

LEO DRIVE RECREATION FACILITIES - PHASE 1

LEO DRIVE · GARDNER · MASSACHUSETTS
CONSTRUCTION DOCUMENT PLAN SET

JUNE 17, 2020

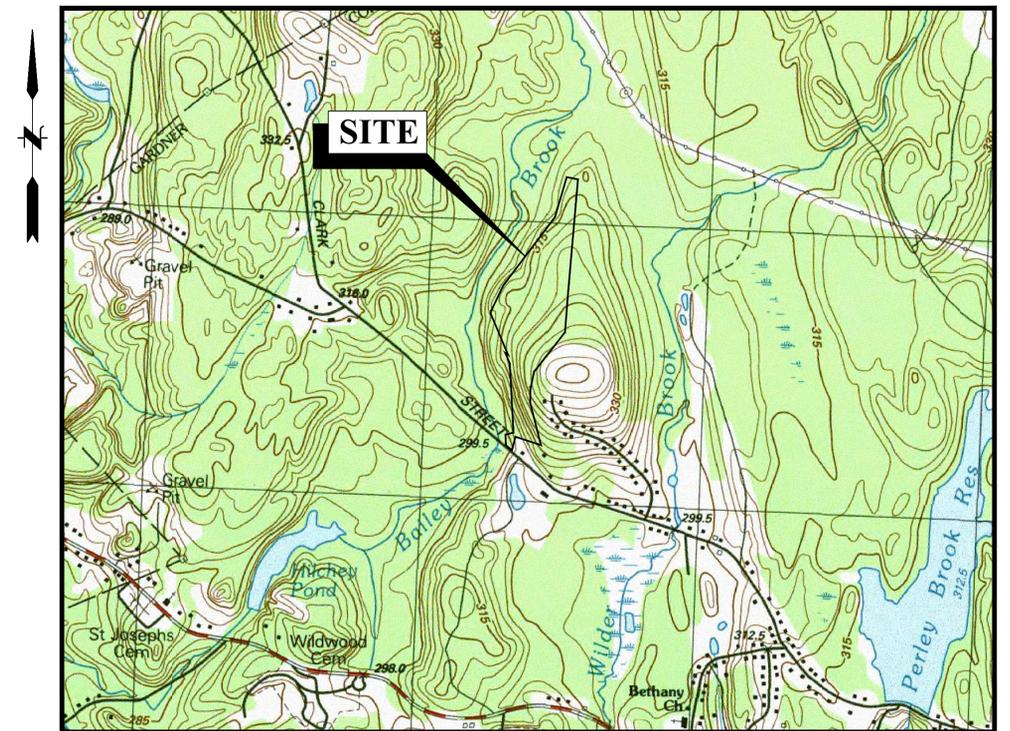
PREPARED FOR
CITY OF GARDNER
95 PLEASANT STREET
GARDNER, MA 01440



PREPARED BY
FUSS & O'NEILL
