NORTH MASON REGIONAL FIRE AUTHORITY – INVITATION FOR BIDS

TAHUYA DIESEL EXHAUST REMOVAL SYSTEM

BID DATE: *February 14, 2020*

The North Mason Regional Fire Authority (referenced as "Fire Authority") hereby extends an invitation to qualified general contractors to bid the exhaust removal system installation project hereafter referred to as: TAHUYA DIESEL EXHAUST REMOVAL SYSTEM. The project is located at 14860 NE North Shore Rd, Tahuya Washington 98588.

BID SUBMITTAL: Sealed bids will be accepted at the North Mason Regional Fire Authority Headquarters located at 460 NE Old Belfair Highway, Belfair, WA 98528 until 5:00 p.m. on Monday, March 2, 2020. Bids will be opened and read aloud at 1:00 p.m. on Tuesday, March 3, 2020, at the Fire Authority Headquarters.

The outside of the sealed envelope must be properly marked with:

"Bid for North Mason Regional Fire Authority, Tahuya Diesel Exhaust Removal System"

All bid proposals shall be deemed to be offers to enter into a contract and shall be irrevocable for a period of thirty (30) days after the bid closing date.

PROJECT DESCRIPTION: The Fire Authority is seeking bids for the purchase and installation of a sliding balancer diesel exhaust removal system suitable for three (3) operating vehicles, into the three (3) apparatus bay (back-in) Tahuya Fire Station. The system shall be fully automatic, including fan activation and system disconnect from the exiting vehicle, and shall be fully code-compliant and easy to use, with one (1)-step connection to the vehicle as it enters the station. The system shall be factory assembled and tested to assure quality and reliability. The system shall be installed, piped and electrically wired by the successful Bidder.

Equipment, ancillary components, installation requirements, testing and certifications required at the installation site shall be stated within this specification. The system and components identified herein shall be a complete and integral part of the package. Attached is a site drawing for the project. The site drawing has been provided in addition to the bid documents but should not be used as a sole means of bidding.

SCHEDULE: Work on the project shall commence on or before a date to be specified in a written "Notice to Proceed". Substantial Completion of the work shall be no later than 49 calendar days thereafter. Final completion of the work shall be no later than 30 calendar days after Substantial Completion.

PROJECT ESTIMATE: The estimate for this project is $46,000.00. This estimate excludes Washington State sales tax, architect and engineering fees, permits, testing and inspection, construction contingency, builders' risk insurance, preconstruction services, construction management fees and alternative contracting premiums.

OBTAINING BID DOCUMENTS: Bid documents may be obtained by going to www.northmasonrfa.com. Bidders may also pick up a Bid Packet in person, from the Fire Authority's Headquarters located at 460 NE Old Belfair Highway, Belfair, WA 98528 during regular business hours.

BID PROPOSALS: Proposals must be submitted in accordance with all specifications included in the instructions to Bidders. Incomplete proposals and proposals received after the time due listed above will not be considered. Oral, electronic, telephonic, telegraphic or faxed proposals will not be accepted.

The Tahuya Diesel Exhaust Removal System project is a public works project and, as such, is subject to prevailing wages.

REJECTION OF BIDS: The Fire Authority expressly reserves the right to reject any or all bids, and the right to waive any informalities or irregularities in any bid or in any bidding and to further award the project to the lowest, responsive, responsible Bidder whose bid complies with all of the prescribed formalities, as it best serves the interest of the Fire Authority.

BID FORM – DIESEL EXHAUST REMOVAL SYSTEM

The North Mason Regional Fire Authority is seeking bids for the purchase and installation of a diesel exhaust removal system that will remove exhaust gases of three (3) operating vehicles, within the three (3) apparatus bay Tahuya Fire Station located at 14860 NE North Shore Rd, Tahuya Washington 98588.

Sealed bids will be accepted at the North Mason Regional Fire Authority Headquarters located at 460 NE Old Belfair Highway, Belfair, WA 98528 until 5:00 p.m. on Monday, March 2, 2020. The outside of the sealed envelope must be properly marked with "Bid for North Mason Regional Fire Authority, Tahuya Diesel Exhaust Removal System".

NOTE TO ALL BIDDERS: NO BIDS RECEIVED AFTER CLOSING WILL BE ACCEPTED

No bid may be withdrawn for a period of thirty (30) days after the bid closing date. The Authority reserves the right to reject any and all bids and to accept the bid it feels is in the best interest of the Authority.

Equipment	Quantity	Unit Price	Total
Sliding Balancer Track Back-In System with Hose and Nozzle	3		
Fan with Motor	1		
Control Panel with Wireless Sensor System	1		
Ducting, Materials and Installation Hardware			
Tailpipe Modifications	3		
Freight			
Electrical			
Miscellaneous/Labor			
Total			

Any questions concerning the bid specifications shall be in writing, and any exceptions must be approved by the Fire Authority.

Signature: _____ Printed Name: _____

Company Name: _____ Title: _____

Company Address: _____

_____

Phone: _____ Fax: _____

Email: _____

NORTH MASON REGIONAL FIRE AUTHORITY - INSTRUCTIONS TO BIDDERS

DIESEL EXHAUST REMOVAL SYSTEM

Identification of Authority. The North Mason Regional Fire Authority is the entity issuing this Invitation for Bids. The Fire Authority is a municipal corporation and a political subdivision of the State of Washington.

Headquarters Physical Address: 460 NE Old Belfair Hwy
Belfair, WA 98528

Mailing Address: PO Box 277
Belfair, WA 98528

Project Site Address: 14860 NE North Shore Rd
Tahuya, WA 98588

For further information, contact the Fire Authority at 360-275-6711 between the hours of 9:00 a.m. and 5:00 p.m. on all regular business days.

The Fire Authority representative for all matters relating to this Invitation for Bids is: Assistant Fire Chief, Scott Cooper.

1. **Definitions.** The following terms shall have the meaning set forth below, when used in this document:

    1.1. **Bidder.** Any person or entity that submits a qualified bid in response to the Invitation for Bids by the Fire Authority.

    1.2. **Qualified Bid.** Any bid submitted to the Fire Authority in response to the Invitation for Bids issued by the Fire Authority that complies with the bid specifications.

    1.3. **Fire Authority.** North Mason Regional Fire Authority.

    1.4. **Supplier.** The Bidder who is awarded the contract to supply the material and construction labor described in the bid specifications issued by the Fire Authority, whether referred to as Successful Bidder, General Contractor or Manufacturer in subsequent documents.

1.5. **Acceptance.** The time at which the Fire Authority indicates the equipment, as installed, substantially complies with the specifications issued by the Fire Authority.

2. **Invitation for Bids.** The Fire Authority will accept bid proposals for turnkey installation of a new sliding balancer track diesel exhaust removal system for use in the three (3) apparatus bay Tahuya Fire Station located at 14860 NE North Shore Rd, Tahuya, WA 98588.

2.1. **Time.** Bid proposals must be received by the Fire Authority on or before 5:00 p.m. on March 2, 2020.

2.2. **Place.** Bid proposals may be mailed to the Fire Authority's mailing address or hand delivered to the Fire Authority's Headquarters.

2.3. **Bid Opening.** Bids will be opened at 1:00 p.m. on March 3, 2020, at the Fire Authority's Headquarters.

2.4. **Board Action.** The Board of Commissioners will review the bid proposals submitted at an open public meeting at 5:00 p.m. on March 10, 2020, at the Fire Authority's Headquarters. The Board may take formal action at that time or at a subsequent meeting.

3. **Acceptance/Rejection of Bids.** The Fire Authority reserves the right to reject any or all bids, to waive minor irregularities in any bids or in the bidding procedure, and to accept any bid presented which meets or exceeds these specifications and which the Board of Commissioners of the Fire Authority deems to be in the best interest of the Fire Authority. The Board of Commissioners reserves the right to award the bid to any responsible Bidder, taking into consideration the interests of the Fire Authority and participating agencies as a whole. This may or may not be the bid with the lowest bid price.

4. **Instruction to Bidders and Specifications.** The invitation/instructions to Bidders and specifications may be obtained by contacting the Fire Authority between the hours of 9:00 a.m. and 5:00 p.m. on all regular business days or online at www.northmasonrfa.com. Any questions regarding bid specifications should be addressed to Assistant Fire Chief Scott Cooper five (5) days prior to the bid opening date. Clarifications, corrections and/or changes shall be sent in writing to all prospective Bidders.

5. **Bid Marking.** All bids must be submitted in a sealed envelope, clearly marked on the outside of the envelope, "Bid for North Mason Regional Fire Authority, Tahuya Diesel Exhaust Removal System".

6. **Bid Submission.** A Bidder may, without prejudice to the Bidder, withdraw, modify or correct a proposal after it has been deposited with the Fire Authority, provided the request is filed with the Fire Authority, in writing before the time set for opening the bid proposals. The original proposal, as modified by such writing, shall be considered as a proposal submitted by the Bidder.

7. **Contents of Bid Proposal.** All bid proposals shall contain or be accompanied by the following:

    7.1. **Proposal.** A written proposal to supply all materials and labor to install a new diesel exhaust removal system as described in the specifications, in accordance with the instructions to Bidders.

    7.2. **Qualification of Bidder.** Satisfactory evidence of the Bidder's ability to construct/install the diesel exhaust removal system as specified.

    7.3. **Warranty/Repair Services.** The Bidder shall provide in the bid proposal a statement stating the length of time that materials and workmanship will be covered after acceptance of the work and services provided.

    7.4. **Authority.** The bid must be signed by an authorized representative of the Bidder. The Bidder shall provide with the bid proposal, proof of such representative's authority to contractually bind the Bidder.

    7.5. **Price.** The total bid price exclusive of state and local sales or use tax based on the estimated quantities, recognizing the exact number of units purchased may vary from estimated quantities.

8. **Compliance.** The Fire Authority advises all prospective Bidders that compliance with the requirements of these instructions to Bidders and bid specifications will be considered by the Board of Commissioners in determining whether to accept or reject any bid.

9. **Material Considerations.** Each of the requirements contained in this document are material, and the failure of a Bidder to comply with each requirement may constitute grounds for the rejection of the bid at the discretion of the Board of Commissioners.

10. **Bidding Errors.** The Fire Authority will not be liable for any errors in any Bidder proposal, and Bidders will not be allowed to alter or modify bids after the bid submittal deadline. The Fire Authority reserves the right to correct or amend errors such as typing, transposition or other obvious errors; however, the Fire Authority is not required to make such corrections or amendments. If a Bidder claims error and asks to be relieved of an award, the Bidder will be required to promptly present certified worksheets documenting the error. If the Fire Authority,

upon review of the worksheets, is convinced at the Fire Authority's sole discretion, that an honest, mathematically excusable error or omission of costs has been made, the Bidder may be relieved of bid. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control.

11. **Offer Irrevocable - Time Period.** All bid proposals shall be deemed to be offers to enter into a contract and shall be irrevocable for a period of thirty (30) days from the date of opening of the bids.

12. **Specifications.** The technical specifications provided by the Fire Authority are the minimum requirements. Any exceptions equivalent to or exceeding these specifications will be given due consideration. Bidders shall include their proposal specification sheets. **Any exceptions to strict compliance with the specifications must be noted. A List of Exceptions to Specifications shall be prepared by the Bidder and included with the bid, indicating any and all exceptions, explaining each exception and describing the specification proposed to be met.**

13. **Completion.** Work on the project shall commence on or before a date to be specified in a written "Notice to Proceed". Substantial Completion of the work shall be no later than 49 calendar days thereafter. Final completion of the work shall be no later than 30 calendar days after Substantial Completion.

14. **Warranty.** If the warranty excludes warranties of any specific included components because such components are covered by the component manufacturer's warranty, the warranty of the component manufacturer shall be included with the bid proposal. The warranty obligation shall include the following:

    14.1. All materials and required labor.

    14.2. The term of the warranty or warranties.

15. **Prevailing Wages.** The Bidder shall pay prevailing wages as currently published by the Washington State Department of Labor and Industries and shall comply with Chapters RCW 39.12 and RCW 49.28.

    15.1. **Statement of Intent to Pay Prevailing Wages** must be filed with the Department of Labor and Industries by the Bidder, after the contract is awarded, before work begins. The approved Statement of Intent and prevailing wage rates for the project must be posted for the benefit of workers.

15.2. **Affidavits of Wages Paid** must be submitted to the Department of Labor and Industries for certification by the director, upon conclusion of the contract, by the Bidder/Contractor. Final payment on the contract shall be withheld until certification by the director has been received by the Fire Authority that the prevailing wage requirements of the law have been satisfied.

15.3. The Bidder must certify that it has not been cited for two (2) violations within the last five (5) years, and is thus not prohibited from bidding on public works contracts. The Bidder must also assure the Fire Authority that it will use no sub-contractor who is thus prohibited.

16. **Statutes and Regulations.** The completed/installed diesel exhaust removal system must comply with the requirements of applicable federal statutes and regulations, Occupational Safety and Health Administration (OHSA) regulations, National Fire Protection Association code, National Institute of Occupational Safety and Health (NIOSH) recommendations, applicable Washington statutes and regulations of the Department of Labor and Industries, and all other applicable state regulatory agencies. In the event the specifications cannot be complied with without violating such requirements, the Bidder shall so state; if not discovered until after the contract has been executed, the supplier shall advise the Fire Authority prior to completion.

17. **Patents.** The supplier shall defend any and all suits and assume all liability for any claims against the Fire Authority, or any of its officials, employees and agents, for the use of any patented process, device or article forming a part of the equipment or any appliance to be furnished under the contract.

18. **Public Disclosure.** All documentation submitted to the Fire Authority may be considered public record under applicable laws and may be subject to disclosure. Bidders recognize and agree the Fire Authority will not be responsible or liable in any way for any losses the Bidder may suffer from the lawful disclosure of information or materials to third parties. Any materials requested to be treated as confidential documents, proprietary information or trade secrets must be clearly identified and readily separate from the balance of the bid submission. Such designations will not necessarily be conclusive, and Bidders may be required to justify why such material should not, upon written request, be disclosed by the Fire Authority under the applicable Public Records Act (RCW 42.56). The Fire Authority will attempt to provide at least two (2) business days' notice of a public records request for material submitted pursuant to this Invitation for Bid. Bidders must respond to the notice in writing with any objection to the production of the documents within two (2) business days of the receipt of the notice. All costs incurred by Bidders associated with any public records request are the responsibility of the Bidders.

19. **Conflict of Interest.** Bidders must certify that no officer, agent or employee of the Fire Authority who has participated in the contract negotiations on behalf of the Fire Authority has a pecuniary interest in the bid proposal and that the proposal is made in good faith without fraud, collusion or participation of any kind by any other Bidder under the same call for bids, and that the Bidder is submitting the bid on its own behalf and not as an undisclosed agent of any person or firm.

DIESEL EXHAUST REMOVAL SYSTEM BID SPECIFICATIONS

INFORMATION FOR BIDDERS/CONTRACTORS: Sealed bids are desired for the purchase and installation of a sliding balancer track diesel exhaust removal system, in accordance with the specifications outlined in this document.

Y___N___

GENERAL REQUIREMENTS: Each bid must be accompanied by the Bidder's accurate and Authority-specific written specifications covering the equipment which it is proposing to supply and install. All specifications herein contained are considered as minimum. The Fire Authority has evaluated different styles of diesel exhaust removal systems and has determined that the specifications herein are best suited for the Fire Authority's needs, in terms of quality and features. These specifications shall not be interpreted as restrictive but rather as a measure of quality and performance against which all other systems will be compared.

Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Each Bidder must indicate compliance with the outlined specifications by checking Yes or No above each section of these specifications. Checking "Y" will indicate complete compliance with that section; "N" will indicate an exception is being taken. Every exception taken shall be listed as to page number and paragraph. Failure to provide the required exception list with the bid proposal will be cause for rejection of that proposal. This requirement shall allow the Fire Authority to easily compare the Bidder's specifications and proposals.

Where questions arise during construction between these specifications and the Bidder's proposal, the Fire Authority specifications shall prevail. Decisions of equivalency will be at the sole interpretation of the Fire Authority. A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence. An original manufacturer's brochure of the proposed product must be submitted with proposal.

Such details and other construction features not specifically covered herein shall conform to all State and Federal requirements, National Fire Protection Association (NFPA) code NFPA 1500 "Standard on Fire Department Occupational Safety, Health, and Wellness Program" and National Institute of Occupational Safety and Health (NIOSH) recommendations.

Y___N___

PREVAILING WAGES: The Bidder shall pay prevailing wages as currently published by the Washington State Department of Labor and Industries and shall comply with Chapters RCW 39.12 and RCW 49.28. The Successful Bidder will be required to file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries after the contract is awarded, before work begins. The approved

Statement of Intent and prevailing wage rates for the project must be posted for the benefit of workers. Additionally, the Bidder/Contractor must submit Affidavits of Wages Paid to the Department of Labor and Industries for certification by the director, upon conclusion of the contract. Final payment on the contract may be withheld until certification by the director has been received by the Fire Authority that the prevailing wage requirements of the law have been satisfied.

Y___N___

In accordance with RCW 39.12, the Bidder certifies that it has not been cited for two (2) violations within the last five (5) years, and is thus not prohibited from bidding on public works contracts. The Bidder also assures the Fire Authority that it will use no sub-contractor who is thus prohibited.

Y___N___

BIDDER QUALIFICATIONS: Bids will only be accepted from companies that have fifteen (15) years established reputation in the field of installing fire department type diesel exhaust removal systems. The installing contractor must be established in the business of hose-based vehicle exhaust removal systems for a minimum of no less than fifteen (15) years.

The Bidder will also supply the last fifteen (15) fire department installs completed, including telephone number and contact name. The Fire Authority reserves the right to reject any bid where the available proof or information does not satisfy the Fire Authority of the Bidder's qualification or ability to provide the materials and service.

Y___N___

SPECIAL INSTRUCTIONS TO BIDDERS: Bidders are requested to read the complete bid invitation carefully and submit their proposals in strict accordance with the requirements set forth. Any questions regarding this specification must be submitted in writing and received by the Assistant Fire Chief a minimum of five (5) days prior to the bid opening date. Clarifications, corrections and/or changes will be sent out in writing to all prospective Bidders. The Authority reserves the right to reject any or all bids, or to accept any bid presented that meets or exceeds these specifications, and which the Authority deems is in the best interest of the Authority, regardless of the amount proposed.

Y___N___

SUBMISSION OF PROPOSALS: Each proposal shall be submitted in sequence with the attached specifications for ease of checking compliance of bids with Bidder's specifications. All proposals shall be submitted on the Bidder/Contractor’s letterhead and not a reproduction of these specifications. Each bid proposal shall be signed by an Officer of the company being bid.

Y___N___

DELIVERY AND OPENING OF PROPOSAL: Each proposal and all papers bound and attached thereto, shall be placed in an envelope and securely sealed therein. Proposals will be received at or prior to the time set for the opening of bids. Proposals received after the "bid deadline" will be returned unopened. The bids will be opened publicly and read aloud at the time and date stated on the Invitation for Bids.

Y___N___

CONTRACT AWARD: The contract will be awarded to the most "responsible Bidder" provided that bid is in the best interest of the Fire Authority. When analyzing bid proposals and in recommending a Successful Bidder, superior design, workmanship, materials, operating costs, location, past experience, length of incorporation and compliance to specifications will be taken into consideration.

These specifications, together with any other documents required herein, shall be included in the contract executed between the Fire Authority and successful Bidder. Each Bidder shall submit a copy of their proposed contract form. If there is any deviation or misunderstanding of the published specification, the Fire Authority's published specifications will override the Bidder's specification in all cases.

The Fire Authority reserves the right to waive any formality in the bids received, when such waiver is in the best interest of the Fire Authority and, also, to accept any item in the bid found to be of superior quality or otherwise preferred by the Fire Authority. In no way will the Fire Authority assume any liability for the Bidder/Contractor's negligence.

Y___N___

PERFORMANCE BOND: The successful Bidder may be required to execute and deliver to the Fire Authority a Performance Bond in the amount of 100% of the contract price, in form and from a surety company reasonably acceptable to the Fire Authority. The bond shall show the Bidder as the “principal” and provide for a 100% guarantee that the bidder will deliver and install equipment per the bid specifications. THE BIDDER SHALL INDICATE THE INTENTION TO PROVIDE THE REQUIRED PERFORMANCE BOND IN THE PROPOSAL PACKET.

Y___N___

PRE-CONSTRUCTION CONFERENCE AT THE AUTHORITY: A pre-construction conference shall be conducted at the North Mason Regional Fire Authority Headquarters, at which time all final designs and equipment mounting locations will be approved. THE BIDDER SHALL INDICATE THE INTENTION TO PROVIDE THE REQUIRED PRE-CONSTRUCTION CONFERENCE IN THE PROPOSAL PACKET.

Y___N___

COMPLETION DATE: Bidders shall indicate in their proposals, the number of working days for delivery and complete installation of the diesel exhaust removal system, from the date of bid acceptance and signed production specifications by the Fire Authority. Any Bidder who "exaggerates or submits false statements of delivery" shall be held liable to the Authority.

Y___N___

INSPECTION OF WORK: All labor, materials and equipment furnished by the Bidder/Contractor shall be subject to the inspection and approval of the Fire Authority's representative at any time during the progress of the work and until final completion thereof. The Fire Authority will not pay for unauthorized or defective work. At the direction of the Fire Authority's representative, the Bidder/Contractor shall immediately remedy, remove, replace or dispose of unauthorized or defective work or materials and bear all costs of doing so.

Y___N___

TRAINING: The Bidder/Contractor shall provide training to Fire Authority personnel in the daily use and maintenance of the diesel exhaust removal system that has been installed and specified herein. Training shall be for all personnel involved with the operation of the exhaust removal system; in addition a training video (DVD) shall be provided.

Y___N___

PAYMENT: The final payment amount, as per the proposal contract, will be due at the time of full acceptance by the Fire Authority of installation of the diesel exhaust removal system. The final price shall not include any local, state or federal taxes.

1. **DIESEL EXHAUST SYSTEM TO INCLUDE:**

Three (3) Y___N___

1.1. **SLIDING BALANCER TRACK BACK-IN SYSTEMS: 19' TRACK WITH HOSE/NOZZLE**

One (1) Y___N___

1.2. **TEV FAN, 5HP, 208/230V, 1PHASE WITH TEFC MOTOR**

One (1) Y___N___

1.3. **CONTROL PANEL, 5HP, 208/230V, 1PHASE WITH WIRELESS SENSOR SYSTEM**

Three (3) Y___N___

1.4. **TAILPIPE MODIFICATION**

Y___N___

1.5. **ALL NECESSARY MECHANICAL INSTALLATION AND CORE DRILLING**

Y___N___

1.6. **ALL NECESSARY ELECTRICAL CONNECTIONS**

Y___N___

1.7. **ALL NECESSARY DUCTWORK AND HARDWARE**

Y___N___

1.8. **ALL INBOUND FREIGHT**

2. **SCOPE OF SERVICES:**

Y___N___

2.1. The Bidder shall provide all labor, materials and equipment necessary, to put in working operation a complete **turnkey system** that will remove both diesel and automotive exhaust gases and particulate of three (3) operating vehicles, within the back-in three (3) apparatus bay, Tahuya Fire Station. All necessary controls, fan, motor, fittings, ductwork, blower, electrical disconnect, all permitting, architectural, engineering, labor and all other equipment and materials specified shall be part of the Bidder's work.

Y___N___

2.2. The bid price shall also include all debris removal from the jobsite, in accordance with local regulations, to include any disposal fees that may be applicable.

Y___N___

2.3. All items of equipment and materials described in these specifications are to be furnished, installed and placed into proper operating condition, in accordance with good practice and the manufacturer's written or published instructions.

Y___N___

2.4. The Bidder shall install a complete turnkey automatic disconnect vehicle exhaust capture system, that addresses the problem of diesel fumes in the Fire Station that will not interfere with normal day-to-day operations.

Y___N___

2.5. The exhaust removal system must provide a complete evacuation of all diesel fumes at the source, from start up to exit of the apparatus from the Fire Station.

Y___N___

2.6. The system must not affect personnel boarding the apparatus. The hose assembly shall not come into contact with the vehicle other than one connection point to the vehicle's tailpipe. The hose assembly shall not touch or drag on the bay floor during system operation or after the system releases from the tailpipe.

Y___N___

2.7. The exhaust system shall not block doorways, exits and aisles in the apparatus bay, which could endanger the welfare of personnel or visitors.

Y___N___

2.8. Due to the harmful effects of diesel exhaust, the system must be designed and capable of capturing the exhaust gas and particulate even in the event of a complete power failure. The system shall not detach itself from the apparatus for any reason during a power failure other than normal exiting of the apparatus bay.

Y___N___

2.9. The bid shall provide a "ready to run" fully installed exhaust system. The Bidder awarded the contract will be required to provide product manuals within five (5) business days of project completion and Computer-Aided Design (CAD) Drawings within ten (10) business days of notice of intent to award.

Y___N___

2.10. **Standard Products:** Equipment and materials provided for the system installation shall be a standard product of manufacturers currently engaged in the manufacturing of automatic vehicle exhaust capture systems. This requirement calls for a packaged exhaust system to be provided. All items shall be the product of a company with a minimum of fifteen (15) years' experience in the fire service.

Y___N___

2.11. **Product Delivery, Storage and Handling:** The Bidder shall be solely responsible for the delivery, storage and handling of all products. Any equipment placed in storage shall be protected from weather, humidity, temperature variations, dirt, dust or other contaminants.

3. **SLIDING BALANCER TRACK SYSTEM REQUIREMENTS:** The diesel exhaust removal system shall capture exhaust emissions directly at the tailpipe of the vehicle and exhaust those emissions to a specified area safely outside the building. Upon an alarm call, the hose assembly and trolley shall travel along with the vehicle. The trolley shall slide under a release valve which will immediately release the nozzle. The trolley shall travel to a rubber shock absorber at the exit end, to take any kinetic energy from the trolley and hose assembly. On return to the station, the nozzle shall be connected to the exhaust pipe and activated simply by pressing a manual fill deflation valve, as the vehicle backs through the door. At the same time, the fan shall automatically start up as the vehicle continues to its rest position.

Y___N___

3.1. **Sliding Track.** The aluminum track shall be a minimum of 19' long, designed with a three (3)-section principle, of which two (2) sections have open areas, one (1) underneath and one (1) on top. The open area on top is to be used for positioning the support legs, duct and exhaust hose connector and the release valve. The open area underneath is to be used for positioning the end stops and for the sliding trolley. The trolley channel shall allow the trolley, balancer and hose assembly to glide to the door threshold in a safe and effective manner. The channel shall allow the whole track to remain rigid as it hangs from factory supplied leg supports and also shall provide an area to attach bolts.

Y___N___

3.2. **Support Legs for the Track and Rail.** Support leg and mounting feet shall be manufactured and provided by the supplier of the primary exhaust removal system (Equipment Manufacturer). This is to ensure that the unit is installed as a complete system including the mounting hardware. The support leg material shall be aluminum.

Y___N___

3.3. **Track Trolley/Balancer Assembly.** The trolley assembly shall be manufactured as a two (2)-piece galvanized steel assembly including bumper stops at each end. Fixed to the side of the trolley are solid steel pins, which shall be for load carrying bearings that are sealed and permanently lubricated. The load carrying bearings shall travel internally in the track trolley channel. Two (2) additional permanently lubricated trolley wheels shall be provided on the bottom side of the track to reduce wobble of the trolley as it conveys the hose assembly to the door threshold. A release plate shall be attached to the chassis of the trolley to smoothly energize the uncoupling release valve when the trolley-balancer assembly approaches the door threshold. The system balancer assembly shall be a self-adjusting weight spring tension balancer. The system supplier shall manufacture the balancer and trolley for the sole purpose of conveying the flexible hose to the door threshold for automatic release of the system.

Y___N___

3.4. **Shock Absorbers.** The track system shall be equipped with end stops that limit the travel of the hose as the vehicle exits the building. The end stop shall be fabricated in a U-shape form with a rubber end stop on the impact end.

Y___N___

3.5. **Upper Flexible Hose.** Each hose shall be a flexible exhaust hose manufactured for the sole purpose of venting high temperature exhaust gases, which are produced by internal combustion engines. The flexible hose shall be designed strictly for the harsh environment of rapid response and auto-release of a vehicle exhaust tailpipe. Construction of each hose shall be such that the hose is capable of operating at continuous temperatures of 600 degrees Fahrenheit and intermittent temperatures of 850 degrees Fahrenheit, such as are experienced when pump checks are performed inside the station.

