

906-635-0511 • 800-867-0511 • Fax: 906-635-0612

[S236-05249]

#### **ADDENDUM NO. 1**

#### TO THE

Sault Ste. Maire Public Schools Middle School Structural Roof Repairs and Roof Replacement Sault Ste. Marie, Michigan

ADDENDUM NO. 1 is issued April 11, 2025, to clarify, modify, and/or change the original plans and specifications issued by UP Engineers and Architects. This ADDENDUM NO. 1 is hereby made part of the Contract Documents for the contract noted below.

## Sault Ste. Marie Public Schools – Middle School Structural Roof Repairs and Roof Replacement

Please acknowledge receipt of this ADDENDUM NO. 1 on the appropriate blank on the Bid Form.

#### **GENERAL**

- 1. See **attached** pre-bid walkthrough sign-in sheet.
- 2. Extend bid due date to Monday, April 21, 2025, at 11:00 a.m. EST

#### **SPECIFICATIONS**

- 3. See attached revised bid form. Replace the original bid form with the attached.
- 4. **Section 21 13 13 Wet-Pipe Sprinkler Systems: ADD** Section in its entirety attached to this addendum.

#### **PLANS**

- 5. See attached revised structural details.
  - a. Metal panel at vertical roof extensions.
  - b. Treated plywood on parapet walls.
  - c. Cuts through new beams.
  - d. Denote bearing walls.

END OF ADDENDUM NO. 1
Prepared by:
U.P. Engineers & Architects, Inc.



U.P. ENGINEERS & ARCHITECTS, Inc.

Houghton • Iron Mountain • Ishpeming
Sault Ste. Marie, MI • Marinette, WI

(906) 635-0511 Fax: (906) 635-0612

Project.:	SAPS -	- Middle	School	Structural	Roof	Repairs	and	Re	placement	

Project No.: <u>S236-05249</u>

Date: April 3, 2025 @ 1:00 p.m. By: \_\_\_\_\_Jeremy K. Gagnon\_ Page: 1

### **SIGN-IN SHEET**

Name	Representing (Address)	Phone (area)	E-Mail Address
Jeremy Gagnon	UPEA	(906) 635-0511	jgagnon@upea.com
Tand Com	UPEA	96-203-4470	down p 4 pro. com
NOAH TACENTENO	Sailor Creek Continue	906 630 -8698	
CRAIG Miller	Sailor Creek Contiacting Comment haves Rosty	906-40-541T	Craig pace thore for fing, com
Term Miller	Great lakes Lodius	906-440-1163	rosh @ silorcreen antsoting. com  Crange a greatlance las ling, com  Tengen Cong cattakes vooling. con  Nar AD 49783 Q GMAIL. Com
MARC JACQUES	Nomad	906-440-000	Nam AD 49783 Q GWAIL, COM

#### **DOCUMENT 00 41 13**

#### BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

То:	Sault Ste Marie Public Schools	
Project:	Structural Roof Repairs and Replacement	
Date:		
Submitted	by:(inser	t full name and address)
the unde	ing examined the Place of The Work and all matters referred to in Contract Documents prepared by the Architect for the above ersigned, hereby offer to enter into a Contract to perform the Work for the contract to perform the contract to perform the work for the contract to perform the contract to	e mentioned project, we, the For the Sum Price of:
A	Base Bid New Roof Except Item B \$( in lawful money of the United States of America.	dollars),
В.	Classroom Area (Insurance) Work Bid \$( in lawful money of the United States of America.	dollars),
C.	Painting Allowance - \$50,000	
	Total of A, B & C Bid \$( in lawful money of the United States of America.	dollars),
D	Voluntary Contractor Alternates \$(	dollars),
<b>T</b> 1		

#### Inclusions:

We have included the security Bid Bond as required by the Instruction to Bidders. All applicable federal taxes are included and State of Michigan taxes are included in the Bid.

#### 2. ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date. If this bid is accepted by the Owner within the time period stated above, we will:

- Execute the Agreement within four days of receipt of Notice of Award.
- Furnish the required bonds within four days of receipt of Notice of Award
- Commence work within ten (10) days after written Notice to Proceed.

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required bonds, the security deposit shall be forfeited as liquidated damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit will be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

#### 3. CONTRACT TIME

If this Bid is accepted, we will complete the Work within the schedule set forth in the Contract Documents, as follows:

Final Completion of Priority 1 (one) areas by August 22, 2025.

