AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Contractor Agreement; Christopher Klein Constructi

Action Requested: Board of County Commissioners' Signature

Parties to the Agreement: BOCC and Chris Klein Construction, LLC

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

This Contract Agreement is for preconstruction and construction services for 8 affordable housing townhome units in Stallion Park, Buckhorn Ranch.

Fiscal Impact: $2,067,905.00

Submitted by: Office of the County Attorney **Submitter's Email Address:** rmagruder@gunnisoncounty.org

Finance Review: (●) Required ( ) Not Required

Comments:

Workforce Impact available cash can be utilized, balance will come from sale of units, financing, etc. Those details are being worked out. ln

Reviewed by: GUNCOUNTY1\lNienhueser Discharge Date: 3/22/2018

County Attorney Review: (●) Required ( ) Not Required

Comments:

Reveiwed by: GUNCOUNTY1\mhoyt Discharge Date: 3/22/2018 Certificate of Insurance Required Yes (●) No ( )

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\mbirnie Discharge Date: 3/22/2018

( ) Consent Agenda (●) Regular Agenda ( ) Worksession Time Allotted: 5

Agenda Date: 3/27/2018

Revised April 2015

CONTRACTOR AGREEMENT

THIS CONTRACTOR AGREEMENT ("Agreement") is entered into the ____ day of March, 2018, by and between the BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF GUNNISON, COLORADO, whose address is 200 East Virginia, Gunnison, Colorado 81230 ("Gunnison County") and CHRISTOPHER KLEIN CONSTRUCTION, INC., a Colorado corporation, whose address is 487 Blackfoot Trail, Gunnison, Colorado 81230 ("Contractor").

A. RECITALS

Contractor intends to serve as a construction manager and general contractor for preconstruction and construction services for two 4-Plex multifamily affordable housing units located within Stallion Park on Elk Valley Road, Crested Butte, Colorado (Stallion Park Project") and

Gunnison County intends to engage Contractor as a construction manager and general contractor to provide preconstruction and construction services for the Stallion Park Project according to the terms and conditions of this Agreement.

B. AGREEMENT

NOW THEREFORE, in consideration of the recitals above and the terms and conditions hereinafter set forth, the parties agree as follows:

1. TERM.

The term of this Agreement shall commence on March 27, 2018 and shall terminate on December 20, 2018 unless sooner terminated or replaced as provided herein ("Term").

2. SERVICES.

During the Term of this Agreement Contractor shall furnish all labor, supervision, and equipment to commence, diligently pursue, and fully and timely complete the services identified in the following:

A. Construction Plans for the Stallion Park Project titled: *Stallion Park Condominiums Gunnison County 4-Plex Condo Skyland Area Elk Valley Gunnison County, Colorado*, prepared by Williams Engineering, L.L.C., dated November 29, 2017, consisting of 18 pages, as may be amended by Gunnison County; and

B. *CSI MasterFormat 2004 Residential Specifications for the Stallion Park 4 Plex's* attached hereto and incorporated herein by reference as Appendix "A" (collectively "Services").

Contractor shall provide Services for the Stallion Park Project within the constraints of the Stallion Park Project Budget as identified in Appendix "B" attached hereto and incorporated herein by reference and according to the terms and allowances identified in Section 3 herein.

All Services shall be performed in a timely manner and in accordance with generally accepted standards for Contractor's profession and all applicable federal, state and local laws and regulations, ordinances, codes and HOA Guidelines affecting the Services or the subject matter thereof. Contractor has made itself informed of, and acknowledges the Stallion Park Project conditions. Contractor further understands and acknowledges that this is a non-exclusive Agreement, and Gunnison County may contract with additional or other providers able to furnish the same or similar services as it deems appropriate to do so.

Any proposed changes and/or amendments to the Services shall be submitted in writing to Gunnison County and shall not be permitted without prior written approval of Gunnison County.

3. COMPENSATION AND EXPENSES.

In exchange for Contractor's performance of Services, Gunnison County shall pay Contractor a fixed fee of One Million Eight Hundred Forty Two Thousand One Hundred and Eleven and No/100 U.S. Dollars ($1,842,111.00) as identified in Contractor's Cost Estimate attached hereto as Appendix "B" ("Fixed Fee").

In addition to the Fixed Fee set forth above, Contractor shall be compensated for the cost plus seventeen point six percent (17.6%), which includes two point six percent (2.6%) for the bond, the following Allowances, though not to exceed the costs set forth below:

ALLOWANCES	COST
Cabinetry	$ 35,943.00
HVAC (to include design/engineering)	$131,059.00
Landscaping (to include design)	$ 25,000.00
ALLOWANCES TOTAL NOT TO EXCEED	$192,002.00

The Fixed Fee and Allowances set both above ("Compensation) shall not exceed the total amount of Two Million Sixty Seven Thousand Nine Hundred Five and No/100 U.S. Dollars ($2,067,905.00) without prior written approval from Gunnison County in the form of a change order(s).

Compensation shall compensate Contractor for all charges, expenses, overhead, payroll costs, employee benefits, insurance, subsistence, and profits.

Any and all water and sewer tap fees, transformer, Home Owner's Association development costs and deposits associated with the Stallion Park Project shall be at the expense of Gunnison County.

Compensation for Services shall be paid by Gunnison County within thirty (30) days upon receipt of Contractor's invoice. Payments shall be mailed to: Christopher Klein Construction, Inc., 487 Blackfoot Trail, Gunnison, Colorado 81230.

4. INSURANCE.

A. Contractor agrees that at all times during the Term of this Agreement that Contractor shall carry and maintain, in full force and effect and at its sole cost and expense, the following insurance policies. Within thirty (30) days of the execution of this Agreement, Contractor will provide insurance certificates to Gunnison County, listing Gunnison County as an additional insured, for the coverage's required herein which shall state that such policies shall not be materially changed or cancelled without thirty (30) days prior notice to Gunnison County.

1. Worker's Compensation Insurance in accordance with Colorado and Federal law which adequately protects all labor employed by Contractor during the Term of this Agreement

2. Comprehensive General Liability Insurance or the equivalent, in an amount not less than Two Million and No/100 U.S. Dollars ($2,000,000) for each occurrence and Two Million and No/100 U.S. Dollars ($2,000,000) aggregate and Three Million and No/100 U.S. Dollars ($3,000,000) excess/umbrella.

3 Comprehensive automobile liability insurance on all vehicles used to carry out the Services, in an amount no less than One Million and No/100 U.S. Dollars ($1,000,000).

B. Contractor agrees that at all times during the Term of this Agreement that its Subcontractors shall carry and maintain, in full force and effect and at their sole cost and expense, the following insurance policies. Within thirty

(30) days of the execution of this Agreement Subcontractors will provide insurance certificates to Gunnison County, listing Gunnison County as an additional insured, for the coverage's required herein which shall state that such policies shall not be materially changed or cancelled without thirty (30) days prior notice to Gunnison County.

1. Worker's Compensation Insurance in accordance with Colorado and Federal law which adequately protects all labor employed by Contractor during the Term of this Agreement.

2. Comprehensive General Liability Insurance or the equivalent in an amount not less than One Million and No/100 U.S. Dollars ($1,000,000) for each occurrence and Two Million and No/100 U.S. Dollars ($1,000,000) aggregate for Bodily Injury Liability.

3. Comprehensive automobile liability insurance on all vehicles used in the Services, in an amount no less than One Hundred Fifty Thousand and No/100 U.S. Dollars ($150,000) for any injury to one person in any single occurrence and in an amount no less than Six Hundred Thousand and No/100 U.S. Dollars ($600,000) for any injury to two or more persons in any single occurrence.

5. GUARANTEES.

Contractor warrants and guarantees to Gunnison County that all equipment and materials to be furnished pursuant to this Agreement are free from all defects in workmanship and materials for one (1) year after date of completion. Contractor shall be responsible to obtain and ensure that all warranties and guarantees provided by manufacturers on equipment and materials furnished under this Contract denominate Gunnison County as an explicit recipient of such warranties and guarantees.

Contractor shall remove from the Stallion Park Project area all work or materials rejected by Gunnison County or its inspector, in Gunnison County's sole discretion, for failure to comply with the terms and conditions of this Agreement, whether incorporated in the construction or not. Contractor shall promptly replace the materials or re-execute the work in accordance with this Agreement and without expense to Gunnison County which are or become defective in the sole discretion of Gunnison County, due to such defects within one (1) year after date of receipt by Gunnison County. The Contractor shall also bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

Should the Contractor fail to proceed promptly in accordance with the guaranty, Gunnison County may have in its sole discretion such work performed at the expense of the Contractor.

6. INDEPENDENT CONTRACTOR.

A. In carrying out its obligations and activities under this Agreement, Contractor is acting as an independent Contractor and not as an agent, partner, joint venture or employee of Gunnison County. Contractor does not have any authority to bind Gunnison County in any manner whatsoever.

B. Contractor acknowledges and agrees that Contractor is not entitled to: (i) unemployment insurance benefits; or (ii) Workers Compensation coverage, from Gunnison County. Further, Contractor is obligated to pay federal and state income tax on any moneys paid which are related to the Services.

7. DELEGATION AND ASSIGNMENT.

This is a personal services contract with Contractor and, therefore, Contractor shall not delegate or assign its duties under this Agreement without the prior written consent of Gunnison County which consent Gunnison County may withhold in its discretion. Subject to the foregoing, the terms, covenants and conditions of this Agreement shall be binding on the successors and assigns of either party.

8. IMMIGRATION COMPLIANCE CERTIFICATION.

A. Contractor certifies that Contractor does not and will not knowingly contract with or employ illegal aliens to work under this Agreement.

B. Contractor certifies that Contractor has required its subcontractors to certify that they do not knowingly contract with or employ illegal aliens to work under this Agreement.

C. Contractor certifies that it has attempted to verify the eligibility of its employees and subcontractors to work through the Basic Pilot Employment Verification Program administered by the Social Security Administration and Department of Homeland Security.

D. Contractor agrees to comply with all reasonable requests made in the course of an investigation under C.R.S. 8-17.5-102 by the Colorado Department of Labor and Employment.

E. Contractor agrees to comply with the provisions of C.R.S. 8-17.5-101 et seq.

9. SOLE SOURCE CONTRACTS.

If the Contractor has entered into a sole source contract or contracts with the State of Colorado or any of its political subdivisions as defined in Article XXVIII of the Colorado Constitution which including this contract in the aggregate on an annual basis are equal to or exceed the amount of $100,000, then the following provisions apply:

> Because of a presumption of impropriety between contributions to any campaign and sole source government contracts, Contractor, on behalf of itself , any person who controls ten percent or more of the shares of or interest in the Contractor, and the Contractor's officers, directors and trustees (collectively, "Contract Holder") shall contractually agree, for the duration of the contract and for two years thereafter, to cease making, causing to be made, or inducing by any means, a contribution, directly or indirectly, on behalf of the Contractor Holder or on behalf of his or her immediate family member and for the benefit of any political party or for the benefit of any candidate for any elected office of the state or any of its political subdivisions.
>
> The parties further agree that if a Contract Holder makes or causes to be made any contribution intended to promote or influence the result of an election on a ballot issue, the Contract Holder shall not be qualified to enter into a sole source government contract relating to that particular ballot issue.
>
> The parties agree that if a Contract Holder intentionally violates sections 15 or 17(2) of Article XXVIII of the Colorado Constitution, as contractual damages that Contract Holder shall be ineligible to hold any sole source government contract, or public employment with the state or any of its political subdivisions, for three years.

