

**ADDENDUM NO. 3
TO THE BID DOCUMENTS**

Tasmania Court Sewer Main Extension

CITY OF HOMER, ALASKA

Addendum Issue Date: November 19, 2021

Bid Submittal Date: November 30, 2021

Previous Addenda Issued: 2

Issued By: Janette Keiser, PE
Public Works Director
City of Homer

Notice to Bidders:

Bidders must **acknowledge receipt of this Addendum** by including the Addenda Acknowledgement Form with the bid.

Bidders are required to acknowledge each addenda separately on the Addenda Acknowledgement Form. Any bids received without acknowledgment of addenda may be rejected prior to evaluation.

The Bid Documents for the above project are amended as follows (all other terms and conditions remain unchanged):

- 1. On the Bid Form, all expenses for mobilization/demobilization, SWPPP implementation and traffic control have been moved to Scope A of the project.**
- 2. Addendum #2 should be disregarded.**
- 3. Addenda Acknowledgment Form is attached.**
- 4. New Special Provisions are attached with language regarding invasive plant control.**
- 5. Questions from Bidders.**

Question #1: Do you know what type of material the septic tanks are made of and size?

Answer #1: Attached to this addendum are septic tank filings from ADEC records which show the size and material of the septic tanks to be replaced. The ADEC records did not

contain any filings for parcel # 17702040 however, it should be assumed that the septic tank for that property is steel unless otherwise notified. We do not know the size of the septic tank on parcel # 17702040

Question #2: DEC allows for septic demolition in place. Pumping, Removal of top, fill with some Lime and clean gravel and grade over. Is demolition in place acceptable?

Answer #2: Yes, demolition in place is acceptable for this project.

ADDENDA ACKNOWLEDGMENT

Project Name: Tasmania Court Water Main Extension Project

I hereby acknowledge addenda numbers:

_____	_____
_____	_____
_____	_____

Name of Firm: _____

Signature of Bidder: _____

Date: _____

This Acknowledgement must be included in the Bid/Proposal for the project if any Addenda are issued or the Bid/Proposal could be considered non-responsive.

CONSOLIDATED BID FORM

Tasmania Court Water & Sewer Main Extension

Scope A: Tasmania Ct. Water Main Extension.

All of the following Bid Items are for the construction of the WATER MAIN & appurtenances.

ITEM NO.	SPEC NO.	BID ITEM DESCRIPTION - Water Main & Appurtenances	UNIT	QUAN TITY	UNIT BID PRICE	TOTAL BID PRICE
1	101	Mobilization/Demobilization (entire project)	LS	1		
2	602	Install 8" HDPE SDR11 Water Pipe	LF	940		
3	603	Furnish & Install 8" Gate Valve	EA	3		
4	604	Furnish & Install Single Pumper Hydrant	EA	3		
5	606	Furnish & Install 1" Water Service Connection	EA	11		
6	207	Excavate & Backfill Structural Trench Section for water line	LF	593		
7	207	Excavate & Backfill Non-Structural Trench Section for water line	LF	752		
8	102	Construction Survey (entire project)	LS	1		
9	221	SWPPP Implementation (entire project)	LS	1		
10	103	Traffic Control (entire project)	LS	1		
11	702	Furnish & Install Geotextile Fabric	SY	600		
12	602	Furnish and install 12" HDPE SDR11 Water Pipe	LF	562		
13	603	Furnish and install 12" Gate Valve	EA	1		
14	503	Furnish and Install ARV Manhole	EA	1		
15	603	Furnish and Install 2" ARV Assembly	EA	1		

Total Bid for Scope A - Water Main: \$ _____

Scope B-1: Tasmania Ct. Sanitary Sewer Main Extension

All of the following Bid Items are for the construction of the SEWER MAIN & appurtenances, but not including the installation of the E-One Grinder Pumps.

ITEM NO.	SPEC NO.	BID ITEM DESCRIPTION – Sewer Main & Appurtenances	UNIT	QUAN TITY	UNIT BID PRICE	TOTAL BID PRICE
1	502	Furnish & Install 8”DIP Class 50 Sewer Pipe	LF	1276		
2	518	Furnish & Install 16” HDPE SDR11 Casing	LF	49		
3	503	Furnish & Install Sewer Manhole	EA	2		
4	508	Furnish & Install Cleanout	EA	3		
5	510	Furnish & Install Sanitary Sewer Service Stub-out	EA	9		
6	518	Furnish & Install Pressurized Sewer Service Stub-out	EA	2		
7	207	Excavate & Backfill Structural Trench Section	LF	869		
8	207	Excavate & Backfill Non-Structural Trench Section	LF	723		
9	704	Furnish & Install 2” Thick Insulation	BOARD FOOT	48		

Total Bid for Scope B-1 – Sewer Main: \$ _____

Scope B-2: Tasmania Ct. Sewer Main E-One Service Connections

All of the following Bid Items are for the construction of the E-One Grinder Pumps on private property.

ITEM NO.	SPEC NO.	BID ITEM DESCRIPTION	UNIT	QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
1	712	Furnish & Install E-One DH071 Grinder Pump	EA	2		
2	502	Furnish & Install 1.25” HDPE SDR11 sewer service pipe	LF	300		
3	220	Excavate & Backfill Asphalt Pavement Trench Section	LF	20		
4	207	Excavate & Backfill Non-Structural Trench Section	LF	280		
5	516	Remove & Dispose of Existing Septic Tank	EA	7		

Total Scope B-2 – E-1 Grinder Pumps on Private Property: \$_____

Consolidated Bid Amount – All Bid Items (Scope A + Scope B-1 + Scope B-2) : \$_____

Note: Basis of bid will be the Consolidated Bid Amount.

Name of Bidding Company_____

Address of Bidding Company_____

Signature of Company Representative _____ Date _____

Printed Name of Company Representative_____

Phone#/Email_____

SPECIAL PROVISIONS

Tasmania Court Sewer Main Extension

The construction contract for this project will be administered in accordance with the General Provisions of the City's Standard Construction Specifications (2011).

MODIFICATIONS TO GENERAL PROVISIONS

SP - 1: Section 10.02 - Add New Article 2.6 – Anti-Discrimination

The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.

SP - 2: Section 10.04 – Add New Article 4.6 – Scope of Work

The Work included under this Contract consists of furnishing all labor, materials, equipment, supervision, and other facilities necessary to successfully complete the Work set forth in the drawings, specifications, and the terms of the Contract, including, but not limited to the following work:

- Excavation required to bury a new sewer main at the depth specified in the plans, including exposing an existing sewer main connection so that the new sewer main can be connected to it.
- Installation of 1276 feet of 8-inch DIP Class 50 sewer pipe.
- Installation of sewer service connections to 11 parcels, including 2 parcel connected through E-Ones Grinder Pumps.
- Installation of 2 manholes.
- Decommission 7 existing septic tanks.
- Excavation and backfill of structural and non-structural trench sections.
- All materials will be provided by the Contractor.
- Work required by the SWPPP
- Traffic control

SP – 3 Article 5.12 – Temporary Erosion Control During Construction

Add the following language:

“The City has prepared a Storm Water Pollution Prevention Plan (SWPPP), which will be included in an Addenda. The Contractor is required to implement the Best Management Practices in the SWPPP and otherwise comply with the terms of the SWPPP. Compensation will be paid under Bid Item #12 of Scope B-1, SWPPP Implementation.”

SP - 4: Article 5.19 - Easement and Rights-of-way

Add the following language:

“The Contractor will be provided access to a laydown area for material storage, job shack, and other uses. The location of this area will be shown in the site map.”

SP - 5: Article 5.25 - Unusual Work Hours

Add the following sentence:

“The noise level from work completed before 8:00 AM and after 8:00 PM cannot exceed 75 db at a distance of 50 feet.”

MODIFICATIONS TO STANDARD SPECIFICATIONS

DIVISION 100 GENERAL DIVISION

SECTION 102 CONSTRUCTION SURVEYING BY THE CONTRACTOR

SP - 7: 102.1 General

Add the following paragraph:

“The Contractor shall submit all survey data with each pay application; Field Books with sketches, professionally scaled plan set redlines and electronic survey coordinates. These items shall be submitted in entirety within 10 days of the project completion. In addition, the as-built information shall also be in NAD 83 datum, the City of Homer will provide the coordinate system at the time of contract award. All files submitted must be in PDF format.”

DIVISION 200 EARTHWORK

SECTION 208 COMPACTION CONTROL BY THE CONTRACTOR

SP - 8: Delete all text within section 208 and replace with:

“The City will provide field compaction testing for quality control.”

SP- 9: New Section 220 – Excavate and Backfill Asphalt Pavement Trench Section

220.1 General

The work under this section consists of performance of all operations pertaining to the trench excavation and backfill within areas containing asphalt concrete pavement in accordance with the limits shown on the drawings and as directed by the Engineer.

220.2 Construction

The contractor shall excavate trenches within areas containing asphalt concrete pavement per HSCS Section 207. Bedding material shall be Class “C” per HSCS Section 211 and backfilled in conformance with HSCS Section 207. Classified Fill Type III and Leveling Course shall be installed in conformance with HSCS Sections 205 and 206, respectively. Asphalt Concrete shall be installed in conformance with HSCS Division 400.

220.3 Method of Measurement

Excavate and Backfill Asphalt Pavement Trench Section shall be measured by the lineal foot (LF) with the dimensions shown on the drawings and these specifications. Payment for Excavate and Backfill Asphalt Pavement Trench Section includes all labor, materials, and incidentals for excavating, backfilling, and placing asphalt concrete surfacing.

220.4 Basis of Payment

Payment shall be made under the following unit:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
220	Excavate and Backfill Asphalt Pavement Trench Section	LF

SP- 10: New Section 221 – SWPPP Implementation

221.1 General

Work under this section consists of all activities related to implementing the requirements of the SWPPP for this project.

221.2 Construction

The contractor shall adhere to all terms and conditions and shall implement all BMPs as stated in the SWPPP.

221.3 Method of Measurement

SWPPP Implementation shall be measured by lump sum.

221.4 Basis of Payment

Payment shall be made under the following unit:

ITEM	DESCRIPTION	UNIT
221	SWPPP Implementation	LS

SP – 11: Add New Section 222, Invasive Weed Control

All mineral materials, topsoil, and straw or hay erosion control products shall be certified as weed free under the state of Alaska’s Division of Agriculture weed free certification program. All questions regarding the weed free certification program should be directed to the Homer Water and Soil Conservation District. They may be reached at (907) 205-0235.

DIVISION 500 SEWER SYSTEMS

SP-12: Add New Section 515 Connection to Existing Sewer Main

515.1 General

There is an existing 8” sewer main running along the south side of South Slope Drive. The new 8” sewer main will be connected to this existing one. This item consists of furnishing all labor, equipment and materials necessary to expose the existing sewer main stub out, modify the end of the stub out as required and connect the new sewer main to the stub out.

515.2 Construction

- A. Rinse all pipe, fittings, and couplings to be used in the connection with a 5% solution of sodium hypochlorite or calcium hypochlorite immediately prior to installation.
- B. Leave the entire reconnection assembly exposed to view until sewage is flowing through the connection and all joints have been examined for leaks.

SP-13: New Section 516 – Decommission Existing Septic Tanks and Biocycle Units

516.1 General

The work under this section consists of performance of all operations pertaining to the removal, disposal, backfilling, and replacement and repair of landscaping as required to

decommission existing septic tanks and biocycle units on properties connecting to the City of Homer sanitary sewer system shown on the drawings and as directed by the Engineer.

The following table itemizes the location and type of septic tank to be decommissioned a spart of gravity sanitary sewer connection to the new sanitary sewer main:

Address	Tank Size and Material	Location Relative to Existing Cleanout Connection to New Service
786 W. Tasmania Court	1250 gallon, steel	10 feet +/- south of cleanout connection
814 W. Tasmania Court	1250 gallon, steel	20 feet +/- south of cleanout connection
825 W. Tasmania Court	1250 gallon, steel	30 feet +/- southwest of cleanout
842 W. Tasmania Court	1250 gallon, steel	30 feet +/- south of cleanout connection
4526 South Slope Drive	1000 gallon, steel	20 feet +/- south of cleanout connection

The following table itemizes the location and type of septic tank to be decommissioned and replaced with a pressurized sewer service connection:

Address	Tank Size and Material	Location Relative to Cleanout Connection to New Service
795 W. Tasmania Court	1250 gallon, steel & 1500 gallon, steel (Biocycle Unit)	6 feet +/- and 40 feet +/- west of cleanout connection
907 E. Tasmania Court	1500 gallon, steel	10 feet +/- south of cleanout connection

516.2 Construction

The contractor shall remove the wastewater from all compartments and dispose of wastewater per Alaska Department of Environmental Conservation (ADEC) regulations at an approved ADEC disposal site.

The septic tanks and biocycle units shall be removed and disposed of per ADEC regulations at an approved disposal site.

The resulting void after removal of the tanks and biocycle units shall be backfilled with Classified Fill Type IV, or material approved by the Engineer, per HSCS Section 205. The fill shall be compacted to 90% maximum relative density per HSCS Section 208 for every 10 cubic yards of fill placed. The final grade of the fill shall match the slope and grade of the surrounding existing ground but shall not allow surface water to be retained within the surface limits of the fill.

The surface shall be seeded with a lawn grass seed mix commercially available in South Central Alaska per the manufacturer's recommendations.

516.3 Method of Measurement

Decommission Existing Septic Tanks and Biocycle Units shall be paid for each unit decommissioned (EA). Payment for Decommission Existing Septic Tanks and Biocycle Units includes all labor, materials, and incidentals for removing wastewater, removal and disposal of the septic tanks and biocycle units, backfill and compaction, and seeding the fill surface limits.

516.4 Basis of Payment

Payment shall be made under the following unit:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
516	Decommission Existing Septic Tanks and Biocycle Unit	EA

SP-14: New Section 517 – Furnish and Install 16” HDPE SDR 11 Casing

517.1 General

The work under this section consists of providing all operations pertaining to the furnishing and installation of 16” high density polyethylene casing around ductile iron pipe, where shown on the plans.

517.2 Construction

HDPE pipe material for casing shall be dimensioned for iron pipe sizing (IPS) and meet the maximum standard dimension ratio SDR of 11

517.3 Method of Measurement

Furnish and Install 16” HDPE SDR 11 Casing shall be measured by the lineal foot (LF) with the dimensions shown on the drawings and these specifications. Payment for Furnish and Install 16” HDPE SDR 11 Casing includes all labor, materials, and incidentals for placing the casing around ductile iron pipe.

517.4 Basis of Payment

Payment shall be made under the following unit:

ITEM	DESCRIPTION	UNIT
517	Furnish and Install 16" HDPE SDR 11 Casing	LF

SP-15: NEW SECTION 518 – PRESSURE SEWER SERVICE CONNECTIONS

518.1 General

The work under this section consists of providing all operations pertaining to the construction required for pressure sewer service connections.

518.2 Materials

All pressure sanitary sewer service connections shall be constructed with ductile iron with "Tyton" joints except where a mechanical joint is used to attach the short body plug.

All services with less than five feet (5') of cover shall be insulated with sufficient two-inch (2") DOW Styrofoam "HI" to provide an equivalent of five feet (5') of soil cover. The insulation shall be two feet (2') in width and shall be placed no closer than six inches (6") above the pipe and no further than one foot (1') above the pipe, centered. IFCO 725-P saddle or equal shall be secured with a double strap or a single stainless steel band of two and one-half inches (2-1/2") inches or more in width.

518.3 Construction

Excavation and backfill for sanitary sewer service connections shall be in accordance with HSCS Division 200, Standard Specifications for Earthwork, Section 207, Trench Excavation and Backfill, of these specifications.

The service connections shall be bedded with non-frost susceptible material, with a fine granular texture containing no material larger than one and one-half inches (1-1/2"). The bedding shall be laid the full extent of ditch and up to the spring line of the service connect. Piping may be bedded with native soils if approved in advance by the Engineer.

Saddles shall be placed over a hole sawed no larger than one-eighth inch (1/8") larger than the inside diameter of the service line. The strap(s) shall be tightened in accordance with the manufacturer's instructions and centered over the hole sawed in the pipe being tapped. The hole shall be made above the spring line of the main being tapped.

Sanitary sewer service connections, shall be installed to the edge of right-of-way or the edge of the permanent easement of the lot being served and shall be permanently marked by

means of a two by four (2" x 4") extending two feet (2') above grade, painted white and stenciled with the word "Sewer" in white, two-inch (2") high letters.

As-built measurements shall be the station of the service connection at the main plus a minimum of two (2) ties to prominent features and when possible ties to property corners. An as-built elevation of the stub end invert is required.

Minimum slopes for the 4" ductile iron pipe shall be 2.08%, (1/4" per foot) sloped down to the main

518.4 Method of Measurement

Pressure Sewer Service Connections shall be measured as completed units in place. This item will include all materials, excavation, installation, compaction, and installation of Class "B" bedding. Imported backfill will be paid separately as a bid item or by letter of agreement.

518.5 Basis of Payment

Payment shall not be made for any service which does not include the as-built stub end elevation and horizontal location as stipulated above.

Payment shall be made under the following unit:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
518	Pressure Sewer Service Connection	EA

DIVISION 700 MISCELLANEOUS CONSTRUCTION

SP-16: NEW SECTION 712 – FURNISH AND INSTALL E-ONE DH071 GRINDER PUMP

712.1 General

This specification covers the installation of E-One Sewer System's E-One DH071 grinder pump as detailed and specified in the plans and these special provisions.

The contractor's attention is directed to the following E-One System's publications:

1. DH071/DR071 Drawings (Standard Details in PDF and Autocad format)
2. DH071/DR071 Installation Instructions (Manual in PDF format)

These publications are available at:

<https://eone.com/sewer-systems/products/grinder-pump-systems/d/dh071>

712.2 Construction

The contractor shall install the E-One DH071 grinder pumps per the manufacturer’s instructions and the construction notes shown in the plans.

The contractor shall locate all buried on-site utilities before any excavation work. Buried on-site utilities may include, gas, electric, telecommunications, boiler heat tubes between buildings, and sewer.

712.3 Method of Measurement

Furnish and Install E-One DH071 Grinder Pump shall be paid for by each unit (EA).

712.4 Basis of Payment

Payment for Furnish and Install E-One DH071 Grinder Pump includes all labor and incidentals for furnishing and installing the units, complete in place including all wiring and plumbing connections. Payment shall be made under the following unit:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
712	Furnish and Install E-One DH071 Grinder Pump	EA

Date Received

RECEIVED

FEB - 9 2000

Department of
Environmental Conservation

KDO

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DOCUMENTATION OF CONSTRUCTION

GENERAL INFORMATION

Legal Description of the Location

Lot 5-A-1 Barnett South Slope S/D
Located w/in N 1/2 SE 1/4 Section 17
T6 S, R13 W, Seward Meridian

Submitted by: (Check one)

- Certified Installer
- Approved Homeowner
- Registered Engineer

Installer Name:

Troy Jones

Mailing Address

Onsite Wastewater System Serves:

- Single Family. Number of Bedrooms 5
- Duplex. Number of Bedrooms _____
- Small Commercial Facility With Estimated
Design Flow of less than 500 GPD.

II. WATER SUPPLY SYSTEM

(SECTION II IS OPTIONAL)

Source of Water and Containment (Check all that Apply)

- Well (Drilled or Driven) Surface (Identify) _____
- Roof Catchment Other (Identify) _____
- Holding Tank Other (Identify) _____

Type of Water Supply System

- Private
- Public (Serves more than one family)

Treatment of Water (Check all that Apply)

- None Chlorination
- Filtration Mineral Removal
- Other: _____

Well Data

Is the height of the well casing more the 12" above the ground?

 Yes No

Is a sanitary seal or well cap installed on the well casing?

 Yes No

Is drainage directed away from or around the casing within a radius of 10 feet of the well casing?

 Yes No

Is well wire enclosed in conduit?

 Yes No

Date Drilled 1985	Depth of Well (Feet) ?	Static Water Level (Feet) ?	Yield (If available) ?	Pump Rate (If available) ?
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Separation Distance from the Well Casing to each of the Following Sources of Contamination:

Septic/Holding Tank on Lot 150 Feet	Sewer Lines on Lot 150 Feet	Absorption Area on Lot 190 Feet
Closest Septic/Holding Tank on Adjacent Lot > 100 Feet	Closest Sewer Lines on Adjacent Lot > 100 Feet	Closest Edge of an Absorption Area on Adjacent Lot > 100 Feet

Indicate separation distance from toxic materials including fuel tanks, paints, lubricants and other petroleum based materials, pesticides, fungicides or herbicides to well casing:

On Lot > 100 Feet	On Adjacent Lot > 100 Feet
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Water Sample Taken by: (Name)

Sampler is:

- Buyer Engineer
- Banker Government Official

Address

Water Sample Results:

Attach Copy Satisfactory - Date Unsatisfactory - Date

Comments/Recommendations:

I certify that the above information, and that provided in Section IV, is correct:

Signature William F. Craine	Typed/Printed Name William F. Craine	Title Registered Engineer	Date 2/6/00
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Note: 1. This section should be signed by a Certified installer, Professional Engineer, DEC staff, or Owner/Builder

2. All public water systems must receive ADEC plan approval prior to construction. See 18 AAC 80 State of Alaska Drinking Water

II. WASTEWATER DISPOSAL

Legal Description: Lot 5-A-1 Barnett South Slope S/D

Type of Wastewater System:

- Septic Tank with Conventional Soil Absorption System Package Treatment Plant (requires engineered design)
 - Holding Tank: Material Type: _____ Size in Gallons: _____ Manufacturer: _____
 - Other - Specify Type _____ Alternate Onsite (requires engineered design)
 - Small Commercial System (< 500 GPD) With Estimated Daily Wastewater Flow of: _____ Gallons Per Day (GPD)
- Criteria Used to Estimate Daily Wastewater Quantity: _____

NEW SYSTEM REPAIR TO EXISTING SYSTEM

Certified Installer Installation Notification Date:

Name of Installer: Troy Jones

Date Installed: November 1998

- System Installed: By a Registered Engineer With Inspection by a Registered Engineer *See attached letter*
- By Approved Homeowner (attach copy of approval letter) By a Certified Installer/Installer Number

Septic Tank: Material: Steel Manufacturer: Anchorage Tank Size (Gallons): 1500 Number of Compartments: 2

- Type of Soil Absorption System:
- Deep Trench Shallow Trench Seepage Pit Bed
 - Mound Other, Specify _____

Soil Type: SP Soil Rating: 150 sq ft/bedroom Dimensions/Size of Absorption Area: 3 @ 5' x 50', 750 ft²

Grading/Size of Distribution Rock: 1 1/2" Thickness/Depth of Distribution Rock: 1.8 ft

Percolation Test Results, Attach Copy of Report:

Minutes per Inch	Sq. Ft. per Bedroom	Percolation Test Performed by:
_____	_____	_____

percolation test results must be sealed/signed by a registered engineer

Minimum Ground Cover Over: Septic Tank: 4' Absorption Area: 4' Sewer Pipes: 4'

Cleanout Pipes/Caps Installed: Foundation Cleanout: Yes Septic Tank: Yes Monitor Tubes: Yes

List Separation Distances From Septic Tank or Absorption Area, Whichever is Closest, to All Nearby:

Public Drinking Water Sources Within 200 feet: N/A Private Drinking Water Sources Within 100 feet: 150 ft

Nearest Water Bodies (see 18 AAC 72.020(b)): 150 ft (Drainage Ditch) Lot Line: 150 ft

Separation Distance from Onlot Sewer Lines to: Public Drinking Water Sources: N/A Private Sources: 150 ft

Separation Distance From Bottom of Distribution Rock to: Groundwater Table: > 4' Bedrock: > 6'

Separation Distance from Absorption Area to Slope exceeding 25%: N/A

Comments/Recommendations

See attached letter.

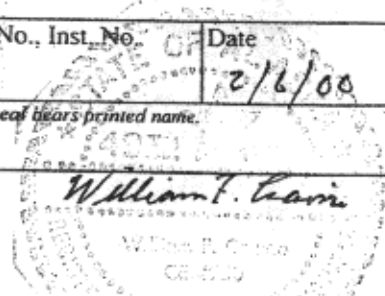
I certify that the above information, and that provided in Section IV, is correct:

Signature <i>William F. Craine</i>	Typed/Printed Name <u>William F. Craine</u>	Title, Reg./Cert No., Inst. No. <u>CE 4950</u>	Date <u>2/6/00</u>
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NOTE: Must be signed by a Certified Installer, Professional Engineer, DEC staff, or Approved Homeowner. If engineering seal bears printed name,

separation number, and is signed, those blocks need not be completed for engineered submittals.

SEAL
Registered Professional
Engineer

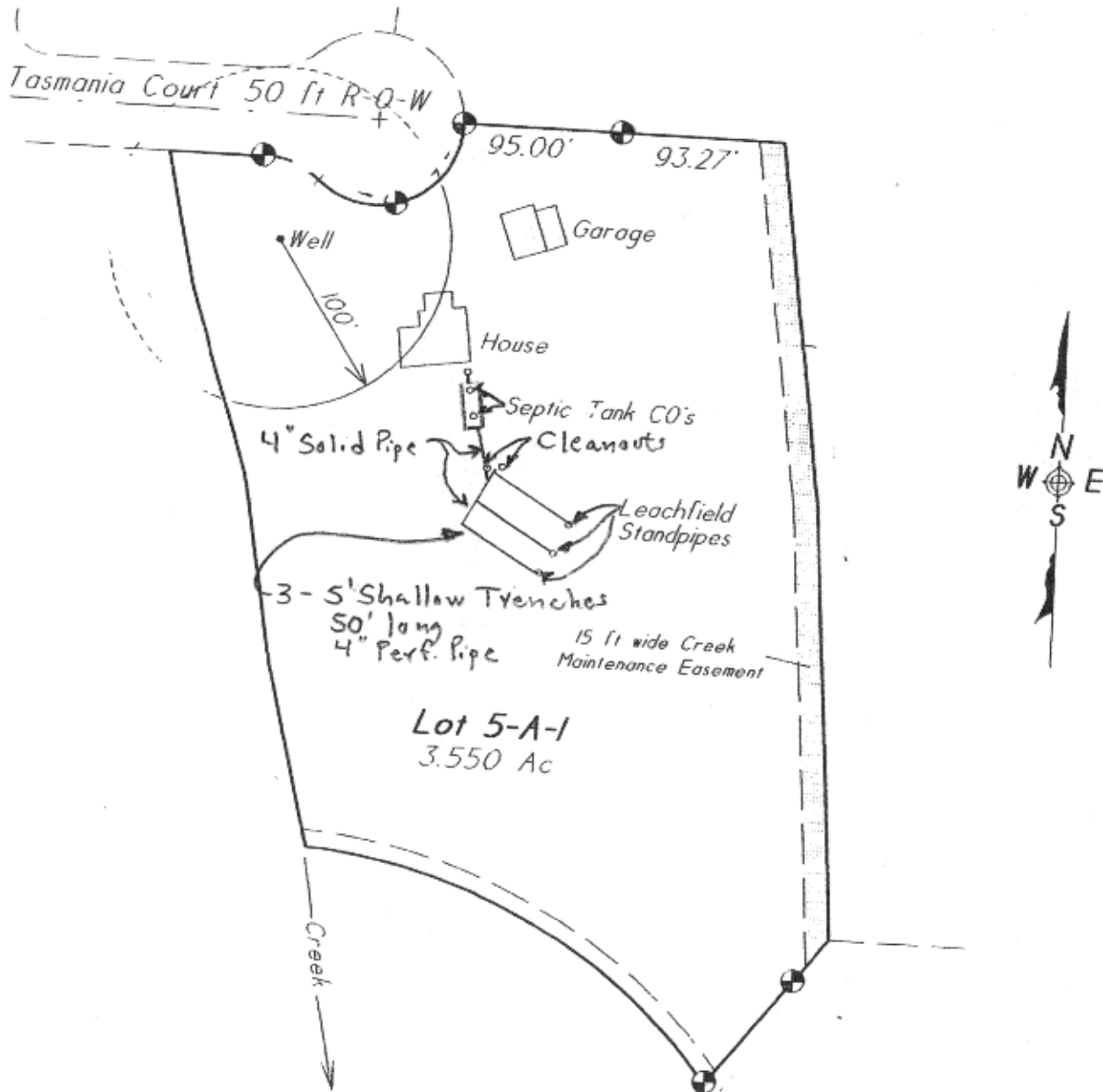


IV. DIAGRAM OF SYSTEM(S) INSTRUCTIONS FOR DIAGRAM

1. In a plan view, locate and identify each of the following:

a) Well	b) All Structures	c) Septic Tank	d) Soil Absorption System
e) Surface Water	f) Sources of contamination	g) Property Line	(Include dimensions)
h) Closest well on adjacent property		i) Closest septic tank on an adjacent property	
j) Closest edge of an absorption field on adjacent property		k) All cleanouts and monitor tubes	
2. Show distances between the well and each of the sources of contamination listed in 1.
3. Show distances between water bodies and each part of the onsite system listed in 1.
4. In a cross section view of the soil absorption area, identify each component and show the depth (thickness) of the following:

