IMPROVEMENT PLANS FOR PUBLIC ROADWAY/PUBLIC UTILITY EASEMENT FOR BARLOW ROAD RETIREMENT COMMUNITY

LOCATED IN THE CITY OF HUDSON, SUMMIT COUNTY, OHIO

OCTOBER 2018

SUMMIT COUNTY D.S.S.S. PROJECT NO. 1668 – SANITARY WWTP #25 VIA PS #6

LEGEND

Symbol	Description
	EX. MONUMENT BOX
	PROP. MONUMENT BOX
	EX. MONUMENT (AS NOTED)
	5/8" BAR W/ H&A CAP (SET)
	BENCHMARK (AS NOTED)
	BOUNDARY LINE
	CENTER LINE
	LOT LINE
	PROPERTY LINE
R/W	RIGHT OF WAY
( )	RECORD BEARINGS & DIST.
E.O.P.	EDGE OF PAVEMENT
F.F.	FINISH FLOOR
	EX. CONTOUR LINE
	PROP. CONTOUR LINE
980	CONTOUR LABEL
	BOLLARD
	FENCE (AS NOTED)
	GUARDRAIL
	MAILBOX
	RAIL ROAD
	SIGN
	H.C. PARKING SPACE
	DECIDUOUS TREE (AS NOTED)
	EVERGREEN TREE (AS NOTED)
	BUSH (AS NOTED)
	SOIL BORING
	POLE ANCHOR
	GUY POLE
	GENERAL POLE
	FLAG POLE
	LIGHT POLE
	LIGHT & POWER POLE
	LIGHT, POWER, TELE POLE
	LIGHT, POWER, TELE, TV POLE
	POWER POLE
	TELEPHONE POLE
	TELEPHONE, LIGHT POLE
	TELEPHONE, POWER POLE
	PULL BOX
	TRAFFIC CONTROL BOX
	POLE W/ PED. SIGNAL
	POLE W/ TRAFFIC SIGNAL
– – OE – –	OVERHEAD ELECTRIC LINE
– – UE – –	UNDERGROUND ELECTRIC LINE
	ELECTRIC LINE MARKER
	ELECTRIC BOX
	ELECTRIC MANHOLE
	ELECTRIC METER
– – FO – –	FIBER OPTIC LINE
	FIBER OPTIC LINE MARKER

Symbol	Description
– – G – –	GAS LINE
	GAS LINE MARKER
	GAS METER
	GAS VALVE
	GAS TANK
	GAS WELL
– – SAN – –	SANITARY SEWER LINE
	SANITARY SEWER LINE MARKER
	SANITARY M.H./ C.O.
M.H.	MANHOLE
C.O.	CLEAN OUT
– – ST – –	STORM SEWER LINE
	STORM SEWER LINE MARKER
	STORM CATCH BASIN
	STORM CURB INLET
	STORM MANHOLE
	STORM DOWNSPOUT
	STORM HEADWALL
C.B.	CATCH BASIN
C.I.	CURB INLET
T/G	TOP OF GRATE
T/C	TOP OF COVER
T/CU	TOP OF CURB
	FLOWLINE
Y.D.	YARD DRAIN
D.S.	DOWNSPOUT
– – OE – –	OVERHEAD TELEPHONE LINE
– – UT – –	UNDERGROUND TELEPHONE LINE
	TELEPHONE LINE MARKER
	TELEPHONE BOX
	TELEPHONE MANHOLE
– – OTV – –	OVERHEAD TV LINE
– – UTV – –	UNDERGROUND TV LINE
	TV LINE MARKER
	TV/CABLE BOX
	TV/CABLE MANHOLE
– – W – –	WATER LINE
	WATER LINE MARKER
	WATER MANHOLE
	WATER METER
	WATER VALVE
	WATER SPRINKLER
	FIRE HYDRANT
	MONITORING WELL

INDEX OF SHEETS

ENGINEER/ SURVEYOR

HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

ATTN– JENNIFER D. SCHUMACHER, PE, LEED–AP

PHONE– 330–499–8817

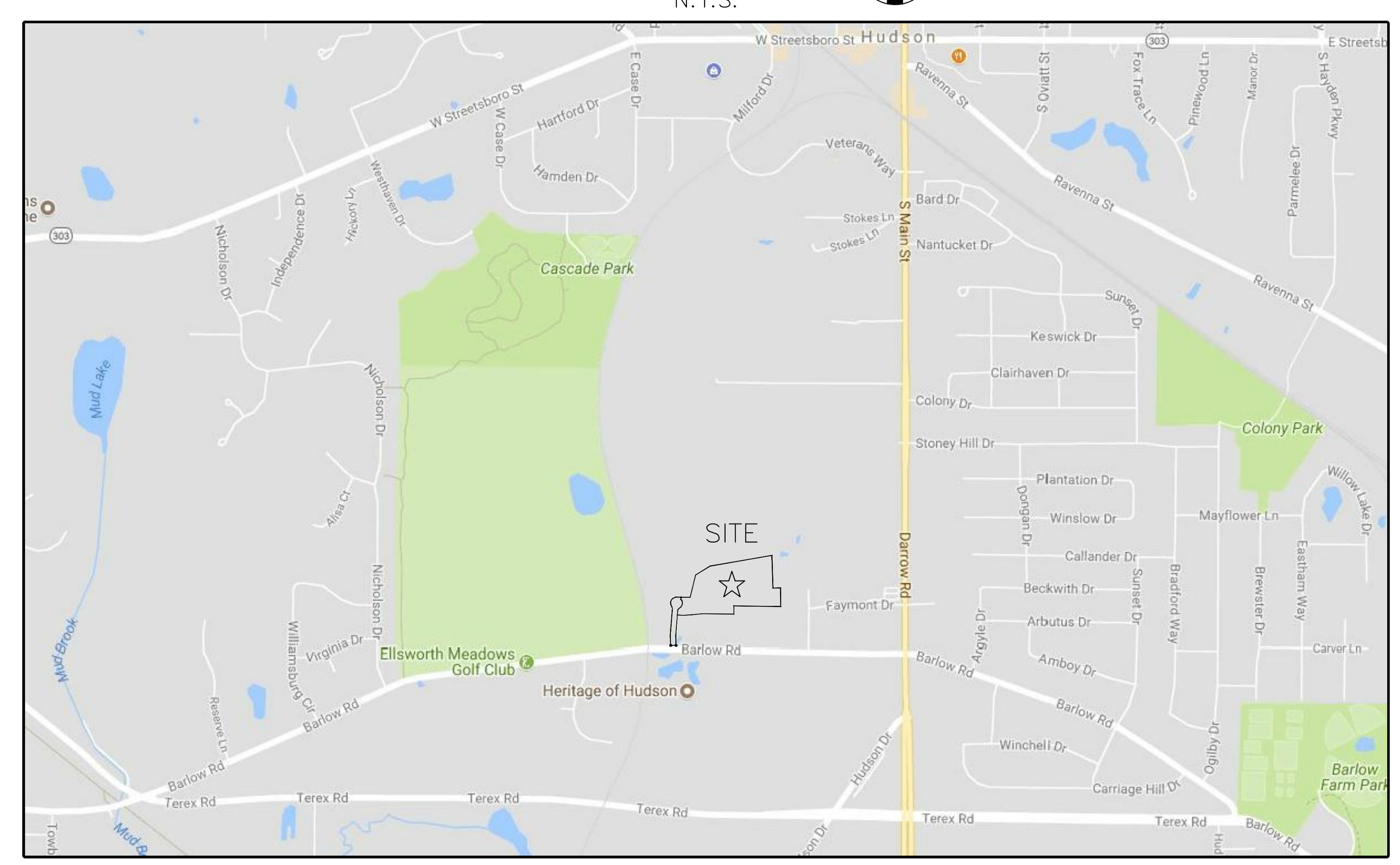
jschumacher@hammontree-engineers.com

OWNER/DEVELOPER

CAMERON GENERAL CONTRACTORS
7101 S. 82nd STREET
LINCOLN NE, 68516
PHONE: (402) 420–3149
ATTN: BOB LEWIS
DIRECTOR OF DEVELOPMENT
blewis@camerongeneralcontractors.com

VICINITY MAP

N.T.S.



SITE ADDRESS: 1275 BARLOW ROAD, HUDSON, OHIO 44236

APPROVALS

SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES

DIRECTOR ____________________ DATE __________
MICHAEL A. WEANT

DEPUTY DIRECTOR ____________________ DATE __________
ROSS A. NICHOLSON, P.E.

THE CITY OF HUDSON

CITY ENGINEER ____________________ DATE __________
BRADLEY S. KOSCO, P.E., P.S.

OHIO EPA

SEWER APPROVED BY LETTER DATED____________________

WATER APPROVED BY LETTER DATED____________________

UTILITY CONTACTS

SANITARY

DEPT. OF SANITARY SEWER SERVICES
1180 SOUTH MAIN ST, SUITE 201
AKRON, OHIO 44301–1254
PH: (330) 926–2400

ELECTRIC

HUDSON ELECTRIC
1769 GEORGETOWN ROAD
HUDSON, OHIO 44236
(330) 342–1750

WATER

HUDSON CITY UTILITIES
115 EXECUTIVE PKWY #400
HUDSON, OHIO 44236
PH: (330) 342–1710

TELEPHONE

VERIZON
400 INTERNATIONAL PARKWAY,
RICHARDSON, TX 75081
PH: (469) 886–4238
ATTN: DEAN BOYERS

GAS

DOMINION ENERGY OHIO
320 SPRINGSIDE DRIVE
AKRON, OHIO 44333
PH: (330) 664–4463
ATTN: ADAM NAHODIL

CABLE

CENTURYLINK
SCOTT STONE
PH: (318) 330–6722 (X6722)
Scott.Stone@CenturyLink.com

GEORGE McELVAIN
PH: (303) 992–9931
George.McElvain@CenturyLink.com

PLANS PREPARED BY
HAMMONTREE & ASSOCIATES, LTD.
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

Jennifer D. Schumacher, P.E. Ohio 62831 Date

CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES, INCLUDING EARTHWORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNER AND ENGINEER DURING THE BIDDING PROCESS OF ANY QUANTITY DISCREPANCIES IN THE BID DOCUMENTS. ONCE THE CONSTRUCTION CONTRACT IS ISSUED, THE CONTRACTOR ACKNOWLEDGES THE CONTRACT PRICE COVERS ALL LABOR AND MATERIALS TO SUBSTANTIALLY COMPLETE THE PROJECT ACCORDING TO THE CONSTRUCTION DOCUMENTS.

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1–800–362–2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON–MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL:1–800–925–0988

* THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION

STATE OF OHIO — JENNIFER D. SCHUMACHER E-62831 — REGISTERED PROFESSIONAL ENGINEER

10–31–18

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499–8817 FAX: (330) 499–0149
TOLL FREE: 1–800–394–8817
www.hammontree-engineers.com

REV. BY: JDS DATE: 6/20/2018 DESC.: 1 REVISED PER COMMENTS FROM CITY OF HUDSON
REV. BY: JDS DATE: 6/20/2018 DESC.: 1 REVISED PER COMMENTS FROM SUMMIT CO. DSSS
REV. BY: JDS DATE: 9/12/2018 DESC.: 4 REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13–15, 20–29
DATE: 3/20/18

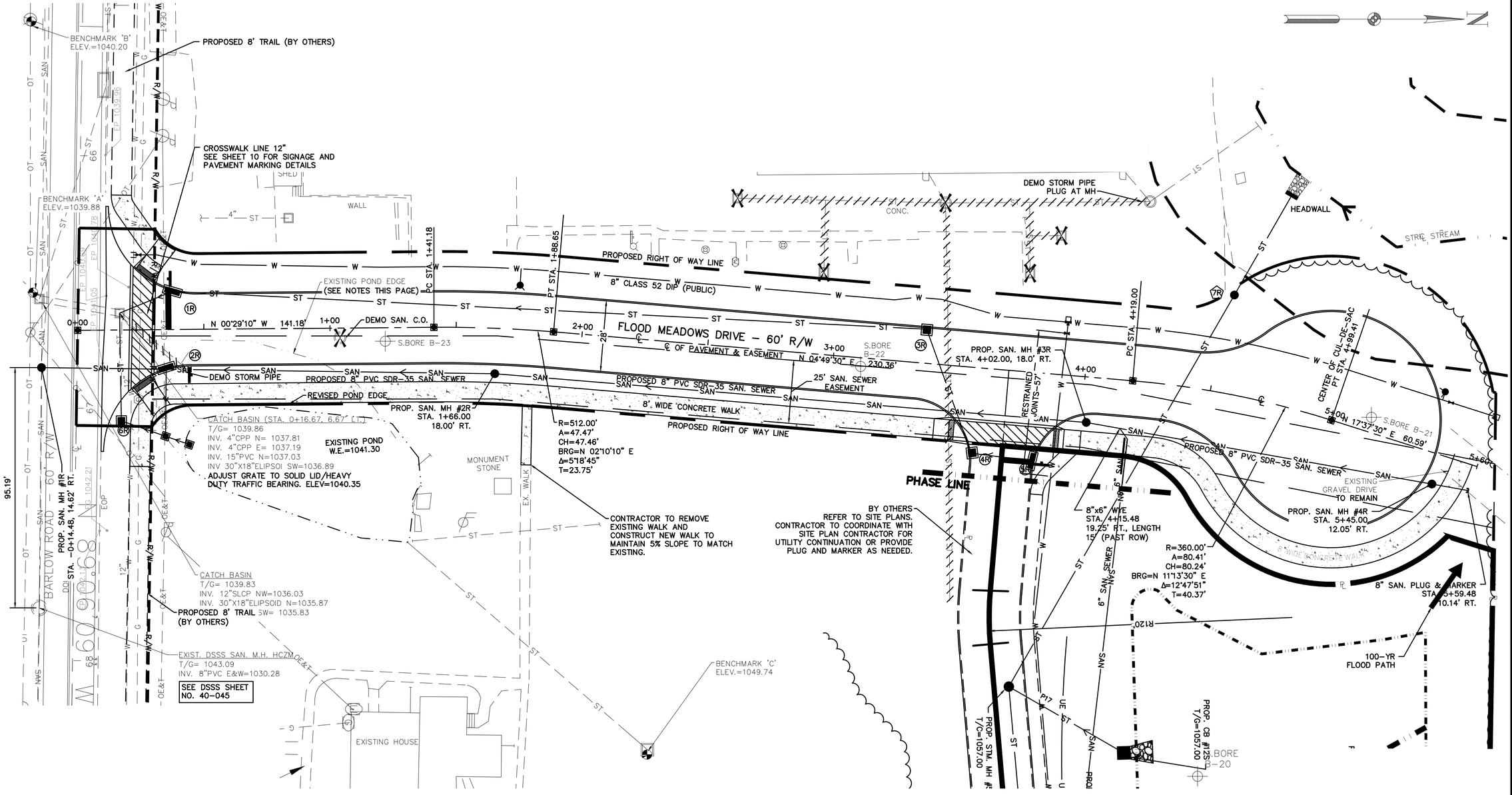
SCALES
HORZ:
VERT:
CONTOUR INT:

COVER
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

ENGINEERS PLANNERS SURVEYORS

R:\Summit\City\Hudson\007\Cameron GC – Barlow Road Retirement Community\DWG\2018–09–12 Barlow Rd Public Roadway Plans.dwg; 11/01/18 – 9:12am; rgrimm

R:\Summit\City\Hudson\007\Cameron GC - Barlow Road Retirement Community\DWG\2018-09-12 Barlow Rd Public Roadway Plans.dwg; 11/01/18 - 9:12am; rgrimm



BENCHMARK "A"	
SQUARE CHISELED IN CONCRETE ON SW CORNER OF CATCH BASIN	ELEV. = 1039.88
BENCHMARK "B"	
MAG NAIL FOUND 1"Y" UP ON NORTH SIDE OF TELE. POLE #6100 016.	ELEV. = 1040.20
BENCHMARK "C"	
CHISELED "L" ON NE CORNER OF CATCH BASIN	ELEV. = 1049.74

NOTES:

1. CONTRACTOR TO FILL IN THE WESTERN PORTION OF THE EXISTING POND. CONTRACTOR TO PROVIDE SHEETING/COFFERDAMS AS NEEDED TO CONSTRUCT IMPROVEMENTS AS SHOWN ON THESE PLANS.
2. REFER TO SHEET 4 FOR EARTHWORK, GENERAL NOTES AND GEOTECHNICAL REPORT BY TERRACON DATED 12/22/06 & SUPPLEMENTAL REPORT DATED 5/28/18 FOR FILLING PROCEDURES.

LEGEND:

- CATCH BASIN NO.
- STORM SEWER MANHOLE NO.
- SAN — SANITARY SEWER
- ST — STORM SEWER
- W — WATER LINE
- WATER LINE GATE VALVE
- FIRE HYDRANT
- ITEM TO BE REMOVED
- SOIL BORING
- PROP. MONUMENT BOX

SCALE: 1 INCH = 20'
0 10' 20' 40'

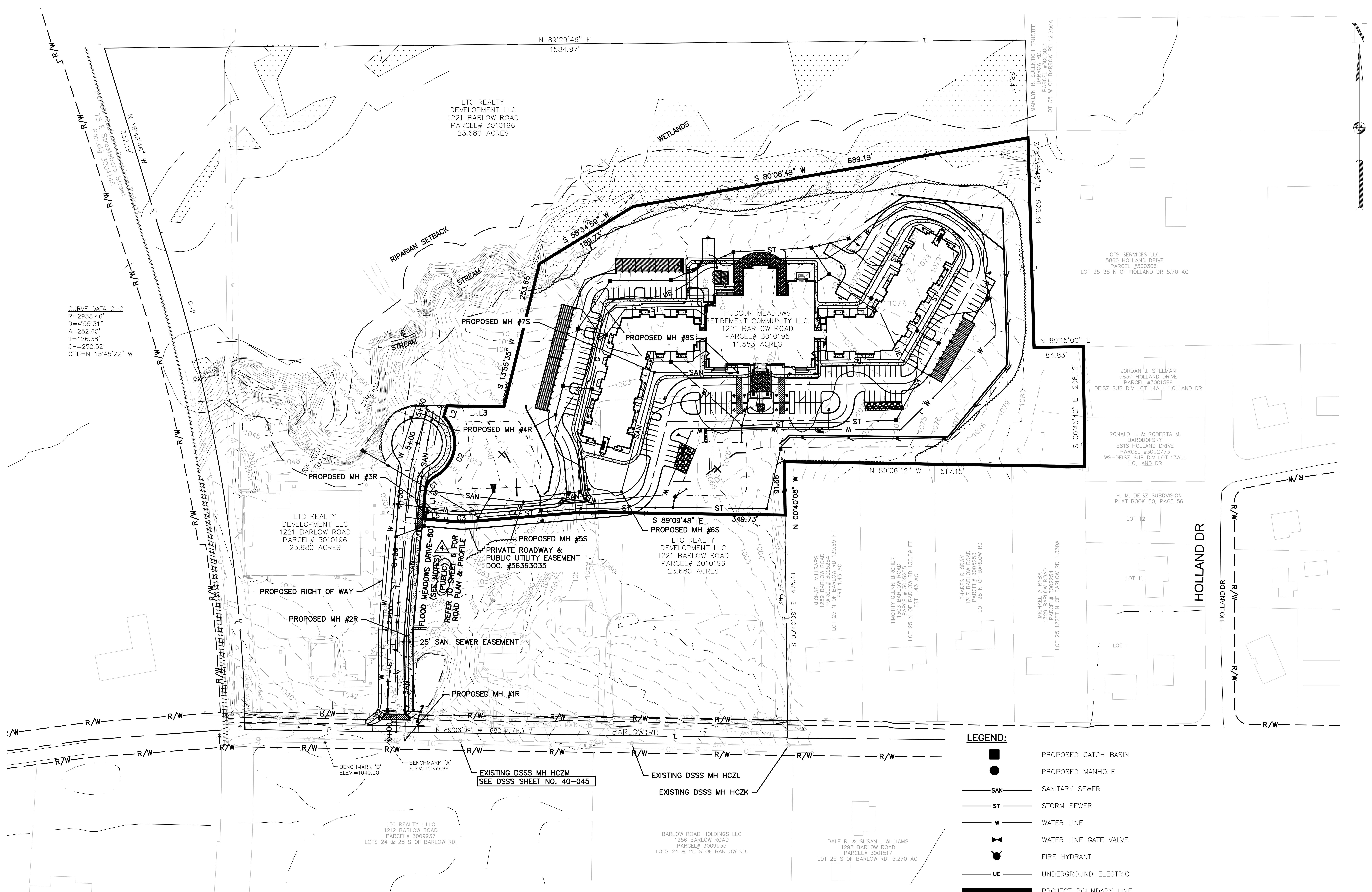
HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY:	DATE:	DESC.:
JDS	6/20/2018	REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC
JDS	8/10/2018	REVISED PER COMMENTS FROM SUMMIT CO. DSSS
JDS	9/12/2018	REVISED ROADWAY FROM PRIVATE TO PUBLIC
REG	10/31/2018	REVISED PER CITY OF HUDSON COMMENTS

