Tract or Parcel _____ Project Name _____ PCN_____ Checked By_____ Date_____

City of La Quinta Public Works Department - Street Improvement Plan Review Checklist

SUBMITTAL REQUIREMENTS – SEE PLAN CHECK REQUIREMENT CHECK LIST

- ☐ Approved tentative map with confirming curve data.
- ☐ Storm drain plan or submittal is combined with street plans.
- ☐ Conditions of approval (engineer to independently verify conditions of approval have been met).
- ☐ Street improvement plans.
- ☐ Traffic signal plans, signing & striping plans (off-site), sidewalk plans (off-site) (as applicable).
- ☐ Provide separate sidewalk/multipurpose plan.
- ☐ Geotechnical report showing R values, concrete flatwork requirements, etc.
- ☐ Dedications – submit legal & plot map reference.
- ☐ Estimates of quantities.
- ☐ Provide separate on-site and off-site improvement plan sets.
- ☐ Provide relevant agreements (e.g. reciprocal access, construction easements, etc.)

TITLE SHEET

- ☐ Construction notes and estimate of quantities (sheet 1) – show construction notes w/o quantities on all other sheets.
- ☐ Include minimum R value and TI in structural section.
- ☐ Soil engineer stamp & signature block – ensure update letter is within 1 year of plan set submittal as applicable. Plans signed by soils engineer.
- ☐ Street typical sections and details (may be shown on separate sheet if room does not permit on title sheet). Ensure sections match conditions of approval. Provide cross sections for all streets, station to station – show traffic index rating per street section.
- ☐ Provide intersection & station to station information in title block to identify coverage of plan set.
- ☐ Development name in title block.
- ☐ For offsite plans without sign & stripe or sidewalk sheets, reference sign & striping and sidewalk plans, if applicable.

GENERAL & PLAN VIEW CALLOUTS

- ☐ North arrow (preferred to point up or to the right or left).
- ☐ 4 inch bar scale – typically used scale 1 inch = 20 ft or 1 inch = 40 ft. Not smaller than 1 inch = 40 ft.
- ☐ Call out all street names (plan & profile).
- ☐ Centerline station to be used on both plan and profile.
- ☐ Station intervals at 100 ft with tick mark and station labels. Preferred stationing is left to right. No negative stationing. Match up stationing & elevations at center line and each curb.
- ☐ Stationing at all intersections with equations. Shade new paving. Provide alternative legend to other pavement areas (grind/resurface, full removals, etc.) .
- ☐ Show proposed improvements with solid lines and existing improvements with dashed lines.
- ☐ Shade proposed pavement for areas on each sheet. Show hatching for removals on each sheet. Show detail section of saw cut AC (grind & overlay sections).
- ☐ Stations of all BC's, EC's, PRC's, and PCC's of curves.
- ☐ Stations of all BCR's and ECR's of curb returns. Set BCR's and ECR's in the direction of vehicular travel. Please do not use EC and BC nomenclature.
- ☐ Show match lines on consecutive sheets at even 100 ft stations.
- ☐ Show flow line gradients in plan views. Call out flow line and top of curb elevations.
- ☐ Call out taper specifications.
- ☐ Call out cul-de-sac high points.
- ☐ Callout flow lines.
- ☐ Right-of-way, parkway and curb lines dimensioned from centerline – consistent with typical sections.
- ☐ Approved street names shown on plan – do not use "a", "b" etc.
- ☐ City limit lines labeled at adjoining cities.
- ☐ All property, parcel and lot line boundaries shown. All lot numbers identified.
- ☐ Include disposition notes for existing facilities. The term "by others" shall not be used but shall be defined.

RIGHT OF WAY & EASEMENTS

- ☐ Dimension street width from FL to FL, right of way from back of curb on private streets, per City General Plan sections on public streets.
- ☐ R/W, pavement, parkways, easements dimensioned and labeled. Show C/L, R/W, curb/gutter, PUE. R/W line for private streets is typically specified at back of curb. See approved COA and City Street Section Standards for R/W boundary for public streets.
- ☐ Call out sewer & junction manholes, pipe diameters.
- ☐ Confirm no encroachment of PUE by retention basin, swale, storm drain facility, building, fence, patio, wall or other structure. 10 ft PUE unless written approval from IID for 5 ft PUE.
- ☐ Show existing overhead and underground public utilities and facilities. Show necessary relocation, reconstruction, adjustment notes and by the responsible party.