Final Completion of Priority 2 (two) areas by October 1, 2025

Liquidated Damages, in the amount of \$1,000 per calendar day, will be deducted from the final payment to the Contractor for each day beyond the above dates established in the Contract. Liquidated damages are not cumulative, only charged \$1,000 per calendar day.

	Liquidated damages are not cumulative, only charged \$1,000 per calendar day.
4.	CHANGES TO THE WORK When the Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee shall be:
	percent overhead and profit on the net cost of our own Work;
	percent on the gross cost of work done by any Subcontractor.
	On work deleted from the Contract, our credit to the Owner shall be the Architect approved net cost plus of the deleted work.
5.	ADDENDA The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum. Price.
	Addendum # Dated Addendum # Dated Addendum # Dated
6.	SUBCONTRACTORS/SUPPLIERS: Work of the following subcontractors is included in the Proposal:
	Electrical:
	Fire Alarm:
7.	APPENDICES The following documents are attached to and made a condition of the Bid:
	<ul> <li>a. Bid security in form of a Bid Bond</li></ul>
8.	BID FORM SIGNATURES The Corporate Seal of
	(Bidder - print the full name of your firm)
	was hereunto affixed in the presence of:
	(Authorized signing officer Title)
	$(\mathbf{C}_{\bullet,\bullet}1)$

(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

#### **SECTION 21 13 13**

#### WET-PIPE SPRINKLER SYSTEMS

#### PART 1 - GENERAL

#### 1.1 SUMMARY

#### A. Section Includes:

1. Provide new sprinkler piping and sprinkler heads in area of renovation.

#### 1.2 REFERENCE STANDARDS

- A. National Fire Protection Association:
  - 1. NFPA 13 Standard for the Installation of Sprinkler Systems.

#### 1.3 SUBMITTALS

- A. Section 013300 Submittal Procedures: Requirements for submittals.
- B. Product Data:
  - 1. Submit manufacturer information regarding sprinklers, valves, and specialties.
  - 2. Submit performance ratings, rough-in details, weights, and requirements for supports and piping connections.

#### C. Shop Drawings:

- 1. Indicate layout of finished-ceiling areas, indicating sprinkler locations to be coordinated with ceiling installation.
- 2. Indicate detailed pipe layout, hangers and supports, sprinklers, components, and accessories.
- 3. Indicate system controls.
- D. Delegated Design Submittals: Submit Shop Drawings, signed by person or firm with approved certification in the location of the Project, with design calculations and the following items:
  - 1. Performance requirements and analysis data showing compliance with performance criteria.
  - 2. Data for water supply, hazard assessment, and system design concept.
  - 3. Hydraulic calculations to substantiate compliance with hydraulic design requirements.
  - 4. Hydrant flow test report with static and residual pressures.
- E. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
- F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

G. Manufacturer Reports: Certify that equipment has been installed according to manufacturer instructions.

#### 1.4 QUALITY ASSURANCE

- A. Perform Work according to NFPA 13.
- B. Seismic Performance: Comply with NFPA 13.

#### 1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' experience.
- B. Installer: Company specializing in performing Work of this Section with minimum three years' experience.
- C. Design: Professional engineer experienced in design of specified Work and licensed at Project location or by firm with approved certification in State of Project location.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 016000 Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Store materials according to manufacturer instructions.

#### D. Protection:

- 1. Furnish piping with temporary inlet and outlet caps until installation.
- 2. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
- 3. Provide additional protection according to manufacturer instructions.

#### 1.7 EXISTING CONDITIONS

#### A. Field Measurements:

- 1. Verify field measurements prior to fabrication.
- 2. Indicate field measurements on Shop Drawings.

#### 1.8 WARRANTY

A. Section 017000 - Execution and Closeout Requirements: Requirements for warranties.

#### PART 2 - PRODUCTS

#### 2.1 SYSTEM DESCRIPTION

- A. Provide coverage for area of renovation.
- B. Occupancy Requirements: Hydraulically design system to NFPA 13 for occupancies as determined by NFPA classifications.

#### 2.2 SPRINKLERS

- A. Manufacturers:
  - 1. Tyco Fire Products.
  - 2. Viking Corporation.
  - 3. Substitutions: As specified in Section 016000 Product Requirements.
- B. Type:
  - 1. Type: Match existing areas of same room type.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Section 017000 Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify that water-flow, pressure, supervisory, and alarm devices are installed and connected to automatic fire-alarm and smoke-detection system.

