ARCHITECTURAL PLAN REVIEW CHECKLIST (RESIDENTIAL)

The checklist items listed below are the items that are typically reviewed during the plan review process. The list includes specific requirements for architectural drawings submitted for Building Permit, as well as items that are commonly found to be missing, incorrect or incomplete. This list is not all encompassing; therefore, all applicable codes and ordinances should also be reviewed by the Architect prior to submitting plans.

No error or omission in either plans or specifications, whether said plans or specifications have been approved by the Building Department or not, shall permit or relieve the applicant from constructing the work in any other manner than that provided for in the Building Codes and requirements of the Village of South Barrington.

GENERAL ITEMS

- Drawings must be signed, sealed and certified by an Illinois Licensed Architect.
- Project name, street address, lot number and subdivision must appear on each sheet.
- Review project for setback, zoning and subdivision ‘Codes, Covenants & Restricts’ (CC&R) conflicts.
- Determine the number of ‘bedrooms’ for septic design purposes.
- Compare architectural plans with septic plan for consistency in topography, etc.
- Review septic design for potential problems:
  1) Soil Test date, depth and results.
  2) Number of bedrooms?
  3) Required size of septic field?
  4) Fill required (must be completed prior to permit)?
  5) New Perc test required?
- If house is intended to be built reversed, a note to that effect must be included on each sheet.
- Review light & vent requirements (10% & 5%).
- Review for any inconsistencies between plans, elevations, sections, details, notes, etc.
- Review for any conflicting dimensions, details, notes, etc.
- Review for any important information, details, sections, notes, dimensions, etc. that are needed by the Building Department to fully understand the project.
- Review for any special conditions that require structural calculations or details.
- Cook County Highway Permit is required for any project on Mundhank or Penny Roads (prior to issuance of permit from South Barrington).
- Engineered truss drawings are required prior to delivery of trusses to job-site.

FOUNDATION PLAN

The following items shall appear in the proper location on the Foundation Plan:

- Floor drain connected to a sealed sanitary sump pit (locate close to water heaters).
- Condensate drain with underslab PVC pipe connected to a footing sump (locate close to furnaces and water softener).
- Footing sump.
- Sealed sanitary sump.
- Draintile with intended path shown around entire house (all sleeves and risers shall be indicated).
- 3-Valve bi-pass for water softener hook-up (locate close to footing sump).
(Note: Water softener backwash must discharge into footing sump, not into the septic system.)

- Furnaces and location of flues.
- Water heaters and location of flues.
- Pressure tank.
- Septic sleeve.
- Electric panels.
- 5/8” Fire code drywall above and 4’ beyond furnace and water heaters.
- 110V smoke detectors.

In addition to all standard foundation plan notes, the following notes shall appear in the proper locations on the Foundation Plan:

- “Excavate to Clay” all garage areas, crawlspaces, stoops, etc. (not “Unexcavated”).
- “Granular backfill only” under all slabs and stoops (no clay allowed).
- 2 x 6 wood plates on top of all steel beams.
- 6 mil vapor barrier under basement slabs.
- Welded wire mesh in all slabs (indicate size) or fiber cement.
- All framing in contact with concrete must be pressure treated lumber.
- Stairs shall have 9 1/2” clear treads, nosing to nosing.
- Bottom of escape windows shall be 36” maximum above top of slab.
- Lumber species and grade to be used.

In addition to all of the above mentioned items, the following items are typically reviewed during the permit process and shall be included, if applicable:

- Load flow.
- Location of bearing walls and concentrated loads from above.
- Lumber spans and spacing (compare to species/grade specified by Architect).
- All wall spread footings shall be 10” x 20” minimum (based on 3000 psf soil).
- All basement foundation walls shall be 10” thick minimum with re-bars in top and bottom (8” thick if frost wall supporting a frame wall only).
- Front entrance stoops shall be supported on all sides by full foundation walls (not wing walls).
- All exterior doors to grade shall have a concrete stoop and/or step(s) supported by wing walls (minimum of 2 per door).
- Re-bars required where foundation or footing crosses overdigs or at wing walls.
- Depress top of foundation at garage doors 12” minimum.

Conditions at step down floor areas:
1) 7’ minimum headroom.
2) Detail of framing condition at beam line is required.

