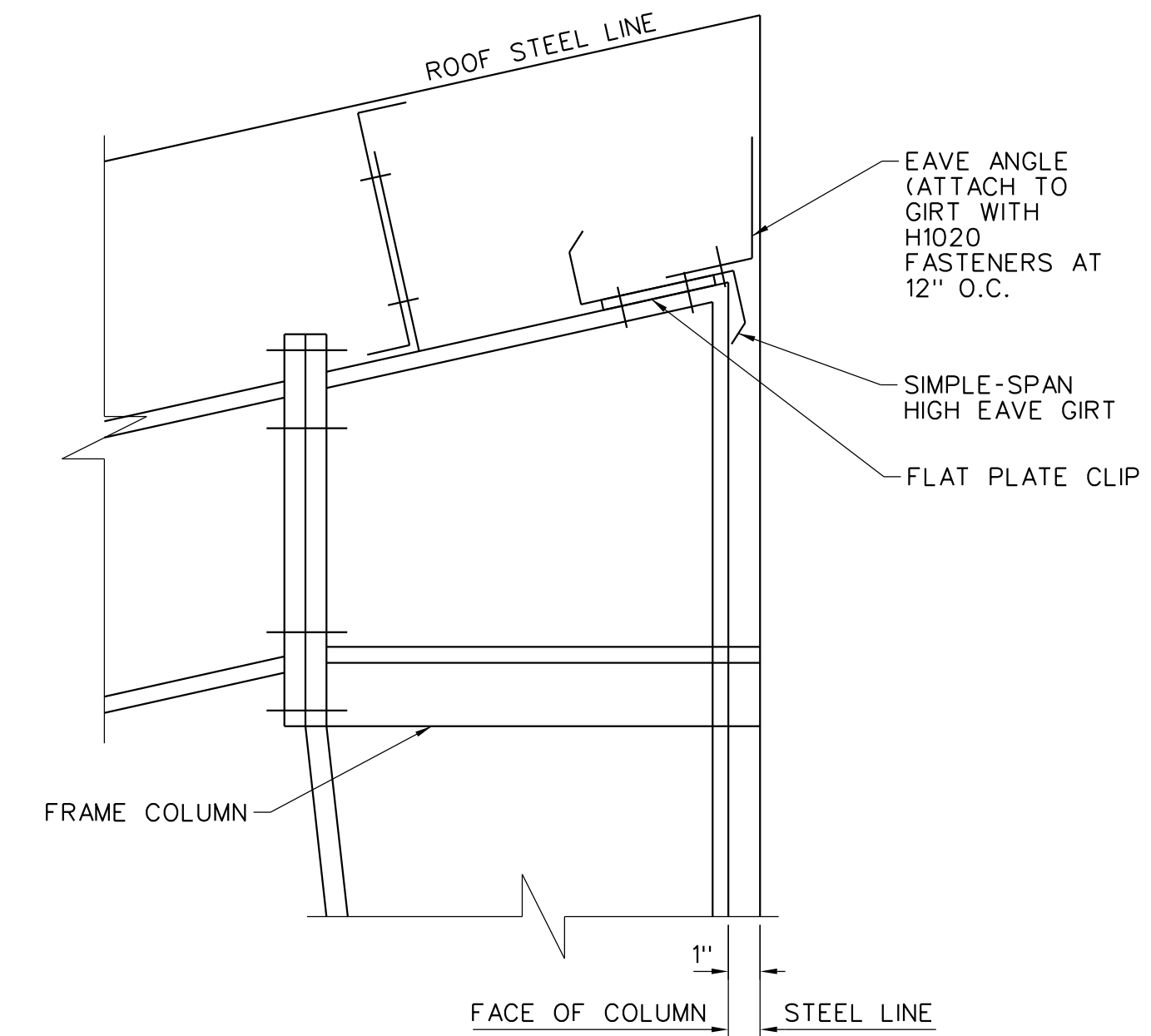
**SECTION 'A'**



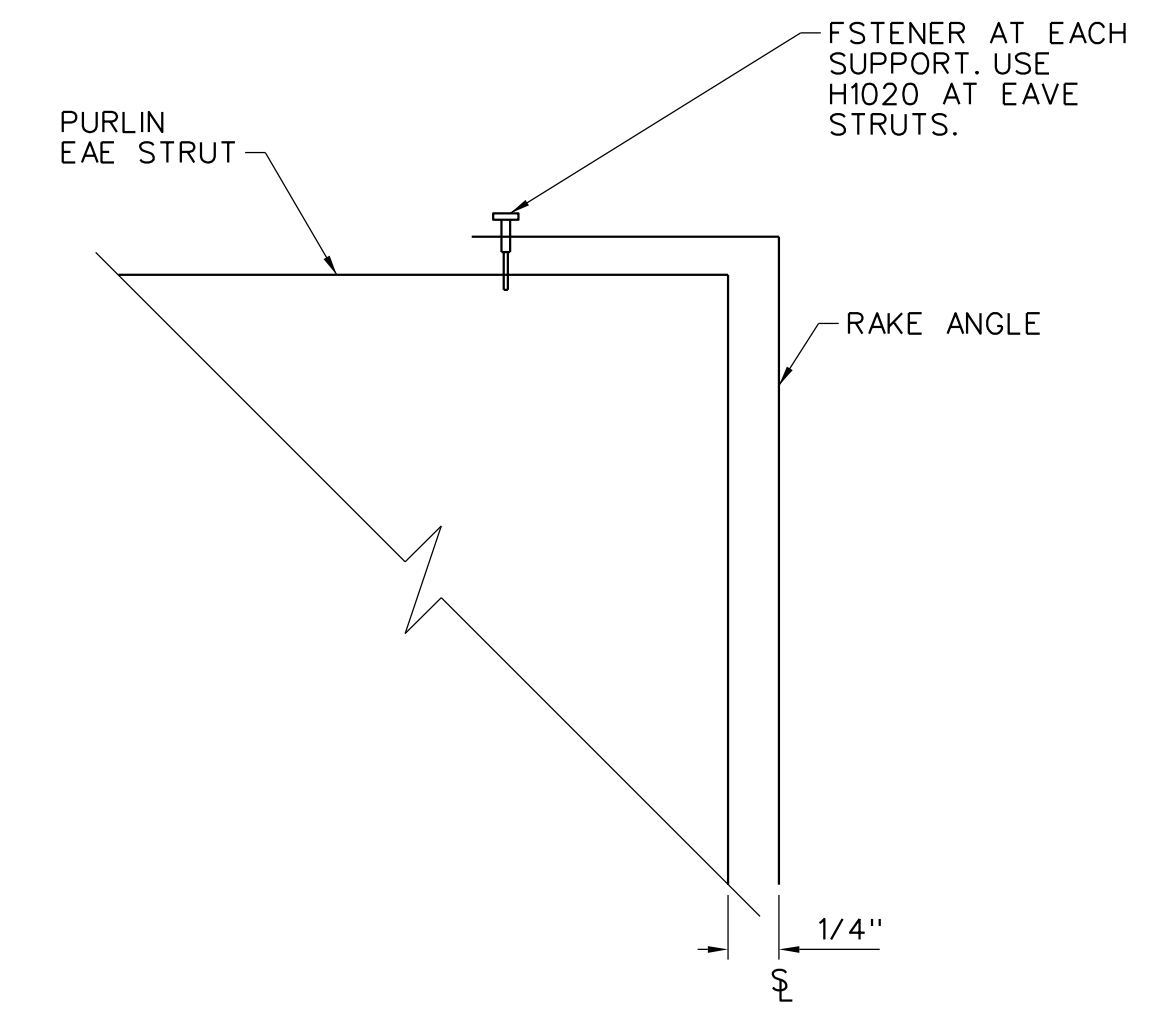
**SECTION 'B'**

**DETAIL NOTES:**  
NO WASHERS REQUIRED AT BOLTS USED IN THE LAPPED REGIONS OF ZEE MEMBERS.

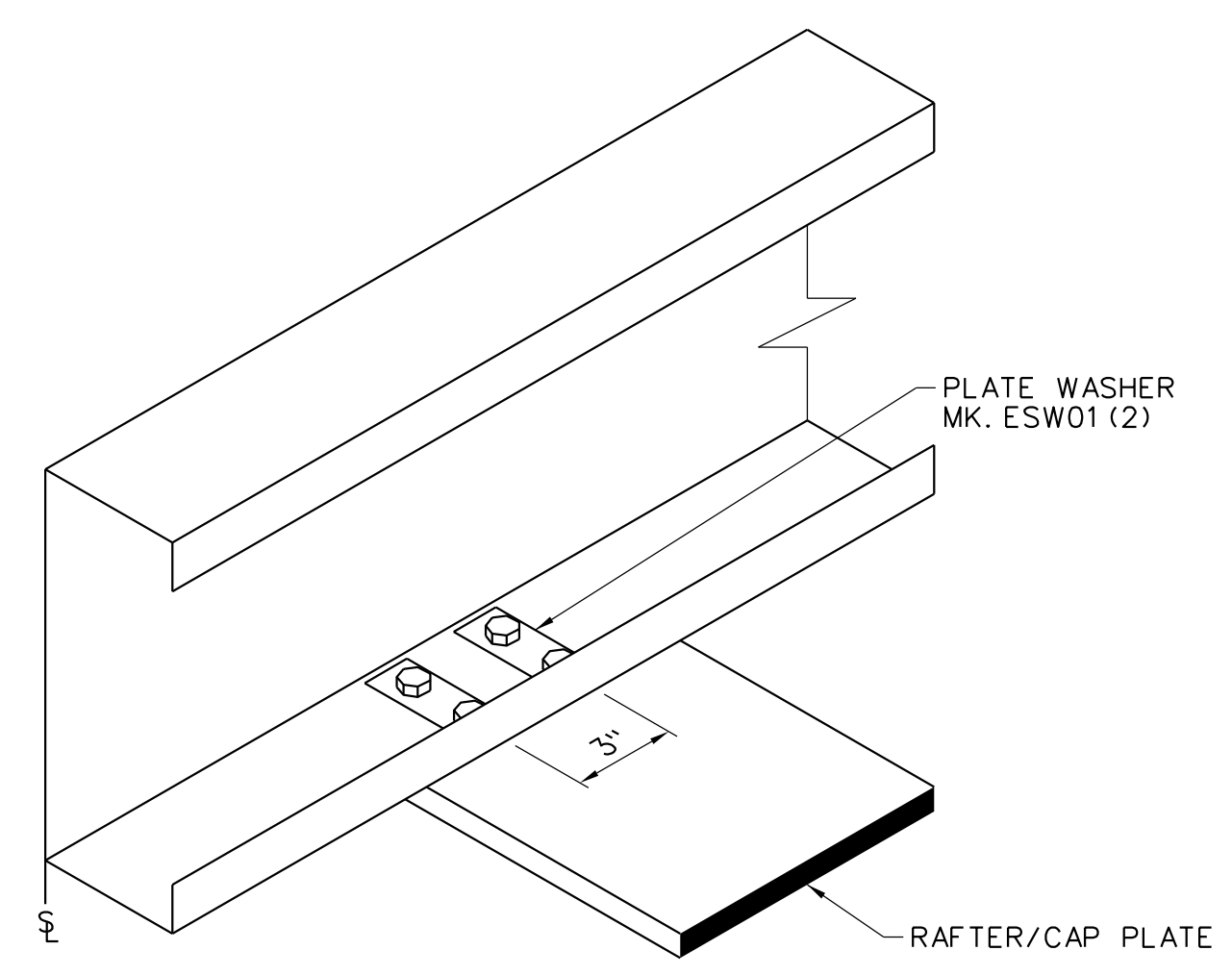
**1** PURLIN & LAPPED SPLICE DETAIL  
SCALE: N.T.S.



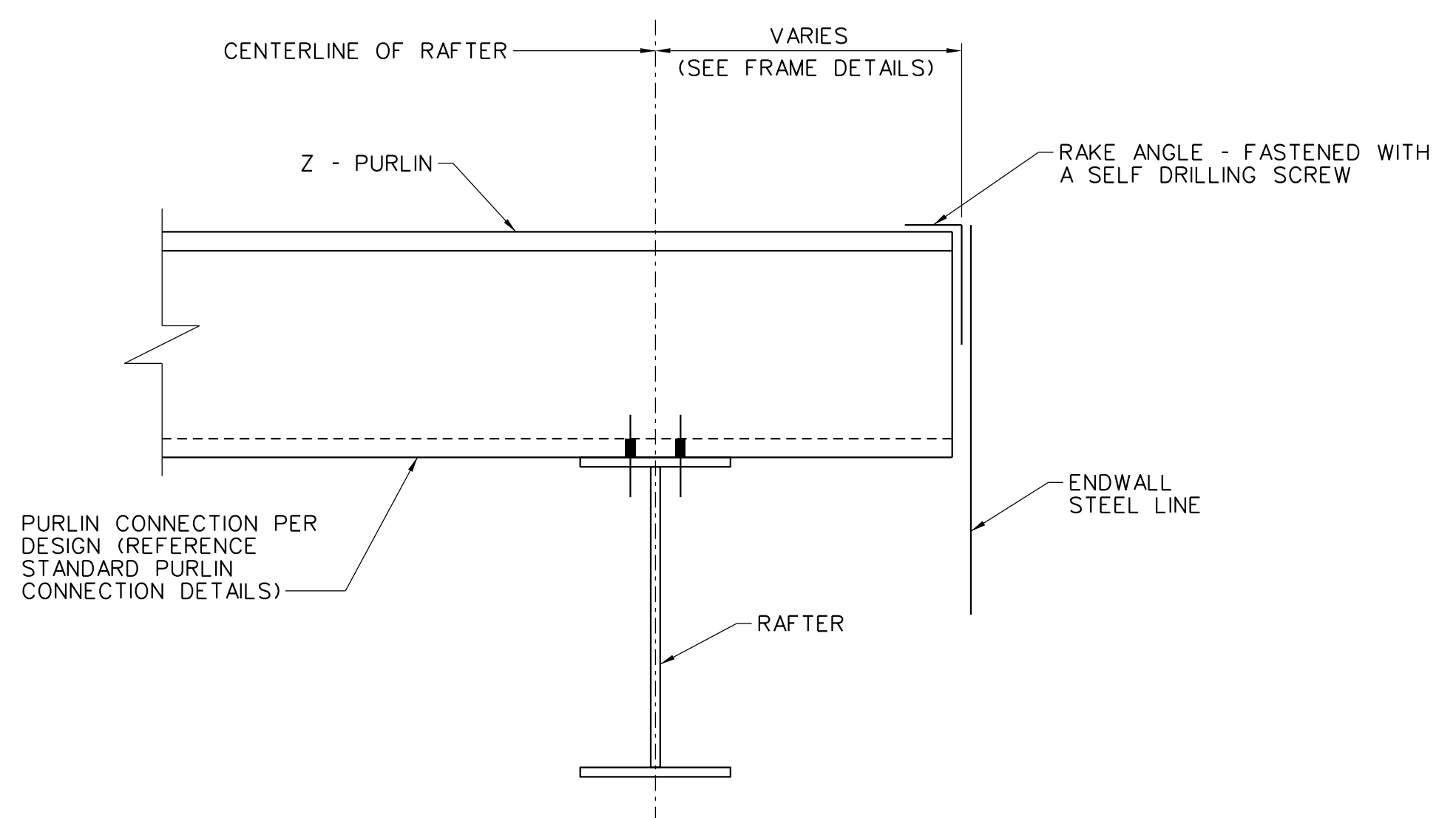
**2** INSET - HIGH EAVE GIRT  
SCALE: N.T.S.



