LOT RESERVED
FOR FUTURE
DEVELOPMENT

SCOTCH ROAD
COUNTY ROUTE No. 611
R.O.W. WIDTH VARIES

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 feet

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East ● Princeton, NJ 08540 ● 609-987-2323
211 Bayberry Drive ● Cape May Court House, NJ 08210 ● 609-465-2600
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No. 24GA28271300 - Since 1894 -

OVERALL SITE UTILITY PLAN NORTH
OF
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 100'
MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
DATE 12/16/20		45051–410–21	203–A–1	CE-58
CHECKED BY BRP	PAGE		203–B–1	
DATE 12/16/20				

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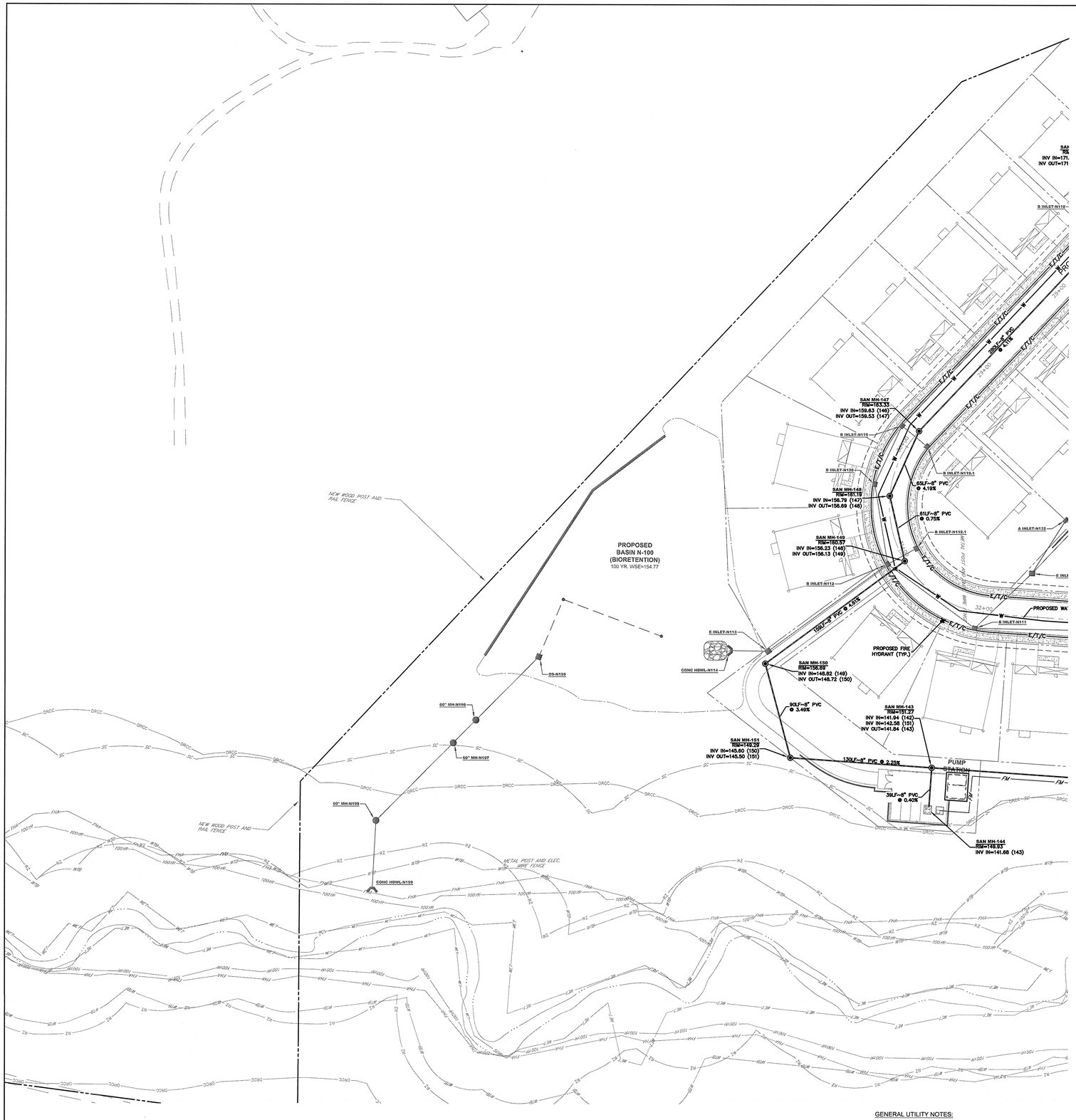
PROPOSED
BASIN N-100
(BIORETENTION)
100 YR. WSE=154.77
NEW WOOD POST AND RAIL FENCE
NEW WOOD POST AND RAIL FENCE
METAL POST AND ELEC. WIRE FENCE
SAN MH-147
RIM=163.33
INV IN=159.63 (146)
INV OUT=159.53 (147)
SAN MH-148
RIM=161.19
INV IN=156.79 (147)
INV OUT=156.69 (148)
SAN MH-149
RIM=160.57
INV IN=156.23 (148)
INV OUT=156.13 (149)
SAN MH-150
RIM=156.69
INV IN=148.82 (149)
INV OUT=148.72 (150)
SAN MH-143
RIM=151.27
INV IN=141.94 (142)
INV IN=142.58 (151)
INV OUT=141.84 (143)
SAN MH-151
RIM=148.29
INV IN=145.60 (150)
INV OUT=145.50 (151)
SAN MH-144
RIM=148.93
INV IN=141.68 (143)
B INLET-N110
B INLET-N115
B INLET-N120
B INLET-N119.1
B INLET-N112.1
B INLET-N112
B INLET-N111
A INLET-N132
E INLET-N113
CONC HDWL-N114
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED WA
PUMP STATION
FM
FM
65LF~8" PVC @ 4.19%
51LF~8" PVC @ 0.75%
156LF~8" PVC @ 4.51%
90LF~8" PVC @ 3.46%
130LF~8" PVC @ 2.25%
39LF~8" PVC @ 0.40%
60" MH-N196
60" MH-N197
60" MH-N198
CONC HDWL-N199
OS-N195
E/T/C
W
SC
DRCC
WL
WB
WB1
WB2
WB3
WB4
WB5
WB6
WB7
WB8
WB9
WB10
WB11
WB12
WB13
WB14
WB15
WB16
WB17
WB18
WB19
WB20
WB21
WB22
WB23
WB24
WB25
WB26
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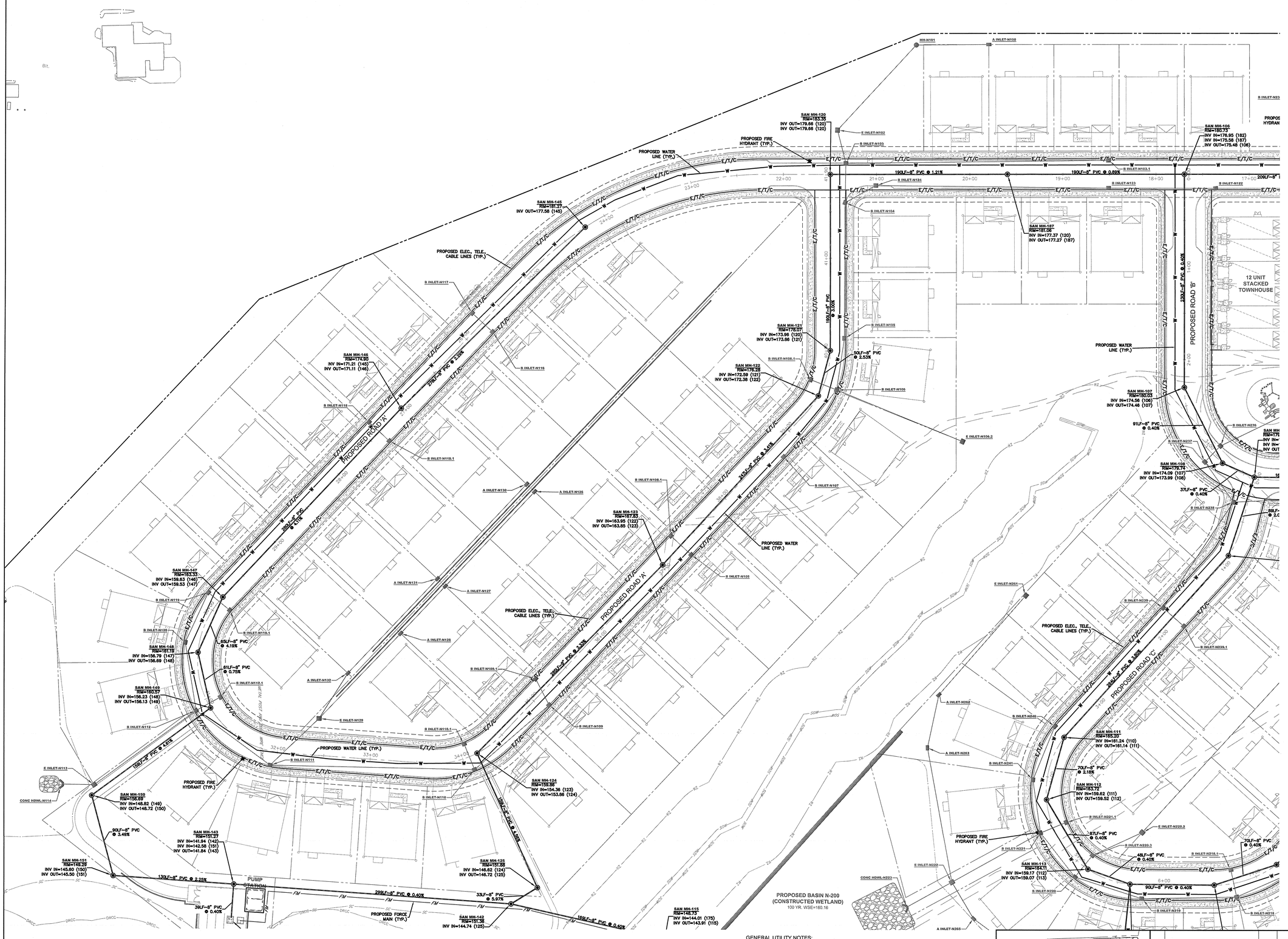
WB37
WB38
WB39
WB40


PROPOSED ROAD 'A'
PROPOSED ROAD 'A1'
PROPOSED ROAD 'B'
PROPOSED ROAD 'C'
12 UNIT STACKED TOWNHOUSE
PUMP STATION
PROPOSED BASIN N-200 (CONSTRUCTED WETLAND) 100 YR. WSE=160.16
SAN MH-120 RIM=183.35 INV OUT=179.66 (120) INV OUT=179.86 (120)
SAN MH-106 RIM=180.73 INV IN=176.95 (182) INV IN=175.58 (187) INV OUT=175.48 (106)
SAN MH-107 RIM=181.06 INV IN=177.37 (120) INV OUT=177.27 (107)
SAN MH-145 RIM=181.27 INV OUT=177.58 (145)
SAN MH-146 RIM=174.05 INV IN=171.21 (145) INV OUT=171.11 (146)
SAN MH-121 RIM=178.07 INV IN=173.96 (120) INV OUT=173.86 (121)
SAN MH-122 RIM=178.28 INV IN=172.59 (121) INV OUT=172.38 (122)
SAN MH-107 RIM=180.03 INV IN=174.56 (106) INV OUT=174.46 (107)
SAN MH-147 RIM=183.33 INV IN=159.63 (146) INV OUT=159.53 (147)
SAN MH-148 RIM=181.19 INV IN=156.79 (147) INV OUT=156.69 (148)
SAN MH-149 RIM=180.37 INV IN=156.23 (148) INV OUT=156.13 (149)
SAN MH-150 RIM=156.68 INV IN=148.82 (149) INV OUT=148.72 (150)
SAN MH-151 RIM=148.29 INV IN=145.60 (150) INV OUT=145.50 (151)
SAN MH-143 RIM=151.27 INV IN=141.94 (142) INV IN=142.56 (151) INV OUT=141.84 (143)
SAN MH-123 RIM=167.83 INV IN=163.95 (122) INV OUT=163.85 (123)
SAN MH-124 RIM=159.56 INV IN=154.36 (123) INV OUT=153.86 (124)
SAN MH-125 RIM=157.38 INV IN=146.82 (124) INV OUT=146.72 (125)
SAN MH-142 RIM=151.36 INV IN=144.74 (125)
SAN MH-115 RIM=148.73 INV IN=144.01 (175) INV OUT=143.91 (115)
SAN MH-111 RIM=185.20 INV IN=181.24 (110) INV OUT=181.14 (111)
SAN MH-112 RIM=183.72 INV IN=159.62 (111) INV OUT=159.52 (112)
SAN MH-113 RIM=184.11 INV IN=159.17 (112) INV OUT=159.07 (113)
SAN MH-108 RIM=179.74 INV IN=174.09 (107) INV OUT=173.99 (108)
PROPOSED WATER LINE (TYP.)
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED ELEC., TELE., CABLE LINES (TYP.)
PROPOSED FORCE MAIN (TYP.)
190LF-8" PVC @ 1.21%
190LF-8" PVC @ 0.89%
209LF-8" P
330LF-8" PVC @ 0.40%
330LF-8" PVC @ 3.00%
190LF-8" PVC @ 2.26%
50LF-8" PVC @ 2.53%
91LF-8" PVC @ 0.40%
37LF-8" PVC @ 0.40%
89LF-8" @ 2.0
307LF-8" PVC @ 3.40%
295LF-8" PVC @ 3.33%
65LF-8" PVC @ 4.19%
51LF-8" PVC @ 0.75%
150LF-8" PVC @ 4.57%
90LF-8" PVC @ 3.46%
130LF-8" PVC @ 2.25%
39LF-8" PVC @ 0.40%
299LF-8" PVC @ 0.40%
33LF-8" PVC @ 5.97%
168LF-8" PVC @ 0.40%
70LF-8" PVC @ 2.18%
87LF-8" PVC @ 0.40%
48LF-8" PVC @ 0.40%
70LF-8" PVC @ 0.40%
90LF-8" PVC @ 0.40%
B INLET-N103
B INLET-N103.1
B INLET-N123
B INLET-N122
B INLET-N124
B INLET-N104
B INLET-N105
B INLET-N106.1
B INLET-N106
E INLET-N106.2
B INLET-N107
B INLET-N108.1
B INLET-N117
B INLET-N116
B INLET-N118
B INLET-N118.1
B INLET-N119
B INLET-N119.1
B INLET-N120
B INLET-N112.1
B INLET-N112
B INLET-N111
B INLET-N110
B INLET-N110.1
B INLET-N109.1
B INLET-N109
E INLET-N113
CONC HDWL-N114
E INLET-N102
B INLET-N103
B INLET-N236
B INLET-N237
B INLET-N238
B INLET-N239.1
B INLET-N239
B INLET-N240
B INLET-N241
B INLET-N221
B INLET-N220.3
B INLET-N221.1
B INLET-N220.2
B INLET-N218.1
B INLET-N219
B INLET-N218
E INLET-N222
CONC HDWL-N223
B INLET-N232
E INLET-N261
A INLET-N262
A INLET-N263
A INLET-N265
A INLET-N100
A INLET-N130
A INLET-N125
A INLET-N131
A INLET-N127
A INLET-N132
A INLET-N128
MH-N101
B INLET-N23
PROPOSED HYDRAN
PROPOSED WATER LINE (TYP.)
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED ELEC., TELE., CABLE LINES (TYP.)
PROPOSED WATER LINE (TYP.)
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED ELEC., TELE., CABLE LINES (TYP.)
PROPOSED FORCE MAIN (TYP.)
DRCC
SCMW
WTM
WET
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
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R24
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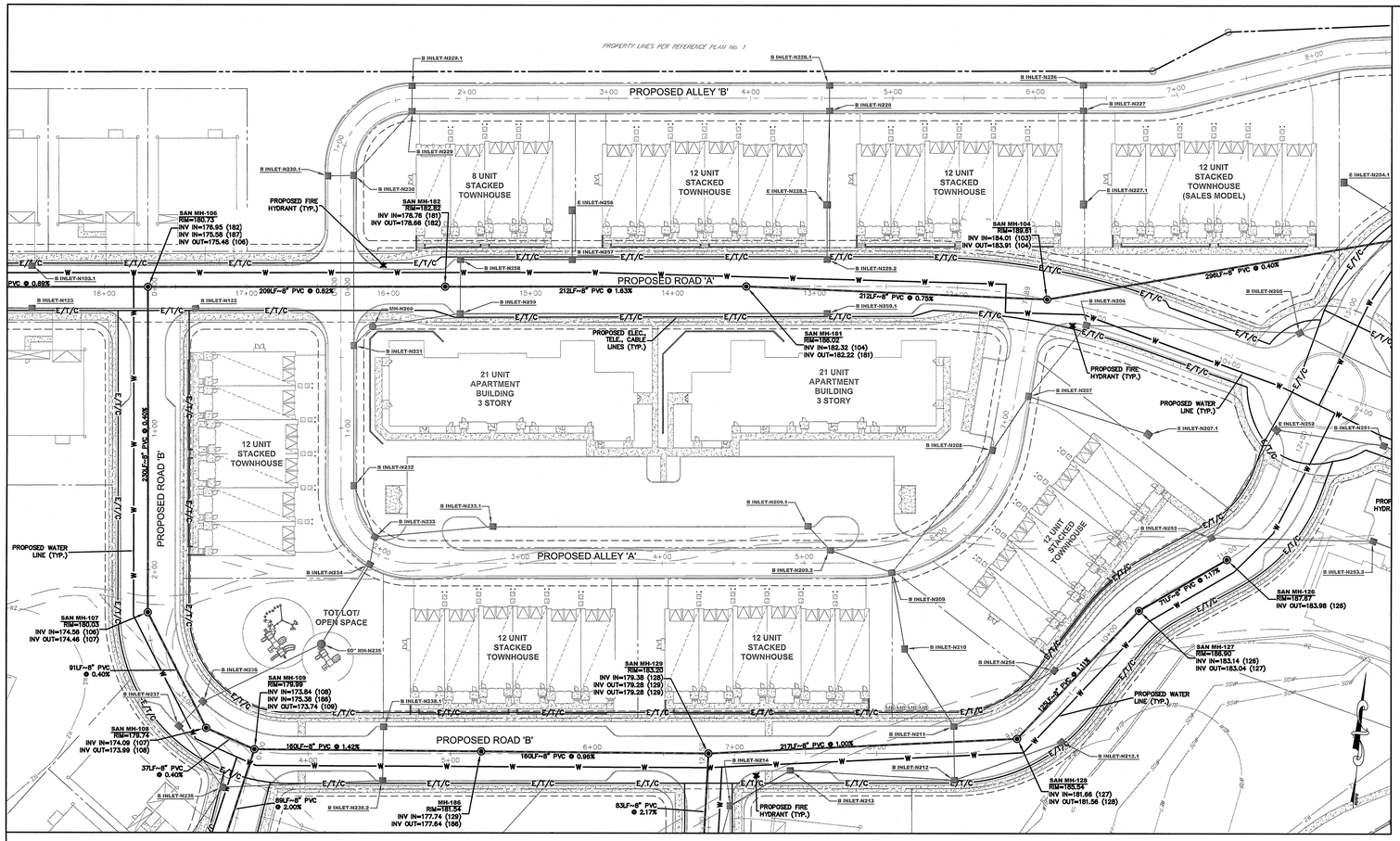
R37
R38
R39
R40



LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- 'D' INLET
- 'E' INLET
- 'A' INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TREE LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- WET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
- SGW — STATE OPEN WATER BOUNDARY
- RZ — RIPARIAN ZONE BOUNDARY
- FLOOD HAZARD BOUNDARY
- WATER EDGE
- 100 YEAR FLOODPLAIN BOUNDARY
- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- D/C — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED DRAINAGE AND UTILITY LEGEND:

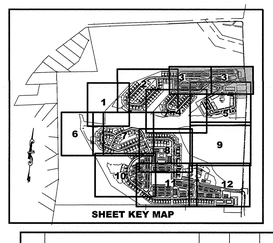
- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
- STORM DRAINAGE MANHOLE
- STORM DRAINAGE INLET
- STORM HEADWALL
- STORM DRAINAGE PIPING
- W — WATER LINE
- G — GAS SERVICE LINE
- E/T/C — UNDERGROUND ELECTRIC/TELEPHONE/CATV
- PERFORATED UNDERDRAIN (W/ CLEANOUTS)
- FIRE HYDRANT

GENERAL UTILITY NOTES:

1. ALL UTILITIES SHOWN ARE FOR INFORMATION/COORDINATION ONLY. FINAL UTILITY LOCATIONS, SIZING, AND CONFIGURATION SHALL BE SUBJECT TO FINAL APPROVAL OF UTILITY AUTHORITIES HAVING JURISDICTION.
2. WASTEWATER SHALL BE CONVEYED TO EWING-LAWRENCE SEWER AUTHORITY (ELSA) FOR TREATMENT & DISPOSAL.
3. VALVES SHALL BE PROVIDED AT EVERY JUNCTION. THE NUMBER OF VALVES SHALL NOT BE LESS THAN N-1, WHERE "N" IS THE NUMBER OF PIPES AT THE NODE.
4. VALVING SHALL BE PROVIDED IN ACCORDANCE WITH RSIS.
5. PROVIDE MINIMUM 10 FT. HORIZONTAL AND 18" VERTICAL CLEARANCE BETWEEN SANITARY AND WATER MAIN PIPING, WHERE THE WATER SHALL BE ABOVE THE SANITARY SEWER LINE.

ABBREVIATIONS:

FG	=	FINISHED GRADE	FC	=	FLUSH CURB
GR	=	TOP OF GRATE	F.F.E.	=	FINISHED FIRST FLOOR
BC	=	BOTTOM OF CURB	F.B.E.	=	FINISHED BASEMENT FLOOR
TC	=	TOP OF CURB	R1-1	=	STOP SIGN
DC	=	DEPRESSED CURB	R6-1	=	ONE WAY SIGN
PT	=	POINT OF TANGENT	R4-7a	=	MEDIAN SIGN
PC	=	POINT OF CURVE	52E	=	TYPE E INLET
52B	=	TYPE B INLET	VB	=	VALVE BOX
TP	=	TOP OF PIPE	WV	=	WATER VALVE
TS	=	TOP OF STRUCTURE	GV	=	GAS VALVE
UGS	=	UNDERGROUND STONE STORAGE	TW	=	TOP OF WALL
			BW	=	BOTTOM OF WALL
C.C.	=	CURB CUT	RIM	=	TOP OF MANHOLE
STM	=	STORM SEWER	SAN	=	SANITARY SEWER
MH	=	MANHOLE	INL	=	INLET
OS	=	OUTLET STRUCTURE	HDWL	=	HEADWALL



SHEET KEY MAP

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
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- Since 1894 -

SITE UTILITY PLAN 3
OF
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
DATE 12/16/20			203-A-1 203-B-1	CE-61
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DATE 12/16/20				

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PROPOSED ROAD 'B'

PROPOSED ROAD 'C'

PROPOSED ROAD 'A'

INV IN=173.84 (108)
INV IN=175.38 (186)
INV OUT=173.74 (109)

INV OUT=179.28 (129)

PROPOSED WATER LINE (TYP.)

SAN MH-108
RIM=179.74
INV IN=174.09 (107)
INV OUT=173.99 (108)

37LF=8" PVC @ 0.40%

180LF=8" PVC @ 1.42%

160LF=8" PVC @ 0.98%

217LF=8" PVC @ 1.00%

PROPOSED FIRE HYDRANT (TYP.)

SAN MH-128
RIM=185.54
INV IN=181.66 (127)
INV OUT=181.56 (128)

99LF=8" PVC @ 2.00%

MH-185
RIM=187.54
INV IN=177.74 (129)
INV OUT=177.64 (186)

83LF=8" PVC @ 2.17%

SAN MH-110
RIM=176.75
INV IN=171.96 (109)
INV OUT=171.27 (110)

SAN MH-130
RIM=181.18
INV IN=177.49 (129)
INV OUT=177.32 (130)

PROPOSED ELEC., TELE., CABLE LINES (TYP.)

265LF=8" PVC @ 3.60%

SAN MH-111
RIM=185.20
INV IN=161.24 (110)
INV OUT=161.14 (111)

70LF=8" PVC @ 2.18%

SAN MH-112
RIM=163.72
INV IN=159.62 (111)
INV OUT=159.52 (112)

87LF=8" PVC @ 0.40%

PROPOSED FIRE HYDRANT (TYP.)