Conditions at crawlspaces:
1) 24” minimum headroom.
2) Floor material?
3) Crawlspace access with p. c. lite.
4) Access for mechanicals.

Deck construction:
1) Joist sizes, span, and spacing.
2) Support conditions at house.
3) Lumber selection. (wolmanized or cedar)
4) Beam size and support conditions at house. (if applicable)
5) 1” insulation on walls of crawlspaces.

☐ Conditions at stair from a garage to basement:
  1) 6” min. gas curb around opening.
  2) Proper railing around stairwell.
  3) Fire-rated door at top or bottom.

☐ Conditions at walk-out basements:
  1) Slab detail at exterior doors. (thermal break?)
  2) Perimeter insulation required at wall/slab.
  3) Stoops on wing walls at all doors. (even if patio slab)
  4) Is all information for frame walls and foundation clear?

☐ Conditions at retaining walls (details of retaining walls are required)
☐ Indicate / note framing around hearth slabs. (Self-supporting reinforced concrete hearth slabs to be independent of floor framing.)
☐ Number of risers required for stairs (7 3/4” maximum).
☐ 6-inch minimum gas curb is required between garage slab and top of foundation at house.
☐ Garage floor drains (if any) must drain to a properly designed three (3) basin separator.
☐ Wood bearing walls in basements are not permitted.

**FLOOR PLANS**
The following items are typically reviewed during the permit process and should be properly indicated if applicable:

☐ Load flow.
☐ Location of bearing walls and concentrated loads from above.
☐ All location of interior bearing headers shall be shown on the floor plan with sizes indicated.
☐ All cripples / posts supporting concentrated loads shall be indicated.
☐ Lumber spans and spacing (compare to species/grade specified by Architect).

☐ Conditions at vaulted ceilings:
  1) Collar ties or ridge beam? Size?
  2) Proper bearing for ridge beam? (not on chimney masonry).
  3) Amount of insulation in rafter space? (1” airspace required)
  4) Continuous ridge vent?

☐ Conditions at attic or 2nd floor furnaces:
  1) All ductwork shall be sheet metal (no flex allowed).
  2) Condensate drain must be tied into the footing sump (not into the septic system).
  3) Fire code drywall on walls/ceilings within 4 feet.
  4) Metal pan under unit?
  5) Insulated ductwork and water lines?
  6) Pull-down attic stair for access to attic furnaces.
  7) “B”- Class vents shall be enclosed in a masonry chimney where exposed above the roof.
□ Conditions for support of brick veneer:
  1) Brick or stone veneer shall be supported by ONLY masonry or steel (NOT WOOD).
  2) Steel lintels shall bear on other masonry or steel only.
  3) Steel lintels cannot be bolted to wood framing.
  4) Brick cannot bear on roof plywood or joist, etc.

□ All steel beams and angles must be supported by steel columns, concrete or masonry (not wood).

□ Conditions at stairs:
  1) 9 ½” clear treads, nosing to nosing (minimum).
  2) 9 ½” clear treads at 15” from end of circular stairs.
  3) 4 ½” minimum tread at the narrow end of winder stairs.
  4) 7 3/4” maximum risers.
  5) Doors shall not swing out over stairs, full landing is required.
  6) Landing size shall be at least as wide and long as the stair it serves.

□ Conditions for attic access:
  1) Attic access panel with p.c. lite required for all attic spaces.
  2) Access panels shall not be located in wardrobe closets.
  3) Access to attic spaces with kneewalls over 3 feet high is required.
  4) Frame-out for future access to attic spaces between dormers.
  5) Pull-down attic stairs required when furnace is located in attic.

□ Conditions at fireplaces:
  1) All fireplaces must be constructed of masonry.
  2) Self-supporting reinforced concrete cantilevered hearth slab.
  3) 16” minimum projection of hearth.
  4) All flues and sizes shall be indicated. (1/10th of fireplace opening)

□ Conditions at garages:
  1) All walls of garage shall be drywalled.
  2) 5/8” fire code drywall on common wall and entire ceiling.
  3) 5/8” fire code drywall on ALL walls when living space is above garage.
  4) Amount of insulation in ceiling and in walls.
  5) 6” minimum gas curb between garage on house.
  6) Fire-rate door from garage and house wall.
  7) Spot elevations of garage slab, raised curbs, steps, etc.

□ Conditions at bonus spaces:
  1) Indicate if space is finished or unfinished.
  2) Type of heating system. (house system or separate)
  3) Insulation amounts.
  4) Insulated door if it is an unheated space.
  5) Access to knee wall attic spaces. (if wall is over 3’)
  6) Frame-out for future access to attic spaces between dormers.

□ Conditions at cantilevered floor framing:
  1) Required framing shall be properly indicated.
2) 1/3 outside and 2/3 inside (detail if special).
3) Insulation and finish under cantilever?

☐ Conditions when bearing walls do not fall directly on bearing walls or steel; typically, the joists are extended past beam line to the point of the bearing wall above. However, if distance is excessive, structural calculations & details may be required.

☐ Conditions at porches, porticos, etc.:
1) All structural information shall be indicated.
2) Ceiling or soffit material?

☐ Smoke detector requirements:
1) At least one (1) smoke detector is required on each floor level.
2) Smoke Detector shall be 15 feet (max.) from each bedroom door.
3) All smoke detectors shall be 110V (battery powered not allowed).
4) Each bedroom requires a smoke detector.

☐ Electrical requirements:
1) All bath outlets shall be on GFI (reset button in each bath).
2) All outlets that are to be GFI shall be indicated as such.
3) Bathroom vanities shall have one (1) outlet per basin (unless one outlet is located between two (2) basins.
4) Lights above tubs & whirlpools:
   a) Shall be GFI protected.
   b) Shall be at least 7’6” above water OR
   c) Shall be recessed with waterproof lens if less than 7’6” from water.
5) Exhaust fans are required in all baths and powder rooms (even if window).
6) An outlet is required in the foyer on the wall of the stairs.
7) An outlet is required on any island in the kitchen.
8) Outlets at all sinks shall be on GFI (reset button in each room).
9) An outlet is required in second floor main hallways.
10) All wardrobe closet lights shall be recessed cans or strip fluorescent.
11) 1 ceiling light is required for each car space.
12) 1 ceiling outlet is required for each overhead garage door.
13) All garage outlets shall be on GFI (reset button in garage).
14) One (1) WPGFI outlet is required on the front and rear (minimum).
15) Outlet Spacing: No point along floor shall be more than 6 feet from an outlet, including any wall space 2 feet or wider.

☐ Ductwork requirements:
1) All ductwork for heating and cooling shall be sheet metal.
2) All joints in ductwork shall be taped.
3) Flexible ductwork and fiberglass duct board is NOT PERMITTED.
4) Ductwork for bath fans shall be sheet metal and shall be ducted to soffit vents, not to roof vents.
5) All ductwork in unheated spaces shall be insulated.
One (1) frost-proof hose bibb (FPHB) is required on the front and rear of each house. (minimum)
Where plumbing occurs in outside walls or common to unheated spaces, such wall shall be 2 x 6 or
other special provisions shall be indicated.
Access panel to whirlpool motors is required. (Location is subject to Village inspector approval.)
All exterior doors to grade shall have a concrete stoop and/or step(s) supported by wing walls, even if a
wood deck or patio is planned for the future.

BUILDING ELEVATIONS
The following information shall be properly indicated on the building elevations:

- Roof vents.
- All necessary flashing.
- Gutter and downspout locations.
- (Note: Downspouts that would discharge and flow across the septic area must be connected into an
  underground drain tile system, which would discharge to an approved outlet.)
- Lintel sizes (Indicate on either floor plan, elevation, or in schedule form.)
- Window and skylight sizes. (Indicate size on elevations or floor plans.)
  (Note: Every sleeping room shall have at least one (1) operable window or exterior door that meets
  egress requirements).
- Foundation outline.
- Exterior materials.
- Roof slopes.
- Basement windows. (Escape windows 36” maximum above top of slab to bottom of window.)
- Wood deck (unless fully detailed elsewhere).
- Stoops and wing walls.

