

JOB #1939

Region 7 Headquarters Storage Building

REBID

Miles City, MT

FWP # 7199152

OWNER:

**Montana Fish, Wildlife & Parks
Design and Construction**

PO Box 200701

1522 Ninth Avenue

Helena, MT 59620-0701

ARCHITECT:

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DATE:

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APPENDIX

1 **01 00 00 - General Requirements**

2
3 **RELATED WORK NOT IN CONTRACT:** Items indicated on Drawings as “N.I.C.” (Not in Contract), By
4 Owner, or By Others as noted on Drawings.

5
6 **LOCATE CALL:** In addition to requesting local utilities to locate underground utilities and per MCA 69-4-
7 501 to 506 the contractor is required by State Law to notify a One-Call location service before all
8 underground excavation. Notification must be received at least TWO (2) working days prior to
9 excavation. Call 1-800-424-5555.

10
11 **LINES & LEVELS:** Before starting Work, locate all general reference points. Take such steps as are
12 necessary to prevent their dislocation or destruction. If disturbed or destroyed, replace as directed. For
13 additions and alterations confirm existing construction and measurements and make adjustment for
14 variations.

15
16 **SPECIFICATIONS:**

- 17 A. Grouping of data in the specifications is for the convenience of the Contractor and conforms
18 roughly to customary trade practice. The Architect is not bound to define the limits of any
19 subcontract.
20 B. These project specifications are open to ‘or equal’ options unless noted otherwise.
21 a. Contractor assumes the risk and associated costs to match specifications when any
22 variance occurs without prior approval from the Architect via addenda or submittal review.
23 b. Where ‘Approved Manufacturers’ is listed in the Specifications, please note that product
24 variances still need to be preapproved – the companies listed have products that
25 generally meet specifications, but this need to be assessed and approved for each
26 project.
27

28 **PRIOR USE AND OCCUPANCY:** The Owner reserves the right to use or occupy any part of the building
29 or to use equipment installed under the Contract, prior to final acceptance. Such use or occupancy shall
30 not constitute acceptance of the work or any parts thereof.

31
32 **MANUFACTURER'S DIRECTIONS:** Manufactured articles, materials and equipment shall be applied,
33 installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer unless
34 herein specified to the contrary.

35
36 **SUBMITTALS:**

- 37 A. The Contractor shall submit to the Architect, for approval, any Shop Drawing, Product Data,
38 and/or Samples as may be required for the construction of any part of the Work. Any Work that is
39 done, or material ordered prior to the approval of such information, shall be at the Contractor's
40 risk. Provide physical samples whenever a color or finish selection is required and as specified in
41 associated Sections.
42 B. The Contractor shall group submittals by trade and/or supplier into a single, cohesive submittal
43 for the purpose of reviewing whole systems, installations, processes, etc. Submittals may be
44 rejected if the Architect deems them incomplete.
45 C. The Contractor shall clearly indicate products, options, assemblies, etc. pertinent to the
46 associated submittal and specifications for the project and call attention to any item requiring
47 selection by the Architect or Engineer tasked with reviewing the submittal. Submittals may be
48 rejected if the Architect deems them to be lacking in clarity.
49 D. Submit five (5) copies in 8-1/2" x 11" folded sizes to the General Contractor. Upon their stamped
50 approval, they will be forwarded to the Architect's office. Following the review of the Architect and
51 their Consultant, the Shop Drawings will be returned to the General Contractor marked NO
52 EXCEPTIONS TAKEN, MAKE CORRECTIONS NOTED, or if necessary, REVISE & RESUBMIT.
53 Note: Electronic submittals are accepted, but will be returned in the format received.
54 E. The Architect reserves the right to withhold action on a submittal requiring coordination with other
55 submittals until related submittals are received.
56 F. **SUBMITTALS REQUIRING COLOR SELECTIONS** shall be submitted as early in the project as
57 possible. The Architect may retain all submittals requiring color selections until ALL such
58 submittals have been submitted. The Architect will then prepare coordinated color selections to
59 be approved by the Owner. Upon approval of the color selections by the Owner, the Architect will

1 process the submittal(s) requiring color selections. All submittals requiring color selections shall
2 be accompanied by actual samples of the color and finish selection options. Printed or electronic
3 renditions of the color choices are not acceptable, do not accurately portray true colors, and
4 therefore cannot be used by the Architect to present the coordinated color choices to the Owner.
5 For this reason, only true samples of the actual finish materials will be accepted for color
6 selections. The Architect is not responsible for the delays caused by the failure of the Sub-
7 Contractor or Supplier to submit the correct color samples in a timely manner.

- 8 G. The Architect reserves the right to be reimbursed by the Contractor for time and expense required
9 to process any submittal that does not get approval after the first resubmittal and/or to gather
10 appropriate color samples when proper color samples are not submitted.
- 11 H. Approval of Submittals will be general and shall not relieve the Contractors from the responsibility
12 for proper fitting and construction of the Work, nor from furnishing material and work required by
13 the Contract which may not be indicated on the Submittal when approved. The approval of the
14 Submittal shall not be construed as allowing departures from the plans and specifications,
15 building codes, or other rules and regulations governing installation of materials.
- 16 I. Upon the Contractor's request, or at the Architect's discretion, a sample list of necessary, project-
17 specific submittals will be made available at the beginning of the project.

18
19 **REQUEST FOR PROPOSAL (RFP):**

- 20 A. Contractor responses are due within 7 calendar days after the RFP is issued.
 - 21 a. No associated Work shall be completed before the RFP is approved unless discussed
22 and agreed to by the Architect and Owner.
- 23 B. The Contractor, and each subsequent subcontractor/supplier, are limited to the total markup listed
24 in the Contract for all changes (typically 15%).
 - 25 a. Supervision, Project Management, Subcontractor Liability, Profit, Direct/Indirect
26 Overhead, Clerical, and similar expenses are part of this markup and shall not be tracked
27 separately.
 - 28 b. If applicable, the Contractor may include a 1% Bonding Fee and/or 1% Gross Receipts
29 Tax adder on the tail end of their totals.
- 30 C. The Contractor's formal response shall include:
 - 31 a. Line item breakdowns of quantities and costs for time, materials, and related expenses.
 - 32 i. Labor breakdowns shall include number of personnel, hours per personnel, and
33 associated rates. If prevailing wage rates are applicable to the project, labor
34 rates shall relate to the task at hand.
 - 35 b. If the RFP is deemed to be an explicit Time & Material (T&M) request, the response shall
36 include dates associated to the Work being tracked.
- 37 D. If delays are associated with the RFP, the Contractor shall notify the Architect via written
38 correspondence (e-mail preferred) within 7 calendar days from when the delay took place.
 - 39 a. Delay requests shall include justifications for how they impact the projected substantial
40 completion date.
- 41 E. The breakdowns for the Contractor and each Subcontractor/supplier shall appear on their own
42 invoice or letterhead.
- 43 F. The Architect will review the responses and will either send to the Owner for their ultimate
44 approval; send to their Consultants for review; or request more information/clarification from the
45 Contractor.
 - 46 a. If more information/clarification is requested, the Contractor has another 4 calendar days
47 to provide a revised response.
 - 48 b. The Architect reserves the right to be reimbursed by the Contractor for time and expense
49 required to process any RFP that does not get approval after the first round of review and
50 request for additional information.

51
52 **OPERATION AND MAINTENANCE MANUAL:** Per the Substantial Completion Procedures provide
53 Operation and Maintenance (O&M) Manuals as follows:

- 54 A. Physical Copy (Provide ONE)
 - 55 a. Directory: Prepare a single, comprehensive directory of emergency, operation, and
56 maintenance information and materials, listing items and their location to facilitate ready
57 access.
 - 58 b. Organization:
 - 59 i. Title Page, to include:

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1. Subject matter included in the Manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information of the Contractor.
 6. Name and contact information of the Architect.
 7. Name and contact information for major Consultants to the Architect that designed the systems contained in the manuals.
- ii. Table of Contents
 1. List each product included in the manual, identified by product name, indexed to the content of the volume, and cross referenced to Specification Section number.
 - iii. Manual Contents
 1. Organize into sets of manageable size and arrange content by Specification Section, system, subsystem, and equipment. Include updated shop drawings and/or product submittals wherever applicable.
- c. Physical copy is to be bound in a heavy-duty, three-ring binder with Division dividers.
 - i. Identify each binder on the front and spine with printed title "OPERATION AND MAINTENANCE MANUAL" and associated indicator if multiple volumes are needed.
 - ii. Oversize drawings are to be neatly folded to fit with inside the binder.
- B. Digital Copy (Provide ONE)
- a. Fully organized and indexed similar to the physical copy issued on a CD, DVD, or flash drive.
- C. Types of Manuals
- a. Operation Manuals
 - i. Content
 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Performance and design criteria if Contractor is delegated design responsibility.
 3. Operating standards, procedures, and logs.
 4. Wiring, control, and piped system diagrams.
 5. Precautions against improper use.
 6. License requirements including inspection and renewal dates.
 - ii. Descriptions
 1. Product name and model number. Use designations for systems and equipment indicated on Contract Documents.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
 - iii. Operating Procedures
 1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instruction on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
 - iv. Systems and Equipment Controls: Describe the sequence of operation and diagram controls as installed.
 - v. Piped Systems: Diagram piping as installed and identify color-coding where

- 1 required for identification.
- 2 b. Product Maintenance Manuals
- 3 i. Content: Organize manual into a separate section for each product, material, and
- 4 finish. Include source information, product information, maintenance procedures,
- 5 repair materials and sources, and warranties and bonds, as described below.
- 6 ii. Source Information: List each product included in manual, identified by product
- 7 name and arranged to match manual's table of contents. For each product, list
- 8 name, address, and telephone number of Installer or supplier and maintenance
- 9 service agent, and cross-reference Specification Sections.
- 10 iii. Product Information: Include the following, as applicable:
- 11 1. Product name and model number.
- 12 2. Manufacturer's name.
- 13 3. Color, pattern, and texture.
- 14 4. Material and chemical composition.
- 15 5. Reordering information for specially manufactured products.
- 16 iv. Maintenance Procedures: Include manufacturer's written recommendations and
- 17 the following:
- 18 1. Inspection procedures.
- 19 2. Types of cleaning agents to be used and methods of cleaning.
- 20 3. List of cleaning agents and methods of cleaning detrimental to product.
- 21 4. Schedule for routine cleaning and maintenance.
- 22 5. Repair instructions
- 23 v. Repair Materials and Sources: Include lists of materials and local sources of
- 24 materials and related services.
- 25 vi. Warranties and Bonds: Include copies of warranties and bonds and lists of
- 26 circumstances and conditions that would affect validity of warranties or bonds.
- 27

28 **CONTRACTOR AND SUBCONTRACTOR WORKER'S COMPENSATION INSURANCE:**

29 *The Contractor is required to procure and maintain Worker's Compensation Insurance for his employees.*

30 *The Contractor shall require all Sub-Contractors similarly to provide Worker's Compensation Insurance.*

31 In case any class of employees engaged in work under this contract is not protected *or exempt* under the

32 Workers' Compensation Statute, the Contractors shall provide and cause each Sub-Contractor to provide

33 adequate employer's General Liability Insurance for the protection of such of his employees that are not

34 otherwise protected.

35

36 **PERMITS & ORDINANCES:** Contractor to procure and pay for general construction permits or

37 certificates required by local authorities having jurisdiction over the Work. Comply with all Federal, State,

38 and Local ordinances applicable to the Work. Sub-Contractors are responsible for obtaining and paying

39 for permits or certificates required for their work, such as electrical or plumbing permits.

40

41 **CUTTING AND PATCHING:** Cutting and patching work will be paid for by the Sub-Contractor requiring

42 the Work to the General Contractor. Does not apply to work not included in Contract.

