

02/07/2014

GENERAL SPECIFICATIONS MANUAL

FOR

Housing Development Construction Projects

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GENERAL SPECIFICATIONS

DIVISION 1 - GENERAL

SECTION 1A - DEFINITIONS

1. "City" Housing Development of the City of Colorado Springs or its authorized representative.
2. "Contractor" individual or firm contracting with the Owner.
3. "Owner" person, persons or organization or their authorized representative.
4. "PPRBD" Pikes Peak Regional Building Department

SECTION 1B - GENERAL SPECIFICATIONS FOR HOUSING REHABILITATION

These General Specifications shall augment the site specific work description provided for each project, provide base specifications for fixtures and finishes incorporated into the project, and outline generally acceptable work practices to be followed under the construction contract. These specifications were prepared by the Housing Development staff for use in the Housing Rehabilitation Programs. Any questions regarding the intent or interpretation of these specifications shall be referred to the Housing Development Division for clarification.

SECTION 1C - CODES AND ORDINANCES

Work shall be accomplished in accordance with current building codes and ordinances as prescribed by Pikes Peak Regional Building Department, the City of Colorado Springs, and El Paso County. If a contradiction exists between the codes and the Work Description or these General Specifications the requirement of the code will apply, except when the requirement of the Work Description or these General Specifications exceeds those of the codes, then the requirement of the Work Description or these General Specifications shall apply.

SECTION 1D - PERMITS

All permits required for the execution of the work called for by the Work Description shall be obtained and paid for by the Contractor prior to the start of that work. Unless otherwise noted, it is the Contractor's responsibility to provide the permitting jurisdiction with all site specific drawings required to obtain the necessary permits.

SECTION 1E - PROJECT INSPECTION

The Contractor shall periodically visit the project site during construction to ensure:

- Work description is properly executed.
- Codes and regulations are enforced.
- Jobsite is kept clean, maintaining a safe work and living environment.

SECTION 1F - STANDARDS AND INSPECTIONS

Site inspections are required for all:

- Change Orders.
- Pay requests.
- Contract compliance, quality control and final payment.
- Any additional inspections as required by other authorities.

SECTION 1G - MATERIALS

- The use of materials other than those designated, without prior approval by contract change order, shall constitute a violation of the Contract.
- Removal and replacement of substitute materials will be at the Contractor's expense.
- The contractor will provide receipts for all allowance items and any amounts not expended shall be credited back to the Owner.

SECTION 1H - WORK DESCRIPTION

- A Work Description for each property, identified by Owner and address, will be provided.
- Drawings may be included as part of the Work Description; details called for on the drawings shall be treated as if called for by the Work Description.
- Work identified in the Work Description shall comply with the requirements of these General Specifications.
- All work called for by the Work Description shall include all labor, material, equipment and permits necessary to perform the work unless otherwise specified.

SECTION 1I – COMPLIANCE WITH MANUFACTURERS' RECOMMENDATIONS

- Installation of products, assemblies and equipment specified shall be in accordance with manufacturers' instructions, recommendations and specifications.
- When provided by the manufacturer, the Contractor shall provide to the Owner all Owner's Manuals, guarantees, warranties, receipts, and certificates for furnished materials and equipment.

SECTION 1J - ENGINEERING

When engineering is required:

- Engineering requirements shall supersede the requirements of these General Specifications.
- Engineering inspections will be performed at no cost to the Contractor, unless the actions of the Contractor require additional inspections.

SECTION 1K - PROPERTY DAMAGE AND SECURITY

- The correction of any damage to the project site or adjacent properties as a result of any activities associated with the Contractor's execution of the work shall be the responsibility of the Contractor. Settlement actions for damages shall be to the satisfaction of the property Owner(s).

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- The Contractor shall ensure security of buildings by use of existing locking devices and boarding of any openings as a result of his work.
- New work and newly installed products shall be protected from damage through completion of the project. Any damage to such work or products shall be repaired or product replaced to the satisfaction of the Owner and City.
- The Contractor shall be held responsible for any damage or defacement caused in the process of delivery of materials or execution of work. Responsibility shall include the repair or replacement cost of damaged surfaces.

SECTION 1L - TRASH REMOVAL

- The Contractor shall remove all construction trash, debris and waste materials.
- Trash, debris and waste materials awaiting removal from the site shall be controlled.
- The Contractor shall not use the homeowner's trash facility.

DIVISION 2 - SITE WORK

SECTION 2A - EARTH WORK

Excavation

- Excavate to grades required by the work called for.
- The bottoms of footing foundation trenches are to be level.
- Footings must rest on virgin soil or properly compacted fill.
- All excess dirt is to be removed from the site.
- Backfill and grade to obtain finish grades as called for. Backfill material shall be free of all rubbish and any rocks larger than 3" in diameter.
- Backfill shall be compacted to a minimum of 90% of the maximum Proctor Density ASTM D-698. Compaction shall be by mechanical tamping. Water shall not be used for compacting.
- The requirements of any engineering report for the project shall supersede the above specifications.

Grading and Drainage Shall be Carried Out To:

- Allow drainage of surface water away from structure.
- Avoid concentrating runoff onto neighboring properties.
- Minimize erosion.
- Provide wood-to-earth separation for affected structures on property.
- Swales shall be a minimum of 5 feet from building and well defined.
- Soil shall be compacted and uniformly spread and suitable for plant growth.

SECTION 2B - LANDSCAPE WORK

Tree and Shrub Placement

- Plants shall be nursery grown, sound, healthy, vigorous, free from plant diseases and insects or their eggs, and shall have normal, healthy root systems.

Tree and Shrub Pruning

- Trees and shrubs shall be pruned in accordance with accepted nursery practice.
- All pruning shall be done with the prior consent of the Owner.

Rock and Mulch

- Establish proper grade and drainage including removal or addition of soil.
- Grade the subgrade evenly to a depth of 4" below desired finish grade.
- Edging shall be securely staked prior to installation.
- Installation of landscape fabric over entire subgrade.
- Finish material placement a minimum of 4" deep and spread uniformly.

SECTION 2C - DRIVEWAYS

- Establish proper grade and drainage as above.
- The subgrade shall be evenly graded to a depth that will permit the installation of the required new materials to the desired finish grade.

Gravel Installation

- Shall include edging of 4" galvanized metal securely staked prior to installation of gravel.
- Edging may be omitted if edge of gravel abuts sidewalk, curb, structure or other suitable edge.

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Asphalt Installation

- Shall have a minimum compacted thickness of 2". Base shall be of crushed stone, gravel, or durable road material and properly compacted to 4" minimum thickness.
- Asphalt shall be applied only in suitable weather conditions.
- All new work abutting existing is to be sawcut clean and provided with expansion joints when appropriate.

SECTION 2D - FENCING

Chain Link

- Chain link fabric shall be 11 1/2 gauge wire woven in a 2" galvanized mesh. Fabric shall be tied to posts and top rail with aluminum or galvanized wire.
- Line posts shall be 1 5/8" OD galvanized pipe spaced at a maximum of 10'-0" on center and set in concrete a minimum of 24" below grade. End posts, corner posts and gate posts shall be 2 1/2" OD galvanized pipe set in concrete a minimum of 30" below grade. Holes shall be large enough to provide space for 2" of concrete around post.
- Top rails of 1 3/8" OD galvanized pipe shall be included in all installations.
- Gates shall be constructed of 1 3/8" OD galvanized pipe with welded or factory fitted joints. Fabric in gates shall be same as fence.
- Fittings and hardware shall be either galvanized steel, aluminum or galvanized malleable metal. Provide and install all fittings and hardware for a complete installation.

Wood

- Nails, staples, bolts, etc. shall be coated or plated. All fasteners shall be flush with the material face and set in a consistent pattern. Boards showing misfires or splits shall be replaced.
- Posts shall be 4" x 4" spaced a maximum of 8'-0" on center, or steel 2 3/8 " round or "hat channel" driven, or set in post mix to 30" below grade.
- Fences with vertical board facings shall have 2" x 4" rails. Two rails are required for fences up to 6'-0" high. Rails shall be securely fastened to posts to rigidly support all loads.
- Facing boards shall be of the style specified. Facing boards with knots exceeding 1/3 of board width will not be accepted.
- All manufacturer's labels shall be removed.

DIVISION 3 - CONCRETE

SECTION 3A - GENERAL REQUIREMENTS

Preparation

- Concrete work shall include all excavation, backfill and compaction required for complete job. Surfaces adjacent to concrete shall be restored to match adjacent surfaces unless otherwise specified.
- Sod and vegetation shall be removed and any soft or wet areas shall be dug out and filled with granular material and thoroughly tamped.