a) Soil Cover	b) Absorption Material	c) Water Table	d) Bedrock
		e) Discharge pipes	f) Insulation



PLAN 1" = 100'

Date Received

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FOR ON-SITE WATER AND SEWER
SYSTEM APPROVAL

I. GENERAL INFORMATION

Legal Description of the Location

LOT 2, BARNETT'S SOUTH SLOPE SUBD.
LOCATED WITHIN THE CITY OF HOMER, ALASKA

Applicant Name

JIM & KAY JULIAN

Applicant is: (Check one)

Bank OWNER Certified Installer No.

Address (Street or P. O. Box)

C/O GENERAL DELIVERY

Type of Residence

Single Family Multi-Family

Total No. of Bedrooms

3

City, State and Zip Code

HOMER, AK. 99603

Telephone

235-7284 (D.M.GIER)

Send Approval to:

Applicant Other: (Give Name & Address) D.M.GIER & CO. BOX 3670 HOMER, AK. 99603

II. WATER SUPPLY SYSTEM

Source of Water and Containment (Check all that Apply)

- Well (Drilled or Driven) Surface (Identify) _____
 Roof Catchment _____
 Holding Tank _____
 Other (Identify) _____

Type of Water Supply System

- Private _____
 Public (Serves more than one family) _____

Treatment of Water (Check all that Apply)

- None Chlorination _____
 Filtration Mineral Removal _____
 Other: _____

Well Data

Is the Height of the Well Casing more than 12" above the Ground? Yes No

Is a sanitary seal installed on the well casing? Yes No

Is drainage directed away from or around the casing within a radius of 10 feet of the well casing? Yes No

Date Drilled

Depth of Well (Feet)

Static Water Level (Feet)

Yield (If Available)

Pump Rate (If Available)

Gal/Min

Gal/Min

Separation Distances from the Well Casing to each of the Following Sources of Contamination:

Septic/Holding Tank on Lot

Sewer Lines on Lot

Absorption Area on Lot

Closest Septic/Holding Tank on Adjacent Lot

Closest Sewer Lines on Adjacent Lot

Closest Edge of an Absorption Area on Adjacent Lot

If toxic materials are stored on the property, including fuel tanks, paints, lubricants and other petroleum based materials, pesticides, fungicides or herbicides, indicate distance from contaminants to well casing:

On Lot

On Adjacent Lot

Water Sample Taken by: Name

Sampler is:

- Buyer Engineer
 Banker Government Official

Address

Water Sample Results:

Attach Copy Satisfactory - Date: _____ Unsatisfactory - Date: _____

Comments/Recommendations:

I certify that the above information is correct:

Signature

Typed/Printed Name

Title

Date

NOTE: Must be signed by a Certified Installer, Professional Engineer, Department of Environmental Conservation or the Owner/Builder

III. WASTEWATER DISPOSAL

<input checked="" type="checkbox"/> Septic Tank/Absorption System		<input type="checkbox"/> Package Treatment: (Specify Brand Name or Process)	
<input type="checkbox"/> Holding Tank - Specify:	Capacity of Tank	Where Waste is Disposed	Frequency of Pumping
<input type="checkbox"/> Septic Tank Outfall Discharged To:		<input type="checkbox"/> Other (Specify): (Outhouse, Incinerator, etc.)	

<input checked="" type="checkbox"/> New System		Name of Installer DUANE BELNAP		Date Installed DECEMBER 1983	
<input checked="" type="checkbox"/> Owner/Builder	<input type="checkbox"/> Certified Installer No. _____	<input type="checkbox"/> Other:	Type/Manufacturer STEEL		
Septic Tank Size (Gallons) 1000		Number of Compartments 2		Soil Type or Rating SW (125 SQ. FT. / BEDROOM)	
Type Soil Absorption System DEEP TRENCH		Dimensions/Size Soil Absorption System (4x2) x 50 = 400 SQ. FT.		Type/Quantity Backfill Material used for Soil Absorption System 1/2" TO 2 1/2" WASHED DRAIN ROCK (GRAVEL)	
Percolation Test Results NOT REQD.		Percolation Test by: (Name)			
Minimum Ground Cover over Absorption Area 4.0 Feet	Minimum Ground Cover over Septic Tank 4.0 Feet	Cleanout Pipes/Caps Installed on Septic Tank <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cleanout Pipes/Caps Installed on Absorption System <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Separation Distance to:	Water Supply Source on Lot 100 MIN. Feet	Nearest Water Supply Source on Adjacent Lot + 500 Feet	Nearest Body of Water + 1500 Feet	Water Table/Bedrock DID NOT ENCOUNTER Feet	Lot Line 10 Feet

Comments/Recommendations

1. ON SITE SOILS INVESTIGATION MADE AUGUST 25, 1983.

2. SYSTEM DESIGNED IN ACCORDANCE WITH EPA DESIGN MANUAL SECTION 7.2.2. AND 7.2.8 (SEE ATTACHED D.M. GIER & CO. DRAWING)

I certify that the above information is correct:

Signature <i>Dennis M. Gier</i>	Typed/Printed Name D.M. GIER P.E.	Title, Reg./Cert. No., Inst. No. P.E. CE-5648	Date 12-21-83
------------------------------------	---	---	-------------------------

NOTE: Must be signed by a certified installer, professional engineer or DEC Staff.

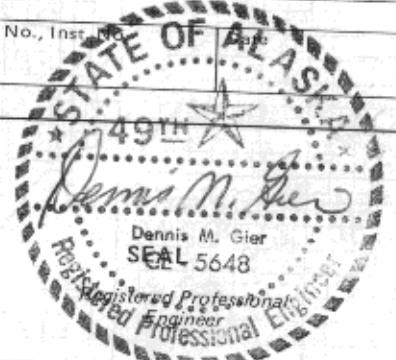
<input type="checkbox"/> Existing System		Name of Installer		Date Installed	
<input type="checkbox"/> Owner/Builder	<input type="checkbox"/> Certified Installer No. _____	<input type="checkbox"/> Other:	Type/Manufacturer		
Septic Tank Size (Gallons)		Number of Compartments		Soil Type or Rating	
Type Soil Absorption System		Dimensions/Size Soil Absorption System		Type/Quantity Backfill Material used for Soil Absorption System	
Adequacy Test Results: <input type="checkbox"/> Pass <input type="checkbox"/> Fail		Adequacy Test Performed By: (Attach Copy of Report)		Date Septic Tank Pumped (Attach Copy of Receipt)	
Minimum Ground Cover over Absorption Area Feet	Minimum Ground Cover over Septic Tank Feet	Cleanout Pipes/Caps Installed on Septic Tank <input type="checkbox"/> Yes <input type="checkbox"/> No		Cleanout Pipes/Caps Installed on Absorption System <input type="checkbox"/> Yes <input type="checkbox"/> No	
Separation Distance to:	Water Supply Source on Lot Feet	Nearest Water Supply Source on Adjacent Lot Feet	Nearest Body of Water Feet	Water Table/Bedrock Feet	Lot Line Feet

Comments/Recommendations

I certify that the above information is correct:

Signature	Typed/Printed Name	Title, Reg./Cert. No., Inst. No.
-----------	--------------------	----------------------------------

NOTE: Must be signed by a professional engineer.



IV. DIAGRAM OF SYSTEM(S)

INSTRUCTIONS FOR DIAGRAM

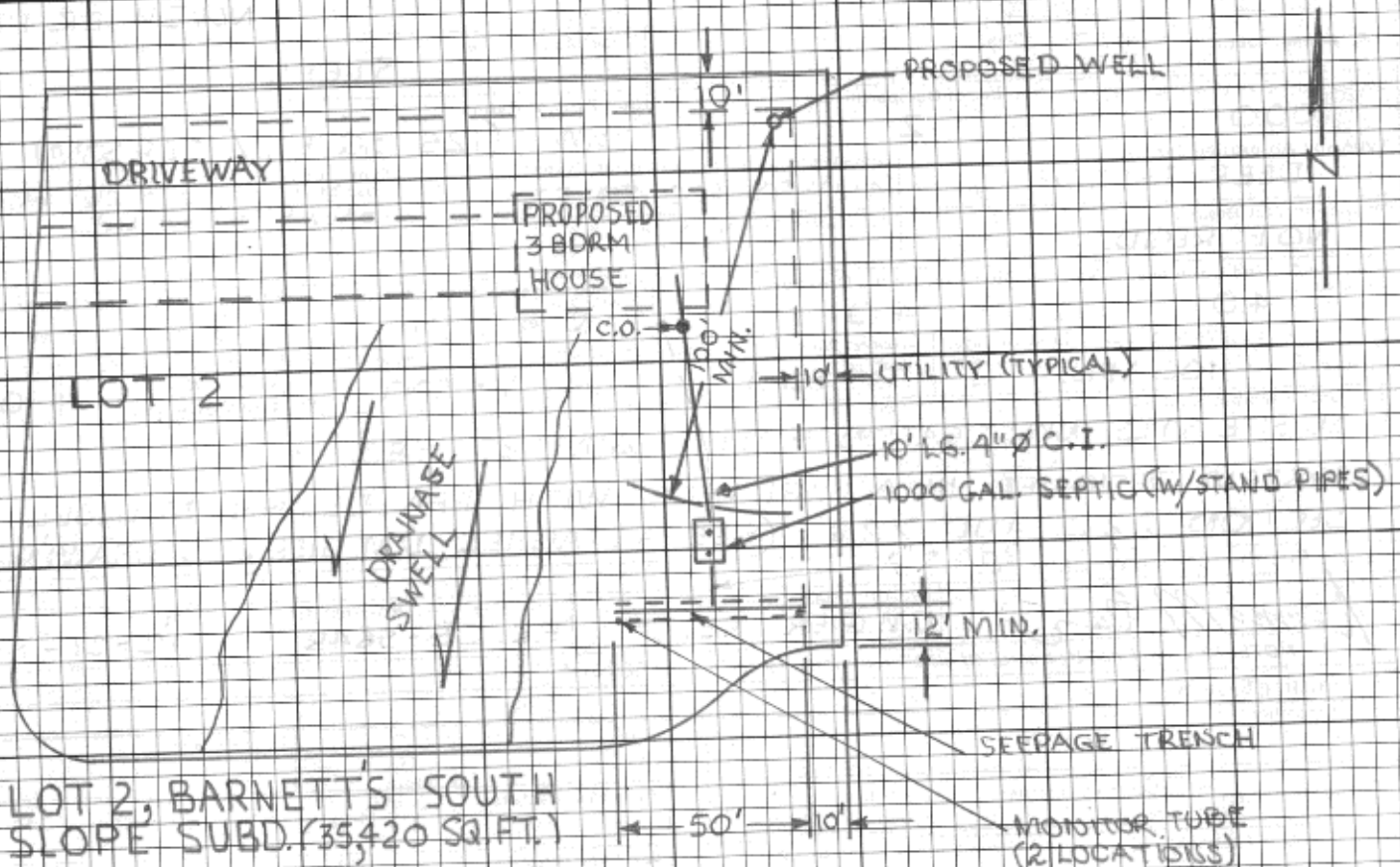
- In a plan view, locate and identify each of the following:
 - Well
 - All Structures
 - Surface Water
 - Closest well on an adjacent property
 - Closest edge of an absorption field on an adjacent property

- Septic Tank
- Property Line
- Closest septic tank on an adjacent property

- Soil Absorption System (Include Dimensions)

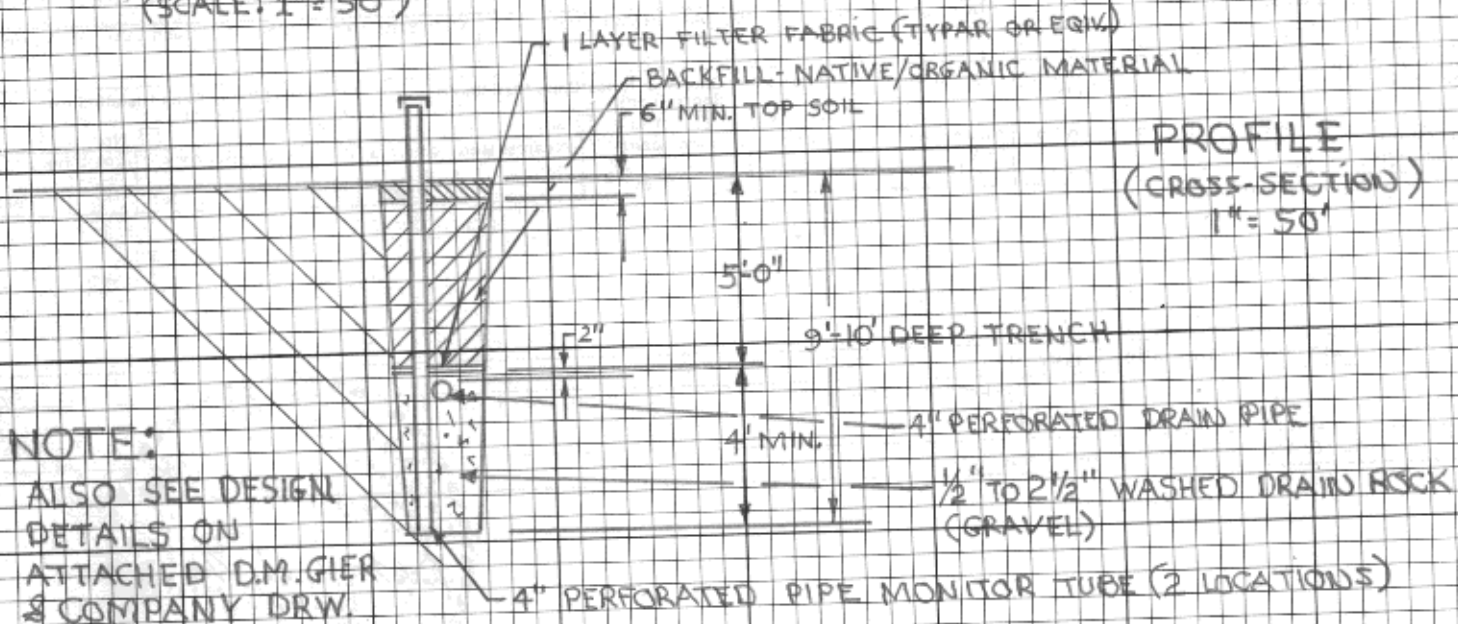
- Show distances between the well and each of the other items listed in 1.
- Show distances between water bodies and each of the other items listed in 1.

- In a cross section view of the soil absorption area, identify each component and show the depth (thickness) of the following:
 - Soil Cover
 - Absorption Material
 - Water Table
 - Bedrock
 - Discharge Pipes



SITE PLAN
(SCALE: 1" = 50')

PROFILE
(CROSS-SECTION)
1" = 50'



NOTE:
ALSO SEE DESIGN
DETAILS ON
ATTACHED D.M. GIER
& COMPANY DRW.
DATED 9-15-83

RECEIVED

Date Received

OCT 20 2004

ADEG
Kenai Area Office

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DOCUMENTATION OF CONSTRUCTION

I. GENERAL INFORMATION

Legal Description of the Location

Barnett's South Slope Subdivision
Block 1, Lot 16

Submitted by: (Check one)

- Certified Installer
- Approved Homeowner
- Registered Engineer

Installer Name:

Ayne Construction

Mailing Address

P.O. Box 1772
Homer, AK 99603

Onsite Wastewater System Serves:

- Single Family. Number of Bedrooms 4
- Duplex. Number of Bedrooms _____
- Small Commercial Facility With Estimated Design Flow of less than 500 GPD.

II. WATER SUPPLY SYSTEM (SECTION II IS OPTIONAL)

Source of Water and Containment (Check all that Apply)

- Well (Drilled or Driven)
- Roof Catchment
- Holding Tank
- Surface (Identify) _____
- Other (Identify) _____

Type of Water Supply System

- SF/Duplex
- Public

Treatment of Water (Check all that Apply)

- None
- Filtration
- Other: _____
- Chlorination
- Mineral Removal

Well Data

- Is the height of the well casing more the 12" above the ground? Yes No
- Is a sanitary seal or well cap installed on the well casing? Yes No
- Is drainage directed away from or around the casing within a radius of 10 feet of the well casing? Yes No
- Is well wire enclosed in conduit? Yes No

Date Drilled

Depth of Well (Feet)

Static Water Level (Feet)

Yield (If available)

Pump Rate (If available)

Separation Distance from the Well Casing to each of the Following Sources of Contamination:

Septic/Holding Tank on Lot Feet	Sewer Lines on Lot Feet	Absorption Area on Lot Feet
Closest Septic/Holding Tank on Adjacent Lot Feet	Closest Sewer Lines on Adjacent Lot Feet	Closest Edge of an Absorption Area on Adjacent Lot: Feet
Indicate separation distance from toxic materials including fuel tanks, paints, lubricants and other petroleum based materials, pesticides, fungicides or herbicides to well casing:		On Lot Feet
		On Adjacent Lot Feet

Water Sample Taken by: (Name)

Sampler is:

Address

- Buyer
- Banker
- Engineer
- Government Official

Water Sample Results:

- Attach Copy Satisfactory - Date
- Unsatisfactory - Date

Comments/Recommendations:

I certify that the above information and that provided in Section IV is correct:

Signature

Typed/Printed Name

Title

Date

William F. Craine

William F. Craine

Civil Engineer

Oct. 16, '04

Note: 1. This section should be signed by a Certified Installer, Professional Engineer, DEC staff, or Owner/Builder

2. All public water systems must receive ADEC plan approval prior to construction. See 18 AAC 80 State of Alaska Drinking Water

Regulations for specific requirements.

III. WASTEWATER DISPOSAL	Legal Description: <u>Barnett's South Slope Subdivision</u> <u>Block 1, Lot 16</u>
Type of Wastewater System:	
<input checked="" type="checkbox"/> Septic Tank with Conventional Soil Absorption System	<input type="checkbox"/> Package Treatment Plant (requires engineered design)
<input type="checkbox"/> Holding Tank; Material Type: _____ Size in Gallons: _____ Manufacturer: _____	
<input type="checkbox"/> Other - Specify Type _____	<input type="checkbox"/> Alternate Onsite (requires engineered design)
<input type="checkbox"/> Small Commercial System (< 500 GPD) With Estimated Daily Wastewater Flow of: _____ Gallons Per Day (GPD)	
Criteria Used to Estimate Daily Wastewater Quantity: _____	

<input checked="" type="checkbox"/> NEW SYSTEM	<input type="checkbox"/> MODIFICATION TO SYSTEM	Certified Installer Installation Notification Date:
Name of Installer: <u>Arno Construction</u>		Date Installed: <u>Sept. 24, 2004</u>
System Installed: <input type="checkbox"/> By a Registered Engineer		<input type="checkbox"/> With Inspection by a Registered Engineer
<input type="checkbox"/> By Approved Homeowner (attach copy of approval letter)		<input checked="" type="checkbox"/> By a Certified Installer/Installer Number <u>03-23-028</u>
Septic Tank: Material: <u>Steel</u>	Manufacturer: <u>D & W</u>	Size (Gallons): <u>1250</u>
		Number of Compartments: <u>2</u>
Type of Soil Absorption System:	<input type="checkbox"/> Deep Trench	<input type="checkbox"/> Shallow Trench
	<input type="checkbox"/> Mound	<input type="checkbox"/> Seepage Pit
		<input checked="" type="checkbox"/> Bed
		<input type="checkbox"/> Other, Specify _____
Soil Classification: <u>Loam</u>	Soil Rating: <u>0.45 sp^d/ft²</u>	Dimensions/Size of Absorption Area: <u>20' x 67' / 1340 ft²</u>
Grading/Size of Distribution Rock: <u>3/4" - 1 1/2"</u>		Thickness/Depth of Distribution Rock: <u>12" / 6" to Bottom</u>
Percolation Test Results, Attach Copy of Report: <u>28.2</u> Minutes per Inch <u>333.3</u> Sq. ft. per bedroom		Percolation Test Performed by: <u>William F. Craine P.E.</u> <small>percolation test results must be sealed/signed by a registered engineer</small>
List ground cover in feet over:	Septic Tank <u>2' + 2" I.</u>	Absorption Area <u>2' + 2" I.</u>
	Sewer Pipes <u>2' + 2" I.</u>	
Cleanout Pipes/Caps Installed:	Foundation Cleanout: <u>Yes</u>	Septic Tank: <u>Yes</u>
	Monitor Tubes: <u>Yes</u>	
Indicate <u>separation distances</u> from septic tank or absorption area, whichever is closest, to all nearby:		
Public drinking water sources within 200 feet: <u>None</u>	Private drinking water sources within 100 feet: <u>None</u>	
Nearest water bodies (see 18 AAC 72.020(b)): <u>None</u>	Lot line: <u>40'</u>	
Separation Distance from Onlot Sewer Lines to: _____	Public Drinking Water Sources: <u>N/A</u>	Private Sources: <u>N/A</u>
Separation Distance From Bottom of Distribution Rock to: _____	Groundwater Table: <u>4'</u>	Bedrock: <u>6'</u>
Separation Distance from Absorption Area to Slope exceeding 25%: <u>N/A</u>		
Comments/Recommendations <u>2' + 2" I => 2' Soil + 2" Insulation</u>		

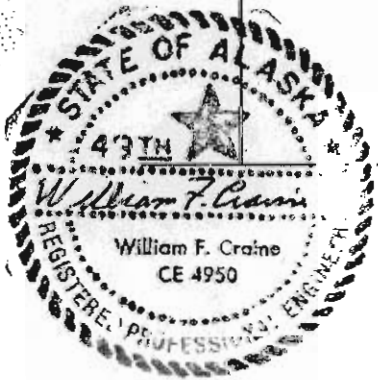
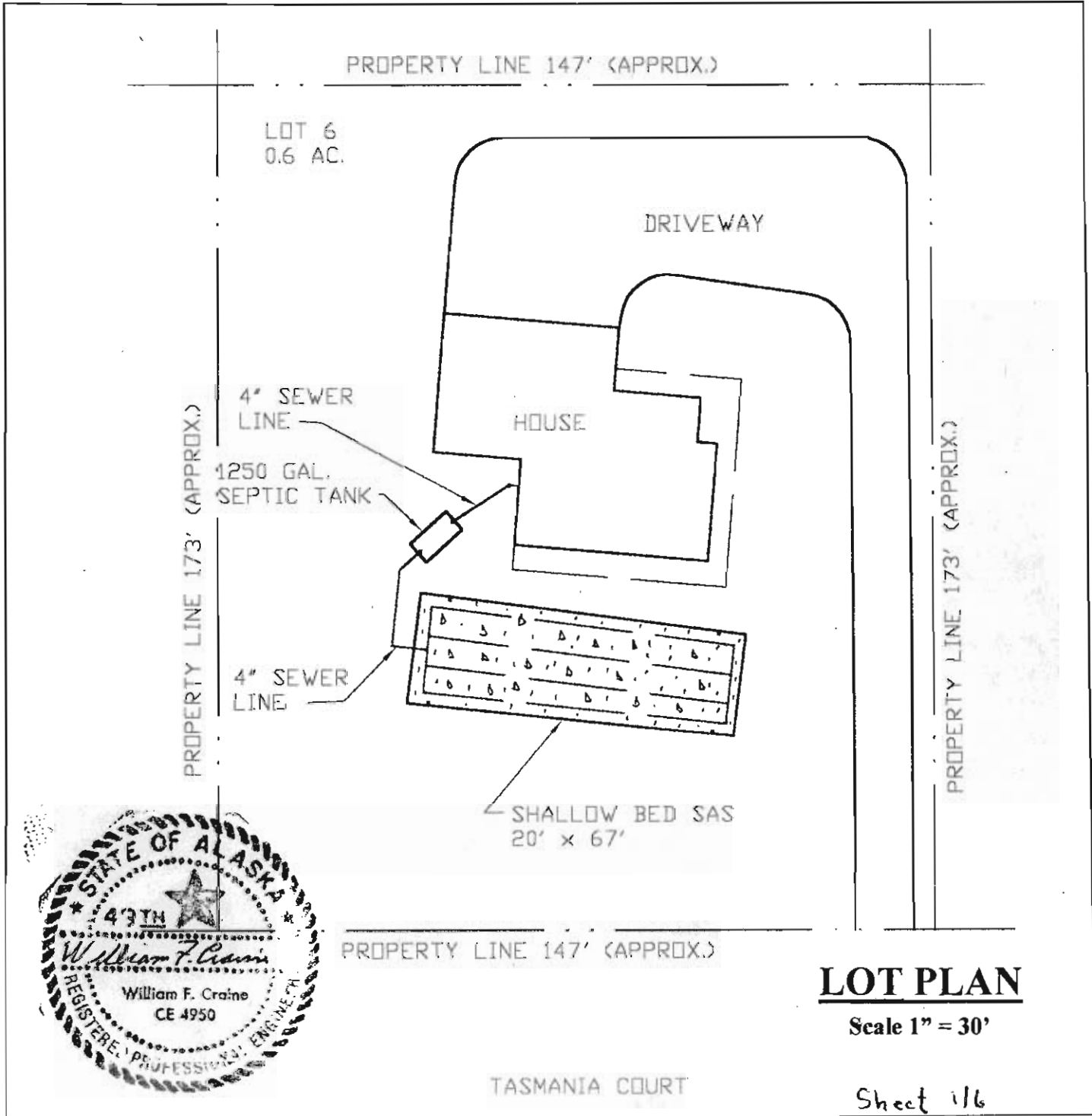
I certify that the above information, and that provided in Section IV, is correct:			
Signature <u>William F. Craine</u>	Typed/Printed Name <u>William F. Craine</u>	Title, Reg./Cert No., Inst. No. <u>Civil Engineer/CE4950</u>	Date <u>Oct. 16, '04</u>
NOTE: Must be signed by a Certified Installer, Professional Engineer, DEC staff, or Approved Homeowner. If engineering seal bears printed name registration number, and is signed, those blocks need not be completed for engineered submittals.			

