Community Systems

Key to Abbreviations

LD  Land Development Program
CS  Community Systems
OM  Operations and Maintenance
PM  Project Manager
BODR Basis of Design Report
VDEQ Virginia Department of Environmental Quality
VDH Virginia Department of Health
Community Systems
Design Review Process

1. DEVELOPER INITIATES PROJECT
2. INTERNAL LOUDOUN WATER INITIATION MEETING
3. PROJECT TEAM CHARTER MEETING WITH DEVELOPER
4. AGREEMENT
5. BODR & HYDROGEOLOGIC REPORT REVIEW
6. PRELIMINARY ENGINEERING
7. REGULATORY APPROVALS
8. FINAL ENGINEERING
9. RATE STUDY GROUND WATER MONITORING
10. LOUDOUN WATER APPROVAL CONSTRUCTION PERMIT

INTERNAL REFERRAL PROCESS (5, 6, 8 & 9)
## Community Systems
### Design Review Process

<table>
<thead>
<tr>
<th>Box #</th>
<th>Description</th>
<th>Loudoun Water Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Developer initiates project; CS determines if Engineering Division support is needed; provide required information Indicated on Project Initiation form</td>
<td>CS, LD</td>
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<tr>
<td>2</td>
<td>Loudoun Water initiation meeting facilitated by LD-determine scope of project; determine PMs, establish roles &amp; responsibilities</td>
<td>CS, LD</td>
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<tr>
<td>3</td>
<td>Team Charter meeting with developer – PMs attend – discuss Developer and Loudoun Water roles &amp; responsibilities, develop schedule - initiate agreement process, prepare organizational chart (see attached meeting outline)</td>
<td>LD, CS</td>
</tr>
<tr>
<td>4</td>
<td>Agreement sent by LD to developer for execution (use standard form unless necessary changes have been identified in boxes #1 thru #3)</td>
<td>LD</td>
</tr>
<tr>
<td>5</td>
<td>Developer submits hydrogeologic &amp; BODR to LD for referral distribution as needed to CS, OM; comments provided to LD for developer to address; $5,000 initial fee required; BODR finalized</td>
<td>LD, CS, OM</td>
</tr>
<tr>
<td>6</td>
<td>Developer submits preliminary (30%-50%) engineering to LD for referral distribution as needed to CS, OM for comments (internal and/or stakeholder meetings if necessary); LD, CP work with developer’s engineer to finalize</td>
<td>LD, OM, CS</td>
</tr>
<tr>
<td>7</td>
<td>Developer submits Loudoun Water approved BODR and preliminary engineering to VDEQ/VDH for approval, LD to track and distribute VDEQ/VDH comments</td>
<td>LD</td>
</tr>
<tr>
<td>8</td>
<td>Developer submits final (95%) engineering to LD for referral distribution as needed to CP,CS, OM for comments (stakeholders meetings if necessary);LD work with developer’s engineer to finalize</td>
<td>LD, CS, OM</td>
</tr>
<tr>
<td>9</td>
<td>Developer submits rate study and groundwater monitoring plan to LD, for referral distribution as needed to CS for review and approval</td>
<td>LD, CS</td>
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### Community Systems Design Review Process

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<tr>
<td>10</td>
<td>LD issues approval letter and issues construction permit based on:</td>
<td>LD</td>
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<tr>
<td></td>
<td>- final engineering plans/specs approved</td>
<td></td>
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<td></td>
<td>- rate study approved</td>
<td></td>
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<td></td>
<td>- groundwater monitoring plan approved</td>
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<td></td>
<td>- record plats/deeds approved and recorded</td>
<td></td>
</tr>
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<td></td>
<td>- easements recorded</td>
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<td></td>
<td>- developer submits construction cost estimate based on</td>
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<td></td>
<td>- contractor’s pricing, pays lab fees, inspection fees, reconciles</td>
<td></td>
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<td></td>
<td>- design fees</td>
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<td></td>
<td>- developer posts bonds</td>
<td></td>
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<td></td>
<td>- developer sends proof of insurance</td>
<td></td>
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<tr>
<td></td>
<td>- developer executes Loudoun Water agreement</td>
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<td></td>
<td>- VDH/DEQ issue certificates to construct</td>
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</tbody>
</table>
Community Systems
Project Initiation Information