1550 MAIN STREET, SUITE 400
SPRINGFIELD, MA 01103
413.452.0445
www.fando.com

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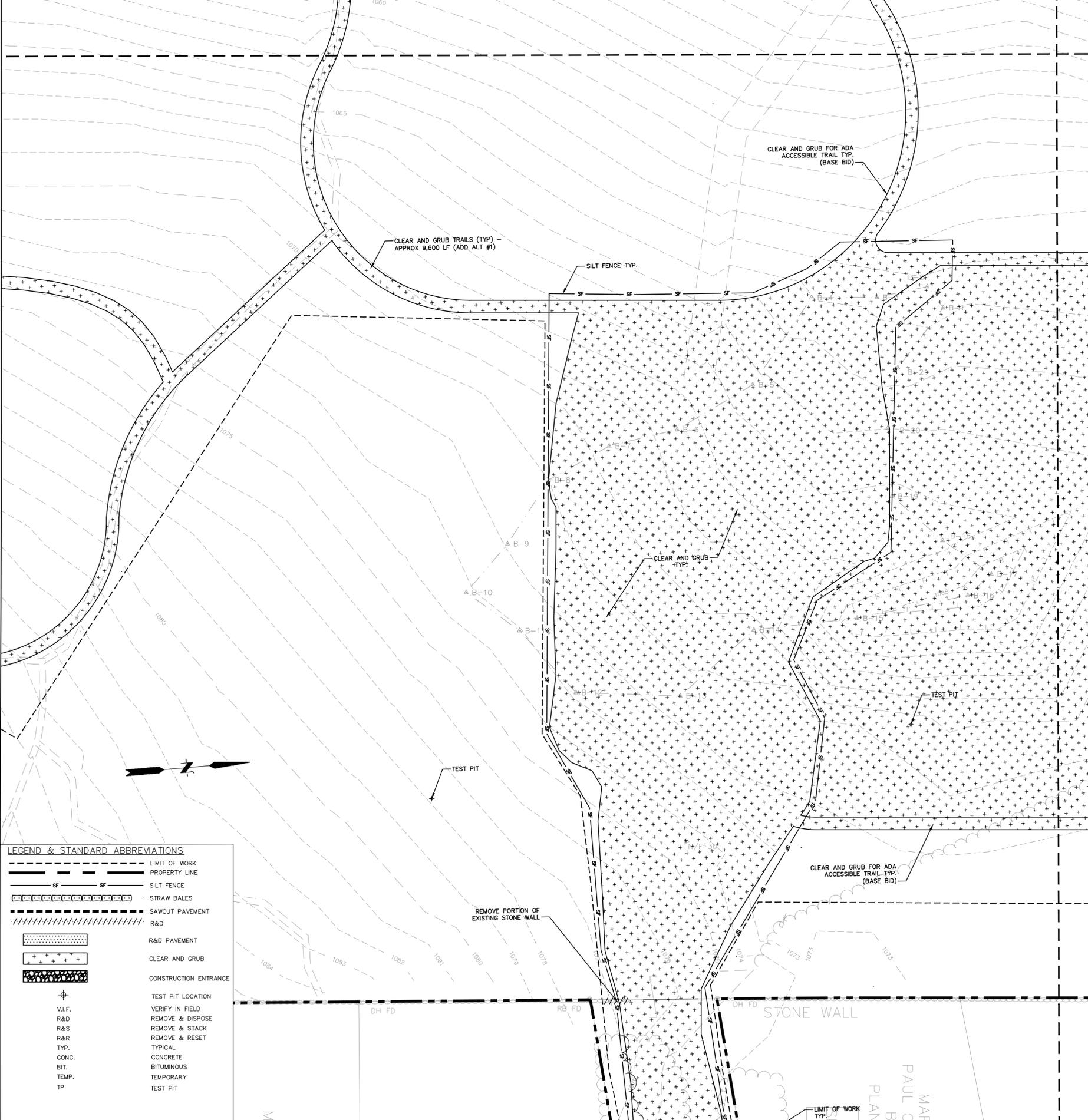
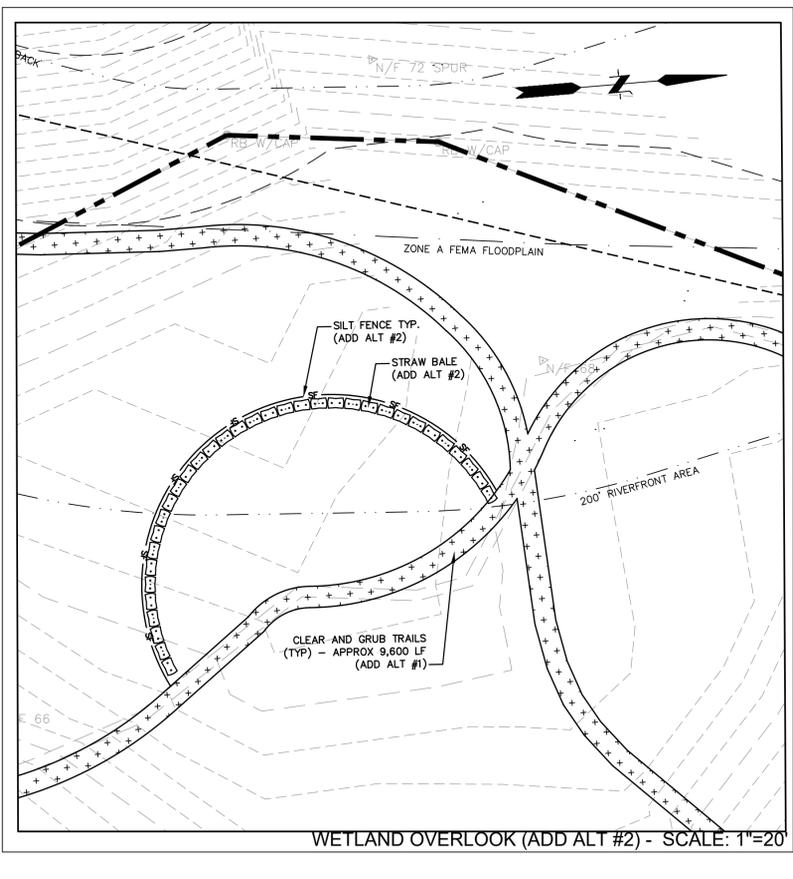
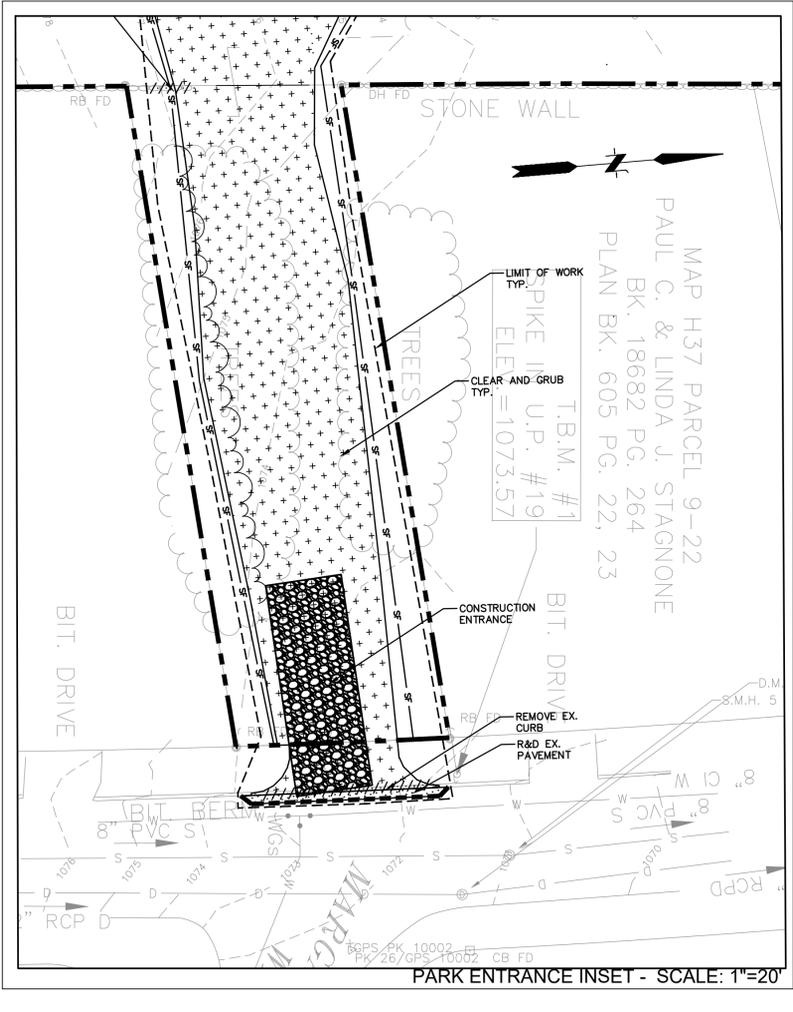
LOCATION MAP
SCALE: 1" = 1000'