DESN BY:	JDS
DRWN BY:	LLB
RVWD BY:	JDS
FLD BK:	627
BK PG:	13-15, 20-29
DATE:	3/20/18

SCALES
HORZ: 20'
VERT:
CONTOUR INT:

UTILITY SCHEMATIC
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO



BENCHMARK "A"	BENCHMARK "B"	BENCHMARK "C"
SQUARE CHISELED IN CONCRETE ON SW CORNER OF CATCH BASIN ELEV. = **1039.88**	**MAG NAIL FOUND 1'± UP ON NORTH SIDE OF TELE. POLE #6100 016.** ELEV. = **1040.20**	**CHISELED "L" ON NE CORNER OF CATCH BASIN** ELEV. = **1049.74**

LINE DATA FOR 11.553 AC. PARCEL

LINE	BEARING	DISTANCE
L1	N 04°49'35" E	47.81'
L2	N 17°17'27" E	19.10'
L3	S 89°04'28" E	98.06'
L4	S 85°07'25" W	197.15'
L5	N 85°10'25" W	58.10'

CURVE DATA FOR 11.553 AC. PARCEL

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	BEARING	DELTA ANGLE	TANGENT
C1	31.99'	31.74'	30.45'	N 33°14'53" E	56°50'36"	207.75'
C2	65.00'	120.97'	104.25'	N 08°21'15" E	106°37'52"	87.25'
C3	120.00'	20.22'	20.19'	N 90°00'00" W	9°39'10"	10.13'

SCALE: 1 INCH = 80'
0 40' 80' 160'

ENGINEERS PLANNERS SURVEYORS

R:\Summit\City\Hudson\007\Cameron GC – Barlow Road Retirement Community\DWG\2018-09-12 Barlow Rd Public Roadway Plans.dwg; 11/01/18 – 9:13am; rgrimm

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY: JDS	DATE: 6/20/2018	DESC.:	1 REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC
REV. BY: JDS	DATE: 8/10/2018	DESC.:	3 REVISED PER COMMENTS FROM SUMMIT CO. DSSS
REV. BY: JDS	DATE: 9/12/2018	DESC.:	4 REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY
REV. BY:	DATE:	DESC.:	
REV. BY:	DATE:	DESC.:	

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15, 20-29
DATE: 6/1/18

SCALES
HORZ: 80'
VERT:
CONTOUR INT:

OVERALL SITE UTILITY SCHEMATIC
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

2A

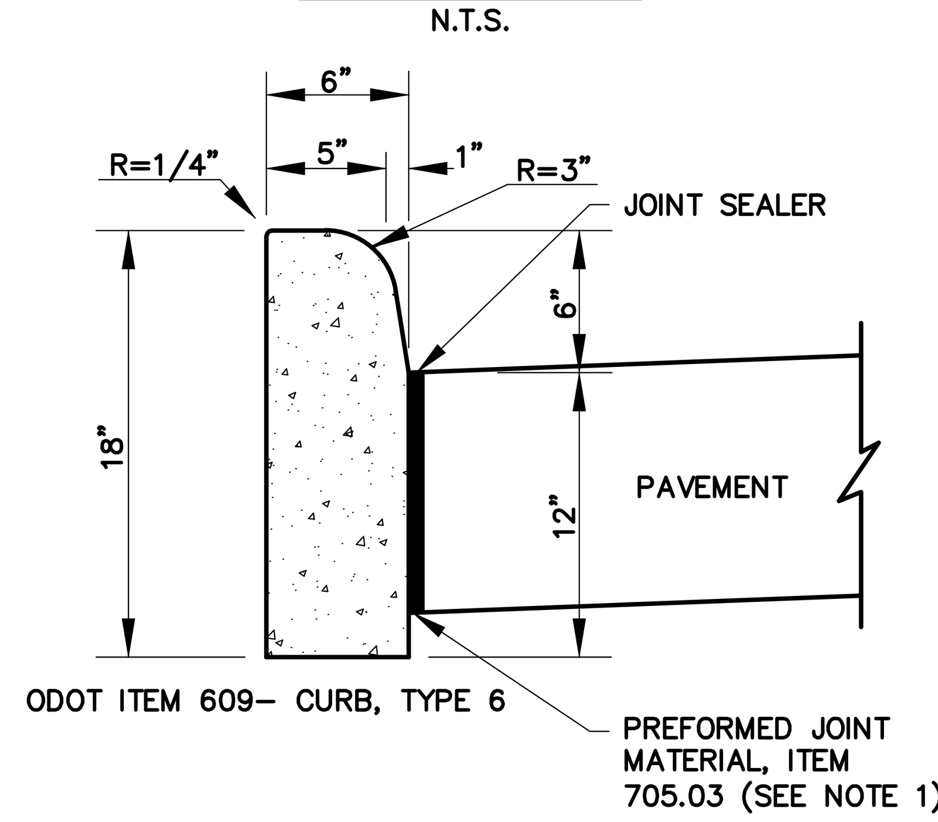
O.D.O.T. STANDARD DRAWING LIST

DRAWING NO.	DATE	DESCRIPTIONS
BP-7.1	7-18-14	CURB RAMPS
HW-1.1	1-18-13	FULL HEIGHT HEADWALLS
HW-2.2	7-21-17	HALF HEIGHT HEADWALLS FOR CONCRETE PIPE
CB-1.1	7-20-18	CATCH BASIN NO. 2-2A & NO. 2-2B
CB-1.2	1-15-16	CATCH BASIN NO. 2-3
CB-2.1	7-20-18	CATCH BASIN NO. 3
CB-2.2	7-20-18	CATCH BASIN NO. 3A

SEE SHEETS 8 & 9 FOR ADDITIONAL DETAILS AND NOTES

CONCRETE CURB

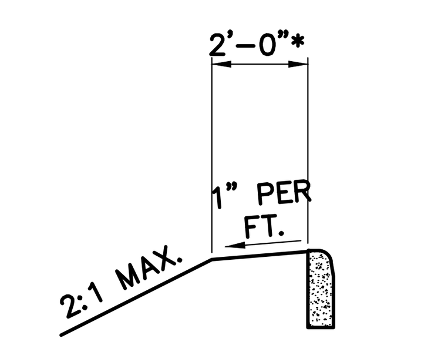
N.T.S.



NOTES:

1. EXPANSION JOINT MATERIAL IS NOT REQUIRED FOR THE PORTION OF THE CURB THAT IS ADJACENT TO A FLEXIBLE PAVEMENT TYPE. EXPANSION JOINT IS REQUIRED, AS DETAILED, FOR THE FULL HEIGHT OF RIGID PAVEMENT AND CONCRETE BASES.
2. SEE ODOT STANDARD CONSTRUCTION DRAWING BP-5.1 (LATEST VERS.) FOR ADDITIONAL INFORMATION.

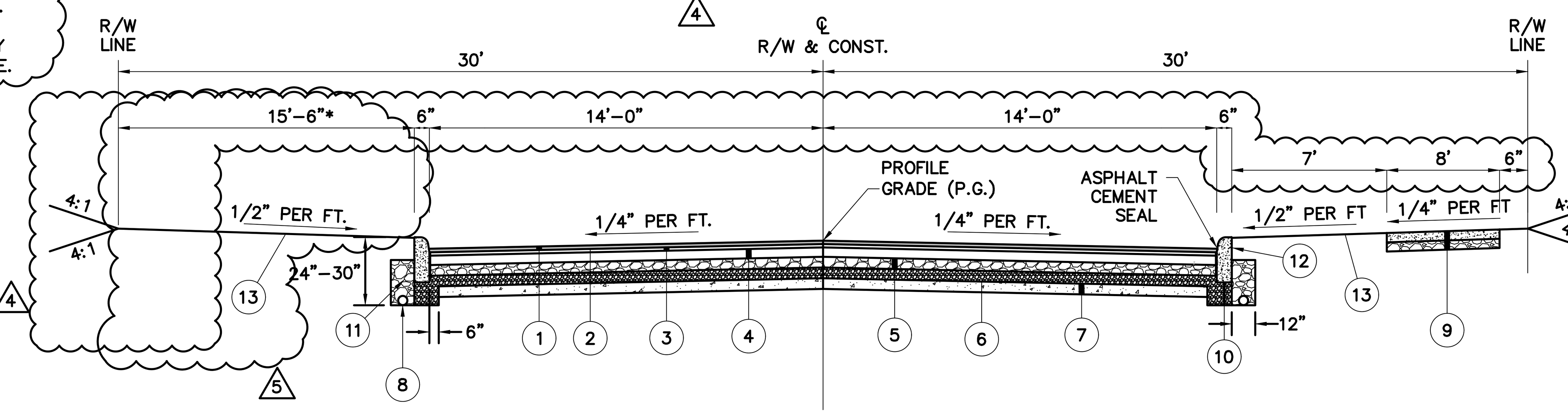
* VARIES – LEFT SIDE
STA. 4+40.57, WIDTH = 15'-6" @ SLOPE 1/2" PER FT.
STA. 4+66.88, WIDTH = 2'-0" @ SLOPE 1" PER FT.
STA. 4+66.88 TO STA. 5+34.00, SEE BELOW
STA. 5+34.00 TO END OF CUL-DE-SAC @ ℄, VARY SLOPE AND WIDTH TO MEET GRADING OF RIGHT SIDE.



STA. 4+66.88 TO STA. 5+34.00

TYPICAL PUBLIC ROADWAY SECTION

N.T.S.



1. ODOT ITEM 441 TYPE 1, SURFACE – 1 1/2" ASPHALT CONCRETE, LIMESTONE
2. ODOT ITEM 407– TACK COAT FOR INTERMEDIATE COURSE (0.06 GAL/S.Y.)
3. ODOT ITEM 441 TYPE 2, INTERMEDIATE – 1 3/4" ASPHALT CONCRETE, LIMESTONE
4. ODOT ITEM 301– 6" BITUMINOUS AGGREGATE BASE, LIMESTONE (2–3" LIFTS)
5. ODOT ITEM 304– 4" LIMESTONE AGGREGATE BASE, COMPACTED
6. ODOT ITEM 203– SUBGRADE COMPACTION AND PROOF ROLLING (CEMENT STABILIZATION OF THE SUBGRADE IS REQUIRED SINCE THE CBR VALUE IS LESS THAN 6. (CBR=4)
7. ODOT ITEM 804– 9" OF SOIL CEMENT STABILIZATION (MINIMUM)
8. ODOT ITEM 605– 6" SHALLOW PIPE UNDERDRAIN, ASTM 3034, SDR 35 (PVC) W/2" #57 LIMESTONE BEDDING
9. ODOT ITEM 608– 4" REINFORCED CONCRETE WALK W/ 3" ITEM #304 LIMESTONE BASE
10. ODOT ITEM 304– VARIES, 6" TO 12" LIMESTONE AGGREGATE BASE
11. #57 LIMESTONE BEDDING AND BACKFILL (PAYMENT INCLUDED WITH #8)
12. ODOT ITEM 609– CURB, TYPE 6
13. ODOT ITEM 659 – SEEDING AND MULCHING
14. ~~PAVEMENT REINFORCING FABRIC (AS REQUIRED BY THE CITY)~~ – NOT USED
15. ~~GEOGRID – TENSAR TX-140S OR APPROVED EQUAL (IF REQUIRED BY THE CITY)~~ – NOT USED

NOTES

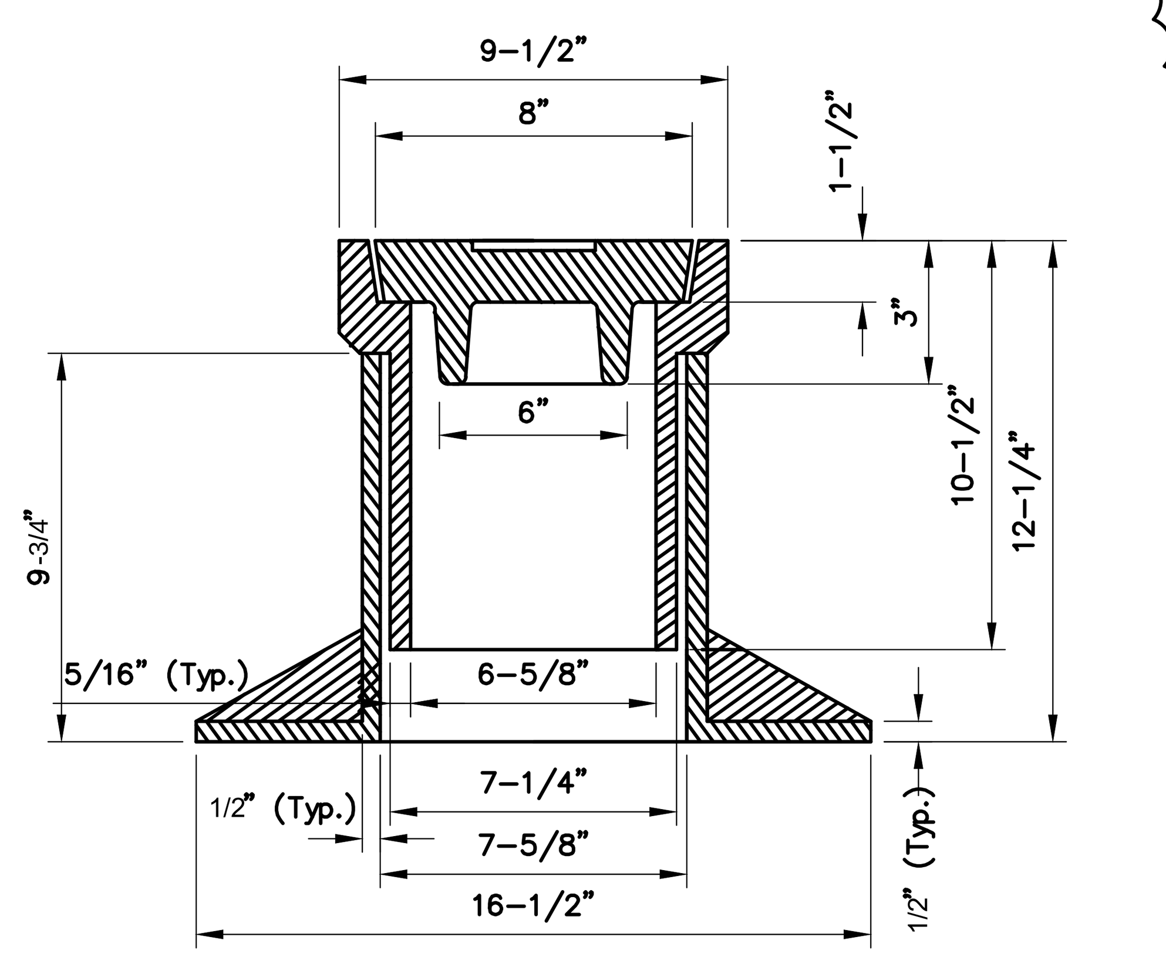
1. Right-of-Way Monuments are typically set prior to construction and are expected to be protected during construction unless otherwise specified in the plans.
2. During construction the contractor will install the Monument Assemblies and Reference Monuments at locations specified in the Right-of-Way plans.
3. All monuments shall be set and written certification sent to the City by a licensed professional surveyor, currently registered in the State of Ohio.
4. Monument boxes shall be East Jordan 8365 Heavy Duty monument. No risers shall be used.

GENERAL NOTES

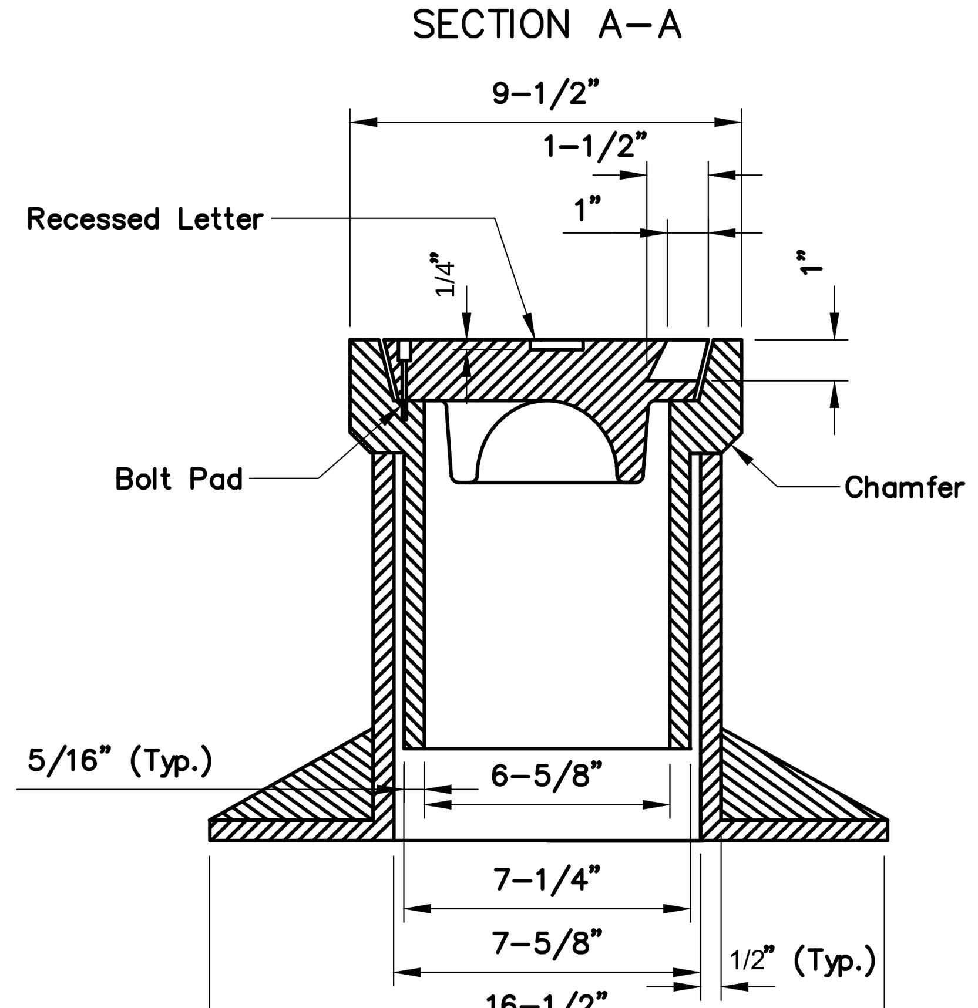
1. ALL SUBGRADE COMPACTION AND ALL 304 AGGREGATE BASE SHALL BE INSPECTED AND APPROVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO PLACEMENT OF ANY 304 AGGREGATE BASE OR 301 BITUMINOUS AGGREGATE BASE.
2. CONTRACTOR SHALL HAVE A GEOTECHNICAL P.E. REVIEW PROOF ROLL. PROOF ROLL MUST MEET ZERO DEFLECTION USING A 30 TON OR 60,000 LB LOADED TANDUM TRUCK WITH TICKET & 200 PSI STANDARD. MORE DEPTH MAY BE NEEDED ON THE CEMENT STABILIZATION BASED ON THE PROOF ROLL & MEETING THESE STANDARDS.
3. THE SOIL CEMENT STABILIZATION SHALL BE PORTLAND CEMENT OR PORTLAND CEMENT KILN DUST OF SUFFICIENT PERCENTAGE BY DRY WEIGHT TO ACHIEVE 200 PSI AT SEVEN (7) DAYS ON AN UNCONFINED COMPRESSIVE STRENGTH.
4. ITEM 304 – AGGREGATE BASE: THE CONTRACTOR SHALL ONLY USE CRUSHED CARBONATE STONE (CCS) [LIMESTONE] FOR ITEM 304, AGGREGATE BASE. ALL OTHER REQUIREMENTS OF SECTION 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

NOTE:

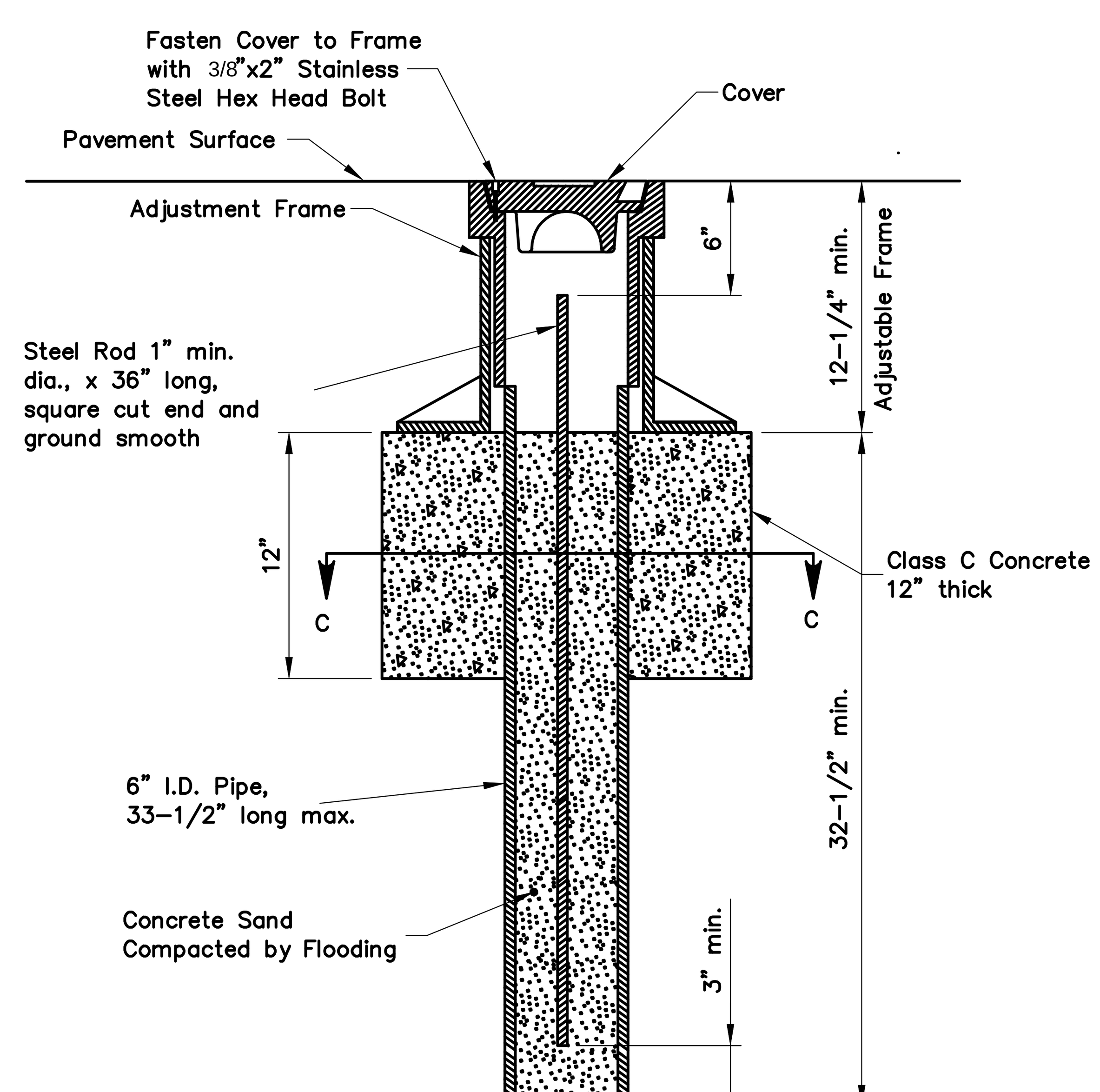
STANDARD DETAILS FOR SANITARY SEWER CONSTRUCTION SHALL FOLLOW CURRENT DETAILS APPROVED BY SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES.



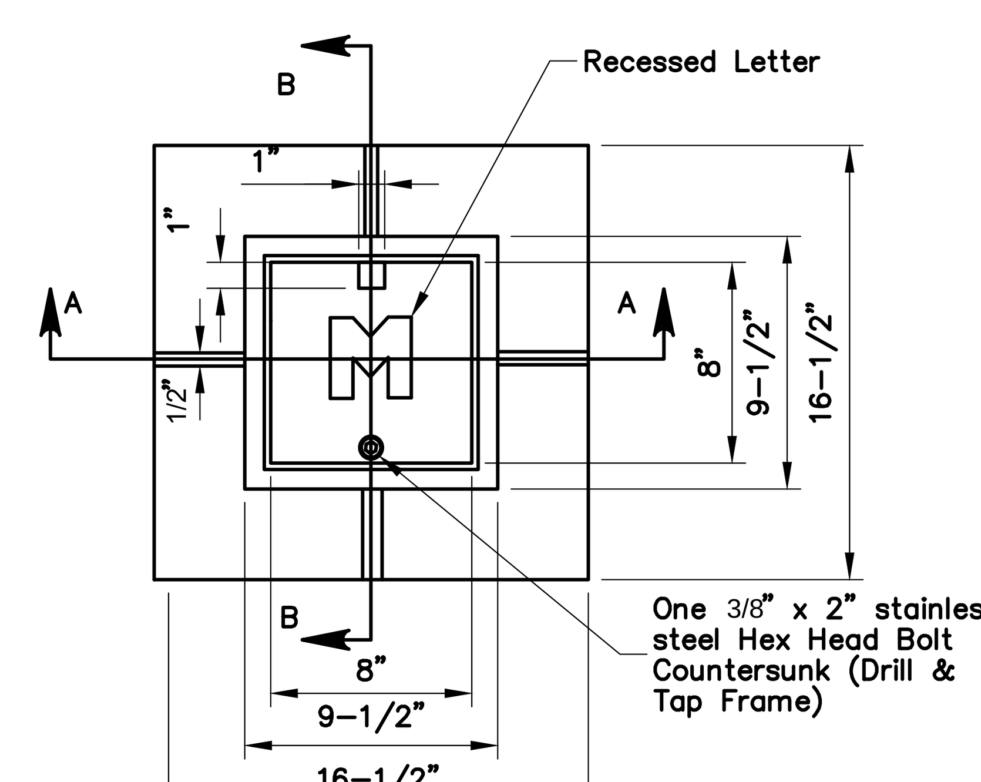
SECTION A–A



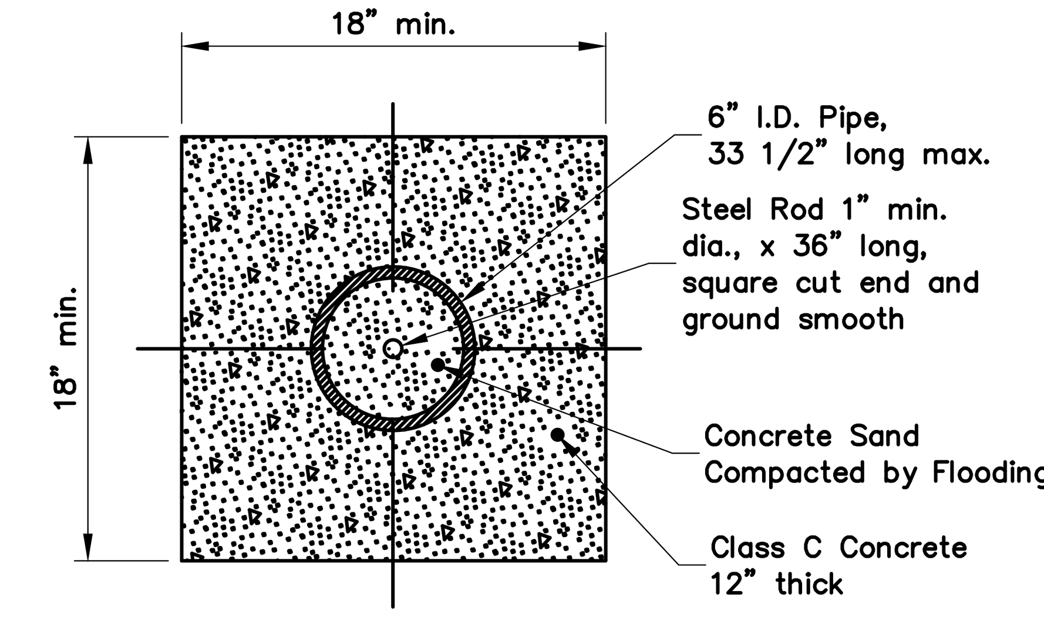
SECTION B–B



SIDE VIEW

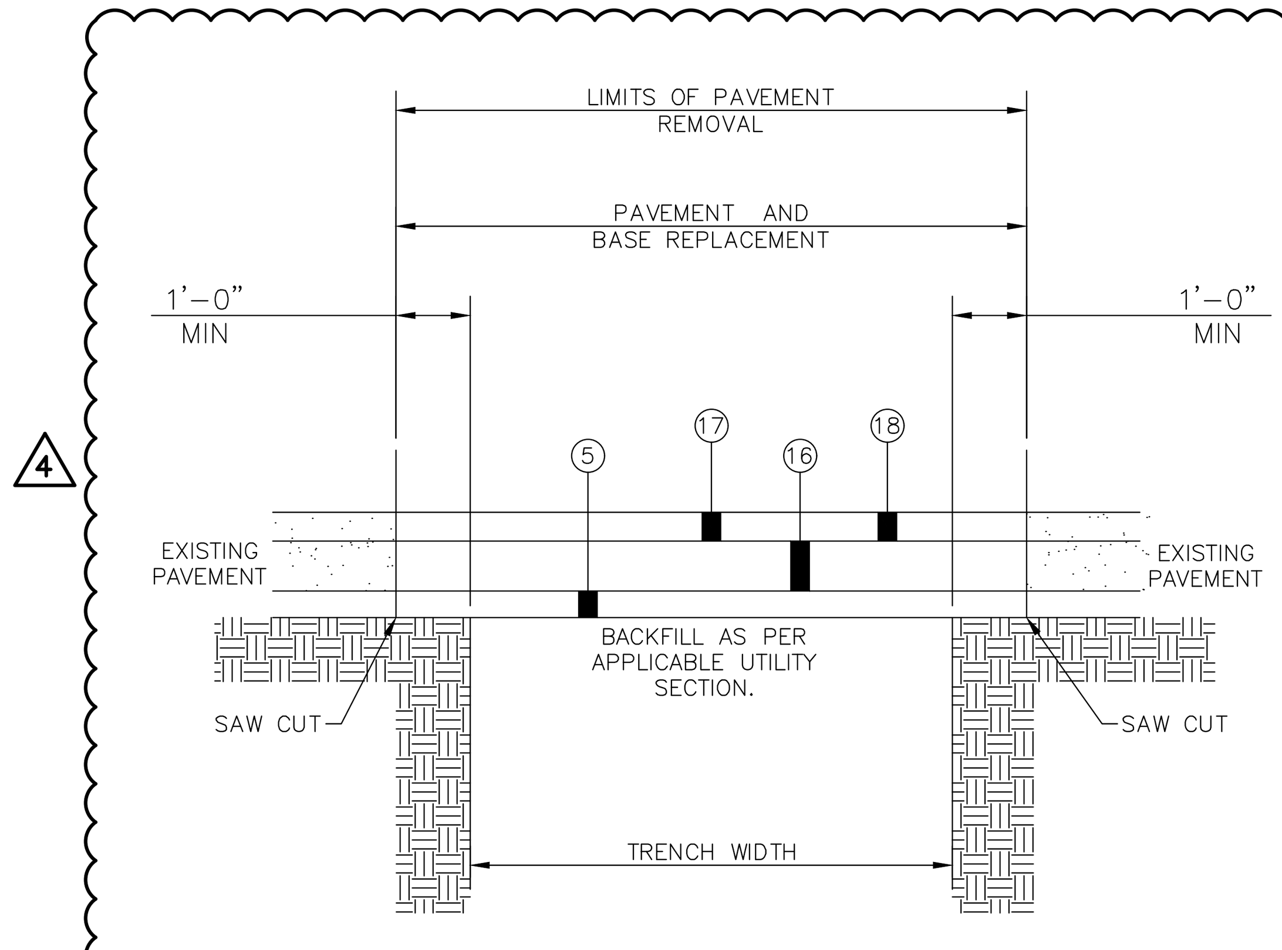


PLAN VIEW



SECTION C–C

MONUMENT TYPE C



5. ODOT ITEM 304 – 4" AGGREGATE BASE, LIMESTONE
16. ODOT ITEM 451 – 7" MIN. REINFORCED CONCRETE
17. ODOT ITEM 441 TYPE 1, SURFACE – 3" ASPHALT CONCRETE, LIMESTONE (2–1½" LIFTS)
18. ODOT ITEM 451 – 3" CONCRETE TEMP. CAP WITH VISQUEEN BOND BREAKER

ASPHALT PAVEMENT REPLACEMENT DETAIL (CITY DETAIL 7.1.2.E)

NTS

(IF UTILITY WORK IS NEEDED WITHIN BARLOW ROAD RIGHT-OF-WAY)

REVISION DATE	7-18-2014
STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR	Reynaldo Stargell
STDS. ENGINEER	M. Ruppe
OFFICE OF ROADWAY ENGINEERING	
STANDARD ROADWAY CONSTRUCTION DRAWING	ROADWAY MONUMENTS
SCD NUMBER	RM-1.1

ENGINEERS PLANNERS SURVEYORS

R:\Summit\City\Hudson\007\Cameron GC – Barlow Road Retirement Community\DWG\2018-09-12 Barlow Rd Public Roadway Plans.dwg – 11/01/18 – 9:13am; rgrimm

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY: JDS	DATE: 6/5/2018	DESC.:	1 REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC
REV. BY: JDS	DATE: 6/20/2018	DESC.:	1 REVISED PER COMMENTS FROM SUMMIT CO. DSSS
REV. BY: JDS	DATE: 9/12/2018	DESC.:	4 REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY
REV. BY: REG	DATE: 10/31/2018	DESC.:	5 REVISED PER CITY OF HUDSON COMMENTS
REV. BY:	DATE:	DESC.:	

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15, 20-29
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

TYPICAL ROADWAY DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

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. SANITARY SEWER CONSTRUCTION SHALL BE ACCORDING TO SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES. SEE SHEET 5.
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 MY CREATE A HEALTH RISK IS DISCOVERED ON THE 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 4" OF BEDDING. BEDDING MATERIAL SHALL BE AS SPECIFIED IN CITY'S "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION, FOR THE TYPE OF 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 MATERIAL DELIVERED TO THE SITE. PLANT TICKETS MUST SHOW NET QUANTITIES 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 SPECIFICATION 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 NEW CONSTRUCTION.
36. THE CONSTRUCTION OF SANITARY SEWERS, WATER MAINS, LIFT STATIONS AND APPURTENANCES IS PROHIBITED UNTIL ALL PLANS HAVE BEEN APPROVED BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY.
37. ALL SANITARY SEWERS CONSTRUCTED IN SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES (SC-DSSS) SERVICE DISTRICTS AND SERVED BY THE SC-DSSS SHALL COMPLY WITH SC-DSSS REQUIREMENTS.
38. THE OWNER SHALL SUBMIT A NOTICE OF INTENT (N.O.I.) APPLICATION TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY (E.P.A.) AND OBTAIN AUTHORIZATION FOR THE STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (N.P.D.E.S.) OR THE LATEST FEDERAL, STATE AND/OR LOCAL REGULATIONS. THE OWNER SHALL SUBMIT A COPY OF THE N.P.D.E.S. PERMIT TO THE CITY OF HUDSON 48 HOURS (2 WORKING DAYS) PRIOR TO SCHEDULING A PRECONSTRUCTION MEETING.

WATERWORK NOTES

CITY OF HUDSON WATER SERVICE AREA

NOTE: THESE WATER WORKS NOTES APPLY TO AREAS OF HUDSON THAT ARE TO BE SERVED WITH CITY OF HUDSON WATER.

1. ALL WATER MAINS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HUDSON "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION", LATEST EDITION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY AND ALL AREAS ALONG THE ROUTE OF THE WATER MAIN. THIS WILL INCLUDE LAWNS, DRIVES, DITCHES, CULVERTS, LANDSCAPING, ETC, AND ANY OTHER AREAS DISTURBED DURING THE CONSTRUCTION PROCESS.
3. ALL TESTING SHALL BE IN ACCORDANCE WITH THE CITY OF HUDSON "ENGINEERING STANDARDS FOR INFRASTRUCTURE CONSTRUCTION" AND BE COORDINATED WITH THE CITY OF HUDSON. AWWA C-600 PRESSURE TESTING AND C-651 DISINFECTION BY CHLORINATION OF THE WATER MAIN WILL BE REQUIRED.
4. ALL PROPOSED TRENCHES LOCATED UNDER THE EXISTING OR PROPOSED PAVEMENT SHALL BE FILLED WITH LOW STRENGTH MORTAR. THE METHOD OF BACKFILLING AS DIRECTED BY THE ENGINEER, SHALL CONFORM TO ODOT 613 TYPE 1. SLAG OR FLY ASH IS NOT PERMITTED IN MIX. PAVEMENT INCLUDES, BUT IS NOT LIMITED TO, ROADWAY SURFACES, SIDEWALKS, BIKE WAYS, DRIVEWAYS, SHOULDERS, ETC. THE LIMITS OF THE LOW STRENGTH MORTAR SHALL INCLUDE 45° ANGLE OF REPOSE FROM ALL EDGES OF PAVEMENT.
5. FIELD STAKING AND RECORD DRAWINGS SHALL BE PROVIDED TO THE CITY BY THE CONTRACTOR, AS SUPERVISED AND STAMPED BY A LICENSED PROFESSIONAL SURVEYOR. RECORD DRAWINGS (AS-BUILTS) IN BOTH REPRODUCIBLE AND DIGITAL FORMAT COMPATIBLE WITH THE CITY OF HUDSON STANDARDS TO BE SUBMITTED TO AND APPROVED BY THE CITY OF HUDSON PRIOR TO UTILITY SERVICE CONNECTIONS BEING MADE.
6. (5) A 10" MINIMUM HORIZONTAL CLEARANCE AND A 18" MINIMUM VERTICAL CLEARANCE SHALL BE MAINTAINED FROM THE EDGE OF THE WATER MAIN PIPE TO THE EDGE OF THE STORM SEWER PIPE.
7. A MINIMUM 10' MINIMUM HORIZONTAL CLEARANCE AND AN 18" MINIMUM VERTICAL CLEARANCE SHALL BE MAINTAINED FROM THE EDGE OF THE WATER MAIN PIPE TO THE EDGE OF ALL SANITARY SEWERS AND/OR FORCE MAIN PIPE.
8. ALL VALVES, FITTINGS, BENDS, TEES, ETC. SHALL HAVE MEGALUG JOINT RESTRAINTS BY EBBA IRON, INC.
9. ALL WATER MAINS WITHIN LOW STRENGTH MORTAR BACKFILL SHALL BE WRAPPED IN POLYETHYLENE AS PER AWWA C-105. OTHER AREAS TO BE WRAPPED IN POLYETHYLENE SHALL BE AS SHOWN ON THE DRAWINGS, AS DETERMINED FROM DIPRA REPORT OR AS REQUIRED BY THE CITY.
10. WHERE WATER MAINS CROSS SEWER TRENCHES, THE TRENCH IS TO BE BACKFILLED WITH ODOT 304 CRUSHED LIMESTONE.
11. TAPPING SLEEVES SHALL BE ROMAC TYPE, WRAP AROUND STAINLESS STEEL WITH #316 STAINLESS STEEL BOLTS AND NUTS.
12. MANUFACTURER'S AFFIDAVIT: THE MANUFACTURER SHALL FURNISH AN AFFIDAVIT INDICATING THAT ALL PIPE, FITTINGS, VALVES, FIRE HYDRANTS, AND APPURTENANCES HAVE BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS IF THE APPLICABLE REFERENCED STANDARDS. A COPY OF EACH AFFIDAVIT, INDICATING THE PROJECT ON WHICH THE MATERIAL IS TO BE USED SHALL BE FORWARDED TO THE CITY OF HUDSON PRIOR TO THE PRECONSTRUCTION MEETING BEING SCHEDULED.
13. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS. THE CITY MAY GRANT SPECIAL PERMISSION FOR BUILDINGS FOUR STORIES AND HIGHER WITH A FIRE SUPPRESSION SYSTEM.
14. (5) PROPOSED FACILITIES SHALL BE DESIGNED TO MAINTAIN A MINIMUM OF 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS. THE SYSTEM SHALL BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.
15. ALL WATER MAINS GREATER THAN 12 INCH DIAMETER SHALL BE LAID TO GRADE WITH HIGH POINTS AND LOW POINTS HAVING ADEQUATE BLOW-OFFS VIA USE OF HYDRANTS.
16. FOR ALL NON-RESIDENTIAL WATER SERVICE, A BLACKFLOW PREVENTION DEVICE SHALL BE INSTALLED PER CITY OF HUDSON AND OEPA STANDARDS AND REQUIREMENTS. FOR RESIDENTIAL WATER SERVICE A BACKFLOW PREVENTION DEVICE MAY BE REQUIRED FOR SWIMMING POOLS, IRRIGATION SYSTEMS, ETC. CONTACT THE CITY SERVICE/WATER DISTRIBUTION DEPARTMENT FOR THE REQUIREMENTS AND STANDARDS FOR BACKFLOW PREVENTION, THERMAL EXPANSION CONTROL, ETC.
17. ALL WATER METER SETTINGS MUST BE APPROVED BY THE CITY OF HUDSON. METERS SHALL BE MAGNETIC DRIVE, WITH A SCANCODE REMOTE READ, MUST READ IN CUBIC FEET, SET WITH VALVES BEFORE AND AFTER THE METER. IT IS THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO PROVIDE AND RUN A REMOTE WATER METER WIRE FROM THE PROPOSED WATER METER LOCATION TO THE VICINITY OF THE PROPOSED ELECTRIC METER LOCATION . CONTACT THE CITY SERVICE/WATER DISTRIBUTION DEPARTMENT FOR THE COMPLETE STANDARDS AND REQUIREMENTS FOR WATER METERS, PRESSURE REGULATORS, ETC.
18. FOR NEW WATER MAIN CONSTRUCTION, THE DRAWINGS SHALL HAVE BEEN REVIEWED BY THE OHIO EPA AND WRITTEN APPROVAL RECEIVED PRIOR TO THE START OF CONSTRUCTION.
19. (5) ALL WATERLINES SHALL HAVE MINIMUM COVER OF 4 FEET.
20. BEDDING FOR THE PROPOSED WATERLINE SHALL FOLLOW THE TRENCH DETAIL ON SHEET 3.

GENERAL NOTES – EARTHWORK

1. THE CONTRACTOR SHALL INSTALL ALL SEDIMENTATION CONTROLS TO MINIMIZE SOIL EROSION AND OFF-SITE SILTATION BEFORE ANY CLEARING, GRUBBING OR EARTHWORK HAS BEGUN. REFERENCE THE STORMWATER POLLUTION PREVENTION PLAN FOR EROSION CONTROL STRUCTURES AND SPECIFICATIONS.
2. ALL TIMBER, LOGS, BRUSH, RUBBISH, AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OF FILL AREAS SHALL BE REMOVED FROM THE PROJECT CONSTRUCTION AREA.
3. ANY UNSUITABLE SOILS ENCOUNTERED IN PROPOSED PAVEMENT AREAS SHALL BE REMOVED AND REPLACED WITH COMPACTED MATERIAL APPROVED BY THE ENGINEER.
4. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES AND SHALL BACKFILL AND GRADE EXCAVATED AREAS SO AS TO ELIMINATE PONDING ON THE SITE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPORTATION OF ANY BORROW MATERIAL NECESSARY TO COMPLETE THE JOB.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ANY AND ALL EXCESS OR UNSUITABLE MATERIAL NOT USED ON THE JOB SITE.
7. PROPOSED PAVEMENT AREAS ARE TO BE PROOF-ROLLED PER SPECIFICATIONS IMMEDIATELY PRIOR TO CONSTRUCTION. IF ANY AREAS ARE FOUND TO BE "SOFT" OF "SPONGY", THE CONTRACTOR IS TO COORDINATE THE REMOVAL OR PROCEDURE WITH THE GEOTECHNICAL ENGINEER.
8. PROPOSED ELEVATIONS SHOWN SHALL NOT BE CHANGED WITHOUT APPROVAL OF THE ENGINEER.
9. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING AND IN AREAS SELECTED BY OWNER.
10. UNLESS OTHERWISE INDICATED AT A SPECIFIC LOCATION, ALL FINISHED GRADES AT THE LIMITS OF NEW WORK ARE TO CONFORM TO AND MATCH EXISTING GRADES.
11. SITE GRADING SHALL PROVIDE POSITIVE DRAINAGE TO CATCH BASINS OR SHEET FLOW OFF OF AREAS, THUS PREVENTING THE PONDING OF WATER ON SITE.
12. PRIOR TO PLACEMENT OF ANY COMPACTED FILLS, PROCTOR CURVES SHALL BE ESTABLISHED FROM PROPOSED BORROW MATERIAL SAMPLES.
13. PRIOR TO PAVING, THE SUBGRADE SHALL BE TESTED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK FURNISHED BY THE CONTRACTOR. ANY YIELDING AREAS IN THE SUBGRADE SHALL BE REMOVED AND/OR REPLACED PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
14. ALL COMPACTED FILLS RELATED TO THE CONSTRUCTION OF THE PROPOSED PROJECT SHALL BE PLACED IN ACCORDANCE WITH ODOT ITEM 203. DURING CONSTRUCTION, THESE COMPACTED FILLS SHALL BE TESTED USING THE NUCLEAR DENSOMETER METHOD. COMPACTION REQUIREMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

N

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY: TRP DATE: 9/17/2018 DESC.: (5) REVISED PER OHIO EPA COMMENTS ON WATERLINE
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15, 28-29
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

GENERAL NOTES
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

SUMMIT COUNTY DEPARTMENT OF SANITARY SEWER SERVICES

GENERAL NOTES (Rev 2/18)

SANITARY SEWER AND APPURTENANCES

1. ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS (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 AND PROPOSED ROADS AND EASEMENTS ARE SHOWN.
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. STANDARDS.
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. INTERNAL 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 ASTM D3034 WITH JOINTS CONFORMING TO ASTM D3212. *(CHECK STANDARDS FOR APPROVED MATERIAL AND ASTM SECTIONS)*
17. THE OWNER (CONTRACTOR) MUST ALERT THE OHIO UTILITIES PROTECTION SERVICE AT 811 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.

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.
4. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. 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.

TRAFFIC MAINTENANCE NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE ERECTED AND MAINTAINED IN COMPLIANCE WITH THE STATE OF OHIO "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" INCLUDING LATEST REVISIONS, ACCORDING TO SIZE, SHAPE, COLOR AND REFLECTORIZATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING LIGHTS, SIGNS, AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS WORK AT THE LOCATION SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL GIVE THE CITY OF HUDSON A MINIMUM OF 7 DAYS NOTICE PRIOR TO STARTING WORK.
4. TRAFFIC MAINTENANCE IS EXPECTED ON ALL STREETS ON THIS PROJECT.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES TO SIGNS, SIGN POSTS, SIGN BRACKETS, ETC.. STOP OR YIELD SIGNS SHALL BE MAINTAINED DURING CONSTRUCTION. STREET NAME SIGNS AND ALL OTHER SIGNS AFFECTED DURING CONSTRUCTION SHALL BE CAREFULLY REMOVED, STORED AND RE-INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH O.M.U.T.C.D. WITHIN FIFTEEN DAYS OF THE COMPLETION OF THE CONSTRUCTION, AND ACCEPTABLE TO THE ENGINEER AND THE CITY OF HUDSON. ALL CONSTRUCTION SIGNS SHALL BE REMOVED WITHIN FIFTEEN DAYS OF THE COMPLETION OF CONSTRUCTION.
6. TYPE "C" BURNING WARNING LIGHTS SHALL BE ERECTED ON DRUMS WITHIN 100 FEET OF ALL INTERSECTIONS AND ALL TRANSITION AREAS FOR NIGHT-TIME CHANNELIZING, MAXIMUM SPACING SHALL BE 25 FEET CENTER TO CENTER.
7. ADDITIONAL MAINTENANCE OF TRAFFIC ITEMS MAY BE REQUIRED BY THE CITY OF HUDSON ENGINEER AT NO ADDITIONAL COSTS TO THE OWNER OR THE CITY OF HUDSON.
8. THE CONTRACTOR SHALL ASSIGN ONE PERSON TO RESPOND TO ANY EMERGENCY REPAIRS REQUIRED TO THE TRAFFIC CONTROL DEVICES. THIS PERSON SHALL BE ON CALL 24 HOURS PER DAY, SEVEN DAYS PER WEEK, VIA A PORTABLE PAGER. CONTRACTOR WILL BE BILLED IF FAILS TO RESPOND WITHIN 2 HOURS.
9. ALL EXISTING PAVEMENT MARKINGS SHALL BE REPAINTED BY THE CONTRACTOR WITHIN 48 HOURS OF PAVEMENT COMPLETION.
10. NO ROAD CLOSURES PERMITTED. ANY LANE CLOSURES OF BARLOW ROAD MUST BE APPROVED BY THE CITY OF HUDSON. FLAGGERS MUST BE EQUIPPED AND USE NEW REFLECTIVE PADDLES WITH VISIBLE DESIGNATIONS OF "STOP" ON ONE SIDE AND "SLOW" ON THE OTHER SIDE. ONE LANE OF TRAFFIC IN EACH DIRECTION MIST BE OPEN FOR TRAVEL EVERY EVENING.
11. STEEL PLATES MAY BE USED IN NON WINTER WEATHER TO MAINTAIN TRAFFIC, BUT MUST BE STAKED DOWN AND COLD PATCH TO ELIMINATE SOUND.
12. 4" CONCRETE CAP MAY BE REQUIRED TO MAINTAIN TRAFFIC SURFACE IN THE WINTER MONTHS.
13. PRIOR TO BEGINNING ANY EXCAVATION FOR THE SEWER WORK WITHIN MOVABLE WORK ZONES, THE CONTRACTOR SHALL SAW CUT (FULL DEPTH) THE EXISTING PAVEMENT. AFTER THE NEW SEWER HAS BEEN INSTALLED, AND BACKFILLED, THE CONTRACTOR SHALL INSTALL ASPHALT PAVEMENT REPLACEMENT PER DETAIL ON SHEET 3 AND IN ACCORDANCE WITH CITY OF HUDSON REQUIREMENTS.
14. WINTER INSTALLATION WILL REQUIRE THE CONTRACTOR TO MAINTAIN THE TRENCH IN COMPACTED 304 LIMESTONE, OR IF DIRECTED BY THE CITY ENGINEER WITH A 4" CONCRETE CAP OVER VISQUENE BARRIER OVER THE COMPACTED 404 LIMESTONE.

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

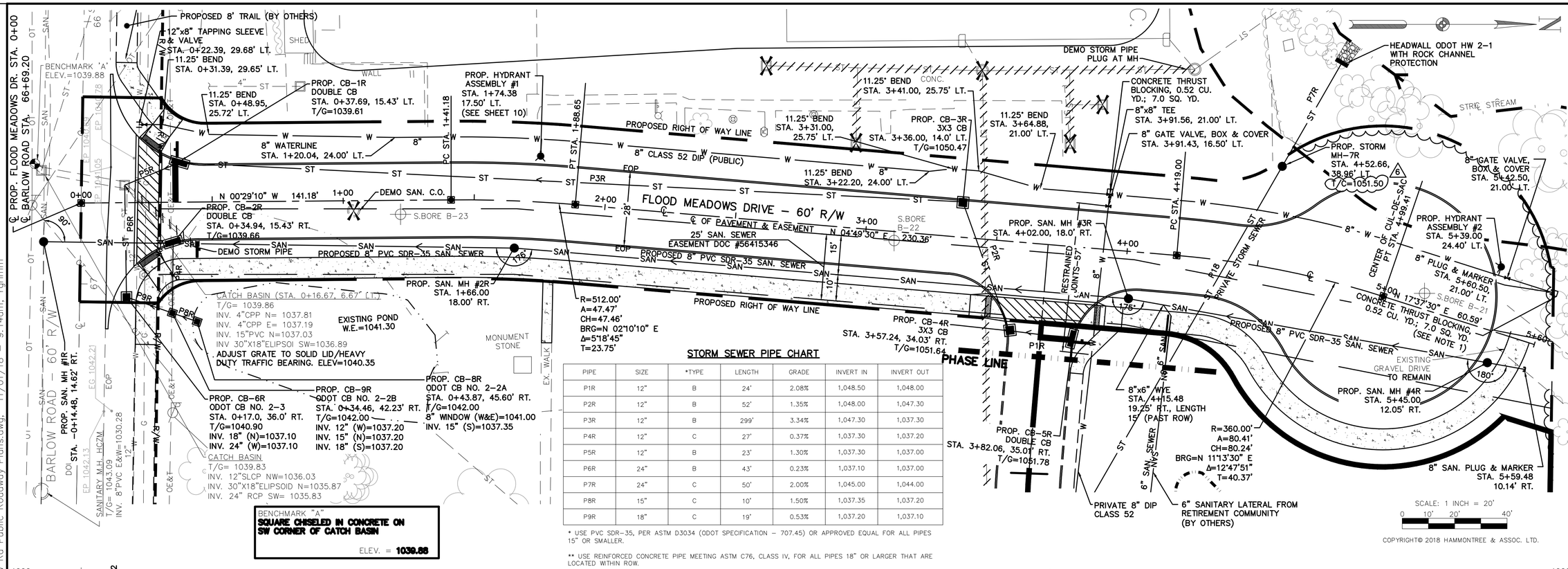
REVISED PER COMMENTS FROM SUMMIT CO. DSSS — DATE: 6/20/2018 — REV. BY: JDS — DESC:

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15,26-29
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

GENERAL NOTES
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

R:\Summit\City\Hudson\007\Cameron GC - Barlow Road Retirement Community\DWG\2018-09-12 Barlow Rd Public Roadway Plans.dwg; 11/01/18 - 9:14am; rgrimm

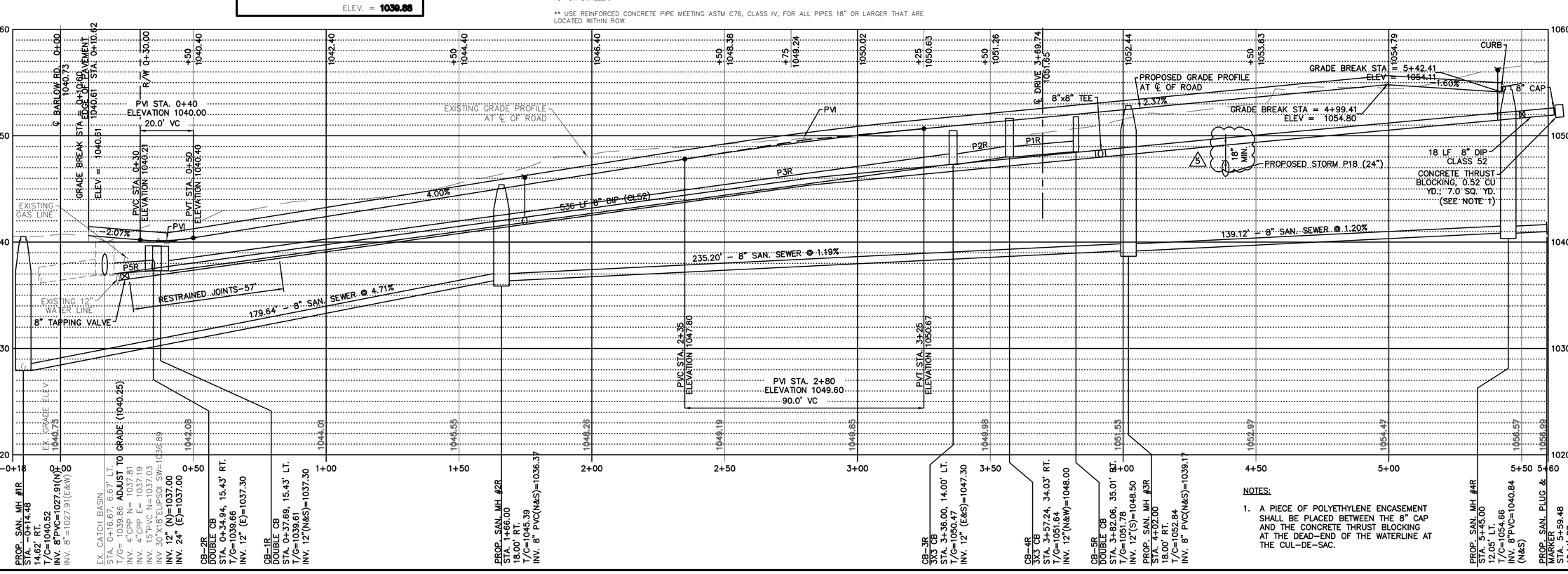


STORM SEWER PIPE CHART

PIPE	SIZE	*TYPE	LENGTH	GRADE	INVERT IN	INVERT OUT
P1R	12"	B	24'	2.08%	1,048.50	1,048.00
P2R	12"	B	52'	1.35%	1,048.00	1,047.30
P3R	12"	B	299'	3.34%	1,047.30	1,037.30
P4R	12"	C	27'	0.37%	1,037.30	1,037.20
P5R	12"	B	23'	1.30%	1,037.30	1,037.00
P6R	24"	B	43'	0.23%	1,037.10	1,037.00
P7R	24"	C	50'	2.00%	1,045.00	1,044.00
P8R	15"	C	10'	1.50%	1,037.35	1,037.20
P9R	18"	C	19'	0.53%	1,037.20	1,037.10

* USE PVC SDR-35, PER ASTM D3034 (ODOT SPECIFICATION - 707.45) OR APPROVED EQUAL FOR ALL PIPES 15" OR SMALLER.

** USE REINFORCED CONCRETE PIPE MEETING ASTM C76, CLASS IV, FOR ALL PIPES 18" OR LARGER THAT ARE LOCATED WITHIN ROW.



NOTES:

1. A PIECE OF POLYETHYLENE ENCASEMENT SHALL BE PLACED BETWEEN THE 8" CAP AND THE CONCRETE THRUST BLOCKING AT THE DEAD-END OF THE WATERLINE AT THE CUL-DE-SAC.

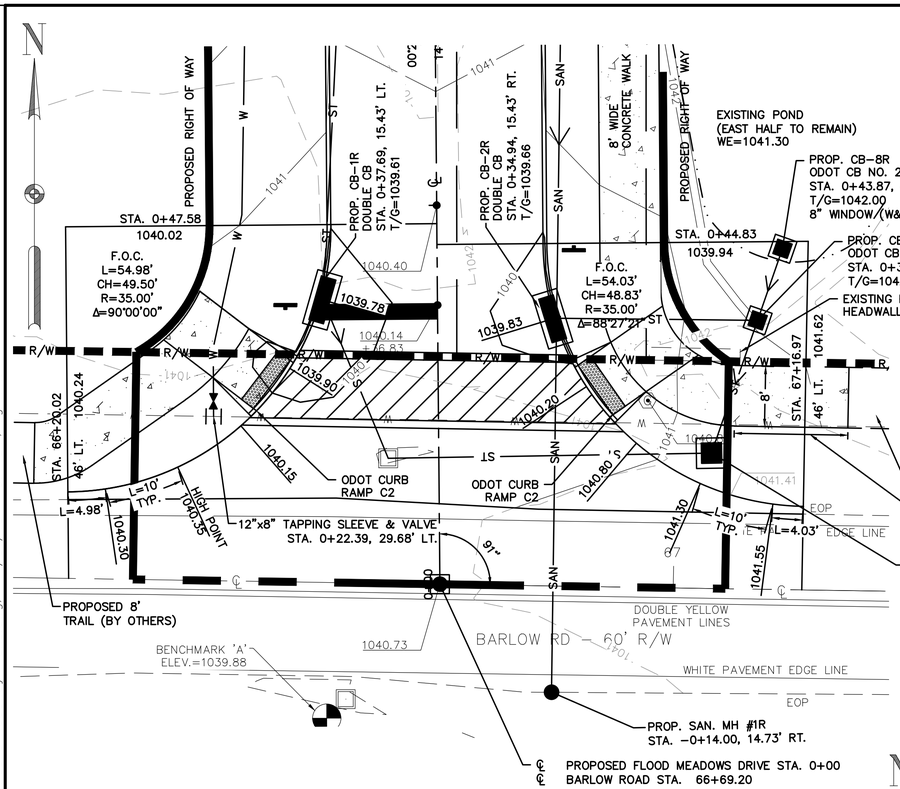
HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

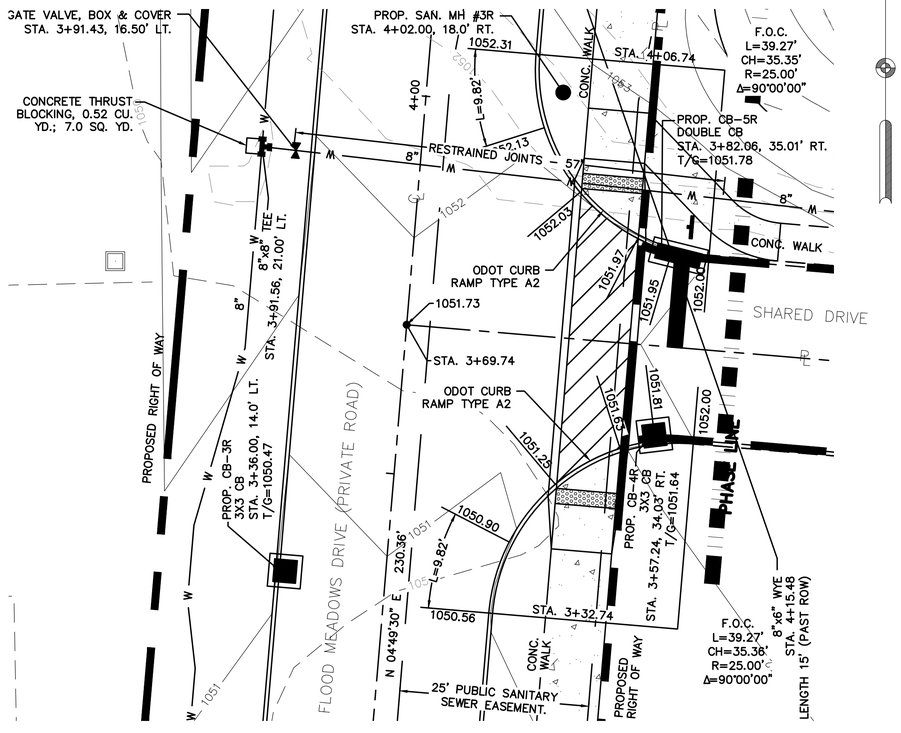
REV. BY:	DESC.:	DATE:
JDS	REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC	6/5/2018
JDS	REVISED PER COMMENTS FROM SUMMIT CO. DSSS	8/10/2018
JDS	REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY	9/12/2018
TRP	REVISED PER OHIO EPA COMMENTS ON WATERLINE	9/17/2018
REG	REVISED PER CITY OF HUDSON COMMENTS	10/31/2018

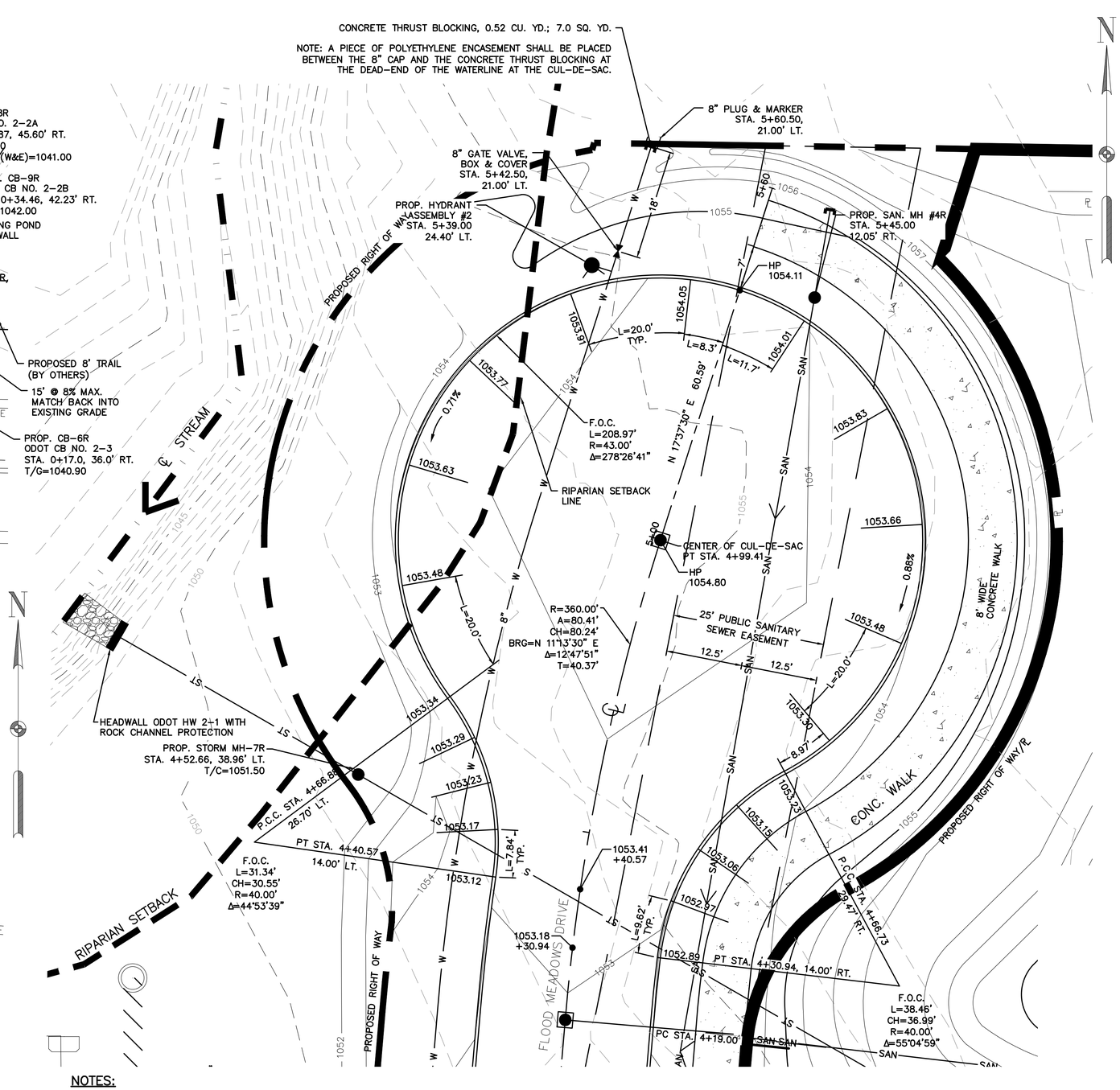
DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15, 28-29
DATE: 3/20/18

SCALES
HORZ: 20'
VERT: 5'
CONTOUR INT:

PLAN AND PROFILE
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO







NOTES:

F.O.C. DENOTES FACE OF CURB AT BOTTOM

EOP DENOTES EDGE OF PAVEMENT

ELEVATIONS SHOWN @ EOP/BOTTOM OF CURB UNLESS OTHERWISE NOTED.

CHORD DISTANCES ON FILLETS ARE 10' UNLESS NOTED.

CHORD DISTANCES ON CUL-DE-SAC ARE 20' UNLESS NOTED.

REFER TO MOST CURRENT ODOT DRAWING BP-7.1 FOR CURB RAMP CONSTRUCTION DETAILS.

SCALE: 1 INCH = 10'

0 5' 10' 20'

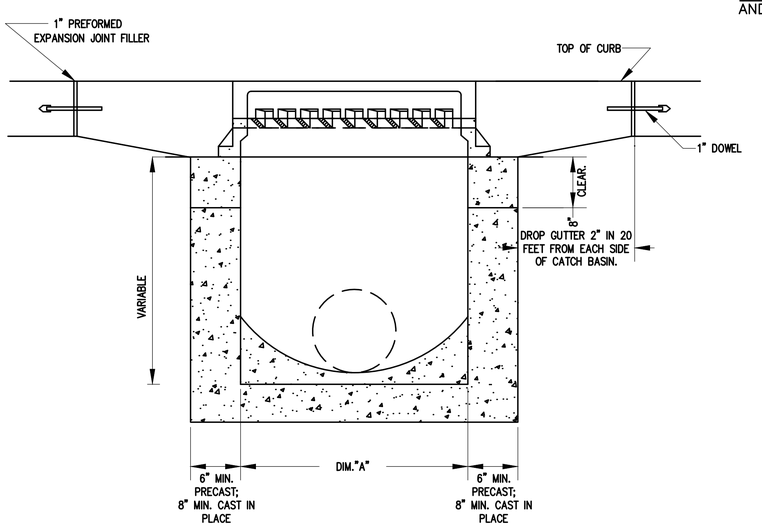
HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY:	DATE:	DESC.:
JDS	6/5/2018	A REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC
JDS	9/12/2018	A REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY
REG	10/31/2018	A REVISED PER CITY OF HUDSON COMMENTS

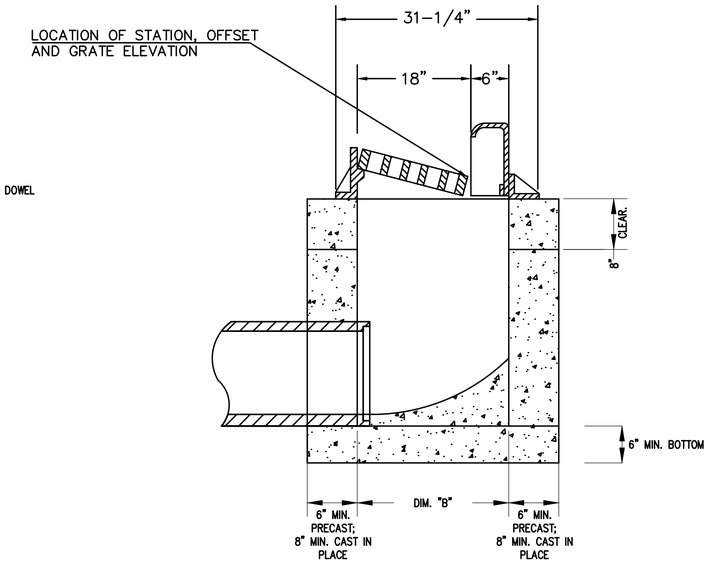
DESN BY:	JDS
DRWN BY:	LLB
RVWD BY:	JDS
FLD BK:	627
BK PG:	13-15, 28-29
DATE:	03/20/18

SCALES
HORZ: 10'
VERT:
CONTOUR INT:

ROADWAY INTERSECTION DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO



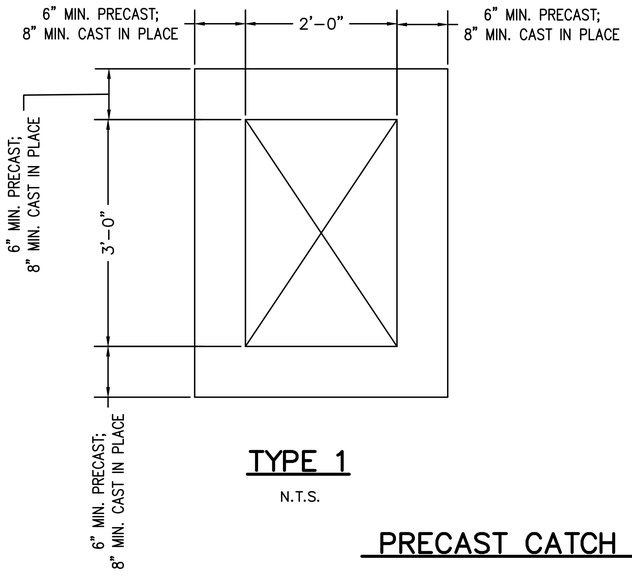
SECTION A–A
N.T.S.



SECTION B–B
N.T.S.

* CATCH BASIN DESIGNATION	DIM. "A"	DIM. "B"	PRECAST TOP	MAXIMUM PIPE SIZE
3'X3'	3'–0"	3'–0"	TYPE 1	30"
DOUBLE	6'–0"	2'–0"	NONE	21"

* ALL CURB INLET TYPE CATCH BASINS SHOWN ON PLANS ARE REFERRED TO BY ONE OF THESE DESIGNATIONS.



TYPE 1
N.T.S.

NOTES:

FOR CATCH BASINS PLACED IN THE ROAD:
- SINGLE CATCH BASINS (3'x3'), FRAMES AND GRATES SHALL BE EJ 7035 WITH A TYPE M6 VANE GRATE AND TYPE T6 BACKS OR CITY APPROVED EQUAL.
- DOUBLE CATCH BASINS (DOUBLE), FRAMES AND GRATES SHALL BE EJ 7036 WITH A TYPE M6 VANE GRATE AND TYPE T6 BACKS OR CITY APPROVED EQUAL.
- IF SPECIFYING ODOT STANDARD CATCH BASIN NO. 2–2B OR NO. 2–3, FRAME SHALL BE A EJ 5250 FRAME WITH EJ 5110 – TYPE M3 SINUSOIDAL GRATE OR CITY APPROVED EQUAL.

FOR CATCH BASINS PLACED IN GRASS AREA (ODOT STANDARD CATCH BASIN NO. 2–2B OR NO. 2–3), FRAME SHALL BE A EJ 5250 FRAME WITH EJ 5110 – TYPE M3 SINUSOIDAL GRATE OR CITY APPROVED EQUAL.

STEPS ARE TO BE PROVIDED ON THE CATCH BASINS WHEN THE CATCH BASIN IS OVER FOUR (4) FEET DEEP.

CATCH BASIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH ITEM 611, STATE OF OHIO, DEPARTMENT OF TRANSPORTATION CONSTRUCTION & MATERIAL SPECIFICATIONS, CURRENT EDITION AND STANDARD CONSTRUCTION DRAWINGS CB–2.1 & CB–2.2, LATEST REVISION, UNLESS NOTED OTHERWISE.

ALTHOUGH NOT SHOWN, ALL STRUCTURES SHALL BE REINFORCED AS REQUIRED PER STANDARD CONSTRUCTION DRAWINGS OR CONSTRUCTED BY PRECAST MANUFACTURER.

CONTRACTOR TO BID AND CONSTRUCT CATCH BASIN WITH CASTING AS SHOWN OR EQUAL AS ONE UNIT ITEM.

PRECAST CATCH BASIN TOP DETAILS

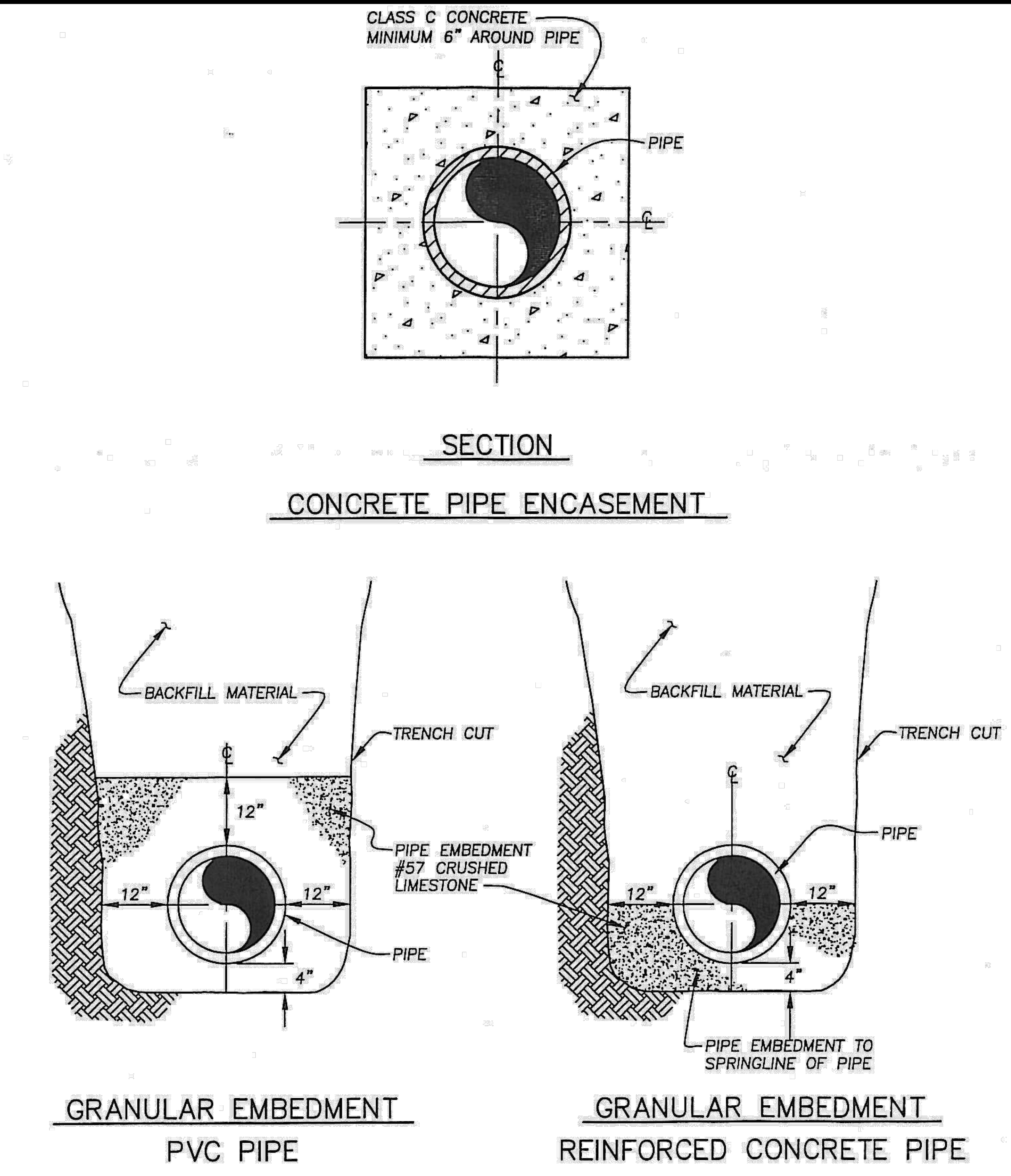
HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY: REG DATE: 10/26/2018 DESC.: 5 DETAILS ADDED PER CITY OF HUDSON COMMENTS
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____
REV. BY: ____ DATE: ____ DESC.: ____

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15,26-29
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

CATCH BASIN DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO



BEDDING DETAILS

NO SCALE

CONCENCS.DWG 09–15–99

FIG 4.17.1

STORM SEWER BEDDING DETAILS

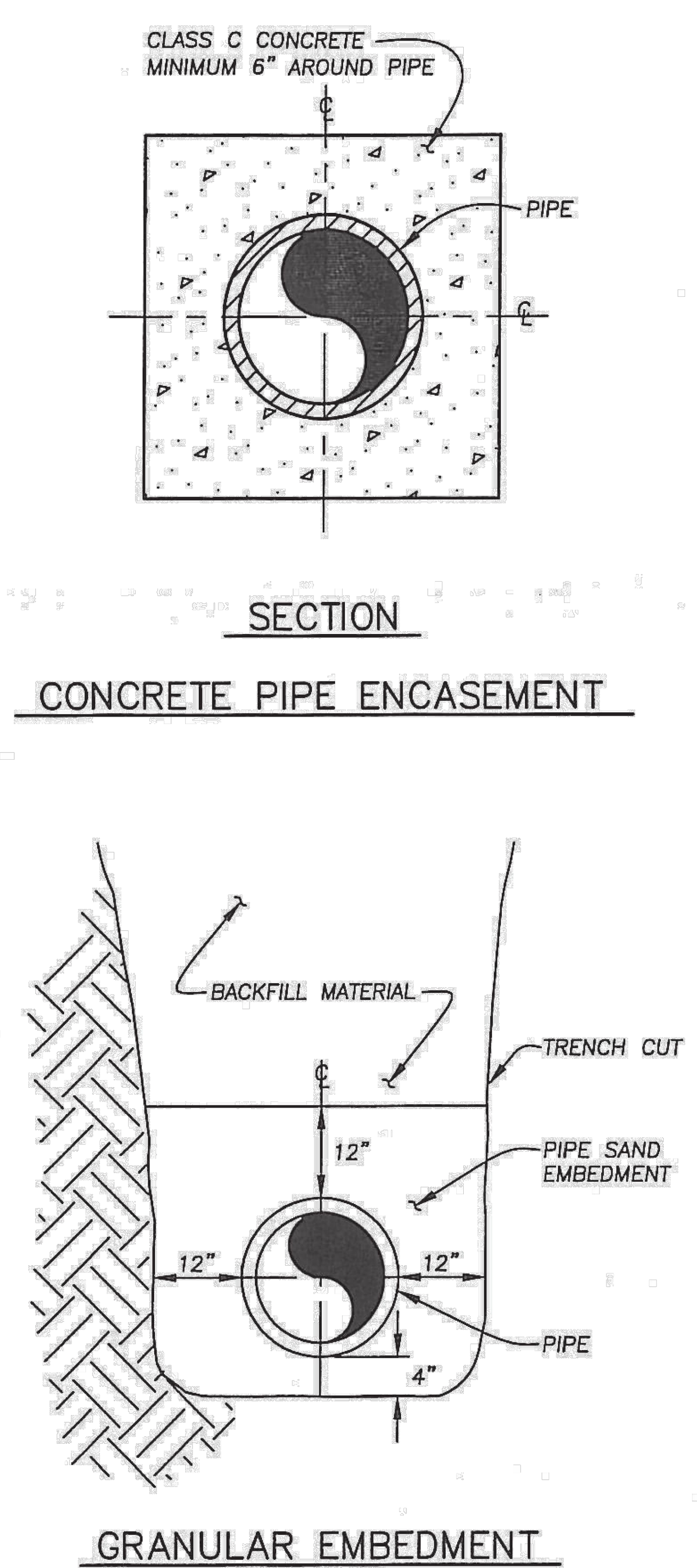
NOTES:

WATER MAINS (FIGS 2.24.1 & 4.19.1):

- PIPE EMBEDMENT SAND SHALL MEET THE REQUIREMENTS OF ODOT ITEM 703.06, FROM 4–INCHES BELOW THE PIPE BARREL TO 12–INCHES ABOVE THE PIPE BARREL.
- CONCRETE ENCASEMENT SHALL BE ODOT CLASS C CONCRETE.
- THE GRANULAR BACKFILL SHALL MEET THE REQUIREMENTS OF ODOT ITEM 304 CRUSHED LIMESTONE.
- CONTROL DENSITY FILL (CDF) SHALL BE ODOT ITEM 613, TYPE 1 LOW STRENGTH MORTAR, EXCEPT NO FLY ASH PERMITTED. THE DESIGN MIX USED SHALL BE APPROVED BY THE CITY, AND SHALL HAVE A MAXIMUM DESIGN STRENGTH OF 100 PSF.

STORM SEWER (FIGS 4.17.1 & 4.19.1):

- PIPE EMBEDMENT SHALL BE CRUSHED LIMESTONE #57 FOR SEWERS, FROM FOUR – INCHES BELOW THE PIPE BARREL TO 12–INCHES ABOVE THE PIPE BARREL FOR PVC PIPE AND TO THE SPRINGLINE FOR RCP PIPE. FOR POLYPROPYLENE PIPE, CRUSHED LIMESTONE #57 SHALL EXTEND FOUR (4) INCHES BELOW THE PIPE BARREL TO SIX (6) INCHES ABOVE THE PIPE BARREL FOR 12–INCH THROUGH 24 DIAMETER SEWER, AND SIX (6) BELOW THE PIPE BARREL TO SIX (6) INCHES ABOVE THE PIPE BARREL FOR 30 INCH THROUGH 60 INCH DIAMETER SEWER. SEE FIGURE 4.17.1.
- CONCRETE ENCASEMENT AND CONCRETE PIPE CRADLES SHALL BE ODOT CLASS C CONCRETE.
- HE GRANULAR BACKFILL SHALL MEET THE REQUIREMENTS OF ODOT ITEM 304 CRUSHED LIMESTONE.
- CONTROL DENSITY FILL (CDF) SHALL BE ODOT ITEM 613, TYPE 1 LOW STRENGTH MORTAR, EXCEPT NO SLAG PERMITTED. THE DESIGN MIX USED SHALL BE APPROVED BY THE CITY, AND SHALL HAVE A DESIGN STRENGTH OF 50 PSF.



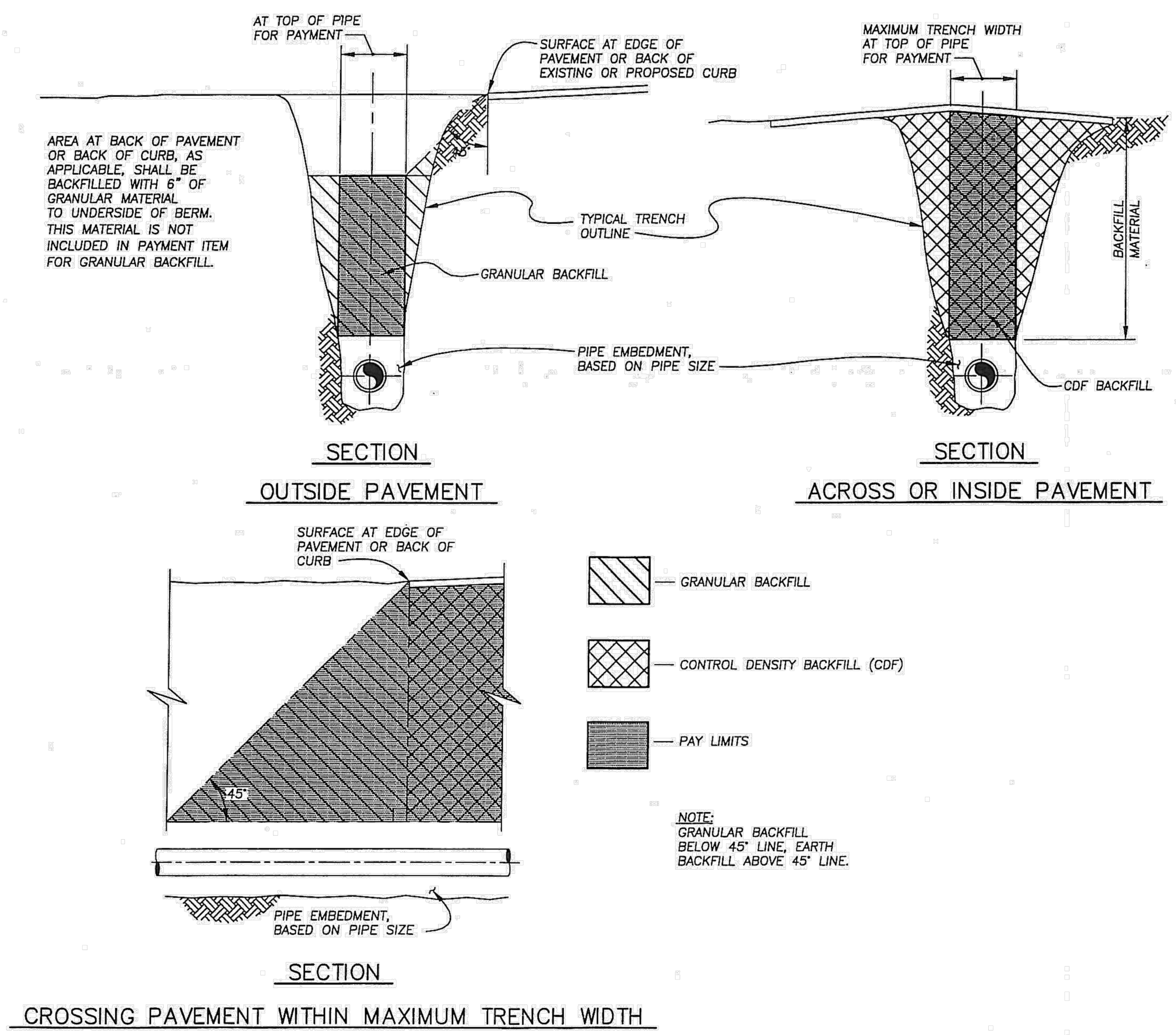
BEDDING DETAILS

NO SCALE

CONCENCS.DWG 09–15–99

FIG 2.24.1

WATER MAIN BEDDING DETAILS



GRANULAR OR CONTROLLED DENSITY FILL BACKFILL – PAY LIMITS

NO SCALE

CONDNBKFL.DWG 09–99

FIG 4.19.1

STORM SEWER & WATER MAIN TRENCH DETAILS

ENGINEERS PLANNERS SURVEYORS

R:\Summit\City\Hudson\007\Cameron GC – Barlow Road Retirement Community\DWG\2018–09–12 Barlow Rd Public Roadway Plans.dwg; 11/01/18 – 9:15am; rgrimm

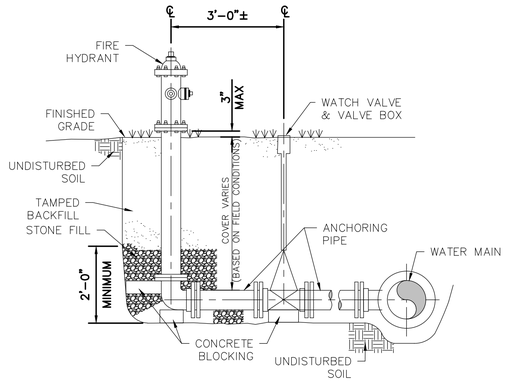
HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499–8817 FAX: (330) 499–0149
TOLL FREE: 1–800–394–8817
www.hammontree-engineers.com

REV. BY: REG DATE: 10/26/2018 DESC: DETAILS ADDED PER CITY OF HUDSON COMMENTS

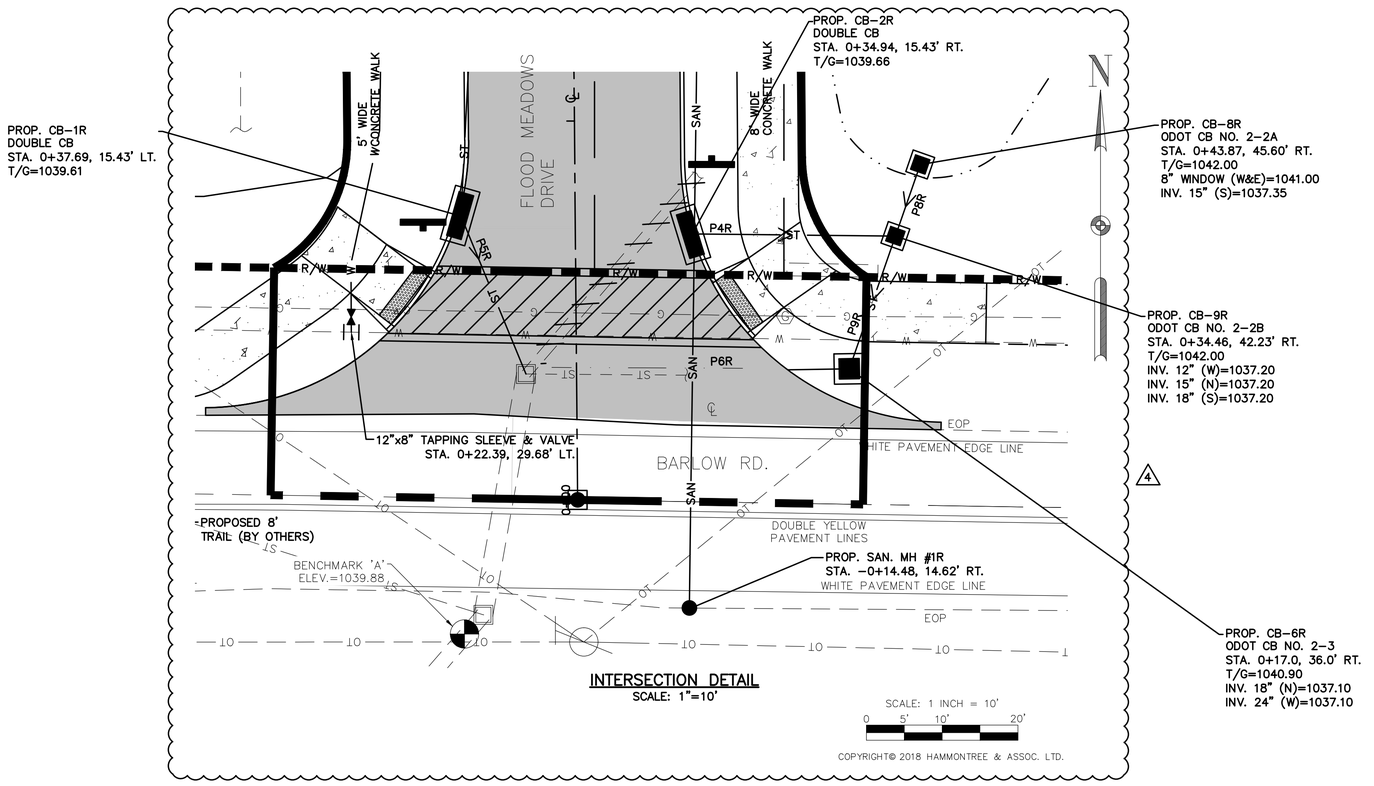
DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

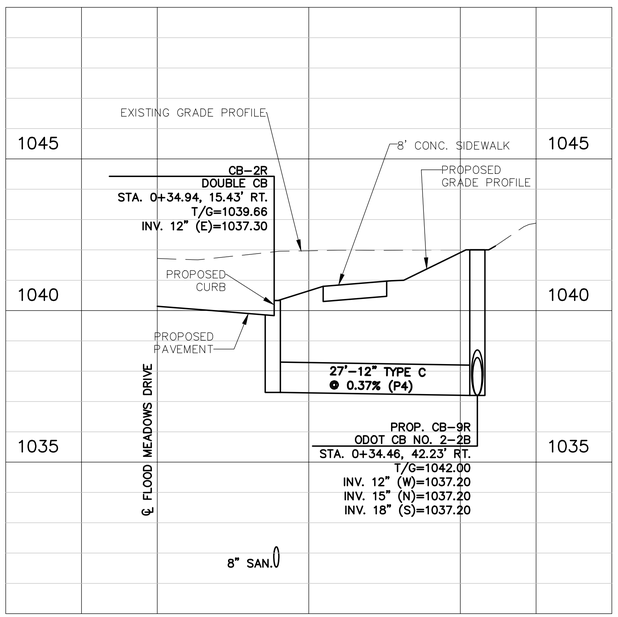
CITY OF HUDSON – TRENCH AND BEDDING DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO



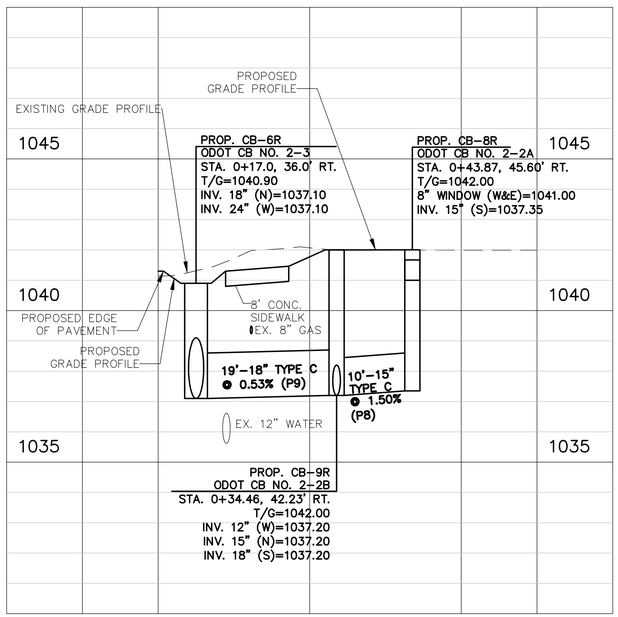
HYDRANT PERPENDICULAR TO WATER MAIN DETAIL
NTS



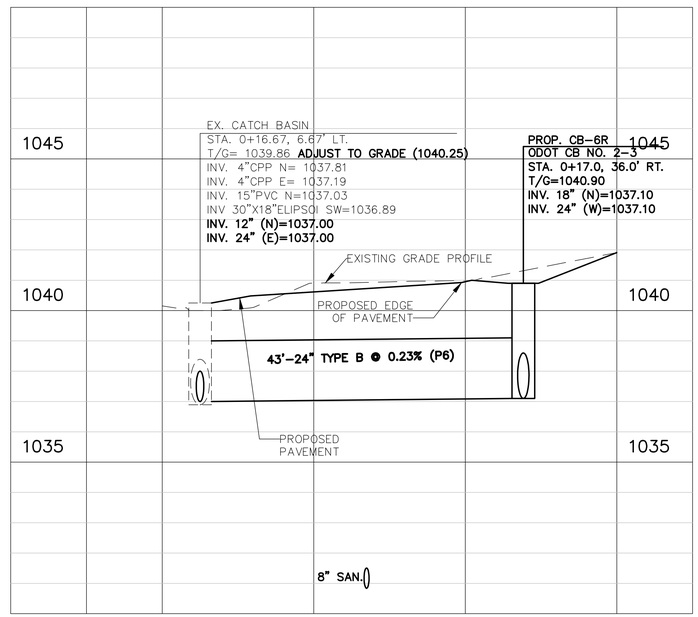
INTERSECTION DETAIL
SCALE: 1"=10'



P4R



P8R–P9R



P6R

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY:	DATE:	DESC.:
JDS	6/5/2018	4 REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC
JDS	9/12/2018	3 REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY
		2
		1

DESN BY:	JDS	
DRWN BY:	LLB	
RVWD BY:	JDS	627
FLD BK:		13-15,26-29
BK PG:		
DATE:	03/20/18	

SCALES
HORZ:
VERT:
CONTOUR INT:

SITE DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

EROSION CONTROL NOTES

1. ALL PROPERTIES ADJACENT TO THE SITE OF SOIL-DISTURBING ACTIVITY SHALL BE PROTECTED TO THE MAXIMUM EXTENT PRACTICABLE, FROM SOIL EROSION AND SEDIMENT RUNOFF AND DRAINAGE, INCLUDING, BUT NOT LIMITED TO PRIVATE PROPERTIES, NATURAL AND ARTIFICIAL WATERWAYS, WETLANDS, STORM SEWERS AND PUBLIC LANDS.

2. CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL PRACTICES USED TO SATISFY THIS REQUIREMENT SHALL CONFORM, AS A MINIMUM, TO STATE OF OHIO STANDARDS AS SET FORTH IN THE MOST-CURRENT EDITION OF THE RAINWATER AND LAND DEVELOPMENT MANUAL, DEFINED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES DIVISION OF SOIL AND WATER CONSERVATION AND NATURAL RESOURCE CONSERVATION SERVICE AND SHALL CONFORM TO THE MOST CURRENT OHIO ENVIRONMENTAL PROTECTION AGENCY, OHIO REVISED CODE CHAPTER 6111 REQUIREMENTS.

3. EROSION AND SEDIMENT CONTROL PLAN APPROVALS ISSUED IN ACCORDANCE WITH THESE RULES DO NOT RELIEVE THE OWNER OF RESPONSIBILITY FOR OBTAINING ALL OTHER NECESSARY PERMITS AND OR APPROVALS FROM FEDERAL STATE, AND/OR COUNTY AGENCIES. IF REQUIREMENTS VARY, THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.

4. EROSION AND SEDIMENT CONTROL PRACTICES AT THE SITE, AND AS IDENTIFIED IN THE ESC PLAN SHALL COMPLY WITH THE FOLLOWING:

   A. AN APPROVED EROSION AND SEDIMENT CONTROL PLAN OR APPROVAL LETTER FROM THE **SUMMIT COUNTY** SWCD SHALL BE LOCATED ON SITE FOR REVIEW.

   B. LIMITS TO CLEARING AND GRADING SHALL BE SHOWN ON ESC PLANS. LIMITS TO CLEARING AND GRADING SHALL BE CLEARLY MARKED ON SITE WITH SIGNAGE, FLAGGING, AND/OR FENCING ETC.

   C. INSTALL EROSION AND SEDIMENT PERIMETER CONTROLS AS A FIRST ACTION OF CONSTRUCTION AS SPECIFIED BY CONSTRUCTION SEQUENCE. THIS SHALL INCLUDE AND IS NOT LIMITED TO PROTECTIVE BMP'S FOR STREAM CORRIDORS AND CROSSINGS, WETLANDS, SITE ENTRANCE, SEDIMENT TRAPS & BASINS, BARRIERS, AND DIVERSION DIKES.

   D. CONCENTRATED STORM WATER RUNOFF SHALL PASS THROUGH A SEDIMENT CONTROL DEVICE BEFORE EXITING THE SITE BOUNDARIES. CONCENTRATED RUNOFF FROM BARE SOIL AREAS SHALL BE DIVERTED INTO A SETTLING POND OR SEDIMENT CONTROL STRUCTURE, OR OTHER APPROVED SEDIMENT BARRIER BEFORE LEAVING THE SITE.

   E. EARTHEN STRUCTURES SUCH AS DAMS, BASINS, STREAM MODIFICATIONS AND WATER DIVERSIONS SHALL BE SEEDED AND MULCHED WITH IN SEVEN (7) DAYS OF THE COMPLETION OF INSTALLATION. DAMS SHALL CONFORM TO THE OHIO DAM LAWS (ORC 1521.06).

   F. STABILIZATION OF CRITICAL AREAS WITHIN 50 FEET OF ANY STREAM OR WETLAND SHALL BE TEMPORARILY STABILIZED WITHIN TWO (2) DAYS OF DISTURBANCE IF AREA WILL REMAIN INACTIVE FOR SEVEN (7) DAYS OR LONGER AND PERMANENTLY STABILIZED WITHIN TWO (2) DAYS OF REACHING FINAL GRADE. CONSTRUCTION VEHICLES SHALL AVOID STREAMS AND THE 50 FOOT BUFFER AREAS. IF AN ACTIVE DRAINAGE WAY MUST BE CROSSED BY CONSTRUCTION VEHICLES REPEATEDLY DURING CONSTRUCTION, A TEMPORARY STREAM CROSSING SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS IN THE RAINWATER & LAND DEVELOPMENT MANUAL. CONSTRUCTION OF BRIDGES, CULVERTS OR SEDIMENT CONTROL STRUCTURES SHALL NOT PLACE SOIL, DEBRIS AND OTHER FINE PARTICULATE MATERIAL INTO OR CLOSE TO THE WATER RESOURCE IN SUCH A MANNER THAT IT MAY SLOUGH, SLIP OR ERODE.

   G. STORM SEWER INLETS SHALL BE PROTECTED SO THAT SEDIMENT-LADEN RUNOFF WILL NOT ENTER THE STORM SEWER SYSTEM WITHOUT FIRST BEING FILTERED AND/OR TREATED. SANITARY SEWER MANHOLES SHALL BE PROTECTED SO THAT NO STORM RUNOFF WILL ENTER THE SANITARY SEWER SYSTEM.

   H. RE-VEGETATE SOIL. TEMPORARY SOIL STABILIZATION SHALL OCCUR WITHIN SEVEN (7) DAYS AFTER ROUGH GRADING IF THE AREA WILL REMAIN IDLE LONGER THAN FOURTEEN (14) DAYS. PERMANENT SOIL STABILIZATION SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. PERMANENT VEGETATION IS A GROUND COVER DENSE ENOUGH TO COVER 80% OF THE SOIL SURFACE AND MATURE ENOUGH TO SURVIVE WINTER WEATHER CONDITION.

   I. SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED TO PREVENT SOIL LOSS. STABILIZATION SHALL BE REQUIRED IF STOCKPILES ARE LOCATED WITHIN CRITICAL AREAS NEAR STREAMS OR WETLANDS, OR IF DETERMINED BY THE **SUMMIT COUNTY** SWCD THAT SEDIMENT FROM STOCKPILES WILL LEAVE THE SITE.

   J. UNSTABLE SOILS PRONE TO SLIPPING OR SLOUGHING SHALL NOT BE CLEARED, GRADED, EXCAVATED, FILLED OR HAVE LOADS IMPOSED UPON THEM UNLESS THE WORK IS PLANNED BY A QUALIFIED PROFESSIONAL ENGINEER AND INSTALLED IN ACCORDANCE WITH THE ESC PLAN. CUT AND FILL SLOPES SHOULD BE DESIGNED TO MINIMIZE EROSION PROBLEMS. ADEQUATE SLOPE DESIGN INCLUDES USE OF ROUGH SOIL SURFACE ALONG THE FACE OF THE SLOPE; WATER DIVERSION ALONG THE TOP OF THE SLOPE AWAY FROM THE FACE; TERRACES TO REDUCE SLOPE LENGTH; DELIVERY OF CONCENTRATED STORM WATER FLOWS TO THE BASE OF THE SLOPE VIA ADEQUATE CHANNEL OR PIPE; AND DRAINAGE FOR WATER SEEPS IN THE SLOPE THAT ENDANGER SLOPE STABILITY.

   K. SOIL SHALL BE REMOVED FROM PAVED SURFACES AND/OR PUBLIC ROADS AT THE END OF EACH DAY IN SUCH A MANNER THAT DOES NOT CREATE OFF-SITE SEDIMENTATION IN ORDER TO ENSURE SAFETY AND ABATE OFF-SITE SOIL LOSS. COLLECTED SEDIMENTS SHALL BE PLACED IN A STABLE LOCATION ON SITE OR TAKEN OFF-SITE TO A STABLE LOCATION.

   L. STABILIZE DISTURBED OR MODIFIED DRAINAGE WAYS. REDUCE EROSION EFFECTS OF STORM WATER BY USING AND/OR MAINTAINING GRASSED SWALES, INFILTRATION STRUCTURES, OR WATER DIVERSIONS.

   M. SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF A 0.5" OR GREATER RAINFALL EVENT. A WRITTEN LOG OF THESE INSPECTIONS AND IMPROVEMENTS TO CONTROLS SHALL BE KEPT ON SITE. THE INSPECTIONS SHALL INCLUDE THE DATE OF INSPECTION, NAME OF INSPECTOR, WEATHER CONDITIONS, OBSERVATIONS, ACTIONS TAKEN TO CORRECT ANY PROBLEMS AND THE DATE CORRECTIVE ACTIONS WERE TAKEN.

   N. TRENCHES FOR UNDERGROUND UTILITY LINES AND PIPES SHALL BE TEMPORARILY STABILIZED WITHIN SEVEN (7) DAYS IF THEY ARE TO REMAIN INACTIVE FOR THIRTY (30) DAYS. TRENCH DEWATERING DEVICES SHALL DISCHARGE IN A MANNER THAT FILTERS SOIL-LADEN WATER BEFORE DISCHARGING IT TO A RECEIVING DRAINAGE DITCH OR POND. IF SEEDING, MULCHING, OR OTHER EROSION AND SEDIMENT CONTROL MEASURES WERE PREVIOUSLY INSTALLED, THESE PROTECTIVE MEASURES SHALL BE REINSTALLED.

   O. DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR A PERIOD OF 14 DAYS OR MORE SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROPRIATE MEANS WITHIN 7 DAYS.

   P. SOLID, SANITARY AND TOXIC WASTE MUST BE DISPOSED OF IN A PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. IT IS PROHIBITED TO BURN, BURY OR POUR OUT ONTO THE GROUND OR INTO THE STORM SEWERS ANY SOLVENTS, PAINTS, STAINS, GASOLINE, DIESEL FUEL, USED MOTOR OIL, HYDRAULIC FLUID, ANTIFREEZE, CEMENT CURING COMPOUNDS AND OTHER SUCH TOXIC OR HAZARDOUS WASTES. STORAGE TANKS SHOULD BE LOCATED IN DIKED AREAS AWAY FROM ANY DRAINAGE CHANNELS. THE DIKED AREA SHOULD HOLD A VOLUME 110% OF THE LARGEST TANK.

   Q. OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD(S) NOTED ON THE PLAN. OFFSITE SEDIMENT TRACKING SHALL BE CONTROLLED BY REGULARLY SCHEDULED SWEEPING OF OFFSITE ACCESS ROADS AND MAINTENANCE OF ROCK CONSTRUCTION ENTRANCE.

   R. ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE OHIO RAINWATER AND LAND DEVELOPMENT HANDBOOK (2006).

   S. OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.

   T. WINTERIZATION - ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

   U. CONCRETE CEMENT IS TO BE TAKEN BACK TO PLANT FOR WASHOUT AND RECYCLING OR DESIGNATED AREAS ON SITE FOR CONCRETE WASHOUT ARE TO BE USED.

ADDITIONAL CONSTRUCTION SITE POLLUTION CONTROLS

1. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTES:

   - PREVENT SPILLS
   - FOLLOW LABEL DIRECTIONS FOR DISPOSAL
   - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
   - RECYCLE WASTES WHENEVER POSSIBLE
   - DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
   - DON'T BURY CHEMICALS OR CONTAINERS
   - DON'T POUR DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
   - DON'T BURN CHEMICALS OR CONTAINERS
   - DON'T MIX CHEMICALS TOGETHER

2. CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS USED ON-SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (C&DD) WASTE MUST BE DISPOSED OF AT AN OHIO EPA APPROVED C&DD LANDFILL.

3. NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON-SITE. BY EXCEPTION, CLEAN FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN A WAY WHICH DOES NOT ENCROACH UPON NATURAL WETLANDS, STREAMS OR FLOODPLAINS OR RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.

4. HANDLING CONSTRUCTION CHEMICALS. MIXING, PUMPING, TRANSFERRING OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.

5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS MAY APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND TANK OF 660 GALLONS OR MORE, ACCUMULATIVE ABOVE GROUND STORAGE OF 1330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. CONTAMINATED SOILS MUST BE DISPOSED OF IN ACCORDANCE WITH ITEM 8.

6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FT. OF THE SUMP SHALL BE CUT AND PLUGGED. FOR SMALL PROJECTS, TRUCK CHUTES MAY BE RINSED AWAY FROM ANY WATER CONVEYANCES.

7. SPILL REPORTING REQUIREMENTS: SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY 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). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO OHIO EPA.

8. CONTAMINATED SOILS. IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY. (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). NOTE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT AUTHORIZED UNDER OHIO EPA'S GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

9. OPEN BURNING. NO MATERIALS CONTAINING RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS, SUCH AS TIRES, AUTOPARTS, PLASTICS OR PLASTIC COATED WIRE MAY BE BURNED (OAC 3745-19). OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS, WHICH ARE DEFINED AS: 1) WITHIN CORPORATION LIMITS; 2) WITHIN 1000 FEET OUTSIDE A MUNICIPAL CORPORATION HAVING A POPULATION OF 1000 TO 10,000; AND 3) A ONE MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE. OUTSIDE OF RESTRICTED AREAS, NO OPEN BURNING IS ALLOWED WITHIN A 1000 FEET OF AN INHABITED BUILDING ON ANOTHER PROPERTY. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR: HEATING TAR, WELDING, SMUDGE POTS AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING FOR WARMTH OR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE OR LAND-CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM OHIO EPA), AND AGRICULTURAL WASTES, EXCLUDING BUILDINGS.

10. DUST CONTROL OR DUST SUPPRESSANTS SHALL BE USED TO PREVENT NUISANCE CONDITIONS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER WHICH WILL PREVENT A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

11. OTHER AIR PERMITTING REQUIREMENTS: CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC OHIO EPA AIR PERMITS FOR INSTALLATION AND OPERATION. OPERATORS MUST SEEK AUTHORIZATION FROM THE CORRESPONDING DISTRICT OF OHIO EPA. FOR DEMOLITION OF ALL COMMERCIAL SITES, A NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO OHIO EPA TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.

12. PROCESS WASTE WATER/LEACHATE MANAGEMENT. OHIO EPA'S CONSTRUCTION GENERAL PERMIT ONLY ALLOWS THE DISCHARGE OF STORM WATER AND DOES NOT INCLUDE OTHER WASTE STREAMS/DISCHARGES SUCH AS VEHICLE AND/OR EQUIPMENT WASHING, ON-SITE SEPTIC LEACHATE CONCRETE WASH OUTS, WHICH ARE CONSIDERED PROCESS WASTEWATERS. ALL PROCESS WASTEWATERS MUST BE COLLECTED AND PROPERLY DISPOSED AT AN APPROVED DISPOSAL FACILITY. IN THE EVENT, LEACHATE OR SEPTAGE IS DISCHARGED; IT MUST BE ISOLATED FOR COLLECTION AND PROPER DISPOSAL AND CORRECTIVE ACTIONS TAKEN TO ELIMINATE THE SOURCE OF WASTE WATER.

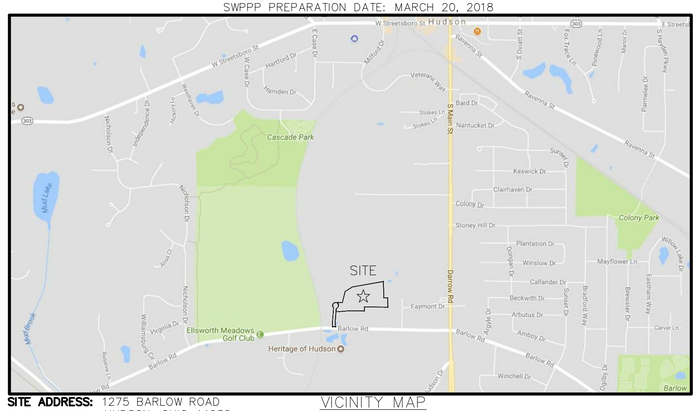
13. A PERMIT TO INSTALL (PTI) IS REQUIRED PRIOR TO THE CONSTRUCTION OF ALL CENTRALIZED SANITARY SYSTEMS, INCLUDING SEWER EXTENSIONS, AND SEWERAGE SYSTEMS (EXCEPT THOSE SERVING ONE, TWO, AND THREE FAMILY DWELLINGS) AND POTABLE WATER LINES. PLANS MUST BE SUBMITTED AND APPROVED BY OHIO EPA. ISSUANCE OF AN OHIO EPA CONSTRUCTION GENERAL STORM WATER PERMIT DOES NOT AUTHORIZE THE INSTALLATION OF ANY SEWERAGE SYSTEM WHERE OHIO EPA HAS NOT APPROVED A PTI.

I, THE UNDERSIGNED, CERTIFY THAT I UNDERSTAND AND WILL ADHERE TO THE REQUIREMENTS, TERMS, AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN REVIEWED AND APPROVED BY THE SUMMIT SOIL AND WATER CONSERVATION DISTRICT FOR COMPLIANCE WITH THE SUMMIT COUNTY WATER QUALITY REGULATIONS FOR THE ABOVE REFERENCED PROJECT.

OWNER- _____ DATE _____

STORMWATER POLLUTION PREVENTION PLAN

SWPPP PREPARATION DATE: MARCH 20, 2018



SITE ADDRESS: 1275 BARLOW ROAD
HUDSON, OHIO 44236

VICINITY MAP
N.T.S.

CONSTRUCTION SEQUENCE

1. CONDUCT PRE-CONSTRUCTION MEETING WITH SUMMIT SWCD.
2. INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE AS SHOWN ON PLANS. (CONTRACTOR SHALL DESIGNATE THE AREA UTILIZED FOR CONSTRUCTION ENTRANCE.)
3. CLEAR TREES, BRUSH AND STUMPS AS NECESSARY.
4. ALL PERIMETER BARRIERS TO BE CONSTRUCTED WITHIN 7 DAYS OF FIRST GRUBBING.
5. SEDIMENT BASINS MUST BE INSTALLED PRIOR TO UP-SLOPE DISTURBANCE.
6. INSTALL TEMPORARY SEEDING TO ALL STRUCTURAL EROSION INSTALLATIONS PRIOR TO MASS GRADING OF SITE.
7. STRIP/STOCKPILE TOPSOIL. STOCKPILES THAT ARE INACTIVE FOR 14 DAYS OR LONGER SHALL BE SEEDED/STABILIZED WITHIN 7 DAYS OF LAST ACTIVITY.
8. MASS GRADING OF THE SITE.
9. INSTALL UNDERGROUND UTILITIES AND BUILDING.
10. INSTALL INLET PROTECTION AT ALL CATCH BASINS & DRAIN BASINS.
11. BRING PAVEMENT AREAS TO SUB GRADE.
12. INSTALL PAVEMENT AND BACK FILL CURBS. AFTER INSTALLATION OF PAVEMENT REPLACE INLET PROTECTION.
13. FINISH GRADE, SEED AND MULCH ALL DISTRIBUTED AREAS AND MAINTAIN TEMPORARY EROSION CONTROLS AS REQUIRED.
14. UPON COMPLETION AND SITE STABILIZATION, REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM STORM SYSTEM AND REMOVE SOIL AND EROSION CONTROLS, EXCEPT FOR SILT FENCING. SILT FENCE TO BE REMOVED AFTER 80% OF SITE HAS BEEN STABILIZED.

ADDITIONAL PROVISIONS:
1. INSTALLATION OF SILT FENCING SHALL NOT OCCUR PRIOR TO THE INITIAL PRE-CONSTRUCTION MEETING.
2. CONTINUOUSLY SWEEP DRIVES AND STREET AND MAINTAIN CONSTRUCTION ENTRANCE.
3. ALL AREAS AT FINAL GRADE OR WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR 14 DAYS OR LONGER SHALL BE STABILIZED WITHIN 7 DAYS OF LAST ACTIVITY.

SITE INFO:

SITE DESCRIPTION- CONSTRUCTION OF A RETIREMENT COMMUNITY ON 11.55 AC. AND CONSTRUCTION OF PRIVATE ROADWAY & UTILITIES ON REMAINING ACRES.

BMPs- MAIN SITE PLAN TO INSTALL WATER QUALITY/DETENTION BASINS. ADDITIONAL AREA TO BE DIVERTED INTO THESE 2 BMP's. ROADWAY PHASE BMP IS A REDUCTION OF 20% IMPERVIOUS AREA. REDUCTION IN VOLUME OF STORM WATER FLOWING TO BARLOW ROAD.

TOTAL AREA OF SITE - 35.23 AC.
AREA OF SITE TO UNDER GO EXCAVATION - 12.72 AC.
THIS PHASE WILL DISTURB - 3.06 AC.

PRE-CONSTRUCTION RUNOFF CURVE NO. - 84
POST-CONSTRUCTION RUNOFF CURVE NO. - 85 (4)

SCHEDULE OF MAJOR CONSTRUCTION

COMMENCEMENT - SPRING 2018
COMPLETION - SUMMER 2019

RECEIVING STREAM & SURFACE WATER

ONSITE DRAINAGE FLOWS TO AN UNNAMED TRIBUTARY THAT CONNECTS INTO THE MUDBROOK TRIBUTARY

SOILS

FROM THE WEB SOIL SURVEY:
MgB- MAHONING SILT LOAM, 2 TO 6% SLOPES
EIB- ELLSWORTH SILT LOAM, 2 TO 6% SLOPES

FROM SOIL BORINGS REPORT BY TERRACON DATED 12/22/16:
TOPSOIL - 4 TO 11 INCHES IN DEPTH
LEAN CLAY - 3 TO 15 FEET IN DEPTH
SANDY SILT, SILTY SAND CLAY SAND - 10 TO 17 FEET IN DEPTH

APPROVALS

OEPA NOI PERMIT #- 3GC09951*BG (4)

OWNER/DEVELOPER

CAMERON GENERAL CONTRACTORS
8040 EIGLER DRIVE
LINCOLN NE, 68516
PHONE: (402) 420-3149
ATTN: BOB LEWIS
DIRECTOR OF DEVELOPMENT
blewis@camerongeneralcontractors.com

ENGINEER/ SURVEYOR

HAMMONTREE & ASSOCIATES, LIMITED
5233 STONEHAM ROAD
NORTH CANTON, OHIO 44720

ATTN- JENNIFER D. SCHUMACHER, PE, LEED-AP

PHONE- 330-499-8817

jschumacher@hammontree-engineers.com

STATE OF OHIO
JENNIFER D. SCHUMACHER
E-65091
REGISTERED
PROFESSIONAL ENGINEER
9-20-18

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

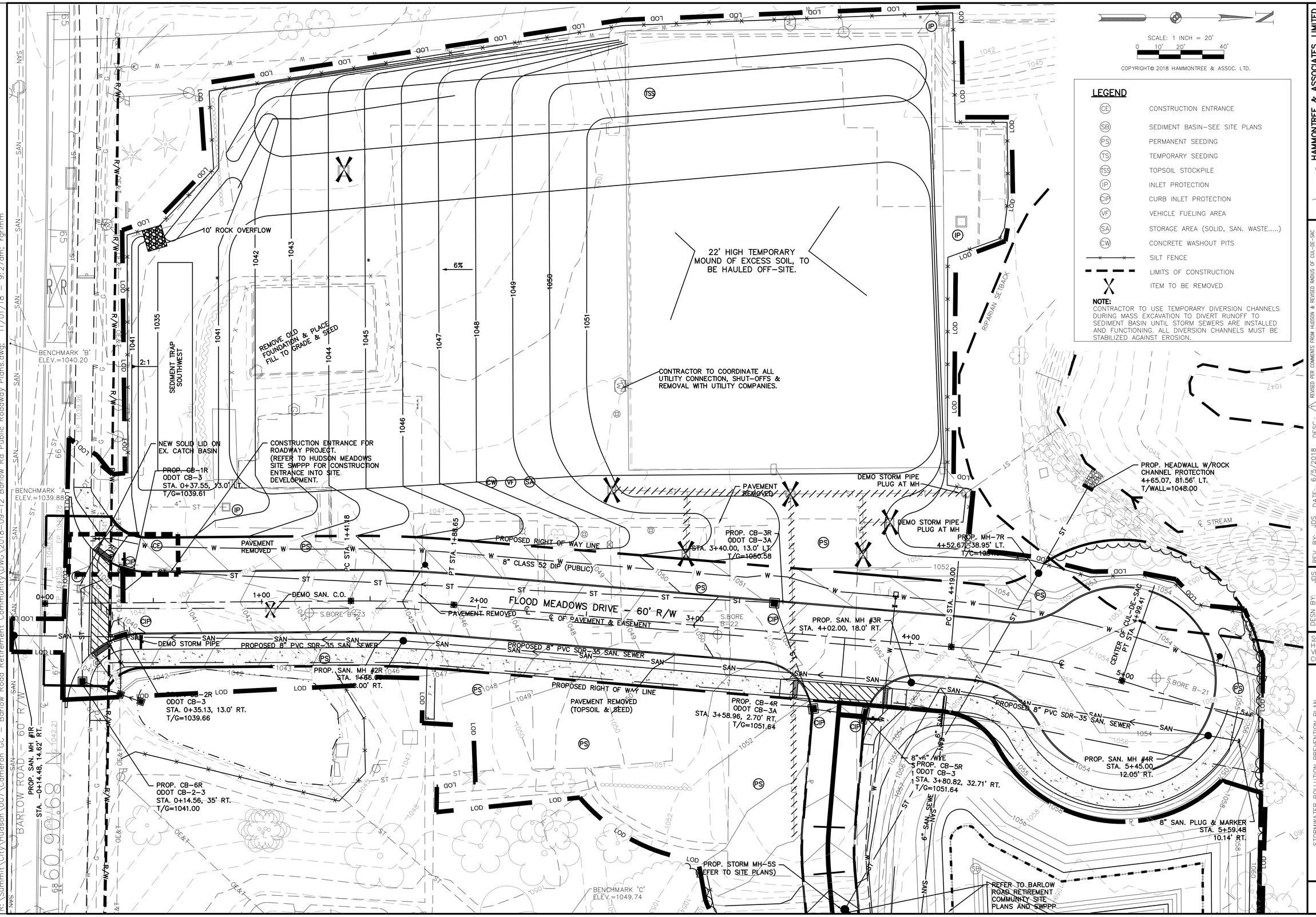
REV. BY:	JDS	DATE:	9/20/2018
REV. BY:		DATE:	
REV. BY:		DATE:	
REV. BY:		DATE:	
REV. BY:		DATE:	

4 REVISED LOD LIMITS/PIPE MATERIAL

DESN BY:	JDS
DRWN BY:	LLB
RVWD BY:	JDS
FLD BK:	627
BK PG:	13-15, 20-29
DATE:	3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

STORMWATER POLLUTION PREVENTION NOTES
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO



HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV.	BY:	DATE:	DESC.:
1	JDS	6/5/2018	REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC
2	JDS	9/12/2018	REVISED PRIVATE ROADWAY TO PUBLIC ROADWAY

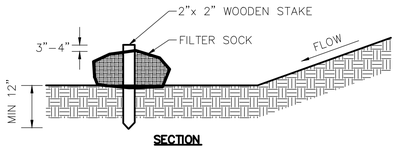
DESN BY:	JDS
DRWN BY:	LLB
RVWD BY:	JDS
FLD BK:	627
BK PG:	13-15, 20-29
DATE:	3/20/18

SCALES
HORZ: 20'
VERT:
CONTOUR INT: 1'

STORMWATER POLLUTION PREVENTION PLAN
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

FILTER SOCK
N.T.S.

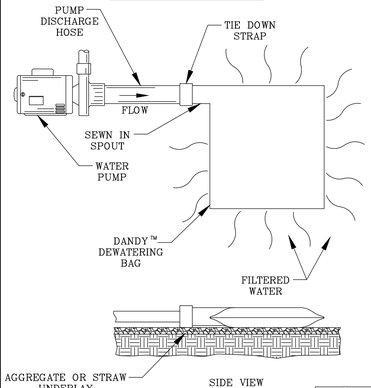
1. MATERIALS: COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF A PARTICLES RANGING FROM 3/8" TO 2".



SECTION

2. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.
3. FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
4. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
5. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.
6. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
7. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
8. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
9. REMOVAL: FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH AS WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

DANDY DEWATERING BAG™



DETAIL OF A DEWATERING BAG

DANDY DEWATERING BAG™ SPECIFICATIONS

NOTE: THE DANDY DEWATERING BAG™ WILL BE **MANUFACTURED IN THE U.S.A.** FROM A NONWOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

DANDY DEWATERING BAG™

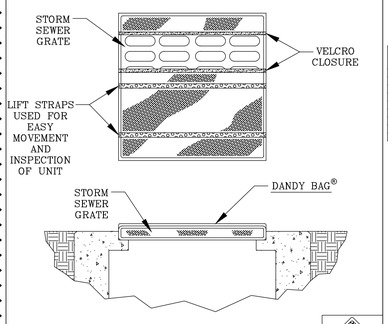
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205) x 0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50 x 50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80) X 0.36 (80)
UV Resistance	ASTM D 4355	%	70
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.180 (80)
Flow Rate	ASTM D 4491	l/min/m²(gal/min/ft²)	3866 (95)
Permittivity	ASTM D 4491	Sec⁻¹	1.2

PROJECT:		DR. BY:
CITY/STATE:	DATE:	DR. NO:

DE-WATERING

1. A DE-WATERING PLAN SHALL BE DEVELOPED PRIOR TO THE COMMENCEMENT OF ANY PUMPING ACTIVITIES.
2. THE DE-WATERING PLAN SHALL INCLUDE ALL PUMPS AND RELATED EQUIPMENT NECESSARY FOR THE DEWATERING ACTIVITIES AND DESIGNATE AREAS FOR PLACEMENT OF PRACTICES. OUTLETS FOR PRACTICES SHALL BE PROTECTED FROM SCOUR EITHER BY RIPRAP PROTECTION, FABRIC LINER, OR OTHER ACCEPTABLE METHOD OF OUTLET PROTECTION.
3. WATER THAT IS NOT DISCHARGED INTO A SETTLING/TREATMENT BASIN BUT DIRECTLY INTO WATERS OF THE STATE SHALL BE MONITORED HOURLY. DISCHARGED WATER SHALL BE WITHIN ±5° F OF THE RECEIVING WATERS.
4. SETTLING BASINS SHALL NOT BE GREATER THAN FOUR (4) FEET IN DEPTH. THE BASIN SHALL BE CONSTRUCTED FOR SEDIMENT STORAGE AS OUTLINED IN CHAPTER 6, SEDIMENT BASIN OR SEDIMENT TRAP. THE INLET AND OUTLET FOR THE BASIN SHALL BE LOCATED AT THE FURTHEST POINTS OF THE STORAGE. A FLOATING OUTLET SHALL BE USED TO ENSURE THAT SETTLED SOLIDS DO NOT RE-SUSPEND DURING THE DISCHARGE PROCESS. THE SETTLING BASIN SHALL BE CLEANED OUT WHEN THE STORAGE HAS BEEN REDUCED BY 50% OF ITS ORIGINAL CAPACITY.
5. ALL NECESSARY NATIONAL, STATE AND LOCAL PERMITS SHALL BE SECURED PRIOR TO DISCHARGING INTO WATERS OF THE STATE.

DANDY BAG®



DETAIL OF INLET SEDIMENT CONTROL DEVICE

PROJECT:		DR. BY:
CITY/STATE:	DATE:	DR. NO:

DANDY BAG® SPECIFICATIONS

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

HI-FLOW DANDY BAG® (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 Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m²(gal/min/ft²)	5907 (145)
Permittivity	ASTM D 4491	Sec⁻¹	2.1

*Note: All Dandy Bags® can be ordered with our optional oil absorbent pillows

TEMPORARY SEEDING

SEEDING DATES	SPECIES	LB./1000 FT2	LB/ACRE
MARCH 1 TO AUGUST 15	OATS TALL FESCUE ANNUAL RYEGRASS	3 1 1	128 40 40
	PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 40 40
	ANNUAL RYEGRASS PERENNIAL RYEGRASS CREEPING RED FESCUE KENTUCKY BLUEGRASS	1.25 3.25 0.40 0.40	55 142 17 17
	OATS TALL FESCUE ANNUAL RYEGRASS	3 1 1	128 40 40
AUGUST 16TH TO NOVEMBER	RYE TALL FESCUE ANNUAL RYEGRASS	3 1 1	112 40 40
	WHEAT TALL FESCUE ANNUAL RYEGRASS	3 1 1	120 40 40
	PERENNIAL RYE TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 40 40
	ANNUAL RYEGRASS PERENNIAL RYEGRASS CREEPING RED FESCUE KENTUCKY BLUEGRASS	1.25 3.25 0.40 0.40	40 40 40
NOVEMBER 1 TO FEB. 29	USE MULCH ONLY OR DORMANT SEEDING		

NOTE: OTHER APPROVED SPECIES MAY BE SUBSTITUTED.

1. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.
2. TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 14 DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDED WITHIN 7 DAYS AFTER GRADING.
3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.
4. SOIL AMENDMENTS: TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. BASE RATES FOR LIME AND FERTILIZER SHALL BE USED.
5. SEEDING METHOD: SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

PERMANENT SEEDING

SEED MIX	SEEDING RATE		NOTES:
	LBS./ACRE	LBS./1,000 SQ. FEET	
GENERAL USE			
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20-40 10-20 20-40	1/2-1 1/4-1/2 1/2-1	FOR CLOSE MOWING & FOR WATERWAYS WITH <2.0 FT/SEC VELOCITY
TALL FESCUE TURF-TYPE (DWARF) FESCUE	40-50 90	1-1 1/4 2 1/4	
STEEP BANKS OR CUT SLOPES			
TALL FESCUE CROWN VETCH TALL FESCUE	40-50 10-20 20-30	1-1 1/4 1/4-1/2 1/2-3/4	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20-25 20-30	1/2-3/4 1/2-3/4	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES			
TALL FESCUE TURF-TYPE (DWARF) FESCUE KENTUCKY BLUEGRASS	40-50 80 5	1-1 1/4 2 1/4 0.1	
LAWNS			
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100-120	2 2	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100-120	2 1-1/2	FOR SHADED AREAS

SITE PREPARATION:
1. SUBSOILER, PLOW, OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. (MAXIMIZING INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY.) SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
2. THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3. TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

SEEDBED PREPARATION:
1. LIME: AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000-SQ. FT. OR 2 TONS PER ACRE.
2. FERTILIZER: FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN PLACE OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AT A RATE OF 25 POUNDS PER 1,000-SQ. FT. OR 1000 POUNDS PER ACRE OF A 10-10-10 OR 12-12-12 ANALYSES.
3. THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES. ON SLOPING LAND, THE SOIL SHALL BE WORKED ON THE CONTOUR.

SEEDING DATES AND SOIL CONDITIONS:
SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE-SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.

DORMANT SEEDINGS:
1. SEEDINGS SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD, THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.

4

HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV. BY: JDS	DATE: 9/20/2018	DESC.: REVISED LOD LIMITS/PIPE MATERIAL
REV. BY:	DATE:	DESC.:
REV. BY:	DATE:	DESC.:
REV. BY:	DATE:	DESC.:
REV. BY:	DATE:	DESC.:

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15, 20-29
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

STORMWATER POLLUTION PREVENTION DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO

SWPPP MODIFICATIONS LOG

MOD. #	DESCRIPTION OF MODIFICATION	DATE OF MOD.	MODIFICATION PREPARED BY (NAME/TITLE)

CONTRACTOR TO KEEP A WRITTEN LOG OF INSPECTIONS AND IMPROVEMENTS TO SEDIMENT & EROSION CONTROLS. A CHECKLIST/INSPECTION FORM CAN BE FOUND AT:
www.summitswcd.org/forms/inspection checklist.pdf

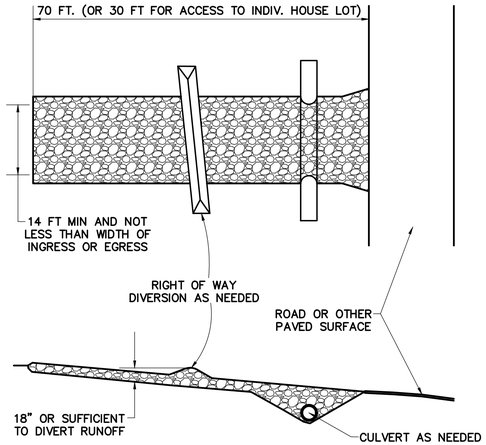
CONSTRUCTION ENTRANCE
N.T.S.

1. STONE SIZE: ODOT # 2 (1.5–2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDUAL LOTS).
3. THICKNESS: THE STONE LAYER SHALL BE AT LEAST 18 INCHES THICK FOR LIGHT OR HEAVY DUTY USE.
4. THE ENTRANCE SHALL BE AT LEAST 20 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE: A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT–PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

   GEOTEXTILE SPECIFICATION FOR CONSTRUCTION ENTRANCE

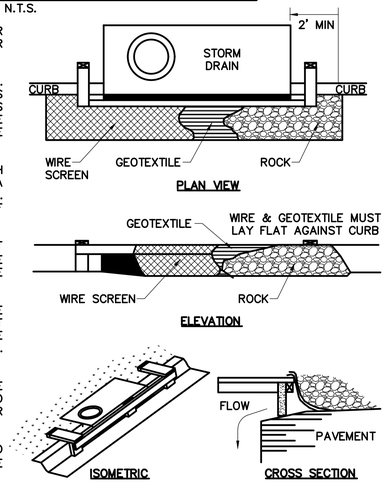
MINIMUM TENSILE STRENGTH	200 LBS.	MINIMUM PUNCTURE STRENGTH	80 PSI.
MINIMUM TEAR STRENGTH	50 LBS.	MINIMUM BURST STRENGTH	320 PSI.
MINIMUM ELONGATION	20%	EQUIVALENT OPENING SIZE	EOS < 0.6 MM.
PERMITIVITY	1X10–3 CM/SEC.		

6. TIMING: THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. CULVERT: A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
8. WATER BAR: A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
9. MAINTENANCE: TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
10. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF–SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION–SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
11. REMOVAL: THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ENTRANCE.



GEOTEXTILE–STONE INLET PROTECTION FOR CURB INLETS
N.T.S.

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
2. CONSTRUCT A WOODEN FRAME OF 2–BY–4–IN. CONSTRUCTION–GRADE LUMBER. THE END SPACERS SHALL BE A MINIMUM OF 1 FT. BEYOND BOTH ENDS OF THE THROAT OPENING. THE ANCHORS SHALL BE NAILED TO 2–BY–4–IN. STAKES DRIVEN ON THE OPPOSITE SIDE OF THE CURB.
3. THE WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC AND STONE. IT SHALL BE A CONTINUOUS PIECE WITH A MINIMUM WIDTH OF 30 IN. AND 4 FT. LONGER THAN THE THROAT LENGTH OF THE INLET, 2 FT. ON EACH SIDE.
4. GEOTEXTILE CLOTH SHALL HAVE AN EQUIVALENT OPENING SIZE (EOS) OF 20–40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE AT LEAST THE SAME SIZE AS THE WIRE MESH.
5. THE WIRE MESH AND GEOTEXTILE CLOTH SHALL BE FORMED TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET AND SECURELY FASTENED TO THE 2–BY–4–IN. FRAME.
6. TWO–INCH STONE SHALL BE PLACED OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE CLOTH.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE STONE AND/OR GEOTEXTILE REPLACED WHEN CLOGGED WITH SEDIMENT.



SILT FENCE
N.T.S.

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
4. SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
7. THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6–INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6–IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND, (SEE DETAILS).
10. MAINTENANCE––SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVER\FS20 TOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

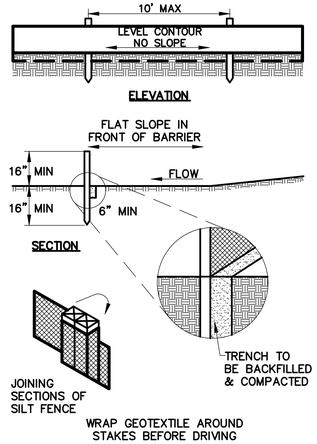
    SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE–HALF OF THE HEIGHT OF THE SILT FENCE.

    SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

CRITERIA FOR SILT FENCE MATERIALS

1. FENCE POST – THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS WILL BE 2–BY–2–IN. NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS, THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
2. SILT FENCE FABRIC – SEE CHART BELOW.

FABRIC PROPERTIES	VALUES	TEST METHOD
MIN TENSILE STRENGTH	120 LBS	ASTM D 4632
MAX. ELONGATION AT 60 LBS	50%	ASTM D 4632
MIN. PUNCTURE STRENGTH	50 LBS	ASTM D 4833
MIN. TEAR STRENGTH	40 LBS	ASTM D 4533
APPARENT OPENING SIZE	0.84 MM	ASTM D 4751
UV EXPOSURE STRENGTH	70%	ASTM G 4355
MIN. PERMITIVITY	1X10–2SEC.–1	ASTM D 4491



CONCRETE WASHOUT FACILITY
N.T.S.

NOTES:
TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FT FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.

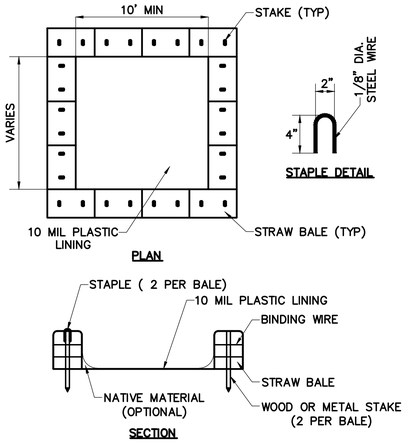
A SIGN SHOULD BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.

TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED ABOVE GRADE OR BELOW GRADE AT THE OPTION OF THE CONTRACTOR. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

ONLY CONCRETE FROM MIXER TRUCK CHUTES SHOULD BE WASHED INTO CONCRETE WASH OUT.

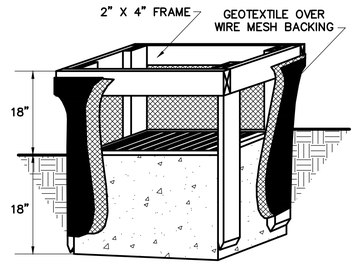
CONCRETE WASHOUT FROM CONCRETE PUMPER BINS CAN BE WASHED INTO CONCRETE PUMPER TRUCKS AND DISCHARGED INTO DESIGNATED WASHOUT AREA OR PROPERLY DISPOSED OF OFFSITE.

ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF ON A REGULAR BASIS.



GEOTEXTILE INLET PROTECTION
N.T.S

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.
3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2–INCH BY 4–INCH CONSTRUCTION GRADE LUMBER. THE 2–INCH BY 4–INCH POSTS SHALL BE DRIVEN ONE (1) FT. INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2–INCH BY 4–INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WILL 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 THE FRAME.
5. GEOTEXTILE MATERIAL SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20–40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF 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 CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION. THE TOP OF THE DIKE SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.



HAMMONTREE & ASSOCIATES, LIMITED
ENGINEERS, PLANNERS, SURVEYORS
5233 STONEHAM RD. NORTH CANTON, OH 44720
PHN: (330) 499-8817 FAX: (330) 499-0149
TOLL FREE: 1-800-394-8817
www.hammontree-engineers.com

REV.	BY:	DATE:	DESC.:
1	JDS	6/5/2018	REVISED PER COMMENTS FROM HUDSON & REVISED RADIUS OF CUL-DE-SAC

DESN BY: JDS
DRWN BY: LLB
RVWD BY: JDS
FLD BK: 627
BK PG: 13-15, 20-29
DATE: 3/20/18

SCALES
HORZ:
VERT:
CONTOUR INT:

STORMWATER POLLUTION PREVENTION DETAILS
PUBLIC ROADWAY PHASE/PUBLIC UTILITY EASEMENT
FOR: BARLOW ROAD RETIREMENT COMMUNITY
LOCATED IN THE CITY OF HUDSON
SUMMIT COUNTY, OHIO