#### 3.2 INSTALLATION

- A. Comply with NFPA 13.
- B. Piping:
  - 1. Minimize obstructions with other Work.
  - 2. Where possible, install in concealed spaces above finished ceilings.
- C. Center sprinklers in two directions in ceiling tile and install piping offsets. Coordinate sprinkler head layout with other disciplines.

#### 3.3 FIELD QUALITY CONTROL

- A. Section 017000 Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
- B. Hydrostatic Testing:
  - 1. Comply with NFPA 13.
  - 2. Witnessing: Fire marshal.
- C. Equipment Acceptance:
  - 1. Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.
  - 2. Make final adjustments to equipment under direction of manufacturer's representative.

#### 3.4 CLEANING

- A. Section 017000 Execution and Closeout Requirements: Requirements for cleaning.
- B. Flush entire piping system of foreign matter.

#### 3.5 PROTECTION

- A. Section 017000 Execution and Closeout Requirements: Requirements for protecting finished Work.
- B. Apply masking tape or paper cover to protect concealed sprinklers, cover plates, and sprinkler escutcheons not receiving field paint finish.
- C. Remove protection after painting and replace painted sprinklers with new.

#### **END OF SECTION 211313**

# MIDDLE SCHOOL STRUCTURAL ROOF REPAIRS

SAULT STE. MARIE PUBLIC SCHOOLS SAULT STE. MARIE, MI

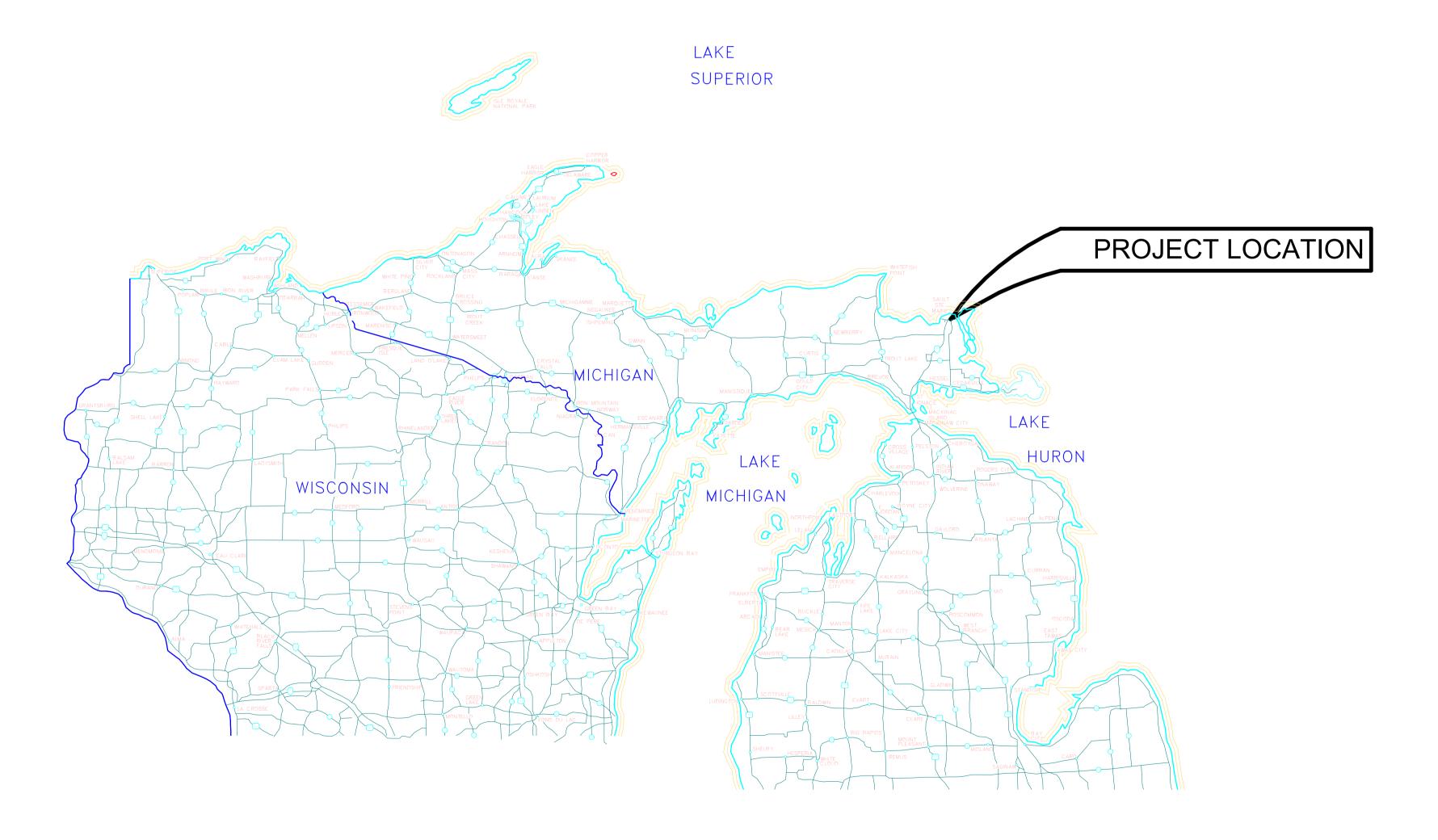
## U.P. ENGINEERS & ARCHITECTS, INC.

