

Southern Kent Island Sanitary Project



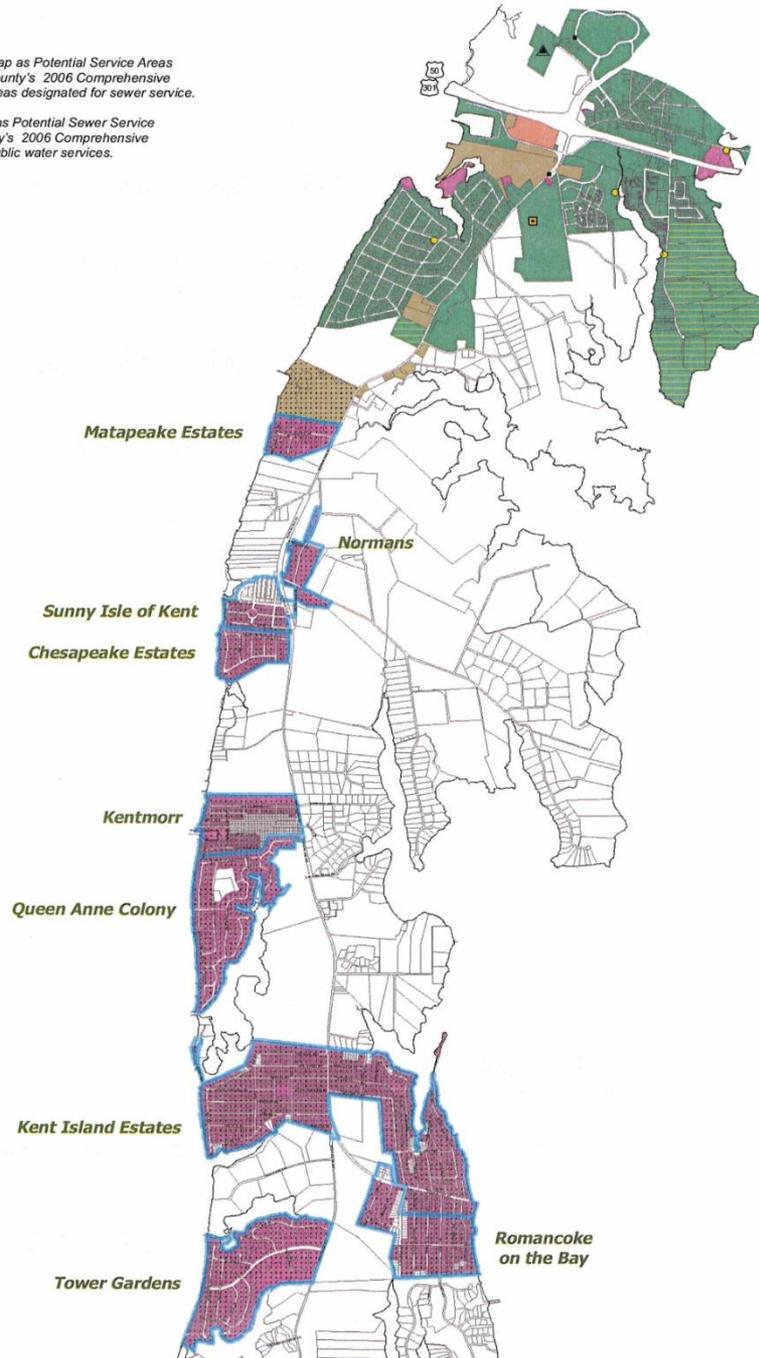
Resident Overview
March 2015

<http://www.qac.org/ski>

South Kent Island (SKI) Service Area

**Note: Areas identified on this map as Potential Service Areas include areas identified in the County's 2006 Comprehensive Water and Sewerage Plan as areas designated for sewer service.*

No areas identified on this map as Potential Sewer Service Areas are identified in the County's 2006 Comprehensive Water and Sewerage Plan for public water services.