PROJ. No.: 20100564.P30
DATE: JUNE 17, 2020

G1.01

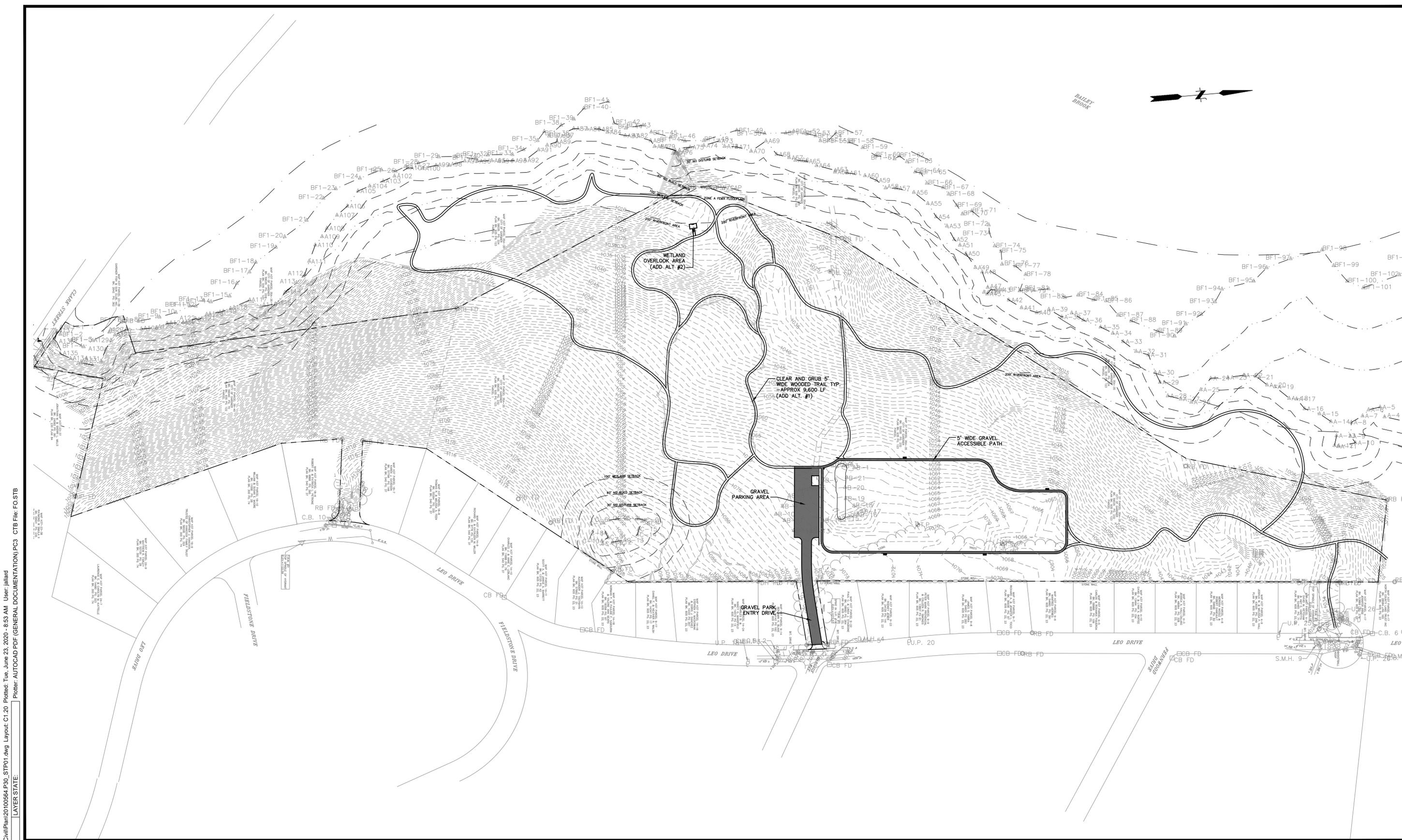
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 Plotter: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3 CTB File: FO.STB
 MS VIEW: LAYER STATE:



LEGEND & STANDARD ABBREVIATIONS

	LIMIT OF WORK
	PROPERTY LINE
	SILT FENCE
	STRAW BALES
	SAWCUT PAVEMENT
	R&D
	R&D PAVEMENT
	CLEAR AND GRUB
	CONSTRUCTION ENTRANCE
	TEST PIT LOCATION
	VERIFY IN FIELD
	REMOVE & DISPOSE
	REMOVE & STACK
	REMOVE & RESET
	TYPICAL
	CONCRETE
	BITUMINOUS
	TEMPORARY
	TEST PIT

