



GENERAL SERVICES COMMITTEE
Minutes – March 2, 2021

Call to Order. Chair Potter called the meeting of the General Services Committee to order at 7:34 A.M., Tuesday, March 2, 2021 at the DPW Garage, 3503 E. CTY RD S, Beloit, WI.

Committee Members Present: Supervisors Potter, Wilson, Homan and Brien.

Committee Members Absent: Supervisor Fox.

Staff Members Present: Randy Terronez, Assistant to the County Administrator; Brent Sutherland, Facilities Management Director; Dave Froeber and Mike Parille, Facilities Superintendents, and Duane Jorgenson, DPW Director.

Others Present: Brian Zobel, UW Whitewater at Rock County.

Approval of Agenda. Supervisor Homan moved approval of the agenda, second by Supervisor Wilson. ADOPTED.

Approval of Minutes – February 16, 2021. Supervisor Brien moved approval of the minutes of February 16, 2021 as presented, second by Supervisor Homan. ADOPTED.

Public Comment. No comments were submitted.

Transfers. None.

Review of Payments. The committee reviewed the payments.

Resolutions and Committee Approval

Awarding Contract for the DPW Wash Bay Renovations

“NOW, THEREFORE, BE IT RESOLVED, that the Rock County Board of Supervisors duly assembled this _____ day of _____, 2021 does hereby approve and authorize awarding a contract in the amount of \$185,225.00 to Advanced Building Corporation of McFarland, Wisconsin, for the DPW Wash Bay Renovations.

BE IT FURTHER RESOLVED, that a \$9,250.00 contingency also be approved to cover any unforeseen items.”

Supervisor Brien moved approval of the above resolution, second by Supervisor Homan as amended – Line 10 replace \$185,225,000 with \$185,225.00. ADOPTED.

Awarding Contract for Engineering for Boiler Replacements and Energy Efficiency Upgrades at Rock County Courthouse

“NOW, THEREFORE, BE IT RESOLVED by the Rock County Board of Supervisors duly assembled this _____ day of _____, 2021, and awards a contract for engineering to replace boilers and provide energy efficiency improvements at the Rock County Courthouse in the amount of \$29,000.00, to Johnson Controls, Inc., of Madison, WI.”

Supervisor Wilson moved approval of the above resolution, second by Supervisor Brien.
ADOPTED.

Updates, Discussion and Possible Action.

Update on Dr. Daniel Hale Williams Rock County Resource Center Project

Approval of Change Orders Mr. Sutherland distributed Change Order # 5 in the amount of \$34,600 and consisted of HVAC bipolar ionization units (\$30,000) and TV monitor installation (\$4,600) and covers the purchase/installation.

Supervisor Wilson moved approval of Change Order #5 in the amount of \$34,600.00, second by Supervisor Brien. ADOPTED

Schedule Mr. Sutherland reported that the project is on schedule for substantial completion in July.

Update on DPW Garage at Shopiere

Approval of Change Order. Mr. Sutherland distributed Change Order #26 in the amount of \$502.70 and consisted of electrical connection to Hand Wash Sink.

Supervisor Homan moved approval of Change Order #26 in the amount of \$502.70 second by Supervisor Wilson. ADOPTED

Denied Change Orders Mr. Sutherland distributed handouts and reviewed with the Committee the background for the following denied change orders.

- Change Order #9 Salt Storage Foundation Extras for Rebar and Concrete \$33,385.19
- Change Order #22 Concrete heat charges and additives \$10,798.63
- Change Order #23 Temporary Heat \$13,083.61

If not informally resolved, the County used a construction contract that calls for disputes over change orders to be taken to a court proceeding.

Schedule Mr. Sutherland reported that some final items are yet to be completed.

Courthouse Fire Alarm System Upgrade Given the project covers the equipment/supplies and labor with the County acting as the general contractor, Mr. Sutherland reviewed the following Change Orders:

- Change Order #1 Omni Technologies LLC \$9,981.51 Design Change-equipment

Supervisor Homan moved approval of Change Order #1 Omni Technologies LLC in the amount of \$9,981.51 second by Supervisor Wilson. ADOPTED

- Change Order #1 Electric Construction, Inc. \$17,803.94 Design change-labor

Supervisor Homan moved approval of Change Order #1 Electric Construction, Inc. in the amount of \$17,803.94 second by Supervisor Wilson. ADOPTED

Next Steps for Job Center Building Once it is Vacant

Mr. Sutherland reported that per direction given at the last Committee meeting, he plans on bringing a proposal for a real estate broker to the next Committee meeting.

Master Electrician Update Mr. Sutherland informed the Committee that the individual hired no longer is employed with the County. The department will be recruiting for a journeyman-level electrician with the requirement that the hired individual get their master electrician license within 2 years of employment.

Communications, Announcements and Information. Duane Jorgenson, DPW Director introduced himself to the Committee and thanked the Committee and Brent Sutherland/Facilities Management staff for the Shopiere Garage construction. It will be a great addition to DPW operations.

Tour of DPW Shopiere Garage Facility Mr. Sutherland and Duane Jorgenson, DPW Director led the Committee on a tour of the facility. (Note: Chair Potter left the meeting at 9:00 a.m.)

Adjournment. Supervisor Wilson moved adjournment at 9:06 A.M., second by Supervisor Homan. ADOPTED.

Respectfully submitted,

Randy Terronez
Assistant to the County Administrator

NOT OFFICIAL UNTIL APPROVED BY COMMITTEE



COUNTY OF ROCK, WISCONSIN CHANGE
ORDER FORM

CHANGE ORDER NUMBER	26
PROJECT NUMBER	2020-25
PROJECT NAME	New Vehicle Storage Building and Site Improvements Rock County
PURCHASE ORDER NUMBER	P2001461
CONTRACTOR NAME	Corporate Contractors Inc
ARCHITECT FIRM & CONTACT	Angus-Young Associates, Inc. Bradley Werginz B.Werginz@angusyoung.com
A/E JOB NUMBER	61670
DISTRIBUTION	OWNER Brent.Sutherland@co.rock.wi.us CONTRACTOR Dylan.Adel@ccwi.com FILE _____ OTHER B.Werginz@angusyoung.com
<i>We propose to provide the following change (s) to our contract for the above reference Project, with the contract amount being adjusted by Contract Change Order amount (s) stated below.</i>	
DESCRIPTION: RFI 49 - Electrical connection to Hand Wash Sink	
ORIGINAL CONTRACT SUM	\$4,241,500.00
PREVIOUS CHANGE ORDERS AMOUNT	\$ 210,620.77
CURRENT CHANGE ORDER AMOUNT	\$502.70
NEW CONTRACT SUM	\$ 4,452,623.47
CONTRACTOR SIGNATURE	
OWNER SIGNATURE	<i>Brent Sutherland</i>

ARCHITECT / ENGINEER SIGNATURE	2.26.21
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COUNTY OF ROCK, WISCONSIN CHANGE ORDER FORM

CHANGE ORDER NUMBER	#5
PROJECT NUMBER	JPC- 5889
PROJECT NAME	Rock County Human Services Building
PURCHASE ORDER NUMBER	
ARCHITECT FIRM & CONTACT	Venture Architect Jack Blume
A/E JOB NUMBER	
DISTRIBUTION	OWNER _____ CONTRACTOR _____ FILE _____ OTHER _____
<i>We propose to provide the following change (s) to our contract for the above reference Project, with the contract amount being adjusted by Contract Change Order amount (s) stated below.</i>	
DESCRIPTION: <ul style="list-style-type: none"> - Installation of HVAC Air Filtration Equipment – Bipolar Ionization GPS Units \$30,000 - Installation of 46 Owner Provided Wall Mounted TVs Delivered to Rooms by Others- \$4,600 - Contract Amount Previous to CO#5 \$21,233,705 	
ORIGINAL CONTRACT SUM	\$21,531,921
PREVIOUS CHANGE ORDERS AMOUNT	credit of (\$298,216)
CURRENT CHANGE ORDER AMOUNT	\$34,600
NEW CONTRACT SUM	\$21,268,305
CONTRACTOR SIGNATURE	<i>Jack Blume</i>
OWNER SIGNATURE	
ARCHITECT/ENGINEER SIGNATURE	

Handout
3-2-21

Rock County DPW Shopiere garage approved and denied Change orders are below.

- CO#1 \$20,072.26 RFP01 REV01 moving the building
- CO#2 \$ -325 credit RFP02
- CO#3 \$12,865.70 Undercut vehicle storage building
- CO#4 \$2,919.40 dewatering
- CO#5 \$1,320 add gate stiffeners
- CO#6 \$ 61,344.92 salt shed undercut due to poor soil conditions
- CO#7 \$\$3,614.44 sanitary drain revisions
- CO#8 \$ \$2,251.54 add additional microwave circuits
- CO#9 (CCI Pending Change order # 8) Denied \$33,385.30 for extra concrete and rebar for the salt shed**
- CO#10 \$ 3,740.00 Salt shed foundation sealer
- CO#11 \$ 5,414.52 RFP 5 requested asphalt removal initiated by Angus Young
- CO#12 \$26,555.10 adding the holding tank
- CO#13 \$39,778.75 Undercut inside of the salt shed
- CO#14 \$ 1,320 direct burial of loops verses saw cut
- CO#15-(**CCI Pending Change order # 16**) \$4,167.46 additional work per plans on Sheet C101
- CO#16- \$5,458.96 cone ties and labor
- CO#17- \$3,084.05 Electrical feed for septic tank alarm
- CO#18- \$1,294.17 Rough in for 5 thermostat
- CO#19- \$957.43 Mezzanine floor had to be poured thicker than the plan- Extra Concrete
- CO#20- \$1,337.36 Exit /EM lighting for Salt shed
- CO#21- \$2,551.12 Alternate Wash bay doors
- CO#22- (CCI Pending Change order # 23) Denied \$10, 798.63 Concrete heat charges and additives**
- CO#23 (CCI Pending Change order # 24) Denied \$13,082.61 Temp Heat**
- CO CO##23- \$14,960. Adding Sno- Guard to salt shed roof. Goes to committee tomorrow 2/16 for approval (I signed and gave approval before getting the required committee approval on error)
- CO#24-- \$ 1,526.05 adding transformer for air compressor 115 V power supply
- CO#25- \$ -1,320 credit to not install the gate stiffener initiated by CO #5
- CO#25 (CCI Pending Change order # 27) \$2,591.34 Denied additional access controls**

Brent Sutherland

From: Brent Sutherland
Sent: Tuesday, January 26, 2021 10:17 AM
To: 'Jennifer Holmes'
Cc: Dylan Adel; Tatiana Arreguin
Subject: RE: RCVSB Change Order Form 23
Attachments: RCVSB Change Order Form 23.pdf

Dylan,

I will not approve the attached Change order. Below is the section in the specifications showing this to be your responsibility. I am not happy with the direction you are heading with change orders.

3. General Contractor:
 - a. Provide temporary window and door closures as required and closures for all other temporary openings. Supervise effectiveness of all closures and see that every reasonable precaution is used to prevent escape of heat.
 - b. Permanent heating system may be used for temporary heating once the permanent heating system, heating controls, concrete installation, concrete curing, concrete saw-cutting, and masonry saw-cutting have been completed.
 - c. If the permanent system is not operable and the building is enclosed and heating is required, then the General Contractor shall furnish and install a

New Vehicle Storage Building and Site Improvements
PROJECT 61670

01 50 00 - 2

TEMPORARY
FACILITIES AND CONTROLS

- d. temporary heating system.
 - d. All portable heating units shall be properly ventilated to prevent combustion gases from remaining in the heated area.
 - e. The General Contractor shall ascertain if temporary heating equipment will operate on the temporary electrical service available. If service is insufficient to operate equipment, the General Contractor shall make all other arrangements at no additional cost to the Owner.
 - f. The temporary heating system shall be removed by the General Contractor after the permanent heating system has been installed, is operating, and balanced. Temporary heating equipment shall be relocated by the General Contractor as required during construction to prevent interference with new construction.
 - g. Temperatures: Except as otherwise specified, a minimum temperature of 45 degrees F for the building shall be maintained until completion of the Project.
 - h. Operation: Supervise and be responsible for operation of temporary heating system as required by weather and building conditions through the duration of construction. Be responsible for maintenance of temporary heating systems during period of construction and do any emergency repair work required during temporary operation.
4. The Contractor shall pay for all fuel consumed and temporary heating equipment cost throughout the duration of construction until Substantial Completion at no additional cost to the Owner.

Thank you,

Brent's question,

Would you be so kind to answer a question in regards to a bid you submitted to Rock County #2020-25 New Vehicle storage building and site improvements for Rock County Department of Public works at 3503 E County Road S Beloit WI 53511 on May 19, 2020? You were a bidder. Our low bidder is asking for a change order for additional concrete and rebar costs for the salt shed foundation walls indicating his cement sub contract did not have the salt shed specifications at the time of the bid. My records show the general contractors were sent the attached specification on 5/13/2020. Did your subcontractor concrete cost in your bid for the salt shed include material and labor to build it according to the attached specifications? Was the attached specifications supplied to your concrete subcontractor by you? Thank you for your time.

PROJECTED TIMETABLE

Issue Invitation to Bid	04/21/2020
Questions Due	04/30/2020 – 12:00 noon
Amendments Issued by	05/07/2020 – 5:00 p.m.
Bids Due	05/19/2020 – 1:30 p.m.
Evaluation of Bids	05/19/2020 – 06/02/2020
Governing Committee Approval	06/02/2020
County Board Approval	06/11/2020

Response for other bidder,

I was actually quite surprised to hear back then we placed _____ on this one because we went after this project pretty aggressively. The answer to your question is YES, the alternate price that was provided included concrete and concrete reinforcing for the salt building (based off these plans). The attachments you just shared with me were also made available to all bidders during the bid. I recall they were to be considered as the basis of design for the foundations of the salt building. So of the \$_____ alternate price, approximately \$144K worth of concrete foundations were included in that price. My estimate shows that I figured approximately 25 tons of reinforcing steel and 320 CY of concrete for the salt building. I can see them asking for the difference in concrete or rebar if the final drawings were different then the plans you just sent me, however it would be extremely unfair to all the contractors who took the time to bid this project if they get away claiming that they didn't include the foundations. I recall CCI's base bid being around \$_____ less than mine and their alternate price was around \$_____ less. Looking back, their alternate price didn't concern me at the time but I'd say it's far more likely they had an error in their base bid estimate and they're just trying to make up for it here. Their base bid was way less than my cost so this actually makes a lot of sense to me now.

Good luck with this one and I hope this information was helpful. I would appreciate you keeping my candor and response confidential though.

Brent Sutherland

From: Bradley Werginz <B.Werginz@angusyoung.com>
Sent: Monday, November 30, 2020 3:04 PM
To: Brent Sutherland
Cc: Michael Parille; JODI MILLIS; Jim Shebesta; Duane Jorgenson
Subject: RE: Wheeler Quote: Rock County DPW - New Vehicle Storage Building and Site Improvements

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Brent,

Your assessment below, of the change order request is accurate.

The corrective measures taken, with the installation of the concrete buttresses, has brought the performance parameters of the salt shed loading back within the specified requirements.

Thank you,

BRADLEY WERGINZ

AIA
Principal Architect

O | 608.756.2326 // C | 608.751.7296
angusyoung.com // janesville | madison



From: Brent Sutherland <Brent.Sutherland@co.rock.wi.us>
Sent: Wednesday, November 25, 2020 5:19 PM
To: Bradley Werginz <B.Werginz@angusyoung.com>
Cc: Michael Parille <Michael.Parille@co.rock.wi.us>; JODI MILLIS <JODI.MILLIS@co.rock.wi.us>; Jim Shebesta <J.Shebesta@angusyoung.com>; Duane Jorgenson <Duane.Jorgenson@co.rock.wi.us>
Subject: FW: Wheeler Quote: Rock County DPW - New Vehicle Storage Building and Site Improvements
Importance: High

Bradley,

Jake requested we don't share this with others. He feels caught in the middle and does not want to tarnish relationships with CCI or Rock County. I told him I will keep it to on and as need to know basis. Keeping in mind we are a government agency and a records request could force us to share. Below and above is what was sent to the list below of those who requested specifications. Mike Magill with CCI did request the specifications. The ones supplied does show the required concrete and rebar. My conversation with Kevin and Dylan, they stated the concrete guy is residential and just starting in commercial does good work but is on sight and doing bidding and may not have caught it. Kevin showed me the plans on Page A050 it states the "Reinforced concrete "T" wall designed by building manufacturer, installed by General Contractor. Design to be provided by building supplier during the bidding process" Kevin stated the specs should have

been right on the A050 drawing so it did not get missed. Jake supplied the specifications to CCI on May 13, 2020. Below was the project timetable. Based on the attached information Rock County will not approve Change order #9 request for an additional \$33,385.19 The salt shed specifications were provided during the bidding process to CCI as stated on the drawings A050 "Reinforced concrete "T" wall designed by building manufacturer, installed by General Contractor. Design to be provided by building supplier during the bidding process" Bradley will you please confirm what I am seeing and stated is accurate? Once you confirmed I will let CCI know I will not approve the Change order # 9 for \$33,385.19

I would also like to know if they corrected through Wheeler Engineers the J hooks every 1' verses every 6" . If they did not correct this that means they also did not build it according to the specifications and we have filling restrictions. I clearly informed them I will not accept it with any restrictions. I assumed that correction was the extra rebar and concrete that caused the change order being requested, but I am not sure. Jim Shebesta was trying to think of a way to correct their mistake. The error was on 2 walls because Jim caught it before they did the other 2 walls. I spoke with Jake at Wheeler to see if there was any field engineering options that could be done to fix their mistake so we do not have any restrictions on filling the shed. Jake stated it had to be reviewed by the Wheeler engineers in house. I shared that with everyone involved.

