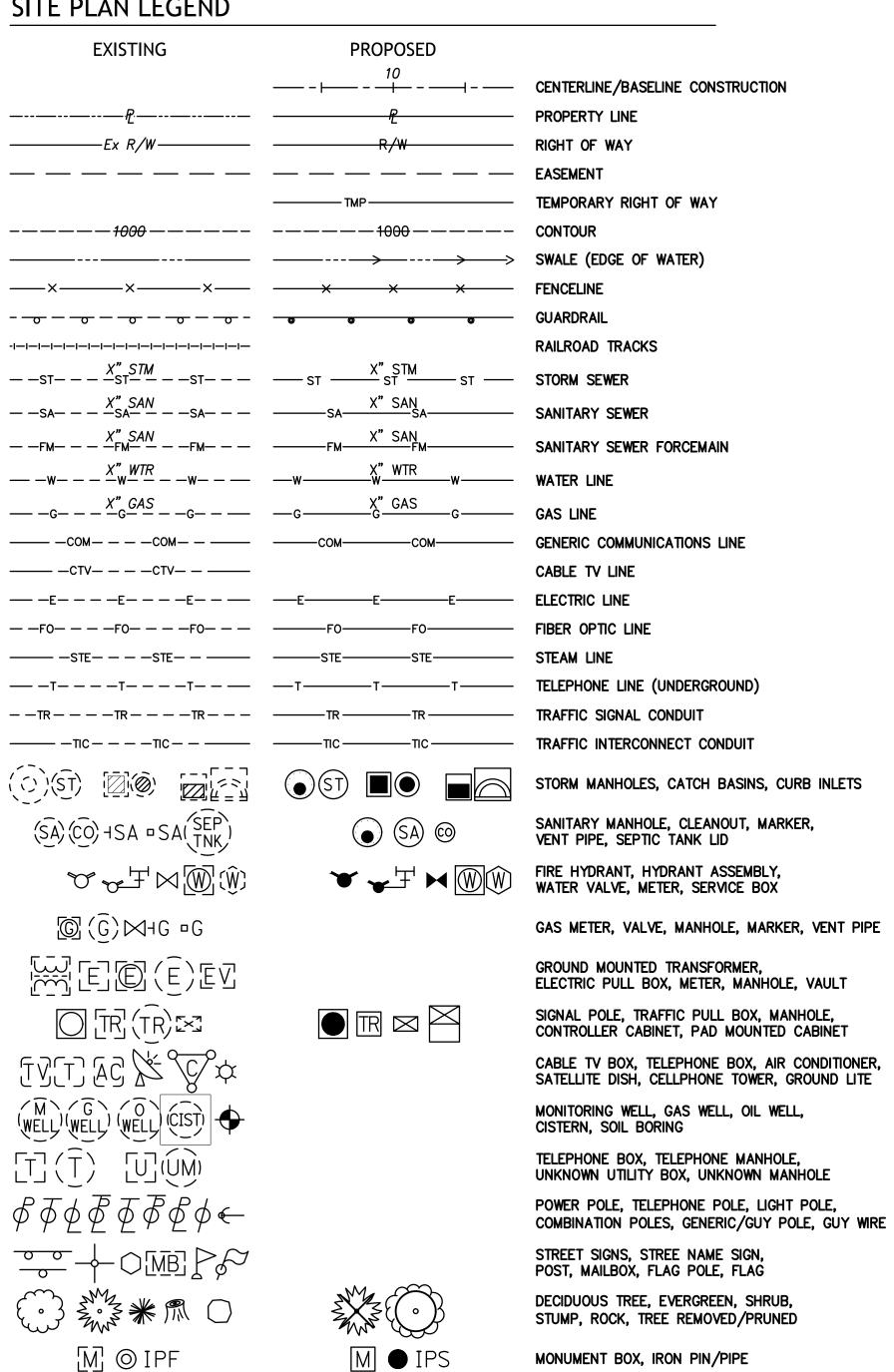
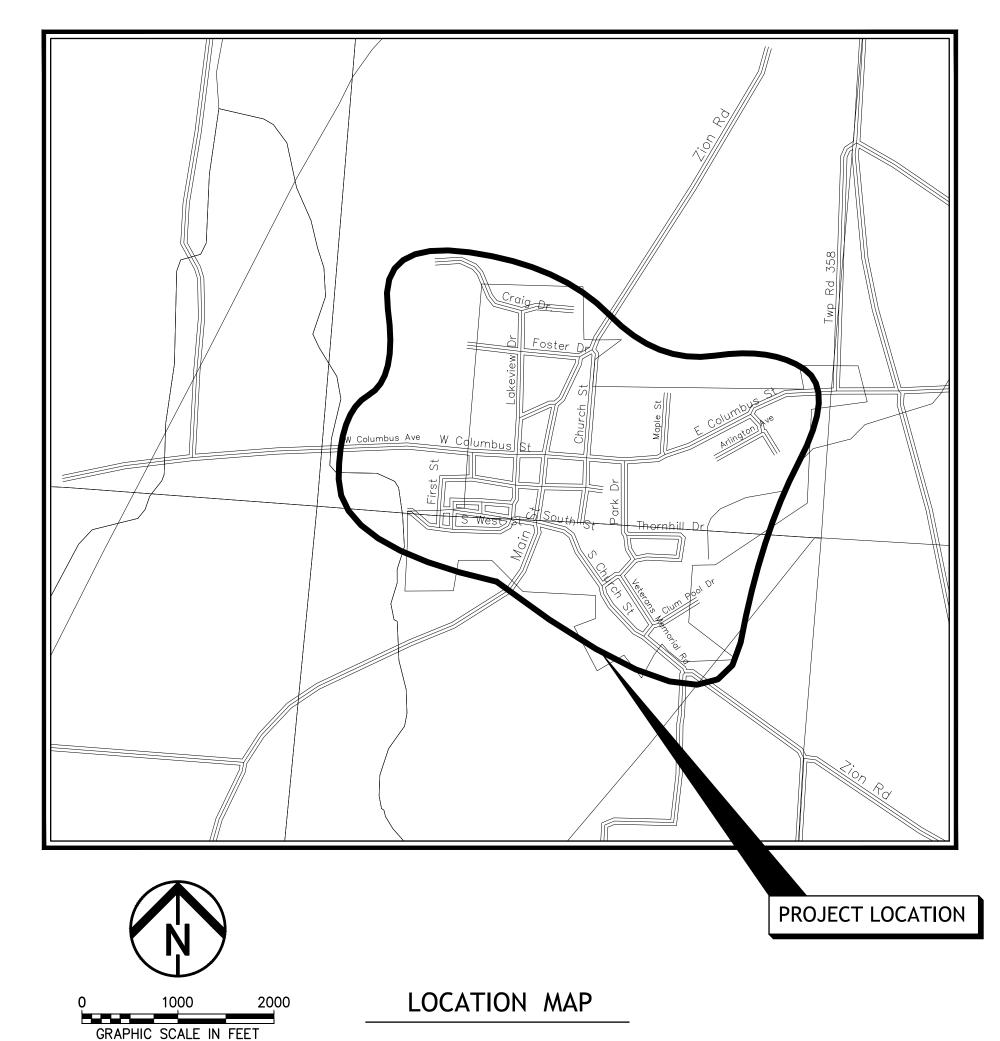
Village of Thornville WWTP IMPROVEMENTS: PHASE II INFILTRATION AND INFLOW REDUCTION PROJECT

