LIBERTY LAKE RV PARK RESTROOM

INDEX OF DRAWINGS

ARCHITECTURAL - SITE

A0.0 COVER SHEET
A1.0 SITE PLAN
A1.01 OVERALL SITE PLAN

ARCHITECTURAL - BUILDING

A2.0 CONSTRUCTION FLOOR PLAN & INT. ELEVATIONS
A2.1 ELEVATIONS & REFLECTED CEILING

STRUCTURAL

S1.1 STRUCTURAL NOTES
S1.2 STRUCTURAL NOTES
S2.0 FOUNDATION PLAN AND DETAILS
S2.2 FRAMING DETAILS

ABBREVIATIONS

&	And	C.T.	Ceramic Tile
∠	Angle	C.O.	Clean Out
@	At	CLR.	Clear
℄	Center Line	C.W.	Cold Water
⌀	Channel	COL.	Column
	Round	C.M.U.	Concrete Masonry Unit
ABV.	Above	CONC.	Concrete
A.B.	Anchor Bolt	CONN.	Connection
ACOUST. T.	Accustical Tile	CONST.	Construction
ADJ.	Adjustable	C.J.	Control Joint
A.F.F.	Above Finish Floor	CONT.	Continuous
ALT.	Alternate	CONTR.	Contractor
ALUM.	Aluminum	CORR.	Corridor
ANOD.	Anodized		
APPROX.	Approximate	D.P.	Damp proofing
ARCH.	Architecture	D.L.	Dead Load
ASPH.	Asphalt	DEG.	Degree
		DTL.	Detail
BM.	Beam	DIAG.	Diagonal
BRG.	Bearing	DIM.	Dimension
BLK.	Block	DIV.	Division
BD.	Board	DR.	Door
B.S.	Both Sides	DBL.	Double
BOTT.	Bottom	DN.	Down
BRK.	Brick	D.S.	Down spout
BLDG.	Building	D.F.	Drinking Fountain
		DWG.	Drawing
CAB.	Cabinet		
C.B.	Catch Basin	EA.	Each
CLG.	Ceiling	ELEC.	Electric
CEM.	Cement	ELEV.	Elevator
C TO C	Center To Center	EQ.	Equal
C.M.T.	Ceramic Mosaic Tile		

EQUIP.	Equipment	HT.	Height
EXIST.	Existing	H.D.O.	High Density Overlay
EXP.	Expansion	HWY.	Highway
EXT.	Exterior	H.C.	Hollow Core
E.I.F.S.	Ext. Insul. and Finnish System	H.M.	Hollow Metal
EL.	Elevation	HORIZ.	Horizontal
ENCL.	Enclosure	H.B.	Hose Bibb
E.P.	Electrical Panel	H.W.	Hot Water
		H.W.T.	Hot Water Tank
F.A.B.	Fabricate		
FT.	Feet	IN.	Inch
FIN.	Finish	INFO.	Information
F.E.	Fire Extinguisher	ID.	Inside Diameter
FXT.	Fixture	INSUL.	Insulation
FLASH.	Flashing	INT.	Interior
FLR.	Floor		
F.D.	Floor Drain	JAN.	Janitor
FTG.	Footing	JT.	Joint
FOUND.	Foundation	JST.	Joist
F.A.	Fresh Air		
FR.	Frame	LAM.	Laminate
F.H.	Fire Hydrant	LAV.	Lavatory
FLUOR.	Fluorescent	L.F.	Linear Feet
		L.L.	Live Load
GALV.	Galvanized	LOC.	Location
G.	Gas	L.O.C.	Limits Of Construction
GA.	Gauge		
G.L.	Glass	MFR.	Manufacture
GLU. LAM.	Glue-Laminated	M.O.	Masonry Opening
GND.	Ground	MATL.	Material
G.W.B.	Gypsum Wall Overlay	MAX.	Maximum
		MECH.	Mechanical
HDWR.	Hardware	M.D.O.	Medium Density Overlay
HDWD.	Hardwood	MTL.	Metal

MEZZ.	Mezzanine	SIM.	Similar
MIN.	Minimum	S.C.	Solid Core
MISC.	Miscellaneous	SQ. FT.	Square Feet
		S. ST.	Stainless Steel
N.I.C.	Not In Contact	STD.	Standard
N.T.S.	Not To Scale	STL.	Steel
NO.	Number	STOR.	Storage
		SUSP. CLG.	Suspended Ceiling
O.C.	On Center	S.S.	Sanitary Sewer
OPNG.	Opening		
ORIG.	Original	THK.	Thick
O.D.	Outside Diameter	T & G	Tongue And Groove
		TYP.	Typical
PNL.	Panel	T.C.	Top Of Curb
P.C.	Pre cast Concrete	TEL.	Telephone
PLAS. LAM.	Plastic Laminate	T.O.P.	Top Of Plate
PL.	Plate	T.P.	Top Of Pavement
PLYWD.	Plywood	T.W.	Top Of Wall
PT.	Point		
PREFAB.	Prefabricated	UNFIN.	Unfinished
PREFIN.	Refinished		
P.P.	Power Pole	V.T.R.	Vent Through Roof
		VERT.	Vertical
QUAL.	Quality	V.C.T.	Vinyl Composition Tile
Q.T.	Quarry Tile		
		WAINS.	Wainscot
REF.	Reference	W.P.	Water Proof
REINF.	Reinforcing	W/	With
REV.	Revision	W.F.	Wide Flange
REQ'D	Required	W.D.	Wood
RD.	Roof Drain	W.W.F.	Welded Wire / Fabric
RM.	Room	W.	Waste Line
SHT.	Sheet		
SHTG.	Sheathing		
SHT. MET.	Sheet Metal		

PROJECT TEAM

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GENERAL NOTES

STANDARD NOTES:

A. Details and notes on these shall apply unless specifically shown or noted otherwise construction details not fully shown or noted shall be similar to details shown for a similar conditions.

B. The contractor shall report to this office any error, inconsistency or omission he may discover. The contractor is responsible for correcting any mistakes at the job site to the satisfaction of this office.

C. City / county - approved plans shall be kept in a secure place and shall not be used by workers. The contractor shall be responsible that all subcontractors construction sets reflect the same information. The contractor shall also maintain in good condition, one complete set of plans With all revisions, addendum's and change orders on the premises at all times. These are to be under the care of the job superintendent and are to be given to the owner upon completion of the job.

D. When used, fire sprinkler shop drawings are to be submitted to the Building Department prior to installation. Audible and visual alarm system to be installed per ICC A117.1 section 702 (provide shop drawings for review.)

E. Deferred submittals such as cabinet shop drawings, structural steel / joist fabrication drawings. Drawings from manuf. and/ or fabricators, trusses showing loading and bracing TJI's & bracing, audible and visual alarm system drawings, automatic sprinkler system drawings etc. are to be submitted and approved then submitted to the building official within a specified time before any installation and C.O.

JOBSITE:

A. It shall be the responsibility of the contractor to locate all existing utilities whether shown hereon or not and to protect them from damage. The contractor shall bear all expenses of repair or replacement of utilities or other property damaged by operations in conjunction with the execution of the work.

B. The contractor shall take all necessary precautions to ensure a dust-free and safe environment for the occupants and workers at all times.

C. All areas of demolition shall be repaired in workmanlike manner so as to be contiguous with and matching the adjacent surfaces.

DIMENSIONS:

A. Dimensions take precedence over drawing. Do not scale drawings to determine any locations. This office shall be notified of any discrepancy prior to the execution of any work.

B. All dimensions on plans are from face of stud unless otherwise indicated.

C. Exterior dimensions are to face of plywood sheathing/face of concrete foundation wall. Partitions are located by one of the following methods:
   a. where possible, by relationship to adjacent structure
   b. typical relationship to large scale details
   c. by dimensions from structure or partition already located.

FRAMING:

A. Provide horizontal blocking in partitions for cabinets, shelving, toilet accessories and other flush or semi-recessed equipment to be installed on gypsum board or as specified.

FINISH:

A. Weld and grind smooth all steel pipe handrail joints.

MECHANICAL/ELECTRICAL:

A. The contractor shall verify locations of all equipment and coordinate location of floor sinks, floor drains, slab depressions, electrical and plumbing stubouts, and all other work under this scope of responsibilities related to this equipment.

B. All electrical, mechanical, and plumbing work shall conform to the requirements of the current, IMC, NEC and IPC, respectively.

C. Heating, plumbing and electrical plans, where shown diagrammatically, are intended to indicate capacity, size, location and general arrangement.

D. Mechanical contractor shall seal all openings in floor slabs and insulated walls around ducts, pipes, vents, soil pipes, tub traps, conduits, structural members, etc. of penetration thru fire walls are to have required F & T rating per code.

ADA BARRIER FREE NOTES

ALL THRESHOLDS TO NOT EXCEED 1/2" AFF. MAX. PER IBC SECT. 1010.1.7 & ANSI 2009 SECT. 404.2.4.

ALL RAMPS TO BE MAX. SLOPE OF 1 IN 12 TYP. PER IBC SECT. 1012.1 & ANSI 2009 SECT. 405.

ALL HANDICAP RAMPS AT CURBS TO BE PROVIDED W/ DETECTABLE WARNING SURFACE PER I.B.C. SECT. 1109.10 & ANSI 2009 SECT. 406.13.

MIN. 44" WIDE WALKWAY STRIPES SHALL BE PAINTED ON SURFACE OF ACCESS ROUTE TO PUBLIC WAY ACROSS ANY TRAFFIC AREAS.

THE MANEUVERING CLEARANCE AT DOORS W/ CLOSURES THAT MUST BE PULLED TO BE OPENED, SHALL BE 18" WIDE BEYOND STRIKE SIDE OF DOOR X 60" DEEP TYP. SEE ANSI 2009 SECT. 404.2.3.

THE MANEUVERING CLEARANCE AT DOORS THAT MUST BE PUSHED TO BE OPENED, SHALL BE 12" WIDE BEYOND STRIKE SIDE OF DOOR X 48" DEEP TYP. SEE ANSI 2009 SECT. 404.2.3.

ALL DOORWAYS SHALL HAVE A MIN. CLEAR OPENING OF 32" WITH DOOR OPEN 90 DEG. MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP AS PER IBC 1010.1.1 & ANSI 2009 SECT. 404.2.2.

ALL EXTERIOR HINGED DOORS SHALL HAVE A MAXIMUM PUSHING/PULLING FORCE TO OPEN THE DOOR OF 15 LB. TYP. SEE IBC SECT. 1010.1.3

ALL INTERIOR HINGED DOORS SHALL HAVE A MAXIMUM PUSHING/PULLING FORCE TO OPEN THE DOOR OF 5 LBF. TYP. SEE IBC SECT. 1010.1.3 & ANSI 2009 SECT. 404.2.8.

ALL HANDLES, LATCHES & LOCKS ON DOORS SHALL BE LEVER STYLE. SEE ANSI 2009 SECT. 404.2.6.

