

ADULT USE MARIJUANA ESTABLISHMENT SPECIAL PERMIT RENEWAL - SITE PLAN REVIEW SANCTUARY MEDICINALS, INC.

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|--------------------------|--|
| Littleton Planning Board | |
| DATE OF APPROVAL: | |
| DATE OF ENDORSEMENT: | |
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234 Taylor Street, Littleton, Massachusetts

Prepared for Sanctuary Medicinals, Inc.

APPLICANT:
SANCTUARY MEDICINALS, INC.
234 TAYLOR STREET
LITTLETON, MA 01460

OWNER:

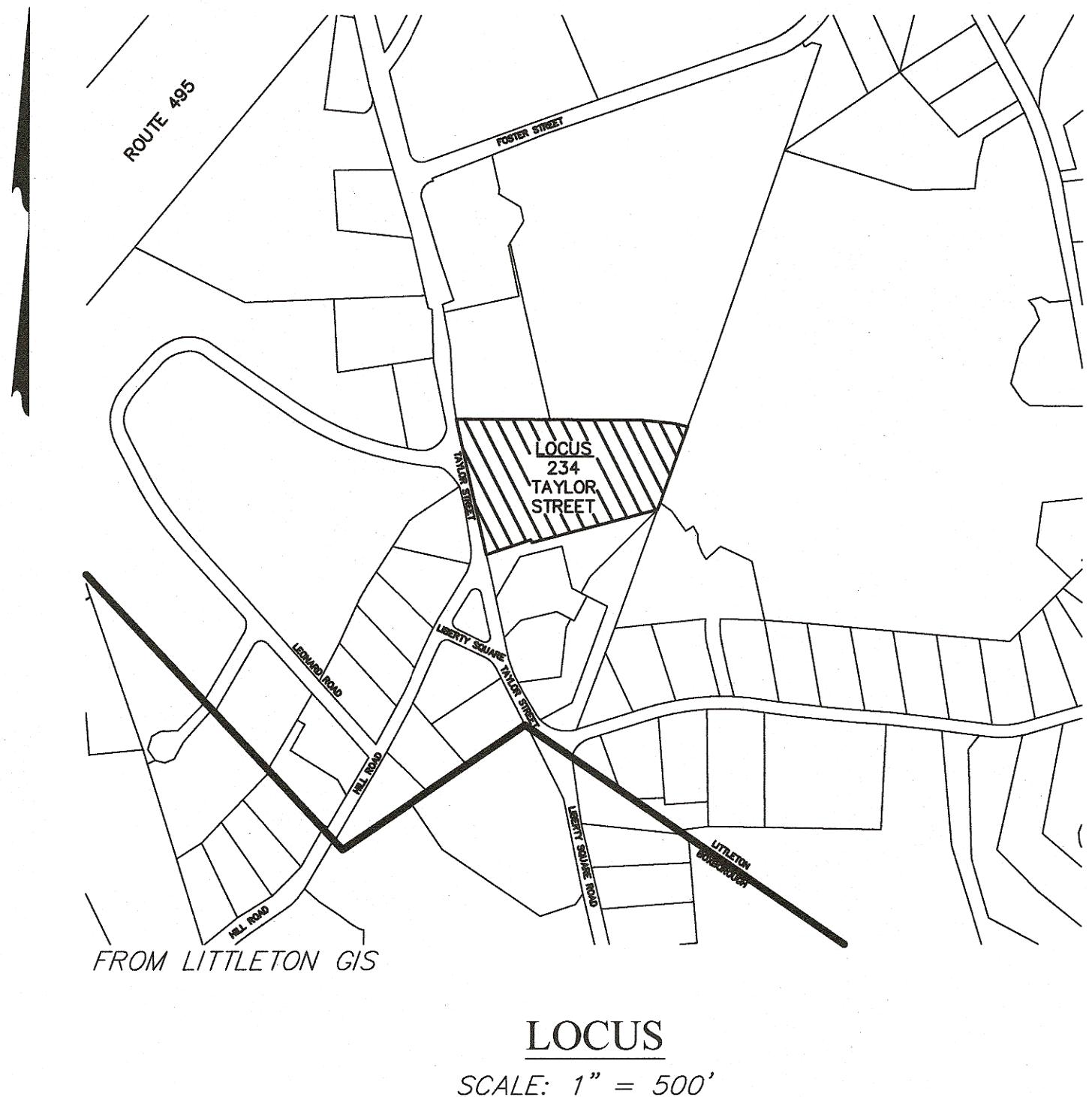
PREMIER HEALTHCARE GROUP, LLC
234 TAYLOR STREET
LITTLETON, MA 01460

PLANNER, LANDSCAPE ARCHITECT,
CIVIL ENGINEER & SURVEYOR:
Places Associates, Inc.
256 Great Road, Suite 4
Littleton, MA 01460

LITTLETON ASSESSORS DATA
Map: R9 Parcel: 34

REFERENCES
Middlesex District Registry of Deeds
Bk. 47439 Pg. 359
Plan 1219 of 1979

ZONING
I-A Industrial



Zoning Conformance Chart
ZONE: I-A Industrial PROPOSED USE: Industrial
WR-Water Resource Protection District

| CRITERIA | REQUIRED | Pre-EXISTING | AS-BUILT | PROPOSED |
|--------------------|----------|--------------|----------|----------|
| LOT AREA | — | 6.34± AC | 6.34± AC | 6.34± AC |
| FRONTAGE | — | 486.5± | 486.5± | 486.5± |
| MIN. FRONT SETBACK | 80 FEET | 147.7± | 147.7± | 147.7± |
| MIN. SIDE SETBACK | 50 FEET | 76.8± | 76.8± | 50.0± |
| MIN. REAR SETBACK | 50 FEET | 223.1± | 223.1± | 223.1± |
| MAX. BUILDING HT. | 40 FEET | <40' | <40' | <40' |
| COV. BY STRUCTURES | 30% MAX | 12.3% | 12.3% | 17.7% |
| COV. BY IMPERVIOUS | 80% MAX | 25.0% | 27.0% | 33.0% |
| PARKING SPACES | 44 | 44 | 44 | 67 |

NOTES:
1. Water Resource Overlay District limits impervious cover to no more than 30%.
2. Parking Lease Agreement with Concord Associates Foster Street Trust for 30 additional spaces

PARKING
Existing spaces = 44 (2 handicapped spaces)
Proposed spaces = 67 (3 handicapped spaces)
Total Available parking spaces= 97
Zoning Requirement: 1 space/1.25 employees on largest shift. (110 employees =88 spaces required)
Trip generation
110 employees x 3 trips (1.5 round trips to reflect carpooling)= 330 employee trips (existing)
Delivery/Services= 2 round trips (based on current frequency)
Total Trips =332 daily trip ends(existing)

EX BLDG AREA=4362 S.F. (SINGLE LEVEL)
PROP. BUILDING=14,446 S.F. (SINGLE LEVEL)
TOTAL BUILDING AREA=48,761 S.F.

PERMIT SET
NOT FOR CONSTRUCTION

SANCTUARY
MEDICINALS, INC.
COVER

LOCATION: 234 TAYLOR STREET
TOWN: LITTLETON, MASSACHUSETTS

PREPARED FOR:
SANCTUARY
MEDICINALS, INC.

SCALE: AS NOTED DATE: JULY 2023

PLACES Associates, Inc.

• Planning
• Landscape
• Architecture
• Civil
• Engineering
• Surveying
256 Great Road, Suite 4
Littleton, MA 01460
(978) 486-0334
www.placesassociates.com

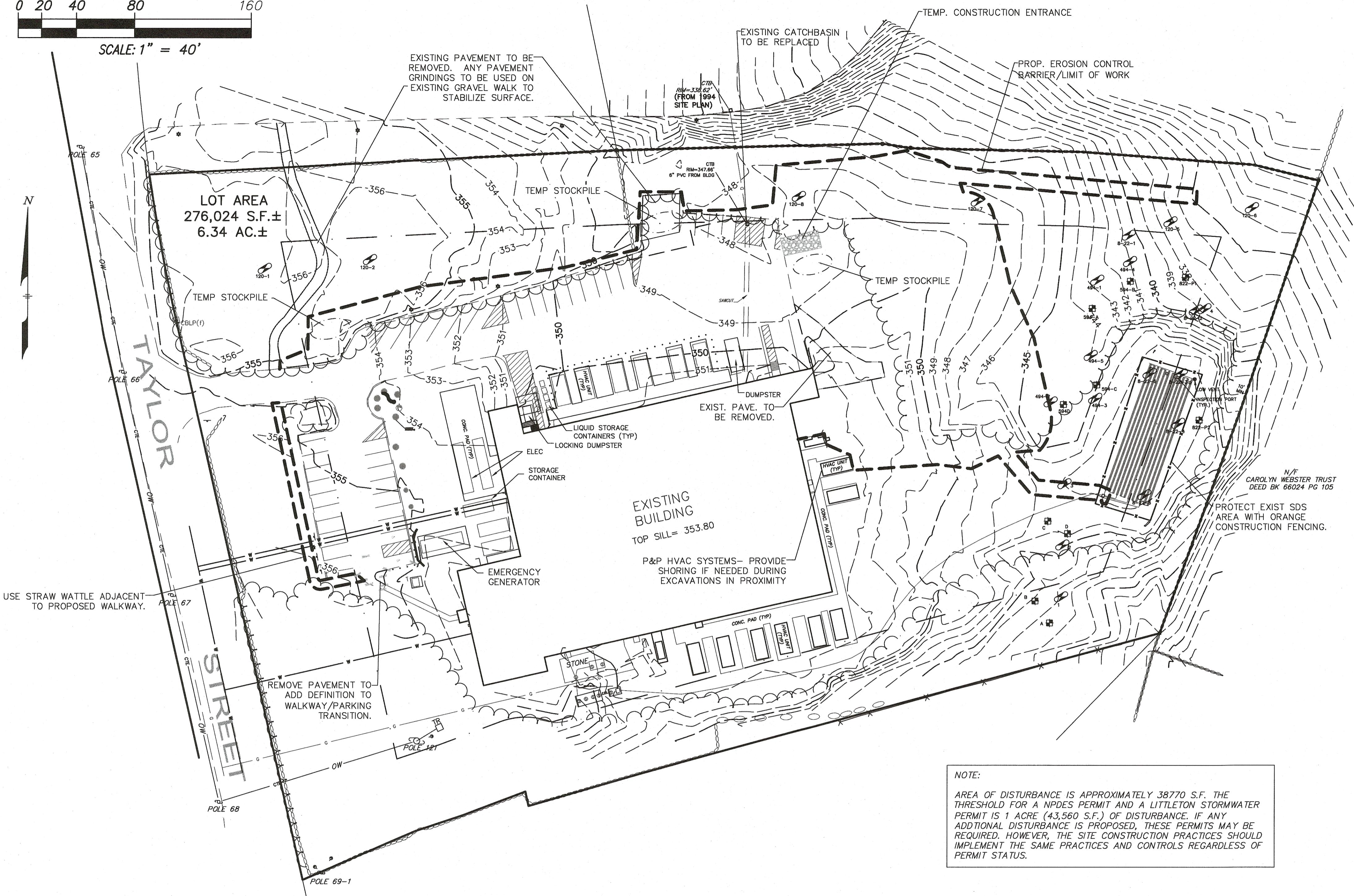


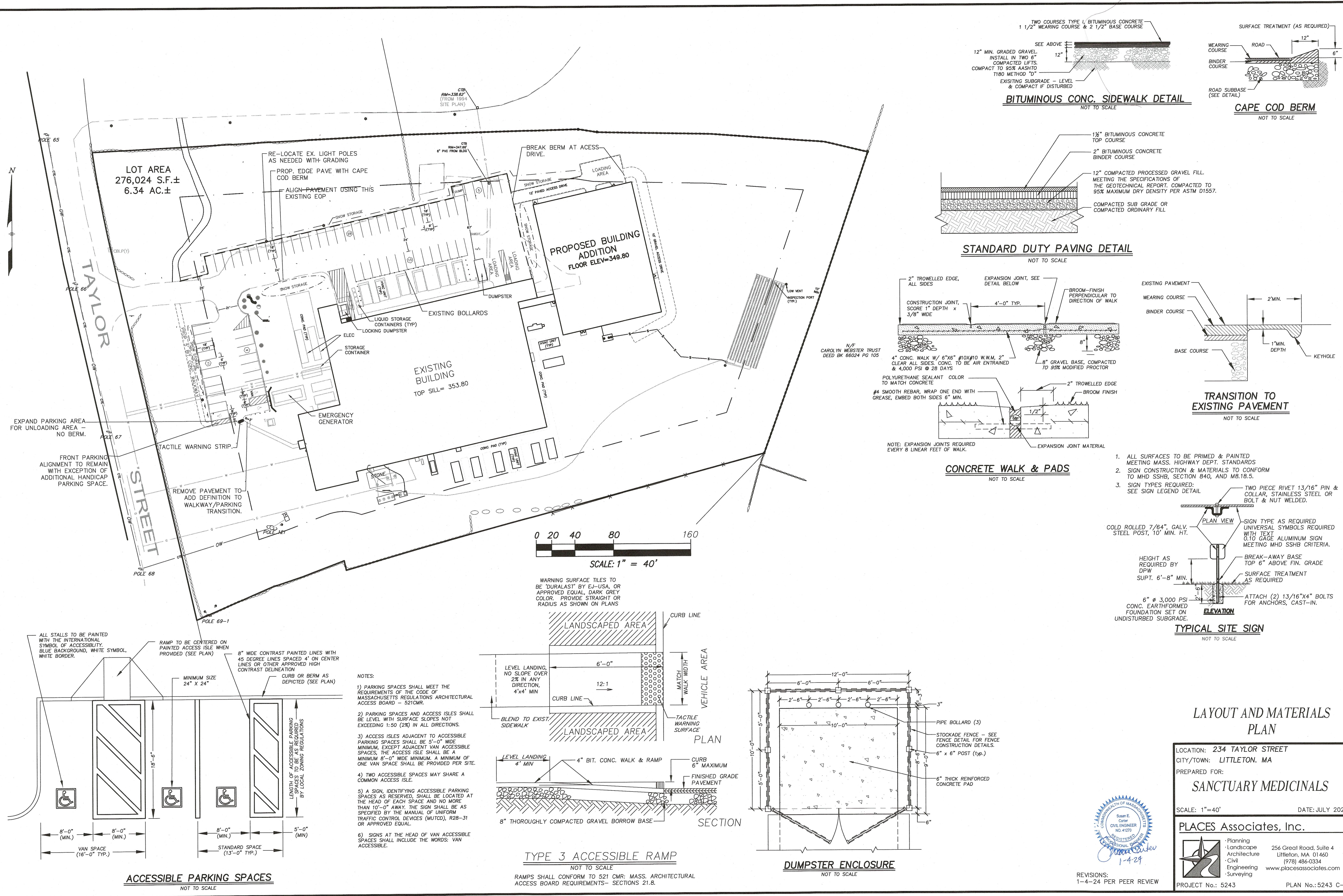
REVISIONS:
1-4-24 PER PEER REVIEW

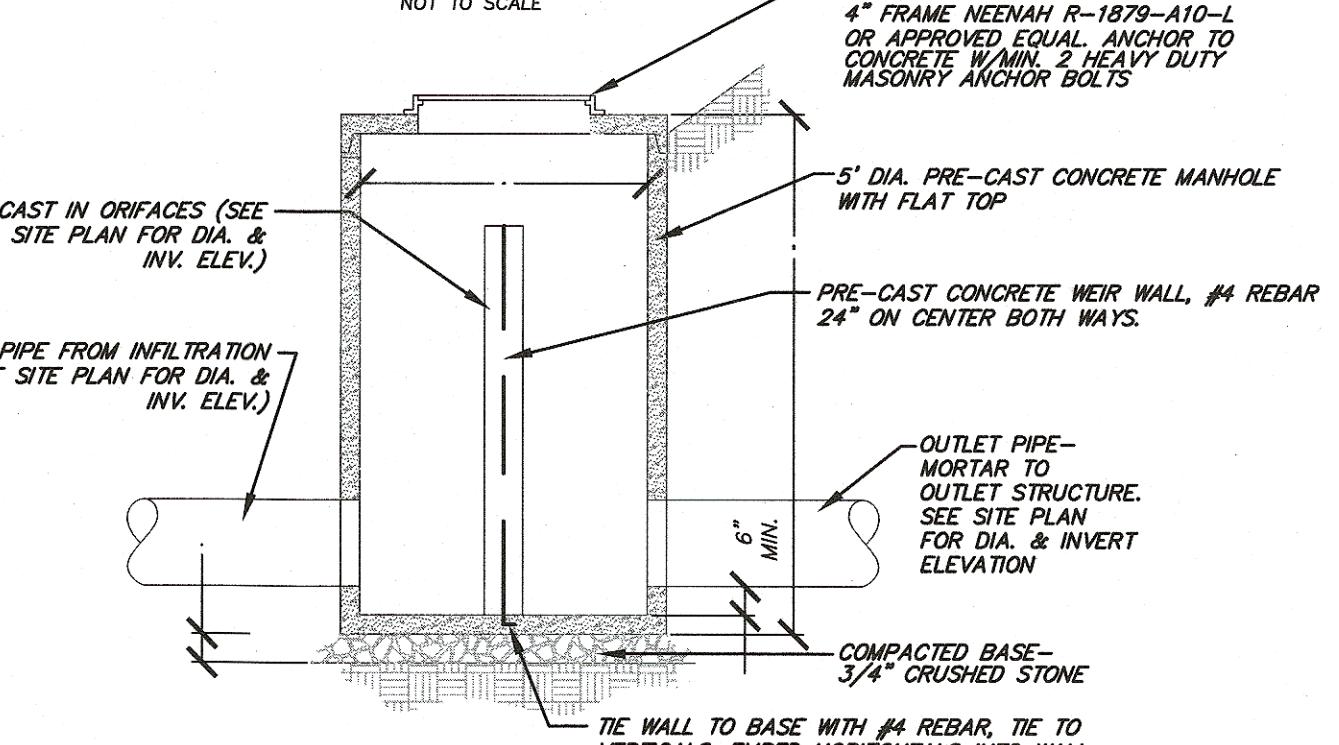
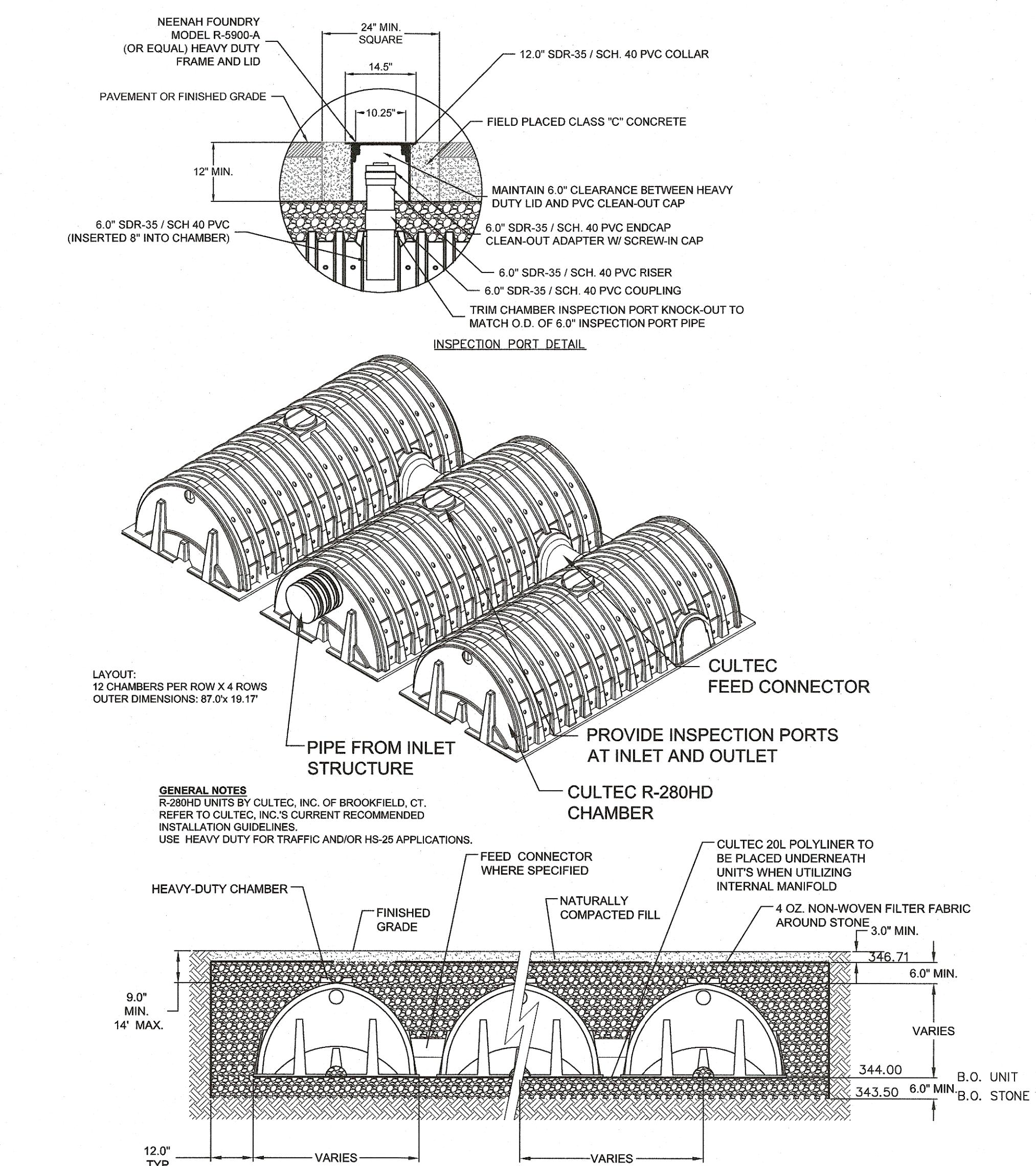
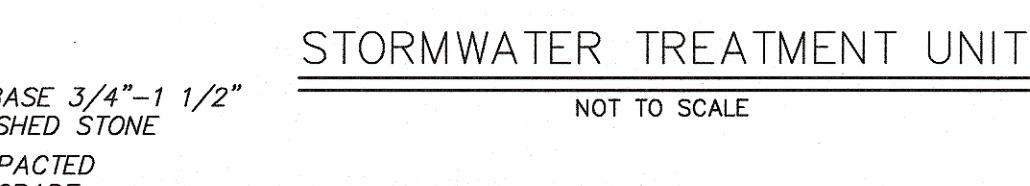
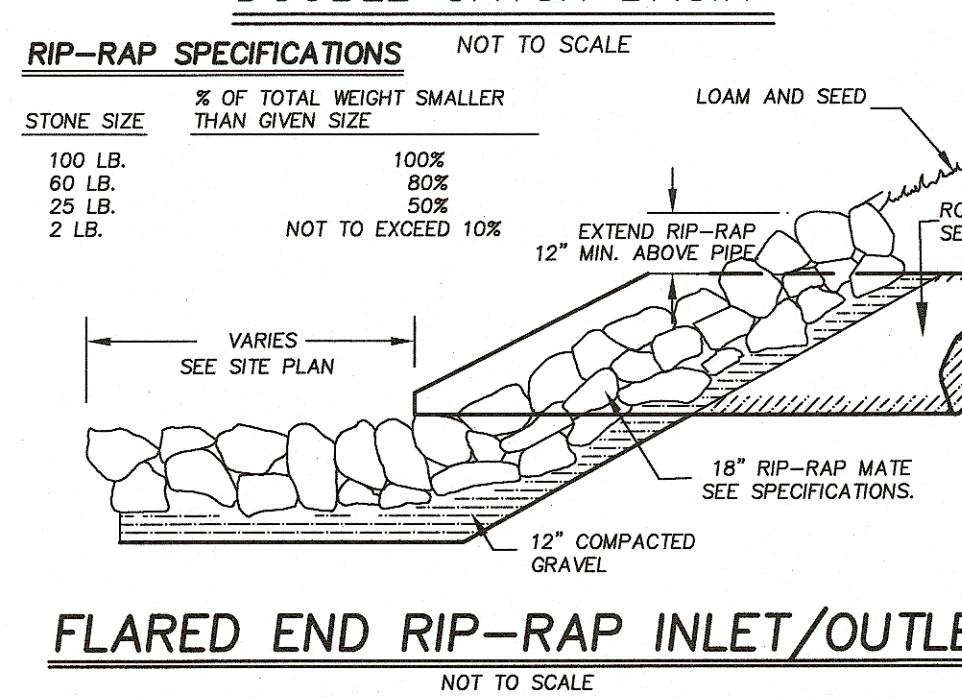
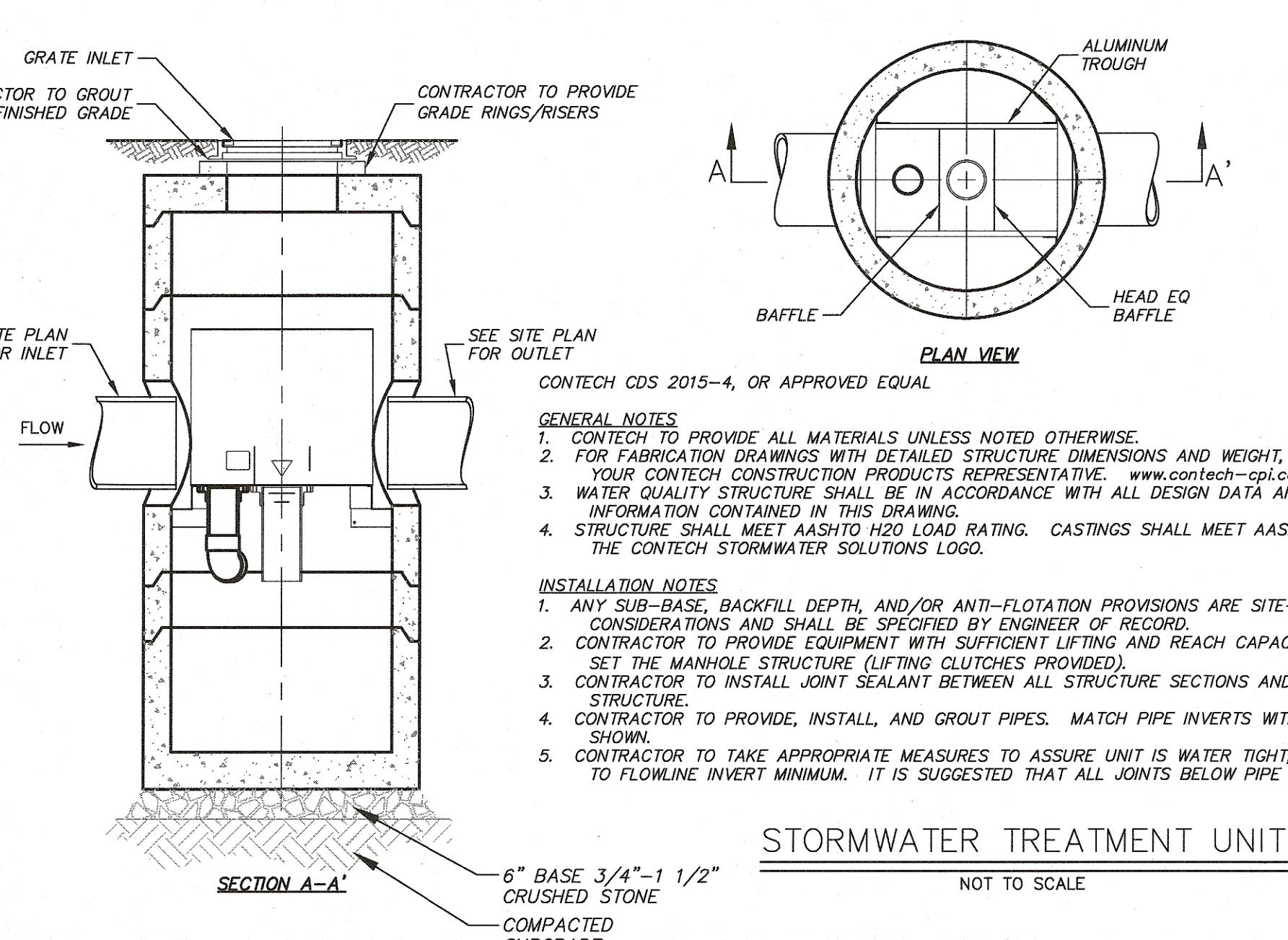
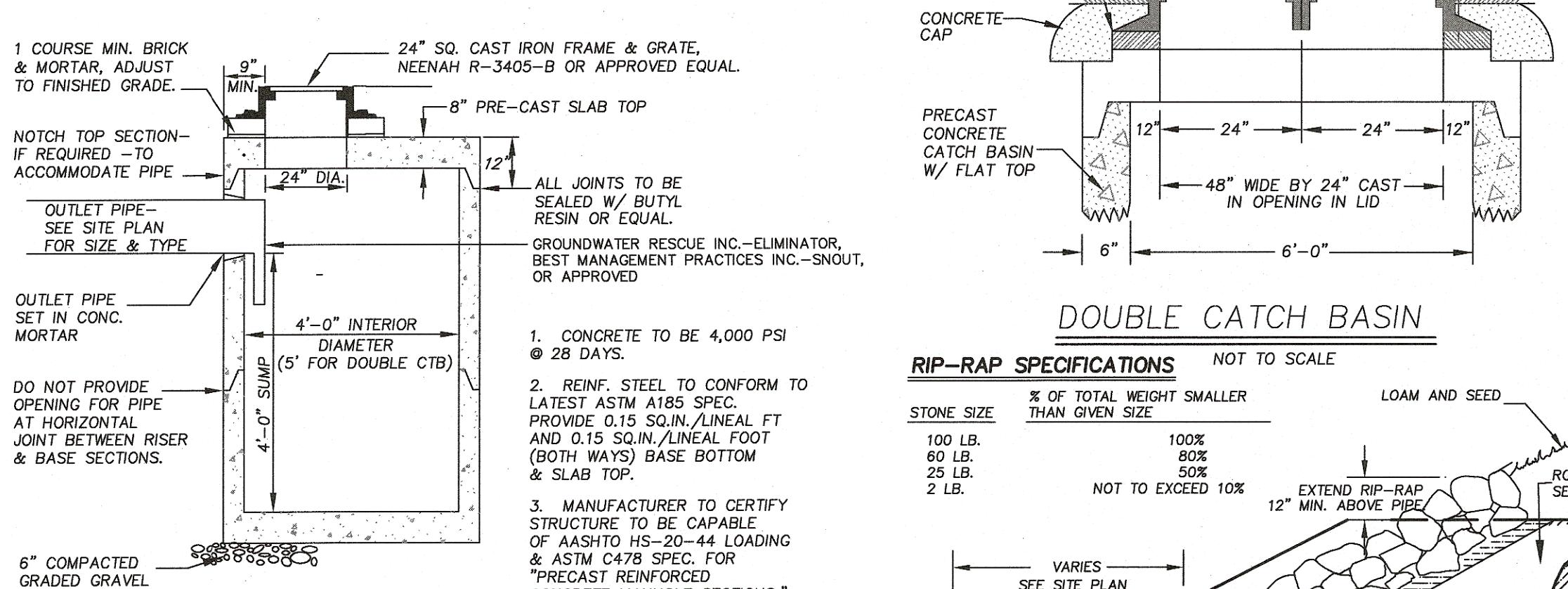
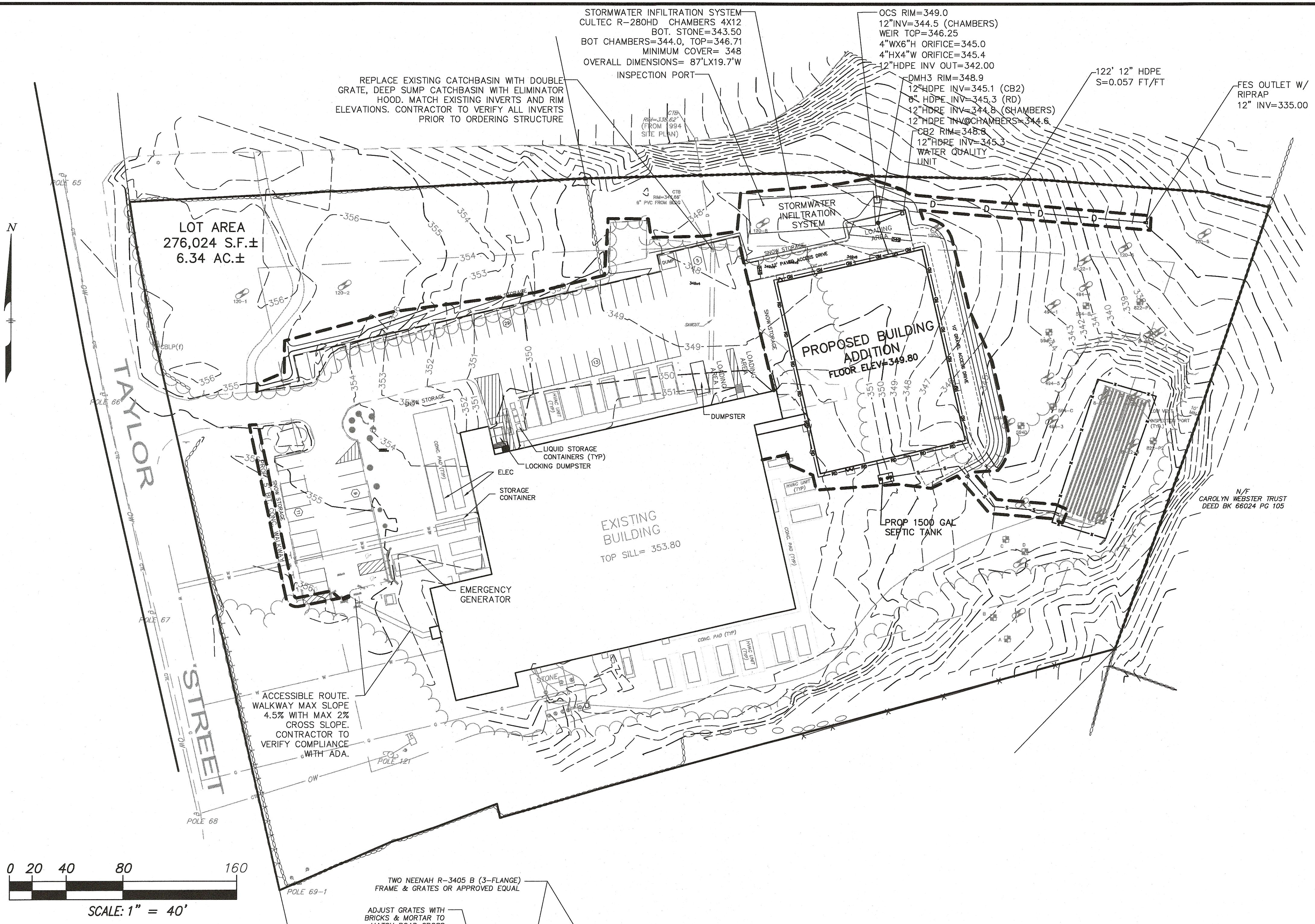
PROJECT No.: 5554 PLAN No.: COVER

0 20 40 80 160

SCALE: 1" = 40'







OUTLET CONTROL STRUCTURE - TYPE 2 WITH WEIR WALL

PROPOSED BUILDING EXPANSION SITE PLAN

LOCATION: 234 TAYLOR STREET
CITY/TOWN: LITTLETON, MA

REARED FOR:
SANCTUARY MEDICINALS

SCALE: 1"=40' DATE: JULY

PLACES Associates, Inc.

Planning

Landscape
Architecture

• Civil Engineering (978) 486-0334
www.placesassociates.com

 Engineering • Surveying www.placesassociates.com

PROJECT No.: 5243 PLAN No.: 5243

GENERAL NOTES:

- PRIOR TO THE PREPARATION OF BIDS AND/OR THE INITIATION OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN AND CAREFULLY EXAMINE THIS PLAN SET, RELATED CONSTRUCTION PLAN SETS FROM OTHER PROFESSIONAL DISCIPLINES, CONSTRUCTION SPECIFICATIONS, MANUFACTURERS INFORMATION AND ANY APPLICABLE PERMIT REQUIREMENTS/CONDITIONS OF APPROVAL FOR THE PROJECT.
- THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. DIG SAFE AND THE APPROPRIATE UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
- NOT ALL UTILITIES WERE ABLE TO BE LOCATED BY RECORD INFORMATION, SITE SURVEYS OR UTILITY LOCATOR SERVICES. THE DESIGN ENGINEER AND BASE PLAN SURVEYOR DO NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OR SUBSURFACE STRUCTURES WHICH ARE OMITTED OR INACCURATELY SHOWN. PRIOR TO THE INITIATION OF WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION/ELEVATION OF EXISTING UTILITIES SHOWN ON THE PLAN.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY DISCREPANCY BETWEEN THE LOCATION/ELEVATION OF ANY EXISTING UTILITIES SHOWN ON THE PLANS AND THAT WHICH IS FOUND IN THE FIELD.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO PROVIDE LAYOUT & CONTROL FOR THE DEVELOPMENT OF THE SITE.
- ALL CONSTRUCTION UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONSTRUCTED TO WITHSTAND A DIRECT H2O DESIGN LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL UTILITY/SITE IMPROVEMENT AREAS UNDER LANDSCAPED/NON-TRAFFIC BEARING AREAS FROM TEMPORARY CONSTRUCTION LOADS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ADJACENT PROPERTY FROM DAMAGE. ALL DAMAGES BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE REPAIRED AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING SURVEY MONUMENTS (BOUNDS, PINS, PIPES, DRILL HOLES, ETC.) THROUGHOUT ALL PHASES OF CONSTRUCTION. ANY DISTURBED MONUMENTS SHALL BE REPLACED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY CONTRADICTORY, INCOMPLETE OR MISLABELED INFORMATION SHOWN ON THE PLANS OR PLANS PREPARED BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME FOR THE ENGINEER TO RESPOND/PROVIDE DIRECTION FOR THE PLAN DISCREPANCY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OF PRODUCTS/MATERIALS TO THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY AS REQUIRED IN THE CONSTRUCTION DOCUMENTS OR IF REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OVER THE PRODUCT. ADEQUATE TIME SHALL BE ALLOWED FOR THE SHOP DRAWINGS TO BE REVIEWED AND RETURNED TO THE CONTRACTOR PRIOR TO ORDERING THE SPECIFIED PRODUCTS/MATERIALS.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
- UNLESS OTHERWISE SPECIFIED OR SHOWN, ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE STANDARDS DESCRIBED IN THE TOWN OF LITTLETON'S SUBDIVISION CONTROL REGULATIONS. IF NOT SPECIFIED THEREIN, SUCH CONSTRUCTION SHALL THEN CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MDOT, FORMERLY MASSHIGHWAY) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST VERSION.

SITE WORK NOTES:

- THE LIMITS OF WORK SHALL BE FIELD ESTABLISHED PRIOR TO INITIATION OF ANY CONSTRUCTION, SITE EXPLORATIONS OR EARTHEN DISTURBANCE.
- EROSION CONTROLS SHALL BE IMPLEMENTED PRIOR TO SITE CLEARING OR DISTURBANCE. SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- EXCEPT FOR THE SETUP FOR ENTRY TO THE SITE, NO CONSTRUCTION OR CONTRACTOR'S VEHICLES SHALL BE PARKED ON TAYLOR STREET. UNLESS COORDINATED WITH ADJACENT PROPERTY OWNERS, ALL CONSTRUCTION STAGING, STOCKPILE AND PARKING AREAS SHALL BE ON SITE.
- LOAM SHALL BE STOCKPILED FOR RE-USE ON THE SITE TO THE EXTENT PRACTICAL, SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS. THE SITE SHALL BE KEPT IN A NEAT AND ORDERLY FASHION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TRENCH OPERATIONS PERMIT PURSUANT TO THE REQUIREMENTS OF THE TOWN OF LITTLETON AND 520 CMR 14.00 (AKA "JACKIE'S LAW").

MATERIAL DEFINITIONS:

BITUMINOUS CONCRETE PAVEMENT

A. ASPHALTIC CONCRETE SHALL BE A STANDARD PLANT-MIXED, HOT-LAID PAVING MATERIAL FOR ROAD WORK, CONSISTING OF CLEAN, CRUSHED ROCK AGGREGATE, MINERAL FILLER, AND ASPHALT CONFORMING TO MDOT SPECIFICATIONS, SECTION M3.11.03, TABLE A.

1. BINDER OR BOTTOM COURSE PAVING MEET THE SPECIFICATIONS FOR MDOT BASE COURSE, SHALL HAVE MAXIMUM AGGREGATE SIZE PASSING 2" IN. SIEVE, AND BITUMEN CONTENT = 4.4 TO 4.6% 1/2% BY WEIGHT.
2. TOP OR WEARING COURSE PAVING SHALL BE "HMA" SURFACE STANDARD TOP COURSE HAVING MAXIMUM AGGREGATE SIZE PASSING 5/8 IN. SIEVE, AND BITUMEN CONTENT = 5.9% 1/2% BY WEIGHT.
3. TOP OR WEARING COURSE FOR CAPE COD BERM PAVING FOR SHALL BE "HMA" DENSE MIX HAVING MAXIMUM AGGREGATE SIZE PASSING 1/2 IN. SIEVE, AND BITUMEN CONTENT = 7.4-7.8% 1/2% BY WEIGHT.

CAST IN PLACE CONCRETE

ALL SITE CAST IN PLACE CONCRETE AND RELATED REINFORCING SHALL MEET THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE, THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) FOR PRODUCT MATERIALS, FORM WORK, PLACEMENT AND FINISHING. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS OTHERWISE REQUIRED IN THE CONSTRUCTION DOCUMENTS.

CONTROLLED DENSITY FILL (CDF)

CONTROL DENSITY FILL SHALL BE A FLOWABLE, SELF-CONSOLIDATING, RIGID SETTING, LOW DENSITY MATERIAL THAT CAN SUBSTITUTE FOR COMPACTED GRAVELS FOR BACKFILLS, FILLS AND STRUCTURAL FILLS. CDF SHALL BE EXCAVATABLE BY HAND TOOLS AND FOR SMALL EQUIPMENT WHEN PLACED AND DENSITY SHALL MEET THE REQUIREMENTS OF SSBH M2.01.08, TYPE 2E, AND SHALL MEET THE FOLLOWING REQUIREMENTS:

- CDF IS TO BE BATCHED AT A READY MIX PLANT AND IS TO BE USED AT A HIGH OF "VERY HIGH SLUMP FROM 10" TO 12". IT SHALL BE FLOWABLE AND REQUIRE NO VIBRATION AFTER IT HAS BEEN PLACED.
- CDF SHALL BE A MIXTURE OF PORTLAND CEMENT, FLYASH, SAND AND WATER DESIGNED TO MEET THE CDF REQUIREMENTS. HIGH AIR ENTRAINMENT MAY BE SUBSTITUTED FOR FLYASH WITH AN ADMIXTURES (2%) ADJUSTMENT IN SAND CONTENT.
- CDF MUST MEET THE FOLLOWING STRENGTH REQUIREMENTS:
-28 DAY COMPRESSIVE STRENGTH: 30-80 PSI
-90 DAY COMPRESSIVE STRENGTH: 100 PSI MAX

CRUSHED STONE

CRUSHED STONE SHALL BE THE SIZE AS INDICATED ON THE PLANS. THE STONE SHALL BE FROM A STONE QUARRY THAT PRODUCES HARD, ANGULAR DURABLE WASHED STONE FREE FROM DEBRIS AND ORGANIC MATERIALS. THE STONE SHALL MEET THE REQUIREMENTS OF SSBH M2.01.0

DENSE GRADED CRUSHED STONE

DENSE GRADED CRUSHED STONE SHALL CONSIST OF THE COMBINATION OF CRUSHER-RUN COARSE AGGREGATES (MEET SSBH M2.01.01) AND FINE AGGREGATES OF NATURAL SAND OR STONE SCREENING UNIFORMLY PREMIXED WITH A PREDETERMINED QUANTITY OF WATER. COARSE AGGREGATE SHALL CONSIST OF HARD, DURABLE PARTICLES OF FRAGMENTS OF STONE. MATERIALS SHALL BREAK UP WHEN ALTERNATELY FROZEN AND THAWED OR DROPPED AND DRAINED SINCE NOT FINE. FINE AGGREGATE SHALL CONSIST OF NATURAL OR CRUSHED SAND. THE GRADATION/MATERIAL SHALL COMPLY WITH THE SPECIFICATIONS OF SSBH M2.01.7

GLACIAL TILL

A. GLACIAL TILL: NATURAL INORGANIC SOIL APPROVED BY THE ENGINEER AND MEETING THE FOLLOWING REQUIREMENTS:

- IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS AND STONES GREATER THAN TWO INCHES IN MAXIMUM DIMENSION.
- IT SHALL BE A SILT LOAM AS DEFINED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL TEXTURAL CLASSIFICATION.
- THE SOIL SHALL CONSIST OF GREATER THAN 50% SILT, 12% TO 27% CLAY, OR 50% TO 80% SILT AND LESS THAN 12% CLAY.

GRAVEL BORROW

GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM CLAY, SURFACE COATINGS, ORGANIC AND DELETERIOUS MATERIAL. ALL GRAVEL BORROW SHALL MEET THE REQUIREMENTS OF SSBH M1.03.0. MAXIMUM STONE SIZE SHALL BE AS FOLLOWS:

TYPE A: 6" LARGEST DIMENSION
TYPE B: 3" LARGEST DIMENSION
TYPE C: 2" LARGEST DIMENSION

LOAM (BORROW)

LOAM SHALL CONSIST OF NATURAL TOPSOIL, FREE FROM SUB-SOIL, OBTAINED FROM AN AREA WHICH HAS NEVER BEEN STRIPPED, HAMMERSHED, OR OF UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARDPAN, SOIL, PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUE, TARRED PAPER, BOARDS, CHIPS OR ANY OTHER UNDESIRABLE MATERIAL.

LOAM SHALL CONTAIN BETWEEN 5.5 AND 7.5 PERCENT ORGANIC MATTER AS DETERMINED BY LOSS ON IGNITION OF A MOISTURE-FREE SAMPLE DRIED IN ACCORDANCE WITH THE CURRENT METHOD OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

THE ACIDITY RANGE OF THE LOAM SHALL BE PH 6.5 TO PH 7.5 INCLUSIVE.

THE MECHANICAL ANALYSIS OF THE SOIL SHALL BE AS FOLLOWS:

| U.S. SIEVE SIZE & NUMBER | PERCENT PASSING | MAXIMUM |
|--------------------------|-----------------|---------|
| 1 INCH | 100% | |
| 1/8 INCH | 97% | 100% |
| NO. 100 (SAND) | 49% | 60% |
| NO. 100 (SLT & CLAY) | 40% | 60% |

ORDINARY BORROW

ORDINARY BORROW SHALL CONSIST OF MATERIAL NOT SPECIFIED AS ANY OTHER MATERIAL LISTED. ORDINARY BORROW SHALL BE WELL GRADED, NATURE INORGANIC MATERIAL ACCEPTABLE TO THE ENGINEER FOR THE GENERAL FILLING TO THE SPECIFIED SUB-GRADE. THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

- IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS AND OF STONES LARGER THAN 6 INCHES IN MAXIMUM DIMENSION.
- IT SHALL BE OF SUCH NATURE & CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE AMOUNT OF TIME.

C. IT SHALL BE FREE OF HIGHLY PLASTIC CLAYS, OF ALL MATERIALS SUBJECT TO DECAY, DECOMPOSITION, AND OF CINDERS OR OTHER MATERIALS WHICH WILL CORRODE PIPING OR OTHER BURIED MATERIALS.

D. IT SHALL HAVE A MAXIMUM DRY DENSITY OF NOT LESS THAN 100 POUNDS PER CUBIC FOOT AND LESS THAN 40% OF THE MATERIAL SHALL PASS THE NUMBER 200 SIEVE.

E. EXCAVATED ROCK & BOULDERS SMALLER THAN ONE CUBIC YARD IN SIZE SHALL BE USED TO FILL AREAS UNDER LAWNS ONLY, PROVIDED THEY ARE A MINIMUM OF 24 INCHES DEEP. THE SUBGRADE PLACED AND COMPACTED IN LAYERS WITH NO VOIDS AND ALL INTERSTICES FILLED.

RIP RAP

RIP RAP STONE SHALL BE SOUND, DURABLE ROCK, ANGULAR IN SHAPE. RIP RAP SHALL BE FREE FROM DEBRIS, ORGANIC OR DELETERIOUS MATERIAL, ROUNDED STONES, BOULDERS, SANDSTONE OR SIMILAR SOFT STONE OR MATERIALS. STONE WILL NOT BE PERMITTED UNLESS SPECIFICALLY PERMITTED BY THE DESIGN ENGINEER. ALL RIP RAP MATERIALS SHALL MEET THE REQUIREMENTS OF SSBH M2.02.0.

SAND BORROW

SAND BORROW SHALL CONSIST OF CLEAN INERT, HARD, DURABLE GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK, FREE FROM LOAM OR CLAY, SURFACE COATINGS AND DELETERIOUS MATERIALS. THE ALLOWABLE AMOUNT OF MATERIAL PASSING A #200 SIEVE, AS DETERMINED BY AASHTO T 11 SHALL NOT EXCEED 10% OF THE SAND BORROW. MEET THE REQUIREMENTS NOT EXCEED 10% OF THE SAND BORROW. MAXIMUM STONE SIZE SHALL BE AS DEPICTED IN THE PLANS.

MATERIAL DEFINITIONS (CONT.):

COMPACTING TESTING

ALL EARTHEN MATERIALS SHALL BE COMPACTION TO THE DRY DENSITY INDICATED IN THE CONSTRUCTION DOCUMENTS AND/OR AS IS REQUIRED BY CODE OR REGULATION. MAXIMUM DRY DENSITY SHALL BE DETERMINED FROM A SAMPLE OF THE MATERIAL AND TESTED IN ACCORDANCE WITH THE MODIFIED PROCTOR DRY DENSITY TEST AS PERFORMED IN ASTM D1557, METHOD C. AREAS THAT WERE TESTED AND FOUND TO BE INSUFFICIENTLY COMPACTION SHALL BE RE-TESTED AFTER THE ADDITIONAL COMPACTION HAS BEEN COMPLETED.

STRUCTURAL FILL

STRUCTURAL FILL IS FILL OR REPLACEMENT SOIL MATERIALS LOCATED BELOW AND ADJACENT TO ALL STRUCTURAL FOOTINGS, SLABS AND BUILDINGS, (AS DEFINED BY THE MASSACHUSETTS BUILDING CODE) EXTENDING OUT TEN FEET (10'-0") FROM THE EXTERIOR LIMITS OF SUCH STRUCTURES.

STRUCTURAL FILL SHALL MEET THE FOLLOWING REQUIREMENTS - IN THE ORDER OF PRIORITY:

1. A SITE SPECIFIC GEOTECHNICAL REPORT, SPECIFICATION OR REQUIREMENT PREPARED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER.
2. A STRUCTURAL ENGINEERS REPORT, SPECIFICATIONS OR REQUIREMENTS.
3. AN ARCHITECT'S REPORT, SPECIFICATION OR REQUIREMENTS.
4. CRUSHED STONE BEING 3/4" TO 1 1/2" DIAMETER, MEETING SSBH M2.01.0

ABBREVIATIONS

ABBREVIATION AASHTO AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABBREVIATION
ABR ACCESSIBLE RAMP - TYPE 1
AR-1 ACCESSIBLE RAMP - TYPE 2
AR-2 ACCESSIBLE RAMP - TYPE 3
AR-3 ACCESSIBLE RAMP - TYPE 4
ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

B&B BALL & BURLAP

BC BOTTOM CURB ELEVATION

BLDG BUILDING

BML BENCHMARK

BR BOTTOM RAMP ELEVATION

CAL CALIFORNIA

CB CONCRETE BOUND

CF CUBIC FOOT

CI CAST IRON PIPE

CMP CORRUGATED METAL PIPE

CONC CONCRETE

CTD CATCH BASIN

CY CUBIC YARD

DRILL HOLE

DH DUCTILE IRON PIPE

DOL DRAIN LINE

DIA DIAMETER

DMH DRAIN MANHOLE

ELEVATION

EMH ELECTRICAL MANHOLE

EXT EXTERIOR

FDN FOUNDATION

FES FLARED END SECTION

FFE FLASH FLOOR ELEVATION

FGR FINISH GRADE

FOUND

FSB FIELD STONE BOUND

FT FEET

FTL LINEAR MEASURE

GAL GALLON

GPM GALLONS PER MINUTE

HDPE HIGH DENSITY POLYETHYLENE PIPE

HP HIGH POINT

HT HEIGHT

I. PIPE IRON PIPE

ID INSIDE DIAMETER

INV PIPE INVERT ELEVATION

LP LOW POINT

MAX MAXIMUM

MHB MASS HIGHWAY BOUND

MIN MINIMUM

MUTCO MANUAL OF UNIFORM TRAFFIC CONTROL

OC ON CENTER

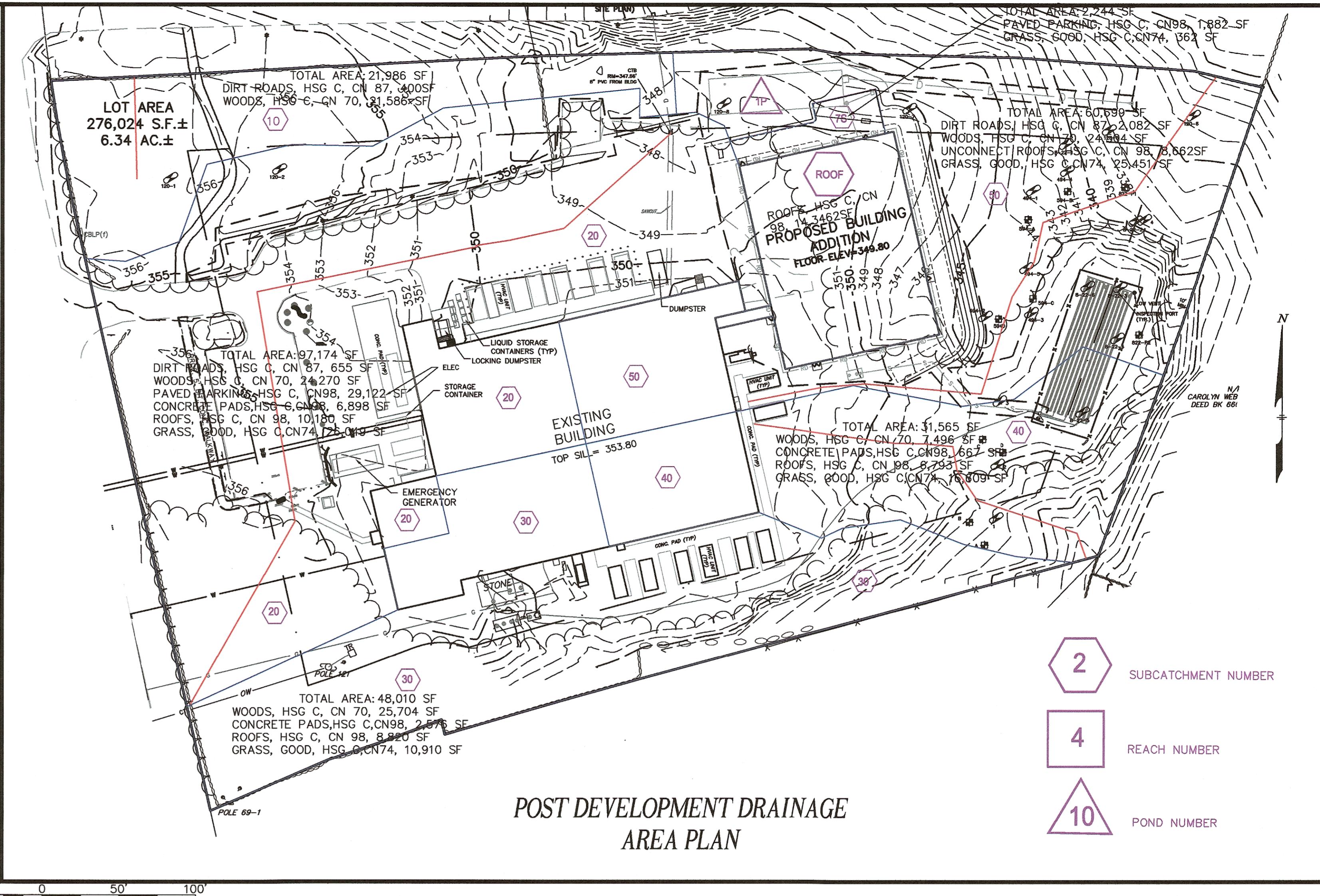
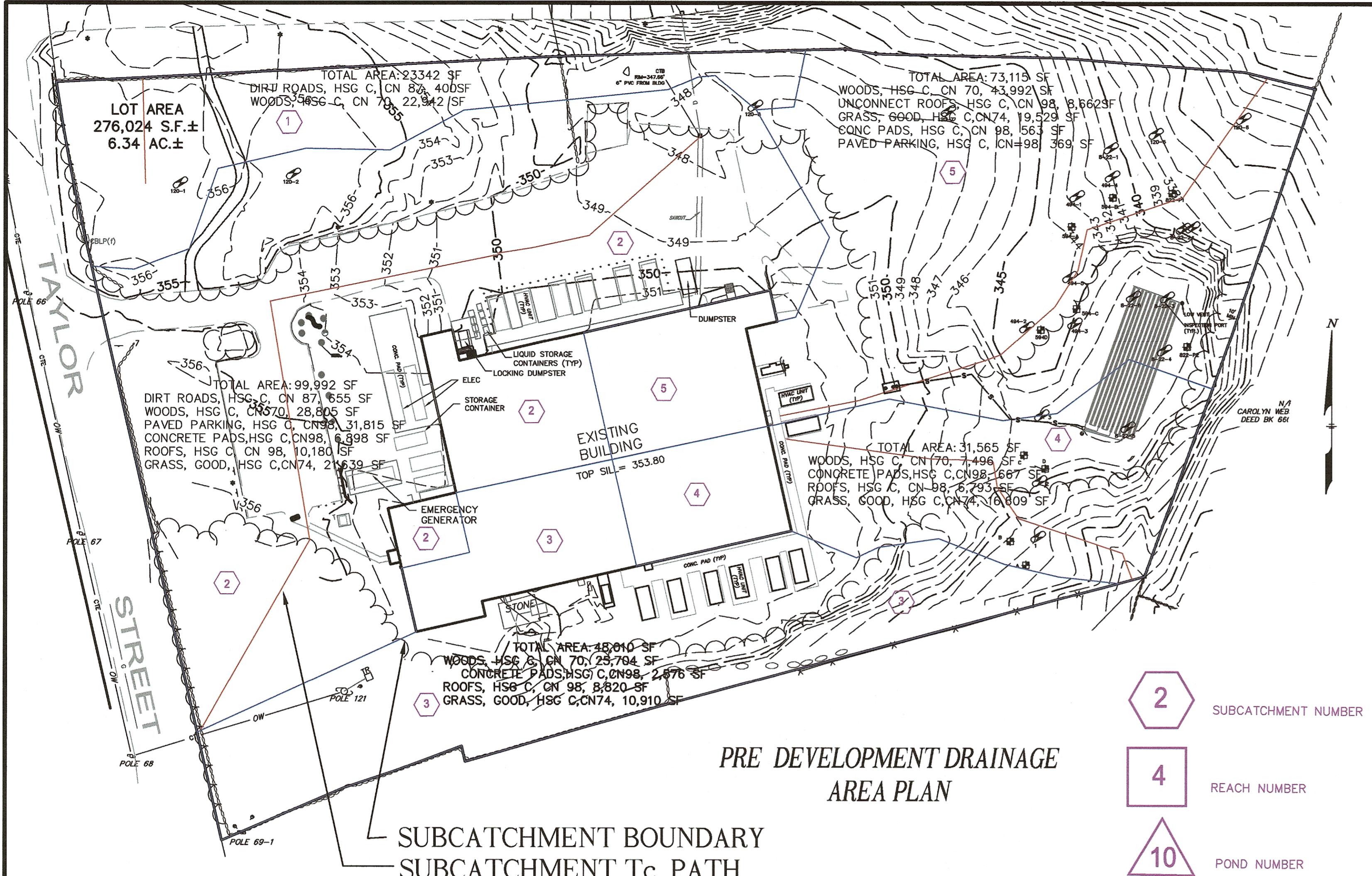
OD OUTSIDE DIAMETER

OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

P&P POUNDS

PSI POUNDS PER SQUARE INCH

PVC POLYVINYL CHLORIDE PIPE



SOIL TESTING

SOIL PROBE TEST RESULTS 1-14-2020
PERFORMED BY SUSAN E. CARTER, PE S.E. 341

120-1 (near Taylor Rd)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-128" C FSL 2.5 y 6/4 friable, 10% cobbles
93" mottles 7yr 5/8
No Refusal, NGWO, ESHWT@ 93"

120-2 (near Taylor Rd)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-128" C FSL 2.5 y 6/4 friable, 10-25% cobbles
83" mottles 7yr 5/8
No Refusal, NGWO, ESHWT@ 83"

120-3 (behind 1979 leaching area)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-135" C SL 2.5 y 6/4 friable, 10-25% cobbles, soils more friable below 60"
100" possible mottles
No Refusal, NGWO, ESHWT@ 100"

120-4 (behind 1994 leaching area)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-84" C1 SL 2.5 y 6/4 friable, 50% stone
84-132" C2 SL 10yr 3/4
Mottling inconsistent following soil seams between stone
No Refusal, NGWO

120-5 (behind 1994 leaching area)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-55" C1 SL 2.5 y 6/4 friable
55-99" C2 SL 2.5 y 6/4 firm with inconsistent mottling
99-148" C3 LS 2.5 y 6/4 friable, 20% stone
GWO@ 129" (seepage) No Refusal, ESHWT @ 99+*

120-6 (near corner of walls at low point of property)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-114" C Ls 2.5 y 6/4 friable, 10% gravel
Mottling @ 39" measured in lower side of test hole
No Refusal, NGWO, ESHWT 39"

120-7 (40' from northerly property line)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-127" C Ls 2.5 y 6/4
Mottling @ 72" high and low chrome
No Refusal, NGWO, ESHWT 72"

120-8 (40' from northerly property line)
0-8" Ap SL 10yr 3/4
8-24" Bw 10 SL 10yr 5/8
24-112" C compact SL 2.5 y 6/4
Possible refusal @ 112" large angular rock, NGWO
This hole is similar to 120-1 AND 120-2

SOIL TESTING (2022)

PERFORMED BY: WILLIAM E. MURRAY, S.E. 1723
PLACES ASSOCIATES, INC.
WITNESSED BY: JAMES GAREFFI, R.S. NABOH

Testhole # 822-1 DATE: 8-12-2022 Elevation: 340.6

| Depth from Surface (inches) | Soil Horizon | Soil texture (USDA) | Soil Color (Munsell) | Soil Mottling | Other |
|-----------------------------|--------------|---------------------|----------------------|---------------|------------------------------------|
| 0"-12" | Ap | FSL | 10YR 3/3 | | MASSIVE, DRY FRIABLE WITH ROOTS |
| 12"-30" | B | FSL | 10YR 5/6 | 48" | MASSIVE, DRY FRIABLE, GRAD. BORDER |
| 30"-100" | C | FSL | 10YR 7/2 | 10YR 5/3 | MASSIVE, DRY SMEAR@48" |

Groundwater Observed: NONE Refusal @ NONE
Estimated Seasonal High Groundwater: 48" Elevation: 336.6

Testhole # 822-2 DATE: 8-12-2022 Elevation: 339.2

| Depth from Surface (inches) | Soil Horizon | Soil texture (USDA) | Soil Color (Munsell) | Soil Mottling | Other |
|-----------------------------|--------------|---------------------|----------------------|---------------|------------------------------------|
| 0"-10" | Ap | FSL | 10YR 3/3 | NONE | MASSIVE, DRY FRIABLE BORDER CLEAR |
| 10"-24" | B | FSL | 10YR 5/6 | NONE | MASSIVE, DRY FRIABLE, GRAD. BORDER |
| 24"-108" | C | FSL | 10YR 6/3 | 48" 10YR 5/3 | MASSIVE, DRY MOTTLES FINE SAND |

Groundwater Observed: NONE Refusal @ NONE
Estimated Seasonal High Groundwater: 48" Elevation: 335.2

PERC P-1 22 MPI @47"

Testhole # 822-3 DATE: 8-12-2022 Elevation: 342.5

| Depth from Surface (inches) | Soil Horizon | Soil texture (USDA) | Soil Color (Munsell) | Soil Mottling | Other |
|-----------------------------|--------------|---------------------|----------------------|---------------|------------------------------------|
| 0"-9" | Ap | FSL | 10YR 4/2 | | MASSIVE, DRY FRIABLE BORDER CLEAR |
| 9"-23" | B | FSL | 10YR 6/6 | | MASSIVE, DRY FRIABLE, GRAD. BORDER |
| 23"-120" | C | FSL | 10YR 6/3 | 48" | MASSIVE, DRY |

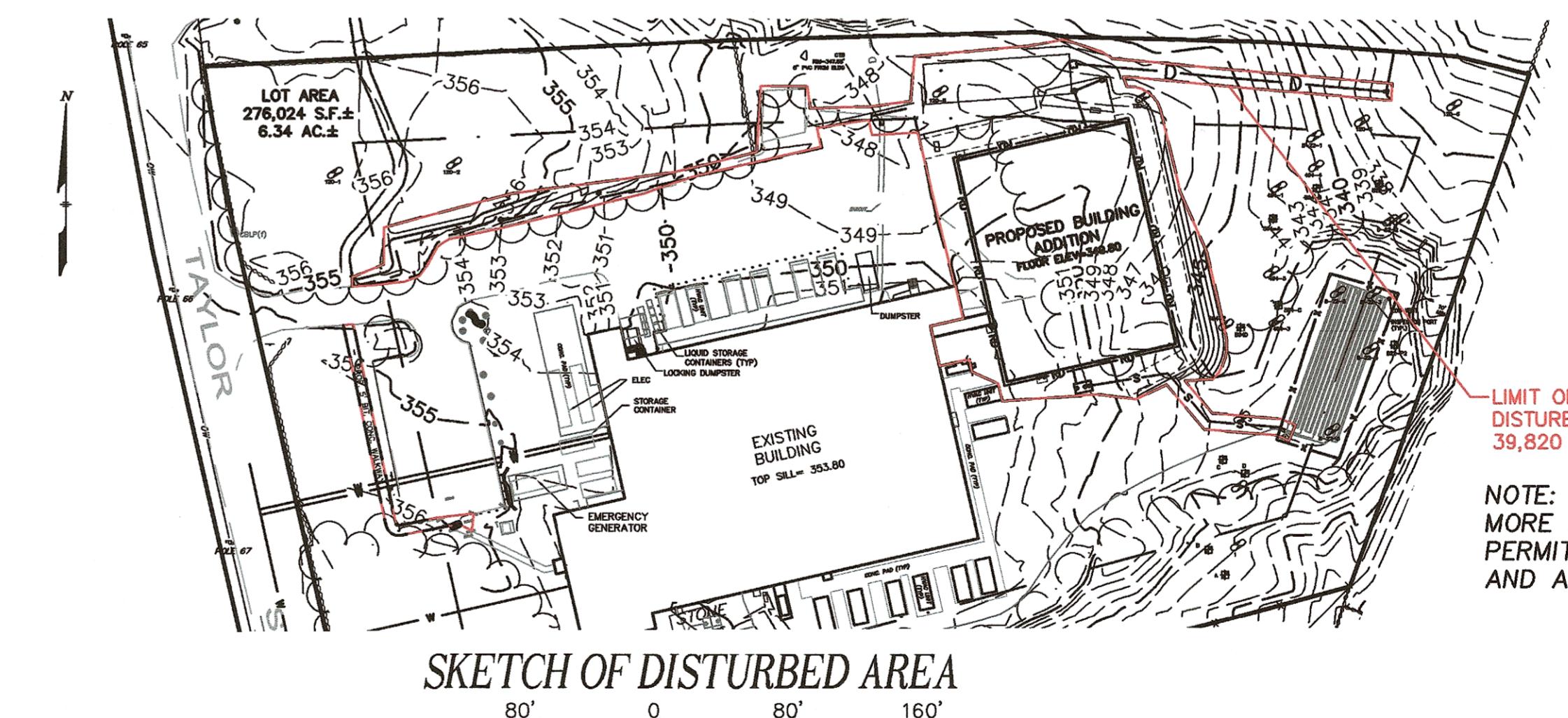
Groundwater Observed: NONE Refusal @ NONE
Estimated Seasonal High Groundwater: 48" Elevation: 337.4

Testhole # 822-4 DATE: 8-12-2022 Elevation: 344.2

| Depth from Surface (inches) | Soil Horizon | Soil texture (USDA) | Soil Color (Munsell) | Soil Mottling | Other |
|-----------------------------|--------------|---------------------|----------------------|---------------|--------------------------------------|
| 0"-10" | Ap | FSL | 10YR 3/3 | | MASSIVE, DRY FRIABLE BORDER CLEAR |
| 10"-24" | B | FSL | 10YR 5/6 | | MASSIVE, DRY FRIABLE, GRAD. BORDER |
| 24"-84" | C1 | FSL | 10YR 6/3 | | MASSIVE, DRY, FRACTURE STONE & SOILS |
| 84"-106" | C2 | FSL | 10YR 6/3 | | MASSIVE, DRY, FRACTURE STONE & SOILS |

Groundwater Observed: NONE Refusal @ NONE
Estimated Seasonal High Groundwater: 50" Elevation: 340.0

PERC P-2 28 MPI @44"



PRE AND POST DEVELOPMENT DRAINAGE AREA PLAN

LOCATION: 234 TAYLOR STREET
CITY/TOWN: LITTLETON, MA
PREPARED FOR:

SANCTUARY MEDICINALS

SCALE: 1"=50' DATE: JULY 2023

PLACES Associates, Inc.



1-4-24

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REVISIONS:
1-4-24 PER PEER REVIEW