

Spec. Div. 1: General Requirements

BUILDING CODE: All work under this contract shall be subject to the RESIDENTIAL CODE OF OHIO for **One-, Two- and Three-Family Dwellings**, latest edition, and all municipal and local laws and regulations.

CONTRACT: The Owner will enter into a working relationship with the selected General Contractor based on an agreement format proposed by General Contractor and approved by The Owner, or by using "Agreement Between Owner and Contractor for Construction Projects of Limited Scope-AIA Document A107," which shall include The General Conditions of A107 which are hereby made a part of these Specifications and The Contract Documents. The Contract Documents, including The Drawings, Specifications, and General Conditions are complimentary and what is required by one shall be as if required by all. Generally, the Specifications take precedence over the Drawings and The General Conditions of the Contract take precedence over the Specifications. Should conflicts occur within the Contract Documents, the Contractor is assumed to have based his cost on the more expensive method of performing the Work unless The Architect has issued clarification before submittal of the Bid Proposal or the Contractor has specifically clarified the issue within his proposal. When applying for subsequent draws, The Contractor shall submit to the Owner an Affidavit of Release of Liens (AIA-G706) for amounts previously paid to the Contractor by the Owner or a lending institution. The Release of Liens (AIA-G706) shall be presented from himself, all subcontractors, suppliers of material and equipment and all performers of Work, labor or services.

INSURANCE: Before beginning the Work, The Contractor shall provide to The Owner a Certificate of Insurance for an amount equal to the Contract Amount and shall also provide a copy of his current Worker's Compensation Certificate. He shall also provide proof of Builder's Risk and Liability Insurance. The Owner will obtain or increase existing Homeowner's Insurance to cover work incorporated into the job.

JOB SITE SECURITY/SAFETY/CONDITION: Barriers, barricades, signs or warning lights, and other safety devices shall be provided to insure safety to The Owner, workers, and the general public from hazardous conditions which may arise as a result of the work. The Contractor shall utilize all means necessary during demolition and construction to insure that all new construction and existing finished spaces are thoroughly protected from vandalism, theft, water and wind damage; and shall remedy/replace, at The Contractor's expense, any such damage that does occur.

PORTABLE TOILET: The Contractor shall provide a portable toilet for use by all personnel, located where directed by the Owner, which shall be cleaned and serviced on a regular basis. The contractor may use existing facilities only if Owner has provided written approval prior to signing a contract. Expectations of cleaning and use shall be clearly discussed in advance.

MATERIALS PROTECTION/ STORAGE: Construction materials stored outside shall be covered and protected with weatherproof tarps. Wood and similar materials shall not be stored in contact with the ground.

WARRANTY: The Contractor shall provide to The Owner a minimum one-year guarantee on materials, equipment and workmanship to commence at the point of substantial completion for all contract work. The Contractor shall furnish The Owner with copies of all equipment guarantees and Owner's Manuals

WORK: Before submitting his Bid Proposal, The Contractor shall visit the Project Site and familiarize himself with existing conditions and shall carefully study and compare the Contract Documents with the existing conditions and report to The Architect any errors, discrepancies, inconsistencies or omissions, and materials, products, systems, procedures, and construction methods shown or specified which are incorrect, inadequate, obsolete, or unsuitable for actual field conditions discovered, or which The Contractor would not warrant as required by The Contract Documents. Prior to ordering materials or doing work at the site, The Contractor shall verify dimensions and conditions affecting materials to be ordered or work to be done, to insure that information shown on The Contract Documents accurately reflects actual conditions, and shall not proceed without The Architect's instructions if there are omissions, errors, discrepancies or inconsistencies. The Contractor shall provide all labor, material, equipment, apparatuses and accessories required to complete all work shown on these drawings, or reasonably implied and necessary for the completion of the project. All materials and equipment to be installed following manufacturers' instructions and best construction methods and standards. The Contractor shall obtain and pay for all required permits, royalties, shipping charges, fees and licenses and shall arrange for all inspections necessary for the proper execution of the Work. Approval Certificates shall be posted in a prominent, central location and per local authority's requirements. Substitutions for items herein specified, or shown on Drawings, must be approved by the Architect. The phrase "or equal" in the Drawings or Specifications shall be interpreted as meaning equal in the opinion of the Architect, and must have his approval prior to ordering.

WASTE REMOVAL: All other waste and debris from demolition work shall be removed from site using a recycling waste removal service offering 85% minimum repurposing/recycling of existing building materials. Waste service provider to be approved by The Architect.

INDOOR AIR QUALITY: To minimize intrusion of dust and other debris, HVAC registers shall be covered and sealed during the demolition and construction phases.

Duct cleaning per NADCA standards is required upon completion of project. Contractor to use a well-controlled brushing of duct surfaces in conjunction with contact HEPA vacuum cleaning to dislodge dust and other particles. See Specifications Div. 15 for further mechanical requirements.

PROJECT CLEANING: At the completion of the project, and during the project as may be appropriate, the Contractor shall thoroughly clean all work, including, but not limited to, the following: removal of mortar spatters or stains from all interior and exterior masonry; removal of masonry waterproofing above finish grade; removal of any spatters or stains from exterior siding, roofing, or other exterior materials; removal of all stains from all exposed concrete work, except for Crawl Space concrete; removal of stains and cleaning of counter tops, ceramic tile, plumbing fixtures and fittings, etc.; thorough cleaning of faucet screens and plumbing traps; vacuuming of all floors, followed by wet mopping of hardwood, ceramic, stone or other hard surface floors; dusting of all walls, ceilings, trim, doors, windows, cabinets, etc., including the interiors of all cabinets; removal of all window and door stickers, paint or stain overlapping on glass, and other glass spatters; polishing of all windows, mirrors or other glass. In addition, The Contractor shall be responsible for the removal, including final vacuuming, of all construction, or other, debris from joist, rafter, stud, or other cavities prior to concealing with flooring, drywall

ENERGY AUDIT: Upon project completion, The Owner shall separately contract with an approved energy auditor licensed by RESNET. Audit shall include infiltration test w/blower-door, and full energy loss analysis.

RADON TESTING: The Owner shall separately contract for Radon Testing services. If test results in more than 4 pCi/L, mitigation shall strictly follow EPA standards. A copy of the Drawings and Specifications, any Addenda issued before or during construction, and all detail drawings submitted during construction, shall be kept and maintained in a suitable condition on the site for use by the Owner, Architect, General Contractor, and all tradesmen.

Spec. Div. 2: Site Work and Excavation

SITE ACCESS: The Contractor shall access the site, stockpile construction materials and park construction vehicles and equipment where agreed with The Owner. Work shall be executed in a manner to minimize damage to existing drives, walks, lawns, plantings, trees, house, utilities, etc. Any such items that are damaged by construction activities shall be repaired to their original condition at The Contractor's expense. The Contractor shall remove topsoil in areas of new excavations, if any, and stockpile where agreed with The Owner for reuse as finish grading material. The Contractor shall limit site disturbance to minimum required for access and mobility.

SOIL EROSION PROTECTION: Slopes greater than 12% and open and exposed soil areas including any stockpiles of subsoil or topsoil shall be enclosed with straw wattles, fiber rolls, straw bale dams, or other recycled materials to prevent soil from washing onto adjacent property or into drainage paths. Such barriers shall be maintained during all construction phases of work, through final grading.

TREE PROTECTION: The Contractor shall actively protect all trees onsite unless requested otherwise by The Owner or on the drawings. Before heavy equipment is employed on site, PROTECTION FENCING must be erected where required to prevent root damage by equipment travel within tree drip line. The Contractor shall obtain approval of the Owner prior to removal of any trees not directly within perimeter of new construction.

