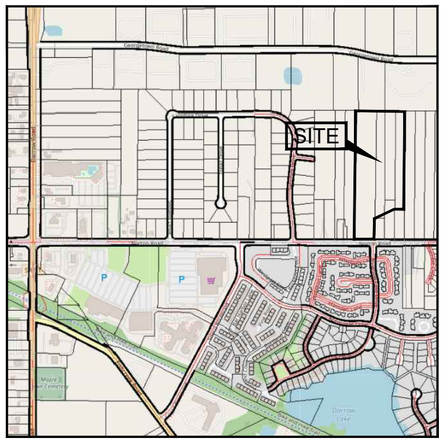
HUDSON PRESERVE

SITUATED IN THE CITY OF HUDSON,
COUNTY OF SUMMIT AND STATE OF OHIO:
AND KNOWN AS BEING A PART OF
ORIGINAL HUDSON TOWNSHIP LOT NO. 7

ACREAGE SUMMARY

LOTS	7.7774 AC. (11 LOTS)
OPEN SPACE	4.0477 AC. (3 PARCELS)
ROAD R.O.W. TO BE DEDICATED:	
NORTON ROAD	0.1378 AC.
PROPOSED ROAD	1.0705 AC.
TOTAL	13.0334 AC.

AUGUST, 2021



VICINITY MAP: N.T.S.

SURVEYOR'S CERTIFICATION:

I hereby certify that I have surveyed the land shown on this plat, and that this plat is a correct representation of the land surveyed and the subdivision thereof, and that I have found or set the pins and monuments on this plat and that all lots conform to the City Land Development Code.

STATE OF OHIO
KELLY D. DUNFORD 8182
REGISTERED SURVEYOR

FOR REVIEW 8/24/21

Kelly D. Dunford
Ohio Professional Surveyor S-8182

State of Ohio
County of Summit

Before me, a Notary Public in and for said county, personally appeared the afore named owners, who acknowledges the making and signing of the foregoing instrument to be their free act and deed.

In testimony of whereof, I have hereunto set me hand and official seal at _____, Ohio. This _____ day of _____, 20 ____.

_____ Notary Public

_____ My Commission Expires

ACCEPTANCE, DEDICATION & EASEMENT

We the undersigned: LDA Land Group, LLC

Owner(s) of the property shown and described hereon do hereby assent to and adopt this subdivision plat and its established setback lines, and acknowledge that the same was made at it/our request, and hereby dedicate the thoroughfares to public use as shown by graphic symbol on this plat and also hereby grant unto the City of Hudson and its corporate successors, permanent easements for the construction, maintenance, and operation of public facilities and appurtenances as shown hereon. All storm water management/retention facilities shall be maintained by the Hudson Preserve Homeowners' Association and lands for such, including access and secondary storm drainage areas are herein granted to the Hudson Preserve Homeowners association as shown.

Owner: Witnesses:

By: _____ _____
Tony Lunardi Name:
LDA Land Group, LLC
6683 Olde Elght Road.
Peninsula, OH 44264
(330) 643-4240 _____
Name:

State of Ohio
County of Summit

Before me, a Notary Public in and for said county, personally appeared the afore named owners, who acknowledges the making and signing of the foregoing instrument to be their free act and deed.

In testimony of whereof, I have hereunto set me hand and official seal at _____, Ohio. This _____ day of _____, 20 ____.

_____ Notary Public

_____ My Commission Expires

TAX MAP DEPARTMENT

SURVEYED BY:

APEX LAND SURVEYING
KELLY D. DUNFORD, P.S. 8182
2858 FULMER DR., SILVER LAKE, OH
(330) 928-7750
ps8182@sbcglobal.net
www.apexlandsurveying.com

UTILITY EASEMENTS (U.E.L.)

We, the owners of the within platted land, do hereby grant unto the City of Hudson, the County of Summit, Hudson Electric Department, Dominion East Ohio, Windstream and Charter Communications, their successors and assigns (hereinafter referred to as the grantees) a permanent right of way and easement twelve (12) feet in width under, over and through all sublots and all lands shown hereon and parallel to a three (3) foot utility easement granted to the City of Hudson and the County of Summit to construct, place, operate, maintain, repair, reconstruct and relocate, renew, supplement, or remove such underground electric, gas, and communications, cables, ducts, conduits, pipes, gas pipelines surface or below mounted transformers and pedestals, concrete pads, and other facilities as are deemed necessary or convenient by the grantees for distributing and transmitting electricity, gas and communication signals for public and private use at such locations as the grantees may determine, upon, within and across said easement premises. Said easement rights shall include the right, without liability therefore, to remove any and all facilities not contemplated in the rights conveyed to grantees by this easement grant within said easement premises including, but not limited to, irrigation systems electronic animal fencing, trees and landscaping including lawns, flowers or shrubbery and landscape lighting within and without said easement premises which may interfere with the installation, maintenance, repair or operation of said electric, gas, and communication facilities, the right to install, repair, augment and maintain service cables and pipelines outside the above described easement premises, and with the right of access, ingress and egress to and from any of the within described premises for exercising any of the purposes of this right of way and easement grant. Grantees shall also be granted the right of access, ingress and egress over and through said three (3) foot utility easement granted to the City of Hudson and the County of Summit. All sublots and all lands shall be restricted to underground utility service.

Grantor:	Grantee:	Grantee:
LDA Land Group, LLC	City of Hudson	Dominion East Ohio
Tony Lunardi, Member	Print:	Print:
Grantee:	Grantee:	Grantee:
Windstream	Charter Communications	County of Summit
Print:	Print:	Ilene Shapiro, County Executive

APPROVALS

Approved by the Planning Commission of the City of Hudson, Ohio this _____ day of _____ , 20__.

_____ Chairmen:

_____ Secretary:

Approved by the Engineer for the City of Hudson, Ohio for record purposes only this _____ day of _____ , 20___.

_____ City Engineer, Bradley Kosco, P.E., P.S.

Approved by the City Manager for the City of Hudson, Ohio for record purposes only this _____ day of _____ , 20___.

_____ Assistant City Manager, Thomas Sheridan

ACCEPTANCE OF DEDICATION

Dedication was accepted by the Council of the City of Hudson, Ohio, at its regular session on the _____ day of _____ , 20___, pursuant to Ordinance No. _____.

_____ President of Council:

_____ Clerk of Council:

SANITARY SEWER EASEMENTS

We the undersigned: LDA Land Group, LLC, owner(s) of the property shown and described hereon, do hereby grant unto the County of Summit and its corporate successors, permanent easements as depicted hereon, including being an easement three (3) feet in width parallel with and contiguous to all street lines, under, over, and thru all sublots and all lands shown hereon. Easements five (5) feet in width and parallel to all side and rear property lines, under, over, and thru are granted for the purpose or constructing, operating and maintaining public sanitary facilities.

Grantor:	Grantee:
LDA Land Group, LLC	County of Summit
Tony Lunardi, Member	Ilene Shapiro, County Executive

WETLAND NOTICE

The lands depicted hereon are subject to the U.S. Army Corps. Permit No. 20__-_____ dated _____ __, 20__, and grant of Section 401 Water Quality Certification, Ohio EPA ID No. _____ dated _____ __, 20__. all relevant provisions of these permits shall apply.

FISCAL OFFICER'S STAMP	RECORDING DEPARTMENT'S STAMP

SEE SHEET 3 OF 3

DARROW FARM SUB'D. (UNRECORDED)

20 | 21 | 22 | 23 | 24

O. Hurt
Parcel #30-02980
1849 Norton Rd.
Rec. #55685370

LOT #5
0.7840 ACRES
(34,153 SQ. FT.)

LOT #4
0.5609 ACRES
(24,431 SQ. FT.)

LOT #3
0.4595 ACRES
(20,014 SQ. FT.)

LOT #2
0.4594 ACRES
(20,013 SQ. FT.)

LOT #1
0.4903 ACRES
(21,355 SQ. FT.)

LOT #8
0.5023 ACRES
(21,878 SQ. FT.)

LOT #9
0.5065 ACRES
(22,063 SQ. FT.)

LOT #10
0.5219 ACRES
(22,733 SQ. FT.)

LOT #11
0.4591 ACRES
(20,000 SQ. FT.)

OPEN SPACE
0.0489 ACRES
(2,130 SQ. FT.)

OPEN SPACE & SAN. SEWER ESMN'T.
0.0925 AC.
(4,030 SQ. FT.)

J.E. & A. White
Parcel #30-01674
1909 Norton Rd.
Doc. #56575311

A.L. & C.M. Calabro
Parcel #30-00882
1891 Norton Rd.
Doc. #56532190
1.000 Ac. (Deed)

J.L. & G.M. Robinson
Parcel #30-02143
1887 Norton Rd.
8/12/87

LDA Land Group LLC
1895 Norton Rd.
Parcel #30-03332
Doc. #56592162

1316.09'(C) to C.L.
N 00°22'18" W
166.66'
170.84'
S 00°21'49" E
1312.51'(C) (1312.48'R) to C.L.
218.05'
175.78'
1311.79'(C) (1311.69'R) to C.L.
S 00°20'50" E

S 51°29'39" E 261.87'
N 68°01'00" W 172.50'
N 38°30'21" E 94.81'
S 50°20'00" W 214.22'
S 80°33'27" E 153.19'
137.12'
101.54'
S 69°39'17" W 96.12'
N 54°29'12" W 249.34'
S 00°23'39" E 22.86'
99.98'(C) S 89°21'28" W
S 00°23'39" E 22.58'
21.76'
S 08°57'15" W 62.02'
S 39°40'03" E 160.37'
N 89°37'42" E 140.00'
2.16'
N 73°58'38" W 129.62'
S 66°24'03" W 109.01'
108.91'(R&M) S 66°24'03" W
217.92'
42.52'
100.18'(C) (100.00'R) S 89°21'28" W
0.89'
S 72°41'57" W 120.21'
N 72°41'57" E 120.21'
N 00°22'18" W 130.00'
S 00°22'30" E 250.00'(R&C) to C.L.
N 00°22'36" W 292.52'(R&C) to C.L.
S 00°23'39" E 335.00'(R&C) to C.L.
N 00°21'49" W 335.00'(R&C) to C.L.
S 89°21'28" W 200.12'(C) (200.00'R)
609.51'(C) S 89°21'28" W
O.L. 7
E. SAPPHIRE DR. (50' R/W)
DARROW LAKE DR.
NORTON ROAD (60' R/W)
PRESERVE LANE (60' R/W)
CITY OF HUDSON
CITY OF STOW

PR. STORM EASEMENT
FUTURE 15' STORM ESMN'T.
50' B/L (TYP.)
15' SIDE S/B (TYP.)
50' REAR S/B (TYP.)
50' REAR S/B
15' SIDE S/B
50' B/L
85' B/L
3' E.L. (TYP.)
12' U.E.L. (TYP.)
CURRENT R/W
ORIGINAL R/W

N: 561,540.84
E: 2,263,282.72
N: 561,851.44
E: 2,263,781.06

1" Rod Fnd. & Usd. (10" Deep)
3/4" Pipe (Bent) Fnd. 0.87'-W. at 21.98'
1/2" Rod Fnd. 0.10'-W. at 33.06' (6" Deep)
3/4" Rod Fnd. 0.58'-W. at 20.36'
5/8" Rebar w/cap: Dunford Fnd. & Usd. at 30.00'
3/4" Pipe Fnd. & Usd. at 20.22'
3/4" Pipe Fnd. 0.14'-W at 30.00' (6" Deep & Bent)
3/4" Pipe Fnd. & Usd. at 30.00' (4" Deep)
3/4" Pipe Fnd. & Usd. at 30.00' (2" Deep)
5/8" Rebar w/cap: Dunford Fnd. & Usd.
3/4" Pipe Fnd. & Usd. 0.10'-E.
1/2" Rod (Leans) Fnd. 0.24'-W. at 19.71'

0 25 50 100
Scale: 1 inch = 50 feet

BASIS OF BEARINGS:

The "BASIS OF BEARINGS" for this survey is GRID NORTH of the Ohio State Plane, North Zone as observed by GPS via the ODOT VRS network, based on the NAD83 (2011) reference frame; 2010.0 epoch.

ALL DISTANCES SHOWN HEREON INDICATE GROUND DISTANCES IN US SURVEY FEET.

SURVEY LEGEND

- ○ – 5/8" x 30" Rebar Set w/cap: Dunford PS-8182
- □ – 1" x 30" Rebar Set in Monument Box
- △ – Nail, Drill Hole or Spike Set
- ● – Iron/Steel Rebar, Pin or Rod Found and Described
- ◉ – Iron/Steel Pipe Found and Described
- ■ – Monument Box Found and Described
- ▲ – Nail, Drill Hole or Spike Found & Described

Rec. (R) = Record Deed (D) = Deed
Plat (PL) = Plat Msd. (M) = Measured
Calc. (C) = Calculated Pro. (PRO) = Prorated
Obs. (O) = Observed
Fnd. (F) = Found Usd. (U) = Used

B.O.B. – Basis of Bearings
P.O.C. – Point of Commencement
P.O.B. – Point of Beginning

REFERENCE DATA

Summit County GIS &
Old Mylar Tax Maps
Deeds as shown hereon.
Sub'd. plats as shown hereon.

HUDSON SOUTH COMMERCIAL PARK
CAB. B, SLD's. 660-664

HUDSON PINES
CAB. J, SLD's. 264-266

13

14

200.00'(R&C)

3/4 Pipe
(3" High)
Fnd. 1.00'-S.

1/2" Rebar
w/cap: ILLEGIBLE
Fnd. 0.08'-E.

84.84'(C)
(85.00'R)

5/8" Rebar
w/cap: STOFFER
Fnd. & Usd

115.02'(C) (115.00'R)

3/4 Pinch
Top Pipe
Fnd. 0.37'-S.

3/4" Rod
Fnd. 0.29'-N.

N: 562,826.90
E: 2,263,274.37

200.05'(C) (200.00'R)

N 89°46'03" E

1" Pipe
Fnd. & Usd.

N 89°46'03" E 500.49'(C)

300.44'(C) (300.00'R)

N: 562,828.93
E: 2,263,774.86

1" Rod
Fnd. & Usd.
(4" High)

100.18'(C)
(100.00'R)

3/4" Pipe
Fnd. & Usd.
0.17'-S
(4" High)

340.00'

340.00'

977.51'

PRIVATE OPEN SPACE
3.9063 ACRES
(170,158 SQ. FT.)

N 89°46'03" E 500.44'

291.50'

208.94'

EX. WETLAND

50' REAR S/B (TYP.)

75.08'

81.67'

1316.09'(C) to C.L.

205.79'

PR. 15' OPEN SPACE
ACCESS EASEMENT

7.5'

15' SIDE S/B (TYP.)

N 39°19'32" W
359.11'

343.30'

351.92'

7.5'

LOT #6
1.5813 ACRES
(68,881 SQ. FT.)

30' RIPARIAN S/B (TYP.)

S 01°13'18" W
389.89'

LOT #7
1.4522 ACRES
(63,256 SQ. FT.)

30' RIPARIAN S/B (TYP.)

216.83'

50' REAR S/B (TYP.)

30.00'

DARROW FARM SUB'D. (UNRECORDED)

20

21

22

23

50' B/L (TYP.)

129.84'

79.15'

15'

15'

PR. STORM EASEMENT

S 39°40'03" E

214.22'

S 50°20'00" W

15' SIDE S/B (TYP.)

LOT #5
0.7840 ACRES
(34,153 SQ. FT.)

C12

C13

C11

C14

160.37'

LOT #8
0.5023 ACRES
(21,878 SQ. FT.)

PR. STORM EASEMENT

N 00°22'18" W
170.84'

S 51°29'39" E
261.87'

7.35'

C10

3' E.L. (TYP.)

12' U.E.L. (TYP.)

101.54'

S 80°33'27" E
153.19'

15'

15'

137.12'

218.05'

S 00°21'49" E
1312.51'(C) (1312.48'R) to C.L.

1311.79'(C) (1311.69'R) to C.L.
S 00°20'50" E

SEE SHEET 2 OF 3

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	200.00'	71.08'	70.71'	N 09°48'36" E	20°21'48"	35.92'
C2	200.00'	71.08'	70.71'	N 09°48'36" E	20°21'48"	35.92'
C3	230.00'	156.06'	153.09'	N 19°04'01" E	38°52'39"	81.17'
C4	25.00'	39.15'	35.27'	N 44°29'35" E	89°43'47"	24.88'
C5	230.00'	65.81'	65.59'	N 07°49'32" E	16°23'40"	33.13'
C6	230.00'	15.93'	15.93'	N 18°00'26" E	3°58'08"	7.97'
C7	170.00'	60.42'	60.10'	N 09°48'36" E	20°21'48"	30.53'
C8	260.00'	101.44'	100.80'	N 10°48'21" E	22°21'19"	51.38'
C9	260.00'	74.98'	74.72'	N 30°14'41" E	16°31'21"	37.75'
C10	25.00'	23.83'	22.94'	N 11°11'39" E	54°37'24"	12.91'
C11	70.00'	66.44'	63.97'	N 11°04'20" E	54°22'46"	35.96'
C12	70.00'	64.70'	62.42'	N 64°44'29" E	52°57'33"	34.87'
C13	70.00'	60.00'	58.18'	S 64°13'22" E	49°06'44"	31.98'
C14	70.00'	60.00'	58.18'	S 15°06'40" E	49°06'41"	31.98'
C15	70.00'	79.88'	75.61'	S 42°08'02" W	65°22'43"	44.92'
C16	70.00'	22.37'	22.27'	S 83°58'35" W	18°18'22"	11.28'
C17	25.00'	23.83'	22.94'	S 65°49'03" W	54°37'24"	12.91'
C18	200.00'	67.96'	67.63'	S 28°46'16" W	19°28'09"	34.31'
C19	200.00'	67.75'	67.42'	S 09°19'57" W	19°24'30"	34.20'
C20	230.00'	18.96'	18.95'	S 01°59'21" W	4°43'19"	9.48'
C21	230.00'	62.79'	62.59'	S 12°10'15" W	15°38'29"	31.59'
C22	170.00'	60.42'	60.10'	S 09°48'36" W	20°21'48"	30.53'
C23	25.00'	39.39'	35.44'	S 45°30'25" E	90°16'13"	25.12'

0 25 50 100

Scale: 1 inch = 50 feet

BASIS OF BEARINGS:

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Parcel #30-02980
1849 Norton Rd.
Rec. #55685370

