DESERT MOUNTAIN CLUB
STORAGE & LAUNDRY FACILITY
CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT
MARCH 26, 2021

CONCEPTUAL RENDERING

PROJECT DIRECTORY

OWNER / OPERATOR:	STRUCTURAL ENGINEER:
DESERT MOUNTAIN CLUB, INC. 39730 N. Cave Creek Rd. Scottsdale, Arizona 85262 tel. 480-595-4260 email. tabruen@desertmt.com Contact: Todd Bruen	**JVA, INC.** 1319 Spruce St, Boulder, Colorado 80302 tel. 303-444-1951 email. msorenson@jvajva.com Contact: Mark E. Sorenson, P.E.
ARCHITECT:	**MEP ENGINEER:**
DTJ DESIGN, INC. 3101 Iris Avenue, Suite 130 Boulder, Colorado 80301 tel. 303-443-7533 fax. 303-443-7534 email. dwilliams@dtjdesign.com Contact: Dave Williams AIA, NCARB	**MEP Engineering, INC.** 6402 S Troy Cir, Centennial, CO 80111 tel. 303-936-1633 email. melissa@mep-eng.com Contact: Melissa Downing
LANDSCAPE ARCHITECT:	**GENERAL CONTRACTOR:**
DTJ DESIGN, INC. 3101 Iris Avenue, Suite 130 Boulder, Colorado 80301 tel. 303-443-7533 fax. 303-443-7534 email. gwhite@dtjdesign.com Contact: Greg White RLA, ASLA	T.B.D.
	CIVIL ENGINEER
	GANNET FLEMING Suite 1900 3838 North Central Avenue Phoenix, AZ 85012-1957 tel. 602.553.8817 email. rrevillard@GFNET.com Contact: Ronny M. Revillard Hernandez

VICINITY MAP

SHEET INDEX

dtj DESIGN

ARCHITECTURE
PLANNING
LANDSCAPE
ARCHITECTURE

DTJ DESIGN, Inc.
3101 Iris Avenue, Ste. 130
BOULDER, CO 80301
T 303.443.7533

www.dtjdesign.com

REGISTERED ARCHITECT 30783 DAVID S. WILLIAMS 3-26-2021 ARIZONA, U.S.A.

DESERT MOUNTAIN CLUB
STORAGE & LAUNDRY FACILITY
10550 Desert Hills Dr, Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

33-DR-2020

DRAWN BY:	MB
CHECKED BY:	DR,DW
PROJECT NO:	2019001.23
ISSUE DATE:	03/26/2021
REVISIONS:	

SHEET TITLE:

COVER

SHEET NUMBER:

G000

Drawing: C:\Users\mbroussard\Documents\DESERT MOUNTAIN_DISTRIBUTION_CD_R20_mbroussardDTJ.rvt
Last Saved: 5/12/2021 2:42:55 PM

GRADING AND DRAINAGE PLAN

STORAGE AND LAUNDRY FACILITY
SCOTTSDALE, AZ

SHEET INDEX:

OWNER

DESERT MOUNTAIN CLUB, INC.
37700 N DESERT MOUNTAIN PARKWAY
SCOTTSDALE, AZ 85262
PHONE: (480) 595-4090 EXT 1970
CONTACT NAME: TODD BRUEN

ARCHITECT

DTJ DESIGN
3101 IRIS AVENUE, SUITE 130
BOULDER, CO 80303
PHONE: (303) 443-7533
CONTACT NAME: DAVID POPPLETON

CIVIL ENGINEER

GANNETT FLEMING, INC.
1900 - 3838 N CENTRAL AVENUE
PHOENIX, AZ 85012
PHONE: (602) 553-8817
CONTACT NAME: BYRON DIXON

ADDRESS

10550 E DESERT HILLS DRIVE
SCOTTSDALE, AZ 85262

APN

219-11-093M (EXISTING BUILDING PARCEL)
219-13-388A (GOLF PARCEL)

LEGAL DESCRIPTION

(EXISTING BUILDING PARCEL)
THAT CERTAIN PARCEL OF LAND DESCRIBED AS "DESERT MOUNTAIN CORPORATE HEADQUARTERS PARCEL, REVISED DECEMBER 18, 1995, ACCORDING TO SPECIAL WARRANTY DEED RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA AS INSTRUMENT NUMBER 1996-0839142.

(GOLF PARCEL)
THAT CERTAIN PARCEL OF LAND DESCRIBED AS APACHE GOLF COURSE AT DESERT MOUNTAIN, PARCEL NO. 1, (HOLES 1,2,3,4,5,7,8,9,10,18, CLUB, DRIVING RANGE AND MAINTENANCE FACILITY ENVELOPE) ACCORDING TO SPECIAL WARRANTY DEED RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA AS INSTRUMENT NUMBER 2011-0000703.

ZONING

(EXISTING BUILDING PARCEL) C-2
(GOLF PARCEL) OS

QS

64-53 (BOTH)

LANDFORM

UPPER DESERT (BOTH)

BENCHMARK

BENCHMARK #1: CHISELED X ON SIDEWALK AT THE WESTERN-MOST CORNER OF THE DESERT MOUNTAIN CORPORATE HEADQUARTERS PARCEL.
ELEVATION=2963.47 N.A.V.D.'88

BENCHMARK #2: ½" IRON BAR TAGGED LS22281 AT THE NORTHERN-MOST CORNER OF THE DESERT MOUNTAIN CORPORATE HEADQUARTERS PARCEL.
ELEVATION=2992.49 N.A.V.D.'88

BENCHMARK CERTIFICATION:
I HEREBY CERTIFY THAT ALL ELEVATIONS REPRESENTED ON THIS PLAN ARE BASED ON NAVD 1988 AND MEET THE FEMA BENCHMARK MAINTENANCE (BMM) CRITERIA.

GENERAL NOTES

1. EXCAVATING, GRADING, AND FILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1804 OF THE 2018 INTERNATIONAL BUILDING CODE (IBC). ALL OTHER CONSTRUCTION SHALL BE IN ACCORDANCE WITH MOST RECENT M.A.G. STANDARD DETAILS AND SPECIFICATIONS.
2. CUT AND FILL SLOPES SHALL HAVE ROUNDED GRADES TO BLEND INTO EXISTING NATURAL TERRAIN.
3. ALL EXPOSED RIP-RAP SHALL BE NATIVE STONE, INDIGENOUS TO THIS SITE.
4. SALVAGE OF NATIVE PLANTS IS BY OTHERS.
5. 5 PERCENT MINIMUM SLOPE AWAY FROM THE BUILDING FOR A MINIMUM OF 10 FEET UNLESS OTHERWISE NOTED.
6. UNLESS NOTED OTHERWISE WITH SPOT GRADES OR PROPOSED CONTOURS, ADJACENT GRADES TO IMPROVEMENTS SHALL BE REGRADED TO PRE-DEVELOPMENT CHARACTERISTICS.
7. PROVIDE SPLASH PADS AT ALL ROOF DRAINS.
8. GEOTECHNICAL ENGINEER TO REVIEW SLOPES STEEPER THAN 2:1 AND PROVIDE RECOMMENDATIONS FOR STABILIZATION IF NECESSARY.
9. COORDINATE WATER AND SEWER BUILDING CONNECTION WITH ARCHITECT'S PLANS. TWO-WAY CLEANOUT REQUIRED ON SANITARY SEWER OUTSIDE OF STRUCTURE.
10. EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND ARE BASED ON UTILITY-PROVIDED QUARTER SECTION MAPS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT PRIVATE UTILITIES FOR EXISTING UTILITY LOCATIONS. IF A PROPOSED IMPROVEMENT CANNOT BE CONSTRUCTED PER PLAN BECAUSE OF CONFLICTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
11. RETAINING/SCREEN WALLS ARE DESIGNED BY OTHERS. WALLS TO INCLUDE WATERPROOFING AS WELL AS SUBSURFACE DRAINAGE CONSIDERATION OF RETAINED SOILS.
12. FLOOD PROOFING REQUIRED PER ARCHITECT'S SPECIFICATIONS WHEREVER FINISH FLOOR IS BELOW ADJACENT GROUND.
13. ALL SITE CONCRETE, INCLUDING ALL HEADWALLS & DRAINAGE STRUCTURES, SHALL BE INTEGRALLY COLORED TO BLEND WITH THE SURROUNDING NATURAL DESERT PER DESERT MOUNTAIN'S MASTER ENVIRONMENTAL CONCEPT PLAN (MEDCP) AMENDMENT. COLORS TO BE APPROVED BY DESERT MOUNTAIN PROPERTIES PRIOR TO INSTALLATION.
14. THIS PLAN DOES NOT INCLUDE TRAFFIC CONTROL AND SAFETY MEASURES. THE ENGINEER RECOMMENDS THAT THE OWNER PERFORM AN ANALYSIS OF TRAFFIC AND SAFETY MEASURES FOR IMPLEMENTATION PRIOR TO USE OF THE FACILITIES.
15. SLOPE ALL CONCRETE WALKWAYS AND PATIOS 1.5% AWAY FROM STRUCTURES OR WITH A CROSS-SLOPE FOR POSITIVE DRAINAGE. COORDINATE ALL SLOPES WITH THE ARCHITECT AND/OR STRUCTURE DESIGNER.
16. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE, VERIFY AND ACCEPT ALL CONSTRUCTION STAKES AND GRADES PRIOR TO STARTING CONSTRUCTION.
17. ALL RAMPS MUST MEET ADA ACCESSIBILITY GUIDELINES (ADAAG) STANDARDS, 2% MAX CROSS SLOPES AND 12:1 MAX LONGITUDINAL SLOPES. TRUNCATED DOMES AS DETECTABLE WARNINGS ARE REQUIRED ON ALL ON-SITE RAMPS PER ADAAG SECTION 4.7.7. TRUNCATED DOMES AS DETECTABLE WARNINGS ARE REQUIRED ON ALL ON-SITE SIDEWALKS THAT CROSS OR ADJOIN A VEHICULAR WAY PER ADAAG SECTION 4.29.5. SURFACE MATERIAL SHALL MEET ADAAG STANDARDS. THIS PLAN DOES NOT INCLUDE ADA SIGNAGE AND RAILINGS.
18. PRIOR TO PLACING FINAL ADA SURFACE MATERIAL (E.G., CONCRETE, ASPHALT CONCRETE, ETC.) CONTRACTOR SHALL CHECK AND VERIFY ALL FORMS AND/OR SUBGRADES FOR CONFORMANCE WITH ADA STANDARDS (GRADES, SLOPES, DIMENSIONS, ETC.).
19. ALL PRIVATE ON-SITE WATER AND SEWER FACILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE (IPC). ALL OTHER CONSTRUCTION SHALL BE IN ACCORDANCE WITH MOST RECENT M.A.G. STANDARD DETAILS AND SPECIFICATIONS.

NATURAL AREA OPEN SPACE (NAOS) AND LIMITS-OF-CONSTRUCTION (LOC) PROTECTION PROGRAM

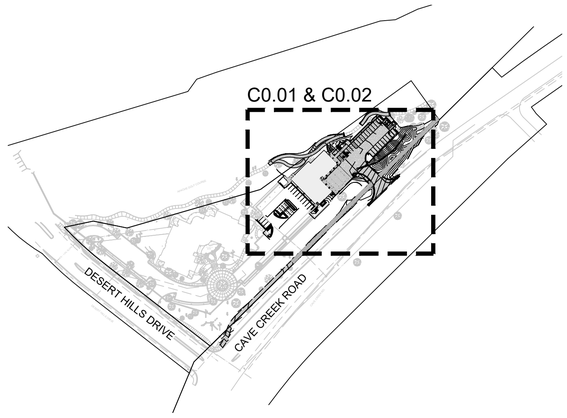
1. NO BUILDING, GRADING, OR CONSTRUCTION ACTIVITY SHALL ENCROACH INTO AREAS DESIGNATED AS NAOS, OR OUTSIDE THE DESIGNATED CONSTRUCTION ENVELOPE.
2. ALL NAOS AND AREA OUTSIDE OF THE LOC SHALL BE PROTECTED FROM DAMAGE PRIOR TO, AND DURING CONSTRUCTION BY THE FOLLOW METHODS:
   A. A REGISTERED LAND SURVEYOR SHALL STAKE ALL NAOS AND LOC DISTURBANCE BASED ON THIS EXHIBIT.
   B. ± THREE (3) FOOT TALL STEEL REBAR, OR CITY OF SCOTTSDALE INSPECTION SERVICES APPROVED SIMILAR, SHALL BE SET ALONG THE NAOS AND LOC, AND CONNECTED WITH GOLD ROPING BY THE CONTRACTOR PRIOR TO ANY CLEARING OR GRADING.
   C. ALL CACTUS SUBJECT TO THE CITY OF SCOTTSDALE'S NATIVE PLANT ORDINANCE DIRECTLY ADJACENT, WITHIN TWO FEET, OF THE NAOS AND LOC LINE SHALL BE FENCED WITH WIRE FENCING TO PREVENT DAMAGE.
   D. THE STAKING, ROPING, AND FENCING SHALL BE MAINTAINED INTACT BY THE CONTRACTOR DURING THE DURATION OF THE CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR SHALL REMOVE STAKING, ROPING, AND FENCING AFTER RECEIPT OF THE LETTER OF ACCEPTANCE FROM THE CITY OF SCOTTSDALE FOR ALL CONSTRUCTION WORK.

ABBREVIATIONS

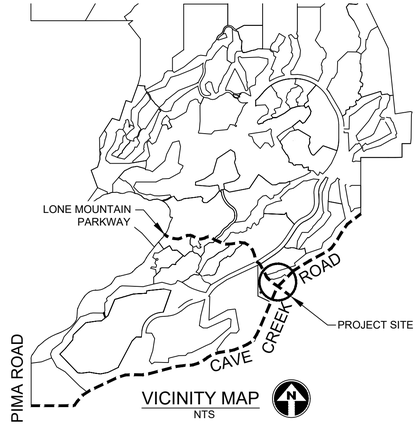
BC	BACK OF CURB
BW	BOTTOM OF EXPOSED WALL
C	CONCRETE SURFACE
DIA	DIAMETER
EP	EXISTING PAVEMENT
EX.	EXISTING
FC	FACE OF CURB
FG	FINISHED GROUND SURFACE
FL	FIRE LINE
INV	INVERT
LP	LOW POINT
NAOS	NATURAL AREA OPEN SPACE
OF	OVERFLOW
P	PAVEMENT
SE	SLOPE EASEMENT
SLE	SEWER LINE EASEMENT
TC	TOP OF CURB
TF	TOP OF FOOTING
TG	TOP OF GRATE
TW	TOP OF WALL
UGE	UNDERGROUND ELECTRIC
FFE	FINISHED FLOOR ELEVATION
WSE	WATER SURFACE ELEVATION

LEGEND

- RIGHT OF WAY/PROPERTY BOUNDARY
- EASEMENT LINE
- LIMIT OF CONSTRUCTION
- FG 88.13 — PROPOSED ELEVATION
- CONTOUR - MAJOR
- CONTOUR - MINOR
- FLOW LINE
- PROPOSED STORM DRAIN
- DIRECTION OF FLOW
- EXISTING CONTOUR - MAJOR
- EXISTING CONTOUR - MINOR
- S — EXISTING SANITARY SEWER LINE
- W — EXISTING WATER LINE
- FO — EXISTING FIBER
- G — EXISTING GAS
- E&T&CATV — EXISTING ELEC., TEL. & CABLE
- EXISTING STORM DRAIN



SITE MAP
1"=200'



VICINITY MAP
NTS

CITY OF SCOTTSDALE GENERAL NOTES

1. ALL CONSTRUCTION IN THE PUBLIC RIGHT-OF WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE CITY'S SUPPLEMENTAL STANDARD DETAILS WILL GOVERN.
2. THE CITY ONLY APPROVES THE SCOPE, NOT THE DETAIL, OF ENGINEERING DESIGNS; THEREFORE, IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF A RIGHT-OF-WAY PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
4. A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE RIGHT-OF-WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING 480-312-5750.
5. WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 811, TWO WORKING DAYS BEFORE EXCAVATION BEGINS. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT.
6. RIGHT-OF-WAY PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHT-OF -WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. A RIGHT-OF-WAY PERMIT WILL BE ISSUED BY THE CITY ONLY AFTER THE REGISTRANT HAS PAID A BASE FEE PLUS A FEE FOR INSPECTION SERVICES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
7. ALL EXCAVATION AND GRADING THAT IS NOT IN THE PUBLIC RIGHTS-OF-WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO APPENDIX J, GRADING, OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY CITY.

CIVIL APPROVAL

REVIEW AND RECOMMENDED APPROVAL BY:

PAVING		TRAFFIC	
G & D		PLANNING	
W & S		FIRE	
RET. WALLS			

ENGINEERING COORDINATION MGR. (OR DESIGNEE) — DATE

MAINTENANCE NOTE

THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING ALL DRAINAGE IMPROVEMENTS. REGULAR INSPECTION SHOULD BE PERFORMED IN ADDITION TO INSPECTING ALL DRAINAGE IMPROVEMENTS AFTER EACH STORM EVENT. THE PROPERTY OWNER IS TO CLEAN OUT OR REPAIR ANY DAMAGED IMPROVEMENTS PROMPTLY.

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NO. / PANEL DATE	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASE FLOOD ELEV.
045012	0903	L	10/16/2013	D	N.A.

ENGINEERS CERTIFICATION

THE LOWEST FLOOR ELEVATION(S) AND/OR FLOOD PROOFING ELEVATION(S) ON THIS PLAN ARE SUFFICIENTLY HIGH TO PROVIDE PROTECTION FROM FLOODING CAUSED BY A 100-YEAR STORM, AND ARE IN ACCORDANCE WITH SCOTTSDALE REVISED CODE, CHAPTER 37 - FLOODPLAIN AND STORMWATER REGULATIONS.

NO CONFLICT SIGNATURE BLOCK

UTILITY	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER	DATE SIGNED
WATER	SCOTTSDALE	REZAUR RAHMAN	480-312-5636	01/28/2021
SANITARY SEWER	SCOTTSDALE	REZAUR RAHMAN	480-312-5636	01/28/2021
ELECTRIC	APS	ZACHARY SCHREY	480-296-6405	01/04/2021
TELEPHONE	CENTURY LINK	KEVIN WAGNER	815-245-9640	10/15/2020
NATURAL GAS	SOUTHWEST GAS	ANDY SAKS	480-387-9755	10/02/2020
CABLE TV	COX COMM.	BRIAN M. McFALL	480-547-0979	

ENGINEER'S CERTIFICATION

I, BYRON DIXON, AS THE ENGINEER-OF-RECORD FOR DEVELOPMENT, HEREBY CERTIFY THAT ALL UTILITY COMPANIES LISTED ABOVE HAVE BEEN PROVIDED FINAL IMPROVEMENT PLANS FOR REVIEW, AND THAT ALL CONFLICTS IDENTIFIED BY THE UTILITIES HAVE BEEN RESOLVED. IN ADDITION, "NO CONFLICT" FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS SUBMITTAL.

SIGNATURE — 05-12-21 DATE

REV △	REVISIONS		
	DATE	BY	DESCRIPTION
1	01/15/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS

DESERT MOUNTAIN
10550 E. Desert Hills Drive Scottsdale, Arizona 85262
Phone (480) 595 4000 Fax (480) 595 4250

Gannett Fleming
3838 N Central Ave, Suite 1900 Phoenix, AZ 85012
Phone (602) 553-8817 Fax (602) 553-8816 Web www.gfnet.com

Registered Professional Engineer (Civil) CERTIFICATE NO. 36372 BYRON L. DIXON 05-12-21 Date Signed ARIZONA, U.S.A.

Contact Arizona 811 at least two full working days before you begin excavation. ARIZONA811 Call 811 or visit Arizona811.com

DESIGNED:	R.REVILLARD
DRAWN:	R.REVILLARD
CHECKED:	B.DIXON
SCALE:	NONE

STORAGE & LAUNDRY FACILITY

COVER SHEET AND NOTES

JOB NO: 065118
DATE: 05/12/21
SHEET: C0.00

33-DR-2020

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APACHE GOLF COURSE

EXISTING CART PATH

EXISTING NAOS BOUNDARY

PROPERTY BOUNDARY

LIMIT OF CONSTRUCTION

RELOCATE (SEE IMPROVEMENT PLANS)

EXISTING FIBER

EXISTING WATER

CAVE CREEK ROAD

CAVE CREEK ROAD ROW

50' S.C.E.
50' M.U.E.E.

EXISTING FAIRWAY BUILDING PARKING LOT

RELOCATE (SEE ELEC. PLANS)

EXISTING ELEC, TEL AND CABLE

EXISTING NONPOTABLE WATER

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
SCALE: 1"=20'

REMOVAL NOTES

1. SAW CUT AND REMOVE CONCRETE CURB.
2. REMOVE CONCRETE CART PATH.
3. REMOVE PARKING CANOPY.
4. REMOVE PARKING CANOPY POSTS.
5. REMOVE CONCRETE.
6. REMOVE AND SALVAGE REFUSE ENCLOSURE'S GATE.
7. SAW CUT ASPHALT.
8. SAW CUT CONCRETE.
9. REMOVE ASPHALT.
10. REMOVE LANDSCAPE.
11. REMOVE CMU WALL.
12. REMOVE STORM CONCRETE HEADWALL.
13. REMOVE STORM DRAINAGE PIPE.
14. REMOVE STORM MANHOLE.
20. REMOVE TREES.

SHEET NOTES

1. PROPOSED CONSTRUCTION AREA SHOULD BE STRIPPED OF ALL VEGETATION, DEBRIS, RUBBLE AND LOOSE SURFACE SOIL. TREE ROOTS MUST BE COMPLETELY REMOVED.
2. REFER TO GEOTECHNICAL REPORT FOR SPECIFIC SITE EXCAVATION DEPTH REQUIREMENTS.

REV △	DATE	BY	DESCRIPTION
1	01/15/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS

DESERT MOUNTAIN
10550 E. Desert Hills Drive Scottsdale, Arizona 85262
Phone (480) 595 4000 Fax (480) 595 4250

Gannett Fleming
3838 N Central Ave, Suite 1900 Phoenix, AZ 85012
Phone (602) 553-8817 Fax (602) 553-8816 Web www.gfnet.com

Registered Professional Engineer (Civil) CERTIFICATE NO. 36372 BYRON L. DIXON 05-12-21 Date Signed ARIZONA, U.S.A.

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DESIGNED:	R.REVILLARD
DRAWN:	R.REVILLARD
CHECKED:	B.DIXON
SCALE:	1" = 20'

STORAGE & LAUNDRY FACILITY

DEMOLITION PLAN

JOB NO: 065118
DATE: 05/12/21
SHEET: C0.01

33-DR-2020

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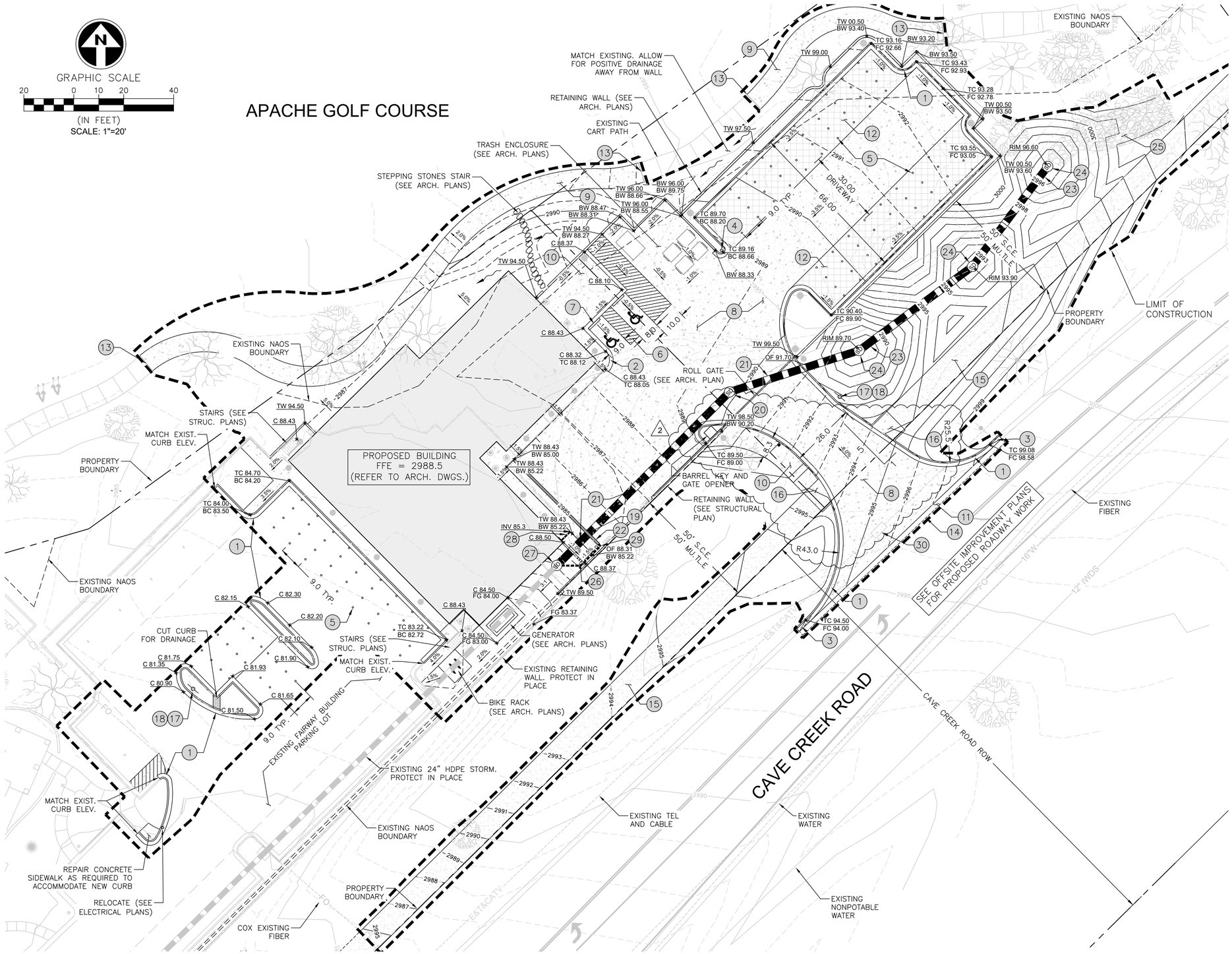
GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
SCALE: 1"=20'

APACHE GOLF COURSE



CONSTRUCTION NOTES

1. CONSTRUCT VERTICAL CURB AND GUTTER AS PER COS DETAIL 2220, TYPE A.
2. CONSTRUCT RIBBON CURB AS PER COS DETAIL 2220, TYPE B.
3. CONSTRUCT VERTICAL CURB TO ROLL CURB TRANSITION AS PER MAG DETAIL 221.
4. INSTALL PERMANENT BOLLARD AS PER MAG DETAIL 150, TYPE 1.
5. INSTALL 4" DIA. X 1/2" HIGH WHITE CIRCULAR PLASTIC PAVEMENT MARKERS AS PER DIMENSIONS ON PLAN. MARKER ADHESION AS PER MANUFACTURER'S SPECIFICATIONS.
6. STRIPE ADA SPACE AND AISLES WITH 4" WIDE WHITE LEAD FREE LATEX TRAFFIC MARKING PAINT. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS. SPACES AND AISLE DIMENSIONS PER PLAN. SLOPES NOT TO EXCEED 2.0% IN ANY DIRECTION. CONTRACTOR SHALL CHECK GRADES BEFORE PLACING FINAL PAVING MATERIAL.
7. INSTALL PRECAST SAFETY CURB AS PER MAG DETAIL 150, TYPE B–3.
8. INSTALL CONCRETE AS PER SECTION DETAIL ON SHEET C0.04
9. INSTALL 8' WIDE CONCRETE PATH AS PER SECTION DETAIL ON SHEET C0.04.
10. INSTALL CONCRETE WALK AS PER SECTION DETAIL ON SHEET C0.04.
11. INSTALL DRIVEWAY ASPHALT PAVEMENT PER STRUCTURAL SECTION DETAIL ON SHEET C0.04.
12. INSTALL PARKING CONCRETE PAVEMENT PER STRUCTURAL SECTION DETAIL ON SHEET C0.04.
13. SAWCUT CONCRETE TO A NEAT EDGE. PROVIDE EXPANSION JOINT BETWEEN NEW AND EXISTING CONCRETE AS PER DETAIL ON SHEET C0.04.
14. SAWCUT ASPHALT TO A NEAT EDGE. PROVIDE TACK COAT BETWEEN NEW AND EXISTING ASPHALT.
15. CONSTRUCT NATURAL TRAIL AS PER DETAIL SECTION ON SHEET C0.04.
16. INSTALL CONCRETE RAMP AS PER DETAIL ON SHEET C0.04.
17. INSTALL FIRE LANE SIGN (TWO–DIRECTIONAL) AS PER COS DETAIL 2365.
18. INSTALL SIGN POST AS PER COS DETAIL 2131
19. INSTALL TRENCH DRAIN TO STORM DRAIN CONNECTION.
20. INSTALL STORM DRAIN MANHOLE BASE AS PER DETAIL MAG 520, MANHOLE SHAFT AS PER MAG DETAIL 522, FRAME AND COVER AS PER MAG DETAIL 423–1.
21. INSTALL 36" N12 HDPE STORM DRAIN, AS PER MAG SECTION 738. SEE PROFILE ON SHEET C0.04
22. INSTALL NEENAH R–4990–EX TRENCH DRAIN (48 LF), TYPE 'A' GRATE OPENINGS.
23. INSTALL 36" HDPE TYPE S STORM DRAIN. SEE PROFILE ON SHEET C0.04
24. INSTALL STORM DRAIN MANHOLE BASE AS PER MAG 520, MANHOLE SHAFT AS PER MAG DETAIL 522, FRAME AS PER MAG DETAIL 423–1 AND EJCO 64870 GRATE.
25. INSTALL RIPRAP, d_{50} = 12" AS PER MAG SECTION 220.
26. CONSTRUCT 2 – 1.0' X 1.0' WALL OPENING FOR OVERFLOW DRAINAGE
27. REPLACE EXISTING MANHOLE WITH D=72" MANHOLE BASE AS PER MAG DETAIL 521. MANHOLE SHAFT AS PER MAG DETAIL 522, FRAME AND COVER AS PER MAG DETAIL 423–1.
28. INSTALL 6" PVC PIPE TO CONNECT TO THE BUILDING'S ROOF DRAINAGE SYSTEM. SEE PLUMBING PLANS.
29. INSTALL 12" N12 HDPE PIPE FROM TRENCH DRAIN TO MANHOLE, 1.5' COVER, AND 2% MIN. SLOPE AS PER MAG SECTION 726.
30. REPLACE EXISTING APS PULLBOX WITH NEW TRAFFIC BEARING PULLBOX AS PER DETAILS ON SHEET C0.05.

REV △	DATE	BY	DESCRIPTION
1	01/15/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS
2	04/06/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS

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DRAWN:	R.REVILLARD
CHECKED:	B.DIXON
SCALE:	1" = 20'

STORAGE & LAUNDRY FACILITY

ONSITE GRADING & DRAINAGE IMPROVEMENT PLAN

JOB NO: 065118
DATE: 05/12/21
SHEET: C0.02

33-DR-2020

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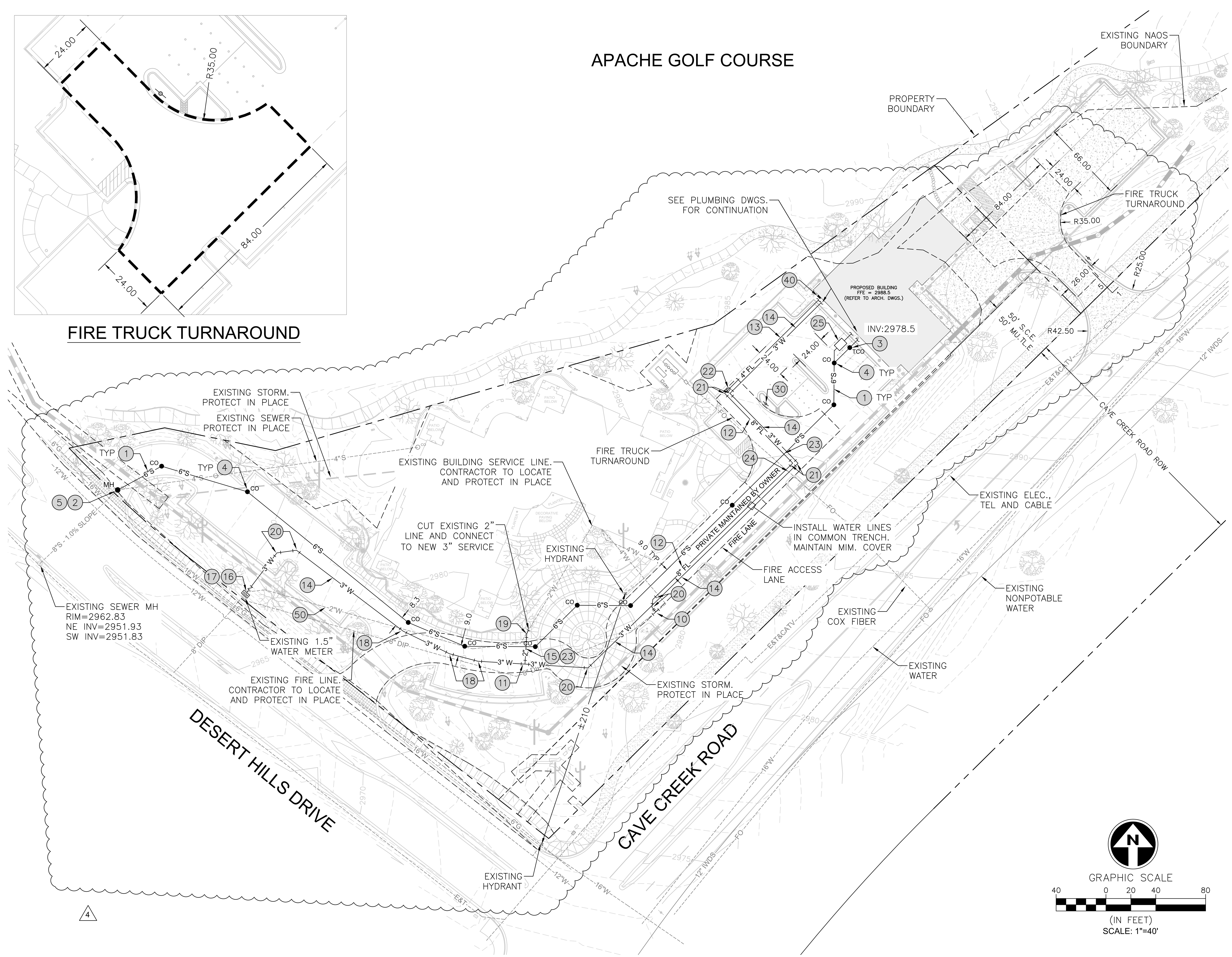

CONSTRUCTION NOTES

1. INSTALL 6" SEWER LATERAL. PVC SDR 35 AT 3.0% MINIMUM SLOPE.
2. INSTALL 48" CONCRETE SANITARY SEWER MANHOLE AS PER MAG DETAIL 420-1, TYPE 'A' TOP. MANHOLE TO BE CONSTRUCTED COMPLETELY IN PRIVATE PROPERTY.
3. INSTALL 2-WAY SURFACE CLEANOUT AS PER PLUMBING DIAGRAMS P004.
4. INSTALL SEWER CLEANOUT AS PER MAG DETAIL 441, CLEANOUT INSTALLATION.
5. CONNECT EXISTING SEWER SERVICE TO NEW MANHOLE.
10. INSTALL 8"x8"x8" TEE AND 8" VALVE AS PER COS DETAIL 2362-2.
11. INSTALL 3"x3"x2" TEE. CONTRACTOR TO LOCATE EXISTING 2" SERVICE PRIOR TO INSTALLATION.
12. INSTALL 8" DIP FIRE LINE, CLASS 350 C/W ALL REQUIRED FITTINGS, RESTRAINTS, WITH MINIMUM OF 4' COVER AND SEPARATION FROM OTHER UTILITIES AS PER COS DETAIL 2372.
13. INSTALL 4" DIP FIRE LINE, CLASS 350 C/W ALL REQUIRED FITTINGS, RESTRAINTS, WITH A MINIMUM OF 4" COVER AND SEPARATION FROM OTHER UTILITIES AS PER COS DETAIL 2372.
14. INSTALL 3" WATERLINE SCH 80 PVC C/W ALL REQUIRED FITTINGS, RESTRAINTS, WITH A MINIMUM OF 3' COVER AND SEPARATION FROM OTHER UTILITIES AS PER COS DETAIL 2372.
15. INSTALL 2" WATERLINE SCH 80 PVC C/W ALL REQUIRED FITTINGS, RESTRAINTS, WITH A MINIMUM OF 3' COVER.
16. COORDINATE REPLACEMENT OF EXISTING 1.5" WATER METER WITH A 2" WATER METER WITH THE CITY PRIOR TO CONSTRUCTION. USE TYPE 'K' CONTINUOUS COPPER TO CONNECT FROM THE MAIN TO THE METER IF REQUIRED.
17. INSTALL 3" REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER AS PER COS DETAIL 2353.
18. INSTALL 11.25° BEND C/W ELEC. BALL MARKER AS PER COS DETAIL 2397.
19. INSTALL 22.5° BEND C/W ELEC. BALL MARKER AS PER COS DETAIL 2397.
20. INSTALL 45° BEND C/W ELEC. BALL MARKER AS PER COS DETAIL 2397.
21. INSTALL 90° BEND C/W ELEC. BALL MARKER AS PER COS DETAIL 2397.
22. INSTALL 8"X4" REDUCER.
23. PROVIDE SEWER SEPARATION AS PER COS DETAIL 2401.
24. COX FIBER OPTIC. PROTECT IN PLACE AND PROVIDE MINIMUM UTILITY SEPARATION AS PER COS DETAIL 2372.
25. INSTALL GREASE, OIL AND SAND SEPARATOR. REFER TO PLUMBING DWGS. FOR DETAILS.
30. INSTALL BI-DIRECTIONAL NO PARKING FIRE LANE SIGN AS PER COS DETAIL 2365. SIGN POST INSTALLATION AS PER COS DETAIL 2131.
40. WALL-MOUNTED FDC. ALARM BELL ABOVE.
50. EXISTING 2" SERVICE LINE TO BE CAPPED AND ABANDONED. CONTRACTOR TO COORDINATE ABANDONMENT WITH THE CITY PRIOR TO CONSTRUCTION.

SHEET NOTES

1. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF EXISTING 8" FIRE AND 2" SERVICE LINE PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY OF ANY EXISTING CONDITIONS DISCREPANCIES WITH THIS PLANS.
2. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS DURING CONSTRUCTION TO THEIR PRE-CONSTRUCTION CONDITION.
3. FIRE LANE(S) TO HAVE UNOBSTRUCTED MINIMUM VERTICAL CLEARANCE OF 13.6' (FIRE ORDINANCE 4283 SECTION 503.2.1.

33-DR-2020

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REVISIONS

REV	DATE	BY	DESCRIPTION
1	01/15/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS
2	03/08/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS (FIRE AND WATER)
3	04/06/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS (FIRE AND WATER)
4	05/11/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS (FIRE)
			REVISIONS TO WATER AND SEWER PIPING LAYOUT.

DESERT MOUNTAIN
10550 E. Desert Hills Drive Scottsdale, Arizona 85262
Phone (480) 595 4000 Fax (480) 595 4250

Gannett Fleming
3838 N Central Ave, Suite 1900 Phoenix, AZ 85012
Phone (602) 553-8817 Fax (602) 553-8816 Web www.gfnet.com

Registered Professional Engineer (Civil) 36372 BYRON L. DIXON 05-12-21 ARIZONA, U.S.A.

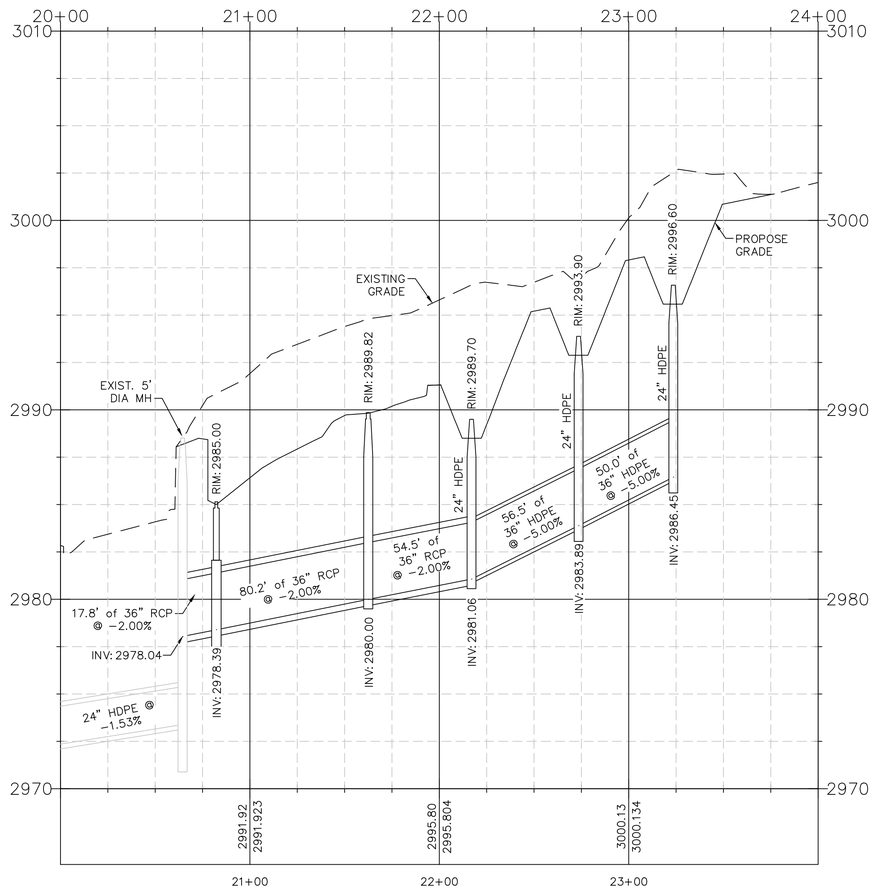
Contact Arizona 811 at least two full working days before you begin excavation. ARIZONA811 Call 811 or click Arizona811.com

DESIGNED:	M.MIRKO
DRAWN:	R.REVILLARD
CHECKED:	B.DIXON
SCALE:	1" = 40'

STORAGE & LAUNDRY FACILITY

WATER AND SEWER PLAN

JOB NO:	065118
DATE:	05/12/21
SHEET:	C0.03

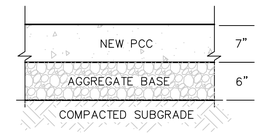


23 STORM DRAIN PROFILE

HOZ. SCALE: 1" = 40'
VER. SCALE: 1" = 4'

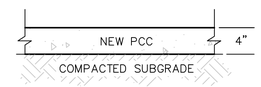
16 CONCRETE RAMP DETAIL

HOZ. SCALE: 1" = 10'



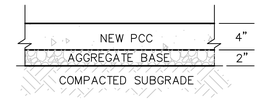
8 DOCK RAMP SECTION

NTS



9 CART PATH SECTION

NTS

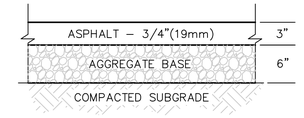


10 CONCRETE WALK SECTION

NTS

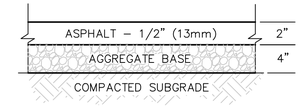
15 NATURAL TRAIL SECTION

NTS



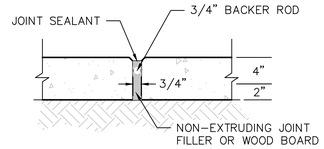
11 DRIVEWAY STRUCTURAL SECTION

NTS



12 PARKING STRUCTURAL SECTION

NTS



13 EXPANSION JOINT DETAIL

NTS

CONSTRUCTION NOTES

1. INSTALL TRUNCATED DOME DETECTABLE WARNING SURFACE AS PER COS DETAIL 2231.

SHEET NOTES

1. PAVEMENT AGGREGATE BASE COURSE MATERIAL AS PER MAG SECTION 702.
2. ASPHALT CONCRETE MATERIAL AND MIX DESIGN AS PER MAG 710. PAVEMENT INSTALLATION AS PER MAG SECTION 321 AND COS SPECIFICATIONS.
3. SUBGRADE CONSTRUCTION AS PER GEOTECHNICAL REPORT.
4. PORTLAND CEMENT CONCRETE PAVEMENT AS PER GEOTECHNICAL REPORT.

33-DR-2020

REV	DATE	BY	DESCRIPTION
1	01/15/21	RR	RESUBMITTAL ADDRESSING CITY'S COMMENTS

REVISIONS

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Registered Professional Engineer (Civil) CERTIFICATE NO. 36372 BYRON L. DIXON 05-12-21 Date Signed ARIZONA, U.S.A.

Contact Arizona 811 at least two full working days before you begin excavation ARIZONA811 Call 811 or click Arizona811.com

DESIGNED: R.REVILLARD
DRAWN: R.REVILLARD
CHECKED: B.DIXON
SCALE: AS-SHOWN

STORAGE & LAUNDRY FACILITY

DETAILS

JOB NO: 065118
DATE: 05/12/21
SHEET: C0.04

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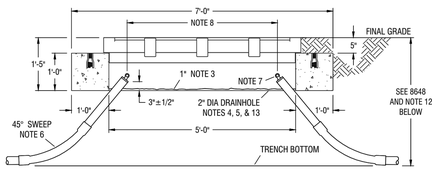
8722.A _ SPLICING MATERIAL ONLY

1 = ONE SPLICE
2 = TWO SPLICE
3 = THREE SPLICE
X = WITHOUT SPLICES

8724.A _ _

IF APPLICABLE
G = APS GROUT PROVIDED

1 = ONE SPLICE
2 = TWO SPLICE
3 = THREE SPLICE
X = WITHOUT SPLICES



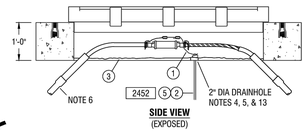
NOTES:

1. REQUIRED EXCAVATION SIZE FOR THE NEW PULLBOX IS 72 IN. X 96 IN. X 20 IN. COMPLETE EXCAVATION PRIOR TO DELIVERY OF THE TRAFFIC BEARING PULLBOX. SUPPLIER WILL SET PULLBOX IN THE EXCAVATION AT TIME OF DELIVERY. FOR SCHEDULING DELIVERY CONTACT THE PRECAST SUPPLIER FIVE WORKING DAYS AHEAD.
2. ADJUST SPECIFIED PULLBOX FRAME AND LID TO MATCH EXISTING OR PROPOSED GRADE.
3. USE PRE-MIX, APN 71301280, TO GROUT THE BOTTOM OF THE PULLBOX.
4. A 2-INCH MINIMUM DIAMETER DRAIN HOLE, INSTALLED IN THE AREA OF LOWEST ELEVATION, IS REQUIRED TO ENSURE PROPER DRAINAGE.
5. WHERE A GROUND ROD IS UTILIZED, IT SHALL BE DRIVEN THROUGH THE DRAIN HOLE TO PREVENT RODENT PENETRATION.
6. ONLY FORTY-FIVE DEGREE CONDUIT SWEEPS ARE ACCEPTABLE
7. CONDUIT SHALL BE SEALED CAPPED OR PLUGGED PER 8601 SECTION 18.0 AND 8881.
8. PROPER CONDUIT SEPARATION IS CRITICAL FOR CABLE TRAINING AND SPLICING. THE SPACING SHALL BE AS FOLLOWS:
   36 INCHES WHEN 45 DEGREE SWEEPS ARE SPECIFIED.
9. MINIMUM SEPARATION BETWEEN CENTER LINES OF THE CONDUITS IS 3 INCHES.
10. CONDUIT FOR PRIMARY OR FEEDERS INSTALLED LOWER THAN A 36-INCH DEPTH SHALL BE PARTIALLY ENCASED WITH A MINIMUM 4-INCH CONCRETE CAP ON TOP AND 2-INCHES ON THE SIDES. PARTIAL CONCRETE ENCASEMENT SHALL INCLUDE TOP AND SIDES OF CONDUIT, BUT NOT THE BOTTOM (SEE 8601).
11. GAPS CREATED BY THE CONDUIT HOLES SHALL BE GROUTED TO PREVENT RODENT PENETRATION. THIS REQUIREMENT SHALL NOT RESULT IN A REDUCTION OF THE VERTICAL SPACE INSIDE THE PULLBOX.
12. ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES.
13. THE PARTY RESPONSIBLE FOR THE INSTALLATION OF THE CONDUIT SYSTEM SHALL BE RESPONSIBLE FOR INSTALLATION OF THE GROUND ROD OR AN APPROVED ALTERNATE.
14. COMPACTION BENEATH AND AROUND PULLBOX SHALL BE A MINIMUM OF 90 PERCENT OF THE MAXIMUM DENSITY AS DEFINED IN 8601.

aps ARIZONA PUBLIC SERVICE COMPANY T&D CONSTRUCTION STANDARDS					SUBSTRUCTURES TRAFFIC BEARING PULLBOX REINFORCED CONCRETE 1/0 AL PRIMARY	SH 1 OF 3 8722 THRU 8724
BY	LDR.	MGR.	DATE	REV.		
MLM	M. CAMPA	J.M. HORMELL	03/2020	1		

NOTES (CONTINUED):

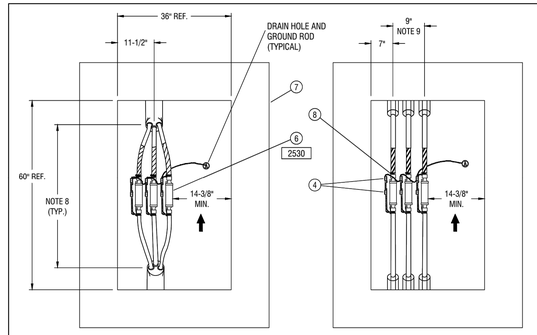
15. IF THE FINAL GRADE IS CONCRETE, BACKFILL WITH 5000 PSI CONCRETE TO FINAL GRADE AND FINISH SURFACE OF CONCRETE. IF FINAL GRADE IS NEITHER CONCRETE NOR ASPHALT, INSTALL FORMS 12 IN. FROM FRAME SIDE SURFACE, BACKFILL WITH 5000 PSI CONCRETE AND FINISH SURFACE OF CONCRETE. INSTALL PULLBOX TO WITHIN 1/8 IN. OF FINAL GRADE, UNLESS OTHERWISE SPECIFIED. A DEPRESSION IS PREFERABLE TO A PROJECTION ABOVE FINAL GRADE.
16. TOTAL WEIGHT:
    BOX WITH COVER = 3,655 LBS.
17. IF PULLBOX IS BEING INSTALLED ON ASPHALT, THIS BACKFILL METHOD CAN BE USED: BACKFILL WITH 5000 PSI CONCRETE TO 3-INCH BELOW FINAL GRADE THEN COMPLETE BACKFILLING WITH ASPHALT UP TO FINAL GRADE.
18. FOR FINAL INSTALLATION OF STEEL COVERS, REPLACE MANUFACTURER SUPPLIED STEP WASHERS WITH A SINGLE COIL, HELICAL SPLIT, GALVANIZED LOCK WASHER, APN# 33007142. THE GALVANIZED SQUARE LOCKNUT HAS AN ADJUSTABLE NYLON INSERT. MAKE SURE THIS LOCKNUT IS ADJUSTED. TURN THE INSERT INTO THE NUT UNTIL THE TIP OF THE INSERT IS FLUSH WITH THE THREADS ON THE INSIDE OF THE NUT. ALSO, CLEAN THREADS ON ALL NUTS AND BOLTS PER MANUFACTURER'S (LOCTITE) RECOMMENDATIONS AND APPLY "LOCTITE" #271 LIQUID APN 85413420 THREADLOCKER TO BOLT THREADS. TORQUE BOLTS TO 50 FT-LBS.
19. THE EXACT LOCATION AND ORIENTATION OF THE PULL BOX SHALL BE SPECIFIED ON THE WORK ORDER CONSTRUCTION DRAWINGS. PULLBOX SHALL BE POSITIONED OUTSIDE DRAINAGE AREAS WHERE PRACTICAL.
20. THIS PULLBOX WILL ACCOMMODATE A MAXIMUM OF THREE PHASES/SPLICES
21. HIGH AND LOW-VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME PULL BOX.
22. SEE 8601 FOR TRENCH BACKFILL AND COMPACTION REQUIREMENTS.
23. SEE 6210 FOR MINIMUM BENDING RADIUS FOR PRIMARY CABLE.
24. SEE 2449-2453 & 2458-2460 FOR ALTERNATE GROUNDING METHODS.



SIDE VIEW
(EXPOSED)

CODE		8722	8724	MATERIAL LIST	
ITEM	QTY	QTY		DESCRIPTION	APN
1	VAR	VAR		CABLE #2/7 STRD CU BARE	31001415
2	1	1		CLAMP GROUND ROD 5/8"	33002580
3	-	VAR		CONCRETE PRE-MIX 30#	71301280
4	VAR	VAR		CONN CU 3/4" 2-1/0 2-1/0	33101345
5	-	1		ROD COPPERCLAD GRD 5/8" X 8"	33004805
6	VAR	VAR		SPLICE 1/0 AL SEE - 2530	
7	-	1		1/0 SPLICE BOX H520 RATED	00147495
8	VAR	VAR		TIE CABLE MAX 2 IN OD	00103864

aps ARIZONA PUBLIC SERVICE COMPANY T&D CONSTRUCTION STANDARDS					SUBSTRUCTURES TRAFFIC BEARING PULLBOX REINFORCED CONCRETE 1/0 AL PRIMARY	SH 2 OF 3 8722 THRU 8724
BY	LDR.	MGR.	DATE	REV.		
MLM	M. CAMPA	J.M. HORMELL	03/2020	1		



TOP VIEW - EXAMPLE A
3-#1/0 AL IN A SINGLE 4 IN. CONDUIT

TOP VIEW - EXAMPLE B
3-#1/0 AL IN SEPARATE 2 IN. CONDUITS

aps ARIZONA PUBLIC SERVICE COMPANY T&D CONSTRUCTION STANDARDS					SUBSTRUCTURES TRAFFIC BEARING PULLBOX REINFORCED CONCRETE 1/0 AL PRIMARY	SH 3 OF 3 8722 THRU 8724
BY	LDR.	MGR.	DATE	REV.		
MLM	M. CAMPA	J.M. HORMELL	03/2020	1		

REV	REVISIONS		
△	DATE	BY	DESCRIPTION

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Registered Professional Engineer (Civil) CERTIFICATE NO. 36372 BYRON L. DIXON 05-12-21 ARIZONA, U.S.A.

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ARIZONA811 Call 811 or visit Arizona811.com

DESIGNED:	R.REVILLARD
DRAWN:	R.REVILLARD
CHECKED:	B.DIXON
SCALE:	AS-SHOWN

STORAGE & LAUNDRY FACILITY

APS DETAILS

JOB NO:	065118
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LANDSCAPE LAYOUT NOTES

(APPLY TO ALL LANDSCAPE RELATED LAYOUT REQUIRED FOR IMPROVEMENTS - SEE ALSO LEGENDS, SPECIFICATIONS AND SHEET NOTES)

1. Verify Survey Info
   All shown control points, baselines, benchmarks, property lines, setbacks, existing conditions to remain, and newly built adjacent construction (by others) shall be verified by a professionally certified surveyor (PLS.) as a part of this contract. Any deviations from information shown or conflicts with proposed improvements shall require the Owner's Representative to be notified immediately with written follow up (within 24 hours), describing any deviation or variations from the proposed layout as described in these plans. Written approval to proceed must be obtained from the Owner's Representative prior to any demolition or new construction.

2. Field Staking
   All work shown shall be field staked or otherwise denoted and subject to field verification, review, and approval by the Owner's Representative prior to any construction or demolition. Field staking of all proposed work and adjacent construction (even if future work by others) may be required by the Owner's Representative prior to approval of all improvements and adequate stakes shall be provided by this Contractor's Surveyor.

3. AutoCAD Design Files
   To expedite the layout of the site, "layout coordinates and/or grids" may have been established as shown. For elements designed with CADD, Drawing files (.DWG) will be provided to the surveyor for staking using surveyor established control points and benchmarks. These points shall be field staked by the surveyor as a part of this contract at the contractor's expense. The layout of these stakes shall accurately occur in locations as determined by the Owner's Representative and shall be maintained throughout the duration of this project. The establishment of these points shall be reviewed and approved by the Owner's Representative prior to any construction in those areas and will assist the Contractor in the layout of all site improvements as shown on drawing or otherwise.

4. Dimension Tolerances
   The construction tolerances for this project are minimal and the dimensions shown are to be strictly adhered to.

5. Dimensions
   Computed dimensions shall take precedence over scaled dimensions, and large scale over small scale drawings. Dimensions shown with (+/-) shall be the only layout information allowed to vary, and may only vary to the tolerances given or to +/-1" if no dimension is given.

6. Complete Project
   The Contractor is responsible to provide "complete-in-place" systems and a complete project, and any intermittent or periodic approvals received for portions of work, stakes, grades, or forms (by the Owner's Representatives, architects, engineers, or others) shall not waive the Contractor's requirements to comply with the intent of any and all portions of this contract.

7. Staking
   All locations for walks, roads, swales, walls, curbs, structures etc. shall be staked by a registered land surveyor. All layout information is based on "Ground Coordinates" and the Contractor shall meet with the Owner's Consulting Surveyors and Engineers to clarify all datum, benchmark, control point requirements, walk, wall and other specific site improvements. Centerline layout information will be provided to the contractor by the engineer/landscape architect as CADD Drawing files (.DWG). See planting notes for tree staking.

8. Curvilinear Improvements
   It is the intent and requirement of this contract to provide curvilinear walks, walls and curbs with smooth transitions and arcs (both horizontal and vertical). Straight segments and abrupt transitions will not be accepted unless shown as such on the plans. Wood curving forms may be required to obtain the proper effects. All walk, edgers, paving edges, and other curvilinear forms must be approved in field prior to installation.

LANDSCAPE GENERAL NOTES

(SEE ALSO ALL OTHER CONSULTANT/ENGINEER NOTES AND DOCUMENTS FOR ALL RELATED INFORMATION)

1. Owners Rep.
   These drawings and documents are submitted to the Owner for review and approval, prior to any release for bidding or construction. Contractors shall receive all bid information, instructions, bid forms, general terms and conditions, and all other required clarifications from the Owner's Authorized Representative administering this project. Unless otherwise indicated, the "Owner's Representative" for this project shall be a specifically designated by the owner. The contractor will also be required to coordinate and correspond with other landscape architects from DTJ and other key consultants involved on the project.

2. Project Manual Discrepancy
   These drawings supplement the other contractual information contained in the "Project Manual" and/or Bid Instructions (Specifications), if provided. Anything mentioned in the Project Specifications and not the drawings, or vice-versa, shall be of like effect as if shown on or mentioned in both. In case of discrepancy in drawings or project specifications, the matter shall be immediately submitted to the Owner's Representative; without his decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense. The Contractor shall not take advantage of any apparent error or omission on the drawings or in the specifications. In the event the Contractor discovers such error or omission, he shall immediately notify the Owner's Representative. The Owner's Representative will then make such clarification and interpretations as may be deemed necessary for the Contractor to fulfill the intent of the contract.

3. Complete Project Intent
   The "intent" of these Improvements Drawings, details and associated specifications is that the Contractor provide the Owner with a complete, accurate, functionally and technically sound project as generally described in the documents. The drawings are diagrammatic. In most cases, unless explicitly noted otherwise, drawing symbols are used to represent complete-in-place systems to be provided, as part of base bid. All elements shown or implied by the drawings, if not specifically detailed or specified, shall be installed per Uniform Building Codes, manufacturers recommendations, State Highway Department Standards, City Standards and Specifications, standard industry practices, as approved by the Owner's Representative.

4. Conform to Codes
   All work on this project shall conform to the current City of Scottsdale Building and Zoning Codes, Ordinances, Standards and Specifications for Construction of Public Improvements, as well as all other applicable governing regulations in effect.

5. Survey Control Points
   All range points, ties, benchmarks or other survey control points which may be encountered during construction, must be preserved or modified/recorded by a registered surveyor at the contractor's expense. Immediately upon discovery, the Contractor shall notify the Owner's Representative of any survey control points found and obtain direction prior to proceeding.

6. Permits
   The Contractor shall coordinate and obtain all permits which are necessary to perform the proposed work. Owner to pay for all construction permits unless otherwise indicated in the Contract Documents. Contractor shall obtain, at his expense, all specialty permits needed for specific items included with the work, unless otherwise indicated in the Contract Documents. Contractor shall comply with all notification and inspection requirements.

7. Testing
   Unless specifically noted otherwise in the Contract Documents, the Contractor shall obtain and coordinate all technical tests and reports by a certified independent laboratory or agency as outlined in the specifications or these drawings. The Owner may, at the Owner's sole discretion, provide separate testing and/or inspection service, and the Contractor is required to fully coordinate with those consultants/contractors. Owner to pay for all soils and materials testing.

8. Existing Condition Survey
   An Existing Condition Survey has been provided to the Owner by registered surveyors under separate contracts for the basis of design. It is not to be considered as part of these Construction Documents. The survey information has been reformatted and included in this set for general information only and intended to assist the contractor in the general orientation of the site. The Contractor is required to visit the site, verify information, conduct any exploratory research, and become thoroughly familiar with all existing conditions as pre-requisite of this bid submittal. Without exception, any deviations or omissions found between these plans and existing site conditions shall immediately be brought to the attention of the Owner's Representative, but will not be considered as basis for additional payment except as allowed in change order process per General Conditions and Supplementary Conditions under the existing Owner-Contractor Agreements/Contracts".

PROJECT GENERAL NOTES

1. Engineering base and survey information provided by Gannet Fleming.
2. See Civil Plans for Grading. Grading to be approved prior to planting. All trees to be staked with wood lath and size and species noted for final field adjustment.
3. All hardscape materials to be approved in field by Landscape Architect prior to installation. Contractor to provide field mock-up samples for all flatwork, stone paving, gravel mulch, walls, fencing and lighting.
4. All concrete/metal edger to be staked and painted in the field prior to approval of grading and boulder placement for areas adjacent to the edger.
5. All landscape materials to be located by matrix plan or planting plan in field prior to planting by contractor. Trees and planting areas may be adjusted in the field and on final landscape & irrigation construction drawings to accommodate unforeseen conditions, provided that the landscape meets the intent shown on these plans approved by Owner's Representative. See Landscape Notes for specifics.
6. Contractor to inspect site soil conditions. assume amendment of 2 cy/1000 sf of compost for all planting areas and 3cy/ 1000 sf for all turf areas. Notify Landscape Architect/owner immediately of any additional work considered necessary to create. Contractor is responsible for soil blending with compost to create an improved planting mix.
7. The horizontal distance between trees and any site utilities or infrastructure shall be in compliance with codes of the local governing authority.
8. Irrigation will be a fully automatic system with a smart controller. Contractor to review existing conditions plan and coordinate with Owner. Contractor to verify existing golf course irrigation system and to verify system with Owner.
9. All irrigation vaults located in planting areas shall have tan cover and vaults located in turf areas to have green cover.

ABBREVIATIONS

B.O.F.	BOTTOM OF FOOTING
B.O.S.	BOTTOM OF STEP
B.O.W.	BOTTOM OF WALL
C.I.P.	CAST IN PLACE
℄	CENTERLINE
CLR	CLEAR
CJ	CONSTRUCTION JOINT
C.M.U.	CONCRETE MASONRY UNIT
CONT.	CONTINUOUS
DIA.	DIAMETER
EJ	EXPANSION JOINT
EJD	DOWELED EXPANSION JOINT
F.O.W.	FACE OF WALL
F.F.E.	FINISHED FLOOR ELEVATION
F.G.	FINISHED GRADE
F.V.	FIELD VERIFY
FL	FLOWLINE
GALV.	GALVANIZED
HC	HANDICAPPED
HP	HIGH POINT
I.D.	INSIDE DIAMETER
INV.	INVERT ELEVATION
JT	JOINT
LF	LINEAR FOOT
MAX	MAXIMUM
MIN	MINIMUM
MH	MANHOLE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE

OC	ON CENTER
O.D.	OUTSIDE DIAMETER
PA	PLANTING AREA
⅊	PLATE
POB	POINT OF BEGINNING
PVMT	PAVEMENT
PVC	POLYVINYL CHLORIDE
P.L.	PROPERTY LINE
RAD	RADIUS
REINF	REINFORCEMENT
RD	ROOF DRAIN
RO	ROUGH OPENING
SCJ	SAW CUT JOINT
S.J.	SCORE JOINT
SFF	SQUARE FACE FOOT
SHT	SHEET
SPEC	SPECIFICATIONS
STD	STANDARD
STL	STEEL
T.O.B.	TOP OF BANK
T.O.C.	TOP OF CURB
T.O.R.	TOP OF ROCK
T.O.S.	TOP OF STEP
T.O.SL	TOP OF SLAB
T.O.W.	TOP OF WALL
TYP.	TYPICAL
V.I.F.	VERIFY IN FIELD
W.E.	WATER ELEVATION
WWM	WELDED WIRE MESH

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SHEET TITLE:

LANDSCAPE GENERAL NOTES

SHEET NUMBER:

L001

Drawing: U:\2019001.20-Desert Mountain\05 CAD\02_Fairways Distribution Center\Sheets\CD\L101-L102 Cover Sheet+General Notes.dwg
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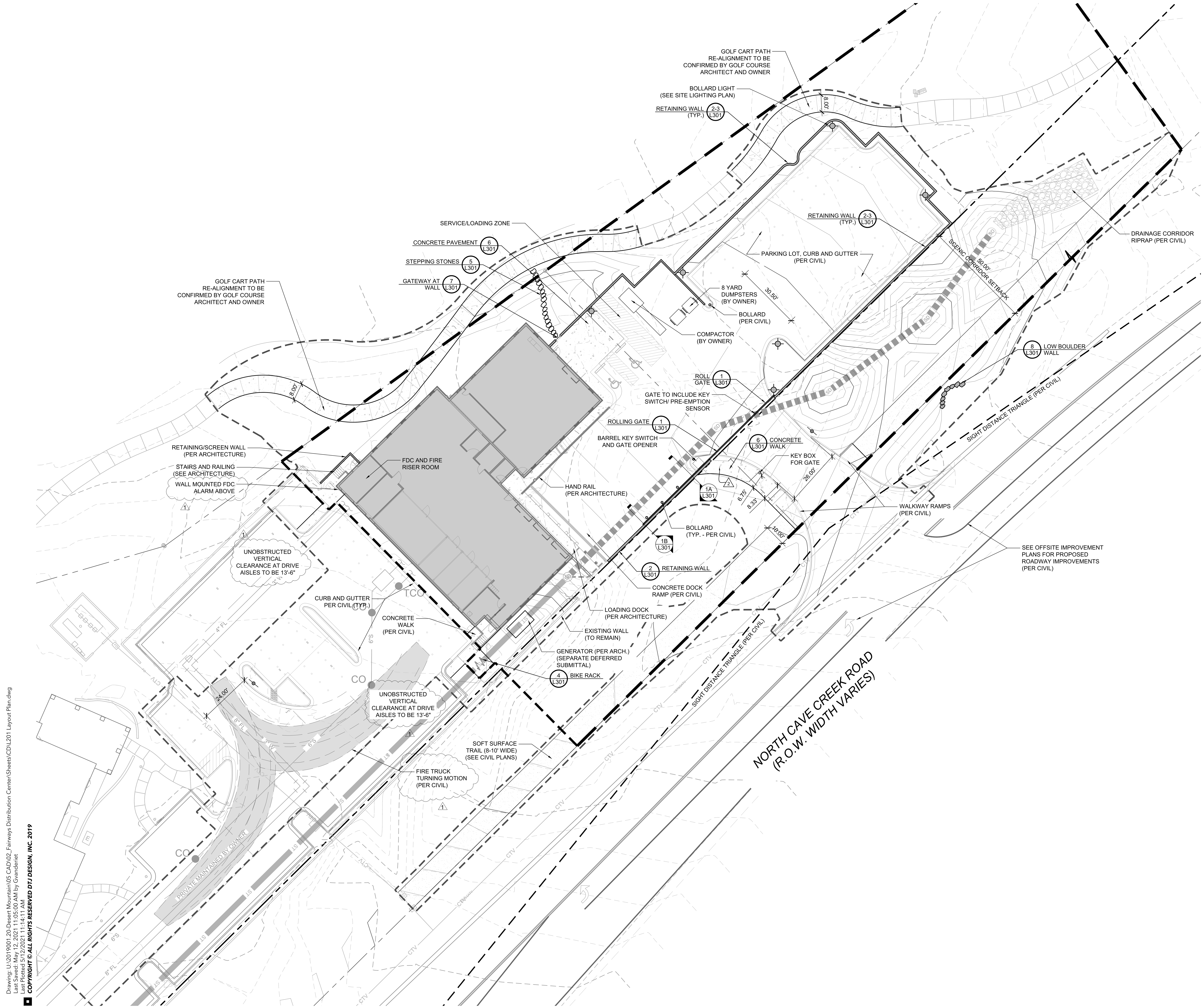


LAYOUT LEGEND

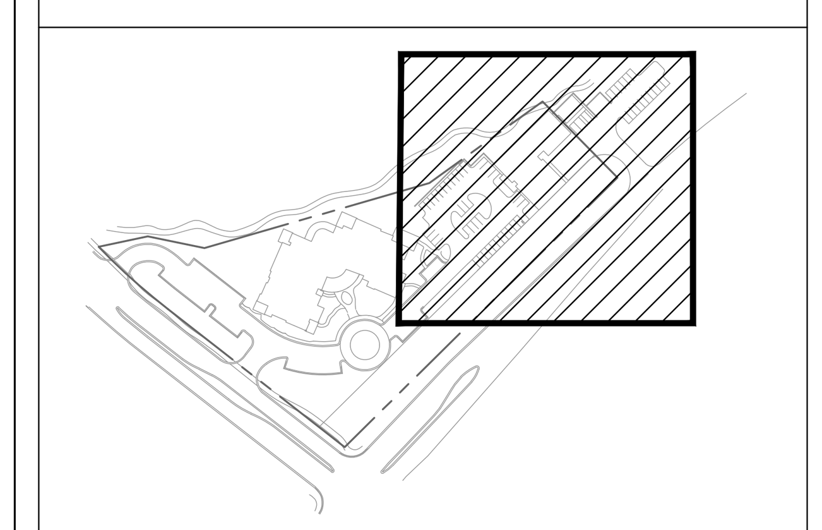
- R.O.W. LINE
- LOT LINE
- LIMIT OF WORK
- SITE WALL

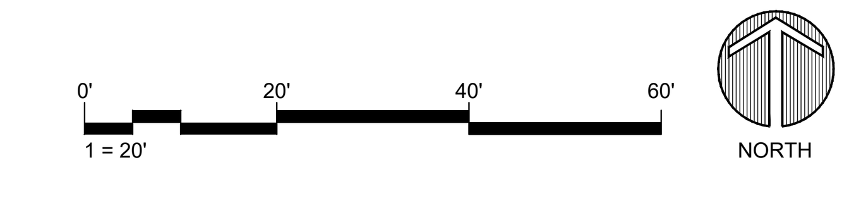
NOTES:
1. GRADING AND SITE INFRASTRUCTURE PER CIVIL PLANS.

LAYOUT NOTES

1. PROTECT IN PLACE ALL EXISTING TREES TO BE PRESERVED AND DO NOT MODIFY GRADES UNDER CROWN OF EXISTING TREES. REFER TO NATIVE PLANT INVENTORY.
2. VERIFY ALL UTILITIES IN FIELD. NOTIFY OWNER OF ANY CONFLICTS WITH EXISTING UTILITIES.
3. VERIFY SMOOTH TRANSITIONS BETWEEN PROPOSED AND EXISTING GRADES.
4. CONTRACTOR TO VERIFY & PROVIDE POSITIVE DRAINAGE FOR ALL PAVING AREAS & SWALES. ALL WALKS TO HAVE POSITIVE DRAINAGE WITH MIN. 1% TO MAX. 2% CROSS SLOPE.

KEYMAP





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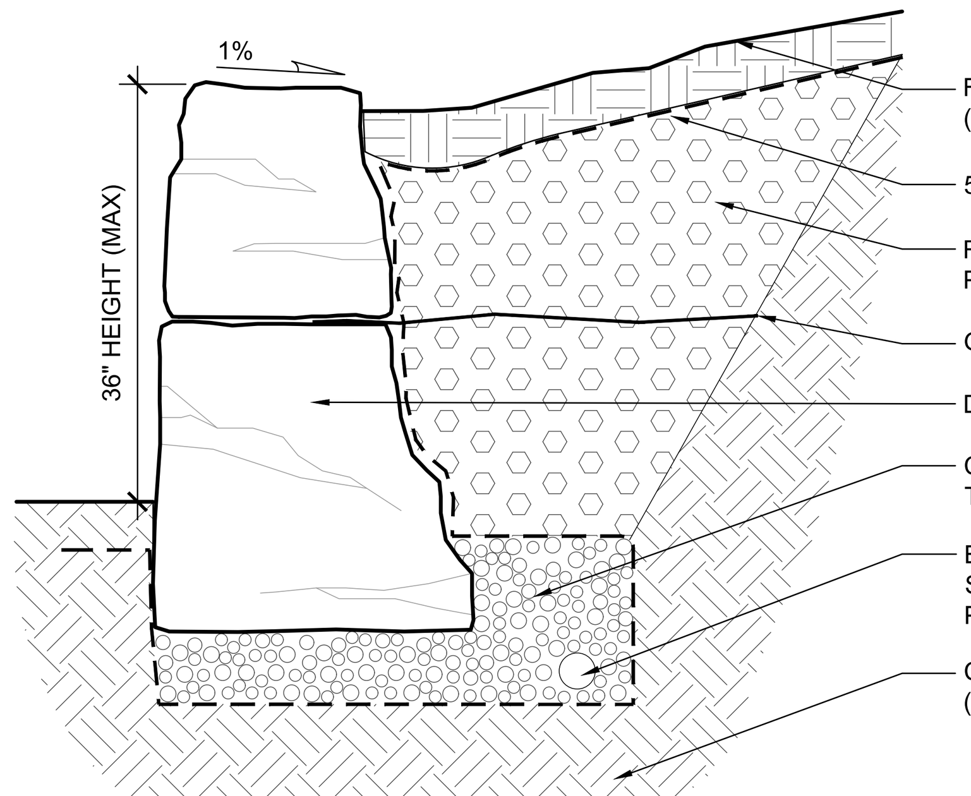
1	03/22/2021
2	05/12/2021

SHEET TITLE:

SITE & LAYOUT PLAN

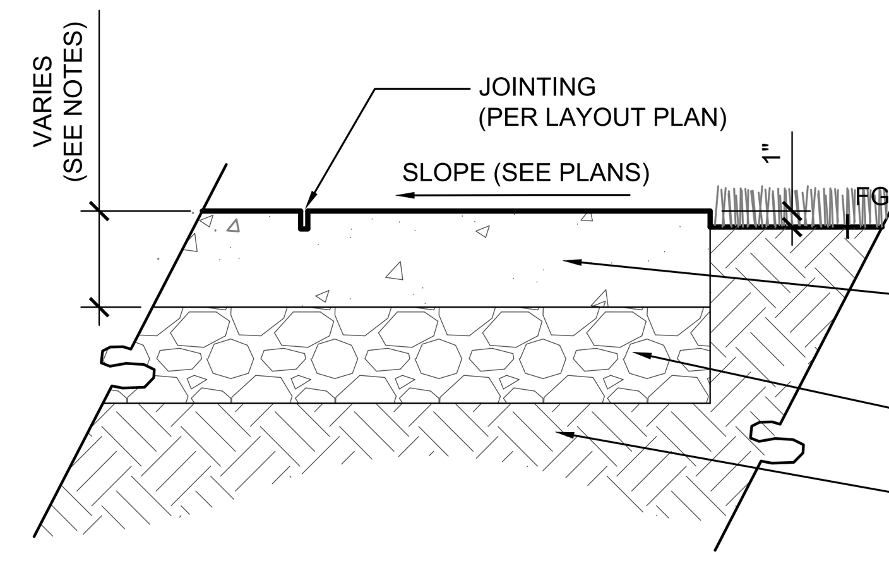
SHEET NUMBER:

L101

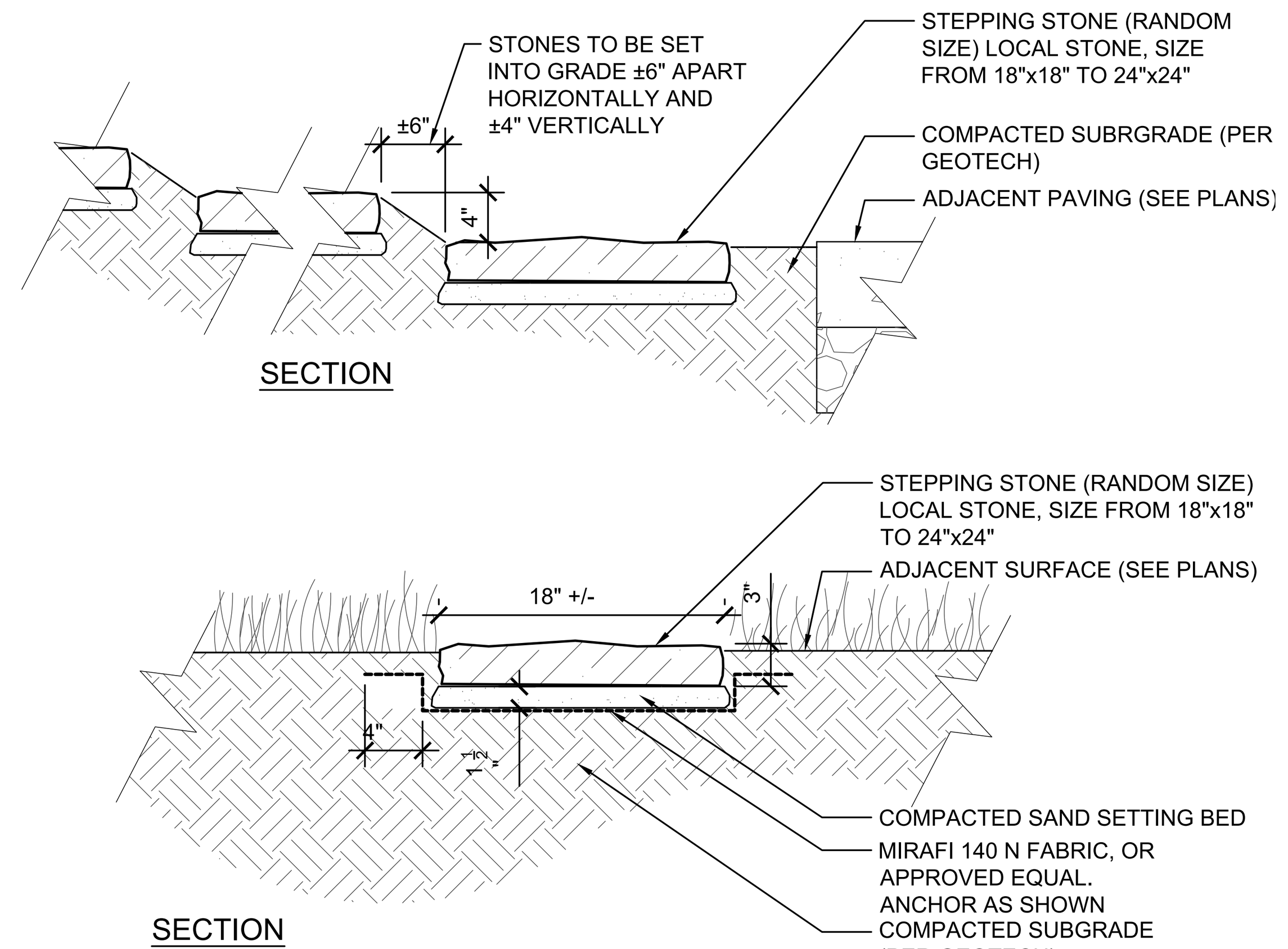


8 L301 DRY STACK BOULDER WALL
3/4" =1'-0" SECTION

NOTES:
1. INTEGRAL COLORED CONCRETE PAVEMENT (SAN DIEGO BUFF OR DAVIS WESTERN GOLD BY DAVIS COLORS) WITH BROOM FINISH PERPENDICULAR TO FLOW OF TRAFFIC. ALL FORM WORK SHALL BE REVIEWED AND COLOR SELECTION APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO POUR.
2. PROVIDE POSITIVE DRAINAGE OFF WALKS/PAVING AND AWAY FROM ALL STRUCTURES IN ALL LOCATION / CONDITIONS. SEE GRADING PLANS FOR SPECIFIC GRADING.



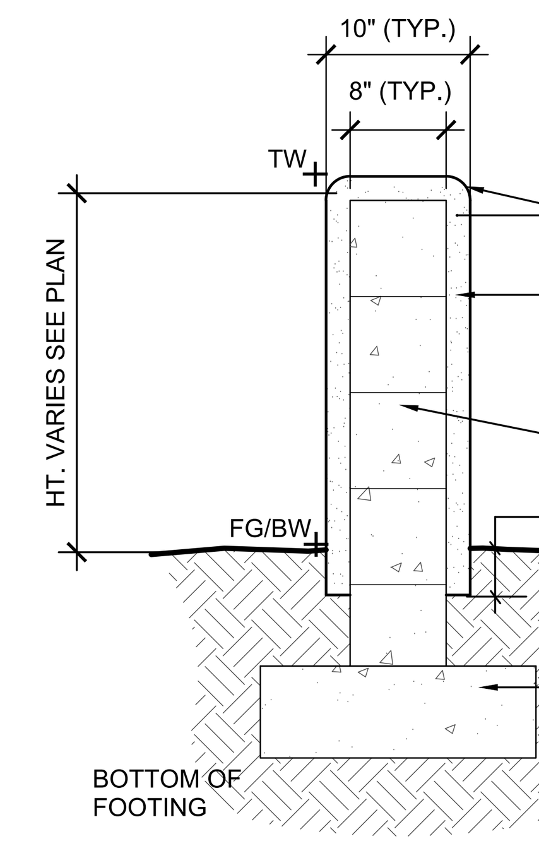
6 L301 COLORED CONCRETE WALK
1" =1'-0" SECTION



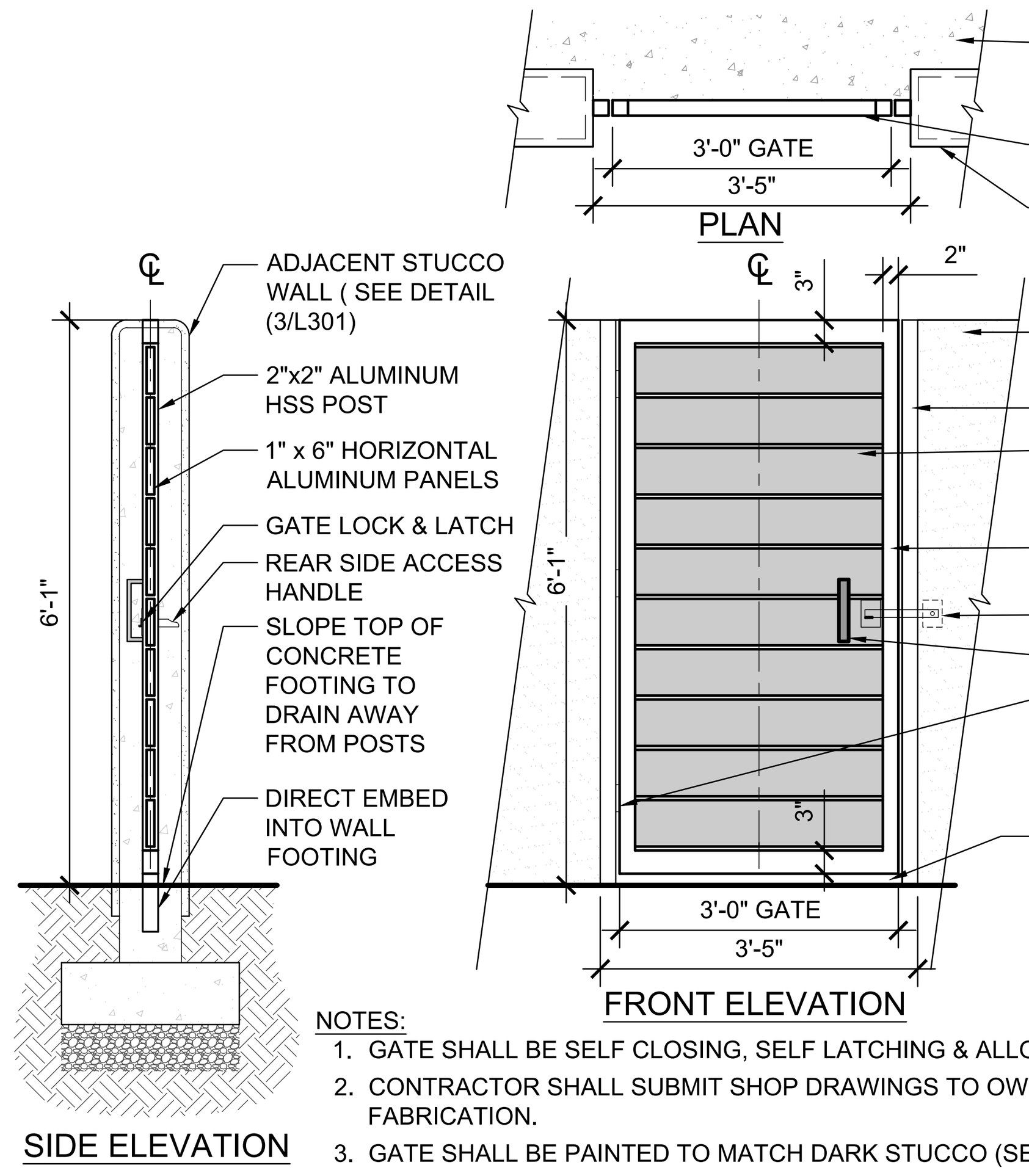
5 L301 STEPPING STONES
1" =1'-0" SECTION & PLAN

NOTE:
1. SEE CIVIL GRADING PLANS FOR HEIGHT OF WALLS
2. PROVIDE ON SITE MOCKUP OF STUCCO WALL, SHOWING STEP TRANSITION AND FINISH PRIOR TO CONSTRUCTION


WALL CHARACTER IMAGE

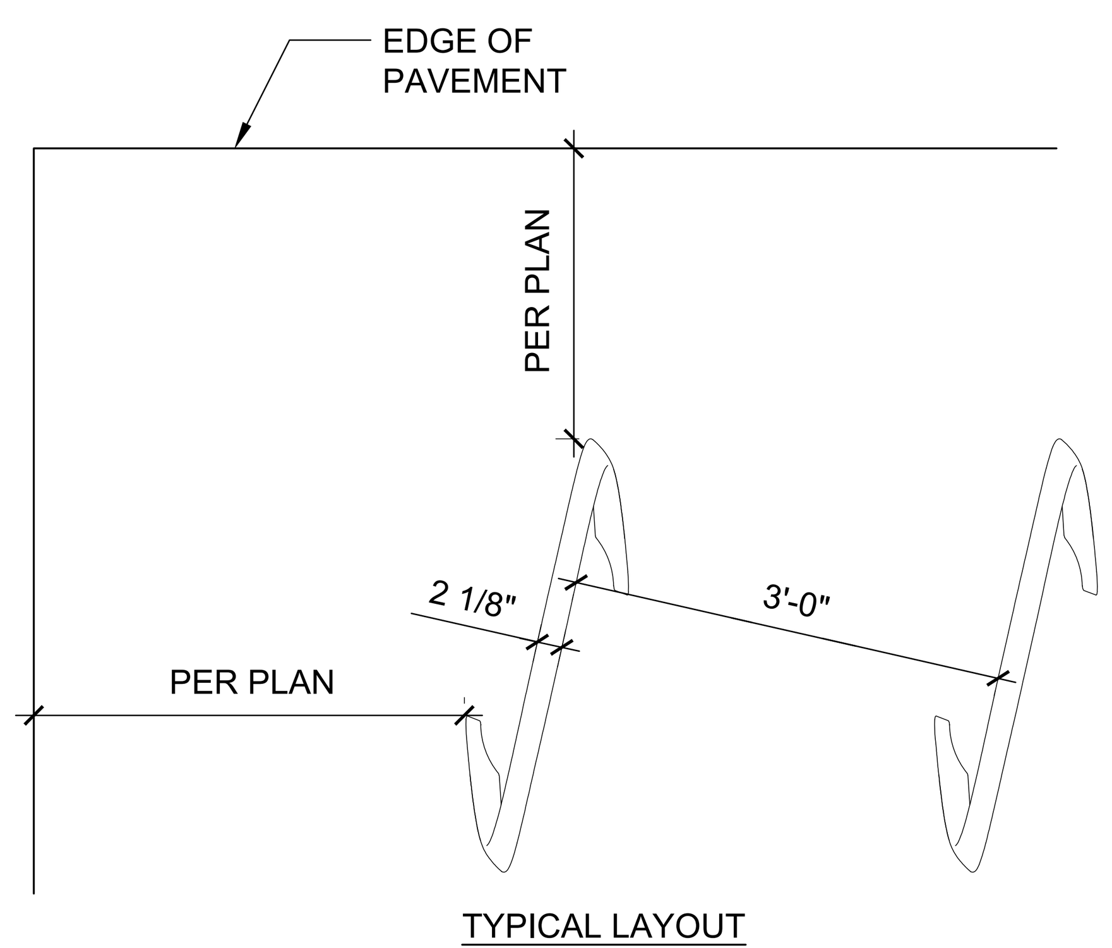


3 L301 STUCCO FREESTANDING WALL
3/4" =1'-0" SECTION



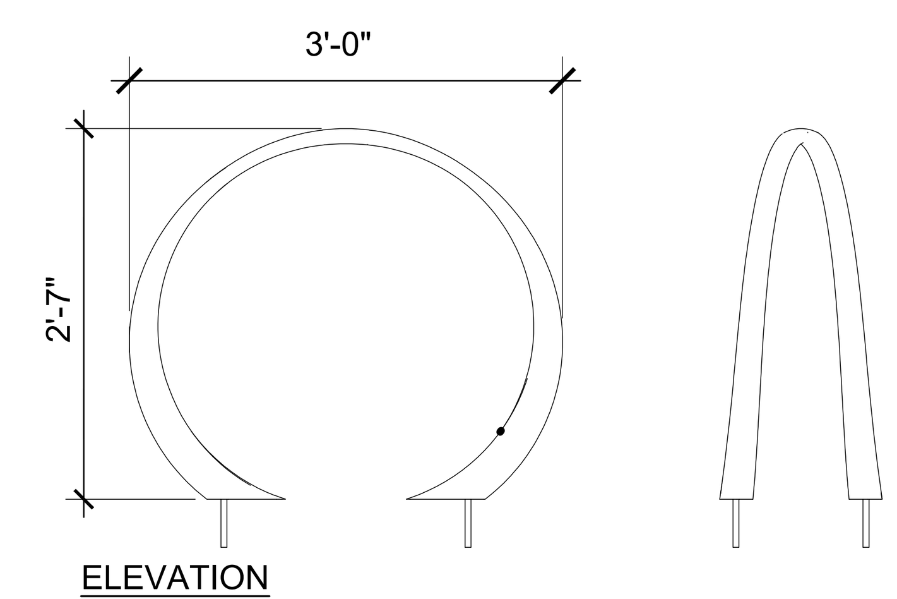
NOTES:
1. GATE SHALL BE SELF CLOSING, SELF LATCHING & ALLOW ACCESS FROM EACH SIDE.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO OWNER & ARCHITECT PRIOR TO FABRICATION.
3. GATE SHALL BE PAINTED TO MATCH DARK STUCCO (SEE BUILDING MATERIAL BOARD)

7 L301 GATEWAY AT STUCCO WALL
1/2" =1'-0" SECTION




CHARACTER IMAGE

NOTES:
1. SURFACE EMBEDDED.
2. BLACK POWEDERCOAT METAL FINISH (PROVIDE SAMPLE FOR APPROVAL)
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

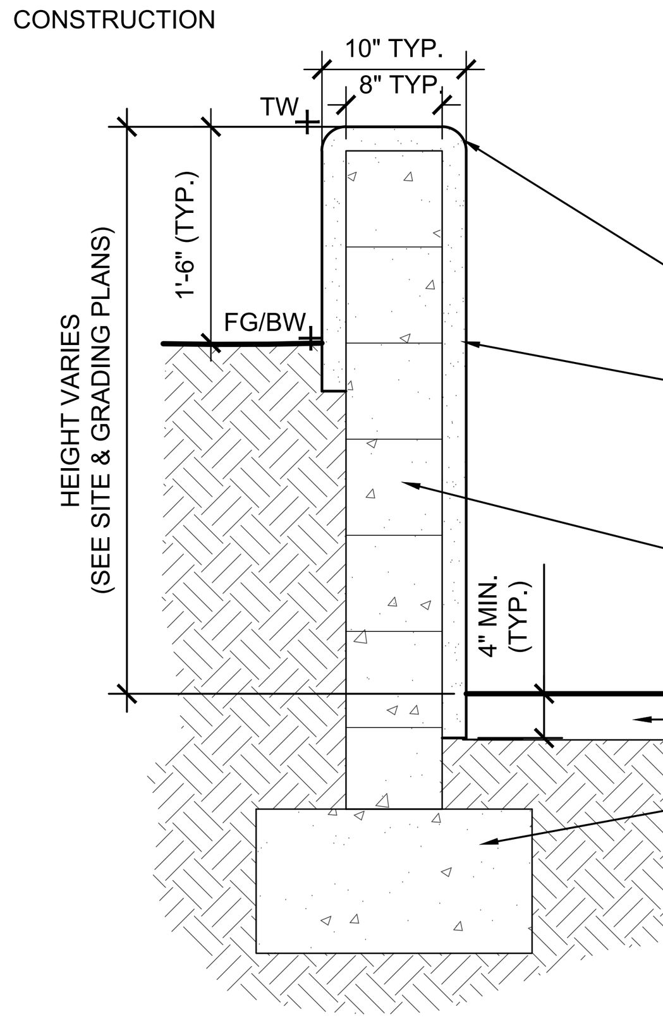


MANUFACTURER: LANDSCAPE FORMS
MODEL: 35 COLLECTION LOOP BIKE RACK
PHONE: 800.521.2546
www.landscapeforms.com

4 L301 BIKE RACK
1" =1'-0" PLAN & ELEVATION

NOTE:
1. SEE CIVIL GRADING PLANS FOR HEIGHT OF WALLS
2. PROVIDE ON SITE MOCKUP OF STUCCO WALL, SHOWING STEP TRANSITION AND FINISH PRIOR TO CONSTRUCTION


WALL CHARACTER IMAGE

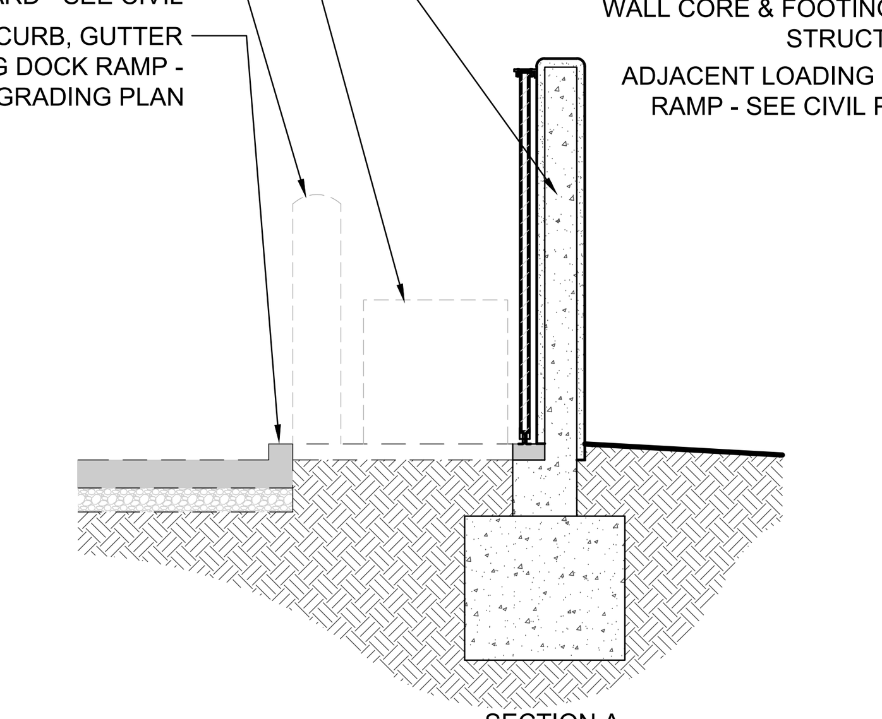


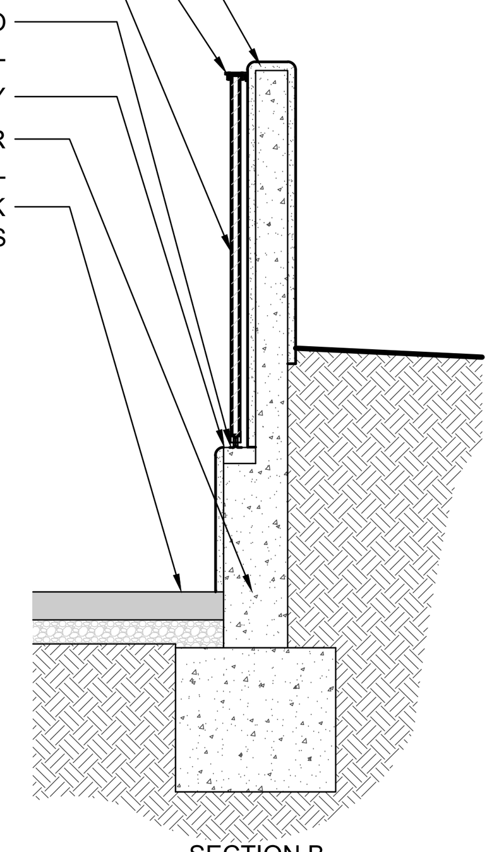
2 L301 STUCCO RETAINING WALL
3/4" =1'-0" SECTION


EXISTING APACHE MAINTENANCE FACILITY GATE (REFERENCE IMAGE)

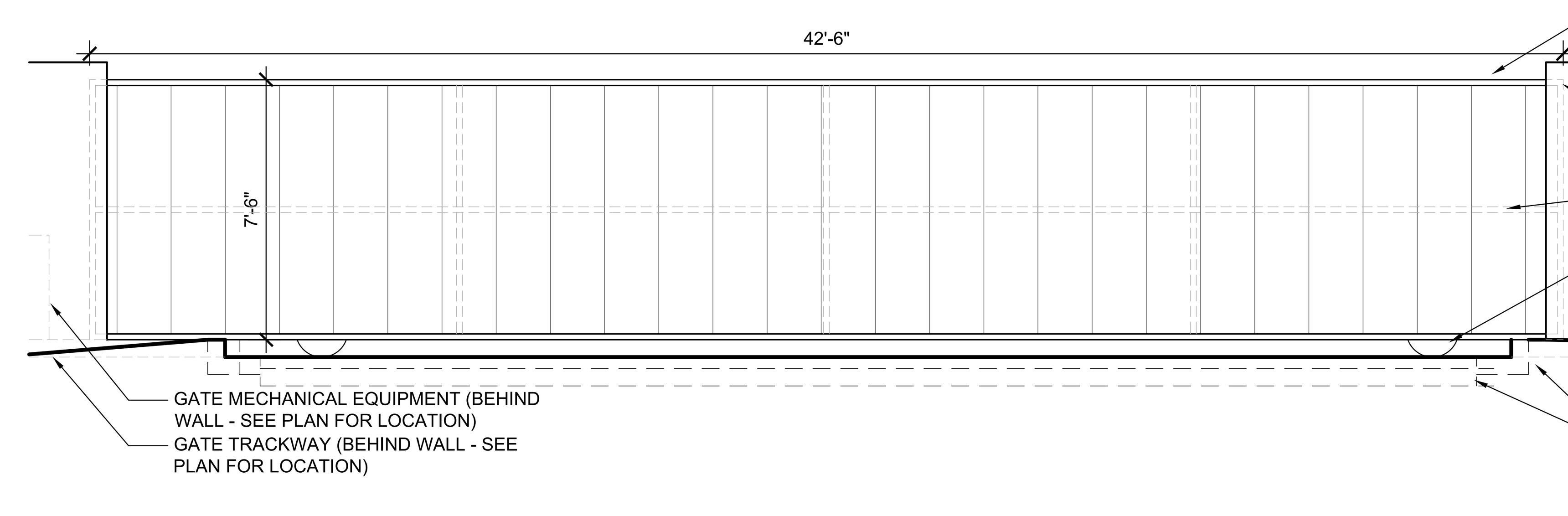
PROPOSED GATE CHARACTER IMAGE

NOTES:
1. SEE CIVIL GRADING PLANS FOR HEIGHT OF WALLS
2. PROVIDE ON SITE MOCKUP OF CONCRETE WALL, SHOWING STEP TRANSITION AND FINISH PRIOR TO CONSTRUCTION





NOTES:
1. GATE TO MATCH STYLE OF APACHE MAINTENANCE FACILITY ROLL GATE
2. GATE COLOR TO BE DARK STUCCO (SEE BUILDING MATERIAL BOARD SHEET 24)
3. SEE SITE PLAN FOR LOCATION OF KEY BOX PER OWNER
4. INCLUDE FIRE PRE-EMPTION SENSOR PER OWNER
5. GATE TRACKWAY SHALL INCLUDE A GATE HOLDER OR GATE STOP AT BOTH ENDS OF GATE TO TERMINATE MOVEMENT OF GATE WHEN FULLY OPENED OR FULLY CLOSED.
6. REFER TO CIVIL PLANS FOR ADJACENT CONDITIONS AND GRADES.
7. REFER TO STRUCTURAL PLANS FOR WALL CORE, TRACKWAY, REINFORCEMENT AND FOOTING.
8. DETAIL IS PROVIDED FOR DESIGN INTENT. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION TO OWNER & ARCHITECT FOR ROLLING GATE SYSTEM INCLUDING ALL ACCESSORIES NECESSARY TO PROVIDE A FULLY FUNCTIONING AUTOMATED GATE SYSTEM.



1 L301 ENTRY GATE
1/4" =1'-0" SECTIONS + ELEVATION

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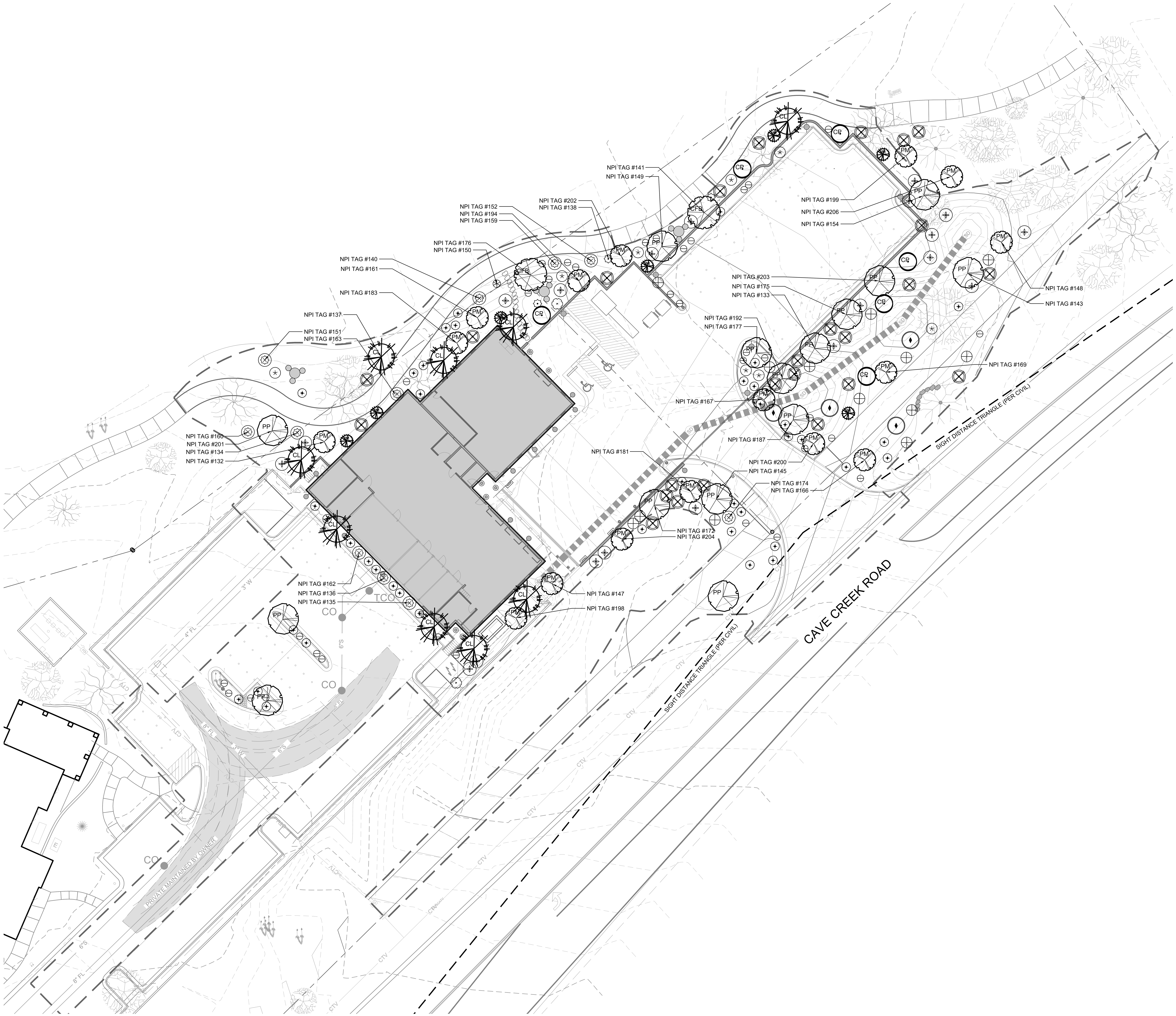
SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
L301



LAYOUT LEGEND

- R.O.W. LINE
- LOT LINE
- LIMIT OF WORK

NOTES:
1. GRADING AND SITE INFRASTRUCTURE PER CIVIL PLANS.

