

## SUFFICIENCY REVIEW CHECKLIST STAGE 2

**In addition to those items specified in Title 17, Articles 3 and 5 of the Subdivision Regulations; the following information must be addressed in the subdivision application or project documentation, as applicable, for review and approval by the City of Missoula, Public Works Department – Engineering Division**  
*(This list is not all inclusive, other information may also be required)*

Project Name: \_\_\_\_\_  
 City File No.: *(to be completed by City Engineering)* \_\_\_\_\_  
 Developer's Representative: \_\_\_\_\_  
 Date Submitted: \_\_\_\_\_

All submitted construction drawings must include and reference the current version / latest revision of any / all applicable City of Missoula Standard Drawings. Prior to submittal, please review the City of Missoula website for current standard drawings;

### Standard Drawings

STANDARD DRAWING SECTION	STANDARD DRAWING NUMBER
Curbs, Sidewalks and Driveways	STD-1nn
Streets	STD-2nn
Sanitary Sewer	STD-3nn
Miscellaneous	STD-4nn
ADA and Parking	STD-5nn
Storm Drainage	STD-6nn
Traffic Control Plans	TC-nnn

*(All efforts are made to communicate revisions; however, standard drawings may be revised with or without notice)*

STAGE #	STAGE PROCESS
1	Sewer Availability
2	<b><i>Sufficiency Review Checklist</i></b>
3	Preliminary Construction Plan Review Checklist
4	Release For Construction (RFC) Plan Checklist
5	Final Construction and Inspection Checklist
6	Documentation, As-Built and Testing Checklist
7	Warranty Inspection Checklist

## BASE INFORMATION

### REQUIRED INFORMATION FOR ENGINEERING REVIEW – Plat Documentation

#### Stage 2

- Two (2) copies of the Subdivision Sufficiency Packet – One (1) copy even if submitted electronically
- Two (2) copies of the completed / signed Stage 2 Checklist (this document)
- One (1) copy of the Preliminary Plat
- Transportation plan, as required
- Review by Montana Department of Transportation (MDOT), when accessing any / all state-controlled public right-of-way
- SID waiver(s) required (specific type(s), documentation on plat, etc.)
- Datum information
- Other

#### Comments

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### DEVELOPMENT / SUBDIVISION TYPE

#### Stage 2

- Rural; County, 2 or less dwelling units per acre
- Urban; City, greater than 2 dwelling units per acre
- Major; more than 5 lots
- Minor; 5 or fewer lots
- PNC / PUD / Cluster Development
- Other

#### Comments

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### COVENANTS

#### Stage 2

- Homeowners Association (maintenance responsibilities)
  - Round-a-bout landscaping maintenance
  - Traffic-calming landscaping maintenance
  - Street lighting maintenance
  - Common area(s) / private park(s) / open space maintenance

- \_\_\_\_\_ Private roads / short court maintenance
- \_\_\_\_\_ Sidewalk / trail on a public access easement maintenance

\_\_\_\_\_ Other

**Comments**

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## SURFACE INFRASTRUCTURE

### TOPOGRAPHY / GEOTECHNICAL – Hillside / Site Grading

*Stage 2, 3*

- \_\_\_\_\_ Floodplain
- \_\_\_\_\_ Wetland / riparian zone(s)
- \_\_\_\_\_ Rock / outcrop issues
- \_\_\_\_\_ Adjacent property topography (grade match)
- \_\_\_\_\_ Slope delineation ( <5%, 5.01-10%, 10.01-20%, 20.01-25%, >25.01% )
- \_\_\_\_\_ Grading plan (existing / proposed, pre-graded lots, cuts / fills, access issues)
- \_\_\_\_\_ Cut and fills (R-O-W work must be located within R-O-W) or easements
- \_\_\_\_\_ Disturbed slopes designed at 2:1 (50%) or less
- \_\_\_\_\_ Ground water issues
- \_\_\_\_\_ Slope stability / hazards (unstable slopes, etc.)
- \_\_\_\_\_ Retaining walls
- \_\_\_\_\_ Weed control / topsoil / re-vegetation plan
- \_\_\_\_\_ Existing surface drainage
- \_\_\_\_\_ Other