Concrete Design

- Concrete shall reach the following minimum compression strengths within 28 days.
- Concrete walls and interior slabs: 2500 psi.
- Driveways, curbs, sidewalks, patios, porches and garage floors: 3000 psi.
- Minimum allowable sacks of cement per cubic yard shall be five for 2500 psi concrete and five and one half for 3000 psi concrete.

Form Work

Walls

- Forms shall be substantially free of surface defects and sufficiently tight to prevent leakage. They shall be properly braced and tied to maintain the design position and shape.
- Supporting forms or shoring shall not be removed until design strength is achieved.
- Form ties shall be removed to a point flush with concrete surface or recessed and grouted.

Flat Work

- Flat work shall be formed with 2x material or steel forms.
- Flat work more than 4" above grade shall be formed with plywood or steel.
- Forms shall be properly braced and tied to maintain the design position and shape.
- Supporting forms or shoring shall not be removed until design strength is achieved.

Placement

- Concrete shall be placed continuously whenever possible or provided with construction joints with reinforcement for transfer of stress.
- Concrete work shall be straight and plumb with square corners and shall be placed in such a manner that when forms are removed no honeycombs, large voids, or form marks are evident and face has a generally uniform appearance.
- If these requirements are not met, the Contractor shall be responsible for surfacing entire face to a uniform appearance.

Protection of Concrete

- Concrete shall be protected from any weather condition which could compromise the strength or appearance of the finished concrete.
- The Contractor shall protect the concrete from traffic and vandalism until concrete will withstand normal traffic without damage.
- The Contractor shall be responsible for repairing or removing and replacing, without added cost to the Owner, any concrete, the strength or appearance of which is damaged from improper protection, workmanship or materials.

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Repair of Concrete Surfaces Shall Include

- Removing existing spalled concrete, loose concrete, or loose cement coating;
- Cleaning area to insure good bonding of patch material;
- Wetting the surface and keeping moist during entire process;
- Filling all voids and cracks with a mixture of concrete and bonding agent placed in accordance with manufacturer's recommendations;
- Repairing any existing cement coating.

SECTION 3B - CONCRETE WALLS

Concrete Foundation Walls

- Foundations shall be constructed in accordance with engineer's design.
- Shall include installation of all recommended foundation drain systems.
- Installation shall include sump pump and pit when required.

Concrete Retaining Walls:

- Walls over 4'-0" in height shall be constructed in accordance with engineer's design.
- Piers shall be a minimum of 12" in diameter and 30" in depth unless otherwise specified.

SECTION 3C - CONCRETE FLAT WORK

Concrete Walks, Ramps, Steps, Stoops, Patios, Driveways, and Apron

- Total thickness of all concrete shall be 4" minimum.
- Exposed surfaces shall be free of honeycombs, voids and form marks.
- Provide exterior flat concrete with light broom finish.
- Drainage shall be maintained away from all buildings, a minimum slope of 1/8" pf.
- Edges shall be tooled with a device designed specifically for this purpose.
- Concrete walks shall be a minimum of 30" wide with 1/2" control joints not to exceed 5' oc unless otherwise specified.
- Driveways to include 1/2" control joints at a maximum of 10' on center in both directions.
- Vehicle garage door apron shall be poured flush with garage floor, and extend 1' to each side of garage door opening and extend out 2' flush with driveway grade.

Interior Concrete Floors

- Floors shall have steel trowel finish, smooth and free from trowel marks.
- Aggregate shall be tamped away from surface using tools designed for this purpose.
- Interior concrete floor slabs shall be a minimum of 4" thick.
- 1/2" x 4" expansion material at perimeter of floor and at any other structural elements.
- Concrete floors shall be finished (except where floors are shown to slope to drain) with a maximum 1/4" variation in an 8'-0" distance in any direction.
- Garage floors shall be sloped for drainage to overhead door opening and include a concrete apron.

DIVISION 4 - MASONRY

SECTION 4A - GENERAL REQUIREMENTS

Placing

- Masonry shall be plumb, square & flat with level courses and uniform joints.
- Joints to be flush where covered with finish and concave tool where exposed.
- When new and existing masonry are joined, transition shall be structurally sound and watertight and if exposed shall be uniform in appearance.
- Work shall include all necessary anchors, lintels and ties.

Cold Weather Precaution

- Masonry work shall be protected from any weather condition which could compromise the strength or appearance of the finished work.

Mortar

- Masonry mortar shall be mixed using a masonry cement specifically designed for this application.

SECTION 4B - FOUNDATIONS AND RETAINING WALLS:

- Masonry work called for shall include excavation, backfilling, reinforcing, coring, etc.
- Walls over 4'-0" in height shall be constructed in accordance with engineer's design.

SECTION 4C - REPAIR OF EXISTING

Tuck Pointing

- Removing existing mortar to a minimum of 3/4" and all loose and deteriorated mortar.
- Cleaning joint edges to ensure good bonding.
- Wetting the surface and keeping moist during the entire process.
- Forcing mortar into joints with caulking tool.
- Striking joint to seal and blend in with existing.
- Cleaning entire surface to remove all mortar from face of masonry (brick, rock or stone).

Resetting Existing Units

- Existing masonry units may be reused if undamaged and clean.

Parging

- Brushing and washing down entire surface to remove loose and deteriorated material.
- Keeping surface damp while applying parging.

Shotcrete

- Shotcreting will be carried out per Engineer's design.
- The finish shotcrete surface shall be uniform and of a consistent appearance.

Chimney

- When a chimney is to be repaired, this includes tuck pointing, replacing damaged or missing masonry, and parging, and installing a new cap and/or flue extension where necessary.

DIVISION 5 - METALS

SECTION 5A - RAILINGS AND HANDRAILS

- Railings shall be custom manufactured and securely anchored.
- Joints are to be rigid and dressed down to a smooth, even surface.
- Railings shall be painted with one coat of metal primer and one coat of suitable finish paint.
- Manufactured ramp & rail systems for approved applications are exempt from this section.

SECTION 5B - FOUNDATION AND ATTIC VENTS

General

- When openings for vents are constructed care shall be taken to avoid unnecessary damage to adjacent components.

Foundation Vents

- Foundation vents shall be operable and screened with corrosion resistant wire mesh.
- Vents shall be placed per current PPRBD code.
- Vents shall be standard quality brands designed for the specific application.

Attic Vents

- Shall be screened with corrosive resistant wire mesh.
- Provide protection against entrance of rain or snow.
- Vents shall be standard quality brands designed for the specific application.

DIVISION 6 - CARPENTRY

SECTION 6A - FRAMING

General

- Framing called for shall provide safe support of all design loads.
- Provide a suitable base for attachment of finish material.
- Framing lumber shall be identified by the Grade Mark of a grading association.
- Framing shall be level and plumb, and where possible all corners shall be square.
- Window and door openings shall be level, plumb, and square.
- Meet all code requirements.
- Engineering and/or PPRBD requirements supersede all requirements of this section.

Sill Plates

- Sill plates shall be sealed to foundation with closed cell foam weather stripping, grout or other gasket material.
- Sill plates shall be redwood or pressure treated material.

Posts, Beams & Floor Joists

- Shall conform with all PPRBD requirements or Engineer's design.

Floor Framing

- When additional floor framing is called for, new joists sizes shall be per PPRBD requirements or Engineer's design.

Sub Flooring

- Subflooring shall be tongue & groove plywood, or OSB (oriented strand board).
- Subflooring shall be glued and fastened with ring shank nails or screws.
- When matching existing, new subfloor shall provide a uniformly smooth transition and shall be supported at all edges.

Furring and Leveling of Existing Floors

- Remove all base and trim so that new floor sheathing will contact wall.
- Floor shall be leveled to the high point of the area.
- Shall extend into any new and existing closet or pantry.
- When leveling of floor(s) is called for continuous furring strips shall be used.
- Sheathing shall conform to sub flooring requirements as above.
- Shimmiing material shall be a structural material with full bearing.

Changes in Floor Level

- When leveling the floor causes differences from adjacent floors of more than 1/2", this change shall take place at openings.
- When the difference is 3" or more, treat as a step with a vertical riser.
- When the difference is less than 3", provide a tapered rise compatible with adjacent floors constructed of solid material.
- Slope shall not exceed 1 in 5.

Walls

- New interior walls shall be constructed of 2" x 4" studs at 16" on center.
- Wall framing shall include backing for all planned accessories.
- Location of all openings shall be as called for per drawings.

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- Exterior walls shall have two continuous beads of caulking applied between soleplate and subfloor.
- Engineering and/or PPRBD requirements supersede all requirements of this section.

Rafters and Trusses

- Rafters and trusses shall be set to provide an even plane for roof sheathing.
- Provide a smooth transition between existing and new roofing.
- Rafter size and spacing shall meet code requirements.
- Rafters shall run full length without joints.
- When roof trusses are called for they shall be engineered.
- Engineering and, or PPRBD requirements supersede all requirements of this section.

