



SEWER PLAN CHECKLIST

PROJECT NAME _____ PLAN CHECKER _____ DATE _____

	1 ST Check	2 nd Check	3 rd Check	Mylars	Comments
I. ALL SHEETS					
A. Medium					
1. 24"x36" size Mylar film conforming to City format					
2. No "sticky back", glued or taped on sections					
3. Drawn with waterproof ink or reproduced on photographic emulsion Mylar film, no Diazo or Xerographic copies					
B. Signed by the Engineer-of- Work, date of expiration of registration adjacent to signature					
C. Marked with the name, address and telephone number of the firm preparing the plans and date of preparation					
D. Consecutively numbered & the total number of sheets					
E. Lettered in a neat and legible style, no hand lettering smaller than 1/8" and no machine letter smaller than 1/10"					
F. Name and phase of development. Street name & construction limits. See I.O. (N/A to title sheet)					Required for archive retrieval
G. Confirm City benchmark identification, location and elevation noted					NMC to match Stantec and should be based on SB Co. OMC contact Ann Marie @ City
H. Prepared to appropriate scale(s)					
I. Scale noted. North arrow (oriented up or to right) & bar scale					
J. Use standard plans and details to maximum extent. Check drawing for dimensions shown on plans. Show detail for non-std improvements					

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K. Note all reference drawings on plans					
L. Clearly designate between existing conditions (dashed) and work proposed (solid)					
M. No duplication of any section or detail designation					
N. Use City standard Title block per Std 6004					
O. Title Block with "Water Improvement Plan & Profile" (top line); street name (2 nd line) and limits of construction "From <u>street intersection</u> to <u>street intersection</u> (or <u>XXX' N,S,E,W</u>)" (3 rd line)					Required for archive retrieval
P. Acceptance block// Recommended By: Louis Abi-Younes/Asst. City Engineer RCE 44485 Exp 3-31-08. Accepted By: John P. Sullivan/City Engineer RCE 24079 Exp 12-31-07. (public facilities only)					
Q. All existing & proposed easements clearly shown. Clearly indicate private or public. (City min. width 15'). 20' on dead ends over 300'					061019 Design Guidelines Sec 1.2
R. Compare to Conditions of Approval & approved Tentative Map or Site Plan					
S. Review Master Plan Sewer Study for location & size					
II. TITLE SHEET					
A. Heading centered at top of sheet "Sewer Improvement Plans for _____ in City of Ontario"					
B. Consultant recommendation for acceptance block (public facilities only)					
C. Standard General Notes & construction notes provided. Construction notes match plans					
D. Additional notes are designated as "Special Notes"					
E. Confirm note 17 states stationing is per pipe CL					
F. Basis of bearing provided					
G. Index Map					
1. Scale is 1" = 100' or 1" = 500'					
2. Sheet coverage shown					

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3. Located on Title Sheet					
4. Street Names shown					
5. Identify areas in the County					
6. Show sewer line, MHs with MH #s, & flow direction arrows on sewer line (info may be shown on larger "System Map" on sheet 2)					
F. Vicinity Map					
1. Orient north as on index map					
2. Arterial streets shown					
3. Project location shown					
G. Legend					
1. Symbols per City standards per 6002-6003					
2. Non-standard symbols and abbreviations used are listed and described					
H. All reference drawings are listed					
I. Owners/Developers name and address shown					
J. Separate written justification for deviations provided					
K. Quantity estimates provided and broken out between public and private & per tract if multi-tract project (Private facilities are not to be included in cost estimate)					
L. Underground service alert					
M. Is there a fully completed "Legal Description of Property"? Match title report					
III. PLAN VIEW					
A. Plan View Shows					
1. Horizontal Scale 1"=40'					
2. Show only construction notes used on sheet					
3. Lot lines, centerline, right-of-way lines, City limits adjacent to project match st imp & FM					

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4. Approved name of street shown (when available)					
5. Bearing and centerline curve data.					
6. Show all driveways & water mains and laterals					
7. Sewer constructed to sewer bdry w/in ROW					
8. State whether the sewer system is "public" or "private" (property owner owned and maintained). The jurisdictional boundary must be clearly delineated. Public sewer to be in min 15' easement					
9. Stationing to match existing plans. New stationing shall increase west to east or south to north, except where street ends in west of south cul-de-sac.					
10. Identical stationing on consecutive sheets					
11. Plan & profile views are to be aligned					
12. Bearings & stationing of all street centerlines					
13. Sewer constructed to boundary w/in ROW					
14. Station @ begin & end of improvements & @ CL of D/W					
15. Sewer station numbers xx+xx.xx, independent of street station. Show for all appurtenances (e.g., manholes, laterals, etc..) along the path of the sewer line. Begin @ lowest MH & increase upstream					
16. Section views of all pipelines crossing sewer mains should be in the profile view of the sewer main.					
17. Terminal MH is required at the PL or City boundary w/in ROW					
18. Drop manholes per Std 2002.					
19. All sewer lines to terminate in MH. Including stub outs to future connections					
20. Reverse horizontal curves are not allowed.					
21. Show flow direction arrows on sewer line.					

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22. Stationing of all structures and BC & EC of all curves					
23. Slopes in excess of 45 degrees (50% slope) to the horizontal are not allowed.					
24. Trees and buildings are not allowed over sewer easements.					
25. Except in special cases, block walls are not allowed over sewer easements.					
26. Topography shown per city std					
27. Crossing (invert) elevations should be given when a sanitary sewer line crosses another pipeline.					
28. Do sanitary sewer mains and laterals conform to City Standards (with respect to the following)?					
a) Min size for mains = 8" for interior streets & per master plans on perimeter streets SFR lat = 4" min; MFR & Com/Ind lat = 6" min (Std 2003)					
b) All mains and laterals shall be VCP					
c) Acceptable radius of curvature of pipeline layout (for main lines, allowable curvature dependent upon pipe size material: service laterals must be straight).					
d) Horizontal clear with other utilities (min 10' Otherwise protective casing or higher grade pipe material required).					
e) Vertical clearance with other utilities (min 1' w/out joints, sewer lines to be below all other pipelines) Add note "Center one length of pipe underneath the <i>utility</i> " per std 4001.					
f) Located per std 1302-1304. Other locations per city approval.					
29. Sewer stationing to conform with stationing of existing plans					
30. Easements for sewer facilities 15' minimum. Additional 10' for each additional utility w/in the easement.					

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31. Show easement limits & course. Easement not to be centered on lot lines					
32. Sewer laterals to conform to std 2003					
33. Each building should have at least one (1) separate lateral coming off the main line.					
34. Sewer laterals cannot run across an adjacent property line (except under certain hardship cases, such as "landlocked" properties).					
35. Sewer laterals cannot come off of the other sewer laterals.					
36. No laterals opposite each other. Min 2' separation					
37. Sewer laterals are to extend to the property line and be stationed					
38. All plan sheets to have house lateral location block (design station & as-built station)					
39. Show all water laterals. Min separation is 5'					
40. Show all ex pipes, irr lines, structures, etc in ROW or adj to ROW that might affect design					
41. On single family residences, sewer laterals and water service laterals must be at least 5 feet apart.					
42. A sampling manhole is required when a common sewer lateral has branches going to more than one building. A manhole is required at each junction point, along with an easement around the common lateral and manhole (s).					
43. If a sewer lateral serves one building only, a manhole should be installed at the property line.					
44. Show, label, & dimension all existing or proposed st lt, FH, and underground utilities					
45. Show existing, proposed & future ROW & improvements widths. Should conform to street plans					
46. All existing sewer facilities should be completely and correctly shown					

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47. All existing and proposed points of connection to existing facilities to be correctly depicted.					
48. All proposed sewer facilities should be in conformance with all applicable Water Districts Master Plans.					
49. Residential sewer laterals must have backflow prevention devices if the nearest upstream manhole rim elevation is higher than the pad elevation.					
50. Maximum MH spacing is 350'					
51. Where lateral size is 8" or larger, connection is to be at MH					
52. Lot lines, frontage distance, & lot #s to match map					
53. Show detail of rechannelizing of bottom of existing MH where required					
54. No sewer is to pass under buildings					
Profile View shows:					
1. Horizontal scale same as plan view 1"=40'					
2. Vertical scale at 1" = 4' (new); 1" = 2' (existing)					
3. Label all profiles					
4. Names & CL stationing of intersecting streets					
5. Label & show connection to existing sewer w/ elevation & grade. Denote existing in ()					
6. Datum elevation at both ends of each street					
7. 100' stationing at bottom of profile					
8. Show finished street surface on top of sewer					
9. Show existing street surface on top of sewer					
10. Names & centerline stations of existing street					
11. Label and show stations and elevations at end of sewer and at sewer crossings; rim and inverts of manhole and cleanouts					

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12. Sewer line grade correctly shown					
13. Show size and material of sewer main					
14. No vertical curves (concave or convex) in sewer. GB @ MH only					
15. Show location and bottom or top elevations of all crossings or parallel pipes or structures that might enter into the design of the sewer					
16. Elevations in profile and plan section match					
17. Profiles and elevations the same on each sheet or section of match lines					
18. Show all MHs to be adjusted to grade					
19. Minimum amount of overhead cover (Public Facilities: 7 feet; Private Facilities: 6 feet under sidewalk, with 2 percent pipe slope up to property line or terminal cleanout).					Current conflict between 061019 Design Guidelines Sec 3.3 (7.5') & Std Dwg 1302-1304 (10'). Verbal direction from City is 7'
20. Compare design to existing plans, if any.					
21. Maintain 0.20 foot drop between flow line of inlet and outlet at manholes. Flowline of side inlets shall be min 0.20 feet higher than outlet per std 2010.					
22. For OMC plans: min. grade for 8" diam. pipe is 0.004. If min. cleansing velocity of 2 fps at peak flow can be demonstrated by calculations for 10" or greater pipe, then slope less than 0.004 may be approved. For NMC plans: minimum grade for 8" diameter pipe shall be = .0057.					
23. Call out sewer bedding for each pipe length per Std Dwg 2104/2105. Bedding is to based on the deepest elevation within pipe length					
24. SAMP submitted for NMC project?					

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