In addition to all of the above mentioned items, the following items are typically reviewed during the
permit process and should be included, if applicable:

- Check for proper number of risers up to house. (7 3/4” max.)
- Compare fascia & window head height as compared to wall section for consistency.
- Review any area of brick not properly supported by masonry or steel.
- Review chimneys for proper height. (2’ above roof 10’ away).
- Review “B” Class chimneys that must be enclosed in masonry where exposed above roof line.
  (typically Z-Brick, etc.)
- Review for roof that do not match floor plan conditions.
- Review for any necessary saddles that are missing.
- Review for any missing windows, doors or skylights (compare with floor plans).
- Review Light & Vent requirements for any rooms that appear short (10% & 5%).
- Review & compare grading with that indicated on Septic Design drawing.
- All skylights shall be glass (not plastic).

TYPICAL WALL SECTIONS
The following components of a typical wall section shall be properly indicated and noted:

- Footings:
  1) All footings shall be 10” x 20” with keyway (min. (Design for 3000 psf).
  2) Footings keyed into virgin soil.
  3) Drain tile with 8” (minimum) washed gravel cover.
  4) Building paper or filter fabric over drain tile and gravel to prevent silting.
Concrete slabs:
1) 4” thick (minimum) in all basement and garage slabs.
2) 6 mil (minimum) vapor barrier.
3) 6 x 6 #10/10 WWM (minimum) in all basement and garage slabs or fiber cement.
4) 4” (minimum) pea gravel under all slabs.
5) Granular backfill only under all slabs and stoops. (no clay allowed)
6) Bottom of slab not lower than top of footing.

Top of foundation:
1) Anchor bolts.
2) 6” (minimum) exposed foundation wall above grade.
3) Wolmanized 2 x 6 sill plate.
4) Sill sealer or grout. (shims not allowed)
5) Rim joist insulation.

Floor construction:
1) Joist size and spacing. (16” o.c. maximum spacing)
2) Bridging at 8’0” o. c. (unless TJI)
3) ¾” plywood subfloor minimum.
4) Rim joist insulation

Exterior wall construction:
1) Drywall.
2) Stud size and spacing. (16” o.c. maximum spacing)
3) Amount of insulation.
4) Sheathing.
5) Type of corner bracing.
6) House wrap or 15# felt required OVER sheathing.
7) Exterior siding material or brick information.
8) Typical exterior header construction with double top plates.

Brick veneer construction:
1) 12 mil base flashing. (minimum)
2) Weep holes at 24” o. c. (max.)
3) 3/4” (minimum) air space.
4) 15# or house wrap to be OVER sheathing and lap over the base flashing by at least 4”.
5) Wall ties @ 15” o. c. vertically and 32” o. c. horizontally. (minimum)
6) Lintel sizes. (if not indicated elsewhere)

Roof construction:
1) Rafter size and spacing (16” o.c. maximum spacing) OR
2) Engineered wood trusses and spacing. (24” o.c. maximum spacing)
3) Roof Slope.
4) Ceiling joist size and spacing. (16” o.c. maximum spacing)
5) Collar tie size, spacing and location.
6) ½” CDX plywood roof sheathing OR
7) 5/8” CDX plywood roof sheathing when trusses at 24” o.c.
8) 15# felt paper under asphalt shingles.
9) Roof ventilation.
10) 30# felt paper under wood shakes or shingles.

11) Ceiling insulation.
12) Ceiling drywall.
13) Insulation air baffles at soffit vents.

☐ Exterior trim:
  1) Fascia.
  2) Gutters and downspouts.
  3) Soffit.
  4) Soffit vents.
  5) Frieze boards, dentils, etc. (if any)

In addition to all of the above-mentioned items, the following items are typically reviewed during the permit process:

☐ Roof & eave details shall match those as indicated on elevations.
☐ Review support condition of rafters.
☐ Review for conflicting floor-to-floor heights indicated on sections and elevations.

**PLUMBING SCHEMATICS**
Plumbing schematics shall be included unless the following information is clearly indicated elsewhere on the drawings:

☐ All plumbing shall be sized and installed according to the current Illinois State Plumbing Code.

☐ Sealed sanitary sump shall receive:
  1) Floor drain.
  2) Plumbing fixtures.

☐ Footing sump shall receive:
  1) Footing drain tile.
  2) Condensate drain at furnaces.
  3) Water softener backwash.

☐ Footing sumps shall discharge to an approved outlet on grade, such that no water will flow across the septic area.
☐ A three-valve bi-pass loop is required to be installed at the water softener location.
☐ All FPHB shall be on hard water.
☐ All vent stacks thru the roof shall have lead flashing, not neoprene.