These provisions shall not apply to the extent they have been enjoined or invalidated by a court of competent jurisdiction.

10. DISCRIMINATION.

The Contractor agrees not to discriminate against any person or class of persons by reason of age, race, color, sex, creed, religion, disability, national origin, sexual orientation or political affiliation in providing any services or in the use of any facilities provided for the public in any manner prohibited by Part 21 of the Regulations of the Office of the Secretary of Transportation. Contractor shall further comply with the letter and spirit of the Colorado Anti-Discrimination Act of 1957, as amended, and any other laws and regulations respecting discrimination in unfair employment practices. Additionally, Contractor shall comply with such enforcement procedures as any governmental authority might demand that Gunnison County take for the purpose of complying with any such laws and regulations.

11. ADA COMPLIANCE.

The Contractor assures Gunnison County that at all times during the performance of this Agreement no qualified individual with a disability shall, by reason of such disability, be exclude from participation in, or denied benefits of the service, programs, or activities performed by the Contractor, or be subjected to any discrimination by the Contractor upon which assurance Gunnison County relies.

12. INDEMNIFICATION.

A. Contractor agrees to indemnify, defend and hold harmless Gunnison County, its Commissioners, agents and employees of and from any and all liability, claims, liens, demands, actions and causes of action whatsoever (including reasonable attorney's and expert's fees and costs) arising out of or related to any loss, cost, damage or injury, including death, of any person or damage to property of any kind caused by the misconduct or negligent acts of Contractor or its employees, sub-contractors or agents in connection with this Agreement.

B. This provision shall survive any termination or expiration of this Agreement with respect to any liability, injury or damage occurring prior to such termination.

13. TERMINATION.

Either party shall have the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days prior written notice to the other. Upon termination, Contractor shall be entitled to Compensation for Services performed prior to the date of termination.

Gunnison County shall have the right to stop work at any time for any reason and shall also have the ability to self-perform any portion of the Services.

14. NOTICES.

Any notice, demand or communication which either party may desire or be required to give to the other party shall be in writing and shall be deemed sufficiently given or rendered if delivered personally or sent by certified first class US mail, postage prepaid, addressed as follows:

Gunnison County: Matthew Birnie, County Manager
Gunnison County
200 E. Virginia
Gunnison, CO 81230

Contractor: Christopher Klein Construction, Inc.
487 Blackfoot Trail
Gunnison, Colorado 81230

Either party has the right to designate in writing, served as provided above, a different address to which any notice, demand or communication is to be mailed.

15. MISCELLANEOUS.

A. SEVERABILITY. If any clause or provision of this Agreement shall be held to be invalid in whole or in part, then the remaining clauses and provisions, or portions thereof, shall nevertheless be and remain in full force and effect.

B. AMENDMENT. No amendment, alteration, modification of or addition to this Agreement shall be valid or binding unless expressed in writing and signed by the parties to be bound thereby.

C. NO WAIVER OF GOVERNMENTAL IMMUNITY. Nothing in this Agreement is, or shall be construed to be, a waiver, in whole or part, by Gunnison County of governmental immunity provided by the Colorado Governmental Immunity Act or otherwise.

16. GOVERNING LAW.

This Agreement shall be governed by and interpreted in accordance with the laws of the State of Colorado. Exclusive jurisdiction and venue for any legal proceedings related to this Agreement shall be in the State District Court governing Gunnison County, Colorado.

17. COUNTERPARTS: ELECTRONIC TRANSMISSION.

This Agreement may be executed and sent electronically and/or in any number of counterparts, any or all of which may contain the signatures of less than all the parties, and all of which shall be construed together as but a single instrument and shall be binding on the parties as though originally executed on one originally executed document. All electronic counterparts shall be promptly followed with delivery of original executed counterparts.

18. ENTIRE AGREEMENT.

This Agreement contains the entire agreement between the parties hereto with respect to the subject matter hereof, and supersedes any and all prior agreements, proposals, negotiations and representations pertaining to the obligations to be performed hereunder.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date set forth above.

BOARD OF COUNTY COMMISSIONERS
OF THE COUNTY OF GUNNISON, COLORADO

By: _____
Phil Chamberland, Chairperson

ATTEST:

_____
Deputy County Clerk

CHRISTOPHER KLEIN CONSTRUCTION, INC.,
a Colorado corporation

By: _____
Christopher Klein, President

CSI MASTERFORMAT 2004 RESIDENTIAL SPECIFICATION

Between the Owner:

Gunnison County
200 E. Virginia Ave.
Gunnison, CO

For the Project:

Stallion Park 4 plex's *TBD*
Elk Valley Rd.
Crested Butte, CO

APPENDIX A

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DIVISION 01 00 00. GENERAL REQUIREMENTS

01 50 00 - Temporary Facilities and Controls

This work shall consist of the application of temporary measures throughout the life of the project.

01 51 00 - Temporary Utilities

All connections and extensions required to provide temporary utilities shall be made by the Contractor at the Contractor's expense.

01 51 13 - Temporary Electricity

Contractor to provide and install temporary power for construction site. Connect to existing power service without disrupting local service requirements. Power feeder service characteristics shall be compatible with the service from which it is taken. Size, type and loading shall be per requirements as established by the National Electric Code (NEC). The contractor shall provide main service disconnect and over-current protection at a convenient location in accordance with the NEC. The Contractor shall provide power outlets for construction operations, with branch wiring and distribution boxes located as necessary and shall provide flexible power cords as required. Provide and install distribution equipment, wiring and outlets to provide single phase branch circuits for power and lighting.

01 51 23 - Temporary Heating, Cooling, and Ventilating

Contractor to provide and install temporary heating, cooling and ventilation for construction site. Contractor to maintain system during construction, while exercising measures to conserve energy. Ventilate enclosed areas to assist cure of materials, to dissipate humidity and to prevent accumulation of dust, fumes, vapors or gases. Supplement with temporary fan units as required to maintain clean air for construction operation.

01 51 26 - Temporary Lighting

Contractor to provide and install temporary lighting for construction site. Provide and install temporary lighting in all work areas sufficient to maintain a lighting level during working hours not less than the lighting level required by OSHA standards. As permanent lighting facilities are completed, they may be used in lieu of temporary facilities. Provide temporary lighting as required to satisfy safety and security requirements.

01 51 36 - Temporary Water

Contractor to provide and install temporary water for construction site or haul water to provide water as needed for completion of work and cleaning.

01 52 00 - Construction Facilities

Field offices are not required, if used they must meet the following requirements: Field offices and sheds shall be portable or mobile buildings, with steps and landings at entrance doors. Structurally sound, secure, weather tight enclosures for office and storage spaces shall be maintained during progress of work and removed at completion of work. Size of field offices and sheds shall depend on contractors needs. Install appropriate fire extinguisher. At completion of work, all temporary facilities shall be removed and area restored to new condition.

01 52 19 - Sanitary Facilities

Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as will comply with laws and regulations. Temporary toilet facilities may consist of portable toilets. The number shall be based on number of workers, 1 toilet per 15 workers. Toilet facilities shall be kept supplied and

clean and in sanitary condition until the completion of the work and then shall be removed from the site. Upon removal the site shall be properly cleaned and graded.

01 53 00 - Temporary Construction
The contractor shall provide and maintain for duration of work all required temporary stairs, ladders, ramps, runways and hoists for use of all trades.

01 54 00 - Construction Aides
The contractor to provide all construction aids needed during construction which shall include but not limited to; elevators, hoists, cranes, etc.

01 54 23 - Temporary Scaffolding and Platforms
The contractor shall provide and maintain for duration of work all required temporary standing scaffolding. 'Independent tied' scaffolds will normally be provided for painting, pointing or other maintenance work.

01 55 00 - Vehicular Access and Parking
Construct and maintain temporary roads accessing public thoroughfares to serve construction area. Parking is not allowed on adjacent lots or common areas, parking must be maintained on the site or along access road to the site. Parking along access road must not interfere with snow plowing.

01 56 00 - Temporary Barriers and Enclosures
The contractor shall provide barriers and signage to prevent unauthorized entry into construction areas and to protect existing facilities and adjacent properties from damage from construction operations. When necessary install chain link fence around job site.

01 57 00 - Temporary Controls
This work shall consist of the application of temporary measures throughout the life of the project to control erosion and siltation. Such measures shall include, but are not limited to, the use of berms, dikes, dams, sediment basins, fiber mats, silt fences, straw bales, washed gravel or crushed stone, mulch, grasses, slope drains, temporary seeding and other methods. Temporary erosion and siltation control measures as described herein, shall be applied to erodible material exposed by any activity associated with the construction and consistent with state and local control standard.

01 58 00 - Project Identification
Within 15 days after the commencement of work, provide one project identification sign at the locations indicated. Maintain sign throughout the life of the project. On the sign, list two points of contact by name and telephone number.

01 60 00 - Product Requirements (Scope of Work)
All materials shall be installed in strict accordance with the manufacturer's written specifications or Material's Institute Standards. Where the manufacturer's recommended details are used, the manufacturer shall be responsible for the performance of their product. All Items not specifically mentioned that are required to make the work complete and operational shall be included.

Installation and Storage - All materials, supplies and equipment shall be installed per manufacturer's recommendations and per applicable codes and requirements. Material stored on site shall be protected from damage by moisture, wind, sun, abuse or any other harmful effects.

01 64 00 - Owner-Furnished Products

Contractor is not responsible for products furnished by the owner that are damaged prior to opening or receiving. Additional work required to install owner furnished products will be charged to the owner and due upon installation.

01 70 00 - Execution and Closeout Requirements

The execution of all work shall be in strict accordance with these specifications and manufacturer's written specifications or Material's Institute Standards. Where the manufacturer's recommended details are used, the manufacturer shall be responsible for the performance of their product. All work not specifically mentioned that is required to make the work complete and operational shall be included.

Codes - Construction shall comply with all applicable national, state and local building codes. It is the responsibility of the Contractor to insure compliance with said codes and modify the specifications as needed to comply with such codes.

Measurements - The Contractor shall check and verify all dimensions and conditions before proceeding with construction. Do not scale drawings. Noted dimensions take precedence.

Workmanship - Workmanship shall conform to the best and highest standards of quality in each trade and shall include all items of fabrication, construction and installation. All work shall be completed by skilled tradesmen and mechanics. Installation of all equipment and materials shall be in strict accordance with manufacturers' recommendations.