**3** EAVE STRUT AT ENDWALL  
SCALE: N.T.S.

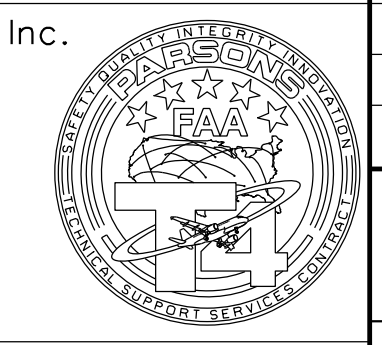


**4** LOW EAVE AT RIGID FRAME  
SCALE: N.T.S.



**5** PURLINS AT ENDWALL  
SCALE: N.T.S.

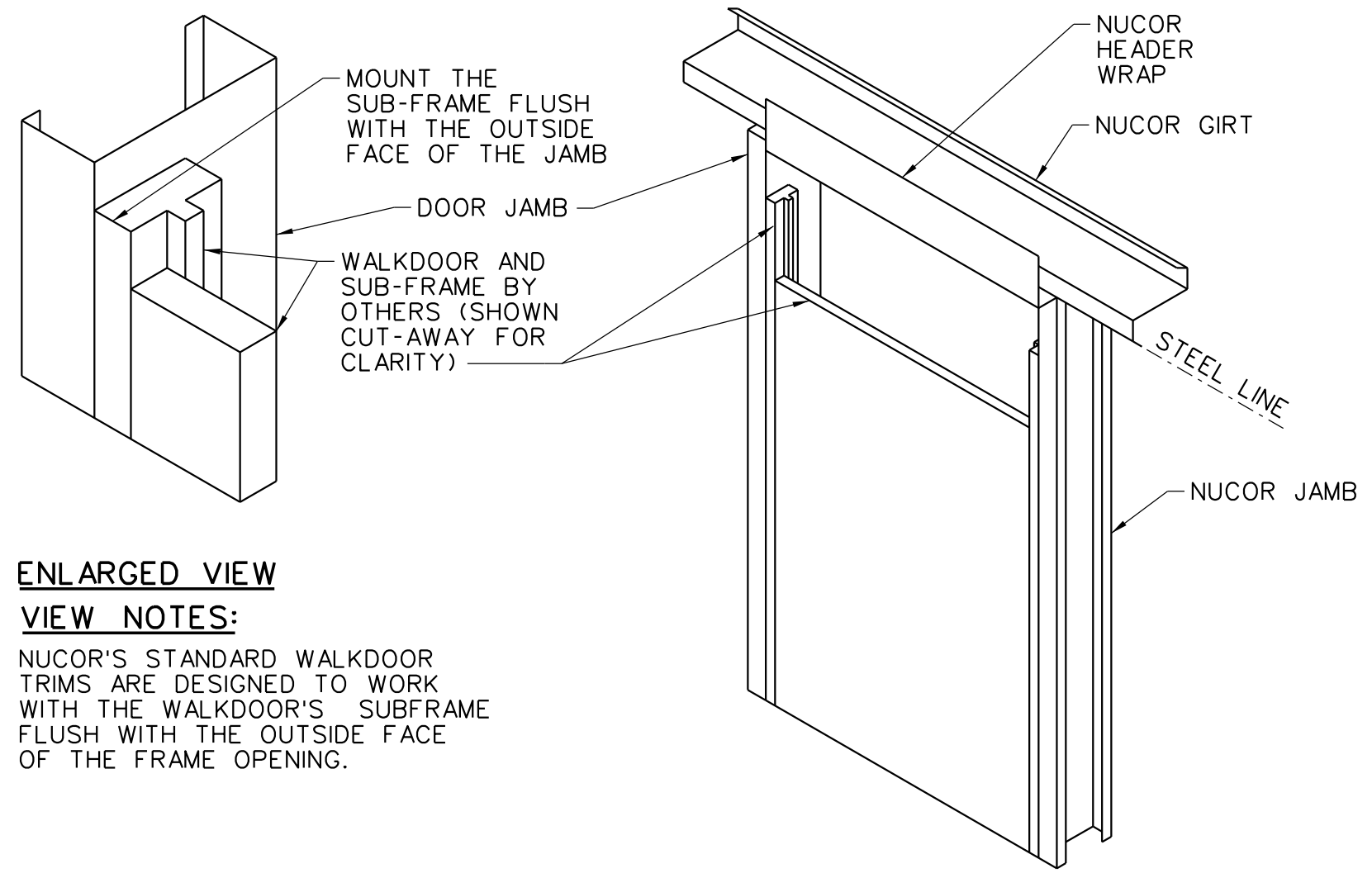
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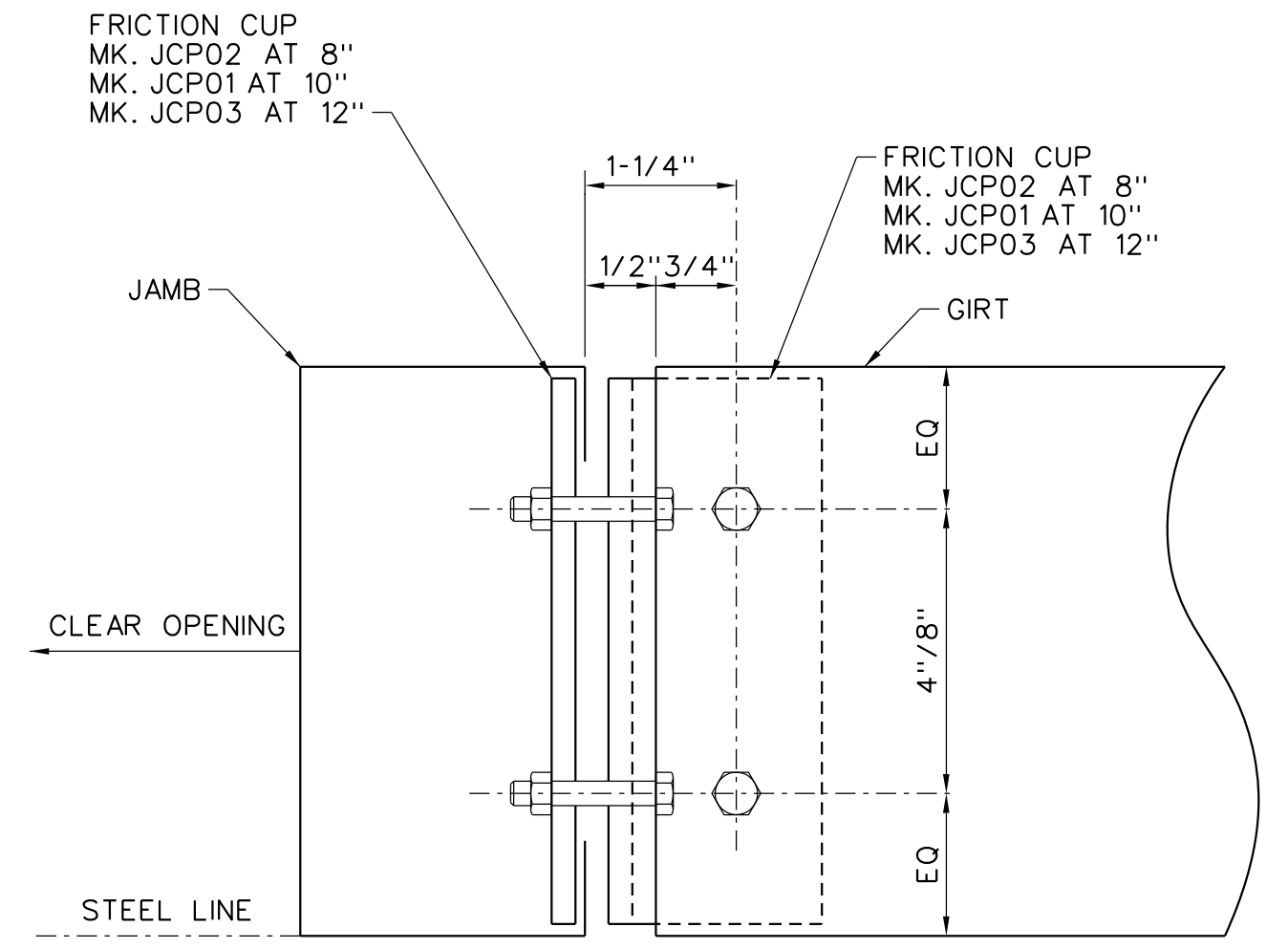
REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b>					
ADM <b>MISCELLANEOUS SECTIONS AND DETAILS</b> SHEET 2 OF 3					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-S401			



**ENLARGED VIEW**  
**VIEW NOTES:**  
 NUCOR'S STANDARD WALKDOOR TRIMS ARE DESIGNED TO WORK WITH THE WALKDOOR'S SUBFRAME FLUSH WITH THE OUTSIDE FACE OF THE FRAME OPENING.

**1** CG0016-WALKDOOR FRAMED OPENING DETAIL  
 SCALE: N.T.S.

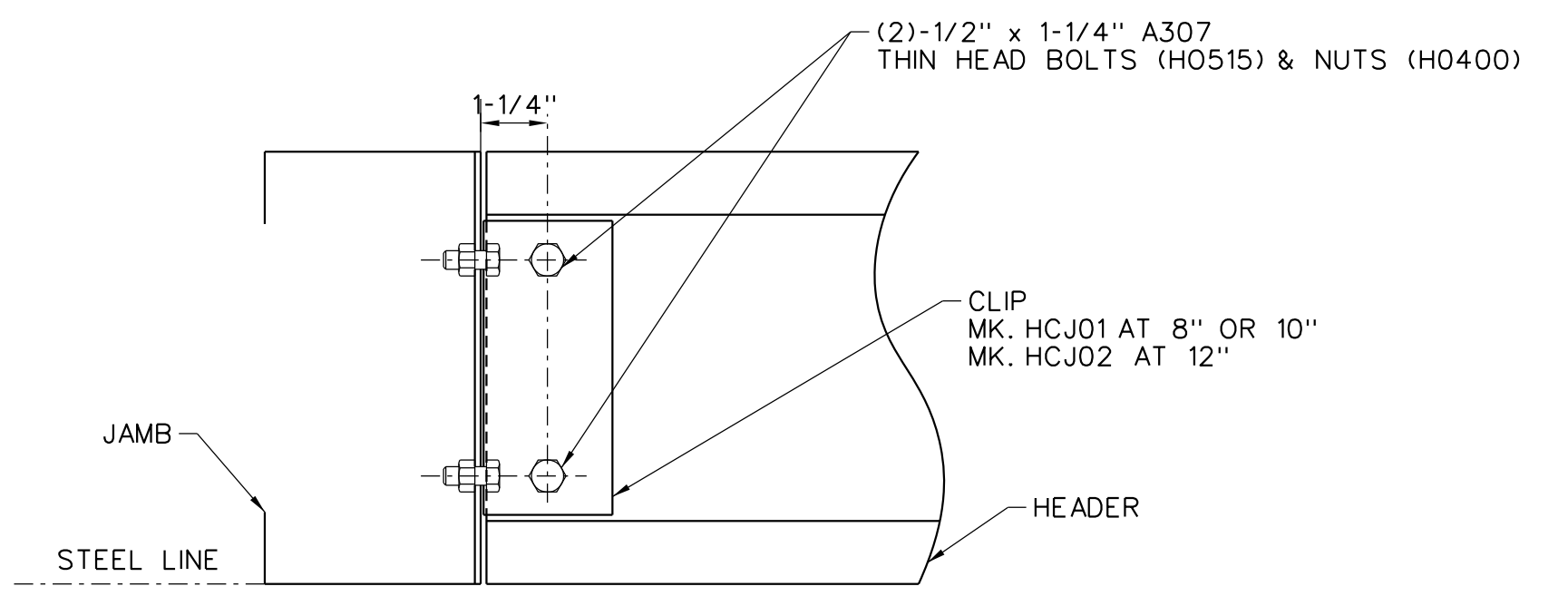
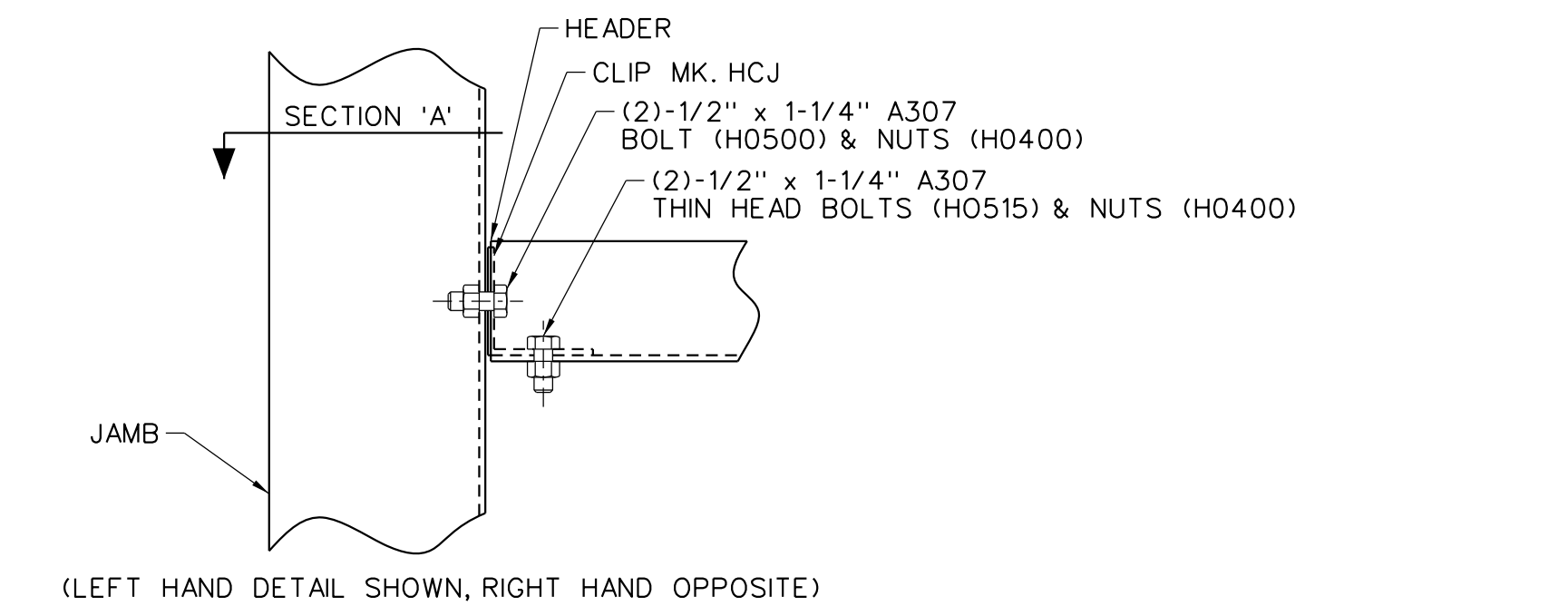
- DETAIL NOTES:**
1. (WALKDOOR NOT PROVIDED BY NBS) SEE THE WALL ELEVATIONS FOR JAMB AND GIRT PART NUMBERS.
  2. SEE THE WALL SHEETING ELEVATIONS AND THE DETAILS FOR TRIM CONDITIONS AND PART NUMBERS.
  3. SEE THE WALL STRUCTURAL ELEVATIONS AND DETAILS FOR JAMB AND GIRT CONNECTIONS.



(RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE)

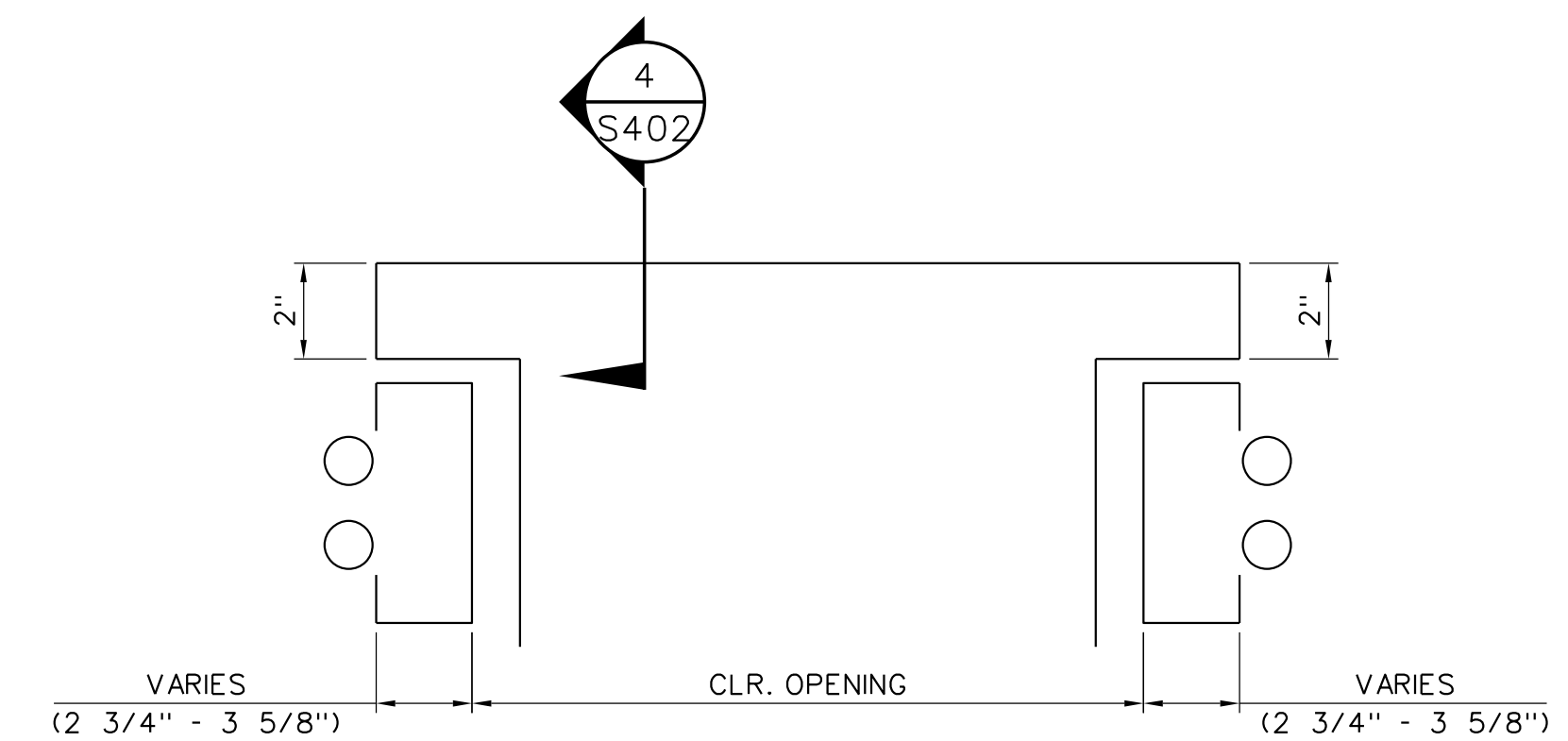
**2** CG0060-GIRT TO JAMB CONNECTION  
 SCALE: N.T.S.

- DETAIL NOTES:**
1. USE (4)-1/2" x 1-1/4" A307 BOLTS H0500/NUTS H0400 REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS.
  2. INSTALL CLIPS ON JAMB BEFORE STANDING JAMB.
  3. USE LEVEL TO ALIGN GIRTS ADJUST CLIP AS REQUIRED.



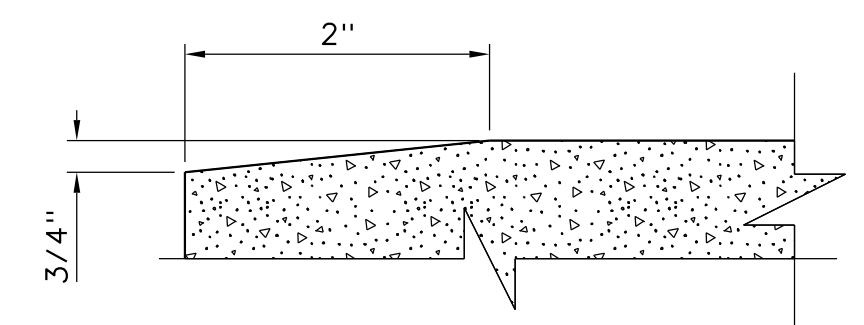
**3** CG0050-HEADER TO JAMB CONNECTION  
 SCALE: N.T.S.

- DETAIL NOTES:**
1. (2)-1/2" x 1-1/4" A307 BOLTS H0500/NUTS H0400 REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS.



**PLAN**

(USE (2)-1/2" DIA. EXPANSION BOLTS PER COLUMN)



**SECTION**

**4** TYPICAL OVERHEAD DOOR FRAMED OPENING  
 NOT TO SCALE (RECOMMENDED)

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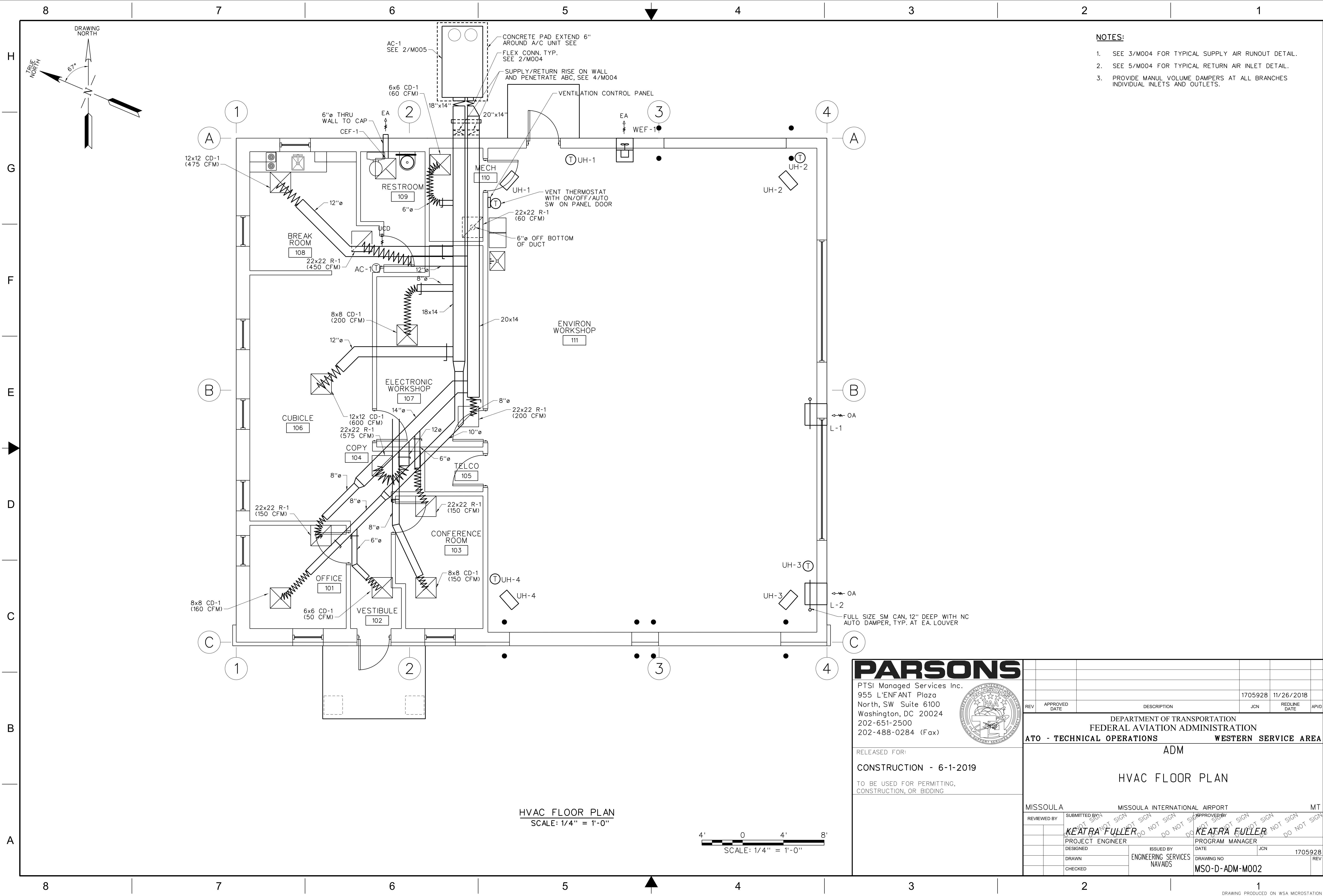


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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM MISCELLANEOUS SECTIONS AND DETAILS SHEET 3 OF 3					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	DATE	JCN	1705928	
	ENGINEERING SERVICES				
DRAWN	NAVAIDS	DRAWING NO	JCN	1705928	
CHECKED		MSO-D-ADM-S402			

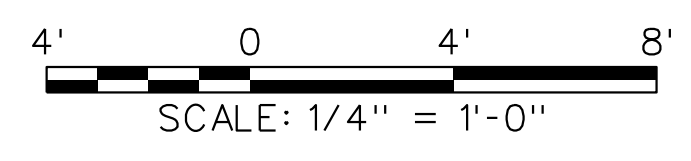






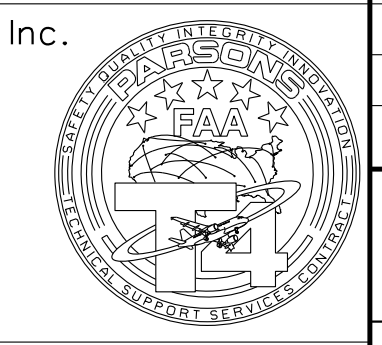
- NOTES:**
- SEE 3/M004 FOR TYPICAL SUPPLY AIR RUNOUT DETAIL.
  - SEE 5/M004 FOR TYPICAL RETURN AIR INLET DETAIL.
  - PROVIDE MANUL VOLUME DAMPERS AT ALL BRANCHES INDIVIDUAL INLETS AND OUTLETS.