WHERE THE VERTICAL CLEARANCE OF AN AREA ADJOINING AN ACCESSIBLE ROUTE OF TRAVEL IS LESS THAN "19", BUT MORE THAN 27", A CONTINUOUS PERMANENT BARRIER SHALL BE INSTALLED TO PREVENT TRAFFIC INTO SUCH AREAS. SEE ANSI 2009 SECT. 307.4.

ACCESSIBLE ROUTE OF TRAVEL SHALL CONNECT THE PROPOSED BUILDING WITH OTHER BUILDINGS & FACILITIES ON SITE PER IBC SECT. 1104.2.

ILLUMINATION SHALL BE PROVIDED ALONG EXTERIOR ACCESSIBLE ROUTE OF TRAVEL & ACCESSIBLE PARKING SPACES OF ONE FOOT-CANDLE MIN. SEE IBC SECT. 1008.2.1.

PROVIDE SIGNAGE W/ INTERNATIONAL SYMBOL OF ACCESS AT PRIMARY ACCESSIBLE ENTRY, AS WELL AS DIRECTIONAL SIGNAGE IDENTIFYING THE NEAREST ACCESSIBLE ENTRY AT ALL OTHER PUBLIC ENTRIES. SEE IBC. SECT. 1111.1.

PROVIDE SIGNAGE IDENTIFYING ACCESSIBLE PARKING, DEPICTING THE INTERNATIONAL SYMBOL FOR ACCESS. ADDITIONAL SIGN REQ'D AT VAN PARKING TO INCLUDE THE PHRASE "VAN ACCESSIBLE". SEE IBC SECT. 1111.1 & ANSI 2009 SECT. 502.7.

ALL ACCESSIBILITY SIGNAGE SHALL BE INSTALLED ON WALL ADJACENT TO LATCH SIDE OF DOORS (NOT ON DOOR), CENTERED AT 60" AFF. MAX. SEE ANSI 2009 SECT. 703.3.10 & 703.3.11.

CODE TABULATION

BUILDING INFORMATION

1. Name of project: RV RESTROOM
2. Date: 6-28-2017
3. Proposed Use: RESTROOM
4. Building Code: IBC 2015
5. Building Area: 567 S.F.
6. Construction Type: VB
7. Occupancy Group: U
8. Building Fully Sprinkled: NO
9. Allowable Height: 1 STORY
10. Allowable Area: 6,000 S.F.
11. Occupant Load: 11 OCCUPANTS
12. Exiting:
    Required: 2 Provided: 2

SITE INFORMATION

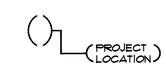
1. Parcel Number:
2. Legal description: SEE SURVEY PLAN
3. Zoning: C
4. Setbacks:

	Required:		Provided:
	Front:		Front:
	Flank:		S. Side:
N. Side:	Rear:		Rear:
			Side:

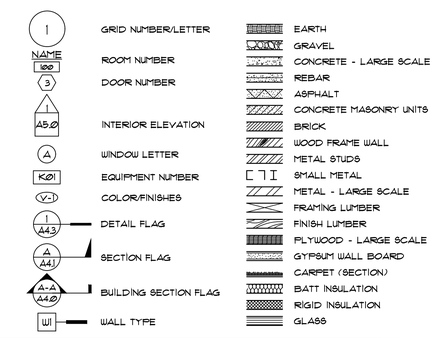
5. Lot Area:
6. % Coverage: 1%
7. Parking Calculations:

Spaces Required: Total Spaces Provided:

VICINITY MAP



DRAWING SYMBOLS



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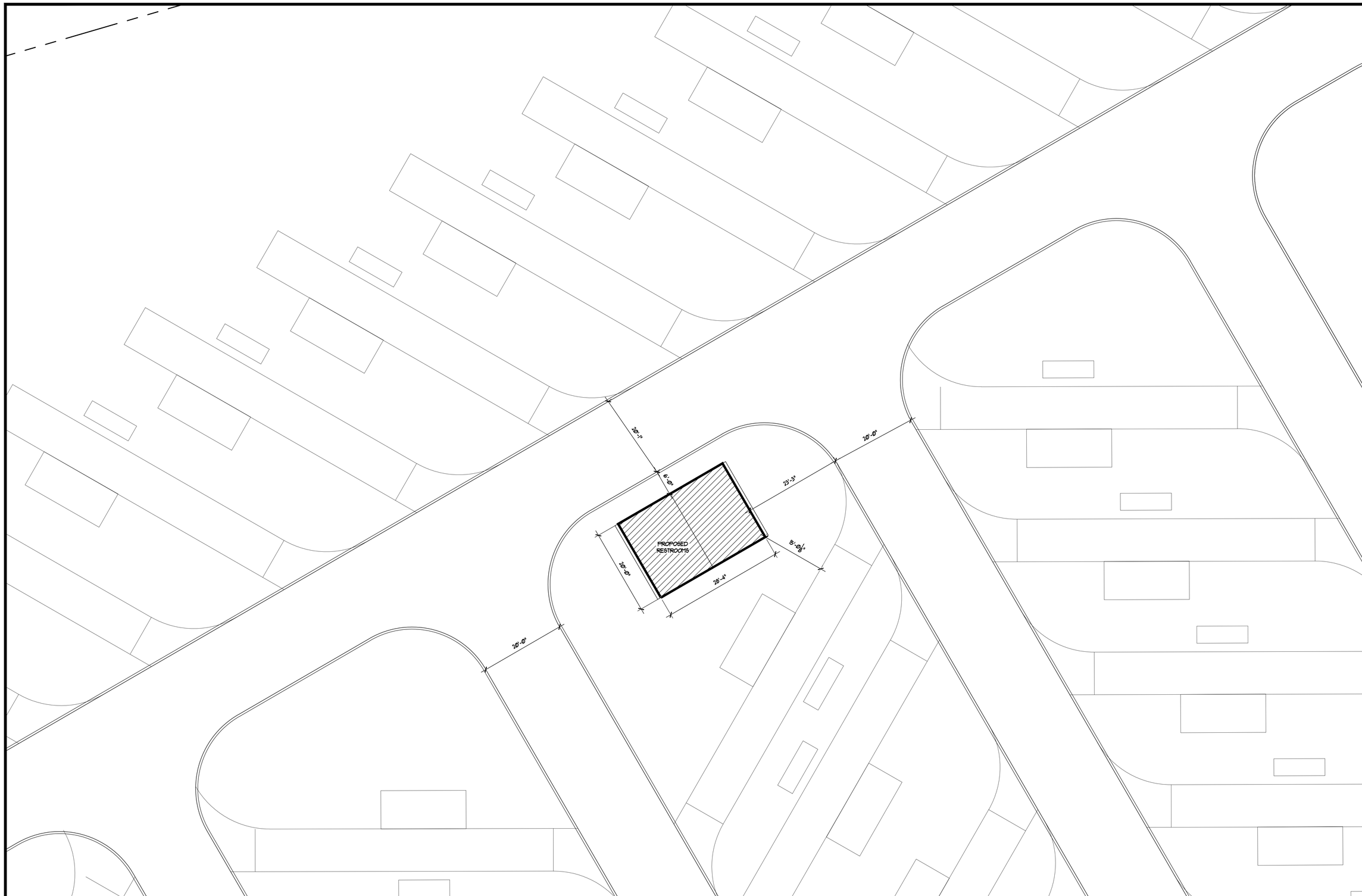
PROJECT: LIBERTY LAKE RV PARK
LIBERTY LAKE, WA
DRAWINGS: COVER SHEET

DATE: 6-28-2017
PLOT SCALE: AS NOTED
DRAWN BY:
JOB NO.: 17-120
SHEET NO.: A.01



SITE DEVELOPMENT PLAN

1" = 20'-0"

NORTH

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LIBERTY LAKE RV PARK
LIBERTY LAKE, WA

DRAWINGS:
SITE DEVELOPMENT PLAN

DATE:
6-28-2017

PLOT SCALE:
1" = 20'-0"

DRAWN BY:
TDB

JOB NO.:
17-120

SHEET NO.:
A1.0

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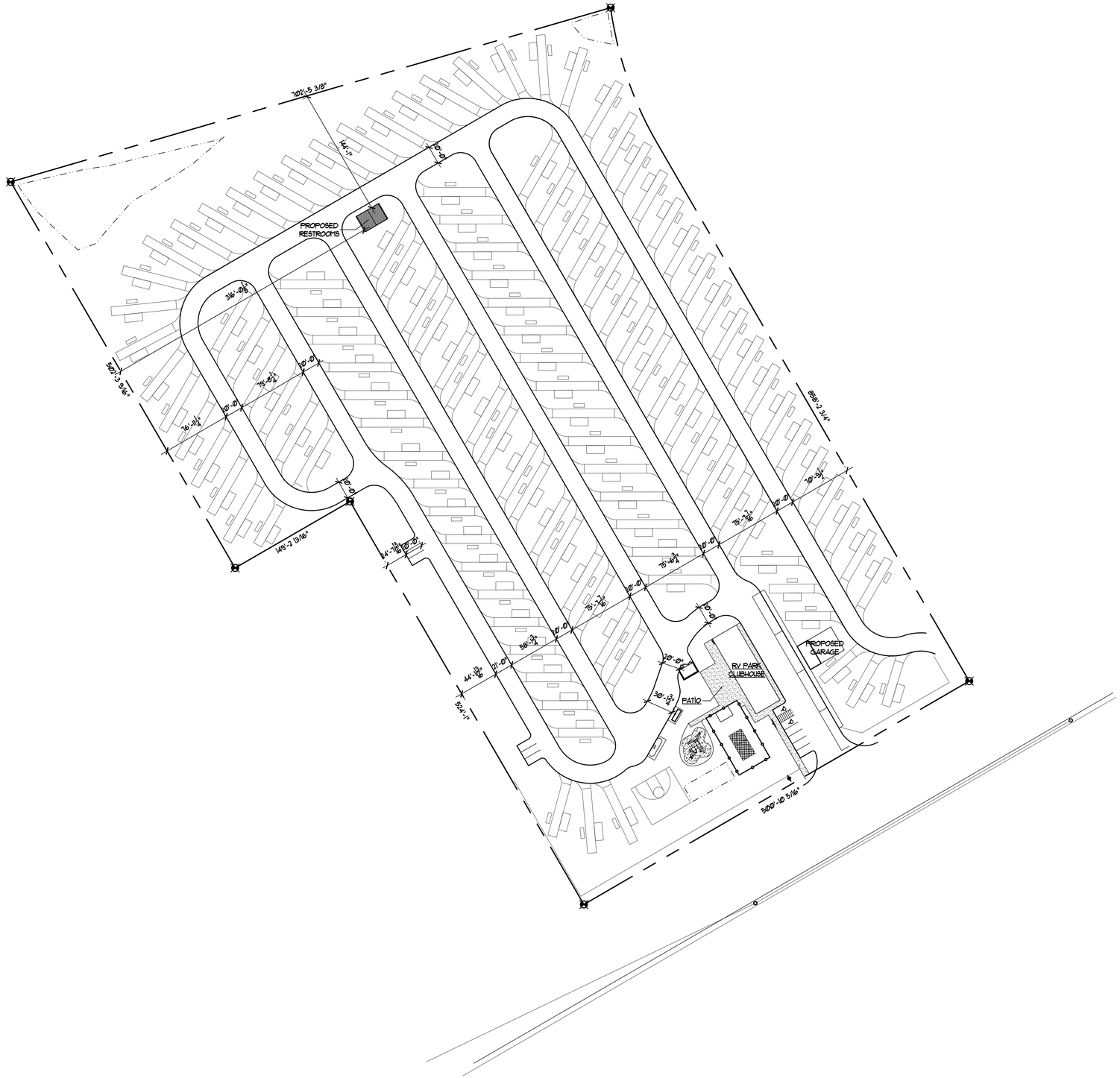

