



May 6, 2019

TO: HOLDERS LIST

**SUBJECT: TOTE Bldg 9, 10 and 3319 Lincoln Ave
CONTRACT NO. 071099**

ADDENDUM NUMBER # 01

This addendum is issued to add, remove, clarify and amend the following:

SPECIFICATIONS

A. SECTION 00 73 16 – Insurance Requirements

DELETE and REPLACE the amended Section 00 73 16 Insurance Requirements and replace it with 00 73 16 Insurance Requirements (Attachment A)

B. SECTION 01 14 00 – Work Restrictions

DELETE and REPLACE the amended Section 01 14 00 Work Restrictions and replace it with 01 14 00 Work Restrictions (Attachment B)

C. SECTION 05 50 00– Metal Fabrication

DELETE spec section 05 50 00 Metal Fabrication in its entirety.

D. SECTION 05 51 00 – Metal Ladder Fabrications

Add section 05 51 00 Metal Ladder Fabrications (Attachment C)

E. SECTION 07 72 00 – Roof Accessories

DELETE and REPLACE the amended Section 07 72 00 Roof Accessories and replace it with 07 72 00 Roof accessories. (Attachment D)



PLANS

A. SHEETS

1. Remove and replace sheet A2.0A with Revised A2.0A
2. Remove and replace sheet A3.1A with Revised A3.1A
3. Remove and replace sheet A2.0B with Revised A2.0B
4. Remove and replace sheet A3.1B with Revised A3.1B

Receipt for this addendum shall be indicated in the space provided in Section 00 41 00, Bid Form.

END OF SECTION

ATTACHMENT A – Revision 1 Section 00 73 16 – Insurance Requirements

ATTACHMENT B – Revision 1 Section 01 14 00 – Work Restrictions

ATTACHMENT C – Revision 1 Section 05 51 00 – Metal Ladder Fabrications

ATTACHMENT D – Revision 1 Section 07 72 00 – Roof accessories

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements for the Contractor's insurance.

1.02 SUBMITTAL REQUIREMENTS

- A. Evidence of the required insurance within 10 days of the issued Notice of Award to the Contractor.
- B. Updated evidence of insurance as required until final completion.

1.03 ~~CONTRACTOR COMMERCIAL GENERAL~~ LIABILITY (CGL) INSURANCE

- A. The Contractor shall secure and maintain until Final Completion, at its sole cost and expense, the following insurance in carriers reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC (6)" or better.
- B. The Port of Tacoma (Port) will be included as an additional insured(s) for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 07 04 and CG 20 37 07 04 (or equivalent coverage endorsements). The inclusion of the Port as an additional insured(s) shall not create premium liability for the Port.

Also, by endorsement to the policy, there shall be:

1. An express waiver of subrogation in favor of the Port;
 2. A cross liabilities clause; and
 3. An endorsement stating that the Contractor's policy is primary and not contributory with any insurance carried by the Port.
- C. If the Contractor, Supplier, or Subcontractors will perform any work requiring the use of a licensed professional, per RCW 18, the Contractor shall provide evidence to the Port of professional liability insurance in amounts not less than \$1,000,000.
- D. This insurance shall cover all of the Contractor's operations, of whatever nature, connected in any way with the Contract, including any operations performed by the Contractor's Subcontractors of any tier. **It is the obligation of the Contractor to ensure that all Subcontractors (at whatever level) carry a similar program that provides the identified types of coverage, limits of liability, inclusion of the Port as additional insured(s), waiver of subrogation and cross liabilities clause.** The Port reserves the right to reject any insurance policy as to company, form, or substance. Contractor's failure to provide, or the Port's acceptance of, the Contractor's certificate of insurance does not waive the Contractor's obligation to comply with the insurance requirements of the Contract as specifically described below:
1. Marine General Liability Insurance on an Occurrence Form Basis including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Contractual Liability;
 - d. Products - Completed Operations Liability;
 - e. Personal Injury Liability;

Alternatively, a Commercial General Liability (CGL) policy is acceptable if all of the above coverages are incorporated in the policy and there are no marine exclusions that will remove coverage for either vessels or work done by or above or around the water.

2. Comprehensive Automobile Liability including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Personal Injury Liability;
 - d. Owned and Non-Owned Automobile Liability; and
 - e. Hired and Borrowed Automobile Liability.
3. Contractor's Pollution Liability (CPL) covering claims for bodily injury, property damage and cleanup costs, and environmental damages from pollution conditions arising from the performance of covered operations.
 - a. If the Work involves remediation or abatement of regulated waste to include, but not limited to asbestos containing materials, lead containing products, mercury, PCB, underground storage tanks, or other hazardous materials or substances, the CPL policy shall not exclude such coverage, or a specific policy covering such exposure shall be required from the Contractor and all Subcontractors performing such Work.
 - b. If the Work involves transporting regulated materials or substances or waste, a separate policy or endorsement to the CPL policy specifically providing coverage for liability and cleanup arising from an upset or collision during transportation of hazardous materials or substances shall be required from the Contractor and all Subcontractors performing such Work.
 - c. It is preferred that CPL insurance shall be on a true occurrence form without a sunset clause. However, if CPL insurance is provided on a Claims Made basis, the policy shall have a retroactive date prior to the start of this project, and this insurance shall be kept in force for at least three years after the final completion of this project. Alternatively, the contractor, at its option, may provide evidence of extended reporting period of not less than three (3) years in its place. The Contractor shall be responsible for providing the Port with certificates of insurance each year evidencing this coverage.
 - d. The Port shall be named as an Additional Insured(s) on the CPL policy.
- E. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence ~~and \$2,000,000 in the aggregate~~ If the coverage is aggregated, the coverage shall be no less than two times the per occurrence or per claim limit. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. The Additional Insured endorsement shall NOT be limited to the amounts specified by this contract unless expressly waived in writing by the Port of Tacoma.
- F. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. The Additional Insured endorsement shall NOT be limited to the amounts specified by this contract, unless expressly waived in writing by the Port.
- G. Contractor shall certify that its operations are covered by the Washington State Worker's Compensation Fund. The Contractor shall provide its Account Number or, if self-insured, its

Certificate of Qualification Number. The Contractor shall also provide evidence of Stop-Gap Employers' Liability Insurance.

- H. The Contractor shall furnish, within ten (10) days following issuance of the Notice of Award, a certificate of insurance satisfactory to the Port evidencing that insurance in the types and minimum amounts required by the Contract Documents has been secured. The Certificate of Insurance shall be signed by an authorized representative of the insurer together with a copy of the endorsement, which shows that the Port is named as additional insured.
- I. Contractor shall provide at least forty-five (45) days prior written notice to the Port of any termination or material change, or ten (10) day's notice in the case of non-payment of premium(s).
- J. If the Contractor is required to make corrections to the Work after Final Completion, the Contractor shall obtain at its own expense, prior to the commencement of any corrective work, insurance coverage as required by the Contract Documents, which coverage shall be maintained until the corrections to the Work have been completed and accepted by the Port.

1.04 BUILDER'S RISK INSURANCE

- A. Until Final Completion of the Work, the construction Work is at the risk of the Contractor and no partial payment shall constitute acceptance of the Work or relieve the Contractor of responsibility of completing the Work under the Contract.
- B. ~~Whenever the estimated cost of the Work is less than \$25,000,000, the Port will purchase and maintain, in a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a builder's risk "all-risk," including Earthquake and Flood with applicable sub-limits, or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. This insurance shall include interests of the Port, the Contractor, and Subcontractors of any tier on the Project. There may be some differences between this Section and the builder's risk insurance secured by the Port; therefore, the Contractor shall provide an "installation floater" or similar property coverage for materials not yet installed, whether stored on-site or off-site or in transit, and the Contractor shall obtain property coverage for all Contractor-owned equipment and tools each loss may be subject to a deductible. Losses up to the deductible amount shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation will be the sole responsibility of the Contractor.~~

To the extent the Work provided under this Contract does not include the construction, rehabilitation or repair of any dam, road, or bridge, and whenever the estimated cost of the Work is less than \$25,000,000, the Port and Contractor acknowledge that the Port will purchase, or has purchased, from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (including Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed to in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Without further endorsement, the coverage afforded by this insurance includes the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk

policy. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation (including, but not limited to, Contractor's equipment and tools) will NOT be covered by the policy.

To the extent the Work provided under this Contract involves any dam, roadway, or bridge, the value of which exceeds \$250,000, or whenever the estimated cost of the Work is equal to or greater than \$25,000,000, Contractor will purchase from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (excluding Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This Builder's Risk insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed to in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Contractor shall provide evidence satisfactory to the Port confirming the coverage afforded by this insurance shall include the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy purchased by the Contractor. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor.