Y___N___

3.6. **Lower Hose Assembly.** Shall be a rigid 4" or 5" diameter by 2' long section of hose identical in appearance to the upper hose. The lower hose shall support the connection nozzle and reducing elbow in a rigid fashion, to allow the operator to place the hose collection nozzle onto the tailpipe without bending over. The lower hose shall be the only section of hose that will disconnect from the upper hose assembly and act as a safety disconnect in the unlikely event the nozzle gets entangled. Construction of each hose shall be such that the hose is capable of operating at continuous temperatures of 600 degrees Fahrenheit and intermittent temperatures of 850 degrees Fahrenheit.

Y___N___

3.7. **Metal Hose Saddle Assembly.** Shall be a rigid exhaust type elbow with a 1.5 diameter radius bent, which has a welded attachment eye to allow for the lifting balance to attach the elbow to the balance and trolley assembly. The metal saddle elbow shall be made of 14-gauge plated steel.

Y___N___

3.8. **Safety Disconnect Coupling.** Each assembly must include a disconnect coupling to protect the vehicle and system from damage. This coupling shall enable the lower hose assembly to physically separate from the upper hose, thus reducing the possibility of damage to the system in the event the exhaust connection nozzle assembly becomes entangled in the undercarriage of the vehicle. This coupling shall be made of metal parts that are in contact with exhaust gases and reusable. The metal coupling shall be designed to allow the lower hose to swivel from the upper hose up to 360 degrees. This disconnect is considered a safety requirement and any system bid must incorporate a safety disconnect.

Y___N___

3.9. **Nozzle.** Each system shall include an easily visible extraction hose assembly with a pneumatic nozzle, comprised of an inflatable rubber bladder, connected to the hose through a reducer. The nozzle shall be filled with compressed air to make a total seal around the exhaust pipe for 100% capture of emissions. The hose side nozzle shall have a conical taper to center the nozzle onto the tailpipe adapter. The collection nozzle must attach to the tailpipe adapter by no greater forward/push force more the two (2)-foot

pounds and release at a pull force no greater the ten (10)-foot pounds. The design must be snag proof so that the collection nozzle will not lock on the tailpipe and not release from the fire apparatus. The collection nozzle shall also incorporate a protective rubber safety cover to avoid damage to the vehicle and surroundings. The reducing elbow that connects to the connection nozzle shall be fabricated using continuous leak-proof welded stainless steel construction. The reducer shall incorporate a primary expanded metal debris screen, which is permanently affixed to the inside opening of exhaust nozzle and prevents a tailpipe that is not fitted with a snag proof tailpipe adapter from allowing to connect to the system

Y___N___

3.10. **Vehicle Tailpipe Modification.** The Bidder shall supply a drawing for the precise modification procedure for the vehicles, to attach to the exhaust removal system. The installing Contractor shall be responsible for all undercarriage or vertical tailpipe modifications and be EVT certified. All vehicles that are in the station must be able to connect to the exhaust system, regardless if they are top or bottom exhaust discharge with the track mounted to the passenger side of vehicle. If vehicles are top exhaust, it must be fitted with an exhaust switch that will automatically switch the exhaust flow from top to bottom or from drive side to passenger side of vehicle. The exhaust must go back to the original exhaust side after the vehicle leaves station. The modification shall vent the exhaust gases at a 90-degree angle on the passenger side of the vehicle. Tailpipe modifications must be constructed in a manner that prevents exhaust blowback into the station after the auto release system disengages from the tailpipe. A flange shall be provided and installed by the Bidder as a precisely located stopping point for the collection nozzle. The manufacturer's supplied adapter shall securely attach to the vehicle tailpipe. The exhaust system tailpipe or tailpipe adapter shall not be exposed or extend past the body of the vehicle. This is considered a safety requirement and any system bid must comply.

Y___N___

3.11. **Exhaust Fan.** System to include a TEV series ventilation fan, designed for use as central fans. The fan must be equipped with lightweight aluminum impellers, suited to exhaust gases, volatile fumes and dust. The fan must consist of matched inlet and outlet areas, to ensure even airflow, high capacity and low noise level.

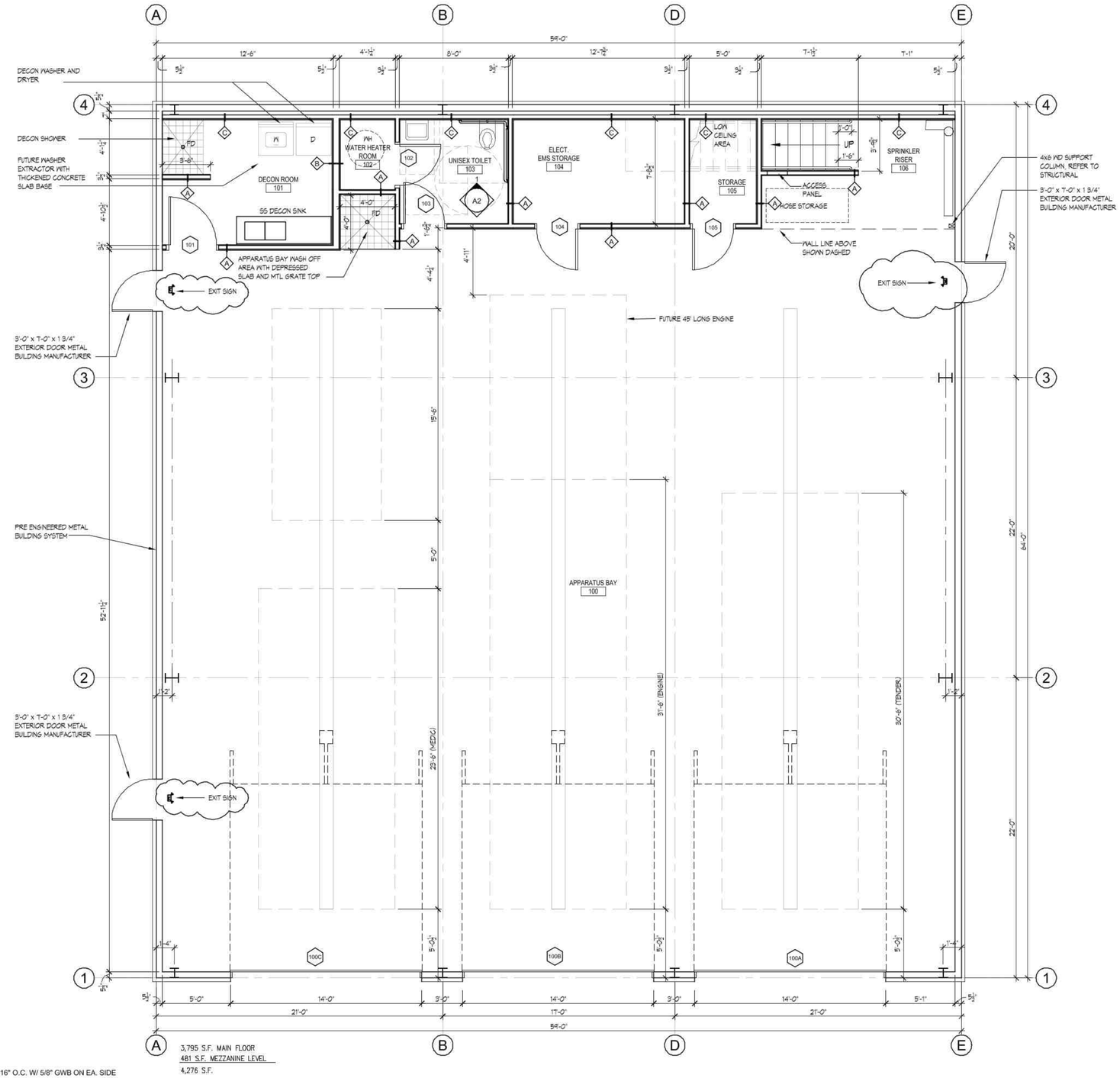
Y___N___

3.12. **Control Panel.** The controller shall be built and supplied by a UL recognized and listed exhaust system manufacturer. The controller shall carry the UL listing label as an "Enclosed Industrial Control Panel”. Individual components listed by UL shall not satisfy the above requirement. The control system must be fully automatic, operating the exhaust system in the most efficient way.

Where the system proposed deviates from the specifications, clearly indicate the nature of the deviation. North Mason Regional Fire Authority intends to award the bid based on a system that meets the performance specifications, however, the Fire Authority reserves the right to waive minor deviations from the specifications, which in the Fire Authority's sole and absolute judgment, does not materially affect the system's performance or maintenance.

Y___N___

4. **WARRANTY:** The Bidder shall guarantee all materials, equipment and workmanship for a minimum period of five (5) years from the date of installation. Defects shall be made good at the bidder's expense with no cost or obligation to the Fire Authority. The Bidder shall not be responsible for system misuse, abuse, natural disasters, components not operated under normal industry use, has been repaired altered or modified. All repairs will be completed at the original installation site of the product; however the Bidder reserves the right, at their own cost, to remove and return the product to the plant where the product can be inspected, repaired or replaced and then returned and reinstalled. The Bidder shall be responsible for all labor costs and transportation costs, including, freight and insurance, in connection with completing a warranty work call. The warranty shall commence on the date of final completion and shall be valid for a period of five (5) years.



WALL TYPES:

- (A) NEW INTERIOR WALL ASSEMBLY: 2X4 WD STUDS AT 16" O.C. W/ 5/8" GWB ON EA. SIDE
- (B) NEW INTERIOR WALL ASSEMBLY: 2X6 WD STUDS AT 16" O.C. W/ 5/8" GWB ON EA. SIDE
- (C) NEW INTERIOR WALL ASSEMBLY: 2X4 WD STUDS AT 16" O.C. W/5/8" GWB ON ONE SIDE ONLY.

A1 FLOOR PLAN
SCALE: 1/4"=1'-0"

MARK	DATE	DESCRIPTION
1	07/23/19	REV COMMENTS

COLLINS ARCHITECTURAL GROUP, P.S.
950 12th AVE. SUITE 200
LONGVIEW, WA 98632
PHONE: 360-425-0000
E-MAIL: craigc@collinsarchgroup.com

JH KELLY
821 3RD AVE
LONGVIEW, WA 98632
PHONE: 360-575-3121
E-MAIL: MOuellet@jhkelly.com

4331 REGISTERED ARCHITECT
CRAIG M. COLLINS
STATE OF WASHINGTON

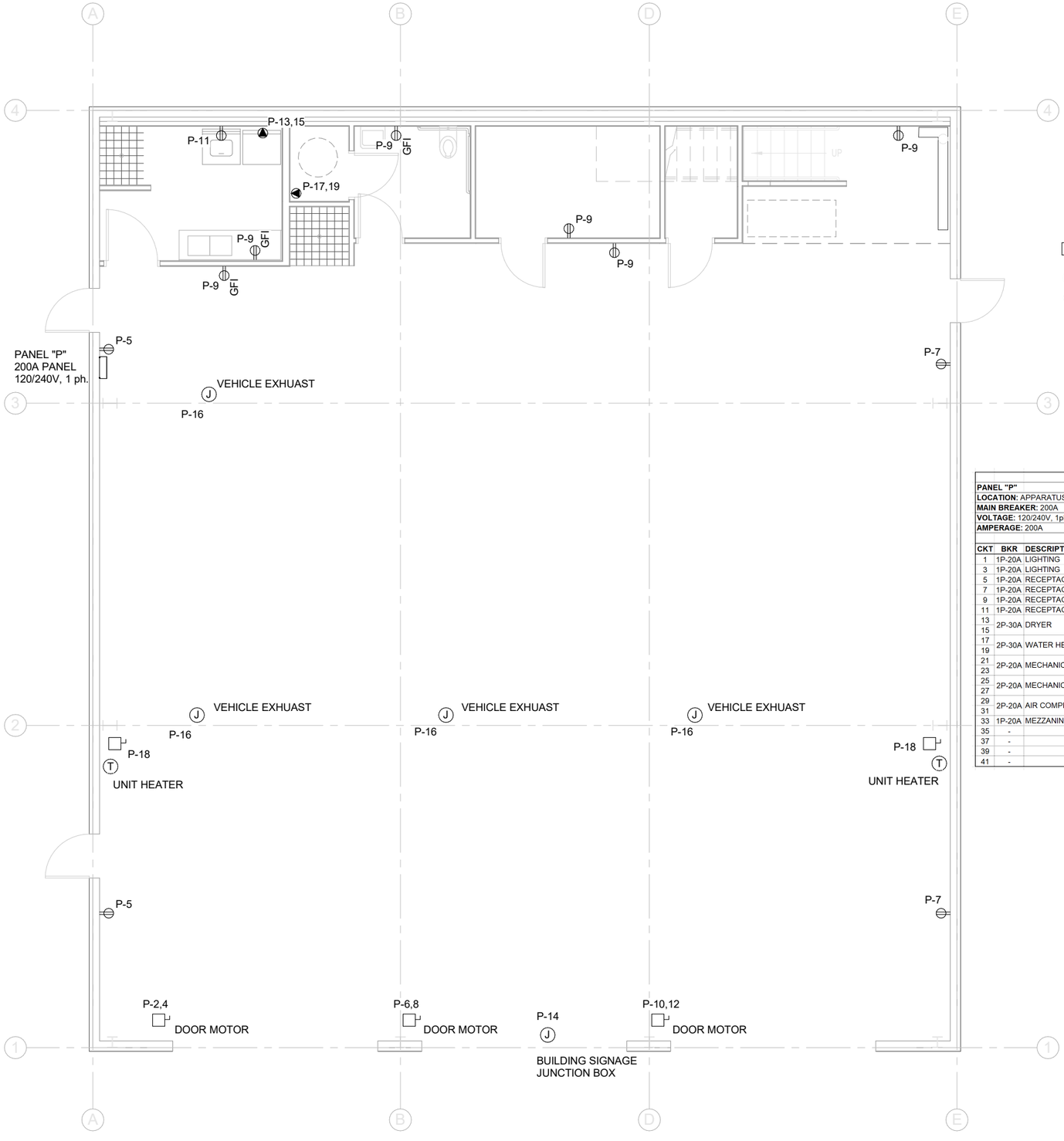
NORTH MASON REGIONAL FIRE AUTHORITY
TAHUYA APPARATUS BAY
14860 NE NORTH SHORE RD
TAHUYA, WA 98588

PERMIT SET
03-29-2019

FLOOR PLAN

2019-06

SHEET NO.
A1



LEGEND:

- RECEPTACLE
- SPECIAL PURPOSE
- DISCONNECT
- (J) JUNCTION BOX
- (T) THERMOSTAT

PANEL SCHEDULE:

PANEL "P"
LOCATION: APPARATUS BAY 100
MAIN BREAKER: 200A
VOLTAGE: 120/240V, 1ph
AMPERAGE: 200A

CKT	BKR	DESCRIPTION	CKT	BKR	DESCRIPTION
1	1P-20A	LIGHTING	2		
3	1P-20A	LIGHTING	4	2P-20A	ROLL-UP DOORS
5	1P-20A	RECEPTACLE	6		
7	1P-20A	RECEPTACLE	8	2P-20A	ROLL-UP DOORS
9	1P-20A	RECEPTACLE	10		
11	1P-20A	RECEPTACLE	12	2P-21A	ROLL-UP DOORS
13	2P-30A	DRYER	14	1P-20A	BUILDING SIGNAGE
15			16	1P-20A	VEHICLE EXHUAST
17	2P-30A	WATER HEATER	18	1P-20A	UNIT HEATERS
19			20	-	
21	2P-20A	MECHANICAL EQUIP	22	-	
23			24	-	
25	2P-20A	MECHANICAL EQUIP	26	-	
27			28	-	
29	2P-20A	AIR COMPRESSOR	30	-	
31			32	-	
33	1P-20A	MEZZANINE RECEPTACLE	34	-	
35	-		36	-	
37	-		38	-	
39	-		40	-	
41	-		42	-	

SHEET NOTES

KEY PLAN

REV	REVISION DESCRIPTION	DATE

DWN BY: Author	DATE: 08/05/19
CHK BY: Checker	Scale: 1/8" = 1'-0"

JOB NAME:
Project Name

BLDG/LEVEL/AREA:

DESCRIPTION:
APPARATUS BAY 100 - POWER

JOB NO:	REV
Project Number	

DRAWING NUMBER:
X1.2.1

PLOTTED BY:Author
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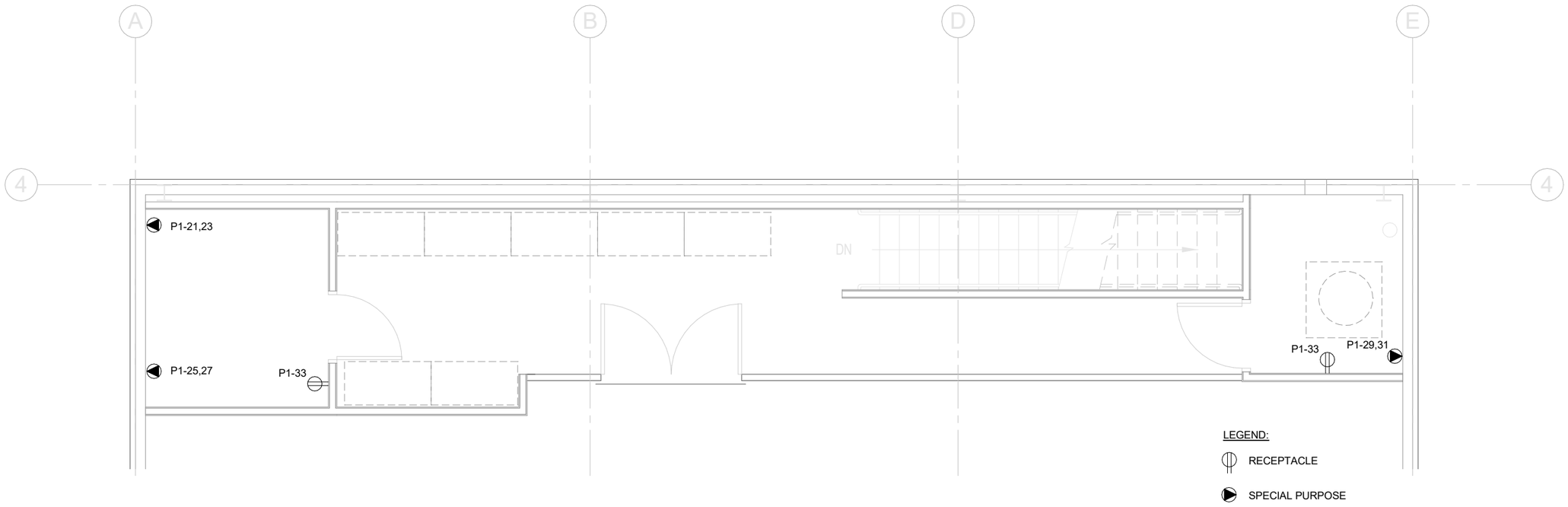

SHEET NOTES

KEY PLAN

REV	REVISION DESCRIPTION	DATE

JH KELLY

DWN BY: Author	DATE: 08/05/19
CHK BY: Checker	Scale: 3/16" = 1'-0"

JOB NAME:
Project Name

BLDG/LEVEL/AREA:

DESCRIPTION:
MEZZANINE 200 - POWER

JOB NO:	REV
Project Number	

DRAWING NUMBER:
X1.2.2

PLOTTED BY:Author
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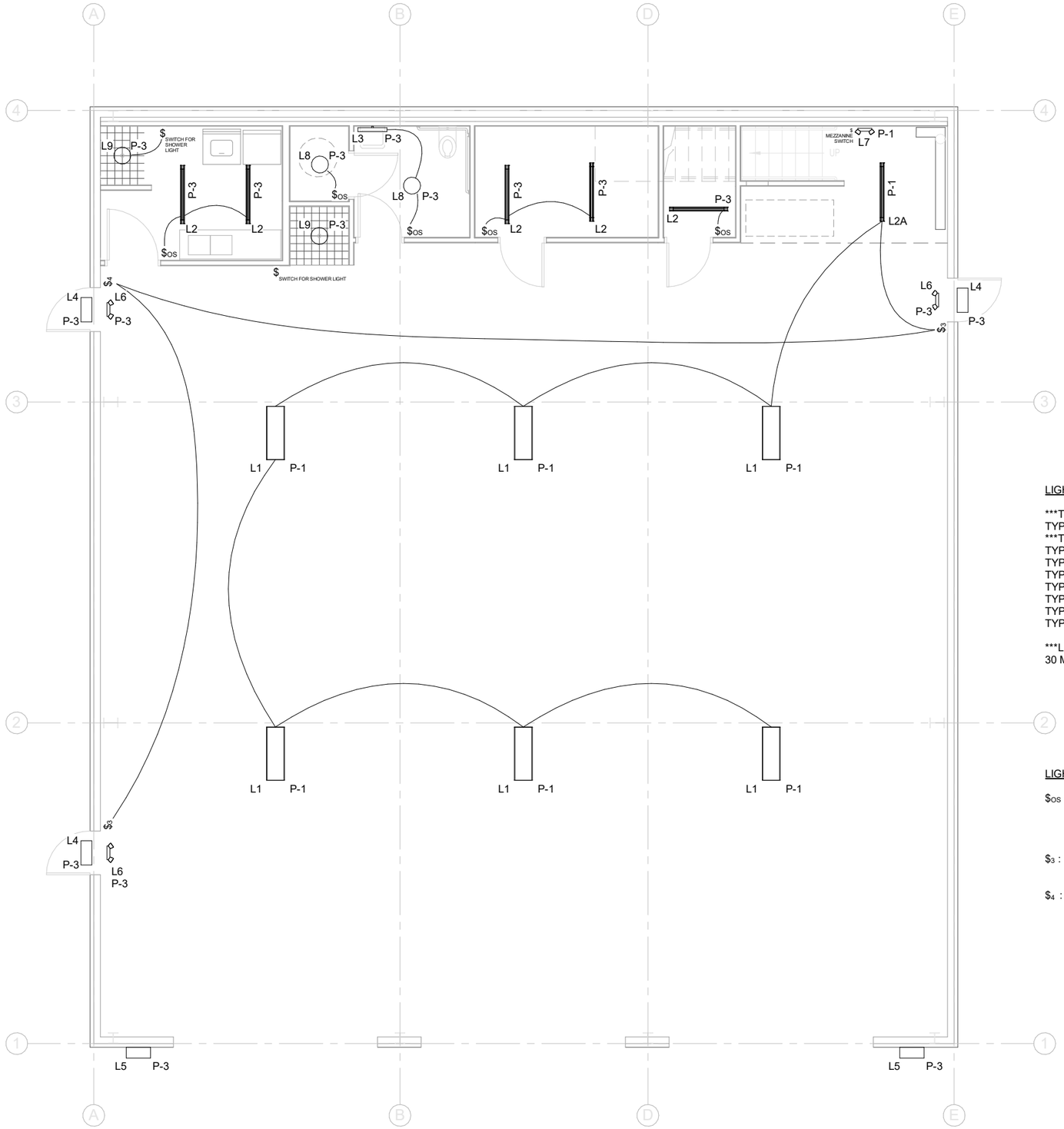

LIGHTING FIXTURE SCHEDULE:

***TYPE L1: LED HIGH BAY INTEGRAL OCCUPANCY SENSOR
TYPE L2: 4' LED STRIP
***TYPE L2A: 4' LED STRIP INTEGRAL OCCUPANCY SENSOR
TYPE L3: WALL MOUNT ABOVE MIRROR
TYPE L4: EXTERIOR LIGHT WITH INTEGRAL PHOTOCELL WITH BATTERY BACK UP
TYPE L5: EXTERIOR LIGHT WITH INTEGRAL PHOTOCELL
TYPE L6: BUGEYE EXIT SIGN COMBO
TYPE L7: BUGEYE LIGHT, NO EXIT SIGN
TYPE L8: SURFACE MOUNT DOME
TYPE L9: WET LOCATION FIXTURE, SUITABLE FOR SHOWER INSTALLATION

***LIGHTS TO BE MANUAL/AUTO ON AND MANUAL OFF/AUTO OFF WITHIN 30 MINUTES OF SPACE BEING UNOCCUPIED

LIGHTING CONTROL SCHEDULE:

$OS : WALL MOUNT OCCUPANCY SENSOR SWITCH
-MANUAL ON OR AUTO ON MODE
-MANUAL OFF IN EITHER AUTO OR MANUAL MODE
-AUTO OFF WITHIN 30 MIN OF SPACE BEING UNOCCUPIED

$3 : 3-WAY LIGHT SWITCH

$4 : 4-WAY LIGHT SWITCH

SHEET NOTES

KEY PLAN

REV	REVISION DESCRIPTION	DATE

JH KELLY

DWN BY:	Author	DATE:	08/05/19
CHK BY:	Checker	Scale:	1/8" = 1'-0"

JOB NAME:
Project Name

BLDG/LEVEL/AREA:

DESCRIPTION:
APPARATUS BAY 100 - LIGHTING

JOB NO:	REV
Project Number	

DRAWING NUMBER:
X1.3.1

PLOTTED BY:Author
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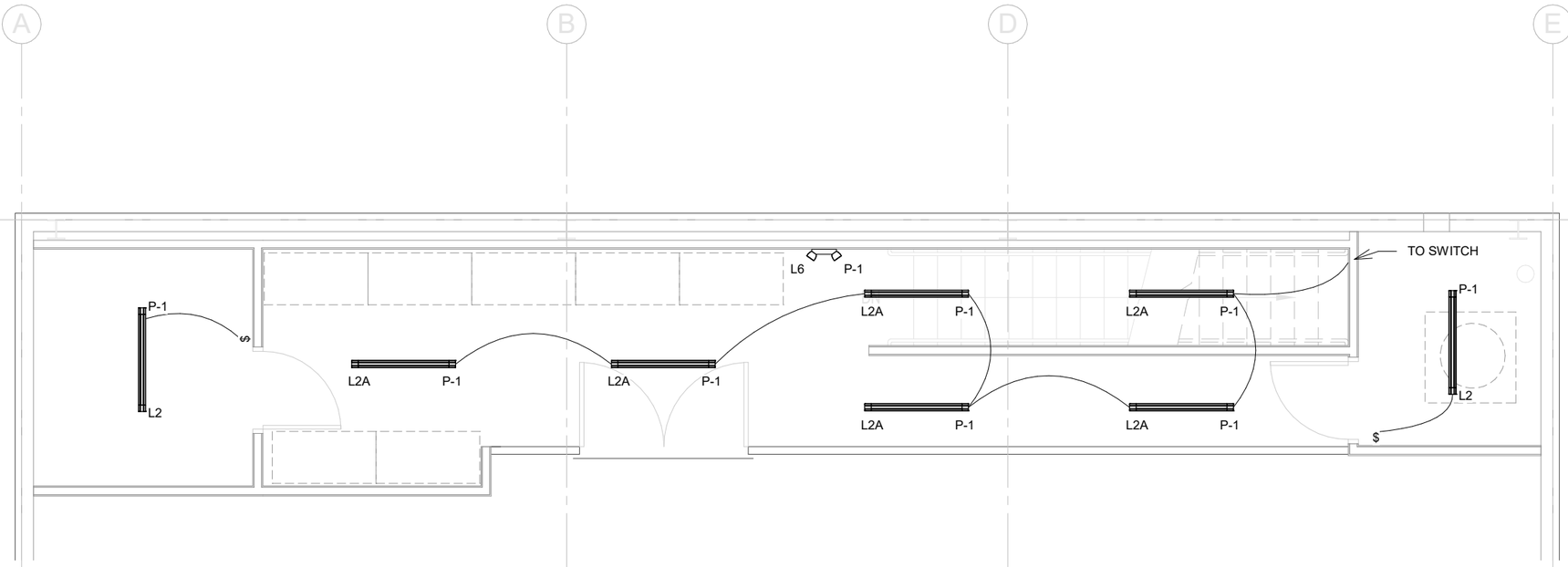

SHEET NOTES

KEY PLAN

REV	REVISION DESCRIPTION	DATE

JH KELLY

DWN BY: Author	DATE: 08/05/19
CHK BY: Checker	Scale: 3/16" = 1'-0"

JOB NAME:
Project Name

BLDG/LEVEL/AREA:

DESCRIPTION:
MEZZANINE 200 - LIGHTING

JOB NO:	REV
Project Number	

DRAWING NUMBER:
X1.3.2

PLOTTED BY:Author
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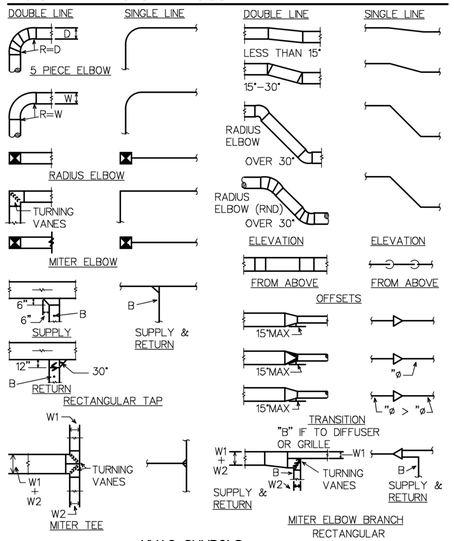
OUTSIDE AIR (VENTILATION) REQUIREMENTS

ROOM	AREA	NET AREA	OCCUPANCY *	VENTILATION REQ PEOPLE OSA RATE	VENTILATION REQ AREA OSA RATE	VENTILATION REQ TOTAL	VENTILATION PROVIDED	SYSTEM
101 DECON	114 FT2	114 FT2	10 OCC/1000 FT2 = 1.14	5 CFM/OCC = 5.7 CFM	0.12 CFM/FT2 = 13.68 CFM	19.38 CFM	20 CFM	ERV-1
104 EMS STORAGE	95 FT2	95 FT2	2 OCC/1000 FT2 = 0.19	5 CFM/OCC = 0.95 CFM	0.06 CFM/FT2 = 5.7 CFM	6.65 CFM	10 CFM	ERV-1
100 APPARATUS BAY	3262 FT2	3262 FT2	2 OCC/1000 FT2 = 6.52	5 CFM/OCC = 32.62 CFM	0.06 CFM/FT2 = 195.72 CFM	228.3 CFM	230 CFM	ERV-1
			7.85	OCCUPANT DIVERSITY = 1.0	AIR DISTRIBUTION EFF. = 1.0	254.4 CFM	260 CFM	ERV-1

* PER ASHRAE 62.1-2010 TABLE 6-1 AND 2015 IMC TABLE 403.3 WITH WASHINGTON AMENDMENTS.