43

44 **TESTS:** The Owner will pay for tests and inspections they feel necessary for quality assurance, other

45 than those normally required by Public Authorities or unless otherwise specified. The Contractor shall, at

46 his expense, furnish samples for all tests and deliver them to the Testing Agency when and where

47 directed by the Architect. Contractor will pay costs of failed tests and superfluous trips made at the

48 direction of the Contractor. Contractor remains responsible for tests and inspections they feel necessary

49 to provide quality control of their Work.

50

51 **QUALITY CONTROL:** The General Contractor will be responsible for Quality Control of their Work and

52 their subcontractor's Work through their Superintendent who shall continuously monitor the Project.

53

54 **LAYOUT CONTROL:** Layout will be the Superintendent's responsibility. The Benchmarks given on the

55 Site Plan will be the vertical elevation that all other elevations are set in relation to. Do not use other

56 control points for establishing elevation unless they are set on site using conventional methods. *Prior to*

57 *doing any of the Work, the Contractor shall confirm that design elevations provide positive drainage and*

58 *meet ADA requirements as required. The Contractor shall also confirm that grades intended to match or*

59 *blend into existing are meeting the design intentions. If a discrepancy occurs, or if there are any potential*

1 concerns, the Contractor is to notify the Architect prior to any other Work being done.

2
3 SPECIAL INSPECTIONS: General Contractor shall notify the Architect 48 hours prior to operations
4 requiring inspection by IBC Sec. 1704. Inspections are required, but not limited to, on the following:

- 5 A. Concrete: Placing and test sampling
- 6 B. Reinforcing Steel: Placement
- 7 C. Welding: Structural and re-bar
- 8 D. High-Strength Bolting: Installation
- 9 E. Piling, Piers & Caissons: Driving & Testing
- 10 F. Special Earthwork: Engineered Fill

11
12 GUARANTEES AND WARRANTIES: Contractor is to provide a (1) ONE YEAR guarantee/warranty on all
13 Work under this Contract. This date corresponds to one year after the substantial completion date (OR
14 issuance of Certificate of Final Acceptance if applicable) for each predetermined phase as needed per
15 project requirements. Throughout the Specifications, certain work or materials will have longer warranty
16 or guarantee periods; provide written warranties or guarantees on these items before final payment.

17
18 TEMPORARY FACILITIES: By General Contractor (unless noted otherwise)

- 19
- 20 A. Water: Water is available on site from existing hose bibs on adjacent buildings.
- 21 B. Temporary Power: Power is available from existing outlets on existing adjacent buildings. Make
22 arrangements for use with owners representative locally.
- 23 C. Toilet: Restrooms are available in the adjacent shop building.
- 24 D. Telephone: Contractor shall install a job telephone at his expense. Phone may be a cell phone, but
25 either way there must be a means of contacting someone on-site during construction hours.
- 26 E. Cold Weather Protection: Heating required before the building is enclosed shall be furnished by
27 each Contractor or Sub-Contractor requiring same with heating units of approved types. Equipment
28 and surroundings kept in clean and safe condition. Applies only to concrete and caulking/sealing.
- 29 F. Temporary Stairs, Ladders, Ramps, Runways and Scaffolding: Furnish and maintain, as required by
30 all trades. Assess others on basis of use. Such apparatus, equipment and construction to meet
31 requirements of labor laws OSHA and other State or Local laws.
- 32 G. Temporary Fire Protection: Contractor shall provide and maintain fire extinguishers, fire hoses and
33 other equipment necessary for fire protection during construction.
- 34 H. Construction Fencing & Traffic Control: Contractor shall provide chain-link panelized construction
35 fencing minimum 6' high as required to secure construction from the Public and allow access.
36 Provide barriers and signage on adjacent streets and parking areas outside the construction fence as
37 required to safely control traffic.
- 38 I. Protection of Work-In-Place: Work-in-place that is subject to injury because of operations, weather,
39 heat, cold, wind, etc. shall be covered, boarded-up or substantially enclosed with adequate
40 protection.
- 41 J. Dust Control: See Section 02 41 00 - Demolition for requirements.

42
43 PROTECTION OF EXISTING GROUNDS: Provide and make use of landing pads, sheeting and other
44 support systems and materials to prevent damage and rutting existing landscaped areas and walks and
45 drives. Any such damage shall be fully repaired to the satisfaction of the Architect and Owner, including
46 grades, plant materials, sprinkler systems, and walks and drives.

47
48 CLEANING: Upon completion, the Contractor shall leave building in a clean condition including, but not
49 limited to, the following items:

- 50 A. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including
51 landscape development areas, of rubbish, waster material, litter, and other foreign substances.
 - 52 B. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains,
53 films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.
54 Restore reflective surfaces to their original condition.
 - 55 C. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts,
56 trenches, equipment vaults, manholes, attics, crawlspaces, and similar spaces.
 - 57 D. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - 58 E. Leave Project clean and ready for occupancy.
- 59

1 PROJECT RECORD (AS-BUILT) DOCUMENTS:

2 The General Contractor will keep one set of drawings on the site to be used exclusively for recording ANY
3 changes made to the original drawings by all trades. These changes will be at the time the changes are
4 made by the trade making the change. This set of drawings will be delivered to the Architect at
5 completion of the project and before final payment is made.

- 6
- 7 A. Copies: Submit ONE set of marked up record documents and ONE digital copy of the scanned
8 record documents.
- 9 B. Preparation: Mark record documents to show the actual installation where installation varies from
10 that shown originally. Provide information as needed to relay the extents of the variation.
- 11 a. Give particular attention to information on concealed elements that would be difficult to
12 identify or measure and record later.
- 13 b. Record data as soon as possible after obtaining it.
- 14 c. Record and check the markup before enclosing concealed installations.
- 15 C. Mark the Record Documents completely, accurately, and legibly. Use personnel proficient at
16 recording graphic information in production of mark-ups.
- 17 D. Mark Record Documents with erasable, red-colored pencil. Use other colors to distinguish
18 between changes for different categories of the Work at the same location.
- 19 E. Note Addenda, Alternate, CCD, RFI, RFP, Change Order, or similar identification numbers, where
20 applicable.
- 21 F. Submittal of Record Documents information that is incomplete, illegible, poorly organized or
22 information that is submitted on damaged, torn, smudged or unreadable copy will be rejected with
23 a request to resubmit.
- 24 G. Format: Organize in the same order as the original drawing set.

25

26 PROJECT MEETINGS:

27

28 PRE-CONSTRUCTION CONFERENCE: The Owner will schedule and conduct a pre-construction
29 meeting at the Project Site or other convenient location. Authorized representatives of the Owner,
30 Architect, and their consultants; the Contractor and his superintendent; major subcontractors and
31 suppliers; and other concerned parties shall attend. Participants shall be familiar with the Project and
32 authorized to conclude matters relating to the Work.

33

34 PRE-INSTALLATION CONFERENCES: The Contractor shall conduct pre-installation conferences at the
35 Project Site prior to each construction activity that requires coordination with other trades.
36 Subcontractors, manufacturer representatives and fabricators involved or affected by the particular work
37 shall attend the meeting. Notify the Architect of scheduled meetings.

38

39 WEEKLY PROGRESS MEETINGS: The Contractor's Superintendent shall conduct weekly progress
40 meetings with subcontractors, suppliers or other entities concerned with current progress or involved in
41 planning, coordination, or performance of future activities.

42

43 MONTHLY PROGRESS MEETINGS: The Owner will schedule and conduct monthly progress meetings.
44 The Owner, Contractor, and his Superintendent shall be represented at these meetings. Meeting will
45 review and correct or approve minutes of the previous meeting. Review other items of significance that
46 could affect progress. Include topics for discussion as appropriate to the status of the Project.

47

48 CONTRACTOR'S CONSTRUCTION SCHEDULE:

49

50 CRITICAL PATH METHOD (CPM): A CPM schedule will be submitted to the Owner for review. The
51 schedule will be updated for current progress status with each Periodic Estimate for Partial Payment. The
52 original baseline schedule will be maintained and will not be altered except to reflect changes in the
53 baseline schedule authorized by Change Order. Any request for change to the Contract performance
54 time must be based on demonstrated effect of changes in the Work on the Critical Path.

55

56 SUBSTANTIAL COMPLETION PROCEDURES:

- 57 A. Prepare and submit a list of items to be completed and/or corrected (Contractor's Punch List).
58 Indicate the monetary value of each item.
- 59 B. Complete the following submittals a minimum of TEN (10) days prior to requesting a Substantial

1 Completion walk-through:

- 2 a. Certificates of Release: Obtain and submit releases from Authorities having jurisdiction
3 permitting the Owner unrestricted use of the Work and access to services and utilities.
4 Include occupancy permits, operating certificates, and similar releases.
5 b. Submit closeout submittals including project record drawings, operation and maintenance
6 manuals, and similar record information.
7 c. Submit closeout submittals including specific warranties, workmanship bonds,
8 maintenance service agreements, final certifications, and similar documents.
9 d. Submit maintenance material submittals including tools, spare parts, extra materials, and
10 similar items. Deliver to Owner.
11 e. Submit changeover information related to Owner's occupancy, use, operation, and
12 maintenance.
- 13 C. Complete the following procedures a minimum of TEN (10) days prior to requesting a Substantial
14 Completion walk-through:
15 a. Advise Owner of pending insurance changeover requirements.
16 b. Participate with Owner in conducting inspection and walk-through with local emergency
17 responders.
18 c. Terminate and remove temporary facilities, mockups, construction tools, and similar
19 elements.
20 d. Complete final cleaning requirements.
21 e. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate
22 visual defects.
- 23 D. When the above items near completion, notify Owner in writing of intended schedule of
24 substantial completion. The Owner, and Contractor will then coordinate a "walkthrough"
25 inspection, after which a generalized statement of work yet to be completed will be issued by the
26 Architect (Architect's Punch List).
- 27 E. The Owner will then determine whether work is SUBSTANTIALLY COMPLETE.
- 28 F. Upon determination that work is SUBSTANTIALLY COMPLETE, the Owner will prepare and
29 submit to the Contractor, for written approval, the following documents:
30 a. **Certificate of Substantial Completion**, which shall:
31 i. Establish Date of Substantial Completion.
32 ii. State responsibilities of Owner and Contractor.
33 iii. Fix time within which items listed shall be completed.
- 34 b. **Contractor's Affidavit of Payment of Debts and Claims**
35 c. **Consent of Surety to Final Payment**

36
37 FINAL COMPLETION PROCEDURES:

- 38 A. Before requesting final inspection for determining final completion, complete the following:
39 a. Submit a final Application for Payment.
40 b. Submit a signed/dated copy of the Owner's Punch List.
41 c. Submit evidence of final, continuing insurance coverage complying with insurance
42 requirements.
- 43 B. When the above items near completion, notify Owner in writing of intended schedule of final
44 completion. The Owner, and Contractor will then coordinate a final "walkthrough" inspection.
- 45 C. Upon determination that work is COMPLETE, the Architect will process the final Application for
46 Payment.
- 47 D. Deficiencies in the Work, except major, which are found during or subsequent to the final
48 inspection by the Owner, will be corrected under the guarantee protection.

49
50 *END OF SECTION*

01 23 00 - Alternates

CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Section.

ALTERNATE PRICES: Contractor shall state, in the spaces provided in the Form of Proposal, Alternate Prices for the Work described below. The responsibility of determining quantity of Alternates rests with the Contractor. Base Bid and Alternate shall include cost of all supporting elements required so that no matter what combination of Base Bid and Alternates are accepted that portion shall be a complete entity in itself. Work for all Alternates shall be in strict accordance with the Specification Sections noted and applicable to the specific Work.

ALTERNATE A-1: Provide all materials, labor and work necessary to extend the new Engineered Post Frame Structure twenty-four feet (24 FT) to the south, adding another full bay. Alternate shall include additional site work, gravel, modification of the chain link fence, one additional convenience outlet, and one additional overhead light fixture.

