

ON-SITE WASTEWATER SYSTEM INSPECTION FORM

PERMIT # 0N0032787

DATE July 18, 2013

APPROVED YES ☒ NO ☐

Environmental Health Specialist: J. Christensen

Address: 12840 Blue Spruce Ln 80908 Owner Andrew Meng

Legal Description: Lot 4, Blue Spruce Estates

Residence ☒ #Bedrooms 4 Commercial ☐ System Installer Hazelton Excavating

SEPTIC TANK: Construction Material Concrete

Capacity Gallon 1500 + 1250 with pump in 2nd chamber

DISPOSAL FIELD:

Trench: Depth (Range) _____ Width _____ Total Length _____ Sq. Ft. _____

Bed: Depth (Range) _____ Width _____ Total Length _____ Sq. Ft. _____

Depth of Rock _____ Under PVC _____ Type of cover on Rock _____

DRYWELLS: # of Pits _____ Rings (Pit 1) _____ Rings (Pit 2) _____ Working Depth #1 _____ #2 _____

Size (L x W) #1 _____ #2 _____ Total Sq. Ft. _____

ROCKLESS SYSTEMS: Low-pressure drip

Standard Chamber: Type _____ #Chambers _____ Sq. Ft./Chamber _____ Bed _____ Trench _____

High Profile Units: Type _____ #Chambers _____ Sq. Ft./Chamber _____ Bed _____ Trench _____

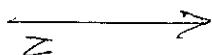
Reduction Allowed _____ % Sq. Ft. Required _____ Depth (Range) _____

Sq. Ft. Installed 3000 Equivalent Sq. Ft. Installed with Reduction N/A

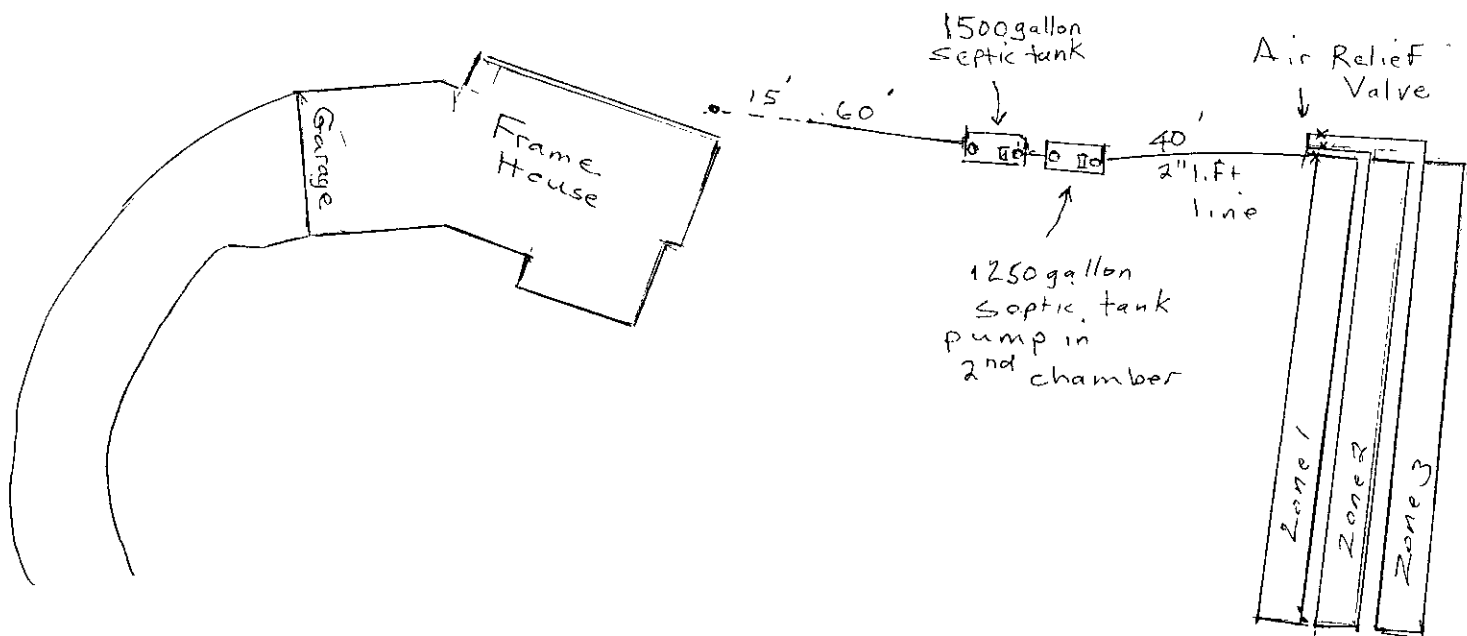
Engineer Design: Y ☒ N ☐ Engineering Firm Geoquest Approval Letter Provided: Y ☒ N ☐Well installed at time of septic inspection: Y ☒ N ☐ Public Water: Y ☐ N ☒

*Approval will be revoked if in the future the well is found to be within 50 feet of the septic tank and/or 100 feet of the disposal field.

Notes: Risers installed on septic tanks: 4' and 3 1/2' riser on first tank, 3 1/2' risers on 2nd tank. End sweeps had not been installed on laterals.



Well



Attn: ANDREW H MENG
12840 BLUE SPRUCE LN
COLORADO SPRINGS, CO 80908

Notify Environmental Health of any change of ownership, type of business activity, business name, or billing address by calling (719) 578-3199. Failure to notify Environmental Health may result in late penalties, Permit/License denial or revocation, and business closure. PERMITS/LICENSES TO OPERATE AND ANNUAL FEE PAYMENTS ARE NOT TRANSFERABLE. Permits become void on change of ownership. New owners must apply and pay for a new Permit(s)/License(s) prior to beginning operation.