OVERALL SITE PLAN

1" = 60'-0"

NORTH

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PROJECT:
LIBERTY LAKE RV PARK
LIBERTY LAKE, WA
DRAWINGS:
OVERALL SITE PLAN

DATE: 6-28-2017
PLOT SCALE: 1" = 60'-0"
DRAWN BY: TDB
JOB NO.: 17-120
SHEET NO.: A1.01

TOILET ACCESSORY SCHEDULE

ITEM	DESCRIPTION	MANUF. & MODEL #	FINISH	REMARKS
A	42" GRAB BAR 1 1/2" DIAMETER STAINLESS STEEL W/ SNAP FLANGE COVER	BOBRICK #B-6806 x42 (SIDE)	STAINLESS STEEL W/ SATIN FINISH	1 1/2" CLEARANCE BETWEEN BAR & WALL
B	36" GRAB BAR 1 1/2" DIAMETER STAINLESS STEEL W/ SNAP FLANGE COVER	BOBRICK #B-6806 x36 (REAR)	STAINLESS STEEL W/ SATIN FINISH	1 1/2" CLEARANCE BETWEEN BAR & WALL
C	18" GRAB BAR 1 1/2" DIAMETER STAINLESS STEEL W/ SNAP FLANGE COVER	BOBRICK #B-6806.99x18 (VERT.)	STAINLESS STEEL W/ SATIN FINISH	1 1/2" CLEARANCE BETWEEN BAR & WALL
D	SANITARY NAPKIN DISPOSAL SURFACE MOUNT	BOBRICK #B-270	STAINLESS STEEL W/ SATIN FINISH	
E	SEAT-COVER DISPENSER SUFACE MOUNTED	BOBRICK #B-4221	STAINLESS STEEL W/ SATIN FINISH	
F	LIQUID SOAP DISPENSER SUFACE MOUNTED CAPACITY: 40 FL. OZ.	BOBRICK #B-4112	STAINLESS STEEL W/ SATIN FINISH	
G	TOILET TISSUE DISPENSER DOUBLE ROLL	BOBRICK #B-2740	BRACKET: HEAVY DUTY ALUMINUM CASTING W/SATIN FINISH SPINDLES (2); MOLDED & EXTRUDED ABS. EQUIPPED W/ RETRACTABLE PIN & CONCEALED LOCKING MECHANISM	THIS IS NOT A CONTROLLED DELIVERY DISPENSER
H	PAPER TOWEL DISPENSER SURFACE MOUNTED (ALL MAKES OF "C-FOLD" & MULTI-FOLD PAPER TOWELS)	BOBRICK #B-262	STAINLESS STEEL w/SATIN FINISH	

BARRIER FREE DESIGN CRITERIA

GENERAL NOTE
All barrier free design criteria is to meet ANSI A117.1 - 2009

WATER CLOSET
At least one water closet clearance area shall measure 5'-0" wide by 5'-0" deep. The center of the water closet to the side of the wall shall not be less than 18". The top of the seat shall be 17" to 19" from the finish floor. Flush controls shall be mounted for use from the wide side of the water closet and not more than 44" above finish floor. 42" clear from the centerline of toilet to edge of lavatory cabinet.

URINALS
At least one urinal shall have a rim height of 17" max. above finish floor with a clear space for a forward approach in compliance with Section 305. Flush controls shall comply with Section 309

GRAB BARS
Up 33" to 36" above floor. Side grab bars to be 42" long with 18" extending in front of the water closet. The back grab bar shall be 36" long, and extend from the water closet centerline 12" min. on the side closest to the wall Vertical grab bars to be 18" long and mounted with bottom of the bar 39" to 41" from finish floor. Centerline of vertical bar to be between 39" and 41" from the rear wall. Provide 2x blocking between studs for entire length of grab bar areas and for accessories. Grab bars to withstand 300 lbs. pressure.

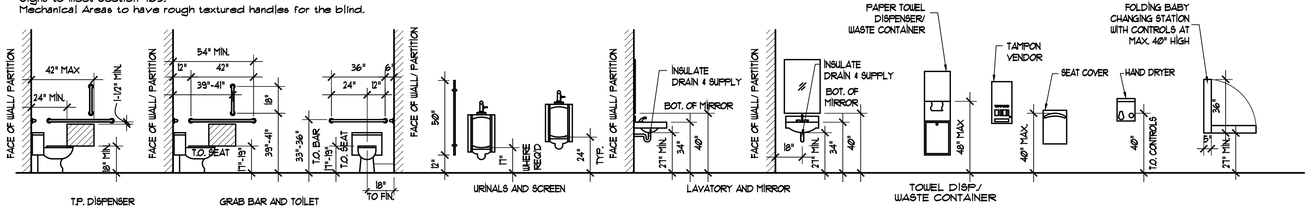
LAVATORIES
One lavatory shall have a rim height of 33" to 34" and shall have a 29" min. clearance from the bottom of the apron to the floor. Faucets shall be lever type and no more than 17" from the front edge of the counter. If self closing valves are used, they shall remain open for at least 10 seconds per operation. Water supply and drainpipes shall be insulated.

ACCESSORIES
At least one mirror shall be located 40" max. from finish floor to bottom off the mirror. Drying equipment, towel and disposal fixtures shall have at least one located 40" from finish floor.

RESTROOM FINISHES
Toilet room floors shall have smooth, hard, non-absorbent surface such as ceramic or quarry tile which covers upward onto the walls at least 5". Walls within water closet compartments and walls within 2 feet of the front and sides of urinals shall be similarly finished to a height of 4 feet.

CABINET GENERAL NOTES
Handles, pulls, latches on cabinets, plumbing fixtures and storage facilities shall have lever handles. At least one of each type of cabinets, drawers and storage areas shall be accessible to the handicapped, with a clear space in front of area to be 30"x48". Controls, receptacles and door hardware to be not less than 36" high nor more than 48" above finish floor. Electrical receptacles to be a min. of 18" high. Knee clearance of 27" ht. min. and a max. ht. of 34" and a depth of 19" and 30" wide under all hand sinks. Sink depth to be not more than 6.5" (typ.). Service counters and check stands are to meet standards per Section 904. 36" in width, max. ht. 36".

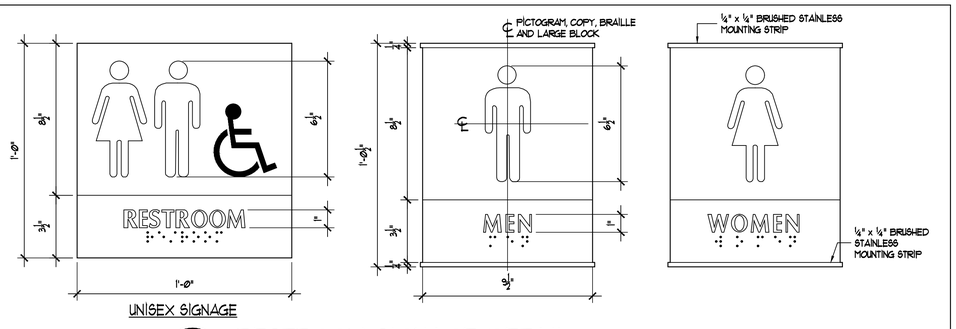
MISCELLANEOUS ITEMS
Interior doors to be capable of 5 lb. force against them. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. Operable parts or hardware shall be mounted 34" min. and 48" max. above the floor, and the force required to activate operable parts shall be 5 pounds max.
Signs to meet Section 703.
Mechanical Areas to have rough textured handles for the blind.



TOILET ACCESSORIES MOUNTING HEIGHTS

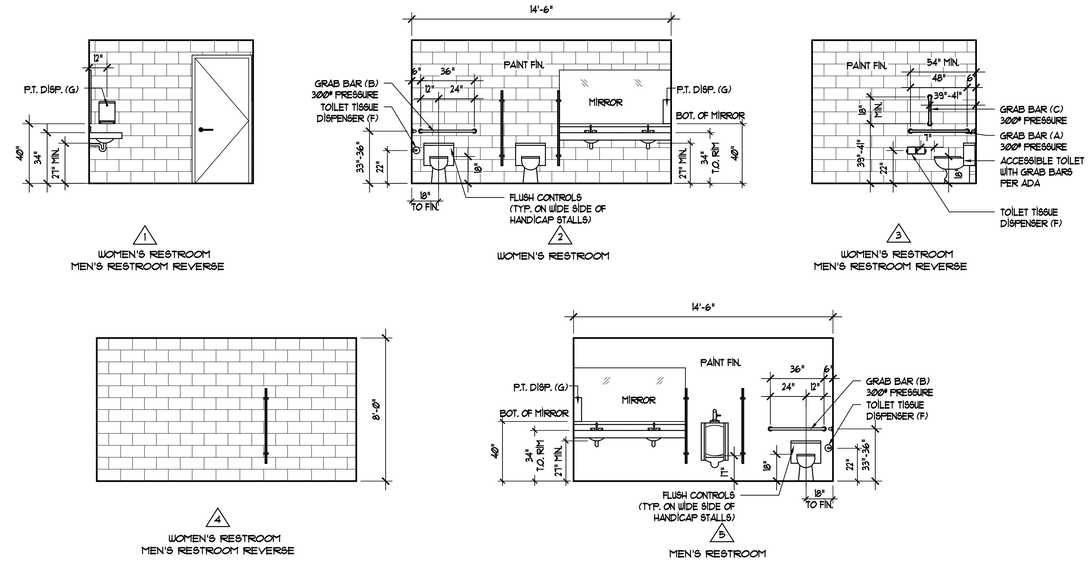
GENERAL NOTES:
-TOP PORTION OF SIGN SILKSCREENED PICTOGRAM ON ¼" PAINTED ACRYLIC
-LOWER PORTION OF SIGN PHOTO ETCHED POLYMER TACTILE COPY AND GRADE 2 BRAILLE
-CHARACTERS AND SYMBOLS ON TACTILE SIGNS SHALL BE RAISED AT LEAST 1/32 INCH (.8mm)
-TACTILE CHARACTERS SHALL BE 48 INCHES MINIMUM ABOVE THE FLOOR, AND 60 INCHES MAXIMUM ABOVE THE FLOOR.
-ALL SIDES PAINTED TO MATCH ADJACENT FACE
-PLAQUE MOUNTED TO WALL WITH VHB TAPE AND EPOXY AS REQUIRED.