**HVAC FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



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<b>HVAC FLOOR PLAN</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	JCN	1705928		
DRAWN	NAVAIDS	DRAWING NO	1705928		
CHECKED		MSO-D-ADM-M002	REV		

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### PACKAGE AIR CONDITIONING UNIT SCHEDULE

TAGS	SERVES	MANUFACTURER	MODEL	FAN			COOLING CAPACITY			HEATING CAPACITY		ELECTRICAL DATA			REFRIG.	OPER WEIGHT (LBS)	NOTES
				CFM	ESP (IN H2O)	HP	TOTAL (MBH)	SENS (MBH)	SEER	INPUT (MBH)	OUTPUT (MBH)	VOLTAGE /PHASE	UNIT MOCP	UNIT MCA			
AC-1	OFFICE	CARRIER	48HC05	1645	1	1.5	48.5	38.1	15.6	90	73.5	230/1	60	41	R410A	600	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

**NOTES**

1. MERV 8 FILTERS	9. LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF
2. CONFORT LINK CONTROLS	10. LOW AMBIENT COOLING PACKAGE
3. HINGED ACCESS DOORS	11. UNIT MOUNTED DISCONNECT SWITCH
4. STAINLESS STEEL DRAIN PAN	12. POWERED CONVENIENCE OUTLET
5. STANDARD DRIVE	13. COOLING CAPACITY AT 95 DEG. DB/70 DEG. WB AMBIENT, 80 DEG. DB/67 DEG. WB COIL
6. 2 STAGE HEAT	14. FOIL FACED INULATED CABINET
7. STAINLESS STEEL HEAT EXCHANGER	15. SET MIN. OUTSIDE AIR AT 110 CFM
8. HAIL GUARDS	

### DIFFUSERS, REGISTERS, AND GRILLES

PLAN MARK	TYPE	MANUFACTURER	MODEL	BORDER TYPE	NOTES
CD-1	CEILING, MOD CORE	TITUS	MCD	3	1,2,3,5
R-1	CEILING, EGGRATE	TITUS	50F	1	1,2,4

**NOTES**

1. WHITE FINISH	4. 1/2"x 1/2"x 1" GRID
2. LAY-IN CEILING	5. OBD
3. BLOW PATTERN AS SHOWN ON DRAWINGS	

### EXHAUST FAN SCHEDULE

DESCRIPTION	SERVES	MAKE/MODEL	CFM	SP (IN H2O)	MAX RPM	V	PH	HP	REMARKS
WEF-1	SHOP	GREENHECK SE1-16-AVC/7	2400	0.3	1725	115	1	3/4	FURNISH WITH WALL HOUSING, MOTOR GUARD, BACKDRAFT DAMPER, WEATHER HOOD
CEF-1	REST ROOM	GREENHECK SP-A90-VG	90	0.3	887	115	1	1	FURNISH WITH BACKDRAFT DAMPER, ECM MOTOR, SPEED CONTROL, DECORATIVE GRILLE, HOODED WALL CAP

### ELECTRICAL UNIT HEATER SCHEDULE

TAG	DESCRIPTION	SERVES	MAKE/MODEL	KW	V	PH	WEIGHT (LBS)	REMARKS
UH-1	ELECTRIC UNIT HEATER	SHOP	REZNOR EGE5 5	5	208	1	20	WALL MOUNT BRACKET, 24V T-STAT, FAN OFF/AUTO SWITCH, CONTROL XFMR, DISCONNECT SWITCH
UH-2	ELECTRIC UNIT HEATER	SHOP	REZNOR EGE5 5	5	208	1	20	WALL MOUNT BRACKET, 24V T-STAT, FAN OFF/AUTO SWITCH, CONTROL XFMR, DISCONNECT SWITCH
UH-3	ELECTRIC UNIT HEATER	SHOP	REZNOR EGE5 5	5	208	1	20	WALL MOUNT BRACKET, 24V T-STAT, FAN OFF/AUTO SWITCH, CONTROL XFMR, DISCONNECT SWITCH
UH-4	ELECTRIC UNIT HEATER	SHOP	REZNOR EGE5 5	5	208	1	20	WALL MOUNT BRACKET, 24V T-STAT, FAN OFF/AUTO SWITCH, CONTROL XFMR, DISCONNECT SWITCH

### LOUVERS

PLAN MARK	TYPE	MANUFACTURER	MODEL	SIZE	NOTES
L-1	WALL INTAKE	RUSKIN	ELF6375F	24"X24"	1
L-2	WALL INTAKE	RUSKIN	ELF6375F	24"X24"	1

**NOTES**

1. SUBMIT COLOR OPTIONS FOR SELECTION BY ARCHITECT.
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			1705928	11/26/2018	

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA  
ADM  
MECHANICAL SCHEDULES

MISSOULA MISSOULA INTERNATIONAL AIRPORT MT

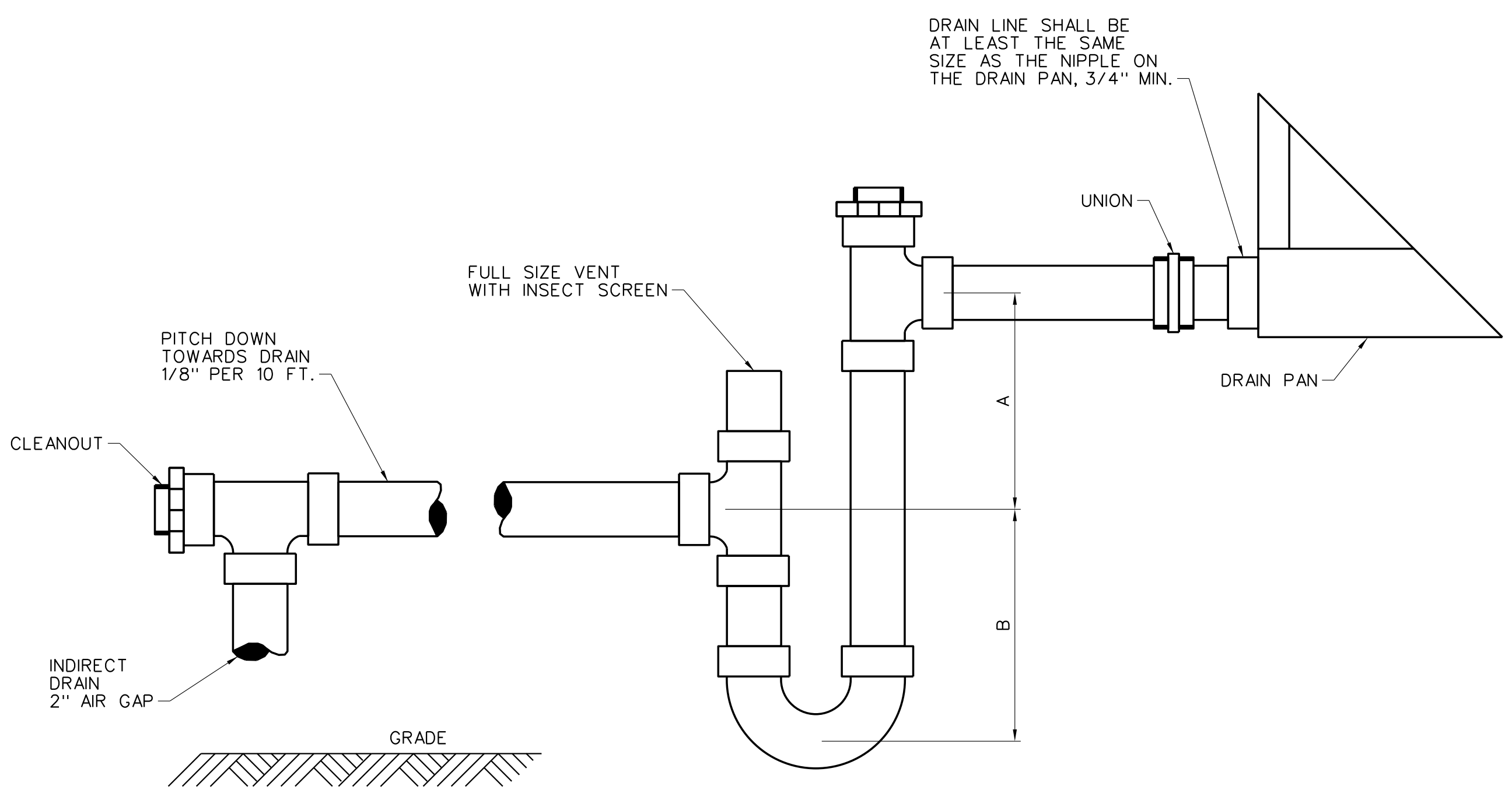
REVIEWED BY	SUBMITTED BY	APPROVED BY
	KEATRA FULLER	KEATRA FULLER
DESIGNED	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	NAVAIDS
DRAWN	DATE	JCN
		1705928
CHECKED	DRAWING NO	REV
	MSO-D-ADM-M003	

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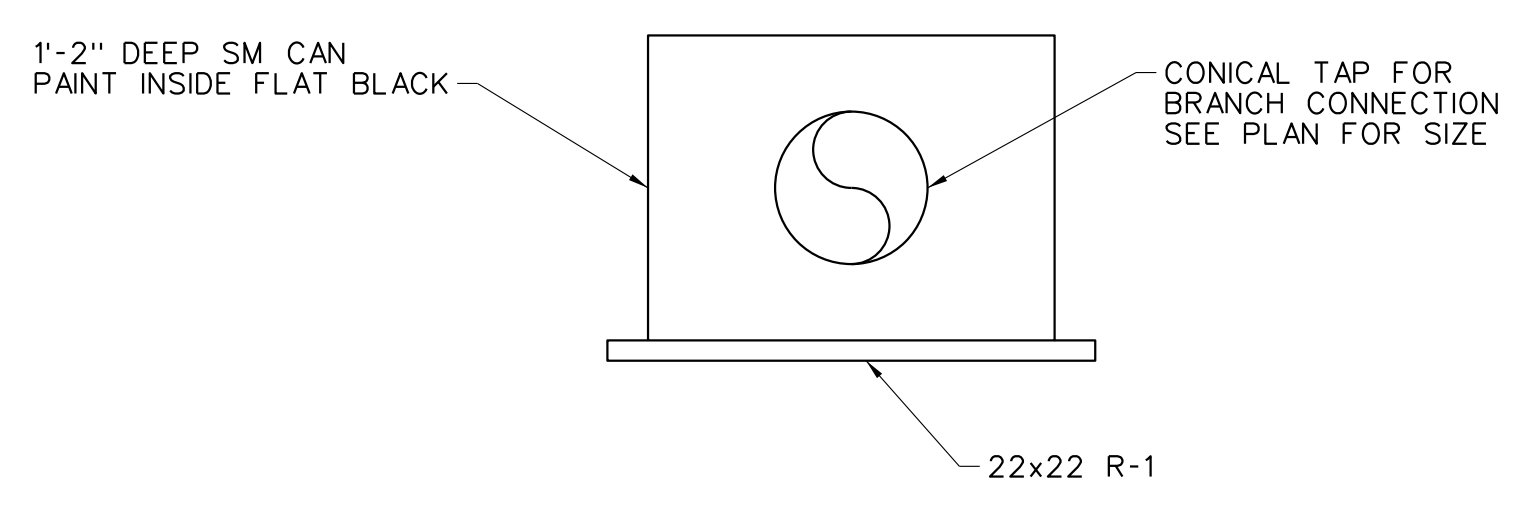
ISSUED FOR CONSTRUCTION

**DETAIL NOTES:**

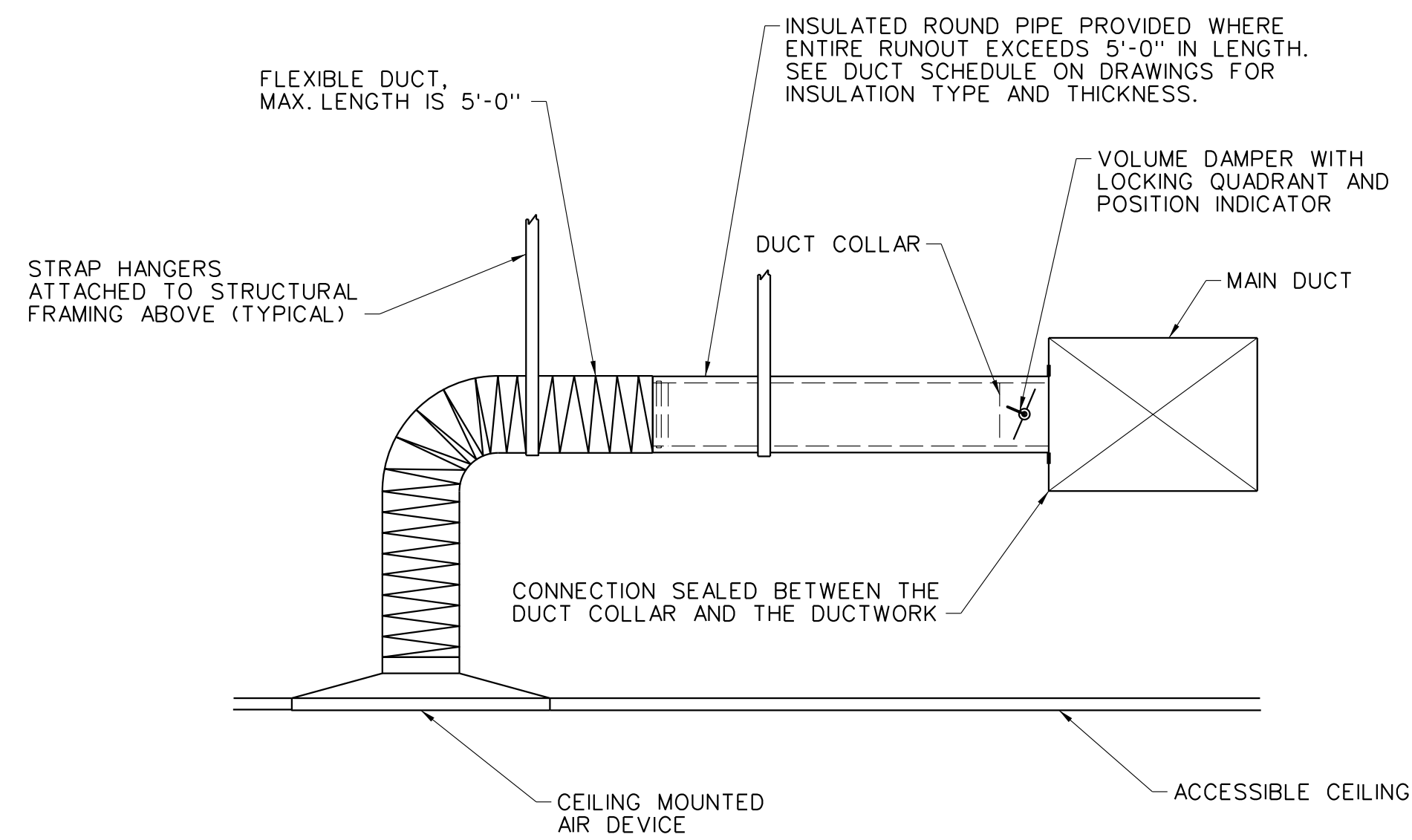
1. VERIFY TRAP DIMENSIONS WITH AC UNIT MANUFACTURER.
2. HEIGHTS BASED ON PRESSURE AT DRAIN OPENING.
3. DRAW-THRU UNITS      BLOW-THRU UNITS  
 A= SP + 1"                      A= 1/2"  
 B= 1/2 SP + 1/2"              B= SP + 1/2"
4. SP TO BE MAXIMUM STATIC PRESSURE (SP) ON DRAIN PAN INCLUDING MAXIMUM FILTER AND COIL PRESSURE DROPS AND DROP OF FUTURE COMPONENTS WHERE APPLICABLE.
5. EXTERNAL CONDENSATE TRAPS NOT REQUIRED WHERE INTERNAL TRAPS ARE PROVIDED WITH THE UNIT OR WHERE CONDENSATE PUMPS ARE PROVIDED.