In all instances, the Contractor shall obtain property insurance for all Contractor-owned equipment and tools and, in the event of loss, payment of any deductible amount shall be the responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - PRODUCTS - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies work sequence and constraints.
- B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.
- C. Sequence of construction. Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

1.02 CONTRACTOR ACCESS AND USE OF PREMISES

- A. Activity Regulations
 - 1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.
- B. Occupied Building
 - 1. The Contractor will be working in existing buildings which are occupied during normal business hours, as stipulated below.
 - 2. Protect materials and equipment in areas adjoining the immediate work area.
- C. Working Facility
 - 1. The Facility will remain in operation for the duration of construction. The Contractor shall conduct all items of the Work in such a manner as to prevent interference with the normal operations of the Facility.
 - 2. The work on buildings 9 and 10 is located at TOTE, a secure and restricted site. All work performed at TOTE will require TWIC credentials as specified in Section 00 73 63 Security Requirements. Access inside the TOTE buildings 9 and 10, will be available from 7:00 AM - 3:30 PM Monday - Friday. Access to the site will be available from 6:45 AM until 5:15 PM, Monday - Friday. No weekend work will be allowed. Contractor is to notify the Tenant through the Engineer seven (7) days prior to performing work inside the building(s).
 - 3. The 3319 Lincoln Ave warehouse is NOT a restricted site. TWIC credentials will not be required. Access to the site (inside and outside of building) will be available Monday - Friday, 7:00 AM - 5:00 PM. Contractor will have to notify the Tenant through the Engineer 48 hours before performing work inside the building. No weekend work will be allowed.
- D. Work Site Regulations
 - 1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:
 - a. Restore all common areas to a clean and useable condition that permits the resumption of Tenant operations after the Contractor ceases daily work.
 - b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.

- c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.
- B. Prefabricated ladders
- C. Ladder fall arrest safety systems

1.02 RELATED REQUIREMENTS

- A. Section 09 90 00 - Painting and Coating.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1910.23 - Ladders; current edition.
- B. 29 CFR 1910.28 - Duty to have Fall Protection and Falling Object Protection; Current Edition.
- C. 29 CFR 1910.29 - Fall Protection Systems and Falling Object Protection - Criteria and Practices; Current Edition.
- D. ALI A14.3 - Ladders - Fixed - Safety Requirements; Current Edition.
- E. ANSI A14.3 - American National Standard for Ladders -- Fixed -- Safety Requirements; Current Edition.
- F. ANSI/ASSP Z359.16 - Safety Requirements for Climbing Ladder Fall Arrest Systems; 2016.
- G. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- H. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- I. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- J. A193 - Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications
- K. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2013.
- L. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014 (Editorial 2017).
- M. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- N. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2017.
- O. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- P. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- Q. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).

1.04 SUBMITTALS

- A. Product Data: Provide manufacturer's data sheets on each ladder safety system product to be used, including installation instructions.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
 - 2. Design data: Submit drawings and supporting calculations, signed and sealed by a qualified professional structural engineer.
 - a. Include the following, as applicable:
 - 1) Member sizes and gages.
 - 2) Details of connections.
 - 3) Support reactions.
 - 4) Bracing requirements and additional building structure by others.
- C. Certificate: Provide documentation that ladder safety system products of this section meet or exceed cited 29 CFR 1910.28, 29 CFR 1910.29, ANSI/ASSP Z359.16, and ANSI A14.3 requirements.
- D. Welders' Certificates: Submit certification for welders employed on the project, verifying AWS qualification within the previous 12 months.

1.05 QUALITY ASSURANCE

- A. Design steel roof access ladders under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

PART 2 - PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A36/A36M.
- B. Plates: ASTM A283/A283M.
- C. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- D. Slotted Channel Framing: ASTM A653/A653M, Grade 33.
- E. Slotted Channel Fittings: ASTM A1011/A1011M.
- F. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.
- G. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- H. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.

- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Ladders: Steel; in compliance with ANSI A14.3; with mounting brackets and attachments; shop galvanized with painted finish.

2.04 PREFABRICATED LADDERS (APPROVED EQUIVALENT)

- A. Prefabricated Ladder: Welded metal unit complying with ANSI A14.3; factory fabricated to greatest degree practical and in the largest components possible.
 - 1. Components: Manufacturer's standard rails, rungs, treads, handrails, returns, platforms and safety devices complying with the requirements of the MATERIALS article of this section.
 - 2. Finish: Manufacturer's standard hot-dipped galvanizing; comply with ASTM A153/A153M and shop painted.

2.05 LADDER FALL ARREST SYSTEM

A. DEFINITIONS

- 1. Anchorage - per ANSI Z359.0 - A secure connecting point or a terminating component of a fall protection system capable of supporting impact forces applied by a fall protection system.
- 2. Anchorage Connector - per ANSI Z359.0 - A component or subsystem that functions as an interface between the anchorage and a fall protection, work positioning, rope access or rescue system for the purpose of coupling the system to the anchorage.
- 3. Clearance - per ANSI Z359.0 - The distance below an authorized person that must remain clear of obstructions in order to ensure that the authorized person does not make contact with any objects that would cause injury in the event of a fall.
- 4. Continuous Fall Protection - per ANSI Z359.0 - One or more fall protection systems that provide fall protection without interruption.
- 5. Fall Arrest - per ANSI Z359.0 - The action or event of stopping a free fall or the instant where the downward free fall has been stopped.
- 6. Fall Hazard - per ANSI Z359.0 - Any location where a person is exposed to a potential free fall.
- 7. Fall Restraint/Travel Restraint - per ANSI Z359.0 - A combination of anchorage, anchorage connector, lanyard (or other means of connection) and body support (full body harness) that limits travel in such a manner that the user is not exposed to a fall hazard.
- 8. Qualified Person - per ANSI Z359.0 - A person with a recognized degree or professional certificate and with extensive knowledge, training and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating and specifying fall protection and rescue systems to the extent required by the Z359 standards.

B. PRODUCTS & DESIGNERS

1. Latchways Ladderlatch ManSafe for Ladders; Latchways PLC, www.latchways.com
2. 3M DBI-SALA Railok 90; 3M, www.3m.com/.../Vertical-Lifeline-Systems
3. Gravitec Systems Inc (Supplier and designer for both systems) or approved equal; 1-800-755-8455, www.gravitec.com

C. SYSTEM DESCRIPTION

1. Type of system required: Constant Force Posts (CFP(s)) with cable or vertical rigid fall arrest
2. System location: Fixed ladder
3. Maximum number of workers on system at one time: 2
4. Systems environmental exposure: Exterior, marine environment, marine grade stainless
5. Workers task while on the system: Workers will ascend and descend. Occasionally, workers are required to look over the edge. While walking, workers need to carry heavy objects.
6. Type of fall protection required: Fall Arrest

D. PERFORMANCE REQUIREMENTS

1. The system anchors shall provide a secure attachment means to the supporting structure in conjunction with the manufacturer's requirements. The system anchors shall provide compatible connections with the applicable anchorage connector. All components shall be designed by the fall protection system supplier and shall meet the applicable fall protection ANSI standards and applicable OSHA regulations.
2. Structure supporting system anchors must be capable of withstanding the design loads as required by governing regulations and codes. Where component design loads are specified herein, they represent design minimum requirements.
3. All fall protection components and systems shall be designed with a minimum 2:1 safety factor

E. PERFORMANCE REQUIREMENTS

1. CFP(s) connection to structure shall be designed and installed, under the supervision of a Qualified Person, as part of a complete personal Fall Protection system.
2. CFP energy absorbers shall not be used to limit the maximum arrest force of the worker. CFP energy absorbers shall be used only to control or reduce the maximum arrest load on the structure.
3. The design engineer shall ensure the increased clearance requirements of a deployed CFP will not conflict with the required clearance of the system.
4. CFP(s) shall satisfy the seismic conditions for nonstructural components as described by ASCE/SEI 7 and the most current edition of the IBC. No exceptions can be taken if the system is required to function for life-safety purposes after an earthquake.
5. Brackets and supports shall be attached to the structure with appropriate anchors of proper size to adequately support the intended loaded.
6. The designer shall take into account environmental factors (snow, ice, debris, etc...) when designing a CFP such that the CFP functions properly.

7. The CFP(s) shall comply with Latchways or 3m DBI-SALA Railok 90 design requirements.
 - a. Restraint CFP(s) shall be designed per ANSI Z359.2 & ANSI Z359.6:
 - b. The CFP(s) shall prevent workers from reaching and falling into any open hole or off the edge of a working surface.
 - c. The CFP(s) shall comply with the requirements for fall arrest CFP(s) as indicated in this document.
 - d. Where a worker is using a full body harness the force on the worker's body shall not exceed 400 lbs.
 - e. CFP(s) may be used in restraint systems; provided that the engineer has determined that the restraint forces will not cause the CFP(s) to deploy and ensures that the CFP extension in combination with other deformations of the restraint system will not permit the worker(s) to reach the fall hazard.
 - f. The use of fall restraint systems shall be limited to surfaces at or less than a slope of 4:12 from the horizontal. This is so a fall will not result in dynamic loading on the fall restraint system or where the authorized person could end up being suspended vertically from the system.
 - g. Fall Arrest CFP(s) shall be designed per ANSI Z359.2 & ANSI Z359.6:
 - h. The selection, design, and installation of fall arrest CFP(s) shall be performed under the supervision of a Qualified Person.
 - i. Anchorages designed for fall arrest systems shall have the strength capable of sustaining static loads applied in the directions permitted by the system of at least two times the maximum arresting force.
 - j. When more than one user is attached to a horizontal lifeline, the load on the lifeline can be determined using either lumped mass or sequential fall calculations as described in ANSI Z359.6 [6.3.6]
 - k. The swing fall shall comply with ANSI Z359.6 [5.3]
 - l. The clearance safety margin shall comply with ANSI Z359.6 [7.2.6.2]
8. Sub-System Requirements
 - a. Harnesses and Vertical Lifelines (VLLs) used with the system shall comply with ANSI Z359.1
 - b. Connecting Components (carabiners and snaphooks) used with the system shall comply with ANSI Z359.12
 - c. Energy Absorbing Lanyards (EALs) used with the system shall comply with ANSI Z359.13
 - d. Self Retracting Lifelines (SRLs) used with the system shall comply with ANSI Z359.14
 - e. The fall protection system shall be used exclusively for its designed use and shall be marked to prevent other uses.
 - f. The design shall take into consideration the potential uses of and loads on the fall protection system, in order to facilitate the prompt rescue of workers who may fall while attached to the system.