STREET GRADES, LOCAL DEPRESSIONS & DRAINAGE

- ☐ Minimum street slope is 0.50% unless otherwise approved by the City engineer. Cul-de-sac flow line – 0.7 % minimum (existing is flexible). High point of cul-de-sac to bulb - 0.7% to 3.0% (typical) call out grades on profiles.
- ☐ Maximum roadway slope of 9% - specialized exceptions may be given to 12% slope roadways.
- ☐ Minimum fall around curb returns with no cross gutters shall be 0.50%.
- ☐ Cross slope 2.0% typical on new streets. Show existing cross fall on existing streets (1% minimum if matching existing streets). City allowable range for cross slope, 1.5% to 3.0% on public streets.
- ☐ Provide cross sections for street widening at 50 ft minimum intervals.
- ☐ Super elevated sections in accordance with Caltrans Standards Section 300. Consider super elevation as required to achieve improved flow gradients.
- ☐ Show all local gutter depressions (e.g. Riverside County Drawing 311) with curb inlet catch basins (e.g. Riverside County Drawing 300 or La Quinta Standard). Show detail with dimensions and elevations. Callout multiple elevations at outer edge of warped concrete gutter at AC matchup – provide smooth AC/concrete profile conforming to finished street surface – avoiding dip in AC surface. Call out gutter depressions in construction notes & show on profiles. Typical gutter depression is a maximum of 4 inches.
- ☐ Maximum grade for intersecting (minor) street is 7% for minimum tangent of 50 ft from flow line.
- ☐ Maximum intersection grade 2% within the overlapping area of the intersecting streets.
- ☐ Provide cross street profile for high grade conditions.
- ☐ Where a property is being developed below the level of the street, a driveway profile is required to show that the 100 year street flow will not enter onto private property. High point must be above 100 year storm flow.
- ☐ No swale on AC pavement, utilize concrete gutter or equal.
- ☐ Additional catch basin utilized in lieu of mid block cross gutter.
- ☐ Catch basin stationed at center line of basin.
- ☐ Catch basin inlets positioned prior to flow turns or intersections.
- ☐ Slopes to adjacent property lines. 2:1 maximum slope.
- ☐ Max slope in PUE is 5:1.

CURBS

- ☐ Callout curb sections and types. 8 inch vertical curb is general standard on City arterials. 6 inch vertical curb ok with matchup issues or for street parking locations as applicable.
- ☐ Verify median curb does not require gutter surface as a result of super elevation, reverse cross slope grades, etc.
- ☐ Concrete specifications for all concrete components per City Standard 200.
- ☐ Show distance from top of pavement at centerline to top of curb.
- ☐ Provide wedge curb to vertical curb transition detail as applicable – utilize 10 ft transition length.
- ☐ Preliminary pavement thickness ("R" value per soils report and traffic index). Show asphalt and aggregate base thickness. City requires use of CAB not Class II aggregates.
- ☐ Curb/gutter alignment matches tentative map.
- ☐ No angle points on curb geometry.
- ☐ Flush curbs (if utilized) have been reviewed for bollard installation requirements for pedestrian safety.

CONSTRUCTION NOTES

- ☐ Include construction notes on each sheet. Please do not refer back to construction notes on the title sheet. Delete unused notes per sheet.
- ☐ Refer to City Standard Drawing Number if applicable to work. Provide specifications, notes, details or other approved Standard Drawing No. if different from City standard.

STATIONING & HORIZONTAL CONTROL

- ☐ Centerline bearing text shown on centerline.
- ☐ Curve and line data (provide table for each sheet) for all centerline and curb data, to include length and bearing, delta, length of arc, radius, tangent. Dimension all street widths. Call out centerline bearing. Call out stations on street sections as applicable.
- ☐ Show connections to existing improvements with elevations at the join line and a minimum of 50 ft at each side of the join line.
- ☐ For offset cul-de-sac – stations must be shown on both final map centerline and crown line.
- ☐ Stationing at knuckle for both streets shall be independent of each other and must intersect at PI with a set of stations. Commence a new set of stations with a new street name.