SITE PLAN LEGEND



PERRY COUNTY, OHIO Village of Thornville Project



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APPROVALS: Village of Thornville	
MAYOR	Date

PLANS PREPARED AND RECOMMENDED BY:



2018 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THESE PLAN BID DOCUMENTS SHALL GOVERN THIS IMPROVEMENT. FOR PURPOSES OF THIS PLAN, REFERENCES TO DIRECTOR OR ENGINEER SHALL BE CONSTRUED TO MEAN THE CITY ENGINEER AND/OR HIS REPRESENTATIVES.



REVISED:		SET NO.	
PROJ. NUMBER DESIGNED BY: DRAWN BY: FILE NO.	23-00602-010 GWS ARC ZTITL-23-00602-010.dwg	TITLE SHEET	SHEET 1 OF 8

ALL ITEM NUMBERS REFER TO THE 2023 STATE OF OHIO, DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. ALL EQUIPMENT, MATERIAL AND WORKMANSHIP SHALL BE PERFORMED ACCORDING TO THESE SPECIFICATIONS.

THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PROJECT, SITE CONDITIONS, WEATHER LIMITATIONS, PLANS, SPECIFICATIONS, STANDARD DRAWINGS AND ANY OTHER DOCUMENTS ASSOCIATED WITH THE PROJECT PRIOR TO BIDDING.

ANY CHANGE ORDERS TO THE ORIGINAL CONTRACT DOCUMENTS MUST BE SUBMITTED IN WRITING BY THE CONTRACTOR TO THE ENGINEER FOR REVIEW AND APPROVAL/DISAPPROVAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON SUSPECTING A PENDING CHANGE ORDER. THE ENGINEER WILL REVIEW EACH REQUEST. WORK COMPLETED BY THE CONTRACTOR WITHOUT PRIOR WRITTEN AUTHORIZATION WILL NOT BE PAID AND COST WILL BE BORNE BY THE CONTRACTOR.

ANY MODIFICATION TO THE WORK SHOWN ON THESE PLANS MUST HAVE PRIOR WRITTEN APPROVAL BY THE ENGINEER.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REQUEST AND ATTEND A PRE-CONSTRUCTION MEETING. AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS AND MATERIAL SHEETS FOR REVIEW, A LIST OF SUBCONTRACTORS, A WRITTEN SCHEDULE FOR THE PROJECT, EMERGENCY NUMBERS, AND OTHER ITEMS REQUESTED BY THE ENGINEER, PRIOR TO BEGINNING ANY WORK ON THE PROJECT.

THE CONTRACTOR SHALL CONFINE WORK ACTIVITIES TO THE PROJECT AREA, UNLESS PRIVATE APPOINTMENTS HAVE BEEN MADE BETWEEN BETWEEN THE CONTRACTOR AND PROPERTY OWNERS TO EXTEND ONTO PRIVATE PROPERTY. ALL DAMAGE TO AREAS BEYOND THE WORK LIMITS SHALL BE REPAIRED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION BEFORE CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.

ALL COSTS FOR THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

THE CONTRACTOR AND SUBCONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTION AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR(S) TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

THE ENGINEER RESERVES THE RIGHT TO STOP WORK ON THE PROJECT, WITH NO RESPONSIBILITY TO DELAY CLAIMS OR PROJECT SCHEDULE, SHOULD THE CONTRACTOR FAIL TO PROVIDE A SAFE ENVIRONMENT FOR WORKERS AND/OR THE PUBLIC.