PROJECTED TIMETABLE

Issue Invitation to Bid	04/21/2020
Questions Due	04/30/2020 – 12:00 noon
Amendments Issued by	05/07/2020 – 5:00 p.m.
Bids Due	05/19/2020 – 1:30 p.m.
Evaluation of Bids	05/19/2020 – 06/02/2020
Governing Committee Approval	06/02/2020
County Board Approval	06/11/2020

Thank you,

Brent Sutherland
Director -Facilities Management
Rock County
51 S. Main Street
Janesville WI, 53545
Office (608)757-5527
Fax (608)757-5539
Cell (608)931-1823
brent.sutherland@co.rock.wi.us

Glad to be Here!

From: Jake Silkey [mailto:jsilkey@wheeler1892.com]
Sent: Tuesday, November 24, 2020 9:16 AM
To: Brent Sutherland <Brent.Sutherland@co.rock.wi.us>
Subject: FW: Wheeler Quote: Rock County DPW - New Vehicle Storage Building and Site Improvements
Importance: High

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Brent,

Contacts quoted below. See email below for concrete information and bid plan attached.

bryan.henne@kphconstruction.com
npaulson@paulsonkimball.com
Jeremy@sullivananddesignbuild.com
tkelly@vogelbldg.com
jwagner@scherrerconstruction.com
bids@scherrerconstruction.com
jvl.bidding@jpcullen.com
mike.magill@cciwi.com
D.Albrecht@t2contractingLLC.com
tcianci@osmanconstruction.com
cward@vogelbldg.com
jeKlobucar@klobucarconstruction.com
JiKlobucar@klobucarconstruction.com
jamesg@gilbankconstruction.com
kott@sjostromconstruction.com
ilindert@abcmadison.com
Kurt@jhhassinger.com
john.kamuchey@Jhhassinger.com
estimating@miron-construction.com

Sincerely,

Jake Silkey, PE | Sales Engineer – Engineered Products | Wheeler
d. 262.229.4068 | jsilkey@wheeler1892.com

From: Jake Silkey
Sent: Wednesday, May 13, 2020 8:41 AM
Cc: Jake Silkey <jsilkey@wheeler1892.com>
Subject: Wheeler Quote: Rock County DPW - New Vehicle Storage Building and Site Improvements
Importance: High

Good Morning,

Thank you for your interest in bidding the construction of a Wheeler Salt Storage Building for the Rock County Department of Public Works. Our material quotation should be available tomorrow. In the meantime, please find the attached documents.

1. **Preliminary Foundation Bid Plan:** Please use this plan for concrete and rebar take-offs for the building foundation. Please note foundation plan is preliminary and is subject to minor changes at the time of final design.
2. **Sample Building Plan:** Sample plan is being supplied to demonstrate the typical timber framing details. Please note building size differs, but most framing typical details will be the same.

Our quotation will identify our material inclusions and exclusions. Below is an additional list:

Included: Plans, Calculations, State DSPS Plan Review, Douglas Fir timber - QNAP treated (posts, planks, blockings, wall plywood, etc.), untreated lumber, roof trusses, roofing plywood, wooden louvers and all connecting galvanized hardware (Nails, Screws, Plates, Bolts, Concrete Anchors bolts, etc.)

Not Included: labor, electrical & lighting, concrete "T" wall brace/footing, overhead door, service door, metal roofing including soffit, fascia, rake trim & roof ventilation, roofing underlayment, translucent window panels, pipe bollards, gutters/downspouts, temporary building and roof truss bracing, or any site preparation.

I will follow-up with our quotation once complete. Please let me know if you have any immediate questions.

Thank you.

Sincerely,

Jake Silkey, PE | Sales Engineer – Engineered Products | Wheeler
d. 262.229.4068 | jsilkey@wheeler1892.com

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**SECTION 13 34 23
SALT STORAGE BUILDING**

PART 1 - GENERAL

1.01 SUMMARY

Building shall be rectangular with walls cabled to each other to withstand lateral load of internal material pile without the aid of external wall bracing. The building shall have a shed roof, sliding doors for closure at one end.

-168' Length

-72' Width

-30' Internal Vertical Height (eaves)

-Capacity:

The building shall hold 8,000 tons salt based on 12' pile height at the wall and extending toward center of building at an angle not to exceed 2 horizontal to 1 vertical, for a maximum pile height of 25'. Area near entrance that is unsuitable for covered material storage due to natural angle of repose should be excluded from capacity calculations. Pile calculations should be based on material weight of 80 pcf for salt. Written calculations and pile diagrams must be provided.

1.02 QUALIFIED MANUFACTURER

- A. Manufacturers other than those listed in this specification, to be eligible for award of bid, shall have at least ten (10) years of successful experience in the design and fabrication of salt storage buildings. Bidder shall provide at least 5 project references with the bid proposal. Reference information shall include project location, building size, date of completion and owner contact information.

1.03 SYSTEM PERFORMANCE REQUIREMENTS

The building shall be designed to meet the requirements of the purpose intended and all applicable Town, County and State Codes.

Wall of the building must be designed to withstand a lateral pressure from material stored to a maximum height of 25'. Design to be based on material weights as specified in CAPACITY, with an internal friction angle of 32 degrees.

Building roof shall be watertight.

1.04 SUBMITTALS

- A. General:
1. Comply with provisions of Section 01 33 00.
- B. General: Submit the following in accordance with Conditions of the Contract and Division 1 Specification Sections.
- C. Product data consisting of storage building system manufacturer's product information for building components and accessories.
- D. Shop drawings for storage building structural framing system, siding panels, and other building system components and accessories that are not fully detailed or dimensioned in manufacturer's product data.
- E. Furnish the following information as proof of conformity to design and performance criteria requirements of this specification. The information (for both submittal phases, below) shall be stamped with the registration seal of an architect or professional engineer, licensed in the

Shall consist of vertical rectangular wood posts set 4' apart center to center and set a minimum of 6' 0" below finished grade. Posts shall be long enough to provide internal clearance height specified in NOMINAL BUILDING DIMENSIONS. Posts may be rough lumber.

Vertical wall posts shall be founded and supported by a continuous cast-in-place concrete "T-Wall." "T-Wall" shall consist of a reinforced concrete spread footing and vertical concrete column, as designed by the manufacturer's engineer. Timber posts shall anchor into both the spread footing and vertical column. Only timber members shall be used in areas that come in contact with salt. Salt contact with concrete members will not be permitted.

No bracing will be allowed on the interior or exterior that extends away from the wall and conflicts with the Owner's equipment movements.

CONCRETE:

All concrete and reinforcement shall be in accordance with the building code requirements for structural concrete (ACI 318). For design purposes, all concrete shall be 4000 psi normal weight. All reinforcement steel shall be grade 60, epoxy coated.

Note: Concrete shall not be used where it is in direct contact with salt.

PIPE BOLLARDS:

Furnish and install pipe bollards at locations shown on plans, minimum six inches (6") in diameter and eight feet (10'-0") in length, consisting of schedule 80 galvanized steel structural pipe, filled with concrete. Furnish concrete within the pipe bollard according to Section 03 30 00 of the standard specifications. Form concrete crown at top of bollard. Embed pipes in concrete footing, and paint with a 3-coat epoxy paint system, (primer plus two finish coats). Paint the entire length of the pipe including buried portion.

SIDING:

Internal load walls shall have horizontal treated timber planks (minimum 12" nom. in width) and treated plywood nailed on the inside of wall posts. Plank thickness and stress grade shall be adequately sized to withstand lateral material pressure and shall be a minimum thickness of 2" nom. in single application. The plank shall extend two feet higher than design pile load line of the wall. Marker shall be provided to designate the maximum pile height on the wall. Design calculations must include analysis of wall plank thickness and stress grade.

Wall planks shall be rough lumber; however, the sides shall be SIE (surfaced on one edge to 11-5/8") to fit tight against adjacent planks.

ROOF:

- A. Provide materials and surface finishes conforming to the guarantee specified below, requiring minimum maintenance and conforming to, or exceeding, the Underwriters' Laboratories, Inc. Class C rating requirements (labels are not required). Unprotected aluminum or bare steel surfaces are not acceptable.
 1. Type: Prefabricated or site-built, complete with all necessary accessories, fastening devices, trim, and flashings.
 2. Drainage: Positive slope; no standing water.
 3. Strength: comply with structural criteria specified on drawings.
 4. Wind Resistance: 60 pounds per square foot (uplift) for adhesive applied products, UL Standard 997 for shingle type products.

5. Compatibility: All materials to be physically and chemically compatible with each other and with adjacent building components.
6. Products:
 - i. Metal roofing shall consist of 29 gauge galvanized coated steel panels, with color matched fasteners, carrying a manufacturer's warranty of 30 years, color to be reviewed, selected and approved by the engineer from manufacturer's standard colors. Acceptable products are GrandRib 3 Plus by Fabral with Enduracote finish, Stormproof by MBCI with Signature 200 paint system, Max Rib by McElroy with siliconized polyester pain system, or equivalent.
 - ii. Trim: Provide metal rake trim at all edges and slope changes
 - iii. Underlayment shall conform to ASTM D1970, Standard Ice Dam Underlayment.
 - iv. Sheathing shall be APA rated, 5/8-inch thick nominal, CDX plywood roof sheathing. In no case shall metal roofing be applied directly to trusses.

VENTILATION:

Provide suitable openings located at or near the highest point of the roof to provide a minimum ratio of 1 square inch of free air area for each 55 square feet or building area. Color to match adjacent roofing materials.

Provide wooden louver vents with minimum area of 3 square-feet each at each gable end of building.

TRANSLUCENT PANELS:

Provide 4'-0" high, minimum, polycarbonate translucent sky lights on sidewalls as shown on the drawings.

MATERIALS:

All materials shall be unused.

All items shall be inspected visually, at the erection site, for conformance with these specifications and the final design as approved by the Owner. If deemed necessary by the Owner, onsite samples will be taken by the Owner and submitted to a testing laboratory selected by the Owner and tested to verify compliance with the specifications and final design.

Timber:

All structural timber products furnished for the building shall be in conformity with the National Design Specifications for Wood Construction, 2015 Edition as published by the National Forest Products Association. This includes all source documents including all lumber grading rules. Suppliers must provide inspection certificates for posts, wall plank and main structural elements certifying compliance with the stress grade required as indicated by the design calculations and as indicated on the plans. All certifications shall be furnished to owner prior to delivery of the material. All structural timber for the wall system shall be Coastal Douglas Fir, other timber species will not be allowed.

Plywood:

Each panel of construction plywood shall be identified with the grade - trademark of the American Plywood Association, and shall meet the requirements of Product Standard "PS-1" for Construction and Industrial Plywood. Plywood roof sheathing shall be C-D interior with exterior glue.

Copper Naphthenate Pressure Treatment:

Preservative treatment of lumber and timber shall be by the pressure process, and unless otherwise provided in the contract special provisions, be in accordance with AWPA Standards and AASHTO Designation M 133.

Preservative and Preservative Treatment shall be in accordance with the American Wood Preservers' Association (AWPA) Standards.

All timber below the roof trusses shall be pressure treated with Copper Naphthenate in AWPA P9 Type A Hydrocarbon Solvent.

Unless otherwise directed by the Owner the material shall be graded prior to treatment. Material shall be accepted after treatment on the basis of its condition prior to treatment, on the basis of inspection of the treatment procedure substantiated by plant records, on the condition of the material after treatment and on absorption, penetration and visual inspection.

So far as practicable all adazing, boring, chamfering, framing, gaining, mortising, surfacing and general framing, etc., shall be done prior to treatment. If cut after treatment, coat cut surfaces according to AWPA M4.

All Douglas Fir or other species that are difficult to penetrate shall be incised prior to treatment.

Metal Plates and Fasteners:

All hardware and plates shall be hot dip galvanized. Metal gusset plates on roof trusses shall be field painted with asphalt paint. The supplier shall furnish the paint.

PART 3 - EXECUTION

3.01 ERECTION OF FRAMING

Do not use materials that are unsound, warped, improperly finished, or with defective surfaces, sizes, or patterns.

Comply with frame manufacturer's approved Shop Drawings for details and building erection.

Columns:

Auger hole to depth of diameter indicated on Drawings.

Construct column foundations per Salt Storage Building Designer Drawings.

Wallboards: Install using manufacturer recommended fasteners.

Provide all required footings, foundations, and/or other required substructures or supports at the required elevations on properly prepared subgrade, as required for the erection of the complete storage building.

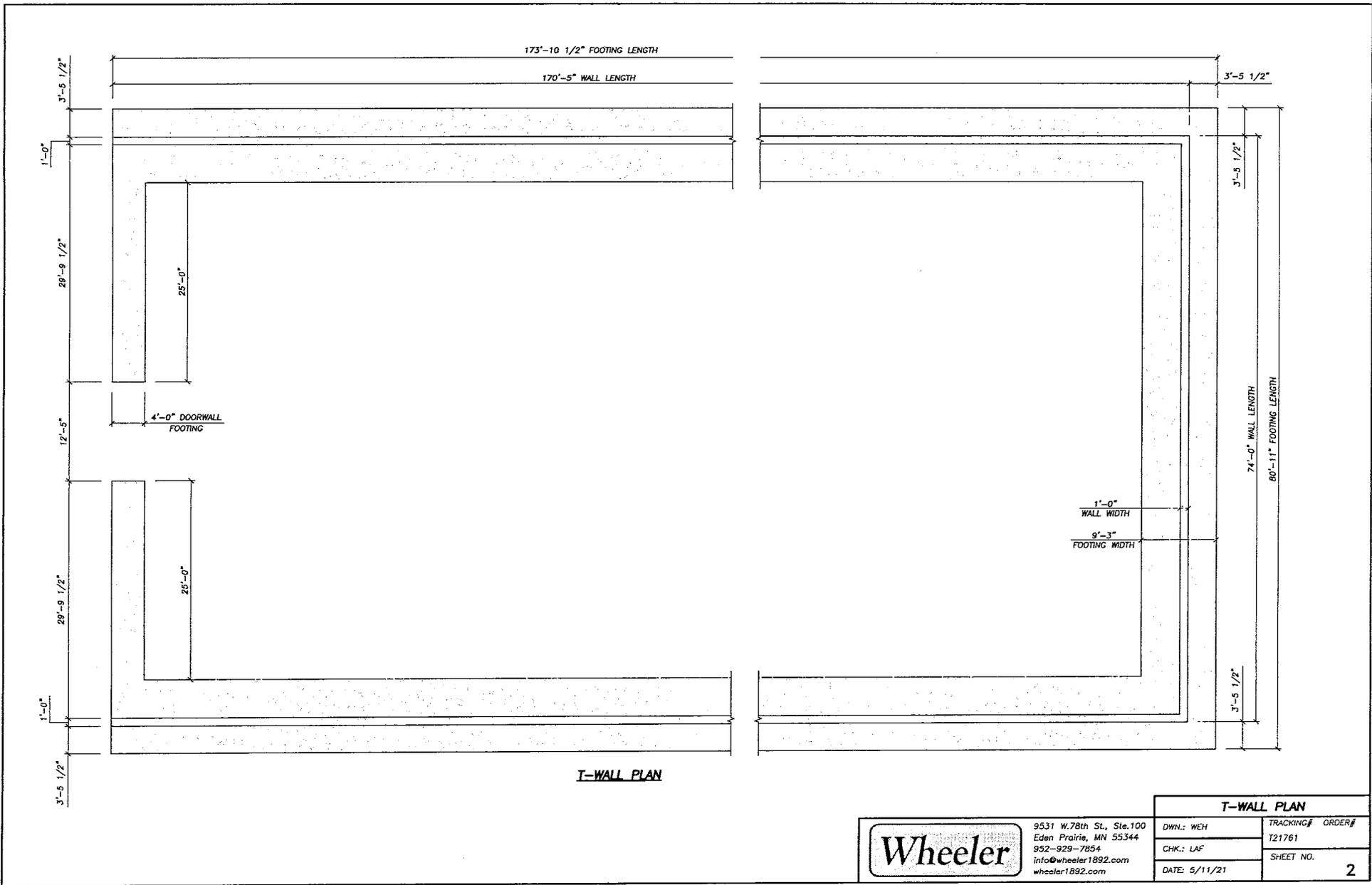
Foundations shall be of size and depth required to resist frost action.

