HERRIMAN CITY
PRAIRIE OAKS PARK PAVILION

BASE BID SCHEDULE B
S. 7300 WEST
HERRIMAN, UTAH

Project Narrative

THE PROPOSED PROJECT IS A 302 SF STAND-ALONE SINGLE STORY BUILDING CONSISTING OF TWO SINGLE-OCCUPANT RESTROOMS, AN ASSOCIATED UTILITY ROOM, AND CANOPY OVER AN EXTERIOR SPACE. CONSTRUCTION SHALL INCLUDE UNIT MASONRY (STRUCTURAL AND FACING), ROUGH CARPENTRY, METAL ROOF SYSTEMS AND ACCESSORIES, DOORS AND HARDWARE, PAINTING AND SPECIAL COATINGS, TOILET ROOM ACCESSORIES, PLUMBING AND PLUMBING FIXTURES, MINIMAL MECHANICAL SYSTEMS, ELECTRICAL (POWER AND LIGHTING), AND EXTERIOR IMPROVEMENTS, SUCH AS CONCRETE SIDEWALKS.

Project Team

OWNER
Herriman City
5355 West Herriman Main Street
Herriman, Utah 84096

ARCHITECT
SH Architecture
868 S. McClelland St., #2
Salt Lake City, Utah 84102
801-883-9328

STRUCTURAL
Reaveley Engineers
675 East 500 South, Suite 400
Salt Lake City, Utah 84102
801-486-3883

MECHANICAL
Olsen & Peterson, Inc.
14 East 2700 South
Salt Lake City, Utah 84115
801-486-4646

ELECTRICAL
BNA Consulting
635 South State Street
Salt Lake City, Utah 84111
801-532-2196

Location

SITE

Sheet Index

NO.	REVISION DESCRIPTION	DATE

STATE OF UTAH
MARK DUKE PAVONI
137574-0301
LICENSED ARCHITECT
1/21/2019

SUBMITTAL	CONTRUCTION
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	1/11/19

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

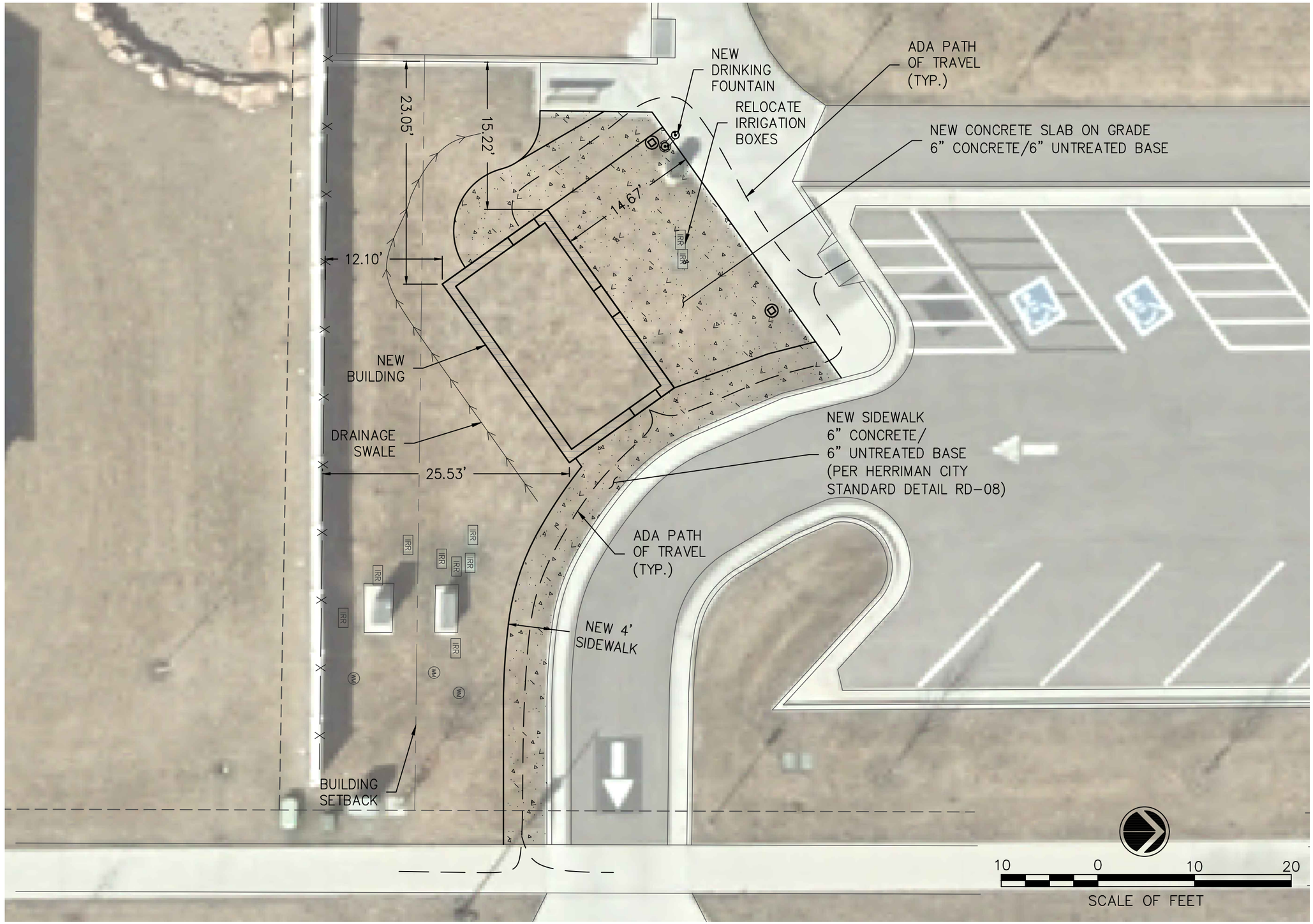
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

COVER SHEET

GI001



NO.	REVISION DESCRIPTION	DATE

LICENSED PROFESSIONAL ENGINEER
8291370
JONATHAN M. BOWERS
12/3/18
STATE OF UTAH

SUBMITTAL		
DRAWN BY:	ALN	
CHECKED BY:	JB	
APPROVED BY:	JB	
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HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK FACILITY

SITE PLAN

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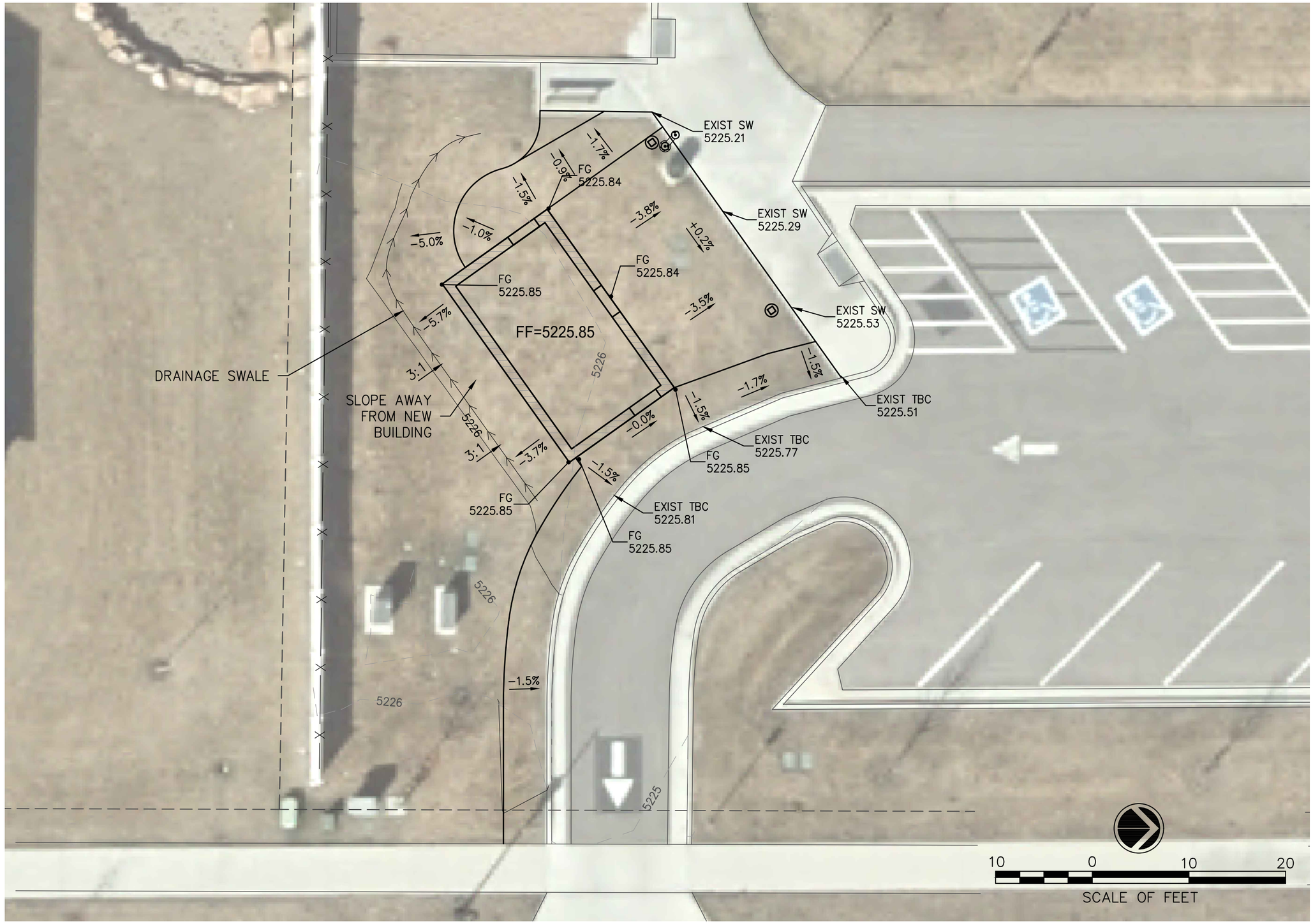

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HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK FACILITY

GRADING PLAN

2 OF 2

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CODE INFORMATION

PROJECT INFORMATION:
The proposed project is a 302 SF stand-alone single story building consisting of two single occupant restrooms, an associated utility room, and canopy over an exterior space. Construction shall include unit masonry (structural and facing), rough carpentry, metal roof systems and accessories, doors and hardware, painting and special coatings, toilet room accessories, plumbing and plumbing fixtures, mechanical systems, electrical (power and lighting), and exterior improvements, such as concrete sidewalks.

Applicable Codes	Year		Year
International Building Code	2015	International Mechanical Code	2015
International Existing Building Code	2015	International Plumbing Code	2015
International Fire Code	2015	Energy Code IECC	2015
ADA Accessibility Guidelines		NEC Electrical Code	2014
IBC Chapter 11	2015		
A.N.S.I. Standard A117.1	2009		

A. Occupancy and Group: U occupancy
Change In Use Yes ____ No X Mixed Occupancy Yes ____ No X

B. Type of Construction: I A | I B | II A | II B | III A | (III B) | IV H.T. | V A | V B

C. Sprinklered: None Existing

D. Location of Property: F.R. Ext. Walls (Hrs.) 10' < 0 HR < 30' Ext. Wall Opening (s) Protection (Hrs.) 30'> UP.

E. Occupancy Separation Required (Hrs): None

F. Areas and Heights:

Occupancy	U
Sprinklered	Yes or (No)
Actual Number of Stories/Height	1 Stories / 15.25 feet
Tabular Building Height (Table 504.3)	55 feet
Tabular Number of Stories (Table 504.4)	2
Actual Area of Building (Combined Total)	302 S.F.
Largest Floor Footprint (Main Floor)	302 S.F.
Tabular Area per Floor (Table 506.2)	9,000 SF

G. Fire Resistive Requirements (Hrs)

Exterior Bearing Walls	0 HR	Floors - Ceiling Floors	0 HR
Interior Bearing Walls	0 HR	Roofs - Ceiling Roofs	0 HR
Exterior Non-Bearing Walls	10' < 0 HR < 30'	Exterior Doors and Windows	0 HR
Structural Frame	0 HR	Shaft Enclosures	2 HR
Non Bearing Interior Walls	0 HR.		

BUILDING AND FLOOR AREAS	
FLOOR	SQ. FT (GROSS)
MAIN LEVEL	302 sf
BUILDING TOTAL	302 sf

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STATE OF UTAH — MARK DUKE FAVOR — LICENSED ARCHITECT

1/21/2019

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CONTRUCTION				1/21/2019	1/11/19
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PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

CODE INFORMATION

GI003

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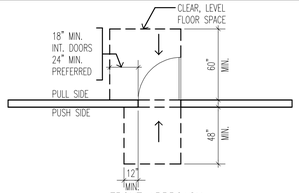
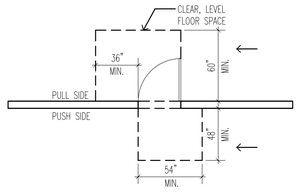
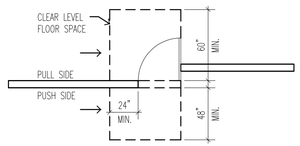
ACCESSIBILITY DIAGRAMS FOR COMMERCIAL / PUBLIC SPACES



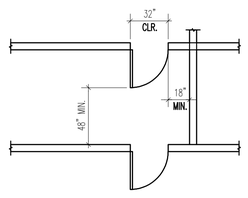
FRONT APPROACH



HINGE SIDE APPROACH

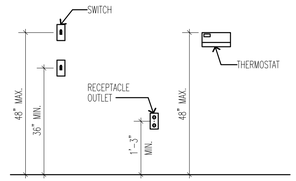


LATCH SIDE APPROACH

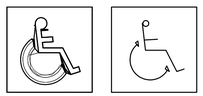


DOORS IN SERIES

DOOR CLEARANCES



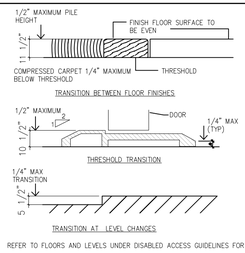
RECEPTACLES / SWITCHES



DISPLAY CONDITIONS

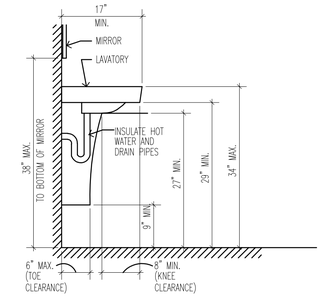
INTERNATIONAL SYMBOL OF ACCESSIBILITY

ACCESSIBILITY SYMBOL

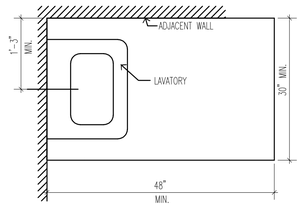


REFER TO FLOORS AND LEVELS UNDER DISABLED ACCESS GUIDELINES FOR ADD'L INFO

THRESHOLD / TRANSITIONS

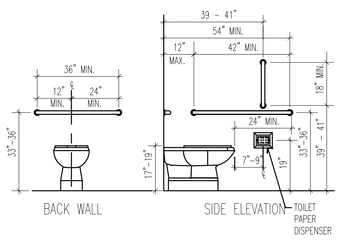


SIDE ELEVATION



PLAN

LAVATORY CLEARANCES



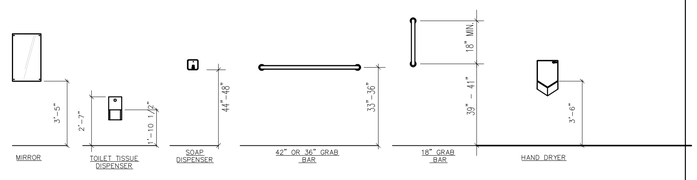
BACK WALL SIDE ELEVATION

TOILET STALL CLEARANCES

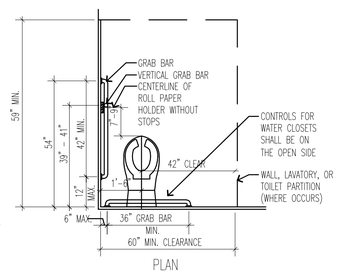
NOTE: VERIFY ALL ACCESSORY SIZE AND MOUNTING WITH MANUFACTURERS APPROVED CUT SHEETS

TRAPS AND HOT WATER PIPES AT LAVS OR SINKS SET IN COUNTERS TO BE INSULATED.

NOT ALL FIXTURES OR ACCESSORIES SHOWN ARE APPLICABLE TO THIS PROJECT - REFER TO PLANS ON SHEET AE101 AND INT. ELEVATIONS ON SHEET AE201 FOR SPECIFIC ITEMS, LOCATIONS AND SPECIAL CONDITIONS.



ACCESSORY MOUNTING HEIGHTS



PLAN

TOILET STALL CLEARANCES

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
A.F.F.	ABOVE FINISH FLOOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
B.O.	BOTTOM OF
C.L.	CENTER LINE
CLNG.	CEILING
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
COORD.	COORDINATE
CORRUG.	CORRUGATED
DEMO	DEMOLISH
DN.	DOWN
DTL.	DETAIL
EA.	EACH
ELEC.	ELECTRICAL
ELECT.	ELECTRICAL
ELEV.	ELEVATION
EXIST.	EXISTING
F.F.	FINISH FLOOR
FIN.	FINISH
FP	FLOOR PLAN
F.R.P.	FIBER REINFORCED PLASTIC
FT.	FEET
GYP. BD.	GYPSUM BOARD
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
INCL.	INCLUDED
LTG.	LIGHTING
MANUF.	MANUFACTURER
MECH.	MECHANICAL
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
MIN.	MINIMUM
MTL.	METAL
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
OPP.	OPPOSITE
PWR.	POWER
RCP	REFLECTED CEILING PLAN
REINF.	REINFORCED
REQ'D.	REQUIRED
SCHED.	SCHEDULE
SIM.	SIMILAR
S.S.	STAINLESS STEEL
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURE
T.O.	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UL	UNDERWRITERS LABORATORIES
UTIL.	UTILITY / UTILITIES
V.I.F.	VERIFY IN FIELD

SYMBOL LEGEND

DATUM POINT

100 — DOOR NUMBER

11 — WINDOW TAG

101 — ROOM NUMBER

11 — ACCESSORY TAG

? — EQUIPMENT TAG

? — KEYNOTE

NORTH — NORTH ARROW

5 / 12 — PITCH

11 50' - 0" / PT-XX — CEILING TAG

CPT , VCT — FLOORING TAG

T.O. FIN. FLR. ELEV. 100'-0" — ELEVATION TAG

0 — GRID BUBBLE AND LINE

0 — EXISTING GRID BUBBLE AND LINE

0 — MATCH BUBBLE AND LINE

1 Ref / Ref 1 / A101 / Ref 1 / 1 Ref — INTERIOR ELEVATION TAG

Ref 1 / Ref 1 1 Ref / A101 / Ref 1 — EXTERIOR ELEVATION TAG

1 — REVISION TAG

1 / A101 / SIM — BUILDING SECTION TAG

1 / A101 / SIM — WALL SECTION TAG

MATERIAL LEGEND

CONCRETE

MASONRY

SAND

WOOD

EARTH

ALUMINUM

STEEL

GRAVEL TYPE - I

RIGID INSULATION

BATT INSULATION

GRAVEL TYPE - II

PLYWOOD

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STATE OF UTAH — MARK DUKE FAVOR — 9349244 — LICENSED ARCHITECT

1/21/2019

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PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

GENERAL NOTES & ADA GUIDE LINES

GI002

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ARCHITECTURAL SITE PLAN

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

1

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF FINISHED FACE OR CENTER LINE OF GRIDS UNLESS NOTED OTHERWISE. ALL CLEAR DIMENSIONS ARE FROM FACE OF FINISH.
2. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO DIMENSIONS, UTILITY LOCATIONS AND UTILITY SIZES.
3. SHOULD ANY CONDITION ARISE WHERE THE INTENT OF DRAWINGS ARE IN DOUBT OR THERE IS A DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING FOR CLARIFICATION, RECORD ANY DISCREPANCY ON A REPRODUCIBLE DOCUMENT AND TRANSIT TO THE ARCHITECT FOR PROJECT RECORD, COORDINATION AND NECESSARY RESOLUTION PRIOR TO CONTINUING WORK.
4. ALTHOUGH NOTES MAY BE GIVEN ONLY ONCE, MANY NOTES ARE TYPICAL FOR SIMILAR DETAILS AND CONDITIONS.
5. SEE STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND COORDINATION.

REFERENCE NOTES

1. EXISTING CONCRETE WALK, COORD. W/ CIVIL (BY OTHERS).
2. NEW RESTROOM BUILDING, COORD. LOCATION AND ORIENTATION W/ CIVIL.
3. EXISTING LANDSCAPING, PROTECT AND RESTORE.
4. EXISTING PARKING LOT AND DRIVE, PROTECT.
5. EXISTING ROADWAY AND CURB & GUTTER.
6. DRINKING FOUNTAIN.
7. ADJACENT PROPERTY LINE, COORD. W/ CIVIL.
8. SITE FURNITURE, BY OTHERS.
9. NEW 4" CONCRETE SIDEWALK ON 4" WASHED GRAVEL, COORD. W/ CIVIL.
10. EXISTING FENCE, PROTECT.
11. EXISTING PLAY AREA.
12. EXISTING CONCRETE MOW STRIP.
13. EXISTING CONCRETE CURB AND GUTTER.
14. EXISTING ELECTRICAL EQUIPMENT.

LEGEND

PROJECT LIMIT LINE

NEW 4" CONCRETE SIDEWALK ON 4" WASHED GRAVEL, COORD. W/ CIVIL

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S. 7300 WEST HERRIMAN, UTAH

ARCHITECTURAL SITE PLAN

AS101

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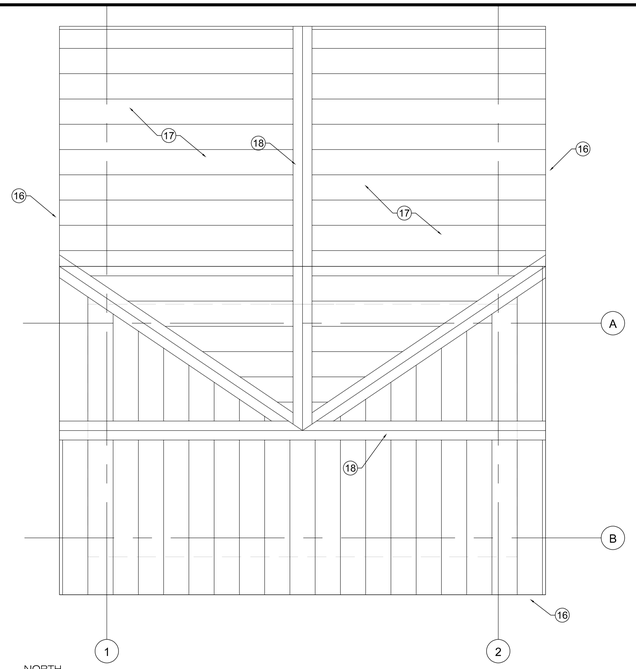

NORTH

ROOF PLAN 3

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

FINISH SCHEDULE

No.	ROOM	FLOOR	BASE	WALLS				CEILING	NOTES
				NORTH	EAST	SOUTH	WEST		
101	WOMEN	F-02	F-02	P-01	P-01	P-01	P-01	C-01	DOORS & FRAMES TO BE P-02
102	UTILITY	F-01	F-01	P-01	P-01	P-01	P-01	C-01	DOORS & FRAMES TO BE P-02
103	MEN	F-02	F-02	P-01	P-01	P-01	P-01	C-01	DOORS & FRAMES TO BE P-02

FINISH KEY

KEY	ITEM	MANUFACTURER	SIZE	PRODUCT #	COLOR NAME	COMMENT
F-01	CONCRETE, SEALED	KELLY-MOORE PAINTS	-	98 MULTI SEAL	ACRYLIC SEALER	2-COAT SYSTEM (PRIMER & FINISH)
F-02	EPOXY FLOOR SYSTEM	GENERAL POLYMERS	-	CERAMIC CARPET	TBD	1/8" SYSTEM - FULL RANGE OF MFR. COLORS
P-01	CMU, SEALED	KELLY-MOORE PAINTS	-	98 MULTI SEAL	ACRYLIC SEALER	2-COAT SYSTEM (PRIMER & FINISH)
P-02	PAINT	SHERWIN WILLIAMS	-	TBD	TBD	-
C-01	CEILING	SHERWIN WILLIAMS	-	TBD	TBD	-

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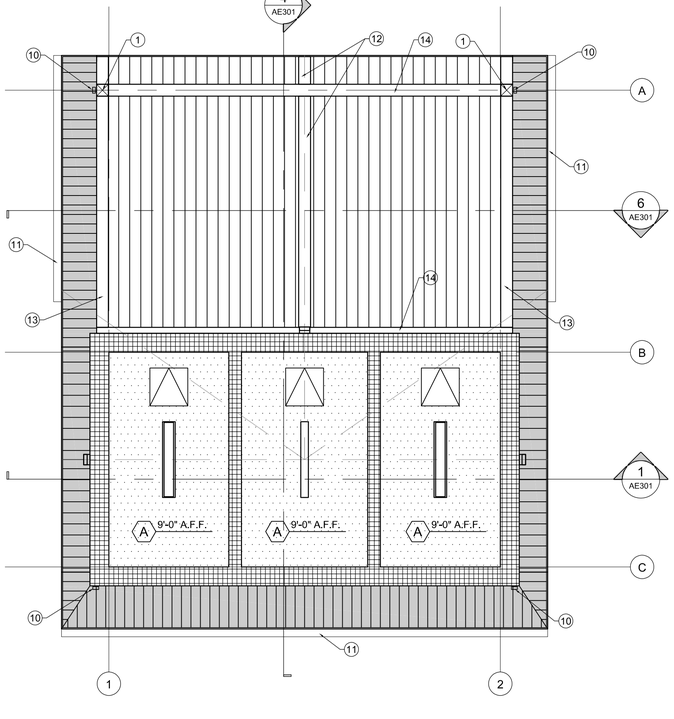
REFERENCE NOTES

1. HEAVY TIMBER POST COORD. WITH STRUCTURAL.
2. NEW 4" CONCRETE SIDEWALK ON 4" WASHED GRAVEL, COORD. WITH CIVIL.
3. ROOF EAVE ABOVE
4. WATER CLOSET , COORD. WITH PLUMBING.
5. LAVATORY, COORD. WITH PLUMBING.
6. FLOOR DRAIN, COORD. WITH PLUMBING.
7. TYPE 'X' GYPSUM BOARD ON TREATED 2x4 FRAMING @ 16" O.C., PAINT.
8. CUSTODIAL SINK, COORD. W/ PLUMBING.
9. HAND DRYER, COORD. WITH ELECTRICAL.
10. PRE - FINISHED METAL DOWN SPOUT.
11. PRE-FINISHED METAL GUTTER.
12. HEAVY TIMBER RIDGE BEAM, COORD. WITH STRUCTURAL.
13. HEAVY TIMBER BEAM, COORD. WITH STRUCTURAL
14. HEAVY TIMBER TRUSS, COORD. WITH STRUCTURAL.
15. UTILITY SHELF W/ MOP HOLDER, BOBRICK, B-239.
16. PRE-FINISHED METAL GUTTER.
17. PRE-FINISHED METAL STANDARD SEAM ROOFING SYSTEM ON CONT. SELF ADHERING UNDERPAYMENT.
18. PRE-FINISHED METAL RIDGE VENT.
19. CONCRETE PIER, COORD. W/ STRUCTURAL.