DUCT FITTING SYMBOLS



HVAC SYMBOLS

		INTERNALLY INSULATED SHEET METAL (SINGLE LINE)
		INTERNALLY INSULATED SHEET METAL (DOUBLE LINE)
		BARE OR INSULATED METAL DUCT (SINGLE LINE)
		BARE OR INSULATED METAL DUCT (DOUBLE LINE)
	ø	FLEX DUCT (SINGLE LINE)
		ROUND DUCT: UP OR DOWN
	B	BUTTERFLY DAMPER
	BDD	BACK DRAFT DAMPER
	OBD	OPPOSED BLADE DAMPER
	OAD-1	OUTSIDE AIR DAMPER No.1
	SD	SMOKE DETECTOR
T	T	THERMOSTAT: WALL MOUNTED
S	S	SENSOR
	HSW	HIGH SIDE WALL SUPPLY OR RETURN
	LSW	LOW SIDE WALL SUPPLY OR RETURN
	ECG	EGGCRATE GRILLE
	RA	RETURN AIR: UP OR DOWN
	OSA	OUTSIDE AIR: UP OR DOWN
	SA	SUPPLY AIR: UP OR DOWN
110 ←		AIR VOLUME, CFM
8x8 ←		DIFFUSER NECK SIZE
4W ←		BLOW DIRECTIONS
RB		REBALANCE EXISTING DIFFUSER TO THIS CFM
(30) →		RELIEF AIR CFM THRU UNDERCUT OF DOOR AND FLOW DIRECTION
G	G	GAS PIPING
CEF-1	CEF-1	CEILING EXHAUST FAN NO. 1
UH-1	UH-1	

EXHAUST FAN SCHEDULE

DESIG	CFM	SP	MOTOR	MANUFACTURER AND MODEL NO.	WEIGHT	COMMENTS
CEF-1	75	0.25"	50 W	GREENHECK SP-B90	10 LBS	①②
CEF-2	75	0.25"	50 W	GREENHECK SP-B90	10 LBS	①②

① PROVIDE WITH BACKDRAFT DAMPER
② CONTROLLED BY MANUAL SWITCH

UNIT HEATERS

DESIG	MANUFACTURER AND MODEL	GAS INPUT	GAS OUTPUT	EFF.	WEIGHT
UH-1	MODINE HDS-30	30 MBH	24.6 MBH	82%	55 LBS
UH-2	MODINE HDS-30	30 MBH	24.6 MBH	82%	55 LBS

ENERGY RECOVERY VENTILATOR

DESIG	SUPPLY CFM	EXHAUST CFM	SP	EFFICIENCY	MOTOR	WEIGHT	MANUFACTURER AND MODEL NO.
ERV-1	260	260	0.6"	67.5%	300 W	73 LBS	LOSSNAY LGH-F300RX5-E1 ①

① CONTROLLED BY TIME CLOCK, ON DURING OCCUPIED PERIODS.

MECHANICAL CODE NOTES:
SECTIONS LISTED REFER TO THE 2015 WASHINGTON STATE ENERGY CODE

EQUIPMENT SIZING –
LOAD CALCULATIONS AND EQUIPMENT SIZING PER SECTIONS C403.2.1 AND C403.2.2.

VENTILATION PER SECTION C403.2.6 AND CHAPTER 4 OF THE 2015 IMC.

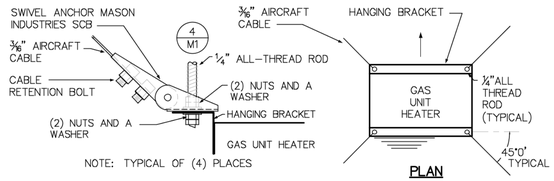
HVAC CONTROLS –
THERMOSTATS TO BE 7 DAY PROGRAMMABLE WITH NIGHT SETBACK. MINIMUM DEADBAND FOR THERMOSTATS 5 DEGREE F. PER SECTION C403.2.4.1, C403.2.4.1.2, C403.2.4.1.3 AND C403.2.4.2.

THERMOSTATS TO PROVIDE OPTIMUM START CONTROLS PER SECTION C403.2.4.2.3.

OSA, EXHAUST, RELIEF AND RETURN AIR DAMPERS TO MEET REQUIREMENTS OF SECTIONS C402.5.5 AND C403.2.4.3.

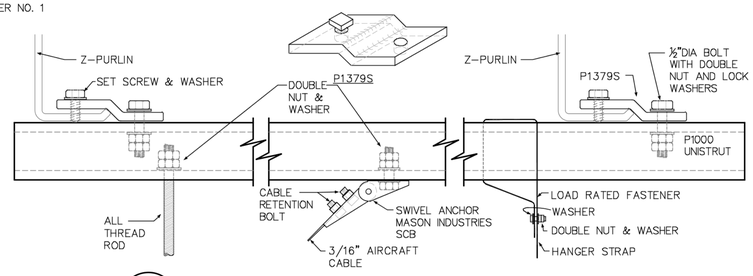
DUCT SYSTEMS –
ALL DUCTWORK TO BE CONSTRUCTED, SEALED AND INSULATED PER SECTION C403.2.8

BUILDING DOCUMENTATION AND CLOSEOUT SUBMITTALS –
DOCUMENTS FOR RECORD, MANUALS, COMPLIANCE AND OPERATIONAL TRAINING PER SECTION C103.6 TO BE PROVIDED.

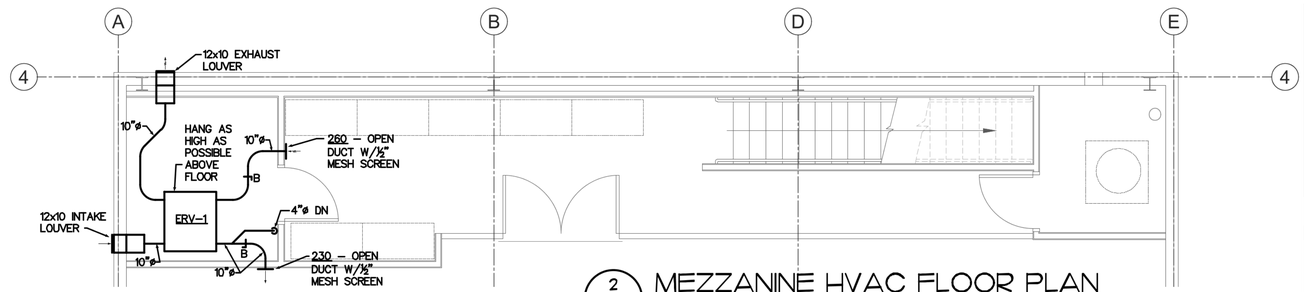


5 M1 GAS UNIT HEATER SEISMIC & HANGING
NO SCALE

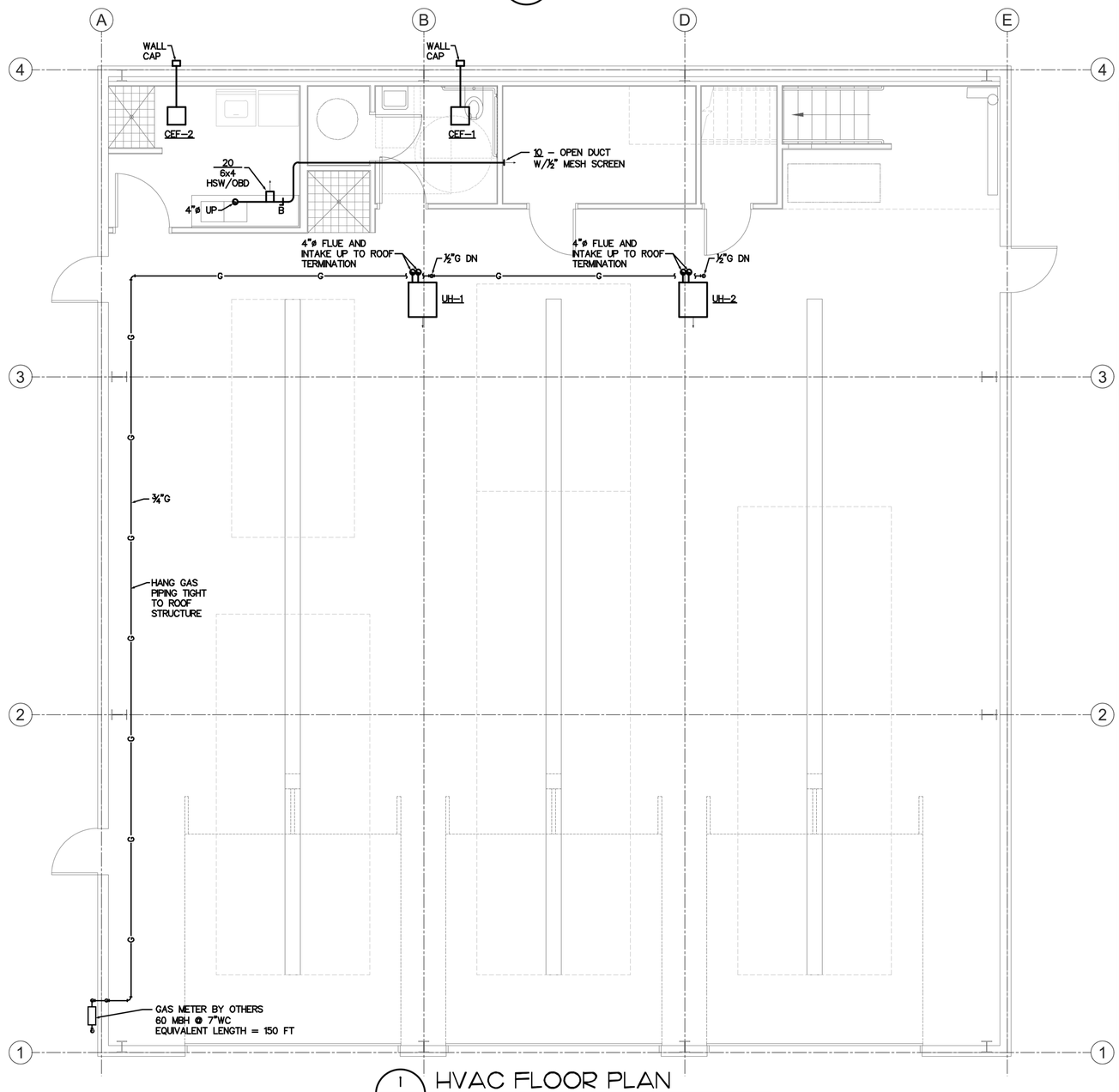
UNIT HEATER NO. 1



4 M1 DUCT UPPER ATTACHMENT PARALLEL TO PURLINS
NO SCALE



2 M1 MEZZANINE HVAC FLOOR PLAN
1/4" = 1'-0"



1 M1 HVAC FLOOR PLAN
1/4" = 1'-0"

SCOTT W CRUZ
STATE OF WASHINGTON
6024748
REGISTERED PROFESSIONAL ENGINEER
8/30/19

REVISIONS:

Paraclete Engineers
7010 N.E. VANCOUVER MALL DR SUITE 100
VANCOUVER, WA. 98662 (360) 254-9534
E-MAIL:PARALG@COMCAST.NET

191.34A1
191.34M1.DWG

HVAC FLOOR PLAN, SCHEDULES & DETAILS

NORTH MASON REGIONAL FIRE AUTHORITY
TAHUYA APPARATUS BAY
14860 NE NORTH SHORE ROAD
TAHUYA, WA 98588

DATE ISSUED:

PLOT DATE:
August 30, 2019

CHECKED:
S. CRUZ

DESIGNER:
SC

CAD OPERATOR:
SS

PARACLETE JOB:
19134

M1

DRAWINGS DONE FOR
JH KELLY

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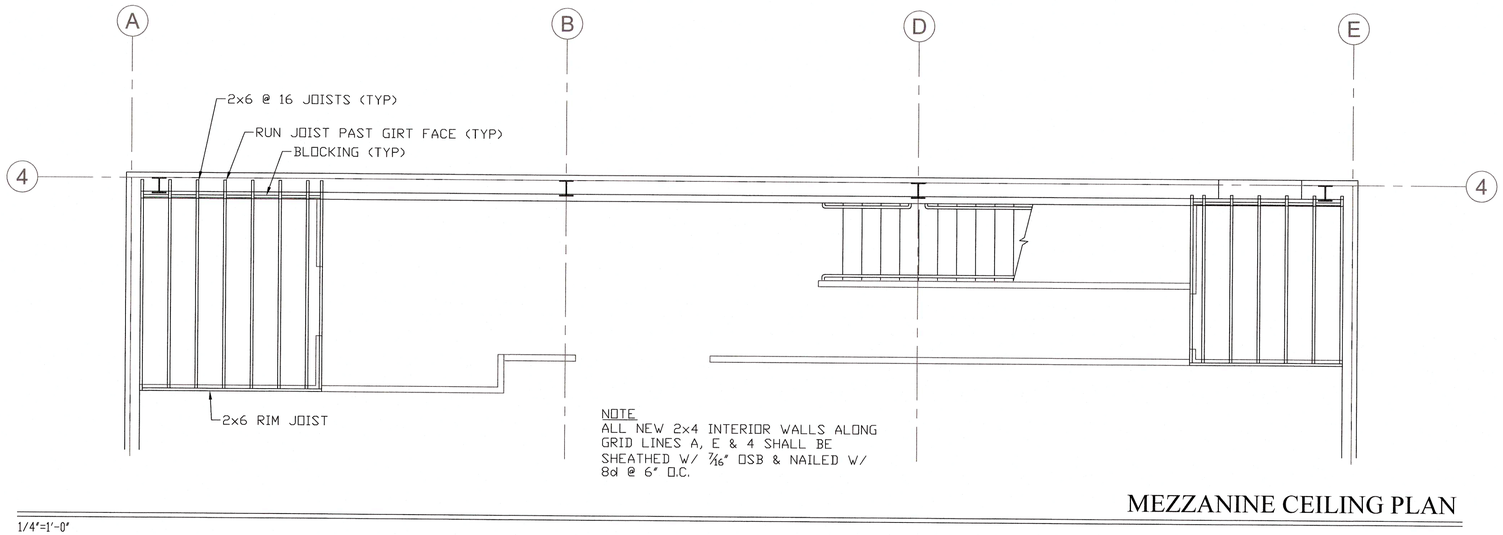
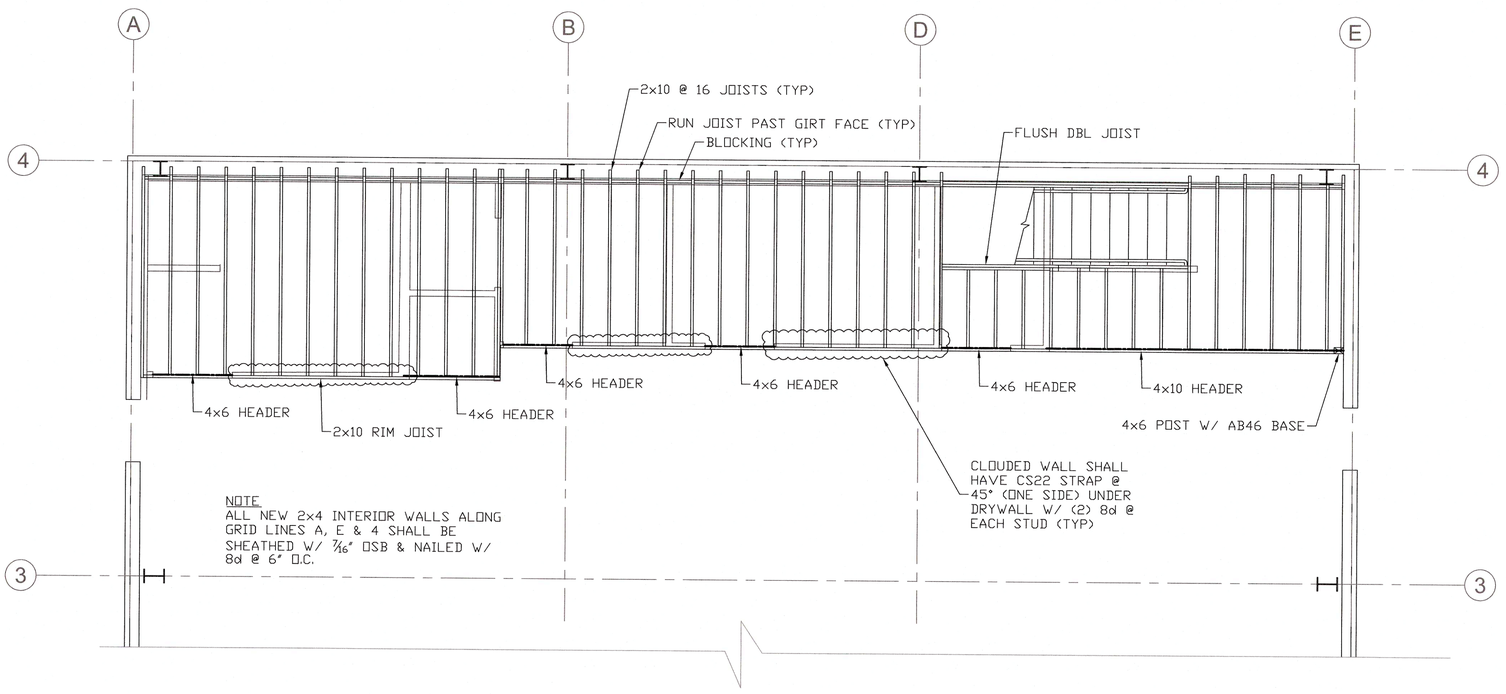


MEZZANINE CEILING PLAN

1/4"=1'-0"



MEZZANINE FRAMING PLAN

1/4"=1'-0"

STRUCTURAL NOTES:

DESIGN CRITERIA:

1. BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE
2. VERTICAL LOADS: FLOOR
   LIVE LOAD 50 psf
   DEAD LOAD 12 psf
3. LATERAL LOAD FORCES TRANSMITTED BY DIAPHRAGM ACTION TO WOOD SHEARWALLS AND THENCE TO FOUNDATION WHERE DISPLACEMENT IS RESISTED BY PASSIVE PRESSURE AND SLIDING FRICTION OF EARTH.

GENERAL:

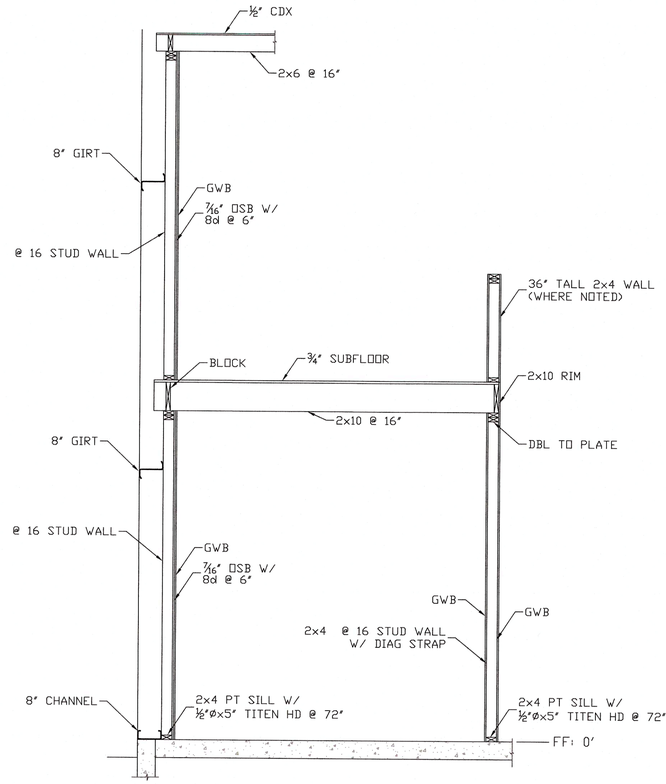
1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CONTRACT DRAWINGS.
2. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS IN ACCORDANCE w/ ALL NATIONAL STATE AND LOCAL SAFETY ORDINANCES. ANY DEVIATION MUST BE APPROVED PRIOR TO ERECTION.
3. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION PROCEDURES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK.

WOOD NOTES:

1. FRAMING LUMBER SHALL BE HEM–FIR NO. 2; AND HEM–FIR NO. 2 FOR ALL TOP AND BOTTOM PLATES (GRADES ARE TYPICAL UNLESS OTHERWISE NOTED ON PLANS). LUMBER TO BE GRADE MARKED PER WCLIB SPECIFICATIONS.
2. STRUCTURAL SHEATHING SHALL BE APA RATED PLYWOOD, EXPOSURE 1, SHEATHING CONFORMING TO EITHER COMMERCIAL STANDARDS P51–83, APA PRP–108, OR VOLUNTARY PRODUCT STANDARD PSE–92. PROVIDE MINIMUM OF 3/8" EDGE DISTANCE ON ALL NAILS AND 1/8" EXPANSION JOINTS BETWEEN ALL PANEL EDGES. MINIMUM SHEATHING REQUIREMENTS ARE AS FOLLOWS:

   ROOF SHEATHING TO BE 15/32" C–D INT–APA RATED PLYWOOD WITH EXTERIOR GLUE, P.I. 24/0 (USE 5–PLY FOR PANELIZED ROOFS). NAILING 8d @ 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS.

   SUB FLOORING TO BE 23/32" T&G C–D EXTERIOR/EXPOSURE 1–APA RATED PLYWOOD WITH EXTERIOR GLUE , P.I. 48/24. GLUE AND NAIL WITH 10d AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS.
3. NAILING SHALL CONFORM TO TABLE 2304.10.1 OF THE INTERNATIONAL BUILDING CODE UNLESS NOTED OTHERWISE. USE COMMON NAILS THROUGHOUT UNLESS NOTED OTHERWISE.
4. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
5. PROVIDE 3"x3"x1/4" (USE GALVANIZED @ P.T. MEMBERS) PLATE WASHERS UNDER HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD UNLESS NOTED OTHERWISE. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED TO BE HOT DIPPED GALVANIZED.
6. BOLT HOLES SHALL BE NOMINAL DIAMETER OF BOLT PLUS 1/16" UNLESS OTHERWISE NOTED. LAG BOLT PILOT HOLES SHALL BE PRE–DRILLED TO 60% OF THE NOMINAL DIAMETER OF THE LAG BOLT UNLESS OTHERWISE NOTED.
7. ALL SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WITH 1/2" MIN ø STEEL BOLTS SPACED AT 72" o.c. MAX. (EMBED 7" MIN. INTO CONCRETE OR MASONRY). SEE PLANS AND DETAILS FOR SPECIFIC REQUIREMENTS WHERE OCCUR.
8. ALL FRAMING LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED. (SEE NOTE 1 FOR MINIMUM GRADE INFORMATION)
9. STUD NOTCHING: BEARING – 25% NOTCH, 40% BORING (60% BORING @ DBL.) NON BEARING – 40% NOTCH, 60% BORING HOLES NO CLOSER THAN 5/8" TO FACE OF STUD



MEZZANINE SECTION

1/2"=1'-0"

MARK	DATE	DESCRIPTION

COLLINS ARCHITECTURAL GROUP, P.S
950 12th AVE, SUITE 200
LONGVIEW, WA 98632
PHONE: 360-425-0000
E-MAIL: craigc@collinsarchgroup.com

JH KELLY
821 3RD AVE
LONGVIEW, WA 98632
PHONE: 360-575-3121
E-MAIL: MOuellet@jhkelly.com

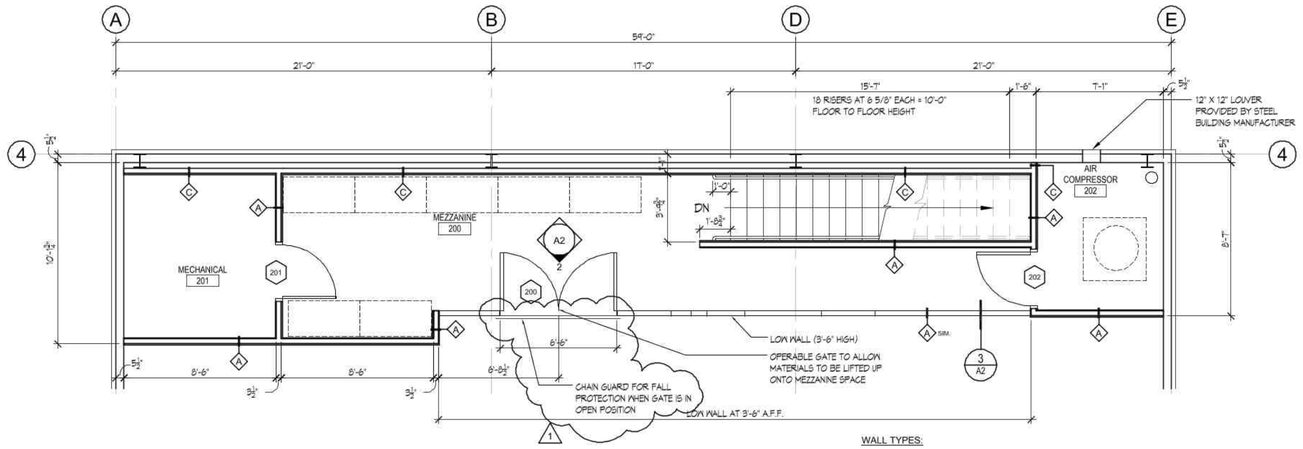
MATTHEW M. ZAMDMCKI
STATE OF WASHINGTON
40916
REGISTERED PROFESSIONAL ENGINEER
3/14/19

NORTH MASON REGIONAL FIRE AUTHORITY
TAHUYA APPARATUS BAY
14860 NE NORTH SHORE RD
TAHUYA, WA 98588

PERMIT SET
03-29-2019

2019-06

SHEET NO.
S1

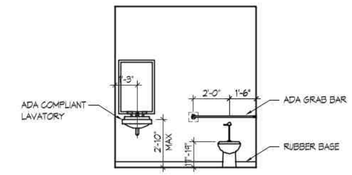


WALL TYPES:

- (A) NEW INTERIOR WALL ASSEMBLY: 2X4 WD STUDS AT 16" O.C. W/ 5/8" GWB ON EA. SIDE
- (B) NEW INTERIOR WALL ASSEMBLY: 2X6 WD STUDS AT 16" O.C. W/ 5/8" GWB ON EA. SIDE
- (C) NEW INTERIOR WALL ASSEMBLY: 2X4 WD STUDS AT 16" O.C. W/5/8" GWB ON ONE SIDE ONLY.

