



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

June 9, 2011
Subject: **Caribou Salt Storage Building**
State Pin: 018120.10
Location: Caribou
Amendment No. 3

Dear Sir/Ms:

Make the following changes to the Bid Documents:

In the Bid Book (page 9), "NOTICE TO CONTRACTORS", **CHANGE** the bid opening date in the first sentence from "June 15, 2011" (changed in Amendment #2) to read "**June 22, 2011**". Make this change in pen and ink.

In the Bid Book, (page 11), **REMOVE** the "SCHEDULE OF ITEMS", 1 page dated 110505 and **REPLACE** with the attached new "SCHEDULE OF ITEMS", 1 page, dated 110608.

In the Bid Book, (page 31), **REMOVE** "SPECIAL PROVISION, SECTION 105, General Scope of Work", 1 page dated April 28, 2011 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 105, General Scope of Work", 1 page dated June 7, 2011.

In the Bid Book, (pages 43-48), **REMOVE** "SPECIAL PROVISION, SECTION 815, Buildings", 6 pages dated April 28, 2011 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 815, Buildings", 7 pages, dated June 7, 2011.

In the Bid Book, (pages 59-61), **REMOVE** "SPECIAL PROVISION, SECTION 06100, ROUGH CARPENTRY", 3 pages dated May, 2011 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 06100, ROUGH CARPENTRY", 4 pages, dated June, 2011.

In the Bid Book, (pages 62-64), **REMOVE** "SPECIAL PROVISION, SECTION 06192, STRUCTURAL GLUE LAMINATED TIMBER"; 3 pages dated May, 2011 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 06192, STRUCTURAL GLUE LAMINATED TIMBER", 4 pages dated June, 2011.

In the Bid Book, (pages 67-69), **REMOVE** "SPECIAL PROVISION, SECTION 07611, METAL ROOFING", 3 pages dated May, 2011 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 07611, METAL ROOFING", 3 pages dated June, 2011.



PRINTED ON RECYCLED PAPER

In the Plans, (Sheets 2-12), **REMOVE** the existing plans sheets “ SHEET NUMBERS 2 thru 12” and **REPLACE** with the attached new “SHEET NUMBERS 2 thru 12”, 11 plan sheets total .

NOTE: Plan Sheets will be FEDEXED/mailed to plan holders who purchased plans in the quantity and size ordered.

The following questions have been received:

Question: The site has been partially excavated exposing ledge above the finish floor elevation of the building. Ledge will undoubtedly be encountered in the wall trenches. Is the removal of the ledge by the Contractor? If so, do the walls have to go full depth? Shouldn't there be a unit price item required for ledge removal with an approximate quantity on the schedule of items bid form?

Response: Rock Excavation will be the responsibility of the Department. The new attached plans show an adjusted foundation design.

Question: The schedule of items includes unit prices for course gravel and crushed aggregate. These are usually accompanied by a unit price request for excavation where these aggregates are used. Is MDOT going to excavate these areas with their own forces? If the excavation is by the Contractor, is it to be carried as part of the aggregate unit prices or lumped in with the salt storage building item?

Response: Rock excavation is almost complete and is the responsibility of the Department. Other excavation is incidental to contract items. Granular Borrow, Gravel Borrow, Aggregate Subbase Course - Gravel and Dense Graded Crushed Aggregate Base will be measured for payment under the applicable contract items.

Question: Wall sections on drawing sheet numbers 5, 7 and 9 show 4” perforated PVC drain pipe. There is no indication on the general site plan (sheet number 2) as to where the outlet of this drain pipe is to go. What is to be done with this drain outlet?

Response: The foundation drain pipe shall outlet from the southeast corner of the salt building and extend to the catch basin near the garage.

Consider this change and information prior to submitting your bid on **June 22, 2011**.

Sincerely,



FOR
—

Scott Bickford
Contracts & Specifications Engineer

SCHEDULE OF ITEMS

CONTRACT ID: 018120.10

PROJECT(S): 018120.10

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 PROJECT ITEMS						
0010	203.25 GRANULAR BORROW	CY 600.000				
0020	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	CY 500.000				
0030	304.13 DENSE GRADED CRUSHED AGGREGATE SUBBASE	CY 100.000				
0040	815.00 BUILDING CARIBOU SALT STORAGE BUILDING	LUMP	LUMP			
	SECTION 0001 TOTAL					
	TOTAL BID					

**SPECIAL PROVISION
SECTION 105
General Scope of Work
(Limitations of Operations)**

A 24 hour notice is required for any change in work schedule.

Work can be performed at any time except Sundays, Holidays and State Government Closure days and as provided in Special Provision, Section 107, Contract Time.

The Area Inside the Salt Shed and Area 3 shall be prepared and available for paving on or before August 14, 2011. The contractor for the salt shed construction is responsible for placing the concrete salt shed foundation, backfill, gravel, foundation drain and connection to catch basin and fine grading. The paving in and around the proposed salt shed shall be done after the foundation, concrete walls, backfill and gravel is complete and before the installation of the salt shed arches and roof. The Department expects to contract separately for the paving in the proposed salt shed and the maintenance lot as shown on the areal view. The Contractor must cooperate with Contractors or others performing such other Work as directed by the Department and coordinate paving schedule with the salt shed construction schedule.

Rock Excavation will be the responsibility of the Department. Grading of the backslopes beyond the pavement limits, loam, seed and mulch will be the responsibility of the Department.

The Contractor shall give the Department and the paving Contractor three weeks notice to schedule their work. The Contractor shall allow for five calendar days for the paving the Area Inside the Salt Shed and Area 3. All paving shall be completed by September 1, 2011. Times and dates mentioned are included in the contracts, are estimates only, are dependent upon favorable weather, working conditions, and freedom from emergencies and the Contractor shall have no claim against the Department if they are exceeded.

The Department will Contract for and perform other Work to be performed within the Project Limits. The Contractor must take all reasonable steps to avoid interfering or hindering such other Work.

SPECIAL PROVISION
SECTION 815
Buildings

Description The work shall consist of the furnishing and construction of the Salt Shed building at the Maine Department of Transportation Lot located in Caribou, Maine in accordance with these contract documents.

Materials All backfill, not otherwise specified, shall be Granular Borrow and shall meet the requirements of Section 703.19 Granular Borrow.

Aggregate Subbase (bottom 10") shall meet the requirements of Standard Specification, Section 703.06 Aggregate for Base and Subbase – Grading D.

Aggregate Subbase (top 2") shall meet the requirements of Special Provision, Standard Specification, Section 304 Aggregate for Base and Subbase, Dense Graded Crushed Aggregate Base with Fine Aggregate Material.

Construction The Department will provide the Contractor with two horizontal and vertical control points establishing the top of slab elevation and two corners of the slab. The Contractor shall provide the additional layout necessary to complete the Work.

All work shall meet the requirements of governmental agencies having jurisdiction and comply with applicable standards and codes. The Contractor shall submit two (2) copies of shop drawings to Department for review at least fifteen (15) days prior to incorporation into the work. Shop drawings shall be approved prior to incorporation into the work.

Roof, siding and paint colors shall be selected by Department from manufacturer's standard colors.

Excavation shall meet the requirements of Section 203 Excavation and Embankment.

When the structure is to rest on an excavated surface other than rock, special care shall be taken not to disturb the bottom of the excavation. If the surface upon which the structure is to rest is disturbed, it shall be regraded and recompacted to the extent directed by the Resident.

Suitable material taken from excavation shall be used in the construction of subgrade and for backfilling as indicated on the plans, or as directed, except that if the volume of suitable excavated material exceeds that required to construct the site to the grades indicated, the excess shall be used as directed or wasted.

Backfilling shall meet the requirements of Section 203 Excavation and Embankment. Backfilling shall consist of placing suitable material in all spaces not occupied by structures up to the elevation of the existing ground or other elevations shown on the plans or designated. Backfill material shall be granular borrow or other material designated on the plans and shall be at or near optimum moisture content and shall not contain stones larger than 3 in, frozen lumps, chunks of clay, mineral matter or any other objectionable matter.

For reinforced concrete sections, no backfill shall be placed until the masonry has been in place at least 14 days or until concrete cylinders cured with the structure establish that design strength has been reached.

Unless otherwise approved the material shall be deposited and spread upon compacted material in full width layers not more than 8 inches in depth, loose measure. Sand or gravel soils shall be compacted by vibratory type compaction equipment or by pneumatic tired equipment and, if necessary, by the addition of water. The compacting operations shall be continued until each layer is satisfactorily compacted to its full depth and width.

