

## PHASE II DRAINAGE REPORT CHECK SHEET

Project Name \_\_\_\_\_

City No. \_\_\_\_\_

Initial Submittal \_\_\_\_ Yes \_\_\_\_ No

Resubmission # \_\_\_\_

Date \_\_\_\_\_

The purpose of this report is to finalize all design details which were either not covered in the Phase I Drainage Report, or which require adjustments resulting from the completion of the construction plans. All aspects of this design for all drainage facilities must be shown and supported in detail. Phase II Reports are typically required at Final Plan stage.

In addition to the Phase I Drainage Report Requirements, the following will be required in the Phase II Drainage Report.

Owner

City  
Review  
Y N

Y N

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|------|------|---|------|------|
| ____ | ____ | 1. Regulations: The optional provisions selected or the deviation from the Regulations, if any, and its justification.  | ____ | ____ |
| ____ | ____ | 2. Development Criteria Reference and Constraints: Previous drainage studies (i.e., project master plans) for the site in question that influence or are influenced by the drainage design and how the plan will affect drainage design for the site; The effects of adjacent drainage studies; The drainage impact of site constraints such as streets, utilities, rapid transit, existing structures, and development or site plan. | ____ | ____ |
| ____ | ____ | 3. Hydrological Criteria: Identify design rainfall; Identify runoff calculation method; Identify detention discharge and storage calculation method.  | ____ | ____ |
| ____ | ____ | 4. Identify Design Storm Recurrence Intervals: Discussion and justification of other criteria or calculation methods used that are not presented in or referenced by the Regulations.   | ____ | ____ |
| ____ | ____ | 5. Hydraulic Criteria: Identify various capacity references; Other drainage facility design criteria used that are not presented in the Regulations.  | ____ | ____ |
| ____ | ____ | 6. Variances from Criteria: Identify provisions by section number for which a variance is requested; Provide justification for each variance requested on a separate sheet.   | ____ | ____ |

—	—	7. Compliance with Standards: “Regulations”; “Major Drainage way Planning Studies”; “Development Manual”.	—	—
—	—	8. Hydrologic Computation: Land use assumptions regarding the project and adjacent properties; Table including Basin ID, Basin Acreage, Weighted Runoff Coefficient, Basin Length, Time of Concentration, Minor and Major Rainfall Intensity, Minor and Major Rational Runoff, and Routed Runoff (for major basins if applicable.); Supporting calculations for the Weighted Runoff Coefficients and Times of Concentration (vertical flow path shown on Map); Rational Runoff Calculations.	—	—
—	—	9. Hydraulic Computations: Gutter capacities with inlet design and spacing; Storm water collection pipe design (based on sub-basin rational flows and HGL/EGL calculations); Storm water trunk line design (based on major basin routed flows and HGL/EGL calculations); Energy dissipation and permanent erosion control devices; Culvert capacities; Open channel design; Check and drop structure design; Detention pond volume and discharge design including emergency spillway; Downstream outfall capacity to Major Drainage way.	—	—
—	—	10. General: All calculations required to achieve the final results must be shown in the appendices. All tables, charts, and nomographs used in the preparation of this report must also be included in the appendices, each following the computation where first utilized. The Hydraulic and Energy Grade Lines must be shown on all construction plan storm profiles. Velocity for storm sewers that discharge to open channels or detention ponds must be shown on plans.	—	—
—	—	11. Drainage Plan: Map(s) of the proposed development at a scale of 1” = 20’ to 1” = 200’ on a 24” x 36” drawing shall be included. Show all Phase I drawing requirements.	—	—
—	—	12. Show streets indicating name, ROW width, street width, sidewalk, etc. on drawings.	—	—
—	—	13. Show existing drainage facilities and structures, including irrigation ditches, roadside ditches, drainage ways, gutter flow directions, and culverts on drawings. All pertinent information such as material, size, shape, slope, and / location shall also be included.	—	—
—	—	14. Show overall drainage area boundary and drainage sub-area boundaries on drawings. Generally, off-site basins may be shown on the General Location map. In some instances, the City Engineer may require that all affected basins be shown on the Drainage Plan, in their entirety. A pre-submission conference should be held with the City Engineer prior to submittal.	—	—
—	—	15. Show the 100-year floodplain for open channels, streams, or other natural water courses not included in the FIRM mapping on a drawing.	—	—

—	—	16. Show proposed type of street flow (i.e., vertical or combination curb and gutter), gutter slope and flow directions, and cross pans, if available on a drawing.	—	—
—	—	17. Show proposed storm sewers and open drainage ways, if available, including inlets, manholes, culverts, other appurtenances, and riprap protection; location and (if known) elevation of all existing and proposed utilities affected by or affecting the drainage design; and definition of flow path leaving the development through the downstream properties ending at a major drainage way on drawings.	—	—
—	—	18. Show the routing of off-site drainage flow from tributary areas through the development on the drawings.	—	—
—	—	19. Show the proposed outfall point for runoff from the developed area and facilities to convey flows to the final outfall point without damage to downstream properties on the drawings.	—	—
—	—	20. Show the routing and accumulation of flows at various critical points for the initial storm run-off and significant changes in flow, and all drainage structures including manholes, inlets, junction boxes, culverts, and bridges on the drawings.	—	—
—	—	21. Show the volumes and release rates for detention storage facilities and information on outlet works and 100-year water line on the drawings.	—	—
—	—	22. Show the location and elevations of all existing floodplains affecting the property on the drawings.	—	—

*This check sheet is not intended to be an exhaustive listing of items to be reviewed by the City. It is a guide to assist with the preparation of Phase II Drainage Report and subsequent review by the City of O'Fallon.*

COMPLETED AND SUBMITTED BY:

\_\_\_\_\_  
Signature - Engineer/Surveyor                      Date

\_\_\_\_\_  
Signature - Owner    Date

REVIEWED BY CITY OF O'FALLON

\_\_\_\_\_  
Engineering    Date

\_\_\_\_\_  
Community Development    Date

Initial Submittal Date \_\_\_\_\_