- g. The CFPs shall be designed to meet BS EN ISO 2360:2003, 1000 hour salt spray test.
- h. The manufacturer shall test the CFP design using a 660lb weight on various roof structures.
- i. The CFPs shall properly deliver the same energy absorbing capacity in any direction of an applied load.
- j. Each batch of CFPs shall be static, dynamic, salt spray, and x-ray tested.
- k. Each component of the CFPs shall be batch marked or individually serial numbered

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Confirm that the ladder structure to which the ladder safety system is installed is capable of withstanding the loads applied by the system in the event of a fall.

3.02 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Install ladder safety system in accordance with manufacturer's instructions.
- C. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- D. Obtain approval prior to site cutting or making adjustments not scheduled.

3.03 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
- C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Roof penetrations mounting curbs.
- B. ~~Roof hatches, Skylights, smoke vents~~ manual and automatic operation, ~~including smoke vents,~~

1.02 RELATED REQUIREMENTS

- A. Section 07 62 00 - Sheet Metal Flashing and Trim: Roof accessory items fabricated from sheet metal.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- B. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010 (Reapproved 2015).
- C. BS EN 12101-2 - Smoke and heat control systems Part 2: Specification for natural smoke and heat exhaust ventilators; 2017.
- D. FM (AG) - FM Approval Guide; current edition.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used.
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Maintenance requirements.
 - 5. For smoke hatches, submit evidence of approval by evaluation agency specified.
- B. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
 - 1. All skylights are on existing manufactured curbs. Contractor shall verify and coordinate sizing for skylight replacements
 - 2. Fall restraint barrier capable of restraining a ~~at~~ 800 lb ~~at~~ load.
- C. Warranty Documentation:
 - 1. Submit manufacturer 5 year warranty.
 - 2. Ensure that forms have been completed in Engineer's name and registered with manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products under cover and elevated above grade.

1.06 WARRANTY

- A. Correct defective Work within a 90 day, except items with 5 year warranty, then 5 year period after Date of Substantial Completion.

- B. Provide five year manufacturer warranty for Sheet metal roofing, coatings, roofing accessories.

PART 2 - PRODUCTS

2.01 ROOF HATCHES, SKYLIGHT AND VENTS, MANUAL AND AUTOMATIC OPERATION

- A. Skylight Manufacturers:

1. Kingspan Light + Air; ~~Single dome, translucent white skylight w/ fall net:~~ www.bristolite.com

B. Smoke Vent

1. Smoke Vent:

- a. Size: Match existing
- b. Operation: match existing manual pull and fusible link
- c. Fall protection: fall net, not required on Building 9
- d. Glazing Frame: 0.04 inch (1.0 mm) thick aluminum .
- e. Shape: Convex dome shaped.
- f. Glazing: Single thickness, clear acrylic, translucent white
- g. Gasket: Neoprene, continuous around cover perimeter.

C. Skylight

1. Skylight Covers: Plastic glazed framed cover, Single dome, translucent white.
- a. Size: Match Existing.
 - b. Capable of supporting 40 psf (1.92 kPa) live load.
 - c. Glazing Frame: 0.04 inch (1.0 mm) thick aluminum.
 - d. Shape: Convex dome shaped.
 - e. Glazing: Single thickness, clear acrylic, translucent white
 - f. Gasket: Neoprene, continuous around cover perimeter.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.

3.04 CLEANING

- A. Clean installed work to like-new condition.

3.05 PROTECTION

- A. Protect installed products until completion of project.

| B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION



SCALE: $1/16'' = 1'-0''$

12. ALL WOOD (IF ANY) USED IN THE WORK SHALL BE FIRE-TREATED.



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TOTE MAINTENANCE BUILDINGS 9, 10
AND 3319 LINCOLN AVE

ROOF REPAIR

ROOF PLAN - BUILDINGS 9, 10

TOWNSHIP: TACOMA, WA 98401-1837

M. ID: 201064.01

PHASE: BID SET

DATE-HRZ: **

PARCEL: 2275200332 / 2275200330

SECTION: **

DRAWING SCALE: AS NOTED

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PRINTED BY: Harper May 03, 2019