<p>06/23/2020</p>	No. _____ DATE _____ DESCRIPTION _____ DESIGNER/REVIEWER _____
<p>SCALE: HORZ.: 1" = 20' VERT.: _____ DATUM: _____ HORZ.: _____ VERT.: _____</p> <p>GRAPHIC SCALE</p>	
<p>FUSS & O'NEILL 1550 MAIN STREET, SUITE 400 FARMINGTON, MA 01405 413.452.0445 www.fandob.com</p>	
<p>CITY OF GARDNER SITE PREP & EROSION CONTROL PLAN LEO DRIVE RECREATION FACILITIES PHASE I CONSTRUCTION DOCUMENT PLAN SET GARDNER MASSACHUSETTS</p>	
<p>PROJ. No.: 20100564_P30 DATE: 06/17/2020</p>	
C1.11	



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 MS VIEW: LAYER STATE: PLOTTER: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3 CTB File: FO.STB

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.			xx/xx	xx

SEAL



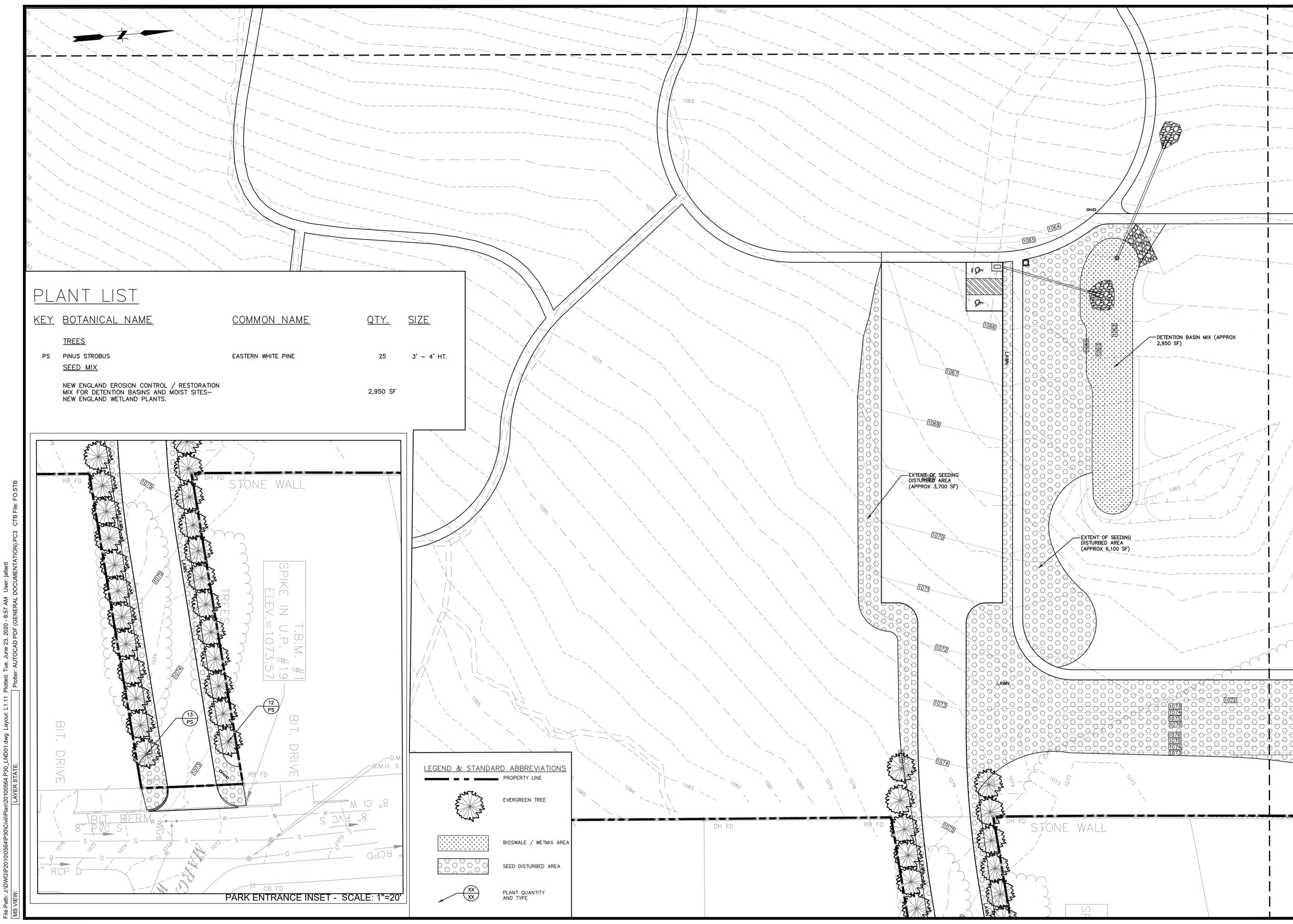
06/23/2020

SCALE:
 HORZ.: 1" = 100'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 GRAPHIC SCALE