Project Title: ______________________________________________________

Developer Contact Information:

Company name: ______________________________________________________

Company address: ____________________________________________________

____________________________________________________________________

Contact name: ________________________________________________________

Phone: ________________________________________________

E-mail: ________________________________________________

Project Location:

(Attach 8 ½” x 11” ADC or USGS map)

Types and Number of Units:

____________________________________________________________________

Status of County Approvals: __________________________________________

____________________________________________________________________

Water System:

Community wells
Individual wells
Other (specify)

Sewer System:

Community discharging
Community non-discharging (land application)
Individual non-discharging (land application)
Other (specify)

Schedule:

Hydrogeological Report Submitted______________________ (date)
BODR Submitted ________________________________
Final Design Submitted___________________________
First unit delivered ______________________________
Project build-out __________________________________
Rate study____________________________________
Ground water monitoring study______________________
Community Systems  
Project Initiation Meeting

(Project Title)  
(Project ID#)

Location:  
Date:  
Time:

AGENDA

1. Attendees:
   - Developer  
   - Design engineer  
   - Loudoun Water – Project Manager and representatives for CS, LD

2. Confirm meeting objectives

3. Review data provided on project initiation form
   - Address comments and any missing information  
   - Provide organizational chart  
   - Confirm schedule  
   - Provide copy of submittal/review guidelines

4. Developer’s responsibilities (to obtain construction permit):
   - Executed agreement  
   - Schedule (detailed)  
   - Hydrogeological report  
   - BODR (bring copies of required submittals for developer to review)  
   - Preliminary engineering report for sewer-per VDEQ SCAT regulations  
   - Engineer’s report and preliminary plans-water-per VDH Waterworks regulations  
   - Final construction specifications and plans – water/sewer  
   - Rate study  
   - Groundwater monitoring plan  
   - County and VDOT approvals  
   - Engineer’s cost estimate  
   - Plats/deeds recorded  
   - Fees:
     - $5,000 up-front  
     - Design review/lab/inspection
   - Bonds  
   - Proof of insurance
Community Systems
Project Initiation Meeting

5. Loudoun Water responsibilities:
   - Draft agreement
   - Review/comment/approve:
     - Detailed schedule
     - Hydrogeologic report
     - BODR
     - Preliminary engineering report and plans - sewer
     - Preliminary engineering report and plans - water
     - Final construction specifications and plans
     - Rate study
     - Ground water monitoring plan
     - Plats/deeds
   - Approval letter

6. Submission procedures and points of contact within Loudoun Water

7. Status of review process at other agencies (Loudoun County, VDEQ, Corps. Of Engineers, VDOT, etc.)
Community Systems Construction Process

LOUDOUN WATER APPROVAL & CONSTRUCTION PERMIT (10)

LOUDOUN WATER INTERNAL MEETING (11)

PRECONSTRUCTION CONFERENCE (12)

INSPECTIONS (13)

SUBMITTALS (14)

O&M MANUALS
• Vendor
• Regulatory (17)

WTP / WWTP SUBSTANTIAL PROGRESS (15)

START-UP (19)

SUBSTANTIAL COMPLETION (20)

PROJECT CLOSEOUT (22)

PUMP & HAUL PERMIT (if needed) (16)

