

Chapter 54 Guidance and Submittal Checklist

ROAD OR LINEAR PROJECTS

| Project Information | | | |
|--|----------------------------------|---|---------------------------------------|
| Project name | Click or tap here to enter text. | | |
| Project number | Click or tap here to enter text. | | |
| Planning project manager | Click or tap here to enter text. | | |
| Design project manager | Click or tap here to enter text. | | |
| Consultant project manager (if applicable) | Click or tap here to enter text. | | |
| Primary Surface Water and Sewers (SWS) contact | Click or tap here to enter text. | | |
| Scoping or 0% Development | | | |
| Scoping or 0% Development Requirements | Deliverable | Chapter 54 Linear Guide Reference Section | Check the box when items are complete |
| Define the project area and scope | Project Narrative | Section 2.1 | <input type="checkbox"/> |
| Determine possibility of Chapter 54 applicability | Project Narrative | Section 2.2 | <input type="checkbox"/> |
| Identify the following: <ul style="list-style-type: none"> ▪ Watershed Management Organizations(s) (WMOs) ▪ Receiving waterbody(s), water quality requirements, and impairments (total maximum daily load or waste load allocation) ▪ Other relevant stormwater studies/priority areas ▪ Sustainable landscaping index (tree canopy, impervious area/vegetative cover) | Project Narrative | Section 2.3 | <input type="checkbox"/> |
| Scoping or 0% Deliverables | | | |
| Project Narrative | | | <input type="checkbox"/> |
| Concept drawing (cross section or plan concept layout of proposed street) | | | <input type="checkbox"/> |
| High-level, scoping cost estimate for stormwater management to inform the Capital Improvement Program | | | <input type="checkbox"/> |

| Concept Layout Development | | | |
|--|-------------------|---|---------------------------------------|
| Concept Layout Development Requirements | Deliverable | Chapter 54 Linear Guide Reference Section | Check the box when items are complete |
| Characterize the project area: <ul style="list-style-type: none"> ▪ Calculate total disturbed area, total drainage area (including area outside the disturbed area) and proposed impervious areas. For projects that have more than one WMO or receiving waterbody, break these calculations out by jurisdiction. ▪ Describe the types of stormwater best management practices (BMPs) expected | Concept Layout | Section 3.1 | <input type="checkbox"/> |
| Confirm Chapter 54 applicability | Project Narrative | Section 3.2 | <input type="checkbox"/> |
| Preliminary Water Quality Analysis <ul style="list-style-type: none"> ▪ Total suspended solids (TSS) goal and expected removal percentage ▪ Total phosphorus (TP) goal and expected removal percentage (if applicable) | Project Narrative | Section 3.3.1 | <input type="checkbox"/> |
| Preliminary Rate Control Analysis <ul style="list-style-type: none"> ▪ Increases to impervious area or changes in the total drainage area to an outfall or to a trunk system connection may require analysis and should be discussed with the primary SWS contact | Project Narrative | Section 3.3.2 | <input type="checkbox"/> |
| Preliminary Volume Control Analysis <ul style="list-style-type: none"> ▪ Volume retention requirement and estimated volume retention ▪ Preliminary infiltration assessment <ul style="list-style-type: none"> ○ Identify potential infiltration prohibitions and restrictions ○ Identify the need for additional geotechnical or environmental assessment | Project Narrative | Section 3.3.3 | <input type="checkbox"/> |
| Concept Layout Plan Deliverables | | | |
| Project Narrative, including preliminary design standard calculations for water quality, rate control (if applicable), and volume control | | | <input type="checkbox"/> |
| Concept layout plan sheet including designer's notes and considerations for stormwater management BMPs | | | <input type="checkbox"/> |
| Cost estimates for stormwater management; specify the funding sources (federal, county, state, etc.) and the internal division cost split | | | <input type="checkbox"/> |

30% Plan Development

| 30% Plan Development Requirements | Deliverable | Chapter 54 Linear Guide Reference Section | Check the box when items are complete |
|--|-------------|---|---------------------------------------|
| <p>Refine the Project Area</p> <ul style="list-style-type: none"> ▪ Refine disturbed areas ▪ Define the construction limits ▪ Calculate total disturbed area, total drainage area, and existing, proposed, and net new impervious surface areas. For projects that have more than one WMO or receiving waterbody, break these calculations out by jurisdiction. | Plans | Section 4.1 | <input type="checkbox"/> |
| Confirm Chapter 54 applicability | Report | Section 4.1.1 | <input type="checkbox"/> |
| <p>Update the Water Quality Analysis broken out by WMO and receiving waterbody, as needed</p> <ul style="list-style-type: none"> ▪ TSS requirement and expected removal percentage ▪ TP requirement and expected removal percentage (if applicable) | Report | Section 4.2.1 | <input type="checkbox"/> |
| <p>Rate Control Analysis</p> <ul style="list-style-type: none"> ▪ Increases to impervious area or changes in the total drainage area to an outfall or to a trunk system connection may require analysis and should be discussed with the primary SWS contact | Report | Section 4.2.2 | <input type="checkbox"/> |
| <p>Update the Volume Control Analysis broken out by WMO and receiving waterbody, as needed</p> <ul style="list-style-type: none"> ▪ Volume retention requirement and proposed volume retention ▪ Infiltration assessment <ul style="list-style-type: none"> ○ Identify potential infiltration prohibitions and restrictions ○ Consider the need for additional geotechnical or environmental assessment | Report | Section 4.2.3 | <input type="checkbox"/> |
| Document project constraints in draft report | Report | Section 4.2 | <input type="checkbox"/> |
| Coordinate with the City Forester's office regarding tree preservation requirements near stormwater BMPs | Plans | N/A | <input type="checkbox"/> |
| <p>Update the areas of proposed stormwater BMPs, including locations and extent of BMPs, and include connections to the storm sewer system</p> <ul style="list-style-type: none"> • Provide typical sections and design details of the proposed BMP types | Plans | Section 4.3 | <input type="checkbox"/> |
| <p>Operation and Maintenance</p> <ul style="list-style-type: none"> • Initial coordination with SWS Operations through the primary SWS contact for unique and proprietary stormwater BMPs or maintenance agreements | Report | Section 4.4 | <input type="checkbox"/> |