**1 COOLING COIL CONDENSATE DRAIN PIPING DETAIL**  
M004 NOT TO SCALE

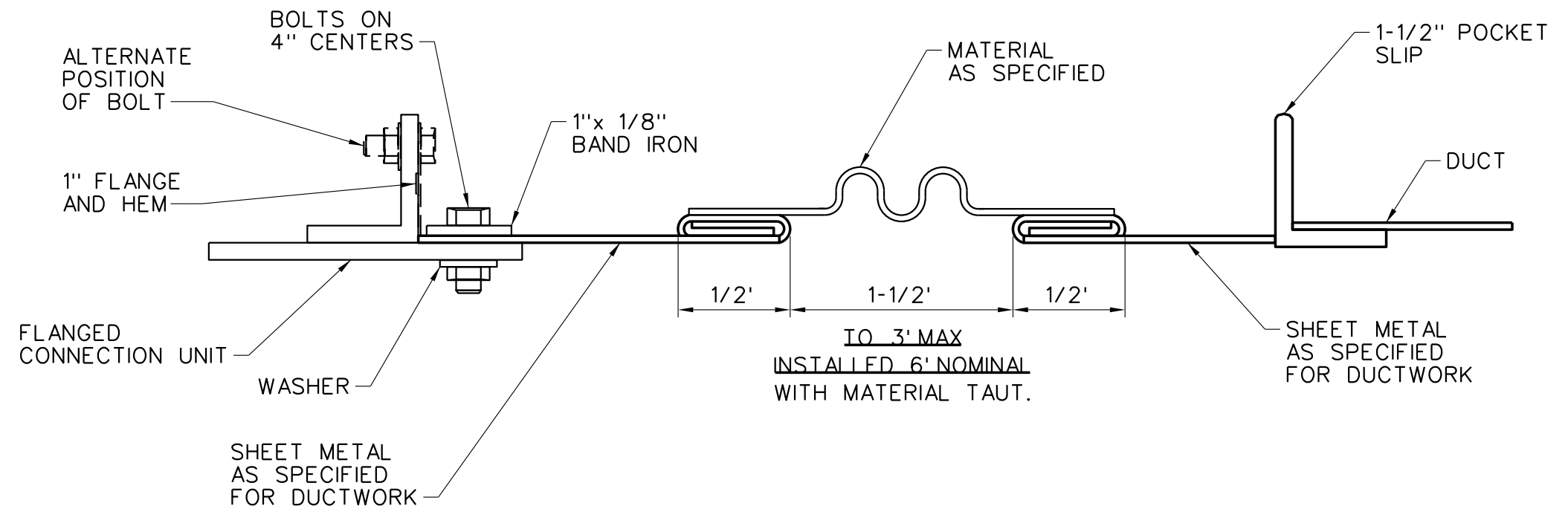


**5 RETURN INLET CONNECTION**  
M004 NOT TO SCALE



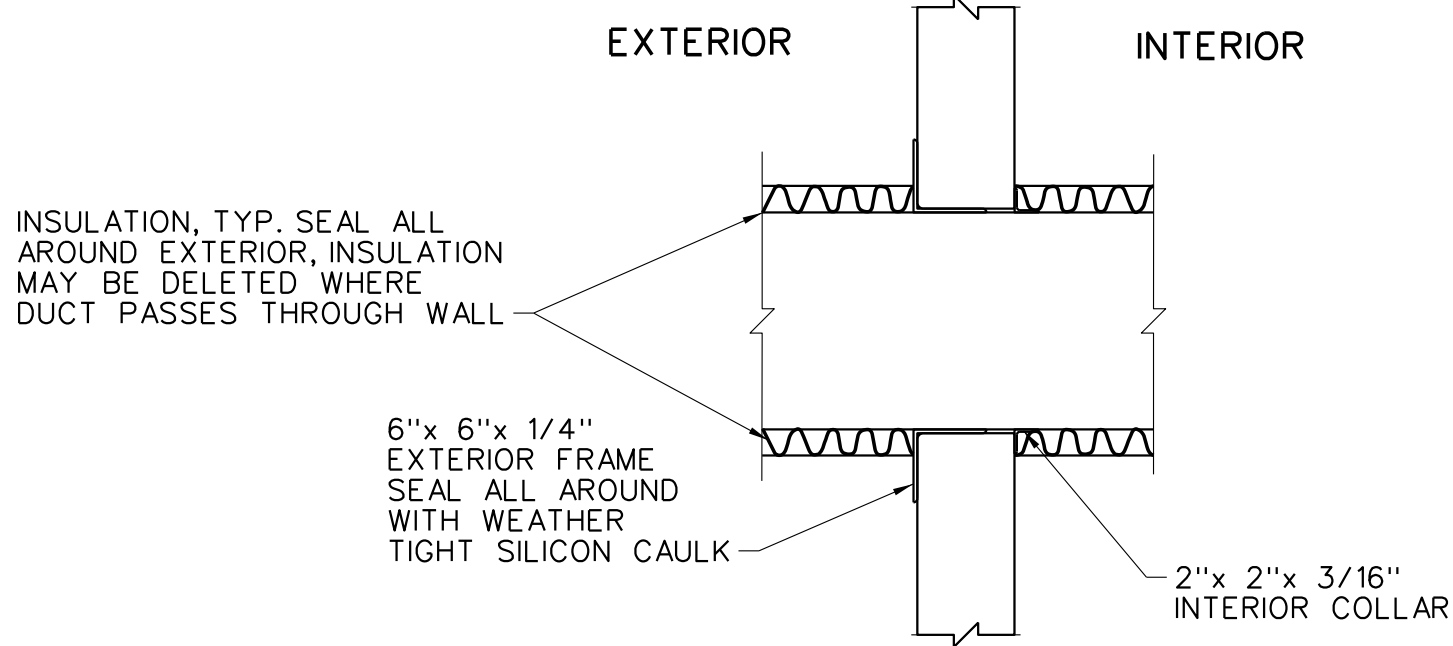
- NOTES:**
1. SEAL ENDS OF FLEXIBLE DUCT WITH TAPE AND SEAL JOINTS BETWEEN THE DUCT COLLAR AND THE MAIN DUCT.
  2. DAMPER QUADRANT SHALL PENETRATE THE INSULATION AND SUFFICIENT SPACE SHALL BE ALLOWED FOR OPERATION.

**3 RUNOUT DETAIL**  
M004 NOT TO SCALE



**NOTE:**  
DETAIL TYPICAL FOR DUCTWORK CONNECTIONS TO ALL EQUIPMENT.

**2 RECTANGULAR FLEXIBLE DUCT CONNECTION**  
M004 NOT TO SCALE



**4 THRU WALL OPENING FOR A/C DUCT**  
M004 NOT TO SCALE



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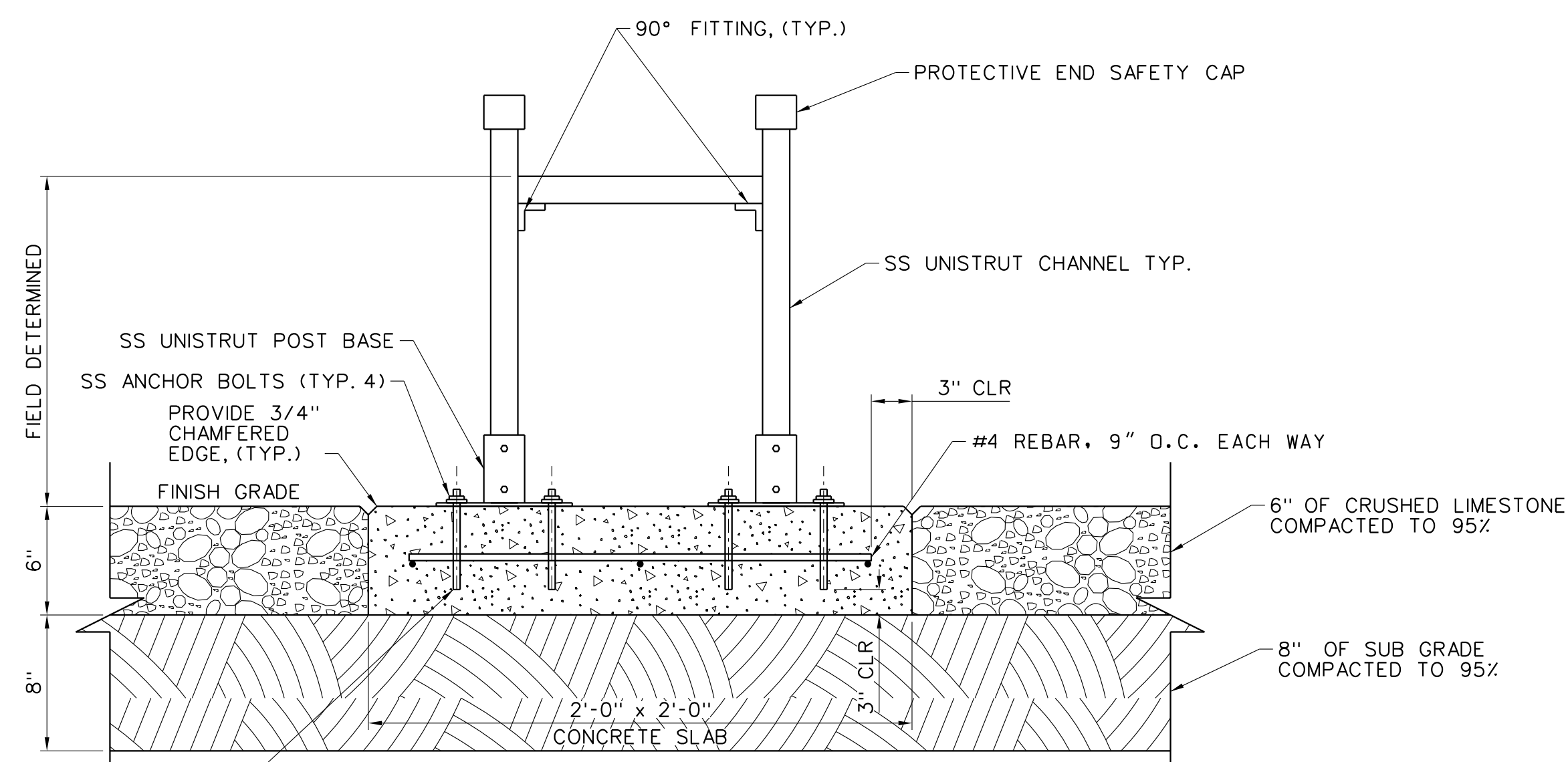
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			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA</b> ADM <b>MECHANICAL DETAILS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-M004			



8 7 6 5 4 3 2 1

H  
G  
F  
E  
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B  
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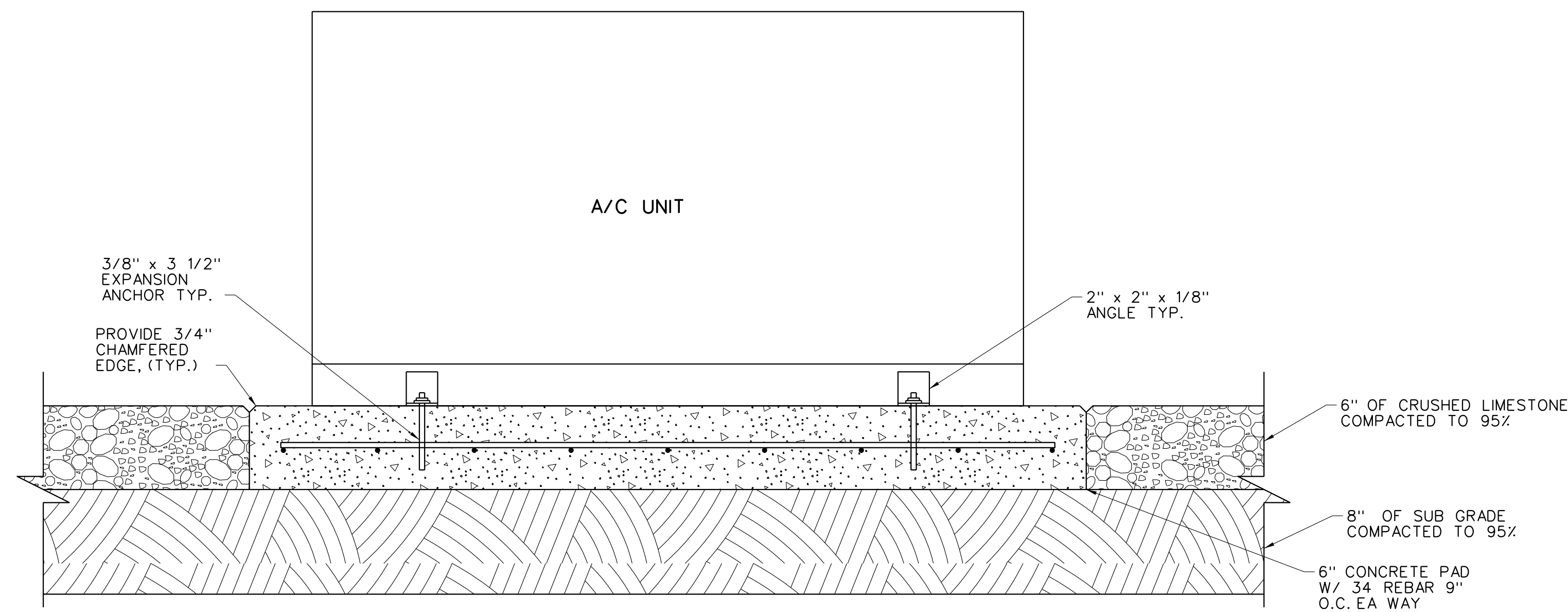
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HILTI KWIK BOLT T7 SS 304,  
2-3/4" MINIMUM EMBEDMENT

1  
M005

UNISTRUT DUCT SUPPORT & CONCRETE PAD  
NOT TO SCALE



DETAIL NOTE:

ATTACHMENTS MIN. 2 PER SIDE.

2  
M005

A/C MOUNTING DETAIL  
NOT TO SCALE

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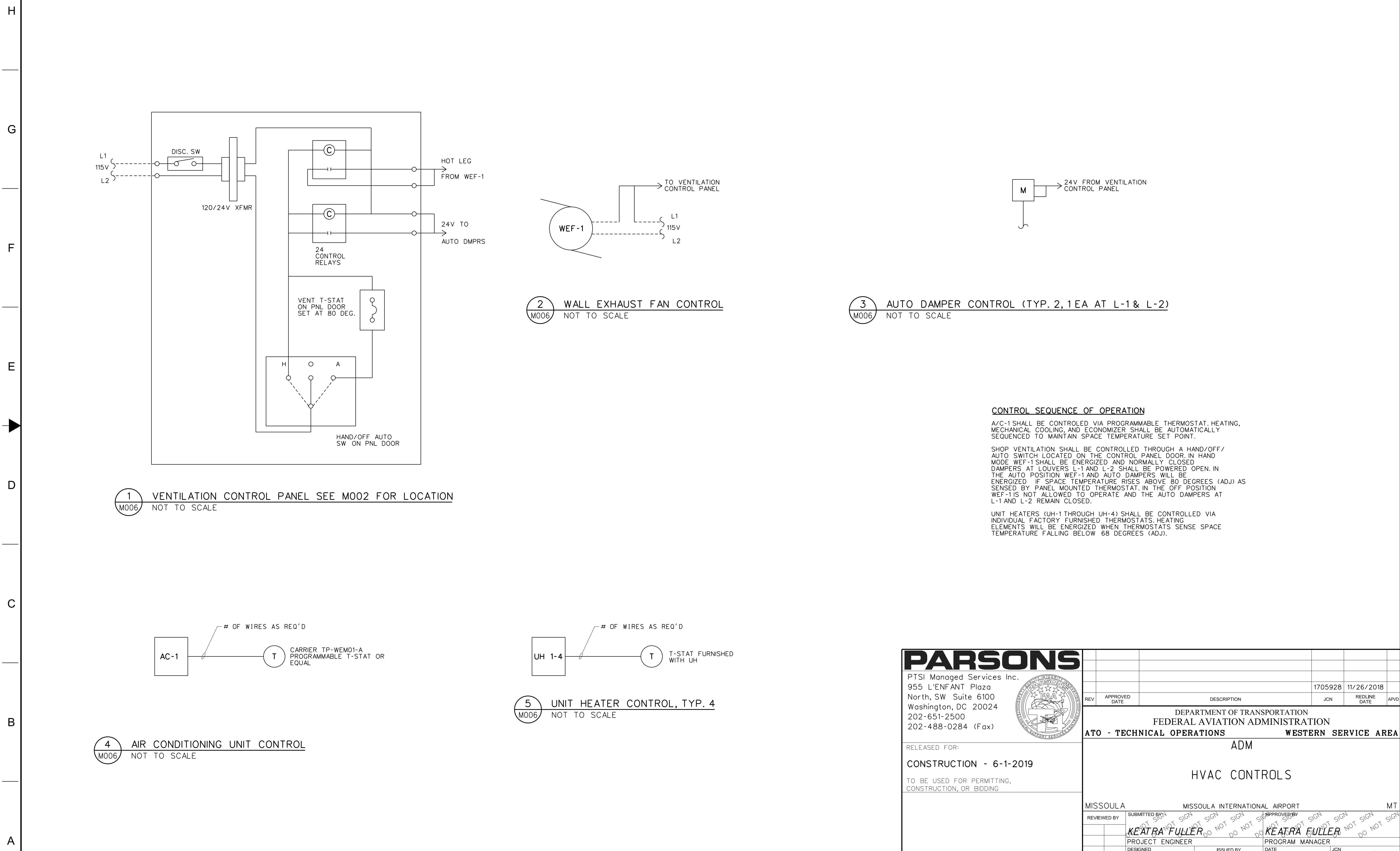
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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM <b>MECHANICAL DETAILS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	11/26/2018	JCN	1705928
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2 WALL EXHAUST FAN CONTROL  
M006 NOT TO SCALE

3 AUTO DAMPER CONTROL (TYP. 2, 1EA AT L-1 & L-2)  
M006 NOT TO SCALE

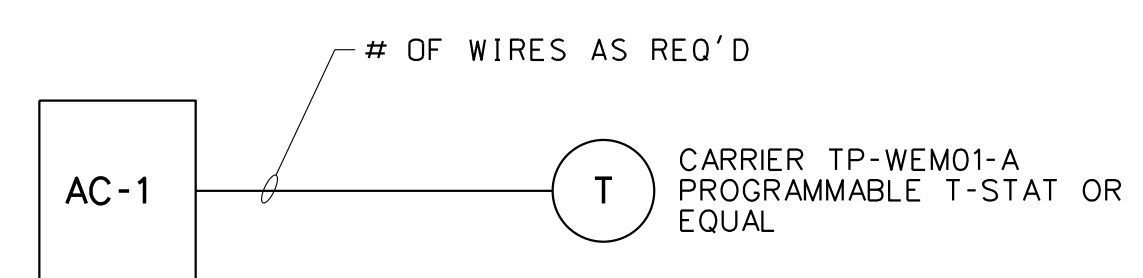
1 VENTILATION CONTROL PANEL SEE M002 FOR LOCATION  
M006 NOT TO SCALE

**CONTROL SEQUENCE OF OPERATION**

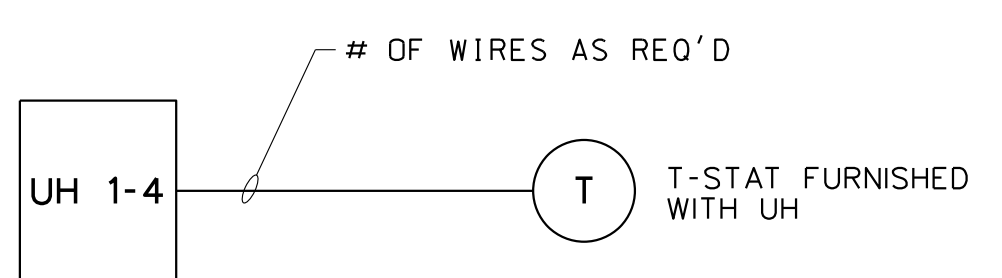
A/C-1 SHALL BE CONTROLLED VIA PROGRAMMABLE THERMOSTAT. HEATING, MECHANICAL COOLING, AND ECONOMIZER SHALL BE AUTOMATICALLY SEQUENCED TO MAINTAIN SPACE TEMPERATURE SET POINT.

SHOP VENTILATION SHALL BE CONTROLLED THROUGH A HAND/OFF/AUTO SWITCH LOCATED ON THE CONTROL PANEL DOOR. IN HAND MODE WEF-1 SHALL BE ENERGIZED AND NORMALLY CLOSED DAMPERS AT LOUVERS L-1 AND L-2 SHALL BE POWERED OPEN. IN THE AUTO POSITION WEF-1 AND AUTO DAMPERS WILL BE ENERGIZED IF SPACE TEMPERATURE RISES ABOVE 80 DEGREES (ADJ) AS SENSED BY PANEL MOUNTED THERMOSTAT. IN THE OFF POSITION WEF-1 IS NOT ALLOWED TO OPERATE AND THE AUTO DAMPERS AT L-1 AND L-2 REMAIN CLOSED.

UNIT HEATERS (UH-1 THROUGH UH-4) SHALL BE CONTROLLED VIA INDIVIDUAL FACTORY FURNISHED THERMOSTATS. HEATING ELEMENTS WILL BE ENERGIZED WHEN THERMOSTATS SENSE SPACE TEMPERATURE FALLING BELOW 68 DEGREES (ADJ).