**Comments**

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### RIGHTS-OF-WAY – Base Criteria

*Stage 2*

- \_\_\_\_\_ Access to public / state right-of-way
- \_\_\_\_\_ Controlled access
- \_\_\_\_\_ Conformance to Subdivision Regulations
  - \_\_\_\_\_ Widths (as per City Subdivision Regulations, Article 3)
  - \_\_\_\_\_ Lengths (block length, diameter of cul-de-sac, etc.)

- \_\_\_\_\_ Alleys (existence, radiuses, access points, drainage, garbage access)
- \_\_\_\_\_ Other

**Comments**

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**BLOCKS**

*Stage 2, 3*

- \_\_\_\_\_ Conformance to City Subdivision Regulations, Article 3
- \_\_\_\_\_ Length maximum uninterrupted block(s)
- \_\_\_\_\_ Configuration; appropriate access to all lots – see also ‘Driveways’ – Access/Approaches
- \_\_\_\_\_ Common area(s); access, maintenance agreements, etc.
- \_\_\_\_\_ Other

**Comments**

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**LOTS**

*Stage 2, 3*

- \_\_\_\_\_ Configuration; buildable area, slope, pre-grading
- \_\_\_\_\_ Access; slope, distance from intersections, no access designation
- \_\_\_\_\_ Sight obstruction / visibility triangles; NO structures permitted in visibility triangle
- \_\_\_\_\_ Other

**Comments**

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**EASEMENTS**

*Stage 2, 3, 4*

No permanent structures are allowed within easements

- \_\_\_\_\_ Existing easement(s)
- \_\_\_\_\_ Proposed easement(s)
  - \_\_\_\_\_ Public / Private utility easement(s) (location, width – includes; [overhead and/or buried] sanitary sewer, storm sewer, water, electric, natural / propane / high-pressure gas, petroleum, telephone, cable and other utilities)
    - ➔ Main(s) twenty (20’) feet minimum easement width
    - ➔ Service(s) fifteen (15’) feet minimum easement width
  - \_\_\_\_\_ Public / Private common service easement (for stub-outs)
  - \_\_\_\_\_ Public / Private drainage easement(s) (collection, retention and detention ponds)
  - \_\_\_\_\_ Public / Private foundation drainage easement(s) (width, location)
  - \_\_\_\_\_ Public / Private access easement(s) (width, location)
  - \_\_\_\_\_ Public / Private NO access easement(s) (width, location)

\_\_\_\_\_ Public / Private non-motorized access easement(s) (width, location [trails])

\_\_\_\_\_ Construction easement(s) (width, location)

\_\_\_\_\_ Maintenance easement(s) (width, location)

\_\_\_\_\_ Irrigation / ditch easement(s) (width / location)

\_\_\_\_\_ Conservation easement(s) (width / location)

\_\_\_\_\_ Off-site / adjacent property(ies) easement(s) (width / location)

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Other

### Comments

## STREETS & ALLEYS – Paving (including; Private Roads, Short Courts, Cul-de-sacs)

*Stage 2, 3, 4, 5, 7*

\_\_\_\_\_ Public street / roadway – (refer to Article 3 of the City Subdivision Regulations)

\_\_\_\_\_ Private street / roadway / drive – (refer to Article 3 of the City Subdivision Regulations)

\_\_\_\_\_ Public / Private street / roadway names

\_\_\_\_\_ Cul-de-sac (length, turn-around) – six hundred (600') feet maximum

\_\_\_\_\_ Short court (length, number of units served) – two hundred (200') feet maximum

\_\_\_\_\_ Overflow parking (length, width, number of spaces)

\_\_\_\_\_ Street / roadway / driveway layout / design cross-section – private / public and short courts