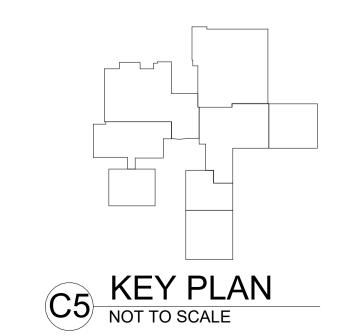
100 PORTAGE STREET HOUGHTON, MI 49931 P (906) 482-4810 F (906) 482-9799 424 S. PINE ST. ISHPEMING, MI 49849 **P (906) 485-1011** F (906) 485-1013

701 DUNLAP AVE., SUITE B MARINETTE, WI 54143 **P (715) 732-4188** F (715) 732-4189 707 ASHMUN STREET SAULT STE. MARIE, MI 49783 **P (906) 635-0511** E (906) 635-0612

2906 N. STEPHENSON AVE, SUITE 2 IRON MOUNTAIN, MI 49801 P (906) 779-0937 F (906) 779-0947

SHEET INDEX			
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UPEA ENGINEERS & ARCHITECTS

LE SCHOOL STRUCTURA
ROOF REPAIRS

 LE SCHOOL STRUCTURAL ROOF
 ISSUED FOR:
 DATE:

 REPAIRS
 ADDENDUM 1
 4-11-2025

 .T STE. MARIE PUBLIC SCHOOLS
 ADDENDUM 1
 4-11-2025

 .T NO:
 S236-05249
 ADDENDUM 1
 A-11-2025

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 A-11-202

COVER SHEET

G001

Know what's below.
Call before you dig.

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<b>BUILDING LOADS</b>		
ROOF SNOW LOADS	Roof Deflection Limits = L/360	
LOAD TYPE		
1. MINIMUM UNIFORM SNOW LOAD		70 psf
2. ROOF DEAD LOAD		20 psf
NOTES:  SNOW LOAD PER ASCE HAZARD TOOL SNOW DRIFT LOADS WHERE APPLICABLE PER SECT	TION 16 OF MBC 2021 & ASCE 7-16	

## **GENERAL PROJECT DESCRIPTION:**

- 1. CONTRACTOR SHALL MOBILIZE TO THE SITE.
- 2. CONTRACTOR SHALL REMOVE THE EXISTING ROOFING AND METAL DECK.
- 3. CONTRACTOR SHALL LEAVE ALL JOISTS AND BRIDGING IN PLACE.
- 4. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL BRACING (TEMPORARY OR PERMANENT.)
- 5. CONTRACTOR SHALL MAKE ANY MISCELLANEOUS JOIST REPAIRS TO THE EXISTING JOISTS WHERE A JOIST REPAIR IS REQUIRED, EITHER BEFORE OR AFTER THE EXISTING METAL DECK IS
- 6. CONTRACTOR SHALL MAKE ALLOWANCES FOR DOING MISCELLANEOUS WELD AND PLATE REPAIRS TO APPROXIMATELY TWELVE (12) STEEL JOISTS. (THIS IS PRIOR TO ANY DAMAGE CAUSED BY THE CONTRACTOR TO JOISTS DURING THE EXISTING DECK REMOVAL.)
- 7. CONTRACTOR SHALL BE REQUIRED TO TIE IN THE EXISTING ROOFING MATERIAL INTO THE NEW ROOFING TO ENSURE AND WARRANTY THE INTERFACE BETWEEN THE NEW AND EXISTING ROOFING; ALONG WITH THE WARRANTY OF ANY FLASHING WORK.