END OF SECTION

DIVISION 02 - EXISTING CONDITIONS

CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

AS-BUILT DRAWINGS: Per Section 01 00 00 - General Requirements.

SCOPE: Complete all Site Drainage and Utility Work as shown on the Drawings and as specified.

CONDITIONS AT SITE: Visit the site. Examine and note all conditions as to the character and extent of Work involved. Protect any adjacent property and improvements from damage and replace any portions damaged through this operation. Maintain all benchmarks, control monuments, and stakes, whether newly established by Surveyor or previously existing. Protect from damage and dislocation. If it is necessary to disturb existing bench marks, re-establish in a safe place.

PERMITS & ORDINANCES: Procure and pay for all necessary permits or certificates required by local authorities having jurisdiction over the Work. Comply with all Federal, State and Local Laws. Check Supplemental Conditions and/or General Conditions to determine who is responsible for procuring the general construction permit.

COORDINATION: Cooperate and coordinate the Work with the various Sub-contractors whose work might be affected by operations.

ADJACENT PROPERTY: Restore any damage to adjacent properties, streets, and the like caused by operations of this Division to original condition without additional cost to the Owner.

TESTS: The Foundation Engineer who prepared the Soils Report (if applicable) shall perform all tests and inspections required by this Division. Relative compactions shall be determined as specified in ASTM D698. Owner will pay for passing tests; Contractor pays for failed tests and superfluous trips made at the direction of the Contractor.

EXISTING UTILITIES: Where existing utilities not shown on the Drawings are encountered: support, shore up, protect same and immediately notify Architect. Allow entrance, opportunity, and ample time for measures necessary for continuance and/or relocation of such services. Where noted on Drawings, cut and cap all street connections encountered in the excavating along curb line and mark location so they can subsequently be located and re-connected as required.

LAYOUT: Layout and Work under this Division shall be made by competent personnel experienced in surveying. If any discrepancies are found by Contractor between the Drawings and actual conditions at the site, Architect reserves right to make such minor adjustments in Work specified as necessary to accomplish the intent of the Contract Documents without increased cost to the Owner.

CLEAN-UP: Remove from the Site all rubbish, debris, etc. resulting from Work in this Division, except as otherwise specified above and per Section 01 00 00 - General Requirements.

END OF DIVISION

02 41 00 - Demolition

GENERAL REQUIREMENTS: Per DIVISION 02 – EXISTING CONDITIONS

LOCATE CALL: In addition to requesting local utilities to locate underground utilities and per MCA 69-4-501 to 502 the contractor is required by State Law to notify a One-Call location service before all underground excavation. Notification must be received at least TWO (2) working days prior to excavation. Call 1-800-424-5555.

DEMOLITION WORK: Refer to Drawings for specific Demolition Work.

ASBESTOS: No known asbestos is present on the site.

NESHAP PERMIT: This is not a project involving a building or existing structure, Not Applicable.

PROTECTIONS: Execute all demolition Work in an orderly and careful manner with due consideration for any existing structures, including any parts of the surrounding areas which are to remain. Barricade and cover as necessary to protect pedestrians, workmen and adjacent properties.

POLLUTION CONTROLS: Control as much as practical the spread of dust and dirt. Do not allow adjacent buildings or properties to become soiled by demolition operations. Observe environmental regulations. Do not allow water usage that results in freezing or flooding.

DISPOSAL: Promptly dispose of materials resulting from demolition operations. Do not allow materials to accumulate on-site. Transport materials resulting from demolition operations and legally dispose of off-site. Do not burn removed materials on-site.

EXECUTION:

- A. Keep all through lanes and drives clean and clear at all times.
- B. Conduct operations so as not to interfere with adjacent roads, streets, drives, walks, service lines and the like. Perform work in a systematic manner.
- C. Protect any electric, telephone, gas, water, or other lines servicing the adjacent structures or facilities. Contact Utility Companies, arrange and pay costs of utility disconnect/removal if needed.
- D. Per Section 31 23 00 - Excavation & Fill, bring site to natural grade with pit-run gravel or lean-clay soils placed according to "engineered fill" specifications. Top 8" (at minimum) to be lean-clay soils or road-mix.

SALVAGE MATERIALS: Certain materials shall be carefully removed, protected and turned over to Owner, or re-used as shown on Drawings. Store and protect in designated locations. Consult with the Owner before removing any mechanical or electrical equipment not specifically noted to be disposed of by the Contractor. Material not being re-used or being retained by the Owner will become the property of the Contractor and is to be disposed of properly at his expense. Salvage materials include but are not limited to the following:

- A. Chain link fencing and related.

END OF SECTION

DIVISION 03 - CONCRETE

CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

SCOPE: Supply/install all Concrete work as shown on the Drawings and as specified herein.

SHOP DRAWINGS: Per Section 01 00 00 - General Requirements, submit Shop Drawings showing bending and placing of all imbedded items. Drawings shall include diagrammatic elevations of all walls at a scale sufficiently large to show clearly the position and erection marks of marginal bars and their dowels and splices.

REFERENCE STANDARDS: Comply with all applicable Federal, State and Local codes, safety regulations, Portland Cement Association Standards, "Manual of Standard Practice for Detailing Reinforced Concrete Structures", American Welding Society (AWS), Vermiculite Institute Specifications, and any others referred to herein.

COORDINATION:

- A. Obtain information and instructions from other Trades and suppliers in ample time to schedule and coordinate the installation of items furnished by them to be embedded in concrete so provision for their work can be made without delaying the Project.
- B. Do any cutting and patching made necessary by failure or delay in complying with these requirements, at no cost to Owner.

TESTS AND INSPECTIONS:

- A. The Contractor shall pay costs of laboratory tests/inspections directly to the Testing Agency. The Contractor pays for all tests and superfluous trips made at the direction of the Contractor.
- B. The Contractor shall: Take three (3) identical test cylinders as directed by the Architect, mark test cylinders and store properly before delivering to Testing Agency, and be responsible and pay for delivery of all required concrete specimens to the Testing Agency at the proper time.
- C. Inspection of Reinforcing Steel and Concrete Placing: Before any concrete is poured on any particular portion of Project, reinforcing steel will be checked and approved by Architect. Correct any errors or discrepancies before concrete is placed. Such checking and approval shall not relieve Contractor from his responsibility to comply with the Contract requirements.

GENERAL:

- A. Produce concrete of required consistency and strength to present appearance satisfactory to the Architect.
- B. Use only one brand of cement unless otherwise authorized by Architect.
- C. Place all pipe sleeves, anchors, bolts, angle frames, inserts, supports, ties and other materials in connection with concrete construction and secure in position before concrete is placed.
- D. Store materials delivered to the job and protect from foreign matter and exposure to any element which would reduce the properties of the material.
- E. Pour no concrete unless air temperature is at least 40 deg F & rising. When temperature cannot be expected to remain above 40 deg F for at least (3) days, protect from freezing by covering with insulating materials, providing heating devices or other suitable means subject to approval by Architect. Temperature of concrete at time of pouring shall be between 50 deg F to 75 deg F.

PATCHING AND CLEANING:

- A. After forms are removed, remove projecting fins, bolts, form ties, nails, etc. not necessary for the Work or cut back one inch from the surface. Joint marks and fins in exposed Work shall be smoothed off and cleaned.
- B. Repair defects in concrete work. Chip voids and stone pockets to a depth of one inch or more as required to remove all loose material. Voids, surface irregularities, chipped areas, etc., shall be filled by patching or rubbing, as directed by Architect. Repaired surfaces shall duplicate appearance of un-patched work.
- C. Clean exposed concrete surfaces and adjoining work stained by leakage of concrete.

CLEAN-UP: In addition to the requirements of Section 01 00 00 - General Requirements, clean-up all concrete and cement work on completion of this project of the Work, except protective coatings or

1 building papers shall remain until floors have completely cured or until interior partitions are to be
2 installed.

3

4

END OF DIVISION

03 11 00 - Concrete Forming

GENERAL REQUIREMENTS: Per DIVISION 03 – CONCRETE

GENERAL:

- A. Provide complete forms of such strength and construction as to prevent any spread, shifting, or settling when concrete is deposited, and tight enough to avoid any leakage or washing out of cement mortar.
- B. Remove all dirt, chips, sawdust, rubbish, water, etc., from forms by water hosing and air pressure before any concrete is deposited. Leave no wooden ties or blocking in concrete except where indicated for attachment of other work. Leave lowest board of forms along walls loose or provide clean-out pockets. At any columns and pilasters, provide holes in forms at bottom for cleaning purposes. Leave openings and holes open until just before concrete is poured.
- C. Provide openings for the introduction of vibrators wherever necessary. Where required on account of excessive drop, or required by Architect, provide elephant trunks or side openings to receive concrete.
- D. Architect will cooperate with Contractor in the matter of removing forms and shoring as early as possible. The length of time forms must remain in place depends on the rate of time required for concrete to obtain a proper strength and on construction loads that will be placed on concrete.
- E. On removal of forms, all bolts, wires for anchoring, etc., shall be either removed, cut off to lengths as directed or left in place for anchorage of other work as specified.
- F. Forms to be reused shall be in good condition and thoroughly cleaned before being reused.
- G. Provide 3/4 inch chamfer at any wall, column and vertical corners unless otherwise shown.

MATERIALS:

Slabs, Walls and Exposed Concrete: Forms for flat exposed surfaces shall be 5-ply Exterior B-B (Concrete Form) panels. See requirements for thickness hereinafter. Panels with raised or separate face veneers shall not be used for exposed concrete.

Other Forms: Except where otherwise specified, shown or noted, forms for other concrete surfaces shall be constructed of Douglas Fir, smooth surfaced on the contact side, culled for loose knots and/or undesirable defects. Form Ties and Spreaders shall be metal, flat bar or cone nut type. No wood spreaders will be permitted. "Nominal" length ties NOT ACCEPTED – 8" walls are to be full 8" thick.

Round Tubular Concrete Forms: Equal to **SONOCO Sonotube**, paperboard, spirally wound and laminated with interior plastic coating moisture barrier, one-piece, one-time use. Place and brace as recommended by manufacturer depending on size and conditions. Erect forms plumb; do not use forms that are out of round, deformed or damaged. Protect from water damage prior to use. Place concrete per 03 30 00 - Cast-in-Place Concrete; do not vibrate or pound on exterior of forms, do not touch interior of forms with vibrator or tamping rods. Remove forms after concrete is properly set.

Optional Forming Systems: Pre-engineered steel, aluminum or composite form systems in good condition may be used in lieu of forming specified above. Form Sealer shall be **PROTEX Procoat** or equal.

Rough Hardware: Nails, bolts, screws, anchors, etc., as shown or needed shall be furnished and set.

END OF SECTION

1 **03 20 00 - Concrete Reinforcing**

2
3 GENERAL REQUIREMENTS: Per DIVISION 03 – CONCRETE

4
5 REINFORCEMENT:

- 6 A. Reinforcing Bars shall be deformed bars conforming to ASTM A615 Grade 40. Use ASTM Grade
7 60 for #4 and larger bars.
8 B. Welded wire fabric shall conform to requirements of ASTM A185 using bright steel wire meeting
9 ASTM A82. Gauges and dimensions shall be as noted on the Drawings.
10 C. All steel for reinforcement shall be new, un-rusted stock, free from mill scale and delivered without
11 rust other than may have accumulated in prompt transportation to the Work. Chairs shall be
12 standard Class B chairs as specified in the "Manual of Standard Practice", the Concrete
13 Reinforcing Steel Institute and Western Concrete Reinforcing Steel Institute. Tie wire shall be No.
14 16 American Wire Gauge or heavier, black annealed.
15 D. Steel Reinforcement Shop Drawings: Detail fabrication, bending & placement.
16 E. Fabricate steel reinforcement according to ***CRSI's Manual of Standard Practice***.