Roof Sheathing

- Roof sheathing shall be plywood or OSB installed and fastened per PPRBD or Engineer's design.
- When matching existing sheathing, transition shall provide a uniformly smooth surface.

Wood Decks, Ramps, Steps, Railings, Retaining Walls

Material

- Decks, ramps, steps and railing structural components shall be as specified in the Work Description.
- Retaining wall components shall be designated for landscape use by the manufacturer.

Construction

- Construction details shall be in accordance with drawings, engineering and local codes.

Repair of Framing and Structural Members

- When the repair of framing or structural members is called for, the repair shall achieve the strength and load bearing capacity of the original member.
- Engineering and/or PPRBD requirements supersede all requirements of this section.

SECTION 6B - EXTERIOR SIDING

Preparation Shall Include

- Securing any loose wood members and replacing defective with like material.
- Existing caulking, which will interfere with proper installation, shall be removed.
- Furring shall be installed as required to ensure finish wall is reasonably plumb and flat.

Installation

- Siding shall be installed to run level, plumb and true to line.
- Meet evenly at corners and existing siding.
- Siding abutting trim and adjacent siding shall be squarely cut and properly fitted.
- Caulking shall be installed around all openings and abutting wood trim.
- Color of caulking shall match finish color of siding.
- Include flashing, trim, and accessories for a finished, weather resistant product.
- All edges of unfinished lap and plywood siding shall be primed or sealed ready for final finish.

Lap Siding

- Vertical joints shall have a minimum separation of 24".
- Short pieces of siding shall not be concentrated in one area.
- Corner trim shall fit tight and true to vertical line of structure.
- Insulated backer shall be installed with all metal and vinyl siding.

Repair

- Repair or replacement of any damaged or deteriorated siding members.

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- Finish and design of siding material shall match existing siding as closely as possible.
- Repair shall be laced into existing siding.
- Vertical joints shall have a minimum separation of 24".

SECTION 6C - PORCHES, STOOPS AND DECKS

Replacement of Components

- Replacement of components will be with like material in style, size and installation.
- Finger joint material may be used when painted.
- Unfinished material shall be primed or sealed and ready for final finish.

Repair

- Repair shall consist of matching existing materials in size, style, and finish including decorative and ornamental moldings.

SECTION 6D - FASCIA, SOFFIT AND EXTERIOR TRIM

General

- Components shall be securely installed to run true to line and meet at even level.
- Cuts and miters shall be even so as to abut uniformly to adjacent members.
- Unfinished material shall be primed or sealed and ready for final finish.

Fascia and Trim

- Corners and in-line joints shall be mitered.

Soffit

- Soffit material shall be a minimum of 3/8" exterior grade plywood, unless otherwise specified. Fascia shall be plowed to receive soffit.

Vinyl and Metal

- Vinyl and metal members shall be installed per manufacturer's recommendations.
- Backing materials shall be as recommended by manufacturer.

Repair

- Repair shall consist of matching existing materials in size, style, and finish including decorative and ornamental moldings.

SECTION 6E - INTERIOR TRIM, CLOSET COMPONENTS AND SHEVING

Material

- New interior trim shall match predominate existing material in size, style, finish, including any decorative and ornamental molding.
- Trim material shall be dressed free of tool marks and other objectionable defects.
- When finish is to be natural or stain, trim material shall be stain grade.
- When trim is to be painted material may be finger joint.
- Closet shelf wall support shall be 1" x 4" material secured to solid backing.
- Closet rod, 1" diameter wood or metal, supported on ends with manufactured wall brackets. Rod shall not be painted.
- Wire shelving systems may be used.

Installation

- Trim shall be securely fastened to wall and installed to run true to line.
- Meet evenly at adjacent corners.

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- Joints shall be secured to prevent separation.
- Casings around all openings shall be joined only at corners.
- External corners shall be mitered and internal corners shall be coped.
- Splicing of trim shall be done with mitered joints over solid backing.
- Fasteners used in installation shall be set below the surface.
- Holes shall be filled smooth with surface; fill shall match stain color.
- Continuous support shall be installed at ends and back of closet shelves.
- Closet shelf and rod shall have a center support bracket if span is more than 5'-0".
- Rod shall be installed at a height of 56" above floor unless otherwise specified.
- Pantry and open shelves shall have center support brackets if span is more than 5'-0".

Repair

- Existing interior trim which is broken, splintered, cracked, chipped, warped or otherwise defective shall be replaced with new material.
- Repair shall include all materials and methods necessary to achieve uniformity.

SECTION 6F - INTERIOR SOFFIT

General

- Shall support design loads and provide a suitable base for attachment of cabinets.
- Framing shall be level and plumb.

SECTION 6G - KITCHEN, BATH AND UTILITY CABINETS

General

- Cabinets shall conform to ANSI A161.1 "Recommended Minimum Construction and Performance Standards for Kitchen Cabinets".
- Cabinets shall be certified by the National Kitchen Cabinet Association.
- No plastic or vinyl transfer finishes shall be accepted.
- Wall and base cabinets shall be of the same construction and same outside appearance.
- Face frames shall be solid 3/4" thick hardwood.
- Sides of cabinets shall be a minimum of 3/8", prefinished to match cabinet front.
- Tops and bottoms shall be a minimum 3/8" thick plywood or MDF.
- Cabinets shall have backs constructed of a minimum 1/8" hardboard.
- Interior of all cabinets shall have a melamine finish.
- Shelves shall be a minimum of 5/8" thick, MDF surfaced with a melamine finish.
- Installation includes all accessories, operating and mounting hardware, fillers, panels and molding provided by the cabinet manufacturer for a complete installation.

Installation

- Cabinet doors shall be properly aligned and drawers shall operate freely.
- Hardware shall operate smoothly and easily.
- Cabinets shall be installed straight, level, and plumb and securely anchored.
- Cabinets on either side of an appliance shall align front and top.
- Cabinets shall be secured to each other and to the wall by counter sinking screws neatly through the rails and stiles of the cabinets.
- Any screw not penetrating solid material shall be removed.
- Holes and any damage to the interior finish shall be filled and refinished.
- Shims shall be securely fastened and capable of supporting loads.
- Base and trim shall be fitted tightly to newly installed cabinets.

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- When cabinet installation is not tight fitting, continuous molding shall be installed.
- Openings necessary for plumbing and mechanical components shall be cut so that a properly sized escutcheon or trim will conceal the opening(s).

Replacement and Repair of Components

- When repair of cabinet components is called for repair shall restore component to its original appearance, structural integrity and operation.

SECTION 6H - COUNTER TOPS

General

- Surfaces shall be standard grade high-pressure plastic laminate.
- Laminate shall be applied to all exposed edges.
- Counter tops shall have a minimum 4" backsplash.
- End splash shall be installed where counter top abuts walls or built-in cabinet work.
- Sections shall be assembled to achieve a structurally sound, rigid, single unit top.
- Joints shall be tight, aligned and smooth.

Installation

- Tops will be scribed to fit tight to adjacent surfaces.
- Top abutting walls shall be fitted with a maximum 3/32" gap prior to caulking.
- Caulking shall be uniformly applied and finished neat and smooth.
- No molding shall be accepted.
- Openings cut and holes drilled for fixtures shall be neat and close fitting.
- Tops shall be secured to cabinet with screws installed into core of top through base cabinet.

SECTION 6I - HANDRAILS AND GUARDRAILS

Installation

- All handrail and guardrail installations shall meet applicable code requirements.
- Mounting brackets shall be screwed to structural members or to securely anchored backing.

DIVISION 7 - MOISTURE PROTECTION

SECTION 7A - DAMP PROOFING

- Damp proofing shall be applied in conjunction with new foundation construction and conform to engineering specifications.

SECTION 7B - PERIPHERAL DRAINS AND SUMP PUMP SYSTEMS

Peripheral Drains

- Peripheral drains shall be installed with new foundations and conform to engineering requirements.

Sump Pump Systems

- New sump pump systems will include sump pit with container and cover designed for this application, sump pump, all electrical connections and discharge drainage to exterior of structure.
- Sump pumps shall be submersible type, minimum 1/3 hp, automatic control, and UL approved.
- Discharge line with check valve shall extend from the pump through the exterior wall at a height to permit discharge into a splash block set on grade.
- A concrete splash block shall be included as part of this installation.

SECTION 7C - CAULKING

Material

- Caulking shall be paintable acrylic latex with silicone unless otherwise specified.

Preparation

- Surfaces to which caulking is to adhere shall be clean, dry, frost free and sound.
- Loose material shall be removed prior to application.
- Joints greater than 3/8" in depth shall be partially filled with a rope or yarn backup material as recommended by the manufacturer of the caulking.

