DEVIATION FROM PLANS – Any deviation from these plans shall have been consulted with and documented by the supervising professional.

NON–CONTRACT ITEMS – Items may appear on these plans that are done by others and are not part of the Walters Buildings' contract.

WALTERS BUILDINGS GENERAL SPECIFICATIONS

SPLASHBOARDS – Splashboards are 2"x4" S4S #2 or better Southern Pine, pressure treated to a net retention of 0.4 pounds per cubic foot with Smart SenseTM copper based treatment. Approved for G–90 galvanized protected connectors and for aluminum contact.
Building code compliant – NER #628. One row is furnished for building on a level grade. Smart SenseTM is a trademark of S–T–N Holdings, Inc.

FRAMING – Side girts are 2"x4" S4S 1650 MSR or better Spruce Pine Fir spaced approximately 32" o.c. with all joints staggered at attachment to columns. Roof purlins are 2"x6" S4S 2400 MSR or better Southern Yellow Pine spaced on edge approximately 24" o.c. All other framing lumber is standard grade or better. Studs are 2"x4" S4S 1650 MSR or better Spruce Pine Fir spaced 24" o.c.

GUTTERS – 5" box type gutters, color to match trim, on both side of the building.

ROOFING PANELS – Structural Steel Grade 80 with G–90 Sheet, pretreatment, urethane primer, and Modified silicon polyester topcoat. Conforms to ASTM A 653.

SIDING PANELS – Structural Steel Grade 80 with G–90 Sheet, pretreatment, urethane primer, and Modified silicon polyester topcoat. Conforms to ASTM A 653.

TRIM – Die formed trim of Structural Steel Grade 80 with G–90 Sheet, pretreatment, urethane primer, and Modified silicon polyester topcoat on gables, ridges, corners, base, windows and doors.

ERECTION NOTES – All wood members must be properly braced until the complete structural system has been completed. The contractor must refer to TPI publication BCSI–B10 POST FRAME SUMMARY SHEET, "POST FRAME TRUSS INSTALLATION & TEMPORARY RESTRAINT / BRACING" for erection, handling and bracing guidance. Also refer to the truss detail for permanent lateral bracing requirements. All lateral bracing specified on the truss detail are intended to provide lateral restraint for individual truss members only. There is additional permanent structural bracing shown on the plans. For guidelines regarding truss bracing, see TPI publication BCSI–B10 POST FRAME SUMMARY SHEET, "POST FRAME TRUSS INSTALLATION & TEMPORARY RESTRAINT / BRACING". Additional permanent structural bracing is specified on the drawings and must be installed as shown. Permanent bracing is supplied as part of the building package. Erection bracing is supplied by the erection contractor.

SITE WORK – The building site shall be graded to provide drainage away from the building. Maintain the grade levels shown on the plan around the building.

STRUCTURAL STEEL – All structural steel required shall be equal to A–36. Design shall conform to the latest AISC Specifications.

WOOD – All wood design shall conform to ANSI/AF&PA NDS–2015.

SOIL BEARING VALUES – Foundations shall not be placed prior to confirmation of the soil type at a depth of 5 feet below the bottom of the footing. The presumed soil bearing value for footing design is 2,000 PSF.

PLACEMENT – All below grade concrete or Sakrete footings to bear on firm, dry, virgin soil or compacted granular fill in uniform layers not exceeding 8" in depth after compaction. Each layer shall be uniformly spread and compacted at the optimum moisture content to a dry density that is at least 90% of the maximum density.

CONCRETE – Design mixes shall be obtained from the following:
1. Strength to be a minimum of 3500 PSI at 28 days for walls and footings.
2. Strength to be a minimum of 3500 PSI at 28 days for floor slabs.
3. Slump not to exceed 4 inches.

Concrete placement shall be in accordance with ACI 318–95.
* CONCRETE SLUMP TEST RESULTS REPORT WILL BE PROVIDED.
** Visual soil bearing composition will be performed and to meet the min. bearing capacity of 2000 psf.

REINFORCING STEEL – Steel reinforcing shall meet the requirements of the "Standard Specifications" for:
1. Billet–Steel Concrete Reinforcing Bars Grade 60 (ASTM designation A–615).
2. All steel bars shall meet the requirements of ASTM designation A–615. All welded wire mesh
3. for concrete reinforcement shall meet the requirement shall meet the requirements set forth in
4. Standard Specification (ASTM designation A–185). The reinforcement shall not be painted and
5. must be free from grease, dirt or deep rust when placed in the work. To prevent rust, the material
6. must be protected from moisture. The reinforcement shall be protected by the proper thickness of
7. concrete. Where not otherwise shown, the thickness of concrete over the reinforcement shall be :
A. Where concrete is deposited against the ground without the use of forms, the thickness of
B. concrete shall not be less than 3 inches.
C. Where concrete is exposed to weather, the thickness of concrete shall not be less than 1 1/2 inches.
D. In columns or pedestals not exposed to weather or ground, the thickness of concrete shall not be
E. less than 1 1/2 inches.
Reinforcing steel shall be placed in accordance with CRSI Standards.

ANCHOR BOLTS – The contractor shall set all anchor bolts to receive the building. The bolts shall be the size as shown or required and shall be set with the use of a template. They may be drilled into place as allowed. The anchor bolts must be set or drilled into concrete with a minimum strength of 3,000 PSI at 28 days. Many states require a ⌀" bolt with a minimum of 7" embedment.

EXIT SIGN – Sign shall have an illumination intensity of not less than 5 foot–candles. Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss. Per IBC 1003.2.10.1, exit signs are not required in rooms or areas which require only one exit. Provide an approved type illuminated sign bearing the word "EXIT" in 6" high letters above all doors shown as a circled letter "E" with four radiated dashes.

Check required door & window rough openings before framing.

WALK DOORS – Solid Blank Polyurethane Foam Core or With Double Pane Window. WINDOWS – Double Pane Clear Thermal Break Metal Frame Windows. OVERHEAD DOORS – Thermal Core.

ELECTRICAL – All work shall be done in strict accordance with state and local codes. Electrical work in not part of this plan

Exterior cracks, joints, and holes in the buildings envelope are caulked, gasketed, weatherstripped, or otherwise sealed. Interior finish of walls & ceiling shall have a flame spread rating of less than 200. Interior finish Class III Rating – flame spread rating less than 200 and smoke development rating of less than 450.

SOUND & INSULATION – Exposed shall have a flame spread rating of 25 or less and smoke development rating of 450 or less. Concealed shall have a flame spread rating of 75 or less and a smoke development rating of 450 or less. Vapor retarder shall be installed to the warm side of the insulation.

GENERAL SPECIFICATIONS

The project consists of a Studwall structure for SUSAN A. BUTE, FINISH LINE STORAGE per WALTERS BUILDINGS Specifications.
The building is a total of (6,193) sq. ft.

BUILDING LOCATION : FINISH LINE STORAGE
2110 ENTERPRISE AVE
LA CROSSE, WI
LA CROSSE COUNTY

Type of Construction – 5B, Unprotected Combustible
Use Group Classification – S–1 – MODERATE HAZARD STORAGE
NON–HEATED MINI STORAGE STUDWALL BUILDING

2015 IBC

S–1 MODERATE HAZARD STORAGE – Risk Category II
Tabular Allowable Area per IBC Table 506.2 = 9,000 sq. ft.
Total Allowable Area Based on Open Perimeter & Sprinkler Requirements = 12,000 sq. ft.
Allowable Height per IBC Tables 504.3 & 504.4 = 1 Story, 40 feet

OCCUPANT LOAD – Risk Category II
(AREA 1) = 6193 sq. ft./500 = 13.39
ACTUAL OCCUPANT LOAD = 13
LARGEST UNIT OCCUPANCY = 1

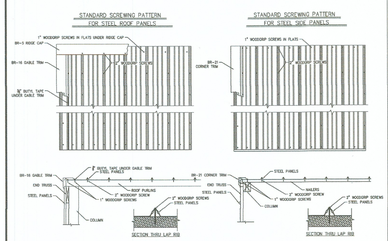
SNOW – Risk Category II
Pf = 0.7CeCtIpg
Ps = CsPf
Pg (Ground Snow Load) = 40 PSF
Ce (Snow Exposure Factor) = 1.0
Ct (Thermal Factor) = 1.2
I (Snow Load Importance Factor) = 1.0
Pf (Flat Roof Snow Load) = 33.6 PSF
Cs = 0.94
Ps = 31.5 PSF
Unbalanced Snow Load = 35 PSF USING SPS 362.1608
Used Design Roof Snow Load = 35 PSF

WIND – Risk Category II
Qz = 0.00256KzKztKd(V)2I
P = Qz[(GCpf)–(GCpi)]
Kz (Velocity Pressure Exposure Coefficient) = 0.70
Kzt (Wind Speed Up) = 1.0
Kd (Wind Directionality) = 0.85
U (ULTIMATE WIND SPEED) = 115 MPH
Nominal Wind Speed Conversion Factor = 0.6
V (Nominal Wind Speed) = 89.1 MPH
I (Wind Load Importance Factor) = 1.00
Qz (Velocity Pressure) = 12.1 PSF
GCpf = Figure 6–3
GCpi = +0.18 or –0.18
USED P = 13 PSF
Exposure Category B = Represents urban and suburban, wooded areas or terrain with numerous closely spaced obstructions the size of single family dwellings or larger.

