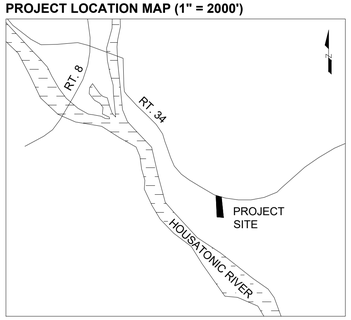
PROJECT LOCATION MAP (1" = 2000')



SITE GENERAL NOTES:
1. THE LOCATIONS AND DEPTHS OF ALL EXISTING UNDERGROUND UTILITIES ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. SEE ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS.
3. NO PART OF THE LOT IS UNDER FLOODPLAIN.
4. WATER SERVICE PROVIDED BY PUBLIC WATER.
5. SANITARY SEWER SERVICE PROVIDED BY PUBLIC SANITARY SEWER.
6. THE OWNER/CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THE EXISTING IMPROVEMENTS, AND PROPOSED CONSTRUCTION WITH REFERENCE TO THE PROPERTY LINE AND SETBACK REQUIREMENTS.

SITE GRADING NOTES:
1. THE EXCESS DIRT SHALL BE TEMPORARILY STOCKPILED WITHIN THE LOCATION SHOWN ON THE PLAN, AND IT SHALL BE PROTECTED BY THE PROPOSED E&S MEASURES.
2. ALL EXCESS DIRT FROM GRADING / EXCAVATING SHALL BE SPREAD UNIFORMLY IN THE REAR OF THE LOT MAINTAINING A MINIMUM OF 5% GRADE AWAY FROM THE STRUCTURE AND A MAXIMUM 3H:1V SLOPE.

EXISTING UTILITY NOTE:
1. THE CONTRACTOR SHALL NOTIFY CALL BEFORE YOU DIG AND ALLOW ADEQUATE TIME FOR MARKING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND AND OVERHEAD UTILITIES. IF, DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR ENCOUNTERS UTILITIES OTHER THAN THOSE INDICATED BY CALL BEFORE YOU DIG AND MEMBER UTILITY COMPANIES, HE (SHE) SHALL IMMEDIATELY NOTIFY THE OWNER AND TAKE NECESSARY AND APPROPRIATE STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.
3. THE SITE CONTRACTORS/DEVELOPERS MUST VERIFY THE LOCATIONS AND ELEVATIONS OF ALL PUBLIC AND PRIVATE UTILITIES AND STRUCTURES AFFECTING THE SITE PRIOR TO THE START OF THE CONSTRUCTION. ANY CONFLICT WITH THE PLAN MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR RESOLUTION. FAILURE TO VERIFY EXISTING UTILITIES MAY RESULT IN COSTLY DELAYS AND REMEDIAL MEASURES.

TOPOGRAPHY NOTE: TOPOGRAPHIC INFORMATION SOURCE: "CAPITOL REGION COUNCIL OF GOVERNMENTS" 2016. AERIAL IMAGERY RETRIEVED FROM HTTP://CTECO.UCONN.EDU/DATA/FLIGHT2016

SURVEY PERFORMED BY RCL THOMPSON LLC 1/5/2020.

SANITARY NOTES:
1. THE WATER LATERAL CONNECTIONS TO THE PUBLIC MAIN REMAIN THE SAME.
2. THE SEWER LATERAL CONNECTION TO PUBLIC SANITARY SEWER REMAINS THE SAME.

CONSTRUCTION ENTRANCE NOTE:
1. DEPENDING ON ACTUAL SITE CONDITIONS AND LIMITATIONS, IN THE FIELD THE SITE INSPECTOR MAY ALLOW AN EXISTING DRIVEWAY TO BE USED AS A CONSTRUCTION ENTRANCE, OR THE LENGTH OF THE STANDARD CONSTRUCTION TO BE MODIFIED.
2. THE EXISTING ASPHALT DRIVEWAY WILL BE USED AS THE CONSTRUCTION ENTRANCE FOR DEMOLITION AND CONSTRUCTION.
3. WATER SOURCE WILL BE PROVIDED TO CLEAN DIRT AND DEBRIS FROM CONSTRUCTION VEHICLES BEFORE ENTERING INTO THE PUBLIC ROAD.

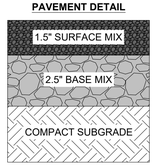
STOCKPILE NARRATIVE:
1. THE SOIL FROM EXCAVATING FOUNDATION WILL BE STOCKPILED IN THE AREA AS SHOWN ON THIS SITE PLAN.
2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. ALL SOIL STOCKPILES, IF ANY, SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS AFTER GRADING.
3. THE HEIGHT OF THE STOCKPILES MATERIAL SHALL NOT EXCEED FOUR (4) FT.
4. THE MAXIMUM SLOPE OF THE STOCKPILE SHALL NOT BE GREATER THAN 3H: 1V.
5. THE STOCKPILE MATERIALS SHALL BE PROTECTED FROM DRAINING INTO ADJOINING NON DISTURBED AREA BY SILT FENCE OR ANY OTHER SEDIMENT CONTROL DEVICES. EXCESS OR UNUSED STOCKPILE MATERIALS (IF ANY) SHALL BE GRADED INTO THE REAR YARD.

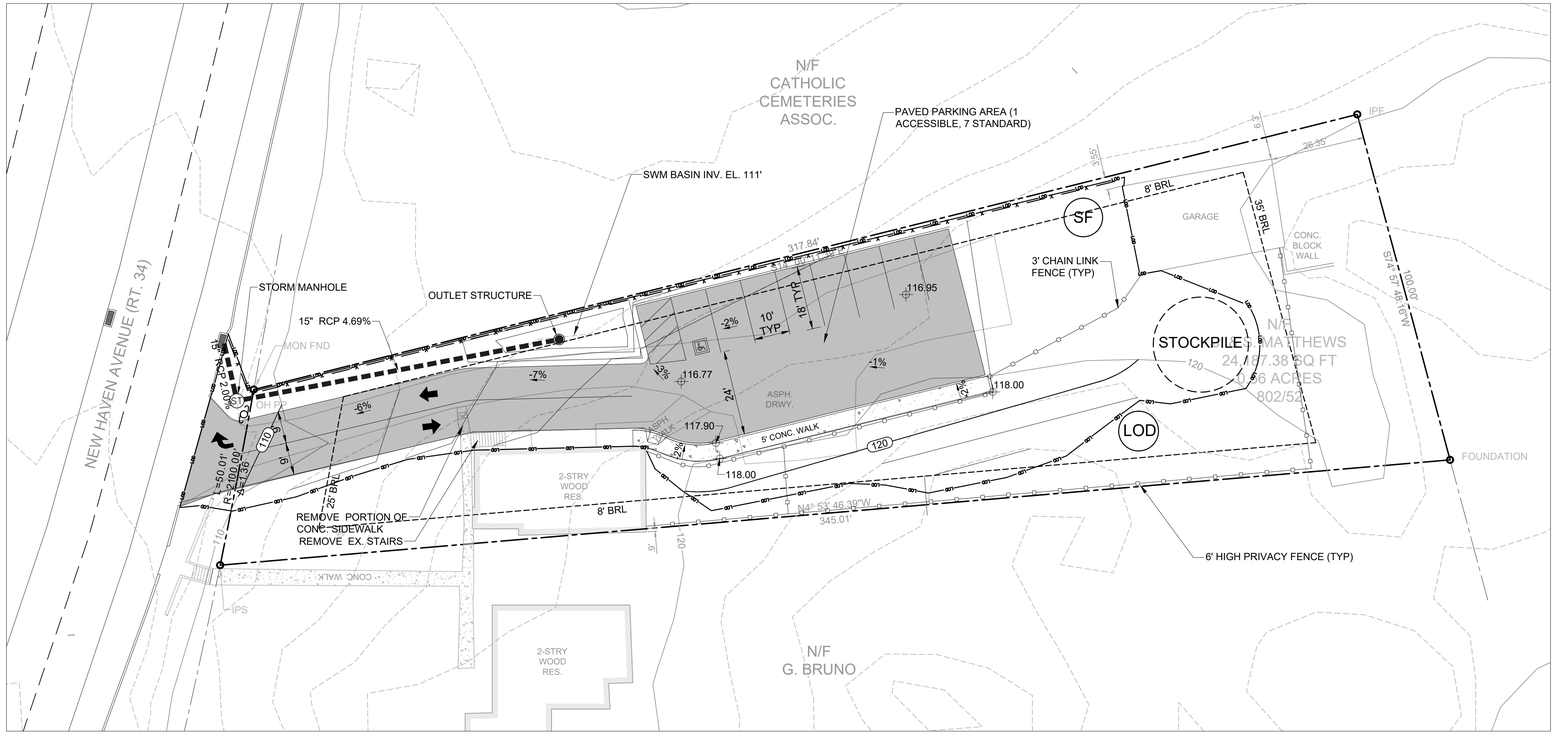
PARKING SPACE REQUIREMENTS:
FROM INSTITUTE OF TRAFFIC ENGINEERS (ITE): 2.45 SPACES PER 1000 FEET OF GROSS SQUARE FOOTAGE

