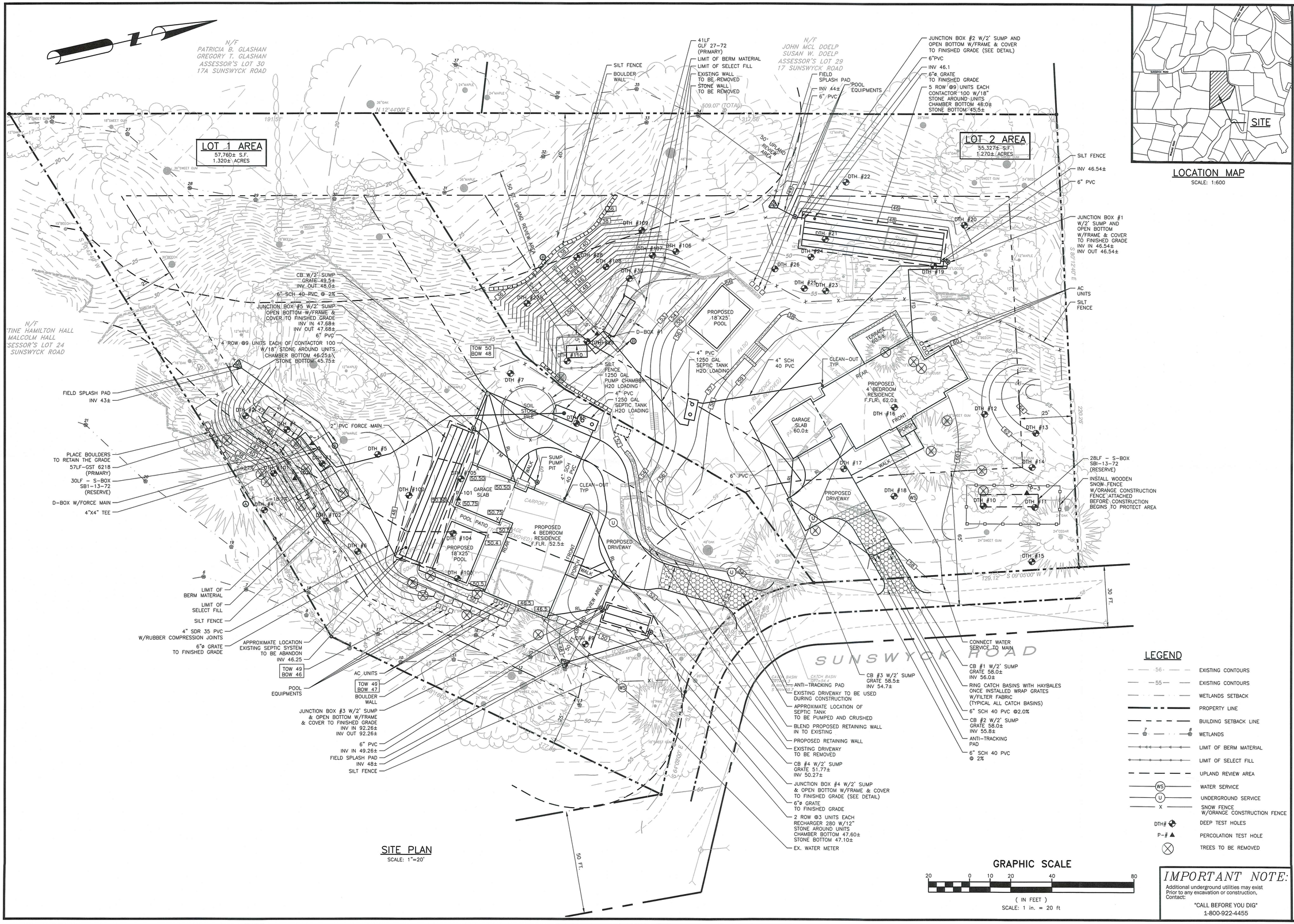


SITE PLAN
SCALE: 1"=20'

LOCATION MAP
SCALE: 1:600

LEGEND

- EXISTING CONTOURS
- EXISTING CONTOURS
- WETLANDS SETBACK
- PROPERTY LINE
- BUILDING SETBACK LINE
- WETLANDS
- LIMIT OF BERM MATERIAL
- LIMIT OF SELECT FILL
- UPLAND REVIEW AREA
- WATER SERVICE
- UNDERGROUND SERVICE
- SNOW FENCE W/ORANGE CONSTRUCTION FENCE
- DEEP TEST HOLES
- PERCOLATION TEST HOLE
- TREES TO BE REMOVED

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
SCALE: 1 in. = 20 ft

IMPORTANT NOTE:
Additional underground utilities may exist Prior to any excavation or construction, Contact:
"CALL BEFORE YOU DIG"
1-800-922-4455

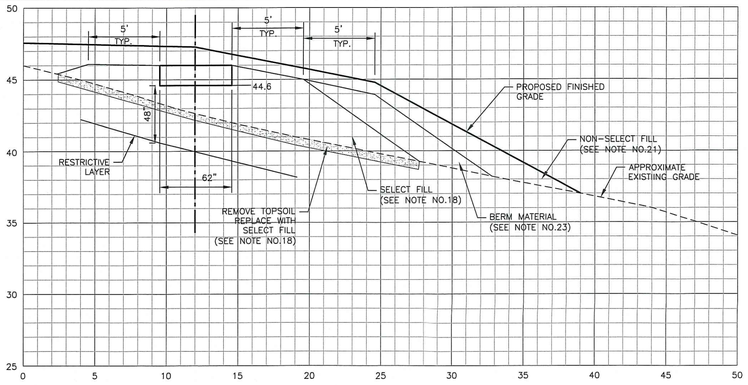
NO.	DATE	REV. BY	ISSUE / REVISION
1	02/26/20	SDI	FOR SUBMISSION TO EPC, HEALTH DEPARTMENT

DiVesta
Civil Engineering Associates, Inc.
51 Painter Ridge Road
Roxbury, Connecticut 06783
Phone 860-354-4226 Fax 860-354-4226
E- mail dceainc@snarter.net

PROJECT TITLE:
PALLADIAN BUILDERS
49 SUNSWYCK ROAD
DARIEN, CONNECTICUT
PROPOSED SITE DEVELOPMENT PLAN

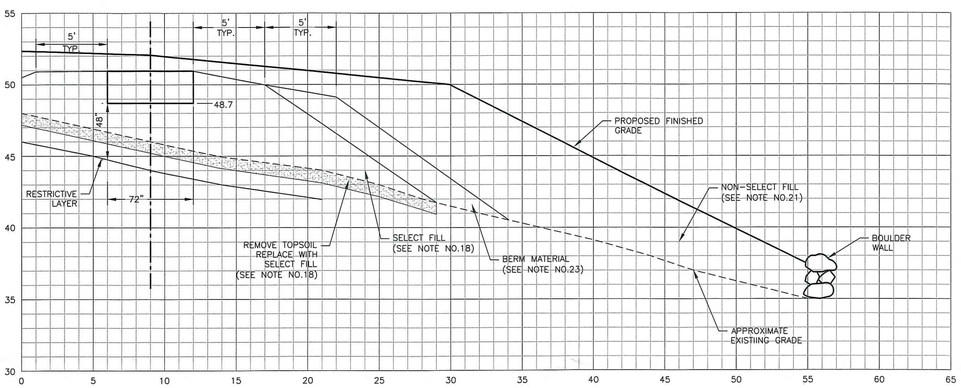
STAMP:
STATE OF CONNECTICUT
DOUGLAS F. DIVESTA
LICENSED PROFESSIONAL ENGINEER
NOT VALID WITHOUT ORIGINAL SEAL AND SIGNATURE