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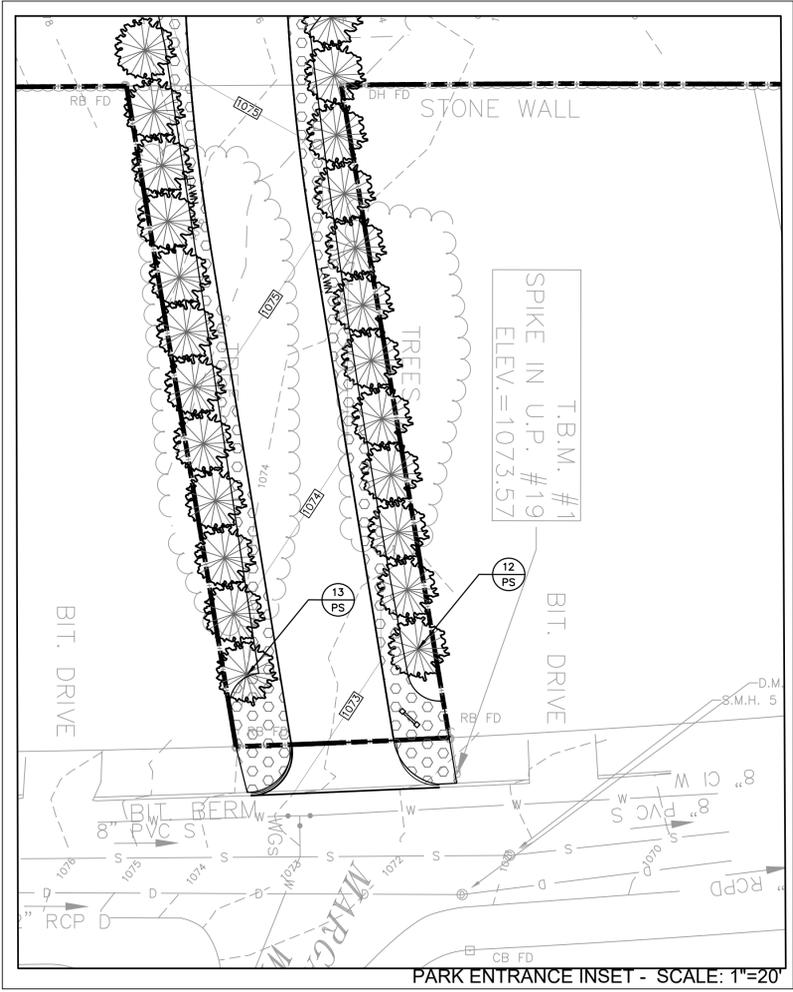
CITY OF GARDNER
 TRAIL PLAN
 LEO DRIVE RECREATION FACILITIES PHASE 1
 CONSTRUCTION DOCUMENT PLAN SET
 MASSACHUSETTS
 GARDNER

PROJ. No.: 20100564.P30
 DATE: 06/17/2020
C1.20



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
TREES				
PS	PINUS STROBUS	EASTERN WHITE PINE	25	3' - 4' HT.
SEED MIX				
	NEW ENGLAND EROSION CONTROL / RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES--		2,950 SF	
	NEW ENGLAND WETLAND PLANTS.			

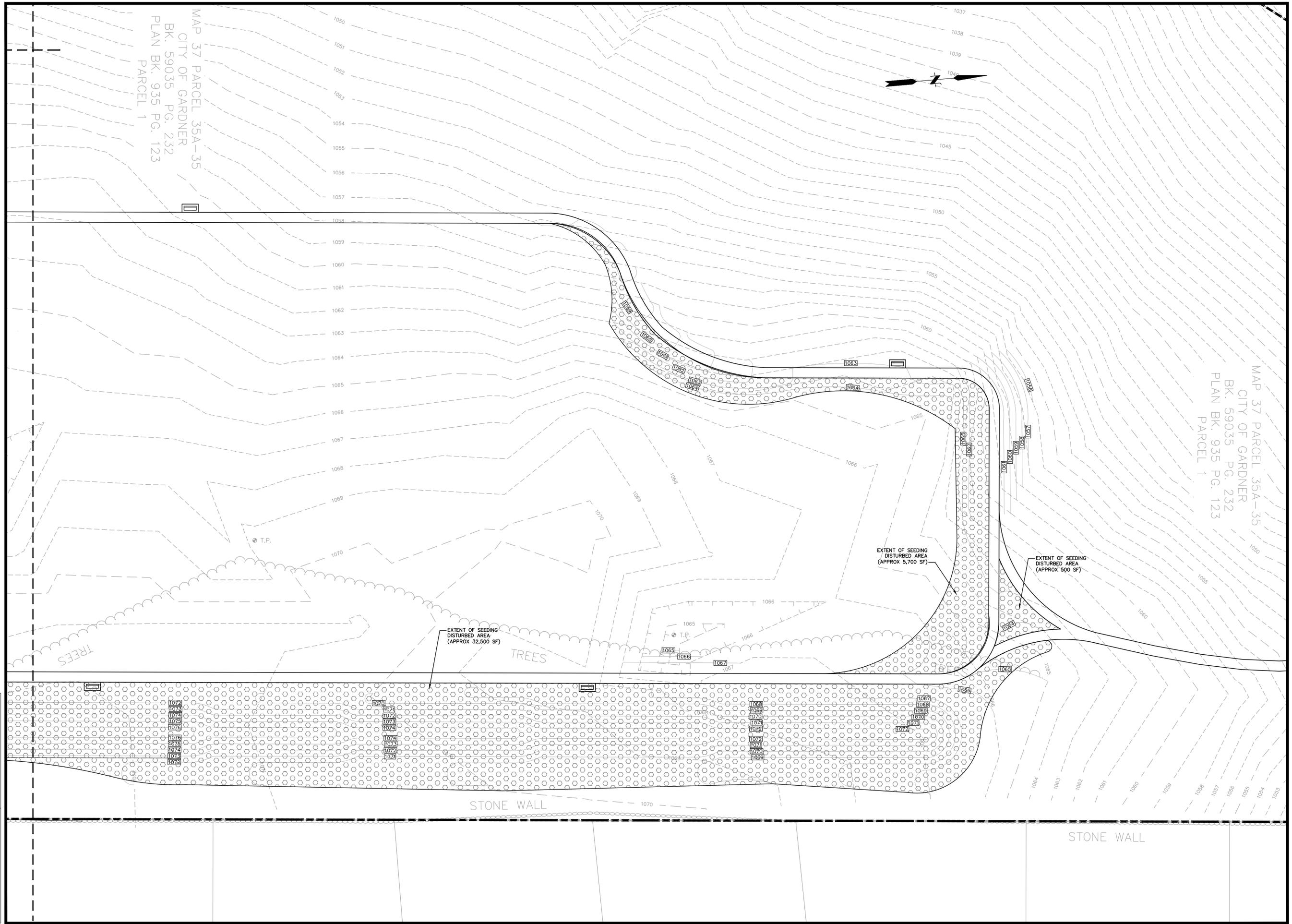


LEGEND & STANDARD ABBREVIATIONS

	PROPERTY LINE
	EVERGREEN TREE
	BIOSWALE / WETMIX AREA
	SEED DISTURBED AREA
	PLANT QUANTITY AND TYPE

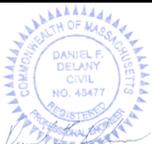
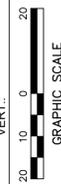
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DATE	DESCRIPTION
No.	
06/23/2020	
SCALE: HORIZ.: 1" = 20'	VERT.: 1" = 20'
DATUM:	
HORIZ.:	
VERT.:	
FUSS & O'NEILL 1550 MAIN STREET, SUITE 400 413.452.0445 www.fandob.com	
CITY OF GARDNER LANDSCAPE PLAN LEO DRIVE RECREATION FACILITIES PHASE 1 CONSTRUCTION DOCUMENT PLAN SET GARDNER MASSACHUSETTS	
PROJ. No.: 20100564.P30 DATE: 06/17/2020	
L1.11	

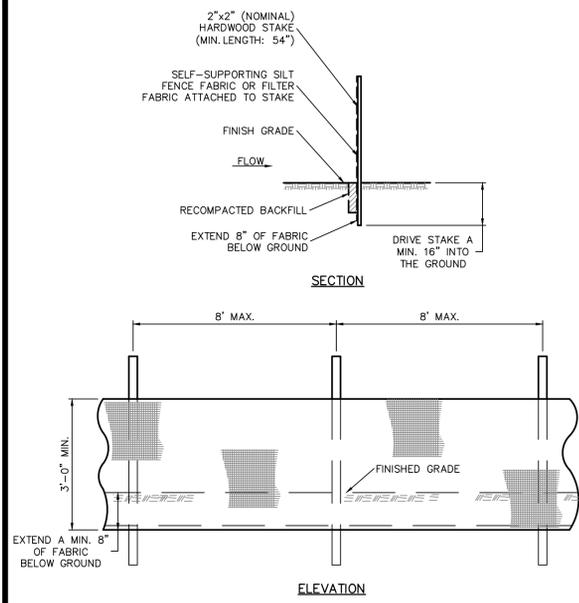
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 LAYER STATE:



MAP 37 PARCEL 35A-35
 CITY OF GARDNER
 BK. 59035 PG. 232
 PLAN BK. 935 PG. 123
 PARCEL 1

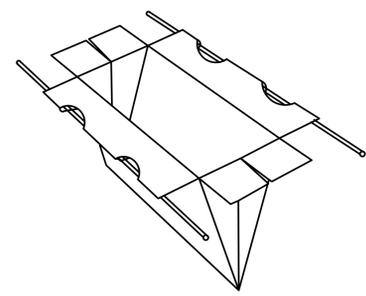
MAP 37 PARCEL 35A-35
 CITY OF GARDNER
 BK. 59035 PG. 232
 PLAN BK. 935 PG. 123
 PARCEL 1

 <p>06/23/2020</p>	<p>SCALE: HORZ.: 1" = 20' VERT.: 1" = 20' DATUM: NAD 83 VERT.: 1" = 20'</p> 
 <p>FUSS & O'NEILL 1550 MAIN STREET, SUITE 400 413.452.0445 www.fandn.com</p>	
<p>CITY OF GARDNER LANDSCAPE PLAN LEO DRIVE RECREATION FACILITIES PHASE 1 CONSTRUCTION DOCUMENT PLAN SET GARDNER MASSACHUSETTS</p>	
<p>PROJ. No.: 20100564.P30 DATE: 06/17/2020</p>	
L1.12	



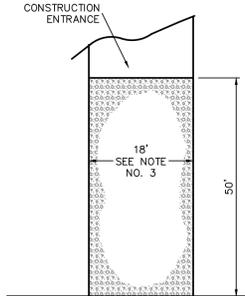
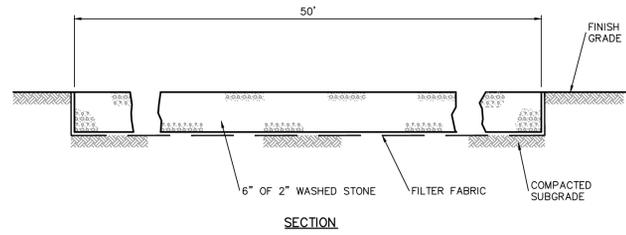
SILT FENCE NOTES:
 1.) INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
 2.) SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE SPECIFICATIONS.