A / A2 MEZZANINE PLAN

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

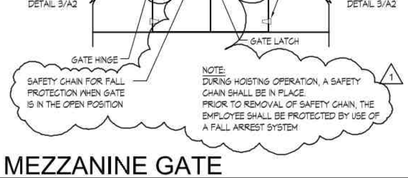


1 / A2 UNISEX TOILET

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

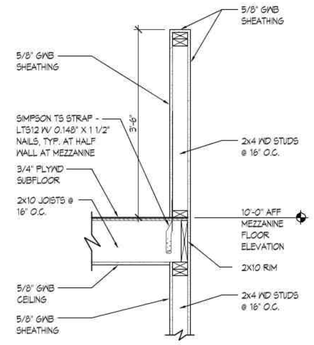
ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR		WALLS								CEILING			REMARKS
		MATL	BASE	NORTH		EAST		SOUTH		WEST		MATL	FIN	HGHT	
				MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN				
100	APPARATUS BAY	CONC.	RB	LINER	-	GWB	P	LINER	-	GWB	P	LINER	-	-	HEIGHT VARIES
101	DECON ROOM	CONC.	RB	GWB	P	GWB	P	LINER	-	GWB	P	GWB	P	9'-0"	
102	WATER HEATER ROOM	CONC.	RB	GWB	P	GWB	P	GWB	P	GWB	P	GWB	P	9'-0"	
103	UNISEX TOILET	CONC.	RB	GWB	P	GWB	P	GWB	P	GWB	P	GWB	P	9'-0"	
104	ELECT./EMS STORAGE	CONC.	RB	GWB	P	GWB	P	GWB	P	GWB	P	GWB	P	9'-0"	
105	STORAGE	CONC.	RB	GWB	P	GWB	P	GWB	P	GWB	P	GWB	P	9'-0"	
106	SPRINKLER RISER	CONC.	RB	LINER	-	LINER	-	GWB	P	GWB	P	GWB	P	9'-0"	
200	MEZZANINE	PLYWD	RB	GWB	P	GWB	P	GWB	P	GWB	P	LINER	-	-	HEIGHT VARIES
201	MECHANICAL	PLYWD	RB	GWB	P	GWB	P	LINER	-	GWB	P	GWB	P	9'-0"	
202	AIR COMPRESSOR	PLYWD	RB	LINER	-	GWB	P	GWB	P	GWB	P	GWB	P	9'-0"	



2 / A2 MEZZANINE GATE

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



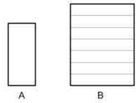
3 / A2 HALF WALL DETAIL

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

DOOR SCHEDULE

NO.	SIZE W x H x T	DOOR					FRAME			HDWE GROUP	NOTES
		GLASS	TYPE	MATL	FIN	LABEL	TYPE	MATL	FIN		
100A	OH 14'-0"x16'-0"	-	B	STEEL	P	-	-	-	-	3	1,2
100B	OH 14'-0"x16-0"	-	B	STEEL	P	-	-	-	-	3	1,2
100C	OH 14'-0"x16'-0"	-	B	STEEL	P	-	-	-	-	3	1,2
101	3'-6"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	1	
102	3'-0"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	2	
103	3'-0"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	2	
104	3'-0"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	2	
105	3'-0"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	2	
200	PR.3'-0"x3'-6"	-	-	-	-	-	-	-	-	4	3
201	3'-0"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	2	
202	3'-0"x7'-0"x1 3/4"	-	A	HM	P	-	A	H.M.	P	2	

DOOR TYPES



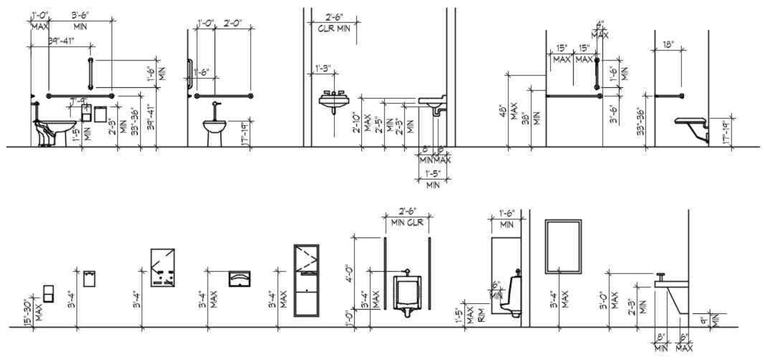
DOOR FRAME TYPES

NOTES:

1. OVERHEAD MOTORIZED SECTIONAL DOOR AND TRACK SYSTEM AS REQUIRED BY OVERHEAD DOOR MANUFACTURER.
2. FRAME TYPE FOR SECTIONAL DOORS WILL BE STEEL CHANNELS PER METAL BUILDING MANUFACTURER.
3. REFERENCE 2/A2 FOR INTERIOR ELEVATION OF THE MEZZANINE GATE HARDWARE LOCATION.

HARDWARE GROUP:

1. (3) HINGES, LEVER LOCKSET, WALL STOP
2. (3) HINGES, PRIVACY LOCKSET, WALL STOP
3. HARDWARE BY MANUFACTURER
4. GATE HARDWARE: STEEL SELF-LATCHING GATE LATCH, 2 3/8" W, BLACK
   STEEL (2) 4" GATE SPRING TEE HINGE, BLACK W/ MATCHING SCREWS



STANDARD MOUNTING HEIGHTS

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

MARK	DATE	DESCRIPTION
1	07/23/19	REV COMMENTS

COLLINS ARCHITECTURAL GROUP, P.S.
950 12th AVE. SUITE 200
LONGVIEW, WA 98632
PHONE: 360-425-0000
E-MAIL: craigc@collinsarchgroup.com

JH KELLY
821 3RD AVE
LONGVIEW, WA 98632
PHONE: 360-575-3121
E-MAIL: MOuellet@jhkelly.com

4331 REGISTERED ARCHITECT
CRAIG M. COLLINS
STATE OF WASHINGTON

NORTH MASON REGIONAL FIRE AUTHORITY
TAHUYA APPARATUS BAY
14860 NE NORTH SHORE RD
TAHUYA, WA 98588

PERMIT SET
03-29-2019

MEZZANINE PLAN

2019-06

SHEET NO.
A2

NUCOR BUILDING SYSTEMS
A DIVISION OF NUCOR CORPORATION

MBMA MEMBER | IAS ACCREDITED AC 472 | CSSBI | CWB CERTIFIED CSA W47.1 | CW3 CERTIFIED CSA A660

Number
U19H0081A
Name
Tahuya Fire Station
Location: City, County, State
Tahuya, Mason, WA
Customer
JH Kelly LLC

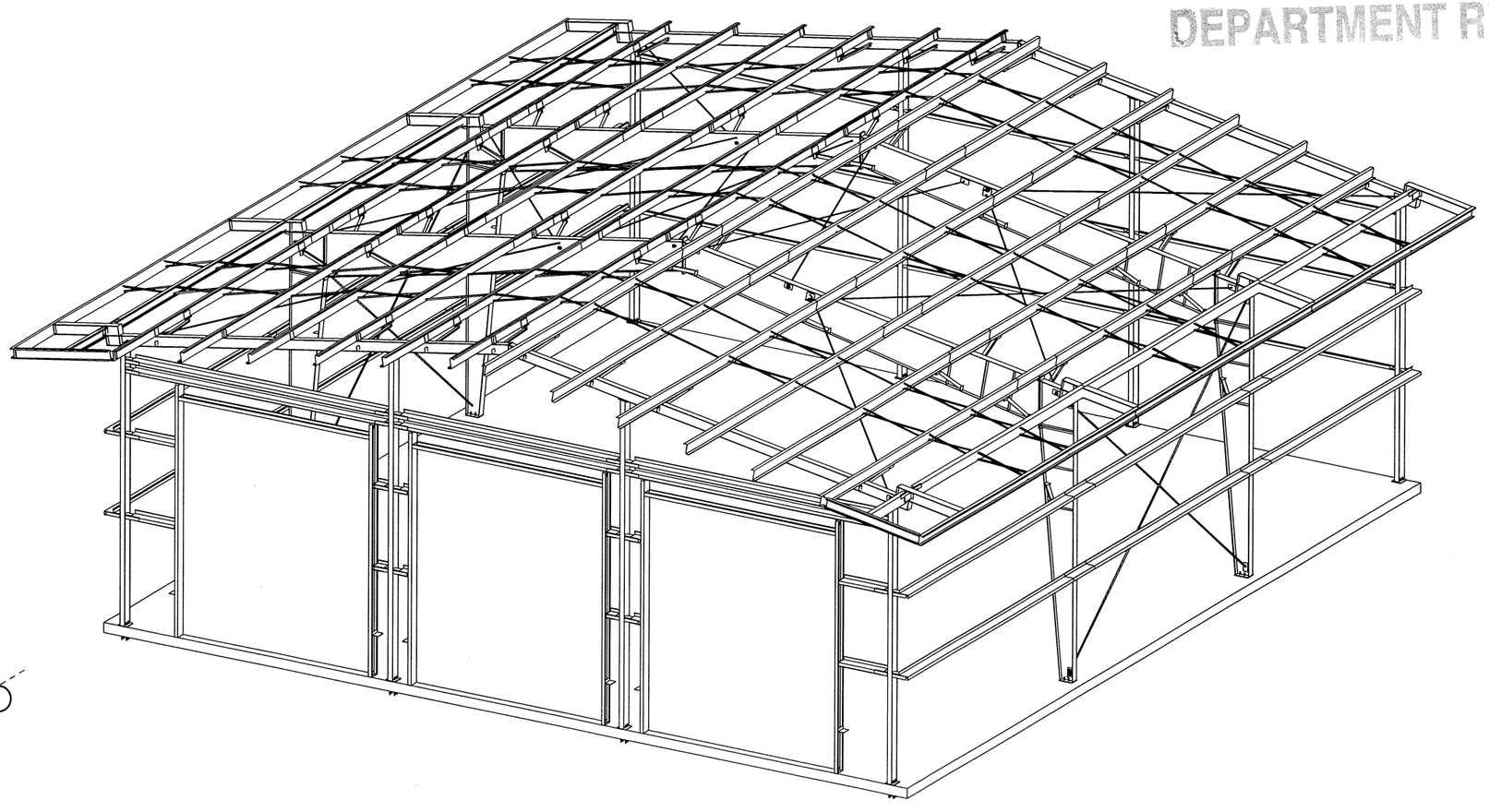
Required Manuals

Wall Sheeting
H9430 - Erection Manual

CFR Roof Sheeting
H9700 - Erection Manual

Drawing Index

FOR BUILDING
MAR 05 2019
DEPARTMENT REVIEW



ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Coversheet

SHEET
C1 OF 3

CASEY KENT CHRISTIANSEN — STATE OF WASHINGTON — 52024 — REGISTERED PROFESSIONAL ENGINEER
MAR - 5 2019

Notes and Specifications:

Building Erection Notes

1) The general contractor and/or erector is responsible to safely and properly erect the metal building system in conformance with these drawings, OSHA requirements, and either MBMA or CSA S16 standards pertaining to proper erection. This includes, but is not limited to, the correct use of temporary guys and bracing where needed for squaring, plumbing, and securing the structural and secondary framing. Secondary wall framing members(girts or bar joists) are not designed to function as a work platform or provide safety tie off attachment in accordance with OSHA requirements. Secondary roof framing members (purlins or bar joists) are not designed to provide safety tie off attachment in accordance with OSHA requirements.

2) A325 & A490 Bolt tightening requirements:
It is the responsibility of the erector to ensure proper bolt tightness in accordance with applicable regulations. For projects in the United States, see the RCSC Specification for Structural Joints Using A325 or A490 Bolts or for projects in Canada, see the CAN/CSA S16 Limit States Design of Steel Structures for more information.
The following criteria may be used to determine the bolt tightness (i.e., "snug-tight" or "fully-pretensioned"), unless required otherwise by local jurisdiction or contract requirements:
A) All A490 bolts shall be "fully-pretensioned".
B) All A325 bolts in primary framing (rigid frames and bracing) may be "snug-tight", except as follows:
"Fully-pretension" A325 bolts if:
a) Building supports a crane system with a capacity greater than 5 tons.
b) Building supports machinery that creates vibration, impact, or stress-reversals on the connections. The Engineer-of-Record for the project should be consulted to evaluate for this condition.
c) The project site is located in a high seismic area. For IBC-based codes, "High Seismic Area" is defined as "Seismic Design Category" of 'D', 'E', or 'F'. See the "Building Loads" section on this page for the defined seismic design category for this project.
d) Any connection designated in these drawings as "A325-SC". "Slip-Critical (SC)" connections must be free of paint, oil, or other materials that reduce friction at contact surfaces. Galvanized or lightly-rusted surfaces are acceptable.
C) In Canada , all A325 and A490 bolts shall be "fully-pretensioned", except for secondary members (purlins, girts, opening framing, etc.) and flange braces.
D) Secondary members (purlins, girts, opening framing, etc.) and flange brace connections may always be "snug-tight", unless indicated otherwise in these drawings.

3) The metal building supplier shall be notified prior to any field modifications. Modifications shall be approved by the metal building supplier before work is undertaken.
4) Common Abbreviations:
a) TYP UNO – Typical Unless Noted Otherwise
b) SLV – Short Leg Vertical
c) LLV – Long Leg Vertical
d) NS & FS – Near Side and Far Side
e) O.A.L. – Overall Length
f) SIM – Similar
g) NIC – Not In Contract
h) SL – Steel Line
i) N/A – Not Applicable
j) MBS – Metal Bldg. Supplier
5) Construction loads shall not be placed on any structural steel framework unless such framework is safely bolted, welded, or otherwise adequately secured.
6) Purlins and girts shall not be used as an anchorage point for a fall arrest system unless written approval is obtained from the metal building supplier.
7) Purlins may only be used as a walking/working surface when installing safety systems, after all permanenent bridging has been installed and fall protection is provided.
8) Construction loads may be placed only within a zone that is within 8 feet of the center line of the primary support member. CFR bundles should be placed directly over the rigid frames.
9) All lifting devices must meet OSHA or MSHA standards and in no case is it acceptable to use structural members supplied by the MBS as a spreader bar or lifting device.

General Design Notes

1) All structural steel sections and welded plate members are designed in accordance with ANSI/AISC 360 "Specifications for Structural Steel Buildings" or the CAN/CSA S16 "Limit States Design of Steel Structures", as required by the specified building code.
2) All welding of structural steel is based on either AWS D1.1 "Structural Welding Code - Steel" or CAN/CSA W59 "Welded Steel Construction (Metal Arc Welding)", as required by the specified building code.
3) All cold formed members are designed in accordance with ANSI/AISI S100 or CAN/CSA S136 "Specifications for the Design of Cold Formed Steel Structural Members", as required by the specified building code.
4) All welding of cold formed steel is based on AWS D1.3 "Structural Welding Code - Sheet Steel" or CAN/CSA W59 "Welded Steel Construction (Metal Arc Welding)", as required by the specified building code.
5) This Nucor Building Systems facility is IAS AC-472 Accredited and CAN/CSA A660 and W47.1 Certified (if applicable) for the design and manufacturing of Metal Building Systems.
6) If joists are included with this project, they are supplied as a part of the systems engineered metal building and are fabricated in accordance with the requirements of Section 1926.758 of the OSHA safety standards for steel erection, dated January 18, 2001.

Material Specifications

Plate and Flange Material:		
5"-12" Wide, To 1½" Th.	–	A529, Grade 55
Others	–	A572 Grade 50
Built-Up StructuraWeb	–	A1011 SS (or HSLAS Class 1) Grade 55
Hot-Rolled Structural	–	A36 or A572 Grade 50 or A992 Grade 50
StructuralTube	–	A500 Grade B (46 KSI)
StructuralPipe	–	A500 Grade B (42 KSI)
Cold-Formed Structural	–	A1011 or A1039 SS (or HSLAS Class 1) or A653 Grade 55
Classic RoofPanel	–	A792 Grade 80
CFR / VR16 RoofPanel	–	A792 Grade 50, Class 1
All Wall PanelProfiles	–	A653 Grade 80, Class 1 or A792 Grade 80, Class 1
Rod Bracing	–	A529 Grade 50
Welds	–	AWS D1.1/D1.3 or CSA W59 per Building Code
High-StrengthBolts	–	A325 Type 1 or A490 Type 1 Heavy Hex
Machine Bolts	–	A307 Grade A Hex

Main

Primary and Secondary Steel Primer Color

RED

Roof Sheeting

Type: CFR, 24 Gage, Finish: CYPRESS GREEN
Roof Panel Clip Type: Short Fixed
Thermal Blocks: No EPS Foam Spacers: Yes
Roof insulation(NOT BY NBS). Thickness: 4"
Roof Line Trim. Color: CYPRESS GREEN
Gutters. Color: CYPRESS GREEN
Downspouts. Color: SURREY BEIGE

Wall Sheeting

Type: CLASSIC, 26 Gage, Finish: SURREY BEIGE
Wall Corner Trim. Color: SURREY BEIGE
Wall Base Trim. Color: SURREY BEIGE
Wall Framed Openings. Trim Color: CYPRESS GREEN
Wall Framed Openings. Cover Trim Color: CYPRESS GREEN
Wall insulation(NOT BY NBS). Thickness: 4"

Wall Liner Panel

Type: CLASSIC, 26 Gage, Finish: FOX GRAY
Liner Corner Trim. Color: FOX GRAY

Building Options

(3) 3070 Preassembled Walkdoor(s). Color: WHITE

Eave Extension

Projection: 4'-0"
Type: CLASSIC, 26 Gage, Finish: SURREY BEIGE
Building Line Trim Color: SURREY BEIGE

Rake Extension

Projection: 5'-0"
Type: CLASSIC, 26 Gage, Finish: SURREY BEIGE
Building Line Trim Color: SURREY BEIGE

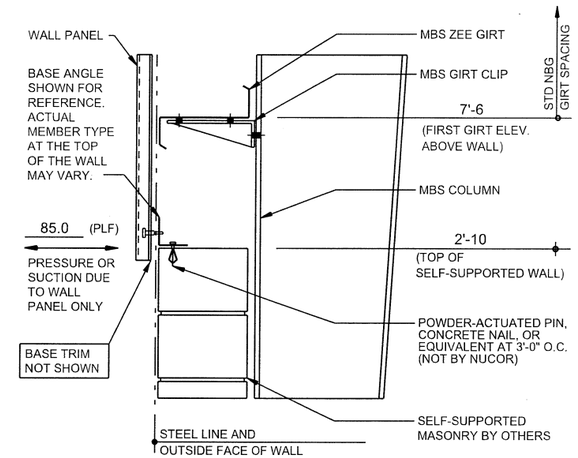
Building Loads:

Design Code:	IBC 2015
Building End Use:	3B - Commercial Warehousing and Storage
MBMA Occupancy Class:	IV - Essential Facilities
Roof Live Load: REDUCIBLE PER CODE	20.00
Ground Snow Load:	25.00
Snow Exposure Factor, Ce:	1.00
Snow Importance Factor, Is:	1.20
100 Year Rainfall Int. (IN/ HR):	
Seismic Information:	Ss: 1.567 S1: 0.590
Seismic Sds/ Sd1:	1.045 / 0.590
Site Class:	D
Seismic Imp. Factor Ie:	1.50
Seismic Design Category:	D
Analysis Procedure:	Equivalent Lateral Force Procedure
Basic SFRS:	Ordinary Steel Moment Frames & Ordinary Steel Concentrically - Braced Frames
Wind (MPH): (Vult) / (Vasd)	115 / 89
C & C Pressures (PSF):	22 / -29
Exposure:	B
UL90:	Yes

Name	Main
Roof Dead (PSF)	3.5
Primary Collateral (PSF)	1.0
Secondary Collateral (PSF)	1.0
Snow Ct	1.0
Snow Cs	1.00
Roof Snow Ps (PSF)	21.00
Roof Snow **Pm (PSF)	25.00
Wind Enclosure	Enclosed
GCpi	+/- 0.18
Seismic R	3.25
Seismic Cs	0.462
Base Shear (KIPS)	21.24

THIS BUILDING SYSTEM DESIGN IS BASED ON UNIFORMLY APPLYING THE CONTRACT-SPECIFIED LIVE LOAD AND ROOF SNOW LOAD. IN ADDITION, THE DESIGN IS BASED ON APPLYING A CODE-DEFINED LIVE LOAD (INCLUDING APPLICABLE REDUCTIONS) AND A CODE-DEFINED SNOW LOAD (BASED ON CONTRACT-SPECIFIED GROUND SNOW) FOR ALL PARTIAL LOADING AND UNBALANCED SNOW LOAD CONDITIONS.

ANY INTERIOR WALLS, PARTITIONS, CEILINGS, AND EXTERIOR WALLS SHALL BE DESIGNED (BY OTHERS) TO ACCOMMODATE THE STORY DRIFT.



MBS WALL PANEL LOADS
SELF-SUPPORTED WALL BY OTHERS

STRUCTURAL OBSERVATIONS, TESTS AND INSPECTION:

1) WHEN STRUCTURAL OBSERVATIONS ARE REQUIRED AS PER IBC 1704.6, OBSERVATIONS SHALL BE PERFORMED BY AN INDEPENDENT ENGINEERING AGENCY EMPLOYED BY THE ARCHITECT OR OWNER.
2) THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN IBC 1704.3 AND IBC 1705
3) ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR ARCHITECT.
4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND INSPECTION FIRM WITH A SCHEDULE TO FACILITATE THE PROPER COORDINATION OF WORK.
5) PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:

AGENCY RESPONSIBLE FOR INSPECTION AND TESTING TO BE NAMED BY OWNER LATER.	YES	NO	N/A
A. STRUCTURAL STEEL:			
1. MILL REPORTS AND IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE)	☐	■	☐
2. SAMPLING AND TESTING OF SPECIMENS	☐	■	☐
B. WELDING:			
1. ALL STRUCTURAL WELDING (INCLUDES DECKING AND WELDED STUDS), EXCEPT WELDING IN APPROVED SHOPS PER IBC 1704.2.2	■	☐	☐
2. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS AT MOMENT FRAMES, BRACED FRAMES, BEAM SPLICES, AND FIELD WELDS.	☐	■	☐
3. STRUCTURAL LIGHT GAGE METAL FRAME WELDING	☐	■	☐
C. BOLTING:			
1. HIGH STRENGTH BOLT A325SC AND A490SC (PRETENSION VERIFICATION)	■	☐	☐
2. HIGH STRENGTH BOLT A325N AND A490X (PER COVER SHEET NOTES)	■	☐	☐
3. EXPANSION/ADHESIVE ANCHORS IN CONCRETE OR MASONRY	■	☐	☐

Project Notes:

1) Collateral dead loads, unless otherwise noted, are assumed to be uniformly distributed. When suspended sprinkler systems, lighting, HVAC equipment, ceilings, etc., are suspended from roof members, consult the M.B.S. If these concentrated loads exceed 500 pounds (using the web mount detail) or 200 lbs (using the flange mount detail), or if individual members are loaded significantly more than others.

2) The design of structural members supporting gravity loads is controlled by the more critical effect of roof live load or roof snow load, as determined by the applicable code.

3) **Pm is based on the minimum roof snow load calculated per building code or the contract specified roof snow, whichever is greater. This value, Pm, is only applied in combination with the dead and collateral loads. Roof snow in other loading conditions is determined per the specified building code.

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

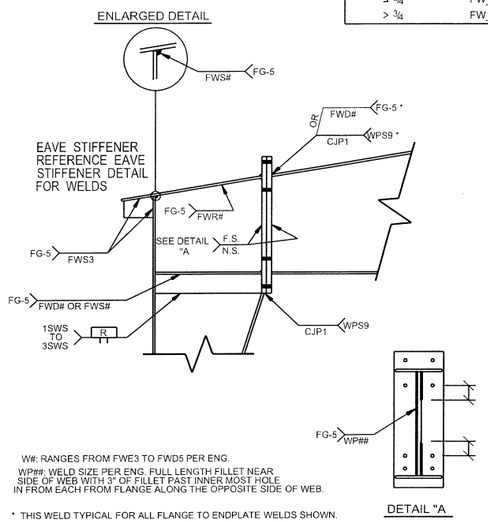
PROJECT NAME: Tahuya Fire Station, Tahuya, WA
CUSTOMER NAME: JH Kelly LLC, Longview, WA
JOB NUMBER: U19H0081A
SHEET TITLE: Building Info Coversheet

CASEY KENT CHRISTIANSEN, STATE OF WASHINGTON, 22021, REGISTERED PROFESSIONAL ENGINEER
MAR - 5 2019

SHEET C2 OF 3

STANDARD WELDS AND LEGEND

Thickest Mat. Joined	Weld
≤ 1/2	FW_3
≤ 3/4	FW_4
> 3/4	FW_5



W#: RANGES FROM FWE3 TO FWD5 PER ENG.

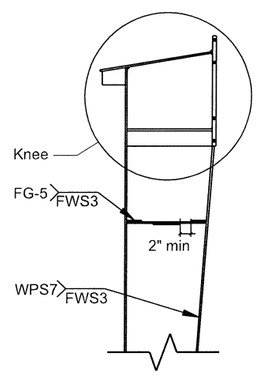
WP##: WELD SIZE PER ENG. FULL LENGTH FILLET NEAR SIDE OF WEB WITH 3" OF FILLET PAST INNER MOST HOLE IN FROM EACH FROM FLANGE ALONG THE OPPOSITE SIDE OF WEB.

* THIS WELD TYPICAL FOR ALL FLANGE TO ENDPLATE WELDS SHOWN.

Perpendicular Knee Column

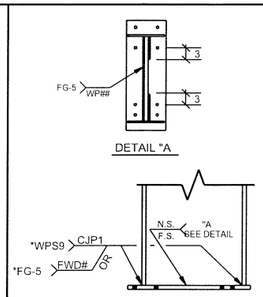
See Weld Standard sheet for WPS description

Thickest Mat. Joined	Weld
≤ 1/2	FW_3
≤ 3/4	FW_4
> 3/4	FW_5



Typical Column

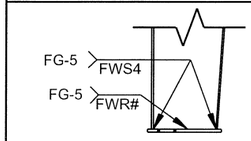
See Weld Standard sheet for WPS description



TYP. FIXED BASE DETAIL

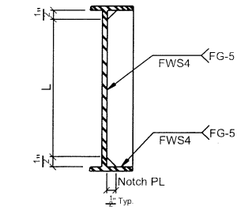
See Weld Standard sheet for WPS description

Base plate extension and anchor bolt locations may vary.

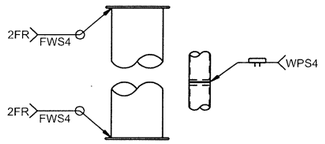


TYP. PINNED BASE DETAIL

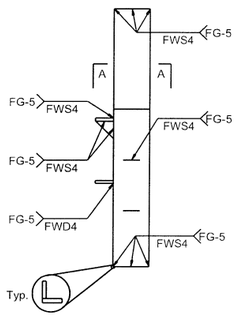
See Weld Standard sheet for WPS description



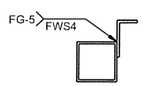
Typ Stiffener Detail Section A-A



Pipe or Tube Column



Structural Column



Tube Bracket

Structural Details

See Weld Standard sheet for WPS description

FWS$ - FILLET WELD, ONE SIDE

$	FILLET LEG
3	3/16
4	1/4
5	5/16

NEAR SIDE WELD: FWS$ $

FAR SIDE WELD: FWS$ $ $ FILLET

FWD$ - FILLET WELD, BOTH SIDES

$	FILLET LEG
3	3/16
4	1/4
5	5/16

FWD$ OR FWD$ $ $ $ FILLET

FWR$ -Full length fillet on near side with "(Max. D/5 or 3") fillet return at both ends on opposite side of plate.

$	FILLET LEG
3	3/16
4	1/4
5	5/16

FWR$ OR FWRS $ $ "(Max.D/5 or 3")

WP1$ - Full length fillet on near side of web with 3" of fillet past inner most hole in from each flange along the opposite side of web.