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TACOMA, WA 98401-1837

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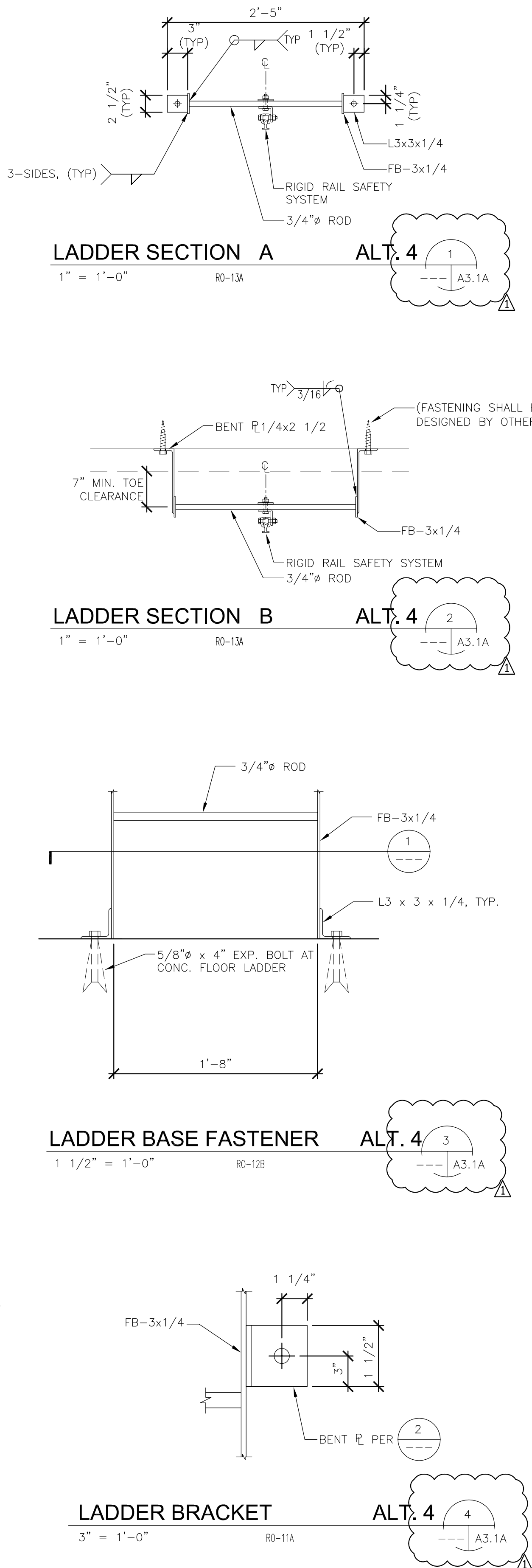
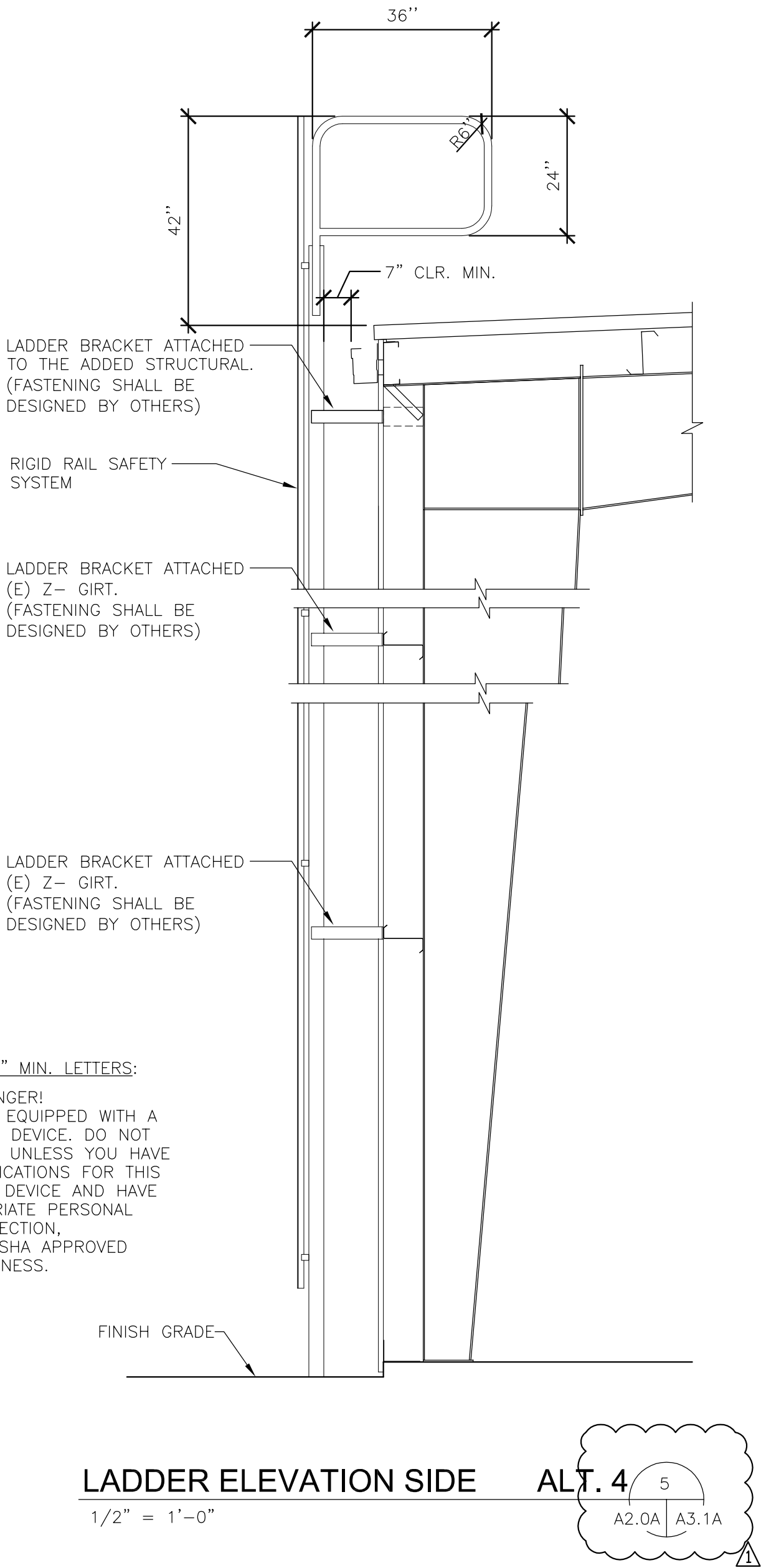
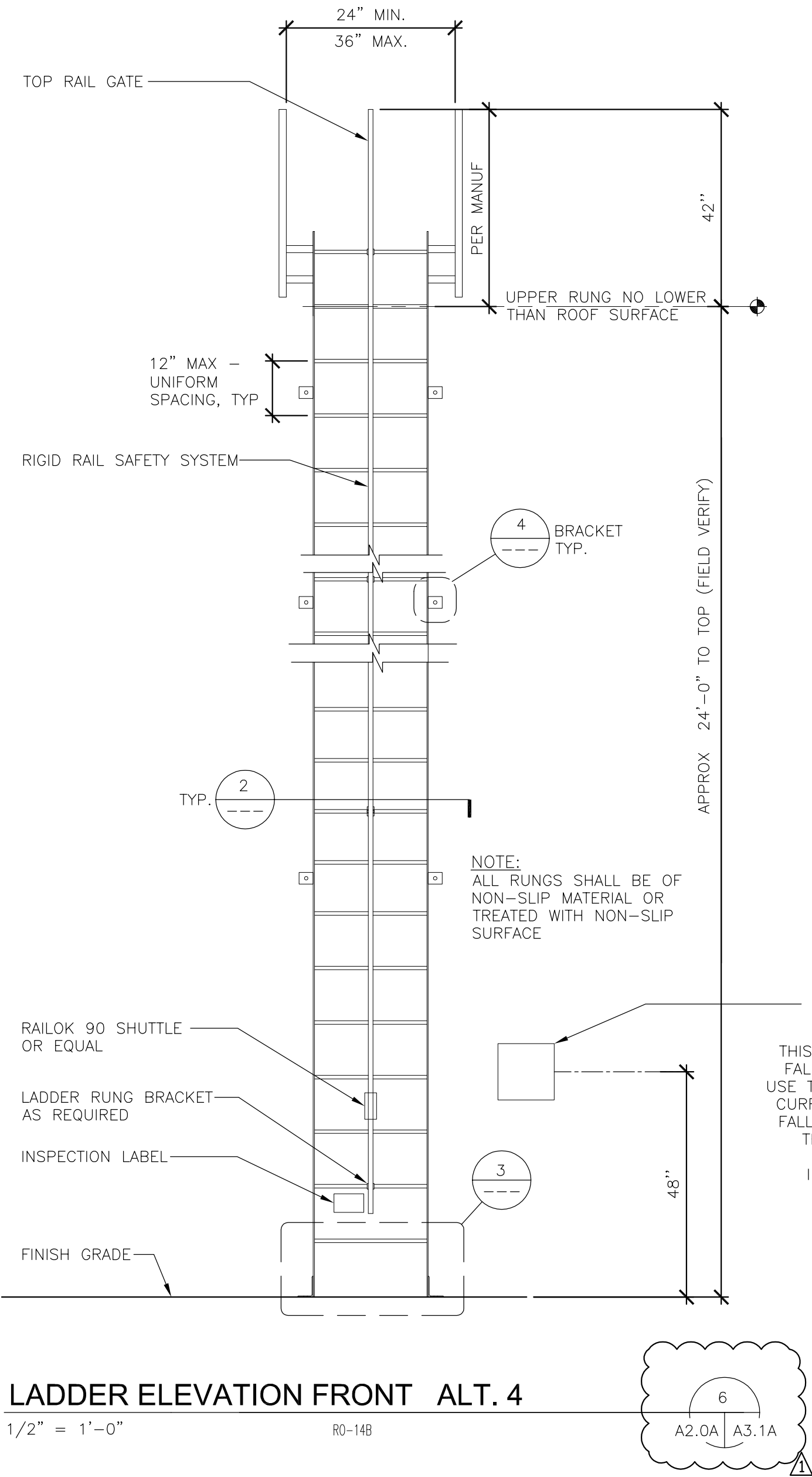
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TOTE MAINTENANCE BUILDINGS 9, 10
AND 3319 LINCOLN AVE
ROOF REPAIR
DETAILS - BUILDINGS 9, 10

CONT/CONS: 071099
M. ID: 201064-01
PHASE: BID SET

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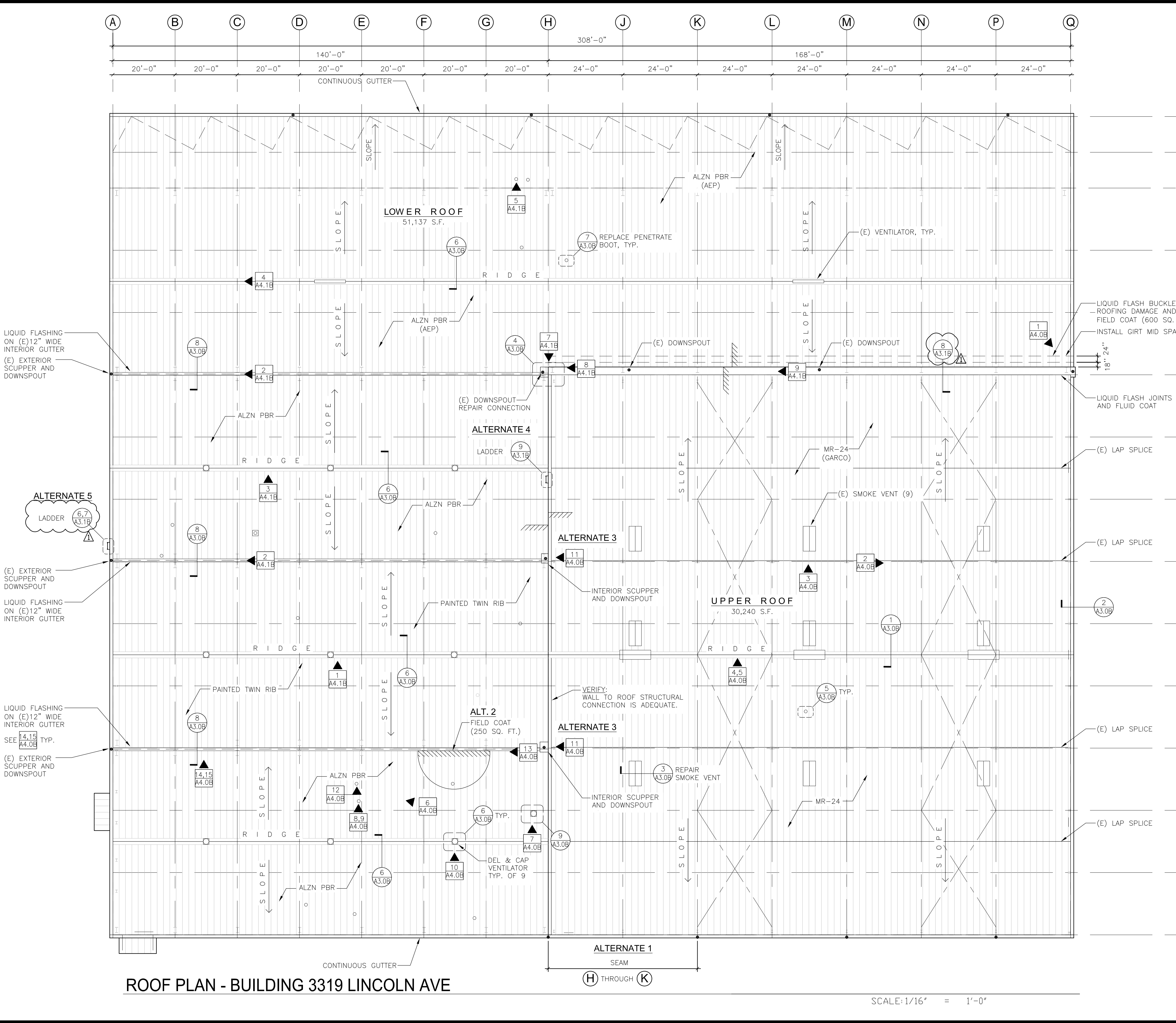
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ROOF PLAN NOTES