SAN MH-113
RIM=164.11
INV IN=159.17 (112)
INV OUT=159.07 (113)

48LF=8" PVC @ 0.40%

70LF=8" PVC @ 0.40%

90LF=8" PVC @ 0.40%

153LF=8" PVC @ 0.61%

SAN MH-131
RIM=170.19
INV IN=162.34 (130)
INV OUT=162.24 (131)

SAN MH-132
RIM=167.73
INV IN=161.35 (131)
INV OUT=161.30 (132)

SAN MH-133
RIM=166.00
INV IN=161.02 (132)
INV OUT=160.92 (133)

SAN MH-134
RIM=164.94
INV IN=160.55 (133)
INV OUT=158.78 (134)

140LF=8" PVC @ 0.50%

PROPOSED BASIN N-200
(CONSTRUCTED WETLAND)
100 YR. WSE=160.16

PROPOSED BASIN N-300
(BIORETENTION)
100 YR. WSE=169.81

SAN MH-115
RIM=168.73
INV IN=144.01 (175)
INV OUT=143.91 (110)

86LF=8" PVC @ 0.40%

SAN MH-175
RIM=150.91
INV IN=144.45 (174)
INV OUT=144.35 (175)

265LF=8" PVC @ 0.40%

SAN MH-174
RIM=150.11
INV IN=145.61 (114)
INV OUT=145.51 (174)

SAN MH-114
RIM=150.19
INV IN=149.50 (134)
INV OUT=146.38 (141)
INV OUT=146.28 (114)

PROPOSED FORCE MAIN (TYP.)

214LF=8" PVC @ 0.40%

SAN MH-141
RIM=155.32
INV IN=147.34 (179)
INV OUT=147.24 (141)

SAN MH-179
RIM=158.15
INV IN=149.05 (178)
INV OUT=148.25 (179)

182LF=8" PVC @ 0.50%

SAN MH-178
RIM=168.92
INV IN=162.15 (177)
INV OUT=162.05 (178)

289LF=8" PVC @ 4.33%

102LF=8" PVC @ 1.20%

SAN MH-177
RIM=171.41
INV IN=163.47 (
INV IN=164.50 (
INV OUT=163.37

PROPOSED FORCE MAIN (TYP.)

SAN MH-184
RIM=171.63
INV OUT=167.21 (184)

212LF=8" PVC @ 0.50%

SAN MH-185
RIM=172.45
INV IN=168.15 (184)
INV OUT=164.95 (185)

30LF=8" PVC @ 1.46%

141LF=8" PVC @ 0.40%

COMMUNITY GARDEN

52 UNIT APARTMENT BUILDING 4½ STORY

PROPOSED WATER LINE (TYP.)

PROPOSED FIRE HYDRANT (TYP.)

PROPOSED ELEC., TELE., CABLE LINES (TYP.)

OS-N286

OS-N295

OS-N305

60" MH-N297

60" MH-N298

60" MH-N307

60" MH-N308

CONC HDWL-N299

CONC HDWL-N313

CONC HDWL-N331

CONC HDWL-N395

E INLET-N105.2
B INLET-N105.1
B INLET-N107
B INLET-N108
E INLET-N251
A INLET-N262
B INLET-N240
A INLET-N263
B INLET-N241
E INLET-N222
CONC HDWL-N223
B INLET-N221
B INLET-N220
A INLET-N266
A INLET-N264
B INLET-N237
B INLET-N238.1
B INLET-N232
B INLET-N238.2
B INLET-N239
B INLET-N239.1
E INLET-N220.1
B INLET-N221.1
E INLET-N220.2
B INLET-N220.3
B INLET-N218.1
B INLET-N219
B INLET-N218
B INLET-N217.1
B INLET-N217
B INLET-N215.1
B INLET-N216
B INLET-N211
B INLET-N214
B INLET-N212
B INLET-N212.1
B INLET-N213
B INLET-N215
B INLET-N308
B INLET-N312
E INLET-N313
E INLET-N311
E INLET-N320
E INLET-N339

LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- "B" INLET
- "E" INLET
- "A" INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TREE LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- WET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
- SGW — STATE OPEN WATER BOUNDARY
- RZ — RIPARIAN ZONE BOUNDARY
- FHA — FLOOD HAZARD BOUNDARY
- WOE — WATER EDGE
- 100YR — 100 YEAR FLOODPLAIN BOUNDARY
- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- D.C. — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- 10 — PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED DRAINAGE AND UTILITY LEGEND:

- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
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GRAPHIC SCALE

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(IN FEET)
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SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
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van note-harvey associates, inc.
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103 College Road East • Princeton, NJ 08540 • 609-987-2323
211 Bayberry Drive • Cape May Court House, NJ 08210 • 609-465-2600
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SITE UTILITY PLAN 4
of
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
MERCER CO., N.J.
SCALE 1" = 40'
DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
DATE 12/16/20			203-A-1	
CHECKED BY BRP	PAGE	45051-410-21	203-B-1	CE-62
DATE 12/16/20				

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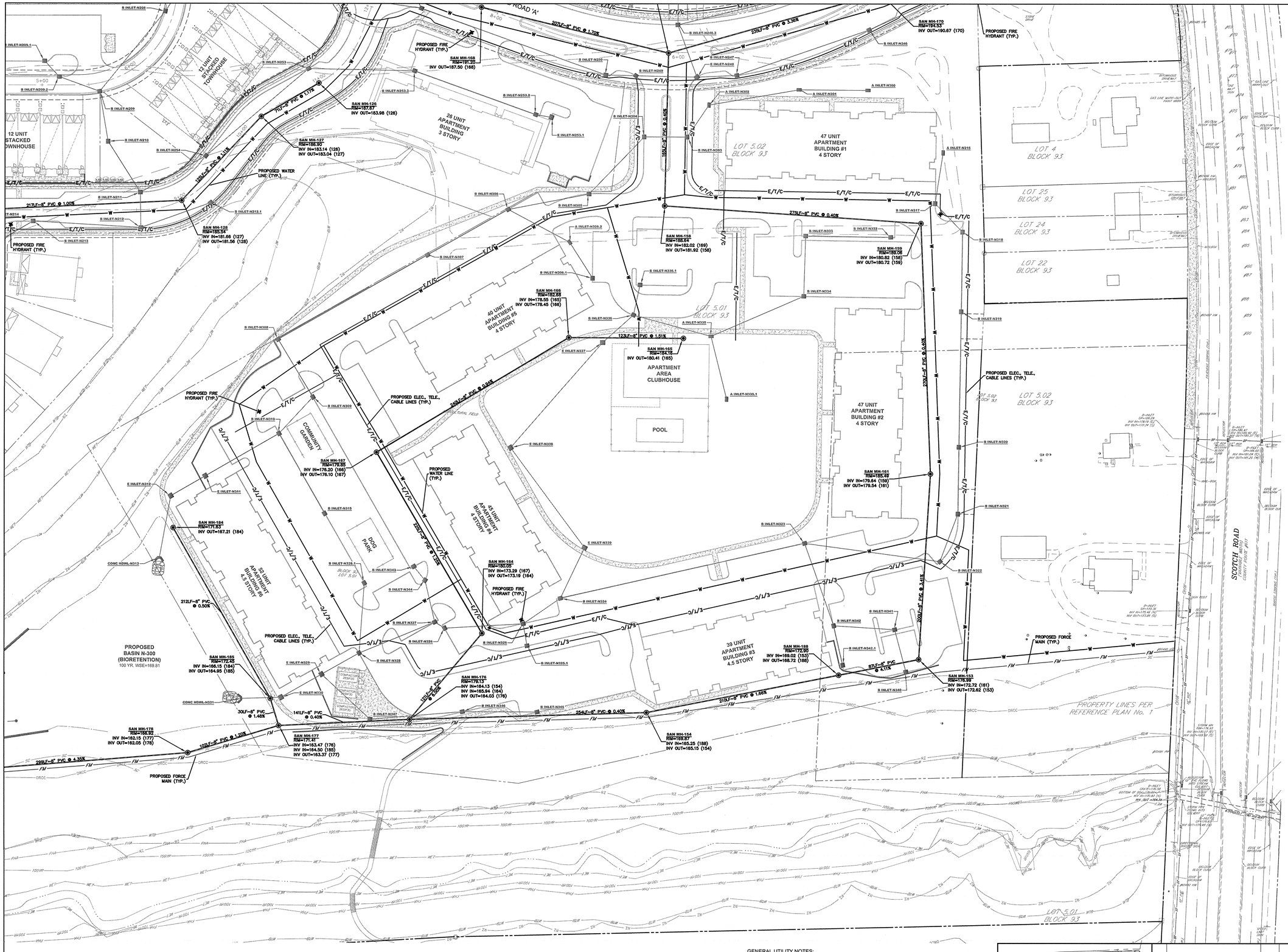

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- WATER VALVE
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- SIGN
- TREE LOCATION
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- FHA — FLOOD HAZARD BOUNDARY
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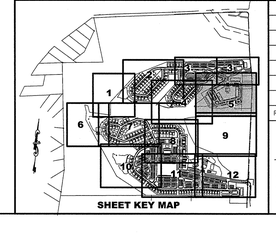

SHEET KEY MAP

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- Since 1894 -

SITE UTILITY PLAN 5
OF
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1	SHEET No. CE-63
CHECKED BY BRP DATE 12/16/20	PAGE			

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LOT RESERVED FOR FUTURE DEVELOPMENT

SCOTCH ROAD
(COUNTY ROUTE No. 611
R.O.W. WIDTH VARIES)

PROPOSED FORCE MAIN (TYP.)

PROPOSED WATER LINE (TYP.)

PROPOSED FIRE HYDRANT (TYP.)

PROPOSED ELEC., TELE., CABLE LINES (TYP.)

PROPOSED ALLEY 'A'

PROPOSED ALLEY 'B'

PROPOSED ALLEY 'C'

PROPOSED ALLEY 'D'

PROPOSED ALLEY 'E'

PROPOSED ALLEY 'F'

PROPOSED ALLEY 'G'

PROPOSED ROAD 'A'

PROPOSED ROAD 'B'

PROPOSED ROAD 'C'

PROPOSED ROAD 'D'

PROPOSED ROAD 'E'

PROPOSED ROAD 'F'

PROPOSED ROAD 'G'

PROPOSED SOUTH REC PROJECT LOT

PROPOSED BASIN N-2/D (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-4 (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-5 (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-6 (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-7 (CONSTRUCTED WETLAND)

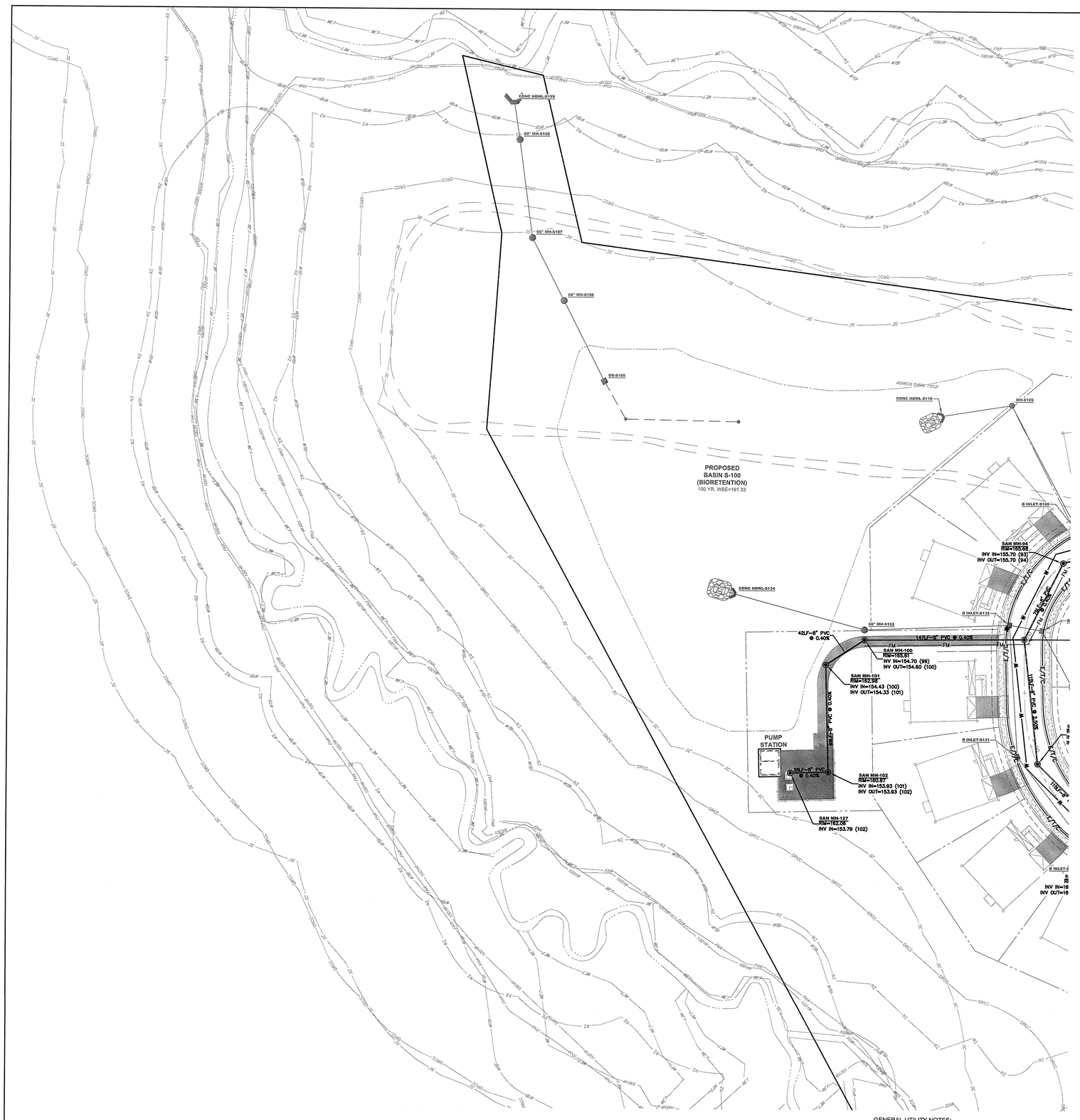
PROPOSED BASIN S-2/W-8 (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-9 (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-10 (CONSTRUCTED WETLAND)

PROPOSED BASIN S-2/W-11 (CONSTRUCTED WETLAND)

PROPOSED BASIN



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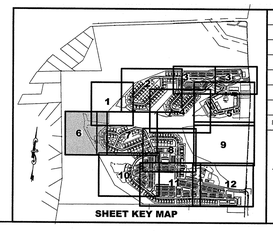

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SITE UTILITY PLAN 6
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP MERCER CO., N.J.
SCALE 1"= 40' DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1	SHEET No. CE-65
CHECKED BY BRP DATE 12/16/20	PAGE			

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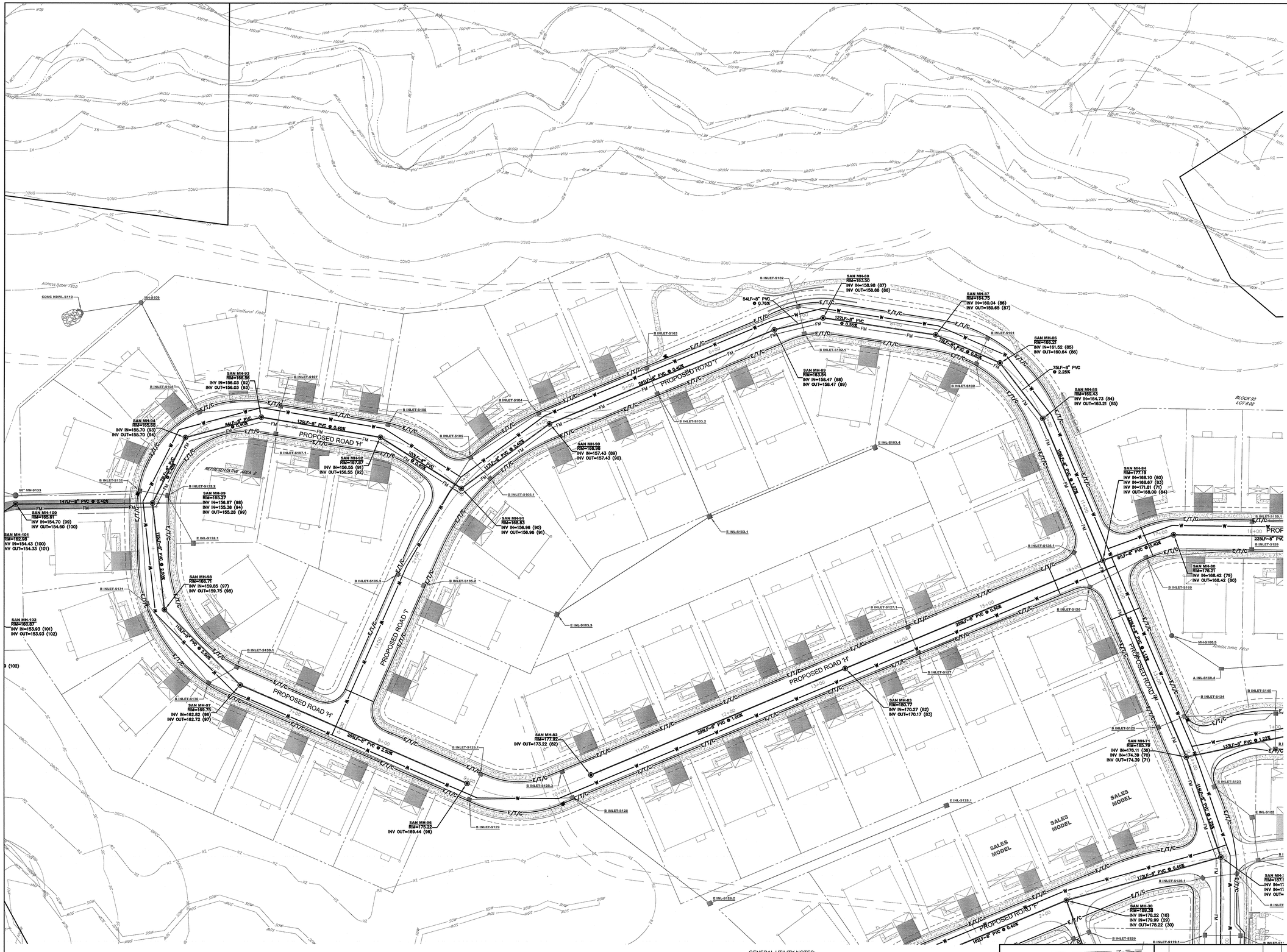

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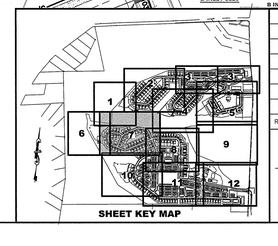

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SITE UTILITY PLAN 7
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'
MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No.	FILE No. 203-A-1 203-B-1	SHEET No. CE-66
CHECKED BY BRP DATE 12/16/20	PAGE	45051-410-21		

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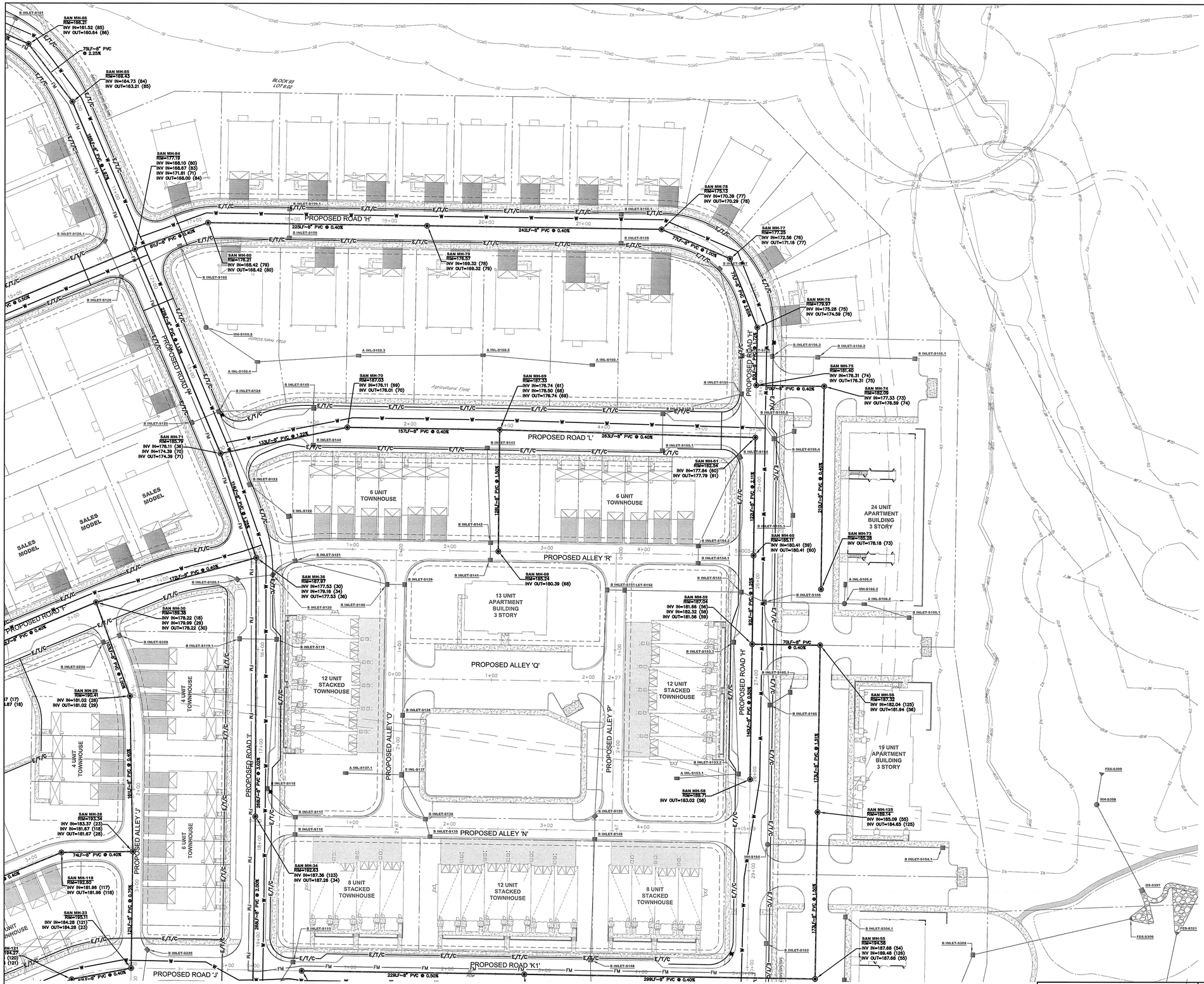
PROPOSED ROAD 'H'
PROPOSED ROAD 'I'
PROPOSED ROAD 'J'
PROPOSED ROAD 'K1'
PROPOSED ROAD 'L'
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PROPOSED ALLEY 'O'
PROPOSED ALLEY 'P'
PROPOSED ALLEY 'Q'
PROPOSED ALLEY 'R'
6 UNIT TOWNHOUSE
4 UNIT TOWNHOUSE
8 UNIT STACKED TOWNHOUSE
12 UNIT STACKED TOWNHOUSE
13 UNIT APARTMENT BUILDING 3 STORY
24 UNIT APARTMENT BUILDING 3 STORY
19 UNIT APARTMENT BUILDING 3 STORY
SALES MODEL
Agricultural Field
SAN MH-86 RIM=188.21 INV IN=161.52 (85) INV OUT=160.64 (86)
SAN MH-85 RIM=189.43 INV IN=164.73 (84) INV OUT=163.21 (85)
SAN MH-84 RIM=177.19 INV IN=168.10 (80) INV IN=168.67 (83) INV IN=171.81 (71) INV OUT=168.00 (84)
SAN MH-80 RIM=176.31 INV IN=168.42 (79) INV OUT=168.42 (80)
SAN MH-79 RIM=176.57 INV IN=169.32 (78) INV OUT=169.32 (79)
SAN MH-78 RIM=175.13 INV IN=170.39 (77) INV OUT=170.29 (78)
SAN MH-77 RIM=177.35 INV IN=172.56 (76) INV OUT=171.16 (77)
SAN MH-76 RIM=178.97 INV IN=175.28 (75) INV OUT=174.59 (76)
SAN MH-75 RIM=181.40 INV IN=176.31 (74) INV OUT=176.31 (75)
SAN MH-74 RIM=182.09 INV IN=177.33 (73) INV OUT=176.59 (74)
SAN MH-73 RIM=185.28 INV OUT=178.18 (73)
SAN MH-70 RIM=187.03 INV IN=176.11 (69) INV OUT=176.01 (70)
SAN MH-69 RIM=187.33 INV IN=176.74 (61) INV IN=178.50 (68) INV OUT=176.74 (69)
SAN MH-61 RIM=182.54 INV IN=177.84 (60) INV OUT=177.79 (61)
SAN MH-60 RIM=185.11 INV IN=180.41 (59) INV OUT=180.41 (60)
SAN MH-59 RIM=187.24 INV IN=181.66 (56) INV IN=182.32 (56) INV OUT=181.56 (59)
SAN MH-58 RIM=189.71 INV OUT=183.02 (58)
SAN MH-56 RIM=187.33 INV IN=182.04 (125) INV OUT=181.94 (56)
SAN MH-55 RIM=194.58 INV IN=187.68 (54) INV IN=189.48 (126) INV OUT=187.68 (55)
SAN MH-125 RIM=189.14 INV IN=185.09 (55) INV OUT=184.65 (125)
SAN MH-75 RIM=185.79 INV IN=176.11 (35) INV IN=174.39 (70) INV OUT=174.39 (71)
SAN MH-68 RIM=185.24 INV OUT=180.39 (68)
SAN MH-36 RIM=187.97 INV IN=177.53 (30) INV IN=178.18 (34) INV OUT=177.53 (36)
SAN MH-30 RIM=189.38 INV IN=178.22 (18) INV IN=179.99 (29) INV OUT=178.22 (30)
SAN MH-29 RIM=190.41 INV IN=181.02 (28) INV OUT=181.02 (29)
SAN MH-28 RIM=193.34 INV IN=183.37 (23) INV IN=181.67 (118) INV OUT=181.67 (28)
SAN MH-118 RIM=192.50 INV IN=181.95 (117) INV OUT=181.96 (118)
SAN MH-23 RIM=195.11 INV IN=184.28 (121) INV OUT=184.28 (23)
SAN MH-34 RIM=192.63 INV IN=187.36 (123) INV OUT=187.28 (34)
B INLET-S101
B INLET-S120.1
B INLET-S121
B INLET-S122
B INLET-S123
B INLET-S124
B INLET-S125
B INLET-S126.1
B INLET-S126
B INLET-S135
B INLET-S136
B INLET-S137
B INLET-S138
B INLET-S139
B INLET-S140
B INLET-S141
B INLET-S142
B INLET-S143
B INLET-S144
B INLET-S145
B INLET-S150
B INLET-S151
B INLET-S152
B INLET-S153
B INLET-S154.1
B INLET-S154.2
B INLET-S155.1
B INLET-S155.4
B INLET-S155.5
B INLET-S156.1
B INLET-S156.2
B INLET-S156.3
B INLET-S157
B INLET-S158
B INLET-S159.1
B INLET-S159.2
B INLET-S160
A INL-S160.1
A INL-S160.2
A INL-S160.3
A INL-S160.4
MH-S160.5
B INLET-S161
B INLET-S162
B INLET-S163
B INLET-S164
B INLET-S165.1
B INLET-S165.2
B INLET-S166
A INL-S166.2
A INL-S166.4
MH-S166.3
B INLET-S105.1
B INLET-S104.1
B INLET-S304.1
B INLET-S308
MH-S164
A INL-S137.1
A INL-S153.1
E INL-S137
E INL-S122
B INLET-S115
B INLET-S116
B INLET-S117
B INLET-S118
B INLET-S119.1
B INLET-S119
B INLET-S120
B INLET-S230
B INLET-S235
B INLET-S239
FES-S305
MH-S398
DS-S307
FES-S309
FES-S321
1+00
2+00
3+00
4+00
0+00
1+00
2+00
2+27
3+00
4+00
1+00
2+00
3+00
4+00
1+00
2+00
3+00
4+00
1+00
2+00

LOT RESERVED
FOR FUTURE
DEVELOPMENT

LOT 6.02
BLOCK 93

LOT 5.01
BLOCK 93

SCOTCH ROAD
(VARIABLE WIDTH)
COUNTY ROUTE #611
PER TAX MAP

100' BLDG. SETBACK

185.7'

188.4'

BARN
HOUSE

UTILITY POLE (TYP.)