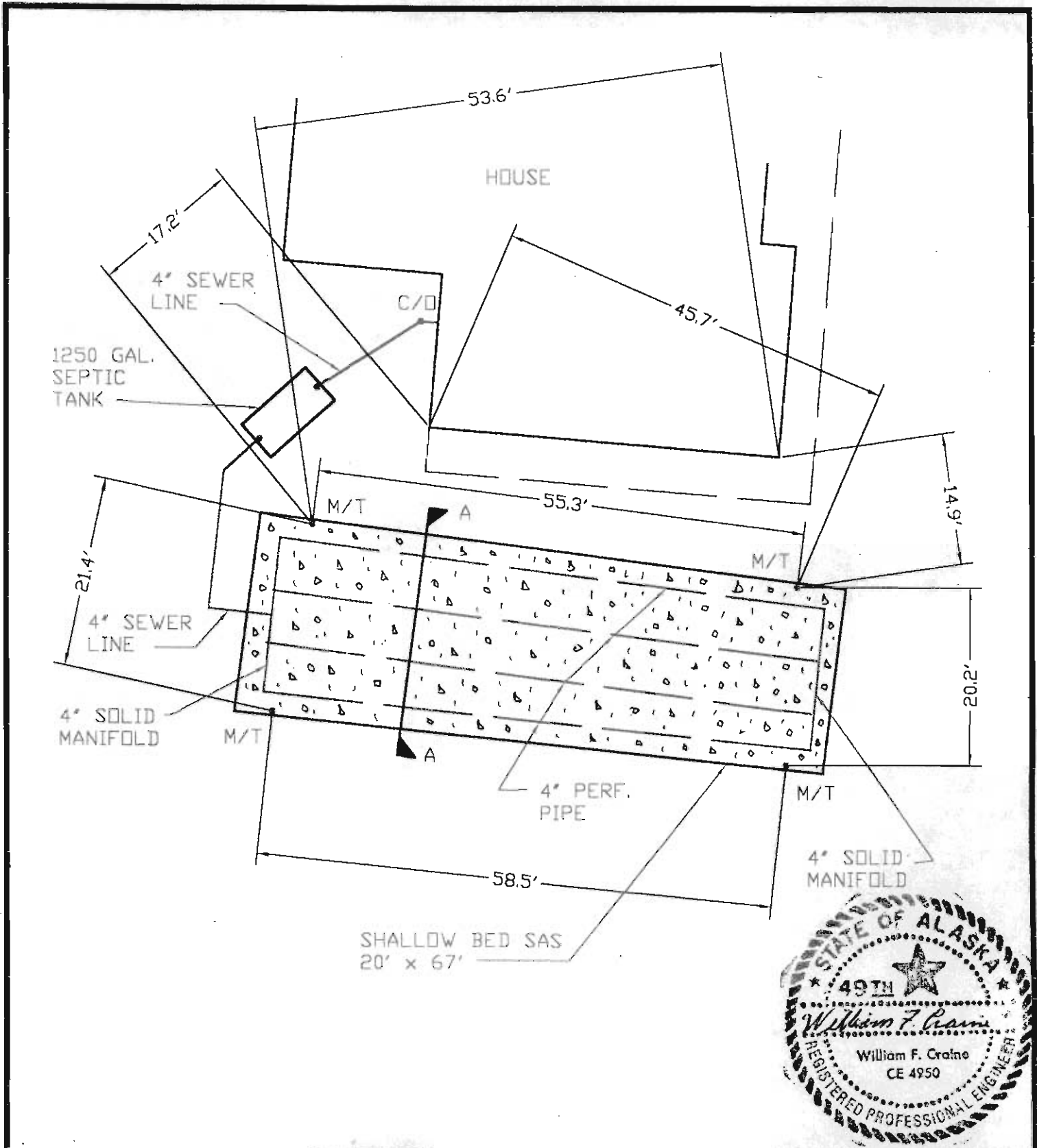
SEAL
Registered Professional
Engineer



**IV. DIAGRAM OF SYSTEM(S)
INSTRUCTIONS FOR DIAGRAM**

1. In a plan view, locate and identify each of the following:
 - a) Well *None*
 - b) All Structures ✓
 - c) Septic Tank ✓
 - d) Soil Absorption System ✓
 - e) Surface Water *None*
 - f) Sources of contamination ✓
 - g) Property Line ✓
 - (Include dimensions)
 - h) Closest well on adjacent property *None*
 - i) Closest septic tank on an adjacent property ?
 - j) Closest edge of an absorption field on adjacent property ?
 - k) All cleanouts and monitor tubes ✓
2. Show distances between the well and each of the sources of contamination listed in 1.
3. Show distances between water bodies and each part of the onsite system listed in 1.
4. In a cross section view of the soil absorption area, identify each component and show the depth (thickness) of the following:
 - a) Soil Cover ✓
 - b) Absorption Material ✓
 - c) Water Table *4' +*
 - d) Bedrock *6' +*
 - e) Discharge pipes ✓
 - f) Insulation ✓





Sandhill Enterprises
 William F. Craine, P.E.
 P.O. Box 728
 Homer, Ak. 99603
 235 - 5902

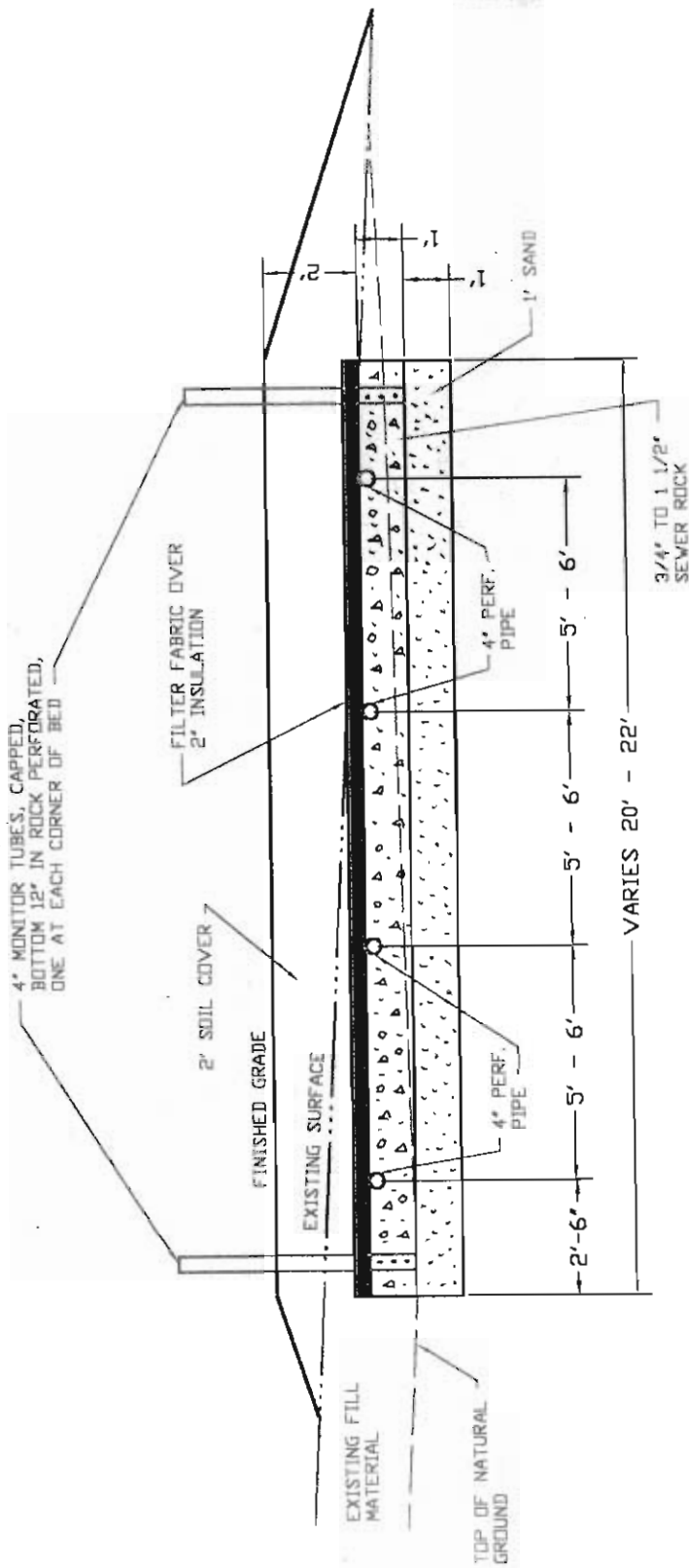
PLAN, Scale 1" = 15'
WASTEWATER DISPOSAL SYSTEM
BARNETT'S SOUTH SLOPE SUBD.
BLOCK 1, LOT 16
FELL RESIDENCE

DATE: Oct 16, '04
 SHEET: 2/6

Drawn: WFC

Revisions:

NOTE: PRIOR TO INSTALLATION OF THE SEPTIC SYSTEM, FILL MATERIAL WAS PLACED OVER THE NATURAL GROUND TO GRADE AROUND THE HOUSE. THE SLOPE OF THE NATURAL GROUND SURFACE WAS LESS THAN 5%. THE SHALLOW BED SAS WAS PLACED IN THE NATURAL SOIL. TWO FEET OF SOIL WAS PLACED OVER THE BED INSULATION TO PROVIDE THERMAL PROTECTION AND GRADED TO BLEND WITH THE FINISHED GRADE OF THE HOUSE.



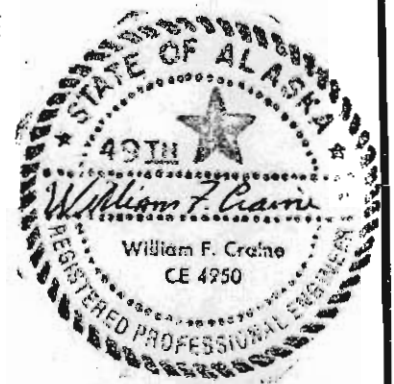
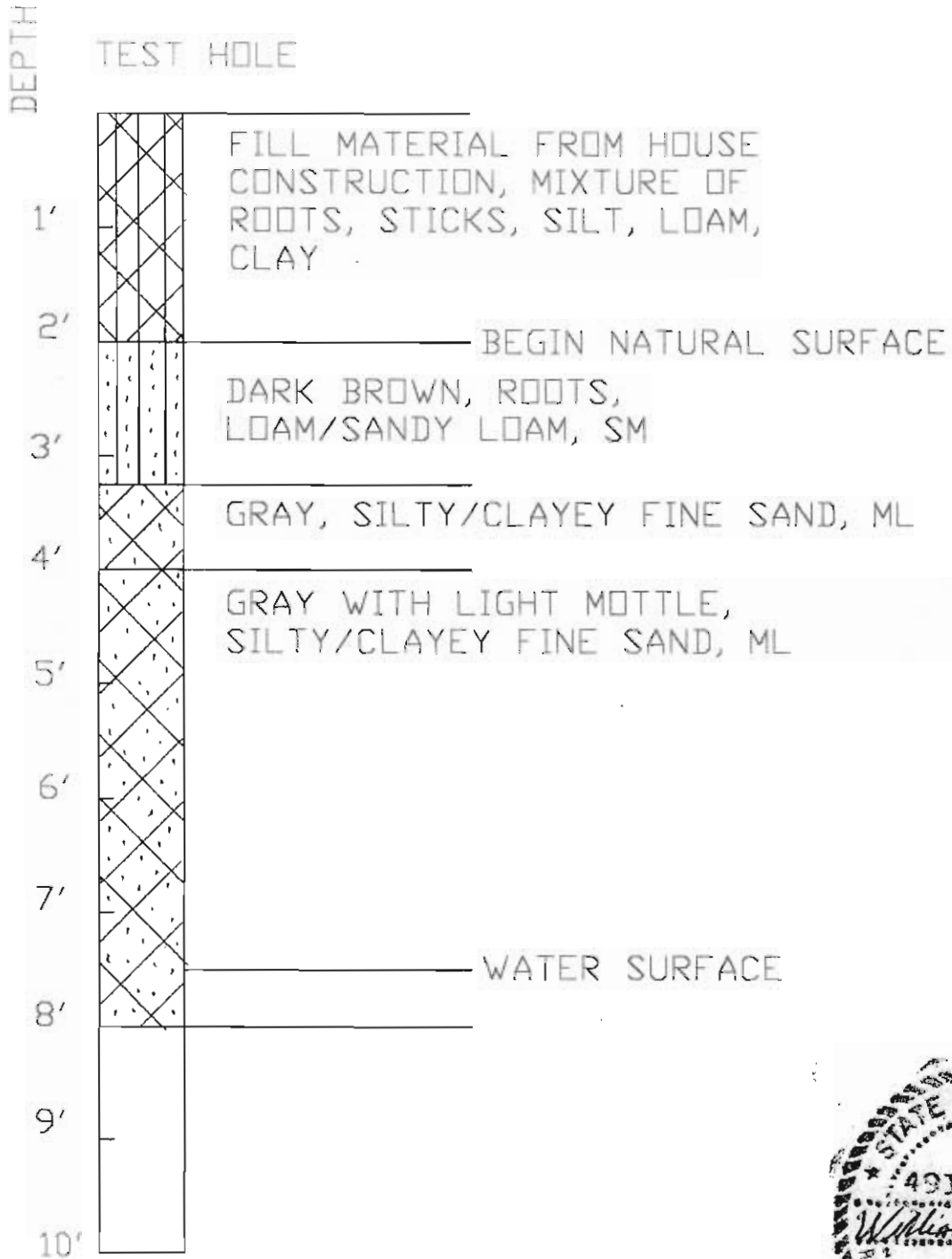
Sandhill Enterprises
 William F. Craine, P.E.
 P.O. Box 728
 Homer, Ak. 99603
 235 - 5902

SECTION A, Scale 1" = 4'
SHALLOW BED SAS
BARNETT'S SOUTH SLOPE SUBD.
BLOCK 1, LOT 16
FELL RESIDENCE

DATE: Oct 16, '04
 SHEET: 3/6

Drawn: WFC

Revisions:



Sandhill Enterprises
 William F. Craine, P.E.
 P.O. Box 728
 Homer, Ak. 99603
 235 - 5902

SOIL LOT - TEST HOLE
BARNETT'S SOUTH SLOPE SUBD.
BLOCK 1, LOT 16
FELL RESIDENCE

DATE: Sept 4, '04
 SHEET: 4/6

Drawn: WFC

Revisions:

PERCOLATION TEST RESULTS
TEST #1

Barnett's South Slope Subdivision
Block 1, Lot 16

September 4, 2004

By: William F. Craine, P. E.