SEISMIC – Risk Category II
Ss (Mapped Spectral Response Acceleration 0.2 Sec) = 5.30%
S1 (Mapped Spectral Response Acceleration 1.0 Sec) = 3.60%
Sds (Spectral Response Coefficient) = 0.057
SD1 (Spectral Response Coefficient) = 0.058
Seismic Design Category = Category A
Site Class D
Seismic Base Shear = 1,357#
Basic Structural and Seismic–Resisting System= Light Framed Walls W/Shear Panels
R (Response Modification Factor) = 7.0
Cs (Seismic Response Coefficient) = 0.010
Using Equivalent Lateral Force Procedure

LOADS

Ground Snow Load : 40 PSF
Design Snow Load (Ps = Live Load) : 31.5 PSF
Unbalanced Snow Load = 35 PSF
Snow Load Used= 35 PSF
Total Load Used= 39 PSF
115 MPH Exposure B
Design Wind Load (P=Velocity Pressure): 13 PSF
Presumed Soil Bearing Capacity : 2000 PSF
Presumed Lateral Soil Pressure : 150 PSF



ABBREVIATIONS

ABV	Above	L.A.V.	Lavatory
AFF	Above Finish Floor	LVR	Louver
ASPH	Asphalt	MAS	Masonry
BD	Base Board	MIL	Millimeter(s)
BBP	Blocking Between Purlins	M.O.	Masonry Opening
BIT	Bituminuous	NBW	Not By Walters Buildings
BLK(G)	Block(ing)	N.I.C.	Not In Contract
BOT	Bottom	N.T.S.	Not To Scale
BRG	Bearing	O.C.	On Center(s)
B.S.	Both Sides	OHD	Overhead Door
℄	Centerline	O/O	Out to Out
CFT	Cubic Foot	PERI	Perimeter
C.H.	Ceiling Height	PL	Property Line
CLOS	Closet	PSF	Pounds per Square Foot
COM	Common	PSI	Pounds per Square Inch
CMU	Concrete Masonry Unit	P.T.	Pressure Treated
d	Penny	R.C.	Raised Chord
DBL	Double	R.O.	Rough Opening
Ea.	Each	R.O.W.	Right of Way
E.E.	Each End	S.C.	Straight Chord
E.F.	Each Face	S.O.G.	Slab on Grade
E.W.	Each Way	SQM.	Square
F.D.	Floor Drain	STP	Steel Transfer Plate
F.E.	Fire Extinguisher	T&G	Tongue & Groove
F.O.	Framed Opening	T.O.L.	Top of Ledger
FT	Feet	T.O.W.	Top of Wall
GA	Gage, Gauge	TYP	Typical(ly)
GTE	Grade to Eave	TRTD	Treated
GTH	Grade to Heel	U.O.N.	Unless Otherwise Noted
GV	Galvanized	WH	Water Heater
IN.	Inch	WWF	Welded Wire Fabric
LAM	Laminated		

FASTENING SCHEDULE

BUILDING ELEMENT	NAIL OR STAPLE SIZE & TYPE	NUMBER & LOCATION
Floor Construction		
Built–up girders & beams	20d common	32" o.c. direct
Bridging to joists	8d common	2 ea. direct end
Floor joists to studs	10d common	5 direct or 3 direct
Floor joists to studs(w/ceiling joist)	10d common	2 direct
Floor joists to sill or girder	8d common	3 toe nail
Ledger strip	16d common	3 ea. direct joist
1" subflooring(6" or less)	8d common	2 ea. direct joist
1" subflooring(8" or more)	8d common	3 ea. direct joist
2" subflooring	16d common	2 ea. direct joist
Particleboard underlayment(1/4"–3/4")	6d annular threaded	6"o.c. direct edges & 12"o.c. intermediate
Wood structural panel subflooring		
(1/2" or less)	6d common or 6d annular/spiral thread	6"o.c. direct edges & 12"o.c. intermediate
(19/32" – 3/4")	8d common or 6d annular/spiral thread	6"o.c. direct edges & 12"o.c. intermediate
(7/8" – 1–1/8")	10d common or 8d ring shank	6"o.c. direct edges
	8d annular or spiral thread	6"o.c. intermediate
(1/2" or less)	16ga galvanized wire staples	4"o.c. edges & 7" o.c. intermediate
(19/32" , 5/8")	3/8" min. crown, 1–5/8" length	2–1/2"o.c. edges & 4"o.c. intermediate
Wall Construction		
Stud to sole plate	8d common	4 toe nail
	16d common	2 direct nail
Stud to cap plate	16d common	2 toe nail or 2 direct nail
Double studs	10d common	12"o.c. direct
Corner studs	16d common	24"o.c. direct
Sole plate to joist or blocking	16d common	16"o.c.
Interior–braced wall sole plate–parallel joist	16d common	12"o.c.
Double cap plate	10d common	16"o.c. direct nail
Cap plate laps	10d common	2 direct nail
Ribbon strip, 6" or less	10d common	2 ea. direct bearing
Ribbon strip, 6" or more	10d common	3 ea. direct bearing
Diagonal brace (to stud & plate)	8d common	2 ea. direct bearing
Interior–braced wall top plate–joist/blocking	10d common	12"o.c.
Tail beams to headers(nailing permitted)	20d common	1 ea. end 4 sq.ft. floor area
Header beams to trimmers(nailing permitted)	20d common	1 ea. end 8 sq.ft. floor area
Continuous header to stud	8d common	4 toe nail
Continuous header, two pieces	16d common	16"o.c. direct
Roof & ceiling construction		
Ceiling joists to plate	16d common	3 toe nail
Ceiling joists (laps over partition)	10d common	3 direct nail
Ceiling joists (parallel to rafter)	10d common	3 direct nail
Collar beam	10d common	3 direct
Roof rafter to plate	8d common	3 toe nail
Roof rafter to ridge	16d common	2 toe nail or direct nail
Jack rafter to hip	10d common	3 toe nail
	16d common	2 direct nail
1" roof decking (6" width or less)	8d common	2 ea. direct rafter
1" roof decking (over 6" width)	8d common	3 ea. direct rafter
Wall & roof sheathing		
1" wall sheathing (8" width or less)	8d common	2 ea. direct stud
1" wall sheathing (over 8" width)	8d common	3 ea. direct stud
1/2" fiberboard sheathing	1–1/2" GV roofing nail or 6d common	3"o.c. exterior edge, 6"o.c. intermediate
	16ga staple, 1–1/8" w/min crown of 7/16"	
25/32" fiberboard sheathing	1–3/4" GV roofing nail or 8d common or 16ga staple, 1–1/2" w/min crown or 7/16"	3"o.c. exterior edge, 6"o.c. intermediate
Gypsum sheathing	12ga 1–1/4" large head, corrosion resistant	4"o.c. on edge, 8"o.c. intermediate
Gypsum sheathing (seismic tracing)	11ga 1–3/4"long 7/16"head, diamond point GV	4"o.c. all bearing points
Particleboard wall sheathing(1/2" or less)	6d common	6"o.c. direct edges & 12"o.c. intermediate
Particleboard wall sheathing(5/8" or less)	8d common	6"o.c. direct edges & 12"o.c. intermediate
Wood structural panel roof & wall sheathing		
(1/2" or less)	6d common(walls); 8d common(roofs)	6"o.c. direct edges & 12"o.c. intermediate
(19/32"–1")	8d common	6"o.c. direct edges & 12"o.c. intermediate
(1" or greater)	10d common	6"o.c. direct edges & 12"o.c. intermediate
(1/2" or less)	16ga GV wire staples, 3/8"min. crown length of 1"+panel thickness	4"o.c. edges & 8"o.c. intermediate
(19/32", 5/8")	same as immediately above	2–1/2"o.c. edges & 5"o.c. intermediate
Shingles	#14 B&S ga corrosion resistant	2 ea. bearing
Weatherboarding	8d corrosion resistant	2 ea. bearing

Note A: Single nails shall penetrate not less than 3/4" into nailing strips, sheathing or supporting construction except as otherwise provided for in Section 1507.0.
Note B: For regions having a basic wind speed of 90 mph or greater where the main roof height is less than 25 ft. and for regions having basic wind speed of 80 mph or less, nails which attach wood structural panel roof sheating to gable end wall framing shall be spaced 6" o.c. Where basic wind speed is greater than 80 mph, nails which attach panel roof sheathing to intermediate supports shall be spaced 6" o.c. of a minimum of a 48" distance from ridges, eaves & gable end walls; & 4" o.c. to gable end wall framing.
Note C: For regions having a basic wind speed of 90 mph greater, 8d deformed shank nails shall be utilized to attach wood structural panel roof sheathing to framing within a minimum 48" distance from gable end walls provided the mean roof height is between 25' and 35'. For roof heights greater than 35' in a 90 mph or greater wind region, attachment of wood structural panel roof sheathing shall be designed for the wind loads in Section 1609.0.
Note D: Nails shall be spaced 6" o.c. direct to panel edges and 6" o.c. to intermediate supports where panel spans are 48" o.c. or greater.
Note E: 1" = 25.4mm, 1' = 304.8mm.