Unless otherwise indicated on the plans or directed, all sheeting and bracing used during structural excavation shall be removed by the Contractor following the completion of the work, and all voids resulting from use of the sheeting and bracing backfilled where necessary.

Subgrades shall be promptly graded and rolled to minimize absorption of water. When excavating results in a subgrade of unsuitable soil, the Resident may require the Contractor to remove the unsuitable material and backfill the area with approved material.

Placing and compacting of Aggregate Subbase (bottom 10") shall meet the requirements of Standard Specification, Section 304 Aggregate Base and Subbase Course.

The foundation drain will outlet from the southeast corner of the building and extend to the catch basin near the corner of the garage as designated by the Department. The Contractor shall install the drain and connect the foundation drain to the catch basin.

Variations from Materials Specified Whenever and wherever items have been identified by describing a proprietary product, such identification is intended to be descriptive, but not restrictive, and is used to indicate the quality and characteristics of products that are satisfactory. Bids shall be considered as offering the item specified in the Invitation for Bid. The Department will consider all alternates submitted by the Contractor, but is not bound to accept any which, in its opinion, is not in the Department's best interest and are determined by the Department to be of equal value in all material respects to the

proprietary items specified. The evaluation of and determination as to equality of the product offered shall be the responsibility of the Department and will be based on information furnished by the Contractor, as well as information reasonably available to the purchasing activity.

Quality and Standards Materials and manufactured products incorporated into the work shall be new unless otherwise specified, free from defect, and in conformity with the contract. When material is fabricated or treated with another material or where any combination of materials is assembled to form a finished product, any or all of which are covered by specifications, the Department may reject the finished product if any of the components do not comply with the specifications. The Department may reject materials not conforming to the Specifications at any time, and the Contractor shall remove them immediately from the project site unless otherwise instructed by the Department. The Contractor shall not store or use rejected materials on any Department project.

If there is no applicable standard set forth in this contract for particular Work, then the Contractor shall perform that Work in accordance with industry standards prevailing at the time of bid. If the Department determines that Work is non-conforming, the Contractor shall remove, replace, or otherwise correct all unacceptable work as directed by the Department at the expense of the Contractor, without cost or liability to the Department.

Submittals The Contractor shall submit manufacturers' specifications, product data and installation instructions for all items furnished. The Contractor shall not be relieved of responsibility for any deviation from the requirements of the specifications unless the contractor has specifically informed the owner in writing of such deviation at the time of submission and the owner has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions. No portion of the work shall be commenced until the Department has approved the submittal.

Delivery, Storage, and Handling

- Store materials off the ground and protected from the weather.
- Deliver products in manufacturers' original containers, dry, undamaged, with seals and labels intact.

Installation

- Installation, handling and storage of all materials shall comply with manufacturer's instructions and recommendations.
- The Contractor shall make provisions to allow safe access to the work for the Department in order to inspect the work, facilitate ongoing inspection of the work and to measure the work for payment purposes.
- Complete installation to provide weathertight service.
- Completed installation for the roof shall conform, to all applicable National, State and local codes

Contractor's Safety Program If a copy of the Contractor's Safety Plan is not on file with the Department, the Contractor must submit an acceptable Contractor's Safety Plan to the Department's Bureau of Maintenance & Operations Section prior to Contract award. If copy of the Contractor's Safety Plan is on file with the Department's Bureau of Maintenance & Operation's, the Contractor must confirm, in writing, that the plan on file is still applicable prior to Contract award. The Contractor shall designate which portions such submissions it considers confidential business information. If such program is revised during the Contract Time, the Contractor shall provide the updated program to the Department. The Contractor shall comply with its safety program and the Standard Specifications. The Contractor shall be responsible for all claims or damages arising from failure to so comply and indemnifies and holds harmless the Department from all claims and damages arising from such non-compliance.

The contractor shall be responsible for the safety of all operations in connection with the Contract and shall take all necessary actions to ensure the safety of all persons who may be in, on or adjacent to the Site. The Contractor shall perform Work in a manner that is in compliance with the Contractor's TCP, an applicable OSHA requirements, and established safety practices.

Failure by the Contractor to comply with the Contractor's TCP or an applicable OSHA requirement or to follow all established safety practices pertaining to the work being performed, will result in the immediate suspension of Work on the entire project until all unsafe practices are corrected and comply with the applicable requirements, standard or practice.

Environmental Requirements and Waste Materials All waste materials shall be removed and disposed of in accordance with all federal, state, and local laws.

All materials removed from the site shall be the property of the contractor. Sale of these materials on site, and removal by persons other than the contractor or his personnel, shall be at the risk of the contractor. Once the contract is signed, responsibility for the safety of the public within the confines of the project shall be the responsibility of the contractor. The contractor shall be responsible for any and all materials dropped from his trucks distant from the project. The contractor shall make his own arrangement for disposal of materials taken from the site, and there will be no burning of materials on or adjacent to the site.

Hazardous Materials If the Contractor encounters any condition that indicates the presence of uncontrolled petroleum or hazardous Materials, the Contractor shall immediately stop Work, notify the Department, treat any such conditions with extreme caution, and secure the area of potential hazard to minimize health risks to Workers and the public, and to prevent additional releases of contaminants into the environment. Such conditions include the presence of barrels, tanks, unexpected odors, discoloration of soil or water, an oily sheen on soil or water, excessively hot earth, smoke, or any other condition indicating uncontrolled petroleum or hazardous Materials. The Contractor shall continue Work in other areas of the Project unless otherwise directed by the Department. The Contractor shall comply with all federal, State, and local laws concerning the

handling, storage, treatment, and disposal of uncontrolled petroleum or hazardous Material.

Permits, Fees, and Notices The Contractor shall also acquire, at its sole expense, all licenses, Permits and other permissions that are necessary, appropriate and legally required to perform the Work. The contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the work. If the contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the Department, he shall assume full responsibility therefore and shall bear all cost attributable thereto.

Closeout Procedures The Contractor shall make final changeover of permanent locks and deliver keys to Department, and complete final cleaning requirements, including touchup painting, touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects,.

Final Cleaning The Contractor shall clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program and comply with manufacturer's written instructions.

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
3. Remove tools, construction equipment, machinery, and surplus material from Project site.
4. Remove snow and ice to provide safe access to building.
5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
6. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
7. Sweep concrete floors broom clean in unoccupied spaces.
8. Remove labels that are not permanent.
9. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
10. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
11. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
Replace parts subject to unusual operating conditions.

Closeout Documentation The following documents shall be added to the required list of closeout documentation:

- Project Record Drawings
- Warranties
- Maintenance & Operations Manual

The Contractor shall prepare and submit Project Record Documents, operation and maintenance manuals, and similar final record information.

Warranty The Contractor shall guarantee work for one (1) year from date of Final Acceptance by the Department. The Physical Work must be Complete and in Conformity with the Contract and the Closeout Documentation, exclusive of the All Bills Paid and Request for Final Payment Letters, in order for the Department to finally “accept” the Project. All defects, including leaks occurring during guarantee period, shall be corrected without cost to the Owner. The contractor unconditionally warrants and guarantees to the owner that all work will be of good quality, free from faults and defects, and in conformance with the specification. All work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the owner, the contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If the Department discovers any warranty defects during the warranty period, the Contractor agrees to perform all remedial work, at no additional cost or liability to the Department. Remedial Work will be completed within two weeks unless a more immediate response is required for safety or convenience, as determined by the Department.

The Contractor agrees that the warranty obligations provided by this Contract shall be reported as an outstanding obligation in the event of bankruptcy, dissolution, or the sale, merger, or cessation of operations of the Contractor.

Operations and Maintenance Manual The Contractor shall prepare operation and maintenance manuals, including the following:

- Emergency data.
- Operation data for systems, subsystems, and equipment.
- Maintenance data for the care and maintenance of systems and equipment.

Method of Measurement The Salt Storage Building will be measured for payment as one lump sum, complete in place and accepted.

Granular Borrow, Aggregate Subbase Course - Gravel and Dense Graded Crushed Aggregate Base will be measured for payment under the applicable contract items. Aggregate subbase and base to the level of subgrade will be measured by the cubic yard in place.

Basis of Payment The Salt Storage Building will be paid for at the contract lump sum price, complete and accepted which shall be full compensation for the work indicated on the plans and as called for in the contract, including excavation, foundation drain pipe,

stone, geotextile, connection to catch basin, the additional underground electrical as noted on the plans, backfill, labor, equipment and materials for building construction and other contract related incidentals necessary to complete the work. Common Excavation shall be incidental to contract items. Rock Excavation will be the responsibility of the Department. Removal of the unsuitable existing material below subgrade and backfill with approved material will not be considered incidental and will be measured for payment as extra work.