4 AIR CONDITIONING UNIT CONTROL  
M006 NOT TO SCALE



5 UNIT HEATER CONTROL, TYP. 4  
M006 NOT TO SCALE



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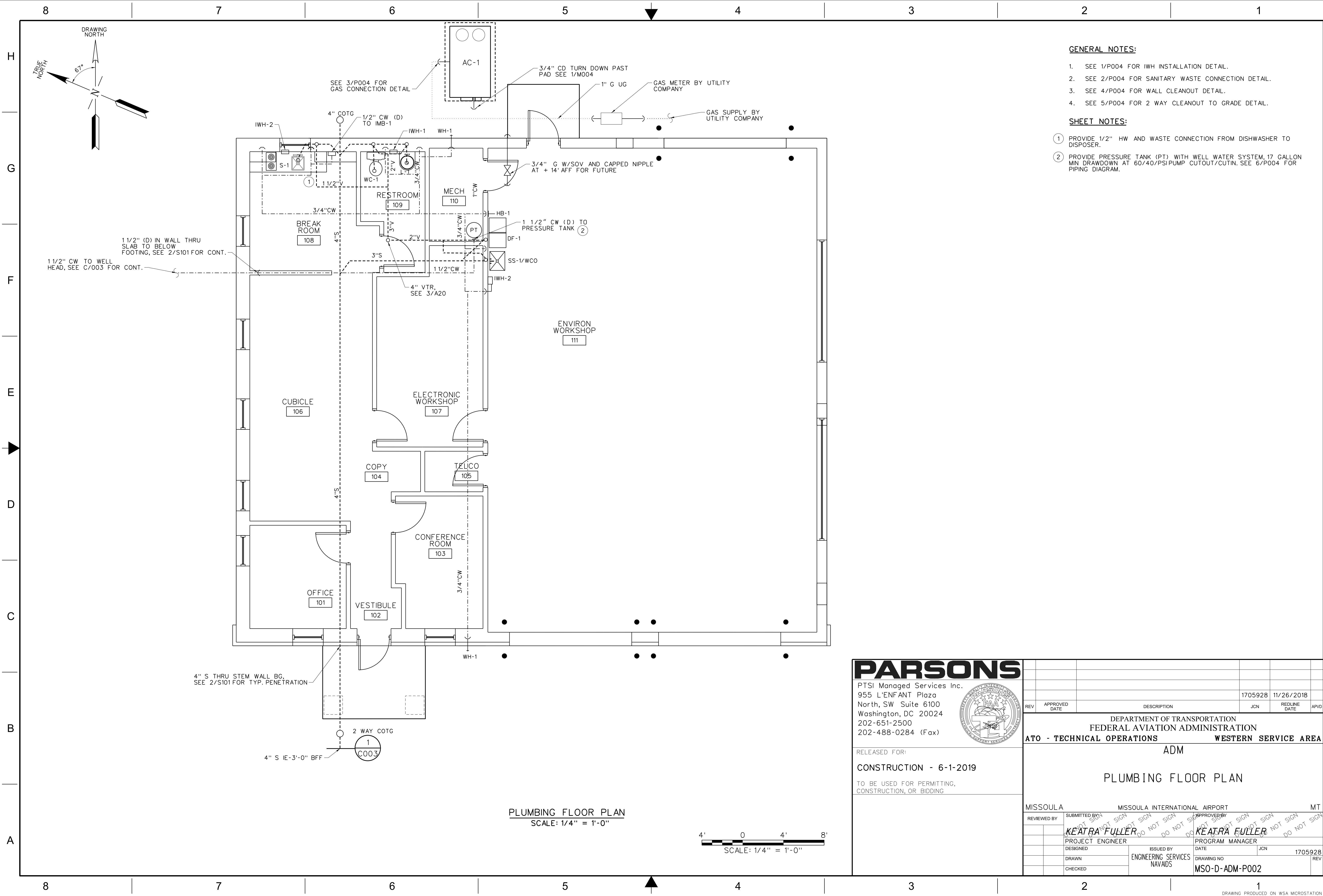


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ADM					
HVAC CONTROLS					
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	ENGINEERING SERVICES				
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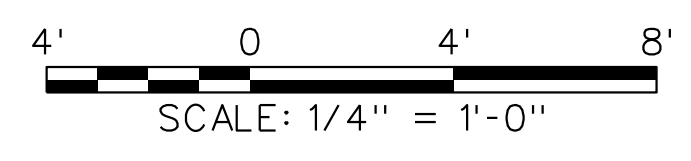
**GENERAL NOTES:**

1. SEE 1/P004 FOR IWH INSTALLATION DETAIL.
2. SEE 2/P004 FOR SANITARY WASTE CONNECTION DETAIL.
3. SEE 4/P004 FOR WALL CLEANOUT DETAIL.
4. SEE 5/P004 FOR 2 WAY CLEANOUT TO GRADE DETAIL.

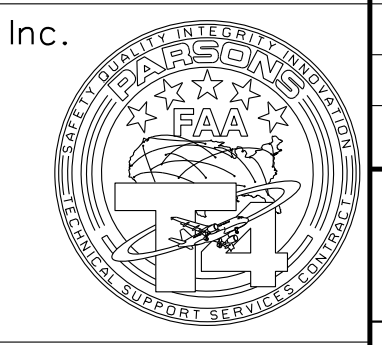
**SHEET NOTES:**

- ① PROVIDE 1/2" HW AND WASTE CONNECTION FROM DISHWASHER TO DISPOSER.
- ② PROVIDE PRESSURE TANK (PT) WITH WELL WATER SYSTEM, 17 GALLON MIN DRAWDOWN AT 60/40/PSIPUMP CUTOFF/CUTIN. SEE 6/P004 FOR PIPING DIAGRAM.

**PLUMBING FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



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FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS**      **WESTERN SERVICE AREA**  
ADM

**PLUMBING FLOOR PLAN**

MISSOULA	MISSOULA INTERNATIONAL AIRPORT	MT
REVIEWED BY	SUBMITTED BY	APPROVED BY
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DESIGNED	ISSUED BY	PROGRAM MANAGER
	ENGINEERING SERVICES	DATE
	NAVAIDS	JCN
DRAWN		1705928
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		DRAWING NO
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# WATER AND WASTE SERVICE CALCULATIONS

JOB NAME: **PROJECT NAME: Missoula SSWC** DATE: **11/29/18**

FIXTURE TYPE	NO.	WASTE		COLD WATER		HOT WATER		TOTAL WATER
		FU	TOTAL	FU	TOTAL	FU	TOTAL	FU
BAR SINK	0	2	0	1.5	0	1.5	0	0
BATH TUB/SHOWER	0	3	0	3	0	3	0	0
CLOTHES WASHER	0	3	0	3	0	3	0	0
DRINKING FOUNTAIN	1	0.5	0.5	0.5	0.5	0	0	0.5
HOSE BIBB	2	0	0	2.5	5	0	0	5
HOSE BIBB - ADDITIONAL	0	0	0	1	0	0	0	0
KITCHEN SINK (DOMESTIC)	1	3	3	1.125	1.125	1.125	1.125	1.5
LAUNDRY SINK	0	2	0	1.125	0	1.125	0	0
LAVATORY (SINGLE)	1	1	1	0.75	0.75	0.75	0.75	1
LAVATORY (MULTIPLE)	0	2	0	0.75	0	0.75	0	0
SERVICE SINK	1	3	3	2.25	2.25	2.25	2.25	3
FLOOR DRAIN	2	2	4	0	0	0	0	0
FLOOR SINK RECEPTOR	1	3	3	0	0	0	0	0
SHOWER	0	2	0	1.5	0	1.5	0	0
SINK, 1-1/2" TRAP	0	2	0	1.5	0	1.5	0	0
SINK, 2" TRAP	0	3	0	1.5	0	1.5	0	0
URINAL, 1.0 GPF	0	4	0	4	0	0	0	0
WASHFOUNTAIN, 1-1/2"	0	2	0	1.5	0	1.5	0	0
WATER CLOSET, 1.6 TANK	1	4	4	2.5	2.5	0	0	2.5
WATER CLOSET, 1.6 FV	0	4	0	5	0	0	0	0
MISCELLANEOUS FIXTURE	0	0	0	0	0	0	0	0
MISCELLANEOUS FIXTURE	0	0	0	0	0	0	0	0
MISCELLANEOUS FIXTURE	0	0	0	0	0	0	0	0
<b>TOTAL FU</b>			<b>18.5</b>		<b>12.1</b>		<b>4.1</b>	<b>13.5</b>

EQUIVALENT COLD WATER FLOW RATE (GPM):	11
ADDITIONAL DEMAND LOAD (GPM)	4
PRESSURE AVAILABLE AT MAIN (PSI):	40
PRESSURE BOOSTER PUMP	0
MINIMUM REQUIRED FIXTURE PRESSURE (PSI):	20
ELEVATION RISE (FT):	20
METER LOSS (PSI):	0
BACKFLOW PREVENTER LOSS (PSI):	0
ADDITIONAL LOSSES (PSI):	0
EQUIVALENT PIPE LENGTH FROM METER TO MOST REMOTE FIXTURE (FT):	100
FRICITION LOSS PRESSURE AVAILABLE (PSI):	11.32
MAXIMUM ALLOWABLE FRICTION LOSS (PSI/100 FT):	11.32
WATER FLOW VELOCITY (FPS):	5.83
CALCULATED FRICTION HEAD LOSS (PSI/100 FT):	7.38
MINIMUM REQUIRED 'WATER' PIPE SIZE (INCHES):	1.0
MINIMUM REQUIRED 'WASTE' PIPE SIZE (INCHES):	3

(CALCULATIONS PER THE UPC/CPC)

### NATURAL GAS LOAD CALCULATION

JOB NAME: **MISSOULA SSWC** DATE: **11/29/18**

SYSTEM	BTUH	CUBIC FEET
SPACE HEATING	100000	100
WATER HEATING	0	0
GAS RANGE		0
MISC. (FUTURE)	50000	50
<b>TOTAL</b>	<b>150000</b>	<b>150</b>
DEVELOPED LENGTH (FT)	100	
2012 UPC REQUIRED PIPE SIZE (IN) (PRESS< 2 PSI)	1"	

### PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MAKE/MODEL	CW	HW	W	V	REMARKS
WC-1	TANK TYPE WATER CLOSET	AMERICAN STANDARD CADET 215AA.104US	1/2"	N/A	4"	2"	ADA COMPLIANT, ELONGATED, 1.28 GPF, WHITE CHURCH 295CT OPEN FRONT SEAT, LEVER ON WIDE SIDE OF TOILET
L-1	LAVATORY	AMERICAN STANDARD LUCERNE 0356.041	1/2"	1/2"	2"	1 1/2"	ADA, CENTER HOLE ONLY, WHITE, SLOAN EBF-615 BDT, BATTERY OPERATED ADA FAUCET, P-TRAP, GRID DRAIN, WALL HANGER
S-1	SINGLE COMPARTMENT SINK	ELKAY LRAD151750	1/2"	1/2"	2"	1 1/2"	15"x17", 3 HOLE, T&S BRASS B-2347 GOOSENECK SWIVEL FAUCET, SIDESPRAY, P-TRAP, BADGER 5XP, 3/4 HP GARBAGE DISPOSER, ADA COMPLIANT
HB-1	HOSE BIBB	WOODFORD B24	3/4"	N/A	N/A	N/A	ANTI SIPHON, VACUUM BREAKER WITH WALL BOX, CHROME FINISH
WH-1	WALL HYDRANT	WOODFORD B65	3/4"	N/A	N/A	N/A	AUTOMATIC DRAIN WITH ANTI SIPHON VACCUM BREAKER BRASS FINISH
IBM-1	ICE MAKER WALL BOX	OATEY 38574	1/2"	N/A	N/A	N/A	1/2 TURN BALL VALVE, 6'-0" SS HOSE
SS-1	SERVICE SINK	AMERICAN STANDARD 7695.008	1/2"	1/2"	3"	2"	7798.030 3" P-TRAP WITH STRAINER, 8344.212 FAUCEL WITH VACUUM BREAKER AND STOPS
DF-1	DRINKING FOUNTAIN	ELKAY EDFP217RAC	1/2"	N/A	1 1/2"	1 1/2"	MPW200 IN WALL CARRIER, ML100 SUPPORTS

### INSTANTANEOUS WATER HEATER SCHEDULE

TAG	DESCRIPTION	SERVES	MAKE/MODEL	KW	V	PH	AMPS	TEMP RISE	FLOW (GPM)
IWH-1	ELECTRIC INSTANTANEOUS WATER HEATER	REST ROOM	EEMAX SP4208FC	4.1	208	1	29	48	0.5
IWH-2	ELECTRIC INSTANTANEOUS WATER HEATER	BREAK ROOM	EEMAX SP8208FC	8.3	208	1	40	57	1



REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA</b> ADM					
<b>PLUMBING SCHEDULES AND CALCULATIONS</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY	MT		
	<b>KEATRA FULLER</b>	<b>KEATRA FULLER</b>			
PROJECT ENGINEER	DESIGNED	ISSUED BY	PROGRAM MANAGER		
		ENGINEERING SERVICES	DATE	JCN	1705928
DRAWN	CHECKED	NAVAIDS	DRAWING NO	MSO-D-ADM-P003	

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GENERAL NOTES

1. GENERAL NOTES
1.1. REFER TO SPECIFICATION DIVISION 26 FOR ALL SPECIFICATIONS RELATED TO ELECTRICAL WORK.
1.2. WORK INDICATED ON THESE DRAWINGS IS DIAGRAMMATIC AND SHOULD NOT BE SCALED TO ESTABLISH LOCATION OF WORK.
1.3. FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SERVICES FOR ALL WORK, IN ACCORDANCE WITH PROVISIONS OF THE CONTRACT DOCUMENTS.
1.4. IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION.
1.5. CLEAN UP ALL WASTE AND DEBRIS AT THE END OF THE EACH WORKING DAY AND AS REQUIRED TO KEEP ALL BUILDING AREAS CLEAN, CLEAR, AND UNOBSTRUCTED.
1.6. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL TOOLS, APPLIANCES, SURPLUS MATERIAL, AND SCRAP FROM THE JOB SITE.
1.7. ALL SPECIFIED EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH FAA ORDER AND MANUFACTURERS RECOMMENDATIONS.
2. COORDINATION AND SCHEDULING
2.1. COMPLETELY COORDINATE AND SCHEDULE WORK OF ALL TRADES.
2.2. CONTRACTOR IS RESPONSIBLE FOR COMPLETE COORDINATION BETWEEN ALL DISCIPLINES.
2.3. ELECTRICAL REQUIREMENTS REGARDING CONTROLS, CONTROL WIRING, DEVICES, DIMENSIONS, AND LOCATIONS OF EQUIPMENT FURNISHED BY OTHERS IS SHOWN ON THE DRAWINGS OF OTHER TRADES.
3. CODE PERMITS AND INSPECTIONS
3.1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LATEST APPLICABLE CODES, REGULATIONS, AND STANDARDS.
3.2. PERFORM ALL WORK IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
3.2.1. FAA ORDER 'FAA-STD-019F'
3.2.2. FAA ORDER 'FAA-C-1217G'
3.2.3. NATIONAL ELECTRIC CODE (NEC) 2017
3.3. CODES AND STANDARDS LISTED ARE MINIMUM STANDARDS.
4. RECORD AS-BUILT DRAWINGS
4.1. REPRODUCIBLE RECORD DRAWINGS SHALL BE SUPPLIED BY CONTRACTOR, UPON WHICH CORRECTIONS SHALL BE MADE, TO PROVIDE AN ACCURATE AND COMPLETE RECORD OF THE WORK, AS INSTALLED.
5. IDENTIFICATION
5.1. CIRCUIT NUMBERS ARE FOR IDENTIFICATION CONVENIENCE ONLY.
6. WIRING METHODS
6.1. ALL WIRING SHALL COMPLY TO FAA STANDARD NOTED ABOVE.
6.2. THE ELECTRICAL CONTRACTOR SHALL SIZE EACH WIRE AS REQUIRED TO LIMIT VOLTAGE DROP TO 3%.
6.3. SINGLE PHASE CIRCUITS SERVING LIGHTING, RECEPTACLES, FANS, AND/OR SIMILAR LOADS SHALL BE 20 A, UNLESS OTHERWISE NOTED.
6.4. WIRING INSTALLED IN AIR HANDLING PLENUMS MUST BE PLENUM RATED.

SYMBOLS LEGEND

Table with 2 columns: Symbol and Description. Symbols include OC, HB, S, S3, SOS, and CR. Descriptions include ceiling mounted line voltage 120V, high bay occupancy sensor, wall mounted single pole switch, three way switch, occupancy sensor, duplex receptacle, and cord reel.

ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes terms like AMP, AC, AHU, AWG, BLDG, C, CONDUIT, CB, CKT, CLG, CU, DIA, DISC, DN, DWG, EC, EF, EG, ELEC, EMERG, EMT, EPO, EQUIP, EW, EWC, EWH, F/A, FA, FAAP, FACP, FLA, FSS, FUSED SAFETY SWITCH, FT, G, GD, HP, IG, IMC, JB, JBOX, KVA, KW, LED, LTG, MAX, MCB, MCC, MECH, MH, MIN, MLO, MOCF, N/A, NA, NEC, NEMA, NIC, NFSS, NTS, PH, Ø, PNL, QTY, REC, RECEPT, RM, SCHED, SWBD, T, XFMR, TBD, TEL, TYP, UON, VA, VAV, W/P, W, #.

LIGHT FIXTURE SCHEDULE

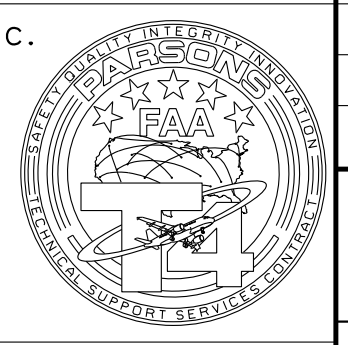
Table with 7 columns: No, Fixture, Manufacturer, Catalog #, Description, Lamps, Volt, Input Watts. Lists various light fixtures including recessed LED, pendant high bay, surface mount LED strip, and exterior weather proof LED wall sconce.

LIGHTING FIXTURE NOTES

EQUAL LIGHTING FIXTURE MANUFACTURERS WILL BE CONSIDERED WITH ARCHITECT'S APPROVAL. CONTRACTOR SHALL PROVIDE PROJECTED DELIVERY DATES FOR ALL SUPPLIED FIXTURES WITH SUBMITTAL, FAILURE WILL RESULT IN REJECTION WITH NO REVIEW. ALL LAMPS SHALL BE THE SAME COLOR TEMPERATURE, 3500K UNLESS OTHERWISE NOTED. SUPPORT ALL RECESSED FIXTURES FROM BUILDING STRUCTURE WITH MINIMUM #12 CEILING HANGER WIRE, FROM EACH CORNER OF FIXTURE. PROVIDE MOUNTING TYPES, FACES, AND DIRECTIONAL ARROWS AS INDICATED ON THE FLOOR PLANS FOR ALL EXIT SIGNS. PROVIDE EMERGENCY POWER BATTERY PACK APPROPRIATE FOR THE LAMPS AND POWER SUPPLY FOR FIXTURE. PROVIDE FIXTURES ALL REQUIRED ACCESSORY EQUIPMENT, MOUNTING AND DRIVERS THAT WILL OPERATE THE FIXTURE ASSEMBLY ON THE VOLTAGE OF THE CONNECTED CIRCUIT.