1. CLEAN LOWER ROOF ESTIMATED 15% AT 51,137 S.F.
2. VERIFY INTEGRITY & CLEAN TITE LINES

GENERAL NOTES

1. MAINTAIN FUNCTIONALITY OF ROOFTOP MECHANICAL EQUIPMENT OR RELATED ROOF PENETRATION TO THE MAXIMUM EXTENT POSSIBLE THROUGHOUT RE-ROOFING OPERATIONS.
2. FIELD VERIFY ALL EXISTING CONDITIONS AND CONNECTION POINTS PRIOR TO STARTING WORK. CONTRACTOR SHALL COORDINATE ALL PORTIONS OF THE WORK AS DESCRIBED IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND RELATIONS TO OTHER WORK. NOTIFY ENGINEER FOR RESOLUTION OF ALL DISCREPANCIES OR CONFLICTS PRIOR TO EXECUTION OF THE WORK.
3. ALL WORK SHALL COMPLY WITH THE FOLLOWING INCLUDING CITY OF TACOMA AMENDMENTS AS APPLICABLE:
 - 2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
 - 2015 INTERNATIONAL MECHANICAL CODE (IMC)
 - 2015 INTERNATIONAL FIRE CODE (IFC)
 - 2015 WASHINGTON STATE BUILDING CODE, FIRE CODE & ENERGY CODE INCLUDING AMENDMENTS
- ALL REFERENCES TO OTHER STANDARDS AND CODES SHALL BE THE LATEST EDITION, UNO
- NO PERMITS ARE ANTICIPATED, PROJECT IS FOR REPAIR AND MAINTENANCE REPLACING LIKE FOR LIKE, UNO
4. DO NOT SCALE DRAWINGS.
5. MAINTAIN CLEAR EXIT PATHS TO REQUIRED MEANS OF EGRESS.
6. PROTECT ALL WORK SCHEDULED TO REMAIN.
7. PROTECTION: PROJECT BUILDING WILL BE OCCUPIED AND OPERATIONAL DURING THE CONTRACT PERIOD. CONTRACTOR IS RESPONSIBLE TO PROTECT PEOPLE AND PROPERTY. PROTECT BUILDING, EQUIPMENT, PAVING, VEHICLES, PEDESTRIANS AND TENANT OPERATIONS FROM ROOFING OPERATIONS INCLUDING DUST, DEBRIS, PAINT ETC. SEAL OFF OPENINGS, AND AREAS DURING OPERATIONS THAT WOULD ALLOW DUST, WATER INFILTRATION, FALLING OBJECTS, OR ANY OTHER ENVIRONMENTAL CONTAMINANT TO ENTER THE BUILDING OR EFFECT OUTDOOR OPERATIONS. CONTRACTOR TO USE ALL APPROPRIATE DUST CONTROL MEASURES. COORDINATE DUST CONTAINMENT MEASURES WITH ENGINEER PRIOR TO INITIATING WORK. PROTECT ADJACENT AREAS WHERE THERE IS NO WORK TO BE PERFORMED. PROJECT WORK IN PROGRESS OR FINISHED WORK DURING OTHER CONTRACT TASKS. LEAVE PROTECTION IN PLACE AS MUCH AS PRACTICABLE UNTIL PUNCH LIST. COORDINATE WITH ENGINEER FOR SAFETY NOTICES AND PROCEDURES THAT WOULD AFFECT THE TENANT.
8. PROVIDE MAINTENANCE, CLEANING AND VERIFY INTEGRITY OF EXIST GUTTER, DOWN SPOUTS, AND STORM DRAIN/TITE LINE. USING A VACTOR TRUCK OR EQUIVALENT, REMOVE ANY FOREIGN DEBRIS, SILT, DIRT, AND ROOTS TO RESTORE ORIGINAL FLOW. CAMERA VERIFY LINES ARE FLOWING FREE AND CLEAR, INTACT, UNBROKEN NOR COLLAPSED BETWEEN THE DOWNSPOUT AND SITE WATER TREATMENT, DETENTION OR DISCHARGE POINT. IF A AFOREMENTIONED STRUCTURE LIES PRIOR TO DISCHARGE, VISUALLY INSPECT AND INFORM ENGINEER OF ANY MAINTENANCE REQUIRED, NOT CAUSED BY ACTIVITIES ASSOCIATED WITH ROOF REPAIRS.
9. CLEAN, REMOVE SEALANT/PATCHING: REMOVE ALL FOREIGN DEBRIS, AND EXIST. ROOF REPAIRS, INCLUDING BUT NOT LIMITED TO: ASPHALTIC OR TAR BASED REPAIRS AND ASSOCIATED MEMBRANES, FLEXIBLE FLASHING TAPE, EXPOSED SEALANTS AND MASTICS, AND OTHER REPAIR SYSTEMS NOT LISTED, DOWN TO METAL ROOF PANEL. PREPARE THE METAL PANELS PER MANUFACTURERS RECOMMENDATIONS FOR LIQUID FLASHING OR FIELD COAT SYSTEM. REMOVING LOOSE DEBRIS, PAINT, RUST, AND CONTAMINANTS. CONTRACTOR IS RESPONSIBLE FOR THE SAFE COLLECTION AND LAWFUL DISPOSAL OF ALL DEBRIS, DUST, CLEANING AGENTS, METAL PREPARATION, AND WATER GENERATED DURING PREPARATION OF METAL SURFACES. DISCHARGE NOTHING TO ANY STORM OR SEWER SYSTEM ON SITE. PROVIDE ENGINEER WITH ANY REPORT, TESTING, OR CERTIFICATION SHOWING COMPLIANCE WITH LAWFULL DISPOSAL OF AFOREMENTIONED PRODUCTS AND BYPRODUCTS, PER PORT OF TACOMA STANDARDS.
10. FLASHINGS & COPINGS: ALL FLASHINGS AND COPINGS SHALL BE ASSEMBLED PER SMACNA. SHEET STOCK SHALL BE 24GA STAINLESS STEEL UNO. ROOFING PANELS PER SPECIFICATIONS. ALL CUSTOM SHEET METAL AND IRONWORK WILL REQUIRE SHOP DRAWING SUBMITTALS.
11. FASTENERS: ALL FASTENERS SHALL BE GALVANIZED AND PAINTED, SELF-TAPPING TEK SCREWS, WITH UV STABILIZED EPDM WASHERS, AS RECOMMENDED BY THE MANUFACTURER, OR TRADE/INDUSTRY GUIDELINES. UNO. REPLACE EXISTING FASTENERS WITH THE SAME LENGTH, TWO SIZES IN WIDTH LARGER, FOR ALL OTHER TYPES OF FASTENERS, MEET SMACNA REQUIREMENTS.
12. ALL WOOD (IF ANY) USED IN THE WORK SHALL BE FIRE-TREATED.