TREE/ PLANTINGS REMOVAL: The Contractor shall remove existing trees as required for construction and as agreed upon with The Owner. Trees shall be limbed and cut into firewood and stacked if so directed by The Owner. (Brush and Stumps) shall be chipped and reused for mulch. The Contractor shall coordinate with local yard waste recycling facility.

EXCAVATION: Prior to beginning any excavation work, The Contractor shall ascertain the location of all underground utilities and services, using utility company location services if necessary, and carefully avoid damage to these items, or interruption of service, to include electric, phone, water, gas, sanitary/storm sewers, etc. The cost to repair and restore any damage to such services shall be paid for by The Contractor.

The Contract Documents have been prepared with an assumed soil bearing capacity of 2,000 psf. No sub-surface geotechnical report or soil bearing logs have been provided or reviewed prior to design of this work. The Contractor shall verify soil conditions and shall notify The Architect and The Owner of any suspected or unusual soil conditions that may affect the footing or foundation work, and shall not proceed until so directed. No new work shall bear on unusual or questionable soil. Excavate to depths as required to provide floor levels as shown on Drawings. Provide a minimum footing depth of 3'-6" below grade. If existing footings are shallower than new adjacent footings, DO NOT disturb soil, call Architect for further instructions BEFORE proceeding. Minimize over-digging and do not allow water to stand in excavation (pump as required). Stockpile excavated subsoil needed for back-filling and grading where agreed with the Owner and dispose of any remaining soil off-site.

FOOTING DRAINS: Install 4" dia. Schedule 35 perforated footing drains, holes oriented down, at the interior and exterior of all footings, with minimum slope of 1/16" per L.F. Exterior footing drain system shall include a minimum of (2) flush ports, or clean-out risers to grade, with threaded PVC caps, and shall be wrapped in silt filter fabric. Filter fabric shall wrap an additional 6" radius of gravel around the pipe; fabric shall not be tightly wrapped to pipe itself. Layout and install where required to permit cleaning of all footing drains. Plug ends of downspout and footing drains when work is in progress to prevent clogging, and clean out before covering. Note: existing invert heights must be low enough to allow for proper placement and slope of new footer drains, and The Owner and The Architect must be notified immediately if the existing system is not of proper depth or is otherwise inadequate. Any alternate drainage system must be approved by The Architect, The Owner and by The Building Inspector

DOWNSPOUT DRAINS: The Contractor shall connect new boots to the existing downspout drainage system using 4" dia. Schedule 35 solid PVC with minimum slope of 1/8" per L.F. No connection with the footing drainage system is allowed, except downstream combination to storm main exit pipe.

BACK-FILLING: Foundations shall not be back-filled until Crawlspace or Basement floor slab and First Floor deck are in place or until walls are adequately braced to accommodate loading. Before backfilling, thoroughly fill all excavations around foundations and any retaining walls of all masonry and other construction debris. Backfill around foundation shall be smooth, rounded, washed river stone to within 6" of finished grade. Backfill top 6" with clean soil. Excavations for utilities under steps and/or terraces shall be filled with granular material.

GRADING: Prior to final grading, clean site of all construction debris. Rough grade with clean excavated subsoil in a fashion to continue natural contours and provide good drainage away from house. Provide drainage swales or yard drains connected to storm sewers for any low areas where surface water is likely to collect. The Contractor shall be responsible for insuring that finish grades are a minimum of 8" below siding/sill plate, and that all surface water drains away from house. Finish grade with stockpiled topsoil and provide additional topsoil if necessary.

DRIVEWAY: New drive to be staked as shown on The Drawings, reviewed with The Owner for approval of layout, and re-staked as directed by The Owner, if necessary.

Concrete Drive: See Specifications Division 3 for Concrete driveway.

Spec. Div. 3: Concrete

GENERAL: Cast-in-place concrete construction shall conform to the latest edition of American Concrete Institute ACI-301, 305, 306, 315, 318, and 347, unless noted otherwise. Slump for all classes of concrete to be between 4" and 5" (ASTM C-143). Concrete shall be discharged at the site within 1 1/2 hours after water has been added to the cement and aggregates. Addition of water to the mix at the project site will not be permitted. CONCRETE WASTE and wash water should be returned with each concrete truck for disposal at the concrete batch plant. If this is not possible, operators can install prefabricated or built on-site concrete washout area per The Architect's instructions. Contractor must not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Do not allow excess concrete to be dumped onsite, except in designated concrete washout areas.

COMPRESSIVE STRENGTH: The compressive strength of concrete in 28 days shall be as follows:

Grout:	2,500 psi minimum
Footings and Interior slabs:	3,000 psi
Exterior and Garage slabs-on-grade:	4,000 psi with 6% +/- 1% Air-entrainment
Water/Cement Ratio:	The water/cement ratio shall not exceed the following:
Comp. Strength	Non Air-entrained Air-entrained
3,000 psi	0.58

4,000 psi 0.53 0.44

REINFORCING: Concrete steel reinforcing bars shall conform to ASTM A-615, Grade 60. Welded wire fabric (w.w.f.) shall conform to ASTM A-185-79 (60,000 psi yield). All detailing, fabrication, and placement of reinforcing steel shall conform to the Manual of Standard Practice for Detailing Reinforced Concrete Members.

For footings and concrete walls: Lap all reinforcing bar splices 45 bar diameters minimum. Bend all horizontal bars 36 bar diameters past each corner or provide equivalent corner bars matching horizontal reinforcing. For slabs: Wire shall lap one full mesh +2" and be securely wired each side and end. Reinforcing placed at 1/3 of slab thickness from top of slab, typical. Properly support all reinforcing and wire mesh on chairs. Minimum coverage for concrete reinforcing shall be:

- Concrete deposited against the ground: 3"
- Concrete exposed to the weather: 2"
- Slabs/wall not exposed to the weather: 3/4"
- Beams/columns (over main reinforcing): 2"

FOOTING: Sizes and reinforcement shall be as detailed on the Drawings but shall not be less than 10" thick, 8" wider than the wall supported, and reinforced with (2) #5 bars, bot. Below masonry chimney construction, footings to be min. 12" thick, 12" wider than masonry above, with #5 bar @ 12" each way, bot. Carefully form all footings with 2x material staked and adequately supported. Verify that footing layout is square and the tops of all footings are level. Construction over footings shall not commence for 48 hours after casting minimum, or per local code. Footings to reach 3000 psi compressive strength at 28 days, water/cement ratio not to exceed 0.58

EXTERIOR/GARAGE SLAB: 4" thick, 4000 psi air-entrained concrete with w.w.f. 6x6-W2.9xW2.9. Driveway and garage slabs to be 4,000 psi with 6% (+/- 1%) air-entrainment over 4" compacted #57 Limestone base (omit vapor barrier). Water/cement ratio not to exceed 0.44. Garage slab finish to be metal floated and steel troweled to a smooth, ridgeless, finish (no machine finishing will be permitted without approval from The Owner and The Architect, sloped toward floor drains or garage doors as shown on the drawings. Garage concrete floor to include: a 3/4" deep depression at overhead door; a 24" wide sloped apron at exterior; and be sprayed with a liquid sealing/hardening agent. Exterior concrete steps, walks and driveway to have a broom finish and concrete steps and curbs to receive tooled edges.

CONTROL JOINTS: Exterior slabs shall have troweled control joints, and basement slabs shall have saw-cut control joints, dividing slabs into rectangular panels as nearly square as possible. The long side of any panel shall not be more than 1 1/2 times the short side and spacing of joints shall be 10 to 12' max. for 4" thick slabs. Control joints shall be a minimum of 1/4 the depth of the slab and shall be continuous to the edge of the slab. Isolation joints shall be cut-in around columns, piers, etc. and panels shall have no "inside" corners. Provide control joints in all slabs on grade within 8 hours of casting concrete.