Roof Joists:

Set joists in place in center of column using lifting methods as approved by manufacturer.

Cable Ties: Install cable ties at locations recommended by building manufacture and per approved Shop Drawings.

END OF SECTION



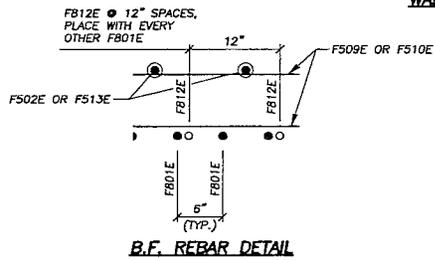
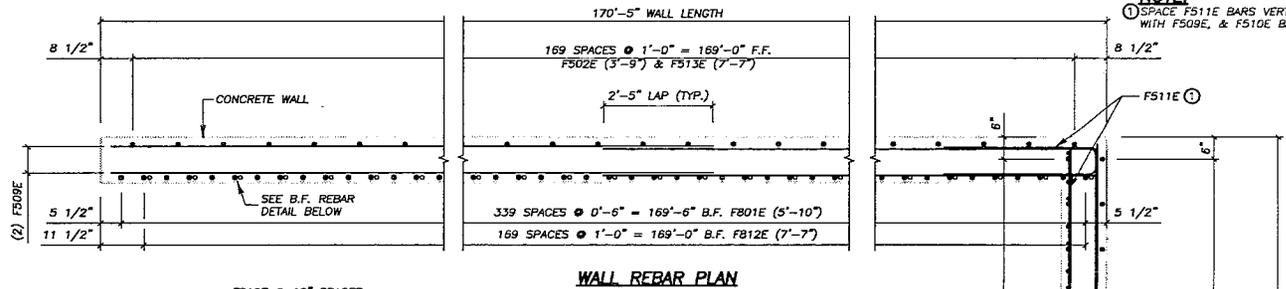
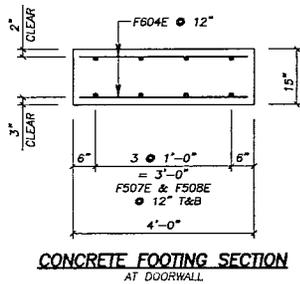
T-WALL PLAN

T-WALL PLAN

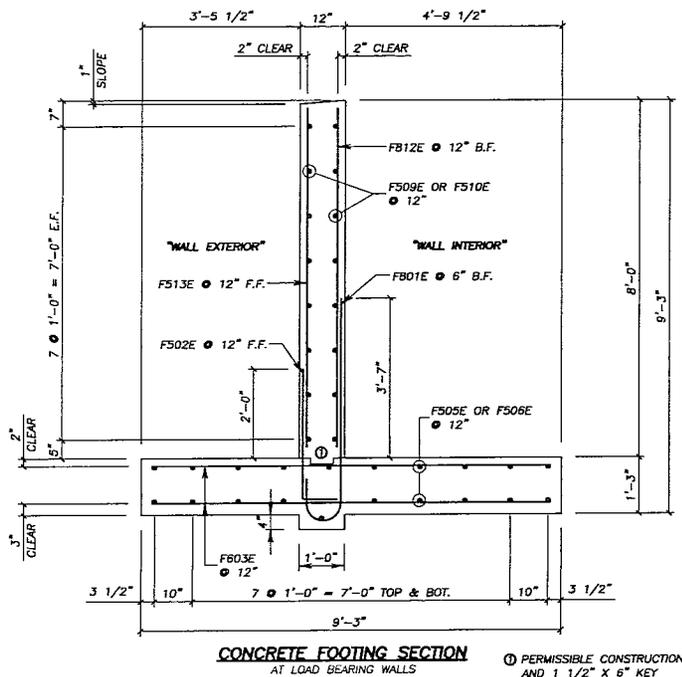


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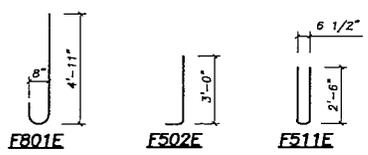
DWN.: WEH	TRACKING#	ORDER#
CHK.: LAF	T21761	
DATE: 5/11/21	SHEET NO.	2



NOTES:
 F.F. = FRONT FACE
 E.F. = EVERY FACE
 B.F. = BACK FACE
 THE FIRST DIGIT OF THE BAR SIGNIFIES THE BAR SIZE.
 BAR SIZE SHOWN IN THIS PLAN ARE U.S. CUSTOMARY DESIGNATIONS.
 BARS MARKED WITH SUFFIX "E" SHALL BE EPOXY COATED.
 ALL REINFORCEMENT STEEL SHALL BE GRADE 60.
 DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.



Ⓢ PERMISSIBLE CONSTRUCTION AND 1 1/2" X 6" KEY

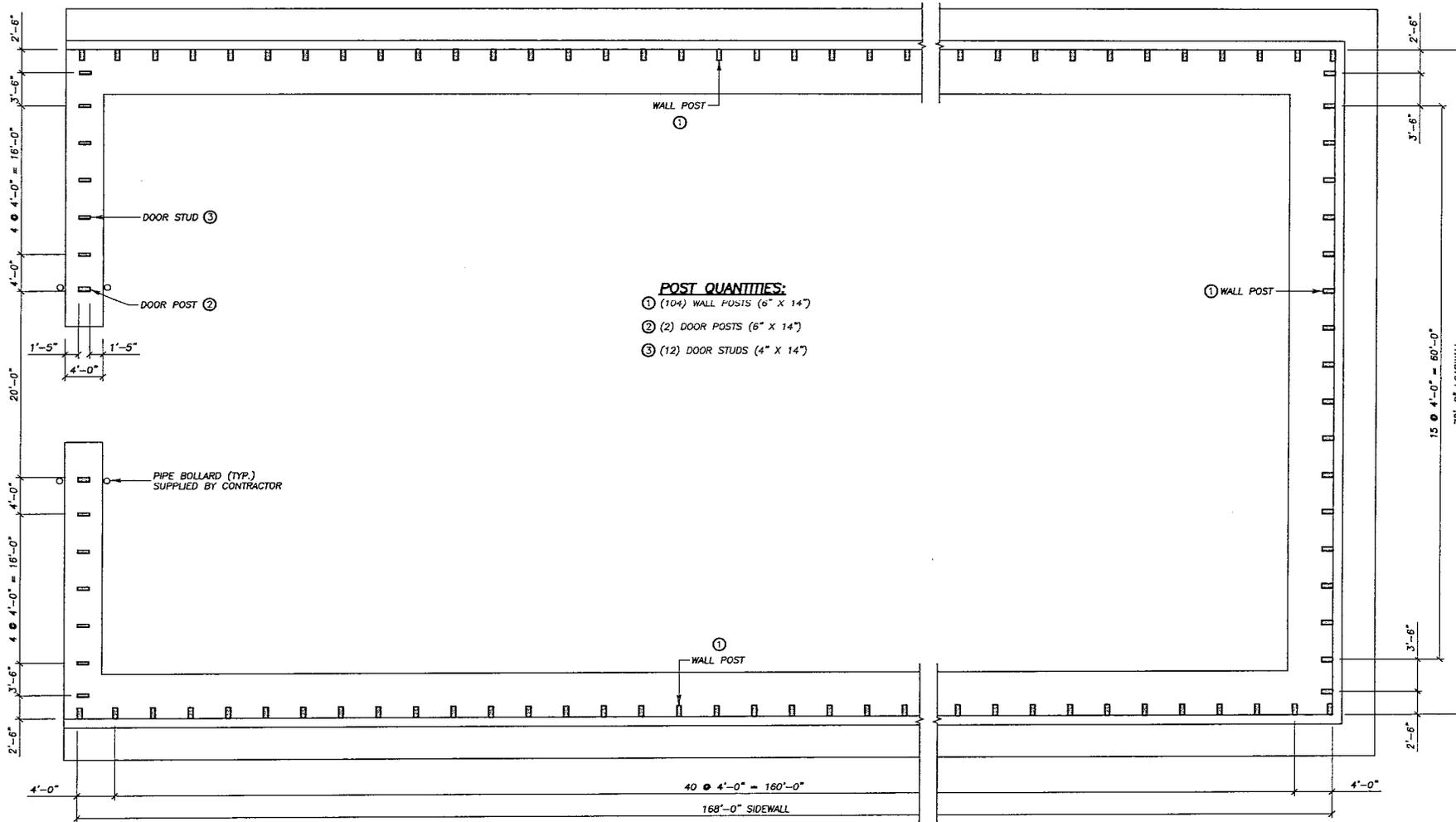


BILL OF REINFORCEMENT				
BAR	QTY.	LENGTH	SHAPE	LOCATION
F801E	827	5'-10"	BENT	WALL B.F. ~ VERTICAL
F502E	414	3'-9"	BENT	WALL F.F. ~ VERTICAL
F603E	768	8'-9"	STRT.	FOOTING ~ TOP & BOTTOM
F604E	100	3'-6"	STRT.	FOOTING ~ TOP & BOTTOM
F505E	240	30'-11"	STRT.	FOOTING ~ T&B LONG
F506E	60	28'-5"	STRT.	FOOTING ~ T&B LONG
F507E	8	33'-9"	STRT.	FOOTING ~ BOTTOM LONG
F508E	8	33'-9"	STRT.	FOOTING ~ TOP LONG
F509E	192	30'-4"	STRT.	WALL ~ HORIZONTAL LONG
F510E	48	26'-2"	STRT.	WALL ~ HORIZONTAL LONG
F511E	32	5'-4"	BENT	WALL ~ HORIZONTAL CORNER
F812E	413	7'-7"	STRT.	WALL B.F. ~ VERTICAL
F513E	414	7'-7"	STRT.	WALL F.F. ~ VERTICAL



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CONCRETE DETAILS		TRACKING#	ORDER#
DWN.:	WEH	T21761	
CHK.:	LAF		
DATE:	5/11/21	SHEET NO.	4



- POST QUANTITIES:**
- ① (104) WALL POSTS (6" X 14")
 - ② (2) DOOR POSTS (6" X 14")
 - ③ (12) DOOR STUDS (4" X 14")

POST PLAN



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POST PLAN	
DWN.: WEH	TRACKING# ORDER#
CHK.: LAF	T21761
DATE: 5/11/21	SHEET NO.
	5

TIMBER NOTES:

ALL TIMBER BELOW ROOF TRUSSES SHALL BE COPPER NAIL/PRESERVATIVE TREATED.

ALL TIMBER TO BE GRADED AS PER NFPA 1991 NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION.

ALL 2" X 12" WALL PLANK TO BE DOUGLAS FIR-LARCH, NO.2, S1S1E (1 5/8" X 11 5/8").

ALL 3" X 12" WALL PLANK TO BE DOUGLAS FIR-LARCH, NO.2, S1S1E (2 5/8" X 11 5/8").

ALL 6" X 12" HEADERS TO BE DOUGLAS FIR-LARCH, NO.1.

ALL 4" X 16" TOP PLATES TO BE DOUGLAS FIR-LARCH, NO.1, S1S (3 1/2").

FILL HEIGHT MARKER TO BE 2" X 4", DOUGLAS FIR-LARCH, NO.1, S4S, UNTREATED & FIELD PAINTED.

ALL 6" X 16" POSTS TO BE DOUGLAS FIR-LARCH, NO.1.

ALL 4" X 16" DOOR STUDS TO BE DOUGLAS FIR-LARCH, NO.1.

BALANCE OF TIMBER TO BE DOUGLAS FIR-LARCH, PONDEROSEA PINE, NO.1.

ALL TIMBER IS ROUGH UNLESS OTHERWISE NOTED.

ALL TIMBER CUT IN FIELD SHALL BE TREATED WITH (3) COATS OF AN APPROVED TREATING PRESERVATIVE.

ALL HARDWARE TO MEET ASTM A307 GALVANIZED TO A153. ALL HIGH STRENGTH HARDWARE TO MEET ASTM A329 OR A449 GALVANIZED TO A153. ALL STRUCTURAL STEEL TO MEET ASTM A56 GALVANIZED TO A123.

CONSTRUCTION REQUIREMENTS SHALL CONFORM TO STATE SPECIFICATIONS UNLESS OTHERWISE NOTED.

ALL TIMBER TO BE CUT TO EXACT LENGTH, DRESSED TO SIZE REQUIRED AND ALL PRACTICAL FRAMING TO BE DONE IN-PLACE TO INCARCINATION.

ALL BOLT THREADS TO BE SET WITH A CENTER PUNCH AFTER INSTALLATION.

ROOFING TO BE 22 GA METAL ROOFING, METAL ROOFING AND UNDERLAYMENT SUPPLIED BY CONTRACTOR.

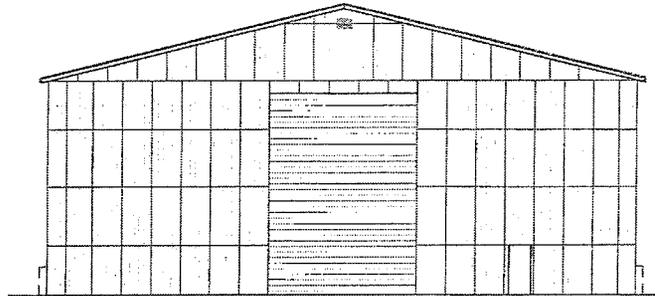
ALL METAL GUSSET PLATES ON TRUSSES AND TRUSS TO BRAYS SHALL BE PAINTED WITH ASPHALT PAINT.

ALL HOLES DRILLED IN FIELD WHERE SPIKES ARE USED ARE TO BE 1/16" SMALLER THAN SPIKE SIZE. HOLES DRILLED FOR BOLTS ARE TO BE 1/16" LARGER THAN BOLT SIZE.

ANY NUT OR MACHINE BOLT HEAD IN DIRECT CONTACT WITH TIMBER TO HAVE ONE PLATE WASHER BETWEEN NUT AND TIMBER, OR BOLT HEAD AND TIMBER.

ANY NUT OR MACHINE BOLT HEAD IN DIRECT CONTACT WITH STEEL TO HAVE ONE CUT WASHER BETWEEN NUT AND STEEL OR BOLT HEAD AND STEEL.

WAUPACA COUNTY, WISCONSIN SALT STORAGE BUILDING



DOORWALL

GOVERNING SPECIFICATIONS:
THE INTERNATIONAL BUILDING CODE GOVERNS.

DESIGN DATA:

THE DESIGN OF THIS STRUCTURE COMPLIES WITH THE BUILDING CODE AND SUPPLEMENTAL SPECIFICATIONS AS INDICATED IN THE CODE AND THE DESIGN COMPUTATIONS.

- 1) USE AND OCCUPANCY CLASSIFICATION - GROUP S-2
- 2) TYPE OF CONSTRUCTION = V-B
- 3) BULK STORAGE, 80 PCF SALT, 12FT. AT WALLS.
100% MAX. FILL HT. MAX. SLOPE SHALL BE 1 VERTICAL TO 2 HORIZONTAL.
- 4) ROOF LIVE LOAD USED IN THE DESIGN 26.9 PSF
 - A) GROUND SNOW LOAD 40 PSF
 - B) FLAT ROOF SNOW LOAD 26.9 PSF
 - C) SNOW EXPOSURE FACTOR 1.0
 - D) SNOW IMPORTANCE FACTOR 0.8
 - E) THERMAL FACTOR 1.2
- 5)
 - A) BASIC WIND SPEED 105 MPH
 - B) OCCUPANCY CATEGORY 1
 - C) EXPOSURE "C"
 - D) COMPONENTS AND CLADDING
 - 1) ROOF = 18.5, -69.5 PSF
 - 2) WALL = 16.5, -46.3 PSF

ROOF TRUSS DESIGN NOTE:

ROOF TRUSSES SHALL BE DESIGNED FOR AN ADDITIONAL 202 LBS. OF TENSION APPLIED CONCURRENTLY WITH OTHER LOADS. THIS IS A POST LOAD APPLIED AT THE TRUSS BEARING RESULTING FROM THE STORED SALT OR SAND.

CONSTRUCTION NOTES:

FOOTINGS ARE DESIGNED FOR A NET ALLOWABLE BEARING PRESSURE OF 2000 PSF. THE GEOTECHNICAL ENGINEER OR PROJECT ENGINEER ON SITE SHALL VERIFY. THE WIDTH OF FOOTING EXCAVATION SHALL BE MINIMIZED TO IMPROVE LATERAL BEARING AND LIMIT DISRUPTION TO THE IN-PLACE NATIVE CONSOLIDATED MATERIAL. BACKFILL WITH NATIVE MATERIAL WHEN SO APPROVED. COMPACT TO 95% STANDARD PROCTOR.