\_\_\_\_\_ Grades (preliminary grading plan, profiles, include vertical curve data, intersection grading is ADA compliant)

\_\_\_\_\_ Cuts and fills; include topsoil and re-vegetation

\_\_\_\_\_ Maintenance agreements for private street / roadway / drive, short courts,

\_\_\_\_\_ Bridges / Culverts

\_\_\_\_\_ Temporary turn-around, required at phase break(s)

\_\_\_\_\_ Other

### Comments

## TRAFFIC MANAGEMENT (must fully conform with MUTCD, FHWA and MT DOT)

*Stage 2, 3, 4, 5, 7*

Must satisfy all requirements for; location, design criteria, minimum radii, landscaping and irrigation, signing and striping, pedestrian facilities and maintenance agreements

\_\_\_\_\_ Round-a-bout(s); location, design, functional; ADA compliance

\_\_\_\_\_ Traffic circle(s); location, design, functional; ADA compliance

- \_\_\_\_\_ Bulb-out(s); location, design, functional; ADA compliance
- \_\_\_\_\_ Mid-block pedestrian crossing(s); location, design, functional; ADA compliance
- \_\_\_\_\_ Chicane(s); location, design, functional compliance
- \_\_\_\_\_ Medians / island(s); location, design, functional compliance
- \_\_\_\_\_ Raised crosswalk(s); location, design, functional; ADA compliance
- \_\_\_\_\_ Speed table(s); location, design, functional; ADA compliance
- \_\_\_\_\_ Other

**Comments**

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**CURBING**

*Stage 2, 3, 4, 5, 7*

- \_\_\_\_\_ Location
- \_\_\_\_\_ Curb type; “A”, “B”, “K” – cove, “L”, standard drawings
- \_\_\_\_\_ Access points / curb cut(s); location, width, type: commercial / residential
- \_\_\_\_\_ Controlled access; right-in / right-out, ‘pork-chop’ islands, etc.
- \_\_\_\_\_ ADA compliance; location, width, ramps / grades, landings, cross-slope, etc.
- \_\_\_\_\_ Mail stop pull-out, bus pull-out, over-flow parking, etc.
- \_\_\_\_\_ Other

**Comments**

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**DRIVEWAYS – Access / Approaches**

*Stage 2, 3, 4, 5, 7*

Refer to Article 3 of the City Subdivision Regulations

- \_\_\_\_\_ Location (multiple / shared, public / private street / road / drive / alley, etc.)
- \_\_\_\_\_ Distance from intersection; minimum distance from intersection or crosswalk
- \_\_\_\_\_ Width of approach(es), curb cut, must be constructed perpendicular (ninety (90°) degrees) to the adjacent street
- \_\_\_\_\_ Grades; eight (8%) percent maximum
- \_\_\_\_\_ Other

**Comments**

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**PEDESTRIAN ACCESS – Non-Motorized Facilities; Sidewalks, Trails, Bicycles**

*Stage 2, 3, 4, 5, 7*

- \_\_\_\_\_ Sidewalk design
  - \_\_\_\_\_ Location; both / one side(s) of street, other / additional location(s)
  - \_\_\_\_\_ Width, cross-section, material, etc. – standard drawings

- \_\_\_\_\_ Sidewalk and boulevard width per approved construction plans
- \_\_\_\_\_ Construction cross-section specifications and design (concrete sidewalk thickness, base thickness, jointing, mix design, testing, type and location of pedestrian facilities / sidewalks)
- \_\_\_\_\_ Backfilling boulevard and adjacent to sidewalk
- \_\_\_\_\_ ADA compliance; location, width, ramps / grades, landings, cross-slope, detectible warning / truncated domes, etc.
- \_\_\_\_\_ Trail (width, location)
- \_\_\_\_\_ Connections; between on-site pedestrian facilities, parks, common area(s), with adjacent property(ies) / subdivision(s), etc.
- \_\_\_\_\_ Street-crossing (mid-block, bulb-out, etc.)
- \_\_\_\_\_ Bike lanes (width, location)
- \_\_\_\_\_ Bridges, non-motorized access; pedestrians, bicycles, trails, etc.
- \_\_\_\_\_ Other