Granular Borrow will be paid for under the applicable contract items.

Aggregate Subbase Course - Gravel and Dense Graded Crushed Aggregate Base will be paid for under the applicable contract items.

Grading of the backslopes beyond the pavement limits, loam, seed and mulch will be the responsibility of the Department.

Payment will be made under:

	<u>Pay Item</u>	<u>Pay Unit</u>
815.00	Buildings - Salt Storage Building	Lump Sum

SPECIAL PROVISION
SECTION 06100
ROUGH CARPENTRY

PART 1 – GENERAL

1.1 Summary

- A. This work consists of all labor, materials and equipment necessary to complete the work as shown on the Drawings and as specified herein.

1.2 References

- A. International Building Code, Latest Edition.

1.3 Workmanship

- A. Deliver the materials to the job site and store in a safe area, out of the way of traffic, shored up off the ground surface and covered to protect from weather.

PART 2 – PRODUCTS

2.1 Dimension Lumber

- A. Dimension lumber shall be Eastern Spruce or other wood approved by the Department and shall comply with grading requirements of the Northeastern Lumber Manufacturers Association for Common, Number 2 or better, and shall bear the grade stamp.
- B. When specified on the Plans or in Part 4, stress grade structural lumber shall be provided. Stress grade lumber shall bear appropriate stamp for the specified grade and species.
- C. Wood for pressure treating and special installation shall be southern yellow pine meeting the requirements of the Southern Pine Inspection Bureau (SPIB) for Number 2 or better.
- D. All lumber shall not exceed 19% moisture content.

2.2 Plywood

- A. All plywood shall be 4/5-ply minimum and shall comply with U.S. Product Standard PS-1 for softwood plywood and shall bear the specified grade and stamp of the American Plywood Association.
- B. Unless otherwise shown on the Drawings, plywood shall meet the following requirements:

<u>Use</u>	<u>Thickness</u>	<u>Grade</u>	<u>Glue</u>	<u>Span Rating</u>
Roof	5/8" T&G	OSB Structural 1	Exterior	40/20
Exterior Sheathing	1/2"	OSB Structural 1	Exterior	32/16
Interior Sheathing	1/2"	C-D	Exterior	32/16
Electrical Backboard	3/4"	BC	Exterior	N/A

- C. All OSB shall be coated oriented strand board (OSB) sheathing in lieu of exterior wall sheathing, equivalent to "Advantech" by Huber Industries. Appropriate Sizes and Grades of plywood may be substituted at the contractor's option.

2.3 Accessories

- A. Nails shall be new, bright or galvanized as appropriate, common nails of appropriate lengths and sizes to adequately join the wood. Use galvanized where exposed to weather or pressure treated lumber or where shown on the Drawings.
- B. Joist hangers, framing anchors shall be 18-gauge, galvanized steel such as manufactured by Kant Sag, Simpson, or approved equivalent.
- C. Special Nails shall be used where shown on the Drawings or as recommended by manufacturer.
- D. Glue shall be an all purpose subfloor and construction adhesive, suitable for interior and exterior use, as manufactured by DAP, GE, Ohio Sealants, of approved equivalents.

2.4 Pressure Treated Lumber (P.T.)

- A. Lumber or plywood in contact with ground or fresh water shall be treated in accordance with AWPA Standards C2 and LP-22 and shall be rated 0.60 retention.
- B. Lumber in direct contact with concrete, masonry, or steel, not in contact with soil or fresh water shall be treated in accordance with AWPA Standards C2 and LP-2 and shall be rated 0.40 retention.
- C. Pressure treatment shall be water borne chromate copper arsenate (ACQ).
- D. Wood shall be dried after treatment.

2.5 LEED Requirements

- A. Use a minimum of 50% (based on cost) of wood-based materials and products that are certified with the Forest Stewardship Council's principles and criteria. Wood used for temporary applications need not apply.
- B. Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value.

PART 3 – EXECUTION

3.1 Preparation

- A. Carefully select individual lumber pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing.
- B. Cut out and discard defects which render a piece unable to serve its intended function.
- C. Lumber will be rejected by the Department if it is excessively warped, twisted, bowed, mildewed or molded, as well as if it is improperly installed.

3.2 Erection

- A. All framing work shall produce joints which are tight, true, and well nailed with members assembled in accordance with the Drawings and with pertinent codes and regulations.
- B. All framing and fastening shall equal or exceed HUD Minimum Property Standards, Manual of Accepted Practices and the requirements of the IBC.
- C. Do not shim any framing member.
- D. Install horizontal and sloped members with crown up.
- E. Do not notch, cut or bore members for pipes, ducts, conduits, or for any other reason, except as shown on the Drawings and as approved by the Department.
- F. Bearing surfaces on which structural members rest shall provide a full, even support.
- G. Joists, rafters and similar members shall be fastened with at least two (2) galvanized steel hangers or anchors and nailed completely.
- H. Install solid block bridging at midpoint of joists or as shown on the Drawings.
- I. Provide all shims, blocking and bracing as shown on the Drawings and as approved by the Department to complete the work.
- J. In addition to normal framing operations, install wood blocking or backing required to support the work of other trades.

3.3 Plywood Sheathing

- A. Unless otherwise specified or approved by the Department, install plywood with the face grain perpendicular to framing and central joints over supports. Leave 1/16-inch gap where adjacent plywood panels meet.
- B. Stagger plywood joints so that all joints do not lie on the same support. Nail as shown in the recommended fastening schedule in this Section.

3.4 Nailing

- A. Use common wire nails except as otherwise indicated. Make tight connections between members. Countersink nail heads on exposed carpentry work and fill holes.
- B. Install fasteners without splitting wood; pre-drill as required.
- C. All nailing shall comply with the IBS, Recommended Fastening Schedule (found in table 2304.9.1), unless special requirements are shown on the Drawings.

3.5 Concrete Bearing

- A. All wood which bears against concrete, earth, steel or masonry shall be pressure treated as specified on the Drawings or as approved by the Department.

SPECIAL PROVISION
SECTION 06192
STRUCTURAL GLUE LAMINATED TIMBER

PART 1 – GENERAL

1.1 Summary

A. Work shall consist of providing wood arches as shown on the drawings, and as needed for a complete installation.

B.

1.2 Quality Assurance

- A. Laminated wood arches fabrication and installation shall comply with the requirements of the American Institute of Timber Construction.
- B. Use an adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and are knowledgeable with the specified requirements and methods necessary to properly perform the work of this section.

1.3 Submittals

- A. Within 30 days after the contractor has received the Departments Notice to Proceed, the contractor shall submit the following:
- A complete list of items to be provided under this section
 - Manufacturer's specifications and all related data needed to prove compliance with the contract requirements.
 - Shop drawings showing species, sizes and grades of lumber proposed to be used.
 - Configuration of arch.
 - Connection details and bearing details, including loads induced from arch.
 - Installation procedure.
 - 6 sets of plan sets and design calculations sealed and stamped by a professional engineer licensed to practice in the State of Maine.

1.4 Delivery Storage and Handling

- A. Handle and store arches with care and in accordance with manufacturer's instructions and with recommended handling procedures of AITC.
- B. The delivery of the arches shall be coordinated between the arch manufacturer and the contractor in such a manner to avoid any extended on-site storage.

- C. Arches shall be handles during fabrication, delivery and installation so as to not induce any excessive bending or additional stresses on the arch.
- D. Trusses shall be unloaded on a smooth surface, and shall be protected against any on-site activities and environmental conditions.

PART 2 – PRODUCTS

2.1 Structural Glue Laminated Wooden Arches

- A. Design Criteria
 - 1. Arches shall comply with all applicable codes in the International Building Code, 2009.
 - 2. A 100psf ground snow load.
 - 3. 90mph wind load.
 - 4. Combination symbol 24F-V5
 - 5. Industrial Grade.
- B. Fabrication
 - 1. Cut members to accurate lengths, angles and sizes to produce close fitting joints with proper wood-to-wood bearing in assembled units.
 - 2. Connect members by means of metal connector plates accurately located and securely fastened to foundation.
 - 3. Arches shall be fabricated in a permanent facility that is large enough to handle the size or the arches, is equipped to manufacture the arches by experienced workmen and does not expose the wood to any extreme weather conditions.

2.2 Sealer

- A. Seal entire member as recommended by manufacturer.

2.3 Bracing

- A. Brace arches as indicated on contract drawings and as required for arch installation and as recommended by arch manufacturer.