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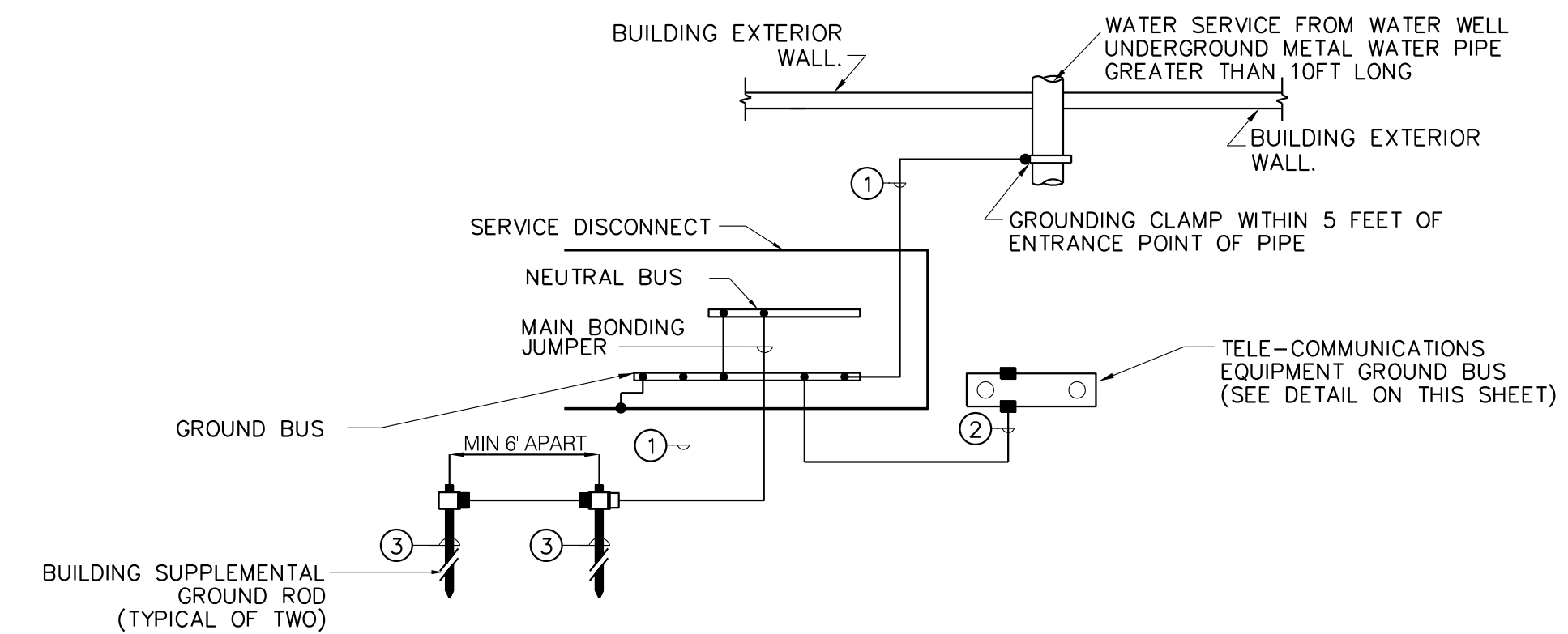
Revision table and project information. Includes columns for REV, APPROVED DATE, DESCRIPTION, JCN, REDLINE DATE, and APVD. Project info includes MISSOULA INTERNATIONAL AIRPORT, ADM, ELECTRICAL NOTES, and program manager KEATRA FULLER.

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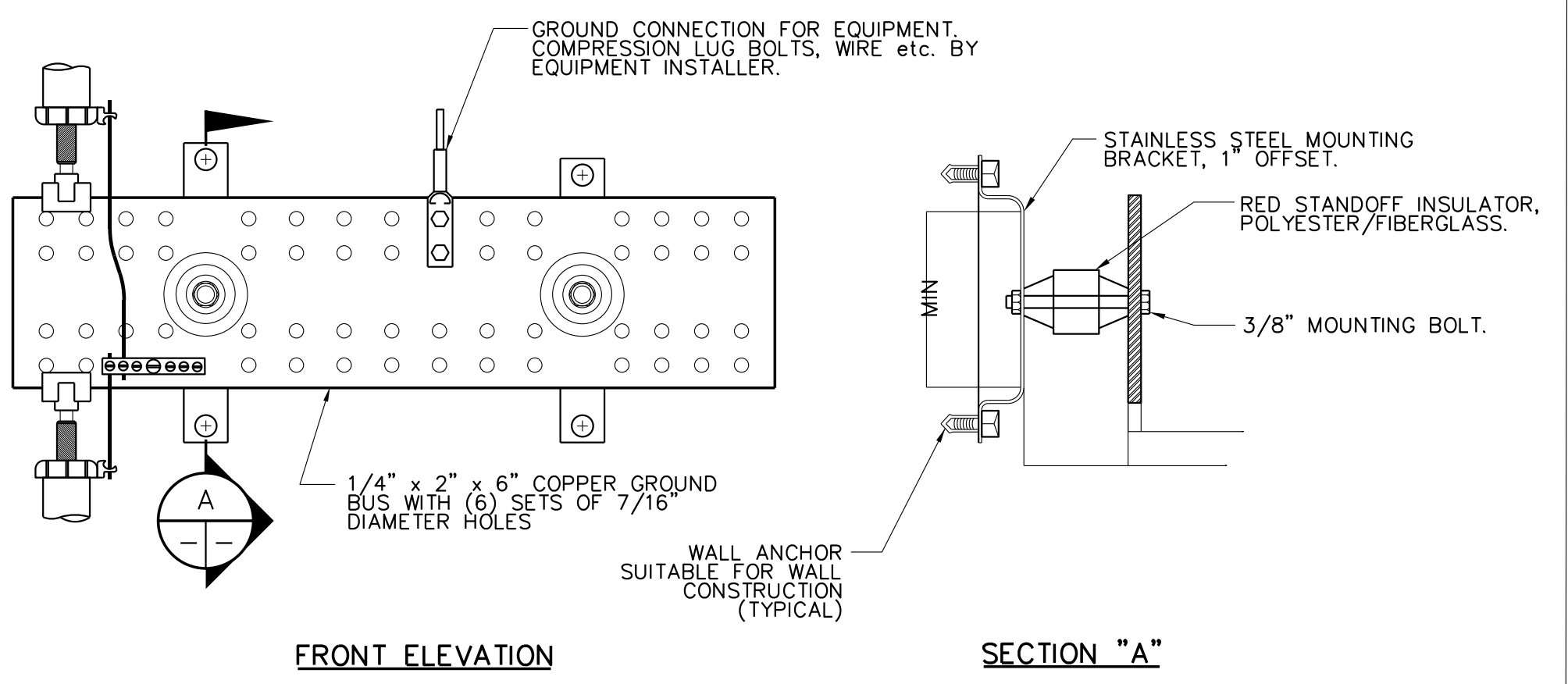


**BUILDING GROUNDING ELECTRODE SYSTEM**

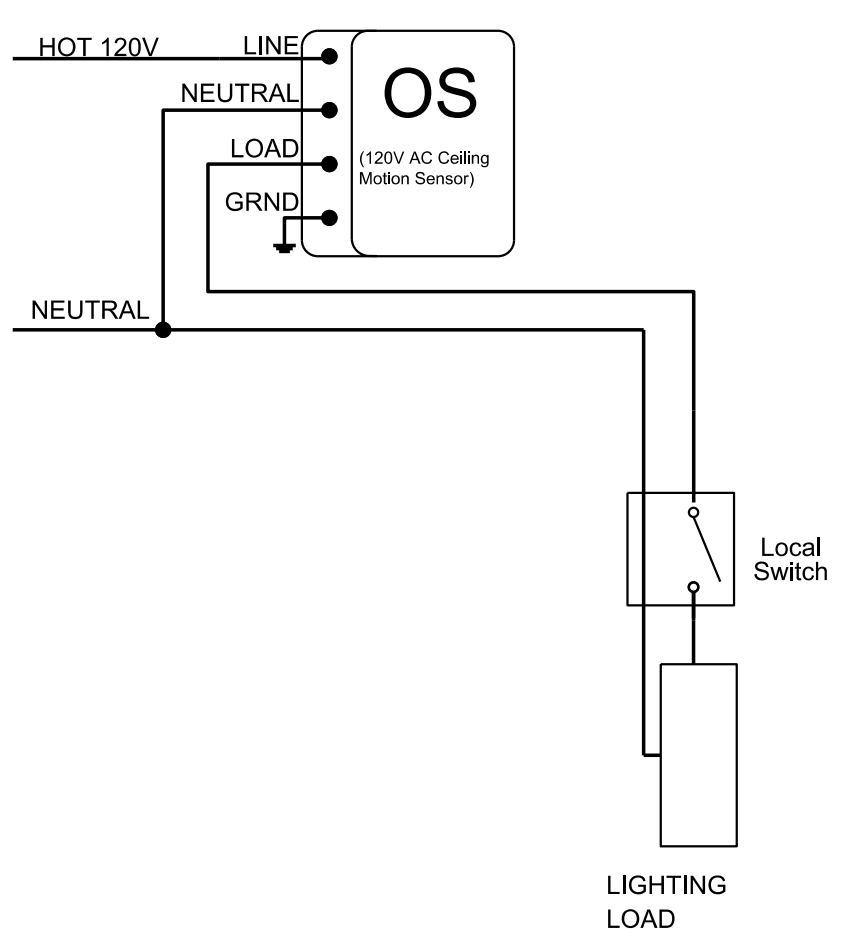


- LEGEND:**
- INDICATES BOLTED CONNECTION.
  - INDICATES EXOTHERMIC WELD CONNECTION, COMPATIBLE WITH MATERIALS BEING JOINED.
  - ① 2/0 AWG SOLID BARE COPPER GROUND CONDUCTOR.
  - ② #6 AWG BARE STRANDED COPPER GROUND CONDUCTOR
  - ③ 3/4" x 10'-0" LONG COPPER-CLAD GROUND ROD DRIVEN WITH TOP 12" BELOW GRADE.

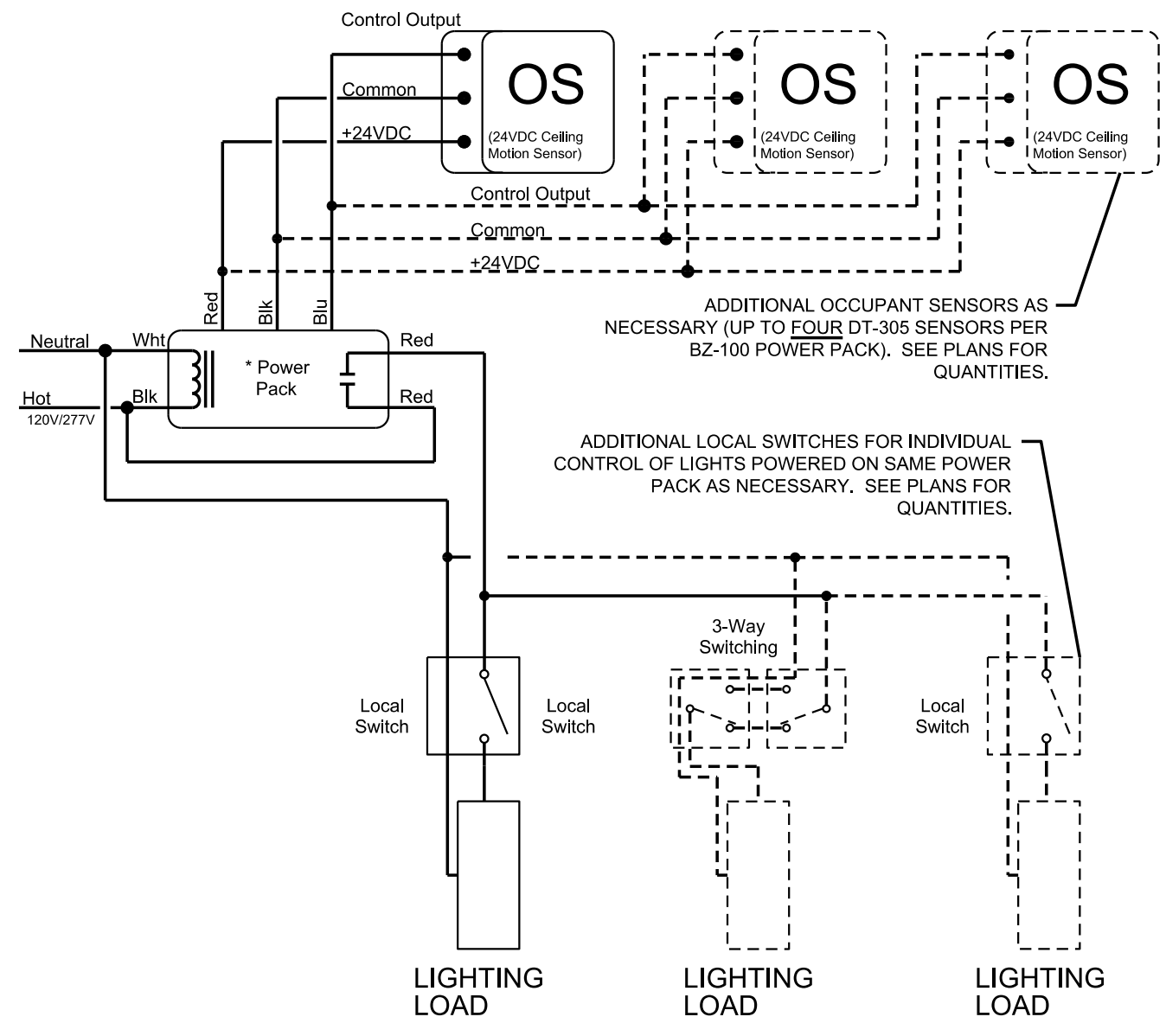
**BUILDING TELECOMMUNICATION SYSTEM GROUND PLATE**



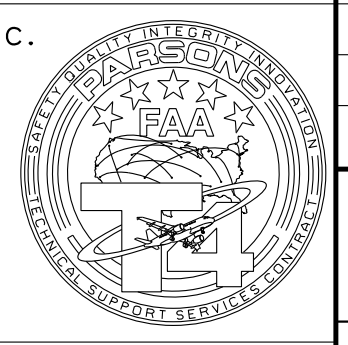
**LINE VOLTAGE MOTION SENSOR WIRING DETAIL**



**LOW VOLTAGE HIGH BAY MOTION SENSOR WIRING DETAIL**



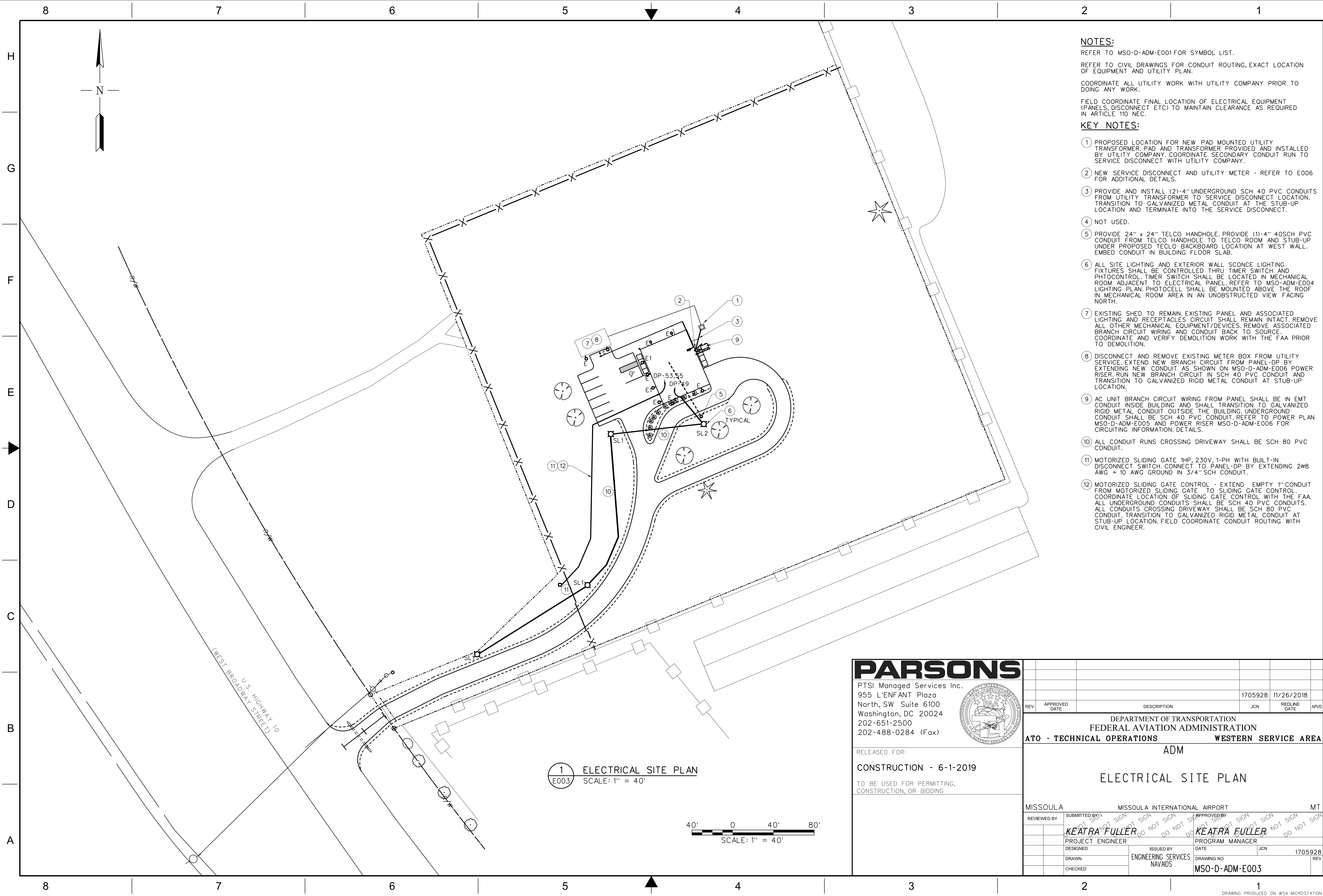
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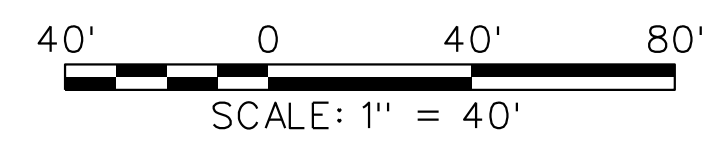
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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA</b> ADM					
<b>ELECTRICAL DETAILS</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY	DATE	JCN	1705928
	KEATRA FULLER	KEATRA FULLER			REV
DESIGNED	ISSUED BY	PROGRAM MANAGER	DATE	JCN	1705928
	ENGINEERING SERVICES				REV
DRAWN	NAVAIDS	DRAWING NO	MSO-D-ADM-E002		
CHECKED					



- NOTES:**
- REFER TO MSO-D-ADM-E001 FOR SYMBOL LIST.
  - REFER TO CIVIL DRAWINGS FOR CONDUIT ROUTING, EXACT LOCATION OF EQUIPMENT AND UTILITY PLAN.
  - COORDINATE ALL UTILITY WORK WITH UTILITY COMPANY PRIOR TO DOING ANY WORK.
  - FIELD COORDINATE FINAL LOCATION OF ELECTRICAL EQUIPMENT (PANELS, DISCONNECT ETC) TO MAINTAIN CLEARANCE AS REQUIRED IN ARTICLE 110 NEC.
- KEY NOTES:**
- PROPOSED LOCATION FOR NEW PAD MOUNTED UTILITY TRANSFORMER. PAD AND TRANSFORMER PROVIDED AND INSTALLED BY UTILITY COMPANY. COORDINATE SECONDARY CONDUIT RUN TO SERVICE DISCONNECT WITH UTILITY COMPANY.
  - NEW SERVICE DISCONNECT AND UTILITY METER - REFER TO E006 FOR ADDITIONAL DETAILS.
  - PROVIDE AND INSTALL (2)-4" UNDERGROUND SCH 40 PVC CONDUITS FROM UTILITY TRANSFORMER TO SERVICE DISCONNECT LOCATION. TRANSITION TO GALVANIZED METAL CONDUIT AT THE STUB-UP LOCATION AND TERMINATE INTO THE SERVICE DISCONNECT.
  - NOT USED.
  - PROVIDE 24" x 24" TELCO HANDHOLE. PROVIDE (1)-4" 40SCH PVC CONDUIT FROM TELCO HANDHOLE TO TELCO ROOM AND STUB-UP UNDER PROPOSED TELCO BACKBOARD LOCATION AT WEST WALL. EMBED CONDUIT IN BUILDING FLOOR SLAB.
  - ALL SITE LIGHTING AND EXTERIOR WALL SCONCE LIGHTING FIXTURES SHALL BE CONTROLLED THRU TIMER SWITCH AND PHOTOCONTROL. TIMER SWITCH SHALL BE LOCATED IN MECHANICAL ROOM ADJACENT TO ELECTRICAL PANEL. REFER TO MSO-ADM-E004 LIGHTING PLAN. PHOTOCELL SHALL BE MOUNTED ABOVE THE ROOF IN MECHANICAL ROOM AREA IN AN UNOBSTRUCTED VIEW FACING NORTH.
  - EXISTING SHED TO REMAIN. EXISTING PANEL AND ASSOCIATED LIGHTING AND RECEPTACLES CIRCUIT SHALL REMAIN INTACT. REMOVE ALL OTHER MECHANICAL EQUIPMENT/DEVICES. REMOVE ASSOCIATED BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE. COORDINATE AND VERIFY DEMOLITION WORK WITH THE FAA PRIOR TO DEMOLITION.
  - DISCONNECT AND REMOVE EXISTING METER BOX FROM UTILITY SERVICE. EXTEND NEW BRANCH CIRCUIT FROM PANEL-DP BY EXTENDING NEW CONDUIT AS SHOWN ON MSO-D-ADM-E006 POWER RISER. RUN NEW BRANCH CIRCUIT IN SCH 40 PVC CONDUIT AND TRANSITION TO GALVANIZED RIGID METAL CONDUIT AT STUB-UP LOCATION.
  - AC UNIT BRANCH CIRCUIT WIRING FROM PANEL SHALL BE IN EMT CONDUIT INSIDE BUILDING AND SHALL TRANSITION TO GALVANIZED RIGID METAL CONDUIT OUTSIDE THE BUILDING. UNDERGROUND CONDUIT SHALL BE SCH 40 PVC CONDUIT. REFER TO POWER PLAN MSO-D-ADM-E005 AND POWER RISER MSO-D-ADM-E006 FOR CIRCUITING INFORMATION. DETAILS.
  - ALL CONDUIT RUNS CROSSING DRIVEWAY SHALL BE SCH 80 PVC CONDUIT.
  - MOTORIZED SLIDING GATE 1HP, 230V, 1-PH WITH BUILT-IN DISCONNECT SWITCH. CONNECT TO PANEL-DP BY EXTENDING 2#8 AWG + 10 AWG GROUND IN 3/4" SCH CONDUIT.
  - MOTORIZED SLIDING GATE CONTROL - EXTEND EMPTY 1" CONDUIT FROM MOTORIZED SLIDING GATE TO SLIDING GATE CONTROL. COORDINATE LOCATION OF SLIDING GATE CONTROL WITH THE FAA. ALL UNDERGROUND CONDUITS SHALL BE SCH 40 PVC CONDUITS. ALL CONDUITS CROSSING DRIVEWAY SHALL BE SCH 80 PVC CONDUIT. TRANSITION TO GALVANIZED RIGID METAL CONDUIT AT STUB-UP LOCATION. FIELD COORDINATE CONDUIT ROUTING WITH CIVIL ENGINEER.

**1** ELECTRICAL SITE PLAN  
E003 SCALE: 1" = 40'



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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>ELECTRICAL SITE PLAN</b>					
MISSOULA		MISSOULA INTERNATIONAL AIRPORT		MT	
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVADS	DRAWING NO			
CHECKED		MSO-D-ADM-E003			

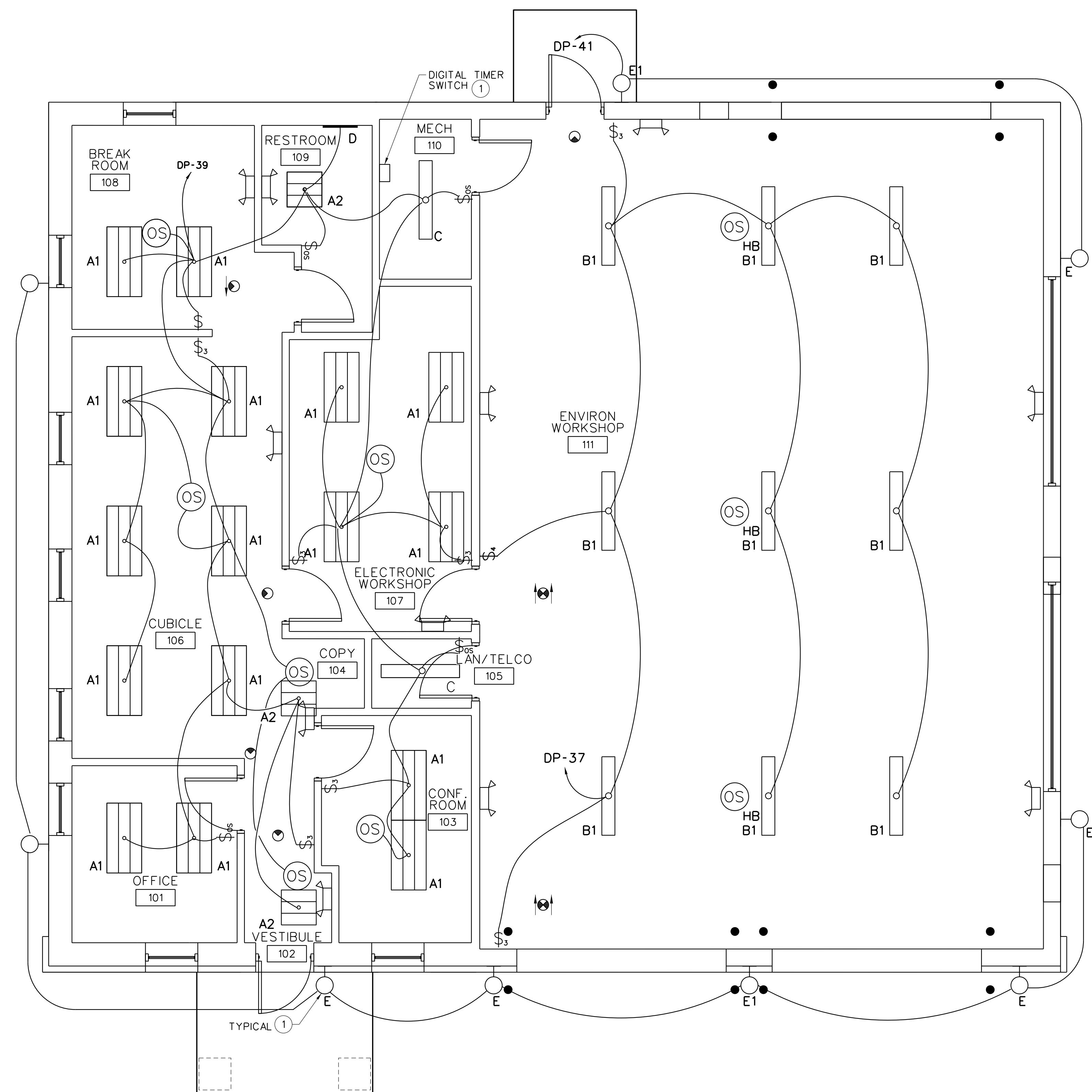
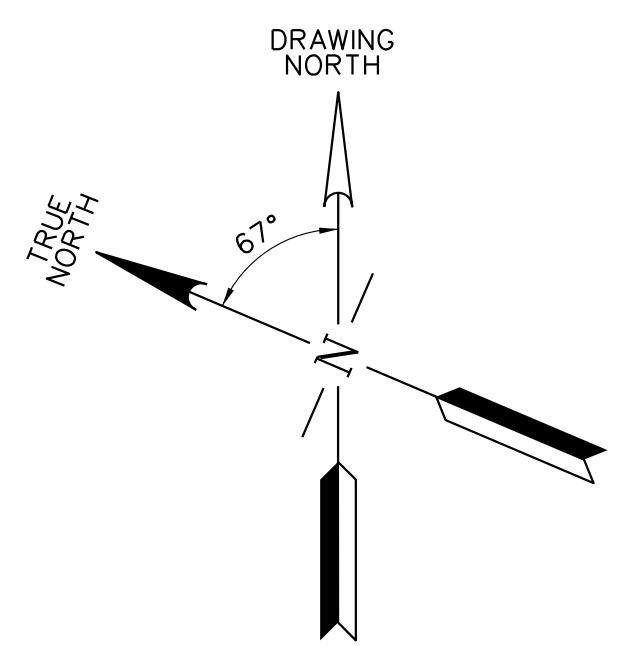
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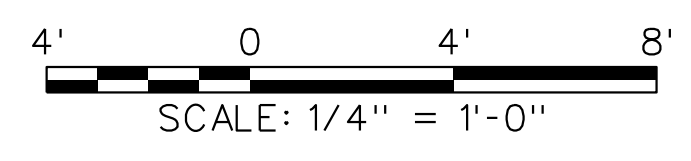
**NOTES:**

- COORDINATE LIGHTING FIXTURE AND SWITCH LOCATIONS WITH OTHER DISCIPLINES.
- REFER TO MSO-D-ADM-E001 FOR LIGHTING FIXTURE SCHEDULE AND SYMBOLS.
- REFER TO MSO-D-ADM-E002 FOR OCCUPANCY SENSOR WIRING DETAIL.
- ALL EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS SHALL BE PROVIDED WITH INTEGRAL BATTERY. THESE DEVICES SHALL BE CONNECTED IN ACCORDANCE TO ARTICLE 700.12(F). CONNECT ALL EMERGENCY LIGHTING FIXTURES TO BRANCH CIRCUIT DP-61 USING 2 #12 + #12G IN 1/2" CONDUIT. EMERGENCY CIRCUIT WIRING IS NOT SHOWN ON PLAN.

**KEY NOTES**

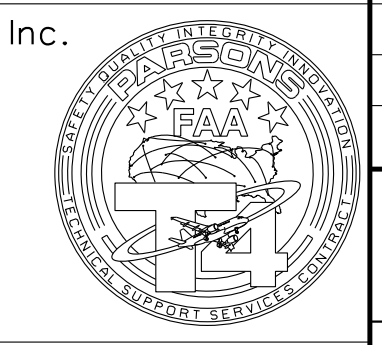
- ALL SITE LIGHTING AND EXTERIOR WALL SCOFF LIGHTING FIXTURES SHALL BE CONTROLLED THRU DIGITAL ELECTRONIC TIMER SWITCH AND PHOTOCONTROL (BASIS OF DESIGN TORK DG200A). TIMER SWITCH SHALL BE LOCATED IN MECHANICAL ROOM ADJACENT TO ELECTRICAL PANEL. PHOTOCELL SHALL BE MOUNTED ABOVE THE ROOF IN MECHANICAL ROOM AREA IN AN UNOBSTRUCTED VIEW FACING NORTH.

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



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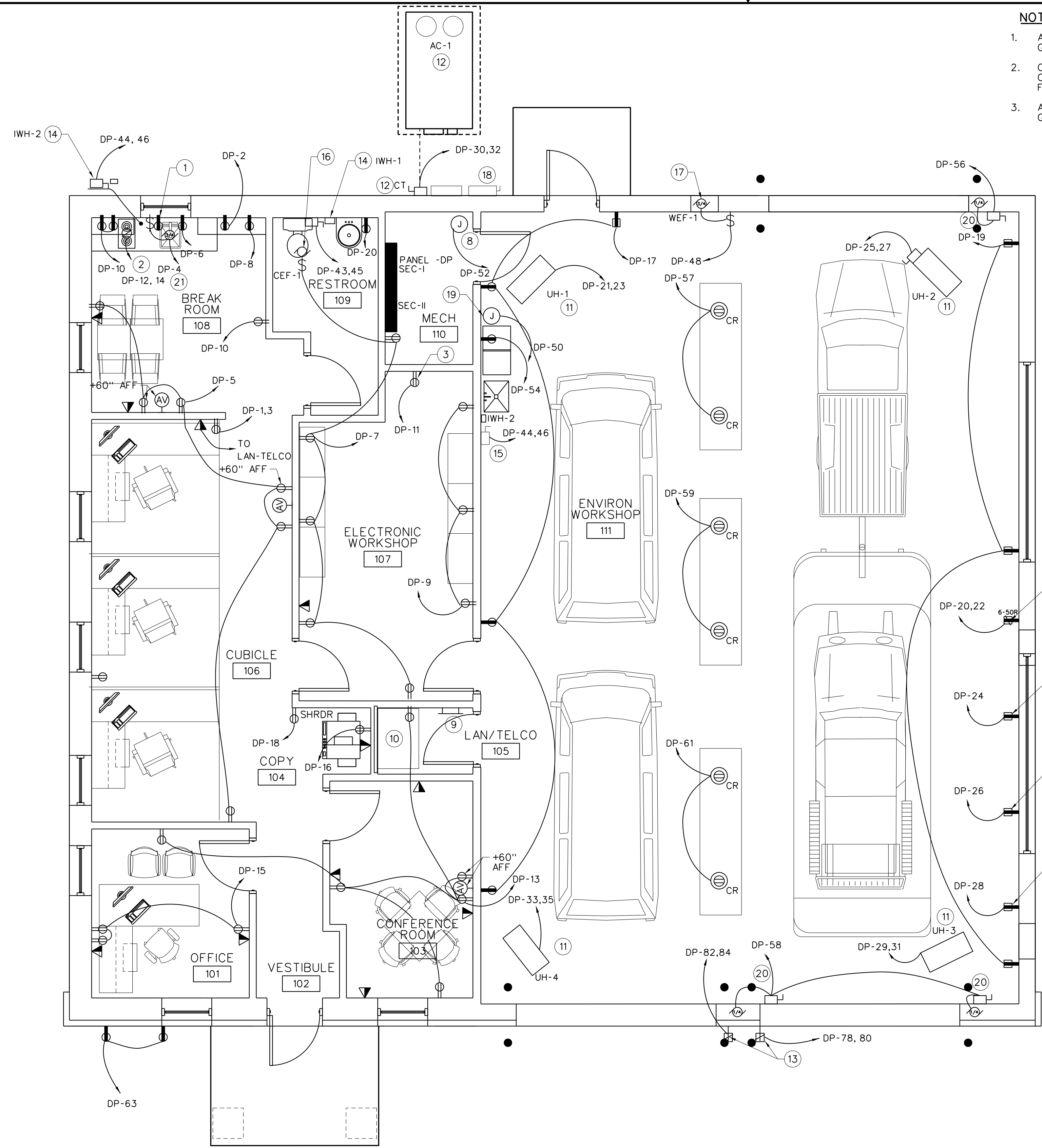
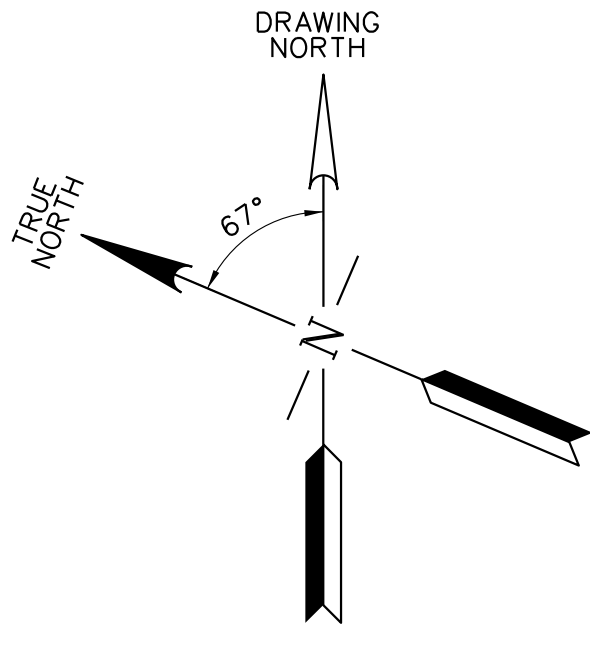
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REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
			1705928	11/26/2018	
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION ATO - TECHNICAL OPERATIONS      WESTERN SERVICE AREA ADM					
<b>ELECTRICAL LIGHTING PLAN</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES	DATE	JCN	1705928	
DRAWN	NAVAIDS	DRAWING NO			
CHECKED		MSO-D-ADM-E004			

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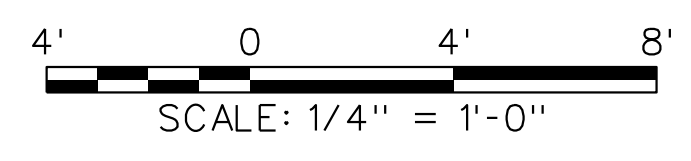
**NOTES:**

1. ALL BRANCH CIRCUIT WIRING SHALL BE (2)-12 AWG + 12 AWG GROUND IN 3/4" CONDUIT, UNLESS OTHERWISE INDICATED.
2. COORDINATE WIRING DEVICE LOCATION WITH OTHER TRADES. COORDINATE COLOR AND FINISH OF COVER PLATE WITH THE FAA PRIOR TO INSTALLATION.
3. ALL UNDERGROUND CONDUITS SHALL BE BURIED 24" BELOW GRADE AND SHALL BE LISTED FOR THE PURPOSE.

**KEY NOTES**

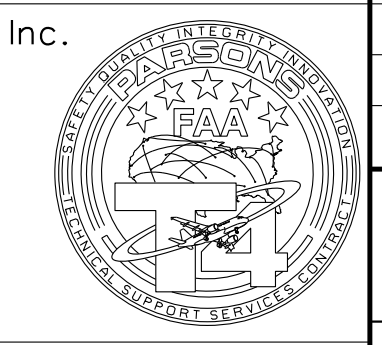
1. GARBAGE DISPOSAL 3/4HP, 115VAC: PROVIDE GFCI RECEPTACLE UNDER COUNTER ALONG WITH THE NECESSARY PLUG AND CONNECTION. PROVIDE 20A, 1-POLE SWITCH 4'-0" AFF.
2. COOKTOP 8KW, 240V, 1-PHASE: PROVIDE NEMA 6-50R RECEPTACLE AND CONNECT USING (2)-8 AWG + 10 AWG GROUND IN 3/4" CONDUIT.
3. UPS 1.5KVA, 120V, 1-PHASE: PROVIDE DUPLEX RECEPTACLE AND CONNECT AS SHOWN. COORDINATE LOCATION WITH THE FAA PRIOR TO INSTALLATION.
4. WELDING MACHINE: MAX INPUT CURRENT 50AMP, 240V, 1-PHASE. PROVIDE NEMA 6-50R RECEPTACLE AND CONNECT USING (2)-8 AWG + 10 AWG GROUND IN 3/4" CONDUIT. COORDINATE FINAL SPECIFICATION AND LOCATION WITH THE FAA. INSTALL AS PER MANUFACTURER'S REQUIREMENT.
5. GRINDING MACHINE 1/3HP, 115V, 1-PHASE. PROVIDE DUPLEX RECEPTACLE. COORDINATE FINAL SPECIFICATION AND LOCATION WITH THE FAA.
6. DRILL PRESS MACHINE 3/4HP, 115V, 1-PHASE. PROVIDE DUPLEX RECEPTACLE. COORDINATE FINAL SPECIFICATION AND LOCATION WITH THE FAA.
7. TABLE MINI-SAW 12A, 115V, 1-PHASE. PROVIDE DUPLEX RECEPTACLE. COORDINATE FINAL SPECIFICATION AND LOCATION WITH THE FAA.
8. WELL PUMP: PROVIDE 20A JUNCTION BOX AND CONNECT AS SHOWN ON PLAN. ALL WIRING FROM PRESSURE SWITCH TO WELL PUMP CONTROL BOX AND TO SUBMERSIBLE PUMP SHALL BE BY WELL PUMP VENDOR/OTHERS. COORDINATE DETAILS AND ADDITIONAL REQUIREMENT WITH WELL PUMP VENDOR PRIOR TO INSTALLATION.
9. TELCO GROUNDING BAR: SEE DETAIL ON MSO-D-ADM-E002.
10. PROVIDE 3/4" x 4' x 8'-0" PLYWOOD WITH (2) FIRE RATED COATING IN TELECOM ROOM. COORDINATE LOCATION AND ADDITIONAL REQUIREMENT WITH THE FAA.
11. UH-1, UH-2, UH-3 & UH-4 5KW, 240V, 1-PHASE. PROVIDE 30A, 2-POLE, 240V DISCONNECT SWITCH USING (2)-10 AWG + 10 AWG GROUND IN 3/4" CONDUIT.
12. AC-1 135A MCA 240V, 1-PHASE: PROVIDE NEMA-3R 60A, 2-POLE, 240V DISCONNECT SWITCH. UNDERGROUND WIRING SHALL BE RUN IN SCH 40 PVC CONDUIT AND SHALL BE BURIED MINIMUM OF 2'-0" BELOW GROUND.
13. CALIBRATION VAN CONNECTION POINT - PROVIDE (2)-50A, 240V WEATHER PROOF PIN AND SLEEVE WALL MOUNTED DEVICES. COORDINATE EXACT LOCATION AND ADDITIONAL REQUIREMENT WITH THE FAA PRIOR TO INSTALLATION.
14. IWH-1 ELECTRIC INSTANTANEOUS WATER HEATER 4.1KW, 240V, 1-PHASE: PROVIDE 30A, 2-POLE, 240V DISCONNECT SWITCH.
15. IWH-2 ELECTRIC INSTANTANEOUS WATER HEATER 8.3KW, 240V, 1-PHASE. PROVIDE 60A, 2-POLE, 240V DISCONNECT SWITCH.
16. CEF-1 24.1 WATTS, 115V: PROVIDE 20A, 1-POLE-SOLID NEUTRAL TOGGLE SWITCH AND CONNECT AS SHOWN ON PLAN.
17. WEF-1 3/4HP, 115V: PROVIDE 20A, 1-POLE-SOLID NEUTRAL TOGGLE SWITCH AND CONNECT AS SHOWN ON PLAN.
18. PROPOSED LOCATION FOR NEW CT AND SERVICE DISCONNECT. REFER TO E003 AND E006 FOR ADDITIONAL DETAILS.
19. VENT CONTROL PANEL PROVIDE POWER AS SHOWN ON PLAN. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
20. MOTORIZED DOOR - BASIS OF DESIGN 1/4HP, 120V, 1-PHASE. PROVIDE 30A, 2-POLE, 240V SAFETY SWITCH. COORDINATE EXACT SPECIFICATION WITH THE FAA PRIOR TO INSTALLATION.
21. ALL RECEPTACLES IN COUNTERTOP AREA SHALL BE MOUNTED 44" AFF. COORDINATE WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO INSTALLATION.
22. PROVIDE GFCI NEMA-3R RECEPTACLES IN WEATHER PROOF ENCLOSURE FOR FOR BLOCK HEATER. FIELD COORDINATE EXACT LOCATION WITH FAA PRIOR TO INSTALLATION.

**POWER PLAN**  
SCALE: 1/4" = 1'-0"



**PARSONS**

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RELEASED FOR:  
**100% SUBMITTAL - 3-1-2019**  
FOR REVIEW PURPOSES ONLY  
NOT TO BE USED FOR PERMITTING,  
CONSTRUCTION, OR BIDDING

REV	APPROVED DATE	DESCRIPTION	JCN	REDLINE DATE	APVD
				1705928	11/26/2018
DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION <b>ATO - TECHNICAL OPERATIONS</b> <b>WESTERN SERVICE AREA</b> ADM					
<b>POWER PLAN</b>					
MISSOULA			MISSOULA INTERNATIONAL AIRPORT		
REVIEWED BY	SUBMITTED BY	APPROVED BY			
	KEATRA FULLER	KEATRA FULLER			
DESIGNED BY	ISSUED BY	PROGRAM MANAGER			
	ENGINEERING SERVICES				
DRAWN	DATE	JCN	1705928		
CHECKED	DRAWING NO	REV			
	MSO-D-ADM-E005				

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 Bzozna CTR Kozak

ISSUED FOR: CONSTRUCTION  
 EDM: mso-d-adm-e005.dgn



DISTRIBUTION BOARD PANEL SCHEDULE - SEC I

Project Name: MISSOULA ELECTRIC COOP  
 Project No: ANT-2242 Date: 11/30/2018  
 Panel: DP (SEC-I) Fed From: SERVICE

Voltage & Phase		Mounting		MLO-or-Main Breaker: 600AMP/2	
<input type="checkbox"/> 120/208-1Ø	<input type="checkbox"/> 120-1Ø	<input type="checkbox"/> 277/480-1Ø	<input type="checkbox"/> Surface	<input type="checkbox"/> A.I.C. Rating: 65 kAIC	<input type="checkbox"/> Panel Rating: 600 Amp
<input type="checkbox"/> 120/240-1Ø	<input type="checkbox"/> 208-1Ø	<input type="checkbox"/> 277-1Ø	<input type="checkbox"/> Flush	<input type="checkbox"/> Sub Feed Lugs	<input type="checkbox"/> Top Feed
<input type="checkbox"/> 240-1Ø	<input type="checkbox"/> 480-1Ø	<input type="checkbox"/> 480-1Ø	<input type="checkbox"/> Semi	<input type="checkbox"/> Feed-Thru Lugs	<input checked="" type="checkbox"/> Bottom Feed
Manufacturer:		Model:		Serial:	

Code	VA	Description	Brk	Phase	Brk	Description	VA	Code
R	1080	SYSTEM FURNITURE - RM 107	20/1	1 A 2	20/1	DISHWASHER - RM 101	900	K
R	1080	SYSTEM FURNITURE - RM 107	20/1	3 B 4	20/1	GARBAGE DISPOSAL - RM 101	1587	K
R	1080	RECEPTACLES - RM 106, 107	20/1	5 A 6	20/1	COFFEE MAKER - RM 101	1500	K
R	720	RECEPTACLES - RM 103	20/1	7 B 8	20/1	REFRIGERATOR - RM 101	1000	K
R	540	RECEPTACLES - RM 103	20/1	9 A 10	20/1	MICROWAVE - RM 101	1200	K
O	1500	UPS - RM 103	20/1	11 B 12	50/2	ELECTRIC RANGE - RM 101	4000	K
R	900	RECEPTACLES - RM 101, 102	20/1	13 A 14	--	ELECTRIC RANGE - RM 101	4000	K
R	540	RECEPTACLES - RM 110	20/1	15 B 16	20/1	COPY MACHINE - RM 108	1000	O
R	480	RECEPTACLES - RM 100	20/1	17 A 18	20/1	SHREDDER - RM 108	1200	O
R	360	RECEPTACLES - RM 100	20/1	19 B 20	50/2	PORTABLE WELDER - RM 100	4000	O
H	2500	UH-1 RM 100	30/2	21 A 22	--	PORTABLE WELDER - RM 100	4000	O
H	2500	UH-1 RM 100	--	23 B 24	20/1	TABLE MINI-SAW - RM 100	1380	O
H	2500	UH-2 RM 100	30/2	25 A 26	20/1	GRINDING MACHINE - RM 100	828	O
H	2500	UH-2 RM 100	--	27 B 28	20/1	DRILL PRESS MACHINE - RM 100	1587	O
H	2500	UH-3 RM 100	30/2	29 A 30	35/2	AC-1	4200	C
H	2500	UH-3 RM 100	--	31 B 32	--	AC-1	4200	C
H	2500	UH-4 RM 100	30/2	33 A 34				
H	2500	UH-4 RM 100	---	35 B 36				
L	1000	LIGHTING - WORKSHOP	20/1	37 A 38				
L	1000	LIGHTING - OFFICE AREA	20/1	39 B 40	60/2	EXISTING PANEL IN SHED	5000	O
L	200	LIGHTING - EXTERIOR	20/1	41 A 42	---		5000	O

Load Codes	VA Load per Phase			Total VA	Multiplier	VA Load
	A	B	C			
C = Cooling Only	0	0	0	0	0.00	0
E = Existing Load	0	0	0	0	1.25	0
H = Heating Only	6200	6200	0	12400	1.00	12400
K = Kitchen	0	0	0	0	0.65	0
L = Lighting	800	0	0	800	1.25	1000
M = Motors	0	0	0	0	1.00	0
O = Other Load	15783	14792.2	0	30575.2	1.00	30575.2
R = Receptacles	720	720	0	1440	1.00	1440
<b>Load Totals</b>	<b>23503</b>	<b>21712.2</b>	<b>0</b>	<b>45215.2</b>	<b>1.00</b>	<b>45415.2</b>
Total VA Loads	23703	21712	0			
Load Balance	104.4%	95.6%	0.0%			
VA Load DP Sec 2				45215.2	0.25	45415.2
Total Load (Amps)				188.3967		197.5

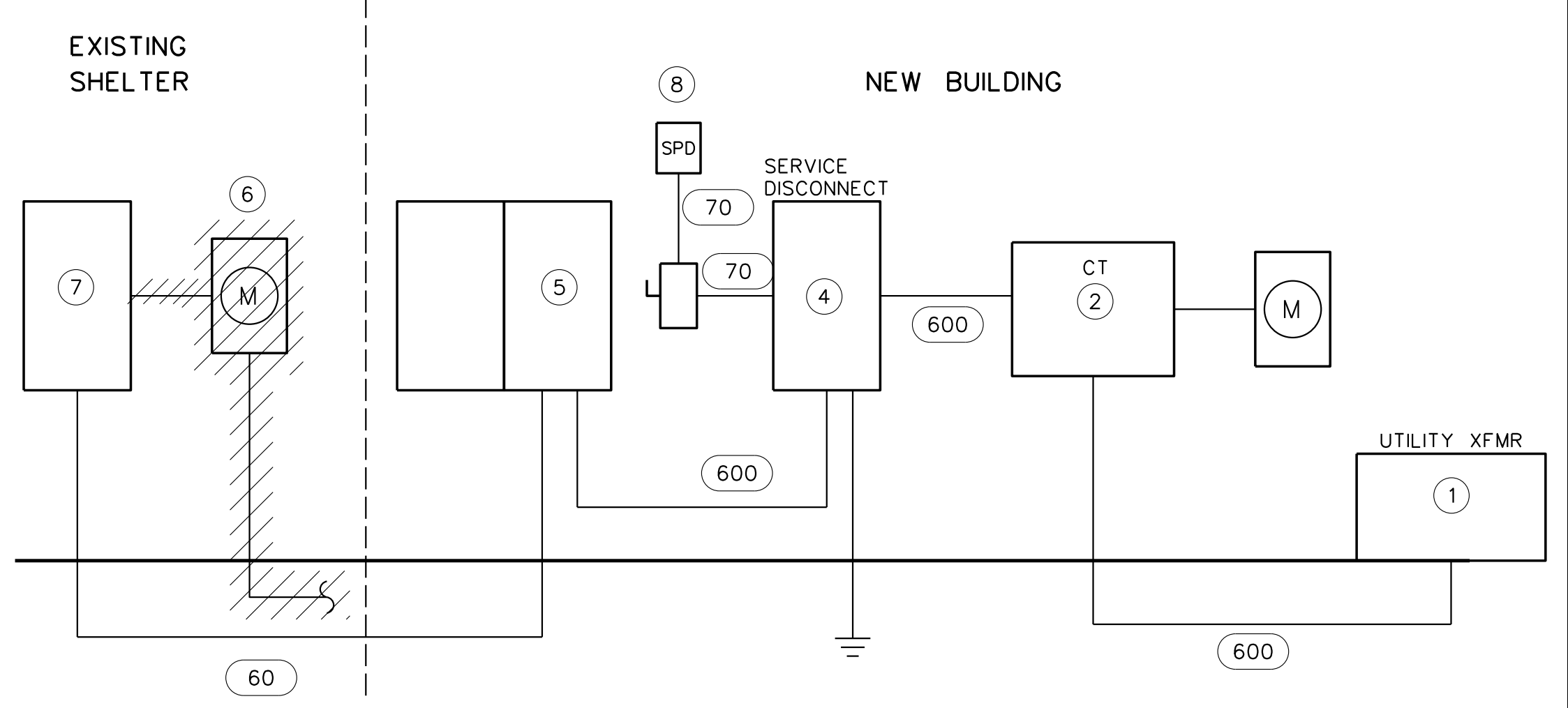
DISTRIBUTION BOARD PANEL SCHEDULE - SEC II

Project Name: MISSOULA ELECTRIC COOP  
 Project No: ANT-2242 Date: 11/30/2018 Feeder:  
 Panel: DP (SEC-II) Fed From: SERVICE Conduit:

Voltage & Phase		Mounting		MLO-or-Main Breaker: xxx/2	
<input type="checkbox"/> 120/208-1Ø	<input type="checkbox"/> 120-1Ø	<input type="checkbox"/> 277/480-1Ø	<input type="checkbox"/> Surface	<input type="checkbox"/> A.I.C. Rating: 65 kAIC	<input type="checkbox"/> Panel Rating: 600 A
<input type="checkbox"/> 120/240-1Ø	<input type="checkbox"/> 208-1Ø	<input type="checkbox"/> 277-1Ø	<input type="checkbox"/> Flush	<input type="checkbox"/> Sub Feed Lugs	<input type="checkbox"/> Top Feed
<input type="checkbox"/> 240-1Ø	<input type="checkbox"/> 480-1Ø	<input type="checkbox"/> 480-1Ø	<input type="checkbox"/> Semi	<input type="checkbox"/> Feed-Thru Lugs	<input type="checkbox"/> Bottom Feed
Manufacturer:		Model:		Serial:	

Code	VA	Description	Brk	Phase	Brk	Description	VA	Code
H	2050	IWH-1	20/2	43 A 44	50/2	IWH-2 RM 100	4150	H
H	2050	IWH-1	--	45 B 46	--	IWH-2 RM 100	4150	H
L	600	DRIVEWAY LIGHTING	20/1	47 A 48	20/1	EXHAUST FAN WEF-1 - RM 101	1500	O
		SPARE	20/1	49 B 50	20/1	VENT CONTROL PANEL	0.2	O
L	200	LIGHTING - EGRESS *	20/1	51 A 52	20/1	WELL PUMP	1587	O
O	920	MOTORIZED GATE CONTROL	20/2	53 B 54	20/1	DRINKING FOUNTAIN	600	O
	920		-	55 A 56	20/1	MOTORIZED DOOR - WORKSHOP	696	O
R	360	CORD REEL - ENVIRON WORKSHOP	20/1	57 B 58	20/1	MOTORIZED DOOR - WORKSHOP	1272	O
R	360	CORD REEL - ENVIRON WORKSHOP	20/1	59 A 60	20/1	SPARE		
R	360	CORD REEL - ENVIRON WORKSHOP	20/1	61 B 62	20/1	SPARE		
R	360	RECEPTACLES OUTDOOR	20/1	63 A 64	20/1	SPARE		
		SPARE	20/1	65 B 66	20/1	SPARE		
		SPARE	20/1	67 A 68	20/1	SPARE		
		SPARE	20/1	69 B 70	20/1	SPARE		
		SPARE	20/1	71 A 72	20/1	SPARE		
		SPARE	20/1	73 B 74	20/1	SPARE		
		SPARE	20/1	75 A 76	20/1	SPARE		
		SPARE	20/1	77 B 78	50/2	CALIBRATION VAN AC	6000	O
		SPARE	20/1	79 A 80	---	CALIBRATION VAN AC	6000	O
		SPARE	20/1	81 B 82	50/2	CALIBRATION VAN EQUIPMENT	6000	O
		SPARE	20/1	83 A 84		CALIBRATION VAN EQUIPMENT	6000	O

Load Codes	VA Load per Phase			Total VA	Multiplier	VA Load
	A	B	C			
C = Cooling Only	4200	4200	0	8400	1.00	8400
E = Existing Load	0	0	0	0	1.25	0
H = Heating Only	10000	10000	0	20000	1.00	20000
K = Kitchen	7600	6587	0	14187	0.65	9221.55
L = Lighting	1200	1000	0	2200	1.25	2750
M = Motors	0	0	0	0	1.00	0
O = Other Load	11028	14467	0	25495	1.00	25495
R = Receptacles	4080	2700	0	6780	1.00	6780
<b>Load Totals</b>	<b>38108</b>	<b>38954</b>	<b>0</b>	<b>77062</b>	<b>0.94</b>	<b>72646.55</b>
Total VA Loads						
Load Balance	100.0%	100.0%	0.0%			
VA Load (SEC-I + SEC-II)				122277.2	0.25	72646.55
Total Load (Amps)				509.5		#N/A



1 POWER RISER DIAGRAM  
 E006 SCALE: N.T.S.

RISER NOTES:

- UTILITY TRANSFORMER - PROVIDE TRANSFORMER PAD AS REQUIRED BY UTILITY COMPANY.
- UTILITY CURRENT TRANSFORMER AND UTILITY METER AS SPECIFIED BY UTILITY COMPANY
- ELECTRICAL SERVICE GROUNDING - SEE DETAILS ON MSO-D-ADM-E002
- SERVICE DISCONNECT SWITCH - 600A, 2-POLE SOLID NEUTRAL, 600V FUSED @ 600 A IN NEMA-3R WEATHER PROOF ENCLOSURE.
- 600A, 2-POLE + SOLID NEUTRAL, 84 POLE I-LINE PANELBOARD DOUBLE SECTION PANEL
- EXISTING SERVICE TO BE DISCONNECTED. REMOVE METER BOX.
- EXISTING PANELBOARD: EXTEND NEW CONDUIT AND WIRING TO NEW SERVICE DISCONNECT AS SHOWN ON RISER. REFER TO E003 FOR ADDITIONAL DETAILS.
- PROVIDE AND INSTALL SURGE PROTECTIVE DEVICE BY RAYCAP #RAYVOSS 240-IP-MI-3-240 ON THE LOAD SIDE OF THE SERVICE. LOCATE SURGE PROTECTIVE DEVICE AS CLOSE AS POSSIBLE TO SERVICE DISCONNECT.
- PROVIDE 60A, 2-POLE, 240V DISCONNECT SWITCH FUSED @ 60A IN NEMA-3R ENCLOSURE AHEAD OF THE SURGE PROTECTIVE DEVICE.

FEEDER SCHEDULE

- 600 (2) SETS OF (3)#350 kcmil + (1)#1 GRD. IN 2 1/2" C SCHEDULE 40 PVC TRANSITION TO GALVANIZED CONDUIT BEFORE STUBBING-UP.
- 60 4#6 AWG + (1)#8 GRD. IN 1" SCH 40 PVC CONDUIT - LAYED IN UNDERGROUND - TRANSITION TO GALVANIZED RIGID METAL BEFORE STUBBING-UP.
- 70 4#4 AWG + (1)#8 GRD. IN 1" RIGID METAL CONDUIT.

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DEPARTMENT OF TRANSPORTATION  
 FEDERAL AVIATION ADMINISTRATION  
**ATO - TECHNICAL OPERATIONS WESTERN SERVICE AREA**  
 ADM  
**ELECTRICAL RISER & PANEL SCHEDULES**

MISSOULA MISSOULA INTERNATIONAL AIRPORT MT

REVIEWED BY: KEATRA FULLER  
 PROJECT ENGINEER  
 DESIGNED BY: KEATRA FULLER  
 DATE: 11/26/2018  
 DRAWN BY: ENGINEERING SERVICES  
 CHECKED BY: NAVIDS

APPROVED BY: KEATRA FULLER  
 PROGRAM MANAGER  
 DATE: 11/26/2018  
 ISSUED BY: ENGINEERING SERVICES  
 DRAWING NO: MSO-D-ADM-E006

REV 1705928 11/26/2018 JCN REDLINE DATE APVD

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 EDK: mso-d-adm-e006.dgn

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