Method: EPA Falling Head Percolation Test Procedure

Percolation Test, Depth = 1' 10"

Time	Time Change min.	Float Height inches	Float Height Change inches	Perc. Rate min/in
11:01	N/A	25.5625	N/A	N/A
11:31	30	24	1.5625	19.20
11:32	N/A	25.5	N/A	N/A
12:02	30	24.375	1.125	26.67
12:03	N/A	25.375	N/A	N/A
12:33	30	24.3125	1.0625	28.24

Percolation Rate = 28.2 minutes per inch

This test is in the natural soil, not in the fill from the house construction.



**PERCOLATION TEST RESULTS
TEST #2**

Barnett's South Slope Subdivision
Block 1, Lot 16

September 4, 2004

By: William F. Craine, P. E.

Method: EPA Falling Head Percolation Test Procedure

Percolation Test, Depth = 3' 6"

Time	Time Change min.	Float Height inches	Float Height Change inches	Perc. Rate min/in
11:03	N/A	14.4375	N/A	N/A
11:33	30	14.125	0.3125	96.00
11:34	N/A	14.5	N/A	N/A
12:04	30	14.1875	0.3125	96.00
12:05	N/A	14.5	N/A	N/A
12:35	30	14.1875	0.3125	96.00

Percolation Rate = 96 minutes per inch





THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental
Conservation

DIVISION OF WATER
Wastewater Discharge Authorization Program

43335 Kalifornsky Beach Road, Suite 11
Soldotna, Alaska 99669
Main: 907.262.5210
Fax: 907.262.2294

December 31, 2012

Mr. William J. Marley Jr., Owner
C/o Gus Andress, P.E.
Pegasus Engineering
4971 Thompson Drive
Homer, AK 99669

Re: Final Approval to Operate an Alternate Wastewater Treatment and Disposal
System
Legal: Barnett's South Slope Lot 12, Block 1, Homer, Alaska
ADEC Plan Number 9090

FILE COPY

Dear Mr. Marley:

The Department has reviewed the record information received on October 11, 2012 for an alternate wastewater system to serve a six-bedroom single family residence at the referenced property. This wastewater system consists of a 1250-gallon septic tank followed by a BioCycle Model 1500 unit which discharges effluent meeting secondary treatment standards to a pressurized soil absorption system having a total absorptive capacity of 1300 ft². The maximum approved wastewater flow for this system is 900 gallons per day based on the six bedrooms. Potable water is provided to the residence by means of an onsite cistern.

The information was reviewed in accordance with the Wastewater Disposal Regulations, 18 AAC 72 and the Department's *Conditional Approval to Construct* letter issued August 27, 2012. **Final approval to operate** is hereby issued and the enclosed Construction and Operation Certificate constitutes a written approval required under the noted regulations. Any future expansion or modification for the subject project will require additional approval from this office.

This approval does not imply the granting of additional authorizations, nor obligate any federal, state, or local regulatory body to grant required authorizations. This is not an approval of omissions or oversights by this office or noncompliance with any applicable regulation. The Department's approval to operate does not guarantee correctness or the functionality of the design, or waive the owner's responsibility for continued compliance with state regulations.

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. **Informal review requests** must be delivered to the Division Director, 555 Cordova Street, Anchorage, Alaska 99501, within 15 days of receiving the decision. **Adjudicatory hearing requests** must be delivered to the Commissioner of the Department of Environmental

Mr. William J. Marley Jr.

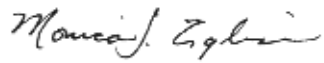
2

December 31, 2012

Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days of the decision. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have any questions please contact me at 907 262 3405, or by e-mail at Monica.English@alaska.gov.

Sincerely,



Monica T. English
Environmental Engineering Associate

Enclosure: Construction and Operation Certificate



STATE OF ALASKA
 DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CONSTRUCTION AND OPERATION CERTIFICATE
 FOR
DOMESTIC WASTEWATER DISPOSAL SYSTEMS

A. APPROVAL TO CONSTRUCT

Plans for the construction or modification of Barnett's South Slope Sub. L12 B1 - BioCycle Model 1500 Treatment System
 (ADEC Plan Tracking Number 9090) _____ domestic wastewater disposal system
 located in Homer, Alaska, submitted in accordance with 18 AAC 72.210
 by Pegasus Engineering - Gus Andress, P.E. have been reviewed and are

- approved.
- conditionally approved (see attached conditions).

BY Monica T. English _____ TITLE Environmental Engineering Associate DATE AUG. 27, 2012

If construction has not started within two years of the approval date, this certificate is void and new plans and specifications must be submitted for review and approval before construction.

B. APPROVED CHANGE ORDERS

Change (contract order number or descriptive reference)	Approved by	Date

C. APPROVAL TO OPERATE

The "APPROVAL TO OPERATE" section must be completed and signed by the Department before this system is made available for use.

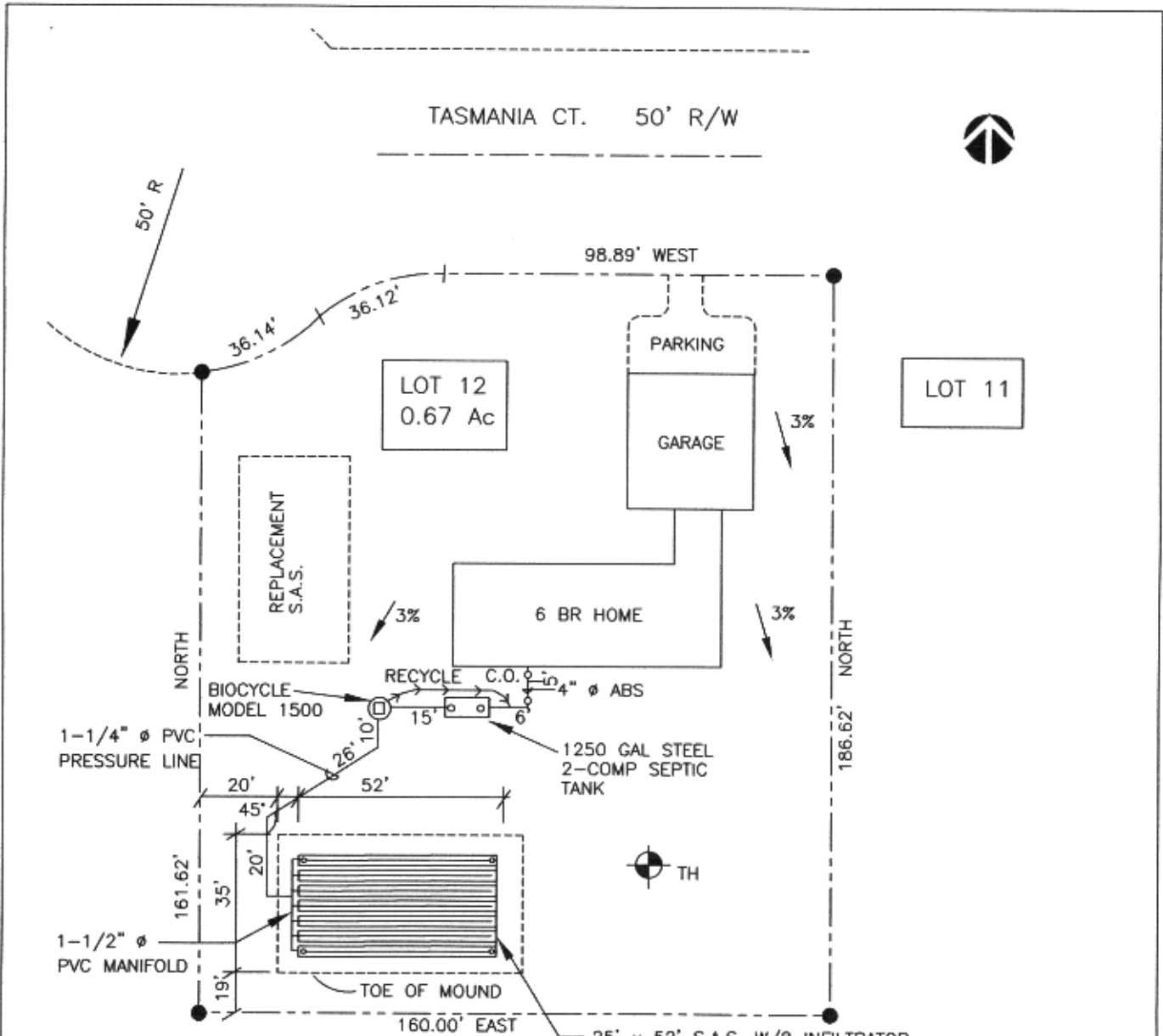
The construction of the above referenced domestic wastewater disposal system was completed on 9/12/2012 (date). The system is hereby granted **interim** approval to operate for 90 days following the completion date.

BY _____ TITLE _____ DATE _____

As-built/record drawings, submitted to the Department, or an inspection by the Department, has confirmed that the domestic wastewater disposal system was constructed in substantial conformance with the approved plans. **The system is hereby granted final approval to operate.**

BY Monica T. English _____ TITLE Environmental Engineering Associate DATE 12/31/2012

- Distribution:
1. Retain original for project file
 2. Make copies for distribution



AS-BUILT

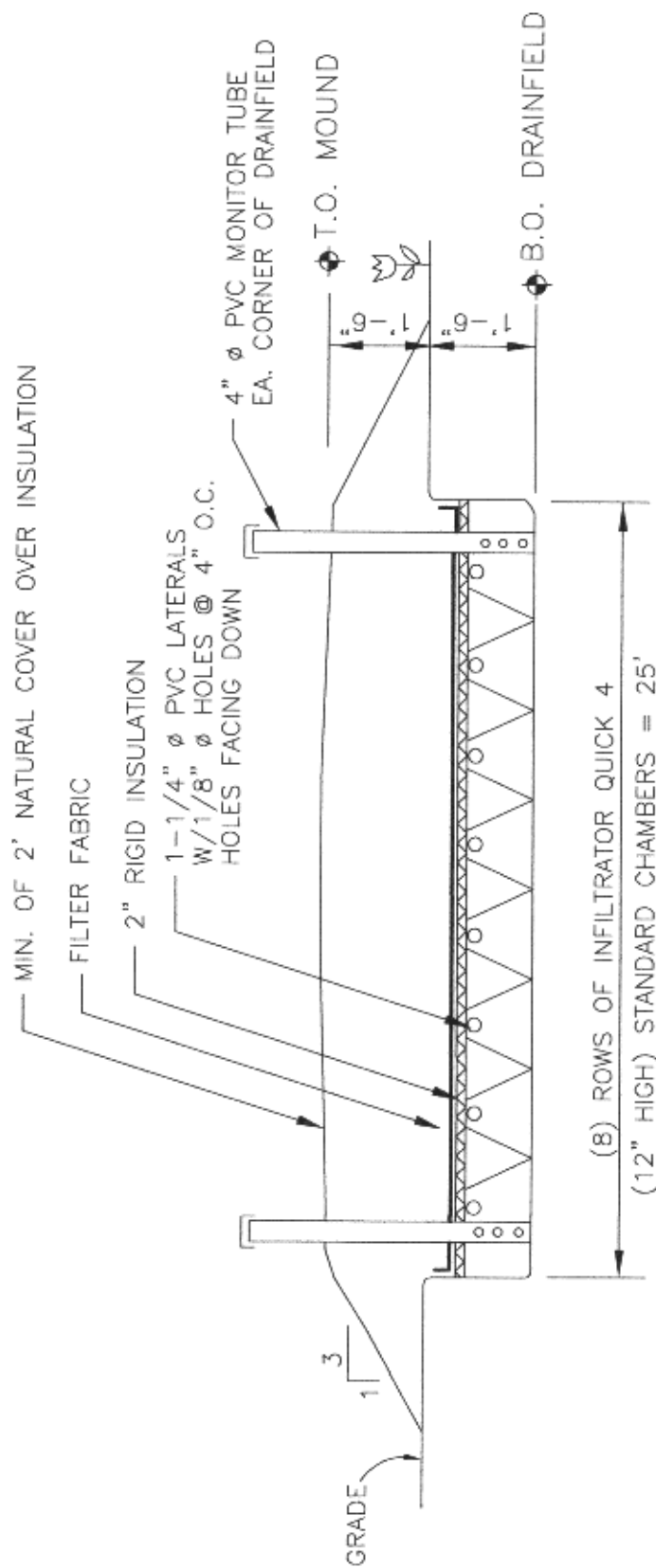
25' x 52' S.A.S. W/8 INFILTRATOR
 ROWS 2.8' WIDE x 52' LONG W/1-1/4" PVC
 PIPE LATERALS, 1/8" HOLES @ 4' O.C.