Application

- Caulking shall be handled according to the manufacturer's written instructions.
- The completed application shall provide a weather tight surface.
- The caulking shall be uniformly applied and the finished surface shall be neat and smooth.

SECTION 7D - INSULATION

General

- The Contractor shall provide a certification of "R Value" for all installations to the Owner.

Material

- Insulation shall be standard quality brands of batt, blanket, or loose thermal insulating materials.
- Insulation materials shall be noncombustible, nontoxic and shall not attract insects or vermin.

Installation

- Attics (rooms or spaces immediately below the roof) shall be insulated to a minimum value of R-38.
- Attic insulation shall be installed between all conditioned and unconditioned spaces.
- Exterior wall cavities shall be insulated to a minimum value of R-13, or R-19 in 2x6 cavity walls.
- Disturbed wall surfaces shall be repaired and finished to match existing.
- Exterior crawl space walls shall be insulated to a minimum value of R-19.
- Floors over unheated spaces shall be insulated to full depth or per current PPRBD requirements.

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- Required clearances shall be maintained between mechanical and electrical components and insulation.

SECTION 7E - ROOFING

Preparation

- Installations shall include the removal of any existing material to meet local code requirements.
- Skip sheathing requires overlay.
- Secure loose sheathing, replace defective material to establish a firm, flat base.
- Protect landscaping and remove construction debris.
- Roofing installations shall include new 30# felt, 1.5" minimum drip edge, sidewall flashings, and roof jacks as needed.
- Replace existing roofing vents, and assure ventilation meets current PPRBD standards.
- New shingles shall extend 1/2" beyond rake and eave edges.

SECTION 7F - SHEET METAL

Roof Flashing

- Roofing installations shall include new valley flashing and other flashing necessary to achieve a weather-tight installation.
- Existing flashing may be used only with prior approval of the Redevelopment Specialist.
- Installation shall achieve weather tight performance without the use of excessive and unsightly mastics.
- Installations shall include style "A" metal drip edge along all eaves and rakes, drip edge shall not be installed in less than four foot lengths.
- Overhang of all existing roofing shall be trimmed back to allow proper installation of drip edge.

Gutters and Downspouts

General

- Gutters shall be installed so that water flow from roof will be caught by the gutters.
- Downspouts that discharge onto a roof shall terminate with an elbow a maximum of 1" above roof.
- Downspouts shall be provided at all corners and valleys unless noted otherwise and shall terminate in a concrete splash-block or tip-out and be located so that water will be diverted a minimum of 30" away from the structure.

Material

- Gutters shall be seamless 5" or 6" K Style.
- Galvanized steel gutter material shall be a minimum of No. 26 gauge.
- Aluminum gutter material shall be a minimum of .027 inches in thickness.
- Downspouts and downspout extensions shall be 3" x 2" corrugated rectangular material to match gutters. Splashblocks shall be precast concrete.

Installation

- Gutters shall have a uniform slope at the rate of 1/16" per foot to downspout.
- Gutters shall be installed under drip edge when it exists.
- Hangers shall be securely fastened and shall be spaced a maximum of 36" on center.
- Strap hangers shall be concealed under roofing material.
- Corners and drops shall be fastened with sheet metal screws and end caps shall be stapled or crimped. Corners, drops and end caps shall be sealed to be watertight using a mastic designed for this purpose.

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- Downspouts shall be securely fastened at top and bottom, if over 10' in length a third intermediate fastener shall be installed equal distance between top and bottom fasteners.
- Elbows shall be fastened with sheet metal screws and downspouts shall terminate with an elbow.
- Installation of gutters, downspouts and accessories shall be in accordance with trade standards.
- Galvanized gutters, downspouts and accessories shall be an enameled factory finish or primed and painted.

DIVISION 8 - DOORS, WINDOWS, & GLAZING

SECTION 8A - DOORS AND FRAMES

General

- Frames, sills, and thresholds shall be plumb, level, square, and rigid.
- Frames shall be sized to fit the opening and wall thickness.
- Whenever doors are installed in existing frames, frames, sills, and thresholds shall be repaired as necessary to provide square, plumb, level, and rigid openings for the new installation.
- New doors shall fit properly in their frames and shall operate smoothly and easily.
- Contractor shall repair any voids or holes left as a result of removing existing hardware.
- When openings are constructed or existing openings modified, headers shall be provided to maintain the structural integrity of the wall and be in compliance with applicable codes.
- When opening modification results in voids in adjacent surfaces, voids shall be filled to achieve uniformity between new and existing materials.

Finished

- Doors shall be finished to match existing surfaces, or as specified in the Work description.

Exterior Doors

- 1 3/4" solid core exterior grade, faced veneer of wood, metal or fiberglass.

Glass/Glazing

- See Section 8C.

Frame

- One piece clear pine rabbeted frame, may be finger joint if painted.

Casing

- Casing shall match existing exterior and interior materials, style and finishes.

Hardware

- Residential grade (Kwikset or equal) consisting of 1 1/2 pair of 4" x 4" butts, key-in-knob entry lockset and single throw deadbolt keyed alike, one-way viewer, and one wall or floor stop.

Weather Stripping

- Residential quality weather stripping of magnetic, vinyl or aluminum with neoprene seal.

Threshold

- Aluminum or wood with vinyl insert or aluminum or wood in conjunction with vinyl door sweep.
- All exterior doors shall have an adjustable threshold.

Installation

- Openings between door casing and exterior wall material shall be caulked with a silicone sealant.
- Voids between door unit and framing shall be insulated.
- Doors shall be weather tight with a weather tight threshold.
- Bottom shall clear finish floor through entire swing.
- Exterior door installation shall include door and all hardware and weather stripping.

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Interior Doors

- 1 3/8" minimum thickness, hollow core wood veneer or solid core wood veneer.

Frame

- One-piece clear pine, Luan or paint grade MDF frame, may be finger joint if painted.
- Casing and stops shall match existing materials, styles, and finishes.

Hardware

- Residential grade (Kwikset or equal); bath doors shall have privacy lockset.
- Installation shall include one pair of 3 1/2" butts, strike plate and wall or floor mounted doorstop.

Installation

- Door shall clear finish floor through entire swing or motion.

Vinyl Storm Doors

Material

- Maintenance-free surface over solid-core frame
- Self-storing window and half screen for bottom ventilation
- Adjustable-speed closer
- Safety chain
- Push-button or lever handle with inside night lock
- Weather-stripping

SECTION 8B - WINDOWS AND FRAMES

Window Units

General

- Window units shall include casing, sill, stool, apron, lifts, locks, screens, and all necessary hardware
- Frames shall be sized to fit the opening and wall thickness
- Openings in a concrete or masonry wall shall be constructed with redwood or pressure treated lumber
- In new and modified openings headers shall be provided to maintain the structural integrity of the wall
- All units must meet current Colorado Springs Utilities energy efficiency standards and rebate requirements. Evidence of compliance must be submitted to the Housing Division.

Finishes

- New wood window units shall be finished.
- Adjacent surfaces will be repaired and finished to match existing as closely as possible

Materials

- Wood, aluminum clad, vinyl, vinyl clad.

Installation

- Window units will be installed plumb, level, square and rigid
- All units to be installed with 2" adhesive air-sealing strip at exterior
- Contractor is responsible for field verification of quantity, dimension and operation.
- Voids between window unit and framing shall be insulated.

SECTION 8C - GLASS AND GLAZING

General

- It is the contractor's responsibility to verify egress and tempering requirements prior to ordering.

Glass Doors (Tub and Shower)

- Glass in tub and shower enclosures shall be safety-tempered glass.

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Storm Doors

- Storm door glass shall be double strength-tempered safety glass.

Replacement

- Glass replacement shall include the removal of all broken glass, old putty, and debris from window sash.
- Glass and glazing shall match existing in type, style, thickness and installation.
- Glass set in metal with glazing clips shall be back-puttied with putty appropriate for the purpose, or set in neoprene glazing bed.
- Glass set in wood shall be secured in place with glazing points and face puttied.
- Glazing compound shall be a quality commercial non-lead brand.

SECTION 8D - WINDOW SCREENS AND FRAMES

General

- Whenever window screens are called for they shall be constructed and installed to match existing in material, fabrication, operation, hardware, and finish.

SECTION 8E - AREA WELLS

General

- The size of area wells required for egress shall be determined by applicable code requirements.
- The size of non-egress area wells shall be established by the width of the window and depth below grade. Width from foundation wall for non-egress area wells shall be 24" unless otherwise specified.
- The top of area wells shall be a minimum of 2" above grade.
- Area wells shall be securely fastened to the foundation wall at the top, bottom and intermediately.
- Area wells shall have a minimum of eight inches of crushed stone the top of which shall be a minimum of 4" below window sill.
- Unless otherwise specified, area well covers shall be pre-manufactured.
- Metal grills shall be No. 9 gauge expanded metal with reinforced edge.
- Area well covers shall be secured and if used on egress window shall be easily released.
- When the depth of the area well is greater than 44" a permanently attached egress ladder shall be installed.