GENERAL NOTES:
ALL SIGN TYPES
-TYPE STYLE IS OPTIMA BOLD (TYP. ALL SIGNS)



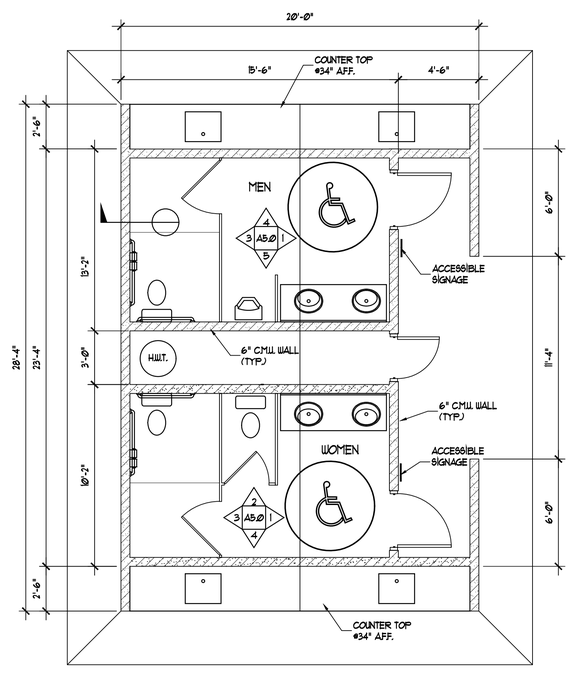
1 / A5.0 RESTROOM SIGNAGE DETAIL
3" = 1'-0"

INTERNATIONAL SIGN OF ACCESSABILITY AT EACH RESTROOM



RESTROOM ELEVATIONS

1/4" = 1'-0"



FLOOR PLAN

1/4" = 1'-0"

NORTH

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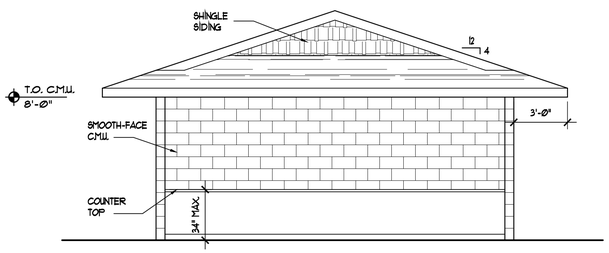
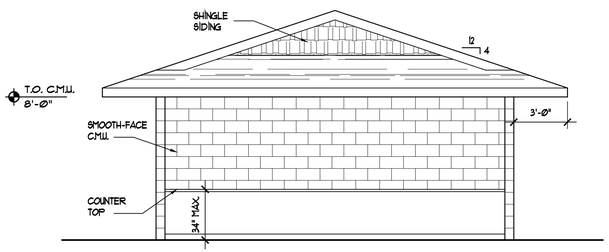
PROJECT: LIBERTY LAKE RV PARK
LIBERTY LAKE, WA
DRAWINGS: FOUNDATION PLAN AND DETAILS

DATE: 6-28-2017
PLOT SCALE: AS NOTED
DRAWN BY:
JOB NO.: 17-120
SHEET NO.: A2.0



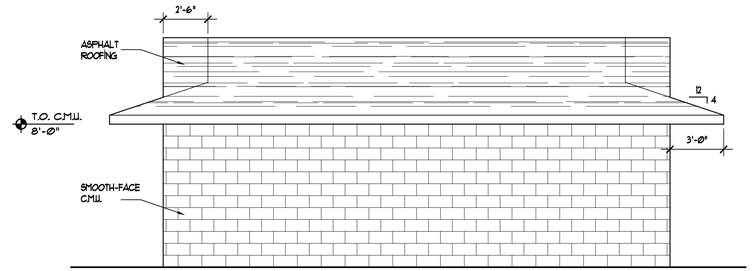
NORTH ELEVATION

1/4" = 1'-0"



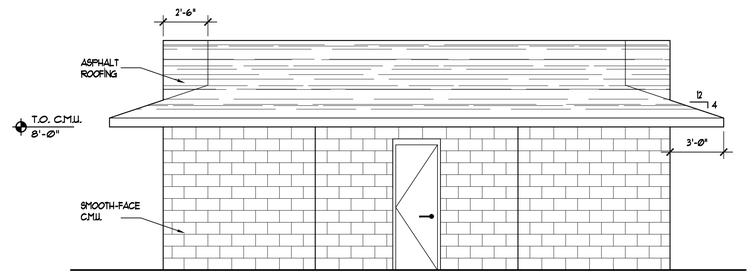
SOUTH ELEVATION

1/4" = 1'-0"



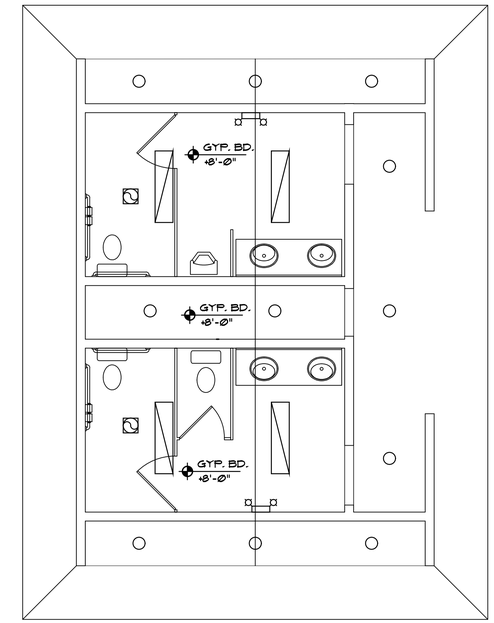
WEST ELEVATION

1/4" = 1'-0"



EAST ELEVATION

1/4" = 1'-0"



REFLECTED CEILING PLAN

1/4" = 1'-0"

NORTH

CEILING LEGEND		
SYMBOL	DESCRIPTION	REMARKS
	1'x4' 2 BULB FLUORESCENT FIXTURE	SURFACE MOUNTED 58 WATTS
	CAN LIGHT	RECESSED 20 WATTS
	EMERGENCY LIGHTING	WALL MOUNTED
	EXHAUST FAN	RECESSED

130 S.F. X .98 WATTS PER S.F. = 127.4 WATTS ALLOWED
(2) 1x4 2 TUBE FLUORESCENT FIXTURES = 116 WATTS PROVIDE

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3738 REGISTERED ARCHITECT
RUSSELL C. PAGE
STATE OF WASHINGTON

REVISIONS:

NO	DATE	REVISION	BY

Russell C. Page
ARCHITECTS
204 N. Division Street, Suite "E"
Spokane, WA 99202
(509) 467-3748 Fx: (509) 467-3817

PROJECT:
LIBERTY LAKE RV PARK
LIBERTY LAKE, WA

DRAWINGS:
FOUNDATION PLAN AND DETAILS

DATE: 6-28-2017

PLOT SCALE: AS NOTED

DRAWN BY:

JOB NO.: 17-120

SHEET NO.: A2.1

STRUCTURAL - GENERAL NOTES

GENERAL REQUIREMENTS

GOVERNING CODE: The design and construction of this project is governed by the "International Building code (IBC)", 2012 Edition, hereafter referred to as the IBC, as adopted and modified by the State of Washington understood to be the Authority Having Jurisdiction (AHJ).

REFERENCE STANDARDS: Refer to Chapter 35 of 2012 IBC. Where other Standards are noted in the drawings, use the latest edition of the standard unless a specific date is indicated. Reference to a specific section in a code does not relieve the contractor from compliance with the entire standard.

DESIGN CRITERIA AND LOADS

OCCUPANCY:	Occupancy Category of Building per 2006 IBC Table 1604.5 =	II

WIND DESIGN:	MAIN WIND FORCE RESISTING SYSTEM		
	Basic Wind Speed	MPH	85
	Exposure Category		B
	Wind Importance	I_w =	1.0
	Internal Pressure Coefficient	Cpi =	+/- 0.18
	Topographic Factor	Kzt =	1.0
	Wind Analysis procedure used:		Method 1 - Simplified
	COMPONENT & CLADDING PRESSURES for DESIGN		PSF
	Wall Cladding, Typical Zone		13.5
	Wall Cladding, Edge Zone within 5.8 feet of corners		16.2
	Roof Cladding, Middle Zone		12.7
	Roof Cladding, Edge Zone within 5.8 feet of edge		19.5
	Roof Cladding, Corner Zone within 5.8 feet of corners		27
	Uplift Load Net		4

SEISMIC DESIGN:	Seismic Design Category:	SDC =	C
	Basic Structural System		Bearing Wall
	Seismic Force Resisting System		Intermediate Reinforced Masonry Shear Walls
	Response Modification Factor:	R =	3.5
	System Over strength Factor	Omega =	2
	Deflection Amplification Factor	Cd =	2.25
	Site Classification per IBC Table 1613.5.2	Site Class =	D
	Seismic Importance Factor per ASCE 7-05 Table 11.5-1	Ie =	1.0
	Spectral Response Acceleration (Short Period)	S_s =	0.3911
	Spectral Response Acceleration (1-Second Period)	S_1 =	0.1118
	Spectral Design Response Coefficient (Short Period)	S_{DS} =	0.388 g
	Spectral Design Response Coefficient (1-Second Period)	S_{D1} =	0.175 g
	Seismic response coefficient(s)	Cs =	.0775
	Redundancy Factor (North/South Direction)	N/S. rho=	1.0
	Redundancy Factor (East / West Direction)	E/W rho=	1.0
	Design Base Shear (North/South Direction)	KIPS	19.9
	Design Base Shear (East / West Direction)	KIPS	19.9
	Base shear governed by:		Seismic
	Seismic Analysis procedure used:		Equivalent Lateral Force (ELF)

SNOW LOAD:	Flat Roof Snow Load, (PSF)	p_f =	40
	Snow Load Importance Factor	I_s =	1.0

DESIGN LIVE LOADS	AREA	LIVE LOADS (PSF) UNO	REMARKS & FOOTNOTES
	Roof Live or SNOW (see above)	40	

DESIGN DEAD LOADS	BIDDER DESIGN	DEAD LOADS (PSF) UNO	REMARKS & FOOTNOTES
	Roof Dead Load, Total Top Chord Bottom Chord	15 PSF 10 PSF 5. PSF	For Pre-Fabricated Wood Truss design,

SUBMITTALS

SUBMIT FOR REVIEW: SUBMITTALS of shop drawings, and product data are required for items noted in the individual materials sections and for *bidder designed* elements.