NOTES

1. THERE ARE NO SLOPES GREATER THAN 25% WITHIN 50 FEET OF ANY PART OF THE NEW SEPTIC SYSTEM.
2. THERE ARE NO KNOWN CLASS A,B,OR C WELLS WITHIN 200 FEET OF THE NEW SEPTIC SYSTEM.
3. THERE ARE NO KNOWN PRIVATE WELLS WITHIN 100 FEET OF THE NEW SEPTIC SYSTEM.
4. THIS RESIDENCE WILL BE SERVED BY A 2000 GALLON CISTERN AND WILL NOT HAVE A PRIVATE WELL ON THE LOT.



PEGASUS ENGINEERING 4971 THOMPSON DR HOMER, AK 99603 (907)226-2476	<h2>SITE PLAN</h2>	<h2>MARLEY RESIDENCE</h2> BARNETT'S SOUTH SLOPE SUB, L12,B1 HOMER, AK	DATE: 9/18/2012 DWG: MARLEY.dwg SHEET: SHEET 1 OF 2
---	--------------------	--	---



AS--BUILT

DRAINFIELD CROSS SECTION



PEGASUS ENGINEERING

4971 THOMPSON DR
HOMER, AK 99603
(907)226-2476

MARLEY RESIDENCE

BARNETT'S SOUTH SLOPE SUB, L12, B1
HOMER, AK

SCALE: NTS

DATE: 6/25/12

SHEET: 2 OF 2

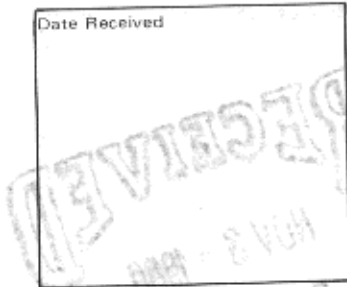
DWG. NAME: MARLEY. DWG.

Date Received

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

582

APPLICATION FOR ON-SITE WATER AND SEWER
SYSTEM APPROVAL



I. GENERAL INFORMATION

Legal Description of the Location

LOT 14, BLK 1
BARNETT'S ~~Subd.~~ South Slope Subd.

Applicant Name

MARY ALICE MAXFIELD

Applicant is: (Check one)

Bank Certified Installer No. _____
 Owner/Builder

Address (Street or P. O. Box)

BOX 897

Type of Residence

Single Family Multi-Family

Total No. of Bedrooms

1

City, State and Zip Code

HOMER, ALASKA 99603

Telephone

235-7707

Send Approval to:

Applicant Other: (Give Name & Address)

II. WATER SUPPLY SYSTEM

Source of Water and Containment (Check all that Apply)

Well (Drilled or Driven) Surface (Identify) _____
 Roof Catchment _____
 Holding Tank _____
 Other (Identify) _____

Type of Water Supply System

Private
 Public (Serves more than one family)

Treatment of Water (Check all that Apply)

None Chlorination
 Filtration Mineral Removal
 Other: _____

Well Data

Is the Height of the Well Casing more than 12" above the Ground?

Yes No

Is a sanitary seal installed on the well casing?

Yes No

Is drainage directed away from or around the casing within a radius of 10 feet of the well casing?

Yes No

Date Drilled

7-2-85

Depth of Well (Feet)

54

Static Water Level (Feet)

14

Yield (If Available)

Gal/Min

Pump Rate (If Available)

Gal/Min

Separation Distances from the Well Casing to each of the Following Sources of Contamination:

Septic/Holding Tank on Lot

81'

Sewer Lines on Lot

81'+

Absorption Area on Lot

86'

Closest Septic/Holding Tank on Adjacent Lot

> 400'

Closest Sewer Lines on Adjacent Lot

> 400'

Closest Edge of an Absorption Area on Adjacent Lot

> 400'

If toxic materials are stored on the property, including fuel tanks, paints, lubricants and other petroleum based materials, pesticides, fungicides or herbicides, indicate distance from contaminants to well casing:

On Lot

> 25'

On Adjacent Lot

> 400'

Water Sample Taken by: Name

JOSEPH CURTIS

Sampler Is:

Buyer Engineer
 Banker Government Official

Address

P.O. BOX 2248 HOMER, ALASKA 99603

Water Sample Results:

Satisfactory - Date: _____

Unsatisfactory - Date: _____

Attach Copy

Comments/Recommendations:

APPLICANT ADVISED TO ADD FILL AROUND CASING AND
TO SLOPE AWAY AS REQUIRED.

I certify that the above information is correct:

Signature

Joseph Curtis

Typed/Printed Name

JOSEPH CURTIS

Title

ENGR. TECH.

Date

10-13-86

George C. Schwadner

GEORGE C. SCHWADNER CIVIL ENGINEER

10/29/86

NOTE: Must be signed by a Certified Installer, Professional Engineer, Department of Environmental Conservation or the Owner/Builder

III. WASTEWATER DISPOSAL

Septic Tank/Absorption System Package Treatment: (Specify Brand Name or Process) **NORWECO**

Holding Tank Capacity of Tank Where Waste is Disposed Frequency of Pumping

Septic Tank Outfall Discharged To: Other (Specify): (Outhouse, Incinerator, etc.)

New System

Name of Installer _____ Date Installed _____

Owner/Builder Certified Installer Other: No. _____ Type/Manufacturer _____

Septic Tank Size (Gallons) _____ Number of Compartments _____ Soil Type or Rating _____

Type Soil Absorption System _____ Dimensions/Size Soil Absorption System _____ Type/Quantity Backfill Material used for Soil Absorption System _____

Percolation Test Results _____ Percolation Test by: (Name) _____

Minimum Ground Cover over Absorption Area _____ Feet Minimum Ground Cover over Septic Tank _____ Feet Cleanout Pipes/Caps Installed on Septic Tank Yes No Cleanout Pipes/Caps Installed on Absorption System Yes No

Separation Distance to: Water Supply Source on Lot _____ Feet Nearest Water Supply Source on Adjacent Lot _____ Feet Nearest Body of Water _____ Feet Water Table/Bedrock _____ Feet Lot Line _____ Feet

Comments/Recommendations _____

I certify that the above information is correct:

Signature _____ Typed/Printed Name _____ Title, Reg./Cert. No., Inst. No. _____ Date _____

NOTE: Must be signed by a certified installer, professional engineer or DEC Staff.

Existing System

Name of Installer **ROBERT PELKEY / GAGNON EXCAVATING** Date Installed **1985**

Owner/Builder Certified Installer Other: No. _____ Type/Manufacturer **NORWECO**

Septic Tank Size (Gallons) **1350** Number of Compartments **3** Soil Type or Rating **OL - CL**

Type Soil Absorption System **BED** Dimensions/Size Soil Absorption System **30' x 16'** Type/Quantity Backfill Material used for Soil Absorption System **UNKNOWN**

Adequacy Test Results: Pass Fail Adequacy Test Performed By: (Attach Copy of Report) **JOSEPH CURTIS** Date Septic Tank Pumped (Attach Copy of Receipt) **10-7-86**

Minimum Ground Cover over Absorption Area **4** Feet Minimum Ground Cover over Septic Tank _____ Feet Cleanout Pipes/Caps Installed on Septic Tank Yes No Cleanout Pipes/Caps Installed on Absorption System Yes No

Separation Distance to: Water Supply Source on Lot **81-86** Feet Nearest Water Supply Source on Adjacent Lot **> 400** Feet Nearest Body of Water **> 100** Feet Water Table/Bedrock **10** Feet Lot Line **> 10** Feet

Comments/Recommendations _____

I certify that the above information is correct:

Signature *George C. Schwaderer* Typed/Printed Name **GEORGE C. SCHWADERER** Title, Reg./Cert. No., Inst. No. **CIVIL ENGINEER** Date **10/29/86**

Signature *Joseph Curtis* Typed/Printed Name **JOSEPH CURTIS** Title, Reg./Cert. No., Inst. No. **ENGR. TECH.** Date **10-13-86**

NOTE: Must be signed by a professional engineer.



SEAL
Registered Professional Engineer

IV. DIAGRAM OF SYSTEM(S)

INSTRUCTIONS FOR DIAGRAM

1. In a plan view, locate and identify each of the following:

- a) Well
- e) Surface Water
- h) Closest well on an adjacent property
- j) Closest edge of an absorption field on an adjacent property
- b) All Structures
- f) Sources of Contamination

- c) Septic Tank
- g) Property Line
- i) Closest septic tank on an adjacent property

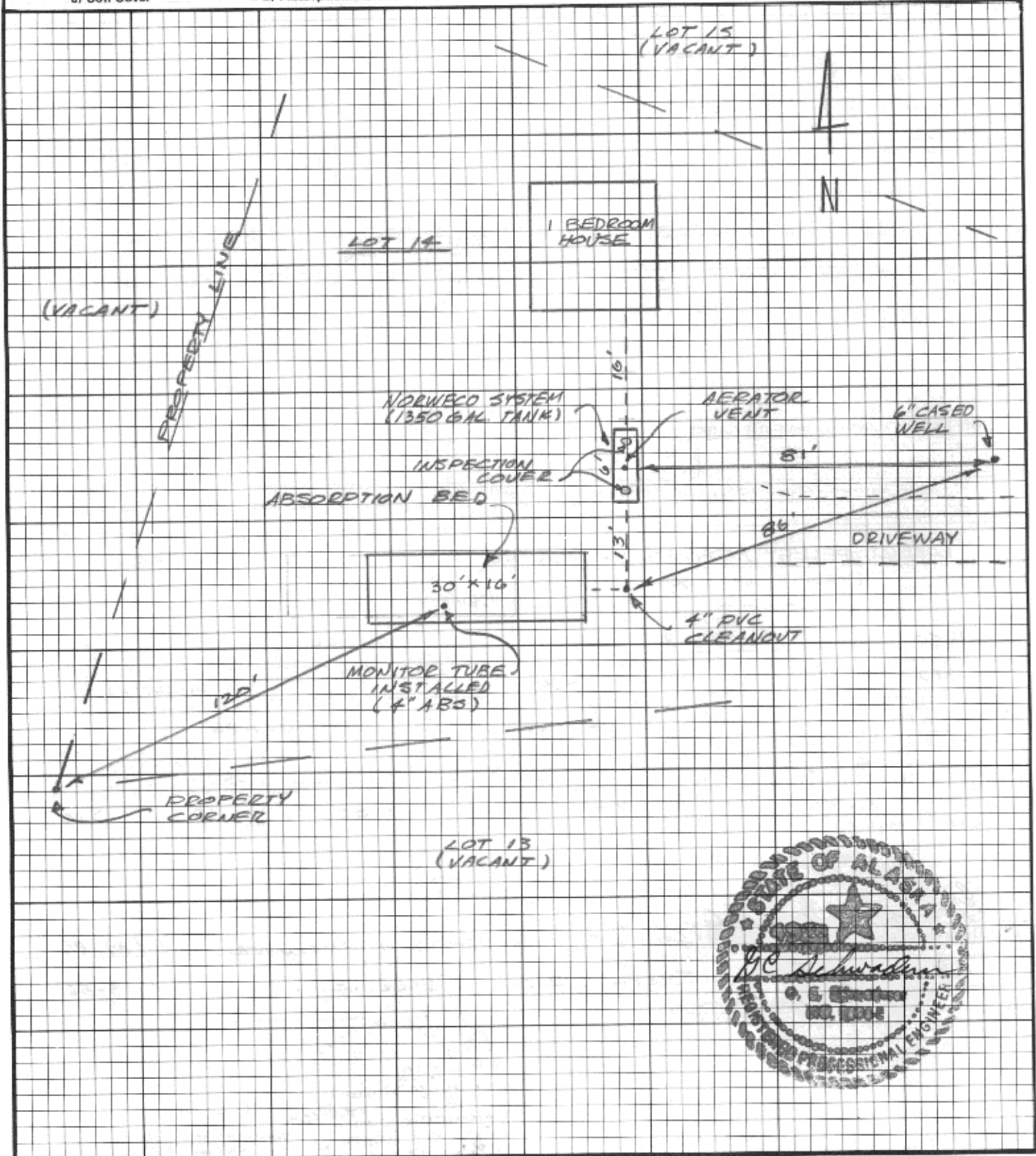
d) Soil Absorption System
(Include Dimensions)

2. Show distances between the well and each of the other items listed in 1.

3. Show distances between water bodies and each of the other items listed in 1.

4. In a cross section view of the soil absorption area, identify each component and show the depth (thickness) of the following:

- a) Soil Cover
- b) Absorption Material
- c) Water Table
- d) Bedrock
- e) Discharge Pipes



Date Received

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DOCUMENTATION OF CONSTRUCTION

I. GENERAL INFORMATION

Legal Description of the Location
Barnett's South Slope Subd.
Lot 17, Block 1

Submitted by: (Check one)
 Certified Installer
 Approved Homeowner
 Registered Engineer

Installer Name:
Arno Construction
Mailing Address
P.O. Box 1772
Homer, Ak 99603

Onsite Wastewater System Serves:
 Single Family. Number of Bedrooms 3
 Duplex. Number of Bedrooms _____
 Small Commercial Facility With Estimated Design Flow of less than 500 GPD.

II. WATER SUPPLY SYSTEM

(SECTION II IS OPTIONAL)

Source of Water and Containment (Check all that Apply)
 Well (Drilled or Driven) Surface (Identify) _____
 Roof Catchment Other (Identify) _____
 Holding Tank

Type of Water Supply System
 Private
 Public (Serves more than one family)

Treatment of Water (Check all that Apply)
 None Chlorination
 Filtration Mineral Removal
 Other: _____

Well Data
Is the height of the well casing more the 12" above the ground? Yes No
Is a sanitary seal or well cap installed on the well casing? Yes No
Is drainage directed away from or around the casing within a radius of 10 feet of the well casing? Yes No
Is well wire enclosed in conduit? Yes No

Date Drilled _____ Depth of Well (Feet) _____ Static Water Level (Feet) _____ Yield (If available) _____ Pump Rate (If available) _____

Separation Distance from the Well Casing to each of the Following Sources of Contamination:
Septic/Holding Tank on Lot _____ Feet Sewer Lines on Lot _____ Feet Absorption Area on Lot _____ Feet
Closest Septic/Holding Tank on Adjacent Lot _____ Feet Closest Sewer Lines on Adjacent Lot _____ Feet Closest Edge of an Absorption Area on Adjacent Lot _____ Feet

Indicate separation distance from toxic materials including fuel tanks, paints, lubricants and other petroleum based materials, pesticides, fungicides or herbicides to well casing:
Water Sample Taken by: (Name) _____ On Lot _____ Feet On Adjacent Lot _____ Feet
Address _____
Sampler is:
 Buyer Engineer
 Banker Government Official

Water Sample Results: Satisfactory - Date _____ Unsatisfactory - Date _____
Attach Copy _____
Comments/Recommendations:

I certify that the above information, and that provided in Section IV, is correct:
Signature William F. Craine Typed/Printed Name William F. Craine Title Civil Engineer Date 2/2/02

Note: 1. This section should be signed by a Certified Installer, Professional Engineer, DEC staff, or Owner/Builder
2. All public water systems must receive ADEC plan approval prior to construction. See 18 AAC 80 State of Alaska Drinking Water

III. WASTEWATER DISPOSAL Legal Description: Barnett's South Slope Subdivision
Lot 17, Block 1

Type of Wastewater System:

Septic Tank with Conventional Soil Absorption System Package Treatment Plant (requires engineered design)

Holding Tank: Material Type: _____ Size in Gallons: _____ Manufacturer: _____

Other - Specify Type _____ Alternate Onsite (requires engineered design)

Small Commercial System (< 500 GPD) With Estimated Daily Wastewater Flow of: _____ Gallons Per Day (GPD)

Criteria Used to Estimate Daily Wastewater Quantity: _____

NEW SYSTEM REPAIR TO EXISTING SYSTEM Certified Installer Installation Notification Date: _____

Name of Installer: Arno Construction Date Installed: 12/18/2001

System Installed: By a Registered Engineer With Inspection by a Registered Engineer

By Approved Homeowner (attach copy of approval letter) By a Certified Installer/Installer Number 00-23-014

Septic Tank: Material: Steel Manufacturer: D & W Size (Gallons): 1250 Number of Compartments: Two

Type of Soil Absorption System: Deep Trench Shallow Trench Seepage Pit Bed

Mound Other, Specify _____

Soil Type: SM Soil Rating: 0.6 gpd/ft² Dimensions/Size of Absorption Area: 825 ft² = 30.5' x 50'
+ 10' x 20'

Grading/Size of Distribution Rock: 3/4" - 1 1/2" Thickness/Depth of Distribution Rock: 12" / 3' to Bottom

Percolation Test Results, Attach Copy of Report: Percolation Test Performed by: _____

Minutes per Inch Sq. Ft. per Bedroom percolation test results must be sealed/signed by a registered engineer

Minimum Ground Cover Over: Septic Tank: 2' + 2" Insul Absorption Area: 2' + 2" Insul Sewer Pipes: 2' + 2" Insul

Cleanout Pipes/Caps Installed: Foundation Cleanout: Yes Septic Tank: Yes Monitor Tubes: Yes

List Separation Distances From Septic Tank or Absorption Area, Whichever is Closest, to All Nearby:

Public Drinking Water Sources Within 200 feet: None Private Drinking Water Sources Within 100 feet: None

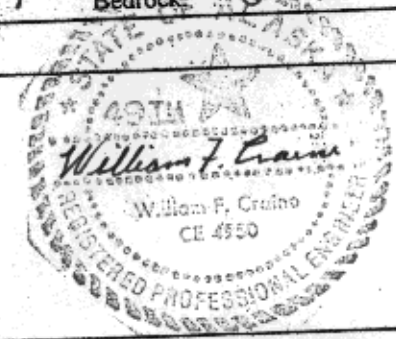
Nearest Water Bodies (see 18 AAC 72.020(b)): Lot Line: N/A

Separation Distance from Onlot Sewer Lines to: Public Drinking Water Sources: N/A Private Sources: > 100'

Separation Distance From Bottom of Distribution Rock to: Groundwater Table: 4' + Bedrock: 6' +

Separation Distance from Absorption Area to Slope exceeding 25%: N/A

Comments/Recommendations



I certify that the above information, and that provided in Section IV, is correct:

Signature <u>William F. Craine</u>	Typed/Printed Name <u>William F. Craine</u>	Title, Reg./Cert No., Inst. No. <u>Civil Engineer / CE 4950</u>	Date <u>2/2/02</u>
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NOTE: Must be signed by a Certified Installer, Professional Engineer, DEC staff, or Approved Homeowner. If engineering seal bears printed name, registration number, and is signed, those blocks need not be completed for engineered submittals.

SEAL
Registered Professional
Engineer

IV. DIAGRAM OF SYSTEM(S) INSTRUCTIONS FOR DIAGRAM

1. In a plan view, locate and identify each of the following:

- a) Well *None*
- b) All Structures
- c) Surface Water *None*
- d) Sources of contamination *None*
- e) Closest well on adjacent property *> 100'*
- f) Closest edge of an absorption field on adjacent property *None*

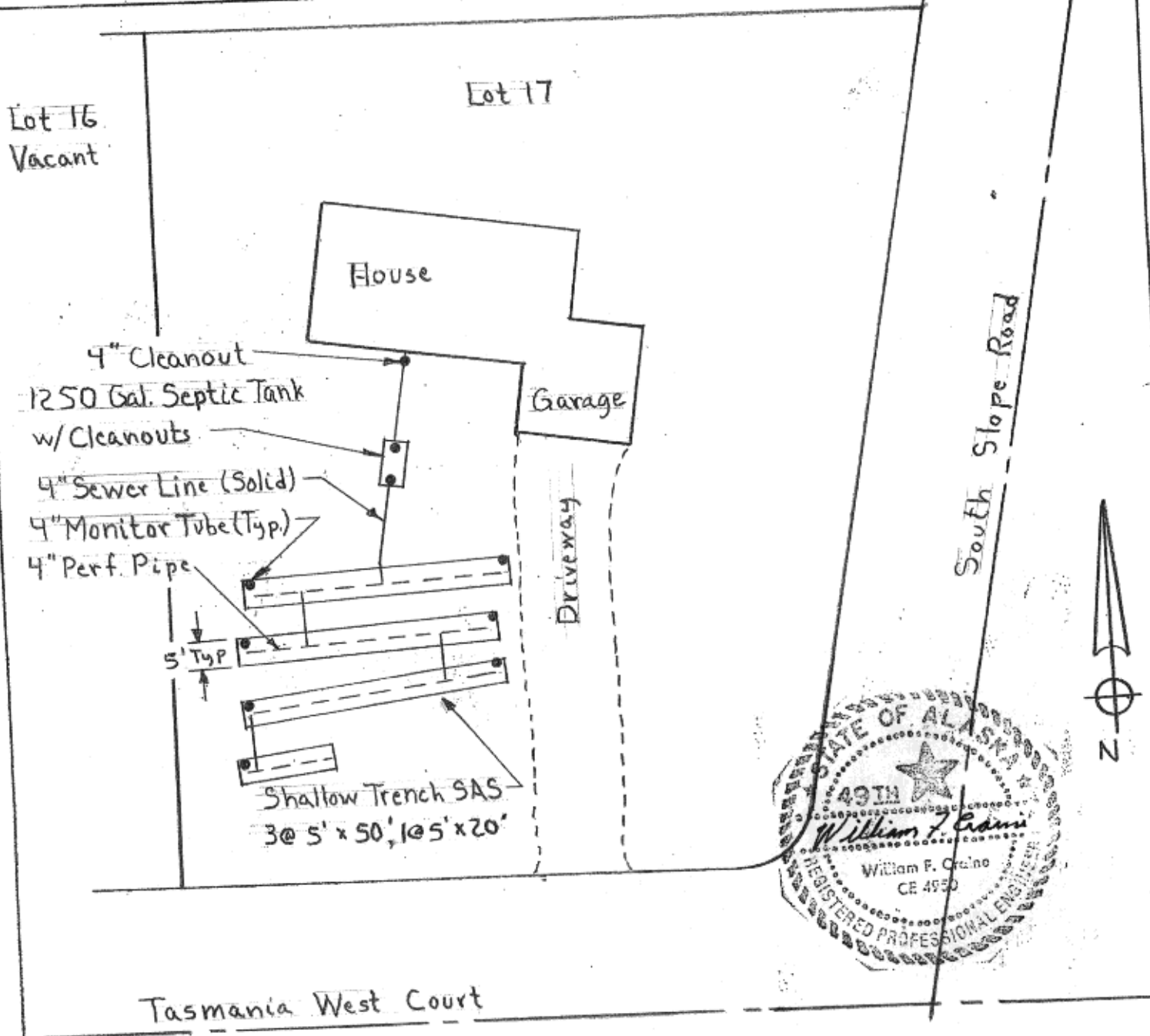
- g) Septic Tank
- h) Property Line
- i) Closest septic tank on an adjacent property *None*
- j) All cleanouts and monitor tubes
- k) Soil Absorption System
(Include dimensions)

2. Show distances between the well and each of the sources of contamination listed in 1.

3. Show distances between water bodies and each part of the onsite system listed in 1.

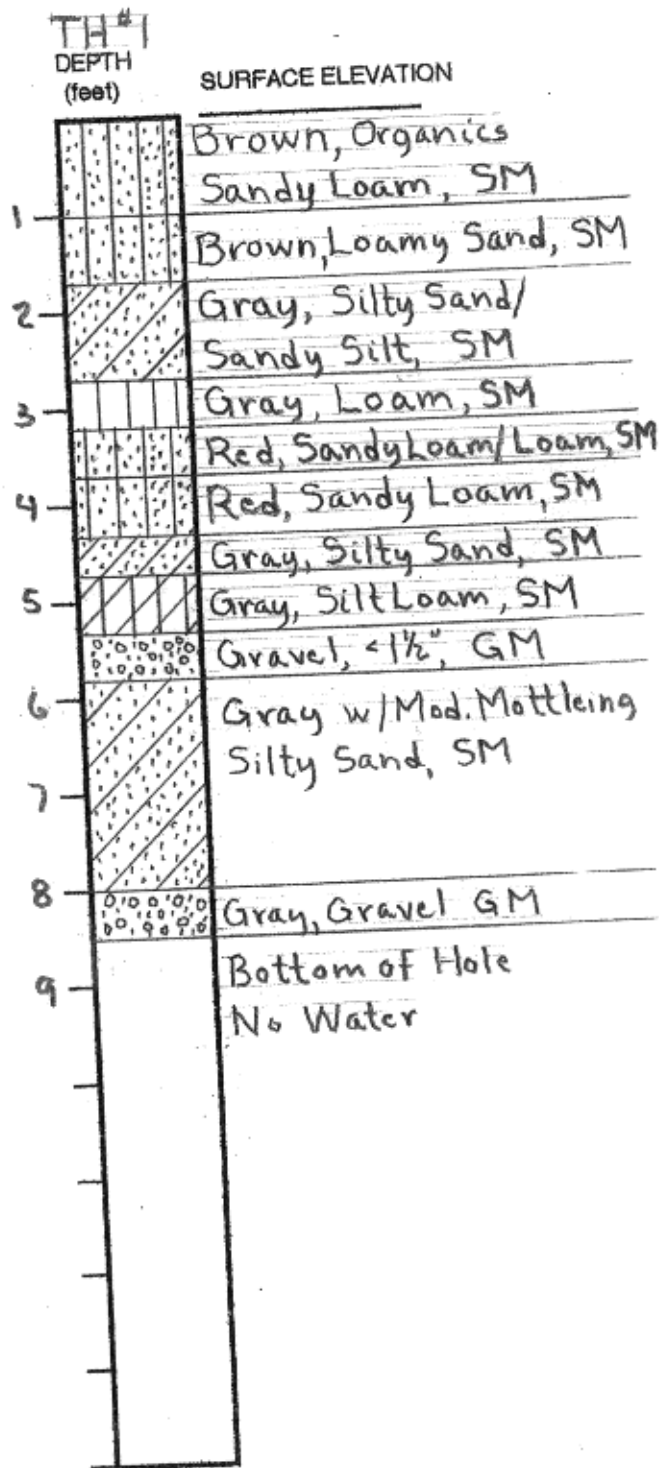
4. In a cross section view of the soil absorption area, identify each component and show the depth (thickness) of the following:

- a) Soil Cover
- b) Absorption Material
- c) Water Table
- d) Bedrock
- e) Discharge pipes
- f) Insulation



SITE PLAN 1" = 30'

2/2/02
Sht. 1/3



Sandhill Enterprises
William F. Craine, P.E.
P.O. Box 728
Homer, Ak. 99603
235 - 5902

SOIL LOG - TEST HOLE #1
SHALLOW TRENCH SAS
BARNETT'S SOUTH SLOPE SUBD. LOT 17 BLOCK 1
STAFFORD RESIDENCE

DATE: 12/9/01
SHEET: 3/3

Drawn: WFC Revisions: