



Onsite Wastewater Concepts, Materials, Regulations & The Application Process Part I

E – Site Plan Review and Classroom Exercise

Instructors:

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Classroom Exercise #1

Complete the classroom exercise #1
handout before reviewing the presentation

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Classroom Exercise #1



1. What is the size of the lot in <u>square feet</u> ? 70 ft. x 125 ft.	8,750 sq. ft.
2. What is the size of the lot in <u>acres</u> ? 8,750 sq. ft. / 43,560 sq. ft.	.20 acres
3. What is the net usable area of the lot in <u>acres</u> ? Lot: 70 x 125 = 8750 sq. ft. ROW: 15 x 125 = 1875 sq. ft. Total: 10,625 / 43,560 = .24	.24 acres

3

Classroom Exercise #1



4. What is the minimum setback requirement to the <u>surface water body</u> across the road? There is no surface water body – only a conservation/wetlands area	None
5. What is the <u>minimum setback</u> requirement for the private potable well?	75 ft.
6. What is the <u>estimated sewage flow</u> for the proposed residence? From Table I	300 gpd
7. What is the authorized sewage flow for the lot? Net usable area x 1500 gal. per acre/per day .24 acres x 1500 = 360 gpd	360 gpd

4

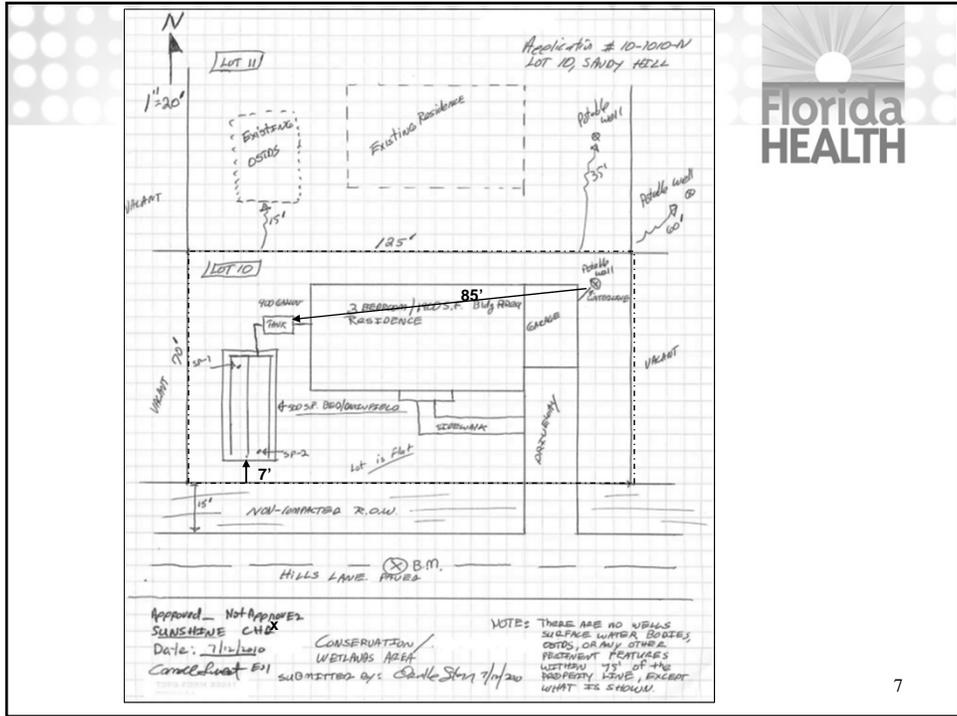


TABLE I
 For System Design
ESTIMATED SEWAGE FLOWS

RESIDENTIAL:	GPD
Residences	
(a) Single or multiple family per dwelling Unit	
1 Bedroom with 750 sq. ft. or less of building area.....	100
2 Bedrooms with 751-1200 sq. ft. of building area.....	200
3 Bedrooms with 1201-2250 sq. ft. of building area.....	300
4 Bedrooms with 2251-3300 sq. ft. of building area.....	400
For each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increased by 60 gallons per dwelling unit.	
(b) Other per occupant.....	50

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Classroom Exercise #2

Complete the classroom exercise #2 handout during the presentation

Application

Form DH 4015 pg 1 of 1
Classroom Exercise #4

- Applicant/ authorized agent (signature needed)
- Date lot platted/subdivided
- Property size
- Water supply
- Sizing criteria



STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
APPLICATION FOR CONSTRUCTION PERMIT