17
18 Reinforcing Steel: Supports or spacers for bars in walls shall be such that exterior face of wall will not be
19 marred when forms are stripped and final finish has been completed. Dowels from footings to walls shall
20 be same size and spacing as wall reinforcement, unless otherwise shown, and shall project thirty (30)
21 diameters into wall and thirty (30) diameters into footing unless detailed or noted otherwise.
22

23 PLACING REINFORCING STEEL:

- 24 A. Reinforcement shall be accurately placed and securely tied at intersections with 16 gauge black
25 annealed wire. It shall be maintained in proper position by chairs, bar supports, or other
26 approved devices.
27 B. Bars shall lap 30 diameters and splices, except as other indicated. Splices in adjoining horizontal
28 bars shall be staggered at least 6 ft. Where this is not feasible, submit suggestions for the
29 Architect's consideration. Horizontal bars shall be hooked around corners not less than 24
30 diameters, with a minimum of 12" as per typical details.
31 C. Concrete protection of reinforcing shall be not less than the following:
32 1. 3" where concrete is poured against ground.
33 2. 2" where concrete is poured against forms but may be in contact with ground.
34 3. 1-1/2" minimum in exterior face of exterior walls (exposed to weather but not in contact with
35 ground).
36 4. 3/4" minimum in interior walls and interior face of exterior walls.
37 5. 1-1/2" in beams, girders and columns.
38

39 *END OF SECTION*

03 30 00 - Cast-in-Place Concrete

GENERAL REQUIREMENTS: Per DIVISION 03 – CONCRETE

DESIGNING AND PROPORTIONING:

- A. The concrete shall: have the lowest slump compatible with placement requirements and workability. Work readily into corners and angles of forms and reinforcement without excessive vibration and without permitting materials to segregate or free water to collect on surface.
- B. Provide a ticket for every load of concrete. Contractor is to maintain a file on all load tickets and, upon request, provide a copy of all tickets to the Architect.

MIXING:

- A. Use ready-mixed concrete complying with ASTM C94 and with the requirements of Contract Documents. Mix for a period of not less than ten (10) minutes; at least three (3) minutes of mixing period shall be immediately prior to discharging of the job.
- B. Introduction of additional water after initial mixing not permitted unless water to cement ratio remains below 0.50.
- C. Temperature of concrete at time of placing shall not exceed 75 degrees F.

WEATHER REQUIREMENTS: Do not mix or place when atmospheric temperature is below 40 degrees F. or when conditions indicate temperature will fall below 40 degrees F. within 72 hours. Concrete deposited shall have temperature not less than 60 degrees F. Reinforcement, forms and ground which concrete will contact shall be completely free of frost. Keep concrete and formwork at a temperature not less than 50 degrees F for not less than 72 hours after pouring. During below freezing temperatures allow concrete to gradually cool for 48 hours after the 72 hour period.

CONVEYING AND PLACING:

- A. Notify Architect at least 24 hours before placing any concrete.
- B. Carry on concreting once started, as a continuous operation until the section of approved size and shape is completed. Make pour cut-off's of approved detail and location.
- C. Handle concrete as rapidly as practicable from mixer to place of deposit by methods which prevent separation or loss of ingredients. Deposit as nearly as practicable in final position to avoid re-handling or flowing. Do not drop concrete freely where reinforcing bars will cause segregation, nor drop freely more than six feet. Deposit to maintain a plastic surface approximately horizontal. In walls, deposit in horizontal layers not over eighteen inches deep. In pouring columns, walls, or thin sections of considerable heights, use openings in forms, elephant trunks, tremies, or other approved devices which permit concrete to be placed without segregation or accumulation of hardened concrete on forms or metal reinforcement above the level of the concrete. Install so concrete will be dropped vertically. At least two hours shall elapse after depositing concrete in walls or columns before depositing in heads over openings, supported beams, girders, or slabs.
- D. Concrete that has partially hardened shall not be deposited in the Work.
- E. Compact thoroughly using approved mechanical vibrators. Provide pour holes in forms to the extent necessary to insure filling or to allow necessary inspection. When starting a new pour or where conditions make puddling difficult, or where reinforcing is congested, place modified concrete with the same sand-cement proportions as elsewhere, but with not more than one-half the normal amount of coarse aggregate per yard. Use modified concrete to depth of not less than three inches when starting a new pour.
- F. Use mechanical vibrator at each point of dump, and a stand-by vibrator in good working order, but not in use, shall be kept on the job until all concrete is placed.

MATERIALS:

Portland Cement: Type II, Type III or Type V as specified shall conform to "Standard Specifications for Portland Cement" (ASTM C150). One brand of cement shall be used throughout the Work for structural purposes. Cement shall have been used for at least two years with the proposed aggregate without detrimental reaction. Contractor is required to obtain from the cement manufacturer and to furnish the Architect with satisfactory evidence of the kind and quality of all cement to be supplied.

Aggregates: Shall conform to "Standard Specifications for Concrete Aggregates" (ASTM C33), except as modified herein. "Gap-grading" of aggregates strictly prohibited. Provide even grading of all sizes of

- 1 aggregate. Use as large of aggregate available to the particular plant. Use a minimum of 56-60%
 2 aggregate in the mix design.
 3 Water: Potable.
 4 Air Entraining: Air entraining - ASTM C260. Equal to **BASF MasterAir AE 200**. Use in all exterior concrete
 5 (and only as approved by Architect). Note: For concrete in transit more than 30 minutes consult Architect
 6 about increased air entertainment. **Do not add air to concrete used for interior slabs.**
 7 - 3% (+/- 1%) air entrainment allowable for Footings and Foundations.
 8 - 6% (+/- 1%) air entrainment allowable for Exterior Flatwork.
 9 Form Release: Equal to **SPECHEM SPECSTRIP** to provide required separation and leave surface area
 10 with substantially the same appearance of untreated concrete.
 11 Repairs: Equal to **SPECHEM SpecPatch 30**. Used for patching damaged concrete.
 12

13 STRENGTHS, SLUMPS, CEMENT CONTENT:

- | | | | | |
|----|------------------------|-----------------|------------|----------------|
| 14 | A. Use | 28 Day Strength | Max. Slump | Min. Cement/CY |
| 15 | Footings & Foundations | 3,000 psi | 4" | 5.0 Sack |
- 16 B. Water Content: The materials shall be mixed with a minimum amount of water to produce a
 17 concrete of such consistency as will allow it to flow sluggishly into forms, around reinforcing steel
 18 and completely fill forms with the aid of thorough vibrating and tamping. The water/cement ratio
 19 shall not exceed 0.50. Slumps shall not, under any conditions, exceed those given except where
 20 water reducer is used, in which case slumps may be double that shown.
 21 C. Curing: Cure all flatwork with 2-6 mil sheet poly, misting the slab to get the poly to adhere to the
 22 surface. Leave sheet in place seven days. Water cure with burlap as specified above. Use of
 23 specific curing compounds by approval only.
 24

25 Exterior Concrete Curing: Use the following products per application:

- 26 A. General Sealant: Equal to **DAYTON SUPERIOR Anti Spall J33** linseed oil base (2) coats: Two
 27 coats applied per manufacturer's recommendations; apply to exposed concrete.
 28
 29

30 *END OF SECTION*

1 **DIVISION 06 - WOODS, PLASTICS, & COMPOSITES**

2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

4
5 SCOPE: Supply and install complete wood and plastics work as shown on Drawings and as specified.

6
7 SHOP DRAWINGS: Per Section 01 00 00 - General Requirements. Submit shop drawings of all
8 fabricated work at full size or large scale showing sizes, materials, grain run, methods of construction,
9 connection to adjacent members and installation. Indicate all backing members for installation and all
10 hardware.

11
12 GUARANTEE: Per Section 01 00 00 - General Requirements.

13
14 MEASUREMENTS: Verify all dimensions shown on Drawings by taking field measurements; proper fit
15 and attachment of all parts is required.

16
17 COORDINATION: Coordinate with all other trades as required to complete Work to satisfaction of
18 Architect.

19
20 DELIVERY AND STORAGE: Deliver and store all materials under protective cover and store within dry
21 enclosed area.

22
23 STANDARDS: Following standards apply to Work of the Division except where more stringent
24 requirements are specified herein:

- 25 A. Architectural Woodwork Institute "Quality Standards"
- 26 B. Western Wood Products Association Manual
- 27 C. American Wood Preservers Association Specifications
- 28 D. National Forest Products Association
- 29 E. West Coast Lumber Inspection Bureau
- 30 F. Douglas Fir Plywood Association
- 31 G. California Redwood Association

32
33 WOOD BACKING: Provide all wood backing, furring, stripping or blocking indicated or required for
34 installation and attachment of work of all other trades. Cut and frame all openings required by other
35 trades. Structural members shall not be cut, notched, or drilled except as shown or noted on Drawings.

36
37 TERMITE CONTROL AND DECAY PREVENTION: Remove all wood, including form lumber, scrap
38 lumber, shavings and sawdust in contact with ground. Leave no wood buried in any fill or backfill.

39
40 CLEAN-UP: Per Section 01 00 00 - General Requirements.

41
42 *END OF DIVISION*

1 **06 10 00 - Rough Carpentry**

2
3 GENERAL REQUIREMENTS: Per DIVISION 06 - WOODS, PLASTICS, & COMPOSITES

4
5 CONNECTIONS:

- 6 A. Nails: Bright common wire nails, galvanized for exterior work. Sub-drill where necessary to avoid
- 7 splitting.
- 8 B. Bolts: Drill bolt holes 1/32" larger than bolt diameter. Use square plate or malleable iron washers
- 9 under heads and nuts where they bear against wood. Re-tighten bolts immediately prior to
- 10 concealing with finish work. Re-tighten exposed bolts immediately prior to final inspection.
- 11 C. Lag Screws and Screws: Sub-drill, use square plate or malleable iron washer under lag screw
- 12 heads when they bear on wood.
- 13 D. Fabricated Connections:
- 14 a. Sheet metal galvanized of size and type shown on Drawings.
- 15 b. Structural Steel: ASTM A36. Welding by qualified welders in conformance with AWS.
- 16 c. A304 or A316 Stainless Steel or G185 Galvanized coated connectors and fasteners rated
- 17 for contact with treated lumber. Do not mix stainless steel fasteners with galvanized plate
- 18 connections.

19
20 LUMBER SPECIES AND MATERIALS:

21 Framing Lumber: Hem-Fir or SPF graded as per Standard Grading and Dressing Rules of West Coast
22 Lumber Inspection Bureau or Western Wood Products Association and grade marked by either. All sides
23 surfaced. Grades as follows unless noted otherwise on plans:

24	25 1x boards	26 "Appearance"	
		27 2x studs, sill plates, etc.	28 Hem Fir #2 & Better
	29 Other framing lumber, 2"-4" thick	30 Hem Fir #2 & Better	
	31 Misc. blocking, bridging, etc.	32 "Utility"	
	33 Treated lumber, sills & plates	34 .25 RET treated 2x plates	

35
36 Treated Lumber, Sills, Plates, Wood Foundations:

37 Sill plates in contact with concrete must be manufactured from pressure treated lumber.

38 For Above Ground use/exposure the following minimum retentions are to be used:

- 39 0.25 pcf for ACQ, CCA-C & MCQ
- 40 0.20 pcf for CBA-A
- 41 0.10 pcf for CA-B

42 For Ground Contact use/exposure the following minimum retentions are to be used:

- 43 0.40 pcf for ACQ, CCA-C & MCQ
- 44 0.41 pcf for CBA-A
- 45 0.21 pcf for CA-B

46 **A304 or A316 Stainless steel, G-185 galvanized, or ceramic-coated fasteners must be used with ACQ treated sill plates. If borate treated sill plates are used, special fasteners are not required.**

47 END CUT TREATMENT: For treated wood that has been cut, seal with **Wolman Woodlife Coppercoat**
48 by **RUST-OLEUM**. Also, use to seal un-treated framing or sheathing in contact with concrete at exterior
49 walls and footings.

50
51 Pre-engineered Trusses: Roof truss and floor truss systems pre-engineered to meet all loads indicated
52 on drawings and manufactured in strict accordance with **Truss Plate Institute** guidelines. Loads
53 indicated are all applied loads. Roof trusses to use 30 psf minimum live load per MT Rule 24.301.154 (5).
54 Provide Montana engineer stamped drawings as part of final submittal. Submit shop drawings for
55 approval before manufacture and include all necessary bridging and bracing instructions as well as
56 material required to complete instructions. **Important: Hem-Fir, Doug-Fir or Southern Yellow Pine are**
57 **ONLY species accepted for trusses.**

58
59 Truss Identification: Permanently brand or otherwise identify every truss with: Name and address of

1 truss manufacturer, design load, and design spacing. In addition, mark each truss with a code
2 corresponding to codes used in shop drawings.

3
4 LSLs: Equal to **WEYERHAEUSER Timberstrand Laminated Strand Lumber** headers & beams in sizes
5 indicated on Drawings. LSLs must have minimum 1.3E.

6 LVLs: Equal to **WEYERHAEUSER Microllam Laminated Veneer Lumber** headers & beams in sizes
7 indicated on Drawings. LVLs must have minimum 1.9E.

8 PSLs: Equal to **WEYERHAEUSER Parallam Parallel Strand Lumber** headers & beams in sizes
9 indicated on Drawings. PSLs must have minimum 1.8E.

10

11 **FRAMING:**

12 General: Install all wood framing making proper provisions for work of other trades. Do all cutting of
13 wood required to accommodate plumbing, heating and ventilating, electrical and other trades. Fit neatly
14 around all exposed items such as outlet boxes, conduit, pipes and ducts.

15

16 Rough Framing: Fit closely and set accurately to required lines and levels and secure rigidly in place.
17 Set horizontal and inclined members with crown edge up. Do not cut, notch or bore structural members
18 without specific approval. Reinforce cut members, as directed. Bolt, nail and spike thoroughly with not
19 less than sizes and quantities indicated. Structural members shall provide full contact at all bearing
20 surfaces.

21

22

END OF SECTION

1 **DIVISION 07 - THERMAL & MOISTURE PROTECTION**

2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

4
5 SCOPE: Supply and install all thermal and moisture protection work as shown on Drawings and as
6 specified herein.

7
8 STANDARDS: Have all work done by applicators approved by the manufacturer of the materials and
9 installed in strict accordance with manufacturer's directions.

10
11 COORDINATION: Work closely with Sheet, Plumbing and Mechanical Contractors and any other
12 adjacent trades. Whenever the watertightness of the roof is dependent on the work of other trades,
13 assume full responsibility for the finished installation of the integrated assembly. Supervise the sheet
14 metal installer's work and all other adjacent trades as necessary to assure satisfactory fabrication and
15 watertight placement.

16
17 INSPECTION: Examine all subsurfaces to receive Work and report in writing to General Contractor, with
18 a copy to Architect, any conditions detrimental to Work. Failure to observe this injunction constitutes a
19 waiver to any subsequent claims to the contrary and holds the Contractor responsible for any corrections
20 Architect may require. Commencement of Work will be construed as acceptance of all subsurfaces.

21
22 DELIVERY AND STORAGE: Deliver materials to job site in manufacturer's original unopened packaging.
23 Fully protect against wetness or damage while temporarily stored. Materials designated for a specific
24 application shall be the products of one manufacturer.

25
26 PREPARATION: Make all subsurfaces free from material projections, dust loose and foreign materials
27 and any other obstructions, presenting a smooth plane, ready for installation.

28
29 WEATHER: Conduct no waterproofing operations when water in any form is present on the surface or
30 when materials are damp, wet or likely to be wetted by the elements.

31
32 PROTECTION: Take precautions to protect all Work in this Division, both during and after installation,
33 from damage of any kind.

34
35 WATERSTOPPING: At the end of each day's work the work performed during that day shall be sealed at
36 the edges and well covered to prevent moisture from getting under the material.

37
38 CLEAN-UP: Per Section 01 00 00 - General Requirements.

39
40 *END OF DIVISION*

07 40 00 - Roofing & Siding Panels

GENERAL REQUIREMENTS: Per DIVISION 07 – THERMAL & MOISTURE PROTECTION

SCOPE OF WORK: Furnish and install the retrofit metal wall system with all related accessories required for a complete and weathertight system.

WARRANTY: Provide written TWO (2) year guarantee on workmanship, including 24 Hour response to written notice by Owner of leak in wall system. Provide manufacturer's written 20 Year minimum warranty on metal finish.

APPLICATORS: Have all work done by applicators approved by manufacturer of materials and a minimum of FIVE (5) years of experience in single ply roof installation.

PRE-APPLICATION REQUIREMENTS:

- A. Review drawings and specifications with Manufacturer to ensure that the materials are properly used.
- B. Submit a report including any revised details to Architect. Any revised details, approved by Architect, will be incorporated in the project at no additional cost to the Owner.
- C. Notify Architect at least 48 hours prior to starting Work.
- D. Contractor is responsible for "total system" including UL rating, all sheet metal flashing work, and compliance with edge standards.
- E. The Roofing Contractor will purchase and maintain a copy of ***The NRCA Roofing and Waterproofing Manual, Latest Edition*** and comply with their recommended details as a minimum unless the Roofing Manufacturer's details have higher requirements.

MANUFACTURER'S SPECIFICATIONS: Manufacturer's specifications, drawings, component information and material properties are herein considered a part of this document and it is the responsibility of the roofing contractor to obtain the latest edition and comply with it.

MATERIALS:

Wall Panels: 26 Ga. ***Kynar 500*** finished steel panels equal to **BRIDGER STEEL *Tuff Rib or Purlin Bearing Rib*** or **METAL SALES *Classic Rib or Delta Rib***. Color as selected by Owner from standard; use Bridger Steel "Hickory" as a basis. Exposed fasteners with heads colored to match panel.

Roof System: 26 Ga. ***Kynar 500*** finished steel panels equal to **BRIDGER STEEL *Tuff Rib or Purlin Bearing Rib*** or **METAL SALES *Classic Rib or Delta Rib***. Color as selected by Owner from standard; use Bridger Steel Medium Brown as a basis. Exposed fasteners with heads colored to match panel. Use pan-head Type "W" screws as recommended by manufacturer.

Fasteners: Use corrosion resistant Type "W" screws as recommended for condition unless noted otherwise on the drawings. For other connections, corrosion resistant, as recommended and approved by manufacturer for specific decks and conditions shown on drawings. Indicate fasteners being used on shop drawings.

Closures, Trim, & Flashings: Same gauge and finish as exterior panels. Use factory formed shapes wherever possible and custom shapes as required by each specific condition. Where indicated, provide closed cell foam closures along with factory formed metal closure trims to protect the foam.

Foam Closures: **EMSEAL *AST Hi-Acrylic*** metal building foam sealant sized for panel corrugations and where indicated on drawings.

Caulking and Sealants: See 07 90 00 - Joint Protection.

Snow Guards: Equal to **SNOBLOX *Snow Breaker 3M*** clear polycarbonate snow block with integral 3M VHB adhesive pads. Prep and install per manufacturer's instructions. See plans for quantity/location of snow guards and include as part of the Roof System.

APPLICATION: Install in strict conformance with Manufacturer's specifications, details and instructions.

- 1 Take special care in installation to avoid marks, discoloration's, drippings, etc. that might affect
2 appearance. Remove such marks before final payment.
- 3 A. Wall Panel System: Install wall system over wall girts in strict accordance with manufacturer
4 recommendations, including all manufacturer standard flashing, accessories and trim required for
5 a water-tight assembly. Drawings may not include all conditions, in which case use best practices
6 for detailing.
- 7 B. Roof Panel System: Install roof system in strict accordance with manufacturer recommendations,
8 including all manufacturer standard flashing, accessories and trim required for a water-tight
9 assembly. Drawings may not include all conditions, in which case use best practices for detailing.
- 10 C. Fascia System: Install fascia system over specified underlayment in strict accordance with
11 manufacturer recommendations, including all manufacturer standard flashing, accessories and
12 trim required for a water-tight assembly. Drawings may not include all conditions, in which case
13 use best practices for detailing.

14 APPROVED MANUFACTURERS: Equal to **BRIDGER STEEL, FIRESTONE, METAL SALES.**

15 *END OF SECTION*

07 60 00 - Flashing & Sheet Metal

GENERAL REQUIREMENTS: Per DIVISION 07 – THERMAL & MOISTURE PROTECTION

GUARANTEE: Per Section 01 00 00 - General Requirements, furnish a written guarantee that all sheet metal work is unconditionally guaranteed to be watertight and free of defects for a period of TWO (2) years, or for the same period as the roof guarantee, whichever is greater.

WORK INCLUDED: Provide flashing and sheet metal not specifically described in other sections but required to prevent penetration of water through the exterior shell of the building and as indicated on the Drawings, as specified herein, and as needed for a complete and proper installation.

QUALITY ASSURANCE: Use adequate numbers of skilled workmen with at least THREE (3) years of experience in the necessary crafts and who are completely familiar with the methods needed for proper performance of the Work of this Section. In addition to complying with pertinent codes and regulations, comply with recommendations contained in current edition of "Architectural Sheet Metal Manual" published by the Sheet Metal and Air-conditioning Contractors Association (SMACNA).

MATERIALS:

Pre-finished metal flashing: Form from 24 ga., 20 year, pre-finished aluminized sheet steel equal to **METAL SALES PVDF** fluorocarbon (**Kynar 500/Hylar 5000**) finish. Use concealed "S" clips to join fascia lengths.

Tape Sealant: Mastic for side laps, end laps and flashing to be butyl rubber, pressure sensitive tape mastic. The sealer will be non-asphaltic, non-shrinking, non-drying and non-toxic; and shall have superior adhesion to metals, plastics and painted surfaces at all temperatures.

EXECUTION:

General: Flashings and counter-flashings shall be installed at the junction of roofs with vertical surfaces and at all points as shown or necessary to make the building watertight. Counterflashing will be installed as roofing work is done. Counterflashing shall extend down to the intersection of roofing with wall and shall be lapped well at joints and around corners.

Fabrication: Fabricate sheet metal flashing to shapes and sizes detailed, allowing sufficient material for up-standing leg. Make surfaces free of waves and buckles, with lines, arises, and angles sharp and true. Form in strict accordance with Drawings and notes. No raw, exposed edges permitted, turn exposed edges back 1/2".

Joints: Join parts with rivets or sheet metal screws where necessary for strength and stiffness. Provide suitable watertight expansion joints for runs of more than 40', except where closer spacing is indicated on drawings.

Nailing: Whenever possible, secure metal by means of concealed clips or cleats, without nailing through exterior metal. In general space nails, rivets, and screws not more than 8" apart and, where exposed to the weather use rubber washers.

Tests: Upon request of the Architect, demonstrate by hose or standing water that the flashing and sheet metal are completely watertight.

END OF SECTION

1 **07 90 00 - Joint Protection**

2
3 GENERAL REQUIREMENTS: Per DIVISION 07 – THERMAL & MOISTURE PROTECTION

4
5 GUARANTEE: Per Section 01 00 00 - General Requirements, Work guaranteed for a period of FIVE
6 years.

7
8 APPLICATION: Apply materials in strict accordance with manufacturer's printed directions, observe
9 manufacturer's requirements regarding temperature control, usability of materials and protection of
10 adjacent surfaces. Clean surfaces to receive sealant with solvents and prime as recommended by
11 sealant manufacturer. Make sealing surface slightly concave, free of wrinkles and skips, uniformly
12 smooth and with perfect adhesion along both sides of joint. Surface is to be shaped with the aid of a
13 formed specialty tool such as **DAP 18570 Dap Cap Caulk Finishing Tool**, or **DAP 09125 PRO Caulk**
14 **Tool Kit**. Protect adjacent surfaces from excess material by masking parallel to the joint both sides;
15 leave joints in a clean, neat condition. Defective joints shall be removed, cleaned and replaced at no
16 additional cost to Owner at anytime during the five year warranty period.