GENERAL CONTRACTOR'S PRIOR REVIEW: Prior to submission to the Architect/Engineer, the Contractor shall review the submittal for completeness. Dimensions and quantities are not reviewed by the SER, and therefore, must be verified by the General Contractor. Contractor shall provide any necessary dimensional details requested by the Detailer and provide the Contractor's review stamp and signature before forwarding to the Architect/Engineer.

SHOP DRAWING REVIEW: Once the contractor has completed his review, the SER will review the submittal for general conformance with the design concept and the contract documents of the building and will stamp the submittal accordingly. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departures there from.

SHOP DRAWING DEVIATIONS: When shop drawings (component design drawings) differ from or add to the requirements of the structural drawings they shall be designed and stamped by the responsible SSE.

DEFLECTION LIMITS:	VERTICAL	LIMIT
	Roof Members, Dead + Live or Snow or Wind, Total Load (TL) Deflection	L / 240, where (L is span length,inches)
	Roof, Live or Snow or Wind Load (RLL)	L / 360
	Floor Members, Total Load (TL) uno	L / 240
	Floor Live Load (LL) uno	L / 360
	HORIZONTAL	LIMIT and FOOTNOTE
	Members Supporting Brittle Finishes	L / 240 (1)
	Members Supporting Flexible Finishes	L / 180 (1)

(1) Wind Load is reducible to 0.7 times the Component and Cladding Loads per Table 1604.3 footnote f.

GENERAL CONTRACTOR'S PRIOR REVIEW: Once the contractor has completed his review of the SSE component drawings, the SER will review the submittal for general conformance with the design of the building and will stamp the submittal accordingly. Review of the Specialty Structural Engineer's (SSE) shop drawings (component design drawings) is for compliance with design criteria and compatibility with the design of the primary structure and does not relieve the SSE of responsibility for that design. All necessary bracing, ties, anchorage, proprietary products shall be furnished and installed per manufacturer's instructions or the SSE's design drawings and calculations. These elements include but are not limited to:

- Solid Web Wood Joists

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

CONTRACTOR'S RESPONSIBILITIES: Contractor shall be responsible to review the Geotechnical Report and shall follow the recommendations specified therein including, but not limited to, subgrade preparations, pile installation procedures, ground water management and steep slope Best Management Practices."

GEOTECHNICAL SUBGRADE INSPECTION: The Geotechnical Engineer shall inspect all sub-grades and prepared soil bearing surfaces, prior to placement of foundation reinforcing steel and concrete. Geotechnical Engineers shall provide a letter to the owner stating that soils are adequate to support the "Allowable Foundation Bearing Pressure(s)" shown below. Assumed values shall be field verified by the Building Official or the Geotechnical Engineer prior to placing concrete.

DESIGN SOIL VALUES:

Allowable Foundation Bearing Pressure (Assumed)	1500	PSF
Passive Lateral Pressure	350	PSF
Active Lateral Pressure (unrestrained)	55	PSF
Active Lateral Pressure (restrained)	35	PSF
Coefficient of Sliding Friction	0.4	

FOUNDATIONS and FOOTINGS: Foundations shall bear on either on competent native soil or compacted structural fill as per the geotechnical report. Exterior perimeter footings shall bear not less than 24 inches below finish grade, unless otherwise specified by the geotechnical engineer and/or the building official.

FOOTING DEPTH: Tops of footings shall be as shown on plans with vertical changes as indicated with steps in the footings; locations of steps shown as approximate and shall be coordinated with the civil grading plans to ensure that the exterior perimeter footings bear no less than 24 inches below finish grade, or as otherwise indicated by the geotechnical engineer or building official.

SLABS-ON-GRADE: All slabs-on-grade shall bear on compacted structural fill or competent native soil per the geotechnical report. All moisture sensitive slabs-on-grade or those subject to receive moisture sensitive coatings/covering shall be provided with an appropriate capillary break and vapor barrier/retardant over the subgrade prepared and installed as noted in the geotechnical report, barrier manufacturer's written recommendations and coordinated with the finishes specified by the Architect.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conform to:
(1) ACI 301-05 "Standard Specifications for Structural Concrete",
(2) IBC Chapter 19-Concrete,
(3) ACI 318-05/318R-05

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conform to ACI 301 Section 4 "Concrete Mixtures."

MATERIALS: Conform to ACI 301 Section 4.2.1 "Materials" for requirements for cementitious materials, aggregates, mixing water and admixtures.

SUBMITTALS: Provide all submittals required by ACI 301 Section 4.1.2. Submit mix designs for each mix in the table below.

TABLE OF MIX DESIGN REQUIREMENTS

Member Type/Location	Strength (psi)	Test Age (days)	Maximum Aggregate	Maximum W/C Ratio	Air Content
Foundations					
• Foundations	3000	28	1"	—	—
Slabs-on-Grade and Sidewalks					
• Exterior	3000	28	1"	0.45	6%
• Interior	3000	28	1"	0.50	—

Mix Design Notes:

(1) A concrete strength of 2500 psi was used in design.
(2) W/C Ratio: Water-cementitious material ratios shall be based on the total weight of cementitious materials. Ratios not shown in the table above are controlled by strength requirements.

(3) Cementitious Content:
a. The use of fly ash, other pozzolans, silica fume, or slag shall conform to ACI 301 Section 4.2.2.9.a. Maximum amount of fly ash shall be 20% of total cementitious content unless reviewed and approved otherwise by SER.
b. For concrete used in elevated floors, portland cement content shall conform to ACI 301 Section 4.2.2.1. Acceptance of lower cement content is contingent on providing supporting data to the SER for review and acceptance.

(4) Air Content: Conform to ACI 301 Section 4.2.2.4. Concrete surfaces in contact with the soil require entrained air. Horizontal exterior surfaces require "severe exposure". Vertical exterior surfaces require "severe exposure". Tolerance is ±1-½%. Air content shall be measured at point of placement.

(5) Slump: Conform to ACI 301 Section 4.2.2.2. Slump shall be determined at point of placement.

(6) Shrinkage Limit: Concrete used in elevated slabs and beams shall have a shrinkage limit of [.045%] at 28 days measured in accordance with ASTM C157. Submit laboratory test results to SER for approval prior to construction.

(7) Chloride Content: Conform to ACI 301 Section 4.2.2.6 and Table 4.2.2.6 for "Other Reinforced Concrete Construction."

(8) Non-chloride accelerator: Non-chloride accelerating admixture may be used in concrete slabs placed at ambient temperatures below 50°F at the contractor's option.

FORMWORK & RESHORING: Conform to ACI 301 Section 2 "Formwork and Form Accessories." Removal of Forms shall conform to Section 2.3.2 except strength indicated in Section 2.3.2.5 shall be 0.75 f' c.

MEASURING, MIXING, AND DELIVERY: Conform to ACI 301 Section 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: Conform to ACI 301 Section 5. In addition, hot weather concreting shall conform to ACI 305.1 and cold weather concreting shall conform to ACI 306.1.

CONCRETE CURING: Provide curing compounds for concrete as follows:

(1) Use membrane curing compounds that are compatible with and will not affect surfaces to be covered with finish materials applied directly to concrete.

(2) Apply curing compounds at a rate equivalent to the rate of application at which curing compound was originally tested for in conformance to the requirements of ASTM C 309 and the manufacturer's recommendations.

(3) Apply specified curing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

(4) Use curing compound compatible with and applied under direction of system manufacturer of protective sealer.

(5) Apply two separate coats with first allowed to become tacky before applying second. Direction of second application shall be at right angles to direction of first.

CONSTRUCTION JOINTS: Conform to ACI 301 Sections. 2.2.2.5, 5.1.2.3a, 5.2.2.1 and 5.3.2.6. Construction joints shall be located and detailed as on the construction drawings. Use of an acceptable adhesive, surface retardant, portland cement grout or roughening the surface is not required unless specifically noted on the drawings.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and non-structural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing and architectural drawings and coordinate other embedded items.

GROUT: Use 5000 psi non-shrink grout under column base plates.

POST-INSTALLED ANCHORS to CONCRETE: Anchor location, type, diameter and embedment shall be as indicated on drawings. Reference the POST INSTALLED ANCHORS section for applicable Post-Installed Anchor Adhesives. Anchors shall be installed and inspected in strict accordance with the applicable ICC-Evaluation Service Report (ESR). Special inspection shall be per the TESTS and INSPECTIONS section.

SHRINKAGE: Conventional and post-tensioned concrete slabs will continue to shrink after initial placement and stressing of concrete. Contractor and subcontractor shall coordinate jointing and interior material finishes to provide adequate tolerance for expected structural frame shrinkage and shall include, but not be limited to: curtain wall, dry-it, storefront, skylight and ceiling suppliers. Contact Engineer for expected range of shrinkage.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to:
(1) ACI 301-99 "Standard Specifications for Structural Concrete", Section 3 "Reinforcement and Reinforcement Supports."
(2) ACI SP-66 "ACI Detailing Manual" including ACI 315 "Details and Detailing of Concrete Reinforcement."
(3) CRSI MSP-2-98 "Manual of Standard Practice."

(4) ANSI/AWS D1.4 "Structural Welding Code - Reinforcing Steel."
(5) IBC Chapter 19-Concrete.
(6) ACI 318-05.

SUBMITTALS: Conform to ACI 301 Section 3.1.1 "Submittals, data and drawings." Submit placing drawings showing fabrication dimensions and locations for placement of reinforcement and reinforcement supports.

MATERIALS:

Reinforcing Bars	ASTM A615, Grade 60, deformed bars.
Weldable Reinforcing Bars	ASTM A706, Grade 60, deformed bars.
Smooth Welded Wire Fabric	ASTM A185
Deformed Welded Wire Fabric	ASTM A497
Bar Supports	CRSI MSP-2-98, Chapter 3 "Bar Supports."
Tie Wire	16 gage or heavier, black annealed.

FABRICATION: Conform to ACI 301, Section 3.2.2. "Fabrication", and ACI SP-66 "ACI Detailing Manual."

WELDING: Bars shall not be welded unless authorized. When authorized, conform to ACI 301, Section 3.2.2.2. "Welding" and provide ASTM A706, grade 60 reinforcement.

PLACING: Conform to ACI 301, Section 3.3.2 "Placement." Placing tolerances shall conform to Section 3.3.2.1 "Tolerances."

CONCRETE COVER: Conform to the following cover requirements from ACI 301, Table 3.3.2.3:

Concrete cast against earth	3"
Concrete exposed to earth or weather	2"
Ties in columns and beams	1-½"
Bars in slabs	¾" or 1" per plan
Bars in walls	¾"
Exterior bars in Tilt-up Panels	1"

SPLICES: Conform to ACI 301, Section 3.3.2.7. Refer to "Typical Lap Splice and Development Length Schedule" for typical reinforcement splices. Mechanical connections may be used when approved by the SER. The splices indicated on individual sheets shall control over the schedule.