$	FILLET LEG
3	3/16
4	1/4
5	5/16

WP1$ OR WP1$ $ $ 3" OF WELD PAST INNER MOST HOLE IN FROM EACH FL ANGE

CJP1 - COMPLETE JOINT PENETRATION, SINGLE BEVEL WELD

NEAR SIDE WELD: CJP1 BACK GOUGE 45°

FAR SIDE WELD: CJP1 45° BACK GOUGE

BEVEL SIDE: CJP1 C 3/32 BACK GOUGE & SQUARE GROOVE WELD (GRIND FLUSH - CJP2) SINGLE BEVEL GROOVE WELD

PURLIN / GIRT / CHANNEL

QTY — SHAPE — (2) 08C060 — THICKNESS — SIZE — X — 1000

EAVE STRUT

QTY — SHAPE — SLOPE — (2) 8E2075 — THICKNESS — SIZE — X — 1000

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

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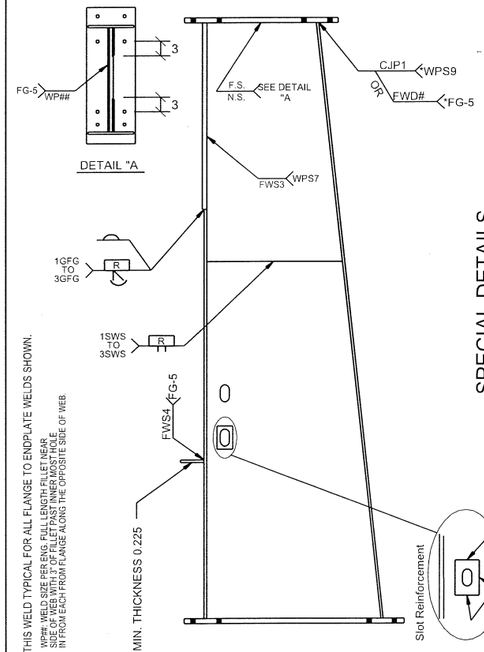
Coversheet

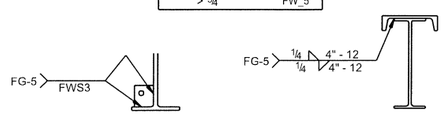


* THIS WELD TYPICAL FOR ALL FLANGE TO ENDPLATE WELDS SHOWN.
WP##: WELD SIZE PER ENG. FULL LENGTH FILLET NEAR SIDE OF WEB WITH 3" OF FILLET PAST INNER MOST HOLE IN FROM EACH FROM FLANGE ALONG THE OPPOSITE SIDE OF WEB.

SPECIAL DETAILS

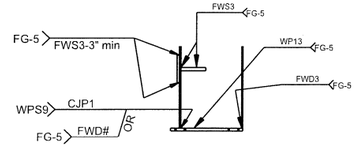
See Weld Standard sheet for WPS description

Thickest Mat. Joined	Weld
≤ 1/2	FW_3
≤ 3/4	FW_4
> 3/4	FW_5

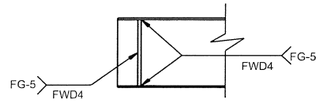


Typ. Flange Brace Clip

Runway Beam



Interior Wide Flange Fixed Base Plate Crane Stop



Runway End

SPECIAL DETAILS

See Weld Standard sheet for WPS description

WPS #	Description	Weld Code	Process	Preq	Position	Limitation	Plant Location UT	IN	SC	TX
FG-4	3/8" & 1/2" multi-pass fillet weld	AWSD1.1-10	GMAW (1/8" multi-pass fillet weld)	PQR	1G	3/16" - 5/16"	X	X	X	
FG-5	3/16" & 5/16" single-pass fillet ≤ weld	AWSD1.1-10	GMAW (3/16" - 5/16" single-pass fillet weld)	PQR	2F	1/8" - 1" - 1/2"	X	X	X	
1GFG	3/8" through 1" flange splice	AWSD1.1-10	GMAW (3/8" - 1" flange splice)	PQR	1G	3/8" - 1"	X	X	X	
2GFG	5/16" flange splice	AWSD1.1-10	GMAW (5/16" flange splice)	PQR	1G	3/16" - 5/16"	X	X	X	
3GFG	1/2" to 1" flange splice	AWSD1.1-10	GMAW (1/2" — 1" flange splice)	PQR	1G-2F	Groove: 1/4" Fillet: 1/2"	X	X	X	
2036	5/8" to 5/8" flange splice	AWSD1.1-10	GMAW (5/8" — 5/8" flange splice)	PQR	1G-2F	Groove: 5/8" Fillet: 5/8"	X	X	X	
5GFG	1" flange splice	AWSD1.1-10	GMAW (1" flange splice)	PQR	1G-2F	Groove: 1	X	X	X	
1SWS	web splice for 0.275" through 0.313" thick	AWSD1.1-10	SAW (0.275-0.313" Web splice)	PQR	1G	0.275 - 0.313	X	X	X	
2SWS	web splice for 0.125" through 0.150" thick	AWSD1.1-10	SAW (0.125-0.150" Web splice)	PQR	1G	0.125 - 0.150	X	X	X	
3SWS	web splice for 0.175" through 0.250" thick	AWSD1.1-10	SAW (0.175-0.250" Web splice)	PQR	1G	0.175 - 0.250	X	X	X	
2038	web splice for 0.375" through 0.500" thick	AWSD1.1-10	SAW (0.375-0.500" Web splice)	PQR	1G	0.375 - 0.500	X	X	X	
2FR	pipe to endplate weld	AWSD1.1-10	GMAW (Pipe-to-Endplate Weld)	PQR	2F ROTATED	6" thru 10	X	X	X	
FBG-1	Rod to plate/angle weld	AWSD1.1-10	GMAW (Rod-to-Plate Weld)	PQR	1G	Diameter: 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4	X	X	X	
WPS4	pipe splice for 0.134" through 0.375" thick	AWSD1.1-10	GMAW (Pipe Splice, 0.134" - 0.375")	YES	1G ROTATED	Diameter: 8 -10	X	X	X	
WPS5	pipe splice for 0.375" through 0.500" thick	AWSD1.1-10	GMAW (Pipe Splice, 0.375" - 0.500")	YES	1G ROTATED	0.375 - 0.50 Diameter: 8 -10	X	X	X	
WPS6	wide-flange beam splice, all sizes	AWSD1.1-10	GMAW (Hot-Rolled Splice Weld)	YES	1G	0.333 - 1.50	X	X	X	
WPS7	flange to web weld made by autowelder using 0.062" ø electrode	AWSD1.1-10	SAW (Autowelder Weld)	YES	2F	0.125 - 1.00	X	X	X	
WPS8	flange to web weld made by autowelder using 0.052" ø electrode	AWSD1.1-10	SAW (Small Autowelder Welds)	YES	2F	0.125 - 1.00	X	X	X	
WPS9	complete penetration groove weld for tee connection. 3/8" thick	AWSD1.1-10	GMAW (Flange to endplate weld)	YES	1G	0.375 - 1.00	X	X	X	
WPS11	vertical tack-fitters	AWSD1.1-10	GMAW (Vertical tack-fitters)	YES	3F	0.125 - Unlimited	X	X	X	
WPS-1	Cold-Form seam stitch weld	AWSD1.3-08	GMAW (CF seam stitch weld)	PQR	FLAT	0.0625" - 0.210	X	X	X	
WPS-1a	Cold-Form seam stitch weld (galvanized)	AWSD1.3-08	GMAW (CF seam stitch weld) (galvanized)	PQR	FLAT	0.0625" - 0.210	X	X	X	
WPS-2	Cold-Form seam weld	AWSD1.3-08	GMAW (CF seam weld)	PQR	HORIZ.	t1=0.0625 - 0.215	X	X	X	
WPS-2a	Cold-Form seam weld (galvanized)	AWSD1.3-08	GMAW (CF seam weld) (galvanized)	PQR	HORIZ.	t1=0.0625 - 0.215	X	X	X	
WPS-3	cold-form seam weld to support steel ≥ 0.3125" thick	AWSD1.3-08	GMAW (CF seam weld to support steel)	PQR	HORIZ.	t1=0.0625" - 0.215" t2 ≥ 0.3125	X	X	X	
WPS-3a	cold-form seam weld to support steel ≥ 0.3125" thick (galvanized)	AWSD1.3-08	GMAW (CF seam weld to support steel) (galvanized)	PQR	HORIZ.	t1=0.0625" - 0.215" t2 ≥ 0.3125	X	X	X	
WPS-4	cold-form tee connection fillet weld	AWSD1.3-08	GMAW (CF tee fillet weld)	PQR	HORIZ.	t1=0.0625" - 0.215	X	X	X	
WPS-4a	cold-form tee connection fillet weld (galvanized)	AWSD1.3-08	GMAW (CF tee fillet weld) (galvanized)	PQR	HORIZ.	t1=0.0625" - 0.215	X	X	X	
WPS-5	cold-form tee connection fillet weld to support steel ≥ 0.313" thick	AWSD1.3-08	GMAW (CF tee fillet to support steel)	PQR	HORIZ.	t1=0.0625" - 0.215" t2 ≥ 0.313"	X	X	X	
WPS-5a	cold-form tee connection fillet weld to support steel ≥ 0.313" thick (galvanized)	AWSD1.3-08	GMAW (CF tee fillet to support steel) (galvanized)	PQR	HORIZ.	t1=0.0625" - 0.215" t2 ≥ 0.313"	X	X	X	
WPS-6	cold-form lap fillet weld	AWSD1.3-08	GMAW (CF lap fillet weld)	PQR	HORIZ.	t1=0.0625" - 0.215	X	X	X	
WPS-6a	cold-form lap fillet weld (galvanized)	AWSD1.3-08	GMAW (CF lap fillet weld) (galvanized)	PQR	HORIZ.	t1=0.0625" - 0.215	X	X	X	
WPS-7	cold-form lap fillet weld to support steel ≥ 0.3125" thick	AWSD1.3-08	GMAW (CF lap fillet to support steel)	PQR	HORIZ.	t1=0.0625" - 0.215" t2 ≥ 0.3125	X	X	X	
WPS-7a	cold-form lap fillet weld to support steel ≥ 0.3125" thick (galvanized)	AWSD1.3-08	GMAW (CF lap fillet to support steel) (galvanized)	PQR	HORIZ.	t1=0.0625" - 0.215" t2 ≥ 0.3125	X	X	X	

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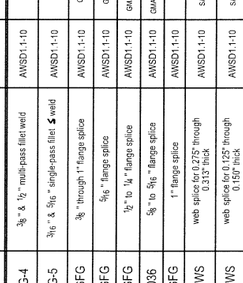
PROJECT NAME
Tahuya Fire Station
Tahuya, WA

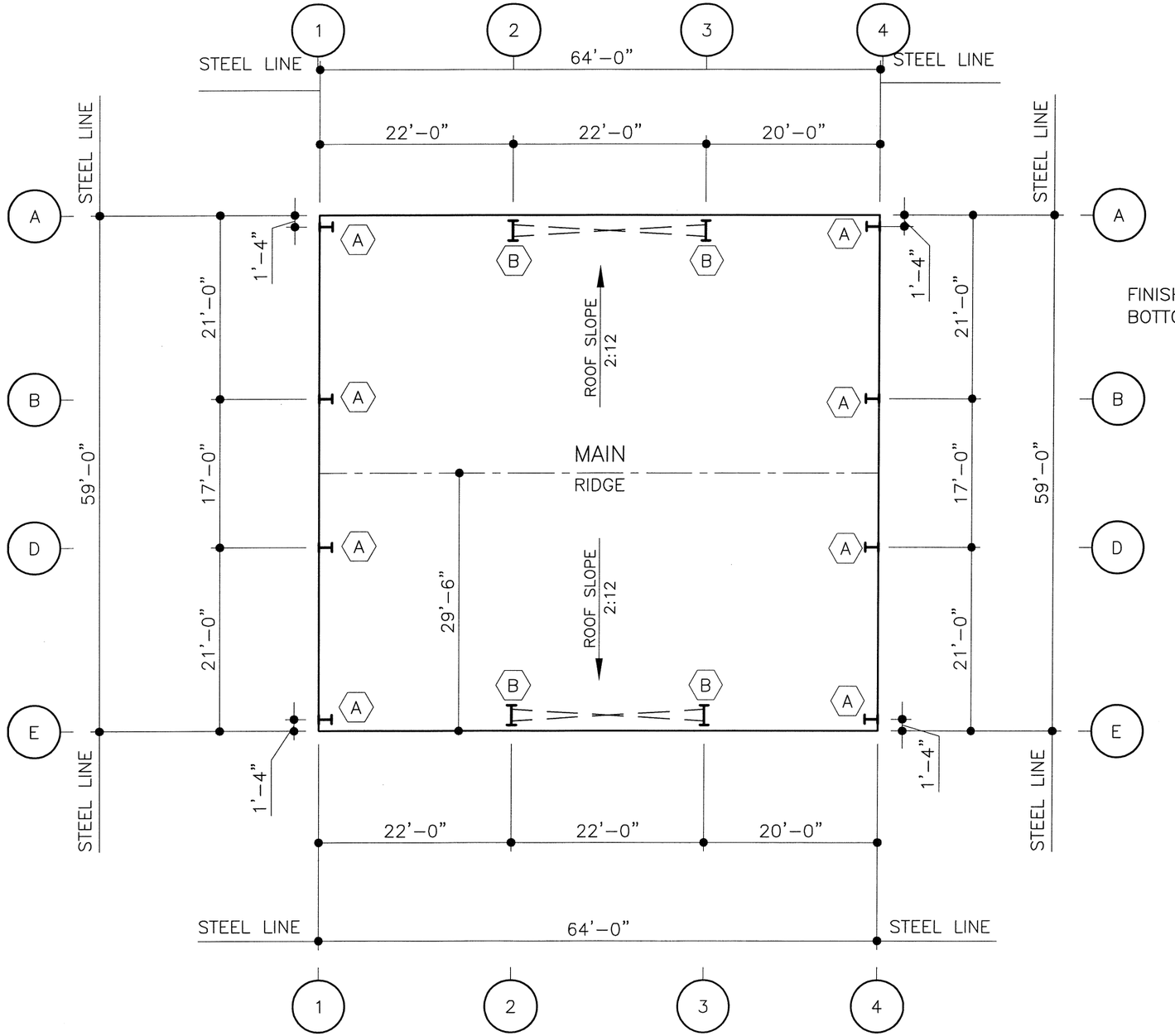
CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Building Info Coversheet

SHEET
C3 OF 3





FINISH FLOOR = 100'-0"
BOTTOM OF BASE PLATE = 100'-0" (UNLESS NOTED OTHERWISE)

ANCHOR BOLT SCHEDULE

QUANTITY	SIZE	MAT'L	PROJECTION
48	3/4"	Gr 55	3" FROM BOTTOM OF BPL
---	---	---	3" FROM BOT. OF BPL
---	---	---	3" FROM BOT. OF BPL
---	---	---	3" FROM BOT. OF BPL
---	---	---	3" FROM BOT. OF BPL

SHEET	DWN	CHK	ENG	PE	DATE
CONST. ANCHOR BOLT PLAN	NBS	EOP	DBR	CKC	2/15/19
FOR BUILDING DEPT REVIEW	TKL	SRR	DBR	CKC	3/5/19

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME: Tahuya Fire Station
Tahuya, WA
CUSTOMER NAME: JH Kelly LLC
Longview, WA
JOB NUMBER: U19H0081A
SHEET TITLE: ANCHOR BOLT PLAN

CASEY KENT CHRISTIANSEN
STATE OF WASHINGTON
52021
REGISTERED
PROFESSIONAL ENGINEER
MAR 5 2019

SHEET: F1 of 2

ANCHOR BOLT PLAN

GENERAL NOTES

1. THE SPECIFIED ANCHOR ROD DIAMETER ASSUMES F1554 GRADE 55 UNLESS NOTED OTHERWISE. ANCHOR ROD MATERIAL OF EQUAL DIAMETER MEETING OR EXCEEDING THE STRENGTH REQUIREMENTS SET FORTH ON THESE DRAWINGS MAY BE UTILIZED AT THE DISCRETION OF THE FOUNDATION DESIGN ENGINEER. ANCHOR ROD EMBEDMENT LENGTH SHALL BE DETERMINED BY THE FOUNDATION DESIGN ENGINEER.

2. THE METAL BUILDING MFR. IS NOT RESPONSIBLE FOR PROJECT FOUNDATION DESIGN. THE FOUNDATION DESIGN IS THE RESPONSIBILITY OF A REGISTERED PROFESSIONAL ENGINEER, FAMILIAR WITH LOCAL SITE CONDITIONS.

3. ALL ANCHOR RODS, FLAT WASHERS FOR ANCHOR RODS, EXPANSION BOLTS, AS WELL AS ALL CONCRETE/MASONRY EMBED PLATES ARE NOT BY THE METAL BUILDING MFR.

4. THIS DRAWING IS NOT TO SCALE.

5. FINISHED FLOOR ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.

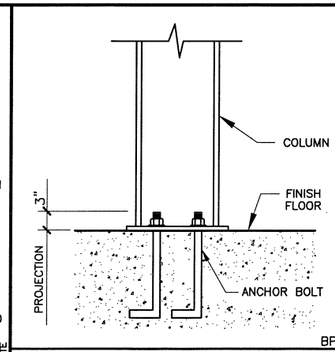
6. "SINGLE" CEE COLUMNS SHALL BE ORIENTED WITH THE "TOES" TOWARD THE LOW EAVE UNLESS NOTED OTHERWISE.

7. THE ANCHOR BOLT LOCATIONS PROVIDED BY THE METAL BUILDING MANUFACTURER SATISFY ANY PERTINENT REQUIREMENTS FOR THE DESIGN OF THE MATERIALS SUPPLIED BY THE METAL BUILDING MANUFACTURER. PLEASE NOTE THAT THESE REQUIREMENTS MAY NOT SATISFY ALL ANCHOR BOLT CONCRETE EDGE DISTANCE REQUIREMENTS DEPENDING ON THE DETAILS OF THE FOUNDATION DESIGN. BECAUSE FOUNDATION DESIGN IS NOT WITHIN THE SCOPE OF WORK OF THE METAL BUILDING MANUFACTURER, IT IS THE RESPONSIBILITY OF THE QUALIFIED PROFESSIONAL DESIGNING THE FOUNDATION TO VERIFY THAT SUFFICIENT CONCRETE EDGE DISTANCE IS PROVIDED FOR THE ANCHOR BOLTS IN THE DETAILS THEREOF.

8. THE ANCHOR BOLT SETTINGS SHOWN ON THESE DRAWINGS NOT ONLY INDICATE WHERE THE ANCHOR BOLTS ARE TO BE PLACED, BUT ALSO THE FOOTPRINT OF THE METAL BUILDING. IT IS ESSENTIAL THAT THESE BOLT PATTERNS BE FOLLOWED. IN THE EVENT THAT THESE SETTINGS DIFFER FROM THE ARCHITECTURAL FOUNDATION PLANS, THE METAL BUILDING MANUFACTURER MUST BE CONTACTED IMMEDIATELY, PREFERABLY BEFORE CONCRETE IS PLACED.

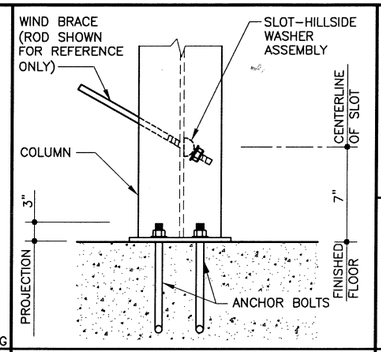
BERTNOTE

– CROSS BRACING

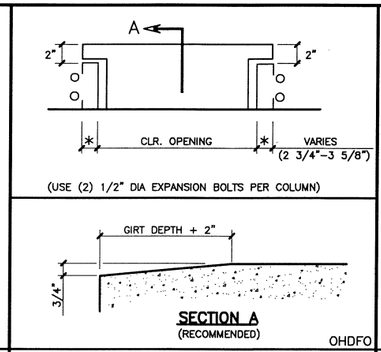


BPFFNG

TYPICAL COLUMN BASE PLATE DETAIL

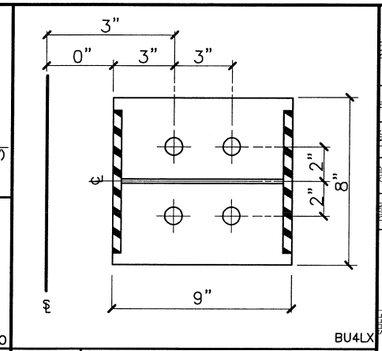


TYPICAL COLUMN BASE PLATE DETAIL AT SLOT–HILLSIDE WASHER LOCATION



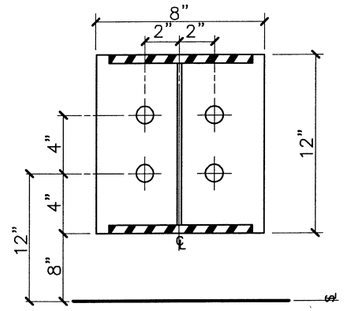
OHDFO

TYPICAL OVERHEAD DOOR FRAMED OPENING



BU4LX

A | (4) 3/4" ø ANCHOR BOLTS WITH A 3" PROJECTION



BU4BX

B | (4) 3/4" ø ANCHOR BOLTS WITH A 3" PROJECTION

FOUNDATION DESIGN NOTE:

THE ORIENTATION OF THE ANCHOR BOLT DETAILS SHOWN ON THIS PAGE MAY NOT COINCIDE WITH THE ACTUAL COLUMN ORIENTATION SHOWN ON PAGE F1. PLEASE REFERENCE THE STEEL LINES AND/OR CENTER LINE OF ADJACENT COLUMN SHOWN ON THE ANCHOR BOLT DETAILS WITH THE ANCHOR BOLT PLAN ON PAGE F1 DURING LAYOUT OF COLUMN AND ANCHOR BOLT LOCATIONS.

SHEET	DWN	CHK	ENG	PE	DATE
CONST. ANCHOR BOLT PLAN	NBS	EOP	DBR	CKC	2/15/19
FOR BUILDING DEPT REVIEW	TKL	SRR	DBR	CKC	3/5/19

NUCOR BUILDING SYSTEMS GROUP
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Brigham City, UT 84302
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Fax: (435) 919-3101

CASEY KENT CHRISTIANSEN
STATE OF WASHINGTON
22021
REGISTERED PROFESSIONAL ENGINEER
MAR 5 2019

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

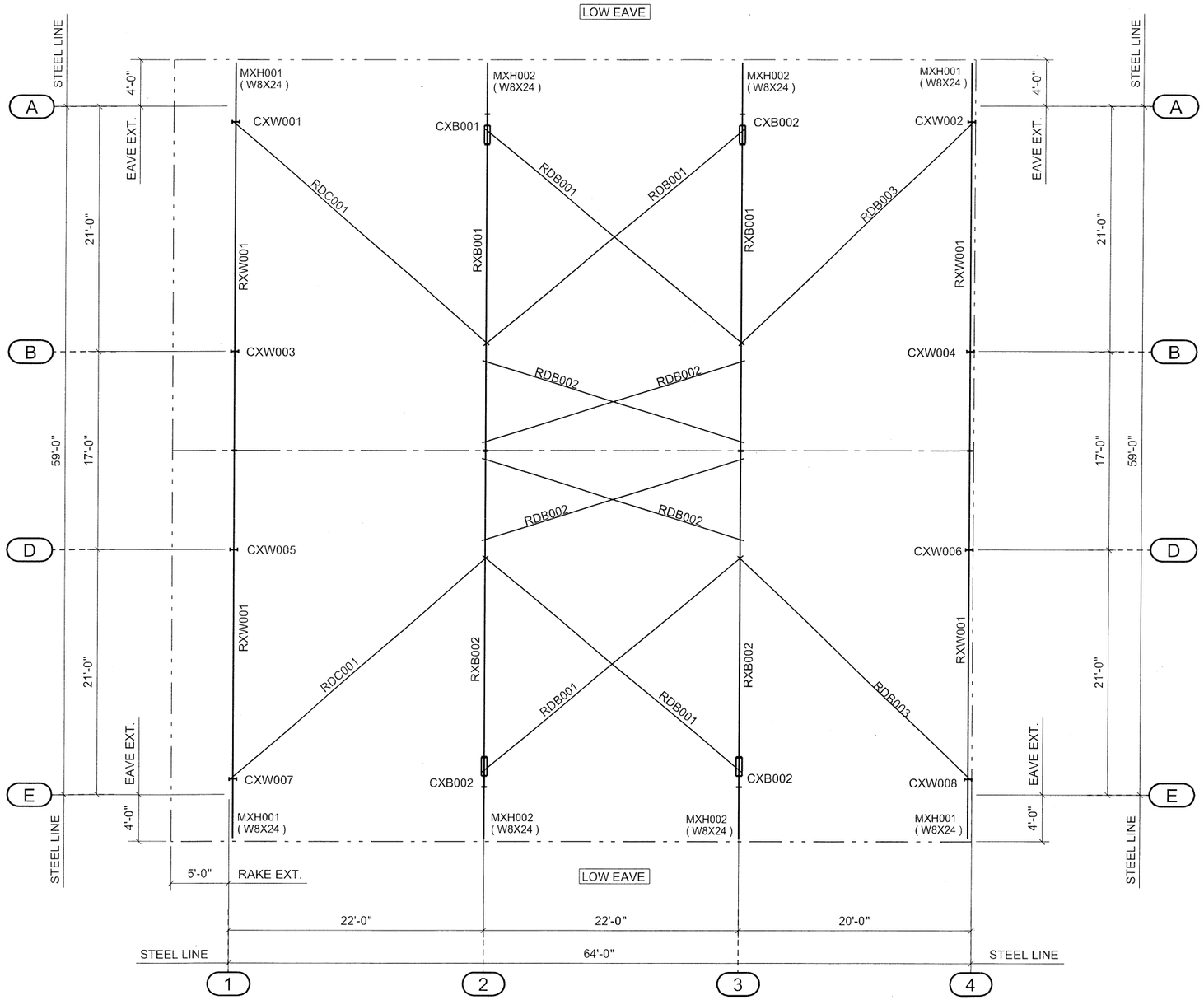
CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
ANCHOR BOLT DETAILS

SHEET
F2 of 2

Part Sizes	
RDB__	5/8" ROD
RDC__	3/4" ROD



Notes:

Place metal tagged end of rafters toward the low eave.

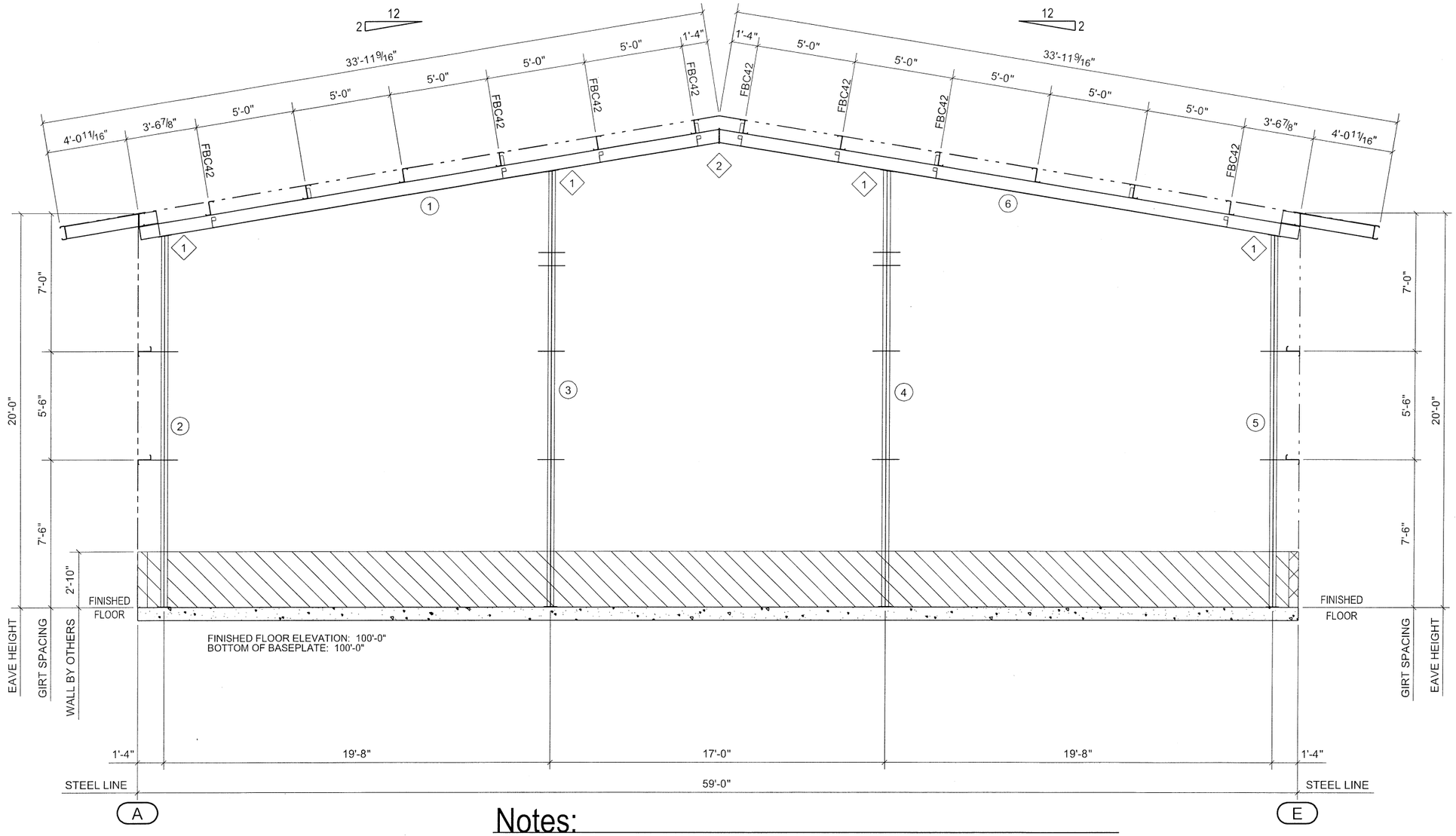
ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME: Tahuya Fire Station, Tahuya, WA
CUSTOMER NAME: JH Kelly LLC, Longview, WA
JOB NUMBER: U19H0081A
SHEET TITLE: Mark Number Plan

CASEY KENT CHRISTIANSEN — STATE OF WASHINGTON — 52021 — REGISTERED PROFESSIONAL ENGINEER
MAR 25 2019

SHEET P1 OF 3



Notes:

For column and rafter mark numbers, see Mark Number Plan.