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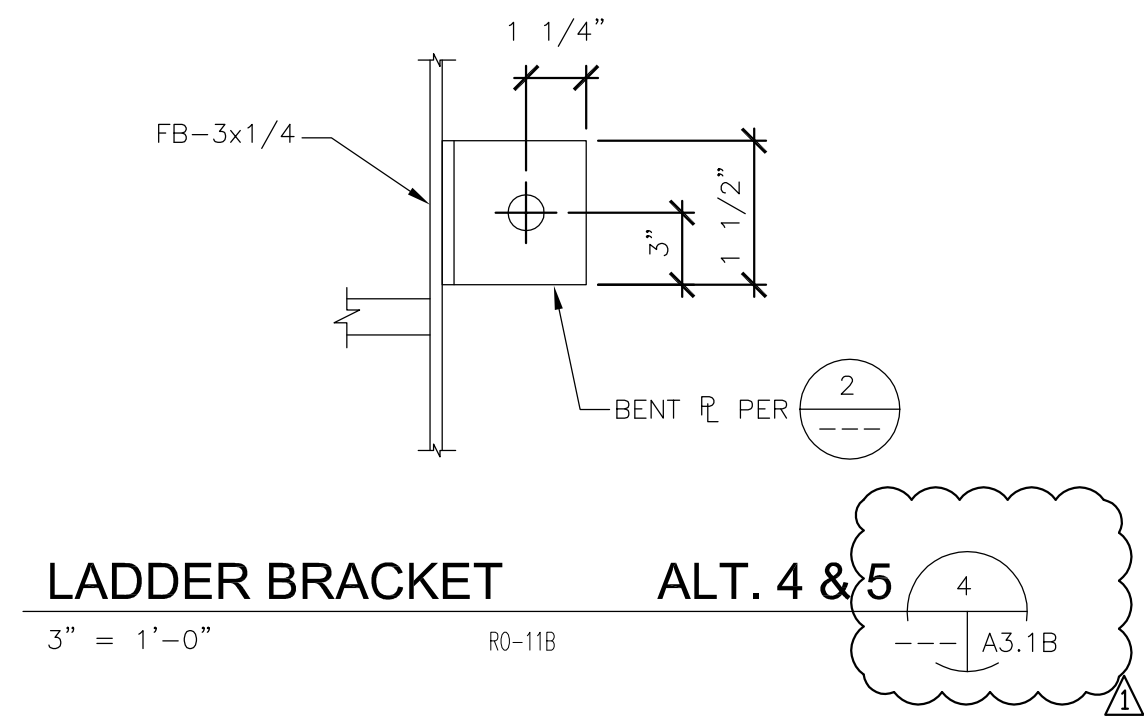
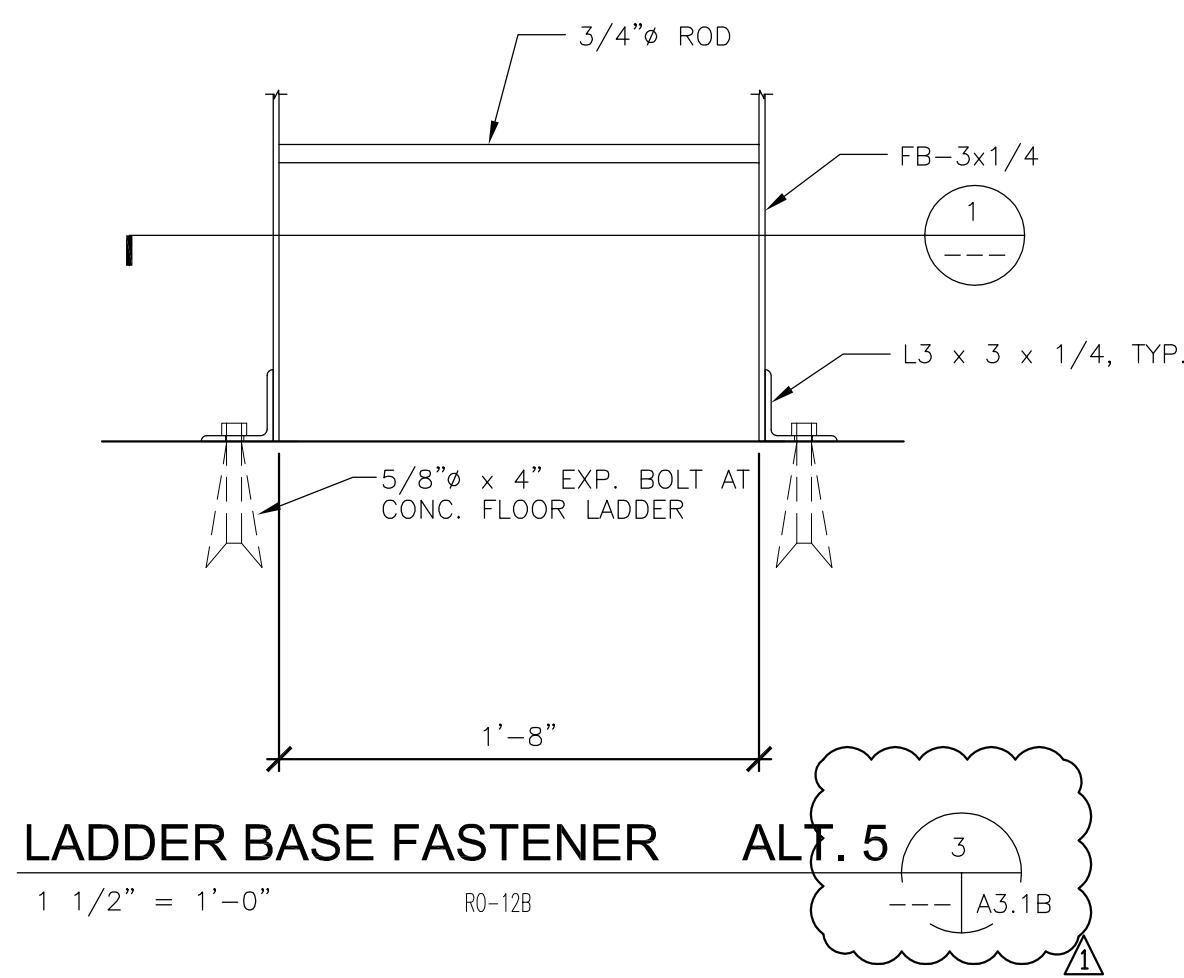
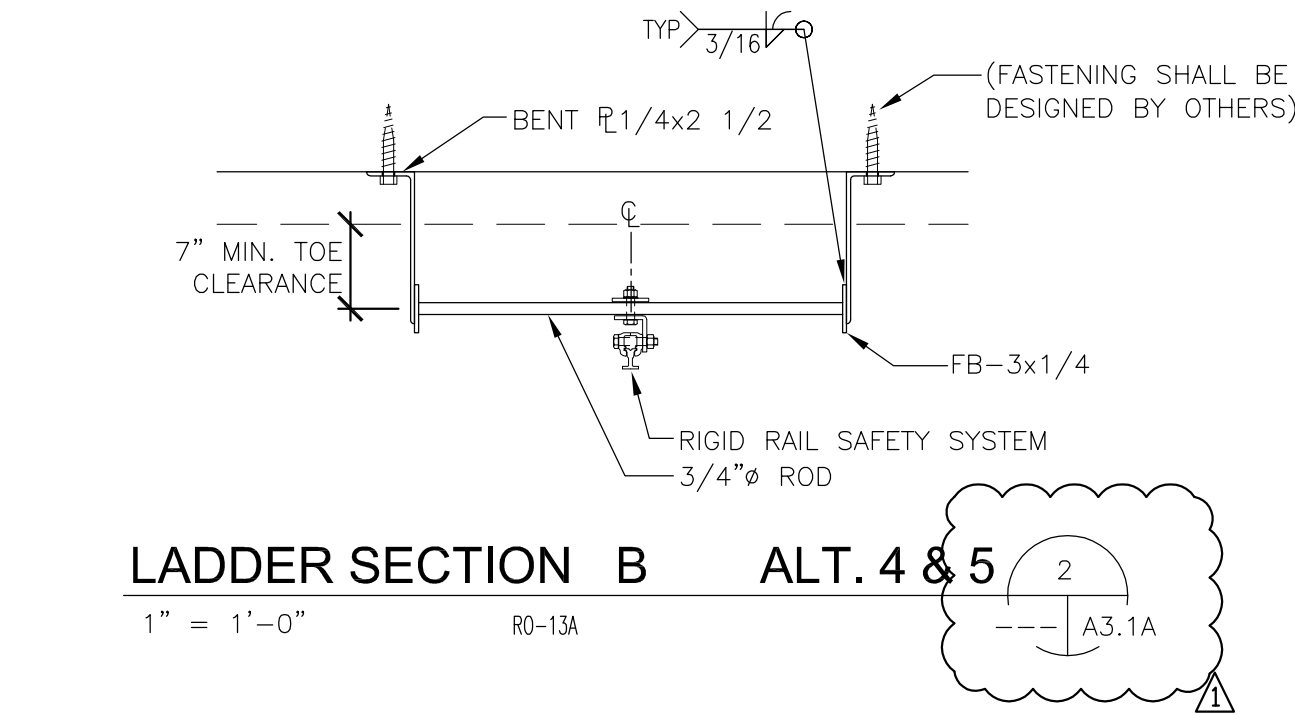
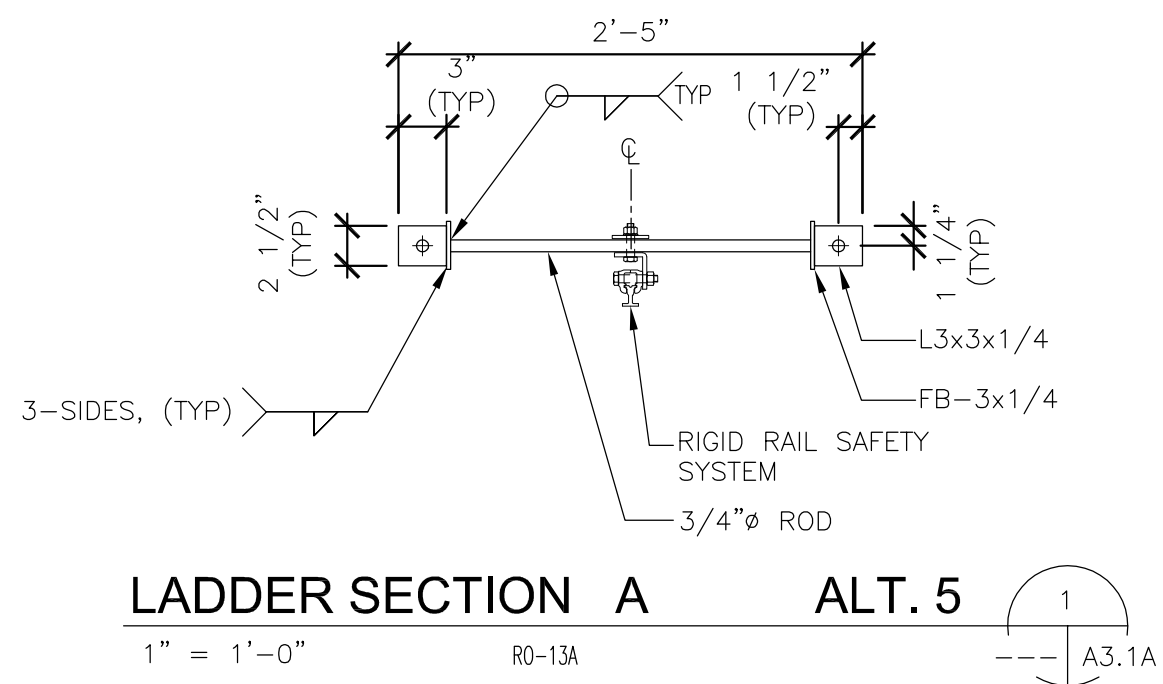
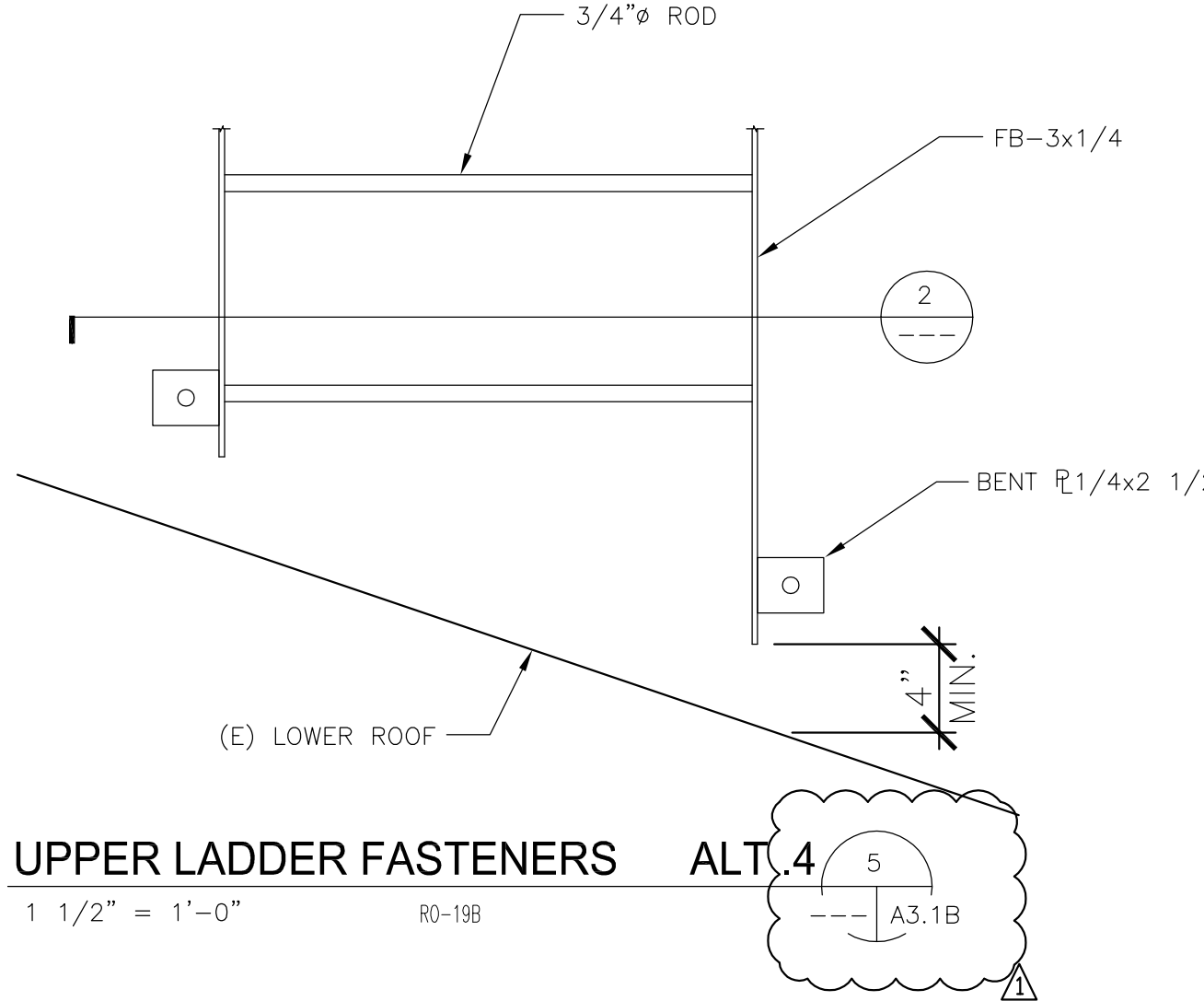