DRAWING NO.	
20-015	
DRAWN BY: SDI	APPROVED BY: DD
SCALE: 1"=20'	DRAWING DATE: 02/26/20
SHEET NO. 1 OF 3	



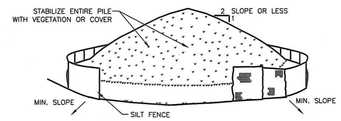
SECTION A–A –LOT #1

SCALE: 1"=5'



SECTION B–B –LOT #2

SCALE: 1"=5'

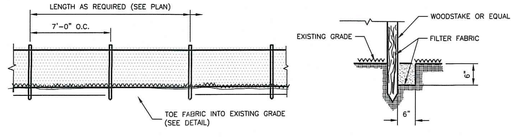


INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING

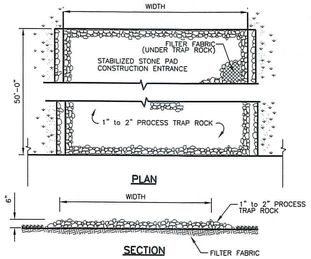
N.T.S.



ELEVATION **TOE IN DETAIL**

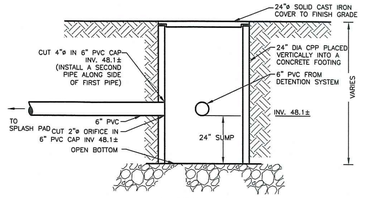
SILTATION FENCE DETAIL

N.T.S.



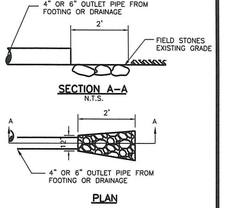
ANTI–TRACKING PAD DETAIL

N.T.S.



JUNCTION BOX #4

N.T.S.



FIELD STONE SPLASH PAD

N.T.S.

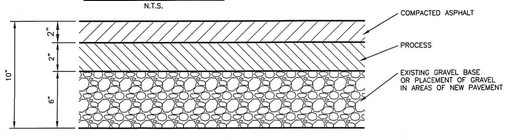
LIQUID CAPACITY	LENGTH "L"	WIDTH "W"	INVERT "I"	HEIGHT "H"
550	7'6"	3'8"	3'8"	4'6"
750	8'6"	4'10"	3'8"	4'6"
900	8'6"	4'10"	4'2"	5'0"
1000	8'6"	4'10"	4'6"	5'4"
1250	10'6"	5'8"	3'8"	4'6"
1500	10'6"	5'8"	4'6"	5'4"
2000	11'11"	6'6"	4'8"	5'8"

DESIGN NOTES:

1. 4000 PSI–28 DAYS
2. MEETS OR EXCEEDS STATE AND LOCAL REQUIREMENTS.
3. ALL SHIPLAP JOINTS SEALED WITH BUTYL RUBBER.
4. LOADING H10 (OR H20 OPTIONAL)
5. TWO COMPARTMENT TANK.
6. INSPECTION LID HAS CAST IN PVC BAFFLE AND IS TRANSFERABLE TO ANY OF THREE INLETS.

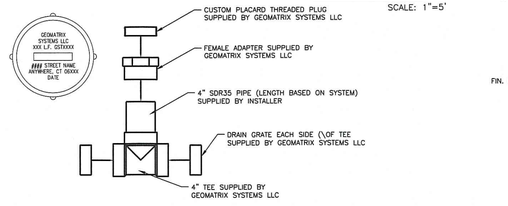
SEPTIC TANK DETAIL

N.T.S.



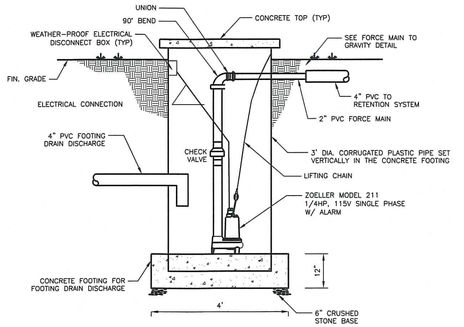
TYPICAL DRIVEWAY

N.T.S.



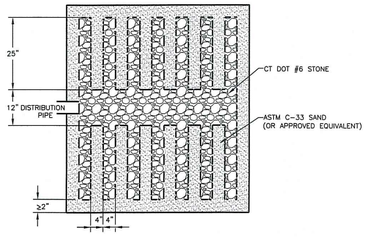
GEOMATRIX GST LEACHING SYSTEM INSPECTION PORT DETAIL

N.T.S.



SUMP PUMP DETAIL

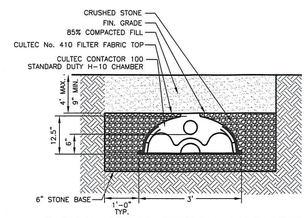
SCALE: N.T.S.



GST 6218

N.T.S.

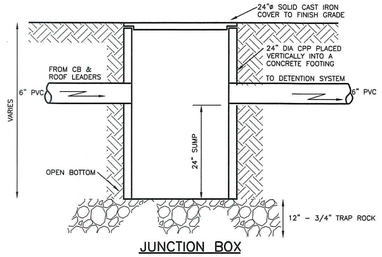
NOTE:
*3" MIN. I.D., ASTM D–3034, SDR 35 PIPE FOR GRAVITY APPLICATIONS
0.75" MIN. I.D., ASTM D–2665, SCH 40 PVC PIPE FOR PRESSURE APPLICATIONS



TYPICAL CROSS SECTION CONTACTOR 100

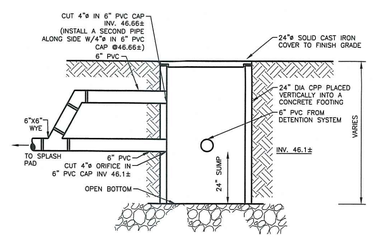
SCALE: N.T.S.

(DRAINAGE)



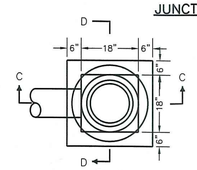
JUNCTION BOX

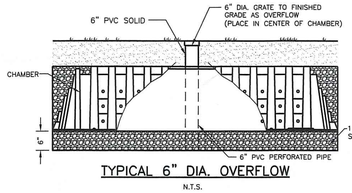
N.T.S.



JUNCTION BOX #2

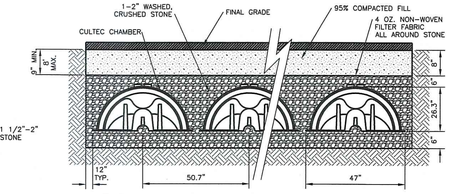
N.T.S.





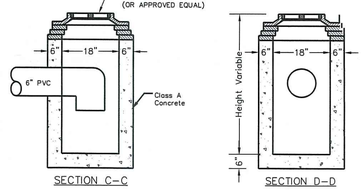
TYPICAL 6" DIA. OVERFLOW

N.T.S.