LEGEND

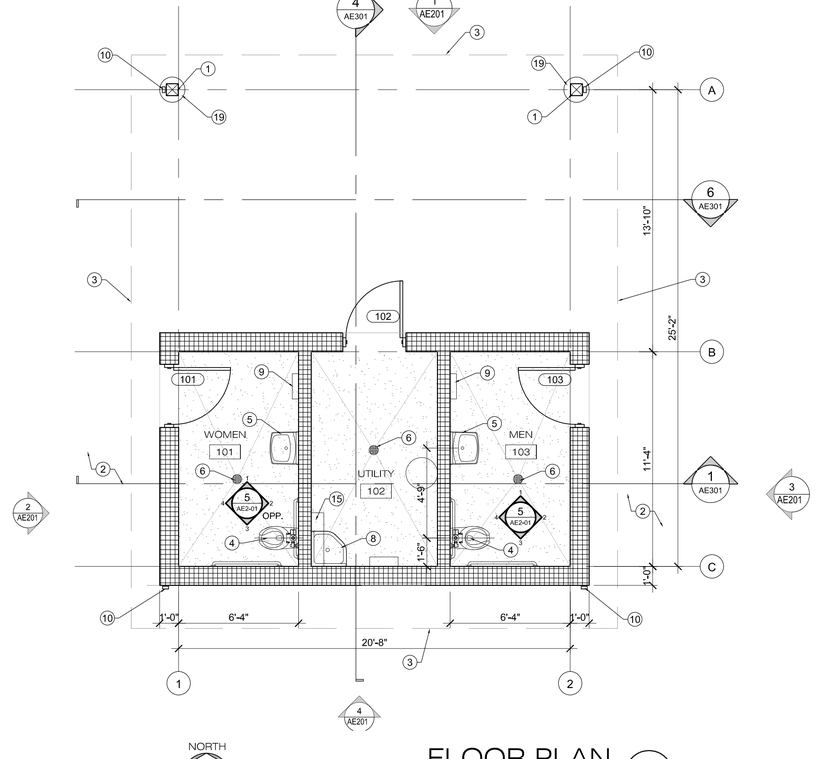
- MASONRY WALL W/ VENEER, COORDINATE WITH STRUCTURAL
- NEW 4" CONCRETE SLAB ON 4" WASHED GRAVEL COORDINATE WITH STRUCTURAL, SLOPE TO DRAIN .
- PAINTED 5/8" TYPE 'X' GYPSUM BOARD
- 24" X 24" CEILING ACCESS PANEL, PAINT COORDINATE FINAL LOCATION WITH OWNER
- # HEIGHT — CEILING TAG
- T & G WOOD FINISH



NORTH

REFLECTED CEILING PLAN 2

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



NORTH

FLOOR PLAN 1

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

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STATE OF UTAH — MARK DUKE RAVOU — LICENSED ARCHITECT

1/21/2019

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BAR IS ONE INCH ON ORIGINAL DRAWING

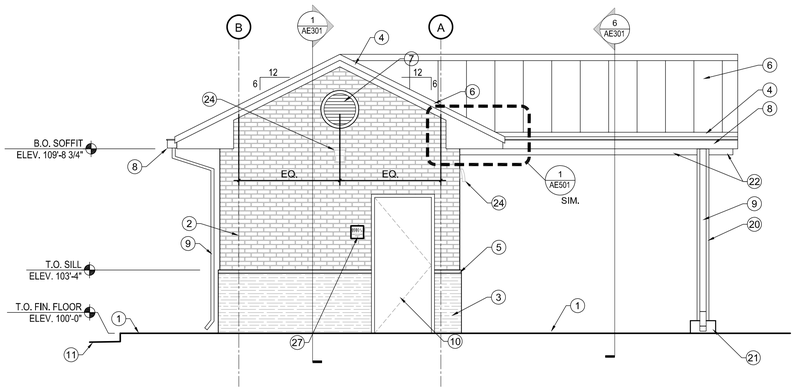
HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

FLOOR PLAN & ROOF PLAN

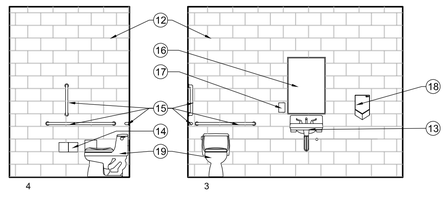
AE101

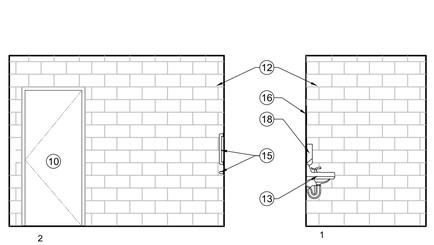
5/14/2018 5:42 PM L:\180056 HERRIMAN CITY – PRAIRIE OAKS PARK PAVILION\EXECUTION DRAWINGS\ARCHITECTURAL\SHEETS\AE101 FLOOR PLAN.DWG



ELEVATION - WEST 3

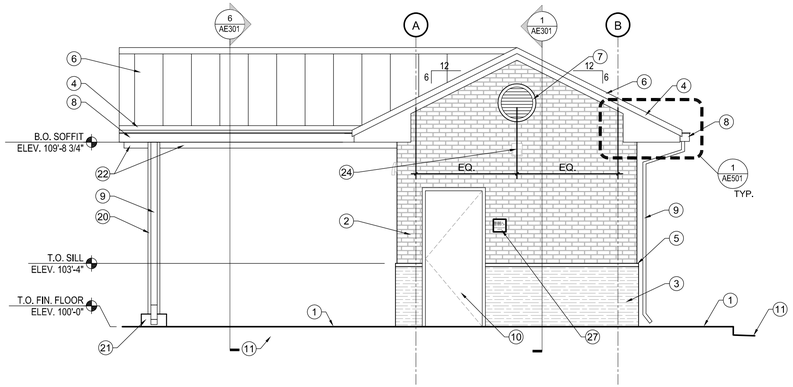
SCALE: 1/4"=1'-0"





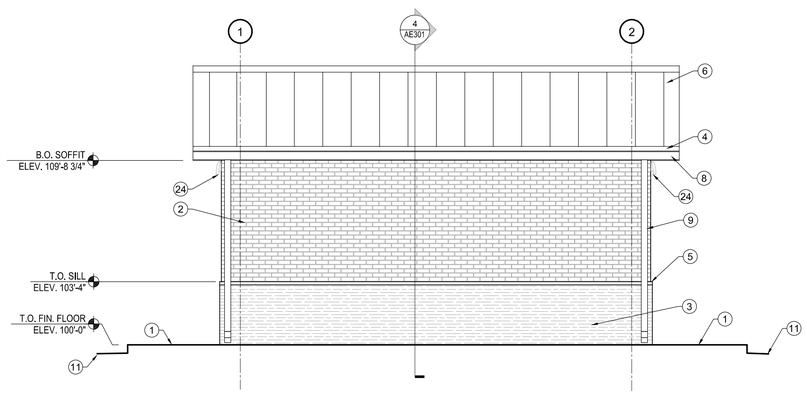
INTERIOR ELEVATIONS - TYP. 5

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



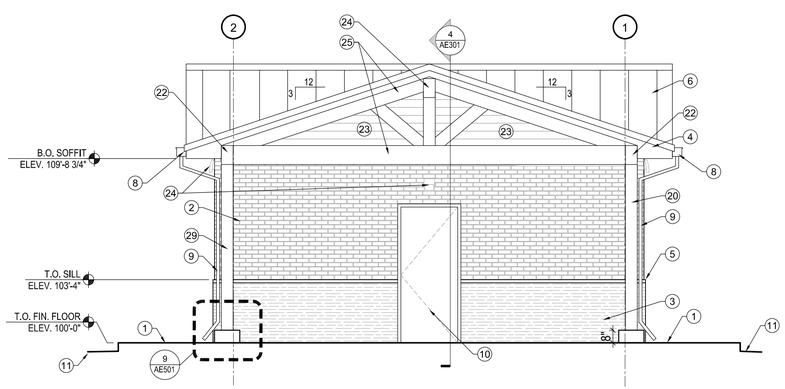
ELEVATION - EAST 2

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



ELEVATION - NORTH 4

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



ELEVATION - SOUTH 1

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

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF FINISHED FACE OR CENTER LINE OF GRIDS UNLESS NOTED OTHERWISE. ALL CLEAR DIMENSIONS ARE FROM FACE OF FINISH.
2. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO DIMENSIONS, UTILITY LOCATIONS AND UTILITY SIZES.
3. SHOULD ANY CONDITION ARISE WHERE THE INTENT OF DRAWINGS ARE IN DOUBT OR THERE IS A DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING FOR CLARIFICATION. RECORD ANY DISCREPANCY ON A REPRODUCIBLE DOCUMENT AND TRANSIT TO THE ARCHITECT FOR PROJECT RECORD, COORDINATION AND NECESSARY RESOLUTION PRIOR TO CONTINUING WORK.
4. ALTHOUGH NOTES MAY BE GIVEN ONLY ONCE, MANY NOTES ARE TYPICAL FOR SIMILAR DETAILS AND CONDITIONS.
5. SEE STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND COORDINATION.

REFERENCE NOTES

1. CONCRETE SIDEWALK COORDINATE W/ CIVIL.
2. BRICK VENEER
3. CULTURED STONE VENEER SYSTEM.
4. PRE - FINISH METAL FASCIA.
5. PRECAST SILL.
6. PRE - FINISH METAL STANDING SEAM ROOFING SYSTEM.
7. PRE - FINISHED METAL LOUVER. SEE DETAIL 6/AE601
8. PRE - FINISHED METAL GUTTER.
9. PRE - FINISHED METAL DOWNSPOUT.
10. DOOR AS SCHEDULED.
11. GRADE , COORDINATE WITH CIVIL.
12. HONED/COLORED CMU, SEALED.
13. LAVATORY W/ UNDERSINK PIPING PROTECTION.
14. TOILET PAPER DISPENSER. BOBRICK B-2892
15. GRAB RAIL. BOBRICK B-6806.
16. MIRROR. BOBRICK B-1556, 24" X 36".
17. SOAP DISPENSER. BOBRICK B-2111.
18. 'ELECTRIC HAND DRYER. BOBRICK B-7128.
19. WATER CLOSET
20. HEAVY TIMBER POST, COORD. WITH STRUCTURAL
21. CONCRETE PIER, COORD. WITH STRUCTURAL
22. HEAVY TIMBER BEAM, COORD. WITH STRUCTURAL
23. T & G WOOD FINISH.
24. EXTERIOR LIGHT FIXTURE 'OA' COORDINATE WITH ELECTRICAL
25. HEAVY TIMBER TRUSS BEAM, COORDINATE WITH STRUCTURAL
26. HEAVY TIMBER RIDGE BEAM, COORDINATE WITH STRUCTURAL
27. ADA ACCESSIBILITY SIGN, SEE 1/ AE601.

LEGEND

BRICK VENEER

CULTURED STONE VENEER

NO.	REVISION DESCRIPTION	DATE

STATE OF UTAH
MARK DUKE FAVOR
LICENSED ARCHITECT

1/21/2019

SUBMITTAL	CONTRUCTION
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	1/11/19

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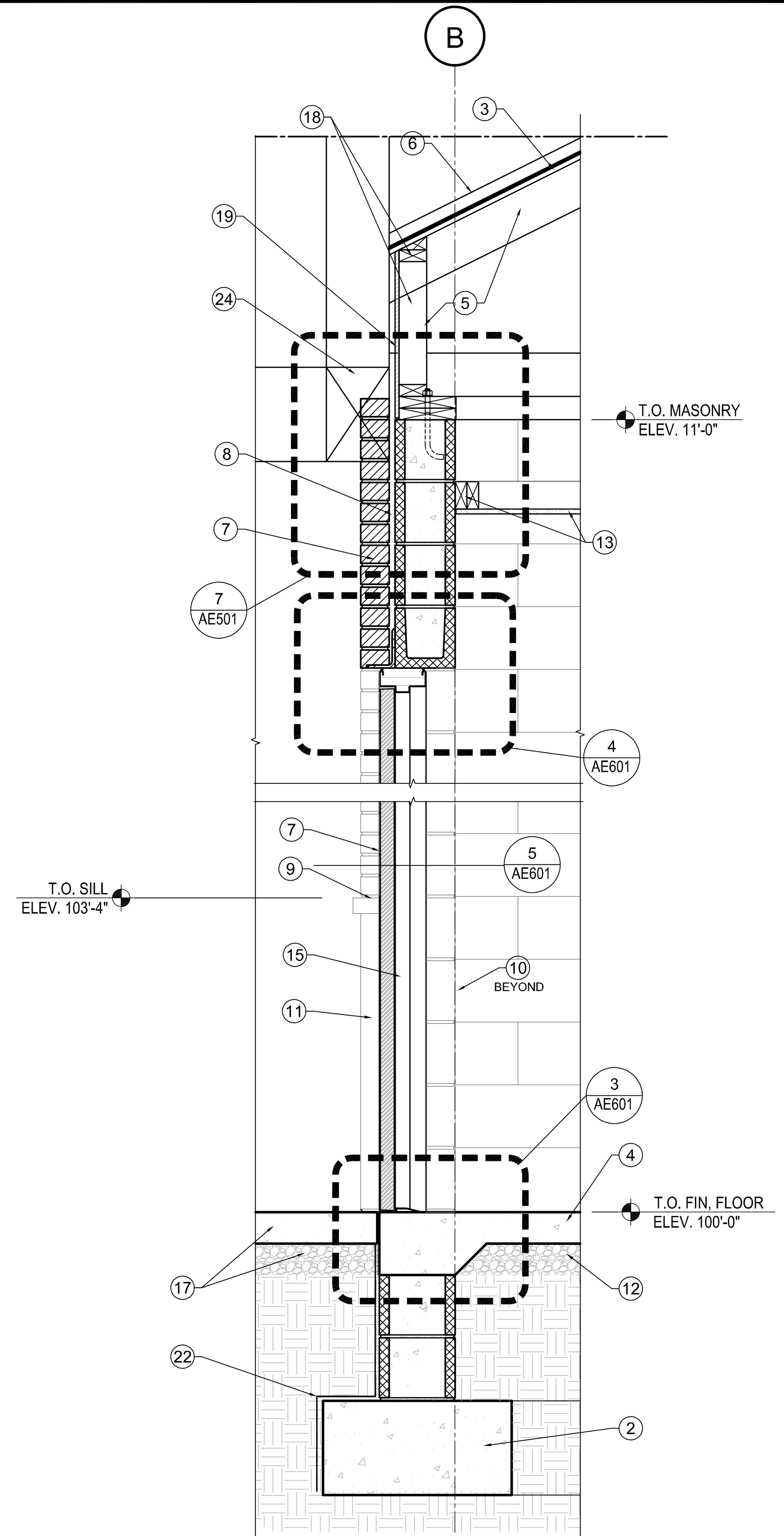
HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

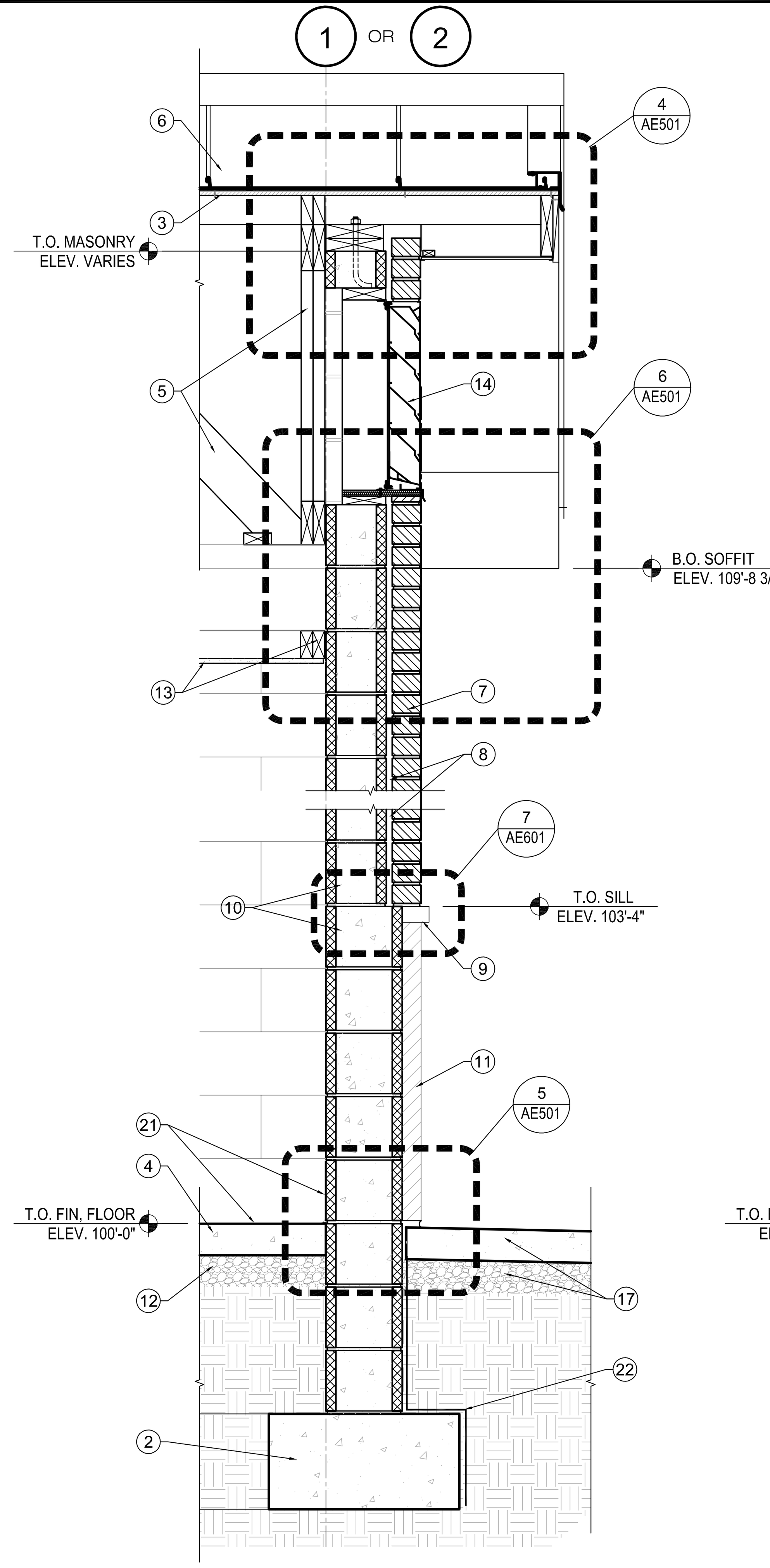
BUILDING EXTERIOR AND INTERIOR ELEVATIONS

AE201

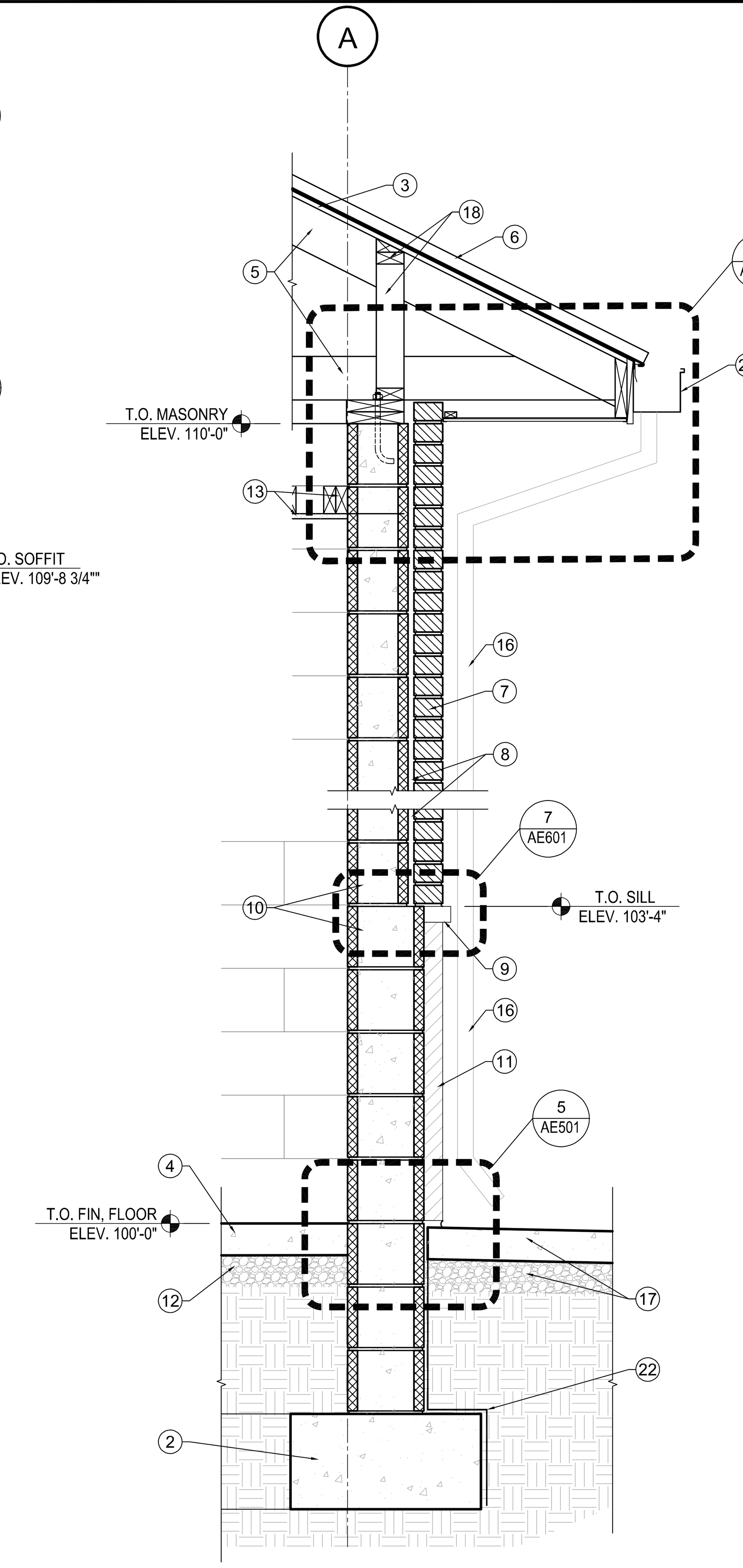
5/14/2018 5:42 PM L:\180056 HERRIMAN CITY - PRAIRIE OAKS PARK PAVILION\EXECUTION DRAWINGS\ARCHITECTURAL\SHEETS\AE201 ELEVS.DWG



WALL SECTION 5
SCALE: 3/4"=1'-0"



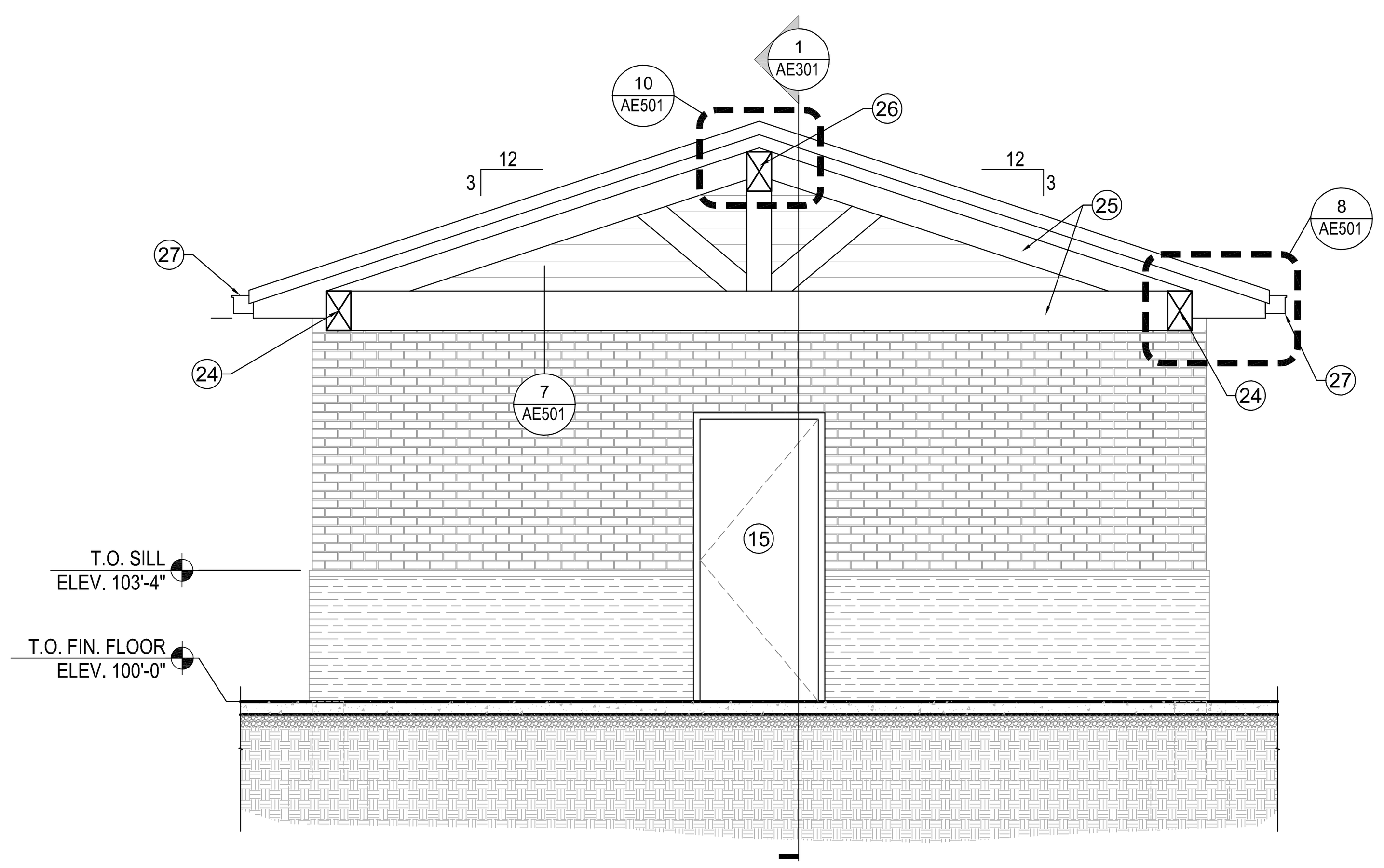
WALL SECTION 3
SCALE: 3/4"=1'-0"



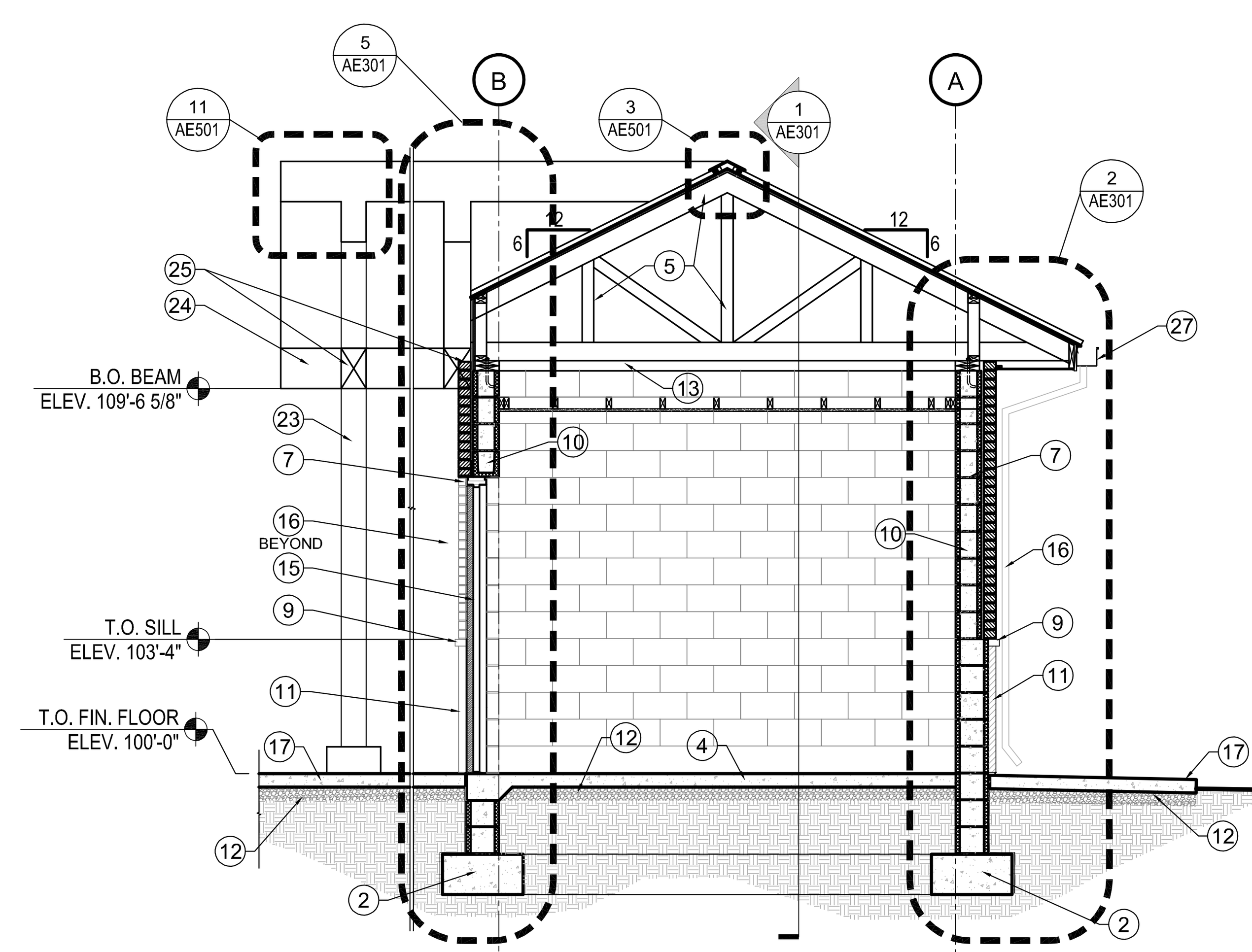
WALL SECTION 2
SCALE: 3/4"=1'-0"

REFERENCE NOTES

1. GRADE, COORDINATE W/ CIVIL.
2. CONCRETE FOOTING, COORD. W/ STRUCTURAL.
3. ROOF SHEATHING, COORD. W/ STRUCTURAL.
4. CONCRETE SLAB, COORD. W/ STRUCTURAL.
5. ROOF TRUSS SYSTEM. COORD. W/ STRUCTURAL.
6. PRE-FINISHED METAL STANDING SEAM ROOFING SYSTEM W/ CONT. SELF-ADHERENT UNDERLAYMENT.
7. MASONRY VENEER.
8. CONT. 1" AIR GAP.
9. PRECAST CONCRETE SILL.
10. CONCRETE MASONRY UNIT , COORD. W/ STRUCTURAL.
11. CULTURED STONE VENEER.
12. COMPACTED GRAVEL, COORD. W/ STRUCTURAL.
13. ⅝" TYPE 'X' GYP. ON TREATED 2x4 FRAMING @ 16" O.C..
14. PRE-FINISHED METAL LOUVER.
15. DOOR - SEE DOOR SCHEDULE.
16. PRE-FIINISHED METAL DOWN SPOUT, RECTANGULAR.
17. CONCRETE SIDEWALK ON COMPACTED/WASHED GRAVEL, COORD. W/ CIVIL.
18. 2x FRAMING @ 16" O.C.
19. SHEATHING, COORD. W/ STRUCTURAL
20. LAVATORY W/ UNDERSINK PIPING PROTECTION, COORD. W/ PLUMBING.
21. EPOXY FLOOR & BASE FINISH.
22. CONT. BITUMINOUS DAMP PROOFING
23. HEAVY TIMBER POST, COORD. WITH STRUCTURAL
24. HEAVY TIMBER BEAM, COORD. WITH STRUCTURAL
25. HEAVY TIMBER TRUSS BEAM, COORDINATE WITH STRUCTURAL
26. HEAVY TIMBER RIDGE BEAM, COORDINATE WITH STRUCTURAL
27. PRE - FINISHED METAL GUTTER



BLDG. SECTION 6
SCALE: 1/4"=1'-0"