CONCRETE PADS

WELL

2-1/2 STORY FRAME DWELLING

SHED

STONE CRUSHED

CONC. WALK

LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- "S" INLET
- "I" INLET
- "A" INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TREE LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- WET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
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- FLOOD HAZARD BOUNDARY
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- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
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PROPOSED LAYOUT LEGEND:

- CURB
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- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
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- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
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- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
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- HANDICAP PARKING SYMBOL
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- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
- STORM DRAINAGE MANHOLE
- STORM DRAINAGE INLET
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- STORM DRAINAGE PIPING
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TC =	TOP OF CURB	R1-1 =	STOP SIGN
DC =	DEPRESSED CURB	R6-1 =	ONE WAY SIGN
PT =	POINT OF TANGENT	R4-7c =	MEDIAN SIGN
PC =	POINT OF CURVE	52E =	TYPE E INLET
52B =	TYPE B INLET	VB =	VALVE BOX
TP =	TOP OF PIPE	WV =	WATER VALVE
TS =	TOP OF STRUCTURE	GV =	GAS VALVE
UGS =	UNDERGROUND STONE STORAGE	TW =	TOP OF WALL
		BW =	BOTTOM OF WALL
C.C. =	CURB CUT	RIM =	TOP OF MANHOLE
S/M =	STORM SEWER	SAN =	SANITARY SEWER
MH =	MANHOLE	INL =	INLET
OS =	OUTLET STRUCTURE	HDWL =	HEADWALL

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 feet

GENERAL UTILITY NOTES:

1. ALL UTILITIES SHOWN ARE FOR INFORMATION/COORDINATION ONLY. FINAL UTILITY LOCATIONS, SIZING, AND CONFIGURATION SHALL BE SUBJECT TO FINAL APPROVAL OF UTILITY AUTHORITIES HAVING JURISDICTION.
2. WASTEWATER SHALL BE CONVEYED TO EWING-LAWRENCE SEWER AUTHORITY (ELSA) FOR TREATMENT & DISPOSAL.
3. VALVES SHALL BE PROVIDED AT EVERY JUNCTION. THE NUMBER OF VALVES SHALL NOT BE LESS THAN N-1, WHERE "N" IS THE NUMBER OF PIPES AT THE NODE.
4. VALVING SHALL BE PROVIDED IN ACCORDANCE WITH RSIS.
5. PROVIDE MINIMUM 10 FT. HORIZONTAL AND 18" VERTICAL CLEARANCE BETWEEN SANITARY AND WATER MAIN PIPING, WHERE THE WATER SHALL BE ABOVE THE SANITARY SEWER LINE.

SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

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Certificate of Authorization No. 24GA28071300
- Since 1894 -

SITE UTILITY PLAN 9
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
DATE 12/16/20			203-A-1	
CHECKED BY BRP	PAGE	45051-410-21	203-B-1	CE-68
DATE 12/16/20				

N:\P\45051\DWG\45051-UT-S-PLT.DWG

V:\P\45051\dwg\45051-UT-S-PLT.dwg, UTL-S-9, 12/14/2020 2:14:41 PM, wvaughn

PROPOSED BASIN S-200-B (DETENTION)
100 YR. WSE=180.24

PROPOSED BASIN S-200-A (CONSTRUCTED WETLAND)
100 YR. WSE=175.40

PROPOSED ROAD 'F'
PROPOSED ROAD 'I'
PROPOSED ROAD 'J'
PROPOSED ALLEY 'J'
PROPOSED ALLEY 'K'
PROPOSED ALLEY 'L'
PROPOSED ALLEY 'M'

12 UNIT STACKED TOWNHOUSE
8 UNIT STACKED TOWNHOUSE
4 UNIT TOWNHOUSE
6 UNIT TOWNHOUSE

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- STORM DRAIN MANHOLE
- "B" INLET
- "I" INLET
- "A" INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
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- ELECTRIC MANHOLE
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- MANHOLE (UNIDENTIFIED)
- SIGN
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- UTILITY POLE
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c.c. = CURB CUT		RIM = TOP OF MANHOLE	
S/M = STORM SEWER		SAN = SANITARY SEWER	
MH = MANHOLE		INL = INLET	
OS = OUTLET STRUCTURE		HDWL = HEADWALL	

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
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- Since 1894 -

SITE UTILITY PLAN 10
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP — MERCER CO., N.J.
SCALE 1" = 40' — DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No.	FILE No. 203-A-1 203-B-1	SHEET No. CE-69
CHECKED BY BRP DATE 12/16/20	PAGE	45051-410-21		

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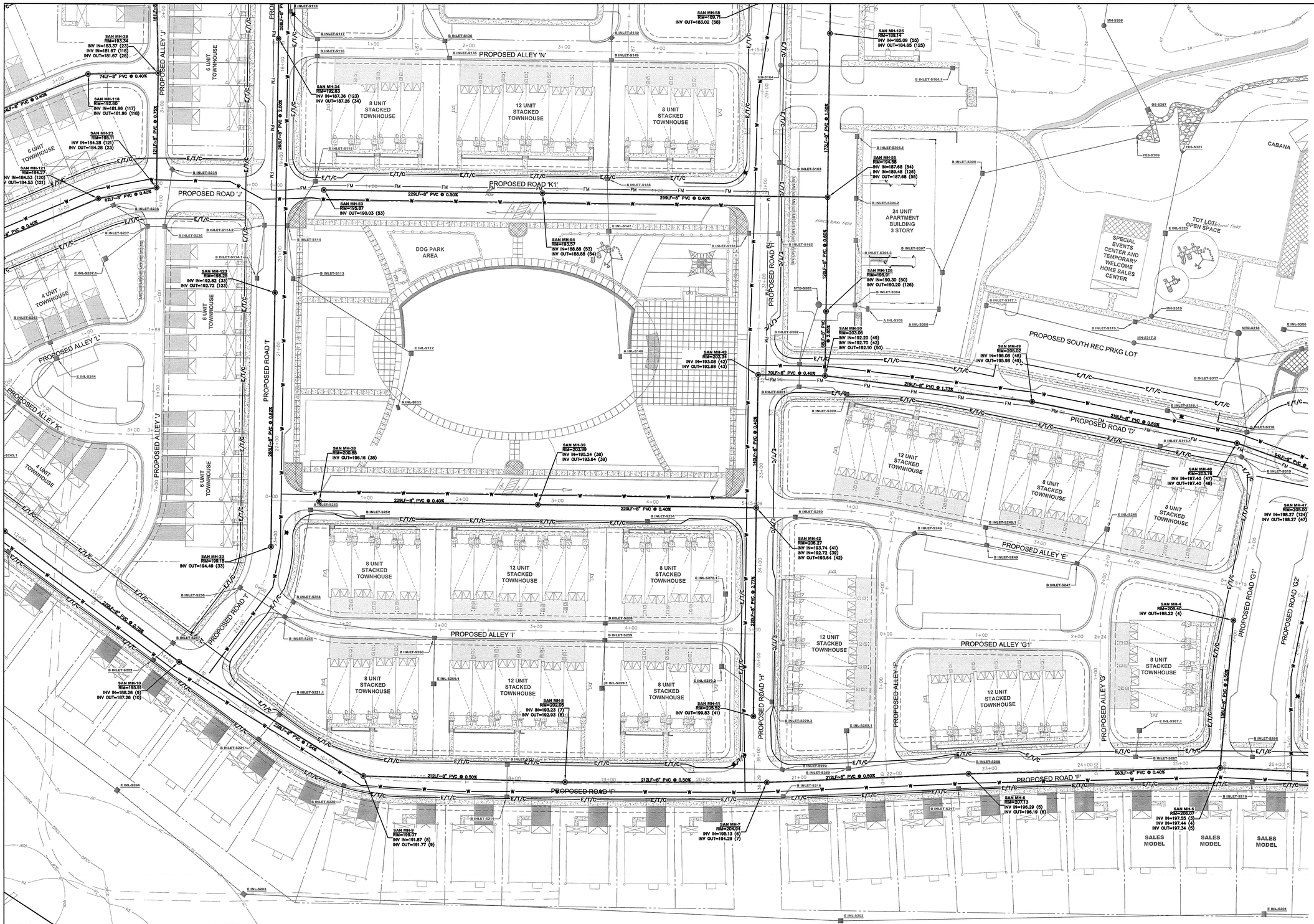
PROPOSED ALLEY 'J'
PROPOSED ALLEY 'L'
PROPOSED ALLEY 'K'
PROPOSED ALLEY 'I'
PROPOSED ALLEY 'E'
PROPOSED ALLEY 'G1'
PROPOSED ROAD 'J'
PROPOSED ROAD 'K1'
PROPOSED ROAD 'I'
PROPOSED ROAD 'H'
PROPOSED ROAD 'F'
PROPOSED ROAD 'D'
PROPOSED ROAD 'G1'
PROPOSED ROAD 'G2'
PROPOSED SOUTH REC PRKG LOT
DOG PARK AREA
TOT LOT/Natural Field OPEN SPACE
SPECIAL EVENTS CENTER AND TEMPORARY WELCOME HOME SALES CENTER
24 UNIT APARTMENT BUILDING 3 STORY
CABANA
4 UNIT TOWNHOUSE
6 UNIT TOWNHOUSE
8 UNIT STACKED TOWNHOUSE
12 UNIT STACKED TOWNHOUSE
SALES MODEL
SAN MH-28 RIM=193.34 INV IN=183.37 (23) INV IN=181.67 (118) INV OUT=181.67 (28)
SAN MH-118 RIM=192.80 INV IN=181.96 (117) INV OUT=181.96 (118)
SAN MH-23 RIM=195.11 INV IN=184.28 (121) INV OUT=184.28 (23)
SAN MH-121 RIM=194.27 INV IN=184.53 (120) INV OUT=184.53 (121)
SAN MH-123 RIM=195.25 INV IN=192.82 (33) INV OUT=192.72 (123)
SAN MH-33 RIM=199.15 INV OUT=194.49 (33)
SAN MH-34 RIM=192.83 INV IN=187.36 (123) INV OUT=187.28 (34)
SAN MH-53 RIM=193.87 INV OUT=190.03 (53)
SAN MH-54 RIM=193.57 INV IN=188.68 (53) INV OUT=188.88 (54)
SAN MH-43 RIM=202.34 INV IN=193.08 (42) INV OUT=192.98 (43)
SAN MH-38 RIM=200.35 INV OUT=196.16 (38)
SAN MH-39 RIM=203.99 INV IN=195.24 (38) INV OUT=193.64 (39)
SAN MH-10 RIM=195.91 INV IN=188.28 (9) INV OUT=187.28 (10)
SAN MH-9 RIM=199.07 INV IN=191.87 (8) INV OUT=191.77 (9)
SAN MH-8 RIM=202.05 INV IN=193.23 (7) INV OUT=192.93 (8)
SAN MH-7 RIM=204.84 INV IN=195.13 (6) INV OUT=194.29 (7)
SAN MH-41 RIM=205.52 INV OUT=192.83 (41)
SAN MH-42 RIM=206.27 INV IN=193.74 (41) INV IN=192.72 (39) INV OUT=193.64 (42)
SAN MH-55 RIM=199.71 INV OUT=183.02 (56)
SAN MH-125 RIM=199.14 INV IN=185.09 (55) INV OUT=184.65 (125)
SAN MH-55 RIM=194.58 INV IN=187.68 (54) INV IN=189.48 (126) INV OUT=187.88 (55)
SAN MH-126 RIM=196.91 INV IN=190.30 (50) INV OUT=190.20 (126)
SAN MH-50 RIM=203.09 INV IN=192.20 (49) INV IN=192.70 (43) INV OUT=192.10 (50)
SAN MH-49 RIM=200.02 INV IN=196.08 (46) INV OUT=195.98 (49)
SAN MH-48 RIM=203.76 INV IN=197.40 (47) INV OUT=197.40 (48)
SAN MH-47 RIM=205.00 INV IN=198.27 (124) INV OUT=198.27 (47)
SAN MH-4 RIM=206.40 INV OUT=198.22 (4)
SAN MH-5 RIM=206.07 INV IN=197.55 (3) INV IN=197.44 (4) INV OUT=197.34 (5)
SAN MH-6 RIM=207.73 INV IN=196.29 (5) INV OUT=196.19 (6)
74LF~8" PVC @ 0.40%
141LF~8" PVC @ 0.40%
121LF~8" PVC @ 0.70%
62LF~8" PVC @ 0.40%
268LF~8" PVC @ 2.00%
229LF~8" PVC @ 0.50%
299LF~8" PVC @ 0.40%
173LF~8" PVC @ 1.50%
193LF~8" PVC @ 0.60%
219LF~8" PVC @ 1.73%
70LF~8" PVC @ 0.40%
219LF~8" PVC @ 0.60%
94LF~8" PVC @
285LF~8" PVC @ 0.40%
229LF~8" PVC @ 0.40%
229LF~8" PVC @ 2.27%
298LF~8" PVC @ 0.70%
212LF~8" PVC @ 0.50%
156LF~8" PVC @ 0.50%
E/T/C
FM
W
G
SC
DRCC
WTD
MH-5398
DS-5397
FES-5309
FES-5321
MH-5319
MTD-5318
MH-5317.2
MH-5316.1
MH-5315.1
MH-5267.1
MH-5270.1
MH-5269.1
MH-5270.2
MH-5209.1
MH-5270.3
MH-5164
MH-5163
MH-5162
MH-5161
MH-5147
MH-5148
MH-5114
MH-5113
MH-5111
MH-5112
MH-5146
MH-5114.1
MH-5114.2
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MH-5243
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MH-5345
MH-5222
MH-5221
MH-5221.1
MH-5220
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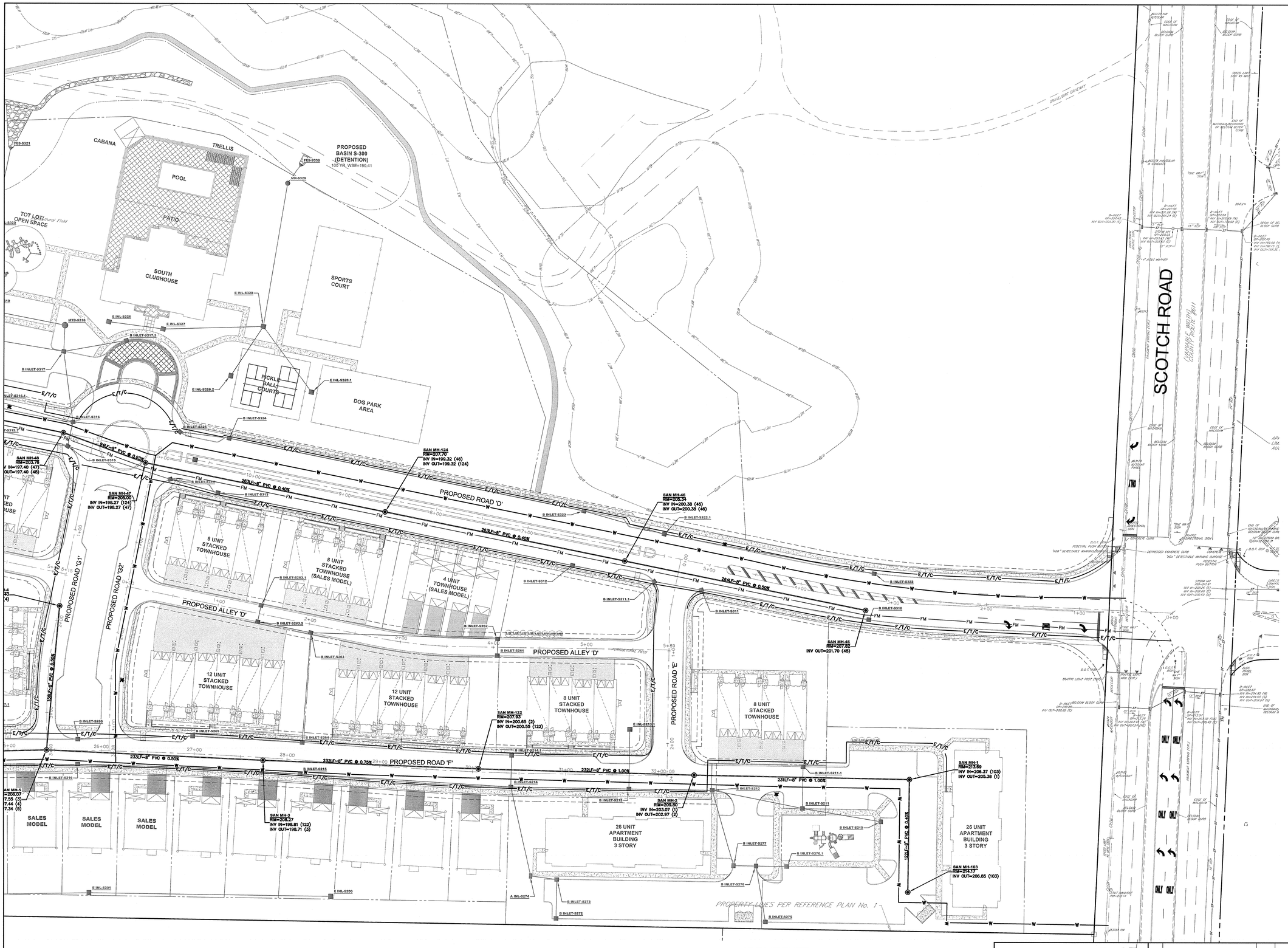
MH-5365



LEGEND:

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- RZ — RIPARIAN ZONE BOUNDARY
- FHB — FLOOD HAZARD BOUNDARY
- WATER EDGE
- 100 YEAR FLOODPLAIN BOUNDARY
- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- D.C. — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED DRAINAGE AND UTILITY LEGEND:

- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
- STORM DRAINAGE MANHOLE
- STORM DRAINAGE INLET
- STORM HEADWALL
- STORM DRAINAGE PIPING
- W — WATER LINE
- G — GAS SERVICE LINE
- E/T/C — UNDERGROUND ELECTRIC/TELEPHONE/CATV
- PERFORATED UNDERDRAIN (W/ CLEANOUTS)
- FIRE HYDRANT

ABBREVIATIONS:

FG =	FINISHED GRADE	FC =	FLUSH CURB
GR =	TOP OF GRATE	F.F.E. =	FINISHED FIRST FLOOR
BC =	BOTTOM OF CURB	F.B.E. =	FINISHED BASEMENT FLOOR
TC =	TOP OF CURB	R1~1 =	STOP SIGN
DC =	DEPRESSED CURB	R6~1 =	ONE WAY SIGN
PT =	POINT OF TANGENT	R4~7c =	MEDIAN SIGN
PC =	POINT OF CURVE	52E =	TYPE E INLET
52B =	TYPE B INLET	VB =	VALVE BOX
TP =	TOP OF PIPE	WV =	WATER VALVE
TS =	TOP OF STRUCTURE	GV =	GAS VALVE
UGS =	UNDERGROUND STONE STORAGE	TW =	TOP OF WALL
		BW =	BOTTOM OF WALL
C.C. =	CURB CUT	RIM =	TOP OF MANHOLE
STM =	STORM SEWER	SAN =	SANITARY SEWER
MH =	MANHOLE	INL =	INLET
OS =	OUTLET STRUCTURE	HDWL =	HEADWALL

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

GENERAL UTILITY NOTES:

1. ALL UTILITIES SHOWN ARE FOR INFORMATION/COORDINATION ONLY. FINAL UTILITY LOCATIONS, SIZING, AND CONFIGURATION SHALL BE SUBJECT TO FINAL APPROVAL OF UTILITY AUTHORITIES HAVING JURISDICTION.
2. WASTEWATER SHALL BE CONVEYED TO EWING-LAWRENCE SEWER AUTHORITY (ELSA) FOR TREATMENT & DISPOSAL.
3. VALVES SHALL BE PROVIDED AT EVERY JUNCTION. THE NUMBER OF VALVES SHALL NOT BE LESS THAN N-1, WHERE "N" IS THE NUMBER OF PIPES AT THE NODE.
4. VALVING SHALL BE PROVIDED IN ACCORDANCE WITH RSIS.
5. PROVIDE MINIMUM 10 FT. HORIZONTAL AND 18" VERTICAL CLEARANCE BETWEEN SANITARY AND WATER MAIN PIPING, WHERE THE WATER SHALL BE ABOVE THE SANITARY SEWER LINE.

SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East • Princeton, NJ 08540 • 609-987-2323
211 Bayberry Drive • Cape May Court House, NJ 08210 • 609-465-2600
www.vannoteharvey.com Certificate of Authorization No. 24GA28271300
van note-harvey associates - Since 1894 -

SITE UTILITY PLAN 12
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1"= 40'
MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1	SHEET No. CE-71
CHECKED BY BRP DATE 12/16/20	PAGE			

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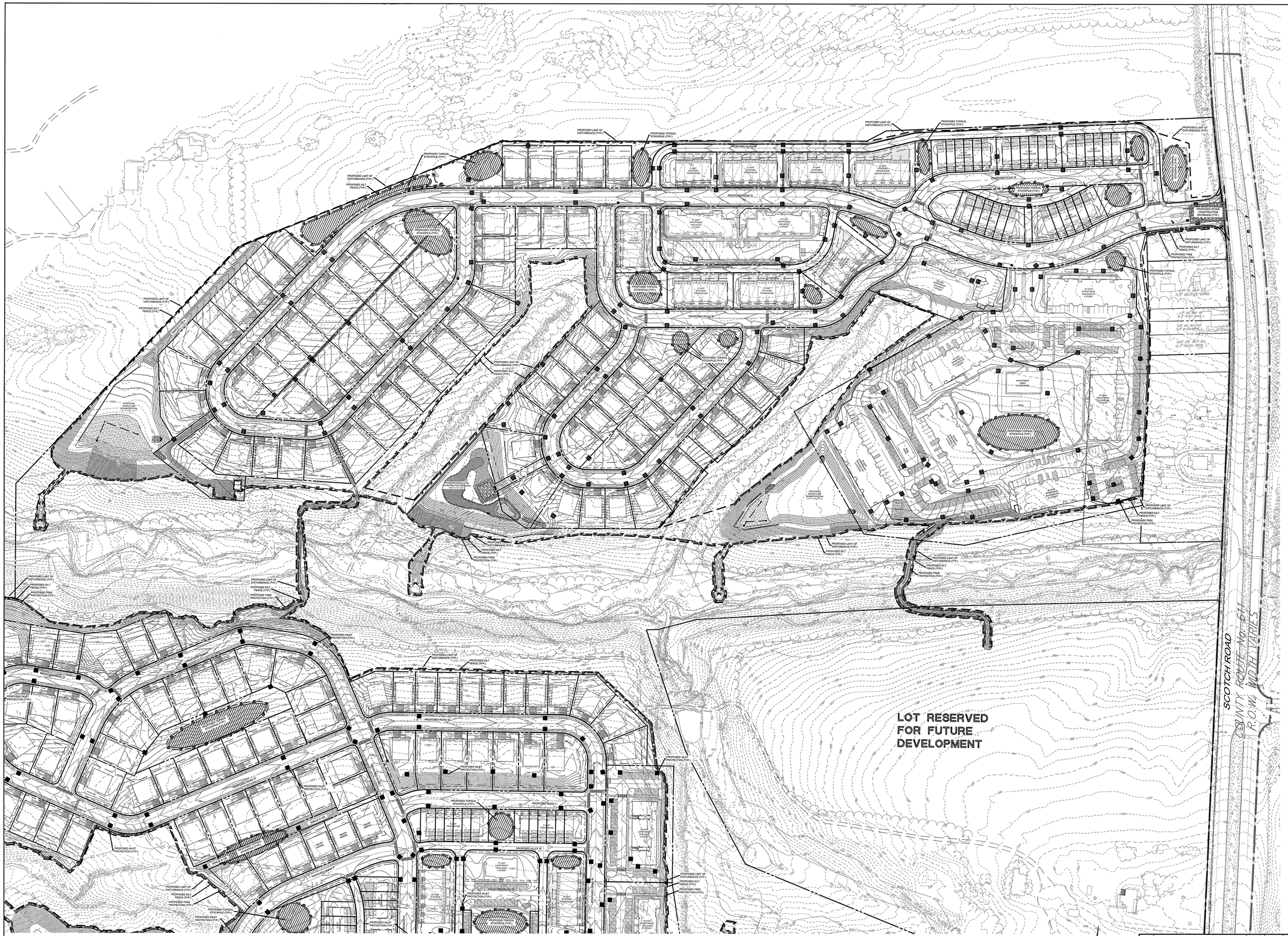
PROPOSED LIMIT OF DISTURBANCE (TYP.)
PROPOSED TOPSOIL STOCKPILE (TYP.)
PROPOSED SILT FENCE (TYP.)
PROPOSED TREE PROTECTION (TYP.)
PROPOSED INLET PROTECTION (TYP.)
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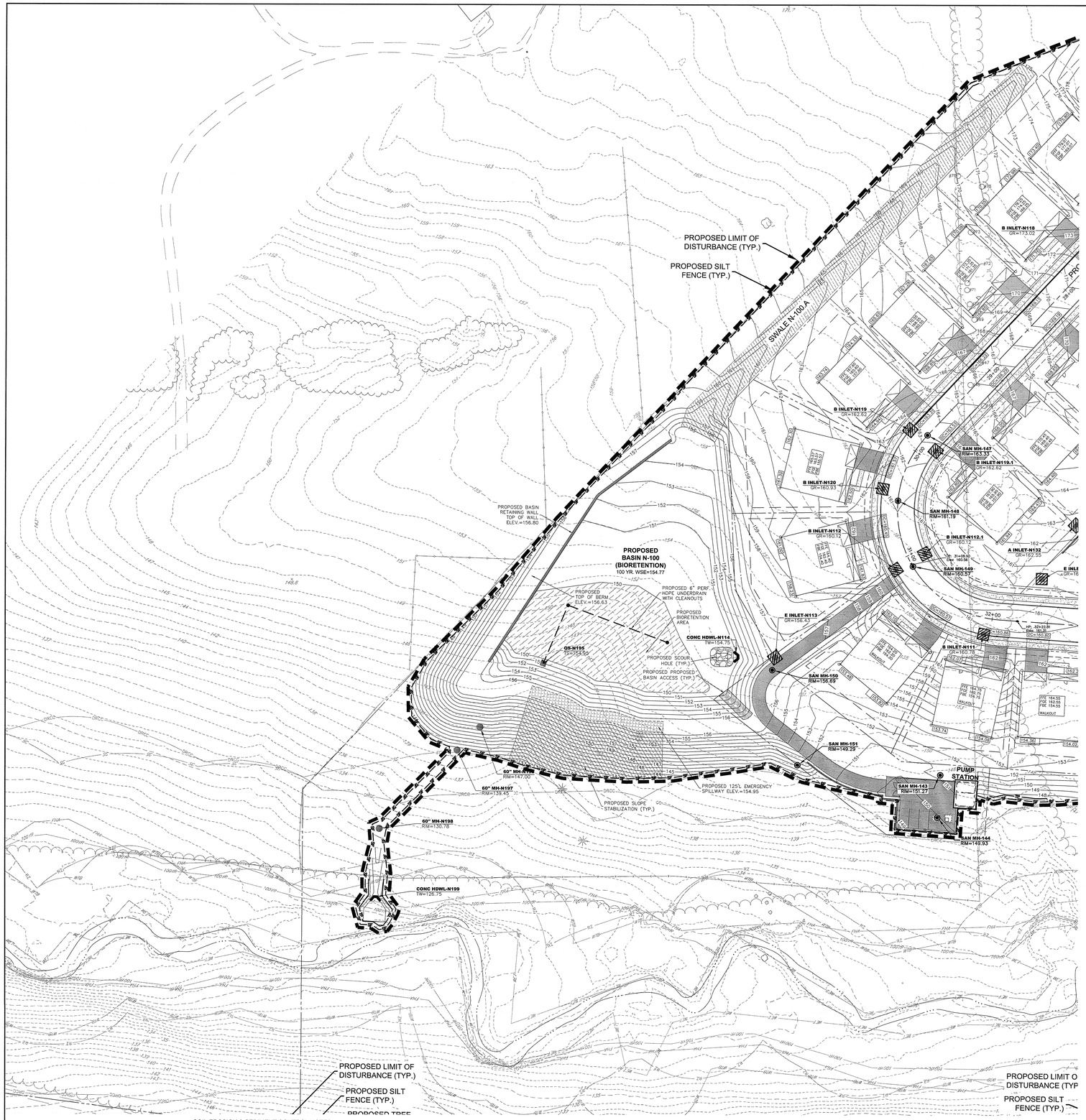

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- STORM DRAIN MANHOLE
- "B" INLET
- "E" INLET
- "A" INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
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- UTILITY MANHOLE
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- TRAFFIC CONTROL SIGNAGE
- FENCING
- 10 — PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED GRADING LEGEND:

- 147 — TOPOGRAPHIC CONTOUR
- 147.68 TC=147.67 BC=147.37 — TOPOGRAPHIC SPOT ELEVATION
- 0.50% — SLOPE & DIRECTION
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SOIL EROSION AND SEDIMENT CONTROL LEGEND:

- LIMIT OF DISTURBANCE
- SF — SF — SF — SILT FENCE
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- INLET PROTECTION
- SEDIMENT BASIN RISER
- STONE CONSTRUCTION ENTRANCE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 feet

SOIL EROSION & SEDIMENT CONTROL NOTES:

1. SITE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AND UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED AND APPROVED BY HOPEWELL TOWNSHIP.
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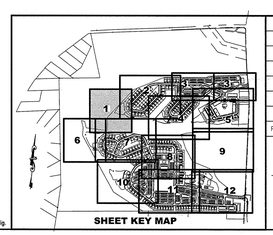
12. COORDINATE ALL TREE REMOVALS WITH ENGINEER, ARCHITECT & OWNER.
13. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PLANTING BEDS AND UNDERDRAINS, SHALL NOT BE FINAL CONSTRUCTED UNTIL AFTER THE SITE HAS BEEN PERMANENTLY STABILIZED

811 Know what's below. Call before you dig.



SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East • Princeton, NJ 08540 • 609-987-2323
211 Bayberry Drive • Cape May Court House, NJ 08210 • 609-465-2600
www.vannoteharvey.com Certificate of Authorization No. 24GA28071300

vnh van note-harvey associates — Since 1894

SITE SOIL EROSION & SEDIMENT CONTROL PLAN 1

OF

NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP MERCER CO., N.J.
SCALE 1" = 40' DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1
CHECKED BY BRP DATE 12/16/20	PAGE		SHEET No. CE-73

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LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- 'B' INLET
- 'E' INLET
- 'A' INLET
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- ELECTRIC MANHOLE
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- FENCING
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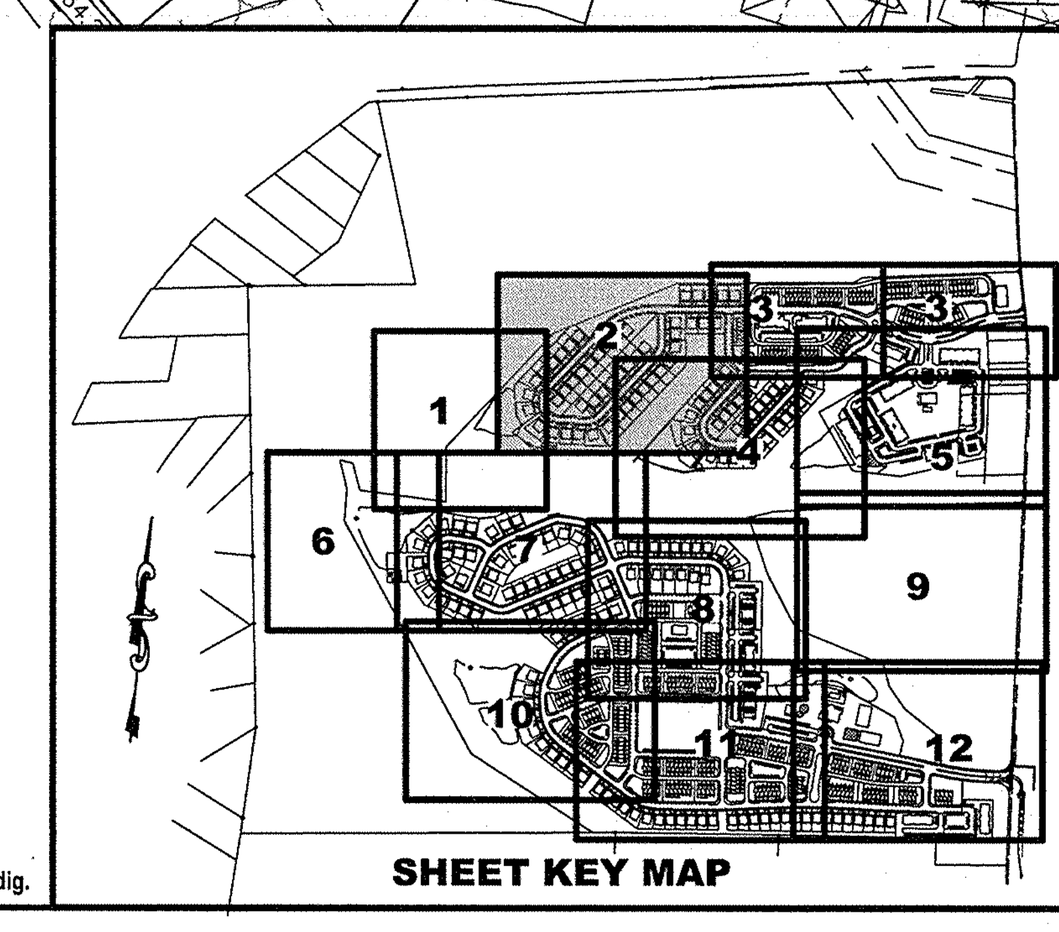

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SITE SOIL EROSION & SEDIMENT CONTROL PLAN 2
OF
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP — MERCER CO., N.J.
SCALE 1"= 40' — DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No.	FILE No.	SHEET No.
CHECKED BY BRP DATE 12/16/20	PAGE	45051-410-21	203-A-1 203-B-1	CE-74

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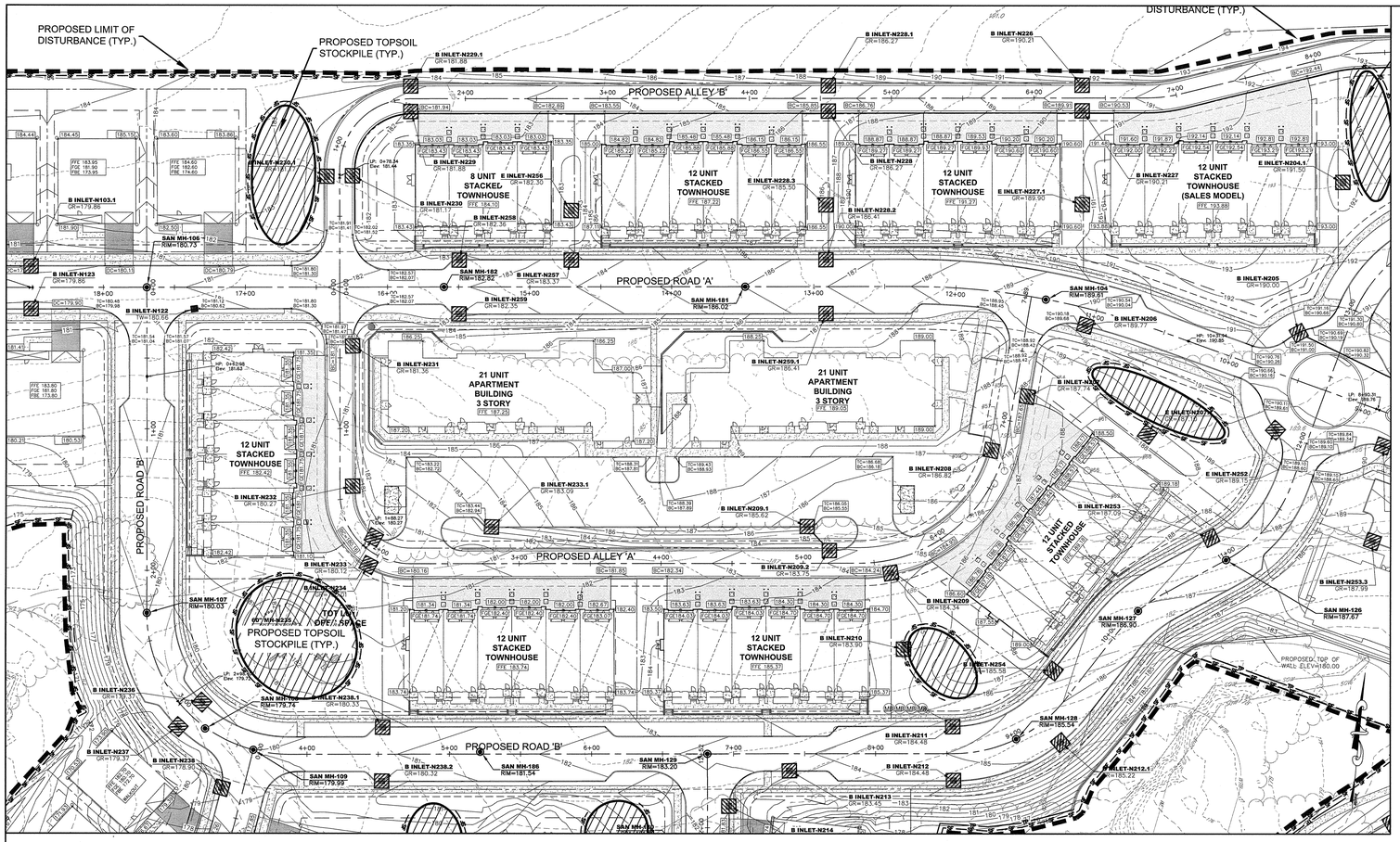

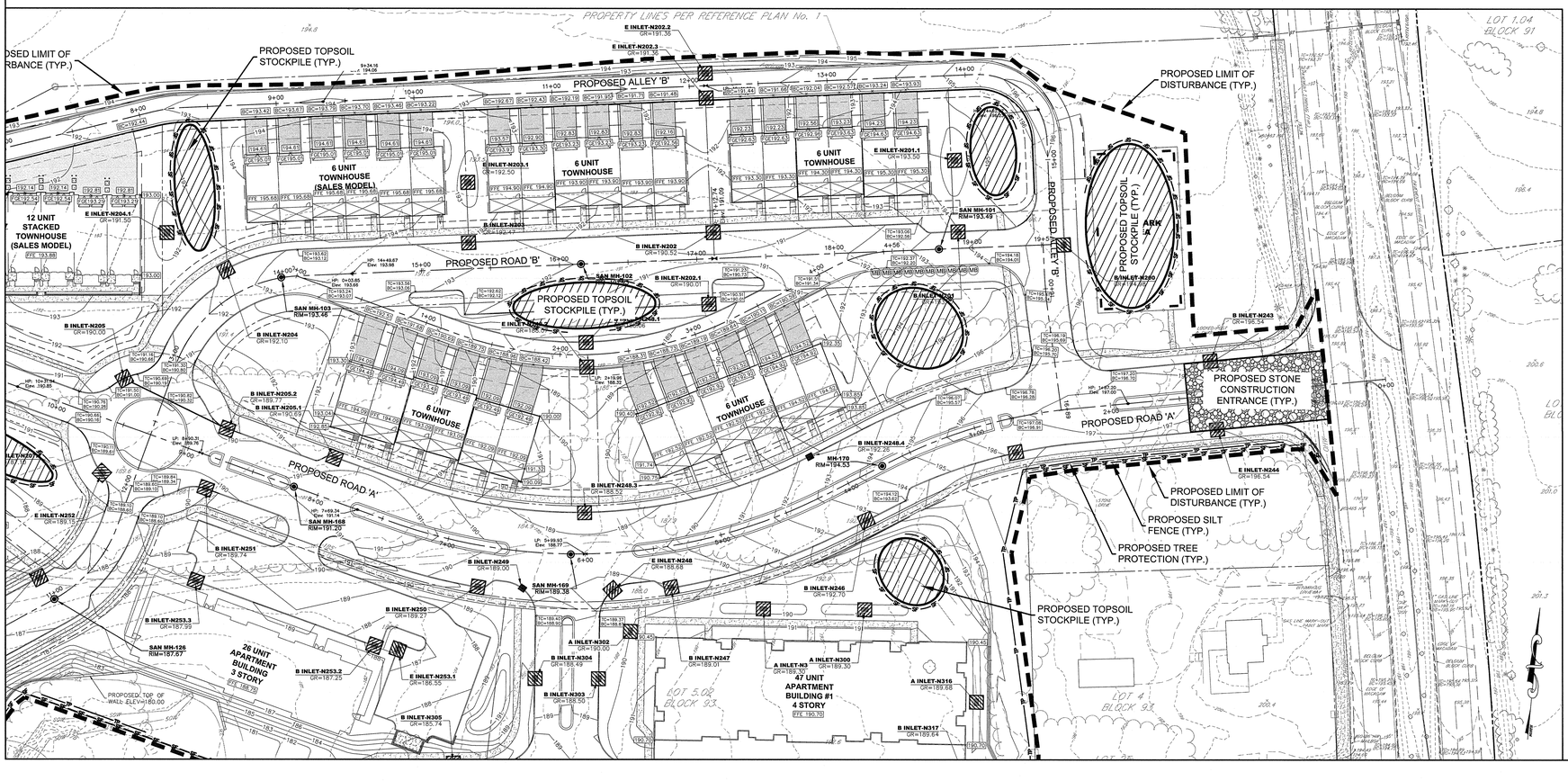

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9. EXISTING UTILITIES ARE TO REMAIN AND BE PROTECTED DURING ALL CONSTRUCTION ACTIVITIES.
10. EXISTING TREES WITHIN THE LIMITS OF DISTURBANCE SHALL BE MAINTAINED & PROTECTED AS REQUIRED.
11. GRADING WITHIN TREE PROTECTION AREAS SHALL BE PERFORMED WITHOUT THE USE OF HEAVY MACHINERY/EQUIPMENT.
12. COORDINATE ALL TREE REMOVALS WITH ENGINEER, ARCHITECT & OWNER.
13. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PLANTING BEDS AND UNDERDRAINS, SHALL NOT BE FINAL CONSTRUCTED UNTIL AFTER THE SITE HAS BEEN PERMANENTLY STABILIZED

LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- 'D' INLET
- 'I' INLET
- 'A' INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TREE LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- WET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
- SGB — STATE OPEN WATER BOUNDARY
- RZ — RIPARIAN ZONE BOUNDARY
- FLOOD HAZARD BOUNDARY
- WATER EDGE
- 100 YEAR FLOODPLAIN BOUNDARY
- DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- DRCC
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- D/C — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED GRADING LEGEND:

- 147 — TOPOGRAPHIC CONTOUR
- 147.66 TC=147.97 BC=147.37 — TOPOGRAPHIC SPOT ELEVATION
- 0.50% — SLOPE & DIRECTION
- FFE =147.85 — FINISHED FIRST FLOOR ELEVATION
- EMERGENCY SPILLWAY
- STABILIZED SLOPES
- RIPRAP
- HIGH MARSH AREA
- LOW MARSH AREA
- MICRO POND AREA

PROPOSED DRAINAGE AND UTILITY LEGEND:

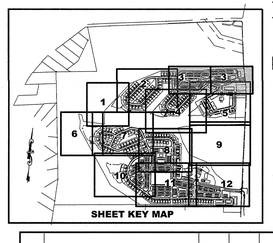
- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
- STORM DRAINAGE MANHOLE
- STORM DRAINAGE INLET
- STORM HEADWALL
- STORM DRAINAGE PIPING
- W — WATER LINE
- G — GAS SERVICE LINE
- E/T/C — UNDERGROUND ELECTRIC/TELEPHONE/CATV
- PERFORATED UNDERDRAIN (W/ CLEANOUTS)
- FIRE HYDRANT

ABBREVIATIONS:

FG	=	FINISHED GRADE	FC	=	FLUSH CURB
GR	=	TOP OF GRATE	F.F.E.	=	FINISHED FIRST FLOOR
BC	=	BOTTOM OF CURB	F.B.E.	=	FINISHED BASEMENT FLOOR
TC	=	TOP OF CURB	R1-1	=	STOP SIGN
DC	=	DEPRESSED CURB	R6-1	=	ONE WAY SIGN
PT	=	POINT OF TANGENT	R4-7c	=	MEDIAN SIGN
PC	=	POINT OF CURVE	S2E	=	TYPE E INLET
S2B	=	TYPE B INLET	VB	=	VALVE BOX
TP	=	TOP OF PIPE	WV	=	WATER VALVE
TS	=	TOP OF STRUCTURE	GV	=	GAS VALVE
UGS	=	UNDERGROUND STONE STORAGE	TW	=	TOP OF WALL
			BW	=	BOTTOM OF WALL
C.C.	=	CURB CUT	RIM	=	TOP OF MANHOLE
STM	=	STORM SEWER	SAN	=	SANITARY SEWER
MH	=	MANHOLE	INL	=	INLET
OS	=	OUTLET STRUCTURE	HDWL	=	HEADWALL

SOIL EROSION AND SEDIMENT CONTROL LEGEND:

- LIMIT OF DISTURBANCE
- SF — SF — SF — SILT FENCE
- TP — TREE PROTECTION
- INLET PROTECTION
- SEDIMENT BASIN RISER
- STONE CONSTRUCTION ENTRANCE



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

811 Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East ● Princeton, NJ 08540 ● 609-987-2323
211 Bayberry Drive ● Cape May Court House, NJ 08210 ● 609-465-2600
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- Since 1894 -

SITE SOIL EROSION & SEDIMENT PLAN 3
OF
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'
MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1	SHEET No. CE-75
CHECKED BY BRP DATE 12/16/20	PAGE			