**EL PASO COUNTY PUBLIC HEALTH
ENVIRONMENTAL HEALTH DIVISION**
1675 W. GARDEN OF THE GODS ROAD, SUITE 2044
COLORADO SPRINGS, CO 80907
PHONE: (719) 578-3199 FAX: (719) 578-3188
www.elpasocountyhealth.org

NEW SYSTEM PERMIT - OWTS

Valid From 12/31/2012 To 12/31/2013

PERMITEE :

ANDREW H MENG
12840 BLUE SPRUCE LN
COLORADO SPRINGS, CO 80908

Onsite ID: ON0032787

Tax Schedule # : 5211001011

Permit Issue Date: 12/26/2012

Dwelling Type: RESIDENTIAL

of Bedrooms (if Res): 4

Proposed Use (if Comm):

Designed Gallons/Day:

Water Source: PRIVATE WELL

OWNER NAME :

ANDREW H MENG

System Installation Requirements :

Dues to bedrock at 30 inches an engineer design septic shall be installed at this site.

Install system per attached design project #12-0561 in area of soil percolation test.

A profile pit inspection is required by the engineer prior to installation of STA.

Health Dept. shall inspect system prior to backfill.

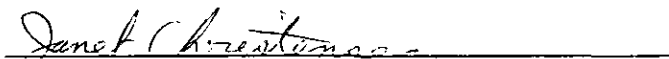
An engineer approval letter must be received by this office for final approval of system.

Septic Tank Capacity Required: 1500 (Gallons) Soil Treatment Area Required: 3000 (SQ. Feet)

The Health Officer shall assume no responsibility in case of failure or inadequacy of an Onsite Wastewater Treatment System, beyond consulting in good faith with the property owner or representative. Access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with the requirements of this law (permit)

Installer inspection request line: Call (719) 575-8699 before 8:30 a.m. of the day that the inspection is requested
Weekends & Holidays excluded.

This permit is issued in accordance with 25-10-106 Colorado Revised Statutes. The PERMIT EXPIRES upon completion/installation of the Onsite Wastewater Treatment System, or at the end of twelve (12) months from date of issue, whichever occurs first. If both a Building Permit and an Onsite Wastewater Treatment System Permit are issued for the same property and construction has not commenced prior to the expiration date of the Building Permit, the Onsite Wastewater Permit shall expire at the same time as the Building Permit. This permit is revocable if all stated requirements are not met. Onsite Wastewater Treatment System to be installed by an El Paso County Licensed System Contractor, or the property owner.


Authorized By: Environmental Health Specialist

APPLICATION FOR AN ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT

☒ NEW PERMIT ☐ MAJOR REPAIR PERMIT ☐ MINOR REPAIR PERMIT
Owner Andrew H Meng Daytime Phone 719 332-4419System Installer Hazeltan Exc. Daytime Phone 719 237-3677Property Address 12840 Blue Spruce Ln. Lot 4 CS CO 80908Owners Mailing Address 2664 Glen Arbor Dr.

Email Address _____ Fax # _____

Tax Schedule # 52110-01-011 Lot Size 5.16 AcresSite Located Inside City Limits ☐ Yes ☒ No Primary Contact ☐ Owner ☒ ContractorProposed Use: ☒ Single Family ☐ Multi-Family ☐ CommercialWater Supply: ☒ Well ☐ Cistern ☐ Municipal Number of Bedrooms 4
☐ Pick-up: _____ ☐ Fax: _____ ☒ Email: Steve Overholser@hotmail.com

CURRENT FEES AS APPROVED BY THE EL PASO COUNTY BOARD OF HEALTH

New Permit: \$440.00 (EPCPH Charge) + \$147.00 (EPC Planning Dept. Surcharge) + \$23.00 (CDPHE Surcharge) = \$610.00

Major Repair Permit: \$494.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$517.00

Minor Repair Permit: \$188.00 (EPCPH Charge) + \$23.00 (CDPHE Surcharge) = \$211.00

- All Payments are due at the time of application submittal; by cash, check or major credit card (Visa / MC)
- This permit will expire one year from the date of issuance.

I certify that the information provided on this application is in compliance with Section 8.3, Chapter 8 of the Onsite Wastewater System (OWS) Regulations of the El Paso County Board of Health. I also authorize the assigned representative of El Paso County Public Health to enter onto this property in order to obtain information necessary for the issuance of a permit.

Applicants Signature: Jan Out Date: 12-24-12 SASite Insp. Date: Dec. 27, 12 Perc. Rate: 18.9 Permit # DND03 2787E.H.S. Review Notes: Ground was frozen and snow covered.Date to: E.P.C. Development Services 12/26/12 Flood Plain and Enumerations 12/26/12

Permit Requirements: Due to bedrock @ 30" an engineer design septic shall be installed at this site. Install system per attached design project # 12-0561 in area of soil percolation test. A profile pit inspection is required by the engineer prior to installation of STA. Health Dept. shall inspect system prior to backfill. An engineer approval letter must be received by this office for final 1500 + 500 Min. Septic Tank Capacity 3000 ft approval of system.

E.H. Specialist Janet Christensen Date 12-31-12 ☒ Approved ☐ Denied

mailed permit 12/20/12 HF

SA J.C.

1) We require an original copy of your PERCOLATION TEST with a licensed engineer's (P.E.) stamp and signature as well as a plot plan of the test hole locations with measurements from a fixed reference point.

