City of Santa Clarita
Engineering Services Division
23920 Valencia Boulevard, Suite 104
Santa Clarita, California 91355
(661) 255-4942

SEWER AREA STUDY CORRECTION SHEET

MC# _____ Master Case No.	_____ Assessor's Parcel No.	_____ Tract / Parcel No. / Address	_____ Lot No's.
ENG _____ Project No.	SS _____ Case No.	_____ Street Name	
_____ Owner	_____ Telephone No.	_____ e-mail address	Plan Check No. / Date - - - - - - - - - - - - - - - - - - 1 2 3 4
_____ Design Engineer	_____ Telephone No.	_____ e-mail address	
_____ Plan Checker	_____ Telephone No.	_____ e-mail address	

Return this Correction Sheet with your next submittal

A. GENERAL INFORMATION

1. The City's approval of this study does not permit the violation of building codes, ordinances or state laws.
2. Counter consultations are not guaranteed unless scheduled in advance with the Plan Checker.
3. Standard forms used by this division are available on the City's website at: http://www.santa-clarita.com/city-hall/departments/public-works/engineering-services/engineering-services-forms
4. The City uses the following design standards for sewer area studies:
   - Los Angeles County, Department of Public Works, Private Contract Sanitary Sewer Procedural Manual

B. APPROVAL & PERMIT PROCESS

1. Prior to Sewer Area Study approval, the study shall address the information and corrections indicated by the circled items on this Sewer Area Study Correction Sheet.
2. This Sewer Area Study Correction Sheet must be returned with the red-lined check prints and two (2) copies of the revised study after corrections have been made.
3. Sewer Area Studies are valid for two (2) years upon approval.

C. CITY APPROVALS

Planning (661) 255-4330

1. Obtain approval of the proposed tentative map/site plan from the City's Planning Division (the Sewer Area Study cannot be approved until Planning approval is obtained). Submit two (2) copies of the following to the Planning Division:
   a. Proposed tentative map/site plan
   b. Assessor Map with all parcels included in the proposed project highlighted
   c. Environmental documents prepared pursuant to CEQA requirements (i.e. Initial Study, Draft EIR, Negative Declaration)

Engineering Services (661) 286-4060

1. Complete and submit the Sewer Use Permit Application.

D. FEES

1. Submit payment for the Sewer Area Study review fee: $_____.
2. Submit payment for Sewer Model updating: $_____.

E. OUTSIDE AGENCY APPROVALS

Los Angeles County, Department of Public Works, Land Development Division

1. Sewage from the proposed development is draining from Los Angeles County into the City of Santa Clarita. The developer's engineer shall submit a sewer area study concurrently to the County and the City for plan check. An approval stamp will be placed on the area study and map when the County approves the study. The County will forward two copies of the approved study to the City for City use. Any upgrades to the City system, as identified in the approved area study, will become conditioned upon the tract/project. The developer will be required to pay double the cost estimate with a non-refundable cash deposit for the upgrades or construct the required segments per the approved study. The City then signs the County sewer plans "For Discharge Only," provided all identified upgrades have been paid for or constructed.

Newhall County Water District (NCWD) (661) 259-3610

2. Obtain approval to connect to NCWD trunk sewer. The developer's engineer shall submit a sewer area study concurrently to Newhall County Water District (NCWD) and the City for plan check. An approval stamp will be placed on the area study and map when NCWD approves the study. NCWD will forward two copies of the approved study to the City for City use. Any upgrades to the City system, as identified in the approved area study, will become requirements of the tract/project. The developer will be required to pay double the cost estimate with a non-refundable cash deposit for the upgrades or construct the required segments per the approved study. The City then signs NCWD's sewer plans "For Discharge Only," provided all identified upgrades have been paid for or constructed.

F. SEWER AREA STUDY

General

1. The Study and Map shall be signed and stamped by a licensed civil engineer.
2. Submit a copy of the proposed tentative tract map/site plan approved by the Planning Division (with Planning's approval stamp).
3. The Study shall include copies of the Sewer Maintenance District (SMD) maps as follows:
   a. highlight the proposed project boundary
   b. highlight the existing sewer main from the proposed project site to the connection at the trunk sewer
   c. outline the tributary drainage area(s)
   d. indicate the direction of flow
   e. sewer manhole numbers shall be left intact (do not cross out)
4. The Study shall include a copy of all existing mainline sewer plans from the project site to the trunk connection.
5. Submit a topographic map (with a 10-foot contour interval) which highlights the tributary drainage area(s).
6. Submit a copy of the following for reference: _____

Study Narrative Requirements

1. Title Page
2. Table of Contents (the table shall list all exhibits, appendices and attachments to the study)
3. Introduction
4. Site Description
5. Project Description (i.e. number of lots, parks, schools, open space, etc.)
6. Description of proposed sewer system (i.e. gravity, force main, range of pipe sizes and slopes, etc)
7. Description of existing sewer system (include PC numbers, and location of connection to the trunk sewer)
8. Methodology used and list of references
9. Sewer Capacity Analysis findings (impacts to existing sewer system)
10. Proposed mitigation (address how the findings of the Sewer Capacity Analysis will be mitigated)
11. Conclusion
12. All sleeves in the report shall be clearly labeled indicating what the sleeve contains (i.e. Exhibit Map1, etc)

Data Table Requirements

1. Data shall be organized in a table format. The data table shall be included in the Study and on the Map included within the Study.
2. Each sewer main segment between manholes shall be identified and analyzed.
3. Use manhole numbers shown on the SMD maps.
4. The data table shall include existing and proposed sewer mains from the proposed project to the Los Angeles County Sanitation District trunk sewer.
5. Indicate sewer plan identifying number (i.e. PC, CI, etc.), pipe size, slope, discharge, capacity , and percent full for each sewer main segment.
6. The capacity of the proposed system (q/Q) and identify critical segments in the existing system using Chart S-C4 "Flow Diagram for the Design of Circular Sanitary Sewers" from the Los Angeles County Department of Public Works Private Contract Sanitary Sewer Procedural Manual.
7. Identify segments needing upsizing, and provide the new pipe size, new capacity, and new percent full for each segment.
8. Use Kutter's Formula with n = 0.013 (Graph S-C4 in the LA County PC Manual) to find the design capacity for each sewer segment.

Capacity Analysis

1. Proposed sewer mains for the project shall be determined by using the (Area) x (Coefficient) method, using the current zoning coefficient.
2. Use the (Area) x (Coefficient) method for commercial, industrial, multi-family (apartments), undeveloped lots, and dedicated open space.
3. Unit Count Method can be used for existing sewers in fully developed areas. Tract maps must be included with the submittal when using the Unit Count Method.
4. The flow from the future developments shall be determined using the (area) x (coefficient) method up to the ridgeline of that main line.
5. Multi-use zones are to be analyzed using all zoning types with-in the development. Add 16 residential units per acre to the commercial / industrial zones where multi-use is allowed per the City zoning.
6. Check the capacity of the pump station wet well for the added flow of the proposed project plus existing conditions.
7. Use the pump station's maximum capacity for analysis of the downstream lines.
8. For Specific Plan Zone _____ use _____ for the flow coefficient.
9. Only areas dedicated as Open Space on the Final Map can use the Open Space flow coefficient. All other areas are considered developable land.
10. To determine the percent full use the cumulative calculated flow (in cfs) divided by the capacity of the pipe (in cfs).
11. Upsizing is required for lines over 50% full for under 15 inches and over 75% full for lines 15 inches and greater.
12. When upsizing is required for the project the main line must be upsized to account for all existing flow, as well as flow from any future developments that will discharge into the line to be improved. All information regarding the upsize must be included in study.

Sewer Area Study Map – Requirements

1. North arrow (pointing towards the top of the sheet)
2. Scale
3. Show City/County/Caltrans boundary
4. Show NCWD/City jurisdictional lines
5. Show Sanitation District, Municipal Water District, Improvement District, Reimbursement District, City and other boundary lines of influence as applicable.
6. Show existing and proposed sewer mains including manholes, pipe size, pipe slope, and direction of flow.
7. Identify pipe segments requiring upsizing on the map.
8. Extend area in the study to the topographic ridgeline down to the connection to the sewer trunk line. Draw boundary on map.
9. Show land use and current zoning of each sub-area within the tributary area. Color code each sub-area within the study area; provide acreage or unit numbers as applicable. Each area must be clearly outlined and labeled as "Area #1, #2, etc."

10. Show major streets with names clearly labeled.
11. Include the table on the sewer area study map showing the size, slope, discharge Q (cfs), capacity, and percent full for each pipe segment.
12. Show existing and proposed utilities, storm drains, state highways, etc, which may have a bearing on the sewer design.
13. Show sewer flow rates and capacities; check between all manholes and at political boundaries.
14. Civil Engineer is to wet stamp the study map.

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