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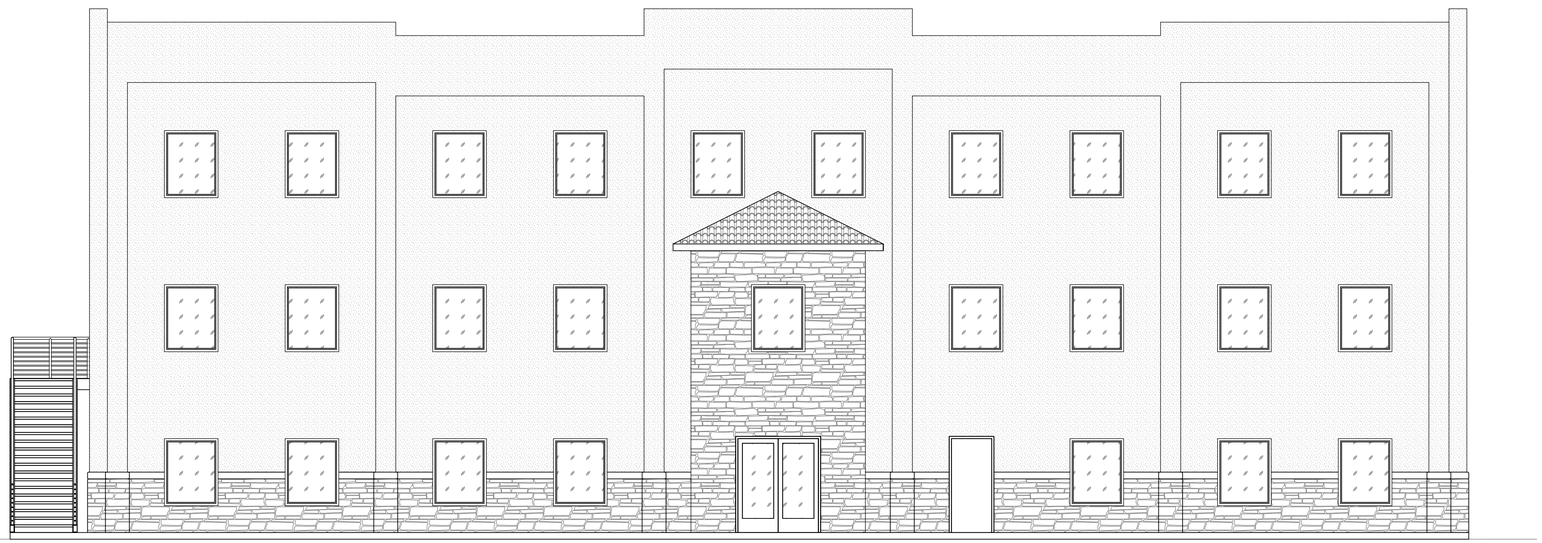

PROJECT INFORMATION

CONSTRUCTION TYPE: — TYPE III-B
OCCUPANCY TYPE: — B
NUMBER OF STORIES: — 3 STORIES

STANDARD LOADINGS:

SNOW LOAD (ROOF): — 30 PSF
ROOF DEAD LOAD: — 14 PSF
ROOF LIVE LOAD: — 20 PSF
WIND LOAD: — 115 MPH, EXP. C
SEISMIC DESIGN: — SEE STRUCTURAL SPECIFICATIONS

BUILDING AREA:

GROUND FLOOR AREA: — 5155 SQ. FT.

OCCUPANT LOAD (IBC TABLE 1004.1.1):

GROUND FLOOR AREA: — 51
(BUSINESS AREAS - 5155 SQ. FT. / 100 SQ. FT. / OCC)

SECOND FLOOR AREA: — 49
(BUSINESS AREAS - 4970 SQ. FT. / 100 SQ. FT. / OCC)

THIRD FLOOR AREA: — 48
(BUSINESS AREAS - 4870 SQ. FT. / 100 SQ. FT. / OCC)

TOTAL OCCUPANT LOAD: — 148

CODE REQUIREMENTS:
*BUILDING CONSTRUCTED AS SINGLE USE, NON-SEPARATED OCCUPANCY
*BUILDING TO BE SPRINKLED

OWNER:
MONUMENT HOSPITALITY
6677 W. THUNDERBIRD RD. SUITE J176
GLENDALE, AZ 85306

PROJECT LOCATION:
WINDOW ROCK, AZ
NAVAJO NATION INN TRACT

DEFERRED SUBMITTALS:
- SHEET ROCK INSTALLATION DETAIL
- LIGHTING INSTALLATION DETAILS

SPCIAL INSPECTION REQUIREMENTS:
- SPECIAL INSPECTION OF ALL EPOXY APPLICATIONS REQ'D
- SPECIAL INSPECTION OF SHOP AND FIELD WELDS
- SPECIAL INSPECTION OF HIGH STRENGTH BOLTS
- SPECIAL INSPECTION OF CONCRETE REBAR AND STRENGTH

ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES:
- CURRENT NTUA SPECIFICATIONS
- THE 2012 INTERNATIONAL PLUMBING CODE (IPC)
- THE 2012 INTERNATIONAL MECHANICAL CODE (IMC)
- THE 2012 INTERNATIONAL BUILDING CODE (IBC)
- THE 2012 INTERNATIONAL FIRE CODE (IFC)
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2008 NATIONAL ELECTRIC CODE (NEC)
- 2003 ANSI 117.1

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WINDOW ROCK OFFICE BUILDING (2 & 3)

TITLE SHEET

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

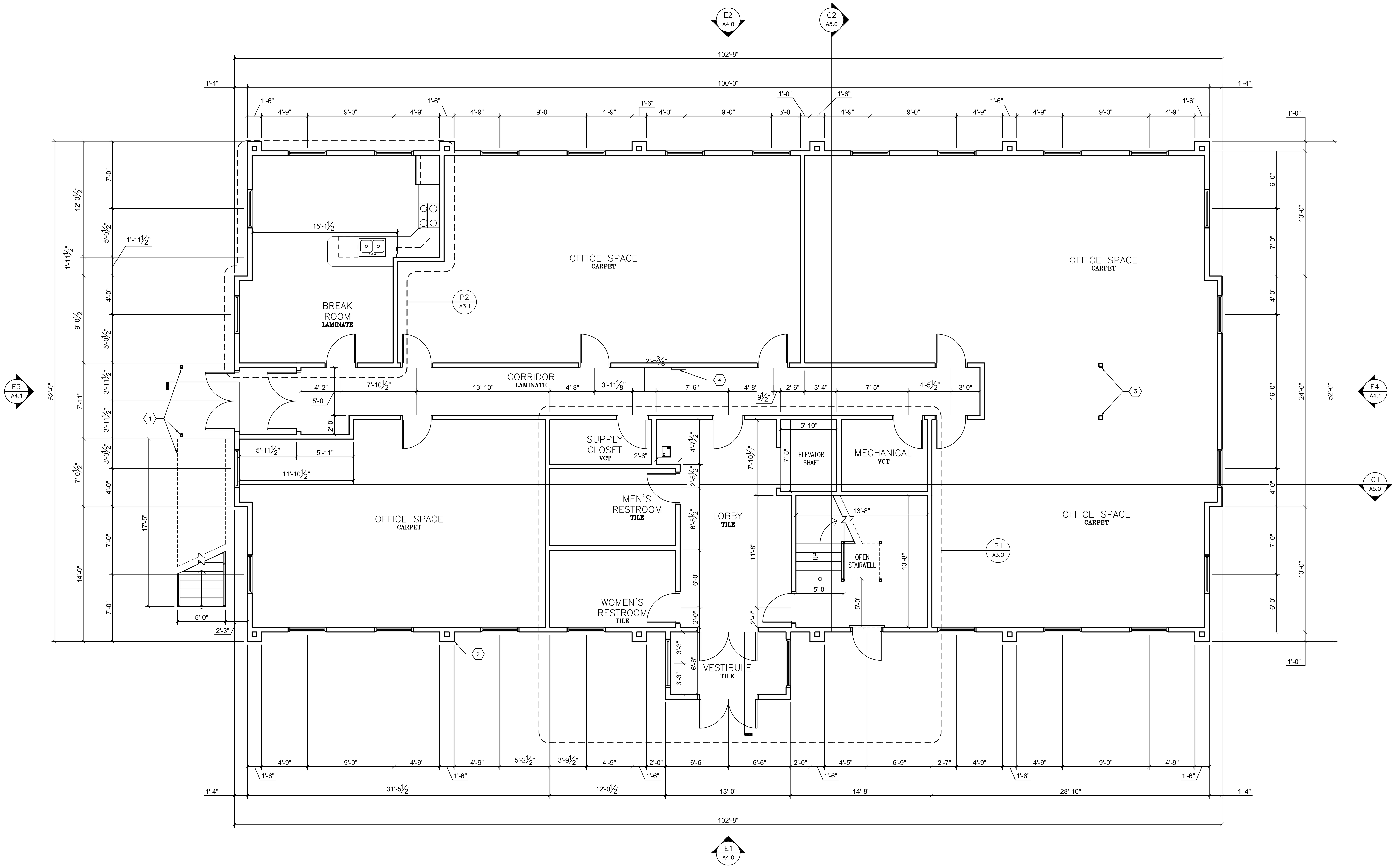
REV#:	DATE:	DESCRIPTION:

REGISTERED Professional Engineer CERTIFICATE NO. 47776 THOMAS W. AVANT ARIZONA U.S.A. EXPIRES 6-30-2019
47776
THOMAS W.
AVANT
12/12/2019

DRAWN BY: M.H.
SCALE: NTS
SHEET: A0.1

PLAN KEYNOTE LEGEND

1. EXTERIOR METAL STAIRS AND LANDING SUPPORT POSTS TO 2ND LEVEL
2. WOOD FRAMED PILASTERS, TYP.
3. STEEL COLUMN PER FRAMING PLAN
4. ANSUL SENTRY 10 lb DRY CHEMICAL EXTINGUISHER IN FIRE RATED SEMI–RECESSED 10 lb FIRE EXTINGUISHER CABINET MODEL: JL AMBASSADOR 1017F10–FX2 INSTALLED PER MFR. SPECIFICATIONS



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WINDOW ROCK OFFICE BUILDING (2 & 3)

GROUND FLOOR PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Registered Professional Engineer (Civil)
CERTIFICATE NO.
47776
THOMAS W.
AVANT
Thomas Avant
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

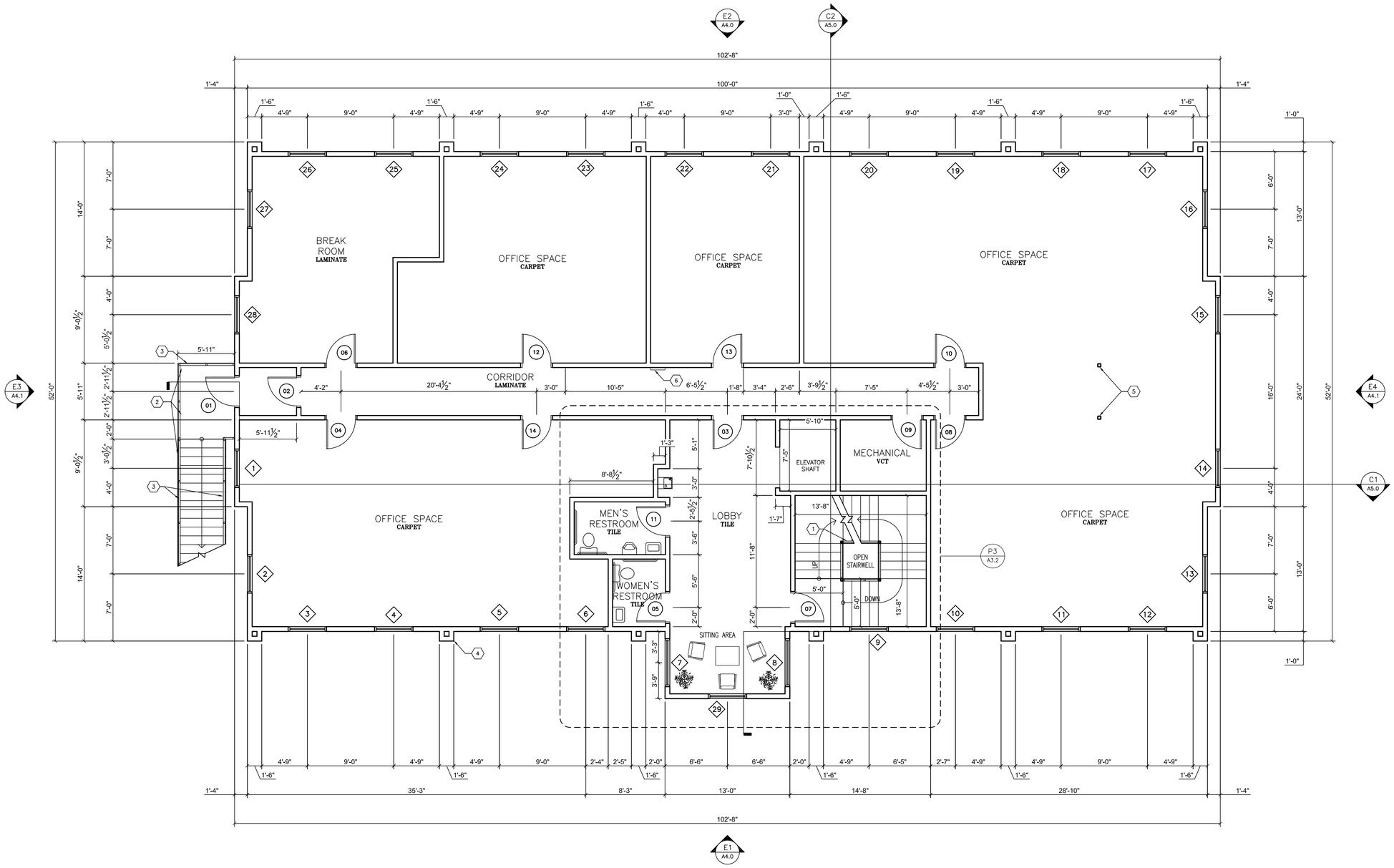
DRAWN BY: M.H.

SCALE: 3/16" = 1'-0"

SHEET: A1.0

PLAN KEYNOTE LEGEND

1. METAL RAILING PER DETAIL D6B/A9.0
2. EXTERIOR METAL STAIRS AND CONCRETE DECK LANDING
3. EXTERIOR METAL RAILING PER DETAIL D6A/A9.0 & D6C/A9.0
4. WOOD FRAMED PILASTERS, TYP.
5. STEEL POSTS PER FRAMING PLAN
6. ANSUL SENTRY 10 lb DRY CHEMICAL EXTINGUISHER IN FIRE RATED SEMI-RECESSED 10 lbs FIRE EXTINGUISHER CABINET MODEL: JL AMBASSADOR 1017F10-FX2 INSTALLED PER MFR. SPECIFICATIONS



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WINDOW ROCK OFFICE BUILDING (2 & 3)

SECOND FLOOR PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

PROFESSIONAL ENGINEER CERTIFICATE
47776
THOMAS W. AVANT
12/12/2019
ARIZONA U.S.A.
EXPIRES 6-30-20 20

DRAWN BY: M.H.

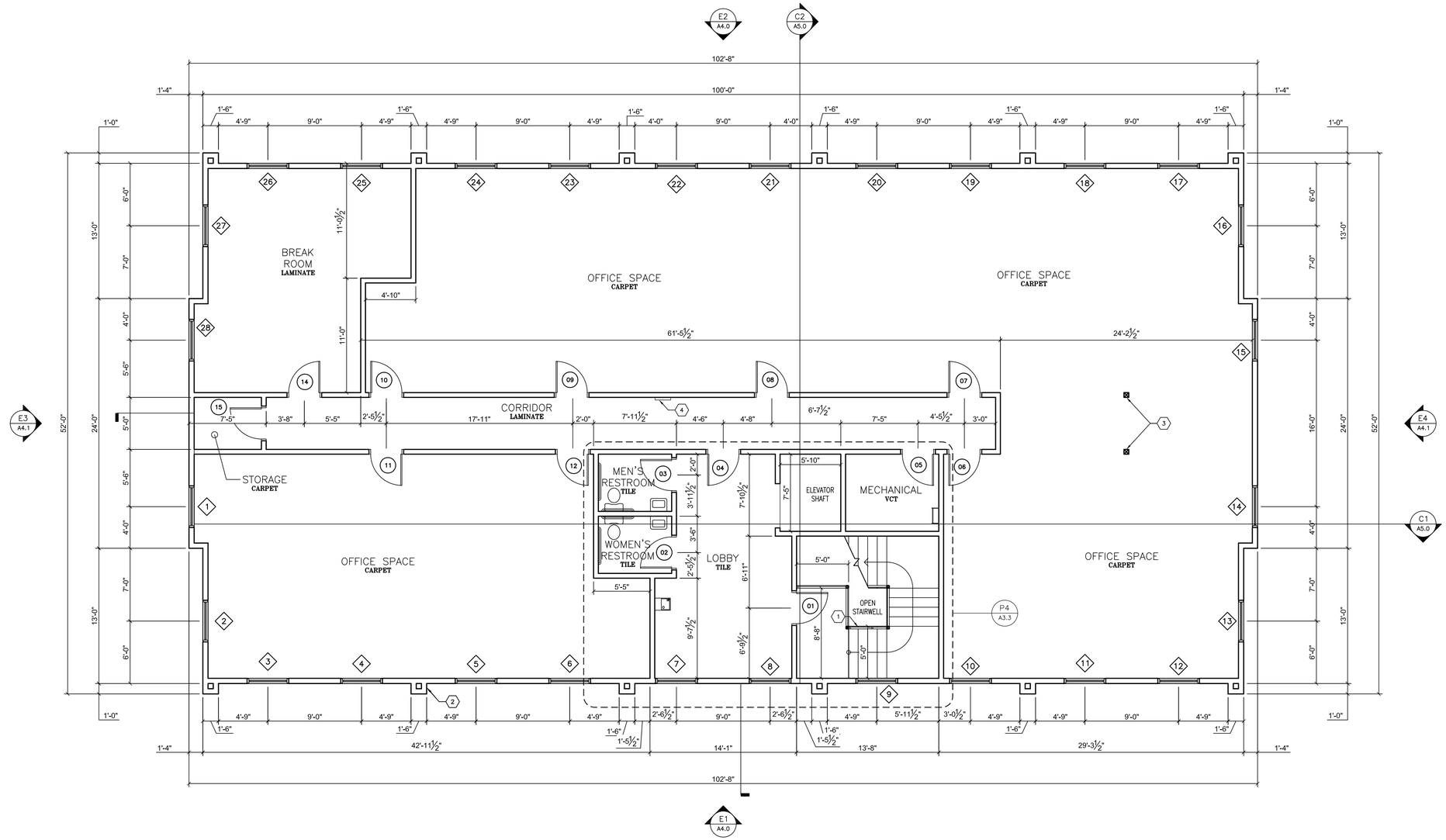
SCALE: 3/16" = 1'-0"

SHEET:

A1.1

PLAN KEYNOTE LEGEND

1. METAL STAIR RAILING PER DETAIL D6B/A9.0
2. WOOD FRAMED PILASTER OUTBUILD, TYP.
3. WOOD COLUMN PER FRAMING PLAN
4. ANSUL SENTRY 10 lb DRY CHEMICAL EXTINGUISHER IN FIRE RATED SEMI-RECESSED 10 lbs FIRE EXTINGUISHER CABINET MODEL: JL AMBASSADOR 1017F10-FX2 INSTALLED PER MFR. SPECIFICATIONS



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WINDOW ROCK OFFICE BUILDING (2 & 3)

THIRD FLOOR PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Thomas W. Avant
477776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
ARIZONA U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.

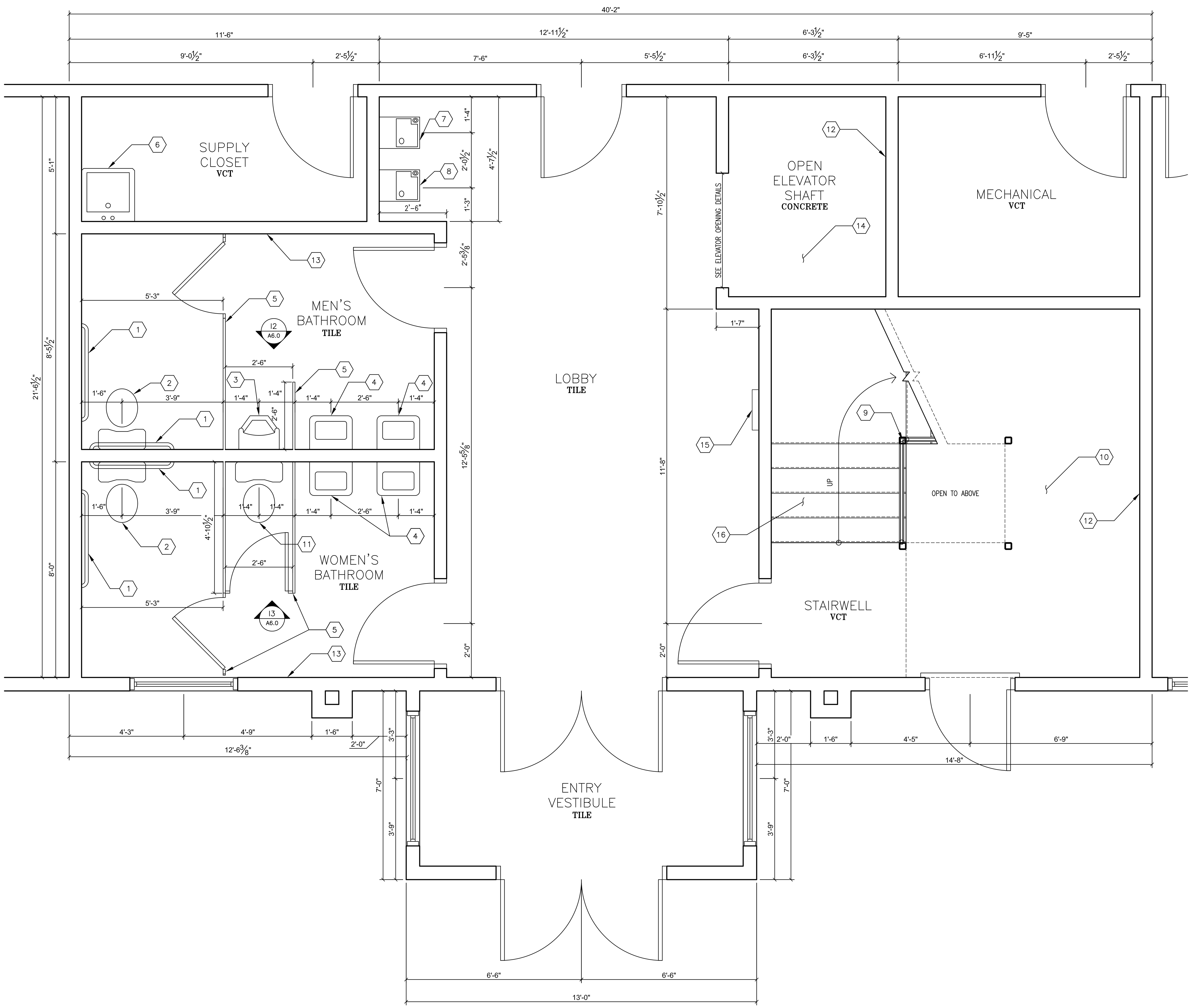
SCALE: 3/16" = 1'-0"

SHEET:

A1.2

PLAN KEYNOTE LEGEND

1. ADA GRAB BARS PER DETAIL D8/A9.0
2. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
3. STANDARD WALL MOUNT URINAL
4. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
5. POWDER COATED STEEL STALL PARTITIONS w/ COLOR PER OWNER SPECIFICATION
6. FLOOR MOUNTED UTILITY SINK
7. LOW ACCESSIBLE DRINKING FOUNTAIN PER DETAIL D9/A9.0
8. HIGH STANDARD DRINKING FOUNTAIN
9. STAIR RAILING PER DETAIL D6B/A9.0
10. OPEN FLOOR SPACE BENEATH STAIRS
11. STANDARD FLOOR MOUNTED TOILET
12. 1–HOUR FIRE RATED SHAFT ENCLOSURE. REFER TO CROSS SECTIONS FOR ADDITIONAL DETAIL
13. CERAMIC TILE INSTALLED TO HEIGHT OF 5'–0" ABOVE FINISH FLOOR
14. OTIS HYDROFIT 2110 "MODEL HYDROFIT PASSENGER 2100#" ELEVATOR INSTALLED PER MANUFACTURER REQUIREMENTS
15. ANSUL SENTRY 10 lb DRY CHEMICAL EXTINGUISHER IN FIRE RATED SEMI–RECESSED 10 lbs FIRE EXTINGUISHER CABINET MODEL: JL AMBASSADOR 1017F10–FX2 INSTALLED PER MFR. SPECIFICATIONS
16. VCT FLOORING AT STAIRS AND LANDING TO MATCH STAIRWELL VCT



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WINDOW ROCK OFFICE BUILDING (2 & 3)

ENLARGED ENTRANCE LOBBY PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

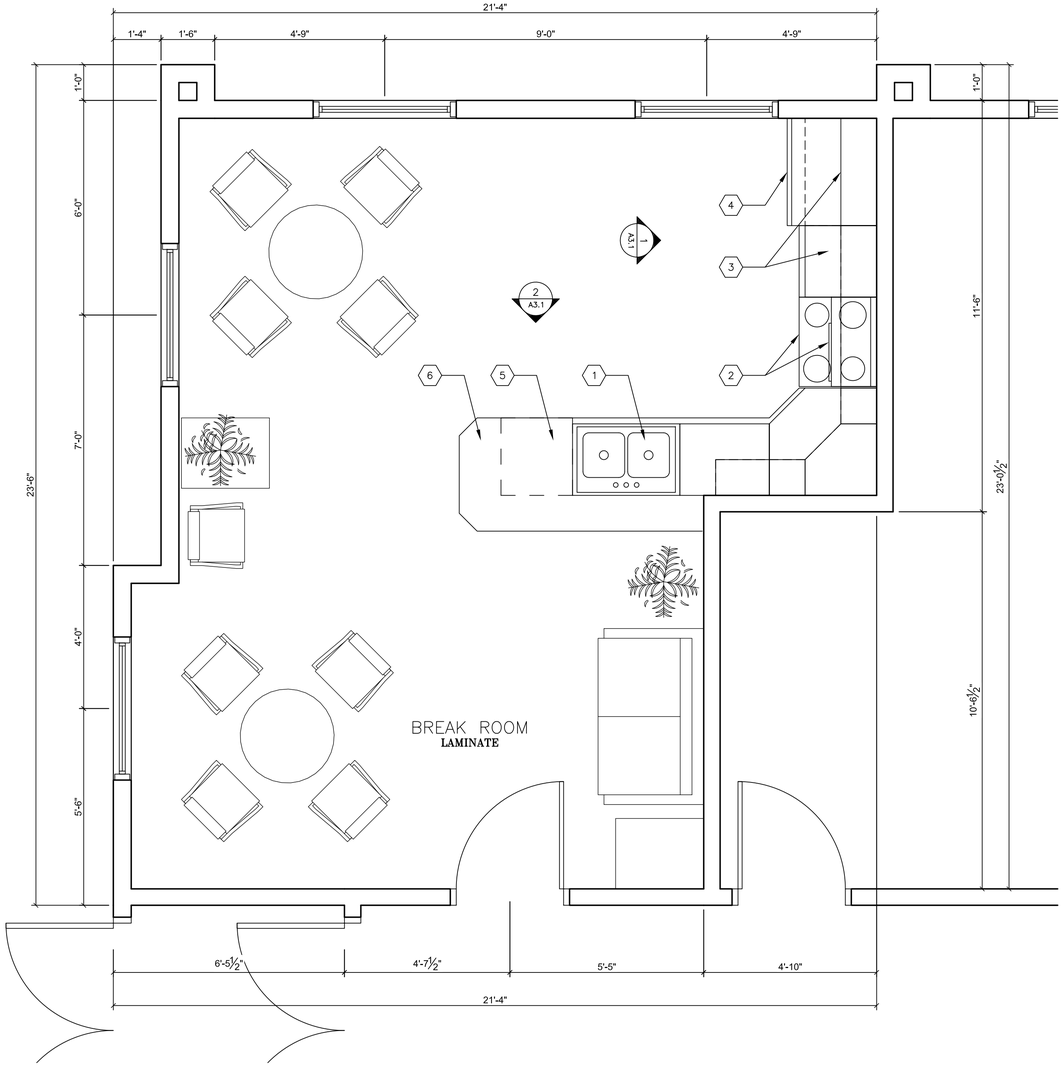
Thomas Avant
47776
THOMAS W. AVANT
12/12/2019

DRAWN BY: M.H.
SCALE: 1/2" = 1'-0"
SHEET: A2.0

PLAN KEYNOTE LEGEND

1. KITCHEN SINK AS SPECIFIED BY OWNER. MOUNTED WITHIN COUNTER
2. OVER-RANGE MICROWAVE MOUNTED BENEATH UPPER CABINETS
3. CASEWORK AS SHOWN ON INTERIOR ELEVATION (2/A2.1)
4. REFRIGERATOR PER OWNER SPECIFICATION

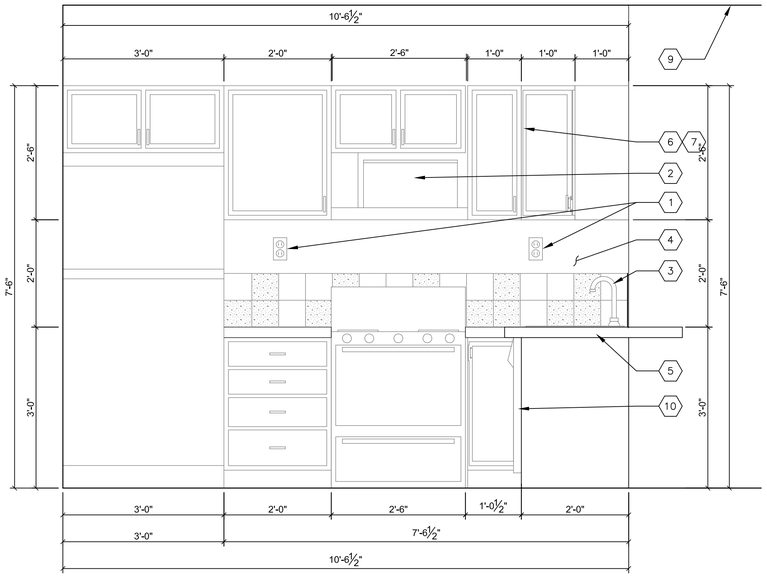
NOTE: BREAK ROOM LAYOUT FOR SECOND AND THIRD LEVEL TO MATCH GROUND LEVEL LAYOUT



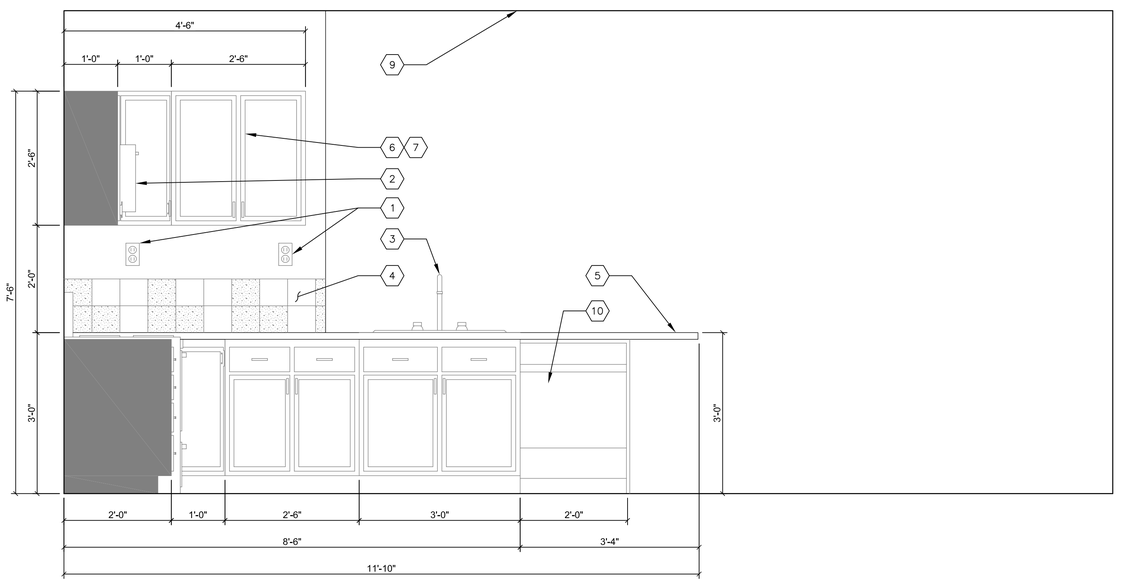
1 ENLARGED BREAK ROOM PLAN
SCALE: 1/2"=1'

ELEVATION KEYNOTE LEGEND

1. GFI RECEPTACLE ABOVE TILE BACKSPLASH
2. OVER-RANGE MICROWAVE MOUNTED BENEATH CABINET
3. KITCHEN SINK AS SPECIFIED BY OWNER. MOUNTED WITHIN COUNTERTOP
4. 12" TILE BACKSPLASH AS SPECIFIED BY OWNER
5. COUNTERTOP AS SPECIFIED BY OWNER
6. CASEWORK LAYOUT PER DETAIL. CASEWORK FINISH AS SPECIFIED BY OWNER
7. RECEPTACLE WITHIN CABINET PROVIDED FOR MICROWAVE
8. RECEPTACLE AND WATERLINE REQ'D FOR REFRIGERATOR
9. FINISHED DROP CEILING ELEVATION
10. UNDER COUNTER DISHWASHER



3 BREAK ROOM ELEVATION: RANGE, FRIDGE, & MICROWAVE
SCALE: 3/4"=1'



2 BREAK ROOM ELEVATION: SINK
SCALE: 3/4"=1'

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WINDOW ROCK OFFICE BUILDING (2 & 3)

ENLARGED BREAK ROOM FLOOR PLAN

WINDOW ROCK
AZ 86515

REV#:	DATE:	DESCRIPTION:

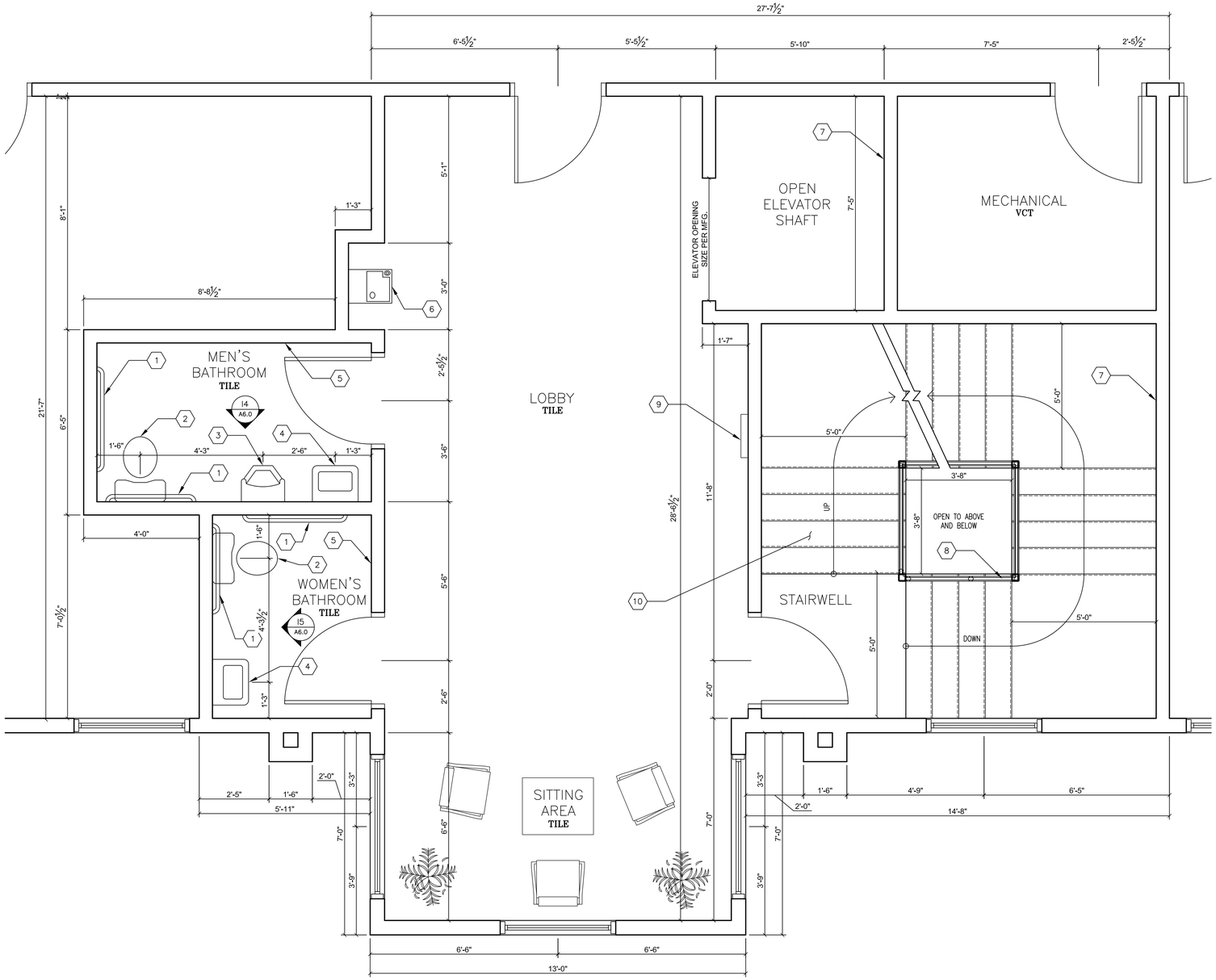
INITIAL SUBMITTAL: 12/12/2019

Thomas Avant
47776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
ARIZONA U.S.A.
EXPIRES 6-30-2019

DRAWN BY:	M.H.
SCALE:	1/2" = 1'-0"
SHEET:	A2.1

PLAN KEYNOTE LEGEND

1. ADA GRAB BARS PER DETAIL D8/A9.0
2. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
3. STANDARD WALL MOUNT URINAL
4. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
5. CERAMIC TILE INSTALLED TO HEIGHT OF 5'-0" ABOVE FINISH FLOOR
6. LOW ACCESSIBLE DRINKING FOUNTAIN PER DETAIL D9/A9.0
7. 1-HOUR FIRE RATED SHAFT ENCLOSURE. REFER TO CROSS SECTIONS FOR ADDITIONAL DETAIL
8. STAIR RAILING PER DETAIL D6B/A9.0
9. ANSUL SENTRY 10 lb DRY CHEMICAL EXTINGUISHER IN FIRE RATED SEMI-RECESSED 10 lbs FIRE EXTINGUISHER CABINET MODEL: JL AMBASSADOR 1017F10-FX2 INSTALLED PER MFR. SPECIFICATIONS
10. VCT FLOORING AT STAIRS AND LANDINGS TO MATCH STAIRWELL VCT



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WINDOW ROCK OFFICE BUILDING (2 & 3)

ENLARGED SECOND FLOOR LOBBY PLAN

WINDOW ROCK
AZ 86515

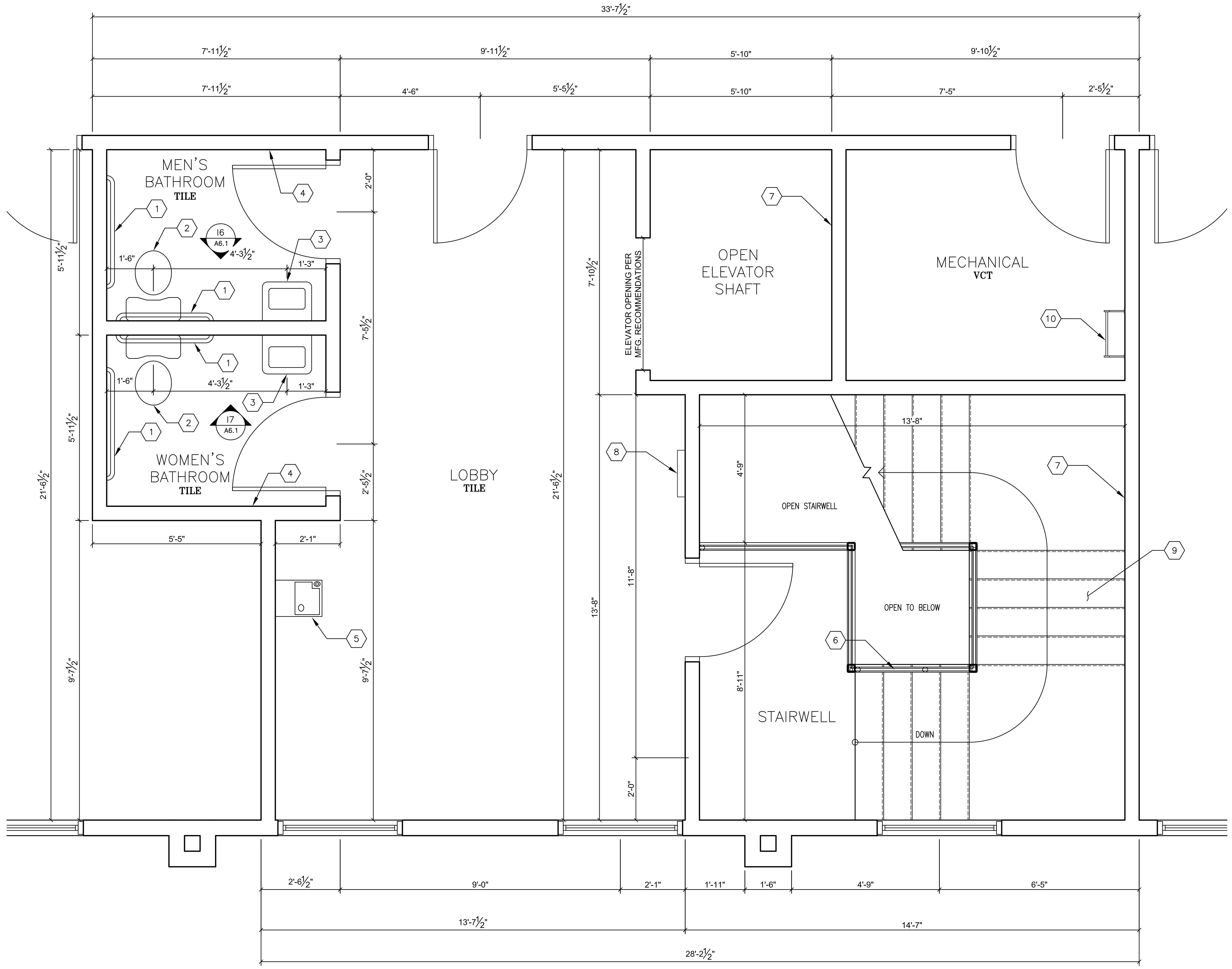
INITIAL SUBMITTAL:	12/12/2019
REV#:	
DATE:	
DESCRIPTION:	

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
47776
THOMAS W. AVANT
12/12/2019
ARIZONA U.S.A.
EXPIRES 6-30-2020

DRAWN BY:	M.H.
SCALE:	1/2" = 1'-0"
SHEET:	A2.2

PLAN KEYNOTE LEGEND

1. ADA GRAB BARS PER DETAIL D8/A9.0
2. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
3. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
4. CERAMIC TILE INSTALLED TO HEIGHT OF 5'–0" ABOVE FINISH FLOOR
5. LOW ACCESSIBLE DRINKING FOUNTAIN PER DETAIL D9/A9.0
6. STAIR RAILING PER DETAIL D6B/A9.0
7. 1–HOUR FIRE RATED SHAFT ENCLOSURE. REFER TO CROSS SECTIONS FOR ADDITIONAL DETAIL
8. ANSUL SENTRY 10 lb DRY CHEMICAL EXTINGUISHER IN FIRE RATED SEMI–RECESSED 10 lbs FIRE EXTINGUISHER CABINET MODEL: JL AMBASSADOR 1017F10–FX2 INSTALLED PER MFR. SPECIFICATIONS
9. VCT FLOORING AT STAIRS AND LANDINGS TO MATCH STAIRWELL VCT
10. FS INDUSTRIES FIXED STEEL LADDER TO ACCESS ROOF HATCH. MODEL #F12S w/ 136" OVERALL LENGTH INSTALLED PER MFR. SPECIFICATION. EQUIVALENT LADDER MAY BE USED AS ALTERNATE IF APPROVED BY OWNER/ARCHITECT



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WINDOW ROCK OFFICE BUILDING (2 & 3)
ENLARGED THIRD FLOOR LOBBY PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

