

## CABINETRY:

The cabinet maker shall be responsible for fabrication , painting , staining of cabinetwork inside and out with primer ( including natural and stained finishes ) , and delivery of cabinetwork to the site. Cabinet maker shall provide sample for approval to the owner , Architect and interior designer.

Contractor shall be responsible for coordinating and installing delivered cabinets. Contractor shall be responsible for finishing cabinets with specified number of coats unless it is decided that the cabinet maker shall provide finish at his shop.

Unless otherwise specified it shall be assumed that all kitchen cabinets shall be installed by the kitchen cabinet company provider and that all custom cabinets and built-ins shall be installed by the shop that has made the particular components.

Cabinet maker shall supply and install drawer tracks , door hinges , door catches and door and drawer silencers.

Contractor shall install all countertops and back splash as shown on drawings.

**HARDWARE:** All drawer tracks shall be full extension , 75 lbs. per pair , ball bearing slides with velvet touch sliding action , or approved equal. All file drawers and drawer with heavy loads shall receive full extension , 150 lbs. per pair , ball bearing slides with velvet touch sliding action , or approved equal. Drawer tracks shall be supplied and installed by cabinet maker. Drawer tracks shall be KNAPP & VOGEL 1483 full extension , epoxy coated , ball bearing slides or approved equal.

All door and drawers to have silencers , supplied and installed by cabinet maker.

Cabinet maker shall supply and install cabinet door hinges and door catches. Samples to be supplied to Architect for approval.

Cabinet door catches shall be STANLEY #46 magnetic cabinet catch , or approved equal.

Cabinet hinges , door and drawer pulls to be selected and provided to cabinet maker for installation.

**MEASUREMENTS:** Before proceeding with fabrication , the cabinet maker shall obtain and be solely responsible for all measurements affecting the cabinetwork , including room dimensions as well as dimensions of all appliances which will be located in the cabinetwork.

The contractor shall confirm and be responsible for accessibility of all work into the building and into its final place of installation.

The cabinet maker shall repair all mistakes due to poor measurements at no additional cost.

Cabinet maker shall keep the Architect and the contractor informed in the case of any discrepancies.

**MATERIALS:** Cabinets shall be fabricated from paint and stain grade material with solid wood used for stiles , rails and drawers fronts , and closed grained hardwood veneer plywood used for large exposed surfaces such as raised panels. In no case shall plywood be used where hinges , or any hardware requiring screws will be attached. Cabinet backs unaproned side shall be plywood as shown on drawings.

Shelves shall be 5/4" built up plywood with hardwood nosing , or solid wood throughout as shown on drawings.

**GENERAL:** Cabinet maker shall time delivery of cabinetwork to avoid delaying other trades whose work is depending on or affected by the cabinetwork.

The contractor shall coordinate with the cabinetmaker the location of any blocking , nailers , furring or similar supports required.

The cabinet maker shall protect woodworking during transit , delivery , storage and handling to prevent damage , soiling and deterioration.

The Contractor shall install cabinetwork plumb , true , level and straight with no distortions. Shim as required using concealed shims . Install to a tolerance of 1/8" in 8'-0" for plumb and level (including countertops) , and 1/32" maximum offset in flush adjoining surfaces , 1/16" maximum in revealed adjoining surfaces.

Contractor shall scribe and cut work to fit adjoining , and refinish cut surfaces or repair damaged finishes as cut.

Cabinet maker shall anchor cabinetwork to anchors or to blocking built-in or directly attached to substrates. Secure to grounds , stripping or blocking with countersunk concealed fasteners and blind nailing as required for a complete installation.

Cabinet units shall be scribed to fit closely to wall - wall , and countertops shall be securely fastened and scribed to wall as necessary.

Cabinet maker shall test all assemblies and installations for proper fitting , spacing , scribing prior to painting of any units.

Cabinet maker shall make all door , drawer and any other aesthetic adjustments to units prior to completion of job.

All associated shelving , doors , drawers , panels , exposed scribes and fillers shall be made of matching wood.

## HEATING / AIR CONDITIONING:

Contractor shall supply and install the various accessories which are shown on the drawings or Provide all labor and materials , services and equipment to furnish and to install a complete and fully operating propane fired , Hydro-Air Air conditioning system throughout the entire house.

The contractor shall provide locations of all thermostats prior to installing with verification from owner and architect prior to commencing.