SECTION 8F - CRAWL SPACE, CELLAR, BASEMENT AND ATTIC ENTRIES

General

- Replacement of below grade crawl space access hatches shall be waterproof, insulated, and built to meet all applicable code requirements.
- Attic access hatches shall be constructed of finish materials to match existing and insulated with rigid foam.

DIVISION 9 - FINISHES

SECTION 9A – STUCCO

General

- When stucco is called for installation methods and materials used shall adhere to trade standards.
- All materials shall be products manufactured for the specific application. A two or three coat system shall finish out to 3/4 in. thick.
- Finish stucco surfaces shall be true and uniform.
- Work shall include preparation necessary for existing work to receive and adjoin new work.
- Installation shall include wire lath, ties and fasteners.
- Appropriate metal bead or stop shall be installed at all edges and corners.
- Expansion joints shall be placed to minimize stress within the stucco finish from structural movement.
- Stucco shall not be applied when temperature of surrounding air is below 40 degrees Fahrenheit and falling, unless precautions against freezing are provided.

SECTION 9B - DRYWALL

General

- When removal of existing wall material is called for on exterior walls, prior to installation of new wallboard, exterior walls shall be insulated to R-13. Or R-19 in 2x6 cavity walls.
- When removal of existing wall material is called for on walls where handrail brackets, grab bars, etc., are located, solid blocking shall be installed prior to installation of new drywall.
- Preparations for wallboard installation shall include all furring and shimming necessary to achieve a straight and plumb surface.
- Any drywall treatment, preparation, or installation called for in a given room shall include closets and pantries in or adjacent to this room unless otherwise specified.
- Fasteners of adequate length to penetrate framing members by a minimum of 3/4" shall be used.
- When trim is to be removed and reinstalled, care shall be taken to avoid damage or scarring trim material. In the event a member is damaged it shall be replaced with a like member. Trim shall be marked and identified for reinstallation in the same location.
- When overlaying existing walls or ceilings, it is intended that the wall and ceiling materials will not be removed. However, if the Contractor elects to remove it, then it becomes his responsibility to comply with any additional requirements of the Regional Building Department to include insulating exterior walls to R-13. Or R-19 in 2x6 cavity walls.
- Drywall contractor shall protect adjacent areas, furnishings, fixtures, electrical cover plates, finished hardware, heater covers, and grills from splattering, spillage or damage during wallboard installation and from taping and texturing applications

Material

- Wallboard shall be 1/2" on walls and ceilings, with tapered edges, unless otherwise specified.
- Wallboard installed in bathrooms shall be water-resistant.
- Type "X" fire rated wallboard shall be installed where required by applicable codes.
- Nails or screws shall be treated to prevent rusting or spotting.

Installation

- Wallboard shall be first applied to ceiling, then to walls.
- Care should be taken to stagger and minimize end joints.
- Wallboard shall be carefully fitted and sized prior to fastening in place.

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- Edges and ends of wallboard shall occur on framing members, except those edges and ends which are perpendicular to the framing members.
- Electrical boxes and mechanical openings shall be flush with finished wallboard surface.
- Exposed exterior corners shall be protected with metal corner bead. Wallboard joints and inside corners shall be covered with a tape and compound designed for this specific purpose.
- Drywall compound shall be applied in accordance with the manufacturer's recommendations to include maintaining the minimum temperature during curing.
- Drywall application shall include the filling of all holes, gouges and imperfections with drywall compound. Drywall work shall provide a true, even, smooth plane that when finished reveals no joints, fastener heads or holes under normal lighting and viewing conditions.
- Texture shall be uniformly applied to the entire surface.

SECTION 9C - PAINTING

Material

- Paint materials shall be standard quality brands and fully suitable for the intended purpose.
- Paint materials shall be delivered to site in manufactures' sealed containers with original labels.
- The printed instructions shall clearly identify the suitability of the application.

Preparation

- Contractors shall request a "surface preparation inspection" by the RS prior to paint application.
- Painting contractor shall protect vegetation, adjacent areas and furnishings.
- Contractor shall be responsible for paint removal or repair of damage to the Owner's satisfaction.
- Finish hardware, electrical cover plates, heating registers, grates, grills, and any other fittings shall be removed and set aside for reinstallation or otherwise protected.
- Contractor shall, after conferring with owner, remove all abandoned hardware, including hooks, screws, nails, anchors, wire, etc. and set nails and fill holes.
- Contractor shall ensure that all surfaces to be finished are free of peeling, blistered, or crazed paint, foreign material, minor holes, cracks, irregularities, and must be clean, smooth, and dry.
- When preparing masonry for paint, remove any surface effervescence.
- Any area to be painted showing signs of mold or mildew shall be treated with a good fungicide and all areas shall be thoroughly dry before painting.
- Upon completion, all fittings removed during painting shall be reinstalled and the entire area shall be cleaned and left in a neat condition.

Application

- Finish work shall be uniform in color, smooth and free from defects, smooth and free of brush marks, lap marks, bleeding, ghosting and shadowing.
- Edges where paint adjoins other materials or colors shall be sharp and clean.
- When doors are finished, top, bottom and side edges shall be included.
- Contractor shall verify in writing with the homeowner which windows are not operable before painting and will not be responsible for making those windows operable.
- Failure to do so will require the painting contractor to make all windows operable. Windows that are operable before painting will be operable after painting.
- Bare wood shall be primed and painted, except that to be stained or clear sealed.

Exterior

General

- Exterior painting shall be done only during favorable weather.
- Temperature minimums shall be surface temperatures as well as air temperatures.
- Previously painted foundations, decks, concrete porches, and stoops shall be part of exterior painting.
- Natural finished items are not to be painted unless specifically noted.

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- When new gutters and downspouts are called for the existing fascia, drip edge, and any new fascia shall be painted prior to installation of the new gutters.
- Exterior painting shall include as many as two different colors, as selected by Owner, or as specified by the Redevelopment Specialist in order to be compatible with homes of historical significance.

Preparation

- Sanding, wire brushing, scraping, and power washing are acceptable methods of cleaning.
- Joints and seams shall be caulked prior to painting to achieve a weather tight and smooth finish.
- Loose or deteriorated putty, including points, for sash shall be replaced.
- When lead-based paint is identified, it is the contractor's responsibility to comply with all applicable regulations regarding lead-safe work practices.

Interior

General

- Finishes called for in a particular room shall extend into any new and existing closet, built in cabinets or pantry located in or adjacent to that room.
- Walls, ceilings, and previously painted doors, windows, trim, and shelving shall be included.
- Cabinet doors, and drawers shall be closeable and operable after painting.

Cabinets

- Peeling, blistered or crazed paint shall be removed.
- Preparation of cabinet surfaces shall include filling of all voids, holes, cracks, surface irregularities and unevenness of existing paints so as to be unnoticeable after final finish is applied.
- Special attention shall be given to the removal of grease, mildew, and other foreign matter unique to kitchen and bath locations.
- When cabinets are finished, interior, shelves, doors, and drawers shall be included. Wall cabinet tops, when there is no soffit, bottoms and exposed ends including stove and refrigerator cavities shall be included.
- When cabinet doors or drawers are finished, all surfaces inside and out shall be included.
- After refinishing all cabinet doors and drawers shall operate smoothly, easily, and close tight.

Gutters, Downspouts, Flashing, Vents and Metal Railings

- New metals not previously painted shall be primed with a rust preventing metal primer manufactured for the specific application.
- Previously painted metals shall be spot primed where necessary.
- Finish shall inhibit rust and be manufactured for the specific application.

SECTION 9D - WALL COVERING (CERAMIC TILE AND WALL PAPER)

General

- All surfaces to be covered shall be clean, smooth, and free of foreign material, holes, cracks, and irregularities and must be dry.
- Adjacent areas and furnishings shall be protected from splattering, spillage or damage during installation.

Ceramic Wall Tile:

Preparation

- Existing walls shall be treated with a water-resistant sealant designed specifically for this purpose.
- Cement board shall be used in all wet locations.

Material

- Tile and grout shall be suitable for the area and application.

Installation

- The adhesive shall be applied to the entire surface to be tiled with a notched spreader blade.
- Tile shall be set by "floating method", surface of tiles shall be flush.
- In shower area height of last course of tile shall extend a minimum of one full tile above showerhead, or as specified by the Redevelopment Specialist.
- Tile shall extend into window recesses (sill and sides) at same height as wall tile.
- Tile installations shall be trimmed with tile specifically designed for the application.
- Joints shall be uniform, shall align vertically and horizontally and be plumb and level.
- Tile joints shall be filled with white grout unless otherwise specified.
- Joints between tub and tile or any dissimilar material shall be sealed with a tub and tile sealant.
- Joints shall be sponged and tooled.