1 SILT FENCE
 SCALE: N.T.S.



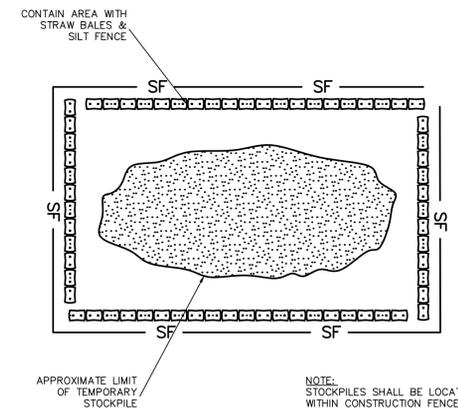
NOTES:
 1. SIZED TO FIT ANY SIZE OR SHAPE CATCH BASIN.
 2. ALL SEAMS DOUBLE STITCHED.
 3. PERMEABILITY - REGULAR FLOW SILTSACK - 40 gal./min./sq. ft.
 HI - FLOW SILTSACK - 200 gal./min./sq. ft.

2 CATCH BASIN SILT SACK
 SCALE: N.T.S.

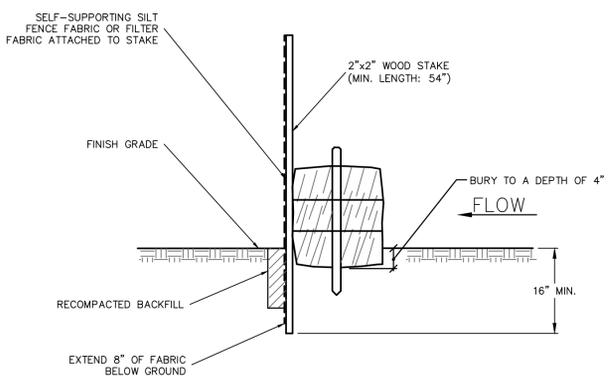


NOTES:
 1.) MAINTAIN ANTI-TRACKING APRON IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
 2.) ADJACENT ROADWAY SHALL BE SWEEP DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.
 3.) WIDTH OF APRON SHALL NOT BE LESS THAN WIDTH OF INGRESS OR EGRESS.

3 CONSTRUCTION ENTRANCE
 SCALE: N.T.S.



4 TEMPORARY SOIL STOCKPILE
 SCALE: N.T.S.



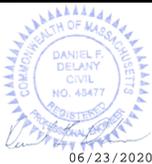
X SILT FENCE BACKED W/ STRAW BALES
 SCALE: N.T.S.

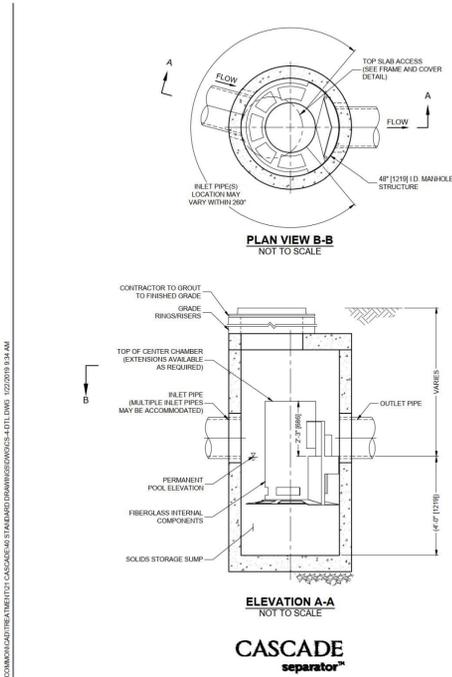
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 LAYER STATE:

 <p>FUSS & O'NEILL 1550 MAIN STREET, SUITE 400 WILMINGTON, MA 01895 413.452.0445 www.fandob.com</p>	<p>CITY OF GARDNER CONSTRUCTION DETAILS LEO DRIVE RECREATION FACILITIES PHASE 1 CONSTRUCTION DOCUMENT PLAN SET GARDNER MASSACHUSETTS</p>
<p>SCALE: HORIZ.: 1" = 60' VERT.: DATUM: HORIZ.: VERT.: 60 30 0 60 GRAPHIC SCALE</p>	<p>DESIGNER REVIEWER No. DATE DESCRIPTION</p>
 <p>06/23/2020</p>	
<p>PROJ. No.: 20100564.P30 DATE: 06/17/2020</p>	
<p>C3.00</p>	



CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)

GENERAL NOTES

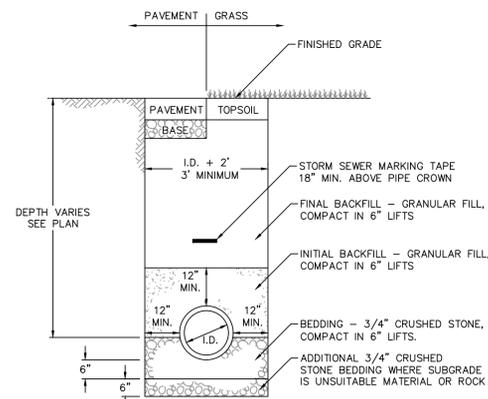
- CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE: www.contech.com
- CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO H20-10 LOAD RATING, ASSUMING EARTH COVER OF 2' (2.0), AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M240 AND BE CAST WITH THE CONTECH LOGO.
- CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C493 AND AASHTO LOAD FACTOR DESIGN METHOD.
- ALTERNATE UNITS ARE SHOWN IN MILLIMETERS (mm).