| 30% Plan Deliverables | | | |
|---|--------------------------|---|---------------------------------------|
| 30% Plan Set | | | <input type="checkbox"/> |
| Stormwater Management Report (preliminary draft only) | | | <input type="checkbox"/> |
| Cost estimates for stormwater management consistent with the 30% plans and Stormwater Management Report; specify the funding sources (federal, county, state, etc.) and the internal division cost split | | | <input type="checkbox"/> |
| 60% Plan Development | | | |
| 60% Plan Development Requirements | Deliverable | Chapter 54 Linear Guide Reference Section | Check the box when items are complete |
| Hold a comment resolution meeting if design team has questions about comments or design team doesn't accept or agree to implement all SWS comments, if needed. | Initial Comment Response | N/A | <input type="checkbox"/> |
| Update the Water Quality Analysis with modeling to demonstrate compliance for each WMO and receiving waterbody broken. Modeling should include a summary of the results. | Report | Section 5.1.1 | <input type="checkbox"/> |
| Update the Rate Control Analysis with hydrologic and hydraulic (H&H) modeling, if necessary, based on previous rate control analysis and discussions with SWS. Modeling should include a summary of the results. | Report | Section 5.1.2 | <input type="checkbox"/> |
| Update the Volume Control Analysis based on new project information or updated soil data, broken out by jurisdiction when applicable. Provide updated volume retention requirement and proposed volume retention. Update infiltration assessment including assumed infiltration rates and potential location of issues. If additional geotechnical investigation or environmental assessment was required, include results from the investigation. | Report | Section 5.1.3 | <input type="checkbox"/> |
| Document project constraints in Stormwater Management Report | Report | N/A | <input type="checkbox"/> |
| Stormwater BMPs (per BMP): <ul style="list-style-type: none"> ○ Design (cross-section, type (infiltration/filtration), underdrains, connections to storm sewer system, etc.) ○ Location and details for Inlets, pretreatment, and energy dissipation (where applicable) | Plans | Section 5.2 | <input type="checkbox"/> |
| Operation and Maintenance <ul style="list-style-type: none"> ▪ Follow-up meeting with SWS to discuss maintenance, access and special needs relating to access (i.e., concrete drive access, reinforced turf path, maximum side slopes, etc.) | Report | Section 5.3 | <input type="checkbox"/> |

| 60% Plan Deliverables | | | |
|--|--------------------------|---|---------------------------------------|
| 30% Comment Resolution Responses. The above referenced comment resolution meeting should be conducted before finalizing 30% Comment Resolution Responses. | | | <input type="checkbox"/> |
| 60% Plan Set | | | <input type="checkbox"/> |
| Draft Stormwater Management Report | | | <input type="checkbox"/> |
| Operations and Maintenance Plan (only applicable for unique and proprietary BMPs) | | | <input type="checkbox"/> |
| Cost estimates for stormwater management consistent with the 60% plans and Stormwater Management Report | | | <input type="checkbox"/> |
| 90% Plan Development | | | |
| 90% Plan Development Requirements | Deliverable | Chapter 54 Linear Guide Reference Section | Check the box when items are complete |
| Hold a comment resolution meeting if design team has questions about comments or design team doesn't accept or agree to implement all SWS comments, if needed. | Initial Comment Response | N/A | <input type="checkbox"/> |
| Update Stormwater Management Report, modeling, and design drawings per 60% comments and other project constraints | Report, Plans | Section 6 | <input type="checkbox"/> |
| Operation and Maintenance (O&M) <ul style="list-style-type: none"> ▪ Ongoing coordination with SWS to discuss maintenance | Report | Section 6 | <input type="checkbox"/> |
| 90% Plan Deliverables | | | |
| 60% Comment Resolution Responses. The above referenced comment resolution meeting should be conducted before finalizing 60% Comment Resolution Responses. | | | <input type="checkbox"/> |
| 90% Plan Set | | | <input type="checkbox"/> |
| Draft Stormwater Management Report | | | <input type="checkbox"/> |
| Operations and Maintenance Plan (only applicable for unique and proprietary BMPs) | | | <input type="checkbox"/> |
| Cost estimates for stormwater management consistent with the 90% plans and Stormwater Management Report | | | <input type="checkbox"/> |
| Draft of Division S Special Provisions (complete set addressing all Chapter 54 items) | | | <input type="checkbox"/> |
| 100% Plan Development and Final Submittals | | | |
| 100% Plan Development Requirements | Deliverable | Chapter 54 Linear Guide Reference Section | Check the box when items are complete |
| Ensure the final submittals maintain compliance with Chapter 54 | Report, Plans | Section 7 | <input type="checkbox"/> |