Spec. Div. 4: Masonry

GENERAL: Construct all masonry walls in accordance with ACI 530.1 specifications (with requirements for Owner Inspection and Acceptance deleted), unless otherwise noted. Anti-freeze admixtures shall not be used and uncured walls shall be protected from freezing as may be required. The tops of walls under construction shall be covered at the end of each day and protected from rain or snow. The minimum Masonry Prism Strength (f'm) shall be 1500 p.s.i. at 28 days, unless noted otherwise.

MATERIALS (GENERAL): Masonry materials shall conform to the following ASTM specifications:

Concrete Masonry Units	ASTM C-90 (Grade N-1)
Facing Brick	ASTM C-216 (Type FBS, Grade SW)
Mortar (Type M,S,N,O)	ASTM C-270
Grout	ASTM C-476 (2,500 psi @ 28days)
Reinforcing Steel Bars	ASTM A-615 (Grade 60)

MORTAR: Mortar for use above and below grade shall be as follows:

Exterior, below grade:	Type 5
Exterior, above grade:	Type 5
Interior, Non-load bearing:	Type 5

REINFORCEMENT: Foundation wall reinforcement shall be as shown on The Drawings but in no case shall un-balanced fill against 8" masonry walls exceed 4'-0" (6 block courses) or 6'-0" (nine block courses) for 12" walls. When grade or other conditions require heights exceeding these figures the walls shall be reinforced full height of the wall and lapped 45 bar diameters min. with projecting bar cast into the footing. Cores shall be grouted solid at anchor bolts and reinforcing bars, and the bars shall be held 1" clear of the interior face of the core.

MASONRY FOUNDATION DAMPROOFING: The exterior of all foundation block and brick walls shall be parged with 3/8" cement with ironite from cove at footing to a finish grade level to be approved by The Owner or The Architect. Fully dried parging shall be coated with 60 mil. wet thickness, two-coat application of Watchdog Waterproofing polymer-enhanced asphalt liquid-applied membrane or approved alternate. Both parging and waterproofing shall run continuous and uninterrupted around complete basement perimeter, installed prior to construction of intersecting masonry walls. Insulating (expanded polystyrene or equal) protection board shall be installed below grade, full depth to footing, prior to backfilling.

STONE PATIOS: to have a 1 1/2" thickness average at infill flagging over built-up mortar bed and 1 3/4" single-slab for steps. Stone type to be bluestone. Edges to be square as selected by The Owner and The Architect. Edges and treads shall overhand by 3/4" past the supporting masonry below.

MORTAR to be approved by Owner and Architect.

Spec. Div. 5: Metals

STRUCTURAL STEEL: Structural steel shall be detailed, fabricated, and erected in accordance with the latest AISC Specification for Structural Steel Buildings, Allowable Stress Design, and Code of Standard Practice.

Shop Painting: Structural steel to be finished with two shop coats of rust inhibitive paint. Connectors and Accessories to be included as required for complete structural support. All shop connections to be made with ASTM A307 bolts or welded using E70 electrodes and shall conform to the specification set forth in the AWS Structural Welding Code. All field connections to be ASTM A307 bolts, unless noted otherwise. Anchor bolts, nuts, washers, straps, framing anchors, hangers, masonry ties, and other accessories to be hot-dipped galvanized.

Note:

- 1) ALL SWITCH, OUTLET & LIGHTING LOCATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS W/ OWNER & ARCHITECT DURING ELECTRICAL WALKTHROUGH.
- 2) CONTRACTOR RESPONSIBLE FOR ALL COORDINATION OF APPLIANCES & WIRING, AS REQUIRED.
- 3) COORDINATE DIMMER LOCATIONS W/OWNER PRIOR TO INSTALLATION.
- 4) CONTRACTOR TO CONFIRM SMOKE DETECTORS EXIST PER CODE AND ARE IN GOOD WORKING ORDER.

Note:

ALL 120-V BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAM. RM'S, LIVING RM'S, PARLORS, DEN'S, BEDROOM'S, SUNROOM'S, REC. RM'S, CLOSETS, HALLWAYS, OR SIM. AREAS TO BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTOR PER NEC 210.12 (b)

Electrical Symbol Legend

SYMBOL	DESCRIPTION
	SWITCH - SINGLE POLE
	SWITCH - THREE WAY
	DUPLEX RECEPTACLE - @ 18" A.F.F., 110V
	DUPLEX RECEPTACLE - G.F.C.I TYPE
	DUPLEX RECEPTACLE - WEATHER PROOF @ 24" A.F.F.
	AUTOMATIC OVERHEAD GARAGE DOOR OPENER
	SMOKE DETECTOR/CARBON MONOXIDE DETECTOR

NOTE: SEE SPECIFICATION SECTION 16, ELECTRICAL CONTRACTOR SHALL MEET ALL CODES

Lighting Fixture Schedule

SYMBOL	DESCRIPTION	TYPE
	WALL MOUNTED	SURFACE-MOUNTED SCENCE BY OWNER (RUSTPROOF AT EXT. AND PORCH)
	CEILING MOUNTED	SURFACE-MOUNTED CLG. FIXTURE BY OWNER (RUSTPROOF AT EXT. AND PORCH)
	UTILITY FIXTURE	LEVITON PORCELAIN KEYLESS TOP WIRED INCANDESCENT LAMP HOLDER
	FLOURESCENT	UTILITY 48" LED 1800 LUMEN

NOTE: USE I.C. AND/OR REMODEL CANS AS REQ'D FOR ALL RECESSED FIXTURES.



1 Proposed Front Elevation

A-1 NTS

Project Team

ARCHITECT
REBECCA PANTUSO
CLEMENS PANTUSO ARCHITECTURE
440-241-1167
PROJECT LEAD:
BECKY@CLEMENS PANTUSO.COM
HEATHER@CLEMENS PANTUSO.COM

CONTRACTOR
JORDAN CONSTRUCTION
216-381-4155
JORDANCONST@AOL.COM

SURVEYOR
JOE BURGON
LEWIS LAND PROFESSIONALS, INC.
330-335-8232
JBURGON@LANDPROINC.COM

Design Loads

SEISMIC DESIGN CATEGORY: "B"
WIND SPEED (mph): 90

1. FLOOR LIVE LOADS:	
FIRST FLOOR:	40 psf
SECOND FLOOR:	30 psf
FLOOR DEAD LOADS:	10 psf
2. ROOF LIVE LOADS (SNOW):	30 psf
ROOF/CEILING DEAD LOAD:	12 psf
TOTAL ROOF LOADING:	42 psf

Project Description

THE PROJECT SCOPE INCLUDES A TWO-CAR DETACHED GARAGE & UNFINISHED STORAGE SPACE ABOVE

Project Area

NEW GROUND FLOOR AREA:	160 SF
IMPERVIOUS LOT COVERAGE:	1,229 SF
LOT AREA:	25,992 SF
PERCENTAGE LOT COVERAGE: (MAXIMUM = 40%.)	27.8%