2) Property address or lot number must be posted and clearly visible
holes must be clearly marked or an additional charge for a return

tion
sed.
COUNTY HEALTH
DEPARTMENT

3) A plot plan must be drawn on an 8 1/2" x 11" sheet of paper and s

- ✓a) North Arrow
- ✓b) Property Lines
- ✓c) Property Dimensions
- ✓d) All Existing and Proposed Buildings
- ✓e) Proposed Septic System Site
- ✓f) Alternate Septic System Site
- ✓g) Driveway & Name of Adjoining Street

ms:
ation
ty

12-26-2012 WED 1PM

ONE NEW 400.00
ONE ONLY SUPPLY 147.00
ONE STATE SLR 27.00
SUBTL 510.00
CHUCK 510.00

4) Additional items that shall be included on the plot plan if they apply

- ✓a) Proposed &/or Existing Wells
- b) Wells on Adjacent Properties
- c) Water Lines
- d) Bodies of water (ie: Lake, Pond)
- e) Drainage Ways (ie: Streams, I
- f) Subsoil Drain

TER 3
FERRIL 5174 10:20PM

5) Please provide below complete and accurate directions to the property from a main highway.

North on Hwy 83
East on Shoep Rd.
North on Blue Spruce Ln.



6825 Silver Ponds Heights #101
Colorado Springs, CO 80908
(719) 481-4560

PERCOLATION TEST

FOR

TIFFANY HOMES

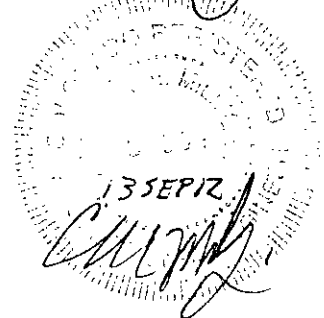
JOB #12-0561

Lot 4,
Blue Spruce Estates Subdivision,
12840 Blue Spruce Lane,
El Paso County,
Colorado

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Charles E. Milligan".

Charles E. Milligan, P.E.
Civil Engineer



PERCOLATION TEST FINDINGS

Due to encountering bedrock (sandstone at the depth of 30 inches the county health department will require the septic system to be installed on this site to be designed by a Colorado Licensed Engineer.

Enclosed are the results of the percolation test for the septic system to be installed at Lot 4, Blue Spruce Estates Subdivision, 12840 Blue Spruce Lane, El Paso County, Colorado. The locations of the percolation test borings were determined by Steve Overholser. The residence will not be on a public water system. The number of bedrooms in the design for the residence is unknown. Due to the natural slope of the property, the entire system will feed to the north-northeast at 3% approximately 125 feet. All applicable regulations of the El Paso County Health Department ISDS Regulations must be complied with for the installation of the disposal system.

The percolation test was performed on September 5, 2012, in accordance with **Section 8.6, Soil Test, E.P.C.P.H.OWS Regulations**. The field data and results of the percolation test are as follows:

PERC. TEST @ TIME	PERC HOLE #1 @ 34" DEPTH DROP (IN INCHES)	PERC HOLE #2 @ 34" DEPTH DROP (IN INCHES)	PERC HOLE #3 @ 34" DEPTH DROP (IN INCHES)
2:00	7-1/2	6	9-1/16
2:10	5-5/16	3-1/2	1-15/16
2:20	2-1/2	2-1/8	1-3/4
2:30	1-1/2	1-1/2	1-3/8
2:40	1/2	7/8	7/8
2:50	3/8	1/2	1
Rate/Hole	26.7	20.0	10.0

The average of the test holes is 18.9 minutes per inch.

Blow counts at the depth of 3 feet was 44/12.

The soil profile for the disposal system is as follows:

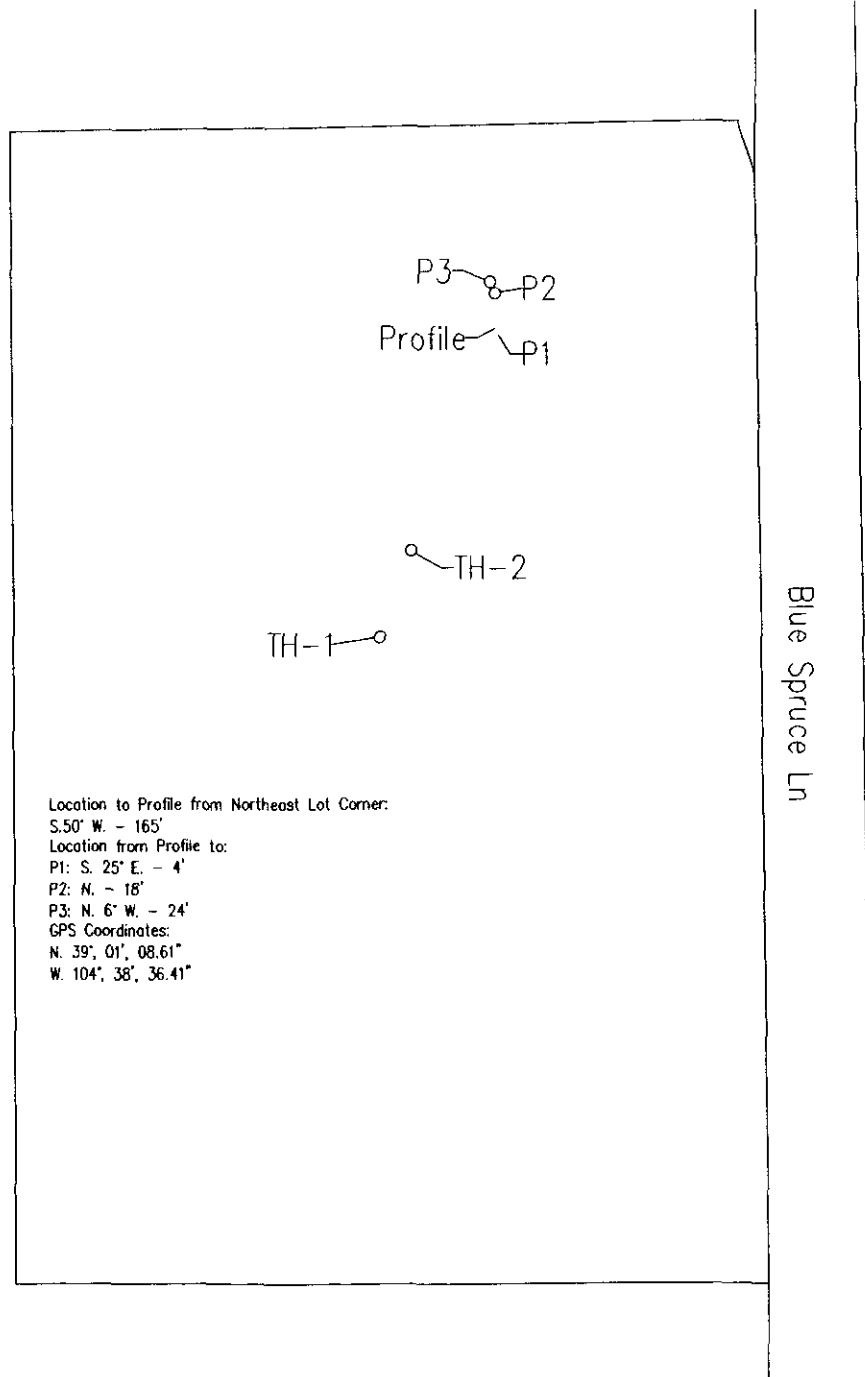
- 0 to 6" - Topsoil- loam, organic composition.
- 6" to 30" - Sand- fine to coarse grain, moderate density, low moisture content, low clay content, low plasticity, light brown in color.
- 30" to 10' - Sandstone- fine to coarse grain, high density, low moisture content, low clay content, low plasticity, buff in color.

No water was encountered during the drilling of all holes. Bedrock (sandstone) was encountered at the depth of 30" during the drilling of the test borings. No known wells were observed within 100 feet of the proposed system. All setbacks shall conform to county regulations.

GEOQUEST LLC

SITE MAP

Lot 4,
Blue Spruce Estates Subdivision,
12840 Blue Spruce Lane,
El Paso County,
Colorado,
Job 12-0561



0 25 50 75 100
GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

EL PASO COUNTY



DEVELOPMENT SERVICES DEPARTMENT

SEPTIC SITE REVIEW

DATE: December 31, 2012

File#: SEP-12-137

Property Address: 12840 BLUE SPRUCE LN

Tax Schedule # 52110-01-011

Legal Description: LOT 4 BLUE SPRUCE ESTATES

Lot Area: 5.16 ACRES **District:** RR-5

Subdivision Plat #: 11221 **Book:** **Page:** **Recorded Date:** 07/29/2002

Reception #: 202122453

APPROVED

DISAPPROVED

BY: Cathy Spaulding

PLAT NOTES/REMARKS:

This form is intended solely as a checklist to forewarn builder/landowner of potential development problems. Plat information and general remarks may affect development and should be noted. Prior to issuance of a building permit, final plot plan approval is required.

Any approval given by El Paso County does not obviate the need to comply with applicable Federal, State or Local laws and/or regulations.



From: Amy Vanderbeek
Sent: December 27, 2012
To: Health Department
Subject: Septic Review

SEPTIC REVIEW FORM

Parcel Schedule Number: 52110-01-011

Legal Description: Lot 4 Blue Spruce Estates

Address: 12840 Blue Spruce Lane

Approved: 12-27-12/Amy Vanderbeek

Enumerations Comments: Per Platted address

Floodplain Approved: 12-28-12/AV

Floodplain Comments: Per Flood Insurance Rate Map No. 08041C0325F, effective date March 17, 1997. Zone X. Community No. 080059 0325F

POSTED

Floodplain & Enumerations SR
1. 12840 Blue Spruce
2. IN

CALCULATIONS:

Soil Treatment Area Design:

4 Bedrooms

Perc Rate 18.9 MIN/IN

Average Daily Flow (Q) = 4 Bedrooms * 150 = 600 GPD

Max. Soil Loading Rate (R) = 0.4634 GPD / SF

$A = (Q/R)(1.5)(1.6)(1.17)(0.75) = 2,726.8 \text{ SF}$ (Use 3,000 SF)

Septic Tank and Plumbing Design:

Number of Laterals:

3,000 SF / 200 SF per Lateral = 15 Laterals

(500 LF per Zone)(3 Zones) = 1,500 LF of Pipe

Pump: Use Zoeller "Mighty Mate" 53, Orenco PI3005 High Head Effluent Pump, or Approved Equivalent; Design Flow Rate = 20.0 GPM
Total Dynamic Head (TDH) = 10.9 ft to Valve Manifold
Dose Vol. = 300 Gal. Recommended

Main Septic Tank Size: Min. 1,500 GAL
Pump Chamber: Min. 500 GAL

Distribution Pipe: Use 2" Ø Class 200 PVC
Field (Zone) Pipe: Use 2" Ø Class 200 PVC
1/4" Ø Holes @ 8" O.C.

* Geoquest, LLC. Percolation Test Locations
Location from Northeast Lot Corner to Profile: S. 50° W. - 165'
Location from Profile to:
P-1: S. 25° E. - 4'
P-2: Due N. - 18'
P-3: N. 6° W. - 24'
GPS Coordinates: N. 39° 01' 8.61" , W. 104° 38' 36.41"

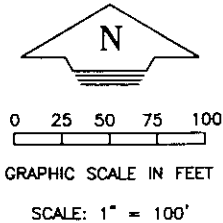
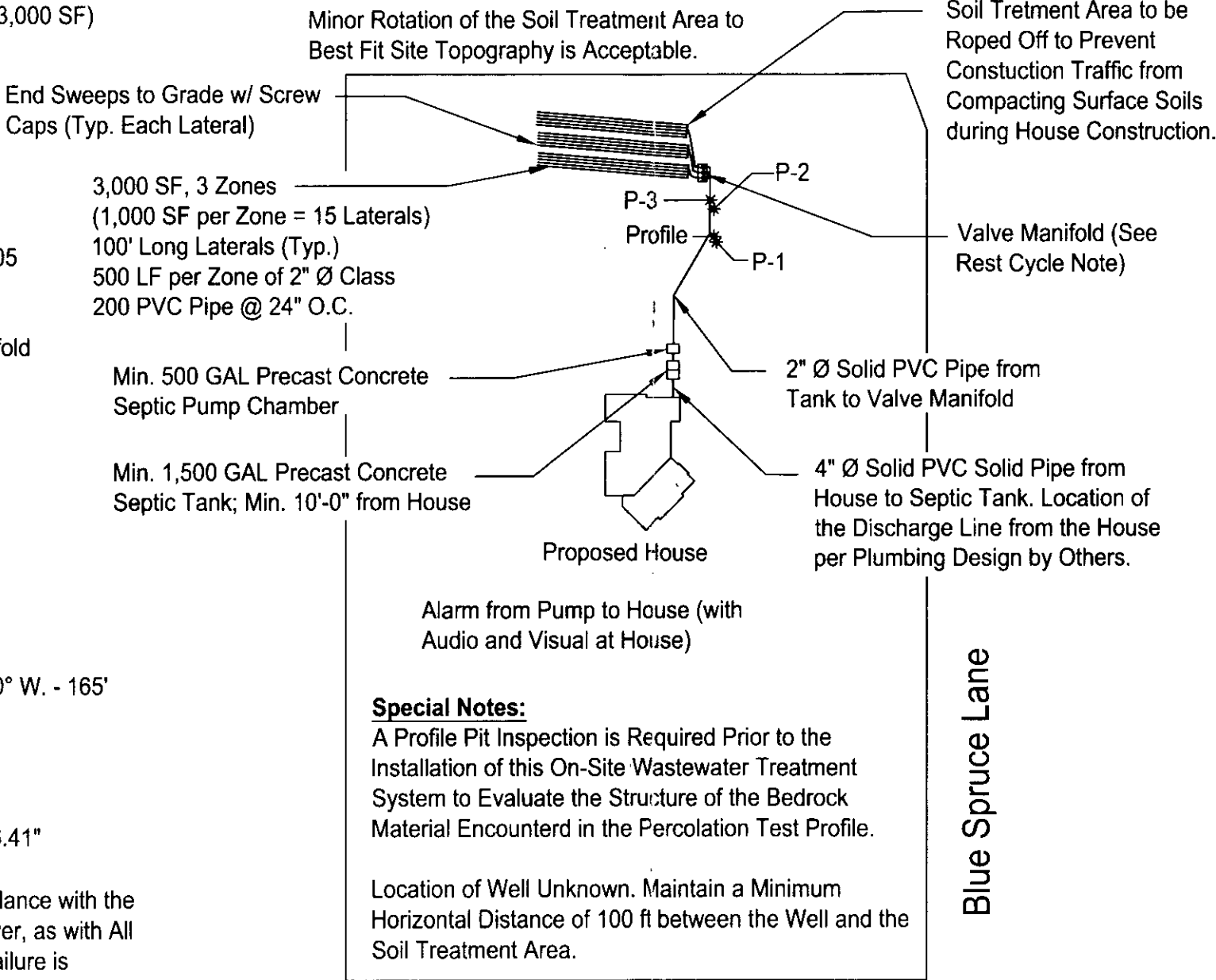
Geoquest, LLC. has Provided this Design in Accordance with the Standards of Practice Common to the Area. However, as with All Underground Absorption Fields, Guarantee from Failure is Impossible. Even with Proper Installation, as Outlined for this Proposed Construction, There Can Remain Many Uncertainties, and Difficulties Can Still Arise in the Operation of the System in the Future. Proper Design, Construction, and Maintenance can Assist in Minimizing Uncertainties, but Cannot Entirely Eliminate Them. Homeowners Should be Advised of Maintenance and Special Considerations for Septic Systems. Geoquest, LLC. Provides No Warranty of this Design or Installation.

All Bends Limited to 45 Degree Ells or Long Sweep Quarter Bends. Areas Under Driveways Shall Be Protected as Per El Paso County Health Department Regulations.

Building Sewer Clean-Outs Shall Be Installed within 5 FT of the Structure and at Intervals Not to Exceed 100' in Straight Runs and When the Cumulative Change in Direction Exceeds 135 Degrees.

Location of Septic Tanks to be Field Determined (Min. 10 FT from the House).

Site Plan Prepared from Incomplete Data. Verify All Locations Prior to Excavation. Location of Driveway Must be Verified on Site when Built / Installed.



INSPECTIONS REQUIRED ARE AS FOLLOWS:

- 1.) Engineer to Verify Soil Treatment Area Location at Time of Construction.
- 2.) Engineer Will Inspect the Installation of Pipe, Septic Tank, Etc. Prior to Backfill.
- 3.) Engineer to Inspect the Soil Treatment Area After Backfill to Insure Min. Cover and Proper Drainage Away from Soil Treatment Area.
- 4.) Soil Conditions to be Verified by Soil Engineer at Time of Installation.

NOTES:

All Work per El Paso County Health Department Criteria.

Grade Surrounding Area to Drain Away from Soil Treatment Area.

Maintain 2.0% Min. Grade on Pipe Feeding the Septic Tank. Maintain 2.0% Min. Grade on Pipe Feeding the Soil Treatment Area.

A Vacuum Breaker is Required at the High Point in the Line Between the Pump and the Soil Treatment Area so this Line can Drain to Prevent Freezing.

If the Soil Treatment Area is Located at a Higher Elevation than the Pump, Install a Seepage Collar Around the Pipe to Prevent Back Flow Through the Trench from the Field to the Pump.

Contractor/Homeowner is Responsible for Permit. Contractor/Homeowner Must Obtain Approval of Engineered System from El Paso County Health Department. Contractor/Homeowner Must Verify Setbacks and Obtain Utility Clearances Prior to Construction.

Due to the Possibility of Unknown Water Usage Factors, Geoquest, LLC. Does Not Warranty this Septic System Against Failure or Damage of Any Type.

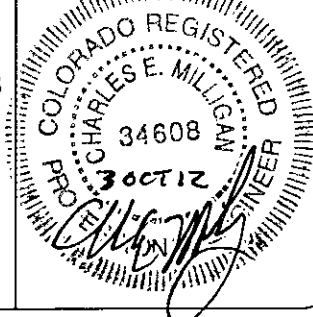
Paving, Planting of Trees/Shrubs, and Vehicular or Hoofed Animal Traffic of Any Kind Over the Soil Treatment Area may Cause Premature Failure and is Prohibited.

Refer to Sheet 2 & 3 for Details.

GEOQUEST, LLC.

6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
FAX: (719) 481-9204



Project: 12-0561

Sheet: 1 of 3

Date: 3 Oct 2012

Geoquest Perc.

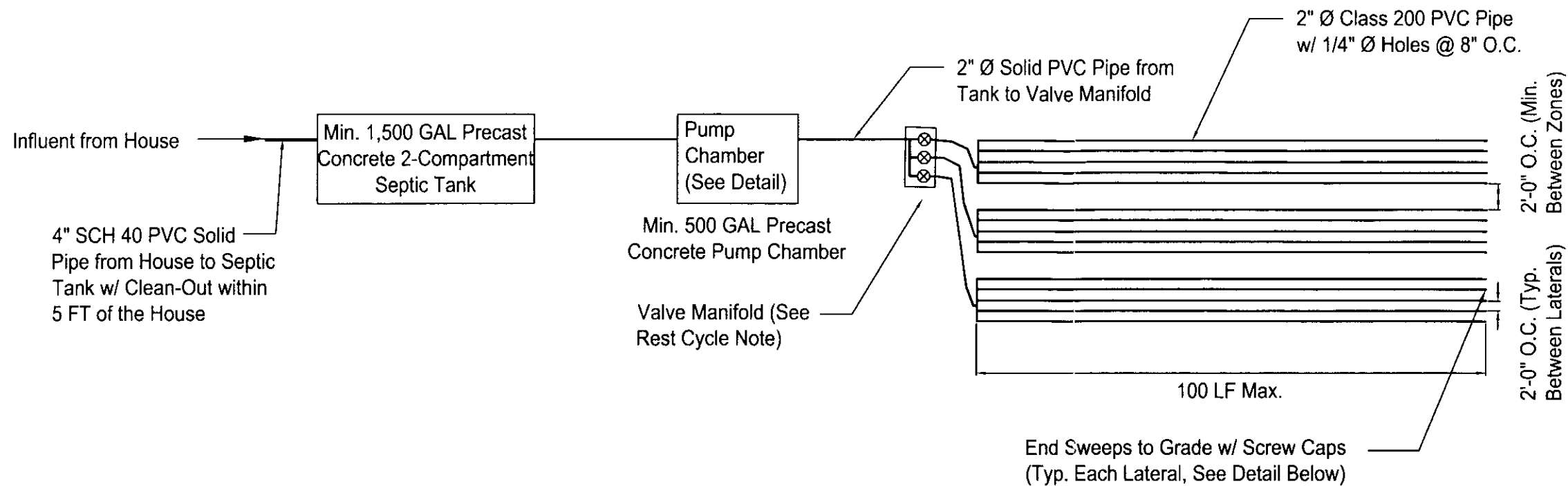
Drawn by: gr

Checked by: cem

Project Name and Address

Tiffany Homes

12840 Blue Spruce Lane
Lot #4, Blue Spruce Estates S/D,
El Paso County, Colorado



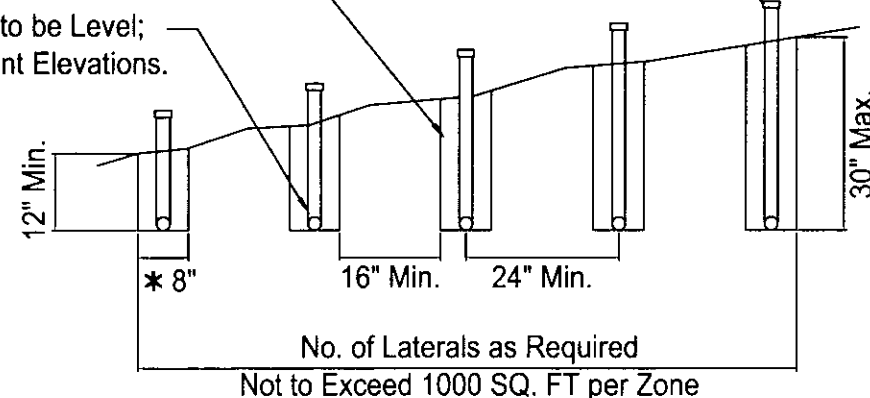
Soil Treatment Area - Plan View

Not to Scale

End Sweeps to Grade w/ Screw Caps at End Opposite Manifold (Typ. Each Lateral) May be Placed in Small Valve Box if Desired. This Will Provide Access to Flush Each Lateral, Allowing for Removal of the Build-Up of Organics (System Maintenance). See Detail.

Native Soil Backfill; Do Not Compact

All Laterals within Zone to be Level; Zones May be at Different Elevations.



* If 8" Width Cannot be Attained, Contact Engineer.

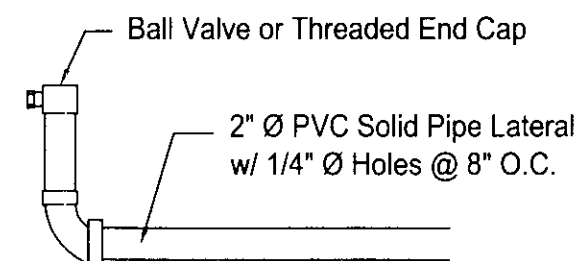
Typical Zone Cross Section

Not to Scale

Rest Cycle Note:

Research Indicates Allowing a Septic Field to "Rest" for Several Months Increases Its Long term Utility.

Geoquest, LLC. Recommends Resting Each Zone for Three to Six Months, Systematically Cycling Through Each Zone Sequentially such that Each Zone of the System is Idled for a Period Every One or Two Years.



End Sweep to Grade Detail

Not to Scale

Septic Tank and Plumbing Design:

Number of Laterals:

3,000 SF / 200 SF per Lateral = 15 Laterals

(500 LF per Zone)(3 Zones) = 1,500 LF of Pipe

Pump: Use Zoeller "Mighty Mate" 53, Orenco PI3005

High Head Effluent Pump, or Approved Equivalent;

Design Flow Rate = 20.0 GPM

Total Dynamic Head (TDH) = 10.9 ft to Valve Manifold

Dose Vol. = 300 Gal. Recommended

Main Septic Tank Size: Min. 1,500 GAL

Pump Chamber: Min. 500 GAL

Distribution Pipe: Use 2" Ø Class 200 PVC

Field (Zone) Pipe: Use 2" Ø Class 200 PVC

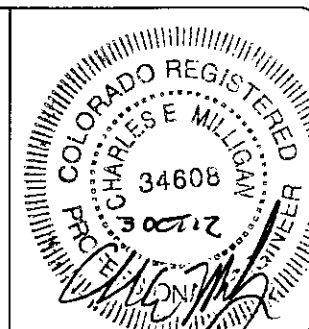
1/4" Ø Holes @ 8" O.C.

Special Note: A Profile Pit Inspection is Required Prior to the Installation of this On-Site Wastewater Treatment System to Evaluate the Structure of the Bedrock Material Encountered in the Percolation Test Profile.

GEOQUEST, LLC.

6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
FAX: (719) 481-9204



Project: 12-0561

Sheet: 2 of 3

Date: 3 Oct 2012

Scale: N.T.S.