| 100% or Final Plan Deliverables | |
|---|--------------------------|
| 90% Comment Resolution Responses. Additional comment resolution meetings may be necessary prior to finalizing 90% Comment Resolution Responses. | <input type="checkbox"/> |
| 100% Construction Plans signed by a Minnesota registered and licensed professional engineer | <input type="checkbox"/> |
| Final Stormwater Management Report in accordance with the provided submittal checklist (below) <ul style="list-style-type: none"> ▪ Includes a Minnesota registered and licensed professional Engineer’s Certification ▪ Complies with Chapter 54 requirements ▪ Approved by SWS | <input type="checkbox"/> |
| Final Models in their native electronic format and PDF of inputs and outputs | <input type="checkbox"/> |
| Final Microstation or AutoCAD native design files of the proposed stormwater management system in .dgn or .dwg | <input type="checkbox"/> |
| Final Operations and Maintenance Plan (only applicable for unique and proprietary BMPs) | <input type="checkbox"/> |
| Final Division 5 Special Provisions | <input type="checkbox"/> |
| Final Engineer’s Cost Estimate (addressing all Chapter 54 items) | <input type="checkbox"/> |
| Stormwater Management BMP Tracking Entry Forms (Linear Guide Appendix D) | <input type="checkbox"/> |

| Notes or Additional Information |
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| <p>Click or tap here to enter text.</p> |

Project Milestone Approvals

SCOPING OR 0% DEVELOPMENT REQUIREMENTS

| | |
|---|--|
| Documents submitted to SWS: | CLICK OR TAP HERE TO ENTER TEXT. |
| Is the project ready to move to the next milestone? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Follow-up/Resubmittals Required: | CLICK OR TAP HERE TO ENTER TEXT. |
| CLICK OR TAP HERE TO ENTER TEXT. | CLICK OR TAP HERE TO ENTER TEXT. |

SWS Reviewer

Date

CONCEPT LAYOUT PLAN DEVELOPMENT REQUIREMENTS

| | |
|---|--|
| Documents submitted to SWS: | CLICK OR TAP HERE TO ENTER TEXT. |
| Is the project ready to move to the next milestone? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Follow-up/Resubmittals Required: | CLICK OR TAP HERE TO ENTER TEXT. |
| CLICK OR TAP HERE TO ENTER TEXT. | CLICK OR TAP HERE TO ENTER TEXT. |

SWS Reviewer

Date

30% PLAN DEVELOPMENT REQUIREMENTS

| | |
|---|--|
| Documents submitted to SWS: | CLICK OR TAP HERE TO ENTER TEXT. |
| Is the project ready to move to the next milestone? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Follow-up/Resubmittals Required: | CLICK OR TAP HERE TO ENTER TEXT. |
| CLICK OR TAP HERE TO ENTER TEXT. | CLICK OR TAP HERE TO ENTER TEXT. |

SWS Reviewer

Date

60% PLAN DEVELOPMENT REQUIREMENTS

| | |
|---|--|
| Documents submitted to SWS: | CLICK OR TAP HERE TO ENTER TEXT. |
| Is the project ready to move to the next milestone? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Follow-up/Resubmittals Required: | CLICK OR TAP HERE TO ENTER TEXT. |
| CLICK OR TAP HERE TO ENTER TEXT. | CLICK OR TAP HERE TO ENTER TEXT. |

SWS Reviewer

Date

90% PLAN DEVELOPMENT REQUIREMENTS

| | |
|---|--|
| Documents submitted to SWS: | CLICK OR TAP HERE TO ENTER TEXT. |
| Is the project ready to move to the next milestone? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Follow-up/Resubmittals Required: | CLICK OR TAP HERE TO ENTER TEXT. |
| CLICK OR TAP HERE TO ENTER TEXT. | CLICK OR TAP HERE TO ENTER TEXT. |

SWS Reviewer

Date

100% PLAN DEVELOPMENT AND FINAL SUBMITTALS REQUIREMENTS

| | |
|---|--|
| Documents submitted to SWS: | CLICK OR TAP HERE TO ENTER TEXT. |
| Is the project ready to move to the next milestone? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Follow-up/Resubmittals Required: | CLICK OR TAP HERE TO ENTER TEXT. |
| CLICK OR TAP HERE TO ENTER TEXT. | CLICK OR TAP HERE TO ENTER TEXT. |

SWS Reviewer

Date