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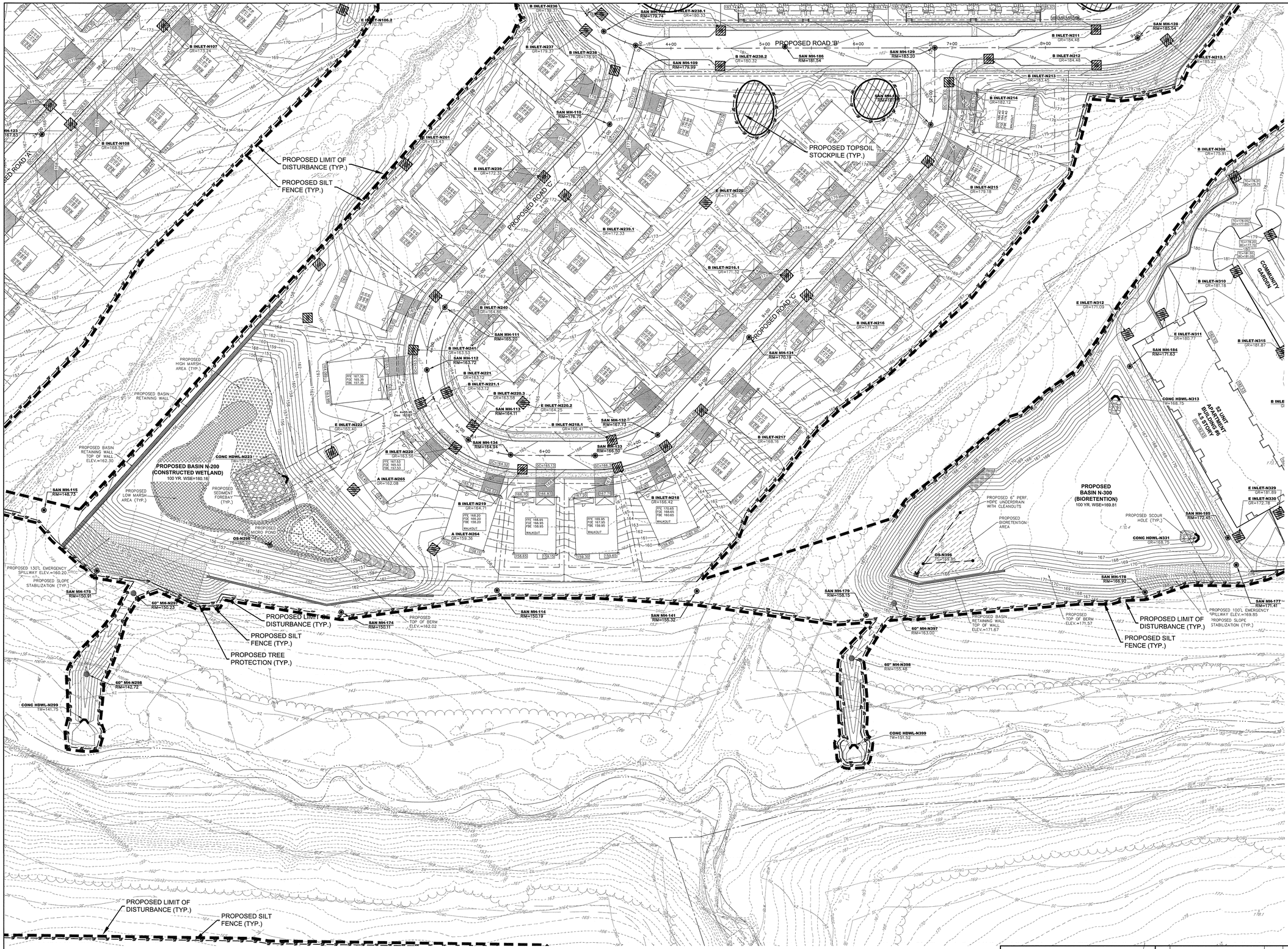
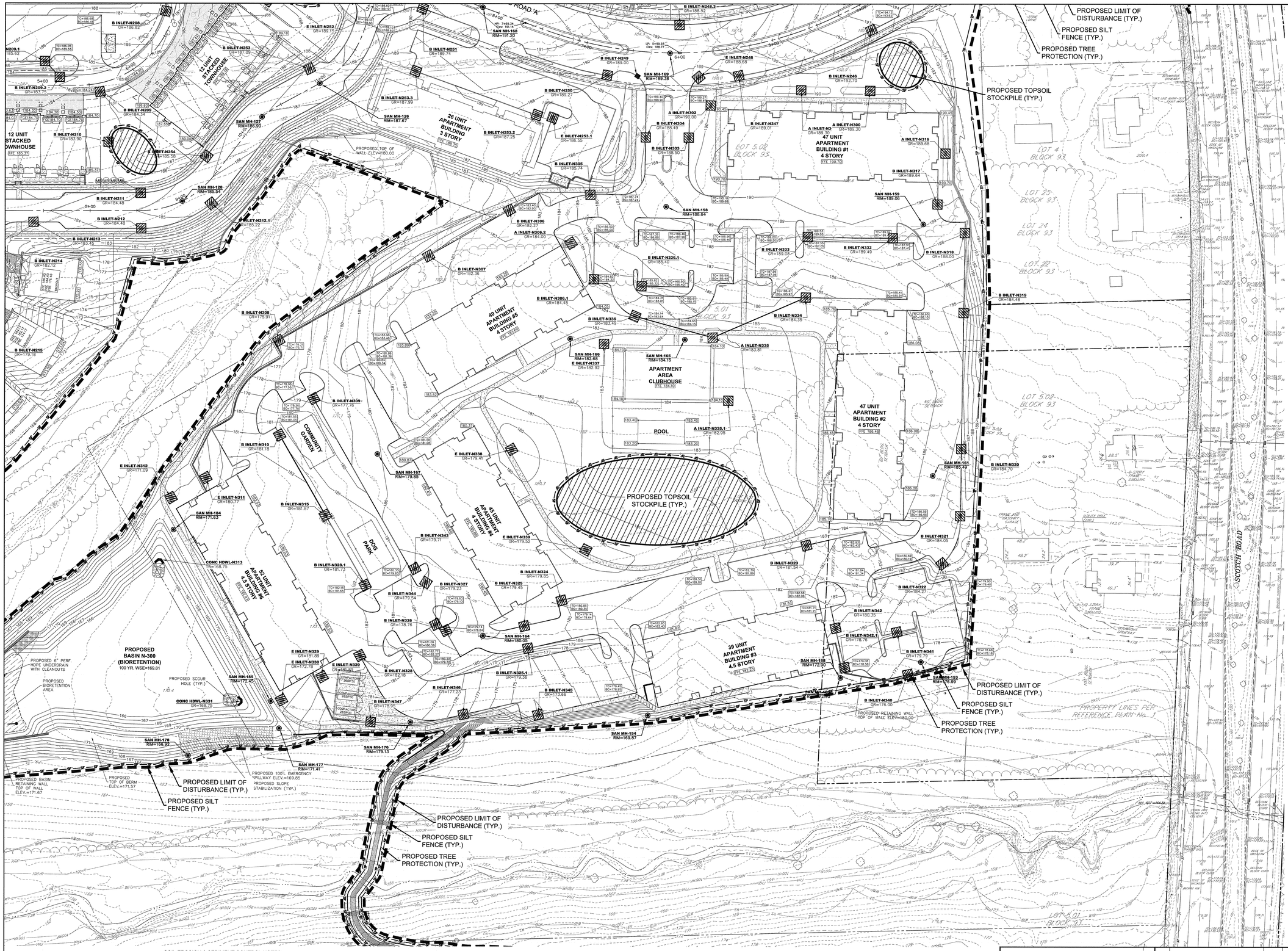

PROPOSED ROAD 'A'
PROPOSED ROAD 'B'
PROPOSED ROAD 'C'
PROPOSED ROAD 'D'
PROPOSED LIMIT OF DISTURBANCE (TYP.)
PROPOSED SILT FENCE (TYP.)
PROPOSED TOPSOIL STOCKPILE (TYP.)
PROPOSED TREE PROTECTION (TYP.)
PROPOSED HIGH MARSH AREA (TYP.)
PROPOSED BASIN RETAINING WALL
PROPOSED BASIN RETAINING WALL TOP OF WALL ELEV.=162.30
PROPOSED BASIN N-200 (CONSTRUCTED WETLAND) 100 YR. WSE=160.16
PROPOSED LOW MARSH AREA (TYP.)
PROPOSED SEDIMENT FOREBAY (TYP.)
PROPOSED MICRO POND
PROPOSED 130'L EMERGENCY SPILLWAY ELEV.=160.20
PROPOSED SLOPE STABILIZATION (TYP.)
PROPOSED BASIN N-300 (BIORETENTION) 100 YR. WSE=169.81
PROPOSED 6" PERF. HDPE UNDERDRAIN WITH CLEANOUTS
PROPOSED BIORETENTION AREA
PROPOSED SCOUR HOLE (TYP.)
PROPOSED BASIN RETAINING WALL TOP OF WALL ELEV.=171.67
PROPOSED TOP OF BERM ELEV.=171.57
PROPOSED TOP OF BERM ELEV.=162.02
PROPOSED 100'L EMERGENCY SPILLWAY ELEV.=169.55
PROPOSED SLOPE STABILIZATION (TYP.)
COMMUNITY GARDEN
52 UNIT APARTMENT BUILDING 4 STORY
SAN MH-175 RIM=150.91
SAN MH-174 RIM=150.11
SAN MH-114 RIM=150.19
SAN MH-141 RIM=155.32
SAN MH-179 RIM=158.15
60" MH-N205 RIM=150.23
60" MH-N298 RIM=142.72
60" MH-N397 RIM=163.00
60" MH-N398 RIM=155.48
CONC HDWL-N299 TW=141.75
CONC HDWL-N399 TW=151.52
CONC HDWL-N313 TW=168.75
CONC HDWL-N331 OR=168.75
SAN MH-185 RIM=172.45
SAN MH-176 RIM=166.32
SAN MH-177 RIM=171.41
OS-N395 TW=169.95
OS-N295 TW=160.20
A INLET-N264 OR=159.36
B INLET-N219 OR=164.71
B INLET-N218 OR=165.42
B INLET-N220 OR=165.58
A INLET-N265 OR=162.08
E INLET-N222 OR=160.40
B INLET-N221 OR=163.12
B INLET-N221.1 OR=163.12
B INLET-N220.3 OR=163.58
E INLET-N220.2 OR=164.25
B INLET-N218.1 OR=166.41
B INLET-N217 OR=168.18
B INLET-N216 OR=171.26
B INLET-N216.1 OR=171.32
B INLET-N215 OR=179.12
B INLET-N214 OR=182.12
B INLET-N213 OR=183.55
B INLET-N212 OR=184.48
B INLET-N212.1 OR=185.22
B INLET-N211 OR=184.48
B INLET-N240 OR=164.56
B INLET-N241 OR=163.53
B INLET-N239.1 OR=172.33
E INLET-N220 OR=171.26
B INLET-N238.2 OR=180.32
B INLET-N238 OR=178.90
B INLET-N237 OR=179.37
B INLET-N236 OR=180.37
E INLET-N238.1 OR=180.33
E INLET-N106.2 OR=170.78
B INLET-N107 OR=173.24
B INLET-N108 OR=168.50
E INLET-N251 OR=163.53
B INLET-N239 OR=172.33
B INLET-N308 OR=175.91
E INLET-N312 OR=171.09
E INLET-N311 OR=170.17
B INLET-N315 OR=181.87
B INLET-N310 OR=180.18
SAN MH-184 RIM=171.63
SAN MH-111 RIM=165.20
SAN MH-112 RIM=163.72
SAN MH-112 RIM=164.11
SAN MH-131 RIM=170.18
SAN MH-132 RIM=167.73
SAN MH-133 RIM=166.30
SAN MH-134 RIM=164.94
SAN MH-115 RIM=148.73
SAN MH-109 RIM=179.99
SAN MH-110 RIM=176.75
SAN MH-186 RIM=181.54
SAN MH-129 RIM=183.20
SAN MH-128 RIM=185.54
SAN MH-130 RIM=178.37
SAN MH-127 RIM=179.74
E INLET-N329 OR=171.89
E INLET-N330 OR=172.78
TC=178.67 BC=177.55
TC=178.90 BC=177.78
TC=179.90 BC=178.78
TC=180.90 BC=180.05
TC=176.30 BC=175.75
TC=147.67 BC=147.37
147.66
OS-N295 TW=160.20
LPL 4x60 @ Elev. 163.67
LPL 4x60 @ Elev. 163.67
LPL 4x60 @ Elev. 163.67



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C.C.	=	CURB CUT	RIM	=	TOP OF MANHOLE
STM	=	STORM SEWER	SAN	=	SANITARY SEWER
MH	=	MANHOLE	IN.	=	INLET
OS	=	OUTLET STRUCTURE	HDWL	=	HEADWALL

SOIL EROSION AND SEDIMENT CONTROL LEGEND:

- LIMIT OF DISTURBANCE
- SF — SF — SF — SILT FENCE
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- INLET PROTECTION
- SEDIMENT BASIN RISER
- STONE CONSTRUCTION ENTRANCE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

SOIL EROSION & SEDIMENT CONTROL NOTES:

1. SITE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AND UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED AND APPROVED BY HOPEWELL TOWNSHIP.
2. SEQUENCE OF LANDSCAPING INSTALLATION SHALL BE AS MOST SUITABLE FOR THE TIME OF INSTALLATION.
3. ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMITS OF DISTURBANCE SHOWN HEREON WILL BE REMOVED IMMEDIATELY TO PREVENT WASHING OR TRACKING OF SOIL AWAY FROM THE PROJECT AREA AND AS A MINIMUM, PRIOR TO THE COMPLETION OF CONSTRUCTION EACH DAY.
4. DUST SHALL BE CONTROLLED DURING CONSTRUCTION VIA THE APPLICATION OF WATER UNTIL THE SURFACE IS WET, OR OTHER APPROVED METHOD IN ACCORDANCE WITH SECTION 16-1 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
5. ALL DISTURBED AREAS, INCLUDING THE STABILIZED CONSTRUCTION ACCESS, SHALL BE COMPLETELY RESTORED FOLLOWING CONSTRUCTION. RESTORATION INCLUDES THE APPLICATION OF 5" OF TOPSOIL AND PERMANENT STABILIZATION.
6. ANY TEMPORARY RIDING SURFACE WITHIN ROADWAYS MUST BE 3/4" CLEAN STONE, DGA, CRUSHED CONCRETE, COLD PATCH OR BASE PAVEMENT. TEMPORARY RIDING SURFACES CONSISTING OF SOIL WILL NOT BE PERMITTED.
7. TEMPORARY TOPSOIL STOCKPILES, CONTRACTOR PARKING & CONSTRUCTION STAGING AREAS SHALL BE LOCATED IN THE FIELD. COORDINATE WITH OWNER, ARCHITECT & ENGINEER.
8. ANY DAMAGED CURB, SIDEWALKS AND HARDSCAPE SHALL BE REPAIRED/RECONSTRUCTED AS REQUIRED.
9. EXISTING UTILITIES ARE TO REMAIN AND BE PROTECTED DURING ALL CONSTRUCTION ACTIVITIES.
10. EXISTING TREES WITHIN THE LIMITS OF DISTURBANCE SHALL BE MAINTAINED & PROTECTED AS REQUIRED.
11. GRADING WITHIN TREE PROTECTION AREAS SHALL BE PERFORMED WITHOUT THE USE OF HEAVY MACHINERY/EQUIPMENT.
12. COORDINATE ALL TREE REMOVALS WITH ENGINEER, ARCHITECT & OWNER.
13. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PLANTING BEDS AND UNDERDRAINS, SHALL NOT BE FINAL CONSTRUCTED UNTIL AFTER THE SITE HAS BEEN PERMANENTLY STABILIZED

811 Know what's below. Call before you dig.

SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East • Princeton, NJ 08540 • 609-987-2323
211 Bayberry Drive • Cape May Court House, NJ 08210 • 609-465-2600
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- Since 1894 -

SITE SOIL EROSION & SEDIMENT CONTROL PLAN 5
OF
NORTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP — MERCER CO., N.J.
SCALE 1" = 40' — DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
DATE 12/16/20		45051-410-21	203-B-1 203-B-1	CE-77
CHECKED BY BRP	PAGE			
DATE 12/16/20				

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V:\P\45051\dwg\45051-FG-N-PLT.dwg, SESC-4-5, 12/17/2020 10:04:49 AM, wvdwghn


LOT RESERVED FOR FUTURE DEVELOPMENT
PROPOSED BASIN B-SOUTH (SEE SEPARATE SHEET FOR DETAILS)
PROPOSED BASIN A-SOUTH (SEE SEPARATE SHEET FOR DETAILS)
PROPOSED LIMIT OF DISTURBANCE (TYP.)
PROPOSED SILT FENCE (TYP.)
PROPOSED TREE PROTECTION (TYP.)
PROPOSED SEDIMENT TRAP (TYP.)
PROPOSED INLET PROTECTION (TYP.)
PROPOSED TOPSOIL STOCKPILE (TYP.)
PROPOSED ROAD 'A'
PROPOSED ROAD 'B'
PROPOSED ROAD 'C'
PROPOSED ROAD 'D'
PROPOSED ALLEY 'A'
PROPOSED ALLEY 'B'
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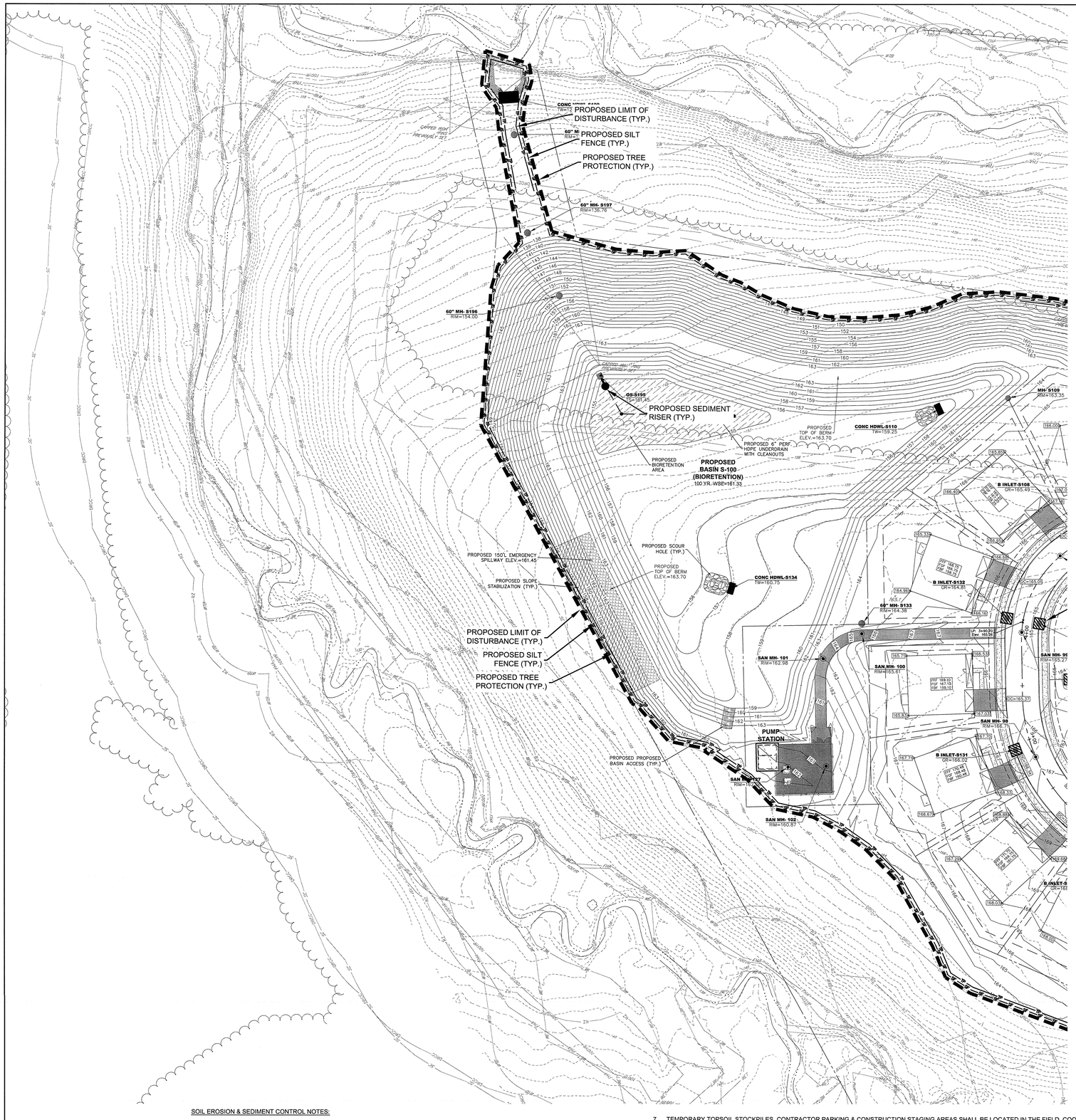

LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- "R" INLET
- "S" INLET
- "A" INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TREE LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- WET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
- SOW — STATE OPEN WATER BOUNDARY
- RZ — RIPARIAN ZONE BOUNDARY
- FLOOD HAZARD BOUNDARY
- WATER EDGE
- 100 YEAR FLOODPLAIN BOUNDARY
- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- D.C. — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED GRADING LEGEND:

- 147 — TOPOGRAPHIC CONTOUR
- 147.66x TC=147.83 BC=147.37x — TOPOGRAPHIC SPOT ELEVATION
- 0.50% — SLOPE & DIRECTION
- FFE =147.85 — FINISHED FIRST FLOOR ELEVATION
- EMERGENCY SPILLWAY
- STABILIZED SLOPES
- RIPRAP
- HIGH MARSH AREA
- LOW MARSH AREA
- MICRO POND AREA

PROPOSED DRAINAGE AND UTILITY LEGEND:

- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
- STORM DRAINAGE MANHOLE
- STORM DRAINAGE INLET
- STORM HEADWALL
- STORM DRAINAGE PIPING
- W — WATER LINE
- G — GAS SERVICE LINE
- E/T/C — UNDERGROUND ELECTRIC/TELEPHONE/CATV
- PERFORATED UNDERDRAIN (W/ CLEANOUTS)
- FIRE HYDRANT

ABBREVIATIONS:

FG	=	FINISHED GRADE	FC	=	FLUSH CURB
GR	=	TOP OF GRATE	F.F.E.	=	FINISHED FIRST FLOOR
BC	=	BOTTOM OF CURB	F.B.E.	=	FINISHED BASEMENT FLOOR
TC	=	TOP OF CURB	R1-1	=	STOP SIGN
DC	=	DEPRESSED CURB	R6-1	=	ONE WAY SIGN
PT	=	POINT OF TANGENT	R4-7c	=	MEDIAN SIGN
PC	=	POINT OF CURVE	S2E	=	TYPE E INLET
S2B	=	TYPE B INLET	VB	=	VALVE BOX
TP	=	TOP OF PIPE	WV	=	WATER VALVE
TS	=	TOP OF STRUCTURE	GV	=	GAS VALVE
UGS	=	UNDERGROUND STONE STORAGE	TW	=	TOP OF WALL
			BW	=	BOTTOM OF WALL
C.C.	=	CURB CUT	RIM	=	TOP OF MANHOLE
STM	=	STORM SEWER	SAN	=	SANITARY SEWER
MH	=	MANHOLE	INL	=	INLET
OS	=	OUTLET STRUCTURE	HDWL	=	HEADWALL

SOIL EROSION AND SEDIMENT CONTROL LEGEND:

- LIMIT OF DISTURBANCE
- SF — SF — SF — SILT FENCE
- TP — TREE PROTECTION
- INLET PROTECTION
- SEDIMENT BASIN RISER
- STONE CONSTRUCTION ENTRANCE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

SOIL EROSION & SEDIMENT CONTROL NOTES:

1. SITE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AND UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED AND APPROVED BY HOPEWELL TOWNSHIP.
2. SEQUENCE OF LANDSCAPING INSTALLATION SHALL BE AS MOST SUITABLE FOR THE TIME OF INSTALLATION.
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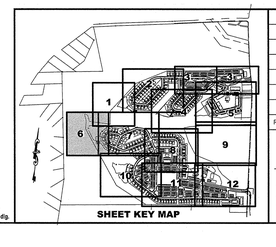
8. ANY DAMAGED CURB, SIDEWALKS AND HARDSCAPE SHALL BE REPAIRED/RECONSTRUCTED AS REQUIRED.
9. EXISTING UTILITIES ARE TO REMAIN AND BE PROTECTED DURING ALL CONSTRUCTION ACTIVITIES.
10. EXISTING TREES WITHIN THE LIMITS OF DISTURBANCE SHALL BE MAINTAINED & PROTECTED AS REQUIRED.
11. GRADING WITHIN TREE PROTECTION AREAS SHALL BE PERFORMED WITHOUT THE USE OF HEAVY MACHINERY/EQUIPMENT.
12. COORDINATE ALL TREE REMOVALS WITH ENGINEER, ARCHITECT & OWNER.
13. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PLANTING BEDS AND UNDERDRAINS, SHALL NOT BE FINAL CONSTRUCTED UNTIL AFTER THE SITE HAS BEEN PERMANENTLY STABILIZED