17
18 MATERIALS:

19
20 Sealant: **DOW CORNING 790 Building Sealant** or **G.E. SCS2000 SilPruf Sealant**. Primer as required
21 for specific surfaces. Color as selected by Architect. Use on interior/exterior non-porous joints involving
22 metal, tile or glass requiring a cleanable waterproof joint.

23
24 Butyl Sealant: **TREMCO General Purpose Butyl Sealant**. ASTM C1311, butyl or polyisobutylene,
25 single component, nondrying, non-skinning, non-curing. Use for sealing gutters, downspouts, and other
26 metal flashings and trims on roof.

27
28 APPLICATION:

- 29 A. Apply only to clean and dry surfaces, using a primers and cleaning agents as recommended by
30 the manufacturer for the material being sealed.
31 B. All caulked joints are to have a smooth tooled "concave" surface (as described above). Irregular,
32 flat or convex joints will be rejected.
33 C. All joints greater than 3/8" wide will be backed with a round poly rod to form a double concave
34 shape sealant joint.

35
36
37
38 *END OF SECTION*

1 **DIVISION 09 - FINISHES**

2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

4
5 SCOPE: Supply and install all Finish Work as shown on Drawings and as specified herein.

6
7 MEASUREMENTS: Verify all dimensions shown on Drawings by taking field measurements; proper fit
8 and fastening of all components is required.

9
10 GUARANTEE: Per Section 01 00 00 - General Requirements.

11
12 COORDINATION: In all Work under this Division, coordinate with all other Trades whose work connects
13 with, is affected or concealed by Finish Work. Before proceeding, make certain all required inspections
14 have been made.

15
16 INSPECTION: Inspect surfaces to receive finishes before starting Work and do not start until surfaces
17 are acceptable. Starting Work under this Division implies acceptance of surfaces.

18
19 DELIVERY AND STORAGE: Deliver all manufactured materials in original packages bearing
20 manufacturer's name and brand. Use only one brand of each material throughout job. Store materials in
21 a dry place.

22
23 STANDARDS: Comply with all applicable requirements of the following codes and references, latest
24 edition, except where more stringent requirements are called for herein or by local codes:

- 25 A. U.S.G. Red Book of Lathing & Plastering.
26 B. U.S.G. Drywall Construction Handbook.
27 C. The Council of America - Tile Handbook.
28 D. National Terrazzo and Mosaic Association - Terrazzo Specifications and Technical Data.
29 E. Acoustical Materials Association - Architectural Acoustical Materials.
30 F. Painting and Decorating Contractors of America Manual.
31 G. Gypsum Association Fire Resistance Design Manual, latest edition.

32
33 INSTALLER: Perform all Work herein by experienced applicators or installers with a minimum of FIVE (5)
34 years of experience in the trade.

35
36 CLEAN-UP: Per Section 01 00 00 - General Requirements, remove all excess material, equipment and
37 debris; dispose of away from premises. Leave Work in clean condition.

38
39 *END OF DIVISION*

09 90 00 - Painting & Coating

GENERAL REQUIREMENTS: Per DIVISION 09 – FINISHES

SAMPLES: Per Section 01 00 00 - General Requirements, submit samples of all types of finishes specified herein. Before Work is begun, Architect will furnish Contractor a color schedule of colors selected from manufacturer's stock colors.

SURFACE PREPARATION:

- A. Protect and mask items not to be painted or remove prior to painting. If required to be removed, reposition after painting.
- B. Make any exposed miscellaneous metal items, such as steel supports, anchors, bucks, hollow metal frames and the like clean, free of rust, dust, grease and dirt.
- C. Clean any visible portions of throats of galvanized steel ductwork with solvent, wipe dry with clean rags and paint flat black.
- D. Wash any unprimed factory sealed galvanized metal with a solution of **GALVA-PREP SG** and **3M Scotch-Brite** pads; non-sealed galvanized metal may be solvent wiped, followed by an acid etch and water rinse.
- E. Make any wood surfaces to be painted or stained clean, smooth, dry, and fully sanded. Knots and pitch pockets under paint finish shall be sealed with shellac. Fill joints, cracks, nail holes, disfigurations, etc. with plastic wood after priming; then sand smooth.
- F. Clean and etch all concrete, masonry or plaster surfaces with a phosphoric acid solution reduced with water to eliminate efflorescence. Seal any similar surfaces to be painted and fill to smooth, even surfaces. Remove grease or oil with benzene.
- G. Clean thoroughly any wallboard surfaces to be painted. Spackle any nail holes after primer has dried. Sand smooth all rough surfaces.
- H. Caulk corners, gaps, and other narrow joints where materials meet to leave neat and smooth closed finish. Use water-base latex caulk on interior painted cosmetic joints.

APPLICATION:

- A. Do no exterior painting below 40 degrees F or at any temperatures within 5 degrees F of the dew point.
- B. Paint all exposed surfaces of every member; paint anything inaccessible after installation before installation, if required to be painted.
- C. Paint no items fitted with finish hardware until hardware has been temporarily removed.
- D. Sand carefully between coats all finishes on smooth surfaces for good adhesion of subsequent coats.
- E. Where coverage is incomplete or not uniform, provide an additional coat at no extra expense to Owner.
- F. Each succeeding pigmented coat shall be distinguishably lighter than the previous coat.
- G. Apply all coatings without reduction except as specifically required by label directions or required by this Specification.
- H. Apply with brush, roller or spray and back-roll. Spray is allowed on metal surfaces, but adjacent areas must be protected from overspray.
- I. Apply paint to nearest edge or corner to cover full planes of walls, ceilings, or other areas unless noted or directed otherwise.

MISCELLANEOUS PAINT ITEMS: Include painting of the following items, unless specifically noted pre-finished: Red iron exposed exterior; Exterior PVC – plumbing vents & exposed pipes and plastic conduits. Paint is to match adjacent surfaces.

MATERIALS: Provide commercial quality painting systems with specifications meeting or exceeding those scheduled below under Painting Systems.

COMPLETION AND CLEANING: On completion of Work, carefully clean all glass, hardware, etc., and remove all misplaced paint and stain spots or spills and leave Work in a condition acceptable to Architect.

PAINTING SYSTEMS: It is the intent of this Specification to establish procedure, quality, and number of coats; the Architect will determine the exact finish desired. Do not start priming or painting without having

1 notified the Architect. All surfaces specified herein to receive 3 coats (primer + 2 finish) will receive 3
2 coats; there will be no exceptions. Tinting of primer is not allowed. First finish coat tinted a shade off of
3 second coat. Equal to **SHERWIN WILLIAMS** - products below are shown for reference to establish
4 quality levels. Apply the following finishes to the areas designated,
5
6

7 TYPE 2 (ferrous metals, hollow metal doors, frames, etc.)

8 First Coat: **B50NZ0006 Kem Kronik Universal Metal Primer**

9 Second Coat: **B54W00151 Pro Industrial Urethane Alkyd Enamel** (Semi-Gloss)

10 Third Coat: **B54W00151 Pro Industrial Urethane Alkyd Enamel** (Gloss)

11
12 OR

13
14 First Coat - **B66A01320 Pro-Cryl Universal Primer** (Low Sheen)

15 Second Coat - **B66W01251 Pro Industrial DTM Acrylic** (Eg-Shel)

16 Third Coat - **B66W01151 Pro Industrial DTM Acrylic** (Semi-Gloss)

17
18

END OF SECTION

DIVISION 13 - SPECIAL CONSTRUCTION

1
2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed apply to this Division.

4
5 SCOPE: Supply and install all special construction as shown on the Drawings and specified herein.

6
7 SHOP DRAWINGS: Submit per Section 01 00 00 - General Requirements, showing general
8 arrangement, description, layout and design.

9
10 GUARANTEE: Per Section 01 00 00 - General Requirements, one year minimum.

11
12 MEASUREMENTS: Verify all dimensions shown on Drawings by taking field measurements; proper fit
13 and attachment of all components is required.

14
15 COORDINATION: Obtain information and instructions from other Trades and suppliers in ample time to
16 schedule and coordinate with all other trades whose Work relates to special construction installation to
17 insure proper execution. Do any cutting, patching or re-building made necessary by failure or delay in
18 complying with these requirements at no cost to the Owner.

19
20 DELIVERY and STORAGE: Deliver and store materials in dry, protected areas keeping free from
21 corrosion or other damage. Replace any damaged materials at no cost to Owner.

22
23 INSTALLATION: Procure all required permits and perform all operations in strict conformance with all
24 local codes and regulations.

25
26 Install all Work plumb, true and as indicated on the Drawings. Be responsible for all anchorage
27 requirements and provide galvanized anchors, plates, angles, fastenings and any other supporting items
28 or members necessary to fully support the Work without damaging or straining surfaces to which Work is
29 fastened. Any surfaces weakened or otherwise damaged by Work of this Section shall be fully repaired or
30 replaced at no cost to the Owner.

31
32 CLEAN-UP: Per Section 01 00 00 - General Requirements.

33
34 *END OF DIVISION*

13 34 00 - Engineered Post Frame Structures

GENERAL REQUIREMENTS: Per DIVISION 13 – SPECIAL CONSTRUCTION

SCOPE OF WORK: Furnish and install a complete Pre-engineered Post Frame building system with all related work and materials required for a complete and weathertight building.

SAMPLES: Per Section 01 00 00 - General Requirements, submit samples of all types of materials and finishes specified herein. Contractor to furnish physical samples for color selection by Owner from manufacturer's stock colors.

MANUFACTURER'S SPECIFICATIONS: Manufacturer's specifications, drawings, component information and material properties are herein considered a part of this document and it is the responsibility of the contractor to obtain the latest edition and comply with it.

ENGINEERED POST FRAME STRUCTURES:

- A. Engineered wood-framed structures consisting of the following components:
 - a. Factory-engineered foundations and/or footings.
 - b. Factory-engineered wall columns.
 - c. Factory-engineered roof trusses.
 - d. Factory-engineered metal roof and/or wall panels.
 - e. Prefinished metal trim, ridge vents, and soffits wherever applicable.
- B. Reference Standards:
 - a. American Wood Preservers Association (AWPA).
 - b. National Design Specifications for Wood Construction, current edition.
 - c. Northeastern Lumber Manufacturer's Association, Inc. (NELMA).
 - d. Southern Pine Inspection Bureau (SPIB): Southern Pine.
 - e. West Coast Lumber Inspection Bureau (WCLIB): Douglas Fir.
 - f. Western Wood Products Association (WWPA): Douglas Fir and Ponderosa Pine.
 - g. MSR Lumber Producers Council (MSR) for machine stress rated lumber.
 - h. National Design Specifications for Wood Construction.
 - i. National Design Standard for Metal Plate Connected Wood Truss Construction (TPI).

SUBMITTALS: The Contractor shall submit to the Architect, for approval Engineer-stamped Shop Drawings, Product Data, and Samples as may be required for the construction of any part of the Work. Any Work that is done, or material ordered prior to the approval of such information, shall be at the Contractor's risk. Provide physical samples whenever a color or finish selection is required and as specified in associated Sections.

- A. Product Data: For each type of process and factory-engineered product. Indicate component materials, dimensions, profiles, and construction and installation details.
 - a. Include information for specialty accessory products specified for this Project as applicable.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 - a. Sizes, stress grades, and species of lumber.
 - b. Anchor-bolt layout.
 - c. Structural Framing Drawings: Show complete fabrication of primary and secondary framing Include provisions for openings and the following information:
 - i. Slope or depth, span, and spacing of truss.
 - ii. Heel bearing height.
 - iii. Design loading to include:
 - 1. Top chord live load.
 - 2. Top chord dead load.
 - 3. Bottom chord dead load.
 - 4. Concentrated loads and their points.
 - iv. Plate type, thickness of gauge, and size.

- 1 v. Lumber size, species and grade for each member.
- 2 d. Metal Roof and/or Wall Panel Layout Drawings: Show layouts of metal panels including
- 3 methods of support. Include details of edge conditions, joints, panel profiles, corners,
- 4 anchorages, trim, flashings, closures, and special details. Indicate components for all roof
- 5 and/or wall mounted items.
- 6 e. Submit Shop Drawings that have been engineered and certified by professional engineer
- 7 licensed in the State in which Project is located. Include seal and signature of
- 8 professional engineer on Shop Drawings.
- 9 C. Design Data: Truss engineering calculations for loading and stresses, bearing seal and signature
- 10 of professional engineer licensed in the State in which Project is located. Include the following
- 11 calculations:
- 12 a. Minimum design shall meet design standards of latest edition of International Building
- 13 Code unless other, more stringent requirements are in force in Project location.
- 14 b. Bending moments and axial forces for each member.
- 15 c. Basic plate design values.
- 16 d. Design analysis for each joint indicating that proper plates have been used.
- 17 e. Provide design calculations for exterior walls, canopies, soffit systems, and lateral
- 18 bracing walls. Design wind loads and lateral bracing loads are indicated on structural
- 19 Drawings.
- 20 f. Submit design calculations that have been engineered and certified by professional
- 21 engineer licensed in the State in which Project is located. Include seal and signature of
- 22 professional engineer on calculations
- 23 D. Samples for Initial Selection: For units with factory-applied color finish, color chart of
- 24 manufacturer's standard colors.
- 25

26 QUALITY ASSURANCE:

- 27 A. Manufacturer Qualifications: Manufacturer shall have a minimum of five (5) years documented
- 28 experience designing and manufacturing engineered post frame buildings.
- 29 a. Manufacturer's responsibilities include providing licensed professional engineering
- 30 services needed to assume engineering responsibility.
- 31 B. Erector Qualifications: Contractor shall have a minimum of five (5) years documented experience
- 32 erecting and assembling engineered post frame buildings.
- 33 C. Source Limitations: Obtain engineered post frame building components, including primary and
- 34 secondary framing and metal panel assemblies, from single source from single manufacturer.
- 35

36 DELIVERY, STORAGE, AND HANDLING

- 37 A. Handle and store materials per manufacturer's requirements.
- 38 a. Store trusses flat, off of ground, and adequately supported to prevent lateral bending.
- 39 b. Protect trusses from weather by covering with waterproof sheeting, securely anchored.
- 40 c. Provide for air circulation around stacks and under coverings.
- 41 d. Store trusses to avoid contact with other materials that could create staining or
- 42 discoloration.
- 43 e. Inspect trusses upon deliver to Project site and notify manufacturer immediately if
- 44 members have damage from handling or show discoloration, corrosion, or other evidence
- 45 of deterioration. Discard and replace trusses that are damaged or defective.
- 46

47 WARRANTY

- 48 A. Manufacturer's Special Warranty – Treated Material: Manufacturer agrees to repair, restore, or
- 49 replace columns that fail in materials within specified warranty period.
- 50 B. Warranty Period: 50 years from date of Substantial Completion.
- 51 C. Manufacturer shall repair treated structural columns that fail because of insect damage or
- 52 because of decay that occurs under normal conditions and proper use. If manufacturer is not able
- 53 to repair structural posts to satisfaction of Architect and Owner, manufacturer shall replace
- 54 damaged treated structural columns.

- 1 D. Special Warranty on Metal Panel Finishes: Provide written TWO (2) year guarantee on
2 workmanship, including 24 Hour response to written notice by Owner of leak in wall or roof
3 system. Provide manufacturer's written 20 Year minimum warranty on metal finish.
4 a. Warranty Exclusions: Manufacturer will not warrant metal panel finishes damaged due to
5 exposure to atmospheric pollutants including animal waste or other corrosive conditions.
6 Manufacturer will not warrant labor by others.
7 b. Manufacturer shall repair painted steel roofing or siding panels if the paint peels, cracks,
8 checks, flakes or blisters to an extent that is apparent by ordinary outdoor visual
9 observation when exposed to normal weather and atmospheric conditions. If
10 manufacturer is not able to repair steel panels to satisfaction of Architect and Owner,
11 manufacturer shall replace damaged steel panels.
12

13 MATERIALS

14 Wood-Preservative Treated Lumber: Per § 06 10 00 – Rough Carpentry.

15 Rough Framing: Per § 06 10 00 – Rough Carpentry.

16 Metal Connectors: Per § 06 10 00 – Rough Carpentry.

17 Roof and/or Wall Panels: Per § 07 40 00 – Roof & Siding Panels

18 Flashing/Trim: Per § 07 60 00 – Flashing & Sheet Metal

19 Fasteners: Per Manufacturer; colors to match metal panels wherever exposed.
20
21

22 FABRICATION

- 23 A. Shop-fabricate wood trusses in TPI inspected plant.
24 B. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.
25 C. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details
26 required to withstand design loads for types of joint designs indicated.
27 D. Assemble truss members in design configuration indicated; use jigs or other means to ensure
28 uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1.
29 Position members to produce design camber as required.
30 a. Fabricate wood trusses within manufacturing tolerances in TPI 1.
31 E. Connect truss members by metal connector plates located and securely embedded
32 simultaneously in both sides of wood members by air or hydraulic press.
33

34 INSTALLATION

- 35 A. Install post frame structure in accordance with manufacturer's written instructions and approved
36 shop drawings.
37 B. Note: Building codes vary for each site. Adjustments to meet local code requirements may
38 require additional features.
39
40

END OF SECTION

1 **DIVISION 26 - ELECTRICAL**

2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

4
5 SCOPE: Design, supply and install a complete electrical system as shown on the Drawings and specified
6 herein. Work to include all miscellaneous incidental items including lamps necessary for complete and
7 successful operation of all electrical systems.

8
9 SHOP DRAWINGS: Submit per Section 01 00 00 - General Requirements, showing all light fixtures,
10 panelboard and heating equipment.

11
12 GUARANTEE: Per Section 01 00 00 - General Requirements, one year minimum.

13
14 DRAWINGS: Drawings are schematic and indicate general arrangement of electrical equipment.
15 Coordinate all work on site with as-built structural to avoid conflicts with other trades and structural
16 members. Visit site and make allowances for field conditions.

17
18 CODE COMPLIANCE: All work is to be done by a licensed electrician in strict compliance with current
19 NEC, Montana Electrical Code requirements, and good trade practices. Contractor to design panel
20 service and branch circuiting. Not more than eight convenience outlets per 20A breaker and adjacent
21 outlets shall be on separate circuits. Circuit lighting & fans separately from wall outlets. Outlets with a
22 home-run arrow indicate a single circuit serves this single outlet.

23
24 MATERIALS:

- 25 1. All branch circuit wiring to be copper type THHN installed in EMT conduit. Below grade conduit
26 to be electrical grade SCH40 PVC minimum.
27 2. Fixtures are to be equal to those scheduled on the drawings; and devices are to be nylon body
28 commercial specification grade, 20A, with LEXAN cover plates.
29 - Lights may be on single circuit; outlets to have individual circuits and breakers for each bay.
30 3. Panelboard to be equal to SQUARE D QO Plug-on 100A 20 space/20 Circuit Outdoor Main
31 Breaker Load Center (QO120M100PRB).
32 4. Feed from existing building to new panel can be PVC to the new panel.

33
34 PERMITS: Obtain and pay for local and State electrical permits upon award of contract. Post a copy of
35 the permit in a prominent place at the jobsite.

36
37 INSTRUCTION & EQUIPMENT MANUALS: Provide instruction on operation and maintenance of all
38 electrical fixtures and equipment to a representative selected by the Owner. Provide two bound copies of
39 all Electrical Shop Drawings and Installation. Instructions that come with the equipment and fixtures to the
40 Architect for review and forwarding to the Owner.

41
42 FIXTURES:

43
44 ***F1 = LITHONIA CNY LED P2 40K MVOLT DDB.***

45
46
47
48
49 *END OF DIVISION*

1 **DIVISION 31 - EARTHWORK**

2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

4
5 AS-BUILT DRAWINGS: Per Section 01 00 00 - General Requirements.

6
7 SCOPE: Complete all Site Drainage and Utility Work as shown on the Drawings and as specified.

8
9 CONDITIONS AT SITE: Visit the site. Examine and note all conditions as to the character and extent of
10 Work involved. Protect any adjacent property and improvements from damage and replace any portions
11 damaged through this operation. Maintain all bench marks, control monuments, and stakes, whether
12 newly established by Surveyor or previously existing. Protect from damage and dislocation. If necessary
13 to disturb existing bench marks, re-establish in a safe place.

14
15 PERMITS & ORDINANCES: Procure and pay for all necessary permits or certificates required by local
16 authorities having jurisdiction over the Work. Comply with all Federal, State and Local Laws. Contractor
17 is responsible for developing a Storm Water Pollution Prevention Plan for the project.

18
19 COORDINATION: Cooperate and coordinate the Work with the various Sub-contractors whose work
20 might be affected by operations.

21
22 ADJACENT PROPERTY: Restore any damage to adjacent properties, streets, and the like caused by
23 operations of this Division to original condition without additional cost to the Owner.

24
25 TESTS: The Foundation Engineer who prepared the Soils Report (if applicable) shall perform all tests
26 and inspections required by this Division. Relative compactions shall be determined as specified in
27 ASTM D-698. The Contractor pays for all tests and superfluous trips made at the direction of the
28 Contractor.

29
30 EXISTING UTILITIES: Where existing utilities not shown on the Drawings are encountered: support,
31 shore up, protect same and immediately notify Architect. Allow entrance, opportunity, and ample time for
32 measures necessary for continuance and/or relocation of such services.
33 Where noted on Drawings, cut and cap all street connections encountered in the excavating along curb
34 line and mark location so they can subsequently be located and re-connected as required. Any existing
35 utilities in the building envelope should be removed prior to constructing the building pad.

36
37 LAYOUT: Layout and Work under this Division shall be made by competent personnel experienced in
38 surveying. If any discrepancies are found by Contractor between the Drawings and actual conditions at
39 the site, Architect reserves right to make such minor adjustments in Work specified as necessary to
40 accomplish the intent of the Contract Documents without increased cost to the Owner.

41
42 CLEAN-UP: Remove from the Site all rubbish, debris, etc. resulting from Work in this Division, except as
43 otherwise specified above, per Section 01 00 00 - General Requirements.

44
45 *END OF DIVISION*

31 23 00 - Excavation & Fill

GENERAL REQUIREMENTS: Per DIVISION 31 – EARTHWORK

GENERAL: All work under this section including materials and installation shall conform to **Montana Public Works Standard Specifications (MPWSS), Sixth Edition, April 2010 Section 02200-Earthwork** and this specification is incorporated by reference. Any bidder in doubt about these requirements can obtain a copy of the specific section in question from the Architect.

LOCATE CALL: In addition to requesting local utilities to locate underground utilities and per MCA 69-4-501 to 506 the contractor is required by State Law to notify a One-Call location service before all underground excavation. Notification must be received at least TWO (2) working days prior to excavation. Call 811 or 1-800-424-5555.

PUMPING AND DRAINAGE:

- A. Keep all excavations, pits, trenches, footings, etc. entirely free from water.
- B. Protect excavations from rain or water from any source during construction. Use suitable pumping equipment or other means as required by conditions. Continue pumping as necessary until completion of project or until released by Architect.
- C. When operations are interrupted by unfavorable weather conditions, prepare areas by grading and compaction to avoid ponding and erosion.
- D. Install project storm sewer, catch basin & manholes prior to construction of building pad.

EXCAVATION:

- A. Excavate to depths noted on Drawings, as required for proper completion of all footings and other subgrade level Work and cut to sufficient size to provide ample room for the construction of forms, shoring, and bulk-heading as required.
- B. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - a. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials
- C. Backfill any excess excavation under footings or slabs with structural fill at Contractor's expense.
- D. Shore and brace excavations where necessary to prevent cave-ins, and in accordance with all safety codes and laws for Type A soils.
- E. Excess material not needed for completion of Work is to be disposed of offsite by the Contractor.
- F. Strip suitable topsoil and store separately for final grading.

TRENCHING: Trenching for underground piping, electrical conduits, etc., shall be done by the trade installing such pipes, conduits, etc. Backfilling of trenches to conform with requirements of Compacted Fill.

FILL AND BACKFILL:

A. COMPACTED FILL:

- a. Material for compacted fill will be selected from suitable on-site excavated material.
- b. Existing fill material to be removed down to the native material and then replaced and compacted to ASTM D698.
- c. All fill other than STRUCTURAL FILL will be compacted fill.
- d. Compacted fill may be spot tested for compliance.
- e. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
- f. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
- g. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.
- h. Compacted fill will be placed in layers not exceeding 8" thick loose lifts. Compaction of

1 each layer will be as follows within +/- 2% of optimum water content.

- 2 i. Structural Fill Beneath Foundations: 98% of ASTM D698
- 3 ii. Backfill Against Foundations: 95% of ASTM D698
- 4 iii. Utility Trench Backfill: 97% of ASTM D698

5
6 **B. TOPSOIL:**

- 7 a. Use only topsoil salvaged from the site with a textural classification of loam, sandy loam
- 8 or silty loam.
- 9 b. Provide a minimum of 4" and a maximum of 6" of topsoil in seeded and sod areas.
- 10 Provide a minimum of 12" of topsoil in planting beds.
- 11 c.
- 12 d. Compact all areas to receive seed, sod or plantings to 85% proctor density.

13
14 **C. GRADING:**

- 15 a. General: Uniformly grade areas to a smooth surface, free of irregular surface changes.
- 16 Comply with compaction requirements and grade to cross sections, lines, and elevations
- 17 indicated.
- 18 b. Site Rough Grading: Slope grades to direct water away from buildings and to prevent
- 19 ponding. Finish subgrades to elevations required to achieve indicated finish elevations,
- 20 within the following subgrade tolerances:
- 21 i. Turf or Unpaved Areas: +/- 1".
- 22 ii. Walks: +/- 3/8".
- 23 iii. Pavements: +/- 3/8".
- 24 c. Grading inside Building Lines: Finish subgrade to a tolerance of 1" when tested with a 10-
- 25 foot straightedge.

- 26
27 **D. CRUSHED GRAVEL:** Provide clean washed 3/4"crushed gravel under canopy/building; depth of
- 28 gravel per plans.

29
30 **FINISH GRADING:** Perform all finish grading required as indicated or reasonably inferred to permit

31 installation of Work of others or as shown on Drawings. Fine grade all topsoil areas to the lines, grades

32 and elevations specified. Note areas to receive organic or mineral mulch or sod and adjust grades

33 accordingly. Do not place topsoil until the designated areas are prepared and all construction work in the

34 area is completed. Remove and dispose of all clods, rocks, large roots, litter, construction debris and all

35 other foreign material from the topsoil before placement.

36
37 At completion of Work, entire site including any waste fill areas will be left in a clean and finished

38 condition.

39
40 *END OF SECTION*

1 **DIVISION 32 - EXTERIOR IMPROVEMENTS**

2
3 CONDITIONS OF THE CONTRACT and DIVISION 01, as indexed, apply to this Division.

4
5 AS-BUILT DRAWINGS: Per Section 01 00 00 - General Requirements.

6
7 SCOPE: Complete all Site Drainage and Utility Work as shown on the Drawings and as specified.

8
9 CONDITIONS AT SITE: Visit the site. Examine and note all conditions as to the character and extent of
10 Work involved. Protect any adjacent property and improvements from damage and replace any portions
11 damaged through this operation. Maintain all bench marks, control monuments, and stakes, whether
12 newly established by Surveyor or previously existing. Protect from damage and dislocation. If necessary
13 to disturb existing bench marks, re-establish in a safe place.

14
15 PERMITS & ORDINANCES: Procure and pay for all necessary permits or certificates required by local
16 authorities having jurisdiction over the Work. Comply with all Federal, State and Local Laws.

17
18 COORDINATION: Cooperate and coordinate the Work with the various Sub-contractors whose work
19 might be affected by operations.

20
21 ADJACENT PROPERTY: Restore any damage to adjacent properties, streets, and the like caused by
22 operations of this Division to original condition without additional cost to the Owner.

23
24 TESTS: The Foundation Engineer who prepared the Soils Report (if applicable) shall perform all tests
25 and inspections required by this Division. Relative compactions shall be determined as specified in
26 ASTM D-698. Owner will pay for all passing tests; Contractor pays for failed tests and superfluous trips
27 made at the direction of the Contractor.

28
29 EXISTING UTILITIES: Where existing utilities not shown on the Drawings are encountered: support,
30 shore up, protect same and immediately notify Architect. Allow entrance, opportunity, and ample time for
31 measures necessary for continuance and/or relocation of such services.
32 Where noted on Drawings, cut and cap all street connections encountered in the excavating along curb
33 line and mark location so they can subsequently be located and re-connected as required.

34
35 LAYOUT: Layout and Work under this Division shall be made by competent personnel experienced in
36 surveying. If any discrepancies are found by Contractor between the Drawings and actual conditions at
37 the site, Architect reserves right to make such minor adjustments in Work specified as necessary to
38 accomplish the intent of the Contract Documents without increased cost to the Owner.

39
40 CLEAN-UP: Remove from the Site all rubbish, debris, etc. resulting from Work in this Division, except as
41 otherwise specified above, per Section 01 00 00 - General Requirements.

42
43 *END OF DIVISION*

32 31 00 - Fences & Gates

GENERAL REQUIREMENTS: Per DIVISION 32 – EXTERIOR IMPROVEMENTS

SCOPE OF WORK: Remove and Modify existing chain link fence as needed to allow for new work. Salvage and re-use existing chain link fabric, posts, gates and related. Use new galvanized wire ties to re-secure fabric.

TEMPORARY PROJECT FENCE UP TO 8' HEIGHT:

- A. General: Posts and rails to be ASTM F1043 Group 1C hot dipped galvanized. All fittings to be pressed steel or malleable iron and hot dip galvanized. Tie wires to be minimum 9 ga. aluminum or 11 ga. galvanized steel. Mechanically drive all posts 3'-0" minimum into the ground. Fence to follow ground line.
- B. As shown on Site Plan, provide a chain link fence as follows:
 - a. Terminal Posts: 2.375" 3.12 lbs./ft posts at corners, ends, and at mid-point of runs exceeding 300'. Set posts in min. 12" diameter 42" deep concrete base. Provide standard caps, ties and diagonal bracing.
 - b. Line Posts: 1.90" 2.28 lbs./ft line posts at 10'-0" O.C. maximum. Provide standard caps for top rail and fastening clips at 12".
 - c. Rail & Post Braces: 1.66" 1.83 lbs./ft with 6" couplings at 21' max. Fabric tie wire spaced at 24" O.C. max.
 - d. Fabric: Fabric woven from 9 ga. ASTM A392 hot-dip galvanized after weaving (GAW) wire in 2" mesh knuckled under at both selvages.
 - e. Gate Posts: 2.875" 4.64 lbs./ft minimum or larger as recommended by manufacturer for gate width and fence height.
 - f. Gate Frames: 1.66" 1.83 lbs./ft tube with welded or fitted corners. Provide braces or trusses when necessary. Include all necessary hinges and fittings including latch. All parts galvanized.
 - g. Barbed Wire (if applicable): Aluminum coated double strand 12 1/2 ga. twisted wire with 14 ga., 4 point round aluminum barbs spaced on 5" centers per ASTM A585. Provide all necessary fittings for 3 wire application.
- C. Temporary fence may be pre-made, free standing, panelized sections.

END OF SECTION

32 90 00 - Landscaping

GENERAL REQUIREMENTS: Per DIVISION 32 – EXTERIOR IMPROVEMENTS

GENERAL:

- A. All plants furnished by Contractor shall be true to name. Conform to “Standardized Plant Names” by American Joint Committee on Horticulture Nomenclature. All Work shall conform to applicable requirements of American Association of Nurserymen, Inc. Standards.
- B. Provide legible labels attached to all plants, specimens, bundles, boxes, bales or other containers, indicating botanical genus, species and size of each.

GRADES: Grade of all finished lawn and planting areas shall, in general, be 2” lower than curb tops and sidewalks. Slope approximately 1” in ten (10) feet from sidewalk and determine slope between sidewalk and building by elevations of sidewalk. Crown any areas surrounded by sidewalks or curbs to provide proper drainage and pleasing appearance.

PREPARATION OF SUBSOIL: When subgrade has been established by others and approved, smooth over to remove ridges and depressions so surface is parallel to finished grade.

PLANTING AREAS: Plant areas mean pits for individual trees, shrubs and vines or lawn areas shown on Drawings or specified herein. Locate all such areas as shown on Drawings and stake out for approval prior to planting.

REPLACEMENT: One year from date of Substantial Completion a final inspection of Work will be made. Remove plants not in a satisfactory and healthy condition from the site and replace with materials of like kind and size and in a manner specified for original planting at no additional cost to Owner. This will apply unless Owner has not maintained Work during the year in a manner prescribed in writing by the Contractor.

PREPARATION OF LAWN AND GROUND COVER AREAS:

- A. All topsoil brought to the job shall be a fertile, friable natural sandy loam, without admixture of subsoil material. It shall be live soil and contain a normal amount of decomposed organic matter and shall be free from heavy alkaline soil, coarse sand, stones, lumps, tools, sticks, or other foreign matter.
- B. Over prepared subgrade, topsoil shall be spread to such a depth that after seeding or planting, and after area has been compacted and planted, surface shall conform to lines and grades designated.
- C. After topsoil has been spread, the area shall be lightly raked to remove all additional stones, roots, lumps or any other foreign material. The finished surface shall be loose, smooth and pulverized.

LAWN HYDRO-SEEDING:

- A. Mix Seed, Fertilizer, Tackifier and Fiber Mulch in water using equipment designed specifically for hydro-seed application. Mix until blended to a uniform homogenous slurry suitable for application and continue mixing during application. Apply slurry at a uniform rate to all areas to be seeded in a single process; apply as required to achieve a min. uniform sowing rate of 125 pounds per acre.
- B. After one year inspect lawns for bare areas and infill with sandy soil and re-seed to remove any areas void of growth.
- C. Seed Mixture for hydro-seeding and infill patching shall be as follows:
 - a. For lawns to be mowed (V):
 - i. 30% **Baron Kentucky Bluegrass**
 - ii. 30% **Pennfine Perennial Ryegrass**
 - iii. 10% **Glade Kentucky Bluegrass**
 - iv. 15% **Pennlawn Creeping Red Fescue**
 - v. 15% **Bison or Cody Buffalograss**
 - b. All seed is to be certified for minimum 98% purity and 90% germination by AOSA and USDA standards. Mix proportions are to be by weight.
- D. NOTE: If less than 500 SF of lawn is impacted by grading and site work lawns may be re-seeded by broadcast seeding using the same mix noted above.

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SPRINKLER SYSTEM:

- A. Modify and repair existing lawn irrigation system for yards and areas impacted by new grading and building construction.
- B. Test all zones adjacent to new building area to make sure they are fully functional. Replace any components damaged or otherwise made non-functional by new work.
- C. Change sprinkler head patterns when repositioning or repairing system so they do not spray on the new building and only cover landscaped areas.

END OF SECTION

APPENDIX A