TYPICAL CROSS SECTION RECHARGER 280

SCALE: N.T.S.

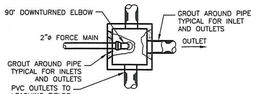


SECTION C–C SECTION D–D

NOTE:
PROVIDE A 90 DEGREE ELBOW ON THE OUTLET PIPE OF EACH CATCH BASIN

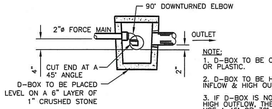
CATCH–BASIN

N.T.S.



PLAN

N.T.S.

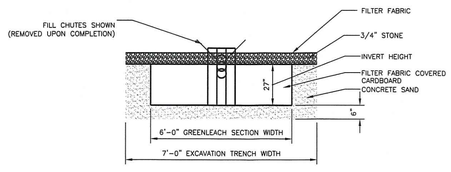


NOTE:
1. D–BOX TO BE CONCRETE OR PLASTIC.
2. D–BOX TO BE HIGH INFLOW & HIGH OUTFLOW.
3. IF D–BOX IS NOT HIGH OUTFLOW, THEN USE A 45° OR 30° PVC BEND, ROTATE UP TO DESIRED ELEVATION.

DISTRIBUTION BOX WITH FORCE MAIN

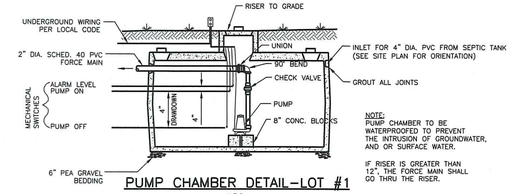
N.T.S.

SEE SITE PLAN FOR PIPING ORIENTATION



GLF 27–72

N.T.S.



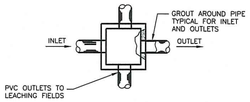
NOTE:
PUMP CHAMBER TO BE WATERPROOFED TO PREVENT THE INTRUSION OF GROUNDWATER, AND OR SURFACE WATER.

IF RISER IS GREATER THAN 12", THE FORCE MAIN SHALL GO THRU THE RISER.

PUMP CHAMBER DETAIL–LOT #1

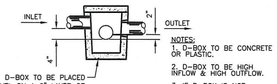
N.T.S.

NOTE:
1. 1250 GALLON PUMP CHAMBER = 35.71 GAL/INCH.
2. PUMP TO BE 6" OFF CHAMBER BOTTOM
3. 4" DRAWDOWN = 142.84 GAL/CYCLE
4. 821.4 GALLONS OF STORAGE AFTER DISCHARGE
5. 678.5 GALLONS AFTER HIGHWATER ALARM
6. 525 GALLONS STORAGE REQUIRED FOR ONE DAY FOR 4 BEDROOMS
7. PER MANUFACTURER GST 6218 VOLUME OF STORAGE = 13.84
8. 57 LF OF GST 6218 x 13.8 GAL/LF = 788.88 GALLONS
9. 20% OF THE TOTAL VOLUME OF STORAGE = 157.7 GAL. THEREFORE PROPOSED DRAWDOWN IS 147.8 GAL/CYCLE IS LESS THAN 20% OF THE TOTAL VOLUME OF STORAGE, OKAY



PLAN

N.T.S.



NOTES:
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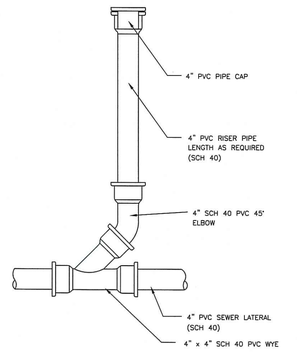
3. IF D–BOX IS NOT HIGH OUTFLOW, THEN USE A 45° OR 30° PVC BEND, ROTATE UP TO DESIRED ELEVATION.

DISTRIBUTION BOX

N.T.S.

SEE SITE PLAN FOR PIPING ORIENTATION



CLEANOUT DETAIL TYPICAL

N.T.S.

NO.	DATE	REV. BY	DESCRIPTION
1	02/26/20	SDI	FOR SUBMISSION TO EPC, HEALTH DEPARTMENT

ISSUE / REVISION

DiVesta
Civil Engineering Associates, Inc.
51 Painter Ridge Road
Roxbury, Connecticut 06783
Phone 860-354-4226 Fax 860-354-4226
E-mail dceainc@charter.net

PROJECT TITLE:

PALLADIAN BUILDERS

49 SUNSWYCK ROAD
DARIEN, CONNECTICUT

DETAILS

STAMP:

STATE OF CONNECTICUT * DOUGLAS P. DIVESTA * 19837 LICENSED PROFESSIONAL ENGINEER

NOT VALID WITHOUT ORIGINAL SEAL AND SIGNATURE

DRAWING NO. 20-015

DRAWN BY:	APPROVED BY:
SDI	DD
SCALE: AS NOTED	DRAWING DATE: 02/26/20

SHEET NO. 2 OF 3

IMPORTANT NOTE:

Additional underground utilities may exist. Prior to any excavation or construction, Contact:

"CALL BEFORE YOU DIG"
1-800-922-4455

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL AND TOWN OF DARIEN REGULATIONS.
2. ALL CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLAN(S).
3. ALL CONTROL MEASURES SHALL BE INSPECTED AND APPROVED BY THE TOWN PRIOR TO COMMENCEMENT OF ANY WORK, INCLUDING PRE-CONSTRUCTION CLEARING AND GRUBBING.
4. ALL CONTROL MEASURES SHALL BE MAINTAINED AND UPGRADED AS REQUIRED TO ACHIEVE PROPER SEDIMENT CONTROL THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS HAVE BEEN THOROUGHLY STABILIZED.
5. NO CONTROL MEASURES SHALL BE REMOVED WITHOUT APPROVAL FROM THE TOWN.
6. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF DEEMED NECESSARY BY THE TOWN OR ITS AUTHORIZED AGENT.
7. THE LIMITS OF CLEARING, GRADING AND DISTURBANCE, AS SHOWN ON THE PLAN(S), SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE THE LIMITS OF CLEARING SHALL REMAIN TOTALLY UNDISTURBED.
8. ANY CONTROL MEASURES RETAINING SEDIMENT OVER ½ THEIR HEIGHT SHALL HAVE THE SEDIMENT IMMEDIATELY REMOVED, AND ALL DAMAGED CONTROL MEASURES SHALL BE REMOVED AND REPLACED.
9. ALL CATCH BASINS LOCATED DOWN-GRADE OF THE SITE SHALL BE PROTECTED BY PLACING FILTER FABRIC BENEATH THE GRATE UNTIL ALL DISTURBED AREAS HAVE BEEN THOROUGHLY STABILIZED.
10. ALL NEW AND EXISTING CATCH BASINS LOCATED ON THE SITE SHALL BE PROTECTED BY STAKED HAYBALES AND BY PLACING FILTER FABRIC BENEATH THE GRATE UNTIL ALL DISTURBED AREAS HAVE BEEN THOROUGHLY STABILIZED.
11. ALL SEDIMENT SHALL BE IMMEDIATELY REMOVED FROM NEW AND EXISTING DRAINAGE STRUCTURES AND PIPING IMPACTED BY THE PROPOSED CONSTRUCTION.
12. SEDIMENT REMOVED FROM CONTROL MEASURES AND DRAINAGE FACILITIES SHALL BE DISPOSED OF IN A MANNER THAT IS CONSISTENT WITH STATE AND LOCAL REGULATIONS.
13. THE PLANTING SEASONS FOR THE SPECIFIED SEED MIXTURE SHALL BE AS DEFINED IN THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, UNLESS DIRECTED OTHERWISE BY THE TOWN. OUTSIDE OF THESE SPECIFIED DATES, AREAS WILL BE STABILIZED WITH HAYBALE CHECK DAMS, FILTER FABRIC, OR WOODCHIP MULCH AS REQUIRED TO CONTROL EROSION.
14. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT NO DRAINAGE FROM TOWN ROADS ENTERS THE SITE DURING OR AFTER CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE LIFE OF THE CONTRACT. THE CONTRACTOR SHALL CONTROL DUST TO PREVENT A HAZARD TO TRAFFIC ON ADJACENT ROADWAYS.
16. TEMPORARY STOCKPILING OF CONSTRUCTION MATERIALS SHALL ONLY BE ALLOWED IN THE LOCATIONS SHOWN ON THE PLAN(S). STOCKPILE AREAS SHALL BE FULLY ENCLOSED BY SILT FENCE.
17. ALL GROUNDWATER EXTRACTED DURING DEWATERING OF EXCAVATIONS SHALL BE DIRECTED TO A TEMPORARY SEDIMENTATION BASIN.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENTATION CONTROL PLAN. THIS INCLUDES THE INSTALLATION AND MAINTENANCE OF ALL CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE TOWN OF ANY TRANSFER OF THIS RESPONSIBILITY.