Historical County Efforts - Planning

- 1975 - Designated SKI areas to be served by public sewer based on public health concerns in CWSP
- 2004 - Reserved 500,000 gallons of ENR treatment capacity via Commissioner Resolution # 04-68
- 2007 - Retained nationally recognized waste disposal expert, Dr. Robert Rubin, to determine best solution to SKI problem. His conclusion was, “extension of public sewer is most cost effective solution and best for Nutrient reduction”

County Efforts - Planning

- 2008 - Retained engineering/planning firm, JMT to evaluate options for a public sewer system to serve South Kent Island
- 2010 - Comprehensive Plan adopted reflecting future public sewer service to SKI Communities
- 2012 - DPW- Advisory Board concludes that “public sewer collection and treatment is warranted to serve SKI and recommended the County to work with State to identify grants to ensure project affordability”

County Efforts - Planning

➤ Project Attributes Identified for Success

- Affordable Cost to Residents
- Minimize Growth Potential
 - ✓ Only 9 existing Communities to receive service
 - ✓ Limit service within Communities to developed areas
- Unbuildable / interspersed “Infill Lots” within Communities should pay more via Economic Benefit Premium
- State Grant Assistance still needed

County Efforts - Planning

- 2013 – Began regular meetings with MDE & MDP to craft viable plan to balance infill development with project financing and costs to residents
- 2013 – Local Health Department adopts “Holding Tank Policy” for failed septic system areas
 - 7 homes and 2 businesses currently on holding tanks
 - 500+ additional homes identified now for future holding tank requirement



Avoid Holding Tanks

Average House

\$200 - \$240 per Pump Out

\$7,200 - \$8,640 per Year

about \$600 per month

County Efforts - Planning

- 2013 - Retained experienced expert counsel Kurt Fischer from Venable, LLC to assure legally defensible actions
- 2013 – Introduced Lot Consolidation Ordinance #13-24 requiring adjacent lots under common ownership to be merged in order to conform with 1984 zoning districts reducing infill development potential
- 2013 – Researched and developed concept design using STEP system Technology reducing construction cost by \$10 million over vacuum system technology
- November 2013 – Launched a dedicated SKI webpage for public access to all project information

County Efforts - Planning

- December 2013 – Held Outreach Workshop to provide Citizens direct access with County and State Officials to review project specifics
- December 2013 – Completed an independent and professional survey of affected residents which documented community support
- 2014 – Retained experienced appraiser to establish and assure Economic Benefit Premium (EBP) viability for vacant lots and the EBP charge

County Efforts - Planning

- 2014 - Supported HB 11 Legislation at the General Assembly to facilitate BRF grant eligibility
- March 2014 – Introduced Special Benefit Resolution #14-07 with Economic Benefit Premium component to levy project costs
- May 1, 2014 - Held Public Hearings for Lot Consolidation Ordinance #13-24, Special Benefit Resolution #14-07 and the Project as required by ratified HB11

THE

1799-2014



STAR

DEMOCRAT

June 4, 2014

SERVING THE MID-SHORE FOR 214 YEARS

EASTON, MARYLAND \$1.00

QA's OKs south KI sewer project

By ANGELA PRICE

baytimes@kibaytimes.com

Existing homeowners will see a \$100 a month fee for the next 20 years, while owners of buildable vacant lots would pay \$216 a month under the current economic benefit projections.

STEVENSVILLE — Queen Anne's County Commissioners approved the \$53.1 million plan to extend public sewer service to communities with failing septic systems on southern Kent Island in a 4-1 vote May 27, with Commissioner Dave Olds opposing.

The commissioners previously voted to address the three measures related to the project together: the sewer project as a whole; a resolution by the county commissioners, sitting as the Sanitary Commission,

to establish a South Kent Island Wastewater Subdistrict, defining its boundaries and financing a public sewage collection and transmission system for it; and County Ordinance 13-24, regarding the use and merger of substandard lots in the neighborhood conservation district. And they voted on

them as one block.

Under Ordinance 13-24, owners of adjoining lots zoned NC-20 (neighborhood conservation) will be required to merge substandard lots, identified as lots consisting of less than 20,000 square feet. The nine communities targeted for sewer expansion, Mata-

peake Estates, Normans, Sunny Isle of Kent, Chesapeake Estates, Kentmorr, Queen Anne Colony, Kent Island Estates, Tower Gardens and Romancoke on the Bay, are all zoned NC-20.

The plan received a favorable recommendation from the planning commission Dec. 12 after more than three hours of discussion and the stated understanding that the ordinance was a necessary first step in the county's long-term goal of obtaining Bay Restoration Fund dollars from the state.

The planning commission recommended final approval of Ordinance 13-24

be delayed until the county commissioners are satisfied that state funding for the extension of sewer for southern Kent Island has been authorized by all relevant state agencies.