BLDG. SECTION 4
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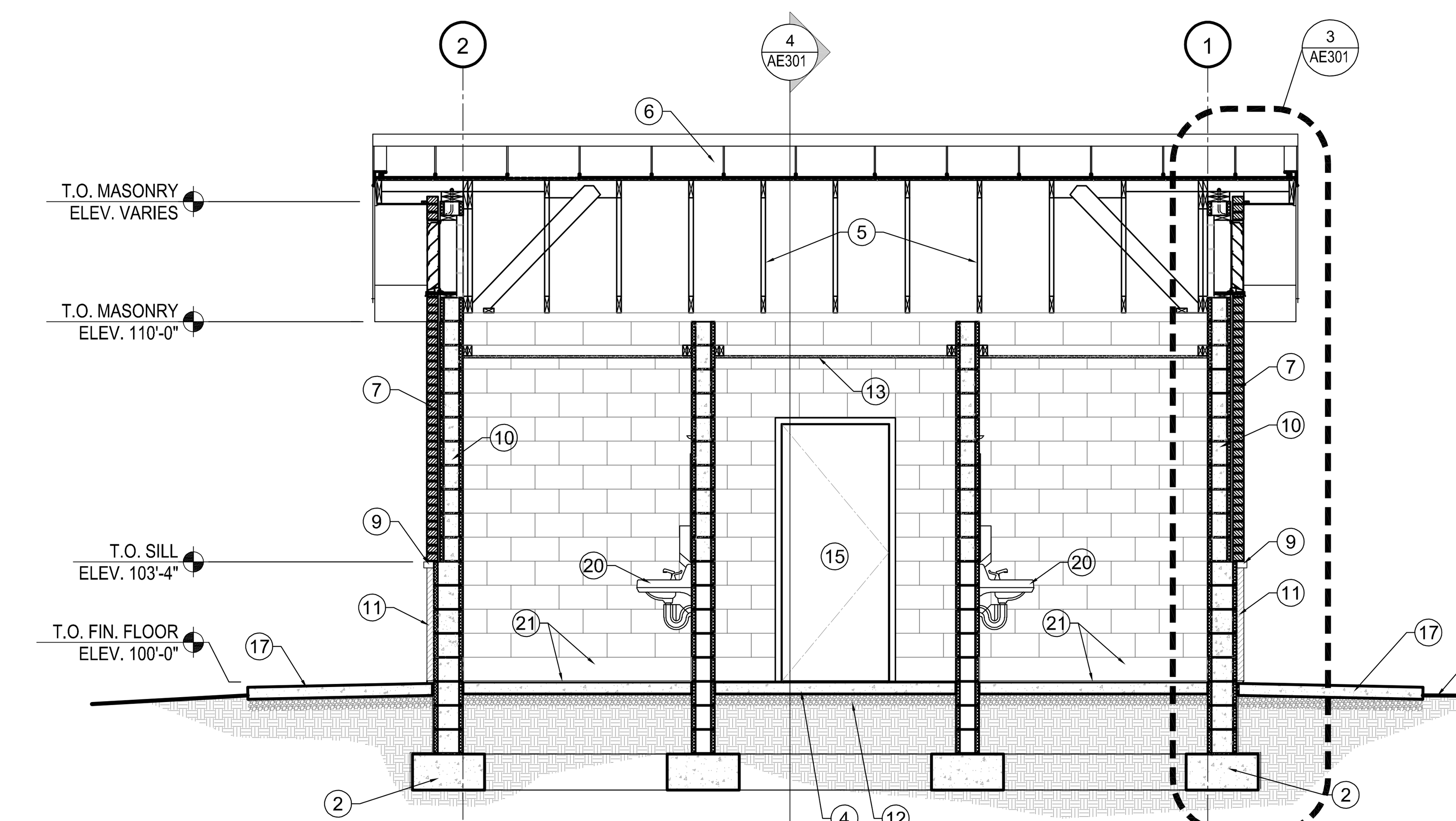

BLDG. SECTION 1
SCALE: 1/4"=1'-0"

NO.	REVISION DESCRIPTION	DATE

MARK DUKE PAVON, LICENSED ARCHITECT, STATE OF UTAH
1/21/2019

SUBMITTAL	CONTRUCTION
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	1/11/19

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VERIFY SCALE
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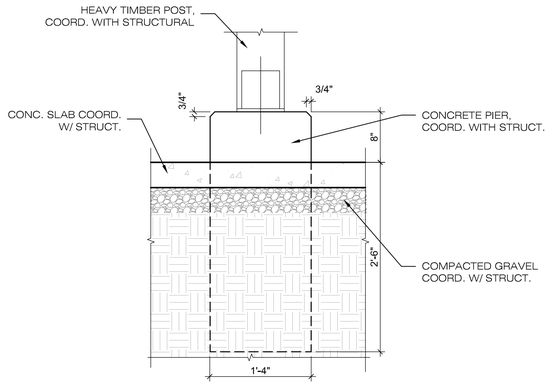
HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRARIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

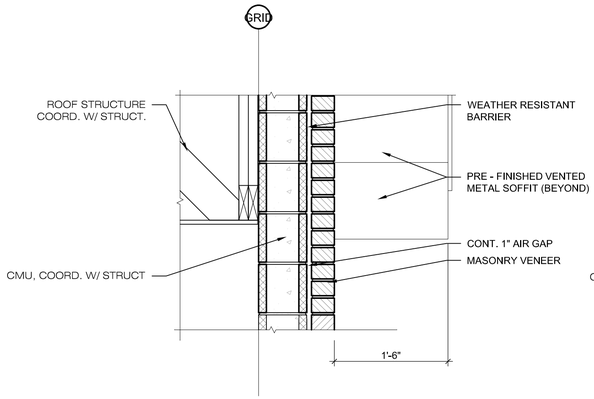
BUILDING SECTIONS & WALL SECTION

AE301



DETAIL 9

SCALE: 1"=1'-0"



DETAIL 6

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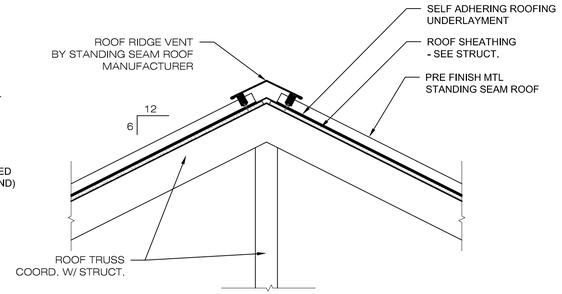

REDGE DETAIL 3

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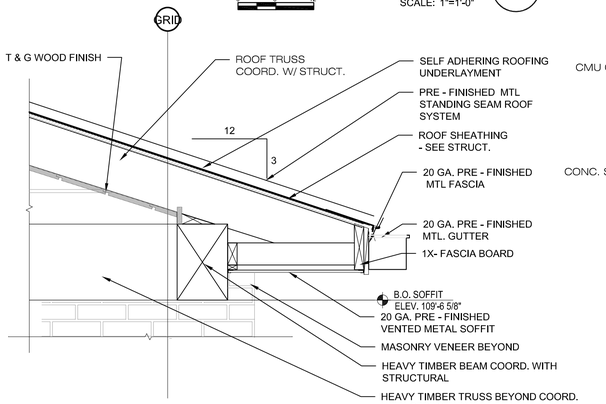
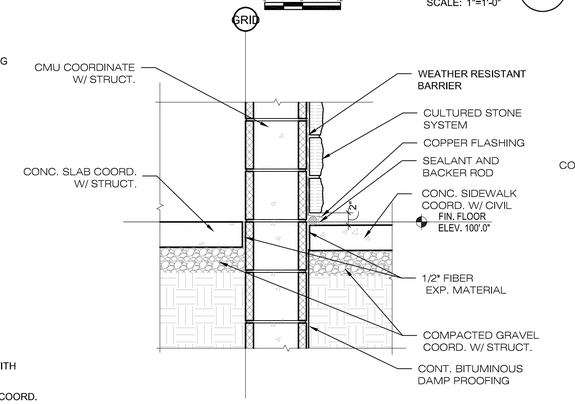


DETAIL 8

SCALE: 1"=1'-0"



DETAIL 5

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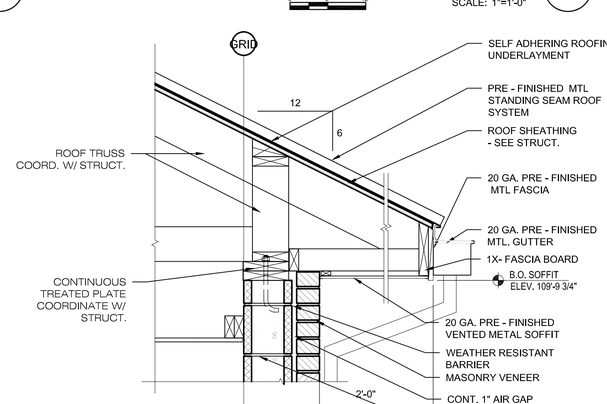
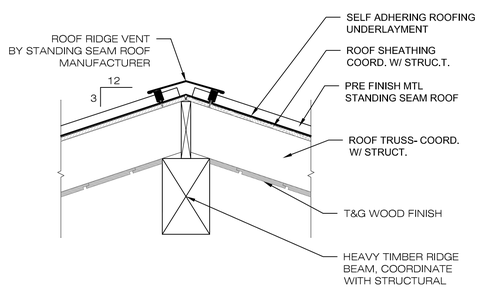


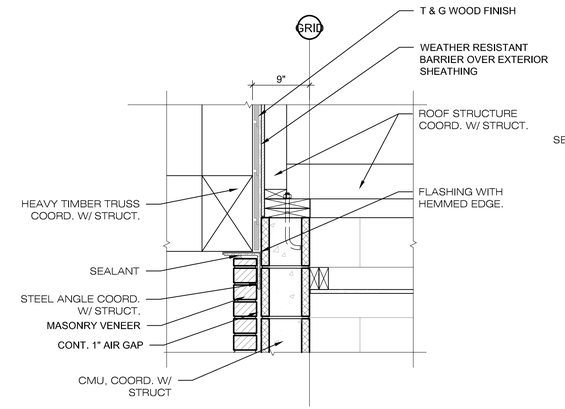
EAVE DETAIL 2

SCALE: 1"=1'-0"



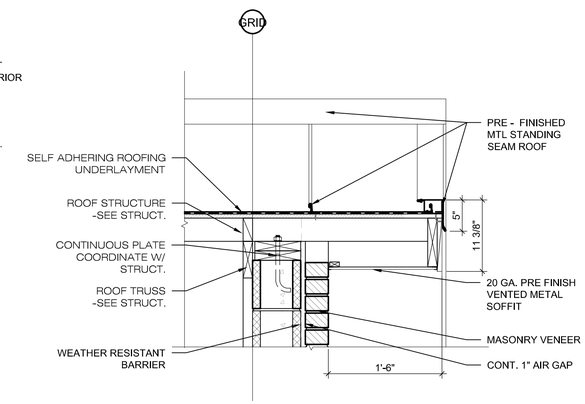
REDGE DETAIL 10

SCALE: 1"=1'-0"



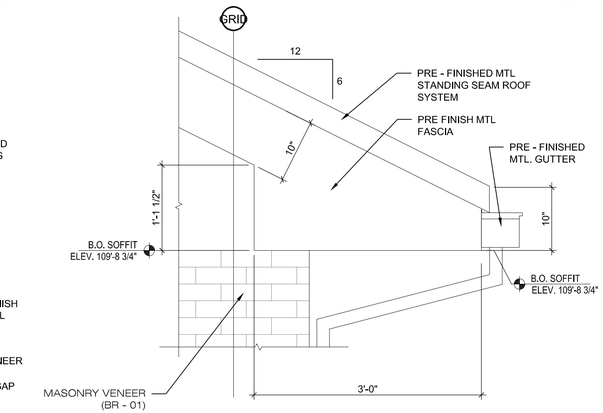
DETAIL EAVE 7

SCALE: 1"=1'-0"



DETAIL EAVE 4

SCALE: 1"=1'-0"



DETAIL ELEV. - RAKE 1

SCALE: 1"=1'-0"

5/14/2018 5:42 PM L:\180056 HERRIMAN CITY – PRAIRIE OAKS PARK PAVILION\EXECUTION DRAWINGS\ARCHITECTURAL\SHEETS\AE501 DETAILS.DWG

NO.	REVISION DESCRIPTION	DATE

STATE OF UTAH
MARK DUKE FAVOR
LICENSED ARCHITECT

1/21/2019

SUBMITTAL		CONTRUCTION	
DRAWN BY:			
CHECKED BY:			
APPROVED BY:		RELEASE:	1/21/2019
		PLOT DATE:	1/11/19

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HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

DETAILS

AE501

DOOR SCHEDULE

NO.	TYPE	DOOR					FRAME								REMARKS	NO.
		SIZE		GLASS	MATERIAL	FINISH	FRAME TYPE	DETAIL			MATERIAL	FINISH	HDWR. SET			
		WIDTH	HEIGHT*					HEAD	JAMB	SILL						
101	D1	3'-0"	7'-2"	-	GALV. H.M.	PT.	F1	4/AE601	5/AE601	3/AE601	GALV. H.M.	PT.	HW-01			101
102	D1	3'-0"	7'-2"	-	GALV. H.M.	PT.	F1	4/AE601	5/AE601	3/AE601	GALV. H.M.	PT.	HW-01			102
103	D1	3'-0"	7'-2"	-	GALV. H.M.	PT.	F1	4/AE601	5/AE601	3/AE601	GALV. H.M.	PT.	HW-01			103

* VERIFY DOOR HEIGHTS IN FIELD

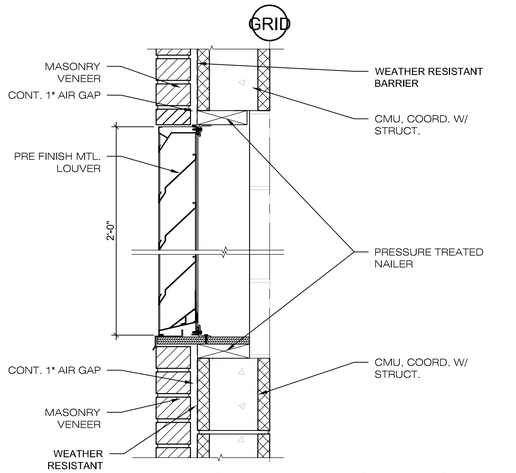
DOOR HARDWARE

HW SET: 01
(Doors 101, 102 & 103)

3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	LOCK SET	NDE80 RHO SERIES (CYL PREP AS REQ'D) ON 'ENGAGE' PLATFORM	626	SCHLAGE
1	EA	CYLINDER / CORE	MATCH OWNER KEY SYST.	626	SCHLAGE
1	EA	SURFACE CLOSER	4040XP SCUSH TBWMS	689	LCN
1	EA	RAIN DRIP	142 SERIES	628	ZERO
1	SET	PERIMETER GASKET	429 SERIES (HEAD & JAMBS)	628	ZERO
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	DOOR SWEEP	39 SERIES	628	ZERO
1	EA	SADDLE THRESHOLD	656 SERIES X 223	719	ZERO

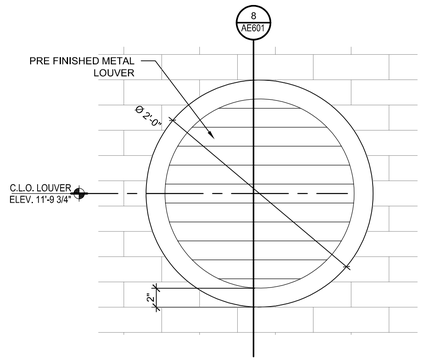
ABBREVIATIONS

H.M.	HOLLOW METAL
PT.	PAINTED
GALV H.M.	GALVANIZED HOLLOW METAL (INSULATED @ DOORS)



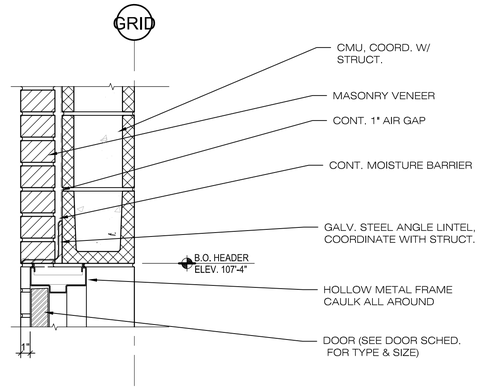
DETAIL - LOUVER 8

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



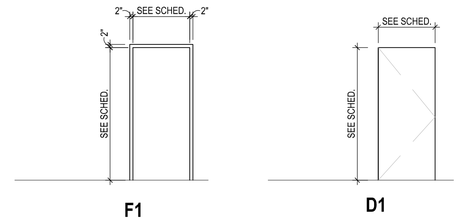
LOUVER 6

SCALE: 1"=1'-0"



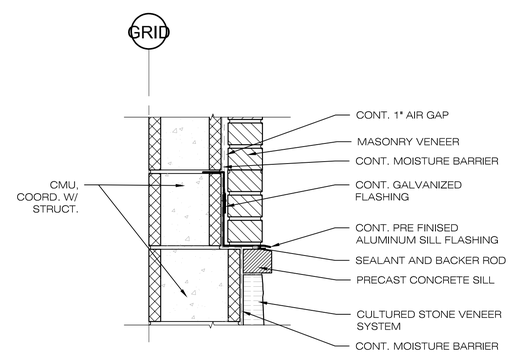
DETAIL - DOOR HEAD 4

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



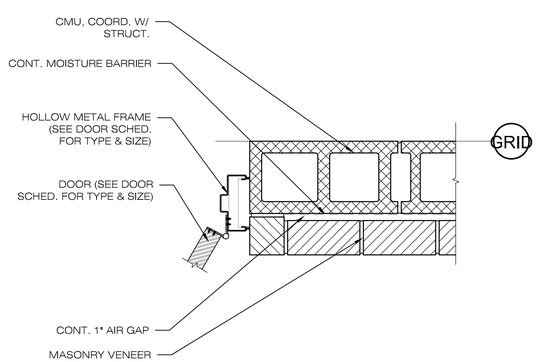
FRAME & DOOR TYPES 2

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



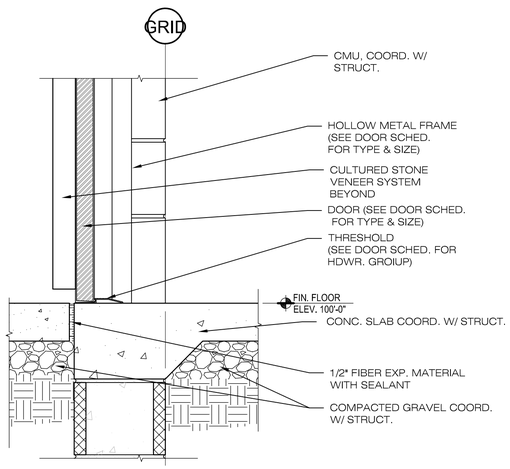
DETAIL 7

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



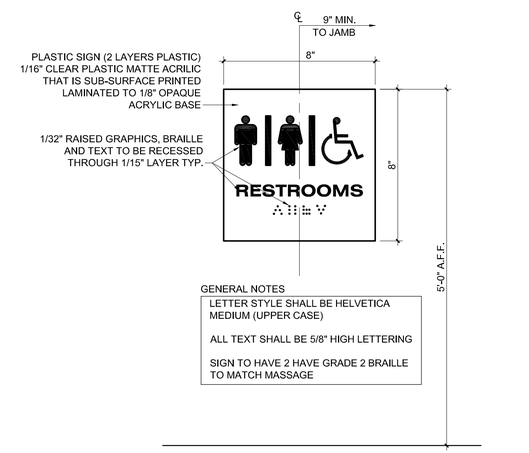
DETAIL - DOOR JAMB 5

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



DETAIL - DOOR SILL 3

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



RESTROOM SIGN 1

SCALE: 3"=1'-0"

NO.	REVISION DESCRIPTION	DATE

STATE OF UTAH
MARK DUKE PAXON
LICENSED ARCHITECT
1/21/2019

SUBMITTAL		CONTRUCTION	
DRAWN BY:			
CHECKED BY:			
APPROVED BY:		RELEASE:	1/21/2019
		PLOT DATE:	1/11/19

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HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

DOOR SCHEDULE & DOOR TYPE & DETAILS

AE601

5/14/2018 5:42 PM L:\180056 HERRIMAN CITY - PRAIRIE OAKS PARK PAVILION\EXECUTION DRAWINGS\ARCHITECTURAL\SHEETS\AE601 DOOR SCHED.DWG

1. Design Criteria

1.1. Governing Building Code ..... 2015 International Building Code (IBC)
A. Risk Category II

1.2. Roof Live Loading
A. Roof Live Load ..... 20 psf
B. Roof Snow Load ..... 32 psf + Drift per IBC
1. Ground Snow Load, P_g ..... 48 psf
2. Snow Exposure Factor, C_e 1.0
3. Importance Factor, Is 1.0
4. Thermal Factor, C_t 1.2

1.3. Earthquake
A. Seismic Design Category ..... D
B. Spectral Response Accelerations
S_S = 0.924 g S_{DS} = 0.696 g
S_1 = 0.313 g S_{D1} = 0.37 g
C. Soil Site Class ..... D
F_a = 1.017 F_v = 1.599
D. Basic Seismic-Force-Resisting System ..... Special Reinforced Masonry Shear Walls
R = 5 Ω_0 = 2.5 C_d = 3.5
E. Importance Factor, I_E 1.0
F. Redundancy Factor, ρ 1.0
G. Analysis Procedure ..... Equivalent Lateral Force (Static)
H. Design Base Shear ..... 6.0 kips

1.4. Wind
A. Ultimate Design Wind Speed V_{ult} ..... 115 mph
B. Exposure ..... B
C. Internal Pressure Coefficient, GC_{pi} 0.18
D. Topographic Factor, K_{zt} 1.0
E. Components and Cladding Design Pressure

Design Wind Pressure (psf)

Location		Tributary Area (ft^2)			
		< 10	50	100	> 500
Walls	Within 3 ft of building corner	31.8	26.9	22.6	19.7
	All other areas	25.8	23.3	21.2	19.7
Roof	Within 3 ft of building corner	56.0	51.2	47.6	43.9
	Within 3 ft of building edge	37.9	33.9	30.8	27.8
	All other areas	21.8	21.0	20.3	19.7

1.5. Foundation
A. Subsurface Conditions:
Soils bearing values are taken from IBC table 1806.2 Presumptive Load Bearing values..
B. Soil Bearing Pressure: ..... 1500 psf,
C. Lateral Soil Pressure Fluid Equivalent Density.
1. Passive: ..... 100 pcf
D. Coefficient of Friction: 0.25

2. Earthwork

2.1. Clearing: The entire building area shall be scraped to remove the top 4 inches of soil, including all vegetation and debris.

2.2. Proof rolling: The natural undisturbed soil below all footings shall be proof rolled prior to placing concrete. Remove all soft spots and replace with compacted structural fill.

2.3. Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 4 inches and with not more than 10 percent passing a No. 200 sieve. It shall be compacted to 95 percent of the maximum laboratory density as determined by ASTM D1557. All fill shall be tested (See Specifications and the Quality Assurance section of the GSN).

3. Concrete

3.1. Materials shall comply with the Standards specified in American Concrete Institute (ACI) 318-14, "Building Code Requirements for Structural Concrete."
A. Concrete mix design requirements shall be as follows:

Location	f'c at 28 days (psi)	Max W/C Ratio	Air Content (%)	Max Aggregate Size	Exposure Classes*		
					F	S	C
Footings	3000	0.50	-	1"	F0	S0	C0
Interior Slabs on Grade	3000	0.45	6	1"	F0	S0	C0
All other site cast concrete	4500	0.45	6	1"	F1	S0	C1

* Exposure Classes are per ACI 318, Section 19.13.1.1, where F, S and C are exposure categories for freezing and thawing, sulfate, and corrosion protection of reinforcement, respectively.

B. Cementitious Materials:
1. Portland Cement (ASTM C150):
a. Type I or II for exposure class S0.
2. Fly Ash (ASTM C618, Class C or F): maximum fly ash content as a percentage of total weight of cementitious materials shall be 25 percent.
C. Concrete Density (Maximum Air Dry Weight):
1. Normal weight concrete shall be approximately 145 to 155 pounds per cubic foot. Aggregate shall be ASTM C33.
D. Steel Reinforcement:
1. ASTM A615 Grade 60, fy = 60,000 psi min. unless noted otherwise.
E. Wire Reinforcement:
1. Welded wire fabric (WWF): ASTM A1064.
F. Admixtures:
1. Air-entraining admixtures, comply with ASTM C 260 (when used).
a. Tolerance on air content as delivered shall be +/- 1.5%.
b. When air content of a trowel finished floor slab exceeds 3%, there is an increased risk for delaminations and blistering to occur. When this situation is present, the contractor shall pay special attention to the finishing procedures to help minimize such risks. Refer to ACI 302.1R-15 "Guide for Concrete Floor and Slab Construction" for proper finishing guidelines.
2. The use of super plasticizers and water reducers is allowed, but not required.
3. Calcium chloride or admixtures containing calcium chloride shall not be added to the concrete mix.
G. Chloride Ion: Maximum water soluble chloride ion concentrations in hardened concrete at age between 28 and 42 days contributed from the ingredients including water, aggregates, cementitious materials, and admixtures shall not exceed a maximum, by weight of cement, of 1.00% for concrete with exposure class C0, 0.30% for concrete with exposure class C1, and 0.15% for concrete with exposure class C2.
H. Slump Limit: 4 inches, maximum for all concrete prior to the addition of plasticizers and water reducing admixtures. The concrete supplier shall indicate the final slump of each concrete mix in the submitted mix design.
I. Shrinkage Limit: Interior slabs on grade shall have a drying shrinkage limit of 0.040 percent tested in accordance with ASTM C157. Drying shrinkage test results shall be submitted with mix designs.
J. Only one grade or type of concrete shall be poured on the site at any given time.

3.2. Formwork shall comply with ACI Standards Publication 347 and the project specifications. The contractor shall be responsible for the design, detailing, care, placement and removal of the formwork and shores.

3.3. Concrete cover requirements for deformed bar reinforcing steel shall comply with ACI 318, "Building Code Requirements for Structural Concrete".
A. Cast-in-place Concrete: Specified Cover
1. Cast against and permanently exposed to earth: ..... 3"
2. Formed concrete exposed to earth or weather:
#5 and smaller bars ..... 1.1/2"

3.4. Construction Joints and Control Joints:
A. Provide a surface intentionally roughened to ¼" amplitude in all wall footings. A continuous keyway shall not be used for concrete shear wall to footing connections, unless specifically indicated. Refer to project plans, schedules and details for the shear wall to footing connection requirements.
B. All horizontal and vertical construction joints shall have a surface intentionally roughened to ¼" amplitude. A continuous 2 X 4 keyway may be used on elements other than shear walls.
C. Provide reinforcement dowels to match the member reinforcement across the joint, unless noted otherwise. For dowels across construction joints and wall to footing connections of concrete shear walls, refer to specific project plans, schedules, and details.
D. Construction joints in suspended concrete pours shall be made at the center of spans.
E. Slabs on grade shall have construction or control joints spaced not to exceed 30 times the slab thickness in any direction.
F. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. See typical details for joint configuration.
G. Control joints in visually exposed walls, unless noted otherwise: (Joints shall line up with masonry and architectural joints, see drawings.)
1. Vertical control joints at 10'-0" on center.
2. Reinforcing shall be continuous through control and construction joints, unless noted otherwise.
3. Control joints in concrete foundation walls shall line up with masonry control joints.

3.5. Detailing: All reinforcing, including welded wire fabric, shall be detailed, bolstered & supported to comply with ACI 315, "Details and Detailing of Concrete Reinforcement" and the Concrete Reinforcing Steel Institute (CRSI) recommendations. Reinforcing bars shall not be welded unless specifically shown on drawings.
A. Lap splice lengths shall be detailed to comply with the CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE SCHEDULE.
B. All embedded elements and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
C. Use chairs or other support devices recommended by CRSI to support and tie reinforcement bars and welded wire fabric prior to placing concrete. Welded wire fabric shall be continuously supported at 36" o.c. maximum.
D. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
E. All reinforcement shall be bent cold, and shall be bent only once at the same location. All reinforcement shall be shop bent, unless otherwise permitted by the engineer.

3.6. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.

3.7. Unless otherwise noted, all slabs on grade shall be 4" thick.

4. Masonry

4.1. Materials shall comply with the Standards specified in TMS 402-13/ACI 530-13/ASCE 5-13 and TMS 602-13/ACI 530.1-13/ASCE 6-13, "Building Code Requirements and Specification for Masonry Structures."
A. Materials, unless noted otherwise:
1. Concrete Masonry 8" Blocks to be ASTM C 90, Medium Weight. 10" Blocks to be ASTM C 90, Normal Weight.
2. Material Strength: The Prism Test Method or the Unit Strength Method according to TMS 602-13/ACI 530.1-13/ASCE 6-13 Section 1.4B may be used to determine the compressive strength of masonry assemblies. The contractor shall select the desired method and meet the required material strengths as follows:
a. Prism Test Method, TMS 602-13/ACI 530.1-13/ASCE 6-13 Section 1.4B.3:
1) Concrete Masonry Unit Assembly, f'm = 2000 psi.
b. Unit Strength Method, TMS 602-13/ACI 530.1-13/ASCE 6-13 Section 1.4B.2:
1) Concrete Masonry Units, minimum unit strength of 2000 psi average or better. (f'm = 2000 psi)
3. Mortar: Use Type "S" according to ASTM C270, proportion specification. Admixtures shall not be added to the mortar mix.
4. Grout: For masonry assemblies with f'm = 2,000 psi or less conform to ASTM C476, proportion specification. Grout that does not meet the requirements of ASTM C476 proportion specification or that is used in masonry assemblies with f'm > 2,000 psi shall meet the following requirements: Meet the material requirements of ASTM C476, obtain a minimum compressive strength of f'm or 2,000 psi, whichever is larger, at 28 days tested according to ASTM C1019, and a slump of 8 in. to 11 in. as determined by ASTM C143.
a. Self-Consolidating Grout: Conform to the material requirements of ASTM C476, obtain a minimum compressive strength of f'm or 2,000 psi, whichever is larger, at 28 days tested according to ASTM C1019, obtain a slump flow of 24 in. to 30 in. as determined by ASTM C1611, and shall have a Visual Stability Index less than or equal to 1 as determined in accordance with ASTM C1611 Appendix X.1. Field addition of admixtures is not permitted.
5. Reinforcing: Grade 60 reinforcing steel shall comply with ASTM A615. Wire joint reinforcing shall comply with ASTM A951.
6. Deformed Bar Anchors (DBA): All DBAs shall comply with ASTM A496.
7. Anchor Bolts (AB): ASTM A307 with ASTM A563 heavy hex nuts and hardened washers, Grade A, unless noted otherwise.
8. Headed Stud Anchors (HSA): Manufacture all HSAs in conformance with ASTM A108 with dimensions complying with AISC specifications.