J.E. & A. White
Parcel #30-01674
1909 Norton Rd.
Doc. #56575311

SHEET: 3 OF 3

HUDSON PRESERVE

IMPROVEMENT PLAN

CITY OF HUDSON

COUNTY OF SUMMIT

STATE OF OHIO

SANITARY SEWER,
STORM SEWER,
WATER MAIN & PAVING

D.S.S.S. PROJECT No. 1681

JUNE, 2021

GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION OF THE SITE WORK AND UTILITIES SHALL BE GOVERNED BY THE CITY OF HUDSON'S "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS REQUIRED FOR THE PROJECT.
3. THE CONTRACTOR MUST ALERT THE OHIO UTILITY PROTECTION SERVICES AT 1-800-362-2764 AT LEAST 48 HOURS BEFORE ANY EXCAVATION IS TO BEGIN.
4. ALL EXISTING APPURTENANCES (UTILITY POLES, VALVES, HYDRANTS, MANHOLES, ETC.) ARE TO BE MAINTAINED BY THE CONTRACTOR UNLESS OTHERWISE SHOWN ON THE PLANS.
5. THE DESIGN ENGINEER CERTIFIES THAT ALL UTILITIES ARE SHOWN AS THEY APPEAR ON EXISTING RECORDS OR FIELD LOCATED.
6. ALL KNOWN ABOVE AND UNDERGROUND SERVICES HAVE BEEN NOTED ON THE DRAWINGS. THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR ANY SERVICES DAMAGED DURING THE CONSTRUCTION OF THE PROJECT WHETHER SHOWN OR NOT ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE SERVICE AS SOON AS POSSIBLE AT THE CONTRACTOR'S OWN EXPENSE.
7. VIDEO TAPING OF PROJECT SHALL BE DELIVERED AND ACCEPTED BY THE CITY OF HUDSON ENGINEERING DEPARTMENT A MINIMUM OF 14 CALENDAR DAYS PRIOR TO START OF CONSTRUCTION ACTIVITIES.
8. NOTIFY THE CITY OF HUDSON ENGINEERING DEPARTMENT A MINIMUM OF FORTY-EIGHT HOURS (2 WORKING DAYS) PRIOR TO THE START OF CONSTRUCTION.
9. A PRECONSTRUCTION MEETING SHALL BE SCHEDULED A MINIMUM OF 48 HOURS (2 WORKING DAYS) AFTER SUBMISSION OF A MINIMUM OF 6 APPROVED SETS OF PLANS AND ALL SHOP DRAWINGS APPLICABLE TO THE PROPOSED IMPROVEMENTS. A PRECONSTRUCTION MEETING MUST BE HELD PRIOR TO START OF ANY CONSTRUCTION.
10. THE LIMITS OF CLEARING AND GRADING SHALL BE FIELD STAKED AND LINED WITH ORANGE CONSTRUCTION FENCING 48 HOURS (2 WORKING DAYS) PRIOR TO THE PRECONSTRUCTION MEETING. AREAS BEYOND THE LIMITS OF CLEARING AND GRADING SHALL NOT BE DISTURBED INCLUDING THE STOCKPILE OF ANY MATERIALS OR CONSTRUCTION TRAFFIC.
11. ALL ROAD SURFACES, EASEMENTS, OR RIGHT-OF-WAY DISTURBED BY THE CONSTRUCTION OF ANY PART OF THESE IMPROVEMENTS ARE TO BE RESTORED ACCORDING TO THE CITY OF HUDSON "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION" AS DIRECTED BY THE CITY OF HUDSON AND/OR ITS ENGINEER.
12. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY OF HUDSON OR ITS REPRESENTATIVE IF SUSPECTED HAZARDOUS MATERIAL OR ANY OTHER MATERIAL THAT MAY CREATE A HEALTH RISK IS DISCOVERED ON SITE.
13. ALL DISTURBED STORM SEWERS AND/OR APPURTENANCES, SIGNS, GUARD RAILING, MAIL AND/OR PAPER BOXES, DRIVE CULVERTS, FENCES, TREES, LANDSCAPING, OR OTHER ITEMS DISTURBED BY THE CONSTRUCTION SHALL BE RESTORED OR REPAIRED TO AT LEAST THE BEFORE-CONSTRUCTION CONDITION.
14. ANY DEFECTS DISCOVERED IN NEW CONSTRUCTION, WORKMANSHIP, EQUIPMENT OR MATERIALS SHALL BE REPAIRED, OR CORRECTED BY APPROVED METHODS AS DIRECTED BY THE CITY OF HUDSON.
15. NUCLEAR COMPACTION TESTING SHALL BE REQUIRED FOR ALL FILL AREAS OVER TWO FEET (2') IN DEPTH, AT 6" LIFTS PER ASTM A-1557, 95% MODIFIED.
16. APPROVAL BY THE CITY OF HUDSON ENGINEER CONSTITUTES NEITHER EXPRESSED NOR IMPLIED WARRANTIES AS TO THE FITNESS, ACCURACY, OR SUFFICIENCY OF PLANS, DESIGNS OR SPECIFICATIONS.
17. DURING TAPPING OF EXISTING UTILITIES, ANY TRAFFIC CONTROL REQUESTED OR REQUIRED BY THE CITY OF HUDSON WILL BE PROVIDED BY THE CONTRACTOR AT NO COST TO THE CITY.
18. COMPLIANCE WITH THE OCCUPATIONAL AND SAFETY ACT OF 1970 IS REQUIRED BY ALL CONTRACTORS ON THIS PROJECT.
19. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
20. ALL DISTURBED AREAS SHALL RECEIVE 4" OF TOPSOIL AND BE SEEDED AND MULCHED AS PER SECTION 9 - LANDSCAPING AND STREET TREES OF THE CITY'S "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION.
21. IF MUD, SOIL, OR OTHER DEBRIS IS DEPOSITED ON ADJACENT STREETS, ROADS, OR OTHER PROPERTY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SUCH AS DIRECTED BY THE CITY OF HUDSON OR ITS ENGINEER AT THE END OF EACH WORK DAY, OR AS REQUIRED DURING THE WORK DAY.
22. ALL PROPOSED SLOPES 3:1 OR STEEPER AND ALL EARTHEN DRAINAGE WAYS SHALL RECEIVE JUTE OR EXCELSIOR MATTING AS PER ODOT 667 OR 668.
23. ALL STORM SEWERS WITHIN PUBLIC RIGHTS-OF-WAY AND CITY OF HUDSON EASEMENTS SHALL BE PER SECTION 4 - STORM COLLECTION OF THE CITY'S "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION.
24. ALL PIPES SHALL BE PLACED OVER A MIN. OF 6" OF BEDDING. BEDDING MATERIAL SHALL BE AS SPECIFIED IN CITY'S "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION, FOR THE TYPE OF PIPE AND D.S.S.S. STANDARDS FOR SANITARY PIPE.
25. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND PROTECTING THE FLOW OF VEHICULAR AND PEDESTRIAN TRAFFIC AROUND THE JOB SITE. TRAFFIC CONTROL SHALL BE COORDINATED WITH THE CITY OF HUDSON POLICE DEPARTMENT.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PLANT TICKETS FOR ALL MATERIALS DELIVERED TO THE SITE. PLANT TICKETS MUST SHOW NET QUANTITY OF DELIVERED MATERIAL. MATERIAL DELIVERED OR PLACED WITHOUT PLANT TICKETS SHALL BE REMOVED AND PROPERLY DISPOSED AT THE EXPENSE OF THE CONTRACTOR.
27. ALL DELIVERED MATERIALS SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF HUDSON OR OTHER APPLICABLE AGENCIES. THE CITY OF HUDSON, OR ITS REPRESENTATIVE, RESERVES THE RIGHT TO REJECT ANY DELIVERED MATERIAL WHICH DOES NOT CONFORM TO THE APPLICABLE STANDARDS AND SPECIFICATIONS.
28. THE CITY OF HUDSON OR ITS REPRESENTATIVE, RESERVES, THE RIGHT TO HALT ALL CONSTRUCTION ACTIVITY FOR NONCONFORMANCE OF PLANS, SPECIFICATIONS AND OTHER APPLICABLE STANDARDS OR REGULATIONS.
29. ALL CHANGES TO APPROVED DRAWINGS AND/OR SPECIFICATIONS MUST BE REAPPROVED BY THE CITY OF HUDSON PRIOR TO CONSTRUCTION.
30. ALL PAVING MATERIAL MUST BE PROVIDED BY ODOT CERTIFIED SUPPLIER. WRITTEN PROOF SHALL BE REQUIRED UPON DELIVERY OF MATERIALS. THE CERTIFIED MIX DESIGN MUST BE SUBMITTED TO, AND APPROVED BY, THE CITY OF HUDSON PRIOR TO SCHEDULING A PRECONSTRUCTION MEETING.
31. CONTRACTOR/DEVELOPER SHALL PROVIDE ALL REQUIRED ROADWAY SIGNAGE AS PER ODOT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES INCLUDING STREET IDENTIFICATION SIGNAGE PER CITY STANDARDS FOR ALL ASPECTS OF THE IMPROVEMENT.
32. ALL BONDS AND OR LETTERS OF CREDIT SHALL NOT BE RELEASED OR REDUCED AND NO WATER OR SANITARY SEWER CUSTOMERS CAN BE CONNECTED UNTIL ALL RECORD DRAWINGS HAVE BEEN SUBMITTED, REVIEWED AND APPROVED BY THE CITY OF HUDSON.
33. ALL WORK, EXCEPT SIDEWALKS, STREET TREES AND STREET LIGHTS, AS PART OF THESE PLANS SHALL BE COMPLETED, INCLUDING PUNCH LIST ITEMS AND DEFICIENCY WORK WITHIN 1 YEAR OF THE DATE OF APPROVAL BY THE CITY ENGINEER. SIDEWALKS, STREET TREES AND STREET LIGHTS SHALL BE COMPLETED WITHIN TWO YEARS OF THE DATE OF APPROVAL BY THE CITY ENGINEER.
34. FAILURE TO COMPLETE THE PROJECT IN ITS ENTIRETY AS APPROVED BY THE PLANNING COMMISSION, INCLUDING PUNCH LIST ITEMS, WILL RESULT IN THE CITY OF HUDSON HOLDING ALL FUTURE ZONING CERTIFICATES UNTIL ALL WORK HAS BEEN COMPLETED AND APPROVED.
35. MANUFACTURERS OR SUPPLIERS AFFIDAVIT FOR ALL CONSTRUCTION MATERIALS SHALL BE PROVIDED AS PER THE CITY'S "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION PRIOR TO THE START OF CONSTRUCTION.
36. ALL SANITARY SEWERS CONSTRUCTED IN SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES (SC-DSSS) SERVICE DISTRICTS AND SERVED BY SC-DSSS SHALL COMPLY WITH SC-DSSS REQUIREMENTS.
37. SHOP DRAWINGS FOR THE PROPOSED LIGHT FIXTURES SHALL BE ATTACHED TO THE APPROVED LIGHTING PLAN AND SUBMITTED WITH THE SIX SETS OF PLANS AS REQUIRED IN NOTE 8. THE LIGHT FIXTURES SHALL HAVE A RECESSED LAMP, FLAT LENSES AND OPTIONAL HOUSE SHIELDING AVAILABLE. THE CITY MAY REQUIRE HOUSE SHIELDS TO BE ADDED AND OTHER MODIFICATIONS AFTER CONSTRUCTION AT THE EXPENSE OF THE CONTRACTOR.
38. THE CONTRACTOR SHALL PERFORM AND SUBMIT A PRECONSTRUCTION VIDEO IN ACCORDANCE WITH THE CITY OF HUDSON STANDARDS.
39. EQUIPMENT, VEHICLES, SOIL AND/OR MATERIALS WILL NOT BE PERMITTED WITHIN THE EXISTING ROADWAYS OR RIGHT OF WAYS, UNLESS APPROVED BY THE CITY.
40. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING THE EXISTING ROADWAY AND OTHER EXISTING PAVEMENT DAILY AS DIRECTED BY THE CITY OF HUDSON.

SANITARY SEWER NOTES - D.S.S.S.

1. ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS (OEPA 3MA00001* AM) OF THE DEPARTMENT OF SANITARY SEWER SERVICES (D.S.S.S.).
2. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED. ORDINANCE NO. 85-656, APPROVED 10/8/85.
3. APPROVAL BY D.S.S.S. CONSTITUTES NEITHER EXPRESSED NOR IMPLIED WARRANTIES AS TO THE FITNESS, ACCURACY, OR SUFFICIENCY OF PLANS, DESIGNS OR SPECIFICATIONS.
4. THE DESIGN ENGINEER CERTIFIES THAT ALL UTILITIES IN EXISTING ROADS AND PROPOSED ROADS AND EASEMENTS ARE SHOWN, IF THEY APPEAR ON EXISTING RECORDS OR CAN BE OBSERVED ABOVE GROUND. ANY UNDERGROUND UTILITIES THAT ARE UNKNOWN TO THE DESIGN ENGINEER DUE TO THEIR CONCEALED NATURE CANNOT BE CERTIFIED.
5. ALL SANITARY SEWERS SHALL PASS THE AIR ACCEPTANCE TEST PRIOR TO ACCEPTANCE BY D.S.S.S.
6. ALL SANITARY SEWERS SHALL BE VIDEO TAPED BY THE OWNER AND FOUND TO BE FREE OF DEFECTS AND FOREIGN MATTER AND IN PROPER ALIGNMENT PRIOR TO FORMAL ACCEPTANCE BY D.S.S.S.
7. ALL MANHOLES SHALL BE SUPPLIED WITH SOLID COVERS EXCEPT IN EASEMENTS WHERE MANHOLE COVERS SHALL BE THE SOLID-LOCKING TYPE.
8. ALL SANITARY LATERALS SHALL BE EXTENDED TO NOT LESS THAN 15 FEET INTO THE PROPERTY.
9. ALL SANITARY LATERALS SHALL BE LAID AT NO LESS THAN 1% GRADE.
10. SANITARY SEWER MATERIALS SHALL CONFORM TO D.S.S.S. AND O.E.P.A. BEDDING SHALL CONFORM TO D.S.S.S. STANDARDS AND ASTM D-2321.
11. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING SEWERAGE SYSTEM RESULTING FROM NON-CONFORMANCE WITH SUMMIT COUNTY STANDARDS OR GENERAL NEGLIGENCE.
12. A 12" MAXIMUM MANHOLE GRADE ADJUSTMENT IS PERMITTED. ADJUSTMENT IS TO BE MADE WITH PRECAST GRADE RINGS OR INFRA-RISER RUBBER RISER RINGS. A MINIMUM OF ONE (1) GRADE RING IS REQUIRED AT EACH MANHOLE.
13. EXTERNAL CHIMNEY SEALS SHALL BE INSTALLED IN ALL MANHOLES.
14. MANHOLE COVER INSERTS SHALL BE PROVIDED FOR ALL MANHOLES, REGARDLESS OF THE TYPE OF COVER REQUIRED.
15. WHERE INLET AND OUTLET PIPES CONNECT TO MANHOLES, A FLEXIBLE WATERTIGHT JOINT, AS APPROVED BY D.S.S.S., IS REQUIRED.
16. SANITARY SEWER MATERIAL SHALL CONSIST OF PVC SDR-35 MEETING (CHECK STANDARDS FOR APPROVED MATERIAL AND ASTM SPECIFICATIONS).
17. THE CONTRACTOR MUST ALERT THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764 AT LEAST 48 HOURS BEFORE ANY EXCAVATION HAS BEGUN.
18. ALL ROUGH GRADING (WITHIN 6" OF FINISHED GRADE) SHALL BE COMPLETED WITHIN THE RIGHT-OF-WAY PRIOR TO SANITARY SEWER CONSTRUCTION.
19. NO SEWER CONSTRUCTION WILL BE PERMITTED UNTIL SUCH TIME THAT THE PLANS ARE APPROVED BY D.S.S.S. AND THE O.E.P.A. INCLUDING PAYMENT OF REVIEW AND "PERMIT TO INSTALL" FEES REQUIRED BY THE O.E.P.A.
20. ALL SANITARY SEWERS CONTAINED HEREIN ARE TO BE PUBLICLY OWNED AND MAINTAINED.
21. SANITARY SEWER AND WATER MAIN SHALL BE CONSTRUCTED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET AND A MINIMUM VERTICAL SEPARATION OF 18 INCHES WHERE THEY CROSS.

SANITARY SEWER NOTES - O.E.P.A.

1. HYDROSTATIC TEST SHALL NOT EXCEED 100 GAL. PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
2. AIR LEAKAGE TESTING OF PLASTIC SANITARY SEWER SHALL BE PER A.S.T.M. F1417.
3. MANHOLE AIR TESTING SHALL BE PER A.S.T.M. C1244. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE.
4. NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, REPLACEMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS IN THE APPROVED SPECIFICATIONS. THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE A.S.T.M. SPECIFICATIONS, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED. THE PIPE SHALL BE MEASURED IN COMPLIANCE WITH A.S.T.M. D2122 STANDARD TEST METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

UNDERGROUND UTILITIES

2 WORKING DAYS
BEFORE YOU DIG
Call...8-1-1
OHIO UTILITIES PROTECTION SERVICE
Call...800-925-0988
OHIO OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

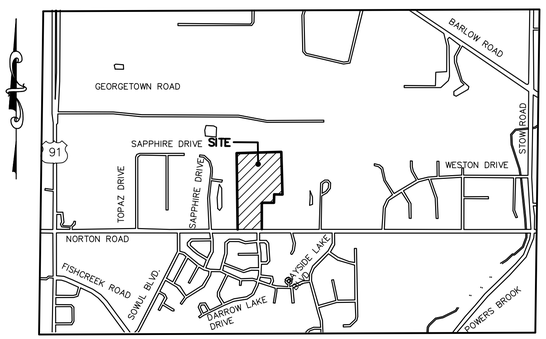
DESIGN ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS

3057 WEST MARKET STREET
SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

OWNER/DEVELOPER

LDA LAND GROUP, LLC
6683 OLDE EIGHT ROAD
PENINSULA, OHIO 44264
(330) 342-4240
REPRESENTATIVE: TONY LUNARDI



VICINITY MAP
NO SCALE

UTILITY OWNERSHIPS

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC

OWNERS:

1. HUDSON PUBLIC WORKS, ELECTRIC, SEWER & WATER
   20 MORSE ROAD-UNIT A
   HUDSON, OHIO 44236
   330-342-1750
2. WINDSTREAM
   4001 RODNEY PARHAM ROAD
   LITTLE ROCK, ARKANSAS 72212
   501-748-7000
3. DOMINION EAST OHIO GAS COMPANY
   DAVID CROFT
   7015 FREEDOM AVENUE N.W.
   NORTH CANTON, OHIO 44720
   330-266-2047
4. OHIO EDISON
   1910 W. MARKET STREET
   AKRON, OHIO 44313
   1-800-633-4766
5. SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES
   ROSS NICHOLSON
   1180 S. MAIN STREET
   AKRON, OHIO 44301
   330-926-2444
6. TIME WARNER CABLE
   1655 BRITTAIN ROAD
   AKRON, OHIO 44310
   330-630-9798
7. CITY OF AKRON WATER DEPARTMENT
   1460 TRIPLETT BOULEVARD
   AKRON, OHIO 44306
   330-375-2549

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SUBMITTED BY _____ DATE _____
Dennis W. Stoffer Reg. Engineer No. 76698

APPROVED BY _____ DATE _____
Tony Lunardi

APPROVED BY HUDSON ASSISTANT CITY MANAGER this _____ day of _____, _____

_____
Thomas J. Sheridan

APPROVED BY THE CITY OF HUDSON ENGINEER this _____ day of _____, _____

_____
Brad Kosco, P.E., P.S.

APPROVED BY
OHIO ENVIRONMENTAL PROTECTION AGENCY

WATER APPROVED BY O.E.P.A. BY LETTER this _____ day of _____, 20 _____.

SANITARY APPROVED BY O.E.P.A. BY LETTER this _____ day of _____, 20 _____.

SEWERAGE SYSTEM APPROVAL

APPROVED BY THE DEPARTMENT OF SANITARY SEWER SERVICES

_____ DATE _____
Director: Michael Vinay

WATER SYSTEM APPROVAL

APPROVED BY THE CITY OF AKRON

_____ DATE _____
Utilities Engineer

_____ DATE _____
Manager of Bureau of Water Supply

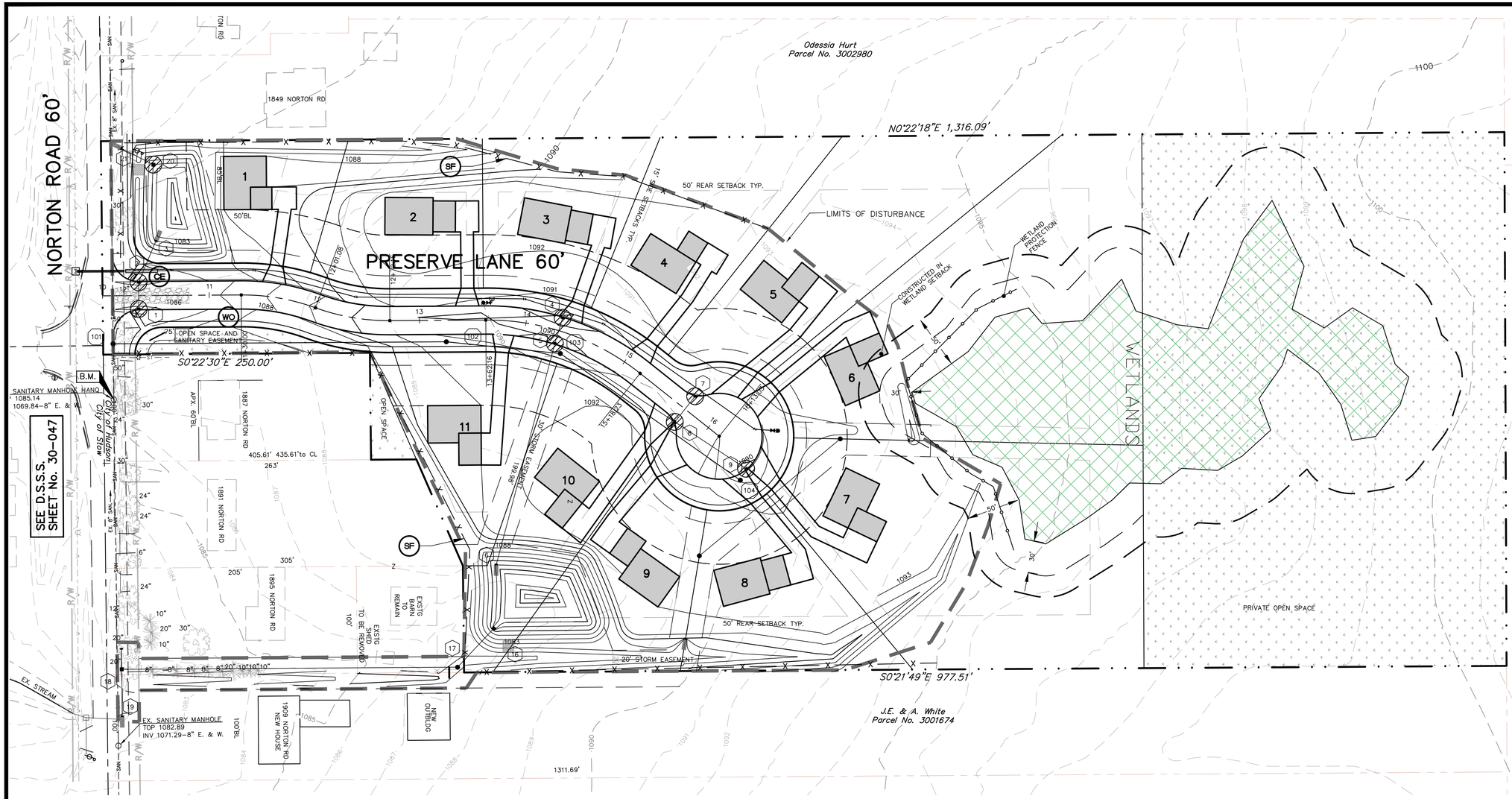
_____ DATE _____
Director of Public Services

SHEET INDEX

DWG FILE: F:\1885 Norton\Ad Design\General Sheets.dwg

REVISED: 7/19/2021

HUDSON PRESERVE



PROPOSED HOUSE ELEVATIONS		
LOT NUMBER	MIN. GARAGE FLOOR ELEAVTION	MIN. BASEMENT FLOOR ELEVATION
1	1090.00	1082.67
2	1092.75	1085.42
3	1092.25	1084.92
4	1092.75	1085.42
5	1093.00	1085.67
6	1093.00	1085.67
7	1093.00	1085.67
8	1093.00	1085.67
9	1092.00	1084.67
10	1092.25	1084.92
11	1091.00	1083.67

B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

NOTES:

1. PROPOSED GRADING SHOWN ON THE LOTS IS CONCEPTUAL AND IS THE BASIS FOR DESIGN. FINAL GRADING PLAN FOR EACH HOUSE IS TO BE PREPARED AT THE TIME OF HOME CONSTRUCTION.
2. SOIL IN PONDS TO BE CLAY MATERIAL TO PREVENT SEEPAGE. CLAY LAYER TO BE CAPPED WITH TOPSOIL.
3. ALL SOILS ON SITE ARE MAHONING SIT LOAM

LEGEND

- SF — SILT FENCE
- INLET PROTECTION
- CE — CONSTRUCTION ENTRANCE
- LIMITS OF CLEARING & GRADING

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE

GRADING AND STORM WATER POLLUTION PREVENTION PLAN

CITY OF HUDSON

DWG FILE: F:\1695 Norton\3 Dwgs\Base Isolation Preserve.dwg (SWPPP)
DRAWN BY: ABD
DATE: 07/12/2021
DESIGNED BY: ABD
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

NORTON ROAD 60'

PRESERVE LANE 60'

1849 NORTON RD

1887 NORTON RD

1891 NORTON RD

1895 NORTON RD

N0°22'18"E 1,316.09'

S0°22'30"E 250.00'

S0°21'49"E 977.51'

20 PROP. POND OUTLET
STA. 10+48.41, 122.71' LT.
TOP 1085.50
INV. 1083.00–12" S.W.

21 PROP. ½ HEADWALL
STA. 10+18.18, 138.29' LT.
TOP 1083.33
INV. 1082.83–12" N.E.

3 PROP. ½ HEADWALL
STA. 10+50.53, 51.55' LT.
TOP 1083.54
INV. 1083.04–12" S.E.

2 PROP. C.B.
STA. 10+33.82, 12.50' LT.
TOP 1086.44
INV. 1083.31–12" N.W. & S.

4 PROP. C.B.
STA. 14+31.57, 12.50' LT.
TOP 1090.35
INV. 1086.85–12" E.

1 PROP. C.B.
STA. 10+33.82, 12.51' RT.
TOP 1086.44
INV. 1083.44–12" W.

5 PROP. C.B.
STA. 14+31.57, 12.50' RT.
TOP 1090.35
INV. 1086.48–12" W. & N.
INV. 1086.23–15" E.

8 PROP. C.B.
STA. 15+72.01, 15.35' RT.
TOP 1090.84
INV. 1087.29–12" W. & S.

7 PROP. C.B.
STA. 15.72.01, 15.35' LT.
TOP 1090.94
INV. 1087.44–12" E.

9 PROP. C.B.
STA. 16+42.53, ON ℄
TOP 1090.30
INV. 1087.30–12" N.E.

PROP. 8" W.M.