The passage of House Bill 11, signed April 8 by Gov. Martin O'Malley, opened the way for the project to obtain state funding. The new law allows specified fee revenue collected for the Bay Restoration Fund to pay specified debt issued by a local government for the cost of connecting

See **SEWER**
Page A13

County Efforts - Planning

- June 2014 – Final Project Service Area Boundaries established consistent with Attorney General Opinion
 - Authorizing denial of hookups outside service area
 - Only offer service to vacant interspersed lots
 - See 90 Opinions of the Attorney General 60 (2005)
- July 2014 – Received unanimous approval from the Smart Growth Coordinating Committee (SGCC) for the project with condition the CWSP would be amended

County Efforts - Planning

- September 9, 2014 – Public Hearing held to amend the County's Comprehensive Water & Sewerage Plan (CWSP) to reflect:
 - Project Need
 - Timing and Sequence
 - Final Service Area Boundaries
 - SGCC Conditions

- September 2014 – MDE and County Commissioners executed the BRF Grant Agreement to fund homeowner sewer allocation (connection) fees
 - \$ 11.8 million over 40 years

County Efforts - Planning

- October 2014 – Began solicitation of design services to prepare construction bid documents
- November 2014 – Received State approval of CWSP Amendment #11-05 establishing the SKI Wastewater Sub-district consistent with envisioned public sewer project
- November 2014 – Received MDE concurrence that SKI is a certified area of “Public Health Concern”

Proposed Project System

Overall View of the Project

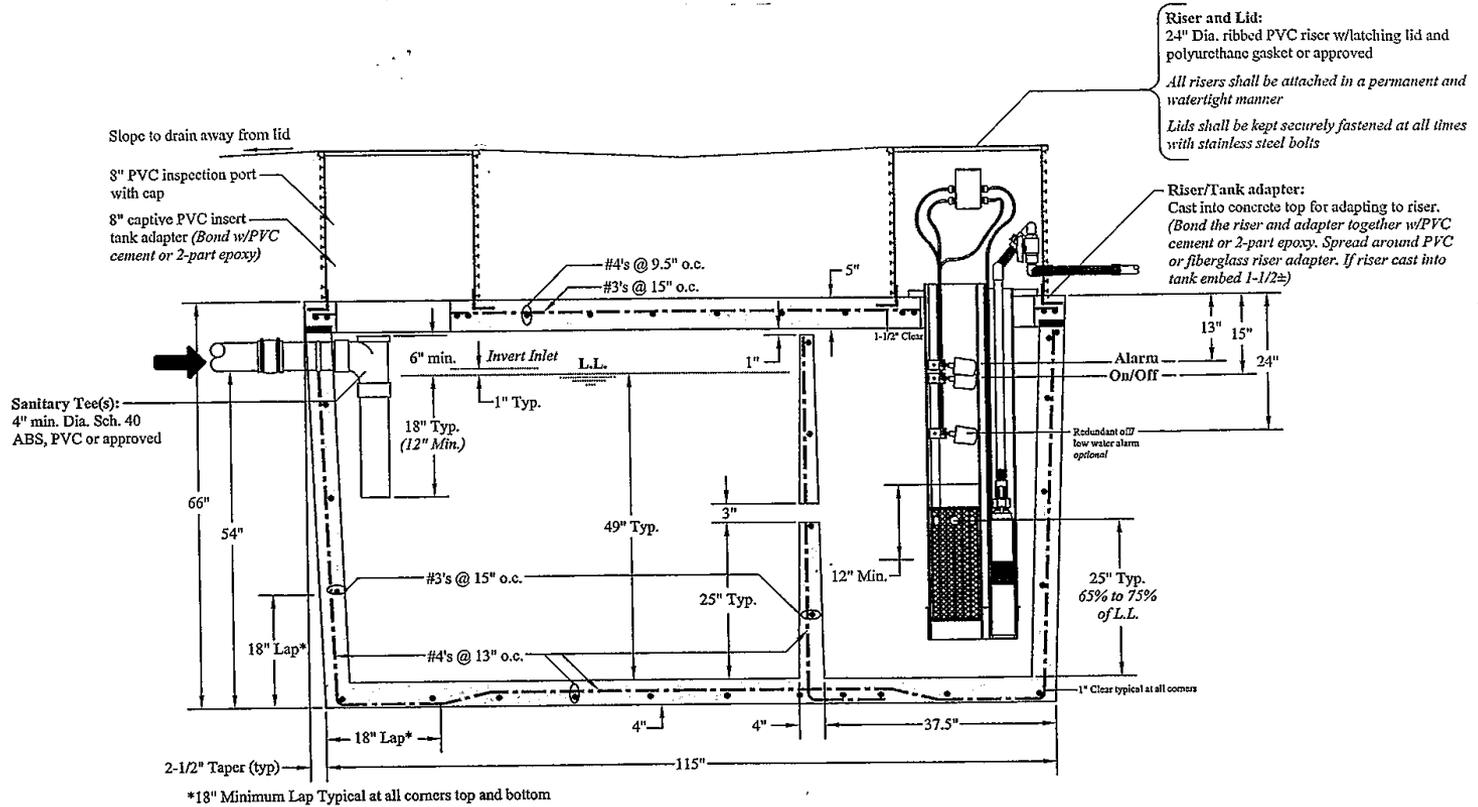
- Red** — 16" Dia.
- Purple** — 12" Dia.
- Brown** — 10" Dia.
- Dark Blue** — 8" Dia.
- Light Blue** — 6" Dia.
- Pink** — 4" Dia.
- Yellow** — 3" Dia.
- Green** — 2" Dia.