2.4 Miscellaneous Materials

- A. Provide any and all other materials, not specifically indicated in this section, required for the proper installation of the arches.

2.5 Anchors

- A. Install F1554 anchors as indicated on the contract drawings. Anchors and fasteners shall be galvanized in accordance with ASTM 123/153 as applicable. Anchors shall be grade 36ksi or better. Contractor shall coordinate

the exact anchor layout with the arch manufacturer prior to installation of any anchors. Any change in the layout of the anchors shall be reported to the Engineer of record. Any dependent work shall not be done until the engineer is satisfied that the modified anchorage is adequate.

2.6 LEED Requirements

- A. Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value.
- B. Use a minimum of 50% (based on cost) of wood-based materials and products that are certified with the Forest Stewardship Council's principles and criteria. Wood used for temporary applications need not apply.

PART 3 – EXECUTION

3.1 Surface Conditions

- A. Do not proceed with installation until the area and conditions of the area in which the work of this section will be performed have been deemed adequate for installation.

3.2 Installation

- A. Coordinate with all involved parties prior to installation to make sure all necessary equipment, tools and personnel are available.
- B. Install the work of this section in accordance with the original design, the approved shop drawings, and the recommendations of the manufacturer as approved by the Engineer.
 - 1. Any apparent damage to the arches shall be reported to the manufacturer prior to installation
 - 2. Cutting or altering of any arch is not permitted unless approved by the Engineer and the manufacturer.
 - 3. Hoist arch into position with required bracing at designated lifting points.
 - 4. Lift arches in such a manner as to not induce any excessive stress in the arch.
 - 5. Set arch level and plumb in correct location. Arches shall be temporarily braced as required until sufficient permanent bracing is installed.
 - 6. Concentrated loads shall not be placed along the arch until all specified bracing has been installed and the roofing has been permanently secured into place.
 - 7. Contractor shall coordinate installation of arches to make sure arches are installed in a timely fashion that will minimize the time between arch placement and installation of final permanent bracing. Arches

shall not sit in place with temporary bracing for any extended amount of time.

SPECIAL PROVISION
SECTION 07611
METAL ROOFING

PART 1 - GENERAL

1.1 Summary

- A. Work included shall consist of installing a standing seam metal roofing complete with concealed fasteners and accessories for a water tight system. Metal roofing shall be continuous, contoured to the profile of the roof arch, with no butt seams.

1.2 Quality Assurance

- A. Contractor shall be approved in writing by the roofing manufacturer and shall substantiate a minimum of three years experience installing standing seam roofing.

1.3 Submittals

- A. Submit two copies of detailed shop drawings to the Department for review at least fifteen days prior to incorporation into the work. Shop drawings shall be approved and assigned a number by the manufacturer.
- B. Shop drawings shall include the following:
- Outline of roof and roof size.
 - Layout of panels
 - Location and types of proposed penetrations.
 - Perimeter details
 - Penetration details
 - Manufacturer's data on the proposed materials including panels, anchor clips and fasteners.
 - Calculations with registered engineer's seal, licensed in the State of Maine, verifying roof panel and attachment method resists applicable wind pressure imposed on it applicable with the IBC 2009.
- C. Submit written approval of contractor by manufacturer.
- D. Submit sample warranty and maintenance instructions.

1.4 Warranty

- A. Provide manufacturer's written twenty year warranty for weather tightness against leaks in roof panels cause by ordinary wear and tear under normal weather conditions.
- B. Roof finish coating shall be warranted against rust, peeling, chipping, cracking and blistering for a period of twenty years.

- C. Contractor shall provide written three year warranty, guaranteeing the roof system to be watertight and free of defects following final acceptance.
- D. Contractor shall provide detailed instructions for preventative maintenance and noting a list of harmful substances that may damage roofing.

PART 2 – PRODUCTS

2.1 Roof Panels

- A. Roof panels shall be 24-gauge Grade C Galvalume ASTM 792-86, AZ 55 with a “Satin Finish”.
- B. Panels shall have a standing, interlocking seam, 16” wide with a seam height of 1.5”.
- C. Panels shall be roll-formed in continuous lengths from eave to ridge.
- D. Roofing color will be selected by the Department.

2.2 Fasteners

- A. Panels shall be fastened to the substrate with a concealed clip system that accommodates thermal movement.
- B. Fasteners shall be concealed.

2.3 Flashing

- A. Flash all other roof penetrations.
- B. Flashing shall be as recommended by the roofing manufacturer and as approved by the Department. Flashing shall be a minimum of 0.040 aluminum or 24 gauge galvanized steel.
- C. Rubber boot pipe flashing shall be used around vent pipes.

2.4 Sealants

- A. Sealants between roof panels shall be as recommended by the manufacturer.
- B. Provide all required sealants at trim, roof penetrations, etc.
- C. Sealants shall be non-drying elastomer based material.

2.5 Fascia, Trim and Accessories

- A. Fascia and metal trim shall be prefinished 0.040 aluminum or 24 gauges galvanized steel.
- B. Ridge cap shall be a continuous venting metal ridge cover, as provided by the roofing manufacturer.

2.6 Acceptable Manufacturers

- A. Everlast Metals

B. Approved Equivalent

2.7 Provisions for Expansion/Contraction

- A. End wall trim and roof transition flashings shall allow the roof to move relative to walls as the roof expands and contracts with temperature changes.
- B. Movement of roof panels relative to other panels shall be accommodated by the use of clips that allow movement of up to 1” in either direction.
- C. Ridge assembly shall be designed to allow roof panels to move lengthwise with expansion/contraction as the roof panel temperature changes. Parts shall be factory prepunched for correct field assembly. If panels are formed in the field by manufacturer, panels may be punched in field as required by manufacturer. Panel closures and interior reinforcing straps shall be installed to seal the panel ends at the ridge. The attachment fasteners shall not be exposed on the weather side. A lock seam plug shall be used to seal the lock seam portion of the panel. A hi-tensile steel ridge cover shall span from panel closure to panel closure and flex as the roof system expands and contracts.

2.8 LEED Requirements

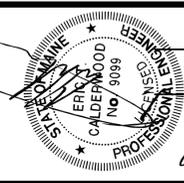
- A. Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value.
- B. Roof material shall have a solar reflectance index (SRI) equal or greater than 29 that covers a minimum of 75% of the roof surface.

PART 3 – EXECUTION

3.1 Inspection

- A. Contractor shall inspect the substrate prior to installing metal roofing to insure that the surface is

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STATE OF MAINE DOT
 CARIBOU, ME SALT SHED
 CEE 029-ST-11

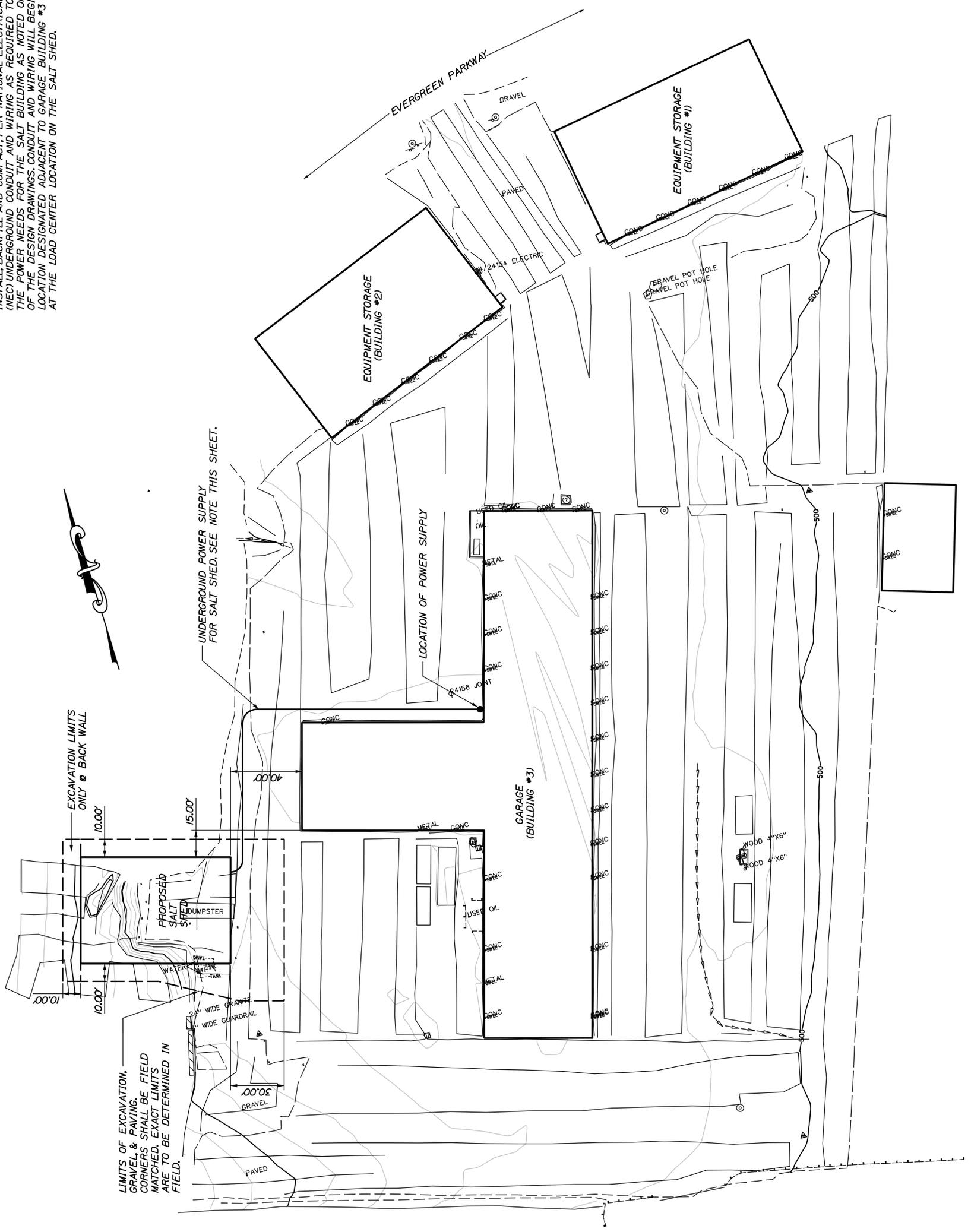


DATE: MARCH 2011	FIELD CHANGES
P.E. NUMBER: 9099	REVISIONS 4
	REVISIONS 3
	REVISIONS 2
	REVISIONS 1
BY: JHM	DESIGN-DETAILED: OJK
DATE: MAR 2011	CHECKED-REVIEWED:
	ETC

**CARIBOU MAINTENANCE
 GENERAL SITE PLAN**

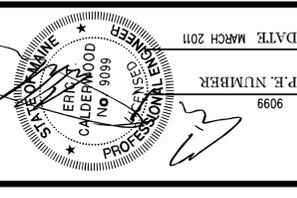
SHEET NUMBER
2

NOTE: CONTRACTOR WILL BE REQUIRED TO EXCAVATE, SUPPLY, INSTALL BACKFILL AND COMPACT, PER NATIONAL ELECTRICAL CODE (NEC) UNDERGROUND CONDUIT AND WIRING AS REQUIRED TO SATISFY THE POWER NEEDS FOR THE SALT BUILDING AS NOTED ON SHEET 13 OF THE DESIGN DRAWINGS. CONDUIT AND WIRING WILL BEGIN AT THE LOCATION DESIGNATED ADJACENT TO GARAGE BUILDING #3 AND TERMINATE AT THE LOAD CENTER LOCATION ON THE SALT SHED.



ROUTE US-1
 GENERAL PLAN
 SCALE: 1" = 30'

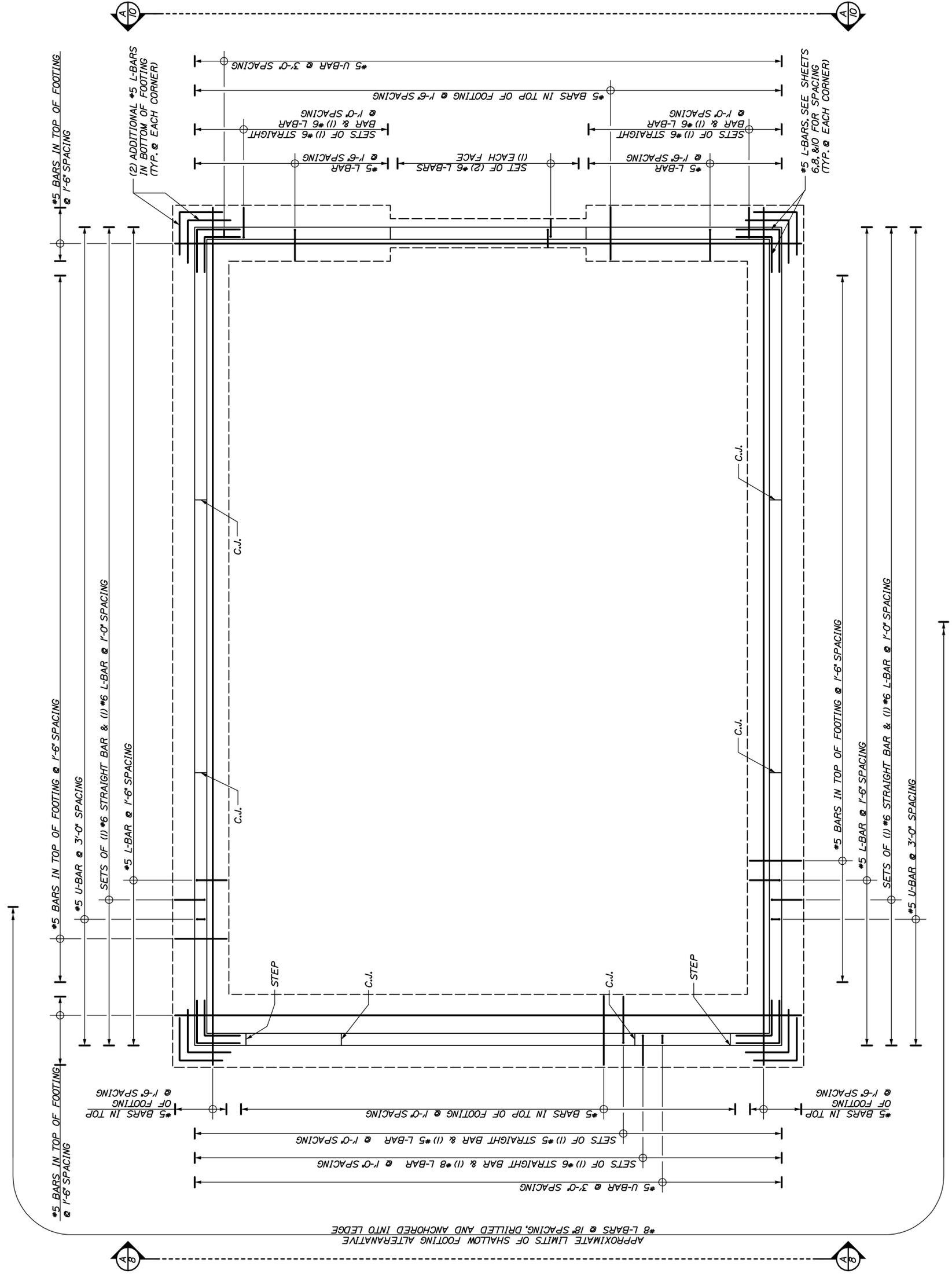
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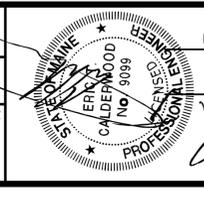
CARIBOU MAINTANANCE
 SALT SHED
 REINFORCING PLAN

SHEET NUMBER
 4



NOTE: HORIZONTAL REINFORCING STEEL IN FOUNDATION WALL NOT SHOWN, SEE SHEETS 6, 8, & 10 FOR DETAILS NOT SHOWN HERE.