Repair

- When repairing existing tile, remove all cracked, loose, chipped or otherwise defective tile.
- Repair sub-surface wall material as necessary to provide a smooth and water resistant surface.
- New tile installed next to existing shall match as closely as possible in size, color, texture and glaze.
- Existing tile may be cleaned and reused when feasible.
- When repairing and sealing grout, remove all loose and deteriorated grout and sealant prior to repair.

SECTION 9E - FLOOR COVERINGS AND FINISHES

General

- The placement of any finish flooring materials shall indicate the acceptance of the surface and compliance with all requirements of this section by the installer.
- When adhesives are used, they shall be designed for the specific application.
- Prior to installation over concrete, all cracks, depressions, and voids shall be filled or repaired. Where leveling is required a product designed specifically for this purpose shall be used. Concrete surface shall be sealed with a sealant designed for this application, prior to installation of floor covering.
- Floor surfaces to receive underlayment or finish floor covering shall be dry, smooth and clean.
- Floor coverings and finishes called for in a particular room shall extend into any new and existing closet or pantry located in or adjacent to the room.
- The transition between rooms with different floor finishes shall occur at the center of the opening or the door, when the door is in the closed position.
- When new finish floors are called for installation shall include trimming bottoms of existing doors that are to remain to clear new finish floor.
- The Contractor shall be responsible for keeping the new floor covering clean and protected from stains and all other damage until acceptance by Owner or final inspection.
- Patching of damaged vinyl is not acceptable.

Vinyl Sheet Goods

- Installation of sheet vinyl flooring shall include replacement of existing base with 4" rubber unless noted otherwise.
- Minimum specifications:
 - Builder grade with felt backing
 - Minimum thickness: .070 in

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- 7 year limited warranty
- HUD/FHA approved
- Owner to select from standard colors.

Stair Nosing

- Aluminum, vinyl, or rubber.

Installation

- Vinyl installations, except when over concrete, shall include underlayment.
- Existing base shoe shall be removed prior to installation of vinyl.
- Water closet shall be removed prior to installation of vinyl. When reinstalling water closet a new bowl wax seal shall be installed.
- Seams shall be tight, straight, uniform, and welded watertight using manufacture's seam sealer.
- Vinyl shall be fitted tight and sealed at tub and around all floor penetrations to be watertight.
- Transition from one floor covering type to another shall be made using a molding product designed for the specific materials and conditions.
- The vinyl installation shall include all necessary trim items including pipe escutcheons.
- Installation of vinyl floor covering on stairs shall include a nosing trim specifically designed for this purpose. Tread and risers shall be one piece with no exposed edges.
- Floors and rubber base shall be left clean, smooth and free from air pockets, buckles, cracks and exposed edges.

Repair

- Vinyl repairs shall be made using manufacturer's recommended products and procedures.
- Finish repair shall be smooth, even and impervious to water.
- Additional vinyl required for repair shall match all characteristics of existing vinyl.

Carpet

- Wool, Acrylic, or Modacrylic Pile carpet shall be 25 ounces per square yard minimum.
- 100% Nylon Pile carpet shall be 20 ounces per square yard minimum.
- Pad shall be 1/2" pad, 5 pound, rebond minimum, unless otherwise specified.
- Bath and kitchen carpet shall be water resistant designed for this use.

Installation

- Base shoe shall be removed prior to installation of carpet.
- Surface of base exposed after removal of base shoe shall be finished to match adjacent surface.
- Installation shall be in accordance with the carpet industry practices and standards.
- Finished carpet installation shall be free of scallops and puckers.
- Bond pad to concrete and staple to wood floors.
- Seams must have a minimum breaking strength of 100 pounds per inch and must be capable of withstanding all carpet cleaning processes.
- Remove all loose threads and vacuum carpeting.

Underlayment

- Unless otherwise specified, 1/4" material (Luan plywood, AC plywood, waferboard, or fiber reinforced gypsum underlayment) designed and stamped for use as underlayment shall be installed.

Wood Flooring

Repair

- Material and installation shall match existing.
- End joints shall be staggered a minimum of four inches.
- Sand patched area and feather into existing flooring.
- Stain and finish new sections of flooring to match existing.

Refinish

- Remove base shoe with care prior to sanding, save for reinstallation.
- Reinstall base shoe, and if damaged provide new and finish to match existing.

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- Re-nail all loose flooring, fill all holes with a product specifically designed for this purpose.
- Floor surface shall be machine sanded with appropriate grit paper to achieve a smooth uniform surface. When machine sanding is impossible hand sand to achieve a smooth even surface.
- A minimum amount of wood surface shall be removed.
- Apply wood filler to floor surface with a product designed for this purpose.
- Apply a minimum of two coats of polyurethane or acrylic floor finish.

SECTION 9F - PLASTER REPAIR

General

- Proper preparation shall include the removal of loose or damaged plaster cut out to clean, sharp edges to solid lath material.
- The areas to be patched shall be filled by one of the following methods.
- Areas to be patched shall be filled with a thickness of wallboard that will allow the finish plaster coat to match the adjoining surface in plane, finish, and texture.
- The wallboard shall be securely fastened to a solid backing.
- Surfaces to be patched shall be dampened immediately before application of the new three coat wet plaster, all surfaces shall be smooth and free of bulges and match the adjoining surface in plane, finish and texture.

DIVISION 10 - SPECIALITIES

SECTION 10A - APPLIANCES

- Appliances shall be delivered to site in manufacturers' containers and protected during construction.
- The Contractor shall furnish appliances in proper operating condition and without defects or damage.
- The Contractor shall provide to the owner, operating instructions, guarantees and warranties.
- The energy-rating label shall be removed and given to Client.
- Unless otherwise noted, the Contractor shall maintain all appliances in working order during construction.

Installation

- The Contractor shall be responsible for constructing openings for built in appliances.
- Installation shall include all new mechanical, electrical, and plumbing service connections per current codes whenever necessary.
- When new connections are required they shall be installed behind the appliance and out of site.
- Existing connections may be used if applicable code requirements are met.
- Range, refrigerator, and dishwasher shall be installed level and flush with adjacent cabinetry and countertops.
- Installation of garbage disposal shall include wall switch above counter top backsplash.

SECTION 10B - PLUMBING FIXTURE REFINISHING

- Refinishing of plumbing fixtures shall be accomplished by a sub-contractor recognized as a professional in this type of refinishing and using products designed specifically for this application.

SECTION 10C - MEDICINE CABINETS AND BATH ACCESSORIES

- Medicine cabinet and bath accessories shall be installed level and securely anchored using manufacturers' hardware at standard heights, unless otherwise requested by owner.
- When installed over sink medicine cabinet shall be centered above sink.
- Locations of accessories shall be coordinated with owner.
- When "all" bath accessories are called for the following shall be provided:
 - ✓ Two towel bars; one 24 inch, one 30 inch, 30# weight capacity
 - ✓ One paper dispenser
 - ✓ One shower rod (not required with glass enclosure)
 - ✓ One soap dish
- See also Division 13 for grab-bar requirements.

DIVISION 11 - DEMOLITION AND REMOVAL

SECTION 11A - GENERAL REQUIREMENTS

- Damage or loss resulting from demolition shall be corrected at the expense of the Contractor.
- Open excavations as a result of demolition shall be filled with earth material free of rubbish or rocks larger than 3" in diameter.
- Fill shall be mechanically compacted in 6" lifts to a minimum of 90% of the maximum proctor density ASTM D-698. Fill shall not be flooded.
- Debris as a result of demolition shall be removed from the site.

SECTION 11B - TREE AND SHRUB REMOVAL

- Tree or shrub removal called for shall include removal of stump and roots to a depth of approximately 12" below finish grade level, backfilling of excavation with identical material unless otherwise noted, and hauling debris from site.

SECTION 11C - FENCE REMOVAL

- Fencing along property line shall be removed only with the written consent of the adjoining property Owner. This consent shall be obtained by the Owner and placed in the "job file".
- Fencing material including concrete below grade shall be removed from site.

SECTION 11D - CONCRETE

- Demolition and removal of concrete shall include concrete below grade. Unless otherwise noted, removal of decks and steps shall include removal of all associated concrete.

SECTION 11E - MASONRY CHIMNEYS

- When a chimney or portion thereof is removed, all resulting openings shall be filled in to match adjacent structural and finish materials so that no outlines remain. If chimney supported any shelving, rods, etc., these items shall be replaced with new material to fit new space.
- When a chimney is removed entirely, the chimney foundation may remain unless otherwise specified.

SECTION 11F- UTILITIES

- When gas appliances are changed from gas to electric or vice versa and installed in the same location the existing service shall remain; if gas it shall be shut off and properly capped in a manner that will not prevent the appliance from properly fitting into the opening.
- When the Contractor's work results in any abandoned utility or other service lines or equipment, the appropriate authority shall be notified so that the lines or equipment can be removed or properly deactivated.
- When the work results in any abandoned piping, ducting, wiring, fittings or associated equipment readily visible or accessible it shall be disconnected and removed.
- When an electrical box contains a device that is to be abandoned, the box shall not be used as a junction box if the cover would be in a finished space.

SECTION 11G- JUNK AND TRASH

- When junk or trash is to be removed it shall be removed in its entirety without damage to other portions of the property.

SECTION 11H - SALVAGE RIGHTS

- Owner has salvage rights when identified in the Work Description.

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DIVISION 12 - STANDARD DRAWINGS

- It is the contractor's responsibility to be knowledgeable of any standard drawings issued by the Pikes Peak Regional Building Department for use on residential projects. From time to time, the Housing Division may issue drawings for a specific project to be included with the bid and contract documents. If a conflict exists between standard drawings issued by the Building Department and drawings issued by the Housing Division, the Building Department's drawings will take precedence.

DIVISION 13 - BARRIER REMOVAL

SECTION 13A - RAMPS

- Construction shall comply with drawings and standards in the Uniform Federal Accessibility Standards or standard details provided by the Housing Development Division.
- The total elevation gain of a single run of ramp shall not exceed 30".
- Ramps are to begin and end at properly sized landings flush with existing surfaces or as detailed.
- When feasible all ramps are to have a slope of 1 in 12.
- Slopes to a maximum of 1 in 8 allowed only when existing site constraints prevent achieving 1 in 12.
- Provide a clear travel path of 42" minimum in width.
- Changes to the slope of the ramp or minimum travel path must be approved in advance by the HDD.
- Contractors are responsible to secure all permits required for construction
- Contractors will provide evidence required inspections are approved (passed) by PPRBD.

Concrete ramps: (See also Div 3)

- The surface will be firm, stable, and slip-resistant with a light broom finish.
- Ramps are to terminate flush with existing hardscaping or as detailed.
- Control joints are to be cleanly tooled without voids or changes in level to the surrounding surface.
- Forms are to be removed from site and all exposed edges are to be finished as above.
- Excess dirt is to be removed from the site and disturbed areas are to be raked smooth.
- Ramps exceeding 6" in total rise are to be equipped with metal railings on both sides adequately secured to the concrete.
- All metal railings are to be primed and finish painted in matte black.
- Railing details are to be consistent with provisions in the Uniform Federal Accessibility Standards.
- It is the contractor's responsibility to submit shop drawings of required railings to the Housing Division prior to fabrication and installation.

Wood ramps: (See also Div 6)

- Wood ramps are to be constructed of pressure treated material in sizes and dimensions detailed on the project drawings or in accordance with standard details approved by the Regional Building Department.
- Whenever feasible wood ramps are to be constructed in such a way that existing concrete landings, steps, and walkways can remain in place.
- All fasteners are to be exterior grade and flush with the finish surface.
- All wood edges are to be cut cleanly and sanded smooth.
- All excess materials are to be removed from the site and discarded.

SECTION 13B - DOORS AND DOOR OPENERS

Door Openers

- Automatic door opener shall include the installation of a 110 volt electrical outlet connected to an existing circuit and located within 18" of the door opener unit.
- Installation of electrical wiring and apparatus shall comply with PPRBD requirements.
- Install door according to manufacturer's installation instructions using only specified or supplied hardware.
- Installation of an automatic door opener shall include the removal of storm door if existing.

SECTION 13C - GRAB BARS

- Installation shall include as necessary solid backing, securely anchored to wall or ceiling framing, and the replacement of wall or ceiling finishes to original condition.
- Heights and locations shall be coordinated with the Owner.

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- Horizontal bars shall be installed level and all vertical bars shall be plumb unless otherwise specified.

SECTION 13D - PLUMBING

Job Built Barrier Free Showers

- For details and installation see Division 12; Drawings; Division 15, Sections 15A and 15B.

When a barrier free shower is called for it shall include:

- Installation of a roll-in shower base to include relocating the existing floor drain or installation of new floor drain and vent as applicable.
- When a pre-manufactured base is specified, it shall be manufactured by a recognized firm, designed for the specific application, and installed per Manufacture Specification.
- Base shall include pre-manufactured transition ramp designed for this application and constructed to be compatible with shower base.
- When a poured in place concrete base is specified it shall consist of a water proof membrane specifically designed for this application, formed and poured concrete base with proper drainage, and ceramic tile finish.
- Base shall include transition ramp constructed as specified.
- Converting existing faucet to shower operation only or installation of new faucet if none exists.
- Replacement of existing shower head with new shower head or hand held personal shower system; or installation of standard shower riser if none exists with shower head or hand held personal shower system.
- Installation of additional matching tile so that shower walls are uniform and complete or installation of new tile in total shower area.
- Installation of chrome plated metal shower curtain rod if none exists.
- When wall construction is called for it shall be included and consist of all framing, drywall and finishes.

Hand Held Personal Shower System

- When hand held personal shower system is called for it shall include diverter valve, hand held personal shower head with wall holder and a flexible hose. This shall be a complete system manufactured for this application.

DIVISION 14 - ENVIRONMENTAL

SECTION 14A - LEAD BASED PAINT AND ASBESTOS

Lead Based Paint

- The requirements of the Code of Federal Regulations (CFR) 24.35 (B) shall be complied with when performing any work involving lead based paint.

Asbestos Containing Materials

- Asbestos containing materials shall be handled and disposed of in accordance with Environmental Protection Agency (EPA) Regulations, 40 Code of Federal Regulation (CFR) Part 61, Subpart M and 40 CFR Part 763, and any applicable state and local regulations.

SECTION 14B - PEST CONTROL (ROACHES AND TERMITES)

Roaches

- When roach treatment is called for it shall be accomplished by a professional exterminator company licensed to perform this type of service.
- The Contractor shall be responsible for the initial treatment and any recommended follow-up shall be the responsibility of the Owner.

Termites

- When termite treatment is called for it shall be accomplished by a professional exterminator company licensed to perform this type of service.
- The Contractor shall be responsible for the initial treatment and any recommended follow-up shall be the responsibility of the Owner.
- It shall be the responsibility of the contractor to repair or replace any damaged components caused by the treatment for termites.

DIVISION 15 - MECHANICAL

SECTION 15A - GENERAL REQUIREMENTS

- Equipment shall be Energy Star Certified and designed for the intended applications.
- Equipment shall bear a permanent and legible factory applied nameplate to permit identification of manufacturer, model number and type of unit.
- Contractor is responsible for permitting as required by PPRBD.
- Proof of approved final inspection required for final payment.
- Cutting, drilling, and refinishing necessary for the proper execution of all work under this division shall be the responsibility of the Contractor.
- When damage of framing or structural members occurs as a result of the work, the damaged members shall be reinforced to achieve the strength and load bearing capacity of the original member.
- Match existing materials in size, style, and finish, including decorative and ornamental moldings.
- Repairs shall include all materials and methods necessary to achieve uniformity between new and existing members.
- Repairs shall meet all building code requirements.

SECTION 15B - PLUMBING

- Whenever possible, water pipes shall not be installed in outside walls, ventilated attics or locations where freezing may occur.
- When it is necessary to install water pipes in these areas, they must be protected from freezing.
- Copper pipe connected to galvanized pipe shall be installed with dielectric connectors.
- Sill cocks shall be frost free, anti-siphon and installed a minimum of 10" above finish grade unless otherwise approved by the Owner. Installation in new location shall include water supply line.
- When a plumbing line is repaired it shall be made fully functional using like materials.
- Damage, voids and holes created as a result of work required under this section shall be professionally repaired and refinished to eliminate all evidence of said work.

Service Lines (Sewer, Water and Gas)

Excavation

- Excavation requirements shall apply to the installation of all service lines. Contractor shall be responsible for the location of all underground services to the property.
- Excavation shall conform to all local, State, and Federal requirements. Any damage or loss resulting from excavating activities shall be corrected at the expense of the Contractor. This includes, but is not limited to sidewalks, driveways, fencing, and retaining walls. Excavation of trenches shall not undermine or disturb the stability of the building foundation.
- Excavated trenches shall run in a straight line and provide continuous support for piping along its full length. Trenches shall be back filled evenly and thoroughly compacted using acceptable fill material.

Sewer Line (New)

- New sewer lines shall be installed from the sewer main to inside the structure foundation.
- Foundation opening around the pipe shall be sealed to be watertight.
- Installation shall include exterior clean out.
- Sewer lines abandoned as a result of work by the Contractor shall be capped outside the foundation wall.
- Foundation openings abandoned shall be plugged and sealed to be watertight.