PROP. 8" PVC SAN.

PROP. 12" STM.

PROP. 8" SAN.

27' PROP. P.A.E.

12' UTILITY EASEMENT

OPEN SPACE AND SANITARY EASEMENT

OPEN SPACE

30' STORM EASEMENT

20' STORM EASEMENT

15' SIDE SETBACKS TYP.

50' REAR SETBACK TYP.

CONSTRUCTED IN WETLAND SETBACK

WETLAND PROTECTION FENCE

WETLANDS

EX. SANITARY MANHOLE HANG
TOP 1085.14
INV 1069.84–8" E. & W.

B.M.

SEE D.S.S.S. SHEET No. 30–047

City of Hudson

EXISTG BARN TO REMAIN

EXISTG SHED TO BE REMOVED

405.61' 435.61'to CL

263'

305'

205'

198.38'

100'

SCALE: 1" = 40'

B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE

UTILITY PLAN

CITY OF HUDSON

DWG FILE: P:\1895 Norton\SAD Dwgs\Base Hudson Preserve.dwg (Utility)
DRAWN BY: AHD
DATE: 07/12/2021
DESIGNED BY: AHD
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

CRITICAL AREA PLANTING – TEMPORARY SEEDING (TS)

STANDARD

Definition

The establishment of a temporary vegetative cover on disturbed areas by seeding with the appropriate rapid growing plants.

Purposes

1. To reduce the erosion and sedimentation by stabilizing disturbed areas that will not be brought to final grade for a year or less.
2. To reduce problems associated with mud or dust from bare soil surfaces during construction.
3. To reduce sediment runoff to downstream areas and improve the visual resources of the construction area.

Conditions Where Practice Applies

On exposed soil surfaces where additional work (grading, etc.) is not scheduled for a period of three weeks to less than one year.

Planning Considerations

1. Protect the area from excess runoff as necessary with diversions, terraces, or sediment basins.
2. Evaluate the capabilities and limitations of the soil to be seeded. Special attention needs to be given to soil pH, texture, internal water movement, steepness, and stability in order to plan the appropriate treatment.
3. Plant species should be selected on the basis of quick germination, growth, and time of year to be seeded.
4. Fertilizer, lime, seedbed preparation, seed coverage, mulch, and irrigation should be used as necessary to promote quick plant growth.

SPECIFICATIONS

I. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and anchoring.

B. Install the needed erosion control practices prior to seeding such as diversions, temporary waterways for diversions outlets, and sediment basins.

II. Seedbed Preparation

A. Lime (in lieu of a soil test recommendation) on acid soil (pH 5.5 or lower) and subsoil at a rate of 100 pounds per 1000 square feet or two tons per acre of agricultural ground limestone. For best results make a soil test.

B. Fertilizer (in lieu of a soil test recommendation) shall be applied at a rate of 12–15 pounds per 1000 square feet or 500–600 pounds per acre of 10–10–10 or 12–12–12 analysis or equivalent.

C. Work the lime and fertilizer into the soil with a disk harrow, springtooth harrow, or similar tools to a depth of two inches. On sloping areas the final operation shall be on the contour.

III. Seeding

A. Species Selection 1/

March 1 to August 15th	Per 1000 Square Feet	Per Acre
1. Oats or	3 lbs.	4 bu.
2. Perennial Ryegrass	1 lb.	40 lbs.
3. Tall Fescue	1 lb.	40 lbs.

August 16 to November 1 2/	Per 1000 Square Feet	Per Acre
1. Rye or	3 lbs.	2 bu.
2. Wheat or	3 lbs.	2 bu.
3. Perennial Ryegrass	1 lb.	40 lbs.
4. Tall Fescue	1 lb.	40 lbs.

1/ Other seed species may be substituted; check with the local SCS office for recommendations.

2/ After November 1, use mulch only. See Standard and Specifications for Mulching.

B. Apply the seed uniformly with a cyclone seeder, drill, cultipacker seeder (slurry may include seed and fertilizer) preferably on a firm, moist seedbed. Seed wheat or rye no deeper than one inch. Seed ryegrass no deeper than one–fourth inch.

C. When feasible, except where a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land seeding operations should be on the contour wherever possible.

IV. Mulching

A. Mulch shall be applied to protect the soil and provide a better environment for plant growth.

B. Mulch shall consist of small grain straw (preferably wheat or rye) and shall be applied at the rate of two tons per acre or 100 pounds (two to three bales) per 1000 square feet.

C. Spread the mulch uniformly by hand or mechanically so the soil surface is covered.

D. Mulch Anchoring Methods

1. Mechanical – Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil.
2. Asphalt Emulsion – Apply at the rate of 160 gallons per acre into the mulch as it is being applied.
3. Mulch Nettings – Use according to the manufacturer's recommendations. Use in areas of water concentration to hold mulch in place.

V. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

CRITICAL AREA PLANTING – PERMANENT SEEDING (PS) – DORMANT SEEDING (DS)

STANDARD

Definition

The establishment of perennial vegetation on disturbed areas by planting seed.

Purposes

1. To reduce the erosion and decrease sediment yield from disturbed areas.
2. To permanently stabilize disturbed areas in a manner that is economical, adaptable to site conditions, and allows selection of the most appropriate plant materials.

Conditions Where Practice Applies

1. Disturbed areas where permanent, long–lived vegetative cover is needed to stabilize the soil.
2. Rough graded areas which will not be brought to final grade for several months or more.

Planning Considerations

1. Protect the area from excess runoff as necessary with diversions, grassed waterways, terraces, or sediment basins.
2. Evaluate the capabilities and limitations of the soil to be seeded. Special attention needs to be given to soil pH, texture, internal water movement, steepness, and stability in order to plan the appropriate treatment.
3. Plant species should be selected on the basis of soil type, planned use of the area, and the amount or degree of maintenance that can be devoted to the area in the future.
4. Fertilizer, lime, seedbed preparation, seed coverage, mulch, and irrigation should be used as necessary to promote quick plant growth.
5. Vegetation cannot be expected to provide erosion control cover and prevent soil slippage on a soil that is not stable due to its structure, water movement, or excessive slope.

SPECIFICATIONS

I. Site Preparation

A. Soil material should consist of at least 25 percent silt and clay to provide an adequate amount of moisture holding capacity. An excessive amount of porous sand will not consistently provide sufficient moisture for good growth regardless of other soil factors.

B. Where compacted soils occur, they should be broken up sufficiently to create a favorable rooting depth of 6–8 inches.

C. Stockpile topsoil to apply to sites that are otherwise unsuited for establishing vegetation.

D. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance. After the grading operation, spread topsoil where needed.

E. Install the needed erosion control practices such as diversions, grassed waterways, and sediment basins.

II. Seedbed Preparation

A. Lime (in lieu of a soil test recommendation) on acid soil and subsoil, 100 pounds per 1000 square feet or two tons per acre of agricultural ground limestone. For best results make a soil test.

B. Fertilizer (in lieu of a soil test recommendation) apply 25 pounds per 1000 square feet or 1000 pounds per acre of 10–10–10 or 12–12–12 analysis. For best results make a soil test.

C. Work the lime and fertilizer into the soil with a disk harrow, springtooth harrow, or other suitable field equipment to a depth of three inches. On sloping land the final operation shall be on the contour.

III. Seeding

A. Select a species or mixture appropriate for the site.

1. Permanent Seeding

Kind of Seed 1/	Seeding Dates 2/	Per 1000 Sq. Ft.	Per Acre
a)Creeping Red Fescue, PLUS Domestic Ryegrass PLUS Kentucky Bluegrass	March–May, Aug.–Sept.	1/2 lb.3/ 1/4 lb. 1/4 lb.	20 lbs.3/ 10 lbs. 10 lbs.
b)Tall Fescue	March–May Aug.–Sept.	1 lb.3/	40 lbs.
c)Dwarf (Turf–type) Fescue 4/		1 lb.3/	40 lbs.3/

2. Special Seedings – Steep Banks or Cuts

Kind of Seed 1/	Seeding Dates 2/	Per 1000 Sq. Ft.	Per Acre
a)Tall Fescue	March–May Aug.–Sept.	1 lb.	40 lbs.
b)Crownvetch PLUS Tall Fescue	March–May Aug.– ?	1/4 lb. 1/2 lb.	10 lbs. 20 lbs.
c)Flatpea PLUS Tall Fescue	March–May August	1/2 lb. 1/2 lb.	20 lbs. 20 lbs.

3. Waterways and Road Ditches

a)Tall Fescue	March–May Aug.–Sept.	1 lb.	40 lbs.

1/ Other seed species may be substituted for these mixtures. Check with local SCS office for recommendations.

2/ These seeding dates are ideal. With the use of mulch and irrigation, seedings could be made any time throughout the growing season.

3/ The seeding rates need to be increased two to three times if the mixture is to be used as a lawn.

4/ The dwarf or turf–type fescues are much shorter and have finer leaves than the tall fescues. It is much better suited for lawn–type areas than tall fescues.

B. Dormant Seedings.

Seedings should not be planted from October 1 through November 20th. During this period the seeds are likely to germinate, but probably will not be able to survive the winter.

The following methods may be used to make a "Dormant Seeding":

1. From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50 percent for this type of seeding.
2. From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, and mulch and anchor. Increase the seeding rates by 50 percent for this type of seeding.

C. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro–seeder (slurry may include seed and fertilizer) on a firm, moist seedbed. Cover to a depth of 1/4 to 1/2–inch.

D. Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

IV. Mulching

A. Mulch shall be applied to protect the soil and provide a better environment for plant growth.

B. Mulch shall consist of small grain straw (preferably wheat or rye) and shall be applied at the rate of two tons per acre or 100 pounds (two or three bales) per 1000 square feet.

C. Spread the mulch uniformly by hand or mechanically so the soil surface is covered.

D. Mulch Anchoring Methods

1. Mechanical – Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil.
2. Asphalt Emulsion – Apply at a rate of 160 gallons per acre into the mulch as it is being applied.
3. Mulch Nettings – Use according to the manufacturer's recommendations. Use in areas of water concentration to hold mulch in place.

V. Maintenance

Maintenance is a vital factor in maintaining an adequate vegetative erosion control cover. See Table 1.

A. Irrigation – If soil moisture is deficient, supply new seedings with adequate water for plant growth until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry and hot seasons, or on adverse sites.

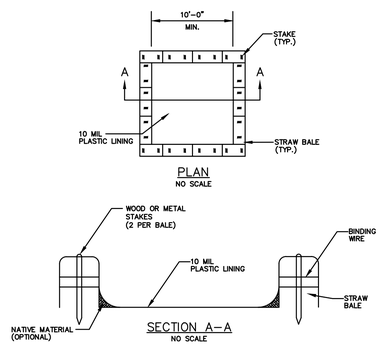
B. Repairs – Inspect all seeded areas for failures and make necessary repairs, replacements, reseedings, and remulching within the planting season, if possible.

1. If stand is inadequate, overseed, fertilize, using half of rates originally applied, and mulch.
2. If stand is over 60 percent damaged, reestablish following original lime, fertilizer, seedbed preparation, seeding recommendations, and mulching recommendations.

TABLE 1

Maintenance Fertilization and Mowing for Permanent Seeding

Mixture	Formula	Fertilizer Rate Lbs./Ac.	Lbs./1000 Sq. Ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10–10–10	500	12	Fall. Yearly or as needed.	Not closer than 3".
Tall Fescue	10–10–10	500	12	Fall. Yearly or as needed.	Not closer than 4".
Dwarf (Turf–Type) Fescue	10–10–10	500	12	Fall. Yearly or as needed.	Not closer than 2".
Flatpea and Crownvetch with Fescue	0–20–20	400	10	Spring. Yearly following establishment and every 4–7 years thereafter.	Do not mow.



CONCRETE WASHOUT

NO SCALE

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HUDSON PRESERVE

SWPPP NOTES

CITY OF HUDSON

DWG FILE: P18093 Network\Civil Projects\General Sheets\dwg (SWPPP 1)
DRAWN BY: ABD
DATE: 06/14/2021
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SILT FENCE (SF)

Definition

A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched. There are two types. The Silt Fence is a temporary linear filter barrier constructed of synthetic filter fabric, posts, and, depending upon the strength of the fabric used, wire fence for support. The Filter Barrier is constructed of stakes and burlap or synthetic filter fabric.

Purposes

1. To intercept and detain small amounts of sediment from disturbed areas during construction operations in order to prevent sediment from leaving the site.

2. To decrease the velocity of sheet flows and low-to-moderate level channel flows.

Conditions Where Practice Applies

1. Below disturbed areas where erosion would occur in the form of sheet and rill erosion.

2. Where the size of the drainage area is no more than 1/4 acre per 100 feet of silt fence length; the maximum slope length behind the barrier is 100 feet; and the maximum gradient behind the barrier is 50 percent (2:1).

3. In minor swales or ditch lines where the maximum contributing drainage area is no greater than 2 acres.

4. Under no circumstances should silt fences be constructed in live streams or in swales or ditch lines where flows are likely to exceed 1 cubic foot per second (cfs). See design Criteria for further clarification.

Planning Considerations

Laboratory work at the Virginia Highway and Transportation Research Council (VH & TRC) has shown that silt fences can trap a much higher percentage of suspended sediments than can straw bales. Silt fences may be preferable to straw barriers in many cases. While the failure rate of silt fences is lower than that of straw barriers, there have been instances in which silt fences were improperly installed. The installation methods outlined here can improve performance.

Filter barriers are inexpensive structures composed of burlap or standard weight synthetic filter fabric stapled to wooden stakes. Flow rates through burlap filter barriers are slightly slower and filtering efficiency is significantly higher than for straw bale barriers (see Table 1).

Table 1

FLOW RATES AND FILTERING EFFICIENCIES OF VARIOUS SEDIMENT FILTER MATERIALS

Material	Flow Rate(gal./sq.ft./min.)	Filter Efficiency (%)
Straw	5.6	67
Burlap (10 oz. fabric)	2.4	84
Synthetic Fabric	0.3 (Avg.)	97 (Avg.)

Source: Va. Highway and Transportation Research Council

Silt fences composed of a wire support fence and an attached synthetic filter fabric slow the flow rate significantly but have a higher filtering efficiency than burlap. Both woven and non-woven synthetic fabrics are commercially available. The woven fabrics generally display higher strength than the non-woven fabrics. When tested under acid and alkaline water conditions, most of the woven fabrics increase in strength. There is a variety of reactions among the non-woven fabrics. The same is true of testing under extensive ultraviolet radiation. Permeability rates vary regardless of fabric type. While all of the fabrics demonstrate very high filtering efficiencies for sandy sediments, there is considerable variation among both woven and non-woven fabrics when filtering the finer silt and clay particles.

Design Criteria

1. No formal design is required.

2. Filter barriers shall have an expected usable life of 3 months. They are applicable in ditch lines, around drop inlets, and at temporary locations where continuous construction changes the earth contour and runoff characteristics and where low or moderate flows (not exceeding 1 cfs) are expected.

3. Silt fences, because they have a much lower permeability than burlap filter barriers, have their applicability limited to situations in which only sheet or overland flows are expected. They normally cannot filter the volume of water generated by channel flows, and many of the fabrics do not have sufficient structural strength to support the weight of water ponded behind the fence line. Their expected usable life is 6 months.

Construction Specifications

The following construction specifications have been adapted from the Virginia Erosion and Sediment Control Handbook.

Materials

1. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

PHYSICAL PROPERTY	REQUIREMENTS
Filtering Efficiency	75% (min.)
Tensile Strength at 20% (max.) Elongation*	Extra Strength-50 lbs./lin.in. (min.) Standard Strength-30 lbs./lin.in. (min.)
Flow Rate	0.3 gal./sq.ft./min. (min.)

*Requirements reduced by 50 percent after 6 months of installation.

Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0° F to 120° F.

2. Burlap shall be 10 ounces per square yard of fabric.

3. Posts for Silt Fences shall be either 4-inch diameter wood or 1.33 pounds per linear foot steel with a minimum length of 5 feet. Steel posts shall have projections for fastening wire to them.

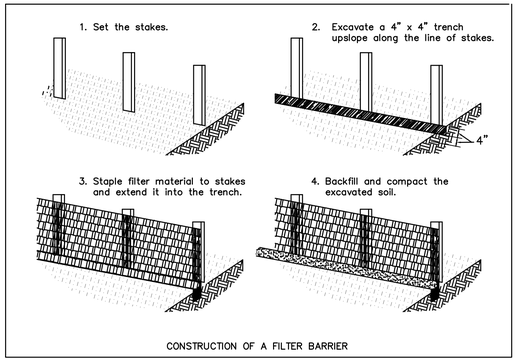
4. Stakes for Filter Barriers shall be 1" x 2" wood (preferred) or equivalent metal with a minimum length of 3 feet.

5. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.

Filter Barrier: This sediment barrier may be constructed using burlap or standard strength synthetic filter fabric. It is designed for low or moderate flows not exceeding 1 cfs. See Figure 1.

1. The height of a filter barrier shall be a minimum of 15 inches and shall not exceed 18 inches.

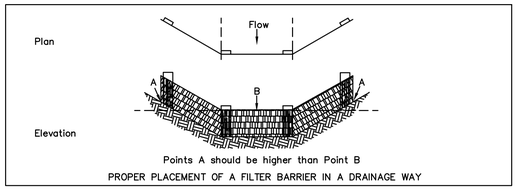
2. Burlap or standard strength synthetic filter fabric shall be purchased in a continuous roll and cut to the length of the barrier to avoid the use of joints (and thus improve the strength and efficiency of the barrier).



CONSTRUCTION OF A FILTER BARRIER

Source: Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Figure 1



Points A should be higher than Point B

PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY

Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Figure 2

3. The stakes shall be spaced a maximum of 3 feet apart at the barrier location and driven securely into the ground (minimum of 8 inches).

4. A trench shall be excavated approximately 4 inches wide and 4 inches deep along the line of stakes and upslope from the barrier.

5. The filter material shall be stapled to the wooden stakes, and 8 inches of the fabric shall be extended into the trench. Heavy duty wire staples at least 1/2-inch long shall be used. Filter material shall not be stapled to existing trees.

6. The trench shall be backfilled and the soil compacted over the filter material.

7. If a filter barrier is to be constructed across a ditch line or swale, the barrier shall be of sufficient length to eliminate end flow, and the plan configuration shall resemble an arc or horseshoe with the ends oriented upslope (Figure 2).

8. Filter barriers shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Silt Fence: This sediment barrier utilizes standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected. See Figure 3.

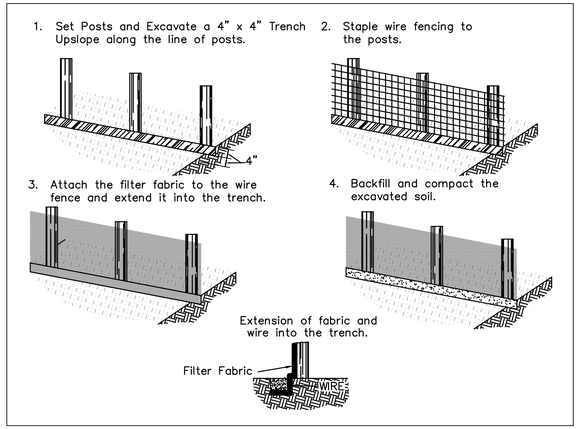
1. The height of a silt fence shall not exceed 36 inches (higher fences may impound volumes of water sufficient to cause failure of the structure).

2. The filter fabric shall be purchased in a continuous roll, cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and securely sealed.

3. Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.

4. A trench shall be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upslope from the barrier.

5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.



Source: Adapted from Installation of straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Figure 3

6. The Standard Strength Filter fabric shall be stapled or wired to the fence, and 8 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item No. 6 applying.

8. The trench shall be backfilled and soil compacted over the filter fabric.

9. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Maintenance

1. Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

2. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

3. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

4. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required, shall be dressed to conform with the existing grade, prepared and seeded.

STORM DRAIN INLET PROTECTION (IP)

Definition

A sediment filter installed around a storm drain drop inlet or curb inlet to reduce sediment discharge.

Purpose

To prevent sediment from entering storm drainage systems prior to permanent stabilization of the disturbed area.

Conditions Where Practice Applies

Where storm drain inlets are to be made operational before permanent stabilization of the disturbed drainage area. Different types of structures are applicable to different conditions.

Planning Considerations

Storm sewers which are made operational before their drainage area is stabilized can convey large amounts of sediment to natural drainageways. In case of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

This practice contains several types of inlet filters and traps which have different applications dependent upon site conditions and type of inlet. Other innovative techniques for accomplishing the same purpose are encouraged, but only after careful study of their effectiveness should they be installed.