4.2. Construction Requirements:
A. Mortar Joints: Joints shall be "concave", "V-joint" or "weathered raked" for structural members unless noted otherwise on architectural drawings.
B. Masonry walls, beams and columns shall be constructed with running bond, unless noted otherwise.
C. Grouting Requirements: Comply with IBC Section 2104 and ACI 530.1/ASCE 6/TMS 602 Section 3.5. Grout shall be mechanically consolidated and mechanically reconsolidated according to TMS 602/ACI 530.1/ASCE 6 Section 3.5 E.
1. Grout Pour Heights that exceed 4 feet shall meet the following requirements:
a. Provide cleanouts in the bottom course of masonry for each grout pour in accordance with ACI530.1/ASCE 6/TMS 602 Section 3.2 F.
b. For grout other than Self Consolidating Grout a demonstration panel representative of the proposed wall construction and construction procedures shall be provided and approved by the Architect. The demonstration panel may be a part of the completed construction as approved by the Architect.
c. For Self Consolidating Grout placed in masonry that has cured for at least 4 hours, place in lifts not exceeding the Maximum Grout Pour Height in listed in ACI 530.1/ASCE 6/TMS 602 Table 7.
2. When grouting, form grout keys between grout pours. Form grout keys between grout lifts when the first lift is permitted to set prior to placement of the subsequent lift.
a. Form a grout key by terminating the grout a minimum of 1.1/2 in. below a mortar joint.
b. Do not form grout keys within beams.
c. At beams or lintels laid with closed bottom units, terminate the grout pour at the bottom of the beam or lintel without forming a grout key.
D. Reinforcing Bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs.
E. Control Joints: Spacing shall not exceed 40'-0" or 2.5 times the wall height, whichever is less. Joints shall not be located over masonry openings, and shall be a minimum of the schedule masonry column width away from masonry openings. See architectural drawings for locations.
F. Grout all beam and joist pockets solid after installation of beams and joists.
G. Masonry Veneer Attachment and Reinforcing:
1. Joint reinforcement: Veneer shall have continuous galvanized wire joint reinforcement of wire size W1.7 (#9 gauge) spaced at 18" o.c. maximum. Mechanically attach veneer anchors to the joint reinforcing with Hohmann & Barnard Seismiclip Interlock System (or engineer approved equivalent).
2. To steel stud and wood stud walls: Veneer shall be attached to the studs with Hohmann & Barnard DW-10HS seismic veneer anchors (or engineer approved equivalent) spaced at maximum 16" o.c horizontally and 18" o.c. vertically. Veneer anchors shall be attached to studs with #10 corrosion resistant self-drilling screws.
3. To concrete walls: 22 gauge galvanized dovetail slots shall be installed vertical in concrete at maximum 16" o.c. horizontal spacing. Attach the veneer to dovetail slots with Hohmann & Barnard #315 BT Flexible Brick Tie at maximum 18" o.c. vertically. Dovetail slots and anchor ties shall be galvanized.
4. To reinforced masonry walls: Veneer shall be attached with tri-rod laddur type reinforcement spaced at a maximum of 16" o.c. vertically consisting of 3 – W1.7 (#9 gauge), galvanized, corrugated, continuous wires. Cross wires shall be W1.7 (#9 gauge) galvanized wires welded to the longitudinal wires and spaced at a maximum of 16" o.c. horizontally. Veneer may also be attached with Hohmann & Barnard 285 Grip-Lok Ladder (or engineer approved equivalent) spaced at maximum 16" o.c. horizontally and 18" o.c. vertically. Where the joints in the veneer and masonry back up walls do not align, attach veneer with Hohmann & Barnard 364 SV Seismic-Notch Gripstay Channel Slot Anchor seismic veneer anchors (or engineer approved equivalent).
5. Other methods of attachment may be used after written acceptance by the architect and structural engineer.
6. Steel Lintels: Provide steel angle lintels at all openings through the masonry veneer. Provide one inch of bearing for each foot of width of opening, with a minimum bearing of six inches. See the Steel Angle Lintel Schedule for size.

4.3. Detailing Requirements:
A. Standards: Reinforcing detailing shall comply with American Concrete Institute (ACI) Standard 315, "Details and Detailing of Concrete Reinforcement."
B. Reinforcement Protection (cover):
1. Joint reinforcement shall have not less than 5/8" mortar coverage from the exposed face.
2. Other reinforcement shall have a minimum coverage of one bar diameter over all the bars, but not less than 3/4". When masonry is exposed to soil, minimum coverage shall be 1.5".
C. Vertical steel reinforcement shall be placed and secured against displacement prior to grouting by wire positioners or other suitable devices: at intervals not exceeding 112 bar diameters, at the grout lift heights, or at bar splice locations, whichever is less. Vertical reinforcing shall be located at the center of the wall, unless noted otherwise.
D. Lap Splice Lengths: Lap all masonry reinforcing bars per the "Masonry Reinforcing Bar Lap Splice Schedule." Joint reinforcement shall lap a minimum of 6".
E. Corner Bars: Horizontal reinforcement shall be continuous at all corners and at intersecting walls. Provide corner bars with the required lap splice length.
F. Dowels: All vertical reinforcing shall be doweled to the foundation wall, footing (structure below) and to the structure above with the same size dowel, spacing (and in the same core) as the vertical wall reinforcing unless noted otherwise.
G. Wall Openings 24" wide and wider: Provide reinforced masonry lintels per Masonry Lintel Schedule over the top of, and 2 - #5 bars, in grouted spaces, on all sides and adjacent to every unscheduled opening, unless noted otherwise. Bars for all openings shall extend a minimum of 48 bar diameters beyond the corners of the opening. Vertical bars shall extend from floor level below to the floor, or roof, level above. Where a 48 bar diameter extension is not possible, extend bars as far beyond the opening as possible and terminate them with a 90 degree standard ACI hook.
H. Horizontal wall reinforcing shall be continuous through joining concrete walls, masonry walls, columns, and pilasters. Provide a key between the wall and the column or pilaster. Horizontal wall reinforcing shall be placed inside the column vertical reinforcing.
I. Anchor bolts and headed stud anchors shall be set in a grouted cell. Anchor bolts and headed stud anchors shall have 1" grout surrounding the shank at its penetration. Grout shall be flush with the face or top of the masonry.
J. The exposed face of all embed plates shall be set flush with the face of masonry wall or column.

4.4. Minimum Reinforcing:
All masonry walls shall be reinforced as follows, unless shown otherwise on the drawings. Reinforcing shall be placed in grouted cells.

Wall Thickness	Horizontal Reinforcing	Vertical Reinforcing
6"	#4 @ 48" o.c.	#5 @ 32" o.c.
8"	#5 @ 48" o.c.	#5 @ 32" o.c.
10"	#6 @ 48" o.c.	#6 @ 32" o.c.
12"	2 - #5 @ 48" o.c.	#6 @ 32" o.c.

5. Structural Steel

5.1. Material:
A. All Other Shapes and Plates: ASTM A36 (Fy = 36 ksi), except as noted otherwise
B. Deformed Bar Anchors (DBA): ASTM A496 or ASTMA1064, 70 ksi minimum yield strength.
C. Headed Stud Anchors (HSA): ASTM A108, with dimensions complying with AISC specifications
D. Anchor Rods: ASTM F1554, Grade 36, unless noted otherwise, with ASTM A563 heavy hex nuts and ASTM F436 hardened washers

5.2. Structural shapes and plates shall be fabricated from newly rolled (milled) one-piece sections without splices, unless specifically noted otherwise on the structural drawings. Connections for structural steel shall comply with the structural drawings, unless written approval is given by the structural engineer.

5.3. Welding:
A. It is recommended the steel erection contractor and steel fabricator contact the Quality Assurance Agency prior to beginning any welds. A program of joint preparation and welding procedures should be worked out between the two parties before the welding is started so that correct welds will be made from the beginning.
B. Certification of Welders: All shop and field welding shall be executed by AWS certified welders who have been specifically certified for the process of welding being performed. The welder's certification will be considered as being current unless the welder is not engaged in the process of welding being performed for a period exceeding six months or there is a specific reason to question a welder's ability as required by AWS. Certification and records must comply with AWS Standards. Certification and appropriate records must be provided to the architect prior to beginning work.
C. Electrodes: E-70 XX or as noted otherwise. E60 XX may be used for welding steel floor and roof decks.
D. Minimum Welds: All intersecting steel shapes that are not bolted shall be connected by a fillet weld all around, unless noted otherwise. Fillet weld sizes that are not shown shall be 1/16" less than the thinnest of the connected parts for thicknesses 1/4" and larger. Fillet welds on plates less than 1/4" shall be of the same size as the thinnest of the connected parts.
E. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors (DBAs), machine bolts, or headed stud anchors (HSAs).
F. Bolts: Do not apply any welds, including "tack" welds to bolts, including anchor bolts, except as specifically detailed in the drawings.
G. Headed Stud Anchor (HSA) welding and Deformed Bar Anchor (DBA) welding shall conform to the manufacturer's specifications. Welding shall comply with AWS D1.1 Section 7.6 through 7.9 and Annex G.

5.4. Steel Lintels
A. Provide steel angle lintels at all openings through the masonry veneer. Provide one inch of bearing for each foot of width of opening, with a minimum bearing of six inches. See the Steel Angle Lintel Schedule for size.

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK R. HARRIS
UTAH
1/21/2019

SUBMITTAL	CONSTRUCTION
DRAWN BY:	JTA/RE+A
CHECKED BY:	RCG/RE+A
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	1/8/2019 6:31:28 AM

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

GENERAL STRUCTURAL NOTES

SE001

6. Wood

6.1. Fabrication and construction shall comply with the following Codes and Standards:
- A. American Wood Council National Design Specification for Wood Construction 2015 Edition and Supplement (NDS and NDS Supplement)
- B. American Wood Council Special Design Provisions for Wind and Seismic 2015 Edition (SDPWS)
- C. Truss Plate Institute National Design Standard for Metal-plate-connected Wood Truss Construction 2014 Edition (TPI 1)

6.2. Materials:
- A. Sawn Lumber: Members shall be identified by the grade mark and shall conform to the requirements of DOC PS 20.
  1. Dimension Lumber: Members shall be Number 2 Douglas Fir-Larch or better or as noted otherwise.
  2. Heavy Timber: Timbers larger than 5"x5" shall be Douglas-Fir Larch Number 1 or better or as noted otherwise, as graded by WWPA.
- C. Glued Laminated Timber (Glulam): Glulam shall conform to ANSI/AITC A 190.1 and ASTM D 3737. All Glulams shall meet the requirements for Stress Class 24F-1.8E as specified in Table 5A of the NDS Supplement. A balanced layup is required for all continuous multi-span beams, cantilever beams, columns, and where specifically noted.
- D. Wood Structural Panel Sheathing: All panels shall be rated by the American Plywood Association (APA). Panels shall bear the stamp of an approved testing and grading agency. Panels shall be grade DOC PS 1 or PS 2 with exterior glue with the following panel span rating, unless noted otherwise.

Area to be sheathed	Span Rating	Minimum Thickness (in)
Roofs	40/20	19/32

- E. Nails as referenced in these documents shall meet the tolerances in ASTM F1667 and have the following properties:

Nail Size	Length	Minimum Penetration	Common		Galvanized Box	
			Shank Diameter	Dowel Bending Yield Strength (psi)	Shank Diameter	Dowel Bending Yield Strength (psi)
6d	2"	1.1/8"	0.113"	100,000	0.099"	100,000
8d	2.1/2"	1.3/8"	0.131"	100,000	0.113"	100,000
10d	3"	1.1/2"	0.148"	90,000	0.128"	100,000
16d	3.1/2"	1.5/8"	0.162"	90,000	0.135"	100,000
20d	4"	2"	0.192"	80,000	0.148"	90,000

When used to attach structural sheathing nails shall be common or galvanized box type nails. All other nails shall be common type nails.
- F. Bolts for connections: ASTM A307 with ASTM A563 heavy hex nuts and standard washers unless noted otherwise.
- G. Lag screws for connections: SAE J429 Grade 1 or ASTM A307 Grade A with dimensions per ANSI/ASME B18.2.1. Minimum dowel bending yield strength to be 45,000 psi.

6.3. Special Treatments:
- A. Preservative Treatment:
  1. The following conditions require that wood members be either naturally durable or preservative treated:
     a. All wood in contact with concrete or masonry which is less than 8 in from exposed earth or below grade.
     b. Any wood member exposed to the weather without covering or protection to prevent water or moisture accumulation.
  2. Preservative-treated wood shall meet the requirements in IBC Section 2303.1.9. Preservative-treated wood shall be treated to meet the requirements of AWPA Standard U1 and M4 according to species, use, and preservative. Preservatives used shall be listed in AWPA U1, Section 4. Preservative-treated wood shall be identified by the mark of an accredited inspection agency. Preservative treated wood shall have a moisture content of less than 19% prior to being enclosed or covered.
- B. Fasteners, including nuts and washers, in contact with treated wood shall meet the following criteria as per IBC Section 2304.10.5:
  1. Fasteners in contact with preservative-treated wood shall be hot-dipped galvanized steel, stainless steel, silicon bronze or copper. Fasteners other than nails, wood screws, timber rivets, and lag screws may be mechanically-deposited zinc-coated steel with coatings meeting ASTM B 695, Class 55 minimum. Fasteners used in exterior applications shall be per fastener manufacturer's recommendations.

6.4. General Framing and Carpentry
- A. Minimum Nailing Requirements (See drawings for areas with greater requirements):
  1. Roof: Use two plyclips between each support for spans of 48" o.c. and one plyclip between each support for lesser spans at all unsupported panel edges. Provide 1/8" gap between panels. Nail all sheathing panels to common framing with 10d common nails at 6" o.c. at all supported edges and at 12" o.c. at all intermediate supports.
- B. Connect all items as per the "Minimum Nailing Schedule" contained within the contract drawings and IBC Table 2304.10.1, "Fastening Schedule", unless noted otherwise.
- C. All blocking shall, unless noted otherwise, be nominally 2 in thick minimum and fit tight against adjacent framing members.
  1. Full-depth blocking shall match the depth of adjacent framing member depths. Full-depth blocking shall be shaped to match diaphragm slope. Full-depth blocking cut from I-joist material of the same depth as the I-joists used in floor/roof construction may be used for flat floors or roofs.
- D. Provide full-depth shaped blocking at joist supports and where indicated.
- E. Full-depth blocking between joists shall be nailed to the wood plate at the top of masonry walls with one Simpson "A35" framing anchor per each piece of blocking, unless noted otherwise.
- F. Coordinate size and locations of middle or end notching for roof ventilation with architectural drawings.
- G. All required bridging and bracing for prefabricated wood I-joists shall be provided by joist manufacturer and installed by contractor. All penetrations through the joists shall be done per manufacturers' recommendations and requirements.
- H. Lateral support of non-bearing walls shall be provided per TYPICAL WOOD NON-BEARING WALL BRACING DETAIL. Framing members shall not bear on non-bearing walls.

6.5. Framing Connections
- A. Simpson Strong Tie Connectors are used as the basis of design. Alternate connectors are permitted with approval of the engineer. The Contractor shall submit the proposed product data and code evaluation report demonstrating the connector is equivalent or exceeds the capacity of the specified connector.
- B. Framing connections not indicated shall be connected in a manner similar to typical details in the drawings and the engineer shall be notified prior to the procurement of connector materials.
- C. Where framing connection type is specified without reference to a specific model no. the highest capacity model hanger of that type which is compatible with the member to be supported shall be used unless noted otherwise in the drawings.
- D. All framing connectors supporting roof members where additional uplift capacity is available shall be fastened to achieve such.
- E. Fill holes in the framing anchors per manufacturer's requirements, unless noted otherwise.

6.3. Pre-Fabricated Steel Plate Wood Trusses (Trusses):
- A. Trusses shall be designed in accordance with IBC Section 2303.4 and TPI 1.
- B. Design Loading: The truss manufacturer is responsible for design and fabrication of the trusses. They shall be designed to support the concentrated and other distributed loads as shown in the drawings. In addition to loads shown, the truss designer shall coordinate and incorporate any additional loads from mechanical equipment, fire sprinkling systems, architectural elements, and hanging walls supported by the trusses. Provide extra trusses where required. As a minimum, the truss bottom chord shall be designed for a 4 psf dead load.
- C. Unless properly coordinated with the truss designer, truss bottom chords shall not be permitted to support mechanical or electrical equipment, plumbing, fire sprinklers, or hanging wall.
- D. Deflection of floor trusses due to live load shall be limited to L/480 and L/360 due to live load and total dead + live load respectively.
- E. Minimum specific gravity of wood truss members shall be G=0.5.
- F. Submittals:
  1. The Truss submittal package shall include design drawings and calculations for each unique truss, a truss placement diagram for each individual truss and details for permanent truss restraint/bracing.
     a. Truss Design Drawings shall meet the requirements of IBC Section 2303.4.1.1
     b. Truss design drawings must bear the seal and signature of a design professional registered to practice in the jurisdiction of the project location.
     c. Truss placement diagrams shall meet the requirements of IBC Section 2303.4.2
- G. Steel Connector Plates: Use only galvanized steel connector plates that comply with the Truss Plate Institute publication, TPI 1, latest edition. All steel connector plates must be approved by the ICC Evaluation Services. Submit a copy of the ICC Code Evaluation Report for the connector plate used. Values established by this committee must be indicated on the shop drawings.
  1. Plates shall be pressed or rolled into member to obtain full penetration without crushing the outer surfaces of wood.
  2. Steel plates at compression web members shall be designed to resist 100% of the compression force without considering wood to wood bearing.
- H. Wood Members: All wood members of the truss shall be constructed of kiln dried lumber. The trusses shall be handled and stored in a manner to prevent moisture from being absorbed by the wood. Grade stamps shall be visible on framing members.
- I. Lateral Bracing/Restraint: Permanent Lateral bracing/restraint and bridging shall be installed by the General Contractor as required by the truss designer and specified on the pre-fabricated wood roof truss design drawings
  1. The truss installer shall follow the BCSI recommendations for handling of trusses and for both permanent and temporary bracing.
- J. Prior to the fabrication of the pre-fabricated wood trusses, the contractor shall submit, in writing, proof of compliance of in-plant inspection by an ICC approved independent inspection agency. The in-plant inspections shall comply with section 1704.2 of the International Building Code.
- K. The truss manufacturer's identification stamp shall be clearly visible.
- L. Truss members and connections shall not be cut, notched, drilled, spliced or otherwise altered (including additional loads) in any way without prior written approval of the engineer.

7. Miscellaneous

7.1. Post-Installed Anchors in Concrete and Masonry
- A. Anchorage to hardened concrete and grout-filled masonry shall include all mechanical and adhesive anchors and epoxy doweled reinforcing bars of size, quantity, spacing, and embedment as shown on the drawings. Additional anchors shall not be used without approval from the Engineer prior to installation.
- B. Special inspection is required during the installation of all post-installed anchors. Refer to applicable code evaluation reports and the Quality Assurance and Statement of Special Inspections sections of the General Structural Notes.
- C. Anchorage to Concrete:
  1. All post-installed anchors into hardened concrete shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report
Hilti KWIK HUS-EZ	ICC ESR-3027
DeWalt Screw-Bolt+	ICC ESR-3889
Simpson Titen HD	ICC ESR-2713

Steel Expansion/Wedge Anchor	Evaluation Report
Hilti KWIK Bolt TZ	ICC ESR-1917
ITW Red Head Trubolt+	ICC ESR-2427
DeWalt Power-Stud+ SD2	ICC ESR-2502
Simpson Strong-Bolt 2	ICC ESR-3037

Adhesive Anchor System	Evaluation Report
Hilti HIT-HY 200	ICC ESR-3187
Hilti HIT-RE 500-V3	ICC ESR-2322
DeWalt AC200+	ICC ESR-4027
DeWalt Pure 110+	ICC ESR-3298
Simpson SET-XP	ICC ESR-2508

  2. Adhesive anchors shall be installed into concrete having a minimum age of 21 days. For installations sooner than 21 days, consult the adhesive manufacturer.
- D. Anchorage to Masonry:
  1. All post-installed anchors into grout-filled masonry shall be selected from the following pre-approved products, unless noted otherwise:

Steel Screw Anchor	Evaluation Report
Hilti KWIK HUS-EZ	ICC ESR-3056
DeWalt Screw-Bolt+	ICC ESR-4042
Simpson Titen HD	ICC ESR-1056

Steel Expansion/Wedge Anchor	Evaluation Report
Hilti KWIK Bolt 3	ICC ESR-1385
DeWalt Power-Stud+ SD1	ICC ESR-2966
Simpson Wedge-All	ICC ESR-1396

Adhesive Anchor System	Evaluation Report
Hilti HIT-HY 270	ICC ESR-2682
DeWalt AC100+ Gold	ICC ESR-3200

- E. Alternate anchors or adhesives are permitted with approval of the engineer. The Contractor shall submit the proposed anchor product data and code evaluation report demonstrating the anchor is equivalent or exceeds the capacity of the specified anchor.
- F. Installation of adhesive anchors horizontally or upwardly inclined to support sustained tension loads shall be performed by personnel certified by an applicable certification program. Certification shall include written and performance tests in accordance with the ACI/CRSI Adhesive Anchor Installer Certification program, or equivalent. Proof of current certification shall be submitted to the engineer for approval prior to commencement of installation.
- G. Anchors shall be installed according to the Manufacturer's Printed Installation Instructions and applicable code evaluation reports including:
  1. Hole diameter, depth, and cleaning procedure
  2. Adhesive mixing, preparation, and placement
  3. Installation torque
- H. Locate all existing reinforcement and embedded items prior to drilling into concrete or masonry elements. Do not damage rebar or embeds while drilling or installing anchors.
- I. Grout all defective or abandoned holes with non-shrink grout or an injectable epoxy adhesive matching the surrounding concrete compressive strength. Consult the Architect for additional requirements at architecturally exposed concrete.
- J. Drilled anchors are not allowed in post-tensioned concrete without approval of the architect and engineer.
- K. Carbon steel anchors are limited to use in dry, interior locations.

8. Special Instructions

8.1. The project specifications are not superseded by the General Structural Notes but are intended to be complementary to them. Consult the specifications for additional requirements in each section. Notes and specific details on the drawings shall take precedence over General Structural Notes and typical details.

8.2. The architectural drawings are the prime contract drawings. Consultant drawings by other disciplines are supplementary to the architectural drawings. All omissions or conflicts, including dimensions, between the various elements of the consultants' drawings and/or specifications shall be brought to the attention of the Architect before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the Architect without additional cost to the owner. Any work done by the contractor after discovery of such discrepancy shall be done at the contractor's risk.

8.3. The structural drawings shall be used in conjunction with the architectural drawings. Primary structural elements and overall structural layout are indicated within the structural plans and details. Some secondary elements, architectural layouts, alcoves, elevations, slopes, depressions, curbs, mechanical equipment and electrical equipment, are not indicated within the structural drawings. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings.

8.4. Shoring and Bracing Requirements:
- A. Roof Structures -- The General Contractor is responsible for the method and sequence of all structural erection. He shall provide temporary shoring and bracing as his method of erection requires to provide adequate vertical and lateral support. Shoring and bracing shall remain in place as the chosen method requires until all permanent members are in place and all final connections are completed, including all roof and floor attachments. The building shall not be considered stable until all connections are complete.
- B. Foundation walls must be braced until the complete floor or roof systems is completed. Do not backfill until floor or roof systems are in place.
- C. Walls above grade shall be braced until the structural system is complete. Walls shall not be considered to be self-supporting.

8.5. Submittals: A copy of all shop drawings that have been submitted for review must be kept at the construction site for reference. These drawings must bear the appropriate review stamps. The shop drawing review shall not relieve the contractor of the responsibility of completing the project according to the contract documents. The general contractor shall review and mark all shop drawings prior to submitting them to the Architect for his review. Shop Drawings made from reproductions of (these) contract drawings will be rejected.

8.6. Project Coordination: 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. Openings or penetrations through, or attachments to the structural system that are not indicated on these drawings shall be the responsibility of the general contractor and shall be coordinated with the Architect/Engineers. The order of construction is the responsibility of the general contractor. It is the contractor's obligation to provide all items necessary for his chosen procedure.

8.7. Contractor shall field verify all dimensions, and conditions. If the contract drawings do not represent actual conditions, contractor shall notify architect/engineer prior to fabrication or construction within that area.

8.8. Notice of Copyright: The structural drawings, plans, schedules, notes and details are hereby copyrighted by Reaveley Engineers and Associates, Inc., All Rights reserved. Submission or distribution of documents to meet official regulatory requirements or for simlar purposes in connection with the project is not to be construed as publication in derogation of Reaveley Engineers and Associates, Inc.'s reserved rights. The documents defining the structure are instruments of service prepared by Reaveley Engineers and Associates, Inc. for one use only. Furthermore, these documents shall not be reproduced, or copied, in whole or in part by the contractor or his subcontractors for preparation of shop drawings or other submittals.

9. Quality Assurance

9.1. Quality Assurance Agency Requirements:
- A. The Owner shall engage a qualified Quality Assurance Agency (QAA) to provide all special inspection and quality assurance testing for the project. The QAA shall provide all information necessary for the building official to determine that the agency meets the applicable requirements
  1. The QAA shall be objective, competent and independent from the contractor responsible for the work being inspected. The agency shall also disclose possible conflicts of interest to confirm objectivity.
  2. The QAA shall have adequate equipment to perform required tests.
  3. The QAA shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities.
  4. Prior to the start of construction, the QAA shall submit to the building official, the owner architect and engineer copies of the following:
     a. Current calibration records for all equipment to be used for the work being inspected and/or tested.
     b. Current certification and training records for each individual performing the inspections and/or testing.
     c. Sample inspection and testing reports and the distribution list for the records.
     d. Proposed inspection procedures and frequency for each inspection required by the work.
     e. Proposed testing methods and frequency of testing required by the work.
  5. The QAA shall send copies of all inspection and testing reports to the building official, owner, architect, engineer and contractor. Reports shall indicate that the work inspected was or was not completed in conformance to the approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official, architect and engineer.
  6. The QAA shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections. The final report shall be distributed to the building official, owner, architect and engineer in a timely manner prior to the completion of the project.

9.2. Contractor Responsibilities:
- A. Each contractor responsible for the construction of a system or component requiring special inspections or testing shall submit a written statement of responsibility to the building official, owner, architect and engineer prior to the commencement of the work. The contractor's statement of responsibility shall contain the following:
  1. Acknowledgement of awareness of the special requirements defined in the statement of special inspections.
  2. Acknowledgement that control will be exercised in order to obtain conformance to the approved construction documents.
  3. Contractor's internal quality control procedures, methods and measures to be used in order to obtain conformance to the approved construction documents. Include copies of quality control reports, frequency of reporting and distribution of reports.
  4. Identification and qualifications of the person(s) responsible for quality control and their position(s) within the organization.
- B. Notification of Engineer: The contractor shall notify the engineer twenty-four hours prior to the items listed in the Structural Observations by the Engineer of Record section.
- C. Notification of QAA: The contractor shall notify the QAA in a timely manner so that inspection and testing may be performed as outlined in the statement of special inspections.

9.3. Structural Observations by the Engineer of Record.
- A. The Engineer of Record will perform a structural observations once prior to the completion of the project. Copies of the engineer's report will be distributed to the architect, contractor, owner, and building official.
- B. Observation visits to the site by the Engineer's field representatives shall not be construed as inspection or approval of construction.

NO. | REVISION DESCRIPTION | DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK R. HARRIS
UTAH
1/21/2019

SUBMITTAL | CONSTRUCTION
DRAWN BY: JTA/RE+A
CHECKED BY: RCG/RE+A
APPROVED BY:
RELEASE: 1/21/2019
PLOT DATE: ---

1/8/2019 6:31:30 AM

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

GENERAL STRUCTURAL NOTES

SE002

10. Statement of Special Inspections

10.1. The following materials, systems and components require special inspection or testing per Chapter 17 of the International Building Code (IBC).

10.2. For items requiring continuous inspection, a special inspector must be present onsite during the performance of that task. In most cases, periodic inspections/tests shall be performed prior to commencing the task, intermittently during the task, and at the completion of the task.