Water Service Line (New)

- New water service lines shall be installed from the water main to meter located inside dwelling.

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- Existing exterior meters shall be relocated to interior of dwelling with exterior remote counter.
- Work shall include the re-installation of curb stop valve and box.
- Water service lines shall be designed to meet applicable code requirements.

Gas Service Line (New, when no service exists.)

- New gas service lines shall be installed from gas main to meter.
- Contractor shall be responsible for installation from meter to property line and for coordinating with the City utilities the installation from property line to gas main.

Gas Service Line Replacement

- When existing gas service line is to be used as a conduit for the replacement line, the replacement line shall be installed from the gas main to meter.
- Meter may remain in existing location, except meters located within structure shall be relocated to exterior.

Building Lines (Drains/Vents, Water, Gas)

Drains/Vents

- When replacement of the entire drain/vent system is called for replacement shall include all new drains from inside of foundation to all fixtures, including fixture traps and vents from all fixture drains through roof.

Water Lines

- New lines shall be installed from inside foundation wall, or from meter when located inside dwelling, to all existing and proposed fixtures, faucets and mechanical equipment requiring water supply.
- For fixtures with shut off valves, new valves and supply lines from valves to faucet shall be installed.
- When new fixture supply lines are called for installation shall be from fixture to shut off valve.

Gas Lines

- When replacement of existing or installation of new gas supply line is called for, new line shall be installed from nearest properly sized supply line to appliance or equipment.

Fixtures

- Fixtures and plumbing accessories shall be installed according to all applicable plumbing codes.
- Fixtures installed in a new location, shall include supply lines, drains, and vents.
- Escutcheons shall be installed where plumbing lines pass through walls or floors of cabinets.
- Valves shall be installed at floor or wall with escutcheons so that only valves and risers are exposed. Shut off valves are not required on claw foot tub installations.
- Drains and supply lines for claw foot tubs shall be chrome finished above floor line.
- Fixtures with exposed drain lines shall have chrome or white PVC finished P-traps and drain pipes.

Water Closets

- Water closets shall be "Watersense" models approved by HDD.

Sinks

- New kitchen sinks shall be stainless steel, porcelain enamel over steel, or porcelain over cast iron with a minimum depth of 8" and basket strainer(s).
- When a kitchen sink and faucet installation is called for it shall include sink, sink basket strainer(s), P-trap, faucet with spray unless otherwise specified, and supply lines.
- New bath sinks shall be vitreous china, cultured marble, onyx, and porcelain enamel over steel, or porcelain over cast iron, with waste pop-up and pop-up lever.

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- A bath sink and faucet installation shall include sink, faucet with pop-up, P-trap, faucet, and supply lines.
- Perimeter of sink rim shall be sealed with plumbers putty and all excess putty removed.
- Before installation of wall hung sinks the Contractor shall ensure that a minimum of 2"x6" backing is installed in the wall. Wall hung sinks for barrier projects shall have protective coverings over supply and drain lines.
- Brackets specifically designed for the support of the sink shall be installed.

Tubs

- New tubs shall be 14" minimum height porcelain enamel over steel, porcelain over cast iron or fiberglass with complete bathtub waste assembly and P-trap.
- Tubs shall have a slip resistance surface unless otherwise specified.
- Tub shall be set level and supported at floor and wall.

Showers

- Complete shower base shall include waste assembly and P-trap.
- A shower faucet shall consist of valve(s) and shower head and shower head finished to be specified.
- Shower wall finishes shall be as specified and installed according to the manufacturer's installation instruction.
- Shower bases shall be set level.

Washer Drip Pan

- New washer drip pan installation shall consist of a drip pan designed for this application, flush mounted in wall with finish trim, supply valves, and all piping and connections to building supply, drain and vent systems.

Water Heaters

- Water heaters shall be Energy Star Certified and designed for the intended applications.
- Contractor is responsible for permitting as required by PPRBD.
- Proof of approved final inspection required for final payment.
- Include all venting flues, gas supply lines and connections, water lines and connections, gas and water shut off valves, T&P valve with drip leg, and combustion air supply and electrical connections.

SECTION 15C - HEATING

Forced Air and Hot Water

- Furnaces and boilers shall be Energy Star Certified and designed for the intended applications.
- Contractor is responsible for permitting as required by PPRBD.
- Proof of approved final inspection required for final payment.
- System installations will include a minimum 92.5% energy efficient furnace or boiler; all venting flues, proper returns, gas connections, supply lines, valves, controls, electrical connections, thermostat and combustion air to provide perimeter type heating through rigid metal ducting or piping with appropriate registers or radiators.
- Piping shall not be installed or located where freezing may occur.
- When a separate electric heating unit is called for it shall be permanently installed and thermostatically controlled. Installation shall include all circuits, wiring, and connections.

SECTION 15D - VENTILATION (RANGE HOODS, BATH FANS, AND DRYER VENTS)

Range Hoods

- When a ducted range hood is called for, it shall include duct work designed for the shortest practical run to the exterior, a dampered, weatherproof termination kit, and all other necessary hardware and electrical connections.

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- When ductless range hood is called for it shall include all necessary hardware and electrical connections.

Bath Fans

- When a bath fan is called for it shall be installed with a separate wall switch, venting duct with damper, all necessary hardware, accessories and electrical connections.
- Venting duct shall extend to the exterior and be protected against the elements.

Dryer Vents

- When a dryer vent is called for it shall consist of venting duct to the exterior with damper and weather cap.

DIVISION 16 - ELECTRICAL

SECTION 16A - GENERAL

- Electrical wiring and devices shall be UL approved.
- Wiring shall be concealed in walls, ceilings, and floors.
- Cutting or drilling of walls, floors, ceilings, and partitions for the installation of electrical work and the closing and refinishing of openings cut for access shall be the responsibility of the Contractor.
- Finishes shall conform to the conditions of the surrounding areas.
- Existing electrical wiring and devices throughout the building which will not be used shall be disconnected and removed in all spaces that are accessible.
- No switches shall be installed behind a door.
- When a doorbell, is called for it shall consist of all necessary wiring (concealed), a push button located at the main entry, a transformer.
- Underground electrical installations shall include restoring excavation and surrounding area to the original condition.
- The Contractor shall provide to the Owner all operating manuals, instructions, guarantees, warranties, and other certificates for installed devices when provided by the manufacturer.

SECTION 16B - REWIRE

Service Entrance

- New service shall include mast and wiring, meter base and meter.
- If the mast penetrates the roof a new roof jack shall be installed.
- The contractor will coordinate with the Utility service provider when a new drop is required.

Circuit Rewiring

- New wiring from the distribution panel to all existing openings and all electrically operated interior and exterior devices and fixtures permanently wired into the structure's electrical system.
- Outlets servicing major appliances shall be relocated if necessary to insure outlet is behind appliance and out of sight after appliances are installed.
- When any existing opening or device is located in violation of any applicable codes it shall not be re-wired.
- When any device or fixture is in an unsafe condition it shall not be reconnected.
- Any additional openings, devices (including smoke detectors), and wiring required to meet all applicable codes.
- New switches, outlets, and trim for all existing and added openings.

SECTION 16C - ADDITIONS TO EXISTING SYSTEM

- When additional outlets, switches or fixtures are called for the boxes shall be securely anchored to support devices or fixtures to be installed and shall be installed flush with finish surfaces.
- Openings shall be cut so that they are concealed by standard size trim plates.
- When additional outlets, switches or fixtures are called for, installation shall include boxes, wiring from service feeders to boxes, grounding type outlets and switches with trim plates, and fixtures.
- Devices and trim plates shall match existing in style and color. Height and alignment (horizontal or vertical) shall be consistent with similar existing devices.
- When additional 220 volt outlet is called for installation shall include box, wiring feeder from distribution panel to box, proper size breaker, proper outlet for intended appliance, and trim plate.

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SECTION 16D - REPLACEMENT OF EXISTING ELECTRICAL COMPONENTS

- When replacement of a switch, outlet or light fixture is called for it shall consist of replacing the existing with new, installing in existing box and attaching to the existing wiring.
- It shall also include the replacement of missing or broken trim plates.
- Replacement components shall match style and color of original components.

SECTION 16E - SECURING ELECTRICAL COMPONENTS, FIXTURE REWIRING AND ELECTRICAL SYSTEM REPAIRS

- Securing of an electrical component shall consist of anchoring the device so that it is properly secured to meet the requirements of the intended use.
- Rewiring an existing fixture shall consist of replacing all existing wiring and damaged or broken bulb receptacles. Materials used shall match original in style and installation.
- Electrical system repairs shall consist of identifying and repairing or replacing the problem component(s) so that the system functions properly.

SECTION 16F - DETACHED GARAGE

- When the rewire of a detached garage is called for, the main structure distribution panel shall be used.