Index of Drawings

A-1 Title Sheet, Specs. Div. 1-5

S-1 Proposed Site Plan

A-2 Floor Plans & Wall Section

A-3 Elevations & Building Section

A-4 Sections, Details Specs. Div. 6-26

Sp-1

Rebecca L. Pantuso, License No.0914899
Expiration Date 12/31/2021

CLEMENS PANTUSO

a r c h i t e c t u r e

Additions and Renovations to

The Corr Residence

290 Bicknell Drive, Hudson, Ohio 44236

Title Sheet, Details, Specs. Div. 1-5

Job number
1901

Drawn by
HD

Date drawn

Issued for

2020.02.04 Hudson Submit
2020.03.24 Review
2020.03.31 CD Set
2020.05.26 Revisions

Drawing number

A-1

45 E. Washington St., Chagrin Falls, OH 44022
tel 440.247.7767 fax 440.317.7752
CLEMENS PANTUSO ARCHITECTURE

George Clemens Architecture Inc. 2020 ©

Mr. and Mrs. Mark and Christine Corr

Detached Garage Section & Details

45 E. Washington St., Chagrin Falls, OH 44022
tel 440.247.7767 fax 440.317.7752
CLEMENS.PANTUSO.COM

Additions and Renovations to

The Corr Residence

290 Bicknell Drive, Hudson, Ohio 44236

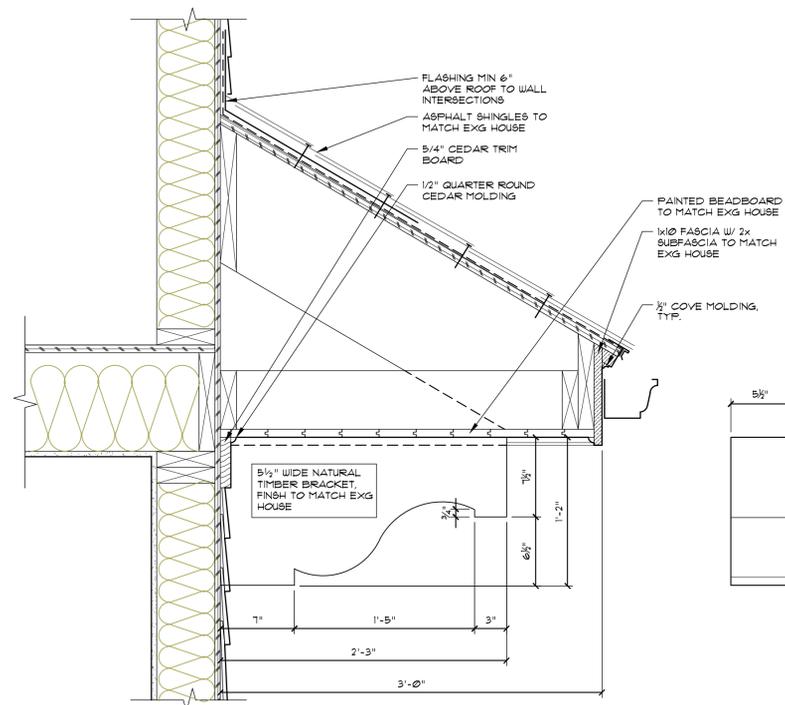
Job number	1822
Drawn by	RP, HD
Date drawn	

Issued for

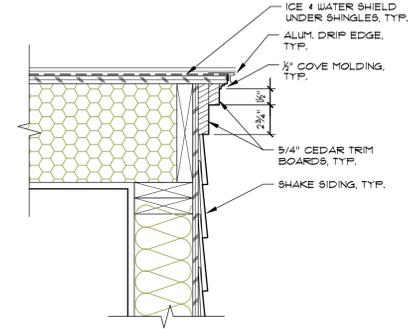
2020.03.31 CD Set
2020.05.21 Revisions
2020.05.26 Revisions

Drawing number

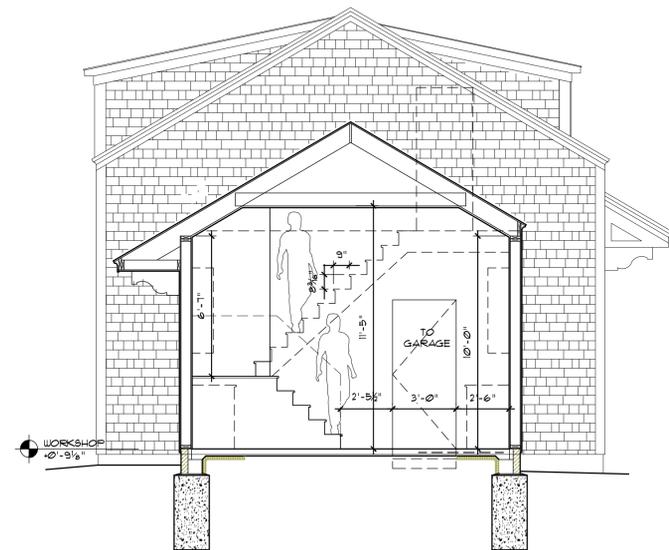
A-4



2 Overhang Section Detail
A-4 1-1/2"=1'-0"



3 Typical Rake Detail
A-3 1-1/2"=1'-0"



1 Building Section
A-4 1/4"=1'-0"

Spec. Div. 6: Wood and Plastics

A. ROUGH FRAMING: GENERAL

All structural framing shall be detailed, fabricated, and erected in accordance with the "National Design Specification" by the National Forest Products Association (N.Fo.P.A.), latest edition. Nail or spike members in accordance with the Residential Code of Ohio, latest edition, Chapter 5-9. All nails exposed to weather to be hot-dipped galvanized at minimum. Framing lumber shall be seasoned to a moisture content of 19% or less (S-DRY). Brace all walls, rafters, floor and roof joists as required to prevent shifting, racking or other movement both during construction and after completion of the work. Cut framing square on bearings, closely fitted, accurately set to required lines and levels and plumb. Do not use shims for leveling on wood or metal bearings.

LVL (Laminated Veneer Lumber) & Pre-Engineered Joists (TJI's): where indicated, shall be stored, installed, braced, and blocked per the manufacturer's directions. Notching, drilling or other cutouts shall be in accordance with manufacturer's published instructions. LVL beams over two members wide shall be assembled with 1/2" dia. flush-mounted through bolts 2 per row at 24" o.c. with (2) bolts at each end, all located 2" from edges and ends.

Framing: All structural framing members shall be single lengths between points of support.

- Floor and ceiling joists shall have solid bridging at minimum 8'-0" intervals or at mid-spans, with minimum 2" bearing at ends. Floor joists to be doubled under partitions parallel to joist direction. Solid blocking required under partitions perpendicular to joist direction. Solid blocking required at 32" o.c. to tie first joist back to parallel foundation walls, where foundation walls run parallel to joist direction.
- Sill plates and wall plates on concrete block or slabs shall be pressure-treated wood and bear over 1/2" compressible sill sealer as manufactured by Dow, Celotex, or Amoco. Sill plates shall be anchored with ½" anchor bolts @ 6'-0" o.c. (max.) and 1'-0" from corners and openings.
- Exterior stud framing to be spaced 16" o.c., doubled at openings, framed for solid backing at corners and angles for drywall. Inner trimmer/jack studs at window/door, etc., openings shall be cut to support the header over the opening and shall extend in one piece from header to bearing. Jack studs shall be doubled at openings exceeding 8'-0". Walls taller than 9'-0" shall receive solid, horizontal blocking at mid-height.
 - Wall opening headers** shall be minimum (2) 2 x 8's with plywood spacers for spans less than 3'-6" and (2) 2x10's with ½" plywood for spans equal to or greater than 3'-6" unless indicated otherwise on Drawings.
- Dormers: provide double rafters and headers at all dormers and skylights, unless noted otherwise. Connect doubled headers to rafters with galvanized hangers.
- Hearth and other floor openings: Provide doubled joists as minimum at perimeter of hearths and all floor openings. Headered members to be hanged to doubled joists where interrupted.