CLASS ROOM Exercise #4

APP DOC # 2
PERMIT # : 3
DATE PAID 05/28/2010
FEE PAID: 0
RECEIPT #: 59-PID-127177

X APPLICATION FOR:
 New System Existing System Holding Tank Innovative
 Repair Abandonment Temporary Other

APPLICANT: Mark Peter
 AGENT: _____ TELEPHONE: _____
 MAILING ADDRESS: 523 Yorkshire Dr Oviedo, FL 32765

TO BE COMPLETED BY APPLICANT OR APPLICANT'S AUTHORIZED AGENT. SYSTEMS MUST BE CONSTRUCTED BY A PERSON LICENSED PURSUANT TO 489.105(13) OR 489.152, FLORIDA STATUTES. IT IS THE APPLICANT'S RESPONSIBILITY TO PROVIDE DOCUMENTATION OF THE DATE THE LOT WAS CREATED OR PLATTED (MM/DD/YY) IF REQUESTING CONSIDERATION OF STATUTORY GRANDFATHER PROVISIONS.

LOT: 132 BLOCK: _____
 SUBDIVISION: Bentley Woods PLATTED: 02/15/1989
 PROPERTY ID #: 09-21-31-014-0000-1320 ZONING: R1 I/M OR EQUIVALENT: Y N

PROPERTY SIZE: 0.23 ACRES WATER SUPPLY: PRIVATE C-20000000 J-20000000
 IS SEWER AVAILABLE AS PER 381.0065, FS? Y N DISTANCE TO SEWER: _____ FT
 PROPERTY ADDRESS: 523 Yorkshire Dr-Oviedo, FL 32765

DISPOSITIONS TO PROPERTY:
 right on red bug lake left on olma, left on pine st right on bentley left on wallington
 right on rochester left on yorkshire

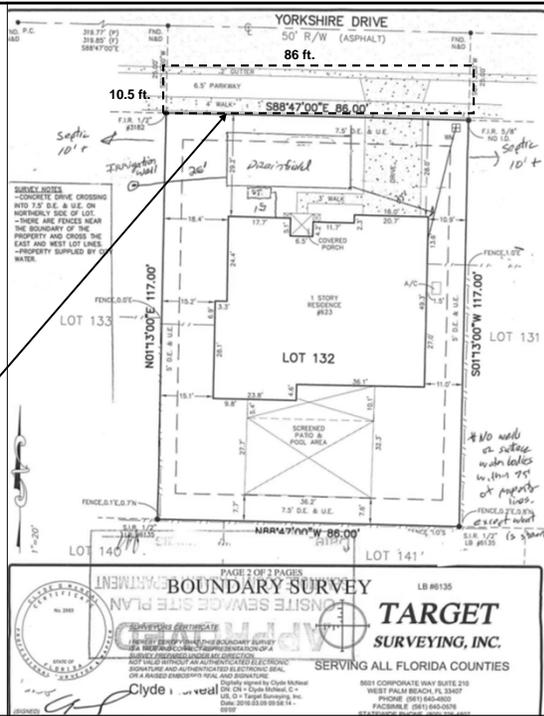
BUILDING INFORMATION:		<input checked="" type="checkbox"/> RESIDENTIAL		<input type="checkbox"/> COMMERCIAL	
Type of Establishment	No. of Bedrooms	Building Area Sq	# Persons Served	Total Design Flow	Flow This Unit
	4	2461	4		400

Floor/Equipment Design Other (Specify): _____ DATE: 05/28/2010

DH 4015, 08/09 (Obsoletes previous editions which may not be used) Page 1 of 4
 Incorporated 642-6.001, FAC v 1.0.0 APP#7278 K10144017

Site Plan Classroom Exercise

- Net Usable Area Available is **10,965 sq. ft.** or **.25 acres**
- Includes non-compacted ROW (**10.5 ft. x 86 ft = 903 sq. ft.**)



Site Evaluation Form DH 4015 Classroom Exercise

- Net Usable Area Available

Note: The remainder of the site evaluation is covered in ACT days 2 and 3 – Soils Course

CLASSROOM EXERCISE SET

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATION

APPLICANT: Mark Elder
CONTRACTOR / AGENT:
LOT: 132 BLOCK:
SUBDIVISION: Dunlevy Woods TRS: 08-21-21-514-0000-1320

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTMENT EMPLOYEE, OR OTHER QUALIFIED PERSON. ENGINEERS MUST PROVIDE REGISTRATION NUMBER AND SIGN EACH PAGE OF SUBMITTAL. COMPLETE ALL FIELDS.