PERCOLATION TEST HOLES LOG

DATE 01/13/20

PERC HOLE P-1

DEPTH: 22 INCHES DIAMETER: 8.00 INCHES
HEAD: 12 INCHES PRESOAK: 03:15 A.M.

TIME	DEPTH (INCHES)	DROP (INCHES)	INTERVAL (MINUTES)	RATE (MIN./INCH)
16.16	6.13			
16.37	10.25	4.13	21.00	5.09
16.56	12.50	2.25	19.00	8.44
17.11	13.50	1.00	15.00	15.00
17.22	14.50	1.00	11.00	11.00

FINAL PERCOLATION RATE: 15.00 MIN/INCH

PERC HOLE P-2

DEPTH: 20 INCHES DIAMETER: 8.00 INCHES
HEAD: 12 INCHES PRESOAK: 03:16 A.M.

TIME	DEPTH (INCHES)	DROP (INCHES)	INTERVAL (MINUTES)	RATE (MIN./INCH)
16.19	9.00			
16.38	13.75	4.75	19.00	4.00
16.59	16.00	2.25	21.00	9.33
17.13	18.00	2.00	14.00	7.00
17.25	19.00	1.00	12.00	12.00

FINAL PERCOLATION RATE: 12.00 MIN/INCH

PERC HOLE P-3

DEPTH: 20 INCHES DIAMETER: 8.00 INCHES
HEAD: 12 INCHES PRESOAK: 03:19 A.M.

TIME	DEPTH (INCHES)	DROP (INCHES)	INTERVAL (MINUTES)	RATE (MIN./INCH)
16.24	7.75			
16.40	10.50	2.75	16.00	5.82
17.01	13.00	2.50	21.00	8.40
17.15	14.25	1.25	14.00	11.20
17.25	15.13	0.88	10.00	11.43

FINAL PERCOLATION RATE: 11.43 MIN/INCH

DATE 01/31/20

PERC HOLE P-100

DEPTH: 19 INCHES DIAMETER: 9.00 INCHES
HEAD: 12 INCHES PRESOAK: 09:20 A.M.

TIME	DEPTH (INCHES)	DROP (INCHES)	INTERVAL (MINUTES)	RATE (MIN./INCH)
11.57	7.00			
12.20	8.75	1.75	23.00	13.14
12.37	9.75	1.00	17.00	17.00
12.51	10.50	0.75	14.00	18.67
13.02	11.13	0.63	11.00	17.60

FINAL PERCOLATION RATE: 18.67 MIN/INCH

PERC HOLE P-101

DEPTH: 19 INCHES DIAMETER: 8.00 INCHES
HEAD: 12 INCHES PRESOAK: 09:25 A.M.

TIME	DEPTH (INCHES)	DROP (INCHES)	INTERVAL (MINUTES)	RATE (MIN./INCH)
11.59	6.50			
12.21	10.50	4.00	22.00	5.50
12.38	11.75	1.25	17.00	13.60
12.52	12.50	0.75	14.00	18.67
13.02	13.25	0.75	10.00	13.33

FINAL PERCOLATION RATE: 18.67 MIN/INCH

PERC HOLE P-102

DEPTH: 20 INCHES DIAMETER: 8.00 INCHES
HEAD: 12 INCHES PRESOAK: 10.24 A.M.

TIME	DEPTH (INCHES)	DROP (INCHES)	INTERVAL (MINUTES)	RATE (MIN./INCH)
12.00	8.75			
12.22	13.63	4.88	22.00	4.51
12.39	15.38	1.75	17.00	9.71
12.54	16.63	1.25	15.00	12.00
13.05	17.50	0.88	11.00	12.57

FINAL PERCOLATION RATE: 12.57 MIN/INCH

MLSS REQUIREMENT

LOT #1-(SOUTHERN LOT)

No. OF BEDROOMS	PERCOLATION RATE DESIGN	LEDGE (INCHES)	LIMITING FACTORS: HARDPAN (INCHES)	LIMITING FACTORS: MOTTLING (INCHES)	GROUNDWATER (INCHES)	HYDRAULIC FACTOR: SLOPE (%)	HYDRAULIC FACTOR: (HF)	HYDRAULIC FACTOR: DEPTH (INCHES)	FLOW FACTOR (FF)	PERCOLATION FACTOR (PF)	MLSS (FEET) (HF*FF*PF)	ACTUAL SPREAD (FEET)	ELA SF (REQUIRED)	ELA SF (PROVIDED)
4	10.1-20	34	NONE	NONE	NONE	>15	18	34.95	1.75	1.25	39.37	57	787.5	798

SYSTEM
DT #1 = 34
DT #3 = 37
(34+37)/2=35.5
AVERAGE OF SYSTEM
35.50

RECEIVING SOILS
DT #5 = 31
DT #6 = 37
(31+37)/2=34
AVERAGE OF RECEIVING
34.00

ADJUSTED HYDRAULIC FACTOR
34.75
(35.5+34)/2=34.75

MLSS REQUIREMENT

LOT #2-(NORTHERN LOT)

No. OF BEDROOMS	PERCOLATION RATE DESIGN	LEDGE (INCHES)	LIMITING FACTORS: HARDPAN (INCHES)	LIMITING FACTORS: MOTTLING (INCHES)	GROUNDWATER (INCHES)	HYDRAULIC FACTOR: SLOPE (%)	HYDRAULIC FACTOR: (HF)	HYDRAULIC FACTOR: DEPTH (INCHES)	FLOW FACTOR (FF)	PERCOLATION FACTOR (PF)	MLSS (FEET) (HF*FF*PF)	ACTUAL SPREAD (FEET)	ELA SF (REQUIRED)	ELA SF (PROVIDED)
4	10.1-20	24	NONE	46	NONE	>15	18	33.00	1.75	1.25	39.4	40	787.5	808.4

SYSTEM
DT #29 = 24
DT #110 = 46
(24+46)/2=46
AVERAGE OF SYSTEM
35.00

RECEIVING SOILS
DT #27 = 45
DT #28 = 17
(45+17)/2=31
AVERAGE OF RECEIVING
31.00

ADJUSTED HYDRAULIC FACTOR
33.00
(35+31)/2=33

DEEP TEST HOLES LOG

DATE 01/13/20

DEEP TEST HOLE #1

0" – 4" TOPSOIL
4" – 34" RED BROWN SILTY SANDY LOAM

LEDGE @ 34"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 34"

DEEP TEST HOLE #2

0" – 4" TOPSOIL
4" – 10" DARK BROWN SILTY LOAM
10" – 41" RED BROWN SILTY LOAM
LEDGE @ 24"(SOUTH END)
LEDGE @ 41" (MIDDLE) 15" (NORTH END)
NO GROUNDWATER
NO MOTTLING
ROOTS TO 41"

DEEP TEST HOLE #3

0" – 6" TOPSOIL
6" – 37" RED BROWN SILTY LOAM

LEDGE @ 37"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 37"

DEEP TEST HOLE #4

0" – 4" TOPSOIL
4" – 31" RED BROWN SILTY LOAM

LEDGE @ 31"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 16"

DEEP TEST HOLE #5

0" – 5" TOPSOIL
5" – 38" RED BROWN SILTY LOAM

LEDGE @ 17" (NORTH SIDE)
LEDGE @ 38" (SOUTH SIDE)
NO GROUNDWATER
NO MOTTLING
ROOTS TO 38"

DEEP TEST HOLE #6

0" – 7" TOPSOIL
7" – 38" RED BROWN SILTY LOAM

LEDGE @ 38"
NO GROUNDWATER
MOTTLING @ 30"
ROOTS TO 30"

DEEP TEST HOLE #7

FRACTURED ROCK @ 13"

DEEP TEST HOLE #8

LEDGE @ 10"

DEEP TEST HOLE #9

0" – 46" MISC FILL
46" – 66" YELLOW BROWN FINE SILTY LOAM

NO LEDGE
GROUNDWATER @ 46"
MOTTLING @ 46"
ROOTS TO 38"

DEEP TEST HOLE #10

0" – 5" TOPSOIL
5" – 40" RED BROWN SILTY LOAM

LEDGE @ 40"
NO GROUNDWATER
MOTTLING @ 34"
ROOTS TO 34"

DEEP TEST HOLE #11

0" – 7" TOPSOIL
7" – 42" RED BROWN SILTY LOAM
42" – 77" TAN SANDY HARDPAN
NO LEDGE
NO GROUNDWATER
MOTTLING @ 42"
ROOTS TO 40"

DEEP TEST HOLE #12

LEDGE @ 16"

DEEP TEST HOLE #13

0" – 4" TOPSOIL
4" – 24" RED BROWN SILTY LOAM
LEDGE @ 24"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 24"

DEEP TEST HOLE #14

LEDGE @ 15"

DEEP TEST HOLE #15

0" – 14" MISC FILL
14" – 37" YELLOW BROWN SILTY LOAM
37" – 48" OLIVE BROWN HARDPAN
NO LEDGE TO 48"
NO GROUNDWATER
MOTTLING @ 24
ROOTS TO 21"

DEEP TEST HOLE #16

LEDGE @ 16"

DEEP TEST HOLE #17

0" – 21" MISC FILL
21" – 45" RED BROWN SILTY LOAM
45" – 72" OLIVE BROWN MOTTLED LOAM
NO LEDGE
NO GROUNDWATER
MOTTLING @ 47"
ROOTS TO 33"

DEEP TEST HOLE #18

LEDGE @ 18"

NOTES PER PLANNING & ZONING

1. APPROVAL BY THE PLANNING & ZONING COMMISSION OF THIS SITE PLAN SHALL NOT BE DEEMED TO CONSTITUTE OR BE EVIDENCE OF AN ACCEPTANCE BY THE TOWN OF ANY RESPONSIBILITY OF LIABILITY WHATSOEVER FOR THE EFFECTS OF DRAINAGE OR OTHER FACTORS RESULTING FROM DEVELOPMENT OF THIS SITE ON OTHER PROPERTIES.
2. MAINTENANCE OF ALL ON-SITE DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
3. ALL DEVELOPMENT ACTIVITIES TO BE UNDERTAKEN WITHIN STREET RIGHT-OF-WAY AND OTHER PUBLIC LANDS SHALL COMPLY FULLY WITH TOWN STANDARDS UNLESS AN APPROVED DEVIATION IS SPECIFICALLY SET FORTH AS PART OF THIS APPLICATION.
4. THE DRAINAGE STRUCTURES AND PROPOSALS INCLUDED IN THIS DEVELOPMENT PROPOSAL WERE DESIGNED BY DIVESTA CIVIL ENGINEERING ASSOCIATES, INC. USING THE BEST ENGINEERING PRACTICES AND WILL NOT PRODUCE ANY NEGATIVE RESULTS FROM STORM RUNOFF ON THIS PROPERTY OR ADJACENT PROPERTIES.

DEEP TEST HOLES LOG

DATE 01/13/20

DEEP TEST HOLE #19

0" – 6" TOPSOIL
6" – 58" RED BROWN SILTY LOAM
58" – 78" OLIVE BROWN SILTY SANDY LOAM
NO LEDGE
NO GROUNDWATER
MOTTLING @ 48"
ROOTS TO 48"

DEEP TEST HOLE #20

LEDGE @ 10"

DEEP TEST HOLE #21

0" – 10" TOPSOIL
10" – 67" RED BROWN SILTY LOAM
LEDGE @ 67"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 51"

DEEP TEST HOLE #22

LEDGE @ 18"

DEEP TEST HOLE #23

LEDGE @ 18"

DEEP TEST HOLE #24

LEDGE @ 17"

DEEP TEST HOLE #25

LEDGE @ 17"

DEEP TEST HOLE #26

LEDGE @ 56"

DEEP TEST HOLE #27

0" – 8" TOPSOIL
8" – 45" RED BROWN SILTY LOAM
LEDGE @ 45"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 24"

DEEP TEST HOLE #28

LEDGE @ 17"

DEEP TEST HOLE #29

0" – 13" TOPSOIL
13" – 24" RED BROWN SILTY LOAM

LEDGE @ 24"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 20"

DEEP TEST HOLE #30

0" – 6" TOPSOIL
6" – 22" OLIVE BROWN SILTY LOAM
22" – 30" RED BROWN SILTY LOAM
LEDGE @ 30"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 30"

DEEP TEST HOLES LOG

DATE 01/31/20

DEEP TEST HOLE #100 (GARAGE LOT)

0" – 7" TOPSOIL
7" – 37" RED BROWN SILTY LOAM
ROCK @ 28"
LEDGE @ 37"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 28"

DEEP TEST HOLE #101

0" – 7" TOPSOIL
7" – 44" RED BROWN FINE SILTY LOAM

LEDGE @ 44"
GROUNDWATER @ 30"
MOTTLING @ 30"
ROOTS TO 18"

DEEP TEST HOLE #102

0" – 5" TOPSOIL
5" – 22" RED BROWN SILTY LOAM
LEDGE @ 22"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 20"

DEEP TEST HOLE #103

0" – 7" TOPSOIL
7" – 29" RED BROWN SILTY LOAM
LEDGE @ 29"
GROUNDWATER @ 29"
NO MOTTLING
ROOTS TO 26"

DEEP TEST HOLE #104

0" – 6" TOPSOIL
6" – 38" RED BROWN SILTY LOAM
LEDGE @ 38"
NO GROUNDWATER
MOTTLING @ 27"
ROOTS TO 27"

DEEP TEST HOLE #105

0" – 10" MISC FILL
10" – 35" RED BROWN SILTY LOAM
35" – 64" OLIVE BROWN MOTTLE HARDPAN
LEDGE @ 64"
GROUNDWATER @ 50"
MOTTLING @ 33"
ROOTS TO 33"

DEEP TEST HOLE #106

0" – 6" TOPSOIL
6" – 15" RED BROWN SILTY LOAM
LEDGE @ 15"
NO GROUNDWATER
NO MOTTLING

DEEP TEST HOLE #107

LEDGE @ 12"

DEEP TEST HOLE #108
LEDGE @ 12"

DEEP TEST HOLE #109
0" – 16" DARK BROWN SILTY LOAM
16" – 30" RED BROWN SILTY LOAM
LEDGE @ 30"
NO GROUNDWATER
NO MOTTLING
ROOTS TO 10"

DEEP TEST HOLE #110

0" – 3" TOPSOIL
3" – 10" DARK BROWN SILTY LOAM
10" – 46" RED BROWN SILTY LOAM
46" – 54" OLIVE BROWN SILTY LOAM
LEDGE @ 54"
NO GROUNDWATER
MOTTLING @ 46"
ROOTS TO 17"

DEEP TEST HOLE #111

FRACTURED ROCK 15" – 40"

DEEP TEST HOLE #112

LEDGE @ 12"

TABLE OF INVERTS LOT #1

SCH 40 @ HOUSE	50.00 (MIN.)
SEPTIC TANK INLET	49.23
SEPTIC TANK OUTLET	48.98
PUMP CHAMBER INLET	48.48
D -BOX #1 WITH FORCE MAIN INLET	46.43
D -BOX #1 WITH FORCE MAIN LATERAL	46.10
GST 6218 INVERT	46.10
GST 6218 BOTTOM	44.60

TABLE OF INVERTS LOT #2

SCH 40 @ HOUSE	58.50 (MIN.)
SEPTIC TANK INLET	54.75
SEPTIC TANK OUTLET	54.50
D -BOX #1 WITH FORCE MAIN INLET	51.28
D -BOX #1 WITH FORCE MAIN LATERAL	50.95
GLF 27-72 INVERT	50.95
GLF 27-72 BOTTOM	48.70

GENERAL NOTES

1. LOT LINES AND TOPOGRAPHIC INFORMATION HAVE BEEN TAKEN FROM PLANS PREPARED BY WILLIAM W. SEYMOUR, PC, DARIEN, CT, TITLED "ZONING LOCATION & TOPOGRAPHIC SURVEY" DATED 1/30/20.
2. THE PROPERTY LINES ARE TO BE STAKED PRIOR TO CONSTRUCTION OF THE DWELLING OR INSTALLATION OF THE SEPTIC SYSTEM.
3. FIELD DATA COLLECTED ON 1/13/20 & 1/31/20 BY DIVESTA CIVIL ENGINEERING ASSOCIATES, INC.
4. THERE IS NO APPARENT INTERFERENCE WITH WELLS OR SEPTIC SYSTEMS ON ADJACENT PROPERTIES.
5. LOCATION OF EXISTING LEACHING SYSTEM AND RELATED STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE RECORDS AND SURVEY, AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY.
6. THE CONTRACTOR MUST OBTAIN ALL NECESSARY PERMITS FROM THE LOCAL AGENCIES PRIOR TO CONSTRUCTION.

LOT # 1

7. BASED ON AN OBSERVED PERCOLATION RATE OF 1"/10.1-20 MIN., A 4 BEDROOM DWELLING AND A 1250 GALLON TWO COMPARTMENT SEPTIC TANK, 787.5 SQ. FT. OF EFFECTIVE LEACHING AREA MUST BE PROVIDED AS PER THE STATE OF CONNECTICUT HEALTH CODE. INSTALL 57 LINEAR FEET OF GST 6218 PROVIDING 798 SQ. FT. OF EFFECTIVE LEACHING AREA. ENDS OF TRENCH PIPING SHALL BE CAPPED WITH MANUFACTURED CAPS.

LOT # 2

8. BASED ON AN OBSERVED PERCOLATION RATE OF 1"/10.1-20 MIN., A 4 BEDROOM DWELLING AND A 1250 GALLON TWO COMPARTMENT SEPTIC TANK, 787.5 SQ. FT. OF EFFECTIVE LEACHING AREA MUST BE PROVIDED AS PER THE STATE OF CONNECTICUT HEALTH CODE. INSTALL 40 LINEAR FEET OF GLF 27-72 PROVIDING 808 SQ. FT. OF EFFECTIVE LEACHING AREA. ENDS OF TRENCH PIPING SHALL BE CAPPED WITH MANUFACTURED CAPS.
9. PROVIDE A 1250 GALLON TWO COMPARTMENT SEPTIC TANK AS MANUFACTURED BY CONNECTICUT PRE-CAST OR EQUAL. THE SEAMS OF THE TANK SHALL BE TARRED OR WATER SEALED PRIOR TO TANK INSTALLATION. INLET AND OUTLET PIPES SHALL ALSO BE SEALED WATERTIGHT. IF 12" OR GREATER OF COVER EXISTS OVER THE TANK, RISERS SHALL BE INSTALLED TO GRADE. RISERS SHALL BE WATERTIGHT AND SEALED ON TOP OF THE TANK. SEPTIC TANK IS TO HAVE AN APPROVED OUTLET FILTER AND MEET THE CURRENT HEALTH CODE.
10. HOUSE SEWER TO BE CONSTRUCTED OF 4" SCH 40 PVC OR EQUAL. MINIMUM PITCH ON HOUSE SEWER FROM HOUSE TO SEPTIC TANK TO BE ONE-QUARTER-INCH PER FOOT AND SEWER FROM SEPTIC TANK TO LEACHING SYSTEM TO BE ONE-EIGHTH-INCH PER FOOT. ALL EFFLUENT PIPES DISPERSING FLOWS TO DISTRIBUTION BOXES TO BE 4" SOLID PVC (ASTM D3033 OR 3034, SDR 35) WITH SOLVENT SEALED JOINTS OR EQUAL. CHANGES IN DIRECTION TO BE MADE WITH THE APPROPRIATE COMMERCIALLY MANUFACTURED FITTINGS. ALL PIPES TO BE PROPERLY GROUTED INTO SEPTIC TANK, PUMP CHAMBER AND DISTRIBUTION BOXES AND PROPERLY SUPPORTED. USE DISTRIBUTION BOX DB-5 AND/OR DB-3 AS MANUFACTURED BY CONNECTICUT PRE-CAST. PERFORATED EFFLUENT DISTRIBUTION PIPE TO BE 4" DIAMETER ASTM D2729 PVC PIPE.
11. PROVIDE A 1,250-GALLON PUMP CHAMBER AS MANUFACTURED BY CONNECTICUT PRE-CAST OR EQUAL WITH A 6" (MIN) WIRE MESH, REINFORCED CONCRETE SADDLE OR PRE-CAST EQUAL. THE SEAMS OF THE PUMP CHAMBER SHALL BE TARRED OR WATER SEALED PRIOR TO CHAMBER INSTALLATION. A MANHOLE SHALL EXTEND TO FINISHED GRADE.
12. SEPTIC TANK AND PUMP CHAMBER SHALL BE LAID LEVEL ON A 6" BED OF CRUSHED STONE.
13. THE PUMP SHALL BE GOULD MODEL #3885; WE0311H; 1/3 HP; SINGLE PHASE OR EQUAL. MECHANICAL LEVEL CONTROL FLOAT SWITCHES ARE TO BE PROVIDED AND SET SO THAT THE PUMP DISCHARGES 125 GALLONS PER CYCLE. CONTROL PANEL TO BE HOWARD "A" OR EQUAL WITH ON/OFF/MANUAL SWITCH. A CLEARLY AUDIBLE, HIGH LIQUID LEVEL ALARM IS TO BE SET INSIDE THE HOUSE. ELECTRICAL HOOKUP TO THE ALARM IS TO BE PLACED IN A MINIMUM 4"X 4" WEATHER TIGHT BOX SET A MINIMUM 12" ABOVE FINISHED GRADE IN A PROTECTED LOCATION. A SERVICE DISCONNECT IS TO BE IN VIEW OF THE PUMP CHAMBER. ALL ELECTRICAL WORK REQUIRES A SEPARATE PERMIT FROM THE LOCAL BUILDING OFFICIAL.
14. THE 2" PVC (ASTM D2241) FORCE MAIN SHALL BE LAID 42" BELOW GRADE WHEREVER POSSIBLE. THE INVERT OF THE FORCE MAIN SHOULD BE 2" ABOVE THE OUTLET OF THE BAFFLED DISTRIBUTION BOX. WHEN NOT POSSIBLE, ITS PITCH SHALL BE SUCH THAT DURING PUMP SHUTDOWN, THE EFFLUENT FLOWS BACK INTO THE PUMP CHAMBER. A CHECK VALVE WITH A WEEP HOLE SHALL BE PROVIDED. FORCE MAIN SHALL BE PROPERLY SUPPORTED AND USE OF THRUST BLOCKS AT SHARP BENDS SHALL BE UTILIZED.
15. ALL STONE AGGREGATE FOR THE LEACHING SYSTEM SHALL BE BROKEN STONE MEETING THE DEPARTMENT OF TRANSPORTATION FORM 814 SPECIFICATION M.01.01 FOR NO. 4 STONE. STONE AGGREGATE SHALL BE FREE OF SILT, DIRT OR DEBRIS AND SHALL SHOW A LOSS OF ABRASION OF NOT MORE THAN 50% USING AASHTO METHOD T-96.
16. CLEAR LEACHING AREA OF TREES AND SHRUBS BY CUTTING VEGETATION FLUSH WITH EXISTING GRADE. STUMPS SHALL BE REMOVED AND DISPOSED OF PROPERLY. REMOVE TOPSOIL AND SCARIFY GROUND SURFACE WITH BUCKET TEETH OR HARROW TO A DEPTH OF 6" (MIN) BEFORE PLACING SELECT BACKFILL MATERIAL. PROTECT THE PREPARED SURFACE FROM MACHINE OR VEHICULAR TRAFFIC.
17. REMOVE ALL ROCKS OF 18" OR LARGER BEFORE THE INSTALLATION OF THE SEPTIC LEACHING TRENCHES. THE AREA WHERE THE ROCKS HAVE BEEN REMOVED SELECT FILL IS TO BE PLACED AND COMPACTED. FINISH GRADE OF THE PROPOSED SEPTIC SYSTEM AREA WITH SELECT BACKFILL MATERIAL, IF REQUIRED, TO A DEPTH AND SLOPE AS SHOWN ON THE SITE PROFILE.
18. SELECT BACKFILL MATERIAL SHALL BE A CLEAN, BANK-RUN SAND OR GRAVEL FILL WITH NO MORE THAN 5% (PREFERABLY 2%) FINES PASSING A NUMBER 200 SIEVE. IT SHALL HAVE A PERCOLATION RATE EQUAL TO OR FASTER THAN THE UNDERLYING NATURALLY OCCURRING SOIL. GRADATION TO BE AS FOLLOWS:

SIEVE SIZE:	#4	#10	#40	#100	#200
% PASSING:	100	70-100	10-50	0-5	0-2.5

THE CONTRACTOR IS TO PROVIDE A COPY OF THE SIEVE ANALYSIS FROM A CERTIFIED TESTING LAB, AS WELL AS A SAMPLE OF THE MATERIAL TO THE ENGINEER OF RECORD AND SANITARIAN. THE SIEVE ANALYSIS SHALL HAVE A CURRENT DATE AND JOB LOCATION. THE ENGINEER OF RECORD AND THE SANITARIAN MUST APPROVE THE SELECT FILL PRIOR TO ITS PLACEMENT.
NOTE: PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10%, AND THE #200 SIEVE DOES NOT EXCEED 5%.

19. THE RESPONSIBILITY FOR THE PREPARATION OF A LEACHING AREA UTILIZING "SELECT MATERIAL" IS THAT OF THE LICENSED INSTALLER. THE INSTALLER SHALL TAKE THE NECESSARY STEPS TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVER COMPACTION AND SILTATION ONCE EXPOSED.
20. SELECT FILL SHALL BE PERCED IN PLACE AND APPROVED BY THE ENGINEER.
21. NON-SELECT FILL SHALL BE A CLEAN LOAM OR BETTER FREE OF ORGANIC MATTER.
22. GRAVEL FILL TO BE DUMPED AT THE EDGE OF PREPARED LEACHING AREA AND PUSHED ONTO HARROWED SURFACE WITH TRACK MACHINE IN 12" (MAX) LIFTS. GRAVEL TO BE COMPACTED TO 90% – 95% PROCTOR DENSITY – MODIFIED OPTIMUM DENSITY ASTM 1557 METHOD "C".
23. BERM MATERIAL SHALL BE PLACED AS DIMENSIONED ON PLAN. THIS MATERIAL SHALL CONSIST OF CLEAN, SANDY LOAM, FREE OF LARGE STONES AND DEBRIS THAT MAY CREATE LARGE VOIDS, AND BE RATED AT ONE INCH IN 15 TO 25 MINUTE PERCOLATION. THE MATERIAL EXCAVATED FROM TRENCHES CAN BE USED AS LONG AS IT MEETS THIS SPECIFICATION. USE GRASS OR PLANTINGS TO STABILIZE EMBANKMENT.
24. CONTRACTOR TO NOTIFY ENGINEER AND HEALTH DEPARTMENT WITHIN 24 HOURS BEFORE COMMENCING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE INSTALLER TO KEEP BOTH THE ENGINEER OF RECORD AND THE TOWN OF DARIEN HEALTH DEPARTMENT INFORMED OF CONSTRUCTION PROGRESS. ENGINEER SHALL ALSO BE NOTIFIED AT LEAST ONCE DURING CONSTRUCTION AND FOR FINAL INSPECTION.
25. UNDERGROUND SOIL INFORMATION HAS BEEN OBTAINED FROM DEEP TEST HOLES WITHIN THE AREA OF THE PROPOSED SYSTEM AS SHOWN OF THE PLAN. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE DARIEN HEALTH DEPARTMENT, AND THE ENGINEER OF RECORD, SHOULD CONDITIONS ENCOUNTERED DIFFER FROM THOSE STATED ON THIS PLAN. THIS INCLUDES DEPTH OF LEDGE, AND OBSERVED GROUNDWATER DEPTH.
26. DURING CONSTRUCTION, ANY DEVIATION FROM THIS PLAN MUST BE APPROVED BY THE DARIEN HEALTH DEPARTMENT, AND THE ENGINEER OF RECORD.
27. INSTALLATION OF THIS SYSTEM IS UNDER THE JURISDICTION OF THE TOWN OF DARIEN SANITARIAN. ALL PARTS OF THE PROPOSED SUB-SURFACE SEWAGE DISPOSAL SYSTEM SHALL BE A MINIMUM OF 25 FEET FROM THE PROPOSED RESIDENCE AND A MINIMUM OF 15 FEET FROM ALL PROPERTY LINES, 25 FEET FROM THE DOWN GRADIENT PROPERTY LINE AND SHALL CONFORM TO ALL APPLICABLE LOCAL AND/OR STATE CODES. WHEN ARTESIAN WELL WATER SUPPLY ARE TO BE UTILIZED. NO WATER LINE SHALL BE WITHIN 10 FT. OF ANY PORTION OF THE SEPTIC SYSTEM.
28. EROSION AND SEDIMENT CONTROL MEASURES SPECIFIED IN THE PLAN SHALL BE MAINTAINED UNTIL DISTURBED AREAS HAVE BEEN STABILIZED.
29. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED. THE DESIGN OF THIS SEWAGE DISPOSAL SYSTEM IS IN CONFORMANCE WITH STATE AND LOCAL SANITARY CODE REQUIREMENTS AS WELL AS ACCEPTED PROFESSIONAL DESIGN PRINCIPLES. IT IS IN NO WAY A GUARANTEE AGAINST FAILURE DUE TO INDETERMINABLE FUTURE CIRCUMSTANCES INVOLVING INSTALLATION, SITE GRADING, WATER USAGE AND MAINTENANCE OF THE SYSTEM OR VARIATIONS IN SOIL OR GROUND WATER CONDITIONS BEYOND THE SCOPE OF NORMAL FIELD INVESTIGATION.
30. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS TO THE DARIEN HEALTH DEPARTMENT AND THE ENGINEER. THE RECORD DRAWINGS SHALL GIVE TWO (2) TIES TO ALL DISTRIBUTION BOXES, LOCATION OF TANKS AND LEACHING FIELD AND INVERT ELEVATIONS
31. RECORD DIMENSIONS ARE TO BE SUBMITTED BY THE ENGINEER TO THE DEPARTMENT OF HEALTH UPON COMPLETION, INSPECTION AND FIELD APPROVAL OF THE SYSTEM
32. THE CONTRACTOR IS TO VERIFY TOPOGRAPHIC INFORMATION AND LOCATIONS OF ALL UTILITIES PRIOR TO INSTALLATION OF THE SEPTIC SYSTEM.
33. THE CONTRACTOR IS TO CONTACT 'CALL BEFORE YOU DIG' TO HAVE ALL UTILITY LINES CLEARLY MARKED PRIOR TO ANY EXCAVATION.
34. WATER CONSERVATION DEVICES ARE RECOMMENDED TO BE INSTALLED ON ALL FAUCETS, SHOWERHEADS AND TOILETS.
35. THIS SYSTEM IS NOT DESIGNED FOR THE DISCHARGES FROM GARBAGE DISPOSALS, A LARGE STYLE TUB OR WATER TREATMENT DEVICES. IF A GARBAGE DISPOSAL OR A LARGE STYLE TUB OF 100 TO 200 GALLONS IS USED, THEN THE SEPTIC TANK CAPACITY SHALL BE INCREASE BY 250 GALLONS FOR EACH.
36. THERE SHALL BE NO ROOF LEADERS, SUMP PUMPS, FOUNDATION DRAINS, YARD DRAINS OR OTHER CONTINUOUS SOURCE OF WATER THAT DISCHARGES INTO THE SUBSURFACE DISPOSAL SYSTEM. FINAL GRADE OF THE SITE AND SEPTIC AREA TO PREVENT SURFACE DRAINAGE FROM ENTERING THE SYSTEM.
37. THE LEACHING AREA SHALL BE LOCATED BY FIELD STAKES OR MARKERS, PRIOR TO ANY SITE WORK, IN ORDER TO CLEARLY IDENTIFY THE LEACHING AREA AND TO PROTECT IT FROM ALL CONSTRUCTION TRAFFIC & POTENTIAL DAMAGE.
38. A SCARIFICATION INSPECTION BY THE HEALTH DEPARTMENT SANITARIAN, DESIGN ENGINEER, AND THE LICENSED INSTALLER OF RECORD SHALL BE CONDUCTED PRIOR TO THE PLACEMENT OF ANY "SELECT MATERIAL" OR FILL IN THE PRIMARY LEACHING AREA. IF THERE ARE ANY PROBLEMS NOTED DURING INSPECTION (BY THE SANITARIAN, ENGINEER, OR INSTALLER) FURTHER TESTING AND/OR PERMIT REVOCATION MAY TAKE PLACE IN ORDER TO CONFIRM CONFORMANCE WITH THE PROPOSED DESIGN CRITERIA AND PROTECTION OF THE SSDS.

IMPORTANT NOTE:
Additional underground utilities may exist
Prior to any excavation or construction,
Contact:
"CALL BEFORE YOU DIG"
1-800-922-4455

NO.	DATE	REV. BY	DESCRIPTION
1	02/26/20	SDI	FOR SUBMISSION TO EPC, HEALTH DEPARTMENT

ISSUE / REVISION

DiVesta
Civil Engineering Associates, Inc.
51 Painter Ridge Road
Roxbury, Connecticut 06783
Phone 860-354-4226 Fax 860-354-4226
E- mail dceainc@charter.net

PROJECT TITLE:
PALLADIAN BUILDERS
49 SUNSWYCK ROAD
DARIEN, CONNECTICUT
NOTES

STAMP:
STATE OF CONNECTICUT
DOUGLAS P. DIVESTA
28837
LICENSED
PROFESSIONAL ENGINEER
NOT VALID WITHOUT ORIGINAL SEAL AND SIGNATURE

DRAWING NO.	
20-015	
DRAWN BY: SDI	APPROVED BY: DD
SCALE: AS NOTED	DRAWING DATE: 02/26/20
SHEET NO. 3 OF 3	