



# *ENGINEERING PLAN REQUIREMENTS*

*City of Ramsey*

*Revised 3/28/2018*

This document is the summary of the City of Ramsey Engineering Department plan set requirements for all new developments. Further detail of City of Ramsey design standards can be found in City of Ramsey Engineering Design Standards.

## Required on All Plan Sheets

| Approved                 | Denied                   | Not Provided             | Not Required             | Description  |
|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plan must be certified by an engineer licensed in the State of Minnesota, certifying the plan was prepared under their direct supervision. Signed by said Engineer in a certification block. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Date of plan preparation and revision(s), with revision description(s).  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Graphic Scale – 1” = 50’ horizontal, 1” = 10’ vertical (typ.).   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | North Arrow - pointing to True North.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Legend - provide symbols, labels, and line types for each feature indicated on the plan sheet.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location and name of existing streets and other public ways, railroads, parks, public open spaces, right of ways, and easements.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Match lines and referenced sheet numbers.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Addresses for all existing and platted lots, PID number if no address is available.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Property lines, block numbers and lot numbers for proposed lots  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location of delineated wetlands and floodplain boundaries.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum sheet size - 24" x 36"   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All required notes necessary to complete construction.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Legible text with no overlapping lines or text.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Discipline specific Plan Sheets with related improvements standing out.  |

**Comments:**

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| <b>TITLE SHEET</b>       |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <b>Approved</b>          | <b>Denied</b>            | <b>Not Provided</b>      | <b>Not Required</b>      | <b>Description</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show project location and overall scope of project.         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Street names of impacted and intersecting streets.          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Scale and north arrow                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Sheet index - sheet numbering and sheet title               |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Project name, project description, and City project number. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Benchmarks used, including datum.                           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Governing specifications.                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | GSOC website, address and phone number.                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Signature block.  |
| <b>Comments:</b>         |                          |                          |                          |   |
|                          |                          |                          |                          |   |
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| <b>GENERAL LAYOUT PLAN SHEET</b> |                          |                          |                          |   |
|----------------------------------|--------------------------|--------------------------|--------------------------|---|
| <b>Approved</b>                  | <b>Denied</b>            | <b>Not Provided</b>      | <b>Not Required</b>      | <b>Description</b>  |
| <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Include layout of entire project area showing general scope of proposed improvements. |
| <input type="checkbox"/>         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Index of corresponding plan sheet windows with sheet numbers referenced.              |
| <b>Comments:</b>                 |                          |                          |                          |   |
|                                  |                          |                          |                          |   |
|                                  |                          |                          |                          |   |
|                                  |                          |                          |                          |   |

## EXISTING CONDITIONS / SITE PLAN

| Approved                 | Denied                   | Not Provided             | Not Required             | Description  |
|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All topographic information must be shown to a minimum 100' beyond the plat boundary.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location of existing roadways including; roadway centerline, width, type of surfacing, curb and gutter type.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All existing public and private utilities. Structures must include rim and invert elevations. Private utility information must be based on locates and/or locate maps provided by the utility owner. A note of utility quality level must be included. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Significant physical features must be shown; trees, landscaping, water courses, lakes, wetlands, etc.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Existing ground contours at vertical intervals of not more than two feet (2'), except where the horizontal contour interval is 100 feet (100') or more, a one-foot (1') vertical interval shall be shown.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Elevation of all existing property lines adjacent to plat (field verified).  |
| <b>Comments:</b>         |                          |                          |                          |  |
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## GRADING AND DRAINAGE PLAN

| Approved                 | Denied                   | Not Provided             | Not Required             | Description   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Required slopes; maximum allowable slope is 1:4 (vert.:horz.). Minimum allowable slope is 2.0%. Boulevards shall be sloped at 4.0%. Maximum driveway slope is 10.0%.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Spot elevations must be provided at all lot corners and along the centerline of drainage swales which do not coincide with common property lines.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Proposed drainage arrows with elevations must be shown along streets and drainage swales.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Existing contours (dashed and in background) and proposed contours (solid line) at vertical intervals of not more than two feet (2'), except where the horizontal contour is one hundred feet (100') or more, a one-foot (1') vertical interval shall be shown. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | For all ponds and wetlands show NWL, 100-year HWL, and EOF.   |

|                          |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location of all delineated wetlands and floodplain boundaries.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lots without municipal sewer must provide the location for the on-site septic drain field area and replacement.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location of designated building pad with proposed garage floor elevation, type of building, lowest opening elevation, and lowest floor elevation.       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Legends must be given to describe the information provided on the building pad and describing the building types used on the project.                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Proposed lot table showing; block #, lot #, building type, garage floor elevation, lowest opening elevation, lowest floor elevation, NWL, HWL, and EOF. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show proposed storm sewer improvements.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show and label all existing underground and overhead utilities.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ponds shall include a 10 foot wide bench sloped at 1:10 (vert.:horz.) from NWL to 1 foot below NWL.   |
| <b>Comments:</b>         |                          |                          |                          |   |
|                          |                          |                          |                          |   |
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| <b>STREET LIGHTING PLAN</b> |                          |                          |                          |  |
|-----------------------------|--------------------------|--------------------------|--------------------------|--|
| <b>Approved</b>             | <b>Denied</b>            | <b>Not Provided</b>      | <b>Not Required</b>      | <b>Description</b>   |
| <input type="checkbox"/>    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Include layout for entire project. 25' LED lights provided at intersections, and cul-de-sacs (case by case). 25' or 14' LED lights provided along streets with 400 feet or greater between intersections, and sharp curves or other unsafe sight obstructions. |
| <input type="checkbox"/>    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14' LED lights provided at crosswalks. Trails and sidewalks (case by case), proximity to vehicular traffic and the projected vehicular and pedestrian volumes will determine need and spacing.   |
| <b>Comments:</b>            |                          |                          |                          |  |
|                             |                          |                          |                          |  |

## EROSION AND SEDIMENT CONTROL PLAN

| Approved                 | Denied                   | Not Provided             | Not Required             | Description   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show and label all existing underground and overhead utilities.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show all erosion control measures as needed; silt fence, inlet protection, rip rap, construction entrances, etc. Erosion control logs may not be used on paved surfaces for inlet protection.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Identify temporary erosion control measures to protect existing and proposed storm sewer inlets, and the phasing of installation and removal.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Identify the locations of all delineated wetlands and floodplain boundaries. Any areas of wetland proposed to be removed and/or mitigated must be indicated.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Any infiltration basin must be constructed in accordance with the Minnesota Stormwater Manual. Infiltration is not allowed within the 10-year capture zone of municipal wells. If the project is within the 10-year capture zone the design engineer must submit an engineer's estimate for an infiltration basin sized to accommodate the project, and the developer must pay into the infiltration mitigation fund. |
|                          |                          |                          |                          | <b>SWPPP Requirements</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | The SWPPP must include all information as required by the General Stormwater Construction permit. Refer to the Minnesota Pollution Control Agency website for more information.<br><a href="https://www.pca.state.mn.us/">https://www.pca.state.mn.us/</a>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A project scope is required which outlines the specific work to be carried out on this project.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A development summary must be included which describes existing and proposed site conditions, including area calcs.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All proper contacts must be included; owner, permittee, operator, designer with training record, local agency, MPCA compliance contact.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A Location Map with 1 mile radius, must show Special / Impaired Waters on map.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | BMP Summary Table, columns include; BMP Items, Quantities, and Page Number(s).  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Included in record keeping the note "All inspection logs must be submitted to the City. Inspection notes after a rainfall event and weekly notes must be emailed to the City inspector. The complete history must be submitted prior to finalizing the project."  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Notice of Termination (NOT) note "City must approve NOT before it is submitted."  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Soils Map (if included) must include table listing; symbol, soil type, hydraulic soil group, erodibility. List erodibility abbreviations and description after table.   |
| <b>Comments:</b>         |                          |                          |                          |   |
|                          |                          |                          |                          |   |

## SANITARY SEWER AND WATERMAIN PLANS

| Approved                 | Denied                   | Not Provided             | Not Required             | Description   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
|                          |                          |                          |                          | <b>Plan View</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | May be shown on separate sheets or combined on one.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plan view of existing and proposed sanitary sewer and watermain; label size and type of mainlines. Label all structures including; sanitary sewer manholes, cleanouts, watermain bends, valves, and hydrants.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Services for each lot shall be labeled. Water service (W) include; station of service on road centerline alignment, curb stop surface elevation, feet of 1" copper line. Sanitary service (S) include; station of service on road centerline alignment or station from downstream manhole, elevation at the end of the service stub, the vertical height of any required riser. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show and label existing underground and overhead utilities.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Alignments with stationing for each utility.  |
|                          |                          |                          |                          | <b>Profile View</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Profile view must follow street centerline alignment stationing, profile view must include; stationing, proposed and existing elevations. The profile grid must align with street stationing in plan view   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show and label proposed (solid line) and existing ground (dashed line).   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Watermain; size, type, length, and minimum coverage depth. Label station of any; valves, tees, and connections.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Sanitary sewer pipe; size, type, length, grade as percentage.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Sanitary sewer structures; name, size, type, rim elevation, build, all invert elevations including direction.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show all proposed and existing storm sewer as dashed line type.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show all pipe crossings and conflicts.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All proposed sanitary sewer and watermain crossings must be shown in profile view to the same standards as described above.   |
| <b>Comments:</b>         |                          |                          |                          |   |
|                          |                          |                          |                          |   |
|                          |                          |                          |                          |   |
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## STREET AND STORM SEWER PLAN

| Approved                 | Denied                   | Not Provided             | Not Required             | Description   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
|                          |                          |                          |                          | <b>Plan View</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | May be shown on separate sheets or combined in one.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show proposed centerline of streets, existing and proposed storm sewers, and drainage ditches in a bold line type.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show any sanitary sewer and watermain in project area in a screened line type.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location and widths of proposed roadways, trails, sidewalks, right of way, and easements.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Note all match lines; match line sheets must be in succession as practical.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show and label existing underground and overhead utilities.   |
|                          |                          |                          |                          | <b>Profile View</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Profile view showing existing ground (dashed line) and proposed profile (solid line) along the proposed centerline alignment, and along pipe centerline for storm sewer crossing profiles. Profile view must include; stationing, proposed and existing elevations. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Include and label pipe type and size of all pipe crossings.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show vertical curve data including; curve length, PVC station and elevation, PVT station and elevation, PVI station and elevation. Line grade as a percentage. Grade break station and elevation, including project match-in location.                              |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Proposed storm sewer system pipe label; type, size, length, slope. Structure label; name, type, size, build, rim elevation, casting, all invert elevations with direction, sump elevation as needed.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All non-typical structures will require an additional detail showing all pertinent information.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All storm sewer pipe and structure crossing must be shown in profile view to the same standards as stated above.  |
| <b>Comments:</b>         |                          |                          |                          |   |
|                          |                          |                          |                          |   |
|                          |                          |                          |                          |   |
|                          |                          |                          |                          |   |