PROPERTY SIZE CORRESPONDS TO SITE PLAN: YES NO **NET USABLE AREA AVAILABLE: 25 ACRES**

AVG DAILY ESTIMATED SEWAGE FLOW: 400 GALLONS PER DAY (RESIDENCES-PARCEL) / OTHER-PARCEL 2

ALLOWED SEWAGE FLOW: 1500 GPD/ACRE OR 2500 GPD/ACRE

UNOBSTRUCTED AREA AVAILABLE: 80FT UNOBSTRUCTED AREA REQUIRED: 80FT

RECHARGE/REFERENCE POINT LOCATION: 50000 ft of road
ELEVATION OF PROPOSED SYSTEM SITE: 8.00 (INCHES) / FT () ABOVE / BELOW) RECHARGE/REFERENCE POINT

THE SYSTEM STRUCTURE WHICH CAN BE MAINTAINED FROM THE PROPOSED SYSTEM TO THE FOLLOWING FEATURES

SURFACE WATER: 0 FT DIKES/DRALES: 0 FT NORMALLY MET: () YES (X) NO

WELLS: PUBLIC: 0 FT LIGHTED USE: 0 FT PRIVATE: 0 FT NON-POSSIBLE: 20 FT

BUILDING FOUNDATIONS: 5 FT PROPERTY LINES: 5 FT POTABLE WATER LINES: 25 FT

SITE SUBJECT TO FREQUENT FLOODING? () YES (X) NO 10 YEAR FLOODING? () YES (X) NO

10 YEAR FLOOD ELEVATION FOR SITE: FT () MSL / MVD) SITE ELEVATION: FT () MSL / MVD

SOIL PROFILE INFORMATION SITE 1			SOIL PROFILE INFORMATION SITE 2		
Munsell #/Color	Texture	Depth	Munsell #/Color	Texture	Depth
10YR 7/8	FH - Fine Sand	0 To 80	10YR 7/8	FH - Fine Sand	0 To 30
10YR 4/3	Fine Sand	80 To 73	10YR 7/8	Fine Sand	30 To 48
			7.5YR 5R	CMVPRM RF	44 To 44
			10YR 4/2	Fine Sand	48 To 72

OBSERVED WATER TABLE: 60.00 INCHES () ABOVE / BELOW) EXISTING GRADE: 7.5 FT () PERCHED / APPARENT)

RECHARGE PER MEASURED WATER TABLE ELEVATION: 42 INCHES () ABOVE / BELOW) EXISTING GRADE

STOR WATER TABLE VEGETATION: () YES (X) NO MOTTLING: (X) YES () NO DEPTH: 44.00 INCHES

SOIL TEXTURE/LOADING RATE FOR SYSTEM DESIGN: Fine Sand/0.60 DEPTH OF EXCAVATION: 0 INCHES

DRAINFIELD CONFIGURATION: () FRENCH (X) RND () OTHER (SPECIFY)

REMARKS: Sp=48", Sp=38", Top of mound=38", Existing site of drainfield=19'33"=42.55' (existing elevation of drainfield=4" lg. Permit based on inspector measurement of existing drainfield site and elevation. Soil had sufficient structure that profiles could be advanced through water to 72". Fill color=yellow/gray/white, 47, 24, 87

SITE EVALUATED BY: DATE: 06/02/09

DE 4015, 08/29 (includes previous editions which may not be used) Incorporation: 06-1-001, PAC Page 3 of 4

Estimated Sewage Flow



64E-6.008, Table I
4 bedroom single family residence
 with **2461 sq. ft. bldg. area**
 requires
400 gallons per day
*(must be consistent with the application
 sizing criteria and floor plan)*

TABLE I
 For System Design
 ESTIMATED SEWAGE FLOWS



RESIDENTIAL:	GPD
Residences	
(a) Single or multiple family per dwelling Unit	
1 Bedroom with 750 sq. ft. or less of building area.....	100
2 Bedrooms with 751-1200 sq. ft. of building area.....	200
3 Bedrooms with 1201-2250 sq. ft. of building area.....	300
4 Bedrooms with 2251-3300 sq. ft. of building area.....	400
For each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increased by 60 gallons per dwelling unit.	
(b) Other per occupant.....	50