Note that these various inlet protection devices are for drainage areas of less than one acre. Runoff from large disturbed areas should br routed through a SEDIMENT BASIN.

The best way to prevent sediment from entering the storm sewer system is to stabilize the site as quickly as possible, preventing erosion and stopping sediment at its source.

Design Criteria

1. The drainage area shall be no greater than 1 acre.

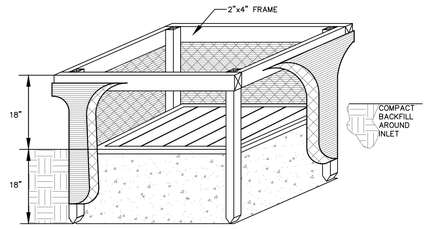
2. The inlet protection device shall be constructed in a manner that will facilitate cleanout and disposal of trapped sediment and minimize interference with construction activities.

3. The inlet protection devices shall be constructed in such a mannner that any resultant ponding of stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.

4. Design criteria more specific to each particular inlet protection device will be found with that construction specifications.

Construction Specifications

1. INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drains become operational.

2. The earth around the inlet shall be excavated completely to a depth of at least 18 inches.

3. The wooden frame shall be constructed of 2x4 inch construction-grade lumber. The 2x4 inch posts shall be driven 1 foot into the ground at four corners of the inlet and the top portion of the 2x4 lumber frame assembled using the overlap joint shown. The top of the frame shall be at least six (6) inches below adjacent roads if ponded water may pose a safety hazard to traffic.

4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to it.

5. Geotextile fabric shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall extend from the top of the frame to 18 inches below the inlet so the ends of the cloth are not fastened to the same post.

6. Backfill shall be placed around the inlet in compacted 6-inch layers until the earth is even with notch elevation on ends and top elevation on sides.

7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in the depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least six (6) inches higher than the top of the frame.

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HUDSON PRESERVE

SWPPP NOTES

CITY OF HUDSON

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DATE: 06/14/2021
DESIGNED BY: DWS
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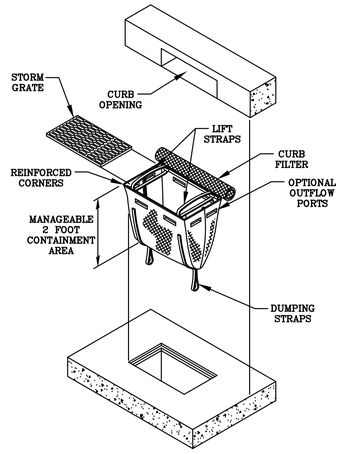
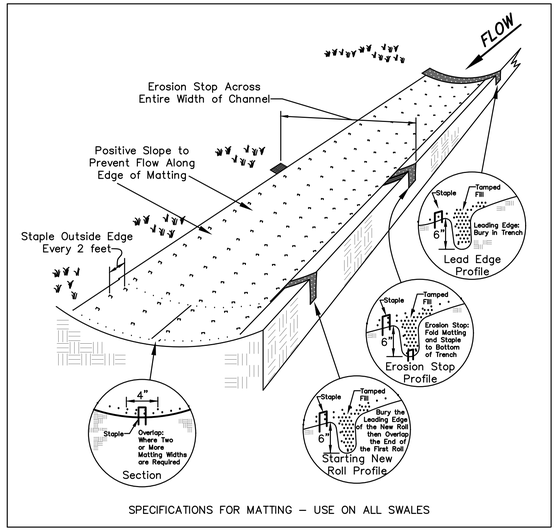
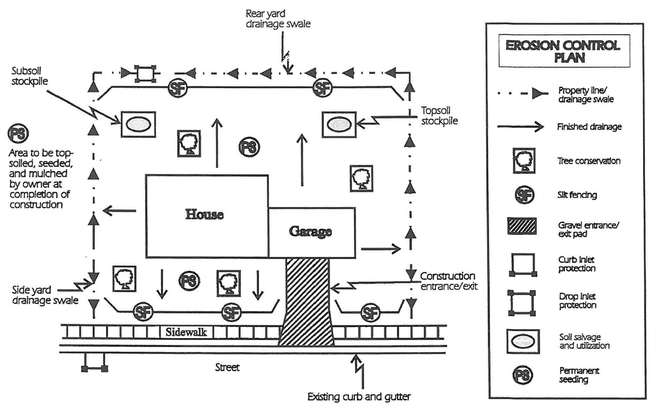
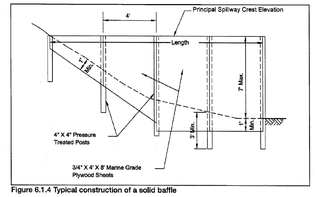
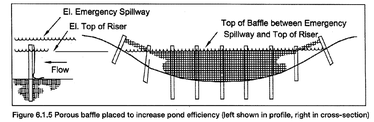










Construction Specifications

2. CURB INLET PROTECTION

   a. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.

DANDY CURB SACK™
SPECIFICATIONS

NOTE: THE DANDY CURB SACK™ WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY CURB SACK™ (BLACK)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$1/min/m^2$ ($gal/min/ft^2$)	2852 (70)
Permittivity	ASTM D 4491	Sec^{-1}	0.90

HI-FLOW DANDY CURB SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$1/min/m^2$ ($gal/min/ft^2$)	5907 (145)
Permittivity	ASTM D 4491	Sec^{-1}	2.1

MATTING

Definition

Matting such as excelsior or jute is used to stabilize easily eroded areas such as channels and steep slopes while vegetation is becoming established.

Conditions Where Practice Applies

Matting should be used on:

1) Channels where the designed flow exceeds 3.5 fps.
2) Steep slopes.
3) Problem areas that have highly erosive soils.
4) Areas that may be slow to establish adequate vegetative cover.

Design Criteria

Materials

1. Matting is available in many acceptable materials that provide excellent soil protection. Two acceptable materials are jute and excelsior matting. Excelsior matting is a wood fiber mulch covered with plastic netting on one or both sides. Jute matting is a woven cloth of jute yarn and may be used in conjunction with organic mulch. Both are widely available, easily installed, and adaptable to most site conditions.

Grade of Matting

1. The specific grade of a matting should be specified. Matting is available in many different grades for a wide range of uses and site conditions.

Channel Width

1. Channels often require several widths of mattings. The width of coverage should be specified for individual sections of the channel.

Manufacturers Instructions

1. Matting manufacturers usually provide detailed installation instructions for their products. The manufacturer's instructions should be referenced during design and included in the construction plans. If instructions are not available, the following guidelines listed in the specifications for matting may be used.

Erosion Stops

1. Erosion stops are made of strips of matting placed in narrow trenches 6–12 in. deep across the full cross section of the channel. The strips are installed under the channel lining matting. Erosion stops prevent undermining and gullies from forming beneath the matting. They should be specified when recommended by the matting manufacturer and for areas of high–erosion potential such as where rocky conditions may prevent good soil matting contact, erosive soils or steep slopes. Depending on erosion potential, specifications should require erosion stops spaced from 20–100 ft. apart.

Construction Specifications

a. Material––Excelsior matting shall be 48 in. wide and weigh an average of 0.75 lb./sq. yd. or greater. Jute matting shall be 48 in. wide and weigh an average of 1.2 lb./yd. or greater. Matting made of other material and providing equal or greater stabilization than the above may be substituted.

b. Site Preparation–– After the site has been shaped and graded, a seedbed shall be prepared that is relatively free of foreign material, clods or rocks that are greater than 1.5 in. in diameter. The site shall be prepared to ensure that the matting has good soil contact and the matting will not "bridge" or "tent" over obstructions.

c. Matting shall be held in place as recommended by the manufacturer as adequate for the site conditions or with sod staples. Sod staples are U–shaped wire staples used for fastening sod, jute or excelsior matting and other erosion–control materials to the soil surface. Sod staples shall be No. 11 gauge or heavier and be 6–10 in. in length. In loose or sandy soils longer staples shall be used.

d. Planting––Lime and fertilizer shall be used according to the recommendation of a soil test or the seeding plan. Seed according to the matting manufacturer's recommendations; or, for excelsior matting, seed area to be protected before installation; or, when using jute matting, apply half the seed before and half the seed after installation.

e. Matting shall be installed as specified by the manufacturer as appropriate for the site conditions or the following procedure may be used:

   1) After the site is prepared and erosion stops are installed, start laying the mat from the top of the slope or channel and unroll the matting allowing 4–in. overlaps at the edges.

   2) Secure the matting by burying the top ends in a trench 6 in. deep and staple the folded ends to the bottom of the trench. Backfill and tamp firmly to the established grade.

   3) Staple matting every 12 in. across the width beginning at the edges and every 2 ft. in rows the entire length of the matting. Every other row of staples running the length of the matting should be staggered.

   4) To join two rolls together, cut a trench to anchor the end of the new roll and secure it the same as the top roll. Overlap the end of the previous roll 18 in. over the new roll. Continue to staple as described above.

   5) When using excelsior matting, the plastic netting shall be on top of the wood fiber.

f. Erosion stops shall be used where recommended by the matting manufacturer and on areas specified where high–erosion potential may cause undermining and gullies to form beneath the matting.

   1) Erosion stops shall be made of strips of matting placed in narrow trenches 6–12 in. deep that cover the full cross section of the channel. They shall be spaced according to the manufacturer's recommendations or by the following:––3 ft. down the channel from each point of entry of concentrated flow,––at points where change in gradient or direction of channel occurs, and––on long slopes at spacing from 20–100 ft. depending upon erodibility of the soil, velocity and volume of flow.

   2) Erosion stops shall extend beyond the channel liner to the full design width of the channel, this will check any rills that might form outside or along the edge of the channel lining.

   3) Erosion stops shall be constructed with 6 in. deep trench, stapled to the bottom of the trench, backfilled and tamped firmly to conform with the cross section of the channel.

   4) If seeding has been done prior to installation of erosion stops, reseed disturbed areas prior to placement of channel liner.

SPECIFICATIONS FOR MATTING – USE ON ALL SWALES

Notes: 1. Erosion/sediment control measures must be functional and be maintained throughout construction.
2. Maintain positive drainage away from the structure(s).

INDIVIDUAL LOT EROSION CONTROL PLAN

INSPECTION CHECKLIST

Site-Specific BMPs

BMP/Activity Description	Implemented	Maintained	Corrective Action Needed	Date for Corrective Action
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		
	☐ Yes ☐ No	☐ Yes ☐ No		

Comments

Overall Site Issues

BMP/Activity Description	Implemented	Maintained	Corrective Action Needed	Date for Corrective Action
Are all slopes and distubed areas not actively being worked properly stabilized?	☐ Yes ☐ No	☐ Yes ☐ No		
Are natural resource areas (streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	☐ Yes ☐ No	☐ Yes ☐ No		
Are perimeter controls and sediment barriers adequately installed and maintained?	☐ Yes ☐ No	☐ Yes ☐ No		
Are discharge points and receiving waters free of sediment deposits?	☐ Yes ☐ No	☐ Yes ☐ No		
Are storm drain inlets properly protected?	☐ Yes ☐ No	☐ Yes ☐ No		
Is sediment being tracked into the street?	☐ Yes ☐ No	☐ Yes ☐ No		
Is trash/litter from work areas collected and placed in a covered dumpster?	☐ Yes ☐ No	☐ Yes ☐ No		
Are washout facilities available and maintained?	☐ Yes ☐ No	☐ Yes ☐ No		
Are vehicle and equipment fueling, and maintenance areas free of spills, or any other deleterious material?	☐ Yes ☐ No	☐ Yes ☐ No		
Are materials that are potential stormwater contaminants stored inside or under cover?	☐ Yes ☐ No	☐ Yes ☐ No		
Are non-stormwater discharges (wash water, dewatering water, etc.) properly controlled?	☐ Yes ☐ No	☐ Yes ☐ No		

Flow Length-to-Width Ratio – The length-to-width ratio shall be 4:1 or greater. If the flow length from the inlet of the basin to the principal spillway is not greater than or equal to the minimum length, either the inlet of the basin should be relocated farther away from the principal spillway, or one or more solid baffles should be used to increase the flow length within the basin. Flow length is to be measured at the elevation of the invert of the principal spillway. Where runoff from disturbed areas enters the basin from different directions, it is better to combine flows from the various areas into a single inlet into the basin rather than have multiple inlets into the basin. If multiple inlets to the basin exist, the flow length to width ratio from all inlets must be at least 4:1.

Use of Baffles in Sediment Basins – If individual situations require greater trapping efficiency or if optimum depth and length-to-width ratios are not feasible, baffles may be incorporated into the design. Baffles may be constructed of porous or solid materials depending upon their purpose. Solid baffles, as shown in Figures 6.1.4 and 6.1.5, may be used to increase the flow length within the basin.

Figure 6.1.4 Typical construction of a solid baffle

Porous baffles, as shown in figure 6.1.5, are used to dampen turbulent currents and increase sedimentation. Porous baffles are typically constructed of jute matting, rock, plastic safety fence, or other material. Porous baffles typically partition the basin into two or three cells. Whether porous or solid baffles, the height shall extend to the crest elevation of the principal spillway.

Figure 6.1.5 Porous baffle placed to increase pond efficiency (left shown in profile, right in cross-section)

SOLID BAFFLES

NO SCALE

DENNIS W. STOFFER
E–76698

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST.,
SUITE 201
FAIRLAWN, OHIO 44333
(330) 836–6661

HUDSON PRESERVE

SWPPP NOTES

CITY OF HUDSON

DWG FILE: F:\1895 Norton\3d Dwgs\General Sheets.dwg (SWPPP-3)
DRAWN BY: TG
DATE: 06/14/2021
DESIGNED BY: DWS
REVISION: DATE:
REVISION: DATE:

PART III G.1

DESCRIPTION
DEVELOPMENT OF AN SUBDIVISION WITH ASSOCIATED UTILITIES.

SITE DATA
PRE-CONSTRUCTION USE: GRASS AND WOODS, RESIDENTIALL
PRE-CONSTRUCTION RUNOFF COEFFICIENT: .77
POST-CONSTRUCTION USE: RESIDENTIAL
POST-CONSTRUCTION RUNOFF COEFFICIENT: .81
TOTAL SITE AREA: 13.03 AC.
TOTAL SITE AREA DISTURBED: 7.16 AC.
TOTAL PROPOSED IMPERVIOUS AREA AS A RESULT OF CONSTRUCTION ACTIVITY IS 1.41 AC., 11% OF SITE.

SOIL INFORMATION
PER THE SUMMIT COUNTY GIS WEBSITE, THE SITE CONSISTS OF:
Mg – MAHONING SILT LOAM, HYDRAULIC GROUP D
OFFSITE SPOIL AREAS TO BE DESIGNATED BY THE CONTRACTOR AT OR BEFORE THE PRE-CONSTRUCTION MEETING.

SEQUENCE OF MAJOR CONSTRUCTION OPERATIONS
1. INITIAL PROJECT STAGE
   - A. PRE-CONSTRUCTION MEETING INCLUDING SITE VISIT
   - B. INSTALLATION OF CONSTRUCTION ENTRANCE
   - C. INSTALLATION OF SILT FENCING WITHIN 7 DAYS OF CONSTRUCTION ENTRANCE INSTALLATION.
   - D. INSTALLATION OF SEDIMENT CONTROLS AND DIVERSIONS WITHIN 7 DAYS OF GRUBBING.

2. INTERMEDIATE PROJECT STAGE
   - A. EARTHMOVING ACTIVITIES/SEEDING AND MULCHING
   - B. UTILITY AND INFRASTRUCTURE INSTALLATION WITH INLET PROTECTION
   - C. PAVING ACTIVITIES

3. FINAL PROJECT STAGE
   - A. FINAL GRADING AND PERMANENT SOIL STABILIZATION (WITHIN SEVEN (7) DAYS OF REACHING FINAL GRADE)(WITHIN TWO (2) DAYS IF WITHIN 50' OF STREAM)
   - B. INSTALL PERMEABLE PAVERS.
   - C. FINAL STABILIZATION MEETING
   - D. REMOVAL OF CONSTRUCTION ENTRANCE, WASHOUT AREA AND TEMPORARY SEDIMENT CONTROL STRUCTURES
   - E. REMOVAL OF SILT FENCING UPON SITE STABILIZATION
   - F. INSPECT STORM SEWER AND REMOVE ALL DEBRIS FROM THE SYSTEM CAUSED BY CONSTRUCTION

CONSTRUCTION IMPLEMENTATION TIMETABLE

	J	F	M	A	M	J	J	A	S	O	N	D
GRUBBING				●	●	●						
SEDIMENT CONTROL				●	●	●	●	●	●	●	●	●
EXCAVATION					●	●						
GRADING						●	●	●	●	●	●	●
UTILITY INSTALLATION						●	●	●	●			
INFRATRUCTURE INSTALLATION						●	●	●	●	●	●	●

RECEIVING STREAM
IMMEDIATE RECEIVING STREAM IS THE POWERS BROOKE.

MAINTENANCE
ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN A FUNCTIONAL CONDITION UNTIL ALL UP SLOPE AREAS THEY CONTROL ARE PERMANENTLY STABILIZED. THE CONTRACTOR SHALL COMPLY WITH THE MAINTENANCE SCHEDULE INCLUDED IN THE APPROVED PLANS FOR THE PROPOSED EROSION CONTROLS. A WRITTEN DOCUMENT CONTAINING THE SIGNATURES OF ALL CONTRACTORS AND SUB-CONTRACTORS INVOLVED IN THE IMPLEMENTATION OF THE BMPS MUST BE MAINTAINED AS PROOF ACKNOWLEDGING THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE SWPPP.

INSPECTION
ALL STORMWATER CONTROLS ON THE SITE ARE INSPECTED BY QUALIFIED INSPECTION PERSONNEL AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. A WRITTEN RECORD DOCUMENTING THE INSPECTION AND THE RESULTS OF THESE INSPECTIONS MUST BE CREATED AND MAINTAINED ON-SITE WITH THE SWPPP. THESE INSPECTION REPORTS MUST CONTAIN THE NAME OF THE INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, AND ANY CORRECTIVE MEASURES TAKEN. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWPPP SHALL BE OBSERVED TO ENSURE THAT THOSE ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.

I. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE.
IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH EXCEPTION OF A SEDIMENT SETTLING POND, IT MUST BE REPAIRED OR MAINTAINED WITHIN THREE DAYS OF INSPECTION. SEDIMENT SETTLING PONDS MUST BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.

II. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION.
IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWPPP, MUST BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 10 DAYS OF INSPECTION.

III. WHEN PRACTICES DEPICTED ON THE SWPPP ARE NOT INSTALLED.
IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE SWPPP. THE SWPPP MUST BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD MUST CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.

PERMITS
THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE MET DURING ALL STAGES OF CONSTRUCTION.

APPROVALS
NPDES PERMIT NO.
SWPPP APPROVED BY SUMMIT SOIL & WATER CONSERVATION DISTRICT BY LETTER THIS DAY OF _____, 2021

PART III G.2

GENERAL EROSION AND SEDIMENT CONTROL NOTES
TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS, THE LOCATION AND SIZE OF WHICH ARE DETAILED ON THE PLANS, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORK OPERATIONS. CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE NOT FORESEEN DURING DESIGN STAGE; THAT REQUIRE ADDITIONAL OR MODIFIED TEMPORARY OR PERMANENT BMP'S SHALL BE APPROVED BY THE DESIGN ENGINEER AND REFLECTED ON THE REVISED SWPPP.

SEDIMENT PONDS, SEDIMENT TRAPS, SEDIMENT CONTROLS, DIVERSIONS, AND PERIMETER SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL DISTURBED AREAS ARE RE-ESTABLISHED WITH TEMPORARY VEGETATION. NO SEDIMENT CONTROLS SHALL BE PLACED IN A STREAM.

TRENCH DEWATERING OR GROUND WATER, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATER SHALL NOT BE DISCHARGED TO STREAMS OR THE STORM SEWER SYSTEM.

THE SWPPP, NOTES AND DETAILED DRAWINGS ARE INTENDED TO SERVE AS BASIC GUIDELINES. ALL EROSION CONTROL PRACTICES SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL.

ADDITIONAL EROSION CONTROL BMP'S MAY BE MANDATED BY THE GOVERNING AGENCY AT ANY TIME DURING THIS PROJECT AS UNFORESEEN SITUATIONS MAY ARISE THAT WARRANT FURTHER EROSION AND SEDIMENT CONTROL PRACTICES.

CONSTRUCTION MUST COMPLY WITH ALL LOCAL EROSION AND SEDIMENT CONTROL REGULATION. DISTURBED AREAS REMAINING DORMANT FOR OVER ONE YEAR OR AT FINAL GRADE, WILL HAVE PERMANENT EROSION CONTROLS APPLIED WITHIN SEVEN DAYS.

INDIVIDUAL BUILDING LOTS
BUILDERS ARE RESPONSIBLE FOR EROSION CONTROL ON EACH INDIVIDUAL BUILDING LOT

ACCEPTABLE EROSION CONTROL TIMETABLE

	J	F	M	A	M	J	J	A	S	O	N	D
TEMP. SEEDING				●	●	●	●	●	●	●		
PERM. SEEDING				●	●	●	●	●	●	●		
LANDSCAPING			●	●	●					●	●	●
MULCHING	●	●	●	●	●	●	●	●	●	●	●	●
MAINTENANCE	●	●	●	●	●	●	●	●	●	●	●	●

CLEARING AND GRUBBING
LIMITS OF CLEARING AND GRADING SHALL BE CLEARLY MARKED ON THE SITE WITH SIGNAGE, FLAGGING AND/OR CONSTRUCTION FENCING.

THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF ERODABLE EARTH MATERIAL EXPOSED BY EXCAVATION, BORROW AND FILL OPERATIONS AND PROVIDE IMMEDIATE PERMANENT OR TEMPORARY CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS OR OTHER WATER COURSES, LAKES, PONDS, WETLANDS OR OTHER AREAS OF WATER IMPOUNDMENT.