SHEET INDEX

STATE OF WISCONSIN * DANIEL L. PEDERSON PE26814 REGISTERED * PROFESSIONAL ENGINEER
10/10/19

Walters Buildings
Jack Walters & Sons, Corp.
P.O. Box 388
6600 Midland Ct.
Allenton, WI 53002
1–800–558–7800
www.waltersbuildings.com

REVISIONS

OWNER: SUSAN A. BUTE

PROJECT: FINISH LINE SELF STORAGE

LOCATION: 2110 ENTERPRISE AV. LA CROSSE, WI

SALES REP / DEALER: DAVE RUDRUD

DRAWN BY: JOHN S. ON: 10/9/2019

ESTIMATED BY: EST ON:

LAST SAVED BY: JSCHNEIDER ON: 10/9/2019

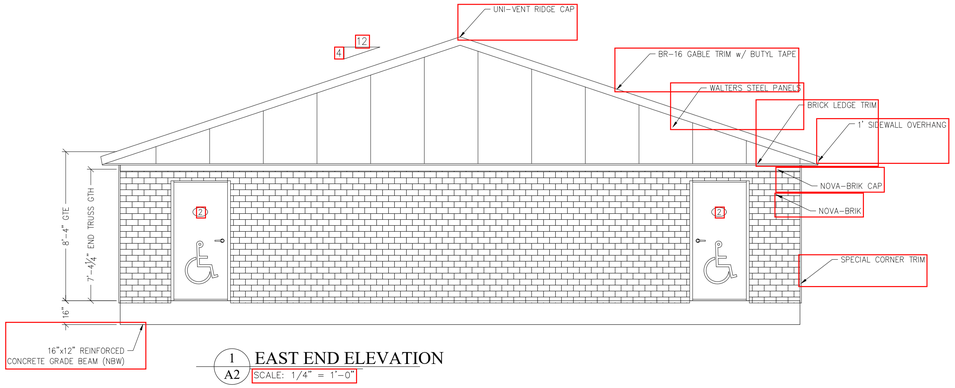
SCALE: 1/8" = 1'-0"

JOB NUMBER: P98–1153R3

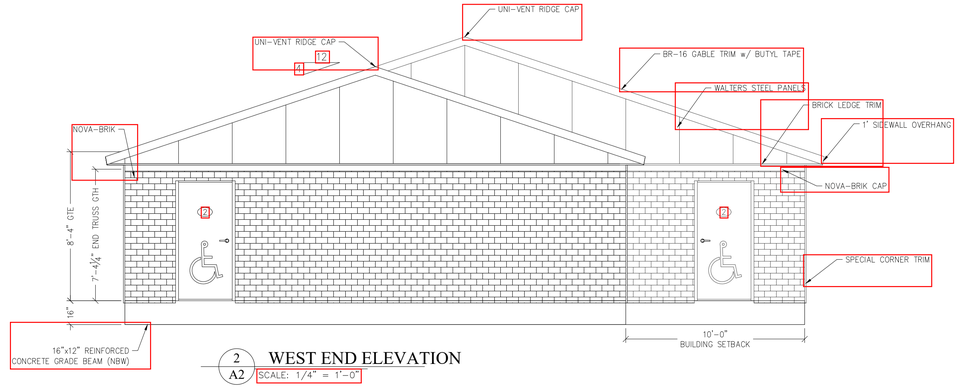
SHEET NUMBER: A1

DOOR & UNIT SCHEDULE

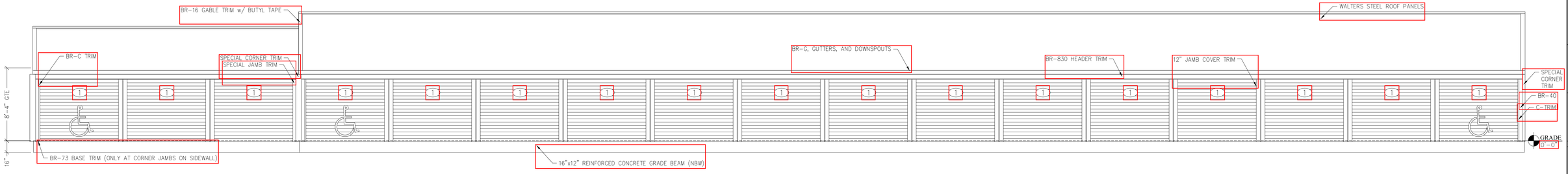
TAG	TYPE	QTY
1	9'-0"x7'-0" ROLL UP DOOR	34
12	3'-0"x6'-8" COMMERCIAL WALKDOOR w/ KWIKSET LEVERSET	4
A	10'x30' UNIT	3
B	10'x20' UNIT	28



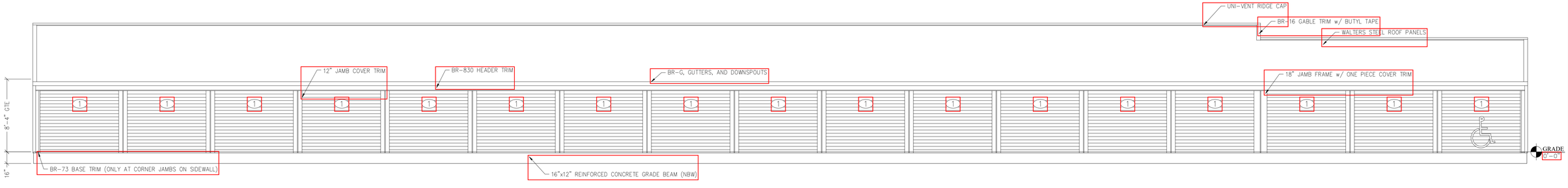
1 A2 EAST END ELEVATION
SCALE: 1/4" = 1'-0"



2 A2 WEST END ELEVATION
SCALE: 1/4" = 1'-0"



3 A2 SOUTH SIDE ELEVATION
SCALE: 3/16" = 1'-0"



4 A2 NORTH SIDE ELEVATION
SCALE: 3/16" = 1'-0"

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ESTIMATED BY: EST ON:

LAST SAVED BY: JSCHNEIDER ON: 10/10/2019

SCALE: AS NOTED

JOB NUMBER: P98-1153R3

SHEET NUMBER: A2

DOOR & UNIT SCHEDULE

TAG	TYPE	QTY
1	9'-0"x7'-0" ROLL UP DOOR	34
2	3'-0"x6'-8" COMMERCIAL WALKDOOR w/ KWIKSET LEVERSET	4
A	10'x30' UNIT	3
B	10'x20' UNIT	28

ACCESSIBLE UNITS – Per IBC 1107.6 at least 5% of mini-storage units with a minimum of one of each size, shall be accessible. Per IBC 1003.3.1.6 slope concrete at accessible units so as to provide a doorway threshold of 1/2" or less, Raised thresholds shall be beveled with a slope no greater than 12:1. Accessible storage units shall have permanent accessibility identification per IBC 1101.2/ANSI A117.1 703.1 & 703.7 A storage space is considered accessible if there is any one of he following: 1) a swing door with a minimum of 32" clearance and 6'-8" height; 2) an electric garage door opener installed for use with an overhead door; or 3) the roll up door meets the opening & closing force maximums of IBC 1008.1.2 and has accessible hardware

FIRE EXTINGUISHERS – OWNER TO FURNISH AND INSTALL FIRE EXTINGUISHERS PER NFPA NO. 10

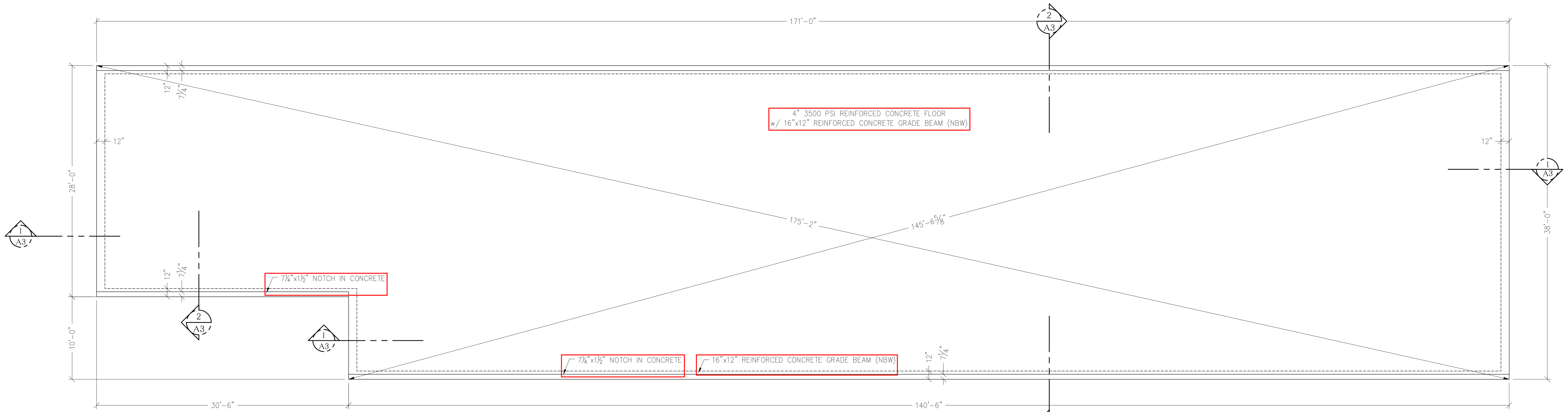
NFPA TABLE 3-2.1

Hazard Occupancy	Light (Low)	Ordinary (Moderate)	Extra (High)
Minimum Rated Single Extinguisher	2-A	2-A	4-A*
Maximum Floor Area per Unit of A	3,000 sq. ft.	1,500 sq. ft.	1,000 sq. ft.
Maximum Floor Area per Extinguisher	11,250 sq. ft.	11,250 sq. ft.	11,250 sq. ft.
Maximum Travel Distance to Extinguisher	75 ft.	75 ft.	75 ft.

* Two 2 1/2 Gallon Water Type Extinguishers can be used to fulfill the requirements of One 4-A Rated Extinguisher.

*6 MIL UNDER SLAB VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6" IS REQUIRED EXCEPT FOR:

1. UNHEATED BUILDINGS
2. UNHEATED STORAGE ROOMS LESS THAN 20 SQUARE FEET & CARPORTS ATTACHED TO R-3 OCCUPANCIES
3. FOR BUILDINGS OF OTHER OCCUPANCIES WHERE MIGRATION OF MOISTURE THROUGH THE SLAB FROM BELOW WILL NOT BE DETRIMENTAL TO THE INTENDED OCCUPANCY OF THE BUILDING
4. FOR DRIVEWAYS, WALKS, PATIOS & OTHER FLATWORK THAT WILL NOT BE ENCLOSED AT A LATER DATE
5. WHERE APPROVED BASED ON LOCAL SITE CONDITIONS



1 A3 CONCRETE PLAN
SCALE: 1/8" = 1'-0"

The Rawl-Stud is available with a length identification mark stamped on the head of the anchor as shown below.

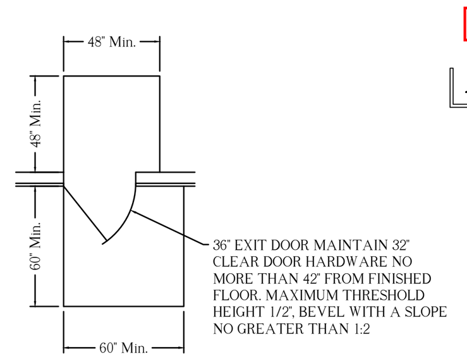
Mark	A	B	C	D	E	F	G	H
From	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
Up to But Not Including	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2

Mark	I	J	K	L	M	N	O	P
From	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9
Up to But Not Including	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2

Mark	Q	R	S	T	U	V	W	X	Y	Z
From	9 1/2	10	11	12	13	14	15	16	17	18
Up to But Not Including	10	11	12	13	14	15	16	17	18	19

Use in: Concrete, stone
Use with: No other fastener needed
Made of: Carbon steel or stainless steel
Size range: 1/4" x 1-3/4" to 1-1/4" x 12"
No layout or hole spotting required
Patented inter-locking wedges
FM approved, UL listed,
ICBO Report No. 4514, Metro-Dade
89 diameters and lengths, other sizes on special order
Also stocked in mechanically galvanized carbon steel, types 303 and 316 stainless steel

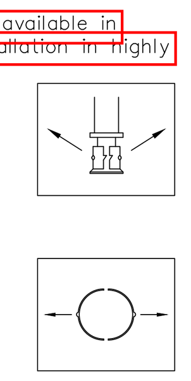
Position fixture, drill hole. Drive Rawl-Stud into hole until nut and washer are flush with fixture, and tighten.



WALK DOOR CLEAR SPACE
SCALE: 3/8" = 1'-0"

The Rawl-Stud is a one-piece anchor available in carbon steel or stainless steel for installation in highly corrosive environments.

The patented dual inter-locking expansion wedges provide optimum performance. During installation of the Rawl-Stud, the interlocking tabs on the wedges prevent spinning of the anchor during the tightening process. As the anchor is tightened, the wedges distribute the compression load equally in lateral planes to prevent cocking of the anchor or premature failure of the concrete due to uneven distribution of the load.



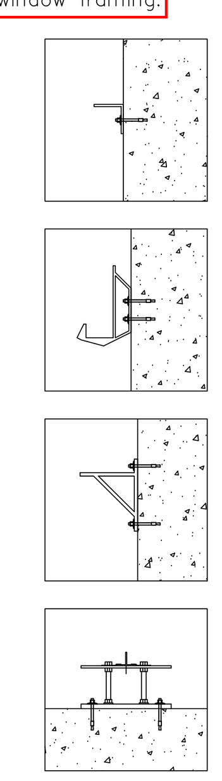
The dependable holding power of the Rawl-Stud makes this anchor ideal for heavy construction applications such as bridges, dams, and power plants. It is particularly well suited for fastning highway guard railings and signs, mechanical supports, elevator equipment, conveyors, machinery, storage racks, loading docks, railings, and floor and window framing.

The Rawl-Stud is ideal for fastening angle brackets, support angles for floors and formwork, and high-load shelving.

Using the Rawl-Stud, supports for highway and commercial signs are securely attached to a wide variety of masonry materials.

Supports for piping, conduits, and electrical junction boxes are securely fastened with the Rawl-Stud.

The one-piece Rawl-Stud is ideal for the installation of equipment such as elevator guide rails.



FIXTURE CLEARANCE HOLES

Anchor Size	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
Clearance Hole	5/16"	7/16"	9/16"	11/16"	13/16"	15/16"	1-1/8"	1-3/8"

LOAD CAPACITIES FOR RAWL-STUD

TENSION LOAD (lbs.)

Anchor Size	Embed. Depth	Install Torque (ft.-lbs.)	2,000 psi Concrete	4,000 psi Concrete	6,000 psi Concrete
1/4"	1-1/4"	8	1,670	2,380	2,195
1/4"	1-1/2"	8	2,120	2,560	2,585
1/4"	2"	8	2,725	2,925	3,050
3/8"	1-5/8"	28	3,565	4,125	4,150
3/8"	2"	28	3,900	4,310	4,400
3/8"	3"	28	4,800	4,800	5,070
1/2"	2-1/4"	60	6,525	6,625	6,625
1/2"	3"	60	7,135	8,050	8,050
1/2"	4"	60	7,945	9,945	9,945
5/8"	2-3/4"	90	7,330	8,365	8,390
5/8"	4"	90	9,375	10,140	11,565
5/8"	5"	90	11,010	11,555	14,100
3/4"	3-3/8"	175	10,745	10,745	15,525
3/4"	5"	175	14,855	15,695	19,380
3/4"	6"	175	17,385	18,745	21,755
7/8"	3-7/8"	250	12,330	15,820	19,275
7/8"	4-1/2"	250	14,300	17,620	20,995
7/8"	5-3/4"	250	18,245	21,225	24,440
1"	4-1/2"	300	13,880	19,990	27,370
1"	5-1/2"	300	18,625	22,720	29,892
1"	6-1/2"	300	23,370	25,455	32,415
1-1/4"	5-5/8"	450	20,240	27,320	34,995
1-1/4"	7"	450	20,240	28,000	36,200

SPACES WITH ONE EXIT
1015.1 STORAGE OCCUPANCY MAXIMUM OF 29 OCCUPANTS. THE COMMON PATH OF EGRESS TRAVEL DOES NOT EXCEED 100 FT.

DOOR SWING
1008.1.2 DOOR SWING DOES NOT HAVE TO BE IN DIRECTION OF TRAVEL WHERE OCCUPANCY LOAD IS LESS THAN 50.

EXIT LIGHT NOT REQUIRED
1011.1 EXIT LIGHT NOT REQUIRED IN AREAS THAT HAVE ONLY ONE EXIT.

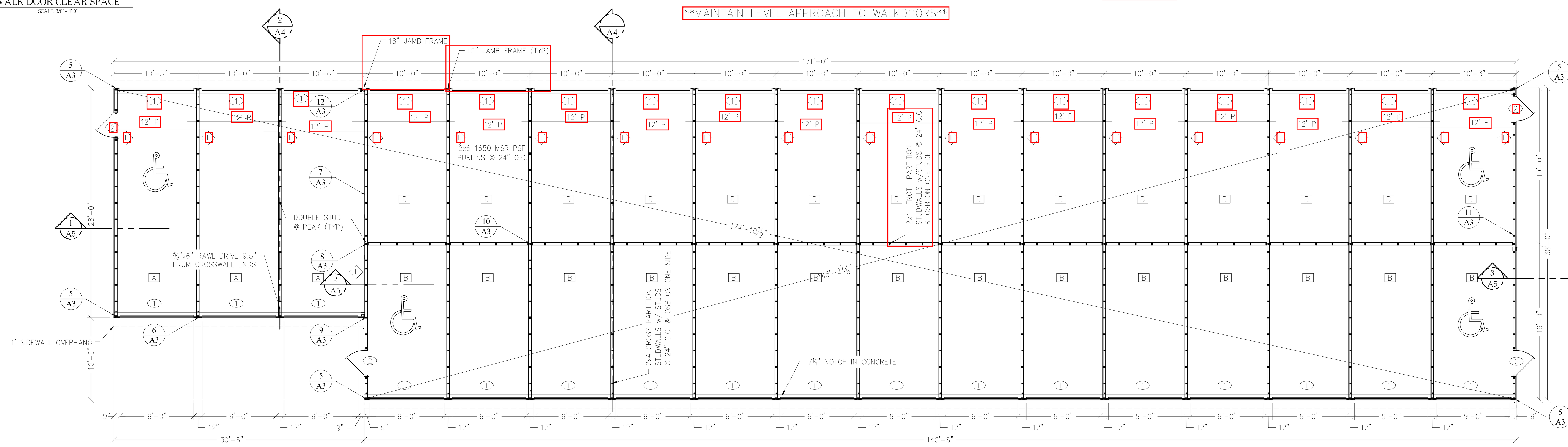
SHEAR LOAD (lbs.)

Anchor Size	Embed. Depth	Install Torque (ft.-lbs.)	2,000 psi Concrete	4,000 psi Concrete	6,000 psi Concrete
1/4"	1-1/4"	8	1,450	2,070	2,080
1/4"	1-1/2"	8	1,655	2,075	2,080
1/4"	2"	8	1,925	2,080	2,080
3/8"	1-5/8"	28	3,840	5,185	5,810
3/8"	2"	28	4,265	5,420	5,925
3/8"	3"	28	5,390	6,040	6,230
1/2"	2-1/4"	60	6,405	6,930	6,985
1/2"	3"	60	6,620	7,190	7,295
1/2"	4"	60	6,905	7,535	7,710
5/8"	2-3/4"	90	8,850	8,850	10,095
5/8"	4"	90	9,215	9,680	10,385
5/8"	5"	90	9,505	10,345	10,620
3/4"	3-3/8"	175	14,660	14,660	15,265
3/4"	5"	175	15,770	17,110	18,045
3/4"	6"	175	16,450	18,620	19,755
7/8"	3-7/8"	250	18,630	19,230	21,035
7/8"	4-1/2"	250	19,590	21,035	22,235
7/8"	5-3/4"	250	20,435	21,635	24,040
1"	4-1/2"	300	24,335	25,120	27,475
1"	5-1/2"	300	25,590	27,475	29,045
1"	6-1/2"	300	26,690	28,260	31,400
1-1/4"	5-5/8"	450	38,035	39,265	42,945
1-1/4"	7"	450	41,720	44,170	49,080

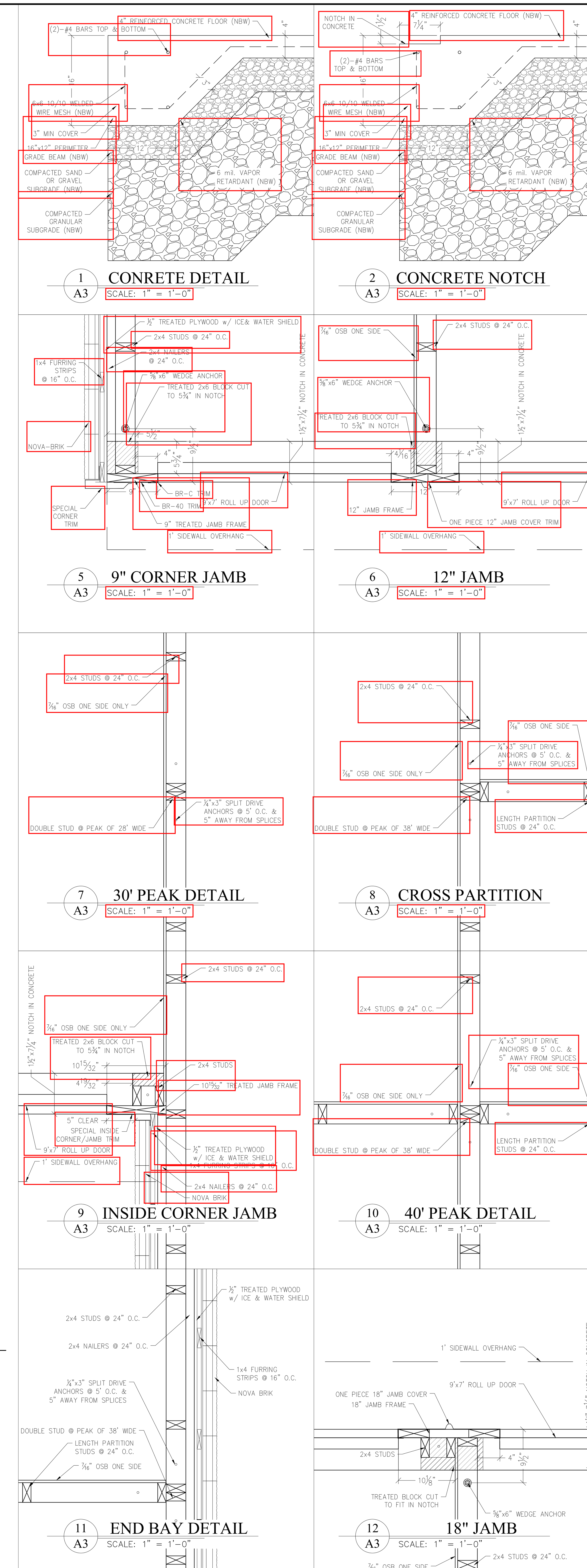
NOTE: The values listed above are ultimate load capacities for the carbon steel and stainless steel Rawl-Stud which should be reduced by minimum safety factor of 4 or greater to determine the allowable working load. Refer to the section on Selection and Specification of Anchors for details.

L = DENOTES 2x6 1650 MSR SPF LEDGER BOARD SIDE

MAINTAIN LEVEL APPROACH TO WALKDOORS



2 A3 FRAMING PLAN
SCALE: 1/8" = 1'-0"



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P.O. Box 388
6600 Midland Ct.
Allenton, WI 53002
1-800-558-7800
www.waltersbuildings.com

REVISIONS:

OWNER: SUSAN A. BUTE

PROJECT: FINISH LINE SELF STORAGE

LOCATION: 2110 ENTERPRISE AV. LA CROSSE, WI

SALES REP / DEALER: DAVE RUDRUD

DRAWN BY: JOHN S. ON: 10/10/2019

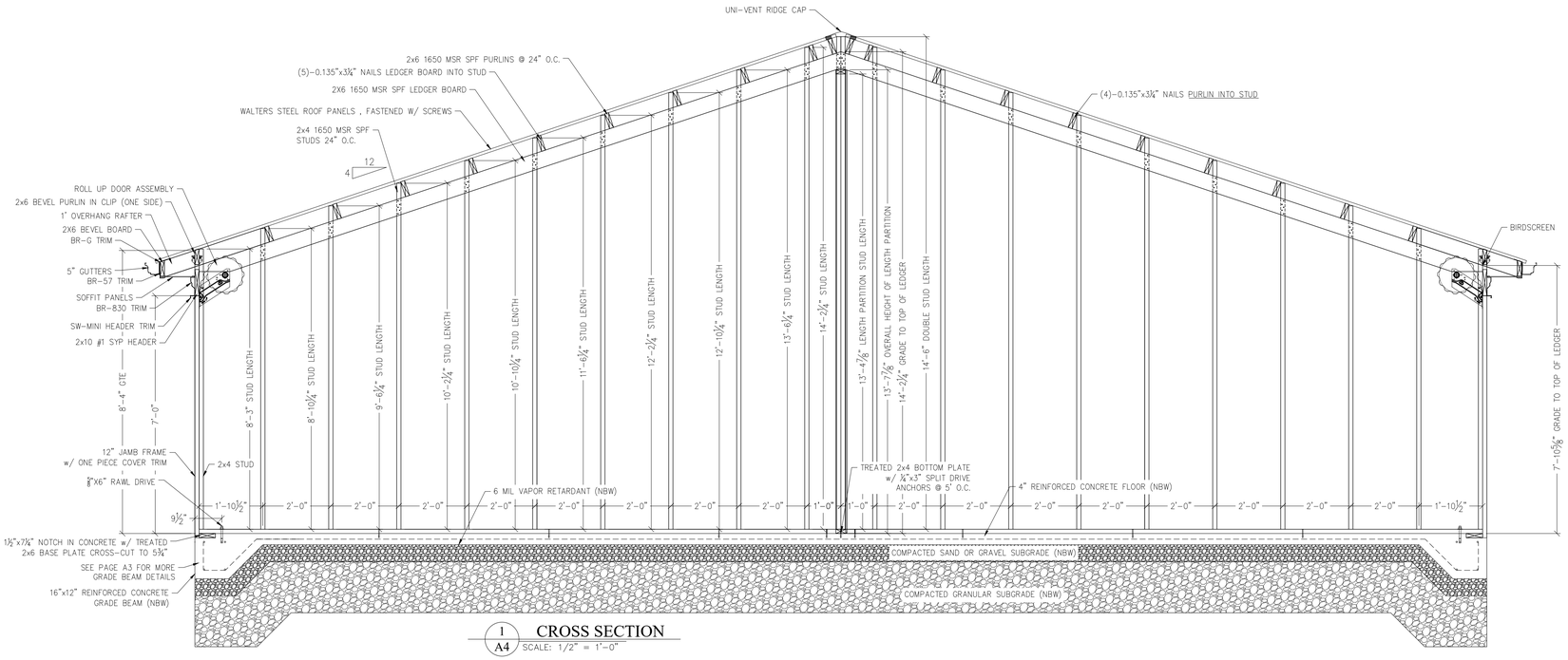
ESTIMATED BY: EST ON:

LAST SAVED BY: JSCHNEIDER ON: 10/10/2019

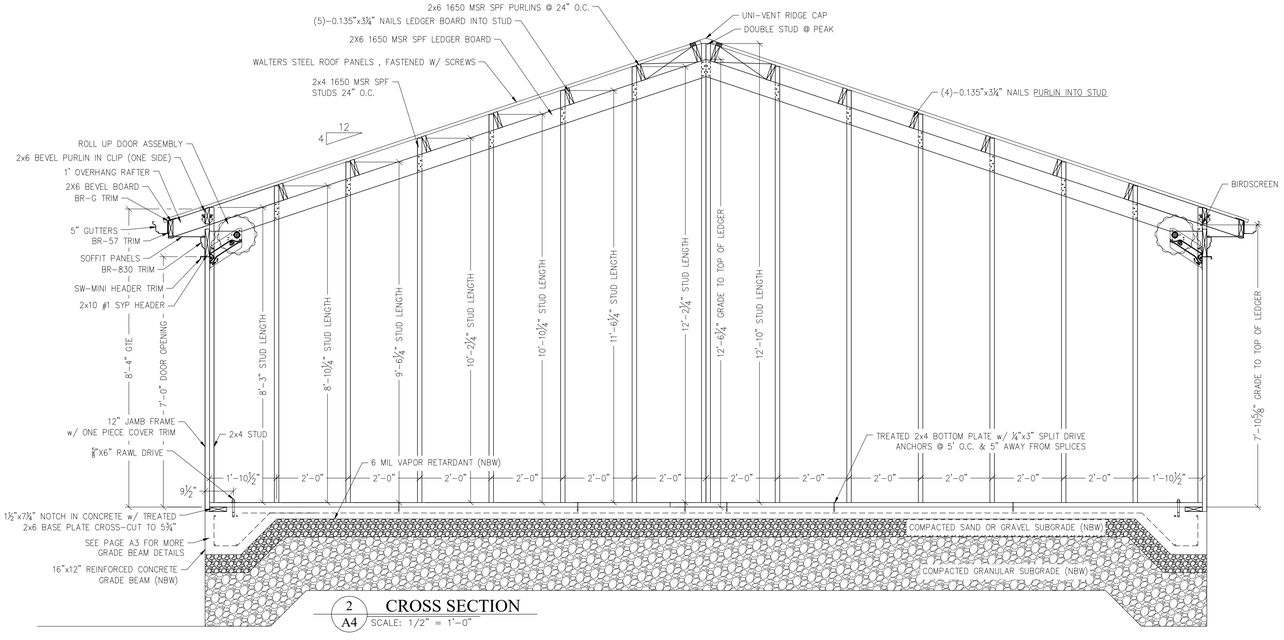
SCALE: AS NOTED

JOB NUMBER: P98-1153R3

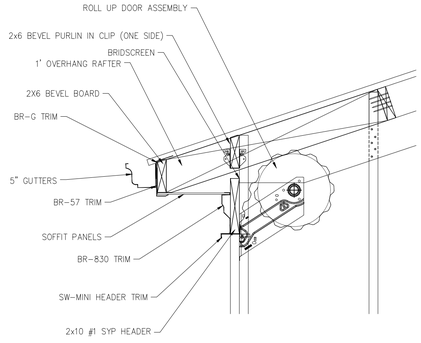
SHEET NUMBER: A3



1 / A4 CROSS SECTION
SCALE: 1/2" = 1'-0"



2 / A4 CROSS SECTION
SCALE: 1/2" = 1'-0"



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LA CROSSE, WI

SALES REP / DEALER:
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JOHN S. ON: 10/10/2019

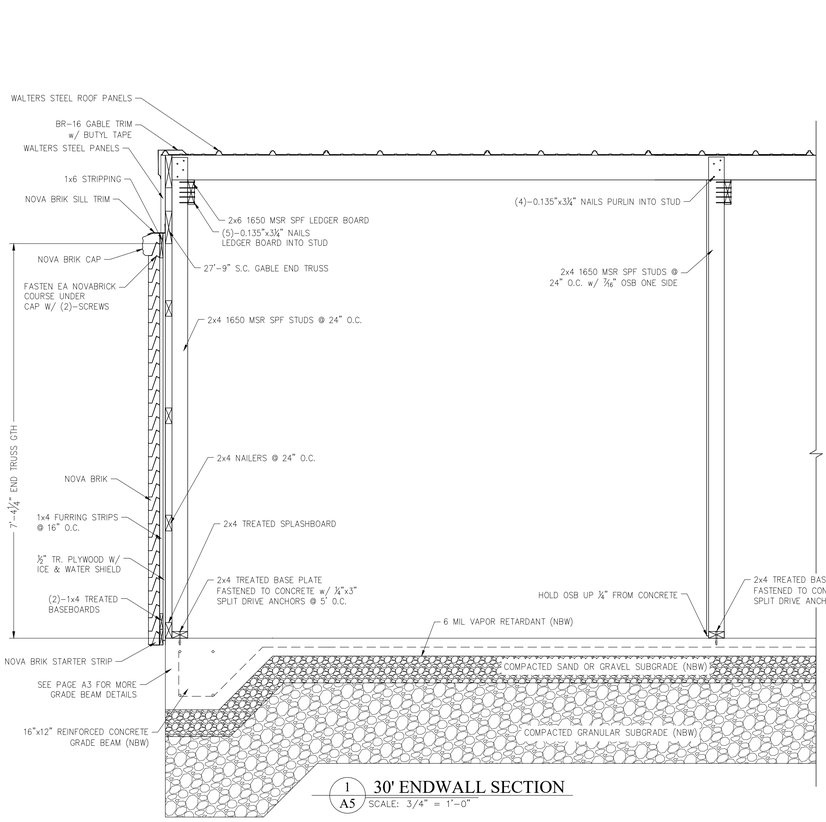
ESTIMATED BY:
EST ON:

LAST SAVED BY:
JSCHNEIDER ON: 10/10/2019

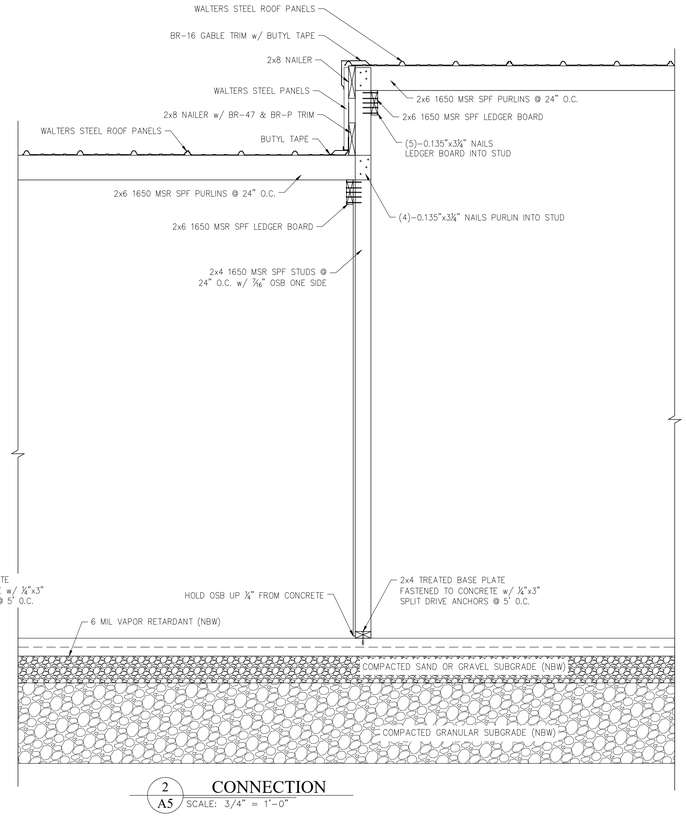
SCALE:
1/2" = 1'-0"
0 1 2

JOB NUMBER:
P98-1153R3

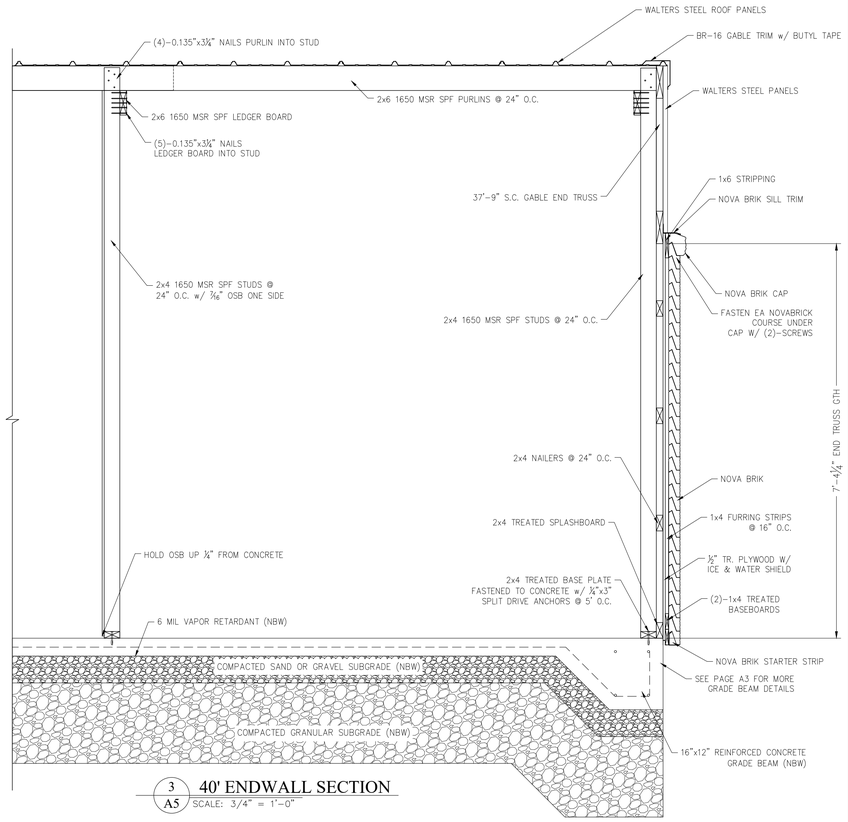
SHEET NUMBER:
A4



1 A5 **30' ENDWALL SECTION**
SCALE: 3/4" = 1'-0"



2 A5 **CONNECTION**
SCALE: 3/4" = 1'-0"



3 A5 **40' ENDWALL SECTION**
SCALE: 3/4" = 1'-0"

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DAVE RUDRUD

DRAWN BY:
JOHN S. ON: 10/10/2019

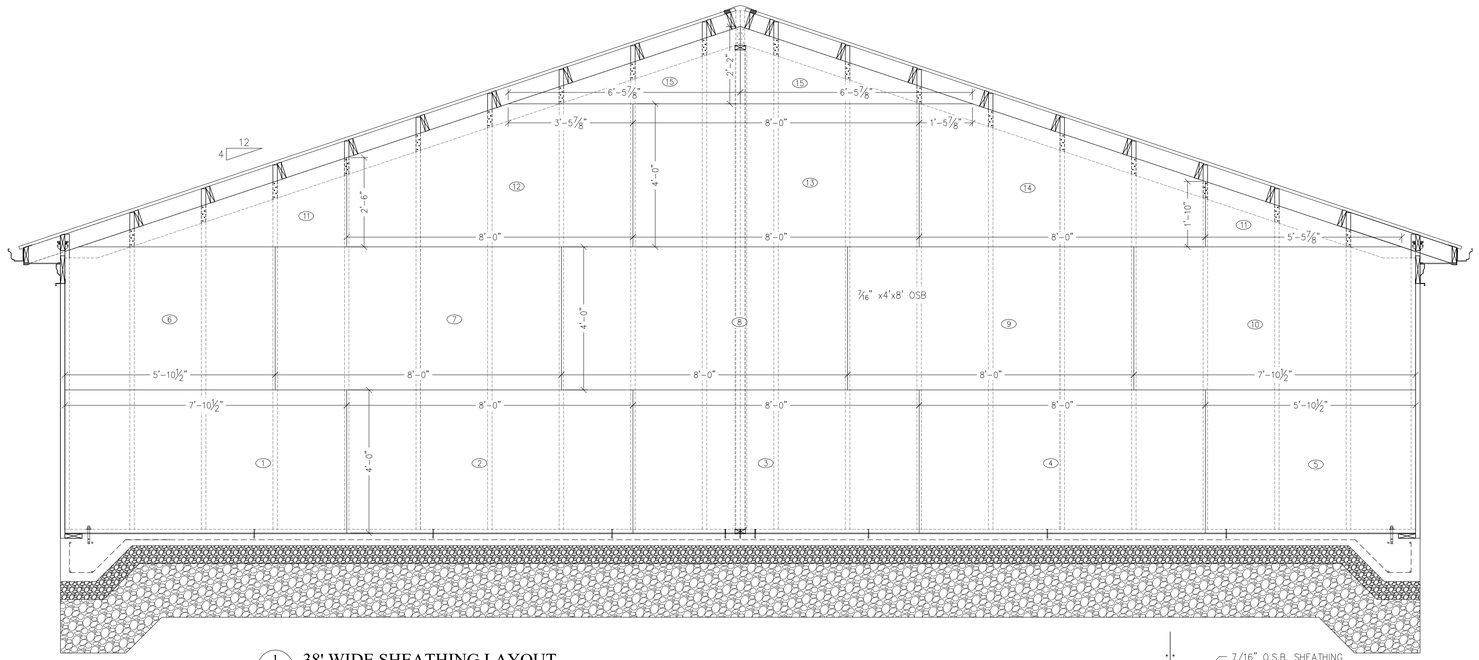
ESTIMATED BY:
EST ON:

LAST SAVED BY:
JSCHNEIDER ON: 10/10/2019

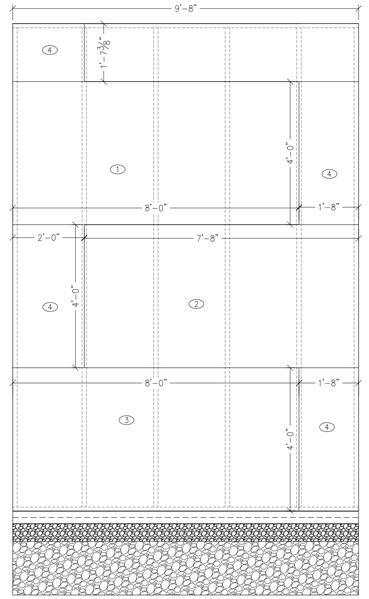
SCALE:
1/2" = 1'-0"
0 1 2

JOB NUMBER:
P98-1153R3

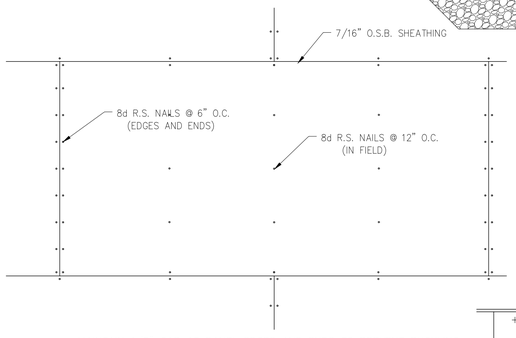
SHEET NUMBER:
A5



1 / A6 38' WIDE SHEATHING LAYOUT
SCALE: 1/2" = 1'-0"

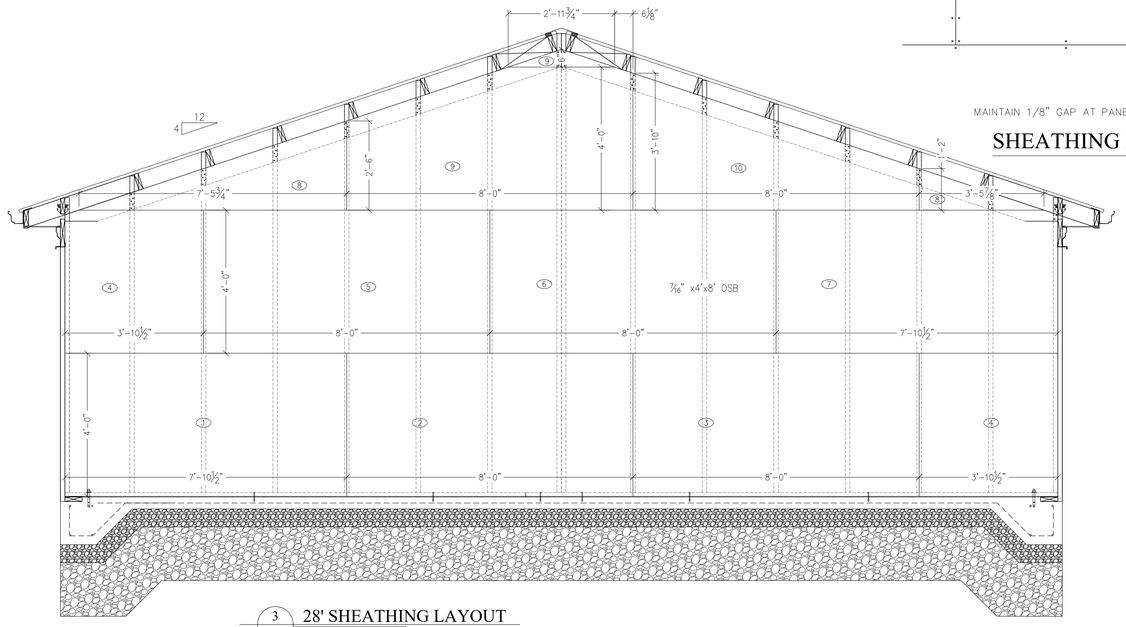


2 / A6 LENGTH PARTITION SHEATHING LAYOUT
SCALE: 1/2" = 1'-0"

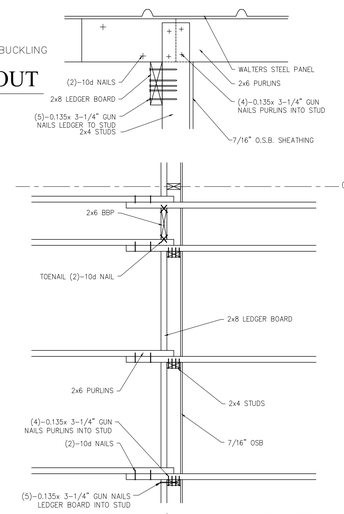


MAINTAIN 1/8" GAP AT PANEL EDGES AND ENDS TO PREVENT BUCKLING

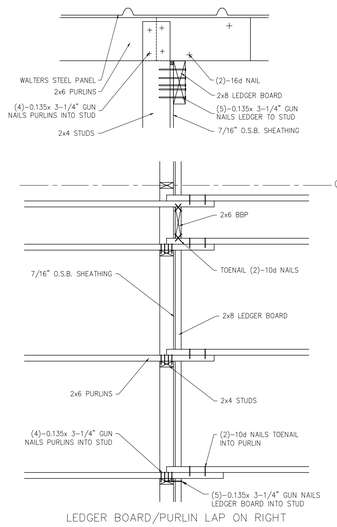
SHEATHING FASTENING LAYOUT



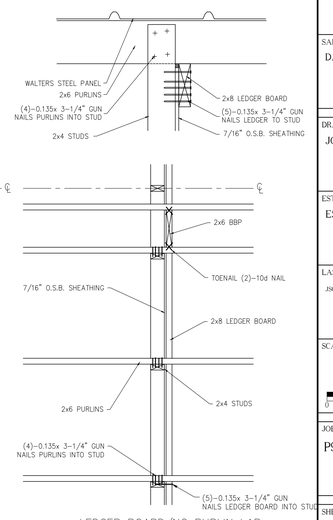
3 / A6 28' SHEATHING LAYOUT
SCALE: 1/2" = 1'-0"



LEDGER BOARD/PURLIN LAP ON THE LEFT



LEDGER BOARD/PURLIN LAP ON RIGHT



LEDGER BOARD/NO PURLIN LAP

LEDGER BOARD DETAILS
SCALE: 3/4" = 1'-0"

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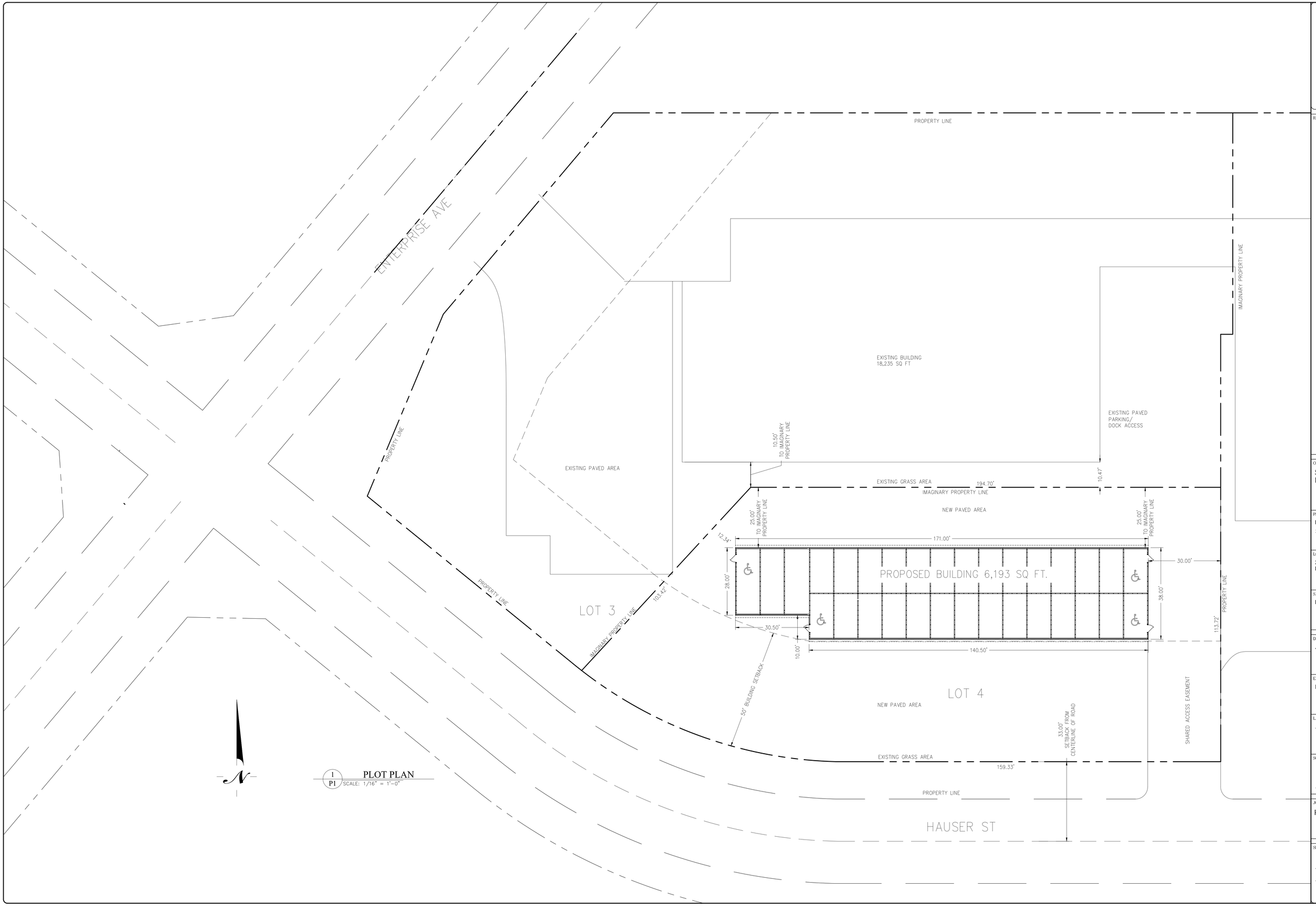
EST ON:

LAST SAVED BY:
JSCHNEIDER ON: 10/10/2019

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

JOB NUMBER:
P98-1153R3

SHEET NUMBER:
A6



1 / P1 PLOT PLAN
SCALE: 1/16" = 1'-0"

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EST ON:

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SCALE:
AS NOTED

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SHEET NUMBER:
P1