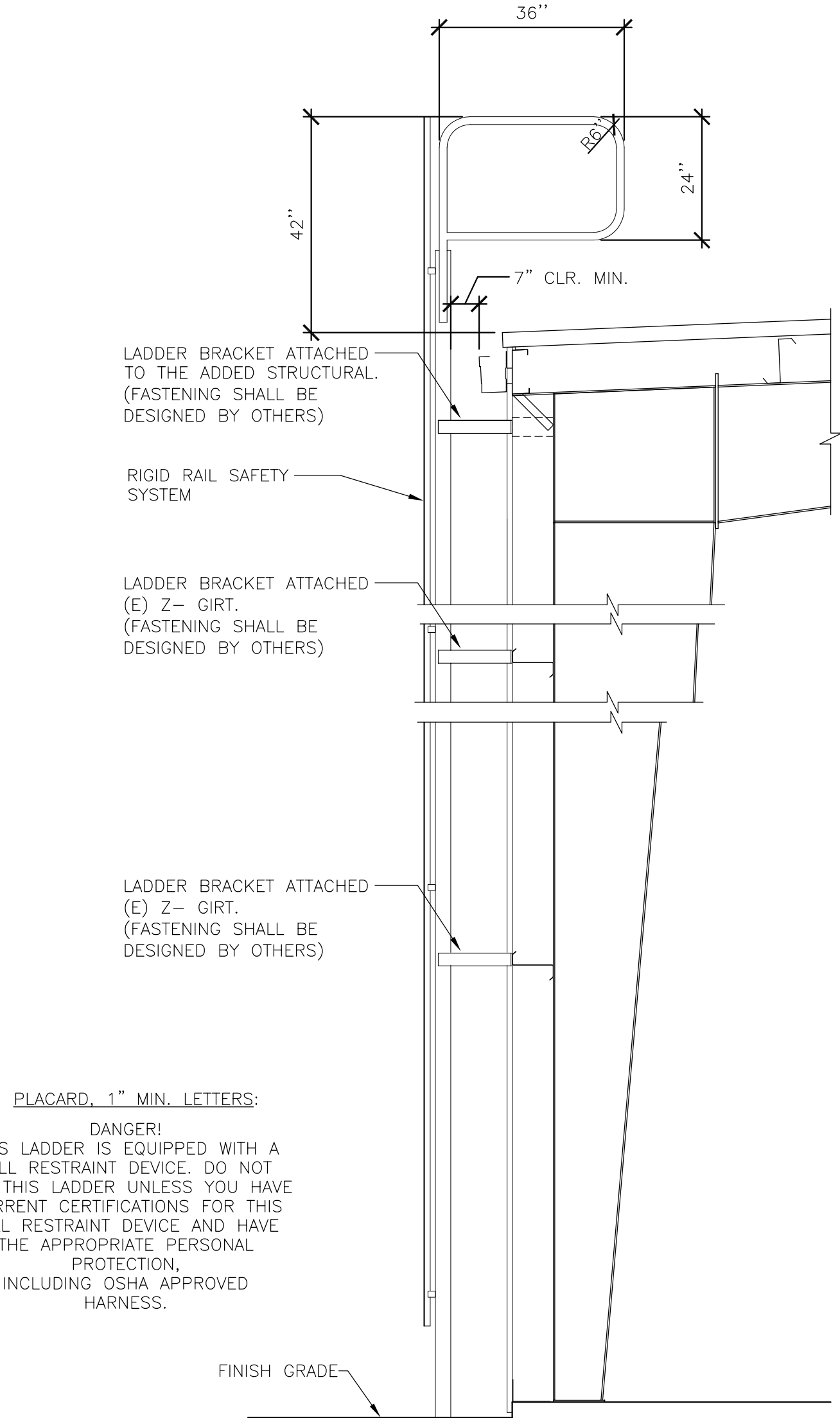
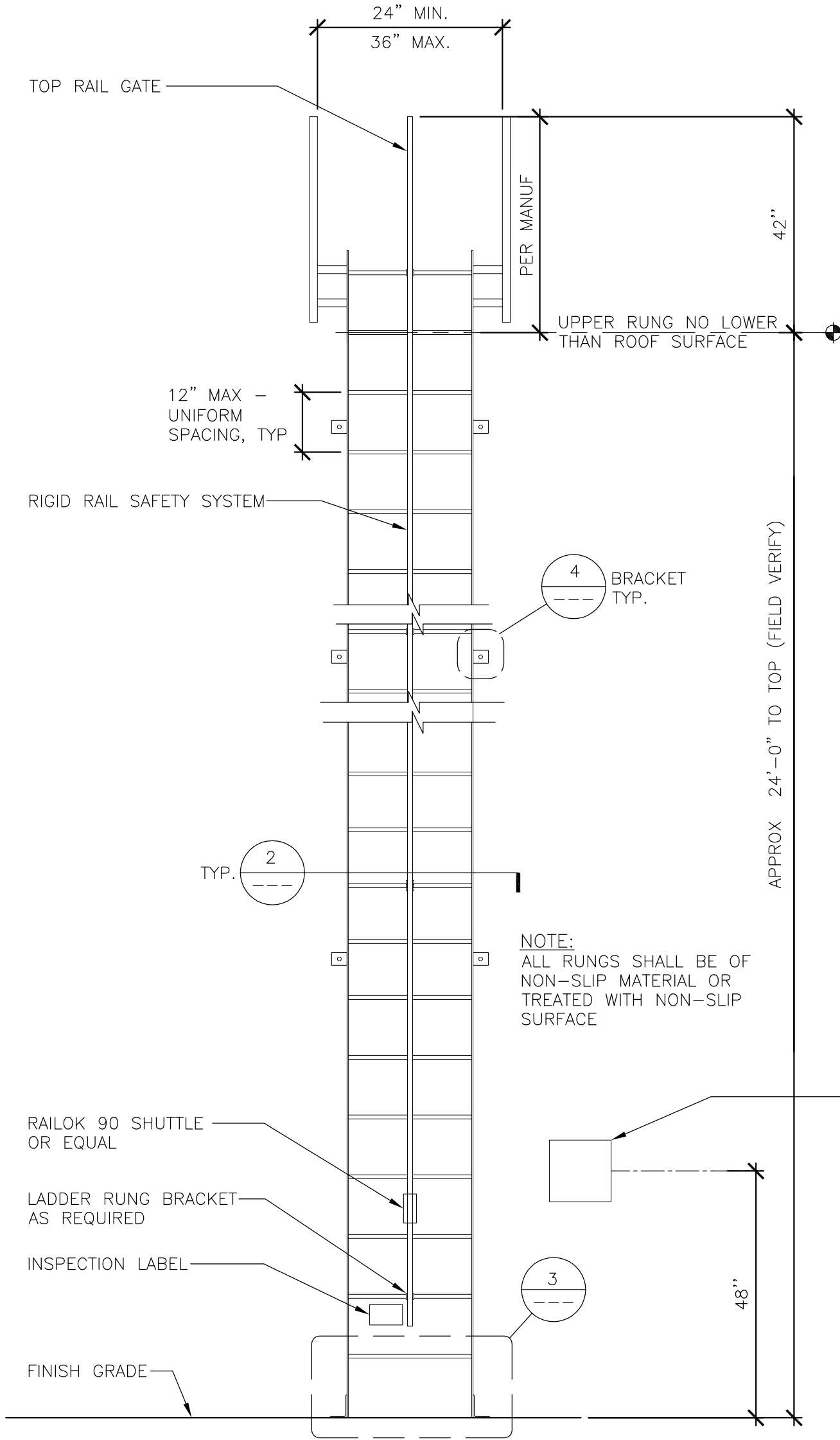
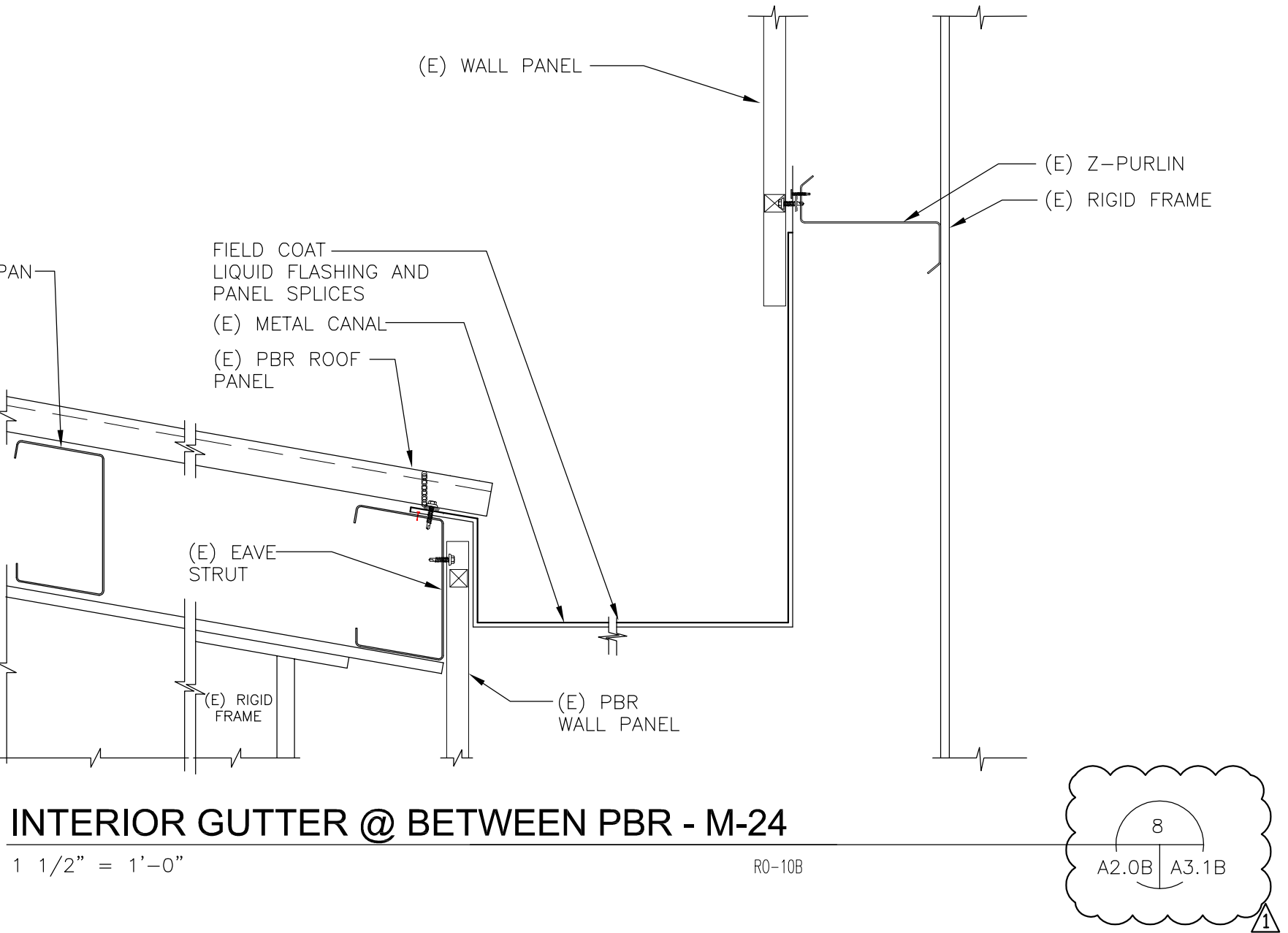
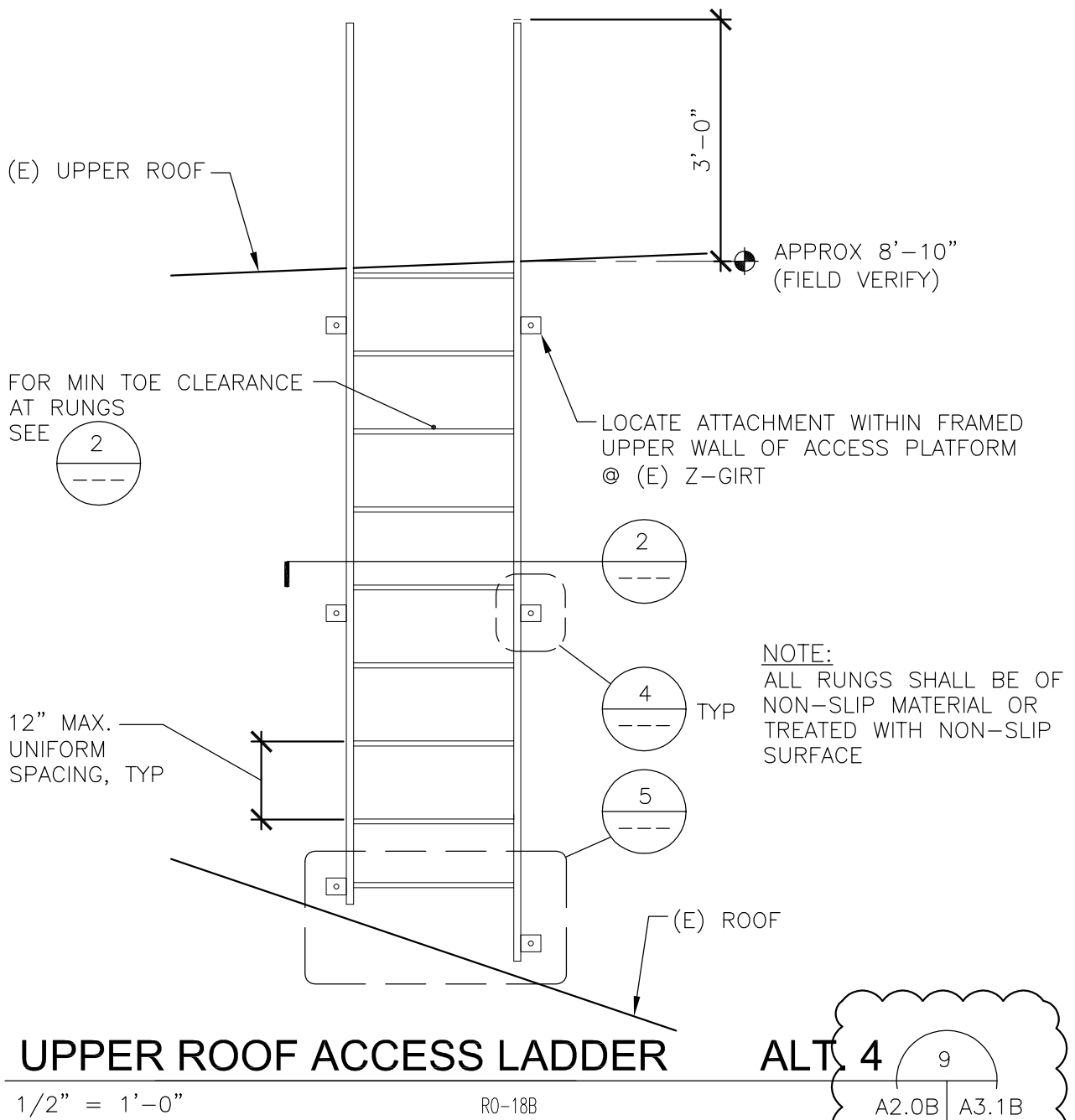
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**TOTE MAINTENANCE BUILDINGS 9, 10
AND 3319 LINCOLN AVE
ROOF REPAIR**
ROOF PLAN - BUILDING 3319 LINCOLN AVE

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CONT/CONS:	071099	TOWNSHIP:	
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