STABILIZATION
PERMANENT AND TEMPORARY STABILIZATION ARE DEFINED IN PART VII OF THE OEPA AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM.
OHIO EPA PERMIT NO. OH000004 EFFECTIVE DATE 4/21/18 – EXPIRATION DATE 4/20/23
DISTURBED AREAS MUST BE STABILIZED AS SPECIFIED IN THE FOLLOWING TABLES BELOW:

TEMPORARY STABILIZATION/SEEDING
SEEDING AREAS SHALL BE INSPECTED AND WHERE THE SEED HAS NOT PRODUCED 80% COVER SHALL BE RESEEDED AS NECESSARY BY THE CONTRACTOR. AREAS SHALL BE STABILIZED WITH MULCH WHEN CONDITIONS PROHIBIT SEEDING.

STRAW MULCHING SHALL BE APPLIED AT A RATE 2-3 STANDARD 45 LB. BALES PER 1,000 SQ. FT. OF DISTURBED AREA OR 2 TONS PER ACRE. ALL HYDRO-SEEDING MUST BE STRAW MULCHED ACCORDING TO THE ABOVE SPECIFICATIONS UNLESS IT IS WATERED WEEKLY.

ALL DETENTION PONDS, RETENTION PONDS, WATER QUALITY STRUCTURES, SEDIMENT PONDS, SEDIMENT TRAPS, EARTHEN DIVERSIONS OR EMBANKMENTS SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS OF COMPLETED CONSTRUCTION.

TABLE 2: TEMPORARY STABILIZATION

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROL
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA. FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	PRIOR TO THE ONSET OF WINTER WEATHER

WINTERIZATION – ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 UNLESS THE SITE CAN BE PERMANENTLY SEEDED BY NOVEMBER 15, OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON-VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED.

PERMANENT STABILIZATION/SEEDING
TABLE 1: PERMANENT STABILIZATION

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE.	WITHIN TWO DAYS OF REACHING FINAL GRADE.
ANY OTHER AREAS AT FINAL GRADE.	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

DITCHES WITH SLOPES GREATER THAN 1.5% SHALL HAVE EROSION CONTROL BLANKETS OR MATTING INSTALLED AS PART OF STABILIZATION MEASURES.

EROSION CONTROL BLANKETS SHALL BE USED TO AID IN ESTABLISHING VEGETATION ON DISTURBED SLOPES STEEPER THAN 6%

SIDE SLOPES OF ROADS AND DRIVES SHALL BE SEEDED AND BLANKETED IMMEDIATELY UPON COMPLETION.

SEEDING AND MULCHING: ALL SITE AREAS NOT OTHERWISE COVERED BY PROPOSED BUILDINGS, PAVEMENTS, OR LANDSCAPE PLANTINGS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH THE LANDSCAPE PLAN.

A SITE IS NOT CONSIDERED TO BE STABLE UNTIL THE FOLLOWING ITEMS ARE COMPLETED:
1) A PERENNIAL VEGETATIVE COVER (OR OTHER PERMANENT STABILIZATION PRACTICE) HAS GROWN TO A 75% DENSITY THROUGHOUT THE ENTIRE DISTURBED AREA.
2) ALL TEMPORARY EROSION AND SEDIMENT CONTROLS HAVE BEEN REMOVED AND DISPOSED OF PROPERLY.
3) ALL TRAPPED SEDIMENT HAS BEEN PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION OR RE-SUSPENSION.
4) ALL CONSTRUCTION ACTIVITIES HAVE CEASED.

EROSION CONTROL NOTES
1. INSTALL GEOFAB OR EQUAL FABRIC FENCE AS SHOWN, 1.5' MIN. IN HEIGHT, AS PER MANUFACTURER'S RECOMMENDATIONS. THIS FABRIC FENCE WILL BE USED DURING GRADING OPERATIONS AND UNTIL ALL BARE AREAS ARE STABILIZED.
2. EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6% GRADE.
3. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
4. ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED WITHIN 7 DAYS OF OBTAINING FINAL GRADE PER O.D.O.T. 659.04, 659.12 AND 659.13.

CONSTRUCTION ENTRANCE
A STONED CONSTRUCTION ENTRANCE SHALL BE INSTALLED FOR ALL INGRESS & EGRESS TO THE SITE. THE MINIMUM DIMENSIONS OF THE DRIVE SHALL BE 20 FEET WIDE AND 70 FEET LONG. THE STONE SHALL BE 6 INCHES DEEP WITH AN UNDERLAIN GEOTEXTILE FABRIC. THE DRIVE SHALL BE INSTALLED PRIOR TO ANY CLEARING AND GRUBBING. SEDIMENTS SHALL BE REMOVED FROM ROADWAYS DAILY. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROADS NOTED ON THE PLAN.

PERMANENT STABILIZATION OF CONVEYANCE CHANNELS
OPERATORS SHALL UNDERTAKE SPECIAL MEASURES TO STABILIZE CHANNELS AND OUTFALLS AND PREVENT EROSIVE FLOWS. MEASURES MAY INCLUDE SEEDING, DORMANT SEEDING (AS DEFINED IN THE LATEST EDITION OF ODNR RAINWATER AND LAND DEVELOPMENT MANUAL), MULCHING, EROSION CONTROL MATTING, SODDING, RIPRAP NATURAL CHANNEL DESIGN WITH BIO ENGINEERING TECHNIQUES OR ROCK CHECK DAMS.

TIMING
SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT THE COURSE OF EARTH DISTURBING ACTIVITY. SEDIMENT BASINS AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED PRIOR TO GRADING AND WITHIN SEVEN DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE SLOPE DEVELOPMENT AREA IS PERMANENTLY RESTABILIZED, AS CONSTRUCTION PROGRESSES AND THE TOPOGRAPHY IS ALTERED, APPROPRIATE CONTROLS MUST BE CONSTRUCTED TO ADDRESS THE CHANGING DRAINAGE PATTERNS.

TRENCH AND GROUND WATER CONTROL
THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATERS CONTAIN SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTLING IN PLACE OR DEWATERING INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS ARE NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE, HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT-LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

SILT FENCE & DIVERSIONS
SHEET FLOW RUNOFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY SILT FENCE OR DIVERSIONS TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM SEDIMENT TRANSPORTED VIA SHEET FLOW. WHERE INTENDED TO PROVIDE SEDIMENT CONTROL, SILT FENCES SHALL BE PLACED ON A LEVEL CONTOUR. THE EPA PERMIT NO. OHC000003 DOES NOT PRECLUDE THE USE OF OTHER SEDIMENT BARRIERS DESIGNED TO CONTROL SHEET FLOW RUNOFF. SILT FENCE IS NOT PERMITTED TO BE USED FOR CONTROLLING CONCENTRATED SURFACE WATER FLOW (ONLY SHEET FLOW).

STORMWATER DIVERSION PRACTICES SHALL BE USED TO KEEP RUNOFF AWAY FROM DISTURBED AREAS AND STEEP SLOPES WHERE PRACTICAL. SUCH DEVICES, WHICH INCLUDE SWALES, DIKES OR BERMS, MAY RECEIVE FROM AREAS UP TO 10 ACRES.

IF SMALL RILLS OR GULLIES DEVELOP, TEMPORARY DIVERSIONS SHALL BE INSTALLED UNTIL SATISFACTORY SEEDING IS ESTABLISHED.

INLET PROTECTION
OTHER EROSION AND SEDIMENT CONTROL PRACTICES SHALL MINIMIZE SEDIMENT LADEN WATER ENTERING ACTIVE STORM DRAIN SYSTEMS, UNLESS THE STORM DRAIN SYSTEM DRAINS TO A SEDIMENT POND. INLET PROTECTION IS MANDATORY WHERE SEDIMENT SETTLING PONDS WILL NOT BE IMPLEMENTED.

STREAM CROSSINGS
STREAM CROSSINGS SHALL BE CONSTRUCTED ENTIRELY OF STONE, ROCK OR CLEAN RECYCLED CONCRETE. SOIL OR EARTHEN MATERIAL MAY NOT BE USED. A 20 FOOT STONE APRON ON EITHER SIDE OF THE STREAM SHALL BE CONSTRUCTED TO PREVENT LOCALIZED SEDIMENTATION. ALL DISTURBED AREAS OF THE BANK WITHIN 50 FEET OF THE STREAM SHALL BE STABILIZED WITH SEED AND MULCH WITHIN 2 DAYS OF THE DISTURBANCE.

POST CONSTRUCTION BMP'S AND RATIONALE
1. RETENTION PONDS, UTILIZED INSTEAD OF OTHER GREEN INFRASTRUCTURE MEASURES DUE TO SITE CONSTRAINTS AND REQUIRED INFRASTRUCTURE IMPROVEMENTS.

NON-SEDIMENT POLLUTANTS CONTROLS
NO SOLID (OTHER THAN SEDIMENT) OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN STORMWATER RUNOFF. ALL NECESSARY BMP'S MUST BE IMPLEMENTED TO PREVENT THE DISCHARGE OF NON-SEDIMENT POLLUTANTS TO THE DRAINAGE SYSTEM OF THE SITE OR SURFACE WATERS OF THE STATE. UNDER NO CIRCUMSTANCE SHALL CONCRETE TRUCKS WASHOUT DIRECTLY INTO A DRAINAGE CHANNEL, STORM SEWER OR SURFACE WATERS OF THE STATE. NO EXPOSURE OF STORMWATER TO WASTE MATERIALS IS RECOMMENDED.

WASTE DISPOSAL
CONTAINERS (E.G., DUMPSTERS, DRUMS) SHALL BE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL.

CONSTRUCTION CHEMICAL COMPOUNDS
AREA SHALL BE DESIGNATED FOR MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS, LIME, ASPHALT OR CONCRETE. THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS OR OTHER STORMWATER DRAINAGE AREA.

CONCRETE WASH WATER
ALL DESIGNATED CONCRETE WASHOUT AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS OR OTHER STORMWATER DRAINAGE AREAS. CONCRETE WASHOUT AREA SHALL BE LINED AND WASHOUT WATER SHALL BE PUMPED OUT AND PROPERLY DISPOSED OF.

EQUIPMENT FUELING & MAINTENANCE
EQUIPMENT FUELING & MAINTENANCE SHALL BE IN DESIGNATED AREAS ONLY.

OFF-SITE TRAFFIC
OFF-SITE VEHICLE TRACKING OF SEDIMENTS AND DUST GENERATION SHALL BE MINIMIZED.

ADJACENT ROADS SHALL BE KEPT FREE OF DIRT AND DEBRIS AT ALL TIMES. TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON STREETS IS PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SUCH OCCURRENCE, BE IT ON STREETS OR ADJACENT PROPERTY(S) AND SHALL CLEAN UP DEBRIS IMMEDIATELY AND AS DIRECTED BY THE OWNER OR MUNICIPAL ENGINEER. IF THE CONTRACTOR FAILS TO KEEP THE WORK AREA CLEAN OF DEBRIS, OR FAILS TO CLEAN THE STREETS OF MUD AND DIRT FROM THIS CONSTRUCTION SITE, THE OWNER OR MUNICIPAL AUTHORITY MAY TAKE ACTION AND ASSESS THE CONTRACTOR FOR ANY COSTS THAT ARE INCURRED.

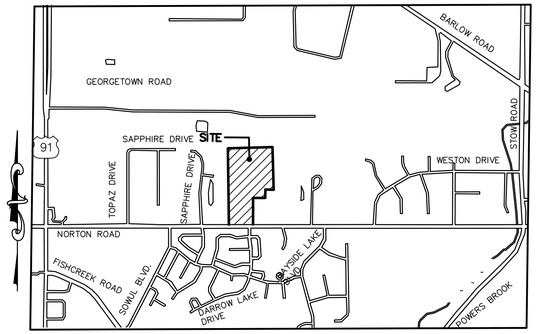
OPEN BURNING
OPEN BURNING IS NOT PERMITTED.

SPILL REPORTING REQUIREMENTS
SPILL ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, KITTY LITTER OR OTHER ABSORBENT MATERIAL AND DISPOSED OF WITH THE TRASH AT A LICENSED LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378) WITHIN ONE HOUR OF DISCOVERY OF THE RELEASE. THE CONTRACTOR SHALL HAVE ON-SITE A 20 GALLON OVER PACK SPILL KIT BY EXCEL EQUIPMENT OR APPROVED EQUAL NEXT TO THE DESIGNATED MAINTENANCE REPAIR AND FUELING AREA THROUGHOUT CONSTRUCTION. A RESPONSE GUIDELINE BOOK SHALL BE SUPPLIED BY THE MANUFACTURER. THIS BOOK SHALL BE POSTED AT THE SITE.

THE CONTRACTOR SHALL CONTACT THE OHIO EPA AT (1-800-282-9378), THE LOCAL FIRE DEPARTMENT AND THE LOCAL EMERGENCY PLANNING COMMITTEE IN THE EVENT OF A PETROLEUM SPILL (>25 GALLONS) OR THE PRESENCE OF SHEEN WITHIN 30 MINUTES OF A SPILL OF 25 GALLONS OR MORE. THIS INFORMATION MUST BE POSTED AT THE SITE.

A SPILL PREVENTION CONTROL AND COUNTERMEASURES
A SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN MUST BE DEVELOPED FOR SITES WITH ONE ABOVE-GROUND STORAGE TANK OF 660 GALLONS OR MORE, TOTAL ABOVE-GROUND STORAGE OF 1,330 GALLONS, OR BELOW-GROUND STORAGE OF 4,200 GALLONS OF FUEL.

EROSION CONTROL NOTES
1. INSTALL GEOFAB OR EQUAL FABRIC FENCE AS SHOWN, 1.5' MIN. IN HEIGHT, AS PER MANUFACTURER'S RECOMMENDATIONS. THIS FABRIC FENCE WILL BE USED DURING GRADING OPERATIONS AND UNTIL ALL BARE AREAS ARE STABILIZED.
2. EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5% AND ALL OTHER SLOPES GREATER THAN 6% GRADE.
3. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
4. THE TYPE OF CONSTRUCTION ACTIVITY TO BE PERFORMED WILL BE AS NECESSARY TO CONSTRUCT ROADWAY, WATER MAIN, SANITARY SEWER AND A STORM WATER SYSTEM FOR A RESIDENTIAL SUBDIVISION.



LOCATION MAP
NO SCALE

OWNER/DEVELOPER
LDA LAND GROUP, LLC
6683 OLDE EIGHT ROAD
PENINSULA, OHIO 44264
(330) 342-4240
REPRESENTATIVE: TONY LUNARDI

CONTAMINATED SOILS
ALL CONTAMINATED SOIL MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDFS).

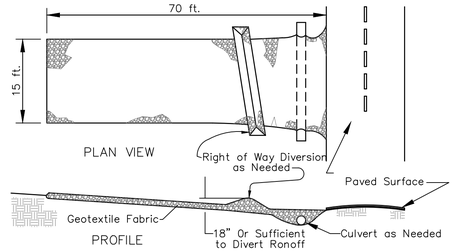
CONSTRUCTION & DEMOLITION DEBRIS
ALL CONSTRUCTION & DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714, CONSTRUCTION DEBRIS MAY BE DISPOSED OF ON-SITE, BUT DEMOLITION DEBRIS MUST BE DISPOSED IN A OHIO EPA APPROVED LANDFILL. ALSO, MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE (OAC) 3745-20).

DUST CONTROLS/SUPPRESSANTS
WATER IS TO BE USED AS A DUST SUPPRESSANT. USED OIL MAY NOT BE USED AS A DUST SUPPRESSANT. NO CHEMICAL DUST SUPPRESSANT SHALL BE APPLIED NEAR CATCH BASINS, STORM SEWERS OR OTHER DRAINAGE WAYS.

TRENCH AND GROUND WATER CONTROL
THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATERS CONTAIN SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTLING IN PLACE OR DEWATERING INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS ARE NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE, HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT-LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

CLEAN HARD FILL
BRICKS, HARDENING CONCRETE AND SOIL WASTE SHALL BE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE.

CLEAN CONSTRUCTION WASTES THAT WILL BE DISPOSED INTO THE PROPERTY, SHALL BE SUBJECT TO ANY LOCAL PROHIBITIONS FROM THIS TYPE OF DISPOSAL.



CONSTRUCTION ENTRANCE DETAIL
NO SCALE

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE
SWPPP NOTES
CITY OF HUDSON

DWG FILE: P:\SWPP Notes\Cover Sheet.dwg (SWPPP-4)
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DATE: XX/XX/XXXX
DESIGNED BY: DWS
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE
CENTERLINE SURVEY
CITY OF HUDSON

DWG FILE: F:\1895 Norton\SAD Dept\Hudson Preserve CF Plan & Profile.dwg (Centerline)
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DATE:
DESIGNED BY: AHD 07/12/2021
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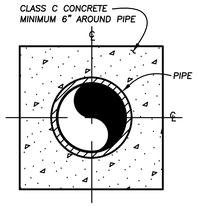
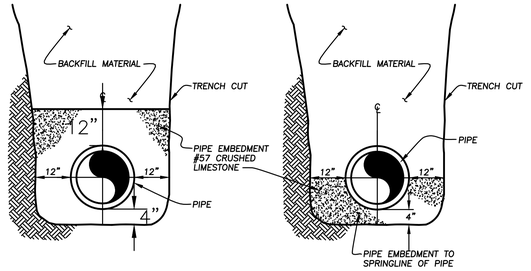


SECTION

CONCRETE PIPE ENCASEMENT

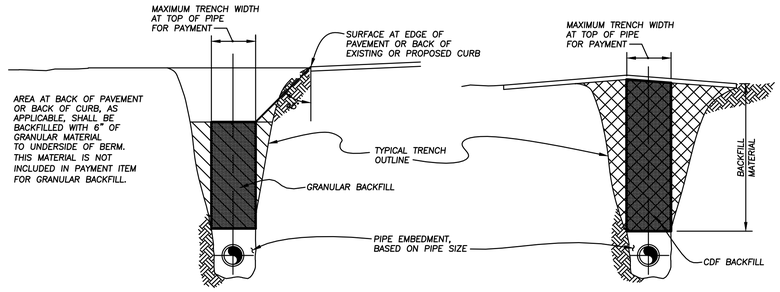


GRANULAR EMBEDMENT
PVC PIPE

GRANULAR EMBEDMENT
REINFORCED CONCRETE PIPE

NOTE: REFER TO D.S.S.S. STANDARDS FOR SANITARY SEWER BEDDING REQUIREMENTS

BEDDING DETAILS
NO SCALE

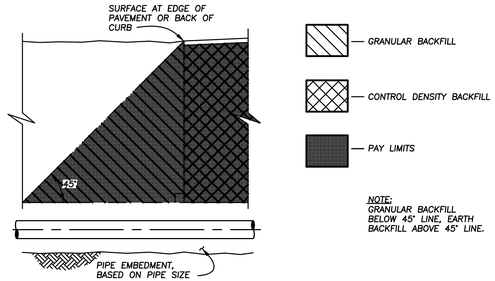


SECTION

OUTSIDE PAVEMENT

SECTION

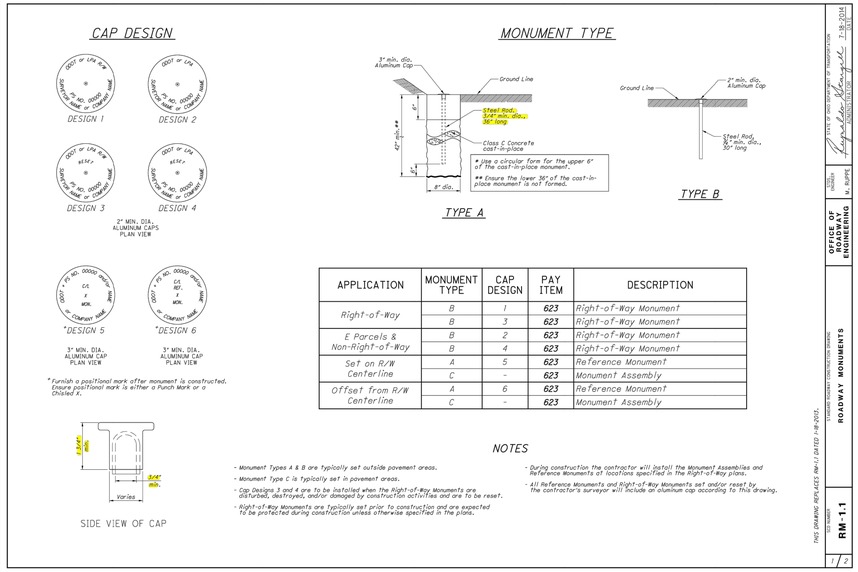
ACROSS OR INSIDE PAVEMENT



SECTION

CROSSING PAVEMENT WITHIN MAXIMUM TRENCH WIDTH

GRANULAR OR CONTROLLED DENSITY FILL BACKFILL – PAY LIMITS
NO SCALE



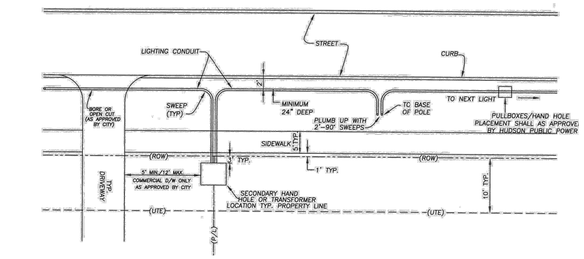
APPLICATION	MONUMENT TYPE	CAP DESIGN	PAY ITEM	DESCRIPTION
Right-of-Way	B	1	623	Right-of-Way Monument
	B	3	623	Right-of-Way Monument
E Parcels & Non-Right-of-Way	B	2	623	Right-of-Way Monument
	B	4	623	Right-of-Way Monument
Set on R/W Centerline	A	5	623	Reference Monument
	C	-	623	Monument Assembly
Offset from R/W Centerline	A	6	623	Reference Monument
	C	-	623	Monument Assembly

NOTES

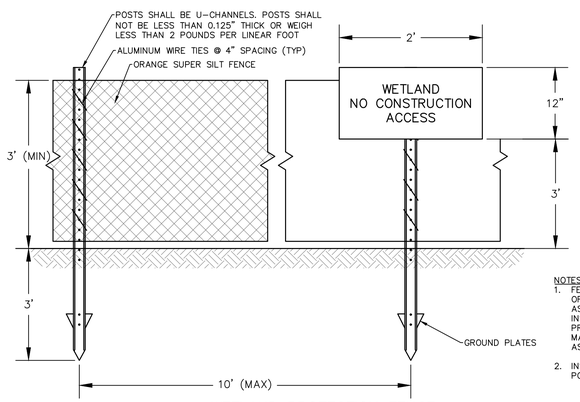
- Monument Types A & B are typically set outside pavement areas.
- Monument Type C is typically set in pavement areas.
- Cap Designs 3 and 4 are to be installed when the Right-of-Way Monuments are disturbed, destroyed, and/or damaged by construction activities and are to be reset.
- Right-of-Way Monuments are typically set prior to construction and are expected to be protected during construction unless otherwise specified in the plans.
- During construction the contractor will install the Monument Assemblies and Reference Monuments at locations specified in the Right-of-Way plans.
- All Reference Monuments and Right-of-Way Monuments set and/or reset by the contractor's surveyor will include an aluminum cap according to this drawing.