HOUSES CONNECTIONS (18)
## Community Systems Construction Process

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<tr>
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<tbody>
<tr>
<td>11</td>
<td>Loudoun Water internal meeting</td>
<td>LD, OM, CS</td>
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<tr>
<td>12</td>
<td>Preconstruction Conference</td>
<td>LD, OM, CS</td>
</tr>
<tr>
<td>13</td>
<td>Inspections during construction</td>
<td>OM, LD, CS</td>
</tr>
<tr>
<td>14</td>
<td>Construction submittals from Developer</td>
<td>LD, CS, OM</td>
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<tr>
<td>15</td>
<td>At the agreed stage of completion, houses may connect to the permanent</td>
<td>OM, LD</td>
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<tr>
<td></td>
<td>water or sewer treatment facilities; operations bond must be in place</td>
<td></td>
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<tr>
<td>16</td>
<td>Pump and Haul permit application,</td>
<td>LD</td>
</tr>
<tr>
<td></td>
<td>Developer’s responsibility – LD writes letter of support/monitors</td>
<td></td>
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<tr>
<td>17</td>
<td>Vendor O&amp;M manuals submitted and</td>
<td>LD, CS</td>
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<tr>
<td></td>
<td>Operations manual prepared by Developer/Engineer and submitted to LD for</td>
<td></td>
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<tr>
<td></td>
<td>distribution to CS, CP; Loudoun Water – approved Operations manual</td>
<td></td>
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<td></td>
<td>forwarded by Developer to VDEQ for their approval</td>
<td></td>
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<tr>
<td>18</td>
<td>LD tracks house connections – number limited based on capacity of</td>
<td>LD</td>
</tr>
<tr>
<td></td>
<td>facilities</td>
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<tr>
<td>19</td>
<td>Approved start-up plan and procedures and</td>
<td>LD, CS</td>
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<td></td>
<td>Loudoun Water training implemented,</td>
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<td></td>
<td>include representatives from VDEQ (sewer) and VDH (water)</td>
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<td></td>
<td>• Performance testing</td>
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<td></td>
<td>• Reliability testing</td>
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<tr>
<td></td>
<td>• Training</td>
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<tr>
<td>20</td>
<td>Substantial completion attained, punch lists generated – compiled by CS, OM and transmitted to Developer/Engineer by LD; regulatory inspection and CTO issued, pump and haul shut down</td>
<td>OM, CS, LD</td>
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<tr>
<td></td>
<td>• All alarms/controls operational</td>
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<td></td>
<td>• All safety equipment installed</td>
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<tr>
<td></td>
<td>• All security items installed</td>
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<td></td>
<td>• Performance bond reduced to 20%</td>
<td></td>
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<tr>
<td>21</td>
<td>Final acceptance procedures:</td>
<td>LD</td>
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<tr>
<td></td>
<td>• Developer posts 5% maintenance bond</td>
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<td></td>
<td>• Loudoun Water releases performance bond</td>
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<td></td>
<td>• Deeds to transfer facilities to Loudoun Water</td>
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<td></td>
<td>• Equipment warranties transferred to Loudoun Water</td>
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<td></td>
<td>• As-built drawings completed</td>
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<td></td>
<td>• Punch list items corrected or completed</td>
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<tr>
<td>22</td>
<td>Project closeout procedures following final acceptance:</td>
<td>CS, OM, LD</td>
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<td></td>
<td>• Loudoun Water inspects at 11 months to identify warranty items prior to 1 year deadline</td>
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<tr>
<td></td>
<td>• Maintenance bond (5%) released once all warranty items corrected</td>
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<tr>
<td></td>
<td>• CS coordinates invoices to Developer – operational bond released once 90% of units sold</td>
<td></td>
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</tbody>
</table>

*Priority of responsibility may be re-assigned by the project manager on a case-by-case basis, anytime after Loudoun Water internal meeting (11).
Community Systems
Preconstruction Conference

(Project Title)
(Project ID#)

Location:
Date:
Time:

AGENDA

1. Introduction/Points of Contact
   a. Owner – Loudoun Water
      • Project Manager
      • Inspectors (O&M, Community Systems)
   b. Developer
   c. Engineer
   d. Contractor

2. Lines of Communication and Responsibility (office and field)
   a. Updated organizational chart
   b. Record documents

3. Status of Required Permits and Regulatory Approvals
   a. Review of Loudoun Water/Developer Agreement
   b. Loudoun County grading
   c. Loudoun County building
   d. VDOT
   e. VDEQ
   f. VDH
   g. Others (NVRPA, Dominion Virginia Power, NOVEC, etc.)

4. Submittals
   a. List (to include project construction schedule, concrete test results)
   b. Review procedures/schedule
   c. Timing
   d. O&M manuals
   e. Record drawings
Community Systems
Preconstruction Conference

5. Work
   a. Sequence of critical work
   b. Site conditions
   c. Field orders/Change orders
   d. Requests for Interpretation (RFI)

6. Progress Meetings

7. Project Substantial Completion
   a. Loudoun Water substantial completion requirements
   b. Start-up schedule
   c. Testing
   d. Training
   e. Punch list
   f. Operation bond

9. Project Final Acceptance and Closeout
   a. Performance bond reduction/release
   b. Loudoun Water 1-year inspection
   c. Deeds and equipment warranties transferred to Loudoun Water

10. Miscellaneous Items
    a. Pump and Haul