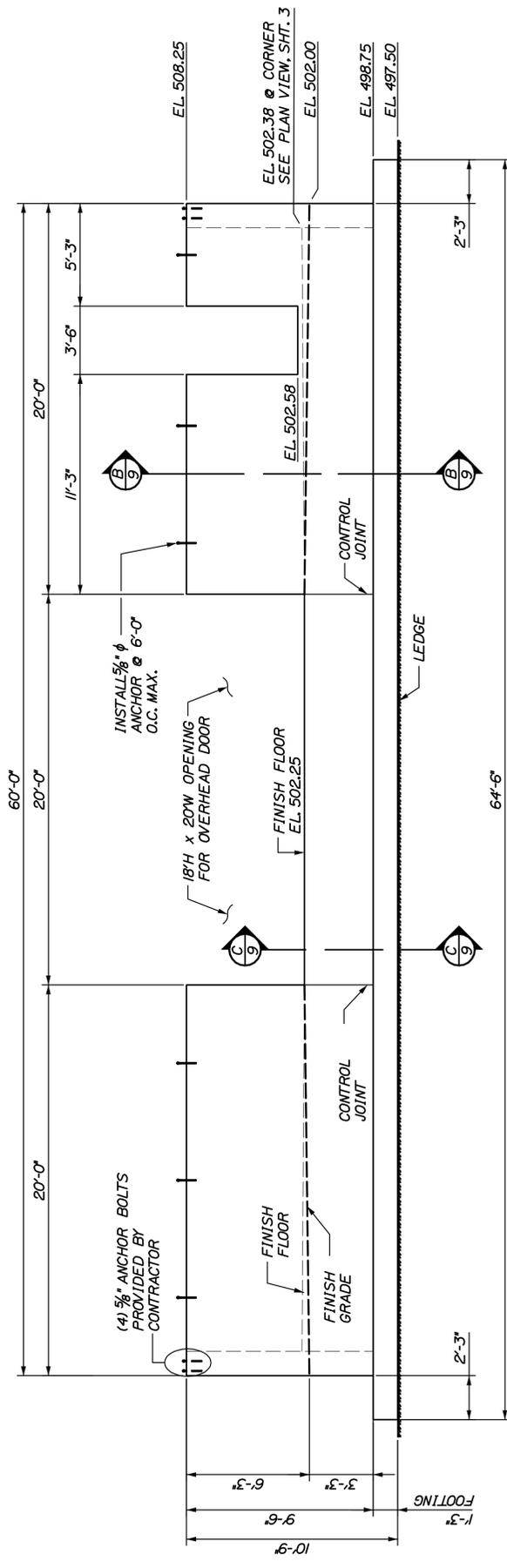
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P.E. NUMBER 9099
 DATE: MARCH 2011

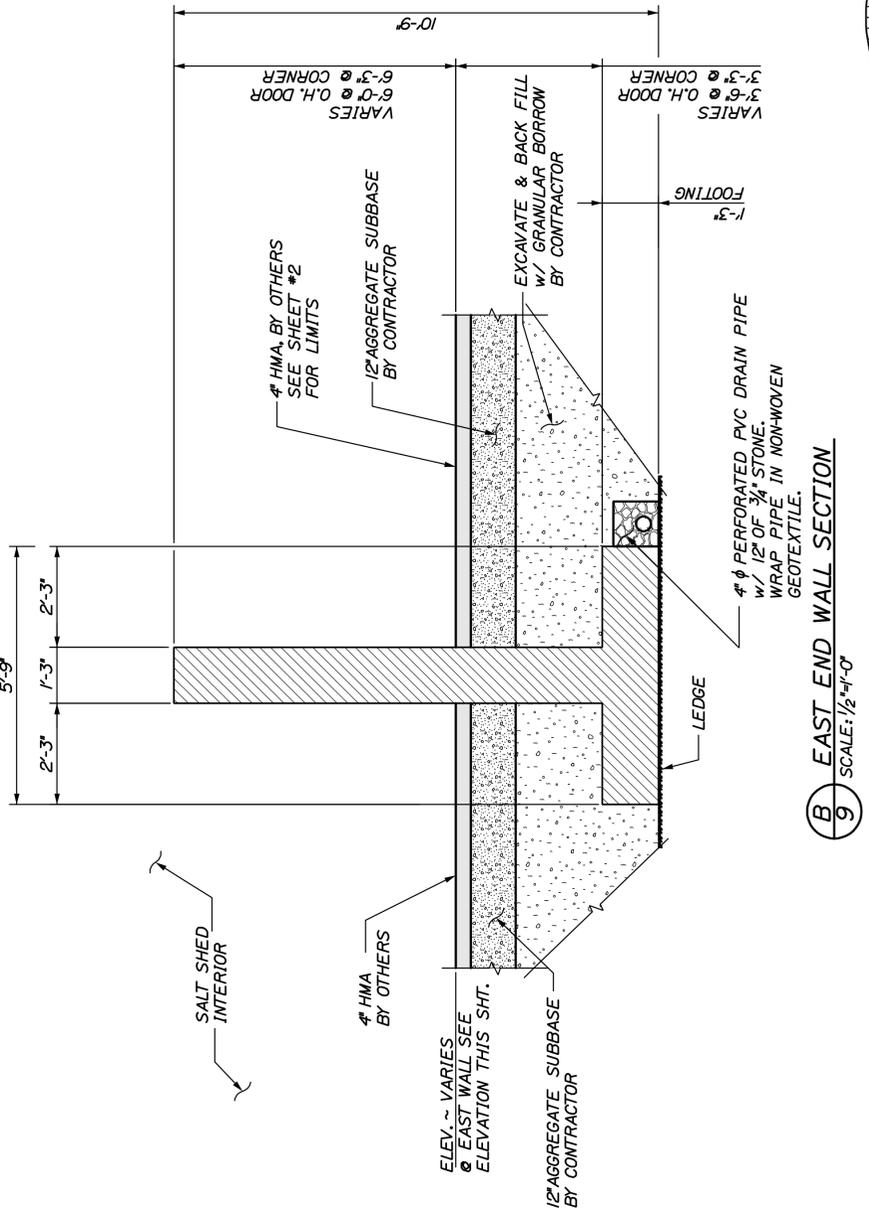
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REVISIONS 4		
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CARIBOU MAINTENANCE EAST END WALL SALT SHED DIMENSIONAL DETAILS

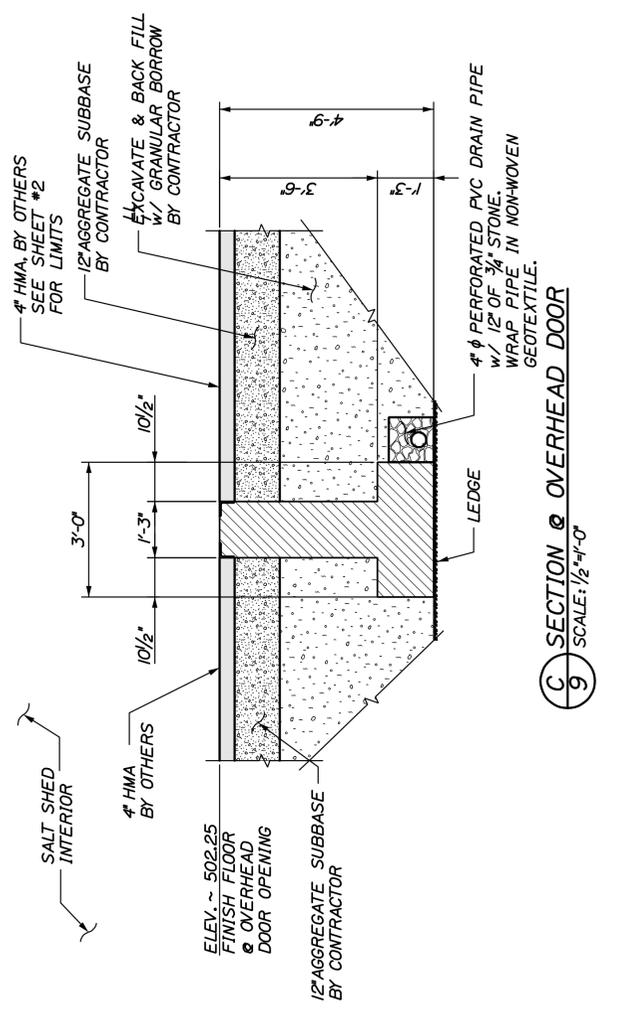


A EAST END WALL ELEVATION
 SCALE: 1/4" = 1'-0"

NOTE:
 ALL EXPOSED LEDGE IS TO BE THOROUGHLY
 CLEANED PRIOR TO THE CASTING OF CONCRETE.



B EAST END WALL SECTION
 SCALE: 1/2" = 1'-0"



C SECTION OF OVERHEAD DOOR
 SCALE: 1/2" = 1'-0"



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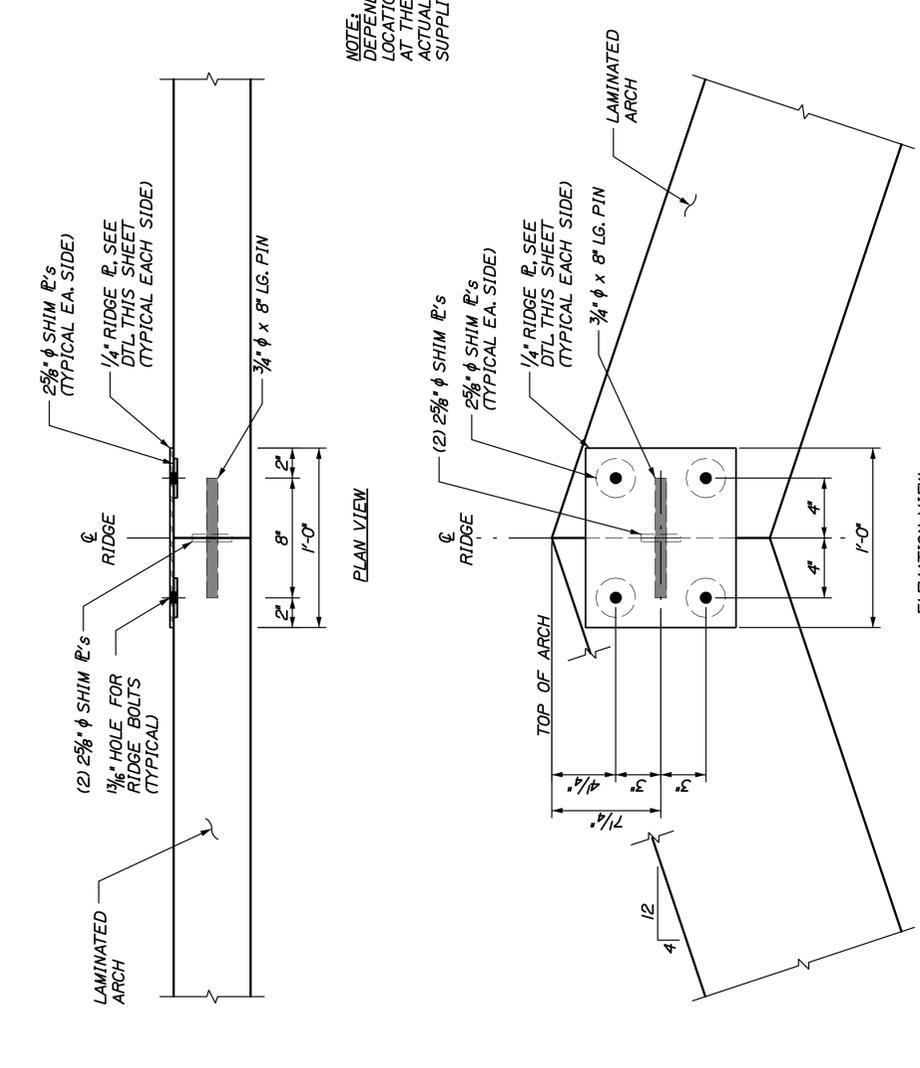
DATE: MARCH 2011
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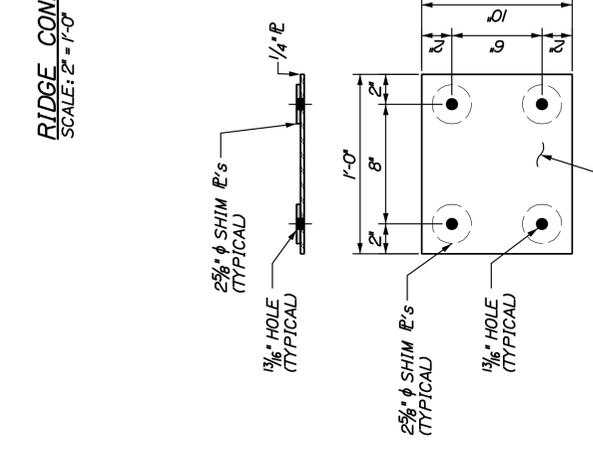
CARIBOU MAINTENANCE
 WEST END WALL
 SALT SHED
 FRAMING DETAILS

- METAL ROOFING NOTES:**
1. THE SALT SHED IS TO BE ROOFED WITH THE EVERLAST DL-150 PRODUCT, OR AN EQUIVALENT PRODUCT. THIS PRODUCT USES DOUBLE-LOCK STANDING SEAM ROOF PANELS.
 2. THE FINISH IS TO BE BARE GALVALUME.
 3. THE PANELS ARE TO BE DELIVERED TO THE JOB SITE BY THE SUPPLIER IN STRAIGHT, UNFORMED PANELS. THE SUPPLIER WILL THEN FORM THE PANELS ON SITE TO THE SHAPE AND RADIUS OF THE ROOF. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE ADDITIONAL MAN-POWER TO THE SUPPLIER TO AID IN MOVING THE PANELS.
 4. NO BUTT SEAMS WILL BE ALLOWED ON THE ROOF. THE PANELS WILL BE FORMED FROM 1 PIECE THAT BEGINS AT THE BOTTOM OF THE ROOF AND CONTINUES ALL THE WAY TO THE RIDGE.
 5. NO EXPOSED FASTENERS WILL BE ALLOWED ON THE ROOF PANELS.
 6. PANELS MUST BE INSTALLED IN A SEQUENTIAL PATTERN.
 7. A 30# ROOFING FELT OR AN APPROVED EQUAL SHOULD BE INSTALLED OVER SUBSTRATE PRIOR TO INSTALLATION OF PANELS.
 8. PANELS MUST BE LOCKED IN THE FIELD BY A MECHANICAL SEAMER.
 9. IF PANELS REQUIRE STORAGE BEFORE BEING INSTALLED, THEY SHOULD BE STORED IN A WELL-VENTILATED, DRY PLACE WHERE NO MOISTURE CAN COME IN CONTACT WITH THEM. IF STORED OUTSIDE, COVER WITH VENTED TARP OR WATERPROOF PAPER COVER (NOT PLASTIC). KEEP MATERIAL OFF THE GROUND.

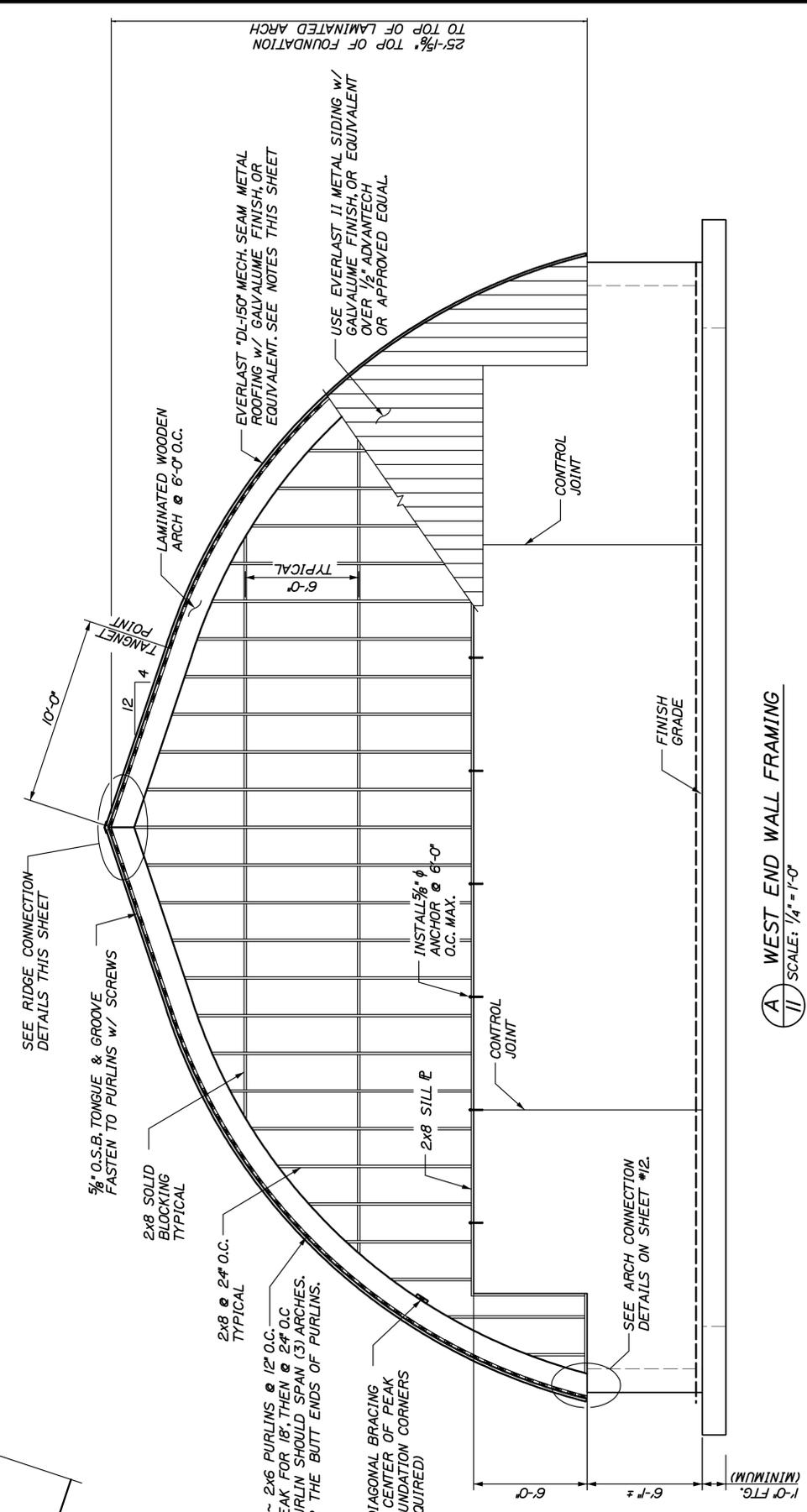
- NOTES:**
1. DEPENDING ON SIZE AND TYPE OF ARCH SELECTED, LOCATION OF CONNECTION BOLTS AND AND PINS AT THE RIDGE MAY CHANGE.
 2. ACTUAL RIDGE CONNECTION TO BE DESIGNED AND SUPPLIED BY ARCH MANUFACTURER.



RIDGE CONNECTION
 SCALE: 2" = 1'-0"

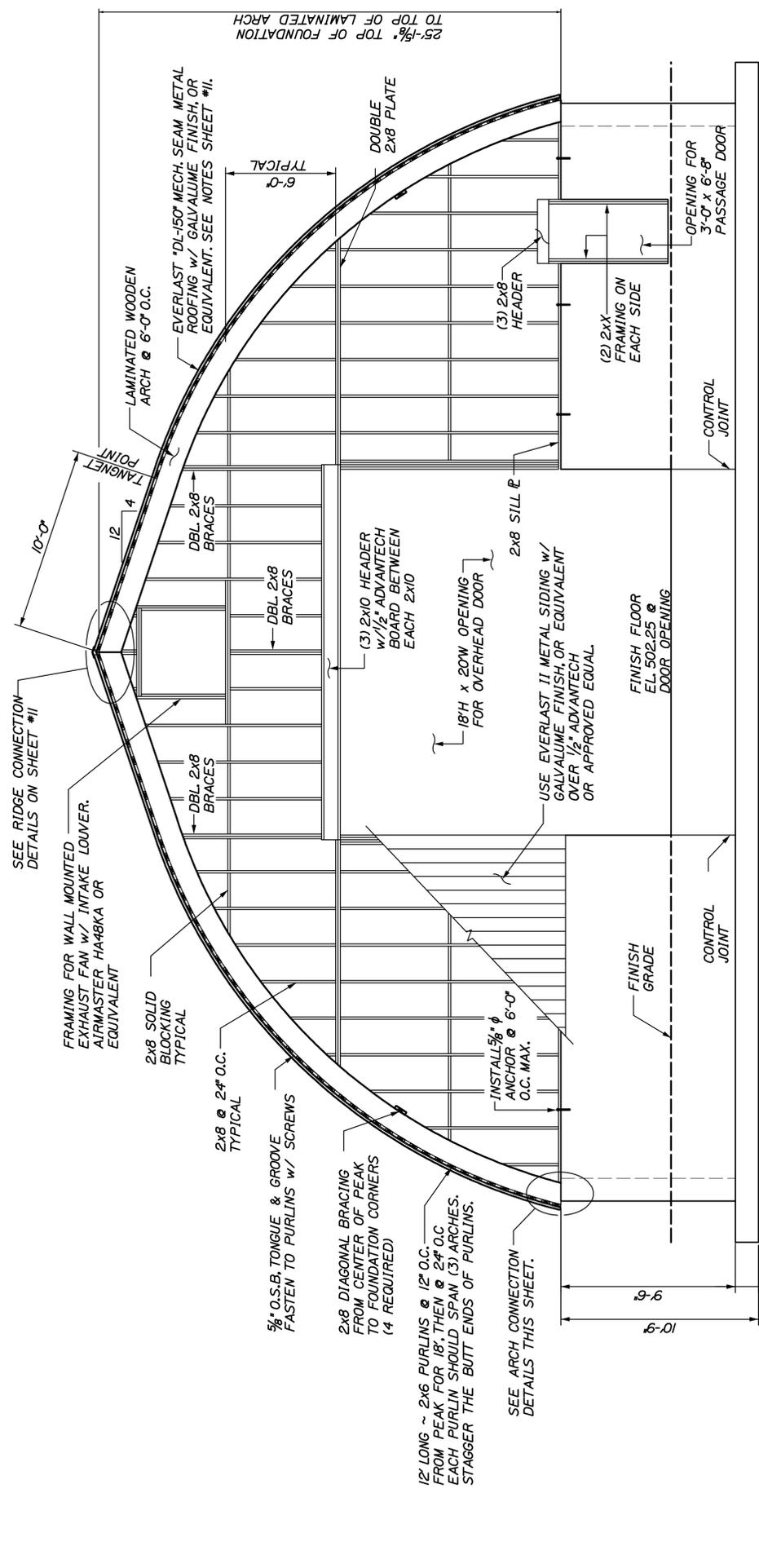


NOTE: RIDGE CONNECTION R SHOWN IS AN EXAMPLE. COORDINATE WITH ARCH MANUFACTURER FOR ACTUAL PLATE TO BE USED.



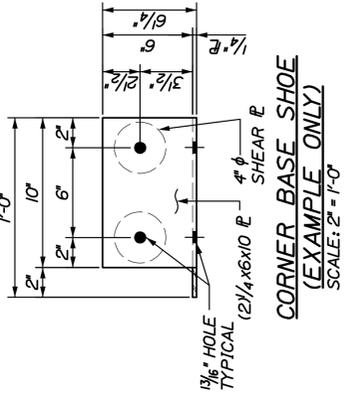
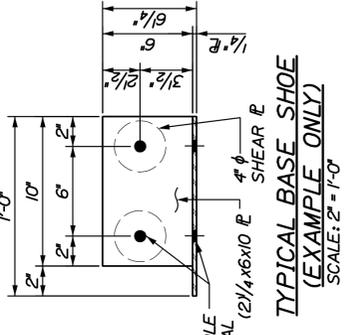
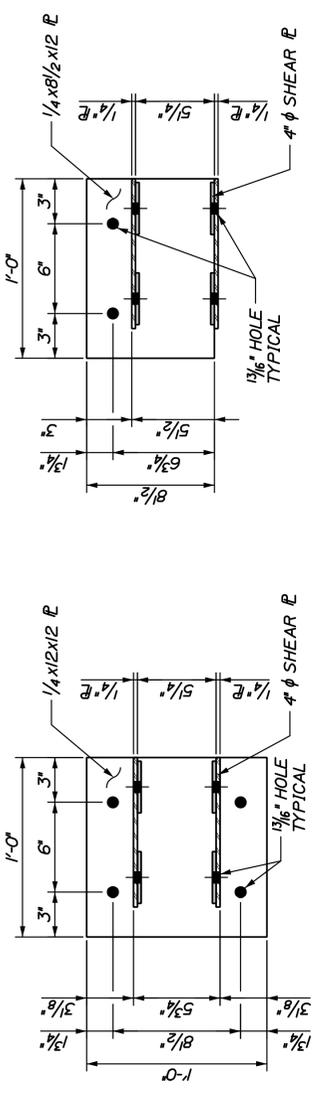
A WEST END WALL FRAMING
 II SCALE: 1/4" = 1'-0"

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REVISIONS 4			
FIELD CHANGES			



A EAST END WALL FRAMING
 SCALE: 1/4" = 1'-0"

NOTE:
 DEPENDING ON SIZE AND TYPE OF ARCH SELECTED, ANCHOR BOLT LAYOUT MAY CHANGE. ACTUAL ANCHOR BOLT LAYOUT TO BE COORDINATED WITH THE LAMINATED ARCH MANUFACTURER. GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING LAYOUT OF ANCHOR BOLTS WITH ARCH BASE PLATES TO ENSURE A PROPER FIT.
 BASE SHOES, SHEAR Ⓡ's, AND ARCH BOLTS TO BE DESIGNED AND SUPPLIED BY ARCH MANUFACTURER.



NOTE:
 SHOES SHOWN ARE EXAMPLES. BASE COORDINATE WITH ARCH MANUFACTURER FOR ACTUAL SHOES TO BE USED.

TYPICAL ARCH TO FOUNDATION CONNECTION
 SCALE: 1/2" = 1'-0"