811 Know what's below. Call before you dig.



SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East • Princeton, NJ 08540 • 609-987-2323
211 Bayberry Drive • Cape May Court House, NJ 08210 • 609-465-2600
www.vannoteharvey.com Certificate of Authorization No. 24GA28271300
van note-harvey associates - Since 1894 -

SITE SOIL EROSION & SEDIMENT CONTROL PLAN 6

OF

SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP MERCER CO., N.J.
SCALE 1"= 40' DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051– 410–21	FILE No. 203–A–1 203–B–1
CHECKED BY BRP DATE 12/16/20	PAGE		SHEET No. CE-79

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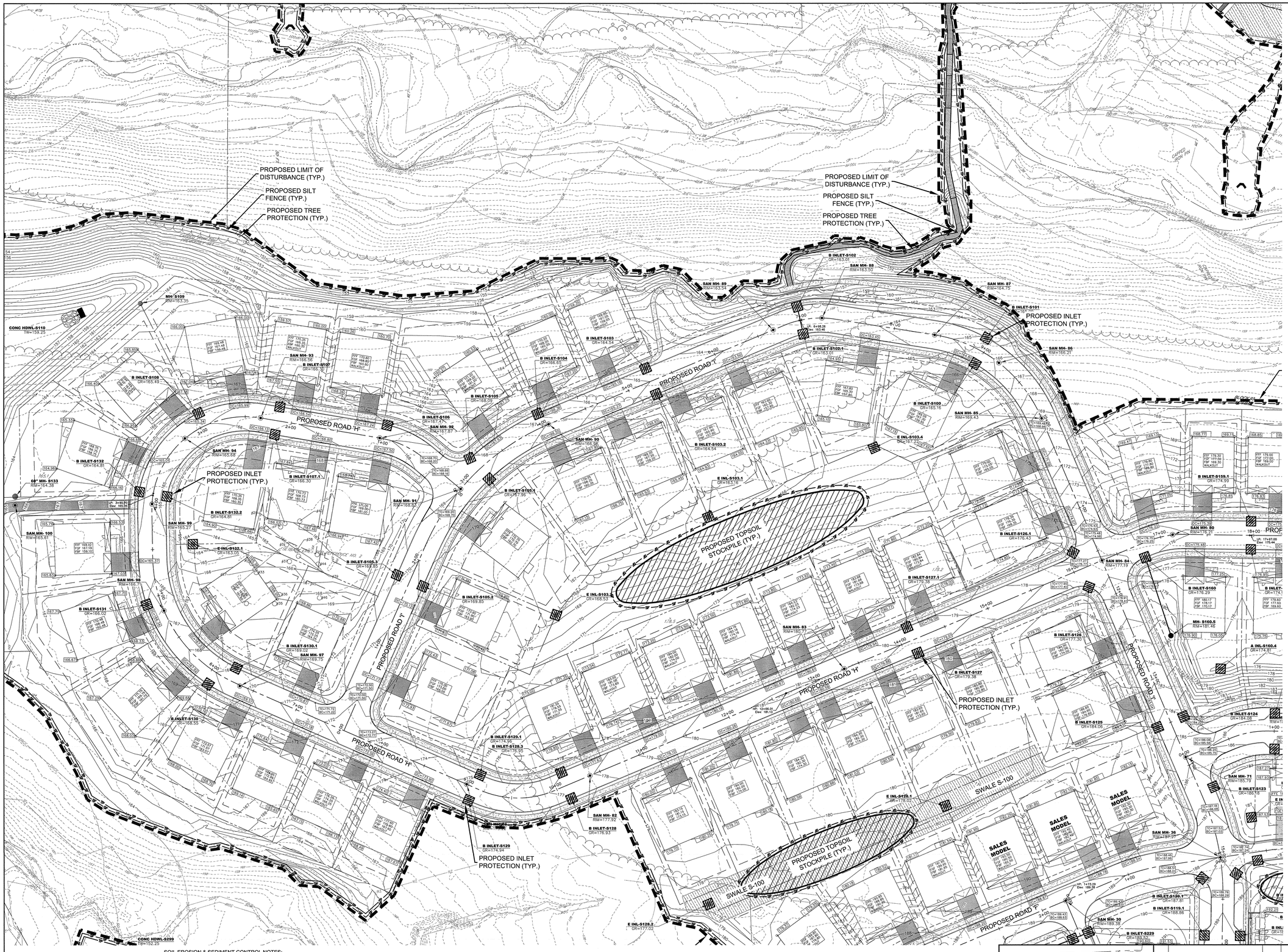

LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- 9" INLET
- 1' INLET
- 3' INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TREE LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- FWET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
- SOW — STATE OPEN WATER BOUNDARY
- RAZ — RIPARIAN ZONE BOUNDARY
- FLOOD HAZARD BOUNDARY
- WATER EDGE
- 100 YEAR FLOODPLAIN BOUNDARY
- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- 0.6 — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- P — PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED GRADING LEGEND:

- 147 — TOPOGRAPHIC CONTOUR
- 147.65 TC=147.57 BC=147.37 — TOPOGRAPHIC SPOT ELEVATION
- 0.50% — SLOPE & DIRECTION
- FFE =147.85 — FINISHED FIRST FLOOR ELEVATION
- EMERGENCY SPILLWAY
- STABILIZED SLOPES
- RIPRAP
- HIGH MARSH AREA
- LOW MARSH AREA
- MICRO POND AREA

PROPOSED DRAINAGE AND UTILITY LEGEND:

- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
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PC	= POINT OF CURVE	SQE	= TYPE E INLET
52B	= TYPE B INLET	VB	= VALVE BOX
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12/16/2020
DATE OF SIGN.

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- Since 1894 -

SITE SOIL EROSION & SEDIMENT CONTROL PLAN 7
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
DATE 12/16/20		45051-410-21	203-A-1 203-B-1	CE-80
CHECKED BY BRP	PAGE			
DATE 12/16/20				

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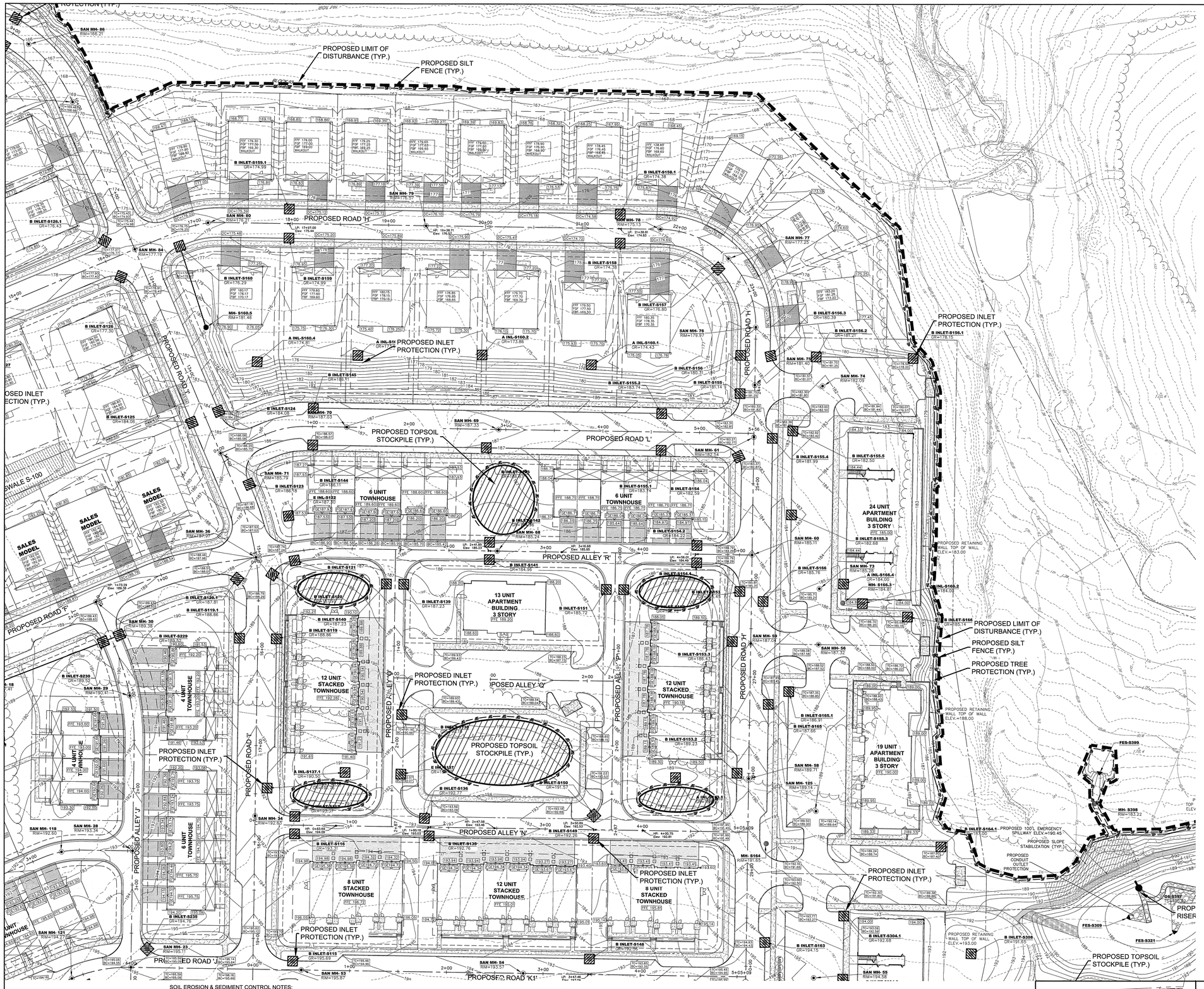

LEGEND:

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- 'A' INLET
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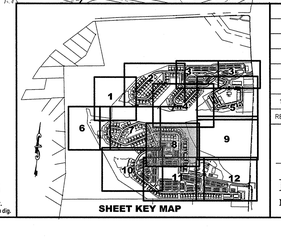

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SITE SOIL EROSION & SEDIMENT CONTROL PLAN 8
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP — MERCER CO., N.J.
SCALE 1" = 40' — DECEMBER 16, 2020

DRAWN BY WDV/MNK	FIELD BK	ORDER No.	FILE No.	SHEET No.
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CHECKED BY BRP	PAGE			
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LOT RESERVED FOR FUTURE DEVELOPMENT

LOT 6.02
BLOCK 93

LOT 6.01
BLOCK 93

SCOTCH ROAD
(VARIABLE WIDTH)
COUNTY ROUTE #611
PER TAX MAP

50 FT. BUILDING SETBACK

100' BLDG. SETBACK

Agricultural Field

BARN HOUSE

CONCRETE PADS

UTILITY POLE (TYP.)

2-1/2 STORY FRAME DWELLING

WELL

SHED

CONC. WALK

STONE DRIVEWAY

CONCRETE MONUMENT

PROPOSED STONE LOW FLOW CHANNEL (TYP.) (SEE DETAIL)

PROPOSED

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- "D" INLET
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TS = TOP OF STRUCTURE		GV = GAS VALVE	
UGS = UNDERGROUND STONE STORAGE		TW = TOP OF WALL	
		BW = BOTTOM OF WALL	
C.C. = CURB CUT		RIM = TOP OF MANHOLE	
STM = STORM SEWER		SAN = SANITARY SEWER	
MH = MANHOLE		INL = INLET	
OS = OUTLET STRUCTURE		HDWL = HEADWALL	

SOIL EROSION AND SEDIMENT CONTROL LEGEND:

- LIMIT OF DISTURBANCE
- SF — SF — SF — SILT FENCE
- TP — TREE PROTECTION
- INLET PROTECTION
- SEDIMENT BASIN RISER
- STONE CONSTRUCTION ENTRANCE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 feet

SOIL EROSION & SEDIMENT CONTROL NOTES:

1. SITE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AND UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED AND APPROVED BY HOPEWELL TOWNSHIP.
2. SEQUENCE OF LANDSCAPING INSTALLATION SHALL BE AS MOST SUITABLE FOR THE TIME OF INSTALLATION.
3. ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMITS OF DISTURBANCE SHOWN HEREON WILL BE REMOVED IMMEDIATELY TO PREVENT WASHING OR TRACKING OF SOIL AWAY FROM THE PROJECT AREA AND AS A MINIMUM, PRIOR TO THE COMPLETION OF CONSTRUCTION EACH DAY.
4. DUST SHALL BE CONTROLLED DURING CONSTRUCTION VIA THE APPLICATION OF WATER UNTIL THE SURFACE IS WET, OR OTHER APPROVED METHOD IN ACCORDANCE WITH SECTION 16-1 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
5. ALL DISTURBED AREAS, INCLUDING THE STABILIZED CONSTRUCTION ACCESS, SHALL BE COMPLETELY RESTORED FOLLOWING CONSTRUCTION. RESTORATION INCLUDES THE APPLICATION OF 5" OF TOPSOIL AND PERMANENT STABILIZATION.
6. ANY TEMPORARY RIDING SURFACE WITHIN ROADWAYS MUST BE 3/4" CLEAN STONE, DGA, CRUSHED CONCRETE, COLD PATCH OR BASE PAVEMENT. TEMPORARY RIDING SURFACES CONSISTING OF SOIL WILL NOT BE PERMITTED.
7. TEMPORARY TOPSOIL STOCKPILES, CONTRACTOR PARKING & CONSTRUCTION STAGING AREAS SHALL BE LOCATED IN THE FIELD. COORDINATE WITH OWNER, ARCHITECT & ENGINEER.
8. ANY DAMAGED CURB, SIDEWALKS AND HARDSCAPE SHALL BE REPAIRED/RECONSTRUCTED AS REQUIRED.
9. EXISTING UTILITIES ARE TO REMAIN AND BE PROTECTED DURING ALL CONSTRUCTION ACTIVITIES.
10. EXISTING TREES WITHIN THE LIMITS OF DISTURBANCE SHALL BE MAINTAINED & PROTECTED AS REQUIRED.
11. GRADING WITHIN TREE PROTECTION AREAS SHALL BE PERFORMED WITHOUT THE USE OF HEAVY MACHINERY/EQUIPMENT.
12. COORDINATE ALL TREE REMOVALS WITH ENGINEER, ARCHITECT & OWNER.
13. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PLANTING BEDS AND UNDERDRAINS, SHALL NOT BE FINAL CONSTRUCTED UNTIL AFTER THE SITE HAS BEEN PERMANENTLY STABILIZED

Know what's below. Call before you dig.

SHEET KEY MAP

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

van note-harvey associates, inc.
consulting engineers, planners & land surveyors
103 College Road East • Princeton, NJ 08540 • 609-987-2323
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www.vannoteharvey.com **Certificate of Authorization** No. 24GA28271300

van note-harvey associates Since 1894

SITE SOIL EROSION & SEDIMENT CONTROL PLAN 9
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1"= 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1	SHEET No. CE-82
CHECKED BY BRP DATE 12/16/20	PAGE			

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PROTECTION (TYP.)
SWALE S-100
PROPOSED LIMIT OF DISTURBANCE (TYP.)
PROPOSED SILT FENCE (TYP.)
PROPOSED TREE PROTECTION (TYP.)
PROPOSED TOPSOIL STOCKPILE (TYP.)
PROPOSED INLET PROTECTION (TYP.)
CONC HDWL-S299
INV=152.25
60" MH- S298
RIM=155.40
60" MH- S297
RIM=159.74
PROPOSED TOP OF BERM ELEV.=177.70
PROPOSED MICRO POND
PROPOSED SEDIMENT RISER (TYP.)
CONC HDWL-S208
PROPOSED BASIN S-200-B (DETENTION)
100 YR. WSE=180.24
PROPOSED LOW MARSH AREA (TYP.)
PROPOSED HIGH MARSH AREA (TYP.)
PROPOSED SEDIMENT FOREBAY (TYP.)
CONC HDWL-S209
TW=172.75
60" MH- S227
RIM=178.76
PROPOSED 150'L EMERGENCY SPILLWAY ELEV.=175.40
PROPOSED SLOPE STABILIZATION (TYP.)
60" MH- S208
RIM=175.00
PROPOSED BASIN ACCESS (TYP.)
OS-S207
OS=180.55
PROPOSED 100'L EMERGENCY SPILLWAY ELEV.=180.55
PROPOSED STONE LOW FLOW CHANNEL (TYP.) (SEE DETAIL)
PROPOSED BASIN S-200-A (CONSTRUCTED WETLAND)
100 YR. WSE=175.40
CONC HDWL-S206
TW=182.75
PROPOSED CONDUIT OUTLET PROTECTION
PROPOSED TOP OF BERM ELEV.=182.0
50' TO BASIN S-200-B
E INL-S128.2
OR=177.02
B INLET-S232
OR=184.43
B INLET-S233
OR=184.43
B INLET-S234
OR=185.01
SAN MH- 15
RIM=186.50
B INLET-S226
OR=188.34
SAN MH- 14
RIM=188.23
B INLET-S225
OR=189.69
SAN MH- 13
RIM=189.50
SAN MH- 12
RIM=191.89
E INL-S205
OR=184.51
B INLET-S224
OR=191.50
B INLET-S224.1
OR=191.30
E INL-S224.1
OR=194.60
SAN MH- 11
RIM=196.58
B INLET-S223
OR=196.45
B INLET-S222
OR=195.39
SAN MH- 10
RIM=195.91
B INLET-S221.1
OR=198.18
B INLET-S221
OR=197.01
B INLET-S221.2
OR=196.61
B INLET-S114.2
OR=196.61
B INLET-S114.1
OR=197.43
B INLET-S114
OR=196.88
B INLET-S113
OR=197.43
SAN MH-123
OR=198.22
B INLET-S253
OR=200.41
B INLET-S254
OR=198.78
B INLET-S255
OR=198.31
B INLET-S256
OR=198.31
B INLET-S257
OR=197.63
B INLET-S258
OR=197.63
B INLET-S259
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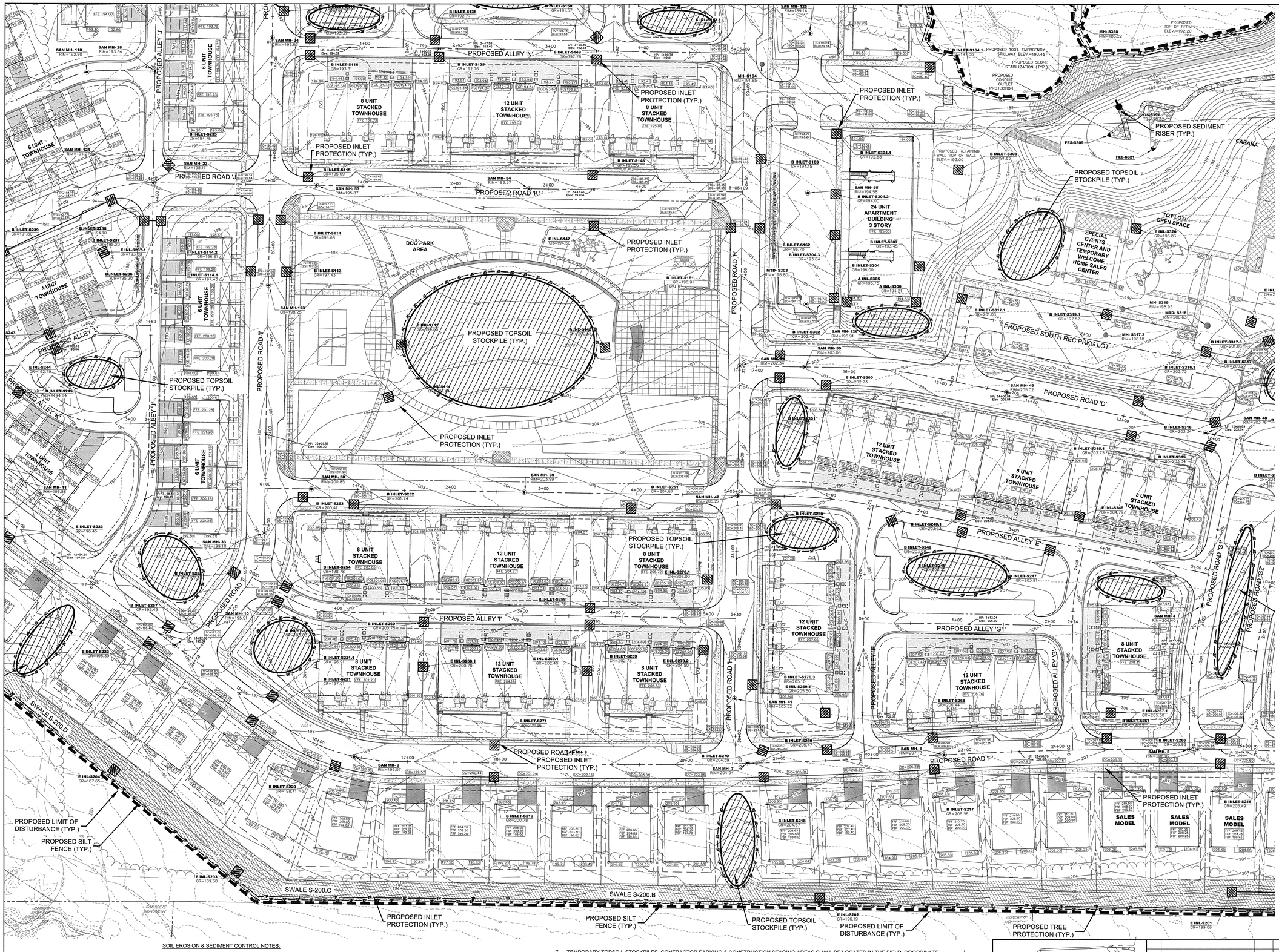

LEGEND:

- TELEPHONE MANHOLE
- STORM DRAIN MANHOLE
- 'D' INLET
- 'E' INLET
- 'A' INLET
- FLARED END SECTION
- WATER VALVE
- CLEANOUT
- FIRE HYDRANT
- UTILITY MANHOLE
- ELECTRIC MANHOLE
- SANITARY MANHOLE
- MANHOLE (UNIDENTIFIED)
- SIGN
- TEST LOCATION
- UTILITY POLE
- OHW — OVERHEAD WIRES
- CURB
- EDGE OF PAVEMENT
- WALKS
- EDGE OF TRAIL
- TREELINE

ENVIRONMENTAL LEGEND

- WET — FRESHWATER WETLAND BOUNDARY
- WTB — WETLAND TRANSITION AREA BOUNDARY
- SGW — STATE OPEN WATER BOUNDARY
- RZ — RIPARIAN ZONE BOUNDARY
- FHA — FLOOD HAZARD BOUNDARY
- WATER EDGE
- 100 YEAR FLOODPLAIN BOUNDARY
- DRCC — DELAWARE & RARITAN CANAL COMMISSION STREAM CORRIDOR BOUNDARY
- SC — MUNICIPAL STREAM CORRIDOR BOUNDARY

PROPOSED LAYOUT LEGEND:

- CURB
- D.C. — DEPRESSED CURB
- MOUNTABLE CONCRETE CURB
- CONCRETE WALK
- BITUMINOUS WALKING PATH
- PEDESTRIAN STRIPED CROSSWALK
- DECORATIVE PAVERS
- STABILIZED BASIN ACCESS
- DRIVEWAYS
- POROUS PAVEMENT
- PEDESTRIAN BOARDWALK
- MB — MAIL KIOSK
- TRAFFIC CONTROL SIGNAGE
- FENCING
- 9 — PARKING SPACE COUNT
- PARKING SPACE PAVEMENT STRIPING
- CONCRETE WHEEL STOPS
- HANDICAP PARKING SYMBOL
- PROJECT/DIRECTIONAL SIGNS

PROPOSED GRADING LEGEND:

- 147 — TOPOGRAPHIC CONTOUR
- 147.66 TC=147.82 BC=147.32 — TOPOGRAPHIC SPOT ELEVATION
- 0.50% — SLOPE & DIRECTION
- FFE =147.85 — FINISHED FIRST FLOOR ELEVATION
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PROPOSED DRAINAGE AND UTILITY LEGEND:

- SANITARY SEWER MANHOLE
- SANITARY SEWER PIPING
- FM — SANITARY SEWER FORCE MAIN
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- STORM DRAINAGE INLET
- STORM HEADWALL
- STORM DRAINAGE PIPING
- W — WATER LINE
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ABBREVIATIONS:

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TC = TOP OF CURB		R1-1 = STOP SIGN	
DC = DEPRESSED CURB		R6-1 = ONE WAY SIGN	
PT = POINT OF TANGENT		R4-7c = MEDIAN SIGN	
PC = POINT OF CURVE		SQE = TYPE E INLET	
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1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

12/16/2020
DATE OF SIGN.

