

**TOWN OF PARADISE
ENGINEERING DIVISION
IMPROVEMENT PLAN
CHECK LIST**

CHECKED BY: _____

APPROVED BY: _____

IMPROVEMENT PLANS

- _____ 24" x 36" or 22" x 34" plan and profile sheets.
- _____ Name of subdivision, scale, north arrow, lot nos., easement and property lines.
- _____ Single plan and profile paper--preferred scale 20' to the inch horizontal and 4' to the inch vertical.
- _____ Engineer's signature and license number & seal.
- _____ Approval block for Town Engineer.
- _____ Reference to Town standards and any drawings that apply.
- _____ Check entire development boundary for adequate discharge and pickup points. Particular care taken with street profiles at subdivision boundary where streets will be extended in future.
- _____ Show plan and profile of all storm drainage facilities, including length, type, size, typical section and slope--also existing ground profiles and invert elevations at structures, etc.
- _____ Show complete detailed drawings of all drainage facilities, such as headwalls or endwalls, retaining walls, junction boxes, swales, ditches, etc. Structural calculations may be required for complicated structures.
- _____ Check for minimum cover of all drainage lines.
- _____ All necessary easements shown on both plans.
- _____ Where steep grades exist, special inlets should be designed for adequate pickup with no overshooting.
- _____ When allowed, provide a 0.4% minimum slope on valley gutters and indicate flow line elevations at flow line intersections.
- _____ Provide sub-drains and filter material in locations having excessive ground water-- check for compliance with onsite wastewater system setback requirements.
- _____ Show typical cross section of all streets. Include curb and gutter, sidewalk, drainage conduits, existing utilities, proposed utilities, pavement section and any other improvements within public R/W.
- _____ Show property lines, easements, and lot numbers along the street.
- _____ On plan, show curb lines, drainage facilities, sanitary sewers, water lines, and other structures, sidewalks, details of sidewalk at returns and pedestrian improvements.
- _____ Show street widths.
- _____ Show curve data (radius, delta, length)

- _____ Show stationing at 100 ft. intervals, at all B.C. and E.C. points in Plan--at B.V.C. and E.V.C. points, and at grade breaks in Profile.
- _____ Show top of curb elevations at curb return points, at intermediate points around returns, grade breaks, and at vertical curves.
- _____ Show centerline grades and elevations at intersections, vertical and horizontal curves and grade breaks.
- _____ Check curb returns for smooth curves in profile.
- _____ Show existing ground and finished grade centerline profiles.
- _____ Show adequate vertical curve data--vertical curves required where difference in grade exceeds 1.0%.
- _____ Profiles of minor streets should be subordinated to the crown of major street.
- _____ Check outboard curbs on curves for flat grade.
- _____ Show established permanent bench mark in area--datum based upon 1991 town-wide mapping.
- _____ Where improvements are made within existing improved streets or plans vary from typical section, show sufficient cross sections and profiles to assure proper conformance with existing improvements.
- _____ Where improvements are made within County or State R/W, a letter of approval is necessary.
- _____ Check proposed improvements for conformance with existing improvements on adjacent property with respect to elevation, grade, and width of sidewalks, pavements, etc.
- _____ Show locations of all street signs, monuments, barricades, street lights, fire hydrants, and postal units.
- _____ Show storm drain facilities in plan and profiles.
- _____ Typical trench to show bedding and backfill for onsite wastewater disposal system, water and storm drain systems..
- _____ Show water in plan with thrust block details.
- _____ Location of onsite wastewater and water services.
- _____ Wheelchair ramps at returns.
- _____ Street lights.
- _____ Location of street legends, pavement marking and striping.
- _____ Plans stamped and signed by Registered Civil Engineer.

GRADING PLANS

- _____ Show all cut and fill slopes.
- _____ Show original contours, finish contours and spot

elevations throughout.

Finished grade elevation shown at lot corners, house pads and along boundary of development

Direction of flow on finished lots, gutters, conduits, ditches, and etc.

Locate retaining walls.

Check periphery of subdivision for drainage conflicts and downstream effect.

Plans stamped and signed by Registered Civil Engineer.

Drainage Map and Calculations

Hydrologic and hydraulic calculations based on rational method in tabular form, covering ultimate development of any contributing watershed area and extension of in-tract improvements to the subdivision boundary.

Head loss calculations at all drainage structures.

Drainage map must show the boundary of all contributing areas, including off-site.

Locations of all catch basins, curb inlets, valley gutters, junction boxes and other drainage structures.

Slope of curb and gutter.

Location, size and slope of all drainage conduits, ditches, channels, etc.

Letter of approval from proper authority or drainage release before increasing or redirecting drainage upon downstream properties.

Compliance with the Interim Drainage Design Guidelines, dated April 2, 1998

Plans and Calculations stamped and signed by Registered Civil Engineer

Engineer's Cost Estimate

Submitted for purposes of establishing encroachment permit and inspection fees.

Should include all streets construction items, filling and grading, all drainage items, street name signs, monuments, water and sewer items, and all other construction items necessary to produce completed development project.