CONCRETE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO MIX DESIGN, QUALITY CONTROL, PLACEMENT, COLD WEATHER PROVISIONS, AND ANCHORAGE INSTALLATION, SHALL BE IN ACCORDANCE WITH THE CODE AND THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318) AS APPROVED BY THE PROJECT ENGINEER ON SITE. CONCRETE TO BE CURED FOR MINIMUM WEIGHT GAINING JOINTS OR UNBONDED CONSTRUCTION JOINTS TO BE PROVIDED AT 16 FT. MAX. SPACING, MIDWAY BETWEEN POSTS OR KNEE BRACES. CONTROL JOINTS SHALL BE LOCATED AT THE UPPER SURFACE OR SURFACES AND PENETRATE ONE FOURTH THE FOOTING THICKNESS (MIN). ALL REINFORCEMENT STEEL SHALL BE GRADE 60, EPOXY COATED.

ERECTION AND TEMPORARY BRACING OF ROOF TRUSSES SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND INDUSTRY STANDARDS AS APPROVED BY THE PROJECT ENGINEER ON SITE AND ARE NOT THE RESPONSIBILITY OF THIS PLAN.

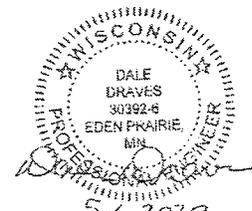
PREDRILL HOLES FOR SCREWS AND NAILS AS NECESSARY TO AVOID SPLITTING OF TIMBERS.

SHEARWALL & ROOF DIAPHRAGM NOTE:

THIS BUILDING DESIGN INCLUDES PROVISIONS FOR SHEARWALLS & A ROOF DIAPHRAGM, WHICH ARE STRUCTURAL ELEMENTS NECESSARY TO RESIST THE BULK STORAGE LATERAL LOAD. CAREFUL ATTENTION MUST BE PAID TO ALL PLYWOOD NAILING SPECIFICATIONS, BLOCKING, AND OTHER DETAILS WITHIN THIS PLAN.

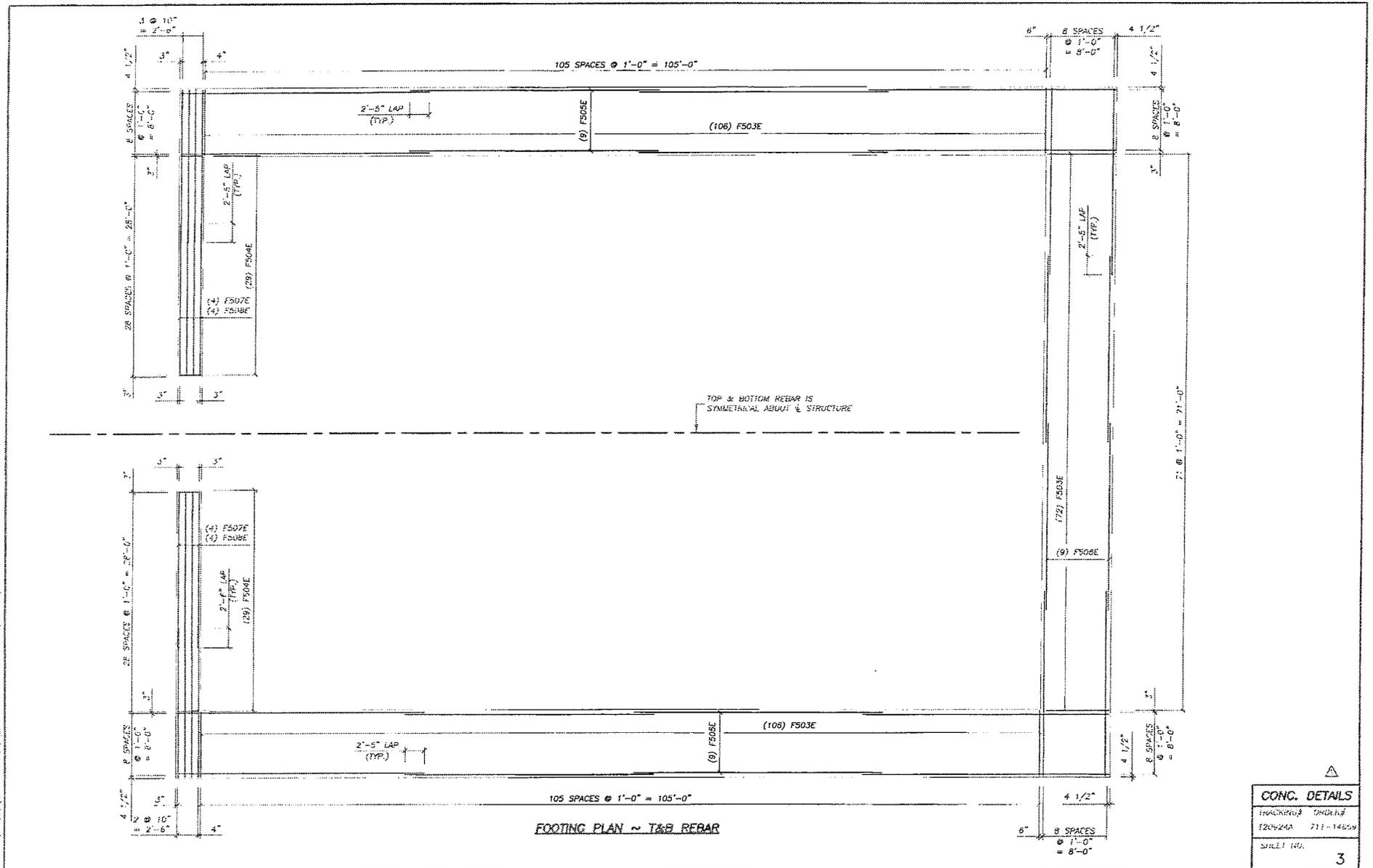
PLAN SHEET INDEX	
SHEET	DESCRIPTION
1	COVER SHEET & SPECIFICATIONS
2	T-WALL PLAN
3	CONCRETE DETAILS
4	CONCRETE DETAILS
5	POST PLAN
6	POST FOOTING DETAILS
7	TYPICAL SECTION @ WALL
8	SHEARWALL DETAILS
9	SHEARWALL DETAILS
10	SHEARWALL DETAILS
11	SIDEWALL FRAMING
12	LOADWALL FRAMING
13	DOORWALL FRAMING
14	SECTION @ WALLS
15	ROOF FRAMING
16	CONNECTION DETAILS
17	ROOF DIAPHRAGM DETAILS
18	FINISHING & MISC. DETAILS
19	PILOT PLAN

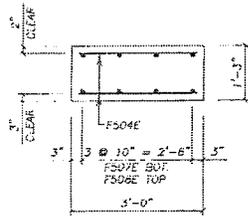
RING SHANK (R.S.) NAIL MINIMUM DIMENSION TABLE		
PENNY WT.	SHANK DIAMETER (IN.)	LENGTH (IN.)
6d	0.120	2.0
16d	0.148	3.5



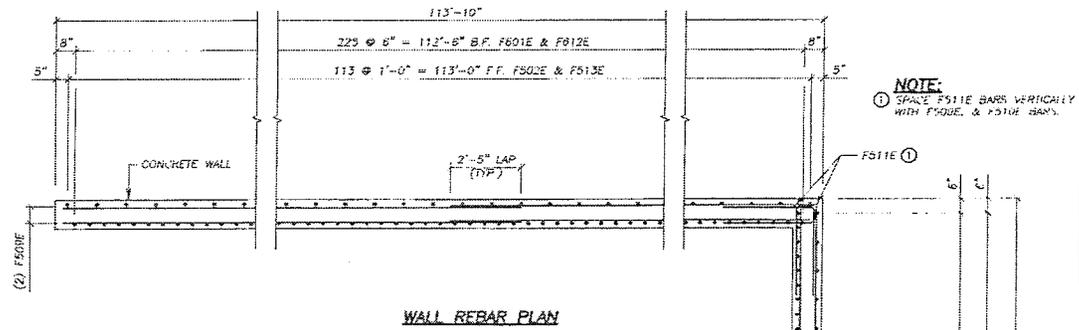
REVISION	DESCRIPTION	DATE	INITIALS
1	CONCRETE FOOTING	5/3/20	WEH
2			
3			

COVER SHEET & SPECIFICATIONS	WAUPACA COUNTY SALT STORAGE BUILDING	112' L X 80' W X 30' H SALT STORAGE		9531 W. 78th St., Ste.100 Eden Prairie, MN 55344 952-928-7854 info@wheeler1892.com wheeler1892.com	DWN: LAF DRK: WEH DATE: 4/10/20	TRACKING# DRUSE# 1209244 711-14659 SHEET NO. 1
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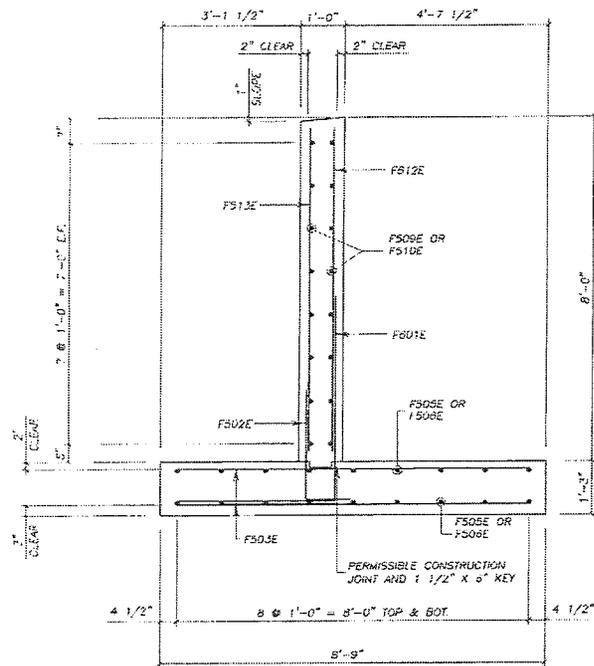




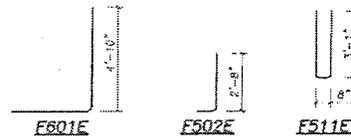
CONCRETE FOOTING SECTION
AT GUCHWALL



WALL REBAR PLAN



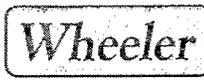
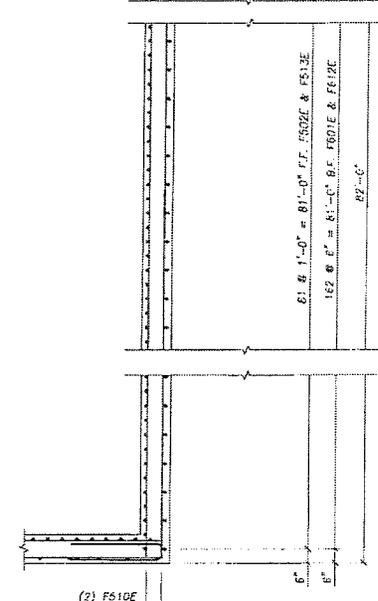
CONCRETE FOOTING SECTION
AT LOAD BEARING WALLS



BILL OF REINFORCEMENT				
BAR	QTY.	LENGTH	SHAPE	LOCATION
F601E	615	8'-5"	BENT	WALL B.F. -- VERTICAL
F502E	310	3'-8"	BENT	WALL F.F. -- VERTICAL
F501E	558	8'-3"	STRT	FOOTING -- TOP & BOTTOM
F504E	116	2'-8"	STRT	FOOTING -- TOP & BOTTOM
F505E	144	31'-0"	STRT	FOOTING -- TAB LONG
F506E	72	22'-3"	STRT	FOOTING -- TAB LONG
F507E	18	19'-8"	STRT	FOOTING -- BOTTOM LONG
F508E	18	19'-8"	STRT	FOOTING -- TOP LONG
F509E	128	30'-2"	STRT	WALL -- HORIZONTAL LONG
F510E	64	23'-10"	STRT	WALL -- HORIZONTAL LONG
F511E	32	6'-2"	BENT	WALL -- HORIZONTAL CORNER
F612E	610	1'-8"	STRT	WALL B.F. -- VERTICAL
F513E	310	7'-6"	STRT	WALL F.F. -- VERTICAL

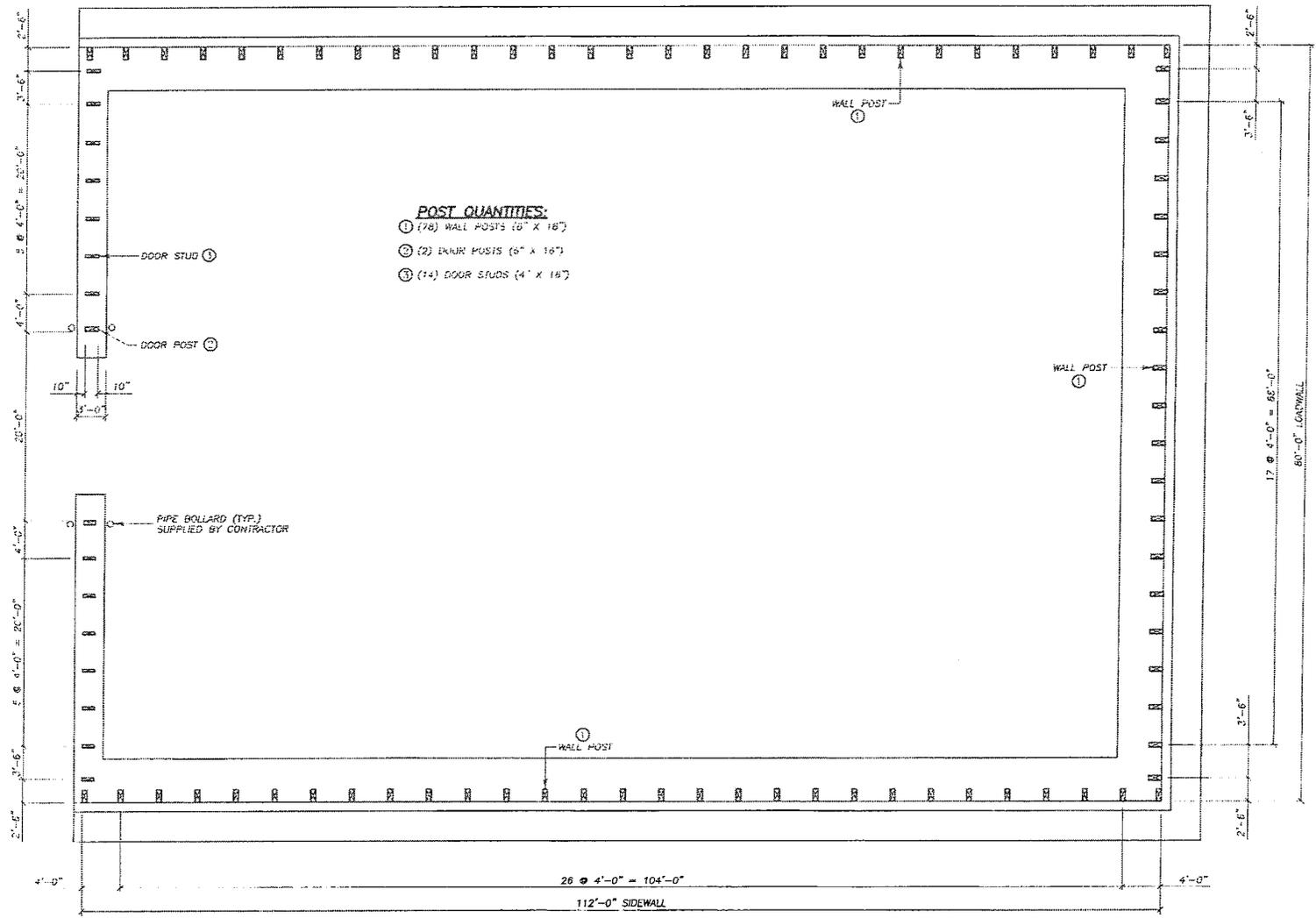
NOTES:

- F.F. = FRONT FACE
- E.F. = EVERY FACE
- B.F. = BACK FACE
- THE FIRST DIGIT OF THE BAR SIGNIFIES THE BAR SIZE
- BAR SIZE SHOWN IN THIS PLAN ARE U.S. CUSTOMARY DESIGNATIONS
- BAR MARKED WITH SUFFIX "E" SHALL BE EPOXY COATED
- ALL REINFORCEMENT STEEL SHALL BE GRADE 60
- DRAWINGS SHALL NOT BE SCALED
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.