THIS DRAWING REPLACES RM-1.1 DATED 1-18-2013.

STANDARD MONUMENT CONSTRUCTION DRAWING
ROADWAY MONUMENTS
SHEET NUMBER RM-1.1
1 / 2

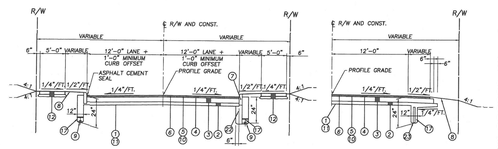


CONDUIT LOCATION WITHIN ROADWAY RIGHT OF WAY OF CURBED STREETS
NO SCALE



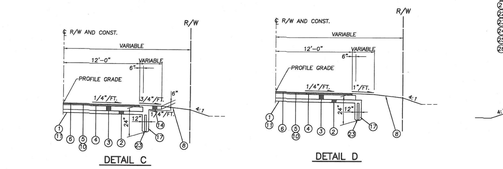
WETLAND PROTECTION FENCE
NO SCALE

NOTES:
1. FENCING SHALL BE INSTALLED ALONG THE PERIMETER OF WETLAND AREA PRIOR TO START OF CONSTRUCTION AS INDICATED ON THE DRAWINGS. SIGNS WILL BE INSTALLED AT 50 FEET OC ALONG THE FENCED IN PROTECTION. SIGNS SIGNS AND FENCING SHALL BE MAINTAINED THROUGHOUT THE PROJECT AND REMOVED AS DIRECTED BY THE ENGINEER.
2. INSTALL FENCE FABRIC ON WINDWARD SIDE OF THE POSTS.



DETAIL A
CURBED TYPICAL SECTION

DETAIL B
ASPHALT SHOULDER TYPICAL SECTION

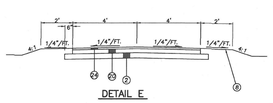


DETAIL C
AGGREGATE SHOULDER TYPICAL SECTION

DETAIL D
TURF SHOULDER TYPICAL SECTION

PROPOSED LEGEND

1. ITEM 203 – SUBGRADE COMPACTION AND PROOF ROLLING (CEMENT STABILIZATION OF THE SUBGRADE SHALL BE REQUIRED WHERE THE CBR VALUE IS LESS THAN 6. SEE DETAILS F, G, & H FOR PAVEMENT BUILD UP WHEN CEMENT STABILIZATION IS REQUIRED.)
2. ITEM 304 – 4" AGGREGATE BASE, LIMESTONE
3. ITEM 301 – 6" BITUMINOUS AGGREGATE BASE (2–3" LIFTS) (TABLE SEC. 7.7) 8" BITUMINOUS AGGREGATE BASE (3–3" LIFTS) (TABLE SEC. 7.7)
4. ITEM 441 TYPE 2, INTERMEDIATE – 1 3/4" ASPHALT CONCRETE, LIMESTONE
5. ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (0.06 GAL./S.Y.)
6. ITEM 441 TYPE 1, SURFACE – 1 1/2" ASPHALT CONCRETE, LIMESTONE
7. ITEM 609 – CURB, TYPE 6
8. ITEM 659 – SEEDING AND MULCHING
9. ITEM 605 – 6" SHALLOW PIPE UNDERDRAIN, ASTM 3034, SDR 35 w/2" BEDDING
10. ITEM SPECIAL – PAVEMENT REINFORCING FABRIC (AS REQUIRED BY THE CITY)
11. ITEM SPECIAL – GEOGRID (TENSAR TX-140S OR APPROVED EQUAL)
12. ITEM 608 – 4" REINFORCED CONCRETE WALK WITH 3" 304 LIMESTONE BASE
13. ITEM 451 – 7" MIN. REINFORCED CONCRETE
14. ITEM 304 – 6" MIN. LIMESTONE AGGREGATE BASE, COMPACTED
15. ITEM 441 TYPE 2, INTERMEDIATE – 2" MIN. ASPHALT CONCRETE, LIMESTONE
16. ITEM 451 – 7" MIN. REINFORCED CONCRETE
17. #57 LIMESTONE BEDDING AND BACKFILL (PAVEMENT INCLUDED WITH ⑨ / ⑬)
18. ITEM 804 – 9" OF SOIL CEMENT STABILIZATION
19. ITEM 441 TYPE 2, INTERMEDIATE – 2 3/4" ASPHALT CONCRETE, LIMESTONE
20. ITEM 301 – 4" BITUMINOUS AGGREGATE BASE, LIMESTONE
21. ITEM 609 – CURB, TYPE 3
22. ITEM 304 – MIN. 4" AGGREGATE BASE, LIMESTONE
23. ITEM 605 – STRIP DRAIN/CONTECH BRAND 80 OR APPROVED EQUAL
24. ITEM 441 TYPE 2, INTERMEDIATE – 1 1/2" ASPHALT CONCRETE, LIMESTONE
25. ITEM 441 TYPE 1, SURFACE – 3" ASPHALT CONCRETE, LIMESTONE (2–1 1/2" LIFTS)
26. ITEM 451 – 3" CONCRETE TEMP. CAP WITH VISQUEEN BOND BREAKER



DETAIL E
BIKE PATH TYPICAL SECTION

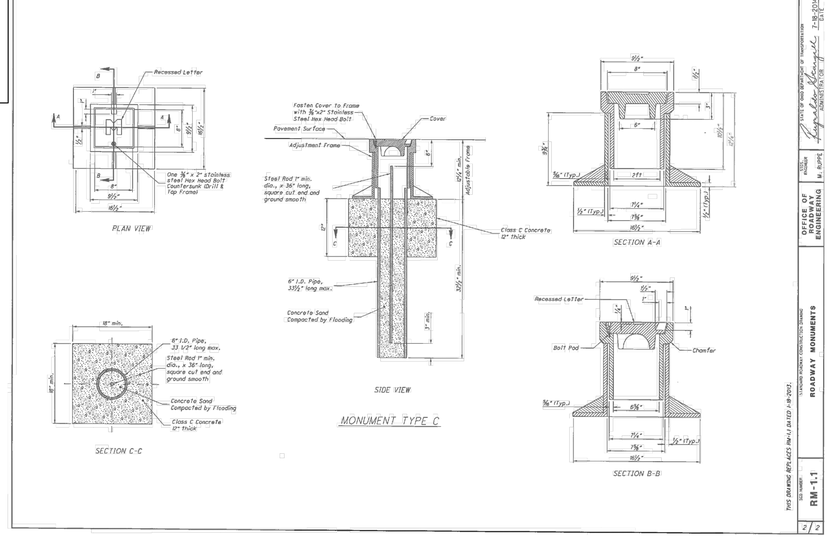
SEE DISCLAIMER STATEMENT ON THE TITLE PAGE OF THESE ENGINEERING STANDARDS

TYPICAL.DWG 5-15-02
REVISED 5-19-15

FIG 7.1.1

TYPICAL SECTION
NO SCALE

NOTE: SOIL ANALYSIS WILL BE REQUIRED TO DETERMINE THE CBR VALUE AND NECESSITY OF CEMENT STABILIZATION.



THIS DRAWING REPLACES RM-1.1 DATED 1-18-2013.

STANDARD MONUMENT CONSTRUCTION DRAWING
ROADWAY MONUMENTS
SHEET NUMBER RM-1.1
2 / 2

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE

SITE CONSTRUCTION DETAILS

CITY OF HUDSON

DRW FILE: F:\2005 Norton\Civil Dwgs\General Sheets\dwg (Details)
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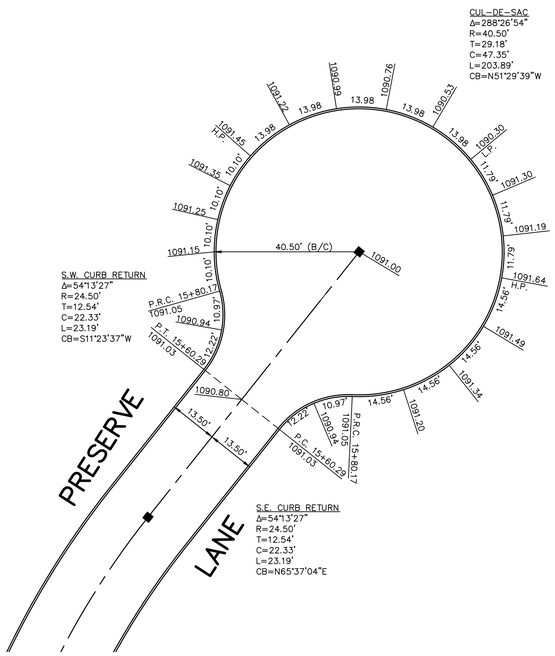
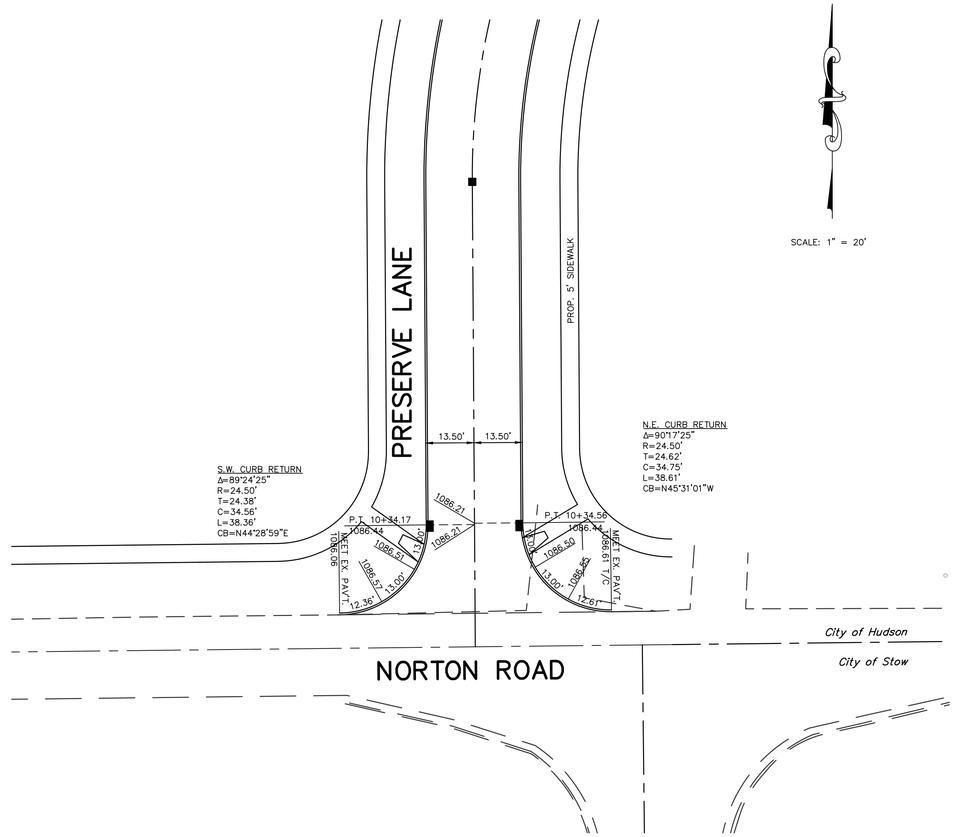
DATE: 06/14/2021
DESIGNED BY: DWS
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

8 OF 16



SCALE: 1" = 20'

NOTES:
1. ALL CURB ELEVATIONS ARE TOP OF CURB
2. ALL DIMENSIONS ARE TO BACK OF CURB



SCALE: 1" = 20'

WATER MAIN NOTES:

1. The contractor shall supply all of the water main materials, including the ductile iron pipe, fittings and fitting restraints, hydrants and valves, polyethylene encasement, all other appurtenances and any items specially itemized as required for the water main installation. All water main materials shall comply with the City of Akron, Akron Engineering Bureau, Construction and Material Specifications (Latest Edition) Item 715, Water Main Materials. Installation of all water main materials shall be in accordance with Section 250, Water Mains. Submittals of material specifications are to be made to the Utilities Engineer prior to purchasing material.

2. Must maintain a ten-foot minimum horizontal clearance from edge of all water main pipe to edge of all sanitary and storm sewer pipes and/or force main pipes.

3. Must maintain an 18-inch minimum vertical clearance from edge of all water main pipe and/or service lines to edge of all sanitary sewer and storm pipes where they cross.

4. The contractor must maintain a 12-inch minimum vertical clearance from edge of all water main pipe to edge of all direct burial conduits, concrete encased electrical conduits, light pole bases, and hand hole pull boxes.

5. The contractor must maintain a 36-inch minimum horizontal clearance from edge of all water main pipe to edge of all direct burial conduits, concrete encased electrical conduits, light pole bases, and hand hole pull boxes.

6. Where water mains cross sewer trenches, the trench is to be backfilled with approved granular material.

7. Approved pipe fittings, bolts, etc., for Akron system water main installation:

Pipe: Minimum thickness Class 53 ductile iron per AWWA C151 specifications, with cement-lining per AWWA C104. Labeled polyethylene encasement per AWWA C105 is required on all pipe, fittings, and valves.

Pipe Joints: Push-on joints (Tyton, Bell-Tite, etc.), per AWWA C151 specifications with plain or restraining rubber gaskets per AWWA C111 specifications.

Fittings: Class 350 ductile iron compact fittings per AWWA C153 or full thickness castings per AWWA C110 are acceptable, with mechanical joint ends and ductile iron follower glands. Anchor tee and anchor pipe is required on all hydrant runs between the tee and hydrant run valve.

Restrained pipe systems: Push-on joint with Field Lock (4 through 16-inch only) or Fast Grip gaskets (4 through 16-inch only), or mechanical joint with restrained follower glands, and 6 ounce zinc anode caps on every bolt thread. Where specified, TR Flex or Flex-Ring pipe and fittings are required on all 16-inch or larger pipe diameters.

Restrained fitting devices: All valves, bends, offsets, hydrant inlets, caps, plugs, and branches of tees and wyes must be restrained using mechanical joint with restrained follower glands or restraining gaskets. Hardwood blocking is required for all diameters 4 through 8-inch, concrete blocking and strapping for all diameters 12-inch and larger.

Concrete blocking is required on all fire lines (regardless of pressure) and on all diameters in areas over 100 psi. Restrained joints for diameters 16-inch and under shall be installed for a length of 30 feet on each side of a valve, bend or offset using Field-Lock or Fast-Grip restraining gaskets or mechanical joint with restrained follower glands. Restrained joints for diameters 20-inch and larger, shall be installed for a length of 30 feet on each side of a valve, bend or offset using mechanical joint with restrained follower glands.

Mechanical Joint T-head Bolts: All mechanical joints shall be made with Cor-Ten or construction-grade alloyed ductile iron bolts. T-head bolts shall be ½-inch longer than standard length and must include a 6 oz. zinc anode cap on every bolt thread.

Hydrants: Akron-style Mueller "Centurian" Model A423; Kennedy "Guardian" Model K-81A; EJ "FlowMaster" CD250; American Flow Control Model B62B with 6-inch inlet, American Flow Control Model B84B with 8-inch inlet. Threads shall be Akron style as shown on Akron Water Works Standard Construction Drawings F-3258 and F-3440. Hydrants must be lead-free per NSF 61-G.

Gate Valves: Resilient-seat wedge (RSW) valves with restrained mechanical joints. Valves shall have non-rising stems and shall open to the right (clockwise).

Butterfly Valves, 16-inch and up: Restrained mechanical joint or shouldered (not grooved) Victaulic ends with Style 44N couplings and stainless steel 316 bolts. Rubber seals in the valve must be replaceable. Flanged end or wafer-style valves are not acceptable.

Valve Boxes: Bibby, Tyler, Star (heavy duty only), or East Jordan brands are acceptable for compatibility.

Curb Boxes: Riser pipe must be of yoloy corrosion resistant material. Plug must be cast iron and thread into a brass ring.

8. Compacted premium backfill is required for underground construction under or within three feet of any proposed or existing sidewalk or pavement. The backfilling shall conform to Section 551.09 of the City of Akron Construction and Material Specifications, Latest Edition.

9. Any existing water mains, hydrants, valves, valve boxes, meter vaults, service lines, or curb boxes that are damaged or must be adjusted and/or moved must be repaired, adjusted, moved and/or replaced at the contractor's expense. Contact Doug Zwahlen, Water Distribution Supervisor, at (330) 375-2420 to schedule this work.

10. No taps for water services shall be made until after the mainline has been tested and sterilized. All taps 2-inch and smaller shall be made by the contractor and inspected by the City of Akron. All brass fittings used shall be lead-free per NSF 61-G.

11. All water main construction shall be inspected by the City of Akron. Notify the City of Akron (Tony Puglia or Doug Zwahlen) at (330) 375-2420 at least 48 hours prior to beginning construction and for all preconstruction meetings.

12. Prior to acceptance, the water line shall be pressure tested, as specified in AWWA C600, and disinfected as specified in AWWA C651 latest revisions, by the contractor.

13. Use extreme caution when excavating in the area of existing water main pipes, valves, hydrants and thrust blocks.

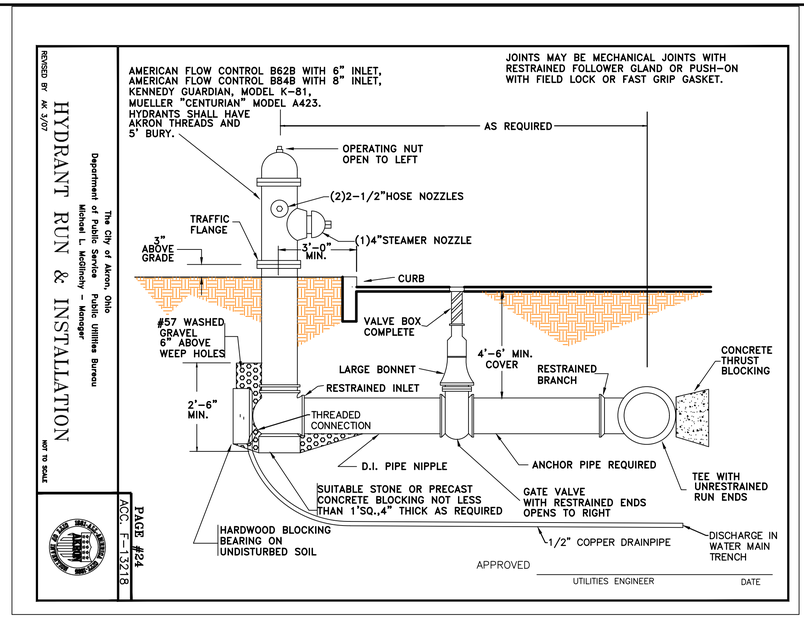
14. The contractor shall supply a temporary safe water service to all homes that will have their water service interrupted by this construction.

15. The proposed facilities must maintain a minimum of 35 psi pressure delivered to the curb stop during normal operating conditions.

16. Booster pumps are not permitted on service connections.

17. Any connection to existing ductile iron water main shall be made with a ductile iron solid sleeve with restraining gland. Any connection to existing cast iron water main may be made with a cast coupling or ductile iron solid sleeve with restraining gland.

18. When City Personnel cannot access the construction site on a hard surface roadway, contractor shall provide a utility behicle for City inspectors to access the site while water main construction is in progress.



STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE

INTERSECTION DETAILS AND WATER MAIN NOTES

CITY OF HUDSON

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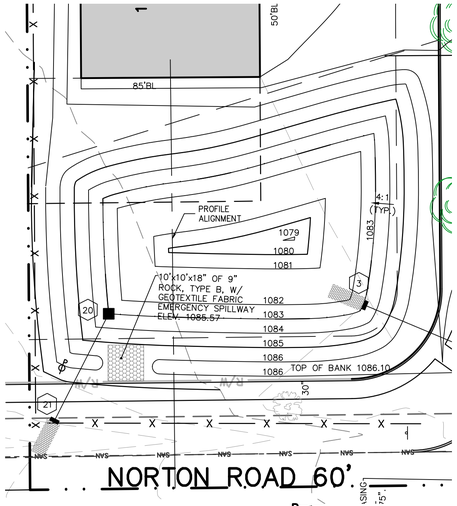
DATE: 07/12/2021
DESIGNED BY: AMD
REVISION: DATE:
REVISION: DATE:



SOUTH POND

PRE-DEVELOPMENT FLOW

1 YEAR = 0.31 cfs
2 YEAR = 0.51 cfs
10 YEAR = 1.14 cfs
25 YEAR = 1.61 cfs
50 YEAR = 2.03 cfs
100 YEAR = 2.49 cfs

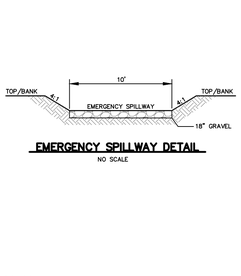
POND DRAINAGE AREA = 1.40 Ac.

