FINAL CONSTRUCTION AND INSPECTION CHECKLIST

STAGE 5

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, as applicable, for review 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.: ______________________________
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;

All construction must meet the requirements set forth in the City of Missoula Public Works Standards, standard drawings, policies, and Montana Public Works Standards

Standard Drawings

<table>
<thead>
<tr>
<th>STANDARD DRAWING SECTION</th>
<th>STANDARD DRAWING NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curbs, Sidewalks and Driveways</td>
<td>STD-1nn</td>
</tr>
<tr>
<td>Streets</td>
<td>STD-2nn</td>
</tr>
<tr>
<td>Sanitary Sewer</td>
<td>STD-3nn</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>STD-4nn</td>
</tr>
<tr>
<td>ADA and Parking</td>
<td>STD-5nn</td>
</tr>
<tr>
<td>Storm Drainage</td>
<td>STD-6nn</td>
</tr>
<tr>
<td>Traffic Control Plans</td>
<td>TC-nnn</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>STAGE NUMBER</th>
<th>STAGE PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sewer Availability</td>
</tr>
<tr>
<td>2</td>
<td>Sufficiency Review Checklist</td>
</tr>
<tr>
<td>3</td>
<td>Preliminary Construction Plan Review Checklist</td>
</tr>
<tr>
<td>4</td>
<td>Release for Construction (RFC) Plan Checklist</td>
</tr>
<tr>
<td>5</td>
<td>Final Construction and Inspection Checklist</td>
</tr>
<tr>
<td>6</td>
<td>Documentation, As-Built and Testing Checklist</td>
</tr>
<tr>
<td>7</td>
<td>Warranty Inspection Checklist</td>
</tr>
</tbody>
</table>
# Submittal Documentation

## Development / Subdivision Final Construction Documentation – Stage 5

- All Sanitary/Storm Sewer Documentation / Testing Results – (Must also submit City Engineering required form Sewer Main Test Sheet *(Use this format)*:
  - TV
  - Air
  - Light / Lamping
  - Mandrel / Deflection
- Draft copy of service stub-out record drawings. **Use City’s Format** / **Electronic Submittal Required - Will be Rejected if Not Completed Correctly** – legal, permit number, signature, date, etc. Contact City Engineering for more information. *(Administrative Rule 620 for Sanitary, STEP, and Storm Sewer)*.
- One (1) copy of Developer Representative’s completed / signed certified punch-list / Stage 5 Checklist
- Other
SURFACE INFRASTRUCTURE

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

Stage 2, 3, 4, 5, 7

Refer to Article 3 of the City Subdivision Regulations or the Missoula City Public Works Standard Specifications for other projects

- Public street / roadway
- Private street / roadway / drive – shall be curbed
- Surface; sealed, honeycombed (open-graded), flushing, roller-marks, uniformity, clean, ponding
- Seams / Joints; visible, adequate compaction, workmanship, expansion joint placement
- Edge Grade; flush with concrete gutter – three-eighths (3/8”) inch maximum tolerance, must be flush at ADA accessible ramps
- Edge Alignment; flush with concrete gutter – three-eighths (3/8”) inch maximum tolerance
- Edge Alignment (no curb); shouldering
- Cul-de-sac – verify constructed as per submitted and approved plans
- Short court – verify constructed as per submitted and approved plans
- Overflow parking – verify constructed as per submitted and approved plans
- Sight obstruction / visibility triangles; NO structures permitted in visibility triangle
- Bridges / Culverts – verify constructed as per submitted and approved plans
- Temporary turn-around, required at phase break(s) – secured area; pin-down curbs, construction fencing, signage – see Signing and Striping Plan
- 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
  - Constructed as designed; width, length, landscaping, etc.
- Traffic circle(s); location, design, functional; ADA compliance
Constructed as designed; width, length, landscaping, etc.

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

CURBING

Stage 2, 3, 4, 5, 7

Location

Curb drainage; proper grade, ponding

Workmanship; straight alignment, verify profile, expansion / contraction joints, proper flow-line

Access points / curb cut(s); proper location, width, type: commercial / residential, transitions

Controlled access; right-in / right-out, ‘pork-chop’ islands, etc.

ADA compliance; location, width, ramps / grades, landings, cross-slope, transitions, etc.

Mail stop pull-out, bus pull-out, over-flow parking, etc.

Other

Comments

SIGNING AND STRIPING (must fully conform with MUTCD, FHWA and MT DOT)

Stage 3, 4, 5, 7

Sign Plan; location, type, application, etc., per standard drawing

Sign material specifications; retro-reflectivity (high-intensity), dimensions - thickness, height, width, symbols, etc.

Sign mounting / base

Sign Text; wording / verbiage / message(s) / block numbers, etc.