Insurance - Builders Risk Insurance shall be maintained by the Owner. All bonding and insurance requirements shall be coordinated with the Owner prior to beginning construction. All contractors shall provide and be solely responsible for necessary barricades and safety precautions, and strictly adhere to all governing codes on safety, including the OSHA Act.

01 71 00 - Local Conditions

The site has been previously disturbed. Field verify proper compaction of soils as noted on plans prior to placing foundations.

01 74 00 - Cleaning and Waste Management

Construction site to be in a clean and orderly condition throughout the construction process. Clean interior spaces prior to the start of finish painting and the application of other finishes. At the conclusion of construction, the project shall be properly cleaned.

This should include but not be limited to; cleaning the interior and exterior glass, surfaces exposed to view, remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surface areas, sweep and mop all tiled surfaces, etc. Replace filters of operating equipment. Clean equipment and fixtures to a sanitary condition. Clean exterior such as debris from roof, gutters, landscape areas, driveways and walks, etc. Remove all waste and surplus materials.

01 76 00 - Protecting Installed Construction

Contractor to protect all installed construction. If products or materials come with a protective coating, contractor shall maintain protective coating until construction is complete. Contractor shall replace any items that become defective or damaged.

DIVISION 02 00 00. EXISTING CONDITIONS

02 00 00 - Existing Conditions

Contractor shall review construction documents and provide necessary site work, excavation and grading as required to construct said project.

DIVISION 03 00 00. CONCRETE

03 00 00 - Concrete

Contractor shall review construction documents and provide labor and materials pertaining to concrete and foundations as required in said documents and as specified herein, while complying with all applicable building codes.

03 05 00 - Common Work Results for Concrete

All concrete work shall be designed on the basis of "Strength Design" in accordance with ACI 318 "Building Code Requirements for reinforced Concrete." Concrete work shall be proportioned in accordance with ACI 301 " Specifications for Structural Concrete" and ACI 211.1 " Recommended Practice for Selecting Proportions for Normal Weight Concrete". Concrete slabs, patios, driveways, walls and foundations shall be constructed of a minimum 3000 to 3600 psi concrete, 28 day test, with a 4" minimum to 6" maximum slump maximum, air-entrained to 5 - 8%. No additional water shall be added to concrete after slump test is recorded. Concrete should be a mix of high grade Portland cement, clean sand or granular fill and washed gravel or crushed stone as coarse aggregate per ACI 530. Maximum aggregate size shall be ¾". All aggregates shall conform to ASTM C33. Gravel should be well graded and not exceed 1 1/2" in size. Water shall not exceed 5 1/2 gallons for each bag, unless sand is very dry. Concrete shall be mixed using an approved batch machine or mobile mixer until uniform in color and providing a 4" minimum to 6" maximum slump.

03 10 00 - Concrete Forming and Accessories

Provide all labor, materials and equipment necessary for the completion of the plain and reinforced concrete called for on the plans. Concrete when deposited shall have a temperature ranging between a minimum of 50 degrees Fahrenheit and a maximum of 90 degrees Fahrenheit.

Construction of Forms - Construct wood forms of sound material, and of the correct shape and dimensions, constructed tightly and of sufficient strength. Brace and tie the forms together. Make joints and seams mortar tight. Install leakage control materials in accordance with manufacturer's installation instructions.

Embedded Items - make provisions for sleeves, anchors, inserts, water-stops and other features.

Form Ties - Use form ties of sufficient strength and in sufficient quantities to prevent spreading of the forms. Place ties at least 1 inch away from the finished surface of the concrete. Do not use ties consisting of twisted wire loops. Leave inner rods in concrete when forms are stripped. Space all form ties equidistant and symmetrical and line up both vertically and horizontally.

Cleanouts and Access Panels - Provide removable cleanout sections or access panels at the bottom of all forms to permit inspection and effective cleaning of loose dirt, debris and water material. Clean all forms and surfaces to receive concrete of all chips, sawdust, and other debris and thoroughly blow out with compressed air just before concrete is placed.

03 15 13 - Concrete Accessories

Provide 1/2" thick by 4" wide bituminous expansion joint material at all surfaces where slabs adjoin raised slab, crawlspace or basement stem-wall CMU or poured foundations.

03 21 00 - Reinforcing Steel

Reinforcing steel (rebar) shall be minimum ASTM A615, grade 40. All reinforcement splices shall be as follows: #4 and #5 bars 25" minimum. All rebar (reinforcing steel) shall be located 3" clear from bottom and side of footing and 2" clear from top. Locate vertical rebar (reinforcing steel) 4'-0" on center (OC). All reinforcement splices shall be in accordance with ACI 318 for "Strength Design." All reinforcement steel shall be accurately placed, rigidly supported, and firmly tied in place with bar supports and spacers in accordance with ACI 301 and ACI 318.

03 22 00 - Welded Wire Fabric Reinforcing

Welded wire fabric shall conform to ASTM A105 and be located in the center of the depth. Install at slab on grade conditions.

03 30 00 - Footings

Center all footings on walls, piers, or columns above unless otherwise noted. All footings shall rest on undisturbed virgin soil with minimum soil bearing allowable of 2500 psf, tested for 95 percent compaction, or 3/4" stone compacted in 12" lifts to 95 percent density if fill is required. Footings at building perimeter shall meet local frost line requirements, and constructed of 3000 psi concrete. Provide 3 - #5 rebar (reinforcing steel) continuous through footers. Provide #5 rebar (reinforcing steel) corner bars at all corners and intersections of footers, beams and walls. Each side should overlap 2'-0",

with a 90 degree bend. Footers shall bear on undisturbed soil and kept free from ground water.

03 30 01 - Slab Foundations

Concrete floor slabs shall be constructed of 3500 psi concrete, 4" thick reinforced with 10 gauge 6" x 6" welded-wire mesh continuous and rebar (reinforcing steel) as per plans. Place slabs over well-compacted granular fill compacted in 12 inch lifts to 95 percent density per AASHTO T-180 Proctor, and a 6 mil vapor barrier. Construction or control joints shall be provided in slabs on grade so that the maximum area between joints shall be 400 sq. ft. and the length of that area is not more than twice the width.
Provide smooth steel trowel finish for all interior slab areas and garage surfaces.
Provide broom finish texture for all exterior slabs. Slope exterior patio or porch slabs away from building at 1/4" of drop in elevation for every 1'-0" in distance. At garage slab, provide positive drainage and taper lip at garage/overhead door.

03 30 02 - Poured Concrete Basement Walls

Poured walls shall be constructed of 3000 psi concrete with #5 rebar (reinforcing steel) at 12" x 12" on center (OC) placed in a vertical grid. Thickness of walls shall conform to plans. Patch all voids and depressions exceeding 3/8 inch in any direction. Provide appropriate waterproofing system around the exterior perimeter and install drainage as specified by manufacturers recommendations.

03 35 00 - Concrete Finishing

Repair of surface defects shall begin immediately after removal of form or pouring of slab foundation. Provide smooth steel trowel finish for all interior slab areas and garage surfaces. Provide broom finish texture for all exterior slabs. Slope exterior patio or porch slabs away from building at 1/4" of drop in elevation for every 1'-0" in distance. At garage slab, provide positive drainage and taper lip at garage/overhead door. Patch all voids and depressions exceeding 3/8 inch in any direction.

03 50 00 - Cast Decks and Underlayment

Install cementitious backer-board under ceramic tile, marble and stone finishes.

Floor Installation - Install over interior wood or concrete sub-floors Ensure subfloor is structurally sound. Ensure the sub-floor is not damaged. Replace any loose, warped or damaged boards. Make certain sub-floor is clean and flat. Stagger joints. Do not align with plywood joints. Never allow all four corners of sheets to meet at one point. Apply a dry set mortar or modified thinset to subfloor per manufacturer's recommendations. Fasten backer-board sheets with proper nails or screws every 8" over the entire surface. Keep the fasteners between 3/8" and 3/4" from sheet edges and 2" in from sheet corners. Provide expansion joints where required.

Wall Installation - Ensure framing is structurally sound. Nominal 2"x wood or minimum 20 gauge metal studs must be straight properly aligned and spaced a maximum of 16" on center. In tub and shower enclosures, ensure that the

framing is adequately reinforced at the corners. Sheets may be installed vertically or horizontally. Score and snap sheets to required sizes and make necessary cut outs. All joint ends and edges must be supported by a structural framing member or added blocking. In wet areas, install a moisture barrier between studs and backer-board. Install sheets 1/4" above floor, tub or shower pan. Fasten backer-board sheets with proper nails or screws every 8" over the entire surface. Keep the fasteners between 3/8" and 3/4" from sheet edges and 2" in from sheet corners. Set fastener heads flush with the surface, without overdriving. Provide expansion joints where required.

03 60 00 - Grouting

Concrete surfaces to receive grout shall be prepared by removing defective concrete, dirt, oil, grease and other foreign matter to achieve sound, clean concrete surfaces.

Grouting- Mix up grout per manufacturers recommendations. Use a padded grout float to spread the grout over a workable section of tile. Push the grout diagonally across the joints to force it down into the gaps. Grout all the joints except those needed to allow for expansion joints specifically along fixtures, between the floor and walls, or joints in corners in between walls. Expansion joints will be sealed with caulk after the grouting process. Once the appropriate joints are packed with grout, scrap the excess grout off the surface of the tile with the grout float. Hold the float at a sharp angle and again use diagonal strokes to keep from digging grout out of the joints. Clean up the excess grout with a damp sponge and a couple buckets of clean water. Wipe excess grout off the surface of the tiles using a clean sponge in circular strokes. Once the tile surface is clean, make another pass parallel to the grout lines to shape the grout lines in the joints. Smooth the joints down a little below the surface of the tile. Clean the remaining haze off the surface of the tile with a sponge or a soft rag. In 24 to 48 hours after the grout has hardened, caulk using a clear tub/shower caulk or one in a color that matches the grout in the areas that you allowed for your expansion joints and over joints that may crack because of movement. Specifically areas between floor tile and cabinet toekick; between floor or wall tile and bathtub or shower; between floor and wall tile; and at the inside corner where two walls meet. Fill the joints completely then smooth them out with a damp rag or appropriate tool. Caulk around plumbing valves, sinks and faucets to seal them from water penetration. Glazed ceramic tile surfaces only require grout joints to be sealed which will provide an enhanced water and mildew resistant surface. Apply a silicone or water-based grout sealer to all joints per manufacturer's recommendations a minimum of 14 days after grout has been installed.

DIVISION 04 00 00. MASONRY (NOT APPLICABLE)

DIVISION 05 00 00. METALS

05 00 00 - Metals

Contractor shall review construction documents and provide labor and materials pertaining to metal work as required in said documents and as specified herein, while complying with all applicable building codes.

05 05 23 - Metal Fastenings

Provide 1/2" diameter x 10" long anchor bolts in filled cells and poured concrete walls at 48" on center (OC) maximum at all window locations and on each side of exterior doors. For slabs, install appropriate tie downs or straps as required by applicable building codes.

05 10 10 - Structural Metal Framing

All structural metal for beams and plates shall be in accordance with ASTM A-36. All structural steel for steel columns shall comply with ASTM specification A-53 Grade B or A-501. Structural steel columns shall be 3" minimum inside diameter, unless noted otherwise. All steel details and connections shall be in accordance with the requirements of the latest AISC specifications and latest revisions. Provide all required anchor bolts, bearing plates and metal ties required by standard practice and as noted below.

Tubular Steel shall be in conformance with ASTM A500 Grade B
Steel pipe shall be in conformance with ASTM A-53, Type E or S, Grade A or B.
Cast Iron shall be in conformance with ASTM A-48, Class 30, unless otherwise noted.
Welding Electrodes shall be as permitted by AWS Code D1.0.

05 50 00 - Metal Fabrications

Install metal detailing as specified on construction documents. Install metal gates, grilles, iron work, etc. to meet all applicable building codes, with appropriate detailing and patterns as shown in construction documents. Metal shall be shop built, welded together, cleaned thoroughly and painted with two coats of an anti-rust primer. After installation, apply an additional coat and anti-rust primer in preparation for finish coats.

05 52 00 - Metal Railings

Install metal hand railings and gates to meet all applicable building codes, with appropriate detailing and patterns as shown in construction documents. Metal shall be shop built, welded together, cleaned thoroughly and painted with two coats of an antirust primer. After installation, apply an additional coat and anti-rust primer in preparation for finish coats.

DIVISION 06 00 00. WOOD, PLASTICS, AND COMPOSITES

06 00 00 - Wood, Plastics, and Composites

Contractor shall review construction documents and provide labor and materials pertaining to carpentry work as required in said documents and as specified herein, while complying with all applicable building codes.

06 10 00 - Rough Carpentry

Lumber shall be of live, sound stock and properly dried. Pressure treated lumber shall be used where any lumber shall come into contract with concrete, masonry block or soil and when using as support members for decks, porches or balconies. Lumber for use at exterior shall have a maximum 9 percent moisture content. Provide adequate bracing and shoring during the construction process. Studs and joists cut to install plumbing and/or wiring shall be reinforced by adding metal or wood structural reinforcing to strengthen member back to original capacity and maintain structural integrity. Holes bored shall not be larger than 1/3 the depth and not closer than 2" to the top or bottom of the joist.

Wood Species: #2 Douglas Fir, Hem Fir, etc.

06 11 00 - Wood Framing

Floor Framing - Pre-engineered trusses or engineered joists are to be installed following manufactures' guidelines for installation. Pressure treated lumber shall be used where any lumber shall come into contract with concrete, masonry block, roof curbing or roof blocking.

Girders: Install girders in pockets formed in the foundation or on top of the sill plate. The pocket should allow a minimum of 1/2" on both sides for circulation.

Girders: solid wood, two or more 2" planks, laminated veneer lumber, glue-lam beams, steel beams

Girder walls: girder walls constructed on footers, placed under floor framing shall be constructed as noted on plans. Girder walls shall be level with sills

Sills: Install single 2"x 6", solid pressure treated lumber horizontally on foundation. Bore holes in sills for anchor bolts. Sills shall be shimmed using steel shims as needed to create level surface. Place shims at each joist bearing location. Fill gaps over 3/8" between sill and concrete wall surface with non-shrink grout.

Floor Joists: Utilize engineered joists per plans and installed per manufacturers' specifications.

Exterior Walls - All exterior walls shall be constructed with 2"x 6" wood studs at 16"on center (OC), with single bottom plates and double top plates throughout. Headers per plans. Provide jack studs as noted on plans under headers. Pre-insulate corner framing and framing channels in exterior walls where interior walls intersect.

Fascia and Soffit - Provide and install wood, fascia and soffit. See construction documents for complete architectural details.

Location: exterior perimeter
Finish, Pattern and Color: smooth finish, brite white color
Specify: James Hardi: Harditrim boards (facia), Hardisoffit (soffit)

Interior Walls
All interior walls shall be wood studs, with single bottom plates and double top plates throughout.

Roof Framing
Roof framing per plans, pre-engineered trusses per truss manufacturer's guidelines. Provide engineered truss plans and shop drawings, stamped by a Colorado licensed engineer with truss package, copies to owner and building inspector.

Roof Decking - Provide and install exterior sheathing of APA rated and code certified CDX plywood panels or OSB, per plans. Sheathing shall be installed with the face grain running across the rafters, vertical joints staggered. Nails shall be 8d common smooth, ring-shank nails spaced 6" apart on the ends and 12" apart inside. Waterproof with bitumous self-adhered membrane; Grace Ice and Water Sheild or approved alternative, install per manufacturer's specifications.

Dropped soffit: kitchen and dining room units framed with 2x4's 16" o.c., see plans for location and size.

Decks, Porches, Balconies - Exterior grade lumber shall be used for exterior decks, porches or balconies. Provide and install galvanized joist hangers to connect floor joists to the main structure. All handrails shall be constructed so as to prevent passage of a 4" sphere. Provide handrail and detailing as shown in construction documents. Paint and seal wood a minimum of 6 months after installation to allow for proper curing. Wood type shall be: treated pine.

06 13 23 - Heavy Timber Construction

Install pre-engineered wood frame, exterior wall and roof packages per construction documents. Structural timber and lumber shall be structural grade or better. Lumber shall be of live, sound stock and properly dried. Pressure treated lumber shall be used where any lumber shall come into contract with concrete, masonry block or soil and when using as support members for decks, porches or balconies. Lumber for use at exterior shall have a maximum 9 percent moister content. Provide adequate bracing and shoring during the construction process. Holes bored shall not be larger than 1/3 the depth and not closer than 2" to the top or bottom of the joist. Install per the plans.

Surfacing: Planed **Wood Species:** Douglas Fir

06 16 00 - Sheathing

Provide and install exterior sheathing of 7/16"" exterior rated plywood or OSB panels with Tyvek Housewrap or equivalent weather barrier as approved, or Huber Zip System sheathing, install all sheathing, housewrap, and sheathing "systems" per manufacturers' recommendations.

06 16 23 - Subflooring

3/4" tongue and groove plywood sub-floor shall be installed with both nails and approved sub-floor adhesive. Stagger joints a minimum 2 stud spaces. For attic access, install necessary plywood walkways to meet applicable building codes.

06 20 00 - Finish Carpentry

All architectural trim and woodwork shall be No. 1 grade material suitable for appropriate finishes. Wood that will be stained shall be clear of knots with concealed joints.

06 22 00 - Millwork

Moisture content for interior woodwork shall be 8-10 percent to reduce excess shrinking. Provide and install interior wood trim as shown in construction documents. Install baseboard trim after hard flooring installation, tight to finished floors. Install baseboard in carpeted areas 3/8" from sub-floor. Material: use fingerjointed pine or MDF trim, prime and paint. Color: white

Fill nail holes, caulk seems and corners, caulk top edge to walls. Nail to studs, minimum ½" penetration.

Base Molding: 3"x7/16" colonial, or approved equiv.
Door Casing: 3"x7/16" boards, mitered corners
Window Casing: none, drywall returns at header and sides.
Window sill: 5 ½" x ¾" board, extend ears past window opening 1"

06 41 00 - Architectural Wood Casework
All cabinetry to be KCMA certified. Contractor to propose cabinetry layout and finish options for owner approval. Cabinets must be free of defects, stored in a secure dry location until installation and protected from damage once installed until final cleaning.

DIVISION 07 00 00. THERMAL AND MOISTURE PROTECTION

07 00 00 - Thermal and Moisture Protection
Contractor shall review construction documents and provide labor and materials pertaining to thermal and moisture protection work as required in said documents and as specified herein, while complying with all applicable building codes. Insulation, air infiltration, and moisture management systems shall meet or exceed IECC, 2015 standards. Installation of insulation must be free of gaps or cracks, insulation must be custom fitted to wall cavities, formed tightly around electrical outlets and other barriers, with no uninsulated channels or gaps. Air infiltration barriers must be lapped, taped, or sealed per manufacturer's recommendations, holes must be patched, and the entire system must be tight and free of leaks. Flashing around windows and doors must meet manufacturer's requirements and integrated into the infiltration and moisture protection system according to industry best practices and manufacturer's recommendations. Details and drawings for flashing and moisture protection systems meeting these requirements must be provided to the owner along with window and door submittals for owner approval.

07 10 00 - Dampproofing and Waterproofing
All joints and penetrations in walls, floors, and roofs shall be made watertight using approved methods and materials. Waterproofing and dampproofing recommendations contained herein are minimum, check with local code officials for additional requirements.

Slab Foundations - Install a minimum (6 mil) polyethylene vapor barrier in all slabs, directly underneath concrete. Lap joints not less than 12 inches and tape and seal in accordance with manufacturers guidelines.

Crawlspace Foundations - Install a minimum (4 mil) polyethylene vapor barrier in all crawlspace areas. Lap joints not less than 12 inches and seal in accordance with manufacturer's guidelines and according to details in plans.

Basement Walls - Install necessary waterproofing material system to exterior basement walls and foundation surfaces, from a point 12" below the lowest slab to not less than 6" above finish grade. Install as recommended by manufacturers guidelines. Install a minimum 5" slotted drain pipe with a positive outflow around exterior basement wall footings, imbedded in a loose fill gravel, minimum 12" deep. Slotted drain pipe should be wrapped with an appropriate geo-technical

fabric to prevent silt buildup. Install other drains necessary for positive site drainage.

07 13 13 – Roof Underlayment

On all roof surfaces install self-adhered bitumous underlayment. Overlap a minimum of 4" vertically and 12" horizontally. Install one course along valleys, cover with metal valley pan to match roof surface, seal valley pan with additional row of self-adhered underlayment. Continue underlayment 12" up all vertical surfaces and 4" over valley metal. Fasten all edges with manufacturer approved mechanical fasteners. Lay courses parallel with eaves. Do not stretch courses.

07 20 00 - Thermal Protection

Effective R values shall be in accordance with local and state energy codes and built in accordance with details on plans.

A. Spray foam shall meet or exceed the following standards :
Insulation materials shall be ICC approved 2 lb spray polyurethane wall foam insulation.
B. Insulation materials, shall be Greenguard approved and certified for Children and Schools.
C. Insulation materials shall meet revised AC377, approval criteria. rafters and in crawl spaces with insulation on the underside of top spaces to a maximum
D. Closed cell foam shall not require intumescent coatings in attics or crawl spaces.
E. Insulation materials shall meet AC377 thermal barrier standards with the application of
DC315 in prescribed depths.
F. Insulation materials shall meet type III and IV construction standards.
G.All cellulose insulation must meet the following standards: CPSC standard 16 CFR Parts 1209 and 1404. In addition, Cel-Pak cellulose insulation meets all of the testing requirements of ASTM C-739, E-84 and E-119, and UL-723.

07 30 00 - Steep Slope Roofing

Provide and install roof system in accordance with all applicable building codes and manufacturers' guidelines. Metal roofing shall be exposed fastener painted metal roofing, minimum 26 guage. Panels must be single piece from ridge to eave or intersection with valleys. Fasten according to manufacturer's recommendations.