ROUGH LUMBER: Unless otherwise noted on the Drawings, material shall be selected and warranted by The Contractor to satisfy the following minimum design stresses for sawn lumber and laminated veneer lumber:

Framing Member	Fb (psi)	Fv (psi)	Fc (psi)	E (psi)
Beams and Headers	1000	130	1000	1,400,000
Floor Joists	1000	130	1000	1,400,000
Rafters & Cl'g Jst's	1000	130	1000	1,400,000
Studs & Misc. Fram'g	875	110	1000	1,400,000
Microllam (LVL)	2600	285	2510	1,900,000

2x Rough Framing: shall be S4S #2 Southern pine, Hem-Fir, Spruce Pine Fir or better.

Sill plates, all framing against masonry or concrete, and framing exposed to weather: shall be pressure-treated lumber.

EXTERIOR WALL STUD FRAMING: to be 2x6, unless noted otherwise on drawings for all walls. Gable walls with uninterrupted vertical studs over 14'-0" in height to be 2x8.

INTERIOR WALL STUD FRAMING: to be 2x4, unless noted otherwise on drawings for walls up to 9'-5" tall, and 2x6 for walls over 9'-5". Gable walls with uninterrupted vertical studs over 14'-0" in height to be 2x8.

FLOOR SHEATHING: shall be 3/4", APA rated exterior grade tongue-and-groove plywood, and span rated for the specified joist spacing. All joints parallel to joists to be fully supported by floor joists below. All plywood floor sheathing shall be installed with construction adhesive such as PL400 or equal, and nailed to framing. Prior to installation of finish flooring over new or existing floor sheathing, thoroughly inspect all sub-flooring for squeaks and, where located, install screws as required to stop such squeaking. Openings in existing sheathing and underlayment, such as at abandoned HVAC floor diffusers, shall be filled with new plywood of the same thickness and shall be adequately blocked from beneath, nailed, and glued so no squeaking or discernible movement is apparent after installation of finish flooring or carpeting.

ROOF AND WALL SHEATHING: INSTALLATION: Install panels over two or more spans with the long dimension perpendicular to the floor framing. Space 4" panel ends a minimum of 1/8" at time of installation. End joints of adjacent panel runs should be staggered. Square edge panels should be installed with a minimum spacing of 1/8" on all panel edges at time of installation. Use ¼" bead of polyurethane or solvent-based adhesives, which conforms to industry standards AFG-01 and follow manufacturers' recommendations. Joist to be clean and dry and apply only enough adhesive to lay one or two panels at a time. Fasteners should penetrate framing members at least 1". Apply fasteners 3/8" from panel edges. Space fasteners 6" o.c. on supported ends (4' ends) and 12" o.c. at intermediate support locations. Use 10d ring shank nails or screw shank nails. Cutsouts for plumbing and electrical components should be oversized by at least 1/4" to avoid a forced fit. In all joints parallel to joists to be fully supported by floor joists below. Sheathing unsupported more than 20" in either direction shall be reinforced or supported with edge blocking or "H" clips

NOTE: Allow for crown or moldings at fascia and rake, where detailed on drawings. Roof sheathing MUST overhang to accept details as drawn: insufficient overhang will be rejected and rebuilt.

MATERIAL: shall be ADVANTAGE FLOOR AND ROOF SHEATHING shall be of thickness as shown on The Drawings, but not less than 7/8" for floors and 5/8" for roofs.

CONNECTORS: Where shown on the Drawings or required herein metal connections shall be provided, designed for specific loading requirements, fabricated from galvanized sheet metal or painted steel plate, as manufactured by Simpson Strong-Tie or equal.

PRESERVATIVE PRESSURE TREATED WOOD shall meet the following AWPA

standards for ACO Preservative retention rates:

Above ground (decking & joists, etc.)	0.25 lb/cu.ft.
Ground contact (posts)	0.40 lb/cu.ft.
Permanent Foundations (poles)	0.60 lb/cu.ft.

EXTERIOR TRIM: Cedar Exterior Casings and Trim: Exterior window and door casings, corner trim, frieze board, panel frames and belts shall be 5/4 x (width shown on drawings) solid #2 cedar, jamba to butt into head casing. Add solid cedar drip cap over all head casing, except where window head butts tight under frieze board or soffit. Sub-sills at all exterior windows to be 2x material, sloped to wash, with 2" projection. Fascia board to be 1 x (width shown on drawings) solid #2 cedar. All crowns, panel molds, and other profiled trim shown on drawings shall match casing wood species, unless noted otherwise. Rout or groove back of flat trim members. For painted or stained finish, back-prime all trim members with alkylid/oil stain-blocking primer or transparent stain-sealer for stained finish (end-prime after final cuts are made). Complete exterior priming within two weeks of installation: do not allow unprotected cedar to weather more than two weeks or final finish may be compromised. Install as detailed with end joints set tight and caulked.

Use stainless steel casing nails for exterior trim (or hot-dipped galvanized casing nails if approved by *The Architect*) with min. 1½" penetration into framing lumber.

ALTERNATE Boral Exterior Casings and Trim: Exterior window and door casings, corner trim, frieze board, panel frames and belts shall be 5/4 x (width shown on drawings) synthetic poly-ash trim, Boral Tri-Exterior or equal as approved by Architect. Jamba to butt into head casing. Add solid cellular pvc drip cap over all head casing, except where window head butts tight under frieze board or soffit. Sub-sills at all exterior windows to be 2x material, sloped to wash, with 2" projection. All crowns, panel molds, and other profiled trim shown on drawings shall be synthetic poly-ash trim, unless noted otherwise. Install as detailed with end joints set tight and caulked. Use stainless steel casing nails for exterior trim (or hot-dipped galvanized casing nails if approved by *The Architect*) with min. 1½" penetration into framing lumber.

EXTERIOR SIDING: Cedar clapboard siding: Cedar siding shall be beveled (smooth or rough surface)#2 common grade S-Dry, 19% max moisture content, stored and acclimated for 7 days on site or clear, premium MC15 kiln-dried for immediate use), exposure as indicated on drawings. Siding to be pre-primed all sides or primed on site, all sides, with alkylid/oil stain-blocking primer or transparent stain-sealer for stained finish. Use split-less, stainless steel siding head nails per manufacturer specs. Alternate siding profiles: Dutch-lap, flush-lap.

Cedar shingle siding: Cedar shingles to be pre-stained red cedar, smooth-sawn surface, with coursing to be 5-6" exposure (coursing layout to be approved by *The Architect*). Doubled bottom shingle course to project ½" below sheathing. Weave outside corners so alternate rows have edge of shingle exposed. Trim shingle flush with adjacent shingle around corner. Use 3d stainless steel ringshank nails, fasten w/ two nails only per shingle, set ¾" from side edge and 1" above coursing level. Gap shingles 1/16", align shingle bottom edge unless noted otherwise.

SOFFITS: to be ¾" smooth fir plywood painted to match trim color].

INTERIOR TRIM, GENERAL: All wood interior trim material, including flooring, shall be delivered and acclimate in an interior, weather-tight, heated and conditioned environment for minimum one week. Upon delivery, flooring shall be broken into small lots and stored in the rooms where it is to be installed. All trim shall be carefully matched, mitered, coped, etc., finish nailed tight to surfaces, and sanded, ready for painting or staining. All horizontal trim shall be installed in continuous lengths wherever possible, or mitered when not, and coped at inside corners. Jamba at Door and Cased Openings shall be tightly shimm'd in a minimum of three locations on each side including at hinges and locksets.