3200 GROSS SQUARE FEET
3200/1000 = 3.2 X 2.45 SPACES PER 1000 SF = 7.84

TOTAL = 7.84 **(ROUND UP TO 8 SPACES)**

PAVEMENT DETAIL





NAD 83 CT SPC

0 10 20 40 Feet
1:240

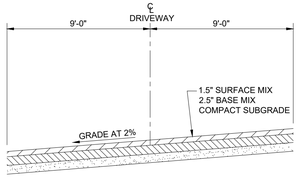
LEGEND:

ASPH -	ASPHALT
BRL -	BUILDING RESTRICTION LINE
BLDG -	BUILDING
CONC -	CONCRETE
ESMT -	EASEMENT
MON -	MONUMENT
IPS -	IRON PIPE OR ROD SET
IPF -	IRON PIPE OR ROD FOUND
ROW -	RIGHT OF WAY
SF -	SQUARE FEET

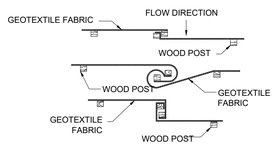
- PROPERTY LINE
- BRL
- EASEMENT
- ELECTRICAL LINE
- 4" PVC — SANITARY SEWER PIPE
- 190 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 190 — PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STONE WALL
- ROOF DRAIN
- FOUNDATION DRAIN
- CONCRETE
- COVERED CONCRETE
- CATCH BASIN
- ELECTRIC BOX
- POWER POLE
- SANITARY MANHOLE
- STORM MANHOLE
- TRAVERSE POINT
- CONSTRUCTION ENTRANCE
- STOCKPILE LOCATION
- LIMIT OF DISTURBANCE
- SILT FENCE
- TO BE DEMOLISHED

PARKING AREA TYPICAL SECTION
N.T.S.

TYPICAL SECTION



DRIVEWAY TYPICAL SECTION
N.T.S.



SILT FENCE DETAILS
N.T.S.

IMPERVIOUS AREA COMPUTATION (SQ.FT)

Description	Pre-Dev	Remain	Remove	Add	Post-Dev
House	1,135	1,135	-	-	1,135
Asphalt Driveway / Parking	4,263	-	4,263	8165	8,165
Garage	1,046	1,046	-	-	1,046
External Stairs	76	-	76	-	-
Covered Porch / Patio	89	-	89	-	-
Sidewalk	101	80	21	941	1,021
TOTAL IMPERVIOUS AREA (SQ.FT)	6,710				11,367
PERVIOUS AREA/GRASS AREA (SQ.FT)	17,477 SF				12,820 SF
TOTAL SITE AREA =	24,187 SF				24,187 SF

INCREASE IN IMPERVIOUS AREA = 4,657 SF
TOTAL % OF IMPERVIOUS AREA = (11367 X 100 / 24,187) 47.0% >18% MAX, BMP REQUIRED

"C" FACTORS CALCULATION

A. PRE-DEVELOPMENT
(6710 x 0.9 + 17477.38 x .25) / 24,187 = 0.43

b. POST-DEVELOPMENT
(11367 x 0.9 + 12820.38 x 0.25) / 24,187 = 0.56

RUNOFF COMPUTATION (Q=CIA)

A. PRE-DEVELOPMENT
(5 MIN Tc) Q2 = (0.43x4.97x0.56) = 1.19 CFS
Q10 = (0.43x7.51x0.56) = 1.79 CFS

B. POST-DEVELOPMENT
(5 MIN Tc) Q2 = (0.56x4.97x0.56) = 1.55 CFS
Q10 = (0.56x7.51x0.56) = 2.34 CFS

C. CHANGE IN RUNOFF
Q2 = 1.55 - 1.19 = **0.36** CFS
Q10 = 2.34 - 1.79 = **0.55** CFS

REQUIRED INTERSECTION SIGHT DISTANCE

	REQUIRED ISD (ft)
DESIGN SPEED	
45 MPH	**500**
TURNING RIGHT ONTO MAJOR ROAD	
SOURCE: CTDOT HIGHWAY DESIGN MANUAL	

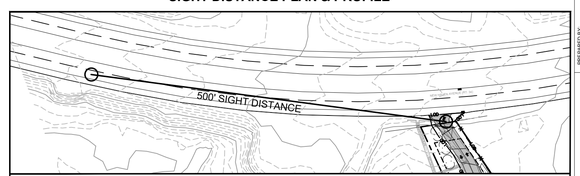
PROJECT DATA

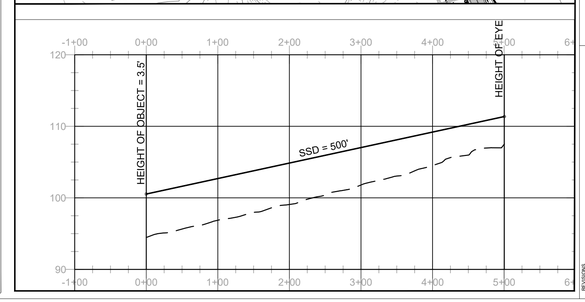
TOTAL AREA:	0.56 AC
EXISTING ZONE:	R-5
PROPOSED USE:	DAY CARE / PRE-SCHOOL
NUMBER OF LOTS:	1 EXISTING

ZONING DATA

	REQUIRED / ALLOWED	PROVIDED
MIN. LOT AREA	7,500 SF	24,187.38
MIN. LOT WIDTH AT FRONT BUILDING LINE	75'	75'
PRINCIPAL BUILDING SETBACKS		
MIN. FRONT YARD SETBACK	25'	25'
MIN. SIDE YARD SETBACK	8'	8'
MIN. REAR YARD SETBACK	35'	35'

SIGHT DISTANCE PLAN & PROFILE





SHEET 01 OF 02

PREPARED FOR: MARTIN & SILVIA ARNOSO

TITLE: SITE PLAN
LUNA LIMON DAYCARE
189 NEW HAVEN AVENUE
DERBY, CT 06418

DRAWING SCALE: 1" = 20'

DATE: June 14, 2021

PREPARED BY:
RCL THOMPSON LLC
19 PEPPERBUSH DR.
CLINTON, CT 06413
860-941-7721

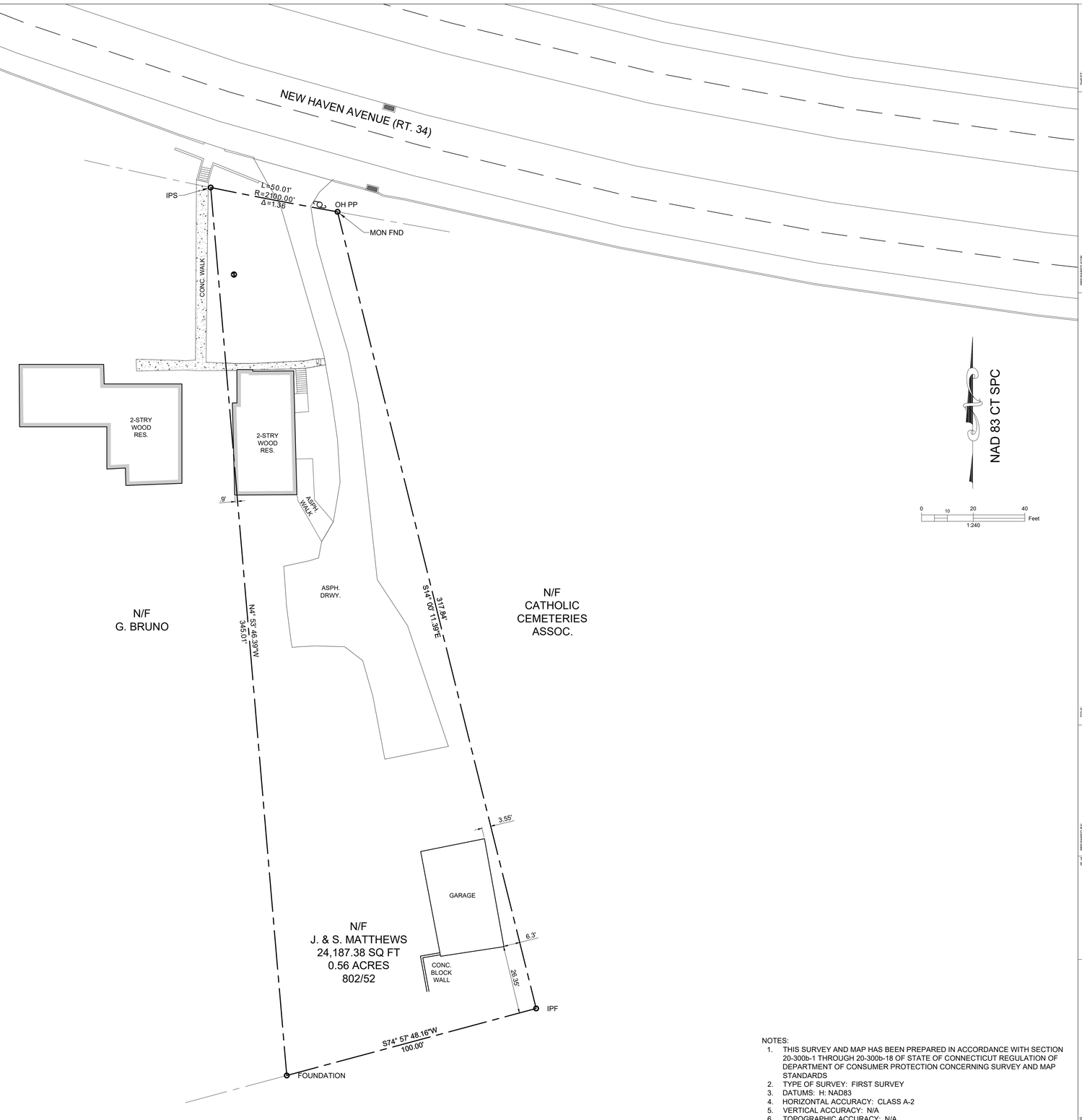
STATE OF CONNECTICUT · RYAN C. THOMPSON · No. 25817 · LICENSED PROFESSIONAL ENGINEER

REVISIONS

C:\Users\ryant\Dropbox\RCL Thompson Documents\Projects 2021\21-04 189 New Haven\189 NEW HAVEN AVE MASTER DESIGN FILE.dwg

LEGEND:

ASPH -	ASPHALT
BRL -	BUILDING RESTRICTION LINE
BLDG -	BUILDING
CONC -	CONCRETE
ESMT -	EASEMENT
DWY -	DRIVEWAY
MON -	MONUMENT
IPS -	IRON PIPE OR ROD SET
IPF -	IRON PIPE OR ROD FOUND
PKS -	PK NAIL SET
PKF -	PK NAIL FOUND
POB -	POINT OF BEGINNING
POC -	POINT OF COMMENCING
PS -	PARKING SPACE(S)
ROW -	RIGHT OF WAY
SF -	SQUARE FEET
UE -	UTILITY EASEMENT
N 90° 00' 00" E	PROPERTY LINE
	BRL
	EASEMENT
	TREELINE
	FENCE
	WETLAND LIMITS
	ELECTRICAL LINE
	TEL / COMM.
	GAS LINE
15" RCP	STORM SEWER PIPE
4" PVC	SANITARY SEWER PIPE
6" DIP	WATER MAIN
190	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
1240	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	STONE WALL
	ROOF DRAIN
	FOUNDATION DRAIN
	CONCRETE
	COVERED CONCRETE
	GUY WIRE
	CATCH BASIN
	CABLE BOX
	ELECTRIC BOX
	ELECTRIC MANHOLE
	FIRE HYDRANT
	FIBER OPTIC MARKER
	FLAG POLE
	GAS METER
	GAS VALVE
	CURB INLET
	LIGHT POLE
	MANHOLE
	MONITORING WELL
	PIPELINE MARKER
"TD"	POWER POLE
	SERVICE POLE
	SANITARY MANHOLE
	STORM MANHOLE
	TELEPHONE PEDESTAL
	TRANSFORMER
	TRAFFIC SIGNAL BOX
	TRAFFIC SIGNAL POLE
	UNDERGROUND CABLE MARKER
	WATER WELL
	WATER METER
WV	WATER VALVE
	BENCH MARK
	TRAVERSE POINT
CE	CONSTRUCTION ENTRANCE
STOCKPILE	STOCKPILE LOCATION
LOD	LIMIT OF DISTURBANCE
SSF	SUPER SILT FENCE
SF	SILT FENCE



NAD 83 CT SPC

0 10 20 40 Feet

1:240

NOTES:
1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 20-300b-1 THROUGH 20-300b-18 OF STATE OF CONNECTICUT REGULATION OF DEPARTMENT OF CONSUMER PROTECTION CONCERNING SURVEY AND MAP STANDARDS
2. TYPE OF SURVEY: FIRST SURVEY
3. DATUMS: H: NAD83
4. HORIZONTAL ACCURACY: CLASS A-2
5. VERTICAL ACCURACY: N/A
6. TOPOGRAPHIC ACCURACY: N/A
7. INTENT: PROPERTY SURVEY

SHEET 2 OF 5

PREPARED FOR:
MARTIN & SILVIA ARNOSO

TITLE:
PROPERTY SURVEY
PROPOSED LUNA LIMON DAYCARE
189 NEW HAVEN AVENUE
DERBY CT 06418

DRAWING SCALE: **1" = 20'**

DATE: **June 14, 2021**

PREPARED BY:

RCL THOMPSON LLC
19 PEPPERBUSH DR.
CLINTON, CT 06413
860-941-7721

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

STATE OF CONNECTICUT RYAN E. THOMPSON No. 29817 LICENSED LAND SURVEYOR

RYAN E. THOMPSON PEL.29817

REVISIONS

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Summary for Pond SWM 1: SWM BASIN 1

Inflow Area = 0.555 ac, 0.00% Impervious, Inflow Depth = 0.23" for 2-yr event
Inflow = 1.50 cfs @ 0.08 hrs, Volume= 0.011 af
Outflow = 0.29 cfs @ 0.15 hrs, Volume= 0.011 af, Atten= 81%, Lag= 4.1 min
Discarded = 0.03 cfs @ 0.15 hrs, Volume= 0.001 af
Primary = 0.26 cfs @ 0.15 hrs, Volume= 0.009 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs
Peak Elev= 112.34' @ 0.15 hrs Surf.Area= 407 sf Storage= 358 cf

Plug-Flow detention time= 13.9 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 14.0 min (19.0 - 5.0)

Volume	Invert	Avail.Storage	Storage Description
#1	111.00'	672 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
111.00	127	0	0
113.00	545	672	672

Device	Routing	Invert	Outlet Devices
#1	Primary	111.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Secondary	112.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	111.00'	**3.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 0.15 hrs HW=112.34' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.26 cfs @ 0.15 hrs HW=112.34' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.26 cfs @ 5.31 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=111.00' (Free Discharge)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Hydrograph for Pond SWM 1: SWM BASIN 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	**0.00**	0	111.00	0.00	0.00	0.00	**0.00**
0.10	**1.25**	**266**	**112.11**	**0.26**	**0.03**	**0.23**	0.00
0.20	0.00	**317**	**112.24**	**0.28**	**0.03**	**0.25**	0.00
0.30	0.00	224	111.98	0.24	0.02	0.22	0.00
0.40	0.00	144	111.71	0.20	0.02	0.18	0.00
0.50	0.00	80	111.46	0.15	0.02	0.14	0.00
0.60	0.00	36	111.24	0.09	0.01	0.08	0.00
0.70	0.00	15	111.11	0.03	0.01	0.02	0.00
0.80	0.00	7	111.05	0.02	0.01	0.01	0.00
0.90	0.00	2	111.02	0.01	0.01	0.00	0.00
1.00	0.00	1	111.00	0.00	0.00	0.00	0.00
1.10	0.00	0	111.00	0.00	0.00	0.00	0.00
1.20	0.00	0	111.00	0.00	0.00	0.00	0.00
1.30	0.00	0	111.00	0.00	0.00	0.00	0.00
1.40	0.00	0	111.00	0.00	0.00	0.00	0.00
1.50	0.00	0	111.00	0.00	0.00	0.00	0.00
1.60	0.00	0	111.00	0.00	0.00	0.00	0.00
1.70	0.00	0	111.00	0.00	0.00	0.00	0.00
1.80	0.00	0	111.00	0.00	0.00	0.00	0.00
1.90	0.00	0	111.00	0.00	0.00	0.00	0.00
2.00	0.00	0	111.00	0.00	0.00	0.00	0.00
2.10	0.00	0	111.00	0.00	0.00	0.00	0.00
2.20	0.00	0	111.00	0.00	0.00	0.00	0.00
2.30	0.00	0	111.00	0.00	0.00	0.00	0.00
2.40	0.00	0	111.00	0.00	0.00	0.00	0.00
2.50	0.00	0	111.00	0.00	0.00	0.00	0.00
2.60	0.00	0	111.00	0.00	0.00	0.00	0.00
2.70	0.00	0	111.00	0.00	0.00	0.00	0.00
2.80	0.00	0	111.00	0.00	0.00	0.00	0.00
2.90	0.00	0	111.00	0.00	0.00	0.00	0.00
3.00	0.00	0	111.00	0.00	0.00	0.00	0.00
3.10	0.00	0	111.00	0.00	0.00	0.00	0.00
3.20	0.00	0	111.00	0.00	0.00	0.00	0.00
3.30	0.00	0	111.00	0.00	0.00	0.00	0.00
3.40	0.00	0	111.00	0.00	0.00	0.00	0.00
3.50	0.00	0	111.00	0.00	0.00	0.00	0.00
3.60	0.00	0	111.00	0.00	0.00	0.00	0.00
3.70	0.00	0	111.00	0.00	0.00	0.00	0.00
3.80	0.00	0	111.00	0.00	0.00	0.00	0.00
3.90	0.00	0	111.00	0.00	0.00	0.00	0.00
4.00	0.00	0	111.00	0.00	0.00	0.00	0.00

Stage-Discharge for Pond SWM 1: SWM BASIN 1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
111.00	0.00	0.00	0.00	0.00
111.05	0.01	0.01	0.00	0.00
111.10	0.03	0.01	0.02	0.00
111.15	0.05	0.01	0.04	0.00
111.20	0.08	0.01	0.06	0.00
111.25	0.10	0.01	0.08	0.00
111.30	0.11	0.01	0.10	0.00
111.35	0.13	0.01	0.11	0.00
111.40	0.14	0.01	0.12	0.00
111.45	0.15	0.02	0.13	0.00
111.50	0.16	0.02	0.14	0.00
111.55	0.17	0.02	0.15	0.00
111.60	0.18	0.02	0.16	0.00
111.65	0.19	0.02	0.17	0.00
111.70	0.20	0.02	0.18	0.00
111.75	0.21	0.02	0.19	0.00
111.80	0.21	0.02	0.19	0.00
111.85	0.22	0.02	0.20	0.00
111.90	0.23	0.02	0.21	0.00
111.95	0.24	0.02	0.21	0.00
112.00	0.24	0.02	0.22	0.00
112.05	0.25	0.02	0.23	0.00
112.10	0.26	0.02	0.23	0.00
112.15	0.26	0.03	0.24	0.00
112.20	0.27	0.03	0.25	0.00
112.25	0.28	0.03	0.25	0.00
112.30	0.28	0.03	0.26	0.00
112.35	0.29	0.03	0.26	0.00
112.40	0.30	0.03	0.27	0.00
112.45	0.30	0.03	0.27	0.00
112.50	0.31	0.03	0.28	0.00
112.55	0.66	0.03	0.28	0.34
112.60	1.29	0.03	0.29	0.97
112.65	2.12	0.03	0.29	1.79
112.70	3.09	0.03	0.30	2.76
112.75	4.19	0.03	0.30	3.85
112.80	5.40	0.03	0.31	5.06
112.85	6.73	0.04	0.31	6.38
112.90	8.15	0.04	0.31	7.80
112.95	9.66	0.04	0.32	9.30
113.00	**11.26**	**0.04**	**0.32**	**10.90**

Summary for Pond SWM 1: SWM BASIN 1

Inflow Area = 0.555 ac, 0.00% Impervious, Inflow Depth = 0.35" for 10-yr event
Inflow = 2.27 cfs @ 0.08 hrs, Volume= 0.016 af
Outflow = 1.33 cfs @ 0.12 hrs, Volume= 0.016 af, Atten= 42%, Lag= 2.4 min
Discarded = 0.03 cfs @ 0.12 hrs, Volume= 0.002 af
Primary = 0.29 cfs @ 0.12 hrs, Volume= 0.011 af
Secondary = 1.01 cfs @ 0.12 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs
Peak Elev= 112.60' @ 0.12 hrs Surf.Area= 462 sf Storage= 472 cf

Plug-Flow detention time= 12.8 min calculated for 0.016 af (100% of inflow)
Center-of-Mass det. time= 12.9 min (17.9 - 5.0)

Volume	Invert	Avail.Storage	Storage Description
#1	111.00'	672 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
111.00	127	0	0
113.00	545	672	672

Device	Routing	Invert	Outlet Devices
#1	Primary	111.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Secondary	112.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	111.00'	**3.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 0.12 hrs HW=112.60' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.29 cfs @ 0.12 hrs HW=112.60' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.29 cfs @ 5.85 fps)

Secondary OutFlow Max=0.96 cfs @ 0.12 hrs HW=112.60' (Free Discharge)
└**2=Orifice/Grate** (Weir Controls 0.96 cfs @ 1.03 fps)

Hydrograph for Pond SWM 1: SWM BASIN 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	**0.00**	0	111.00	0.00	0.00	0.00	0.00
0.10	**1.88**	**419**	**112.49**	**0.31**	**0.03**	**0.28**	**0.00**
0.20	0.00	**395**	**112.43**	**0.30**	**0.03**	**0.27**	**0.00**
0.30	0.00	293	112.17	0.23	0.03	0.20	0.00
0.40	0.00	203	111.91	0.23	0.02	0.21	0.00
0.50	0.00	127	111.65	0.19	0.02	0.17	0.00
0.60	0.00	68	111.40	0.14	0.01	0.12	0.00
0.70	0.00	29	111.20	0.07	0.01	0.06	0.00
0.80	0.00	12	111.09	0.03	0.01	0.02	0.00
0.90	0.00	6	111.04	0.01	0.01	0.00	0.00
1.00	0.00	2	111.01	0.01	0.01	0.00	0.00
1.10	0.00	0	111.00	0.00	0.00	0.00	0.00
1.20	0.00	0	111.00	0.00	0.00	0.00	0.00
1.30	0.00	0	111.00	0.00	0.00	0.00	0.00
1.40	0.00	0	111.00	0.00	0.00	0.00	0.00
1.50	0.00	0	111.00	0.00	0.00	0.00	0.00
1.60	0.00	0	111.00	0.00	0.00	0.00	0.00
1.70	0.00	0	111.00	0.00	0.00	0.00	0.00
1.80	0.00	0	111.00	0.00	0.00	0.00	0.00
1.90	0.00	0	111.00	0.00	0.00	0.00	0.00
2.00	0.00	0	111.00	0.00	0.00	0.00	0.00
2.10	0.00	0	111.00	0.00	0.00	0.00	0.00
2.20	0.00	0	111.00	0.00	0.00	0.00	0.00
2.30	0.00	0	111.00	0.00	0.00	0.00	0.00
2.40	0.00	0	111.00	0.00	0.00	0.00	0.00
2.50	0.00	0	111.00	0.00	0.00	0.00	0.00
2.60	0.00	0	111.00	0.00	0.00	0.00	0.00
2.70	0.00	0	111.00	0.00	0.00	0.00	0.00
2.80	0.00	0	111.00	0.00	0.00	0.00	0.00
2.90	0.00	0	111.00	0.00	0.00	0.00	0.00
3.00	0.00	0	111.00	0.00	0.00	0.00	0.00
3.10	0.00	0	111.00	0.00	0.00	0.00	0.00
3.20	0.00	0	111.00	0.00	0.00	0.00	0.00
3.30	0.00	0	111.00	0.00	0.00	0.00	0.00
3.40	0.00	0	111.00	0.00	0.00	0.00	0.00
3.50	0.00	0	111.00	0.00	0.00	0.00	0.00
3.60	0.00	0	111.00	0.00	0.00	0.00	0.00
3.70	0.00	0	111.00	0.00	0.00	0.00	0.00
3.80	0.00	0	111.00	0.00	0.00	0.00	0.00
3.90	0.00	0	111.00	0.00	0.00	0.00	0.00
4.00	0.00	0	111.00	0.00	0.00	0.00	0.00

Stage-Discharge for Pond SWM 1: SWM BASIN 1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
111.00	0.00	0.00	0.00	0.00
111.05	0.01	0.01	0.01	0.00
111.10	0.03	0.01	0.02	0.00
111.15	0.05	0.01	0.04	0.00
111.20	0.08	0.01	0.06	0.00
111.25	0.10	0.01	0.08	0.00
111.30	0.11	0.01	0.10	0.00
111.35	0.13	0.01	0.11	0.00
111.40	0.14	0.01	0.12	0.00
111.45	0.15	0.02	0.13	0.00
111.50	0.16	0.02	0.14	0.00
111.55	0.17	0.02	0.15	0.00
111.60	0.18	0.02	0.16	0.00
111.65	0.19	0.02	0.17	0.00
111.70	0.20	0.02	0.18	0.00
111.75	0.21	0.02	0.19	0.00
111.80	0.21	0.02	0.19	0.00
111.85	0.22	0.02	0.20	0.00
111.90	0.23	0.02	0.21	0.00
111.95	0.24	0.02	0.21	0.00
112.00	0.24	0.02	0.22	0.00
112.05	0.25	0.02	0.23	0.00
112.10	0.26	0.02	0.23	0.00
112.15	0.26	0.03	0.24	0.00
112.20	0.27	0.03	0.25	0.00
112.25	0.28	0.03	0.25	0.00
112.30	0.28	0.03	0.26	0.00
112.35	0.29	0.03	0.26	0.00
112.40	0.30	0.03	0.27	0.00
112.45	0.30	0.03	0.27	0.00
112.50	0.31	0.03	0.28	0.00
112.55	0.66	0.03	0.28	0.34
112.60	1.29	0.03	0.29	0.97
112.65	2.12	0.03	0.29	1.79
112.70	3.09	0.03	0.30	2.76
112.75	4.19	0.03	0.30	3.85
112.80	5.40	0.03	0.31	5.06
112.85	6.73	0.04	0.31	6.38
112.90	8.15	0.04	0.31	7.80
112.95	9.66	0.04	0.32	9.30
113.00	**11.26**	**0.04**	**0.32**	**10.90**

Summary for Pond SWM 1: SWM BASIN 1

Inflow Area = 0.555 ac, 0.00% Impervious, Inflow Depth = 0.54" for 100-yr event
Inflow = 3.49 cfs @ 0.08 hrs, Volume= 0.025 af
Outflow = 3.06 cfs @ 0.10 hrs, Volume= 0.025 af, Atten= 12%, Lag= 1.1 min
Discarded = 0.03 cfs @ 0.10 hrs, Volume= 0.002 af
Primary = 0.30 cfs @ 0.10 hrs, Volume= 0.012 af
Secondary = 2.73 cfs @ 0.10 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs
Peak Elev= 112.70' @ 0.10 hrs Surf.Area= 482 sf Storage= 517 cf

Plug-Flow detention time= 8.9 min calculated for 0.025 af (100% of inflow)
Center-of-Mass det. time= 9.0 min (14.0 - 5.0)

Volume	Invert	Avail.Storage	Storage Description
#1	111.00'	672 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
111.00	127	0	0
113.00	545	672	672

Device	Routing	Invert	Outlet Devices
#1	Primary	111.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Secondary	112.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	111.00'	**3.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 0.10 hrs HW=112.70' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.30 cfs @ 0.10 hrs HW=112.70' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 0.30 cfs @ 6.04 fps)

Secondary OutFlow Max=2.72 cfs @ 0.10 hrs HW=112.70' (Free Discharge)
└**2=Orifice/Grate** (Weir Controls 2.72 cfs @ 1.46 fps)

Hydrograph for Pond SWM 1: SWM BASIN 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
0.00	**0.00**	0	111.00	0.00	0.00	0.00	0.00
0.10	**2.90**	**517**	**112.70**	**3.06**	**0.03**	**0.30**	**2.73**
0.20	0.00	400	112.44	0.30	0.03	0.27	0.00
0.30	0.00	298	112.19	0.27	0.03	0.24	0.00
0.40	0.00	207	111.92	0.23	0.02	0.21	0.00
0.50	0.00	130	111.66	0.19	0.02	0.17	0.00
0.60	0.00	70	111.41	0.14	0.01	0.13	0.00
0.70	0.00	30	111.20	0.08	0.01	0.07	0.00
0.80	0.00	13	111.09	0.03	0.01	0.02	0.00
0.90	0.00	6	111.04	0.01	0.01	0.00	0.00
1.00	0.00	2	111.01	0.01	0.01	0.00	0.00
1.10	0.00	0	111.00	0.00	0.00	0.00	0.00
1.20	0.00	0	111.00	0.00	0.00	0.00	0.00
1.30	0.00	0	111.00	0.00	0.00	0.00	0.00
1.40	0.00	0	111.00	0.00	0.00	0.00	0.00
1.50	0.00	0	111.00	0.00	0.00	0.00	0.00
1.60	0.00	0	111.00	0.00	0.00	0.00	0.00
1.70	0.00	0	111.00	0.00	0.00	0.00	0.00
1.80	0.00	0	111.00	0.00	0.00	0.00	0.00
1.90	0.00	0	111.00	0.00	0.00	0.00	0.00
2.00	0.00	0	111.00	0.00	0.00	0.00	0.00
2.10	0.00	0	111.00	0.00	0.00	0.00	0.00
2.20	0.00	0	111.00	0.00	0.00	0.00	0.00
2.30	0.00	0	111.00	0.00	0.00	0.00	0.00
2.40	0.00	0	111.00	0.00	0.00	0.00	0.00
2.50	0.00	0	111.00	0.00	0.00	0.00	0.00
2.60	0.00	0	111.00	0.00	0.00	0.00	0.00
2.70	0.00	0	111.00	0.00	0.00	0.00	0.00
2.80	0.00	0	111.00	0.00	0.00	0.00	0.00
2.90	0.00	0	111.00	0.00	0.00	0.00	0.00
3.00	0.00	0	111.00	0.00	0.00	0.00	0.00
3.10	0.00	0	111.00	0.00	0.00	0.00	0.00
3.20	0.00	0	111.00	0.00	0.00	0.00	0.00
3.30	0.00	0	111.00	0.00	0.00	0.00	0.00
3.40	0.00	0	111.00	0.00	0.00	0.00	0.00
3.50	0.00	0	111.00	0.00	0.00	0.00	0.00
3.60	0.00	0	111.00	0.00	0.00	0.00	0.00
3.70	0.00	0	111.00	0.00	0.00	0.00	0.00
3.80	0.00	0	111.00	0.00	0.00	0.00	0.00
3.90	0.00	0	111.00	0.00	0.00	0.00	0.00
4.00	0.00	0	111.00	0.00	0.00	0.00	0.00

SHEET 4 OF 5

PREPARED FOR:
MARTIN & SILVIA ARNOSO

TITLE:
SWM BMP & ESC B
LUNA LIMON DAYCARE
189 NEW HAVEN AVENUE
DERBY CT 06418

DATE: June 14, 2021
DRAWING SCALE: NA

PREPARED BY:
RCL THOMPSON LLC
19 PEPPERBUSH DR.
CLINTON, CT 06413
860-941-7721

STATE OF CONNECTICUT · ROBERT L. THOMPSON · No. 25817 · LICENSED PROFESSIONAL ENGINEER

REVISIONS

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EROSION & SEDIMENT CONTROL NOTES

NARRATIVE
SEDIMENT & EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT & EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER IS ESTABLISHED. ALL SEDIMENT & EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, CONNECTICUT - 2002" AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.

PURPOSE AND SCOPE
a. REMOVAL OF EXTERIOR STAIRS AND COVERED PATIO
b. RENOVATIONOF STRUCTURE INTO DAYCARE FACILITY
c. CONSTRUCTION OF STORM WATER MANAGEMENT BASIN AND ASSOCIATED OUTLET STRUCTURE AND STORM SEWER
d. WIDENING OF DRIVEWAY TO 18' (TWO 9' LANES)
e. CONSTRUCTION OF 8 SPACE PAVED PARKING LOT
f. CONSTRUCTION OF 4 SPACE GRAVEL OVERFLOW PARKING (POTENTIAL EXPANSION PARKING)
g. CONSTRUCTION OF 5' WIDE CONCRETE SIDEWALK
h. SITE GRADING AS NECESSARY

AREA OF DISTURBANCE = 14,400 SF

EROSION & SEDIMENT CONTROL CONCERNS
a. CUTS AND FILLS ASSOCIATED WITH SITE GRADING
b. PROTECTION OF OFFSITE DRAINAGE AND NEIGHBORING PROPERTIES

CONSERVATION PRACTICES INCORPORATED INTO THE PROJECT AREA
c. DETAILED STORMWATER AND SEDIMENT CONTROL PLAN

PARTY RESPONSIBLE FOR SOIL AND EROSION CONTROLS
d. SITE CONTRACTOR

GENERAL E&S NOTES
1. THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING CONSTRUCTION .
2. IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATER BODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATER BODIES, AND TO PREVENT EROSION ON THE SITE.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP OF CLEARING.
4. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE BUILDING INSPECTOR.
5. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
6. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
7. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS.
8. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.
9. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABLIZED.
10. CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. ADDITIONAL SLOPE STABILIZATION MEASURES SHOULD BE PROVIDED TO PREVENT EXCESS EROSION ON SLOPES.
11. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.
12. ADEQUATE DRAINAGE PROTECTION SHALL BE MADE WHENEVER WATER SEEPS FROM A SLOPE FACE.
13. ALL STORM SEWER INLETS (IF ANY) THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED.
14. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS TO WORKING WITHIN OR CROSSING A WATERCOURSE SHALL BE MET.
15. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE AREA, WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PUBLIC OR PAVED ROADS.
16. ALL TEMPORARY EROSION / SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION WITH THE PERMISSION OF THE INSPECTOR.

PERMANENT SEEDING
PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED AS VARIOUS SECTIONS OF THE PROJECT ARE COMPLETED IN ORDER TO STABILIZE THE SOIL, REDUCE DOWNSTREAM DAMAGE FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE AESTHETIC NATURE OF THE SITE. IT WILL BE APPLIED TO ALL CONSTRUCTION AREAS SUBJECT TO EROSION WHERE FINAL GRADING HAS BEEN COMPLETED AND A PERMANENT COVER IS NEEDED SHALL BE SEEDED WITHIN 7 DAYS OF ESTABLISHMENT OF FINAL GRADES.

SITE PREPARATION
1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
2. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
3. PERFORM ALL PLANTING OPERATIONS PARALLEL TO THE CONTOURS OF THE SLOPE.
4. APPLY TOPSOIL AS INDICATED ELSEWHERE HEREIN.
5. APPLY FERTILIZER ACCORDING TO SOIL TEST OR:

SILT FENCE
SILT FENCE SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:.
1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER, OR ETHYLENE YARN.
2. SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
3. IF WOODEN STAKES ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A DIAMETER OF 2" WHEN OAK IS USED AND 3" WHEN PINE IS USED. WOODEN STAKED MUST HAVE A MINIMUM LENGTH OF 5'.
4. IF STEEL POSTS (STANDARD "U" AND "T" SECTION) ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT AND SHALL HAVE A MINIMUM LENGTH OF 5'.
5. THE HEIGHT OF A SILT FENCE SHALL BE A MINIMUM OF 16" ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34" ABOVE GROUND ELEVATION
6. SILT FENCE SHOULD BE USED FOR DRAINAGE AREAS THAT ARE NO LARGER THAN 0.25 ACRES PER 100' OF SILT FENCE LENGTH. THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100'. THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1. SILT FENCE IS BEST USED WHEN THE SLOPE ABOVE THE FENCE, EITHER CUT OR FILL, IS NOT STEPPER THAN 3:1.

GRADING
THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
1. THE PERMANENT CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
2. THE PERMANENT EXPOSED FACES OF EARTHEN FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
3. THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO FOUR VERTICAL (1:4).
4. PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
5. EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY FROM EROSION, SLIDING, SETTLING, OR CRACKING.
6. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS, WATERCOURSES, OR WATER BODIES BODIES.
7. PRIOR TO ANY REGRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.

IMPERVIOUS AREA COMPUTATION (SQ FT)

Description	Pre-Dev	Remain	Remove	Add	Post-Dev
House	1,135	1,135	-	-	1,135
Asphalt Driveway / Parking	4,263	-	4,263	8165	8,165
Garage	1,046	1,046	-	-	1,046
External Stairs	76	-	76	-	-
Covered Porch / Patio	89	-	89	-	-
Sidewalk	101	80	21	941	1,021
TOTAL IMPERVIOUS AREA (SQ FT)	6,710				11,367
PERVIOUS AREA/GRASS AREA (SQ FT)	17,477 SF				12,820 SF
TOTAL SITE AREA =	24,187 SF				24,187 SF
INCREASE IN IMPERVIOUS AREA =	4,657 SF				
TOTAL % OF IMPERVIOUS AREA =	(11367 X 100 / 24,187	47.0%	>18% MAX, BMP REQUIRED		

"C" FACTORS CALCULATION

A. PRE-DEVELOPMENT
(6710 x 0.9 + 17477.38 x .25) / 24,187 = 0.43

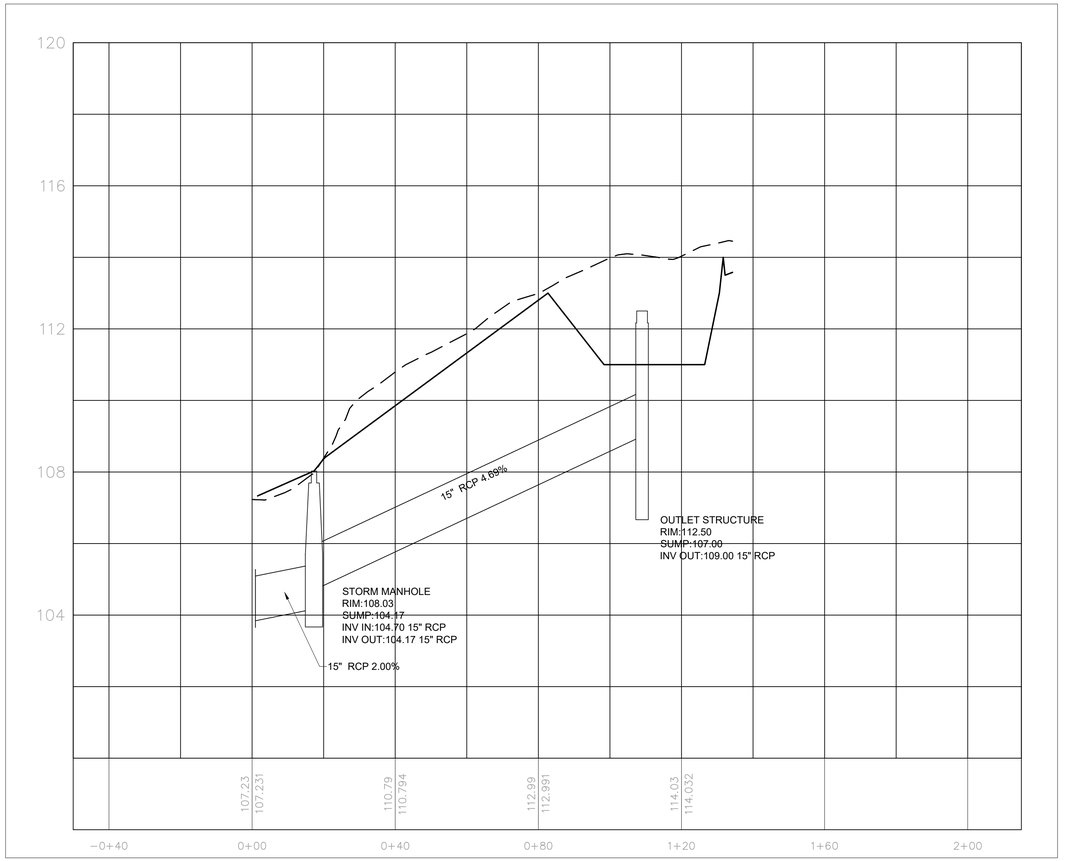
b. POST-DEVELOPMENT
(11367 x 0.9 + 12820.38 x 0.25) / 24,187 = 0.56

RUNOFF COMPUTATION (Q=CIA)

A. PRE-DEVELOPMENT
(5 MIN Tc) Q2 = (0.43x4.97x0.56) = 1.19 CFS
Q10 = (0.43x7.51x0.56) = 1.79 CFS
Q100 = (0.43x11.54x0.56x1.1) = 3.03 CFS 1.1 saturation factor

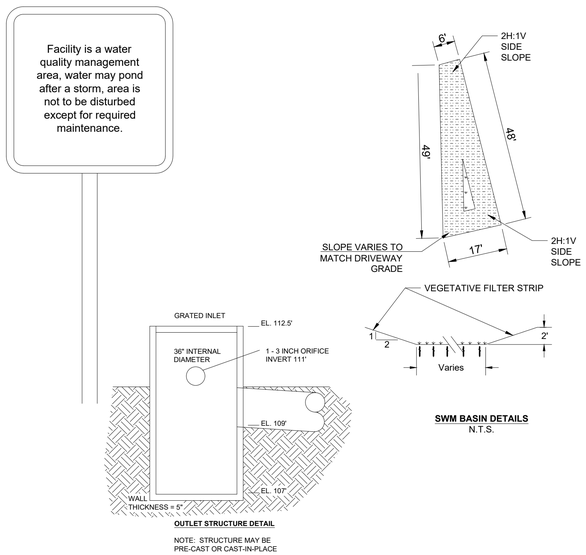
B. POST-DEVELOPMENT
(5 MIN Tc) Q2 = (0.56x4.97x0.56) = 1.55 CFS
Q10 = (0.56x7.51x0.56) = 2.34 CFS
Q100 = (0.56x11.54x0.56x1.1) = 3.95 CFS 1.1 saturation factor

C. CHANGE IN RUNOFF
Q2 = 1.55 - 1.19 = **0.36** CFS
Q10 = 2.34 - 1.79 = **0.55** CFS
Q100 = 3.95 - 3.03 = **0.92** CFS



SIGN DETAIL

Facility is a water quality management area, water may pond after a storm, area is not to be disturbed except for required maintenance.