Location of new air conditioning condensers shall be coordinated with the site plan and shall be approved by owner , however , location shall not exceed the furthest distance allowed by manufacturer. Condensers shall be located on pre cast concrete pads supplied by a/c contractor.

All work shall be done in accordance with state and local codes.

All materials shall be new and free of defects. All work shall be performed in accordance with the best practices of the trade. All electrical equipment shall be UL listed.

All work performed or provided under this contract shall be guaranteed against defects in workmanship and / or materials for minimum period of one year from the date of installation.

By submitting a bid the contractor represents that he has visited the site and familiarized himself with all the conditions and limitations under which this project is to be performed , and correlated his observations with the requirements of the drawings and specifications. Failure to determine existing conditions and limitations shall NOT be considered a basis for the granting of additional compensation. Contractor to provide shop drawings showing duct layout and sizes of units for Architects approval.

Provide all labor and materials , supervision , tests , and permits necessary to provide a complete , satisfactory and workable Heating / air conditioning system as shown and called for in these specifications.

All ductwork shall be constructed of galvanized sheet metal , in strict accordance with ASHRE and SMACNA standards. All ductwork , unless otherwise noted , shall be run concealed in walls and joist spaces.

Ductwork shall be continuous , shall be built in strong , workmanlike manner , with air tight joints and seams presenting a smooth surface on the inside and a neat finish on the outside. Curves and bends shall be constructed so as to effect an easy flow of air. Unless otherwise shown , in the inside radius of all curves and bends shall not be less than the width of the duct in the plane of the bend.

Transverse joints shall be made as airtight as possible with all laps in the opposite direction of the flow. All ductwork to be insulated for weather and sound.

New boiler shall be high efficiency propane fired Hydro - Air boiler as manufactured by WEIL-MCLAIN \* or equal with boiler mate.

New 1,000 gal. propane tank buried on property. Exact location T.B.D. Location and installation to conform to all applicable codes and regulations.

Exterior duct insulation shall be medium density, min. R-8, flexible duct wrap with factory applied vapor barrier. All seams shall be sealed using a vapor barrier mastic tape 2" wide.

## HEATING / AIR CONDITIONING (continued):

Registers , grills and diffusers shall be sized for proper function and comfort and shall be manufactured by TITUS or HART and COOLEY. Submit locations drawings and manufactures cuts and samples of floor registers , ceiling diffusers and grills for approval by owner prior to installation.

Provide Air cleaners and humidifiers on systems in all zones Shown.

The Contractor shall be responsible for providing access plates in ductwork to facilitate duct cleaning and the removal of dust and debris by a professional high pressure furnace & duct cleaning company.

Duct tightness test goes to max. 8 cfm/100 sq. ft. leakage tested across entire system including air handler (Exception allows up to 40 ft. of system extensions during renovation without testing.) ( section 110.3.2.)

## PLUMBING:

Furnish and install complete hot and cold domestic water distribution system to all fixtures as required. Connect system to water service as required by local codes

Furnish and install all drainage and vent piping within the building , including vent flashing at roof connections shown on the drawings and as required by the code. Contractor to confirm locations of vent exhaust through roof prior to installation.

Make connections to all fixtures through approved traps. Each trap to be vented either by circuit loop or by individual vent as arranged to give complete regulating control of the fluid in the pipes , and at all equipment and fixtures.

All water piping shall be 'Pex' cross linked polyethylene. All water piping shall be covered with 1/2" insulation with universal jackets at areas with extreme hot and cold temperature.

All drainage and vent piping shall be ASTM D2836 72 solvent welded PVC , ASTM D2751 solvent welds ABS plastic , or ASTM A74-69 cast iron pipe. All waste lines located in interior walls shall be cast iron with PVC elsewhere.

Supply vent and drain piping shall be sized to meet all codes and standards of Authorities having jurisdiction , and to comply with the highest accepted practices of the trade.

Provide clean-outs , heavy duty threaded type , at the base of all stacks , and at changes of direction to horizontal drains , in accessible locations. Provide access panels to all clean outs where required.

Provide hangers and supports , not to exceed spacing as required by code and to assure stable straight and firmly anchored runs. Use separate hangers for each branch run.