07 40 00 - Roofing Panels

Install 40 year warranty raised rib metal roof system with exposed fasteners as shown on construction documents.

Metal roof: *Metal Sales, Classic Rib- MS Colorfast45, Color: Burnished Slate*

07 46 00 - Siding
Provide and install siding exterior in accordance with applicable building codes and manufacturers guidelines.

Composite Siding - Install 30 year warranty horizontal composite siding as specified in construction documents. Siding shall be straight and flat against building. When installing siding horizontally, joints should be blocked and butt joints caulked. Provide all necessary starter strips, wedges, corner detailing, etc. required by manufacturer and as stated in construction documents.

Manufacturer and Product line: James Hardi, HardiPlank lap siding,
Width: 8"
Siding: Lap
Texture: Cedarmill
Finishes: Pre-finished, color: Monterey Taupe
Trim: James Hardi, HardiTrim,
Size: Windows: 4/4" x 3 ½", Corners: 4/4" x 5 ½", Facia: 4/4" x 7 ¼"
Color: Cobblestone

07 60 00 - Flashing and Sheet Metal
Install appropriate flashing at all joints of chimneys, dormers, walls, vent pipes and other connection points to prevent the infiltration of water. Flashing shall be assembled of 26 gauge minimum galvanized, corrosion resistant sheet metal. Valleys shall be wrapped with 24" wide galvanized flashing and extend 12" in each direction from center-line of valley. Use 4"wide x 4"high x 10'long galvanized flashing between wall siding and roof surfaces. Keep flashing concealed except where exposed on vertical surfaces or counter flashing.

07 72 00 - Roof Accessories
Vents - Proper roof ventilation requires a minimum 1 sq inch of vent area for every 2.08 square feet of attic floor area. Provide a minimum of 144 square inches of free air ventilation for every 300 square feet of attic floor area. 50% of the roof ventilation should be located adjacent the roof peak with the other 50% located in the soffit area under the eaves to provide natural convection throughout the attic area. Check ventilation requirements with roof system manufacturer.

Soffit Vents - Install perforated aluminum or galvanized continuous or louvered metal soffit vents every 8'-0"on center (OC).

Gable End Vents - Install metal gable end vents as noted on drawings.

07 92 00 - Joint Sealants
Use a 50 year warranty silicon based caulk at high expansion/compression areas, such as around chimneys, tile, ceramic, and around enamel and pre-fabricated tubs and showers. For exterior windows, door frames, interior trim, woodwork and other paintable surfaces use a clear, colored Latex based caulk. Color shall match wood stain or paint.

DIVISION 08 00 00. OPENINGS

08 00 00 - Openings
Contractor shall review construction documents and provide labor and materials pertaining to the doors and windows as required in said documents and as specified herein, while complying with all applicable building codes. In all sleeping areas provide an operable egress standard window or door directly to exterior.

08 11 01 - Exterior Doors
All exterior doors shall be solid core, insulated and swing inside with weather-tight thresholds. Install weather-stripping around all doors.

Front Door – Fiberglass, insulated door, with insulated, Low- E glass, per drawings. Provide necessary hardware per door schedule.

Sliding Exterior Door - Fiberglass insulated, full-lite window, Low-E glass, with full weather-stripping and threshold. Provide necessary hardware per door schedule.

08 14 00 - Interior Doors
Interior doors shall be pre-hung, including casing on both sides of the door. Casing shall be WM 445, 11/16" x 3 1/4" finger joint for paint finish, or approved equivalent MDF. Casing and jambs to be painted white.

Standard Interior Door Manufacturer:
Masonite
Type: Hollow core
Style: Heritage Series. Logan
Color: White

Bi-fold Door Manufacturer: Masonite
Type: Hollow core
Style: Heritage Series. Logan

Color: White

Interior French Door Manufacturer:
Masonite
Type: Hollow core
Style: Heritage Series. Logan
Color: White

08 31 00 - Attic Access Door
Install a 24"w x 24"d wood access door as shown on construction documents. Insulate and seal access door with minimum 6" rigid polystyrene insulation and seal perimeter with weather-stripping. Frame attic opening with plywood barriers extending up to top of attic insulation to prevent spillage of insulation into attic access. Trim opening with appropriate window casing to match interior trim. Confirm size of opening meets local building codes for attic access.

08 36 00 - Panel Doors
Install Overhead, insulated, metal garage/overhead door(s) with electric opener(s) and dual remote control units. Install weather-stripping around each door opening. Garage doors must be minimum R-6. Contractor to submit door style and specifications to owner for approval.

08 50 00 - Windows
Confirm that openings are compliant with all applicable building codes concerning egress, lighting and ventilation requirements. Temper all glass located within 2'-0" from exterior doors, all glass in doors and above tub enclosures. Provide and install necessary windows and appropriate hardware to operate and lock windows. Bedroom windows shall comply with Code requirements for emergency escape with appropriate egress hardware. Minimum net clear opening shall be 5.7 sq.ft., minimum net clear width shall be 20", minimum net clear height shall be 24" and sill height shall not exceed 24" above floor. Hardware Finish shall be: white. Consult window and glazing schedule.

Windows: Milgard, StyleLine or approved equivilent
Frame: vinyl **Glazing options:** Clear Glazing
Insulation options: Double Pane, Low-E coating
Ratings: U value Rating (rate at which heat flows through glass), R-value, air infiltration and shading coefficients

QUALITY ASSURANCE

A. Overall Standards: Comply with ANSI/AAMA/101/I.S.2, except where noted herein.

B. Certifications for Insulated Glass Units: Insulated glass units are certified to ASTM E2188/E2190 per the Associated Laboratories Incorporated (ALI) guidelines.

C. AAMA: Windows shall be Gold Label certified with label attached to frame per AAMA requirements.

D. NFRC: Windows shall be NFRC certified with temporary U-factor label applied to glass and an NFRC tab added to permanent AAMA frame label.

DELIVERY, STORAGE and HANDLING

A. Comply with Manufacturer's/Dealer's ordering instructions and lead time requirements to avoid construction delays.

B. Delivery: Deliver materials in Manufacturer's standard packaging for protection of product.

C. Storage & Protection: Store products away from exposure to environmental conditions that may be harmful to materials.

D. Store materials off ground in an upright position. Provide cover from weather and construction activity.

E. Follow Manufacturer's instructions on label applied to units.

WARRANTY

Residential Special Warranty: (Owner Occupied Multi-Family Residential)
10 Year Multi-Family Limited Warranty.

EXECUTION EXAMINATION

A. Examine openings in which windows will be installed.

1. Verify that framing complies with AAMA 2400 (Mounting Flange Installation) & AAMA 2410 (Flush Fin Installation).

2. Verify that fasteners in framed walls are fully driven and will not interfere with window installation.

B. Coordinate with responsible entity to correct unsatisfactory conditions. C. Commencement of work by installer is acceptance of substrate conditions.

INSTALLATION

A. Install windows in framed walls in accordance with AAMA 2400 ("Mounting Flange Installation")

B. Do not remove temporary labels.

C. Install insect screens on operable windows.

CLEANING AND FINISHING

Remove temporary labels and protection. Clean soiled painted surfaces and glass using a mild detergent and warm water solution with soft, clean cloths.

08 71 00 - Door Hardware

Finish hardware shall include keyed deadbolt locksets at exterior doors except sliding patio doors. Interior doors shall be a combination of privacy and passage locks, consult with owner for lock styles and submit for owner approval. Hardware shall be as per

allowance. All exterior locksets shall be keyed the same. Substitutions by Owner approval.

Type: lever door hardware.
Finish: Satin nickel
Door Hardware: Passage Set, Privacy Lockset, Dead Bolt, Dummy Knobs with Ball Catches (as approved by owner)
Specify: Schlage, Century Collection, Latitude

08 71 01 - Door Hardware - Thresholds
Provide and install brushed aluminum thresholds and appropriate door sweeps at exterior doors.

08 83 00 - Mirrors
Install mirrors as noted in construction documents. Install with silicon sealant and spacer strips per manufacturers recommendations.

DIVISION 09 00 00. FINISHES

09 00 00 - Finishes
Contractor shall review construction documents and provide labor and materials pertaining to the finishes as required in said documents and as specified herein, while complying with all applicable building codes.
09 29 00 - Gypsum Board
Gypsum board must be held firmly against the framing while fastening to avoid later movement of gypsum board on the shank of the nails or screws.

Nails or Screws: Nails and screws shall be a minimum 3/8" and a maximum of 1/2" from edges and ends of wallboard and the heads shall be seated slightly below the surface without breaking the paper. Nails shall be spaced not to exceed 7" on ceilings or 8" on sidewalls. Head diameter shall be a nominal 1/4" with the length 1 1/2" to penetrate a minimum of 7/8" into nailing member. Nails shall meet the minimum requirements of ASTM C514 and may include coated, etched treated or annular ring shanks to improve withdrawal resistance. Drywall screws shall meet the minimum requirements of ASTM C1002. Bugle-shaped heads shall be 0.315" in nominal diameter and contain a No. 2 Phillips driving recess. Type "W" screws are designed for easier fastening in wood.

Joints: At gypsum wallboard joints install a 2" strong, cross threaded tape with a cross tensile strength of 45 lbs per lineal inch. Press a strong, good quality tape firmly onto sheathing joints and around openings, imbedded in joint cement. At corners and angles, install metal corner beads as specified by manufacturer. If corners are rounded, install corner reinforcement as required. Spread gypsum wallboard mud at all tape joints, corner beads, nails and screw penetrations and

where a smooth surface is needed. Apply second coat of wallboard mud after a minimum 24 hours. After drying (minimum 48 hours), sand all joints and other areas to a smooth consistent surface.

Interior Walls: Sheath walls and ceilings with 1/2" gypsum wallboard, either vertically with long edges parallel to framing, or horizontally with long edges at right angles to framing members. Offset joints between layers at least 16".

Ceilings: Apply a single layer of 5/8" gypsum wallboard across the supports and fasten with nails or screws. Offset joints between layers at least 10". Nails are spaced 6"on center (OC) with 1 1/4" heads. Screws are spaced 12" on center (OC). Ceiling finish shall be smooth, stippled, blown, etc.

Fire-Rated Gypsum Wallboard: In garages, around gas water heaters and as required by applicable building codes, install 5/8" Type "X" fire-rated gypsum wallboard. Nails shall be 1 3/4" long, spaced a maximum of 4" on center (OC) around perimeter and 8" on center (OC) in the field of the board. At party walls install 5/8" Type "X" wallboard according to specifications in plans. Party walls must meet minimum 2 hour fire rating in all site conditions.

Water Resistant Gypsum Wallboard: Around showers, tubs, whirlpools, or as required by applicable building codes, install 1/2" water resistant drywall.

09 60 00 - Flooring

Contractor shall properly clean all surfaces to be covered and install appropriate underlayment or preparation per manufacturers' recommendations.

09 65 00 - Resilient Flooring

Install appropriate underlayment for all surfaces as described below or required by manufacturer. Properly clean and fill all surfaces leaving installation area smooth and free of foreign material. Cracks and expansion joints should be smooth and level. Wood sub-floors must be solid, free from movement and have a minimum of 18" of wellventilated air space below the structure. Follow pattern arrows on back of vinyl flooring for the direction of installation.

Vinyl flooring (tiles): Install vinyl tiles as indicated per construction documents. Use appropriate adhesive material or installation method guidelines per manufacturer's recommendations. Transitions including thresholds and crawl access shall be finished with appropriate trim: Schluter or equiv.

Specify: Manufacturer, description, color and item number

09 68 00 - Carpeting

Inspect all sub-flooring to insure a clean, dry and secure surface before installation. If filling compound is needed for floor leveling, a latex based sub-floor filler will be used.

Padding: Cushion padding shall be 3/8" thick, 8# installed in the longest possible lengths. Cushion seams shall not be located directly under carpet seams, and when possible shall be oriented at right angles to carpet seams. All padding shall be smooth, flat and secure with seams tightly butted and taped.

Installation: Carpet shall be installed to produce a tight, smooth, secure and uniform surface as indicated per construction documents and finish schedules. In areas where more than one width of carpet is required, precut the carpet to the proper length allowing for flash up at walls and through doorways. Position first two pieces of carpet, and cut seams by row cutting and trace cutting for the second piece in a manner that will produce a tight, uniform seam requiring a minimum amount of adjusting with a knee kicker.

Seams: Carpet seams shall be secured by a non-releasable backed low profile hot melt seaming tape per carpet manufacturers' recommendations.

Specify Carpet: Manufacturer, description, color and item number
Specify Pad: Manufacturer, type, density

09 70 00 - Wall Finishes

Walls shall be clean and free of defects such as cracks or unfinished joints prior to installation of wall finishes. If mildew is evident, mildew must be removed and surface properly treated to inhibit further mildew growth.

09 90 00 - Painting and Coating

Prepare each surface to receive scheduled work as set forth below.

Finish Schedule

Room	Walls	Floors	Ceiling	Trim
Kitchen, Dining, Living, Hallways	Benjamin Moore, Morning Dew 1493, flat	Vinyl Plank	Benjamin Moore, Simply White 2143-70, flat	Benjamin Moore, Simply White 214370, semi-gloss
Laundry	Benjamin Moore, Simply White 214370, satin		Benjamin Moore, Simply White 2143-70, flat	Benjamin Moore, Seapearl 961, satin

Bedrooms	Benjamin Moore, Simply White 2143-70, flat		Benjamin Moore, Simply White 2143-70, flat	Benjamin Moore, Seapearl 961, satin
Bathrooms	Benjamin Moore, Simply White 214370, satin		Benjamin Moore, Simply White 214370, satin	Benjamin Moore, Seapearl 961, satin

09 91 13 - Exterior Painting

All nail heads shall be set below the surface and finished smooth. If mildew is evident, the mildew must be removed and surface treated to inhibit further mildew growth. Exterior siding and trim shall be factory pre-finished. Joints shall be caulked with colormatch caulking. Touch-up as needed. Color as described in section 07 46 00.

DIVISION 10 00 00. SPECIALITIES

10 00 00 - Specialties

Contractor shall review construction documents and provide labor and materials pertaining to the specialties as required in said documents and as specified herein, while complying with all applicable building codes.

10 28 16 - Bath Accessories

Contractor shall install toilet paper rolls, 18" towel bars and soap dispensers in all 1/2 baths. In full baths, add an additional 24" towel bar. Install toilet paper rolls 15" Above Finished Floor (AFF).

Specify: contractor propose, approve by owner

10 57 00 - Wardrobe and Closet Specialties

Install shelving as indicated on construction documents for all closets, storage areas and pantries. Shelving shall be fabricated of white melamine coated MDF. Provide supports every 3'-6"maximum on center (OC)

DIVISION 11 00 00. EQUIPMENT

11 00 00 - Equipment

Contractor shall review construction documents and provide labor and materials pertaining to the equipment as required in said documents and as specified herein, while complying with all applicable building codes.

11 31 00 - Residential Appliances

Install electrical or gas appliances as shown on construction documents, including all venting and supply requirements per manufacturer's recommendations. See electrical specifications for wiring information.

Appliances – contractor propose for owner approval

Appliance:
Range
Vent Hood
Microwave
Dishwasher
Disposal
Refrigerator
Washer
Dryer

12 30 00 - Casework

Install pre-fabricated cabinetry as specified in construction documents. Dimensions of base cabinets shall be: 24"deep x 36"high. Dimensions of overhead cabinets shall be: 12"deep x 36"high. Provide concealed hinges and cabinet hardware. Contractor to propose casework for owner approval.

12 36 00 - Countertops

Plastic laminate counter tops shall be provided and installed per construction documents and finish schedules. Counter surfaces shall be glued onto 3/4" plywood or appropriate substrate as recommended by manufacturer. Edges shall be installed per construction documents and finish schedules. Provide minimum 4" backsplash between counter and wall. Contractor to propose style and finish for owner approval.

DIVISION 15 00 00. MECHANICAL

15 00 00 - Mechanical

Contractor shall review construction documents and provide design and specification for a fully engineered mechanical heating system and proposal for heating system labor and materials, while complying with all applicable building codes. Mechanical system shall be forced air, natural gas furnace, with AFUE 90 minimum. Each unity shall have a dedicated furnace. One zone per unit floor level. The system will contain air distribution ducts, diffusers and programmable thermostat. Each room shall receive supply and return ducts per code and as required to provide necessary space conditioning. Provide necessary venting and fire-rated wall system around furnace

DIVISION 22 00 00. PLUMBING

22 00 00 - Plumbing

Plumbing shall be a fully operational system of hot and cold water. Provide and install all piping, soil, vents, drains, sewage removal and water supply systems to connect with appropriate water and sewage systems. Provide and install appropriate insulation around piping. All permits and inspections are to be obtained by contractor as required by local building codes and the Uniform Plumbing Code.

Sewer and Waste Piping - Drainage system shall be Schedule 40 PVC pipe. All connections shall have PVC cement and assembled tight for no leakage. Condensate drains shall be constructed of Schedule 40 PVC. Valves shall be Milwaukee Brand or equal. Building sewer shall be approved Schedule 40 PVC pipe. Connection to public sewer system shall comply with all local requirements. Caulk joints or provide neoprene gaskets for all sewer lines. Pitch shall be a minimum 1/8" per foot for soil lines larger than 3" diameter and a minimum of 1/4" per foot for soil lines 3" diameter or less.

Water Pipes - From public water line, install Type "L" or "K" 1" (minimum) copper pipes or PEX if approved by local water authority, located below frost line. From the meter to the building, install 1" supply water lines. Use ½" minimum lines from supply lines to each plumbing fixture as required. At water heaters and hose bibs install a minimum 3/4" pipe. From water heater install min. 3/4" pipe to each room with branches to fixtures as described above. Fittings shall be wrought copper, soldered with 95-5 solder and suitable flux. Use polished chrome adjustable brass P-traps with wall escutcheons at all exposed locations.

Provide shut-off valves at sinks, toilets, water heater and other fixtures as required. Test all pipes under 100 lbs pressure per building code requirements.

Waste Drainage - Install sewage clean-out at the end of each horizontal drainage run and every 100 feet per building code requirements. Vents shall be installed throughout plumbing connections and connected with the vertical stacks and vented through the roof. Check with local building code officials for specific venting requirements.

Water Heater - Install one 50 gallon electric heat pump water heater per unit as shown in plans. Water heater shall have appropriate safety valves, back flow preventers, pressure relief valves and drain assemblies. Follow manufacturer recommendations and building code requirements for installation and use.

22 40 00 - Plumbing Fixtures

Provide necessary piping, water and drains for plumbing fixtures as shown on the construction documents and listed herein. Fixtures allowances are listed in Contract Documents. Alternates acceptable upon Owner approval.

Fixtures and Fittings - Provide and install plumbing fixtures as listed below.

Location	Fixture/Fittings	Description	Model #
Kitchen	Sink	Single basin, stainless	Kohler K-20060-1
Kitchen	Faucet	Faucet, pull out, single hole	Delta 9113-DST
Bathroom	Faucets	Single hole, chrome	Delta 559LF-MPU
Bathroom	Sinks	Single hole, white, drop-in	Kohler K-2337-1-0
Bathroom	Tub/Shower	One-piece w/ shower door	Kohler K-707000-L-SHP
Bathroom	Toilet	White – 1.28 GPF	Kohler- K 3609

DIVISION 26 00 00. ELECTRICAL

26 00 00 - Electrical

Contractor shall review construction documents and provide labor and materials pertaining to the electrical system as required in construction documents and as specified herein, while complying with all applicable building codes, local utility requirements and building restrictions.

26 05 00 - Common Work Results for Electrical

From electrical meter box, install below ground wiring to building. Raceways to be buried shall be PVC #2 Plastic Electrical conduit. Where permitted by code, non-metallic sheathed cable may be used. Type THW or THWN 600 volt insulation conductors shall be used, minimum wire size shall be #12. Aluminum wire shall not be permitted. Wiring shall connect into metal recessed electrical panel, as shown on construction documents. Electrical service shall be rated at 100 amps to each unit. Wiring from the outside meter box shall be SE cable.

26 05 19 - Conductors and Cables

Provide and install necessary circuits and breakers for appliances as stated in manufacturer's recommendations per applicable building code requirements. For general illumination, provide a minimum 15 amp circuit for each 500 sf of living area (load 3 watts per sq.ft.)
Branch circuits shall be wired with No. 12 gauge wire.
Install GFI circuits with No. 12 gauge wire in all wet areas, baths and exterior outlets.

Appliance circuits shall be installed as follows per applicable building code requirements.
Range: No. 6 gauge wire Dryer: No. 10 gauge wire
Disposal: No. 12 gauge wire Dishwasher: No. 12 gauge wire For furnace, install 10 gauge wire per applicable building code requirements. **26 05 33 - Raceway and Boxes for Electrical Systems**

Flexible or rigid conduits, couplings, supports and nonmetallic ducts. Install conduit concealed in all areas, excluding mechanical and electrical rooms/areas, connections to

motors and connections to surface cabinets. Coordinate installation of conduit in masonry work. Unless indicated otherwise, do not install conduit larger than 2 1/2 inches in concrete slabs. Provide a minimum concrete cover around conduits of 2 inches. Install conduit free from dents and bruises. Plug ends to prevent entry of dirt and moisture. Minimize crossovers. Provide flashing and pitchpockets, making watertight joints where conduits pass through roof or waterproofing membranes. Route all exposed conduits parallel or perpendicular to building lines. All fittings shall be UL approved.

Fasten raceways securely in place. Firmly fasten within 3 feet of each outlet, junction box, cabinet or fitting. Support every 10 feet.