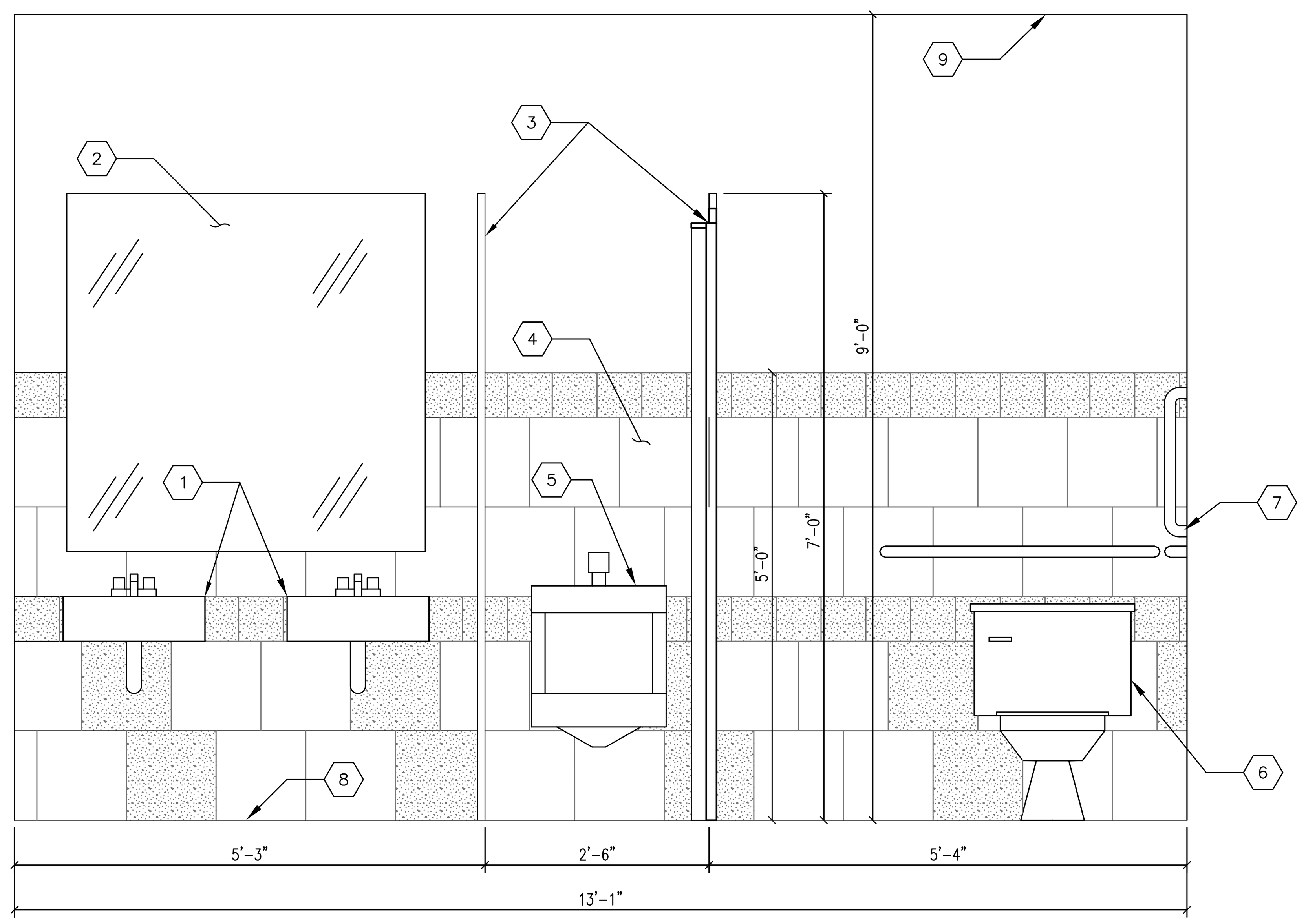
REV#:	DATE:	DESCRIPTION:

Thomas Avant
Registered Professional Engineer (Civil)
CERTIFICATE NO.
47776
THOMAS W. AVANT
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.
SCALE: 1/2" = 1'-0"
SHEET: A2.3

ELEVATION KEYNOTE LEGEND

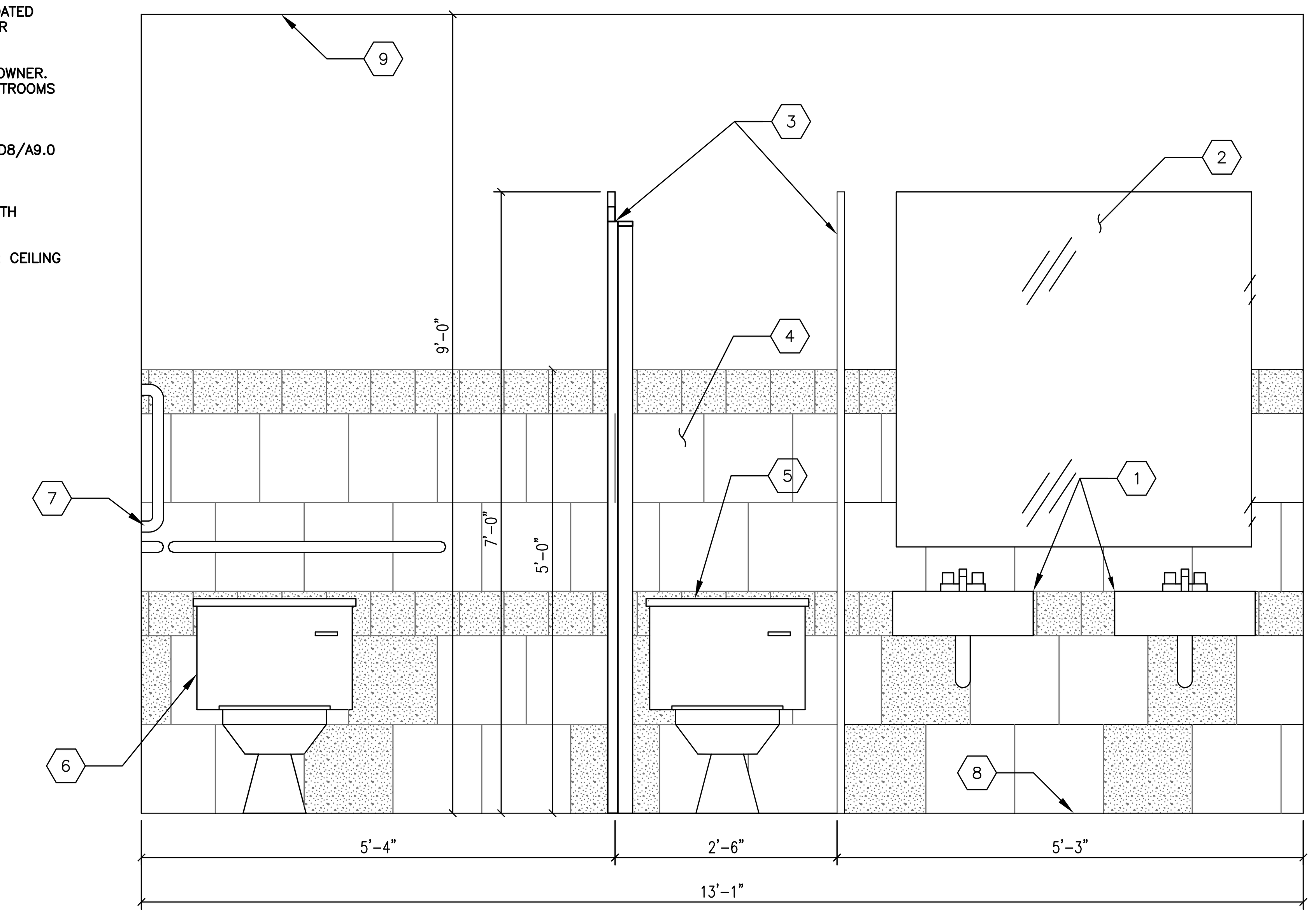
1. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
2. 4'X4' WALL—MOUNTED MIRROR w/ BOTTOM EDGE OF MIRROR MOUNTED AT 40" ABOVE F.F.
3. AAMCO TYPE HB HEADRAIL BRACED POWDER COATED STEEL BATHROOM PARTITIONS. PARTITION COLOR SHALL BE TAN
4. 5' CERAMIC TILE SURROUND AS SPECIFIED BY OWNER. PATTERN CONTINUES ON ALL WALLS WITHIN RESTROOMS
5. STANDARD WALL MOUNT URINAL
6. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
7. ACCESSIBLE GRAB BARS PER DETAIL D8/A9.0
8. CERAMIC TILE FLOOR. PATTERN SYNONYMOUS WITH TILE SURROUND
9. FINISHED HARD LID CEILING ELEVATION OVER 2x CEILING RAFTERS



I2 1ST FLOOR MEN'S RESTROOM INTERIOR ELEVATION
SCALE: 3/4"=1'

ELEVATION KEYNOTE LEGEND

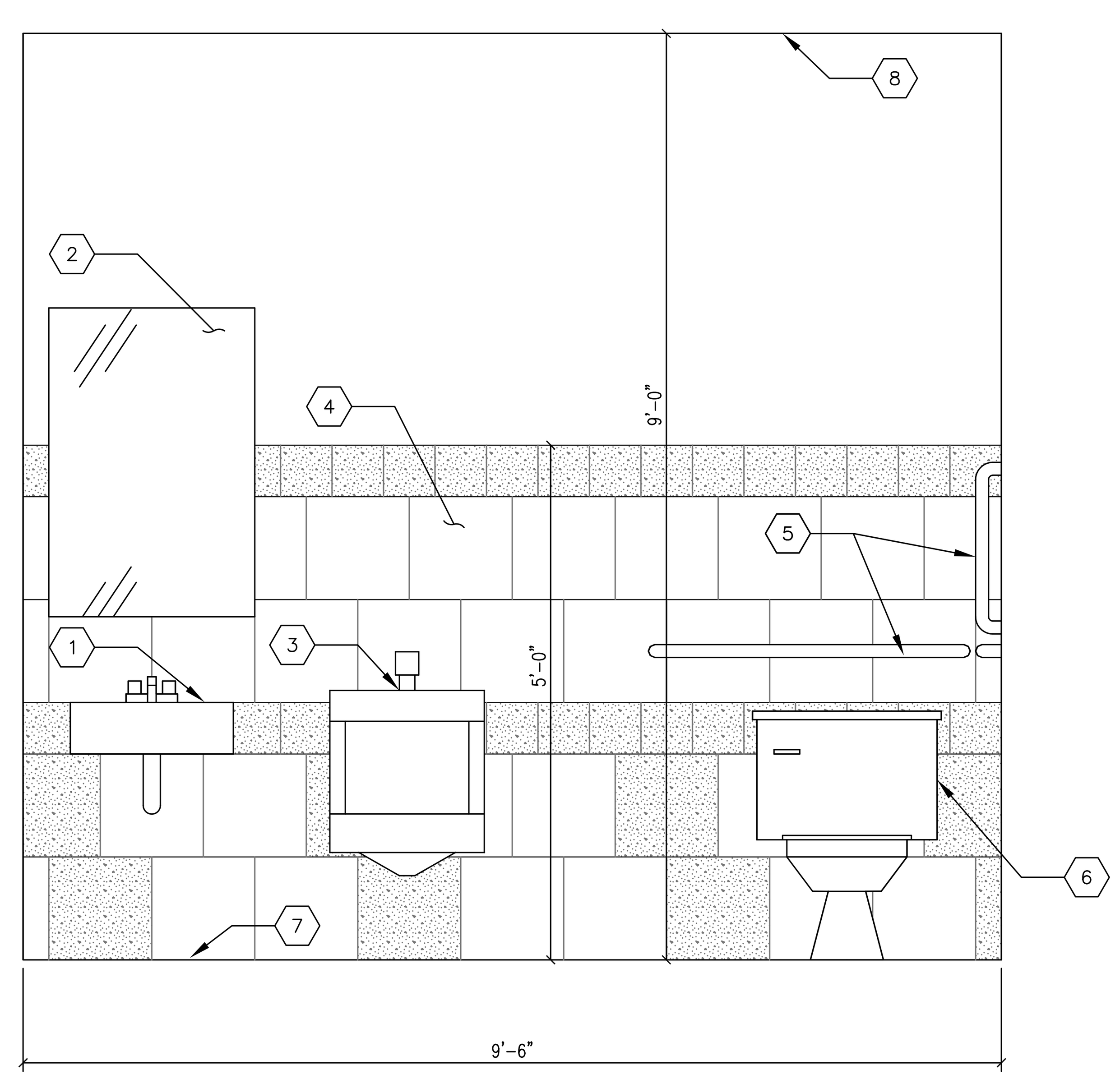
1. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
2. 4'X4' WALL—MOUNTED MIRROR w/ BOTTOM EDGE OF MIRROR MOUNTED AT 40" ABOVE F.F.
3. AAMCO TYPE HB HEADRAIL BRACED POWDER COATED STEEL BATHROOM PARTITIONS. PARTITION COLOR SHALL BE TAN
4. 5' CERAMIC TILE SURROUND AS SPECIFIED BY OWNER. PATTERN CONTINUES ON ALL WALLS WITHIN RESTROOMS
5. STANDARD FLOOR MOUNT TOILET
6. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
7. ACCESSIBLE GRAB BARS PER DETAIL D8/A9.0
8. CERAMIC TILE FLOOR. PATTERN SYNONYMOUS WITH TILE SURROUND
9. FINISHED HARD LID CEILING ELEVATION OVER 2x CEILING RAFTERS



I3 1ST FLOOR WOMEN'S RESTROOM INTERIOR ELEVATION
SCALE: 3/4"=1'

ELEVATION KEYNOTE LEGEND

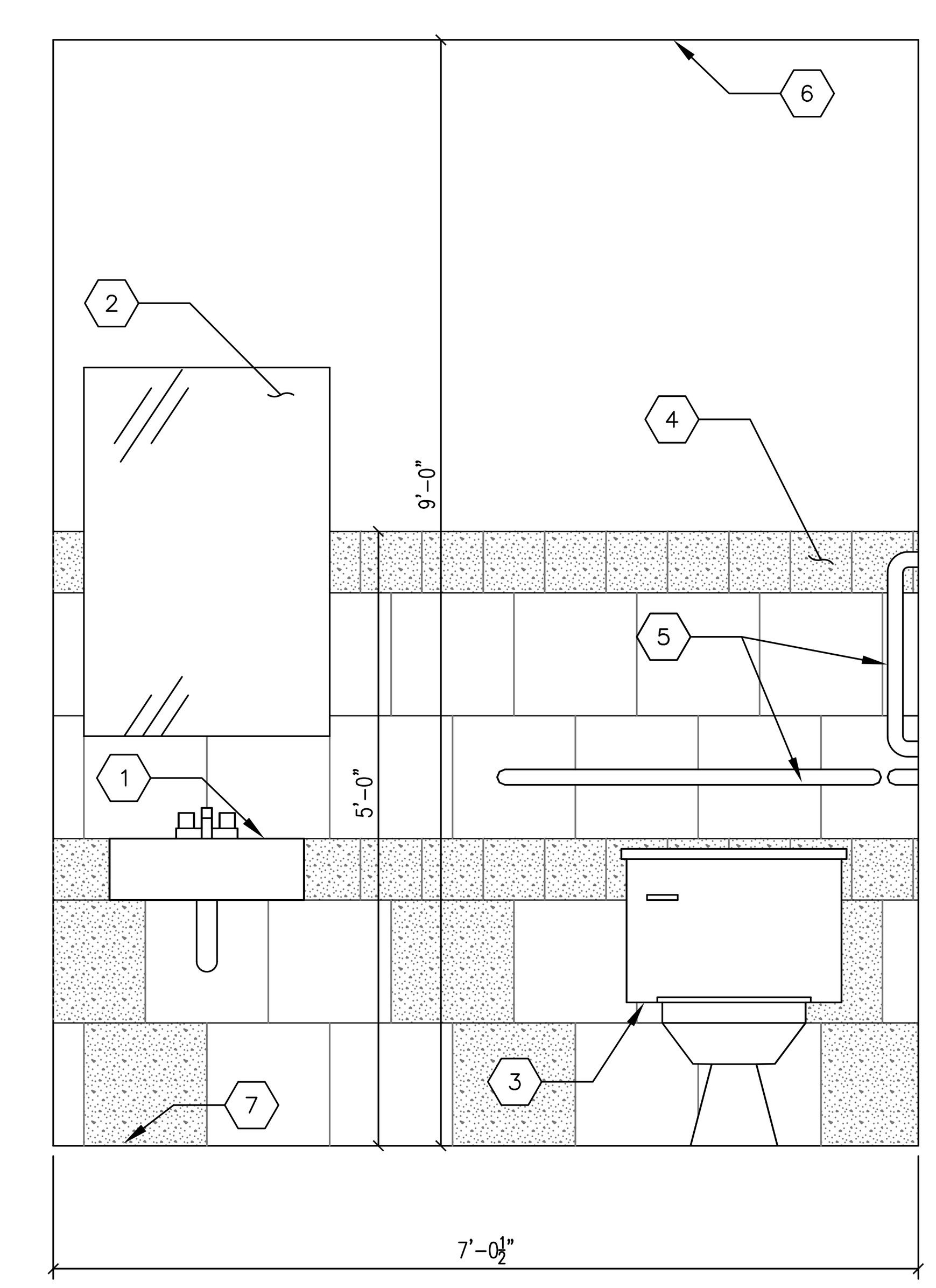
1. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
2. 2'X4' WALL—MOUNTED MIRROR w/ BOTTOM EDGE OF MIRROR MOUNTED AT 40" ABOVE F.F.
3. STANDARD WALL MOUNT URINAL
4. 5' CERAMIC TILE SURROUND AS SPECIFIED BY OWNER. PATTERN CONTINUES ON ALL WALLS WITHIN RESTROOMS
5. ACCESSIBLE GRAB BARS PER DETAIL D8/A9.0
6. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
7. CERAMIC TILE FLOOR. PATTERN SYNONYMOUS WITH TILE SURROUND
8. FINISHED HARD LID CEILING ELEVATION OVER 2x CEILING RAFTERS



I4 2ND FLOOR MEN'S RESTROOM INTERIOR ELEVATION
SCALE: 3/4"=1'

ELEVATION KEYNOTE LEGEND

1. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
2. 2'X4' WALL—MOUNTED MIRROR w/ BOTTOM EDGE OF MIRROR MOUNTED AT 40" ABOVE F.F.
3. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
4. 5' CERAMIC TILE SURROUND AS SPECIFIED BY OWNER. PATTERN CONTINUES ON ALL WALLS WITHIN RESTROOMS
5. ACCESSIBLE GRAB BARS PER DETAIL D8/A9.0
6. FINISHED HARD LID CEILING ELEVATION OVER 2x CEILING RAFTERS
7. CERAMIC TILE FLOOR. PATTERN SYNONYMOUS WITH TILE SURROUND



I5 2RD FLOOR WOMEN'S RESTROOM INTERIOR ELEVATION
SCALE: 3/4"=1'

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435-644-2031
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WINDOW ROCK OFFICE BUILDING (2 & 3)

INTERIOR ELEVATIONS

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

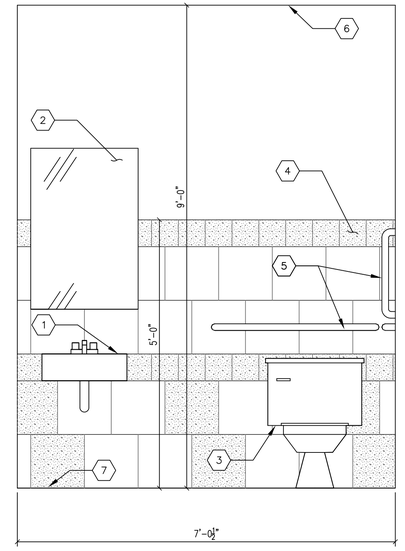
REV#:	DATE:	DESCRIPTION:

Thomas Avant
Registered Professional Engineer (Civil) CERTIFICATE NO. 47776 THOMAS W. AVANT
12/12/2019
DATE SIGNED ARIZONA, U.S.A. EXPIRES 6-30-2020

DRAWN BY: M.H.
SCALE: 1/2" = 1'-0"
SHEET: A2.4

ELEVATION KEYNOTE LEGEND

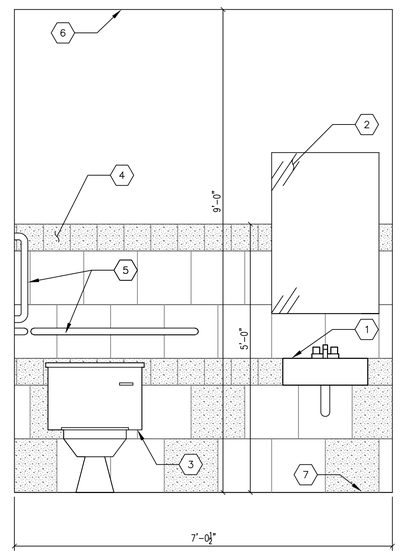
1. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
2. 2'X4' WALL-MOUNTED MIRROR w/ BOTTOM EDGE OF MIRROR MOUNTED AT 40" ABOVE F.F.
3. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
4. 5' CERAMIC TILE SURROUND AS SPECIFIED BY OWNER. PATTERN CONTINUES ON ALL WALLS WITHIN RESTROOMS
5. ACCESSIBLE GRAB BARS PER DETAIL D8/A9.0
6. FINISHED HARD LID CEILING ELEVATION OVER 2x CEILING RAFTERS
7. CERAMIC TILE FLOOR. PATTERN SYNONYMOUS WITH TILE SURROUND



16 3RD FLOOR WOMEN'S RESTROOM INTERIOR ELEVATION
SCALE: 3/4"=1'

ELEVATION KEYNOTE LEGEND

1. ACCESSIBLE LAVATORY PER DETAIL D7/A9.0
2. 2'X4' WALL-MOUNTED MIRROR w/ BOTTOM EDGE OF MIRROR MOUNTED AT 40" ABOVE F.F.
3. ACCESSIBLE FLOOR MOUNT TOILET PER DETAIL D8/A9.0
4. 5' CERAMIC TILE SURROUND AS SPECIFIED BY OWNER. PATTERN CONTINUES ON ALL WALLS WITHIN RESTROOMS
5. ACCESSIBLE GRAB BARS PER DETAIL D8/A9.0
6. FINISHED HARD LID CEILING ELEVATION OVER 2x CEILING RAFTERS
7. CERAMIC TILE FLOOR. PATTERN SYNONYMOUS WITH TILE SURROUND



17 3RD FLOOR MEN'S RESTROOM INTERIOR ELEVATION
SCALE: 3/4"=1'

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WINDOW ROCK OFFICE BUILDING (2 & 3)

INTERIOR ELEVATIONS

WINDOW ROCK
AZ 86515

REV#:	DATE:	DESCRIPTION:

INITIAL SUBMITTAL: 12/12/2019

REGISTERED Professional Engineer CERTIFICATE NO. 47776 THOMAS W. AVANT STATE OF ARIZONA
47776
THOMAS W.
AVANT
12/12/2019
EXPIRES 6-30-2019

DRAWN BY:	M.H.
SCALE:	1/2" = 1'-0"
SHEET:	A2.5

WINDOW AND DOOR GENERAL NOTES:

1. REFER TO WINDOW SCHEDULE FOR HEADER HEIGHTS
2. WINDOW AND DOOR MINIMUM U-FACTOR SHALL BE A MINIMUM OF 0.35 AS PER 2012 IBC REQUIREMENT
3. ALL WINDOWS WITHIN 24" OF ANY DOOR SHALL BE SAFETY GLAZED
4. WINDOWS AND DOORS TO BE FLASHED WITH APPROVED MATERIALS
5. TYP. MASONITE CORE DOORS TO BE SET IN FIRE-RATED WOOD FRAMES. STOREFRONT DOORS TO HAVE ALUMINUM FRAMES

1ST FLOOR

DOOR AND FRAME SCHEDULE

DOOR						FIRE RATING LABEL	HARDWARE		NOTES
MARK	SIZE: WD	SIZE: HGT	SIZE: THK	MATL	GLAZING		SET NO	KEYSIDE RM NO	
1	6'-0"	7'-0"	1 3/4"	ALUMINUM	STOREFRONT	--	--	CARD KEY LOCK	Auto-closer - panic w/ lock
2	6'-0"	7'-0"	1 3/4"	ALUMINUM	STOREFRONT	--	--	PASSAGE	Auto-closer
3	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PASSAGE	Auto-closer
4	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	1 HR	--	PASSAGE	Auto-closer - panic w/o lock
5	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	--	--	--	PASSAGE	Auto-closer - panic w/o lock - no exterior operation
6	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PASSAGE	Auto-closer
7	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PASSAGE	Auto-closer
8	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
9	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
10	6'-0"	7'-0"	1 3/4"	ALUMINUM	FULL LITE	20 MIN	--	PASSAGE	Auto-closer
11	6'-0"	7'-0"	1 3/4"	ALUMINUM	FULL LITE	--	--	CARD KEY LOCK	Auto-closer - panic w/ lock
12	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PASSAGE	Auto-closer
13	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
14	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
15	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
16	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
17	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
18	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer

2ND FLOOR

DOOR AND FRAME SCHEDULE

DOOR						FIRE RATING LABEL	HARDWARE		NOTES
MARK	SIZE: WD	SIZE: HGT	SIZE: THK	MATL	GLAZING		SET NO	KEYSIDE RM NO	
1	3'-0"	7'-0"	1 3/8"	ALUMINUM	FULL LITE	--	--	CARD KEY LOCK	Auto-closer - panic w/ lock
2	3'-0"	7'-0"	1 3/8"	ALUMINUM	FULL LITE	20 MIN	--	LOCKING	Auto-closer - panic
3	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PASSAGE	Auto-closer
4	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
5	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PRIVACY	Auto-closer - privacy
6	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
7	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	1 HR	--	PRIVACY	Auto-closer
8	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
9	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
10	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
11	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PRIVACY	Auto-closer - privacy
12	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
13	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
14	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer

3RD FLOOR

DOOR AND FRAME SCHEDULE

DOOR						FIRE RATING LABEL	HARDWARE		NOTES
MARK	SIZE: WD	SIZE: HGT	SIZE: THK	MATL	GLAZING		SET NO	KEYSIDE RM NO	
1	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	1 HR	--	--	Auto-closer
2	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PRIVACY	Auto-closer
3	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	PRIVACY	Auto-closer
4	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	--	Auto-closer
5	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
6	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
7	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
8	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
9	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
10	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
11	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
12	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
14	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	Auto-closer
15	3'-0"	7'-0"	1 3/8"	MASONITE CORE	--	20 MIN	--	LOCKING	--

1ST FLOOR

WINDOW SCHEDULE

Number	SIZE: Width	SIZE: Height	TYPE	MATERIAL	Remarks
1	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
2	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
3	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
4	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
5	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
6	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT/FROST
7	5'-0"	5'-0"	PICTURE	METAL	UV RESISTANT - BRONZE TINT
8	5'-0"	5'-0"	PICTURE	METAL	UV RESISTANT - BRONZE TINT
9	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
10	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
11	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
12	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
13	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
14	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
15	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
16	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
17	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
18	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
19	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
20	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
21	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
22	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
23	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
24	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
25	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
26	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
27	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT

2ND FLOOR

WINDOW SCHEDULE

Number	SIZE: Width	SIZE: Height	TYPE	MATERIAL	Remarks
1	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
2	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
3	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
4	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
5	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
6	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
7	5'-0"	5'-0"	PICTURE	METAL	UV RESISTANT - BRONZE TINT
8	5'-0"	5'-0"	PICTURE	METAL	UV RESISTANT - BRONZE TINT
9	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
10	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
11	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
12	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
13	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
14	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
15	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
16	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
17	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
18	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
19	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
20	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
21	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
22	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
23	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
24	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
25	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
26	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
27	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
28	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
29	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT

3RD FLOOR

WINDOW SCHEDULE

Number	SIZE: Width	SIZE: Height	TYPE	MATERIAL	Remarks
1	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
2	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
3	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
4	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
5	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
6	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
7	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
8	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
9	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
10	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
11	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
12	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
13	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
14	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
15	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
16	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
17	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
18	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
19	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
20	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
21	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
22	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
23	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
24	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
25	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
26	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
27	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT
28	4'-0"	5'-0"	AWNING	METAL	UV RESISTANT - BRONZE TINT

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WINDOW ROCK OFFICE BUILDING (2 & 3)

SCHEDULES

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Registered Professional Engineer (Civil)
CERTIFICATE NO.
47776
THOMAS W.
AVANT
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020
Thomas Avant
12/12/2019

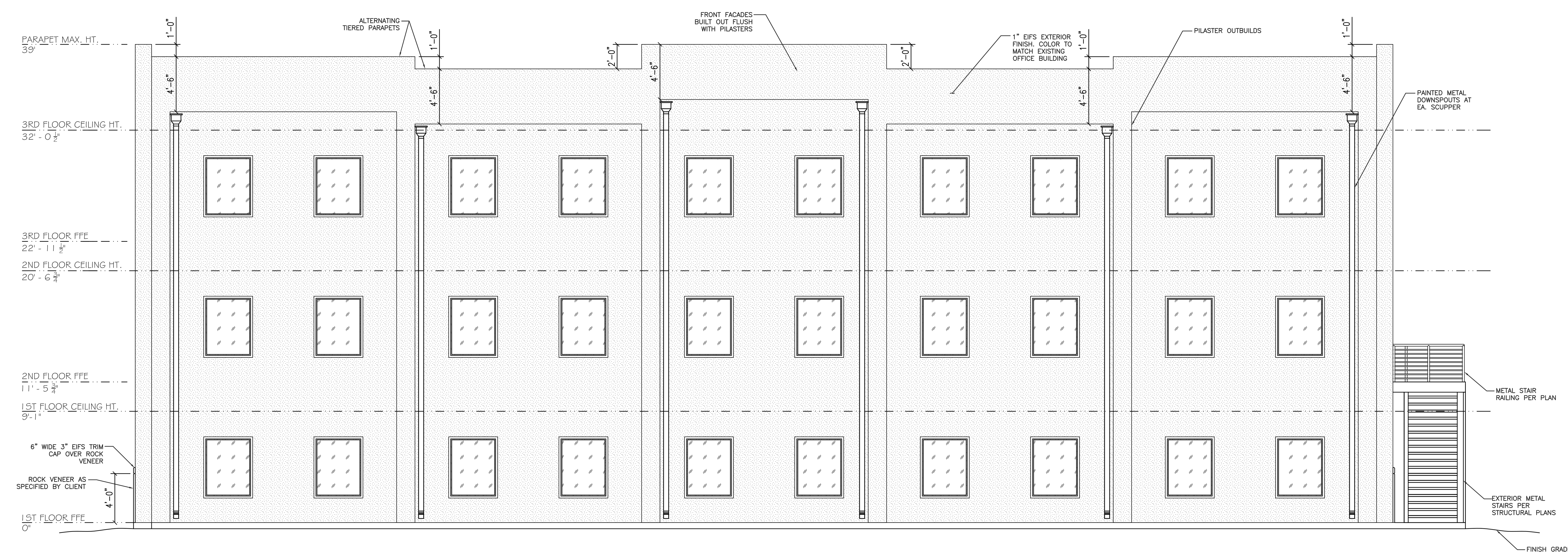
DRAWN BY: M.H.

SCALE: NTS

SHEET:

A3.0

E1 FRONT ELEVATION
SCALE: 3/16"=1'



E2 REAR ELEVATION
SCALE: 3/16"=1'

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WINDOW ROCK OFFICE BUILDING (2 & 3)

BUILDING ELEVATIONS

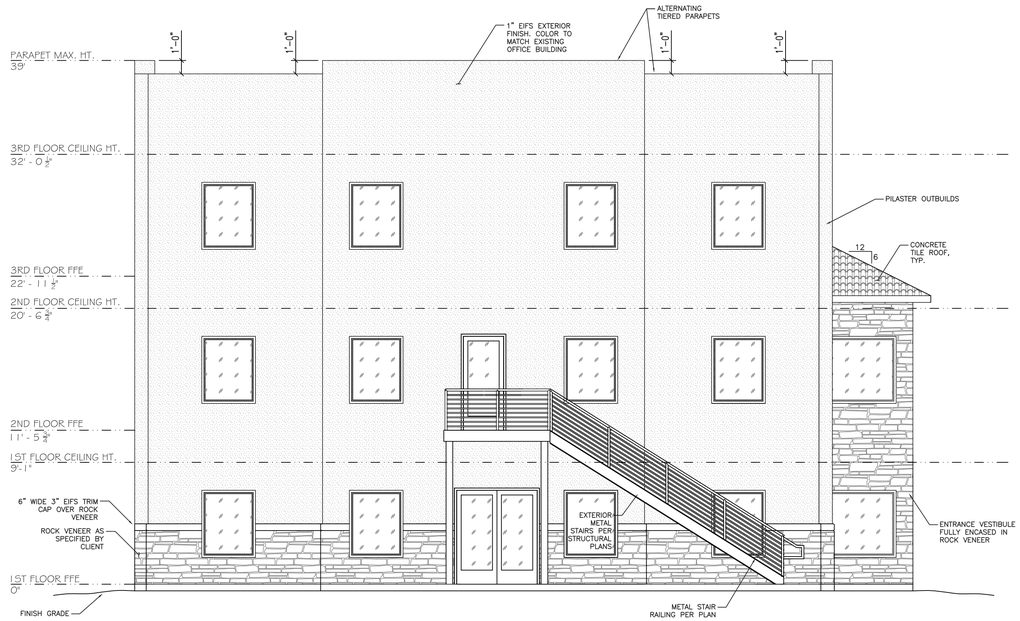
WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

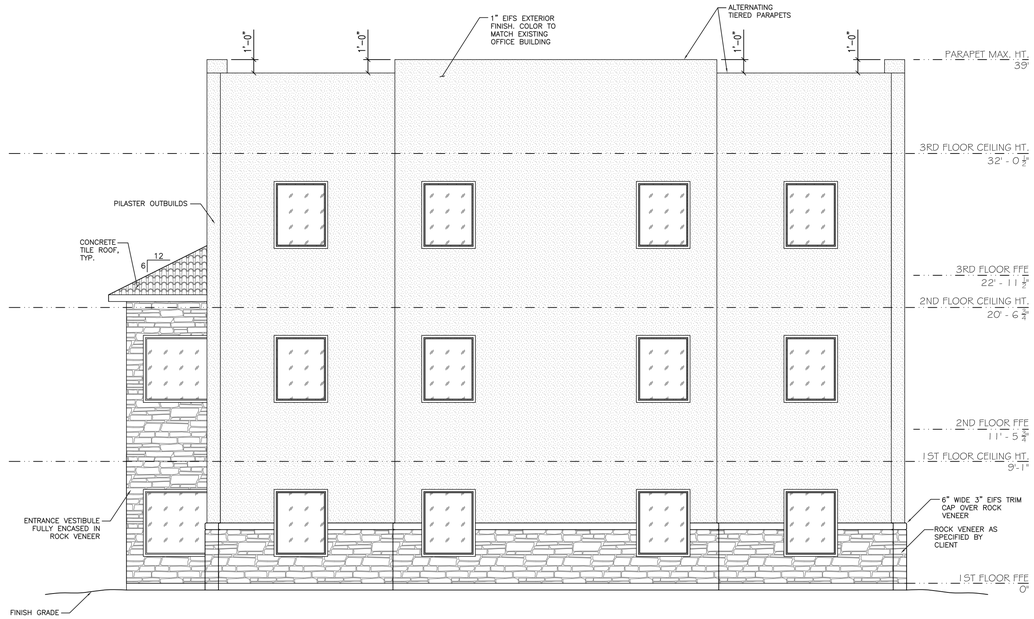
REV#:	DATE:	DESCRIPTION:

Thomas Avant
Registered Professional Engineer (Civil)
47776
THOMAS W.
AVANT
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY:	M.H.
SCALE:	AS NOTED
SHEET:	A4.0



E3 LEFT ELEVATION
SCALE: 3/16"=1'



E4 RIGHT ELEVATION
SCALE: 3/16"=1'

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WINDOW ROCK OFFICE BUILDING (2 & 3)

BUILDING ELEVATIONS

WINDOW ROCK
AZ 86515

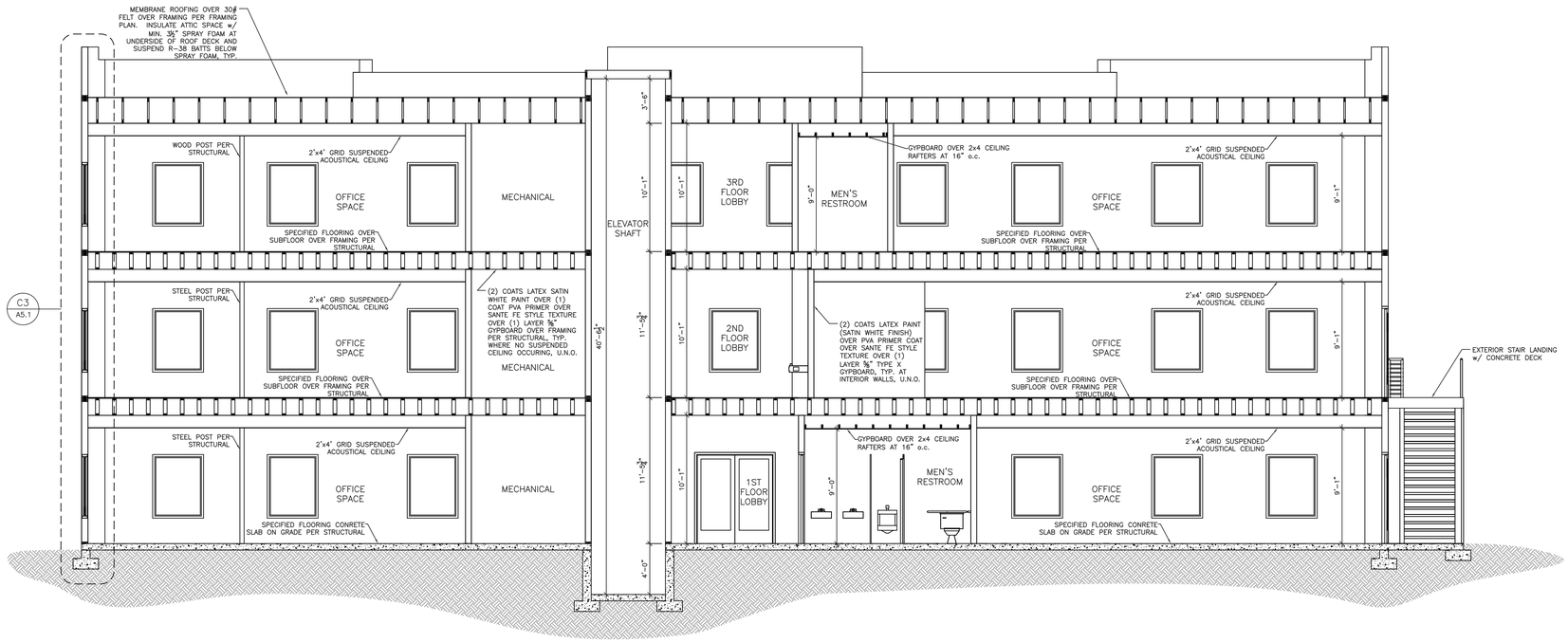
REV#:	DATE:	DESCRIPTION:

INITIAL SUBMITTAL: 12/12/2019

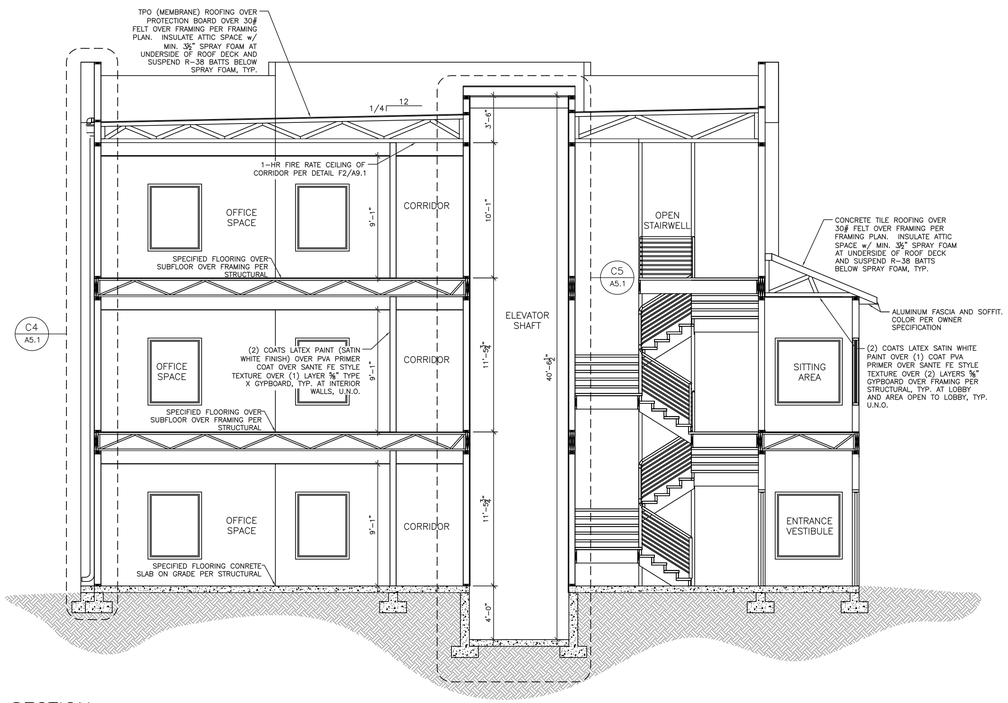
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
47776
THOMAS W. AVANT
12/12/2019
ARIZONA U.S.A.
EXPIRES 6-30-2019

Thomas Avant

DRAWN BY: M.H.
SCALE: AS NOTED
SHEET: A4.1



C1 CROSS SECTION
SCALE: 3/16"=1'



C2 CROSS SECTION
SCALE: 3/16"=1'

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WINDOW ROCK OFFICE BUILDING (2 & 3)

BUILDING CROSS SECTION

WINDOW ROCK
AZ 86515

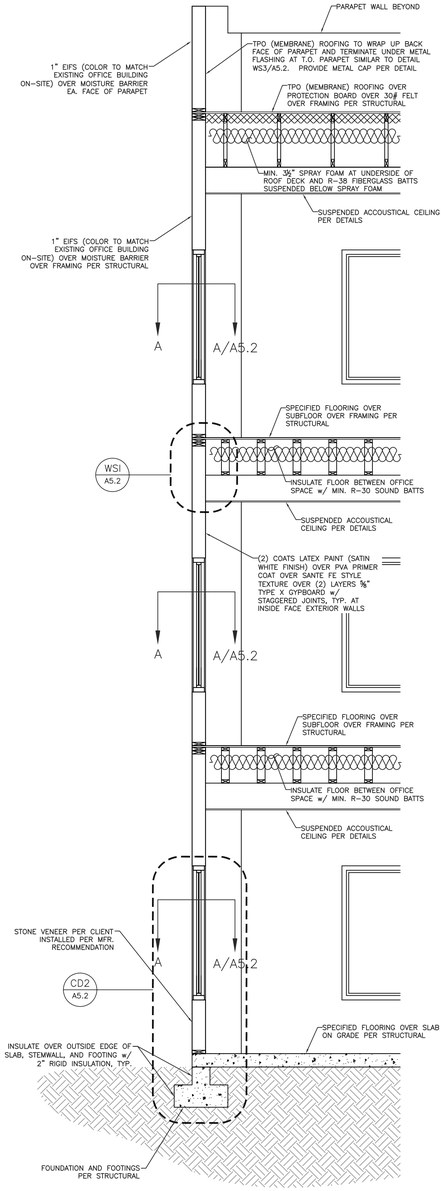
INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

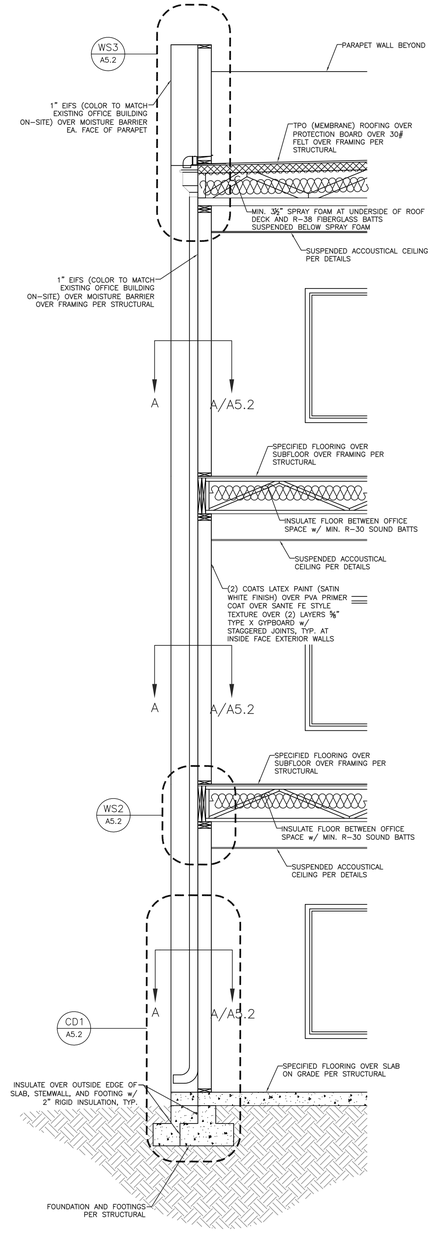
PROFESSIONAL ENGINEER
47776
THOMAS W. AVANT
12/12/2019
ARIZONA U.S.A.
EXPIRES 6-30-2019

DRAWN BY: M.H.
SCALE: AS NOTED
SHEET:

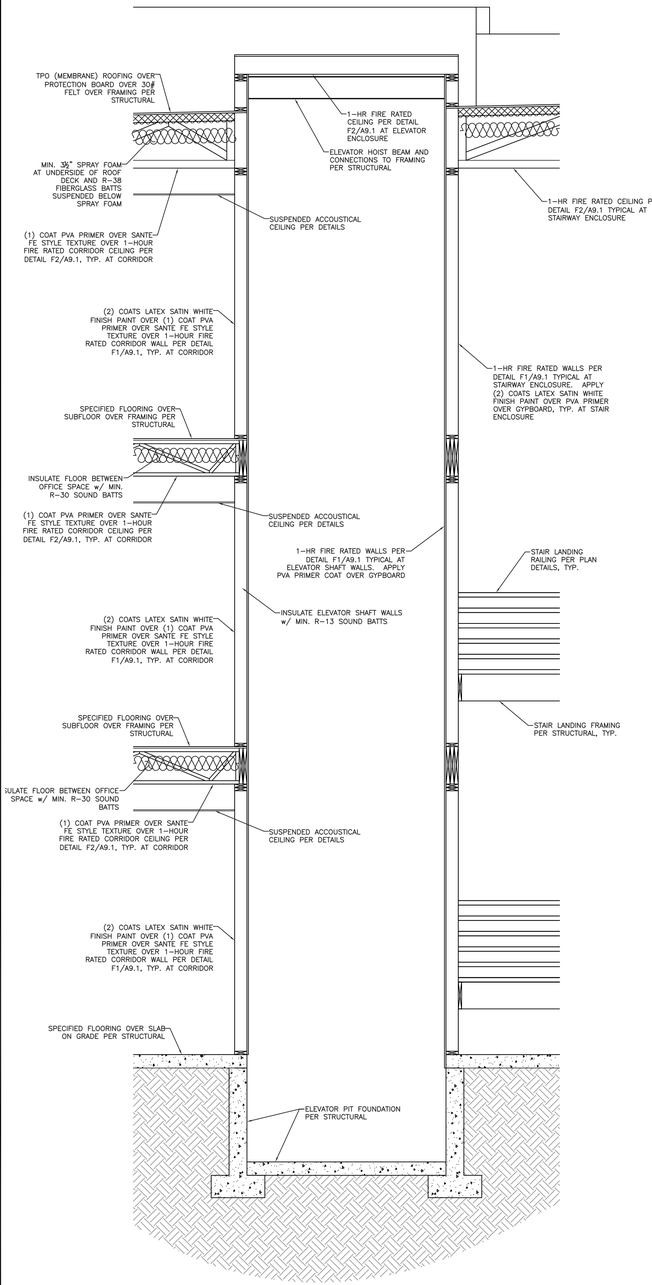
A5.0



C3 TYPICAL WALL SECTION
SCALE: 3/8"=1'



C4 TYPICAL WALL SECTION
SCALE: 3/8"=1'



C5 ELEVATOR SHAFT WALL SECTION
SCALE: 3/8"=1'

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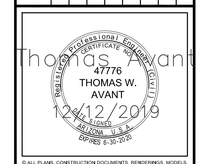
WINDOW ROCK OFFICE BUILDING (2 & 3)

WALL SECTIONS

WINDOW ROCK
AZ 86515

REV#:	DATE:	DESCRIPTION:
INITIAL SUBMITTAL:	12/12/2019	



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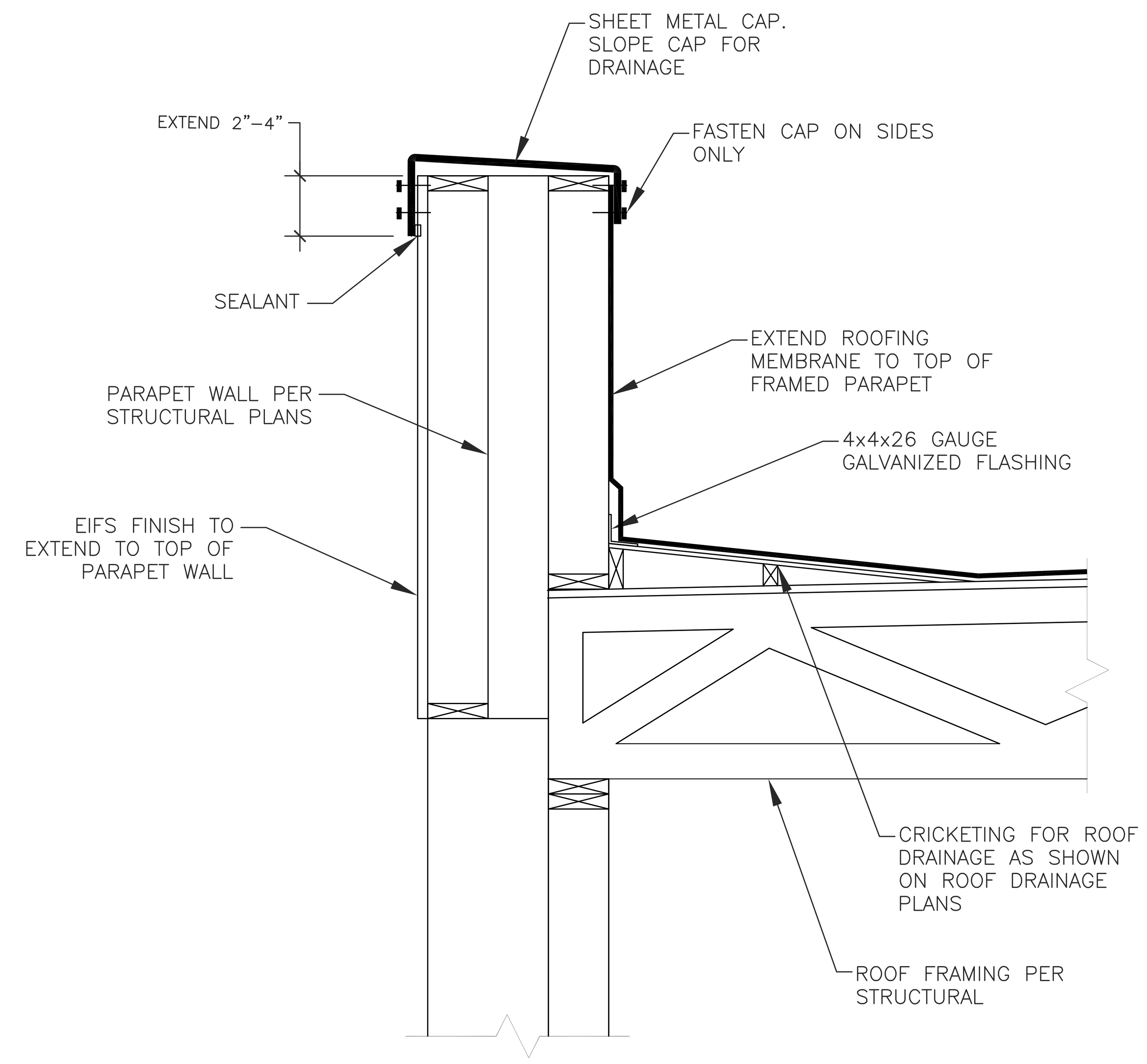
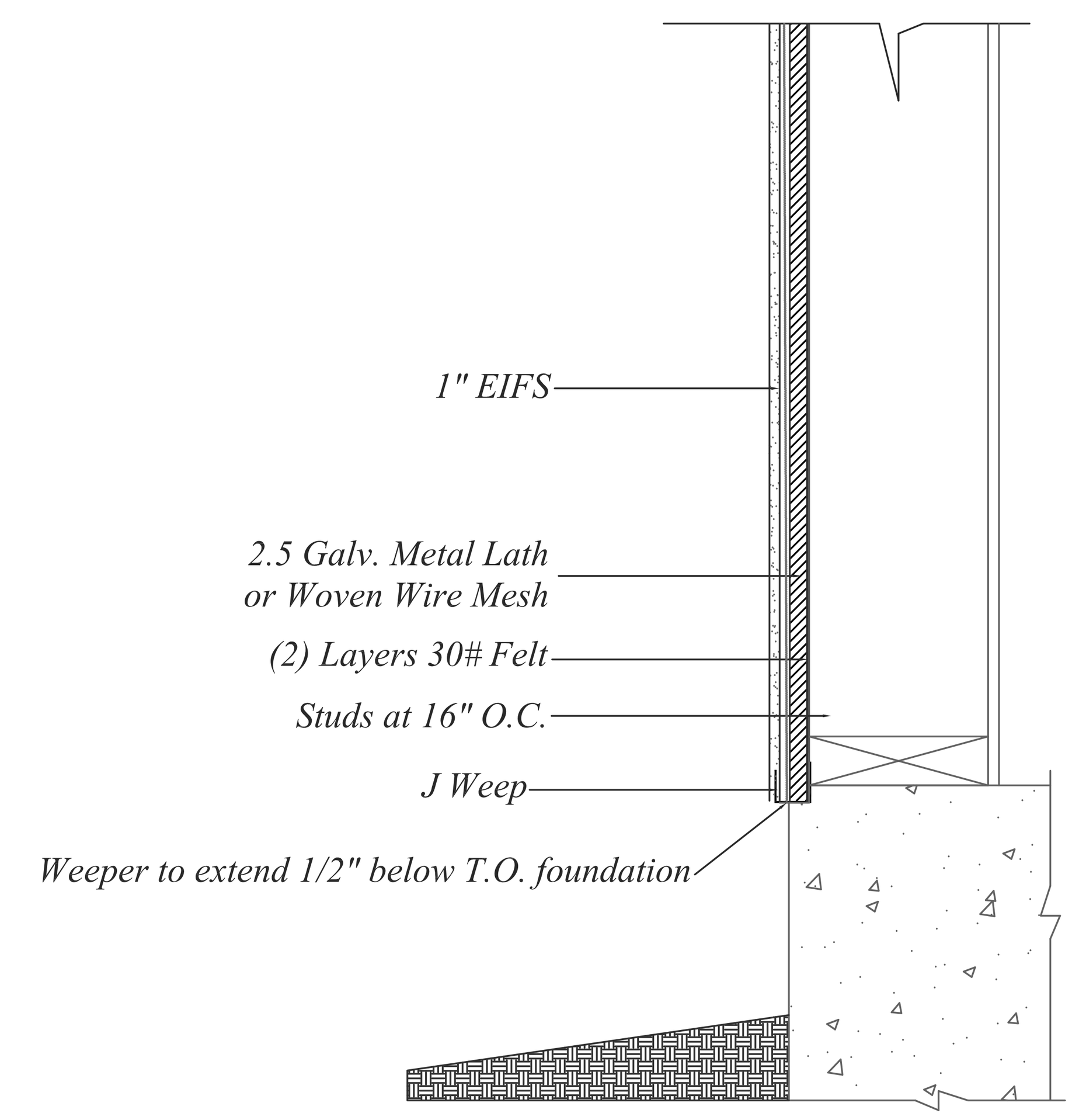
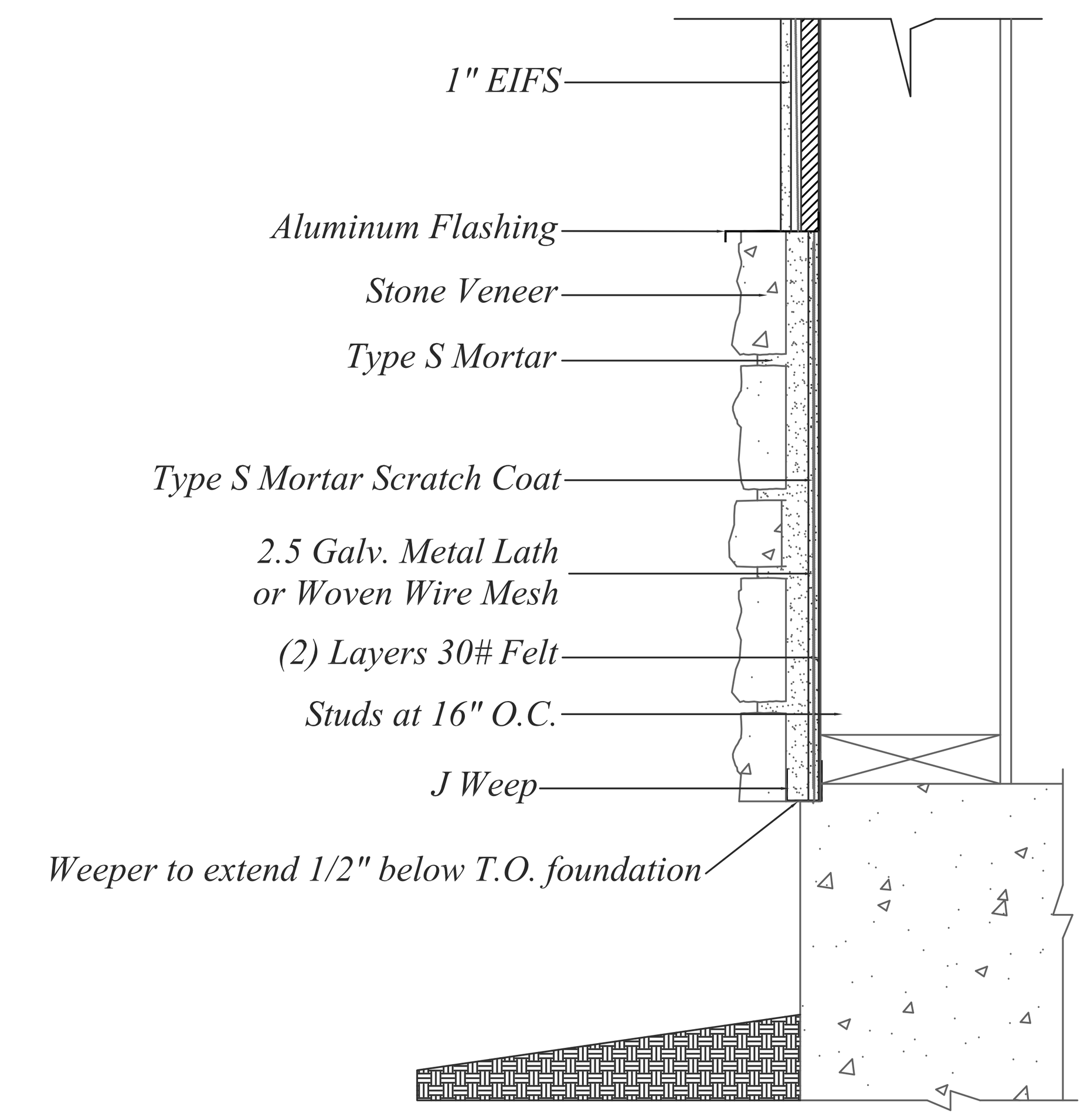
SCALE:	AS NOTED
SHEET:	A5.1



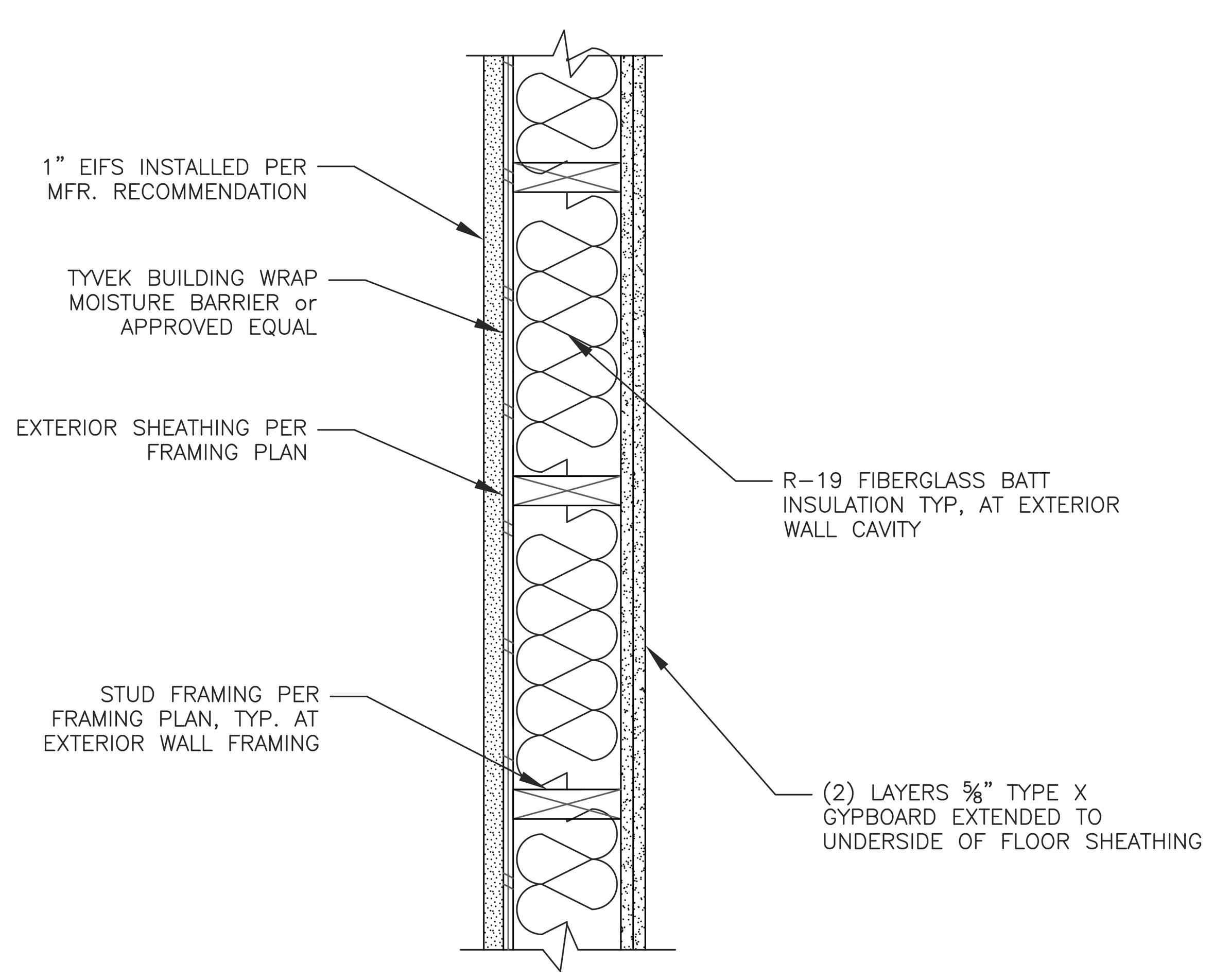
WS3 TYPICAL CRICKET AT FLAT ROOF
NTS



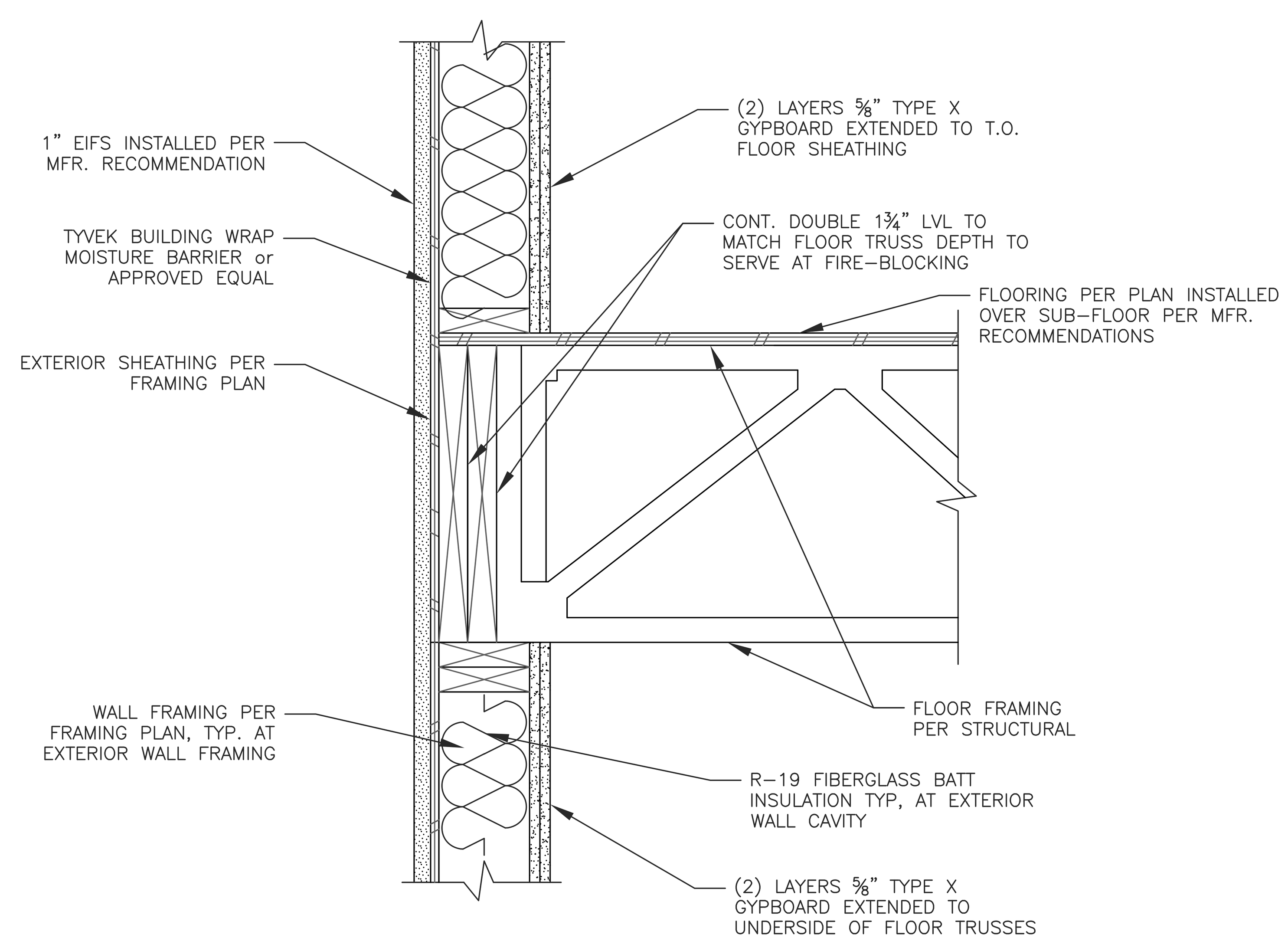
CD1 TYPICAL STUCCO FINISH
NTS



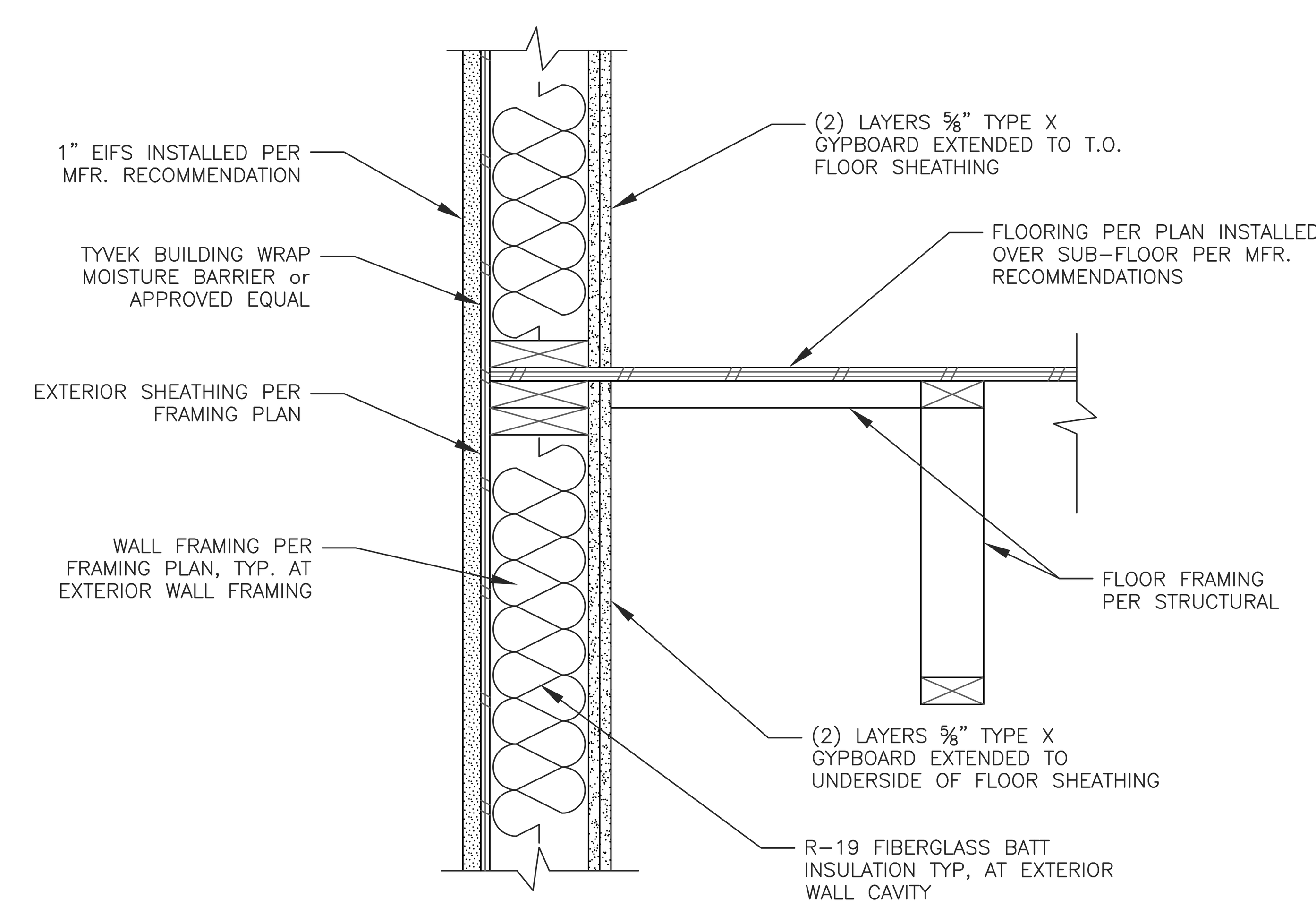
CD2 TYPICAL STONE VENEER
NTS



AA TYP. WALL SECTION – PLAN VIEW
N.T.S.



WS2 TYP. FLOOR FRAMING BEARING AT EXTERIOR WALL
N.T.S.



WS1 TYP. WALL SECTION AT GABLE FLOOR TRUSSES
N.T.S.

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www.ironrockeng.com

WINDOW ROCK OFFICE BUILDING (2 & 3)

WALL SECTION DETAILS

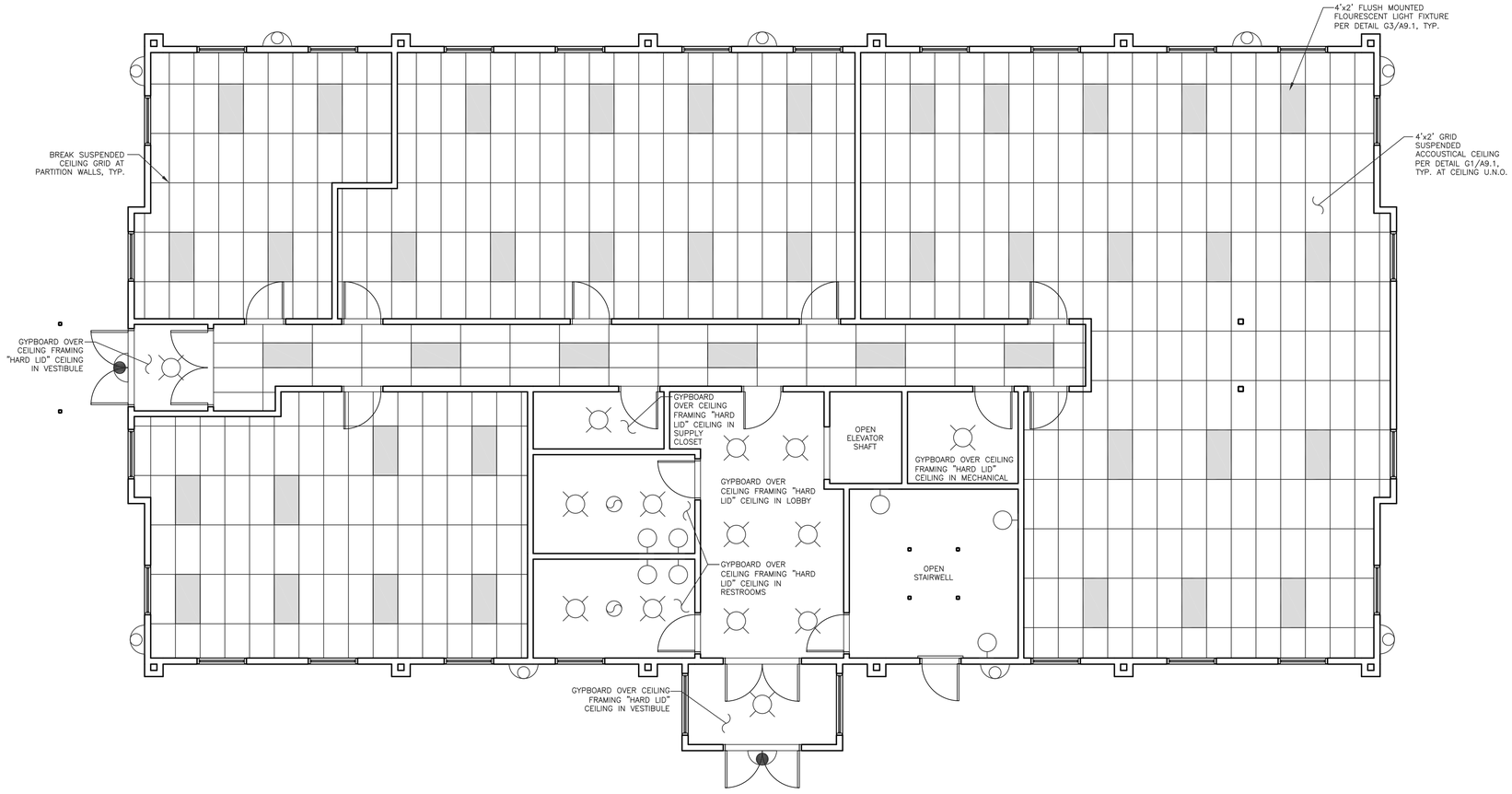
WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Thomas Avant
Registered Professional Engineer (Civil)
47776
THOMAS W.
AVANT
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.
SCALE: AS NOTED
SHEET: A5.2



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WINDOW ROCK OFFICE BUILDING (2 & 3)

GROUND FLOOR REFLECTED CEILING PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Thomas Avant

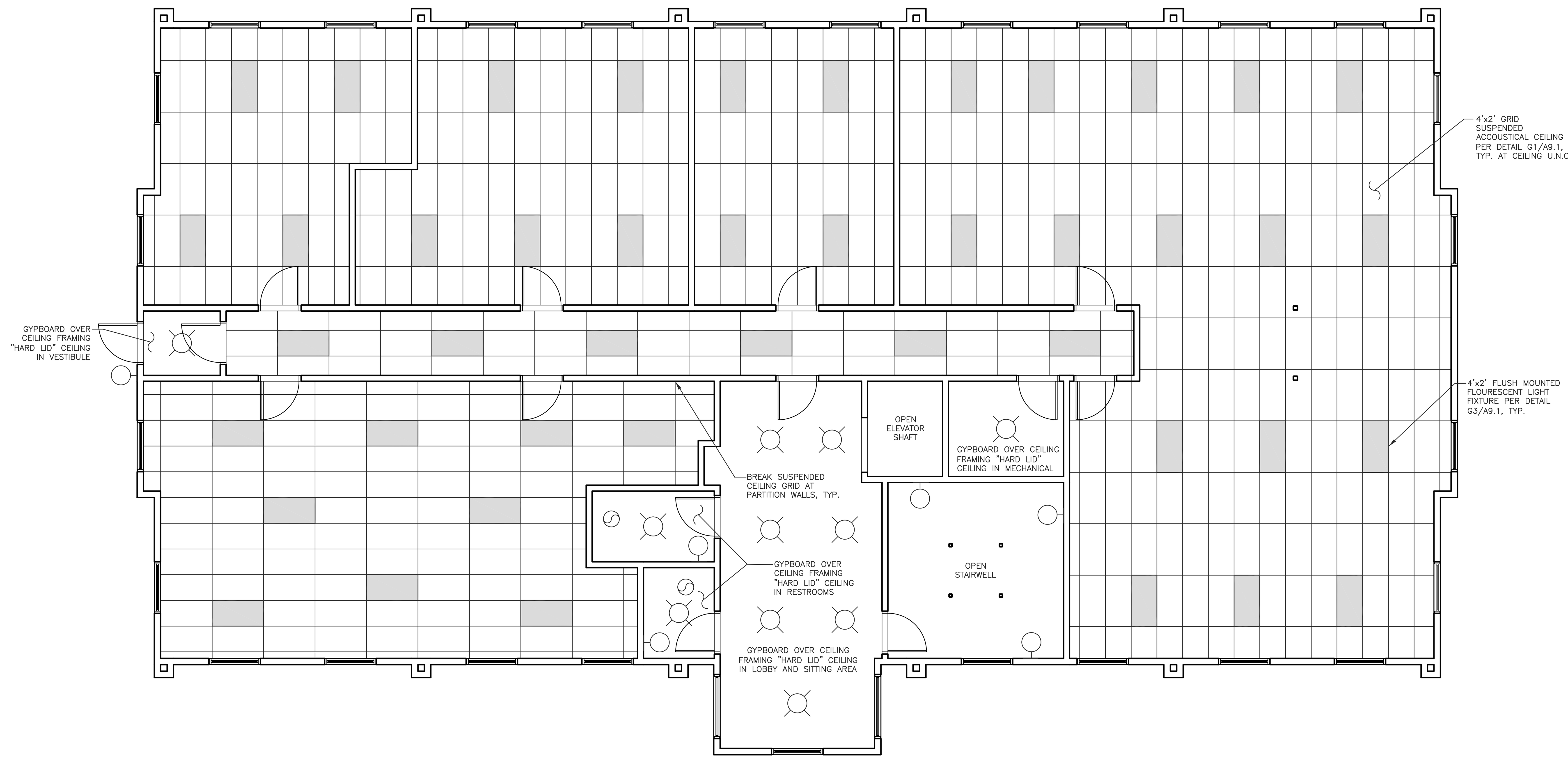
47776
THOMAS W.
AVANT
12/12/2019
Registered Professional Engineer Certificate
ARIZONA U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.

SCALE: 3/16" = 1'-0"

SHEET:

A6.0



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WINDOW ROCK OFFICE BUILDING (2 & 3)

SECOND FLOOR REFLECTED CEILING PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

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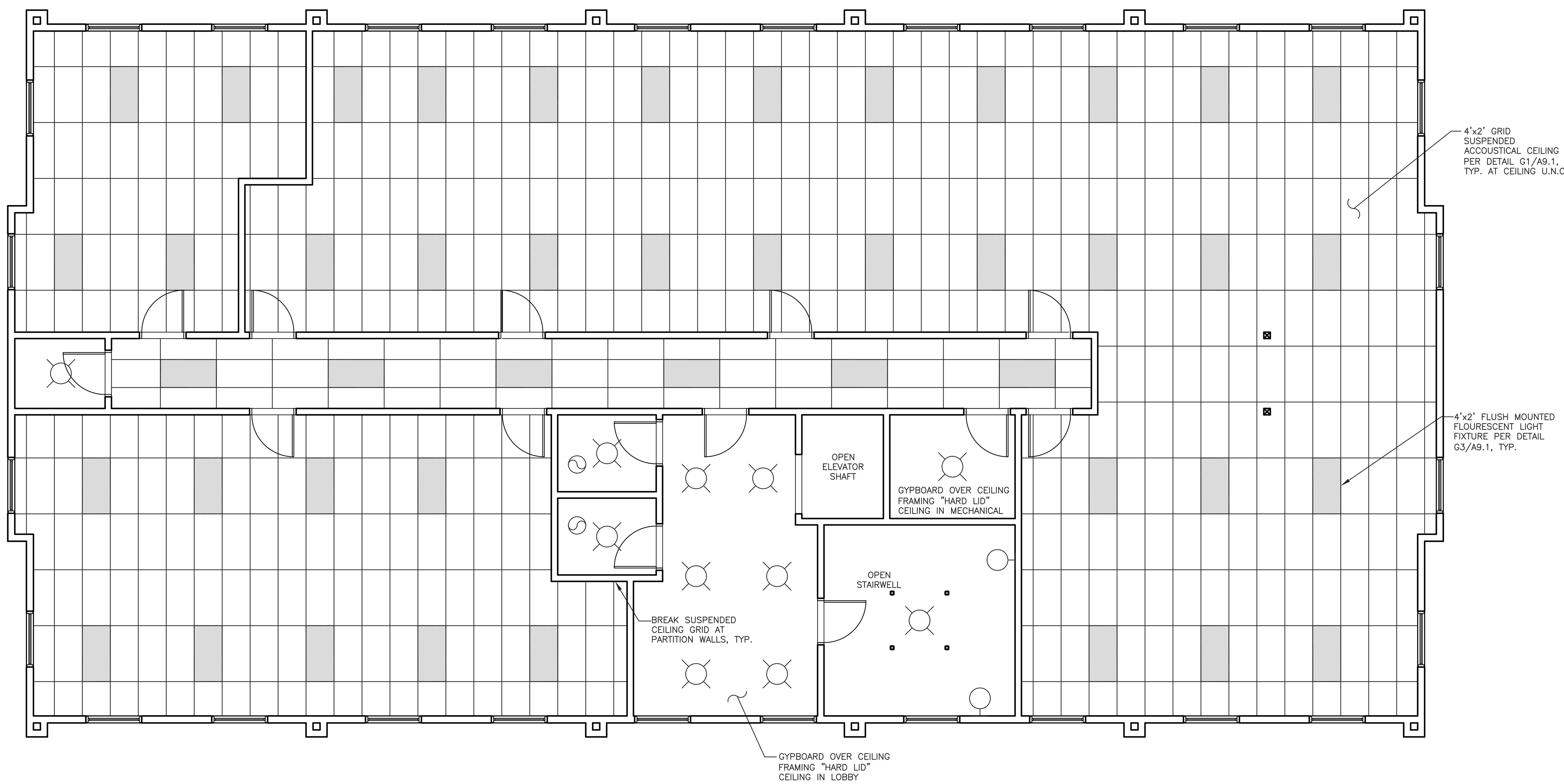
Registered Professional Engineer (Civil)
CERTIFICATE NO.
47776
THOMAS W.
AVANT
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.

SCALE: 3/16" = 1'-0"

SHEET: A6.1



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WINDOW ROCK OFFICE BUILDING (2 & 3)

THIRD FLOOR REFLECTED CEILING PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

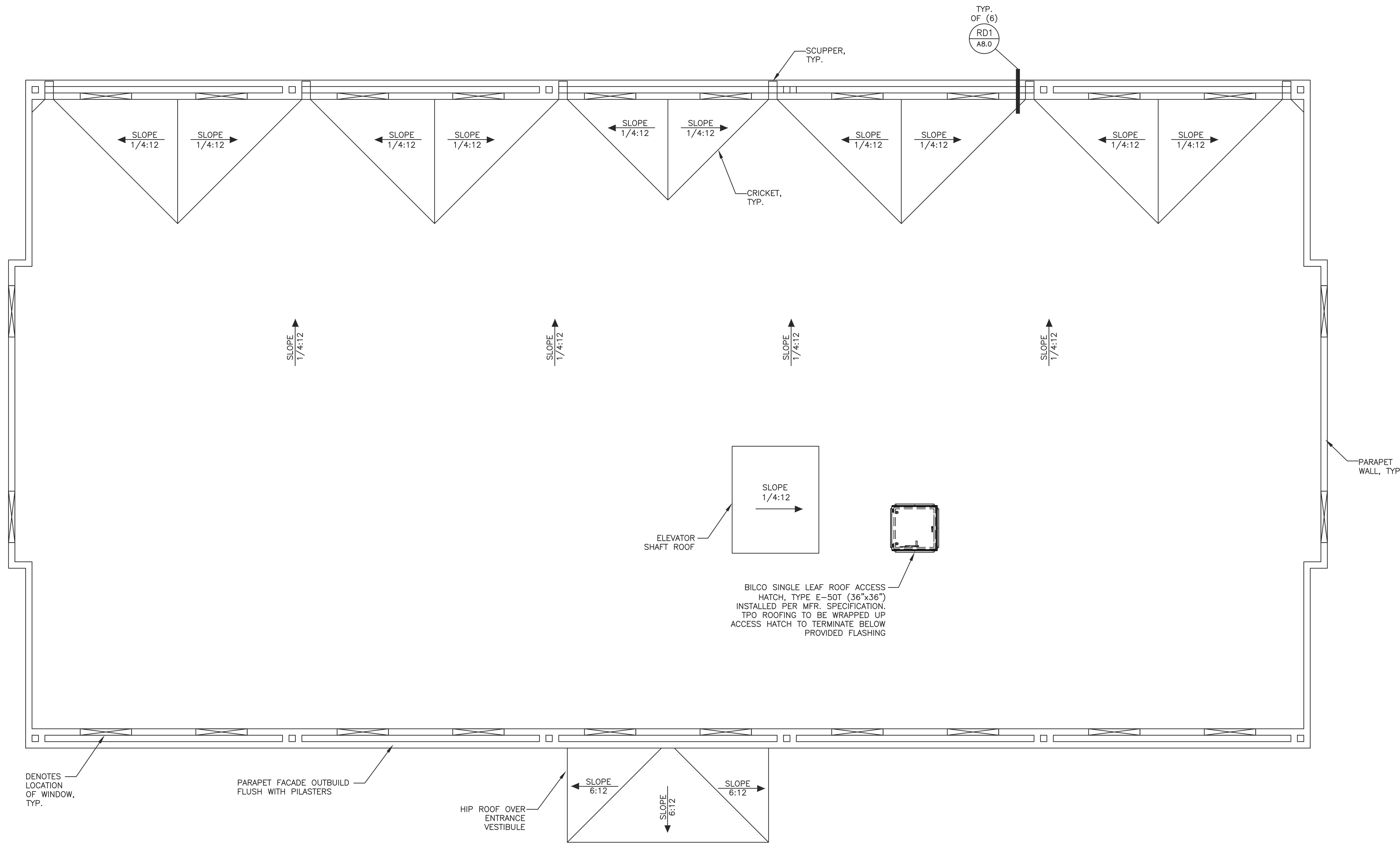
REV#:	DATE:	DESCRIPTION:

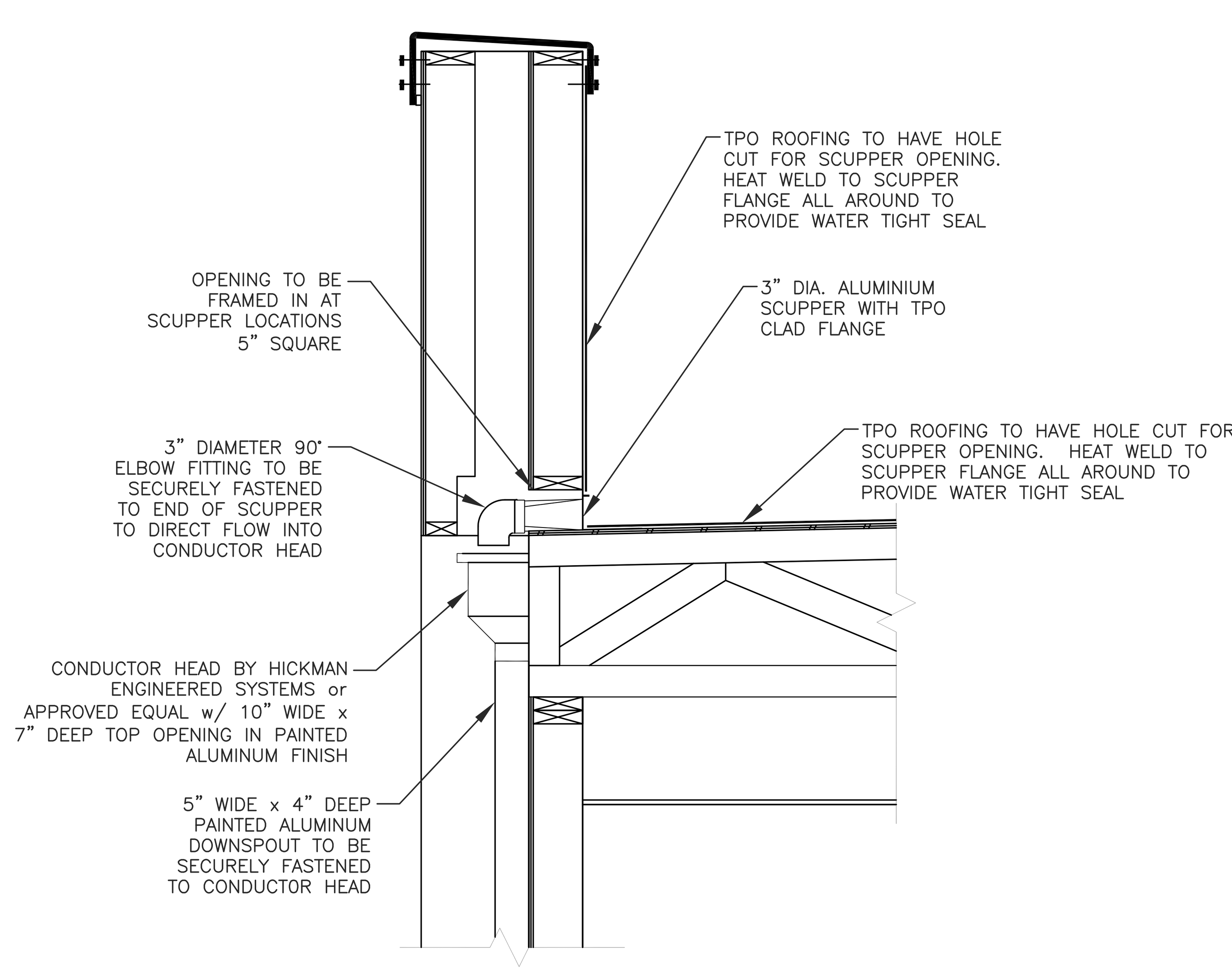
Registered Professional Engineer (Civil)
CERTIFICATE NO. 47776
THOMAS W. AVANT
Thomas Avant
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.