## **GENERAL STRUCTURAL NOTES:**

- THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR THE GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.
- 2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED, SELF SUPPORTING, STABLE STRUCTURE UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND CONSTRUCTION SEQUENCE AND PROVIDE ALL MEASURES NECESSARY TO ENSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENTS THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS FORMS. SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES,
- THE GOVERNING BUILDING CODE IS THE MICHIGAN BUILDING CODE 2015.
- 4. SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, ETC. SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER FOR CONFORMANCE WITH DESIGN INTENT ONLY.
- 5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST APPROVED MANUFACTURERS CERTIFIED EQUIPMENT
- 6. MECHANICAL FRAMING LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO MECHANICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND OTHER TRADES TO VERIFY EQUIPMENT SIZE AND LOCATIONS. ANY CHANGES IN EQUIPMENT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OR RECORD.
- 7. UNLESS NOTED OTHERWISE, REQUIREMENTS GIVEN FOR ONE OR MORE LOCATIONS ALSO APPLY AT OTHER LOCATIONS AT WHICH CONDITIONS ARE SIMILAR. THE REQUIREMENTS GIVEN SHALL BE ADAPTED TO CONDITIONS AT SUCH OTHER LOCATIONS.
- 8. DO NOT SCALE THE DRAWINGS TO DETERMINE BUILDING DIMENSIONS.
- 9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND FOR COORDINATING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THOSE SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. IF DISCREPANCIES IN THE DIMENSIONS OCCUR, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING THE DISCREPANCY TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- 10. CONTRACTOR SHALL NOT MIX GALVANIZED AND STAINLESS STEEL. ANY METAL PARTS IN CONTACT WITH OTHER METAL PARTS SHALL BE OF A SIMILAR MATERIAL.

## FOUNDATIONS AND FOOTINGS:

- 1. ALL FOOTINGS HAVE BEEN SIZED BASED ON AN ALLOWABLE BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT (psf), CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING AND PROVIDING 2,000 psf BEARING CAPACITY AT THE PREPARED SITE FOR ALL FOOTINGS AND SLABS WITH LESS THAN 1/4" SETTLEMENTS. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
- 2. THE SOIL BORING LOGS PRESENTED ON THE PLAN SHEETS REPRESENT POINT INFORMATION ONLY. PRESENTATION OF THIS INFORMATION IN NO WAY INFERS THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN AT THE EXACT LOCATION OF THE
- 3. ANY SUBSURFACE CONDITIONS OR EXISTING FOUNDATIONS ENCOUNTERED THAT ARE NOT REPRESENTED ON THE PLANS OR IN THE SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER FOR INSPECTION AND/OR ALTERNATE FOUNDATION/FOOTING DESIGN.