PAVING

- ☐ Asphalt concrete specifications per City Standard 195.
- ☐ Show limits of overlays and removals. Grade breaks on lane lines unless otherwise approved.
- ☐ Detail all street sections inches of AC, inches of CAB.
- ☐ 2 inch x 4 inch redwood header or thickened AC edge is required at edges of paving to native soil.
- ☐ 2 ft minimum pavement cut/removal at join lines.
- ☐ 0.10 ft minimum header cut for overlays.
- ☐ Valves/manholes adjusted prior to final AC lift.

UTILITIES

- ☐ Show proposed water lines, sewer lines, valves, fire hydrants, manholes, cleanouts and laterals – shaded back.
- ☐ Callout hydrants with blue RPM's offset from center line.
- ☐ No water services or sewer laterals in driveways unless otherwise approved by CVWD.
- ☐ Provide underground detail of electrical pole abandonments.
- ☐ Conduit specified for electrical and water connections at medians
- ☐ Conduit and pull boxes specified for all required future signals (conduit installed across each intersection leg, signal controller interconnects and detection loops
- ☐ Provide lighting and conduits for pedestrian accessibility and safety has required.

CURB RAMPS

- ☐ Access ramps shown. Existing non-conforming ramps may be subject to reconstruction for ADA compliance. Check for conformance to City and current ADA standards per City ADA Checklist and City Standard 250. Public R/W curb ramps shall utilize 3 ft of in-line domes (La Quinta Quarry Red). Dual ramps specified for curb return radii greater than 25 ft.

CURBED MEDIANS

- ☐ No private median or pavers within the Public R/W.
- ☐ Three ft minimum median noses. Terminate median nose at ECR or BCR unless shortened nose directs traffic into improper (wrong way lane) at a widened intersection.
- ☐ 6 inch maximum median curb height.
- ☐ Tapered median noses on turn lane per city design guidance documents. Provide cigar nose raised medians as required for left out movements. Ensure 3 ft minimum median width. Utilize a 5:1 parabolic flare (typ.) with a minimum sized radius at the flare termination.
- ☐ Stamped concrete shown on civil and landscaping plans to 10 ft width (general specification for parabolic cigar nose or transitional curved median) with 10 ft width at median turn pocket noses. For narrow medians below 10 ft in width stamped concrete width may be reduced to 6 ft. 50 ft length (general minimum) at each opposing median nose. Terminate stamped concrete with "S" transition to landscaped

area. Stamped concrete specification - 4 inch x 8 inch running bond brick pattern, perpendicular to curb face, Minimum 4 inch depth, Color, L.M. Scofield, C-32, La Quinta Quarry Red or Equal. Rounded median noses with no parabolic narrowing and no sight distance issue, o.k. to landscape to median curb with shrubs.

- ☐ No trees or palms or fixed objects within 50 ft (minimum) of any median nose. CalTrans specification requires no fixed objects or equal within 100 ft of any median nose.
- ☐ Fire Dept Access over median every 1,760 ft. Utilize existing median breaks, turn pockets and intersections as possible. Alternatively, utilize grouted rip rap or brick pattern stamped concrete specification with 20 ft (minimum) opening mountable rolled curb (City Standard 203) as necessary with posted no U turn signage.
- ☐ Flush curb at median at a cul-de-sac location is allowable.
- ☐ Double yellow painted median noses for additional vehicular guidance to cross walk or cross gutter. Call out parabolic (cigar nose) or straight double yellow from median nose as applicable for turning movements.
- ☐ Call out reflectorized left edgeline at median for all future projects – dark sky safety item.