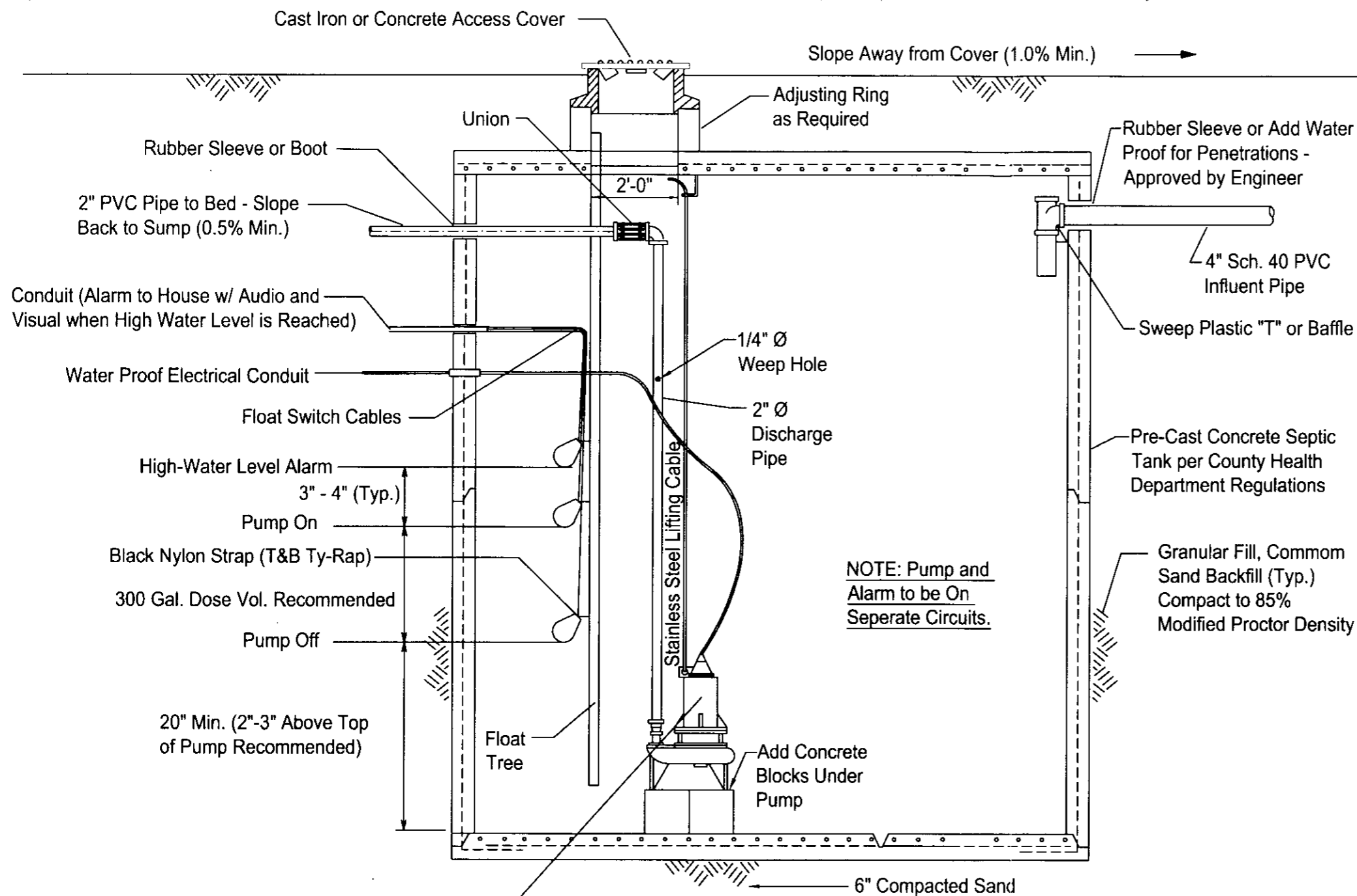
Drawn by: grr

Checked by: cem

Project Name and Address

Tiffany Homes

12840 Blue Spruce Lane
Lot #4, Blue Spruce Estates S/D,
El Paso County, Colorado



Pump: Use Zoeller "Flow Mate" 53, Orenco PI3005
High Head Effluent Pump, or Approved Equivalent
Dose Volume = 300 Gal. Recommended

PUMP CHAMBER SECTION

NOT TO SCALE

Rest Cycle Note:

Research Indicates Allowing a Septic Field to "Rest" for Several Months Increases Its Long term Utility.

Geoquest, LLC. Recommends Resting Each Zone for Three to Six Months, Systematically Cycling Through Each Zone Sequentially such that Each Zone of the System is Idled for a Period Every One or Two Years.

Electrical Code Requirements: All electrical work, equipment, and material must be listed for the intended use by a nationally recognized testing laboratory, and comply with the requirements of the National Electrical Code in effect on the date of the permit. The electrical installer shall contact the electrical inspector for the location where the ISDS is constructed.

1. All wire splices shall be enclosed in a National Electrical Manufacturers Association (NEMA) 4x splice box. The splice box shall be placed in an accessible location positioned outside of the tank riser.
2. All wires shall be spliced with silicon seal wire nuts or heat shrink sleeves.
3. Conduits shall be sealed to prevent gases from entering the splice box or the control panel (if system is so equipped) and electrical panel.
4. A means to disconnect the house power supply to OWTS components shall be provided at the splice box or at the pump control panel (if system is so equipped).
5. The branch circuit wire from the building to the splice box shall be a minimum of 24" below the ground surface. Lines buried less than 24" are allowed, but will be required to be in conduit or have ground fault protection on the circuit.
6. Conduit risers for physical protection must extend 18" below grade.

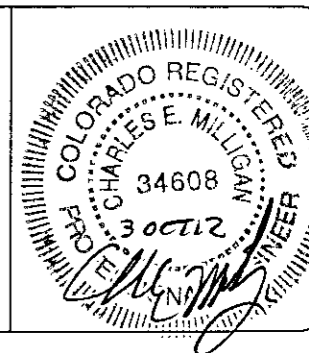
Best Practices Guidelines: The following "best practices" are intended to facilitate maintenance and servicing of the electrical components associated with lift stations, dosing systems, and treatment units that are part of an OWTS.

1. The "quick disconnect" for the pump discharge pipe shall be located within 6"-12" of the top of the riser(s). Electrical lines at the septic tank, dosing tank, or treatment unit must be placed in such a manner as to protect them from damage during backfill. An example of such protection is placement of the electrical line in an approved conduit.
2. The floats shall be secured to a separate float tree with approved connecting straps that will remain secure underwater and not deteriorate. Electrical tape is not acceptable. Top of float tree to be within 6" - 12" of the top of the lift station, dosing system tank or treatment unit riser.
3. If a separate riser is used, it shall be secured to maintain the riser in an upright and plumb position.
4. Control panels, if used, shall be placed within "line of sight" of the pump.
5. The alarm and pump control floats shall be placed on a separate dedicated circuit.
6. The pump shall be placed on a separate dedicated circuit.

GEOQUEST, LLC.

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COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
FAX: (719) 481-9204



Project: 12-0561

Sheet: 3 of 3

Date: 3 Oct 2012

Scale: N.T.S.

Drawn by: grr

Checked by: cem

Project Name and Address

Tiffany Homes

12840 Blue Spruce Lane
Lot #4, Blue Spruce Estates S/D,
El Paso County, Colorado