## **MASONRY:**

- 1. CONCRETE MASONRY SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION, PORTLAND CEMENT ASSOCIATION AND THE AMERICAN CONCRETE INSTITUTE CODES.
- 2. CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT CONFORMING TO ASTM C90: HOLLOW LOAD BEARING, GRADE N, TYPE II, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,700 psi (NET
- 3. FACE BRICK SHALL CONFORM TO ASTM C216, TYPE FBS, GRADE SW.
- 4. MORTAR SHALL CONFORM TO ASTM C270, TYPES S, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 psi AT 28 DAYS. (PROPORTION SPECIFICATIONS).
- 5. GROUT SHALL CONFORM TO ASTM C476, FINE OR COARSE TYPE AS APPROPRIATE, WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 psi AT 28 DAYS. LOW LIFT GROUTING SHALL BE USED IN HEIGHTS OF LESS THAN FOUR FEET.
- 6. HORIZONTAL AND VERTICAL REINFORCING SHALL COMPLY WITH THE ABOVE CODES AND BE OF TYPE, SIZE AND SPACING INDICATED ON THE DRAWINGS. DEFORMED BARS SHALL COMPLY WITH ASTM A615, GRADE 60; COLD-DRAWN STEEL WIRE SHALL CONFORM TO ASTM A82, AND DEFORMED STEEL WIRE SHALL CONFORM TO ASTM A496. LAP JOINT REINFORCING 12" MIN.
- 7. CONCRETE MASONRY DESIGN PER ACE 530.1 SHALL BE PER THE UNIT STRENGTH METHOD WITH f'm=1,700 psi.
- 8. A DESIGN MIX FOR THE MORTAR AND GROUT SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION, IN ACCORDANCE WITH THE APPROPRIATE ASTM SPECIFICATIONS AND SHALL INCLUDE ACTUAL 28 DAY COMPRESSIVE STRENGTH TESTS.
- 9. TEST DATA ON THE PROPOSED MASONRY UNITS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. TEST RESULTS SHALL BE IN ACCORDANCE WITH THE APPROPRIATE ASTM SPECIFICATIONS AND INCLUDE ACTUAL COMPRESSIVE STRENGTH, ABSORPTION, WEIGHT, MOISTURE CONTENT, AND DIMENSIONS.
- 10. NORMAL MASONRY CONSTRUCTION WEATHER CONDITIONS ASSUME THE AIR TEMPERATURE TO BE BETWEEN 40 AND 90 DEGREES FAHRENHEIT WITH MINIMUM WIND AND RAIN. PLUS AVERAGE RELATIVE HUMIDITY. IF CONDITIONS OTHER THAN THESE OCCUR. THE CONTRACTOR SHALL MODIFY CONSTRUCTION PROCEDURES IN ACCORDANCE WITH SOUND CONSTRUCTION PRACTICES AND THE ABOVE NOTED CODES.
- 11. EXTERIOR WALLS SHALL BE CONSTRUCTED IN A WEATHERTIGHT MANNER WITH ALL NECESSARY FLASHING AND WEEPS.

## **CAST-IN-PLACE CONCRETE:**

- 1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE LATEST EDITION OF THE ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 4301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
- 2. CONCRETE FOR THIS PROJECT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH ACCORDING TO THE FOLLOWING:
- A. FOOTINGS: 4,000 psi
- B. WALLS, COLUMNS, STRUCTURAL CONCRETE: 4,000 psi C. INTERIOR SLABS ON GRADE: 3,500 psi
- D. EXTERIOR SLABS ON GRADE: 4,000 psi 3. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60 (Fy=60,000
- psi). ALL WELDED WIRE FABRIC (WWF) SHALL BE IN ACCORDANCE WITH ASTM A185 (65,000 psi).
- 4. REINFORCEMENT PROTECTION SHALL BE AS FOLLOWS: CONCRETED POURED AGAINST EARTH 3" ALL OTHER CONCRETE 2"
- 5. CONTRACTOR SHALL PROVIDE CORNER BARS OF EQUAL OR GREATER SIZE TO HORIZONTAL WALL REINFORCEMENT AT ALL CORNERS AND INTERSECTIONS OF CONCRETE FOUNDATIONS.
- 6. ALL WELD PLATES AND MISCELLANEOUS STEEL SHALL BE Fy = 36 ksi
- 7. WELDED CONNECTIONS SHALL CONFORM TO THE AWS STRUCTURAL WELDING CODE AND US 60 ksi ELECTRODES.
- 8. ALL EMBEDDED ITEMS SHALL BE PLACED IN THE FORMWORK PRIOR TO PLACING CONCRETE. DRILLING AND GROUTING IS ACCEPTABLE AND SUBJECT TO ENGINEER APPROVAL.
- 9. FIELD WELDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT WRITTEN CONSENT OF THE ENGINEER.
- 10. FIELD BEND BARS COLD. DO NOT FIELD BEND BARS WITH HEAT OR BARS PARTIALLY EMBEDDED IN CONCRETE.
- 11. ALL EXTERIOR CONCRETE INCLUDING WALLS SHALL BE AIR-ENTRAINED.
- 12. SEE ARCHITECTURAL DRAWINGS FOR ALL FLOOR FINISHES, SLOPES, FLOOR DRAINS, ETC. NOT SHOWN ON FOUNDATION PLANS
- 13. THE CONCRETE FLOOR SLAB SHALL BE CUT WITH A 1/4" WIDE x 1-1/2" DEEP SAW-CUT PER PLAN. IF A PLAN IS NOT PROVIDED, CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER / ARCHITECT FOR APPROVAL. ALL SAW-CUT JOINTS SHALL BE FILLED WITH SEALANT PER SPECIFICATIONS. PERFORM CUTTING IMMEDIATELY AFTER PLACEMENT OF CONCRETE WHEN CONCRETE CAN SUPPORT REQUIRED EQUIPMENT. SAW-CUTTING SHALL OCCUR WITHIN 24 HOURS AFTER PLACEMENT. SAW-CUT JOINTS TO BE STRAIGHT AND TRUE.
- 14. PROVIDE 10-MIL VAPOR BARRIER UNDER ALL INTERIOR CONCRETE SLABS.

## **PLYWOOD:**

- 1. ALL PLYWOOD TO BE 1/2" CDX
- 2. ALL PLYWOOD SHEATHING SHALL BE SCREWED WITH #12 SELF-TAPPING SCREWS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN THE FIELD.

## STRUCTURAL STEEL:

- ALL STRUCTURAL STEEL SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST ISSUE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS.
- 2. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, Fy = 50 ksi, EXCEPT FOR ANGLES, CHANNELS AND PLATE, WHICH SHALL CONFORM TO ASTM A 36, Fy = 36 ksi.
- 3. ALL HOLLOW SECTIONS (HSS) SHALL CONFORM TO ASTM A500, Fy = 46 ksi.
- 4. ALL COLUMN ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GR. 36, UNLESS OTHERWISE NOTED.
- 5. ANCHOR BOLTS AND BASE PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES OR SIMILAR METHODS. GALVANIZED BOLTS IN ACCORDANCE WITH ASTM A123 OR ASTM A153 AFTER FABRICATION IF SO LABELED.
- 6. SHOP AND FIELD CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTING. BOLTED CONNECTIONS SHALL CONFORM TO ASTM A325-X USING LOAD INDICATOR WASHERS (LIW) OR LOAD INDICATOR BOLTS (LIB). UNLESS OTHERWISE NOTED, BEAM CONNECTIONS SHALL PROVIDE SHEAR CAPACITY TO SUPPORT A REACTION R EQUAL TO HALF THE SHEAR CAPACITY OF THE BEAM. USE 3/4" Ø BOLTS, E70XX 1/4" WELD, AND 5/16" ANGLE THICKNESS.
- 7. WELDED CONNECTIONS SHALL CONFORM TO THE AWS STRUCTURAL WELDING CODE. ALL WELDING SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70 ksi (E70 ELECTRODE) USING THE SHIELDED METAL ARC WELDING PROCESS (SMAW) AND IN ACCORDANCE WITH AWS SPECIFICATIONS. ANY OTHER SIZE OF ELECTRODE OR ANY OTHER TYPE OF WELDING PROCESS MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.

## **BAR JOIST/METAL DECKING:**

- 1. ALL STEEL BAR JOISTS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION STANDARD SPECIFICATION FOR STEEL JOISTS AND JOIST GIRDERS PUBLISHED BY THE STEEL JOIST INSTITUTE.
- 2. CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY AND PERMANENT LATERAL BRACING AND BRIDGING ACCORDING TO JOIST MANUFACTURERS SPECIFICATIONS AND OSHA REQUIREMENTS.
- 3. MINIMUM BEARING SHALL BE 6" ON MASONRY OR 4" ON STEEL U.N.O. PLACE BEARING PADS OVER CENTERLINE OF STEEL BEAM OR WALL U.N.O.
- 4. ALL STEEL DECK SHALL BE 22 GA, 1.5" WR/B, C60 GALVANIZED, 1-1/2" METAL DECK, USE 36/5 FASTENER PATTERN AND #10 SCREWS @ 12" O.C. FOR SIDE LAPS. FOR 3" ACOUSTIC DECK, USE 24/4 FASTENER PATTERN AND #10 SCREWS @ 12" O.C. FOR SIDE LAPS.
- 5. ACOUSTIC DECK SHALL BE PROVIDED WHERE NOTED. INCLUDE FIBERGLASS INSULATION IN FLUTES. (NOT IN CONTRACT.)
- 6. CONTRACTOR SHALL BE REQUIRED TO FIELD MEASURE TO VERIFY ALL STEEL JOIST CLEAR SPANS AND TOTAL LENGTHS; AND SHALL REFLECT ANY CHANGES ON THE SHOP DRAWINGS FOR THE JOISTS.
- 7. CONTRACTOR SHALL VERIFY THE END CONDITIONS AND CONNECTIONS FOR EACH PROPOSED GROUPING OF THE JOISTS IN EACH OF THE AREAS OF THE ROOF.



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