LANDSCAPE LEGEND

OVERSTORY

CFB	*Cercidum floridum*	Blue Palo Verde
CL	*Chilopsis linearis*	Desert Willow
PM	*Parkinsonia microphylla*	Foothills Palo Verde
CP	*Celtis pallida*	Desert Hackberry
JM	*Juniperus monosperma*	One-Seed Juniper
PP	*Prosopis pubescens*	Mesquite

CACTUS & SUCCLENTS

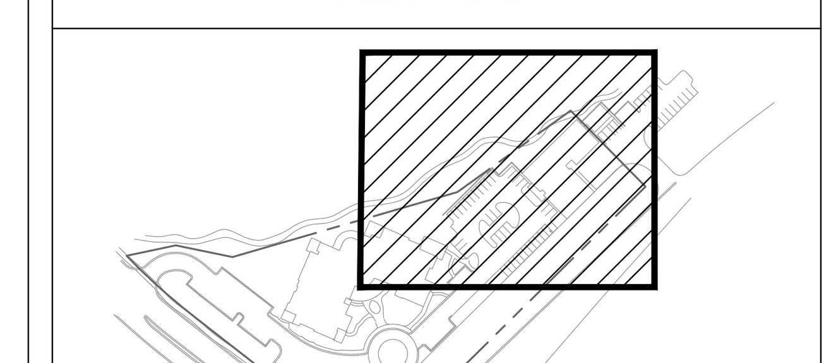
CG	*Carnegiea gigantea*	Saguaro
FC	*Ferocactus wislizeni*	Barrel Catcus
FS	*Fouquieria splendens*	Ocotillo
NM	*Nolina microcarpa*	Bear Grass
OE	*Optunia englemannii*	Desert Prickly Pear
YB	*Yucca baccata*	Banana Yucca
YE	*Yucca elata*	Soaptree Yucca

SHRUBS

AG	*Acacia Greggii*	Catclaw Acacia
DP	*Dalea pulchra*	Indigo Bush
DV	*Dadonaea visua*	Hopbush
EF	*Encelia Farinosa*	Brittle Bush
EV	*Ephedra viridis*	Mormon Tea

NOTES:
SEE PLANT LIST FOR QUANTITIES AND SEE SHEET L502 FOR ADDITIONAL LANDSCAPE NOTES AND SPECIFICATIONS.
1. SEE IRRIGATION PLANS FOR POINT OF CONNECTION, CONTROLLER & IRRIGATION SYSTEM.
2. PROVIDE ROCK MULCH FOR ALL LANDSCAPE AREAS. SEE OWNER FOR ROCK MULCH SPECIFICATION
3. COORDINATE WITH NATIVE PLANT INVENTORY SURVEY FOR TRANSPLANTING AND SALVAGE. CONTRACTOR TO COORDINATE WITH LA FOR FIELD LOCATION OF SALVAGED MATERIAL.
4. SEE NPI PLANS FOR CORRESPONDING PLANT TAGS AND MATERIAL TO BE REPLACED

KEYMAP



0' 20' 40' 60'
1" = 20'
NORTH

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1	03/22/2021
2	05/12/2021

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L401

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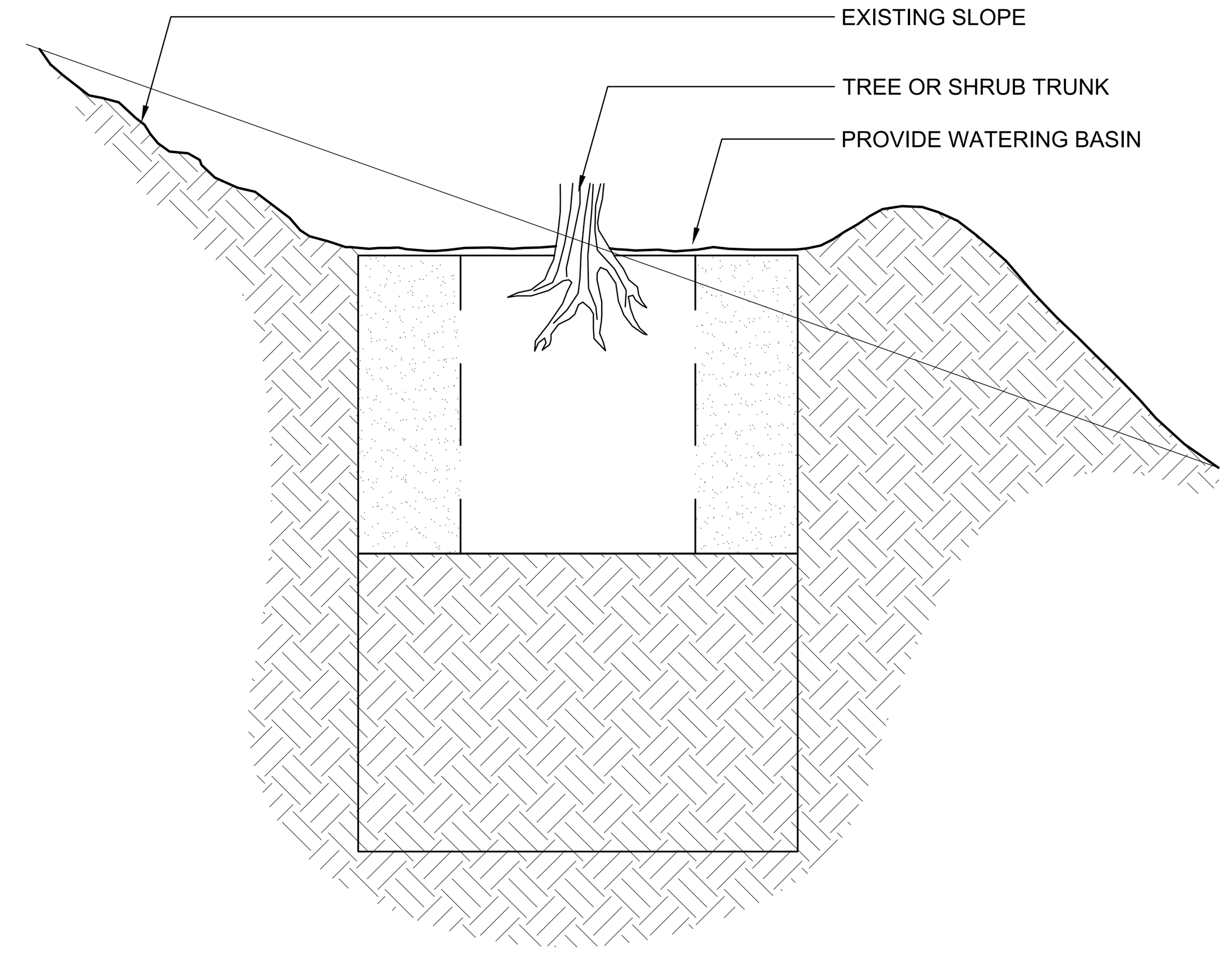
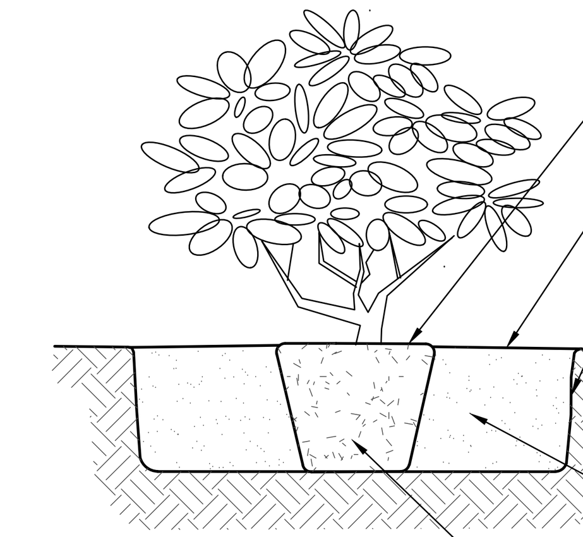
Last Plotted 5/12/2021 11:15:58 AM

NOTES:
PLANTING SHALL BE AS PER COS STANDARD DETAILS 2620-1,2&3



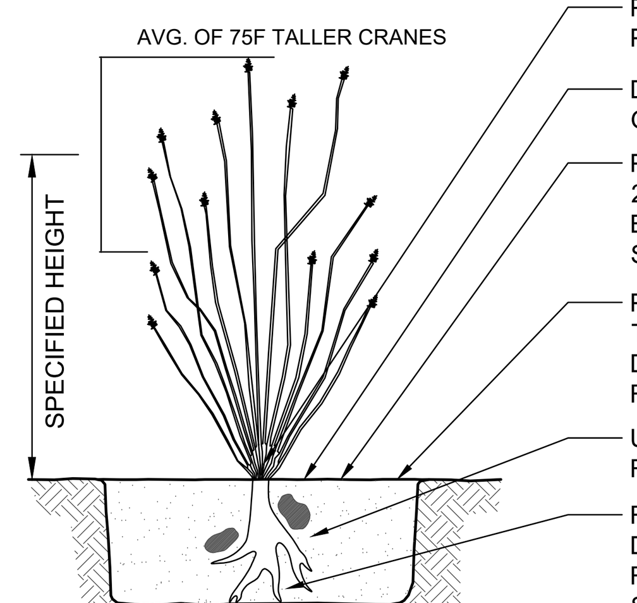
TREE & SHRUB PLANTING ON SLOPE

NOTES:
1. SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN SHRUBS AND UTILITY FACILITIES SO AS TO NOT HINDER USE OF THESE FACILITIES.



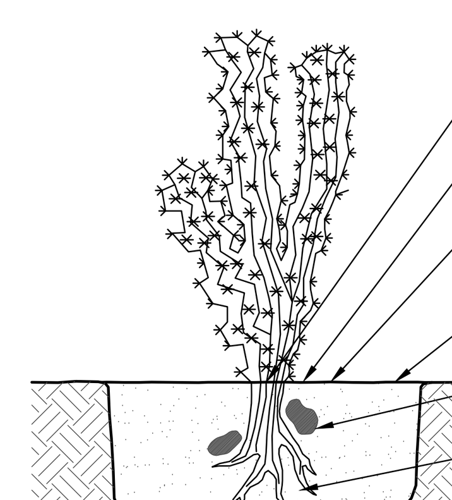
3 L501 SHURB PLANTING
N.T.S SECTION

NOTES:
1. OPTIMUM TRANSPLANTING SEASON IS OCTOBER THROUGH NOVEMBER
2. MAINTAIN ORIGINAL PLANT ORIENTATION. THE ORIGINAL "NORTH" ORIENTATION SHALL BE MARKED ON A RIB AT A HEIGHT OF 5' ABOVE GROUND LEVEL
3. WATER THOROUGHLY AT THE TIME OF TRANSPLANTING TO REMOVE AIR POCKETS & ASSURE PROPER COMPACTION. BACKFILL SHALL BE FREE OF INJURIOUS ROCKS & DEBRIS.
4. DO NOT WATER FOR 3 WEEKS AFTER PLANTING.
5. PLANT IN AREAS SAFE FROM PRESENT & FUTURE CONSTRUCTION ACTIVIES
6. TRANSPLANT TO ORIGINAL DEPTH OF BURY.
7. WATER WEEKLY THROUGH SUMMER.



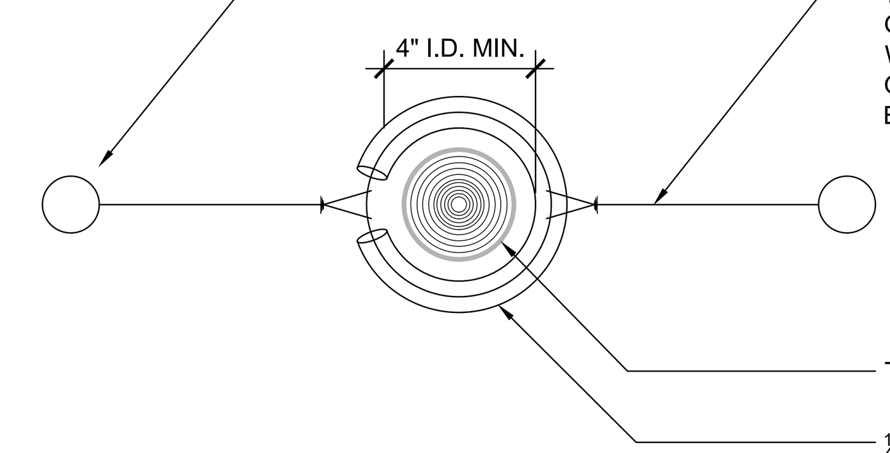
OCOTILLO PLANTING

NOTES:
1. OPTIMUM TRANSPLANTING SEASON IS OCTOBER THROUGH NOVEMBER.
2. MAINTAIN ORIGINAL PLANT ORIENTATION. THE ORIGINAL "NORTH" ORIENTATION SHALL BE MARKED ON A RIB AT A HEIGHT OF 5' ABOVE GROUND LEVEL.
3. WATER THOROUGHLY AT THE TIME OF TRANSPLANTING TO REMOVE AIR POCKETS & ASSURE PROPER COMPACTION. BACKFILL SHALL BE FREE OF INJURIOUS ROCKS & DEBRIS.
4. DO NOT WATER FOR 3 WEEKS AFTER PLANTING.
5. PLANT IN AREAS SAFE FROM PRESENT & FUTURE CONSTRUCTION ACTIVITIES.
6. TRANSPLANT TO ORIGINAL DEPTH OF BURY
7. AFTER WEEKLY THROUGH THE SUMMER. MAINTAIN ORIGINAL GROWING ORIENTATION.



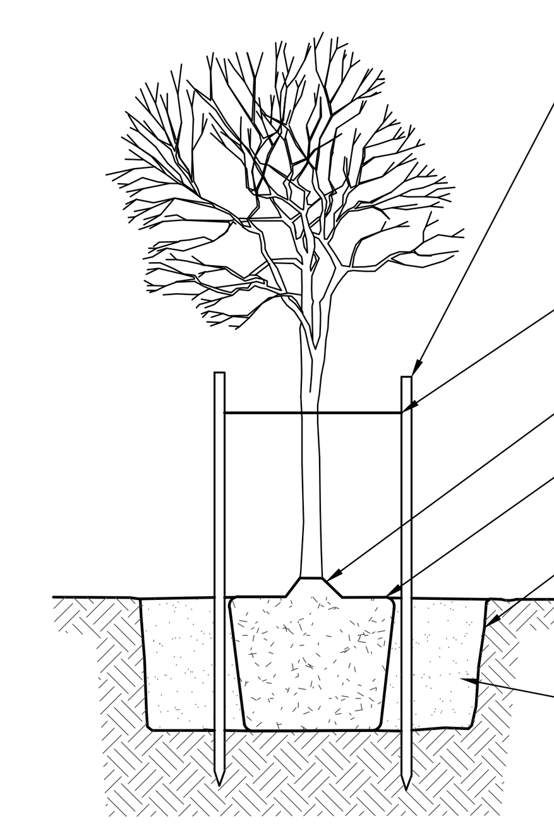
CACTUS PLANTING

NOTES:
1. SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN SHRUBS AND UTILITY FACILITIES SO AS TO NOT HINDER USE OF THESE FACILITIES.

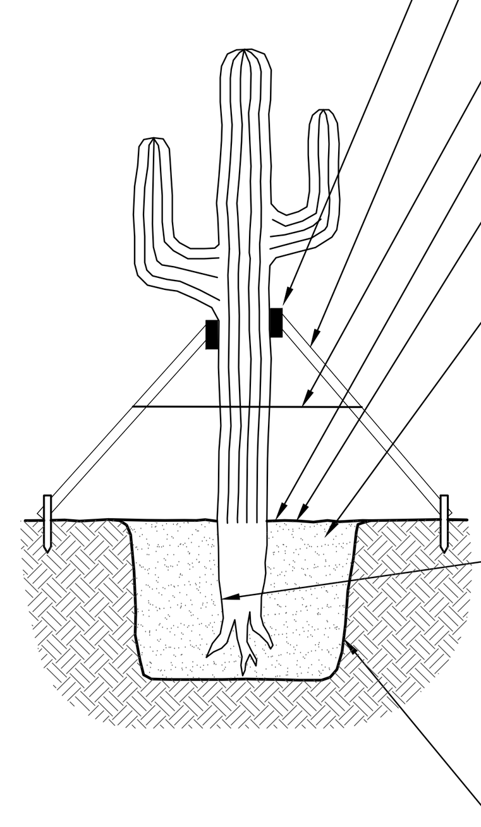


TREE STAKING - PLAN

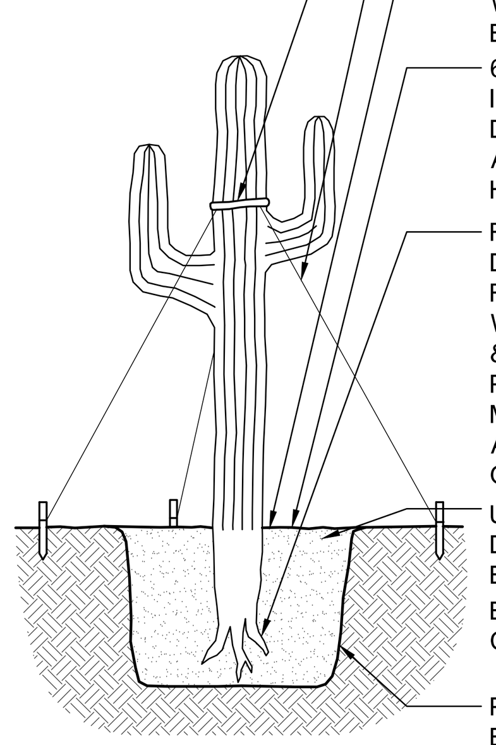
NOTES:
1. SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN TREES & UTILITY FACILITIES SO AS TO NOT HINDER USE OF THESE FACILITIES.
2. PLANT PIT BASINS WITHIN SLOPED PLANTING AREAS SHALL BE CONSTRUCTED WITH A MAX. 2:1 SLOPE. PROVIDE SMOOTH TRANSITION TO SURROUNDING FINISH GRADE.



2 L501 SALVAGED TREE PLANTING
N.T.S SECTION

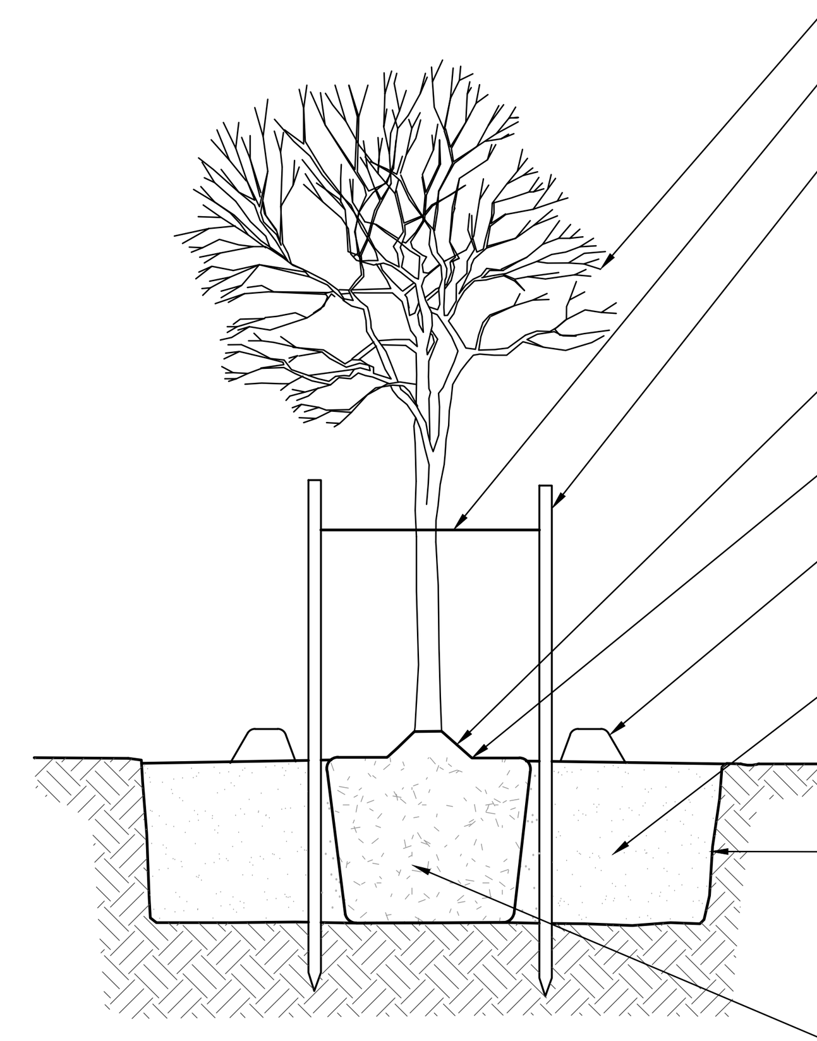


SAGUARO PLANTING TYPE B



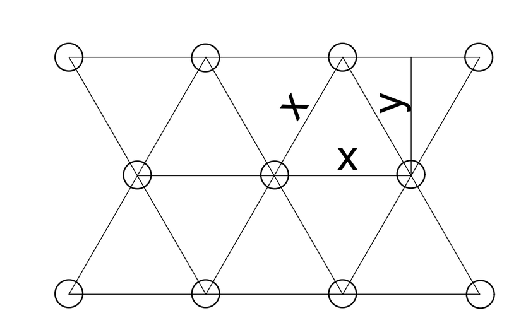
SAGUARO PLANTING TYPE A

5 L501 CACTUS PLANTING
NTS SECTION

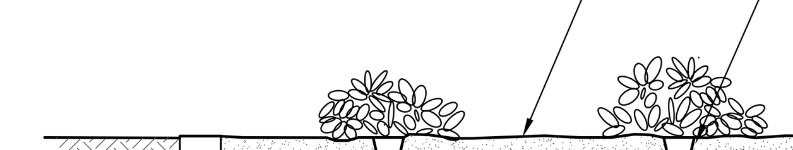


4 L501 SALVAGE, STAKING, SLOPE PLANTING
N.T.S SECTION

NOTES:
ALL GROUNDCOVERS TO PLANTED ON CENTER (SEE PLANT LEGEND) IN A TRIANGULAR PATTERN.



X = O.C. Dimension As Noted On Plan
Y = 0.86 Of Dimension "X"



1 L501 GROUNDCOVER PLANTING
N.T.S SECTION

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SHEET TITLE:
LANDSCAPE DETAILS

SHEET NUMBER:
L501

LANDSCAPE PLANTING NOTES

1. The Contractor shall be responsible for becoming aware of all related existing conditions, utilities, pipes and structures, etc. prior to construction. The Contractor shall be held responsible for contacting all utility companies for field location of all underground utility lines, including depths, prior to any excavation. The Contractor shall take sole responsibility for any and all cost, or other liabilities incurred due to damage of said utilities/structures/etc.
2. The Contractor shall not willfully proceed with construction as designed when it is apparent that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Owner's Representative for clarification. The Contractor shall assume full responsibility for all liabilities, including necessary revisions due to failure to give such notification.
3. The Contractor shall be responsible for any coordination with Subcontractors as required to accomplish all planting and related operations.
4. See specifications and details for planting methods (staking, pit dimensions, backfill requirements, etc.), soil testing, materials, execution and plant protection and other related planting requirements.
5. The acceptable tolerances for this project are minimal and specific layout is required as shown on the layout, planting, and other plans. Final location and staking of all plant materials shall be accepted by the Owner's Representative in advance of plantings. A registered surveyor may be required if specified elsewhere.
6. The Contractor shall notify Owner's Representative 48 hours prior to commencement of work to coordinate project inspection schedules.
7. If conflicts arise between size of areas and plans, The Contractor is required to contact Owner's Representative for resolution. Failure to make such conflicts known to the Owner's Representative will result in The Contractor's liability to relocate the materials.
8. Plant names may be abbreviated on the drawings. See plant legend and landscape schedule for symbols, abbreviations, botanical/common names, sizes, estimated quantities (if given) and other remarks.
9. It is The Contractor's responsibility to furnish all plant materials free of pests or plant diseases. Pre-selected or "tagged" material must be inspected by The Contractor and certified pest and disease free. It is The Contractor's obligation to maintain and warranty all plant materials for a period of (1) year, with watering as necessary to ensure survivability and planting specifications. A (1) year warranty walk will be scheduled for final acceptance of the project. All plants shall be subject to the Owner's Representative approval prior to installation.
10. The Contractor may be asked to provide "Unit Cost" for every size of plant material, by type, as called out on the planting plans, specifications and details. Unit cost shall include the plant material itself including installation, all labor, amendments, fertilizers, warranties, etc. as shown on the drawings, details and as specified. See "Project Manual", if applicable.
11. Provide matching sizes and forms for all species of trees and plants installed on grid or spaced equally in rows as shown on drawings, unless otherwise shown or detailed. Adjust spacing (to "equal-equal") as necessary (subject to acceptance by the Owner's Representative).
12. Form a minimum 36 inch watering basin around all trees as shown in the details. Fill basin with 3" layer of mulch (see specs). See also details and project manual, if applicable.
13. The Contractor shall fine grade, rake and be responsible for positive drainage away from all structures and throughout site, with accurately set flow lines. No low spots or ponding of surface water will be accepted in the final work. No rocks or debris will be accepted (see specs). Final grade tolerances are +/-0.1 foot maximum.
14. Unless indicated otherwise, all planting beds are to be mulched with 3" deep layer of mulch per plans, details, and project manual, if applicable.
15. All planting beds to be separated from adjacent lawn with steel edger per specifications (as shown). If a bed lies adjacent to hardscape surface, no edger is required, as shown in plans. Stake per plans for review/acceptance by Owner's Representative, prior to installation. Install per specification and details. In some cases, perennial and annual beds may be separated from adjacent shrub bed areas. See plans, details, and specifications.
16. The Contractor may be required to provide coordinate geometry stakes for all control point layout of steel edger at the discretion of the Owner's Representative. Additionally, The Contractor shall provide point lines / string lines / hose or other means to fully indicate the specific layout geometry of all steel edgers for approval by the Owner's Representative, prior to any construction. The Contractor's base bid shall anticipate minor adjustments as directed by the Landscape Architect in the field.
17. Where provided, area takeoffs and plant quantity estimates are for information only. The Contractor is responsible to do their own quantity take-offs for all plant materials and sizes as shown on plans. In case of an discrepancies, plans and plant symbols shall take precedence over call-outs and/or "plant list". The Contractor is responsible for notifying the Owner's Representative with any major discrepancies for review and direction.
18. Coordinate installation of all plant material with installation of all adjacent irrigation, pavements, curb and related structures. Any damage to existing improvements is the responsibility of The Contractor and shall be replaced / repaired at his own expense.
19. Unless otherwise indicated:
    a. All groundcovers, perennials, orn. grasses and annuals shall be triangularly spaced (equal-equal). See Planting details.
    b. All planting areas including sod, seed and planting beds, shall receive soil amendments. See specifications and details.
    c. Sodded lawn shall have been grown between 9 and 18 months and shall have full, vigorous growth,
    d. Shrubs and ornamental grass areas, within beds, are to be underlaid with weed barrier. See specifications.
    e. All bulb planting (if shown) shall occur after mid-October and before ground is frozen.
20. The Contractor is responsible to "restore" all areas of the site, or adjacent areas, where disturbed. Sod areas disturbed shall be restored with new sod to match existing. Native areas disturbed, if not already improved to meet other requirements of this contract, shall be restored with an approved seed mix (including topsoil and amendments).
21. The Contractor shall take into consideration all necessary scheduling and other precautions to avoid winter, climatic, or other weather related damage to plants. A "planting window" of specific calendar days is required to be submitted by The Contractor for approval and planting operations should occur per this approved schedule. See specification for more information.
22. All "existing plant material to remain" shall be staked and fenced for protection in a diameter equal to the drip line. See grading plans for location and extent.
23. During plant establishment, adjacent areas, including wetlands, ponds and stream corridors, will be protected from sedimentation and erosion. Prior to construction activities, adjacent areas outside the "Limit of Work" or impacted areas, will be protected with silt fence. Newly graded slopes above should be replanted as soon as possible following grading.

KEY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	LIGHT	WATER USE	TYPE	QTY.
	TREES								
CP	*Celtis pallida*	Desert Hackberry	24" Box	10'	10'	Full Sun	Very Low	Evg	6
CL	*Chilopsis linearis*	Desert Willow	24" Box	25'	20'	Full Sun	Low	Dec	8
JM	*Juniperus monosperma*	One-Seed Juniper	24" Box	10-30'	10-30'	Part Shade	Low	Evg	7
PP	*Prosopis pubescens*	Mesquite	24" Box	25'	25'	Full Sun to Part Shade	Very Low	Dec	3
	SHRUBS								
AG	*Acacia greggii*	Catclaw Acacia	5 Gal.	3'-15'	6'-12'	Full Sun	Low	Dec	20
DP	*Dalea pulchra*	Indigo Bush	5 Gal.	4'-5'	4'-5'	Full Sun	Low	Evg	41
DV	*Dodonaea viscosa*	Hopbush	5 Gal.	6'	6'	Full Sun to Part Shade	Low	Evg	25
EF	*Encelia farinosa*	Brittle Bush	5 Gal.	3'	4'	Full Sun to Part Shade	Very Low	Dec	34
EV	*Ephedra viridis*	MormonTea	5 Gal.	4'	8'	Full Sun	Low	Evg	13
NM	*Nolina microcarpa*	Bear Grass	5 Gal.	5'	8'	Full Sun	Low	Semi-evg	8
	SUCCULENTS & CACTI								
CG	*Carnegiea gigantea*	Saguaro	12' ht. Min	20'	10'	Full Sun to Part Shade	Very Low	Evg	3
FS	*Fouquieria splendens*	Ocotillo	18" Box	15'	10'	Full Sun	Very Low	Semi-EVG	4
OE	*Opuntia engelmannii*	Desert Prickly Pear	5 Gal.	3' - 6'	3' - 6' (up to 30')	Full Sun	Very Low	Evg	2
YB	*Yucca baccata*	Banana Yucca	5 Gal.	3'	5'	Full Sun	Very Low	Evg	2

NOTE: ALL PLANTS LISTED ON THE NATIVE PLANT INVENTORY HAVE BEEN LOCATED ON THE PLAN WITH CORRESPONDING PLANT NUMBERS. CONTRACTOR TO COORDINATE INSTALLATION OF ALL SALVAGED MATERIAL.

NPI SALVAGED & RELOCATED PLANTS			
KEY	BOTANICAL NAME	COMMON NAME	QTY.
CF	*Cercidium floridum*	Blue Palo Verde	2
PM	*Parkinsonia microphylla*	Foothills Palo Verde	16
PP	*Prosopis pubescens*	Mesquite	12
CL	*Chilopsis linearis*	Desert Willow	1
FC	*Ferocactus wislizeni*	Barrel Cactus	1
YB	*Yucca baccata*	Banana Yucca	1
YE	*Yucca elata*	Soaptree Yucca	11

1 L502 LANDSCAPE SCHEDULE
N.T.S

SCHEDULE

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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 61165 WILLIAM BAKER Date Signed 3.25.21 ARIZONA, U.S.A.

DESERT MOUNTAIN
STORAGE & LAUNDRY FACILITY
10550 Desert Hills Dr, Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

33-DR-2020

DRAWN BY:	JV/GGW
CHECKED BY:	GBW
PROJECT NO.:	2019001.20
ISSUE DATE:	03/26/2021
REVISIONS:	

SHEET TITLE:
LANDSCAPE SCHEDULE

SHEET NUMBER:
L502

INSTALLATION GENERAL NOTES

1. THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 65 PSI (MINIMUM REQUIRED VERIFY PRESSURE BEFORE CONSTRUCTION), AT A MAXIMUM DISCHARGE OF 10 GPM AT THE 3/4-INCH IRRIGATION POINT-OF-CONNECTION (POC). TAP, METER, BACKFLOW, AND MASTER VALVE SHALL ALL BE THE SAME SIZE. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION.
2. READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.
3. COORDINATE UTILITY LOCATES ("CALL BEFORE YOU DIG") OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
4. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES, OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
5. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
   A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE.
   B. TREE AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
   C. USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF TEES IN THE BULLNOSE CONFIGURATION, OR USE OF CROSS TYPE FITTINGS IS NOT ALLOWED.
6. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
   A. TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES.
   B. TWO (2) OF EACH SERVICING WRENCH OR TOOL NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL ROTARY SPRINKLERS.
7. SELECT NOZZLES FOR SPRAY AND ROTARY SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVERSPRAY FOR THE SITE CONDITIONS. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE OF EACH ROTARY SPRINKLER TO PROVIDE THE BEST PERFORMANCE.
8. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR. PIPE SLEEVES SHALL BE SIZED TWICE THE NOMINAL SIZE OF THE PIPE PASSING THROUGH.
9. INSTALL ALL ELECTRICAL POWER TO THE IRRIGATION CONTROL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE LOCAL ELECTRIC UTILITY CODES.
10. THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED PIPE IS LOCATED BETWEEN THE IDENTICALLY SIZED SECTIONS, THE UNSIZED PIPE IS THE SAME NOMINAL SIZE AS THE TWO SIZED SECTIONS. THE UNSIZED PIPE SHOULD NOT BE CONFUSED WITH THE DEFAULT PIPE SIZE NOTED IN THE LEGEND.
11. INSTALL TWO (2) #14 AWG CONTROL WIRES ON STANDARD WIRE SYSTEMS, FOR USE AS SPARES. INSTALL SPARE WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE. COIL 3 FEET OF WIRE IN VALVE BOX.

IRRIGATION PIPE SCHEDULE

CLASS 200 PVC PIPE

SIZE	FLOW (GPM)
1-INCH	0-15
1.25-INCH	16-25
1.5-INCH	26-35
2-INCH	36-55
2.5-INCH	56-80
3-INCH	81-110
4-INCH	111-200

IF THERE IS A DISCREPANCY BETWEEN PIPE SIZES SHOWN ON THE DRAWINGS AND THIS PIPE SCHEDULE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE IRRIGATION DESIGNER FOR CLARIFICATION.

IRRIGATION PIPE SCHEDULE

CLASS 315 PVC PIPE

SIZE	FLOW (GPM)
0.5-INCH	0-5
0.75-INCH	6-9
1-INCH	10-15
1.25-INCH	16-22
1.5-INCH	23-30
2-INCH	31-46
2.5-INCH	47-70
3-INCH	71-95
4-INCH	96-170

IF THERE IS A DISCREPANCY BETWEEN PIPE SIZES SHOWN ON THE DRAWINGS AND THIS PIPE SCHEDULE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE IRRIGATION DESIGNER FOR CLARIFICATION.

IRRIGATION LEGEND

- SLEEVES: CLASS 200 PVC
- POINT-OF-CONNECTION ASSEMBLY
- MAINLINE PIPE: CLASS 200 PVC, 1 1/4-INCH SIZE UNLESS OTHERWISE INDICATED
- LATERAL PIPE TO SHRUB EMITTERS: CLASS 315 PVC, 1/2-INCH SIZE UNLESS OTHERWISE INDICATED
- LATERAL PIPE TO TREE EMITTERS: CLASS 315 PVC, 1/2-INCH SIZE UNLESS OTHERWISE INDICATED
- REMOTE CONTROL DRIP VALVE ASSEMBLY: RAIN BIRD XCZ-PRB-100-COM
- QUICK COUPLING VALVE ASSEMBLY: RAIN BIRD 5RC
- ISOLATION GATE VALVE ASSEMBLY: MATCO 514
- FLOW SENSOR ASSEMBLY: RAIN BIRD MJ100B
- BACKFLOW PREVENTION ASSEMBLY: FEBCO 825YA
- MASTER VALVE ASSEMBLY: RAIN BIRD PESB
- FLUSH CAP ASSEMBLY
- UNCONNECTED PIPE CROSSING

A1 / 14 / 1" / Turf
- INDICATES CONTROLLER AND STATION NUMBER
- INDICATES LATERAL DISCHARGE (GPM)
- INDICATES VALVE SIZE (INCHES)
- INDICATES LANDSCAPE APPLICATION

(C) IRRIGATION CONTROLLER UNIT WITH RAIN/FREEZE SENSOR CELLULAR/ETHERNET/LNK WIFI
CONTROLLER A: RAIN BIRD ESP-ME3 W/ ESP -SM6 EXTENSION MODULE

RAIN/FREEZE SENSOR: WR2-RFC

CONSTRUCTION NOTES

1. THE IRRIGATION SYSTEM POINT-OF-CONNECTION (POC) SHALL BE DOWNSTREAM OF THE IRRIGATION WATER TAP AND METER INSTALLED BY OTHERS AT THE APPROXIMATE LOCATION SHOWN. INSTALL BACKFLOW PREVENTION UNIT AND MASTER VALVE ASSEMBLY AS INDICATED VERIFY EXACT LOCATION OF POC WITH OWNER'S REPRESENTATIVE.
2. PEDESTAL MOUNT THE IRRIGATION CONTROLLER AT THE APPROXIMATE LOCATION SHOWN. COORDINATE ELECTRICAL POWER TO THE CONTROLLER WITH THE OWNER'S REPRESENTATIVE. CARE SHOULD BE TAKEN TO INSTALL THE IRRIGATION CONTROLLER IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE AND AVOIDS OTHER UTILITIES IF MOUNTED IN A MECHANICAL ROOM, AND SCREENED FROM VIEW EITHER BEHIND ENTRY WALLS, NEXT TO BUILDINGS, OR BEHIND PLANT MATERIAL. FINAL LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE.
3. IRRIGATION SHOWN OUT OF LANDSCAPED AREA FOR CLARITY ONLY. INSTALL IRRIGATION COMPONENTS WITHIN LANDSCAPED AREA.

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10550 Desert Hills Dr. Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS – FOR BUILDING PERMIT

JAMES R. HINES — CERTIFIED IRRIGATION DESIGNER — COMMERCIAL

DRAWN BY: JB
CHECKED BY: JH / JB
PROJECT NO.: 2019001.20
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IRRIGATION LEGEND & NOTES

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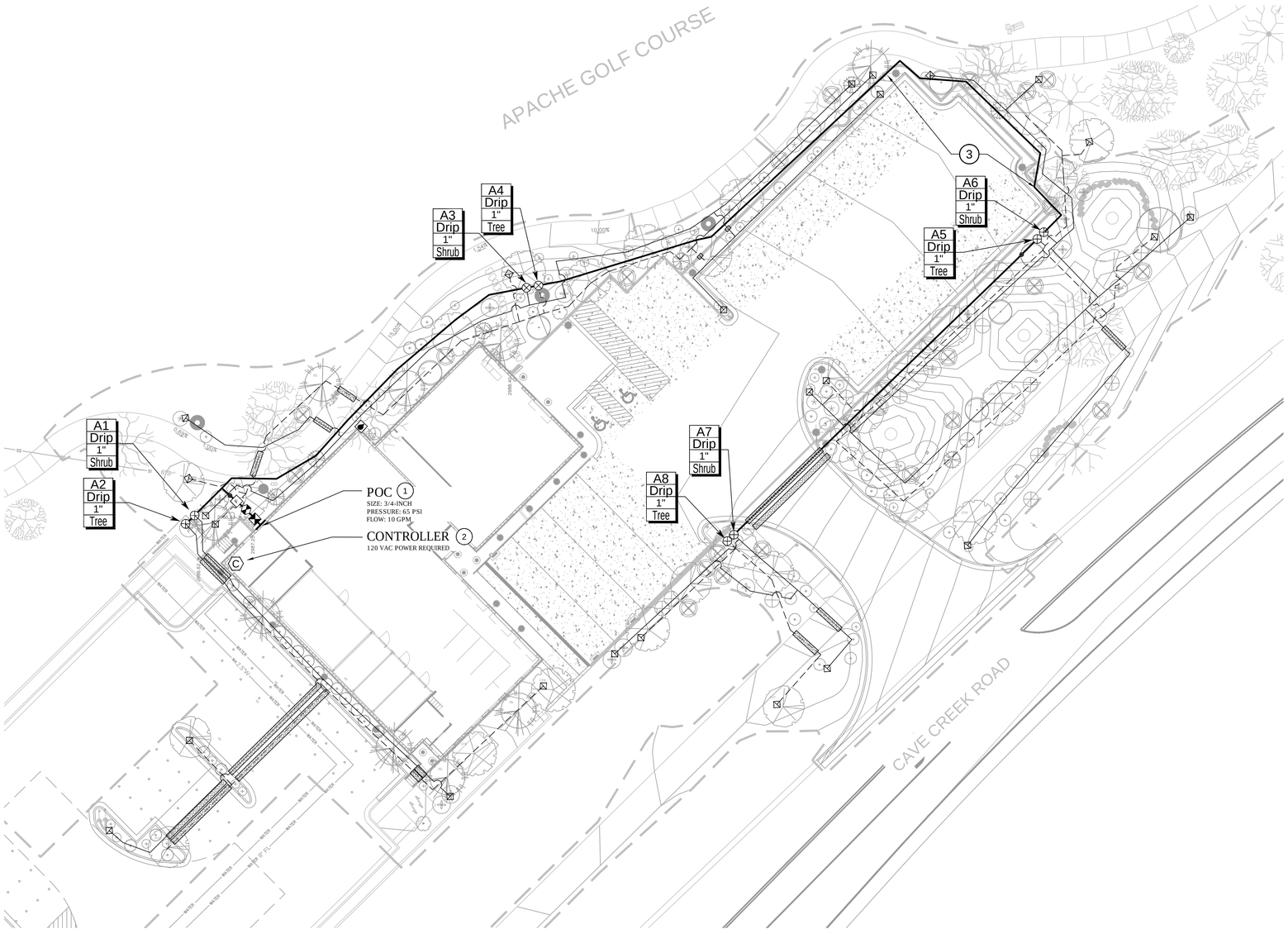
IR0.0



IRRIGATION LEGEND

- SLEEVES: CLASS 200 PVC
- POINT-OF-CONNECTION ASSEMBLY
- MAINLINE PIPE: CLASS 200 PVC
  1 1/4-INCH SIZE UNLESS OTHERWISE INDICATED
- LATERAL PIPE TO SHRUB EMITTERS: CLASS 315 PVC
  1/2-INCH SIZE UNLESS OTHERWISE INDICATED
- LATERAL PIPE TO TREE EMITTERS: CLASS 315 PVC
  1/2-INCH SIZE UNLESS OTHERWISE INDICATED
- REMOTE CONTROL DRIP VALVE ASSEMBLY: RAIN BIRD XCZ-PRB-100-COM
- QUICK COUPLING VALVE ASSEMBLY: RAIN BIRD 5RC
- ISOLATION GATE VALVE ASSEMBLY: MATCO 514
- FLOW SENSOR ASSEMBLY: RAIN BIRD MJ100B
- BACKFLOW PREVENTION ASSEMBLY: FEBCO 825YA
- MASTER VALVE ASSEMBLY: RAIN BIRD PESB
- FLUSH CAP ASSEMBLY
- UNCONNECTED PIPE CROSSING

A1 — INDICATES CONTROLLER AND STATION NUMBER
1.4 — INDICATES LATERAL DISCHARGE (GPM)
1" — INDICATES VALVE SIZE (INCHES)
Turf — INDICATES LANDSCAPE APPLICATION

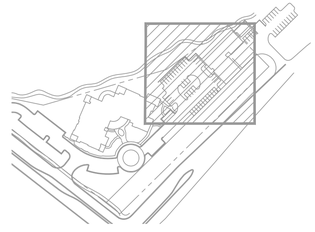
C — IRRIGATION CONTROLLER UNIT WITH RAIN/FREEZE SENSOR CELLULAR/ETHERNET/LNK WIFI
CONTROLLER A: RAIN BIRD ESP-ME3 W/ ESP -SM6 EXTENSION MODULE

RAIN/FREEZE SENSOR: WR2-RFC

CONSTRUCTION NOTES

1. THE IRRIGATION SYSTEM POINT-OF-CONNECTION (POC) SHALL BE DOWNSTREAM OF THE IRRIGATION WATER TAP AND METER INSTALLED BY OTHERS AT THE APPROXIMATE LOCATION SHOWN. INSTALL BACKFLOW PREVENTION UNIT AND MASTER VALVE ASSEMBLY AS INDICATED VERIFY EXACT LOCATION OF POC WITH OWNER'S REPRESENTATIVE.
2. PEDESTAL MOUNT THE IRRIGATION CONTROLLER AT THE APPROXIMATE LOCATION SHOWN. COORDINATE ELECTRICAL POWER TO THE CONTROLLER WITH THE OWNER'S REPRESENTATIVE. CARE SHOULD BE TAKEN TO INSTALL THE IRRIGATION CONTROLLER IN A LOCATION THAT IS ACCESSIBLE FOR MAINTENANCE AND AVOIDS OTHER UTILITIES IF MOUNTED IN A MECHANICAL ROOM, AND SCREENED FROM VIEW EITHER BEHIND ENTRY WALLS, NEXT TO BUILDINGS, OR BEHIND PLANT MATERIAL. FINAL LOCATION TO BE APPROVED BY OWNER'S REPRESENTATIVE.
3. IRRIGATION SHOWN OUT OF LANDSCAPED AREA FOR CLARITY ONLY. INSTALL IRRIGATION COMPONENTS WITHIN LANDSCAPED AREA.

KEYMAP



NORTH
0 20 40 60 feet
1" = 20'

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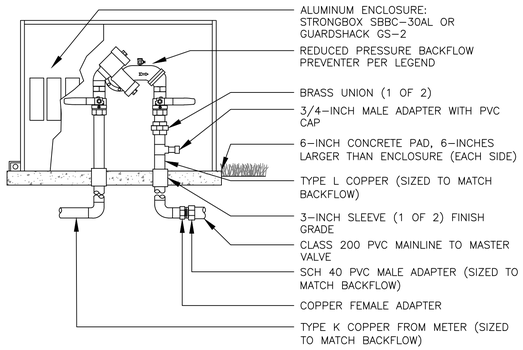
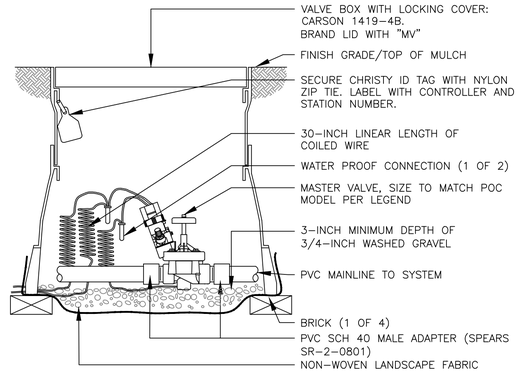
IR1.0

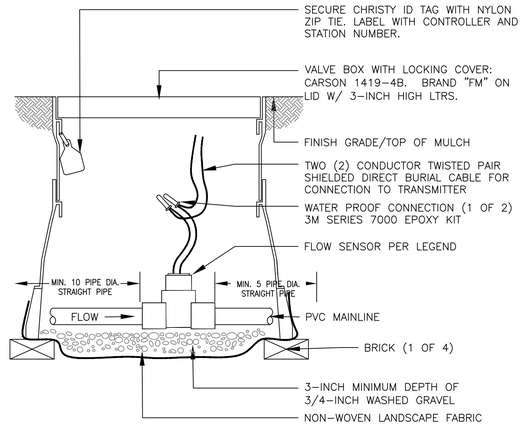


NOTES:
1. INSTALL BACKFLOW DEVICE IN ACCORDANCE WITH ALL STATE AND LOCAL CODE REQUIREMENTS.
2. SLOPE TOP SURFACE OF PAD AT 0.5 % WITH BROOM FINISH. MAKE PIPE SLEEVES WITH 1-1/2 INCH LARGER DIAMETER PIPE THAN PENETRATING PIPE SIZE.
3. ALL HINGED CONNECTION LOCATIONS AND HARDWARE TO BE TAMPER PROOF.
4. ALL WELD JOINTS SHALL BE CONTINUOUS AND GROUND SMOOTH.

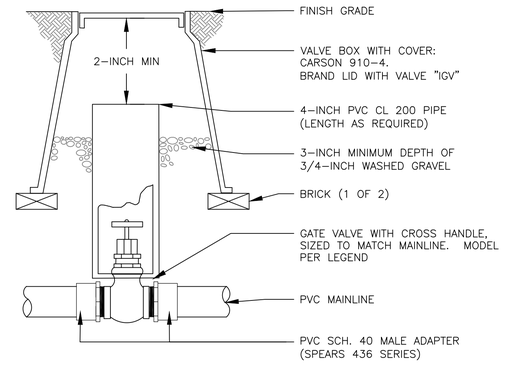
1 BACKFLOW PREVENTION UNIT ASSEMBLY



2 MASTER VALVE ASSEMBLY

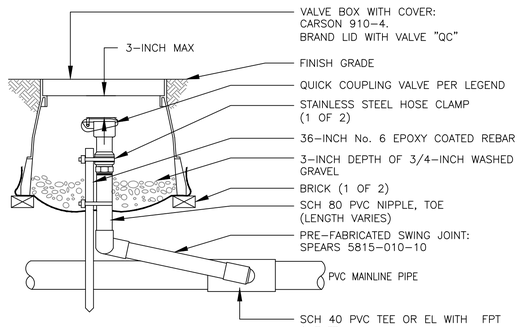


3 FLOW SENSOR ASSEMBLY

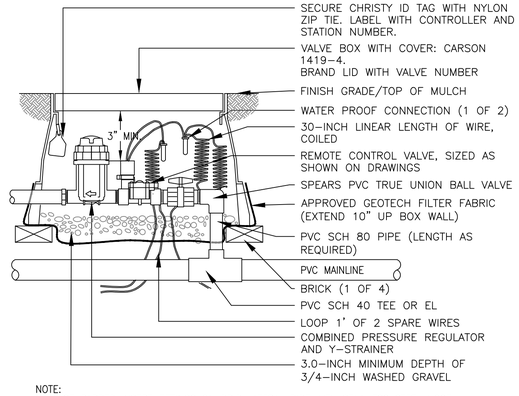


NOTES:
1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.

4 ISOLATION GATE VALVE ASSEMBLY 2.5-INCH MAINLINE AND SMALLER

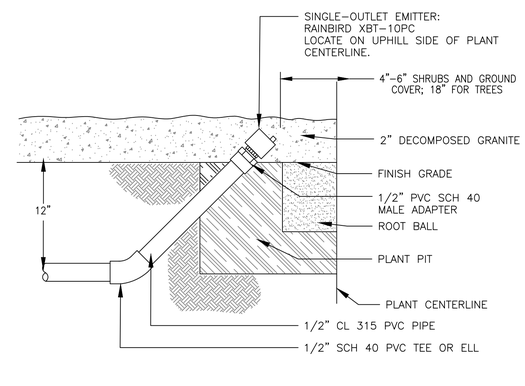


5 QUICK COUPLING VALVE ASSEMBLY



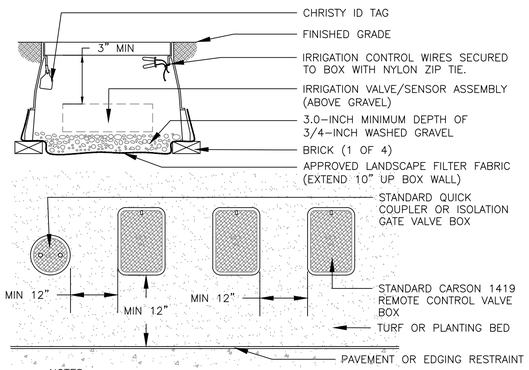
NOTE:
1. USE BARBED INSERT FITTINGS ON DRIP LATERAL PIPE WITH STAINLESS STEEL HOSE CLAMPS. PLACE CLAMPS ON DRIP TUBING DIRECTLY OVER BARBED AREA OF FITTING. PINCH CLAMPS ARE NOT ACCEPTABLE.

6 REMOTE CONTROL DRIP VALVE ASSEMBLY



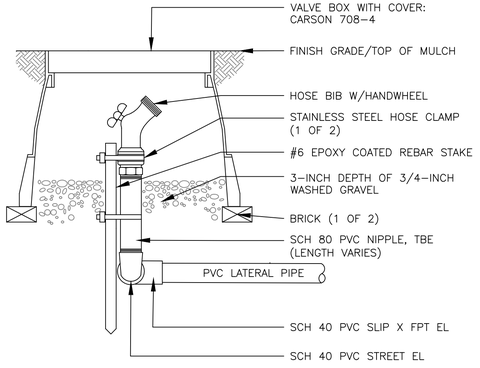
NOTE:
1. 90 DEGREE ELL MAY BE USED IN LIEU OF 45 DEGREE IF PLANTER WIDTH IS LESS THAN SHOWN.

7 SINGLE OUTLET DRIP EMITTER ASSEMBLY FOR SHRUBS



NOTES:
1. INSTALL ONLY ONE RCV TO VALVE BOX. LOCATE AT LEAST 12-INCHES FROM AND ALIGN WITH NEARBY WALLS OR EDGES OF PAVED AREAS. GROUP RCV ASSEMBLIES TOGETHER WHERE PRACTICAL.
4. GROUP RCV ASSEMBLIES TOGETHER WHERE PRACTICAL, BUT AVOID GROUPING MORE THAN THREE (3) STANDARD VALVE BOXES TOGETHER IN A SERIES.
5. ARRANGE GROUPED VALVE BOXES IN RECTANGULAR PATTERNS.

8 TYPICAL VALVE BOX INSTALLATION



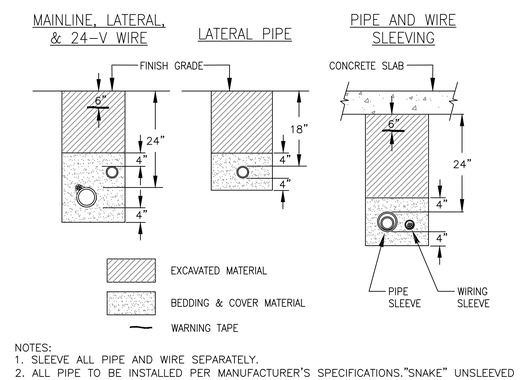
NOTES:
1. TAN COLORED BOX LIDS SHALL BE UTILIZED IN DG MULCHED AREAS. GREEN LIDS SHALL BE UTILIZED IN TURF AREAS.

9 DRIP FLUSH CAP ASSEMBLY

PLANT TYPE	PLANT SIZE	EMITTERS PER PLANT	GPH PER POUTLET	NUMBER OF OUTLETS	TOTAL GPH PER PLANT
TREES	15 GAL	1 MULTI	2 GPH	3	6 GPH
TREES	24" BOX	1 MULTI	2 GPH	4	8 GPH
TREES	36" BOX	2 MULTI	2 GPH	4	16 GPH
TREES	42" BOX	2 MULTI	2 GPH	5	20 GPH
SHRUBS	1 GAL	1 SINGLE	1 GPH	1	1 GPH
SHRUBS	5 GAL	2 SINGLE	1 GPH	1	2 GPH
GROUND COVER	1 GAL	1 SINGLE	1 GPH	1	1 GPH
CACTI		1 SINGLE	0.6 GPH	1	0.6 GPH

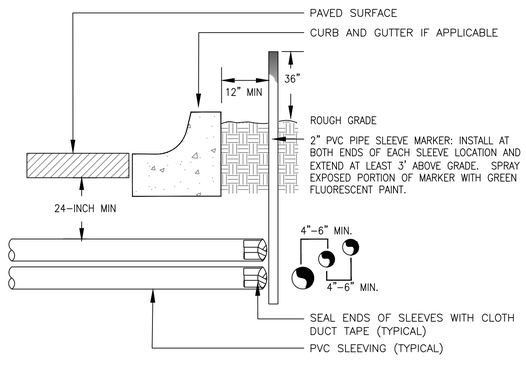
NOTE: ALL EMISSION POINTS TO BE LOCATED ON THE UPHILL SIDE OF PLANT MATERIAL.

10 EMITTER SCHEDULE



NOTES:
1. SLEEVE ALL PIPE AND WIRE SEPARATELY.
2. ALL PIPE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS."SNAKE" UNSLEEVED PLASTIC PIPE IN TRENCH. PROVIDE A MINIMUM OF 2" CLEARANCE TO SIDE OF TRENCH AND BETWEEN PIPES.
3. ALL 120-V WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS. TAPE AND BUNDLE 24-V WIRE EVERY 10' AND PROVIDE LOOSE 20" LOOP AT ALL CHANGES OF DIRECTION OVER 30 DEGREES.

11 TYPICAL TRENCHING DETAIL



NOTE:
1) ALL SLEEVING TO BE CLASS 200 BE PVC, SIZED AS NOTED.
2) INSTALL SLEEVES IN SIDE-BY-SIDE CONFIGURATION WHERE MULTIPLE SLEEVES ARE TO BE INSTALLED. SPACE SLEEVES 4" TO 6" APART. DO NOT STACK SLEEVES VERTICALLY.

12 TYPICAL SLEEVING DETAIL

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JAMES R. HINES — CERTIFIED IRRIGATION DESIGNER — COMMERCIAL

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SHEET TITLE:
IRRIGATION DETAILS

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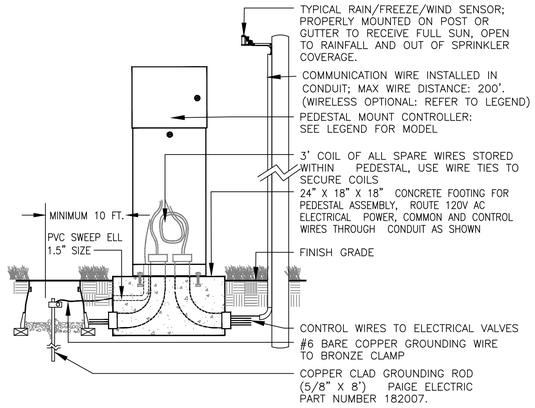
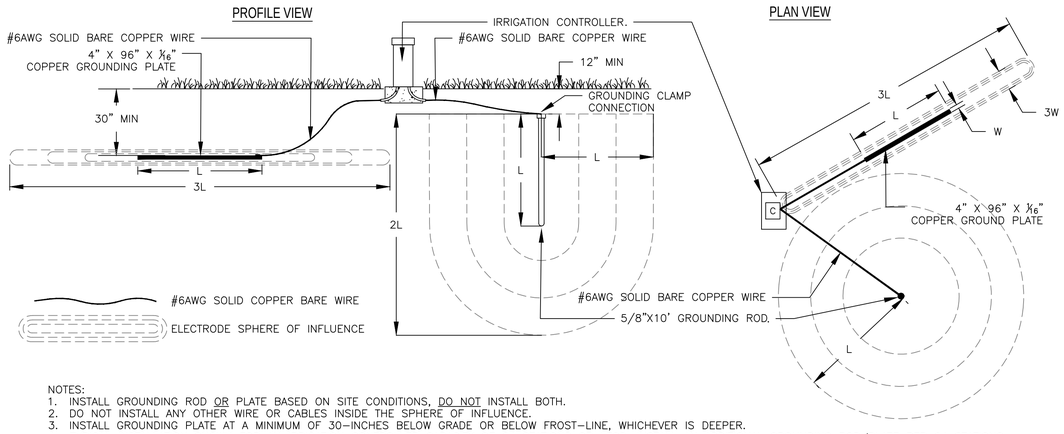
IR2.0



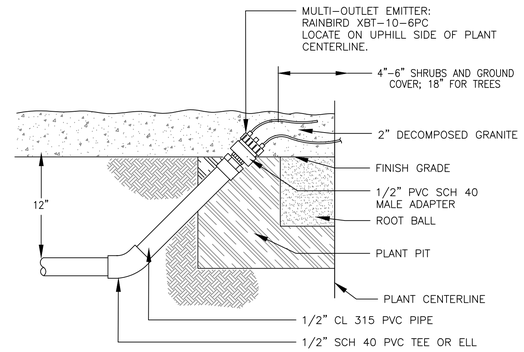
NOTES:
1. INSTALL RAIN SENSOR ON TREATED 4X4 POST IF CONTROLLER IS IN TURF AREA. POST TO BE MOUNTED IN SHRUB BED TO AVOID BEING IRRIGATED BY OVERHEAD SPRINKLERS.

13 PEDESTAL MOUNTED CONTROLLER ASSEMBLY



NOTES:
1. INSTALL GROUNDING ROD OR PLATE BASED ON SITE CONDITIONS, DO NOT INSTALL BOTH.
2. DO NOT INSTALL ANY OTHER WIRE OR CABLES INSIDE THE SPHERE OF INFLUENCE.
3. INSTALL GROUNDING PLATE AT A MINIMUM OF 30-INCHES BELOW GRADE OR BELOW FROST-LINE, WHICHEVER IS DEEPER.
4. TYPICAL INSTALLATION SHOWN FOR AN IRRIGATION CONTROLLER CAPACITY OF 64 STATIONS OR LESS, INSTALL AN ADDITIONAL GROUNDING ROD/PLATE PER 64 STATIONS.

14 TYPICAL IRRIGATION CONTROLLER GROUNDING ROD OR PLATE INSTALLATION



NOTES:
1. EMITTER TUBING EMISSION POINTS SHALL BE EQUALLY SPACED AND LOCATED TO DIRECT WATER FLOW TO PLANT ROOTBALL.
2. AT LEAST ONE EMITTER TUBE TO BE LOCATED WITHIN 4 INCHES OF PLANT CENTERLINE.
3. FOUR HOLES OPEN INITIALLY.

15 MULTI-OUTLET DRIP EMITTER ASSEMBLY FOR TREES

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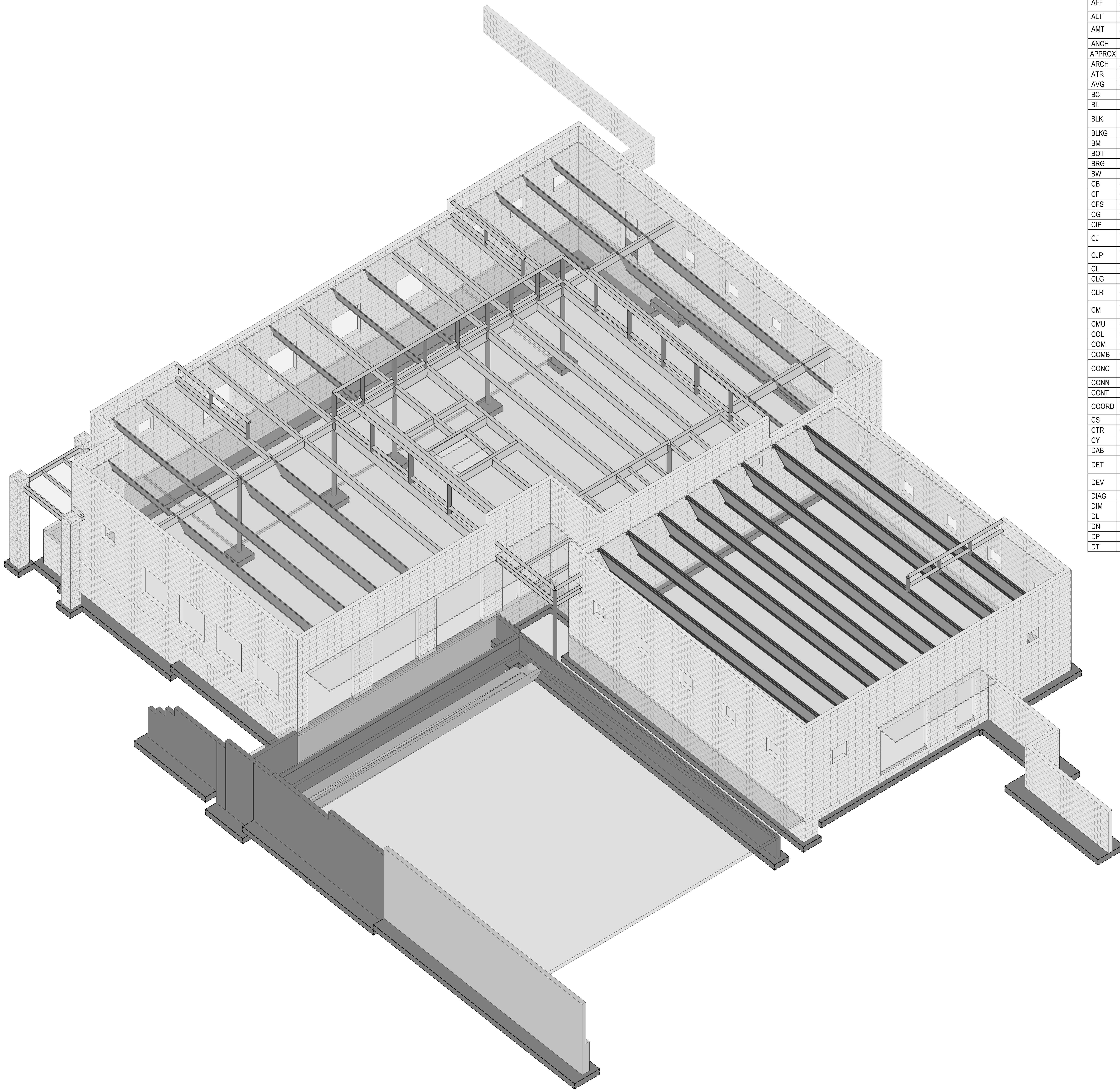

ABBREVIATIONS KEY

@	ON CENTER SPACING	DWG	DRAWING	LGS	LIGHT GAGE STEEL		
(E)	EXISTING	DWL	DOWEL	LL	LIVE LOAD	REINF	REINFORCE, -ED, -ING
(N)	NEW	EA	EACH	LLH	LONG LEG HORIZONTAL	REQ	REQUIRED
(R)	REMOVE	ECC	ECCENTRIC	LLV	LONG LEG VERTICAL	REQMT	REQUIREMENT
AB	ANCHOR ROD (BOLT)	E-E	END TO END	LOC	LOCATION	RET	RETAINING
ADDL	ADDITIONAL	EF	EACH FACE	LP	LOW POINT	RM	ROOM
ADJ	ADJUSTABLE	EJ	EXPANSION JOINT	LSL	LAMINATED STRAND LUMBER (GENERIC TERM)	RMO	ROUGH MASONRY OPENING
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	EL	ELEVATION	LT	LIGHT	RO	ROUGH OPENING
AFF	ABOVE FINISHED FLOOR	ELEC	ELECTRIC, ELECTRICAL	LVL	LAMINATED VENEER LUMBER (GENERIC TERM)	SC	SLIP-CRITICAL
ALT	ALTERNATE	EMBED	EMBEDMENT	MACH	MACHINE	SCH	SCHEDULE
AMT	AMOUNT	ENGR EOR	ENGINEER ENGINEER OF RECORD	MASY	MASONRY	SDST	SELF-DRILLING/ SELF-TAPPING
ANCH	ANCHOR, ANCHORAGE	EQ	EQUAL	MATL	MATERIAL	SECT	SECTION
APPROX	APPROXIMATE	EQUIP	EQUIPMENT	MAX	MAXIMUM	SF	SQUARE FEET, SUB-FLOOR
ARCH	ARCHITECT, -URAL	EQUIV	EQUIVALENT	MB	MACHINE BOLT	SHT	SHEET
ATR	ALL THREAD ROD	ES	EACH SIDE	MECH	MECHANICAL	SHTG	SHEATHING
AVG	AVERAGE	EST	ESTIMATE	MEZZ	MEZZANINE	SIM	SIMILAR
BC	BOTTOM OF CONCRETE	E-W	EAST TO WEST	MFR	MANUFACTURE, -ER, -ED	SLH	SHORT LEG HORIZONTAL
BL	BRICK LEDGE	EXC	EXCAVATE	MIN	MINIMUM	SLV	SHORT LEG VERTICAL
BLK	BLOCK	EXP	EXPANSION	ML	MICROLLAM (TRUS-JOIST BRAND LVL), MASONRY LINTEL	SOG	SLAB ON GRADE
BLKG	BLOCKING	EXT	EXTERIOR	MO	MASONRY OPENING	SP	SPACES, SPACED
BM	BEAM	FD	FLOOR DRAIN	MTL	METAL	SPEC	SPECIFICATIONS
BOT	BOTTOM	FDN	FOUNDATION	NF	NEAR FACE	SQ	SQUARE
BRG	BEARING	FF	FINISHED FLOOR, FAR FACE	NIC	NOT IN CONTRACT	SSR	SHEAR STUD RAIL
BW	BOTTOM OF WALL	F-F	FACE TO FACE	NS	NEAR SIDE	ST	SNUG-TIGHT
CB	COUNTERBORE	FIG	FIGURE	N-S	NORTH TO SOUTH	STD	STANDARD
CF	CUBIC FOOT	FL	FLUSH	NTS	NOT TO SCALE	STIFF	STIFFENER
CFS	COLD FORMED STEEL	FLG	FLANGE	OCJ	OSHA COLUMN JOIST	STL	STEEL
CG	CENTER OF GRAVITY	FLR	FLOOR	OD	OUTSIDE DIAMETER	STRUCT	STRUCTURE, -AL
CIP	CAST-IN-PLACE	FO	FACE OF	OH	OPPOSITE HAND	SUPT	SUPPORT
CJ	CONSTRUCTION JOINT, CONTROL JOINT	FP	FULL PENETRATION	OPNG	OPENING	SY	SQUARE YARD
CJP	COMPLETE JOINT PENETRATION	FS	FOOTING STEP, FAR SIDE	OPP	OPPOSITE	SYM	SYMMETRICAL
CL	CENTER LINE	FTG	FOOTING	OS	OUTSIDE FACE	T&B	TOP AND BOTTOM
CLG	CEILING	GA	GAGE, GAUGE	OSB	ORIENTED STRAND BOARD	T&G	TONGUE AND GROOVE
CLR	CLEAR	GALV	GALVANIZED	PAF	POWDER ACTUATED FASTENER	TB	TOP OF BEAM
CM	CONSTRUCTION MANAGER, -MENT	GC	GENERAL CONTRACTOR	PC	PRECAST	TC	TOP OF CONCRETE
CMU	CONCRETE MASONRY UNIT	GEN	GENERAL	PCF	POUNDS PER CUBIC FOOT	TCA	TORQUE-CONTROLLED ANCHOR
COL	COLUMN	GL	GLUED LAMINATED, GLULAM	PE	PRE-ENGINEERED	TD	TOP OF DECK
COM	COMMON	GND	GROUND	PEN	PENETRATION	THD	THREAD
COMB	COMBINATION	GR	GRADE	PERP	PERPENDICULAR	THK	THICK, -NESS
CONC	CONCRETE	GT	GIRDER TRUSS	PJP	PARTIAL JOINT PENETRATION	TJ	TOP OF JOIST
CONN	CONNECTION	GYP BD	GYPSUM BOARD	PL	PLATE	TL	TOTAL LOAD
CONT	CONTINUOUS, CONTINUE	HAS	HEADED ANCHOR STUD	PLF	POUND PER LINEAR FOOT	TPG	TOPPING
COORD	COORDINATE, COORDINATION	HDG	HOT-DIP GALVANIZED	PNL	PANEL	TRANS	TRANSVERSE
CS	COUNTERSINK	HDR	HEADER	PP	PANEL POINT	TW	TOP OF WALL
CTR	CENTER	HORIZ	HORIZONTAL	PS	PRESTRESSED	TYP	TYPICAL
CY	CUBIC YARD	HP	HIGH POINT	PSF	POUNDS PER SQUARE FOOT	ULT	ULTIMATE
DAB	DEFORMED ANCHOR BAR	HT	HEIGHT	PSI	POUNDS PER SQUARE INCH	UNO	UNLESS NOTED OTHERWISE
DET	DETAIL	ID	INSIDE DIAMETER	PSL	PARALLEL STRAND LUMBER (GENERIC TERM)	VERT	VERTICAL
DEV	DEVELOP	IF	INSIDE FACE	PT	POST TENSIONED, PRESSURE TREATED	VIF	VERIFY IN FIELD
DIAG	DIAGONAL	INT	INTERIOR, INTERMEDIATE	PTN	PARTITION	WP	WORK POINT
DIM	DIMENSION	IT	INVERTED TEE	PWD	PLYWOOD	WT	WEIGHT
DL	DEAD LOAD	JB	JOIST BEARING	QTY	QUANTITY	WWF	WELDED WIRE FABRIC
DN	DOWN	JST	JOIST	R	RADIUS	XS	EXTRA STRONG
DP	DRILLED PIER	JT	JOINT	RE	REFERENCE, REFER TO	XSECT	CROSS SECTION
DT	DOUBLE TEE	K	KIP (1,000 LBS)	RECT	RECTANGLE	XXS	DOUBLE EXTRA STRONG

SYMBOLS KEY

Symbol	Description
	DIRECTION OF DECK SPAN
GRID	GRID DESIGNATION
X	REVISION
X / SX	INDICATES STRUCTURAL ELEVATION
SWx	SHEAR WALL
	SHORING
	STEP IN FLOOR ELEVATION
	CMU (CONCRETE MASONRY UNIT)
	BRICK
	CIP CONCRETE
	PRECAST CONCRETE
	EXISTING CONCRETE
	EARTH
FX.X	ISOLATED SPREAD FOOTING MARK
FXX	SPREAD FOOTING MARK
STEP	STEP IN BOTTOM OF WALL/GRADE BEAM
DP-XXM {Y} (XX'-X")	DRILLED PIER: XX = Ø, M = PIER MARK, {Y} = BEDROCK PENETRATION (XX'-X") = TOP OF PIER ELEVATION
XX:12	ROOF SLOPE
SLOPE	DIRECTION OF SLOPE (DOWN)
DN UP	STAIR OR RAMP DIRECTION
	STRESSING END ANCHOR
	DEAD END ANCHOR
	INTERMEDIATE ANCHOR

Group	Symbol	Description
	XXX'-X	TOP OF CONCRETE OR MASONRY ELEVATION
	[XXX'-X]	TOP OF BEAM ELEVATION
	JB XXX'-X	JOIST BEARING ELEVATION
	BL XXX'-X	BRICK LEDGE ELEVATION
	(XXX'-X)	TOP OF FOOTING ELEVATION
	XXX'-X	TOP OF FLOOR ELEVATION
BUILDING COLUMN DESIGNATIONS	CONT C	COLUMN CONTINUOUS FROM LEVEL BELOW
	CXX	COLUMN STARTING AT THIS LEVEL
	B	COLUMN STOPPING BELOW THIS LEVEL, SEE FRAMING PLAN AT NEXT LOWER LEVEL
	CXX STUB	COLUMN STARTING AND ENDING AT THIS LEVEL OF FRAMING
	CXX HGR	COLUMN CONNECTING A LOWER BEAM TO A HIGHER BEAM AT THIS LEVEL OF FRAMING
BRACED/FRAME BAY SYMBOLS	B	INDICATES BRACED BAY MARK
	X / SX	INDICATES BRACED BAY ELEVATION
		INDICATES CONFIGURATION OF INVERTED CHEVRON-TYPE BRACED BAY WITH HSS DIAGONAL BRACES
		INDICATES CONFIGURATION OF SINGLE DIAGONAL BRACED BAY WITH HSS DIAGONAL BRACE
	RF	INDICATES RIGID (MOMENT) FRAME WITH FULL PENETRATION WELDED BEAM FLANGE TO COLUMN CONNECTIONS
	X / SX	INDICATES RIGID (MOMENT) FRAME ELEVATION W/ FULL PENETRATION WELDED BEAM FLANGE TO COLUMN CONNECTIONS
		INDICATES BRACED BAY OR FRAMED BAY COLUMN BASE
		FULLY WELDED MOMENT FRAME CONNECTION
		CANTILEVER MOMENT FRAME CONNECTION
		LOCATION OF BEND IN BENT BEAM
	<X>	NUMBER OF HEADED ANCHOR STUDS

TYPICAL STAIR ASSEMBLY (EXCEPT AS NOTED):
- CONCRETE-FILLED PANS WITH CLOSED RISERS AND STRINGERS PER ARCHITECTURAL DRAWINGS
- FRAME LANDINGS WITH CHANNELS OR ANGLES AS REQUIRED. SUPPORT LANDING WITH PIPE OR TUBE STEEL COLUMNS OR HANGERS FROM FOUNDATION OR BEAMS AS REQUIRED TO AVOID INTERFERENCE WITH STRUCTURAL/ARCHITECTURAL ELEMENTS. FRAMING SHOWN IS FOR SCHEMATIC PUROPOSES ONLY
- STAIR FABRICATOR SHALL DESIGN & DETAIL ALL MEMBERS, CONNECTIONS AND ASSEMBLIES REQIURED FOR FRAMING AND SUPPORT OF STAIRS WHERE NOT SHOWN
- CALCULATIONS, STAMPED AND SIGNED BY A REGISTERED COLORADO PROFESSIONAL ENGINEER, SHALL BE SUBMITTED WITH THE STAIR SHOP DRAWINGS
- COORDINATE ALL STAIR ASSEMBLIES AND DETAILS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

TYPICAL 6" AND 8" NON-STRUCTURAL BLOCK PARTITIONS:
BLOCK PARTITIONS SHALL HAVE #4 VERTICALS CENTERED IN WALL IN GROUTED CELLS AT CORNERS, JAMBS, WALL INTERSECTIONS, AND @ 8'-0 MAXIMUM. DOWEL TO SLAB WITH 1/2"Ø x 1'-6 ALL THREAD BARS INTO A 1/2"Ø DROP-IN EXPANSION ANCHOR WITH A 2" EMBEDMENT INTO THE SLAB. LOCATE DOWELS TO MATCH VERTICAL BAR SPACING. PROVIDE 2'-0 DEEP SOLID GROUTED MASONRY LINTEL AT TOP OF ALL WALLS WITH MATCHING CORNER BARS. WALL SHALL HAVE HORIZONTAL JOINT REINFORCING @ 16". BRACE TOP OF PARTITIONS PER SECTION X/XXX. SEE ARCHITECTURAL DRAWINGS FOR EXTENT OF PARTITIONS AND CONTROL JOINTS

MASONRY, STEEL, AND MECHANICAL SUB CONTRACTORS NOTE:
STRUCTURAL DRAWINGS DO NOT INDICATE ALL WALL, FLOOR, OR ROOF PENETRATIONS FOR MECH DUCTS, DRAINS, VENTS, ETC.; DRAWINGS INDICATE TYPICAL AND SPECIAL CONDITIONS FOR FRAMING AT THE PENETRATIONS, SEE X/XXX; GENERAL CONTRACTOR AND SUB CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING AND/OR MODIFYING OPENING LOCATIONS, ELEVATIONS AND DIMENSIONS FOR MECH UNLESS NOTED OTHERWISE. COORDINATION TO BE COMPLETED PRIOR TO FABRICATION OF STRUCTURAL STEEL AND ROOF JOISTS

FIELD VERIFICATION:
- ALL DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY CONTRACTOR
- IF DIMENSIONS AND CONDITIONS DIFFER THAN THOSE SHOWN ON DRAWINGS, NOTIFY ARCHITECT AND ENGINEER
- NOTIFY ARCHITECT AND ENGINEER ONCE FINISHES ARE REMOVED & FOUNDATION IS EXCAVATED TO ALLOW OBSERVATION

STRUCTURAL DRAWING LIST

SHEET NO	SHEET TITLE
S001	COVER SHEET
S002	GENERAL NOTES
S003	IBC 2015 STATEMENT OF SPECIAL INSPECTION
S101	FOUNDATION PLAN
S102	ROOF FRAMING PLAN
S103	MECHANICAL SCREEN & PARAPET FRAMING PLAN
S401	CMU WALL ELEVATION
S402	CMU WALL ELEVATION
S501	SCHEDULES
S502	TYPICAL DETAILS
S503	CMU TYPICAL DETAILS & SCHEDULES
S511	FOUNDATION SECTIONS
S512	FOUNDATION SECTIONS
S521	ROOF SECTIONS

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CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

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SHEET NUMBER: S001

STRUCTURAL GENERAL NOTES

DESIGN LOADS:

1. DESIGN LOADS: 2015 INTERNATIONAL BUILDING CODE WITH CITY OF SCOTTSDALE AMENDMENTS, ASCE 7-10
2. RISK CATEGORY: II STANDARD
3. ROOFS:
   - A. ROOF DEAD LOAD — 25 PSF (INCLUDES 5 PSF FOR FUTURE PV)
   - B. ROOF LIVE LOAD — 20 PSF
4. FLOOR LIVE LOADS:

OCCUPANCY OR USE	UNIFORMLY DISTRIBUTED (PSF)	CONCENTRATED LOAD (LBS)	LIVE LOAD REDUCTION
PUBLIC SPACES	100	2,000	NO
STORAGE AREAS	125	N/A	NO

5. WIND:
   - A. ULTIMATE DESIGN WIND SPEED, V_{ULT}, (3-SECOND GUST) — 115 MPH
   - B. NOMINAL DESIGN WIND SPEED, V_{ASD}, (3-SECOND GUST) — 90 MPH
   - C. INTERNAL PRESSURE COEFFICIENT — 0.18 (ENCLOSED)
   - D. WIND EXPOSURE — C
   - E. AIR DENSITY COEFFICIENT — 0.92
   - F. COMPONENTS AND CLADDING ULTIMATE DESIGN WIND PRESSURES
     1. WALLS:
        - a. WITHIN 5 FEET OF CORNERS +24.2 PSF -32.2 PSF
        - b. AWAY FROM CORNERS +24.2 PSF -26.2 PSF
     2. PARAPETS:
        - a. WITHIN 5 FEET OF CORNERS +87.4 PSF -51.0 PSF
        - b. AWAY FROM CORNERS +63.8 PSF -44.6 PSF
     3. ROOFS:
        - a. WITHIN 5 FEET OF CORNERS +16.0 PSF -66.7 PSF
        - b. WITHIN 5 FEET OF EDGES +16.0 PSF -44.3 PSF
        - c. AWAY FROM EDGES +16.0 PSF -26.4 PSF
     4. OVERHANGS:
        - a. WITHIN 5 FEET OF CORNERS -62.7 PSF
        - b. AWAY FROM CORNERS -38.1 PSF
     5. PRESSURES MAY BE REDUCED FOR EFFECTIVE WIND AREAS LARGER THAN 10 SQUARE FEET, BUT NOT BELOW 16 PSF.
6. SEISMIC:
   - A. SPECTRAL RESPONSE ACCELERATION PARAMETERS
     1. SHORT PERIOD
        - a. S_S 0.237g
        - b. S_{DS} 0.19g
     2. ONE SECOND
        - a. S_1 0.072g
        - b. S_{D1} 0.081g
   - B. SOILS SITE CLASS — C
   - C. SEISMIC IMPORTANCE FACTOR — 1.0
   - D. SEISMIC DESIGN CATEGORY — B
   - E. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)
     - • INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
   - F. DESIGN BASE SHEAR(S) — 35 KIPS
   - G. SEISMIC RESPONSE COEFFICIENT(S), C_S — 0.054
   - H. RESPONSE MODIFICATION COEFFICIENT(S), R — 3.5
   - I. ANALYSIS PROCEDURE — EQUIVALENT LATERAL FORCE

FOUNDATION DESIGN:

1. REFER TO SOILS REPORT NO. 192870SA BY SPEEDIE AND ASSOCIATES, DATED FEBRUARY 7, 2020.
2. GEOTECHNICAL ENGINEER SHALL VERIFY SOIL CONDITIONS AND TYPES DURING EXCAVATION AND PRIOR TO PLACEMENT OF FORMWORK OR CONCRETE.
3. MINIMUM REQUIRED FOOTING DEPTH SHALL BE 1'-6 BELOW EXTERIOR GRADE.

FOOTINGS:

1. DESIGN OF FOOTINGS IS BASED ON
   - A. MAXIMUM ALLOWABLE BEARING PRESSURE (MAIN BUILDING) — 2,500 PSF
2. BEAR ON THE NATURAL UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. EXTERIOR FOOTINGS SHALL BEAR BELOW FROST DEPTH.

EARTH RETAINING STRUCTURES:

1. EARTH EQUIVALENT FLUID LATERAL PRESSURE:
   - A. WALLS RESTRAINED AT TOP (AT REST) — 60 PCF
   - B. CANTILEVERED WALLS (ACTIVE) — 35 PCF
   - C. PASSIVE RESISTING (CONTINUOUS FOOTING) — 300 PCF
   - D. PASSIVE RESISTING (SPREAD FOOTING) — 350 PCF
2. COEFFICIENT OF SLIDING FRICTION
   - A. WITH PASSIVE PRESSURE — 0.35
   - B. WITHOUT PASSIVE PRESSURE — 0.45

REINFORCED CONCRETE:

1. DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
2. CONCRETE WORK SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE."
3. STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

INTENDED USE	EXPOSURE CLASS	f'c, PSI 28 DAYS	MAX W/CM RATIO	MAXIMUM AGGREGATE	SLUMP, INCHES (+/- 1")	AIR CONTENT PERCENT (+/- 1.5%)	CEMENT TYPE	ADMIXTURES / COMMENTS
FOOTINGS	F0-S0-W0-C1	3000	0.52	3/4" STONE	5	N/A	I/II	
STEM WALLS/ PILASTERS	F2-S0-W0-C1	4500	0.45	3/4" STONE	4	6%	I/II	
FORMED STRUCTURAL SLAB	F0-S0-W0-C0	4000	0.45	3/4" STONE	4	N/P	I/II	
INTERIOR SLAB ON GRADE	F0-S0-W0-C0	4000	0.45	3/4" STONE	4	N/P	I/II	
EXTERIOR SLAB ON GRADE	F3-S0-W0-C2	5000	0.40	3/4" STONE	4	6%	I/II	25% MAX FLY ASH

4. CONCRETE MIX TABLE NOTES:
   - A. SLUMP VALUES INDICATED ARE SUGGESTED BASED ON USE AND TYPICAL PLACEMENT METHODS. CONTRACTOR MAY ADJUST SLUMP AS NECESSARY FOR FIELD CONDITONS AND INSTALLATION METHOD USED PROVIDED REMAINING REQUIREMENTS ARE MET.
   - B. AIR CONTENT:
     1. N/P: AIR ENTRAINING ADMIXTURES NOT PERMITTED, ENTRAPPED AIR ONLY
     2. N/A: NOT APPLICABLE, NO STRUCTURAL AIR CONTENT REQUIREMENTS
5. DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
6. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT TIES OR BARS SHOWN TO BE FIELD-BENT, WHICH SHALL BE GRADE 40.
7. BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
8. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP BARS 50 DIAMETERS (MINIMUM).
9. AT CORNERS AND INTERSECTIONS, MAKE HORIZONTAL BARS CONTINUOUS OR PROVIDE MATCHING CORNER BARS FOR EACH LAYER OF REINFORCEMENT.
10. TRIM OPENINGS IN WALLS AND SLABS WITH (2) #5 FOR EACH LAYER OF REINFORCEMENT, FULLY DEVELOPED BY EXTENSION OR HOOK.
11. IN CONTINUOUS MEMBERS, SPLICE TOP BARS AT MID-SPAN AND SPLICE BOTTOM BARS OVER SUPPORTS.
12. FORM INTERMITTENT SHEAR KEYS AT ALL CONSTRUCTION JOINTS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
13. EXCEPT AS NOTED ON THE DRAWINGS, CONCRETE PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
    - A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
      1. EXPOSED TO EARTH OR WEATHER:
         - a. #6 THROUGH #18 BARS 2"
         - b. #5 BAR, W31 OR D31 WIRE, AND SMALLER 1-1/2"
    - B. NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      1. SLABS, WALLS, JOISTS: #11 BARS AND SMALLER 3/4"
      2. BEAMS AND COLUMNS:
         - a. PRIMARY REINFORCEMENT 1-1/2"
         - b. STIRRUPS, TIES, SPIRALS 1-1/2"
14. ANCHOR BOLTS AND RODS FOR BEAM AND COLUMN-BEARING PLATES SHALL BE PLACED WITH SETTING TEMPLATES.

POST-INSTALLED ANCHORS

1. ALL CAST IN PLACE ANCHORS DESIGNED IN ACCORDANCE WITH ACI 318.
2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. EXISTING REINFORCING BARS SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
4. ALL ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MPII.
5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER; REGISTRATION MUST BE IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO THE ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE EOR/ SPECIAL INSPECTOR AS REQUESTED.
7. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318-11 D 9.2.2, ACI 318-14 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D 2.2, ACI 318-14 17.1.2)
9. ALL POST INSTALLED ANCHORS SHALL BE INSTALLED IN DRY HOLES THAT HAVE BEEN DRILLED, CLEANED, AND PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION AND THE RESPECTIVE ICC-ES EVALUATION REPORTS.
10. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC 2012/2015 TABLE 1705.3 NOTE B).

CONCRETE POST INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD2 (ICC ESR-2502)	KWIK BOLT TZ (ICC ESR-1917)	STRONG-BOLT 2 (ICC ESR-3037)
CONCRETE SCREW	SCREW-BOLT+ (ICC ESR 3889)	KWIK HUS-EZ (ICC ESR-3027)	TITEN HD (ICC ESR 2713)
ADHESIVE	AC200+ (ICC ESR-4027)	HIT-HY 200 (ICC ESR-3187)	AT-XP (UES ER-263)

MASONRY POST INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD1 (ICC ESR-2966)	KWIK BOLT 3 (ICC ESR-1385)	WEDGE-ALL (ICC ESR-1396)
SCREW	SCREW-BOLT+ (ICC ESR-4042)	HUS-EZ (ICC ESR-3056)	TITEN HD (ICC ESR-1056)
ADHESIVE	AC100+ GOLD (ICC ESR-3200)	HIT HY-270 (ICC ESR-4143 & 4144)	AT-XP (UES ER-281)

STRUCTURAL MASONRY:

1. GENERAL CONTRACTOR SHALL HOLD A MASONRY PRECONSTRUCTION MEETING AT THE PROJECT SITE WITH REPRESENTATION FROM THE GC, MASON, TESTING AGENCY AND STRUCTURAL ENGINEER.
2. GENERAL CONTRACTOR SHALL SUBMIT COORDINATED ELEVATION DRAWINGS FOR REVIEW OF ALL MASONRY WALLS SHOWING:
   - A. ALL CONTROL JOINTS, BOND BEAMS, BEAM AND JOIST POCKETS, AND OPENINGS INCLUDING MECHANICAL AND PLUMBING PENETRATIONS GREATER THAN 3" IN ANY DIMENSION.
   - B. TYPICAL WALL REINFORCING
   - C. ADDITIONAL WALL REINFORCING AT MASONRY LINTELS, JAMBS, OPENINGS, AND AS NOTED ON STRUCTURAL DRAWINGS.
3. DESIGN IS BASED ON ACI 530/ASCE 5/TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES," ALLOWABLE STRESS DESIGN.
4. 28-DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY USED FOR DESIGN IS 2,000 PSI, BASED ON NET-BEDDED AREA.
5. EXCEPT AT MASONRY LINTELS USING STANDARD LINTEL UNITS, BOND BEAM UNITS SHALL BE PRODUCED FROM STANDARD VERTICALLY VOIDED UNITS WITH PRE-CUT KNOCKOUT CROSS WALLS.
6. HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS (CMU) SHALL BE LIGHTWEIGHT, 85 TO 105 PCF DENSITY, CONFORMING TO ASTM C90, WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,000 PSI BASED ON AVERAGE NET AREA.
7. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270.
8. MASONRY CEMENT SHALL NOT BE USED UNLESS PART OF A PRE-PACKAGED MORTAR OR GROUT MIX APPROVED BY THE STRUCTURAL ENGINEER.
9. ADMIXTURES SHALL NOT BE USED UNLESS APPROVED BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER.
10. GROUT USED IN MASONRY WALLS AND BLOCK CELLS SHALL BE COARSE GROUT, AS DEFINED BY ARTICLE 2.2 OF TMS 602/ACI530.1/ASCE 6, WITH A MINIMUM CUBE STRENGTH = 2,000 PSI OR 3,000 PSI CONCRETE USING 3/8" DIAMETER AGGREGATE AND PLACED BY VIBRATING UNLESS AN APPROVED SELF-CONSOLIDATING MIX IS USED.
11. PLACEMENT OF MORTAR, GROUT, MASONRY UNITS AND WALL TIES SHALL COMPLY WITH TMS 602 / ACI 530.1 / ASCE 6.
12. PROVIDE FULL SHOVED MORTAR IN ALL HEAD AND BED JOINTS.
13. 'LOW-LIFT' GROUTING SHALL NOT EXCEED 5 FEET IN HEIGHT UNLESS ACI 530.1 'HIGH-LIFT' GROUTING PROCEDURES ARE REVIEWED AND APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
14. VERTICALLY SPACE CONTINUOUS HORIZONTAL JOINT REINFORCING AT 16" MAXIMUM IN ALL CMU WALLS. JOINT REINFORCING SHALL BE WELDED TYPE WITH 9 GAGE SIDE RODS AND 9 GAGE LADDER CROSS RODS. IN EXTERIOR WALLS, JOINT REINFORCEMENT SHALL BE STAINLESS STEEL OR HOT-DIP GALVANIZED. ALL OTHER JOINT REINFORCEMENT SHALL BE MILL GALVANIZED, HOT-DIP GALVANIZED, OR STAINLESS STEEL.
15. WIRE TIES FOR VENEER SHALL BE 9 GAGE DIAMETER FOR CAVITY WIDTHS 2" OR LESS. WHERE NOMINAL CAVITY WIDTH EXCEEDS 2 INCHES, VENEER TIES SHALL BE 1/4" DIAMETER. TIES SHALL BE SPACED A MAXIMUM OF 16" IN EACH DIRECTION.
16. REINFORCING BARS SHALL BE AS FOR REINFORCED CONCRETE EXCEPT AS NOTED. UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS, LAP BARS 50 DIAMETERS (MINIMUM) AT SPLICES. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE BAR LOCATORS OR OTHER SUITABLE DEVICES AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS OR 10 FEET.
17. REINFORCE AND GROUT VERTICAL CELLS AT CORNERS, ENDS OF WALLS, JAMBS OF OPENINGS, EACH SIDE OF VERTICAL CONTROL JOINTS, AND AT SPACING SHOWN ON DRAWINGS.
18. WHERE NOTED ON THE DRAWINGS, PROVIDE CLEARANCE BETWEEN MASONRY AND STRUCTURAL ELEMENTS, OR WRAP STEEL WITH POLYETHYLENE FILM.
19. LOCATE VERTICAL CONTROL JOINTS IN ALL MASONRY WALLS AS SHOWN ON THE ARCHITECTURAL DRAWINGS, STRUCTURAL DRAWINGS, OR SPACED HORIZONTALLY AT 25'-0 MAXIMUM SPACING WHERE NOT SHOWN.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. STRUCTURAL STEEL WIDE FLANGE BEAMS SHALL CONFORM TO ASTM A992, 50 KSI YIELD.
3. OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, WTS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
4. HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 50 KSI YIELD.
5. HSS ROUND SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 46 KSI YIELD.
6. EXCEPT AS NOTED, FRAMED BEAM CONNECTIONS SHALL BE BEARING-TYPE WITH 3/4" DIAMETER, SNUG TIGHT, ASTM F3125 BOLTS, DETAILED IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE "STEEL CONSTRUCTION MANUAL" BY THE AISC. INSTALL BOLTS IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
7. ALL BEAMS SHALL HAVE FULL DEPTH WEB STIFFENERS EACH SIDE OF WEBS ABOVE AND BELOW COLUMNS.
8. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE (36, 55 WITH WELDABILITY SUPPLEMENT S1, AND/OR 105) AS NOTED ON THE STRUCTURAL DRAWINGS.
9. HEADED ANCHOR STUDS (HAS) SHALL CONFORM TO ASTM A108 AND SHALL BE CONNECTED TO STRUCTURAL STEEL WITH EQUIPMENT APPROVED BY THE STUD MANUFACTURER ACCORDING TO THE STUD MANUFACTURER'S RECOMMENDATIONS.
10. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE, THE AMERICAN WELDING SOCIETY (AWS) D1.1: STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF WELD E70 ELECTRODES. WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE.
11. GROUT BENEATH COLUMN BASE AND BEAM BEARING PLATES SHALL HAVE A MINIMUM 28-DAY, COMPRESSIVE STRENGTH OF 7,500 PSI AND SHALL BE NON-SHRINK, NON-METALLIC, AND TESTED IN ACCORDANCE WITH ASTM C1107.

PRE-ENGINEERED, PRE-FABRICATED STEEL JOISTS & JOIST GIRDERS:

1. STEEL JOISTS, JOIST SUBSTITUTES, JOIST GIRDERS, AND JOIST HEADERS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR JOISTS, LONG SPAN JOISTS, AND JOIST GIRDERS AND THE "CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS", AS PREPARED BY THE STEEL JOIST INSTITUTE (SJI).
2. STEEL JOISTS, JOIST SUBSTITUTES, HEADERS, AND JOIST GIRDERS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED EMPLOYED BY THE JOIST FABRICATOR TO SATISFY THE REQUIREMENTS SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
3. DESIGN CALCULATIONS BEARING THE DESIGN ENGINEER'S STAMP AND SIGNATURE SHALL BE SUBMITTED FOR STRUCTURAL ENGINEER'S REVIEW PRIOR TO FABRICATION.
4. MEMBERS SHALL BE DESIGNED TO SUPPORT THE FULL DEAD LOADS AND OTHER SUPERIMPOSED DESIGN LOADS NOTED ON THE STRUCTURAL DRAWINGS.
5. MINIMUM CAPACITY FOR NET UPLIFT DUE TO LATERAL FORCES = 20PSF.
6. TOP AND BOTTOM CHORD MEMBERS SHALL HAVE THE CAPACITY TO SUPPORT A CONCENTRATED 250-POUND LOAD APPLIED ANYWHERE ALONG THE LENGTH, CONCURRENT WITH OTHER LIVE LOADS, WITHOUT REQUIRING FIELD INSTALLED STRUT REINFORCING BETWEEN CHORDS.
7. PROVIDE SPECIAL END BEARINGS, TOP CHORD EXTENSIONS, AND EXTENDED ENDS AS SHOWN ON THE STRUCTURAL DRAWINGS.
8. DETAIL AND PROVIDE BRIDGING FOR ALL JOISTS IN ACCORDANCE WITH CURRENT OSHA AND SJI REQUIREMENTS.

STEEL DECKING:

1. STEEL ROOF, NON-COMPOSITE FLOOR (OR FORM), AND COMPOSITE FLOOR DECK SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE STANDARD DECK SPECIFICATIONS AND THE "MANUAL OF CONSTRUCTION WITH STEEL DECK" AS PREPARED BY THE STEEL DECK INSTITUTE (SDI).
2. ROOF DECK SHALL BE CONNECTED TO SUPPORTING MEMBERS AND INTERCONNECTED AS NOTED ON THE STRUCTURAL DRAWINGS.
3. NON-COMPOSITE AND COMPOSITE FLOOR DECK SHALL BE CONNECTED TO SUPPORTING MEMBERS AND INTERCONNECTED AS REQUIRED TO SATISFY SDI MINIMUM REQUIREMENTS EXCEPT AS NOTED ON THE STRUCTURAL DRAWINGS.
4. WELDING PATTERNS, SCREW PATTERNS, AND DETAILS SHALL BE INDICATED ON THE DECK SUPPLIER'S SHOP DRAWINGS.

COLD-FORMED STEEL FRAMING (DELEGATED DESIGN):

1. COLD FORMED DESIGN FOR THIS PROJECT IS A PERFORMANCE BASED, DELEGATED DESIGN. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR REVIEW. CALCULATIONS SHALL BE PERFORMED BY A STRUCTURAL ENGINEER WITH CURRENT REGISTRATION IN THE STATE OF COLORADO.
2. STUD SIZES AND DETAIL OPTIONS PROVIDED ARE REPRESENTATIVE OF THIS TYPE OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH POTENTIAL COLD-FORMED SUB-CONTRACTORS AND THEIR ENGINEERS FOR SPECIFIC BIDDING INFORMATION.
3. MEMBER FORMING SHALL CONFORM TO THE AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
4. ALL STRUCTURAL FRAMING (STUDS, JOISTS, TRACK, RUNNERS, BRACING, AND BRIDGING) SHALL BE GALVANIZED G-60 SHEET STEEL CONFORMING TO ASTM A1003.
5. STUDS AND JOISTS 54 MILS (16 GAUGE) AND HEAVIER SHALL BE 50 KSI YIELD. 43 MILS (18 GAUGE) AND LIGHTER SHALL BE 33 KSI YIELD UNLESS NOTED.
6. COLD-FORMED DESIGNER SHALL PROVIDE BRIDGING AND BLOCKING AT A MAXIMUM OF 4 FOOT SPACING AND WITHIN 12 INCHES OF DEFLECTION TRACK, OR AS REQUIRED FOR STABILITY AND STIFFNESS OF THE FINAL ASSEMBLY. *NOTE THAT EXTERIOR WALL SYSTEM DOES NOT HAVE SHEATHING ON THE OUTSIDE FACE TO PROVIDE STUD BRACING*.
7. WHERE PUNCHOUTS ARE WITHIN 8" OF MEMBER ENDS, INSTALL UNPUNCHED STIFFENERS WITH (4) #10 SCREWS EACH EDGE TO THE STIFFENED MEMBER.
8. PARALLEL MEMBERS IN CONTACT SHALL HAVE #10 SCREWS @ 16" MAX ALONG EACH CONTACT EDGE IN THE FIELD OF THE MEMBER.
9. MINIMUM MEMBER THICKNESSES (GOVERNS OVER OTHER CRITERIA OR SCHEDULED/DETAILED SIZES):
   - A. STUD BACKUP TO MASONRY VENEER - 43 MILS
   - B. STUDS BEING WELDED - 54 MILS
   - C. STUDS SUPPORTING WELDED BRICK LEDGE - 68 MILS
10. DEFLECTION CRITERIA:
    - A. STUD BACKUP FOR WALL FINISHES, OUT-OF-PLANE DEFLECTION (WIND PRESSURE MAY BE 0.7 TIMES COMPONENT AND CLADDING PRESSURE AS PERMITTED BY IBC):
      - a. MASONRY VENEER: L/600
      - b. STUCCO: L/480
      - c. METAL PANEL AND ALL OTHERS NOT NOTED: L/360
    - B. FLOOR AND ROOF JOISTS: VERTICAL DEFLECTION OF L/360 LIVE LOAD AND L/240 TOTAL LOAD.
    - C. MEMBERS SUPPORTING MASONRY: VERTICAL DEFLECTION OF L/600 TOTAL LOAD.
11. COLD-FORMED STEEL FRAMING STUDS AND FRAMING ATTACHMENT TO BE DESIGNED FOR THE TRIBUTARY WIND AND GRAVITY LOAD OF THE STUD SPACING. CLADDING SUPPLIER TO DESIGN CLADDING TO ATTACH AT EACH STUD. CLADDING ATTACHMENT SPACING WHICH EXCEEDS THE STUD SPACING IS NOT ACCEPTABLE WITHOUT APPROVAL FROM THE METAL STUD SUPPLIER/DESIGNER AND THE PROJECT EOR. IF THE CLADDING SUPPLIER DOES NOT ATTACH TO EACH STUD, THE LOADS FROM THE CLADDING SUPPLIER MUST BE PROVIDED TO THE METAL STUD FRAMING SUPPLIER. THE METAL STUD FRAMING SUPPLIER WILL NEED TO INCORPORATE THESE LOADS INTO THE METAL STUD FRAMING DESIGN. GC TO COORDINATE BETWEEN METAL STUD FRAMING SUPPLIER AND CLADDING SUPPLIER AS REQUIRED.
12. THE SSMA PRODUCT IDENTIFICATION CODES ARE USED TO LABEL MEMBERS ON THE DRAWINGS: [MEMBER DEPTH IN 1/100 INCHES][STYLE][FLANGE WIDTH IN 1/100 INCHES] [MATERIAL THICKNESS IN MILS] [YIELD STRENGTH KSI]

STYLE	SECTION	THICKNESS (MILS)	REFERENCE ONLY GAUGE NO.
S	STUD OR JOIST	33	20 - STRUCTURAL
T	TRACK	43	18
U	CHANNEL	54	16
F	FURRING CHANNEL	68	14

STEEL STAIRS:

1. STAIRS SHALL BE DESIGNED, DETAILED, AND ERECTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE "RECOMMENDED VOLUNTARY MINIMUM STANDARDS FOR FIXED METAL STAIRS" IN NAAMM AMP 510 - METAL STAIRS MANUAL. STAIRS SHALL BE DESIGNED BY, AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE STAIR ENGINEER SHALL BE EMPLOYED BY THE STAIR SUPPLIER PER THE DEFERRED SUBMITTAL REQUIREMENTS.
2. STAIR SUPPLIER SHALL DESIGN STAIR ATTACHMENTS TO THE PRIMARY STRUCTURAL FRAME. ATTACHMENT TO THE PRIMARY STRUCTURAL FRAME SHALL BE MADE WITH PINNED CONNECTIONS. MOMENT CONNECTIONS AND CONNECTIONS WHICH INDUCE TORSION ON THE PRIMARY STRUCTURAL FRAME ARE NOT PERMITTED UNLESS SPECIFICALLY DETAILED OTHERWISE.
3. INTERIOR STAIRS SHALL BE "ARCHITECTURAL CLASS" AND SHALL BE PRE-ASSEMBLED STRUCTURAL STEEL WITH CONCRETE FILLED TREADS AND CLOSED RISERS SPANNING BETWEEN STRINGERS. DESIGN AND DETAILING OF STAIR COMPONENTS, INCLUDING STINGERS, TREADS, RISERS, HEADERS, INTERMEDIATE LANDINGS, RAILINGS, CONNECTIONS, AND ALL VERTICAL SUPPORTING ELEMENTS WITHIN THE DESIGNATED STAIR SHAFT SHALL BE THE RESPONSIBILITY OF THE STAIR SUPPLIER.
4. EXTERIOR STAIRS SHALL BE "SERVICE CLASS" AND SHALL BE PRE-ASSEMBLED, GALVANIZED STRUCTURAL STEEL WITH OPEN GRATING STEEL TREADS, AND NO RISERS, SPANNING BETWEEN STRINGERS. DESIGN AND DETAILING OF STAIR COMPONENTS INCLUDING STRINGERS, TREADS AND RISERS, HEADERS, INTERMEDIATE LANDINGS, RAILINGS, CONNECTIONS, AND ALL VERTICAL SUPPORTING ELEMENTS.
5. ANY REQUIRED FOUNDATION ELEMENTS (IF ANY) SHALL BE THE RESPONSIBILITY OF THE STAIR SUPPLIER. USE OF ANY EXISTING FOUNDTION ELEMENTS (INCLUDING FLOOR SLABS) SHALL BE SUBMITTED TO THE EOR FOR REVIEW AND APPROVAL.
6. STAIR SUPPLIER SHALL COORDINATE STAIR ASSEMBLIES AND DETAILS WITH ADJACENT FRAMING ELEMENTS SHOWN ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS.
7. REQUIRED STAIR AND RAILING DESIGN LOADS:
   - A. STAIRS MUST BE DESIGNED FOR THE FOLLOWING NON-CONCURRENT LIVE LOADS:
     1. 100 POUNDS PER SQUARE FOOT (PSF)
     2. 300 LB CONCENTRATED LOAD ON STAIR TREAD APPLIED ON AN AREA OF 2 INCHES X 2 INCHES
   - B. HANDRAIL AND GUARDRAILS:
     1. ALL HANDRAILS AND GUARDRAILS SHALL BE DESIGNED TO RESIST A SINGLE CONCENTRATED LOAD OF 200 LB APPLIED IN ANY DIRECTION AT ANY POINT ON THE HANDRAIL OR TOP RAIL AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE TO PRODUCE THE MAXIMUM LOAD EFFECT ON THE ELEMENT BEING CONSIDERED.
     2. ALL HANDRAIL AND GUARDRAIL SYSTEMS SHALL BE DESIGNED TO RESIST A LOAD OF 50 POUNDS PER LINEAR FOOT (PLF) APPLIED IN ANY DIRECTION ALONG THE HANDRAIL OR TOP RAIL. THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH THE 200 LB POINT LOAD.
     3. INTERMEDIATE RAILS (ALL THOSE EXCEPT THE HANDRAIL), AND PANEL FILLERS SHALL BE DESIGNED TO WITHSTAND A HORIZONTALLY APPLIED NORMAL LOAD OF 50 LB ON AN AREA NOT TO EXCEED 12 INCH X 12 INCH INCLUDING OPENINGS AND SPACE BETWEEN RAILS. THE 50 LB LOAD MUST BE APPLIED IN THE LOCATION TO PRODUCE THE MAXIMUM LOAD AFFECT.
   - C. STAMPED CALCULATIONS DEMONSTRATING THE REQUIRED CODE COMPLIANCE SHALL BE SUBMITTED BY THE STAIR SUPPLIER'S STRUCTURAL ENGINEER FOR REVIEW BY THE DESIGN TEAM.
8. THE ARCHITECT SHALL REVIEW ALL STAIR RISE AND RUN INFORMATION AS WELL AS LANDING AND RAILING CRITERIA.