Structural Steel per IBC Section 1705.2.1, 1705.12.1 & 1705.13.1

Item	Frequency	Detailed Instructions
Prior to Welding (Table N5.4-1, AISC 360-10):		
Verify welding procedures (WPS) and consumable certificates	Continuous	
Material identification	Periodic	Verify type and grade of material.
Welder identification	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Access holes	Periodic	Verify configuration and finish.
Fit-up of fillet welds	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
During Welding (Table N5.4-2, AISC 360-10):		
Use of qualified welders	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	Periodic	Verify packaging and exposure control.
Cracked tack welds	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	Periodic	Verify win speed is within limits as well as precipitation and temperature.
WPS followed	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
After Welding (Table N5.4-3, AISC 360-10):		
Welds cleaned	Periodic	Verify that welds have been propyl cleaned.
Size, length, and location of welds	Continuous	
Welds meet visual acceptance criteria	Continuous	
Arc strikes	Continuous	
k-area	Continuous	
Backing & weld tabs removed	Continuous	
Repair activities	Continuous	
Document acceptance or rejection of welded joint/member	Continuous	

Concrete Construction per IBC Sections 1705.3 &1705.12

Item	Frequency	Detailed Instructions
Reinforcing steel, including prestressing tendons	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Welding of reinforcing steel	Periodic	Verify weldability of reinforcing steel other than A706. Continuous inspection is required for welding of reinforcing steel used in intermediate or special concrete moment frames, boundary elements of special structural walls or shear reinforcement.
Cast-in bolts & embeds	Periodic	
Post-installed adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads	Continuous	All post-installed anchors/dowels shall be special inspected in accordance with the approved code evaluation report and with ACI Section 17.8.2.
Post-installed mechanical anchors and adhesive anchors not defined above	Periodic	
Use of required mix design	Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3-26.4.4; and IBC 1904.1, 1908.2, 1908.3.
Concrete sampling for strength tests, slump, air content, and temperature	Continuous	Samples for strength tests shall be taken in accordance with ASTM C172, cured per ASTM C31 and tested in accordance with ASTM C39 by a testing agency complying with ASTM C1077. Acceptance criteria for strength tests shall be per ACI 318 Section 26.12.3. For each mix placed, samples shall be taken not less than once a day, nor less than once for each 150 yd^3 of concrete, nor less than once for each 5000 ft^2 of surface area for slabs or walls. At the time fresh concrete is is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.
Concrete & shotcrete placement	Continuous	
Curing temperature and techniques	Periodic	Verify that concrete is maintained at a temperature of at least 50°F and in a moist condition for at least 7 days after placement. Verify that high-early-strength concrete is maintained at a temperature of at least 50°F and in a moist condition for at least 3 days after placement. Accelerated curing methods may be used (see ACI 318: 26.5.3.2(c)). Shotcrete shall be maintained at a temperature of at least 40°F for the same period of time as noted for concrete and kept in the moist condition during curing periods in accordance to IBC 1908.9 All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Formwork	Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.
Welding of Reinforcing Steel (IBC Table 1705.3):		
Verification of weldability	Periodic	Verify weldability of reinforcing steel other than A706 based upon carbon equivalent and in accordance with AWS D1.4. Continuous inspection is required for welding of reinforcing steel used in intermediate or special concrete moment frames, boundary elements of special structural walls or shear reinforcement.
Other reinforcing steel	Periodic	Visually inspect all welds in accordance with AWS D1.4.
Single-pass fillet welds, 5/16" max	Periodic	
All other welds	Continuous	

Masonry Construction per IBC Section 1705.4

Item	Frequency	Detailed Instructions
Prior to Construction (Article 3.1.1, TMS-402/ACI 530.1-13):		
Review material certificates, mix designs, test results and construction procedures	Periodic	Verify that materials conform to the requirements of the approved construction documents. Mix design, test results, material certificates, and construction procedures should be submitted for review. Mortar mix designs shall conform to ASTM C 270 while grout shall comply with the proportion or strength requirements of ASTM C 476 or be based upon compressive strength tests in accordance with ASTM C1019. Material certificates shall be provided for the following: reinforcement; anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot-weather construction shall be reviewed.
Verify f'_m and f'_{AAC} prior to construction	Periodic	Determine the compressive strength for each wythe by the "unit strength method" or by the "prism test method" as specified in Section 1.4B of ACI 530.1-13 prior to construction.
Proportions of site-prepared mortar	Periodic	Verify that mortar is of the type and color specified on the construction documents, that it conforms to ASTM C 270, and that it is mixed in accordance with Article 2.6 A of TMS-602/ACI 530.1-13.
Construction of mortar joints	Periodic	Verify that mortar joints comply with Article 3.3 B of TMS-602/ACI 530.1-13.
Preparation of required grout specimens, mortar specimens and/or prisms shall be observed	Periodic	If the prism test method is used a minimum of three prisms shall be constructed in accordance with ASTM C1314. If the unit strength method is selected the compressive strength of the grout shall be determined per ASTM C1019 (not required if grout complies with ASTM C476).
Prior to Grouting (Table 3.1.2, TMS-402/ACI 530-13):		
Grout space	Periodic	Verify that grout space is free of mortar droppings, debris, loose aggregate, and other deleterious materials and that cleanouts are provided per Article 3.2 D and 3.2 F of TMS-602/ACI 530.1-13.
Grade, type, and size of reinforcement and anchor bolts	Periodic	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors comply with the approved construction documents and Section 1.6 of TMS 402/ACI 530-13.
Placement of reinforcement and connectors	Periodic	Verify that reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors are installed in accordance with the approved construction documents and Articles 3.2 E, 3.4, and 3.6 A of TMS 602/ACI 530.1-13.
Proportions of site-prepared grout	Periodic	Verify that grout is proportioned per ASTM C 476 and has a slump between 8-11 inches. Self-consolidated grout shall not be proportioned onsite. (see Articles 2.6 B and 2.4 G.1.b of TMS 602/ACI 530.1-13. *Continuous inspection is required for Risk Category IV buildings*.
Placement of masonry units and construction of mortar joints	Periodic	Verify that face shells and head joints are fully mortared and that vertical cells are aligned and unobstructed openings for grout are provided. All units are to be clean and placed while mortar is soft and plastic. Verify that mortar joints are placed in accordance with Article 3.3 B of TMS 602/ACI 530.1-13.
During Masonry Construction (Table 3.1.2, TMS-402/ACI530-13):		
Size and location of structural elements	Periodic	Verify that structural elements are placed in locations specified on the approved construction documents and to the tolerances noted in Section 3.3F of TMS 602/ACI 530.1-13.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	Periodic	Verify that correct anchorages and connections are provided per the approved plans and Sections 1.16.4.3 and 1.17.1 of TMS 402/ACI 530-13. Verify that structural elements are placed in locations specified on the approved construction documents. Headed or bent bar anchor bolts shall be embedded in grout.
Welding of reinforcement	Continuous	
Preparation, construction, and protection of masonry during cold weather (<40°F) or hot weather (>90°F)	Periodic	Verify that cold-weather construction is performed in accordance with Article 1.8 C of TMS 602/ACI 530.1-13 and hot weather construction per Article 1.8 D of TMS 602/ACI 530.1-13.
Placement of grout	Continuous	
Self-consolidating grout	Continuous	
Placement of AAC masonry units and construction of thin-bed mortar joints	Periodic	Verify that mortar is placed in accordance with Article 3.3 B.8 of TMS-602/ACI 530.1-13.
Observation of grout specimens, mortar specimens, and/or prisms	Periodic	Confirm that specimens/prisms are performed as required by Article 1.4 of TMS-602/ACI 530.1-13. *Continuous inspection is required for Risk Category IV buildings.*
Minimum Testing:		
Verification of Slump Flow and Visual Stability Index (VSI) for self-consolidating grout	Periodic	Compressive strength tests should be performed in accordance with ASTM C 1019 for slump flow and ASTM C 1611 for VSI.
Verification of f'_m and f'_{AAC}	Periodic	Determine the compressive strength for each wythe by the "unit strength method" or by the "prism test method" as specified in Article 1.4 B of TMS 602/ACI 530.1-13 prior to construction. *For Risk Category IV buildings this should be verified at every 5,000ft² of construction*.
Verification of proportions of materials in premixed or pre-blended mortar and grout	Periodic	Verify that proportions for mortar meet ASTM C 270 and proportions for grout meet ASTM C 476. This applies to *Risk Category IV buildings only.*
Post-installed anchors or dowels		All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report.

Soils per IBC Section 1705.6

Item	Frequency	Detailed Instructions
Verify subgrade is adequate to achieve design bearing capacity	Periodic	Prior to placement of concrete.
Verify excavations extend to proper depth and material	Periodic	Prior to placement of compacted fill or concrete.
Verify that subgrade has been appropriately prepared prior to placing compacted fill	Periodic	Prior to placement of compacted fill.
Perform classification and testing of compacted fill materials	Periodic	All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000ft² of surface area.
Verify proper materials, densities and lift thicknesses during placement and compaction.	Continuous	

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK A. HARRIS
UTAH
1/21/2019

SUBMITTAL	CONSTRUCTION	
DRAWN BY:	JTA/RE+A	
CHECKED BY:	RCG/RE+A	
APPROVED BY:		
RELEASE:	1/21/2019	
PLOT DATE:	---	1/8/2019 6:31:32 AM

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HERRIMAN CITY

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ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

GENERAL STRUCTURAL NOTES

SE003

COMBINED LEGEND

PLAN LEGEND

- S — FOOTING STEP
- FOOTING - CONTINUOUS
- FOOTING - THICKENED SLAB
- FOOTING - SQUARE FOOTING - RECTANGULAR FOOTING - MAT FOOTING
- 0" — CHANGE IN ELEVATION
- SLAB BLOCK-OUT AT COLUMN
- CJ / CJ — SLAB CONTROL/CONSTRUCTION JOINT
- OPENING
- CONCRETE HOUSEKEEPING PAD
- MASONRY WALL
- MASONRY WALL - RECESSED (FDTN PLAN) MASONRY LINTEL (FRAMING PLAN)
- MASONRY COLUMN IN MASONRY WALL

PLAN MARKS

BF-#	BRACED FRAME
CB-#	CONCRETE BEAM
CC-#	CONCRETE COLUMN
CCSS-#	CANTILEVERED CONCRETE SUSPENDED SLAB
CDP-#	CONCRETE DRILLED PIER
CFW-#	CONCRETE FOUNDATION WALL
CGB-#	CONCRETE GRADE BEAM
CJ-#	CONCRETE JOIST
CJC-#	CONCRETE JAMB COLUMN
CL-#	CONCRETE LINTEL
CP-#	CONCRETE PIER
CRW-#	CONCRETE RETAINING WALL
CSG-#	CONCRETE SLAB ON GRADE
CSH-#	CONCRETE SHEAR HEAD
CSS-#	CONCRETE SUSPENDED SLAB
CSW-#	CONCRETE SHEAR WALL
CW-#	CONCRETE WALL
FC#	CONTINUOUS FOOTING
FM#	MAT FOOTING
FR#	RECTANGULAR FOOTING
FS#	SQUARE FOOTING
FTS#	THICKENED SLAB FOOTING
HD-#	HOLD DOWN ANCHOR
MC-#	MASONRY COLUMN
MF-#	MOMENT FRAME
ML-#	MASONRY LINTEL
MP-#	MASONRY PIER
MW-#	MASONRY WALL
PTB-#	POST-TENSIONED CONCRETE BEAM
SBP-#	STEEL BASE PLATE
SC-#	STEEL COLUMN
SCP-#	STEEL CAP PLATE
SD-#	STEEL DECK
SDA-#	STEEL DECK ATTACHMENT
SG-#	STEEL GIRDER
SJ-#	STEEL JOIST
SND-#	SNOW DRIFT
WB-#	WOOD BEAM
WBW-#	WOOD BEARING WALL
WC-#	WOOD COLUMN
WD-#	WOOD DIAPHRAGM
WJ-#	WOOD JOIST
WSW-#	WOOD SHEAR WALL

STRUCTURAL DRAWING LIST

SHT NO.	SHT NAME
SE001	GENERAL STRUCTURAL NOTES
SE002	GENERAL STRUCTURAL NOTES
SE003	GENERAL STRUCTURAL NOTES
SE004	LEGENDS & ABBREVIATIONS
SB101	FOOTING & FOUNDATION PLAN
SB501	TYPICAL FOOTING & FOUNDATION DETAILS
SB601	CONCRETE SCHEDULES
SB611	MASONRY SCHEDULES
SB612	MASONRY SCHEDULES
SF101	ROOF FRAMING PLAN
SF401	TRUSS ELEVATION
SF501	ROOF FRAMING DETAILS
SF502	ROOF FRAMING DETAILS

ABBREVIATIONS

@	AT
AB	ANCHOR BOLT (S)
ABV	ABOVE
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
CJ	CONSTRUCTION JOINT OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CTR	CENTER
D.B.	DECK BEARING
db	DIAMETER OF REINFORCING BAR
DBA	DEFORMED BAR ANCHORS
DBL	DOUBLE
DET	DETAIL
DIA (OR Ø)	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DK	DECK
DN	DOWN
DWG	DRAWING
DWL	DOWEL
E.F.	EACH FACE
E.J.	EXPANSION JOINT (SEISMIC SEPARATION JOINT)
E.W.	EACH WAY
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST (E)	EXISTING
EXP	EXPANSION / EXPOSED
EXT	EXTERIOR
F.D.	FLOOR DRAIN
F.F.	FINISH FLOOR
F.V.	FIELD VERIFY
FDTN	FOUNDATION
FIN	FINISH
FL	FLOOR
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLU-LAMINATED BEAM
GR	GRADE
GSN	GENERAL STRUCTURAL NOTES
HB	HORIZONTAL BRIDGING
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHORS
HSS	HOLLOW STRUCTURAL STEEL
HT	HEIGHT
I.F.	INSIDE FACE
IBC	INTERNATIONAL BUILDING CODE
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
ICC	INTERNATIONAL CODE COUNCIL
IN	INCH
INSUL	INSULATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIPS - 1,000 POUNDS
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
LBS	POUNDS

ABBREVIATIONS

Ld, Lt, Lsb, Lsbt, Ldc, Lsc	SEE CONCRETE REINFORCING BAR DEVELOPMENT AND LAP LENGTH SCHEDULE
LF	LINEAL FOOT
LFRS	LATERAL FORCE RESISTING SYSTEM (SFRS & WFRS)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SDIE VERTICAL
MAS	MASONRY
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MFGR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NORM	NORMAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OWSJ	OPEN WEB STEEL JOIST
P.T.	POST-TENSIONED
PCF	POUNDS/CUBIC FOOT
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS/LINEAL FOOT
PNL	PANEL
PSF	POUNDS/SQ FOOT
PSI	POUNDS/SQ INCH
R.D.	ROOF DRAIN
REINF	REINFORCING
REQD	REQUIRED
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHT	SHEET
SI	SPECIAL INSPECTION (SP. INSP.)
SIM	SIMILAR
SOG	SLAB ON GRADE
SQ	SQUARE
STAG	STAGGERED
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
T & B	TOP AND BOTTOM
T.O.	TOP OF
TEMP	TEMPERATURE
THDS	THREADS
TOC	TOP OF CONCRETE
TOCP	TOP OF CONCRETE PIER
TOF	TOP OF FOOTING
TOS	TOP OF SLAB
TOST	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W.P.	WORK POINT
W/	WITH
WF	WIDE FLANGE
WFRS	WIND FORCE RESISTING SYSTEM
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER — NO. #176779 — MARK A. HARRIS — UTAH

1/21/2019

SUBMITTAL				
CONSTRUCTION	JTA/RE+A	RCG/RE+A		1/21/2019
DRAWN BY:	CHECKED BY:	APPROVED BY:	RELEASE:	PLOT DATE:

1/8/2019 6:31:32 AM

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING

HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

LEGENDS & ABBREVIATIONS

SE004

MASONRY WALL NOTES

1. TERMINATE HORIZONTAL REINFORCEMENT AT CONTROL JOINTS IN MASONRY WALLS PER DETAIL A1/SB611.

2. PROVIDE ADDITIONAL HORIZONTAL AND VERTICAL REINFORCING AT WALL CORNERS, EDGES OF OPENINGS, WALL ENDS, AND WALL INTERSECTIONS PER B1/SB611

3. SEE A2/SB611 FOR TYPICAL REINFORCING AROUND MISCELLANEOUS OR RECESSED MASONRY WALL OPENINGS.

4. SEE B3/SB612 FOR REQUIRED ADDITIONAL DUCTILITY REINFORCING IN LOAD BEARING MASONRY WALLS.

5. SEE ARCHITECTURAL FOR TOP OF NON-BEARING WALL LOCATIONS.

SLAB ON GRADE PLAN NOTES

1. ALL SLABS ON GRADE SHALL BE 4 INCHES THICK, UNLESS NOTED OTHERWISE. SEE TYPICAL CONCRETE SLAB ON GRADE PROFILE DETAIL C4/SB501 FOR SUBGRADE REQUIREMENTS.

2. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.

3. SEE ARCHITECTURAL DRAWINGS AND FINISH SCHEDULE FOR SLAB DEPRESSIONS, SLOPES TO DRAINS AND SLAB AREAS TO RECEIVE FLOOR TILE.

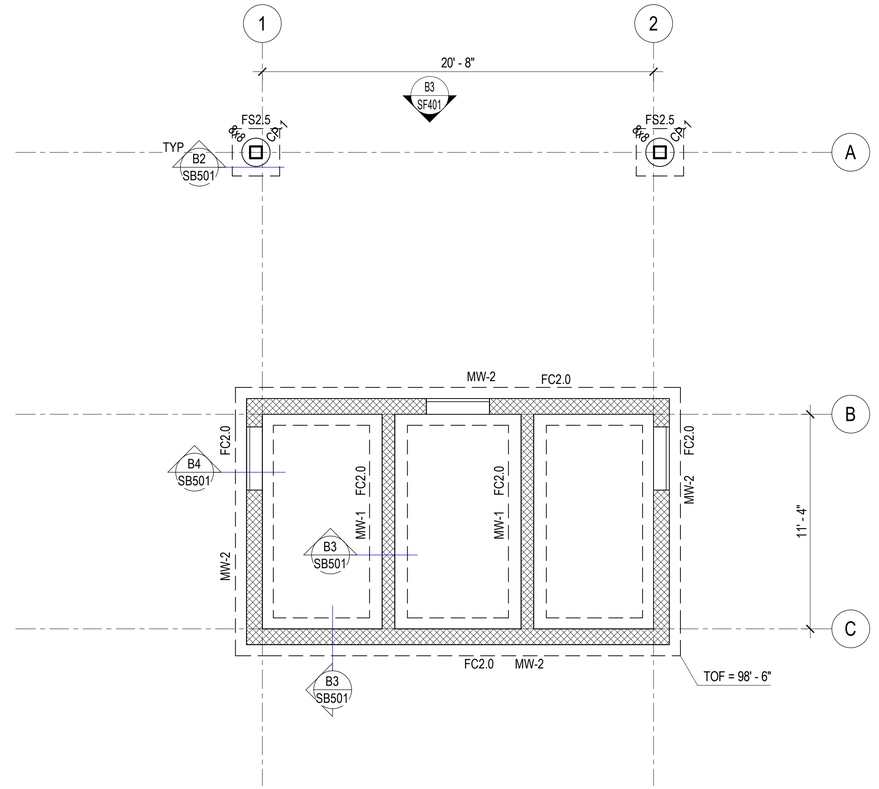
4. SEE TYPICAL CONCRETE SLAB ON GRADE DETAILS FOR CONSTRUCTION JOINTS, CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING C2/SB501.

FOOTING & FOUNDATION PLAN NOTES

1. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE DRAWINGS FOR EXTERIOR CONCRETE RETAINING AND / OR SITE WALLS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

2. SEE TYPICAL STEP DETAIL AT CONTINUOUS FOOTING FOR REINFORCING REQUIREMENTS C1/SB501.

3. DOWEL ALL CONCRETE WALLS TO FOOTING PER TYPICAL DETAIL B3/SB501.



A3 / SB101 FOOTING & FOUNDATION PLAN

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

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #178779
MARK A. HARRIS
UTAH
1/21/2019

SUBMITTAL				
CONSTRUCTION	JTA/RE+A	RCG/RE+A		1/21/2019	---
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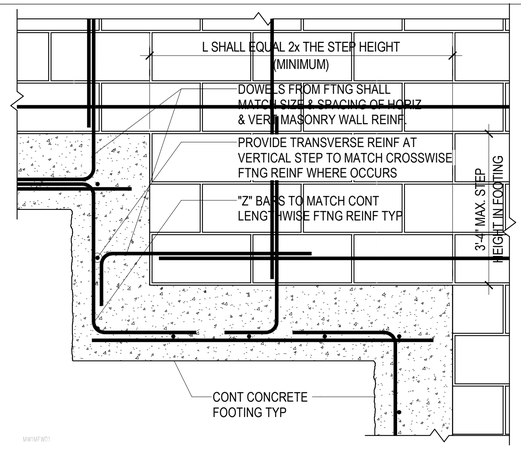
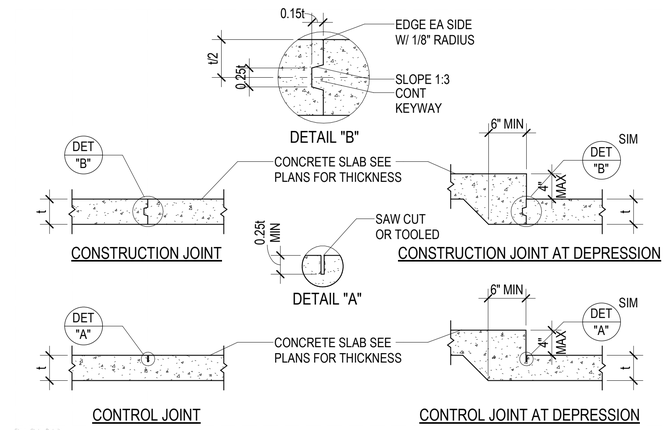
FOOTING & FOUNDATION PLAN

SB101



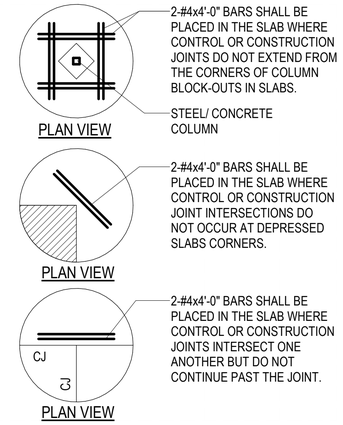
C1 / SB501 — TYPICAL STEP IN FOOTING DETAIL AT MASONRY FOUNDATION WALL

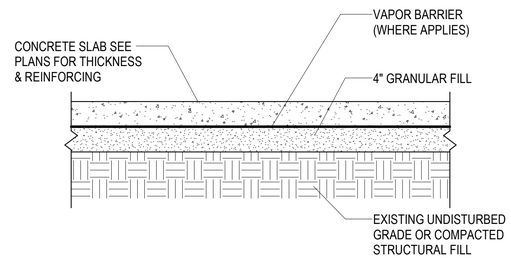
NO SCALE



C2 / SB501 — TYPICAL CONCRETE SLAB ON GRADE DETAILS

NO SCALE





C4 / SB501 — TYPICAL CONCRETE SLAB ON GRADE PROFILE

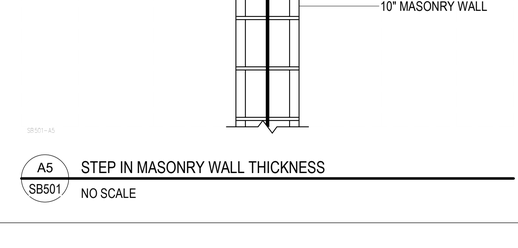
NO SCALE

B2 / SB501 — WOOD POST AT CONCRETE PIER AND FOOTING

NO SCALE

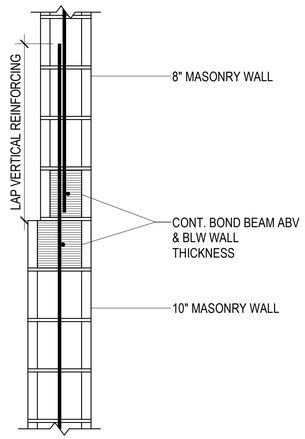
B3 / SB501 — TYPICAL MASONRY WALL WITH MASONRY FOUNDATION

NO SCALE



B4 / SB501 — TYPICAL MASONRY FOUNDATION WALL

NO SCALE



A5 / SB501 — STEP IN MASONRY WALL THICKNESS

NO SCALE

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LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #178779
MARK A. HARRIS
UTAH
1/21/2019

CONSTRUCTION				
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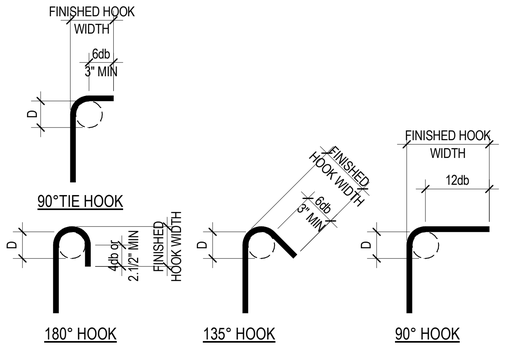
TYPICAL FOOTING & FOUNDATION DETAILS

SB501



END HOOK SCHEDULE					
BAR SIZE	D	FINISHED HOOK WIDTH			
		180° HOOK	135° HOOK	90° HOOK	90° TIE HOOK
#3	2.1/4"	3"	4.1/4"	6"	4"
#4	3"	4"	4.1/2"	8"	4.1/2"
#5	3.1/4"	5"	5.1/2"	10"	6"
#6	4.1/2"	6"	8"	12"	--
#7	5.1/4"	7"	9"	14"	--
#8	6"	8"	10.1/2"	16"	--
#9	9.1/2"	11.3/4"	--	19"	--
#10	10.3/4"	13.1/4"	--	22"	--
#11	12"	14.3/4"	--	24"	--
#14	18.1/4"	21.3/4"	--	31"	--
#18	24"	28.1/2"	--	41"	--

Scale: 1" = 1'-0"

B2 / SB601 REINFORCEMENT END HOOK SCHEDULE

NO SCALE

CONCRETE REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SCHEDULE																							
BAR SIZE	f'c = 3000 PSI				f'c = 4000 PSI				f'c = 4500 PSI				f'c = 5000 PSI				f'c = 6000 PSI				f'c = ALL	
	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ld	Lt	Lsb	Lsbt	Ldc	Lsc
#3	17"	22"	22"	28"	15"	19"	19"	25"	14"	18"	18"	23"	13"	17"	17"	22"	12"	16"	16"	20"	8"	12"
#4	22"	29"	29"	38"	19"	25"	25"	33"	18"	24"	24"	31"	17"	23"	23"	29"	16"	21"	21"	27"	10"	15"
#5	28"	36"	36"	47"	24"	31"	31"	41"	23"	30"	30"	38"	22"	28"	28"	36"	20"	26"	26"	33"	12"	19"
#6	33"	43"	43"	56"	29"	37"	37"	49"	27"	35"	35"	46"	26"	34"	34"	44"	24"	31"	31"	40"	15"	23"
#7	48"	63"	63"	81"	42"	54"	54"	71"	40"	51"	51"	67"	38"	49"	49"	63"	34"	45"	45"	58"	17"	27"
#8	55"	72"	72"	93"	48"	62"	62"	81"	45"	59"	59"	76"	43"	56"	56"	72"	39"	51"	51"	66"	19"	30"
#9	62"	81"	81"	105"	54"	70"	70"	91"	51"	66"	66"	86"	48"	63"	63"	81"	44"	57"	57"	74"	22"	34"
#10	70"	91"	91"	118"	61"	79"	79"	102"	57"	74"	74"	96"	54"	71"	71"	92"	50"	64"	64"	84"	24"	39"
#11	78"	101"	101"	131"	67"	87"	87"	114"	64"	82"	82"	107"	60"	78"	78"	102"	55"	71"	71"	93"	27"	43"
#14	93"	121"	NA	NA	81"	105"	NA	NA	76"	99"	NA	NA	72"	94"	NA	NA	66"	86"	NA	NA	33"	NA
#18	124"	161"	NA	NA	108"	140"	NA	NA	101"	132"	NA	NA	96"	125"	NA	NA	88"	114"	NA	NA	43"	NA

NOTES:

1. DEFINITIONS:
   - Ld: TENSION DEVELOPMENT LENGTH FOR REINFORCEMENT SATISFYING THE FOLLOWING CONDITIONS:
     SLABS AND WALLS: CLEAR SPACING > 2db AND CONCRETE CLEAR COVER > db
     BEAMS AND COLUMNS: CLEAR COVER SPACING > db AND CONCRETE CLEAR COVER > db
   - Lt: DEVELOPMENT LENGTH FOR TOP BARS IN TENSION
   - Lsb: TENSION LAP SPLICE LENGTH FOR OTHER THAN TOP BARS (CLASS B)
   - Lsbt: TENSION LAP SPLICE LENGTH OF TOP BARS.
   - Ldc: DEVELOPMENT LENGTH FOR BARS IN COMPRESSION
   - Lsc: TIED COLUMN LAP SPLICE IN COMPRESSION
   - db: NOMINAL BAR DIAMETER (INCHES)
   - TOP BARS: HORIZONTAL BEAM REINFORCEMENT WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW
2. MULTIPLY VALUES IN SCHEDULE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET REQUIREMENTS FOR Ld IN NOTE 1.
3. MULTIPLY VALUES IN SCHEDULE BY 1.3 FOR USE IN LIGHTWEIGHT AGGREGATE CONCRETE.
4. FOR EPOXY COATED BAR: MULTIPLY VALUES IN SCHEDULE BY 1.5 FOR BARS WITH CLEAR COVER < 3db OR CLEAR SPACING < 6db. OTHERWISE MULTIPLY VALUES BY 1.2.
5. a. FOR BUNDLED BARS OF THREE OR LESS MULTIPLY LENGTHS BY 1.2.
   b. FOR BUNDLED BARS OF FOUR OR MORE MULTIPLY LENGTHS BY 1.33.
   c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.
6. SCHEDULE LENGTHS ARE FOR fy=60ksi REINFORCING, MULTIPLY LENGTHS BY 1.25 FOR fy=75ksi REINFORCING.
7. LAP SPLICES ARE NOT PERMITTED FOR #14 & #18 BARS. USE BAR COUPLERS PER G.S.N.