<u>MATERIAL STORAGE/EQUIPMENT STORAGE</u>

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE APPROPRIATE EQUIPMENT AND MATERIAL STORAGE AREA TO SUIT HIS NEEDS.

MATERIAL TESTING AND PERMITS

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL TESTING.
- 2. THE EXECUTED PROJECT CONTRACT SHALL SERVE TO FULFILL LICKING COUNTY PERMITTING REQUIREMENTS.

NO NIGHT WORK BETWEEN THE HOURS OF 7:00 P.M. TO 7:00 A.M. SHALL BE PERMITTED UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE ENGINEER AND LICKING COUNTY.

CONSTRUCTION SEQUENCE

THE CONTRACTOR SHALL ENGAGE IN THE CONSTRUCTION OF THE PROJECT SUCH THAT ADEQUATE ACCESS TO THE RESIDENCES AND ALL BUSINESSES IS MAINTAINED AT ALL TIMES. INCLUDE COSTS IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC. ONCE THE CONTRACTOR IS ENGAGED IN THE PROJECT, WORK SHALL BE CONTINUOUS USING FULL CREWS.

REMOVAL OF DEBRIS AND SITE CLEANUP

THE PROJECT SITE MUST BE KEPT FREE OF CONSTRUCTION DEBRIS, TRASH, PAPER AND OTHER WASTE ITEMS. COLLECT AND REMOVE THESE ITEMS AT THE END OR EACH WORK DAY.

DUST NUISANCE ORIGINATION

DUST PRODUCED FROM ANY OPERATIONS INSIDE OR OUTSIDE THE RIGHT-OF-WAY SHALL BE CONTROLLED BY THE CONTRACTOR IN ACCORDANCE WITH ITEM 616. WATER AND/OR CALCIUM CHLORIDE SHALL NOT BE APPLIED UNLESS ORDERED BY THE ENGINEER.

PAVEMENT SWEEPING

AS REQUIRED DURING THE COURSE OF EACH WORK DAY, THE CONTRACTOR SHALL SWEEP ALL PAVED AREAS AFFECTED BY THE DAY'S WORK. PAVEMENT SHALL BE SCRAPED AND SWEPT TO REMOVE ALL DIRT, MUD AND DEBRIS. INCLUDE THE COST OF THIS WORK IN THE PRICE BID FOR THE EXCAVATION.

PROTECTION AND RESTORATION OF PROPERTY

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE PROPERTY.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE OR INJURY TO PROPERTY OF ANY CHARACTER, DURING THE EXECUTION OF THE WORK, RESULTING FROM ANY ACT, OMISSION, NEGLECT, OR MISCONDUCT OF HIS MANNER OR METHOD OF EXECUTING THE WORK, OR AT ANY TIME DUE TO DEFECTIVE WORK OR MATERIALS, AND SAID RESPONSIBILITY WILL NOT BE RELEASED UNTIL THE PROJECT IS COMPLETED AND ACCEPTED.
- 3. WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY OCCURS TO PUBLIC OR PRIVATE PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLECT, OR MISCONDUCT IN THE EXECUTION OF THE WORK, OR IN CONSEQUENCE OF THE NON-EXECUTION THEREOF BY THE CONTRACTOR, HE SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR SHALL MAKE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.
- 4. WHEN SIGNS AND SUPPORTS INTERFERE WITH CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND ERECT THEM IN A TEMPORARY LOCATION DURING CONSTRUCTION IN A MANNER SATISFACTORY TO AND AS DIRECTED BY THE ENGINEER. AFTER COMPLETION OF THE CONSTRUCTION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL ERECT THE SIGNS AND SUPPORTS IN THEIR ORIGINAL LOCATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

MANHOLE LIDS IN PAVEMENT

MANHOLE LIDS IN FAVEMENT

MANHOLE LIDS MUST BE SET TO THE PAVEMENT CROSS SLOPE. GRADE RING SHALL HAVE

VARIABLE THICKNESS TO ACHIEVE THE REQUIRED CROSS SLOPE ACROSS THE LID.

NOTIFICATION OF PROPERTY OWNERS/TENANTS

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO PROPERTY OWNERS AND/OR TENANTS AT LEAST 5 WORKING DAYS PRIOR TO CONSTRUCTION OPERATIONS ON EASEMENT AREAS.

MAINTAINING SANITARY SEWER SERVICE

THE CONTRACTOR SHALL NOTIFY RESIDENTS OF EFFECTED PROPERTIES AT LEAST 72 HOURS PRIOR TO DISRUPTIONS OF SANITARY SEWER SERVICE. SEWER SERVICES SHALL BE RESTORED WITHIN 8 HOURS OF ANY DISRUPTIONS. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING FOR ANY SERVICE INTERRUPTIONS LONGER THAN 8 HOURS. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE RELATED BID ITEMS.

EROSION CONTROL

ALL CONSTRUCTION EROSION CONTROL ITEMS SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
THE COST OF THESE ITEMS, AS WELL AS TEMPORARY SEEDING SHALL BE INCLUDED WITH THE
PIPE LINING AND VARIOUS RELATED ITEMS. TEMPORARY SEEDING OR MULCHING SHALL BE PLACED
IN ACCORDANCE WITH ODOT ITEM 659 NO MORE THAN 21 DAYS AFTER DISTURBANCE.
ALL COSTS SHALL BE INCLUDED WITH THE PIPE LINING AND VARIOUS RELATED ITEMS.

CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO LINE EACH MANHOLE IN ACCORDANCE WITH SUPPLIED SPECIFICATIONS. COST SHALL INCLUDE, BUT IS NOT LIMITED TO, BYPASS PUMPING (IF NECESSARY), PREPARATION OF THE SURFACE BY WATER BLASTING (MINIMUM 3500 PSI) THE INTERIOR OF THE MANHOLE OR STRUCTURE TO REMOVE LOOSE MORTAR, PAINTS, EFFLORESCENCE, CONTAMINANTS, LAITANCE AND CURING COMPONENTS, LEAVING A CLEAN, STRUCTURALLY SOUND SUBSTRATE. WIRE BRUSHING OR SAND BLASTING MAY BE REQUIRED. REMOVAL OF STEPS AND PLUGGING HOLES WITH NON—SHRINK GROUT, HYDROSTATIC LEAK REPAIRS WITH HYDRAULIC CEMENT OR CHEMICAL GROUT, GROUTING BETWEEN BRICKS AS NECESSARY, RESTORATIVE SPRAY IN MORTAR, CORROSION EPOXY BARRIER LINING AND CHIMNEY SEAL.

SEE SUPPLEMENTAL SPECIFICATIONS FOR DETAILS AND INSTALLATION INSTRUCTIONS FOR ALL

ALL COSTS OF MATERIALS AND LABOR AS OUTLINED ABOVE AND IN THE SPECIFICATIONS SHALL BE INCLUDED IN THE VERTICAL FOOT COSTS.

<u>ITEM SPECIAL — EXISTING MANHOLE LINING REMOVAL</u>

CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO REMOVE ALL EXISTING MANHOLE PROTECTIVE COATINGS. COST SHALL INCLUDE, BUT IS NOT LIMITED TO, BYPASS PUMPING (IF NECESSARY) AND/OR SEWAGE FLOW DIVERSION,, PREPARATION OF THE SURFACE BY WATER BLASTING (MINIMUM 3500 PSI) THE INTERIOR OF THE MANHOLE OR STRUCTURE TO REMOVE EXISTING PROTECTIVE COATINGS, LEAVING A CLEAN STRUCTURALLY SOUND SUBSTRATE. WIRE BRUSHING OR SAND BLASTING MAY BE REQUIRED.

ALL COSTS OF MATERIALS AND LABOR ASSOCIATED WITH REMOVING EXISTING PROTECTIVE COATINGS SHALL BE INCLUDED IN THE VERTICAL FOOT COST OF ITEM SPECIAL — EXISTING MANHOLE LINING REMOVAL.

ITEM 614 - MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL NOTIFY ALL RESIDENTS ON THE AFFECTED STREETS, POLICE, FIRE, AND TOWNSHIPS IN WRITING AT LEAST 72 HOURS PRIOR TO A STREET CLOSURE. STREETS SHALL BE RE-OPENED DURING NON-WORKING HOURS.

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR, IN ACCORDANCE WITH THE CURRENT OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

NORMAL ACCESS AND EMERGENCY ACCESS ROUTES TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

ALL TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC AT ALL TIMES WITHIN THE PROJECT LIMITS. EXCEPTION: DURING WORKING HOURS FROM 7 AM TO 6 PM, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE-LANE, TWO-WAY TRAFFIC PER PAGE C-18 OF THE OMUTCD.

IF, IN THE OPINION OF THE ENGINEER, PROPER MAINTENANCE OF TRAFFIC DEVICES ARE NOT BEING PROVIDED OR MAINTAINED BY THE CONTRACTOR, THE APPROPRIATE MAINTENANCE OF TRAFFIC DEVICES WILL BE INSTALLED BY THE CONTRACTOR THROUGH A CHANGE—ORDER DEDUCTION FROM THE PROJECT CONTRACTOR.

ITEM SPECIAL — MANHOLE FRAME AND COVER REPLACEMENT

CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY

TO REPLACE MANHOLE FRAME AND COVER IN ASPHALT PAVEMENT, CONCRETE PAVEMENT,

AND GRASS/YARDS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

COST SHALL INCLUDE, BUT IS NOT LIMITED TO;

SAW CUTTING OF ASPHALT PAVEMENT AND/OR CONCRETE PAVEMENT, EXCAVATION WITHIN GRASS/YARD (INCLUDING REMOVAL & REPLACEMENT OF ALL FILL), REMOVING AND REPLACING EXISTING FRAME AND COVER IN ACCORDANCE WITH LICKING COUNTY NEEHNAH MANHOLE FRAME & LID, REPLACEMENT OF ASPHALT AND/OR CONCRETE (INCLUDING EXPANSION JOINTS, FORMING, FINISHING, ETC.), ASPHALT SEALING ON SEAM, SURFACE RESTORATION & GRASSING IN ACCORDANCE WITH ODOT ITEM 659 — SEEDING & MULCHING.

ALL COSTS OF MATERIALS AND LABOR AS OUTLINED ABOVE AND IN THE PLANS SHALL BE INCLUDED IN THE UNIT COST FOR ITEM SPECIAL — MANHOLE FRAME AND COVER REPLACEMENT.

ITEM SPECIAL — 8" CURED IN PLACE (CIPP) PIPE LINING, AS PER PLAN

CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO LINE THE SPECIFIED PIPE SIZE AND LENGTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. COST SHALL INCLUDE, BUT IS NOT LIMITED TO, BYPASS PUMPING AND/OR DIVERSION OF SEWAGE FLOW, CLEANING AND TELEVISION INSPECTION OF SEWER TO BE LINED, ENGINEERING DESIGN CALCULATIONS FOR LINER THICKNESS, PUBLIC NOTIFICATION PLAN, 50 YEAR FULLY STRUCTURAL STAND ALONE LINER INSTALLATION, RECONNECTION OF SERVICE CONNECTIONS, FINAL TELEVISION INSPECTION, TESTING & WARRANTY REPAIR OF LINED PIPE SYSTEM, AS—BUILT DRAWINGS, AND VIDEOS UTILIZING THE OWNER'S NUMBERING SYSTEM.

ALL COSTS OF MATERIALS AND LABOR AS OUTLINED ABOVE AND IN THE SPECIFICATIONS SHALL BE INCLUDED IN THE PER FOOT UNIT COST PER SIZE OF PIPE FOR INDIVIDUAL ITEMS, ITEM SPECIAL — XX" CURED IN PLACE PIPE LINING, AS PER PLAN.

ITEM SPECIAL - ROOT CUTTING

CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS AS NECESSARY TO ROOT CUT THE SEWER MAIN WHERE NECESSARY AT THE SPECIFIED PIPE SIZE AND LENGTH. COST SHALL INCLUDE, BUT IS NOT LIMITED TO BYPASS PUMPING, AND/OR DIVERSION OF SEWAGE FLOW, CLEANING AND TELEVISION INSPECTION OF SEWER TO BE CUT, AND FINAL TELEVISION INSPECTION.

ALL COSTS OF MATERIALS AND LABOR AS OUTLINED ABOVE SHALL BE INCLUDED IN THE PER FOOT UNIT COST PER SIZE OF PIPE FOR INDIVIDUAL ITEMS, ITEM SPECIAL — ROOT CUTTING.

PAYMENT SHALL BE FOR EACH FOOT OF ROOT CUTTING THAT IS COMPLETED.

		GENERA	L SUMMARY	
ODOT	COC	TOTAL	UNIT	DESCRIPTION
ITEM	ITEM			
				MANHOLE REHABILITATION
	SPECIAL	1560	VF	MANHOLE REHABILITATION (171 MH AVG DEPTH 9.12')
				PIPE REPAIRS
	SPECIAL	24000	LF	8" CURED IN PLACE (CIPP) PIPE LINING
				MISCELLANEOUS
624		1	LS	MOBILIZATION
614		1	LS	MAINTENANCE OF TRAFFIC
				CONTINGENCY ITEMS (AS DIRECTED)
	SPECIAL	25	EA	MANHOLE FRAME AND COVER CASTING (EST. 25%)
	SPECIAL	3600	LF	ROOT CUTTING (EST. 15%)
	SPECIAL	3600	LF	HEAVY CLEANING (EST. 15%)





WWTP IMPROVEMENTS:
PHASE II INFILTRATION AN
INFLOW PROJECT

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DATE: _____REVISIONS

CHECKED BY:

DATE ISSUED:

GENERAL NOTES

YYYY/MM/DD

2

OF

MANHOLE	 E DETAILS— SEWER	SHED 4
MANHOLE NUMBER	SHEET	DEPTH (FT)
		i i
2	<u>5</u> 5	3.84 5.35
3	<u> </u>	4.60
4	<u> </u>	5.66
5	5	8.20
6	5	8.10
7	5	10.21
8	5	8.28
9	5	CAN'T OPEN
10	5	CAN'T OPEN
11	8	10.43
12	8	5.91
13	5	3.72
14	5	5.52
15	5	5.54
16	5	7.34
17	5	8.26
18	<u>5</u> 5	9.31
19	<u> </u>	CAN'T OPEN
20 21	5	CAN'T OPEN CAN'T OPEN
22	5	CAN'T OPEN
23	5	9.59
24	5	6.81
25	5	3.30
26	5	5.88
27	5	5.00
28	5	CAN'T OPEN
29	5	6.78
30	5	CAN'T OPEN
31	5	CAN'T OPEN
32	5	CAN'T OPEN
33	5	4.61
34	5	9.82
35	5	5.65
36	5	3.55
37	5	7.44
38	5 5	6.16
39 40	<u> </u>	3.15 2.79
41	5	3.24
42	5	3.35
43	5	7.04
44	5	3.18
45	5	7.27
46	5	8.90
47	5	CAN'T OPEN
48	5	8.90
49	5	CAN'T OPEN
50	5	CAN'T OPEN
51	5	CAN'T OPEN
52	5	12.37
53	<u>5</u> 5	9.40
54		6.51
55 56	5	7.49
56 57	<u>5</u> 5	9.39 7.10
58	5	6.91
59	5 5	CAN'T OPEN
60	<u>5</u>	CAN'T OPEN
61	5	CAN'T OPEN
62	8	3.38
63	8	CAN'T OPEN
64	8	CAN'T OPEN
65	5	CAN'T OPEN
66	8	6.20
67	8	CAN'T OPEN
68	5	4.58
69	5	3.85
70	5	7.21
71	5	13.13
72	5	11.22

MANHOLE	DETAILS - SEWER	SHED 3
MANHOLE NUMBER	SHEET	DEPTH (FT)
73	6	8.82
74	6	9.05
75	6	8.61
76	6	8.60
77	6	13.52
78	6	14.49
79	6	12.49
80	6	9.37
81	6	CAN'T OPEN
82	6	4.72
83	6	5.30
84	6	6.95
85	6	7.72

11.22

MANHOLE	DETAILS- SEWER	SHED 2
MANHOLE NUMBER	SHEET	DEPTH (FT)
86	6	8.75
87	6	10.45
88	6	10.15
89	6	9.48
90	6	5.12
91	6	8.99
92	6	6.65
93	6	5.55
94	6	6.76
95	6	9.38
96	6	5.52
97	6	4.35
98	6	3.12
99	6	9.35
100	5	8.94
101	5	2.90
102	5	8.05
103	5	CAN'T OPEN
104	5	3.49
105	5	8.23
106	5	8.28
107	5	8.78
108	5	CAN'T OPEN
109	5	CAN'T OPEN
110	5	CAN'T OPEN
111	5	5.52
112	5	7.62
113	5	CAN'T OPEN
114	5	9.38
115	5	10.90
116	6	6.95
117	6	4.98
118	6	5.39
119	6	CAN'T OPEN
120	6	4.56
121	6	7.00
122	6	14.60
123	6	6.00
124	7	8.00
125	7	5.82
126	7	6.89
127	7	8.77
128	7	5.50
129	7	7.81
130	7	CAN'T OPEN
131	7	11.64
132	7	10.54
133	7	6.09
134	7	6.49
135	7	7.35
136	7	7.21
137	7	

MANHOL	E DETAILS- SEWER	SHED 1
MANHOLE NUMBER	SHEET	DEPTH (FT)
138	7	8.36
139	7	8.43
140	7	9.74
141	7	7.85
142	7	8.95
143	7	10.95
144	7	11.47
145	7	8.20
146	7	5.37
147	7	14.86
148	7	6.45
149	7	MH NOT FOUND
150	7	MH NOT FOUND
151	7	4.48
152	7	CAN'T OPEN
153	7	2.99
154	7	11.89
155	7	5.71
156	7	7.39
157	7	10.64
158	7	9.72
159	7	8.52
160	7	8.95
161	7	9.28
162	7	6.60
163	7	5.00
164	7	4.96
165	8	2.94
166	8	6.78
167	8	4.00
168	8	5.02
169	8	7.90
170	8	9.70
171	8	6.20
172	8	4.88
173	8	3.47
174	8	6.80
175	8	5.31

I MIN. CIP	P THICKNESS REQU	IREMENT
SEWER REACH	SHEET	T (MM)
1-2	5	3.2
2–3	5	3.2
2–72	5	3.9
3–4	5	3.3
4-5	5	3.3
5-6	5	3.3
5–53	5	3.5
6-7	5	3.7
7–8	8	3.7
7–11	8	3.7
8–9	5	3.5
9–10	5	3.3
11–12	5	3.7
12–13	5	3.3
13–14	5 5	3.2
13–16	5	3.1
14–15	5	3.2
16-17	5	3.3
17–18	5	3.5
18–19	5	3.5
19-20	5	3.5
	5	
20-21		3.5
21–109	5	3.5
22–23	5	3.6
25-29	5	3.0
30-31	5	3.0
31–32	5	3.0
32–33	5	3.0
	5	
32–35		3.3
33–34	5	3.6
35-36	5	3.3
36-37	5	3.1
37–38	5	3.1
37–70	5	3.2
38–39	5	2.8
38–43	5	3.0
38-41	5	2.8
39-40	5	2.9
41-42	5	3.0
43-44	5	3.0
45-46	5	3.4
46-47	5	3.4
47–48		3.4
	5	
48-49	5	3.4
48-52	5	4.0
49-50	5	3.4
49-51	5	3.4
52-53	5	4.1
54-55	5	3.1
55-56	5	3.5
56-57	5	3.5
57–58	5	3.0
58-59	5	3.0
59-60	5	3.0
60-61	5	3.0
61-62	8	3.0
62-63	8	3.0
63-64	8	3.0
64–168	8	3.1
63–65	8	3.0
68–69	5	3.0
69-70	5	3.1
70-71	5	4.2
71–72	5	4.2
71 /2	-	T .

MIN. CIP	P THICKNESS REQU	IREMENT	MIN CIPP	THICKNESS REC	QUIREMENT
REACH	SHEET	T (MM)	SEWER REACH	SHEET	T (MM)
2	5	3.2	75–76	6	3.4
3	5	3.2	76-77	6	3.3
2	5	3.9	77–78	6	4.4
}	5	3.3	78-79 79-80	6 6	4.4 4.1
2	5 5	3.3 3.3	80-81	6	3.5
3	<u>5</u>	3.5	82-83	6	3.2
7	5	3.7	83-84	6	3.0
3	8	3.7	84-85	6	3.2
1	8	3.7	96-99	6	3.5
9	5	3.5	97–98	6	3.0
0	5	3.3	99-100	6	3.5
2	5	3.7	101-102	5	3.3
3	5	3.3	106-107	5	3.4
4	5	3.2	115–116	6	3.8
16	5	3.1	116-117	6	3.0
5 7	5	3.2	116-119 119-120	6 6	3.0
8	5 5	3.3 3.5	120-121	6	3.0 3.0
19	5	3.5	121–122	6	4.4
20	5	3.5	121-123	6	3.0
21	5	3.5	123-124	7	3.2
09	5	3.5	124-125	7	3.2
23	5	3.6	126-134	7	3.1
29	5	3.0	126-129	7	3.2
31	5	3.0	127-128	7	3.4
32	5	3.0	129-130	7	3.2
33	5	3.0	130–131	7	3.9
35 34	5	3.3	131–132	7	3.9
,	5	3.6	134–135 135–136	7	3.1 3.1
36 37	<u>5</u> 5	3.3 3.1	135–136	7	3.1
38	<u>5</u>	3.1	138-139	7	3.3
70	5	3.2	138-147	7	4.4
39	5	2.8	139-140	7	3.6
13	5	3.0	139-141	7	3.3
41	5	2.8	141-142	7	3.4
40	5	2.9	141-143	7	3.8
12	5	3.0	143-144	7	3.9
14	5	3.0	143-145	7	3.8
16	5	3.4	145-146	7	3.3
17 18	5	3.4	147-148 148-149	7	4.4 MH NOT FOUND
1 9	<u> </u>	3.4 3.4	149-150	7	MH NOT FOUND
52	5	4.0	150-151	7	3.0
50	5	3.4	151-152	7	3.0
51	5	3.4	152-153	7	4.1
53	5	4.1	153-154	7	4.0
55	5	3.1	154-155	7	4.0
56	5	3.5	155–156	7	3.6
57	5	3.5	155–163	7	3.3
58	5	3.0	156-157	7	3.8
59	5	3.0	157–158	7	3.8
60 61	<u> </u>	3.0	157–161 158–159	7	3.8 3.6
62		3.0 3.0	159-160	7	3.4
52 53	<u>8</u> 8	3.0	161–162	7	3.5
55 54	8	3.0	163-164	7	3.1
68	8	3.1	164-165	7	3.1
65 65	8	3.0	165–166	8	3.0
59 59	5	3.0	167–168	8	3.1
70	5	3.1	170–171	8	3.6
71	5	4.2	171–172	8	2.8
72	5	4.2	172–173	8	3.1
7 4 75	6	3.5	173–174	8	3.0
75	6	3.5	174–175	8	3.0





Know what's below. Call before you
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WWTP IMPROVEMENTS:	INFLOW PROJECT	VILLAGE OF THORNVILLE
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DATI	E:		
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PROJ	IECT NO.:		23-00602-010

DRAWN BY:

CHECKED BY: DATE ISSUED:

> MANHOLE & PIPE LINER DETAILS

YYYY/MM/DD

of **8**





PROPOSED PIPE LINING

PIPE PREVIOUSLY LINED SEWER SHED BOUNDARY

MANHOLE PREVIOUSLY LINED

PROPOSED MANHOLE LINING

VEMENT THORNVILLE

Environmental Design Group

AKRON / CLEVELAND / COLUMBUS

HO 450 GRANT ST., AKRON, OH 44311
P 330.375.1390 / TF 800.835.1390
W ENVDESIGNGROUP.COM

Know what's below.
Call before you dig.

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SHEET INDEX



23-00602-010



GRAPHIC SCALE IN FEET

PROPOSED SANITARY PIPE TO BE LINED

EXISTING SANITARY PIPE

SEWER SHED BOUNDARY

SANITARY MANHOLE TO BE LINED

EXISTING SANITARY MANHOLE

Environmental Design Group

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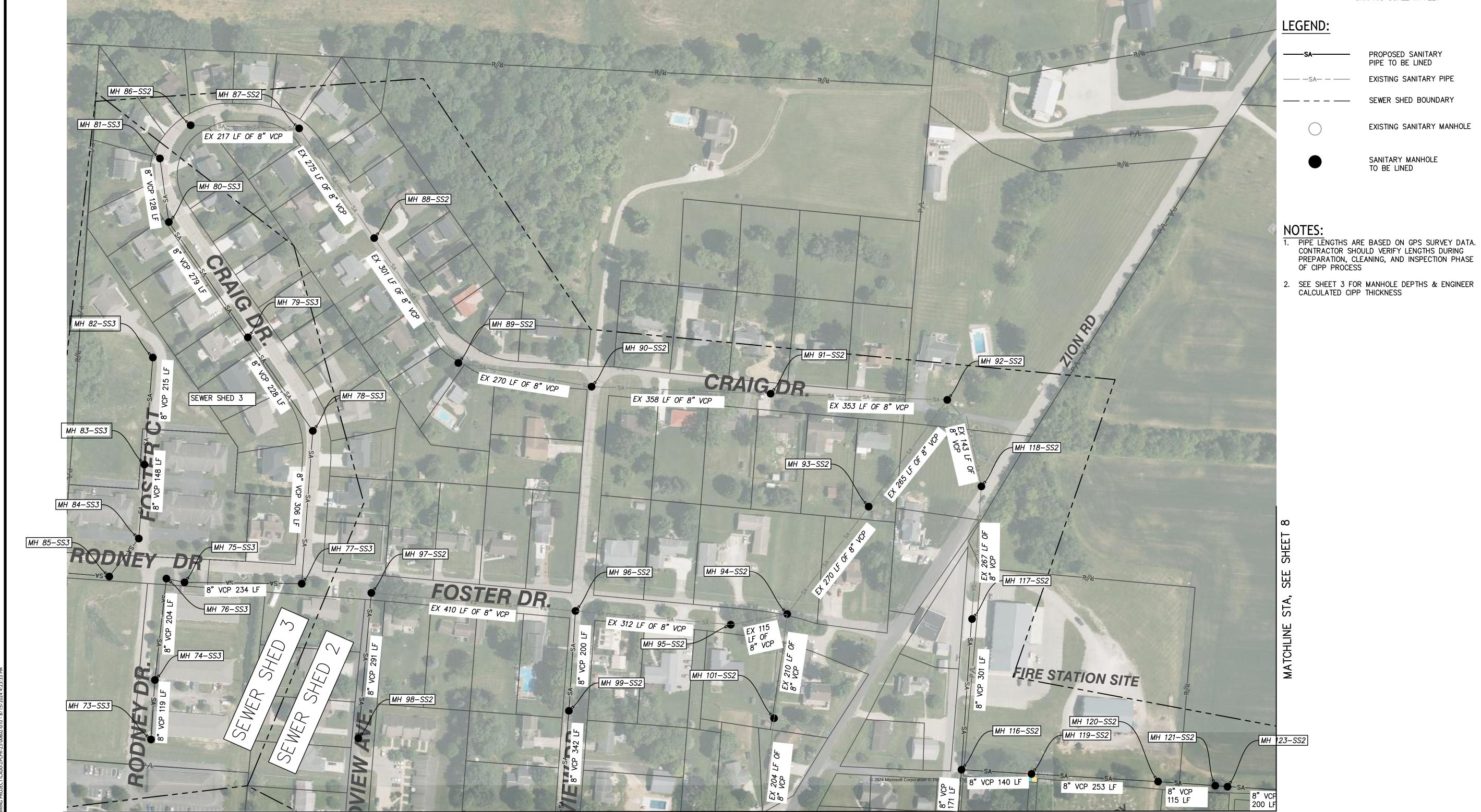
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SCHEMATIC PLAN 2

OF



MATCHLINE STA, SEE SHEET 5



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IMPROVEMENTS: TRATION **PROJECT**

THORNVILLE PHA

REVISIONS ⚠ DATE DESCRIPTION

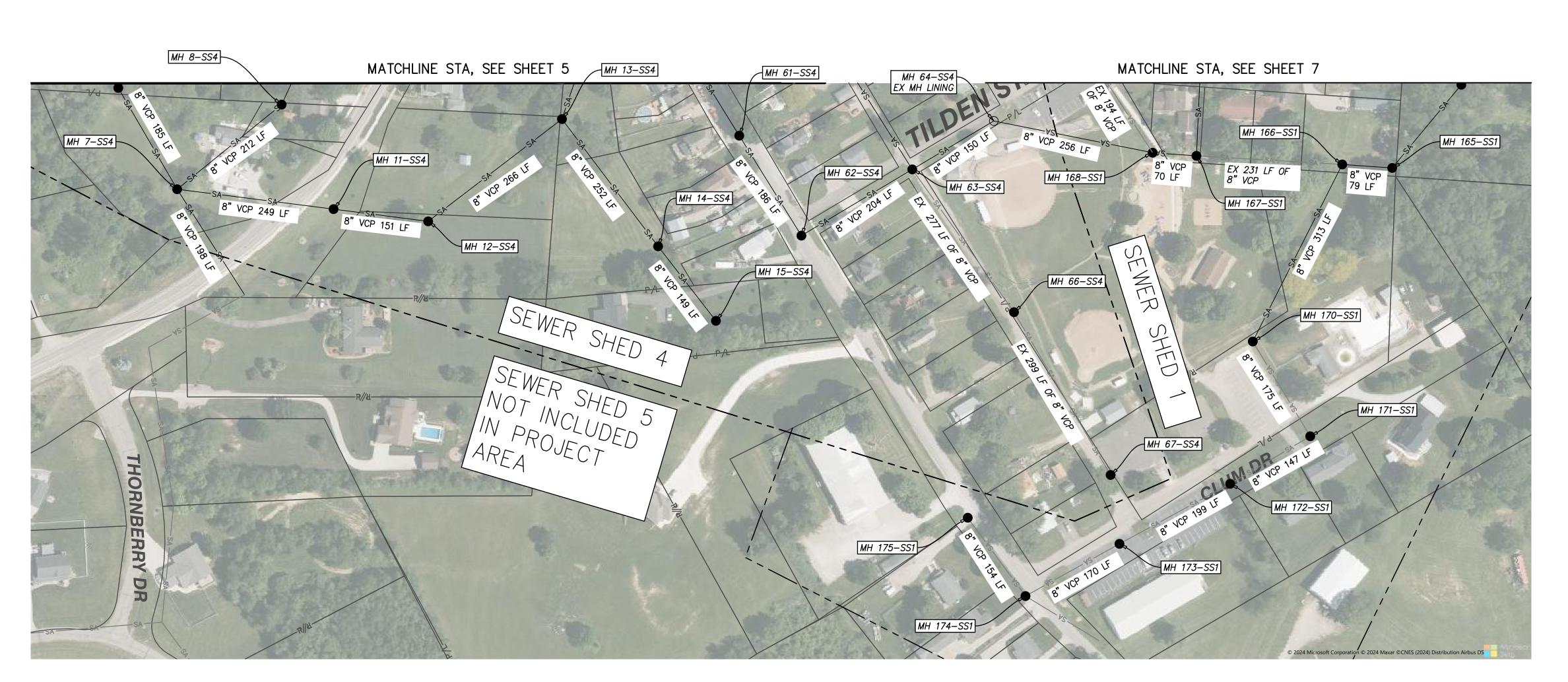
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SCHEMATIC PLAN 4

OF

GRAPHIC SCALE IN FEET



NOTES:

- 1. PIPE LENGTHS ARE BASED ON GPS SURVEY DATA. CONTRACTOR SHOULD VERIFY LENGTHS DURING PREPARATION, CLEANING, AND INSPECTION PHASE OF CIPP PROCESS
- 2. SEE SHEET 3 FOR MANHOLE DEPTHS & ENGINEER CALCULATED CIPP THICKNESS