Project System

Sepic Tank Effluent Pumping





Side View 1500 Gallon Tank.

Project System

➤ STEP System Advantages

- Uses directional drill technology which minimizes destruction of roads
- Closed system pumps all the way to the Wastewater Plant
- Provides emergency storage during power outages
- Service call issues are minor (isolated to individual home vs. hundreds of homes)
- Easy to pinpoint and correct problems
- Pumps are economical yet robust

Project System

➤ STEP System Advantages

- Recommended for septic tank abatement projects over other mechanical systems
- Minimizes inflow and infiltration
- Corrosion and odor issues managed by using plastic pipe and pumping/discharging directly at WWTP
- Two compartment concrete tanks separate solids and liquids (like a traditional on-lot septic system)





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Design/Construction Schedule

Phase 1: Trunk Line Kent Island Estates & Romancoke	2015 – 2020
Phase 2: Tower Gardens	2019 – 2021
Phase 3: Queen Anne Colony & Kentmorr	2020 – 2022
Phase 4: Chesapeake Estates, Sunny Isle of Kent Batts Neck & Matapeake Estates	2021 - 2023

Southern Kent Island
Service Area
Queen Anne's County
MARYLAND



FileNo. 111714-DPW01

County Efforts Financing

- Estimated aggregate project cost is \$54 million
 - \$37.4 million for wastewater conveyance infrastructure
 - \$16.3 million for wastewater treatment capacity
- Similar successful projects completed 20 years ago for Cloverfields and Bay City communities using SRL funding

County Efforts - Financing

- County will receive the \$1.0 million it now receives from BRF annually, expecting to dedicate \$600,000 annually over 20 years for principal debt reduction
- Remaining \$400,000 annually being reserved for BAT upgrades in other areas of the County
- State Revolving Fund funding of \$37.4 million to be requested incrementally over the 4 phases
- County adopted Resolution #14-07 authorizing levy of special benefit charges within service area to fund project, with authorization to assess greater charge to vacant lots, eg. an Economic Benefit Premium (EBP)

Financing Template / Resolution 14-07

Existing homes served	1518
Existing non residential properties served	8
Vacant lots served	560 *
Buildable vacant lots served	12
Estimated Total Construction Cost Of Infrastructure	\$37,433,326
Economic Benefit Premium (vacant lots only)	\$25,600 **
Estimated Average STEP System Cost	\$12,500
Allocation (Treatment) Fee	\$ 7,750

*Based on County legislative actions & historical lot consolidation trends

** Final value to be set by the Commissioners

Financing Template

Resulting Homeowner Charges

Base Cost *	=	\$ 1,917
STEP Cost	=	\$12,500
Allocation Fee (Bay Restoration Fund Grant)	=	<u>\$ 0</u>
Total cost if paid up front	=	\$14,417
Monthly Debt Service (20 year payoff)	=	\$70
Operations & Maintenance per month	=	<u>\$30</u>
Total Monthly Payment	=	\$100

* Base cost calculated by Formula in Resolution 14-07

Financing Template

Resulting Vacant Lot Owner Charges Prior to Building Permit

Base Cost *	=	\$ 1,917
Economic Benefit Premium	=	<u>\$25,600</u>
Total cost if paid up front	=	\$27,517
Monthly Debt Service (20 year payoff)	=	\$ 134
Operation & Maintenance (ready to serve)	=	<u>\$ 10</u>
Total Monthly Payment before building permit issuance	=	\$ 144