CONCRETE FOOTING SCHEDULE													
MARK	WIDTH	LENGTH	THICK	CROSSWISE REINFORCING				LENGTHWISE REINFORCING				REMARKS
				NO.	SIZE	LENGTH	SPACE	NO.	SIZE	LENGTH	SPACE	
FC2.0	2' - 0"	CONT.	1' - 0"	--	NONE	REQ'D	--	2	#5	CONT.	18"	
FS2.5	2' - 6"	2' 6"	1' - 0"	3	#4	2' - 0"	12"	3	#4	2' - 0"	12"	

1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER UNLESS NOTED OTHERWISE.
2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" CLEAR CONCRETE COVER.
3. SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS AND CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS, UNLESS NOTED OTHERWISE.
4. ALL FOOTINGS SHALL BE FORMED. FOOTINGS SHALL NOT BE EARTH FORMED OR OVERSIZED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

CONCRETE PIER SCHEDULE					
MARK	DIMENSIONS		REINFORCING		REMARKS
	DEPTH	WIDTH	VERTICAL	TIES	
CP-1	1' - 6"		6-#5	#3 @ 10" O.C.	18"Ø PIER

CP-1

A3 / SB601 TYPICAL CONCRETE PIER REINFORCEMENT/TIE DIAGRAM

NO SCALE

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #175779
MARK A. HARRIS
UTAH
1/21/2019

CONSTRUCTION	JTA/RE+A
DRAWN BY:	RCG/RE+A
CHECKED BY:	
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	---

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PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

CONCRETE SCHEDULES

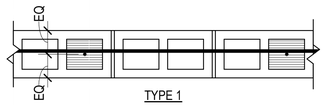
SB601

MASONRY WALL SCHEDULE

MARK	WIDTH	MATERIAL	REINFORCING			REMARKS
			VERTICAL	HORIZONTAL	TYPE	
MW-1	8"	CMU	#5 @ 32" O.C.	#5 @ 32" O.C.	TYPE 1	
MW-2	10"	CMU	#5 @ 32" O.C.	#5 @ 32" O.C.	TYPE 1	

NOTES

1. SEE PLANS, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS.
2. GROUT SOLID ALL CELLS BELOW GRADE, CELLS CONTAINING EMBEDS (HSA'S, DBA'S, ANCHOR BOLTS, ETC.), AND CELLS CONTAINING REINFORCING. CONSOLIDATE GROUT AS PER THE GENERAL STRUCTURAL NOTES.
3. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.



C3 / SB611 TYPICAL MASONRY WALL TYPES - PLAN VIEW

NO SCALE

MASONRY REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE	f'm = 2000 psi					
	6" CMU	8" CMU		10" CMU		
	CLASS	CLASS		CLASS		
	A	A	B	A	B	
#3	12"	12"	12"	12"	12"	
#4	18"	13"	21"	12"	20"	
#5	28"	20"	35"	16"	32"	
#6	**	38"	54"	29"	54"	
#7	-	52"	**	40"	**	
#8	-	**	-	61"	**	
#9	-	-	-	79"	-	

NOTES:

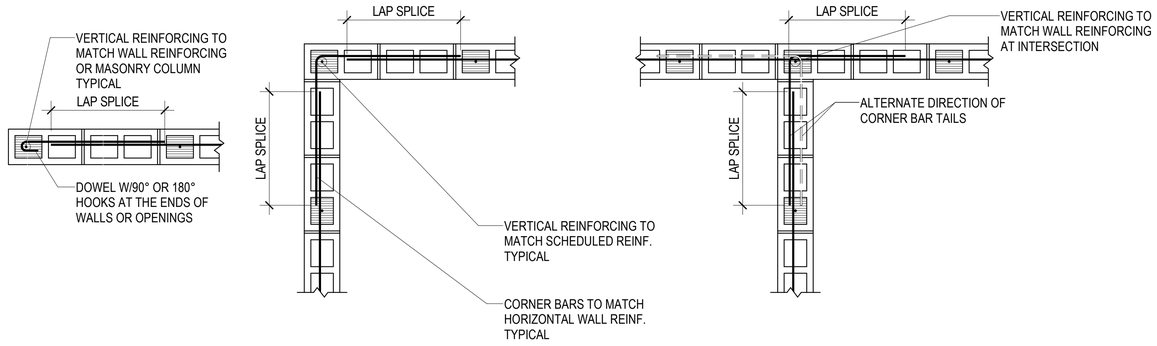
1. CLASS A SPLICES MAY BE USED WHEN ONLY ONE BAR IS CONTINUOUS IN THE MASONRY CELL OR COURSE.

2. CLASS B SPLICES SHALL BE USED WHEN TWO BARS ARE CONTINUOUS IN THE MASONRY CELL OR COURSE.

3. ** INDICATES THAT A LAP SPLICE IS NOT ALLOWED AND MECHANICAL BAR COUPLERS ARE REQUIRED FOR THE BAR SPLICES. SPLICES SHALL BE OFFSET 2'-0" TO AVOID CONGESTION.

4. WHERE VERTICAL BARS HAVE A REQUIRED LAP SPLICE GREATER THAN THE HEIGHT OF THE GROUT POUR, THE BAR SPLICE SHALL BE MADE WITH A MECHANICAL BAR COUPLER. WHERE THE HEIGHT OF THE GROUT POUR EXCEEDS 60 INCHES, HIGH LIFT GROUTING PROCEDURES SHALL BE FOLLOWED.

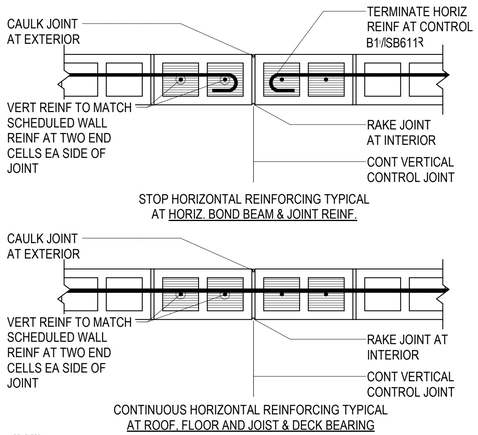
5. WHERE MECHANICAL BAR COUPLERS ARE USED, THE CONNECTOR SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR IN TENSION AND COMPRESSION.



WALL ENDS / EDGES OF OPENINGS — WALL CORNERS — WALL INTERSECTIONS

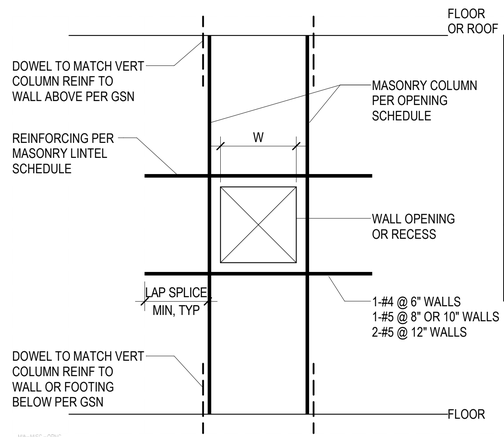
B1 / SB611 TYPICAL MASONRY WALL END, CORNER AND INTERSECTION DETAILS

NO SCALE



A1 / SB611 TYPICAL CONTROL JOINTS IN MASONRY WALLS

NO SCALE



OPENING SCHEDULE

OPENING WIDTH	COLUMN SIZE
W≤3'-4"	8" LONG W/1-#5 @ 6" & 8" WALLS 8" LONG W/2-#5 @ 10" & 12" WALLS

NOTES:
1. COLUMNS AND LINTELS NOTED ON THE PLANS TAKE PRECEDENCE OVER COLUMNS AND LINTELS SHOWN IN THIS DETAIL.

A2 / SB611 TYPICAL REINFORCING AROUND MISCELLANEOUS OR RECESSED MASONRY OPENINGS

NO SCALE

MASONRY LINTEL SCHEDULE

MARK	DIMENSIONS		REINFORCING		MAXIMUM SPAN	REMARKS
	DEPTH	WIDTH	HORIZONTAL	STIRRUPS		
ML-1	16"	6",8",10" OR 12"	1- #5 CONT. BOTTOM	--	3'-4"	

NOTES:

1. EXTEND ALL HORIZONTAL REINFORCING 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING. IF HORIZONTAL REINFORCING CANNOT BE EXTENDED 48 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING, PROVIDE 90 DEGREE STANDARD HOOK.

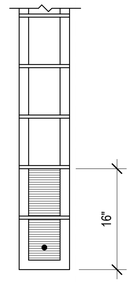
2. GROUT MASONRY LINTELS MONOLITHICALLY WITH THE SUPPORT WALL OR COLUMN AT EACH END.

3. SPLICE TOP BARS AT MIDSPAN OF LINTEL ONLY.

4. SPLICE BOTTOM BARS OVER SUPPORTS ONLY.

5. FOR WALL ABOVE LINTEL, DOWEL VERTICAL REINFORCING INTO FULL DEPTH OF THE LINTEL OR 48 BAR DIAMETERS, WHICHEVER IS LESS.

6. HORIZONTAL WALL REINFORCING SHALL CONTINUE THROUGH MASONRY LINTELS. WHERE BOTH HORIZONTAL WALL REINFORCING AND LINTEL REINFORCING WOULD OCCUR IN THE SAME COURSE, THE LARGER BARS ARE TO REPLACE THE SMALLER BARS.



ML-1

A4 / SB611 TYPICAL MASONRY LINTEL DETAILS

NO SCALE

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK A. HARRIS
UTAH
1/21/2019

SUBMITTAL				
DRAWN BY:	JTA/RE+A		RELEASE:	1/21/2019
CHECKED BY:	RCG/RE+A		PLOT DATE:	1/8/2019 6:31:26 AM
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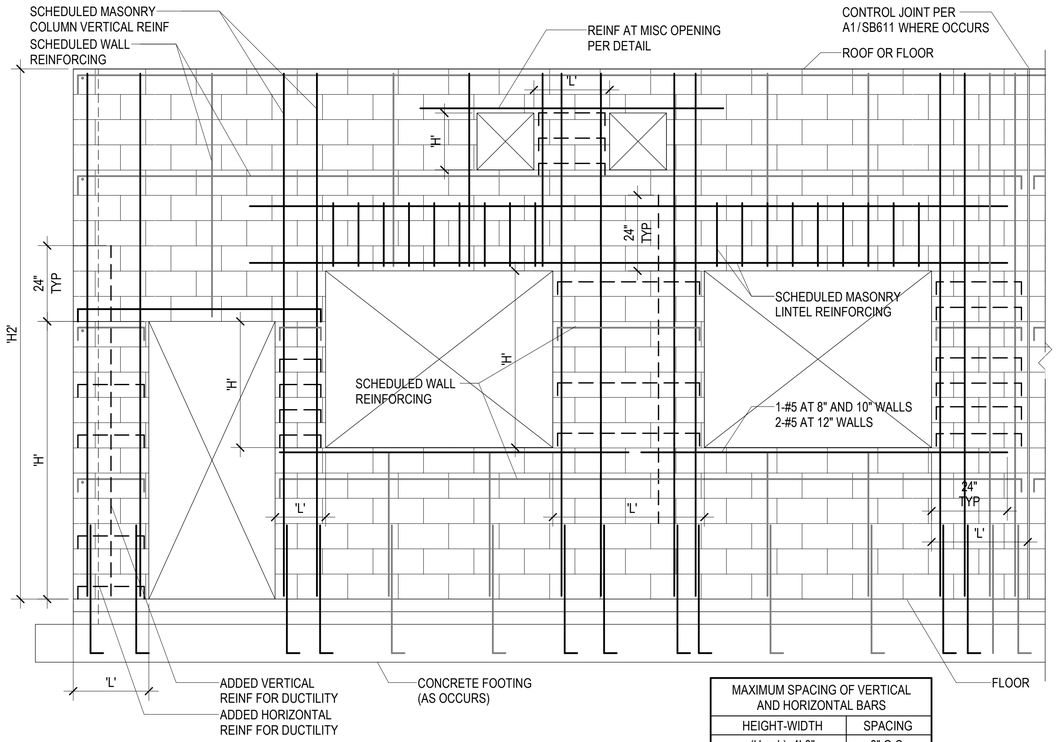
MASONRY SCHEDULES

SB611



MAXIMUM SPACING OF VERTICAL AND HORIZONTAL BARS	
HEIGHT-WIDTH	SPACING
(H or L)<4'-0"	8" O.C.
4'-0"≤(H or L)<6'-0"	16" O.C.
6'-0"≤(H or L)<8'-0"	24" O.C.
8'-0"≤(H or L)<10'-0"	32" O.C.
10'-0"≤(H or L)<12'-0"	40" O.C.
12'-0"≤(H or L)	48" O.C.

NOTES:
1. ADDED BAR SIZE SHALL BE 1-#4 MINIMUM.
2. ALL ADDED BARS SHALL BE EMBEDDED IN GROUT.
3. ALL ADDED HORIZONTAL REINFORCING SHALL BE TERMINATED WITH A 90° OR 180° STANDARD HOOK AROUND THE VERTICAL REINFORCING.
4. FOR WALLS WITH 'H2' AND 'L'≥12'-0" OR LARGER ADDITIONAL REINFORCING FOR DUCTILITY IS NOT REQUIRED.

WALL REINFORCING LEGEND

- SCHEDULED WALL REINF
- SCHEDULED OPENING REINF
- ADDED REINF FOR DUCTILITY

B3 / SB612 TYPICAL MASONRY WALL OPENINGS WITH ADDITIONAL DUCTILITY REINFORCMENT FOR MASONRY SHEAR WALLS

NO SCALE

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK A. HARRIS
UTAH
1/21/2019

SUBMITTAL	CONSTRUCTION		
DRAWN BY:	JTA/RE+A	RELEASE:	1/21/2019
CHECKED BY:	RCG/RE+A	PLOT DATE:	---
APPROVED BY:			

1/8/2019 6:31:26 AM

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

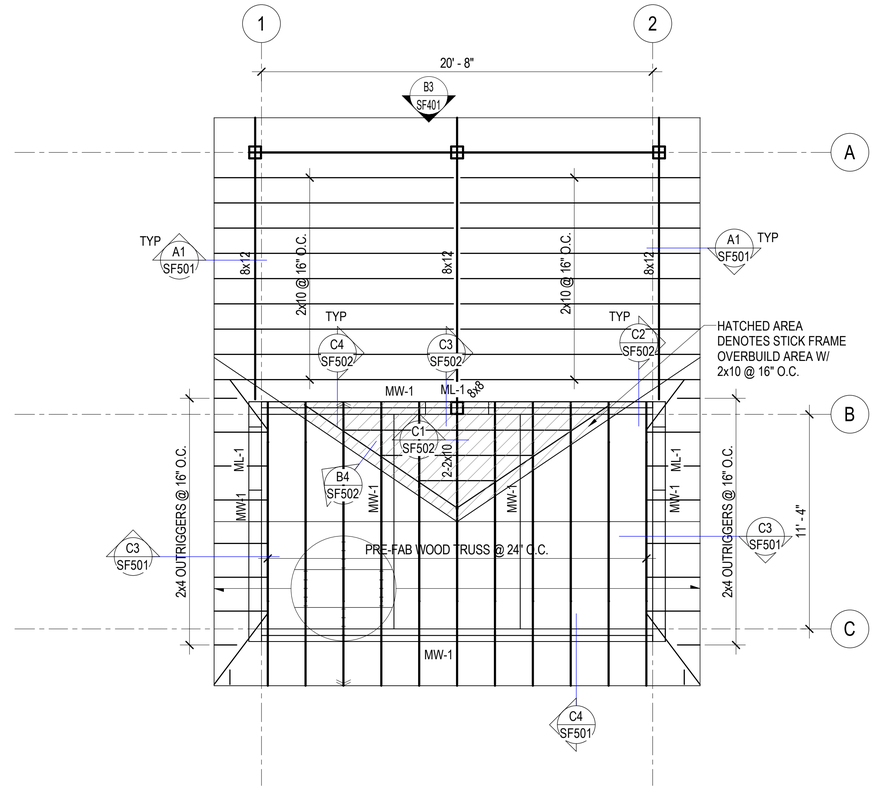
MASONRY SCHEDULES

SB612

ROOF FRAMING PLAN NOTES

1. SEE A3 / SF501 FOR TRUSS LOADING DIAGRAMS.

2. TYPICAL ROOF FRAMING IS WOOD SHEATHING OVER PREFAB METAL PLATE WOOD TRUSSES.



A3 / SF101 ROOF FRAMING PLAN

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

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK A. HARRIS
UTAH
1/21/2019

SUBMITTAL				
CONSTRUCTION				
DRAWN BY:	JTA/RE+A	CHECKED BY:	RCG/RE+A	APPROVED BY:		RELEASE:	1/21/2019
PLOT DATE:	1/8/2019 6:31:33 AM						

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

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ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

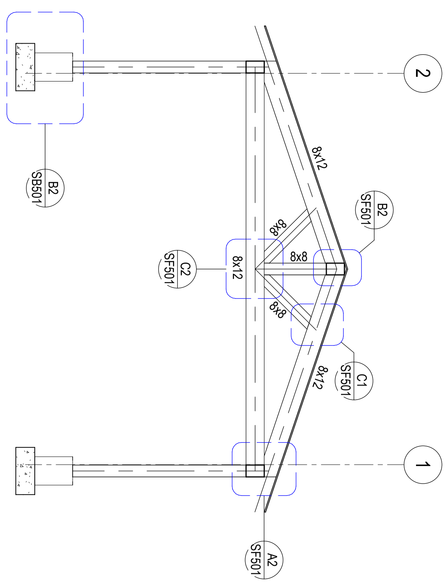
ROOF FRAMING PLAN

SF101

B3
SF401

TRUSS ELEVATION

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



SF401

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

TRUSS ELEVATION

HERRIMAN CITY

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

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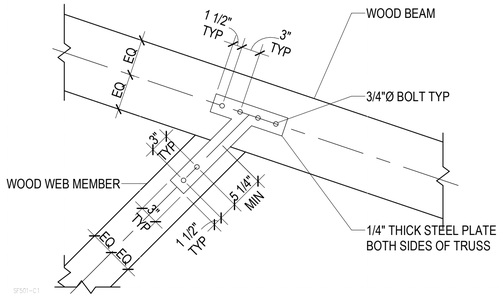
SUBMITTAL	CONSTRUCTION
DRAWN BY:	JTA/RE+A
CHECKED BY:	RCG/RE+A
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	----

LICENSED CERTIFIED STRUCTURE ENGINEER
JAY T. HARRIS
#178275
UTAH
1/21/2019

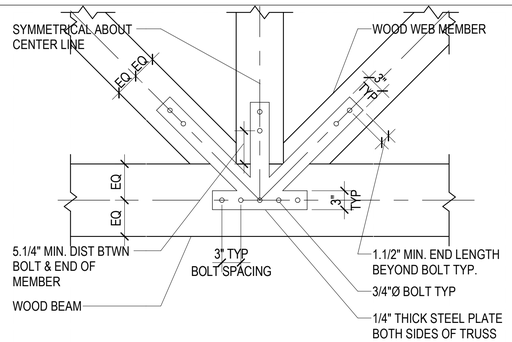
NO.	REVISION DESCRIPTION	DATE

1/8/2019 6:31:33 AM



C1 SF501 TRUSS CONNECTION DETAIL

NO SCALE



C2 SF501 TRUSS CONNECTION DETAIL

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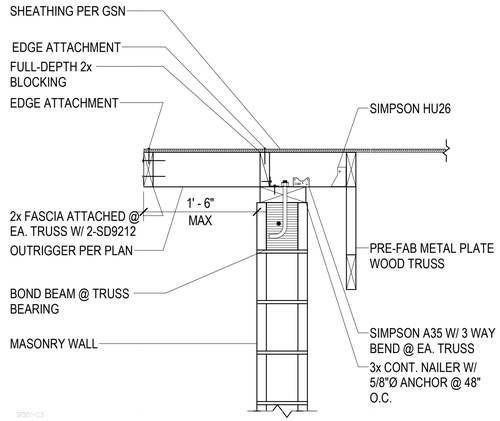
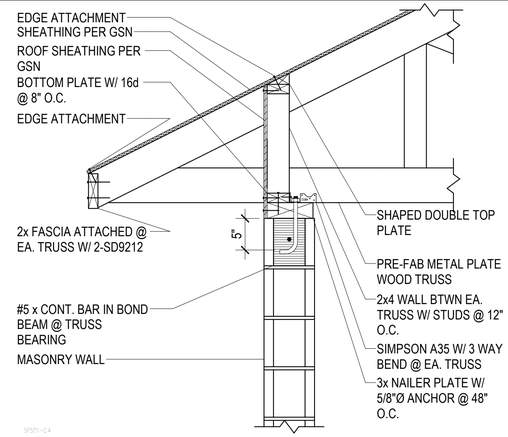


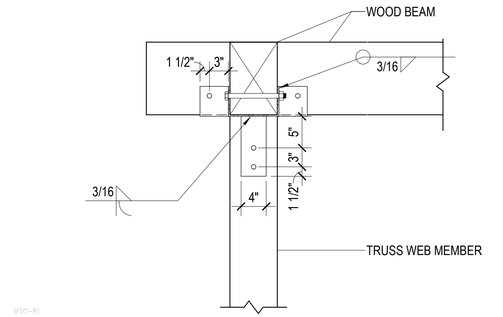
C3 SF501 WOOD OUTRIGGER OVER MASONRY AT GABLE END

NO SCALE



C4 SF501 WOOD TRUSS AT MASONRY WALL

NO SCALE



B1 SF501 TRUSS CONNECTION DETAIL

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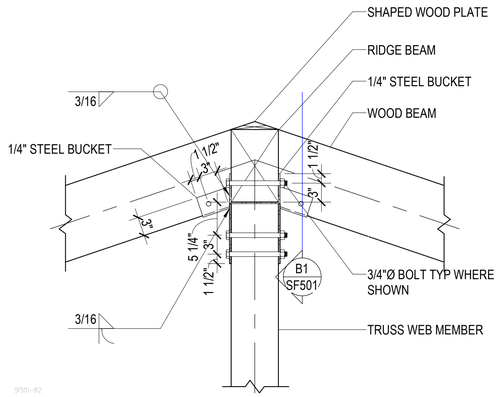

B2 SF501 TRUSS CONNECTION DETAIL

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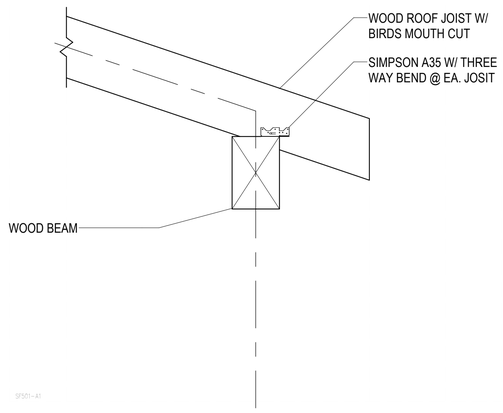
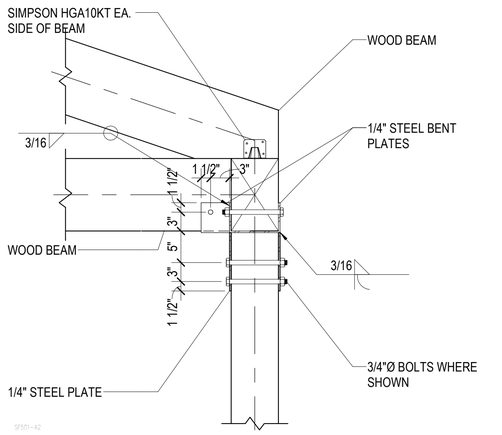


A1 SF501 ROOF MEMBER TO WOOD BEAM

NO SCALE

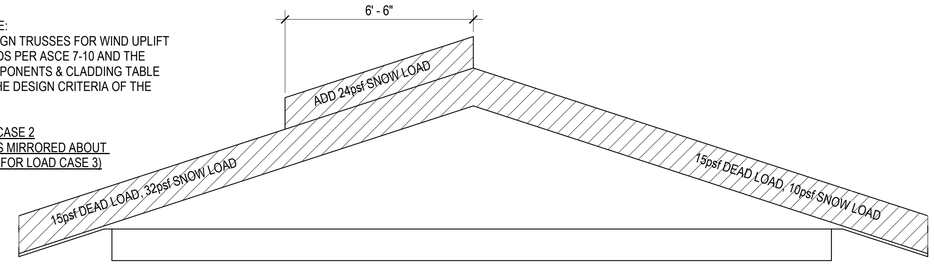


A2 SF501 TRUSS CONNECTION DETAIL

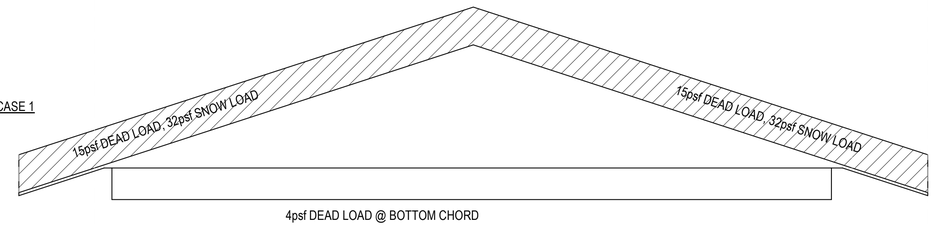
NO SCALE

NOTE:
DESIGN TRUSSES FOR WIND UPLIFT LOADS PER ASCE 7-10 AND THE COMPONENTS & CLADDING TABLE IN THE DESIGN CRITERIA OF THE GSN

LOAD CASE 2
(LOADS MIRRORED ABOUT RIDGE FOR LOAD CASE 3)



LOAD CASE 1



A3 SF501 TRUSS LOADING

NO SCALE

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK HARRIS
UTAH
1/21/2019

SUBMITTAL	CONSTRUCTION
DRAWN BY:	JTA/RE+A
CHECKED BY:	RCG/RE+A
APPROVED BY:	
RELEASE:	1/21/2019
PLOT DATE:	---

1/8/2019 6:31:34 AM

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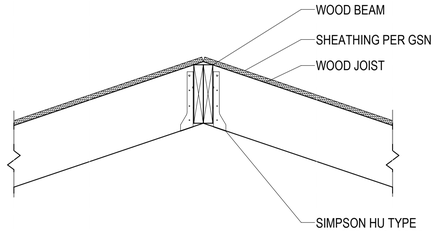
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

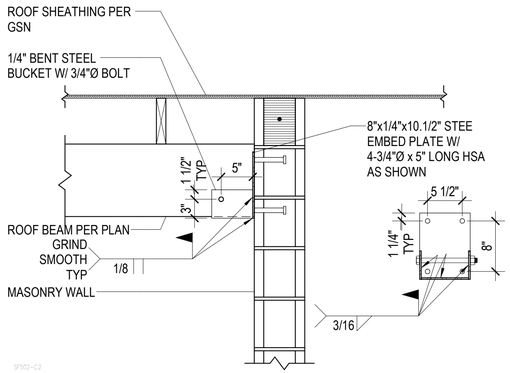
ROOF FRAMING DETAILS

SF501



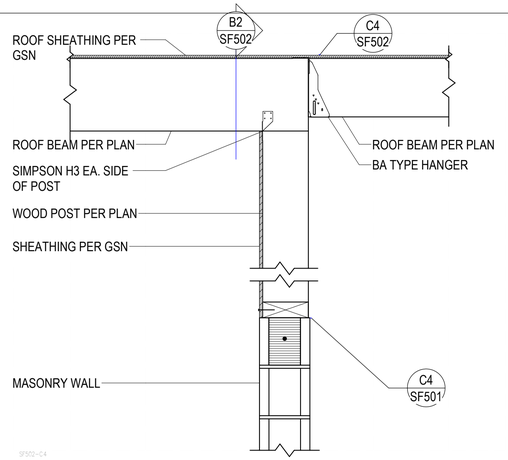
C1 / SF502 — WOOD JOIST AT RIDGE BEAM

NO SCALE



C2 / SF502 — WOOD TRUSS AT MASONRY WALL

NO SCALE



C3 / SF502 — WOOD TRUSS AT MASONRY WALL

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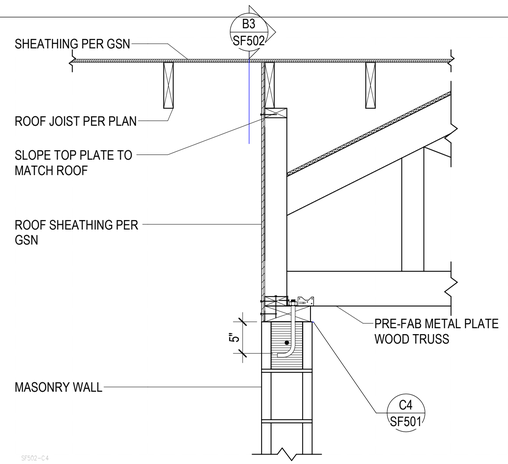