**Comments**

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**PARKING – Overflow**

*Stage 2, 3, 4, 5, 7*

- \_\_\_\_\_ Location; distance from intersections, access, type; parallel, head in / back in, angled: 90°, 60°, 45°
- \_\_\_\_\_ Dimensions; length, width
- \_\_\_\_\_ Grading and drainage
- \_\_\_\_\_ Parking Signage
- \_\_\_\_\_ Pedestrian access; connection to sidewalks, trails, etc.
- \_\_\_\_\_ ADA compliance; width, ramps / grades, landings, cross-slope, etc.
- \_\_\_\_\_ Other

**Comments**

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**BUS STOPS**

*Stage 2, 3, 4, 5, 7*

- \_\_\_\_\_ Location; distance from intersections, signing, configuration, standard drawings
- \_\_\_\_\_ Pedestrian Access; connection to sidewalk, trails, etc.
- \_\_\_\_\_ ADA compliance; width, ramps / grades, landings, cross-slope, etc.
- \_\_\_\_\_ Other

**Comments**

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## CLUSTER MAIL BOX FACILITIES (U.S.P.S. Postmaster approval required)

Stage 2, 3, 4, 5

- Location
- Mail stop pull-out
- Pedestrian Access; connection to sidewalk, trails, etc.
- ADA compliance; width, ramps / grades, landings, cross-slope, etc.
- Documented Post Office concurrence with location / design, letter of approval
- Other

### Comments

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## STREET LIGHTS

Stage 2, 3, 4, 5

- Location, minimum; intersections, pedestrian crossings, mid block pedestrian crossings, etc.
- Maintenance agreement; covenants
- Compliance with Missoula Outdoor Lighting Ordinance – MMC 8.64
- Other

### Comments

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## SURFACE DRAINAGE

Stage 2, 3, 4, 5, 7

- Natural drainage; existing both on-site and adjacent off-site
- Storm drainage; calculations, location on-site / off-site, collection / retention / detention, and source areas  
(see also 'STORM SEWER' section below in 'UTILITY INFRASTRUCTURE' review)
- Surface drainage – existing / proposed; calculations, cross-sections, overflow, crossings: culvert / bridge sizing, vegetation, etc.
- Surface drainage – individual lots
  - Swales: between lots and through development / subdivision
  - Covenants
  - Building permit conditions / requirements
  - Other
- Foundation drains (separate collection system for foundation drains on hillside development)
- Maintenance; public / private, homeowner's association, agreement(s)



- \_\_\_\_\_ Structures: inlets, sumps, manholes; location, design, capacity, etc.
  - ➔ One (1) per ten thousand (10,000 S.F.) square feet, minimum
- \_\_\_\_\_ Other

**Comments**

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**EROSION CONTROL (must fully conform with EPA and MT DEQ)**

*Stage 2, 3, 4, 5, 7*

- \_\_\_\_\_ Montana DEQ SWPPP approval letter, SWPPP approved plan and SWPPP Notice of Intent (NOI); one (1) copy required (See Stage 3 Summary for more information)
- \_\_\_\_\_ SWPPP (Storm Water Pollution Prevention Plan) and City Permit required;
  - \_\_\_\_\_ Reference to and include City of Missoula standard drawings, where applicable
  - \_\_\_\_\_ Apply specific treatments
  - \_\_\_\_\_ Apply to specific locations
  - \_\_\_\_\_ Include design specifications
- \_\_\_\_\_ BMP (Best Management Practices); specifications
- \_\_\_\_\_ Maintenance responsibility(ies); must remain in place and be maintained throughout the duration of all site development and individual lot construction
- \_\_\_\_\_ Other

**Comments**

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## UTILITY INFRASTRUCTURE

### SANITARY SEWER

Stage 2, 3, 4, 5, 6, 7

- \_\_\_\_\_ Type (Gravity, S.T.E.P., Force, Dry lay)
- \_\_\_\_\_ State D.E.Q. approval letter
- \_\_\_\_\_ County review for additional county rules and regulations
- \_\_\_\_\_ Conformance to City, County and State specifications and requirements; thrust restraint on mains over 20% grade, ownership, etc.
- \_\_\_\_\_ Structures; location, access,
- \_\_\_\_\_ Manholes; location, access, type
- \_\_\_\_\_ Gravity mains; location, sizing, profile, separation, specifications, calculations, etc.
- \_\_\_\_\_ Lift stations; location, sizing, access both to site and internal, security, specifications, etc.
- \_\_\_\_\_ Force mains; location, sizing, profile, ports, valves, etc.
- \_\_\_\_\_ S.T.E.P. systems and appurtenances designed and engineered for commercial use
- \_\_\_\_\_ S.T.E.P. mains; location, sizing, profiles, ports, valves, etc.
- \_\_\_\_\_ S.T.E.P. Tanks and appurtenances; residential, commercial and community
- \_\_\_\_\_ Floodplain requirements
- \_\_\_\_\_ Shallow groundwater requirements
- \_\_\_\_\_ Stub-outs; location, property marked
- \_\_\_\_\_ Specifications; pipe type(s), sizing, bedding, gradations, marking and compaction
- \_\_\_\_\_ Number and location (by lot) of stub-outs for auditing and permitting purposes
- \_\_\_\_\_ Other

#### Comments

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### STORM SEWER

Stage 2, 3, 4, 5, 6, 7

- \_\_\_\_\_ Type (Gravity, S.T.E.P., Force, Dry lay)
- \_\_\_\_\_ Conformance with current E.P.A. and state (MT D.E.Q.) rules, regulations and practices
- \_\_\_\_\_ Mains; location, sizing, profile, separation, specifications, calculations, etc.
- \_\_\_\_\_ Appurtenances; manholes, inlets, grates, outfalls, diffusers, beehives, etc.
- \_\_\_\_\_ Access; appurtenances, collection / retention / detention systems, etc.
- \_\_\_\_\_ Shallow groundwater requirements
- \_\_\_\_\_ Other

**Comments**

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**WATER (reviewed by Mountain Water Company and City Fire Department)**

*Stage 2, 3, 4, 5, 6, 7*

- \_\_\_\_\_ Conformance with current state (MT D.E.Q.) rules, regulations and practices
- \_\_\_\_\_ Mains; size, location, valves, separation, etc.
- \_\_\_\_\_ Stub-outs; location, property marked
- \_\_\_\_\_ Fire protection; mains to structures: commercial, industrial and residential
- \_\_\_\_\_ Hydrants; location within 500 feet, clear zone, charged, verified and approved by Fire Department
- \_\_\_\_\_ Other

**Comments**

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**UTILITIES**

*Stage 2, 3, 4, 5, 6, 7*

- \_\_\_\_\_ Two (2) copies of the Master Utility Plan; comprehensive all sources, below, at and above grade
- \_\_\_\_\_ Gas – Mains; location, placement of related appurtenances (valves, etc.)
- \_\_\_\_\_ Electric – Mains and Primaries; location, placement of related appurtenances (switches, transformers, etc.), traffic control lights, rail control lights, street lights, etc.
- \_\_\_\_\_ Communications; Telephone, Television, etc. – Mains and Primaries; placement of related appurtenances (pedestals, junction boxes, etc.)
- \_\_\_\_\_ Other

**Comments**

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**APPLICANTS CERTIFICATION:**

All information has been reviewed by me and to the best of my knowledge all requirements have been satisfied and this submittal is true and accurate.

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Developer Representative's Signature

Date