NS/FS indicates that flange bracing is required on both sides of the frame line.

For expandable endwall rigid frames, if flange bracing is required on both sides (NS/FS) of an expandable endframe, the opposite side flange brace will have to be installed at the time of expansion. These flange braces have been provided, as required, for this future condition.

If NS/FS is NOT indicated, only one flange brace is required and can be located on either side of the frame.

"*" indicates the long side of the interior columns. Columns at the ridge are typically "flat-top" columns, unless indicated by the "*" symbol.

Rigid frames shall have 50% of their bolts installed and tightened on both sides of the web adjacent to each flange before the hoisting equipment is released.

Material Schedule

ID	Low Plate		High Plate		Outside Flange		Inside Flange		Web		
	Width	Thick	Width	Thick	Width	Thick	Width	Thick	Depth1	Thick	Depth2
1	6.00	0.25	6.00	0.38	-	-	-	-	W8X18	-	-
	-	-	-	-							
2	8.00	0.38	8.00	0.25	-	-	-	-	W8X10	-	-
3	8.00	0.38	8.00	0.25	-	-	-	-	W8X10	-	-
4	8.00	0.38	8.00	0.25	-	-	-	-	W8X10	-	-
5	8.00	0.38	8.00	0.25	-	-	-	-	W8X10	-	-
6	6.00	0.25	6.00	0.38	-	-	-	-	W8X18	-	-
	-	-	-	-							

Bolt Schedule

ID	Qty	Bolt Description	Bolt #	Nut #
1	4	½" X 2" A325	H0603	H0300
2	4	⅝" X 2 ¼" A325	H0610	H0310

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
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Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME: Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME: JH Kelly LLC
Longview, WA

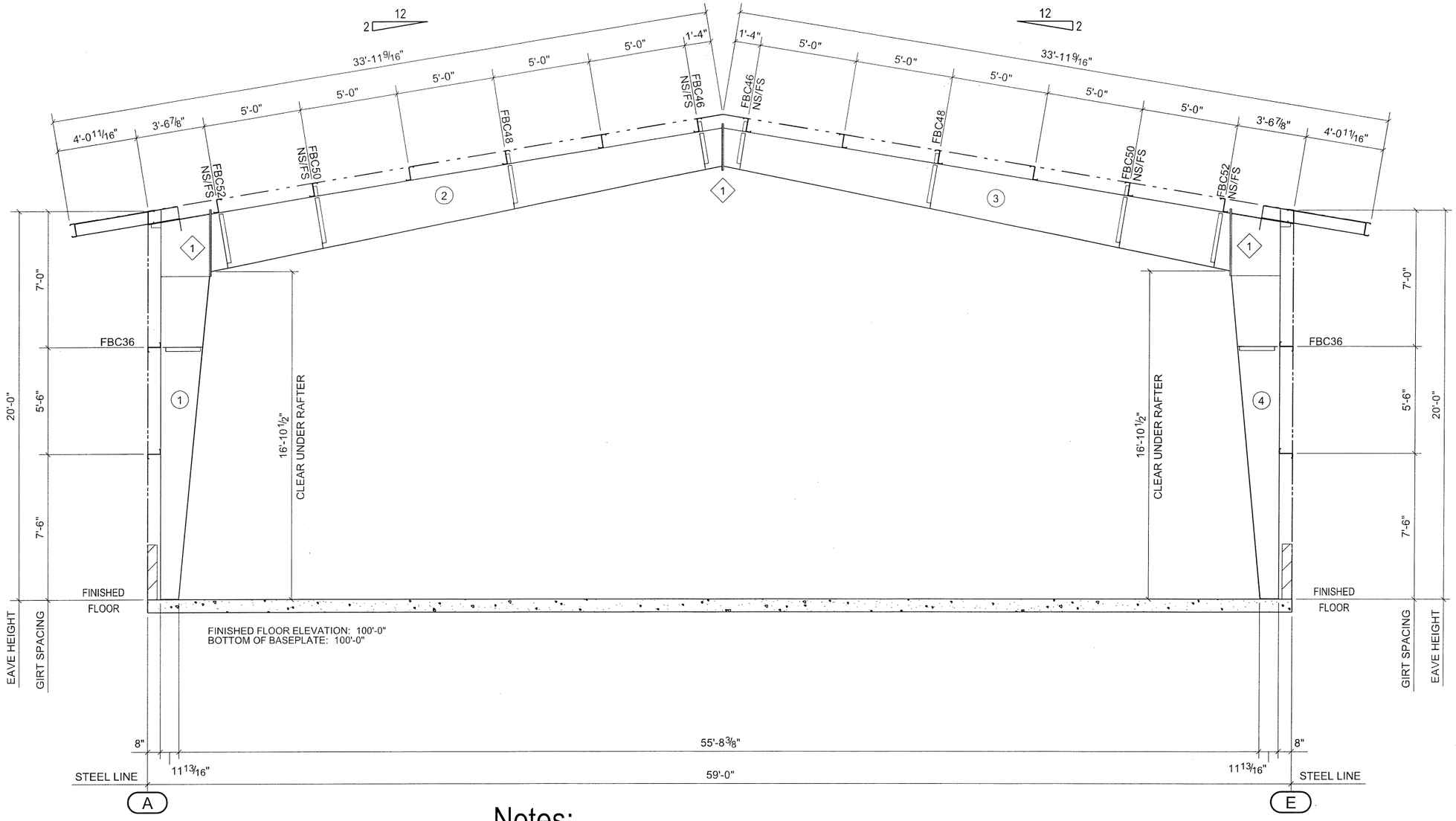
JOB NUMBER: U19H0081A

SHEET TITLE: Cross Sections at Lines 1 & 4

SHEET: P2 OF 3

CASEY KENT CHRISTIANSEN
STATE OF WASHINGTON
52021
REGISTERED PROFESSIONAL ENGINEER
MAR 5 2019

03/04/2019 06:46:23pm



Material Schedule

ID	Low Plate Width	Low Plate Thick	High Plate Width	High Plate Thick	Outside Flange Width	Outside Flange Thick	Inside Flange Width	Inside Flange Thick	Web Depth1	Web Thick	Web Depth2
1	8.00	0.38	6.00	0.63	6.00	0.19	6.00	0.38	11.13	0.14	29.88
	-	-	-	-					29.88	0.22	29.88
2	6.00	0.63	6.00	0.50	6.00	0.25	6.00	0.25	34.85	0.16	22.89
3	6.00	0.63	6.00	0.50	6.00	0.25	6.00	0.25	34.85	0.16	22.89
4	8.00	0.38	6.00	0.63	6.00	0.19	6.00	0.38	11.13	0.14	29.88
	-	-	-	-					29.88	0.22	29.88

Notes:

For column and rafter mark numbers, see Mark Number Plan.

NS/FS indicates that flange bracing is required on both sides of the frame line.

For expandable endwall rigid frames, if flange bracing is required on both sides (NS/FS) of an expandable endframe, the opposite side flange brace will have to be installed at the time of expansion. These flange braces have been provided, as required, for this future condition.

If NS/FS is NOT indicated, only one flange brace is required and can be located on either side of the frame.

"*" indicates the long side of the interior columns. Columns at the ridge are typically "flat-top" columns, unless indicated by the "*" symbol.

Rigid frames shall have 50% of their bolts installed and tightened on both sides of the web adjacent to each flange before the hoisting equipment is released.

Bolt Schedule

ID	Qty	Bolt Description	Bolt #	Nut #
1	8	5/8" X 2 1/4" A325	H0610	H0310

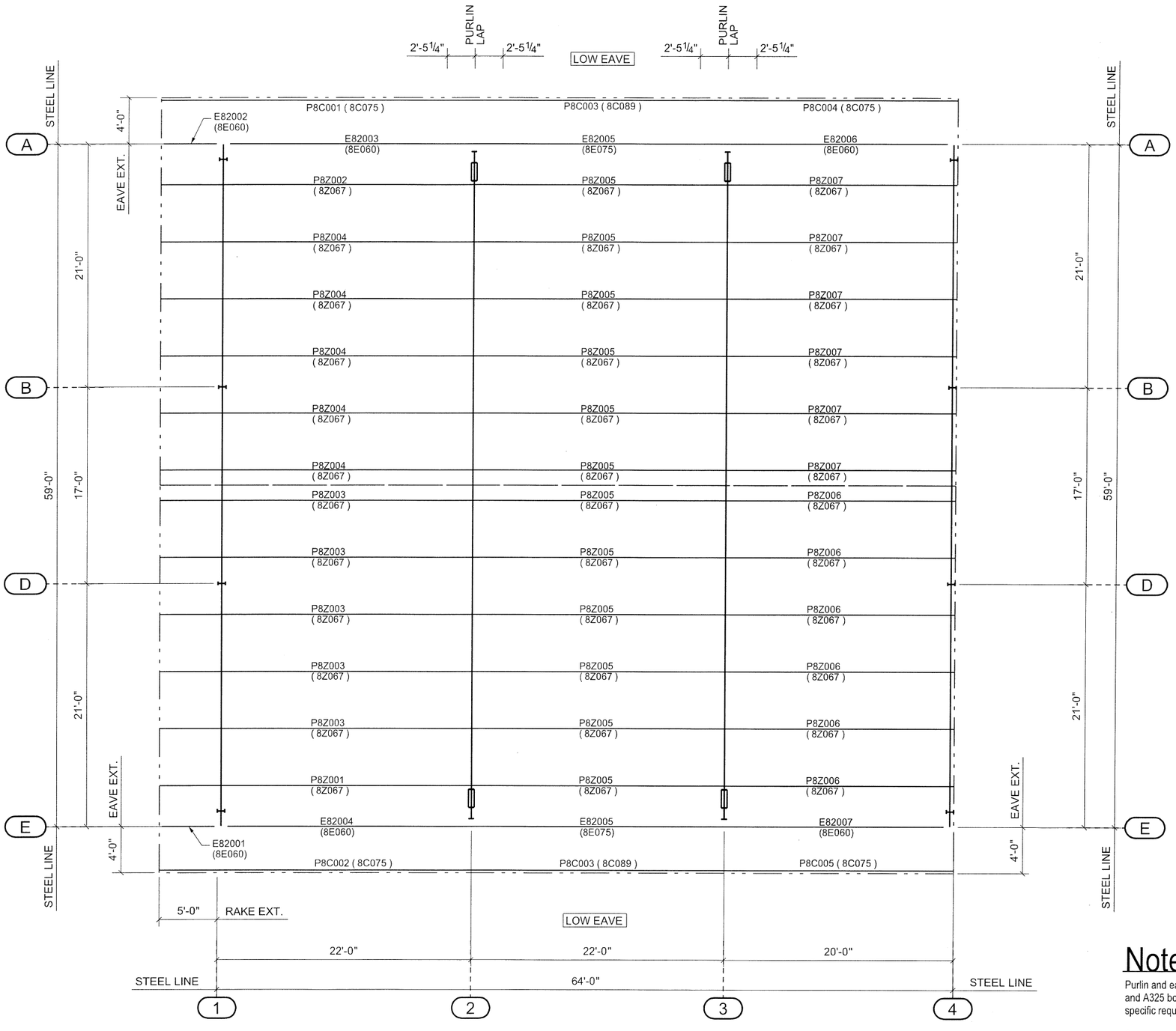
ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME: Tahuya Fire Station
Tahuya, WA
CUSTOMER NAME: JH Kelly LLC
Longview, WA
JOB NUMBER: U19H0081A
SHEET TITLE: Cross Sections at Lines 2-3

CASEY KENT CHRISTIANSEN
STATE OF WASHINGTON
52021
REGISTERED
PROFESSIONAL ENGINEER
MAR - 5 2019

SHEET: P3 OF 3



Notes:

Purlin and eave strut connection bolt requirements: A307 and A325 bolts are both used. Refer to the details for specific requirements.

See cross section drawings for main frame flange bracing.

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

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1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME: Tahuya Fire Station, Tahuya, WA
CUSTOMER NAME: JH Kelly LLC, Longview, WA
JOB NUMBER: U19H0081A
SHEET TITLE: Roof Framing Plan

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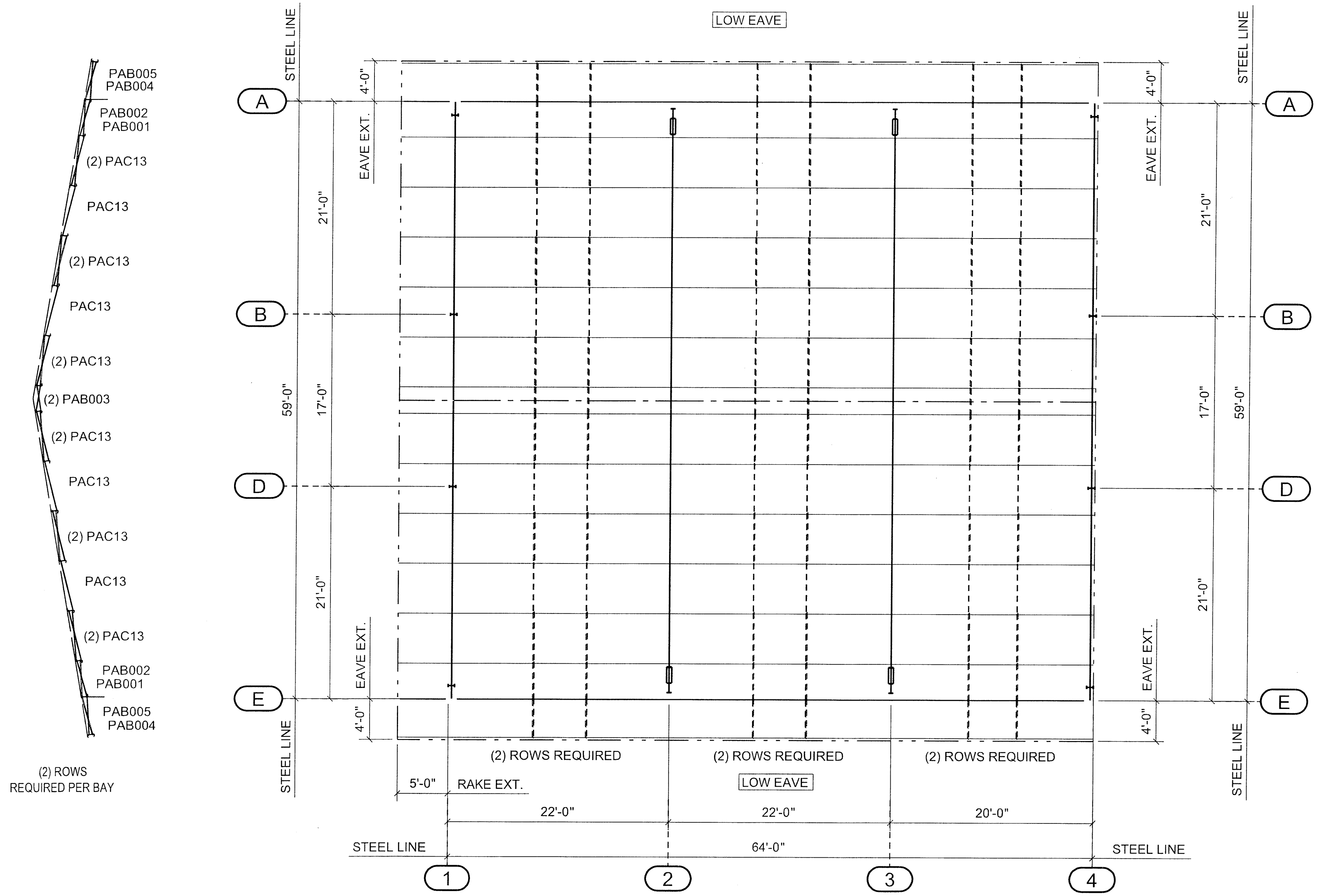
MAR 1 5 2019

SHEET: R1 OF 2



Notes:

PAB__/PAC__ indicates purlin bracing. See roof framing details section BE0001 for more info.

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR
BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Purlin Bracing/Roof F.O.

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STATE OF WASHINGTON
52021
REGISTERED
PROFESSIONAL ENGINEER

MAR - 5 2019

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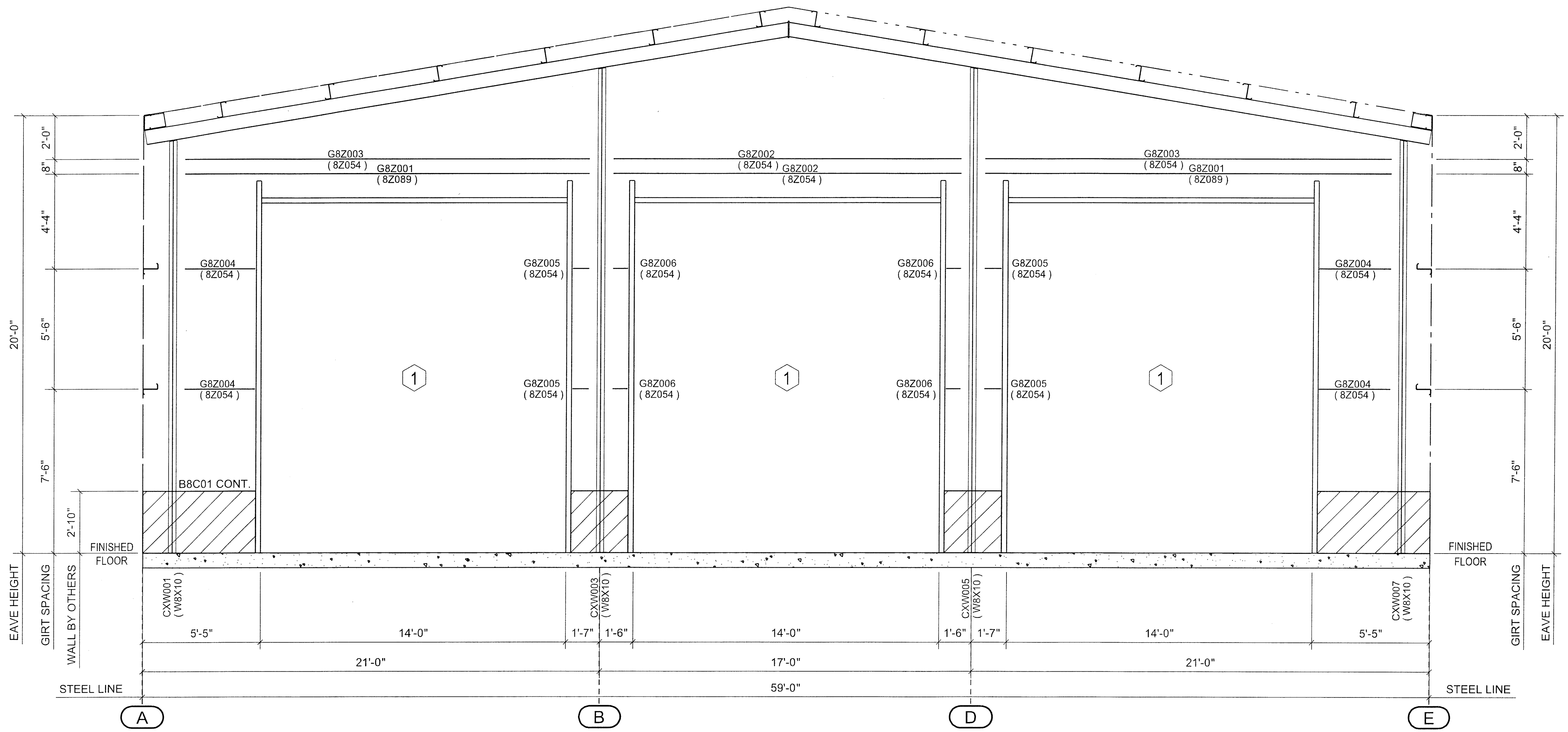
SHEET
R2 OF 2



Notes:

See cross section drawings for main frame flange bracing.

See wall framing details for standard girt orientation detail.

RD___ indicates rod bracing. See primary details for rod brace assembly.

At flush or inset girt condition, field slot girt webs, to allow passage of cable/rod bracing. See primary details for guidelines.

Cut and drill girts as necessary for field located framed openings.

Framed Opening Schedule

ID	Qty	Width	Length	Header	Jambs Left/Right
1	3	14'-0	16'-0	H8C001 (8C060)	J8C001 (8C067)

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
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NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Wall Framing Elevation at Line 1

03/04/2019 06:46:34pm

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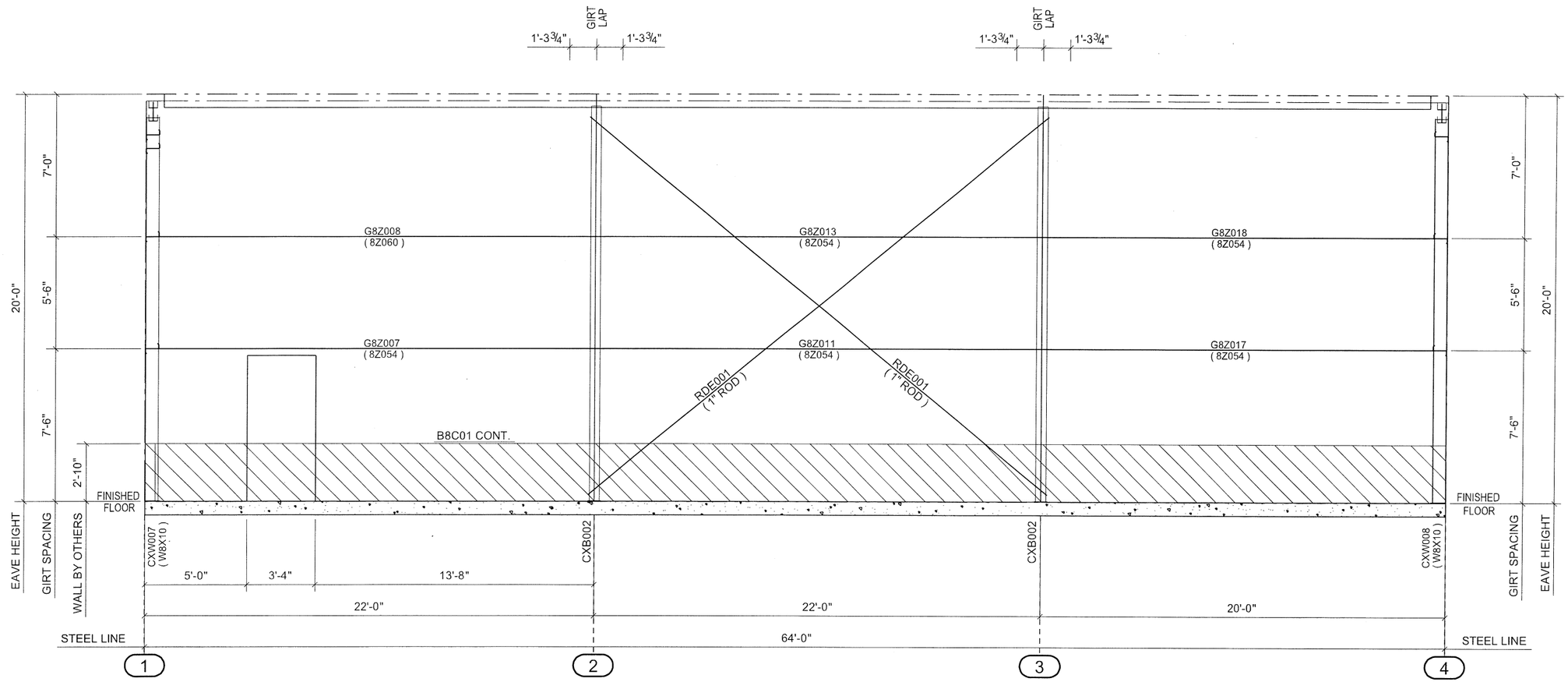
SHEET
W1 OF 4



Notes:

See cross section drawings for main frame flange bracing.

See wall framing details for standard girt orientation detail.

RD___ indicates rod bracing. See primary details for rod brace assembly.

At flush or inset girt condition, field slot girt webs, to allow passage of cable/rod bracing. See primary details for guidelines.

Cut and drill girts as necessary for field located framed openings, which are shown here for location reference only. Framed openings on Line E are by others (NOT BY NUCOR).

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

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BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
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Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Wall Framing Elevation at Line E

SHEET
W2 OF 4

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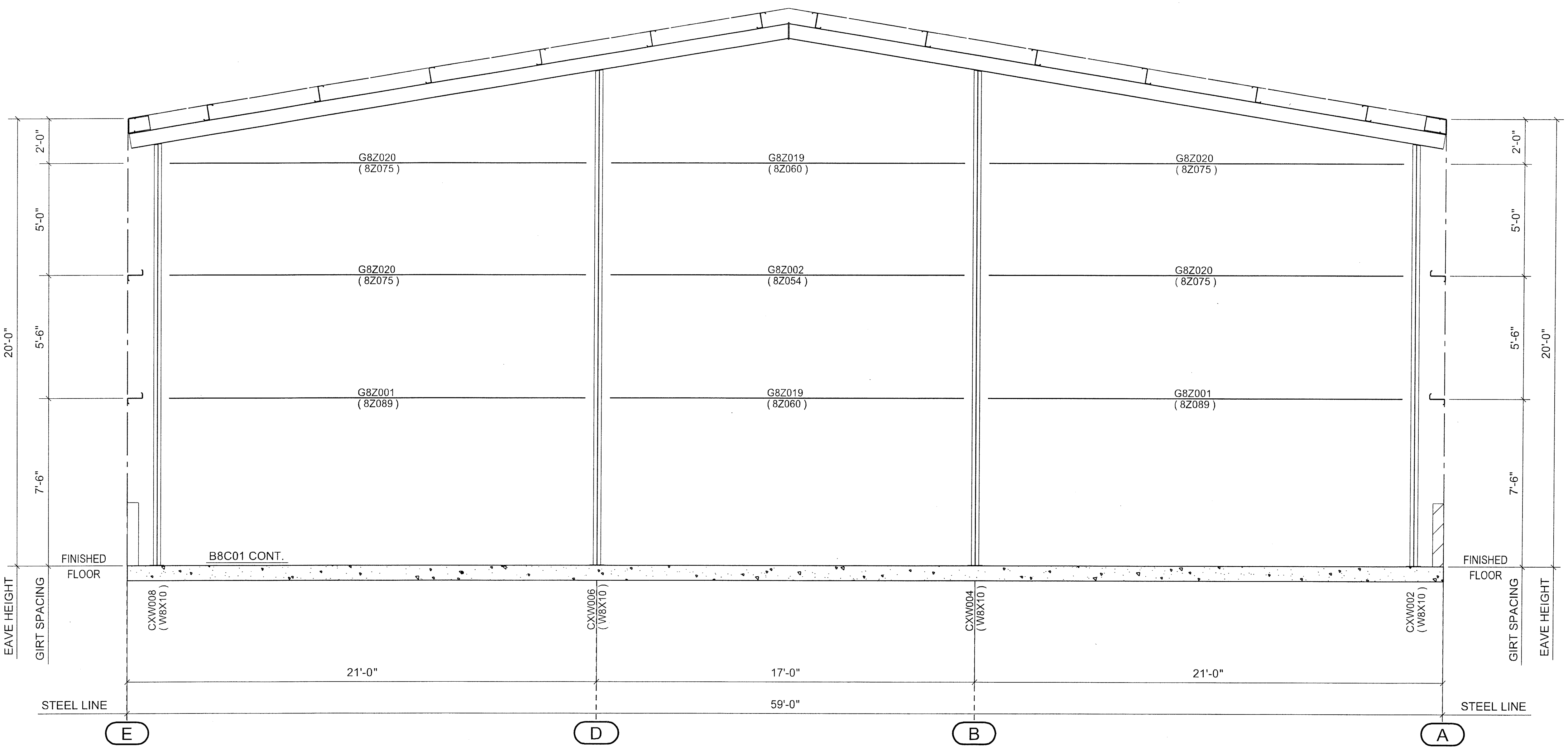
20211
MAR 5 2019



Notes:

See cross section drawings for main frame flange bracing.