OR

Monthly Debt Service (if deferred for 10-years)	=	\$ 42
Operation & Maintenance (ready to serve)	=	<u>\$ 10</u>
Total Monthly Payment before building permit issuance	=	\$ 52

* Base cost calculated by Formula in Resolution 14-07

Financing Template

Resulting Vacant Lot Owner Charges Upon Building Permit Issuance

Monthly Debt Service	=	\$ 134
Operation & Maintenance per month	=	<u>\$ 30</u>
Monthly Payment	=	\$ 164

Additional Fees & Costs ~~\$\$\$~~

Allocation Fee (payable at time of permit issuance) = \$ 7,750

STEP System (included in the home's cost) = \$12,500

Impact Fee = \$11,800

Total Addition Fees & Costs for Vacant Lots = ~~\$\$\$~~ 32,050

Community Revitalization

- Failing Septic systems detrimental to community vitality
 - Home sale contracts fail
 - Additions to homes cannot be approved
 - Septic effluent often present with resulting odor
 - More holding tanks will be required at great homeowner expense

- Experience in Cloverfields and Bay City, documents project completion will revitalize communities

Unique Features of SKI

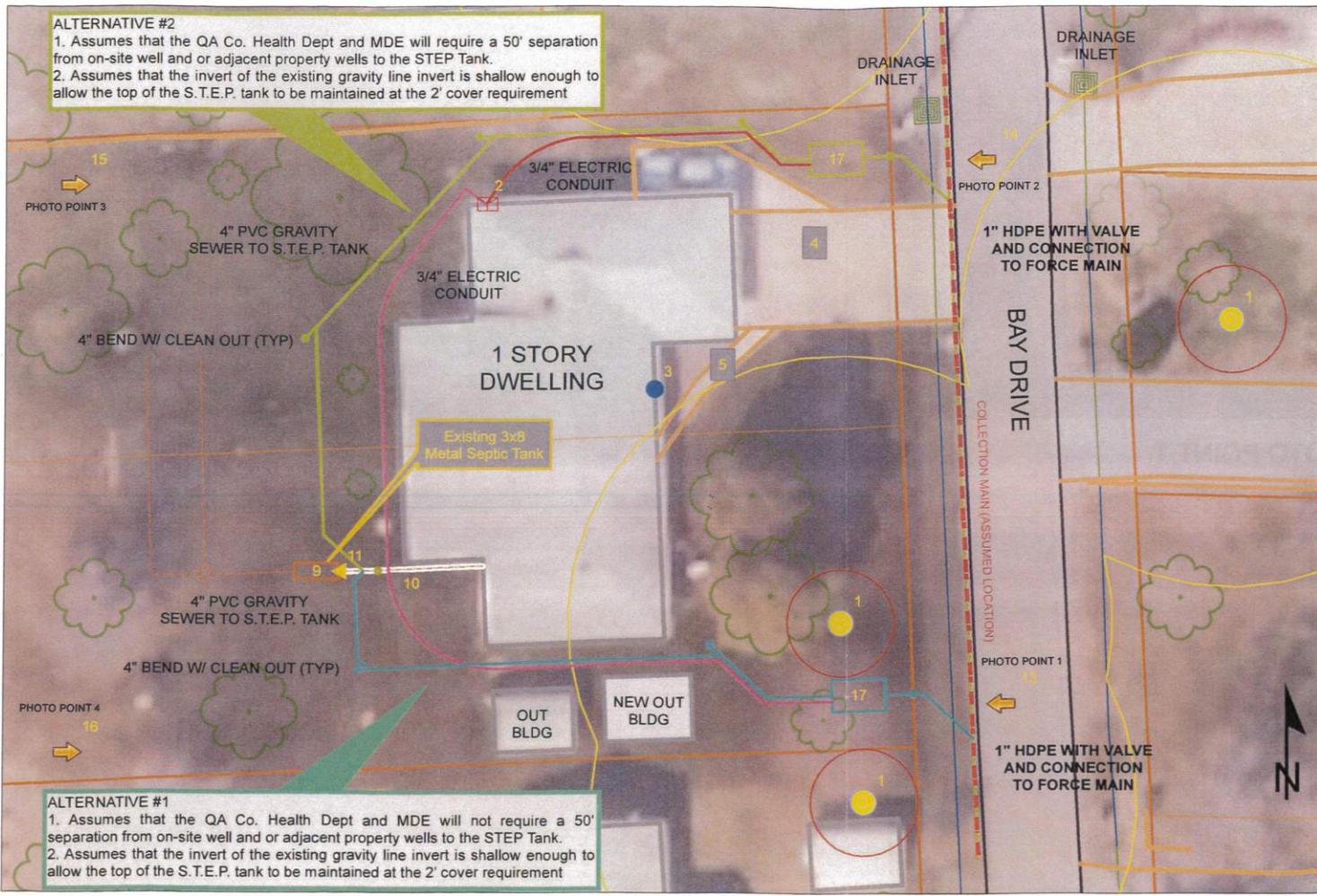
- Likely greatest concentration of failing septics in State
- Soils too poor to have any tolerance for septic systems
- ENR plant upgraded using BRF, with capacity specifically reserved to relieve failing septic systems in 2004
- Compelling public health concerns identified since 1975 in County's CWSP