INSTALLATION NOTES

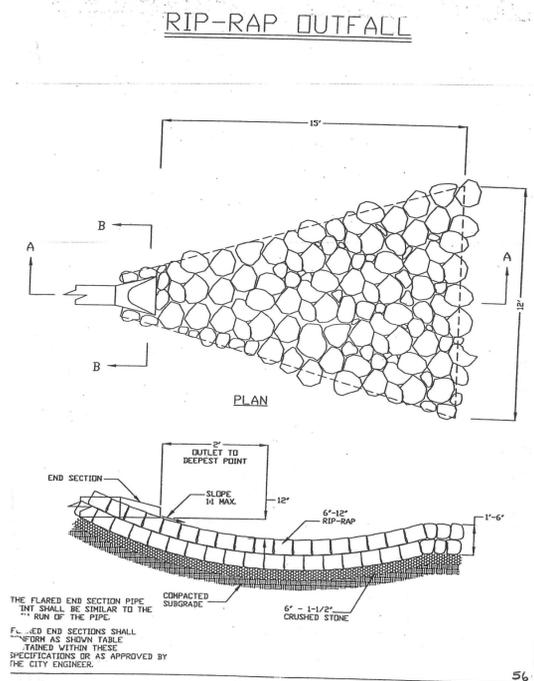
- ANY SUBGRADE BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPES. MATCH PIPE JOINTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



CS-4
CASCADE SEPARATOR
STANDARD DETAIL



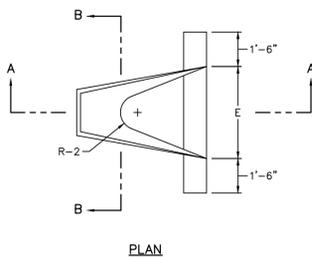
NOTE:
DETAIL SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. INSTALLATION OF STORMWATER DRAINAGE SHALL BE COORDINATED WITH THE CITY OF GARDNER DEPARTMENT OF PUBLIC WORKS.



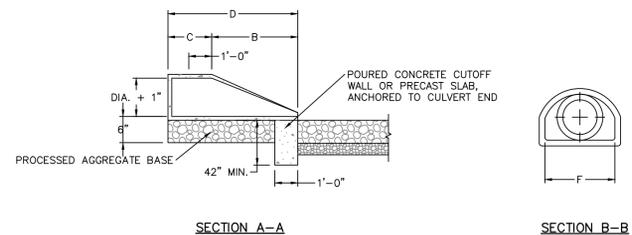
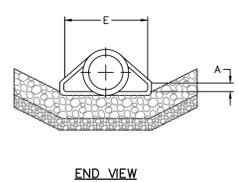
**4 CITY OF GARDNER DETAIL
RIP RAP OUTFALL
SCALE: N.T.S.**

**1 STORMWATER TREATMENT SYSTEM (CS-4 CASCADE SEPARATOR OR APPROVED EQUAL)
SCALE: N.T.S.**

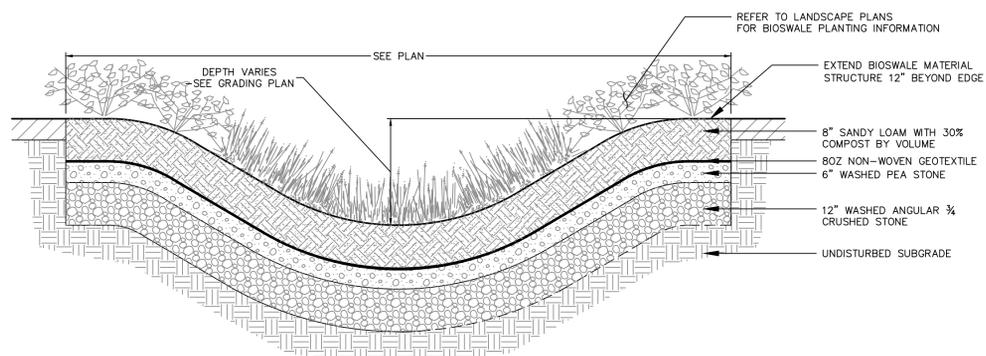
**3 STORMWATER DRAINAGE TRENCH
SCALE: N.T.S.**



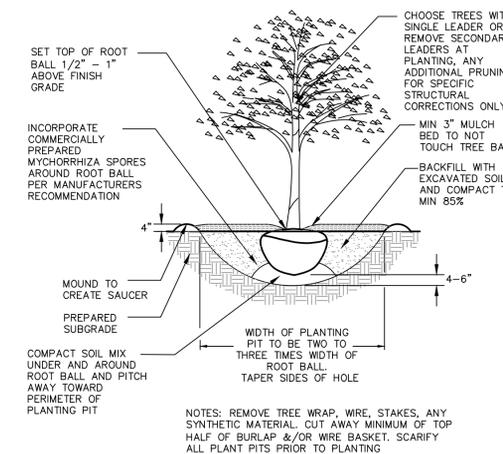
DIA.	A	B	C	D	E	F
12"	4"	2'-0"	6'-0 3/8"	6'-0 3/8"	2'-0"	1'-7 15/16"
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 5/16"
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-5"
24"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	2'-9 3/16"
30"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3'-1"
36"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3'-11 13/16"
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4'-5 7/8"
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	4'-8 1/2"



**5 CONCRETE CULVERT FLARED END
SCALE: N.T.S.**



**6 BIOSWALE
SCALE: N.T.S.**



**7 TREE PLANTING
SCALE: N.T.S.**

DESIGNER REVIEWER

No. DATE

DESCRIPTION

6/23/2020

SCALE: HORZ.: 1" = 60'
VERT.: 1" = 60'

DATUM: VERT.: 60 30 0 60

GRAPHIC SCALE

FUSS & O'NEILL

1550 MAIN STREET, SUITE 400
413-452-0445
www.fandoh.com

CITY OF GARDNER

CONSTRUCTION DETAILS

LEO DRIVE RECREATION FACILITIES PHASE 1
CONSTRUCTION DOCUMENT PLAN SET
GARDNER MASSACHUSETTS

PROJ. No.: 20100564.P30
DATE: 06/17/2020

C3.02