See wall framing details for standard girt orientation detail.

RD___ indicates rod bracing. See primary details for rod brace assembly.

At flush or inset girt condition, field slot girt webs, to allow passage of cable/rod bracing. See primary details for guidelines.

Cut and drill girts as necessary for field located framed openings.

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Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR
BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Wall Framing Elevation at Line 4

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MAR 5 2019

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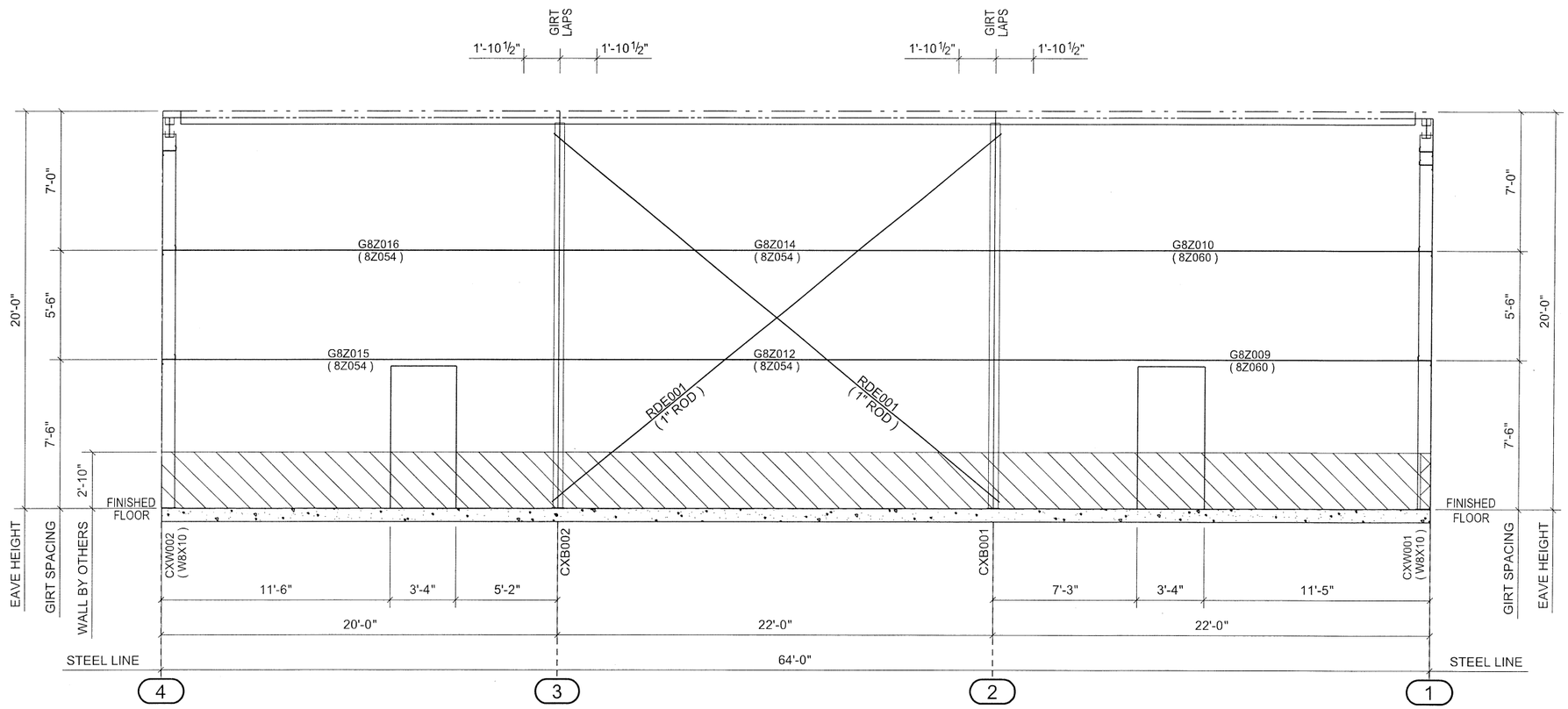
SHEET
W3 OF 4



Notes:

See cross section drawings for main frame flange bracing.

See wall framing details for standard girt orientation detail.

RD___ indicates rod bracing. See primary details for rod brace assembly.

At flush or inset girt condition, field slot girt webs, to allow passage of cable/rod bracing. See primary details for guidelines.

Cut and drill girts as necessary for field located framed openings, which are shown here for location reference only. Framed openings on Line A are by others (NOT BY NUCOR).

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Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Wall Framing Elevation at Line A

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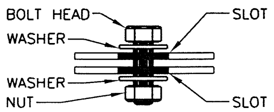
STATE OF WASHINGTON
52021
REGISTERED
PROFESSIONAL ENGINEER

MAR 5 2019

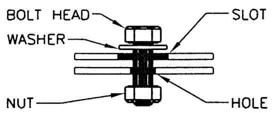
SHEET
W4 OF 4

TYPICAL WASHER REQUIREMENTS ERECTOR NOTE

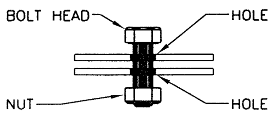
(UNLESS NOTED OTHERWISE ON DRAWINGS)



SLOT TO SLOT CONNECTIONS
WASHERS REQUIRED ON BOTH SIDES OF MATERIAL IF SLOTS ARE ON BOTH SIDES. (EXCEPTION: SEE DETAIL AT RIGHT FOR LAPPED ZEE MEMBERS)



SLOT TO HOLE CONNECTIONS
ONE WASHER REQUIRED ON SLOTTED SIDE ONLY.

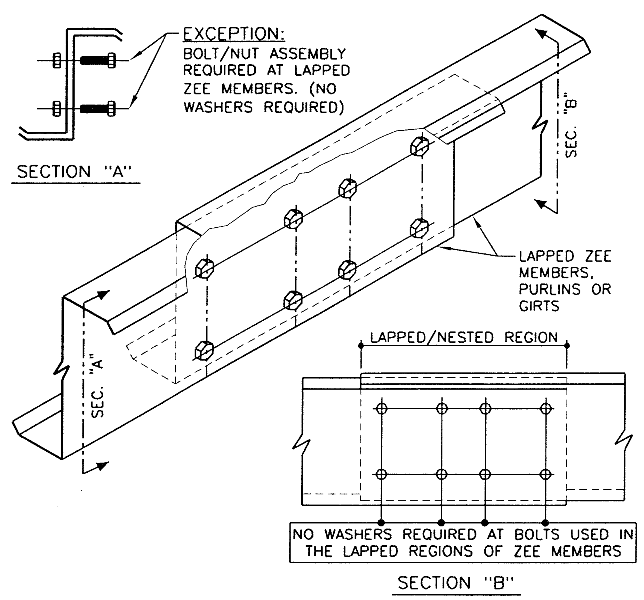


HOLE TO HOLE CONNECTIONS
NO WASHERS REQUIRED WHEN SLOTS ARE NOT USED.

WASHER PART NUMBERS

H0200 - 1/2" FLAT WASHER	H0240 - 1" FLAT WASHER
H0210 - 5/8" FLAT WASHER	H0250 - 1 1/8" FLAT WASHER
H0220 - 3/4" FLAT WASHER	H0260 - 1 1/4" FLAT WASHER
H0230 - 7/8" FLAT WASHER	

A00010



TYPICAL FIELD WELD REQUIREMENTS ERECTOR NOTE:

(UNLESS NOTED OTHERWISE ON DRAWINGS)

ALL FIELD WELDING MUST BE PERFORMED BY AWS/CWB CERTIFIED WELDERS WHO ARE QUALIFIED FOR THE WELDING PROCESSES AND POSITIONS INDICATED. ALL WORK MUST BE COMPLETED AND INSPECTED IN ACCORDANCE WITH THE APPLICABLE AWS/CWB SPECIFICATIONS. WELD ELECTRODES USED FOR THE SMAW (OR STICK) WELD PROCESS MUST BE 70 KSI/483 MPa MATERIAL AND LOW HYDROGEN CONTENT.

GALVANIZED STEEL FIELD WELDING RECOMMENDATIONS

PREPARATION OF WELD AREA

AWS D-19.0, WELDING ZINC COATED STEEL, CALLS FOR WELDS TO BE MADE ON STEEL THAT IS FREE OF ZINC IN THE AREA TO BE WELDED. FOR GALVANIZED STRUCTURAL COMPONENTS, THE ZINC COATING SHOULD BE REMOVED AT LEAST ONE TO FOUR INCHES (2.5-10 CM) FROM EITHER SIDE OF THE INTENDED WELD ZONE AND ON BOTH SIDES OF THE WORKPIECE. GRINDING BACK THE ZINC COATING IS THE PREFERRED AND MOST COMMON METHOD; BURNING THE ZINC AWAY OR PUSHING BACK THE MOLTEN ZINC FROM THE WELD AREA ALSO ARE EFFECTIVE.

TOUCH-UP OF WELD AREA

WELDING ON GALVANIZED SURFACES DESTROYS THE ZINC COATING ON AND AROUND THE WELD AREA. RESTORATION OF THE AREA WILL BE PERFORMED IN ACCORDANCE WITH ASTM A 780, STANDARD PRACTICE FOR REPAIR OF DAMAGED AND UNCOATED AREAS OF HOT-DIP GALVANIZED COATINGS, WHICH SPECIFIES THE USE OF PAINTS CONTAINING ZINC DUST, ZINC-BASED SOLDERS OR SPRAYED ZINC. ALL TOUCHUP AND REPAIR METHODS ARE CAPABLE OF BUILDING A PROTECTIVE LAYER TO THE THICKNESS REQUIRED BY ASTM A 780.

SAFETY & HEALTH

WHEN WELDING DIRECTLY ON GALVANIZED STEEL IS UNAVOIDABLE, OSHA PERMISSIBLE EXPOSURE LIMITS (PELS) MAY BE EXCEEDED AND EVERY PRECAUTION, INCLUDING HIGH-VELOCITY CIRCULATING FANS WITH FILTERS, AIR RESPIRATORS AND FUME-EXTRACTION SYSTEMS SUGGESTED BY AWS, SHOULD BE EMPLOYED. FUMES FROM WELDING GALVANIZED STEEL CAN CONTAIN ZINC, IRON AND LEAD. FUME COMPOSITION TYPICALLY DEPENDS ON THE COMPOSITION OF MATERIALS USED, AS WELL AS THE HEAT APPLIED BY THE PARTICULAR WELDING PROCESS. IN ANY EVENT, GOOD VENTILATION MINIMIZES THE AMOUNT OF EXPOSURE TO FUMES.

PRIOR TO WELDING ON ANY METAL, CONSULT ANSI/ASC Z-49.1, SAFETY IN WELDING, CUTTING AND ALLIED PROCESSES, WHICH CONTAINS INFORMATION ON THE PROTECTION OF PERSONNEL AND THE GENERAL AREA, VENTILATION AND FIRE PREVENTION.

INFORMATION COURTESY OF AMERICAN GALVANIZERS ASSOCIATION

A00020

STANDARD ANGLE SCHEDULE

Mark	Description	Size	Sketch
MAE0_	EAVE ANGLE GALVANIZED	4"x5"x120"	4" x 5", ANG.(SLOPE)
MAF0_	SCULP. EAVE ANGLE GALVANIZED	5"x8"x120"	5" x 8", ANG.(SLOPE)
MAG01	GIRT ANGLE GALVANIZED	1"x2-1/2"x12"	1" x 2-1/2"
MAG02	GIRT ANGLE GALVANIZED	1"x2-1/2"x24"	1" x 2-1/2"
MAG03	GIRT ANGLE GALVANIZED	1"x2-1/2"x30"	1" x 2-1/2"
MAG10	GIRT ANGLE GALVANIZED	1"x2-1/2"x120"	1" x 2-1/2"
MAH0_	EAVE STRUT ANGLE GALVANIZED	1"x2-1/2"x12"	1" x 2-1/2", ANG.(SLOPE)
MAL01	LINER LOW EAVE ANGLE GALVANIZED	6"x7-3/4"x120"	6" x 7-3/4"
MAL02	LINER EAVE ANGLE 2:12 GALVANIZED	3"x3"x120"	3" x 3", ANG. 84?
MAL05	LINER EAVE ANGLE 4:12 GALVANIZED	3"x3"x120"	3" x 3", ANG. 105?
MAL07	LINER EAVE ANGLE 1:12 GALVANIZED	3"x3"x120"	3" x 3", ANG. 95?
MAL12	LINER EAVE ANGLE 2:12 GALVANIZED	3"x7-3/4"x120"	3" x 7-3/4", ANG. 81?
MAP01	RAKE PARAPET ANGLE GALVANIZED	2"x12"x120"	2" x 12"
MAP02	RAKE PARAPET ANGLE GALVANIZED	6"x6"x120"	6" x 6"
MAR01	RAKE ANGLE GALVANIZED	3"x5"x240"	3" x 5"
MAR02	CFR RAKE/ BASE ANGLE GALVANIZED	2"x3"x242"	2" x 3"

A00030

ISSUE	DWN	CHK	ENG	PE	DATE
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NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
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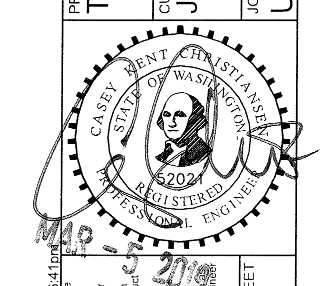
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
General Details

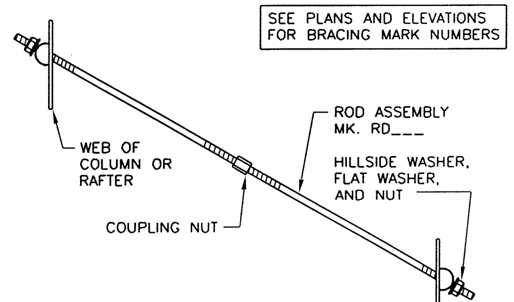


03/04/2019 06:46:41pm

SHEET
D1 OF 8

ROD DIAMETER	MARK NUMBER	HILLSIDE WASHERS	FLAT WASHERS	A307/A325 NUTS	COUPLING NUTS
5/8" ø	RDB__	(2) H0930	(2) H0210	(2) H0310	H0810
3/4" ø	RDC__	(2) H0930	(2) H0220	(2) H0320	H0820
7/8" ø	RDD__	(2) H0930	(2) H0230	(2) H0325	H0830
1" ø	RDE__	(2) H0960	(2) H0240	(2) H0330	H0840
1 1/8" ø	RDF__	(2) H0960	(2) H0250	(2) H0450	H0850
1 1/4" ø	RDG__	(2) H0960	(2) H0260	(2) H0340	H0860

SEE PLANS AND ELEVATIONS FOR BRACING MARK NUMBERS

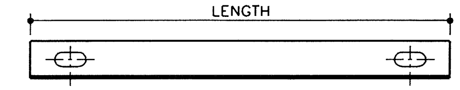


ROD BRACE DETAIL
(WEB TO WEB)

AF0010

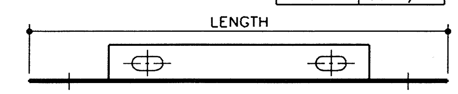
TYPICAL FLANGE BRACE MARK NUMBERS
ACTUAL FLANGE BRACES DO NOT HAVE MARK NUMBERS ON THEM

FBC__
INDICATES LENGTH OF FLANGE BRACE IN INCHES

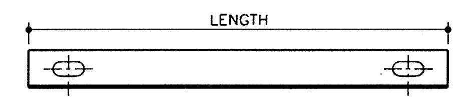


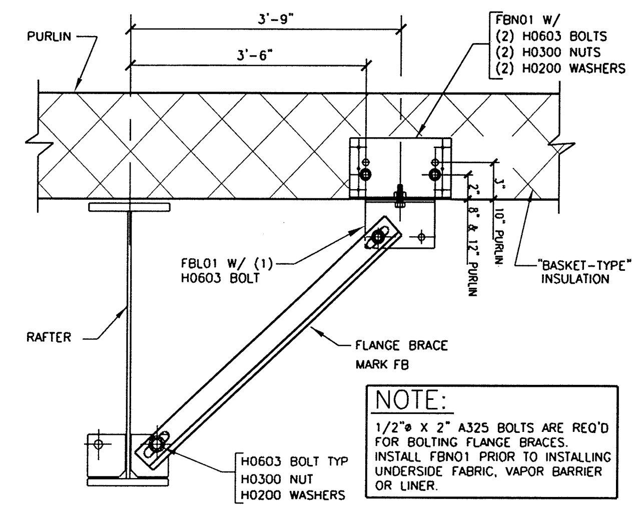
FBE__
COUNTER - SEE CHART

COUNTER	LENGTH
01	35 7/8"
02	37 1/8"
03	49 1/2"
04	50 1/4"



FBK__
INDICATES LENGTH OF FLANGE BRACE IN INCHES



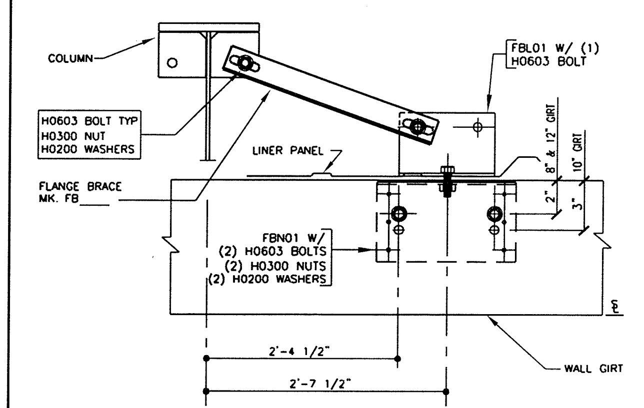


NOTE:
1/2"ø X 2" A325 BOLTS ARE REQ'D FOR BOLTING FLANGE BRACES. INSTALL FBN01 PRIOR TO INSTALLING UNDERSIDE FABRIC, VAPOR BARRIER OR LINER.

AG0110

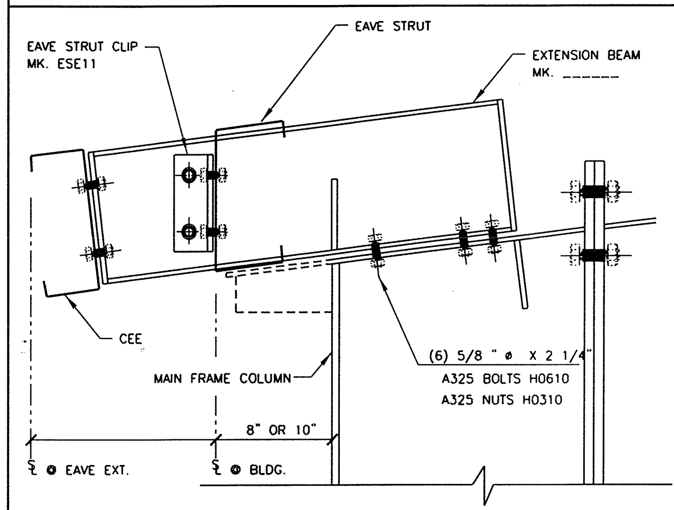
TYP FLANGE BRACE @ PURLIN & RAFTER
WITH THE USE OF "BASKET-TYPE" INSULATION
NOTES: SEE PLANS AND ELEVATIONS FOR FLANGE BRACE PART MARKS

ERECTOR NOTES FIELD DRILL HOLE IN LINER PANEL AT THROUGH BOLT LOCATIONS. FIELD CUT &/OR FLATTEN PANEL RIB IF INTERFERENCE WITH FLANGE BRACE CLIP OCCURS. THE FBN01 CLIP MUST BE IN PLACE BEFORE LINER IS INSTALLED.



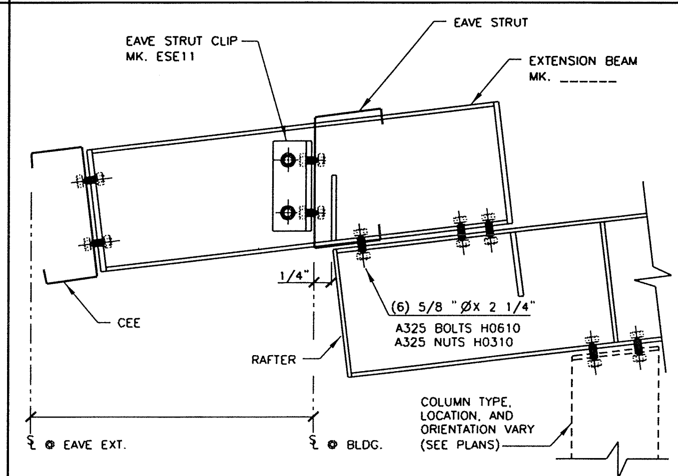
AG0150

TYPICAL FLANGE BRACE AT BUILT-UP COLUMN & GIRT
1/2"ø x 2" A325 BOLTS ARE REQUIRED FOR BOLTING FLANGE BRACES.
SEE PLANS AND ELEVATIONS FOR FLANGE BRACE PART MARKS



LOW EAVE EXTENSION DETAIL
BYPASS GIRTS AT INTERMEDIATE FRAMES
FOR HAUNCH DEPTHS > 1'-3"
NOTE: USE 1/2"x 2" A325 BOLTS H0603/NUTS H0300 U.N.O.

AN0030



LOW EAVE EXTENSION DETAIL
POST AND BEAM ENDWALL
NOTE: USE 1/2"x 2" A325 BOLTS H0603/NUTS H0300 U.N.O.

AN0070

ISSUE	DWN	CHK	ENG	PE	DATE
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NUCOR
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JOB NUMBER
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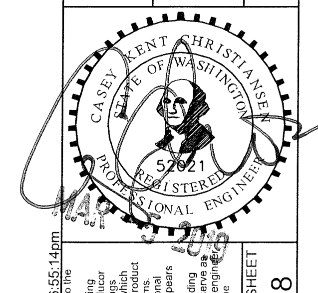
SHEET TITLE
Primary Details



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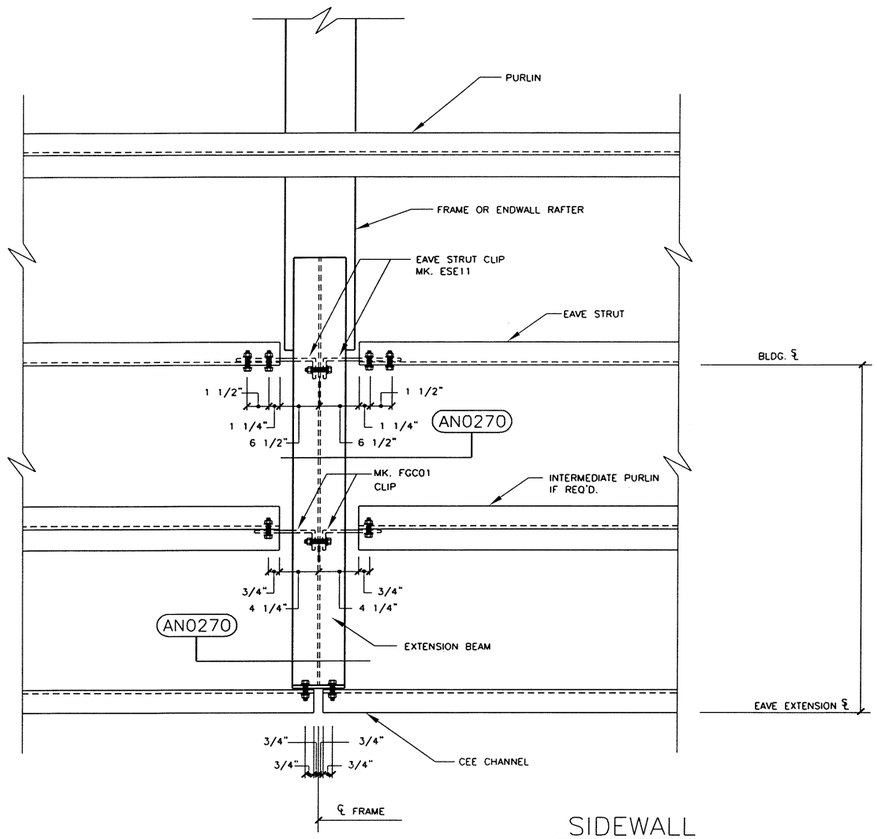
SHEET
D2 OF 8

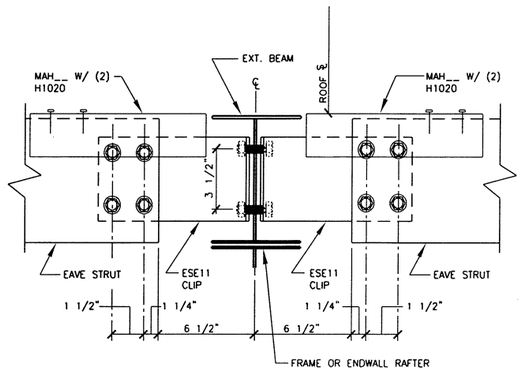


SIDEWALL

LOW EAVE EXTENSION DETAIL

NOTE: USE 1/2"x 2" A325 BOLTS H0603/NUTS H0300 (U.N.O.)

AN0220



EAVE STRUT AT EAVE EXTENSION DETAIL

NOTE: USE (10) 1/2"X 2" A325 BOLTS H0603/NUTS H0300
REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS

AN0270

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

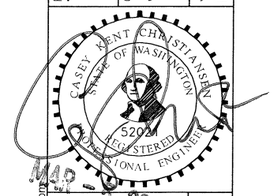
NUCOR
BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

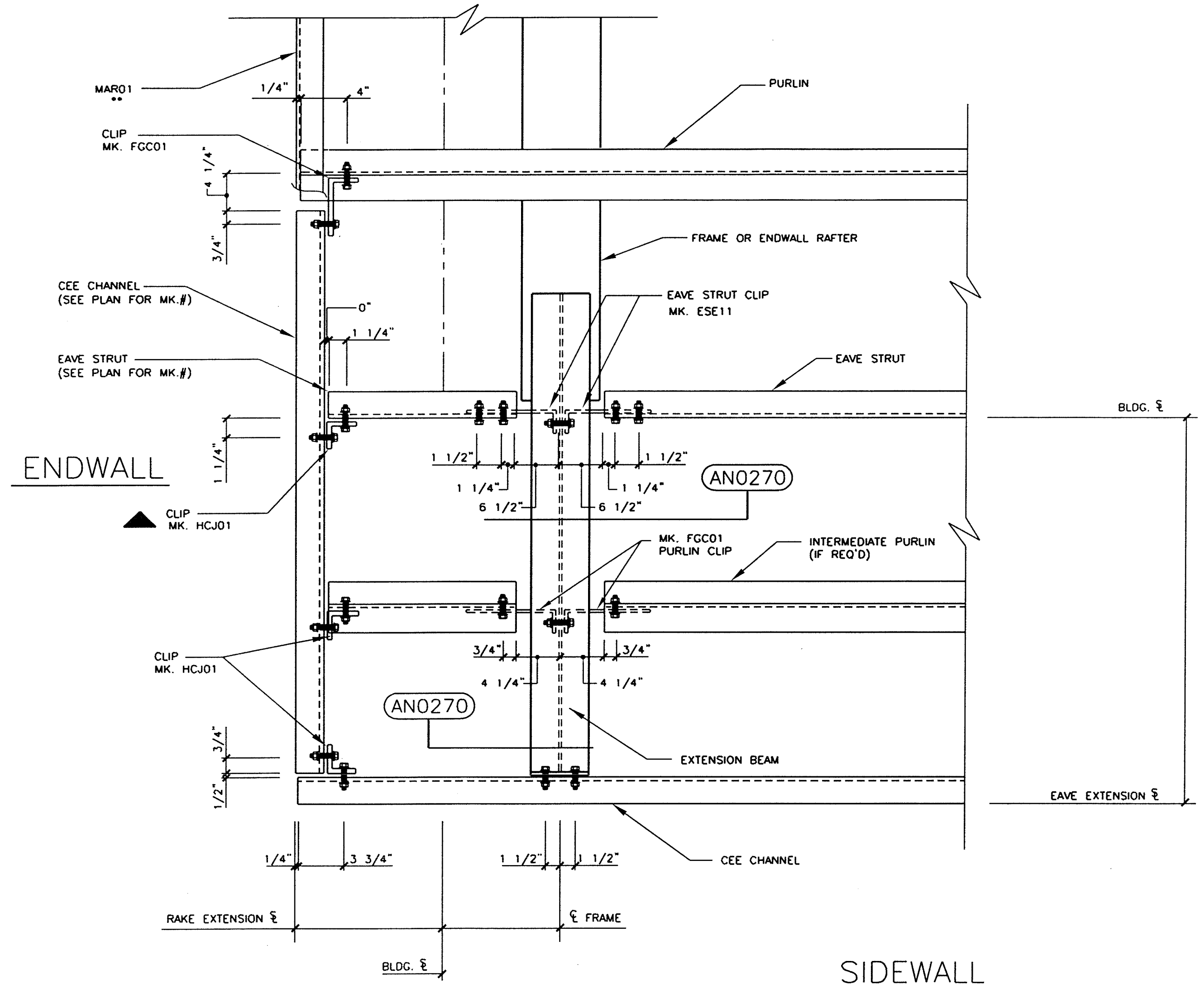
JOB NUMBER
U19H0081A

SHEET TITLE
Primary Details



MAR 7 2019

SHEET
D3 OF 8



LOW EAVE & RAKE EXTENSION DETAIL

NOTE: USE 1/2"x 2" A325 BOLTS H0603/NUTS H0300 (U.N.O.)