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- Since 1894 -

SITE SOIL EROSION & SEDIMENT CONTROL PLAN 11 OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1" = 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No. 45051-410-21	FILE No. 203-A-1 203-B-1
CHECKED BY BRP DATE 12/16/20	PAGE		SHEET No. CE-84

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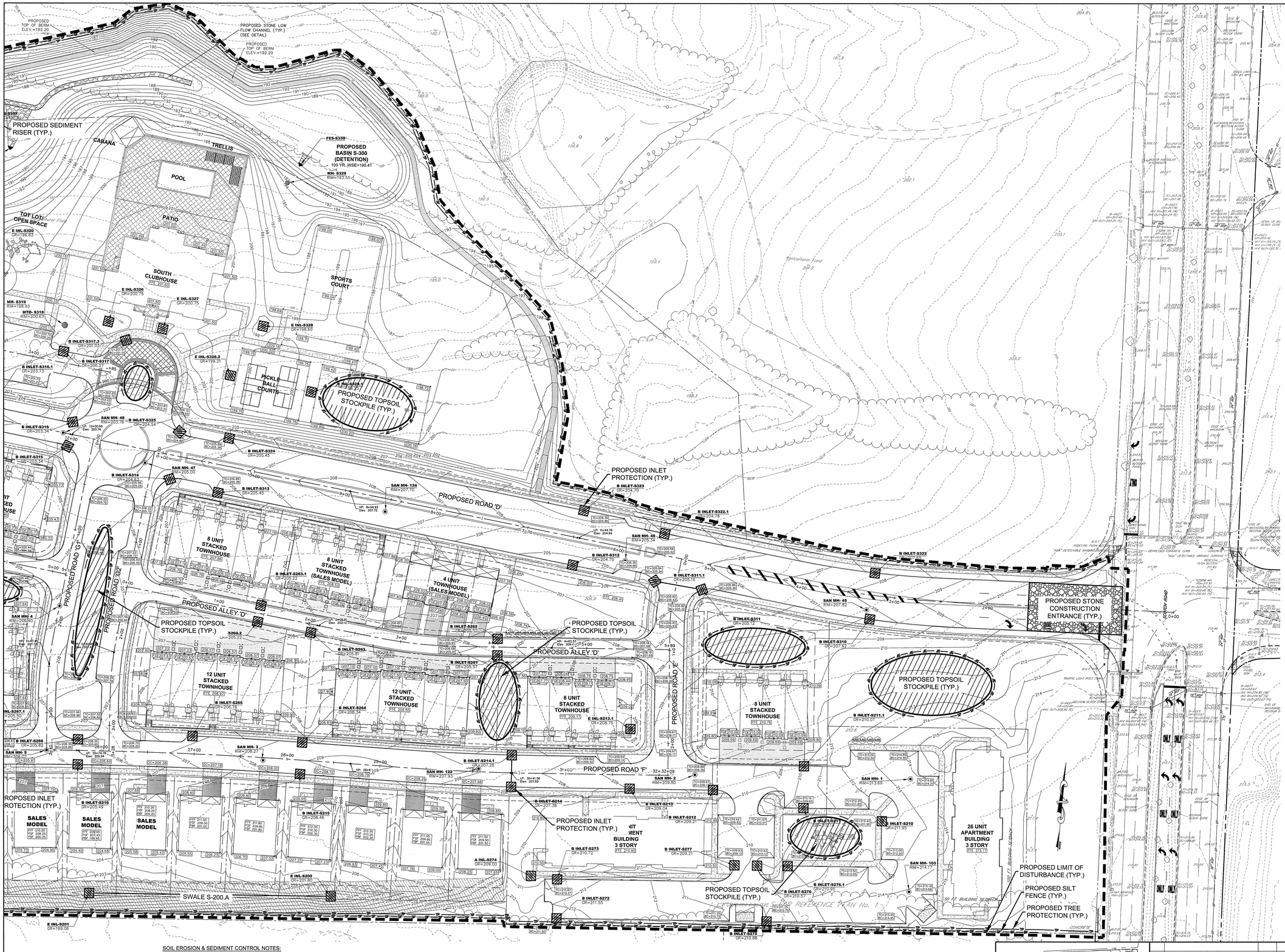

LEGEND:

- TELEPHONE MANHOLE
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- "B" INLET
- "I" INLET
- "A" INLET
- FLARED END SECTION
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- CLEANOUT
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- FENCING
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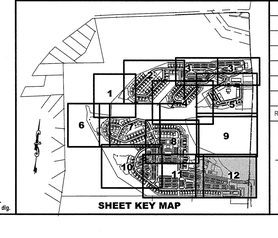
811 Know what's below. Call before you dig.



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SITE SOIL EROSION & SEDIMENT CONTROL PLAN 12
OF
SOUTH SECTION
HOPEWELL PARC
SITUATED IN

HOPEWELL TOWNSHIP
SCALE 1"= 40'

MERCER CO., N.J.
DECEMBER 16, 2020

DRAWN BY WDV/MNK DATE 12/16/20	FIELD BK	ORDER No.	FILE No.	SHEET No.
CHECKED BY BRP DATE 12/16/20	PAGE	45051-410-21	203-A-1 203-B-1	CE-85

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A. MERCER COUNTY SOIL CONSERVATION DISTRICT GENERAL NOTES

1. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING LAND DISTURBANCE ACTIVITY. NOTICE MAY BE MAILED, FAXED OR EMAILED TO:

MCSCD, 590 HUGHES DRIVE, HAMILTON SQUARE, NJ 08690
PHONE: 609-586-9603 FAX: 609-586-1117
EMAIL: MERCERSOIL@AOL.COM

2. IF APPLICABLE TO THIS PROJECT, THE OWNER SHOULD BE AWARE OF HIS OR HER OBLIGATION TO FILE FOR A NJPDES CONSTRUCTION ACTIVITY STORMWATER SG3 PERMIT (NJG0088323) VIA THE NJDEP ONLINE PERMITTING SYSTEM (WWW.NJLOGON.GOV/DEP/ONLINE) AND TO MAINTAIN THE ASSOCIATED BEST MANAGEMENT PRACTICES AND STORMWATER POLLUTION PREVENTION PLAN SELF-INSPECTION LOGBOOK ONSITE AT ALL TIMES. THIS PERMIT MUST BE FILED PRIOR TO THE START OF SOIL DISTURBANCE. THE ONLINE APPLICATION PROCESS WILL REQUIRE ENTRY OF AN SCD CERTIFICATION CODE, WHICH IS PROVIDED BY THE SOIL CONSERVATION DISTRICT UPON CERTIFICATION OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN.

3. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.

4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INCLUDING AN INCREASE IN THE LIMIT OF DISTURBANCE, WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.

5. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES.

6. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AS OUTLINED WITHIN THE SEQUENCE OF CONSTRUCTION ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NJ. IF LANGUAGE CONTAINED WITHIN ANY OTHER PERMIT FOR THIS PROJECT IS MORE RESTRICTIVE THAN (BUT NOT CONTRADICTORY TO) WHAT IS CONTAINED WITHIN THESE NOTES OR ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, THEN THE MORE RESTRICTIVE PERMIT REQUIREMENTS SHALL BE FOLLOWED.

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 1½" TO 2½" CLEAN STONE TRACKING PAD AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SITE DISTURBANCE, WHETHER IDENTIFIED ON THE CERTIFIED PLAN OR NOT. THE WIDTH SHALL SPAN THE FULL WIDTH OF EGRESS, AND LENGTH SHALL BE 50 FT. OR MORE, DEPENDING ON SITE CONDITIONS AND AS REQUIRED BY THE STANDARD. THIS SHALL INCLUDE INDIVIDUAL LOT ACCESS POINTS WITHIN RESIDENTIAL SUBDIVISIONS. IF THE EGRESS IS TO A COUNTY ROAD, THEN A 20FT. LONG PAVED TRANSITION SHALL BE PROVIDED BETWEEN THE EDGE OF PAVEMENT AND THE STONE ACCESS PAD.

9. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS HERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING, PROVIDED THAT ALL OTHER REQUIREMENTS RELATED TO DETENTION BASINS, SWALES AND THE SEQUENCE OF CONSTRUCTION HAVE BEEN MET.

10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION ACTIVITY WILL IMMEDIATELY RECEIVE TEMPORARY STABILIZATION. IF THE SEASON PREVENTS ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER, OR IF THE AREA IS NOT TOPSOILED, THEN THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS. SLOPED AREAS IN EXCESS OF 3H:1V SHALL BE PROVIDED WITH EROSION CONTROL BLANKETS. CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES, ROADWAY EMBANKMENTS, ENVIRONMENTALLY SENSITIVE AREAS) WILL RECEIVE TEMPORARY STABILIZATION IMMEDIATELY AFTER INITIAL DISTURBANCE OR ROUGH GRADING.

11. ANY STEEP SLOPES (I.E. SLOPES GREATER THAN 3:1) RECEIVING PIPELINE OR UTILITY INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS.

12. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING AND TOPSOILING. ALL AGRONOMIC REQUIREMENTS CONTAINED WITHIN THE STANDARDS AND ON THE CERTIFIED PLAN SHALL BE EMPLOYED. MULCH WITH BINDER, IN ACCORDANCE WITH THE STANDARDS, SHALL BE USED ON ALL SEEDED AREAS. SAVE ALL TAGS AND/OR BAGS USED FOR SEED, LIME AND FERTILIZER, AND PROVIDE THEM TO THE DISTRICT INSPECTOR TO VERIFY THAT MIXTURES AND RATES MEET THE STANDARDS.

13. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOILS WILL NOT PROVIDE SUITABLE CONDITIONS, THEN NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

14. DURING THE COURSE OF CONSTRUCTION, SOIL COMPACTION MAY OCCUR WITHIN HAUL ROUTES, STAGING AREAS AND OTHER PROJECT AREAS. IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING, COMPACTED SURFACES SHOULD BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO TOPSOIL APPLICATION. THIS WILL HELP ENSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

15. PRIOR TO SEEDING, TOPSOIL SHALL BE WORKED TO PREPARE A PROPER SEEDBED. THIS SHALL INCLUDE RAKING OF THE TOPSOIL AND REMOVAL OF DEBRIS AND STONES, ALONG WITH OTHER REQUIREMENTS OF THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION.

16. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE BURIED WITH LIMESTONE IN ACCORDANCE WITH THE STANDARD AND BE COVERED WITH A MINIMUM OF 12"OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO TOPSOIL APPLICATION AND SEEDBED PREPARATION. IF THE AREA IS TO RECEIVE TREE OR SHRUB PLANTINGS, OR IS LOCATED ON A SLOPE, THEN THE AREA SHALL BE COVERED WITH A MINIMUM OF 24"OF SOIL HAVING A PH OF 5 OR MORE.

17. MULCHING TO THE STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONAL ROC'S ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. PERMANENT STABILIZATION MUST THEN BE COMPLETED DURING THE OPTIMUM SEEDING SEASON IMMEDIATELY FOLLOWING THE CONDITIONAL ROC, OR THE COMPLETION OF WORK IN A GIVEN AREA.

18. HYDROSEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED-TO-SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF THE SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A MINIMUM RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS. THE USE OF HYDROMULCH ON SLOPED AREAS IS DISCOURAGED.

19. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF THE CONSTRUCTION PROJECT. ALL SEDIMENT WASHED, DROPPED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED.

20. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION, AND FOR EMPLOYING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AT THE REQUEST OF THE MERCER COUNTY SOIL CONSERVATION DISTRICT.

21. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

22. ALL DETENTION / RETENTION BASINS MUST BE FULLY CONSTRUCTED (INCLUSIVE OF ALL STRUCTURAL COMPONENTS AND LINERS) AND PERMANENTLY STABILIZED PRIOR TO PAVING OR PRIOR TO THE ADDITION OF ANY IMPERVIOUS SURFACES. PERMANENT STABILIZATION INCLUDES, BUT MAY NOT BE LIMITED TO: TOPSOIL, SEED, STRAW MULCH AND BINDERS OR EROSION CONTROL BLANKETS ON ALL SEEDING, ALL AGRONOMIC REQUIREMENTS AS SPECIFIED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INSTALLATION OF THE OUTFLOW CONTROL STRUCTURES AND DISCHARGE STORM DRAINAGE PIPING, LOW FLOW CHANNELS, CONDUIT OUTLET PROTECTION, EMERGENCY SPILLWAYS, AND LAP RING PROTECTION.

23. THE RIDING SURFACE OF ALL UTILITY TRENCHES WITHIN PAVED AREAS SHALL BE 3/4" CLEAN STONE OR BASE PAVEMENT UNTIL SUCH TIME AS FINAL PAVEMENT HAS BEEN INSTALLED. TEMPORARY SOIL RIDING SURFACES ARE PROHIBITED.

24. ALL CONSTRUCTION DEWATERING (TRENCHES, EXCAVATIONS, ETC.) MUST BE DONE THROUGH AN INLET OR OUTLET FILTER IN ACCORDANCE WITH THE STANDARD FOR DEWATERING OR AS DEPICTED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. DISCHARGE LOCATIONS FOR THE DEWATERING OPERATION MUST CONTAIN PERENNIAL VEGETATION OR SIMILAR STABLE SURFACE.

25. ALL SWALES OR CHANNELS THAT WILL RECEIVE RUNOFF FROM PAVED SURFACES MUST BE PERMANENTLY STABILIZED PRIOR TO THE INSTALLATION OF PAVEMENT. IF THE SEASON PROHIBITS THE ESTABLISHMENT OF PERMANENT STABILIZATION, THE SWALES OR CHANNELS MAY BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE STANDARDS.

26. NJSA 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN SATISFIED. THEREFORE, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS MUST BE COMPLETED BEFORE THE DISTRICT ISSUES A REPORT OF COMPLIANCE OR CONDITIONAL REPORT OF COMPLIANCE, WHICH MUST BE FORWARDED TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY, RESPECTIVELY.

B. TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1, IN "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" (SSESCNJ).

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE SSESCNJ ENGINEERING STANDARDS.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED TO A 6" MINIMUM DEPTH. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDBED PREPARATION

A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.

D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, SSESCNJ PG 1-1.

3. SEEDING

A. APPLY SEED AS FOLLOWS:

COOL SEASON PERENNIAL RYEGRASS AT 100 POUNDS/ACRE OR 1 POUND/1000 SQ.FT.; OPTIMUM SEEDING DATES:3/1-5/15 & 8/15-10/1; OPTIMUM SEED DEPTH: 0.5 INCHES

WARM SEASON PEARL MILLET AT 20 POUNDS/ACRE OR 0.5 POUNDS/1000 SQ.FT. OPTIMUM SEEDING DATE: 5/15-8/15; OPTIMUM SEED DEPTH: 1.0 INCHES

THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF THE SPECIFIED SEED AND PLANTING DATES WITH THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.

B. SEEDING RATE FOR WARM SEASON GRASS SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.

C. GRASSES MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.

D. REFER TO SSESNJ, FIGURE 7-1, PG. 7-5 FOR PLANT HARDINESS ZONES.

E. PLANTING DEPTHS SHOULD BE DOUBLED FOR SANDY SOILS.

F. CONVENTIONAL SEEDING: APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4 TO 1/2 INCH BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

G. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4, MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

H. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON-SITE WILL BE MAXIMIZED.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DETERMINED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 2½ TONS PER ACRE. MULCH MUST BE UNIFORMLY SPREAD SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

B. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTINGS. STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

TABLE B-1

LIMESTONE APPLICATION RATE BY SOIL TEXTURE

SOIL TEXTURE	TONS/ACRE	LBS./1000 S.F.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

1. PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED TO MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

C. PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.

B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARDS FOR LAND GRADING.

C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SEEDBED PREPARATION

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ½ RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. HIGH ACID PRODUCING SOIL SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

3. SEEDING

A. SELECT A MIXTURE FROM BELOW OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEEDINGS SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED. APPLY SEED AS FOLLOWS:

WATERWAY MIX

– STRONG CREEPING RED FESCUE AT 130 POUNDS/ACRE OR 3 POUNDS/1000 SQ.FT.; OPTIMUM SEEDING DATES: 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

– KENTUCKY BLUEGRASS AT 50 POUNDS/ACRE OR 1 POUND/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

– PERENNIAL RYEGRASS AT 20 POUNDS/ACRE OR 0.5 POUNDS/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

OR, REDTOP AT 10 POUNDS/ACRE OR 0.05 POUNDS/1000 SQ.FT PLUS WHITE CLOVER AT 5 POUNDS/ACRE OR 0.1 POUNDS/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

GENERAL LAWN/RECREATION

– BLEND OF HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE AT 175 POUNDS/ACRE OR 4 POUNDS/1000 SQ.FT. WITH PERENNIAL RYEGRASS AT 45 POUNDS/ACRE OR 1 POUND/1000 SQ.FT. PLUS KENTUCKY BLUEGRASS BLEND AT 45 POUNDS/ACRE OR 1 POUND/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

* IF SITE IS IRRIGATED

1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

2. WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85 DEGREES F AND ABOVE. SEE TABLE 4-3 IN SSESCNJ, MIXTURES 1 TO 7. PLANTING RATES FOR WARM SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3. COOL SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85 DEGREES F. MANY GRASSES BECOME ACTIVE AT 65 DEGREES F. SEE TABLE 4-3 IN SSESCNJ. SEEDING DATES ARE 2-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITH THE HOOFS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON-SITE WILL BE MAXIMIZED.

D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION 4 BELOW, MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS, REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

4. MULCHING – SEE PARAGRAPH 4 UNDER TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

5. IRRIGATION (WHERE FEASIBLE)

IF SOIL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

SINCE SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION 2, A SEEDBED PREPARATION, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3, SSESCNJ ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUEST A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE S

A. MERCER COUNTY SOIL CONSERVATION DISTRICT GENERAL NOTES

1. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING LAND DISTURBANCE ACTIVITY. NOTICE MAY BE MAILED, FAXED OR EMAILED TO:

MCSCD, 590 HUGHES DRIVE, HAMILTON SQUARE, NJ 08690
PHONE: 609-586-9603 FAX: 609-586-1117
EMAIL: MERCERSOIL@AOL.COM

2. IF APPLICABLE TO THIS PROJECT, THE OWNER SHOULD BE AWARE OF HIS OR HER OBLIGATION TO FILE FOR A NJPDES CONSTRUCTION ACTIVITY STORMWATER SG3 PERMIT (NJG0088323) VIA THE NJDEP ONLINE PERMITTING SYSTEM (WWW.NJLOGON.GOV/DEP/ONLINE) AND TO MAINTAIN THE ASSOCIATED BEST MANAGEMENT PRACTICES AND STORMWATER POLLUTION PREVENTION PLAN SELF-INSPECTION LOGBOOK ONSITE AT ALL TIMES. THIS PERMIT MUST BE FILED PRIOR TO THE START OF SOIL DISTURBANCE. THE ONLINE APPLICATION PROCESS WILL REQUIRE ENTRY OF AN SCD CERTIFICATION CODE, WHICH IS PROVIDED BY THE SOIL CONSERVATION DISTRICT UPON CERTIFICATION OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN.

3. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.

4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INCLUDING AN INCREASE IN THE LIMIT OF DISTURBANCE, WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.

5. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES.

6. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AS OUTLINED WITHIN THE SEQUENCE OF CONSTRUCTION ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NJ. IF LANGUAGE CONTAINED WITHIN ANY OTHER PERMIT FOR THIS PROJECT IS MORE RESTRICTIVE THAN (BUT NOT CONTRADICTORY TO) WHAT IS CONTAINED WITHIN THESE NOTES OR ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, THEN THE MORE RESTRICTIVE PERMIT REQUIREMENTS SHALL BE FOLLOWED.

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 1½" TO 2½" CLEAN STONE TRACKING PAD AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SITE DISTURBANCE, WHETHER IDENTIFIED ON THE CERTIFIED PLAN OR NOT. THE WIDTH SHALL SPAN THE FULL WIDTH OF EGRESS, AND LENGTH SHALL BE 50 FT. OR MORE, DEPENDING ON SITE CONDITIONS AND AS REQUIRED BY THE STANDARD. THIS SHALL INCLUDE INDIVIDUAL LOT ACCESS POINTS WITHIN RESIDENTIAL SUBDIVISIONS. IF THE EGRESS IS TO A COUNTY ROAD, THEN A 20FT. LONG PAVED TRANSITION SHALL BE PROVIDED BETWEEN THE EDGE OF PAVEMENT AND THE STONE ACCESS PAD.

9. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS HERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING, PROVIDED THAT ALL OTHER REQUIREMENTS RELATED TO DETENTION BASINS, SWALES AND THE SEQUENCE OF CONSTRUCTION HAVE BEEN MET.

10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION ACTIVITY WILL IMMEDIATELY RECEIVE TEMPORARY STABILIZATION. IF THE SEASON PREVENTS ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER, OR IF THE AREA IS NOT TOPSOILED, THEN THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS. SLOPED AREAS IN EXCESS OF 3H:1V SHALL BE PROVIDED WITH EROSION CONTROL BLANKETS. CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES, ROADWAY EMBANKMENTS, ENVIRONMENTALLY SENSITIVE AREAS) WILL RECEIVE TEMPORARY STABILIZATION IMMEDIATELY AFTER INITIAL DISTURBANCE OR ROUGH GRADING.

11. ANY STEEP SLOPES (I.E. SLOPES GREATER THAN 3:1) RECEIVING PIPELINE OR UTILITY INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS.

12. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING AND TOPSOILING. ALL AGRONOMIC REQUIREMENTS CONTAINED WITHIN THE STANDARDS AND ON THE CERTIFIED PLAN SHALL BE EMPLOYED. MULCH WITH BINDER, IN ACCORDANCE WITH THE STANDARDS, SHALL BE USED ON ALL SEEDED AREAS. SAVE ALL TAGS AND/OR BAGS USED FOR SEED, LIME AND FERTILIZER, AND PROVIDE THEM TO THE DISTRICT INSPECTOR TO VERIFY THAT MIXTURES AND RATES MEET THE STANDARDS.

13. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOILS WILL NOT PROVIDE SUITABLE CONDITIONS, THEN NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

14. DURING THE COURSE OF CONSTRUCTION, SOIL COMPACTION MAY OCCUR WITHIN HAUL ROUTES, STAGING AREAS AND OTHER PROJECT AREAS. IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING, COMPACTED SURFACES SHOULD BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO TOPSOIL APPLICATION. THIS WILL HELP ENSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

15. PRIOR TO SEEDING, TOPSOIL SHALL BE WORKED TO PREPARE A PROPER SEEDBED. THIS SHALL INCLUDE RAKING OF THE TOPSOIL AND REMOVAL OF DEBRIS AND STONES, ALONG WITH OTHER REQUIREMENTS OF THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION.

16. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE BURIED WITH LIMESTONE IN ACCORDANCE WITH THE STANDARD AND BE COVERED WITH A MINIMUM OF 12"OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO TOPSOIL APPLICATION AND SEEDBED PREPARATION. IF THE AREA IS TO RECEIVE TREE OR SHRUB PLANTINGS, OR IS LOCATED ON A SLOPE, THEN THE AREA SHALL BE COVERED WITH A MINIMUM OF 24"OF SOIL HAVING A PH OF 5 OR MORE.

17. MULCHING TO THE STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONAL ROC'S ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. PERMANENT STABILIZATION MUST THEN BE COMPLETED DURING THE OPTIMUM SEEDING SEASON IMMEDIATELY FOLLOWING THE CONDITIONAL ROC, OR THE COMPLETION OF WORK IN A GIVEN AREA.

18. HYDROSEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED-TO-SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF THE SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A MINIMUM RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS. THE USE OF HYDROMULCH ON SLOPED AREAS IS DISCOURAGED.

19. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF THE CONSTRUCTION PROJECT. ALL SEDIMENT WASHED, DROPPED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED.

20. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION, AND FOR EMPLOYING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AT THE REQUEST OF THE MERCER COUNTY SOIL CONSERVATION DISTRICT.

21. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

22. ALL DETENTION / RETENTION BASINS MUST BE FULLY CONSTRUCTED (INCLUSIVE OF ALL STRUCTURAL COMPONENTS AND LINERS) AND PERMANENTLY STABILIZED PRIOR TO PAVING OR PRIOR TO THE ADDITION OF ANY IMPERVIOUS SURFACES. PERMANENT STABILIZATION INCLUDES, BUT MAY NOT BE LIMITED TO: TOPSOIL, SEED, STRAW MULCH AND BINDERS OR EROSION CONTROL BLANKETS ON ALL SEEDING, ALL AGRONOMIC REQUIREMENTS AS SPECIFIED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INSTALLATION OF THE OUTFLOW CONTROL STRUCTURES AND DISCHARGE STORM DRAINAGE PIPING, LOW FLOW CHANNELS, CONDUIT OUTLET PROTECTION, EMERGENCY SPILLWAYS, AND LAP RING PROTECTION.