SIGHT DISTANCE, FIXED OBJECTS & EMBANKMENT SLOPES

- ☐ Call out all trees, monuments, utility transformers, bus shelters, CVWD and Gas Company manifolds or equivalent fixed objects. Provide minimum setback of 2 ft for all signage to 10-30 ft setback &/or guardrails for severe hazards. Verify that all trees shown adjacent to the edge of pavement are removed as applicable. Call out guardrails or equivalent safety devices as required.
- ☐ Intersection sight distance shall be in accordance with CalTrans, City Standards & AASHTO Standards.
- ☐ Vertical sight distance shall be in accordance with CalTrans, City Standards & AASHTO Standards.

CROSS GUTTERS

- ☐ Cross gutter not utilized on regional, primary or secondary arterial roads.
- ☐ Create a vertical curve sag if swales cross driveways.
- ☐ Straight grade through cross gutters is preferred.

PROFILE CALLOUTS

- ☐ Call out match lines for profile and plan views. Show grid lines on profile. Provide consistent stationing & elevations in plan, profile and section views. Darken profile scale every 100 ft.
- ☐ Profile TC for median on CL profile.
- ☐ Finished centerline and curb lines are solid lines. Call out east, west, north or south curbs.
- ☐ Show existing ground line in profile. Show proposed grade as a solid line & existing grade as a dashed line.

<u>Stations and elevations every 100 ft in profile shown at:</u>

  - ☐ Beginning and end of improvements with stationing at high point (HP).
  - ☐ Centerline intersections.
  - ☐ Vertical curves. Minimum spacing shown on vertical curves is 25 ft.
  - ☐ All grade breaks.
  - ☐ All BC's, EC's, BCR's, ECR.'s.

- ☐ Identify BCR & ECR dependent of layout per sheet - include edge of pavement profile.
- ☐ Show all catch basins on profile.
- ☐ Super elevation sections per CalTrans design manual Section 300. Show super elevation rates.
- ☐ Extend profiles beyond end of improvements a minimum of 300 ft as necessary to explain the profile grade.
- ☐ In all "grade to drain" situations, show profile of ditch with elevations from beginning of ditch to daylight point at 50 ft interval.
- ☐ Indicate length of curb returns. Show curb return with ¼ points in profile. Plane method for calculating curb returns shall be used.
- ☐ Show 100 ft stationing at bottom of profile grid - should be aligned with starting station in plan view.
- ☐ Show grade break "0" bubble on all grade breaks and vertical curve labels in profile. Show centerline in plan and profile.
- ☐ Provide cross section every 50 ft in areas of realignment. Specify sections on driveways.
- ☐ When widening an existing street, show elevations of top edge of existing pavement.
- ☐ Street profiles accurately match section details – confirm street centerline elevation accurate relative to TC elevation.
- ☐ Callout street name(s) on profile.

VERTICAL CURVES (STREETS)

- ☐ Provide vertical curves on grade breaks >0.5% at local and arterial streets.
- ☐ Sag vertical curves utilize the approximate AASHTO Specification for sag vertical curve distance (ft) with <2% grade break = 3 times design speed (mph). Avoid use of short (e.g. 50 ft) vertical curves.
- ☐ Crest vertical curve length accommodates sight distances in accordance with Caltrans & AASHTO Design Standards.
- ☐ Check for flat spots at high and low points of vertical curves.

INTERSECTION DESIGN

- ☐ Arterial to arterial intersection design should flatten the crown through the intersection. Local to local intersection design can also flatten the crown with a dome at the centerline intersection to provide drainage. But the local to local intersection may also hold the crown on one of the local streets and provide a relatively high grade break (to 4% at 25 mph) on the opposing local.
- ☐ In order to provide drainage, at ALL intersections, show 1% minimum AC grades. The direction arrows of intersection flow is generally not critical.
- ☐ For wide arterial intersections, detail the top of pavement elevations with a grid (10 ft O.C. maximum spacing) or show 0.1 ft proposed contours.

MINIMUM INTERSECTION SPACING (SEE GENERAL PLAN FOR ADDITIONAL GUIDANCE))

- ☐ Major arterial: 2,600 or 1,060 ft (residential/commercial)
- ☐ Primary arterial: 1,060 ft
- ☐ Secondary arterial: 600 ft
- ☐ Collector street: 300 ft
- ☐ Local street: 250 ft

MINIMUM DRIVEWAY SPACING (PER GENERAL PLAN)

- ☐ Driveway spacing >250 ft

CONDUIT

- ☐ Provide 2 inch Schedule 80 conduit for future arterial street signal interconnect. Provide 17 inch x 32 inch pull boxes on 200 ft spacing (copper interconnect assumed, 400 ft spacing is typical for fiber optic interconnect).
- ☐ Provide 3 inch Schedule 80 conduit for future arterial street signal installation across all intersection legs to estimated future curb returns.
- ☐ Provide 2 inch Schedule 80 conduit for advance loop detection 500 ft from intersection. Install other loop detection conduit as required.
- ☐ Provide 6 inch Schedule 40 conduit for water and electrical connections for all medians. Include conduit for nose to nose connections as required. All pipe to be a minimum of 24 inches below the finished surface of asphalt.

BIKE LANES/GOLF PATHS

- ☐ Callout bike lanes per City General Plan.
- ☐ Callout golf paths per City General Plan.

TECHNICAL GUIDANCE (GEOMETRICS):

FUTURE REQUIREMENTS PER CITY GENERAL PLAN

- ☐ Ultimate improvements for project have been coordinated with City General Plan requirements and the Public Works Traffic Division. Traffic signals, drainage upgrades, striping/signage upgrades, deceleration lanes, dual left turn pockets, Class 2 or Class 3 bike facilities and golf cart paths are typical improvements.

MINIMUM CENTERLINE CURVE RADII AND DESIGN SPEEDS (SUBJECT TO MODIFICATION BY COA OR APPROVED TENTATIVE MAP – CHECK SIGHT DISTANCES AND GENERAL PLAN FOR ADDITIONAL REVIEW)

- ☐ Major arterial: 1,800 ft @ 60 mph design speed
- ☐ Primary arterial: 1,200 ft @ 50 mph design speed
- ☐ Secondary arterial: 650 ft @ 40 mph design speed
- ☐ Collector street: 350 ft @ 30 mph design speed
- ☐ Local street: 125 ft @ 20 mph design speed
- ☐ Cul-de-sacs: 100 ft @ 15 mph design speed
- ☐ Design check has been performed for authorized speed per current approved City Speed Survey information for road segment.

CURB RETURN RADII (SUBJECT TO MODIFICATION BY COA OR APPROVED TENTATIVE MAP)

- ☐ 45–65 ft curb return radii at arterial driveways or other specialized street intersections w/ heavy truck use.
- ☐ 35 ft curb return radii at street intersections with secondary or larger street. Main pedestrian routes may allow for reduced curb return radii.
- ☐ 25 ft curb return radii at local street curb returns. Main pedestrian routes may allow for reduced curb return radii.
- ☐ All curb return radii checked with turning templates. Utilize WB-50 for private subdivision reviews. Utilize SU-30 for commercial parking lots (non semi-tractor trailer delivery areas).
- ☐ 38 ft minimum cul-de-sac radius for curb.

LANE WIDTHS (TO ASSIST CURB SPACING)

- ☐ 12 ft standard thru lane (11 ft minimum).
- ☐ 11 ft standard turn pocket (10 ft minimum).
- ☐ 12 ft standard right turn lane (10 ft minimum).
- ☐ (10 ft ac pavement + 2 ft PCC curb/gutter).
- ☐ Left turn lane can be dimensioned up to 12 ft width at typ. 150 ft length. Typical 4 lane 46 ft total lane width would be dimensioned with 2 x 12 ft thru lanes and 2 x 11 ft left lanes.
- ☐ 12 ft standard combination (thru/turn option) (12 ft minimum).
- ☐ 14 ft conventional lane with adjacent edge line or median (12 ft ac pavement + 2 ft PCC curb/gutter, typ.). Where option exists – specify additional 1 ft of lane width to provide offset from fixed curb median or equal from standard 12 ft thru lane.
- ☐ 18 ft approach lane (single exit lane from intersection) - needed for truck clearance and turning radius. Consider curb return radius increase to 65 - 75 ft as alternative truck turning specification.
- ☐ 14 ft maximum standard thru lane - no widened lanes to 20 ft – keep lane widths to 12 - 14 ft. No unstriped large areas.
- ☐ 8 ft maximum bike/golf cart lane width (must be narrower than standard lane to avoid vehicular use). 6 ft bike lane typical on lower speed streets (4 ft AC + 2 ft Gutter pan).
- ☐ Provide 100 ft minimum turn pocket length with minimum 70 - 90 ft opening (speed dependant).
- ☐ Minimize gore areas as possible. Utilize edge striping, bike lanes, etc.

TAPERS/MERGING LANES

- ☐ Tapers on pavement shall be as follows – City prefers long transitions with edge line striping. See CA MUTCD transition guidelines.
- ☐ Minimum 2:1 taper for traffic lane widening – see CA MUTCD for preferred standards.
- ☐ Minimum of 10:1 taper for merging traffic on low speed (less than 25 mph) roads.
- ☐ Roads having a speed greater than 35 mph, merging lanes or lane drops shall use Caltrans standard: length (ft) = design speed (mph) x distance traffic moves (ft). Ensure offsite permission to extend taper is obtained or notify city of inability to obtain permission.
- ☐ Pavement less than 500 ft in length is normally not considered a lane of traffic and should be striped out.
- ☐ Power pole or equal fixed object offset from pavement without curb = 20 ft for arterial, 10 ft for local street. 5 ft minimum fixed object setback for any street with curb.
- ☐ All tapers and merging lanes should follow CA MUTCD specifications.
- ☐ Start taper 100 ft minimum from intersection.

LEFT TURN POCKETS

- ☐ Left turn pocket length is 100 ft (minimum) for local streets and 150 ft (minimum) for collector and arterial streets. Higher turn pocket lengths are desired for very high trip generation or at unsignalized intersections above 200 turns per hour.
- ☐ Reverse curve transitions for left turn pockets should have a minimum length of 90 ft. Longer transitions may be warranted for higher speed locations. 100 ft minimum gap in striped opening for turn pocket.

DRIVE-THROUGH DESIGN

- ☐ Drive-thru lane width minimum = 12 ft with 14 ft minimum knuckle at turns.

INTERSECTION & DRIVEWAY SPACING, GATED ENTRIES, BUS STOPS ETC.

- ☐ Intersection spacing per City General Plan (or as approved by City Engineer):

Roadway/design speed (mph)	Minimum spacing (ft)
Primary arterial (50)	1060
Secondary arterial (40)	600
Collectors (30)	300
Local street (25) or driveway off arterial	250
Residential street	Case by case

  See Access Management Manual (Transportation Research Board), Chapter 9 for additional guidance.
- ☐ Arterial cross sections – See City Standards 100 through 190. Pending new secondary arterial section with bike lane = 96 ft.
- ☐ Landscape setback minimums – Highway 111 – 50 ft, Major and primary arterials – 20 ft, secondary arterials and collectors – 10 ft, local streets – 0 ft.
- ☐ Gated access – 2 car stack (37 ft from call box to flow line), 3 car stack (62 ft from call box to flow line), provide 25 ft gap for median opening for refusal turnaround. Provide detail of entry gate & car turnaround and stacking on gated communities.
- ☐ Street intersections shall be at 90 degrees within 100 ft of the intersection tangent. Five degrees shall be the maximum allowable skew. Twenty degrees of skew may be allowable with specialized conditions with defined sight distance with ultimate construction.
- ☐ Barricades and appropriate signing shown at all temporary dead end streets.
- ☐ Show bus stops as applicable for Sunline & local school district.

DRIVEWAYS

- ☐ Minimum driveway width (Village) – 24 ft.
- ☐ Minimum driveway width (Commercial + other) – 28 ft, 35 ft desirable, 45 ft maximum.
- ☐ Minimum 2 car residential driveway structural opening – 16 ft, minimum 1 car driveway structural opening – 9 ft with maximum slope of 12%.

DECELERATION LANES

- ☐ Deceleration lane design according to City Engineering Bulletin 06-13. Detail all deceleration lanes, turn pockets, turn restrictors, roundabout splitter medians, etc. Provide a 75 ft minimum opening for all deceleration lanes, or equal facility.