** EXTEND MAR01 TO EXT. STEEL LINE

▲ = FIELD WORK MAY BE REQUIRED FOR PROPER CLIP FIT UP.

AN0170

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR
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PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Primary Details

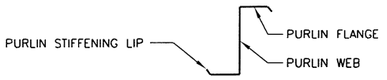
CASEY KENT CHRISTIANSEN
STATE OF WASHINGTON
52021
REGISTERED PROFESSIONAL ENGINEER

03/04/2019 06:46:46pm

This seal pertains only to the materials designed and supplied by Nucor Building Systems, a division of Nucor Corporation. The drawings and the metal building which they represent are the product of Nucor Building Systems. The registered professional engineer whose seal appears on these drawings is employed by Nucor Building Systems and does not serve as or represent the project engineer of record and shall not be construed as such.

SHEET
D4 OF 8

COLLATERAL DEAD LOADS, UNLESS OTHERWISE NOTED, ARE ASSUMED TO BE UNIFORMLY DISTRIBUTED. WHEN SUSPENDED SPRINKLER SYSTEMS, LIGHTING, HVAC EQUIPMENT, CEILINGS, ETC. ARE SUSPENDED FROM ROOF MEMBERS, CONSULT NUCOR ENGINEERING IF THESE CONCENTRATED LOADS EXCEED 500 POUNDS (USING THE WEB MOUNT DETAIL) OR 200 POUNDS (USING THE FLANGE MOUNT DETAIL), OR IF INDIVIDUAL MEMBERS ARE LOADED SIGNIFICANTLY MORE THAN OTHERS.



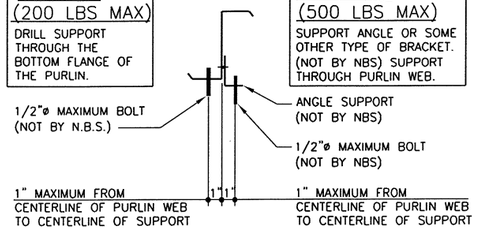
GENERAL RESTRICTION:

UNDER NO CIRCUMSTANCES CAN THE PURLIN STIFFENING LIP BE FIELD MODIFIED FROM THE FACTORY SUPPLIED CONDITION. ALSO DO NOT HANG ANYTHING FROM PURLIN STIFFENING LIP.

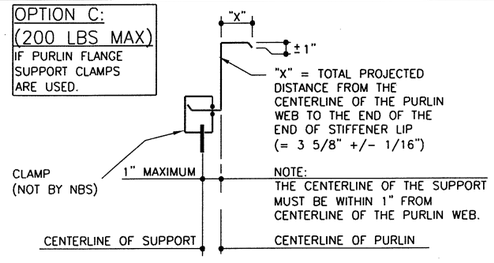
OPTIONS FOR SUPPORT ATTACHMENTS

OPTION A (200 LBS MAX)
DRILL SUPPORT THROUGH THE BOTTOM FLANGE OF THE PURLIN.

OPTION B (500 LBS MAX)
SUPPORT ANGLE OR SOME OTHER TYPE OF BRACKET. (NOT BY NBS) SUPPORT THROUGH PURLIN WEB.

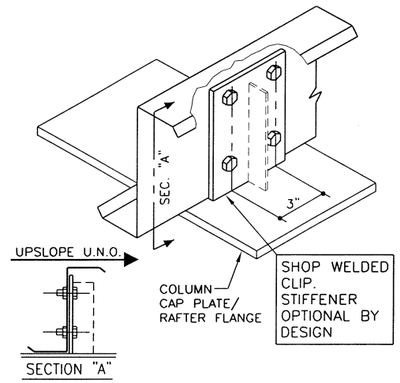


OPTION C: (200 LBS MAX)
IF PURLIN FLANGE SUPPORT CLAMPS ARE USED.



B00010

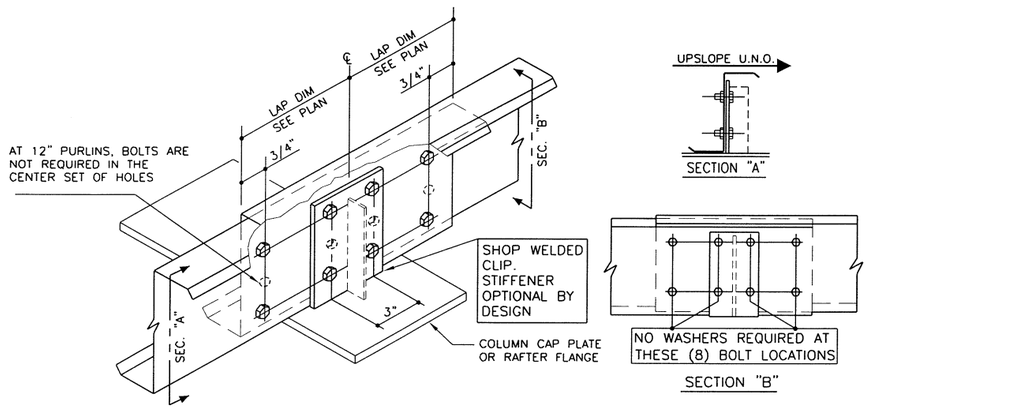
NBS PURLIN SUPPORT METHODS



WELDED CLIP @ END FRAME

USE (4) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400 U.N.O.
REFERENCE ERECTOR NOTE FOR TYP. WASHER REQUIREMENTS

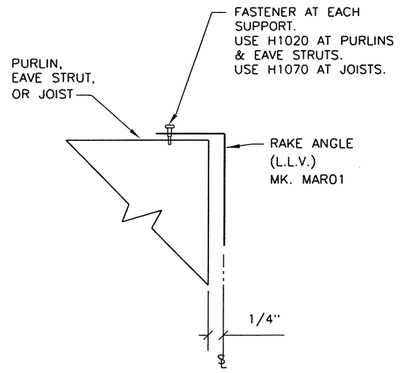
BB0050



WELDED CLIP @ INTERIOR FRAME

USE (8) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400 U.N.O.

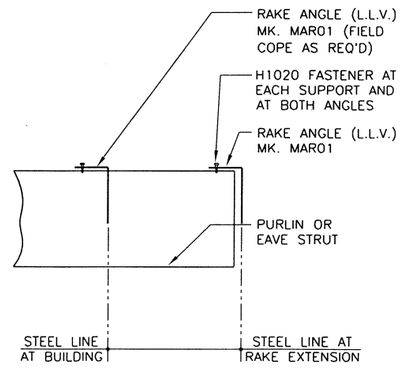
BB0055



RAKE ANGLE ATTACHMENT

AT ENDWALL STEEL LINE

BD0120



RAKE ANGLE ATTACHMENT

RAKE ANGLE ATTACHMENT
AT RAKE EXTENSION

BD0126

ISSUE	DWN	CHK	ENG	PIE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME
Tahuya Fire Station
Tahuya, WA

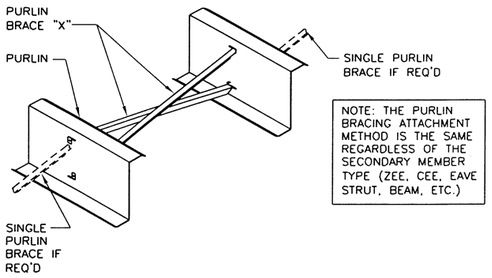
CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

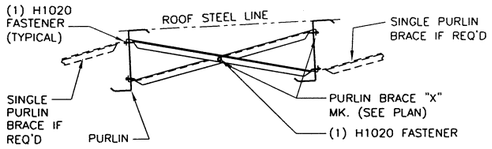
SHEET TITLE
Roof Framing Details

03/04/2019 06:46:48pm

SHEET
D5 OF 8



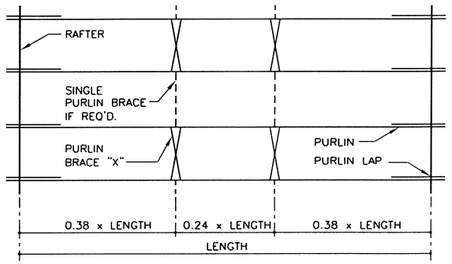
NOTE: THE PURLIN BRACING ATTACHMENT METHOD IS THE SAME REGARDLESS OF THE SECONDARY MEMBER TYPE (ZEE, CEE, EAVE STRUT, BEAM, ETC.)



PLAN VIEW OF PURLIN BRACING LOCATIONS PER BAY

1) THERE ARE TYPICALLY (2) ROWS OF PURLIN BRACING REQUIRED REGARDLESS OF THE BAY LENGTH U.N.O.

2) THE PURLIN BRACING IS TYPICALLY SPACED AS SHOWN IN THE DETAIL BELOW U.N.O.



PURLIN BRACING ATTACHMENT METHODS

SEE ROOF FRAMING PLAN(S) FOR PURLIN BRACING MARK NUMBERS, QUANTITIES AND LOCATIONS

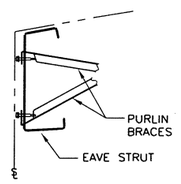
INSTALLATION INSTRUCTIONS

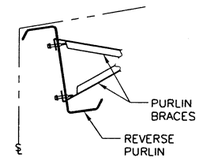
1) FOR SINGLE PURLIN BRACE, INSERT THE ANGLE INTO THE FACTORY PUNCHED SLOTS. BEND THE TABS AS SHOWN AND ATTACH WITH (1) H1020 FASTENER PER END.

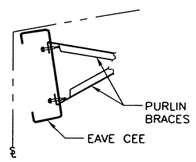
2) FOR PURLIN BRACE "X", INSERT THE ANGLES "BACK-TO-BACK" INTO THE FACTORY PUNCHED SLOTS. BEND THE TABS AS SHOWN AND ATTACH WITH (1) H1020 FASTENER PER END.

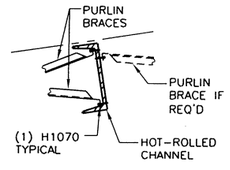
3) CONNECT THE PURLIN BRACE "X" AT THE INTERSECTION WITH (1) H1020 FASTENER.

4) SEE THE DETAILS AT RIGHT FOR ADDITIONAL INFORMATION WHEN ATTACHING TO ALTERNATE FRAMING MEMBERS.

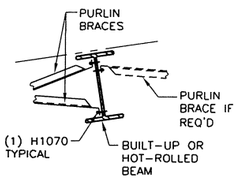


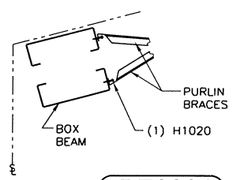






NOTE: THE CHANNEL MAY BE TOED UP OR DOWN.





BE0001

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR BUILDING SYSTEMS GROUP
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PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Roof Framing Details

SHEET
D6 OF 8

CASEY KENT CHRISTIANSEN
STATE OF WASHINGTON
2021
REGISTERED PROFESSIONAL ENGINEER

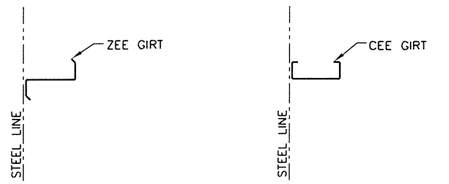
MAR 5 2019

ERECTOR NOTE:

UNLESS SPECIFICALLY NOTED OTHERWISE, STANDARD ZEE GIRT ORIENTATION IS TO HAVE THE GIRT TOED DOWN AT THE STEEL LINE AS SHOWN IN THE DETAIL BELOW.

UNLESS SPECIFICALLY NOTED OTHERWISE, STANDARD CEE GIRT ORIENTATION IS TO HAVE THE GIRT TOED UP AS SHOWN IN THE DETAIL BELOW. STANDARD CLIP ATTACHMENT IS BELOW THE GIRT, HOWEVER SOME DETAILS REQUIRE THAT THE CLIP BE ABOVE THE GIRT OR THAT THE GIRT BE TOED DOWN.

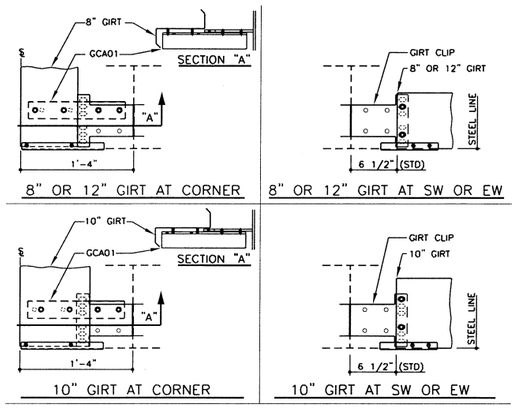
(REFER TO THE GIRT DETAILS FOR SPECIFIC CONNECTION REQUIREMENTS).



ZEE GIRT ORIENTATION CEE GIRT ORIENTATION

STANDARD GIRT ORIENTATION DETAIL

SEE GIRT DETAILS FOR GIRT CONNECTIONS
(COLUMNS NOT SHOWN)



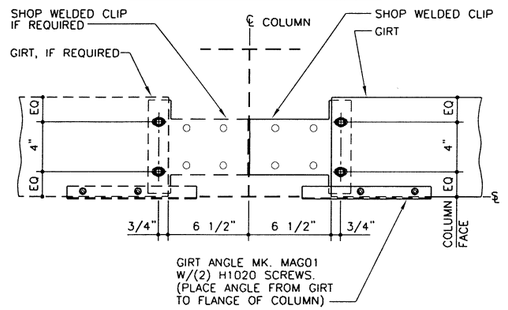
FLUSH GIRT BOLT PLACEMENT DETAIL

REFERENCE WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS
GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS.
REFER TO THE DETAILS ABOVE TO DETERMINE WHICH HOLES ARE UTILIZED.

ERECTOR NOTE

GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS. REFER TO THE STANDARD BOLT PLACEMENT DETAIL(S) FOR PROPER BOLT PLACEMENT.

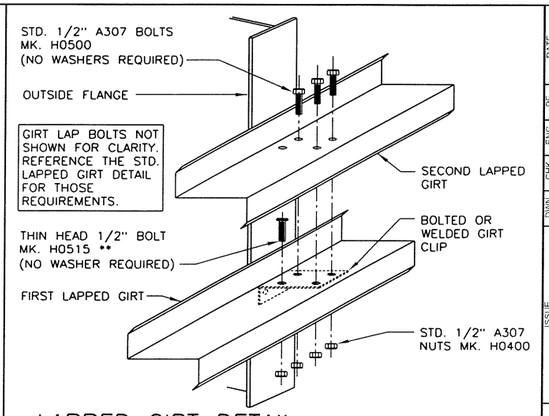
RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE



FLUSH GIRT DETAIL

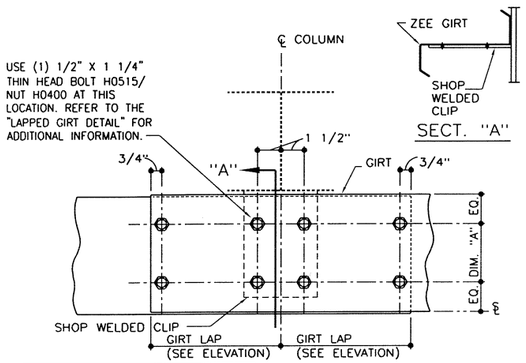
FLUSH GIRTS AT INTERIOR BAY COLUMNS
NOTE: USE (4) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CA1010



LAPPED GIRT DETAIL

LAPPED GIRTS ● INTERIOR BAY COLUMNS
** THE THIN HEAD 1/2" A307 BOLT MUST BE INSTALLED INTO THE FIRST GIRT AND CLIP OF A LAPPED CONDITION. THE BOLT/NUT ASSEMBLY MUST BE WRENCH TIGHT PRIOR TO THE SECOND LAPPED GIRT BEING INSTALLED.



DIM. "A" = 4" AT 8" & 10" GIRTS
= 8" AT 12" GIRTS

SW OR EW GIRT DETAIL

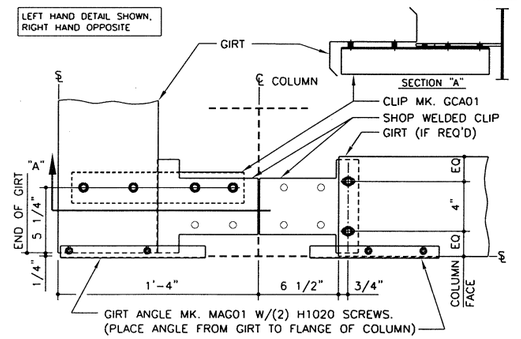
LAPPED BYPASS GIRTS AT INTERIOR BAY COLUMNS
NOTE: USE (7) 1/2"x 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS

CC1010

ERECTOR NOTE

GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS. REFER TO THE STANDARD BOLT PLACEMENT DETAIL(S) FOR PROPER BOLT PLACEMENT.

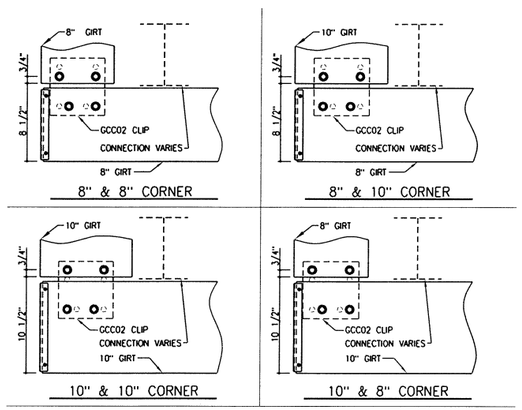
LEFT HAND DETAIL SHOWN, RIGHT HAND OPPOSITE



CORNER GIRT DETAIL

CORNER FLUSH GIRT DETAIL WITH WELDED CLIPS
NOTE: USE (6) 1/2" X 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CD1010

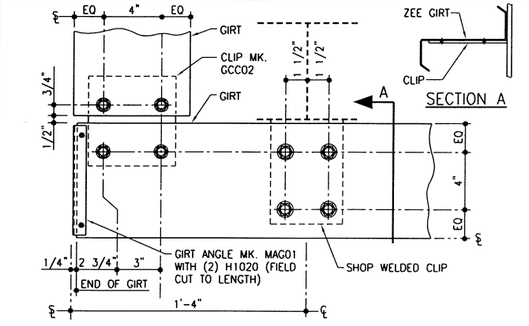


BYPASS GIRT BOLT PLACEMENT DETAIL

REFERENCE WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS
GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS.
REFER TO THE DETAILS ABOVE TO DETERMINE WHICH HOLES ARE UTILIZED.

ERECTOR NOTE

GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS. REFER TO THE STANDARD BOLT PLACEMENT DETAIL(S) FOR PROPER BOLT PLACEMENT.



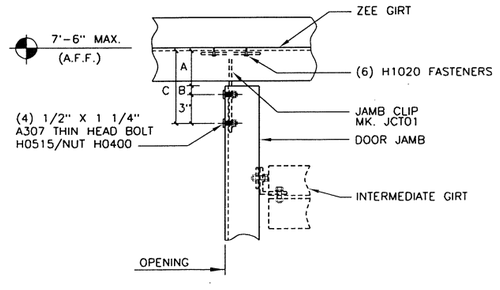
BYPASS GIRT CORNER DETAIL

LEFT HAND DETAIL SHOWN, RIGHT HAND OPPOSITE
NOTE: USE (8) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CF1010

DIM. A= 4" AT 8" & 10" GIRTS DIM. A= 4-1/4" AT 12" GIRTS	DIM. B= 1" AT 8" & 10" GIRTS DIM. B= 3/4" AT 12" GIRTS	DIM. C= 8" AT 8" & 10" GIRTS DIM. C= 8" AT 12" GIRTS

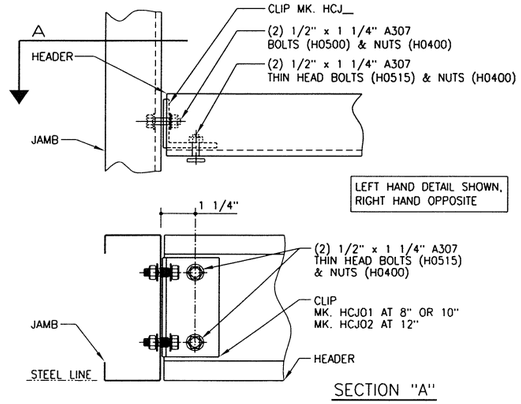
RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE



TYPICAL JAMB DETAIL

COLD-FORMED JAMB TO ZEE GIRT WITH INTERMEDIATE GIRT
REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CG0018



HEADER TO JAMB CONNECTION

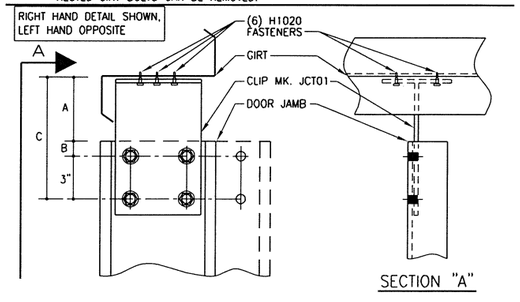
NOTE: USE (2) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CG0050

DIM. A= 4" AT 8" & 10" GIRTS DIM. A= 4-1/4" AT 12" GIRTS	DIM. B= 1" AT 8" & 10" GIRTS DIM. B= 3/4" AT 12" GIRTS	DIM. C= 8" AT 8" & 10" GIRTS DIM. C= 8" AT 12" GIRTS

ERECTOR NOTE:
-PRE-DRILL HOLES AT NESTED ZEE GIRTS & DOUBLE CEE GIRTS IF REQUIRED.
-IF THE T-CLIP IS LOCATED IN THE SAME LOCATION AS NESTED GIRT BOLTS, THE NESTED GIRT BOLTS CAN BE REMOVED.

RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE



DOOR JAMB TO GIRT CONN

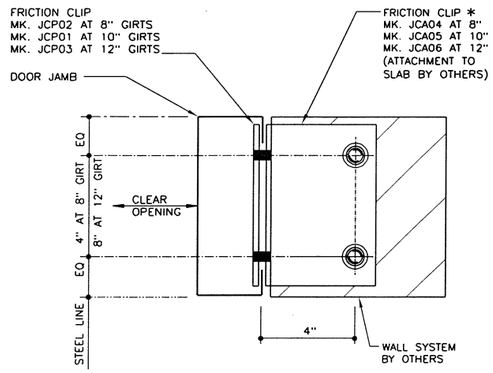
NOTE: USE (4) 1/2"X 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CG0059

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

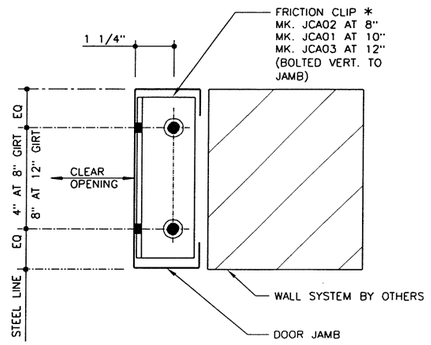
NUCOR BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

PROJECT NAME: Tahuya Fire Station, Tahuya, WA
CUSTOMER NAME: JH Kelly LLC, Longview, WA
JOB NUMBER: U19H0081A
SHEET TITLE: Wall Framing Details
SHEET: D7 OF 8



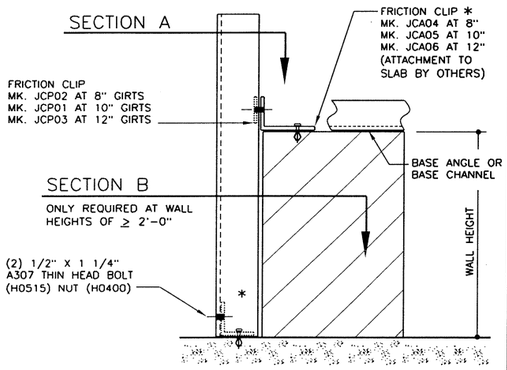
SECTION A

USE (2) 1/2"X 1 1/4" A307 BOLTS (H0500) AND NUTS (H0400)



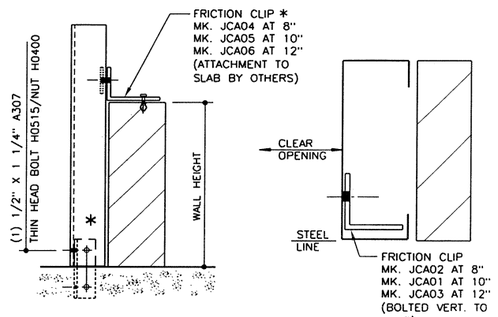
SECTION B

ONLY REQUIRED AT WALL HEIGHTS OF GREATER THAN OR EQUAL TO 2'-0"
USE (2) 1/2"X 1 1/4" A307 THIN HEAD BOLTS (H0515) AND NUTS (H0400)



(8,10,12) JAMB TO FIN FLR CONN

JAMB AT MASONRY WALL WITH BASE ANGLE OR BASE CHANNEL
REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS



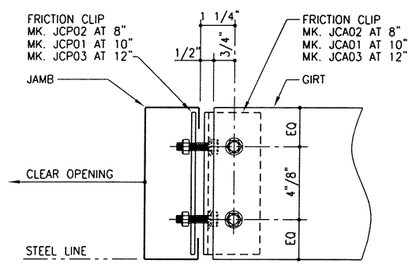
ALTERNATE SECTION B

ONLY REQUIRED AT WALL HEIGHTS OF GREATER THAN OR EQUAL TO 2'-0"
USE (2) 1/2"X 1 1/4" A307 THIN HEAD BOLTS (H0515) AND NUTS (H0400)

*ERECTOR NOTE:
SET ANCHORS IN CONCRETE, ATTACH CLIP TO JAMB PLACE CLIP OVER ANCHORS, NO NUTS REQUIRED. IF STEEL IS ERECTED BEFORE THE FINISHED FLR. IS POURED, USE THE ALTERNATE BASE DETAIL.

CG0040

NOTE:
INSTALL CLIPS ON JAMB BEFORE STANDING JAMB.
USE LEVEL TO ALIGN GIRTS ADJUST CLIP AS REQUIRED.



RIGHT HAND DETAIL SHOWN, LEFT HAND OPPOSITE

GIRT TO JAMB CONNECTION

NOTE: USE (4) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400
REFERENCE STANDARD WASHER DETAIL FOR TYPICAL WASHER REQUIREMENTS

CG0060

ISSUE	DWN	CHK	ENG	PE	DATE
Const AB Plan	NBS	EOP	DBR	CKC	2/15/2019
For Build Dept Rev	TKL	SRR	DBR	CKC	3/5/2019

NUCOR
BUILDING SYSTEMS GROUP
1050 North Watery Lane
Brigham City, UT 84302
Phone: (435) 919-3100
Fax: (435) 919-3101

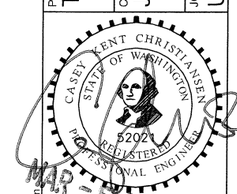
PROJECT NAME
Tahuya Fire Station
Tahuya, WA

CUSTOMER NAME
JH Kelly LLC
Longview, WA

JOB NUMBER
U19H0081A

SHEET TITLE
Wall Framing Details

SHEET
D8 OF 8



MAR - 5 2019