26 24 00 - Switchboards and Panelboards

Panelboards shall be Square "D", G.E. or ITE. Provide typewritten directory of circuits mounted in box. Use dead front panelboards with one-piece cabinets constructed from code gauge steel, finished with rust inhibiting primer and baked enamel finish and manufacturer's standard color.. Use factory assembled panelboards with amp rating units indicated. Provide spare units and blank spaces as indicated.

26 27 26 - Wiring Devices

Install white receptacles, switches and cover plates as per construction documents and finish schedules. For exterior receptacles install gray cover plates. When two or more switches or receptacles are located together, gang with one common faceplate. If they cannot be ganged, install with a minimum distance between units. Install all receptacles at 18"on center (OC) above finished floor (AFF), unless otherwise noted. At counters, locate receptacles at 44"on center (OC), above finished floor (AFF). Install switches at 48"on center (OC) above finished floor (AFF). Locate light switch cover plates 6" from frame of door or corner of wall. Switches shall be: Toggle

26 50 00 - Lighting

Provide necessary circuits and wiring for light fixtures as listed below. All lighting shall be switched as noted on construction documents. For exact locations of fixtures, see construction documents and finish schedules. Fixture allowances are listed in Contract Documents.

Special Items - Provide necessary receptacle requirements and wiring for additional items as listed below. Locate as shown on construction documents.

Bath Vent Fans - install in all bathrooms, include in lighting allowance
Smoke Detectors/ CO detectors - install per code at bedrooms and kitchen
Telephone/ cable outlets - located in great room, kitchen, and garage.
Garage Door/ Overhead Door opener - locate ceiling hook-up and push button at door.
Fixtures - Propose for owner approval

DIVISION 28 00 00. ELECTRONIC SAFETY AND SECURITY

28 31 46 - Smoke Detection Sensors

Install at least one smoke alarm on every floor of a structure (including the basement) and outside each sleeping area. Smoke alarms are required in all sleeping rooms, according to the NFPA 72, *National Fire Alarm Code®*. Mount the smoke alarms on ceilings or high on walls. Ceiling-mounted alarms should be installed at least four inches away from the nearest wall; wall-mounted alarms should be installed at least four inches, but not more than 12 inches away from the ceiling. On vaulted ceilings, be sure to mount the alarm at the highest point of the ceiling. Don't install smoke alarms near windows, outside doors, or ducts where drafts might interfere with their operation. Do not paint, apply finish or obstruct smoke alarms.

DIVISION 31 00 00. EARTHWORK

31 10 00 - Site Clearing

The area of clearing shall be maintained within the limits shown on the appropriate site plans. Remove stumps and matted roots to a depth of 24 inches below existing ground surface. Dispose of trees and shrubs in accordance with applicable garbage, refuse or weeds ordinance. Do not burn materials on site. .

> **Soil Bearing** - Foundation designs are based on a soil bearing value of 2500 psf. Foundations and slabs are designed to uniformly bear on well-compacted, welldrained non-expansive soils. A certified soils engineer shall review foundation designs and building loads and compare with subsurface soil investigation. Should on-site observations show that foundation designs are not satisfactory, a structural engineer should be contacted immediately to redesign foundations to accommodate conditions.

31 11 00 - Clearing and Grubbing

Clear and grub the construction site. Grade building site with appropriate soils. Existing trees to remain shall be marked prior to clearing and protected to prevent damage. If any damage is done to walkways, driveways, etc, needed repairs shall be provided by the contractor. Repair or replace any damaged vegetation or terrain that is indicated to be protected or is more than eight feet from the edge of any construction.

31 20 00 - Earth Moving

Excavate bottom of all foundation walls and footings at building perimeter per plans. Base of footings shall extend down to undisturbed virgin soil which has been compacted to 95 percent proctor density. All excavation shall be to a level below existing demolition debris. Board form all footing as required by soil conditions.

At slab foundations, compact sub-grade under slabs to a minimum 95% density. Compact backfill areas not under slabs or foundation to a minimum 90% ASTM D-689.

Sub-base directly under concrete slabs on grade shall be a minimum of four inches of compacted granular fill.

31 22 00 - Grading

Carefully remove loam and topsoil to be incorporated in the finished work and store separate from the other excavated material. Failure to isolate loam and topsoil from the other excavations shall require that said soils not be used as topsoil.

When excavations are to be made in paved surfaces, remove pavement so as to provide a clean, uniform edge with a minimum disturbance of remaining pavement. Do not mix pavement with other excavated material unless it is broken into pieces measuring 3 inches or less. Dispose large pieces of pavement away from the site of the work immediately.

31 22 13 - Rough Grading

Prior to commencement of earthwork, perform such soil and rock removal and filling as may be required to facilitate the progress of the work and bring all elevations to the rough grade lines indicated on the Contract Documents. Fill or backfill as required.

31 22 19 - Finish Grading

Keep exterior finished grade a minimum of 6 1/2" below finished floor elevation (see construction documents for exact locations) by backfilling with appropriate soils. Provide swales with positive outfall and slope grade away from building to allow water to drain away from the building foundation. Do not backfill against foundation until project is completely framed and roof structure is in place.

31 23 00 - Excavation and Fill

Backfill material to be used from the excavations shall be of such nature that after it has been placed and properly compacted, it will make a dense, stable fill. It shall not contain vegetation, masses of roots, stones over 3-inches in diameter, or porous matter and shall not be saturated. Organic matter shall not exceed minor quantities and shall be well distributed.

31 23 16 - Excavation

Carry out the excavation, dewatering, sheeting and bracing in such manner as to eliminate any possibility of undermining or disturbing the foundations or any existing structure or any work previously completed.

Excavate pipe trenches to the necessary depth as shown on plans. Trenches over 5 feet in depth shall be properly sloped, shored, braced or otherwise supported in conformance with the OSHA Construction Safety and Health Standards.

Excavate trenches to provide a uniform and continuous bearing and support for the pipe and appurtenant structures on solid and undisturbed ground and at the specified grade at every point.

Excavation for structures and pipelines shall include the disposal of materials unsuitable for reuse for backfill. Excavation activities shall include the stockpiling of suitable materials which shall be incorporated into the project at a later date of different location.

31 23 19 - Dewatering

At all times during construction - provide, place and maintain ample means and devices with which to remove promptly all water entering trenches and other excavations. Keep excavations dry until the structures, pipes and appurtenances to be built therein have been completed and backfilled. Dispose of all water pumped or drained from the work without interference with other work, traffic or injury to public or private property. Prevent siltation of storm water facilities or receiving waterways.

31 23 23.13 - Backfill

Correct any part of the trench bottom excavated below the specified grade with approved materials and thoroughly compact.

Complete all backfilling to the dimensions and levels shown on the construction documents. Where excavated material or any portion thereof is deemed unsuitable for backfilling material, procure and place approved select borrow materials.

Backfill as promptly as is consistent with non-damage to the installed structures. Do not place frozen material in the backfill.

No material shall be placed or compacted when it is too wet or frozen or when the subgrade or previously placed material is too wet or frozen.

31 25 00 - Erosion and Sedimentation Controls

Clear the top layer of soil and place in a designated area for use at the end of the project. Provide swales with positive outfall, and slope grade away from building to allow water to drain away from the foundation. Backfill around building with subsoil graded free of lumps larger than 6", rocks larger that 3" and debris. Keep finished grade elevations a minimum of 6 1/2" below finished floor elevation (see construction documents for exact locations. Do not backfill against foundation, until main floor framing including sheathing is complete

31 50 00 - Excavation Support and Protection

Install excavation support systems for safety preservation of existing improvements. Design criteria of support systems shall consider all loads in a manner which will allow the safe and expeditious construction of permanent structures without movement or settlement of the ground.

DIVISION 32 00 00. EXTERIOR IMPROVEMENTS

Contractor propose landscaping for owner approval. Landscaping to be minimal and consistent with natural surroundings. Landscaping must comply with HOA requirements. Provide a minimum 3 trees per unit, reseed with native grasses and shrub; provide water until established.

32 01 90 - Operation and Maintenance of Planting

All plants shall be kept in healthy, growing condition by replacement of dead or dying plants where necessary, by watering, weeding, cultivating, pruning, spraying, trimming, protection from wind, and by performing any other necessary operations or maintenance for a period of 30 days or until acceptance of the planting at the time of the final

inspection. A final weeding of all plant areas shall be made immediately prior to final inspection. Newly planted trees shall be pruned as necessary. All dead branches shall be removed. Rootstock shoots from grafted material shall be removed.

32 01 90.13 - Fertilizing

Commercial fertilizer to mix with backfill soil shall be ammonium phosphate 16-20-0 applied at twenty (20) pounds actual nitrogen per 1000 square feet (12.5 pounds of ammonium phosphate applied to each 1000 square foot area). Use Agriform tablets at twice label recommendations for tree and shrub materials. Fertilizer will be applied for seeding areas disturbed by clearing operations. Spread soil conditioners and fertilizers and thoroughly incorporate into topsoil to a depth of 4". Rake topsoil until the surface is finely pulverized and smooth.

32 13 13 - Driveway and Walks

Provide compacted ¾" aggregate road base minimum 4" thick for road access and parking. A 4" thick concrete walkway will be provided from front door to the driveway. Consult site plan for additional information. Expansion joints shall be installed as in standard concrete practices. Control joints shall be installed at pre-determined locations no later than 12 hours after installation.

32 90 00 - Planting

Provide and install all plants, materials, and labor required to execute the landscaping as described in the Contract Documents. Landscape site per construction documents with appropriate sod, plants, trees, and shrubs suitable for local climate and site requirements as listed below. Landscaping budget shall be determined by an allowance as stated in the Contract Documents.

32 92 19 - Seeding

Seed only when weather conditions are suitable. All newly seeded turf areas shall be free of broadleaf weeds. Sow seed with mechanical spreaders at the specified rate on a calm day. Sow one half the seed in one direction and the other half at right angles. Seed shall be raked lightly into the soil to a depth of 1/4 inch and rolled with a roller weighing not more than 100 pounds per linear foot of tread. Keep the surface moist by a fine spray until the grass shows uniform germination over the entire area. Wherever poor germination occurs in areas larger than three (3) square feet, reseed, roll and water as necessary to obtain proper germination. Infested areas shall be treated with a selective broadleaf insecticide; Trimec or approved equal.

32 93 00 - Plants

Shrubs and trees shall be of a variety, size and quantity shown in the Construction Documents. Cut burlap, twin and wire baskets from top 12 inches of root-ball and remove from site. Backfill with 1/2 clean existing soil, 1/4 sand and 1/4 peat moss. Plants shall bear some relation to soil level when planted as they did when in container. Place each plant in center of plant pit. Firmly tap backfill material into plant pits around and under the root ball to force out all air pockets. Backfill as specified on the plans.

Thoroughly water to saturate the root ball and backfill. Stake all trees with hardwood stakes driven 2' into firm ground and secure tree to stake.

DIVISION 33 00 00. UTILITIES

33 00 00 - Utilities

Install necessary utility services, such as electricity, water, gas and oil, sanitary sewerage and support structures for power and communications. Coordinate requirements with local utility providers. All utilities shall be located underground from street to building, unless otherwise stated.

33 46 13.13 - Foundation Drainage Piping

Install a minimum 5" slotted drain pipe with a positive outflow around exterior basement wall footings, imbedded in a loose fill gravel, minimum 12" deep. Slotted drain pipe should be wrapped with an appropriate geo-technical fabric to prevent silt buildup. Install other drains necessary for positive site drainage.

CHRISTOPHER KLEIN CONSTRUCTION, INC.

Estimate #: 2016-44
Customer Name: Stallion Park
Project Name: Elk Valley RoadCrested Butte, CO

Allowance item

Subtotal	1,795,430
Bond	46,681
OH and bond on allowances	33,792
Subtotal Proposal	1,875,903
Allowances	192,002
Total Proposal	**2,067,905**

10496
13096

Description	Quan	UM	Labor Mhr/U	Labor Mhrs	CC	Labor $ Amount	Material Unit	Material Amount	Equipment Unit	Equipment Amount	Sub Amount	Subtotal	13%OH 2%pr Total with OH &P (15%)	
Save this line				0		0		0		0				
General Conditions				0		0		0		0		0	0	
				0		0		0		0		0	0	
Project Manager	9	mos	12	108	p	7,560		0		0		7,560	8694	x
Supeirntendent	36	wks	24	864	p	60,480		0		0		60,480	69552	x
				0		0		0		0		0	0	
Builders risk policy	0	ls		0		0		0		0		0	0	x
				0		0		0		0		0	0	
Building permit fee	1	ls		0		0		0		0	16,000	16,000	18400	per crystal
Reclamation permit fee	1	ea		0		0		0		0	150	150	173	
Driveway permit fee	1	ea		0		0		0		0	75	75	86	
				0		0		0		0		0	0	
				0		0		0		0		0	0	
Sewer tap fees	1	ls		0		0		0		0		0	0	ERSD
Water tap fees	1	ls		0		0		0		0		0	0	ERWC
				0		0		0		0		0	0	
				0		0		0		0		0	0	
Dumpster	4	ea		0		0		0	950	3,800		3,800	4370	x
Port o let	9	mos		0		0	350.00	3,150		0		3,150	3623	x
				0		0		0		0		0	0	
				0		0		0		0		0	0	
Construction Fencing	1	ls	30	30	l	1,350	1100.00	1,100		0		2,450	2818	x
				0		0		0		0		0	0	
				0		0		0		0		0	0	
Con ex's 2 ea	9	mos		0		0		0	300	2,700		2,700	3105	x
Mob/demob con es	2	ea		0		0		0	300	600		600	690	x
Forklift	5	mos		0		0		0	3000	15,000		15,000	17250	x
Mob/demob forklift	1	ea		0		0		0	400	400		400	460	x
				0		0		0		0		0	0	
				0		0		0		0		0	0	
				0		0		0		0		0	0	
				0		0		0		0		0	0	
Sitework Div 2				0		0		0		0		0	0	
Excavation/backfill	1	ls		0		0		0		0	64,000	64,000	73600	Hearne
				0		0		0		0		0	0	
Water	1	ls		0		0		0		0	16,600	16,600	19090	Hearne
Sewer	1	ls		0		0		0		0	17,000	17,000	19550	Hearne
Electric/phone/cable	300	lf		0		0		0		0	8,500	8,500	9775	Hearne

Parking lot	1	ls		0		0		0		0	16,000	16,000	18400		122,100
				0		0		0		0		0	0		
Gas Atmos	1	ls		0		0		0		0	9,600	9,600	11040	Atmos	
				0		0		0		0		0	0		
Temp power/elec chgs	1	ls		0		0		0	2500	2,500		2,500	2875	x	
Water for construction	1	ls		0		0	800.00	800		0		800	920	x	
				0		0		0		0		0	0		
Radon collection system				0		0		0		0		0	0	by Alpha	
Radon stone	118	cy	0.5	59	o	3,835	38.00	4,484	9	1,062		9,381	10788	CK	
				0		0		0		0		0	0		
Foam on water/sewer	1,280	sf		0		0	1.10	1,408		0		1,408	1619	x	
				0		0		0		0		0	0		
Landscape & design	1	ls		0		0		0		0		0	0	Allow	
				0		0		0		0		0	0		
				0		0		0		0		0	0		
Concrete Div 3				0		0		0		0		0	0		
Footings& sternwall	1	ls		0		0		0		0	108,732	108,732	125042	CSI	
Garage slab	2,600	sf		0		0		0		0	13,578	13,578	15615	CSI	
Patio slabs	633	sf		0		0		0		0	4,636	4,636	5331	CSI	
Misc.grade conc	1	ls		0		0	1400.00	1,400		0		1,400	1610	x	
				0		0		0		0		0	0		
Damproofing	1,686	sf	0.01	17	l	759	0.25	422		0		1,180	1357	ck	
Foundation insulation	1	ls		0		0		0		0	15,900	15,900	18285	insuseal	
inc vapor barrier				0		0		0		0		0	0		
				0		0		0		0		0	0		
				0		0		0		0		0	0		
Framing				0		0		0		0		0	0		
Framing materials	1	ls		0		0	135000	135,000		0		135,000	155250	Alpine	
				0		0		0		0		0	0		
Framing Labor	1	ls		0		0		0		0	130,800	130,800	150420	KD	
				0		0		0		0		0	0		
Nails/fasteners/hangers	1	ls		0		0	6400.00	6,400		0		6,400	7360	x	
				0		0		0		0		0	0		
				0		0		0		0		0	0		
Exterior				0		0		0		0		0	0		
Window mats inc sliders	1	ls		0		0	19300.00	19,300		0		19,300	22195	alpine	
Window labor	1	ls		0		0		0		0	0	0	0	KD	
				0		0		0		0		0	0		
Window drip/flash ext	44	ea		0		0	22.00	968		0		968	1113	x	
				0		0		0		0		0	0		
Front door	8	ea		0		0	350.00	2,800		0		2,800	3220	KD, alpine	
Front door hard	8	ea		0		0	35.00	280		0		280	322	KD	
Door gar to hall	8	ea	2	16	c	1,040	304.00	2,432		0		3,472	3993	CK, alpine	
Gar dr hard	8	ea	1	8	c	520	35.00	280		0		800	920	x	
Door drip/flash ext	24	ls		0		0	30.00	720		0		720	828	KD, alpine	
				0		0		0		0		0	0		
Garage drs	8	ea		0		0		0		0	10,400	10,400	11960	Blackjack	

				0	0		0		0		0	0	
Horizontal siding Hardi	7,313	sf		0	0	2.35	17,186		0	64,000	81,186	93363	KD
Hardi shake siding	266	sf		0	0	7.65	2,035		0		2,035	2340	KD
				0	0		0		0		0	0	
Roofing	1	ls		0	0		0		0	40,348	40,348	46400	Majestic
				0	0		0		0		0	0	
Paint/stain ext	1	ls		0	0		0		0	19,700	19,700	22655	Kooler
				0	0		0		0		0	0	
Interior				0	0		0		0		0	0	
Electric	1	ls		0	0		0		0	135,160	135,160	155434	Legacy
				0	0				0		0	0	
Heat for gar				0	0		0		0		0	0	Allow
HVAC				0	0		0		0		0	0	Allow
Plumbing	1	ls		0	0		0		0	180,894	180,894	208028	Alpha
				0	0		0		0		0	0	
Radon through	0	ls		0	0		0		0		0	0	Alpha
				0	0		0		0		0	0	
Bath and kit fan ducting	1	ls		0	0		0		0		0	0	Alpha, allow
				0	0		0		0		0	0	
Insulation	1	ls		0	0		0		0	38,700	38,700	44505	insuseal
				0	0		0		0		0	0	
Drywall	1	ls		0	0		0		0	99,200	99,200	114080	Blanco
				0	0		0		0		0	0	
Pain/stain int	1	ls		0	0		0		0	49,760	49,760	57224	Kooler
				0	0		0		0		0	0	
				0	0		0		0		0	0	
Flooring total	1	ls		0	0		0		0	46,500	46,500	53475	Hi country
				0	0		0		0		0	0	
Interior finsh labor	1	ls		0	0		0		0	43,885	43,885	50468	OLC
				0	0		0		0		0	0	
Cabinets/vanities	1	ls		0	0	0.00	0		0		0	0	Labor OLC
				0	0		0		0		0	0	
Countertops	1	ls		0	0	12018.00	12,018		0		12,018	13821	Labor OLC
				0	0		0		0		0	0	
Attic Hatches	8	ea		0	0	258.00	2,064		0		2,064	2374	Labor OLC
				0	0		0		0		0	0	
Appliances	1	ls		0	0	23543.36	23,543		0		23,543	27075	Sears
				0	0		0		0		0	0	
Stair rail	136	lf		0	0	13.00	1,768		0		1,768	2033	OLC
				0	0		0		0		0	0	
Window casing int	194	lf		0	0	1.75	340		0		340	390	OLC
Door casing int	3,592	lf		0	0	1.50	5,388		0		5,388	6196	OLC
Baseboard	2,658	lf		0	0	1.50	3,987		0		3,987	4585	OLC
				0	0		0		0		0	0	
Closet shelving/rods	216	lf		0	0	5.00	1,080		0		1,080	1242	OLC
				0	0		0		0		0	0	
Interior doors	56	ea		0	0	125.00	7,000		0		7,000	8050	alpine

Bypass doors	32	ea		0		0	211.00	6,752		0		6,752	7765	alpine
Bifold doors	8	ea		0		0	166.00	1,328		0		1,328	1527	alpine
Interior door hardware	56	ea		0		0	25.00	1,400		0		1,400	1610	x
				0		0		0		0		0	0	
Towel bars/tp holders	8	ea		0		0	250.00	2,000		0		2,000	2300	x
Mirrors	24	ea		0		0	30.00	720		0		720	828	x
				0		0		0		0		0	0	
Common Labor	6	mos	80	480	I	21,600		0		0		21,600	24840	x
Final clean	10,496	sf		0		0		0		0	18,368	18,368	21123	x
				0		0		0		0		0	0	
Totals				1,582		97,144		269,552		26,062	1,168,486	1,561,243	1795430	
													234186	

	CC	Rate	anhours	Fringes	Tot. Rate	Labor $
Foreman/owner	P	70.00	972		70.00	68,040
	I		0		0.00	0
Carpenter	C	65.00	24		65.00	1,560
Operator	O	65.00	59		65.00	3,835
Laborer	L	45.00	527		45.00	23,709
Totals			1582			97,144

Days 2 men	98.866
Days 3 men	65.911
Weeks 2 men	19.773
Weeks 3 men	13.182
Days 4 men	49.433
Weeks 4 men	9.8866

Allowances	
Cabinetry	35942.74
HVAC	131059
Landscape	25000
Total allowances	192001.74
OH&P and Bond	33792
Total Proposal	2,067,905