C4 / SF502 — WOOD TRUSS AT MASONRY WALL

NO SCALE

B2 / SF502 — WOOD POST FOR RIDGE BEAM AT MASONRY WALL

NO SCALE

B3 / SF502 — WOOD PONY WALL AND TRUSSES AT MASONRY WALL

NO SCALE

B4 / SF502 — WOOD JOIST OVER FRAMING AT ROOF

NO SCALE

NO.	REVISION DESCRIPTION	DATE

LICENSED CERTIFIED STRUCTURAL ENGINEER
NO. #176779
MARK K. HARRIS
UTAH
1/21/2019

SUBMITTAL	CONSTRUCTION		
DRAWN BY:	JTA/RE+A		
CHECKED BY:	RCG/RE+A		
APPROVED BY:		RELEASE:	1/21/2019
		PLOT DATE:	---

1/8/2019 6:31:34 AM

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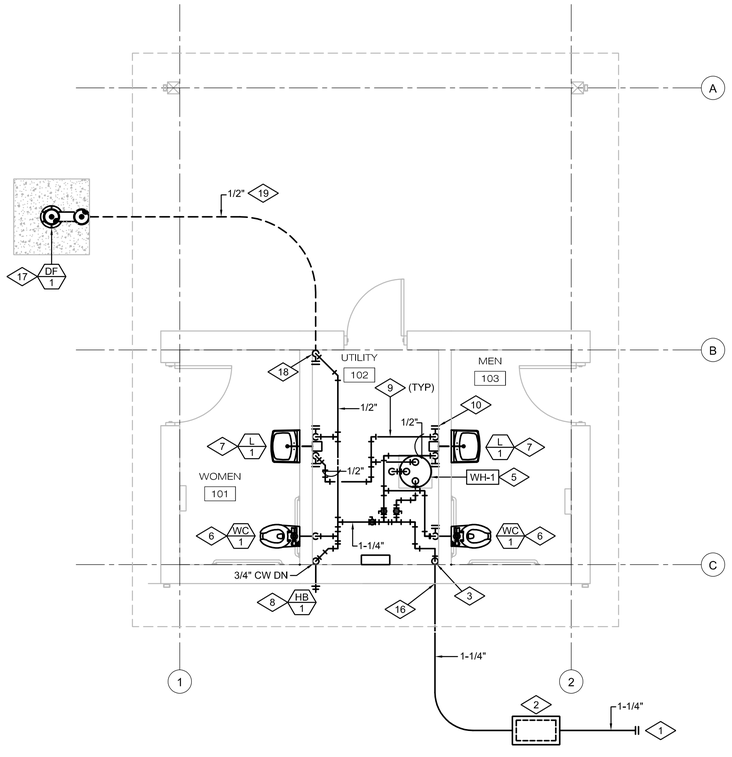
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

ROOF FRAMING DETAILS

SF502

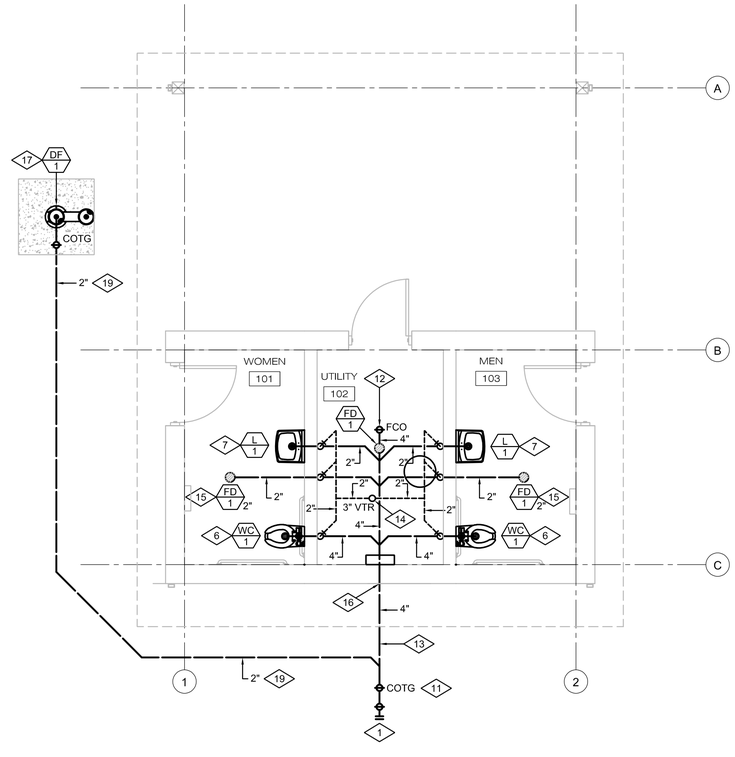


PLUMBING FLOOR PLAN - GAS & WATER (2)

NORTH

48 0 2' 4'

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



PLUMBING FLOOR PLAN - WASTE & VENT (1)

NORTH

48 0 2' 4'

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

REFERENCE NOTES

1. POINT OF CONNECTION (P.O.C.) CONNECT TO SITE UTILITY PIPING IN THIS LOCATION. MATCH PIPING SIZE AND MATERIAL OR PROVIDE COMPATIBLE TRANSITION.
2. WATER VALVE BOX WITH DRAIN FITTING. INSTALL WATER VALVE BOX WITH CURB STOP VALVES AND DRAINAGE FITTING. SEE DETAIL 6/P501.
3. BUILDING DOMESTIC WATER SERVICE ENTRANCE. SEE DETAIL 1/P502.
4. INSTALL ISOLATION BALL VALVES TO ISOLATE SERVICE TO EACH RESTROOM AND TO THE WATER HEATER. (TYP)
5. INSTALL ELECTRIC WATER HEATER ON WALL IN THIS LOCATION. PROVIDE SUPPORTING WALL SHELF AND BRACKETS. SEE DETAIL 3/P502.
6. INSTALL ADA COMPLIANT WALL MOUNTED STAINLESS STEEL WATER CLOSET IN THIS LOCATION. PROVIDE CONCEALED CHAIR CARRIER AND FLUSH VALVE IN UTILITY ROOM. PIPE 4" WASTE AND 2" VENT LINES FROM WATER CLOSET AND CONNECT TO MAIN WASTE AND VENT LINES AS INDICATED. PIPE 1-1/4" CW LINE DOWN AND CONNECT TO CONCEALED FLUSH VALVE IN UTILITY ROOM. MAKE ALL REQUIRED PIPING CONNECTIONS FOR A COMPLETE INSTALLATION. SEE ARCHITECTURAL DRAWINGS FOR PREFERRED MOUNTING HEIGHT OF WATER CLOSET.
7. INSTALL ADA COMPLIANT WALL MOUNTED STAINLESS STEEL LAVATORY IN THIS LOCATION. PROVIDE CONCEALED ARMS CARRIER AND MIXING VALVE IN UTILITY ROOM. PIPE 1-1/2" WASTE AND 1-1/2" VENT LINES FROM LAVATORY AND CONNECT TO MAIN WASTE AND VENT LINES AS INDICATED. PIPE 1/2" CW AND 1/2" HW TO CONCEALED MIXING VALVE IN UTILITY ROOM. PIPE 1/2" TEMPERED WATER LINE THROUGH WALL TO LAVATORY FAUCET. MAKE ALL REQUIRED PIPING CONNECTIONS FOR A COMPLETE INSTALLATION. SEE ARCHITECTURAL DRAWINGS FOR PREFERRED MOUNTING HEIGHT.
8. PIPE 3/4" CW LINE DOWN TO NON-FREEZE HOSE BIBB. MOUNT HOSE BIBB 18" ABOVE FINISHED GRADE,
9. PIPING TO RUN HIGH NEAR STRUCTURE. COORDINATE LOCATION WITH MECHANICAL, STRUCTURAL, AND ELECTRICAL TRADES.
10. PROVIDE "T" FITTINGS WITH BALL VALVES AT EACH PLUMBING FIXTURE WATER SUPPLY LINE TO THOROUGHLY DRAIN AND WINTERIZE ALL WATER LINES SERVING THE RESTROOM FIXTURES. SEE DETAIL 1/P501.
11. CLEANOUT TO GRADE (COTG). SEE DETAIL 5/P501.
12. FLOOR CLEANOUT (FCO). SEE DETAIL 4/P502.
13. WASTE PIPING TO RUN 30" BELOW FLOOR SLAB OR GRADE LINE. SLOPE PIPING AT 2 %.
14. VENT THRU ROOF (VTR). TERMINATE 18" A.F.R. (TYP) COORDINATE ROOF PENETRATION WITH MECHANICAL EXHAUST FAN AND ARCHITECT. SEE DETAIL 5/P502.
15. LOCATE FLOOR DRAIN IN THIS LOCATION. COORDINATE FLOOR DRAIN LOCATION WITH ARCHITECT.
16. COORDINATE LOCATION OF PIPING WITH STRUCTURAL FOOTINGS. COORDINATE WITH GENERAL CONTRACTOR AND STRUCTURAL ENGINEER FOR PIPE SLEEVES THROUGH FOUNDATION WALLS.
17. PROVIDE SANITARY FREEZE-RESISTANT SERVICE VALVE AND DRAIN. INSTALL DRINKING FOUNTAIN PER MANUFACTURERS INSTRUCTIONS AND DETAILS. GENERAL CONTRACTOR TO PROVIDE 4" THICK CONCRETE SLAB.
18. DRINKING FOUNTAIN SERVICE LINE AND BALL VALVE. PROVIDE BLOW DOWN SCHRADER VALVE TO BLOW DOWN DRINKING FOUNTAIN SUPPLY LINE.
19. RUN WATER AND DRAIN LINE BELOW FROST DEPTH OR AT 36" B.F.G.

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	WASTE	VENT	C.W.	H.W.	T.W.	NOTES
WC 1	WATER CLOSET	4"	2"	1-1/4"	–	–	ADA, WALL MTD, SIPHON JET 1.6 GPF, STAINLESS STEEL CONCEALED FLUSH VALVE, WHITE IN COLOR ACORN 2105-W-1-1.6-FVBO-EGE
L 1	LAVATORY - ADA	1 1/2"	1 1/2"	–	–	1/2"	ADA, WALL MTD, 18" x 22" STAINLESS STEEL BASIN, CONCEALED MIXING VALVE, AIR CONTROLED VALVE, SINGLE HOLE PUNCH . ACORN 1953-1-DMS-9-MI-EGE
MV 1	MIXING VALVE	–	–	1/2"	1/2"	1/2"	ACORN ST70-LEAD FREE, ASSE 1070 SET @ 105° F
FD 1	FLOOR DRAIN	2"	2"	–	–	–	J.R. SMITH 2005, NICKEL BRONZE STRAINER W/ DEEP SEAL P-TRAP AND PROSET TRAP GUARD
HB 1	HOSE BIBB FREEZE PROOF	–	–	3/4"	–	–	J.R. SMITH 5609QT, FREEZE PROOF, QUARTER TURN, LOOSE KEY, WALL CLAMP, INTEGRAL VACUUM BREAKER
HB 2	HOSE BIBB	–	–	1/2"	–	–	CHICAGO 387-E27CP
DF 1	DRINKING FOUNTAIN	2"	–	1/2"	–	–	ELKAY LK4420BF1UDBFRK (FREEZE PROOF)

PLUMBING EQUIPMENT SCHEDULE

WH-1 ELECTRIC WATER HEATER, POINT OF USE, 6 GALLON STORAGE CAP, 3/4" INLET AND OUTLET, T&P VALVE, 2000 WATT HEATING ELEMENT, HIGH TEMP SAFETY CUT-OUT, 120 VOLT 1 PHASE POWER. FURNISH W/ WALL BRACKET AND SHELF, 1/4 TURN BALL VALVE DRAIN. MOUNT 48" ABOVE FINISHED FLOOR.
MANUFACTURER: RHEEM
MODEL: 81VP6S
ELECTRICAL: 2000 WATT, 120 VOLT / 1 PHASE
SIZE: 16" DIA X 16" TALL
WEIGHT: 50 LBS

ET-1 DOMESTIC WATER EXPANSION TANK, 2 GALLON TOTAL VOLUME. 0.9 GALLON ACCEPTANCE VOLUME. PRE-CHARGED DIAPHRAGM, MAXIMUM WORKING PRESSURE 150 PSI, NSF 61, 200 DEG F MAX TEMP, MOUNT ON WALL NEAR WATER HEATER. CONFIGURE INSTALLATION TO PROVIDE FOR FULL DRAINAGE AND WINTERIZATION.
MANUFACTURER: AMTROL
MODEL: ST-5
SIZE: 8" DIA X 13" TALL
WEIGHT: 5 LBS

PLUMBING PIPING LEGEND

COLD WATER
HOT WATER
WASTE
VENT

NO.	REVISION DESCRIPTION	DATE

LICENSED PROFESSIONAL ENGINEER
PAUL W. LAIRD
No. 171126
12/12/18
STATE OF UTAH

SUBMITTAL	CONTRUCTION
DRAWN BY:	STAFF
CHECKED BY:	PWL
APPROVED BY:	PWL
RELEASE:	12/12/18
PLOT DATE:	12/11/18

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

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HERRIMAN CITY

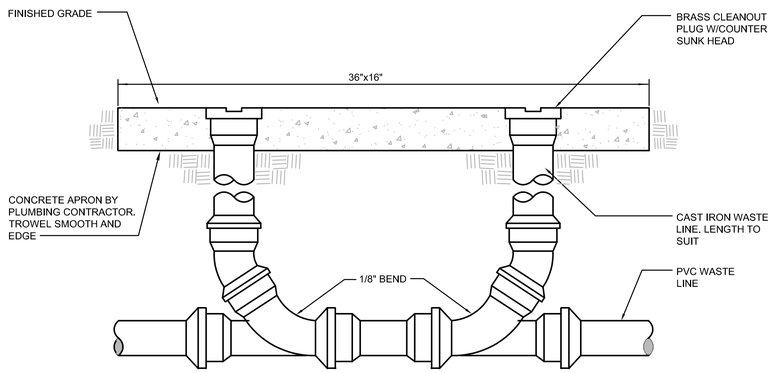
HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

PLUMBING FLOOR PLANS

P101

OLSEN & PETERSON
consulting engineers, inc.
14 East 2700 South, Salt Lake City, UT 84115
Phone: (801) 486-4646 Fax: (801) 467-2531

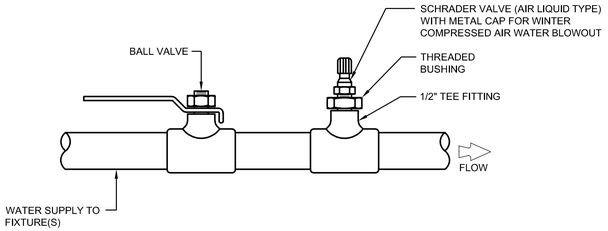
5/14/2018 5:42 PM T:\18108 -- PRAIRIE OAKS PARK PAVILION\DRAWINGS\P101.DWG



DOUBLE CLEANOUT TO GRADE DETAIL

NOT TO SCALE

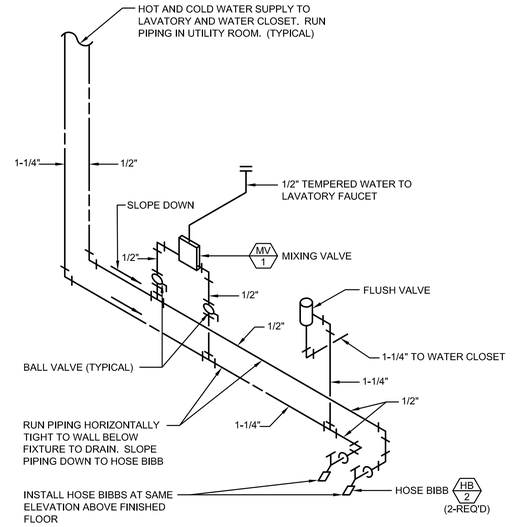
5 / P501



COMPRESSED AIR WATER BLOWOUT VALVE DETAIL

NOT TO SCALE

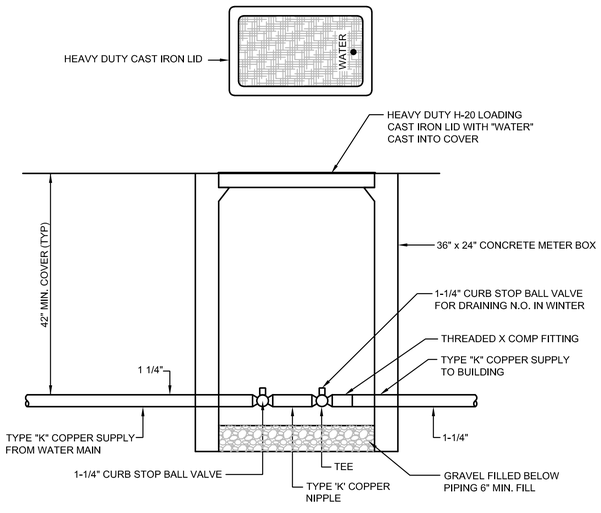
3 / P501



RESTROOM LAVATORY PIPING SCHEMATIC

NOT TO SCALE

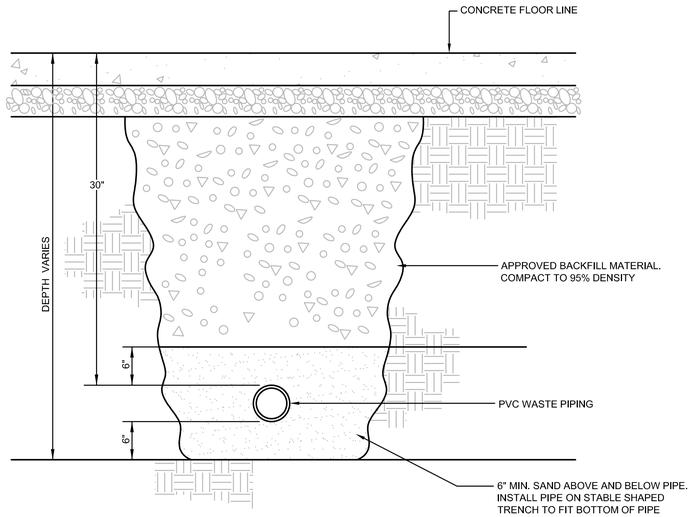
1 / P501



BUILDING SHUT-OFF AND BLOWOUT DETAIL

NOT TO SCALE

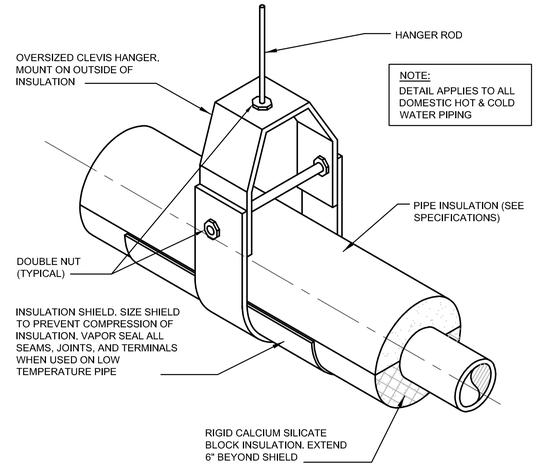
6 / P501



TYPICAL WASTE TRENCH DETAIL

NOT TO SCALE

4 / P501



PIPE SUPPORT DETAIL

NOT TO SCALE

2 / P501

OLSEN & PETERSON
consulting engineers, inc.
14 East 2700 South, Salt Lake City, UT 84115
Phone: (801) 486-4646 Fax: (801) 467-2331

NO.	REVISION DESCRIPTION	DATE

LICENSED PROFESSIONAL ENGINEER
No. 174126
PAUL W. LAIRD
12/12/18
STATE OF UTAH

SUBMITTAL	CONTRUCTION
DRAWN BY:	STAFF
CHECKED BY:	PWL
APPROVED BY:	PWL
RELEASE:	12/12/18
PLOT DATE:	12/11/18

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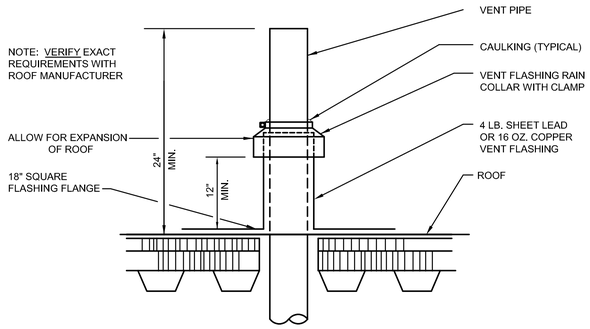
HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

PLUMBING DETAILS

P501

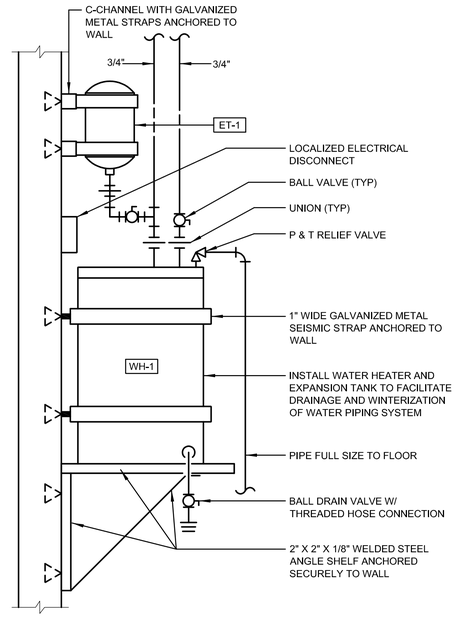
5/14/2018 5:42 PM T:\18108 -- PRAIRIE OAKS PARK PAVILION\DRAWINGS\P501.DWG



VENT THRU ROOF DETAIL

NOT TO SCALE

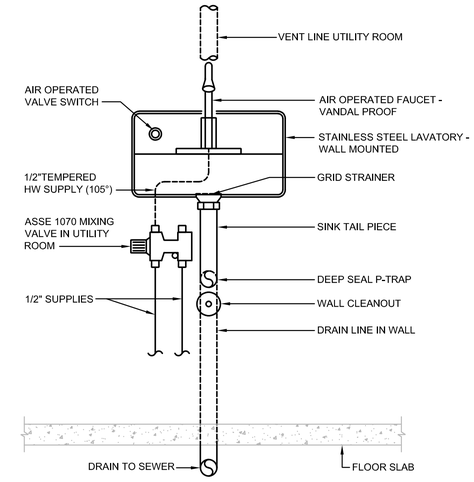
5 / P502



WATER HEATER DETAIL

NOT TO SCALE

3 / P502



LAVATORY INSTALLATION DETAIL

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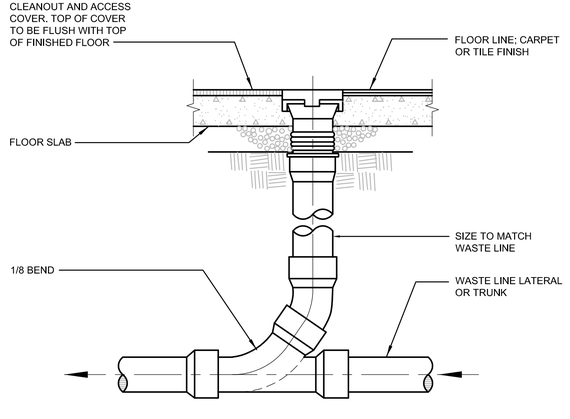
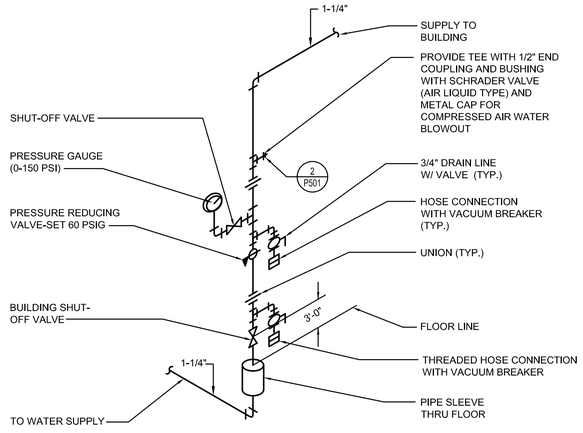
1 / P502



FLOOR CLEANOUT DETAIL

NOT TO SCALE

4 / P502



BUILDING WATER CONTROL VALVE

NOT TO SCALE

2 / P502

NO.	REVISION DESCRIPTION	DATE

LICENSED PROFESSIONAL ENGINEER — No. 174126 — PAUL W. LAIRD — 12/12/18 — STATE OF UTAH

SUBMITTAL	CONTRUCTION
DRAWN BY:	STAFF
CHECKED BY:	PWL
APPROVED BY:	PWL
RELEASE:	12/12/18
PLOT DATE:	12/11/18

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

VERIFY SCALE

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HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

PLUMBING DETAILS

P502

OLSEN & PETERSON
consulting engineers, inc.
14 East 2700 South, Salt Lake City, UT 84115
Phone: (801) 486-4646 Fax: (801) 467-2331

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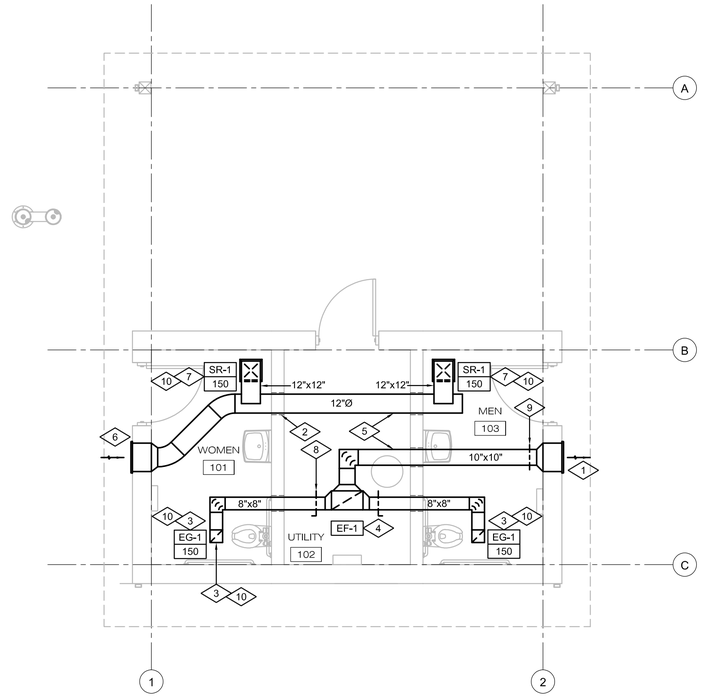

NORTH

MECHANICAL FLOOR PLAN 1

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

REFERENCE NOTES

1. CONNECT EXHAUST DUCTWORK TO EXTERIOR LOUVER IN THIS LOCATION. EXTERIOR LOUVER FURNISHED BY OTHERS. TRANSITION DUCTWORK TO MATCH LOUVER DIAMETER. SEAL AIR TIGHT AROUND DUCT-WALL PENETRATION.
2. CORE DRILL, FRAME OR SLEEVE DUCT AT WALL PENETRATION. SEAL AIR TIGHT AROUND DUCT. COORDINATE REQD WALL OPENINGS WITH GENERAL CONTRACTOR. (TYP)
3. INSTALL CEILING EXHAUST GRILLE IN THIS LOCATION. CONNECT EXHAUST GRILLE TO EXHAUST DUCT. TRANSITION EXHAUST DUCT AS NEEDED TO MATCH GRILLE SIZE. BALANCE EXHAUST GRILLE TO CFM INDICATED.
4. INSTALL INLINE EXHAUST FAN IN THIS LOCATION. SUPPORT EXHAUST FAN FROM OVERHEAD STRUCTURE. PROVIDE VIBRATION ISOLATION KIT. MAKE ALL REQUIRED INLET AND OUTLET DUCT CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS. SEE INSTALLATION DETAIL 2/M501.
5. RUN DUCTWORK HIGH ABOVE CEILINGS AND CLOSE TO STRUCTURE. COORDINATE LOCATION OF DUCTWORK WITH STRUCTURE, PLUMBING AND ELECTRICAL TRADES.
6. CONNECT MAKE-UP AIR DUCTWORK TO EXTERIOR LOUVER IN THIS LOCATION. EXTERIOR LOUVER FURNISHED BY OTHERS. TRANSITION DUCTWORK TO MATCH LOUVER DIAMETER. SEAL AIR TIGHT AROUND DUCT-WALL PENETRATION.
7. INSTALL CEILING MAKE UP AIR REGISTER IN THIS LOCATION. CONNECT REGISTER TO MAKE-UP AIR DUCT. TRANSITION MAKE-UP AIR DUCT AS NEEDED TO MATCH REGISTER SIZE. BALANCE REGISTER TO CFM INDICATED.
8. VOLUME DAMPER (TYP)
9. INSTALL GRAVITY BACKDRAFT DAMPER ON EXHAUST DUCT NEAR WALL PENETRATION.
10. INSTALL REGISTERS AND GRILLES AS INDICATED. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION. (TYP)

REGISTER & GRILLE SCHEDULE

SYMBOL	SIZE	LOCATION	TYPE	MAKE & MODEL	
EG-1 / CFM	8" x 8"	CEILING	EXHAUST AIR	PRICE 535	(1)(2)
SR-1 / CFM	12" x 12"	CEILING	MAKE-UP AIR	PRICE 535	(1)(2)

NOTES:
(1) FURNISH WITH BRIGHT WHITE FINISH.
(2) PROVIDE FRAME FOR MOUNTING IN GYP BOARD OR LAY-IN CEILING.

EXHAUST FAN SCHEDULE

SYMBOL	SERVES	TYPE	C.F.M	S.P.	R.P.M.	MOTOR	DRIVE	MAKE & MODEL	NOTES
EF-1	RESTROOMS	IN-LINE	300	0.375	1600	100 WATTS 120/1/60	DIRECT	COOK GN-542	(1)

NOTES:
(1) FAN TO BE COMPLETE WITH SPRING VIBRATION ISOLATION KIT, BACKDRAFT DAMPER, INTEGRAL WIRED FAN SPEED CONTROLLER AND DIRECT DRIVE MOTOR.