FIELD BENDING: Conform to ACI 301 Section 3.3.2.8. "Field Bending or Straightening." Bar sizes #3 through #5 may be field bent cold the first time. Other bars require preheating. Do not twist bars.

TYPICAL CONCRETE REINFORCEMENT: Unless noted on the plans, concrete walls shall have the following minimum reinforcement. Contractor shall confirm minimum reinforcement of walls with SER prior to rebar fabrication.

Wall Thickness	Horizontal Bars	Vertical Bars	Location
6"	#4 @ 12" OC	#4 @ 12" OC	@ CL of Wall
8"	#5 @ 12" OC	#5 @ 12" OC	@ CL of Wall
10"	#4 @ 16" OC	#4 @ 16" OC	Each Face
12"	#4 @ 12" OC	#4 @ 12" OC	Each Face

POST-INSTALLED ANCHORS (INTO CONCRETE AND MASONRY)

DESIGN STANDARDS:
Post-Installed Anchors into concrete for this project are designed in accordance with American Concrete Institute, ACI 318-05, Appendix D Specifications.

POST-INSTALLED ANCHORS: Install only where specifically shown in the details or allowed by SER. All post-installed anchors types and locations shall be approved by the SER and shall have a current ICC-Evaluation Service Report that provides relevant design values necessary to validate the available strength exceeds the required strength. Submit current manufacturer's data and ICC ESR report to SER of for alternates and all non pre-approved anchors to SER for approval. Anchors shall be installed in strict accordance to ICC-ESR and manufacturers instructions. Special inspection shall be per the TESTS and INSPECTIONS section. Anchor type, diameter and embedment shall be as indicated on drawings.

1. ADHESIVE ANCHORS: The following Adhesive-type anchoring systems have been used in the design and shall be used for anchorage to CONCRETE and MASONRY as applicable and in accordance with corresponding current ICC ESR report. Drilled-In anchor embedment lengths shall be as shown on drawings, or not less than 7 times the anchor nominal diameter (7D).
   a. HILTI "HY-150 MAX" – ICC ESR-1967

STRUCTURAL STEEL.

DESIGN STANDARDS:

Structural Steel for this project is designed in accordance with American Institute of Steel Construction (AISC) Specifications. Gravity framing for this project is designed per:

AISC – "Manual of Steel Construction, Allowable Stress Design (ASD), Ninth Edition (1989), Type 2, "Unrestrained Free-Ended Framing".

REFERENCE STANDARDS: Conform to:
1) AISC "Code of Standard Practice for Steel Buildings & Bridges." (2000).
2) Research Council on Structural Connections (RCSC) "Specification for Structural Joints using ASTM A325 or A490 Bolts" (2000), Appendix B, ASD Alternative.
3) Welding Code: AWS D1.1-2000 "Structural Welding Code - Steel."
4) AISC – "Specification for Allowable Stress Design (ASD), Single Angle Members (1989).
5) AISC "Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design"– ASD 335-89 (1989) including Supplement No. 1 (2001).

SUBMITTALS:
(1) Submit shop drawings in accordance with AISC "Code of Standard Practice", Section 4 "Shop and Erection Drawings" and Sec. M1 of the applicable AISC specification.
(2) Submit welder's certificates verifying qualification within past 12 months.
(3) Epoxy/Adhesive for Drill-In Anchors.

MATERIALS:

Wide Flange (W), Tee (WT) Shapes	ASTM A992 Fy = 50 ksi	
Channel (C) & Angle (L) Shapes	ASTM A36, Fy = 36 ksi,	
Structural Bars & Plates (PL)	ASTM A36, Fy = 36 ksi,	
Hollow Structural Section – Square/Rect (HSS)	ASTM A500, Grade B	Fy = 46 ksi
Structural Pipe, (PIPE) 12" dia. and less	ASTM A53, Grade B	Fy = 35 ksi
High-Strength Bolts	ASTM A325/F1852, Type 1, Plain	
Nuts	ASTM A563	
Washers (flat or beveled)	ASTM F436--required @ slotted & oversize holes	
Anchor Rods (Anchor Bolts)	ASTM F1554,Gr 36	
High Strength (HS) Anchor Rods (Anchor Bolts)	ASTM F1554,Gr. 55 weldable per Supplement No.1	
Mild Threaded Rods	ASTM A36,	Fy = 36 ksi
High Strength Threaded Rods	ASTM A449,	Fy = 50 ksi
Dowel Bar Anchors	ASTM A496 – Nelson/TRW D2L or equal	
Welding Electrodes	E70XX, E71TXX unless noted otherwise with a minimum toughness of 20 ft-lbs at 40 degrees Fahrenheit.	
Drill-In Anchors	A36 Rods with Hilti HY-150, Simpson SET, Redhead Epcon 7 or SER approved equal with current ICC report.	

WELDING:
1) Welding shall conform to AWS D1.1 "Structural Welding Code – Steel" and visually conform to AWS Section 6 and Table 6.1.
2) Welders shall be qualified for the specific prequalified joints required by the design and certified in accordance with AWS requirements.
3) Welding shall be done in accordance with appropriate Weld Procedure Specifications (WPS's). Welders shall be familiar with the applicable WPS's.
4) Welding shall be done with AWS Prequalified Welding Processes unless otherwise approved.
5) Welder qualifications and WPS's shall be maintained at the site of the work and shall be readily available for inspection upon request, both in the shop and in the field.
6) Use E70 or E71T, 70 ksi strength electrodes appropriate for the process selected.
7) An Certified Weld Inspector (CWI) certified in accordance with provisions of AWS QC1, shall be employed by the Owner and shall inspect and document compliance with the following:
   a. Confirm welder qualifications prior to the start of work.
   b. Review all WPS prior to the start of work.
   c. Confirm materials in fabrications conform to the specifications.
   d. Periodically observe joint preparation, fit-up and welder techniques.
   e. Visually inspect all welds per AWS Section 6.5 and Table 6.1.

HIGH-STRENGTH BOLTING:
1) High Strength bolts shall be of the ASTM Grade and Type specified in the Materials section. Unless noted otherwise, install bolts in joints in accordance with the RCSC Specification as Joint Type ST, "Snug Tight" - per RCSC Specification Table 4.1 and Section 8.1. Inspection is per RCSC Section 9.1. Bolts have been designed as ASTM A325-N bolts – "threads included in the shear plane".

ANCHORAGE to CONCRETE:

1) COLUMN ANCHORS RODS and BASE PLATES: All columns (vertical member assemblies weighing over 300 pounds) shall be provided with a minimum of four ¾" diameter anchor rods. Columns base plates shall be at least ¾" thick, unless noted otherwise. Cast-in-place anchor rods shall be provided unless otherwise approved by the Engineer. Unless noted otherwise, embedment of cast-in-place anchor rods shall be 12 times the anchor diameter (12D).

2) EMBEDDED STEEL with HEADED CONCRETE ANCHORS (HCA): Headed concrete anchors (HCA) welded to steel embedment plates cast monolithic with concrete, shall be welded in accordance with AWS D1.1 Chapter 7 "Stud Welding." Unless noted otherwise, HCA shall be 1/2" diameter x 6" long.

3) DRILL-IN ADHESIVE ANCHORS: Adhesive anchors shall be SER approved with current ICC report that provides allowable shear and tensile values equal to or greater than those ICC values listed for Hilti HY-150. Install anchors in strict accordance to ICBO report and manufacturers instructions. Drilled-In anchor embedment lengths shall be as shown on drawings, or not less than 10 times the anchor nominal diameter (10D).

4) COLD WEATHER ADHESIVE ANCHORS: Use acrylic anchors of equivalent strength when base material falls below 40 degrees F. Submit to Engineer for review.

FABRICATION:
1) Conform to AISC "Code of Standard Practice" (2000), Section 6 "Shop Fabrication and Delivery", Section 8 "Quality Assurance." and Sec. M2 and M5 of the applicable AISC specification.
2) Structural Welding and associated inspections and qualifications shall conform to the AWS D1.1. See notes above.
3) The fabricator shall maintain detailed fabrication & erection quality control procedures per IBC Sec 1704.2.1 that provides the basis for inspection control of the workmanship and ensures that the work is performed in accordance with Code of Standard Practice, the AISC Specification, and the Contract Documents.

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3738 REGISTERED ARCHITECT RUSSELL C. PAGE STATE OF WASHINGTON

REVISIONS: NO/DATE	REVISION	BY

Russell C. Page ARCHITECTS
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Spokane, WA 99202
(509) 467-9748 Fax: (509) 467-9871

ULTIMATE / STYLE / AESTHETIC / FUNCTIONAL / BUDGET / CONSTRUCTION

PROJECT: LIBERTY LAKE RV PARK
DRAWINGS: GENERAL NOTES
LIBERTY LAKE, WA

DATE: 6-28-2017
PLOT SCALE: AS NOTED
DRAWN BY:
JOB NO.: 17-120
SHEET NO.: S1.1

4) Special Inspector shall review the procedures for completeness and adequacy relative the Code and the Work. This review may be waived if the Fabricator is approved per IBC Sec 1704.2.2.

ERECTION:

1) Conform to AISC "Code of Standard Practice" (2000), Section 7 "Erection", Section 8 "Quality Assurance." and Sec. M4 of the applicable AISC specification.

2) Structural Welding to conform to the AWS D1.1 and applicable WELDING notes above.

3) Special Inspector shall inspect the steel framing to verify compliance with the details shown on the Contract Documents including member size, location, bracing and the application of proper joint details at each connection.

4) High strength bolting shall be periodically inspected by the Special Inspector per IBC Section 1704.3.3.

BRACING and SAFETY PROTECTION: The contractor shall provide temporary bracing and safety protection required by AISC Specification Sec. M4.2 "Bracing" and AISC Code Sec. 7.10 and 7.11 for "Temporary Support of Structural Steel Frames" and "Safety Protection."

SHOP PAINTING: Conform to AISC Specification Sec. M3 and AISC Code Sec. 6.5 unless a multi-cost system is required per the project specifications. Do not paint steel to be embedded in concrete, fireproofed, or concealed by the interior building finish. Do not paint surfaces to be field welded. Steel shall be painted per the project specifications.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL: Steel identified by the Architect on the architectural drawings as Architecturally Exposed Structural Steel, (AESS) shall conform to Sec. 10 of AISC Code.

WOOD FRAMING

REFERENCE STANDARDS: Conform to:

(1) IBC Chapter 23 "WOOD"
(2) NDS - "2005 National Design Specification (NDS) for Wood Construction".
(3) APA PDS—97 Plywood Design Specification (revised 1996)
(4) ANSI/TPI 1 "National Design Standard for Metal-Plate-Connected Wood Truss Construction".
(5) TPI HIB "Commentary and recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses"
(6) TPI DSB "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses"
(7) APA Report T98-22 – "Nail Penetration and Framing Specific Gravity Factors for Shear Walls and Diaphragms"

SUBMITTALS: Submit shop drawings to the Architect/Engineer for review. Shop drawings shall include member size, spacing, camber, material type, grade, shop and field assembly details and connections, types and location of bolts and other fasteners.

DEFERRED SUBMITTALS: Submit product data and proof of ICBO approval for framing members and fasteners that have been designed by others. Submit calculations prepared by the SSE in the state of Montana for all members and connections designed by others along with shop drawings. All necessary bridging, blocking, blocking panels and web stiffeners shall be detailed and furnished by the supplier. Temporary and permanent bridging shall be installed in conformance with the manufacturer's specifications. Deflection limits shall be as noted under DESIGN LOADS section. Products included are:

- Open web wood trusses

IDENTIFICATION: All sawn lumber and pre-manufactured wood products shall be identified by the grade mark or a certificate of inspection issued by the certifying agency.

MATERIALS:

- Sawn Lumber: Conform to grading rules of WWPA, WCLIB or NLGA. Finger jointed studs acceptable at interior walls only.

Member Use	Size	Species	Grade
Studs	2x4, 3x4, 2x6, 3x6	Doug Fir Larch	No.2
Sill Plate	2x4, 3x4, 2x6, 3x6	PT Doug Fir Larch	No. 2
Posts	4x4, 4x6, 4x8	Doug Fir Larch	No.2
Joists	2x6 — 2x12	Doug Fir Larch	No. 2
Beams	4x6 — 4x12	Doug Fir Larch	No. 2
Beams	6x8 — 6x12	Doug Fir Larch	No. 1
Posts & Timbers	6x6, 8x8	Doug-Fir Larch	No. 1

- Glued Laminated Timber: Conform to AITC 117-2004 "Standard Specifications for Structural Glue-laminated Timber of Softwood Species, Manufacturing and Design" and ANSI/AITC A190.1 "Structural Glued Laminated Timber." Camber all glued laminated members beams to 2000' radius, unless shown otherwise on the plans.

Member Use	Sizes	Species	Comb. Symbol	Uses
Beams	All	DF/DF	24F--V4	Simple Spans
	All	DF/DF	24F--V8	Cantilever Spans
Columns	All	DF	L2	Post-Truss Member

- Wood Structural Sheathing (Plywood): Wood APA-rated structural sheathing includes: all veneer plywood, oriented strand board, waferboard, particleboard, T1-11 siding, and composites of veneer and wood based material with T&G joint. Architect may disallow OSB. Confirm with Architect. Conform to "Construction and Industrial Plywood" based on Product Standard PS 1-95 by the U.S. Dept. of Commerce, and "Performance Standard for Wood-Based Structural-Use Panels" based on Product Standard PS 2-92 by the U.S. Dept. of Commerce and "Plywood Design Specification (revised 1996)" based on APA PDS—97 by the American Plywood Association.

- Minimum APA Rating

Location	Thickness	Span Rating	Plywood Grade	Exposure
Roof	23/32"	40/20	C-D	1
Roof	15/32"	32/16	C-D	1
Walls	15/32"	32/16	C-D	1

Unless noted otherwise on drawings, install roof and floor panels with long dimension across supports and with panel continuous over two or more spans. End joints shall occur over supports. HUD UM406 grade marking of sheathing certification is required.

- Timber Connectors: Shall be "Strong Tie" by Simpson Company as specified in their latest catalog. Alternate connectors by other manufacturers may be substituted provided they have current ICBO approval for equivalent or greater load capacities and are reviewed and approved by the SER prior to ordering. Connectors shall be installed per the manufacturer's instructions. Where connector straps connect two members, place one-half of the nails or bolts in each member. Where straps are used as hold-downs, nail straps to wood framing just prior to drywall application, as late as possible in the framing process to allow the wood to shrink and the building to settle. Premature nailing of the strap may lead to strap buckling and potential finish damage.

  Where connectors are in exposed exterior applications in contact with preservative treated wood (PT) other than CCA, connectors shall be either batch hot-dipped galvanized (HDG), mechanically galvanized (ASTM B695, Class 40 or greater) stainless steel, or provided with 1.85 oz/sf of zinc galvanizing equal to or better than Simpson ZMAX finish.

- Fasteners (nails, bolts, screws, etc) attaching timber connectors (joist hangers, post caps and bases, etc) to PT wood shall have similar corrosion resistance properties (matching protective treatments) as the protected connector. Fasteners (nails, bolts, screws, etc) attaching sawn timber members or sheathing (shear walls) to PT wood be corrosion resistant; nails and lag bolts shall be either HDG (ASTM A153) or stainless steel. Verify the suitability of the fastener protection/coating with the wood treatment chemical manufacturer/supplier.

  Provide washers under the heads and nuts of all bolts and lag screws bearing on wood. All nails 12d and smaller shall be full length common unless noted otherwise. 16d nails may be 16d sinkers unless noted otherwise. Nail straps to wood framing as late as possible in the framing process to allow the wood to shrink and the building to settle. Premature nailing of the strap may lead to strap buckling and potential finish damage.

- Fasteners: Conform to IBC Section 2304.9 "Connections and fasteners." Unless noted on plans, nail per Table 2304.9.1. Unless noted otherwise all nails shall be common. Alternate nails may be used but are subject to review and approval by the Structural Engineer. Substitution of staples for the nailing of rated sheathing is subject to review by the structural engineer prior to construction.

- Lag Bolts/Bolts: Conform to ASTM A307 and IBC Section 2304.9.

NAILING REQUIREMENTS: Provide minimum nailing in accordance with IBC Table 2304.9.1. "Fastening Schedule" except as noted on the drawings. Nailing for roof/floor diaphragms/shear walls shall be per drawings. Nails shall be driven flush and shall not fracture the surface of sheathing.

STANDARD LIGHT-FRAME CONSTRUCTION: Unless noted on the plans, construction shall conform to IBC Section 2308 "Conventional Light-Frame Construction."

NAILERS ON STEEL COLUMNS and BEAMS: Wood 3x nailers are generally required on all HSS columns and steel beams abutting or embedded within wood framing. Unless noted otherwise, attach with 5/8" diameter bolts or welded studs at 16" on centers. Wood nailers on beams supporting joist hangers shall not overhang the beam flange by more than ½".

MOISTURE CONTENT: Wood material used for this project shall have maximum moisture content of 19% except for the pressure-treated wood sill plate. Refer to TESTING & INSPECTIONS for the verification of these limits. The maximum moisture content required may be less than 19% when based on a particular cladding/insulation system. Refer to the Architect's drawings, and project specifications, or with cladding installer for maximum recommended moisture content.

CLADDING COMPATIBILTY: The Architect/Owner shall review the cladding and insulation systems proposed for the project with respect to their performance over wood studs with moisture contents greater than 19%. EIFS systems should be avoided on wood-framed projects due to problems with moisture proofing.

PRESERVATIVE TREATMENT (PT): Wood materials are required to be "treated wood" in accordance with IBC Section 2304.11. "Decay and Termite Protection" shall conform to the appropriate standards of the American Wood-Preservers Association (AWPA) for sawn lumber, glued laminated timber, round poles, wood piles and marine piles. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Products shall bear the appropriate mark. Fasteners or anchors in treated wood shall be of stainless steel or hot-dipped galvanized or as per IBC 2304.9.5. [HUD UM48a Pressure-Treated Lumber and Plywood Certification is required.]

Mud sill plates in normally dry interior applications may be treated with Sodium Borate (DOT - Disodium Octaborate Tetrahydrate) as recent studies have noted less connector corrosion potential than other available wood treatments or the original CCA treated sill plates. Wood treated with Sodium Borate shall be protected during shipment, storage and installation to minimize leaching of the water-soluble preservative from the lumber. Sodium borate pressure treated plates do not require hot-dipped galvanized connectors.

If using sill plates other than CCA or sodium borate, fasteners must be hot dipped galvanized or stainless steel. Fasteners (nails, bolts, screws, washers & lag screws) attaching timber connectors (joist hangers, post caps and bases, etc) to PT wood shall have similar corrosion resistance properties (matching protective treatments) as the protected connector; that is, use hot dipped galvanized or stainless steel fasteners. Fasteners (nails, bolts, screws, washers & lag screws) attaching sawn timber members or sheathing (shear walls) to Pressure Treated wood be corrosion resistant (hot dipped galvanized or stainless steel.

Always verify the suitability of the fastener protection/coating with the wood treatment chemical manufacturer/supplier.

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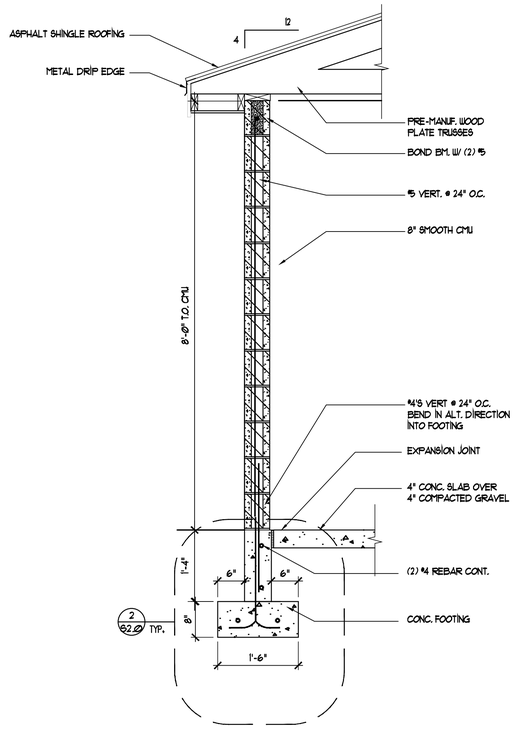
PROJECT: LIBERTY LAKE RV PARK
LIBERTY LAKE, WA
DRAWINGS: GENERAL NOTES

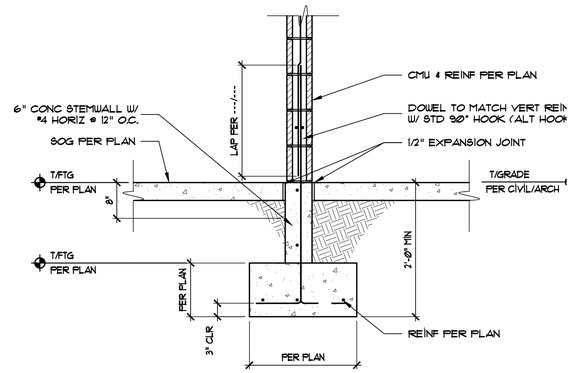
DATE: 6-28-2017
PLOT SCALE: AS NOTED
DRAWN BY:
JOB NO.: 17-120
SHEET NO.: S1.2



A
S2.0

WALL SECTION

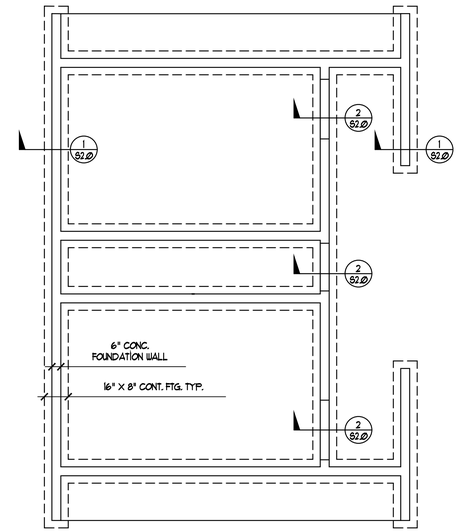
3/4"=1'-0"



1
S2.0

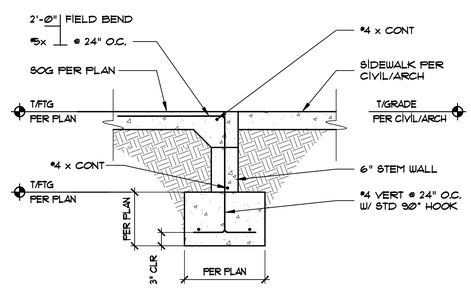
TYP. FOOTING DETAIL

3/4"=1'-0"



FOUNDATION PLAN

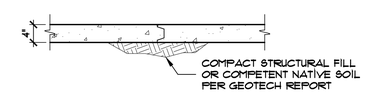
1/4" = 1'-0"



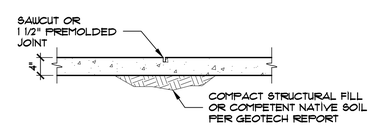
2
S2.0

TURN DOWN SLAB

3/4"=1'-0"



CONSTRUCTION JOINT



CONTROL JOINT

NOTES:

1. FOR CONSTRUCTION OR CONTROL JOINT LOCATIONS REF FOUNDATION/SLAB PLAN.
2. USE "SOFFCUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST.
3. PROVIDE CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE ARES OF 144 SF MAX.

3
S2.0

SLAB CONTROLL JOINT

3/4"=1'-0"

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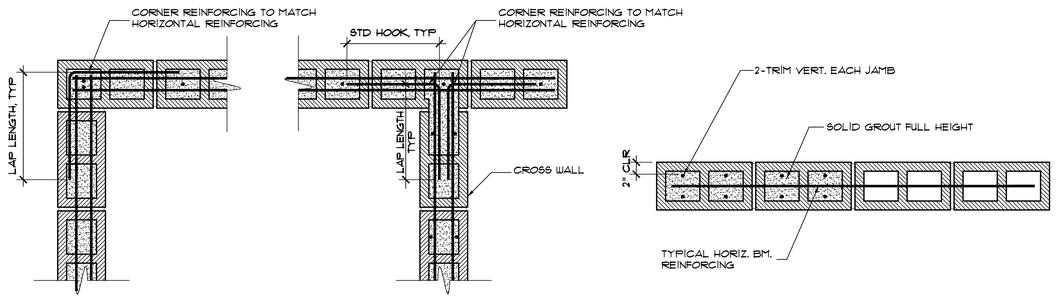
PROJECT:
LIBERTY LAKE RV PARK
LIBERTY LAKE, WA
DRAWINGS:
FOUNDATION PLAN AND DETAILS

DATE: 6-28-2017
PLOT SCALE: AS NOTED
DRAWN BY:
JOB NO.: 17-120
SHEET NO.: S2.0

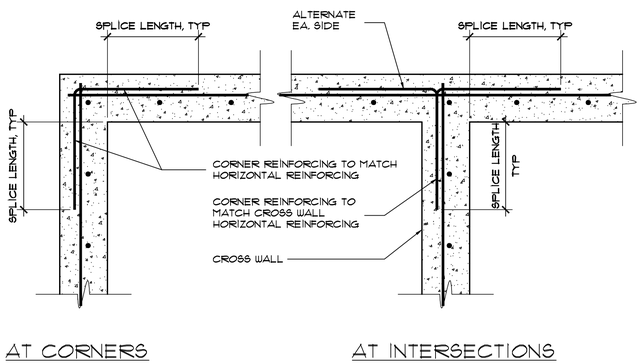
N:\Home\17-120 LIBERTY LAKE RV PARK\BESTROOM\17-120 S2.0.dwg, 6/30/2017 6:31:43 PM, DWG To PDF.pc3



AT CORNERS

AT INTERSECTIONS

AT JAMB OR END



AT CORNERS

AT INTERSECTIONS

NOTES:

1. LAP LENGTHS PER REINFORCING LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE FOR CMU.
2. WALL REINFORCING PER ELEVATIONS, SECTIONS AND DETAILS.
3. CORNER REINFORCING AT FOOTING AND STEM WALLS TO MATCH FOOTING AND STEMWALL HORIZONTAL REINFORCING.

1 / S3.2 PLAN-TYPICAL CORNER REINFORCING @ CMU WALL

1" = 1'-0"

CONCRETE

BAR SIZE	TOP BARS			OTHER BARS		
	Ld	CLASS A	CLASS B	Ld	CLASS A	CLASS B
f'c=3,000 psi						
#3	16	16	21	13	13	16
#4	22	22	28	17	17	22
#5	27	27	35	21	21	27
#6	32	32	42	25	25	32
#7	32	32	49	29	29	38
#8	43	43	56	33	33	43
#9	48	48	63	37	37	48
#10	58	58	76	45	45	58
#11	71	71	93	55	55	71

MASONRY

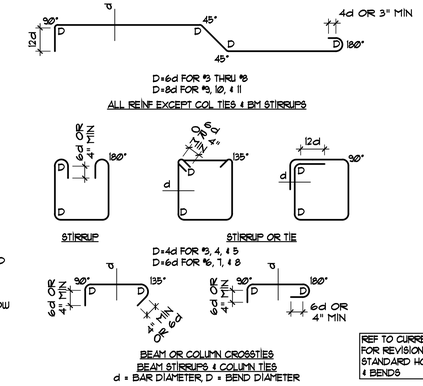
BAR SIZE	LAP LENGTH
#3	18
#4	24
#5	30
#6	36
#7	42

NOTES:

1. DEVELOP ALL BARS INTO SLABS, BEAMS, OR COLUMNS WITH Ld MINIMUM.
2. SCHEDULE ABOVE APPLIES TO CATEGORY 6 BAR DEVELOPMENT AND LAP SPLICE LENGTHS PER LATEST EDITION OF ACI 318. REFER TO DRAWINGS FOR SPECIAL CASES.
3. TOP BARS ARE BARS WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON THE DOCUMENTS AS "TOP BARS".
4. UNLESS NOTED OTHERWISE, ALL LAPS SHALL BE MINIMUM CLASS B SPLICE.
5. PROVIDE 48 BAR DIAMETERS MINIMUM LAP FOR ALL MASONRY BAR SPLICES.

2 / S3.0 LAP SPLICE & DEVELOP.

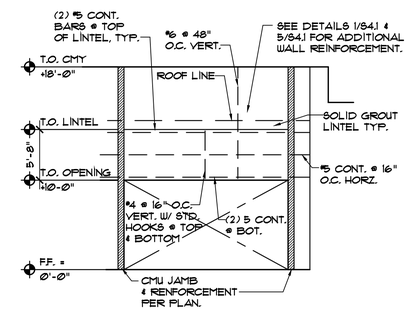
NTS



3 / S3.0 STND HOOKS & BENDS

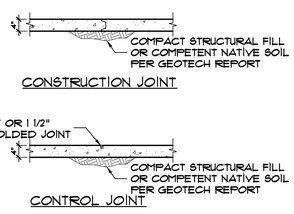
NTS

Standard Hooks & Bends.dwg



5 / S3.0 CMU LINTEL BEAM

1/8" = 1'-0"



NOTES:

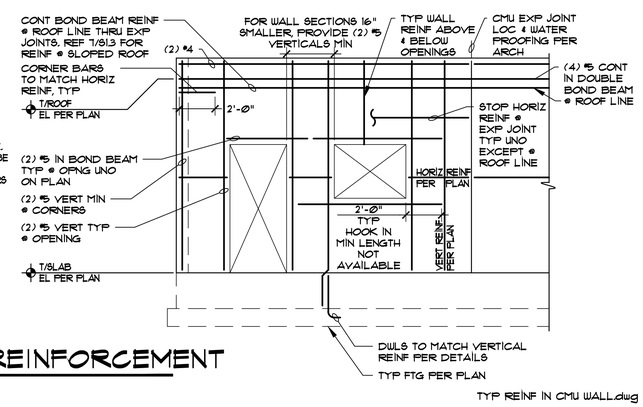
1. FOR CONSTRUCTION OR CONTROL JOINT LOCATIONS REF FOUNDATION/SLAB PLAN.
2. USE "SOFFCUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST.
3. PROVIDE CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREA OF 144 SF MAX.

4 / S3.0 SLAB CONTROLL JOINT

1/2" = 1'-0"

NOTE:

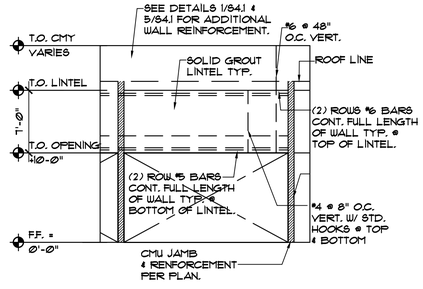
1. GROUT CMU WALLS AT ALL REINFORCING.
2. WHEN (2) REINFORCING BARS ARE CALLED OUT, LOCATE (1) BAR IN EACH FACE, OTHERWISE CENTER SINGLE BARS IN CELL.
3. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT BEFORE LOSS OF PLASTICITY IN A MANNER TO FILL THE GROUT SPACE. GROUT POURS GREATED THAN 12" IN HEIGHT SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION TO MINIMIZE COINDS DUE TO WATER LOSS. GROUT POURS 12" OR LESS IN HEIGHT SHALL BE MECHANICALLY VIBRATED OR PUDDLED.



TYP REINF IN CMU WALL.dwg

7 / S1.1 TYP. WALL REINFORCEMENT

1/4"=1'-0"



6 / S3.0 CMU LINTEL BEAM

1/8" = 1'-0"

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PROJECT: LIBERTY LAKE RV PARK
LIBERTY LAKE, WA
DRAWINGS: STRUCTURAL DETAILS

DATE: 6-28-2017
PLOT SCALE: AS NOTED
DRAWN BY: MEK
JOB NO.: 17-120
SHEET NO.: S2.1