Lay out plumbing system in careful coordination with the drawings determining proper elevations for all components of the system and using only the minimum number of bends to produce a satisfactorily functioning system. Layout all pipes to fall within partitions , walls or roof cavities and not to require furring other than as shown on the drawings. Promptly notify the Architect of any problems encountered in correlating plumbing layout with other work. Do not cut or reduce the size of any load carrying member without the prior approval of the Architect. Install all piping generally level and plumb , free from traps in a manner to conserve space for other work. Cushion all traps and bearing to minimize the transfer of sound. Provide complete isolation of all dissimilar metals. Firmly anchor all pipes into position. Provide uniform pitch of at least 1/4" inch per foot for all horizontal waste and soil piping within the building. Pitch all vents for proper drainage. Provide air chamber at all fixtures 16" min. length and same diameter as branch. Conceal all piping unless otherwise noted.

Where applicable, gas piping supply to Kitchen and appliances shall be fully concealed. Supply shall have a shutoff valve so located so that its position does not hamper or in any way obstruct the position of the appliance. All fixtures to have individual shutoffs , and these valves shall be located in logical , unobtrusive , yet easily accessible locations.

Any exterior hose bibs shown on plans shall be frost proof.

Provide for plumbing recirculating line into domestic water system for \* upper bathroom.

Upon completion of rough in , full test supply system at full pressure , verify and assure that the system is free of leaks , obtain all approvals and certificates of inspection from all authorities having jurisdiction prior to enclosing any work.

Provide for connecting to new septic system as required.

Upon completion of plumbing work , clean all plumbing fixtures , faucets and affected adjacent surfaces of flux , soldering , putties , etc. by proper methods , using care not to scratch or otherwise damage finished surfaces.

When plumbing work is completed , the Plumbing contractor shall remove all surplus materials including existing faucets , fixtures and piping removed during demolition , and other items of his equipment from the premises. The Plumbing contractor shall leave the plumbing work in a clean and orderly fashion.

Hot water insulation mandatory: Water Heater to kitchen sink , to manifold , any 1/2" pipe run > 20 feet , any 3/4" pipe run > 10 feet , supply and return piping entire recirculation system , all pipe > 3/4". (Section 110.3.4.2)

Dryer vent required to be mechanically fastened - screws may not project > 1/8" into duct. (Section 1502.4)

All air exhaust terminations must be minimum 3" from windows and either 10" or 3" above air intakes. ( Section 1506.2 )

Mechanical ventilation required to be continuous or intermittent at airflow rates as per Table. (Section 1507.3.3)

## ELECTRICAL

All electrical work shall conform to the National Electrical Code and local ordinances. See power and lighting device location plans for device quantities and locations.

Provide new 400 amp service - underground from street - see civil drawings for more information.

Fixtures , switch locations, and specific outlet locations shall be as approved by owner.

Smoke and Carbon Monoxide detectors are to be hard wired with battery back-up and installed as required by code.

## SITE WORK AND EARTHWORK:

The limits of all work in this section shall be determined by the drawings and specifications of the Landscape Architect and Landscaper provided by the Owner.

Site cleaning: Removal of shrubs , grass and other vegetation , improvements or obstructions interfering with new construction. Remove such items elsewhere on site or as specifically indicated. Removal includes digging out stumps and roots.

Protection: No trees or vegetation other than those specifically located in the field or marked on the drawings shall be destroyed or removed without written consent from the Owner or the Architect. Provide adequate protection to prevent damage to existing improvements , trees and vegetation indicated to remain.

Remove all materials from clearing and grubbing as well as excess or unsuitable topsoil and excess or unsatisfactory subsoil not scheduled for site retention. It shall be the responsibility of the Contractor to arrange and provide proper and legal means of off site disposal for all debris of clearing and grubbing.

Topsoil: Satisfactory topsoil is that reasonably free of subsoil , clay lumps , stones and other objects over 2" diameter. Strip topsoil to whatever depths encountered in a manner to prevent intermixing with underlying subsoil or other objectionable materials. Remove heavy growths of grass from the areas before stripping. Stockpile topsoil in storage piles.

## SITE WORK AND EARTHWORK: (continued)

Excavate earth to depths and widths required. Slope sides of excavation to comply with applicable codes shore and in unsafe conditions until completion of backfilling. Do not allow water to accumulate in excavated areas. Remove standing water with pumps , sumps and dewatering systems as necessary to prevent softening of foundation bottoms.

Excavation of back fill required in conjunction for all Plumbing , Electrical and Mechanical work is included in this section.

Stockpile and retain satisfactory excavation materials away from edge of excavation and as directed , until required for back fill or fill.

Back fill excavations as promptly as work permits but not prior to inspections and acceptance of all construction specified below finish grade , removal of concrete form work , and all other debris , and adequate bracing above grade of structure to be back filled against is complete.

Back fill and fill with satisfactory excavated or borrowed material , free of clay , large rocks , debris , waste , frozen or organic materials and other deleterious matter. Place back fill materials in not more than 6" loose depth layers and compact to a density equal to adjacent subsoil between layers.

Grade areas within limit of grading within this section , including adjacent transition areas. Smooth finish surface and compact with uniform levels or slopes between point where elevations are shown indicated or between such points and existing grade.

Drainage pipe for foundation and storm drainage shall be polyvinyl chloride pipe ASTM D 2729. Perforated drainage pipe shall be placed with perforations down and joints tightly closed and surrounded with clean and compacted drainage fill overlaid with one layer of filter fabric. Solid pipe shall be placed with joints tightly closed and pitched at minimum 1/8" to one foot to daylight of drywell.

The Contractor shall be responsible for the removal of all rain and ground water with above described piping and excavation.

The Contractor shall work with the Landscaper and Landscape Architect as required to complete the specified planting and excavation required for a complete and finished

The Contractor will integrate and accommodate hardscape design to be implemented by Landscape Architect and Landscaper. project.

## STRUCTURAL STEEL:

Provide structural steel work as indicated and scheduled on drawings. All work shall comply with reference standard: AISC Code of Standard Practice.

Work in this section shall include , but not be limited to:

Steel Flitch Beams Steel  
Lally Columns Steel  
Beams

Structural steel beams , plates , pipe columns and shapes shall be ASTM A 36. Bolts and nuts shall be hex head , ASTC-307 grade A , with washers @ each end of each connection. Structural members shall be formed at the corners and trim in a neat manner. Neatly and carefully do all cutting and grinding as required for accurate fitting throughout. Maintain joints plumb , level , true and of uniform standard widths as approved by the Architect. Tile work shall be laid out according to drawings. Contractor to do a proper layout prior to installing any material and shall notify the Architect of any discrepancies prior to installing

All grout shall be mixed with deionized water or equal for all areas that will be tiled or marbled.

Upon completion of each area of work under this section , apply heavy paper protection over the entire surface. Leave protection in place until final cleaning. Prior to final cleaning any portion of the work areas , damaged areas shall be required to be repaired or replaced at no additional cost to the owner.

## STRUCTURAL STEEL NOTES:

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE "SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS" AS ADOPTED IN JUNE 1989, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 9TH EDITION AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", ADOPTED EFFECTIVE SEPTEMBER 1, 1986.

2. MATERIALS:

SHAPES, ANGLES, PLATES AND BARS: ASTM A 36  
STRUCTURAL STEEL TUBING ROUND: ASTM A 53, TYPE S, GRADE B  
BOLTS: ASTM A 325  
ANCHOR BOLTS: ASTM A 307  
WELDING ELECTRODE: ASTM E70XX - LOW HYDROGEN

3. ALL WELDING SHALL CONFORM TO THE CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION OF THE AMERICAN WELDING SOCIETY AND BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH A.W.S. STANDARDS. ALL WELDS ARE TO BE CLEANED OF SLAG TO PERMIT VISUAL INSPECTION.

4. STEEL SHALL BE ERECTED TO A TOLERANCE OF NOT MORE THAN 1/4" IN 10 FEET OUT-OF-PLUMB, NOR 1/8" FROM THE REQUIRED ELEVATION.

5. UNLESS OTHERWISE NOTED, FOR LINTELS OVER DOORS, WINDOWS, DUCTS, AND MISCELLANEOUS OPENINGS USE FOR EACH 4" OF WALL:

3-1/2" X 3-1/2" x 5/16" (6" BEARING) FOR M.O.S. UP TO 3'-6"  
3-1/2" X 4" x 5/16" (6" BEARING) FOR M.O.S. UP TO 5'-0"  
3-1/2" X 5" x 5/16" (6" BEARING) FOR M.O.S. UP TO 6'-9"

6. LINTELS SUPPORTING EXTERIOR WYTHES ARE TO BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123.

7. CERTIFICATES OF COMPLIANCE ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR STRUCTURAL STEEL, BOLTS, NUTS, WASHERS, AND WELD FILLER MATERIAL PRIOR TO THE FABRICATION ON ANY STEEL.