SCALE: 3/16" = 1'-0"

SHEET: A6.2





RD1 TYP. ROOF SCUPPER DETAIL
NTS

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WINDOW ROCK OFFICE BUILDING (2 & 3)

ROOF DRAINAGE PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

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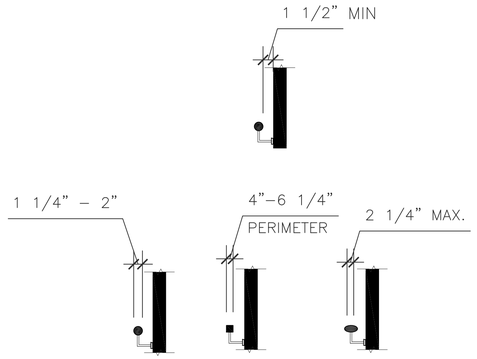
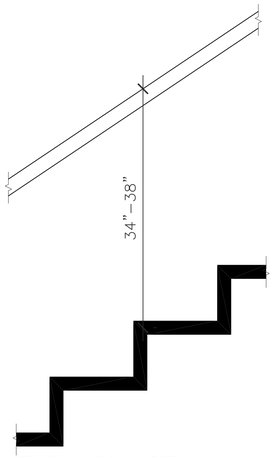
CERTIFICATE NO.
47776
THOMAS W. AVANT
Thomas Avant
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: M.H.
SCALE: 3/16" = 1'-0"
SHEET:

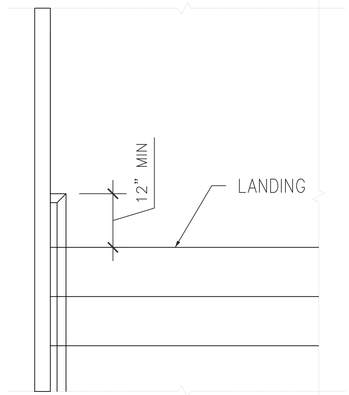
A7.0



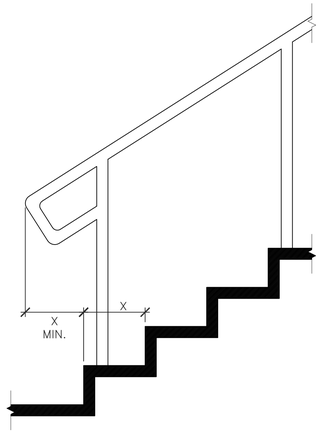
D1 TYP. ADA STAIR HANDRAIL DETAIL
NTS



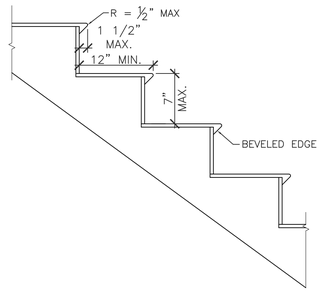
D2 TYP. ADA STAIR HANDRAIL DETAIL
NTS



D3 TYP. HANDRAIL ENDING EXTENSION – PLAN VIEW
NTS

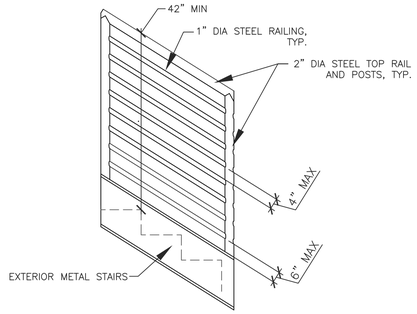


D4 TYP. ADA EXTERIOR HANDRAIL EXTENSION DETAIL
NTS

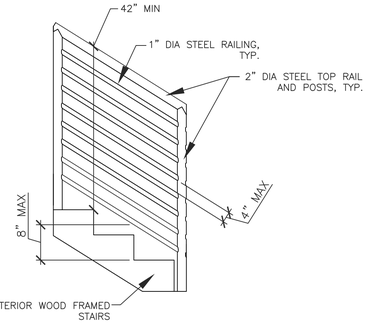


A. PROVIDE DARK TO LIGHT VISUAL CONTRAST BETWEEN LEADING 2" OF TREAD AND REMAINDER OF TREAD

D5 TYP. ADA STAIR TREAD AND RISER DETAIL
NTS



D6A TYP. GUARD RAIL (AT EXTERIOR STAIRS) DETAIL
NTS



D6B TYP. GUARD RAIL (AT INTERIOR STAIRS) DETAIL
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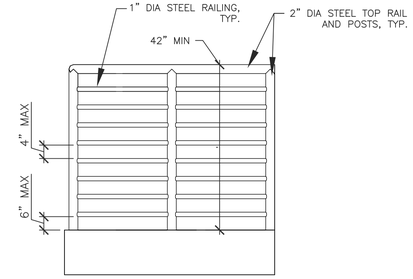
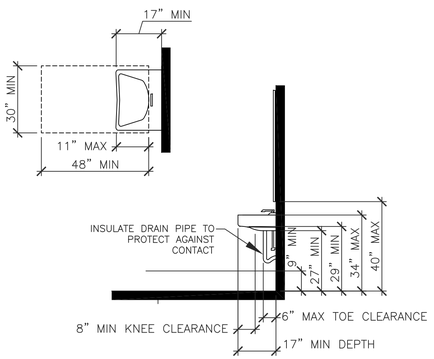
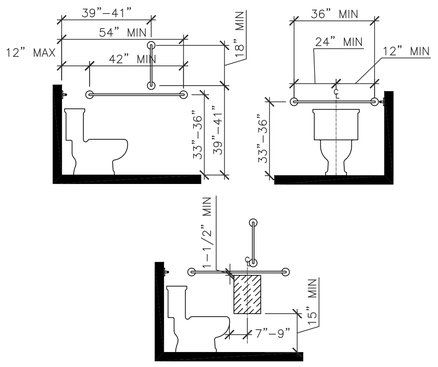


D6C TYP. GUARD RAIL AT LANDING
NTS



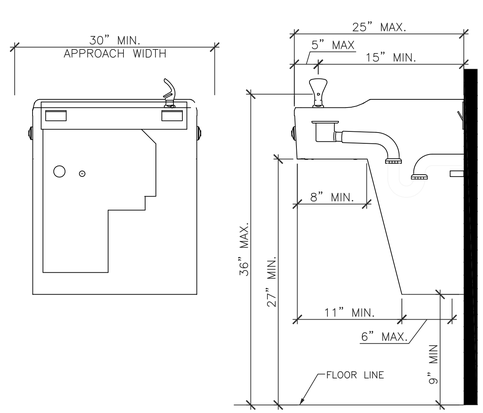
*LAVATORY FAUCET AND SOAP DISPENSER CONTROLS SHALL HAVE A MAXIMUM REACH DEPTH OF 11"

D7 TYP. ADA LAVATORY DETAIL
NTS

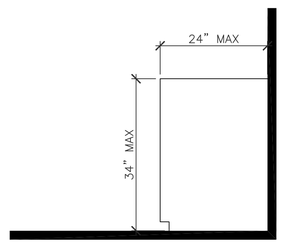


*TOILET SHALL BE EQUIPPED w/ SEAT OF SMOOTH, NON–ABSORBANT MATERIAL. TOILET SEAT SHALL BE OF THE HINGED OPEN–FRONT TYPE. INTEGRAL SEATS SHALL BE OF THE SAME MATERIAL AS THE FIXTURE. WATER CLOSET SEATS SHALL BE SIZED FOR THE WATER CLOSET BOWL TYPE.

D8 TYP. BATHROOM TOILET DETAIL
NTS



D9 TYP. ADA DRINKING FOUNTAIN DETAIL
NTS



D10 KITCHEN CABINET DETAILS
NTS

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WINDOW ROCK OFFICE BUILDING (2 & 3)

ARCHITECTURAL DETAILS

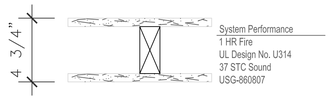
WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL:	12/12/2019
REV#:	DATE:
	DESCRIPTION:

Thomas Avant
REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 47776 CIVIL
47776
THOMAS W.
AVANT
12/12/2019
ARIZONA U.S.A.
EXPIRES 6-30-20 20

DRAWN BY: M.H.
SCALE: NTS
SHEET:

A8.0



System Performance
1 HR Fire
UL Design No. U314
37 STC Sound
USG-860807

System Description

Wood Stud Partition (Load Bearing)
⅝" SHEETROCK Brand Gypsum Panel, FIRECODE Core or FIBEROCK Brand Panel
2" x 4" Wood Stud 16" o.c.
⅝" SHEETROCK Brand Gypsum Panel, FIRECODE Core or FIBEROCK Brand Gypsum Panel
Perimeter caulked
Estimated weight – 7lb/sf

F1 1 HR INTERIOR WALL DETAIL
NTS

System Performance
1 HR Fire
GA File No. FC 5406

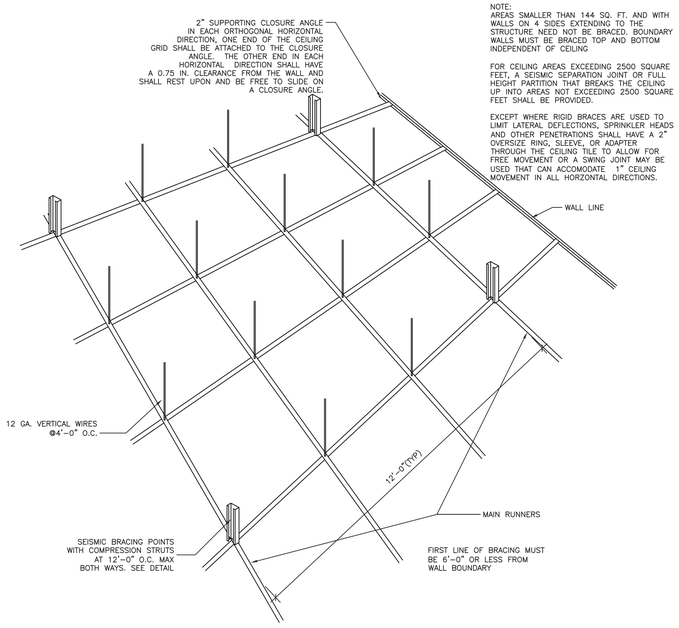
System Description

Floor Ceiling Assembly

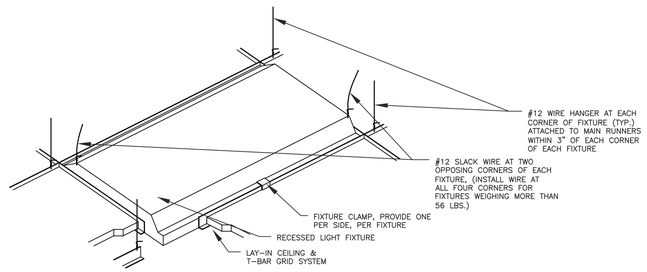
3/4" plywood floor
16" floor joist 16" o.c.
5/8" SHEETROCK brand gypsum panel, FIRECODE CORE
5/8" SHEETROCK brand gypsum panel, FIRECODE CORE
Estimated ceiling weight - 5 lb/sf

Note:
Gypsum Ceiling Membrane provides one hour protection to wood framing.

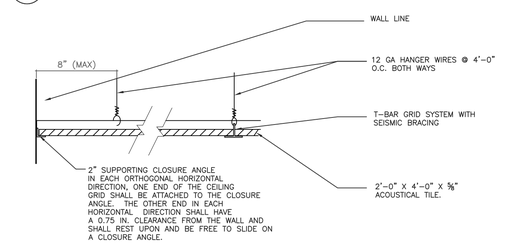
F2 TYPICAL CEILING DETAIL (1) HR
NTS



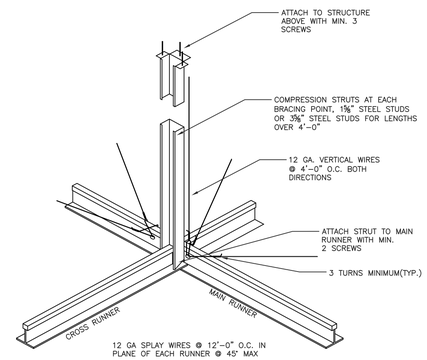
G1 SUSPENDED CEILING GRID SCHEMATIC
NTS



G3 LIGHT FIXTURE AT SUSPENDED CEILING
NTS



G4 SUSPENDED CEILING GRID DETAIL
NTS



G2 SUSPENDED CEILING GRID DETAIL
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SHEET:

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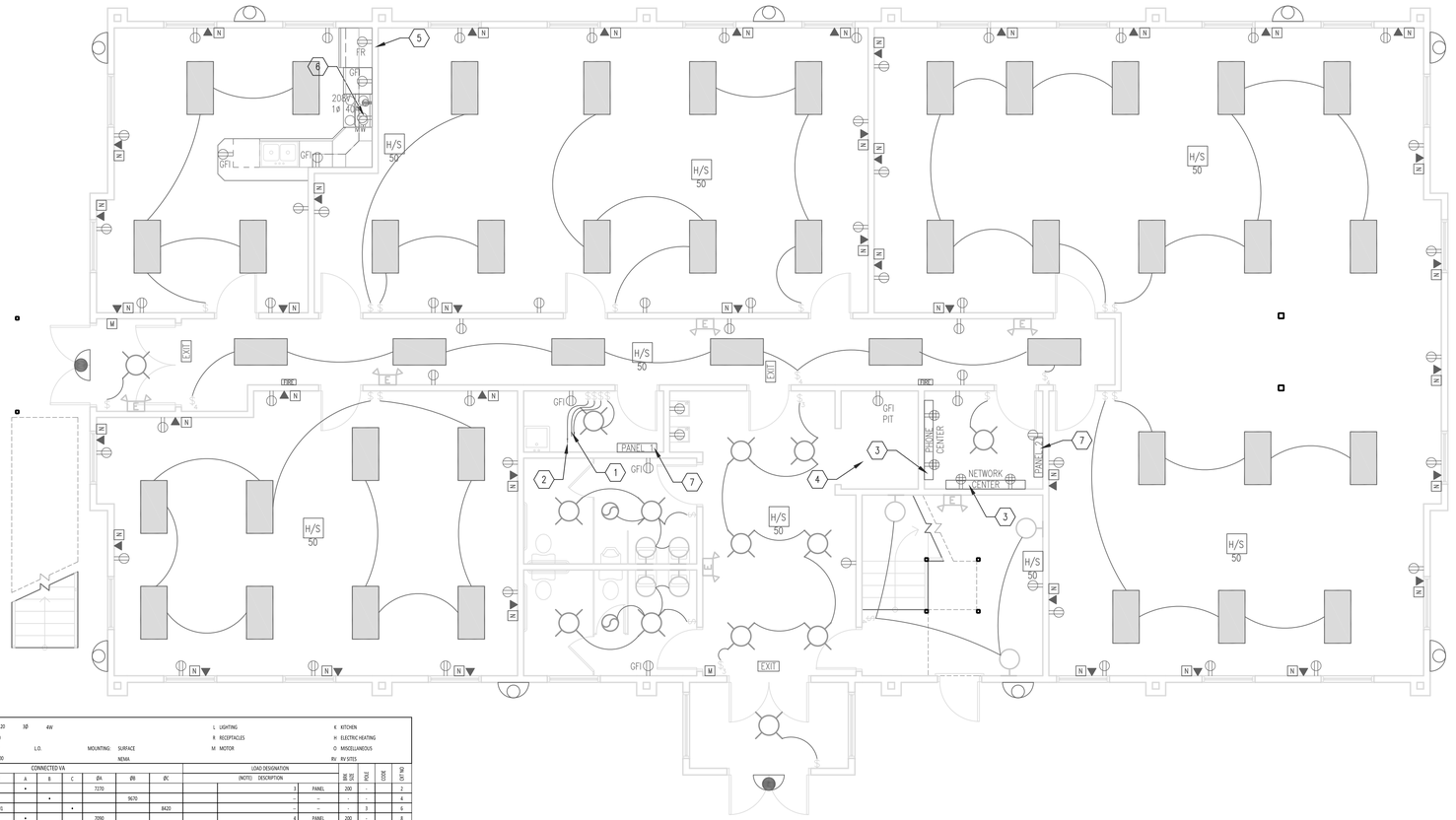
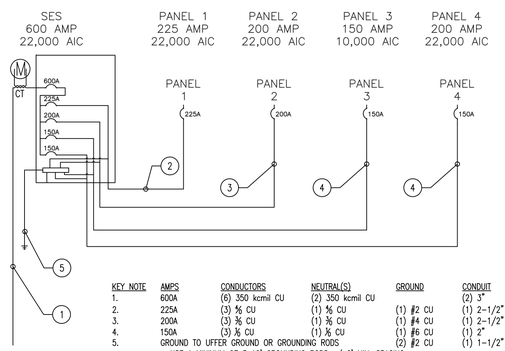


PLAN KEYNOTE LEGEND

1. TO PHOTO CELL FOR EXTERIOR BUILDING WALL PACKS
2. TO PHOTO CELL FOR EXTERIOR PARKING LIGHTS
3. INSTALL ¾" PLYWOOD ON WHOLE WALL FOR DATA/PHONE NETWORKS
4. PROVIDE MAIN DISCONNECT FOR ELEVATOR.
   INSTALL GFCI OUTLET IN ELEVATOR PIT AND OVERHEAD.
   INSTALL LIGHT IN ELEVATOR PIT.
   PROVIDE ALARM INTERCONNECT FOR ELEVATOR CONTROL.
   PROVIDE 15 AMP CIRCUIT FOR CAR LIGHTING POWER SUPPLY.
5. INSTALL REFRIGERATOR OUTLET PER MANUFACTURES REQUIREMENTS
6. INSTALL MICROWAVE OUTLET IN CABINET ABOVE MICROWAVE
7. SURFACE MOUNT LOAD CENTER TO ALLOW FOR FUTURE EXPANSION AND CHANGES TO ELECTRICAL SYSTEM.



KEY NOTE	AMPS	CONDUCTORS	NEUTRAL(S)	GROUND	CONDUIT
1.	600A	(6) 350 kcmil CU	(2) 350 kcmil CU		(2) 3"
2.	225A	(3) ⅚ CU	(1) ⅚ CU	(1) #2 CU	(1) 2-1/2"
3.	200A	(3) ⅜ CU	(1) ⅜ CU	(1) #4 CU	(1) 2-1/2"
4.	150A	(3) ⅜ CU	(1) ⅜ CU	(1) #6 CU	(1) 2"
5.	GROUND TO UFFER GROUND OR GROUNDING RODS USE A MINIMUM OF 3 10' GROUNDING RODS w/ 6' MIN. SPACING			(2) #2 CU	(1) 1-1/2"

POWER – ONE–LINE DIAGRAM:
N.T.S.

ELECTRICAL LEGEND

MARK	TYPE	MARK	TYPE
$	SINGLE POLE TOGGLE SWITCH		150 CFM EXHAUST FAN – BROAN QTXE150
$3	THREE WAY TOGGLE SWITCH	▼	TELEPHONE (CAT 5E WIRING) SINGLE LINE UNLESS NOTED (NUMBER) DESIGNATES PORT OUTLETS REQUIRED
$4	FOUR WAY TOGGLE SWITCH		
	110 VOLT DUPLEX OUTLET	N	MULTI–MEDIA NETWORK OUTLET (CAT 5E WIRING) W/ (2) PORT OUTLET
GFI	110 VOLT GROUND FAULT INTERRUPTER	H/S 50	DROP CEILING MOUNTED AUDIO/VISUAL FIRE ALARM (NUMBER) DENOTES REQUIRED MINIMUM CANDELA OUTPUT
	110 VOLT FOURPLEX OUTLET		
	220 VOLT OUTLET	E	LED EMERGENCY EGRESS WALL MOUNTED LIGHT W/ MINIMUM 25' LIGHT TO LIGHT SPACING (90 MIN MINIMUM BATTERY RUN TIME)
EXIT	DROP CEILING MOUNTED EXIT SIGN W/ BACKUP BATTERY (90 MIN MINIMUM BATTERY RUN TIME)		WALL MOUNT FIXTURE – PER OWNER
FIRE	SEMI–RECESSED 5–POUND FIRE EXTINGUISHER IN LOCKING CABINET (KIDDE 468046 OR EQUAL)		HIGH PRESSURE SODIUM WALL PACK (LITHONIA ACUITY OR APPROVED EQUAL) W/ BACKUP BATTERY (90 MIN MINIMUM BATTERY RUN TIME)
M	RECESSED MANUAL FIRE ALARM PULL BOX		HIGH PRESSURE SODIUM WALL PACK (LITHONIA ACUITY OR APPROVED EQUAL)
			2' X 4' FLUORESCENT FIXTURE W/ (2) T–8 BULBS W/ SATIN FINISHED LOUVERS

ELECTRICAL NOTES

1. SEE SHEETS E1.0 FOR ELECTRICAL PROJECT KEY NOTES AND INFORMATION.
2. ELECTRICAL LAYOUTS ARE SHOWN IN SCHEMATIC. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THE LAYOUT AND INSTALLATION OF ALL RELATED ITEMS WITH EXISTING CONDITIONS AND RELATED TRADES.
3. COORDINATE WITH OWNER, INTERIOR DESIGNER AND / OR PLANS FOR FIXTURE SCHEDULES, STYLES, FINISHES, ETC.
4. ALL WORK TO COMPLY WITH CURRENT N.E.C. CODES AND CURRENT INTERNATIONAL BUILDING CODES.
5. CENTER OF ALL OUTLETS TO BE 18" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE. CENTER OF OUTLETS OVER CABINETS, VANITIES, ETC. TO BE 12" ABOVE FINISH COUNTER HEIGHT UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL ELECTRICAL FIXTURES, SWITCHES, ETC. WITH OWNER AND DESIGNER PRIOR TO WIRING.
7. PROVIDE SLOPED RECESSED CANS FOR SLOPED CEILING APPLICATIONS & THERMAL PROTECTION CANS WHERE IN CONTACT WITH INSULATION AS REQUIRED.
8. CONTRACTOR TO PROVIDE ELECTRICAL SERVICE TO MECHANICAL EQUIPMENT AS REQUIRED.
9. EXHAUST FANS SHALL EXTEND TO THE OUTSIDE MIN. 3' FROM FRESH AIR INLETS.
10. SMOKE DETECTORS REQUIRED TO RECEIVE POWER FROM THE BUILDING WIRING WITH BATTERY BACK–UP. ALL SMOKE DETECTORS SHALL BE WIRED TO SOUND TOGETHER
11. PROVIDE AT LEAST (1) 20 AMP CIRCUIT TO SUPPLY BATHROOM OUTLETS. THIS CIRCUIT SHALL SUPPLY NO OTHER OUTLETS

SES — VOLTAGE: 208/120 3Ø 4W; BUS: 600; MAINS: M L.O.; MOUNTING: SURFACE; NEMA:; FULLY RATED AIC: 22,000

L LIGHTING, R RECEPTACLES, M MOTOR; K KITCHEN, H ELECTRIC HEATING, O MISCELLANEOUS, RV RV SITES

CKT NO	CODE	POLE	BRK SIZE	LOAD DESIGNATION DESCRIPTION (NOTE)				ØA	ØB	ØC	CONNECTED VA A	B	C	ØA	ØB	ØC	LOAD DESIGNATION (NOTE) DESCRIPTION			BRK SIZE	POLE	CODE	CKT NO
1		-	225	PANEL	1			24201			•			7270			3	PANEL		200	-		2
3		-	-	–	-				22601			•			9670		–	–		-	-		4
5		3	-	–	-					20401			•			8420	–	–		-	3		6
7		-	225	PANEL	2			17710			•			7090			4	PANEL		200	-		8
9		-	-	–	-				17170			•			7330		–	–		-	-		10
11		3	-	–	-					8420			•			7700	–	–		-	3		12
13											•												14
15													•										16

PANEL NOTES — PHASE TOTALS — PH A: 56271 — PH B: 56771 — PH C: 44941 — TOTAL CONNECTED: 157983

PANEL CONNECTED KVA: 157983
PANEL DEMAND KVA: 144169.75
PANEL DEMAND AMPS: 400.2
MANUFACTURER:
TYPE:

SES LOAD CALCULATION

	P1	P2	P3	P4	TOTAL				
LIGHTING - 1ST 20KVA	12,720	800	4,880	4,880	20,000	VOLTAMPS	1.00	=	20000
LIGHTING - 20KVA-100KVA	0	0	0	0	3,280	VOLTAMPS	1.00	=	3280
LIGHTING - 100KVA+	0	0	0	0	0	VOLTAMPS	1.00	=	0
RECEPTACLES - 1ST 10KVA	0	10,000	10,000	10,000	10,000	VOLTAMPS	1.00	=	10000
RECEPTACLES - BALANCE	0	2,960	3,900	260	26,720	VOLTAMPS	0.50	=	13360
LARGEST MOTOR LOAD	3,387	3,100	400	400	7,467	VOLTAMPS	1.25	=	9334
BALANCE OF MOTOR LOADS	27,096	7,180	400	400	35,256	VOLTAMPS	1.00	=	35256
KITCHEN EQUIPMENT	0	7,600	0	0	7,600	VOLTAMPS	0.65	=	4940
ELECTRIC HEATING EQUIPMENT	24,000	12,000	6,000	6,000	48,000	VOLTAMPS	1.00	=	48000
RV SITES	0	0	0	0	0	VOLTAMPS	1.00	=	0
MISC LOADS	0	0	0	0	0	VOLTAMPS	1.00	=	0

OF UNITS: 6+
MAX # OF UNITS: 1

TOTAL CALCULATED DEMAND LOADS = 144,170

PANEL P1 — VOLTAGE: 208/120 3Ø 4W; BUS: 225; MAINS: M L.O.; MOUNTING: SURFACE; NEMA:; FULLY RATED AIC: 22,000

L LIGHTING, R RECEPTACLES, M MOTOR; K KITCHEN, H ELECTRIC HEATING, O MISCELLANEOUS, RV RV SITES

CKT NO	CODE	POLE	BRK SIZE	LOAD DESIGNATION DESCRIPTION (NOTE)				ØA	ØB	ØC	CONNECTED VA A	B	C	ØA	ØB	ØC	LOAD DESIGNATION (NOTE) DESCRIPTION			BRK SIZE	POLE	CODE	CKT NO
1	M	-	30	HVAC	CONDENSOR - 1ST FLOOR			3387			•			3387			–	CONDENSOR - 1ST FLOOR	HVAC	30	-	M	2
3	M	-	-	–	-				3387			•			3387		–	–		-	-	M	4
5	M	3	-	–	-					3387			•			3387	–	–		-	3	M	6
7	M	-	30	HVAC	CONDENSOR - 2ND FLOOR			3387			•			6000			(TRONIC 3000 U512) WATER	HEATER	50	-	H	8
9	M	-	-	–	-				3387			•			6000		BATHROOMS	–	2	H	10		
11	M	3	-	–	-					3387			•			6000	(TRONIC 3000 U512) WATER	HEATER	50	-	H	12	
13				SPACE							•			6000			UTILITY ROOM	–	2	H	14		
15	L	1	20	LIGHTS	EXTERIOR			2200			•			2040			INTERIOR	LIGHTS	20	1	L	16	
17	L	1	20	LIGHTS	EXTERIOR				2200			•			2040		INTERIOR	LIGHTS	20	1	L	18	
19				SPACE							•			2040			PARKING LOT	LIGHTS	20	1	L	20	
21	L	1	20	LIGHTS	ELEVATOR			2200			•												22	
23												•											24	
25											•												26	
27												•											28	
29													•										30	
31											•												32	
33												•											34	
35													•										36	
37											•												38	
39												•											40	
41													•										42	

PANEL NOTES — PHASE TOTALS — PH A: 24201 — PH B: 22601 — PH C: 20401 — TOTAL CONNECTED: 67203

PANEL CONNECTED KVA: 67203
PANEL DEMAND KVA: 68049.75
PANEL DEMAND AMPS: 188.9
MANUFACTURER:
TYPE:

PANEL P1 LOAD CALCULATION

LIGHTING - 1ST 20KVA	12,720	VOLTAMPS	1.00	=	12720
LIGHTING - 20KVA-100KVA	0	VOLTAMPS	1.00	=	0
LIGHTING - 100KVA+	0	VOLTAMPS	1.00	=	0
RECEPTACLES - 1ST 10KVA	0	VOLTAMPS	1.00	=	0
RECEPTACLES - BALANCE	0	VOLTAMPS	0.50	=	0
LARGEST MOTOR LOAD	3,387	VOLTAMPS	1.25	=	4233.75
BALANCE OF MOTOR LOADS	27,096	VOLTAMPS	1.00	=	27096
KITCHEN EQUIPMENT	0	VOLTAMPS	0.65	=	0
ELECTRIC HEATING EQUIPMENT	24000	VOLTAMPS	1.00	=	24000
RV SITES	0	VOLTAMPS	1.00	=	0
MISC LOADS	0	VOLTAMPS	1.00	=	0

OF UNITS: 6+
MAX # OF UNITS: 1

TOTAL CALCULATED DEMAND LOADS = 68,050

PANEL P2 — VOLTAGE: 208/120 3Ø 4W; BUS: 100; MAINS: M L.O.; MOUNTING: SURFACE; NEMA:; FULLY RATED AIC: 22,000

L LIGHTING, R RECEPTACLES, M MOTOR; K KITCHEN, H ELECTRIC HEATING, O MISCELLANEOUS, RV RV SITES

CKT NO	CODE	POLE	BRK SIZE	LOAD DESIGNATION DESCRIPTION (NOTE)				ØA	ØB	ØC	CONNECTED VA A	B	C	ØA	ØB	ØC	LOAD DESIGNATION (NOTE) DESCRIPTION			BRK SIZE	POLE	CODE	CKT NO
1	H		25	WATER	HEATER (TRONIC 3000 U512)			6000			•	-	-	3100									2
3	H	2	-	–	BREAKROOM				6000			•			3100								4
5	R	1	20	OUTLETS	LOBBY/BATH					1440			•			3100							6
7	R	1	20	OUTLETS	HALL			900			•			490			INTERIOR UNITS	HVAC	15	-	M	8
9	R	1	20	OUTLETS	NETWORK				1800			•			490			–	-	2	M	10
11	R	1	20	OUTLETS	BREAKROOM					1080			•			800		EMERGANCY LIGHTS/ALARM		15	1	L	12
13	R	1	20	OUTLETS	SMALL OFFICE			900			•			3800			OVEN	BREAKROOM		40	-	K	14
15	R	1	20	OUTLETS	SMALL OFFICE				900			•			3800			–	-	2	K	16
17	R	1	20	OUTLETS	MEDIUM OFFICE					1260			•										18
19	R	1	20	OUTLETS	MEDIUM OFFICE			1440			•												20
21	R	1	20	OUTLETS	LARGE OFFICE				1080			•											22
23	R	1	20	OUTLETS	LARGE OFFICE					1080			•										24
25	R	1	20	OUTLETS	LARGE OFFICE			1080			•												26
27												•											28
29													•										30
31											•												32
33												•											34
35													•										36
37											•												38
39												•											40
41													•										42

PANEL NOTES — PHASE TOTALS — PH A: 17710 — PH B: 17170 — PH C: 8760 — TOTAL CONNECTED: 43640

PANEL CONNECTED KVA: 43640
PANEL DEMAND KVA: 40275
PANEL DEMAND AMPS: 111.8
MANUFACTURER:
TYPE:

PANEL P2 LOAD CALCULATION

LIGHTING - 1ST 20KVA	800	VOLTAMPS	1.00	=	800
LIGHTING - 20KVA-100KVA	0	VOLTAMPS	1.00	=	0
LIGHTING - 100KVA+	0	VOLTAMPS	1.00	=	0
RECEPTACLES - 1ST 10KVA	10,000	VOLTAMPS	1.00	=	10000
RECEPTACLES - BALANCE	2,960	VOLTAMPS	0.50	=	1480
LARGEST MOTOR LOAD	3,100	VOLTAMPS	1.25	=	3875
BALANCE OF MOTOR LOADS	7,180	VOLTAMPS	1.00	=	7180
KITCHEN EQUIPMENT	7600	VOLTAMPS	0.65	=	4940
ELECTRIC HEATING EQUIPMENT	12000	VOLTAMPS	1.00	=	12000
RV SITES	0	VOLTAMPS	1.00	=	0
MISC LOADS	0	VOLTAMPS	1.00	=	0

OF UNITS: 6+
MAX # OF UNITS: 1

TOTAL CALCULATED DEMAND LOADS = 40,275

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WINDOW ROCK OFFICE BUILDING (2 & 3)
1ST FLOOR ELECTRICAL PLAN
WINDOW ROCK
AZ 86515

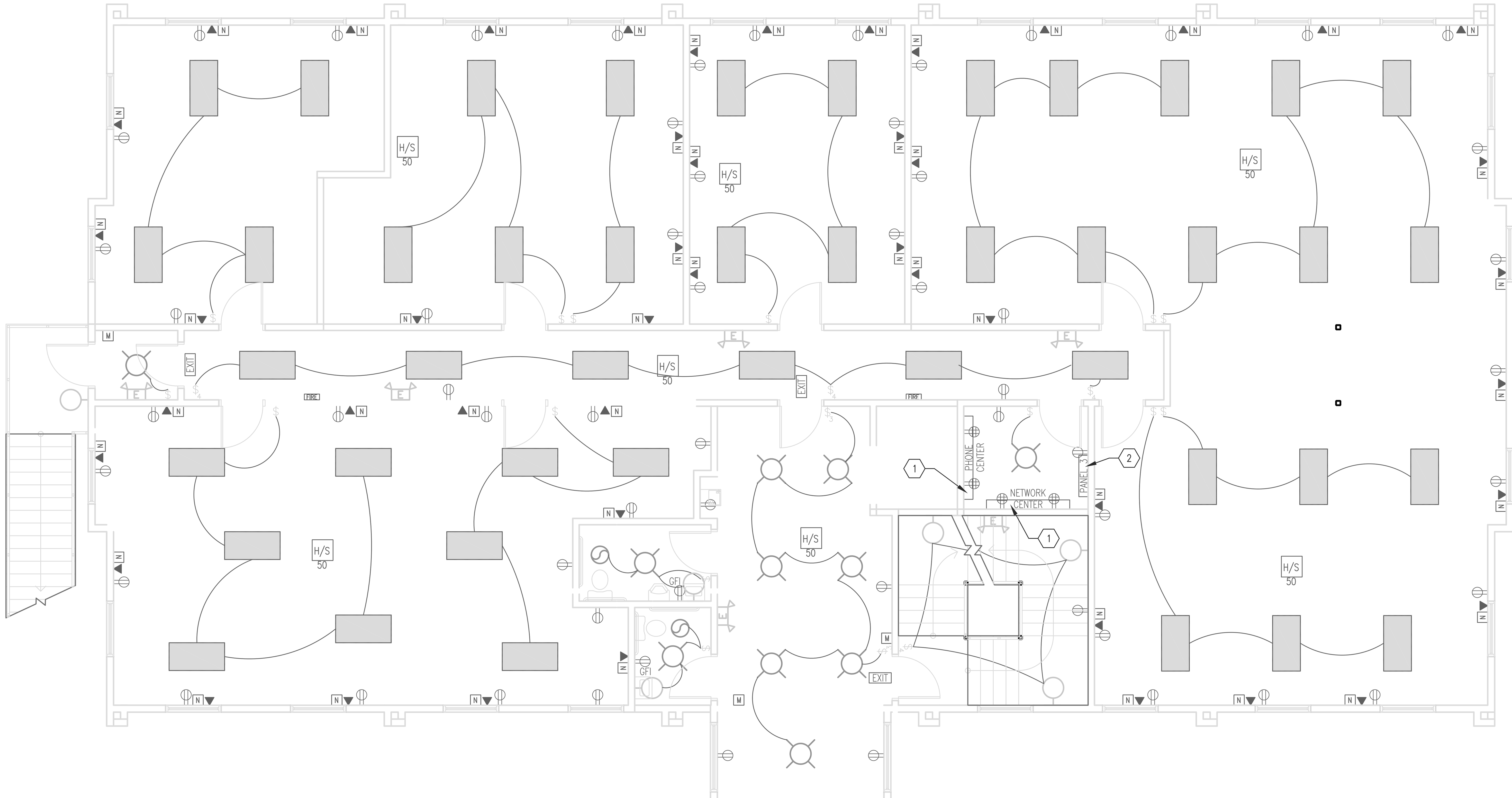
REV#:	DATE:	DESCRIPTION:
INITIAL SUBMITTAL:	12/12/2019	

Thomas Avant
47776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: TWA
SCALE: 3/16" = 1'-0"
SHEET:
E1.0

PLAN KEYNOTE LEGEND

1. INSTALL ¾" PLYWOOD ON WHOLE WALL FOR DATA/PHONE NETWORKS
2. SURFACE MOUNT LOAD CENTER TO ALLOW FOR FUTURE EXPANSION AND CHANGES TO ELECTRICAL SYSTEM.



ELECTRICAL LEGEND

MARK	TYPE	MARK	TYPE
$	SINGLE POLE TOGGLE SWITCH	(fan symbol)	150 CFM EXHAUST FAN – BROAN QTXE150
$3	THREE WAY TOGGLE SWITCH	▼	TELEPHONE (CAT 5E WIRING) SINGLE LINE UNLESS NOTED (NUMBER) DESIGNATES PORT OUTLETS REQUIRED
$4	FOUR WAY TOGGLE SWITCH		
(duplex symbol)	110 VOLT DUPLEX OUTLET	N	MULTI–MEDIA NETWORK OUTLET (CAT 5E WIRING) W/ (2) PORT OUTLET
GFI	110 VOLT GROUND FAULT INTERRUPTER	H/S 50	DROP CEILING MOUNTED AUDIO/VISUAL FIRE ALARM (NUMBER) DENOTES REQUIRED MINIMUM CANDELA OUTPUT
(fourplex symbol)	110 VOLT FOURPLEX OUTLET		
(220 V symbol)	220 VOLT OUTLET	E	LED EMERGENCY EGRESS WALL MOUNTED LIGHT W/ MINIMUM 25' LIGHT TO LIGHT SPACING (90 MIN MINIMUM BATTERY RUN TIME)
EXIT	DROP CEILING MOUNTED EXIT SIGN W/ BACKUP BATTERY (90 MIN MINIMUM BATTERY RUN TIME)	(wall fixture symbol)	WALL MOUNT FIXTURE – PER OWNER
FIRE	SEMI–RECESSED 5–POUND FIRE EXTINGUISHER IN LOCKING CABINET (KIDDE 468046 OR EQUAL)	(wall pack symbol)	HIGH PRESSURE SODIUM WALL PACK (LITHONIA ACUITY OR APPROVED EQUAL) W/ BACKUP BATTERY (90 MIN MINIMUM BATTERY RUN TIME)
M	RECESSED MANUAL FIRE ALARM PULL BOX	(wall pack symbol)	HIGH PRESSURE SODIUM WALL PACK (LITHONIA ACUITY OR APPROVED EQUAL)
		(shaded rectangle)	2' X 4' FLUORESCENT FIXTURE W/ (2) T–8 BULBS W/ SATIN FINISHED LOUVERS

PANEL P3

VOLTAGE: 208/120 3Ø 4W
BUS: 150
MAINS: M L.O.
MOUNTING: SURFACE
NEMA
FULLY RATED AIC: 22,000

L LIGHTING · R RECEPTACLES · M MOTOR · K KITCHEN · H ELECTRIC HEATING · O MISCELLANEOUS · RV RV SITES

CKT NO	CODE	POLE	BRK SIZE	LOAD DESIGNATION	DESCRIPTION	(NOTE)	ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	(NOTE)	DESCRIPTION		BRK SIZE	POLE	CODE	CKT NO
1	H	-	25	WATER	HEATER (TRONIC 3000 US6)		3000			•								SPACE				2
3	H	2	-	--	BREAKROOM			3000			•			2040			INTERIOR	LIGHTS	20	1	L	4
5	R	1	20	OUTLETS	LOBBY/BATH				1260			•			2040		INTERIOR	LIGHTS	20	1	L	6
7	R	1	20	OUTLETS	HALL		1440			•			490				INTERIOR UNITS	HVAC	15	-	M	8
9	R	1	20	OUTLETS	NETWORK			1800			•			490			--	--	-	2	M	10
11	R	1	20	OUTLETS	CENTER OFFICE				1260			•			800		EMERGANCY LIGHTS/ALARM		15	1	L	12
13	R	1	20	OUTLETS	SMALL OFFICE		1260			•												14
15	R	1	20	OUTLETS	SMALL OFFICE			1260			•											16
17	R	1	20	OUTLETS	MEDIUM OFFICE				900			•										18
19	R	1	20	OUTLETS	MEDIUM OFFICE		1080			•												20
21	R	1	20	OUTLETS	LARGE OFFICE			1080			•											22
23	R	1	20	OUTLETS	LARGE OFFICE				1080			•										24
25				SPACE						•												26
27				SPACE							•											28
29	R	1	20	OUTLETS	LARGE OFFICE				1080			•										30
31										•												32
33											•											34
35												•										36
37										•												38
39											•											40
41												•										42

PANEL NOTES · PHASE TOTALS · PH A: 7270 · PH B: 9670 · PH C: 8420

TOTAL CONNECTED	25360
PANEL CONNECTED KVA	25360
PANEL DEMAND KVA	23732.5
PANEL DEMAND AMPS	65.9

MANUFACTURER:
TYPE:

PANEL P3 LOAD CALCULATION

LIGHTING - 1ST 20kVA	4,880	VOLTAMPSX	1.00	=	4880
LIGHTING - 20kVA-100kVA	0	VOLTAMPSX	1.00	=	0
LIGHTING - 100kVA+	0	VOLTAMPSX	1.00	=	0
RECEPTACLES - 1ST 10KVA	10,000	VOLTAMPSX	1.00	=	10000
RECEPTACLES - BALANCE	3,500	VOLTAMPSX	0.50	=	1750
LARGEST MOTOR LOAD	490	VOLTAMPSX	1.25	=	612.5
BALANCE OF MOTOR LOADS	490	VOLTAMPSX	1.00	=	490
KITCHEN EQUIPMENT	0	VOLTAMPSX	0.65	=	0
ELECTRIC HEATING EQUIPMENT	6000	VOLTAMPSX	1.00	=	6000
RV SITES	0	VOLTAMPSX	1.00	=	0
MISC LOADS	0	VOLTAMPSX	1.00	=	0
TOTAL CALCULATED DEMAND LOADS =					23,733

OF UNITS 6+
MAX # OF UNITS 1

ELECTRICAL NOTES

1. SEE SHEETS E1.0 FOR ELECTRICAL PROJECT KEY NOTES AND INFORMATION.
2. ELECTRICAL LAYOUTS ARE SHOWN IN SCHEMATIC. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THE LAYOUT AND INSTALLATION OF ALL RELATED ITEMS WITH EXISTING CONDITIONS AND RELATED TRADES.
3. COORDINATE WITH OWNER, INTERIOR DESIGNER AND / OR PLANS FOR FIXTURE SCHEDULES, STYLES, FINISHES, ETC.
4. ALL WORK TO COMPLY WITH CURRENT N.E.C. CODES AND CURRENT INTERNATIONAL BUILDING CODES.
5. CENTER OF ALL OUTLETS TO BE 18" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE. CENTER OF OUTLETS OVER CABINETS, VANITIES, ETC. TO BE 12" ABOVE FINISH COUNTER HEIGHT UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL ELECTRICAL FIXTURES, SWITCHES, ETC. WITH OWNER AND DESIGNER PRIOR TO WIRING.
7. PROVIDE SLOPED RECESSED CANS FOR SLOPED CEILING APPLICATIONS & THERMAL PROTECTION CANS WHERE IN CONTACT WITH INSULATION AS REQUIRED.
8. CONTRACTOR TO PROVIDE ELECTRICAL SERVICE TO MECHANICAL EQUIPMENT AS REQUIRED.
9. EXHAUST FANS SHALL EXTEND TO THE OUTSIDE MIN. 3' FROM FRESH AIR INLETS.
10. SMOKE DETECTORS REQUIRED TO RECEIVE POWER FROM THE BUILDING WIRING WITH BATTERY BACK–UP. ALL SMOKE DETECTORS SHALL BE WIRED TO SOUND TOGETHER
11. PROVIDE AT LEAST (1) 20 AMP CIRCUIT TO SUPPLY BATHROOM OUTLETS. THIS CIRCUIT SHALL SUPPLY NO OTHER OUTLETS

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WINDOW ROCK OFFICE BUILDING (2 & 3)

2ND FLOOR ELECTRICAL PLAN

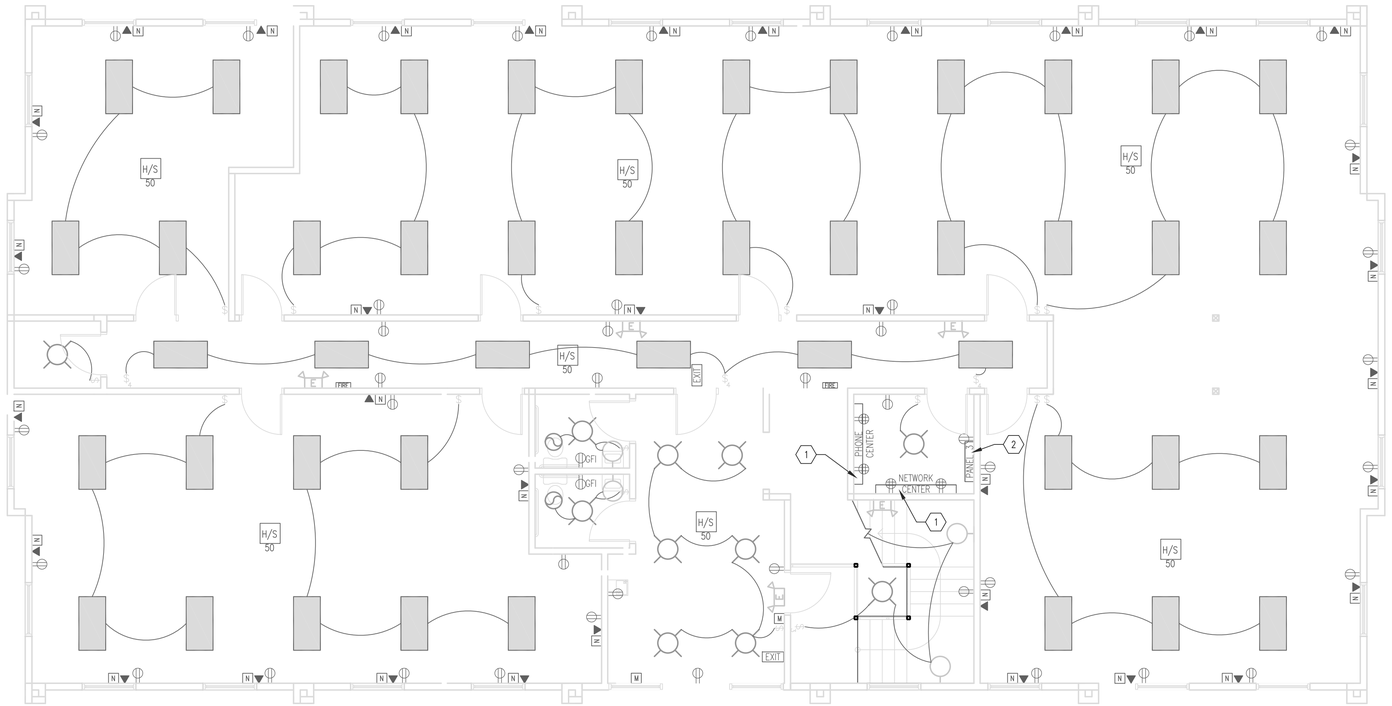
WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Thomas Avant
Registered Professional Engineer (Civil) Certificate No. 47776 THOMAS W. AVANT
12/12/2019 DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: TWA
SCALE: 3/16" = 1'-0"
SHEET: E1.1



PLAN KEYNOTE LEGEND

1. INSTALL ¾" PLYWOOD ON WHOLE WALL FOR DATA/PHONE NETWORKS
2. SURFACE MOUNT LOAD CENTER TO ALLOW FOR FUTURE EXPANSION AND CHANGES TO ELECTRICAL SYSTEM.