**Site Evaluation
Form DH 4015
Classroom Exercise**

- Estimated sewage flow

CL 15/0000 10/20/06 214


STATE OF FLORIDA
 DEPARTMENT OF HEALTH
ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
SITE EVALUATION AND SYSTEM SPECIFICATION

APPLICATION # AD
 PERMIT # 20-551
 DOCUMENT # SEL

APPLICANT: Mark Elmer
 CONTRACTOR / AGENT: _____ BLOCK: _____
 LOT: 132

SUBDIVISION: Bentley Woods ID# 00-21-31-514-0000-1320
 TO BE COMPLETED BY ENGINEER, HEALTH DEPARTMENT EMPLOYEE, OR OTHER QUALIFIED PERSON. ENGINEERS MUST PROVIDE
 REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE ALL ITEMS

PROPERTY SIZE COMPARED TO SITE PLAN: YES NO NET USABLE AREA AVAILABLE: 25 ACRES
 TOTAL ESTIMATED SEWAGE FLOW: 600 GALLONS PER DAY (RESIDENCES-PARCEL 1) OVER-PARCEL 2)
 AUTHORIZED SEWAGE FLOW: _____ GALLONS PER DAY (1500 GPD/ACRE OR 2500 GPD/ACRE)
 UNSTRUCTURED AREA AVAILABLE: _____ SQFT UNSTRUCTURED AREA REQUIRED: _____ SQFT

BENCHMARK/REFERENCE POINT LOCATION: corner dot of road
 ELEVATION OF PROPOSED SYSTEM SITE: 8.00 (INCHES / FT) (ABOVE / BELOW) BENCHMARK/REFERENCE POINT

THE MINIMUM SETBACK WHICH CAN BE MAINTAINED FROM THE PROPOSED SYSTEM TO THE FOLLOWING FEATURES
 SURFACE WATER: 0 FT DITCHES/DRAINS: 0 FT NORMALLY SET: YES NO
 WELLS: PUBLIC: 0 FT LIMITED USE: 0 FT PRIVATE: 0 FT NON-POTABLE: 20 FT
 BUILDING FOUNDATIONS: 5 FT PROPERTY LINES: 5 FT POTABLE WATER LINES: 25 FT

SITE SUBJECT TO FREQUENT FLOODING? YES NO 10 YEAR FLOODING? YES NO
 10 YEAR FLOOD ELEVATION FOR SITE: _____ FT (MSL / MVD) SITE ELEVATION: _____ FT (MSL / MVD)

SOIL PROFILE INFORMATION SITE 1				SOIL PROFILE INFORMATION SITE 2			
USDA SOIL SERIES (Unknown)				USDA SOIL SERIES (Unknown)			
Munsell BCOLOR	Texture	Depth		Munsell BCOLOR	Texture	Depth	
10YR 7B	F8 - Fine Sand	0 To 60		10YR 7B	F8 - Fine Sand	0 To 32	
10YR 4Z	Fine Sand	60 To 72		10YR 7G	Fine Sand	32 To 48	
				7.0YR 5B	Clayey Silty	48 To 64	
				10YR 4Z	Fine Sand	64 To 72	

OBSERVED WATER TABLE: 60.00 INCHES (ABOVE / BELOW) EXISTING GRADE TYPE: (PEACHED / ASPHALT)
 ESTIMATED WET SEASON WATER TABLE ELEVATION: 44 INCHES (ABOVE / BELOW) EXISTING GRADE
 HIGH WATER TABLE VEGETATION: YES NO MOTTILING: YES NO DEPTH: 44.00 INCHES
 SOIL TEXTURE/LOADING RATE FOR SYSTEM SIZING: Fine Sand/60 DEPTH OF EXCAVATION: 0 INCHES
 DRAINFIELD CONFIGURATION: (1) TRENCH (2) BED (3) OTHER (SPECIFY) _____
 REDDRESS/ADDITIONAL CRITERIA _____

Fig#47, Sp#18, Sp#28, Top of mound=38", Existing site of drainfield=19'33"=423E Existing elevation of drainfield=4" hg. Permit based on inspection measurement of existing drainfield site and elevation. Soil had sufficient structure that profiles could be advanced through water to 72", F8 color/texture=10YR7B, m4, 4L, 2L, 8L

SITE EVALUATED BY: _____ DATE: 06/02/2010
DE 4015, 06/08 (Replaces previous editions which may not be used) Incorporates: 06-1-001, PAC Page 3 of 4
APW/211 6/21/10/17 11:23 034'

Authorized Sewage Flow



Lots served by a public water system:
 Net usable area (acres) x 2500 gpd per acre

$$.25 \text{ acres} \times 2500 \text{ gpd per acre} = 625 \text{ gpd.}$$

Site Evaluation
Classroom Exercise

- Authorized Sewage Flow

CL 1500001 10/20/12 114


STATE OF FLORIDA
 DEPARTMENT OF HEALTH
 ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
 SITE EVALUATION AND SYSTEM SPECIFICATION

APPLICATION # AD
 PERMIT # 20-551
 DOCUMENT # SEL

APPLICANT: Mark Elber
 CONTRACTOR / AGENT: _____
 LOT: 132 BLOCK: _____
 SUBDIVISION: Bentley Woods ID# 00-21-31-514-0000-1320

TO BE COMPLETED BY ENGINEER, HEALTH DEPARTMENT EMPLOYEE, OR OTHER QUALIFIED PERSON. ENGINEERS MUST PROVIDE
 REGISTRATION NUMBER AND SIGN AND SEAL EACH PAGE OF SUBMITTAL. COMPLETE AND RETURN

PROPERTY SIZE CONFIRMS TO SITE PLAN: YES NO SET TABLE AREA AVAILABLE: 25

TOTAL ESTIMATED SEWAGE FLOW: 400 GALLONS PER DAY [RESIDENCES-TYPICAL] OVER-TABLE 2)
 AUTHORIZED SEWAGE FLOW: 825 GALLONS PER DAY [1500 GPD/ACRE OR 1500 GPD/ACRE]
 UNSTRUCTURED AREA AVAILABLE: _____ SFT UNSTRUCTURED AREA REQUIRED: _____ SFT

BENCHMARK/REFERENCE POINT LOCATION: corner dot of road
 ELEVATION OF PROPOSED SYSTEM SITE: 8.00 [INCHES / FT] [ABOVE / BELOW] BENCHMARK/REFERENCE POINT

THE MINIMUM SETBACK WHICH CAN BE MAINTAINED FROM THE PROPOSED SYSTEM TO THE FOLLOWING FEATURES
 SURFACE WATER: 0 FT DITCHES/DRAINS: 0 FT NORMALLY MET: YES NO
 WELLS: PUBLIC: 0 FT LIMITED USE: 0 FT PRIVATE: 0 FT NON-POTABLE: 20 FT
 BUILDING FOUNDATIONS: 5 FT PROPERTY LINES: 5 FT POTABLE WATER LINES: 25 FT

SITE SUBJECT TO FREQUENT FLOODING? YES NO 10 YEAR FLOODING? YES NO
 10 YEAR FLOOD ELEVATION FOR SITE: _____ FT (MSL / MVD) SITE ELEVATION: _____ FT (MSL / MVD)

SOIL PROFILE INFORMATION SITE 1				SOIL PROFILE INFORMATION SITE 2			
VENEER SOIL SERIES (taken)				VENEER SOIL SERIES (taken)			
Moisture	Color	Texture	Depth	Moisture	Color	Texture	Depth
10YR 7B		FR - Fine Sand	0 To 60	10YR 7B		FR - Fine Sand	0 To 32
10YR 4Z		Fine Sand	60 To 72	10YR 7G		Fine Sand	32 To 48
				7.0YR 5B		Clayey Silty	48 To 64
				10YR 4Z		Fine Sand	64 To 72

OBSERVED WATER TABLE: 60.00 INCHES [ABOVE / BELOW] EXISTING GRADE TYPE: [PEACHED / APPARENT]
 ESTIMATED WET SEASON WATER TABLE ELEVATION: 44 INCHES [ABOVE / BELOW] EXISTING GRADE
 FROM WATER TABLE VEGETATION: YES NO MOTTILING: YES NO DEPTH: 44.00 INCHES
 SOIL TEXTURE/LOADING RATE FOR SYSTEM DESIGN: Fine Sand/60 DEPTH OF EXCAVATION: 0 INCHES
 DRAINFIELD CONFIGURATION: 1 TRENCH 2) BED 3) OTHER (SPECIFY)

ADDRESSES/ADDITIONAL CRITERIA _____
 DATE: 06/02/2010

Fig#47, Sp#18, Sp#28, Sp#38, Top of mound=38", Existing site of drainfield=19'33"=432" Existing elevation of drainfield=4" hg. Permit based on inspection measurement of existing drainfield site and elevation. Soil had sufficient structure that profile could be advanced through water to 72", FR color/texture=10Y7B, m43, 4L24, 81

SITE EVALUATED BY: _____ DATE: _____
DR 4118, 04/08 (Replaces previous editions which may not be used) Interpretation: see 4. vol. 1, PAC Page 3 of 4
APW/STJ ECT/146817 11/22 034'

Classroom Exercise #2



1. Has the lot size been confirmed? And how?	Yes, Survey
2. Does this lot meet lot size requirements? Need to review adjacent lots	Yes
3. What are the property dimensions of the lot?	86ft. X 117ft.
4. What is the total square footage of the lot? 86 ft. x 117 ft = 10,062 SF	10,062 SF
5. What is the total square footage of permissible rights of ways and easements?	10.5 ft x 86 ft. = 903 SF

Classroom Exercise #2



6. Are there surface water bodies present? If so, what is the total area excluded from the net usable area?	No / NA
7. What is the net usable area of the lot in acres? 10,026 sq. ft. x 903 sq. ft. = 10,965 sq. ft.	10,965/43,560 = .25 acres
8. What is the estimated sewage flow for the residence?	400 gpd
9. What is the sizing criteria the estimated sewage flow is based on?	4 beds/ 2461 sf bldg area
10. What is the authorized sewage flow for the lot? .25 acres x 2500 GPD =	625 gpd

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Classroom Exercise #3



24

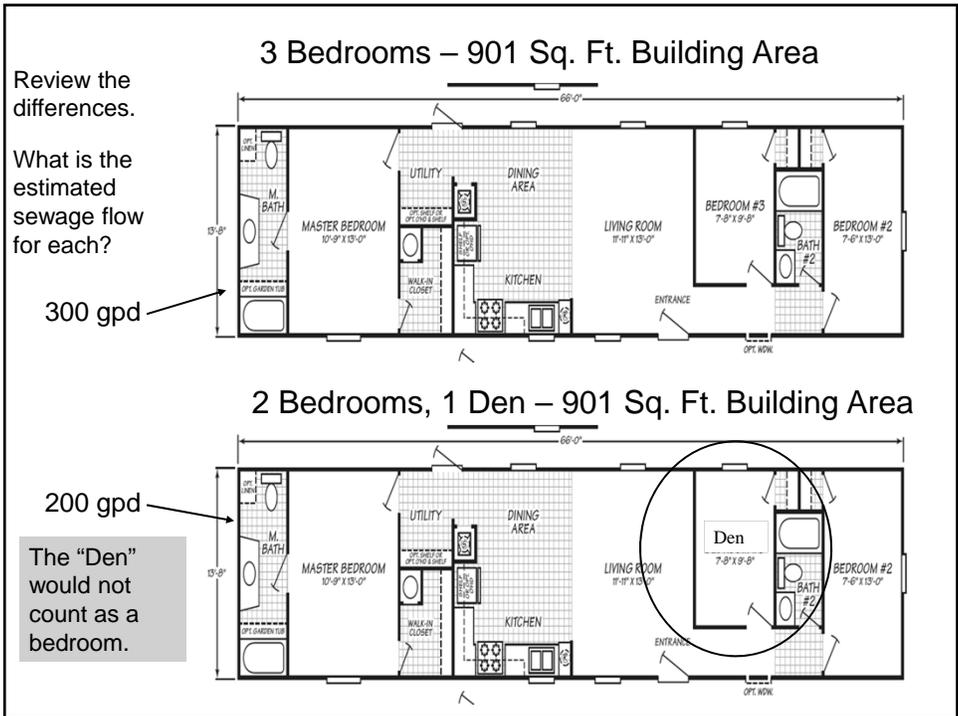


TABLE I
For System Design
ESTIMATED SEWAGE FLOWS

Florida HEALTH

RESIDENTIAL:	Residences	GPD
(a) Single or multiple family per dwelling Unit		
1 Bedroom with 750 sq. ft. or less of building area.....		100
2 Bedrooms with 751-1200 sq. ft. of building area.....		200
3 Bedrooms with 1201-2250 sq. ft. of building area.....		300
4 Bedrooms with 2251-3300 sq. ft. of building area.....		400
For each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increased by 60 gallons per dwelling unit.		
(b) Other per occupant.....		50

2 bedrooms with 901 sq. ft. bldg. area

3 bedrooms with 901 sq. ft. bldg. area

QUESTIONS