CORROSION CONTROL:

1. ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123.
2. FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR ASTM B695 CLASS 50 (A490 BOLTS SHALL NOT BE HOT DIPPED GALVANIZED). STAINLESS STEEL FASTENERS AND HARDWARE MAY ALSO BE USED.
3. ALL FIELD CUT OR DAMAGED SURFACES, FIELD WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS AS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPAIRED WITH (2) COATS OF A 95% ZINC RICH PAINT PER ASTM A780 (ZRC PREFERRED).

SHOP DRAWINGS:

1. THE STRUCTURAL DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF JVA'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY JVA, A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF JVA'S NAME AND LOGO FROM ALL SHEETS SO USED.
2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE STRUCTURAL DRAWINGS OR PROJECT SPECIFICATIONS.
3. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED (AFTER HAVING BEEN CHECKED) BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR STRUCTURAL ENGINEER'S REVIEW; SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW.
4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR:
   - A. COLD-FORMED STEEL FRAMING
   - B. CONCRETE MIX DESIGNS
   - C. CONCRETE REINFORCING STEEL
   - D. MASONRY REINFORCING STEEL
   - E. STRUCTURAL STEEL
   - F. STEEL JOISTS AND JOIST GIRDERS
   - G. STEEL FORM, FLOOR, AND ROOF DECK
5. SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE STRUCTURAL ENGINEER.
6. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "REQUEST FOR CHANGE IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, CHANGES MADE BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING THE CHANGE.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:

1. THE STRUCTURAL DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED.
2. THE STRUCTURAL DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT EVERY DETAIL IS ILLUSTRATED AND NOT EVERY EXCEPTIONAL CONDITION IS ADDRESSED.
3. ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
4. ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND LOCAL ORDINANCES.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS. ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR RESOLUTION.
6. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES.
7. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE STRUCTURAL DRAWINGS DO NOT DESCRIBE METHODS OF CONSTRUCTION.
8. THE GENERAL CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO TEMPORARY BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
9. DO NOT BACKFILL AGAINST BASEMENT OR RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE TEMPORARY BRACING IS PROVIDED.
10. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER SUPPORTING ELEMENTS ARE IN PLACE.
11. THE ARCHITECT AND STRUCTURAL ENGINEER BEAR NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTIONS OF THESE ITEMS.

PRECAUTIONARY NOTES ON STRUCTURAL BEHAVIOR:

1. INTERIOR ARCHITECTURAL FINISH DETAILING MUST ACCOMMODATE THE RELATIVE DIFFERENTIAL MOVEMENTS OF SUPPORTING STRUCTURAL ELEMENTS.
2. WHERE THE ROOF FRAMING ELEMENT SPANS ARE LONG, APPLIED LOADING WILL NATURALLY CAUSE SUBSTANTIAL DEFLECTION. INTERIOR ELEMENTS HUNG FROM THE ROOF STRUCTURE WILL DEFLECT WITH THE ROOF.
3. THE FLOOR IS A FLOATING CONCRETE SLAB-ON-GRADE AND MAY EXPERIENCE MOVEMENTS INDEPENDENT OF THE STRUCTURAL FOUNDATIONS. INTERIOR ELEMENTS SUPPORTED ON THE SLAB-ON-GRADE FLOOR WILL MOVE WITH THE FLOOR. INTERIOR ELEMENTS SUPPORTED ON FOUNDATIONS AND COLUMNS WILL NOT EXPERIENCE SIMILAR OR MEASURABLE MOVEMENTS.
4. EXTERIOR/PERIMETER WALL ASSEMBLIES HUNG FROM THE EDGE OF THE BUILDING STRUCTURE WILL BE DIRECTLY AFFECTED (TO SOME DEGREE) BY CHANGES IN EXTERNAL TEMPERATURE AND FLOOR DEFLECTION.
5. EXTERIOR/PERIMETER AND INTERIOR ARCHITECTURAL FINISH DETAILS SHOULD ALLOW FOR RELATIVE MOVEMENTS BETWEEN ELEMENTS WITH DIFFERENT SUPPORT CONDITIONS.

DEFERRED SUBMITTALS:

1. PORTIONS OF THE STRUCTURE HAVE ELEMENTS OF PROPRIETARY DESIGN AND FABRICATION, WHICH SHALL BE SUBMITTED BY THE SUPPLIER FOR APPROVAL AFTER AWARD OF CONTRACT.
2. THESE ITEMS SHALL CONFORM TO THE LOAD, CAPACITY, SIZE, GEOMETRY, CONNECTION, AND SUPPORT CRITERIA NOTED ON THE STRUCTURAL DRAWINGS.
3. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. FINAL SHOP DRAWING SUBMITTALS SHALL BE STAMPED AND SIGNED.
4. FURNISH DEFERRED SUBMITTALS FOR:
   - A. CANOPIES, SUNSCREENS, AND SUNSHADES
   - B. DOCK LEVELER
   - C. GATES
   - D. COLD-FORMED STEEL FRAMING
   - E. STAIRS & RAILINGS
   - F. STEEL JOISTS
   - G. STRUCTURAL STEEL CONNECTIONS
5. SUBMITTALS WILL BE REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD FOR COMPLIANCE WITH THE SPECIFIED DESIGN REQUIREMENTS, STAMPED AS "REVIEWED," AND FORWARDED TO THE LOCAL BUILDING AUTHORITY FOR REVIEW AS REQUIRED.
6. FINAL ISSUE OF THE BUILDING PERMIT MAY, AT THE APPROVAL AUTHORITY'S OPTION, BE CONTINGENT ON ITS APPROVAL OF THE DEFERRED SUBMITTAL DOCUMENTS.
7. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN CALCULATIONS AND DRAWINGS HAVE BEEN REVIEWED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND/OR LOCAL BUILDING AUTHORITY AS REQUIRED.

LETTERS OF CONSTRUCTION COMPLIANCE:

1. THE GENERAL CONTRACTOR SHALL DETERMINE FROM THE LOCAL BUILDING AUTHORITY, AT THE TIME THE BUILDING PERMIT IS OBTAINED, WHETHER ANY LETTERS OF CONSTRUCTION COMPLIANCE WILL BE REQUESTED FROM THE STRUCTURAL ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ALL SUCH REQUIREMENTS IN WRITING PRIOR TO THE START OF CONSTRUCTION.
3. TWO-DAY ADVANCE NOTICE SHALL BE GIVEN WHEN REQUESTING SITE VISITS NECESSARY AS THE BASIS FOR THE COMPLIANCE LETTER.
4. THE GENERAL CONTRACTOR SHALL PROVIDE COPIES OF ALL THIRD-PARTY TESTING AND INSPECTION REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER A MINIMUM OF ONE WEEK PRIOR TO THE DATE THAT THE COMPLIANCE LETTER IS NEEDED.

SPECIAL INSPECTIONS - 2015:

1. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR, RETAINED BY THE OWNER, IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF IBC CHAPTER 17:
   - A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
     1. 1704.2 SPECIAL INSPECTIONS AND TESTS
     2. 1704.3 STATEMENT OF SPECIAL INSPECTIONS
   - B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
     1. 1705.2 STEEL CONSTRUCTION
     2. 1705.3 CONCRETE CONSTRUCTION
     3. 1705.4 MASONRY CONSTRUCTION, LEVEL <A, B, OR C> SPECIAL INSPECTION
     4. 1705.6 SOILS
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE APPROVED INSPECTOR MUST BE INDEPENDENT FROM THE CONTRACTOR RESPONSIBLE FOR THE WORK BEING INSPECTED.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO INSPECT AND/OR TEST THE WORK OUTLINED ABOVE AND WITHIN THE STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
5. PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD.
6. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN 10 DAYS OF THE FINAL SPECIAL INSPECTION STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
7. EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1704.6. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

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CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO. 68858
DEREK PEDERSEN
04.01.21 DATE SIGNED
ARIZONA U.S.A.

DRAWN BY:	HJN
CHECKED BY:	MES
PROJECT NO:	2019001.23
ISSUE DATE:	3/26/21
REVISIONS:	
SHEET TITLE:	GENERAL NOTES
SHEET NUMBER:	S002

STEEL SPECIAL INSPECTION (IBC 1705.2, 1705.12.2 & 1705.13.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
FABRICATORS			(IBC 1704.2.5 & 1705.10)
In-plant Inspection	AWS/AISC-SSI ICC-SWSI		Required unless Fabricator is approved and follows procedures of 1704.2.5.2
PRIOR TO WELDING			(TABLE N5.4-1, AISC 360-10)
Verify welding procedures (WPS) and consumable certificates	AWS-CWI ASNT	Continuous	
Material identification	AWS-CWI ASNT	Periodic	Verify type and grade of material.
Welder identification	AWS-CWI ASNT	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Access holes	AWS-CWI ASNT	Periodic	Verify configuration and finish.
Fit-up of fillet welds	AWS-CWI ASNT	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
DURING WELDING			(TABLE N5.4-2, AISC 360-10)
Use of qualified welders	AWS-CWI ASNT	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	AWS-CWI ASNT	Periodic	Verify packaging and exposure control.
Cracked tack welds	AWS-CWI ASNT	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	AWS-CWI ASNT	Periodic	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	AWS-CWI ASNT	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	AWS-CWI ASNT	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
AFTER WELDING			(TABLE N5.4-3, AISC 360-10)
Welds cleaned	AWS-CWI ASNT	Periodic	Verify that welds have been properly cleaned.
Size, length, and location of welds	AWS-CWI ASNT	Continuous	
Welds meet visual acceptance criteria	AWS-CWI ASNT	Continuous	
Arc strikes	AWS-CWI ASNT	Continuous	
k-area	AWS-CWI ASNT	Continuous	
Backing & weld tabs removed	AWS-CWI ASNT	Continuous	
Repair activities	AWS-CWI ASNT	Continuous	
Document acceptance or rejection of welded joint/member	AWS-CWI ASNT	Continuous	
NONDESTRUCTIVE TESTING			(SECTION N5.5, AISC 360-10)
CJP welds (Risk Cat. II)	AWS-CWI ASNT	Periodic	Ultrasonic testing shall be performed on 10% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate must be increased if > 5% of welds tested have unacceptable defects.
AFTER BOLTING			(TABLE N5.6-3, AISC 360-10)
Document acceptance or rejection of bolted connections	AWS/AISC-SSI ICC-SWSI	Continuous	
OTHER STEEL INSPECTIONS			(SECTION N5.7, AISC 360-10; Tables J8-1 & J10-1, AISC 341-10)
Structural steel details	PE/SE	Periodic	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	ACI-CCI	Periodic	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.
STEEL ROOF AND FLOOR DECKS			(IBC 1705.2.2; Section 6.1 of SDI QA/QC - 2011)
Material verification of cold-formed steel deck	AWS/AISC-SSI ICC-SWSI	Periodic	Confirm that identification markings are provided to conform to ASTM standards specified on construction documents.
Floor and roof deck welds	AWS-CWI	Periodic	Visual inspection is required to confirm that weld meets acceptance criteria of AWS D1.3 and SDI C, SDI NC, SDI RD and manufacturer's instructions.
Floor and roof mechanical fasteners	AWS/AISC-SSI ICC-SWSI	Periodic	Visual inspection to confirm fasteners are installed per SDI C, SDI NC, SDI RD and manufacturer's instructions.
Steel deck installation	AWS/AISC-SSI ICC-SWSI	Periodic	Verify deck is installed per the approved construction documents, installation drawings, shop drawings and applicable reference standards.
OPEN-WEB STEEL JOISTS AND JOIST GIRDERS			(IBC TABLE 1705.2.3)
End connections – welded or bolted		Periodic	Visual inspection to confirm that end connections conform to the approved plans and shop drawings.
Bridging – horizontal or diagonal		Periodic	Visual inspection to confirm that bridging is provided per the approved plans and shop drawings.

CONCRETE SPECIAL INSPECTION (IBC 1705.3 & 1705.12.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
Reinforcing steel	ACI-CCI ICC-RCSI	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Welding of reinforcing steel	AWS-CWI	Periodic	Visually inspect all welds and also verify weldability of reinforcing steel based upon carbon equivalent and in accordance with AWS D1.4.
Cast-in bolts & embeds	ACI-CCI ICC-RCSI	Periodic	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used.
Post-installed anchors or dowels	ACI-CCI ICC-RCSI	Periodic	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. Horizontally or upwardly inclined anchors that resist sustained tension loads require continuous inspection and approved installers.
Use of required mix design	ACI-CCI ICC-RCSI	Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3, 26.4.4; and IBC 1904.1, 1904.2, 1908.2, 1908.3.
Concrete sampling for strength tests, slump, air content, and temperature	ACI-CFTT ACI-SIT	Continuous	
Concrete & shotcrete placement	ACI-CCI ICC-RCSI	Continuous	
Curing temperature and techniques	ACI-CCI ICC-RCSI	Periodic	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 26.4.7-26.4.9). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Formwork		Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

MASONRY SPECIAL INSPECTION (IBC 1705.4)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
PRIOR TO CONSTRUCTION			(ARTICLE 3.1.1, TMS-402/ACI 530.1-13)
Review material certificates, mix designs, test results and construction procedures	PE	Periodic	Verify that materials conform to the requirements of the approved construction documents. Mix design, test results, material certificates, and construction procedures should be submitted for review. Mortar mix designs shall conform to ASTM C 270 while grout shall conform to ASTM C 476. Material certificates shall be provided for the following: reinforcement; anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot-weather construction shall be reviewed.
AS CONSTRUCTION BEGINS			(TABLE 3.1.2, TMS-402/ACI 530-13)
Proportions of site-prepared mortar	ICC-SMSI	Periodic	Verify that mortar is of the type and color specified on the construction documents, that it conforms to ASTM C 270, and that it is mixed in accordance with Article 2.6 A of TMS-602.
Construction of mortar joints	ICC-SMSI	Periodic	Verify that mortar joints comply with Article 3.3 B of TMS-602.
Grade and size of prestressing tendons and anchorages	ICC-SMSI	Periodic	Verify that prestressing tendons comply with Article 2.4 B of TMS-602 and that anchorages, couplers, and end blocks comply with Article 2.4 H.
Location of reinforcement, connectors, and prestressing tendons and anchorages	ICC-SMSI	Periodic	Verify that reinforcement is placed in accordance with Article 3.4 of TMS-602. Prestressing tendons shall be placed per Article 3.6 A.
PRIOR TO GROUTING			(TABLE 3.1.2, TMS-402/ACI 530-13)
Grout space	ICC-SMSI	Periodic	Verify that grout space is free of mortar droppings, debris, loose aggregate, and other deleterious materials and that cleanouts are provided per Article 3.2 D and 3.2 F of TMS-602.
Construction of mortar joints	ICC-SMSI	Periodic	Verify that mortar joints are placed in accordance with Article 3.3 B of TMS 602.
DURING MASONRY CONSTRUCTION			(TABLE 3.1.2, TMS-402/ACI 530-13)
Size and location of structural elements	ICC-SMSI	Periodic	Verify the locations of structural elements with respect to the approved plans and confirm that tolerances meet the requirements of Article 3.3 F of TMS 602.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	ICC-SMSI	Periodic	Verify that correct anchorages and connections are provided per the approved plans and Sections 1.16.4.3 and 1.17.1 of TMS 402
Welding of reinforcement	ICC-SMSI AWS-CWI	Continuous	
Preparation, construction, and protection of masonry during cold weather (<40°F) or hot weather (>90°F).	ICC-SMSI	Periodic	Verify that cold-weather construction is performed in accordance with Article 1.8 C of TMS 602 and hot weather construction per Article 1.8 D of TMS 602.
Construction of mortar joints	ICC-SMSI	Periodic	Verify that mortar joints are placed in accordance with Article 3.3 B of TMS 602.
DURING MASONRY CONSTRUCTION			(TABLE 3.1.2, TMS-402/ACI 530-13)
Size and location of structural elements	ICC-SMSI	Periodic	Verify the locations of structural elements with respect to the approved plans and confirm that tolerances meet the requirements of Article 3.3 F of TMS 602.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	ICC-SMSI	Periodic	Verify that correct anchorages and connections are provided per the approved plans and Sections 1.16.4.3 and 1.17.1 of TMS 402.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction - Risk Category IV	ICC-SMSI	Continuous	Verify that correct anchorages and connections are provided per the approved plans and Sections 1.16.4.3 and 1.17.1 of TMS 402.

COLD FORMED STEEL SPECIAL INSPECTION (IBC 1705.2.2)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
Fabricator Certification/Quality Control Procedures	AWS/AISC-SSI ICC-SWSI	Periodic	Inspect shop fabrication process and quality control procedures of structural elements and assemblies in accordance with Section 1704.2.5.`
Member Sizes		Periodic	Verify that the member sizes in the field match those called for on the structural drawings or the approved submittal.
Material Thickness		Periodic	Verify that the member thicknesses in the field match those called for on the structural drawings or the approved submittal
Material Properties		Continuous	Verify that the material strength in the field matches that called for on the structural drawings or the approved submittal
Mechanical Connections		Continuous	Verify that the connections comply with those shown in the structural drawings or approved submittal
Framing Details		Periodic	Verify that framing details comply with the construction documents or approved submittal

SOIL SPECIAL INSPECTION (IBC 1705)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
SHALLOW FOUNDATIONS			(IBC 1705.6)
Verify subgrade	PE/GE	Periodic	Prior to placement of concrete inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.
CONTROLLED STRUCTURAL FILL			(IBC 1705.6)
Excavations	PE/GE	Periodic	Verify excavations extend to proper depth and material prior to placement of compacted fill or concrete.
Fill materials	PE/GE	Periodic	Perform classification and testing of compacted fill materials. Check for proper classifications and gradations at each lift and not less than once for each 10,000ft² of surface area.
Placement and compaction		Continuous	Verify proper materials, densities and lift thicknesses during placement and compaction.
Subgrade preparation	PE/GE	Periodic	Verify that subgrade has been appropriately prepared prior to placing compacted fill.
Density		Continuous	Test density of each lift by nuclear methods (ASTM D2922).

STATEMENT OF SPECIAL INSPECTIONS

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines:

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.
Interim Report Frequency: Within 72 hours of inspection, unless indicated otherwise.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

American Concrete Institute (ACI) Certification
ACI-CFTT Concrete Field Testing Technician – Grade 1
ACI-CCI Concrete Construction Inspector
ACI-LTT Laboratory Testing Technician – Grade 1 & 2
ACI-STT Strength Testing Technician

American Welding Society (AWS) Certification
AWS-CWI Certified Welding Inspector
AWS/AISC-SSI Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification
ASNT Non-Destructive Testing Technician – Level II or III

International Code Council (ICC) Certification
ICC-SMSI Structural Masonry Special Inspector
ICC-SWSI Structural Steel and Welding Special Inspector
ICC-SFSI Spray-Applied Fireproofing Special Inspector
ICC-RCSI Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)
NICET-CT Concrete Technician – Levels I, II, III & IV
NICET-ST Soils Technician - Levels I, II, III & IV
NICET-GET Geotechnical Engineering Technician - Levels I, II, III & IV

Exterior Design Institute (EDI) Certification
EDI-EIFS EIFS Third Party Inspector

Quality Assurance Plans

Quality Assurance for Seismic Resistance
Seismic Design Category: B
Quality Assurance Plan Required: No

Quality Assurance for Wind Requirements
Basic Wind Speed V_{asd} (3 second gust): 90 mph
Basic Wind Speed V_{ult} (3 second gust): 115 mph
Wind Exposure Category: C
Quality Assurance Plan Required: No

Statement of Responsibility
Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

Statement of Responsibility
Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

Prepared by:

EOR NAME / Signature — Date: 3/26/2021

Owner's Authorization:

Signature ____________ Date ____________

Building Official's Acceptance:

Signature ____________ Date ____________

SCHEDULE OF INSPECTION AND TESTING AGENCIES

SPECIAL INSPECTION AGENCIES	FIRM	ADDRESS, TELEPHONE, E-MAIL
Special Inspection Coordinator	TBD	
Inspector	TBD	
Inspector	TBD	
Testing Agency	TBD	
Testing Agency	TBD	
Continuous	TBD	
Other	TBD	

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DESERT MOUNTAIN CLUB
STORAGE AND LAUNDRY FACILITY
10550 Desert Hills Dr, Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

REGISTERED PROFESSIONAL ENGINEER (CIVIL) — CERTIFICATE NO. 68858 — DEREK PEDERSEN — DATE SIGNED 04.01.21 — ARIZONA U.S.A.

DRAWN BY: HJN
CHECKED BY: MES
PROJECT NO: 2019001.23
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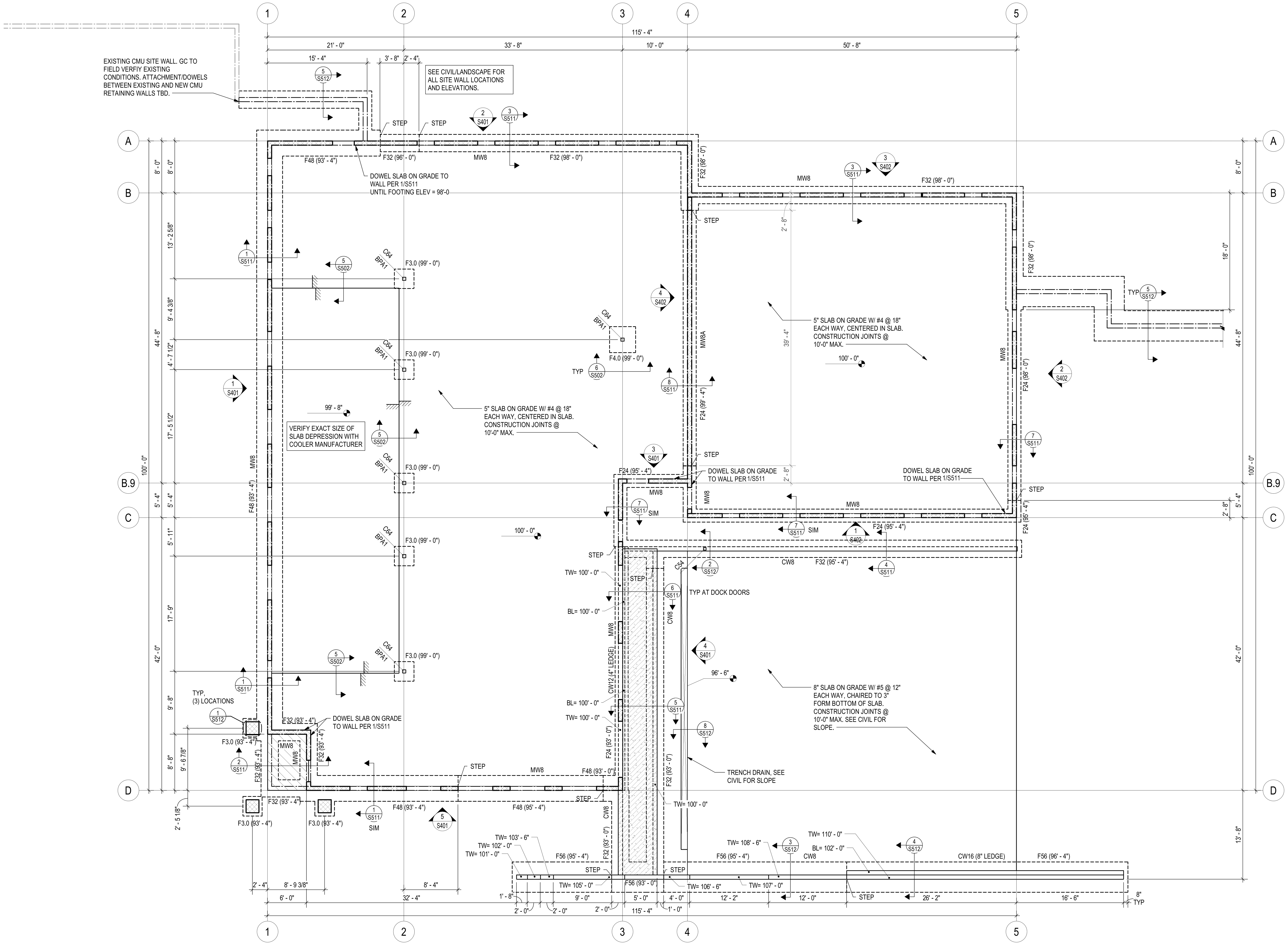
SHEET TITLE: IBC 2015 STATEMENT OF SPECIAL INSPECTION

SHEET NUMBER: S003



FOUNDATON PLAN

1/8" = 1'-0"

- USGS ELEVATION 2988.5' = TOP OF MAIN LEVEL INTERIOR FLOOR SLAB = 100'-0, UNLESS NOTED THUS: XXX'-X
- INTERIOR STEEL COLUMNS BEAR ON FOOTINGS AT ELEVATION = 99'-0"

TYPICAL INTERIOR SLAB ON GRADE:
5" THICK CONCRETE SLAB ON UNDISTURBED NATURAL SOILS OR COMPACTED STRUCTURAL FILL PER SOILS REPORT; REINFORCE SLAB WITH #4 @ 18", EA WAY, 3" CLEAR FROM BOTTOM; PROVIDE SAWCUT OR FORMED CONTROL JOINTS, PER 3/S501, @ 10'-0 ± IN EACH DIRECTION. ADD (2) #4 x 6'-0 DIAGNOL BARS AT MID-DEPTH OF SLAB ALL RE-ENTRANT CORNERS.

EXTERIOR TRUCK RAMP SLAB ON GRADE:
8" THICK CONCRETE SLAB ON UNDISTURBED NATURAL SOILS OR COMPACTED STRUCTURAL FILL PER SOILS REPORT; REINFORCE SLAB WITH #5 @ 12", EA WAY, 3" CLEAR FROM BOTTOM; PROVIDE SAWCUT OR FORMED CONTROL JOINTS, PER 3/S501, @ 10'-0 ± IN EACH DIRECTION. ADD (2) #4 x 6'-0 DIAGNOL BARS AT MID-DEPTH OF SLAB ALL RE-ENTRANT CORNERS.

TYPICAL EXTERIOR STRUCTURAL STOOP:
8" CONCRETE SLAB W/ #4 @ 12" EACH WAY, CENTERED IN SLAB, OVER 6" VOID FORM.

LOADING DOCK STRUCTURAL SLAB:
12" CONCRETE SLAB W/ #4 @ 12", EACH WAY, TOP & BOTTOM, OVER 6" VOID FORM.

WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING
F24	2' - 0"	1' - 0"	(3) #5 CONT, BOTTOM
F32	2' - 8"	1' - 0"	(4) #5 CONT, TOP & BOTTOM, #5 @ 16" TRANSVERSE
F48	4' - 0"	1' - 0"	(5) #5 CONT, TOP & BOTTOM, #5 @ 16" TRANSVERSE
F56	4' - 8"	1' - 0"	(5) #5 CONT, TOP & BOTTOM, #5 @ 16" TRANSVERSE

ISOLATED FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICKNESS	REINFORCING
F3.0	3' - 0"	3' - 0"	1' - 0"	(3) #5 EACH WAY, BOTTOM
F4.0	4' - 0"	4' - 0"	1' - 0"	(4) #5 EACH WAY, BOTTOM

CONCRETE WALL SCHEDULE

MARK	WIDTH	HORIZ REINF	VERT REINF	TOP BARS	BOTTOM BARS
CW8	8"	#5 @ 18", CENTERED	#5 @ 12", CENTERED	(2) #5	(2) #5
CW12 (4" LEDGE)	12"	#5 @ 18", EA FACE	#5 @ 12", EA FACE	(2) #5	(2) #5
CW16 (8" LEDGE)	16"	#5 @ 18", EA FACE	#5 @ 12", EA FACE	(2) #5	(2) #5

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DERIK PEDERSEN 04.01.21 ARIZONA U.S.A.

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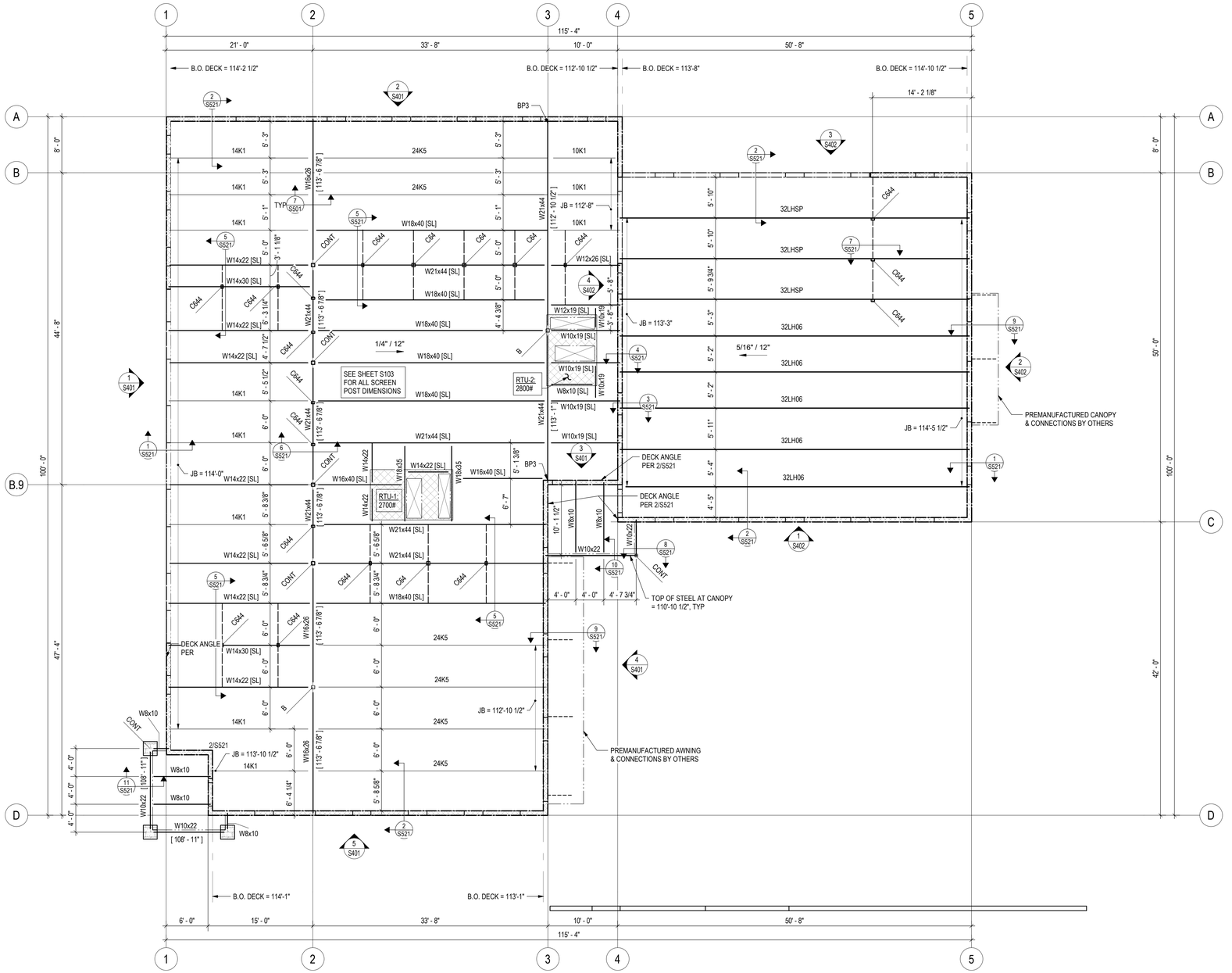
SHEET TITLE:
FOUNDATION PLAN

SHEET NUMBER:
S101



ROOF FRAMING PLAN

1/8" = 1'-0"

0 2' 4' 8' 16'

- TOP OF STEEL BEAM ELEVATION NOTED THUS: [XXX'-X]
- AT SLOPING [SL] BEAMS, BOTTOM OF DECK ELEVATION NOTED THUS: B.O. DECK =
- BEAM END ELEVATION PERPENDICULAR TO K JOIST SPAN = 2 1/2" BELOW TOP OF JOIST, TYPICAL UNLESS NOTED OTHERWISE
- TOP OF SLOPING BEAM END ELEVATION PARALLEL TO JOIST SPAN = TOP OF JOIST, TYPICAL UNLESS NOTED OTHERWISE
- JOIST AT CMU BEARING ELEVATION = 111'-9 1/2" UNLESS NOTED THUS: JB XXX'-X
- SEE ARCH DRAWINGS FOR SIZE AND LOCATION OF ALL ROOF OPENINGS

TYPICAL ROOF DECK:
1 1/2" DEEP x 20 GAGE STEEL DECK (VULCRAFT TYPE 1.5B) WITH 5/8" PUDDLE WELDS @ 12" (36/4) AT INTERMEDIATE SUPPORTS & EDGES AND #10 SDST SCREWS @ 12" AT SIDELAP CONNECTIONS. STEEL DECK SHALL BE CONTINUOUS OVER THREE OR MORE SUPPORTS; [PAINT SHALL BE UL APPROVED TO RECEIVE FIREPROOFING AS REQUIRED, SEE ARCH].

OPEN WEB STEEL ROOF JOIST NOTES:
- K SERIES JOIST END BEARING SEAT DEPTH = 2 1/2"
- LH JOIST END BEARING SEAT DEPTH= 5"

ROOFTOP MECHANICAL UNIT:
WT = XXXX LBS INDICATES TOTAL OPERATING WEIGHT OF UNIT, SEE MECHANICAL DRAWINGS

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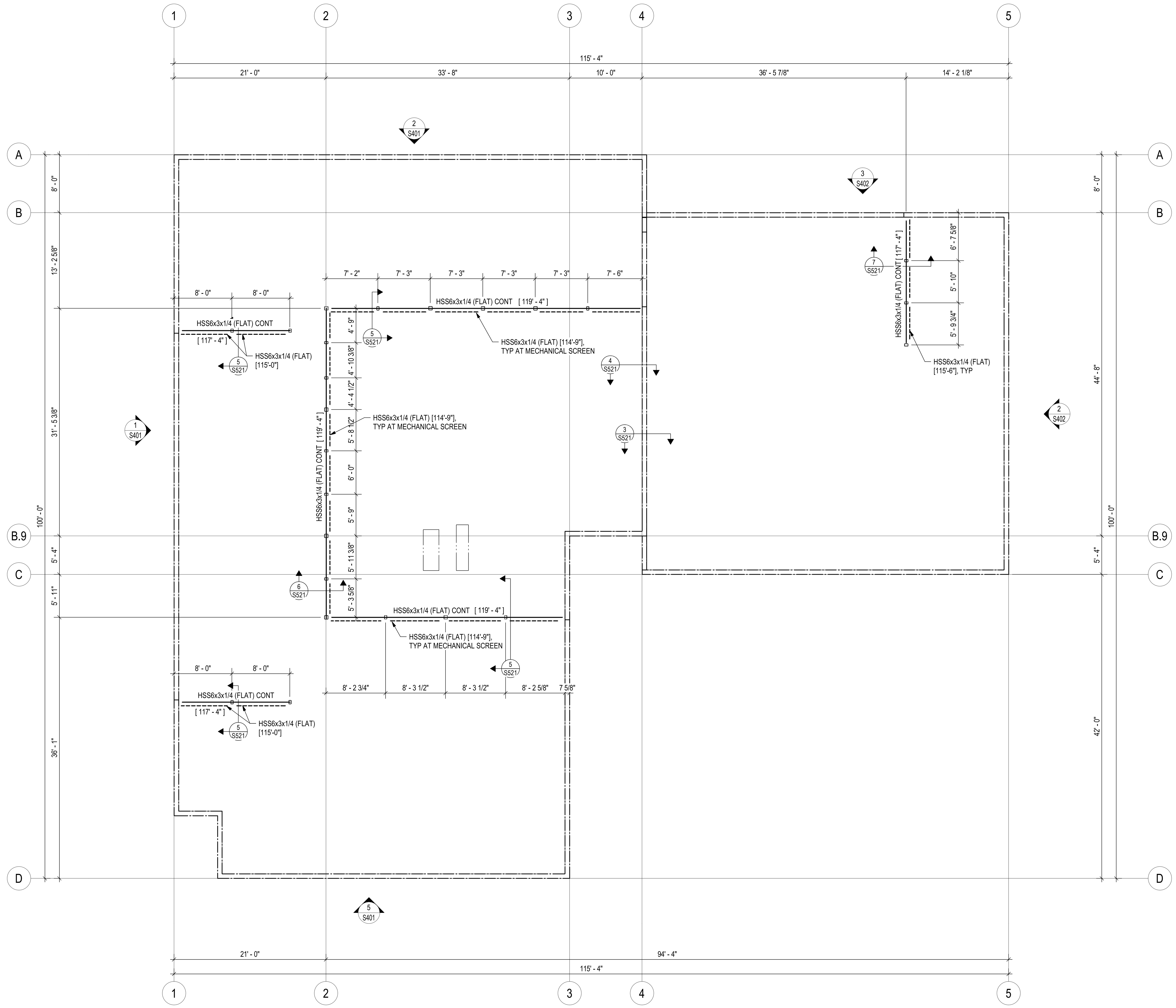
SHEET TITLE:
ROOF FRAMING PLAN

SHEET NUMBER:
S102



MECHANICAL SCREEN & PARAPET FRAMING PLAN

1/8" = 1'-0"

0 2' 4' 8' 16'

- SEE S401 & S402 SHEETS FOR OP OF MASONRY WALL, TYP

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REGISTERED PROFESSIONAL ENGINEER (CIVIL) 56858 DEREK PEDERSEN ARIZONA U.S.A. 04.01.21

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SHEET TITLE:

MECHANICAL SCREEN & PARAPET FRAMING PLAN

SHEET NUMBER:

S103

Drawing: BIM 360://20170 Desert Mountain Distribution Center/20170_Central_S20.rvt
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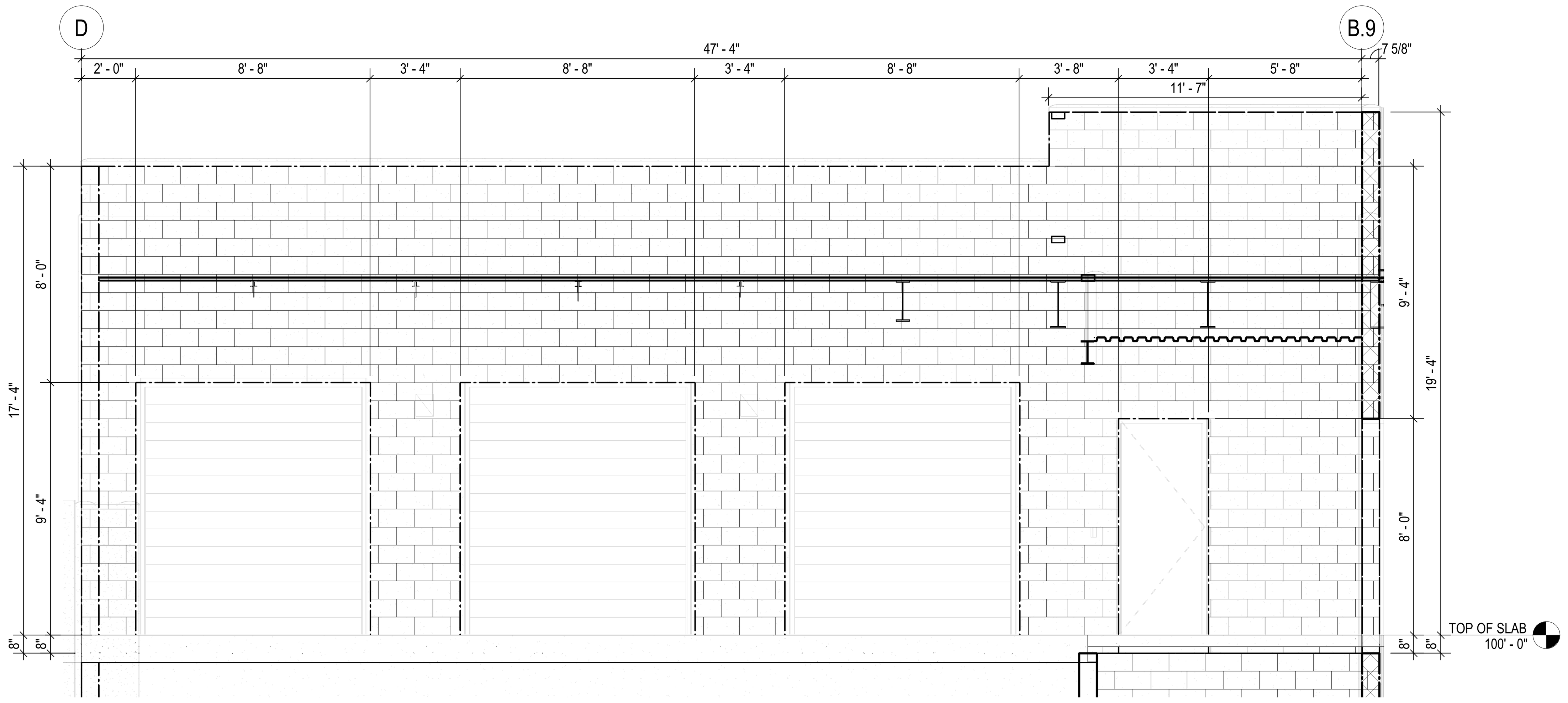
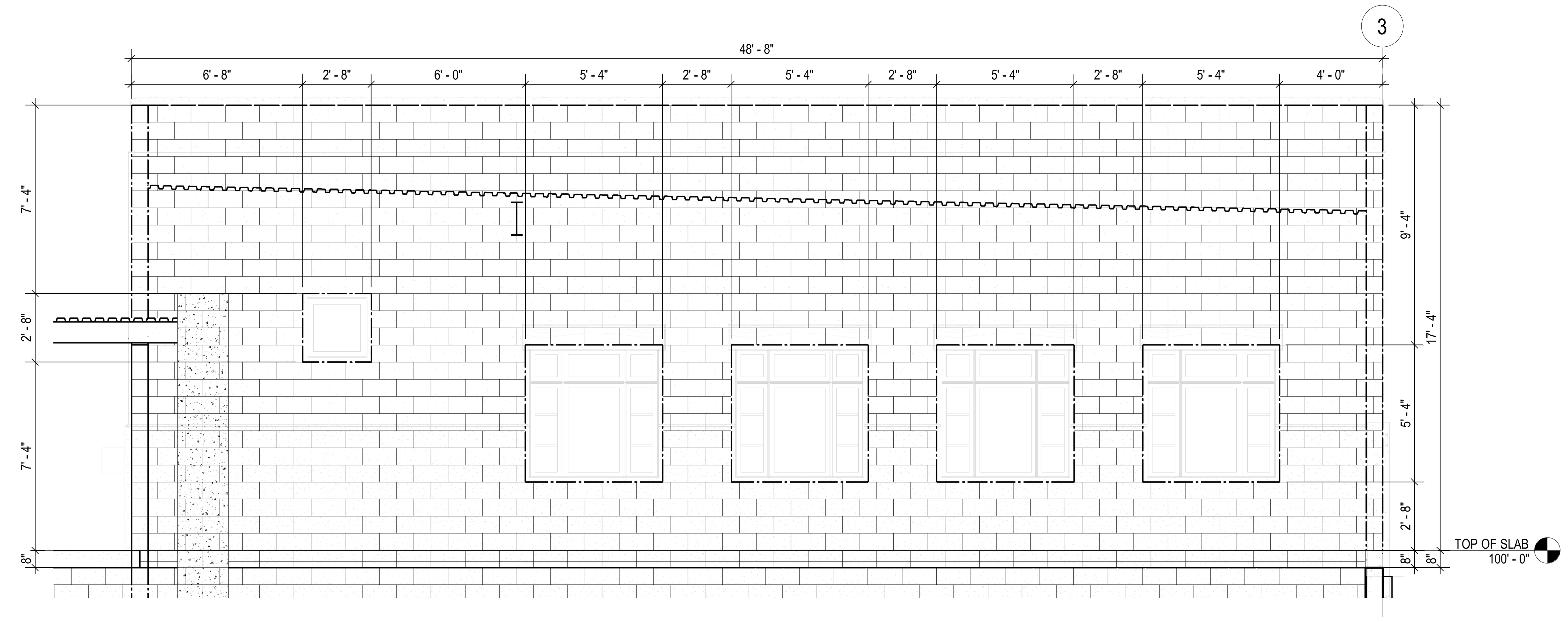
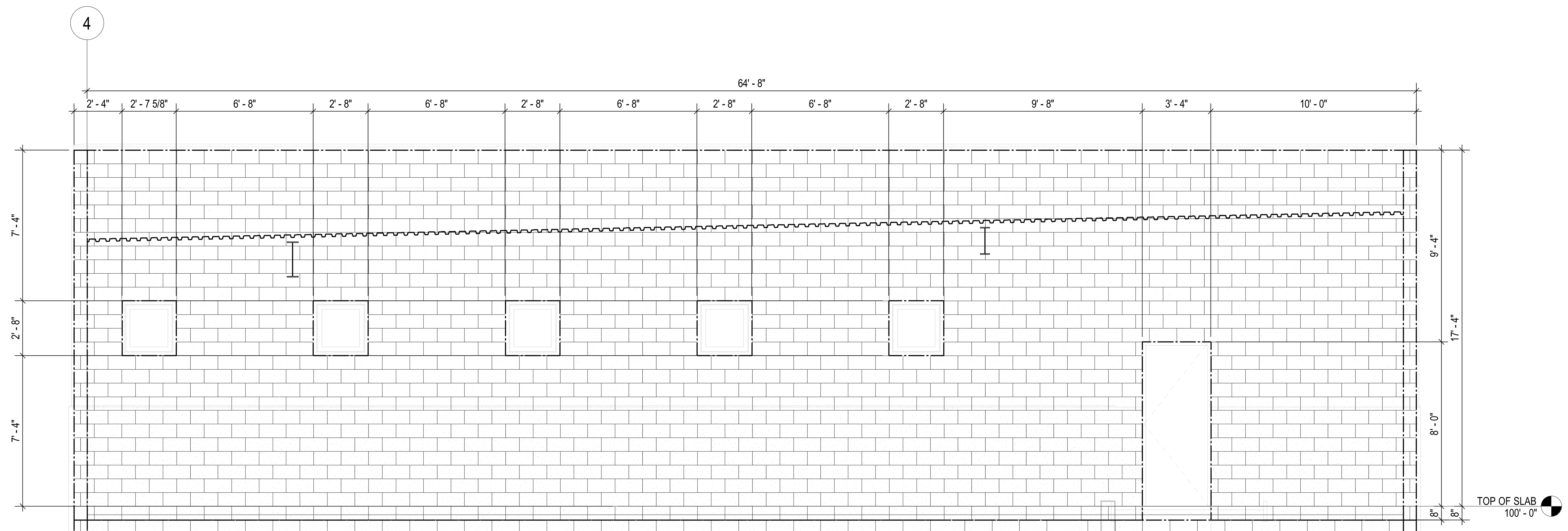


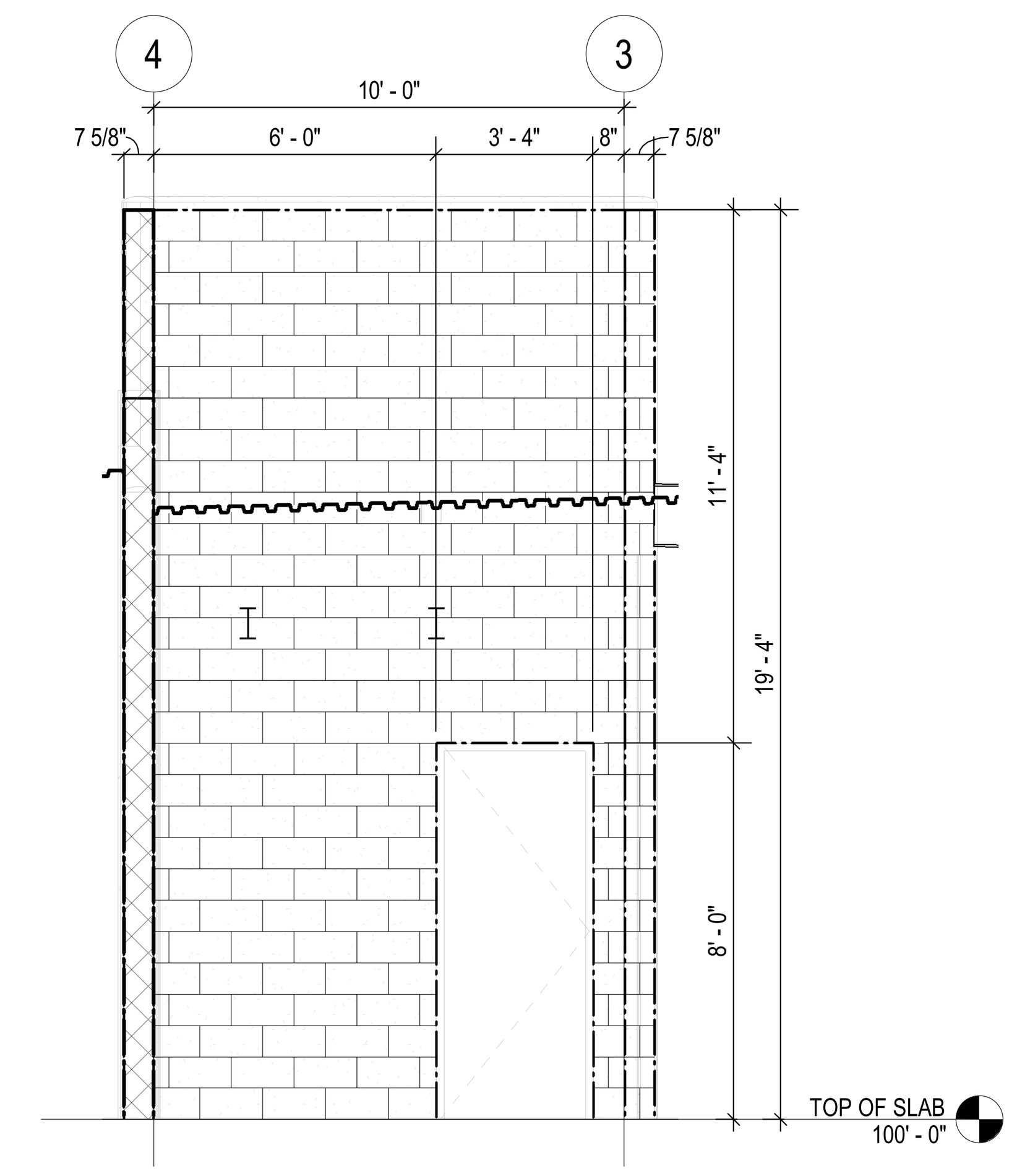
4 S401 CMU WALL ELEVATION
1/4" = 1'-0"



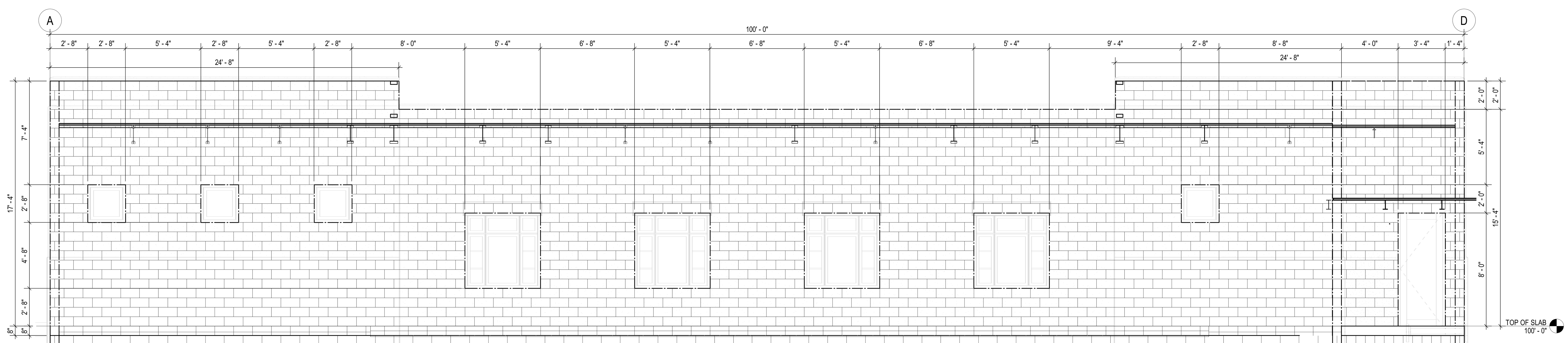
5 S401 CMU WALL ELEVATION
1/4" = 1'-0"



2 S401 CMU WALL ELEVATION
1/4" = 1'-0"



3 S401 CMU WALL ELEVATION
1/4" = 1'-0"



1 S401 CMU WALL ELEVATION
1/4" = 1'-0"

0 1' 2' 4' 8'

REFER TO 3/S503 FOR ALLOWABLE CONTROL JOINT LOCATIONS (25'-0" MAX SPACING)

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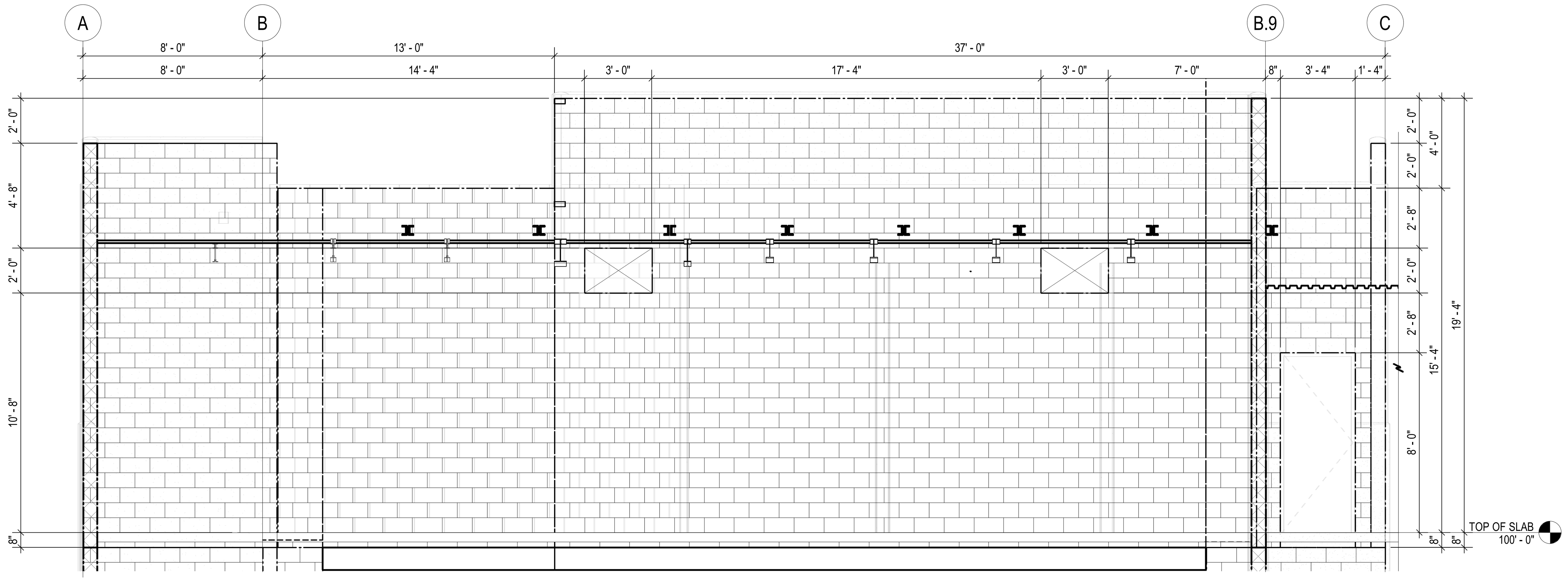
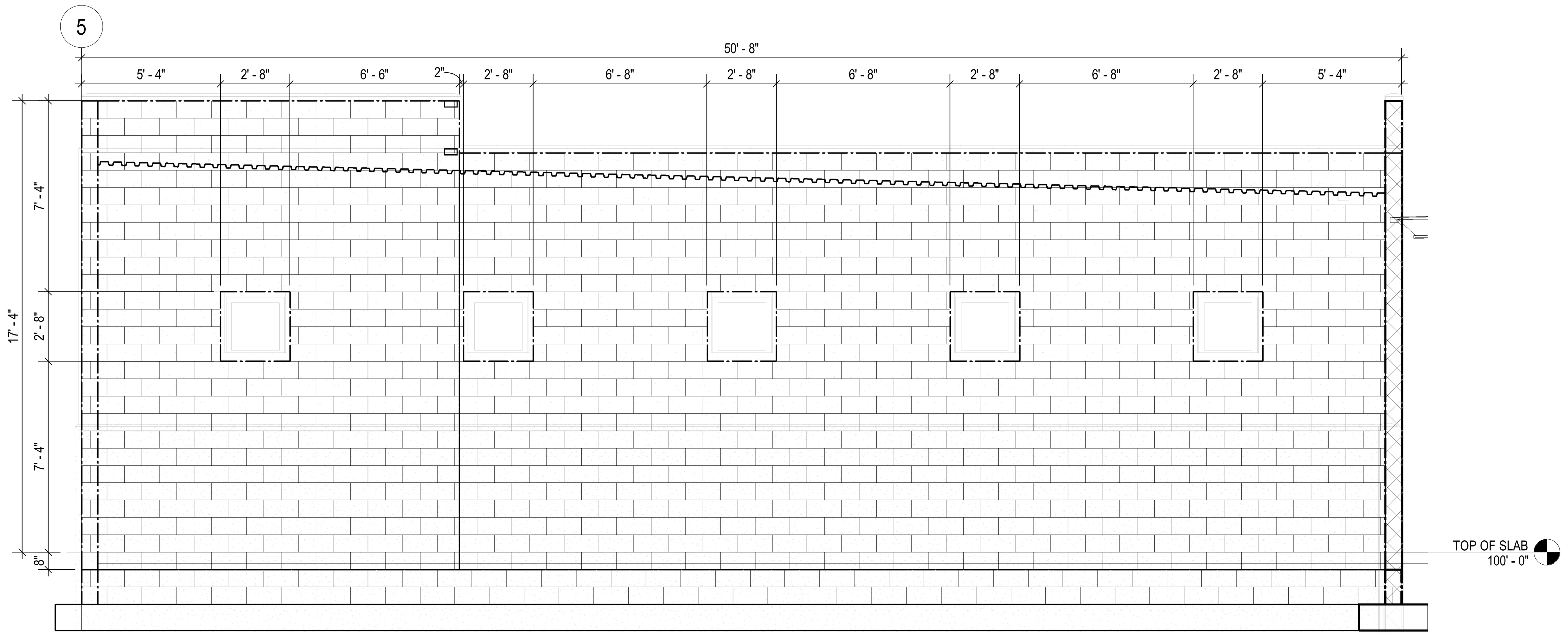
CMU WALL ELEVATION

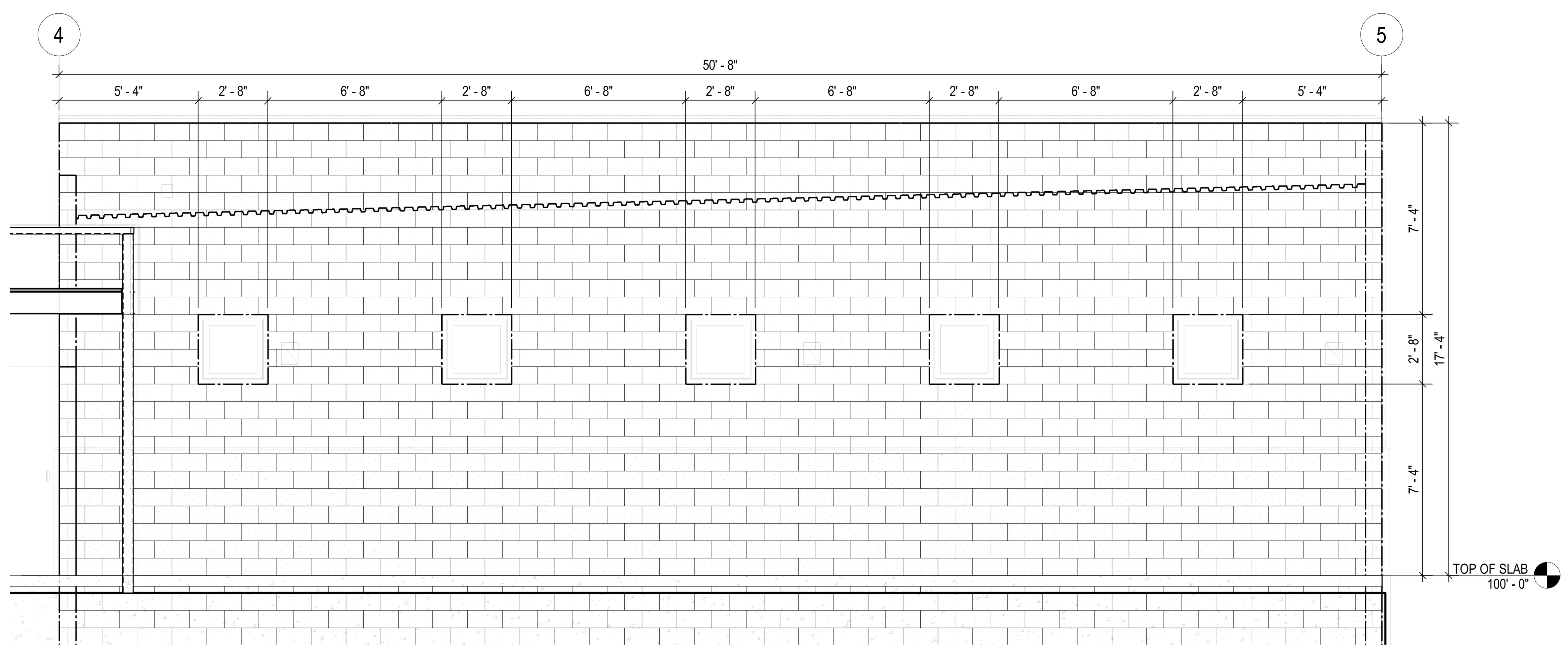
SHEET NUMBER:
S401



4 S402 CMU WALL ELEVATION
1/4" = 1'-0"



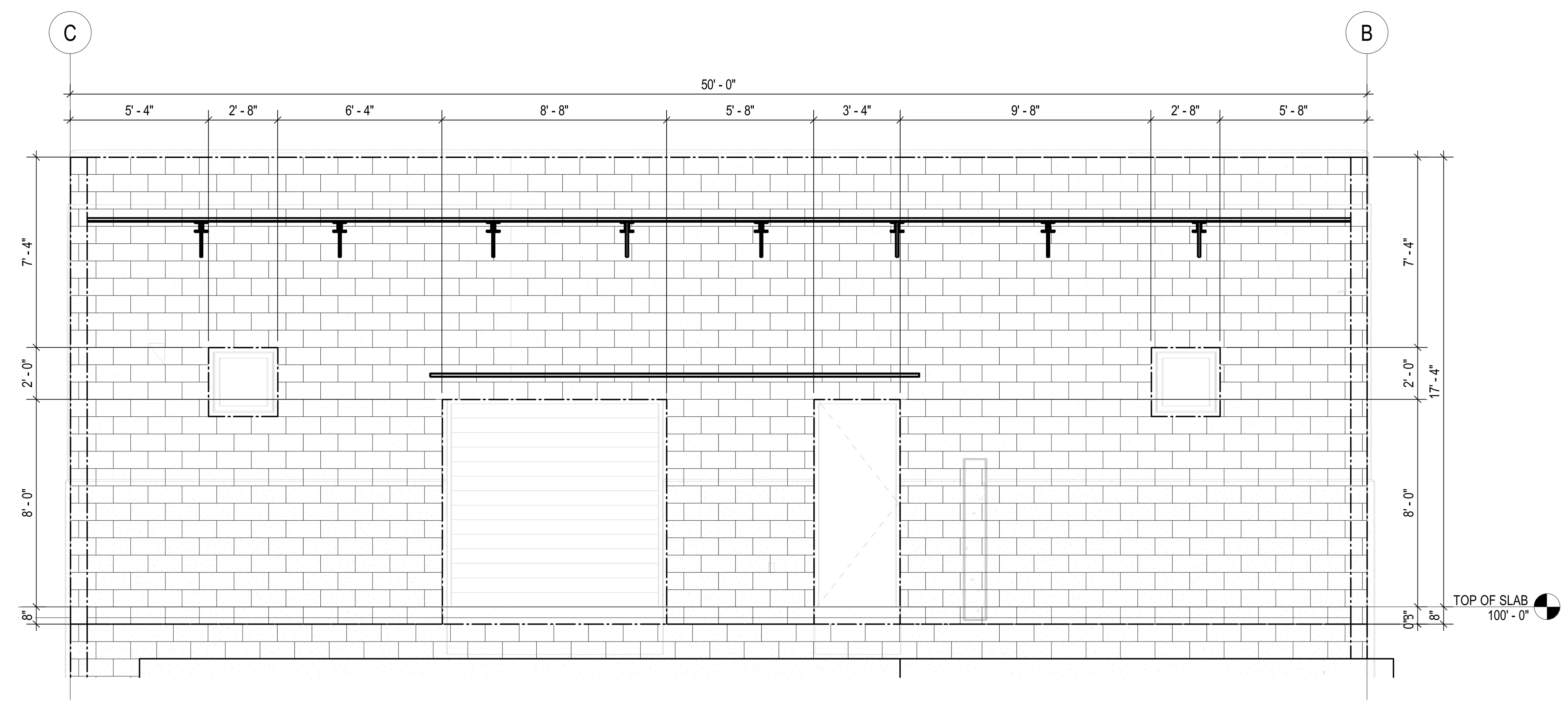
3 S402 CMU WALL ELEVATION
1/4" = 1'-0"



1 S402 CMU WALL ELEVATION
1/4" = 1'-0"

0 1' 2' 4' 8'

REFER TO 3/S503 FOR ALLOWABLE CONTROL JOINT LOCATIONS (25'-0" MAX SPACING)



2 S402 CMU WALL ELEVATION
1/4" = 1'-0"

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CMU WALL ELEVATION

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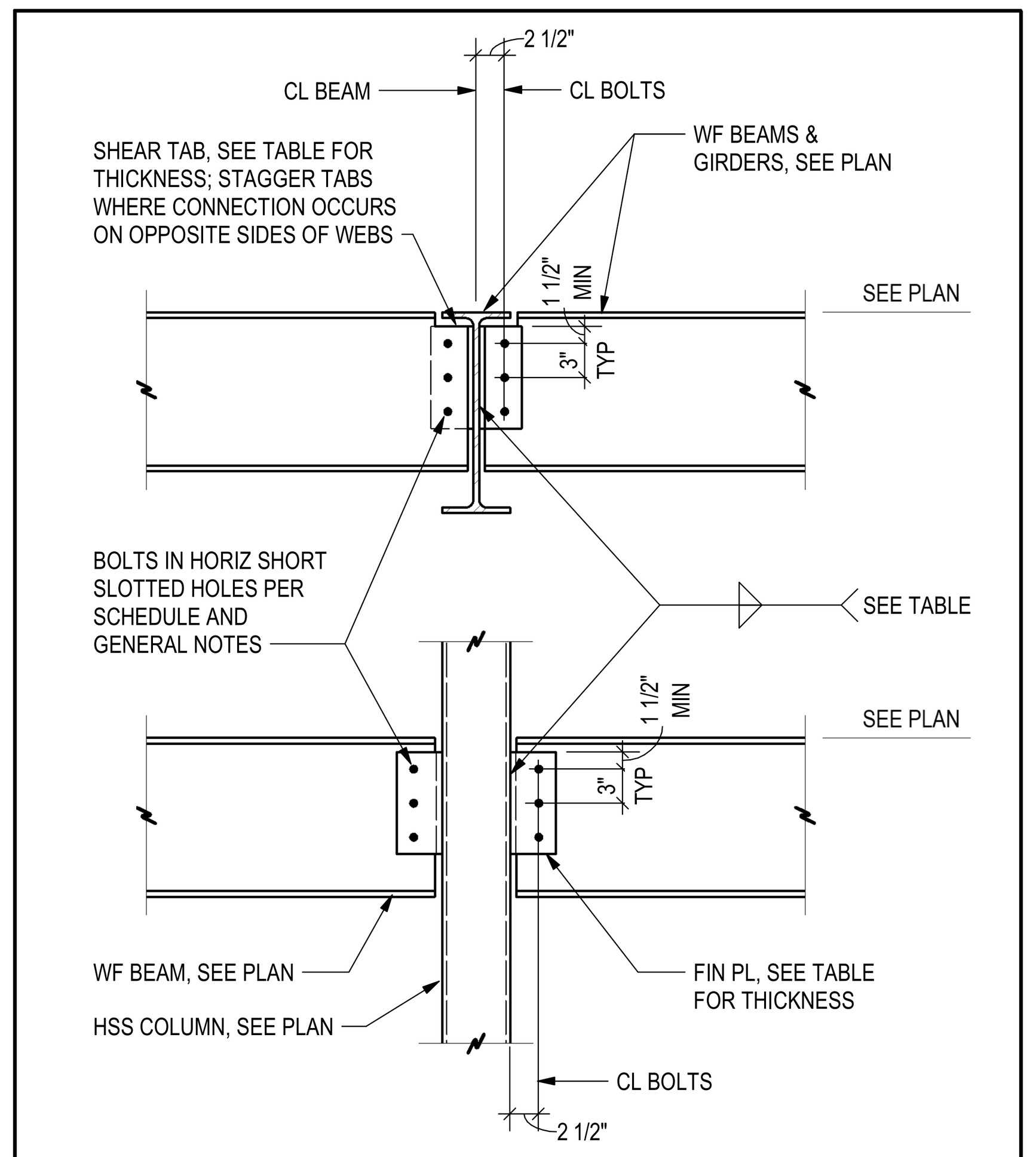
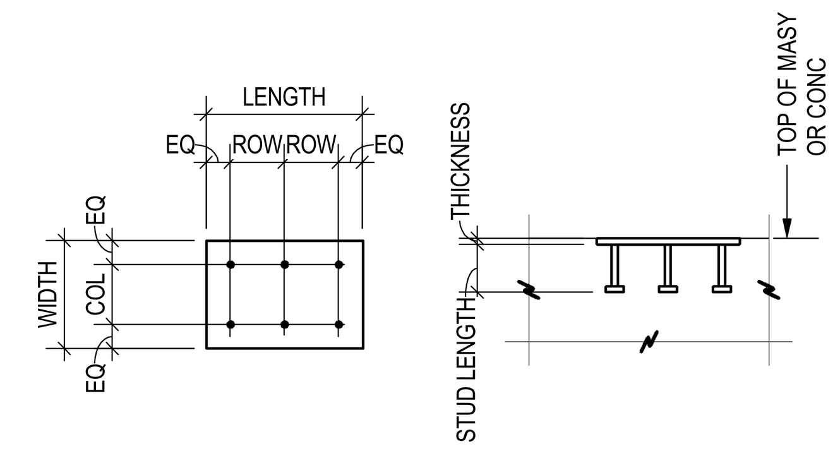
S402



SHEAR TAB/BEAM TO HSS COLUMN CONNECTION SCHEDULE				
BEAM SIZE	# OF BOLTS	FIN PL THICKNESS, t	WELD	MINIMUM HSS WALL THICKNESS
W8, W10	2	1/4"	3/16"	3/16"
W12, W14	3	1/4"	3/16"	3/16"
W16	4	1/4"	3/16"	3/16"
W18	5	1/4"	3/16"	3/16"
W21	6	3/8"	1/4"	1/4"
W24	7	3/8"	1/4"	1/4"
W27	8	3/8"	5/16"	5/16"
W30	9	7/16"	3/8"	3/8"

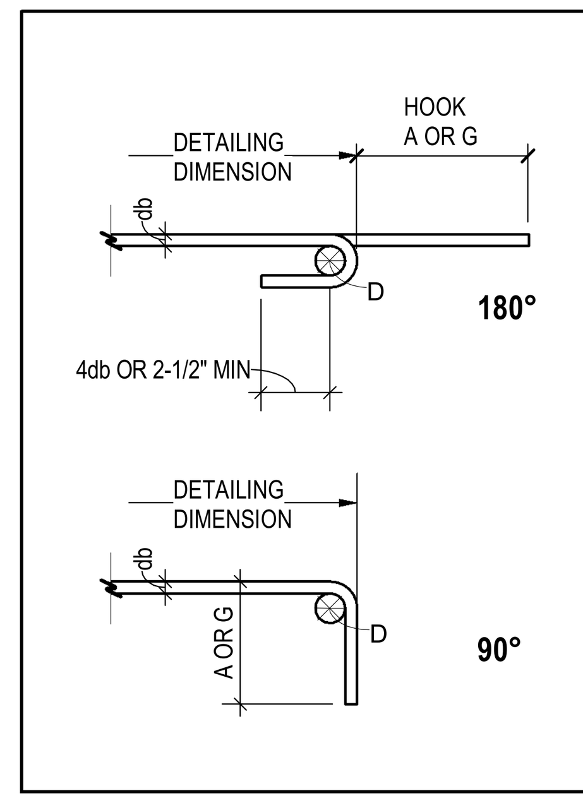
1. FLEXIBLE SUPPORT USING A325-N BOLTS IN SHORT SLOTTED HOLES
2. BOLTS ARE TO BE 3/4"Ø EXCEPT WHERE NOTED ON PLAN THAT 1"Ø BOLTS ARE REQUIRED
3. b/t < 37.3 FOR 46ksi TUBE STEEL
4. E70XX WELD ELECTRODES
5. Fy = 36 ksi FOR FIN PLATES
6. BLOCK SHEAR AND BENDING CAPACITY OF COPED MEMBERS MAY GOVERN CAPACITY AND IS CHECKED SEPARATELY
7. MINIMUM WEB THICKNESS, tw, FOR WIDE FLANGE BEAMS IS 3/16"
8. FIN PL THICKNESS IN SCHEDULE SHALL NOT BE INCREASED FOR CONVENIENCE OF FABRICATOR

5 / S501 WF BEAM SCHEDULE
NO SCALE



BEARING PLATE SCHEDULE			
MARK	PLATE SIZE	HAS	GAGE
BP1	5/8x6x0'-8	(2) 1/2"Øx6"	6"
BP2	5/8x6x0'-10	(2) 1/2"Øx6"	6"
BP3	1x6x0'-10	(2) 1/2"Øx6"	6"

9 / S501 BEARING PLATE SCHEDULE
NO SCALE



STANDARD HOOKS				
BAR SIZE	D	180° (A OR G)	180° (J)	90° (A OR G)
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0
#7	5-1/4"	10"	7"	1'-2
#8	6"	11"	8"	1'-4
#9	9 1/2"	1'-3	11 3/4"	1'-7
#10	10 3/4"	1'-5	1'-1 1/4	1'-10
#11	12"	1'-7	1'-2 3/4	2'-0
#14	18 1/4"	2'-3	1'-9 3/4	2'-7
#18	24"	3'-0	2'-4 1/2	3'-5

ALL GRADES OF STEEL
D = FINISHED INSIDE BEND DIAMETER
db = NOMINAL BAR DIAMETER
MIN D = 6 db FOR #3 THROUGH #8
MIN D = 8 db FOR #9, #10, AND #11
MIN D = 10 db FOR #14 AND #18

10 / S501 REBAR HOOK SCHEDULE
NO SCALE

COLUMN SCHEDULE

TYPICAL COLUMN MARKS:

CXX OR CXXX

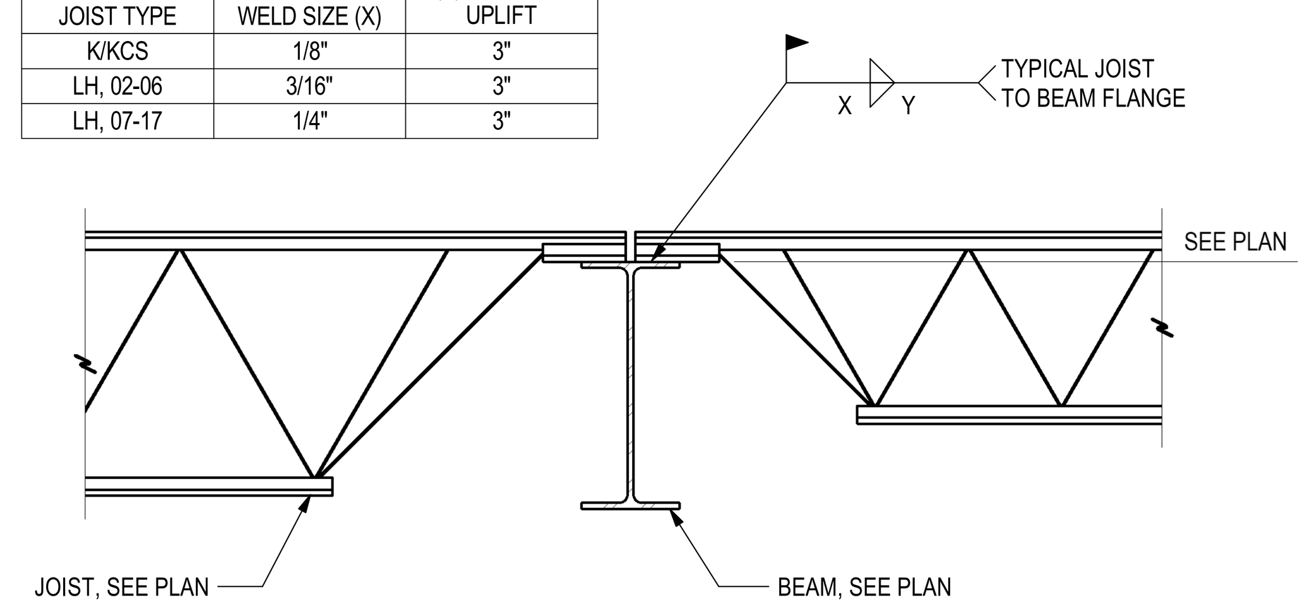
HSS COLUMN WALL THICKNESS IN 16ths OF AN INCH
(EXAMPLE: '5' INDICATES 5/16" WALL THICKNESS, '10' INDICATES 5/8", ETC...)

SQUARE OR RECTANGULAR HSS COLUMN SIZE
(EXAMPLE: '6' INDICATES HSS6x6, '75' INDICATES HSS7x5)

STEEL COLUMN SCHEDULE	
MARK	STEEL COLUMN SCHEDULE
C54	HSS5x5x1/4
C64	HSS6x6x1/4
C644	HSS6x4x1/4

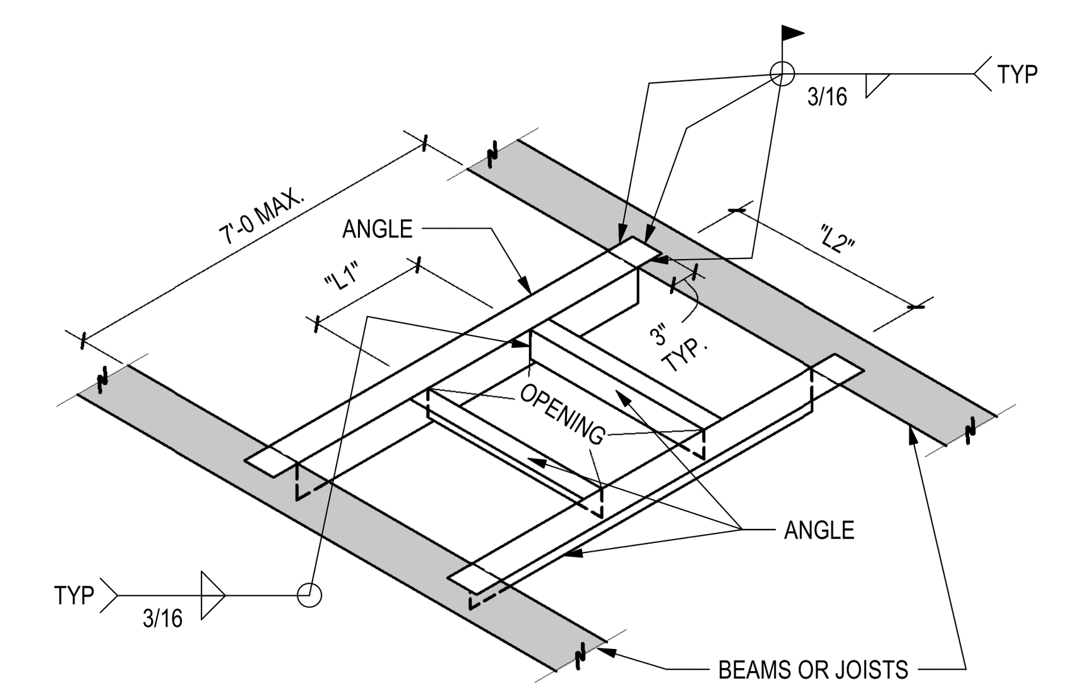
6 / S501 HSS COLUMN SCHEDULE
NO SCALE

JOIST TYPE	WELD SIZE (X)	WELD LENGTH (Y) WITH NET UPLIFT
K/KCS	1/8"	3"
LH, 02-06	3/16"	3"
LH, 07-17	1/4"	3"



TYPICAL WF SUPPORT OF JOIST

7 / S501 JOIST TO WF BEAM SCHEDULE
NO SCALE



'L1' OR 'L2 (USE LARGER VALUE)	ANGLE SIZES	REMARKS
UP TO 1'-0	NONE REQUIRED	
UP TO 3'-0	L3-1/2x3-1/2x1/4	
UP TO 5'-0	L5x3x1/4 (LLV)	
UP TO 7'-0	L6x4x5/16 (LLV)	

- USE ABOVE FRAMING AT ALL FLOOR & ROOF OPENINGS WHERE EITHER "L1" OR "L2" EXCEEDS 1'-0 , UNLESS NOTED OTHERWISE
- VERIFY WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS

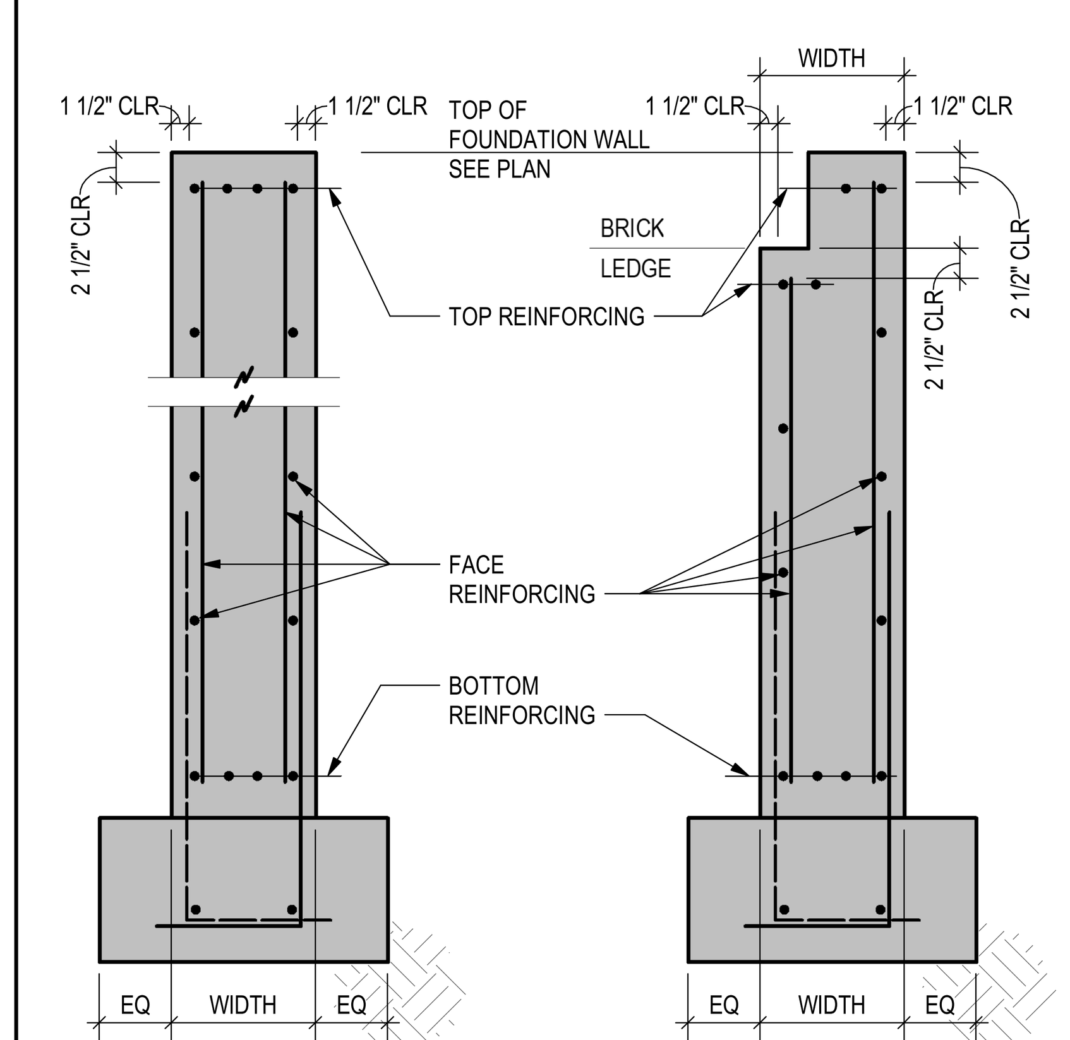
8 / S501 OPENING FRAMING SCHEDULE
NO SCALE

TYPICAL CONCRETE REINFORCING LAP & EMBEDMENT LENGTHS (UNO)							
BAR SIZE	TYPE	Fc = 3000 PSI (TOP)	Fc = 3000 PSI (OTHER)	Fc = 4000 PSI (TOP)	Fc = 4000 PSI (OTHER)	Fc = 5000 PSI (TOP)	Fc = 5000 PSI (OTHER)
#4	EMBED	29	22	25	19	22	17
	LAP	37	29	32	25	29	22
#5	EMBED	36	28	31	24	28	22
	LAP	47	36	40	31	36	28
#6	EMBED	43	33	37	29	33	26
	LAP	56	43	48	37	43	33
#7	EMBED	63	48	54	42	49	37
	LAP	81	63	70	54	63	49
#8	EMBED	72	55	62	48	55	43
	LAP	93	72	80	62	72	55
#9	EMBED	81	62	70	54	63	48
	LAP	105	81	91	70	81	63
#10	EMBED	91	70	79	61	70	54
	LAP	118	91	102	79	91	70
#11	EMBED	101	78	87	67	78	60
	LAP	131	101	113	87	101	78

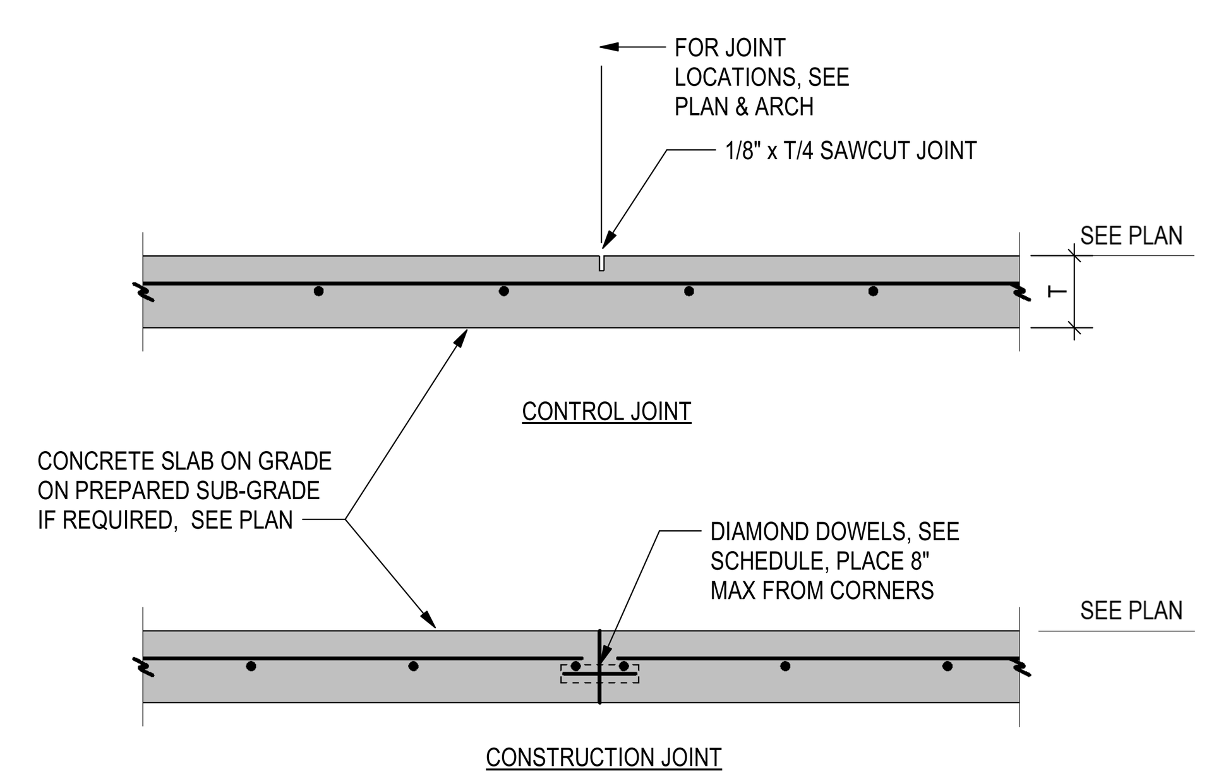
NOTES:
1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW BAR
2. TABULATED VALUES ARE BASED ON GRADE 60 NON-EPOXY-COATED REINFORCING BARS AND NORMAL WEIGHT CONCRETE
3. VALUES ARE IN INCHES

1 / S501 REBAR LAP SCHEDULE
NO SCALE

CONCRETE WALL SCHEDULE					
MARK	WIDTH	HORIZ REINF	VERT REINF	TOP BARS	BOTTOM BARS
CW8	8"	#5 @ 18", CENTERED	#5 @ 12", CENTERED	(2) #5	(2) #5
CW12 (4" LEDGE)	12"	#5 @ 18", EA FACE	#5 @ 12", EA FACE	(2) #5	(2) #5
CW16 (8" LEDGE)	16"	#5 @ 18", EA FACE	#5 @ 12", EA FACE	(2) #5	(2) #5



2 / S501 CONCRETE WALL SCHEDULE
NO SCALE

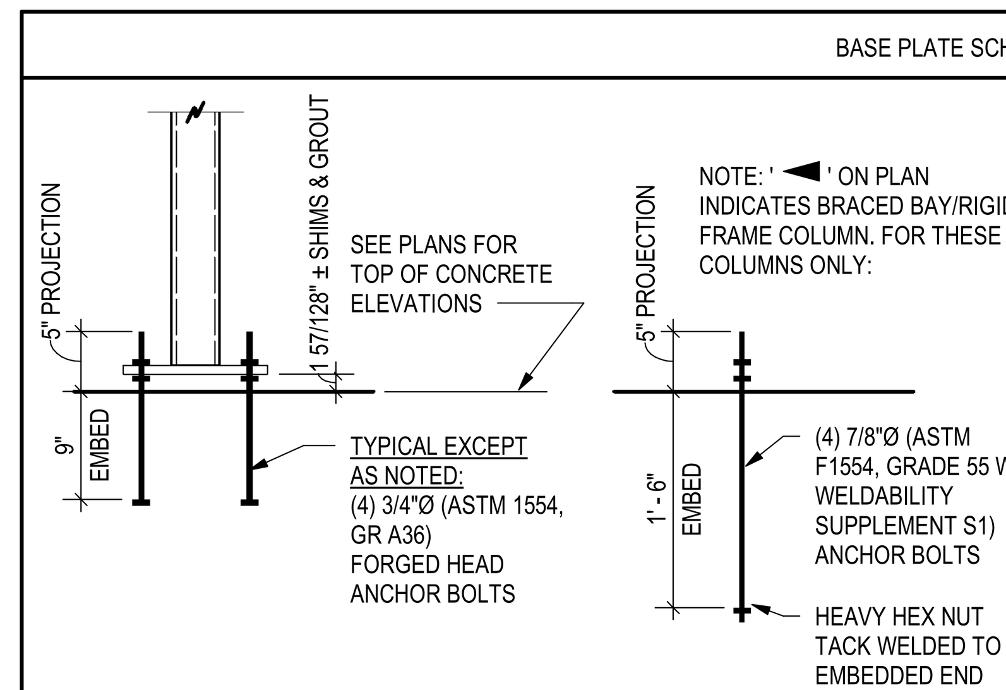


DOWEL SIZE & SPACING AT CONSTRUCTION JOINTS		
SLAB DEPTH (INCHES)	DOWEL DIMENSIONS (INCHES)	DOWEL SPACING (INCHES)
5 TO 6	1/4 x 4-1/2 x 4-1/2	18
7 TO 8	3/8 x 4-1/2 x 4-1/2	18
9 TO 11	3/4 x 4-1/2 x 4-1/2	20

TYPICAL REINFORCED SLAB ON GRADE JOINTS

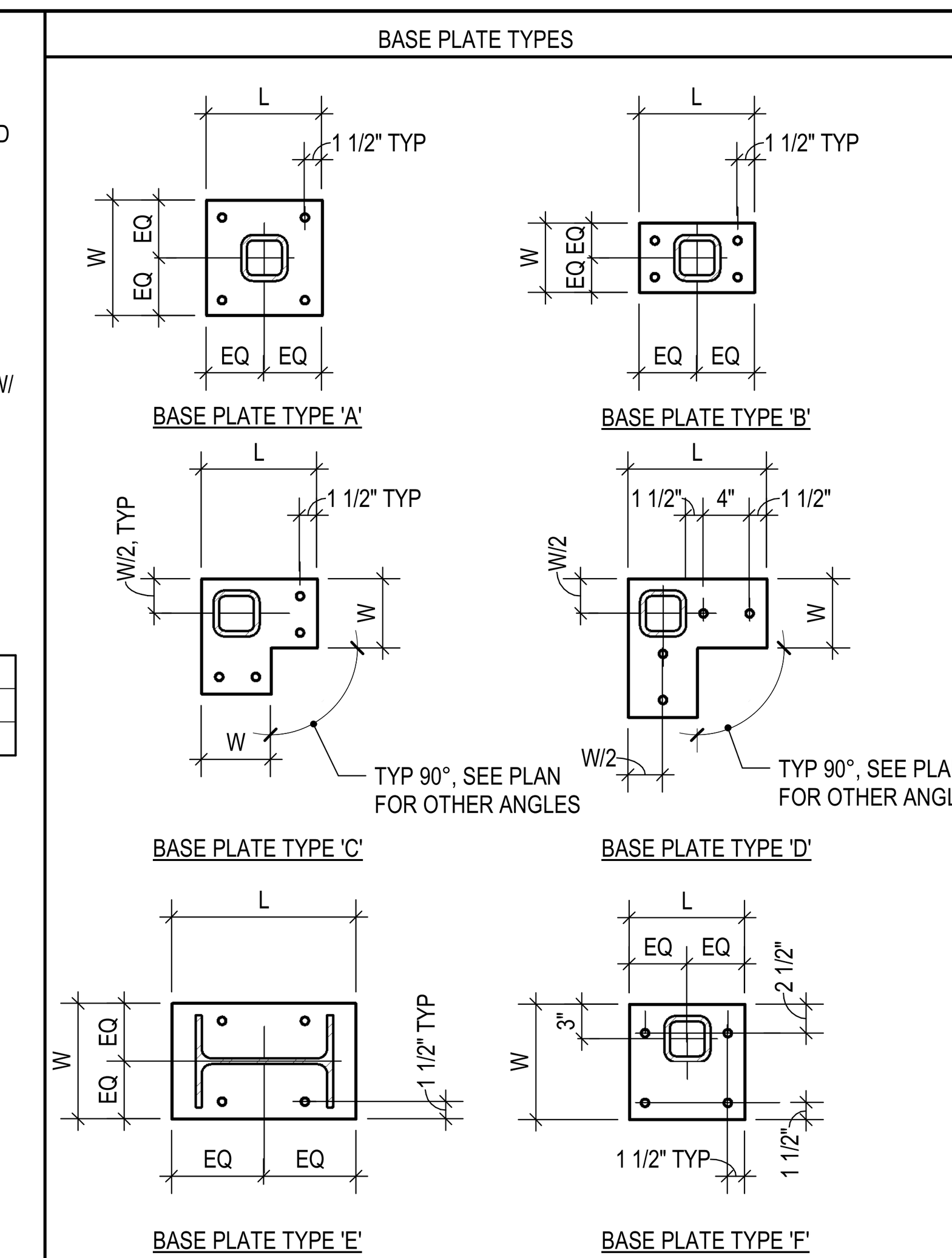
3 / S501 CONCRETE JOINT SCHEDULE
NO SCALE

BASE PLATE SCHEDULE



BASE PLATE SCHEDULE					
MARK	TYPE	LENGTH	WIDTH	THICKNESS	COMMENTS
BPA1	A	1' - 0"	1' - 0"	3/4"	

BASE PLATE TYPES



4 / S501 BASE PLATE SCHEDULE
NO SCALE

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JVA #20170

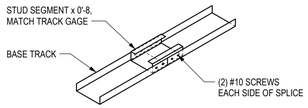
DESERT MOUNTAIN CLUB STORAGE AND LAUNDRY FACILITY
10550 Desert Hills Dr, Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

DRAWN BY: HJN
CHECKED BY: MES
PROJECT NO: 2019001.23
ISSUE DATE: 3/26/21
REVISIONS:

SHEET TITLE: SCHEDULES

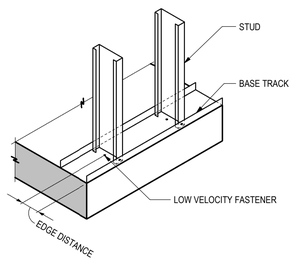
SHEET NUMBER: S501

Drawing BIM 360://20170 Desert Mountain Distribution Center/20170_Central_S20.rvt
Last Saved: 4/1/2021 10:11:14 AM



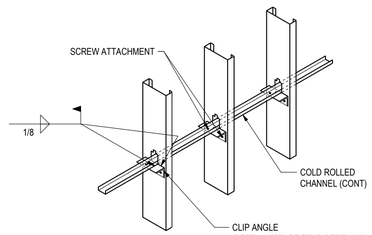
TYPICAL TRACK SPLICE CONNECTION

9 S502 DETAIL
3/4" = 1'-0"



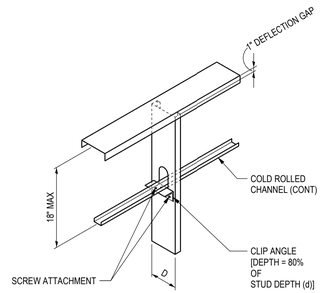
TYPICAL BOTTOM TRACK ANCHORAGE W/
LOW VELOCITY FASTENERS

10 S502 DETAIL
3/4" = 1'-0"



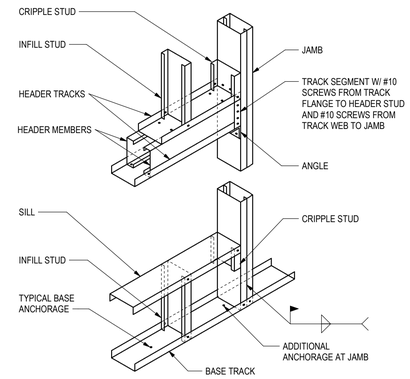
TYPICAL COLD ROLLED BRIDGING CHANNEL WITH CLIP ANGLE

11 S502 DETAIL
3/4" = 1'-0"



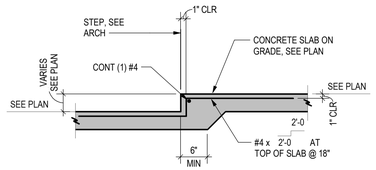
TYPICAL DEFLECTION TRACK ASSEMBLY:
SINGLE TRACK WITH COLD ROLLED CHANNEL

12 S502 DETAIL
3/4" = 1'-0"



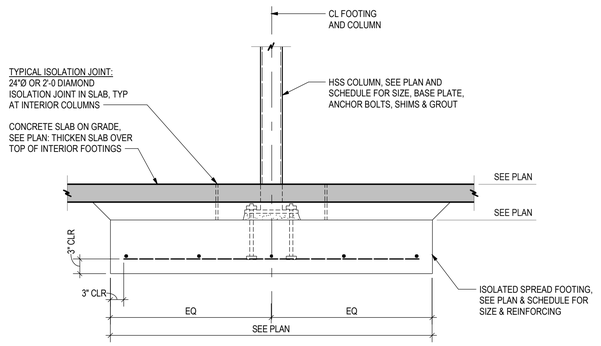
TYPICAL BOXED HEADER DETAIL

13 S502 DETAIL
3/4" = 1'-0"



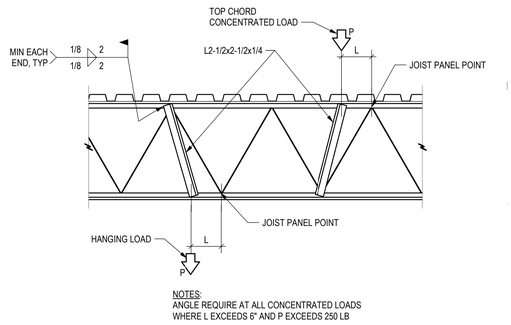
TYPICAL DEPRESSION OR SHALLOW STEP IN SLAB

5 S502 TYPICAL SLAB STEP DETAIL
3/4" = 1'-0"



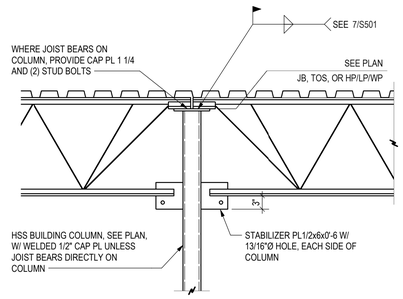
TYPICAL ISOLATED SPREAD FOOTING AT COLUMN

6 S502 TYPICAL ISOLATED FOOTING DETAIL
3/4" = 1'-0"



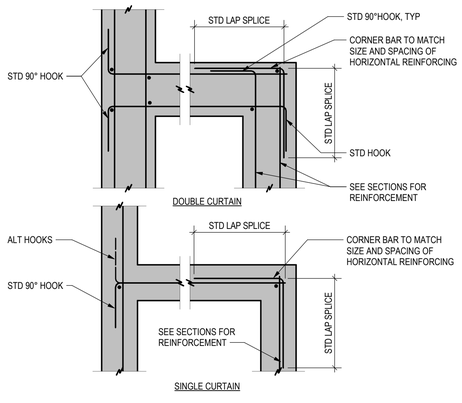
NOTES:
ANGLE REQUIRE AT ALL CONCENTRATED LOADS
WHERE L EXCEEDS 6" AND P EXCEEDS 250 LB

7 S502 TYPICAL JOIST REINFORCING DETAIL
3/4" = 1'-0"



TYPICAL JOIST BEARING AT HSS COLUMN

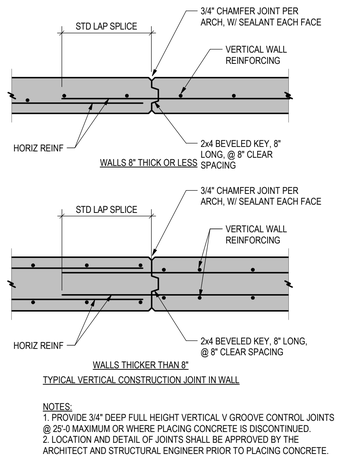
8 S502 JOIST BEARING AT HSS COLUMN DETAIL
3/4" = 1'-0"



TYPICAL WALL INTERSECTIONS

1 S502 TYPICAL WALL INTERSECTION DETAIL
3/4" = 1'-0"

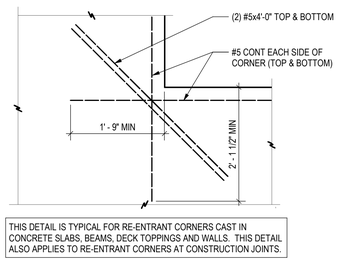
0 6" 1' 2' 3'



TYPICAL VERTICAL CONSTRUCTION JOINT IN WALL

NOTES:
1. PROVIDE 3/4" DEEP FULL HEIGHT VERTICAL V GROOVE CONTROL JOINTS @ 25'-0 MAXIMUM OR WHERE PLACING CONCRETE IS DISCONTINUED.
2. LOCATION AND DETAIL OF JOINTS SHALL BE APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.

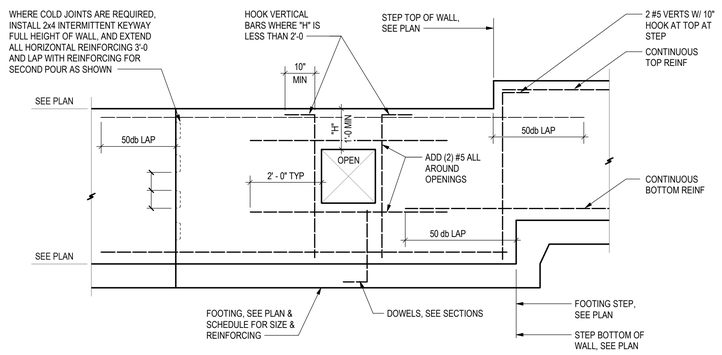
2 S502 TYPICAL WALL JOINT DETAIL
3/4" = 1'-0"



THIS DETAIL IS TYPICAL FOR RE-ENTRANT CORNERS CAST IN CONCRETE SLABS, BEAMS, DECK TOPPINGS AND WALLS. THIS DETAIL ALSO APPLIES TO RE-ENTRANT CORNERS AT CONSTRUCTION JOINTS.

PLAN VIEW

3 S502 RE-ENTRANT CORNER DETAIL
3/4" = 1'-0"



TYPICAL REINFORCING AT STEPS AND OPENINGS

4 S502 FOUNATION STEP AND OPENINGS DETAIL
1/2" = 1'-0"

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PEDERSEN
04.01.21
RENEWAL
ARIZONA, U.S.A.

DRAWN BY: HJN
CHECKED BY: MES
PROJECT NO: 2019001.23
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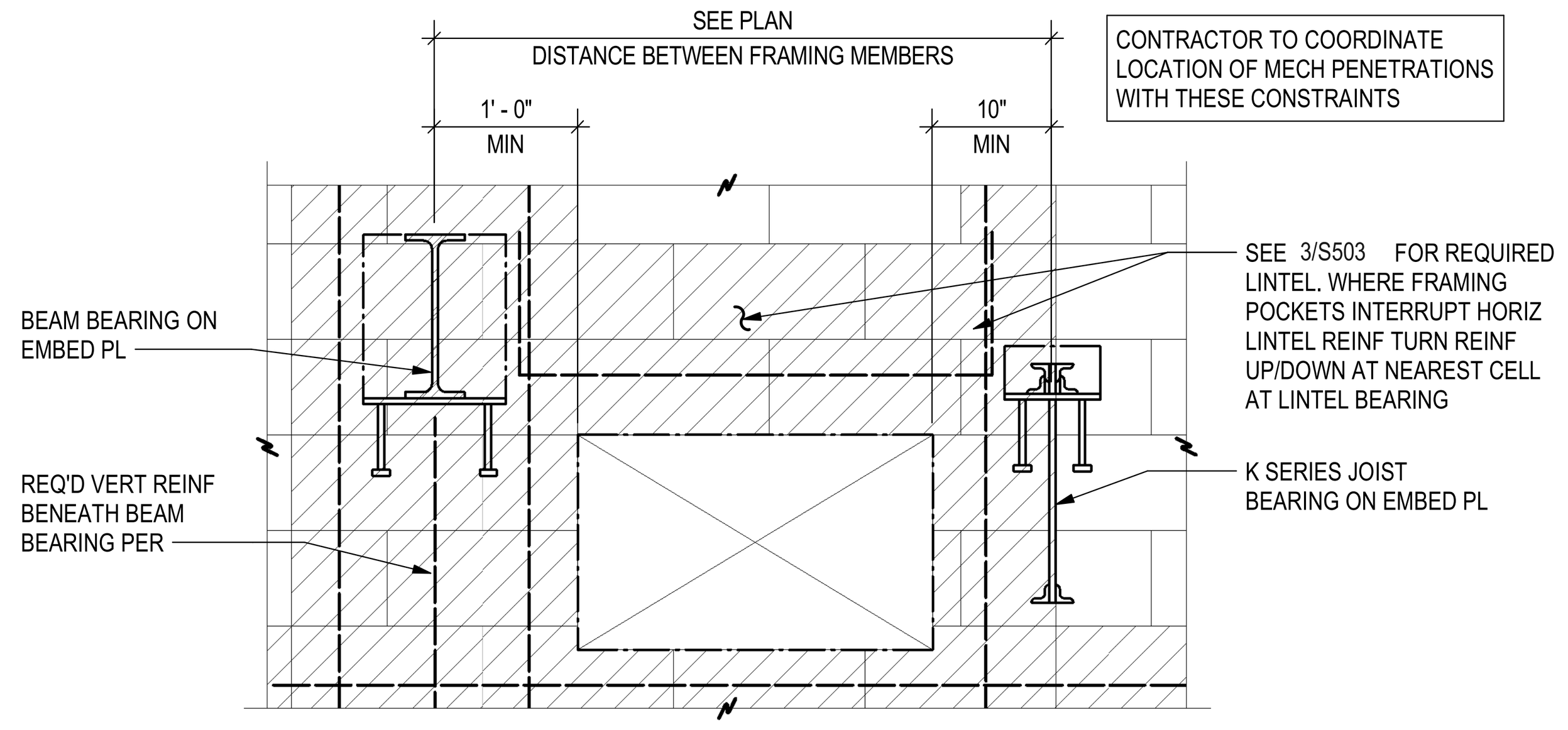
REVISIONS:

SHEET TITLE: TYPICAL DETAILS

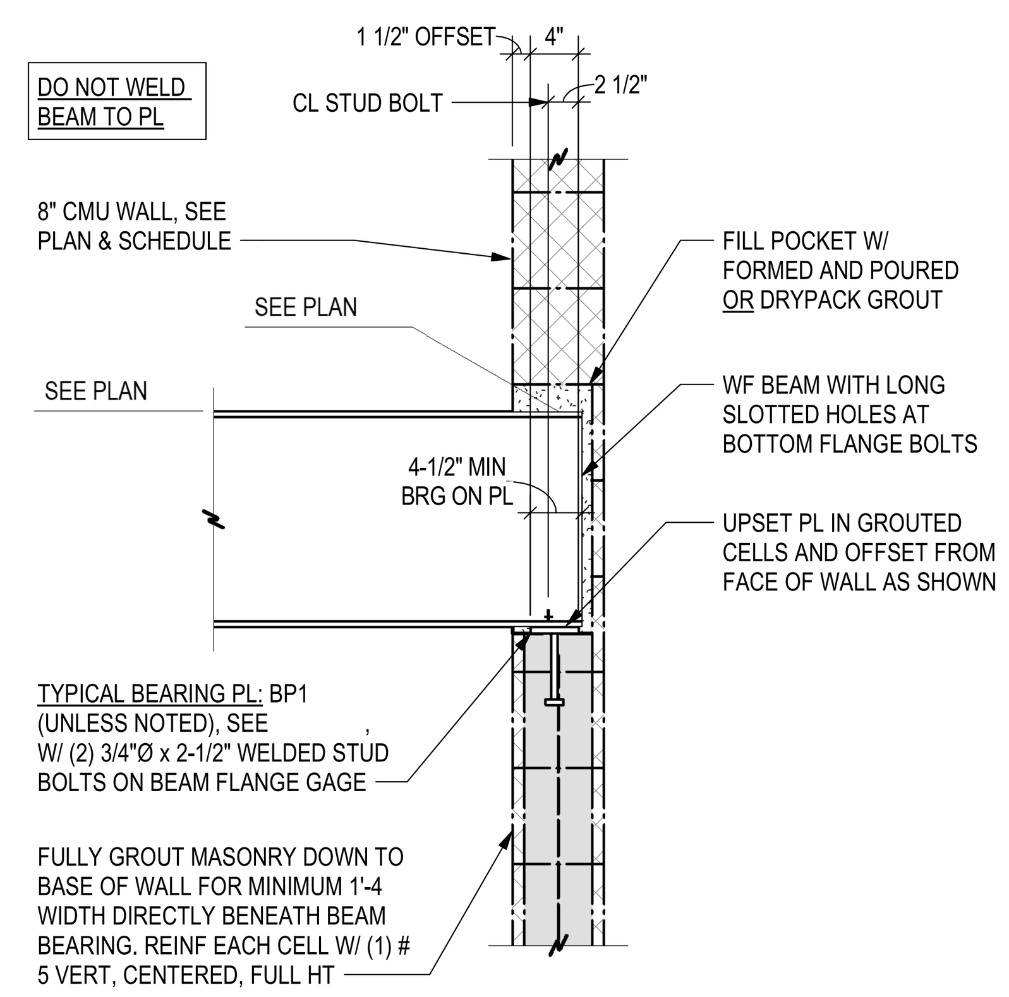
SHEET NUMBER: S502



TYPICAL SPACING CONSTRAINTS OF MECHANICAL PENETRATIONS TO ROOF/FLOOR STRUCTURE BEARING ON STRUCTURAL CMU (APPLICABLE FOR PENETRATIONS 5'-0 WIDE OR LESS)

8 / S503 TYPICAL MECHANICAL PENETRATION DETAIL

3/4" = 1'-0"

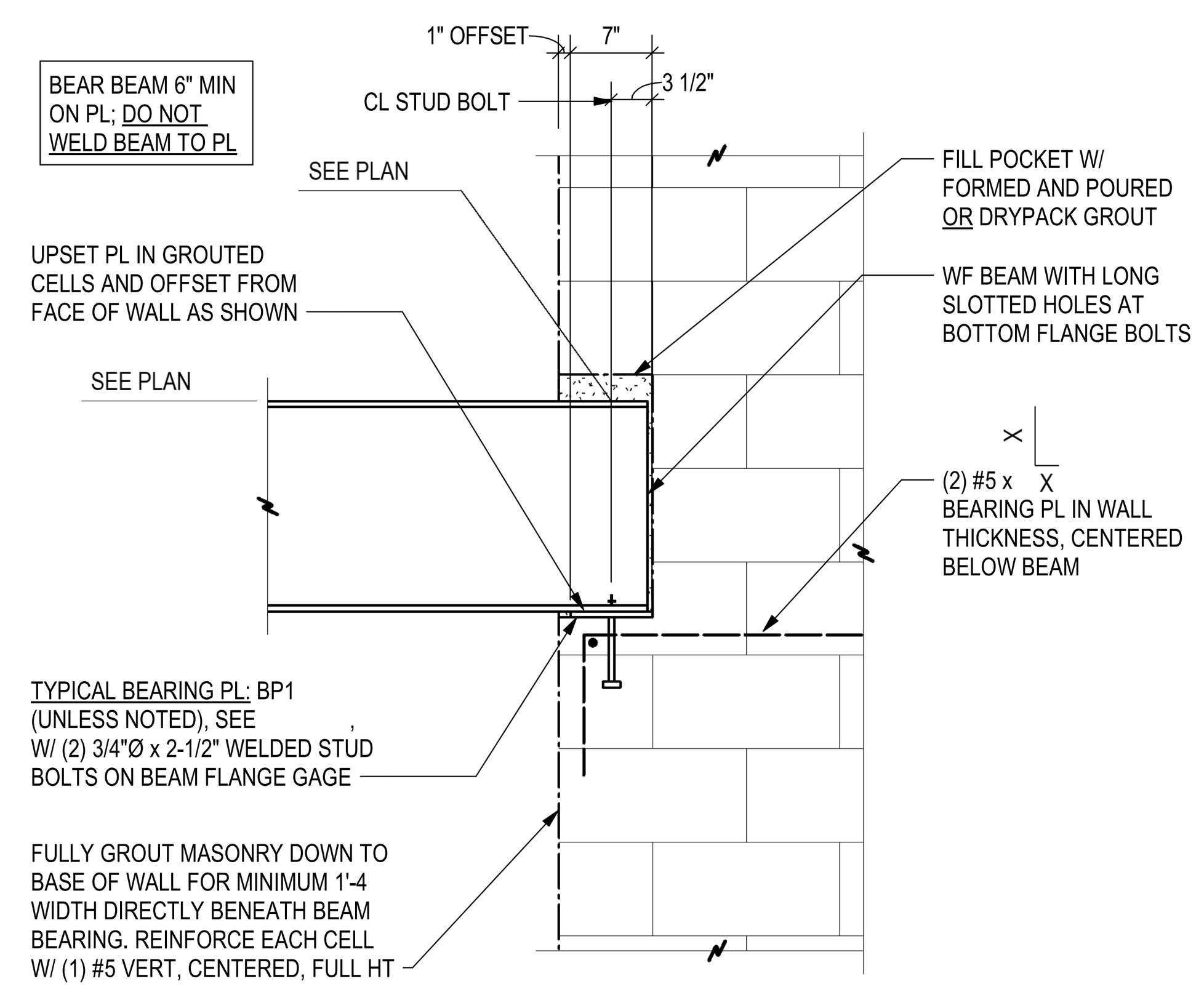


TYPICAL BEAM BEARING ON PERPENDICULAR CMU WALL

4 / S503 TYPICAL WF BEAM BEARING DETAIL

3/4" = 1'-0"

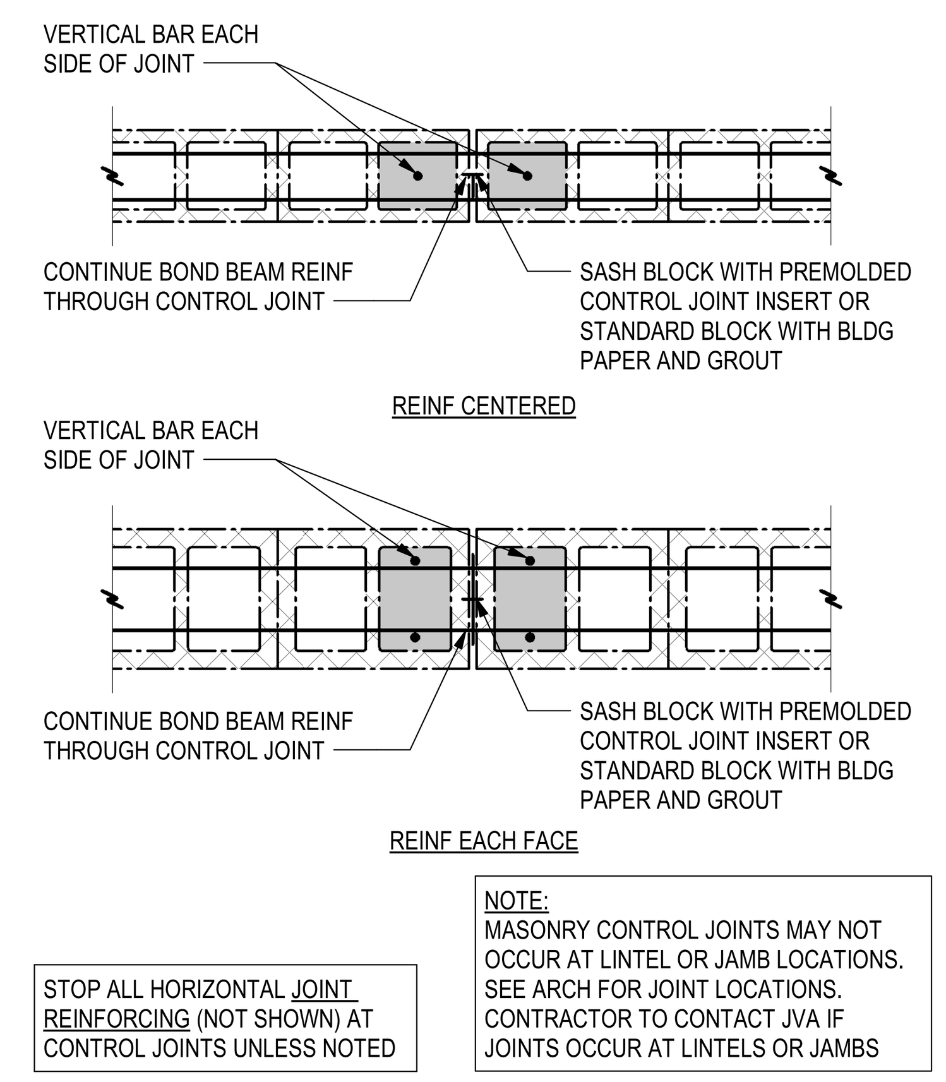
0 6" 1' 2' 3'



TYPICAL BEAM BEARING ON PARALLEL CMU WALL END

5 / S503 TYPICAL WF BEAM BEARING DETAIL

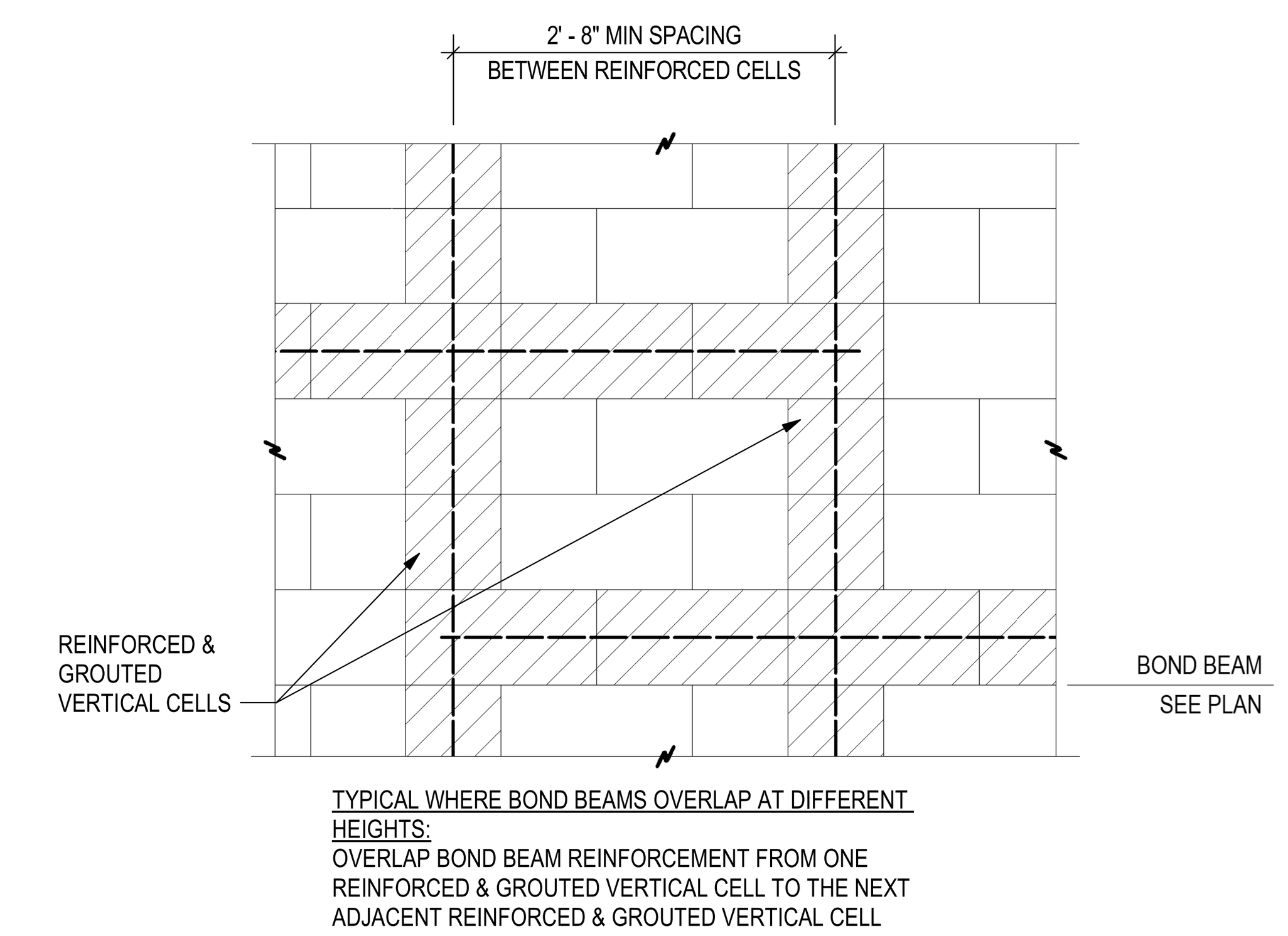
3/4" = 1'-0"



TYPICAL VERTICAL CONTROL JOINT IN CMU WALL
SEE ARCH DRAWINGS FOR LOCATIONS

6 / S503 TYPICAL CONTROL JOINT DETAIL

3/4" = 1'-0"



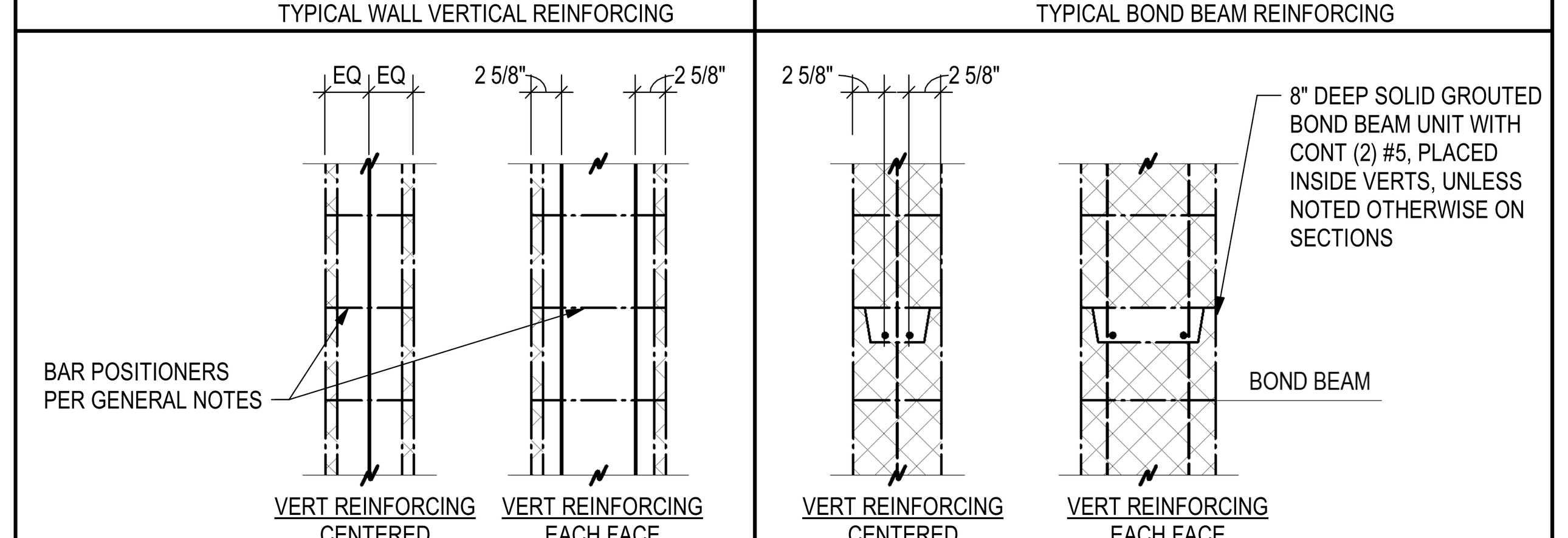
TYPICAL CMU BOND BEAM LAP

7 / S503 TYPICAL BOND BEAM LAP DETAIL

3/4" = 1'-0"

TYPICAL CMU WALL/REINFORCING ASSEMBLIES

TYPICAL WALL VERTICAL REINFORCING | TYPICAL BOND BEAM REINFORCING



STRUCTURAL MASONRY WALL SCHEDULE

MASONRY WALL SCHEDULE		
MARK	**WIDTH**	**VERT REINF**
MW8	7 5/8"	#5 @ 32"
MW8A	7 5/8"	#5 @ 24"

1. VERTICAL REINFORCING INSTALLED FULL HEIGHT IN SOLID GROUTED VERTICAL CELLS AT SPACING SHOWN AND LOCATED AT OPENING JAMBS, VERTICAL CONTROL JOINTS (AS IN 6/S503) WALL ENDS, CORNERS, AND INTERSECTIONS
2. STANDARD LADDER-TYPE CONTINUOUS HORIZONTAL JOINT REINFORCING VERTICALLY @ 16" UNLESS OTHERWISE NOTED
3. ADD BOND BEAMS AT ALL FLOOR AND ROOF ELEVATIONS AS NOTED IN SECTIONS AND AT ALL TOP OF WALL LOCATIONS, MAXIMUM VERTICAL SPACING = 8'-0.

1 / S503 MASONRY WALL SCHEDULE

NO SCALE

TABLE #1 - LAP SPLICE LENGTHS FOR MASONRY (INCHES) - REINF. CENTERED

BARS CENTERED IN WALL (SINGLE REINFORCING)						
BAR SIZE	6" CMU	8" CMU	10" CMU	12" CMU	14" CMU	16" CMU
#3	18	18	18	18	18	18
#4	24	24	24	24	24	24
#5	-	30	30	30	30	30
#6	-	**38**	36	36	36	36
#7	-	-	42	42	42	42
#8	-	-	-	**50**	48	48
#9	-	-	-	**64**	54	54

TABLE #2 - LAP SPLICE LENGTHS FOR MASONRY (INCHES) - REINF. EACH FACE

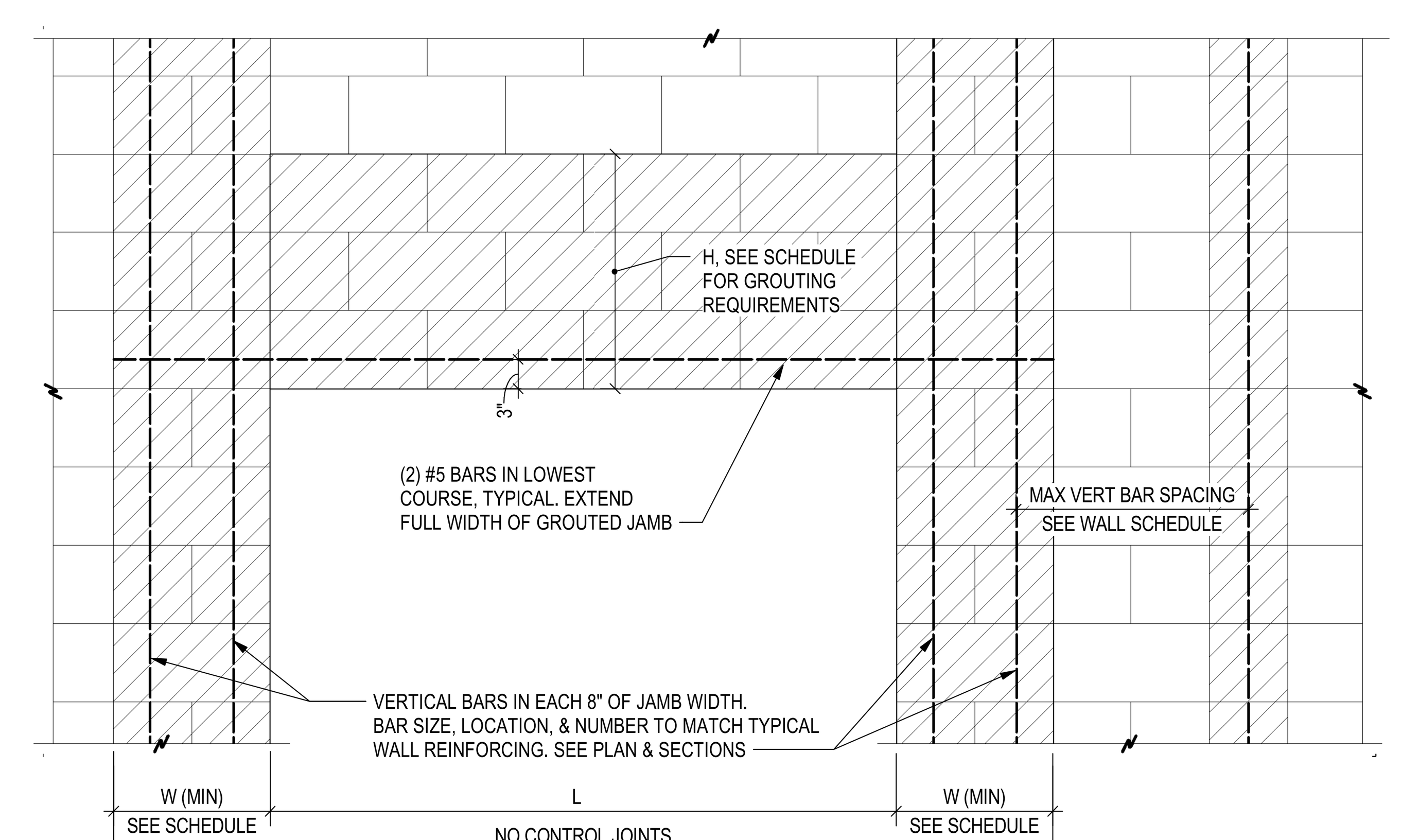
BARS PLACED EACH FACE (DOUBLE REINFORCING)					
BAR SIZE	8" CMU	10" CMU	12" CMU	14" CMU	16" CMU
#3	18	18	18	18	18
#4	24	24	24	24	24
#5	30	30	30	30	30
#6	**57**	**57**	**57**	**57**	**57**
#7	-	**80**	**80**	**80**	**80**
#8	-	-	-	-	-
#9	-	-	-	-	-

NOTES:
1. REINFORCING STEEL fy = 60,000 PSI
2. MASONRY f'm = 2,000 PSI
3. FOR EPOXY COATED BARS MULTIPLY TABLE VALUES BY 1.5
4. USE MECHANICAL COUPLER WHERE REQUIRED LAP LENGTH EXCEEDS GROUT LIFT HEIGHT.
5. OPEN END MASONRY UNITS MAY BE USED AT VERTICAL REINFORCING LOCATIONS.
6. WALL BRACING DESIGN AND IMPLEMENTATION SHALL BE BY CONTRACTOR.

2 / S503 MASONRY LAP SPLICE SCHEDULE

NO SCALE

TYPICAL MASONRY LINTELS		
L (OPENING WIDTH)	H (HEIGHT OF SOLID GROUTED LINTEL)	W (SOLID GROUTED JAMB WIDTH)
UP TO 6'-0	2'-0	1'-4
6'-1 TO 10'-0	3'-4	2'-0



TYPICAL CMU LINTEL

NOTE:
MASONRY CONTROL JOINTS MAY NOT OCCUR AT LINTEL OR JAMB LOCATIONS. SEE ARCH FOR JOINT LOCATIONS. CONTRACTOR TO CONTACT JVA IF JOINTS OCCUR AT LINTELS OR JAMBS

3 / S503 MASONRY LINTEL SCHEDULE

3/4" = 1'-0"

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CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 48858 HERBY PEDERSEN 04.01.21 ARIZONA U.S.A.

DRAWN BY:	HJN
CHECKED BY:	MES
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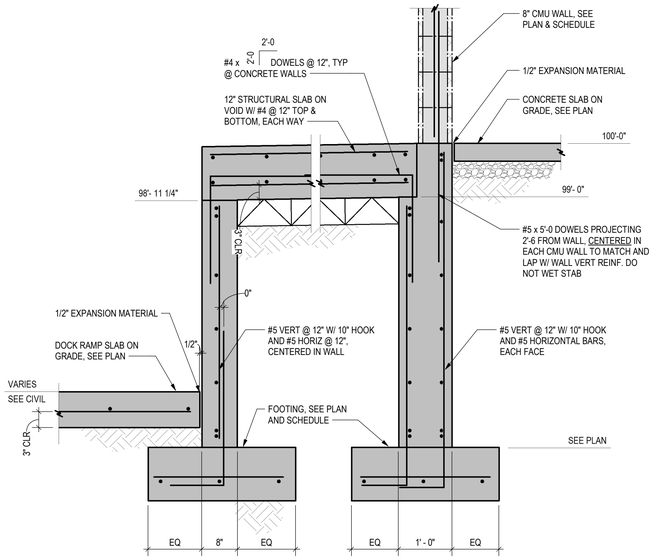
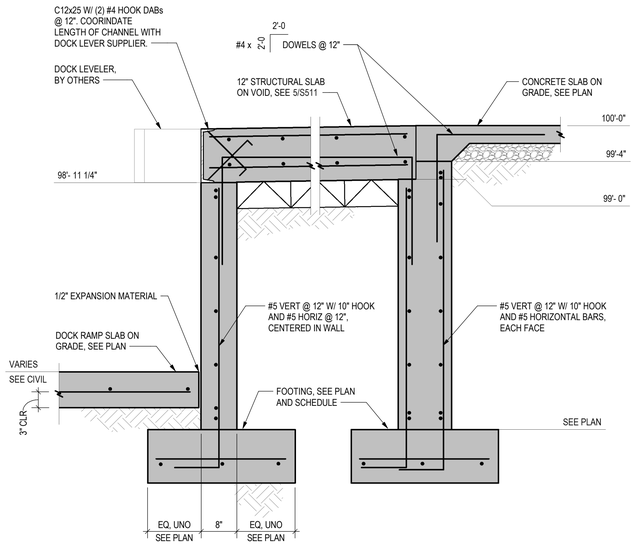
SHEET TITLE:
CMU TYPICAL DETAILS & SCHEDULES

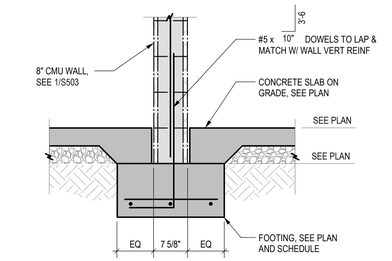
SHEET NUMBER:
S503



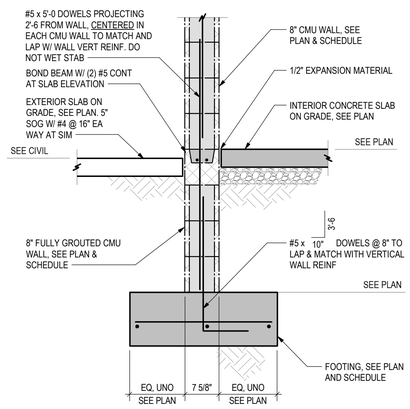
5 S511 SECTION
3/4" = 1'-0"



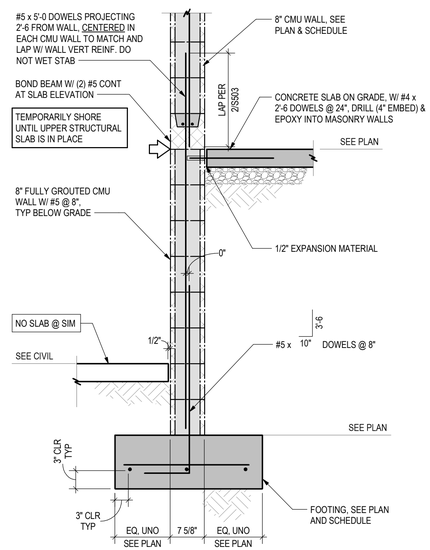
6 S511 SECTION
3/4" = 1'-0"



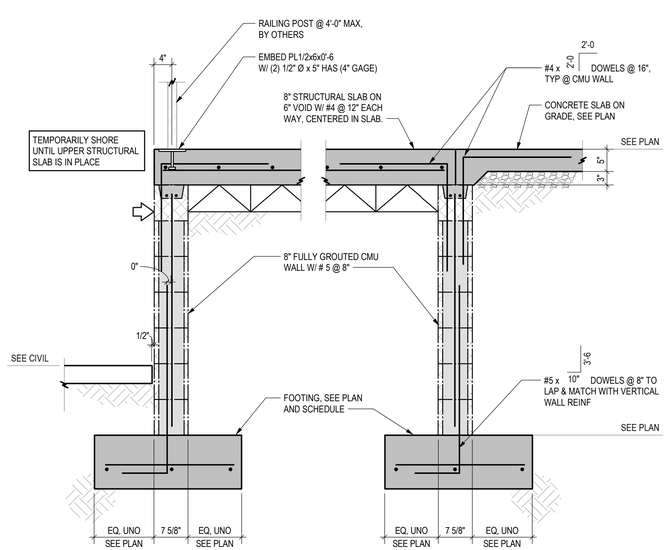
8 S511 SECTION
3/4" = 1'-0"



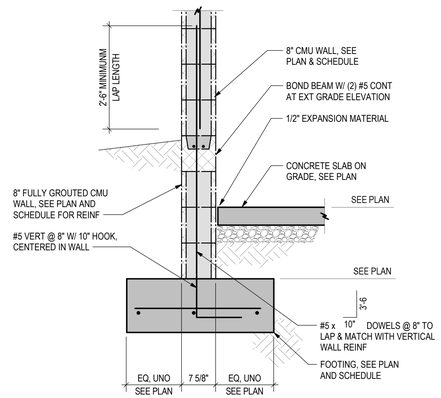
7 S511 SECTION
3/4" = 1'-0"



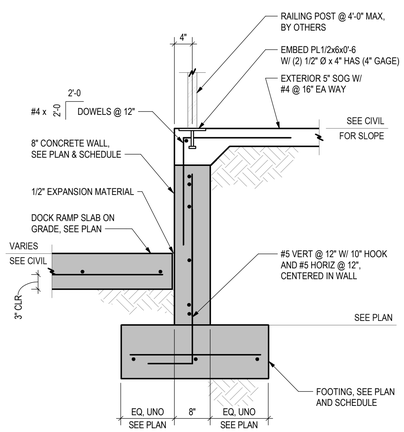
1 S511 SECTION
3/4" = 1'-0"
0 6" 1' 2' 3'



2 S511 SECTION
3/4" = 1'-0"



3 S511 SECTION
3/4" = 1'-0"



4 S511 SECTION
3/4" = 1'-0"

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CHECKED BY: MES
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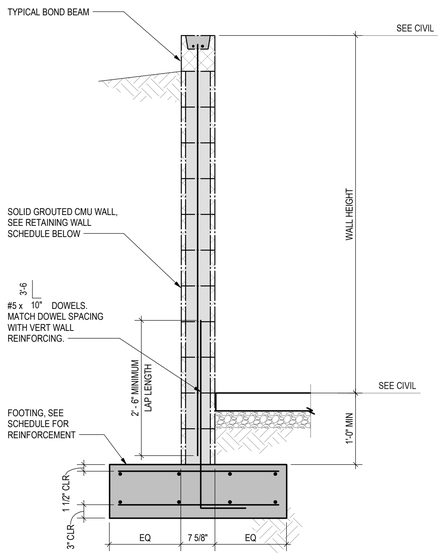
FOUNDATION SECTIONS

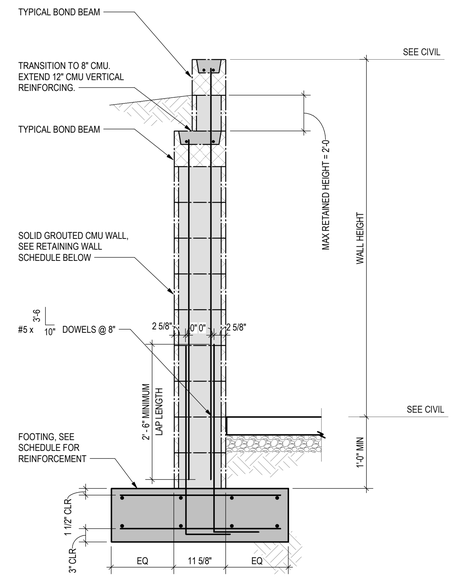
SHEET NUMBER:
S511



CMU RETAINING WALLS			
WALL HEIGHT	WALL WIDTH	VERTICAL REINFORCING	FOOTING SIZE
UP TO 4'-0"	8" CMU	#5 @ 24", CENTERED	F32
4'-1" TO 6'-0"	8" CMU	#5 @ 8", CENTERED	F48
6'-1" TO 8'-0"	12" CMU	#5 @ 8", EACH FACE	F56

NOTES: REFER TO 1/S503 FOR CMU WALL REINFORCING REQUIREMENTS.

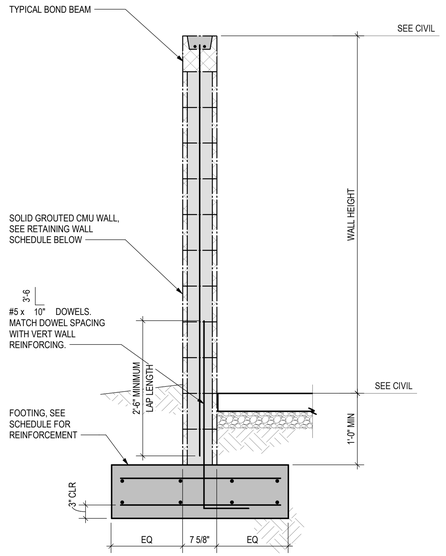
5 S512 TYPICAL 8" RETAINING SITE WALL
3/4" = 1'-0"



CMU RETAINING WALLS			
WALL HEIGHT	WALL WIDTH	VERTICAL REINFORCING	FOOTING SIZE
UP TO 4'-0"	8" CMU	#5 @ 24", CENTERED	F32
4'-1" TO 6'-0"	8" CMU	#5 @ 8", CENTERED	F48
6'-1" TO 8'-0"	12" CMU	#5 @ 8", EACH FACE	F56

NOTES: REFER TO 1/S503 FOR CMU WALL REINFORCING REQUIREMENTS.

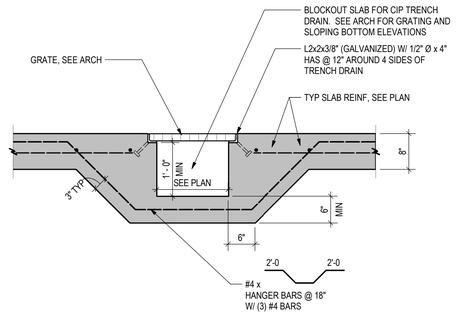
6 S512 TYPICAL 12" RETAINING SITE WALL
3/4" = 1'-0"



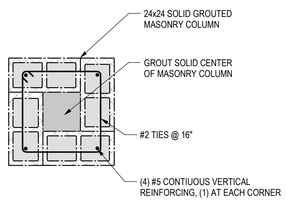
CMU RETAINING WALLS			
WALL HEIGHT	WALL WIDTH	VERTICAL REINFORCING	FOOTING SIZE
UP TO 4'-0"	8" CMU	#5 @ 24", CENTERED	F32
4'-1" TO 8'-0"	8" CMU	#5 @ 8", CENTERED	F48

NOTES: REFER TO 1/S503 FOR CMU WALL REINFORCING REQUIREMENTS.

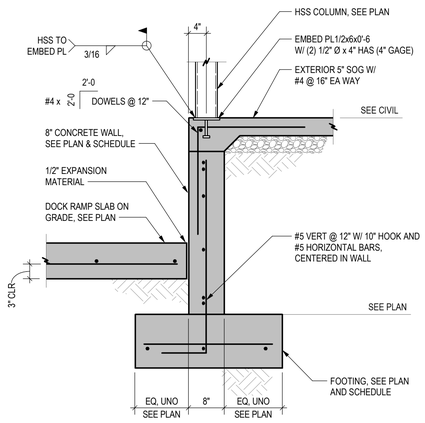
7 S512 TYPICAL FREESTANDING SITE WALL
3/4" = 1'-0"



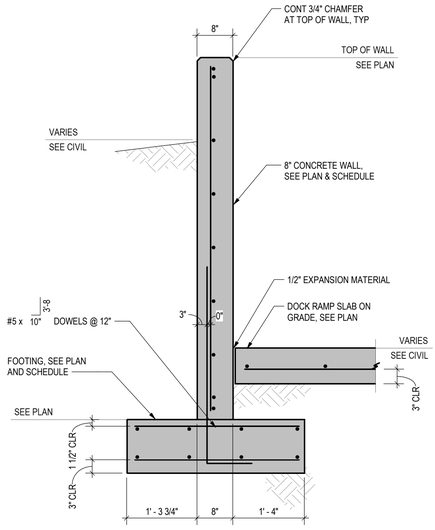
8 S512 TRENCH DRAIN SECTION
3/4" = 1'-0"



1 S512 24x24 MASONRY COLUMN
3/4" = 1'-0"
0 6" 1' 2' 3'



2 S512 SECTION
3/4" = 1'-0"



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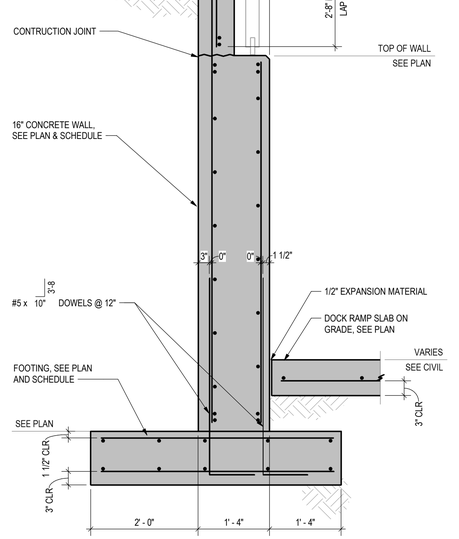

4 S512 SECTION
3/4" = 1'-0"

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DESERT MOUNTAIN CLUB STORAGE AND LAUNDRY FACILITY

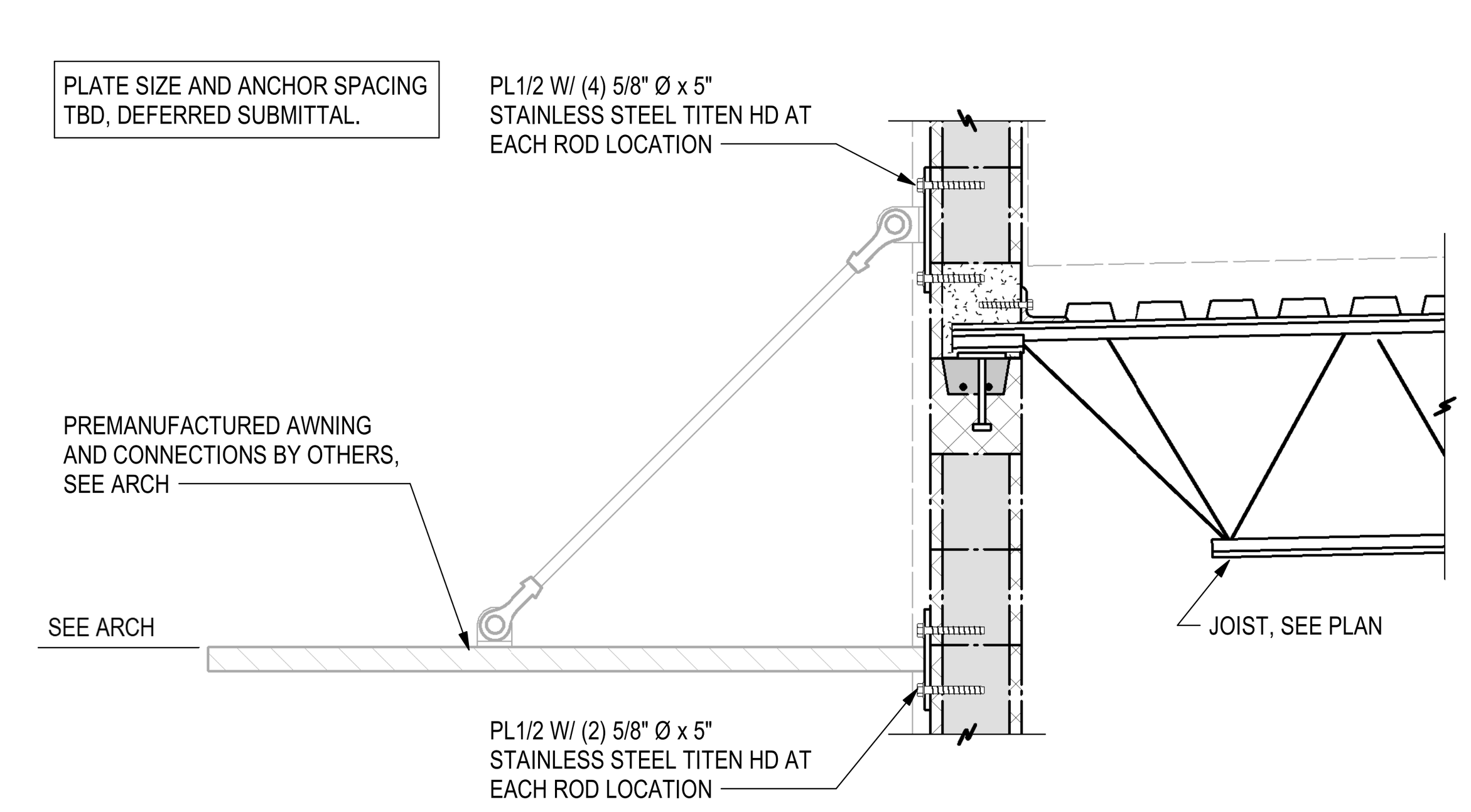
10550 Desert Hills Dr, Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 68826 DEREK PEDERSEN 04.01.21 RENEWAL ARIZONA, U.S.A.

DRAWN BY: HJN
CHECKED BY: MES
PROJECT NO: 2019001.23
ISSUE DATE: 3/26/21
REVISIONS:

SHEET TITLE: FOUNDATION SECTIONS

SHEET NUMBER: S512



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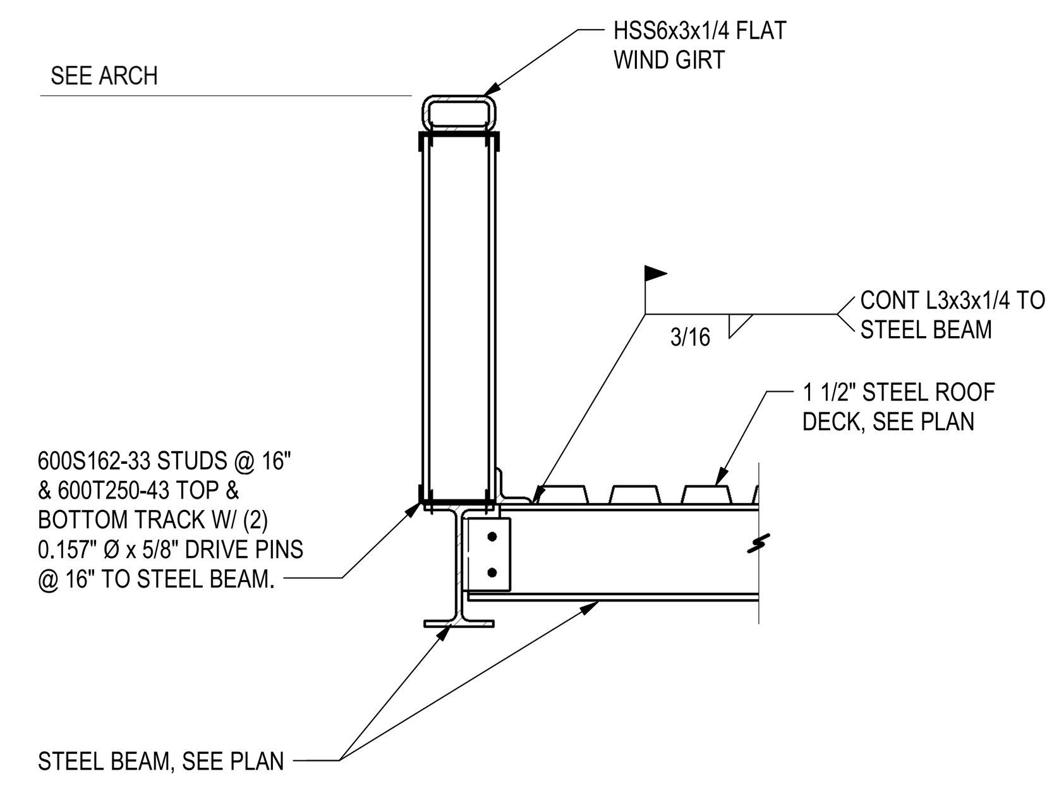

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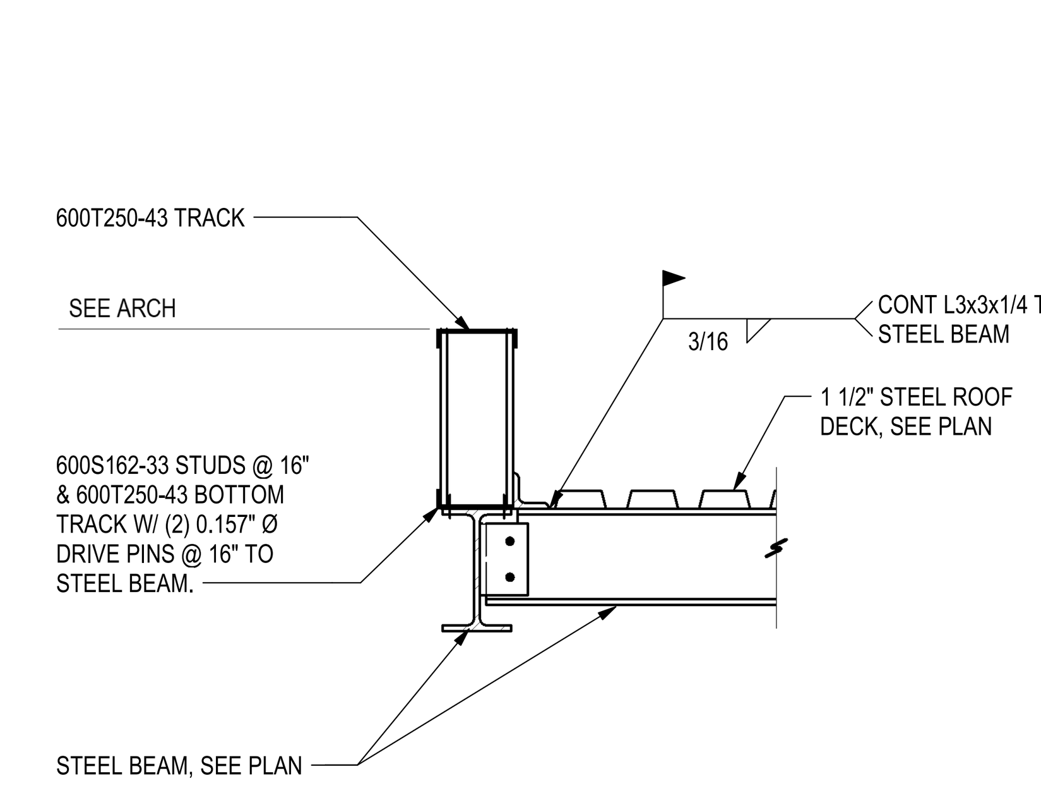

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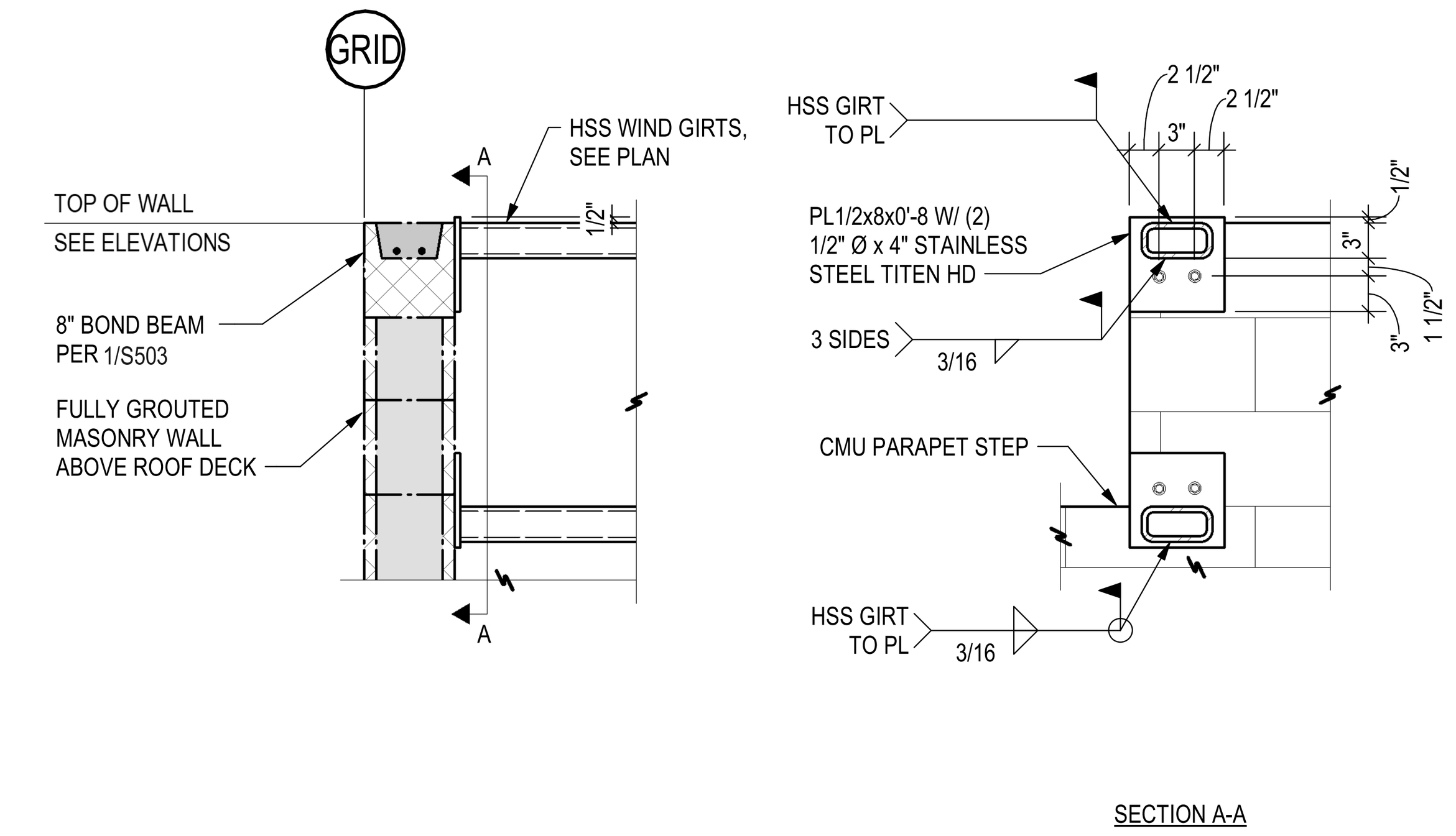

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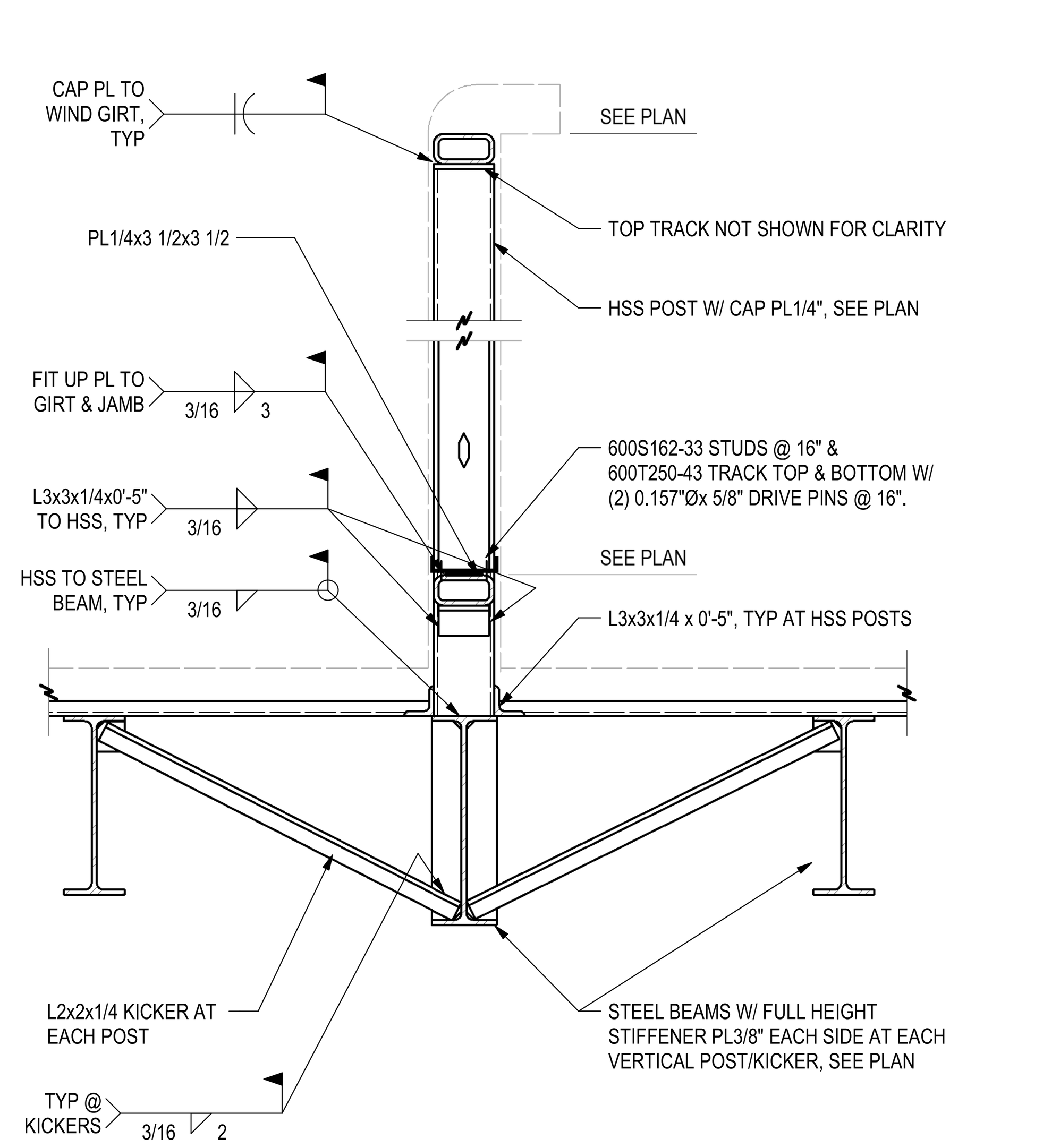

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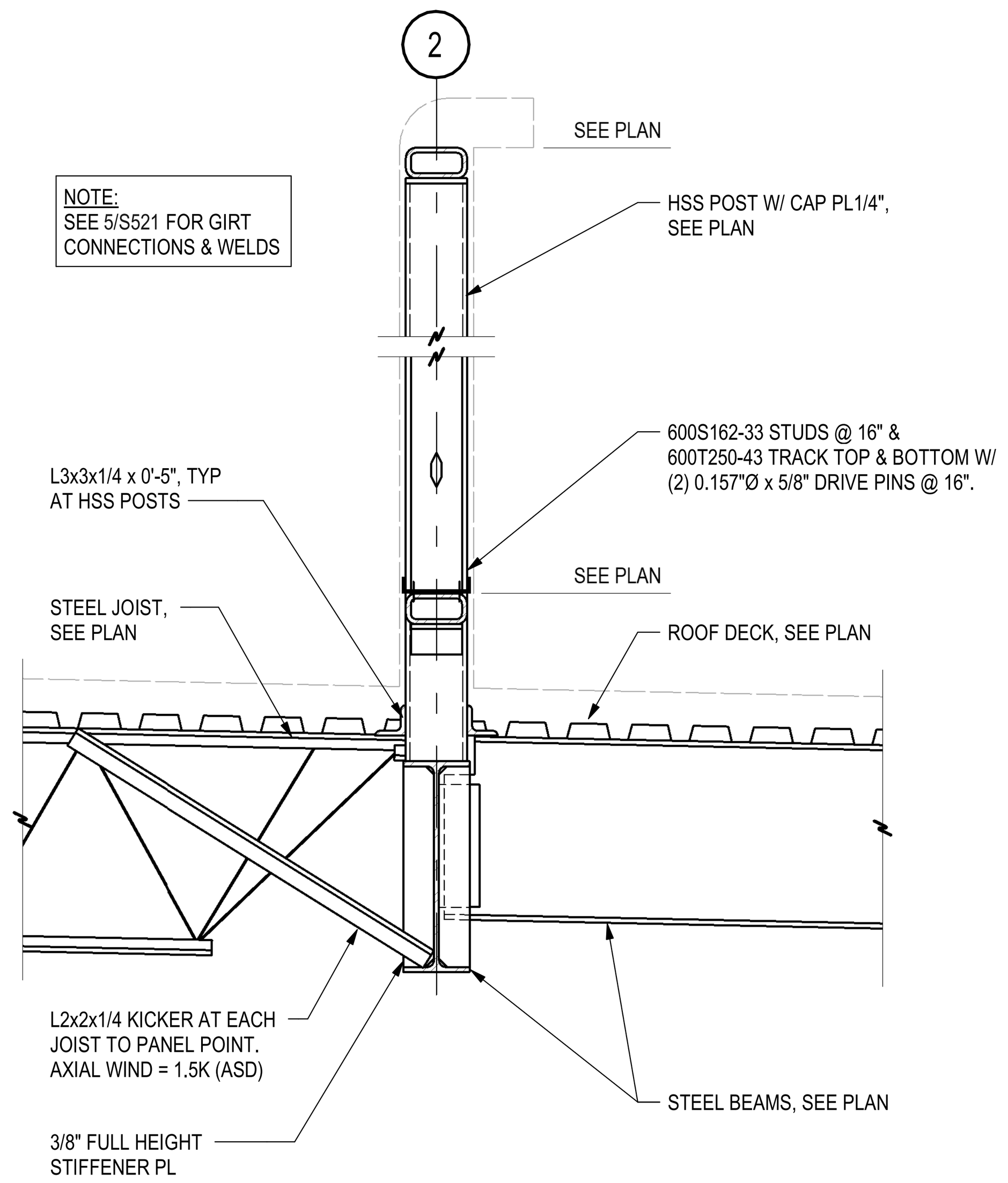

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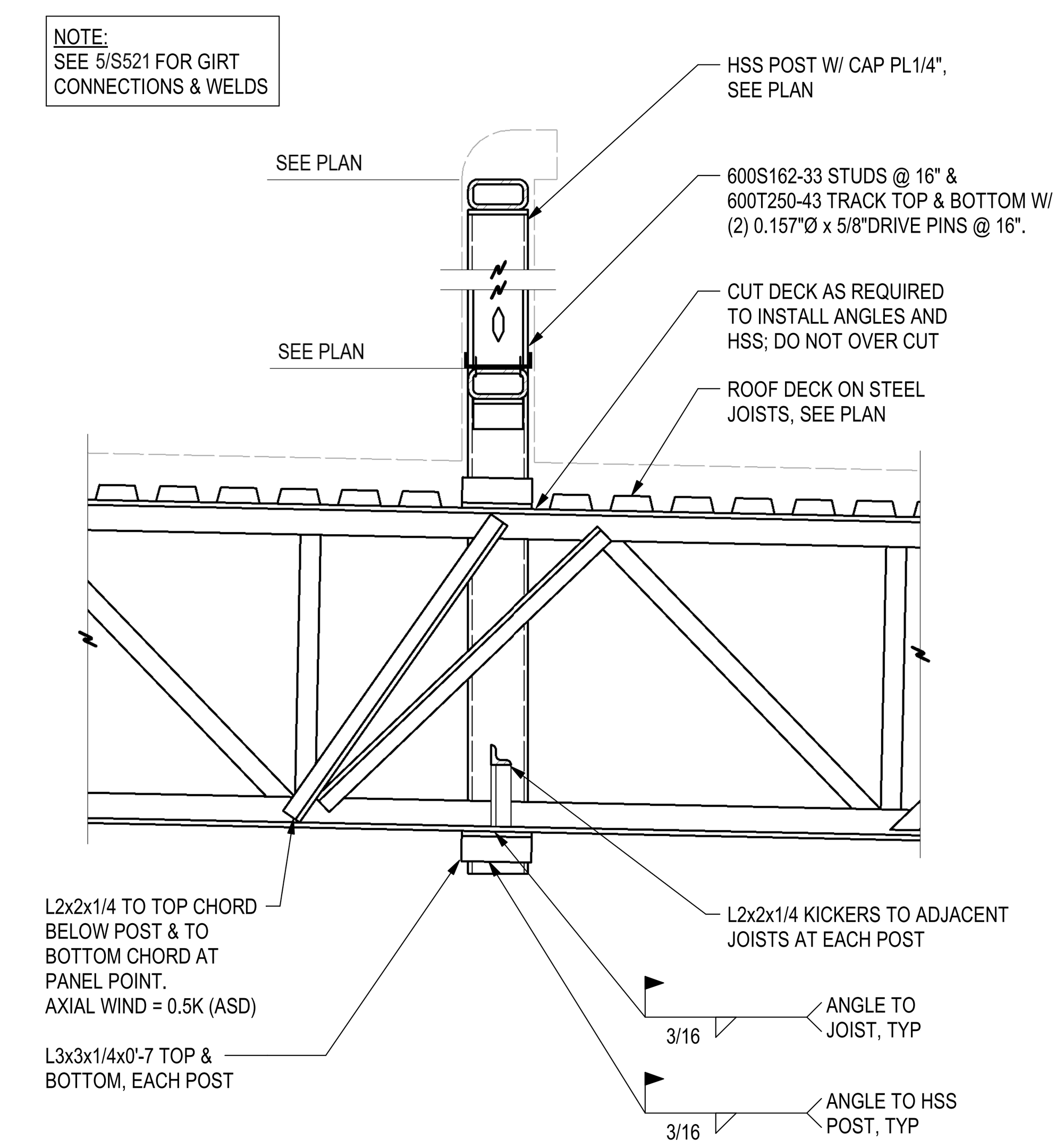

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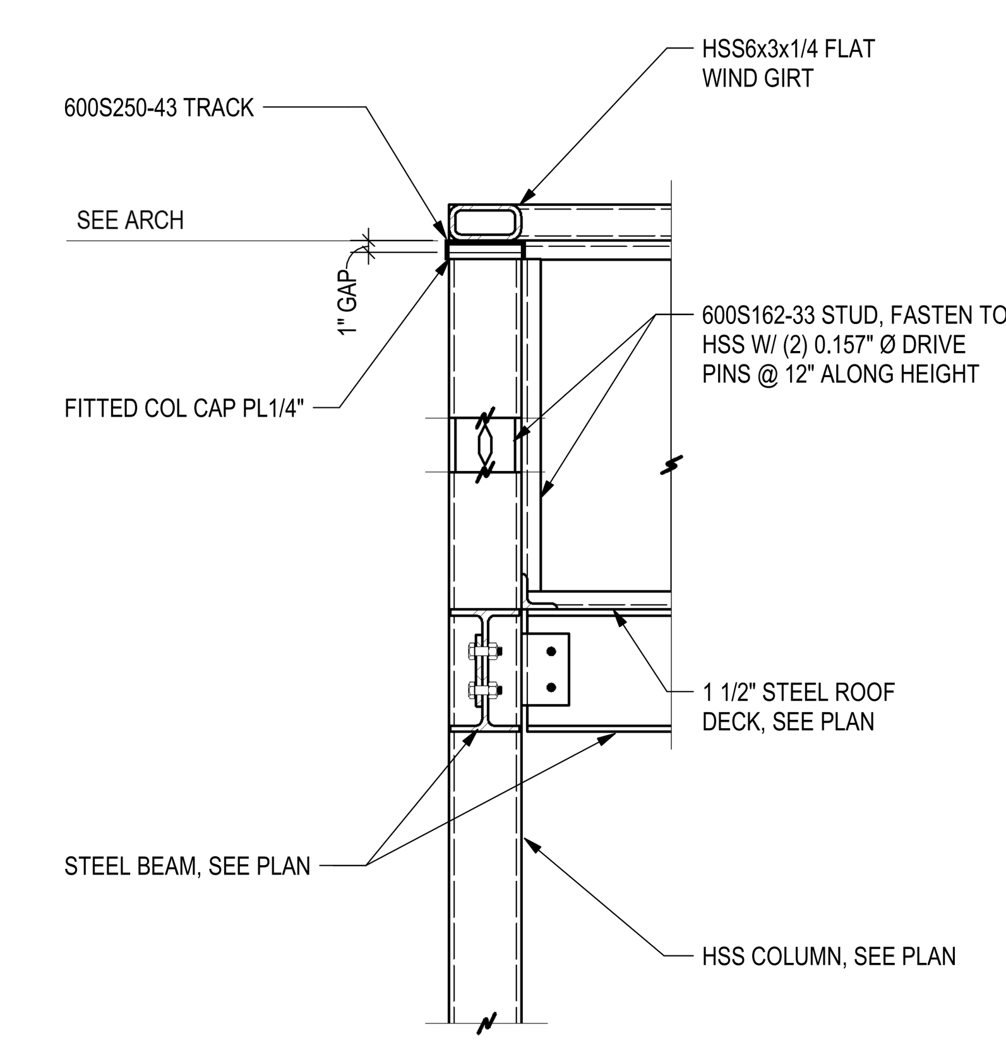

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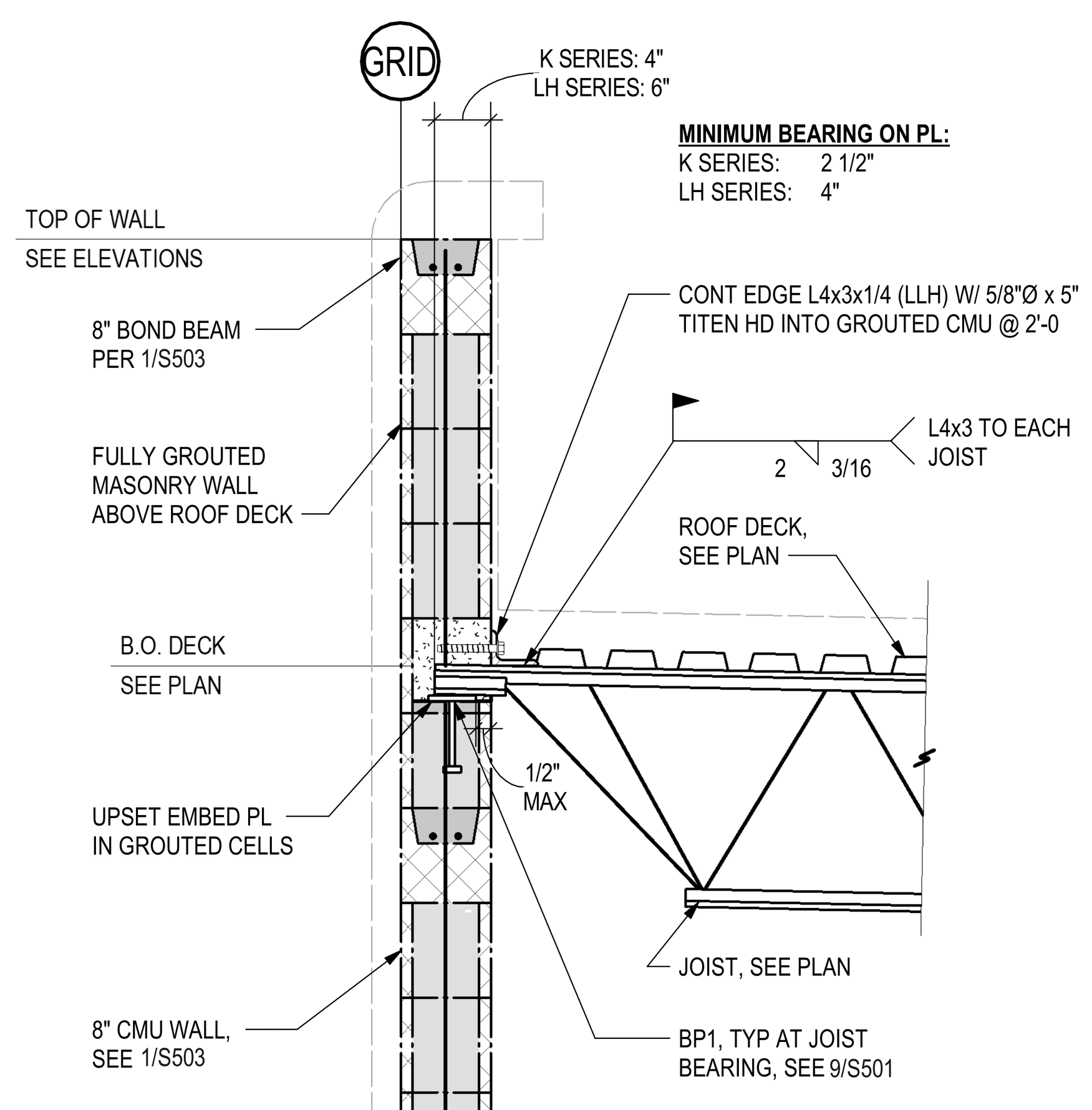
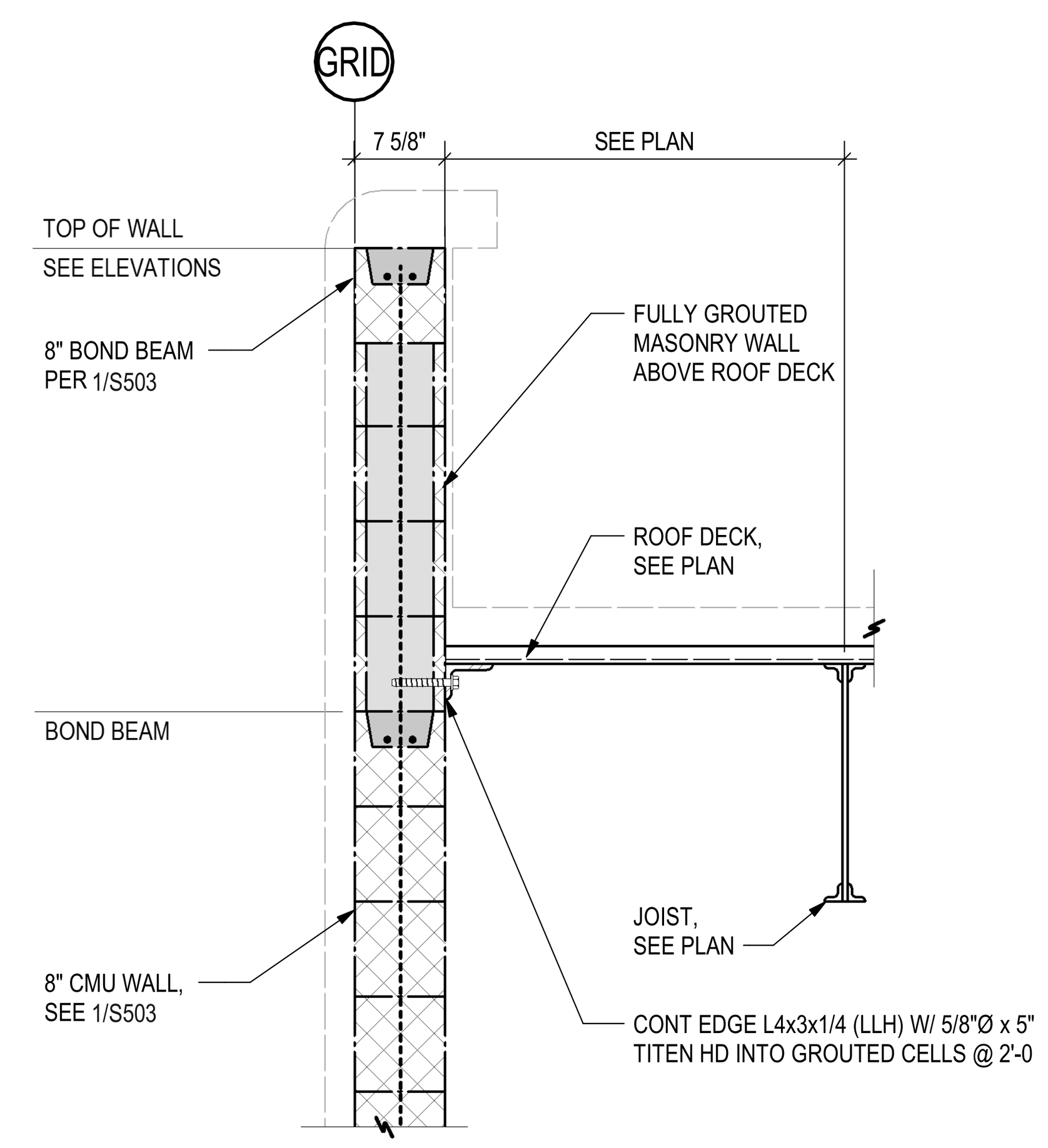


1 S521 SECTION 3/4" = 1'-0"

0 6" 1' 2' 3'



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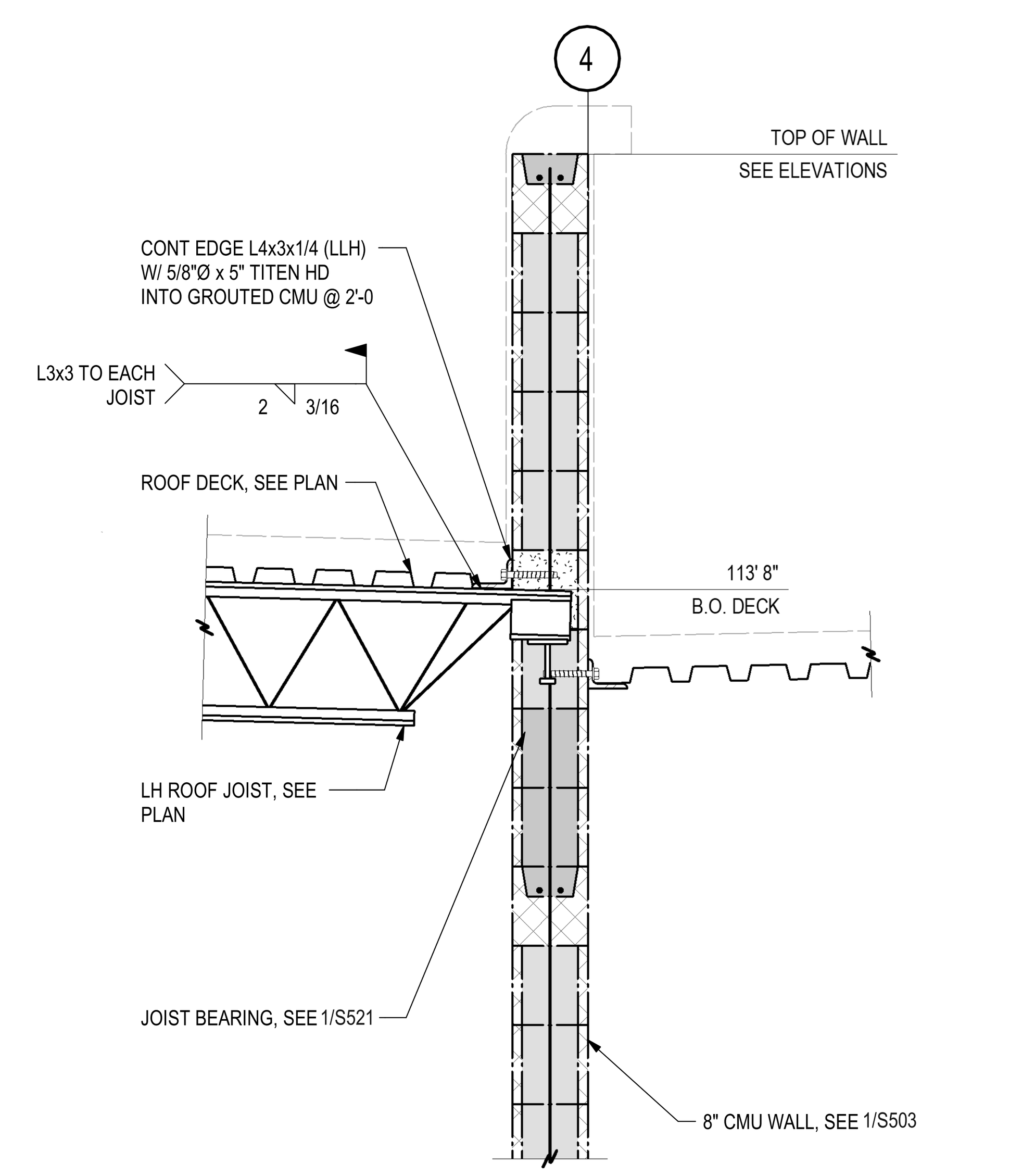

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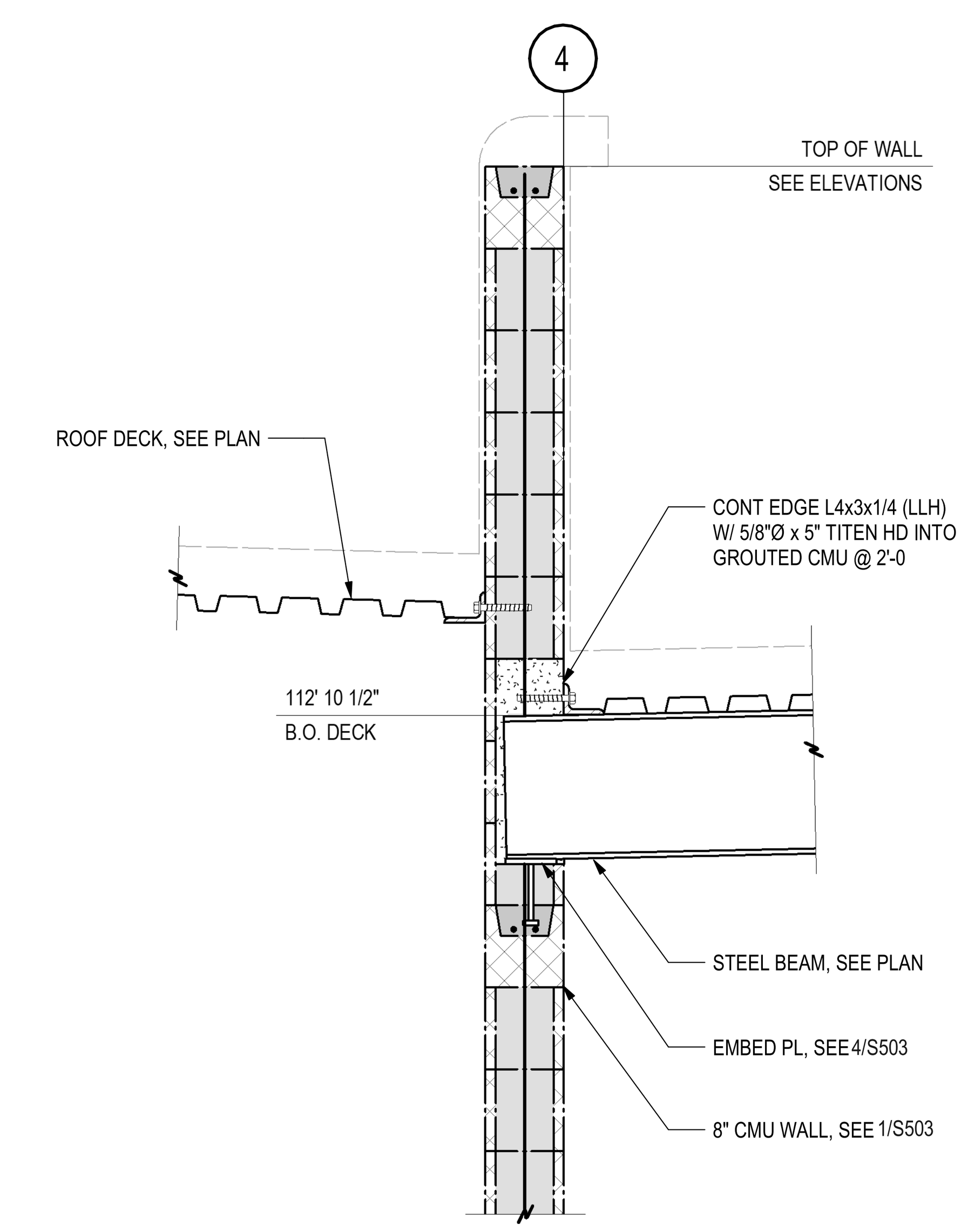

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CONSTRUCTION DOCUMENTS- FOR BULIDING PERMIT

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 68858 DEREK PEDERSEN 04.01.21 ARIZONA U.S.A.

DRAWN BY:	HJN
CHECKED BY:	MES
PROJECT NO:	2019001.23
ISSUE DATE:	3/26/21
REVISIONS:	

SHEET TITLE:
ROOF SECTIONS

SHEET NUMBER:
S521

Drawing: BIM 360://20170 Desert Mountain Distribution Center/20170_Central_S20.rvt
Last Saved: 4/1/2021 10:11:37 AM

ABBREVIATIONS

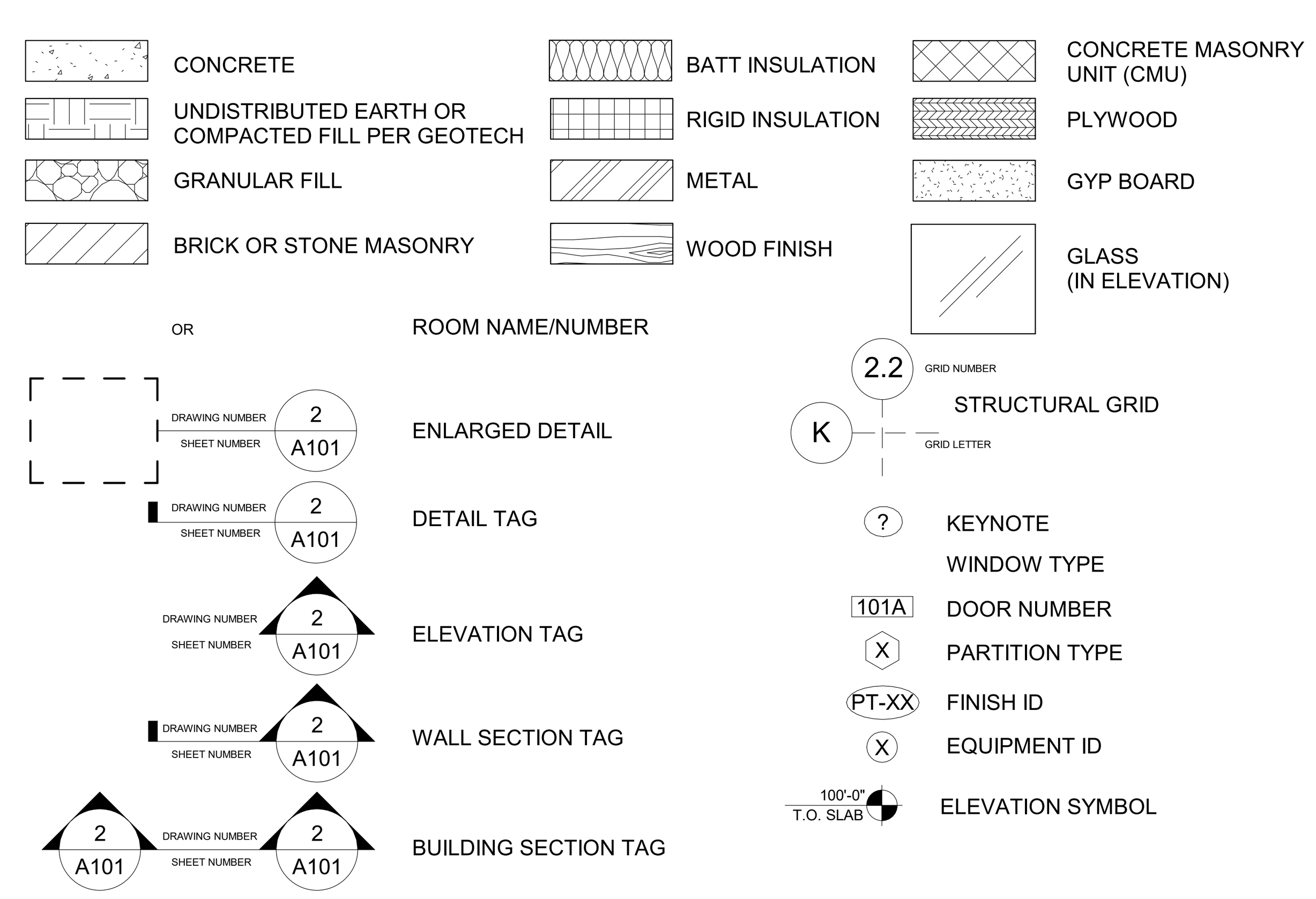
ACOUST	acoustic(al)
ACT	acoustic ceiling tile
ADJ	adjacent
AFF	above finish floor
ALT	alternate
ALUM	aluminum
ANOD	anodized
APPL	appliance(s)
APPROX	approximate
ARCH	architectur(al)
ASPH	asphalt
BD	board
BITUM	bituminous
BK	brick
BLDG	building
BLK	block
BLKG	blocking
BM	beam
BO	by others
B.O.	bottom of
BOT	bottom
BRG	bearing
BSMT	basement
BTWN	between
C/PV	concrete pavers
CAB	cabinet
CHNL	channel
CJ	control joint
CLG	ceiling
CL	centerline
CLR	clear(ance)
CMU	concrete masonry unit
COL	column
CONC	concrete
CONN	connection
CONST	construction
CONT	continuous
COORD	coordinate/coordination
CPT	carpet
CT	ceramic tile
CTSK	countersink
CUFT	cubic foot
DBL	double
DEPT	department
DF	drinking fountain
DIA	diameter
DIAG	diagonal
DIM	dimension
DN	down
DR	drain/door
DS	downspout
DTL	detail
DWG(S)	drawing(s)
EA	each
EIFS	exterior insulation finish system
EJ	expansion joint
ELEC	electrical
ELEV/EL	elevation/elevator
ENCL	enclosure
ENGR	engineer(ed)
EQ	equal
EQUIP	equipment
EXH	exhaust
EXP	expansion
EXPSD	exposed
EXIST	existing
EXT	exterior
FBGL	fiberglass
FC	fiber cement
FCU	fan coil unit
FD	floor drain
FDC	fire department connection
FDN	foundation
FEC	fire extinguisher cabinet(s)
FF	finish floor
FGRG	fiberglass-reinforced gypsum
FIN	finish(ed)
FIXT	fixture
FLR	floor(ing)
FLSH	flush
FO	face of
FR	fire resistive
FRR	fire resistive rating
FRMG	frame(ing)
FRP	fiber-reinforced plastic
FT	foot/feet
FTG	footing
FUT	future
FWC	fabric wall covering
GA	gage/gauge
GAL	gallon
GALV	galvanized
GC	general contractor
GCT	glazed ceramic tile
GEN	general
GL	glass/glazing
GYP BD	gypsum board
HDWD	hardwood
HB	hose bib
HC	handicapped/hollow core
HDBD	hardboard
HDR	header
HM	hollow metal
HORIZ	horizontal
HT	height
HTG	heating
HTR	heater
ID	inside diameter
INCL	include(d)(ing)
INSUL	insulate(d)(ion)
INT	interior/intermediate
JST(S)	joist(s)
JT(S)	joint(s)
KIT	kitchen
LAM	laminated
LAT	lateral
LAV	lavatory
LOC	location
LT	light
LTWT	light weight
LVT	luxury vinyl tile

MAS	masonry
MAX	maximum
MBR	member
MECH	mechanic(al)
MFG(R)	manufacture(r)(d)
MH	manhole
MIN	minimum
MISC	miscellaneous
MLD	molding/moulding
MPTN	movable partition system
MS	metal stud
MTD	mount(ed)
MTG	meeting
MATL	material(s)
MTL	metal
N/A	not applicable
NTS	not to scale
NIC	not in contract
NO	number
o/	over
OC	on center(s)
OCL	occupant load
OD	outside diameter
OFF	office
OH	overhang
OPNG	opening
OPP	opposite
OVHD	overhead
PARTBD	particle board
PC	precast
PC/TL	porcelain ceramic tile
PERP	perpendicular
PF	prefinished
PFAB	prefabricate(d)
PL	property line/plate
PLAM	plastic laminate
PLUMB	plumbing
PLYWD	plywood
PNT	paint
PR	pair
PREFIN	prefinished
PT	pressure treated
PTN	partition
QT	quarry tile
QTR	quarter
R	radius
RB	rubber base
RD/OD	roof drain/overflow drain
RE	reference
REC	recommend(ations)
RECPT	reception/receptacle
REINF	reinforce(d)(ing)
RQD	required
RET	retaining
RFG	roofing
RM	room
RO	rough opening
ROW	right of way
RT	rubber tile
RTG	rating
S4S	sawn/surfaced four sides
SAP	suspended acoustical panel
SAT	suspended acoustical tile
SC	solid core
SCHED	schedule
SEC	section
SF	square foot/feet
SHT	sheet
SIM	similar
SPDRL	spandrel
SPEC	specification(s)/specified
SQ	square
SS	solid surface/stainless steel
STA	station
STD	standard
ST/PT	stone pavers
ST/TL	stone tiles
STL	steel
STN	stain
STOR	storage
STRUCT	structural
SUPPL	supplied(er)
SUSP	suspended
SYM	symmetrical
SYST	system
T	tread
T&B	top and bottom
T&G	tongue and grove
T.O.	top of
TEL	telephone
TEMP	tempered
THK	thick(ness)
THLD	threshold
TS	tube steel
TV	television
TYP	typical
UNF	unfinished
UNO	unless noted otherwise
UON	unless otherwise noted
USS	underside of structure
VAR	varies
VCT	vinyl composition tile
VERT	vertical
VEST	vestibule
VIF	verify in field
VWC	vinyl wall covering
W	wide flange beam
w/	with
w/o	without
WC	water closet
WD	wood
WH	water heater
WSCT	wainscot
WT	weight
WWF	welded wire fabric
WWM	welded wire mesh

GENERAL NOTES

1. Contractor shall be governed by the currently adopted edition of all codes and regulations having jurisdiction over aspects of this construction project.
2. Written dimensions and existing conditions shall be verified in the field by the Contractor and/or his Sub-Contractors. Do not scale drawings. If further clarification is required, contact Architect and provide field dimensions as required to assist with clarification.
3. Any unsatisfactory or questionable conditions or discrepancy in dimensions and/or drawings and/or field measurements shall be brought to the attention of the Architect prior to the commencement of any work.
4. These drawings and specifications are the property and copyright of the Architect and shall not be used on any other work except by agreement with the Architect.
5. Duty of Cooperation: Release of these plans anticipates further cooperation among the Owner, Contractor, and Architect. Although the Architect and consultants have performed their services with due care and diligence, they cannot guarantee perfection. Any ambiguity or discrepancy discovered shall be reported immediately to the Architect. Failure to cooperate by a simple notice to the Architect shall not relieve the Contractor from responsibility for all consequences. Changes from the plans made by the GC without the consent of the Architect are unauthorized, and shall relieve the Architect of responsibility for all consequences arriving out of such changes.
6. Plans reflect final building and site configuration. Demolition, site clearing, etc. is to be performed as required. No inference is made that all existing conditions are shown or all demolition noted. Contractor is to field verify all existing conditions and dimensions indicated in layout of existing work. Prior to commencing work, carefully compare drawings for discrepancies in locations of work to be executed.
7. The Contractor shall include any work required to make the end result building operative and occupiable. If equipment, material, and/or intent are not detailed in drawings or specifications but are obviously required as industry standard for operative conditions, this work shall be included in base bid. If the Owner does not accept the Contractor's selection, the additional cost (to the Contractor) of that equipment or materials chosen by the Owner or Architect will be offset by Change Order. All products shall be installed per manufacturer's recommendations.
8. The contractor shall provide the original occupant with a list of the heating, cooling, water heating, and lighting systems and conservation or solar devices installed in the building and instructions on how to use and maintain them effectively and efficiently. All warranties of all materials and equipment are to be delivered to the original occupant at completion of construction.
9. The details shown are intended to further illustrate the visual design concept and the minimum weather protection for this project. The general contractor shall incorporate the requirements of the local building codes, structural considerations, trade association manuals, publications and recommendations, and the manufacturer's written instructions for complete construction of details. All possible field conditions which may be encountered are not necessarily described. Field conditions encountered which require clarification shall be brought to the attention of the Architect.
10. General Contractor shall be responsible for coordination of all trades doing work under contract with the GC and coordination with Owner and Owner's sub-contractors regarding installation and provision for all equipment, materials, and constructions indicated "by Owner" or "by others" on these documents.
11. All existing areas outside of the contract limits are fully finished and beyond the jurisdiction of the Owner. Contractor shall take all precautions necessary to protect these areas from damage, debris, and any other deleterious effects caused by this construction. Any areas affected by this construction shall be restored to original condition as required at completion of work.
12. Should conflict occur in or between the Construction Documents and Project Manual, the General Contractor is assumed to have estimated on the more costly method of doing the work unless he requests, and obtains in writing, a resolution to such conflicts before submission of Bid as to which method or materials will be required.
13. The Contractor is responsible for protecting all existing items, utilities, or structures to remain. The Contractor shall contract utility entities or make exploratory excavations as necessary or as noted on the plans to determine the location of underground utilities and structures, and the limits and character of soil and/or rock. If any item requires relocation, the Contractor shall notify the Owner well in advance of approach to the item and shall be responsible for making all arrangements with the item Owner for relocation of the item.
14. If these documents or onsite conditions make it impossible to produce first class work, or to warrant the work or its performance, or should discrepancies appear among the Contract Documents, it is the General Contractor's responsibility to request interpretation, correction, or clarification prior to proceeding with work. If the contractor fails to make such requests, work must be performed in a satisfactory manner and no request for added cost or extension of time will be considered.
15. The General Contractor represents that he fully understands the nature and extent of the work, all factors and conditions affecting or which may be affected by it, and characteristics of its various parts and elements and their fitting together and functioning.
16. All work to be in accordance with general conditions of the contract for construction - AIA Document A201 and other Contract Documents.
17. Contract Documents also include the Project Manual and is made part of these drawings in their entirety.
18. Vent all exhaust fans to exterior. Provide rain caps and flashing as required.
19. Center water closets in the space provided, or in location indicated. Maintain a minimum of 15" from adjacent vertical surfaces. Maintain all accessible clearances as required.
20. Provide cement board adjacent to plumbing fixtures, walls in utility rooms and bathrooms, and behind all walls finished with ceramic tile.
21. All angles are to be 45° unless noted otherwise.
22. Do not use cadmium or cadmium plated products or products containing cadmium for work in place.
23. Do not use asbestos or asbestos containing products for work in place. Contractor shall not cut, drill, remove, or otherwise disturb any material, equipment, construction, etc., if it is thought to contain any hazardous material. If material, equipment, construction, etc., is encountered which appears to, or is likely to contain hazardous materials, notify Owner immediately.
24. Electrical equipment shall be certified as containing no PCB's.
25. Typographical errors or errors of spelling shall be brought to the Architect's attention for clarification. Interpretation of the meaning of mistyped or misspelled words without clarification from the Architect will be done by the Contractor with acceptance of responsibility for that interpretation and all consequences arriving therefrom.
26. All dimensions to face of foundation or face of stud, typical, unless noted otherwise. All masonry dimensions indicated are nominal dimensions unless noted otherwise.
27. The term "provide" as used herein shall mean that Contractor shall furnish and install said item, construction, equipment, materials, etc., for a complete, finished installation.
28. All survey and property information indicated herein is based upon survey information prepared by GANNET FLEMING.
29. Refer to geotechnical report by others for all site work and fill recommendations.

GRAPHICS STANDARDS

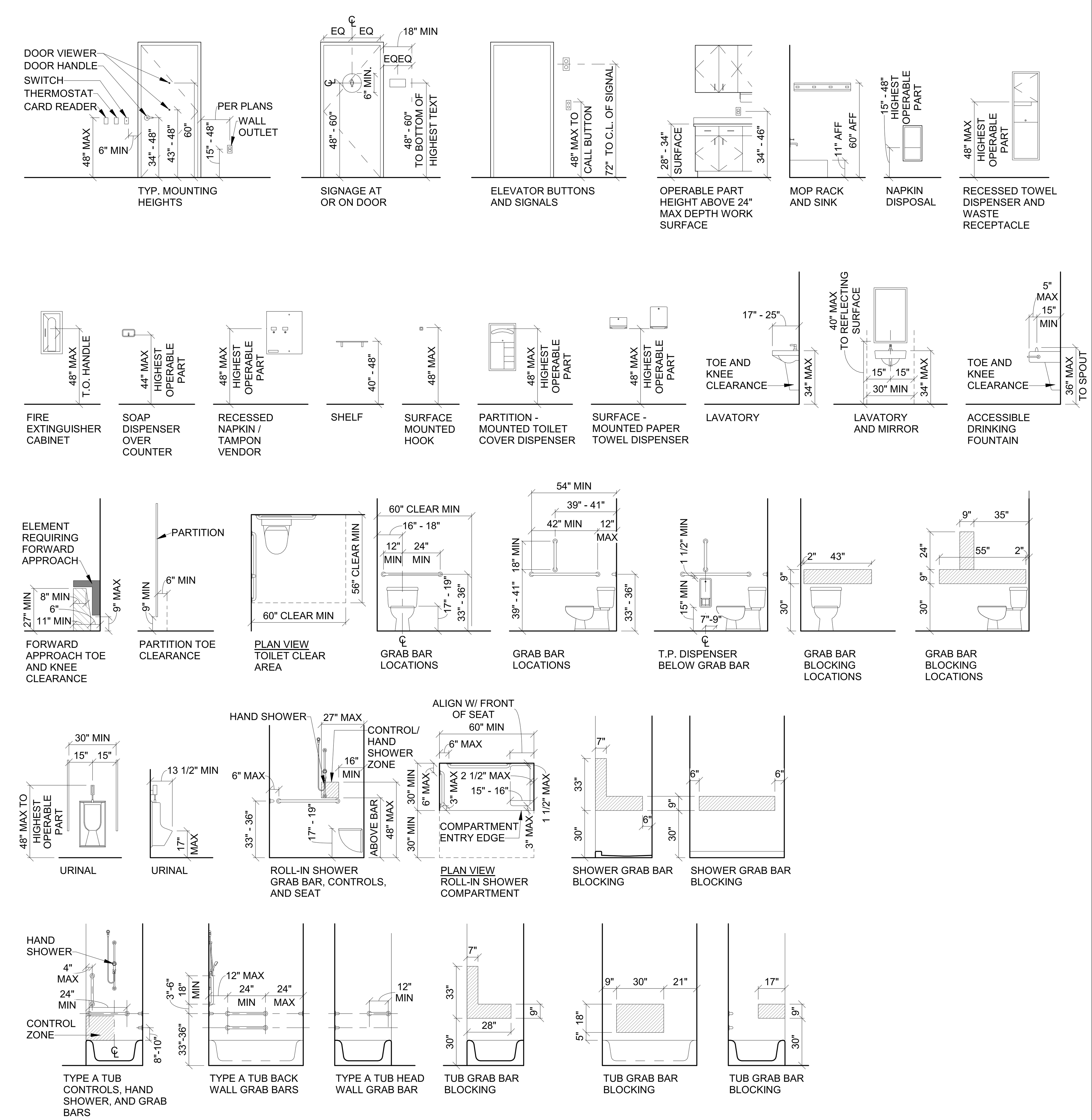


CONCRETE
UNDISTRIBUTED EARTH OR COMPACTED FILL PER GEOTECH
GRANULAR FILL
BRICK OR STONE MASONRY
BATT INSULATION
RIGID INSULATION
METAL
WOOD FINISH
CONCRETE MASONRY UNIT (CMU)
PLYWOOD
GYP BOARD
GLASS (IN ELEVATION)
OR
ROOM NAME/NUMBER
ENLARGED DETAIL
DETAIL TAG
ELEVATION TAG
WALL SECTION TAG
BUILDING SECTION TAG
STRUCTURAL GRID
KEYNOTE
WINDOW TYPE
DOOR NUMBER
PARTITION TYPE
FINISH ID
EQUIPMENT ID
ELEVATION SYMBOL

DRAWING REFERENCE: "SEE 2/A200" INDICATES REFER TO DRAWING 2 ON SHEET A200

ACCESSIBILITY STANDARDS - ICC 2009

GENERAL NOTES:
1. THE FIXTURES AND DEVICES INDICATED HERE ARE FOR EXAMPLE ONLY AND MAY NOT BE REPRESENTATIVE AND/OR PERTINENT TO THE PROJECT.
2. MOUNTING HEIGHTS INDICATED ARE GENERAL IN NAUTRE AND MAY BE SUPERCEDED BY MORE SPECIFIC INFORMATION ELSEWHERE IN THIS SET OF DOCUMENTS
3. DIMENSIONS ARE TO FACE OF FINISHED SURFACE, TYP.
4. ALL DIMENSIONS SHOULD COMPLY WITH ICC/ANSI A117.1 - 2009
5. ALL DRAWINGS ARE SECTION/ELEVATION UNLESS OTHERWISE NOTED



TYP. MOUNTING HEIGHTS
SIGNAGE AT OR ON DOOR
ELEVATOR BUTTONS AND SIGNALS
OPERABLE PART HEIGHT ABOVE 24" MAX DEPTH WORK SURFACE
MOP RACK AND SINK
NAPKIN DISPOSAL
RECESSED TOWEL DISPENSER AND WASTE RECEPTACLE
FIRE EXTINGUISHER CABINET
SOAP DISPENSER OVER COUNTER
RECESSED NAPKIN / TAMPON VENDOR
SHELF
SURFACE MOUNTED HOOK
PARTITION - MOUNTED TOILET COVER DISPENSER
SURFACE - MOUNTED PAPER TOWEL DISPENSER
LAVATORY
LAVATORY AND MIRROR
ACCESSIBLE DRINKING FOUNTAIN
FORWARD APPROACH TOE AND KNEE CLEARANCE
PARTITION TOE CLEARANCE
PLAN VIEW TOILET CLEAR AREA
GRAB BAR LOCATIONS
GRAB BAR LOCATIONS
T.P. DISPENSER BELOW GRAB BAR
GRAB BAR BLOCKING LOCATIONS
GRAB BAR BLOCKING LOCATIONS
URINAL
URINAL
ROLL-IN SHOWER GRAB BAR, CONTROLS, AND SEAT
PLAN VIEW ROLL-IN SHOWER COMPARTMENT
SHOWER GRAB BAR BLOCKING
SHOWER GRAB BAR BLOCKING
TYPE A TUB CONTROLS, HAND SHOWER, AND GRAB BARS
TYPE A TUB BACK WALL GRAB BARS
TYPE A TUB HEAD WALL GRAB BAR
TUB GRAB BAR BLOCKING
TUB GRAB BAR BLOCKING
TUB GRAB BAR BLOCKING

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REGISTERED ARCHITECT 50793 DAVID S. WILLIAMS 3-26-2021 Date Signed ARIZONA, U.S.A.

DESERT MOUNTAIN CLUB
STORAGE & LAUNDRY FACILITY
10550 Desert Hills Dr, Scottsdale, AZ 85262
CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

33-DR-2020

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SHEET TITLE:
GENERAL NOTES, ABBREVIATIONS, ACCESSIBILITY

SHEET NUMBER:
A001

Drawing: C:\Users\mbroussard\Documents\DESERT MOUNTAIN_DISTRIBUTION_CD_R20_mbroussardDTJ.rvt
Last Saved:

CODE SUMMARY

APPLICABLE CODES/STANDARDS:
2015 INTERNATIONAL BUILDING CODE - ORD. 4284 (2015 IBC)
2015 INTERNATIONAL FUEL GAS CODE (2015 IFGC)
2015 INTERNATIONAL PLUMBING CODE (2015 IPC)
2015 INTERNATIONAL MECHANICAL CODE (2015 IMC)
2014 NATIONAL ELECTRICAL CODE (2014 NEC)
2015 INTERNATIONAL ENERGY CONSERVATION CODE (2015 IECC)
2015 INTERNATIONAL FIRE CODE - ORD. 4283 (2015 IFC)
ICC/ANSI A117.1-2009 ACCESSIBILITY STANDARDS

PROJECT DESCRIPTION:
THE STORAGE AND LAUNDRY FACILITY IS FOR DELIVERIES, STORAGE AND DISTRIBUTION OF FOOD AND BEVERAGE PRODUCTS, AND LAUNDRY FOR THE DESERT MOUNTAIN FACILITIES. THE DISTRIBUTION CENTER WILL BE COMPRISED OF REFRIGERATED AND DRY STORAGE, OFFICE, WORK STATION, A REPACKING STATION, AND A THREE BAY LOADING DOCK. THE LAUNDRY FACILITY WILL BE COMPRISED OF WASHERS AND DRYERS, FOLDING, PRESSING, AND STAFF FACILITIES.

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION

LAUNDRY	F-1
DRY STORAGE	S-1
LIQUOR STOR.	S-1
BEER AND WINE STOR.	S-1
COOLERS AND FREEZERS	S-2
OFFICE	B
JANITOR	S-1
REPACK STATION	S-1
MECH	S-1

CHAPTER 4: SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY
SECTION 413.1: COMBUSTIBLE STORAGE - GENERAL - HIGH-PILED STOCK OR RACK STORAGE IN ANY OCCUPANCY GROUP SHALL COMPLY WITH THE INTERNATIONAL FIRE CODE.

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

IBC GROSS AREA

Level	NAME	INTERIOR AREA	EXTERIOR AREA	AREA CALCULATION TOTAL	IS INTERIOR AREA	NOTES
Level 1	Laundry	2533 SF	0 SF	2533 SF	Yes	
Level 1	STORAGE	5929 SF	0 SF	5929 SF	Yes	
Level 1		8463 SF	0 SF	8463 SF		
Building Total		8463 SF	0 SF	8463 SF		

TABLE 504.3 - ALLOWABLE BUILDING HEIGHT
S-1 OCCUPANCY 60' ABOVE GRADE (SPRINKLERED)

TABLE 504.4 - ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE
S-1 OCCUPANCY 2 STORY (SPRINKLERED)

TABLE 506.2 - ALLOWABLE AREA FACTOR
S-1 OCCUPANCY 36,000 SF TYPE V-B CONSTRUCTION, SPRINKLERED

SECTION 508: MIXED USE AND OCCUPANCY
SECTION 508.3 - NONSEPARATED OCCUPANCIES
508.3.1 - Occupancies are individually classified in accordance with section 302.1 as identified above - most restrictive occupancy allows V-B construction
508.3.1 - None of the restrictions in chapter 9 apply to these uses (903.2)
508.3.2 - Most restrictive allowable building area and height are not exceeded - ws type V-B
508.3.3 - No separation required - Exceptions do not apply

CHAPTER 6: TYPES OF CONSTRUCTION

TYPE V-B, SPRINKLERED

TABLE 601 AND 602:
BELOW ARE FIRE-RESISTANCE RATING REQUIREMENTS PER IBC TABLE 601 (BUILDING ELEMENTS) AND TABLE 602 (EXTERIOR WALLS) FOR TYPE V CONSTRUCTION

	TABLE 601	TABLE 602
STRUCTURAL FRAME	0 HR	
BEARING WALLS (EXTERIOR AND INTERIOR)	0 HR	
NON-BEARING WALLS - EXTERIOR (TABLE 602)	0 HR	0 HR WHERE x > 30' FIRE SEPARATION DISTANCE
NON-BEARING WALLS - INTERIOR	0 HR	
FLOOR CONSTRUCTION	0 HR	
ROOF CONSTRUCTION	0 HR	

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES
All exterior walls are greater than 30' from interior lot lines and imaginary lot lines, no opening protection required

CHAPTER 8: INTERIOR FINISHES
TABLE 803.11 REQUIRES THAT INTERIOR WALL AND CEILING FINISHES BE CLASS C RATED FOR FLAME SPREAD INDEX

CHAPTER 9: FIRE PROTECTION SYSTEMS
AN APPROVED NFPA 13 AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE PROVIDED PER SECTION 903.3.1.1 - DESIGN BY OTHERS WITH DELAYED SUBMITTAL
PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER SECTION 906

CHAPTER 10: MEANS OF EGRESS

SECTION 1004: OCCUPANT LOAD
TABLE 1004.1.2

AREA OCCUPANCY LOAD SUMMARY

Name	OCCUPANT GROUP	AREA	IBC CHAPTER 10 EGRESS REQUIREMENTS	OCCUPANT LOAD FACTOR	DESIGN OCCUPANT LOAD
OFFICE	B	182 SF	Business Areas	100	2
LAUNDRY	F-1	2551 SF	Industrial areas	100	26
MECH/FIRE	S-1	241 SF	Accessory storage area, mechanical equipment room	300	1
LIQ. STOR.	S-1	220 SF	Accessory storage area, mechanical equipment room	300	1
WAREHOUSE	S-1	5301 SF	Warehouses	500	11
Total:		8495 SF			41

SECTION 1006: NUMBER OF EXITS AND EXIT ACCESS DOORWAYS

PER TABLE 1006.3.2(2):
F AND B OCCUPANCIES WITH AN OCCUPANT LOAD GREATER THAN 49 REQUIRE MORE THAN 1 EXIT
S OCCUPANCIES WITH AN OCCUPANT LOAD GREATER THAN 29 REQUIRE MORE THAN 1 EXIT

	REQUIRED EXITS	PROVIDED EXITS
F	1	2
B	1	2

SECTION 1006: EXIT ACCESS
PER TABLE 1006.2.1 - COMMON PATH OF EGRESS TRAVEL

F OCCUPANCY	100 FEET (AUTOMATIC SPRINKLER SYSTEM)
S OCCUPANCY	100 FEET (AUTOMATIC SPRINKLER SYSTEM)
B OCCUPANCY	100 FEET (AUTOMATIC SPRINKLER SYSTEM)

SECTION 1017: EXIT ACCESS TRAVEL DISTANCE
PER TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE

F-1 OCCUPANCY	250 FEET (WITH AUTOMATIC SPRINKLER SYSTEM)
S-1 OCCUPANCY	250 FEET (WITH AUTOMATIC SPRINKLER SYSTEM)
B OCCUPANCY	300 FEET (WITH AUTOMATIC SPRINKLER SYSTEM)

CHAPTER 12: INTERIOR ENVIRONMENT
BUILDINGS WILL BE MECHANICALLY VENTILATED - SEE MECHANICAL DRAWINGS

CHAPTER 29: PLUMBING SYSTEMS
SECTION 2902: MINIMUM PLUMBING FIXTURES
PER TABLE 2902.1:

NOTE: IN LIEU OF DRINKING FOUNTAIN, POTABLE WATER AND CUPS SHALL BE PROVIDED IN KITCHENETTE

SECTION 2902.6: SMALL OCCUPANCIES
Drinking fountains shall not be required for an occupant load of 15 or fewer - NOT PROVIDED IN STORAGE AREA

IBC CHAPTER 29 REQUIRED PLUMBING FIXTURE

	OCCUPANCY		WATER CLOSETS				LAVATORIES				DRINKING FOUNTATIN		
Name	OCCUPANT GROUP	LOAD	RATIO (1/X)	MALE	RATIO (1/X)	FEMALE	RATIO (1/X)	MALE	RATIO (1/X)	FEMALE	RATIO (1/X)	DRINKING FOUNTAINS	SERVICE SINK
LAUNDRY	F-1	26	100	0.13	100	0.13	100	0.13	100	0.13	400	0.065	1
WAREHOUSE	S-1	11	100	0.055	100	0.06	100	0.055	100	0.055	1000	0.011	1
OFFICE	B	2	25	0.04	25	0.04	40	0.025	40	0.025	100	0.02	1
MECH/FIRE	S-1	1	100	0.005	100	0.01	100	0.005	100	0.005	1000	0.001	1
LIQ. STOR.	S-1	1	100	0.005	100	0.01	100	0.005	100	0.005	1000	0.001	1
TOTAL				1 REQ'D		1 REQ'D		1 REQ'D		1 REQ'D		NONE PROVIDED; SEE ABOVE	1 REQ'D

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DESERT MOUNTAIN CLUB
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CODE SUMMARY

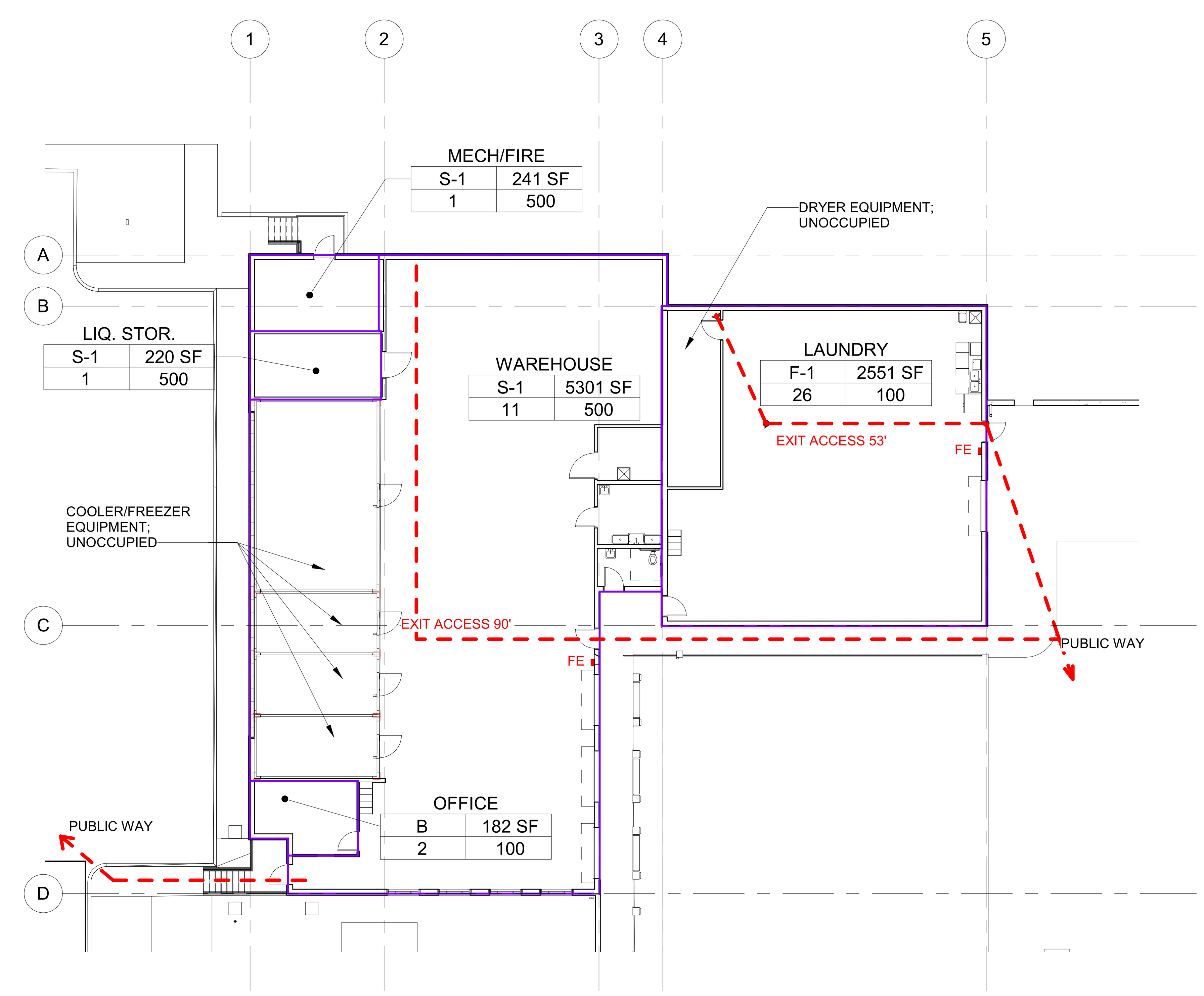
SHEET NUMBER:
A010

CODE PLAN LEGEND

R-2 / 1BR	OCCUPANCY GROUP / ROOM NAME
950	NOMINAL SQ. FT.
200	OCCUPANT LOAD FACTOR
5	NUMBER OF OCCUPANTS
FE	FIRE EXTINGUISHER

EXIT ACCESS TRAVEL DISTANCE

OCCUPANCY	TRAVEL DISTANCE
14	90'-0"
26	53'-0"



1 A011 OCCUPANCY AREAS
SCALE: 1/16" = 1'-0"

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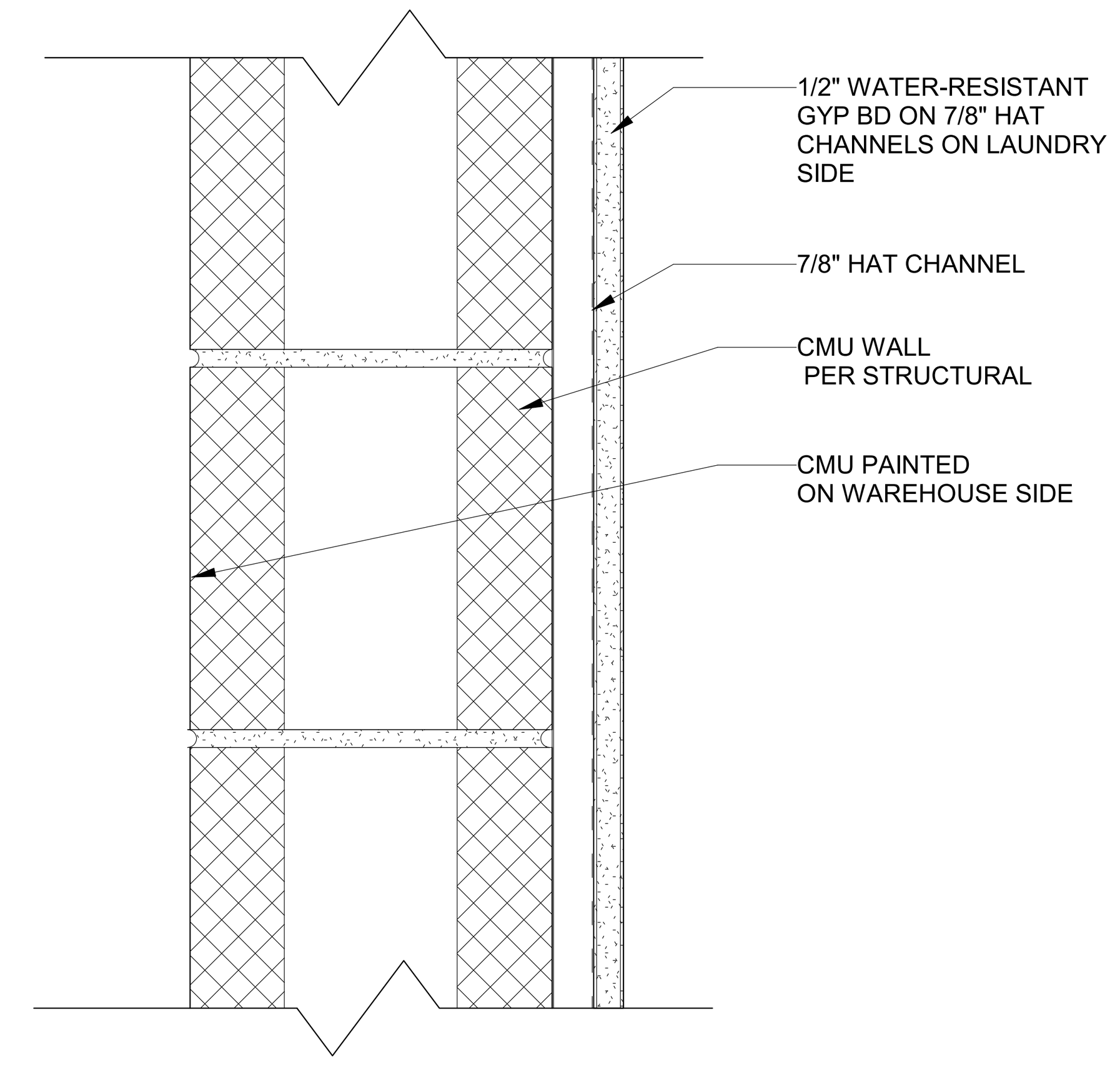
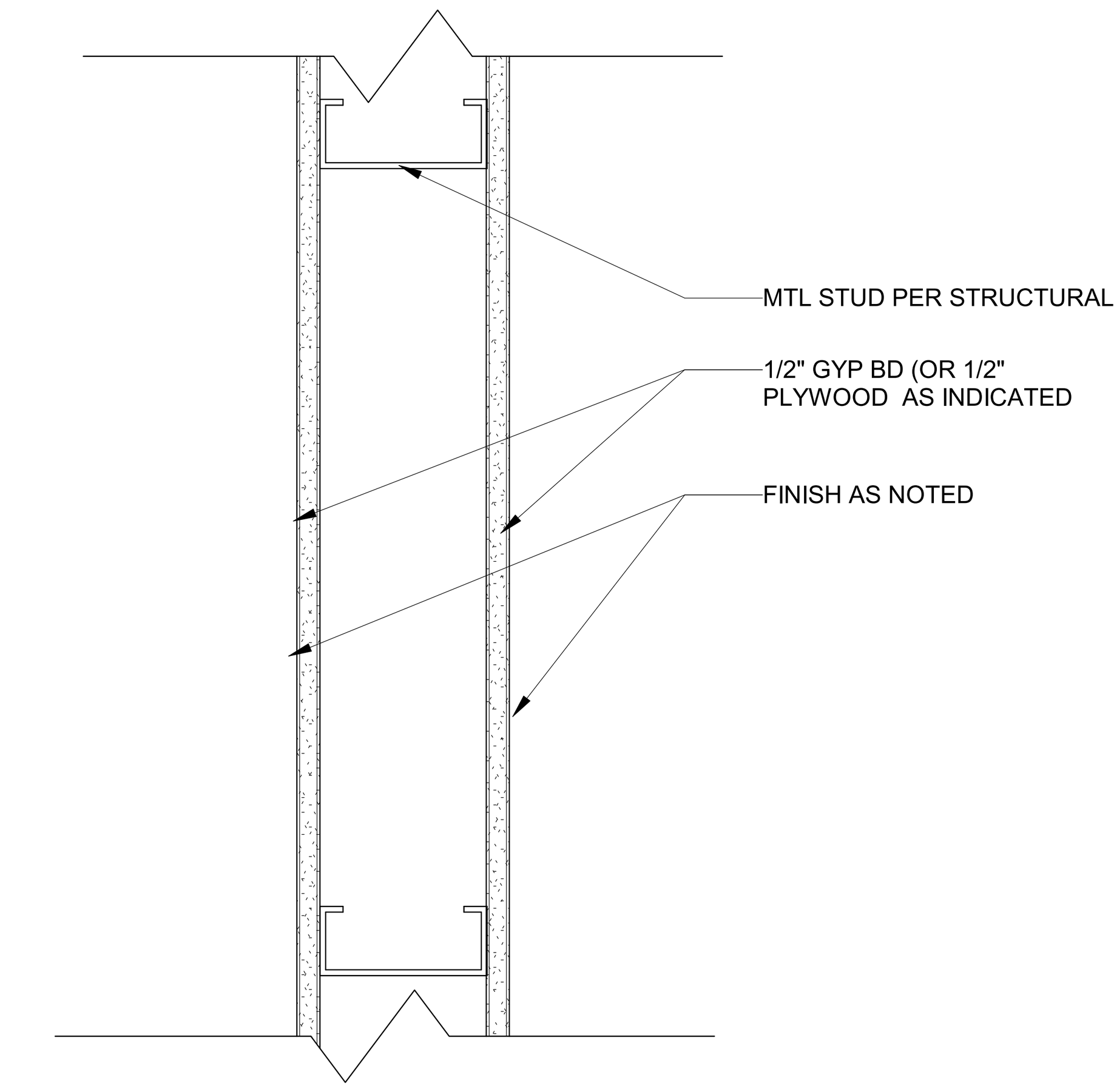


PLAN VIEW

F1. 8" CMU - AS SHOWN
F2. 8" CMU - FRP OVER 1/2" WATER -RESISTANT GYP BD OVER 7/8" HAT CHANNEL ON BOTH SIDES OF WALL

F INTERIOR CMU PARTITION

SCALE: 3" = 1'-0"

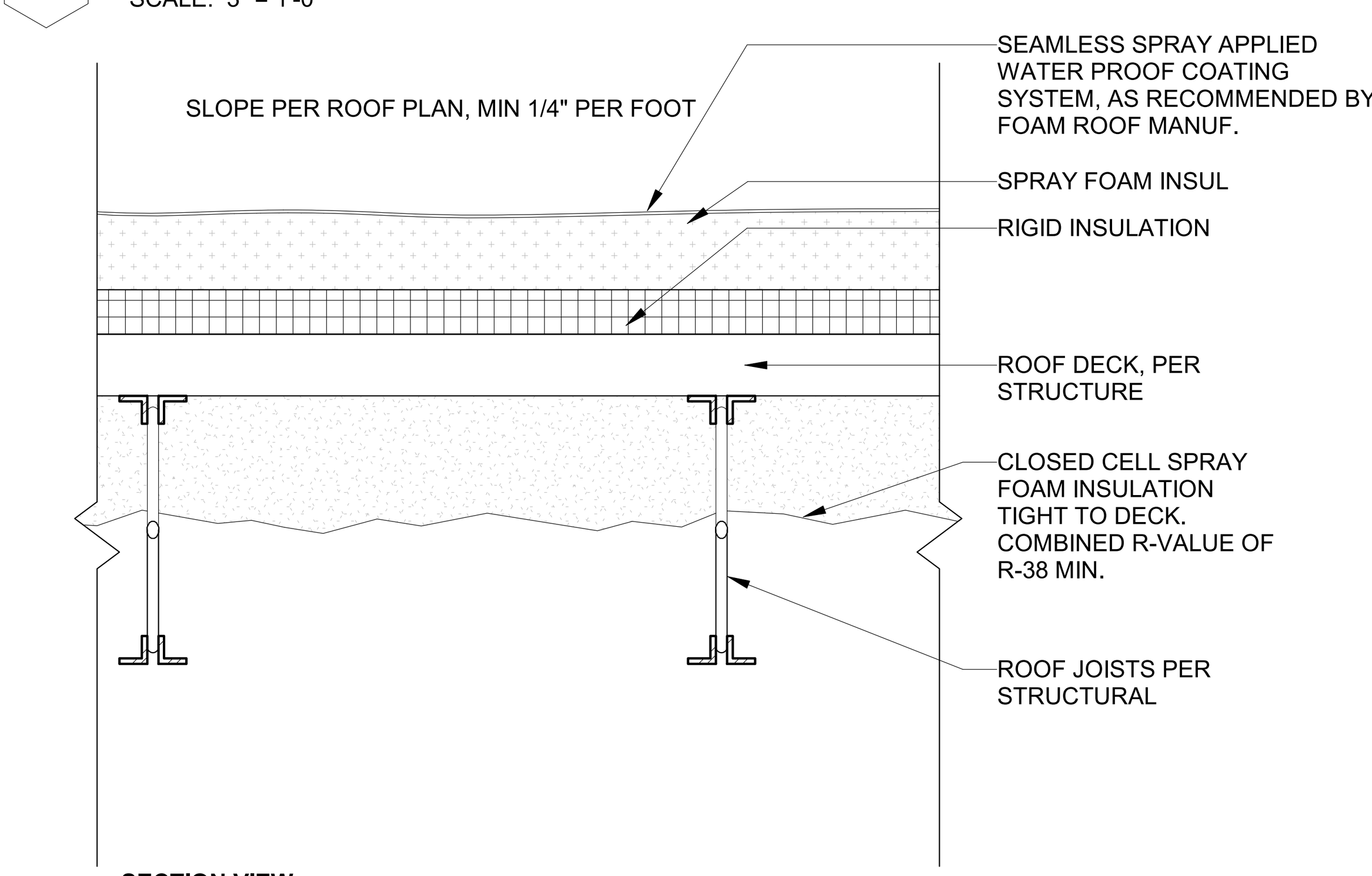


PLAN VIEW

C1. 3 5/8" MTL STUD - AS SHOWN
C2. 3 5/8" MTL STUD - FRP ON 1/2" PLYWOOD ON STORAGE SIDE, 1/2" GYP BD.
C3. 3 5/8" MTL STUD - FRP ON 1/2" PLYWOOD ON STORAGE SIDE, 1/2" WATER-RESISTANT GYP BD.
C4. 6" MTL STUD - FRP ON 1/2" WATER-RESISTANT GYP BD ON BOTH SIDES
C5. 6" MTL STUD - FRP ON 1/2" PLYWOOD ON STORAGE SIDE, 1/2" GYP BD

C INTERIOR MTL STUD PARTITION

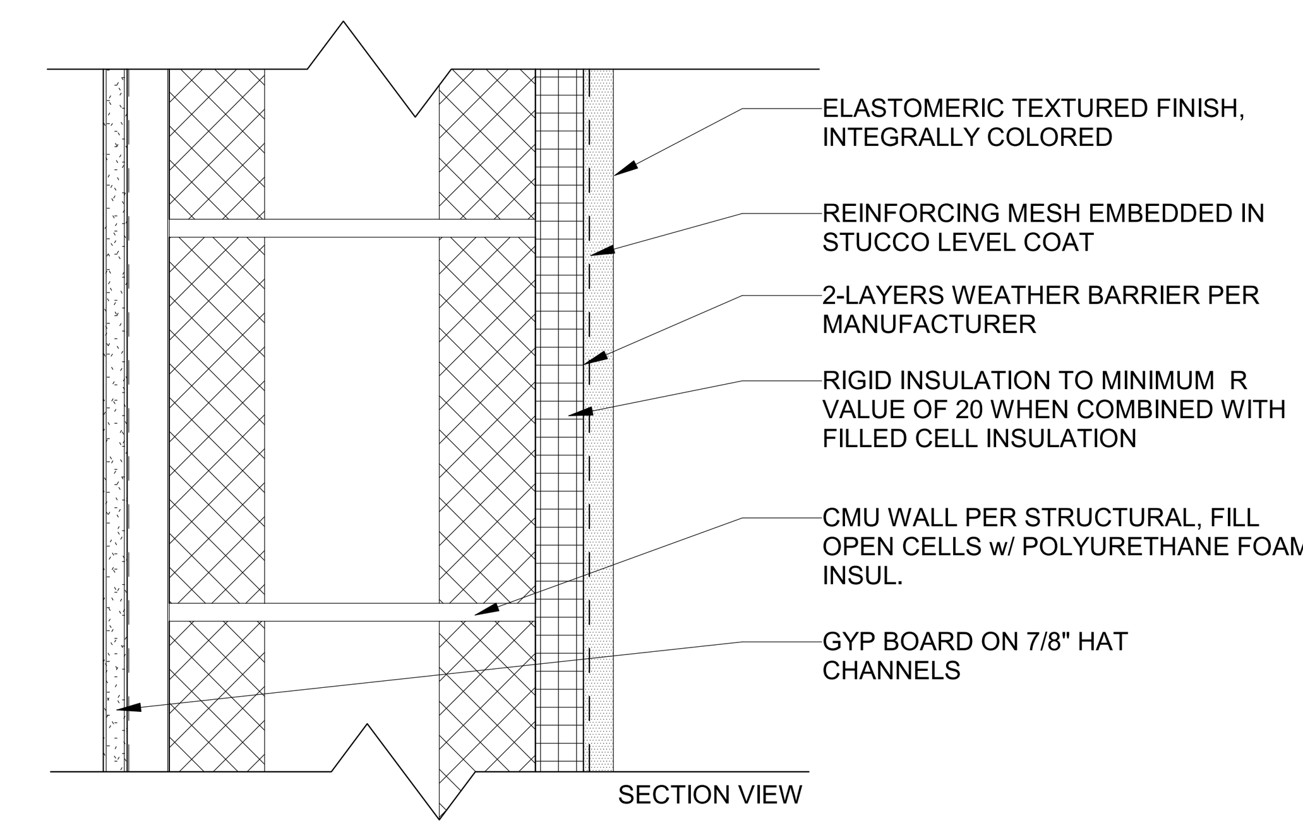
SCALE: 3" = 1'-0"



SECTION VIEW

E FLAT ROOF

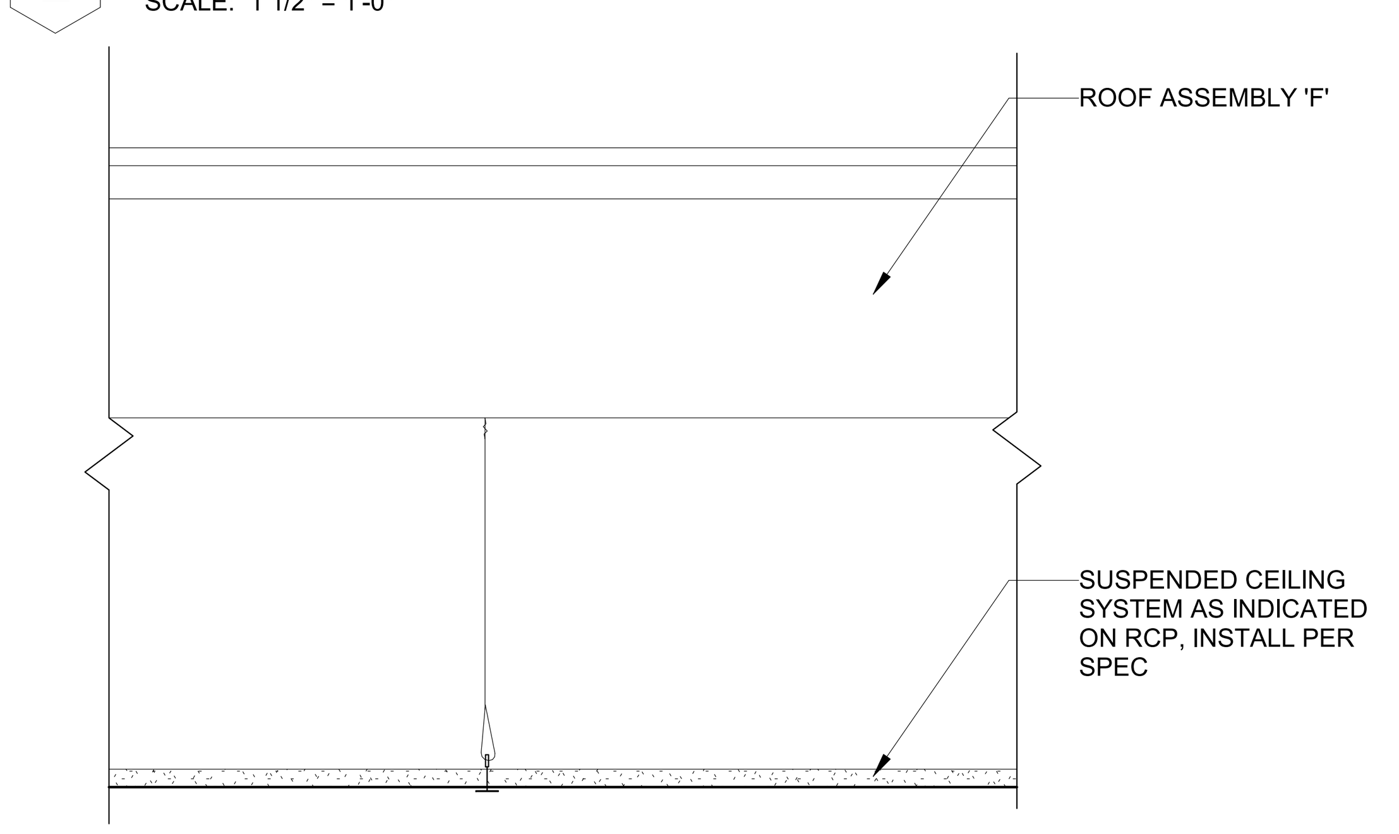
SCALE: 1 1/2" = 1'-0"



B1. 8" - AS SHOWN
B2. 8" - FRP OVER 1/2 WATER-RESISTANT GYP BD OVER 7/8" HAT CHANNELS
B3. 8" - NO GYP BOARD; FILL AND PAINT CMU ON INTERIOR

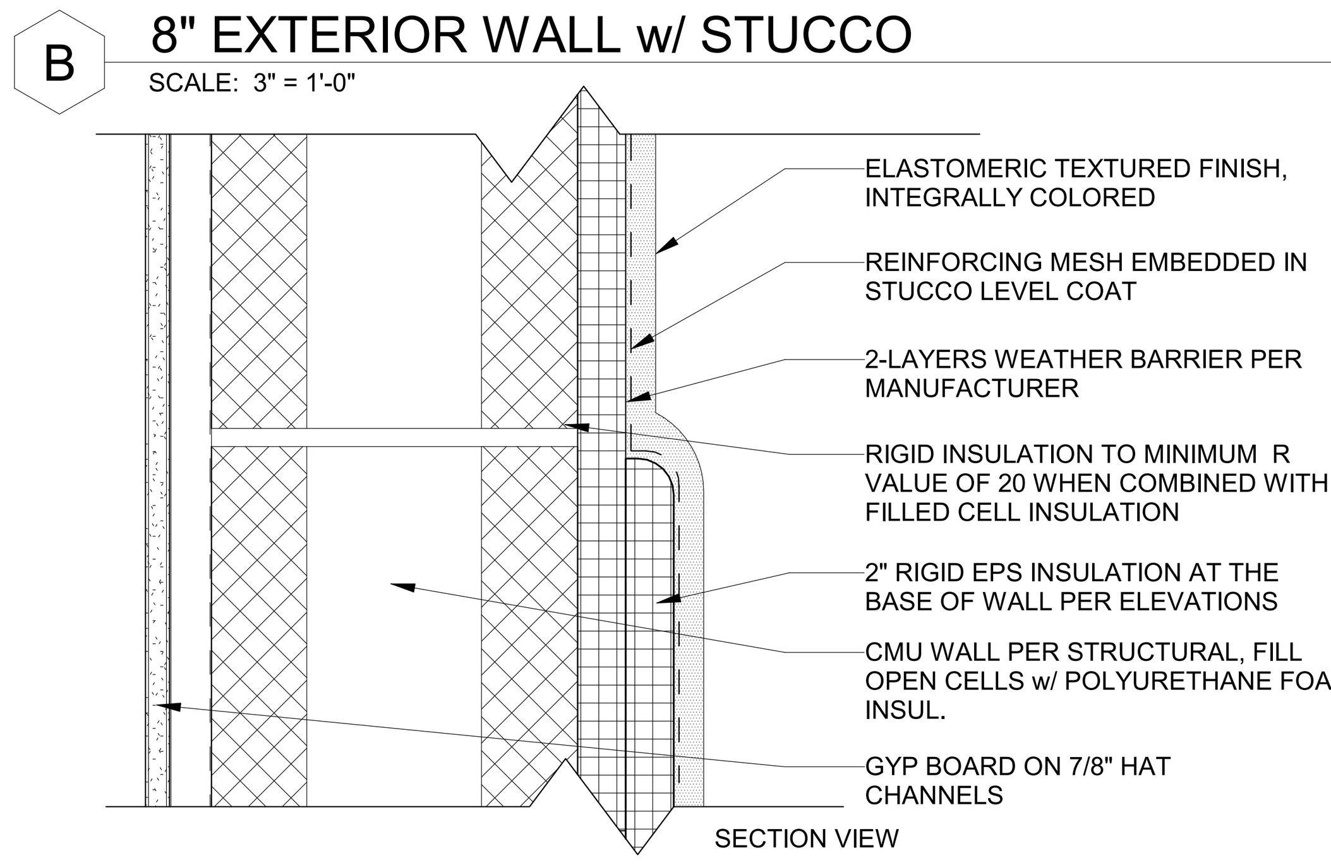
B 8" EXTERIOR WALL w/ STUCCO

SCALE: 3" = 1'-0"



D SUSPENDED CEILING ASSEMBLY

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



A1. 8" - AS SHOWN
A2. 8" - FRP OVER 1/2 WATER-RESISTANT GYP BD OVER 7/8" HAT CHANNELS
A3. 8" - NO GYP BOARD; FILL AND PAINT CMU ON INTERIOR

A 8" EXTERIOR WALL

SCALE: 3" = 1'-0"

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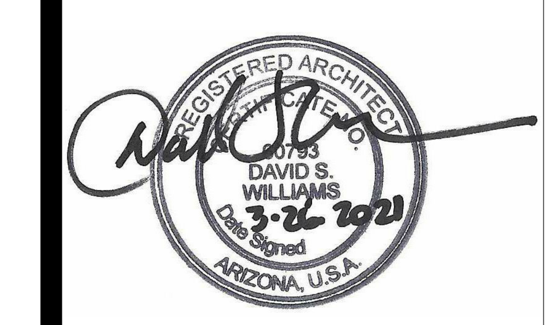

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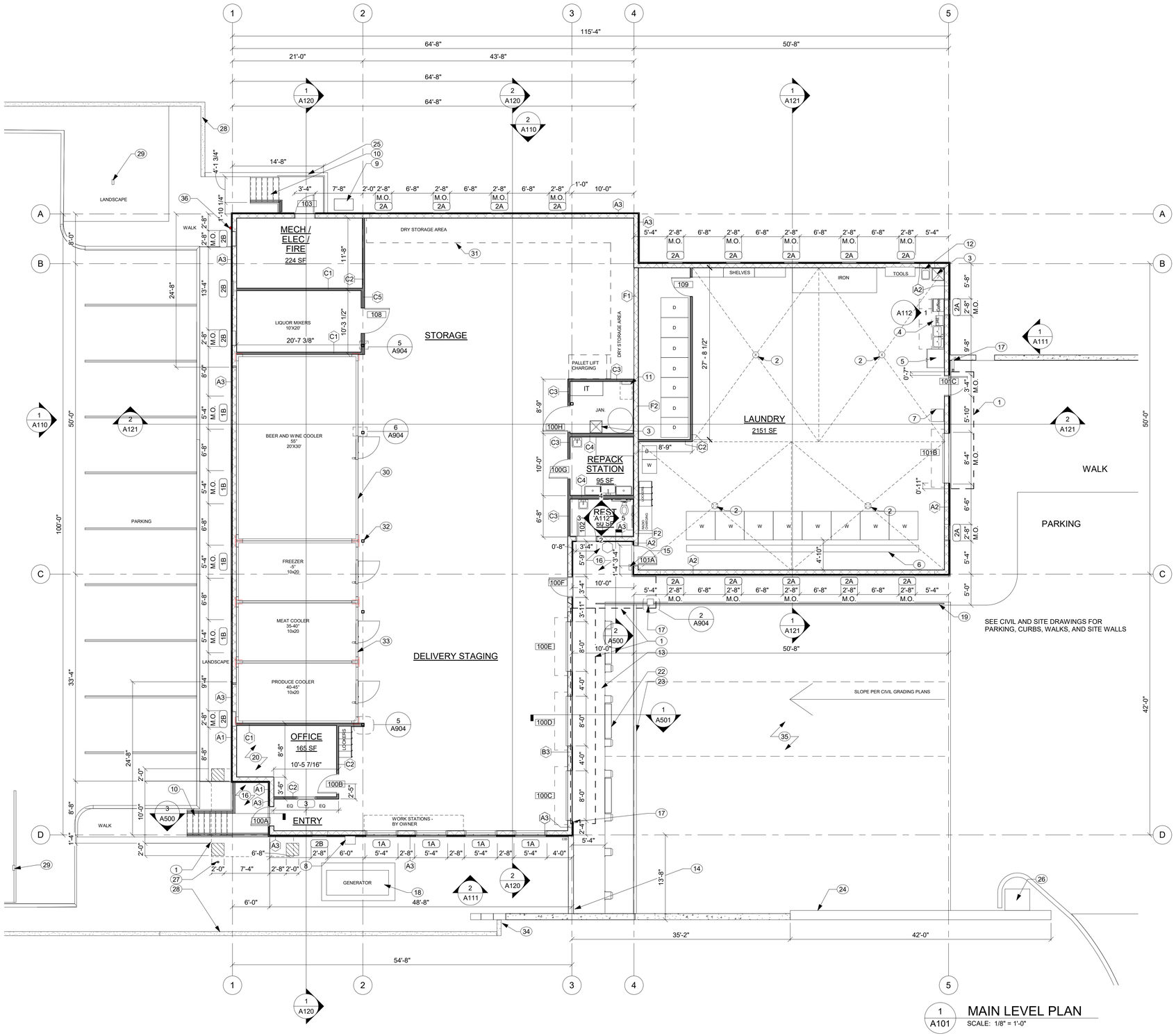

1 A101 **MAIN LEVEL PLAN**
SCALE: 1/8" = 1'-0"

North

PLAN NOTES

1. ALL DIMENSIONS INDICATED ARE TO FACE OF FRAMING OR STRUCTURE, UNO.
2. REFER TO STRUCTURAL DRAWINGS FOR ALL FOUNDATION AND CONCRETE SLAB SPECIFICATIONS.
3. ALL WINDOW AND DOOR DIMENSIONS ARE SHOWN AS MASONRY OPENINGS.
4. ALL INTERIOR PARTITIONS TO BE 3 5/8" MTL STUD, UNO.
5. ALL EXTERIOR WALLS TO BE 8" CMU, UNO.
6. ALL INTERIOR WALL FINISH IN LAUNDRY TO BE FRP ON GYP BD U.N.O.
7. ALL EQUIPMENT TO BE FURNISHED AND INSTALLED BY CONTRACTOR. COORDINATE ALL DIMENSIONS, CLEARANCES, UTILITY HOOK-UPS, ECT.

PLAN NOTES

1 EXTENTS OF ROOF OVERHANG ABOVE
2 FLOOR DRAIN, SLOPE FLOOR WHERE INDICATED
3 MOP SINK, WITH DRAIN
4 COUNTER TOP W/ UNDERMOUNT CABINETS
5 REFRIGERATOR
6 RECESSED DRAIN TROUGH, COORD. w/SUPPLIER
7 SCALE
8 GAS METER
9 ELECTRIC METER
10 EXTERIOR METAL STAIR; PRE-ENGINEERED
11 ROOF ACCESS LADDER
12 EYEWASH AND HAND SINK
13 RAISED CONC. DOCK
14 CMU SCREEN WALL
15 TIME CLOCK
16 COVERED ENTRY
17 DOWNSPOUT
18 PROVIDE GAS POWERED GENERATOR. VERIFY CLEARANCES AND MAKE CONNECTIONS TO BUILDING
19 RETAINING WALL W/ GUARDRAIL
20 OFFICE WALL FINISH TO BE GYP BD, PT
21 CLERESTORY WINDOWS ABOVE, REF. ELEVATIONS
22 MECHANICAL DOCK LEVELERS AND BUMPERS
23 VALLEY GUTTER, SEE CIVIL
24 CONC. C.I.P. WALL SEE STRUCT. DWGS
25 RETAINING WALL , SEE LANDSCAPE DWGS
26 GATE OPENER EQUIPMENT PAD, SEE SITE/CIVIL
27 RAIN CHAIN
28 EXISTING SITE WALL TO REMAIN
29 COLUMN FOR EXISTING SHADE STRUCTURE TO REMAIN
30 PONY WALL ABOVE LINE OF COOLERS. HOLD COOLER WALL BEHIND COLUMNS
31 PROPOSED STORAGE SHELVING/ RACKS BY OWNER
32 STRUCTURAL COLUMNS; FIELD MEASURE DIMENSIONS FOR FREEZER/COOLER LAYOUT
33 PRE-FABRICATED FREEZER/COOLER UNITS. COORD. w/MANUF.
34 CONNECT NEW RETAINING WALL TO EXISTING, SEE LANDSCAPE
35 DELIVERY TRUCK LOADING
36 WALL-MOUNTED FDC, ALARM BELL ABOVE

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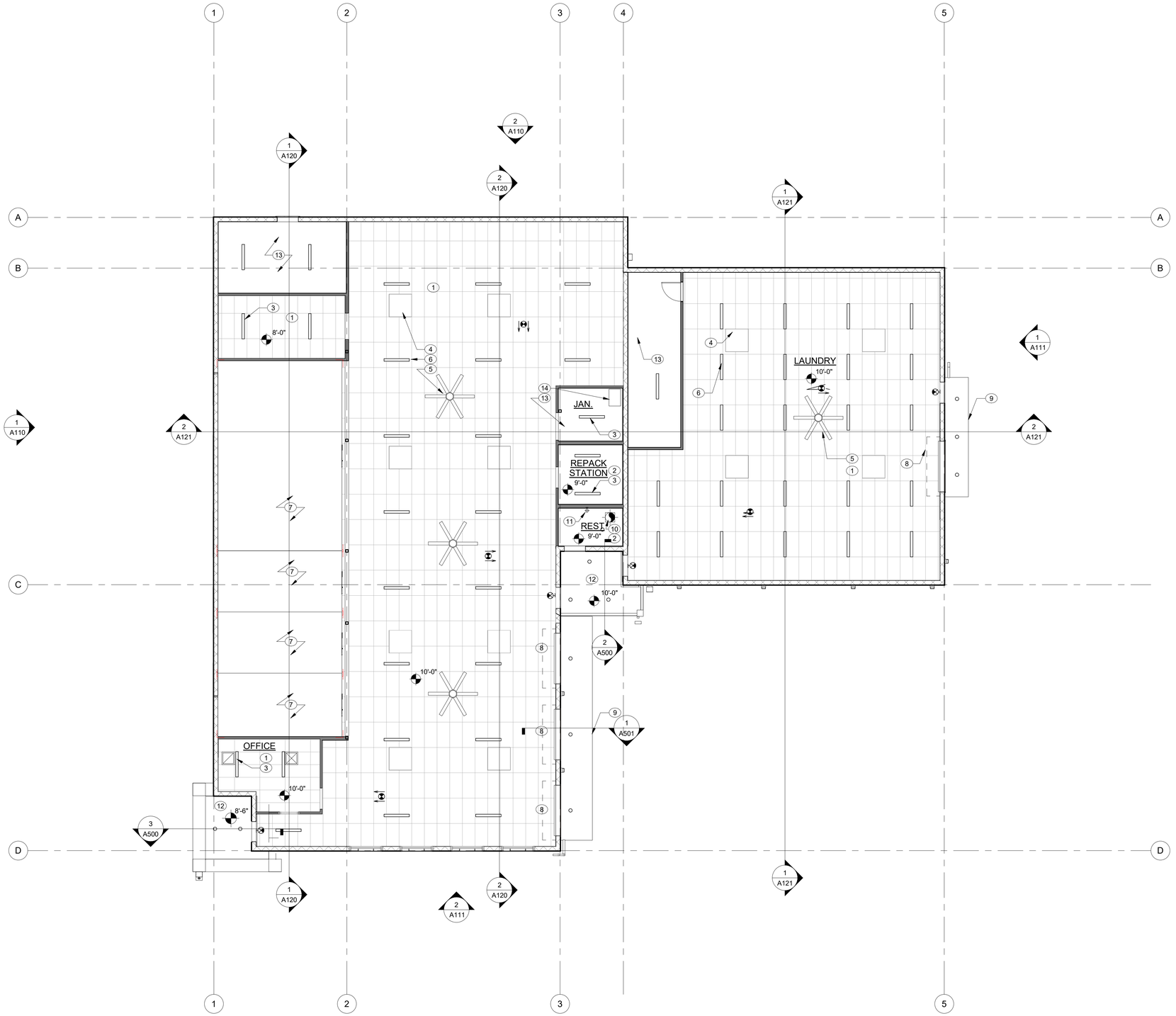
SHEET NUMBER: A101



1 A102 MAIN LEVEL RCP
SCALE: 1/8" = 1'-0"

North

RCP PLAN NOTES

1. ALL DIMENSIONS INDICATED ARE TO FACE OF FRAMING OR STRUCTURE, U.N.O
2. ALL CEILINGS OPEN TO STRUCTURE U.N.O.

RCP PLAN NOTES

1	DROPPED 2'X4' ACT TILE CLG.
2	DROPPED GYP. BD. CLG.
3	LED LIGHT, SEE ELEC. DWGS.
4	4'X4' SKYLIGHT ABOVE, TYP.
5	CEILING FAN, TYP. SEE ELEC. DWGS.
6	LED LIGHTING, TYP. SEE ELEC. DWGS.
7	CEILING OPEN TO STRUCTURE ABOVE COOLER/FREEZER UNITS
8	OVERHEAD COILING DOOR
9	EXTERIOR ROOF AWNING
10	RESTROOM EXHUAST FAN
11	WALL SCONCE, SEE ELEC. DWGS.
12	COVERED ENTRY, EXTERIOR GYP BD. PAINTED
13	OPEN TO STRUCTURE
14	ROOF ACCESS

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ARIZONA RED ARCHITECTS
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3-26-2021
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MAIN LEVEL RCP

SHEET NUMBER:

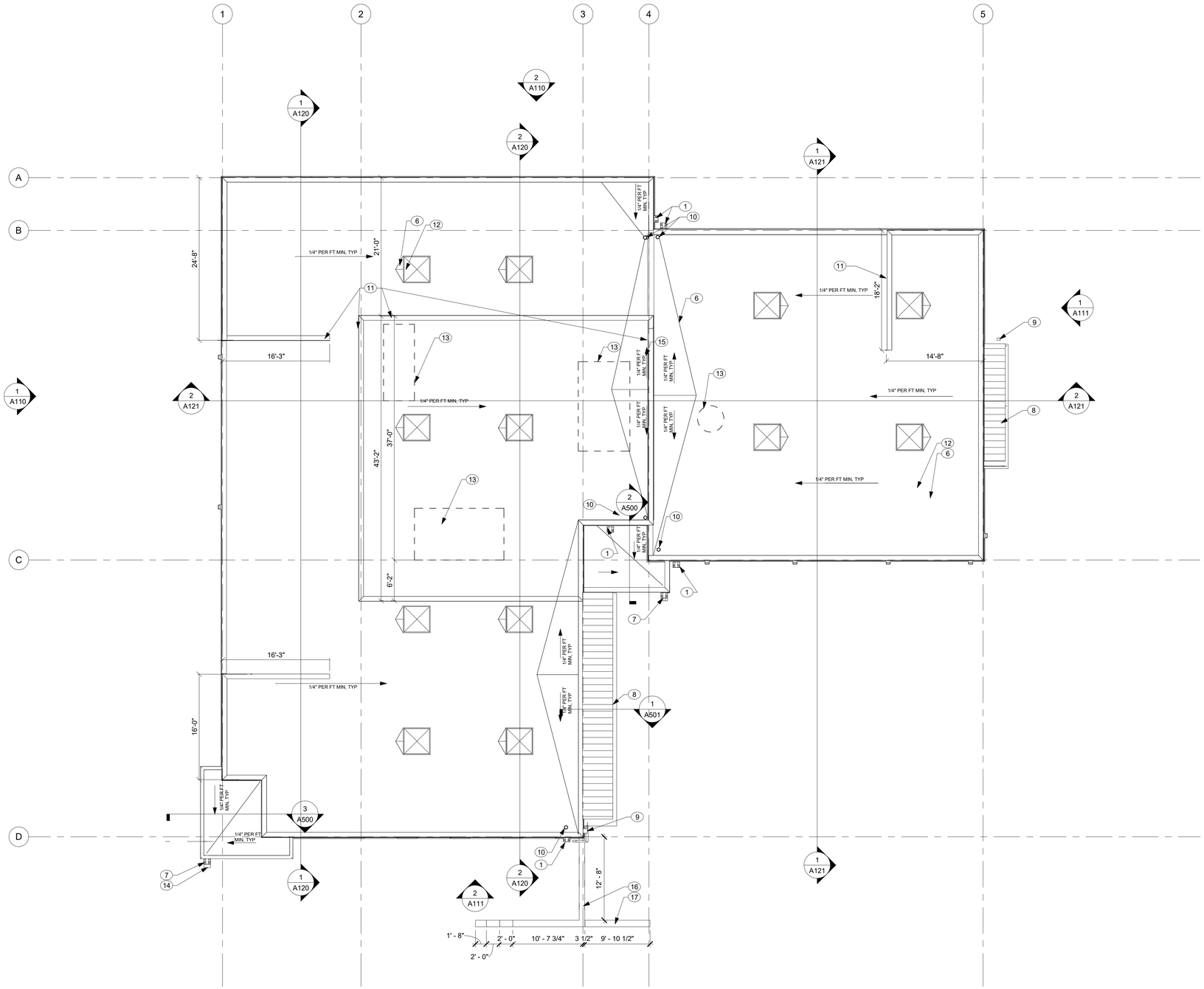
A102

ROOF PLAN NOTES

1. DRAWINGS DEPICT DESIGN INTENT ONLY. SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING PLANS AND TRUSS INFORMATION.
2. ALL ROOF PENETRATIONS SHALL BE FLASHED AND SEALED PER MFR'S RECOMMENDATIONS.
3. VERIFY ALL GUTTER AND DOWNSPOUT LOCATIONS IN THE FIELD WITH BUILDER.

ROOF NOTES

1	OVER FLOW SCUPPER +2" ABOVE PRIMARY ROOF DRAIN
2	NOT USED
3	NOT USED
4	LINE OF WALL BELOW
5	ROOF BELOW
6	ROOF CRICKET
7	SCUPPER W/ DOWNSPOUT / RAINCHAIN
8	LOW-SLOPE METAL ROOF W/ GUTTER
9	DOWNSPOUT
10	ROOF DRAIN
11	SCREEN WALLS WITH DRAINAGE BENEATH
12	4'X4' SKYLIGHT, TYP.
13	MECHANICAL EQUIPMENT, SEE MECHANICAL
14	RAIN CHAIN
15	ROOF ACCESS HATCH
16	CMU SCREEN WALL w/DRAIN SLOTS AT BASE
17	CMU SCREEN WALL



1 A103 ROOF PLAN
SCALE: 1/8" = 1'-0"

0' 4' 8' 16'
North

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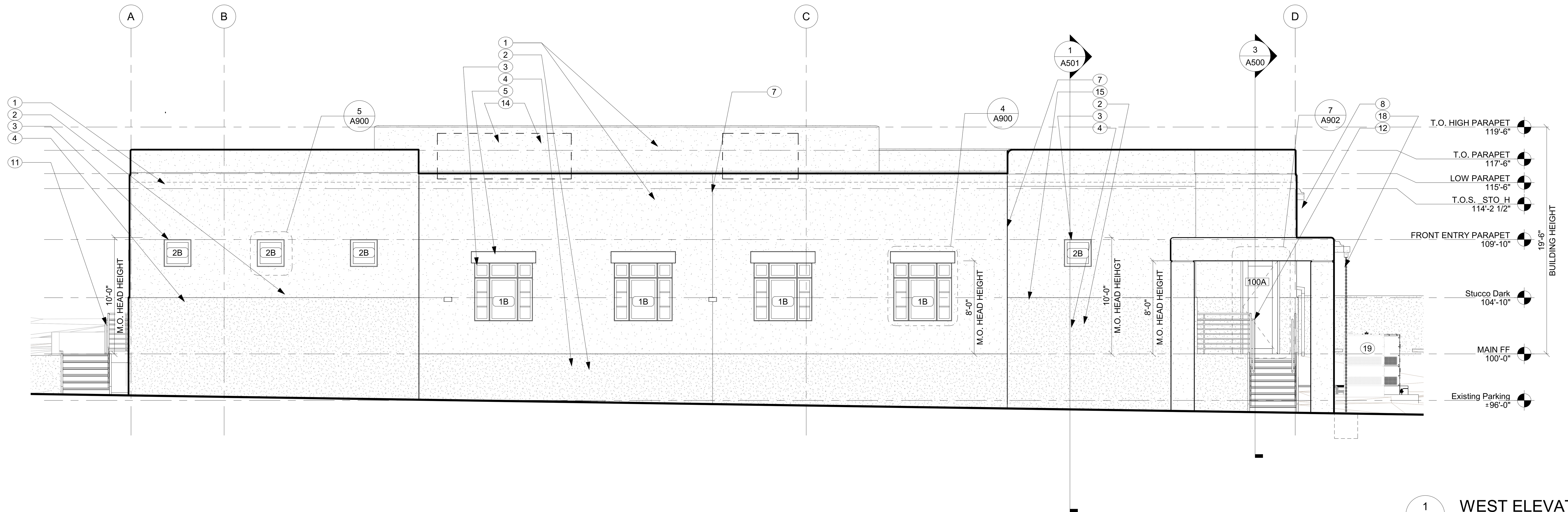
ROOF PLAN

SHEET NUMBER:

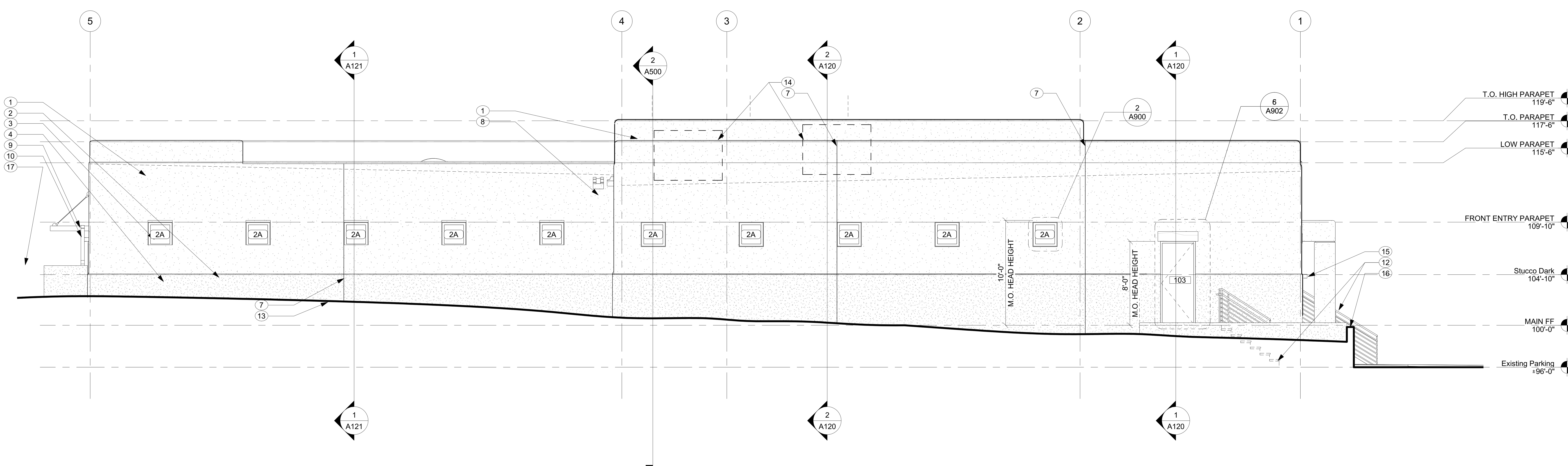
A103

ELEVATION NOTES

1 LIGHT STUCCO, TO MATCH LIGHT STUCCO ON EXISTING FAIRWAYS BLDG
2 DARK STUCCO, TO MATCH DARK STUCCO ON EXISTING FAIRWAYS BLDG.
3 FIXED ALUMINIUM FRAME WINDOWS , TYP., TO MATCH STYLE AND PROPORTION OF EXISTING FAIRWAYS BLDG, COLOR TO BE BRICK RED
4 4" RIGID INSULATION @ WALL STEPS
5 TIMBER HEADER, TO MATCH EXISTING ON FAIRWAYS BLDG.
6 1B & 2B TYPE WINDOW IS OPAQUE SPANDREL GLASS IN ALUMINIUM FRAME OVER SOLID SHEATHING
7 VERTICAL CONTROL JOINT @ 25' MAX
8 SCUPPER , TO MATCH EXISTING ON FAIRWAYS BLDG.
9 METAL AWNING
10 DOWNSPOUT
11 RAILING
12 EXTERIOR STAIR ,RAIL, & LANDING; PRE-ENGINEERED
13 FIN. GRADE, SEE LANDSCAPE/CIVIL
14 MECHANICAL EQUIPMENT BEHIND PARAPET SCREEN WALL. COORD w/ MECHANICAL
15 EXTERIOR LIGHT FIXTURE, SEE ELECTRICAL
16 EXISTING SITE WALL TO REMAIN, VERIFY HEIGHT & LOCATION
17 SITE WALL, SEE LANDSCAPE AND CIVIL DRAWINGS
18 RAIN CHAIN
19 PROVIDE GAS POWERED GENERATOR. VERIFY CLEARANCES AND MAKE CONNECTIONS TO BUILDING
20 DOCK BUMPERS w/LEVELERS
21 DOCK BUMPERS ONLY
22 CMU SCREEN WALL w/DRAIN SLOTS AT BASE
23 CONC. RTG. WALL , SEE STRUCTURAL.
24 SITE WALL BEYOND, SEE LANDSCAPE
25 SITE WALL, SEE LANDSCAPE
26 SERVICE RAMP, SEE CIVIL FOR GRADES



1 A110 **WEST ELEVATION**
SCALE: 3/16" = 1'-0"



2 A110 **NORTH ELEVATION**
SCALE: 3/16" = 1'-0"

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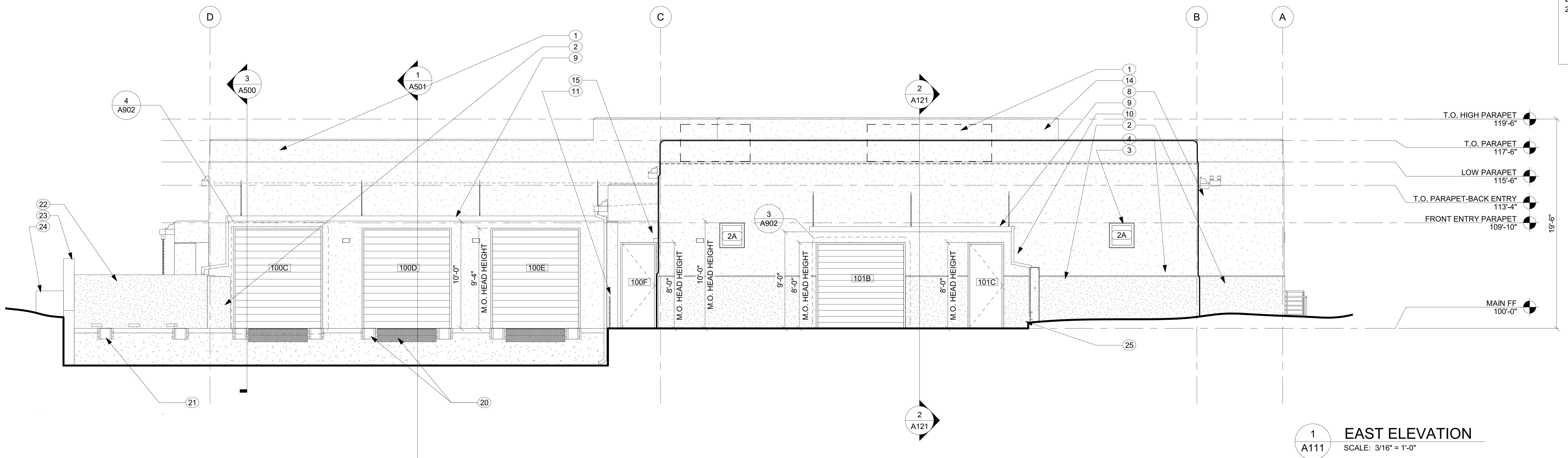
ELEVATIONS

SHEET NUMBER:
A110

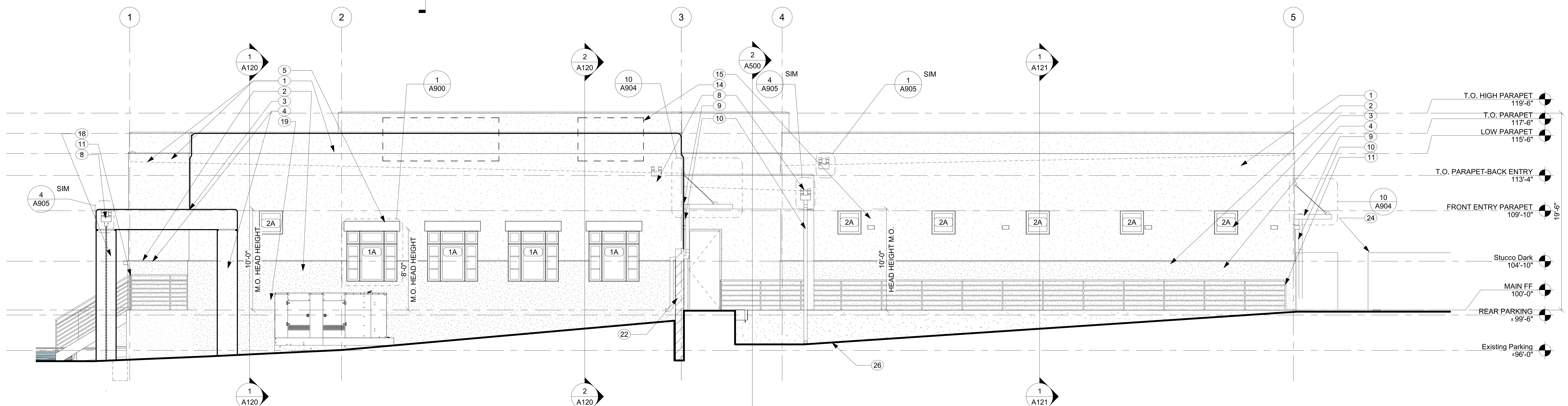
Drawing: C:\Users\mbroussard\Documents\DESERT MOUNTAIN DISTRIBUTION_CD_R20_mbroussardDTJ.rvt
Last Saved: 3/26/2021

ELEVATION NOTES

1 LIGHT STUCCO, TO MATCH LIGHT STUCCO ON EXISTING FAIRWAYS BLDG
2 DARK STUCCO, TO MATCH DARK STUCCO ON EXISTING FAIRWAYS BLDG.
3 FIXED ALUMINIUM FRAME WINDOWS , TYP., TO MATCH STYLE AND PROPORTION OF EXISTING FAIRWAYS BLDG, COLOR TO BE BRICK RED
4 4" RIGID INSULATION @ WALL STEPS
5 TIMBER HEADER, TO MATCH EXISTING ON FAIRWAYS BLDG.
6 1B & 2B TYPE WINDOW IS OPAQUE SPANDREL GLASS IN ALUMINIUM FRAME OVER SOLID SHEATHING
7 VERTICAL CONTROL JOINT @ 25' MAX
8 SCUPPER , TO MATCH EXISTING ON FAIRWAYS BLDG.
9 METAL AWNING
10 DOWNSPOUT
11 RAILING
12 EXTERIOR STAIR ,RAIL, & LANDING; PRE-ENGINEERED
13 FIN. GRADE, SEE LANDSCAPE/CIVIL
14 MECHANICAL EQUIPMENT BEHIND PARAPET SCREEN WALL. COORD w/ MECHANICAL
15 EXTERIOR LIGHT FIXTURE, SEE ELECTRICAL
16 EXISTING SITE WALL TO REMAIN, VERIFY HEIGHT & LOCATION
17 SITE WALL, SEE LANDSCAPE AND CIVIL DRAWINGS
18 RAIN CHAIN
19 PROVIDE GAS POWERED GENERATOR. VERIFY CLEARANCES AND MAKE CONNECTIONS TO BUILDING
20 DOCK BUMPERS w/LEVELERS
21 DOCK BUMPERS ONLY
22 CMU SCREEN WALL w/DRAIN SLOTS AT BASE
23 CONC. RTG. WALL , SEE STRUCTURAL.
24 SITE WALL BEYOND, SEE LANDSCAPE
25 SITE WALL, SEE LANDSCAPE
26 SERVICE RAMP, SEE CIVIL FOR GRADES



1 A111 EAST ELEVATION
SCALE: 3/16" = 1'-0"



2 A111 SOUTH ELEVATION
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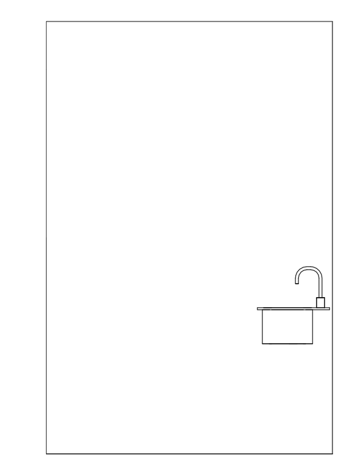
SHEET NUMBER:
A111

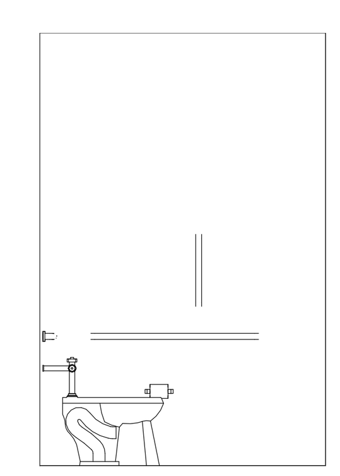
Drawing: C:\Users\mbroussard\Documents\DESERT MOUNTAIN_DISTRIBUTION_CD_R20_mbroussardDTJ.rvt

NOTES

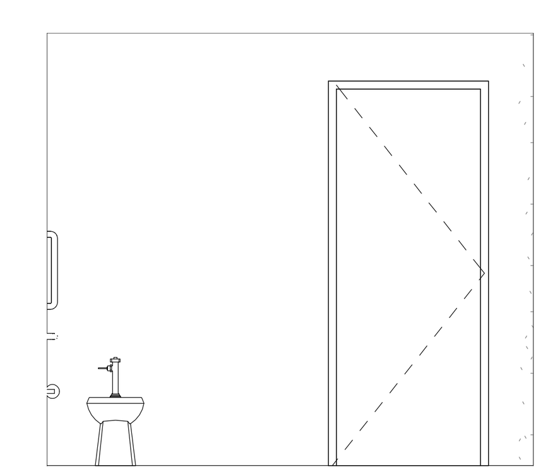
1. SEE SHEET A001 FOR ACCESSIBLE MOUNTING HEIGHTS AND REQUIREMENTS



3 A112 Elevation 1 - b
SCALE: 1/4" = 1'-0"



5 A112 Elevation 1 - d
SCALE: 1/4" = 1'-0"



2 A112 Elevation 1 - a
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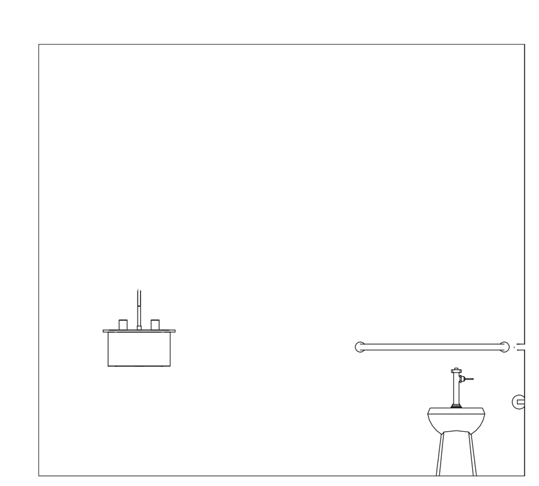

4 A112 Elevation 1 - c
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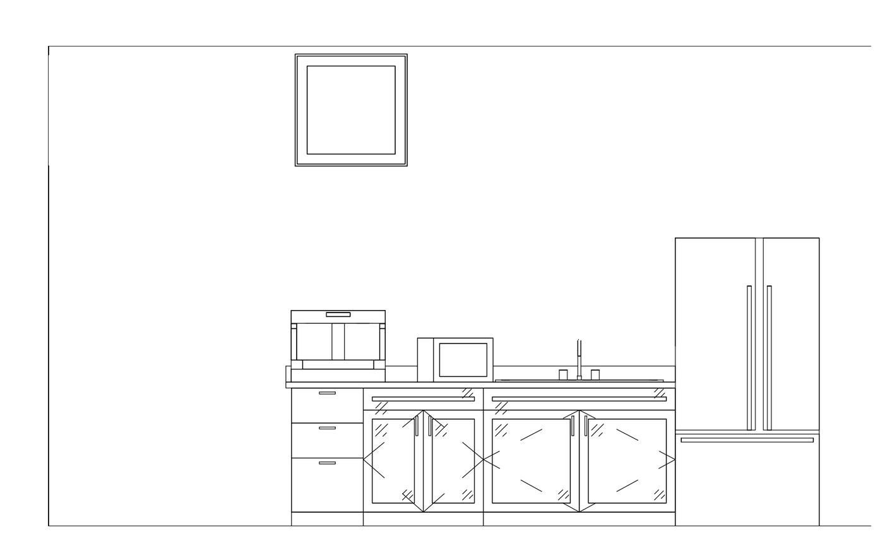

1 A112 KITCHENETTE
SCALE: 1/4" = 1'-0"

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33-DR-2020

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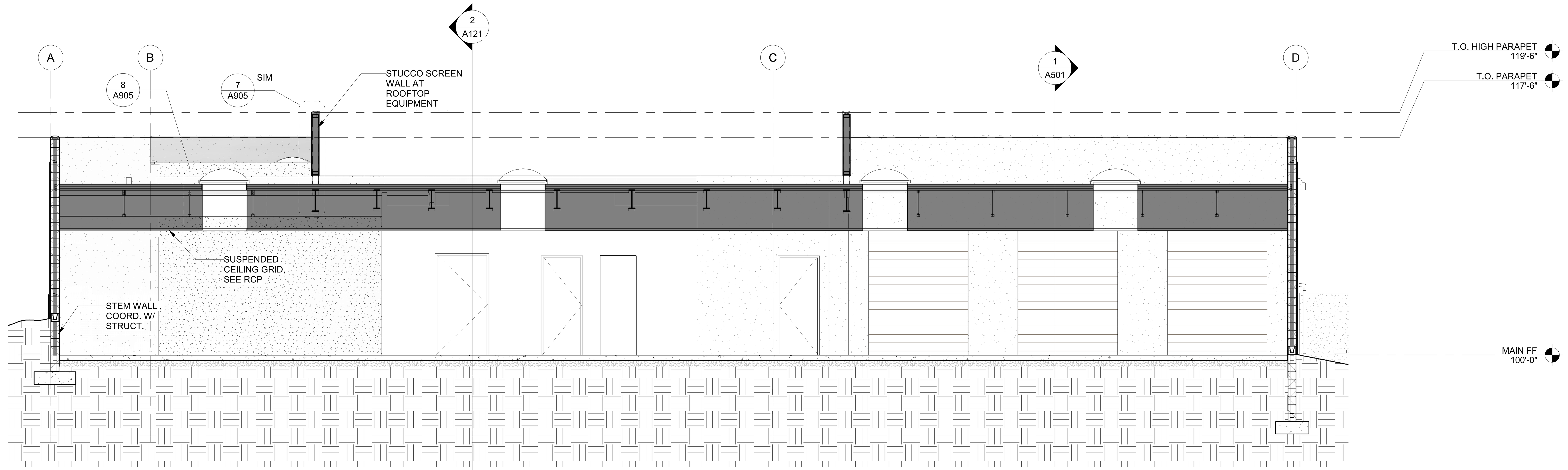
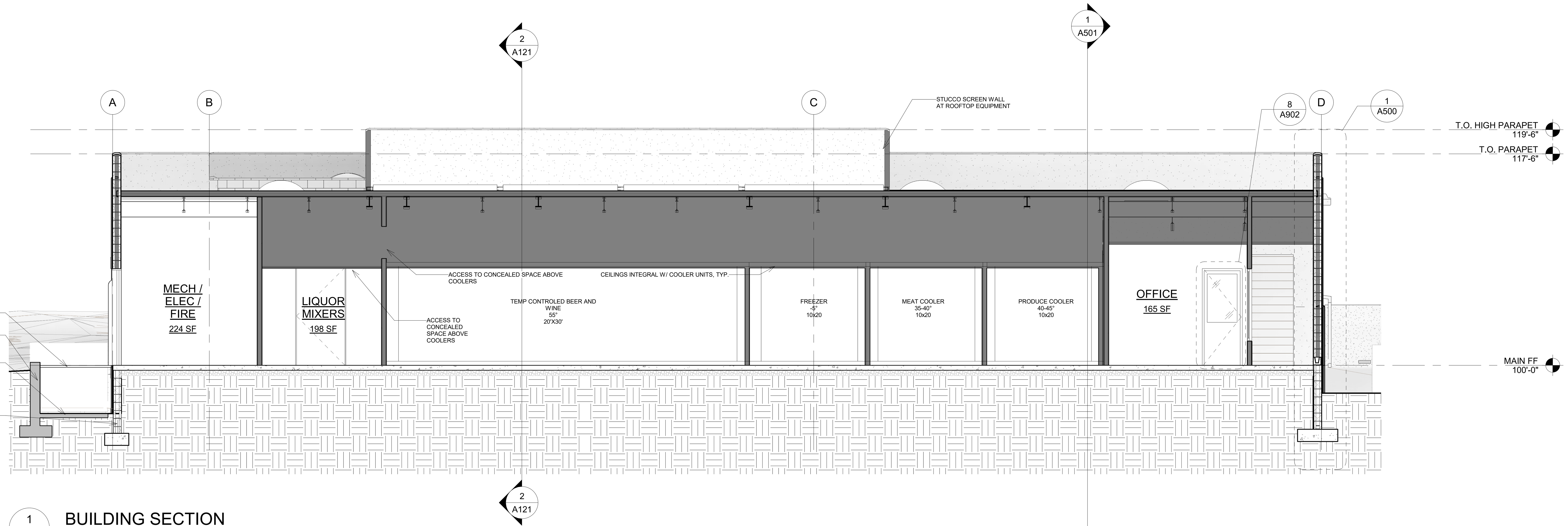
INTERIOR ELEVATIONS

SHEET NUMBER:
A112



2
A120
BUILDING SECTION
SCALE: 3/16" = 1'-0"



1
A120
BUILDING SECTION
SCALE: 3/16" = 1'-0"

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REGISTERED ARCHITECT 50783 DAVID S. WILLIAMS Date Signed 3-26-2021 ARIZONA, U.S.A.

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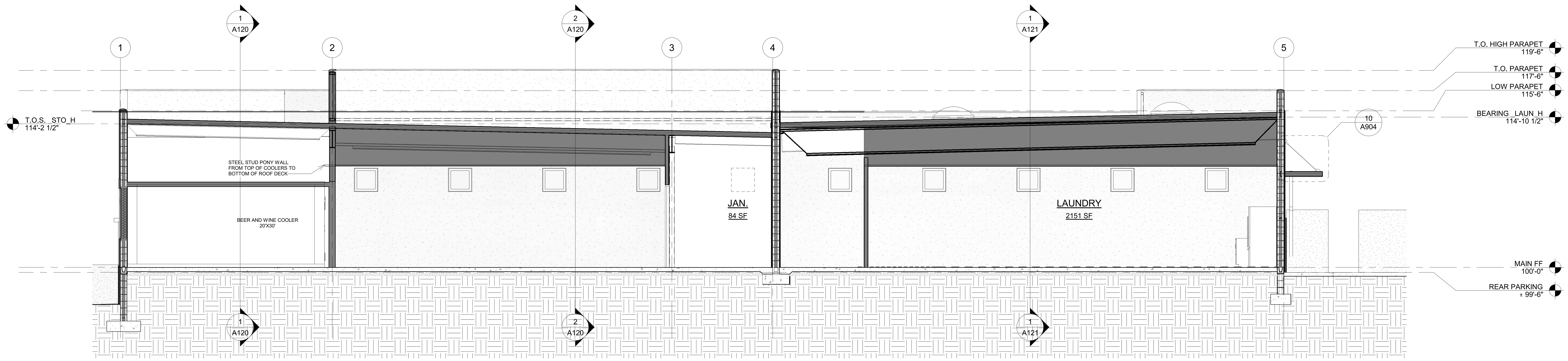
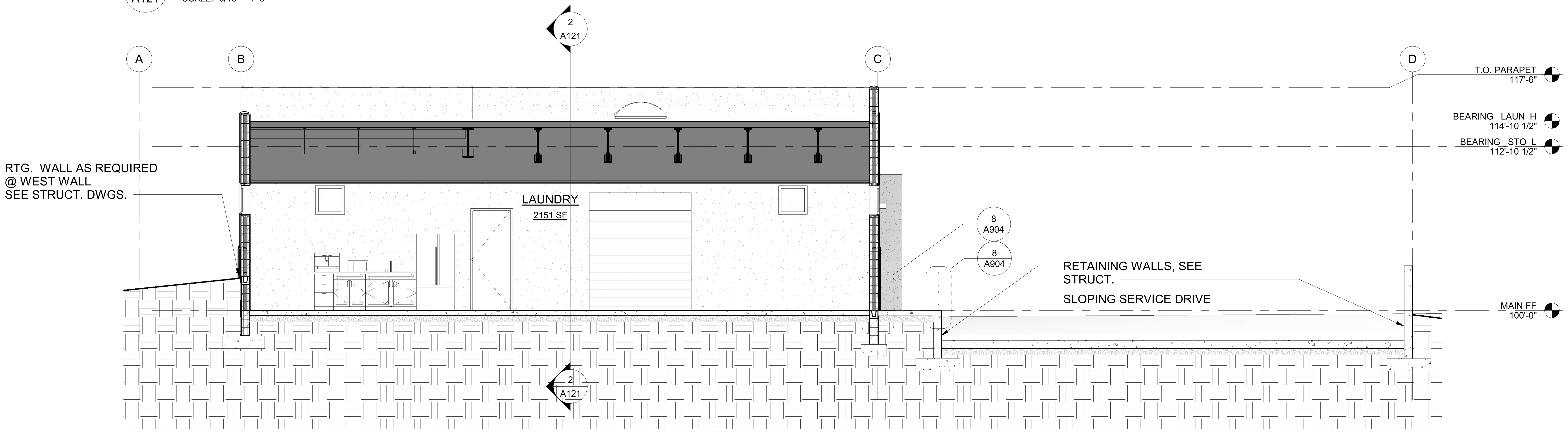
SHEET TITLE:
BUILDING SECTIONS

SHEET NUMBER:
A120



2 A121 BUILDING SECTION
SCALE: 3/16" = 1'-0"



1 A121 BUILDING SECTION
SCALE: 3/16" = 1'-0"

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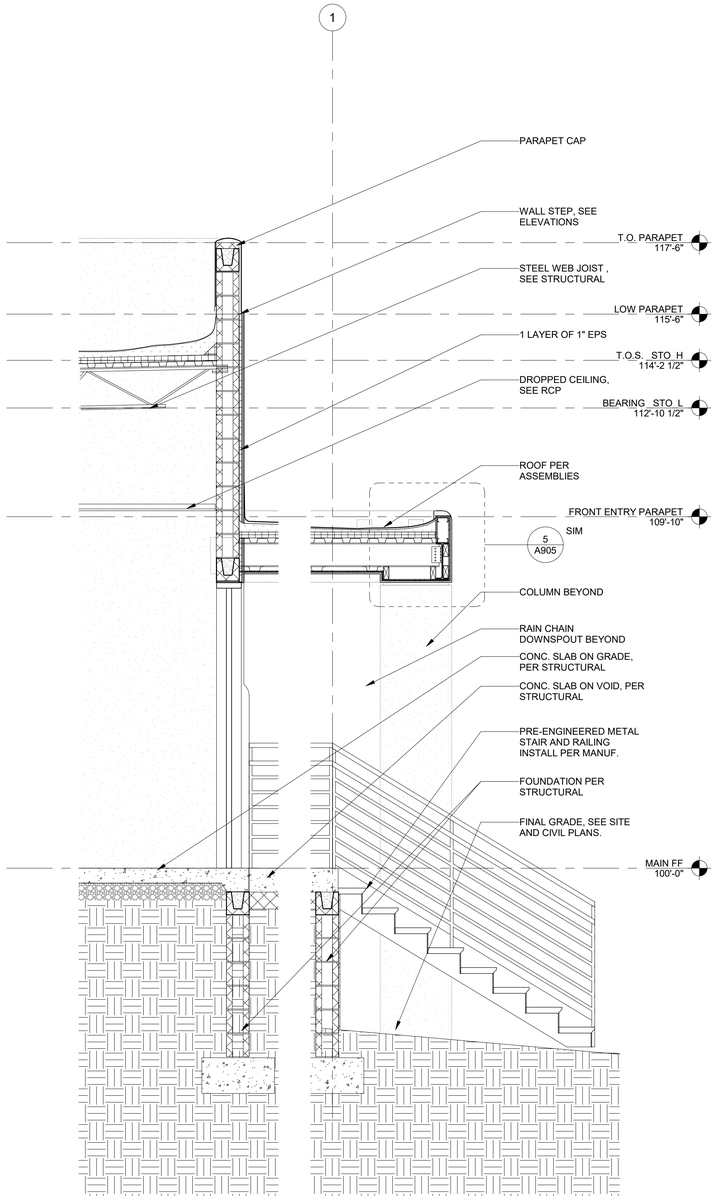
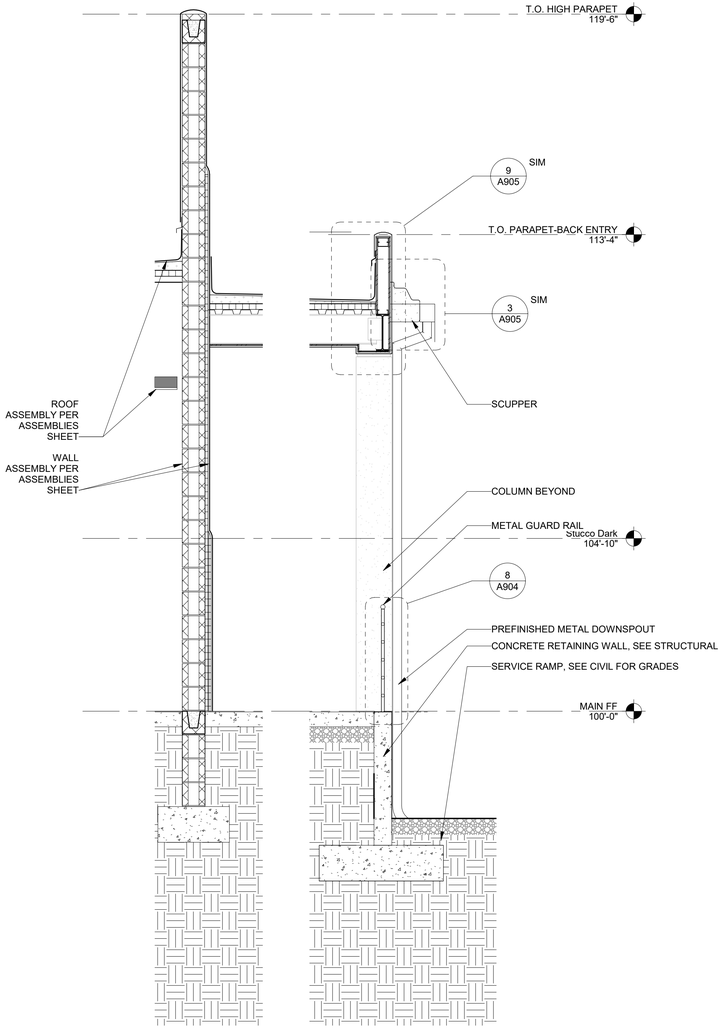
SHEET TITLE:
BUILDING SECTIONS

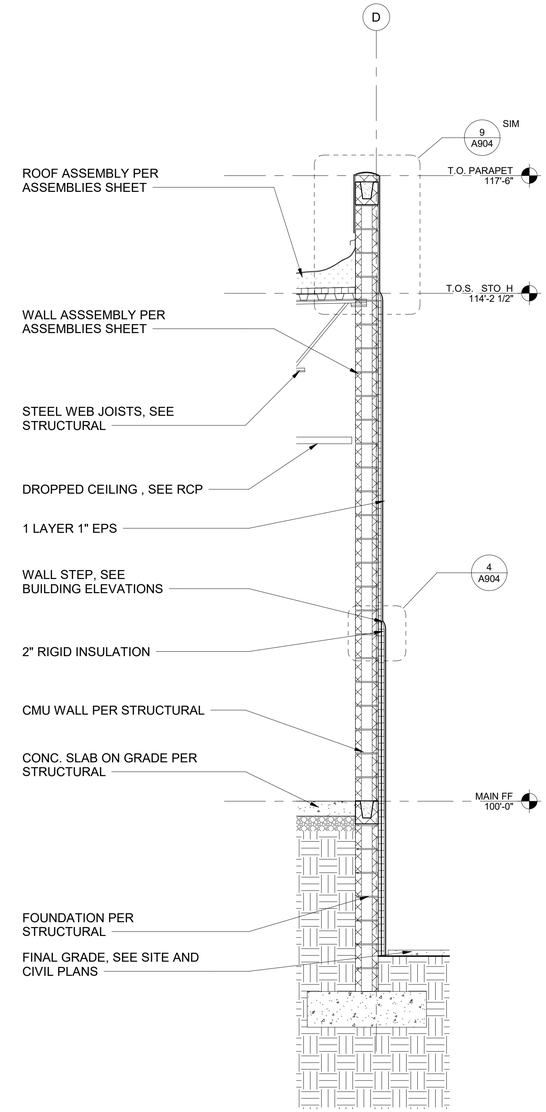
SHEET NUMBER:
A121



3 A500 Wall Section @ Front Entry
SCALE: 1/2" = 1'-0"



2 A500 Wall Section @ Back Entry
SCALE: 1/2" = 1'-0"



1 A500 Wall Section @ South Wall
SCALE: 1/2" = 1'-0"

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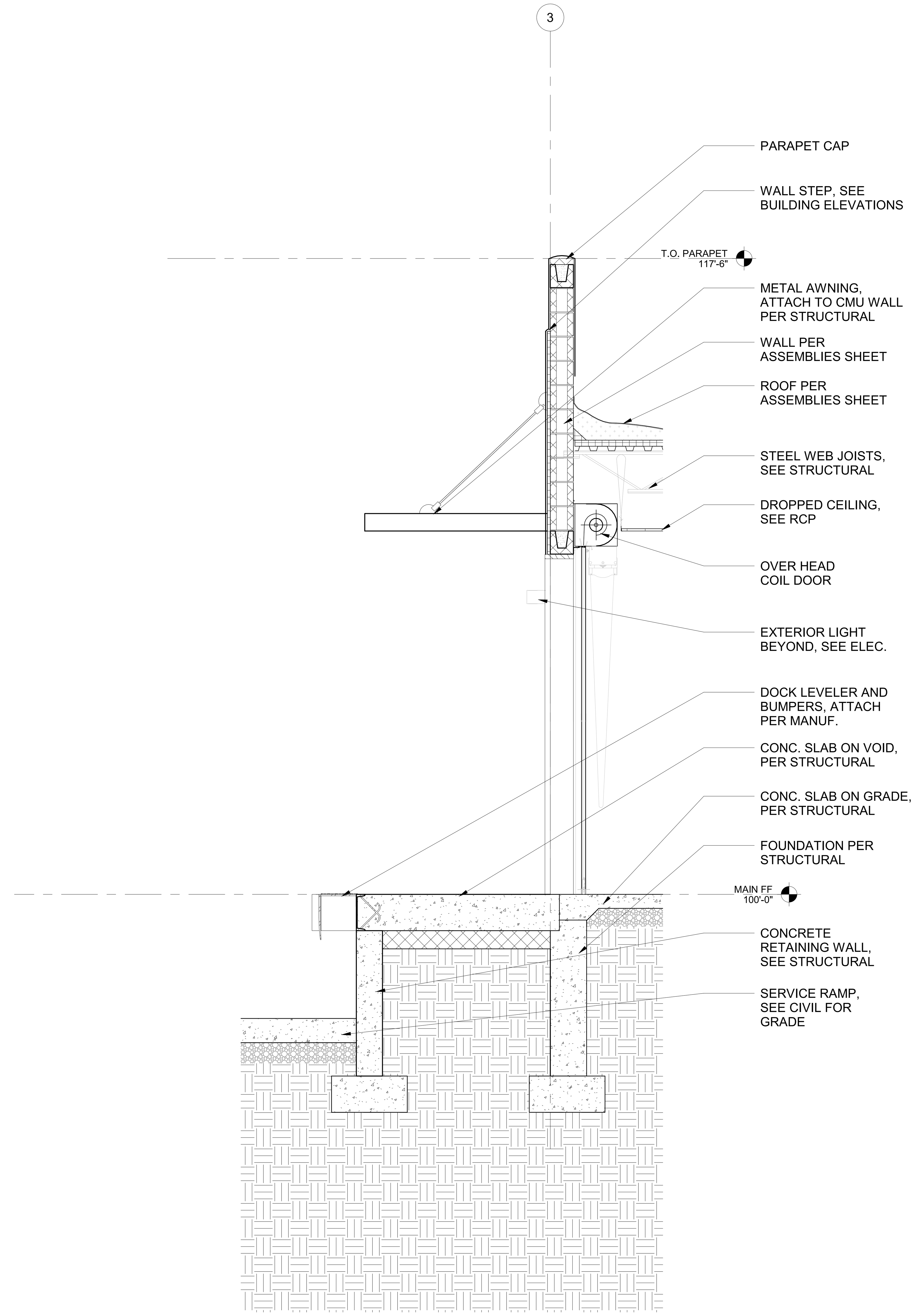
WALL SECTIONS

SHEET NUMBER:

A500



1
A501
Wall Section @ Dock
SCALE: 1/2" = 1'-0"

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SHEET NUMBER:
A501

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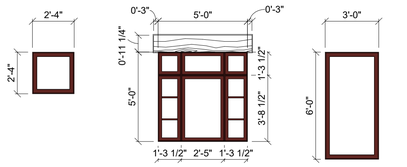
WINDOW SCHEDULE

TYPE	DESCRIPTION	WIDTH	HEIGHT	FINISH	COMMENTS
1A		5'-0"	5'-0"	PVDF COATING	
1B	"FALSE" WINDOW	5'-0"	5'-0"	PVDF COATING	SPANDREL GLASS
2A		2'-4"	2'-4"	PVDF COATING	
2B	"FALSE" WINDOW	2'-4"	2'-4"	PVDF COATING	SPANDREL GLASS
3		3'-0"	6'-0"	PVDF COATING	



TYPE 2A, 2B
FIXED ALUMINUM; INSULATED GLASS, SPANDREL GLASS AT 2B

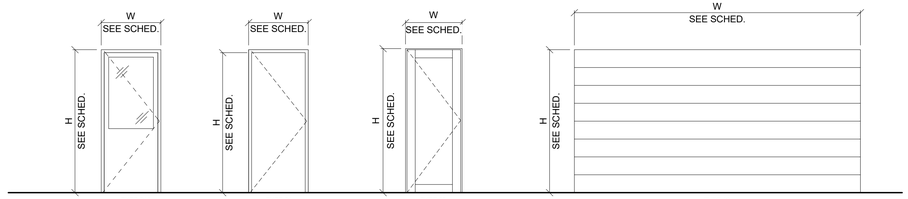
TYPE 1A 1B
FIXED ALUMINUM; INSULATED GLASS, SPANDREL GLASS AT 1B

TYPE 3
FIXED ALUMINUM TEMPERED GLASS.

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

DOOR SCHEDULE

	DOOR SIZE		DOOR			FRAME					
DOOR NO.	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	FIRE RATING	HARDWARE	COMMENTS
100A	3'-0"	8'-0"	2	ALUM/GLASS	PVDF COATING		ALUM	PVDF COATING			FULL-LITE ALUMINUM ENTRY DOOR
100B	3'-0"	7'-10"	1A	HOLLOW METAL	PAINT		STEEL	PAINT			
100C	8'-0"	9'-2"	3	METAL	MANUF. STD.		STEEL	MANUF. STD			COIL ROLL UP DOOR
100D	8'-0"	9'-2"	3	METAL	MANUF. STD.		STEEL	MANUF. STD			COIL ROLL UP DOOR
100E	8'-0"	9'-2"	3	METAL	MANUF. STD.		STEEL	MANUF. STD			COIL ROLL UP DOOR
100F	3'-0"	7'-10"	1	INSULATED METAL	PAINT		STEEL	PAINT			
100G	3'-0"	7'-10"	1	HOLLOW METAL	PAINT		STEEL	PAINT			
100H	4'-0"	8'-0"	1	HOLLOW METAL	PAINT		STEEL	PAINT			
101A	3'-0"	7'-10"	1	INSULATED METAL	PAINT		STEEL	PAINT			
101B	8'-0"	7'-10"	3	METAL	MANUF. STD.		STEEL	MANUF. STD			COIL ROLL UP DOOR
101C	3'-0"	7'-10"	1	INSULATED METAL	PAINT		STEEL	PAINT			
102	3'-0"	7'-10"	1	INSULATED METAL	PAINT		STEEL	PAINT			
103	3'-0"	7'-10"	1	INSULATED METAL	PAINT		STEEL	PAINT			
108	4'-0"	8'-0"	1	INSULATED METAL	PAINT		STEEL	PAINT			
109	3'-0"	6'-8"	1	HOLLOW METAL	PAINT		STEEL	PAINT			



TYPE 01A
S - HALF-LITE
HOLLOW METAL FRAME

TYPE 01
S - FLUSH PANEL
HOLLOW METAL FRAME

TYPE 02
FULL LITE ALUM
STORE FRONT ENTRANCE

TYPE 03
OVERHEAD COILING DOOR

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

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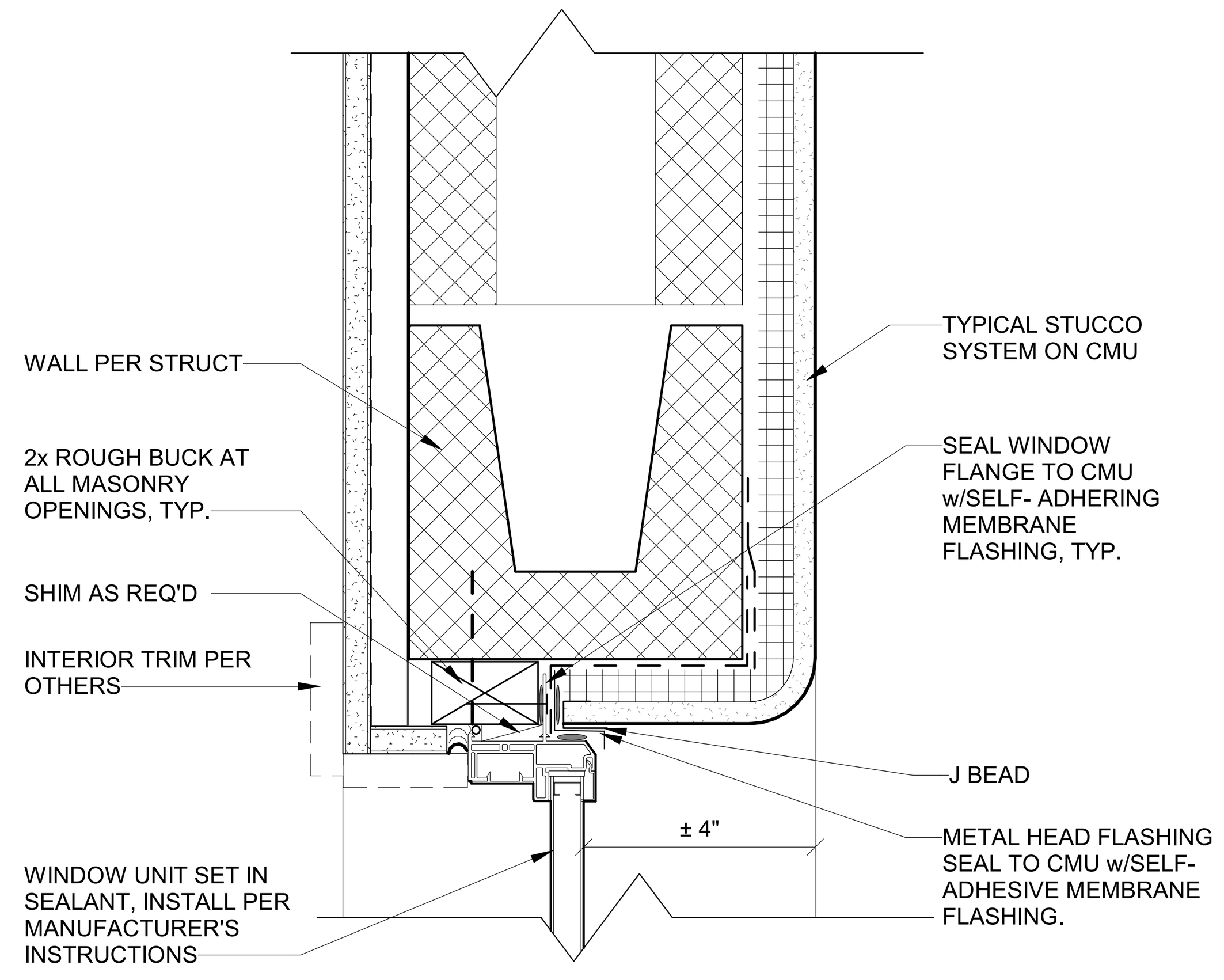
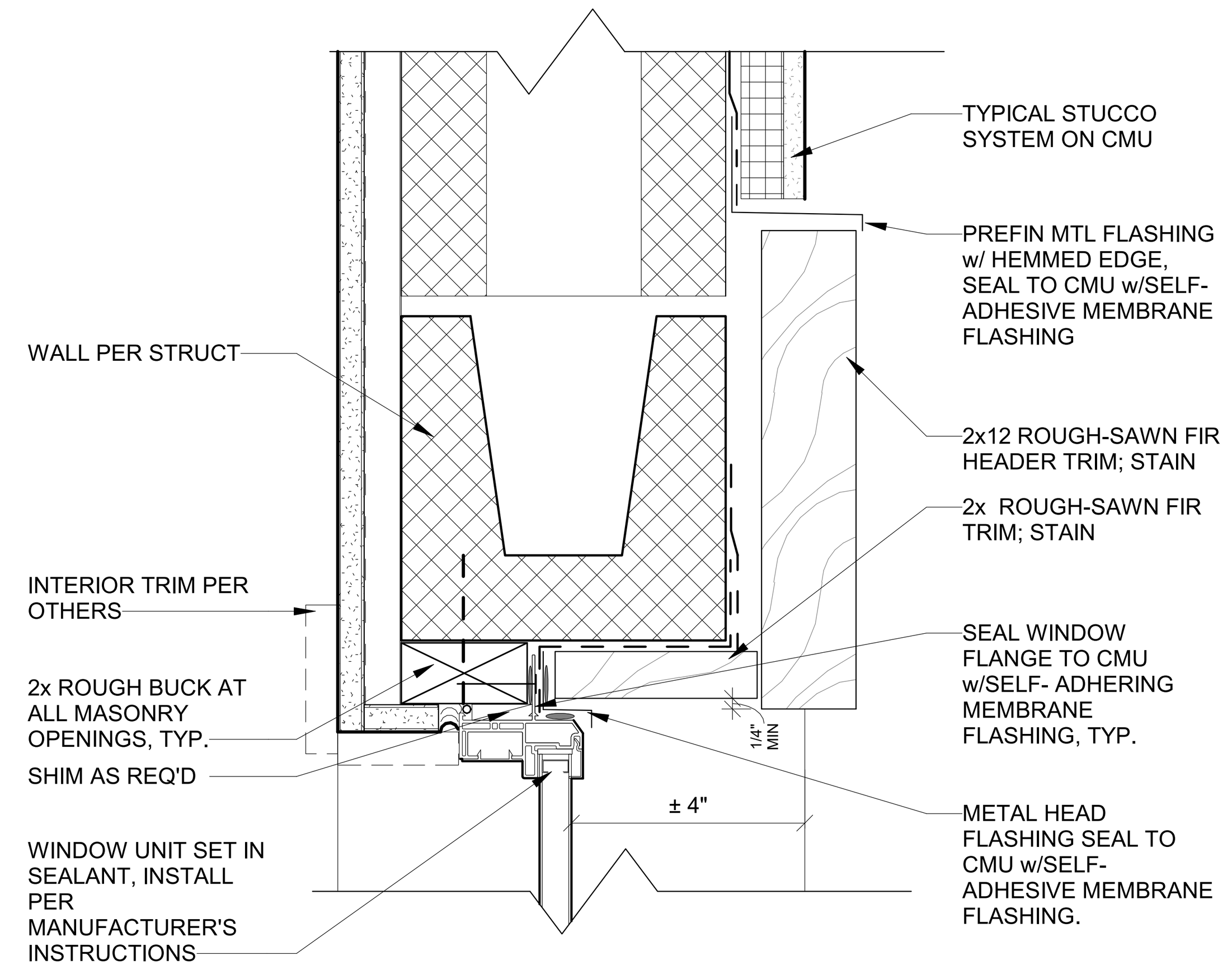
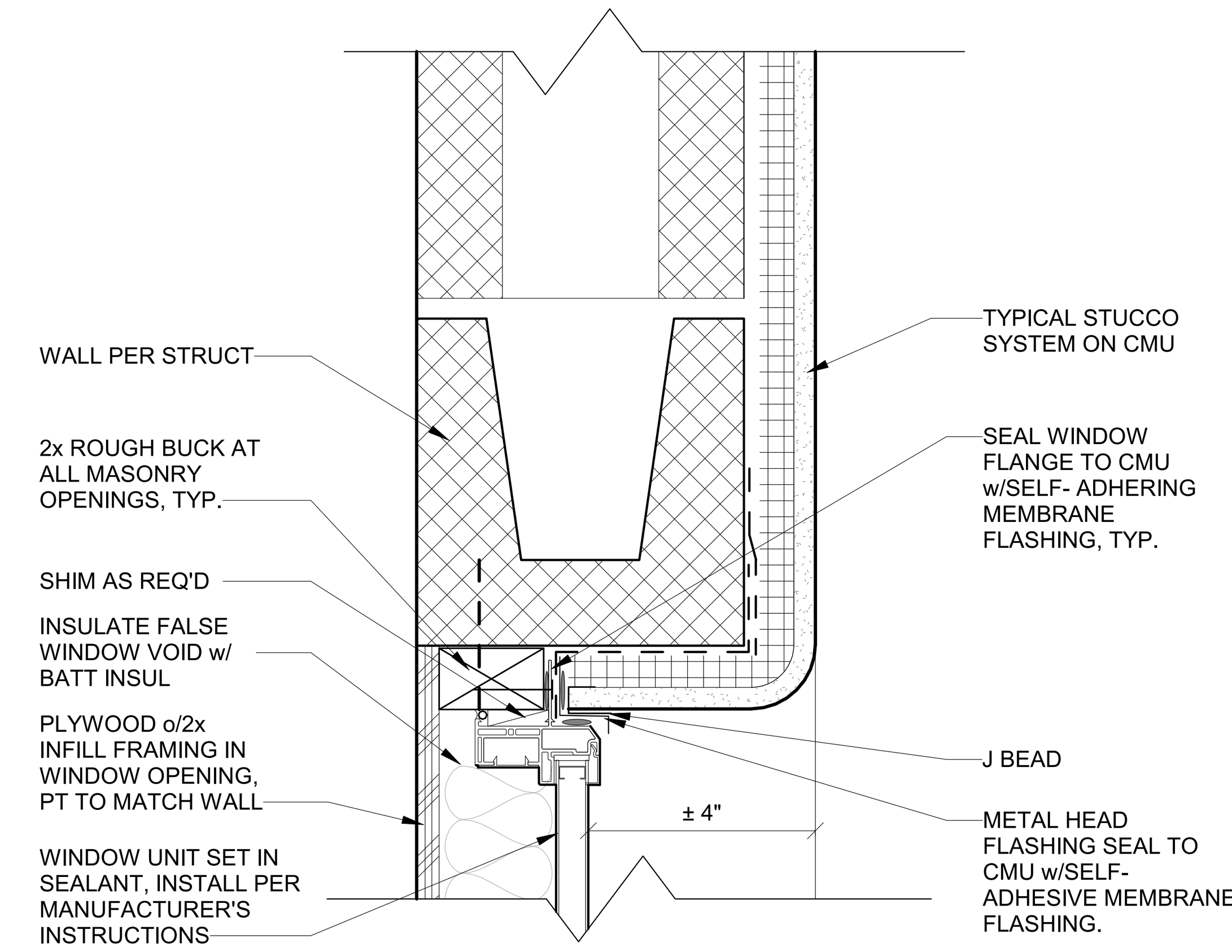


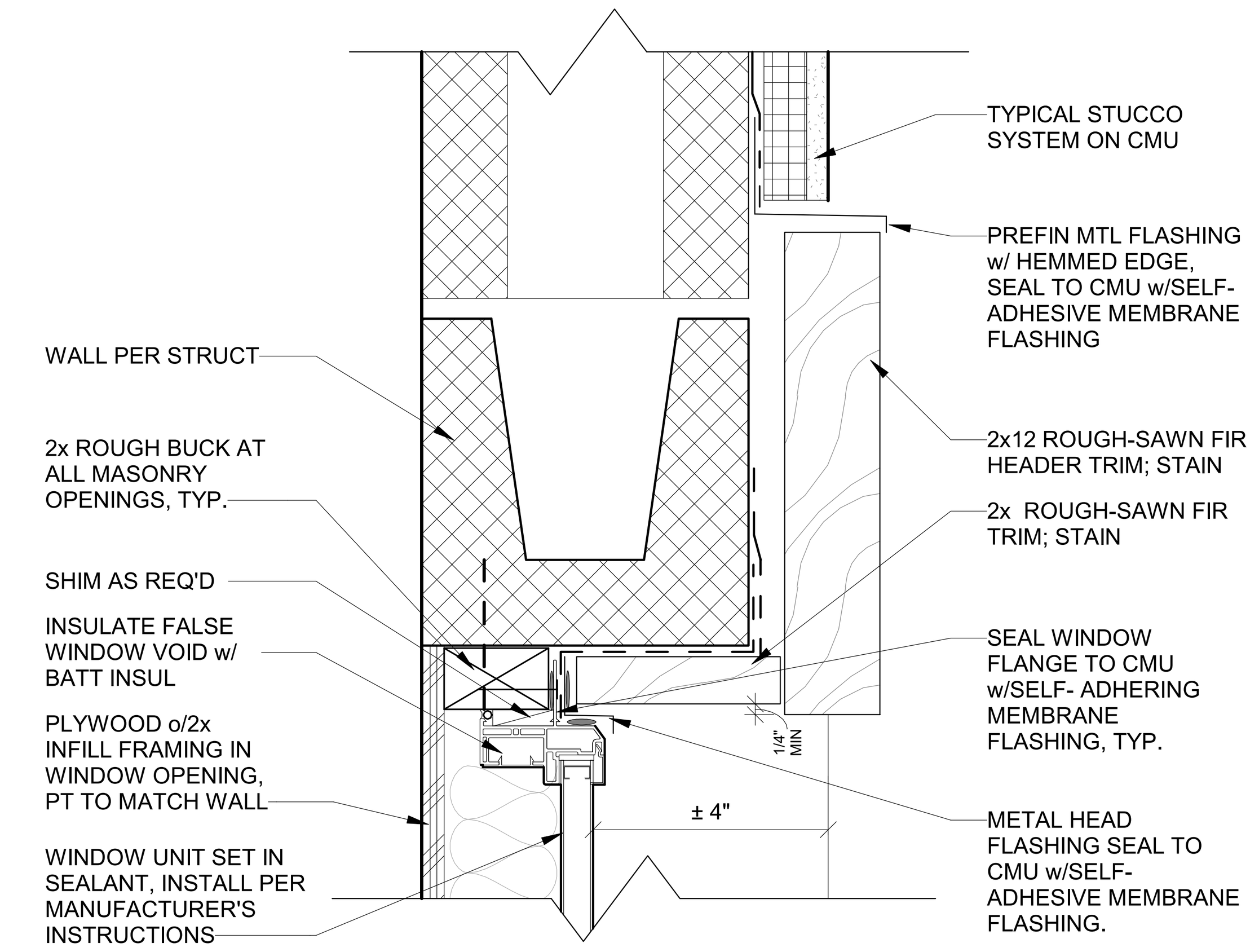
12 A900 DETAIL - WINDOW HEADER WO/ TRIM
SCALE: 3" = 1'-0"



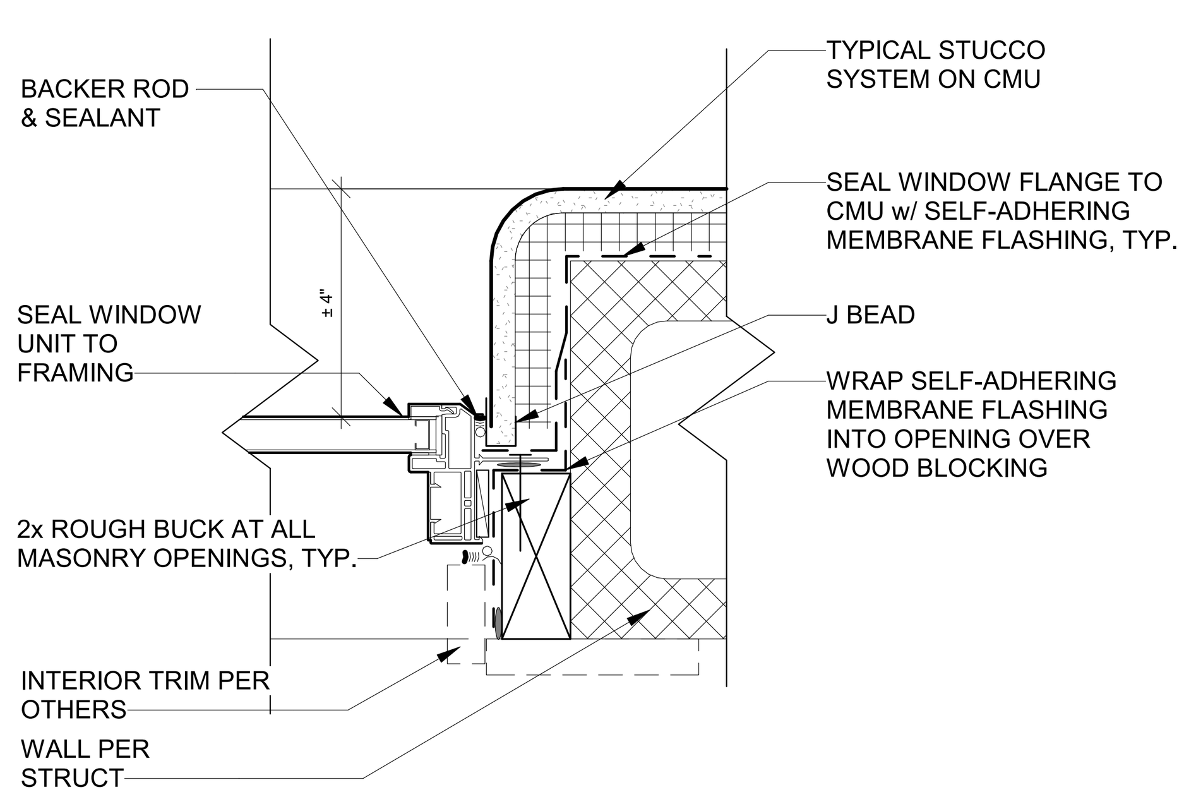
9 A900 DETAIL - WINDOW HEADER W/ TRIM 50%
SCALE: 3" = 1'-0"



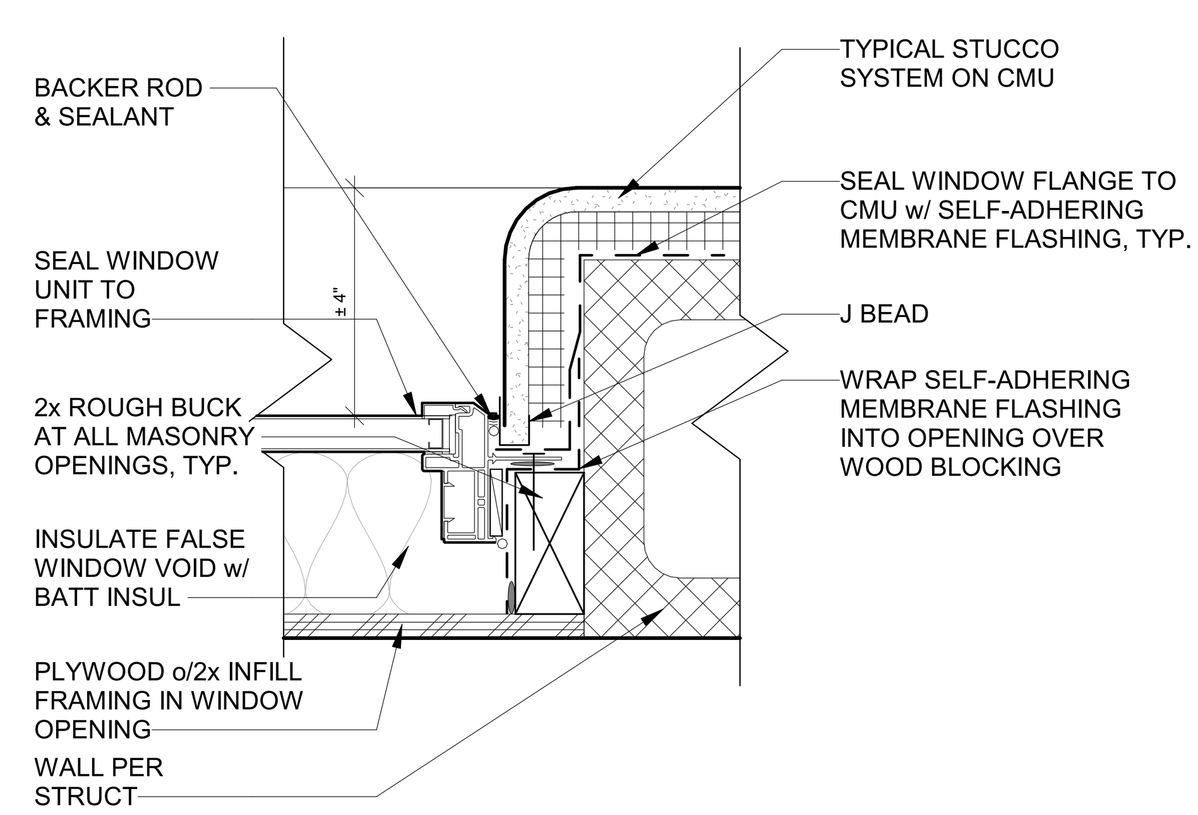
6 A900 DETAIL - FALSE WINDOW HEADER WO/ TRIM 50%
SCALE: 3" = 1'-0"



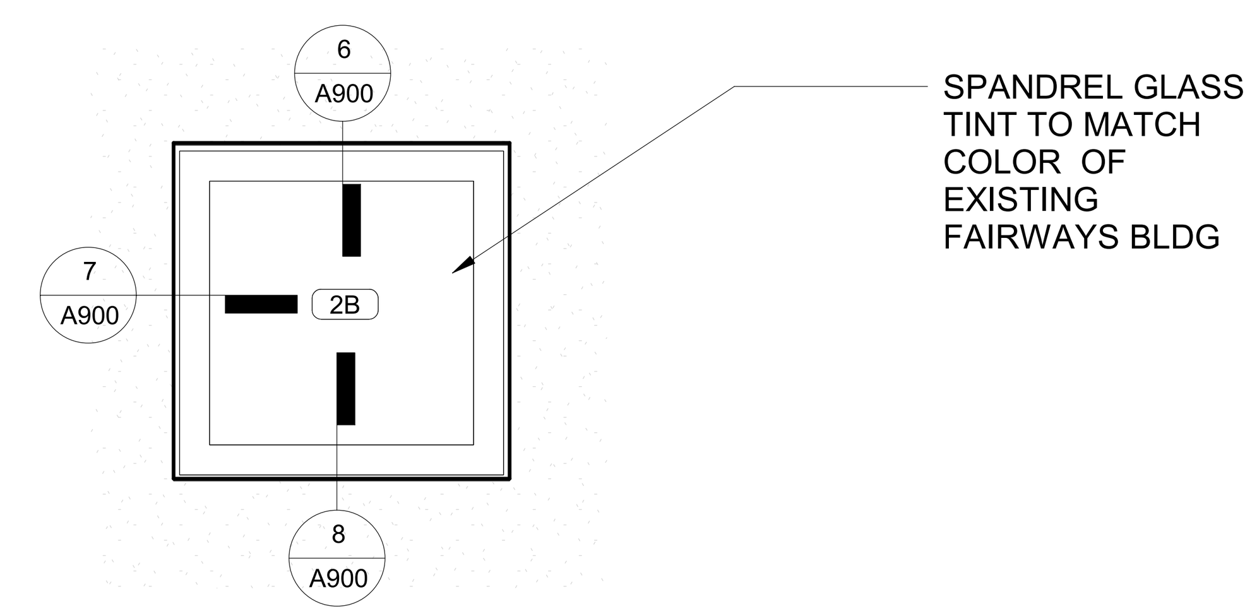
3 A900 DETAIL - FALSE WINDOW HEADER W/ TRIM 50%
SCALE: 3" = 1'-0"



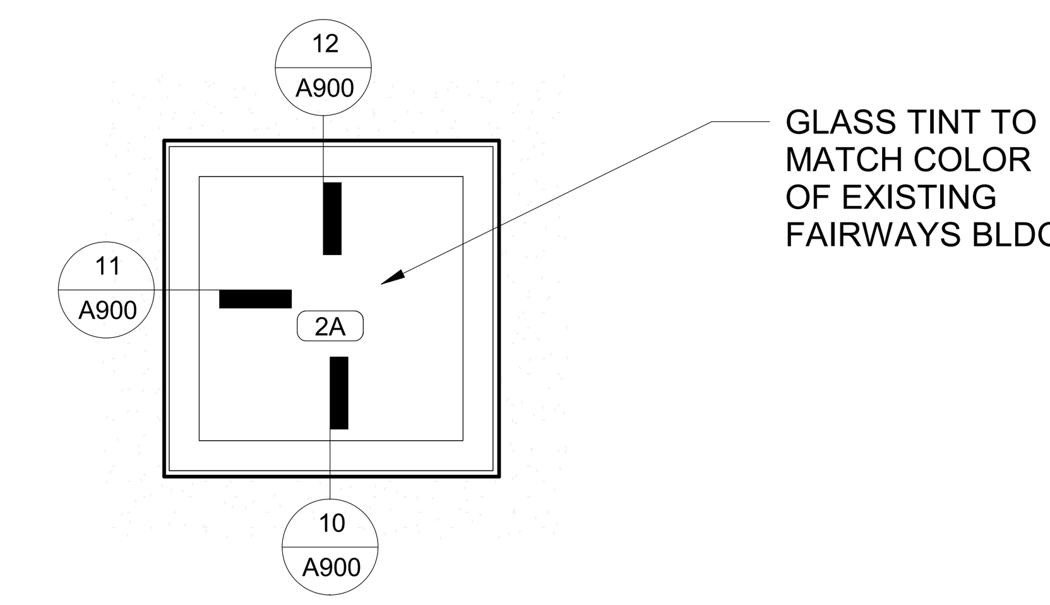
11 A900 DETAIL - WINDOW JAMB AT STUCCO 50%
SCALE: 3" = 1'-0"



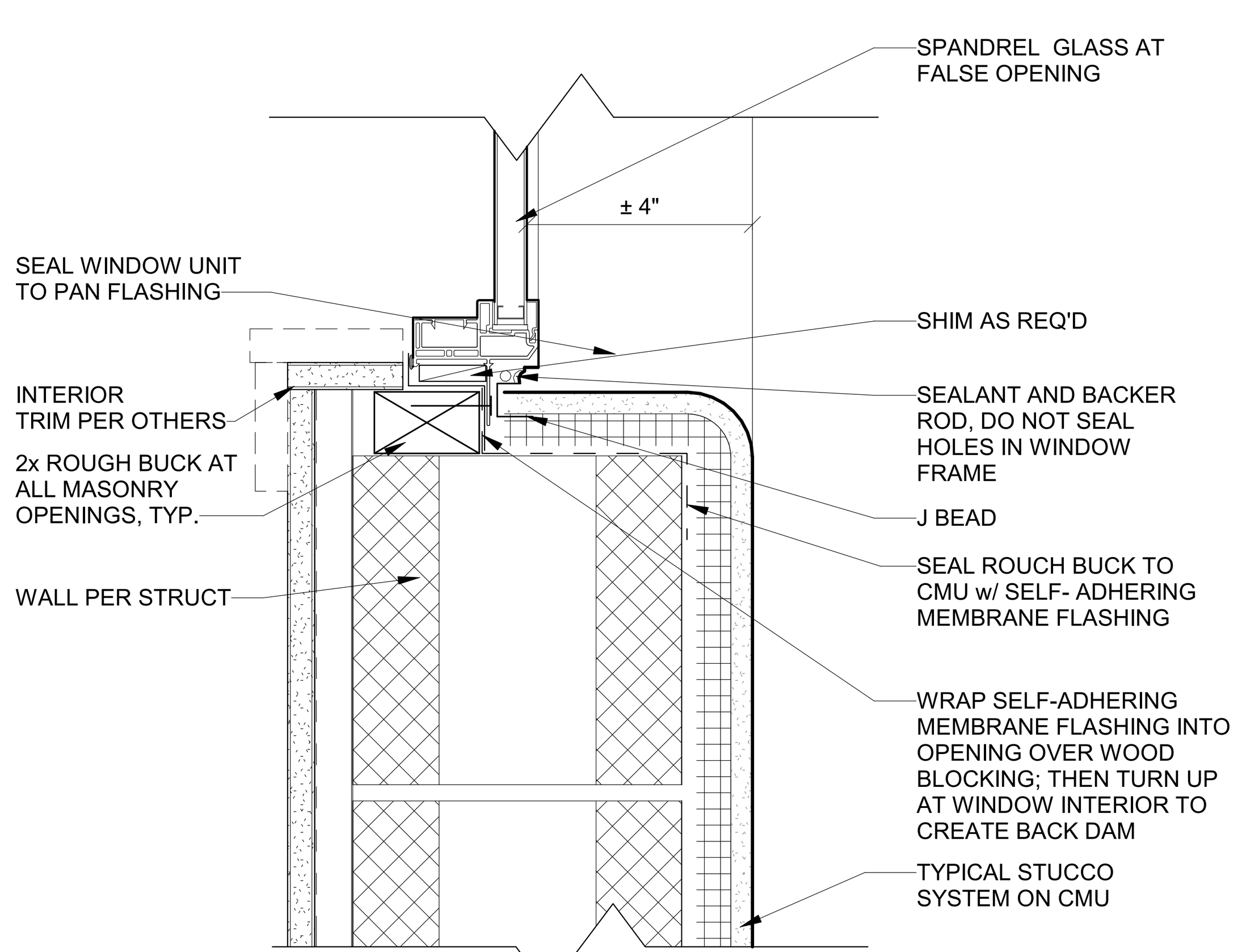
7 A900 DETAIL - FALSE WINDOW JAMB AT STUCCO 50%
SCALE: 3" = 1'-0"



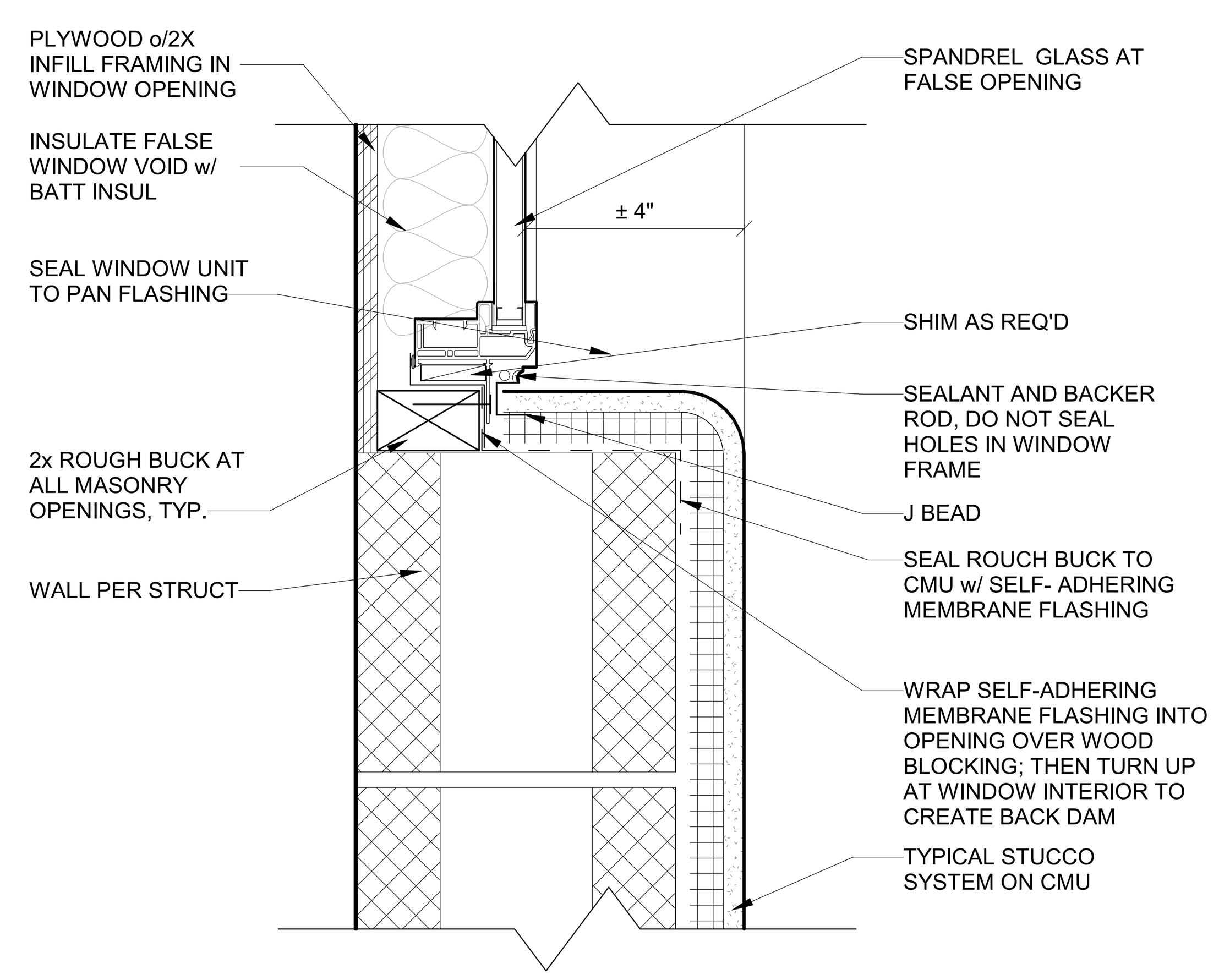
5 A900 WINDOW ELEVATION - 2B
SCALE: 3/4" = 1'-0"



2 A900 WINDOW ELEVATION - 2A
SCALE: 3/4" = 1'-0"

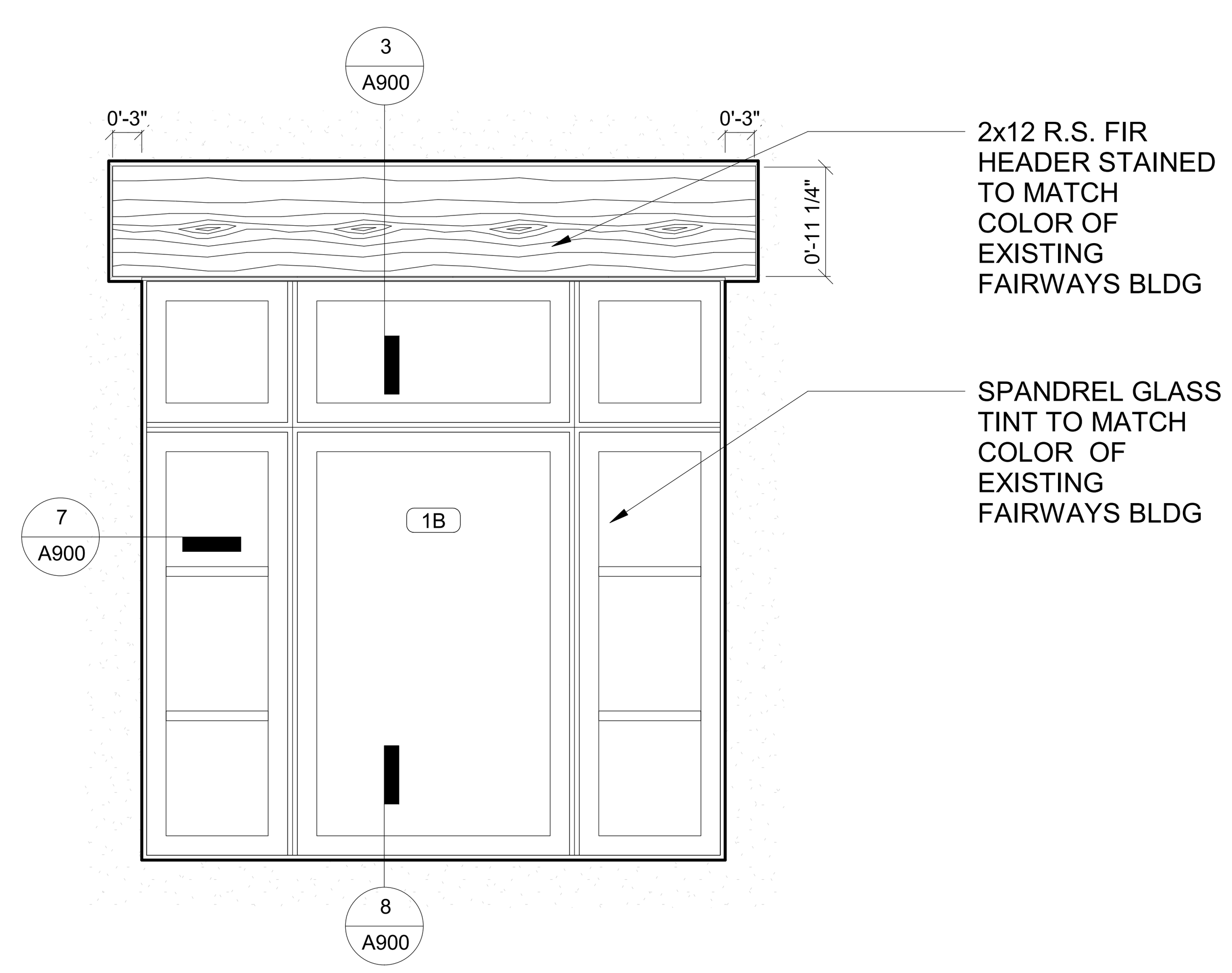


10 A900 DETAIL - WINDOW SILL AT STUCCO 50%
SCALE: 3" = 1'-0"

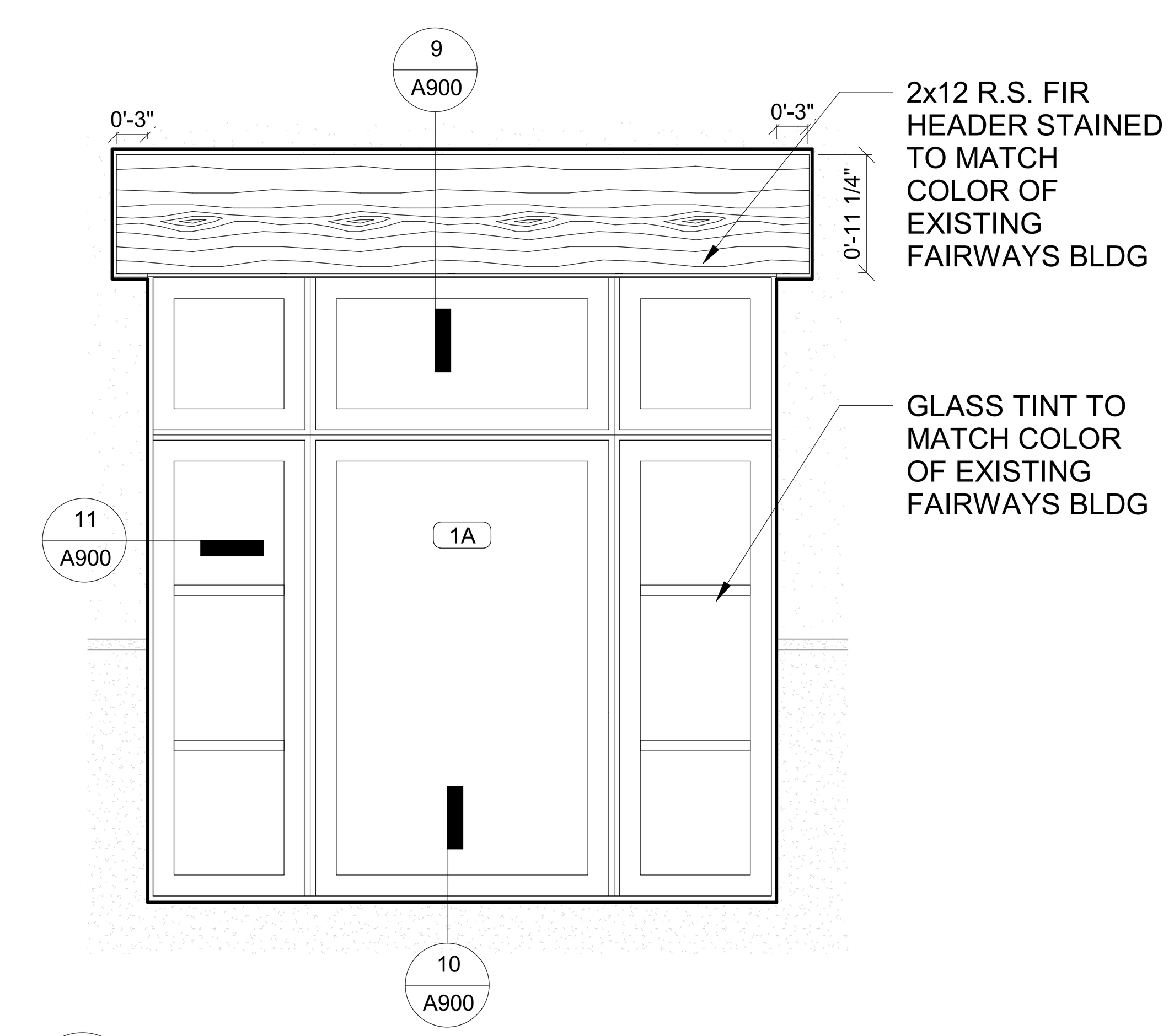


8 A900 DETAIL - FALSE WINDOW SILL AT STUCCO 50%
SCALE: 3" = 1'-0"

B1



4 A900 WINDOW ELEVATION - 1B
SCALE: 3/4" = 1'-0"



1 A900 WINDOW ELEVATION - 1A
SCALE: 3/4" = 1'-0"

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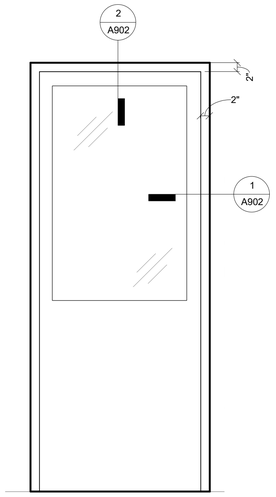
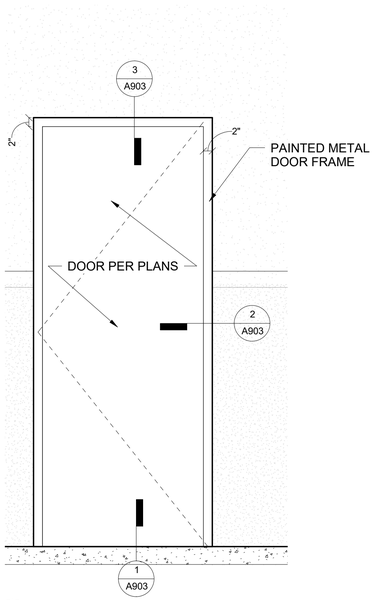
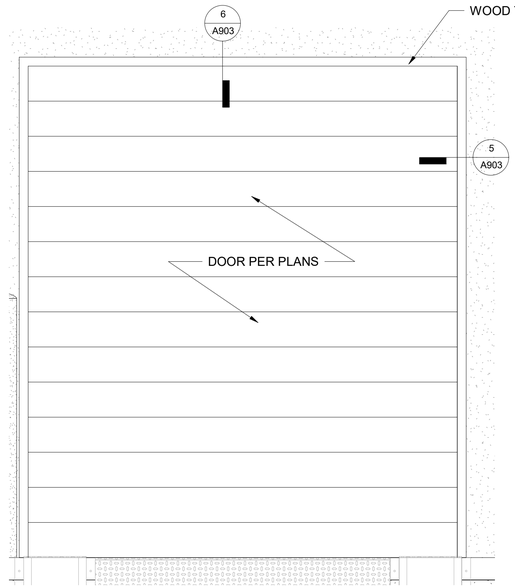
A900



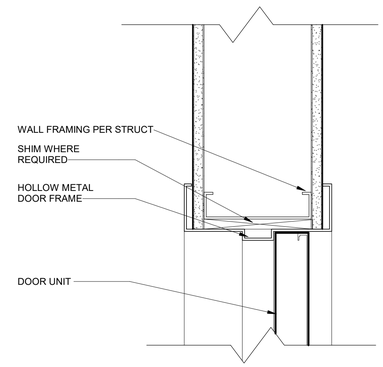
8 A902 INT. DOOR
SCALE: 3/4" = 1'-0"



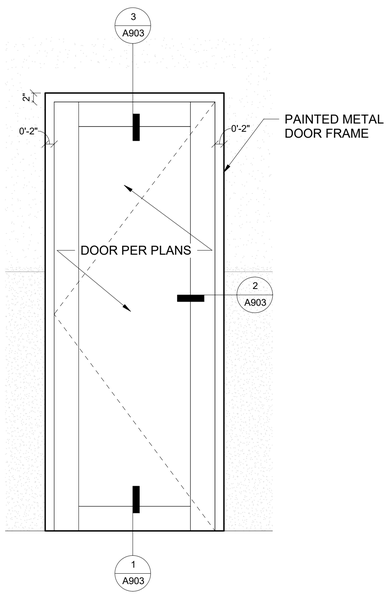
6 A902 SINGLE DOOR - EXT wo/HEADER
SCALE: 3/4" = 1'-0"



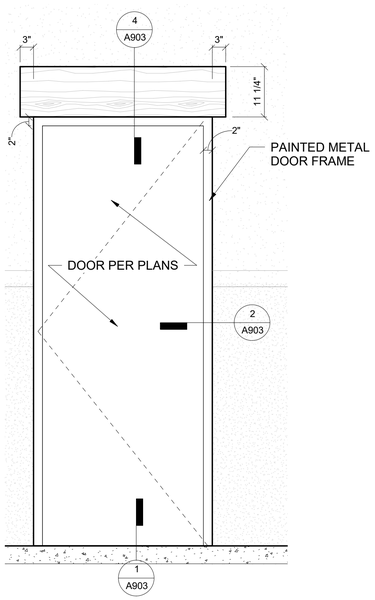
4 A902 COIL DOOR @ STORAGE
SCALE: 3/4" = 1'-0"



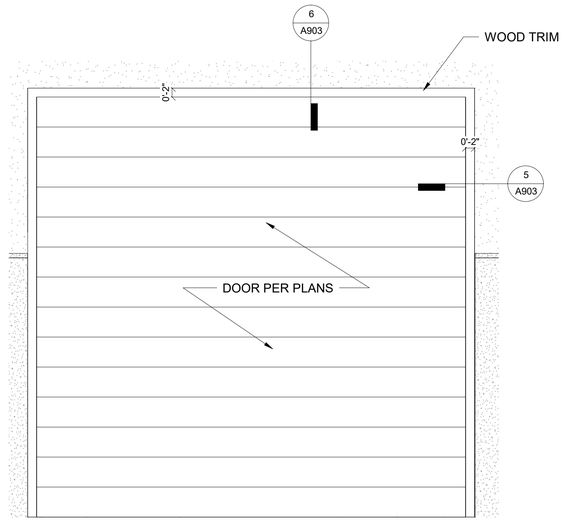
2 A902 DETAIL - DOOR HEADER @ INT
SCALE: 3" = 1'-0"



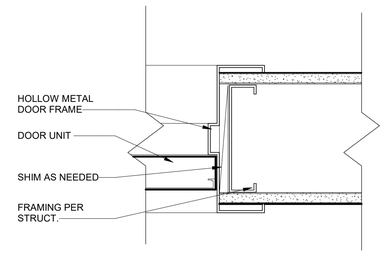
7 A902 SINGLE DOOR @ FRONT ENTRY - EXT
SCALE: 3/4" = 1'-0"



5 A902 SINGLE DOOR - EXT w/HEADER
SCALE: 3/4" = 1'-0"



3 A902 COIL DOOR @ LAUNDRY
SCALE: 3/4" = 1'-0"



1 A902 DETAIL - DOOR JAMB @ INT
SCALE: 3" = 1'-0"

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3-26-2021
Date Signed
ARIZONA, U.S.A.

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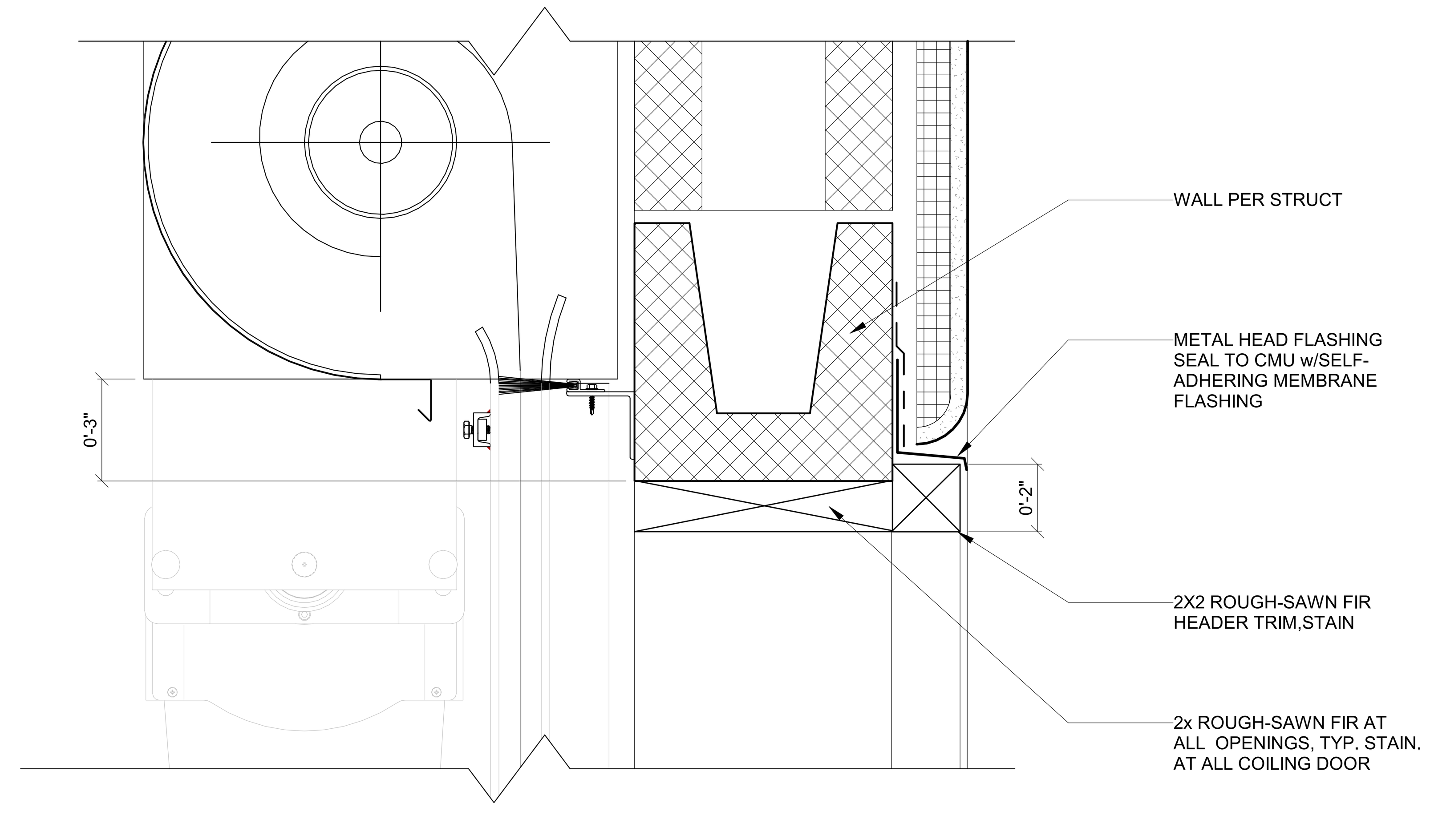
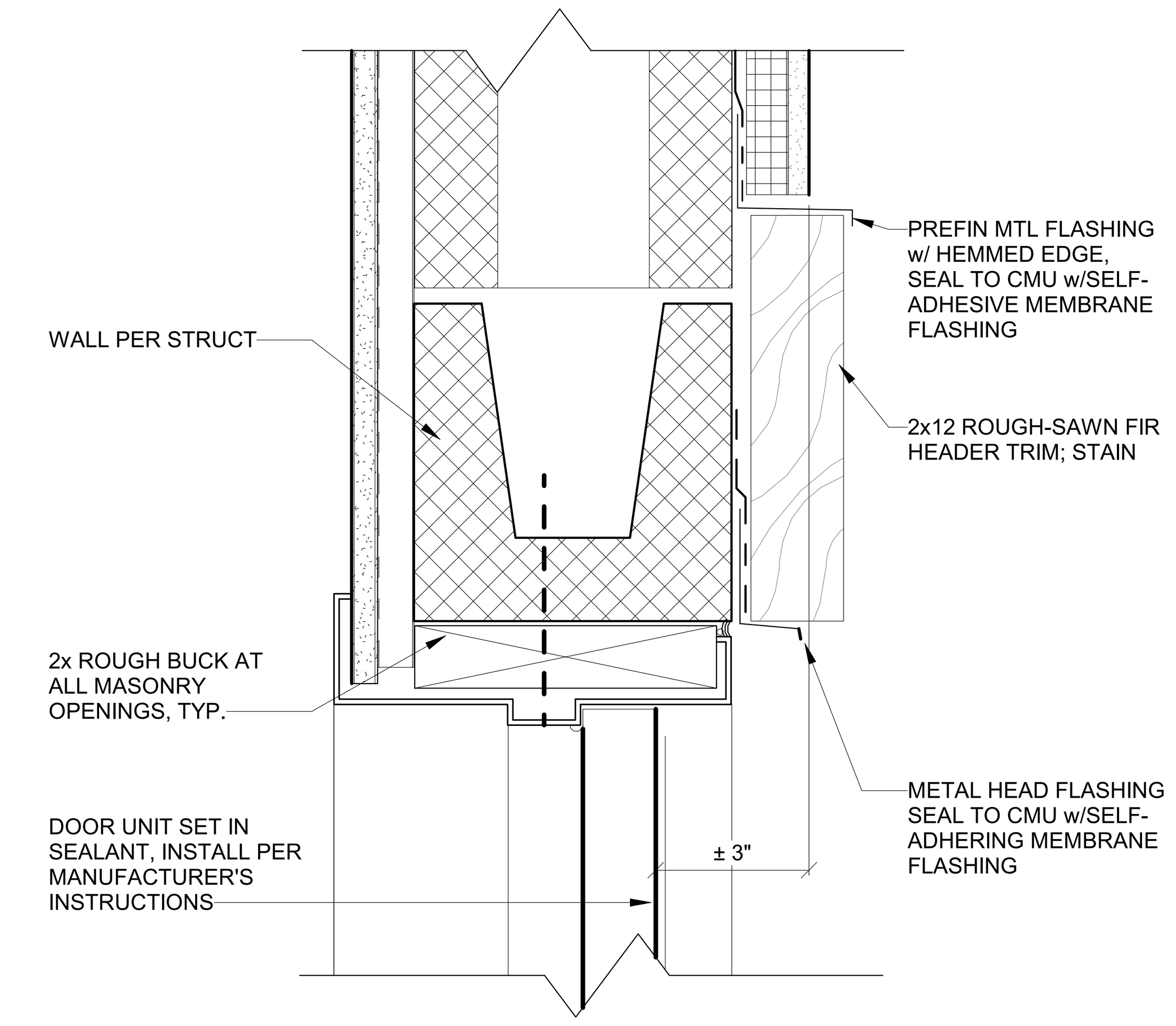
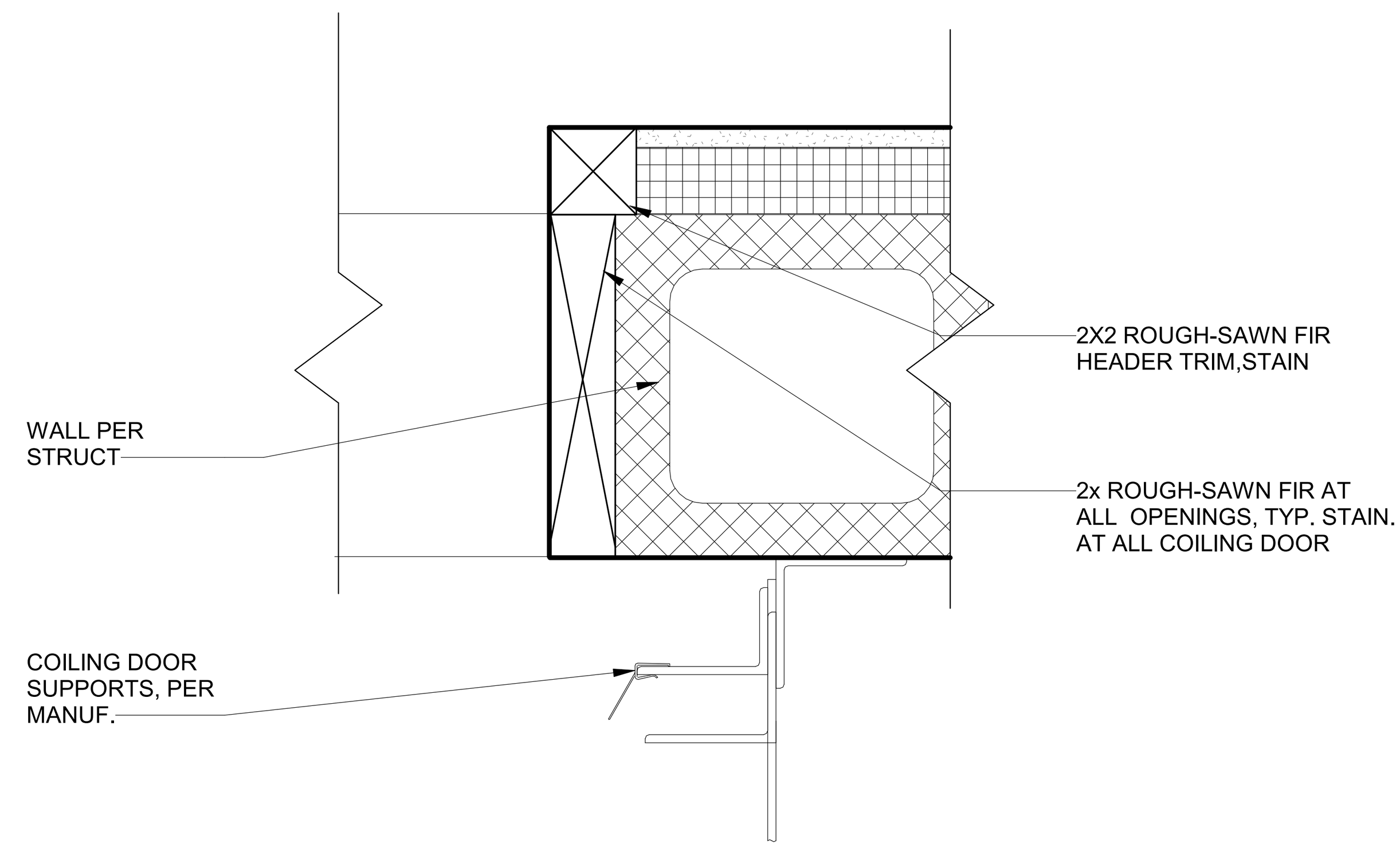


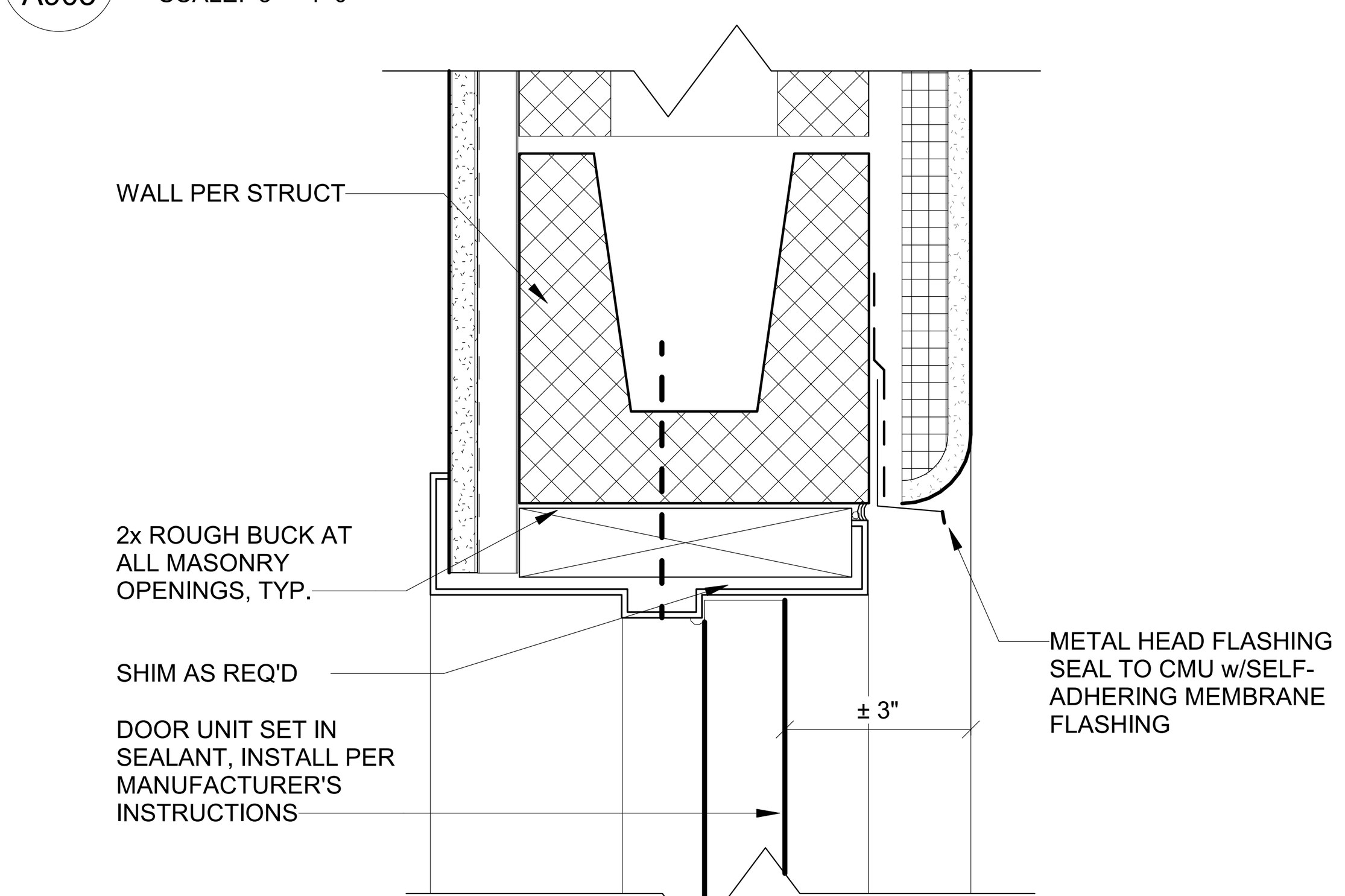
6 A903 DETAIL - COIL DOOR HEADER w/TRIM
SCALE: 3" = 1'-0"



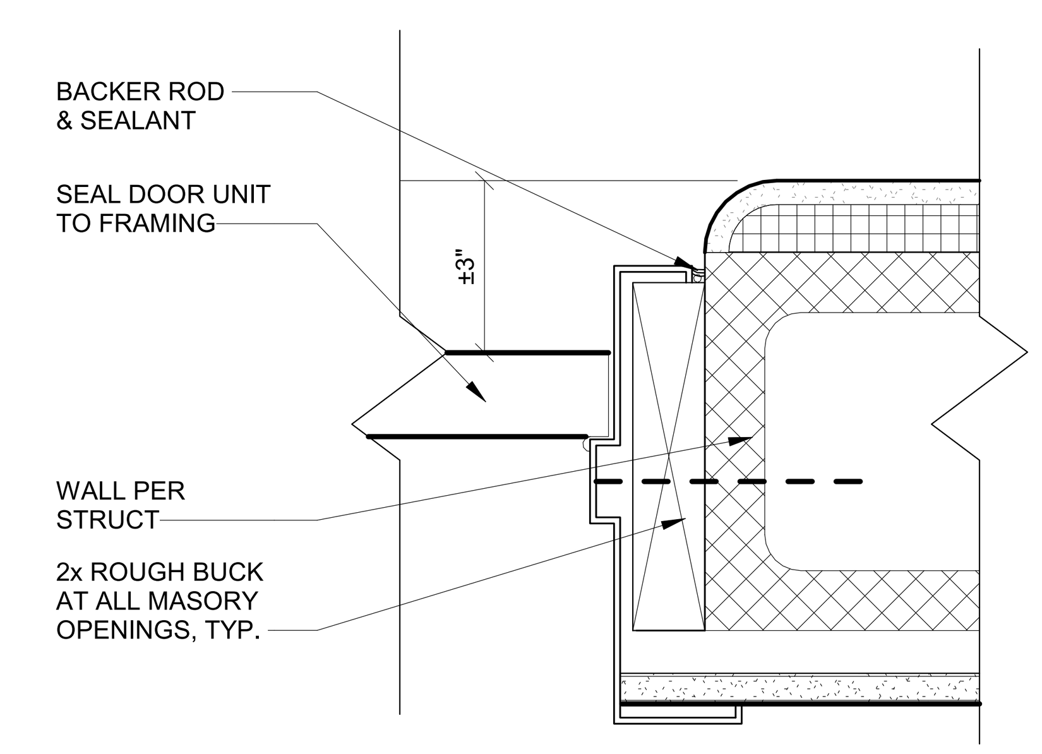
4 A903 DETAIL - DOOR HEADER w/TRIM
SCALE: 3" = 1'-0"



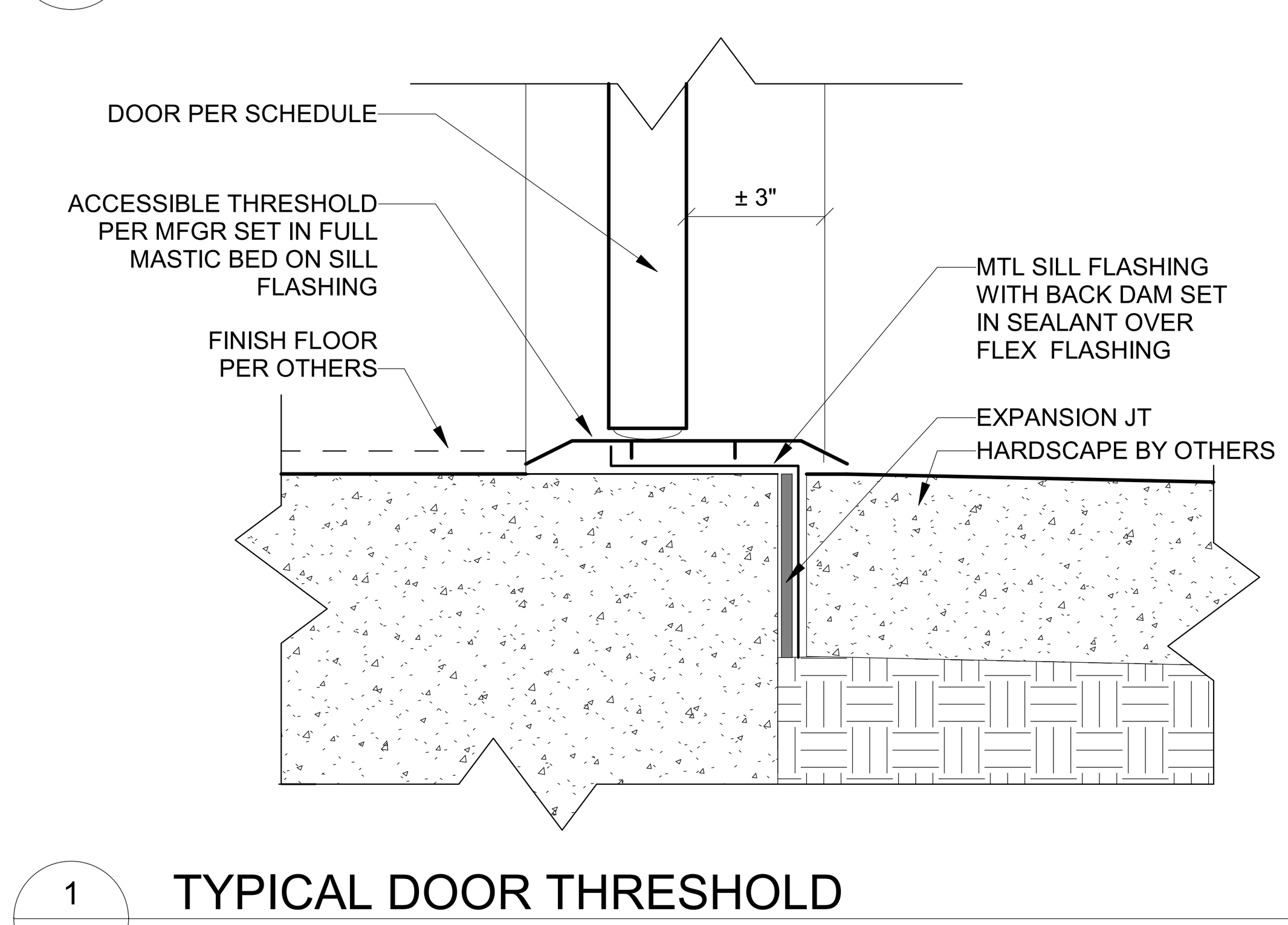
5 A903 DETAIL - COIL DOOR JAMB w/TRIM@ LOADING DOCK
SCALE: 3" = 1'-0"



3 A903 DETAIL - DOOR HEADER wo/TRIM
SCALE: 3" = 1'-0"



2 A903 DETAIL - DOOR JAMB @ STUCCO
SCALE: 3" = 1'-0"



1 A903 TYPICAL DOOR THRESHOLD
SCALE: 3" = 1'-0"

Drawing: C:\Users\mbroussard\Documents\DESERT MOUNTAIN_DISTRIBUTION_CD_R20_mbroussardDTJ.rvt

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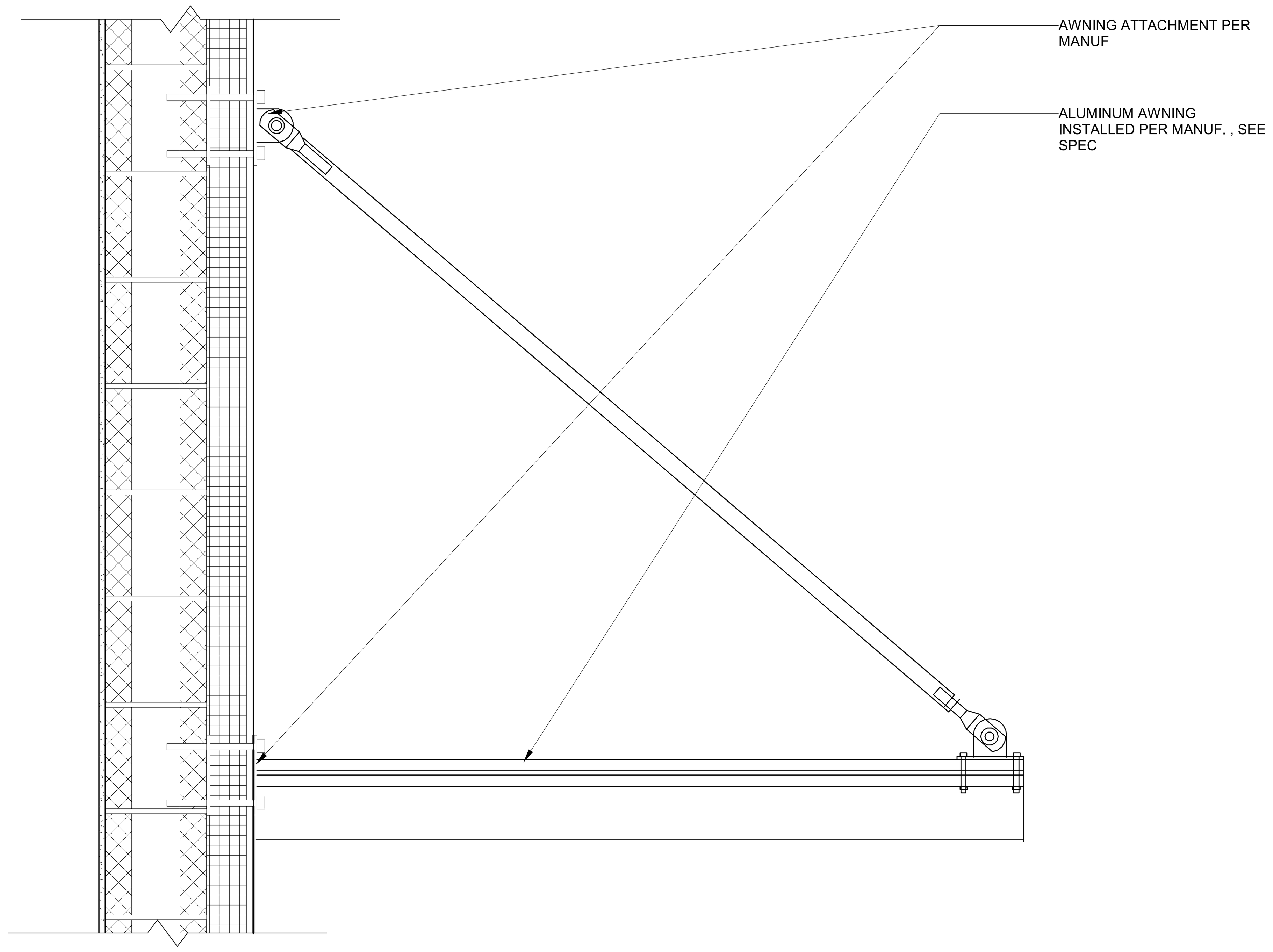
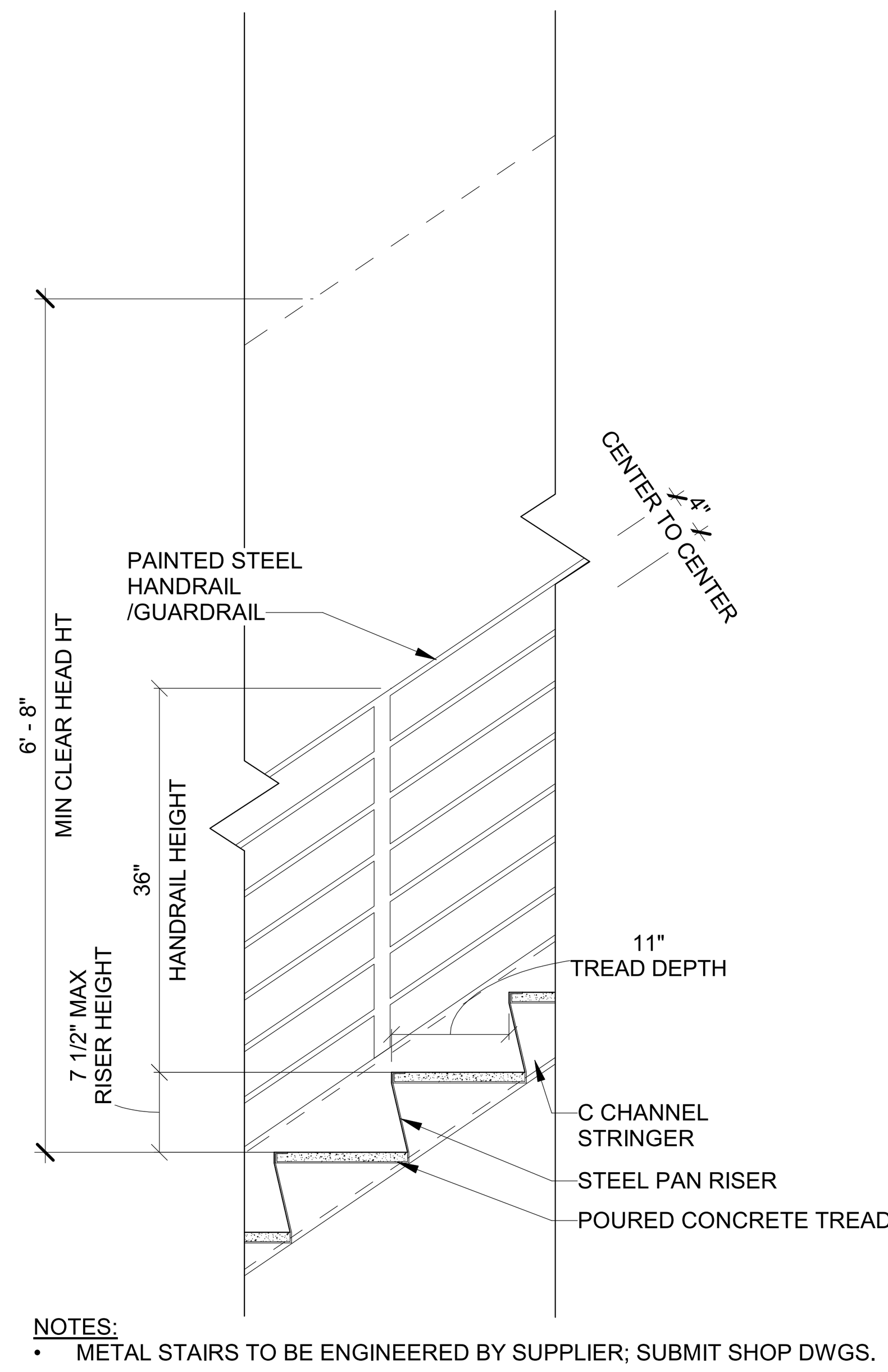
SHEET TITLE:
DOOR DETAILS

SHEET NUMBER:
A903

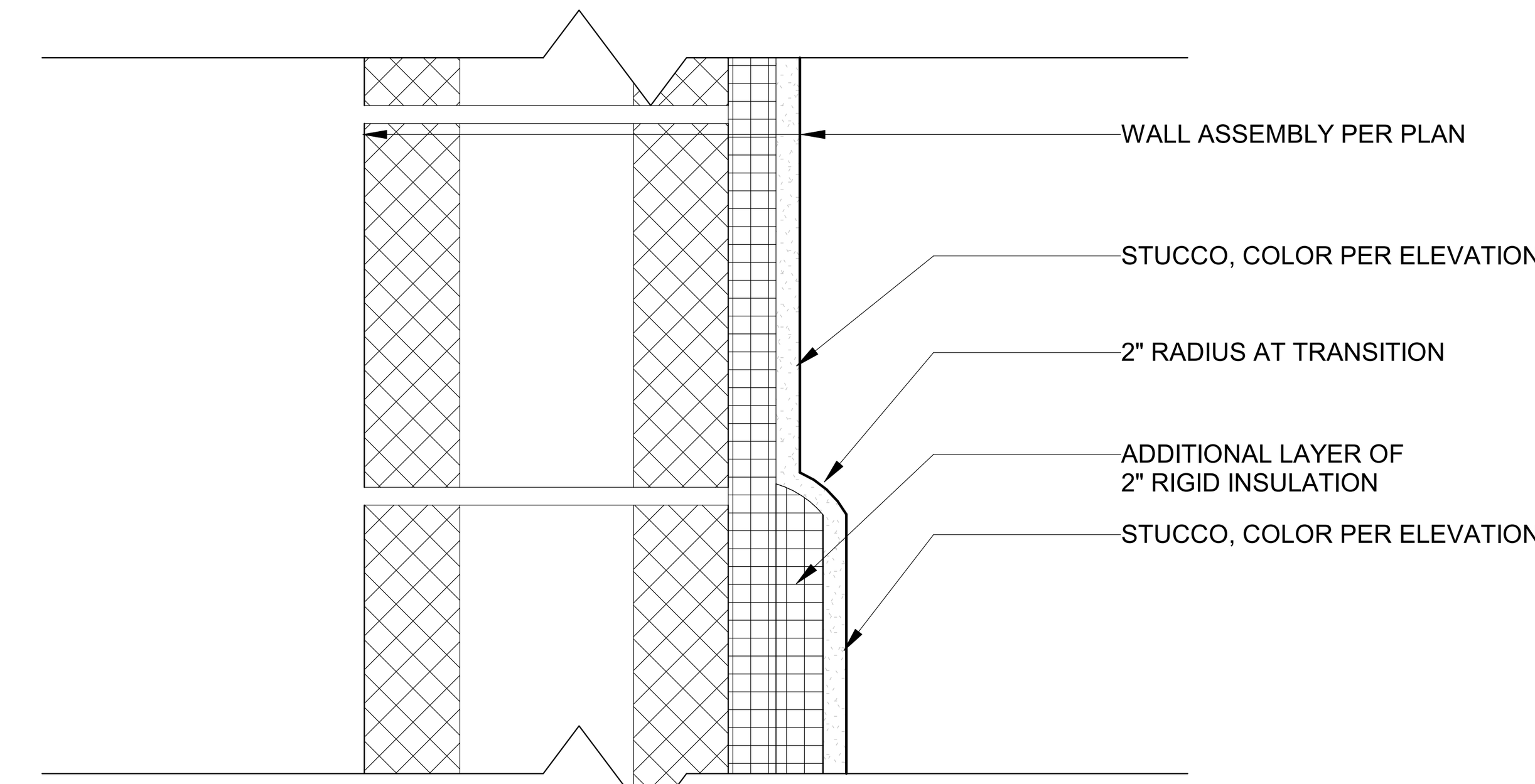


10 A904 Detail - Metal Awning
SCALE: 1 1/2" = 1'-0"

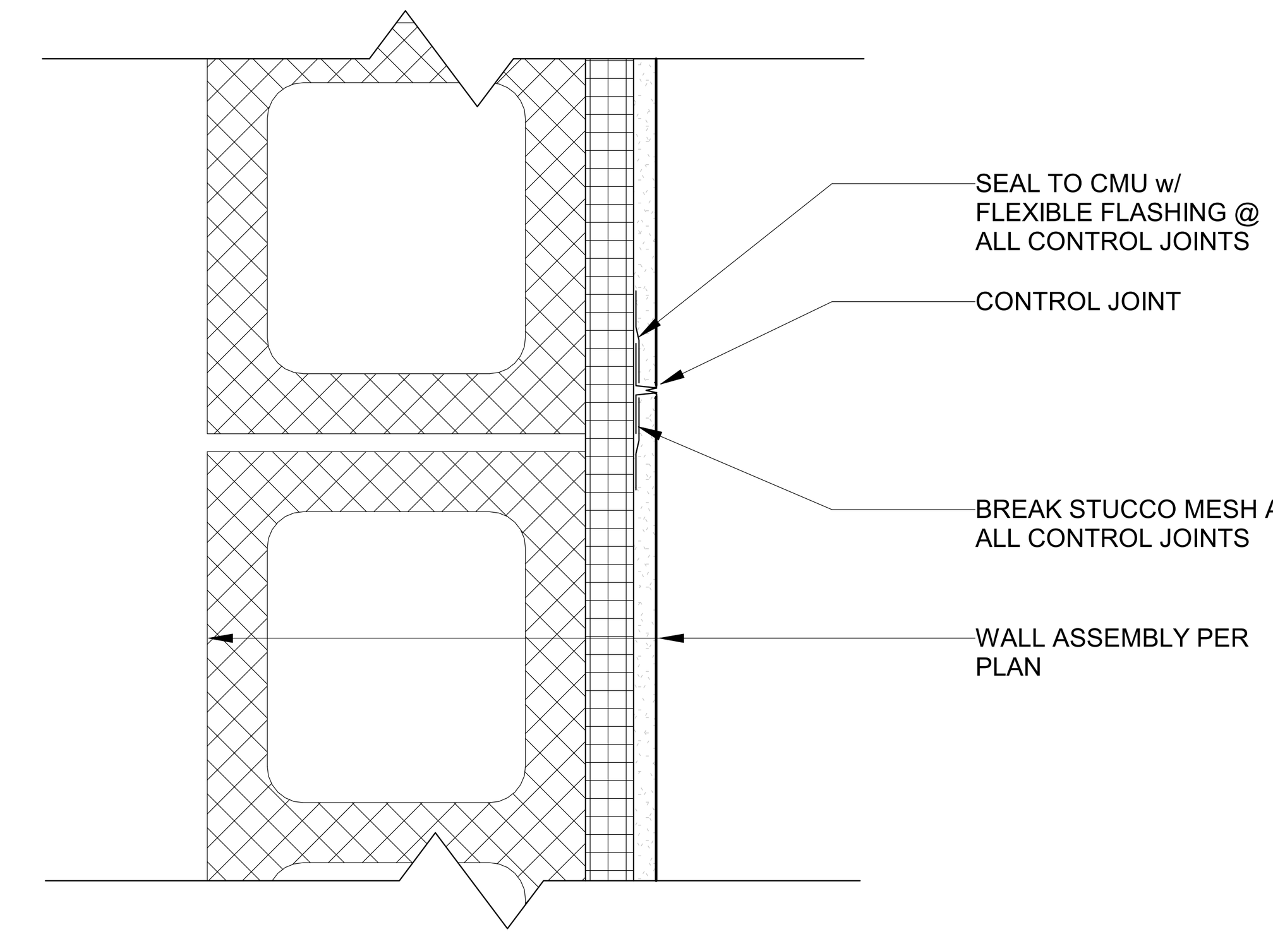


NOTES:
- METAL STAIRS TO BE ENGINEERED BY SUPPLIER; SUBMIT SHOP DWGS.

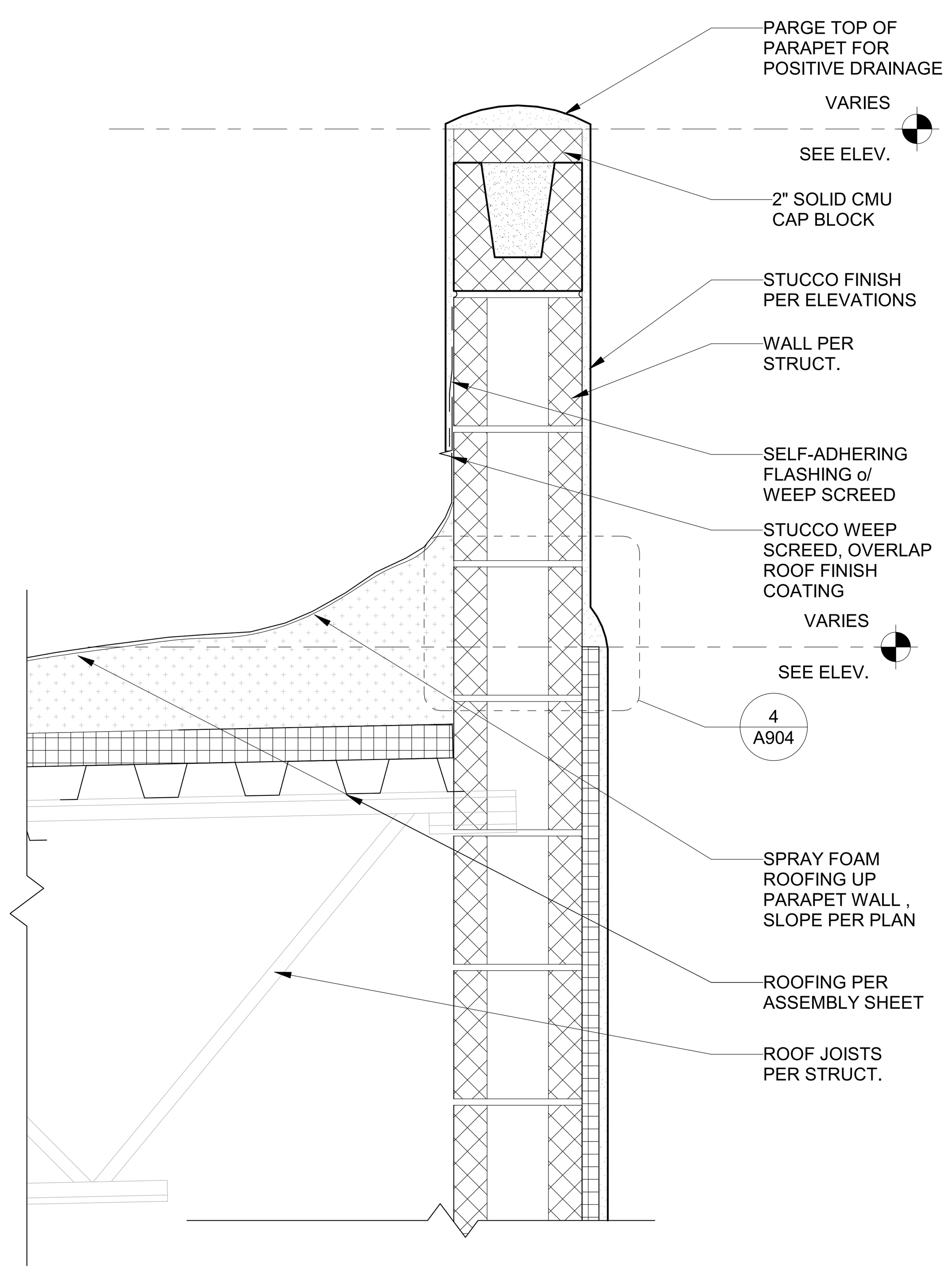
7 A904 DETAIL - EXTERIOR STAIR - TYP
SCALE: 3/4" = 1'-0"



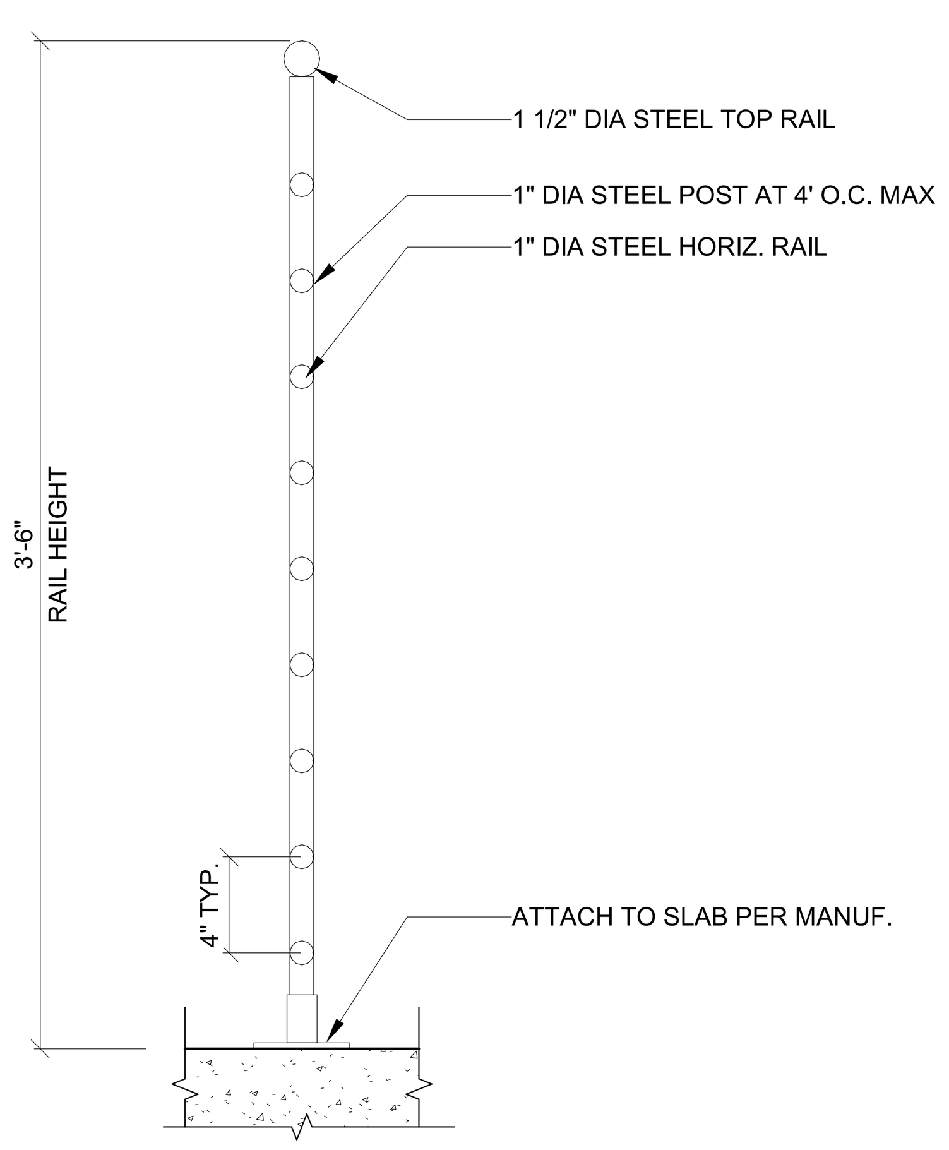
4 A904 Detail - Stucco Transition
SCALE: 3" = 1'-0"



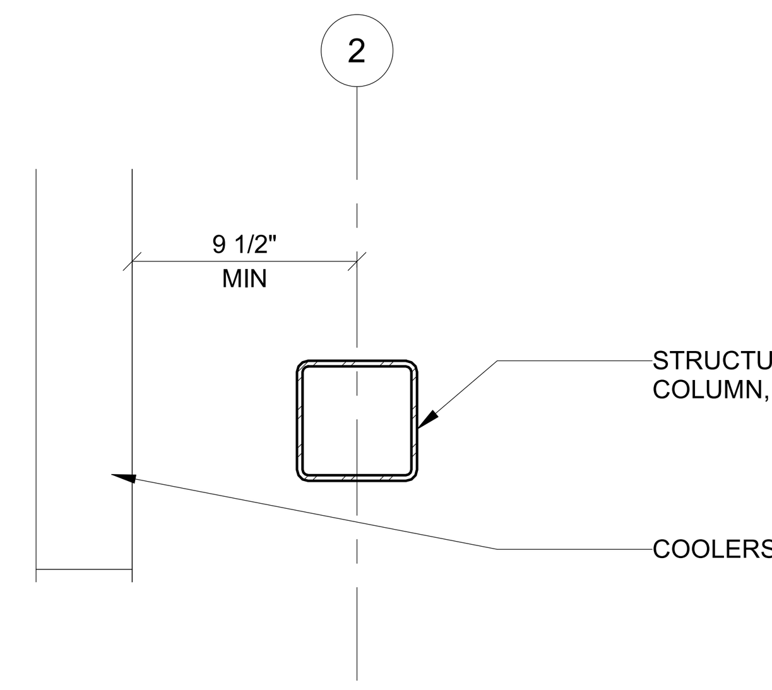
3 A904 Detail - Stucco Control Joint
SCALE: 3" = 1'-0"



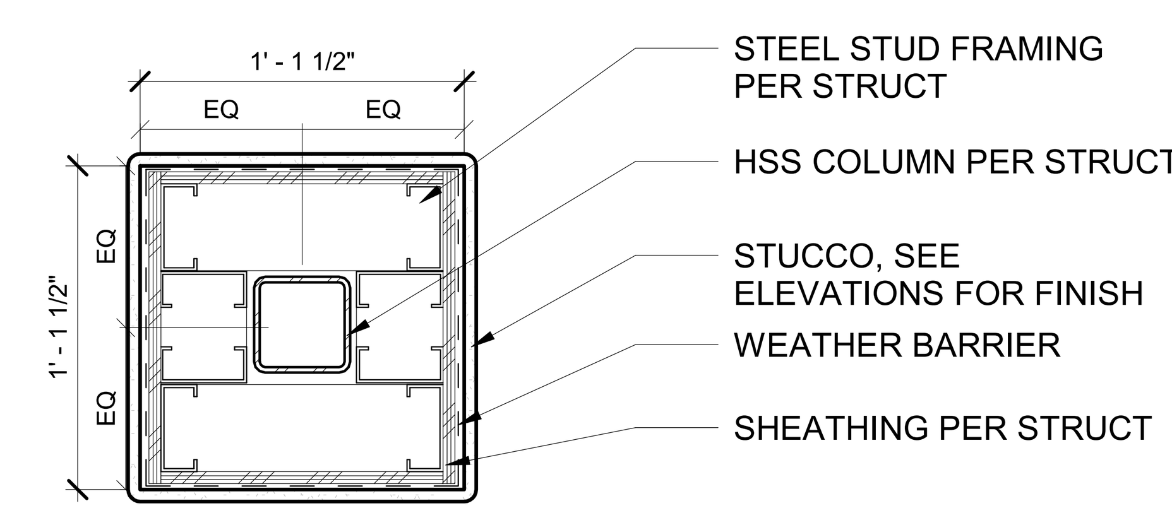
9 A904 Detail - Parapet Wall
SCALE: 1 1/2" = 1'-0"



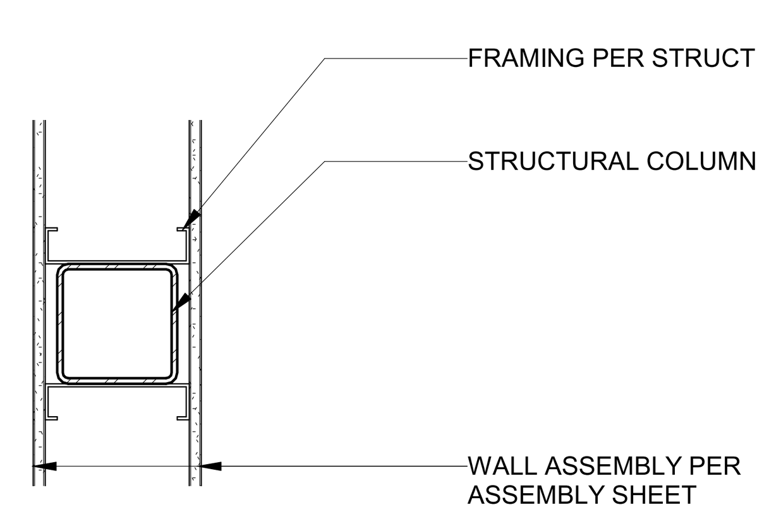
8 A904 Detail - Handrail @ Loading Dock
SCALE: 1 1/2" = 1'-0"



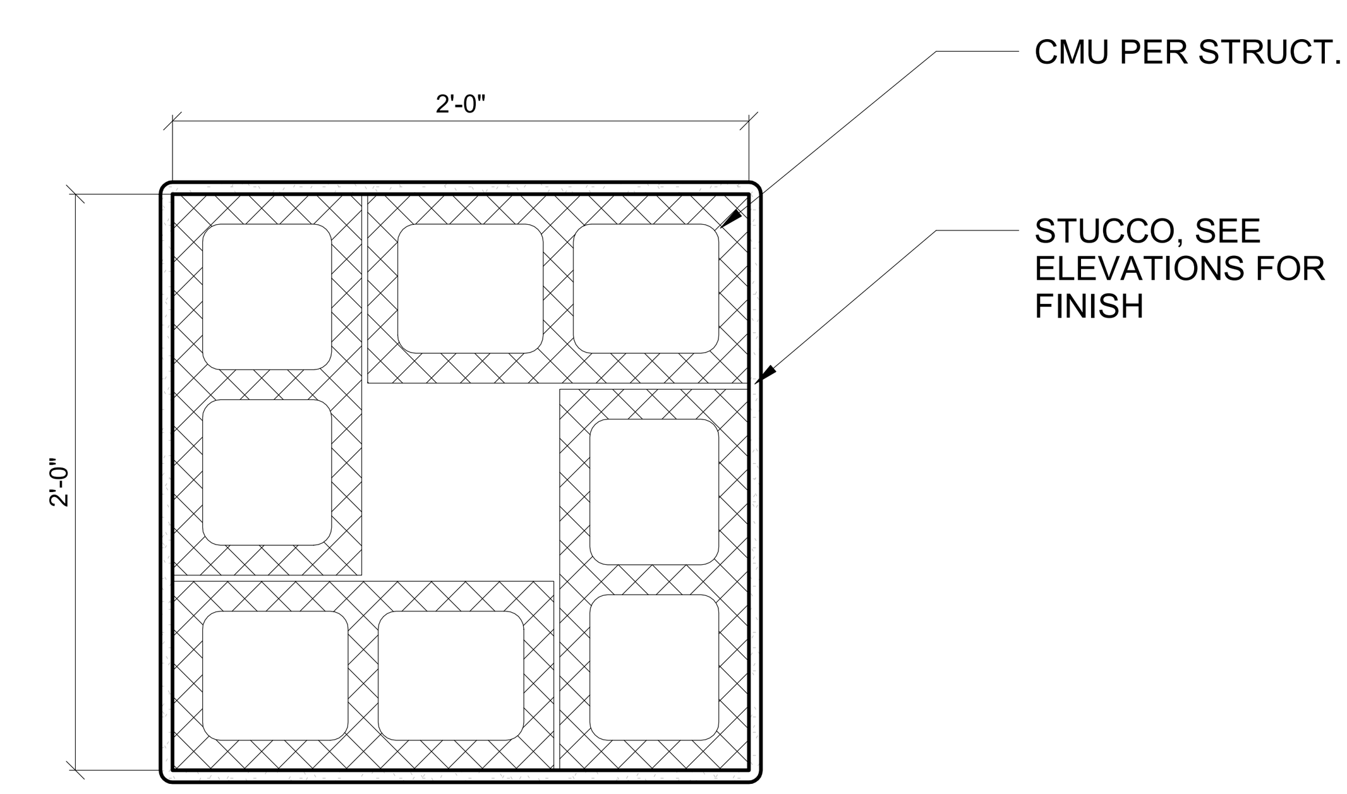
6 A904 DETAIL - EXPOSED COLUMN
SCALE: 1 1/2" = 1'-0"



2 A904 Detail - Rear Entrance Column
SCALE: 1 1/2" = 1'-0"



5 A904 DETAIL - IN-WALL COLUMN
SCALE: 1 1/2" = 1'-0"



1 A904 Detail - Front Entrance Column
SCALE: 1 1/2" = 1'-0"

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DETAILS

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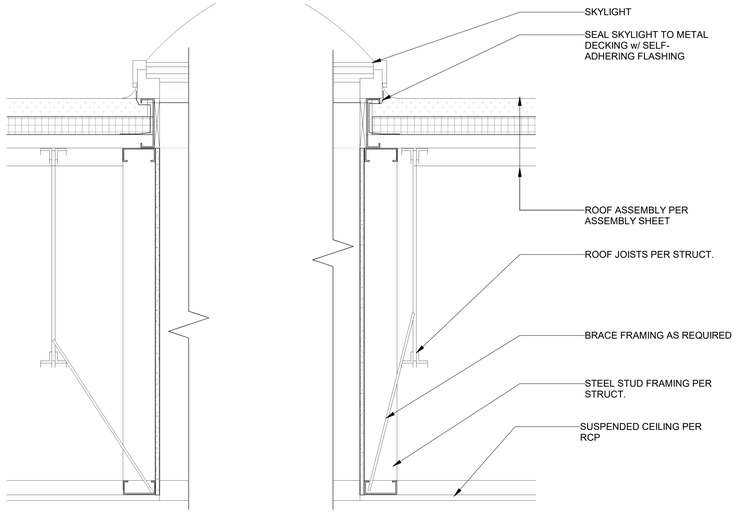
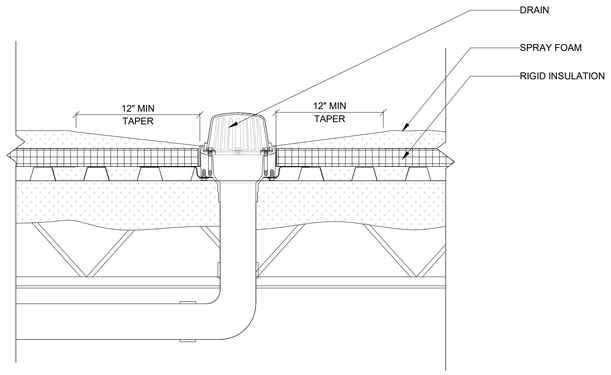
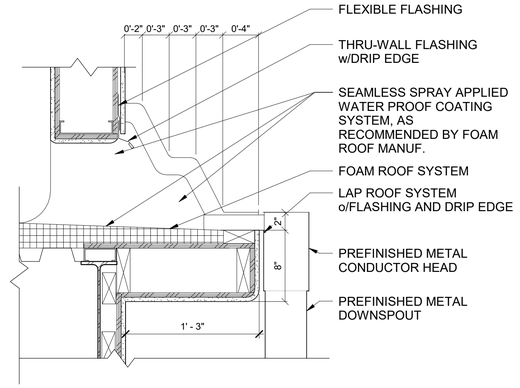


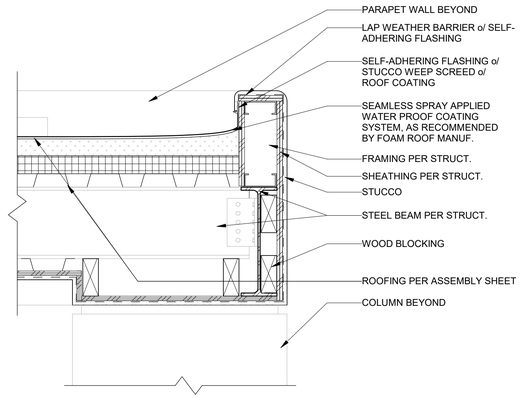
8 A905 DETAIL - SKYLIGHT
SCALE: 1 1/2" = 1'-0"



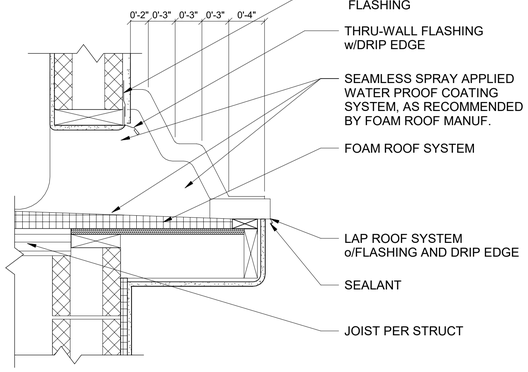
6 A905 Detail - Roof Drain
SCALE: 1 1/2" = 1'-0"



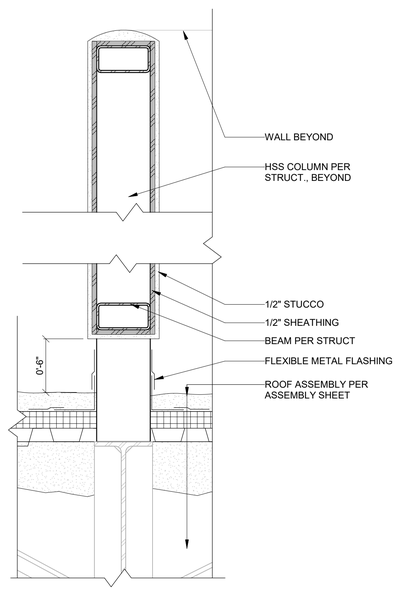
3 A905 Detail - Scupper - section - Downspout
SCALE: 1 1/2" = 1'-0"



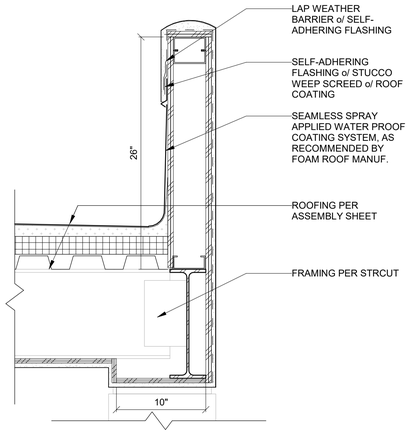
5 A905 Parapet @ Front Entry
SCALE: 1 1/2" = 1'-0"



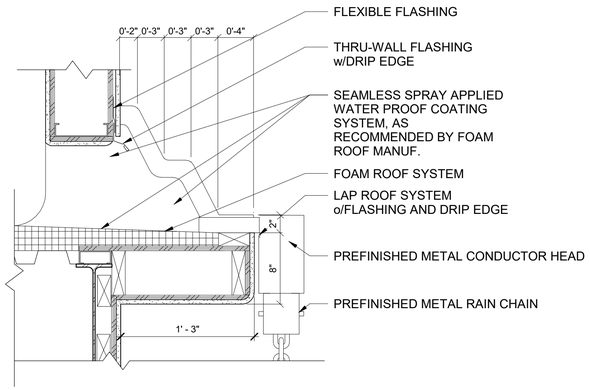
2 A905 Detail - Scupper - section
SCALE: 1 1/2" = 1'-0"



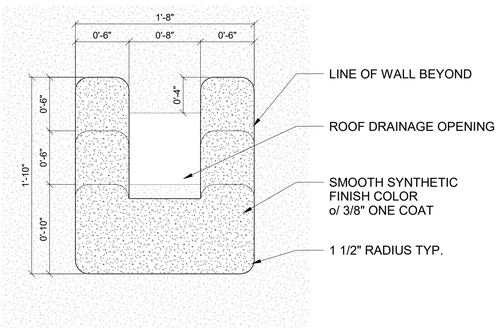
7 A905 Detail - Screen Wall
SCALE: 1 1/2" = 1'-0"



9 A905 Detail - Parapet at Rear Covered Entry
SCALE: 1 1/2" = 1'-0"



4 A905 Detail - Scupper - section - Rain Chain
SCALE: 1 1/2" = 1'-0"



1 A905 Detail - Scupper - elevation
SCALE: 1 1/2" = 1'-0"

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DAVID S. WILLIAMS 3-26-2021 Digitally Signed ARIZONA, U.S.A.

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

33-DR-2020

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CHECKED BY: DR;DW
PROJECT NO: 2019001.23
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE: DETAILS

SHEET NUMBER: A905

2015 IPC BACKFLOW SIZE ESTIMATOR			
COMBINED IPC			
Fixture	QTY	Load	Total
Public/Commercial			
water closet (pressure assist)		2	0
water closet (tank)		5	0
water closet (valve)	1	10	10
urinal		5	0
lavatory / hand sink	1	2	2
shower	1	3	3
kitchen sink	3	3	9
service sink	2	3	6
dishwasher		3	0
clotheswasher	1	2.25	2.25
drinking fountain/glass filler	3	0.25	0.75
ice maker box		0.25	0
hose bib		2	0
TOTAL WSFU =			33
		equivalent gpm:	42.8
		+PLUS washer hot load gpm	14.08
		Total GPM	56.88

AWWA M22 TAP AND METER SIZE ESTIMATOR			
COMBINED AWWA M22			
Fixture	QTY	Load	Total
Public/Commercial			
water closet (pressure assist)			0
water closet (tank)		4	0
water closet (valve)	1	35	35
urinal		35	0
lavatory / hand sink	1	0.5	0.5
shower	1	1.5	1.5
kitchen sink	3	1.8	5.4
service sink	2	4	8
dishwasher		2	0
clotheswasher	1	6	6
drinking fountain/glass filler	3	2	6
ice maker box		2	0
hose bib		12	0
TOTAL WSFU =			62.4
		equivalent gpm:	45
		+PLUS washer hot load gpm	14.73
		Total GPM	59.73

2015 IPC SANITARY FLOWRATE 709.3 Rule					
Summary:	Safety Factor	DFU	GPM	LAUNDRY LOAD	TOTAL LOAD
DFU Calc	1	21.5	10.8	14.08	24.8
DFU calc, 1.1 safety factor	1.1	24	11.8	15.49	27.3
SCOTTSDALE DSPM 2018 - 7-1.403					
Land Use	Peaking Factor	Demand	GPM	LAUNDRY LOAD	TOTAL LOAD
Commercial/Retail (8700SF)	3	0.5 GPD / SF	9.06	14.08	23.14
Commercial/Retail (8700SF)	3.1	0.5 GPD / SF	9.36	15.49	24.85

TOTAL CONNECTED GAS LOAD SCHEDULE

EQUIPMENT	QTY.	INPUT EACH (BTUH @ SL)	INPUT TOTAL (BTUH @ SL)	INLET PRESSURE	NOTES
RTU-1	1	250,000	250,000	7"WC	1, 2, 3
RTU-2	1	350,000	350,000	7"WC	1, 2, 3
GUH-1	1	120,000	120,000	7"WC	1, 2, 3
GUH-2	1	120,000	120,000	7"WC	1, 2, 3
75# DRYER	7	165,000	1,155,000	7"WC	1, 2, 3
22# DRYER	1	22,500	22,500	7"WC	1, 2, 3
IRONER	1	420,000	420,000	7"WC	1, 2, 3
GWH-1	1	500,000	500,000	7"WC	1, 2, 3
GWH-2	1	500,000	500,000	7"WC	1, 2, 3
GENERATOR	1	970,000	970,000	7"WC	1, 2, 3
		TOTAL NEW LOAD=	3,437,500		

NOTES:
1. MODIFICATIONS TO GAS METER AND/OR SERVICE PIPING SHALL BE PERFORMED BY THE GAS COMPANY. SUBMIT REQUIRED GAS SERVICE APPLICATION TO GAS COMPANY IN A TIMELY MANNER TO MEET THE CONSTRUCTION SCHEDULE.
2. FARTHEST CONNECTED DEVICE DISTANCE BASED ON 150'.
3. PIPE SIZING BASED ON PRESSURE AT METER OUTLET OF 7 INCHES WATER COLUMN. CONTRACTOR TO FIELD VERIFY OUTLET PRESSURE PRIOR TO STARTING WORK.

IFGC PIPE SIZING CALCULATOR FOR NATURAL GAS PRESSURES LESS THAN 1.5 PSI

METER DISCHARGE PRESSURE =	7	("W.C.)
ALLOWABLE PRESSURE DROP =	0.5	("W.C.)
TOTAL EQUIVALENT LENGTH OF PIPE =	150	FEET
ALTITUDE CORRECTION FACTOR =	900	BTU/CFH @ ALT.

NOMINAL SCHD. 40 STEEL PIPE SIZE	CAPACITY (CFH)	CAPACITY (MBH)
3/4"	83	75
1"	157	141
1-1/4"	322	290
1-1/2"	482	434
2"	928	836
2-1/2"	1479	1332
3"	2615	2354
4"	5333	4801
5"	9649	8684
6"	15624	14062

*PIPE CAPACITY IS CALCULATED USING FORMULA FOR LOW PRESSURE GAS (1.5 PSI AND LESS) LOCATED IN IFGC APPENDIX A

Q = 2313*D^2.623*((H)/(Cr*L))^.541

Q = CAPACITY (CFH)
D = INSIDE PIPE DIAMETER
H = ALLOWABLE PRESSURE DROP ("W.C.)
Cr = FACTOR FOR VISCOSITY, DENSITY AND TEMPERATURE = .6064
L = LENGTH OF PIPE (FEET)

PLUMBING LEGEND

NOT ALL ITEMS LISTED BELOW ARE USED ON THIS SET OF PLUMBING DRAWINGS

PLUMBING PIPING

SYMBOL	ABBV.	DESCRIPTION
	CW	DOMESTIC COLD WATER
	HW	DOMESTIC HOT WATER
	HWC	DOMESTIC HOT WATER CIRCULATION
180	HW	DOMESTIC HOT WATER AT TEMP. SHOWN
T	T	TEMPERED WATER
TR	TR	TEMPERED WATER CIRCULATION
W	W	SOIL OR WASTE
GW	GW	GREASE WASTE
SOD	SOD	SEDIMENT & OIL DRAIN
FM	FM	FORCE MAIN DRAINAGE
D	D	DRAIN
V	V	SANITARY VENT
GV	GV	GREASE VENT
SD	SD	STORM DRAIN
OD	OD	OVERFLOW STORM DRAIN
F	F	FIRE SPRINKLER
FDC	FDC	FIRE DEPT. CONNECTION
G	G	NATURAL GAS LOW PRESSURE
MPG	MPG	NATURAL GAS MEDIUM PRESSURE
LPG	LPG	PROPANE GAS
CA	CA	COMPRESSED AIR

PLUMBING PIPING SYMBOLS

SYMBOL	DESCRIPTION
	ARROW IN LINE INDICATES DIRECTION OF FLOW
XX	INDICATES PIPE SLOPE DOWN
	REMOVE EXISTING
	BOTTOM PIPE CONNECTION
	PIPING UP
	PIPING DOWN
	FIXTURE TRAP OR DRAIN TRAP
	PIPING CAP OR PLUG
	BALL VALVE IN VERTICAL PIPE DROP
	GATE VALVE IN VERTICAL PIPE DROP

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	WALL HYDRANT
	HOSE BIBB
	BALL VALVE
	CALIBRATED BALANCING VALVE
	GATE VALVE
	CHECK VALVE
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	PLUG VALVE
	PUMP
	ATMOSPHERIC VACUUM BREAKER
	STRAINER
	RELIEF VALVE
	DOWNSPOUT NOZZLE
	WATER HAMMER ARRESTER
	UNION
	REDUCER
M	WATER METER
G	GAS METER
	PRESSURE GUAGE
	THERMOMETER
	FLOOR SINK
	AREA/FLOOR DRAIN
	ROOF DRAIN OR OVERFLOW DRAIN
	WALL CLEANOUT AND LINE CLEANOUT
	FLOOR CLEANOUT
	CONNECT NEW TO EXISTING
1 / P101	RISER BUBBLE AND REFERENCE BUBBLE
DTL / SHT	
1t	EQUIPMENT DESIGNATION

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	FFE	FINISHED FLOOR ELEVATION	NIC	NOT IN CONTRACT
AFG	ABOVE FINISHED GRADE	FPC	FIRE PROT. CONTRACTOR	NO	NORMALLY OPEN
AP	ACCESS PANEL	GC	GENERAL CONTRACTOR	NTS	NOT TO SCALE
BFP	BACKFLOW PREVENTER	IE	INVERT ELEVATION	SCO	SURFACE CLEAN OUT
DNZ	DOWNSPOUT NOZZLE	LCO	LINE CLEANOUT	TYP	TYPICAL
(E)	EXISTING	MC	MECHANICAL CONTRACTOR	VTR	VENT THROUGH ROOF
EC	ELECTRICAL CONTRACTOR	MH	MANHOLE	WCO	WALL CLEAN OUT
EL	ELEVATION	(N)	NEW		
FCO	FLOOR CLEAN OUT	NC	NORMALLY CLOSED		

CODES AND STANDARDS:
2015 IPC, IMC, IFGC, IECC
CITY OF SCOTTSDALE AMENDMENTS

PLUMBING SHEET INDEX

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

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PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE:
PLUMBING LEGEND AND SCHEDULES

SHEET NUMBER:
P001

WATER HAMMER ARRESTOR SCHEDULE

SYMBOL	MODEL	PDI SYMBOL	CONNECTION SIZE	FIXTURE UNIT RATING	NOTES
WHA-A	1260XL-A	A	1/2"	1-11	1, 2

NOTES:
1. EQUIPMENT SCHEDULE BASED ON ZURN.
2. ACCEPTABLE MANUFACTURERS INCLUDE: J.R. SMITH, SIOUX CHIEF, P.P.P. AND WILKINS.

SPECIFICATION:
STAINLESS STEEL PISTON TYPE WITH DOUBLE "O" RING SEAL, MALE THREAD INLET.

DOMESTIC EXPANSION TANK SCHEDULE

NOTES:
1. EQUIPMENT SCHEDULE BASED ON: AMTROL
2. ACCEPTABLE MANUFACTURER'S INCLUDE: TACO AND WATTS

SPECIFICATION:
HYDRO-PNEUNATIC EXPANSION TANK, CONSTRUCTION IN ACCORDANCE WITH SECTION VII OF THE ASME BOILER AND PRESSURE VESSEL CODE. ALL WELDS SHALL CONFORM TO ASME. MAXIMUM OPERATING PRESSURE OF 150 PSIG.
ALL INTERNAL COMPONENTS SHALL COMPLY WITH FDA REGULATIONS, SUITABLE FOR POTABLE WATER.

SYMBOL	MODEL	CAPACITY (GAL)	DIAMETER (IN)	HEIGHT (IN)	OPERATING WEIGHT (LBS)	SYSTEM CONNECTION (IN)	ACCEPTANCE FACTOR	REMARKS
DET-1	ST-447C	53.0	24	45	670	2"	1	1,2

INTERCEPTOR SCHEDULE

1.EQUIPMENT SCHEDULE BASED ON: ZURN
2.ACCEPTABLE MANUFACTURERS INCLUDE: COPELAND, JENSEN, OLDCASTLE, XERXES.
3.REFER TO DIAGRAMS FOR COMPLETE DIMENSIONS

SYMBOL	SERVICE	MODEL	MATERIAL	LENGTH	WIDTH	HEIGHT	VOLUME (GAL)	DRY WEIGHT (LBS)	NOTES
LI-1	WASHER DRAIN	Z1185	Metal - Steel	4' - 0"	4' - 0"	3' - 4"	390.0 gal	723.00 lbf	400 GPM FLOW RATE
SOI-1	LAUNDRY EQUIPMENT	Z1188-HD-KC	Metal - Steel	8' - 4"	6' - 0"	4' - 7"	1275.0 gal	2816.00 lbf	450 GPM FLOW RATE

2

PLUMBING FIXTURE SCHEDULE

NOTE: ALL CONNECTIONS TO POTABLE WATER SYSTEM SHALL CONFORM TO NSF/ANSI-61 AND NSF/ANSI-372 EFFECTIVE 01/04/2014

SYMBOL	DESCRIPTION	ADA	ACCESSORIES	FINISH	MANUFACTURER	MODEL NUMBER	FAUCET TRIM MANUFACTURER	ACCEPTABLE MANUFACTURERS	REMARKS	ROUGH IN CONNECTION SIZING			
										WASTE (INCHES)	VENT (INCHES)	HOT (INCHES)	COLD (INCHES)
ESE-1	COMBINATION EMERGENCY SHOWER AND EYEWASH, WITH 10" D SHOWERHEAD, 10" D EYEWASH BOWL, TWIN EYEWASH HEADS	YES	INTEGRAL FLOW CONTROL, IPS STAY OPEN BALL VALVE, PULL ROD AND PUSH HANDLE	STAINLESS STEEL	BRADLEY	S19314BFSS	--	HAWS, GUARDIAN, SPEAKMAN	CENTER SHOWER HEAD, OVER 3" FLOOR DRAIN	0"	0"	1 1/4"	0"
EWC-1	DRINKING FOUNTAIN, WALL MOUNTED FLEXI-GUARD BUBBLER, FRONT AND SIDE PUSH BAR VALVES	NO	WATER FILTER STEEL WALL HANGER AND CARRIER WATER FILTER STEEL WALL HANGER AND CARRIER	GRAY GRANITE	ELKAY	LMABFDL	--	HAWS HALSEY-TAYLOR KOHLER, OASIS	COORDINATE MOUNTING HEIGHT AND WALL REQUIREMENTS WITH ARCHITECT	2"	2"	0"	1/2"
L-1	LAVATORY - 20"x17" OVAL COUNTER MOUNTED, 4" CENTERSET FAUCET WITH ONE HANDLE CONTROL & 4-3/4" SPOUT	YES	OFFSET GRID STRAINER TRUEBRO TRAP COVER	VITREOUS CHINA CHROME STRAINER	AMERICAN STD.	476.028	DELTA 2529LF-HDF	ZURN CHICAGO KOHLER	0.5 GPM FLOW RATE	2"	2"	1/2"	1/2"
MSB-1	MOP SERVICE BASIN WITH 6" DROP FRONT 3" STAINLESS STEEL DRAIN, 8" WALL MOUNT FAUCET WITH PAIL HOOK	NO	PROVIDE WITH: FIAT#832 HEAVY-DUTY 30" FLEX HOSE & BRACKET, FIAT #889 STAINLESS STEEL MOP BRACKET	MOLDED STONE CHROME FAUCET CHROME STRAINER	FIAT	TSB-3010	FIAT 830-AA	ARCO FLORESTONE WILLAIMS	INTEGRAL VACUUM BREAKER COORDINATE WALL REINFORCEMENT FOR FAUCET BRACE	3"	2"	1/2"	1/2"
S-1	SINK - 22"X19" O.D. SINGLE COMPARTMENT, DELUXE SINGLE HANDLE FAUCET, METAL CONSTRUCTION & 9" SPOUT	YES	SIDE SPRAY FAUCET, OFFSET DRAIN OPENING FOR ADA COMPLIANCE	STAINLESS STEEL CHROME FAUCETS	ELKAY	LRAD2219	DELTA 400LF-HDF	JUST STANADYNE	6-1/2" DEEP SINK, COORDINATE FAUCET HOLE CONFIGURATION WITH FAUCET	2"	2"	1/2"	1/2"
S-2	SINK - 33"X22" O.D. DOUBLE COMPARTMENT, DELUXE SINGLE HANDLE FAUCET, METAL CONSTRUCTION & 9" SPOUT	YES	PULL DOWN SPRAY FAUCET, OFFSET DRAIN OPENING FOR ADA COMPLIANCE	STAINLESS STEEL CHROME FAUCETS	ELKAY	LRAD3322	DELTA 19962Z-SD-DST	JUST STANADYNE	6-1/2" DEEP SINK, COORDINATE FAUCET HOLE CONFIGURATION WITH FAUCET	2"	2"	1/2"	1/2"
S-3	SINK -63"x22"x10" 3-COMPARTMENT SINK, COMMERCIAL KITCHEN SPRAY FAUCET WITH SWING SPOUT FAUCET AND HAND SPRAYER.	NO	COMMERCIAL KITCHEN SPRAY FAUCET	STAINLESS STEEL CHROME FAUCETS	ELKAY	LTR632210	510-G613L12XKC AB	JUST STANADYNE	COORDINATE FAUCET HOLE CONFIGURATION WITH FAUCET	2"	2"	1/2"	1/2"
TD-1	TRENCH DRAIN, STAINLESS STEEL HEAVY-DUTY - 16" INTERNAL WIDTH INTEGRAL RAILS TO SUPPORT CARE	N/A	PERFORATED STAINLESS STEEL GRATE	CAST IRON	JR SMITH	9814	--	POLYDRAIN ZURN MIFAB		4"	0"	0"	0"
WB-1	WALL BOX - ICE MACHINE, STEEL, RECESSED, 1/2" NPT BOTTOM INLET 1/4" COMPRESSION OUTLET	N/A	INTEGRAL HAMMER ARRESTER OPEN FRAME FACEPLATE	GALVANIZED STEEL	GUY GRAY	BIM875QTS-HA	--	LSP PRODUCTS OATLEY SIOUX CHIEF	FOR COMMERCIAL APPLICATIONS	0"	0"	0"	0"
WB-2	WALL BOX - LAUNDRY, RECESSED, STEEL WATTS #2T "DUO CLOZ" VALVES WATER AND WASTE CONNECTIONS	N/A	INTERGRAL HAMMER ARRESTERS OPEN FRAME FACEPLATE	GALVANIZED STEEL	GUY GRAY	WB200HA	--	LSP PRODUCTS OATEY SIOUX CHIEF	FOR COMMERCIAL APPLICATIONS	2"	2"	1/2"	1/2"
WC-1	WATER CLOSET - FLOOR MOUNTED, TOP SPUD AUTOMATIC SENSOR OPERATED FLUSH VALVE, 17" HIGH, 1.28 GPF, ELONGATED BOWL, BATTERY POWERED	YES	HEAVY DUTY SEAT, COLOR SHALL MATCH FIXTURE	VITREOUS CHINA	AMERICAN STD. MADERA	3461.001	SLOAN ECOS 8111-1.28	ZURN DELANY KOHLER	HIGH EFFICIENCY FLUSH STAIN RESISTANT SURFACE, BATTERY POWERED	3"	2"	0"	1"

PLUMBING SPECIALTIES SCHEDULE

NOTE: ALL CONNECTIONS TO POTABLE WATER SYSTEM SHALL CONFORM TO NSF/ANSI-61 AND NSF/ANSI-372 EFFECTIVE 01/04/2014

SYMBOL	TYPE	ADA	ACCESSORIES	FINISH	MANUFACTURER	MODEL NUMBER	ACCEPTABLE MANUFACTURERS	REMARKS
4" RD-1	ROOF DRAIN, CAST IRON BODY WITH SUMP, FLASHING FLANGE AND CLAMP, UNDERDECK CLAMP	N/A	REMOVABLE DOME STRAINER, INTEGRAL GRAVEL STOP	CAST IRON	ZURN	Z100	JOSAM J.R. SMITH WADE/WATTS	CONNECTION SIZE NOTED ON FLOOR PLANS
D-1	DISPOSER - 3/4 HP, 120-1-60 AUTOMATIC REVERSING STAINLESS STEEL ELEMENTS	N/A	MOTOR OVERLOAD PROTECTION PLUG AND CORD	--	IN SINK ERATOR	PRO 333	NATIONAL WAST KING GE MONOGRAM	
DNZ-1	DOWNSPOUT NOZZLE, NICKLE BRONZE BODY WITH INSIDE THREADED CONNECTION	N/A	--	NICKLE BRONZE	ZURN	Z199	JOSAM J.R. SMITH WADE/WATTS	CONNECTION SIZE NOTED ON FLOOR PLANS
FCO-1	FLOOR CLEANOUT WITH COUNTERSUNK PLUG HEAVY DUTY SECURED COVER	YES	MATCH TOP STYLE FOR FLOORING	NICKLE BRONZE	ZURN	EZC	JOSAM J.R. SMITH WADE/WATTS	CONNECTION SIZE NOTED ON FLOOR PLANS
FD-1	2692 QUAD-CLOSE TRAP SEAL IRON BODY ,FLASHING COLLAR, ADJUSTABLE STRAINER HEAD, SECURED GRATE	YES	2692 QUAD-CLOSE TRAP SEAL	NICKEL BRONZE	J.R. SMITH	2005-A06NB	JOSAM ZURN MIFAB	CONNECTION SIZE NOTED ON FLOOR PLANS
FDC-1	4"x2-1/2" CAST BRASS TWO-WAY INLET BODY, CAPS AND CHAINS DROP CLAPPERS, PIN LUG SWIVELS	N/A	CAST BRASS WALL PLATE WITH "AUTO SPRINKLER" LETTERING	BRASS	POTTER ROEMER	5751	CROKER ELKHART STANDARD	
FS-1	FLOOR SINK - SQUARE CAST IRON BODY, PORCELAIN ENAMELED INTERIOR, DOME STRAINER	N/A	REMOVABLE HALF GRATE 2692 QUAD-CLOSE TRAP SEAL	NICKLE BRONZE	J.R. SMITH	3155-12	JOSAM J.R. SMITH WADE/WATTS	CONNECTION SIZE NOTED ON FLOOR PLANS
SCO-1	ROUND CAST IRON BODY BRONZE DOUBLE FLANGED HOUSING HEAVY DUTY SECURED COVER	YES	VANDAL RESISTANT SCREWS TAPER THREAD BRONZE PLUG	NICKLE BRONZE	ZURN	Z1474	JOSAM ZURN WADE/WATTS	

GAS FIRED DOMESTIC WATER HEATER SCHEDULE

NOTES:
1. EQUIPMENT SCHEDULE BASED ON: LAARS
2. ACCEPTABLE MANUFACTURERS INCLUDE: PVI, HUBBELL.
3. BURNER SHALL BE DESIGNED TO FIRE ON NATURAL GAS, 6" W.C., 900 BTU/CF.
4. WATER HEATER SHALL BE PROVIDED WITH MANUFACTURER SUPPLIED, INTEGRAL HEAT TRAP ON SUPPLY AND DISCHARGE CONNECTIONS.

SPECIFICATION:
GAS WATER HEATER. POWER DIRECT VENT DESIGN WATER HEATER WITH AN AUTOMATIC BLOWER-POWERED, TWO PIPE AIR INTAKE AND EXHAUST SYSTEM COMMUNICATING DIRECTLY WITH THE OUTSIDE OF THE BUILDING. UNIT MUST MEET OR EXCEED ASHRAE 90.1B-1992 REQUIREMENTS FOR WATER HEATERS. WATER HEATER SHALL HAVE AGA OR CGA SEAL, CONSTRUCTED FOR WORKING PRESSURE OF 150 PSI, AND A FACTORY INSTALLED TEMPERATURE AND PRESSURE RELIEVE VALVE. PROVIDE WITH MAGNESIUM ANODE ROD; GLASS, POLY, OR EPOXY LINING ON INTERNAL SURFACES EXPOSED TO WATER; BURNER SHALL HAVE AN INDIVIDUAL ORIFICE FOR BURNER TUBE AND SHALL BE CONSTRUCTED OF TUBULAR ALUMINIZED STEEL MOUNTED IN AN EASILY REMOVABLE TRAY; EQUIP WITH AUTOMATIC GAS SHUTOFF DEVICE TO SHUT OFF ENTIRE GAS SUPPLY IN EVENT OF EXCESSIVE TEMPERATURE IN TANK AND PILOT SAFETY SHUTOFF; INSULATE JACKET WITH VERMIN-PROOF GLASS FIBER OR FOAM INSULATION; OUTER JACKET SHALL BE STEEL WITH BAKED ENAMEL FINISH.

SYMBOL	MODEL	STORAGE	MBH INPUT @S.L.	MBH OUTPUT @3,000	INLET WATER TEMP (F)	OUTLET WATER TEMP (F)	RECOVERY RATE @S.L. (GPH)	FLUE/INTAKE	VOLTAGE	PHASE	DEPTH (IN)	WIDTH	HEIGHT (IN)	OPERATING WEIGHT (LBS)	NOTES
GWH-1	NTV500	140 gal	500	450	60 °F	140 °F	726	4"	120 V	1	38"	25"	50 1/2"	1590 lbf	1,2,3,4
GWH-2	NTV500	140 gal	500	450	60 °F	140 °F	726	4"	120 V	1	38"	25"	50 1/2"	1590 lbf	1,2,3,4

DOMESTIC WATER STORAGE TANK SCHEDULE

NOTES:
1. EQUIPMENT SCHEDULE BASED ON: LAARS
2. ACCEPTABLE MANUFACTURER'S INCLUDE: A.O. SMITH, LOCHINVAR, STATE

SPECIFICATION:
TANK SHALL BE STEEL; RATED, DESIGNED AND STAMPED PER ASME CODE SECTION VIII FOR WORKING PRESSURE OF 125 PSIG, WITH STAINLESS STEEL THREADED CONNECTIONS, ACCESS MANHOLE, STEEL SUPPORT SADDLES, AND TAPPINGS FOR PIPING AND ACCESSORIES. TANK SHALL BE INSULATED TO MEET ASHRAE STAND-BY LOSS REQUIREMENTS AND SHALL HAVE A PRE-PAINTED, HEAVY GAUGE STEEL JACKET. TANK LINING SHALL CEMENT OR GLASS. CEMENT LINING SHALL BE 3/4" THICK CEMENT WITH LINE FLANGED CONNECTIONS, CLEANED AND PRIME COATED BEFORE LINING. GLASS LINED TANKS SHALL BE FURNISHED WITH A MAGNESIUM ANODE FOR CATHODIC PROTECTION. PROVIDE WITH TEMPERATURE AND PRESSURE RELIEF VALVE.

SYMBOL	MODEL	STORAGE CAPACITY (GAL)	INLET PIPE SIZE (IN)	OUTLET PIPE SIZE (IN)	T&P RELIEF VALVE CONNECTION (IN)	HEIGHT (IN)	DIAMETER (IN)	OPERATING WEIGHT (LBS)	SERVICE	REMARKS
ST-1	A2086000	200.0	2 1/2"	2 1/2"	1	80"	32"	2000.00	DOMESTIC HOT WATER	1,2

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

ROGER C. CRAWFORD 43769 REGISTERED PROFESSIONAL ENGINEER ARIZONA U.S.A. 05.12.21

DRAWN BY: CSG
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021

REVISIONS:

1	PERMIT DWG UPDATES	2021-03-08
2	DRB REVISIONS	2021-05-12

SHEET TITLE: PLUMBING SCHEDULES

SHEET NUMBER: P002

THERMOSTATIC MIXING VALVE SCHEDULE

NOTES:
1. EQUIPMENT SCHEDULE BASED ON: LEONARD.
2. ACCEPTABLE MANUFACTURER'S INCLUDE: LAWLER, POWERS, AND SYMMONS.

SPECIFICATION:
THERMOSTATIC WATER MIXING VALVE WITH SOLID BIMETAL OR LIQUID FILLED THERMOSTAT, ADJUSTABLE TEMPERATURE LIMIT STOP, INTEGRAL COMBINATION CHECK STOPS ON INLETS. COLOR CODED DIAL THERMOMETER ON OUTLET, INTEGRAL WALL SUPPORT, CAST LEVER HANDLES. BRONZE, BRASS AND STAINLESS STEEL INTERNAL COMPONENTS WITH ROUGH BRONZE OR CHROME PLATED FINISH. LOCKING TEMPERATURE REGULATOR. MASTER MIXING TYPE VALVE SHALL CONSIST OF LARGE THERMOSTATIC WATER MIXING VALVE FOR HIGH FLOWS, SMALL THERMOSTATIC WATER MIXING VALVE FOR SMALL FLOWS, WITH PRESSURE REGULATING VALVE WITH PRESSURE GAUGES, FACTORY PREASSEMBLED AND TESTED PIPING MANIFOLD, INLET AND OUTLET BALL VALVES. EACH THERMOSTATIC MIXING VALVE SHALL BE AS SPECIFIED ABOVE. ASSEMBLY SHALL BE SURFACE MOUNTED TO STEEL FRAMEWORK.

SYMBOL	MODEL	HW INLET TEMP. (°F)	CW INLET TEMP. (°F)	OUTLET TEMP. (°F)	MINIMUM FLOW (GPH)	MAXIMUM FLOW (GPH)	PRESSURE DROP (PSI)	INLET SIZE (IN)	OUTLET SIZE (IN)	HEIGHT (IN)	SERVICE	REMARKS
TMV-1	TM-800-LF-STS TL-EXP	140 °F	60 °F	85 °F	3.00 GPM	25.0 GPM	10.00 psi	1"	1 1/4"	16"	ESE-1	1,2
TMV-2	270-LF	140 °F	60 °F	110 °F	0.25 GPM	5.5 GPM	10.00 psi	1/2"	1/2"	6"	LAV-1	1,2

BACKFLOW PREVENTER SCHEDULE

1.EQUIPMENT SCHEDULE BASED ON: ZURN-WILKINS
2.ACCEPTABLE MANUFACTURERS INCLUDE: WATTS, CASH-ACME, FEBCO, AMES.
3.CONNECTIONS TO DOMESTIC WATER SYSTEM SHALL BE LEAD FREE

SYMBOL	MODEL	TYPE	MINIMUM FLOW (GPM)	MAXIMUM FLOW (GPM)	PRESSURE DROP - MAX (PSI)	SIZE (IN)	LENGTH (IN)	SERVICE	NOTES
BFP-1	350A	DOUBLE CHECK	1 GPM	300 GPM	5.00 psi	3"	37"	FIRE PROTECTION	1,2,3

DOMESTIC CIRCULATION PUMP SCHEDULE

NOTES:
1. EQUIPMENT SCHEDULE BASED ON: TACO
2. ACCEPTABLE MANUFACTURER'S INCLUDE ARMSTRONG, AURORA, BELL&GOSSET, PACO

SPECIFICATION:
BRONZE WET ROTOR CIRCULATOR PUMP. PROVIDE COMPLETE WITH 100% LEAD FREE STAINLESS STEEL PUMP BODY, POLYPROPYLENE IMPELLER, CERAMIC SHAFT AND BOUBLE-SINTERED CARBON BEARINGS; 18 MONTH WARRANTY.

SEQUENCE OF OPERATION:
PUMP WILL START/STOP BY THE SCHEDULE FROM THE BUILDING MANAGEMENT SYSTEM OR TIME CLOCK

SYMBOL	SERVICE	PUMP TYPE	MODEL	GPM	HEAD (FT WC)	HP	RPM	VOLTAGE	PHASE	SUCTION SIZE (IN)	DISCH. SIZE (IN)	NOTES
CP-1	DOMESTIC HOT WATER CIRCULATION	IN-LINE	008-SF6	6	10	0.04	3250	120	1	1	1	1,2
CP-2	DOMESTIC STORAGE TANK	IN-LINE	008-SF6	10	8	0.04	3250	120	1	1	1	1,2
CP-3	DOMESTIC STORAGE TANK	IN-LINE	008-SF6	10	8	0.04	3250	120	1	1	1	1,2

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42769
ROGER C. CRAWFORD
04.02.21
ARIZONA, U.S.A.

DRAWN BY: CSG
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE:
PLUMBING SCHEDULES

SHEET NUMBER:
P003

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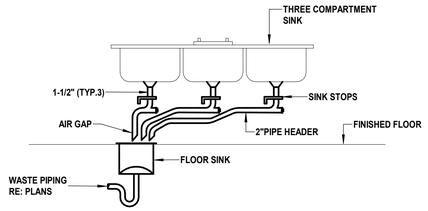

THREE COMPARTMENT SINK DIAGRAM

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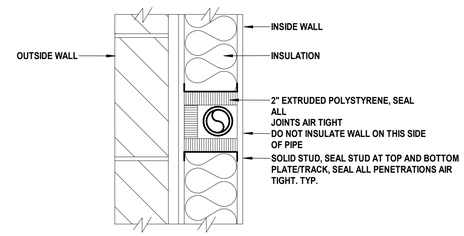

PIPE IN OUTSIDE WALL DIAGRAM

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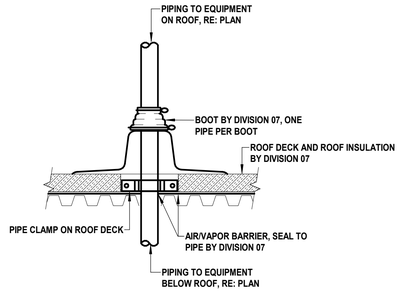

PIPE ROOF PENETRATION DIAGRAM

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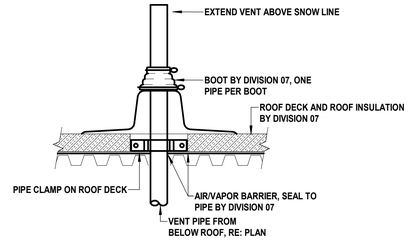

VENT THROUGH ROOF DIAGRAM

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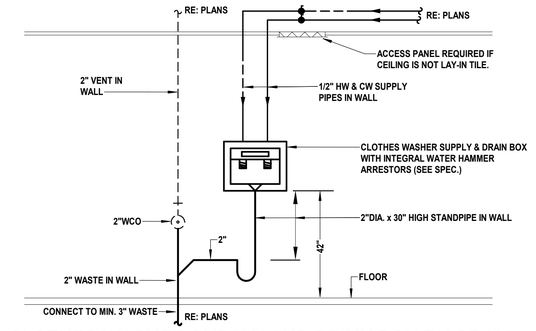

CLOTHES WASHER SUPPLY AND DRAIN BOX DIAGRAM

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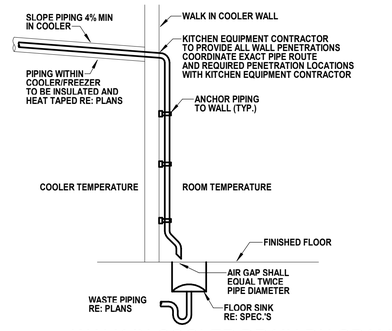

WALK-IN COOLER DRAIN DIAGRAM

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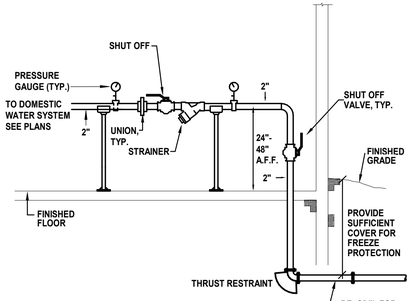
PLUMBING CONTRACTOR TO CONFIRM INSTALL MEETS CITY REQUIREMENTS.



DOMESTIC WATER ENTRY DIAGRAM

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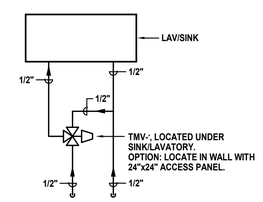
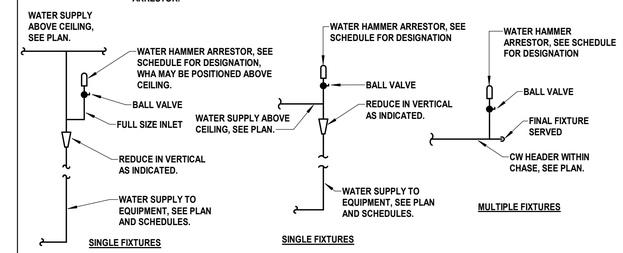


THERMOSTATIC MIXING VALVE DIAGRAM

NOT TO SCALE 22 11 19.07

NOTE:
WATER HAMMER ARRESTORS INSTALLED ABOVE CEILING SHALL BE POSITIONED IN ACCESSIBLE LOCATIONSWITH ACCESS PANELS PROVIDED AS NEEDED. ALL WATER HAMMER ARRESTORS INSTALLED WITHIN WALLS OR CHASES SHALL BE PROVIDED WITH ACCESS PANELS SIZED TO ALLOW FOR VALVE CLOSURE AND REMOVAL OF WATER HAMMER ARRESTOR.



WATER HAMMER ARRESTOR PIPING DIAGRAMS

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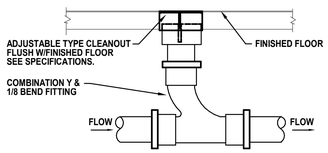

FLOOR CLEANOUT (FCO)

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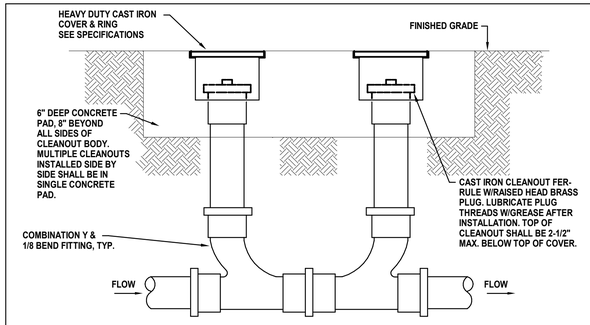

2-WAY SURFACE CLEANOUT

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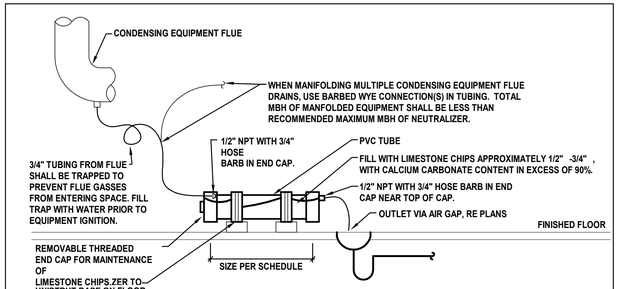

INLINE CONDENSATE NEUTRALIZER DIAGRAM

NOT TO SCALE 22 13 19.03

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ROGER C. CRAWFORD 04.02.21

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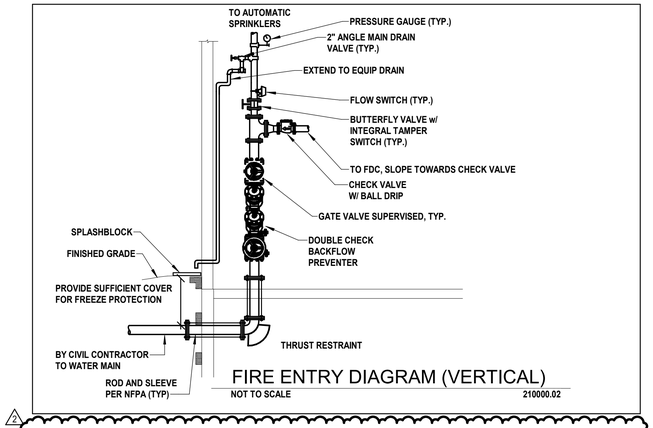

FIRE ENTRY DIAGRAM (VERTICAL)

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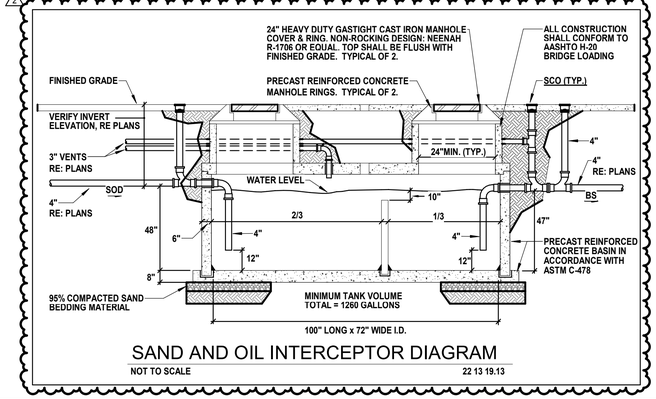

SAND AND OIL INTERCEPTOR DIAGRAM

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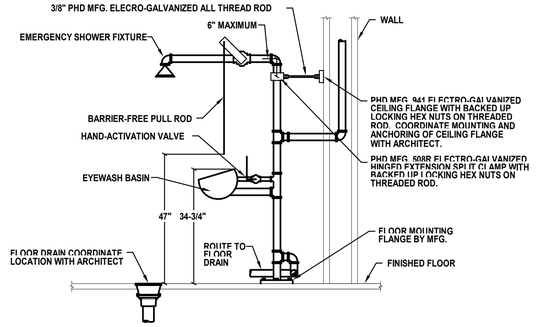

EMERGENCY FIXTURE SUPPORT DIAGRAM

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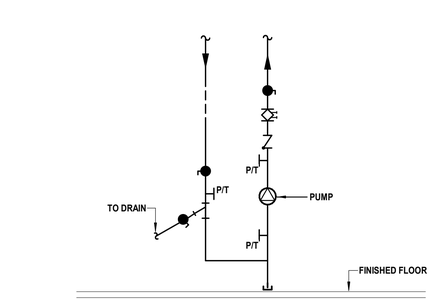
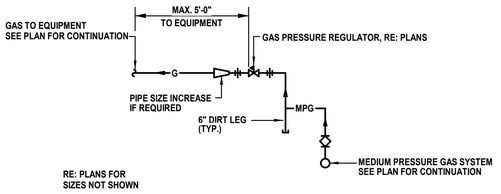


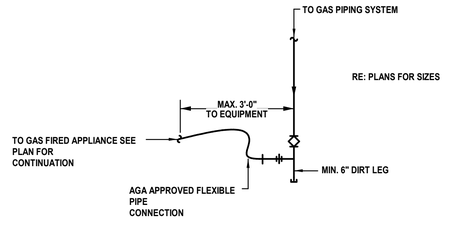
IN-LINE PUMP DIAGRAM (VERTICAL)

NOT TO SCALE 22 00 00.03



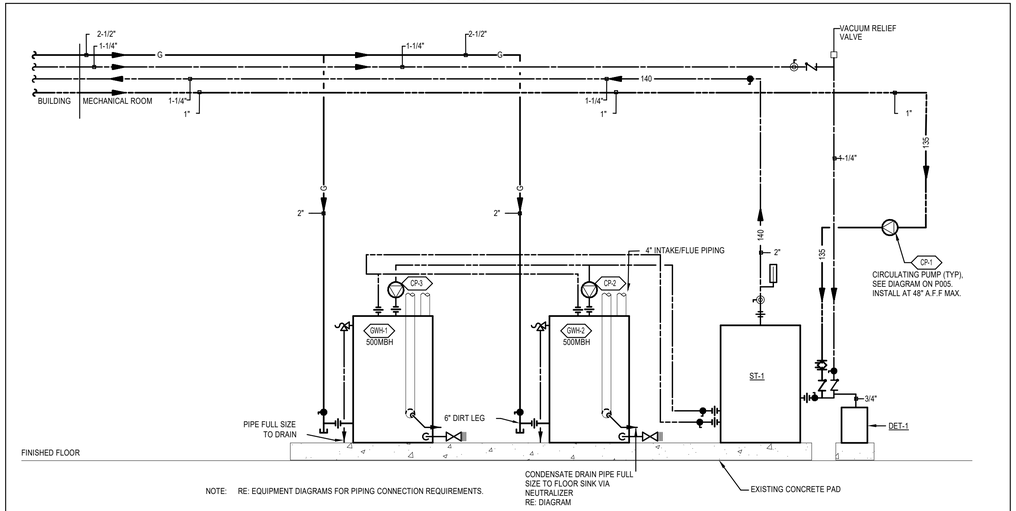
GAS PRESSURE REGULATOR PIPING DIAGRAM (EXTERIOR LOCATION)

NOT TO SCALE 23 11 23.06



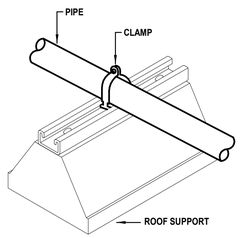
INTERIOR EQUIPMENT GAS PIPING DIAGRAM

NOT TO SCALE 231123.08



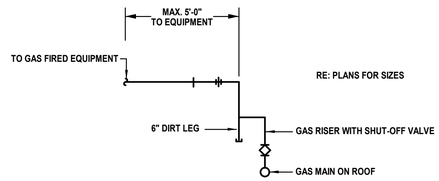
DOMESTIC HOT WATER FLOW DIAGRAM

NOT TO SCALE



GAS PIPING ROOF SUPPORT

NOT TO SCALE 23 11 23.09



ROOF EQUIPMENT GAS PIPING DIAGRAM

NOT TO SCALE 23 11 23.07

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DESERT MOUNTAIN CLUB
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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

REGISTERED PROFESSIONAL ENGINEER 43799 ROGER C. CRAWFORD 05.12.21 ARIZONA U.S.A.

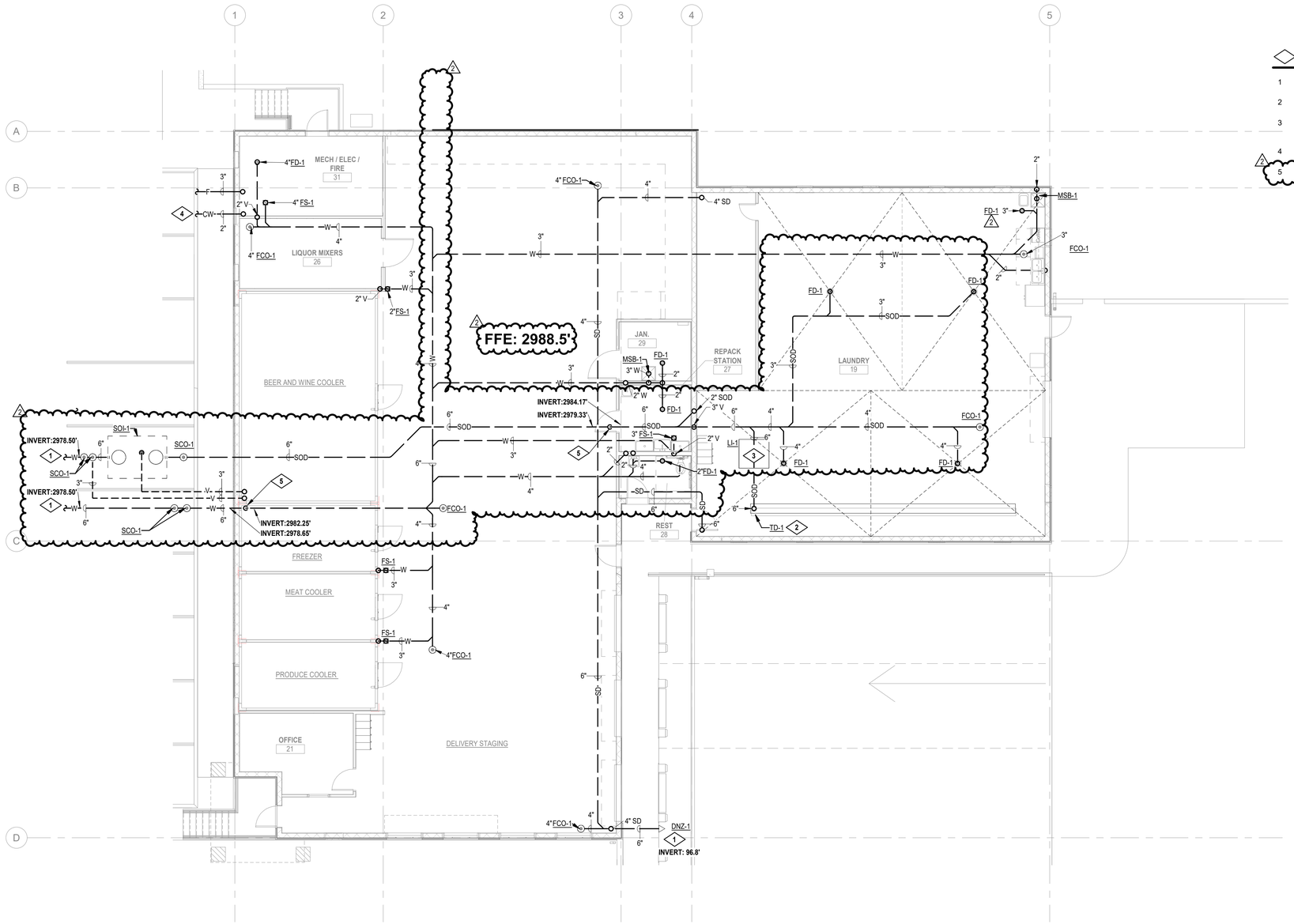
DRAWN BY: CSG
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021

REVISIONS:

2	DRB REVISIONS	2021-05-12

SHEET TITLE: PLUMBING DIAGRAMS

SHEET NUMBER: P005



DRAWING NOTES:

1. COORDINATE FINAL LOCATION WITH CIVIL ENGINEER
2. TRENCH DRAIN FOR INDIRECT WASHER DRAIN COLLECTION.
3. PROVIDE IN-FLOOR LINT INTERCEPTOR DOWNSTREAM OF WASHER TRENCH DRAIN CAPABLE OF FLOWING 350 GPM.
4. 2" DOMESTIC WATER FROM CIVIL BACKFLOW PREVENTER NEAR METER.
5. DROP TO MEET INVERT AT EXTERIOR OF BUILDING.

UNDERSLAB PLUMBING PLAN

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

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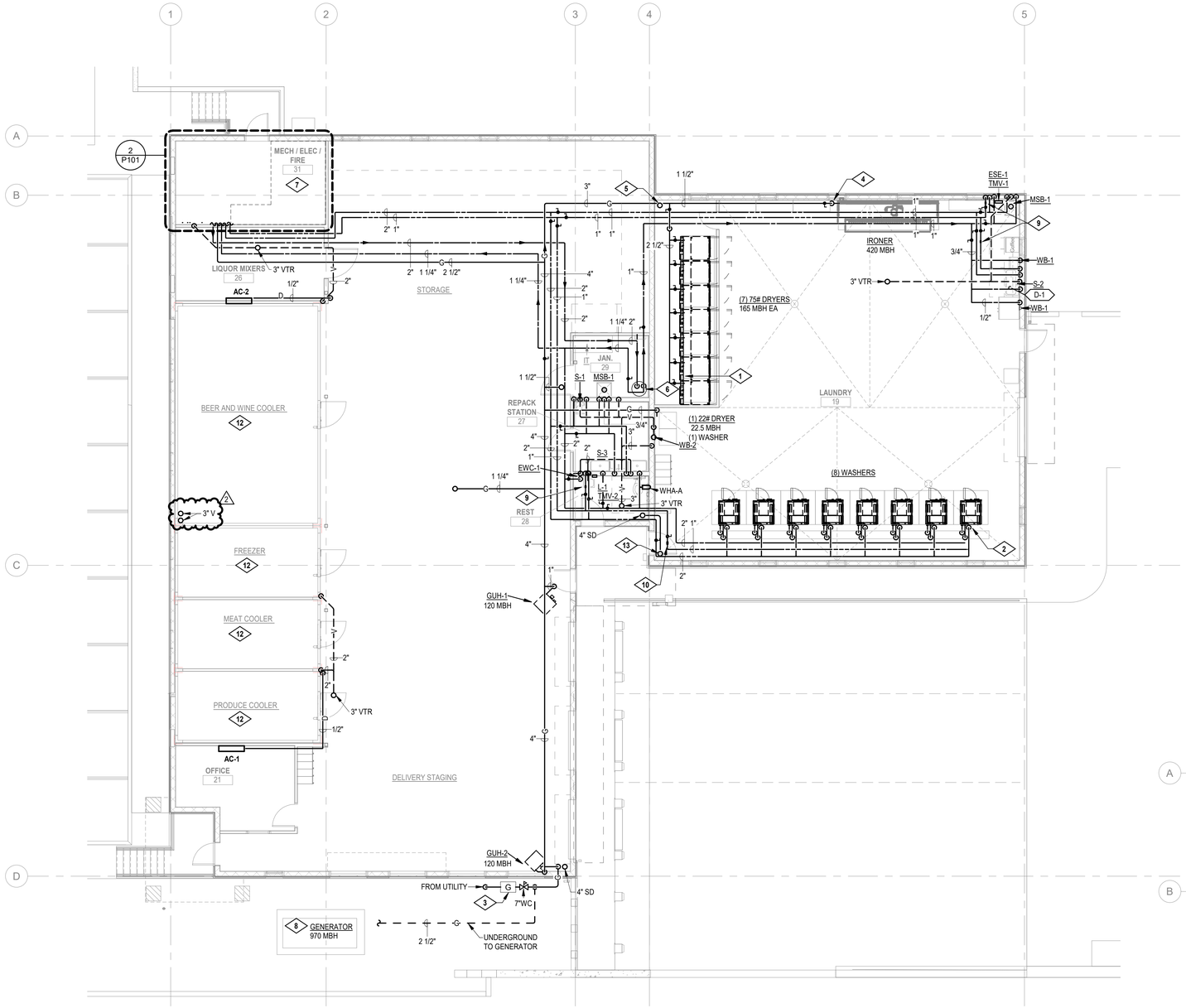
1	PERMIT DWG UPDATES	2021-03-08
2	DRB REVISIONS	2021-05-12

SHEET TITLE:

UNDERSLAB PLUMBING PLAN

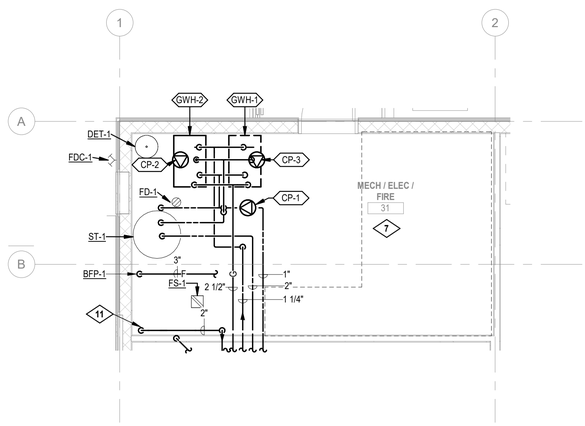
SHEET NUMBER:

P100



MAIN LEVEL PLUMBING PLAN

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



ENLARGED MECH / ELE / FIRE 31

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

DRAWING NOTES:

1. COORDINATE GAS SUPPLY CONNECTION LOCATION AND INSTALLATION PROCEDURES WITH EQUIPMENT MANUFACTURER INSTALLATION REQUIREMENTS. PROVIDE 1-1/4" GAS CONNECTION WITH ISOLATION VALVE AT EACH DRYER.
2. COORDINATE WASTE AND WATER CONNECTIONS WITH MANUFACTURER CUTSHEETS. PROVIDE 1" HOT, 1" COLD, 3" INDIRECT WASTE, AND 2" WASTE OVERFLOW AT EACH WASHER. DISCHARGE DRAINS TO TRENCH WITH AIR GAP. PROVIDE HAMMER ARRESTER AND ISOLATION VALVE ON WATER CONNECTIONS.
3. 7" WATER COLUMN GAS SERVICE AND METER BY LOCAL GAS UTILITY. COORDINATE LOCATION WITH UTILITY AND BUILDING ELEVATIONS.
4. COORDINATE GAS SUPPLY CONNECTION LOCATION AND INSTALLATION PROCEDURES WITH EQUIPMENT MANUFACTURER INSTALLATION REQUIREMENTS. PROVIDE 1-1/4" GAS CONNECTION WITH ISOLATION VALVE AT EACH DRYER.
5. 4" SD UP TO ROOF DRAIN AND DOWN TO UNDERSLAB.
6. DOMESTIC WATER SOFTENER SYSTEM BY OTHERS. ANTICIPATED FLOW RATE OF BUILDING IS 43.1 GPM.
7. NO WATER PIPING SHALL BE INSTALLED OVER THE ELECTRICAL EQUIPMENT IN THIS ROOM.
8. 80kw GENERATOR BY OTHERS. PROVIDE GAS LINE AT 7"WC FROM METER TO INLET OF GENERATOR. COORDINATE INSTALLATION REQUIREMENTS WITH GENERATOR MANUFACTURER.
9. CIRCUIT SETTER BALANCE VALVE. SET FOR 1 GPM EACH.
10. CIRCUIT SETTER BALANCE VALVE. SET FOR 3 GPM.
11. 2" DOMESTIC WATER FROM CIVIL BACKFLOW PREVENTER NEAR METER.
12. RUN EVAPORATOR CONDENSATE DRAINS TO NEAREST FLOOR SINK. REFER TO UNDERSLAB PLAN P100 FOR FLOOR SINK LOCATIONS. REFER TO DIAGRAM ON P004.
13. 4" STORM DRAIN UP TO ROOF DRAIN AND 6" STORM DRAIN DOWN TO UNDERSLAB.

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REVISIONS:

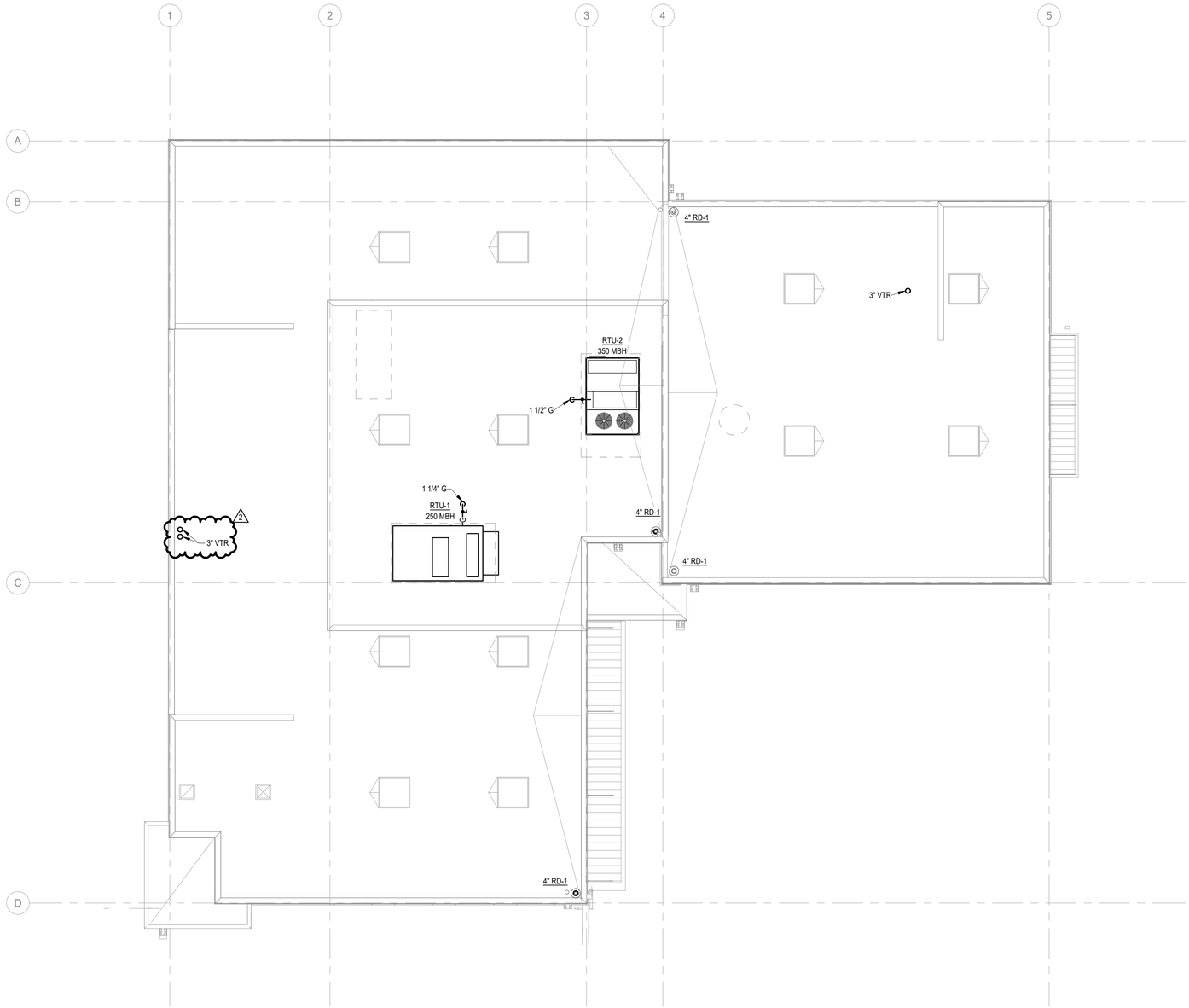
1	PERMIT DWG UPDATES	2021-03-08
2	DRB REVISIONS	2021-05-12

SHEET TITLE:

MAIN LEVEL PLUMBING PLAN

SHEET NUMBER:

P101



ROOF PLUMBING PLAN

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

GENERAL NOTES:

1 OVERFLOW ROOF DRAINAGE ACCOUNTED FOR VIA ARCHITECTURAL SCUPPERS AND DOWNSPOUTS.

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2	DRB REVISIONS	2021-05-12

SHEET TITLE:

ROOF PLUMBING PLAN

SHEET NUMBER:

P102

FAN SCHEDULE

REMARKS:
1.ACCEPTABLE MANUFACTURERS INCLUDE: ACME, BROAN, CARNES, COOK, GREENHECK, PANASONIC, PENN, SOLER & PALAU, AND TWIN CITY.
2.PROVIDE FAN WITH UNIT MOUNTED SPEED CONTROL SWITCH.
3.PROVIDE WITH DISCHARGE DUCT COLLAR.
4.PROVIDE WITH ROOF CURB.

SEQUENCE OF OPERATION (CONTINUOUS): EF-1
A.FAN TO RUN CONTINUOUSLY.

SEQUENCE OF OPERATION (TIMECLOCK): EF-2
A.FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS.

SEQUENCE OF OPERATION: EF-3 & EF-4
A.FAN TO BE CONTROLLED BY HUMIDISTAT. FAN WILL CYCLE ON WHEN SPACE EXCEEDS 60 PERCENT RELATIVE HUMIDITY(ADJ.) UNITIL THE SPACE IS BELOW 55 PERCENT RELATIVE HUMIDITY(ADJ.).

SYMBOL	MANUFACTURER	MODEL	FAN TYPE	SERVICE	CFM @1,300'	S.P. IN W.C. @ S.L.	ELECTRICAL DATA					DRIVE TYPE	DAMPER TYPE	SONES	ROOF OPENING	WEIGHT (LBS)	HEIGHT (INCLUDING CURB)	REMARKS
							VOLTAGE	PHASE	RPM	HP	WATTS							
EF-1	BROAN	XB80	CEILING	RESTROOM	80	0.375	120	1	887	-	15	DIRECT	GRAVITY	0.3	-	12.5	9	1,2,3
EF-2	BROAN	XB80	CEILING	JANITOR	80	0.375	120	1	887	-	15	DIRECT	GRAVITY	0.3	-	12.5	9	1,2,3
EF-3	GREENHECK	G-095-VG	DOWNBLAST	LAUNDRY	950	0.375	120	1	1664	1/6	-	DIRECT	GRAVITY	9.9	12x12	29.0	27	1,2,3,4
EF-4	GREENHECK	G-095-VG	DOWNBLAST	LAUNDRY	950	0.375	120	1	1664	1/6	-	DIRECT	GRAVITY	9.9	12x12	29.0	27	1,2,3,4

SPLIT-SYSTEM INDOOR A/C UNIT SCHEDULE

REMARKS:
1ACCEPTABLE MANUFACTURERS ARE: MITSUBISHI, CARRIER, LIEBERT, MCQUAY, STULZ, TEMTROL, TRANE, YORK.
2PROVIDE WITH WALL MOUNTED MICROPROCESSOR CONTROLLER, INTEGRAL FACTORY ELECTRICAL DISCONNET AND SCROLL COMPRESSOR.
3UNIT CFM/COIL CAPACITIES BASED ON HIGH SPEED OPERATION.
4REFRIGERANT TYPE TO BE R-410A.
5ELECTRICAL CONNETED THROUGH OUTDOOR CONDENSING UNIT, RE: CONDENSING UNIT SCHEDULE.
6PROVIDE MFR. CONENSATE PUMP, ALARMS AND CONTROLLERS, INTERNALLY WIRED TO THE CRAC UNIT AT THE FACTORY.

SEQUENCE OF OPERATION:
1. THE WALL MOUNTED THERMOSTAT SHALL CYCLE THE UNIT FAN AND REFRIGERATION SYSTEM TO MAINTAIN SETPOINT.

SYMBOL	MANUFACTURER	MODEL	NOMINAL TONS	SERVICE	ARRANGEMENT	COIL DATA			FAN DATA	ELECTRICAL				SYSTEM SEER	APPROX OPER WT (LBS)	REMARKS
						MBH TOTAL/ SENSIBLE	ENTERING AIR TEMP DB (F)	LEAVING AIR TEMP DB (F)	CFM TOTAL @1300'	VOLTAGE	PHASE	MCA	MOCP			
AC-1	MITSUBISHI	PKA-A12HA	1.0	OFFICE	HIGH WALL	12	80	54	425	208	1	1	15 A	15.2	29.00	1-6
AC-2	MITSUBISHI	PKA-A12HA	1.0	WINE ROOM	HIGH WALL	12	80	54	425	208	1	1	15 A	15.2	29.00	1-6

GAS FIRED UNIT HEATER SCHEDULE

REMARKS:
1. ACCEPTABLE MANUFACTURER'S INCLUDE MODINE, REZNOR, STERLING AND TRANE.
2. PROVIDE WITH UNIT MOUNTED THERMOSTAT.
3. PROVIDE WITH CONCENTRIC VENT KIT.
4. PROVIDE WITH TOTALLY ENCLOSED FAN MOTOR.

GAS FIRED UNIT HEATER SPECIFICATION:
A. SEPARATED COMBUSTION TYPE DESIGNED TO FIRE ON NATURAL GAS.
B. STEEL CASING, BAKED ENAMEL FINISH, FORWARD CURVED CENTRIFUGAL FAN, ADJUSTABLE BELT DRIVE MOTOR WITH THERMAL OVERLOAD PROTECTION, SINGLE DEFLECTION DIFFUSERS, VIBRATION ISOLATED MOTOR/FAN ASSEMBLY
C. ALUMINIZED STAINLESS STEEL HEAT EXCHANGER WITH REMOVABLE STEEL BURNERS, TWO STAGE GAS VALVE WITH 100% SHUT-OFF SAFETY PILOT VALVE, AUTOMATIC ELECTRIC IGNITION, PRESSURE REGULATOR WITH LEAK LIMITING DEVICE MANUAL MAIN AND PILOT VALVE, HIGH LIMIT SWITCH HEAT DISSIPATION FAN CONTROL SWITCH, SEALED COMBUSTION CHAMBER, BUILT-IN POWER EXHAUST WITH PRE-PURGE AND POST-PURGE AND CYCLES.

GAS FIRED UNIT HEATER SEQUENCE OF OPERATION:
A. THE SPACE THERMOSTAT SHALL ENERGIZE THE UNIT HEATER FAN AND COMBUSTION AIR VENTER FAN, AND SHALL ENERGIZE THE GAS VALVE SUBJECT TO AN AIR FLOW SAFETY SWITCH IN THE COMBUSTION AIR STREAM, TO MAINTAIN SPACE TEMPERATURE. PROVIDE A SUMMER-WINTER SWITCH SUBBASE TO ALLOW INDEPENDENT OPERATION OF THE FAN FOR VENTILATION.

SYMBOL	MANUFACTURER	MODEL	MBH INPUT @S.L.	MBH OUTPUT @1300'	CFM @1300'	FLUE SIZE	COMB AIR SIZE	ELECTRICAL DATA				APPROX OPER WEIGHT	REMARKS
								VOLTAGE	PHASE	MCA	MOCP		
GUH-1	REZNOR	UDAS-125	120	99.6	1500	4	4	120	1	5	15	125.00	
GUH-2	REZNOR	UDAS-125	120	99.6	1500	4	4	120	1	5	15	125.00	

AIR DEVICE SCHEDULE

NOTES:
1.EQUIPMENT SCHEDULE BASED ON PRICE. ACCEPTABLE MANUFACTURERS: CARNES, KRUGER, METAL-AIRE, PRICE,TITUS
2.MAX NC RATING 30, PROVIDE NECESSARY FRAME AND TRIM FOR CEILING APPLICATION.

SYMBOL	TYPE	MANUFACTURER	MODEL	FRAME	MATERIAL	FINISH	DAMPER TYPE	ACCESSORIES	REMARKS
CD-1	CEILING DIFFUERS	PRICE	SPD	LAY-IN	Metal - Steel	WHITE	NONE	NONE	SQUARE PLAQUE; 4-WAY PATTERN UNLESS OTHERWISE SHOWN, 24"x 24" FACE, NECK SIZE PER PLANS
CD-2	CEILING DIFFUERS	PRICE	SPD	SURFACE	Metal - Steel	WHITE	NONE	NONE	SQUARE PLAQUE; 4-WAY PATTERN UNLESS OTHERWISE SHOWN, 24"x 24" FACE, NECK SIZE PER PLANS
CD-3	CEILING DIFFUERS	PRICE	SPD	SURFACE	Metal - Steel	WHITE	NONE	NONE	SQUARE PLAQUE; 4-WAY PATTERN UNLESS OTHERWISE SHOWN, 12"x 12" FACE, NECK SIZE PER PLANS
EG-1	EXHAUST GRILLE	PRICE	PDR	LAY-IN	Metal - Steel	WHITE	NONE	NONE	PERFORATED 24" x 12" FACE SIZE 12"X12" NECK SIZE
RG-1	RETURN GRILLE	PRICE	PDR	LAY-IN	Metal - Steel	WHITE	NONE	NONE	PERFORATED 24" x 24" FACE SIZE
RG-2	RETURN GRILLE	PRICE	PDR	SURFACE	Metal - Steel	WHITE	NONE	NONE	PERFORATED 24" x 24" FACE SIZE
SR-1	SUPPLY REGISTER	PRICE	530	SIDEWALL	Metal - Steel	WHITE	OBD	SQUARE TO ROUND ADAPTER	3/4" BLADE SPACING 35 DEGREE SINGLE DEFLECTION SEE PLANS FOR GRILLE SIZE

LOUVER SCHEDULE

REMARKS:
1. ACCEPTABLE MANUFACTURERS INCLUDE GREENHECK, LOUVERS AND DAMPERS AND RUSKIN.
2. PROVIDE WITH 120V MOTORIZED DAMPER.

LOUVER SPECIFICATION:
A. EXTRUDED ALUMINUM, DRAINABLE BLADE, 0.125" EXTRUDED ALUMINUM BLADES AND FRAME, 1/4" MESH 19 GAUGE GALVANIZED STEEL WIRE SCREEN.

Type Mark	MANUFACTURER	MODEL	SERVICE	SIZE (IN)		CFM	MIN. FREE AREA (SQ FT)	VELOCITY (FPM)	PRESSURE DROP	MATERIAL	REMARKS
				HEIGHT	WIDTH						
LVR-1	GREENHECK	ESD-635	INTAKE	36	56	6650	7.7	859	0.11	Metal - Aluminum	1, 2

MECHANICAL LEGEND

NOT ALL ITEMS LISTED BELOW ARE USED ON THIS SET OF MECHANICAL DRAWINGS

DOUBLE LINE DUCTWORK

SYMBOL	DESCRIPTION
	RECTANGULAR SUPPLY AIR DUCT UP
	RECTANGULAR SUPPLY AIR DUCT DOWN
	RECTANGULAR RETURN AIR / EXHAUST DUCT UP
	RECTANGULAR RETURN AIR / EXHAUST DUCT DOWN
	ROUND DUCT UP
	ROUND DUCT DOWN
	BRANCH DUCT 45° TAKE-OFF
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
	RADIUS ELBOW RECTANGULAR/ROUND DUCT
	DUCT TRANSITION
	FLEX CONNECTION

CONTROL DEVICES AND DAMPERS

SYMBOL	DESCRIPTION
H	HUMIDISTAT
P	PRESSURE SENSOR
S	SENSOR
T	WALL MOUNTED THERMOSTAT
T	UNIT MOUNTED THERMOSTAT
S	SWITCH
	FIRE DAMPER
	RADIATION DAMPER
R	SMOKE DAMPER
S	COMBINATION FIRE AND SMOKE DAMPER
	MANUAL VOLUME DAMPER W/LOCKING QUADRANT
M	MOTORIZED DAMPER

GENERAL

SYMBOL	DESCRIPTION
DTL / SHT	REFERENCE BUBBLE
1t	MECHANICAL/ELECTRICAL EQUIPMENT DESIGNATION
	REMOVE EXISTING
-A-	AIR FLOW
-U-	UNDERCUT DOOR
	CONNECT NEW TO EXISTING

PIPING

SYMBOL	ABBV.	DESCRIPTION
PC	PC	PUMPED CONDENSATE
D	D	EQUIPMENT DRAIN
RL	RL	REFRIGERANT LIQUID
RS	RS	REFRIGERANT SUCTION

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	ARROW IN LINE INDICATES DIRECTIONOF FLOW
XX	INDICATES PIPESLOPE DOWN
	BOTTOM PIPE CONNECTION
	PIPING UP
	PIPING DOWN
	PIPING CAP OR PLUG
	PUMP

SINGLE LINE DUCTWORK

SYMBOL	DESCRIPTION
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
	RADIUS ELBOW RECTANGULAR/ROUND DUCT
	DUCT TRANSITION
	CONICAL SPIN-IN FITTING
	CONICAL SPIN-IN FITTING W/DAMPER
	FLEXIBLE DUCT

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR	RA	RETURN AIR
AP	ACCESS PANEL	(N)	NEW	RE	REFER TO
C	COMMON	NC	NORMALLY CLOSED	SA	SUPPLY AIR
(E)	EXISTING	NIC	NOT IN CONTRACT	SRV	SAFETY RELIEF VALVE
EC	ELECTRICAL CONTRACTOR	NO	NORMALLY OPEN	TCC	TEMPERATURE CONTROL CONTRACTOR
ELEV	ELEVATION	NTS	NOT TO SCALE		
EQ	EQUIPMENT	OA	OUTSIDE AIR	TYP	TYPICAL
GC	GENERAL CONTRACTOR	PRV	PRESSURE REDUCING VALVE		

NOTE:

APPLICABLE CODE STANDARDS

2015 INTERNATIONAL BUILDING CODE	2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL FIRE CODE	2015 INTERNATIONAL PLUMBING CODE
2014 NATIONAL ELECTRIC CODE	2015 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL FUEL GAS CODE	

MECHANICAL SHEET INDEX

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04.02.21
ARIZONA, U.S.A.

DRAWN BY: BGK
CHECKED BY: RCC
PROJECT NO: 20022
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SHEET TITLE:
MECHANICAL SCHEDULES & LEGEND

SHEET NUMBER:
M001

PACKAGED CONSTANT VOLUME ROOFTOP HEATING AND COOLING UNIT

REMARKS:
1. ACCEPTABLE MANUFACTURER'S INCLUDE CARRIER, LENNOX, MCQUAY, TRANE, AAON, DAIKIN AND YORK
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.
3. COOLING COIL CAPACITY BASED ON ENTERING AIR TEMPERATURE SHOW IN SCHEDULE AND 110 F AMBIENT AT CONDENSER.
4. BURNER SHALL BE DESIGNED TO FIRE ON NATURAL GAS, 7" WC.
5. PROVIDE WITH 14" HIGH ROOF CURB.
6. PROVIDE RTU WITH DUCT SMOKE DETECTOR MOUNTED IN RETURN DUCT. MECHANICAL CONTRACTOR SHALL PROVIDE INSTALLATION, ELECTRICAL CONTRACTOR SHALL PROVIDE DUCT SMOKE DETECTOR AND WIRING TO FACP.
7. UNIT SHALL BE PROVIDED WITH 120V WEATHER PROOF CONVENIENCE OUTLET FACTOR PROVIDED.
8. PROVIDE WITH UNIT ECONOMIZER.
9. PROVIDE WITH BAROMETRIC RELIEF AND FACTORY INSTALLED POWERED EXHAUST.

SEQUENCE OF OPERATIONS:

1. A SMOKE DETECTOR LOCATED IN THE SUPPLY AIR DUCT TO THE UNIT SHALL STOP THE SUPPLY FAN IF IT SENSES SMOKE.
2. WARM-UP CYCLE: THE UNIT FAN SHALL OPERATE CONTINUOUSLY. THE RETURN AIR DAMPER SHALL BE OPEN AND THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. THE GAS VALVE SHALL BE ENERGIZED. AS THE RETURN AIR TEMPERATURE APPROACHES THE WARM-UP TEMPERATURE SETPOINT, THE OUTSIDE AIR DAMPER SHALL OPEN TO ITS MINIMUM POSITION AND THE RETURN AIR DAMPER SHALL CLOSE A CORRESPONDING AMOUNT.
3. HEATING OCCUPIED CYCLE: THE THERMOSTAT SYSTEM SHALL CYCLE THE GAS HEATING SYSTEM IN STAGES TO MAINTAIN SPACE TEMPERATURE.
4. COOLING OCCUPIED CYCLE: THE THERMOSTAT SYSTEM SHALL CYCLE THE REFRIGERATION SYSTEM IN STAGES TO MAINTAIN SPACE TEMPERATURE.
5. COOLING ECONOMIZER CYCLE: BELOW 60 F(ADJ.) THE ECONOMIZER CYCLE OF CONTROL SHALL BE ENERGIZED. THE MECHANICAL REFRIGERATION CYCLE SHALL BE LOCKED OUT. ON A DEMAND FOR COOLING THE DDC SYSTEM SHALL ENERGIZE THE MIXED AIR CONTROLLER. THE MIXED AIR CONTROLLER SHALL MODULATE THE OUTSIDE AIR AND RETURN AIR DAMPERS TO MAINTAIN SPACE TEMPERATURE.
6. UNOCCUPIED CYCLE: THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. THE DDC SYSTEM SHALL CYCLE THE UNIT FAN AND THE GAS HEATING SYSTEM TO MAINTAIN THE REDUCED SPACE TEMPERATURE. THE REFRIGERATION SYSTEM SHALL BE DISABLED.

SYMBOL	MANUFACTURER	MODEL	NOMINAL TONS	SUPPLY FAN DATA					COIL DATA								NO. COMP	ELECTRICAL DATA							FILTER DATA		APPROX ROOF CURB DM(IN)	EER	SEER	APPROX OPER WT (LBS)	REMARKS
									HEATING				COOLING																		
				CFM TOTAL @1300'	CFM O.A. @1300'	ESP IN W.C. @1300'	APPROX RPM	MIN FAN HP	ENTERING AIR TEMP DB (F)	LEAVING AIR TEMP DB (F)	MBH OUTPUT @1300'	NO STEPS	ENTERING AIR TEMP DB (F)	ENTERING AIR TEMP WB (F)	LEAVING AIR TEMP DB (F)	LEAVING AIR TEMP WB (F)	MBH COOL @1300'	NO STEPS		VOLTAGE	PHASE	MCA	MOCP	AIC (A)	Isc (A)	DATE CALCULATED	TYPE	AREA SQ. FT.				
RTU-1	TRANE	YHD150G3	12.5	4925	1478	1	766	3	70	107	200	2	83	65	57	55	132	3	2	208	3	64	90	10000	6957	2/2/21	MERV 8	2.70	121x84	12	14	2620	1-9
RTU-2	TRANE	YHD210G3	17.5	6500	1950	1	743	5	60	99	280	2	83	68	60	58	197	3	2	208	3	83	110	10000	6467	2/2/21	MERV 8	2.70	121x84	12	13	2723	1-9

RTU-1 VENTILATION SUMMARY SCHEDULE (2015 IMC)

ROOM NUMBER	ROOM NAME	OCCUPANCY CLASSIFICATION 2015 IMC, TABLE 403.3.1.1		AREA OF OCCUPANCY (SQ.FT)	OCCUPANCY LOAD (PER 1,000 SF)	NUMBER OF PEOPLE	OUTDOOR AIR PER OCCUPANCY (CFM PER PERSON)	OUTDOOR AIR PER SQ. FT. (CFM)	EXHAUST RATE (CFM/SF)	EXHAUST REQUIRED (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	OUTDOOR AIR REQUIRED (CFM)	PRIMARY AIRFLOW (CFM)	PRIMARY OUTDOOR AIR FRACTION, Zp
20	STORAGE	STORAGE	WAREHOUSES	3589	---	---	---	0.06	---	---	0.8	270	3775	0.07
21	OFFICE	OFFICES	OFFICE SPACES	110	5	1	5	0.06	---	---	0.8	15	150	0.10
26	LIQOUR MIXERS	STORAGE	WAREHOUSES	189	---	---	---	0.06	---	---	0.8	15	350	0.04
27	REPACK STATION	WORKROOMS	COPY, PRINTING ROOMS	95	4	1	5	0.06	0.5	47.5	0.8	14	150	0.09
28	RESTROOM	PUBLIC SPACES	TOILET ROOMS	61	---	---	---	---	50/70	50	0.8	---	75	---
29	JANITOR	PUBLIC SPACES	TOILET ROOMS	47	---	---	---	---	50/70	50	0.8	---	75	---
31	MECH / ELECT / FIRE	OFFICES	OFFICE SPACES	226	5	2	5	0.06	---	---	0.8	30	350	0.09

SUMMARY

OA REQUIRED	344	CFM	
SA PROVIDED	4,925	CFM	AREA TOTAL 4,317
OA PERCENTAGE	30	%	CFM/SQFT 1.14
OA PROVIDED	1,478	CFM	

THE AMOUNT OF OUTSIDE AIR PROVIDED EXCEEDS THE CODE REQUIRED MINIMUM.

NOTES
1. SCHEDULE BASED ON INTERNATIONAL MECHANICAL CODE, 2015 EDITION, CHAPTER 4 VENTILATION.
2. CALCULATIONS REPRESENT ONLY AREAS WHERE WORK IS EXPECTED.
3. ZONE AIR DISTRIBUTION EFFECTIVENESS DETERMINED USING TABLE 403.3.1.1.1.2.
4. OCCUPANT DIVERSITY ASSUMED TO BE NEGLIGIBLE.

RTU-2 VENTILATION SUMMARY SCHEDULE (2015 IMC)

ROOM NUMBER	ROOM NAME	OCCUPANCY CLASSIFICATION 2015 IMC, TABLE 403.3.1.1		AREA OF OCCUPANCY (SQ.FT)	OCCUPANCY LOAD (PER 1,000 SF)	NUMBER OF PEOPLE	OUTDOOR AIR PER OCCUPANCY (CFM PER PERSON)	OUTDOOR AIR PER SQ. FT. (CFM)	EXHAUST RATE (CFM/SF)	EXHAUST REQUIRED (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	OUTDOOR AIR REQUIRED (CFM)	PRIMARY AIRFLOW (CFM)	PRIMARY OUTDOOR AIR FRACTION, Zp
19	LAUNDRY	DRY CLEANERS	LAUNDRY	2212	10	23	25	---	---	---	0.8	719	6500	0.11

SUMMARY

OA REQUIRED	719	CFM	
SA PROVIDED	6,500	CFM	AREA TOTAL 2,212
OA PERCENTAGE	30	%	CFM/SQFT 2.94
OA PROVIDED	1,950	CFM	

THE AMOUNT OF OUTSIDE AIR PROVIDED EXCEEDS THE CODE REQUIRED MINIMUM.

NOTES
1. SCHEDULE BASED ON INTERNATIONAL MECHANICAL CODE, 2015 EDITION, CHAPTER 4 VENTILATION.
2. CALCULATIONS REPRESENT ONLY AREAS WHERE WORK IS EXPECTED.
3. ZONE AIR DISTRIBUTION EFFECTIVENESS DETERMINED USING TABLE 403.3.1.1.1.2.
4. OCCUPANT DIVERSITY ASSUMED TO BE NEGLIGIBLE.

AIR COOLED CONDENSING UNIT SCHEDULE (REFRIGERATION SERVICE)

REMARKS:
1. ACCEPTABLE MANUFACTURERS INCLUDE: MITSUBISHI, CARRIER, LIEBERT, MCQUAY, STULZ, TEMTROL, TRANE, YORK.
2. AUTOMATIC-RESET TIMER TO PREVENT RAPID CYCLING OF COMPRESSOR.
3. PROVIDE R-410A REFRIGERANT.
4. PROVIDE WITH MANUFACTURER SIZED REFRIGERANT LINE SET.
5. CRAC UNIT AND CONDENSING UNIT SHALL BE PROVIDED BY THE SAME MANUFACTURER.

SYMBOL	MANUFACTURER	MODEL	CONNECTED UNIT	NOMINAL TONS	TOTAL COOLING (MBH)	NUMBER OF COMPRESSORS	AMB TEMP	ELECTRICAL DATA				EER (SEER)	WEIGHT	REMARKS
								PHASE	VOLTAGE	MCA	MAX FUSE			
CU-1	MITSUBISHI	PUY-A12	AC-1	1	12	1	110	1	208	13	15	15.2	90 lb	1,2,3,4,5
CU-2	MITSUBISHI	PUY-A12	AC-2	1	12	1	110	1	208	13	15	15.2	90 lb	1,2,3,4,5

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REGISTERED PROFESSIONAL ENGINEER
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04.02.21
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DRAWN BY: BGK
CHECKED BY: RCC
PROJECT NO: 20022
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MECHANICAL SCHEDULES

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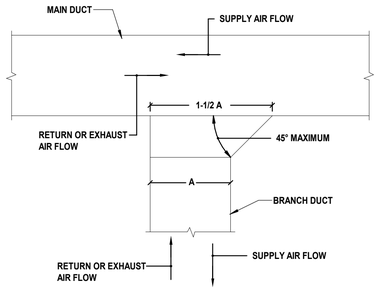
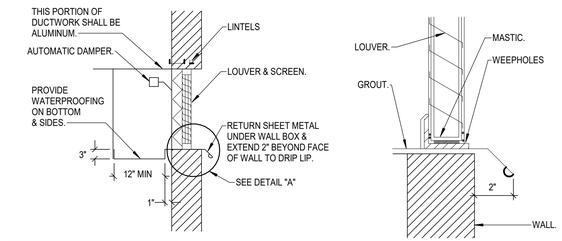


DUCT TAKE-OFF DIAGRAM

NOT TO SCALE



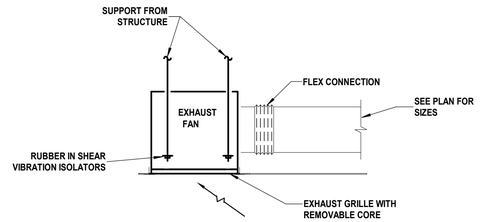
NOTE:
REFER TO MFR'S INSTRUCTIONS FOR SPECIFIC MOUNTING DETAILS. COORDINATE WITH ARCHITECTURAL REQUIREMENTS.

DETAIL A

NOT TO SCALE

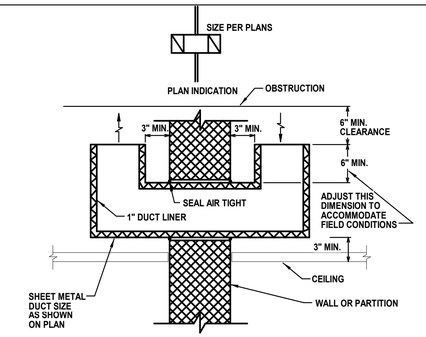
WATERTIGHT LOUVER CONNECTION DIAGRAM

NOT TO SCALE



CEILING EXHAUST FAN DIAGRAM

NOT TO SCALE



RETURN AIR TRANSFER DIAGRAM

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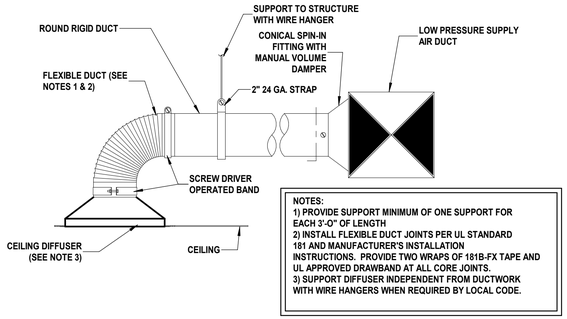
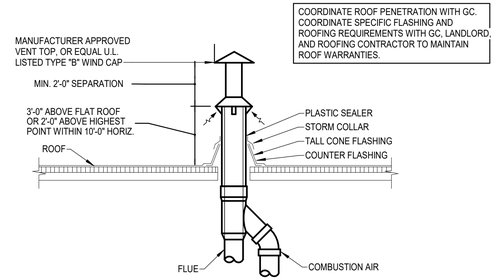


NOTES:
1) PROVIDE SUPPORT MINIMUM OF ONE SUPPORT FOR EACH 3'-0" OF LENGTH
2) INSTALL FLEXIBLE DUCT JOINTS PER UL STANDARD 181 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE TWO WRAPS OF 181B-FX TAPE AND UL APPROVED DRAWBAND AT ALL CORE JOINTS.
3) SUPPORT DIFFUSER INDEPENDENT FROM DUCTWORK WITH WIRE HANGERS WHEN REQUIRED BY LOCAL CODE.

AIR DEVICE DIAGRAM

NOT TO SCALE



CONCENTRIC TERMINATION THRU ROOF DIAGRAM

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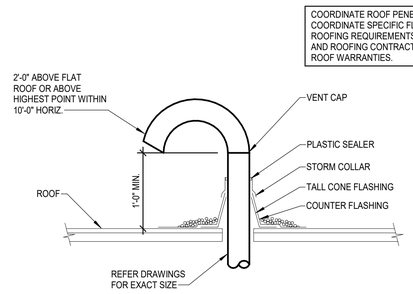

EXHAUST DUCT DIAGRAM

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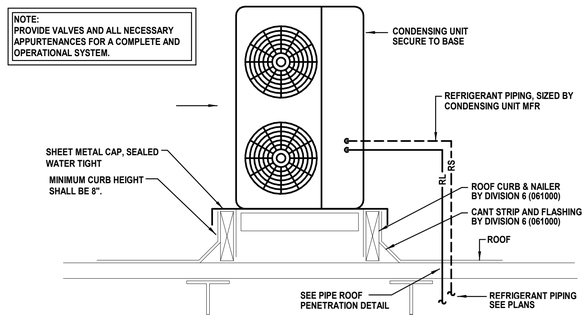
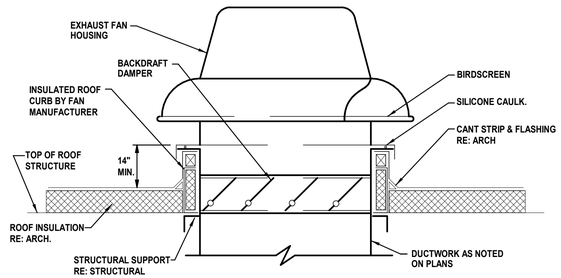


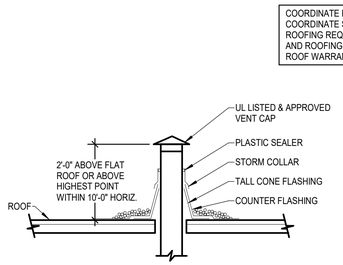
ROOF MOUNTED CONDENSING UNIT INSTALLATION DIAGRAM

NOT TO SCALE 23 62 00.03



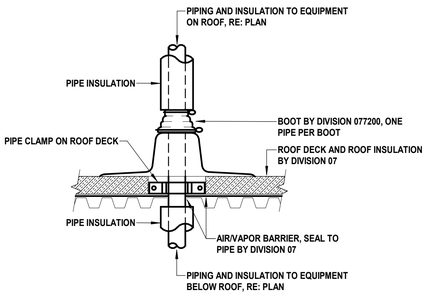
ROOF EXHAUST FAN DIAGRAM

NOT TO SCALE 23 34 00.14



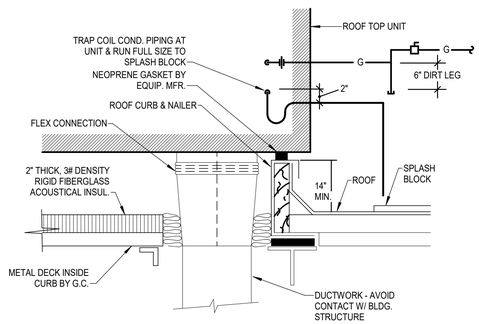
EXHAUST FAN DUCT THRU ROOF DIAGRAM

NOT TO SCALE



PIPE W/INSULATION ROOF PENETRATION DIAGRAM

NOT TO SCALE 220500



ROOFTOP UNIT INSTALLATION DIAGRAM

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CHECKED BY: RCC
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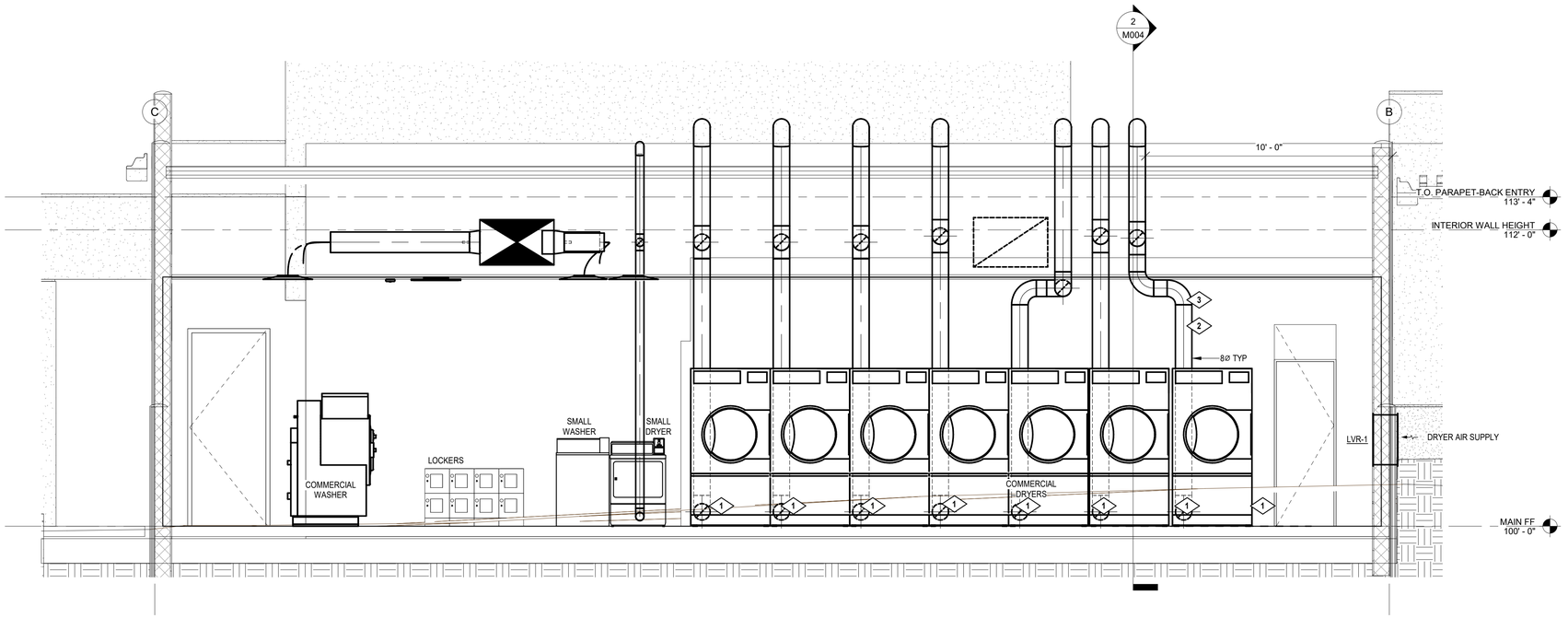
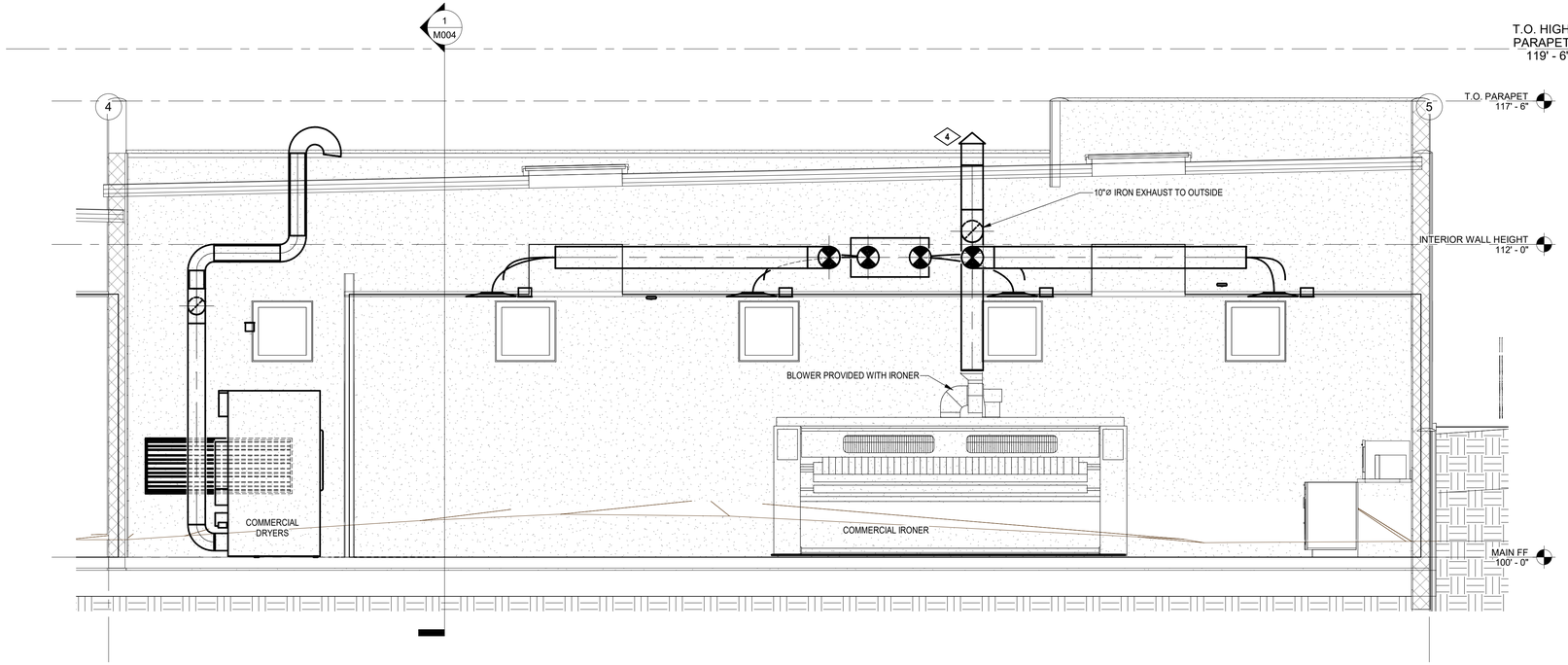
MECHANICAL DIAGRAMS

SHEET NUMBER:
M003



1 DRYER EXHAUST
3/8" = 1'-0"



2 IRON EXHAUST
3/8" = 1'-0"

GENERAL NOTES:

1. REFERENCE DIAGRAMS FOR INSTALLATION OF NEW HVAC EQUIPMENT AND DEVICES.
2. PLANS ARE DIAGRAMMATIC AND ONLY SHOW THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. THE PLANS DO NOT SHOW EVERY OFFSET AND TRANSITION. CONTRACTOR SHALL FOLLOW PLANS IN LAYING OUT WORK AND COORDINATE WITH OTHER TRADES TO VERIFY SPACE IN WHICH WORK IS INSTALLED.
3. ALL DUCT DIMENSIONS SHOWN ARE SHEET METAL DIMENSIONS.
4. NOT ALL DUCT TRANSITIONS AND OFFSETS ARE SHOWN. CONTRACTOR SHALL PROVIDE THE NECESSARY FITTING REQUIRED AND INSTALL ACCORDINGLY.
5. COORDINATE THERMOSTAT LOCATIONS WITH FURNITURE LAYOUT, INSTALL ACCORDINGLY. VERIFY FURNITURE LAYOUT WITH ARCHITECTURAL DRAWINGS.
6. CONTRACTOR SHALL PROVIDE NECESSARY CODE COMPLYING CLEARANCES FOR ALL EQUIPMENT INSTALLED.
7. COORDINATE DUCT LAYOUT WITH SKYLIGHTS PRIOR TO CONSTRUCTION.

◇ DRAWING NOTES:

1. 8" AIR CONNECTION AND SECONDARY LINT TRAPS AT REAR OF DRYERS
2. EACH DRYER IS 920 CFM (6,440 CFM TOTAL) MAXIMUM STATIC BACK PRESSURE AT ANY DRYER IS 13" WC (~1/2 PSI).
3. DUCT SHALL BE 22 GA MIN GALVANIZED STEEL. FLEXIBLE METAL DUCT IS NOT ALLOWED. DUCT TO BE ASSEMBLED WITHOUT SHARP PROTRUSIONS. USE SMOOTH POP RIVETS AND/OR DUCT TAPE FOR ASSEMBLY (NO SCREWS).
4. MANUFACTURER APPROVED VENT CAP.

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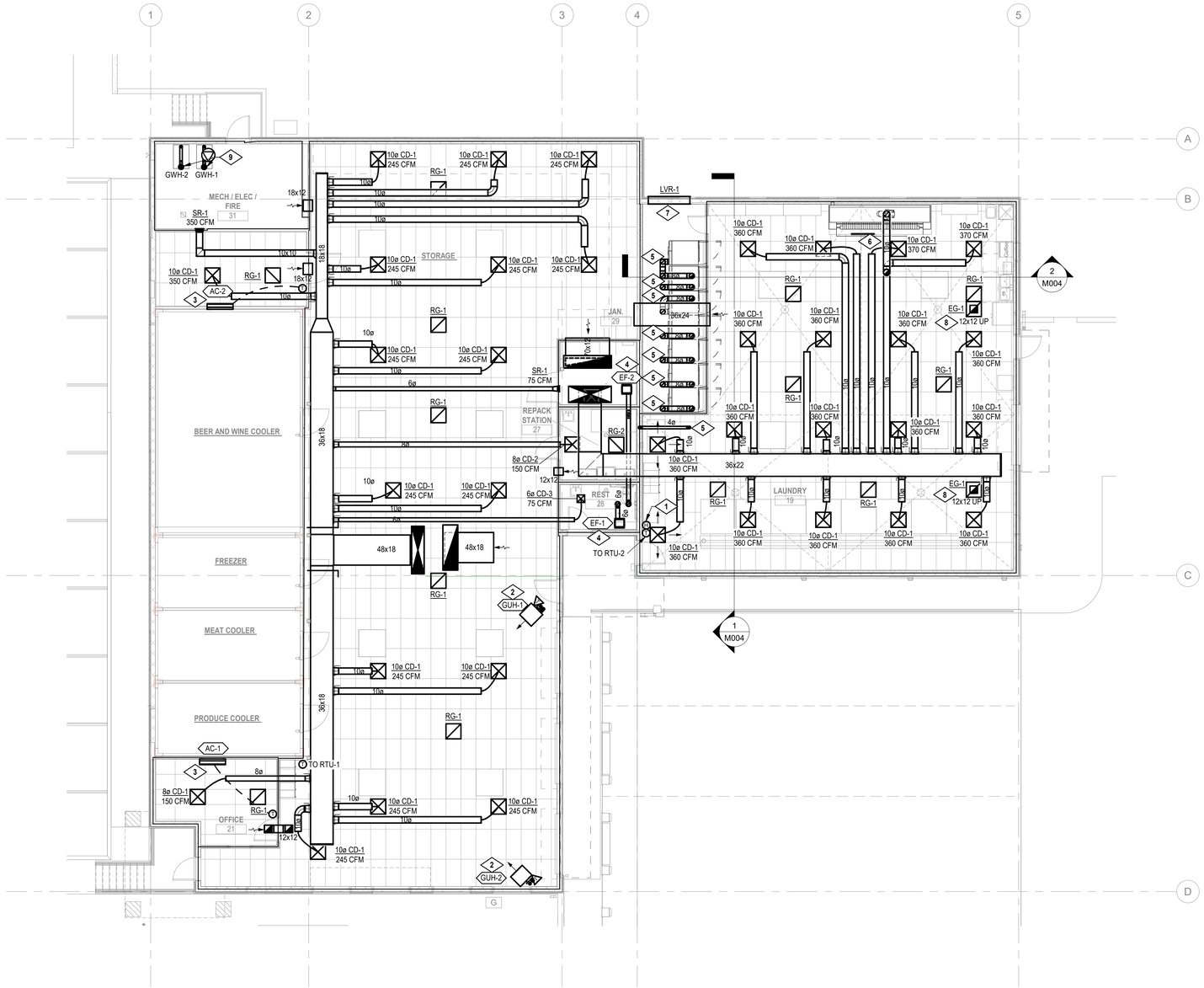

MAIN LEVEL MECHANICAL PLAN

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

GENERAL NOTES:

1. REFERENCE DIAGRAMS FOR INSTALLATION OF NEW HVAC EQUIPMENT AND DEVICES.
2. PLANS ARE DIAGRAMMATIC AND ONLY SHOW THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. THE PLANS DO NOT SHOW EVERY OFFSET AND TRANSITION. CONTRACTOR SHALL FOLLOW PLANS IN LAYING OUT WORK AND COORDINATE WITH OTHER TRADES TO VERIFY SPACE IN WHICH WORK IS INSTALLED.
3. ALL DUCT DIMENSIONS SHOWN ARE SHEET METAL DIMENSIONS.
4. NOT ALL DUCT TRANSITIONS AND OFFSETS ARE SHOWN. CONTRACTOR SHALL PROVIDE THE NECESSARY FITTING REQUIRED AND INSTALL ACCORDINGLY.
5. COORDINATE THERMOSTAT LOCATIONS WITH FURNITURE LAYOUT, INSTALL ACCORDINGLY. VERIFY FURNITURE LAYOUT WITH ARCHITECTURAL DRAWINGS.
6. CONTRACTOR SHALL PROVIDE NECESSARY CODE COMPLYING CLEARANCES FOR ALL EQUIPMENT INSTALLED.
7. COORDINATE DUCT LAYOUT WITH SKYLIGHTS PRIOR TO CONSTRUCTION.

◇ DRAWING NOTES:

1. PROVIDE HUMIDISTAT INTERLOCKED TO EF-3 AND EF-4 WITH MANUAL OVERRIDE AND 1 HOUR(ADJ.) TIME OUT FUNCTION.
2. NEW GAS FIRED UNIT HEATER. SUPPORT FROM STRUCTURE ABOVE. SEE DIAGRAM. ROUTE COMBUSTION AIR AND FLUE UP THROUGH ROOF AND TERMINATE IN MANUFACTURE APPROVED CONCENTRIC VENT KIT.
3. INSTALL WALL MOUNTED SPLIT SYSTEM UNIT AT 6 FEET AFF TO BOTTOM OF UNIT. RUN REFRIGERATION LINE SET TO CONDENSING UNIT ON ROOF. ATTACH CONDENSATE PUMP WITH DRAINPIPE TO NEW DRAIN LINE. RE PLUMBING PLANS FOR DRAIN ROUTING.
4. NEW CEILING MOUNTED EXHAUST FAN, SUPPORT FROM STRUCTURE. SEE DIAGRAM. ROUTE EXHAUST UP THROUGH ROOF AND TERMINATE IN EXHAUST VENT CAP A MINIMUM OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.
5. ROUTE DRYER EXHAUST UP THROUGH ROOF AND TERMINATE IN GOOSENECK A MINIMUM OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.
6. ROUTE IRON EXHAUST UP THROUGH ROOF AND TERMINATE IN VENT CAP A MINIMUM OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.
7. MOUNT LOUVER LOW IN WALL WITH 120V MOTORIZED DAMPER. SEE DIAGRAM. COORDINATE MOUNTING HEIGHT WITH STRUCTURAL PLANS. INTERLOCK DAMPER TO OPEN WHEN ONE OR MORE DRYERS IS RUNNING.
8. ROUTE EXHAUST DUCT UP TO EXHAUST FAN ON ROOF.
9. 4" FLUE/COMBUSTION AIR VENTS ROUTED FROM GAS WATER HEATER. TERMINATE THROUGH ROOF WITH MANUFACTURE APPROVED CONCENTRIC VENT TERMINATION KIT. RE: DIAGRAM.

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DRAWN BY: BGK
CHECKED BY: RCC
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MAIN LEVEL MECHANICAL PLAN

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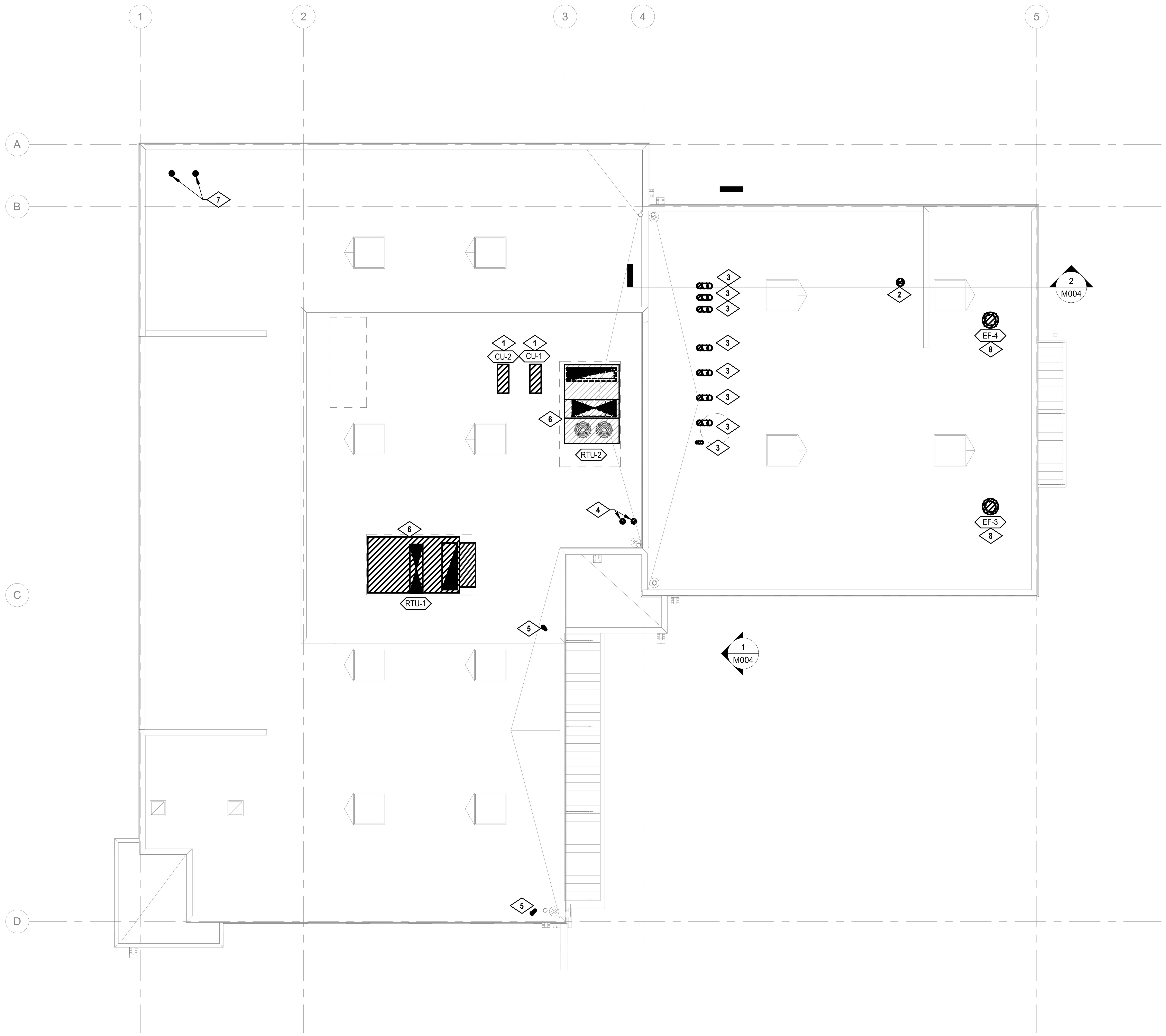

ROOF MECHANICAL PLAN

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

GENERAL NOTES:

1 REFERENCE DIAGRAMS FOR INSTALLATION OF NEW HVAC EQUIPMENT AND DEVICES.

2 PLANS ARE DIAGRAMMATIC AND ONLY SHOW THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. THE PLANS DO NOT SHOW EVERY OFFSET AND TRANSITION. CONTRACTOR SHALL FOLLOW PLANS IN LAYING OUT WORK AND COORDINATE WITH OTHER TRADES TO VERIFY SPACE IN WHICH WORK IS INSTALLED.

3 ALL DUCT DIMENSIONS SHOWN ARE SHEET METAL DIMENSIONS.

4 NOT ALL DUCT TRANSITIONS AND OFFSETS ARE SHOWN. CONTRACTOR SHALL PROVIDE THE NECESSARY FITTING REQUIRED AND INSTALL ACCORDINGLY.

5 COORDINATE THERMOSTAT LOCATIONS WITH FURNITURE LAYOUT, INSTALL ACCORDINGLY. VERIFY FURNITURE LAYOUT WITH ARCHITECTURAL DRAWINGS.

6 CONTRACTOR SHALL PROVIDE NECESSARY CODE COMPLYING CLEARANCES FOR ALL EQUIPMENT INSTALLED.

7 COORDINATE DUCT LAYOUT WITH SKYLIGHTS PRIOR TO CONSTRUCTION.

DRAWING NOTES:

1 MINI-SPLIT CONDENSING UNIT ON ROOF. SET CONDENSING UNIT ON NEW CURB ON ROOF, MIN. 8". SEE DIAGRAM. PROVIDE MANUFACTURER RECOMMENDED SERVICE CLEARANCE BETWEEN CONDENSING UNITS AND RTU.

2 IRON EXHAUST TERMINATION. MAINTAIN A MINIMUM DISTANCE OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE AND BUILDING EDGE.

3 DRYER EXHAUST TERMINATION. MAINTAIN A MINIMUM DISTANCE OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE AND BUILDING EDGE.

4 EXHAUST TERMINATION. MAINTAIN A MINIMUM DISTANCE OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.

5 GAS FIRED UNIT HEATER CONCENTRIC VENT TERMINATION. MAINTAIN A MINIMUM DISTANCE OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.

6 INSTALL RTU ON 0'-14" ROOF CURB. SEE DIAGRAM. PROVIDE MANUFACTURER RECOMMENDED SERVICE CLEARANCE AROUND UNIT.

7 GAS WATER HEATER CONCENTRIC VENT TERMINATION KIT.

8 ROOF MOUNTED EXHAUST FAN ON 14" CURB. SEE DIAGRAM.

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43769
ROGER C. CRAWFORD
04.02.21
ARIZONA, U.S.A.

DRAWN BY:	BGK
CHECKED BY:	RCC
PROJECT NO:	20022
ISSUE DATE:	03/26/2021
REVISIONS:	

SHEET TITLE:

ROOF MECHANICAL PLAN

SHEET NUMBER:

M101

Drawing: D:\CGriffiths\Documents\20022 MEP Model_corey.griffiths.rvt
Last Saved: 4/1/2021 4:29:22 PM

LIGHTING LEGEND

INTERIOR LIGHTING SYMBOLS	
SYMBOL	DESCRIPTION
	LINEAR LED LIGHTING FIXTURE
	PENDANT LIGHTING FIXTURE
	LINEAR PENDANT FIXTURE
	RECESSED/SURFACE MOUNTED DIRECT-INDIRECT - 1' X 4'
	RECESSED/SURFACE MOUNTED DIRECT-INDIRECT - 2' X 2'
	RECESSED/SURFACE MOUNTED DIRECT-INDIRECT - 2' X 4'
	RECESSED MOUNTED FIXTURE - 1' X 4'
	RECESSED MOUNTED FIXTURE - 2' X 2'
	RECESSED MOUNTED FIXTURE - 2' X 4'
	RECESSED/SURFACE ROUND FIXTURE
	RECESSED/SURFACE SQUARE FIXTURE
	STEPLIGHT FIXTURE
	SURFACE/WALL MOUNTED LINEAR FIXTURE
	TRACK LIGHTING
	TRACK LIGHTING, HEAD
	WALL MOUNTED FIXTURE - ROUND
	WALL MOUNTED FIXTURE - SQUARE
	WALLWASH DOWNLIGHT FIXTURE - ROUND
	WALLWASH DOWNLIGHT FIXTURE - SQUARE

SITE LIGHTING FIXTURE SYMBOLS	
SYMBOL	DESCRIPTION
	BOLLARD FIXTURE - ROUND
	BOLLARD FIXTURE - SQUARE
	EXTERIOR POLE LIGHT - ROUND FIXTURE HEAD
	EXTERIOR POLE LIGHT - SQUARE FIXTURE HEAD
	FLOOD LIGHT FIXTURE - ROUND
	FLOOD LIGHT FIXTURE - SQUARE
	WALL PACK FIXTURE - ROUND
	WALL PACK FIXTURE - SQUARE

EGRESS SYMBOLS	
SYMBOL	DESCRIPTION
	CEILING MOUNTED EXIT SIGN
	CEILING MOUNTED SINGLE FACE EXIT SIGN W/ "FROG-EYE"
	EMERGENCY BATTERY PACK, "FROG-EYE"
	EMERGENCY, REMOTE HEAD, SINGLE & DOUBLE

ELECTRICAL SYMBOLS LEGEND

ALL SYMBOLS INDICATED IN THE LEGEND MAY NOT NECESSARILY BE USED ON PLANS.

CIRCUITING	
SYMBOL	DESCRIPTION
	CIRCUITING DESIGNATION - OPEN 277/480V., SOLID 120/208V.
	CIRCUITING - RUN CONCEALED IN WALL OR CEILING
	CIRCUITING - RUN CONCEALED IN FLOOR OR GRADE
	CONDUIT RISER - TURNED UP, TURNED DOWN
	CIRCUITING - CONTINUED AS DESIGNATED
	CIRCUITING - END CAP

LINETYPES AND LINEWEIGHTS	
	NEW CIRCUITING - CONTINUOUS AND BOLD
	NEW CIRCUITING - UNDER FLOOR OR GRADE - LARGER DASHED AND BOLD
	EXISTING CIRCUITING - CONTINUOUS AND THIN
	DEMOLITION CIRCUITING - LARGER DASHED AND THIN
	NEW AND RELOCATED DEVICES AND FIXTURES - CONTINUOUS AND BOLD
	EXISTING DEVICES AND FIXTURES - CONTINUOUS AND THIN
	DEMOLITION DEVICES AND FIXTURES - SMALLER DASHED AND THIN

NOTES AND TAGS	
	REVISION DELTA
#	DRAWING NOTE
#	MECHANICAL EQUIPMENT
#	KITCHEN EQUIPMENT
#	LIGHTING CONTROL NOTE

TELECOMMUNICATION SYMBOLS	
	TELEPHONE OUTLET, DOUBLE GANG BOX, 1" CONDUIT STUB TO ACCESSIBLE CEILING
	DATA OUTLET, DOUBLE GANG BOX, 1" CONDUIT STUB TO ACCESSIBLE CEILING
	TELEPHONE/DATA OUTLET, DOUBLE GANG BOX, 1" CONDUIT STUB TO ACCESSIBLE CEILING
	CABLE TV OUTLET, DOUBLE GANG BOX, 1" CONDUIT STUB TO ACCESSIBLE CEILING
	FLOOR DATA OUTLET - SEE DRAWING NOTES
	FLOOR TELEPHONE/DATA OUTLET - SEE DRAWING NOTES

MISCELLANEOUS SYMBOLS	
B	BELL - 1/2" CONDUIT STUB TO ACCESSIBLE CLG
B	DOOR BUZZER - 1/2" CONDUIT STUB TO CLG
S PA	MUSIC OR PAGING SPEAKER, DOUBLE GANG, 1/2" CONDUIT STUB TO ACCESSIBLE CEILING
P	PHOTOCELL
T	THERMOSTAT, LINE VOLTAGE
MIC	MICROPHONE JACK
RTS	REMOTE TEST SWITCH
	CLOCK
	COMBINATION CLOCK/SPEAKER BOX

POWER SYMBOLS	
SYMBOL	DESCRIPTION
	JUNCTION BOX; J-BOX WITH BLANK COVER
	SIMPLEX RECEPTACLE
TR	DUPLEX RECEPTACLE
TR	TAMPER RESISTANT DUPLEX RECEPTACLE
USB	COMBINATION DUPLEX RECEPT / USB OUTLET
	HALF SWITCHED DUPLEX RECEPTACLE
	DEDICATED DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE FOURPLEX RECEPTACLE
	DEDICATED FOURPLEX RECEPTACLE
	CLG. MOUNTED FOURPLEX RECEPTACLE
	SPECIAL RECEPTACLE - SEE DRAWING NOTES
	FLOOR MOUNTED POWER FLOOR BOX DEVICE
	FLOOR COMBINATION PWR/DATA FLOOR BOX
	NON FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
VFD	VARIABLE FREQUENCY DRIVE
M	MOTOR
	ONE, TWO, and THREE BUTTON PUSH SWITCH
	POWER POLE
	TIME CLOCK
	CONTACTOR
	GROUND BAR
EPO	EMERGENCY POWER OFF PUSH BUTTON
	METER
	PANEL BOARD
	PULLBOX
	CURRENT TRANSFORMER
	TRANSFORMER
M	MOTORIZED DAMPER

SWITCHES	
S	SWITCH, SINGLE POLE
S_2	SWITCH, DOUBLE POLE
S_3	SWITCH, THREE WAY
S_4	SWITCH, FOUR WAY
S_D	SWITCH, DIMMER
S_K	SWITCH, KEYED
S_P	SWITCH, WITH PILOT LIGHT
S_{TO}	SWITCH, THERMAL OVERLOAD
S_{LV}	SWITCH, LOW VOLTAGE - SEE DWG NOTES
S_V	SWITCH, VARIABLE SPEED CONTROL
S_{SU}	SWITCH, TYPE S FUSE HLDR(INCLUDE FUSE)
SC	LTG SCENE CONTROLLER-SEE DWG NOTES

SECURITY AND ACCESS CONTROL SYMBOLS	
R	CARD READER, DOUBLE GANG BOX, 3/4" CONDUIT STUB TO ACCESSIBLE CEILING
A	INTERCOM PUSH BUTTON, DOUBLE GANG BOX, 3/4" CONDUIT STUB TO ACCESSIBLE CEILING
	SECURITY CAMERA, DOUBLE GANG BOX, 3/4" CONDUIT STUB TO ACCESSIBLE CEILING
M	WALL SECURITY MOTION SENSOR, DBL GANG, 1/2" CONDUIT STUB TO ACCESSIBLE CEILING
	CLG. SECURITY MOTION SENSOR, DBL GANG, 1/2" CONDUIT STUB TO ACCESSIBLE CEILING
D	DOOR CONTACT, - SEE DRAWINGS NOTES 1/2" CONDUIT STUB TO ACCESSIBLE CEILING

FIRE ALARM SYMBOLS	
SYMBOL	DESCRIPTION
	CEILING MOUNTED FIRE HORN/STROBE
	CEILING MOUNTED STROBE
	CEILING MOUNTED FIRE SPEAKER
	REMOTE INDICATOR LAMP
	MANUAL PULL STATION
	FLOW SWITCH
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
	WALL MOUNTED STROBE
	WALL MOUNTED FIRE HORN
	WALL MOUNTED FIRE HORN/STROBE
DH	MAGNETIC DOOR HOLD OPEN
FACP	FIRE ALARM CONTROL PANEL
ANN	FIRE ALARM ANNUNCIATOR PANEL
MAP	FIRE ALARM GRAPHIC MAP
	DUCT DETECTOR
	FIRE SMOKE DAMPER
H	HEAT DETECTOR
	SMOKE DETECTOR
CO	COMBINATION SMOKE/CO DETECTOR
FF	FIREFIGHTER'S PHONE JACK / WALL PHONE
	TWO-WAY COMMUNICATION STATION

LIGHTING CONTROL SENSORS	
VS	WALL VACANCY SENSOR, DUAL TECH, SINGLE ZONE, INTEGRAL OVERRIDE SWITCH
VS D	WALL VACANCY SENSOR, DUAL TECH, SINGLE ZONE, INTEGRAL OVR SWITCH, DIMMING
VS 4b	WALL VACANCY SENSOR, DUAL TECH, DUAL ZONE, INTEGRAL OVERRIDE SWITCH,
VS S	CEILING VACANCY SENSOR, DUAL TECH, SINGLE ZONE, POWER PACK; LV OVERRIDE SWITCHES
VS 4b S 4b	CEILING VACANCY SENSOR, DUAL TECH, DUAL ZONE, 2P POWER PACK; LV OVERRIDE SWITCHES
VS WP	CEILING VACANCY SENSOR, SINGLE ZONE, EXTERIOR RATED, EXTENDED RANGE, PIR
OS	WALL OCCUPANCY SENSOR, DUAL TECH, SINGLE ZONE, INTEGRAL OVERRIDE SWITCH
OS D	WALL OCCUPANCY SENSOR, DUAL TECH, SINGLE ZONE, INTEGRAL OVR SWITCH, DIMMING
OS 4b	WALL OCCUPANCY SENSOR, DUAL TECH, DUAL ZONE, INTEGRAL OVERRIDE SWITCH,
OS S	CEILING OCCUPANCY SENSOR, DUAL TECH, SINGLE ZONE, POWER PACK; LV OVERRIDE SWITCHES
OS 4b S 4b	CEILING OCCUPANCY SENSOR, DUAL TECH, DUAL ZONE, 2P POWER PACK; LV OVERRIDE SWITCHES
OS WP	CEILING OCCUPANCY SENSOR, SINGLE ZONE, EXTERIOR RATED, EXTENDED RANGE, PIR
DS	INTERIOR DAYLIGHT SENSOR

ONE LINE DIAGRAM SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
PANEL "LA"	PANEL BOARD	100A FRN-R	FUSED DISCONNECT SWITCH WITHIN SWITCHBOARD
C T	CURRENT TRANSFORMER ENCLOSURE	100/3	
P B	PULL BOX	SPARE	SPARE SWITCH WITHIN SWITCHBOARD
100/3 100A FRN-R	FUSED DISCONNECT SWITCH	SPACE	SPACE WITHIN SWITCHBOARD
	NON-FUSED DISCONNECT SWITCH		CIRCUIT BREAKER
T F	TRANSFORMER		SERVICE WEATHER HEAD
T F	PAD MOUNTED TRANSFORMER		CURRENT TRANSFORMER
	TRANSFER SWITCH		GROUNDING CONNECTION
	OVERHEAD POLE MOUNTED TRANSFORMER BANK	M	MOTOR
		G	GENERATOR
		M	METER
		GB	GROUND BAR

ABBREVIATIONS									
A, AMP	AMPERE	CU	COPPER	GC	GENERAL CONTRACTOR	MLO	MAIN LUGS ONLY	NTS	NOT TO SCALE
AC	ABOVE COUNTER	CLG	CEILING (CEILING MOUNTED)	GD	GARBAGE DISPOSAL	MV	MEDIUM VOLTAGE	(PART)	PARTIAL CIRCUIT
AFCI	ARC FAULT CIRCUIT INTERRUPTER	CWP	COLD WATER PIPE	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	MW	MICROWAVE	REF	REFRIGERATOR
AFF	ABOVE FINISHED FLOOR	(D)	EXISTING TO BE DEMOLISHED	G,GND	GROUND	(N)	NEW	(RL)	EXISTING TO BE RELOCATED
AFG	ABOVE FINISHED GRADE	Db	DECIBEL	HP	HORSEPOWER	N	NEUTRAL	RTS	REMOVE TEST SWITCH
AL	ALUMINUM	(E)	EXISTING TO REMAIN	IG	ISOLATED GROUND DEVICE	N.C.	NORMALLY CLOSED	TBB	TELEPHONE PLYWOOD BACKBOARD
BLDG	BUILDING	EC	ELECTRICAL CONTRACTOR	LV	LOW VOLTAGE	N.O.	NORMALLY OPEN	UC	UNDER COUNTER
C	CONDUIT	EPO	EMERGENCY POWER OFF	MC	MECHANICAL CONTRACTOR	NEC	NATIONAL ELECTRIC CODE	UG	UNDER GROUND
CB	CIRCUIT BREAKER	EM	EMERGENCY POWER CIRCUIT	MCB	MAIN CIRCUIT BREAKER	NF	NON FUSED	WP	WEATHERPROOF – NEMA 3R
CCTV	CLOSED CIRCUIT TELEVISION	FA	FIRE ALARM	MFR	MANUFACTURER	NIC	NOT IN CONTRACT	XP	EXPLOSION PROOF
CT	CURRENT TRANSFORMER	FC	FOOTCANDLES			NL	NIGHT LIGHT		

NOTES:

APPLICABLE CODE STANDARDS			
2015 INTERNATIONAL BUILDING CODE	2015 INTERNATIONAL MECHANICAL CODE	2015 INTERNATIONAL ENERGY CONSERVATION CODE	2014 NATIONAL ELECTRIC CODE
2015 INTERNATIONAL FIRE CODE	2015 INTERNATIONAL PLUMBING CODE	2015 INTERNATIONAL FUEL GAS CODE	

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ROGER C. CRAWFORD
05.12.21
ARIZONA U.S.A.

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021

REVISIONS:

2	DRB REVISIONS	2021-05-12

SHEET TITLE:
ELECTRICAL LEGEND

SHEET NUMBER:
E001

Isc CALCULATION - 3 PHASE

Point #1 - At The Utility Transformer

Isc = 53,011

Point #2 - At the Main Service Disconnect

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 130 X 53,011 / 4 X 21.390 X 208
f = 0.671

M = 1/(1+f)
M = 0.599

Isc = Isc(prev) x M
Isc = 31,730

Point #11 - At Main Distribution Panel "MDP"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 10 X 31,730 / 4 X 18.755 X 208
f = 0.035

M = 1/(1+f)
M = 0.966

Isc = Isc(prev) x M
Isc = 30,650

Point #3 - At Panel "M"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 5 X 30,650 / 2 X 12,122 X 208
f = 0.053

M = 1/(1+f)
M = 0.950

Isc = Isc(prev) x M
Isc = 29,118

Point #4 - At Panel "L"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 150 X 30,650 / 2 X 12,122 X 208
f = 1.579

M = 1/(1+f)
M = 0.388

Isc = Isc(prev) x M
Isc = 11,884

Point #5 - At "ATS-01"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 10 X 30,650 / 1 X 7,292 X 208
f = 0.350

M = 1/(1+f)
M = 0.741

Isc = Isc(prev) x M
Isc = 22,704

Point #6 - At Panel "LS"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 6 X 22,704 / 1 X 3,806 X 208
f = 0.298

M = 1/(1+f)
M = 0.770

Isc = Isc(prev) x M
Isc = 17,491

Point #7 - At "ATS-02"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 10 X 30,650 / 1 X 7,292 X 208
f = 0.350

M = 1/(1+f)
M = 0.741

Isc = Isc(prev) x M
Isc = 22,704

Point #8 - At Panel "ME"

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 6 X 22,704 / 1 X 8,924 X 208
f = 0.127

M = 1/(1+f)
M = 0.887

Isc = Isc(prev) x M
Isc = 20,144

Point #9 - At RTU-1

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 50 X 29,118 / 1 X 3,806 X 208
f = 3.185

M = 1/(1+f)
M = 0.239

Isc = Isc(prev) x M
Isc = 6,957

Point #10 - At RTU-2

f = [1.732 X length X Isc(prev)] / [# runs X wire factor X voltage]
f = 1.732 X 50 X 11,884 / 1 X 5,906 X 208
f = 0.838

M = 1/(1+f)
M = 0.544

Isc = Isc(prev) x M
Isc = 6,467

DRAWING NOTES:

1 PROVIDE ELECTRONIC ADJUSTABLE TRIP UNIT FOR CIRCUIT BREAKER TO COMPLY WITH NEC 240.87. PROVIDE ARC FLASH STUDY, ARC FLASH MITIGATION RECOMMENDATIONS WITH BREAKER SETTINGS AND FIELD APPLIED ARC FLASH LABELS. REFERENCE SECTION 262413 SWITCHBOARDS AND SECTION 260573 POWER SYSTEMS STUDIES.

2 PROVIDE INTEGRAL SURGE PROTECTION DEVICE PER SPECIFICATION 264300.

3 PROVIDE 65 kA/MODE INTEGRAL SURGE PROTECTION DEVICE PER SPECIFICATION 264300.

4 PROVIDE MANUFACTURER'S INFORMATION ON WITHSTANDING RATING WITH OVERCURRENT DEVICE

FEEDER SCHEDULE:

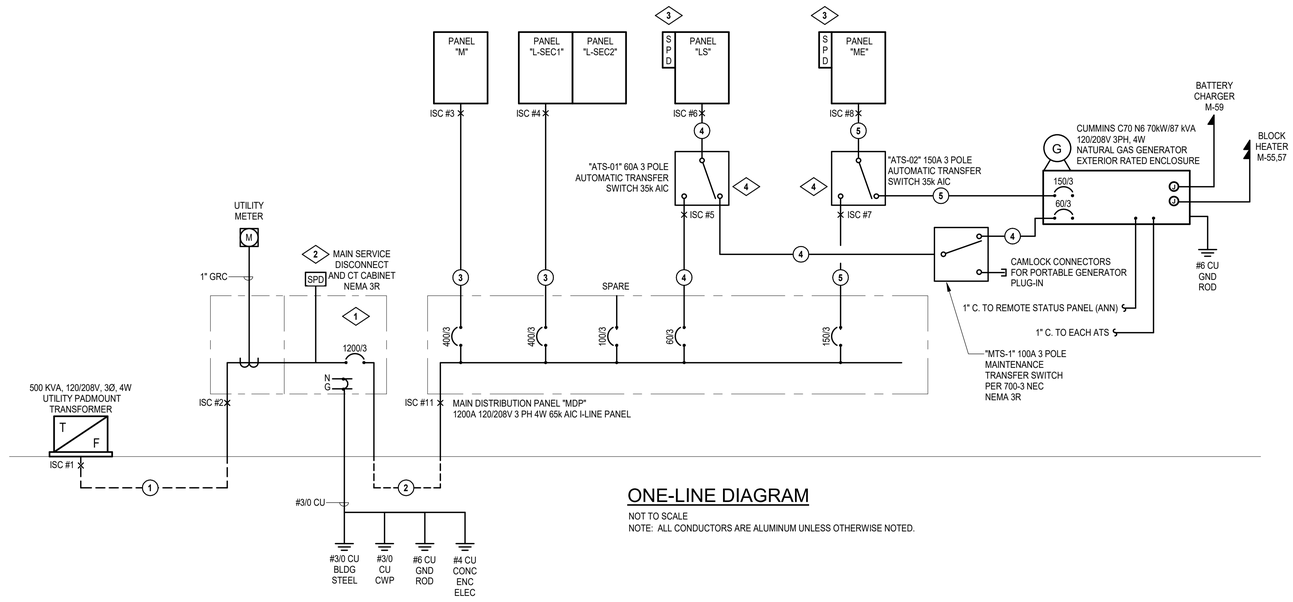
1 4[(4-500 KCMIL AL) 4"C.]

2 4[(4-500 KCMIL AL, 1-250 KCMIL AL GND) 4"C.]

3 2[(4-250 KCMIL AL, 1-#3 CU GND) 3"C.]

4 (4-#4 CU, 1-#10 CU GND) 1-1/4"C.

5 (4-#1/0 CU, 1-#6 CU GND) 2"C.



ONE-LINE DIAGRAM

NOT TO SCALE
NOTE: ALL CONDUCTORS ARE ALUMINUM UNLESS OTHERWISE NOTED.

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ROGER C. CRAWFORD 04.02.21 ARIZONA U.S.A.

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE: ELECTRICAL ONE-LINE DIAGRAM

SHEET NUMBER: E002

PANEL "MDP" VOLTAGE 120 / 208 V 3 Ø 4 W
FLUSH ____ MAIN ____ MLO ____
SURFACE X BUS 1200A FEED THRU ____ A.I.C. 65,000

TYPE	DESCRIPTION	BKR	CIR	LOAD (VA/Ø) A Ø	B Ø	C Ø	CIR	BKR	DESCRIPTION	TYPE
LRMG	PANEL "M"	400	1	22379	0		2	100	SPARE	
LRMG	-	/	3		20890	0	4	/	-	
LRMG	-	3	5			20902	6	3	-	
RMG	PANEL "L"	400	7	36101	0		8		SPACE	
LMKG	-	/	9			37353	10		SPACE	
LMKG	-	3	11				35632	0	12		SPACE
LG	PANEL "LS"	60	13	1136	0		14		SPACE	
L	-	/	15			619	0		16		SPACE
L	-	3	17				512	0	18		SPACE
MK	PANEL "ME"	150	19	13999	0		20		SPACE	
MK	-	/	21			13764	0		22		SPACE
MK	-	3	23				12499	0	24		SPACE
	SPACE		25	0	0		26		SPACE	
	SPACE		27			0	0		28		SPACE
	SPACE		29					0	0	30		SPACE
	SPACE		31	0	0		32		SPACE	
	SPACE		33			0	0		34		SPACE
	SPACE		35				0	0	36		SPACE
	SPACE		37	0	0		38		SPACE	
	SPACE		39			0	0		40		SPACE
	SPACE		41				0	0	42		SPACE
				73615		72626	69545			

LOAD TYPE	CONNECTED KVA AØ	BØ	CØ	TOTAL ALL Ø'S	FACTOR	DEMAND KVA AØ	BØ	CØ	TOTAL ALL Ø'S
LIGHTING/CONTINUOUS	0.3	2.2	1.7	4.2	125%	0.3	2.8	2.2	5.3
RECEPTACLE (10KVA OR LESS)	3.3	1.8	2.7	7.8	100%	3.3	1.8	2.7	7.8
RECEPTACLE (OVER 10KVA)	0.4	0.0	0.0	0.4	100%	0.4	0.0	0.0	0.4
HVAC/MOTOR	45.2	41.6	43.8	130.6	100%	45.2	41.6	43.8	130.6
MOTOR(LARGEST)	9.9	9.9	9.9	29.7	125%	12.4	12.4	12.4	37.1
KITCHEN EQUIPMENT	3.8	6.3	3.8	14.0	65%	2.5	4.1	2.5	9.1
MISCELLANEOUS	10.6	10.8	7.6	29.0	100%	10.6	10.8	7.6	29.0
TOTAL KVA	73.6	72.6	69.5	215.8	TOTAL KVA	74.8	73.5	71.1	219.4
					TOTAL AMPERES	623.5	612.1	592.6	623.5

LEGEND L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

PANEL "L" SECTION 2 VOLTAGE 120 / 208 V 3 Ø 4 W
FLUSH ____ MAIN ____ MLO X
SURFACE X BUS 400A FEED THRU ____ A.I.C. 22,000

TYPE	DESCRIPTION	BKR	CIR	LOAD (VA/Ø) A Ø	B Ø	C Ø	CIR	BKR	DESCRIPTION	TYPE
M	W-1 WASHER	30	43	2005	2005		44	30	W-2 WASHER	M
M	-	/	45		2005	2005	46	/	-	M
M	-	3	47			2005	2005	48	3	-	M
M	W-1 WASHER	30	49	2005	2005		50	30	W-2 WASHER	M
M	-	/	51			2005	2005	52	/	-	M
M	-	3	53				2005	2005	54	3	-	M
M	W-1 WASHER	30	55	2005	528		56	20	EF-4	M
M	-	/	57			2005	528		58	20	EF-3	M
M	-	3	59				2005	0	60		SPACE	
M	W-1 WASHER	30	61	2005	0		62		SPACE	
M	-	/	63			2005	0		64		SPACE	
M	-	3	65				2005	0	66		SPACE	
M	W-1 WASHER	30	67	2005	0		68		SPACE	
M	-	/	69			2005	0		70		SPACE	
M	-	3	71				2005	0	72		SPACE	
M	W-1 WASHER	30	73	2005	0		74		SPACE	
M	-	/	75			2005	0		76		SPACE	
M	-	3	77				2005	0	78		SPACE	
	SPACE		79	0	0		80		SPACE	
	SPACE		81			0	0		82		SPACE	
	SPACE		83				0	0	84		SPACE	
				16568		16568	16040			

LOAD TYPE	CONNECTED KVA AØ	BØ	CØ	TOTAL ALL Ø'S	FACTOR	DEMAND KVA AØ	BØ	CØ	TOTAL ALL Ø'S
LIGHTING/CONTINUOUS	0.0	0.0	0.0	0.0	125%	0.0	0.0	0.0	0.0
RECEPTACLE (10KVA OR LESS)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
RECEPTACLE (OVER 10KVA)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
HVAC/MOTOR	14.6	14.6	14.0	43.2	100%	14.6	14.6	14.0	43.2
MOTOR(LARGEST)	2.0	2.0	2.0	6.0	125%	2.5	2.5	2.5	7.5
KITCHEN EQUIPMENT	0.0	0.0	0.0	0.0	65%	0.0	0.0	0.0	0.0
MISCELLANEOUS	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
TOTAL KVA	16.6	16.6	16.0	49.2	TOTAL KVA	17.1	17.1	16.5	50.7
					TOTAL AMPERES	142.2	142.2	137.8	142.2

LEGEND L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

PANEL "M" MAIN VOLTAGE 120 / 208 V 3 Ø 4 W
FLUSH ____ MAIN ____ MLO X
SURFACE X BUS 400A FEED THRU ____ A.I.C. 35,000

TYPE	DESCRIPTION	BKR	CIR	LOAD (VA/Ø) A Ø	B Ø	C Ø	CIR	BKR	DESCRIPTION	TYPE
M	RTU-1	90	1	7686	1165		2	15	CU-1/AC-1	M
M	-	/	3		7686	1165	4	2	-	M
M	-	/	5			7686	1165	6	15	CU-2/AC-2	M
R	ROOFTOP REC	20	7	720	1165		8	2	-	M
G	WATER SOFTENER	20	9			500	612	10	20	GUH-1	G
G	CHARGING STATION	20	11				1200	612	12	20	GUH-2	G
G	REC IT RACK	20	13	1000	1092				14	20	GWH-1/CP-1/CP-3	MG
G	REC IT RACK	20	15			1000	852		16	20	GWH-2/CP-2	MG
R	REC REPACK STATION	20	17				360	1920	18	30	OVERHEAD DOOR	M
R	REC REPACK STATION	20	19	360	1920				20	30	OVERHEAD DOOR	M
RM	REC RESTROOM/EF-1	20	21			195	1920		22	30	OVERHEAD DOOR	M
R	REC CONVENIENCE	20	23				180	360	24	20	REC ENTRY S WALL WORK	R
R	REC EXTERIOR	20	25	540	360				26	20	REC ENTRY S WALL WORK	R
R	REC TELECOM	20	27			360	360		28	20	REC ENTRY	R
R	REC ELEC ROOM	20	29				180	540	30	20	REC OFFICE	R
RM	REC JANITOR/EF-2	20	31	375	500				32	20	TIME CLOCK	G
R	REC CONVENIENCE	20	33			540	500		34	20	IRRIGATION CONTROL	G
R	REC CONVENIENCE	20	35				720	2500	36	30	BALER	M
M	CEILING FANS	20	37	360	2500				38	/	-	M
R	REC LIQUOR MIXERS	20	39			180	2500		40	3	-	M
R	REC CONVENIENCE	20	41				360	1000	42	20	MOTORIZED GATE	G
L	BLDG LTG	20	43	136	1000				44	20	BALER CNTRL PNL	G
L	INTERIOR LTG	20	45			840	180		46	20	EXTERIOR RECEPT	R
L	INTERIOR LTG	20	47					619	0	48		SPACE
	SPACE		49	0	0					50		SPACE
	SPACE		51			0	0			52		SPACE
	SPACE		53					0	0	54		SPACE
G	BLOCK HEATER	30	55	1500	0					56		SPACE
G	-	/	57			1500	0			58		SPACE
G	GEN BATT CHARGER	20	59					1500	0	60		SPACE
				22379		20890		20902				

LOAD TYPE	CONNECTED KVA AØ	BØ	CØ	TOTAL ALL Ø'S	FACTOR	DEMAND KVA AØ	BØ	CØ	TOTAL ALL Ø'S
LIGHTING/CONTINUOUS	0.1	0.8	0.6	1.6	125%	0.2	1.1	0.8	2.0
RECEPTACLE (10KVA OR LESS)	2.3	1.8	2.7	6.8	100%	2.3	1.8	2.7	6.8
RECEPTACLE (OVER 10KVA)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
HVAC/MOTOR	7.7	5.9	5.7	19.3	100%	7.7	5.9	5.7	19.3
MOTOR(LARGEST)	7.6	7.6	7.6	22.8	125%	9.5	9.5	9.5	28.5
KITCHEN EQUIPMENT	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
MISCELLANEOUS	4.6	4.7	4.3	13.6	100%	4.6	4.7	4.3	13.6
TOTAL KVA	22.4	20.9	20.9	64.2	TOTAL KVA	24.3	23.0	23.0	70.3
					TOTAL AMPERES	202.6	191.7	191.3	202.6

LEGEND L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

PANEL "LS" LIFE SAFETY VOLTAGE 120 / 208 V 3 Ø 4 W
FLUSH ____ MAIN ____ MLO X
SURFACE X BUS 60A FEED THRU ____ A.I.C. 22,000

TYPE	DESCRIPTION	BKR	CIR	LOAD (VA/Ø) A Ø	B Ø	C Ø	CIR	BKR	DESCRIPTION	TYPE
* G	FACP	20	1	1000	136		2	20	BLDG EM LTG	L
L	STORAGE EM LTG	20	3			619	0	4	20	SPARE	
L	LAUNDRY EM LTG	20	5				512	0	6	20	SPARE	
	SPARE	20	7	0	0				8	20	SPARE	
	SPARE	20	9			0	0		10	20	SPARE	
	SPARE	20	11					0	0	12	20	SPARE
	SPARE	20	13	0	0				14	20	SPARE	
	SPARE	20	15			0	0		16	20	SPARE	
	SPARE	20	17				0	0	18	20	SPARE	
	SPARE	20	19	0	0				20	20	SPARE	
	SPARE	20	21			0	0		22	20	SPARE	
	SPARE	20	23					0	0	24	20	SPARE
				1136		619		512				

LOAD TYPE	CONNECTED KVA AØ	BØ	CØ	TOTAL ALL Ø'S	FACTOR	DEMAND KVA AØ	BØ	CØ	TOTAL ALL Ø'S
LIGHTING/CONTINUOUS	0.1	0.6	0.5	1.3	125%	0.2	0.8	0.6	1.6
RECEPTACLE (10KVA OR LESS)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
RECEPTACLE (OVER 10KVA)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
HVAC/MOTOR	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
MOTOR(LARGEST)	0.0	0.0	0.0	0.0	125%	0.0	0.0	0.0	0.0
KITCHEN EQUIPMENT	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
MISCELLANEOUS	1.0	0.0	0.0	1.0	100%	1.0	0.0	0.0	1.0
TOTAL KVA	1.1	0.6	0.5	2.3	TOTAL KVA	1.2	0.8	0.6	2.6
					TOTAL AMPERES	9.8	6.4	5.3	9.8

LEGEND L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

* PROVIDE RED LOCKABLE BREAKER.

PANEL "L" SECTION 1 VOLTAGE 120 / 208 V 3 Ø 4 W
FLUSH ____ MAIN ____ MLO X
SURFACE X BUS 400A FEED THRU L2 A.I.C. 22,000

TYPE	DESCRIPTION	BKR	CIR	LOAD (VA/Ø) A Ø	B Ø	C Ø	CIR	BKR	DESCRIPTION	TYPE
M	RTU-2	125	1	9968	1237		2	20	IRON-1 IRONER	M
M	-	/	3		9968	1237	4	/	-	M
M	-	/	5			9968	1237	6	3	-	M
G	DRYER D-1	20	7	1656	180		8	20	REC EXTERIOR	R
G	DRYER D-1	20	9			1656	1200	10	20	REFRIGERATOR	K
G	DRYER D-1	20	11					1656	1656	12	20	DISPOSER	M
G	DRYER D-1	20	13	1656	180				14	20	REC COUNTER	R
G	DRYER D-1	20	15			1656	1500			16	20	REC COFFEE	K
G	DRYER D-1	20	17					1656	1500	18	2	-	K
G	DRYER D-1	20	19	1656	360					20	20	REC GENERAL	R
G	DRYER	20	21			1800	500			22	20	EMPLOYEE TIMECLOCK	G
M	WASHER	20	23				1200	87	24	20	SITE LIGHTING	L
R	REC CONVENIENCE	20	25	720	0				26	20	SPARE	
L	INTERIOR LTG	20	27			768	0		28	20	SPARE	
L	INTERIOR LTG	20	29				512	0	30	20	SPARE	
M	OVERHEAD DOOR	20	31	1920	0				32	20	SPARE	
G	SCALE	20	33			500	0		34	20	SPARE	
M	CEILING FAN	20	35				120	0	36	20	SPARE	
	SPARE	20	37	0	0				38	20	SPARE	
	SPARE	20	39			0	0		40	20	SPARE	
	SPARE	20	41				0	0	42	20	SPARE	
				"LAUNDRY-1"	19533		20785		19592			
				"LAUNDRY-2"	16568		16568		16040			
				TOTAL	36101		37353		35632			

LOAD TYPE	CONNECTED KVA AØ	BØ	CØ	TOTAL ALL Ø'S	FACTOR	DEMAND KVA AØ	BØ	CØ	TOTAL ALL Ø'S
LIGHTING	0.0	0.8	0.6	1.4	125%	0.0	1.0	0.7	1.7
RECEPTACLE (10KVA OR LESS)	1.4	0.0	0.0	1.4	100%	1.4	0.0	0.0	1.4
RECEPTACLE (OVER 10KVA)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
HVAC/MOTOR	19.8	17.9	20.3	58.0	100%	19.8	17.9	20.3	58.0
MOTOR(LARGEST)	9.9	9.9	9.9	29.7	125%	12.4	12.4	12.4	37.1
KITCHEN EQUIPMENT	0.0	2.7	1.5	4.2	65%	0.0	1.8	1.0	2.7
MISCELLANEOUS	5.0	6.1	3.3	14.4	100%	5.0	6.1	3.3	14.4
TOTAL KVA	36.1	37.4	35.6	109.1	TOTAL KVA	38.6	39.1	37.7	115.4
					TOTAL AMPERES	321.5	325.6	314.4	325.6

LEGEND L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

PANEL "ME" MECHANICAL VOLTAGE 120 / 208 V 3 Ø 4 W
FLUSH ____ MAIN ____ MLO X
SURFACE X BUS 150A FEED THRU ____ A.I.C. 22,000

TYPE	DESCRIPTION	BKR	CIR	LOAD (VA/Ø) A Ø	B Ø	C Ø	CIR	BKR	DESCRIPTION	TYPE
M	ECU-1	30	1	2400	2400		2	30	ECU-3	M
M	-	/	3		2400	2400	4	/	-	M
M	-	/	5			2400	2400	6	3	-	M
K	EVAP-1	20	7	300	432				8	20	EVAP-3	K
K	BEERWINE COOLER H&L	20	9			1200	1200		10	20	MEAT COOLER HEAT LTG	K
M	ECU-2	40	11				2964	2400	12	30	ECU-4	M
M	-	/	13	2964	2400				14	/	-	M
M	-	/	15			2964	2400		16	3	-	M
K	EVAP-2	30	17				1903	432	18	20	EVAP-4	K
K	-	/	19	1903	1200				20	20	PRODUCE COOLER H&L	K
K	FREEZER HEAT LTG	20	21			1200	0		22	20	SPARE	
	SPARE	20	23				0	0	24	20	SPARE	
	SPARE	20	25	0	0				26	20	SPARE	
	SPARE	20	27			0	0		28	20	SPARE	
	SPARE	20	29				0	0	30	20	SPARE	
	SPARE	20	31	0	0				32	20	SPARE	
	SPARE	20	33			0	0		34	20	SPARE	
	SPARE	20	35				0	0	36	20	SPARE	
	SPARE	20	37	0	0				38	20	SPARE	
	SPARE	20	39			0	0		40	20	SPARE	
	SPARE	20	41				0	0	42	20	SPARE	
				13999		13764	12499					

LOAD TYPE	CONNECTED KVA AØ	BØ	CØ	TOTAL ALL Ø'S	FACTOR	DEMAND KVA AØ	BØ	CØ	TOTAL ALL Ø'S
LIGHTING/CONTINUOUS	0.0	0.0	0.0	0.0	125%	0.0	0.0	0.0	0.0
RECEPTACLE (10KVA OR LESS)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
RECEPTACLE (OVER 10KVA)	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
HVAC/MOTOR	7.3	7.3	7.3	21.8	100%	7.3	7.3	7.3	21.8
MOTOR(LARGEST)	2.9	2.9	2.9	8.7	125%	3.6	3.6	3.6	10.9
KITCHEN EQUIPMENT	3.8	3.6	2.3	9.8	65%	2.5	2.3	1.5	6.4
MISCELLANEOUS	0.0	0.0	0.0	0.0	100%	0.0	0.0	0.0	0.0
TOTAL KVA	14.0	13.8	12.5	40.3	TOTAL KVA	13.4	13.2	12.4	39.0
					TOTAL AMPERES	111.5	110.2	103.4	111.5

LEGEND L = LIGHTING R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

"MDS"	"M"	"L-SEC1"
"L-SEC2"	"LS"	"ME"

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE: ELECTRICAL SCHEDULES

SHEET NUMBER: E003

MECHANICAL EQUIPMENT SCHEDULE

NOTES:
1. **INDOOR AC UNIT POWER FROM CORRESPONDING EXTERIOR CU UNIT. PROVIDE 3/4" CONDUIT FROM EXTERIOR UNIT TO INTERIOR UNIT FOR POWER CONNECTION.**
2. **FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS.**
3. **FAN SHALL BE CONTROLLED VIA WALL MOUNTED HUMIDISTAT.**
4. **REQUIRED 120V1P CONNECTION FOR CONTROLS. CIRCUIT PER PLAN.**
5. **FAN TO RUN CONTINUOUSLY.**

SYMBOL	DESCRIPTION	VOLTAGE	PHASE	HP	kVA	WATTS	FLA	MCA	AIC (A)	Isc (A)	DATE	CONDUCTORS	CONDUIT	SWITCH	CIRCUIT BREAKER	FUSE SIZE/TYPE	REMARKS
AC-1	AIR CONDITIONER (INDOOR)	208	1	0	0.0	0.0 W	0.0 A	1.0	0	0		(2-#12, 1-#12 GND)	3/4"	S2P	15A/2P	15A FRN-R	1
AC-2	AIR CONDITIONER (INDOOR)	208	1	0	0.0	0.0 W	0.0 A	1.0	0	0		(2-#12, 1-#12 GND)	3/4"	S2P	15A/2P	15A FRN-R	1
BAL-1	BALER	208	3	1	10.0	0.0 W	0.0 A	0.0	0	0		(3-#8, 1-#10 GND)	3/4"	60/3	40A/3P	40A FRN-R	4
CP-1	CIRC PUMP	120	1	0.04	0.0	0.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
CP-2	CIRC PUMP	120	1	0.04	0.0	0.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
CP-3	CIRC PUMP	120	1	0.04	0.0	0.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
CU-1	CONDENSING UNIT (OUTDOOR)	208	1	0	0.0	0.0 W	0.0 A	13.0	5,000	956	2/2/21	(2-#12, 1-#12 GND)	3/4"	30/2	15A/2P	15A FRN-R	
CU-2	CONDENSING UNIT (OUTDOOR)	208	1	0	0.0	0.0 W	0.0 A	13.0	5,000	1,021	2/2/21	(2-#12, 1-#12 GND)	3/4"	30/2	15A/2P	15A FRN-R	
D1	DRYER	120	1	0	0.0	0.0 W	13.8 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
ECU-1	BEER COOLER CONDENSING UNIT	208	3	0	0.0	0.0 W	0.0 A	20.0	5,000	2,570	2/2/21	(3-#10, 1-#10 GND)	3/4"	30/3	30A/3P	30A FRN-R	
ECU-2	FREEZER CONDENSING UNIT	208	3	0	0.0	0.0 W	0.0 A	24.7	5,000	3,445	2/2/21	(3-#8, 1-#10 GND)	3/4"	60/3	40A/3P	40A FRN-R	
ECU-3	MEAT COOLER CONDENSING UNIT	208	3	0	0.0	0.0 W	0.0 A	20.0	5,000	2,109	2/2/21	(3-#10, 1-#10 GND)	3/4"	30/3	30A/3P	30A FRN-R	
ECU-4	PRODUCE COOLER CONDENSING UNIT	208	3	0	0.0	0.0 W	0.0 A	20.0	5,000	1,936	2/2/21	(3-#10, 1-#10 GND)	3/4"	30/3	30A/3P	30A FRN-R	
EF-1	EXHAUST FAN	120	1	0	0.0	15.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	S	20A/1P	-	2
EF-2	EXHAUST FAN	120	1	0	0.0	15.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	S	20A/1P	-	5
EF-3	EXHAUST FAN	120	1	1/6	0.0	0.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	3
EF-4	EXHAUST FAN	120	1	1/6	0.0	0.0 W	0.0 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	3
EVAP-1	BEER COOLER EVAPORATOR COIL	120	1	0	0.0	0.0 W	2.5 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
EVAP-2	FREEZER EVAPORATOR COIL	208	1	0	0.0	0.0 W	18.3 A	0.0	0	0		(2-#10, 1-#10 GND)	3/4"	30/2	30A/2P	-	
EVAP-3	MEAT COOLER EVAPORATOR COIL	120	1	0	0.0	0.0 W	3.6 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
EVAP-4	PRODUCE COOLER EVAPORATOR COIL	120	1	0	0.0	0.0 W	3.6 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
GUH-1	GAS UNIT HEATER	120	1	0	0.0	0.0 W	0.0 A	5.1	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
GUH-2	GAS UNIT HEATER	120	1	0	0.0	0.0 W	0.0 A	5.1	0	0		(2-#12, 1-#12 GND)	3/4"	STO	20A/1P	-	
GWH-1	GAS WATER HEATER	120	1	0	0.0	0.0 W	5.1 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	S	20A/1P	-	
GWH-2	GAS WATER HEATER	120	1	0	0.0	0.0 W	5.1 A	0.0	0	0		(2-#12, 1-#12 GND)	3/4"	S	20A/1P	-	
IRON-1	IRONER	208	3	0	0.0	0.0 W	10.3 A	0.0	0	0		(3-#12, 1-#12 GND)	3/4"	30/3	20A/3P	20A FRN-R	
OH-1	OVERHEAD DOOR	120	1	1	0.0	0.0 W	0.0 A	0.0	0	0		(2-#10, 1-#10 GND)	3/4"	STO	30A/1P	30A FRN-R	
RTU-1	ROOF TOP UNIT	208	3	0	0.0	0.0 W	0.0 A	64.0	10,000	6,957	2/2/21	(3-#2, 1-#8 GND)	1 1/4"	100/3	90A/3P	90A FRN-R	
RTU-2	ROOF TOP UNIT	208	3	0	0.0	0.0 W	0.0 A	83.0	10,000	6,467	2/2/21	(3-#1, 1-#6 GND)	1 1/4"	200/3	125A/3P	110A FRN-R	
W1	WASHER (65LB)	208	3	5	0.0	0.0 W	0.0 A	0.0	0	0		(3-#10, 1-#10 GND)	3/4"	30/3	30A/3P	30A FRN-R	
W2	WASHER (45LB)	208	3	5	0.0	0.0 W	0.0 A	0.0	0	0		(3-#10, 1-#10 GND)	3/4"	30/3	30A/3P	30A FRN-R	

EGRESS LIGHTING SCHEDULE

LUMINAIRE						LAMP	
TYPE	MANUFACTURER	MODEL	CATALOG NUMBER	DESCRIPTION	MOUNTING	VOLTAGE	TYP
X	LITHONIA LIGHTING	LQM	LQM S W 3 G MVOLT	LED EXIT SIGN WITH WHITE THERMOPLASTIC HOUSING AND GREEN LETTERING. DAMP LOCATION LISTED.PROVIDE MOUNTING KIT AS NECESSARY PER PLANS.	WALL MOUNT	MVOLT	LED
X1	LITHONIA LIGHTING	LQM	LQM S W 3 G MVOLT	LED EXIT SIGN WITH WHITE THERMOPLASTIC HOUSING AND GREEN LETTERING. DAMP LOCATION LISTED.PROVIDE MOUNTING KIT AS NECESSARY PER PLANS.	CEILING MOUNT	MVOLT	LED

LIGHTING FIXTURE SCHEDULE

LUMINAIRE								LAMP					
TYPE	MANUFACTURER	MODEL	CATALOG NUMBER	DESCRIPTION	VOLTAGE	DIMMING	MOUNTING	QTY.	TYPE	WATTS	LUMENS	COLOR TEMP	CRI
A	LITHONIA	CLX	CLX-L48-9000LM-SEF-WD L-120-GZ10-35K-80CRI	4'X4' RECESSED LINEAR STRIP DOWNLIGHT, DAMP LOCATION LISTED. WIDE ANGLE DISTRIBUTION.	120	0-10V	SURFACE MOUNT TO GRID	1	LED	64	9000 lm	3500K	80
A1	LITHONIA	CLX	CLX-L48-3000LM-SEF-WD L-120-GZ10-35K-80CRI	4'X4' RECESSED LINEAR STRIP DOWNLIGHT, DAMP LOCATION LISTED. WIDE ANGLE DISTRIBUTION.	120	0-10V	SURFACE MOUNT TO GRID	1	LED	20.3	3000 lm	3500K	80
AE	LITHONIA	CLX	CLX-L48-9000LM-SEF-WD L-120-GZ10-35K-80CRI	4'X4' RECESSED LINEAR STRIP DOWNLIGHT, DAMP LOCATION LISTED.WIDE ANGLE DISTRIBUTION.	120	0-10V	SURFACE MOUNT TO GRID	1	LED	64	9000 lm	3500K	80
B	LITHONIA	THCLX	CLX-L48-9000LM-SEF-WD L-120-GZ0-10V-35K-80CRI-THCLX	4'X4' SURFACE MOUNT LINEAR STRIP DOWNLIGHT, DAMP LOCATION LISTED .	120	0-10V	SURFACE MOUNT TO STRUCTURE	1	LED	64	9000 lm	3500K	80
B1	LITHONIA	THCLX	CLX-L48-3000LM-SEF-WD L-120-GZ0-10V-35K-80CRI-THCLX	4'X4' SURFACE MOUNT LINEAR STRIP DOWNLIGHT, DAMP LOCATION LISTED. WIDE ANGLE DISTRIBUTION.	120	0-10V	SURFACE MOUNT TO STRUCTURE	1	LED	20.3	3000 lm	3500K	80
B1E	LITHONIA	THCLX	CLX-L48-4000LM-SEF-WD L-120-GZ0-10V-35K-80CRI-THCLX	4'X4' SURFACE MOUNT LINEAR STRIP DOWNLIGHT, DAMP LOCATION LISTED. WIDE ANGLE DISTRIBUTION.	120	0-10V	SURFACE MOUNT TO STRUCTURE	1	LED	20.3	3000 lm	3500K	80
BB	BEGA	99056	99056-120 2700K-BZ	DECORATIVE SITE PEDESTRIAN BOLLARD IN DARK BRONZE FINISH.	120	0-10V	ON FINISHED GRADE	1	LED	14	1300 lm	2700K	70
C	TBD	TBD	TBD	DECORATIVE VANITY FIXTURE.	120	0-10V	WALL MOUNT ABOVE MIRROR	1	LED	13	0 lm	3500K	80
DE	LITHONIA	LDN6	LDN6 35/20 L06AR LS MVOLT GZ10	6" RECESSED LED DOWNLIGHT WITH WHITE FINISH AND MATTE DIFFUSE LENS.	120	0-10V	RECESSED	1	LED	22.5	2006 lm	3500K	80
FFE	BEGA	CEILING MOUNTED DOWNLIGHT	66977 K27	6" SURFACE MOUNT DOWNLIGHT WITH MARINE GRADE DIE CAST ALUMINUM ALLOY HOUSING AND CLEAR SAFETY GLASS WITH BRONZE FINISH. WET LOCATION LISTED.	120	0-10V	SURFACE MOUNT TO STRUCTURE	1	LED	4.9	532 lm	2700K	80
GGE	BEGA	WALL LUMINAIRE	22359 K27	WALL PACK WITH DIE CAST MARINE GRADE ALUMINIUM ALLOY HOUSING AND MATTE SAFETY GLASS. WET LOCATION LISTED IN BRONZE FINISH.	120	0-10V	WALL MOUNT RE: PLANS	1	LED	7.7	463 lm	2700K	70
HHE	BEGA	RECESSED WALL LUMINAIRE	33055 K27	RECESSED WALL MOUNT STEPLIGHT FIXTURE WITH ASSYMETRICAL LIGHT DISTRIBUTION. DIE CAST MARINE GRADE ALUMINUM ALLOY HOUSING AND CLEAR SAFETY GLASS AND BRONZE FINISH. WET LOCATION LISTED.	120	0-10V	WALL MOUNT RE: PLANS	1	LED	8.4	480 lm	2700K	70

LIGHTING CONTROL SCHEDULE

SPACE TAG	DESCRIPTION	NUMBER OF CONTROL ZONES	MANUAL CONTROL SWITCH	OCCUPANCY SENSING DEVICE	OCCUPANCY SENSOR TYPE	TIMECLOCK CONTROL FUNCTION	TIMECLOCK OVERRIDE CONTROL	AMBIENT PHOTOCELL CONTROL	LOCAL PHOTOCELL CONTROL	DAYLIGHT HARVESTING ZONES	SEQUENCE OF OPERATION NOTES	REMARKS
A	MECH / ELEC ROOMS	2	S	--	--	--	--	--	--	--	1	
B	JAN CLST / MIXERS / REPACK	3	OS	X	DT / CWS	--	--	--	--	--	2	1
C	OFFICE / RESTROOM	2	DS/OS	X	DT / CWS	--	--	--	--	--	3	1
D	RECEIVING / STORAGE / LAUNDRY	2	DS/OS	X	DT	--	--	--	X	X	4	2
E	EXTERIOR BLDG	1	--	--	--	X	--	X	--	--	5	3
F	PARKING LOT	1	--	--	--	X	--	X	--	--	5	3

REFER TO LIGHTING PLANS FOR CONTROL DEVICE LOCATIONS AND MOUNTING CONFIGURATIONS

SEQUENCE OF OPERATION NOTES:

1. LIGHTS CONTROLLED BY MANUAL TOGGLE SWITCH
2. LIGHTS CONTROLLED BY WALL MOUNT VACANCY SENSOR WITH MANUAL OVERRIDE.
3. LIGHTS CONTROLLED BY WALL MOUNT DIMMABLE VACANCY SENSOR WITH MANUAL OVERRIDE.
4. LIGHTS CONTROLLLED BY CEILING OCCUPANCY SENSOR WITH (2) ZONE DIMMABLE MANUAL OVERRIDE SWITCH. MANUAL CONTROL SHALL OVERRIDE PHOTOCELL CONTROL DAYLIGHT ZONE.
5. LIGHTS CONTROLLED BY TIMECLOCK AND PHOTOCELL CONTROL

REMARKS:

1. LIGHTS TO MANUAL ON/AUTO OFF 20 MINUTES AFTER OCCUPANT LEAVES.
2. LIGHTS TO BE AUTO ON/AUTO OFF 20 MINUTES AFTER OCCUPANT LEAVES.
3. LIGHTS TO BE ON ONE HOUR BEFORE DUSK AND OFF ONE HOUR AFTER DAWN.

SENSOR TYPES	MANUAL CONTROL SWITCHES
DT = DUAL TECHNOLOGY	S = TOGGLE SWITCH (SP, 3-WAY, 4-WAY PER PLANS)
PI = PASSIVE INFRARED	DS = DIMMER SWITCH
US = ULTRASONIC	KS = KEYED SWITCH
CWS = COMBINATION OCCUPANCY SENSOR / WALL SWITCH	TS = DIGITAL TIMER SWITCH
	OS = LOW VOLTAGE OCCUPANCY SENSOR OVERRIDE SWITCH

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

ROGER C. CRAWFORD 05.12.21 ARIZONA U.S.A.

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021

REVISIONS:

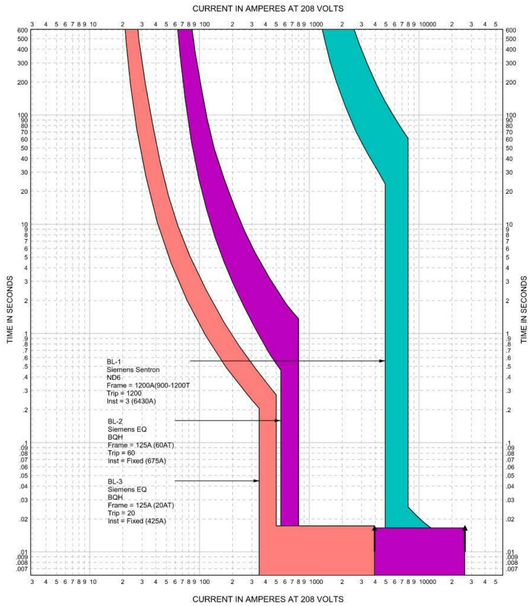
2	DRB REVISIONS	2021-05-12

SHEET TITLE:

ELECTRICAL SCHEDULES

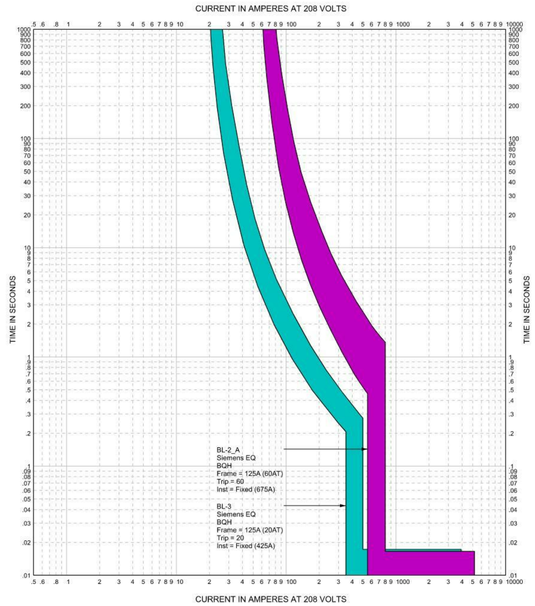
SHEET NUMBER:

E004



MEP Engineering Inc	***EasyPower*®** **TIME-CURRENT CURVES**	Utility Power
		FAULT: DATE: 1/29/2021 BY: REVISION: 1

20022 COORDINATION STUDY



MEP Engineering Inc	***EasyPower*®** **TIME-CURRENT CURVES**	Generator Power
		FAULT: DATE: 1/29/2021 BY: REVISION: 1

20022 COORDINATION STUDY

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE:
SELECTIVE COORDINATION

SHEET NUMBER:
E005

COMcheck Software Version 4.1.1.0
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Desert Mountain Laundry Storage and Distribution
Project Type: New Construction

Construction Site:
37700 N Desert Mountain Pkwy
Scottsdale, AZ 85262

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

Enhanced Interior Lighting Controls

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Laundry Facility (Workshop)	2420	1.19	2880
2-Storage Facility (Warehouse)	5750	0.66	3795
		Total Allowed Watts =	6675

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Laundry Facility (Workshop)				
LED 1: A/AE: 4' LINEAR RECESSED LED: Other:	1	18	64	1152
LED 6: 4' LINEAR SURFACE LED: Other:	1	2	64	128
2-Storage Facility (Warehouse)				
LED 2: A/AE: 4' LINEAR SURFACE LED: Other:	1	19	64	1216
LED 3: A1: 4' LINEAR RECESSED LED: Other:	1	5	20	102
LED 4: C: VANITY FIXTURE: Other:	1	1	16	16
LED 5: D: RECESSED DOWNLIGHT: Other:	1	1	22	22
LED 7: B1/B1E: 4' LINEAR SURFACE LED FIXTURE: Other:	1	11	20	223
			Total Proposed Watts =	2859

Interior Lighting PASSES: Design 57% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Melissa Downing - Electrical Project Designer — Name - Title
Signature
01-25-2021 — Date

COMcheck Software Version 4.1.1.0
Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Desert Mountain Laundry Storage and Distribution
Project Type: New Construction
Exterior Lighting Zone: 2 (Residential mixed use area)

Construction Site:
37700 N Desert Mountain Pkwy
Scottsdale, AZ 85262

Owner/Agent:

Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Main Entry Door (Main entry)	3 ft of door	20	Yes	60
Walkway (Walkway < 10 feet wide)	157 ft of	0.7	Yes	110
Loading Dock (Emergency services, loading area)	3319 ft2	0.5	No	1660
			Total Tradable Watts (a) =	170
			Total Allowed Watts =	1829
			Total Allowed Supplemental Watts (b) =	600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main Entry Door (Main entry 3 ft of door width): Tradable Wattage				
LED 1: FFE: 6" CANOPY DOWNLIGHT: Other:	1	2	5	10
Walkway (Walkway < 10 feet wide 157 ft of walkway length): Tradable Wattage				
LED 2: FFE: 6" CANOPY DOWNLIGHT: Other:	1	2	5	10
LED 3: GGE: WALL MOUNT LUMINAIRE: Other:	1	6	8	46
Loading Dock (Emergency services, loading area 3319 ft2): Non-tradable Wattage				
LED 4: FFE: 6" CANOPY DOWNLIGHT: Other:	1	3	5	15
LED 5: GGE: WALL MOUNT LUMINAIRE: Other:	1	5	8	38
LED 6: HHE: RECESSED STEP LIGHT: Other:	1	3	8	25
			Total Tradable Proposed Watts =	66

Exterior Lighting PASSES: Design 91% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Melissa Downing - Electrical Project Designer — Name - Title
Signature
01-25-2021 — Date

COMcheck Software Version 4.1.1.0
Inspection Checklist

Energy Code: 2015 IECC

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15][1]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Daylight spaces that comply with this code.
C405.2.1 [EL18][1]	Occupancy sensors installed in required spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1, C405.2.2.3 [EL23][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.2.1 [EL22][2]	Automatic controls to shut off all building lighting installed in all buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.3 [EL16][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.3, C405.2.3.1, C405.2.3.2 [EL20][1]	Primary sidelighted areas are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.3, C405.2.3.1, C405.2.3.3 [EL21][1]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.5 [EL25][null]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C406.4 [FI54][1]	Enhanced digital lighting controls efficiency package: Interior lighting has following enhanced lighting controls in accordance with Section C405.2.2: Luminaires capable of continuous dimming and being addressed individually, <= 8 luminaires controlled in combination in a daylight zone, digital control system for fixtures, "Sequence of Operations" documentation, and functional testing per Section C408.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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43769
ROGER C.
CRAWFORD
04.02.21
Date Signed
ARIZONA U.S.A.

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE:
ELECTRICAL COMCHECK

SHEET NUMBER:
E006

Drawing: D:\CGriffiths\Documents\20022 MEP Model_corey.griffiths.rvt
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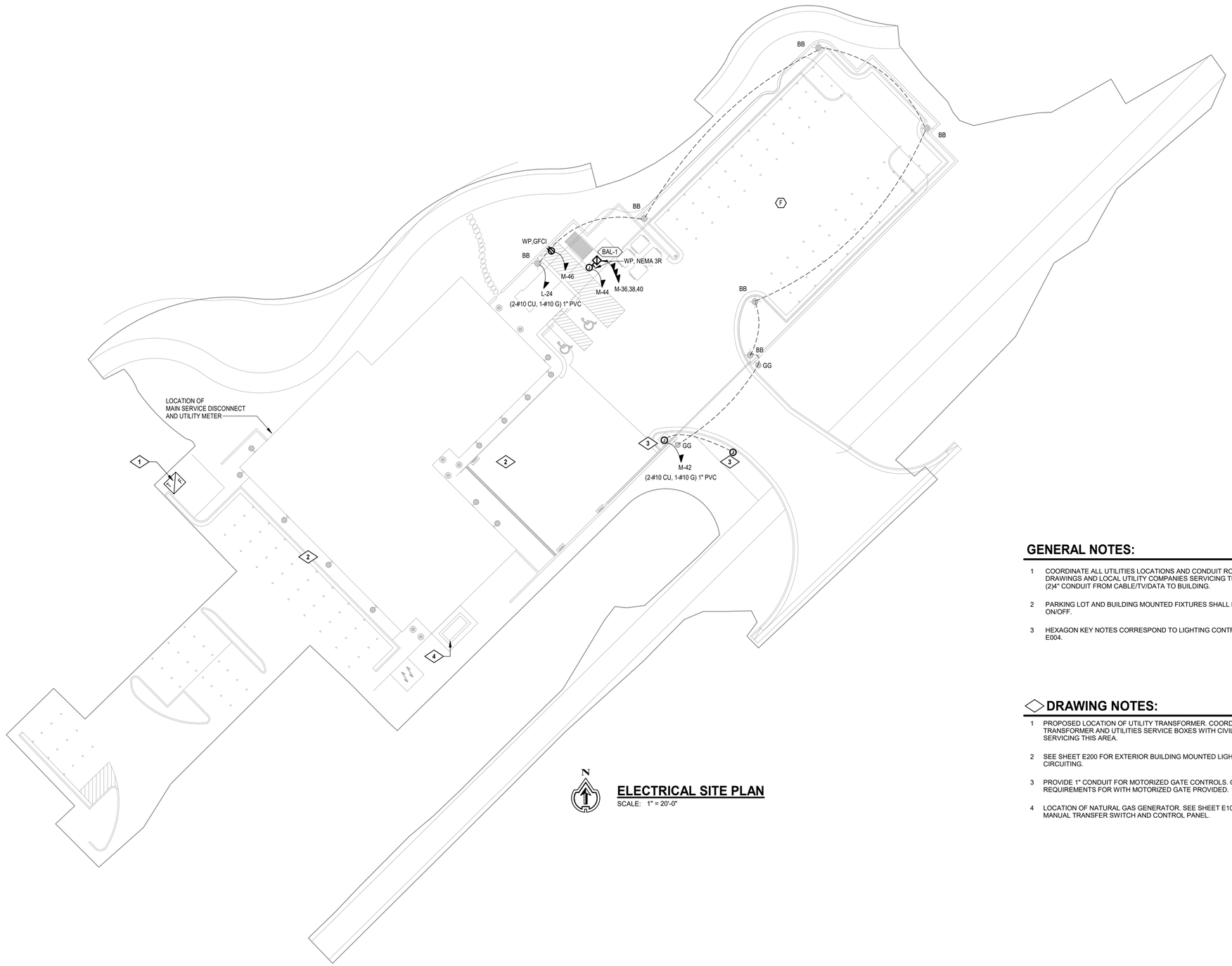

ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

GENERAL NOTES:

1 COORDINATE ALL UTILITIES LOCATIONS AND CONDUIT ROUTING WITH CIVIL DRAWINGS AND LOCAL UTILITY COMPANIES SERVICING THIS AREA. PROVIDE (2)4" CONDUIT FROM CABLE/TV/DATA TO BUILDING.

2 PARKING LOT AND BUILDING MOUNTED FIXTURES SHALL BE PHOTOCELL ON/OFF.

3 HEXAGON KEY NOTES CORRESPOND TO LIGHTING CONTROL SCHEDULE SHEET E004.

DRAWING NOTES:

1 PROPOSED LOCATION OF UTILITY TRANSFORMER. COORDINATE LOCATION OF UTILITY TRANSFORMER AND UTILITIES SERVICE BOXES WITH CIVIL AND LOCAL UTILITY SERVICING THIS AREA.

2 SEE SHEET E200 FOR EXTERIOR BUILDING MOUNTED LIGHTING DESIGNATION AND CIRCUITING.

3 PROVIDE 1" CONDUIT FOR MOTORIZED GATE CONTROLS. COORDINATE POWER REQUIREMENTS FOR WITH MOTORIZED GATE PROVIDED.

4 LOCATION OF NATURAL GAS GENERATOR. SEE SHEET E101 FOR LOCATION OF MANUAL TRANSFER SWITCH AND CONTROL PANEL.

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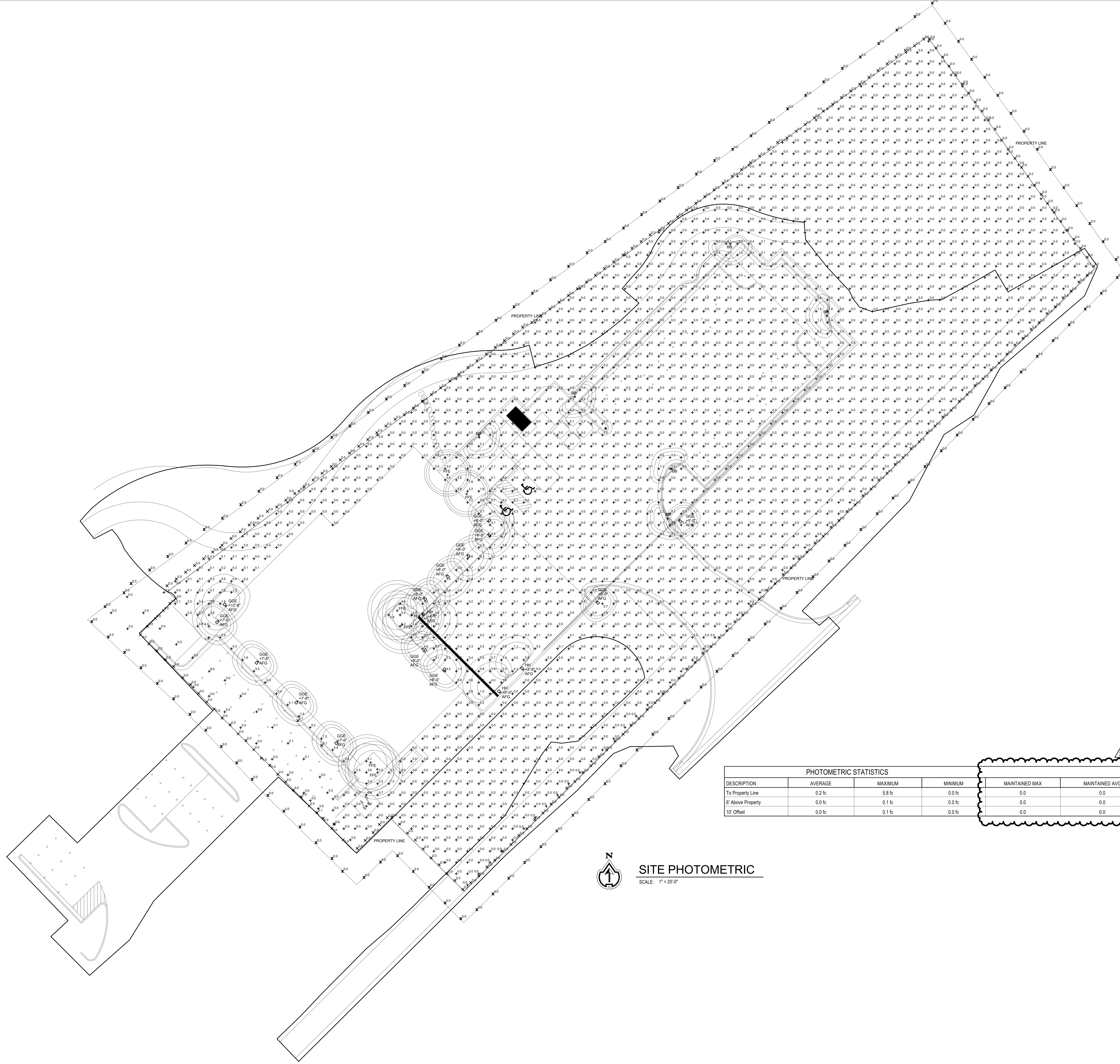
ROGER C. CRAWFORD
05.12.21
ARIZONA U.S.A.

DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE: ELECTRICAL SITE PLAN

SHEET NUMBER: E100



SITE PHOTOMETRIC

SCALE: 1" = 20'-0"

PHOTOMETRIC STATISTICS						
DESCRIPTION	AVERAGE	MAXIMUM	MINIMUM	MAINTAINED MAX	MAINTAINED AVG	POINT
To Property Line	0.2 fc	5.8 fc	0.0 fc	0.0	0.0	+
6' Above Property	0.0 fc	0.1 fc	0.0 fc	0.0	0.0	X
10' Offset	0.0 fc	0.1 fc	0.0 fc	0.0	0.0	*

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

Registered Professional Engineer (Electrical)
CERTIFICATE NO. 43769
ROGER C. CRAWFORD
05.12.21
Date Signed
ARIZONA U.S.A.

DRAWN BY:	MKD
CHECKED BY:	RCC
PROJECT NO:	20022
ISSUE DATE:	05/12/21

REVISIONS:

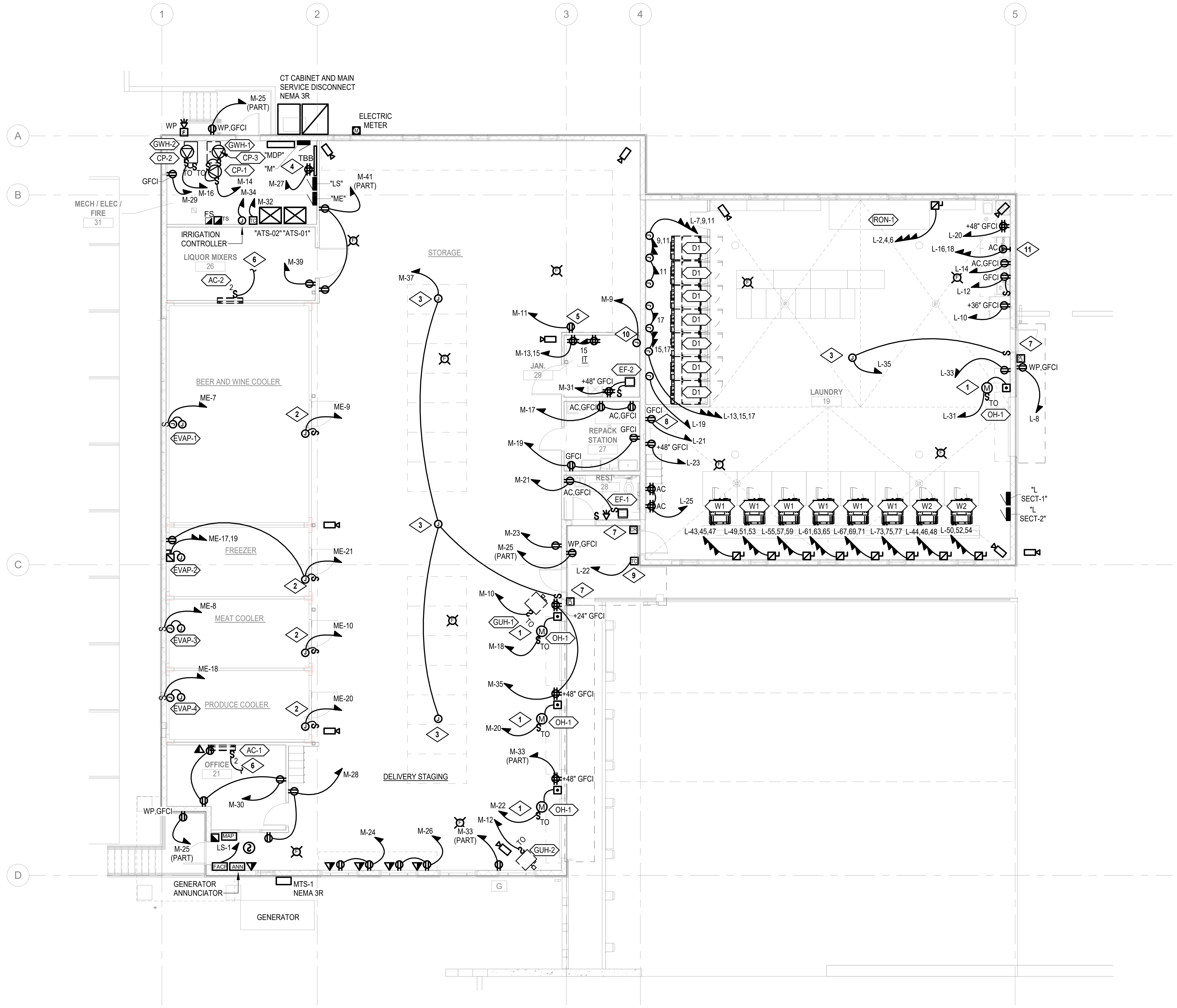
2	DRB REVISIONS	2021-05-12

SHEET TITLE:

SITE PHOTOMETRIC

SHEET NUMBER:

E100.1



MAIN LEVEL POWER PLAN

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

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO LABEL ALL SWITCHES AND RECEPTACLES WITH CIRCUIT NUMBERS AND PANEL NAME. CIRCUIT NUMBERS AND PANEL NAMES SHALL BE CLEAR AND LEGIBLE ON COVER PLATES. ELECTRICAL CONTRACTOR SHALL COORDINATE COLOR OF COVER PLATES WITH BUILDING MANAGEMENT.
2. PROVIDE REMOTE GFCI RESET SWITCH FOR ALL GFCI DUPLEX RECEPTACLES LOCATED BEHIND FIXED EQUIPMENT (NOT READILY ACCESSIBLE). FLUSH MOUNT GFCI RESET SWITCH IN READILY ACCESSIBLE LOCATION. COORDINATE EXACT LOCATION WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN.
3. PROVIDE WEATHER RESISTANT RECEPTACLE WITH WEATHER PROOF "WHILE-IN-USE" COVER FOR EXTERIOR RECEPTACLES.
4. COORDINATE EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF THE ASSOCIATED ELECTRICAL EQUIPMENT. PROVIDE DEDICATED ELECTRICAL CONNECTIONS TO ALL MECHANICAL AND PLUMBING EQUIPMENT UNLESS OTHERWISE INDICATED.
5. ALL EXPOSED CONDUIT SHALL BE ROUTED PERPENDICULAR, PARALLEL AND TIGHT TO COLUMNS AND BEAMS. ALL EXPOSED CONDUIT ROUTING SHALL BE COORDINATED WITH ARCHITECT, GENERAL CONTRACTOR AND OWNER PRIOR TO INSTALLATION.
6. PROVIDE A WP, GFCI DUPLEX RECEPTACLE WITHIN 20'-0" OF ALL MECHANICAL EQUIPMENT.
7. COORDINATE WORKING CLEARANCES FOR ELECTRICAL DISCONNECTS PRIOR TO ROUGH-IN.
8. PROVIDE DISCONNECTING MEANS FOR ALL HARDWIRED EQUIPMENT.

DRAWING NOTES:

1. MOTORIZED OVERHEAD DOORS TO BE 120V/1PH 1 HP (30A/1P BREAKER AND 2-#10 CU, 1-#10 GND). COORDINATE LOCATION OF MOTOR AND MOTOR CONTROLS WITH OWNER PRIOR TO ROUGH-IN.
2. PROVIDE CONDUIT SEAL-OFF'S AT ALL WALK-INS.
3. CEILING FAN TO BE 120V 1 PH 1A (20A/1P BREAKER AND 2-#12 CU, 1-#12 GND). FAN TO BE DAMP LOCATION LISTED CEILING FAN, ALL JUNCTION BOXES FOR OVERHEAD CEILING FANS SHALL BE CEILING FAN RATED. COORDINATE REQUIREMENTS WITH FAN PROVIDED PRIOR TO ROUGH-IN.
4. PROVIDE 48" X 48" X 3/4" PLYWOOD TELEPHONE BACKBOARD MOUNTED AT +48" AFF TO BOTTOM. SKIM COAT AND PAINT WITH FIRE-RESISTANT PAINT TO MATCH EXISTING WALL. ALSO PROVIDE (1) DEDICATED DUPLEX OUTLET MOUNTED AT +60" AFF. COORDINATE EXACT REQUIREMENTS WITH ARCHITECTURAL PLANS, TENANT REPRESENTATIVE, AND COMMUNICATIONS SYSTEM VENDOR. PROVIDE COPPER GROUND BAR WITH ONE (1) #6 CU GREEN INSULATED GROUNDING CONDUCTOR IN 1/2" CONDUIT TO NEAREST BUILDING GROUNDING ELECTRODE SYSTEM FOR EQUIPMENT GROUND.
5. PROVIDE 120V 1 PH CONNECTION FOR PALLET LIFT CHARGER. COORDINATE REQUIREMENTS AND LOCATION OF FORK LIFT CHARGING STATION WITH EQUIPMENT PROVIDED.
6. AC UNIT FED FROM CORRESPONDING CU UNIT. REFER TO 'EQUIPMENT SCHEDULE'.
7. PROVIDE JUNCTION BOX MOUNTED +48" FOR OWNER PROVIDED CARD READER SYSTEM. ALSO PROVIDE 1" EMPTY CONDUIT TO 6" ABOVE ACCESSIBLE CEILING WITH PULL LINE AND PLASTIC BUSHING ON CONDUIT END. SECURITY CABLING AND DEVICES TO BE PROVIDED BY OWNER'S SECURITY SYSTEM VENDOR UNDER SEPARATE CONTRACT. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH ARCHITECTURAL PLANS, OWNER'S REPRESENTATIVE, AND SECURITY SYSTEM SUPPLIER PRIOR TO ROUGH-INS.
8. DRYER: PROVIDE 120V 1 PH 20A CONNECTION (2-#12 CU, 1-#12 GND). COORDINATE EXACT NEMA CONFIGURATION WITH APPLIANCE PROVIDED.
9. PROVIDE 120V 1 PH CONNECTION FOR OWNER PROVIDED EMPLOYEE TIMECLOCK. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. COORDINATE CONNECTION WITH EQUIPMENT PROVIDED.
10. PROVIDE 120V 1PH CONNECTION FOR WATER SOFTENER SYSTEM. COORDINATE LOCATION OF CONNECTION PRIOR TO ROUGH-IN. COORDINATE CONNECTION REQUIREMENTS WITH SYSTEM PROVIDED.
11. PROVIDE HARD WIRE CONNECTION FOR COFFEE MAKER. CONFIRM POWER REQUIREMENTS WITH COFFEE MAKER PROVIDED PRIOR TO ROUGH-IN.

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CONSTRUCTION DOCUMENTS - FOR BUILDING PERMIT

ROGER C. CRAWFORD 43769 04.02.21

DRAWN BY:	MKD
CHECKED BY:	RCC
PROJECT NO:	20022
ISSUE DATE:	03/26/2021
REVISIONS:	

SHEET TITLE:
MAIN LEVEL POWER PLAN

SHEET NUMBER:
E101

Drawing: D:\CGriffiths\Documents\20022 MEP Model_corey.griffiths.rvt
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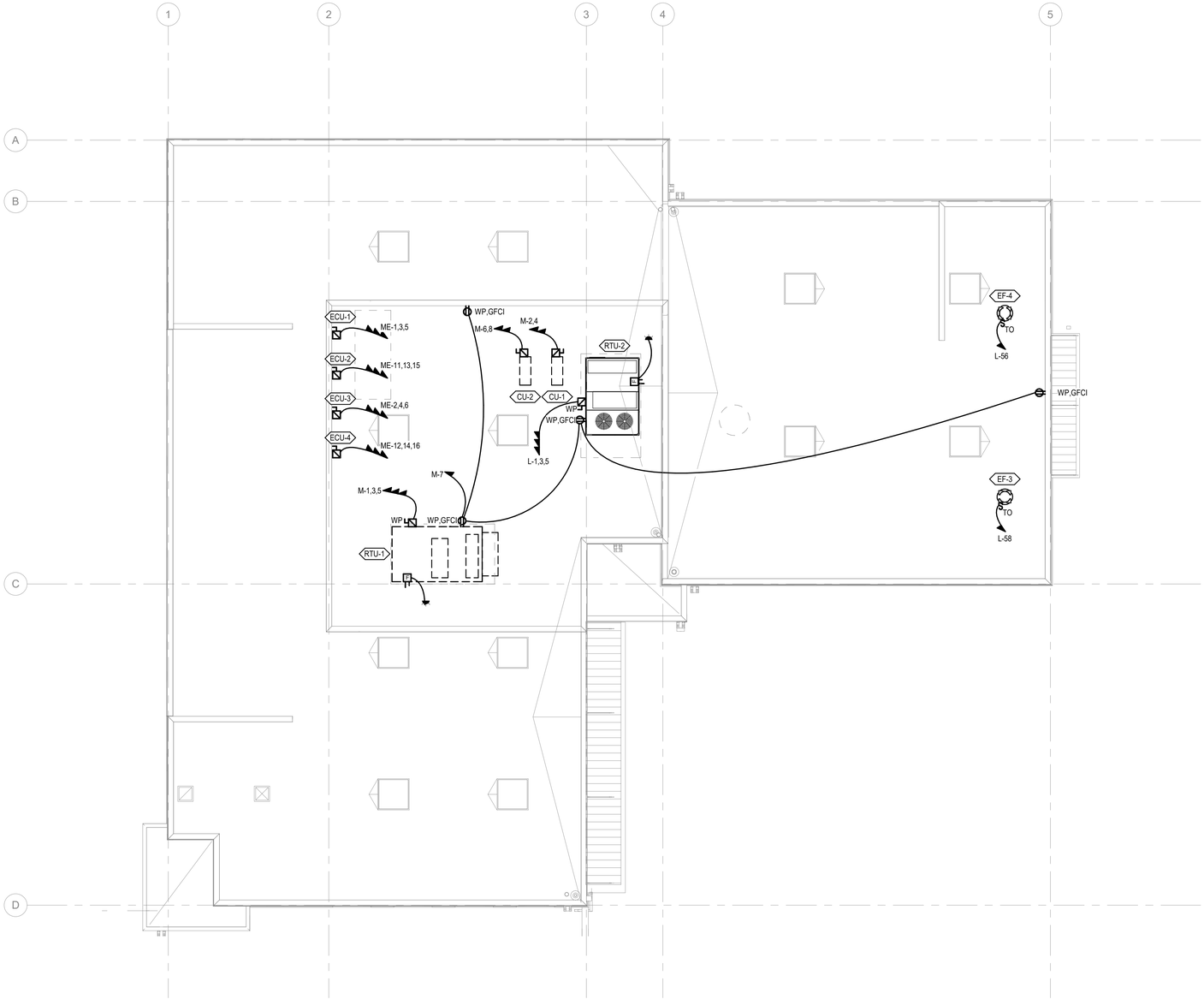

ROOF POWER PLAN

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

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO LABEL ALL SWITCHES AND RECEPTACLES WITH CIRCUIT NUMBERS AND PANEL NAME. CIRCUIT NUMBERS AND PANEL NAMES SHALL BE CLEAR AND LEGIBLE ON COVER PLATES. ELECTRICAL CONTRACTOR SHALL COORDINATE COLOR OF COVER PLATES WITH BUILDING MANAGEMENT.
2. PROVIDE REMOTE GFCI RESET SWITCH FOR ALL GFCI DUPLEX RECEPTACLES LOCATED BEHIND FIXED EQUIPMENT (NOT READILY ACCESSIBLE). FLUSH MOUNT GFCI RESET SWITCH IN READILY ACCESSIBLE LOCATION. COORDINATE EXACT LOCATION WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN.
3. PROVIDE WEATHER RESISTANT RECEPTACLE WITH WEATHER PROOF "WHILE-IN-USE" COVER FOR EXTERIOR RECEPTACLES.
4. COORDINATE EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF THE ASSOCIATED ELECTRICAL EQUIPMENT. PROVIDE DEDICATED ELECTRICAL CONNECTIONS TO ALL MECHANICAL AND PLUMBING EQUIPMENT UNLESS OTHERWISE INDICATED.
5. ALL EXPOSED CONDUIT SHALL BE ROUTED PERPENDICULAR, PARALLEL AND TIGHT TO COLUMNS AND BEAMS. ALL EXPOSED CONDUIT ROUTING SHALL BE COORDINATED WITH ARCHITECT, GENERAL CONTRACTOR AND OWNER PRIOR TO INSTALLATION.
6. PROVIDE A WP, GFCI DUPLEX RECEPTACLE WITHIN 20'-0" OF ALL MECHANICAL EQUIPMENT.
7. COORDINATE WORKING CLEARANCES FOR ELECTRICAL DISCONNECTS PRIOR TO ROUGH-IN.
8. PROVIDE DISCONNECTING MEANS FOR ALL HARDWIRED EQUIPMENT.

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Professional Engineer
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04.02.21
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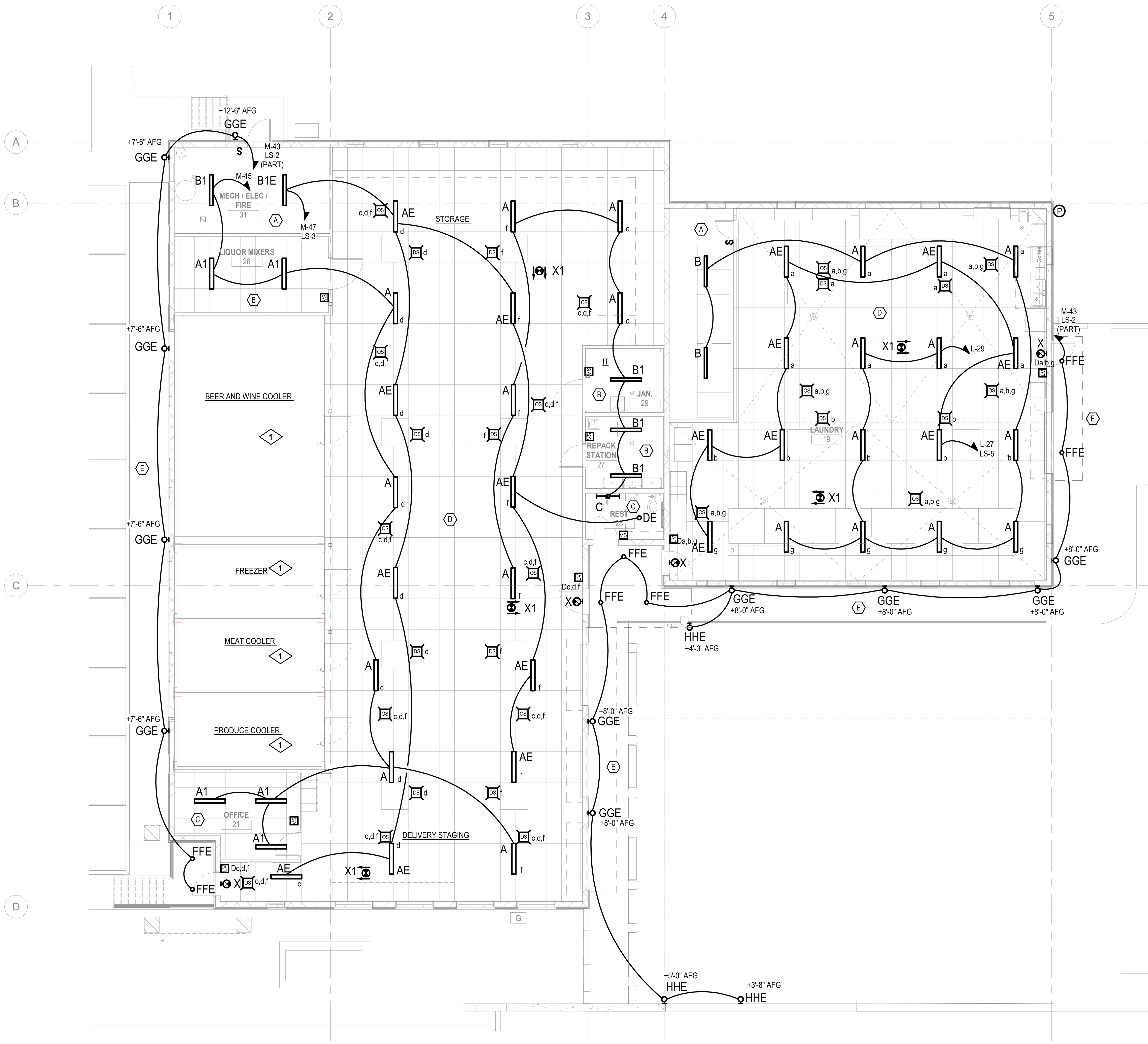
DRAWN BY: MKD
CHECKED BY: RCC
PROJECT NO: 20022
ISSUE DATE: 03/26/2021
REVISIONS:

SHEET TITLE: ROOF POWER PLAN

SHEET NUMBER: E102



MAIN LEVEL LIGHTING PLAN

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

GENERAL NOTES:

1. CONTRACTOR TO VERIFY THAT FIXTURE SPECIFICATION INCLUDE ALL NECESSARY ACCESSORIES AND REMOTE TRANSFORMERS/DRIVERS FOR A COMPLETE INSTALLATION.
2. ELECTRICAL CONTRACTOR TO LABEL ALL SWITCHES AND RECEPTACLES WITH CIRCUIT NUMBERS AND PANEL NAME. CIRCUIT NUMBERS AND PANEL NAMES SHALL BE CLEAR AND LEGIBLE ON COVER PLATES. ELECTRICAL CONTRACTOR SHALL COORDINATE COLOR OF COVER PLATES WITH BUILDING MANAGEMENT.
3. ALL FIXTURES DESIGNATED WITH AN 'E' AT THE END OF THE FIXTURE TAG SHALL BE CIRCUITED TO PANEL AS PER DRAWINGS AND PROVIDED WITH UL-924 RELAY TO SWITCH LIGHTS TO GENERATOR CIRCUIT LISTED DURING POWER OUTAGE. FIXTURES SHALL COME TO FULL BRIGHT DURING POWER OUTAGE.
4. LOWER CASE LETTERS AT LIGHT FIXTURES AND LIGHTING CONTROLS DESIGNATE LOCAL SWITCH LEG.
5. HEXAGON KEY NOTES CORRESPOND TO LIGHTING CONTROL SCHEDULE SHEET E004.
6. CONNECT EXIT SIGNS TO NEAREST UNSWITCHED EMERGENCY CIRCUIT ON GENERATOR.

DRAWING NOTES:

1. LIGHTING IN THIS AREA TO BE PROVIDED BY WALK-IN COOLER MANUFACTURER.

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SHEET TITLE:

MAIN LEVEL
LIGHTING PLAN

SHEET NUMBER:

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