Unique Features of SKI

- Continual actions to address public health concerns, including reversing 216 previously approved percolation tests in 1989
- Huge and ongoing County commitment to project
- Upon project completion area will essentially remain “as is”
- Without project, due to recently implemented holding tank policy, communities will deteriorate

SKI Project Design Underway

- Three Design Contracts awarded to develop plans and engineering cost for phase 1 in February 2015
 - Force Main Along Maryland Route 8
 - Interior Community Collection Lines
 - Individual Homesite STEP System Site Plans
- Community Outreach Workshop meetings scheduled
 - March 11, 21 & 25 2015 – Kent Island Estates Community Center
 - March 19 & 28 – Romancoke Community Clubhouse
- Inform Residents
- Answer Project Questions
- Get Assistance from Residents for their Homesite STEP System Design



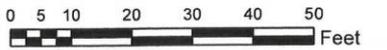
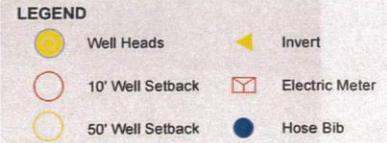
ALTERNATIVE #2
 1. Assumes that the QA Co. Health Dept and MDE will require a 50' separation from on-site well and or adjacent property wells to the STEP Tank.
 2. Assumes that the invert of the existing gravity line invert is shallow enough to allow the top of the S.T.E.P. tank to be maintained at the 2' cover requirement

ALTERNATIVE #1
 1. Assumes that the QA Co. Health Dept and MDE will not require a 50' separation from on-site well and or adjacent property wells to the STEP Tank.
 2. Assumes that the invert of the existing gravity line invert is shallow enough to allow the top of the S.T.E.P. tank to be maintained at the 2' cover requirement

FEATURES

ID	Feature	Comment
1	Well:	
2	Electric meter:	
3	Outside hose bib:	
4	Driveway potential within LOD: Type of driveway surface within LOD:	N
5	Walkways potential within LOD: Type of walkway surface within LOD:	N
6	Path potential within LOD: Type of path material within LOD:	N
7	Deck potential within LOD: Type of deck material within LOD:	N
8	Type of Foundation (slab, crawlspace, split foyer): Ease of Crawlspace access (Good, poor unknown): Height of crawlspace: Potential to 'spin-around' main drain within crawlspace:	Slab N/A N/A N/A
9	Current Septic Tank to be abandoned:	
10	Location of sewer line:	
11	Location of invert:	
12	Invert depth: Type of tank:	Metal
13	Photo 1 (front of home from left from road):	
14	Photo 2 (front of home from right from road):	
15	Photo 3 (back of home from left from property line):	
16	Photo 4 (back of home from right from property line):	
17	New STEP Tank:	
	Electric (Overhead or Underground):	U
	Phone (Overhead or Underground):	U
	Cable TV (Overhead or Underground):	U
	Check potential outlets for dishwashers:	Y/W
	Check potential outlets for washing machines:	Y/W

NOTES:
 Information on ex. Metal 3x8 septic tank located 6' off rear of house obtained from Health Dept records. Site well and adjacent wells also from Health Dept records. Electric meter located using the County base sample PDF provided with RFO.



The DEPARTMENT of PUBLIC WORKS
 of
 QUEEN ANNE'S COUNTY
 MARYLAND

Approved	Designed
	QUEEN ANNE'S COUNTY DEPT. OF PUBLIC WORKS

SEAL

Date	Revision

SKI Project Phase 1 C
 ACCOUNT ID 1804063546
 506 BAY DR
 KENT ISLAND ESTATES BLOCK B
 SECTION 3 LOT 25 26 MAP 0070 PARCEL 0077

Sheet No. 1
 of 192 Sheets

Southern Kent Island Sanitary Project



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March 2015

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