SWM BASIN DETAILS
N.T.S.

OUTLET STRUCTURE DETAIL

NOTE: STRUCTURE MAY BE PRE-CAST OR CAST-IN-PLACE

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SHEET 4 OF 5

PREPARED FOR: MARTIN & SILVIA ARNOSO

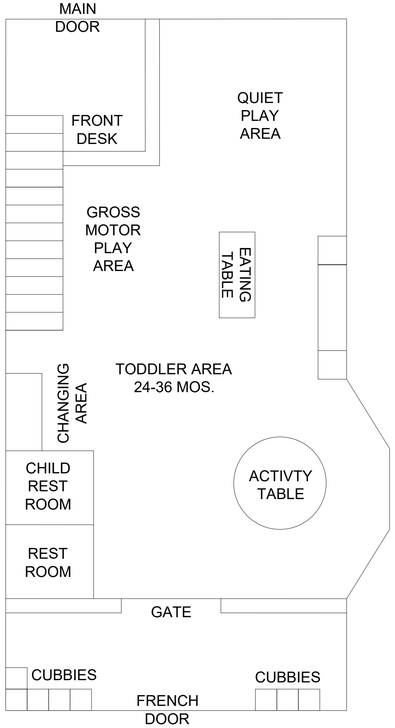
TITLE: SWM BMP & ESC B
LUNA LIMON DAYCARE
189 NEW HAVEN AVENUE
DERBY CT 06418

DATE June 14, 2021
DRAWING SCALE NA

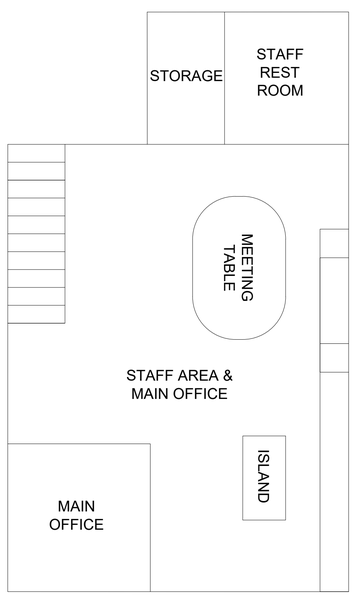
PREPARED BY:
RCL THOMPSON LLC
19 PEPPERBUSH DR.
CLINTON, CT 06413
860-941-7721

STATE OF CONNECTICUT · RYAN C. THOMPSON · No. 29817 · LICENSED PROFESSIONAL ENGINEER

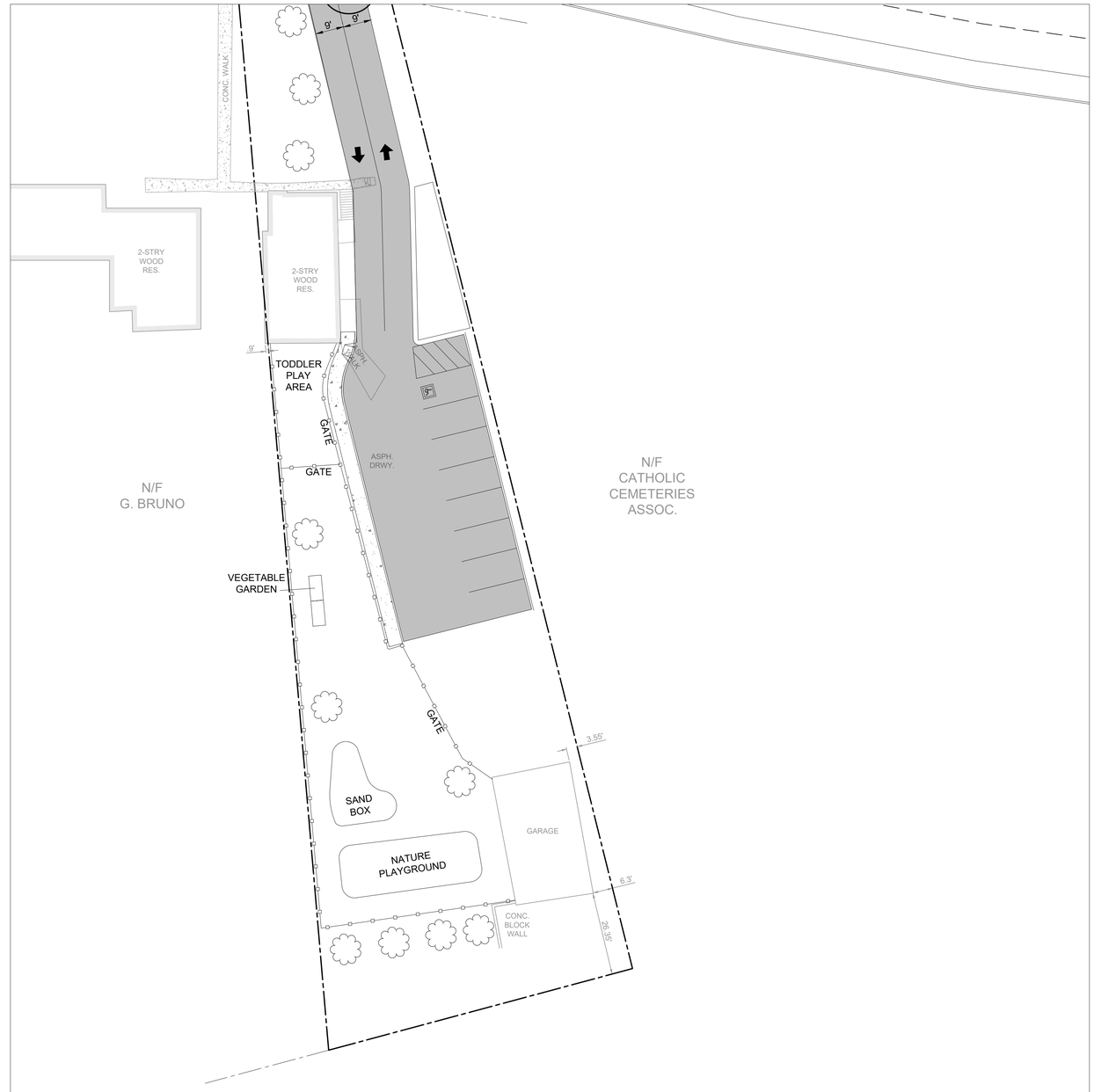
REVISIONS



FIRST FLOOR



SECOND FLOOR



PLAY AREA & OUTDOOR LEARNING CENTER

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SHEET: 5 OF 5

PREPARED FOR: **MARTIN & SILVIA ARNOSO**

TITLE: **CONCEPTUAL BUILDING & YARD LAYOUT**

LUNA LIMON DAYCARE
189 NEW HAVEN AVENUE
DERBY CT 06418

DRAWING SCALE: **NA.**

DATE: **June 14, 2021**

PREPARED BY:

RCL THOMPSON LLC
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