9531 W. 78TH St., Ste. 100
Eden Prairie, MN 55344
952-929-7854
info@wheeler1892.com
wheeler1892.com

CONCRETE DETAILS		
ENGR. LAF	DATE: 4/10/20	DRAWING# 711-146104
CHK: WFF		711-146104
		4

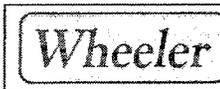


- POST QUANTITIES:**
- ① (78) WALL POSTS (6" X 18")
 - ② (2) DOOR POSTS (6" X 18")
 - ③ (14) DOOR STUDS (4" X 18")

26 @ 4'-0" = 104'-0"

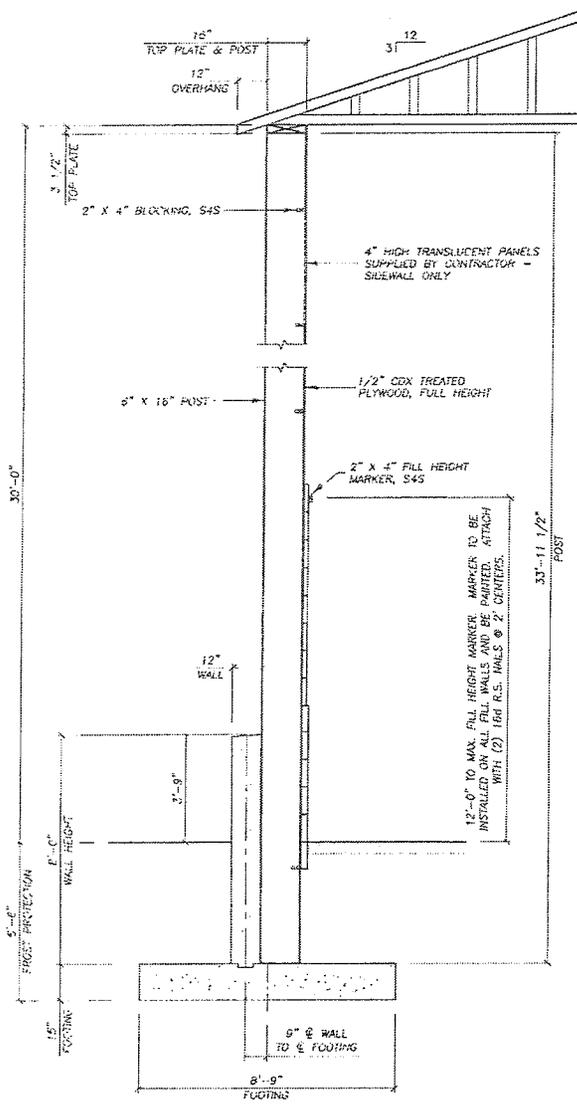
112'-0" SIDEWALL

POST PLAN

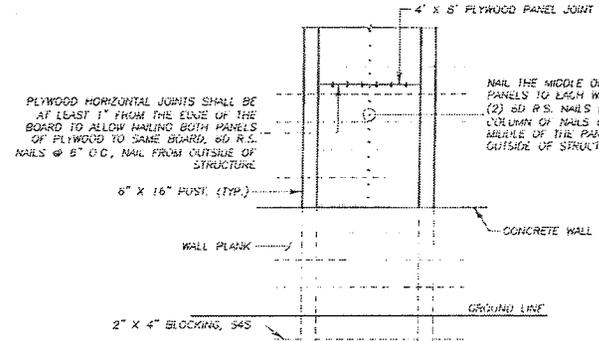


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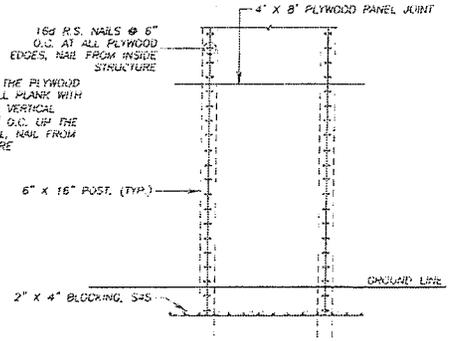
POST PLAN			
DWN. LAK	TRACKING#	DATE#	
CHK. WEH	F20824A	711-14609	
DATE: 4/10/09	SHEET NO.	5	



SECTION @ SIDEWALL
LOADWALL SIMILAR



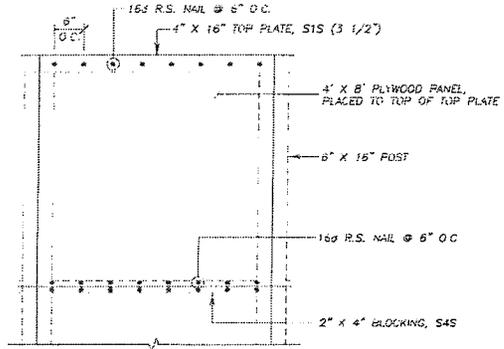
TYPICAL WALL PLYWOOD NAILING DETAIL



TYPICAL WALL PLYWOOD NAILING DETAIL

VIEWING FROM OUTSIDE OF STRUCTURE
APPROXIMATELY (20) NAILS PER PLYWOOD PANEL

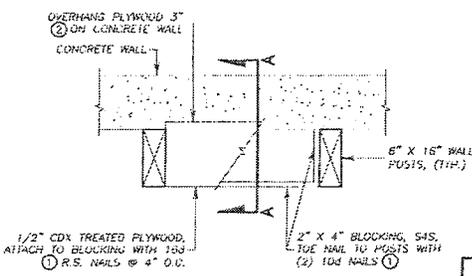
VIEWING FROM INSIDE OF STRUCTURE
WALL PLANKS NOT SHOWN FOR CLARITY
APPROXIMATELY (15) NAILS PER PLYWOOD PANEL



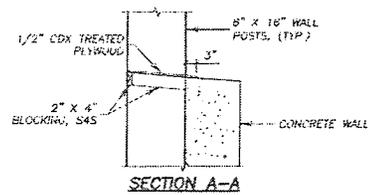
PLYWOOD CONNECTION TO TOP PLATE AT SIDE/LOADWALL
VIEWING FROM INSIDE OF STRUCTURE

NOTES:

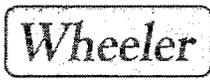
- ① BLOCKING & PLYWOOD TO BE INSTALLED BETWEEN EVERY WALL POST!
- ② SEAL ALL PLYWOOD EDGES WITH CAULKING TO PREVENT WATER LEAKAGE AT WALL JOINTS. CAULKING SUPPLIED BY CONTRACTOR.



WALL POST FILLER DETAIL

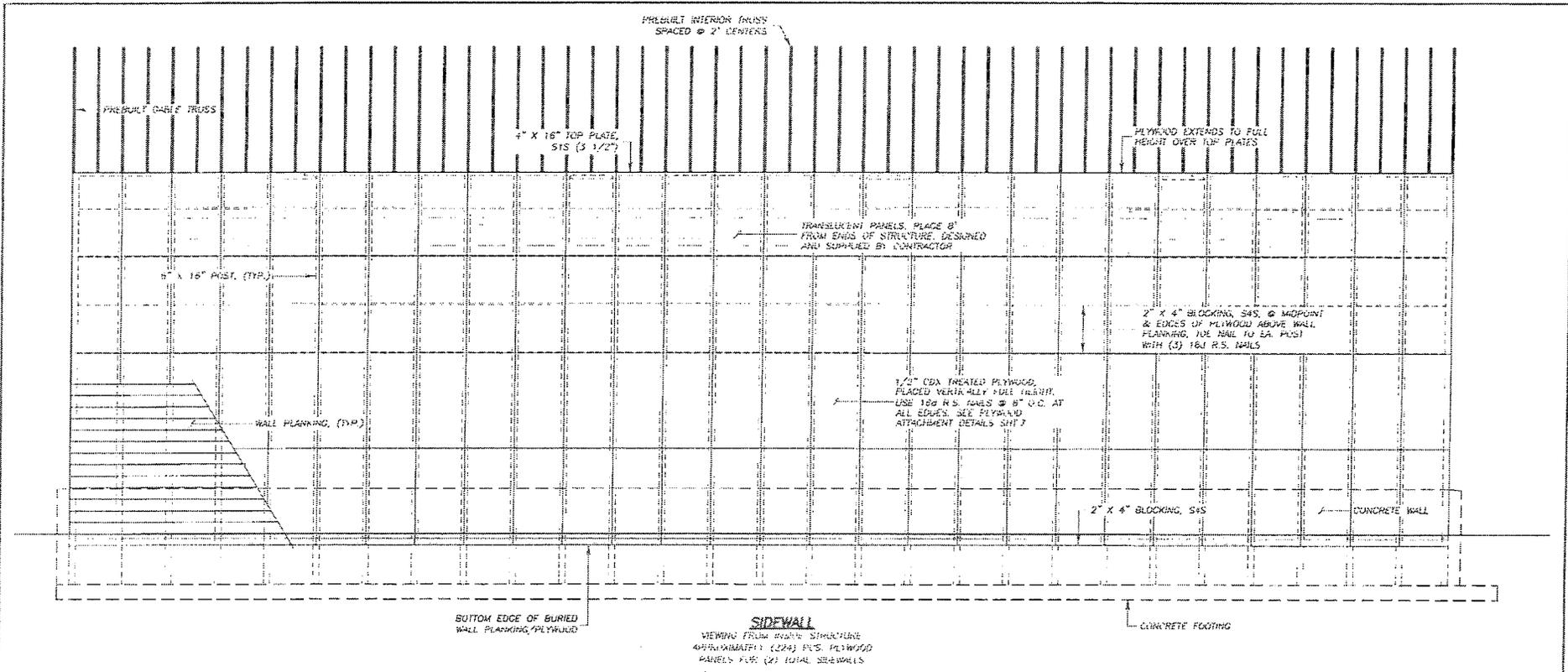


SECTION A-A



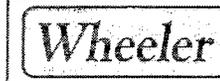
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Eden Prairie, MN 55344
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TYPICAL SECTION @ WALL	
DRAWN: LAP	DRAWING# 111-14650
CHKD: WEL	DATE: 4/10/20
DATE: 4/10/20	SHEET NO. 7



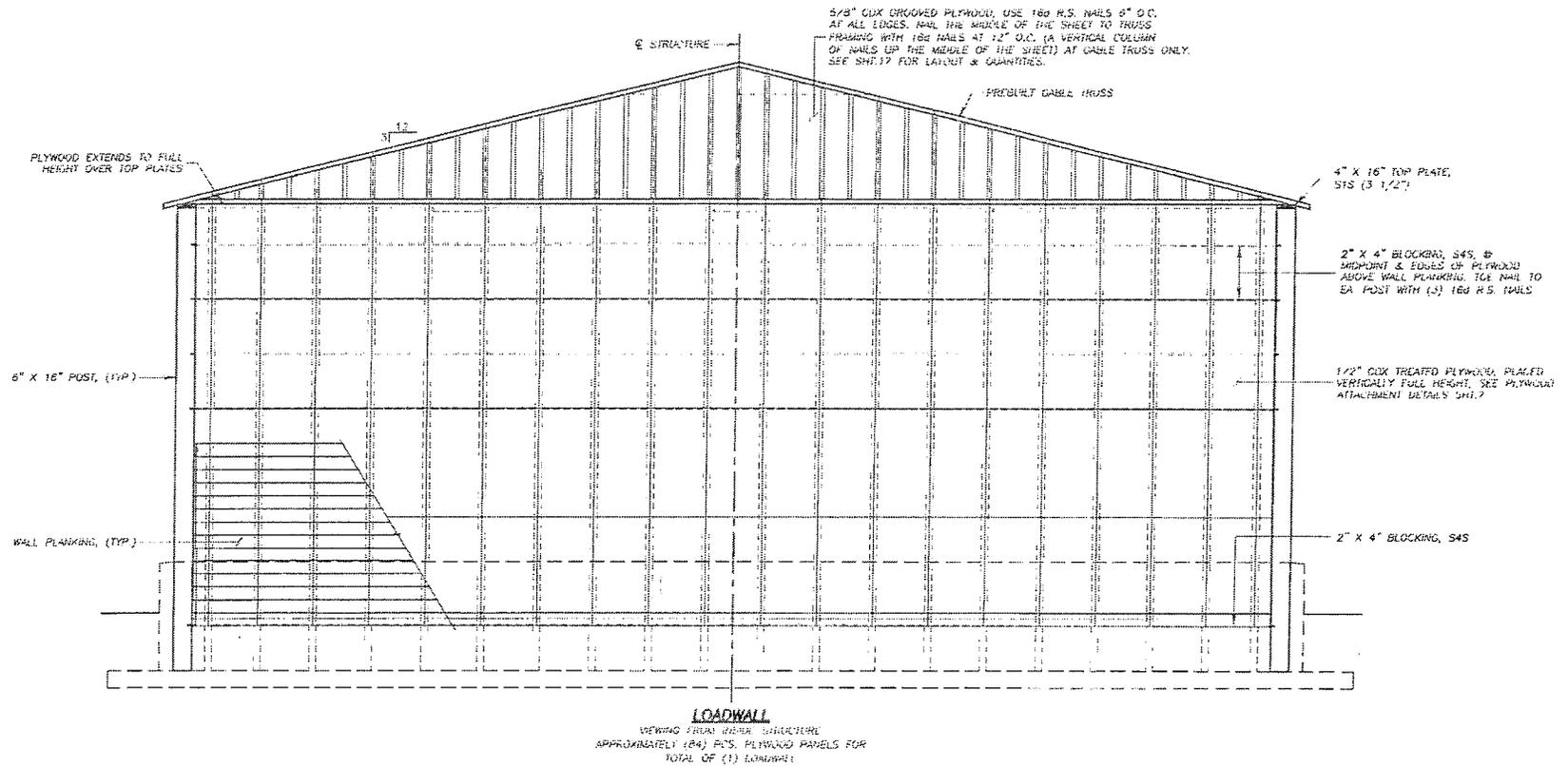
SIDEWALL SHEARWALL NOTES:

- 1. ALL VERTICAL PLYWOOD PANEL EDGES SHALL BE PASTERED TO EITHER EXISTING FRAMING OR EXISTING BLOCKING.
- 2. WALL PLANKING SHALL BE AS SHOWN IN PLYWOOD NAIL DETAIL SHEET 7.
- 3. PLYWOOD VERTICAL JOINTS OVER WALL PLANKING SHALL BE AT LEAST 1' CLEARANCE FROM THE END OF THE BOARD, AND ALLOW SHOWN WITH EDGES OF PLYWOOD TO THE SAME BOARD. THESE JOINTS ARE TO BE NAILED FROM THE OUTSIDE OF THE WALLING. JOINT REQUIRED IS CONCRETE WALL.
- 4. NAIL THE MIDDLE OF THE PANELS TO EACH WALL PLANK WITH (2) 10d R.S. NAILS (A VERTICAL COLUMN OF NAILS @ 8" O.C. UP THE MIDDLE OF THE PANEL) NOT REQUIRED IS CONCRETE WALL.
- 5. THE MIDDLE OF ALL PANELS NOT AGAINST WALL PLANKING SHALL BE PASTERED TO BLOCKING. USE 16d R.S. NAILS @ 8" O.C.
- 6. THE VERY BOTTOM OF THE PLYWOOD SHALL HAVE 2" X 4" BLOCKING OR BLOCKING POINTS EVERYWHERE, INCLUDING WHERE THERE IS WALL PLANKING.
- 7. PLYWOOD PANELS SHALL BE 4' X 8' EXCEPT AT BOUNDARIES AND AT CORNER JOINTS WHERE THE MINIMUM DIMENSION SHALL BE 24"



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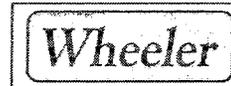
SHEARWALL DETAILS		
DWN: LAF	TRACING & CHECKED	
CHK: WEH	12.4.2014	111-14259
DATE: 4/10/10	SHEET NO.	8



LOADWALL SHEARWALL NOTES:

- 1. ALL SHEARWALL PLYWOOD PANEL EDGES SHALL BE FASTENED TO EITHER COMMON FRAMING OR COMMON BLOCKING.
- 2. NAIL PATTERN SHALL BE AS SHOWN IN PLYWOOD NAIL DETAIL SHEET.
- 3. PLYWOOD HORIZONTAL JOINTS OVER WALL PLANKING SHALL BE AT LEAST 1" (MINIMUM) 2" (MAX) FROM THE EDGE OF THE BOARD, TO ALL OR BOTH SIDES OF PLYWOOD TO THE SAME BOARD. THIS ALWAYS AND TO BE NEEDED FROM THE OUTSIDE OF THE BUILDING. NOT REQUIRED TO CONCRETE WALL.
- 4. NAIL THE MIDDLE OF THE PANELS TO EACH WALL PLANK WITH (2) 6" R.S. NAILS (A VERTICAL COLUMN OF NAILS 6" MAX UP THE MIDDLE OF THE PANEL) NOT REQUIRED TO CONCRETE WALL.
- 5. THE ENDPOINT OF ALL PANELS NOT AGAINST WALL PLANKING SHALL BE FASTENED TO BLOCKING. USE 16D R.S. NAILS @ 6" O.C.
- 6. THE VERY BOTTOM OF THE PLYWOOD SHALL HAVE 2" X 4" BLOCKING BETWEEN TRUSSES EVERYWHERE, INCLUDING WHERE THERE IS WALL PLANKING.
- 7. PLYWOOD PANELS SHALL BE 4' X 8' EXCEPT AT BEADINGS AND AT CORNER BEADINGS WHERE THE MINIMUM WIDTH SHALL BE 24".

LOADWALL
VIEWING FROM INTERIOR STRUCTURE
APPROXIMATELY (84) PCS. PLYWOOD PANELS FOR
TOTAL OF (1) LOADWALL



5531 W. 5th St., Ste. 100
Eden Prairie, MN 55344
952-929-7854
info@wheeler1882.com
wheeler1882.com

SHEARWALL DETAILS		
OWNER: SAF	PROJECT NO: 170624A	DATE: 7/11/20
DATE: 4/11/20	SCALE: 1/4" = 1'-0"	9

DOORWALL SHEARWALL NOTES:

ALL ADJACENT PLYWOOD PANEL EDGES SHALL BE FASTENED TO EITHER COMMON FRAMING OR VERTICAL BLOCKING.

THE MIDDLE OF ALL PANELS (EXCEPT AT CABLE TRUSS) SHALL BE SUPPORTED BY AND FASTENED TO BLOCKING USE 16d R.S. NAILS @ 6" O.C.

THE VERY BOTTOM OF THE PLYWOOD SHALL HAVE 2" X 4" BLOCKING BETWEEN PILES EVERYWHERE, INCLUDING WHERE THERE IS WALL FINISHING.

PLYWOOD PANELS SHALL BE 4' X 8' EXCEPT AT BRACKETS AND AT CABLE TRUSS WHERE THE MINIMUM DIMENSION SHALL BE 24"

5/8" CDX GROOVED PLYWOOD, PLACED VERTICALLY PER TRUSS USE 16d R.S. NAILS AT 6" O.C. AT ALL EDGES

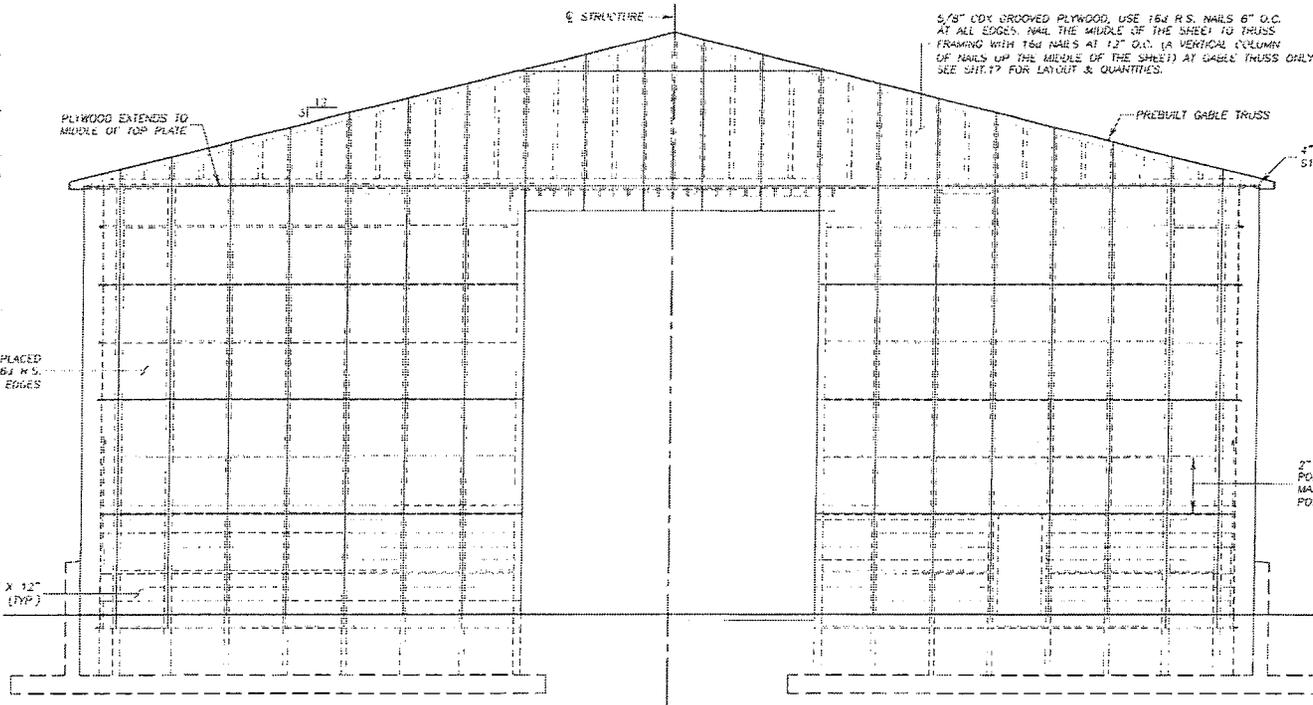
(9) ROWS 2" X 12" WALL FINISHING (TYP)

PLYWOOD EXTENDS TO MIDDLE OF TOP PLATE

5/8" CDX GROOVED PLYWOOD, USE 16d R.S. NAILS 6" O.C. AT ALL EDGES, NAIL THE MIDDLE OF THE SHEET TO TRUSS FRAMING WITH 16d NAILS AT 12" O.C. (A VERTICAL COLUMN OF NAILS UP THE MIDDLE OF THE SHEET) AT GABLE TRUSS ONLY. SEE SHEET 17 FOR LAYOUT & QUANTITIES.

4" X 16" TOP PLATE, SIS (3 1/2")

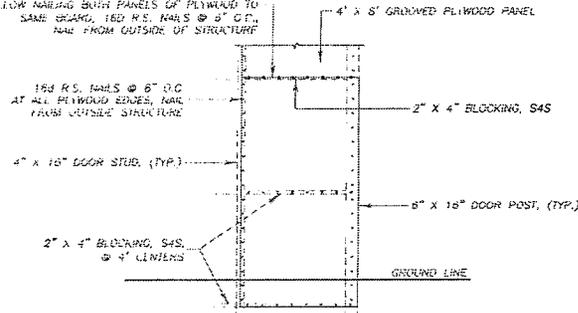
2" X 4" BLOCKING, S4S, AT MID POINT & EDGES OF PLYWOOD, 4 FT. MAX. SPACING, USE NAIL TO EA. POST WITH (3) 16d R.S. NAILS



DOORWALL

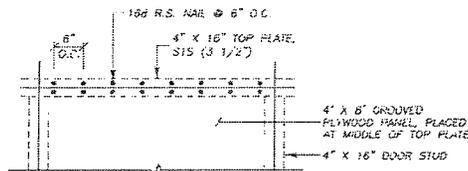
VIEWING FROM INTERIOR STRUCTURE
APPROXIMATELY (70) POS. GROOVED PLYWOOD PANELS
FOR TOTAL OF (1) DOORWALL

PLYWOOD HORIZONTAL JOINTS SHALL BE AT LEAST 1" FROM THE EDGE OF THE BOARD TO AVOID NAILING BOTH PANELS OF PLYWOOD TO SAME BOARD, 16d R.S. NAILS @ 6" O.C. NAIL FROM OUTSIDE OF STRUCTURE



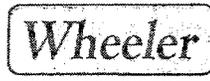
GROOVED PLYWOOD NAILING DETAIL

VIEWING FROM OUTSIDE OF STRUCTURE
APPROXIMATELY (56) NAILS PER PLYWOOD PANEL



PLYWOOD CONNECTION TO TOP PLATE AT DOORWALL

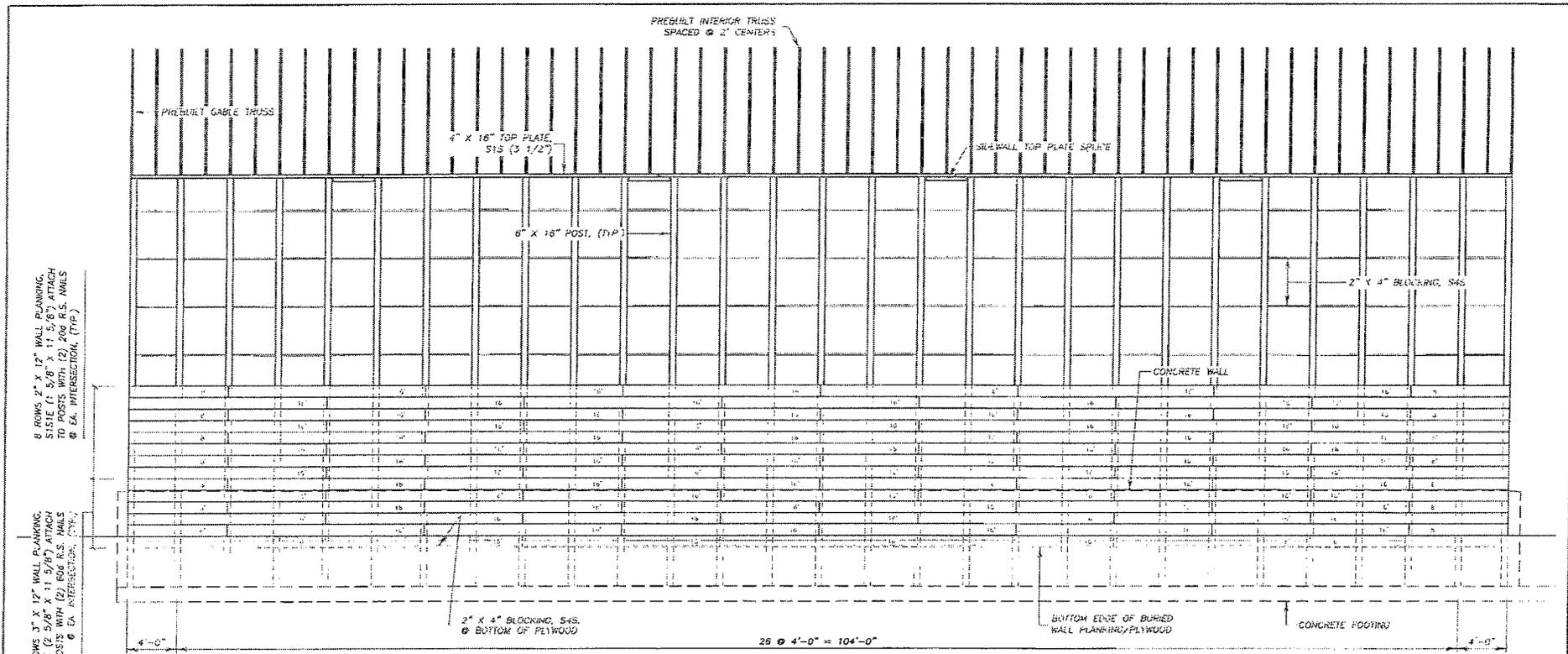
VIEWING FROM OUTSIDE OF STRUCTURE



5531 W 78th St., Ste. 100
Eagan Prairie, MN 55122
952-929-7854
info@wheeler1852.com
wheeler1852.com

SHEARWALL DETAILS

DRWN: LAF	TRACER/REB: URQUHART
CHK: WEH	1209246 711-14659
DATE: 4/10/20	SHEET NO

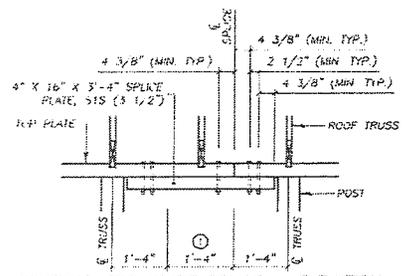


6 ROWS 2" X 12" WALL PLANKING, S/S/E (L 5/8" X 11 5/8") ATTACH TO POSTS WITH (2) 200 K.S. NAILS @ EA. INTERSECTION (TYP.)

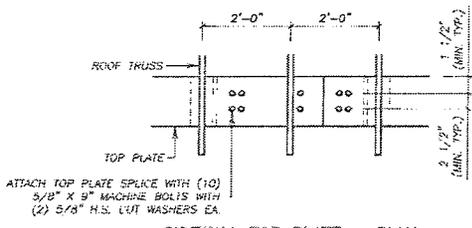
6 ROWS 3" X 12" WALL PLANKING, S/S/E (L 5/8" X 11 5/8") ATTACH TO POSTS WITH (1) 200 K.S. NAILS @ EA. INTERSECTION (TYP.)

NOTE:
 ① TOP PLATE SPLICE SHALL BE LOCATED WITHIN THIS ZONE EXCEPT SHALL BE 1" (MIN.) FROM FACE OF ROOF TRUSS.

SIDEWALL FRAMING
 VENTED FRAMING WALL STRUCTURE
 PLYWOOD INSTALLED BEFORE WALL PLANKING
 PLYWOOD NOT SHOWN FOR CLARITY

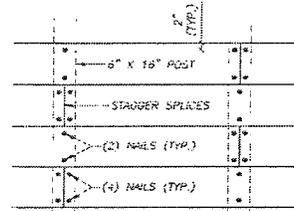


SIDEWALL TOP PLATE SPLICE ~ ELEVATION

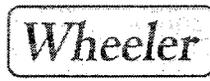


ATTACH TOP PLATE SPLICE WITH (10) 5/8" X 9" MACHINE BOLTS WITH (2) 5/8" H.S. CUT WASHERS EA.

SIDEWALL TOP PLATE ~ PLAN

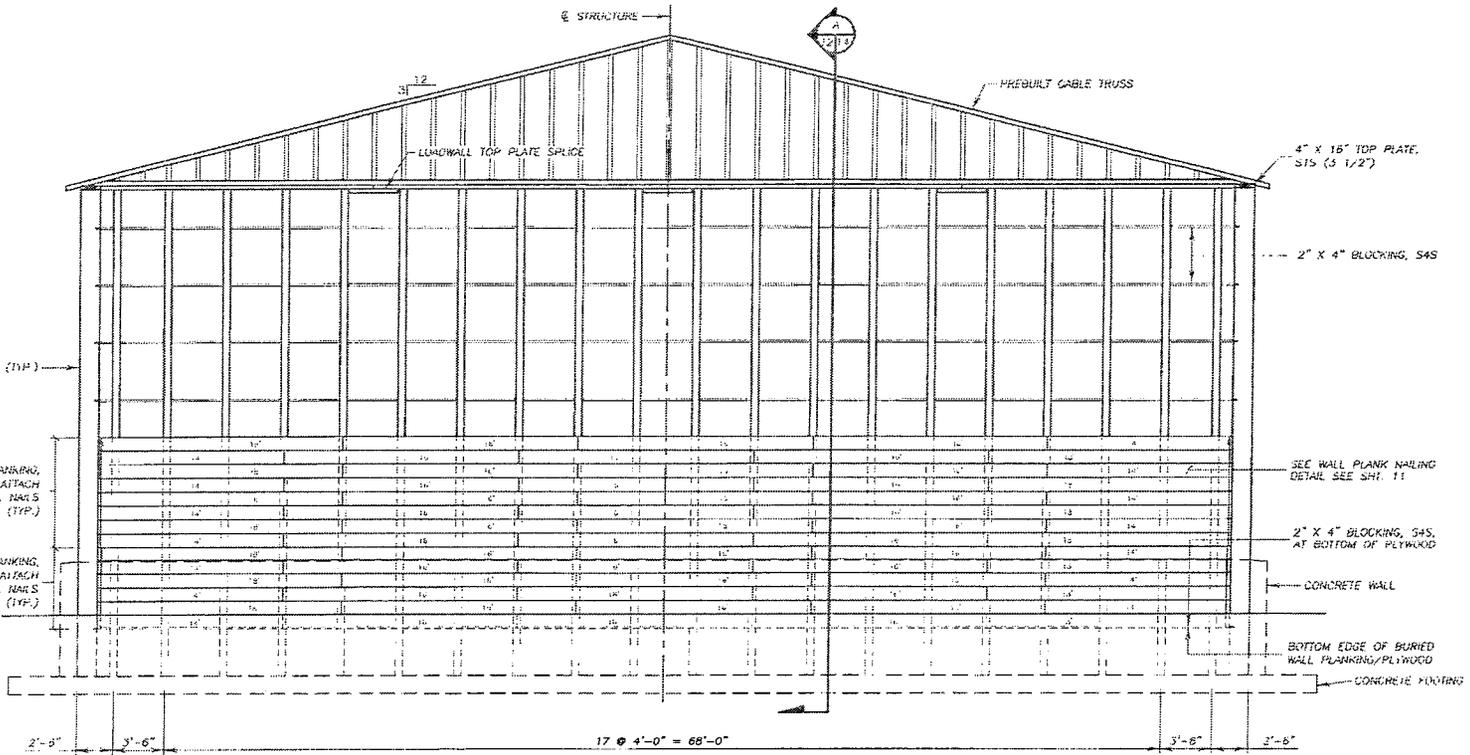


WALL PLANK NAILING DETAIL

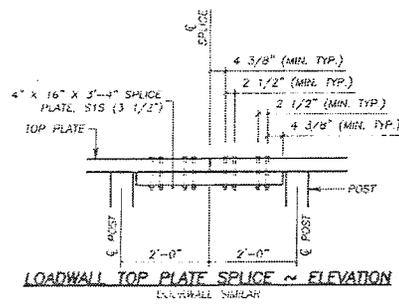


4531 W. 75th St., Ste. 100
 Eden Prairie, MN 55344
 952-929-7554
 info@wheeler1892.com
 wheeler1892.com

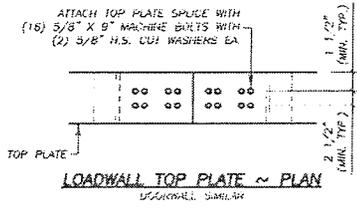
SIDEWALL FRAMING		
DRW.: LAH	TRACER #	05292
CHK.: WLH	120524A	11-14-20
DATE: 4/11/20	SHEET NO.	11



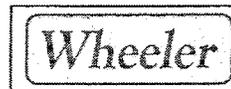
LOADWALL FRAMING
 UPWARD FROM ROOF STRUCTURE
 PLYWOOD INSTALLED BEFORE WALL FRAMING.
 PLYWOOD NOT SHOWN FOR CLARITY



LOADWALL TOP PLATE SPICE ~ ELEVATION
 LOADWALL SIMILAR



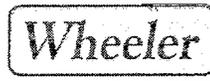
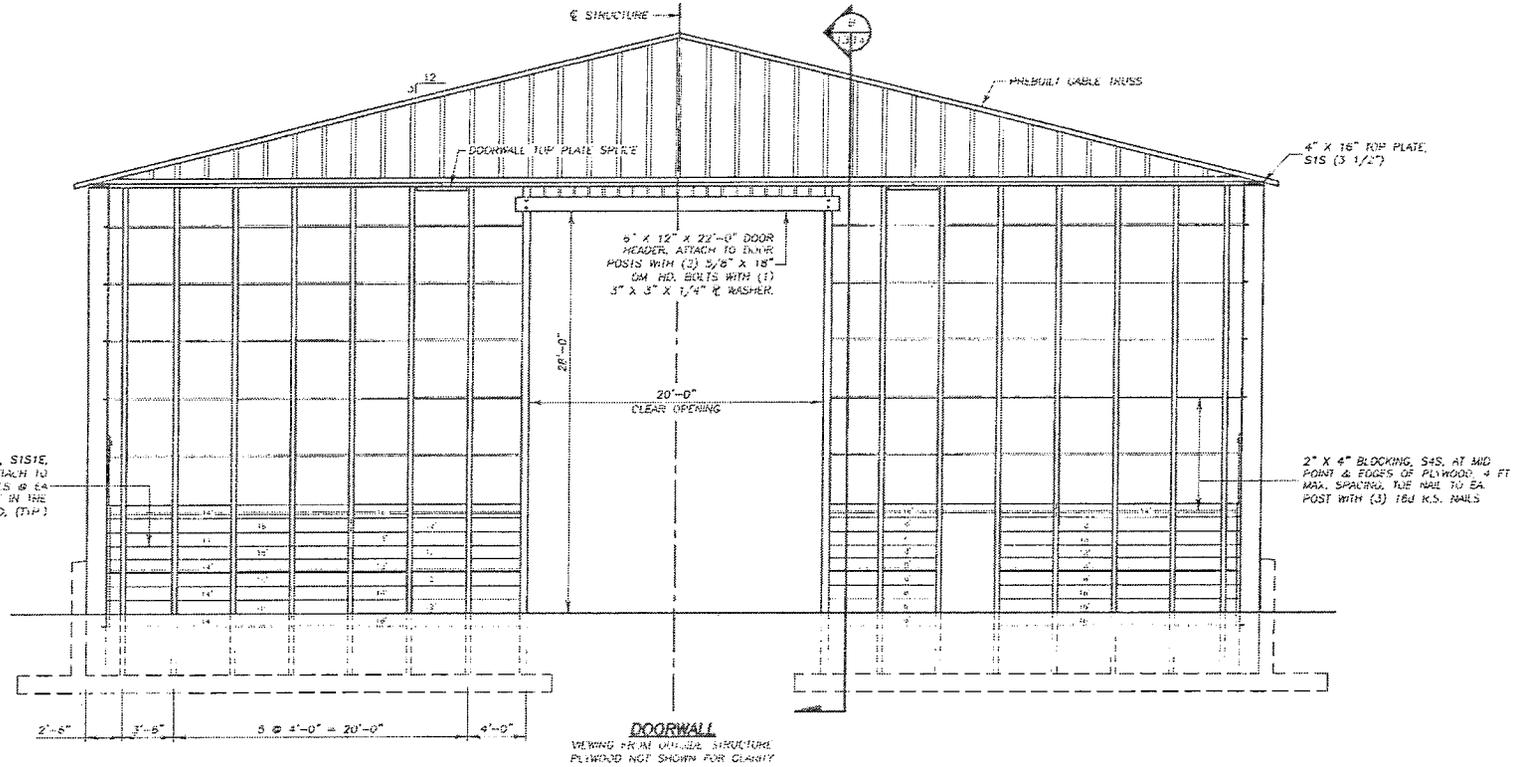
LOADWALL TOP PLATE ~ PLAN
 LOADWALL SIMILAR



9031 W. 78th St. Ste. 10A
 Eden Prairie, MN 55544
 952-929-7854
 info@wheeler1892.com
 wheeler1892.com

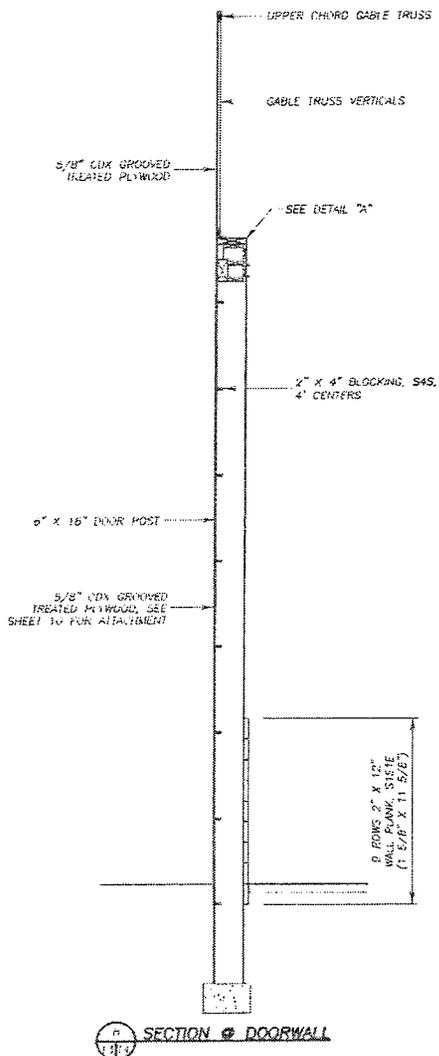
LOADWALL FRAMING	
OWN. LAF	TRACKING# 000000
CHK. MEM	120924A 717-14659
DATE: 4/10/20	SHEET NO.

(9) PLWS 2" X 12" MATERIAL, S1S1E,
 (1) 5/8" X 11 5/8", ATTACH TO
 POSTS WITH (2) 200 K.S. NAILS @ EA.
 INTERSECTION, CUT TO FIT IN THE
 HEAD. (TYP.)

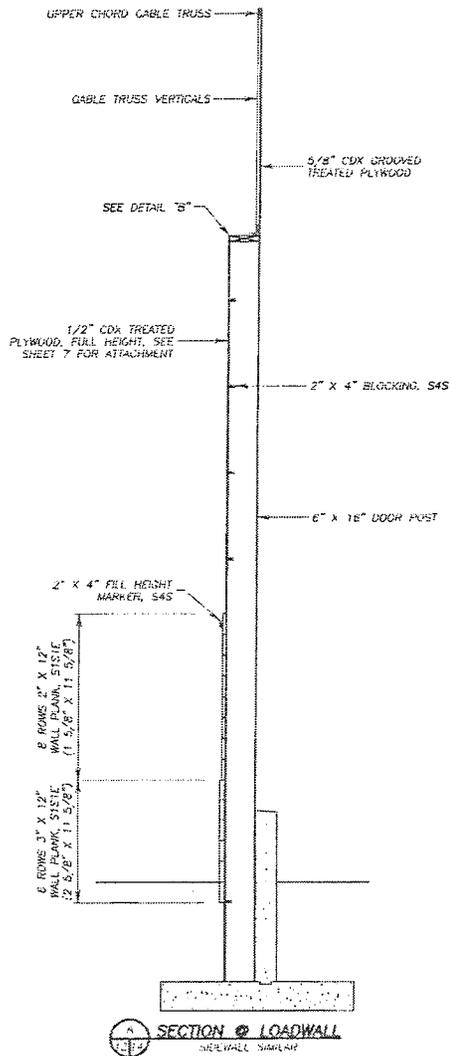


2531 W. 4th St., Ste. 100
 Eden Prairie, MN 55344
 952-929-7834
 info@wheeler1880.com
 wheeler1892.com

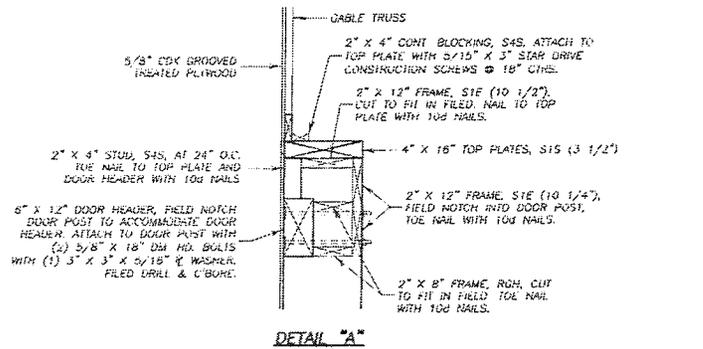
DOORWALL FRAMING			
DWN.: LAF	TRACER/	UNVER/2	
CHK.: WEH	120924A	711-14659	
DATE: 4/10/20	SHEET NO.		13



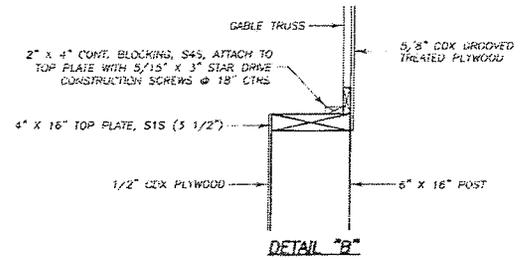
SECTION @ DOORWALL



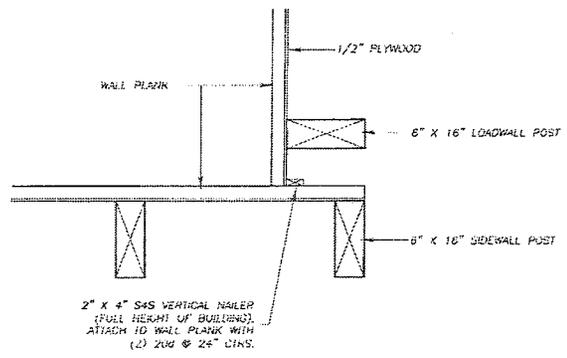
SECTION @ LOADWALL



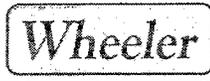
DETAIL "A"



DETAIL "B"

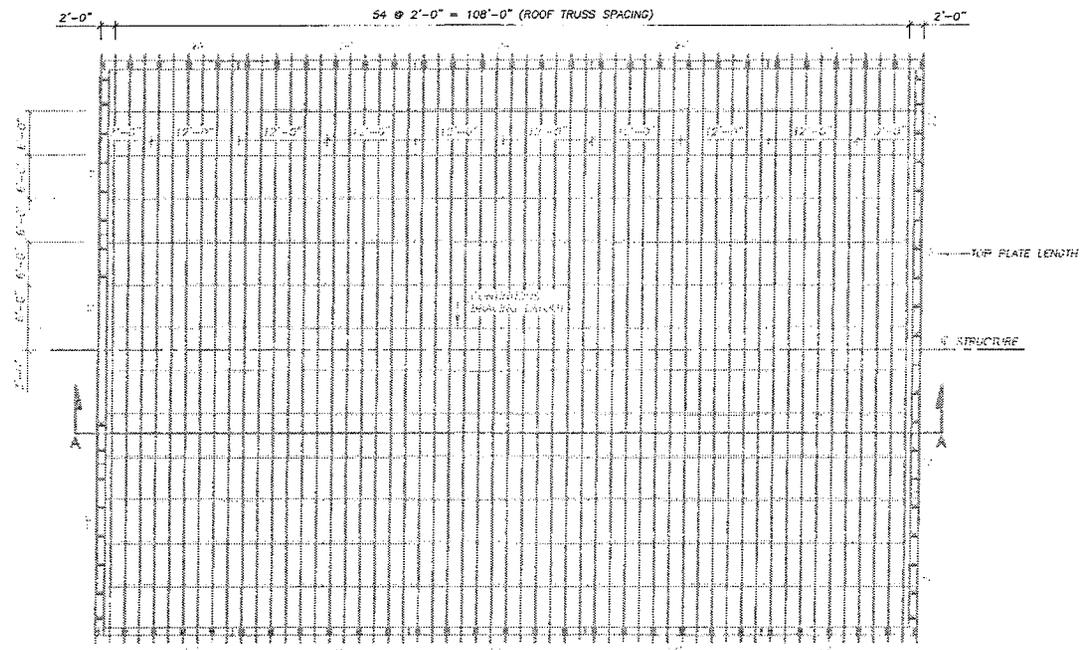


CORNER DETAIL AT SIDEWALL/LOADWALL



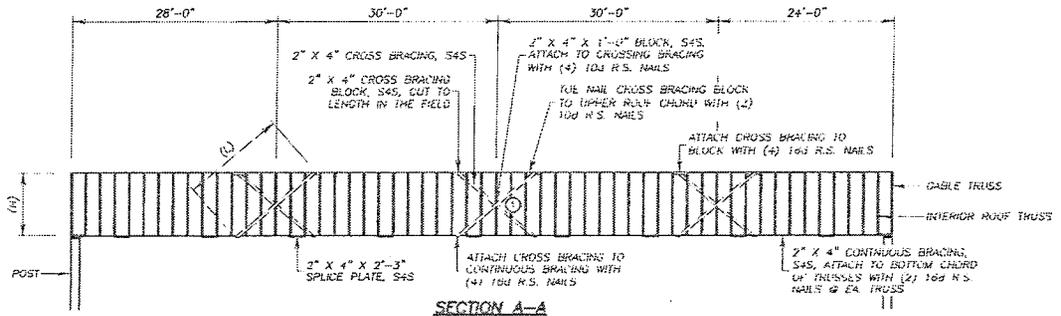
9531 W. 70th St., Ste. 110
 Eden Prairie, MN 55344
 952-929-7854
 info@wheeler1892.com
 wheeler1892.com

SECTION @ WALLS	
DRN: LAF	TRAINING# 00000#
CHK: WLM	T20924A 711-146-9
DATE: 4/10/20	SHEET NO

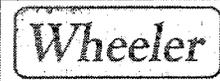


TRUSS & TOP PLATE LAYOUT

- NOTES:**
- PROVIDE 3 X 4 BRACES PER CONTINUOUS BRACE. SPACE EQUALLY IN BRACING LENGTH. AVOID TRUSS BRACE SPLICE.
 - WIDTH (W) SHALL APPROXIMATELY EQUAL HEIGHT (H).
 - FIELD CUT TOP PLATES AS NEEDED. SEE SHEETS 11 & 12 FOR TOP PLATE SPLICE DETAIL.
 - ① PROVIDE 2" X 4" BLOCK BETWEEN BRACE WHEN (L) ENCLOSED 7/1

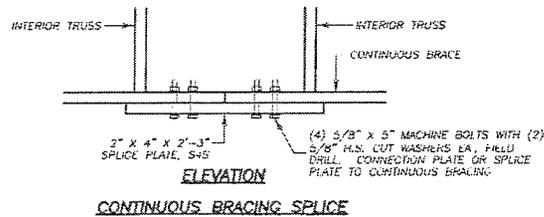
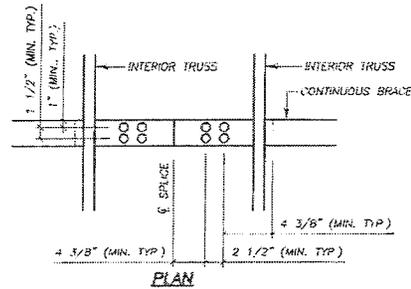


SECTION A-A

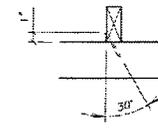
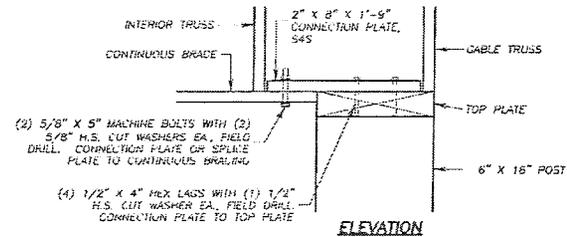
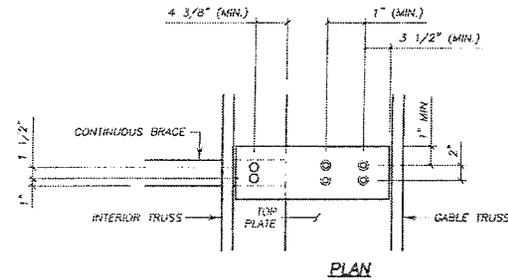


9531 W. 25th St., Ste. 100
 Eden Prairie, MN 55344
 952-929-7854
 info@wheeler1852.com
 wheeler1852.com

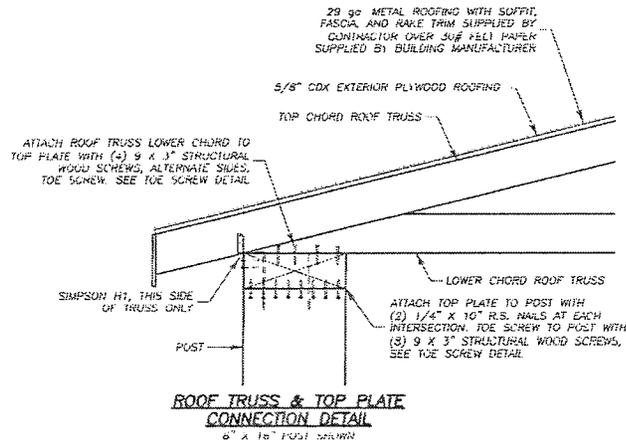
ROOF FRAMING		
DRAWN: GAF	DATE: 4/10/20	SHEET NO: 15
CHKD: WEL		



NOTE:
CONTINUOUS BRACING SPLICES MAY BE LOCATED ANYWHERE, MIN. EDGE AND SPACING DISTANCES SHALL BE MAINTAINED



TOE SCREW DETAIL
THE CHORDS OF TRUSS MUST BE Nailed THROUGH SOLID WOOD, IT IS ACCEPTABLE TO PLACE THROUGH TRUSS PLATE. 2" MIN SPACING



Wheeler

3031 W/8th St, Ste 102
Lslen Prairie, MN 55344
952-928-7854
Info@wheeler1892.com
wheeler1892.com

CONNECTION DETAILS			
DWN. 14"	TRACING#	ORDER#	
CHK. WEN	T209244	711-14654	
DATE: 4/10/20		SHEET NO.	16

ROOF DIAPHRAGM NOTES:

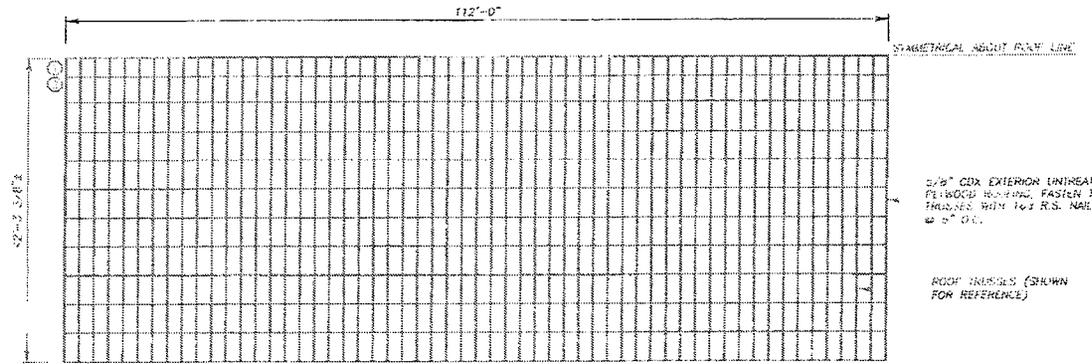
ALL ADJACENT PLYWOOD PANEL EDGES THAT ARE PARALLEL TO TRUSSES SHALL BE FASTENED TO A LAMINATION TRUSS.

PLYWOOD PANELS SHALL BE 4' X 8' EXCEPT AT END BRACES WHERE THE MINIMUM SHEET DIMENSION SHALL BE 24".

- ① TOP ROW OF ROOF PLYWOOD TO BE A MIN. OF 24" WIDE
- ② SECOND ROW FROM TOP TO BE FIELD MEASURED & CUT AS REQUIRED. MINIMUM WIDTH DIMENSION SHALL BE 24"
- ③ SEE TRUSS INFO SPECIFICATION SHEET(S) FOR LOCATION OF CONTINUOUS WEB BRACES.

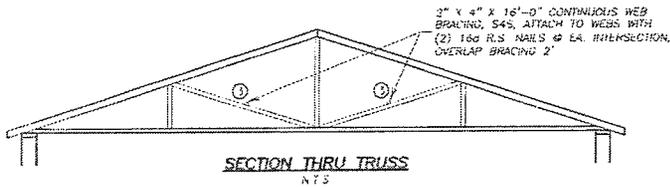
FIELD VERIFY

Dimensions shown are approximate only. Final dimensions to be determined in the field.



ROOF DIAPHRAGM PLAN VIEW

(JOB) 4' X 8' X 3/8" SHEET PLYWOOD (TYPE HOA)
DIMENSIONS SHOWN ARE APPROXIMATE ONLY
FINAL DIMENSIONS TO BE DETERMINED IN THE FIELD



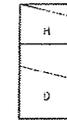
2 SHEETS THIS
2 SHEET THIS REVERSE



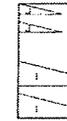
2 SHEETS THIS
2 SHEET THIS REVERSE



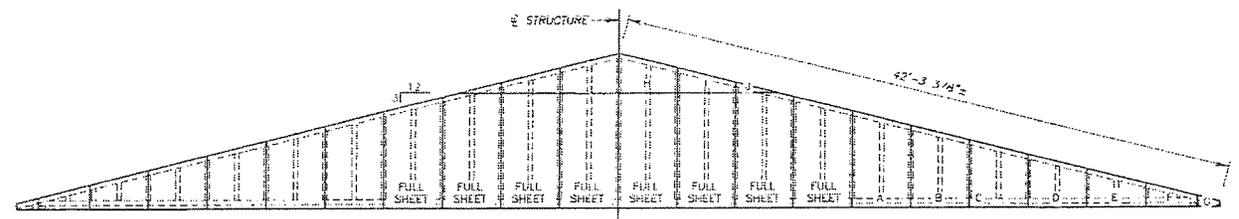
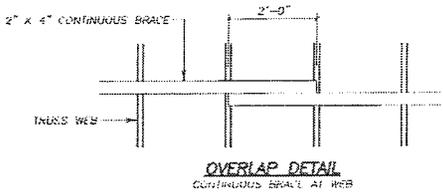
2 SHEETS THIS
2 SHEET THIS REVERSE



2 SHEETS THIS
2 SHEET THIS REVERSE

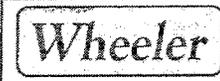


1 SHEET THIS
1 SHEET THIS REVERSE



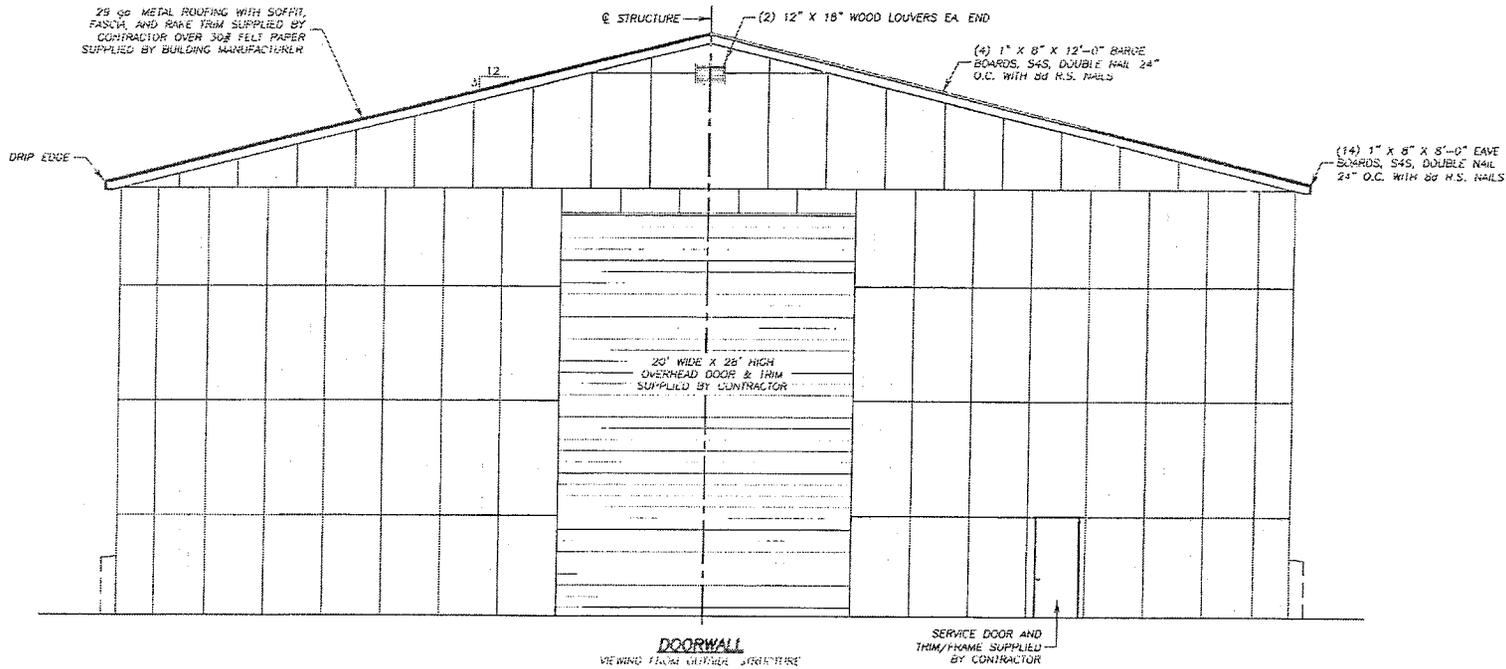
SUGGESTED GABLE END CUTTING PATTERN DETAIL

(JOB) 4' X 8' X 3/8" SHEET UNGRADED PLYWOOD (TYPE GABLES)
LAYOUT SHOWN IS APPROXIMATE ONLY
FINAL LAYOUT TO BE DETERMINED IN THE FIELD.
CONNECTION TO TOP PLATE SHALL BE AS SHOWN ON PLYWOOD CONNECTION TO TOP PLATE DETAIL ON SHEET 10



9531 W. 79th St., Ste. 160
Eden Prairie, MN 55344
952-929-7854
info@wheeler1892.com
wheeler1892.com

ROOF DIAPHRAGM DETAILS	
DWN. LAF	120924A 711-14609
CHK: WEH	SHEET NO.
DATE: 4/10/20	17

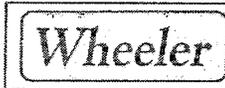


DOORWALL PLYWOOD NOTES:

ALL EDGES OF ALL PANELS SHALL BE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING ALL EDGES SHALL BE COMPLETELY DETAIL FOR THE SAFE AND SOUND.

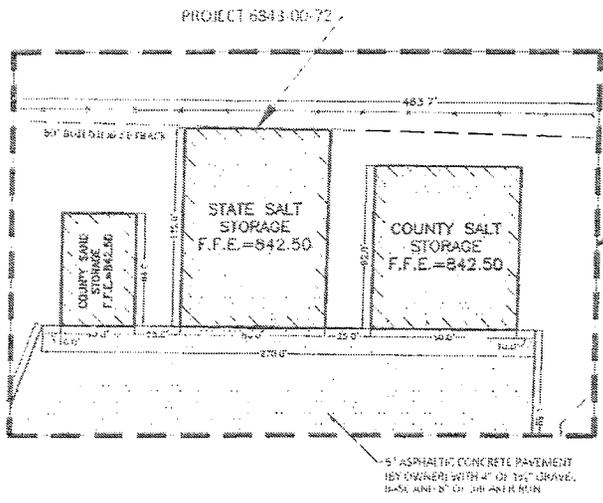
THE MIDPOINT OF ALL PANELS SHALL BE SUPPORTED UP AND FASTENED TO BEAMING ELSE 100 H.S. NAILS AT 6" O.C.

NAIL PATTERN SHALL BE AS SHOWN IN PLYWOOD NAIL DETAIL ON SHEET 10.



9531 W 75th St, Site 100
Eden Prairie, MN 55344
952-928-7854
info@wheeler1892.com
wheeler1892.com

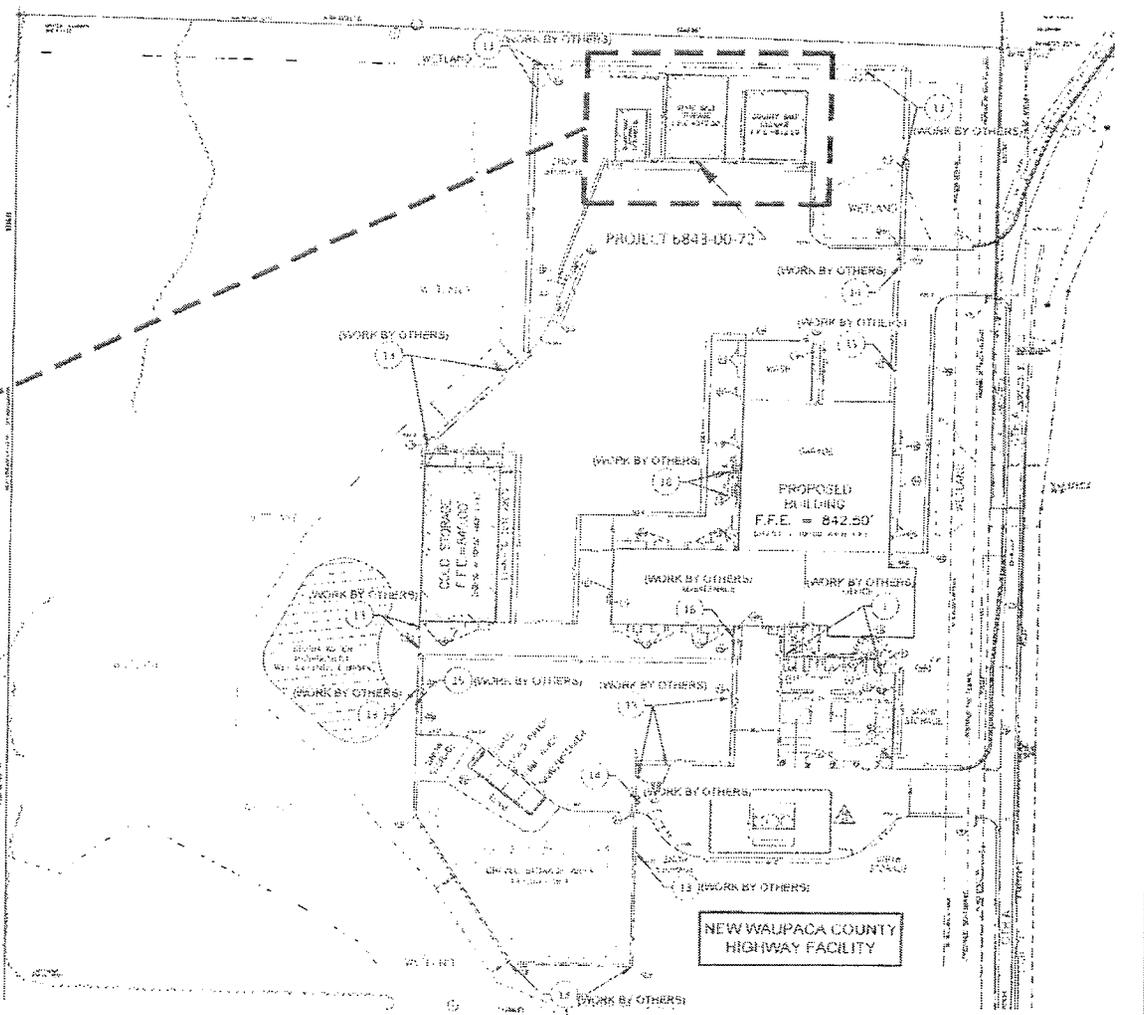
FINISHING AND MISC. DETAILS	
DRAWN: LAD	FINISHING: CRULKE
CHK: WEH	TZORIMA 711-14609
DATE: 4/10/20	SHEET NO. 18



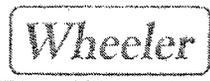
LOCATION OF STATE SALT STORAGE

LEGEND

- (1) THICKENED EDGE WALK (WORK BY OTHERS)
- (2) 8' TALL CHAIN LINK SECURITY FENCE (WORK BY OTHERS)
- (3) 10' SECURITY CHAIN LINK CANTILEVER GUIDE (WORK BY OTHERS)
- (4) 20' SECURITY CHAIN LINK SWING GATE (WORK BY OTHERS)
- (5) 6' WIDE SECURITY CHAIN LINK MAIN GATE (WORK BY OTHERS)
- (6) CONCRETE BOLLARD (WORK BY OTHERS)



NEW WAUPACA COUNTY
HIGHWAY FACILITY



9031 W. 96th St., Ste 100
Eden Prairie, MN 55349
952-929-7854
info@wheelerid2.com
wheeler1897.com

PLOT PLAN	
Drawn By	IRVING GORDON
Check By	IRVING GORDON
Date	4/10/20