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Phone: (801) 486-4646 Fax: (801) 467-2531

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LICENSED PROFESSIONAL ENGINEER
No. 174126
PAUL W. LAIRD
12/12/18
STATE OF UTAH

SUBMITTAL	CONTRUCTION
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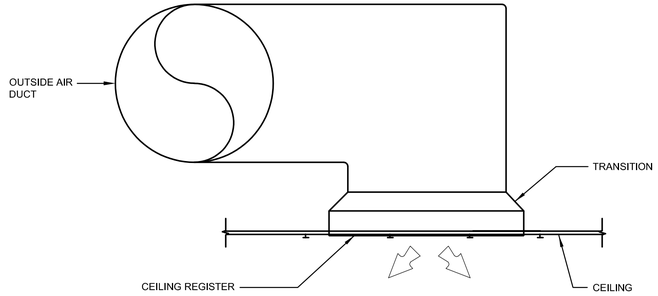
MECHANICAL FLOOR PLAN

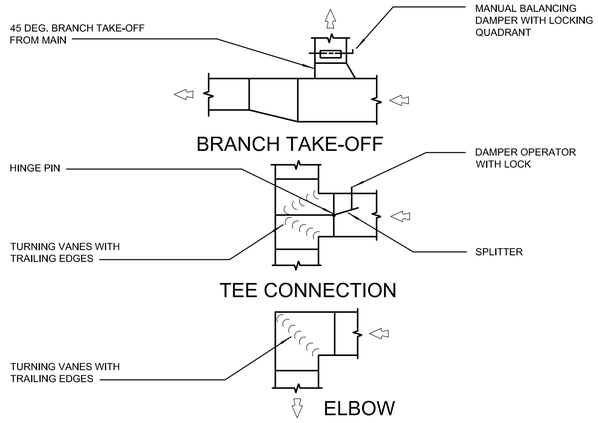
M101



CEILING REGISTER DETAIL

NOT TO SCALE

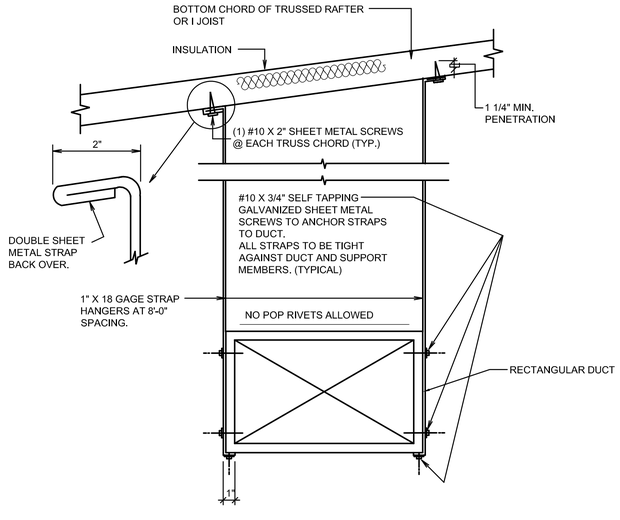
3 / M501



LOW PRESSURE DUCT DETAILS

NOT TO SCALE

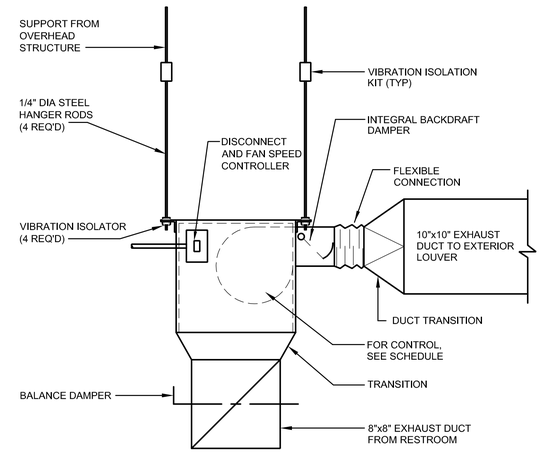
1 / M501



DUCT STRAP HANGER DETAIL

SCALE: NONE

4 / M501



CEILING EXHAUST FAN DETAIL

NOT TO SCALE

2 / M501

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12/12/18
STATE OF UTAH

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MECHANICAL DETAILS

M501

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GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER DIVISION 23 (15) WITH APPROVED MECHANICAL SHOP DRAWINGS BEFORE BEGINNING ROUGH IN.
4. SEE SECTION 265100 (16510) OF THE SPECIFICATION REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 – 115	MIN. #10 AWG	MIN. #12 AWG
115 – 170	MIN. #8 AWG	MIN. #10 AWG
170 – 270	MIN. #6 AWG	MIN. #8 AWG
271 – 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

A. THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.

B. PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.

C. CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.

ELECTRICAL SYMBOL SCHEDULE

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT MEASURED TO TOP OF THE BOX FROM FINISHED FLOOR.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.
12. COORDINATE WITH DOOR HARDWARE SUPPLIER.

* TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, HOME RUN TO PANEL		
	TWO CIRCUIT, HOME RUN TO PANEL		
	THREE CIRCUIT, HOME RUN TO PANEL		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION	CAP CONDUIT	
	CONDUIT/CIRCUIT CONTINUATION		
	CABLE TRAY	AS NOTED	
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	RECESSED WALL-WASH FIXTURE	CEILING	1.
	LIGHT FIXTURE	AS NOTED	1
	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1. 3. 8.
$x	SINGLE POLE SWITCH	+4'-0"	4. 6.
$3	THREE-WAY SWITCH	+4'-0"	6.
$4	FOUR-WAY SWITCH	+4'-0"	6.
$K	KEY OPERATED SWITCH	+4'-0"	6.
$TM	TIMER SWITCH	+4'-0"	6.
Ux	LOW VOLTAGE WALL STATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE) SEE DIAGRAM	+4'-0"	6.
	DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR (PROVIDE WITH ALL ROOM CONTROLLERS)	CEILING	SEE DIAGRAM, SPEC.
	DUAL TECHNOLOGY WALL MOUNTED OCCUPANCY SENSOR (SUBSCIPT D=DIMMING AND DAY-LIGHT CONTROL)	+4'-0"	SEE DIAGRAM, SPEC.
PP	POWER PACK	ABOVE CEILING	SEE DIAGRAM, SPEC.
RCx	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS, #E INDICATES EM ENABLED RC)	ABOVE CEILING	SEE DIAGRAM. SPEC.
EP	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.
R	RECEPTACLE SWITCH PACK	ABOVE CEILING	SPEC.
A	AUTOMATIC RELAY PACK	ABOVE CEILING	SEE DIAGRAM. SPEC.
T	LOW VOLTAGE TRANSFORMER		
P	PHOTO-ELECTRIC CONTROL	AS NOTED	TORK 2000A
	DIGITAL DAYLIGHT SENSOR	CEILING	SEE DIAGRAM SPECIFICATION
TC	TIME CLOCK	+5'-0"	2.
	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
U	DUPLEX RECEPTACLE WITH USB OUTLET	+16" OR AS NOTED	9. 11.
C	DUPLEX RECEPTACLE WITH CONTROL	+16" OR AS NOTED	9. 11.
A	DUPLEX RECEPTACLE		9.
W	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	GROUND FAULT INTERRUPTER FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11.
	DATA OUTLET W/(1) CABLE (SEE SPECIFICATION)	+16" OR AS NOTED	9. 11.
	DATA OUTLET W/(2) CABLES (SEE SPECIFICATION)	+16" OR AS NOTED	9. 11.
	DATA OUTLET W/(3) CABLES (SEE SPECIFICATION)	+16" OR AS NOTED	9. 11.
X	DATA OUTLET W/MORE THAN (3) CABLES (SEE SPEC)	+16" OR AS NOTED	9. 11.
	WIRELESS ACCESS POINT, W/(2) CABLES (SEE SPEC)	CEILING	

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
J	JUNCTION BOX ('F' IN FLOOR)	AS NOTED	
	MOTOR OUTLET	TO SUIT EQUIP.	
	PUSHBUTTON	+4'-0"	6.
	NON-FUSED DISCONNECT SWITCH	+5'-0"	5.
F	FUSED DISCONNECT SWITCH	+5'-0"	5.
$T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'-0"	6.
	MAGNETIC STARTER	+5'-0"	7.
	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'-0"	
VFD	VARIABLE FREQUENCY DRIVE	+6'-6"	
	PANEL BOARD	TOP AT +6'-0"	
	MAIN DISTRIBUTION PANEL		
	TELEPHONE TERMINAL BOARD		
	GROUND BUS BAR		
	CHIME	+7'-6"	
F	FIRE ALARM MANUAL STATION	+4'-0"	6.
H	FIRE ALARM SIGNAL HORN/STROBE	+8'-0"	6.
E	FIRE ALARM SIGNAL SPEAKER/STROBE	+8'-0"	6.
S	FIRE ALARM STROBE	+8'-0"	6.
K	FIRE ALARM SPEAKER ONLY	+8'-0"	6.
B	FIRE ALARM SIGNAL STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	+8'-0"/ CEILING	MOUNT AS PER. MAN
S	SMOKE DETECTOR	CEILING	
C	CARBON MONOXIDE DETECTOR	CEILING	
H	HEAT DETECTOR	CEILING	
D	DUCT SMOKE DETECTOR		MTD. IN DUCT
D	FIRE/SMOKE DAMPER		
	DOOR HOLDER	AS NOTED	
R	FIRE ALARM RELAY OR SECURITY RELAY		
CM	FIRE ALARM CONTROL MODULE		
MM	FIRE ALARM MONITOR MODULE		
D	DURESS PUSHBUTTON	+4'-0"	6.
D1	SECURITY SYSTEM DOOR SWITCH	DOOR JAMB	
D2	SECURITY SYSTEM OVERHEAD DOOR SWITCH	CEILING	MOUNT AS PER. MAN
MK	MAGNETIC SHEAR LOCK		
A	SECURITY SYSTEM KEYED ACCESS SWITCH	+4'-0"	6.
K	SECURITY SYSTEM KEYED PAD	+4'-0"	6.
I	INFRARED SENSOR	AS NOTED	
M	SECURITY MOTION DETECTOR		MOUNT AS PER. MAN
P	SECURITY SYSTEM POP-IT		MOUNT AS PER. MAN
G	GLASS BREAK DETECTOR	CEILING	
ES	ELECTRIC DOOR STRIKE		12.
EL	ELECTRIC DOOR LOCK		12.
R	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
CR	ACCESS CONTROL CARD READER	+4'-0"	6.
BR	ACCESS CONTROL BIOMETRIC READER	+4'-0"	6.
	CAMERA – SEE SCHEDULE	AS NOTED	SEE DIAGRAM, SPEC.
	DOOR POSITION INDICATING SWITCH		
A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
E2/34	EQUIPMENT NUMBER		
842	ARCHITECTURAL ROOM NUMBER		
X	DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		

INDEX OF ELECTRICAL DRAWINGS

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635 South State Street
Salt Lake City, Utah 84111
P:801.532.2196
F:801.532.2305
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NO.	REVISION DESCRIPTION	DATE

PROFESSIONAL ENGINEER
JOSHUA OAKESON
No. 7707671-2202
STATE OF UTAH

SUBMITTAL	CONSTRUCTION	
DRAWN BY:	BNA	
CHECKED BY:	RLW	
APPROVED BY:	RLW	
RELEASE:	1/21/19	
PLOT DATE:	--	

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S. 7300 WEST HERRIMAN, UTAH

SYMBOLS, SCHEDULES AND NOTES

E001

LIGHT FIXTURE ABBREVIATION SCHEDULE
NOTE: NOT ALL ABBREVIATIONS WILL NECESSARILY BE USED.

A.F.F.	ABOVE FINISH FLOOR	SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
WALL●CLG	WALL MOUNT AT CORNER OF WALL AND CEILING	CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT	SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT
		MOD	MODIFY STANDARD LIGHT FIXTURE AS INDICATED

LIGHT FIXTURE GENERAL NOTES

1. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, BALLAST, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
5. REFER TO LIGHTING PLANS FOR ALL LINEAR FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF LINEAR FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH.
6. REFER TO LIGHTING PLANS FOR ALL UNDERCABINET FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF UNDERCABINET FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH OR TO FIT WITHIN THE MILLWORK. COORDINATE FIXTURE LAYOUT WITH MILLWORK SHOP DRAWINGS PRIOR TO LIGHTING SUBMITTALS.
7. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.
8. PRIOR APPROVALS SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
9. REFER TO SPECIFICATIONS 260500, 265100 & 265600 (16001, 16510 & 16551).
10. VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE; ARCHITECT, OWNER, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.

FIXTURE SCHEDULE

Project Manager: *RICHARD WARDLE*

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMPS
A	4 FOOT LED SURFACE WRAP FIXTURE WITH 5,072 LUMENS, PEARLESCENT POLYCARBONATE LENS, ELECTRONIC DRIVER AND EMERGENCY BATTERY PACK	KENALL	MLHA8-48-R-MW-PP-45L40K-DCC-120-LEL	120	49	INCLUDED
B	4 FOOT LE STRIP FIXTURE WITH 4436 LUMENS, FULL FROST LENS AND ELECTRONIC DRIVER	METALUX	4SWLED-44HL-LW-UNV-L840-CD1-U	120	40	INCLUDED
OA	4 FOOT LED WALL SONCE WITH 4000 LUMENS, PHOTOCELL AND ELECTRONIC DRIVER	LUMARK	XTOR4BY-SCBA-PC1	120	38	INCLUDED

EQUIPMENT SCHEDULE

UNIT #	FUNCTION	LOAD	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES				OCPD		REF. NOTES			
							NO. SETS	NO.	SIZE	EQUIP. GND[1]	TYPE	AMPS	STARTER	DISCONNECT	OTHER	REMARKS
EF-1	EXHAUST FAN	100 VA	120	1	0.83	3/4"	1	2	12	12	CB	15	4A			
WH-1	WATER HEATER	2000 VA	120	1	16.67	3/4"	1	2	10	10	CB	25		1A		

NOTES:

1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER W/THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER, COORDINATE W/MOTOR TYPE
14. SOLID STATE SOFT STARTER

A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 26
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 26.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.

CB = CIRCUIT BREAKER - THERMAL MAGNETIC
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.

NO.	REVISION DESCRIPTION	DATE

PROFESSIONAL ENGINEER
JOSHUA OAKESON
No. 770767-2202
STATE OF UTAH

SUBMITTAL	CONSTRUCTION
DRAWN BY:	BNA
CHECKED BY:	RLW
APPROVED BY:	RLW
RELEASE:	1/21/19
PLOT DATE:	--

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

SCHEDULES

E002

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F:801.532.2305
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SALT LAKE ST GEORGE

By: colvin; Jan 11, 2019 - 3:26pm
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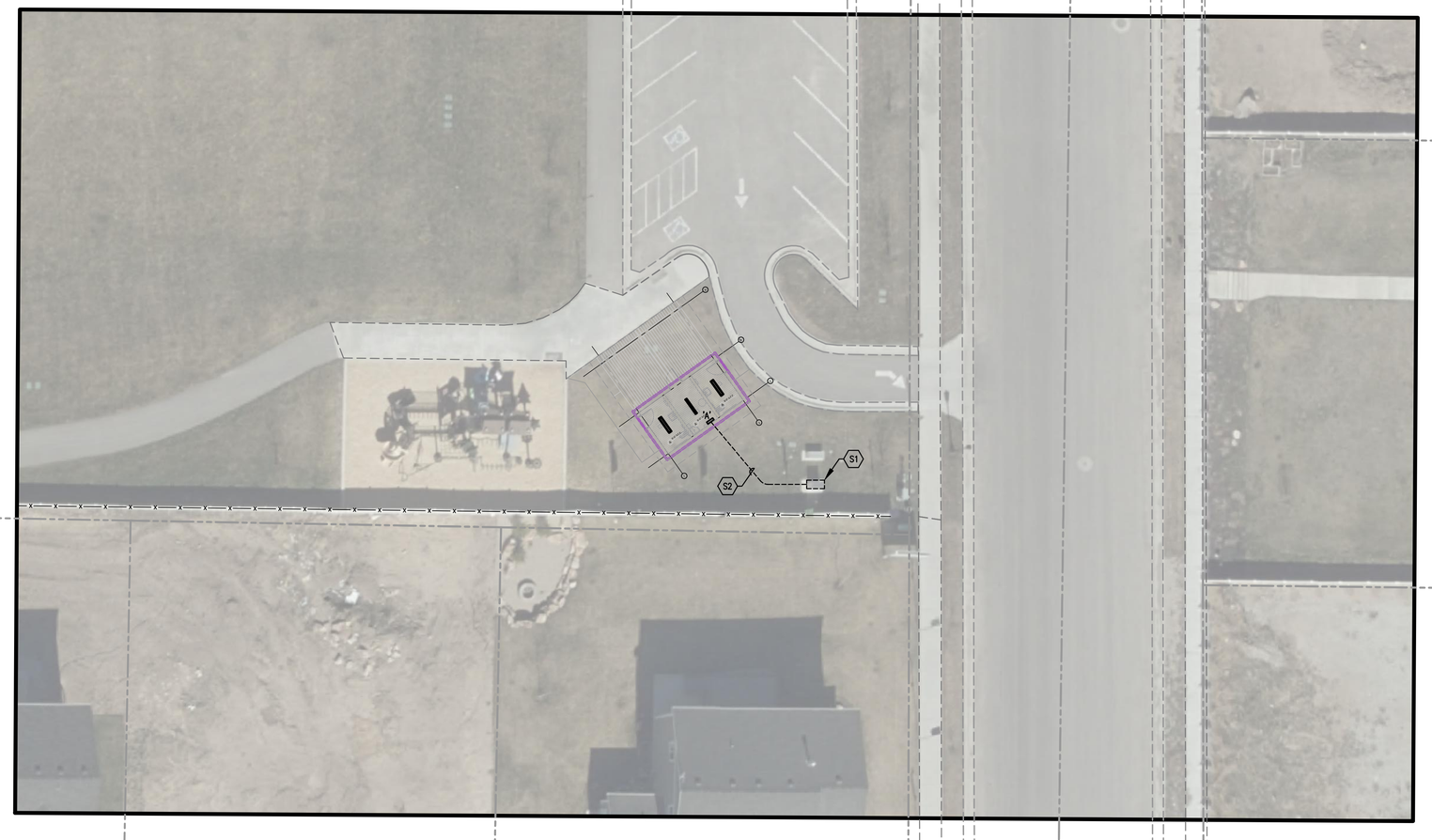
SHEET KEYNOTES

S1 EXISTING PANEL IN IRRIGATION CONTROLLER HOUSING, SEE ONE-LINE DIAGRAM SHEET E401 FOR ADDITIONAL REQUIREMENTS.

S2 PROVIDE POWER FEED TO NEW PANEL, SEE ONE-LINE DIAGRAM SHEET E401 FOR ADDITIONAL REQUIREMENTS.



PLAN NORTH

ELECTRICAL SITE PLAN
1/16" = 1'-0"

0 8' 16' 32'

NO.	REVISION DESCRIPTION	DATE

PROFESSIONAL ENGINEER
JOSHUA OAKESON
No. 7707671-2202
STATE OF UTAH

SUBMITTAL	CONSTRUCTION
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HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
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ELECTRICAL SITE PLAN

E101

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SALT LAKE ST.GEORGE

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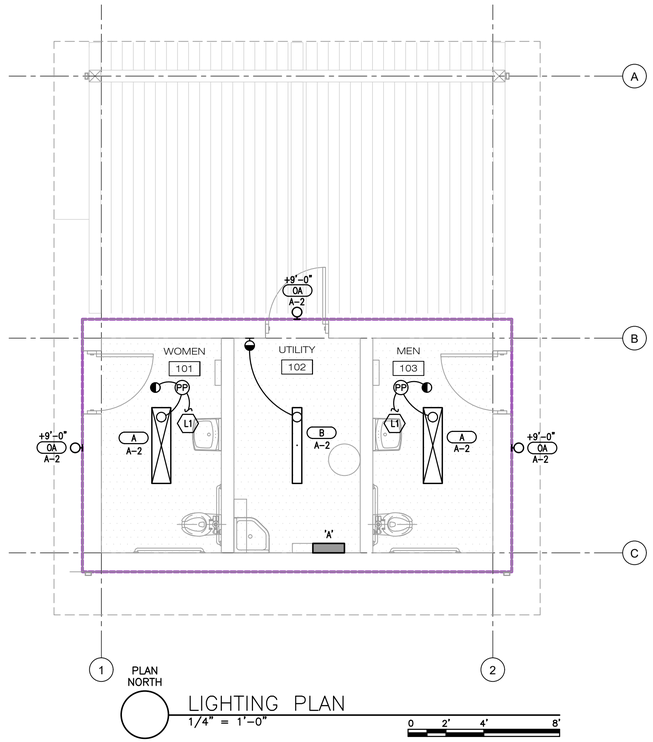
SHEET KEYNOTES

L1 PROVIDE WIRING TO POWER PACK TO CONTROL EXHAUST FAN.

P1 WIRE EXHAUST FAN TO OCCUPANCY SENSOR IN RESTROOMS.

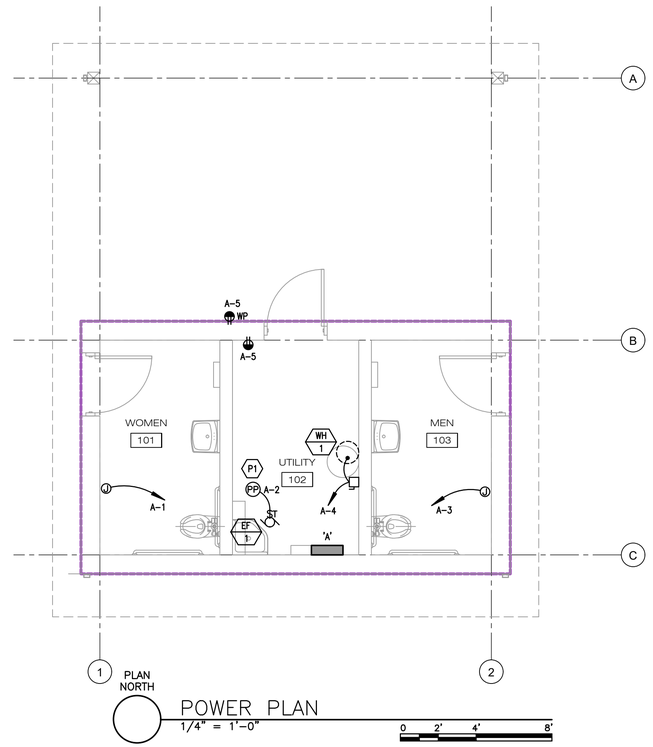


PLAN NORTH

LIGHTING PLAN

1/4" = 1'-0"

0 2' 4' 8'



PLAN NORTH

POWER PLAN

1/4" = 1'-0"

0 2' 4' 8'

NO.	REVISION DESCRIPTION	DATE

PROFESSIONAL ENGINEER
JOSHUA OAKESON
No. 770767-2202
STATE OF UTAH

SUBMITTAL	CONSTRUCTION
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HERRIMAN CITY

HERRIMAN CITY
ENGINEERING DEPARTMENT
PRAIRIE OAKS PARK PAVILION
S. 7300 WEST HERRIMAN, UTAH

LIGHTING AND POWER PLANS

E201

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SALT LAKE ST.GEORGE

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Short-Circuit Evaluation

1 - Is the available fault current known? (●) YES ( ) NO

INPUT AVAILABLE FAULT CURRENT: **22000** AMPS

2 - Select voltage and phase of system? 120/240, 1-phase

INPUT VOLTAGE(L-L): 120 Volts

Minimum XFMR Impedances	
XFMR Size	Minimum Z%
0-75 kVA	3%
112.5 - 225 kVA	4%
> 300 kVA	5%

DISTRIBUTION PANELBOARD

PANEL: Existing Panel

XFMR kVA: N/A kVA
V(L-L): N/A Volts
Ifla: N/A Amps

$$Ifla = \frac{kVA \times 1000}{V(L\text{-}L)}$$ XFMR FULL LOAD AMPS

XFMR Z%: N/A %
Isca: N/A Amps

$$Isca = \frac{Ifla \times 100}{XFMR\ Z\% \times (.9)}$$ AVAILABLE FAULT CURRENT

Raceway Type: Aluminum in non-metallic raceway

Length of conductor	L	40	ft
Maximum Fault Current	Isca	22,000	Amps
Number of conductors / phase	n	1	
Phase Conductor constant	C	2,350	
Line Voltage	V(L-L)	120	Volts
Neutral Conductor constant	C	2,350	
Line-to-neutral voltage	V(L-N)	69	Volts

Phase Conductor: 4

Neutral Conductor: 4

$$f = \frac{2 \times L \times Isca}{C \times n \times V(L\text{-}L)}$$ 'f' FACTOR

Note: Use 2 and V(L-N) for fneutral

fphase	6.241	
fneutral	10.810	
Mphase	0.138	
Mneutral	0.085	

$$M = \frac{1}{1 + f}$$ MULTIPLIER

Irms = Isca x M — Available fault current at equipment — Iphase(L-G): **3,038**

Irms = Isca x M — Available fault current at equipment — Ineutral: **1,863**

Voltage Drop	
Iload	60 Amps
Voltage Drop	1.79 Volts
% Drop	1.49%

$$VD = \frac{2 * K * L * Iload}{C}$$

K=Resistivity of the conductor (Ω/cmil-foot)

[AL=18, CU=12,Pg.3.41 "Electricians Handbook"]

C=Area of conductor (circular mills)

Iload = Current of load

PANELBOARD SCHEDULE

PANEL A — TYPE NQOB — 120/240 VOLTS — 1 PH — 3 W

MOUNTING: FLUSH; X SURFACE

DIMENSIONS: 14 W; 5 D (in.); H

LOCATION: UTILITY 102

AMP 60

MAINS: LUGS; X BREAKER; SUBFEED LUGS; ISO GROUND; 200% NEUTRAL; SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	L. PHASE LOAD A	L. PHASE LOAD B	R. PHASE LOAD A	R. PHASE LOAD B	CIR. NO.	AMPS	POLE	WIRE SIZE	ITEM
HAND DRYER	20	1	12	1	2400		352		2	20	1	12	LIGHTING
HAND DRYER	20	1	12	3		2400		2000	4	20	1	12	WATER HEATER
RECEPTACLES	20	1	12	5	360				6				SPACE ONLY
SPACE ONLY				7					8				SPACE ONLY
SPACE ONLY				9					10				SPACE ONLY
SPACE ONLY				11					12				SPACE ONLY
SPACE ONLY				13					14				SPACE ONLY
SPACE ONLY				15					16				SPACE ONLY
SPACE ONLY				17					18				SPACE ONLY
SPACE ONLY				19					20				SPACE ONLY
				21					22				
				23					24				
				25					26				
				27					28				
				29					30				
				31					32				
				33					34				
				35					36				
				37					38				
				39					40				
				41					42				
					2760	2400	352	2000					
					3112	4400	TOTAL						
					26	37	AMPS/PHASE						

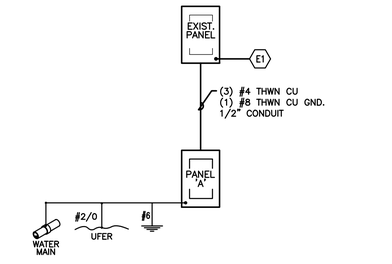
CONNECTED LOAD TOTAL: 7512 W

* Provide 5 mA GFCI Circuit Breaker

EQUIP RATING 10,000 AMPS RMS SYM.

SHEET KEYNOTES

E1 PROVIDE NEW 60 AMP 2 POLE BREAKER IN EXISTING PANEL



1 ONE–LINE DIAGRAM
NO SCALE

NO.	REVISION DESCRIPTION	DATE

PROFESSIONAL ENGINEER — JOSHUA DAKESON — No. 7707671-2202 — STATE OF UTAH

CONSTRUCTION	
SUBMITTAL	
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ONE-LINE DIAGRAM & PANELBOARD SCHEDULES

E401

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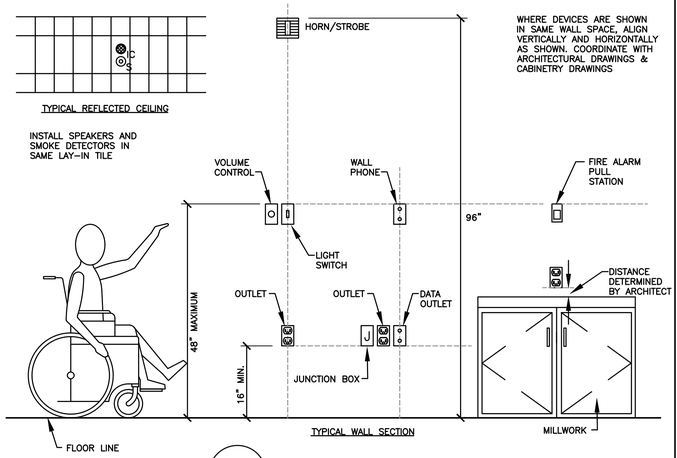

DIAGRAM R001 DEVICE MOUNTING HEIGHTS

NTS

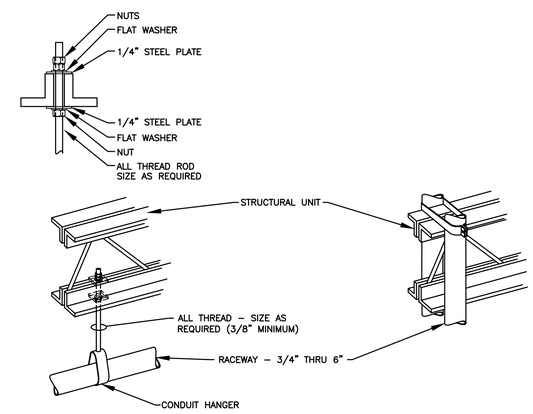

DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS

NTS

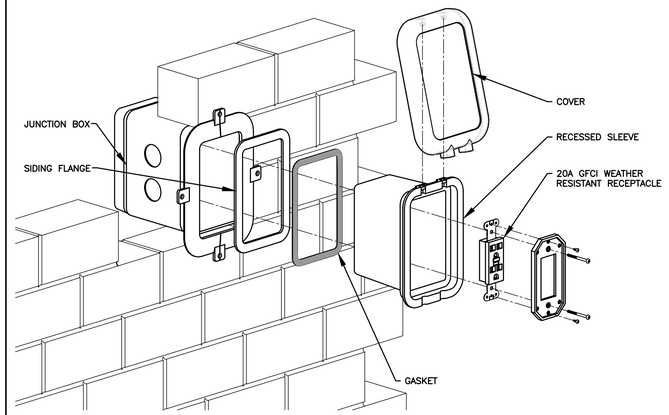

DIAGRAM L009 RECESSED IN-USE RECEPTACLE & COVER

NTS

NO.	REVISION DESCRIPTION	DATE

PROFESSIONAL ENGINEER
JOSHUA OAKESON
No. 770767 / 2202
STATE OF UTAH

SUBMITTAL	CONSTRUCTION
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ELECTRICAL DIAGRAMS

E501

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