PANEL P4

VOLTAGE: 208/120 3Ø 4W
BUS 150
MAINS: M L.O.
FULLY RATED AIC: 22,000

MOUNTING: SURFACE
NEMA

L LIGHTING
R RECEPTACLES
M MOTOR

K KITCHEN
H ELECTRIC HEATING
O MISCELLANEOUS
RV RV SITES

CKT NO	CODE	POLE	BR SIZE	LOAD DESIGNATION DESCRIPTION (NOTE)		CONNECTED VA ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	LOAD DESIGNATION (NOTE) DESCRIPTION		BR SIZE	POLE	CODE	CKT NO
1	H	-	25	WATER	HEATER (TRONIC 3000 (350	3000			•						SPACE					1
3	H	2	-	–	BREAKROOM		3000			•				2040	INTERIOR	LIGHTS	20	1	L	4
5	R	1	20	OUTLETS	LOBBY/BATH			1080			•			2040	INTERIOR	LIGHTS	20	1	L	6
7	R	1	20	OUTLETS	HALL	1080			•			490			INTERIOR UNITS	HVAC	15	-	M	8
9	R	1	20	OUTLETS	NETWORK		1800			•				490	–	–	-	2	M	10
11	R	1	20	OUTLETS	OFFICE SPACE			1260			•			800	EMERGANCY LIGHTS/ALARM		15	1	L	12
13	R	1	20	OUTLETS	OFFICE SPACE	1260			•											14
15				SPACE						•										15
17	R	1	20	OUTLETS	OFFICE SPACE			1260			•									18
19	R	1	20	OUTLETS	OFFICE SPACE	1260			•											20
21				SPACE						•										22
23	R	1	20	OUTLETS	OFFICE SPACE			1260			•									24
25									•											26
27										•										28
29											•									30
31									•											32
33										•										34
35											•									36
37									•											38
39										•										40
41											•									42
PANEL NOTES				PHASE TOTALS	PH A:	7090		PH B:	7330			PH C:	7700		TOTAL CONNECTED		22120			
															PANEL CONNECTED KVA		22120			
															PANEL DEMAND KVA		22112.5			
															PANEL DEMAND AMPS		61.4			
															MANUFACTURER:					
															TYPE:					

PANEL P4 LOAD CALCULATION

LIGHTING - 1ST 20KVA	4,880	VA/SQ.METER	1.00	=	4880
LIGHTING - 20KVA-100KVA	0	VA/SQ.METER	1.00	=	0
LIGHTING - 100KVA+	0	VA/SQ.METER	1.00	=	0
RECEPTACLES - 1ST 10KVA	10,000	VA/SQ.METER	1.00	=	10000
RECEPTACLES - BALANCE	250	VA/SQ.METER	0.50	=	130
LARGEST MOTOR LOAD	490	VA/SQ.METER	1.25	=	612.5
BALANCE OF MOTOR LOADS	490	VA/SQ.METER	1.00	=	490
KITCHEN EQUIPMENT	0	VA/SQ.METER	0.65	=	0
ELECTRIC HEATING EQUIPMENT	6000	VA/SQ.METER	1.00	=	6000
RV SITES	0	VA/SQ.METER	1.00	=	0
MISC LOADS	0	VA/SQ.METER	1.00	=	0
TOTAL CALCULATED DEMAND LOADS =					22,113

ELECTRICAL LEGEND

MARK	TYPE	MARK	TYPE
$	SINGLE POLE TOGGLE SWITCH		150 CFM EXHAUST FAN – BROAN QTXE150
$3	THREE WAY TOGGLE SWITCH	▼	TELEPHONE (CAT 5E WIRING) SINGLE LINE UNLESS NOTED (NUMBER) DESIGNATES PORT OUTLETS REQUIRED
$4	FOUR WAY TOGGLE SWITCH		
	110 VOLT DUPLEX OUTLET	N	MULTI-MEDIA NETWORK OUTLET (CAT 5E WIRING) W/ (2) PORT OUTLET
GFI	110 VOLT GROUND FAULT INTERRUPTER	H/S 50	DROP CEILING MOUNTED AUDIO/VISUAL FIRE ALARM (NUMBER) DENOTES REQUIRED MINIMUM CANDELA OUTPUT
	110 VOLT FOURPLEX OUTLET		
	220 VOLT OUTLET	E	LED EMERGENCY EGRESS WALL MOUNTED LIGHT W/ MINIMUM 25' LIGHT TO LIGHT SPACING (90 MIN MINIMUM BATTERY RUN TIME)
EXIT	DROP CEILING MOUNTED EXIT SIGN W/ BACKUP BATTERY (90 MIN MINIMUM BATTERY RUN TIME)		WALL MOUNT FIXTURE – PER OWNER
FIRE	SEMI-RECESSED 5-POUND FIRE EXTINGUISHER IN LOCKING CABINET (KIDDE 468046 OR EQUAL)		HIGH PRESSURE SODIUM WALL PACK (LITHONIA ACUITY OR APPROVED EQUAL) W/ BACKUP BATTERY (90 MIN MINIMUM BATTERY RUN TIME)
M	RECESSED MANUAL FIRE ALARM PULL BOX		HIGH PRESSURE SODIUM WALL PACK (LITHONIA ACUITY OR APPROVED EQUAL)
			2' X 4' FLUORESCENT FIXTURE W/ (2) T-8 BULBS W/ SATIN FINISHED LOUVERS

ELECTRICAL NOTES

1. SEE SHEETS E1.0 FOR ELECTRICAL PROJECT KEY NOTES AND INFORMATION.
2. ELECTRICAL LAYOUTS ARE SHOWN IN SCHEMATIC. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THE LAYOUT AND INSTALLATION OF ALL RELATED ITEMS WITH EXISTING CONDITIONS AND RELATED TRADES.
3. COORDINATE WITH OWNER, INTERIOR DESIGNER AND / OR PLANS FOR FIXTURE SCHEDULES, STYLES, FINISHES, ETC.
4. ALL WORK TO COMPLY WITH CURRENT N.E.C. CODES AND CURRENT INTERNATIONAL BUILDING CODES.
5. CENTER OF ALL OUTLETS TO BE 18" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE. CENTER OF OUTLETS OVER CABINETS, VANITIES, ETC. TO BE 12" ABOVE FINISH COUNTER HEIGHT UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL ELECTRICAL FIXTURES, SWITCHES, ETC. WITH OWNER AND DESIGNER PRIOR TO WIRING.
7. PROVIDE SLOPED RECESSED CANS FOR SLOPED CEILING APPLICATIONS & THERMAL PROTECTION CANS WHERE IN CONTACT WITH INSULATION AS REQUIRED.
8. CONTRACTOR TO PROVIDE ELECTRICAL SERVICE TO MECHANICAL EQUIPMENT AS REQUIRED.
9. EXHAUST FANS SHALL EXTEND TO THE OUTSIDE MIN. 3' FROM FRESH AIR INLETS.
10. SMOKE DETECTORS REQUIRED TO RECEIVE POWER FROM THE BUILDING WIRING WITH BATTERY BACK-UP. ALL SMOKE DETECTORS SHALL BE WIRED TO SOUND TOGETHER
11. PROVIDE AT LEAST (1) 20 AMP CIRCUIT TO SUPPLY BATHROOM OUTLETS. THIS CIRCUIT SHALL SUPPLY NO OTHER OUTLETS

IRON ROCK ENGINEERING
SURVEYING & DESIGN
Building on Solid Foundations
460 E. 300 SOUTH
KANAB, UTAH 84741
435-644-2031
www.ironrockeng.com

WINDOW ROCK OFFICE BUILDING (2 & 3)

3RD FLOOR ELECTRICAL PLAN

WINDOW ROCK
AZ 86515

REV#:	DATE:	DESCRIPTION:
INITIAL SUBMITTAL:		12/12/2019

Thomas Avant
47776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
ARIZONA U.S.A.
EXPIRES 6-30-2020

DRAWN BY: TWA

SCALE: 3/16" = 1'-0"

SHEET:

E1.2

BASIC MATERIALS AND METHODS

1. SLEEVE ALL PENETRATIONS THROUGH NEW WALLS AND FLOORS. SEAL ALL PENETRATIONS WATER TIGHT WITH SILICONE SEALANT.
2. SEAL ALL DUCTS THROUGH WALLS AIR TIGHT.

MECHANICAL IDENTIFICATION

1. DUCT MARKERS:
   PROVIDE MANUFACTURE'S STANDARD LAMINATED PLASTIC; COLOR CODED DUCT MARKERS
2. COLOR:
   COMPLY WITH ANSI A13.1.
3. LETTERING:
   MANUFACTURE'S STANDARD PRE-PRINTED NOMENCLATURE WHICH BEST DESCRIBES PIPING OR DUCT SYSTEM IN EACH INSTANCE OR AS SELECTED BY ARCHITECT OR ENGINEER IN CASES OF VARIANCE WITH NAMES AS SHOWN.
4. ARROWS:
   PRINT EACH MARKER WITH ARROWS INDICATING DIRECTION OF FLOW.

VIBRATION ISOLATION, SOUND ISOLATION & SEISMIC BRACING

1. ALL MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING MUST BE VIBRATION ISOLATED AND SEISMIC ALLY BRACED FOR THE SITE SPECIFIC SEISMIC DESIGN CATEGORY AND SEISMIC USE GROUP, IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE BUILDING CODES, ASHRAE, AND SMACNA. PROVIDE SEISMIC PRODUCTS BY AMBER-BOOTH OR MASON INDUSTRIES.
2. IN GENERAL, PROVIDE SPRING MOUNTS TO ATTENUATE LOW FREQUENCY SOUND AND VIBRATION AND NEOPRENE PADS TO ATTENUATE HIGH FREQUENCY SOUND AND VIBRATION. SEISMIC BRACING/MOUNTING CAN BE COMBINED WITH VIBRATION ISOLATION AS APPLICABLE.
3. CONTRACTOR MANUFACTURED SEISMIC BRACING/RESTRAINT METHODS ARE NOT ACCEPTABLE. PROVIDE A SIGNED AND STAMPED LETTER FROM A PROFESSIONAL ENGINEER CERTIFYING THAT THE SUPPLIED PRODUCTS ARE CORRECT FOR THE APPLICATION AND THAT THE INSTALLATION IS IN COMPLIANCE WITH ALL APPLICABLE CODES.

INSULATION

1. WRAP ALL ROUND SUPPLY AND RETURN DUCTWORK WITH 1-1/2" THICK FOIL FACED FIBERGLASS INSULATION. WRAP INSULATION TIGHTLY ON THE DUCT WITH ALL CIRCUMFERENTIAL JOINTS BUTTED AND LONGITUDINAL JOINTS OVERLAPPED A MIN. OF 2" COVER ALL JOINTS WITH FOIL-REINFORCED "KRAFT" TAPE, 3" WIDE.
2. OUTDOOR DUCTWORK EXPOSED TO THE WEATHER SHALL HAVE 2" INSULATION AND SHALL BE FITTED WITH 0.016 EMBOSSED ALUMINUM JACKET POP-RIVETED FOR A TIGHT WEATHERPROOF FIT.
3. SEE METAL DUCTWORK SECTION FOR LINED RECTANGULAR DUCTWORK.

HEATING AND COOLING UNITS

1. UNITS SHALL BE FACTORY ASSEMBLED AND TESTED, DESIGNED FOR ROOF OR SLAB INSTALLATION, AND CONSISTING OF HEAT EXCHANGER, COMPRESSORS, CONDENSERS, EVAPORATOR COILS, CONDENSER AND EVAPORATOR FANS, REFRIGERATION AND TEMPERATURE CONTROLS, FILTERS AND DAMPERS AS REQUIRED.
2. HEAT PUMPS:
   PROVIDE COMPLETELY AUTOMATIC CHANGEOVER CONTROLS.
3. PROVIDE ANY ROOF TOP UNITS WITH ROOF CURB, ECONOMIZER CONNECTION (NO RELIEF), HIGH AND LOW PRESSURE CUTOUTS, 5 YEAR MIN WARRANTY, AND ONE EXTRA SET OF BELTS AND FILTERS.
4. PROVIDE A COPPER P-TRAP ON ALL ROOFTOP CONDENSATE DRAIN PANS, SIZED THE SAME AS THE OUTLET SIZE OF THE MANUFACTURE'S DRAIN PAN. DRAIN CONDENSATE TO ROOF UNLESS NOT ALLOWED BY LOCAL CODES. PROVIDE A 6" SQUARE (MINIMUM) CONCRETE SPLASH BLOCK UNDERNEATH THE DRAIN OUTLET, WITH A 1" MINIMUM AIR GAP.
5. PROVIDE FACTORY INSTALLED AND WIRED SMOKE DETECTOR IN SUPPLY AND RETURN AIR STEAM FOR ALL UNITS OF 2,000 CFM AND LARGER CAPACITY. UNIT SHALL SHUT DOWN AUTOMATICALLY UPON DETECTION OF SMOKE.

GRILLES, DIFFUSER AND LOUVERS

1. ALL GRILLES, DIFFUSERS, AND REGISTERS SHALL BE COMPLETE WITH FRAMES AND RUBBER GASKETS. FINISH FOR ALL REGISTERS, DIFFUSERS, AND GRILLES SHALL BE WHITE.
2. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL LIGHTING LAYOUT, AND ARCHITECTURAL ELEVATIONS
3. LOUVERS SHALL HAVE MINIMUM FREE AREA AND MAXIMUM PRESSURE DROP. LOUVER SHALL HAVE FRAME AND SILLS COMPATIBLE WITH ADJACENT SUBSTRATE AND FIT ACCURATELY FOR WEATHERPROOF INSTALLATION. LOUVERS SHALL BE COMPLETE WITH $\frac{1}{2}$" MESH ANODIZED ALUMINUM BIRD SCREEN.

METAL DUCTWORK

1. ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS AND PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION, (SMACNA).
2. TRANSITION ALL NEW DUCTWORK TO CONNECT TO OTHER DUCTWORK AND EQUIPMENT, AS REQUIRED.
3. DUCTWORK SHALL BE GALVANIZED STEEL THROUGHOUT, FABRICATED AND INSTALLED SO THAT NO VIBRATION OR NOISE RESULTS. IT SHALL BE MADE FROM THE BEST GRADE OF GALVANIZED MILLED STEEL SHEETS OF U.S. STANDARD GAUGE AND BE FREE FROM BLISTERS, SLIVERS, AND PITS. ALL SEAMS SHALL BE AIRTIGHT, THE CONSTRUCTION OF ALL DUCTWORK, INCLUDING GAUGES OF METAL, BRACING LAYOUT, ETC., SHALL BE IN ACCORDANCE WITH SMACNA. SLEEVES FOR FIRE DAMPERS AND DUCT SECTIONS FORMING AN EXTENSION OF THE FIRE WALL SHALL BE 10 GAUGE STEEL, WHERE APPLICABLE.
4. SEAL DUCTWORK ACCORDING TO THE FOLLOWING SMACNA DUCT SEALING CLASS:

DUCT LOCATION	DUCT TYPE			
	SUPPLY		EXHAUST	RETURN
	<2in. Wg	>2in. Wg		
OUTDOORS	A	A	A	A
UNCONDITIONED SPACES	B	A	B	B
CONDITIONED SPACES	C	B	B	B
(CONCEALED DUCTWORK) CONDITIONED SPACES (EXPOSED DUCTWORK)	A	A	B	B

5. HANGERS FOR DUCTS UP TO 18" IN WIDTH OR DIAMETER SHALL BE PLACED ON NOT MORE THAN 8 FOOT CENTERS. DUCTS 19" AND OVER IN WIDTH OR DIAMETER SHALL BE SUPPORTED ON NOT MORE THAN 4 FOOT CENTERS. DUCT HANGERS SHALL BE CONSTRUCTED OF GALVANIZED BAND IRON 1-1/8" FOR DUCTS UP TO 36" IN WIDTH OR DIAMETER. HANGERS SHALL EXTEND DOWN SIDES AND A MINIMUM OF 1" UNDER RECTANGULAR DUCTS, AND WRAP COMPLETELY AROUND ROUND DUCTS. ALL DUCTS SHALL BE RIGIDLY SUPPORTED.
6. ALL DUCTWORK SHALL BE CLEANED PRIOR TO THE INSTALLATION OF CEILING, DIFFUSERS AND GRILLES. OPERATE FANS TO BLOW OUT DUCTWORK.
7. RECTANGULAR LOW-PRESSURE SUPPLY AND RETURN AIR DUCTWORK SHALL BE LINED WITH 1" FACED FIBERGLASS INSULATION SECURELY BUTTONED OR LAPPED AND SEALED. INSULATION SHALL BE 1-1/2 POUND DENSITY.
8. OUTDOOR DUCTWORK EXPOSED TO THE WEATHER SHALL BE WRAPPED WITH A MINIMUM R-5 FACED FIBERGLASS INSULATION SECURELY BUTTONED OR LAPPED AND SEALED, AND SHALL BE FITTED WITH A 0.016 EMBOSSED ALUMINUM JACKET POP RIVETED FOR A WEATHERPROOF FIT.
9. DUCT DIMENSIONS SHOW ON DRAWINGS ARE INSIDE CLEAR AREA AND SHALL BE INCREASED TO ACCOMMODATE INSULATION.

DUCTWORK ACCESSORIES

1. FLEXIBLE DUCTWORK:
   THE FINAL 5 FOOT CONNECTION TO GRILLES AND DIFFUSERS IN LAY-IN CEILINGS OR TO FLOOR MOUNTED GRILLES, MAY BE MADE WITH FLEXIBLE DUCT, FLEXMASTER TYPE 5M ONLY. ENDS SHALL BE SEALED.
2. SQUARE/RETANCULAR ELBOWS SHALL BE PROVIDED WITH TURNING VANES.
3. ALL DUCT BRANCHES AND TAKEOFFS SHALL BE HIGH-EFFICIENCY TYPES, WITH DUCT MOUNTED BALANCING DAMPERS.
4. PROVIDE FLEXIBLE CONNECTIONS NOT LESS THAN 4" WIDE CONSTRUCTED OF HEAVY, WATERPROOF, WOVEN PLASTIC COATED CLASS FABRIC AT SUPPLY AND RETURN CONNECTIONS TO FURNACES, AIR HANDLING, ROOFTOP, MAKE-UP AIR OR FAN-COIL UNITS. CORNERS SHALL BE SEWN TIGHT. CONNECTIONS SHALL BE 20 OUNCE VENT FABRICS OR EQUAL.
5. DUCT MOUNTED BALANCING DAMPERS SHALL BE USED TO CONTROL SUPPLY, RETURN OR EXHAUST AIR TO EACH DIFFUSER AND GRILLE. AN OPERATING HEAD SHALL BE PLACED ON THE SIDE OF THE DUCT WITH A POSITIVE LOCKING QUADRANT. DAMPERS SHALL BE PROVIDED IN RETURN AND EXHAUST AIR DUCTS WHERE SHOWN ON DRAWINGS.
6. PROVIDE DAMPER OPERATOR EXTENSIONS THROUGH ALL SHEET ROCK OR OTHER HARD CEILINGS. YOUNG REGULATOR MODEL 315 OR EQUAL.

AUTOMATIC TEMPERATURE CONTROL SYSTEM

1. BUILDING HVAC CONTROL SYSTEM:
   THERMOSTATS SHALL BE MITSUBISHI CONTROL PROGRAMMABLE THERMOSTAT OR EQUAL

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MECHANICAL SPECIFICATIONS

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AZ 86515

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Registered Professional Engineer
CERTIFICATE NUMBER
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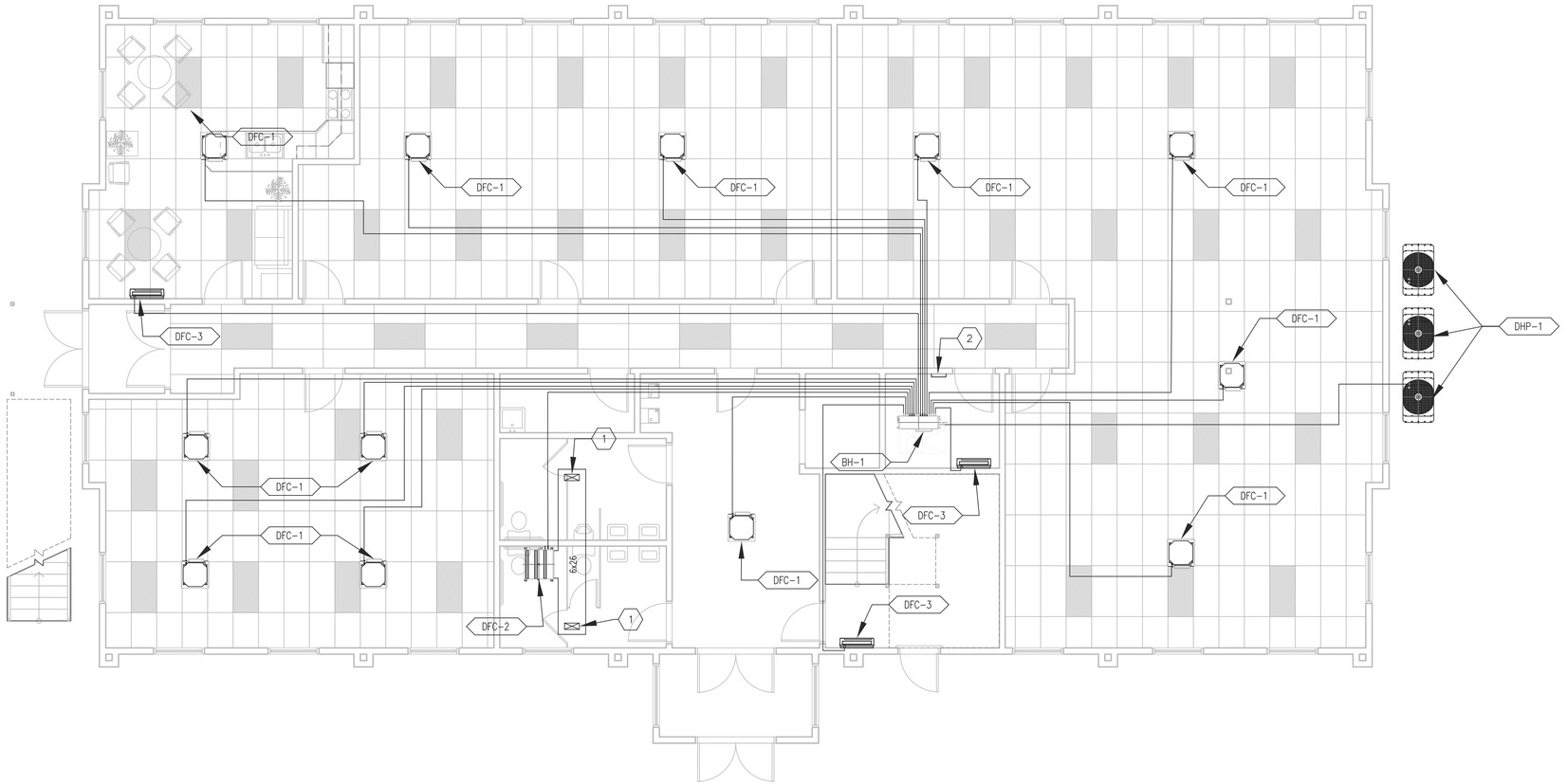

GENERAL MECHANICAL NOTES:

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAWS, ACTS, AND AUTHORITIES HAVING JURISDICTION.

2. THE COMPLETED INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE INDUSTRY STANDARDS OF GOOD PRACTICE AND SAFETY, AND THE MANUFACTURER'S STRICTEST RECOMMENDATIONS FOR EQUIPMENT AND PRODUCT APPLICATION AND INSTALLATION.

3. PRIOR TO BEGINNING OF WORK, THE CONTRACTOR SHALL VISIT THE JOBSITE AND THOROUGHLY INSPECT ALL EXISTING CONDITIONS TO INSURE THAT THE WORK REPRESENTED ON THE DRAWINGS AND IN THE SPECIFICATIONS CAN BE INSTALLED AS INDICATED. NOTIFY THE ARCHITECT/ENGINEER OF ANY MAJOR DISCREPANCIES. FAILURE OF THE CONTRACTOR TO THOROUGHLY INSPECT ALL EXISTING CONDITIONS SHALL RELIEVE THE ARCHITECT/ENGINEER AND THE OWNER FROM ANY ADDED COST CHANGES.

4. ALL WORK SHALL BE LOCATED TO AVOID CONFLICTS WITH OTHER TRADES. CLOSELY COORDINATE ALL WORK WITH ALL OTHER TRADES. FAILURE OF THE CONTRACTOR TO COORDINATE WITH ALL OTHER TRADES SHALL RELIEVE THE ARCHITECT/ENGINEER AND THE OWNER FROM ANY ADDED COST

5. ALL WORK SHALL BE LOCATED TO PROVIDE ADEQUATE CLEARANCE FOR ARCHITECTURAL DESIGN AND PROPER OPERATION AND SERVICE OF EQUIPMENT.

6. COORDINATE LOCATION OF ALL GRILLES, DIFFUSERS, DUCTS, ETC. WITH CEILING, LIGHTS, FIRE PROTECTION AND ARCHITECTURAL MATERIALS.

7. THESE DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENTS AND THE EXTENT OF THE SYSTEM. IT SHALL BE THE WORK OF THE CONTRACTOR TO MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES, OR MATERIAL REQUIRE PRIOR APPROVAL BY THE CONSULTING ENGINEER.

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KEYNOTES:

1. 6" X 14" PRICE MODEL 520 OR EQUAL DOUBLE DEFLECTION SURFACE GRILL. COLOR TO BE WHITE.
2. MITSUBISHI AE-200 CENTRALIZED CONTROLLER

- DHP-1: MITSUBISHI MODEL PUHY-HP96THMU-A HEAT PUMP CONDENSER
- DFC-1: MITSUBISHI MODEL PLFY-P08NCME-ER4 INDOOR UNIT
- DFC-2: MITSUBISHI MODEL PEFY-06NMSU-E INDOOR UNIT
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WINDOW ROCK OFFICE BUILDING (2 & 3)

1ST FLOOR MECHANICAL PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Thomas Avant
47776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: TWA

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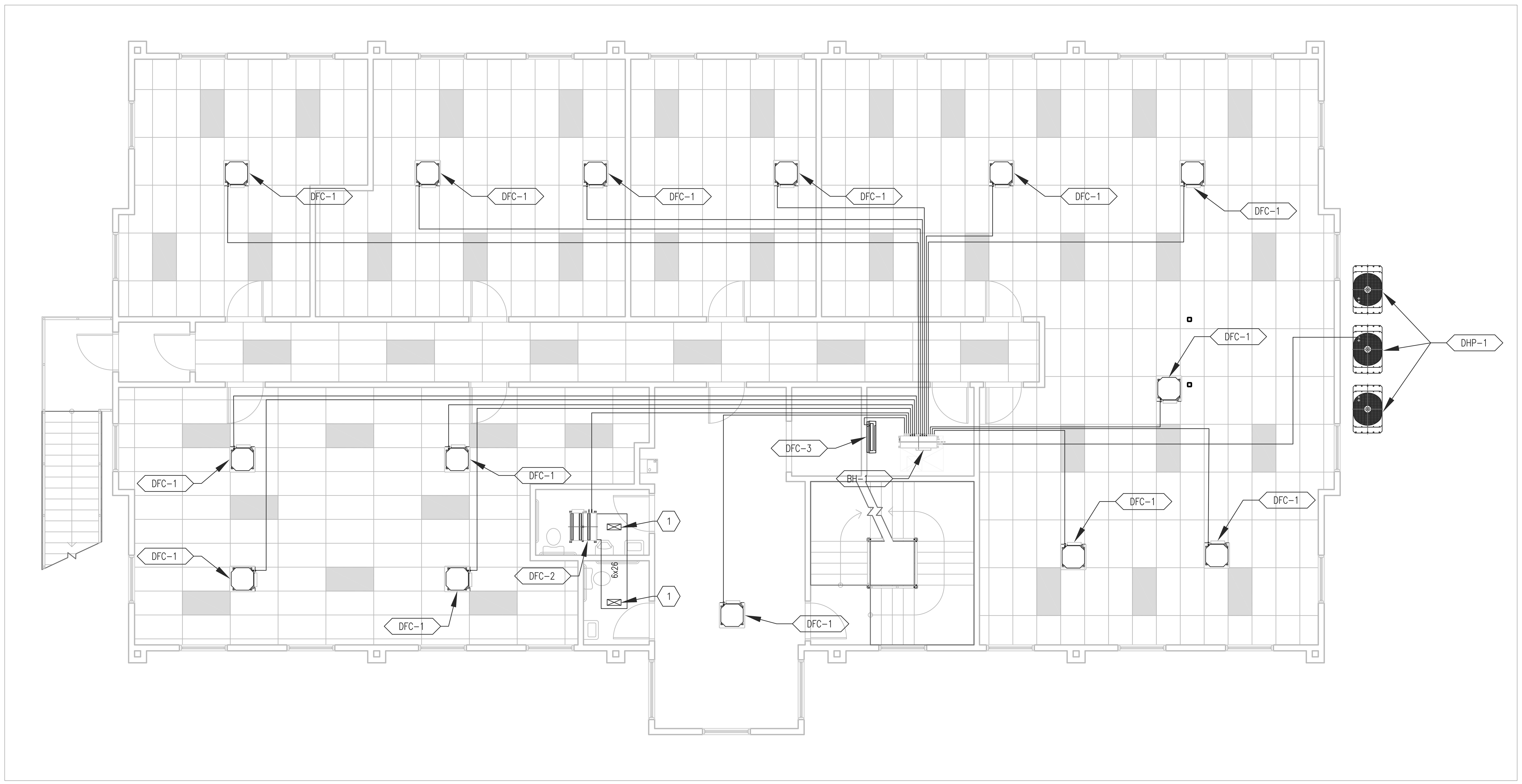

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2ND FLOOR MECHANICAL PLAN

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Registered Professional Engineer (Civil)
47776
THOMAS W.
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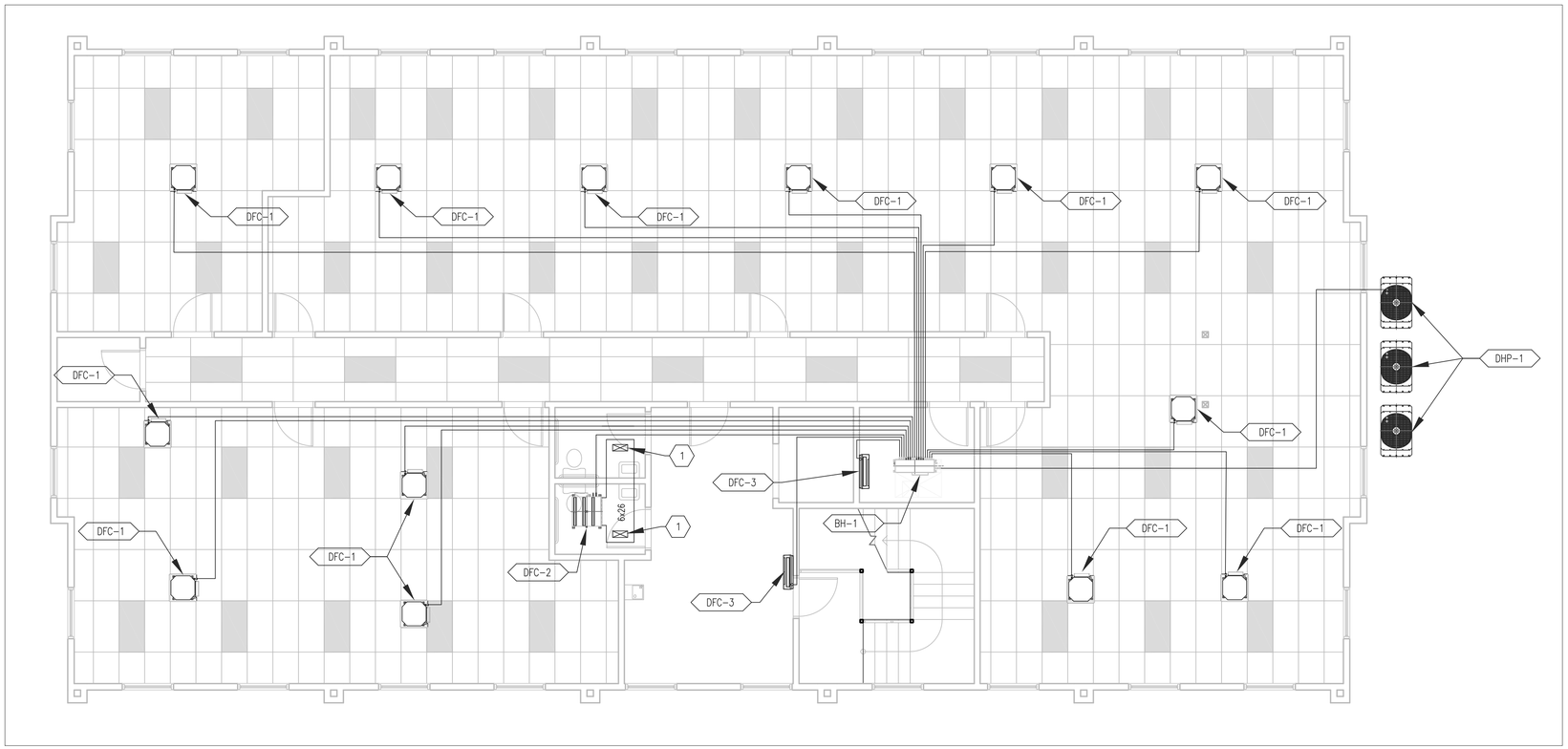

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SHEET:

M1.2

DUCTLESS SPLIT SYSTEM – HEAT/COOL –INDOOR FAN COIL UNIT SCHEDULE

FIX NO.	MANUF. AND MODEL NO.	LOCATION	OUTDOOR UNIT	TOTAL AIR FLOW RATE CFM	CAPACITY (BTUH)	ELECTRICAL		REMARKS
						VOLT/PH	MCA	
DFC–1	MITSUBISHI PLFY–P08NCMU–ER4	CEILING–RECESSED	DHP–1	350 CFM	8,000	230–1	1	
DFC–2	MITSUBISHI PEFY–P06NMSU–E	HORIZONTAL DUCTED	DHP–1	247 CFM	6,000	230–1	1	
DFC–3	MITSUBISHI PKFY–P06NBMU–E	WALL MOUNTED	DHP–1	210 CFM	6,000	230–1	1	

DUCTLESS SPLIT SYSTEM – OUTDOOR HEAT PUMP SCHEDULE

FIX NO.	MANUF. AND MODEL NO.	LOCATION	INDOOR UNITS	IEER	TOTAL COOLING (MBH)	LIQUID LINE (IN)	VAPOR LINE (IN)	ELECTRICAL		REMARKS
								VOLT/PH	MCA	
DHP–1	MITSUBISHI PUHY–HP96THMU–A	OUTSIDE	DFC–1,DFC–2, & DFC–3	13.8	96,000	1/2	7/8	208–3	1	

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435-644-2031
www.ironrockeng.com

WINDOW ROCK OFFICE BUILDING (2 & 3)

MECHANICAL SCHDULE

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Professional Engineer CERTIFICATE
47776
THOMAS W.
AVANT
12/12/2019
REGISTERED
ARIZONA U.S.A.
EXPIRES 6-30-2020

Thomas Avant

DRAWN BY: TWA

SCALE: N.T.S.

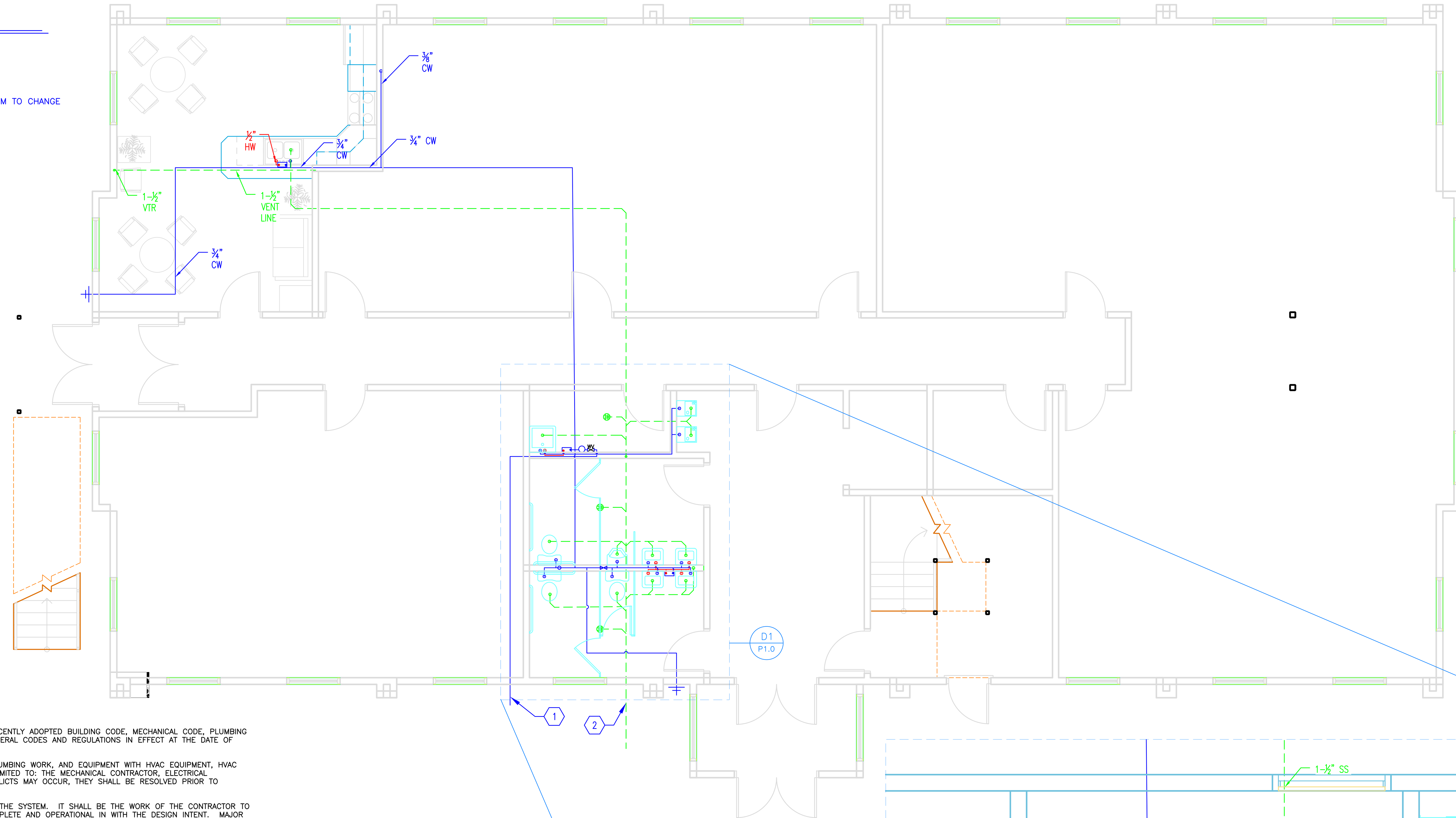
SHEET:

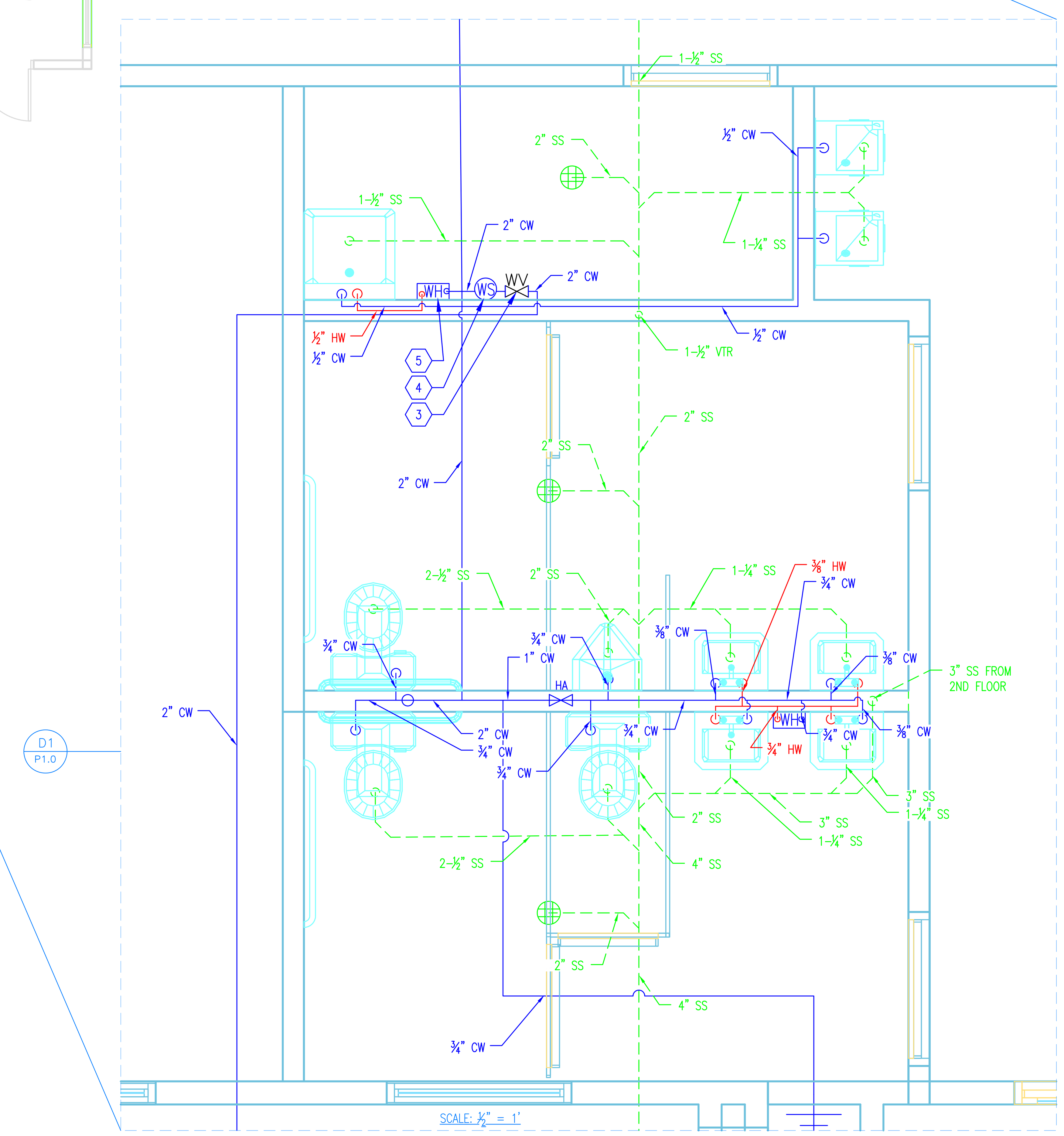
M2.0

PLAN KEYNOTE LEGEND

1. SEE CIVIL PLANS FOR WATER LINE CONNECTION
2. SEE CIVIL PLANS FOR SANITARY SEWER LINE CONNECTION
3. INSTALL WATER VALVE WITH COPPER PIPE ON OUTSIDE OF WALL
4. INSTALL (2) WATER SOFTENERS IN PARALLEL STACKED. ENSURE ROOM TO CHANGE FILTERS
5. INSTALL WATER HEATER ON WALL NEAR FLOOR SINK

PLUMBING PLAN ABBREVIATIONS:
CW – COLD WATER
HW – HOT WATER
SS – SANITARY SEWER LINE





PLUMBING NOTES:

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PRIOR TO FABRICATION AND INSTALLATION, COORDINATE THE INSTALLATION OF ALL PLUMBING WORK, AND EQUIPMENT WITH HVAC EQUIPMENT, HVAC DUCTWORK, FIRE PROTECTION PIPING AND ALL OTHER TRADES INCLUDING BUT NOT LIMITED TO: THE MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, AND ANY CONTRACTOR HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.

THESE DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENTS AND THE EXTENT OF THE SYSTEM. IT SHALL BE THE WORK OF THE CONTRACTOR TO MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES, OR MATERIAL REQUIRE PRIOR APPROVAL BY THE CONSULTING ENGINEER.

THESE DRAWINGS ARE DIAGRAMMATIC, AND NOT ALL INFORMATION IS SHOWN ON THE PLUMBING DRAWINGS. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR COMPLETE INSTALLATION. ALL LOCATIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

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UPON COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS AND RUBBISH. MAKE ALL REQUIRED PATCHING AND REPAIRS OF OTHERS TRADES' WORK DAMAGED BY THE CONTRACTOR, AND LEAVE THE PREMISES IN A CLEAN, ORDERLY CONDITION.

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GAS PIPING TO BE SIZED TO ACCOMMODATE FUTURE NATURAL GAS

ALL FLOOR DRAINS TO HAVE TRAP PRIMERS

WATER HEATERS TO BE LOCATED 18" MIN ABOVE FINISHED FLOOR.

FIRST 8' OF HOT WATER OUTLET OF HOT WATER HEATERS TO HAVE ½" INSULATION

INSTALL TEMPERATURE LIMITING DEVICE FOR EACH WASH BASIN CONFORMING TO ASSE 1070.

PROVIDE LOW PRESSURE REGULATOR FOR GAS LINE AT WATER HEATER

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ALL HOT AND COLD WATER LINES SHALL BE COPPER AND OR PEX WITH COPPER CRIMP RING FITTINGS.

PLUMBING FIXTURE SCHEDULE

SYM.	DESCRIPTION	CONNECTION SIZES			
		W	V	C	H
	FLOOR DRAIN (FINISHED AREAS) COATED CAST IRON FLOOR DRAIN, TWO PIECE BODY, DOUBLE DRAINAGE FLANGE, BOTTOM NO–HUB OUTLET CONNECTION, 1/2" TRAP PRIMER, ADJUSTABLE SATIN BRONZE STRAINER, VANDAL PROOF SCREWS, INSTALL WITH TRAPGUARD PRO–SET TRAP SEAL	2"			
	NEW WALL HUNG SINK, AMERICAN STANDARD REGALYN 20"x18" CAST IRON WALL MOUNTED SINK	1–1/4"	1–1/4"	1/2"	1/2"
	NUVO MANOR SYSTEM – WATER SOFTNER			1–1/2"	
	TOLIET, AMERICAN STANDARD, CADET 1.6 GPF TWO–PIECE PRESSURE ASSISTED (MODEL 2467.016)	2–1/8"	1–1/4"	1"	
	URINAL, AMERICAN STANDARD, WASHBROOK 1.0 GPF WASHOUT URINAL SYSTEM (MODEL 6501–511)	2"	1–1/4"	3/4"	
WH	INTANTANEOUS WATER HEATER, BOSCH TRONIC 5000 WH17, MOUNTED UNDER SINK			3/4"	3/4"
	DRINKING FOUNTAIN, ELKAY EMABF8L (OR APPROVED EQUAL), 8 GHP, GRAY CABINET COLOR, ¼ HP MOTOR, MOUNT BUBBLER AT 39"	1–1/4"	1–1/4"	3/8"	
	BALL VALVE, INSTALLED IN WALL WITH METAL ACCESS HATCH	PLAN			
	WATER HAMMER ARRESTOR, WATT COPPER W/ LOW–LEAD BRASS ADAPTER W/ BALL VAVLE TO MAIN WATER LINE, INSTALLED IN WALL WITH METAL ACCESS HATCH	PLAN			
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1ST FLOOR PLUMBING PLAN

WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

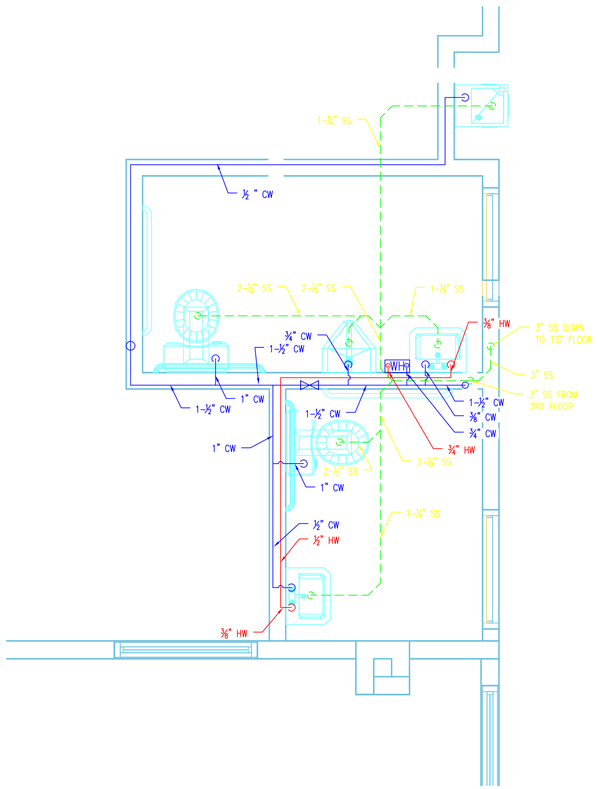
REV#:	DATE:	DESCRIPTION:

Registered Professional Engineer
CERTIFICATE NO.
47776
THOMAS W. AVANT
(CIVIL)
Thomas Avant
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: TWA

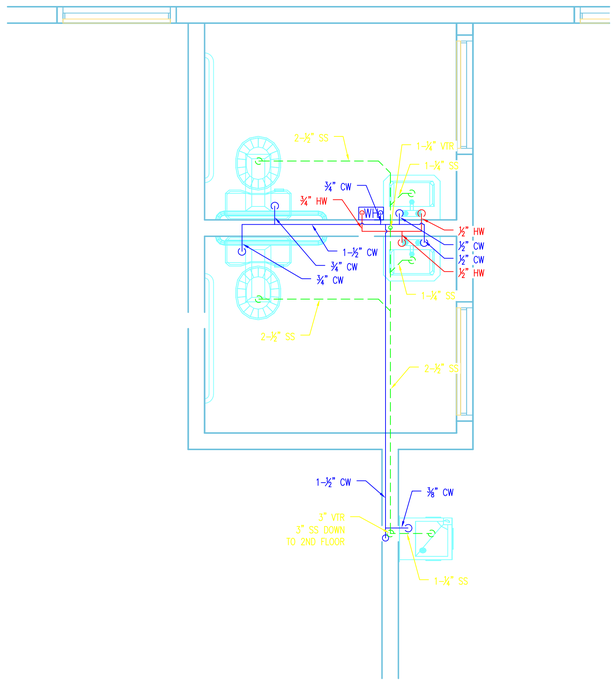
SCALE: 3/16" = 1'-0"

SHEET: P1.0



2ND FLOOR PLUMBING

SCALE: 1/2" = 1'



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2ND & 3RD FLOOR PLUMBING PLAN

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INITIAL SUBMITTAL:	12/12/2019	

Professional Engineer
CERTIFICATE
47776
THOMAS W. AVANT
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REGISTERED
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EXPIRES 6-30-2020

Thomas Avant

DRAWN BY: TWA

SCALE: 3/16" = 1'-0"

SHEET:

P1.1

GENERAL NOTES

1. DESIGN SNOW LOADS:
   ROOF = 30 PSF
   IMPORTANCE FACTOR – 1.0

   BASIS FOR WIND DESIGN:
   2012 INTERNATIONAL BUILDING CODE / ACSE 7–10
   WIND = 115 MPH BASIC WIND SPEED (Vult), EXPOSURE C.
   WIND USE GROUP – II
   IMPORTANCE FACTOR – 1.0

   SEISMIC – SITE CLASS D
   SEISMIC DESIGN CATEGORY B
   Ss = 0.176   Sds = 0.188
   S1 = 0.051   Sd1 = 0.029
   IMPORTANCE FACTOR – 1.0

   LATERAL FORCE RESISTING SYSTEM:
   LIGHT FRAMED WOOD SHEAR WALL w/ WOOD SHEATHED DIAPHRAGMS

2. THESE STRUCTURAL NOTES DO NOT SUPERSEDE THE PLAN NOTES. CONSULT THE PLAN NOTES SPECIFIC TO FOUNDATION AND FRAMING FOR ADDITIONAL REQUIREMENTS IN EACH SECTION. IF CONFLICT BETWEEN NOTES AND SPECIFICATIONS OCCURS, THE MOST STRINGENT REQUIREMENT GOVERNS. NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES, TYPICAL DETAILS, AND SPECIFICATIONS.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DURING CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OR CONSTRUCTION IN ANY AREA. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES, OMISSIONS, OR INCONSISTENCIES. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENTS AS DIRECTED BY THE ARCHITECT AND ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER. DO NOT SCALE DRAWINGS!

4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, AND THE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS. ALL SPECIFICATIONS NOTED SHALL BE THE LATEST APPROVED REVISION OR EDITION. THE GENERAL CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTING THEM TO THE ARCHITECT. A REVIEWED COPY OF ALL SHOP DRAWINGS SHALL BE KEPT AT THE CONSTRUCTION SITE FOR REFERENCE. THE SHOP DRAWING REVIEW SHALL NOT RELIEVE THE GENERAL CONTRACTOR OF ANY RESPONSIBILITY FOR COMPLETION OF THE PROJECT ACCORDING TO THE CONTRACT DOCUMENTS.

5. THE CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING, EXCAVATION OR OTHER EARTH WORK OPERATIONS FOR FILLED EXCAVATIONS, BURIED STRUCTURES OR UNNATURAL SOIL CONDITIONS.

6. STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO: BRACING, SHORING, ETC. SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT MEMBERS ARE IN PLACE AND CONNECTIONS COMPLETE. OBSERVATION VISITS TO THE SITE BY THE ENGINEER OR HIS REPRESENTATIVE SHALL NOT INCLUDE INSPECTION OF THESE ITEMS. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.

7. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE COMPLETE SET OF CONSTRUCTION DOCUMENTS AND ARE NOT INTENDED TO CONVEY ABSOLUTELY ALL INFORMATION RELATED TO THE PRIMARY STRUCTURE AS AN INDEPENDENT SET OF DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE WITH ALL TRADES, ANY AND ALL, ITEMS THAT ARE TO BE INTEGRATED INTO THE STRUCTURAL SYSTEM.

8. SEE ARCH'L DRAWINGS FOR THE FOLLOWING: (UNLESS NOTED SPECIFICALLY ON STRUCTURAL DRAWINGS)
   – SIZE AND LOCATION OF DOOR, WINDOW, FLOOR, AND ROOF OPENINGS
   – SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON–BEARING PARTITIONS
   – FLOOR AND ROOF FINISHES
   – STAIR FRAMING AND DETAILS (EXCEPT AS SHOWN).
   – DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS

9. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR THE FOLLOWING: (UNLESS SHOWN OR NOTED)
   – PIPE RUNS, SLEEVES, TRENCHES, HANGERS, WALL AND SLAB OPENINGS, ETC.
   – ELECTRICAL CONDUITS, BOXES, AND OUTLETS IN WALLS AND SLABS.
   – CONCRETE INSERT REQUIREMENTS FOR MECHANICAL AND ELECTRICAL.
   – SIZE AND LOCATION OF MACHINE OR EQUIP. BASES, ANCHOR BOLT REQUIREMENTS, ETC.

10. OPENINGS LARGER THAN 6 IN. SHALL NOT BE PLACED IN SLABS, DECKS, WALLS, ETC., UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW ABOVE CONDITIONS LOCATED IN STRUCTURAL MEMBERS.

11. OBSERVATION VISITS BY THE ENGINEER OR HIS REPRESENTATIVE SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.

FOUNDATIONS

1. FOUNDATION AND FOOTINGS ARE DESIGNED BASED ON A BEARING PRESSURE OF 1500 PSF AS PER SOILS REPORT PREPARED BY TC ENGINEERING, PC DATED ______

2. THE CONTRACTOR SHALL PROVIDE FOR PROPER DE–WATERING OF ANY AND ALL EXCAVATIONS IF REQUIRED.

3. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED TO SAFELY AND ADEQUATELY RETAIN ANY EXCAVATIONS.

4. ALL RETAINING WALLS, BUILDING WALLS, PITS, ETC. MUST HAVE ATTAINED THEIR DESIGN STRENGTH AND/OR SUPPORT PRIOR TO BACKFILLING. EXCEPTION – IF BRACING IS TO BE USED TO SUPPORT WALLS AND ETC. FOR EARLY BACKFILLING, CONTRACTOR IS RESPONSIBLE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.

5. GRADING SHALL ALLOW FOR POSITIVE DRAINAGE (2 PERCENT MINIMUM) AWAY FROM THE BUILDING, OTHER FOOTINGS AND FOUNDATIONS, DRIVES AND SIDEWALKS. ALL DOWN SPOUTS SHALL DRAIN ONTO 3 FOOT LONG SPLASH BLOCKS SLOPING AWAY FROM FOUNDATIONS.

6. EXCESSIVE WETTING OR DRYING OF THE FOUNDATION EXCAVATION AND THE FLOOR SLAB AREAS SHOULD BE AVOIDED DURING CONSTRUCTION.

7. ALL FILL SUPPORTING CONCRETE SLABS, FOOTINGS, OR ETC. SHALL BE MOISTENED AND COMPACTED IN 8" LIFTS TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D–1557 (MODIFIED PROCTOR). ALL OTHER FILL SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF NINETY (90) PERCENT OF MAXIMUM DRY DENSITY IN 8" LIFTS. COMPACTION TESTING SHALL BE PERFORMED BY AN APPROVED TESTING AGENCY AND THE RESULTS SUBMITTED TO THE STRUCTURAL ENGINEER. SUFFICIENT FIELD DENSITY TESTS SHALL BE PERFORMED TO CERTIFY BUILDING PADS ARE CONFORMING TO THE SPECIFICATIONS.

WOOD CONSTRUCTION

1. ALL PHASES OF WORK PERTAINING TO WOOD FRAMING OR WOOD CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS LISTED IN CHAPTER 23 OF THE I.B.C.

2. ALL WOOD BEAMS, JOISTS AND COLUMNS SHALL BE #2 DOUGLAS FIR (D.F.) GRADE LUMBER OR BETTER (U.N.O.) MICRO–LAM BEAMS SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 2,800 psi.

WOOD CONSTRUCTION (CONT'D)

3. ALL GLUE LAMINATED TIMBER MEMBERS SHALL HAVE THE FOLLOWING MINIMUM STRESS GRADE LUMBER:
   1. BENDING = 2400 psi
   2. TENSION = 1100 psi
   3. COMPRESSION PARALLEL TO GRAIN = 1650 psi

4. GLUE LAMINATED STRUCTURAL MEMBERS SHALL CONFORM TO THE U.S. DEPARTMENT OF COMMERCE COMMERCIAL STANDARD PS–56 AND SECTION 2312, TABLES 23–I–C AND 23–I–D OF THE I.B.C.

5. ALL STRUCTURAL PLYWOOD SHALL BE STRUCTURAL I OR STRUCTURAL II GRADE. A.P.A. PERFORMANCE RATED WAFERBOARD, COMPOSITE BOARD, AND ORIENTED STRAND BOARD (BUT NOT STRUCTURAL PARTICLE BOARD) ARE ACCEPTED AS EQUIVALENT TO PLYWOOD, PROVIDING SPECIFIED SPAN RATINGS AND OTHER SPECIFIED REQUIREMENTS FOR PLYWOOD ARE MET.

6. ALL PLATES OR OTHER LUMBER IN CONTACT WITH CONCRETE OR WITHIN 6 INCHES OF EARTH SHALL BE FOUNDATION REDWOOD ALL MARKED OR BRANDED BY THE REDWOOD INSPECTION SERVICE OR PRESSURE TREATED FOR MOISTURE PROTECTION.

7. TRUSSES AND/OR WEB JOISTS SHALL HAVE ALL BLOCKING, BRACING, BRIDGING, AND ETC. AS RECOMMENDED BY THE MANUFACTURER.

8. WALLS SHALL RUN CONTINUOUS BETWEEN HORIZONTAL SUPPORT POINTS, UNLESS ADEQUATE APPROVED BRACING IS PROVIDED.

9. REQUIRED MINIMUM NAILING SCHEDULE FOR USE WHERE NOT NOTED OTHERWISE ON PLANS OR DETAILS: (SEE IBC TABLE NO. 23–Q)
   STUD TO PLATES_______________TOE NAIL 4–8d OR END NAIL 2–16d
   DOUBLE TOP PLATES________FACE NAIL 16" O.C. STAGGERED 1–16d w/ 2–16d AT LAPS AND INTERSECTIONS.
   DOUBLE STUDS_____________________FACE NAIL 24" O.C. 16d
   CORNER STUD AND ANGLES_______24" O.C. 16d
   JOIST TO SILL OR GIRDERS________TOE NAIL 3–8d OR 2–16d
   SOLE PLATE TO JOIST/BLOCKING__FACE NAIL 16" O.C. 16d
   BRIDGING TO JOIST________________TOE NAIL EACH END 2– 8d
   PLYWOOD TO ROOF JOISTS, TRUSSES OR STUDS – SEE NAILING SCHEDULE.

10. NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN FLUSH BUT SHALL NOT BREAK THE SURFACE OF THE SHEATHING.

11. CONNECT ALL WOOD TO CONCRETE, WOOD TO STEEL, AND WOOD TO WOOD (EXCEPT STUD TO PLATE) WITH SIMPSON OR EQUAL CONNECTORS U.N.O.

CONCRETE

1. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) LATEST APPROVED EDITIONS, WITH MODIFICATIONS AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.

2. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. ALL CONCRETE IN CONTACT WITH THE EARTH SHALL CONTAIN TYPE V PORTLAND CEMENT UNLESS NOTED OTHERWISE (UNO). ALL CONCRETE SHALL BE AIR ENTRAINED BY 5% +/– 1%.

3. CALCIUM CHLORIDE SHALL NOT BE USED.

4. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS WITHIN 28 DAYS AFTER PLACEMENT (UNO):

   FOOTINGS 4,000 psi
   FOUNDATION 4,000 psi
   INTERIOR FLATWORK 4,000 psi
   ALL EXTERIOR CONCRETE 4,000 psi

5. MAXIMUM CONCRETE SLUMP SHALL NOT EXCEED 4 INCHES.

6. ALL CONCRETE SHALL BE THOROUGHLY CURED ACCORDING TO ACI RECOMMENDATIONS. FOLLOW ACI 306R "COLD WEATHER CONCRETING" AND ACI 305R "HOT WEATHER CONCRETING" FOR ALL CONCRETE AND MASONRY WORK WHEN REQUIRED BY CURRENT WEATHER CONDITIONS.

7. CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL CONFORM TO THE REQUIREMENTS IN SECTION 1906.3 OF THE INTERNATIONAL BUILDING CODE.

8. NO ALUMINUM OR ANY METAL INJURIOUS TO CONCRETE SHALL BE EMBEDDED IN CONCRETE.

9. BOTH INTERIOR AND EXTERIOR CONCRETE SLABS–ON–GRADE SHALL BE A MINIMUM OF 4 INCHES IN THICKNESS UNO, WITH SAWN OR TOOLED JOINTS A MAXIMUM 12 FEET IN EACH DIRECTION. SAWN JOINTS SHALL BE 1/4 SLAB THICKNESS IN DEPTH AND SHALL BE CUT AS SOON AS SURFACE ALLOWS AND NOT MORE THAN 12 HOURS AFTER CONCRETE PLACEMENT. CONSTRUCTION JOINTS SHALL BE PLACED SO AS TO LEAST IMPAIR ALL REINFORCING, AND BARS SHALL BE CONTINUOUS THROUGH JOINTS (UNO).

10. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCEMENT BARS SHALL BE AS FOLLOWS (UNO):
   – FOR CONCRETE PLACED DIRECTLY AGAINST EARTH, 3 IN. COVER
   – FOR CONCRETE SURFACES EXPOSED TO WEATHER, 1 1/2 IN. COVER
   – FOR CONCRETE SURFACES EXPOSED TO GROUND AFTER REMOVAL OF FORMS, 2" COVER.
   – FOR CONCRETE SURFACES NOT EXPOSED TO THE GROUND OR WEATHER: SLABS AND WALLS, 3/4 IN. COVER; JOISTS OR WAFFLE BEAMS, 1 IN. COVER; BEAMS, PIERS, AND COLUMNS, 1 1/2 IN. COVER.

11. AROUND OPENINGS IN CONCRETE SLABS, UNLESS OTHERWISE SCHEDULED, ADD REINFORCING EQUIVALENT TO BARS CUT BY OPENING. THE BARS PARALLEL TO THE MAIN REINFORCEMENT SHALL RUN THE FULL LENGTH OF THE SPAN. THE BARS PARALLEL TO THE TEMPERATURE STEEL SHALL RUN 40 BAR DIAMETERS EACH WAY BEYOND THE OPENING.

12. BARS SHALL NEVER BE SMALLER THAN SCHEDULED WALL REINFORCING. REINFORCING DOWELS FROM THE FOOTING SHALL BE THE SAME SIZE AND SPACING AS THE VERTICAL REINFORCEMENT IN THE WALL ABOVE. RUN DOWELS 44 DIAMETERS INTO WALL AND SAME INTO FOOTINGS. POSITION DOWELS BEFORE PLACING CONCRETE.

REINFORCING STEEL (FOR CONCRETE AND MASONRY)

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318 LATEST EDITION) AND THE MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION (1973 EDITION) BY THE CRSI AND THE WCRSI, AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.

2. CHAIRS, SUPPORTS AND TIE BARS REQUIRED IN ADDITION TO THE SCHEDULED REINFORCING SHALL BE FURNISHED BY THE CONTRACTOR.

3. ALL STEEL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60 WITH A MINIMUM YIELD STRENGTH OF 60,000 psi, WITH THE FOLLOWING THREE EXCEPTIONS:

   1. #3 AND #4 COLUMN TIES AND BEAM STIRRUPS AND BREAKOUT DOWELS SHALL BE GRADE 40 WITH A MINIMUM YIELD STRENGTH OF 40,000 psi.
   2. ANY AND ALL REINFORCING THAT IS TO BE WELDED SHALL BE DEFORMED WELDABLE BAR (DWB) THAT CONFIRMS TO ASTM A706 GRADE 60.
   3. UNLESS NOTED OTHERWISE (UNO) ON DRAWINGS.

4. WELDING OF REINFORCING SHALL BE WITH LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL AMERICAN WELDING SOCIETY, AWS–D1.4.

5. SPLICES OF REINFORCING BAR, IF REQUIRED, SHALL BE AVOIDED AT POINTS OF MAXIMUM STRESS. ALL SPLICES AND LAPS IN REINFORCING BARS SHALL CONFORM TO TYPICAL DETAIL B/S0.1. SPLICES SHALL BE MADE IN A REGION OF COMPRESSION, UNLESS SHOWN OTHERWISE.

REINFORCING STEEL (FOR CONCRETE AND MASONRY) – (CONT'D)

6. REINFORCING BARS SHALL NEITHER BE WELDED NOR BENT BY HEATING. WHERE INSERTS REQUIRE WELDING TO PLATES, ANGLES OR THE LIKE, DEFORMED WELDABLE BARS SHALL BE USED.

7. ALL HOOKS IN REINFORCING BARS SHALL BE BENT 180 DEGREES WITH AN INSIDE DIAMETER OF 6 BAR DIAMETERS FOR BARS UP TO 1 IN. AND 8 BAR DIAMETERS FOR BARS OVER 1 IN. IN DIAMETER. EXTEND BARS A MINIMUM OF 4 BAR DIAMETERS BEYOND BEND. REFER TO STANDARD REBAR BEND DETAILS (A/S0.1) AND TYP. REBAR LAP LENGTH DETAILS (B/S0.1) FOR CLARIFICATION

8. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE, AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNO.

STRUCTURAL STEEL

1. STRUCTURAL STEEL STRENGTH REQUIREMENTS:
   WIDE FLANGE SHAPES (W SECTIONS) – ASTM A992, GRADE 50, Fy= 50 KSI
   CHANNELS, ANGLES, PLATES, RODS, AND BARS – A36, Fy= 46 KSI
   SQUARE AND RECTANGULAR TUBES ASTM A500 – GRADE B, Fy= 46 KSI
   PIPES ASTM A53 – GRADE B, Fy= 36 KSI

2. ANCHOR BOLTS AND THREADED RODS SHALL CONFORM TO ASTM A36 OR A307

3. DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE REQUIREMENTS OF THE AISC MANUAL OF STEEL CONSTRUCTION, LRFD, 13TH EDITION

4. WHERE STEEL MEMBERS ARE WELDED AND NO SIZE IS SPECIFIED, PROVIDE FULL LENGTH FILLET WELDS BOTH SIDES OF MEMBER. WELD SIZES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
   MEMBER THICKNESS (INCHES)............................WELD SIZE (INCHES)
   3/16...3/16
   1/4...3/16
   5/16...3/16
   3/8...1/4
   7/16...1/4
   1/2...5/16
   9/16...3/8
   5/8...7/16

5. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER AS TO LOCATION AND TYPE OF SPLICE TO BE MADE. ANY MEMBER HAVING A SPLICE NOT SHOWN AND DETAILED ON SHOP DRAWINGS WILL BE REJECTED

6. ALL WELDING SHALL CONFORM TO THE AWS CODE. E70 SERIES ELECTRODES SHALL BE USED FOR ALL STRUCTURAL STEEL WELDS

7. STRUCTURAL STEEL SHALL BE PUNCHED BY THE STEEL FABRICATOR FOR ALL BOLTED CONNECTIONS, WOOD BLOCKING, NAILERS, CLIPS AND TIES IN ACCORDANCE WITH ARCHITECTURAL/STRUCTURAL DETAILS

8. ULTRASONIC INSPECTION BY THE TESTING LABORATORY SHALL BE PROVIDED FOR ALL WELDS CALLED FOR ON THE STRUCTURAL DRAWINGS OR SHOP DRAWINGS AS PARTIAL OR FULL PENETRATION WELDS. ALL FIELD WELDS SHALL BE INSPECTED BY AN AWS CWI INSPECTOR

9. COMPLETE STEEL FABRICATION SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION PROCESS

10. ALL STEEL EXPOSED TO VIEW SHALL BE CLASSIFIED AS ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) AS DEFINED BY THE AISC CODE OF STANDARD PRACTICE AND SHALL BE TREATED AS SUCH

11. ALL BOLTS IN STEEL TO STEEL CONNECTIONS (EXCEPT SHEAR CONNECTIONS) SHALL BE TORQUED OR PRETENSIONED TO MEET THE REQUIREMENTS FOUND IN "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".

PLATED WOOD TRUSSES

1. DESIGN CRITERIA:
   ROOF TRUSSES:
   WIND LOAD (UPLIFT) = 11 psf
   SNOW LOAD (ROOF) = 30 psf
   DEAD LOAD TOP CHORD = 14 psf
   LIVE LOAD BOTTOM CHORD = 10 psf

   FLOOR TRUSSES:
   TOP CHORD DEAD LOAD = 12 psf (*ADD 12 psf WHERE TILE OCCURS ON FLOOR (i.e. BATHROOMS, LOBBIES))
   BOTTOM CHORD DEAD LOAD = 6 psf
   TOP CHORD LIVE LOAD = 50 psf
   TOP CHORD LIVE LOAD AT LOBBIES = 100 psf
   TOP CHORD LIVE LOAD AT CORRIDORS = 80 psf
   *ADD 8 psf WHERE INTERIOR WALLS OCCUR
   *MAXIMUM ALLOWABLE TRUSS DEPTH SHALL BE 18"

2. NO TRUSS MEMBER SHALL BE STAMPED STUD, UTILITY, CONSTRUCTION, OR #3 GRADE.

3. USE ONLY ALPINE PLATES (STAMPED ALPINE), BOWMAN PLATES (STAMPED B OR COMBO– LOCK), HYDRO AIR PLATES (STAMPED HYDRO–MAIL), GANG–NAIL PLATES (BLUE AND WHITE BANDS WITH GANG NAIL SPELLED OUT), AND MITEDC PLATES, TRUSSES WITH ANY OTHER PLATES SHALL BE REJECTED UNLESS PLATE ICBO REPORT IS INCLUDED W/ SUBMITTAL.

4. ALL GUSSET PLATES SHALL EXTEND AT LEAST 2 1/2" ONTO EACH MEMBER AT EACH JOINT.

5. NO JOINT SHALL HAVE MORE THAN 1/16" AVERAGE GAP BETWEEN BEARING SURFACES.

6. PLATES SHALL BE FLUSH WITH WOOD, BUT THE WOOD SHALL NOT BE CRUSHED.

7. LUMBER AT PLATES SHALL BE A COMPLETE SECTION WITH NO KNOTS OR EXCESSIVE WARE.

8. ALL TRUSSES ARE TO BE ENGINEERED BY THE TRUSS MANUFACTURER. SHOP DRAWINGS ARE TO BE SUPPLIED FOR EACH TRUSS AND STAMPED BY A UTAH REGISTERED PROFESSIONAL ENGINEER. SUBMIT SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

9. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION:

   – THE ALLOWABLE LOADS IN POUNDS PER EFFECTIVE NAIL FOR THE LUMBER AND PLATES USED AS ALLOWED BY ICBO AND ICBO REPORT NUMBER.
   – A STATEMENT THAT THE MINIMUM PLATE SIZE IS 15 SQUARE INCHES.
   – DURATION FACTORS OR STRESS REDUCTION FACTORS USED IN THE DESIGN OF THE LUMBER AND PLATES.
   – TOP AND BOTTOM CHORD DESIGN LOADS IN psf.
   – SIZE, GAUGE, AND EXACT LOCATION BY DIMENSION OF ALL PLATES.
   – THE LUMBER SPECIES AND GRADES USED.
   – ENGINEER'S STAMP AND SIGNATURE.
   – THE NAME AND TRADEMARK OF THE PLATE MANUFACTURER, THE TRUSS FABRICATOR AND THE PROJECT NAME AND ADDRESS.
   – COMPUTED MID–SPAN DEFECTION (TOTAL LOAD).

10. FOR ALL FLAT BOTTOM, CHORD TRUSSES, SIZE PLATES FOR 125 PERCENT OF MEMBER FORCES OR USE A STRESS REDUCTION FACTOR OF 0.8 FOR PLATE VALUES. NO STRESS INCREASE FOR DURATION OF LOADING OR FOR ANY OTHER FACTOR SHALL BE USED TO INCREASE PLATE VALUES. ONLY ONE PLATE PER PANEL POINT PER TRUSS SIDE WILL BE ALLOWED. EACH CHORD SECTION SHALL EXTEND THROUGH TWO PANEL POINTS PRIOR TO BEING SPLICED.

11. TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOAD COMBINATIONS:
   – FULL SNOW LOAD
   – UNBALANCED SNOW LOAD ON ONE–HALF OF THE SPAN
   – FULL WIND LOAD – 8 psf NET UPLIFT

12. THE FOLLOWING TWO PUBLICATIONS SHALL BE COMPLIED WITH WHILE HANDLING AND INSTALLING TRUSSES: "HANDLING AND ERECTION OF WOOD TRUSSES" (HET–80) BY TRUSS PLATE INSTITUTE AND "BRACING WOOD TRUSSES" (BWT–76) BY TRUSS PLATE INSTITUTE.

SPECIAL INSPECTION

1. SPECIAL INSPECTION AND QUALITY ASSURANCE, AS REQUIRED BY SECTION 1704 THRU 1709 OF THE IBC, SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER UNLESS WAIVED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE REQUIRED INSPECTIONS. ALL TESTING AND INSPECTION REPORTS SHALL BE SENT WITHIN 24 HOURS OF THE TEST TO THE ARCHITECT, ENGINEER, BUILDING OFFICIAL AND CONTRACTOR FOR REVIEW. SPECIAL INSPECTION DURING FABRICATION IS NOT REQUIRED IF THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. ITEMS REQUIRING SPECIAL INSPECTION AND QUALITY ASSURANCE ARE:

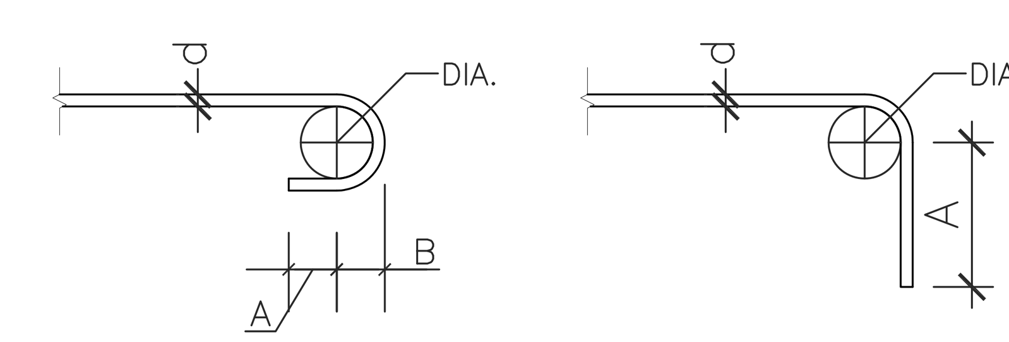
2. SOILS (IBC 1704.7)
   A. PRIOR TO PLACEMENT OF THE PREPARED FILL, THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
   B. DURING PLACEMENT AND COMPACTION OF THE FILL MATERIAL, THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE MATERIAL BEING USED AND THE MAXIMUM LIFT THICKNESS COMPLY WITH THE SOILS REPORT.
   C. THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE IN–PLACE DRY DENSITY OF THE COMPACTED FILL MATERIAL COMPLIES WITH THE SOILS REPORT.
   C.A. CONTINUOUS FOOTING BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST ONE TEST FOR EACH 40 LINEAR FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
   C.B. SPOT FOOTING BACKFILL: MINIMUM OF ONE COMPACTION TEST FOR EACH LIFT FOR EACH SPOT FOOTING.

3. CONCRETE PLACEMENT (IBC 1704.4)
   A. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED.
   B. CYLINDERS, SLUMP, TEMPERATURE AND AIR–ENTRAINMENT SHALL BE DONE FOR EVERY 50 CUBIC YARDS OR EACH DAY'S PRODUCTION IF THE DAY'S PRODUCTION IS LESS THAN 50 CUBIC YARDS
   C. PROTECTION OF CONCRETE DURING COLD AND HOT WEATHER.

4. BOLTS INSTALLED IN CONCRETE (IBC 1704.4)
   A. ALL BOLTS SHALL BE SPECIAL INSPECTED PRIOR TO AND DURING CONCRETE PLACEMENT.

5. CONCRETE REINFORCING STEEL PLACEMENT (IBC 1704.4)
   A. ALL REINFORCING SHALL BE SPECIAL INSPECTED PRIOR TO CONCRETE PLACEMENT.

6. EPOXY ANCHORS (IBC 1704.13)
   A. SPECIAL INSPECTION SHALL VERIFY ALL DRILLED HOLES' SIZE AND DEPTH PRIOR TO INSTALLATION OF EPOXY AND ANCHOR ROD.



BAR SIZE	d (BAR DIA.)	DIA.	180° HOOKS A	180° HOOKS B	90° BENDS A
#3	3/8"	2 1/4"	2 1/2"	1 1/2"	4 1/2"
#4	1/2"	3"	2 1/2"	2"	6"
#5	5/8"	3 3/4"	2 1/2"	2 1/2"	7 1/2"
#6	3/4"	4 1/2"	3"	3"	9"

A STANDARD REBAR BENDS DETAIL
NTS

BAR SIZE	d (BAR DIA.)	LAP LENGTH	HOOK EMBED
#3	3/8"	15"	6 1/2"
#4	1/2"	19 1/2"	8 1/2"
#5	5/8"	24"	10 1/2"
#6	3/4"	29"	12 1/2"

B TYP. REBAR LAP LENGTHS
NTS

DATE:	REVISION:
04/08/15	INITIAL DESIGN
	OWNER REVIEW
	CITY APPROVAL
07/30/15	FOR CONSTRUCTION

WINDOW ROCK OFFICE BUILDING
STRUCTURAL SPECIFICATIONS
WINDOW ROCK, AZ
SCALE = NTS

Thomas Avant
47776
THOMAS W. AVANT
7/30/2015

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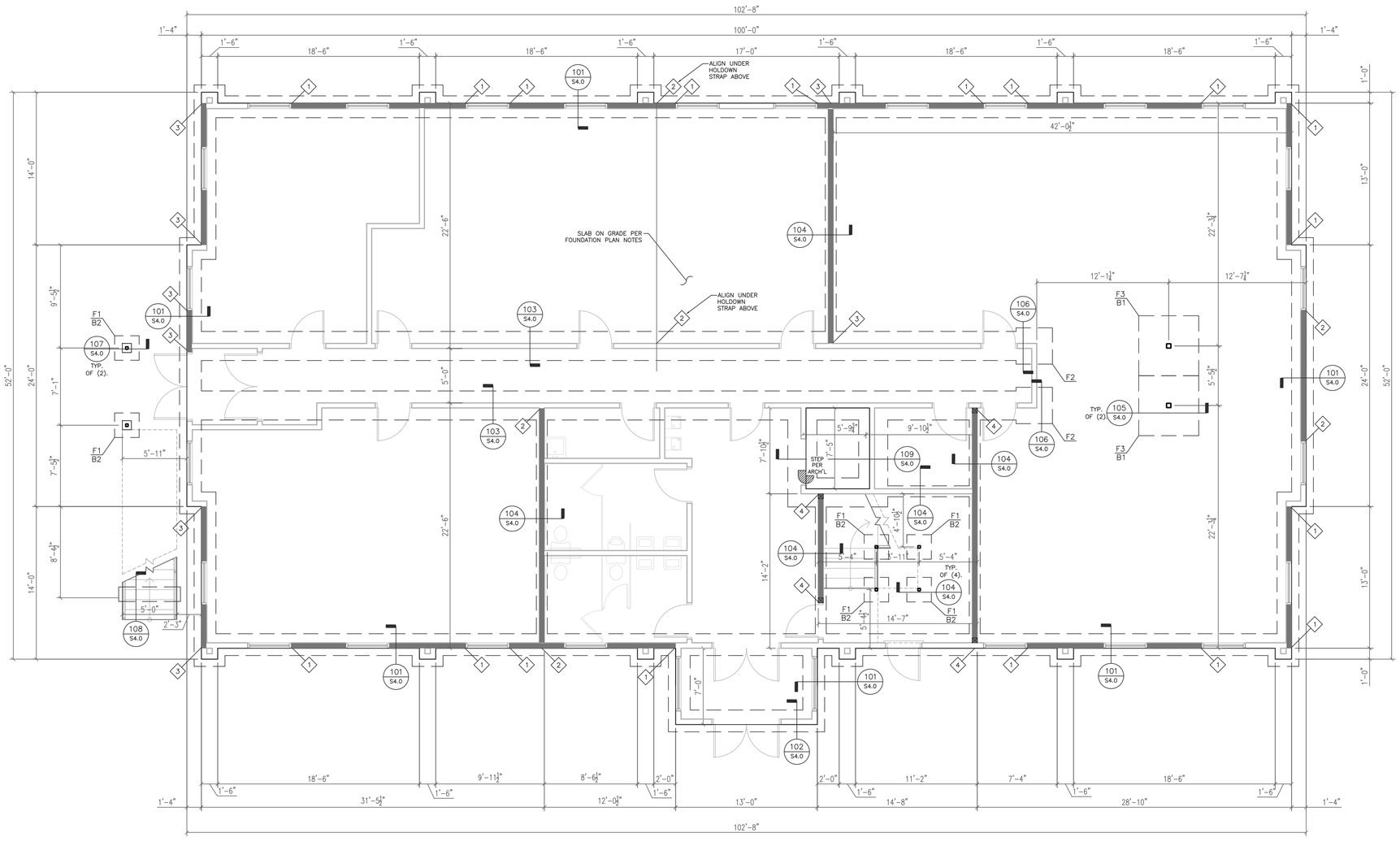


FOUNDATION PLAN NOTES:

1. TYP. MINIMUM EXTERIOR FOOTING EMBEDMENT SHALL BE 30" UNLESS NOTED OTHERWISE ON PLANS OR DETAILS
2. REFER TO STRUCTURAL SPECIFICATIONS FOR ALL PAD GRADING AND PREPARATION AS WELL AS COMPACTION REQUIREMENTS
3. TYP. SLAB SHALL BE 4" THICK AND REINFORCEMENT SHALL BE #3 BARS AT 18" o.c. EACH WAY CENTERED IN SLAB THICKNESS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS
4. ALL CONCRETE SHALL BE TYPE V CONCRETE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS
5. ALL INTERIOR SLABS ON GRADE TO BE CAST OVER MINIMUM 2" SAND OVER 10 MIL VISQUEEN OVER 6" TYPE II AGGREGATE BASE OR PROVIDE EQUIVALENT VAPOR/MOISTURE BARRIER. NOT REQ'D WHERE NO FLOOR COVERINGS TO BE APPLIED
6. CONTRACTOR TO VERIFY LOCATION OF ALL ANCHOR BOLTS, HOLDOWN ANCHORS, INSERTS, PLUMBING, ETC... PRIOR TO PLACING CONCRETE
7. VERIFY ALL DIMENSIONS w/ ARCH'L DRAWINGS PRIOR TO PLACING CONCRETE
8. CLEAR BUILDING PAD OF ALL LOOSE DEBRI, SHRUBS, ORGANIC MATERIAL, ETC.. PRIOR TO PLACEMENT OF CONCRETE
9. PROVIDE ABU TYPE POST BASE TO MATCH POST DIMENSIONS AT ALL EXTERIOR WOOD POSTS UNLESS NOTED OTHERWISE ON PLAN
10. ALL WOOD IN CONTACT w/ CONCRETE (I.E. LEDGERS, NAILERS, ETC...) SHALL BE PRESSURE TREATED OR PROVIDE APPROVED VAPER BARRIER BETWEEN WOOD AND CONCRETE
11. APPLY APPROVED WATERPROOFING ON ALL FOUNDATION WALLS BELOW GRADE. NOT REQ'D AT TYP. PERIMETER FOOTING w/ SOIL ON EA. SIDE OF STEM WALL
12. REFER TO FOOTING SCHEDULE FOR FOOTING SIZE AND REINFORCEMENT. FOOTINGS REFERENCED ON PLAN AS FOLLOW: F1, F2, F3.....
13. REFER TO BASEPLATE SCHEDULE FOR BASEPLATE AND ANCHOR BOLTS SIZES, THICKNESSES, ETC.. BASEPLATES REFERENCED ON PLAN AS B1, B2, B3.....
14. REFER TO TYPICAL DETAIL 110/S4.0 "TYP. PIPE PERPENDICULAR TO FOOTING" FOR TREATMENT WHERE PIPES ARE REQUIRED TO CROSS PERPENDICULAR THROUGH FOOTINGS
15. REFER TO TYPICAL DETAIL 111/S4.0 "TYP. POUR JOINT AT CONCRETE SLAB" FOR TREATMENT AT SLAB CONSTRUCTION JOINTS
16. PROVIDE 1/2" DIA. x 8" MIN. EMBED ANCHOR BOLTS AT 48" o.c. AT ALL EXTERIOR AND BEARING WALLS TYP., U.N.O. ON PLANS OR SHEAR/BRACED WALL SCHEDULE ON FRAMING PLAN. MIN. (2) ANCHOR BOLTS PER PLATE. INSTALL MIN. 12" FROM CORNERS AND END OF PLATES. INSTALL ANCHOR BOLTS w/ 3"x3" PLATE WASHERS
17. REFER TO FRAMING PLAN FOR LOCATION AND LENGTH OF ALL BRACED WALLS AND BOTTOM PLATE ANCHOR BOLTING REQUIREMENTS
18. SHEAR/BRACED WALL HOLDOWNS SHALL BE MARKED ON PLAN AS FOLLOWS. HOLDOWNS SHALL BE FASTENED TO END STUDS OF SHEAR WALL. FOLLOW ALL MFR. REQUIREMENTS FOR INSTALLATION OF HOLDOWNS:

1 SIMPSON STHD10 (INSTALL PER MFR. RECOMMENDATIONS) or HDU2 HOLDOWN w/ ⅝" DIA. ALL-THREAD w/ MIN. 8" EMBED INTO FOOTING w/ DOUBLE HEAVY HEX NUT AND WASHER ON END (INSTALL PER MFR. RECOMMENDATIONS)

2 SIMPSON STHD14 (INSTALL PER MFR. RECOMMENDATIONS) or HDU5 HOLDOWN w/ ⅝" DIA. ALL-THREAD w/ MIN. 8" EMBED INTO FOOTING w/ DOUBLE HEAVY HEX NUT AND WASHER ON END (INSTALL PER MFR. RECOMMENDATIONS)

3 HDU8 HOLDOWN w/ ⅞" DIA. ALL-THREAD w/ MIN. 8" EMBED INTO FOOTING w/ DOUBLE HEAVY HEX NUT AND WASHER ON END (INSTALL PER MFR. RECOMMENDATIONS)

4 HDU14 HOLDOWN w/ 1" DIA. ALL-THREAD w/ MIN. 8" EMBED INTO FOOTING w/ DOUBLE HEAVY HEX NUT AND WASHER ON END (INSTALL PER MFR. RECOMMENDATIONS)

1 1 DENOTES SHEAR/BRACED WALL AND REQ'D HOLDOWNS AS OCCUR

FOOTING SCHEDULE

FOOTING LABEL	FOOTING LENGTH/WIDTH	FOOTING THICKNESS	REQ'D REINFORCING
F1	2'-3" x 2'-3" SQ.	10"	(3) #4 BARS E.W. BOTTOM
F2	3'-4" x 3'-4" SQ.	12"	(5) #4 BARS E.W. BOTTOM
F3	5'-6" x 5'-6" SQ.	12"	(8) #4 BARS E.W. BOTTOM

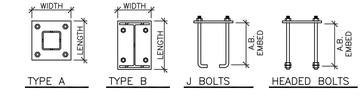
BASEPLATE SCHEDULE

B.P. LABEL	B.P. TYPE	B.P. LENGTH/WIDTH	B.P. THICKNESS	ANCHOR BOLTS	A.B. EMBED DEPTH/TYPE
B1	A	11" x 11"	3/8"	(4) ⅝" DIA. A.B.	8" J-BOLT
B2	A	9" x 9"	3/8"	(4) ⅝" DIA. A.B.	8" J-BOLT

A. ALL EDGE DISTANCE, END DISTANCE, AND BOLT SPACINGS SHALL BE PER MINIMUM AISC SPECIFICATIONS.

B. ALL BOLT EMBED DEPTHS ARE TO BE MEASURED FROM TOP OF CONCRETE

C. EPOXY USED FOR EPOXY ANCHORS SHALL BE SIMPSON SET EPOXY OR APPROVED ALTERNATE AND SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATION



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WINDOW ROCK OFFICE BUILDING (2 & 3)

FOUNDATION PLAN

WINDOW ROCK
AZ 86515

REV#:	DATE:	DESCRIPTION:
INITIAL SUBMITTAL:	12/12/2019	

PROFESSIONAL ENGINEER CERTIFICATE
47776
THOMAS W. AVANT
12/12/2019
REGISTERED
ARIZONA U.S.A.
EXPIRES 6-30-2020

DRAWN BY: RMD

SCALE: 3/16" = 1'-0"

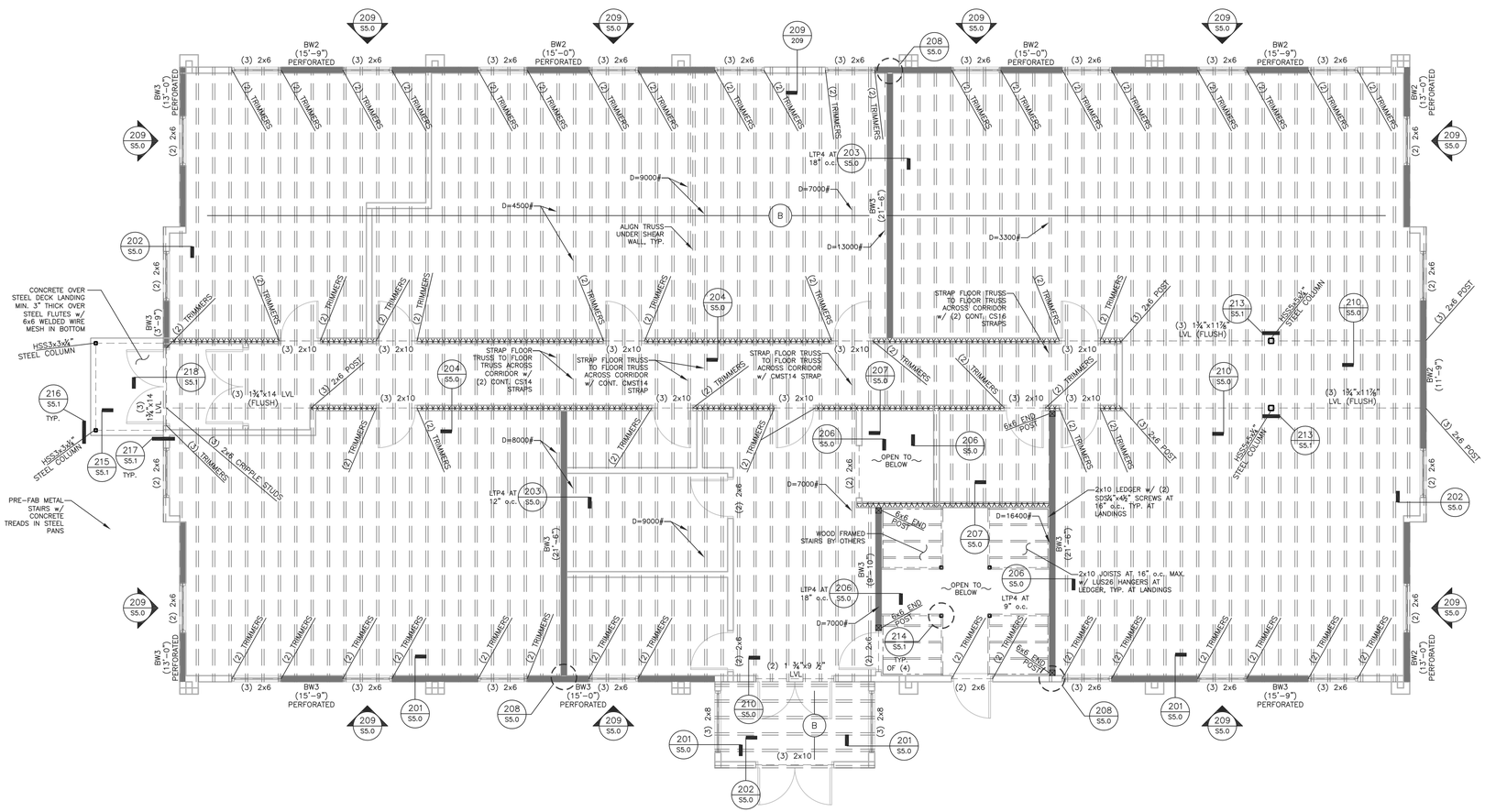
SHEET: S1.0

STRAPPING SCHEDULE			
STRAP LABEL	STRAP END LENGTH	MIN. FASTENERS IN END LENGTH	STRAP INTERMEDIATE NAILING
CS16	13" MIN.	(13) 8d MIN.	(2) 8d AT 4⅛" o.c.
CS14	16" MIN.	(18) 8d MIN.	(2) 8d AT 4⅛" o.c.
CMST14	30" MIN.	(33) 10d MIN.	(2) 10d AT 3½" o.c.
CMST12	39" MIN.	(43) 10d MIN.	(2) 10d AT 3½" o.c.

STRAPPING NOTES:

1. REFER TO FRAMING PLAN FOR STRAP CALLOUTS. (I.E. CS16, CS14,...)
2. WHERE STRAPS ARE CALLED OUT AS SHEAR WALL HOLDOWNS, INSTALL STRAP w/ END LENGTH AND NAILING PER SCHEDULE TO BOTH SHEAR WALL END STUDS ABOVE AND SHEAR WALL END STUDS or OTHER FRAMING BELOW FLOOR DIAPHRAGM. FASTEN STRAP ACROSS FLOOR DIAPHRAGM w/ INTERMEDIATE NAILING PER SCHEDULE. TOTAL STRAP LENGTH SHALL BE LENGTH OF BOTH ENDS PLUS THICKNESS OF DIAGPHRAM.
3. INSTALL STRAPPING OVER THE TOP OF SHEATHING AS OCCURS

TYPICAL STRAP CALLOUT AT SHEAR WALL



FRAMING SCHEDULE:

(A) PRE-MANUFACTURED OPEN WEB ROOF TRUSSES @ 24" o.c.
(B) PRE-MANUFACTURED OPEN WEB FLOOR TRUSSES @ 16" o.c. MAX.

FRAMING PLAN NOTES:

1. REFER TO PLANS AND DETAILS FOR ALL NAILING REQUIREMENTS. WHERE NAILING IS NOT SPECIFIED ON DRAWINGS, REFER TO TABLE 2304.9.1 OF THE 2012 IBC FOR MINIMUM NAILING REQUIREMENTS
2. EXTERIOR WALL FRAMING SHALL BE 2x6 STUDS AT 16" o.c. MAX. AT 2ND AND 3RD FLOORS AND 12" o.c. MAX. AT 1ST FLOOR, U.N.O. ON PLAN. INTERIOR CORRIDOR WALLS SHALL BE MIN. 2x6 STUDS AT 16" o.c. MAX. AT 2ND AND 3RD FLOORS AND 12" o.c. MAX. AT 1ST FLOOR, U.N.O. ON PLANS. OTHER INTERIOR WALLS SHALL BE PER ARCH'L DRAWINGS. REFER TO ARCH'L DRAWINGS FOR REQ'D 2x6 INTERIOR PLUMBING WALLS
3. PROVIDE MIN. (1) TRIMMER STUD AND (1) KING STUD AT EACH END OF EACH WOOD HEADER U.N.O. ON PLAN. PROVIDE MIN. (1) TRIMMER STUD AT EACH INTERIOR BEARING LOCATION AT CONTINUOUS BEAM, U.N.O. ON PLAN
4. PROVIDE CONTINUOUS DOUBLE TOP PLATE AT ALL WOOD FRAMED BEARING WALLS. WHERE TOP PLATE CANNOT BE RUN CONTINOUS OVER HEADER, STRAP HEADER TO TOP PLATE w/ CS16x32" w/ (28) 8d EA. END OF HEADER
5. REFER TO TYPICAL DETAIL 309/S5.2 FOR HEADER TO KING STUD/POST CONNECTION
6. REFER TO SHEAR/BRACED WALL SCHEDULE FOR MINIMUM SHEAR REQUIREMENTS. ALL EXTERIOR SHEAR WALL PANELS SHALL BE ½" FIRE-RETARDANT TREATED PLYWOOD. SHEATHE ALL OTHER EXTERIOR WOOD FRAMED WALLS w/ MINIMUM 1/2" FIRE-RETARDANT TREATED PLYWOOD SHEATHING w/ NAILS OR STAPLES PER THE I.B.C., U.N.O. ON PLAN OR DETAILS
7. TYP. FLOOR SHEATHING SHALL BE 3/4" THICK T & G PLYWOOD OR O.S.B. APA RATED STRUCTURAL GRADE 1 GLUED AND FASTENED w/ 10d RING SHANK NAILS AT 6" o.c. EDGES AND 12" o.c. FIELD U.N.O. ON PLANS OR DETAILS. TYP. ROOF SHEATHING SHALL BE 5/8" THICK PLYWOOD OR O.S.B. APA RATED STRUCTURAL GRADE 1 w/ 10d NAILS AT 6" o.c. EDGES AND 12" o.c. FIELD U.N.O. ON PLANS OR DETAILS.
8. LAMINATED VENEER LUMBER (LVL) SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS (Fb) OF 2800 PSI AND A MINIMUM MODULUS OF ELASTICITY (E) OF 2,000,000 PSI. MULTI-PLY LVL BEAMS SHALL BE FASTENED TOGETHER PER MFR. SPECIFICATIONS
9. CLIP EVERY OTHER TRUSS OR RAFTER TO TOP PLATE OR NAILER w/ H2.5A CLIP.
10. ALL HARDWARE SHALL BE SIMPSON STRONG TIE OR APPROVED EQUAL. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH MFR'S WRITTEN INSTRUCTIONS USING THE TYPE, SIZE AND NUMBER OF FASTENERS SPECIFIED FOR EACH CONNECTOR.
11. STRUCTURAL FRAMING MEMBERS SHALL NOT BE NOTCHED, DRILLED OR OTHERWISE ALTERED WITHOUT WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER.
12. PROVIDE CONT. BEARING THOUGH FLOOR DIAPHRAGM(S) FROM ROOF FRAMING TO FOUNDATION FOR POSTS, TRIMMER STUDS, ETC...
13. ALL TRUSS TO TRUSS CONNECTIONS SHALL BE PER TRUSS MANUFACTURER SPECIFICATIONS
14. PROVIDE MINIMUM (2) 2X6 STUDS BENEATH EA. GIRDER TRUSS OR INTERIOR BEAM AT BEARING UNLESS NOTED OTHERWISE ON PLAN
15. "D=" DENOTES TRUSS SHALL BE DESIGNED BY TRUSS DESIGNER FOR DRAG LOAD AS SPECIFIED ON PLAN (I.E. D=1000#). BOUNDARY FASTEN ROOF SHEATHING ALONG DRAG TRUSS w/ 10d AT 6" o.c. or (2) ROWS 10d AT 6" o.c. MAX. AT INTERIOR DRAG TRUSS
16. SHEAR PANEL BLOCKING CONSTRUCTION AS NOTED ON PLAN SHALL CONSIST OF 2x4 MEMBERS ON ALL (4) SIDES OF PANEL SHEATHED w/ MIN. ⅜" THICK OSB OR PLYWOOD SHEATHING w/ 8d EDGE NAILING AT 6" o.c. MAX. AROUND PERIMETER.
17. WHERE STRAPPING CALLED OUT ON FRAMING PLANS, REFER TO STRAPPING SCHEDULE FOR REQUIRED STRAP LENGTHS AND NAILING.

INTERIOR BEARING WALL

SHEAR/BRACED WALL SCHEDULE			
SHEAR/ BRACED WALL	MIN. SHEATHING THICKNESS	SHEATHING NAILING	BOTTOM PLATE NAILING/ANCHOR BOLTS
BW1	3/8"	8d AT 6" o.c. EDGES, 12" o.c. FIELD	16d AT 6" o.c. OR 1/2" DIA. x 10" A.B. AT 32" o.c.
BW2	3/8"	8d AT 4" o.c. EDGES, 12" o.c. FIELD	16d AT 4" o.c. OR 1/2" DIA. x 10" A.B. AT 24" o.c.
BW3	3/8"	8d AT 3" o.c. EDGES, 12" o.c. FIELD	1/2" DIA. x 10" A.B. AT 16" o.c.

SHEAR/BRACED WALL NOTES:

1. REFER TO PLAN FOR MINIMUM LENGTH AND LOCATION OF SHEAR/BRACED WALLS
2. MIN. (2) FULL HEIGHT STUDS REQUIRED AT EACH END OF SHEAR WALLS w/ HOLDOWNS. ONLY (1) REQ'D AT SHEAR/BRACED WALLS WITHOUT HOLDOWNS
3. BLOCK AND EDGE NAIL ALL SHEATHING PANEL EDGES w/ SOLID 2x BLOCKING
4. REFER TO FOUNDATION PLAN FOR SHEAR WALL HOLDOWN TYPE AND LOCATION AS OCCUR
5. SHEAR WALLS SHALL BE BEARING WALLS UNLESS NOTED OTHERWISE ON PLAN
6. BOTTOM PLATE NAILING SHALL BE USED WHERE SHEAR WALL OCCURS AT RAISED FLOOR AND ANCHOR BOLTS SHALL BE USED WHERE SHEAR WALL OCCURS AT FOUNDATION. EXTEND SHEAR WALL SHEATHING NAILNG TO NAILER AT CONCRETE WALL WHERE SHEAR WALLS OCCUR AT WOOD FLOOR OVER CONCRETE WALL
7. WHERE SHEAR WALL OCCURS AT RAISED FLOOR, CRIPPLE WALL BETWEEN SHEAR WALL BOTTOM PLATE AND SOLE PLATE AT FOUNDATION SHALL BE SHEATHED AND NAILED TO MATCH SHEAR WALL ABOVE

BW# (LENGTH) DENOTES SHEAR/BRACED WALL

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WINDOW ROCK OFFICE BUILDING (2 & 3)

2ND FLOOR FRAMING PLAN

WINDOW ROCK
AZ 86515

REV#:	DATE:	DESCRIPTION:
		INITIAL SUBMITTAL: 12/12/2019

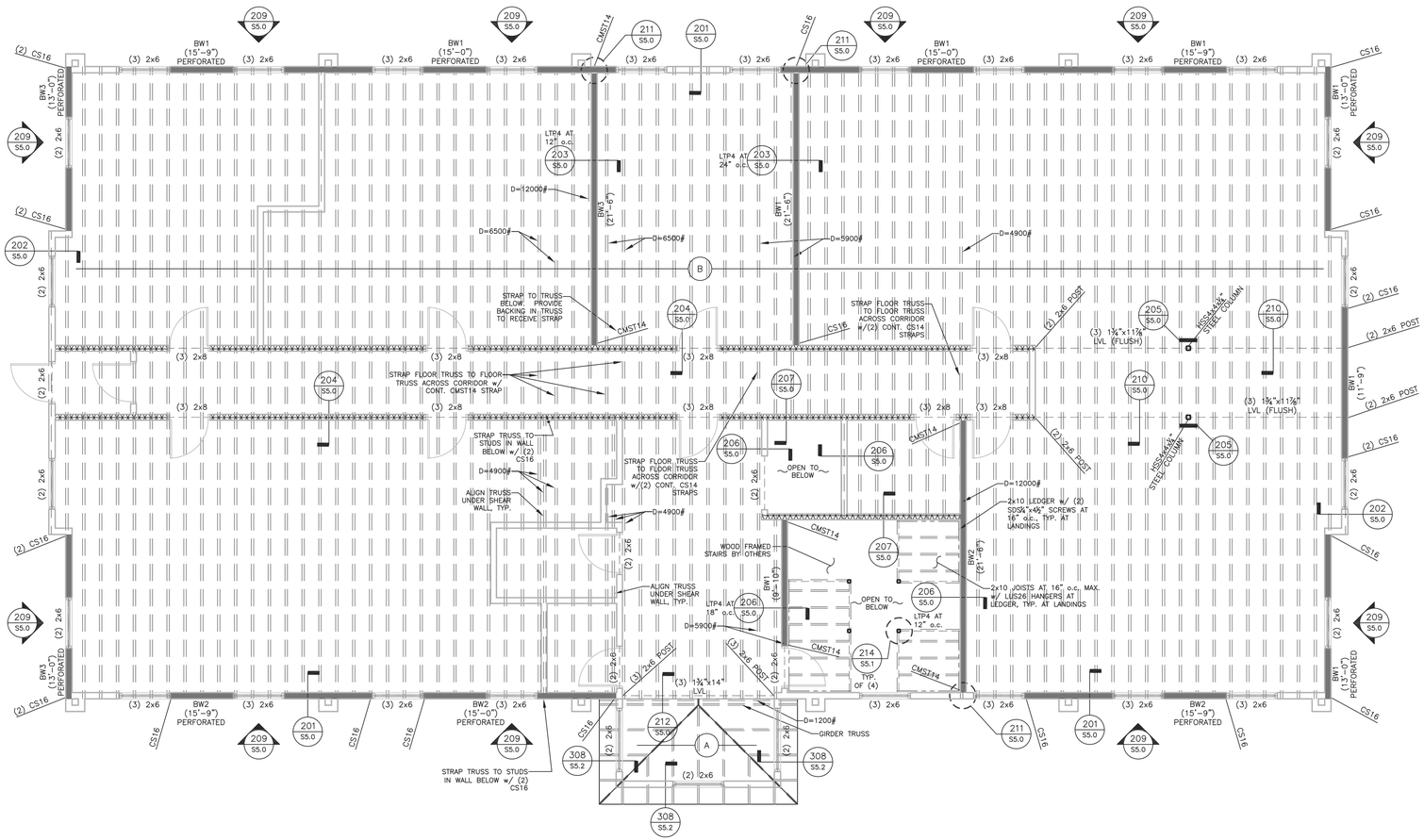
Thomas Avant
47776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
STATE OF ARIZONA U.S.A.
EXPIRES 6-30-2020

DRAWN BY: RMD

SCALE: 3/16" = 1'-0"

SHEET:

S2.0



STRAPPING SCHEDULE			
STRAP LABEL	STRAP END LENGTH	MIN. FASTENERS IN END LENGTH	STRAP INTERMEDIATE NAILING
CS16	13" MIN.	(13) 8d MIN.	(2) 8d AT 4⅛" o.c.
CS14	16" MIN.	(18) 8d MIN.	(2) 8d AT 4⅛" o.c.
CMST14	30" MIN.	(33) 10d MIN.	(2) 10d AT 3½" o.c.
CMST12	39" MIN.	(43) 10d MIN.	(2) 10d AT 3½" o.c.

STRAPPING NOTES:

1. REFER TO FRAMING PLAN FOR STRAP CALLOUTS. (I.E. CS16, CS14,...)
2. WHERE STRAPS ARE CALLED OUT AS SHEAR WALL HOLDOWNS, INSTALL STRAP w/ END LENGTH AND NAILING PER SCHEDULE TO BOTH SHEAR WALL END STUDS ABOVE AND SHEAR WALL END STUDS or OTHER FRAMING BELOW FLOOR DIAPHRAGM. FASTEN STRAP ACROSS FLOOR DIAPHRAGM w/ INTERMEDIATE NAILING PER SCHEDULE. TOTAL STRAP LENGTH SHALL BE LENGTH OF BOTH ENDS PLUS THICKNESS OF DIAGPHRAM.
3. INSTALL STRAPPING OVER THE TOP OF SHEATHING AS OCCURS

TYPICAL STRAP CALLOUT AT SHEAR WALL

FRAMING SCHEDULE:

(A) PRE-MANUFACTURED OPEN WEB ROOF TRUSSES @ 24" o.c.
(B) PRE-MANUFACTURED OPEN WEB FLOOR TRUSSES @ 16" o.c. MAX.

FRAMING PLAN NOTES:

1. REFER TO PLANS AND DETAILS FOR ALL NAILING REQUIREMENTS. WHERE NAILING IS NOT SPECIFIED ON DRAWINGS, REFER TO TABLE 2304.9.1 OF THE 2012 IBC FOR MINIMUM NAILING REQUIREMENTS
2. EXTERIOR WALL FRAMING SHALL BE 2x6 STUDS AT 16" o.c. MAX. AT 2ND AND 3RD FLOORS AND 12" o.c. MAX. AT 1ST FLOOR, U.N.O. ON PLAN. INTERIOR CORRIDOR WALLS SHALL BE MIN. 2x6 STUDS AT 16" o.c. MAX. AT 2ND AND 3RD FLOORS AND 12" o.c. MAX. AT 1ST FLOOR, U.N.O. ON PLANS. OTHER INTERIOR WALLS SHALL BE PER ARCH'L DRAWINGS. REFER TO ARCH'L DRAWINGS FOR REQ'D 2x6 INTERIOR PLUMBING WALLS
3. PROVIDE MIN. (1) TRIMMER STUD AND (1) KING STUD AT EACH END OF EACH WOOD HEADER U.N.O. ON PLAN. PROVIDE MIN. (1) TRIMMER STUD AT EACH INTERIOR BEARING LOCATION AT CONTINUOUS BEAM, U.N.O. ON PLAN
4. PROVIDE CONTINUOUS DOUBLE TOP PLATE AT ALL WOOD FRAMED BEARING WALLS. WHERE TOP PLATE CANNOT BE RUN CONTINOUS OVER HEADER, STRAP HEADER TO TOP PLATE w/ CS16x32" w/ (28) 8d EA. END OF HEADER
5. REFER TO TYPICAL DETAIL 309/S5.2 FOR HEADER TO KING STUD/POST CONNECTION
6. REFER TO SHEAR/BRACED WALL SCHEDULE FOR MINIMUM SHEAR REQUIREMENTS. ALL EXTERIOR SHEAR WALL PANELS SHALL BE ½" FIRE-RETARDANT TREATED PLYWOOD. SHEATHE ALL OTHER EXTERIOR WOOD FRAMED WALLS w/ MINIMUM 1/2" FIRE-RETARDANT TREATED PLYWOOD SHEATHING w/ NAILS OR STAPLES PER THE I.B.C., U.N.O. ON PLAN OR DETAILS
7. TYP. FLOOR SHEATHING SHALL BE 3/4" THICK T & G PLYWOOD OR O.S.B. APA RATED STRUCTURAL GRADE 1 GLUED AND FASTENED w/ 10d RING SHANK NAILS AT 6" o.c. EDGES AND 12" o.c. FIELD U.N.O. ON PLANS OR DETAILS. TYP. ROOF SHEATHING SHALL BE 5/8" THICK PLYWOOD OR O.S.B. APA RATED STRUCTURAL GRADE 1 w/ 10d NAILS AT 6" o.c. EDGES AND 12" o.c. FIELD U.N.O. ON PLANS OR DETAILS.
8. LAMINATED VENEER LUMBER (LVL) SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS (Fb) OF 2800 PSI AND A MINIMUM MODULUS OF ELASTICITY (E) OF 2,000,000 PSI. MULTI-PLY LVL BEAMS SHALL BE FASTENED TOGETHER PER MFR. SPECIFICATIONS
9. CLIP EVERY OTHER TRUSS OR RAFTER TO TOP PLATE OR NAILER w/ H2.5A CLIP.
10. ALL HARDWARE SHALL BE SIMPSON STRONG TIE OR APPROVED EQUAL. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH MFR'S WRITTEN INSTRUCTIONS USING THE TYPE, SIZE AND NUMBER OF FASTENERS SPECIFIED FOR EACH CONNECTOR.
11. STRUCTURAL FRAMING MEMBERS SHALL NOT BE NOTCHED, DRILLED OR OTHERWISE ALTERED WITHOUT WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER.
12. PROVIDE CONT. BEARING THOUGH FLOOR DIAPHRAGM(S) FROM ROOF FRAMING TO FOUNDATION FOR POSTS, TRIMMER STUDS, ETC...
13. ALL TRUSS TO TRUSS CONNECTIONS SHALL BE PER TRUSS MANUFACTURER SPECIFICATIONS
14. PROVIDE MINIMUM (2) 2X6 STUDS BENEATH EA. GIRDER TRUSS OR INTERIOR BEAM AT BEARING UNLESS NOTED OTHERWISE ON PLAN
15. "D=" DENOTES TRUSS SHALL BE DESIGNED BY TRUSS DESIGNER FOR DRAG LOAD AS SPECIFIED ON PLAN (I.E. D=1000#). BOUNDARY FASTEN ROOF SHEATHING ALONG DRAG TRUSS w/ 10d AT 6" o.c. or (2) ROWS 10d AT 6" o.c. MAX. AT INTERIOR DRAG TRUSS
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17. WHERE STRAPPING CALLED OUT ON FRAMING PLANS, REFER TO STRAPPING SCHEDULE FOR REQUIRED STRAP LENGTHS AND NAILING.

INTERIOR BEARING WALL

SHEAR/BRACED WALL SCHEDULE			
SHEAR/ BRACED WALL	MIN. SHEATHING THICKNESS	SHEATHING NAILING	BOTTOM PLATE NAILING/ANCHOR BOLTS
BW1	3/8"	8d AT 6" o.c. EDGES, 12" o.c. FIELD	16d AT 6" o.c. OR 1/2" DIA. x 10" A.B. AT 32" o.c.
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BW3	3/8"	8d AT 3" o.c. EDGES, 12" o.c. FIELD	1/2" DIA. x 10" A.B. AT 16" o.c.

SHEAR/BRACED WALL NOTES:

1. REFER TO PLAN FOR MINIMUM LENGTH AND LOCATION OF SHEAR/BRACED WALLS
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3RD FLOOR FRAMING PLAN

WINDOW ROCK AZ 86515

REV#:	DATE:	DESCRIPTION:
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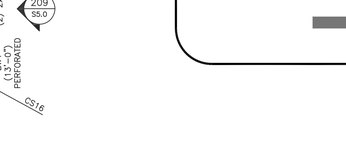
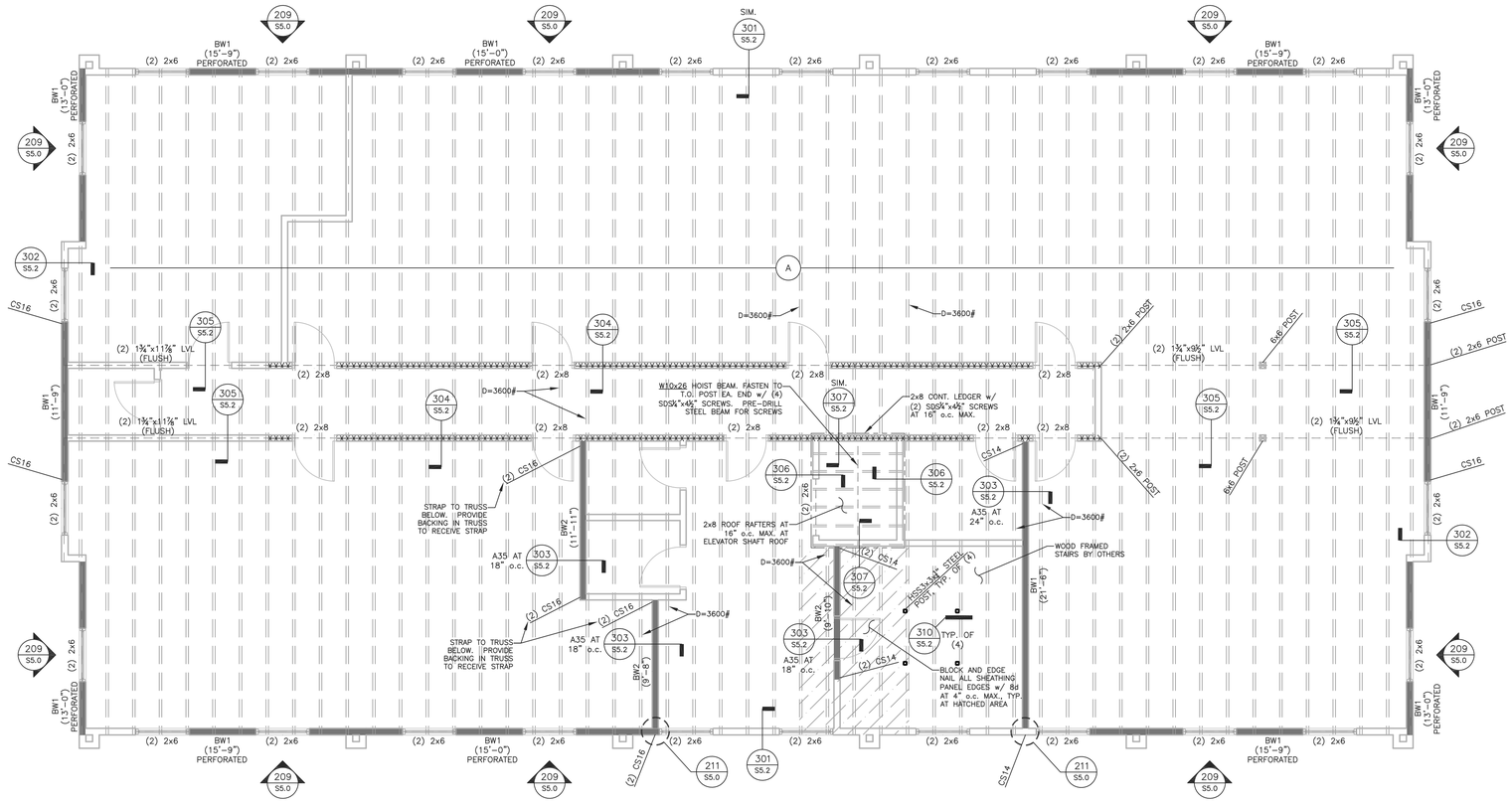


DRAWN BY: RMD

SCALE: 3/16" = 1'-0"

SHEET:

S3.0



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INTERIOR BEARING WALL

SHEAR/BRACED WALL SCHEDULE			
SHEAR/ BRACED WALL	MIN. SHEATHING THICKNESS	SHEATHING NAILING	BOTTOM PLATE NAILING/ANCHOR BOLTS
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SHEAR/BRACED WALL NOTES:

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7. WHERE SHEAR WALL OCCURS AT RAISED FLOOR, CRIPPLE WALL BETWEEN SHEAR WALL BOTTOM PLATE AND SOLE PLATE AT FOUNDATION SHALL BE SHEATHED AND NAILED TO MATCH SHEAR WALL ABOVE

BW# (LENGTH) DENOTES SHEAR/BRACED WALL

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ROOF FRAMING PLAN

WINDOW ROCK
AZ 86515

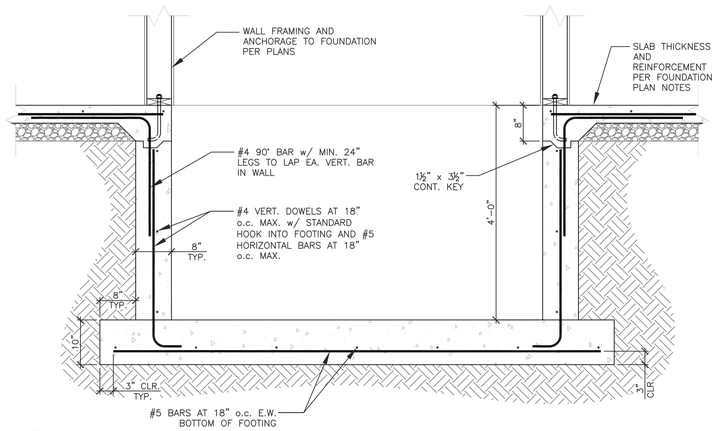
INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

Thomas Avant
47776
THOMAS W. AVANT
12/12/2019
REGISTERED PROFESSIONAL ENGINEER
ARIZONA U.S.A.
EXPIRES 6-30-2019

DRAWN BY: RMD
SCALE: 3/16" = 1'-0"
SHEET:

S4.0



109 FOUNDATION AT ELEVATOR SHAFT
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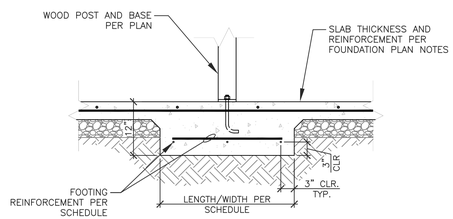

106 TYP. INTERIOR THICKENED SLAB FOOTING
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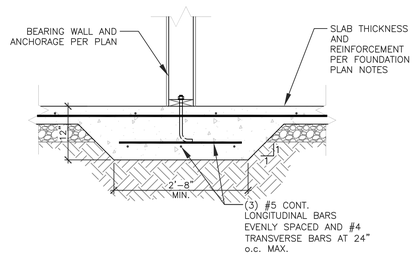

103 TYP. CONT. THICKENED SLAB FOOTING
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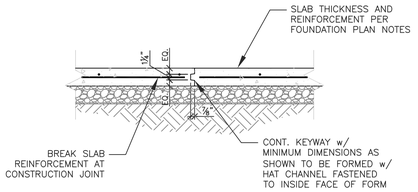

111 TYP. POUR JOINT AT CONCRETE SLAB
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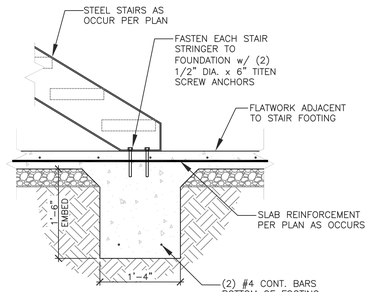
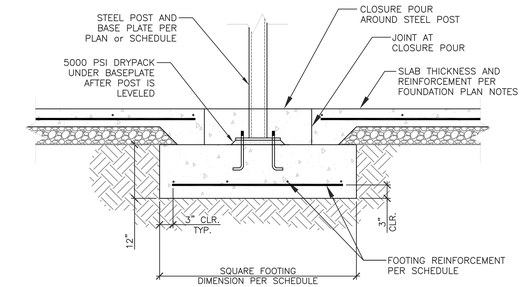
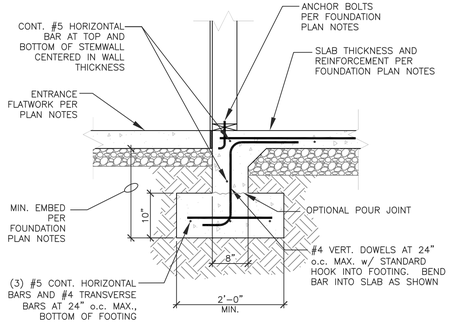


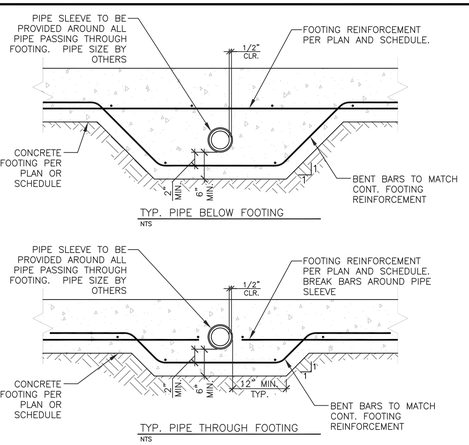
108 EXTERIOR STAIRS AT FOOTING
N.T.S.



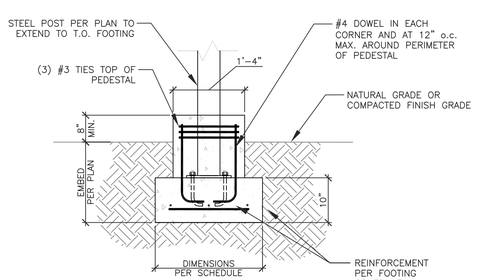
105 STEEL POST AT FOOTING
N.T.S.



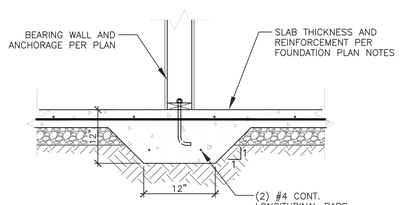
102 PATIO AT EXTERIOR PERIMETER FOOTING
N.T.S.



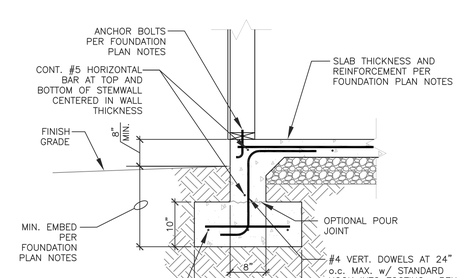
110 TYP. PIPE PERPENDICULAR TO FOOTING
N.T.S.



107 STEEL COLUMN AT EXTERIOR FOOTING
N.T.S.



104 TYP. CONT. THICKENED SLAB FOOTING
N.T.S.



**INSULATE FOOTING PER ARCH'L DRAWINGS, TYP.

101 TURNDOWN EDGE PERIMETER FOOTING
N.T.S.

IRON ROCK ENGINEERING
SURVEYING & DESIGN
Building on Solid Foundations
460 E. 300 SOUTH
KANAB, UTAH 84741
435-644-2031
www.ironrockeng.com

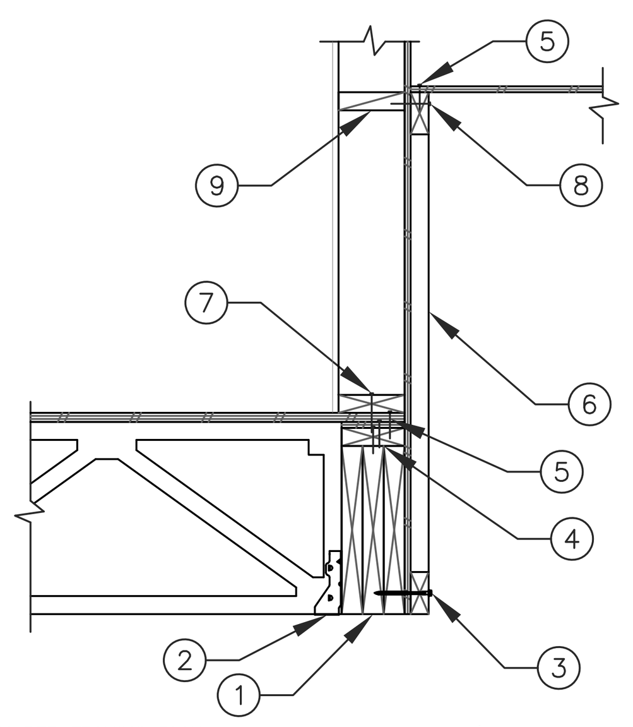
WINDOW ROCK OFFICE BUILDING (2 & 3)
WINDOW ROCK AZ 86515

FOUNDATION DETAILS

INITIAL SUBMITTAL: 12/12/2019		
REV#:	DATE:	DESCRIPTION:

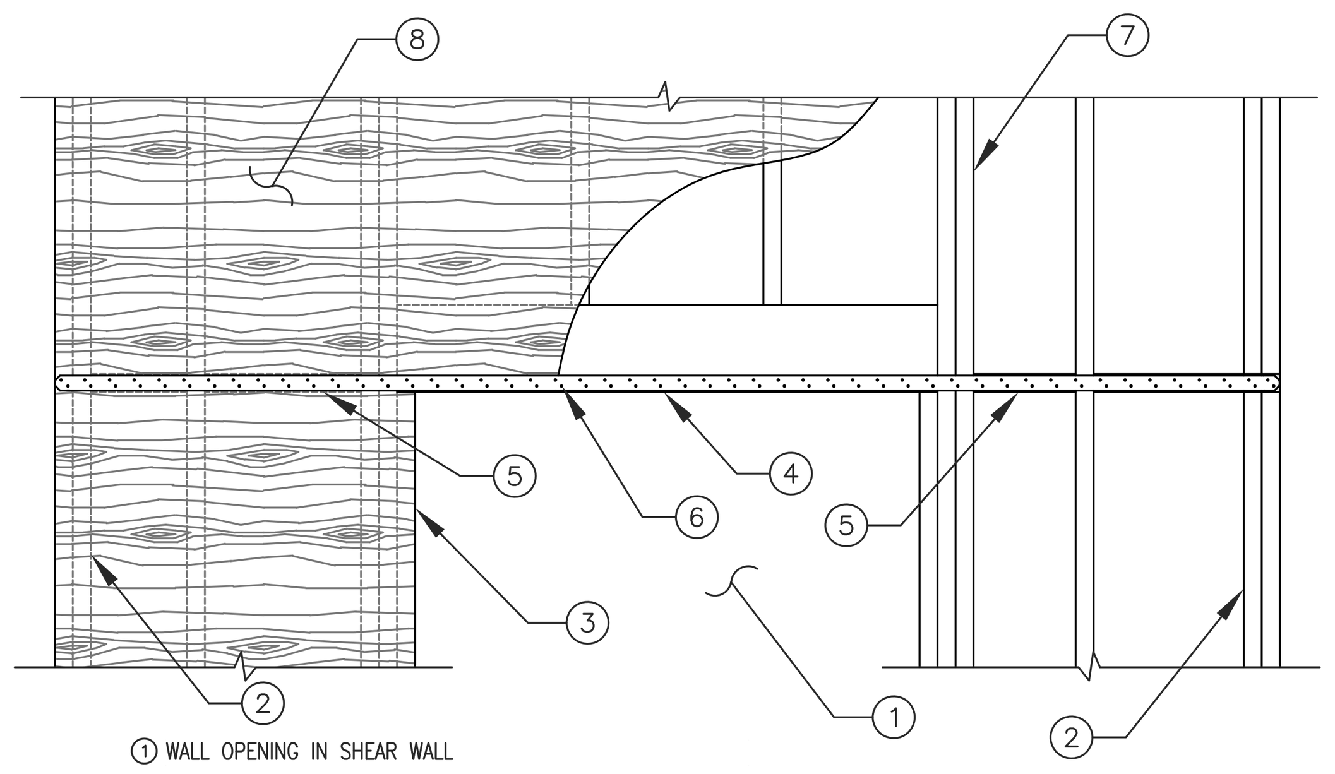
Thomas Avant
PROFESSIONAL ENGINEER CERTIFICATE NO. 47776 THOMAS W. AVANT 12/12/2019 ARIZONA U.S.A. EXPIRES 6-30-2019

DRAWN BY: RMD
SCALE: NTS
SHEET: S5.0



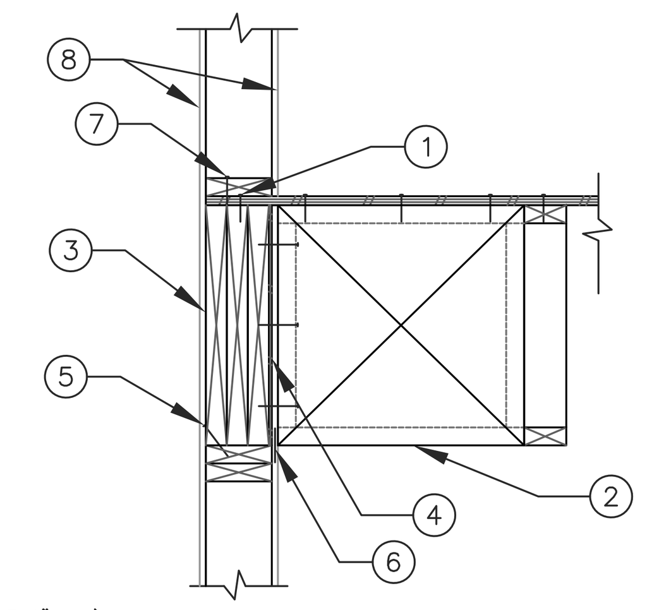
① FLUSH BEAM PER FRAMING PLAN
② FASTEN TRUSS TO BEAM w/ HU48 FACE MOUNT HANGER
③ SDS¼"x4½" SCREWS AT 24" o.c. MAX. STAGGERED
④ PAD BEAM AS REQ'D. FASTEN EA. LAYER OF PADDING w/ 16d AT 6" o.c. MAX. STAGGERED
⑤ BOUNDARY FASTENERS (8d AT 6" o.c. MAX. AT ROOF or 10d AT 6" o.c. MAX. AT FLOOR)
⑥ DRAG TRUSS PER PLAN
⑦ 16d AT 8" o.c. or PER SHEAR WALL SCHEDULE, WHICHEVER IS MORE STRINGENT
⑧ FASTEN TRUSS TOP CHORD ALONG BLOCKING IN WALL w/ 16d AT 8" o.c. MAX.
⑨ 2x SOLID BLOCKING BETWEEN STUDS AT HEIGHT OF TRUSS TOP CHORD TO FIT SNUG BETWEEN STUDS

212 LOW ROOF AT BEAM
N.T.S.



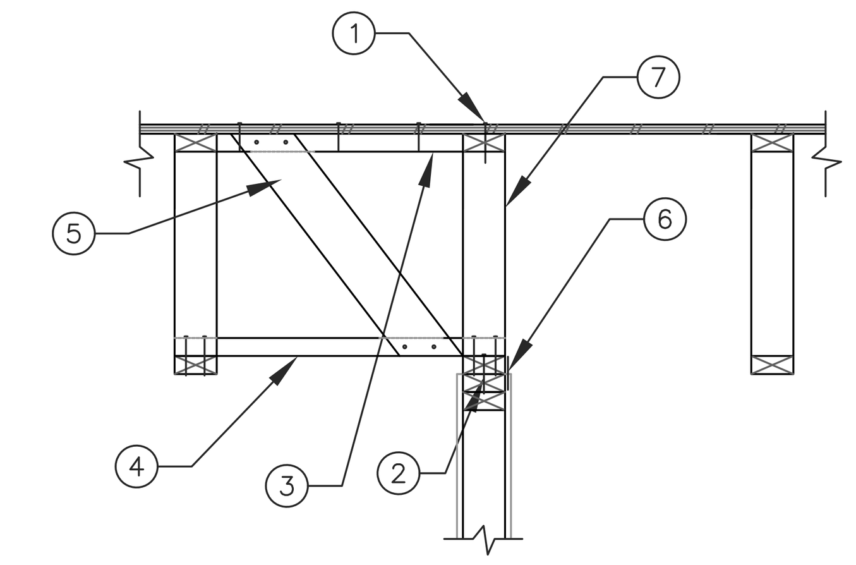
① WALL OPENING IN SHEAR WALL
② SHEAR WALL PIER END STUDS (MIN. (2) END STUDS REQ'D U.N.O. ON PLAN OR SHEAR WALL SCHEDULE
③ TRIMMER STUD(S) PER PLAN
④ WOOD HEADER IN WALL PER FRAMING PLAN
⑤ 2x BLOCKING FLUSH w/ TOP AND BOTTOM OF WALL OPENING TO EXTEND CONT. TO END OF WALL PIER
⑥ CONT. CS16 STRAP TOP AND BOTTOM OF WALL OPENING w/ (2) 8d AT 4 ⅛" o.c. TO BE INSTALLED OVER SHEAR WALL SHEATHING AND BLOCKING/HEADER. EXTEND STRAP TO END OF SHEAR WALL PIER EA. SIDE OF OPENING.
⑦ (2) KING STUD, TYP. ADJACENT TO WALL OPENING
⑧ SHEAR WALL SHEATHING AND NAILING PER SHEAR WALL SCHEDULE. APPLY TO WALL CONT. AT PIERS AND OVER OPENING IN WALL

209 TYP. PERFORATED SHEAR WALL AT WALL OPENING
N.T.S.



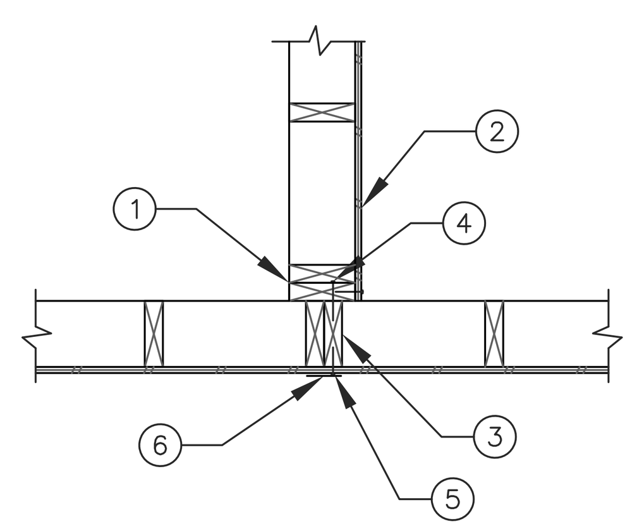
① BOUNDARY FASTENERS (10d AT 6" o.c.)
② SHEAR PANEL BLOCKING PER FRAMING PLAN NOTES AT 48" o.c. MAX. FASTEN FLOOR SHEATHING ALONG PANEL BLOCKING w/ 10d AT 6" o.c. MAX. PRE-FAB TRUSS BLOCKING MAY BE USED IN LIEU OF PANEL BLOCKING
③ TRIPLE 1¾" x DEPTH OF FLOOR TRUSS LVL BEAMS. MULTI-LAM BEAMS TO BE FASTENED TOGETHER PER MFR. RECOMMENDATIONS
④ ⅜" THICK PLYWOOD FILLER TO MATCH DEPTH OF ADJACENT BEAM
⑤ 16d TOENAILS AT 8" o.c. MAX.
⑥ CLIP BEAM TO TOP PLATE w/ LTP4 CLIPS w/ SPACING AS NOTED PER FRAMING PLAN (TYP. SPACING 48" o.c. MAX.)
⑦ BOTTOM PLATE NAILING PER SHEAR WALL SCHEDULE or 16d AT 8" o.c. MAX WHERE NO SHEAR WALL OCCURS
⑧ WALL BOARD PER ARCH'L DRAWINGS

206 FLOOR TRUSSES PARALLEL TO ELEVATOR SHAFT
N.T.S.



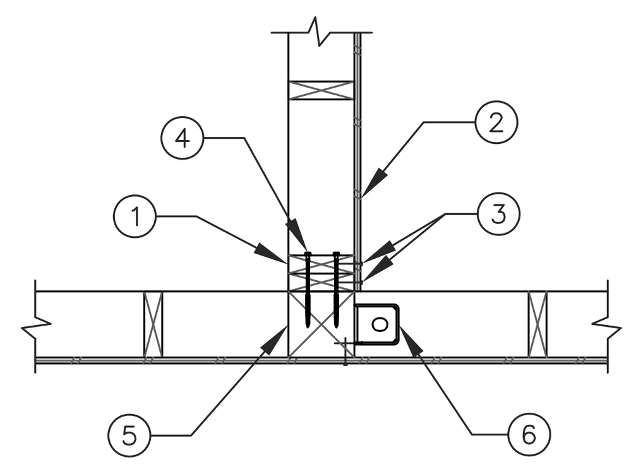
① BOUNDARY FASTENERS (10d AT 6" o.c.)
② FASTEN TRUSS TO STUD WALL BELOW w/ 16d AT 8" o.c. MAX.
③ 2x SOLID BLOCKING BETWEEN TRUSS TOP CHORDS AT 48" o.c. MAX. FASTEN FLOOR SHEATHING ALONG BLOCKING w/ (3) 16d EVENLY SPACED
④ 2x6 FLAT BLOCKING AT 48" o.c. MAX. FASTENED TO ADJACENT TRUSS BOTTOM CHORDS w/ (2) 16d EA. END
⑤ 2x4 KICKER TO MATCH BLOCKING SPACING FASTENED TO BLOCKING TOP AND BOTTOM w/ (2) 16d
⑥ CLIP DRAG TRUSS BOTTOM CHORD TO WALL TOP PLATE w/ LTP4 CLIPS WHERE NOTED PER FRAMING PLAN. SPACING PER PLAN AS REQ'D
⑦ DRAG TRUSS PER PLAN

203 DRAG CONNECTION AT FLOOR TRUSSES
N.T.S.



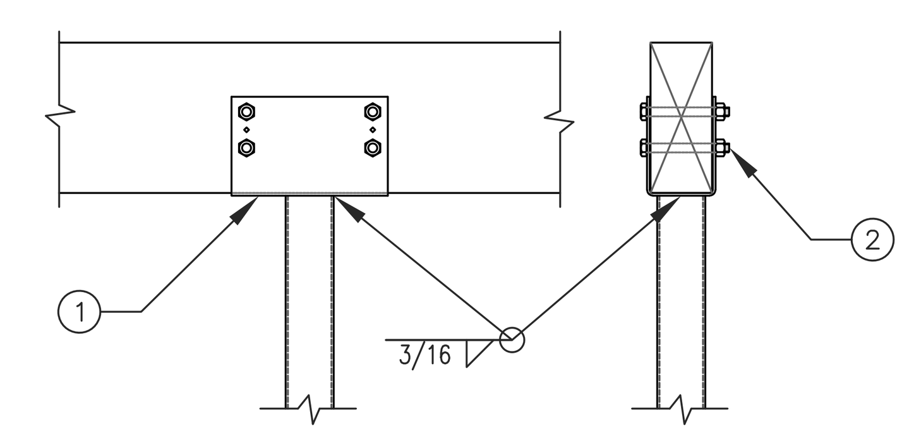
① SHEAR WALL END STUDS
② SHEAR WALL SHEATHING AND NAILING PER SHEAR/BRACED WALL SCHEDULE
③ DOUBLE 2x6 STUD IN EXTERIOR WALL TO RECEIVE NAILING FROM INTERIOR SHEAR WALL
④ 16d AT 6" o.c. MAX. STAGGERED
⑤ SHEAR WALL EDGE NAILING PER SHEAR WALL SCHEDULE TO CORRESPOND TO INTERIOR SHEAR WALL NAILING AS SPECIFIED PER FRAMING PLAN
⑥ SHEAR WALL HOLDOWN PER FRAMING/FOUNDATION PLAN

211 TYP. INTERIOR SHEAR WALL AT EXTERIOR WALL
N.T.S.



① SHEAR/BRACED WALL END STUDS AT CORNER
② SHEAR WALL SHEATHING PER SHEAR/BRACED WALL SCHEDULE
③ SHEAR WALL EDGE NAILING PER SHEAR WALL SCHEDULE
④ SDS¼"x6" SCREWS AT 8" o.c. STAGGERED FOR HEIGHT OF WALL (MIN. (15) SCREWS)
⑤ WOOD POST PER FRAMING PLAN
⑥ SHEAR WALL HOLDOWN PER FOUNDATION PLAN

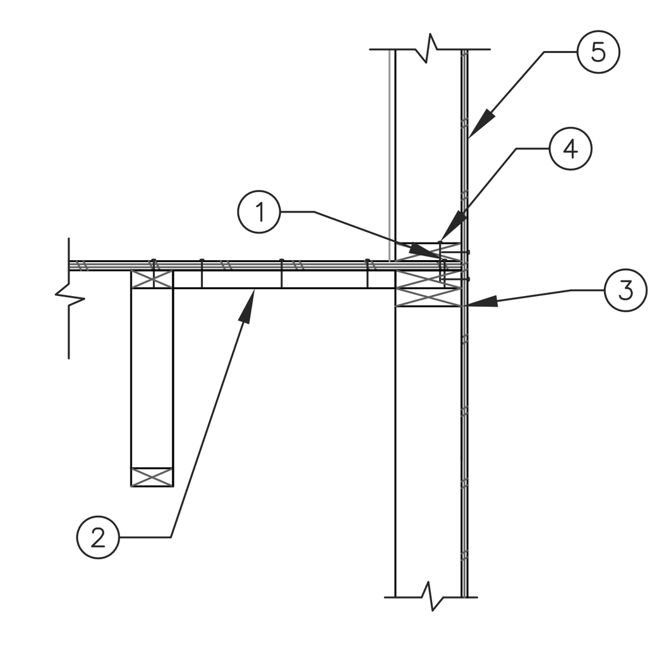
208 INTERIOR SHEAR WALL HOLDOWN AT EXT. WALL
N.T.S.



① SIMPSON CC66 POST CAP w/ LEGS REMOVED TO ALLOW WELDING TO STEEL COLUMN
② (4) ¾" DIA. A307 BOLTS

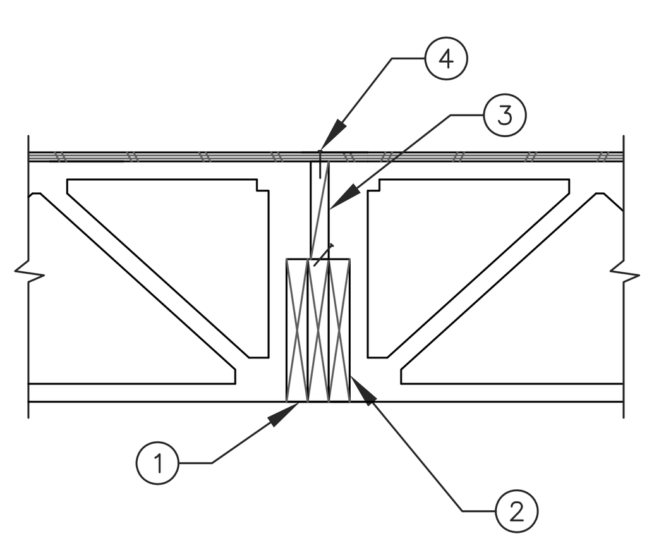
*FRAMING ABOVE NOT SHOWN FOR CLARITY

205 WOOD BEAM AT STEEL COLUMN
N.T.S.



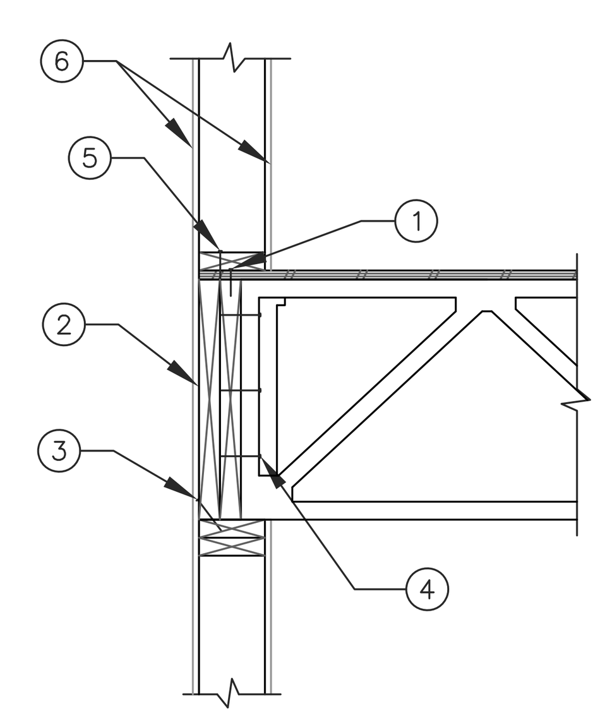
① BOUNDARY FASTENERS (10d AT 6" o.c.)
② 2x SOLID BLOCKING AT 36" o.c. MAX. FASTEN FLOOR SHEATHING ALONG BLOCKING w/ 10d AT 6" o.c. MAX.
③ EXTEND WALL TO UNDER SIDE OF FLOOR SHEATHING
④ BOTTOM PLATE NAILING PER SHEAR WALL SCHEDULE or 16d AT 8" o.c. MAX WHERE NO SHEAR WALL OCCURS
⑤ WALL SHEATHING AND NAILING PER FRAMING PLAN NOTES. EXTEND SHEATHING CONT. ACROSS FLOOR DIAPHRAM. SHEATHING AND NAILING ACROSS DIAPHRAGM TO MATCH SHEATHING AND NAILING OF SHEAR WALL BELOW AS OCCURS

202 FLOOR TRUSSES PARALLEL TO STUD WALL
N.T.S.



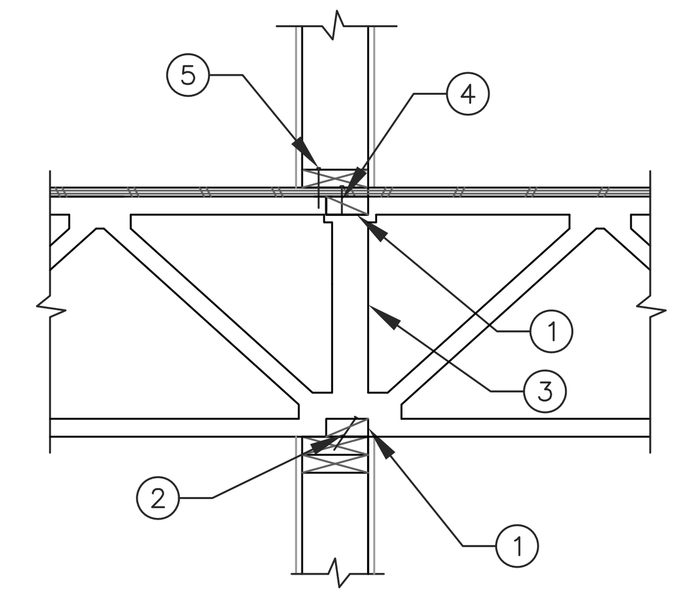
① FLUSH BEAM PER PLAN
② TRUSS DESIGNER TO DESIGN TRUSS w/ POCKET FOR BEAM
③ 2x UPRIGHT BLOCKING BETWEEN TRUSS TOP CHORD AT BEARING w/ 16d TOENAILS AT 8" o.c. MAX. TO BEAM BELOW
④ BOUNDARY FASTENERS (10d AT 6" o.c. MAX.)

210 FLOOR FRAMING AT STUD WALL (CORRIDOR)
N.T.S.



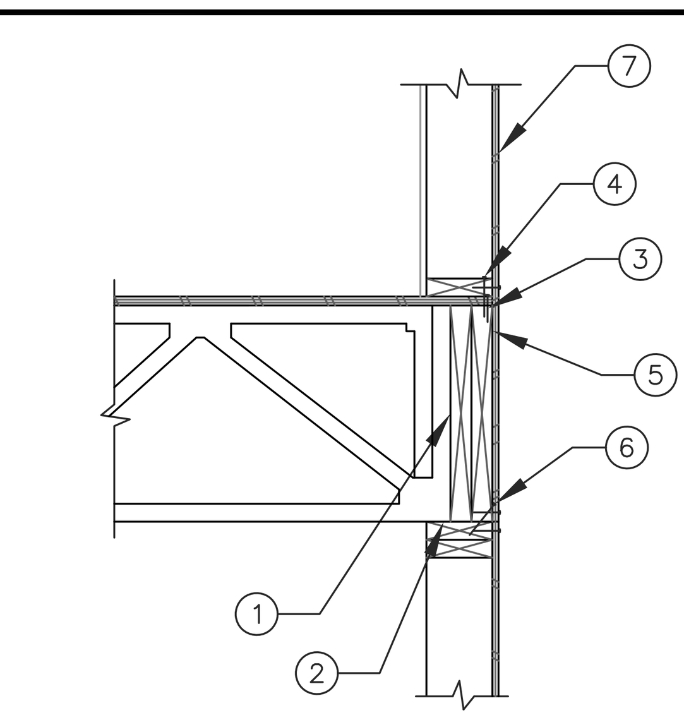
① BOUNDARY FASTENERS (10d AT 6" o.c.)
② DOUBLE 1¾" x DEPTH OF FLOOR TRUSS LVL BEAM/RIM BOARD. MULTI-LAM BEAMS TO BE FASTENED TOGETHER PER MFR. RECOMMENDATIONS
③ 16d TOENAILS AT 8" o.c. MAX.
④ FASTEN TRUSS WEB TO LVL RIM w/ (3) 16d EVENLY SPACED
⑤ BOTTOM PLATE NAILING PER SHEAR WALL SCHEDULE or 16d AT 8" o.c. MAX WHERE NO SHEAR WALL OCCURS
⑥ WALL BOARD PER ARCH'L DRAWINGS

207 FLOOR TRUSSES AT ELEVATOR SHAFT
N.T.S.



① 2x SOLID BLOCKING TOP AND BOTTOM BETWEEN TRUSSES AT BEARING TO FIT SNUG AGAINST DECK SHEATHING AT TOP
② 16d AT 8" o.c. MAX. TO TOP PLATE BELOW
③ TRUSS DESIGNER TO PROVIDE DOUBLE 2x4 VERTICAL WEB MEMBER IN TRUSS AT BEARING
④ BOUNDARY FASTENERS (10d AT 6" o.c. MAX.)
⑤ BOTTOM PLATE NAILING PER PLAN (MIN. 16d AT 8" o.c. MAX.)

204 FLOOR FRAMING AT STUD WALL (CORRIDOR)
N.T.S.



① FASTEN TRUSS TO DOUBLE RIM w/ (3) 16d TOENAILS EA. SIDE OF TRUSS WEB
② MIN. 2" TRUSS BEARING
③ BOUNDARY FASTENERS (10d AT 6" o.c.)
④ BOTTOM PLATE NAILING PER SHEAR WALL SCHEDULE or 16d AT 8" o.c. MAX WHERE NO SHEAR WALL OCCURS
⑤ CONT. DOUBLE 1¾" WIDE x DEPTH OF FLOOR TRUSSES LVL RIM
⑥ 16d TOENAILS AT 8" o.c. MAX. SPACING or TO MATCH BOTTOM PLATE NAIL SPACING OF SHEAR WALL ABOVE AS OCCURS, WHICHEVER IS MORE STRINGENT
⑦ WALL SHEATHING AND NAILING PER FRAMING PLAN NOTES. EXTEND SHEATHING CONT. ACROSS FLOOR DIAPHRAM. SHEATHING AND NAILING ACROSS DIAPHRAGM TO MATCH SHEATHING AND NAILING OF SHEAR WALL BELOW AS OCCURS

201 FLOOR TRUSSES AT STUD WALL
N.T.S.

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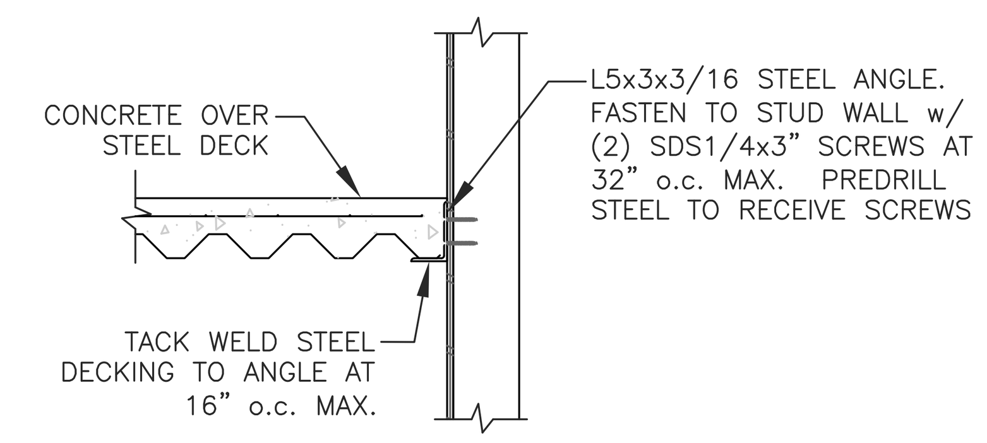
FLOOR FRAMING DETAILS

WINDOW ROCK
AZ 86515

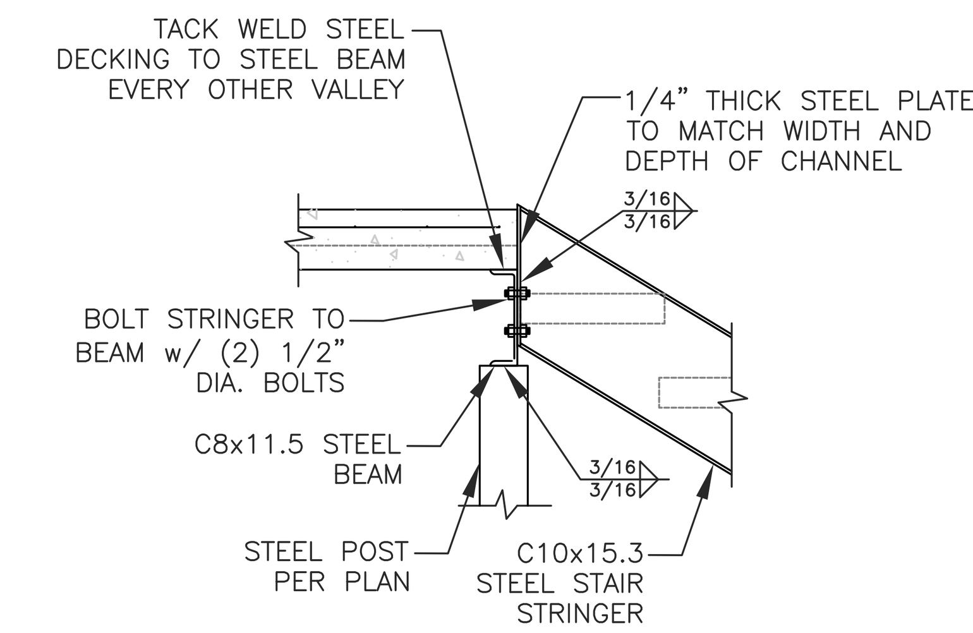
INITIAL SUBMITTAL:	12/12/2019
REV#:	DATE:	DESCRIPTION:

Registered Professional Engineer Certificate No. 47776 THOMAS W. AVANT (Civil) Date Signed 12/12/2019 ARIZONA, U.S.A. Expires 6-30-2020
Thomas Avant

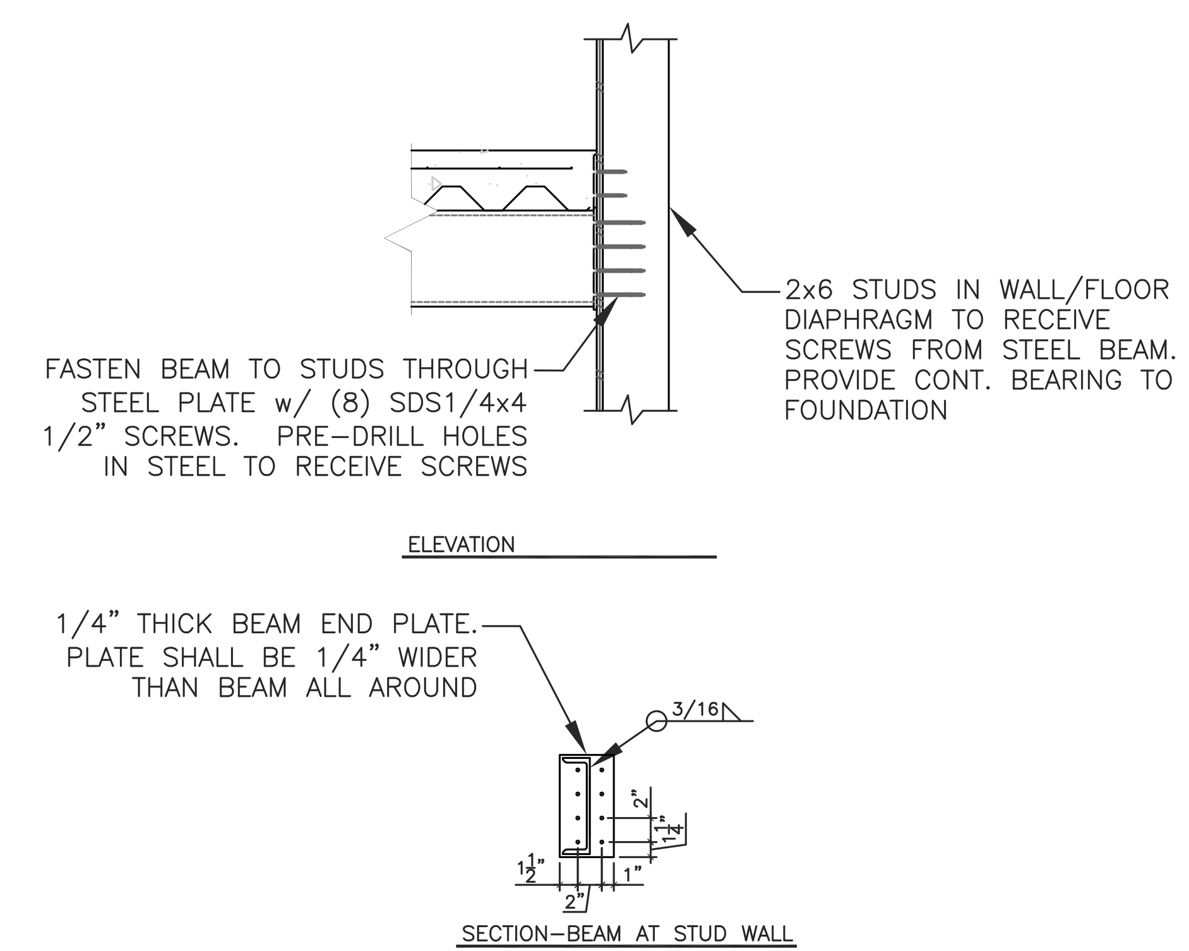
DRAWN BY: RMD
SCALE: NTS
SHEET: S6.0



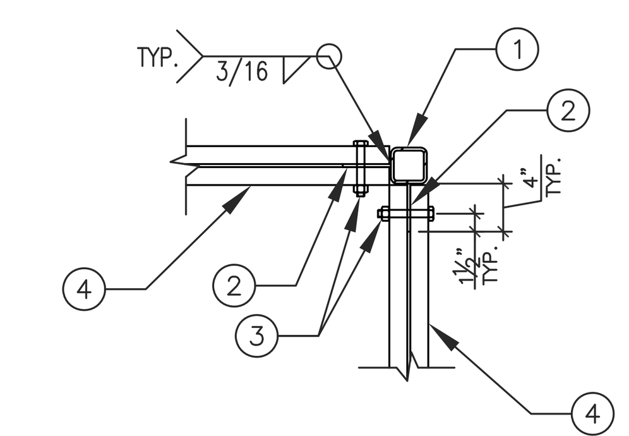
218 STAIR LANDING AT STUD WALL
NTS



215 STEEL STAIR STRINGER AT STEEL BEAM
NTS



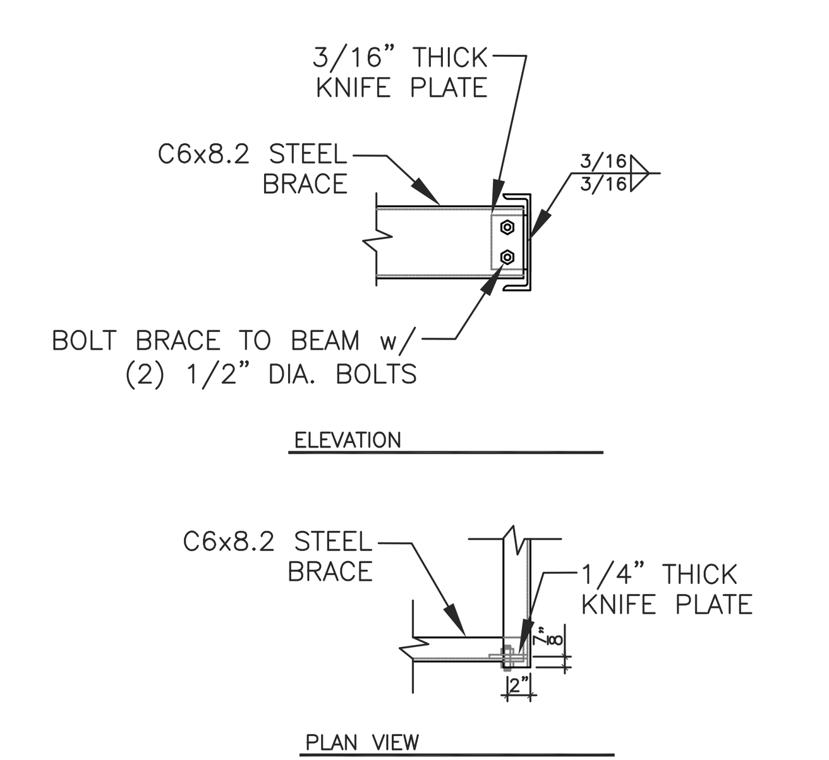
217 STEEL BEAM AT STUD WALL
NTS



1. STEEL POST PER FRAMING PLAN
2. 4" x 9" x ¼" THICK STEEL KNIFE PLATE CENTERED ON STEEL POST w/ (3) ¾" DIAMETER PRE-DRILLED HOLES LOCATED 1½" FROM EDGE OF PLATE AND SPACED 3" o.c.
3. (3) ⅝" DIA. A307 BOLTS EA. BEAM
4. DOUBLE 2x10 BEAM w/ ¼" SPACER BETWEEN BEAM TO ALLOW SNUG FIT AROUND KNIFE PLATE

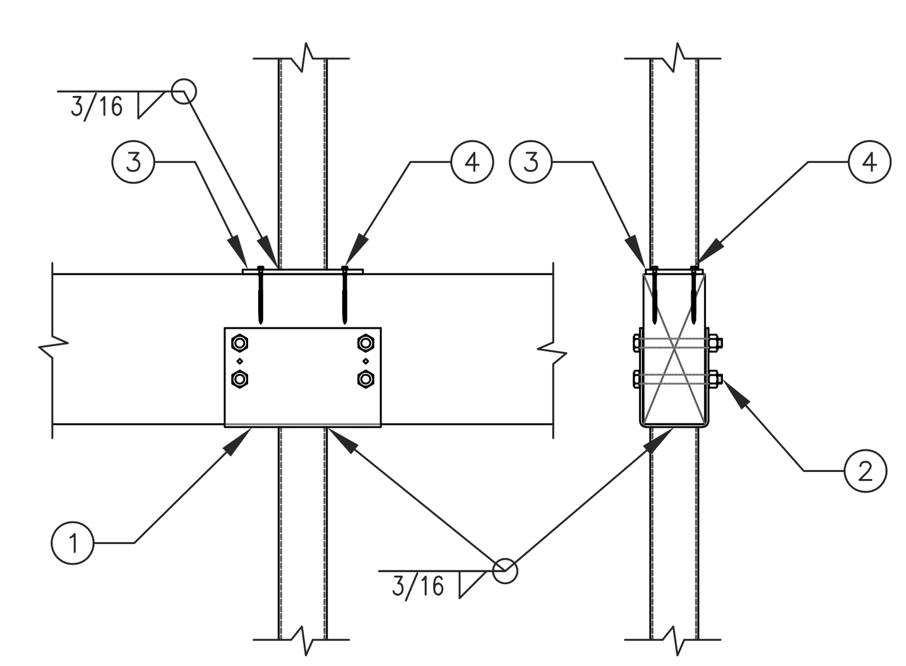
*FLOOR FRAMING NOT SHOWN FOR CLARITY

214 LANDING BEAMS AT STEEL COLUMN
N.T.S.



A. ADJACENT FRAMING NOT SHOWN FOR CLARITY

216 STEEL BRACE AT STEEL BEAM
NTS



1. SIMPSON CC66 POST CAP w/ LEGS REMOVED TO ALLOW WELDING TO STEEL COLUMN
2. (4) ¾" DIA. A307 BOLTS
3. 4¾" x 10" x ⅜" THICK STEEL PLATE CENTERED ON STEEL POST ABOVE w/ (4) ¼" PREDRILLED HOLES LOCATED ¾" FROM EDGES AND 1½" FROM ENDS OF PLATE
4. FASTEN PLATE OT TOP OF WOOD BEAM w/ (4) SDS¼"x4½" SCREWS

*FLOOR FRAMING NOT SHOWN FOR CLARITY

213 WOOD BEAM AT STEEL COLUMN(S)
N.T.S.

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WINDOW ROCK OFFICE BUILDING (2 & 3)

FLOOR FRAMING DETAILS

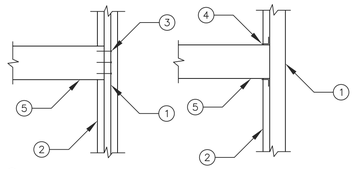
WINDOW ROCK
AZ 86515

INITIAL SUBMITTAL: 12/12/2019

REV#:	DATE:	DESCRIPTION:

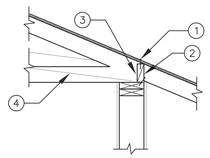
Thomas Avant
Registered Professional Engineer (Civil)
47776
THOMAS W. AVANT
12/12/2019
DATE SIGNED
ARIZONA, U.S.A.
EXPIRES 6-30-2020

DRAWN BY: RMD
SCALE: NTS
SHEET: S7.0



1. KING STUDS/POST PER PLAN
2. TRIMMER STUD
3. (3) 16d FROM KING STUD TO HEADER
4. A34 CLIP FROM HEADER TO KING STUD. CLIP MAY BE INSTALLED EITHER ON TOP OR BOTTOM OF HEADER
5. HEADER PER PLAN

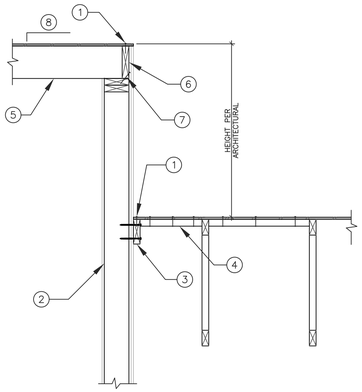
309 HEADER AT KING STUD/POST
N.T.S.



1. BOUNDARY FASTENERS (8d AT 6" o.c.)
2. 2x SOLID BLOCKING w/ (3) 16d TOENAILS PER BLOCK
3. A35 CLIP AND SPACING WHERE NOTED PER PLAN
4. VAULTED TRUSS BOTTOM CHORD AS OCCURS PER PLAN

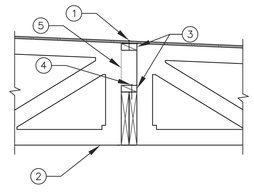
A. SHEAR PANEL BLOCKING MAY BE USED AS ALTERNATE TO SOLID BLOCKING WHERE HIGH-HEELED TRUSS OCCURS

308 TRUSS AT STUD WALL
N.T.S.



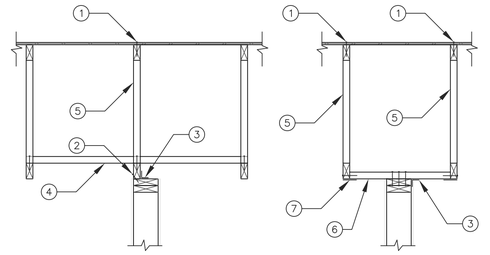
1. BOUNDARY FASTENERS (10d AT 6" o.c. MAX.)
2. CONT. WALL STUD FRAMING AT ELEVATOR SHAFT
3. CONT. 2x LEDGER AND FASTENERS PER FRAMING PLAN
4. 2x6 BLOCKING AT 36" o.c. MAX. TO FIT SNUG BETWEEN LEDGER AND TRUSS TOP CHORDS AND TO EXTEND MINIMUM (2) TRUSS BAYS AWAY FROM WALL. FASTEN ALONG ROOF SHEATHING w/ 10d AT 8" o.c. MAX.
5. UPPER ROOF RAFTERS PER FRAMING PLAN or SCHEDULE
6. CONT. 2x RIM BOARD TO MATCH RAFTER DEPTH. FASTEN TO END OF EA. RAFTER w/ MIN. (3) 16d
7. 16d NAILS/TOENAILS AT 8" o.c. MAX.
8. ROOF SLOPE PER ARCH'L

306 HIGH/LOW ROOF FRAMING AT ELEVATOR SHAFT
N.T.S.



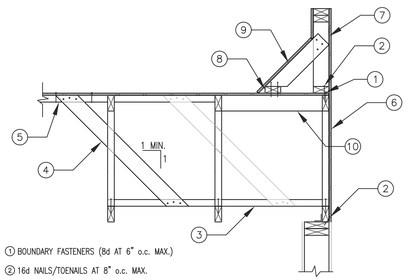
1. BOUNDARY FASTENERS (8d AT 6" o.c. MAX.)
2. TRUSS DESIGNER TO DESIGN TRUSS(ES) FOR TOP CHORD BEARING CONDITION
3. 2x BLOCKING TOP AND BOTTOM BETWEEN TRUSSES AT BEARING TO FIT SNUG TIGHT AGAINST TRUSS TOP AND BOTTOM CHORDS
4. 16d AT 8" o.c. MAX.
5. OPTIONAL TRUSS LAP AT BEARING

305 ROOF TRUSS(ES) AT FLUSH BEAM
N.T.S.



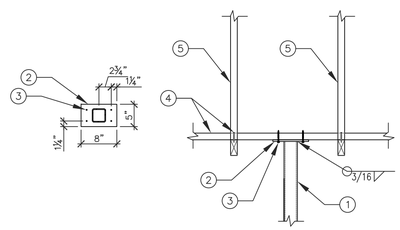
1. BOUNDARY FASTENERS (8d AT 6" o.c.)
2. 16d TOENAILS AT 8" o.c.
3. A35 CLIP AND SPACING WHERE NOTED PER PLAN
4. CONT. 2x4 MEMBER AT 48" o.c. MAX. TO EXTEND MIN. (2) TRUSS BAYS w/ (2) 16d EACH PERPENDICULAR TRUSS CHORD
5. DRAG TRUSS PER PLAN
6. 2x6 BLOCKING AT 24" o.c. MAX. BETWEEN TRUSSES w/ (3) 16d TO TRUSS AT EACH END OF BLOCKING AND (3) 16d TO TOP PLATE
7. LTP4 CLIPS TO MATCH SPACING OF A35 CLIPS WHERE NOTED ON PLAN

303 DRAG TRUSS(ES) AT STUD WALL
N.T.S.



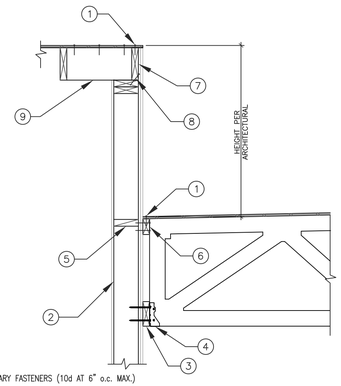
1. BOUNDARY FASTENERS (8d AT 6" o.c. MAX.)
2. 16d NAILS/TOENAILS AT 8" o.c. MAX.
3. CONT. 2x4 MEMBER AT 48" o.c. MAX. TO EXTEND MIN. (2) TRUSS BAYS w/ (2) 16d EACH PERPENDICULAR TRUSS CHORD
4. 2x4 KICKER AT 48" o.c. MAX. w/ (3) 16d AT TOP AND BOTTOM CHORD. MAY BE INSTALLED IN FIRST TRUSS BAY AS SHOWN
5. 2x SOLID BLOCKING TO MATCH SPACING OF KICKERS. BOUNDARY FASTEN ROOF SHEATHING ALONG BLOCKING
6. ⅜" MIN. PLYWOOD SHEATHING w/ 8d AT 6" o.c. EDGES AND 12" o.c. FIELD
7. 2x4 STUDS AT 24" o.c. MAX. AT PARAPET WALL
8. CONT. 2x4 MEMBER w/ (3) 16d TO EA. ADJACENT BLOCK
9. 2x4 KICKER AT 24" o.c. MAX. w/ (3) 16d TOP AND BOTTOM
10. 2x4 BLOCKING AT 24" o.c. MAX. w/ (3) 16d EA. END TO TRUSS TOP CHORDS

302 ROOF FRAMING PARALLEL TO STUD WALL
N.T.S.



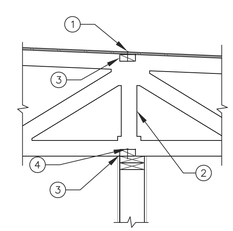
1. STEEL POST PER FRAMING PLAN
2. ⅜" THICK STEEL TOP PLATE TO BE CENTERED ON STEEL POST
3. (4) SDS¼"x2½" SCREWS IN 9/16" PRE-DRILLED HOLES FROM STEEL PLATE TO WOOD BRACE
4. CONT. 2x MEMBER AND FASTENERS TO TRUSS BOTTOM CHORD PER PLAN
5. PRE-FAB TRUSS BY OTHERS

310 STEEL COLUMN AT TRUSS BRACING
N.T.S.



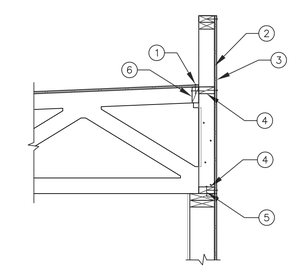
1. BOUNDARY FASTENERS (10d AT 6" o.c. MAX.)
2. CONT. WALL STUD FRAMING AT ELEVATOR SHAFT
3. CONT. 2x LEDGER AND FASTENERS PER FRAMING PLAN
4. FASTEN TRUSS TO LEDGER w/ HANGER PER FRAMING SCHEDULE
5. 2x SOLID BLOCKING BETWEEN STUDS AT HEIGHT OF UPPER LEDGER TO FIT SNUG BETWEEN STUDS
6. 2x4 CONT. LEDGER w/ (2) 16d AT 16" o.c. MAX. INTO SOLID BACKING AND 16d AT 8" o.c. MAX. ALONG ADJACENT BLOCKING
7. CONT. 2x RIM BOARD TO MATCH RAFTER DEPTH
8. 16d NAILS/TOENAILS AT 8" o.c. MAX.
9. 2x SOLID BLOCKING BETWEEN RAFTERS AT 36" o.c. MAX. FASTEN ROOF SHEATHING ALONG BLOCKING w/ (3) 10d AND FASTEN BLOCKING TO TOP PLATE w/ (2) 16d TOENAILS EA. SIDE

307 HIGH/LOW ROOF FRAMING AT ELEVATOR SHAFT
N.T.S.



1. BOUNDARY FASTENERS (8d AT 6" o.c. MAX.)
2. TRUSS DESIGNER TO DESIGN TRUSS w/ VERTICAL WEB MEMBER AT BEARING
3. 2x BLOCKING TOP AND BOTTOM BETWEEN TRUSSES AT BEARING TO FIT SNUG TIGHT AGAINST TRUSS TOP AND BOTTOM CHORDS
4. 16d AT 8" o.c. MAX.

304 ROOF TRUSS AT INTERIOR BEARING WALL
N.T.S.



1. BOUNDARY FASTENERS (8d AT 6" o.c. MAX.)
2. 2x VERT. MEMBER EA. TRUSS TO FORM PARAPET FASTENED TO TRUSS WEB MEMBER w/ 16d AT 6" o.c. STAGGERED. PARAPET MAY BE BUILT INTO TRUSS IN LIEU OF 2x VERTI MEMBER
3. MIN. ⅜" SHEATHING w/ 8d AT 6" o.c. EDGES AND ALONG BLOCKING AND 12" o.c. FIELD
4. 2x SOLID BLOCKING BETWEEN TRUSSES. FASTEN SHEATHING ALONG BLOCKING w/ 8d AT 6" o.c. MAX.
5. 16d AT 8" o.c. STAGGERED
6. 2x SOLID UPRIGHT BLOCKING w/ 16d AT 6" o.c. TO ADJACENT BLOCK IN WALL

301 ROOF FRAMING PARALLEL TO STUD WALL
N.T.S.

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ROOF FRAMING DETAILS

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INITIAL SUBMITTAL:	DATE:	DESCRIPTION:	REV#:
	12/12/2019		

Professional Engineer Certificate No. 47776 THOMAS W. AVANT 12/12/2019 Arizona U.S.A. EXPIRES 6-30-2020

DRAWN BY: RMD
SCALE: NTS
SHEET: S8.0