Striping Plan; location, material, application, etc. – center line, fog line, skip line, stop bar, bicycle lane, messages, symbols, etc., per standard drawing
___ Striping Material Specifications; paint thickness (coverage), water-born epoxy, retro-reflectivity, color, glass bead application, etc. – no runs, thin areas, etc.
___ Traffic Control Devices (traffic signals); signal type, location, material, application, etc. – LED, lighted, properly sequenced, 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 or the Missoula City Public Works Standard Specifications for projects that are not subdivision related

___ 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
___ Cross-section; as applicable to driveways, drainage cuts / fills, base / asphalt / concrete depth
___ Construction cross-section specifications and design (curb thickness, base thickness, mix design, testing, type and location of pedestrian facilities / sidewalks)
___ 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)
   ___ Backfill 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.
STAGE 5
FINAL CONSTRUCTION AND INSPECTION
CHECKLIST

[540x754]STAGE 5
[386x743]FI
[395x743]NAL CONSTRUCTION AND INSPECTION
CHECKLIST
[530x31]Page
[552x31]6
[559x31]of
[570x31]11

Revised: November 19, 2012

Street-crossing (mid-block, bulb-out, etc.)
Bike lanes (width, location)
Bridges, non-motorized access; pedestrians, bicycles, trails, etc.
Other

Comments

_________________________________________________________

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

_________________________________________________________

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

_________________________________________________________

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

#### SURFACE DRAINAGE

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

- Natural drainage; existence both on-site and off-site
- Floodplain limits; as per current FIRM mapping
- Riparian areas / zones
- Storm drainage; calculations, on-site, off-site, collection / retention / detention, and source areas (see also ‘STORM SEWER’ section below in ‘UTILITY INFRASTRUCTURE’ review)
- Surface drainage – existing and proposed; calculations, cross-sections, overflow, crossings: culvert / bridge sizing, vegetation, etc.
- Surface drainage – project / development / subdivision / individual lots
  - Swales: between lots and throughout project / development / subdivision
  - Rain Gardens: between lots and throughout project / development / subdivision
  - Shallow ground water storage systems: between lots and throughout project / development / subdivision
  - Structures: inlets; beehive, grated, veined, etc.
  - Covenants and maintenance agreements
  - Building permit conditions / specific requirements for individual lots
  - Other
  - Foundation drains (separate system for foundation drains on hillside development)
- Maintenance; public / private, homeowner’s association, agreement(s)
- Structures: inlets, sumps, manholes; location, design, capacity, etc.
- Other

#### Comments

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### Erosion Control (must fully conform with EPA and MT DEQ)

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

Applies to and is required by MT DEQ and the City of Missoula on any/all projects greater than one (1) acre in size – include any/all access routes in calculation of the one (1) acre threshold. SWPPP Permit fees are based on acreage of disturbance.

**State of Montana AND City of Missoula SWPPP Permit are REQUIRED PRIOR to ANY site (project / development / subdivision) disturbance**

- [ ] Montana DEQ Notice of Termination (NOT); one (1) copy required – if/when applicable
- [ ] Montana DEQ Permit Transfer Notice (PTN); one (1) copy required – if/when applicable
- [ ] SWPPP (Storm Water Pollution Prevention Plan) and City of Missoula SWPPP permit required, annual renewal of State and City SWPPP permits is also 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 up to seventy (70%) percent construction and/or re-vegetation of disturbed area
- [ ] Other

**Comments**

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### Other Infrastructure Requirements – (if applicable)

*Stage 5, 6, 7*

If applicable, documentation (letter, email, photographs, etc.) is attached/included, that the following additional City of Missoula agencies and related interested parties have approved the pertinent requirements, including but NOT limited to:

- [ ] City Parks and Recreation Department (*boulevard trees, sprinkler systems, parks, open spaces, etc.*)
- [ ] City Fire Department (*fire protection / combustible construction, hydrants, equipment / fire truck access, etc.*)
- [ ] City Police Department (*life safety issues, emergency services access, property and structure(s) visibility, etc.*)
- [ ] City Building Division (*structure / construction, code requirements, etc.*)
Office of Planning and Grants (OPG) (zoning, subdivision regulations, conditions of approval, boulevard improvements, floodplain administrator, etc.)

City-County Health Department (air quality, water quality, food service, etc.)

Missoula Parking Commission (Central Business District [CBD], University Parking District)

Missoula County Public Works Department (overlapping projects, generally dry-laid sanitary sewer)

Mountain Line (bus structures and access)

Missoula Redevelopment Agency [MRA]

Montana Department of Transportation [MDT] (Federal and State motor vehicle / transportation routes)

University of Montana [UM] (University related projects)

Montana Rail Link [MRL]

Irrigation / Ditch Company District

Other
## UTILITY INFRASTRUCTURE

### SANITARY SEWER

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

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

**Comments**

### STORM SEWER

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type (Gravity, S.T.E.P., Force, Dry lay)</td>
<td></td>
</tr>
<tr>
<td>Conformance with current E.P.A. and state (MT D.E.Q.) rules, regulations and practices</td>
<td></td>
</tr>
<tr>
<td>Mains; location, sizing, profile, separation, specifications, calculations, etc.</td>
<td></td>
</tr>
<tr>
<td>Appurtenances; manholes, inlets, grates, outfalls, diffusers, beehives, etc.</td>
<td></td>
</tr>
<tr>
<td>Access; appurtenances, collection / retention / detention systems, etc.</td>
<td></td>
</tr>
<tr>
<td>Specifications; pipe type(s), sizing, bedding, gradations, marking and compaction</td>
<td></td>
</tr>
<tr>
<td>Shallow groundwater requirements</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
Comments

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

Stage 2, 3, 4, 5, 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
- Specifications; pipe type(s), sizing, bedding, gradations, marking and compaction
- Other

Comments

LIGHT UTILITIES

Stage 2, 3, 4, 5, 7

- Master Plan
- Gas; location, placement of related appurtenances, etc.
- Electric; location, placement of related appurtenances, street lights, etc.
- Communications – telephone, television, etc.; placement of related appurtenances
- Other

Comments

______________________________________________________________________________

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.

Developer Representative’s Signature                      Date