23. THE RIDING SURFACE OF ALL UTILITY TRENCHES WITHIN PAVED AREAS SHALL BE 3/4" CLEAN STONE OR BASE PAVEMENT UNTIL SUCH TIME AS FINAL PAVEMENT HAS BEEN INSTALLED. TEMPORARY SOIL RIDING SURFACES ARE PROHIBITED.

24. ALL CONSTRUCTION DEWATERING (TRENCHES, EXCAVATIONS, ETC.) MUST BE DONE THROUGH AN INLET OR OUTLET FILTER IN ACCORDANCE WITH THE STANDARD FOR DEWATERING OR AS DEPICTED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. DISCHARGE LOCATIONS FOR THE DEWATERING OPERATION MUST CONTAIN PERENNIAL VEGETATION OR SIMILAR STABLE SURFACE.

25. ALL SWALES OR CHANNELS THAT WILL RECEIVE RUNOFF FROM PAVED SURFACES MUST BE PERMANENTLY STABILIZED PRIOR TO THE INSTALLATION OF PAVEMENT. IF THE SEASON PROHIBITS THE ESTABLISHMENT OF PERMANENT STABILIZATION, THE SWALES OR CHANNELS MAY BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE STANDARDS.

26. NJSA 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN SATISFIED. THEREFORE, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS MUST BE COMPLETED BEFORE THE DISTRICT ISSUES A REPORT OF COMPLIANCE OR CONDITIONAL REPORT OF COMPLIANCE, WHICH MUST BE FORWARDED TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY, RESPECTIVELY.

B. TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1, IN "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" (SSESCNJ).

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE SSESCNJ ENGINEERING STANDARDS.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED TO A 6" MINIMUM DEPTH. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDBED PREPARATION

A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.

D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, SSESCNJ PG 1-1.

3. SEEDING

A. APPLY SEED AS FOLLOWS:

COOL SEASON PERENNIAL RYEGRASS AT 100 POUNDS/ACRE OR 1 POUND/1000 SQ.FT.; OPTIMUM SEEDING DATES:3/1-5/15 & 8/15-10/1; OPTIMUM SEED DEPTH: 0.5 INCHES

WARM SEASON PEARL MILLET AT 20 POUNDS/ACRE OR 0.5 POUNDS/1000 SQ.FT. OPTIMUM SEEDING DATE: 5/15-8/15; OPTIMUM SEED DEPTH: 1.0 INCHES

THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF THE SPECIFIED SEED AND PLANTING DATES WITH THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.

B. SEEDING RATE FOR WARM SEASON GRASS SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.

C. GRASSES MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.

D. REFER TO SSESNJ, FIGURE 7-1, PG. 7-5 FOR PLANT HARDINESS ZONES.

E. PLANTING DEPTHS SHOULD BE DOUBLED FOR SANDY SOILS.

F. CONVENTIONAL SEEDING: APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4 TO 1/2 INCH BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

G. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4, MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

H. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON-SITE WILL BE MAXIMIZED.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DETERMINED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 2½ TONS PER ACRE. MULCH MUST BE UNIFORMLY SPREAD SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

B. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTINGS. STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

TABLE B-1

LIMESTONE APPLICATION RATE BY SOIL TEXTURE

SOIL TEXTURE	TONS/ACRE	LBS./1000 S.F.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

1. PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED TO MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

C. PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.

B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARDS FOR LAND GRADING.

C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SEEDBED PREPARATION

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ½ RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. HIGH ACID PRODUCING SOIL SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

3. SEEDING

A. SELECT A MIXTURE FROM BELOW OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEEDINGS SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED. APPLY SEED AS FOLLOWS:

WATERWAY MIX

– STRONG CREEPING RED FESCUE AT 130 POUNDS/ACRE OR 3 POUNDS/1000 SQ.FT.; OPTIMUM SEEDING DATES: 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

– KENTUCKY BLUEGRASS AT 50 POUNDS/ACRE OR 1 POUND/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

– PERENNIAL RYEGRASS AT 20 POUNDS/ACRE OR 0.5 POUNDS/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

OR, REDTOP AT 10 POUNDS/ACRE OR 0.05 POUNDS/1000 SQ.FT PLUS WHITE CLOVER AT 5 POUNDS/ACRE OR 0.1 POUNDS/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

GENERAL LAWN/RECREATION

– BLEND OF HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE AT 175 POUNDS/ACRE OR 4 POUNDS/1000 SQ.FT. WITH PERENNIAL RYEGRASS AT 45 POUNDS/ACRE OR 1 POUND/1000 SQ.FT. PLUS KENTUCKY BLUEGRASS BLEND AT 45 POUNDS/ACRE OR 1 POUND/1000 SQ.FT.; OPTIMUM SEEDING DATES 8/15-10/15, ACCEPTABLE SEEDING DATES: 3/1-4/30 & 5/1-8/14*

* IF SITE IS IRRIGATED

1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

2. WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85 DEGREES F AND ABOVE. SEE TABLE 4-3 IN SSESCNJ, MIXTURES 1 TO 7. PLANTING RATES FOR WARM SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3. COOL SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85 DEGREES F. MANY GRASSES BECOME ACTIVE AT 65 DEGREES F. SEE TABLE 4-3 IN SSESCNJ. SEEDING DATES ARE 2-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITH THE HOOFS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON-SITE WILL BE MAXIMIZED.

D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION 4 BELOW, MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS, REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

4. MULCHING – SEE PARAGRAPH 4 UNDER TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

5. IRRIGATION (WHERE FEASIBLE)

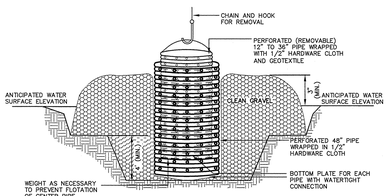
IF SOIL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

SINCE SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION 2, A SEEDBED PREPARATION, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

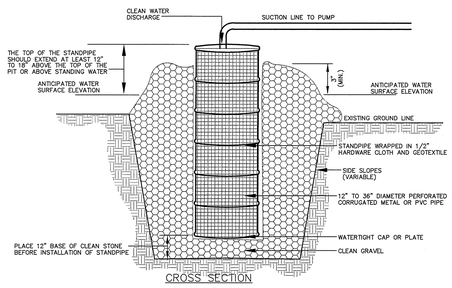
7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3, SSESCNJ ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUEST A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE S



ELEVATION (CUTAWAY)

REMOVAL OF PUMPING STATION DETAIL
(IF/AS REQUIRED)
NTS



CROSS SECTION

SUMP PIT DETAIL
(IF/AS REQUIRED)
NTS

CONSTRUCTION SPECIFICATIONS

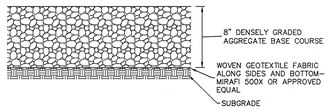
1. PIT DIMENSIONS ARE VARIABLE, WITH THE MINIMUM DIAMETER BEING 2 TIMES THE STANDPIPE DIAMETER.

2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12" TO 24" DIAMETER CORRUGATED OR PVC PIPE. THEN WRAPPING WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE PERFORATIONS SHALL BE 1/2" x 6" SLITS OR 1" DIAMETER HOLES.

3. A BASE OF FILTER MATERIAL CONSISTING OF CLEAN GRAVEL OR ASTM C 33 STONE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD THEN BE BACK FILLED WITH THE SAME FILTER MATERIAL.

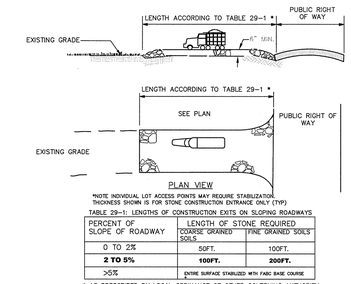
4. THE STANDPIPE SHOULD EXTEND 12" TO 18" ABOVE THE LIP OF THE PIT OR THE RISER CREST ELEVATION (BASIN DEWATERING ONLY) AND THE FILTER MATERIAL SHOULD EXTEND 3" MINIMUM ABOVE THE ANTICIPATED STANDING WATER ELEVATION.

DEWATERING DETAIL
(IF/AS REQUIRED)
NTS



NOTES:
1. STRIP TOPSOIL PRIOR TO PLACEMENT OF FILTER FABRIC AND STONE

CONTRACTOR PARKING / STAGING AREA DETAIL
NTS



PLAN VIEW

*NOTE INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE ONLY (TYP)

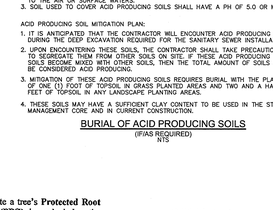
TABLE 29-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADWAYS

PERCENT OF SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50FT.	100FT.
2 TO 5%	**100FT.**	**200FT.**
>5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE	

* AS PRESCRIBED BY LOCAL ORDINANCE OF OTHER GOVERNING AUTHORITY.

1. PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. STONE SIZE SHALL BE ASTM C-33, SIZE NO. 2 OR 3, CLEAN CRUSHED ANGULAR STONE.
3. THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN TWELVE INCHES (12").
4. THE WIDTH AT THE EXISTING PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS.
5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W. OR PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT.
6. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC OR PRIVATE ROADWAY MUST BE REMOVED IMMEDIATELY.

STONE CONSTRUCTION ENTRANCE
(IF/AS REQUIRED)
NTS

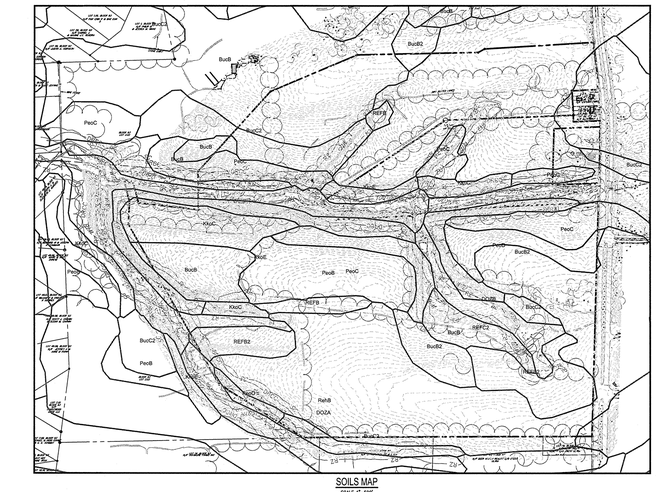


NOTES:
1. ACID PRODUCING SOILS ARE DEFINED AS SOILS CONTAINING IRON SULFIDE MINERALS OR SOILS WITH A PH OF 4.0 OR LESS.
2. IRON SULFIDE MINERALS WILL PRODUCE SULFURIC ACID WHEN EXPOSED TO THE AIR OR SURFACE WATERS.
3. SOIL USED TO COVER ACID PRODUCING SOILS SHALL HAVE A PH OF 5.0 OR MORE.

ACID PRODUCING SOIL MITIGATION PLAN:

1. IT IS ANTICIPATED THAT THE CONTRACTOR WILL ENCOUNTER ACID PRODUCING SOILS DURING THE DEEP EXCAVATION REQUIRED FOR THE SANITARY SEWER INSTALLATION.
2. UPON ENCOUNTERING THESE SOILS, THE CONTRACTOR SHALL TAKE PRECAUTIONS TO SEGREGATE THEM FROM OTHER SOILS ON SITE. IF THESE ACID PRODUCING SOILS BECOME MIXED WITH OTHER SOILS, THEN THE TOTAL AMOUNT OF SOILS WOULD BE CONSIDERED ACID PRODUCING.
3. MITIGATION OF THESE ACID PRODUCING SOILS REQUIRES BURIAL WITH THE PLACEMENT OF ONE (1) FOOT OF TOPSOIL IN GRASS PLANTED AREAS AND TWO AND A HALF (2 1/2) FEET OF TOPSOIL IN ANY LANDSCAPE PLANTING AREAS.
4. THESE SOILS MAY HAVE A SUFFICIENT CLAY CONTENT TO BE USED IN THE STORMWATER MANAGEMENT CORE AND IN CURRENT CONSTRUCTION.

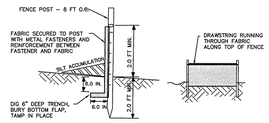
BURIAL OF ACID PRODUCING SOILS
(IF/AS REQUIRED)
NTS



SOILS MAP
SCALE 1"=500'

SYMBOL	SOIL NAME AND DESCRIPTION	ACRES IN AOI	PERCENT OF AOI
BudB	BUCKS SILT LOAM, 2 TO 5 PERCENT SLOPES	432.9	28.1%
BudB2	BUCKS SILT LOAM, 2 TO 5 PERCENT SLOPES, ERODED	112.6	7.3%
BudC2	BUCKS SILT LOAM, 5 TO 12 PERCENT SLOPES, ERODED	95.8	6.2%
DOZA	DOYLESTOWN AND REAVILLE VARIANT SILT LOAMS, 0 TO 2 PERCENT SLOPES	34.6	2.2%
DOZB	DOYLESTOWN AND REAVILLE VARIANT SILT LOAMS, 2 TO 6 PERCENT SLOPES	11.5	0.7%
KloC	KLINESVILLE CHANNERY LOAM, 6 TO 12 PERCENT SLOPES	33.2	2.2%
KloE	KLINESVILLE CHANNERY LOAM, 18 TO 35 PERCENT SLOPES	45.3	3.0%
PeoB	PENN CHANNERY SILT LOAM, 2 TO 6 PERCENT SLOPES	175.9	11.4%
PeoC	PENN CHANNERY SILT LOAM, 6 TO 12 PERCENT SLOPES	164.7	10.7%
REfB	READINGTON AND ABBOTTSTOWN SILT LOAMS, 12 TO 19 PERCENT SLOPES	58.8	3.8%
REfB2	READINGTON AND ABBOTTSTOWN SILT LOAMS, 2 TO 6 PERCENT SLOPES	46.6	3.0%
REfC2	READINGTON AND ABBOTTSTOWN SILT LOAMS, 2 TO 6 PERCENT SLOPES, ERODED	13.4	0.9%
RehB	READINGTON AND ABBOTTSTOWN SILT LOAMS, 6 TO 12 PERCENT SLOPES, ERODED	5.6	0.4%
RehB	REAVILLE SILT LOAM, 2 TO 6 PERCENT SLOPES	71.2	4.6%

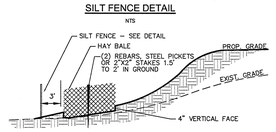
REFERENCE:
NATIONAL RESOURCES CONSERVATION SERVICE (NRCS). WEB SOIL SURVEY UTM ZONE 18N NAD83, MERCER COUNTY, NEW JERSEY. VERSION 13, DATED OCTOBER 6, 2017.



NOTES:

1. ALL SILT FENCE WILL BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH RAIN.

SILT FENCE DETAIL
NTS

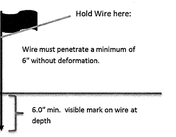


NOTE:
1. PLACE HAYBALE/SILT FENCE SCD MEASURE AT THE BOTTOM OF SLOPES AND AT LOCATIONS OF CONCENTRATED FLOW. ADDITIONAL LOCATIONS IF REQUIRED SHALL BE DETERMINED IN THE FIELD WITH THE ENGINEER.

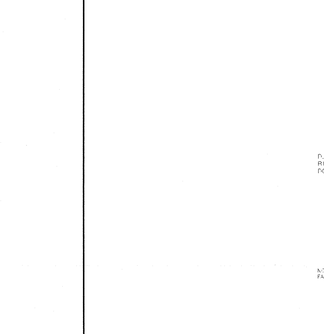
STAKED HAY BALE SEDIMENT BARRIER DETAIL
(IF/AS REQUIRED)
NTS

Probing Wire Test- 15.5 ga steel wire (survey flag)

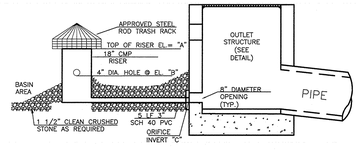
Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



PROBING WIRE TEST DETAIL
(IF/AS REQUIRED)
NTS



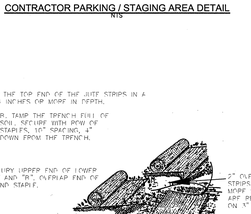
SLOPE STABILIZATION FABRIC DETAIL
IF/AS REQUIRED
NTS



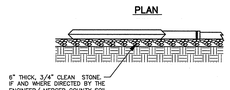
BASIN	TOP OF RISER ELEVATION "A"	DEWATERING HOLE EL. "B"	ORIFICE INVERT "C"
BASIN N100	153.95	152.30	151.00
BASIN N200	159.05	156.65	154.50
BASIN N300	168.85	167.95	166.00
BASIN S100	159.96	157.90	156.00
BASIN S200A	170.55	178.40	176.00
BASIN S200B	173.30	170.95	169.00
BASIN S300	189.45	188.75	187.00

SEDIMENT BASIN MAINTENANCE PLAN:
1. MAINTENANCE DURING OPERATION: SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN THE SEDIMENT LEVEL REACHES 50% OF TRAP EFFICIENCY ELEVATION. THE ELEVATION SHALL BE IDENTIFIED BY THE INVERT OF THE 50% TRAP EFFICIENCY DEWATERING HOLE (EL. "B").
2. ALL SEDIMENT REMOVED FROM THE BASIN SHALL BE SPREAD OVER SOIL STOCKPILE AREAS AND STABILIZED IN ACCORDANCE WITH THIS PLAN.
3. SEDIMENT REMOVED FROM THE BASIN SHALL BE PLACED IN A MANNER SO AS NOT TO ERODE FROM THE SITE.
4. WATER LYING OVER TRAPPED SEDIMENT SHALL BE REMOVED BY PUMPING.
5. SEDIMENT SHALL NOT BE DEPOSITED DOWNSTREAM, IN OR ADJACENT TO A STREAM, IN A FLOODPLAIN OR IN WETLANDS.
6. THE CONTRACTOR IS RESPONSIBLE FOR OPERATION AND MAINTENANCE DURING THE LIFE OF THE SEDIMENT BASIN.

TYPICAL SEDIMENT BASIN RISER DETAIL
NTS



PLAN

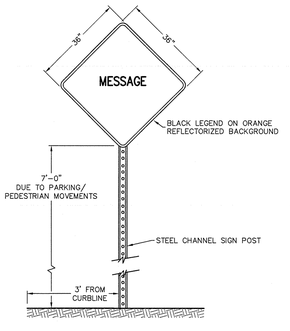


ELEVATION

NOTES:

1. ALL STORM WATER FROM THE CONSTRUCTION SITE SHALL BE DIVERTED TO LOW AREAS AND SHALL BE PUMPED THROUGH SILT FILTRATION BAG.
2. SILT FILTRATION PUMPING STATIONS AND BAGS SHALL BE PROVIDED AS REQUIRED.
3. CONTRACTOR SHALL UTILIZE ALL MEASURES, AS REQUIRED, TO PREVENT SEDIMENT-LADEN WATER FROM EXITING THE CONSTRUCTION SITE.
4. DIRT BAG SHALL BE LOCATED ON A STABLE SURFACE AWAY FROM WATERWAYS AND ACTIVE CONSTRUCTION AREAS.

SILT FILTRATION BAG DETAIL
(IF/AS REQUIRED)
NTS



NOTES:
1. ALL SIGNS TO BE MOUNTED ON BREAKAWAY POSTS.
2. ALL SIGN POSTS IN CONCRETE TO BE INSTALLED IN 4" PVC SLEEVE.
3. SIGN FOR "NO TRUCKS OR CONSTRUCTION TRAFFIC BEYOND THIS POINT" SHALL BE SIMILAR.

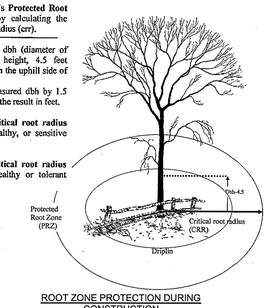
TRAFFIC CONTROL SIGN DETAIL
NTS

Estimate a tree's Protected Root Zone (PRZ) by calculating the Critical Root Radius (crr).

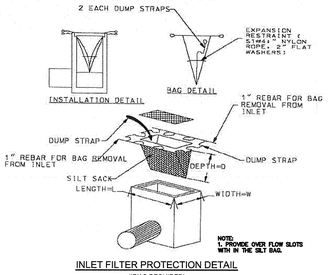
1. Measure the dbh (diameter of tree at breast height, 4.5 feet above ground on the uphill side of tree) in inches.
2. Multiply measured dbh by 1.5 or 1.0. Express the result in feet.

Dbh x 1.5: Critical root radius for older, unhealthy, or sensitive species.

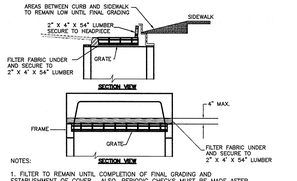
Dbh x 1.0: Critical root radius for younger, healthy or tolerant species.



ROOT ZONE PROTECTION DURING CONSTRUCTION
NTS

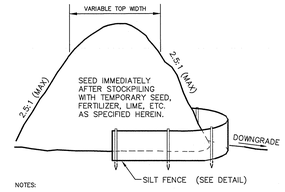


INLET FILTER PROTECTION DETAIL
(IF/AS REQUIRED)
NTS



NOTES:
1. FILTER TO REMAIN UNTIL COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF COVER. ALSO, PERIODIC CHECKS MUST BE MADE AFTER EACH RAINFALL TO EXCAVATE AND REMOVE SEDIMENT FROM AROUND INLETS.
2. FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUIVALENT.

INLET FILTER CURB TYPE DETAIL
(IF/AS REQUIRED)
NTS



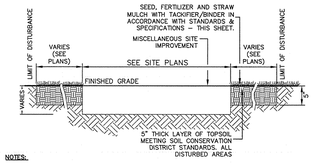
TREES TO BE PROTECTED DURING CONSTRUCTION WILL BE TAGGED PRIOR TO THE START OF CONSTRUCTION BY THE ENGINEER. ALL TREES TO BE PROTECTED. THE FINAL DETERMINATION OF THOSE TO BE PROTECTED WILL BE MADE BY THE ENGINEER AND BY LANDSCAPE ARCHITECT IN THE FIELD.

PROTECTIVE FENCING IS TO BE MAINTAINED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER AND BY LANDSCAPE ARCHITECT.

NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING WITHOUT PERMISSION FROM THE ENGINEER AND BY LANDSCAPE ARCHITECT.

AT THE COMPLETION OF CONSTRUCTION ALL PRESERVED TREES WILL BE PRUNED AS NECESSARY TO CORRECT ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITY.

TREE PROTECTION DETAIL
NTS



NOTES:

1. ALL DISTURBED AREAS SHALL BE COMPLETELY RESTORED FOLLOWING CONSTRUCTION. RESTORATION INCLUDES THE APPLICATION OF 5" OF TOPSOIL, AND PERMANENT STABILIZATION.
2. REFER TO NOTES SHEET CE-12, FOR SOIL EROSION AND SEDIMENT CONTROL STANDARDS AND PERMANENT STABILIZATION REQUIREMENTS.

TYPICAL RESTORATION DETAIL
(IF/AS REQUIRED)
NTS

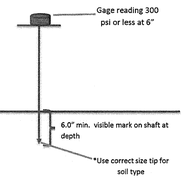
NOTES:

1. TOPSOIL STOCKPILE LOCATIONS ARE TO BE APPROVED IN THE FIELD BY THE ENGINEER.
2. SEED IMMEDIATELY AFTER STOCKPILING WITH TEMPORARY SEED, FERTILIZER, LIME, ETC. AS SPECIFIED HEREIN.

TYPICAL TOPSOIL STOCKPILE
N.T.S.

Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gauge.



HANDHELD SOIL PENETROMETER TEST DETAIL
(IF/AS REQUIRED)
NTS

SOIL DECOMPACTION AND TESTING REQUIREMENTS (IF/AS REQUIRED)

SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS **PRIOR TO THE APPLICATION OF TOPSOIL** (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.

3. **COMPACTION TESTING LOCATIONS** ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION MITIGATION VERIFICATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.

4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION

PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION **PRIOR TO PLACEMENT OF TOPSOIL** AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

REV.	DESCRIPTION	DATE	DFT.BY	CKD.BY
1.	PRELIMINARY/FINAL SITE PLAN SUBMISSION	12/16/20	WDV	BRP

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SOIL EROSION & SEDIMENT CONTROL DETAILS
OF
NORTH AND SOUTH SECTIONS
HOPEWELL PARC
ON
BLOCK 93, LOTS 5.01, 5.02, AND 6.02
SITUATED IN
HOPEWELL TOWNSHIP
NOT TO SCALE
MERCER CO., N.J.
DECEMBER 16, 2020

12/16/2020
DATE OF SIGN.

BRIAN R. PERRY
N.J. PROFESSIONAL ENGINEER LIC. NO. GE 45920

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