Wherever trim terminates and is not fully stopped by cabinets, casings, plinths, etc., repeat profile of trim at end by miter-returning, coping or molding as needed. **Window casing** to include molded stool, miter-returned at ends, and apron of casing material, inverted and miter-returned at ends. Doorways at end of Halls shall be centered in Hall, unless shown otherwise, and all doorways roughed-in and jamba hung so that full casing may be installed. When casings are within 1" of corner walls, fill gap between casing and wall with S4S wood trim 1/8" thinner than casing. Closed doors shall be fully jamba'd and cased on both sides (Reach-in closets may have secondary casing type for interior, as approved by *the Architect*) Casing at bi-fold or bypassing doors shall be installed to conceal track and hardware above doors. **Shoe mold** shall be installed at all new hardwood, ceramic tile, vinyl, or other hard surface flooring. **Window casing** to include molded stool, miter-returned at ends, and apron of casing material, inverted and miter-returned at ends.

INTERIOR TRIM: All new woodwork shall be clear poplar, thoroughly seasoned and kiln dried, molded or S4S, no finger joints.

UNDERLAYMENT: at Carpet shall be ½" Plywood. **Underlayment at Ceramic Tile:** Where ceramic tile is to be installed over thin- set mortar or epoxy, underlayment shall be ½" USG Dur-Rock waterproof cement-board.

Spec. Div. 7: Thermal and Moisture Protection

INSULATION, GENERAL: Material specifications and R-value ratings calculated by installer to comply with the latest edition of the prevailing Dept. of Energy Building Energy Codes as adopted into the Ohio Residential Code for residential structures. In general, all heated living spaces shall be totally enveloped in insulation. Access doors from conditioned spaces into unconditioned attics shall be weatherstripped and insulated to a level equivalent to the insulation on the surrounding surfaces. The Work shall include corrugated rigid foam insulation baffles at sloped ceilings and rafter/sidewall intersections as shown on *The Drawings*.

WALL/CEILING INSULATION: All thermal insulation shall be spray-foam and batt combination conforming to the following:

Cathedral ceilings & Roof: Closed-cell spray foam insulation, installed to a density of 1.8 lb. per cubic foot/ R38 installed per manufacturer's specifications.

Wall cavities to receive R-21 unfaced batt insulation.

AIR-SEALING: Contractor to perform the following:

- Non-expanding foam to seal around all windows and door rough-openings
- Seal with caulk at tight joints, bottom plate all wall, top plate all walls, and at vertical joints between separately-erected wall sections (corners, etc.)
- Fully seal all floor penetrations for plumbing, etc. with fire-code approved material. Fully block up with rigid foam and foam seal all vertical chases at top of basement and at attic
- All exterior doors to be fully weather-stripped

MOISTURE/AIR BARRIER (HOUSE WRAP): All exterior walls shall have Dupont Tyvek Homewrap, or approved equal, over exterior wall sheathing. Use Division 8 for required window/door installation and flashing. See Division 4 for requirements at Masonry veneer walls.

Completely seal with caulking compound, joints around frames and sills of doors, windows, joints of dissimilar material and other openings in exterior masonry. Use Bond Breakers, backer rods and Primers as recommended by caulking mfr.

ROOFING: ASPHALT SHINGLES TO MATCH EXISTING: New asphalt shingle roofing system to be installed in strict accordance with manufacturer's specifications and the recommendations of the Asphalt Shingle Association. Asphalt shingles to be 30 year minimum warranty, Architectural grade and to match existing, installed over underlayment as specified below. The Work shall include installation of "Ridgeline" nailable polypropylene ridge vent with cap shingles, or equal as approved by *Architect*.

LOW-SLOPE ROOFING: Roofing sloped at 3:12 or less shall be a modified bitumen roofing system installed in strict accordance with industry standards and mfr. specs. Three-ply system shall include one (1)ply Flintlastic SA Nailbase ASTM D4601 modified bitumen roll roofing base sheet mechanically fastened over plywood sheathing. Overlap sidelaps 4" and endlaps 6". Stagger sheets min 36" and cut up cutting corners of endlaps diagonally to avoid "T" seam joints. Use trowel grade FlintBond modified bitumen adhesive uniformly in 1/16" to 1/8" layer over overlaps to ensure an adequate bond. Successive Self-Adhering SBS Modified Bitumen Flintlastic Mfr. plys and Cap sheet ASTM D6164 to be installed per mfr. specs. Use cant strips and flashings per roofing mfr. specs, and extend roofing 1'-6" up adjacent walls or roofs. Mineral-surface color to be approved by Owner. Maintain minimum roof slope of ¼" per foot at all roof surfaces.

ROOF UNDERLAYMENT: Deck-Armor™ Premium Breathable Roof Deck Protection or approved alternate to be installed and lapped per strict manufacturers recommendations and RCO Section 905.27. In addition, self-adhering waterproof underlayment, **Grace Ice & Water Shield**® or approved equal, shall be installed 3'-0" width at all valleys, 4'-6" width at eaves (min. 2'-0" beyond inside face of exterior wall line), full coverage for small dormers and shingle roofs below 4:12 pitch. At rakes, underlayment shall be covered with metal drip edge.

FLASHING: All flashing shall be designed and installed in strict accordance with the Architectural Sheet Metal Manual. Roof valley flashing shall be 20" wide, 0.019" coil coated aluminum, "V" crimped, color to match shingles as close as possible. Chimney flashing to be 16 oz. copper, cap and base type with hemmed edges and installed in raked out mortar joints or saw kerfs. Set with lead roping and seal with a small bead of lead silicone. Other roof flashing to be 0.019" coil coated aluminum, to match single color. Flashing at stoops and steps, where masonry abuts wood wall or floor systems, shall be 0.019" coil coated aluminum, color to match adjacent siding or trim, and installed to thoroughly protect wood.

GUTTERS and RAINWATER LEADERS, GENERAL: Sizing of gutters and downspouts to be verified by roofing contractor and should match existing. If roof area calculations/ unusual conditions warrant an increase in gutter size to 6" with 4" downspouts, contact *The Architect* for approval. Install splash or overflow guards on gutters where recommended at the termination of major valleys, or other locations where overflow is likely. Gutter lengths shall be extruded in continuous lengths with neoprene expansion joints in all hip-roof applications and at straight runs over 40'-0", 1/4" mitered inside and outside corners and stock endcaps, installed with concealed hanger. Gutters shall be pitched to downspouts within the height of the gutter board, not allowing water to stand in gutter. All joints shall be sealed with sealant recommended by gutter manufacturer.

GUTTERS: gutters shall be **pre-finished aluminum 5" ogee**, 0.32 ga aluminum, pre-finished white polyester or baked enamel. PVC boot to project maximum 6" above grade to accept downspout and be painted to match downspout. **DOWNSPOUTS:** shall be .019" thickness 3" diameter round (confirm - match existing) prefinished aluminum. Finish to match gutters. Downspout connection at gutter shall be located so that downspout is centered directly over boots with no bends in its vertical drop. If necessary, relocate downspout drain to achieve straight drops. If it is impractical, or unadvisable, to locate downspouts where shown on *The Drawings*, contact *The Architect* for approval of alternate location.

Spec. Div. 8: Windows and Doors

WINDOW PACKAGE ORDERING: Architect to receive copy of window order with min. three days to review/approve order prior to execution of window order. Contractor to directly confirm with Owner to approve: interior finish of screens and window hardware, interior finish of door hardware, acceptability of glass color, details of muntin bars as specified. Jeld-Wen and Windsor to remove saw groove, top and bottom, at DH windows. Owner to see window sample upon request.

WINDOW INSTALLATION: Air-and-moisture barrier shall be applied to the building exterior, properly taped and wrapped at openings, before installation of windows. Apply a continuous bead of sealant under nailing fins. Apply Protecto Tape 5" wide bitumen-modified self-adhesive protection tape at head, jamb, and window sill over nailing fin and providing positive seal from window unit to building wrap. Lap tape for proper drainage.

TEMPERED/SAFETY GLAZING: Tempered or safety glazing shall be required for the following locations considered hazardous:

- Glazing in a fixed or operable panel within 24 inches of an adjacent door and whose bottom edge is less than 60 inches above the floor or walking surface.
- Glazing in a fixed or operable panel that is larger than 9 square feet and whose bottom edge is less than 18 inches above the walking surface.
- Glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom edge of the glazing is less than 60 inches measured vertically above any standing

or walking surface.

4) Glazing adjacent to stairways, landings and ramps within 36 inches measured horizontally of a walking surface and whose bottom edge is less than 60 inches above the plane of the adjacent walking surface. Glazing adjacent to stairways within 60 inches measured horizontally from the bottom tread of the stairway and whose bottom edge is less than 60 inches above the nose of the tread.

MANUFACTURED WINDOWS AND DOORS: to be **poltruded fiberglass construction**. All new-construction (and replacement, where applicable and approved by *the Architect*) windows, as well as exterior doors supplied by window manufacturer to meet the following specification standards:

GENERAL: units to have **nailing fins w/ corner waterproof closure; high-performance, 5" wide butyl-modified window tape included with order.**

GLASS: to be **double-pane glass with 272 Low-E Coating** and argon gas, U= 0.34 or less, APPROVED PRODUCTS: Lincoln Marvin Integrity Double-Hung or Casement Windows; Pella Architect Series 850 Double-Hung or Casement Windows; Windsor

MUNTIN BARS: to be **7/8" Simulated Divided Lite**, pattern as indicated on drawings, w/ spacer bars, exterior to be pultruded fiberglass, finish to match windows. Provide wider (1 ½" to 2") SDL bars to simulate double-hung center sash if indicated. **EXTERIOR FINISH:** pultruded-fiberglass finish to meet or exceed AAMA 623-10, White exterior finish.

INTERIOR FINISH: Pre-primed interiors, including interior muntin bars. Window manufacturer to verify with *Owner and Architect* all Interior/Exterior window and hardware finish choices prior to window order. Standard hardware finish included.

DOUBLE-HUNG WINDOWS: to have sash liner white vinyl

SPECIAL CASEMENT WINDOW SETTINGS: to have, where indicated.

SCREENS: to be dark fiberglass mesh screening. Double-hung units to have full screens.

CUSTOM EXTERIOR DOORS: Custom exterior doors to be 2½" thick, painted wood.

Weatherstripping to be kerfed compression bulb.

INTERIOR DOORS: to match existing. For solid masonite/MDF doors, finish shall be smooth (NO WOOD GRAIN). Set doors to provide maximum 1/4" clearance between bottom edge of doors and finish flooring, including carpeting. Jamba at Door and Cased Openings shall be tightly shimm'd in a minimum of three locations on each side including at hinges and locksets. Interior doors from house to Garage: door and frame to have one hour fire rating and self-closing mechanism.

GARAGE DOORS AND OPENING:

OVERHEAD GARAGE DOOR to be HAAS American traditions 900 Series or equal, flush finish, four section, 1 3/8" thick, solid polyurethane core with inside and outside steel skins with composite overlays. Door shall be complete with hinges, interior handles, latch mechanisms, and compressible-type rubber weather-strip for bottom rail and weather-strips for top and side rails.

NEW DOOR OPENERS shall be LiftMaster Premium Series Model 3265-267, ½ H.P., with Multi-Function Controls Panel, manual release, Remote Control Units, and optical and contact sensors.

DOOR HARDWARE: Provide and install all finish hardware as selected by *The Owner and Architect* under allowance, and shall include all door latches/knobs and steps. Unless otherwise directed, door hardware shall be 2 3/4" backset latches. Doors shall be hung with three **square** hinges per door, 3½"x3½" hinges for interior doors, and 4"x4" for exterior doors. Shim all jamba, minimum 3 shims per side jamb.

Spec. Div. 9: Finishes

DRYWALL: Use 5/8" gypsum-board for new wall finish; Use 5/8" gypsum-board for new ceiling finish. Verify adequate/level framing before installation to avoid visibly uneven surface. All ends and edges of gypsum board should occur over framing members or other solid backing except where treated joints occur at right angles to framing or furring members. Gypsum Board is applied directly to wood framing members. Ceilings are applied first, then sidewalls. Boards should be accurately cut and joints abutted but not forced together. Horizontal application, long edges at right angles to nailing members, is preferred for it minimizes joints and strengthens the wall or ceiling.

FASTENERS: NAIL APPLICATION: Nails shall be spaced not to exceed 7" on ceilings, or 8" on sidewalls, a minimum of 3/8" and a maximum of 1/2" from edges and ends of gypsum board. Gypsum board nails or annular ring nails, such as the GWB-54, are recommended. **SCREW APPLICATION:** Screw application is often preferred as the screw holds the gypsum board tight against the framing when applied as recommended. Type W 1 1/4" Drywall Screws are driven with an electric screw gun equipped with adjustable screw depth control and a #2 Phillips bit. If framing is spaced up to 16" o.c., screws are spaced 12" o.c. max on ceilings and 16" o.c. max on walls. If framing is spaced 24" o.c., screw spacing must not exceed 12" o.c. Minimum screw penetration shall be 5/8" for wood studs.

GYSUM BOARD BENDING RADI: Lengthwise Bending: 1/4" (6.4 mm) = 5'-0" radius; 3/8" (9.4 mm) = 7'-6" radius; 1/2" (12.7 mm) = 10'-0" radius; 5/8" (15.9 mm) = 15'-0" radius; Note: To achieve tighter bending radii, use 1/4" HighFlex Gypsum Board.

GYSUM BOARD FINISHING: Execution of finishing is to conform to Gypsum Association publication GA 214-10: Recommended Levels of Gypsum Board Finish. Levels shall be attained according to ASTM C 840, "The Standard Specification for Application and Finishing of Gypsum Board." Tape all edges, all joints thoroughly bedded, taped and feathered, and all drywall corners finished with metal corner bead. All finish surfaces to be smooth, free of cracks, breaks, bulges, ridges, etc., with all taping compound well feathered and sanded and thoroughly concealed. Carefully cut around all electric, HVAC or other openings. Furr walls and ceilings as required where installed adjacent to existing plastered surfaces.

Level 4: If the final decoration is to be a flat paint, light texture or lightweight wall covering, a Level 4 finish is required. As stated in Level 4, "All joints and interior angles shall have tape embedded in joint compound and shall be immediately wiped with a joint knife leaving a thin coating of joint compound over all joints and interior angles. Two separate coats of joint compound shall be applied over all flat joints and one separate coat of joint compound shall be applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. All joint compound shall be smooth and free of tool marks and ridges." It is recommended that the prepared surface be coated with a **drywall primer** prior to the application of final finishes.

Level 5: Level 5 finish is recommended for areas where severe lighting conditions exist and areas that are to receive gloss, semi-gloss, enamel or non-textured flat paints. Level 5 requires all the operations in Level 4. Additionally, a thin skim coat of joint compound, or material manufactured especially for this purpose, is applied to the entire surface. A skim coat of joint compound is intended to conceal small imperfections in joints and on the surface of the gypsum board to help conceal joints and create the appearance of flatness. A skim coat will also smooth the texture of the paper, minimize differences in surface porosity, and create a more uniform surface to which the final decoration can be applied. The Level 5 finish is required to achieve the highest degree of quality by providing a uniform surface and minimizing the possibility of joint photographing and/or fasteners showing through the final decoration.

CEILING TEXTURES: New Ceiling textures to be smooth. Where indicated on *The Drawings*, or where ceiling meets existing textured ceiling, the textured ceiling finish shall be blended to match the existing texture. *The Contractor* shall prepare a sample of new ceiling texture for approval by *The Architect or The Owner* before proceeding with new ceilings or walls.

FIRE-RATED GYPSUM BOARD: 5/8" fire-rated drywall to be installed and finished as required by all governing building codes. Panel complies with requirements of ASTM C 1396, Type X. Typically, all attached garage walls and ceiling to be fire-rated.

MOLD AND MOISTURE RESISTANT GYPSUM BOARD: Gold Bond® BRAND XP Gypsum Board or equal, panel complies with requirements of ASIM C 1396. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273. Moisture resistant drywall shall be used in areas prone to moisture, such as bathrooms, laundry rooms, basements, garages, kitchens and utility rooms. Also may be used as tile backer in limited wet areas, such as bathroom and basement walls, as well as kitchen and laundry wall tile areas.

BACKER BOARD: Cementitious, water durable, board, surfaced with fiberglass reinforcing mesh on front and back; long edges wrapped; and complying with ANSI A118.9 and ASTM C 1325. Approved fasteners: Nails: 1-1/2-in. long, hot dipped galvanized, and in accordance with FS FF-N-105B, Type 2, Style 20. Screws: Hi-Lo thread screws (No. 8) waffer head, corrosion-resistant, 1-1/4 in. or 1-5/8 in. long, and complying with ASTM C 1002. Joint Treatment: Use alkali-resistant fiberglass mesh tape intended for use with cement board. Install in accordance with ANSI A108.11 and Manufacturer's Recommendations: "PermaBase Cement Board Construction Guide;" 110831, National Gypsum Co.

CERAMIC/PORCELAIN/STONE TILE: Tile shall be selected by *The Owner* under allowance and installed per the latest edition of The Tile Council of America specifications as follows: **THIN-SET FLOORS:** Dry-set or latex-Portland cement mortar bond coat over ½" cementitious-backer board (USG Dur-rock or equal) over plywood sub floor, per M144. Tape joints with 4" Dur-rock tape set into tile setting material.

SEALING: All porous stone, ceramic tile, or other porous flooring and wall tile shall be sealed following installation to prevent staining, and other precautions taken to prevent damage to such tile work.

INTERIOR PAINTING:

PREPARATION: Prior to starting the Work, *The Contractor* shall inspect all surfaces to be painted or stained to ascertain that all such surfaces are dry, clean and in perfect condition for finishing. Wood surfaces shall be smoothly sanded; all nail and screw holes and imperfections filled with non-shrinking putty and refilled as

required so that these imperfections are indiscernible; and all knots, pitch pockets and saps streaks primed with shellac. After priming fill gaps between trim and walls/ceilings with paintable latex/silicone caulk and wipe smooth.

MATERIALS: Painting materials to be Sherwin Williams, Pratt and Lambert, Benjamin-Moore, or approved equal, delivered to job in new, unopened containers. Paint or finish shall be of color, shade, sheen and texture as selected and approved by *The Owner* prior to commencement of work, samples presented on a reasonably large area.

EXECUTION: Finish work shall be of uniform shades, free from shadows, runs, sags, grain, grain variations (when stained) and dust, dirt or other airborne particles. Where surfaces of different colors meet, the final appearance shall be of a fine, straight line. All light fixtures, electric outlet covers, HVAC grills, hardware, or other removable materials adjacent to painted surfaces shall be removed and replaced after painting is completed. Other built-in materials adjacent to painted surfaces shall be carefully masked prior to painting/staining.

INTERIOR PAINTED WOOD or MDF trim work: shall be painted with three coats: First, alkyl'd enamel primer; Second and third, alkyl'd base enamel, Benjamin Moore Impervo or equal, finish as selected by Owner, second coat tinted to differentiate from final coat. Putty prior to primer coat. Sand between coats. All window muntin grilles to be painted or stained at inside to match adjacent woodwork finish, and painted at exterior to match window color.

STAINED WOODWORK: to be stain finished with three coats: First, stain/sealer; Second and third, clear polyurethane or approved equal, satin finish. Sand between coats.

DRYWALL WALLS AND CEILINGS: to be painted with three coats: First, latex wall primer; Second and third, latex enamel. After initial priming, inspect all surfaces and re-prime as required following surface corrections, if any. Prime and paint all edges of all doors, including top and bottom edges, after trimming, shaving, undercutting or other adjustments to doors. Prime and finish paint all edges of windows and exterior doors.

EXTERIOR PAINTING AND STAINING:

PREPARATION: *The Contractor* shall inspect, clean, and properly prepare all exterior surfaces that are to be painted or stained. *The Architect* shall be notified of any surfaces that cannot be brought up to proper standards for finishes specified. Sand any exposed wood to a fresh surface. Patch all nail holes with a wood filler or putty and sand smooth. Work to include application of sealant on all exterior joints between siding and windows, trim or other exterior openings or areas where moisture penetration is likely (see Division 7). **NEW WOOD PRIMING:** prime and back-prime all new exterior wood trim and wood siding prior to installation. Prime all cut ends or rips prior to installation.

EXTERIOR PAINTED WOOD TRIM AND SIDING: *The Contractor* shall paint all exterior siding, trim and woodwork with one coat of alkyl'd-based stain-blocking primer (prior to installation). Finish paint with two coats of highest-quality exterior latex house paint, Sherwin-Williams 'Duration' or equal-, color and texture to match existing. Include all exterior surfaces of windows and doors concealed by meeting rails or overlapping members.

PRESSURE-TREATED WOOD shall be stained with two coats specially formulated for pressure-treated wood application (SW Deckscapes or equal).

CEDAR SHINGLES: Shingles shall be stained (or pre-dipped) with all sides prior to installation. A second coat of solid color to match existing, exterior wood preservative stain shall be applied after shingle installation. Stain by Sikksens or Cabot.

Spec. Div. 11: Equipment

APPLIANCES AND EQUIPMENT: All appliances as shown on drawings to be installed by *The Contractor*, and contract price must include all electric circuitry, gas supply piping, or other required infrastructure to support appliances and equipment as shown on drawings. All fuel fired appliances to comply with venting per RCO Section 2427.6 as applicable. All clothes dryers to be constructed of smooth metal duct, minimum 4" nominal in diameter and comply with installation requirements per RCO Section 1502.

SECURITY: Security to be handled directly by *The Owner* under separate contract. *The Owner* is responsible for coordinating the Security system work as directed by *The Contractor*

Spec. Div. 26: Electrical

GENERAL:ALL ELECTRICAL WORK TO COMPLY WITH THE 2014 NEC.

ELECTRICAL: Provide and install all electrical materials shown or inferred in The Drawings, including hook-ups of all new appliances, mechanical equipment or other electrical devices shown. Disconnect, terminate, rewire or relocate all existing electrical devices as required for new construction and as noted on Electrical and Demolition Plans or as required to meet all applicable codes.The Contractor shall calculate electrical load requirements for all existing and new work, feed new circuits from existing subpanel(s), or provide and install new Square D, or approved equal, circuit breaker type main/sub distribution panel, sized to accommodate new and existing electrical load requirements and an additional 25% capacity for future electric work, if required. The Base Bid shall include all labor and material costs associated with relocating the existing meter and service entrance and with upgrading the electrical service into the house, if required to accommodate electric requirements specified herein. Any wall device mounting boards, for electrical distribution panels or other devices, shall be fabricated from ¾" MDO sheet material, primed and finish painted beige prior to the installation of any devices.

WIRING: Wiring layout, circuiting, materials and installation shall conform to the requirements of latest edition of the National Electric Code. Electrical contractor must use 12 gauge wiring at a minimum. 14 gauge wire is not acceptable unless contractor acquires written approval from *The Owner*.

</

Site Photos