ALLOWABLE FLOW

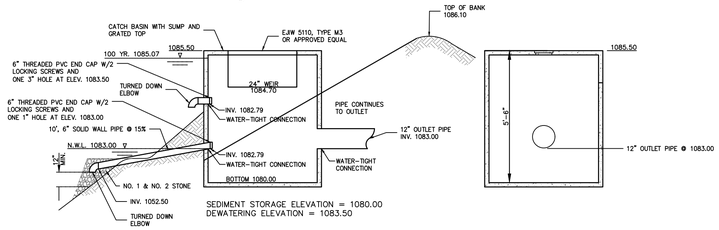
1 YEAR – 25 YEAR = 0.31 cfs
50 YEAR = 2.03 cfs
100 YEAR = 2.49 cfs

POST DEVELOPMENT

POND OUTFLOW		ELEVATIONS
1 YEAR = 0.04	cfs	1083.58
2 YEAR = 0.09	cfs	1083.72
10 YEAR = 0.22	cfs	1084.26
25 YEAR = 0.27	cfs	1084.68
50 YEAR = 0.77	cfs	1084.87
100 YEAR = 1.78	cfs	1085.07



EMERGENCY SPILLWAY DETAIL
NO SCALE

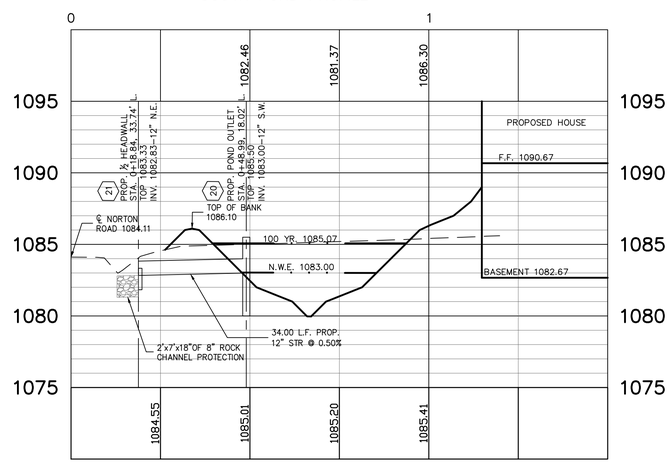


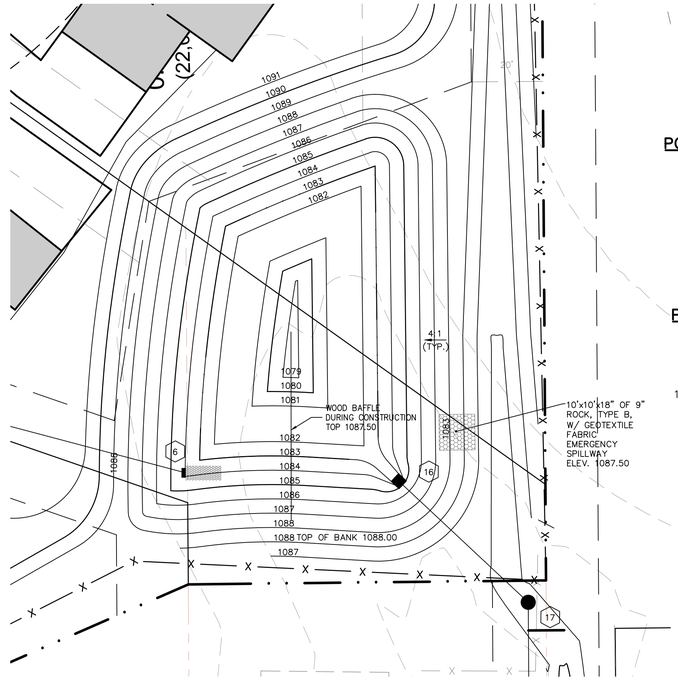
SECTION B–B SECTION A–A

PROPOSED SOUTH POND CONTROL STRUCTURE O.D.O.T CB–2–2 (MODIFIED)

NO SCALE

SOUTH POND PROFILE





EAST POND

PRE-DEVELOPMENT FLOW

1 YEAR = 0.76 cfs
2 YEAR = 1.23 cfs
10 YEAR = 2.77 cfs
25 YEAR = 3.93 cfs
50 YEAR = 4.94 cfs
100 YEAR = 6.06 cfs

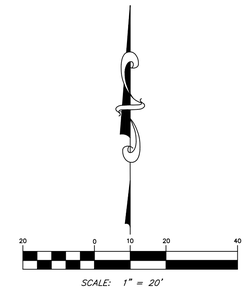
POND DRAINAGE AREA = 4.17 Ac.

ALLOWABLE FLOW

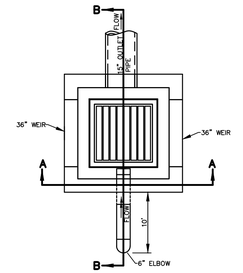
1 YEAR = 0.76 cfs
2 YEAR = 0.76 cfs
10 YEAR = 0.76 cfs
25 YEAR = 0.76 cfs
50 YEAR = 4.94 cfs
100 YEAR = 6.06 cfs

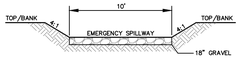
POST DEVELOPMENT

POND OUTFLOW		ELEVATIONS
1 YEAR = 0.18	cfs	1084.25
2 YEAR = 0.35	cfs	1084.61
10 YEAR = 0.63	cfs	1085.80
25 YEAR = 0.76	cfs	1086.58
50 YEAR = 2.79	cfs	1086.81
100 YEAR = 4.61	cfs	1086.93

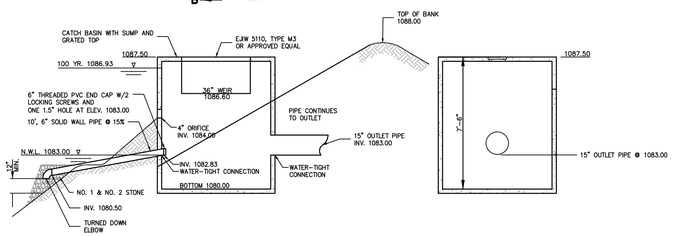


SCALE: 1" = 20'





EMERGENCY SPILLWAY DETAIL
NO SCALE



SECTION B–B SECTION A–A

SEDIMENT STORAGE ELEVATION = 1078.00
DEWATERING ELEVATION = 1084.00

PROPOSED EAST POND CONTROL STRUCTURE O.D.O.T CB–2–3 (MODIFIED)

NO SCALE

B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

STATE OF OHIO
DENNIS W. STOFFER
E-76698
REGISTERED PROFESSIONAL ENGINEER

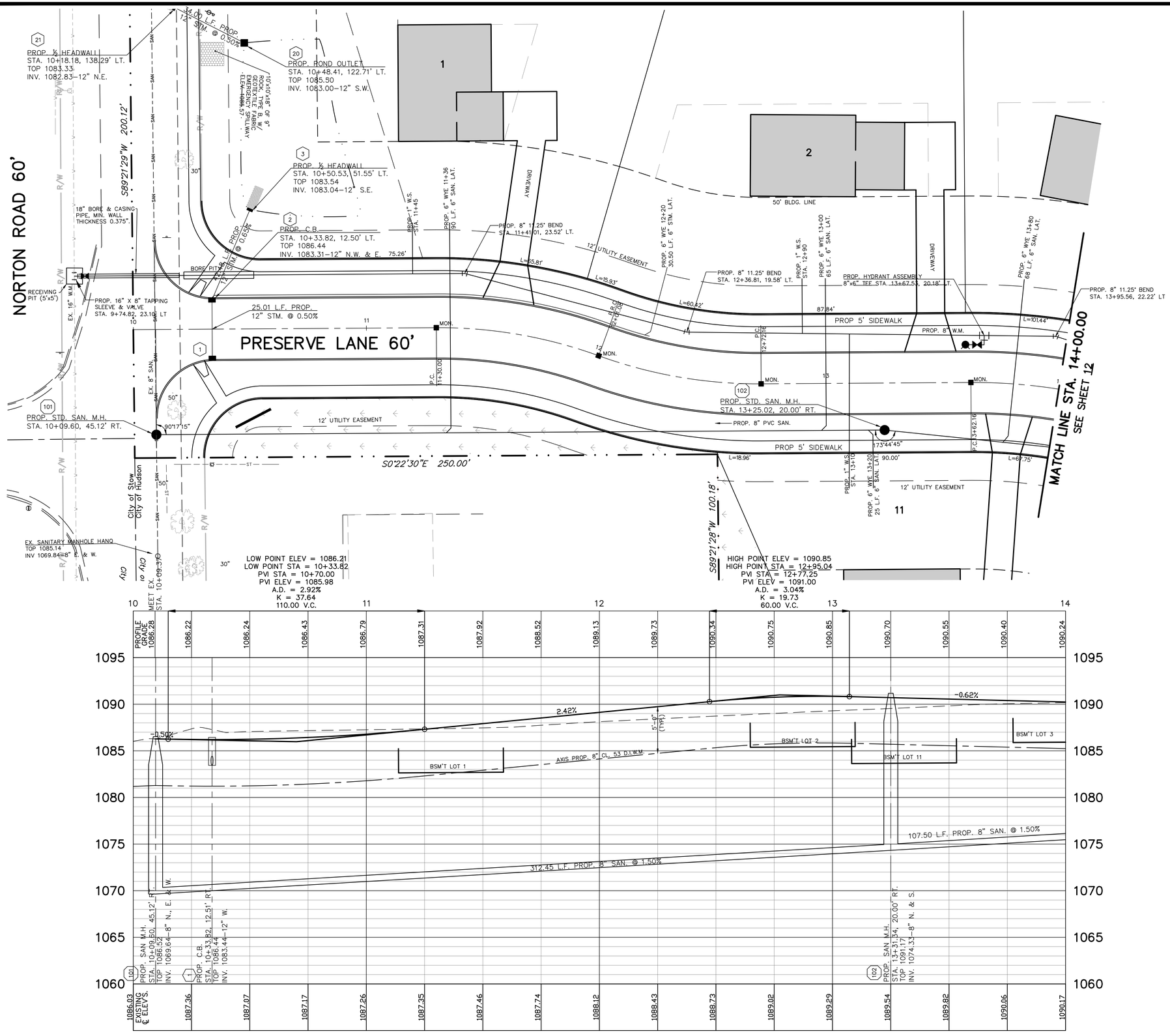
SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE

POND DETAILS

CITY OF HUDSON

DWG FILE: P3505 Network\Civil Dwgs\Base-Indoson Preserve.dwg (Pond Details)
DRAWN BY: ABD
DATE: 07/12/2021
DESIGNED BY: ABD
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:



B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

SCALE: 1" = 20'

NOTES:

1. CONTRACTOR TO OBTAIN STREET OPENING PERMIT & POST A PERFORMANCE BOND WITH THE CITY OF STOW FOR THE WORK IN THE STOW SECTION OF NORTON ROAD.
2. ALL SEWERS AND PIPES 15–INCH AND SMALLER SHALL BE PVC SDR35, PER ASTM D3034 OR POLYPROPYLENE MEETING ASTM F2764 UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. ALL SEWERS AND PIPES GREATER THAN 15–INCH SHALL BE CONCRETE MEETING ASTM C76 CLASS IV UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

STATE OF OHIO
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E–76698
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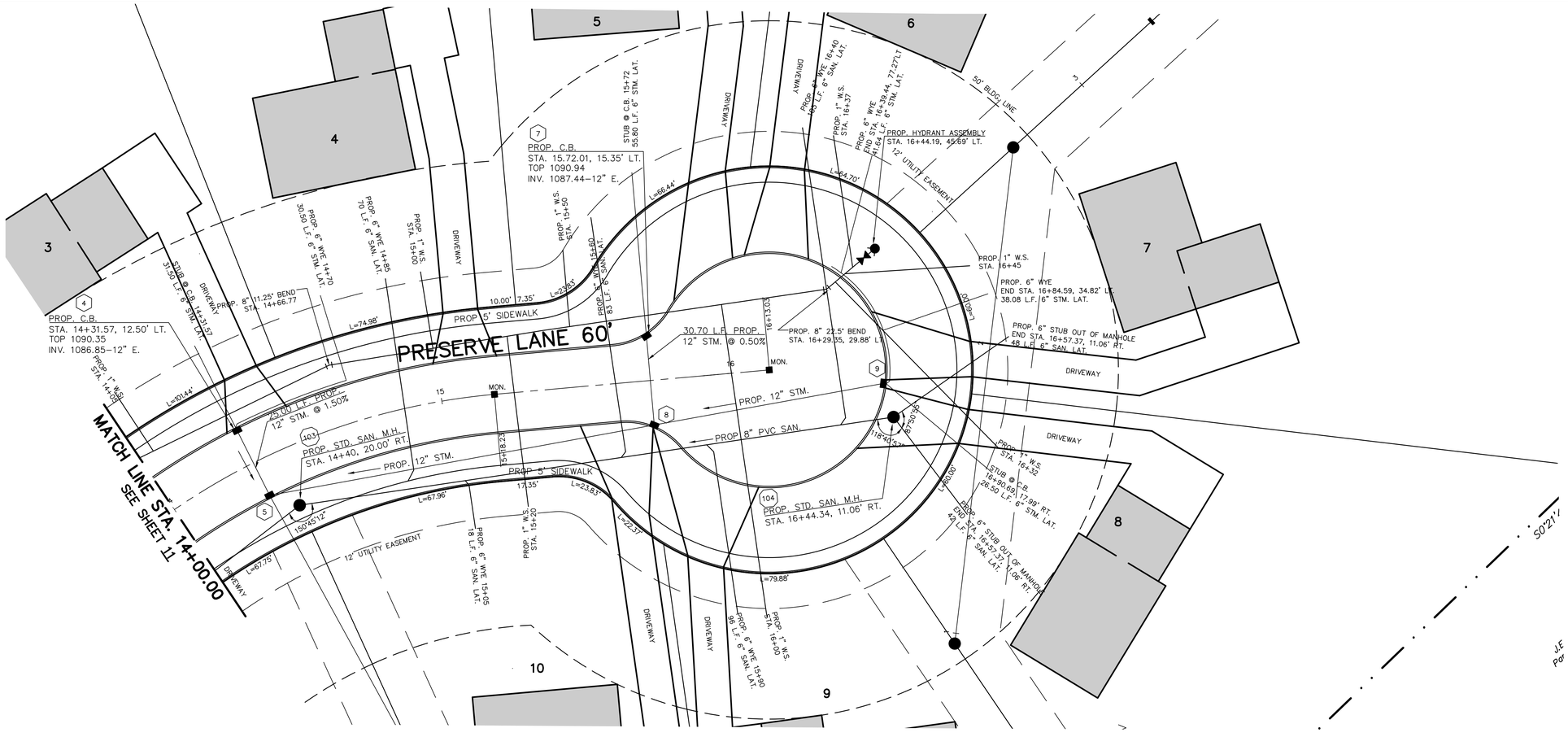
FAIRLAWN, OHIO 44333
(330) 836–6661

HUDSON PRESERVE
PRESERVE LANE (NORTON ROAD TO STA. 14+00)
CITY OF HUDSON

DWG FILE: P15093 Norton Rd Design\Hudson Preserve GT Plan & Profile.dwg (P&P 1)
DRAWN BY: ABD
DATE: 07/12/2021
DESIGNED BY: ABD
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:



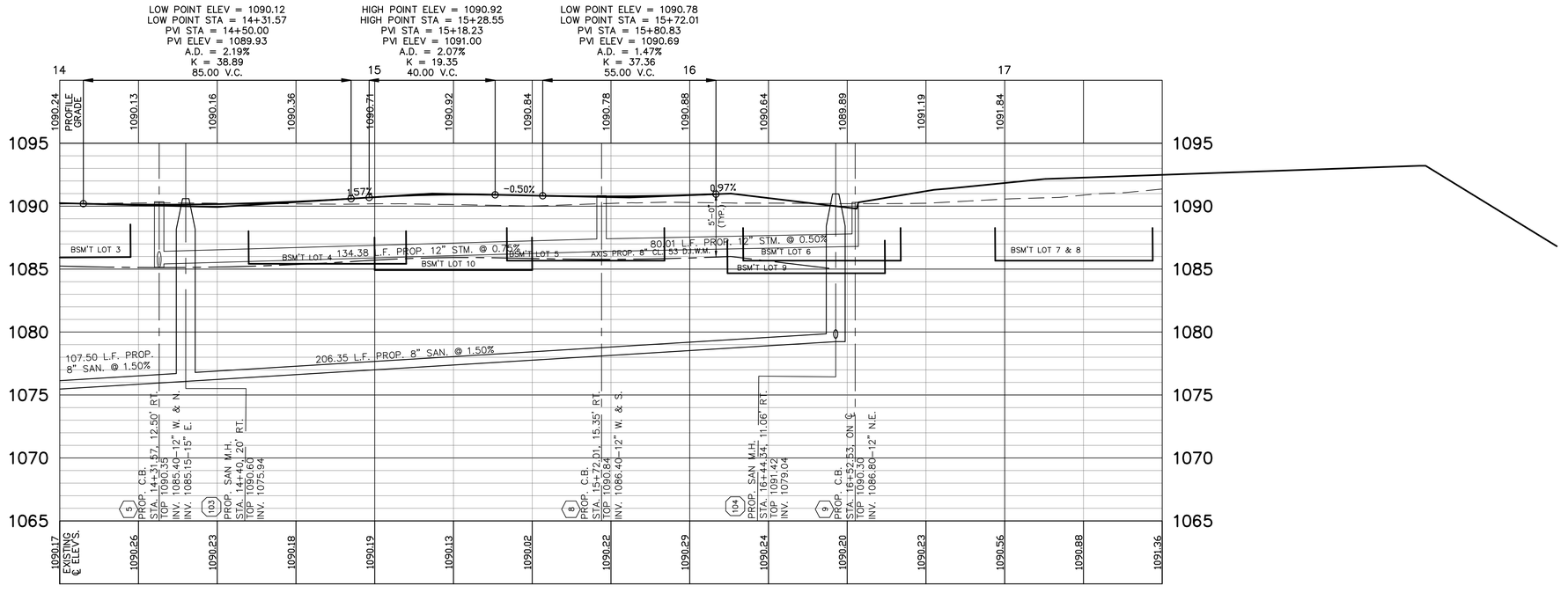
SCALE: 1" = 20'

B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

NOTES:

1. ALL SEWERS AND PIPES 15–INCH AND SMALLER SHALL BE PVC SDR35, PER ASTM D3034 OR POLYPROPYLENE MEETING ASTM F2764 UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. ALL SEWERS AND PIPES GREATER THAN 15–INCH SHALL BE CONCRETE MEETING ASTM C76 CLASS IV UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.



STATE OF OHIO
DENNIS W. STOFFER E–76698
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SPAGNUOLO & ASSOCIATES, LLC
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FAIRLAWN, OHIO 44333
(330) 836–6661

HUDSON PRESERVE

PRESERVE LANE (STA. 14+00 TO 16+13)

CITY OF HUDSON

DWG FILE: FN1805 Nemeth\3d Progs\Hudson Preserve\ CI Plan & Profile.dwg (PKP 2)
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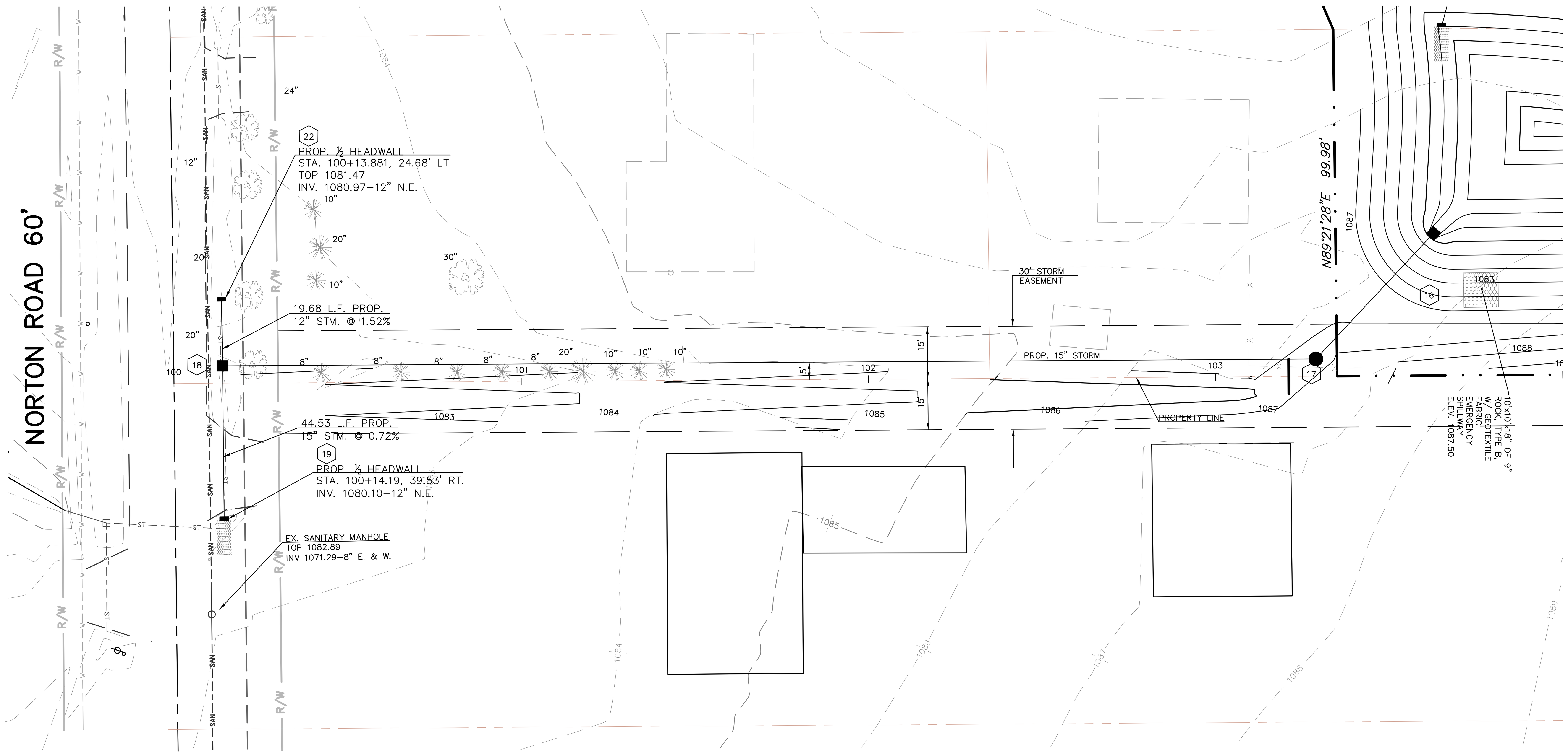
DATE: 07/12/2021
DESIGNED BY: AHD
REVISIONS: DATE:
REVISIONS: DATE:
REVISIONS: DATE:



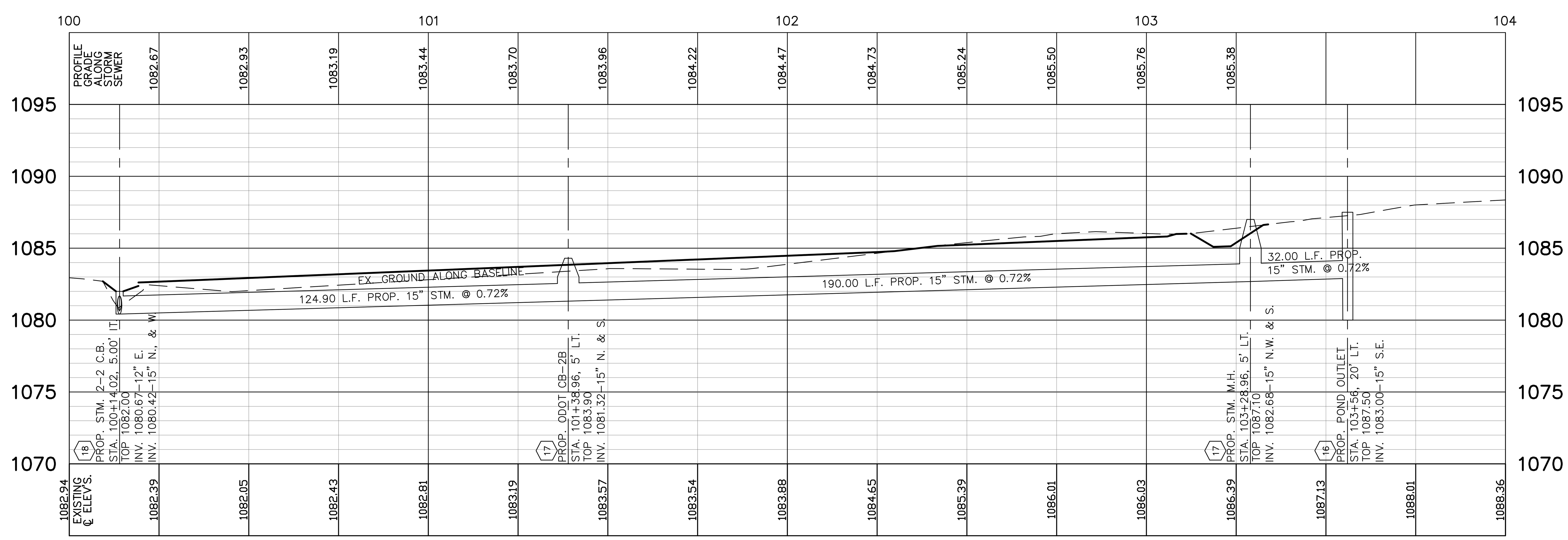
SCALE: 1" = 20'

B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

NOTES:

1. ALL SEWERS AND PIPES 15–INCH AND SMALLER SHALL BE PVC SDR35, PER ASTM D3034 OR POLYPROPYLENE MEETING ASTM F2764 UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. ALL SEWERS AND PIPES GREATER THAN 15–INCH SHALL BE CONCRETE MEETING ASTM C76 CLASS IV UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.



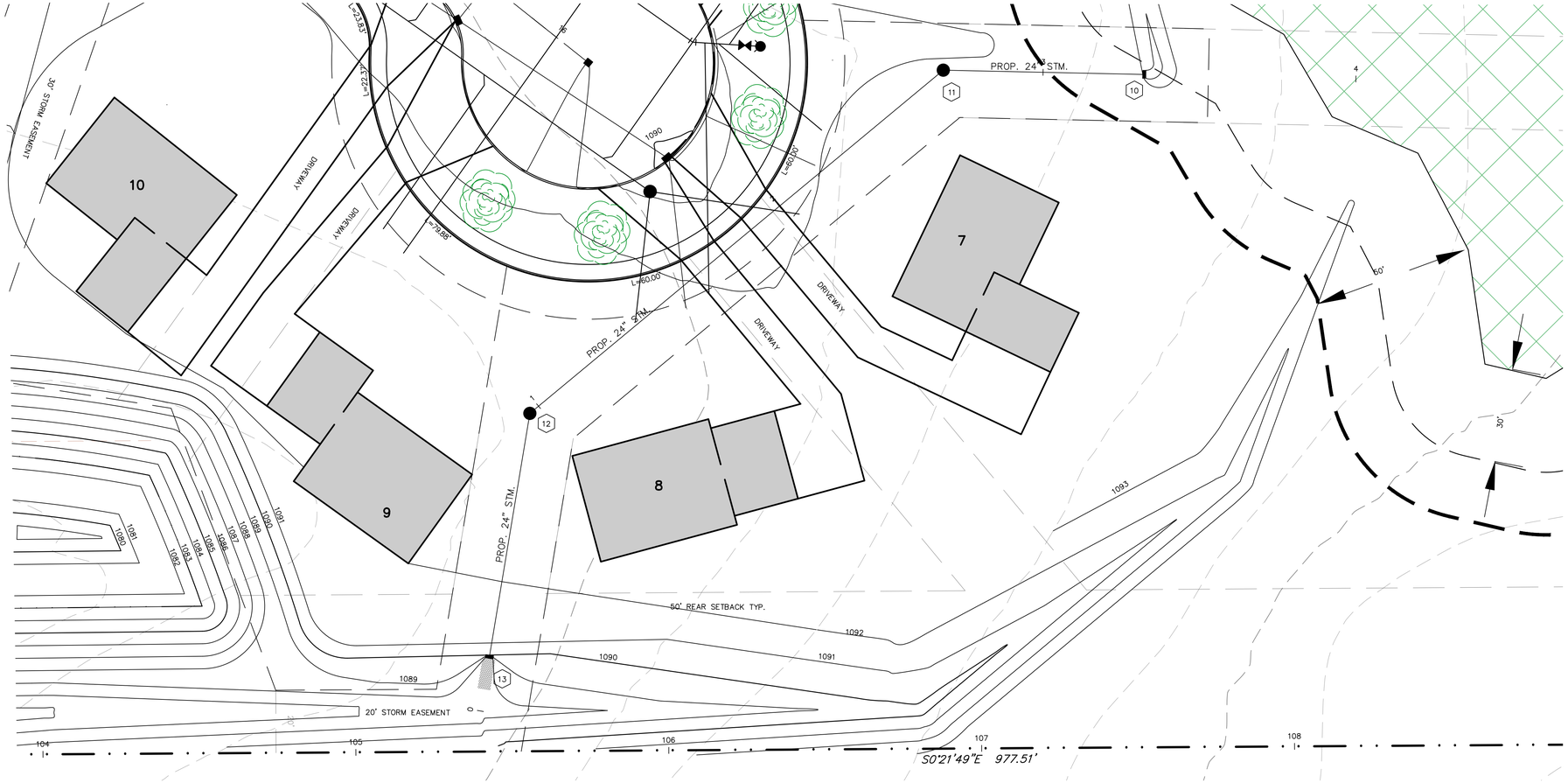
DENNIS W. STOFFER E-76698 REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO

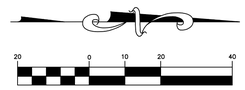
SPAGNUOLO & ASSOCIATES, LLC
ENGINEERS SURVEYORS
3057 WEST MARKET ST., SUITE 201
FAIRLAWN, OHIO 44333
(330) 836-6661

HUDSON PRESERVE
POND OUTLET PLAN & PROFILE
CITY OF HUDSON

DRAWN BY: ABD
DATE: 07/12/2021
DESIGNED BY: ABD

REVISION:	DATE:



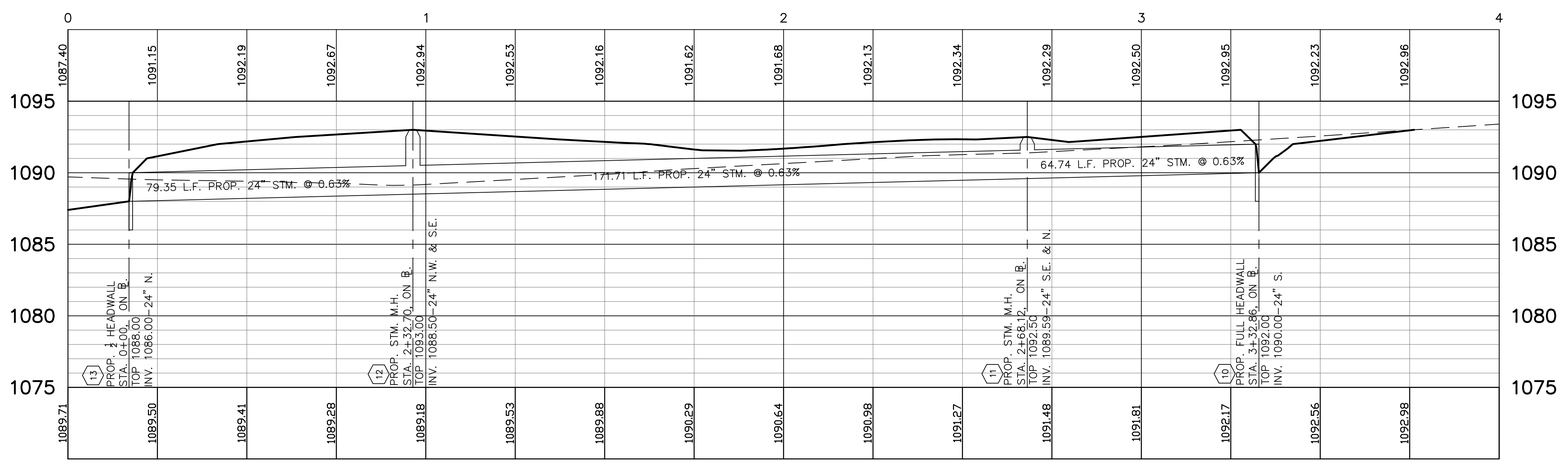


B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

NOTES:

1. ALL SEWERS AND PIPES 15-INCH AND SMALLER SHALL BE PVC SDR35, PER ASTM D3034 OR POLYPROPYLENE MEETING ASTM F2764 UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. ALL SEWERS AND PIPES GREATER THAN 15-INCH SHALL BE CONCRETE MEETING ASTM C76 CLASS IV UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.



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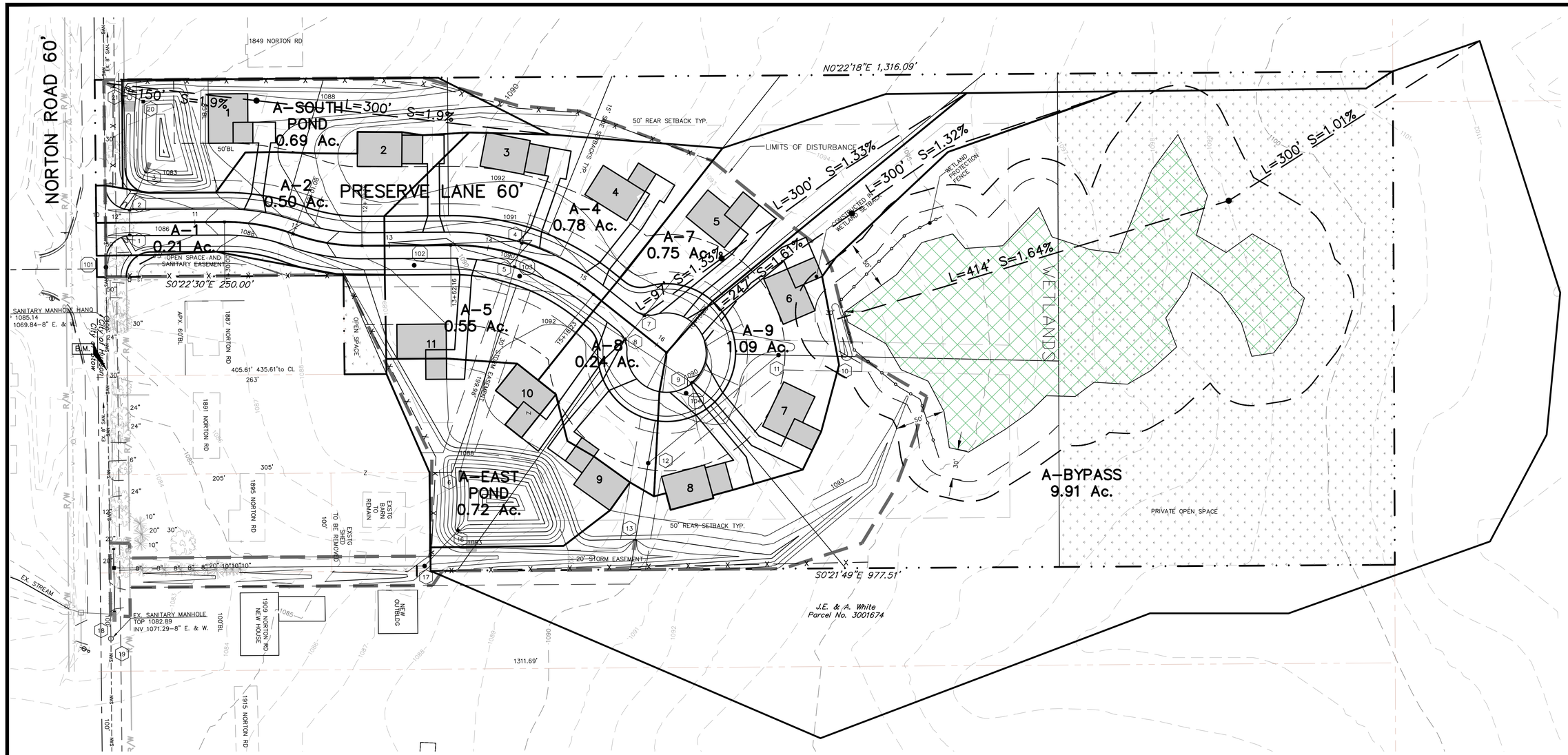
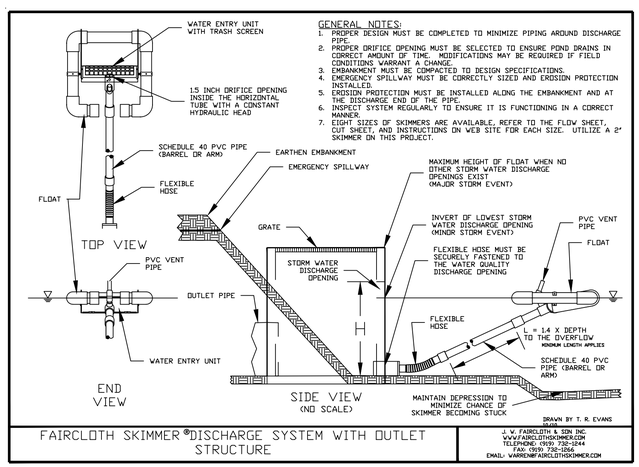
HUDSON PRESERVE

POND OUTLET PLAN & PROFILE

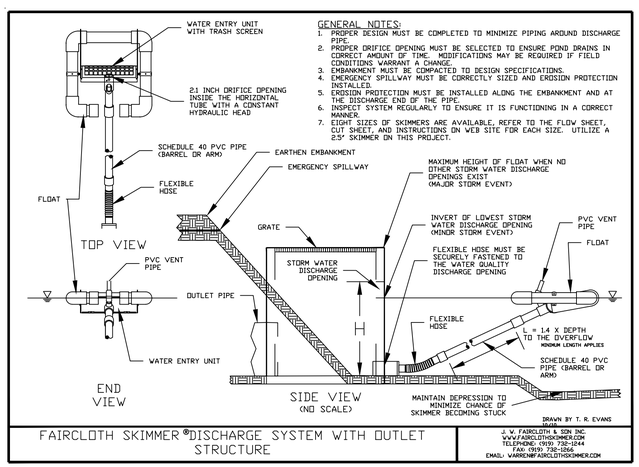
CITY OF HUDSON

DWG FILE: P3595 Normal\Dwgs\Hudson Preserve GT Plan & Profile.dwg [P&P 4]
DRAWN BY: ABD
DATE: 07/12/2021
DESIGNED BY: ABD
REVISION: DATE:
REVISION: DATE:





SOUTH POND SKIMMER



EAST POND SKIMMER

NOTES:

1. PROPOSED GRADING SHOWN ON THE LOTS IS CONCEPTUAL AND IS THE BASIS FOR DESIGN. FINAL GRADING PLAN FOR EACH HOUSE IS TO BE PREPARED AT THE TIME OF HOME CONSTRUCTION.
2. SOIL IN POND TO BE CLAY MATERIAL TO PREVENT SEEPAGE. CLAY LAYER TO BE CAPPED WITH TOPSOIL.

50 0 25 50 100

SCALE: 1" = 50'

B.M. ~ TOP OF SANITARY MANHOLE EAST OF ENTRANCE

ELEV.~ 1085.14

LEGEND

- SF — SILT FENCE
- INLET PROTECTION
- CE — CONSTRUCTION ENTRANCE

STATE OF OHIO
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FAIRLAWN, OHIO 44333
(330) 836-6661

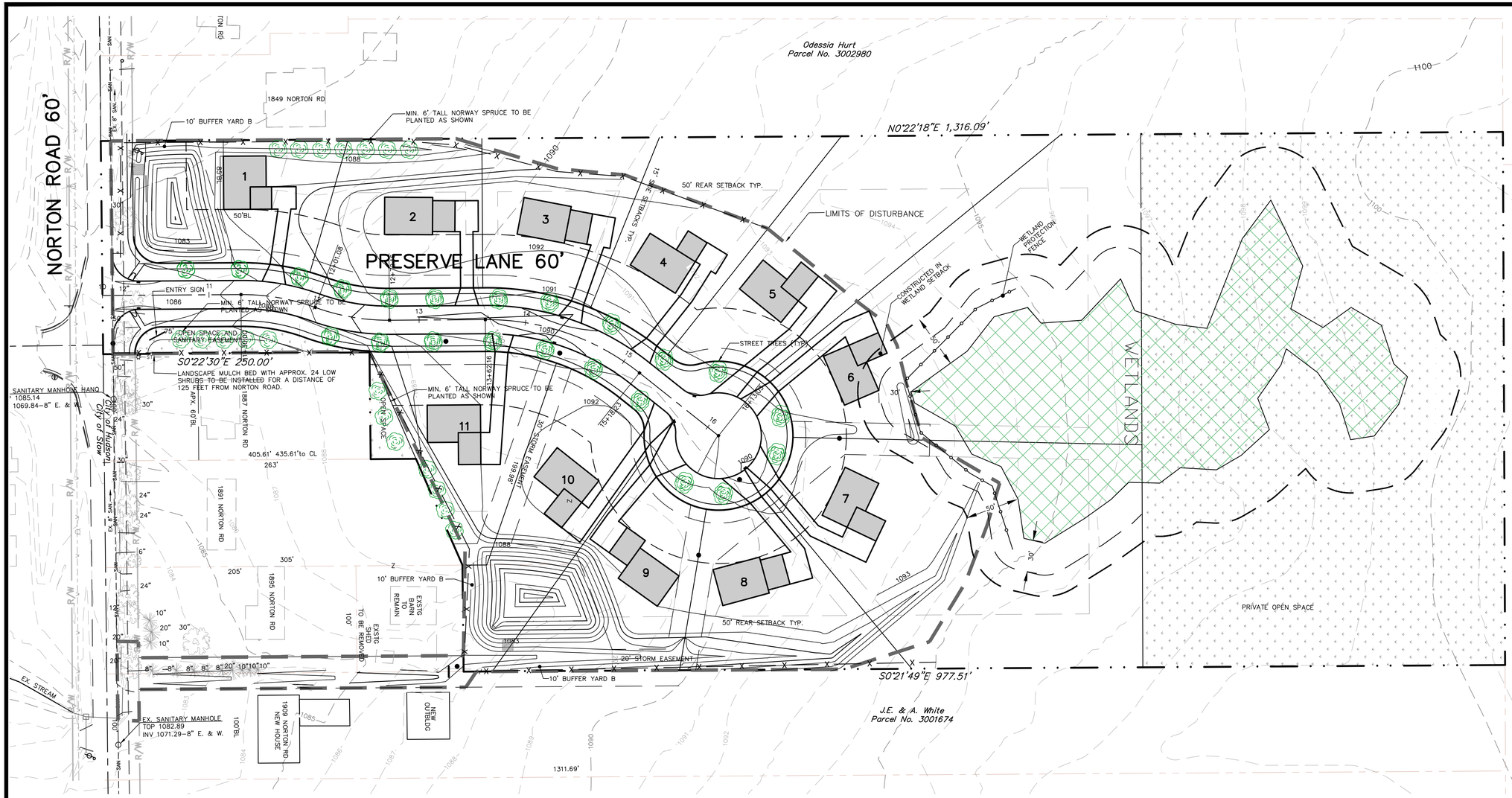
HUDSON PRESERVE

DRAINAGE MAP

CITY OF HUDSON

DWG FILE:	P:\1695 Norton\Old Progs\Base-Indiana Preserve.dwg (DRAINAGE MAP)
DRAWN BY:	ABD
DATE:	07/12/2021
DESIGNED BY:	ABD
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:

15 OF 16



NOTES:

1. BUFFER YARD B TO BE LANDSCAPED PER CITY OF HUDSON STANDARDS.

STATE OF OHIO
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(330) 836-6661

HUDSON PRESERVE

LANDSCAPING PLAN

CITY OF HUDSON

DWG FILE: F:\1695 Norton\Sd Dwgs\Base Isolation Preserve.dwg (LANDSCAPE PLAN)
DRAWN BY: ABD
DATE: 07/12/2021
DESIGNED BY: ABD
REVISION: DATE:
REVISION: DATE: