CITY OF ANN ARBOR WASHTENAW COUNTY, MICHIGAN NORTHSIDE INTERCEPTOR CONDITION ASSESSMENT ITB No. <u>4521</u>

	INDEX OF SHEETS										
SHEET NO.	DESCRIPTION										
1	COVER SHEET										
2	LEGEND										
3	OVERALL LAYOUT										
4-10	INSPECTION PLANS										

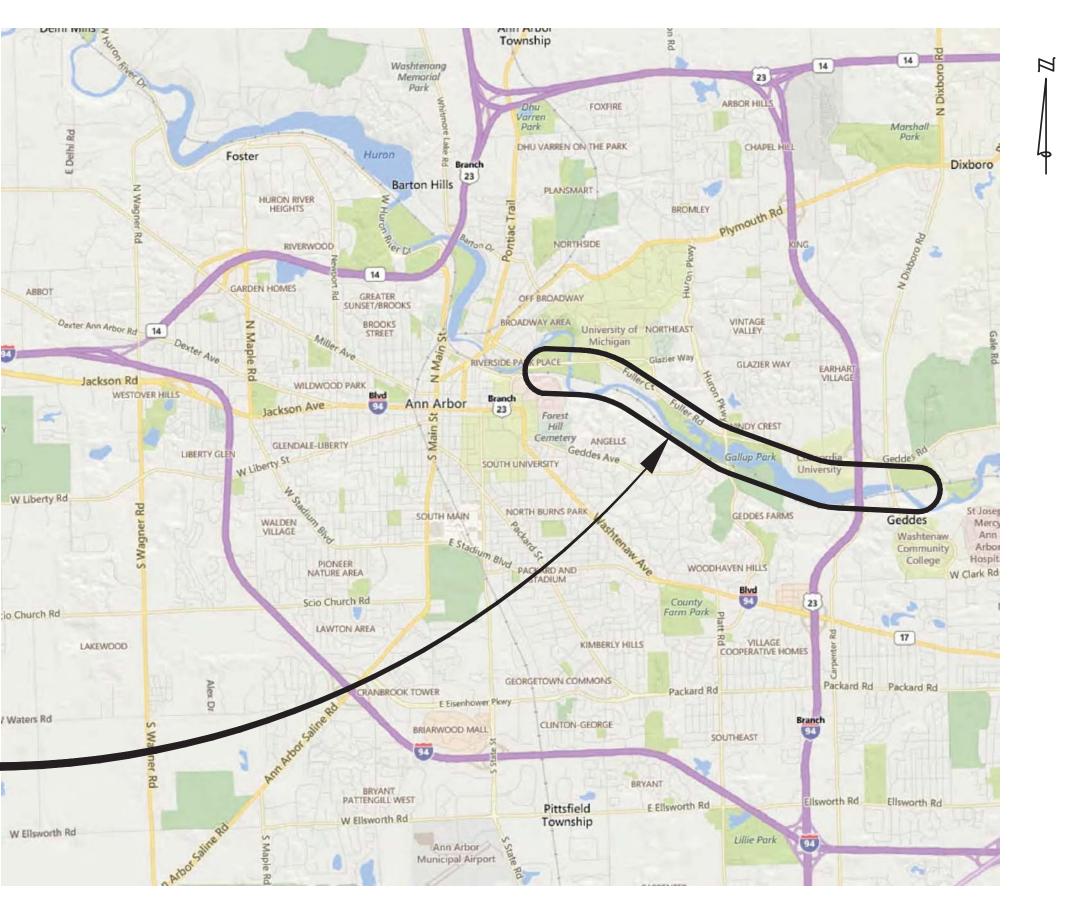


GENERAL PROVISIONS

THE CONDITION ASSESSMENT COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE PROPOSAL AND ACCOMPANYING SPECIFICATIONS FOR THIS PROJECT.

THE LOCATION OF ALL PUBLIC UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. THE CITY OF ANN ARBOR WILL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATIONS SHOWN. PURSUANT TO ACT 174 OF THE P.A. OF 2013, AS A CONDITION OF THIS CONTRACT, NOTICE SHALL BE GIVEN TO MISS DIG PRIOR TO UNDERGROUND WORK TO BE PERFORMED IN ACCORDANCE WITH THIS CONTRACT, PHONE (800) 482–7171 (OR 811). UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THE PLANS AND ARE NOT THE RESPONSIBILITY OF THE CITY OF ANN ARBOR.

THE ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON NAVD 1988 VERTICAL DATUM.



LOCATION MAP Not to Scale

	Advancing Communities					
ОНМ	34000 Plymouth Road Livonia, MI 48150 p (734) 522-6711 f (734) 522-6427					
PREPARED UNDER T	HE SUPERVISION OF:					
	60848 Registration No.					
GEORGE A. TSAKOFF, P.E.	Date					
REVIS	SIONS					
PROJECT NO.	SHEET NO.					
0028-17-0040	1 OF 10					

CONDITION ASSESSMENT OF SANITARY SEWER INTERCEPTOR AND MAIN PIPING UTILIZING

CCTV, LASER, SONAR, AND GAS INSPECTION TECHNOLOGIES.

CONTRACT FOR:

WATER & SEWER UTILITY SYMBOLS

EXISTING

Ost	STORM MANHOLE
	SQUARE CATCH BASIN
\bigoplus	ROUND CATCH BASIN
	CULVERT
(+)	CULVERT W/O END SECTION
)	CULVERT W/END SECTION
Os	SANITARY MANHOLE
\bigcirc	CLEAN OUT
⊗ GW	GATE VALVE & WELL
\bigcirc	GATE VALVE & BOX
W	WATER STOP BOX
Y	FIRE HYDRANT
MP	METER PIT
\bigcirc	WATER METER
SH	SPRINKLER HEAD
	IRRIGATION VALVE

PROPOSED

\bullet	STORM MANHOLE
	INLET/CATCH BASIN
)	CULVERT END SECTION
\bullet	SANITARY MANHOLE
Gv&W	GATE VALVE & WELL
GV&B	GATE VALVE & BOX
E TSV&W	TAPPING SLEEVE VALVE & WELL
TSV&B	TAPPING SLEEVE VALVE & BOX
۲	FIRE HYDRANT

MISCELLANEOUS UTILITY SYMBOLS

EXISTING

\swarrow	GUY WIRE
\varnothing_{GP}	GUY POLE
$\varnothing_{\rm U}$	UTILITY POLE
	UTILITY POLE W/LIGHT
	LIGHT/DECOR LAMP POLE
- <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> - <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>	FLOOD LIGHT
	GAS VALVE
G	GAS VENT
G	GAS METER
G	gas riser
	TRAFFIC SIGNAL
-(P)-	PEDESTRIAN RISER
E	TRANSFORMER PAD
ΟU	PRIVATE UTILITY MANHOLE
R¥ R	RAILROAD CROSSING
E	ELECTRIC METER
PB	PHONE BOOTH
TS	TRAFFIC SIGNAL CONTROLLER
\bigcirc	HAND HOLE
(E)	ELECTRIC RISER
$\langle 1 \rangle$	TELEPHONE RISER
$\langle \hat{C} \rangle$	CABLE TV RISER
(W)	MONITORING WELL
	UNDERGROUND MARKER

REAL ESTATE SYMBOLS



- CONTIGUOUS PROPERTY SYMBOL
- **XXXX** PARCEL NUMBER BOX
- NO ROW IMPACTS

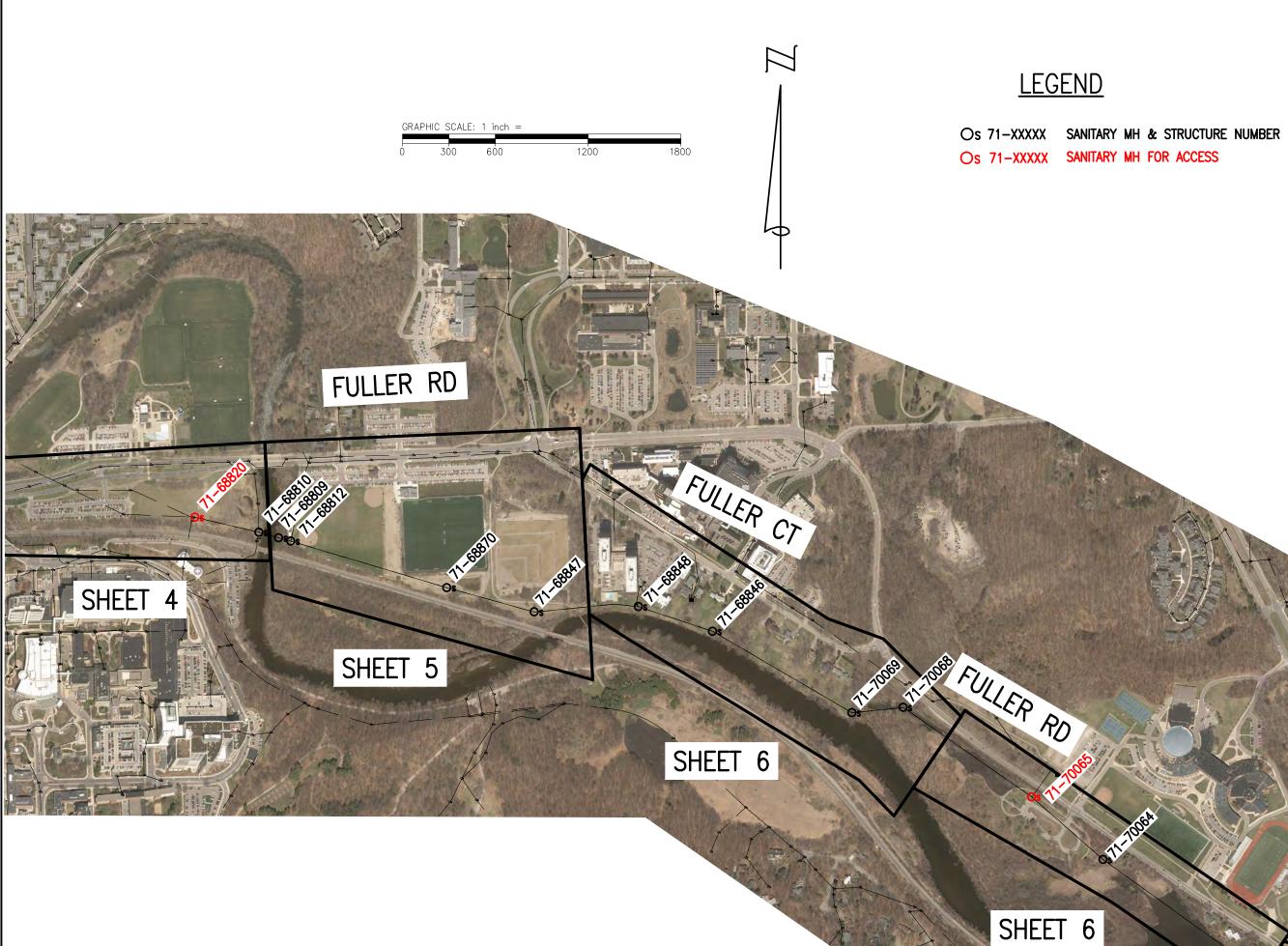
MISCELLANEOUS SYMBOLS

UTILITY PATTERN

	EXISTING	EXISTING	
	RIPRAP	ELEC	ELECTRICAL *
+	SIGN	6" (COMPANY)_GAS	GAS\OIL
$\sim ightarrow$	FLOW DIRECTION	(COMPANY) CABLE/TEL	
R	STUMP	(C <u>OMPA</u> NY) CAB <u>LE/T</u> EL	CABLE/TELEPHONE *
	WETLAND		FIBER OPTIC *
shy Zvi	CONIFEROUS TREE CL 1 1" TO 5" CL 2 6" TO 17" CL 3 18" TO 35" CL 4 36" AND UP	1 <u>2" WM </u>	WATER
\bigcirc	DECIDUOUS TREE CL 4 36" AND UP	<u>12" SAN</u>	SANITARY
Å	CONIFEROUS SHRUB	40 ⁷ CT1	
Strate St	DECIDUOUS SHRUB	<u>12"</u> STM	STORM
● _{SB#}	SOIL BORING	PROPOSED	
÷	SECTION CORNER	<u> 12</u> " ~►	STORM/SANITARY/WATER
● _{MON}	MONUMENT IRON ROD/PIPE	<u> </u>	PRIMARY UTILITY WILL HAVE A CONTINUOUS LINESTYLE, WITH THE
	, PK NAIL		SECONDARY UTILITY MATCHING ITS RESPECTIVE EXISTING UTILITY LINEST
●BM#	BENCHMARK	*OH = OVERHEAD , UG = UNDERGROUND	
∆ TP#	TRAVERSE POINT	ROW PATTERN	
P	MAIL/NEWSPAPER BOX	EXISTING	
O _{FP}	FLAG POLE	ROW	ROW
o	POST		
HAZARDOUS OR FLAMMABLE MATERIAL	USED WITH UNDERGROUND GAS & ELECTRICAL LINES		SECTION
CAUTION - CRITICAL UNDERGROUND UTILITY	USED WITH TELEPHONE & FIBER OPTIC LINES	کے	PROPERTY/PARCEL
ONDERONOOND ONEITT	FIDER OFFIC LINES	PROPOSED	
<u> </u>	PROPOSED	ROW	ROW
	RIPRAP		
┥ ,╢,╟,╡,╟,	SIGN	TOPO PATTERN	
~	FLOW DIRECTION	EXISTING	
$\otimes \otimes \otimes$	STRUCTURE NUMBER WM SAN STM		HEDGE/TREE
	ADA SIDEWALK RAMP		FENCE
			GUARDRAIL
			CENTERLINE OF DITCH
			RAILROAD
		· _ · · · · · · · · · · · · · _ · · _ · _ · · _ · · _ · · · · ·	WETLAND/EDGE OF WATER
		PROPOSED	
			grading limit (slope stake)
			CENTERLINE OF DITCH
			GUARDRAIL
			FENCE

<u>REMOVA</u>	<u>L LEGEND</u>	ł	ſ) -	łМ	
	SIDEWALK REMOVAL	-				RS PLANNERS
	HMA SURFACE REMOVAL	F	P (73	Live	0 Plymout onia, MI 4 6711 F (`	
	PAVEMENT REMOVAL			OHM-	ADVISOR	RS.COM
	COLD MILLING HMA SURFACE					
	HMA BASE CRUSHING AND SHAPING					
	EXCAVATION, EARTH, MODIFIED					
· <u>····</u> ·	CURB AND GUTTER, REM					
\bigotimes	TREE, REM					
S-[XXXXXXX]	SALVAGE					
B-[XXXXXX]	BULKHEAD					
A-[XXXXXX]	ABANDON					
R- <u>XXXXXX</u>	REMOVE					
ADJ-	ADJUST	REVISIONS:				
REL-	RELOCATE	REVI				
REC-XXXXXX	RECONSTRUCT	VERT DATUM	NAVD88			
R B/O-[XXXXXX]	REMOVE BY OTHERS	HORIZ DATUM V	NAD83			
DJ B/O-[XXXXXX]	ADJUST BY OTHERS	HORIZ	NA			
EL B/O-[XXXXXX]	RELOCATE BY OTHERS		NTS			
IF NECESSAR	Y FOR CLARITY	SCALE	.:			
S	SALVAGE		: NTS			
₿	BULKHEAD		Ξ			
(A)	ABANDON	NSHIP				
Ô	CLEARING	CITY/VILLAGE/TOWNSHIP	ANN ARBOR			
(REL)	REMOVE RELOCATE	CITY/NIL	A			
REC	RECONSTRUCT					
REL B/O	RELOCATE BY OTHERS	COUNTY	WASHTENAW			
(ADJ B/O)	ADJUST BY OTHERS					
		CADD	R			
<u>SPECIAL</u>					R	
	ITARY MH & STRUCTURE NUMBER	PROJ MGR	GT	OR	NORTHSIDE INTERCEPTOR	
		ENG	 -	CITY OF ANN ARBOR	ITER	
			040	ANN N		
		PROJ NUMBER	0028-17-0040		IISH	DN
		DATE	 	CITY	NOR	LEGEND

"H THE "G ITS LINESTYLE



	SEWER INFORMATION											
MH ID	Frame inner diameter (in)	Chimney diameter (in)	Chimney depth (in)	Chimney material	Sediment depth (in)	Frame depth (in)						
71-68820	30	23.5	18	Brick/block	0	8						
71-69947	29.75	26 (cone)	N/A	N/A	0	8						
71-70087	24	23	19	block	0	7						
71-61492	30	25 (cone)	N/A	N/A	0	8						
71-61045	21.5	26	9	concrete	0	7						

						PIF	PE SUM	MARY				
Segment	Upstream MH	to	Downstream MH	Sheet No.	Pipe Size (inches)	Pipe Material	Slope (%)	Average Depth (feet)	Estimated Length (feet)	Sensors to Use*	Average flow Depth (inches)	Estimated Depth (i
1	71-68820		71-68810	4	78	RCP	0.06	18.4	427	TV, L, S, G	30.0	
2	71-68810	-	71-68809	4	78	RCP	0.06	15.9		TV, L, S, G		
3	71-68809		71-68812	5	78	RCP	0.06	17.3		TV, L, S, G		
4	71-68812		71-68870	5	78	RCP	0.06	22.4	1,056	TV, L, S, G	30.0	
5	71-68870		71-68847	5	78	RCP	0.06	23.8	587	TV, L, S, G	30.0	
6	71-68847		71-68848	5	78	RCP	0.06	19.3	680	TV, L, S, G	30.0	
7	71-68848		71-68846	6	78	RCP	0.06	15.8	507	TV, L, S, G	30.0	
8	71-68846		71-70069	6	78	RCP	0.06	13.2	1,043	TV, L, S, G	30.0	
9	71-70069		71-70068	6	78	RCP	0.06	16.6	334	TV, L, S, G	30.0	
10	71-70068		71-70065	6	78	RCP	0.06	19.4	1,013	TV, L, S, G	30.0	
11	71-70065		71-70064	6	78	RCP	0.06	17.7	614	TV, L, S, G	30.0	
12	71-70064		71-70087	6	78	RCP	0.06	17.3	1,632	TV, L, S, G	36.0	
13	71-70087		71-70084	7	78	RCP	0.06	16.8	885	TV, L, S, G	36.0	
14	71-70084		71-70086	7	78	RCP	0.06	15.6	700	TV, L, S, G	36.0	
15	71-70086		71-70085	7	78	RCP	0.06	16.6		TV, L, S, G		
16	71-70085		71-65747	7	78	RCP	0.06	12.9	522	TV, L, S, G	30.0	
17	71-65747		71-65676	7	78	RCP	0.06	12.6	424	TV, L, S, G	30.0	
18	71-65676		71-61882	7	78	RCP	0.06	16.6	1,122	TV, L, S, G	30.0	
19	71-61882		71-61880	7	78	RCP	0.06	17.5	785	TV, L, S, G	30.0	
20	71-61880		71-61492	8	78	RCP	0.06	18.6	1,083	TV, L, S, G	30.0	
21	71-61492		71-61468	8	78	RCP	0.06	19.2	831	TV, L, S, G	30.0	
22	71-61468		71-61013	8	78	RCP	0.06	18.9	831	TV, L, S, G	30.0	
23	71-61013		71-61045	9	78	RCP	0.06	17.2	1,142	TV, L, S, G	30.0	
24	71-61045		71-61873	9	78	RCP	0.06	16.4	825	TV, L, S, G	36.0	
25	71-61873		71-61878	10	78	RCP	0.06	19.9	657	TV, L, S, G	36.0	
26	71-61878		WWTP	10	78	RCP	0.06	22.7	248	TV, L, S, G	36.0	
	71-61017		71-61874	10	36	RCP	0.4	10.8		TV, L, S, G		
	71-61874		71-61873	10	36	RCP	0.4	15.0	32	TV, L, S, G	N/A	
Totals									19,221		, í	

* Sensors - 'TV' = CCTV, 'L' = Laser, 'S'= Sonar, 'G' = Gas

1 1
Image: state in the state
11 11 <td< td=""></td<>
i i i i i i i i i i i i i i i i i i i
1 Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber 2 1 Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * * Structure: Type - 'S' = Standard. 'D' = Drag: Structure, 'L' = Junction Chamber * * * * * * * * * * * * *
1 1
22 77-63/68 0 1 N N N N 0.0 24.0 448 19.7 24 ***71-81044 3 0 0 N N N 23.0 24.0 448 19.7 24 ***71-81044 3 0 0 N N N 20.0 24.0 448 19.7 24 ***71-81044 3 0 0 N N N 20.0 24.0 11/7/16.78 10.5
24 ***71-51043 s c 0 N Y N 21.0 224.0 13.278.47 15.7 24 ***71-51043 s Y 0 N Y N 30.0 24.4 13.278.47 15.7 15.7 26 ***71-51043 s Y 0 N Y N 30.0 24.4 13.278.47 15.7 15.7 26 ***71-51043 s Y 0 N Y N N/A N/A N/A 10.0 1 T1-61074 s S Stadues Stadue
26 771-61872 Since N Y N Y N N/4 V/4 V/4<
<pre>! Structure Type - 'S' = Standard, 'D' = Drop Structure, 'J' = Junction Chamber ? Localina - Per MACP Codina; 'D' = Other; River Bank ** Structure is accessible through temperary access acsement - to be oblained by City *** Available CCTV access point DES RD U U U U U U U U U U U U U U U U U U U</pre>

ited Sludge n (inches) 0. 0. 0.0 0. 0. 0.0 0.0 0.0 0. 0.0 0.0 N/A N/A

TRAVERSE POINT #101 N 286948.67 E 13296734.02 ELEV 767.06

	STRUCTURE SUMMARY													
					Field	Available for	Accesible by	F&C		Wall Dia. /	Estimated			
		Structure		Surface	Located	TV Access	Road/Trail	Opening	Chimney/Cone	L-W-H	Depth			
No.	Structure ID	Type ¹	Location ²	Type ³	(Y/N)	(Y/N)	(Y/N)	(inches)	Dia. (inches)	(inches)	(feet)			
1	***71-68820	S	Y	D	Y	Y	Y	30.0	23.5	48	22.7			
2	71-68810	S	Y	D	Ν	Ν	Y	30.0	24.0	48	14.0			
	Totals										36.7			

¹ Structure Type - 'S' = Standard, 'D' = Drop Structure, 'J' = Junction Chamber

² Location - Per MACP Coding

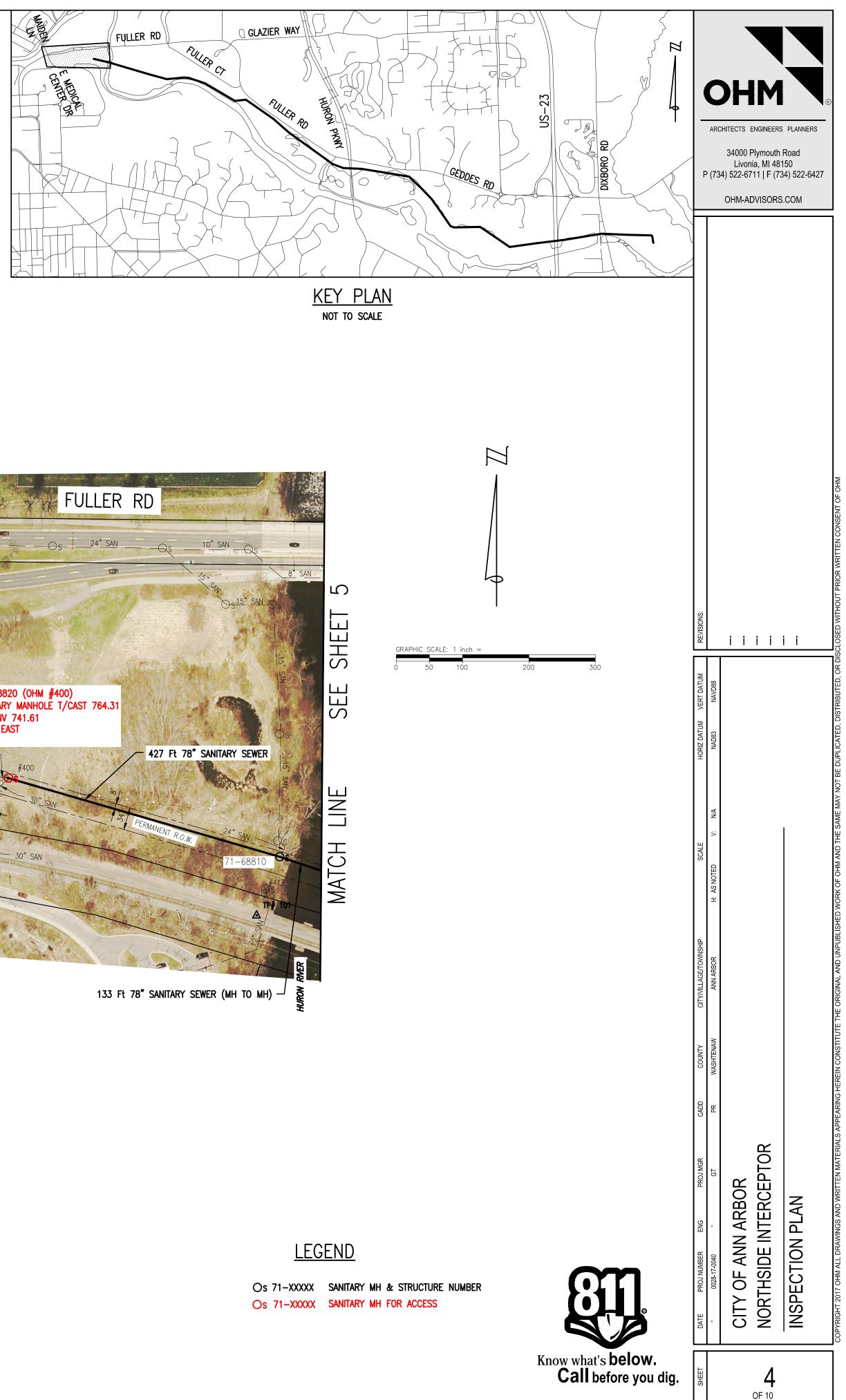
 3 Surface Type - Per MACP Coding; '0' = Other; River Bank

** Structure is accessible through temporary access easement — to be obtained by City *** Available CCTV access points

	PIPE SUMMARY											
Segment	Upstream MH	to	Downstream MH	Sheet No.	Pipe Size (inches)	Pipe Material	Slope (%)	Average Depth (feet)	Estimated Length (feet)	Sensors to Use*	Average flow Depth (inches)	Estimated Sludge Depth (inches)
1	71-68820		71-68810	4	78	RCP	0.06	18.4	427	TV, L, S, G	30.0	0.0
2	71-68810		71-68809	4	78	RCP	0.06	14.0	133	TV, L, S, G	36.0	0.0
Totals									560			

* Sensors - 'TV' = CCTV, 'L' = Laser, 'S'= Sonar, 'G' = Gas





NOTES:

- 1. UNLESS OTHERWISE NOTED IN A TEMPORARY ACCESS AGREEMENT, CONTRACTOR SHALL NOT USE ANY PRIVATE PROPERTY FOR ACCESS OR STORAGE OF ANY MATERIALS, EQUIPMENT, OR LABOR. ALL OPERATIONS SHALL BE CONFINED TO THE PERMANENT INTERCEPTOR EASEMENTS.
- 2. DESIGNATED ACCESS POINTS, HIGHLIGHTED IN RED, ARE LOCATED ON CITY PROPERTY OR IN AREAS WHERE TEMPORARY ACCESS HAS BEEN OBTAINED. ONLY THESE LOCATIONS SHALL BE USED FOR MATERIAL, EQUIPMENT, AND LABOR ACCESS WITHOUT PRIOR WRITTEN CONSENT. ALL CONDITIONS OF ANY TEMPORARY ACCESS AGREEMENT SHALL BE ADHERED TO BY THE CONTRACTOR.

TRAVERSE POINT #100 N 286908.68 E 13296882.47 ELEV 766.53

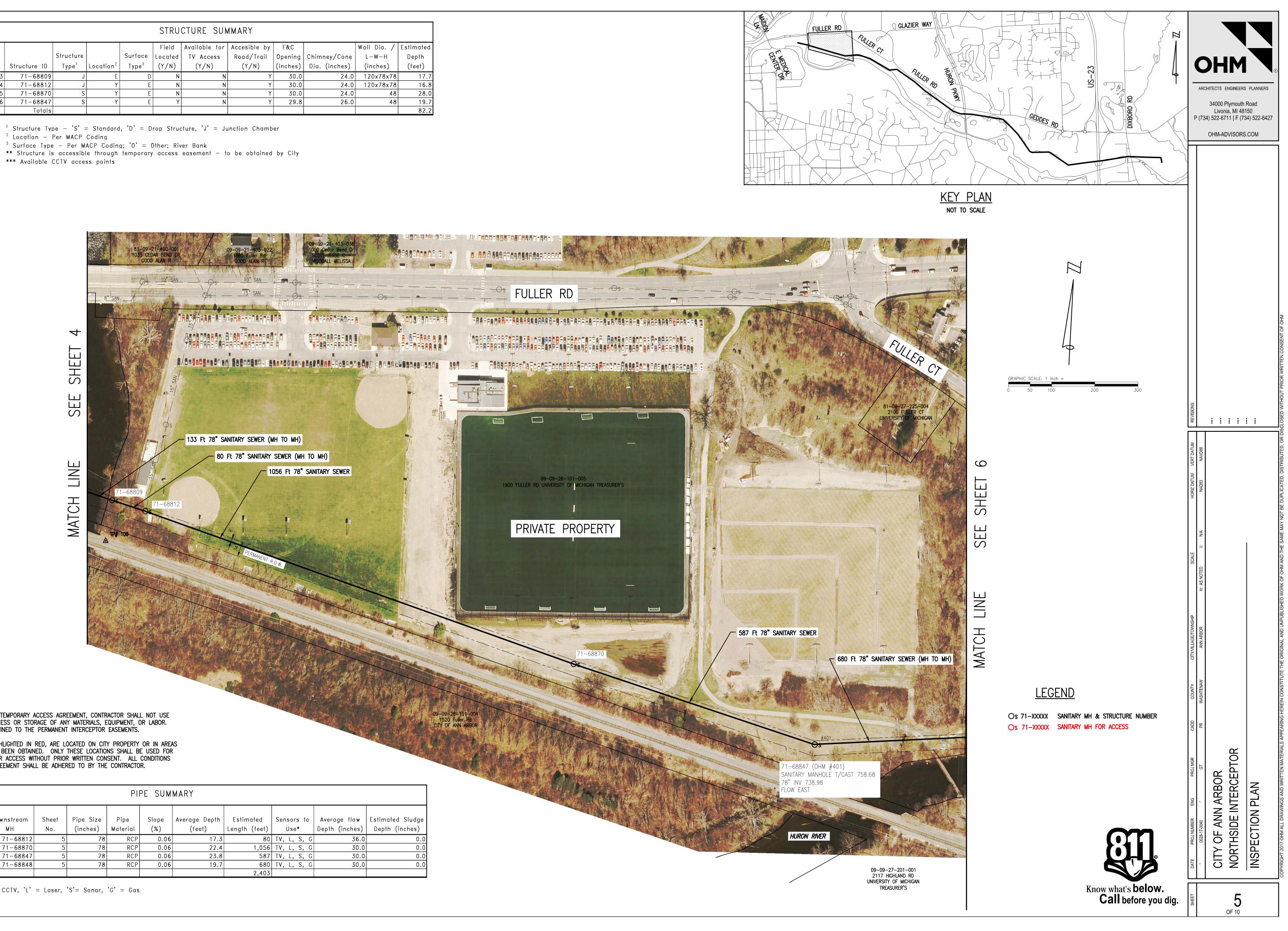
					STRU	CTURE SUN	IMARY				
					Field	Available for	Accesible by	F&C		Wall Dia. /	Estimated
		Structure		Surface	Located	TV Access	Road/Trail	Opening	Chimney/Cone	L-W-H	Depth
No.	Structure ID	Type ¹	Location ²	Type ³	(Y/N)	(Y/N)	(Y/N)	(inches)	Dia. (inches)	(inches)	(feet)
3	71-68809	J	E	D	Ν	Ν	Y	30.0	24.0	120x78x78	17.7
4	71-68812	J	Y	E	N	Ν	Y	30.0	24.0	120x78x78	16.8
5	71-68870	S	Y	E	N	N	Y	30.0	24.0	48	28.0
6	71-68847	S	Y	E	Y	Ν	Y	29.8	26.0	48	19.7
	Totals										82.2

¹ Structure Type - 'S' = Standard, 'D' = Drop Structure, 'J' = Junction Chamber

² Location - Per MACP Coding

 3 Surface Type - Per MACP Coding; '0' = Other; River Bank

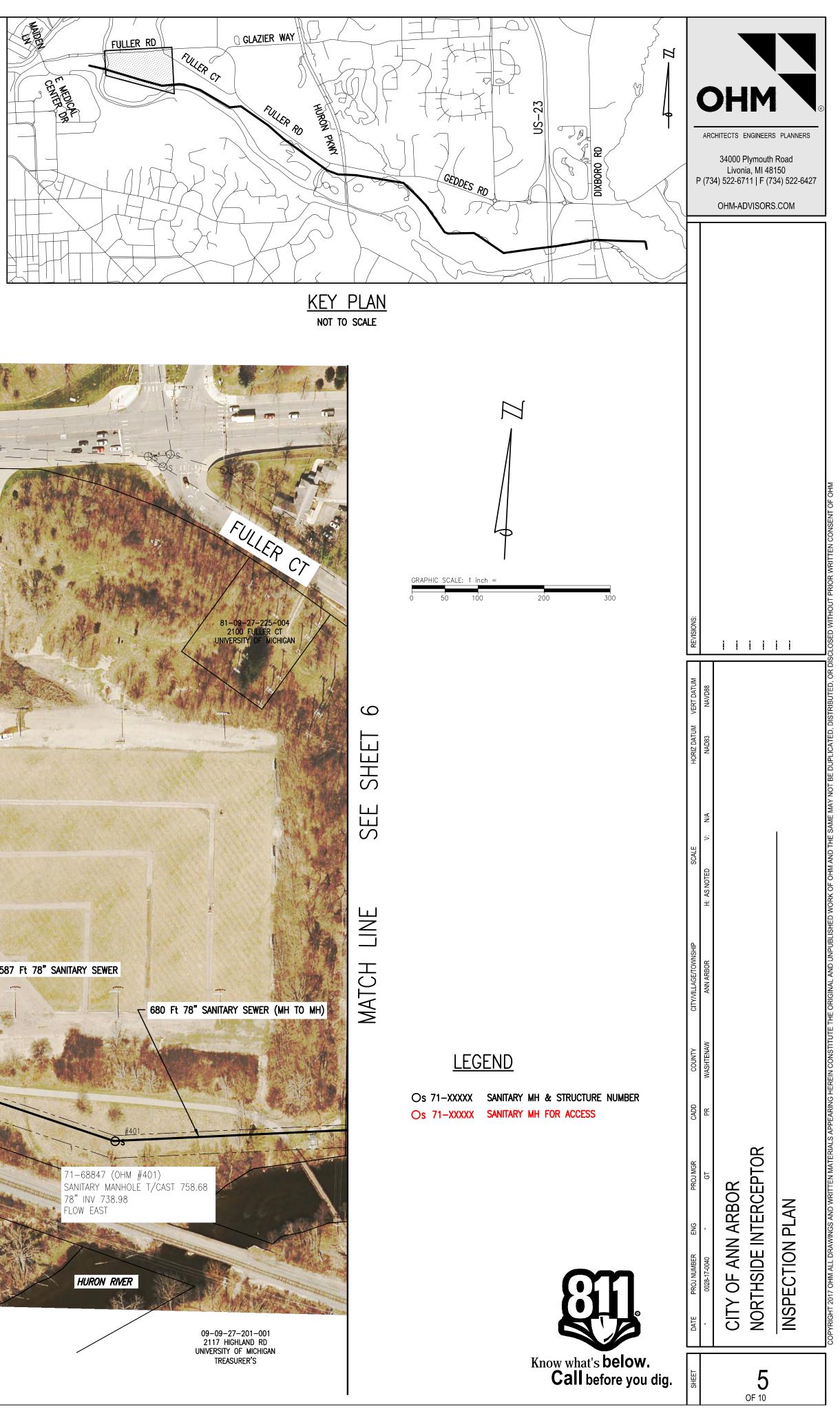
*** Available CCTV access points



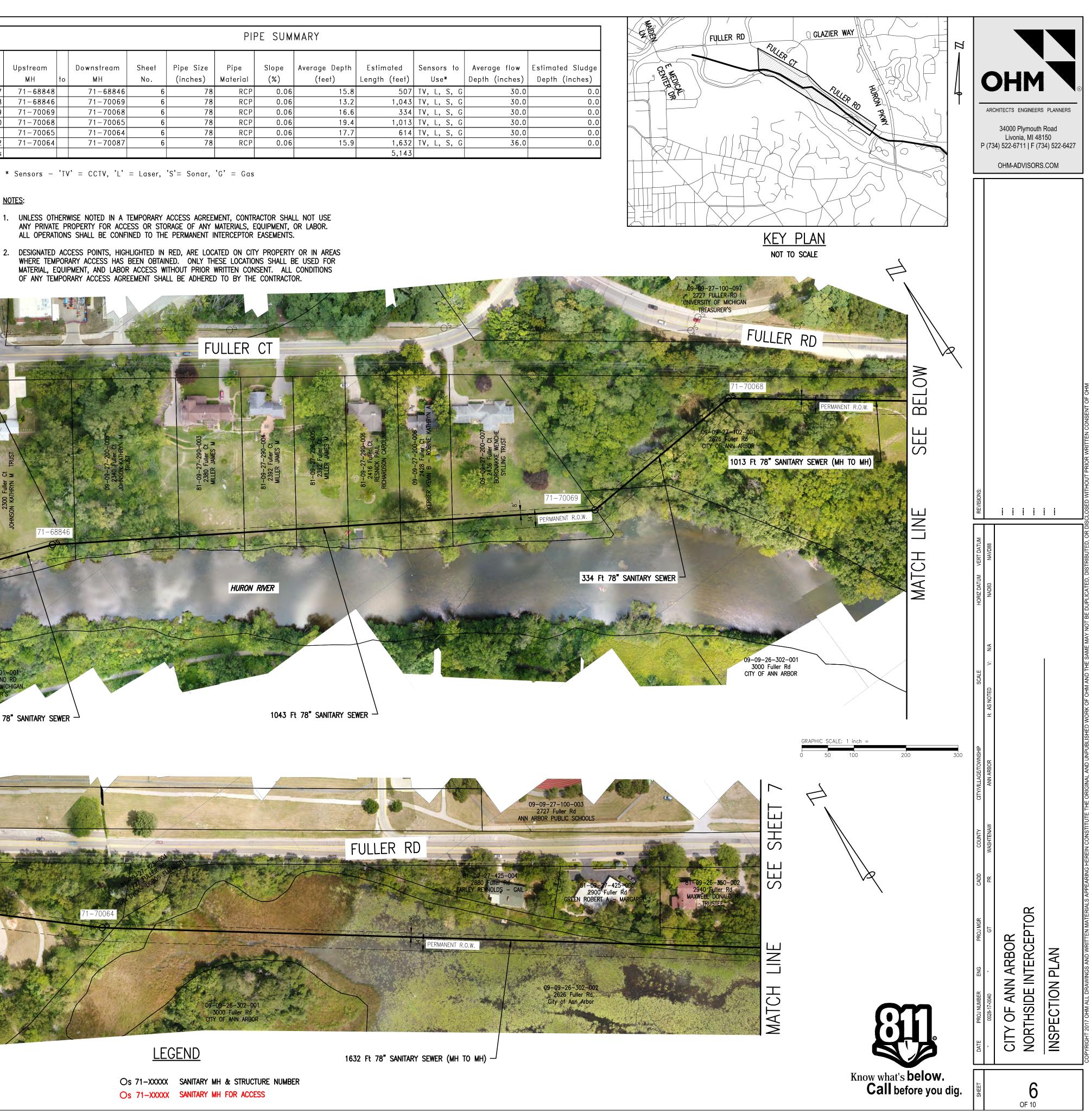
<u>NOTES</u>:

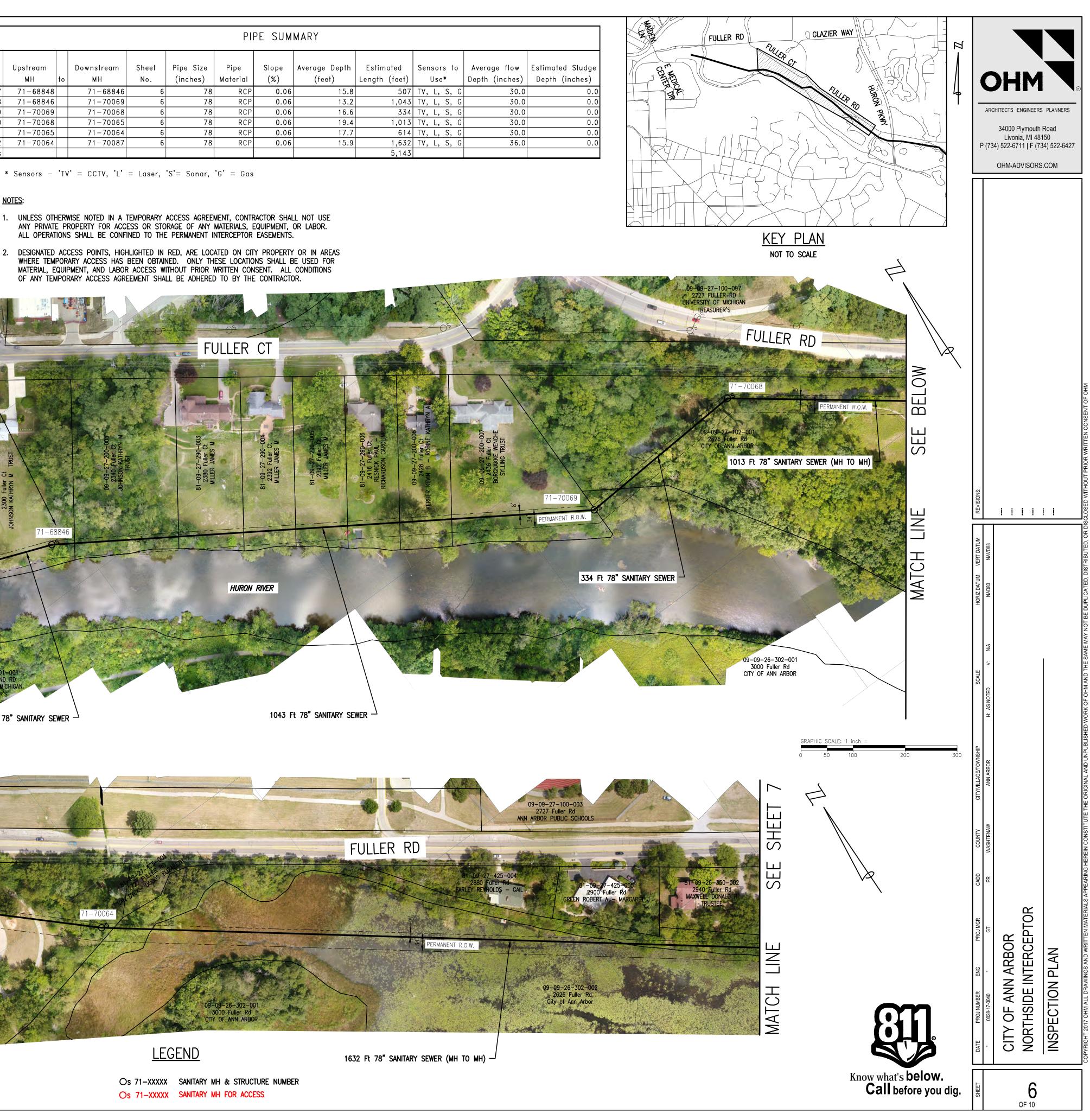
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						ΓI	SE SOM	MARI				
Segment	Upstream MH	to	Downstream MH	Sheet No.	Pipe Size (inches)	Pipe Material	Slope (%)	Average Depth (feet)	Estimated Length (feet)	Sensors to Use*	Average flow Depth (inches)	Estin Dep
3	71-68809		71-68812	5	78	RCP	0.06	17.3	80	TV, L, S, G	36.0	
4	71-68812		71-68870	5	78	RCP	0.06	22.4	1,056	TV, L, S, G	30.0	
5	71-68870		71-68847	5	78	RCP	0.06	23.8	587	TV, L, S, G	30.0	
6	71-68847		71-68848	5	78	RCP	0.06	19.7	680	TV, L, S, G	30.0	
Totals									2,403			

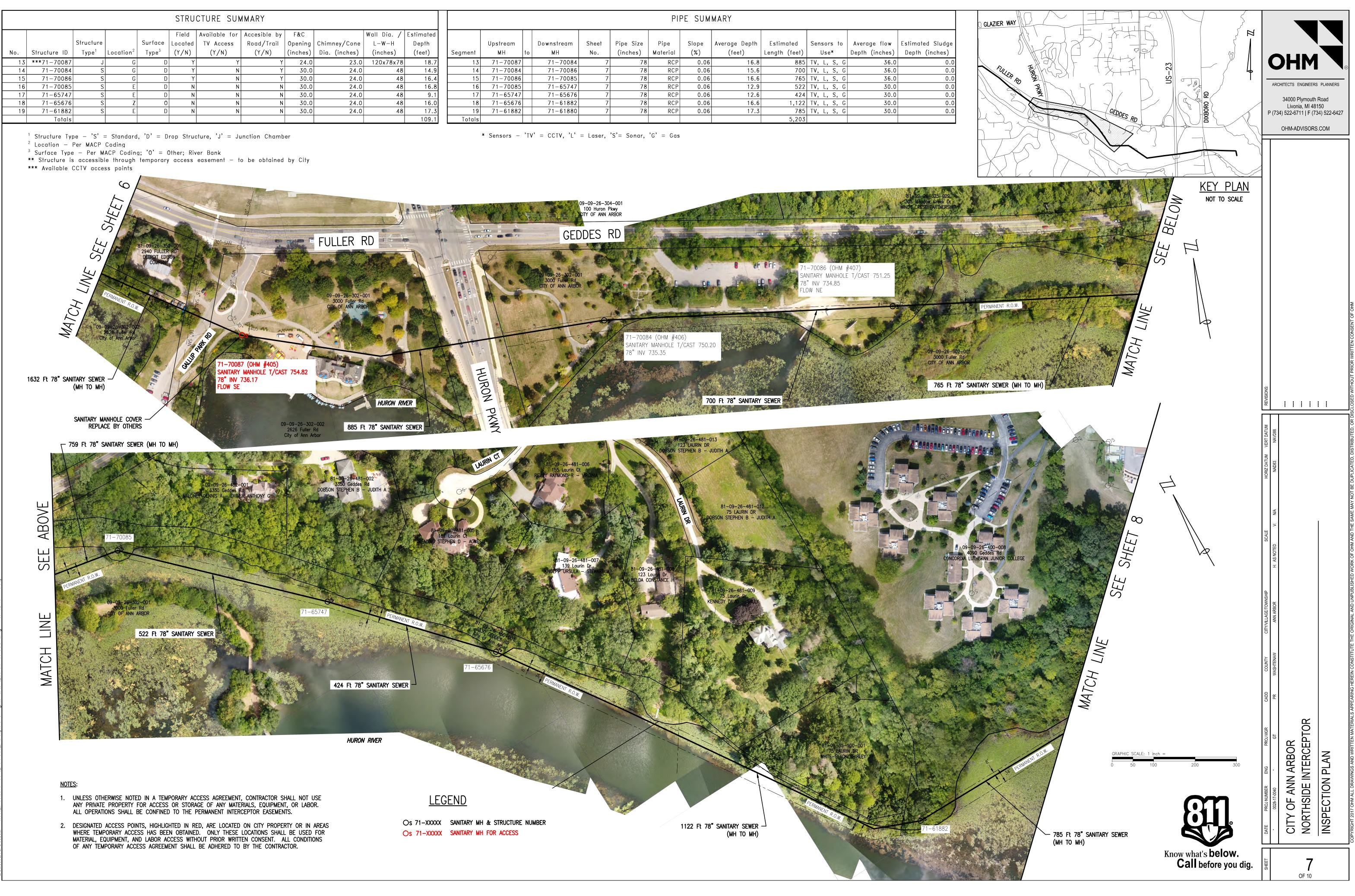


		STDUCTURE OU]
			- Accesible by F		Wall Dia. / Estimo							SUMMARY			
	rcture Surface 2 ype ¹ Location ² Type ³ S F D	Located TV Access (Y/N) (Y/N)	(Y/N) (in	ening Chimney/Cone ches) Dia. (inches) 30.0 24.0	(inches) (fee		Upstream t MH to 7 71-68848	Downstream MH 71-68846	No.	Pipe Size (inches) 78	Pipe Slop Material (% RCP) (feet)	EstimatedSensors toLength (feet)Use*5.8507	Depth (inches)	Estimated Sludge Depth (inches)
8 71-68846 9 71-70069	S E D S E D	D N D N	N N N	30.024.030.024.0	48 48	12.7	8 71-68846 9 71-70069	71-70069 71-70068	6 6	78 78	RCP (0.06 13 0.06 16	5.2 1,043 TV, L, S, 0 5.6 334 TV, L, S, 0	G 30.0 G 30.0	0.0
10 71-70068 11 ***71-70065 12 71-70064	S E D S G D S E D	D N D Y D N	Y Y	30.0 24.0 30.0 24.0 30.0 24.0 30.0 24.0	48		0 71-70068 1 71-70065 2 71-70064	71-70065 71-70064 71-70087	6	78 78 78	RCP	0.06 17	9.4 1,013 TV, L, S, 0 7.7 614 TV, L, S, 0 5.9 1,632 TV, L, S, 0	G 30.0	0.0
Totals ¹ Structure Type -	'S' = Standard, 'D' = D	Drop Structure, 'J' = .	Junction Chamber		10	00.1 Tota		IV' = CCTV, 'L'	= Laser, 'S	'= Sonar, '	'G' = Gas		5,143		
² Location — Per M ³ Surface Type — F		Other; River Bank		City			NOTES:								
*** Available CCTV		,		,			ANY PRIVATE	RWISE NOTED IN A PROPERTY FOR ACC NS SHALL BE CONF	ESS OR STORA	AGE OF ANY N	MATERIALS, EQUIPME	ENT, OR LABOR.			
												PERTY OR IN AREAS ALL BE USED FOR			
				NO A	NOTE: CCESS FROM FULLER CT	$\overline{\}$	MATERIAL, EQU	JIPMENT, AND LABO ORARY ACCESS AGR	R ACCESS WITH	HOUT PRIOR W	VRITTEN CONSENT.	ALL CONDITIONS			
				09	-09-27-203-001				10						
5	- PS			VETER	ANS ADMIN HOSP J M UNDERKOFLER	P.		F	- 05-		JLLER CT	-05	05		
		and the second					•		HINP TRUE			Contraction of the second	Colora P		
	THE REAL								**			3			Charles of
	The set		· R. B. ASS 500,								120		6 KATHRYN A		
	81. A						Inst	-200-005 Miler Ct		-290-003 uller Ct AMES M	-290-004 uller Ct	MANES M	7-290-000 Fuller Ct < PAUL - 0N CAROLIN CAROLIN 27-200-00 Fuller: Ct - ROBINE	27-200-00 Fuller Ct KKE WENCH NG TRUST	
THE CH			1	ler Ct 106	AENT LLC		-09-2/-200-004	09-09-27 2340 F JoHNSON		81-09-27 2380 F MILLER	81-09-27 2392 F	81-09-	81-09-2 2416 RESNICI RICHARDSG RICHARDSG RICHARDSG 2428 2428 2428 2428 2428 2428 2428 242	09-09- 2436 BORGNA SYLLI	
			A CONTRACTOR	2230 Full	NNESTH NVESTH NVESTH NVESTH	O	2300 - 2300 - 2300 - 1020 - 2300 - 1020 - 2300 - 1020 - 2300 - 1020 - 2300 - 1020 - 2300 - 23		an.				KEKBE		71-70069
		09-09-27-	200-001		09-09-2251 ASSOC 0F		\$ 71-688	46							
		2200 Full HURON TOWERS A	er Ct SSOCIATES LLC		ALUMNI						Aller .				334 Ft 78
											HURON RIVER	I			334 Ft 7
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	Ϋ́Υ.	1. 5.	a the	71-68848 SANITARY N 78" INN 73	(OHM #402) MANHOLE T/CAST 758.38					Personal and					
			FERMENT R.C.	FLOW EAST	MANHOLE T/CAST 758.38 9.50	09-09-27- 2117 HIGH UNIVERSITY OF	201-001 AND RD MICHIGAN		Star Constant					March Barry	
					CAL!	507 F	t 78" SANITARY SEW			- (10)43 Ft 78" SANITARY	SEWER		
- 6:34pm		676 Ft 78" SAN	IITARY SEWER (MH TO I	ин) 7											
c 19, 2017	B 1			1											
I-dwg De				6' *** 6'	-27-100-097 7 FULLER RD										09-09-27-100-003
				RO.W. UNIVERSITY OF	Y FULLER RD MICHIGAN TREASURER'S	0	and a second			/				AN	09-09-27-100-003 2727 Fuller Rd N ARBOR PUBLIC SCHOOLS
AB	town with the	TTT	18" SAN -				ting (Physics stars		001		The Part		FULLER RD		
	PERMANENT R.O.W. 09-0	09-27-102-001		#404		Reserve	to a p		19 PULLER ELLE				E Contraction of the second se	81-09-27-425-004 2880 Futter Rd ARLEY REMOLDS - GAIL	B1-09-27-4 2900 Full GREEN ROBERT A
ptor/Drawin		09-27-102-001 1626_Fuller_Rd OF ANN ARBOR		71 70065 (0444 #404)				71-70064	000				2		GREEN ROBERT A
de_Intercep	ANNO			71-70065 (OHM #404) SANITARY MANHOLE T/CA FLOW SE	ST 757.23								·····································	R.O.W.	
LLINE	- Jones William	C. S. C.	19	A			ent f	1/				*			WIT I
		12, 10	1.	A 8. 3	A 16.1						09-26-302-001	KI			09-09-26-302-002 2626 Fuller Rd City of Ann Arbor
					-				1	Og=(30 CITY	000 Fuller Rd OF ANN ARBOR				
			19.					Contraction States	LEG	<u>END</u>			1632 Ft 78" SANITARY SEWER (MH	то мн) _	
AWING PA					614 Ft 78" SANITAR	y sewer _)s 71–XXXXX	SANITARY M	H & STRUCTURE N			·····,	
DRA	1013 Ft 78" SANITARY	SEWER (MH TO MH) —						0	os 71–XXXXX	SANITARY M	H FOR ACCESS				





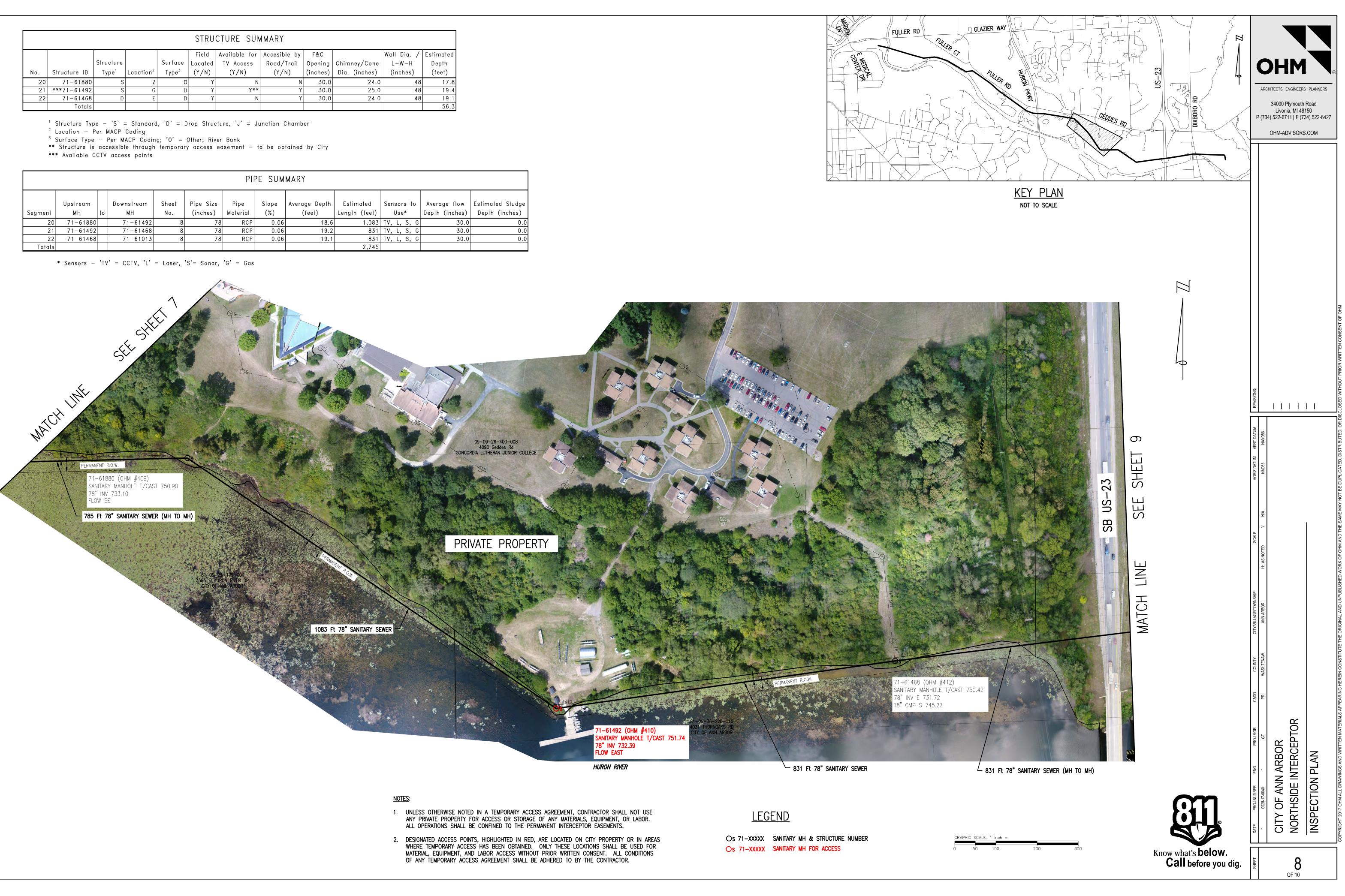




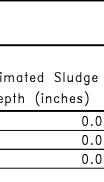
Upstream		Downstream	Sheet	Pipe Size	Pipe	Slope	Average Depth	Estimated	Sensors to	Average flow	Estimated Sludge
MH	to	MH	No.	(inches)	Material	(%)	(feet)	Length (feet)	Use*	Depth (inches)	Depth (inches)
71-70087		71-70084	7	78	RCP	0.06	16.8	885	TV, L, S, G	36.0	0.0
71-70084		71-70086	7	78	RCP	0.06	15.6	700	TV, L, S, G	36.0	0.0
71-70086		71-70085	7	78	RCP	0.06	16.6	765	TV, L, S, G	36.0	0.0
71-70085		71-65747	7	78	RCP	0.06	12.9	522	TV, L, S, G	30.0	0.0
71-65747		71-65676	7	78	RCP	0.06	12.6	424	TV, L, S, G	30.0	0.0
71-65676		71-61882	7	78	RCP	0.06	16.6	1,122	TV, L, S, G	30.0	0.0
71-61882		71-61880	7	78	RCP	0.06	17.3	785	TV, L, S, G	30.0	0.0
								5,203			

Γ						STRU	CTURE SUN	MARY				
						Field	Available for	Accesible by	F&C		Wall Dia. /	Estimated
			Structure		Surface	Located	TV Access	Road/Trail	Opening	Chimney/Cone	L-W-H	Depth
	No.	Structure ID	Type ¹	Location ²	Type ³	(Y/N)	(Y/N)	(Y/N)	(inches)	Dia. (inches)	(inches)	(feet)
Γ	20	71-61880	S	Z	0	Y	N	N	30.0	24.0	48	17.8
	21	***71-61492	S	G	D	Y	Y**	Y	30.0	25.0	48	19.4
	22	71-61468	D	E	D	Y	N	Y	30.0	24.0	48	19.1
		Totals										56.3

						PI	PE SUM	MARY				
Segment	Upstream MH	to	Downstream MH	Sheet No.	Pipe Size (inches)	Pipe Material	Slope (%)	Average Depth (feet)	Estimated Length (feet)	Sensors to Use*	Average flow Depth (inches)	Esti De
20	71-61880		71-61492	8	78	RCP	0.06	18.6	1,083	TV, L, S, G	30.0	
21	71-61492		71-61468	8	78	RCP	0.06	19.2	831	TV, L, S, G	30.0	
22	71-61468		71-61013	8	78	RCP	0.06	19.1	831	TV, L, S, G	30.0	
Totals									2,745			







						STRU	CTURE SUN	MARY				
ſ						Field	Available for	Accesible by	F&C		Wall Dia. /	Estir
			Structure		Surface	Located	TV Access	Road/Trail	Opening	Chimney/Cone	L-W-H	De
	No.	Structure ID	Type ¹	Location ²	Type ³	(Y/N)	(Y/N)	(Y/N)	(inches)	Dia. (inches)	(inches)	(f
[23	71-61013	S	E	D	N	N	N	30.0	24.0	48	
	24	***71-61045	S	С	D	Y	Y	Y	21.5	26.0	48	
		Totals										

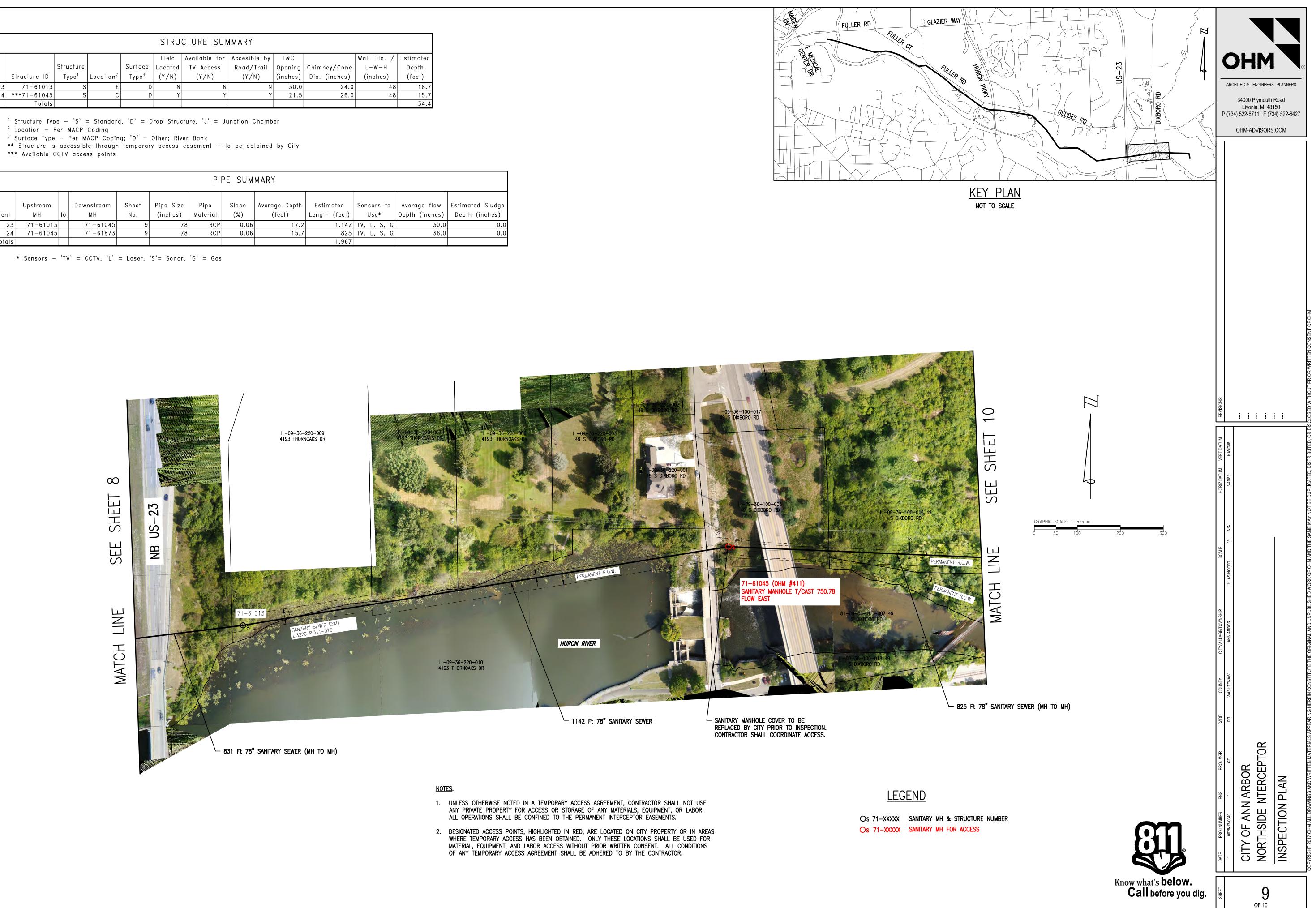
¹ Structure Type - 'S' = Standard, 'D' = Drop Structure, 'J' = Junction Chamber

² Location - Per MACP Coding

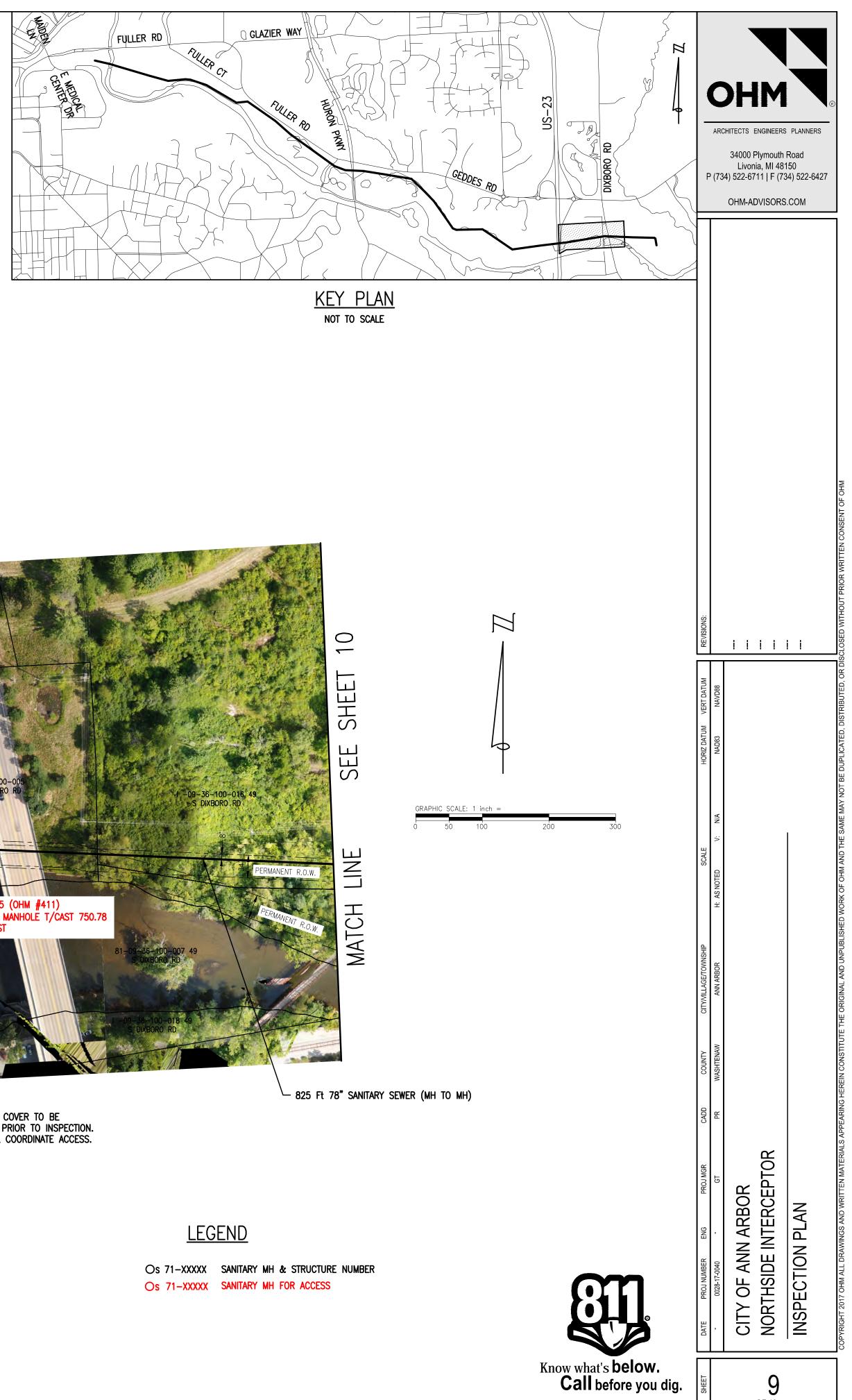
*** Available CCTV access points

						PI	PE SUM	MARY				
Segment	Upstream MH	to	Downstream MH	Sheet No.	Pipe Size (inches)	Pipe Material	Slope (%)	Average Depth (feet)	Estimated Length (feet)	Sensors to Use*	Average flow Depth (inches)	Estimated Sludge Depth (inches)
23	71-61013		71-61045	9	78	RCP	0.06	17.2	1,142	TV, L, S, G	30.0	0.0
24	71-61045		71-61873	9	78	RCP	0.06	15.7	825	TV, L, S, G	36.0	0.0
Totals									1,967			

* Sensors - 'TV' = CCTV, 'L' = Laser, 'S'= Sonar, 'G' = Gas



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					STRU	CTURE SUN	MARY				
					Field	Available for	Accesible by	F&C		Wall Dia. /	Estimated
		Structure		Surface	Located	TV Access	Road/Trail	Opening	Chimney/Cone	L-W-H	Depth
No.	Structure ID	Type ¹	Location ²	Type ³	(Y/N)	(Y/N)	(Y/N)	(inches)	Dia. (inches)	(inches)	(feet)
25	71-61873	J	Y	D	N	Y	N	30.0	24.0	117x78x78	17.1
26	71-61878	S	Y	D	N	Y	N	30.0	24.0	48	22.7
	***71-61017	Control			N	Y	Y	N/A	N/A	N/A	16.0
	71-61874	S			N	Y	Y	N/A	N/A	N/A	10.0
	Totals										65.8

¹ Structure Type - 'S' = Standard, 'D' = Drop Structure, 'J' = Junction Chamber

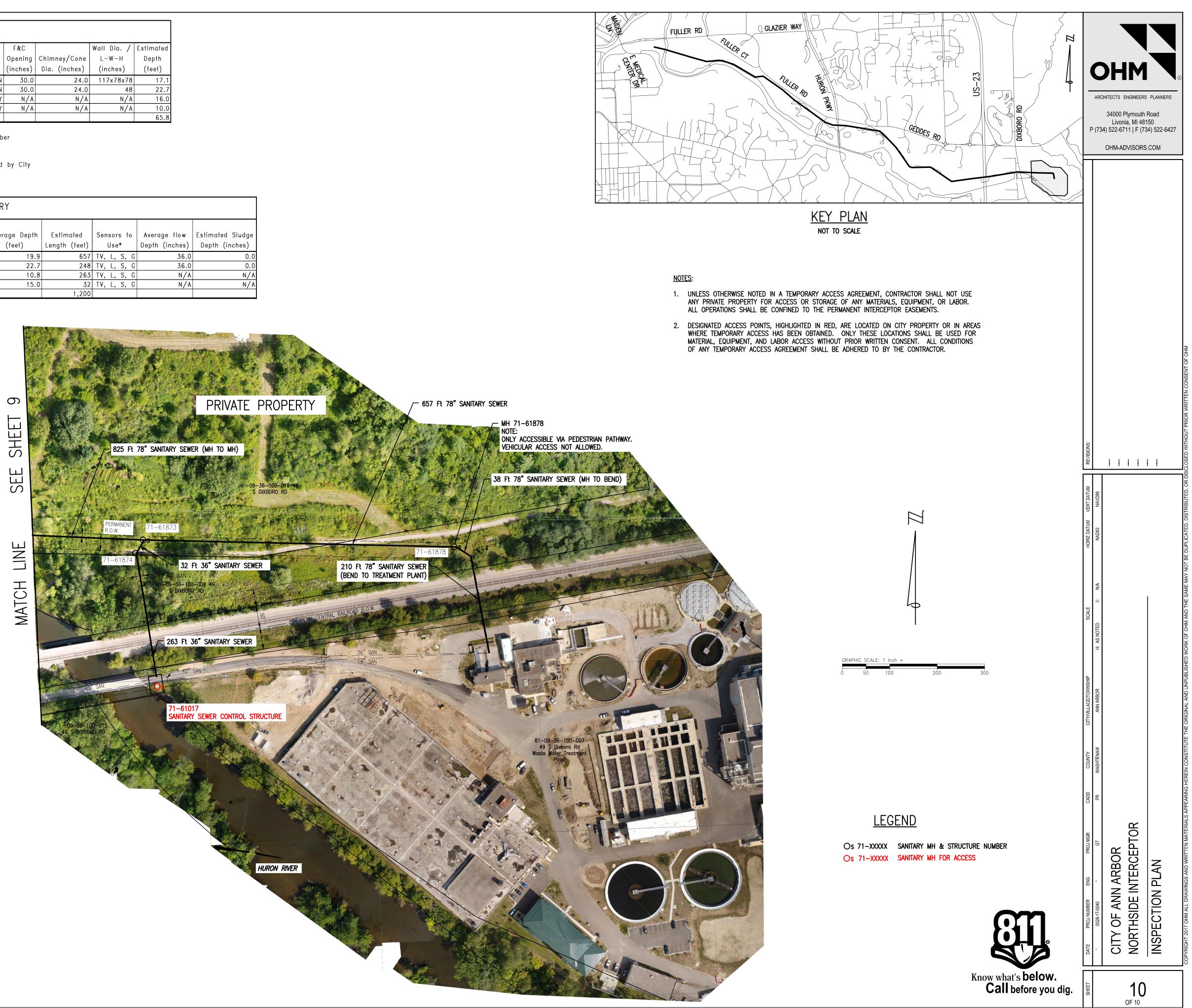
² Location - Per MACP Coding

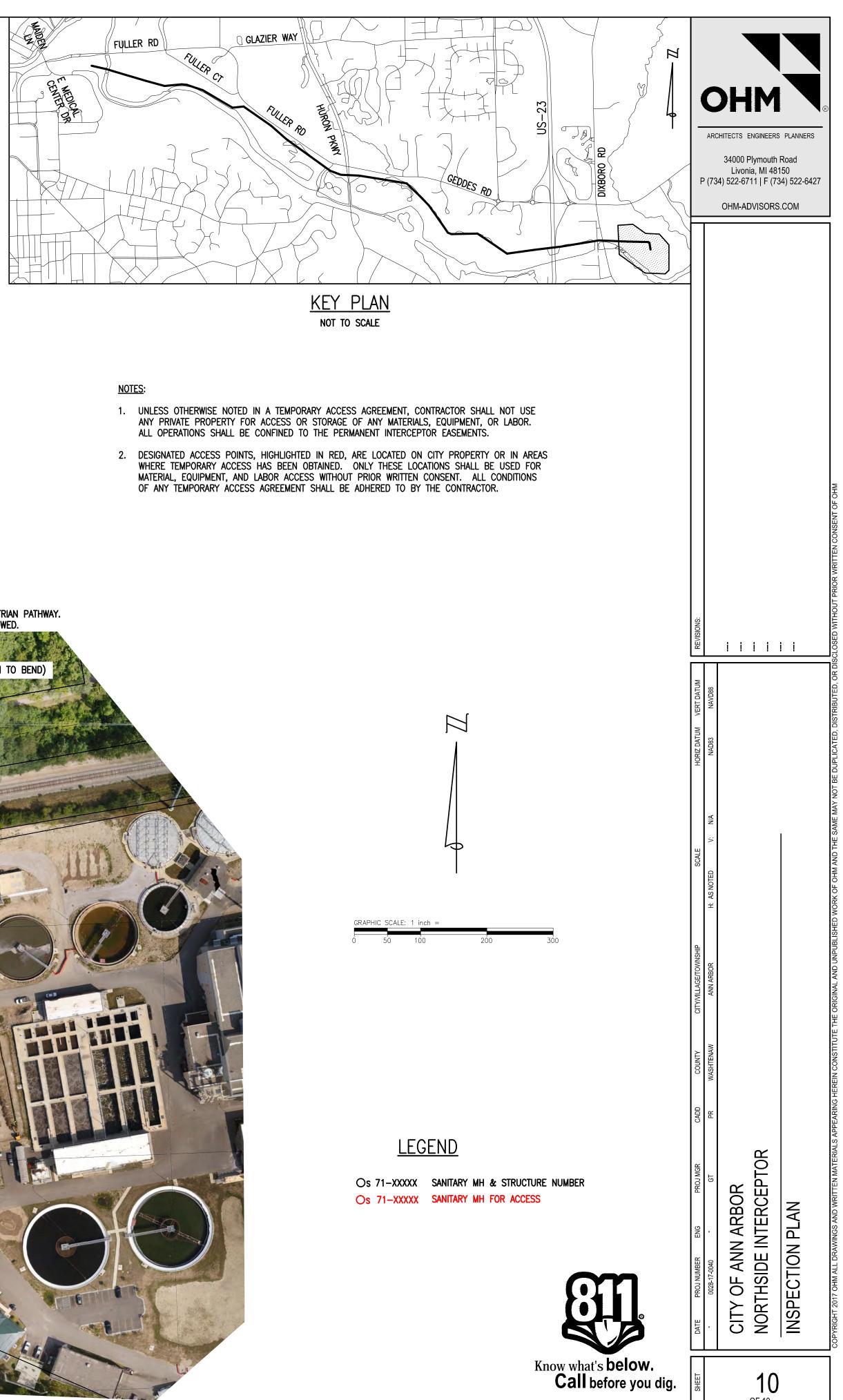
³ Surface Type — Per MACP Coding; 'O' = Other; River Bank ** Structure is accessible through temporary access easement — to be obtained by City

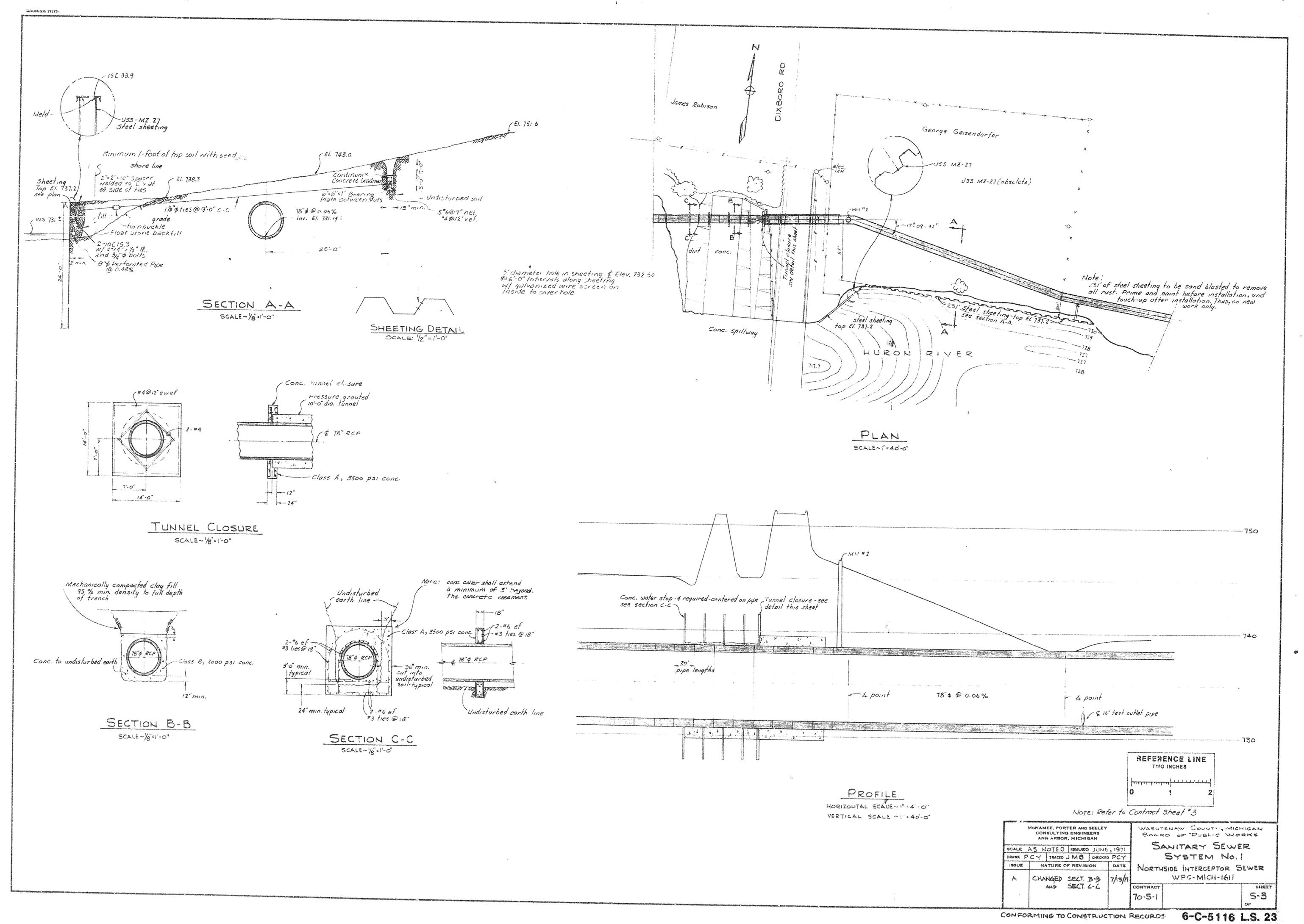
*** Available CCTV access points

						PI	PE SUM	MARY				
Segment	Upstream MH	to	Downstream MH	Sheet No.	Pipe Size (inches)	Pipe Material	Slope (%)	Average Depth (feet)	Estimated Length (feet)	Sensors to Use*	Average flow Depth (inches)	Es
25	71-61873		71-61878	10	78	RCP	0.06	19.9	657	TV, L, S, G	36.0	
26	71-61878		WWTP	10	78	RCP	0.06	22.7	248	TV, L, S, G	36.0	
	71-61017		71-61874	10	36	RCP	0.4	10.8	263	TV, L, S, G	N/A	
	71-61874		71-61873	10	36	RCP	0.4	15.0	32	TV, L, S, G	N/A	
Totals									1,200			

* Sensors - 'TV' = CCTV, 'L' = Laser, 'S'= Sonar, 'G' = Gas

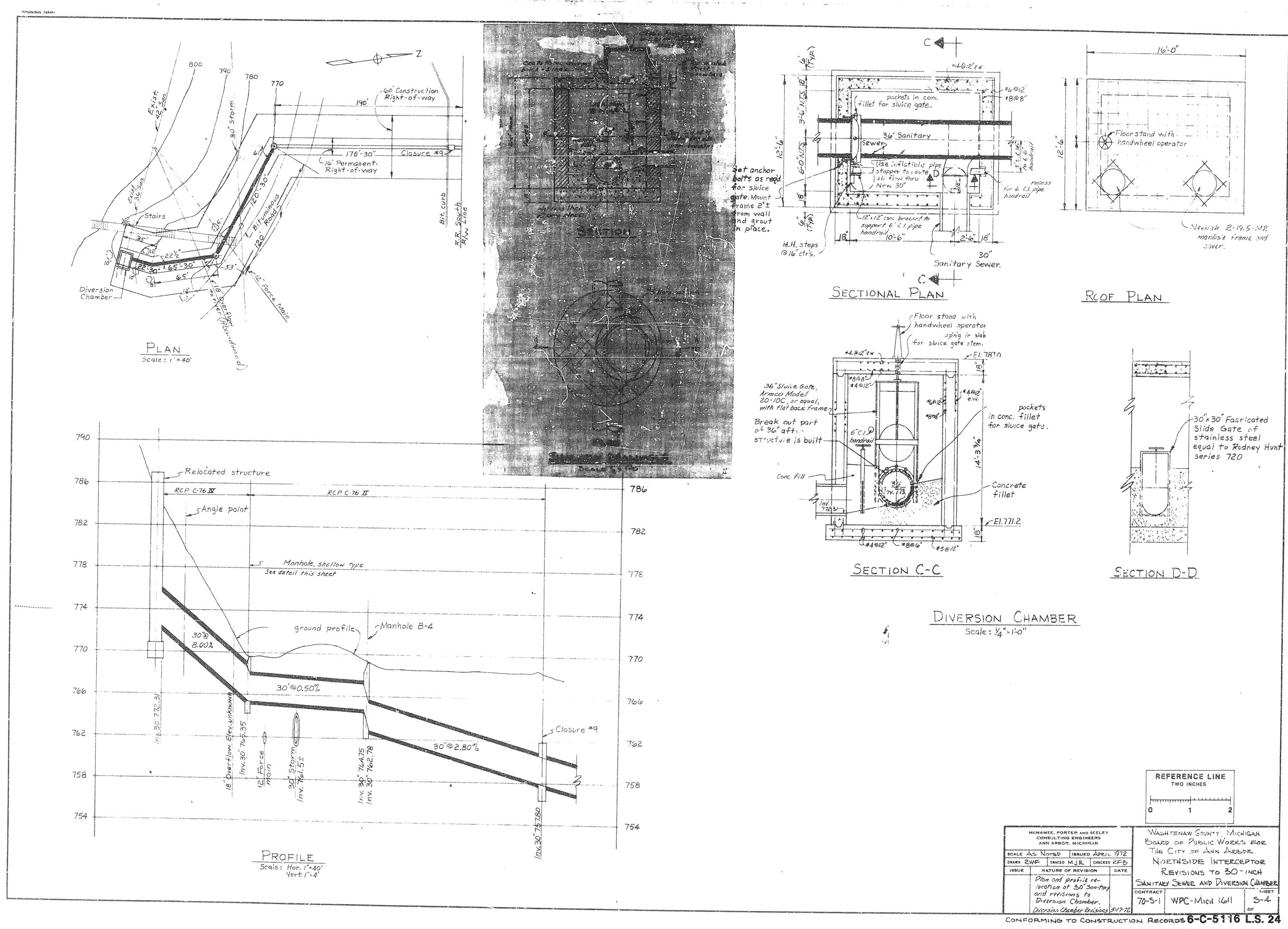


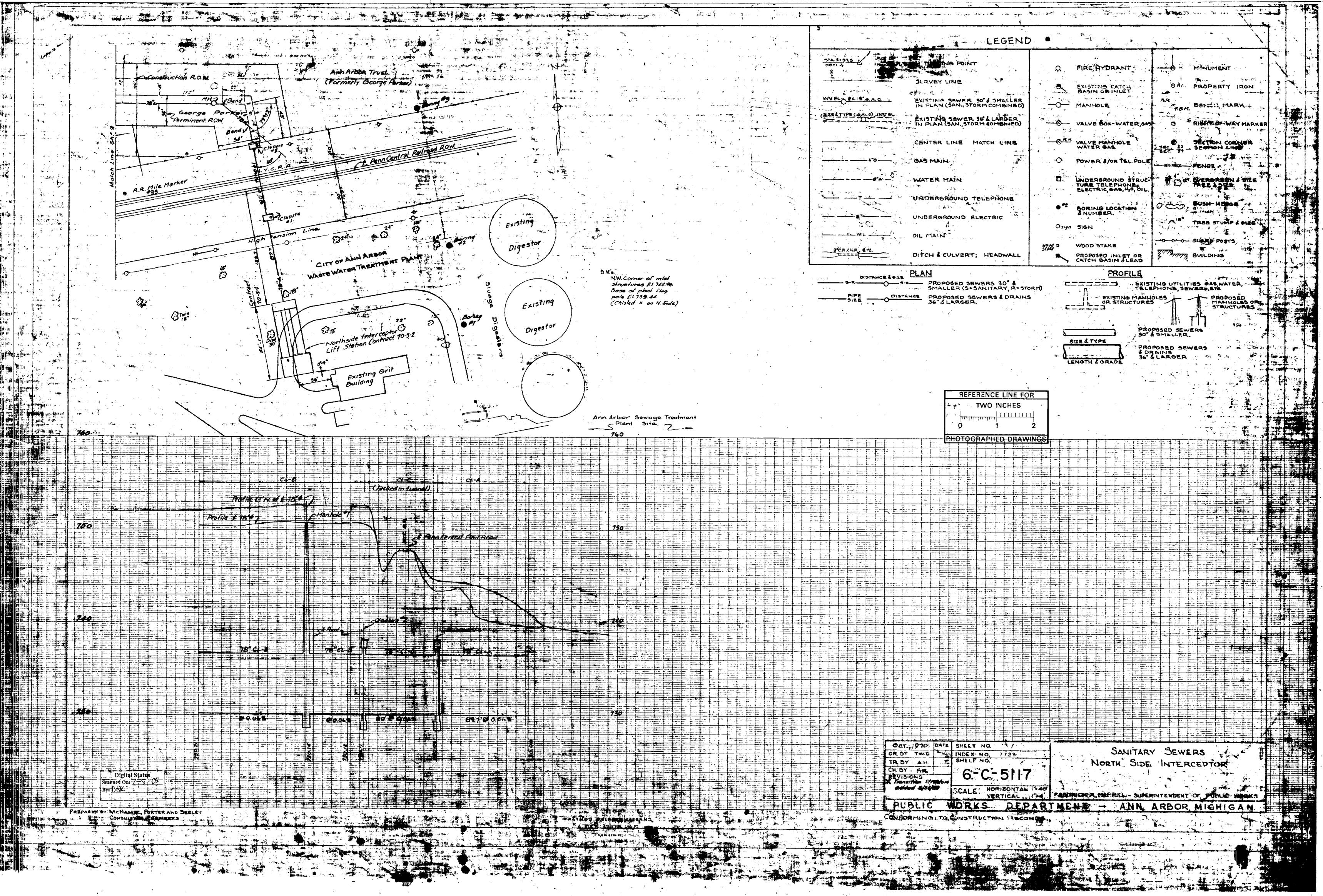


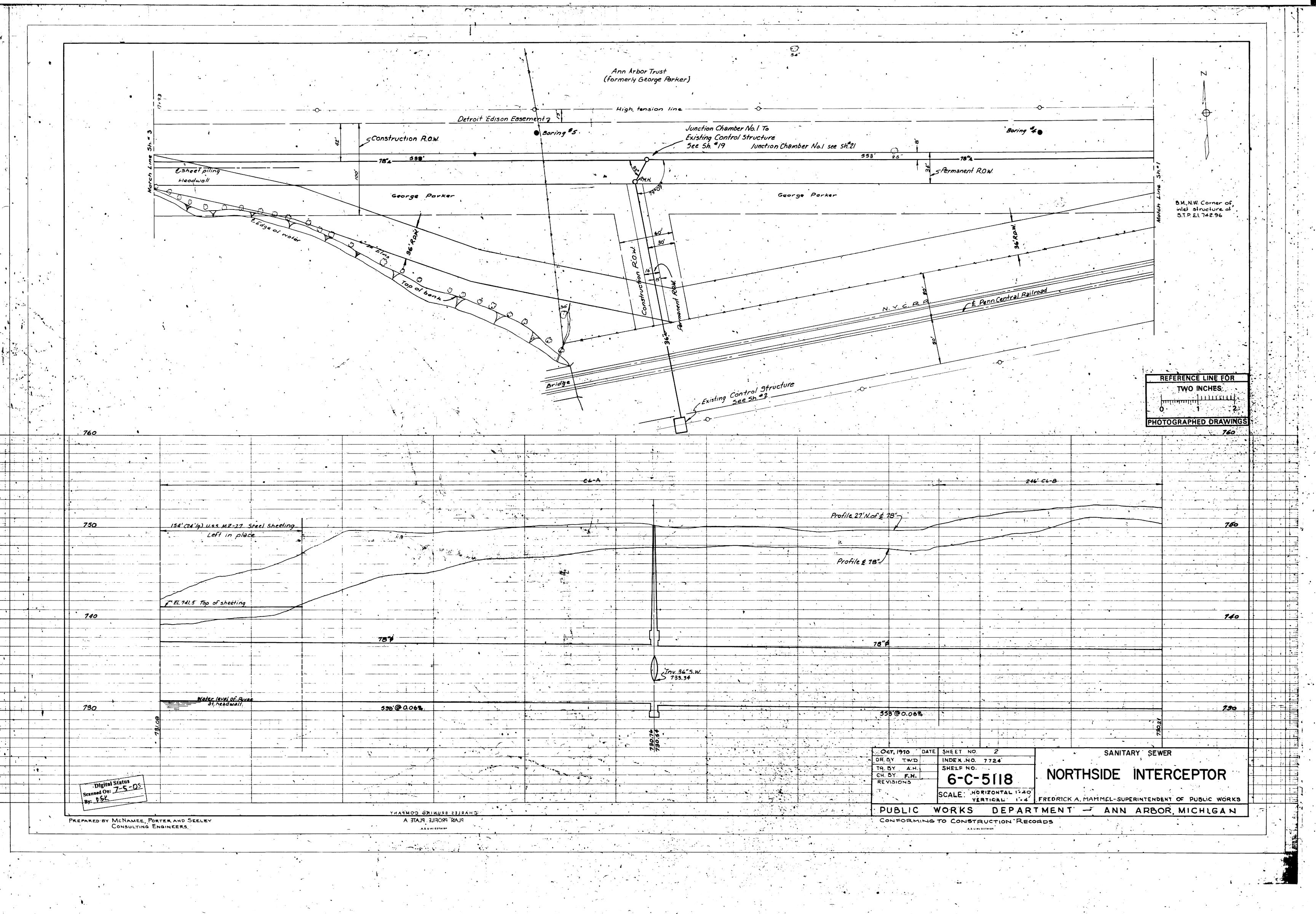


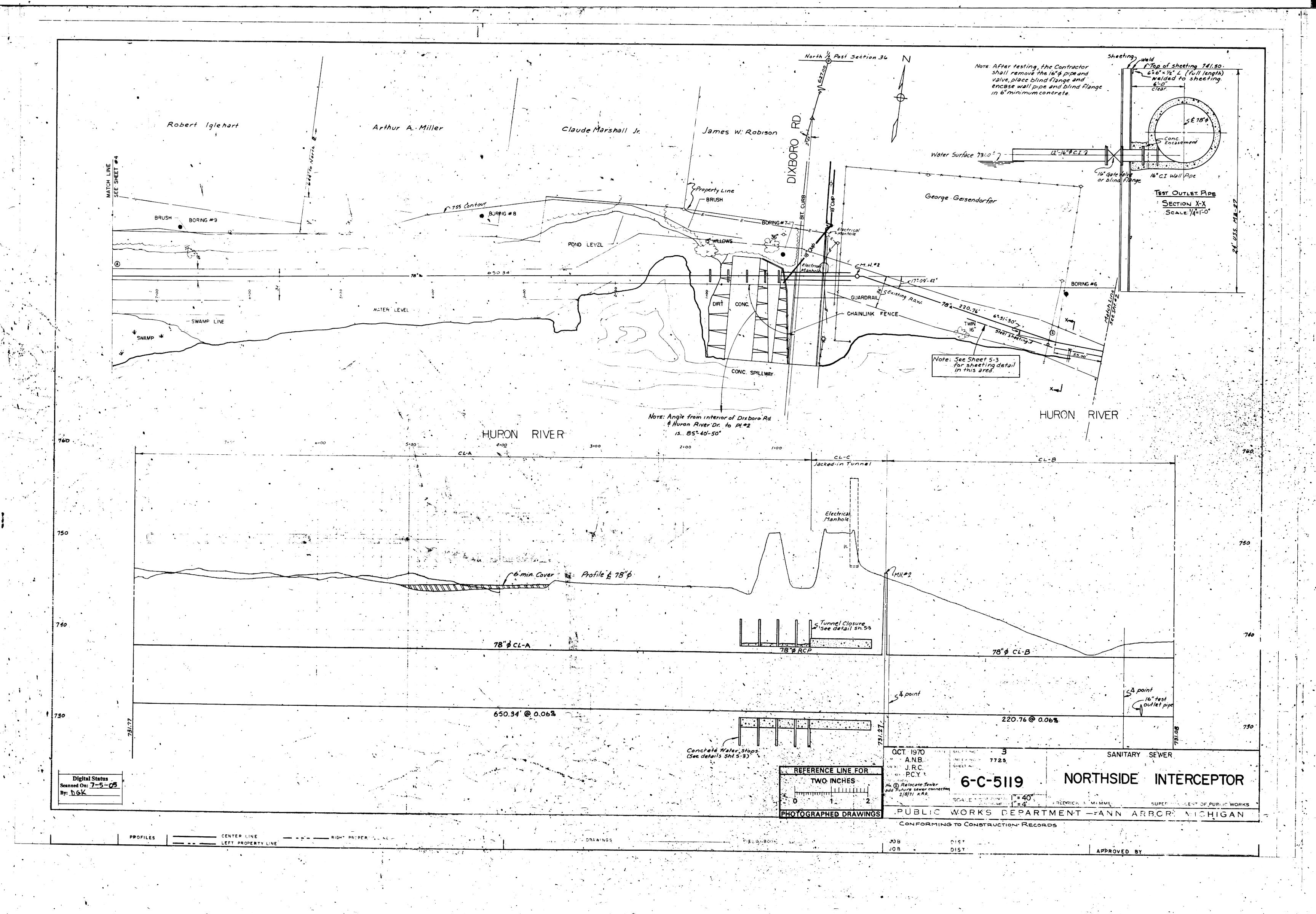
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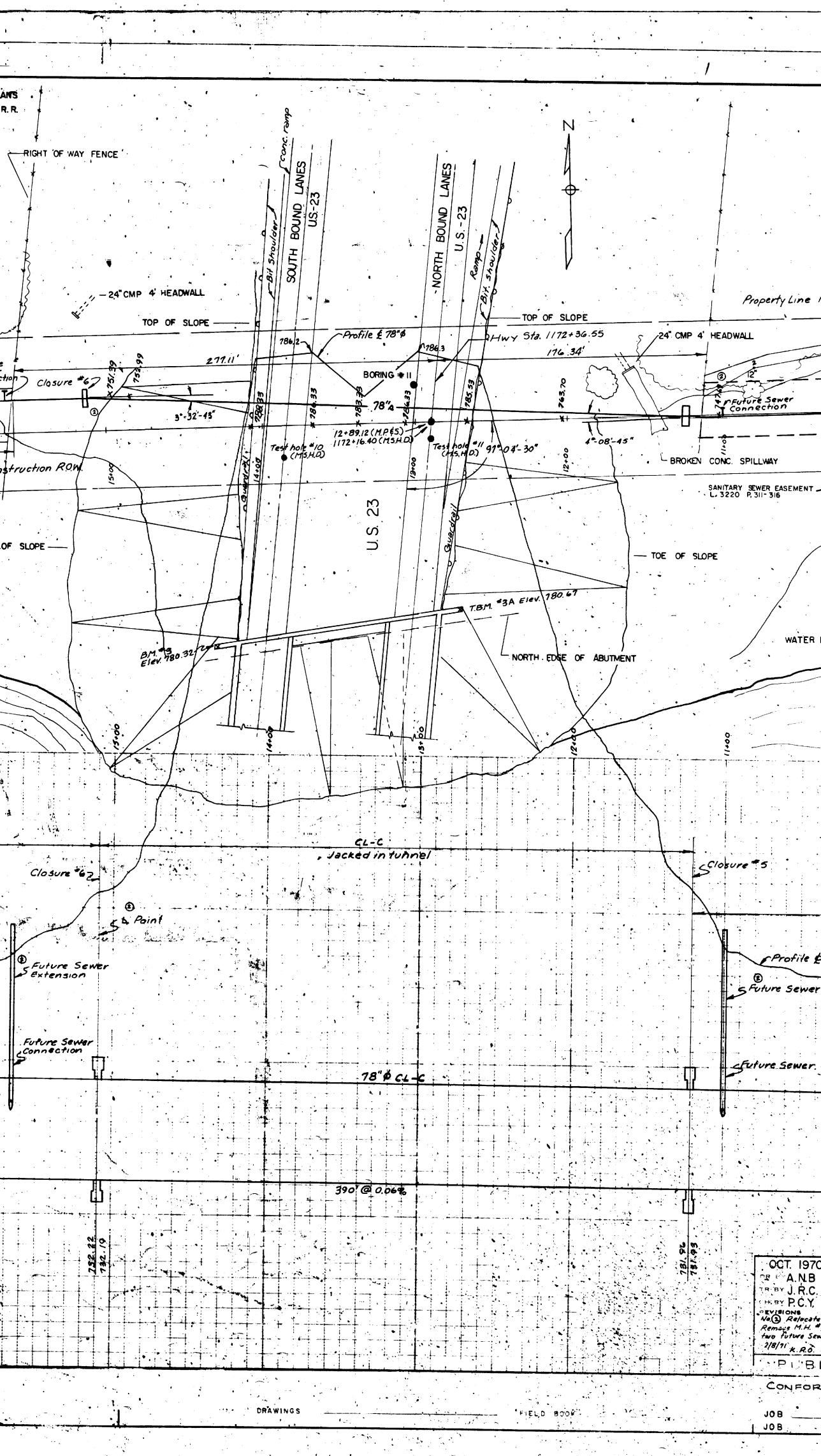




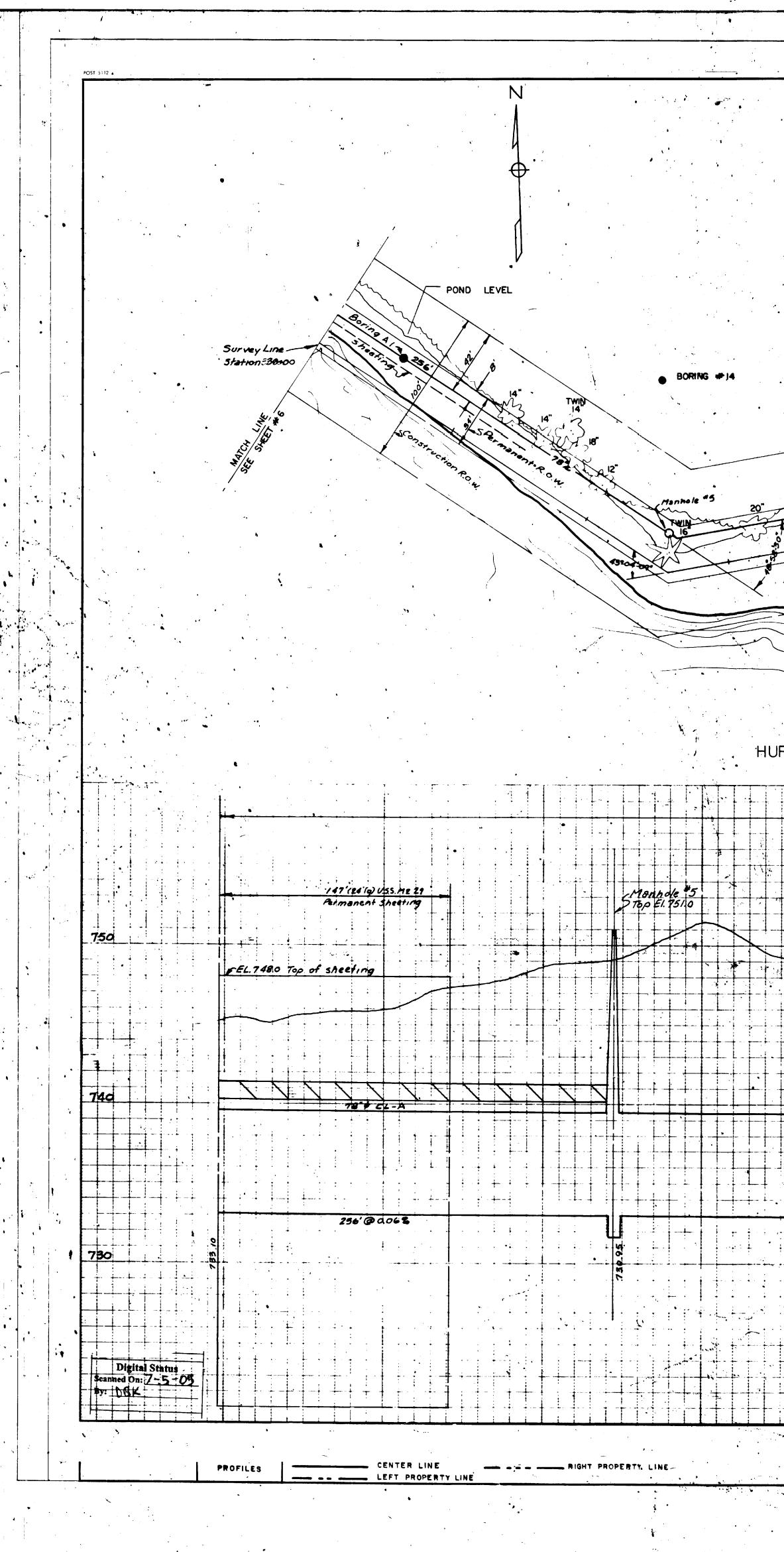




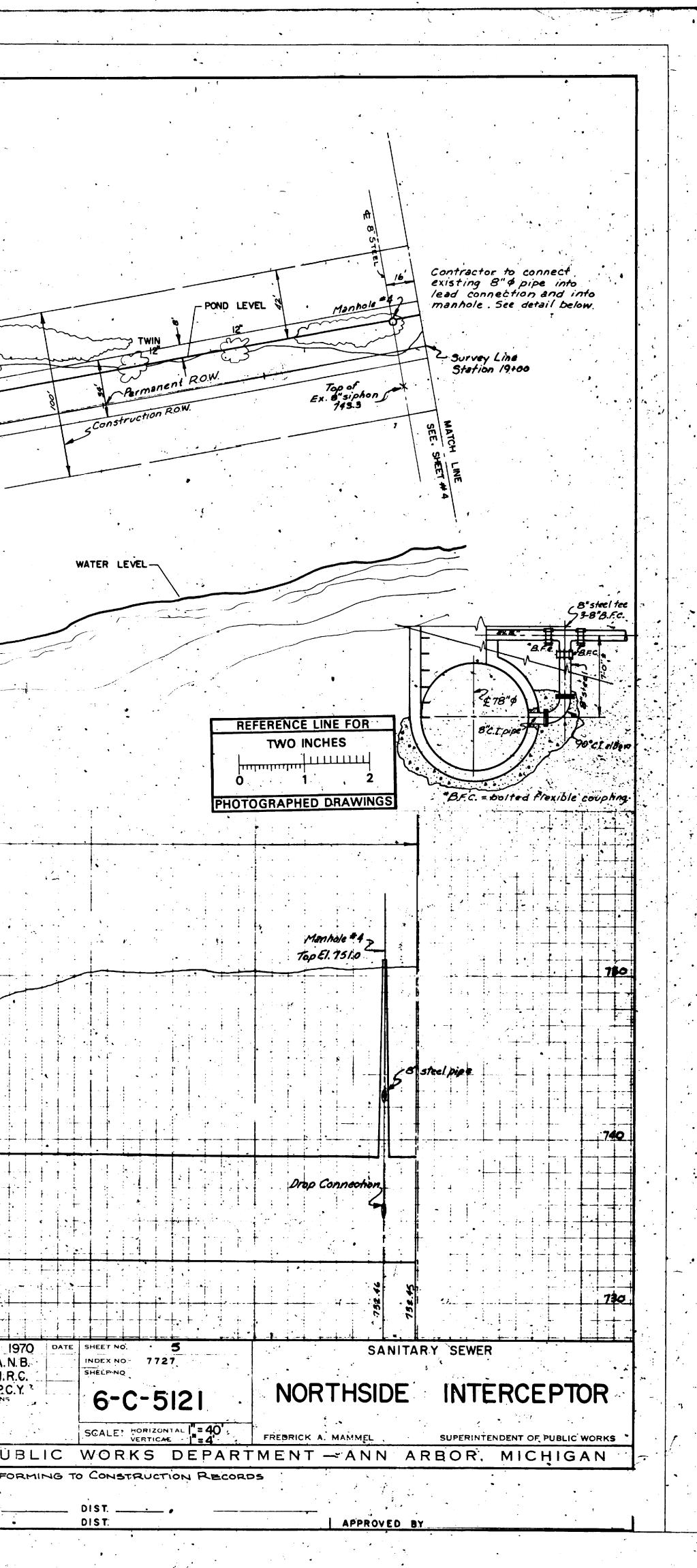
. NOTE: TEST HOLE INFORMATION OBTAINED FROM M.D.S.H. PLANS FOR RELOC. U.S. 23 OVER THE NEW YORK CENTRAL R.R. AND HURON RIVER. XI OF 81-1-17 TEST-HOLES #10 & II **a** . . ۰. ا Concordia Lutheran Junior College #Ю #11 750.39-750.39- ____ - WATER - WATER SOFT SEDS OF RIVER SILT 748.39 -FIRM SAND- BR B GR. MOTTLED LAY PEBBLY TR OF SUT 746.39-741.89 — HARD BR. B GR MOTTLED CLAY-COO PEBBLE - TR. OF SANE - SOFT SEDS OF RIVER SILT 737.89 -- 77 A TEL HARD GR. QLAY-TR. OF PEBBLE -TR. OF SILT 734.39-73339 -HARD GR. QLAY-TR. OF FEBBLE - TR. OF SILT-OCC. LENSES OF STIFF GR QLAY-WITH TR. OF SAND 731.89-01 729.39 --BRUSH 727.89-726.39-- HARD GR. CLAY-U OCC. PEBBLE-TR. OF SILT STIFF GRICLAY-SANDY-722.39 -2 - HARD GR CLAY-TR OF SAND-TR OF SILT-OCC PEBBLE Future Sewer Connection 718.39-LEND OF BORING END OF BORING ___ 78 ~___ BORING #12 • ۲ 340' 8 Zconstruction ROW. - POND LEVEL TOE OF SLOPE -----28 A.S. -WATER LEVEL . CLLA • 750 -----740 -----78"\$ \$1-A 388' @ 0.06% ي يهد معامد فالسعاف Digital Status Scanned On: 7-5-05 By: DGK CENTER LINE PROFILES ____ ---- RIGHT PROPERTY LINE LEFT PROPERTY LINE



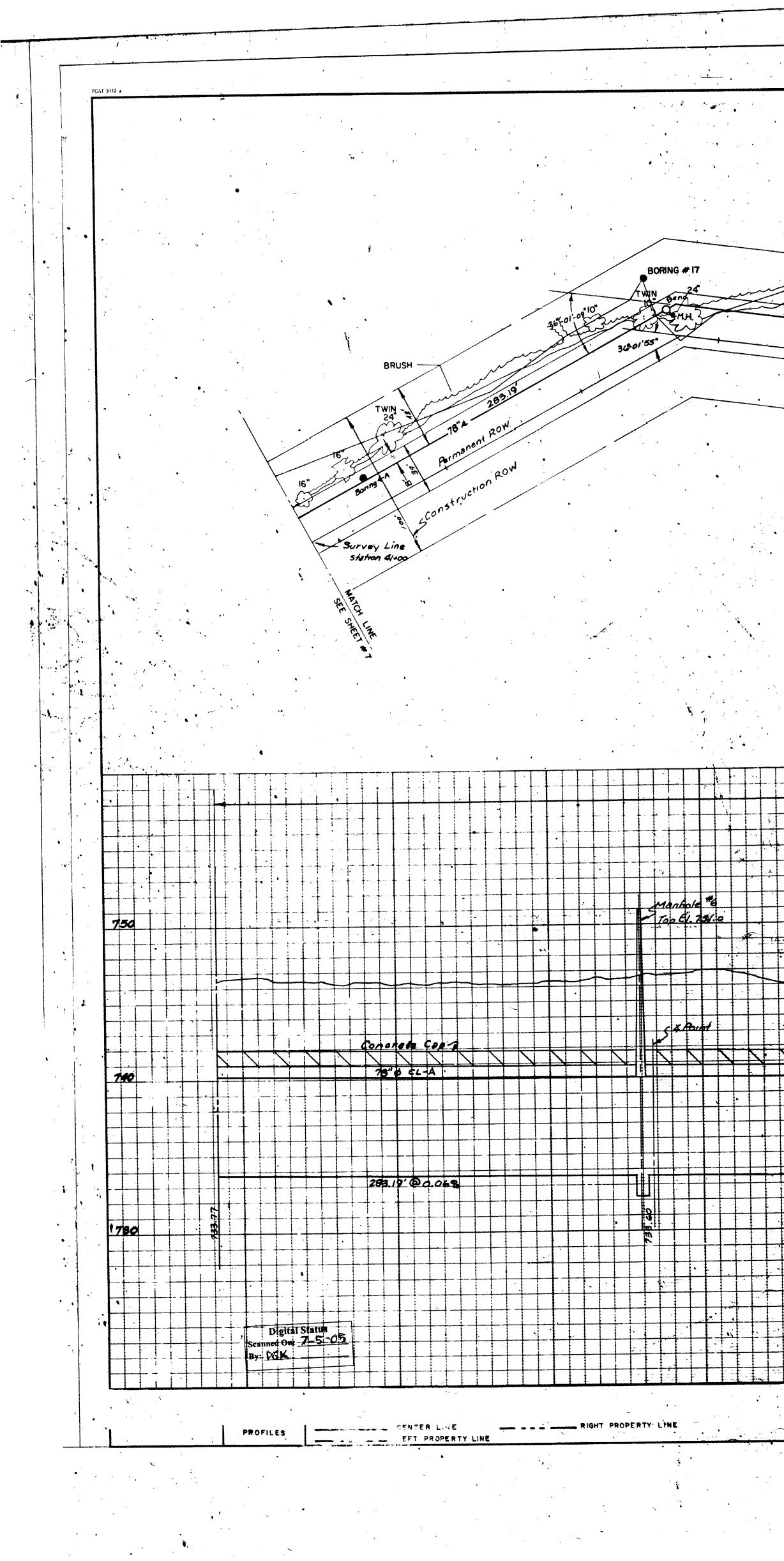
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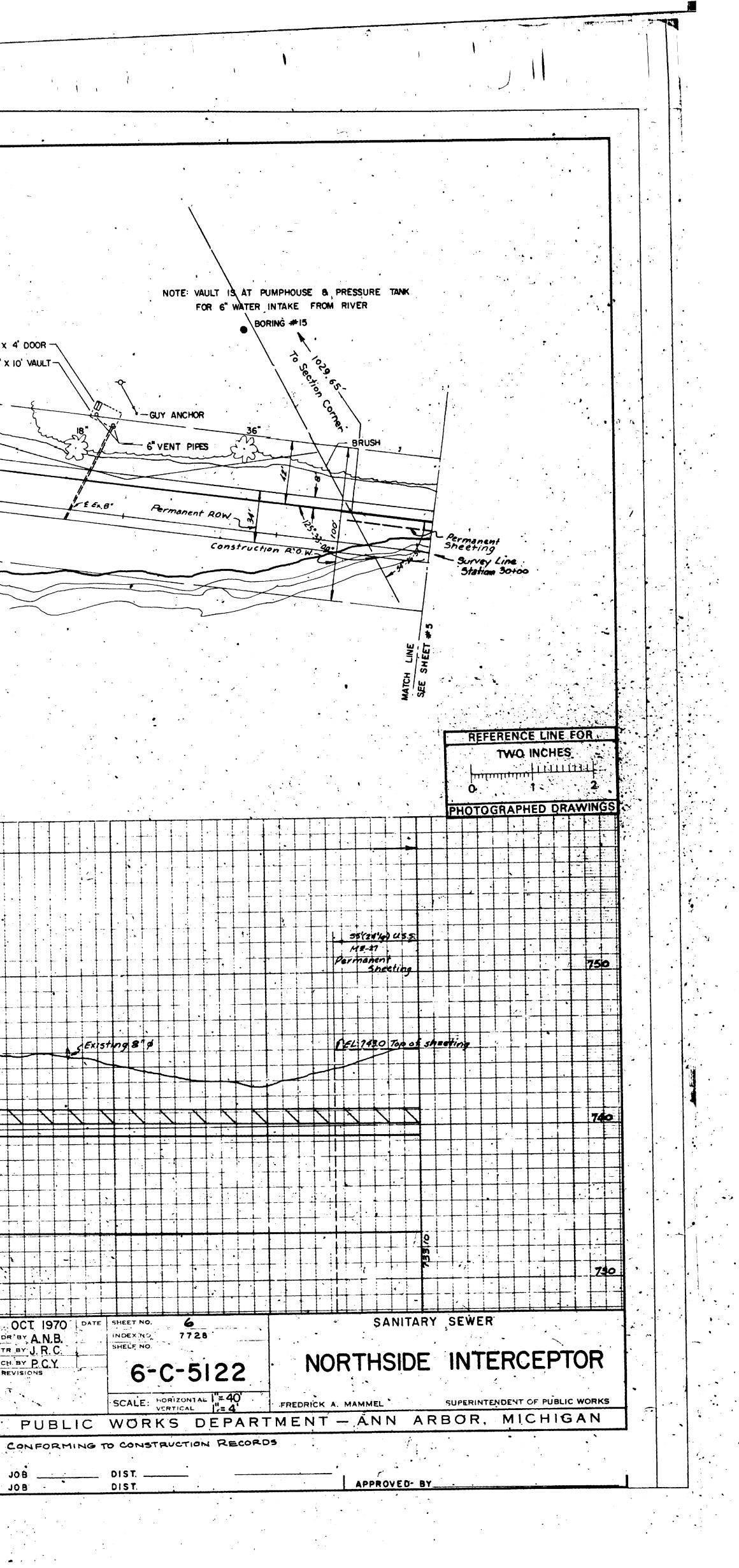


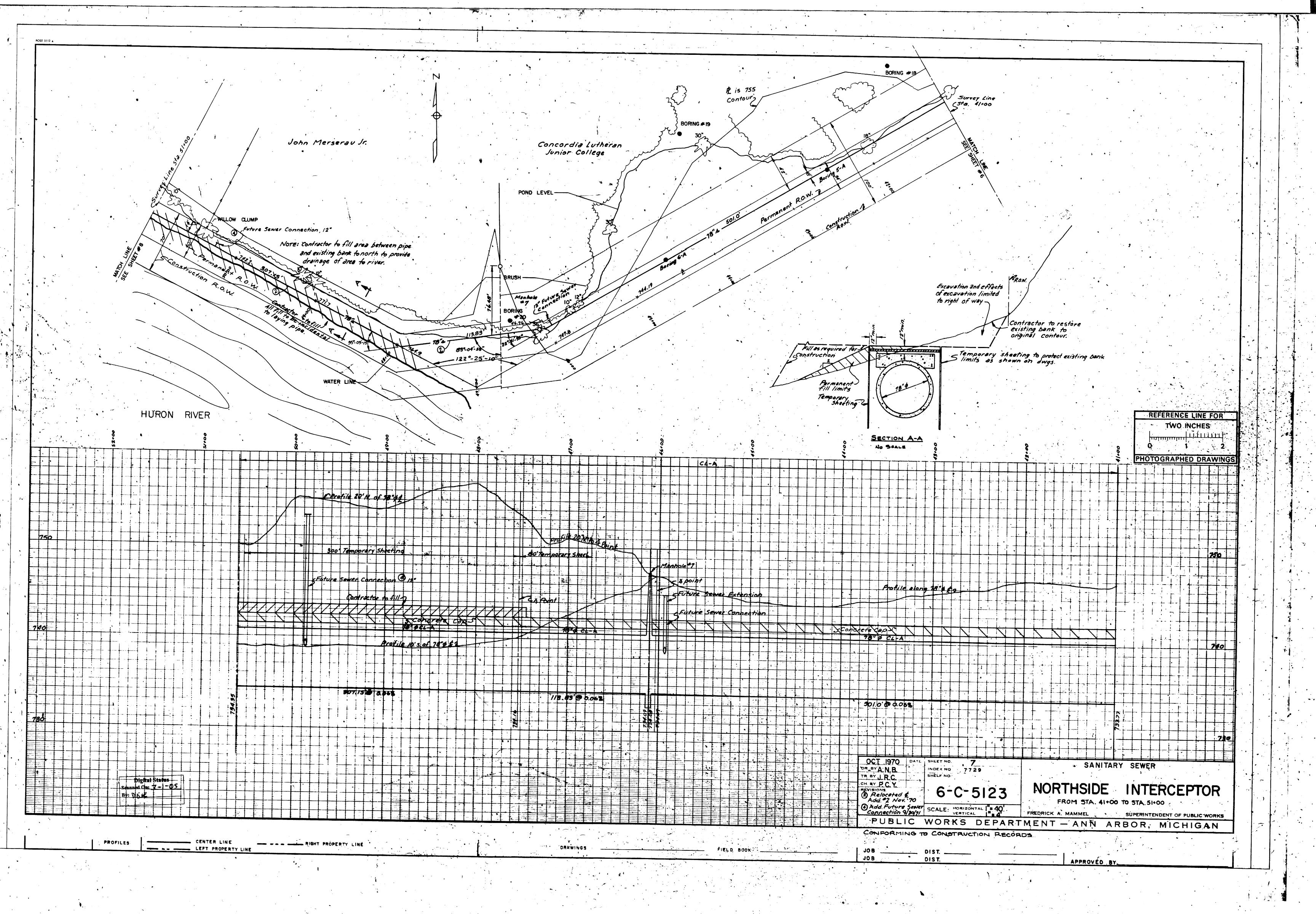
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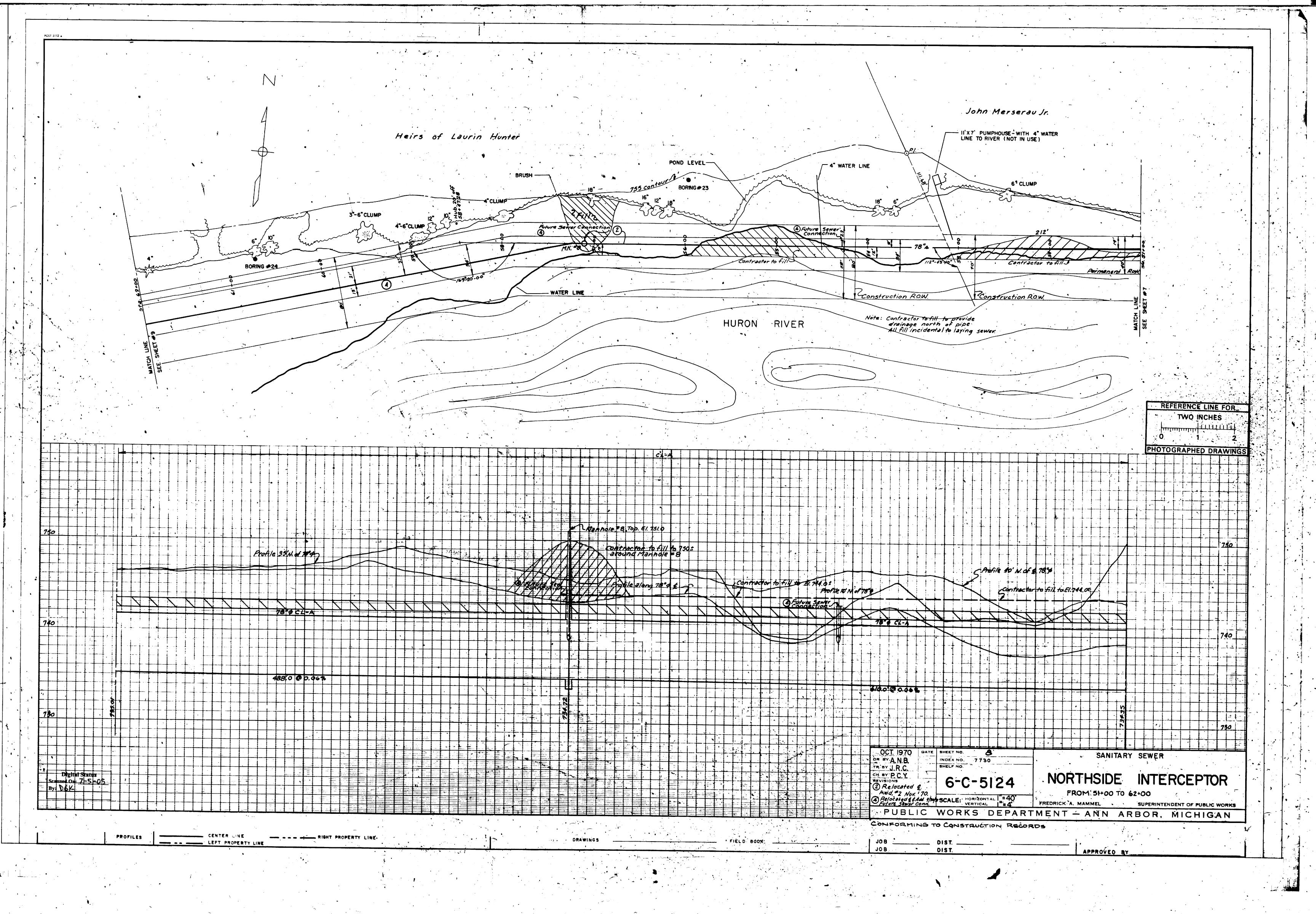


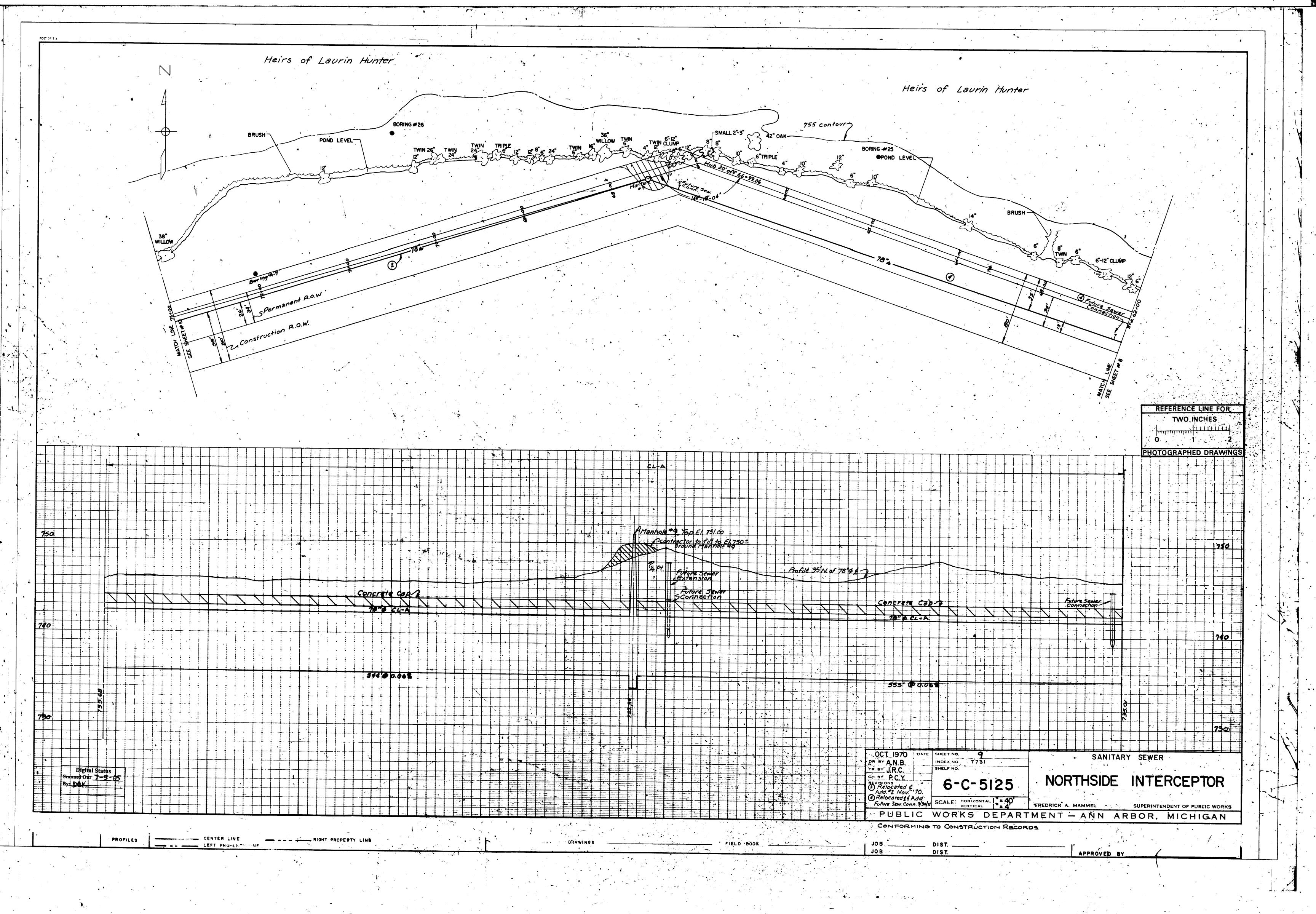
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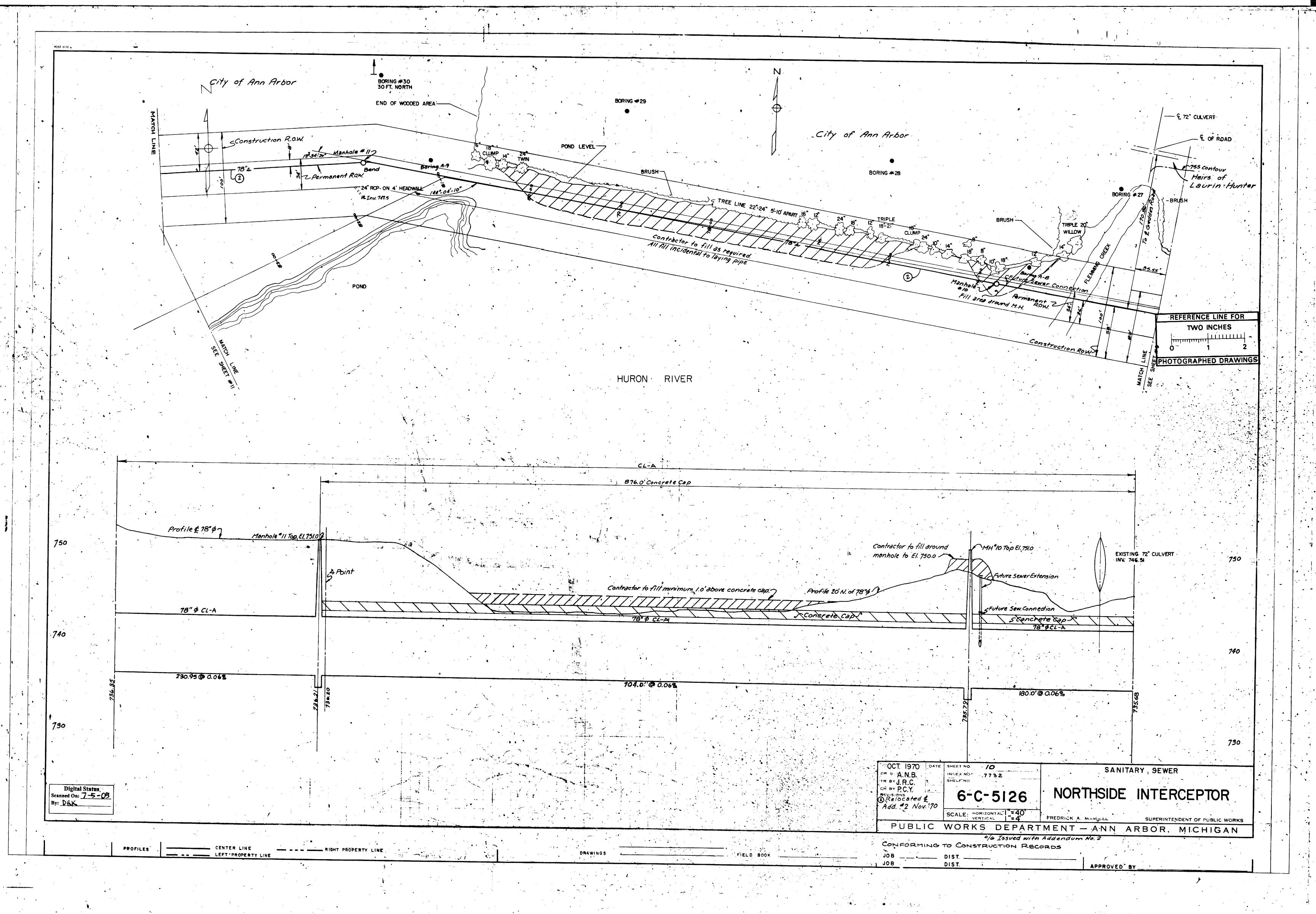
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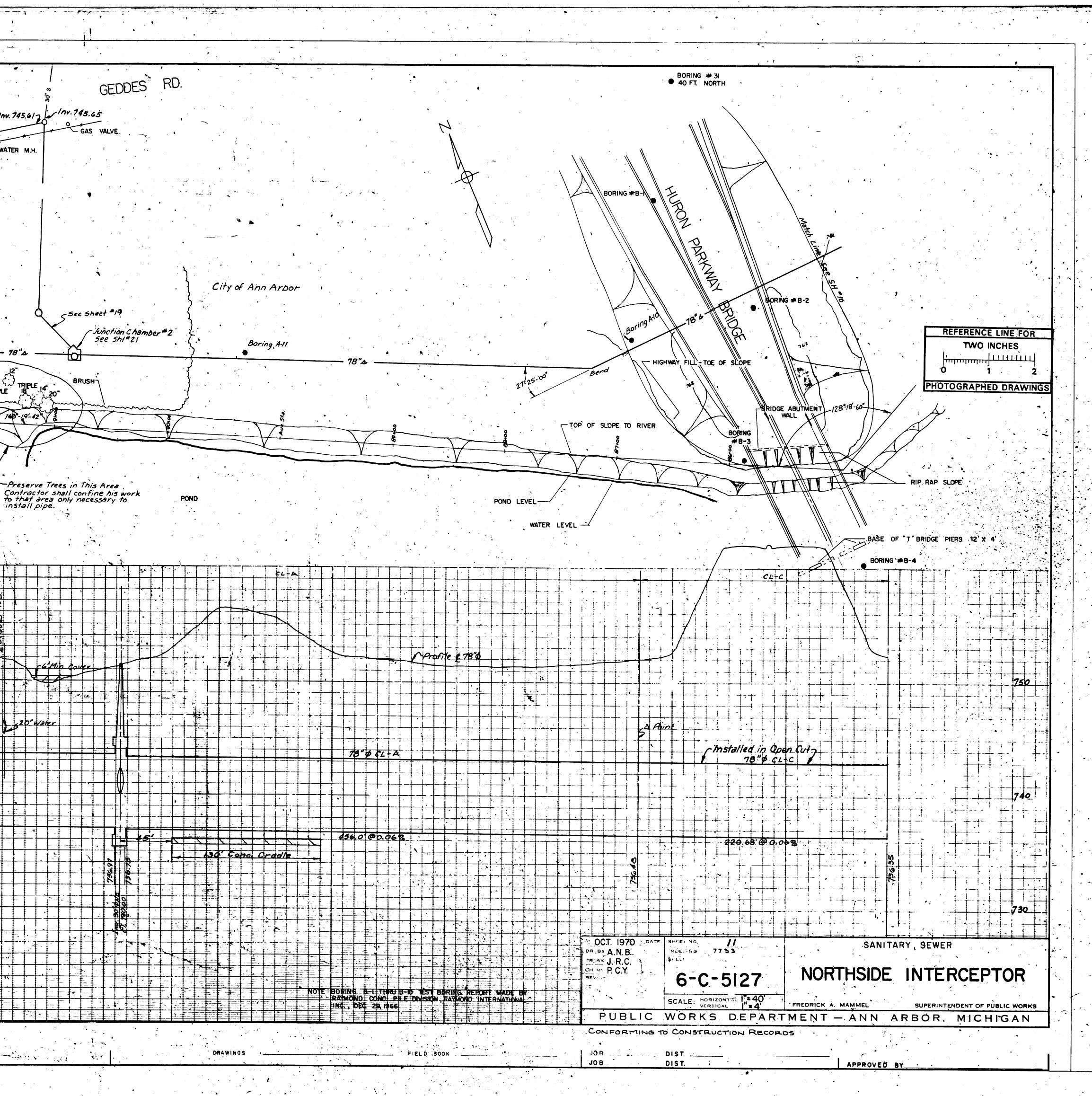


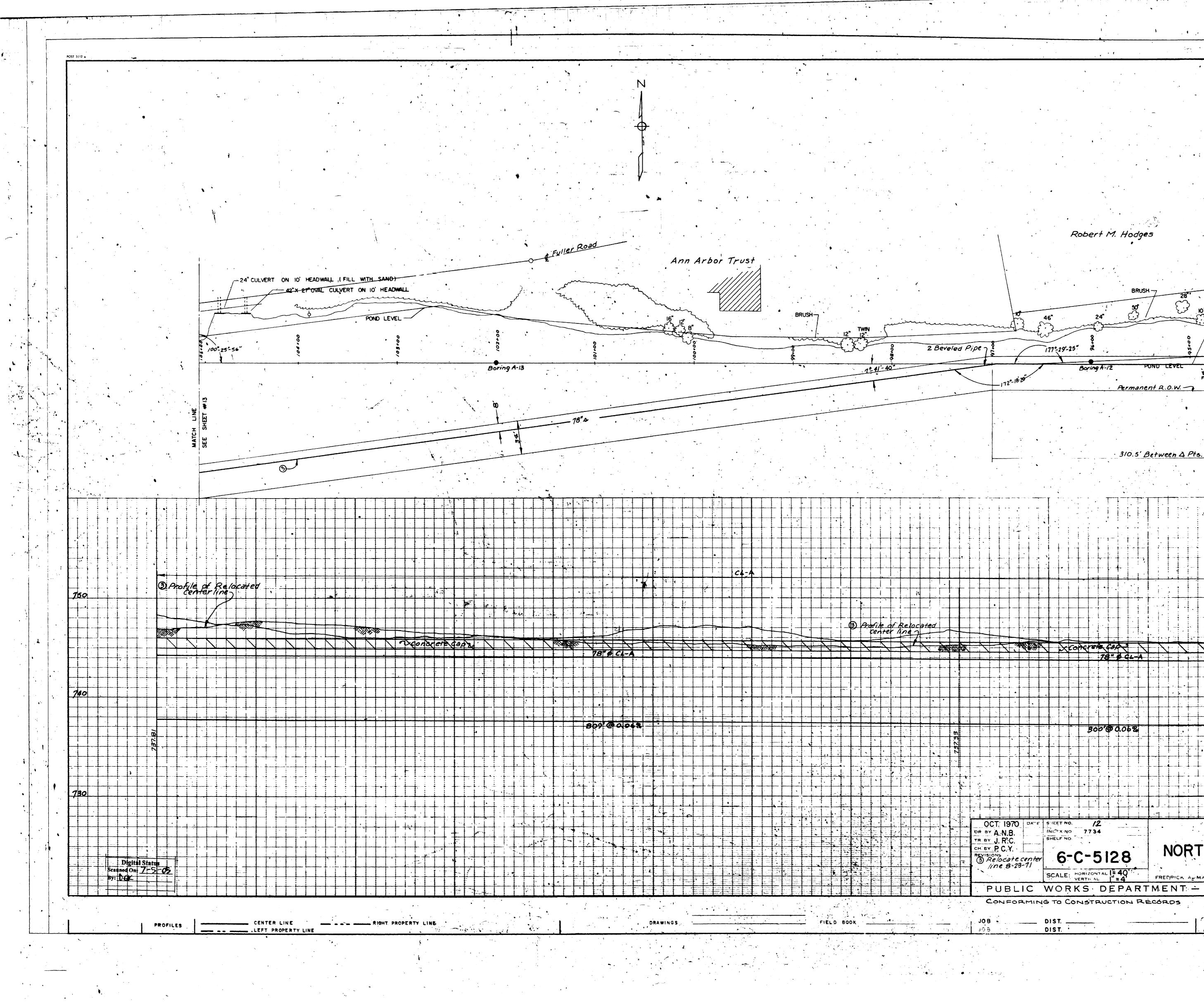




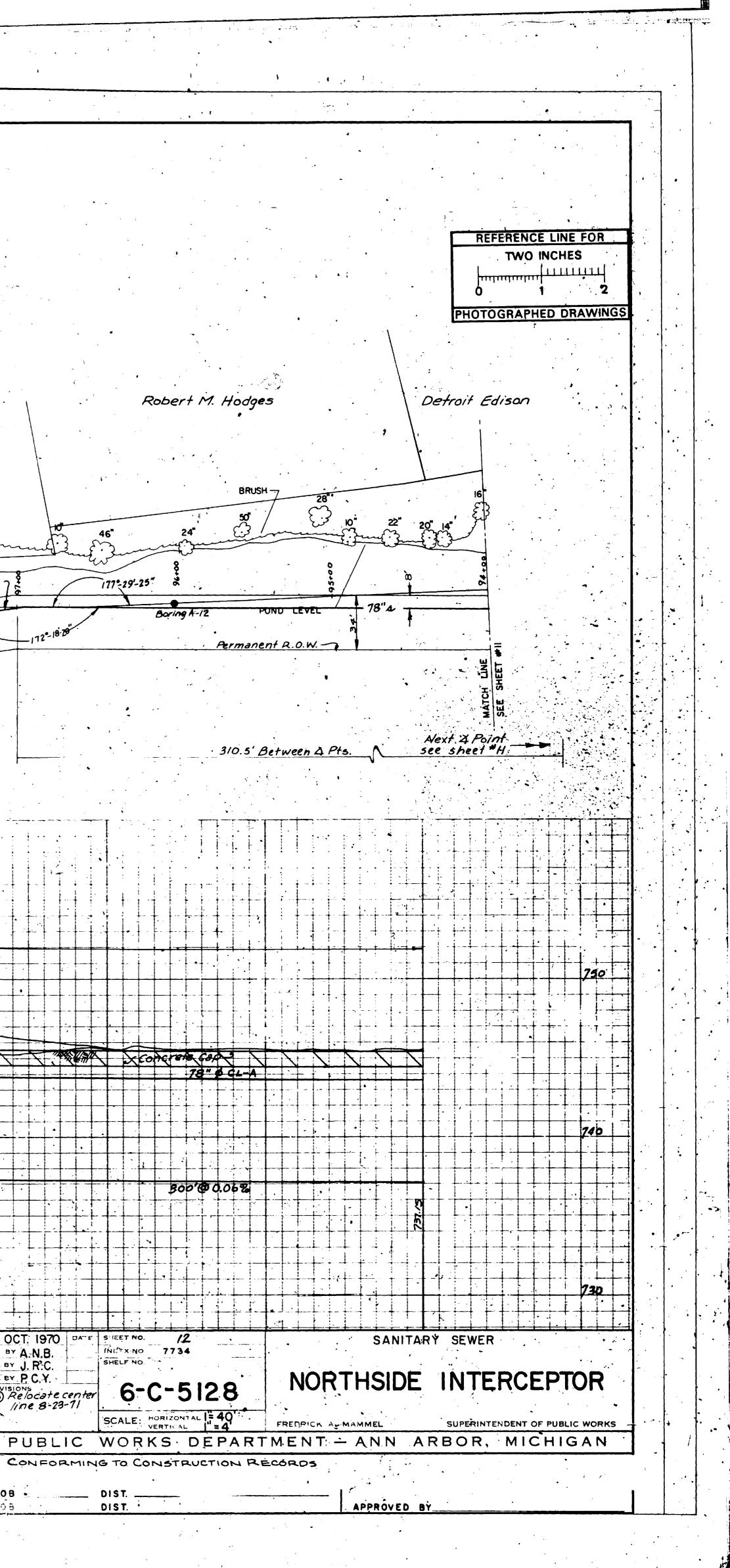


POST 5112 A FULLER · 🗶 📜 🖡 RD 14" I.D. PUMPING MAIN Inv. 745.61 104.745.65 BORING AT LIFT STATION 4/25/58 • NO. OF BLOWS PER FOOT DEPTH OF SAMPLE EDISON M.H. -WATER M.H. SOFT SAND, GRAVELLY, BROWN CLAY MED. VARI COLORED CLAY, SOME FINE SAND & GRAVEL WATER Detroit Edison SAND, SOME CLAY FIRM FINE TO COARSE BROWN SAND, SOME CLAY & GRAVEL 12 COMPACT COARSE GREY SAND GRAVEL & LARGE STONES / UNABLE TO OBTAIN SAMPLE / AT 14' BECAUSE OF A BOULDER - BORING-___LIFT STAT • 100-4 COMPACT SILTY FINE TO MED. 90____23' COMPACT MED. TO COARSE BROWN 20-53-09" 18"s TOP OF SLOPE Permanent Row. TRIPLE MULTIPLE Construction RO.W. 148-19-42 BRUSH POND LEVEL ----750 111 中語市 s A Point Stonexete Sop - 78" g ct - A 20" Water ──╞╪╍┈╸╞╸┄╴╞╴┈╺╋<u>──</u>╋<u>──</u>╋<u>──</u> 740 Ēţ - + ÷. 293.41 @0.06% 130 PROFILES CENTER LINE

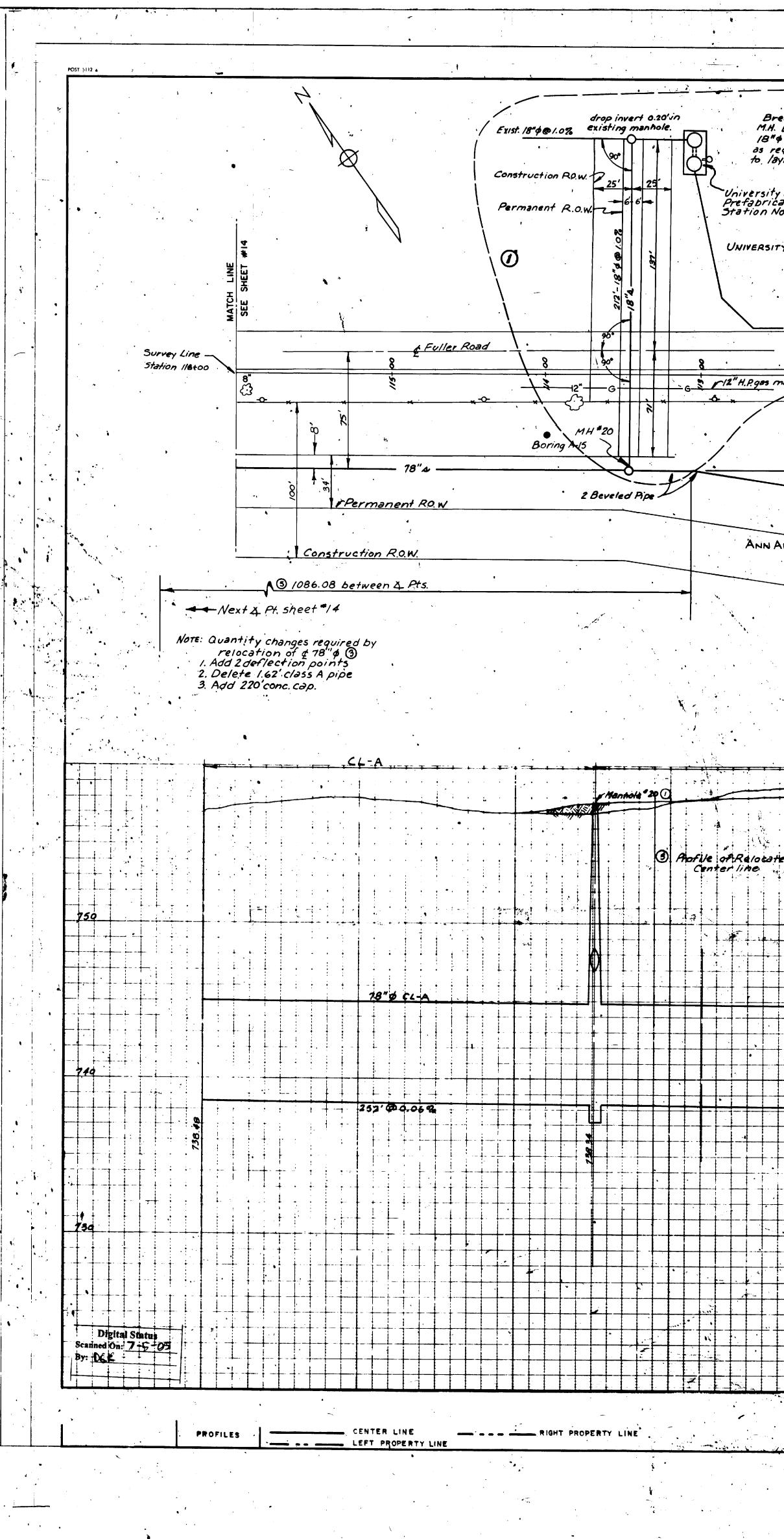




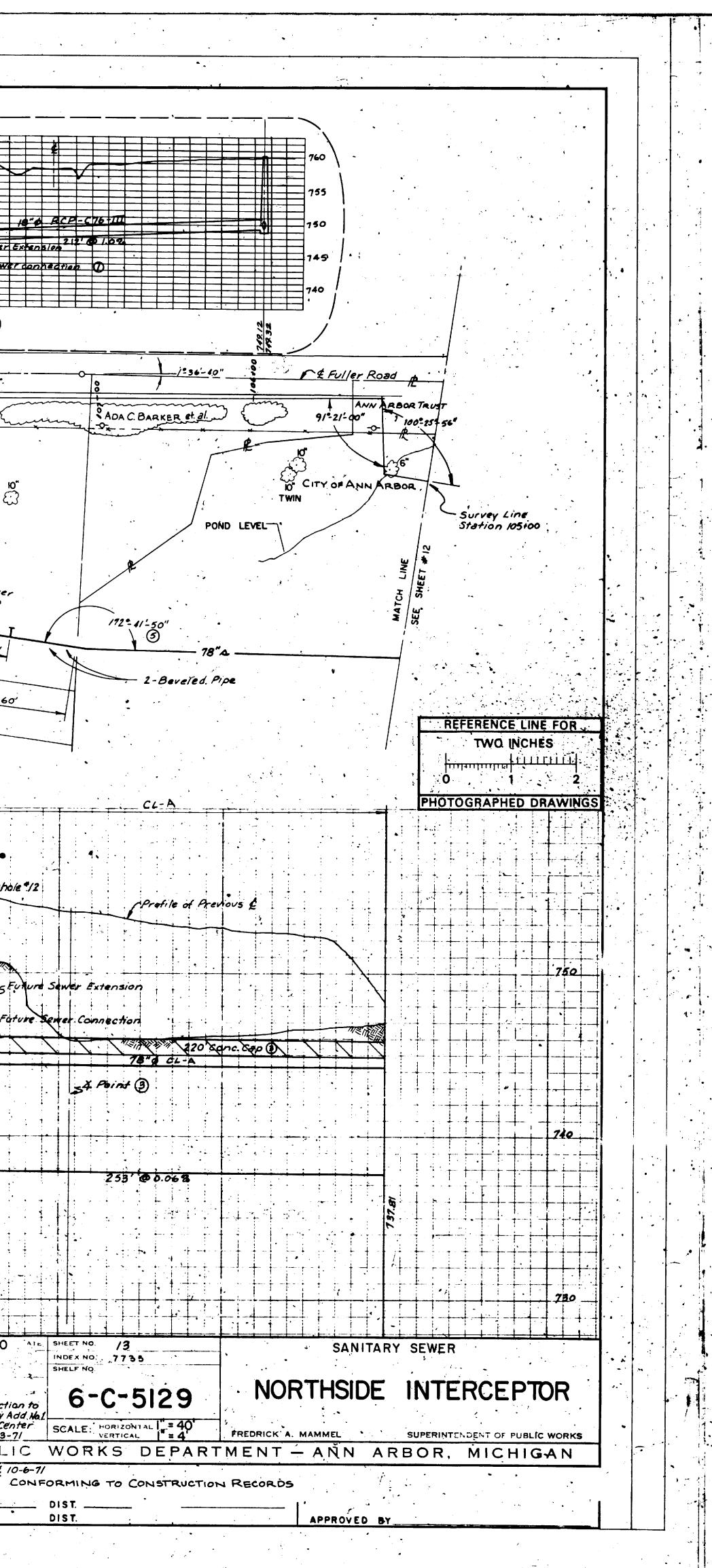
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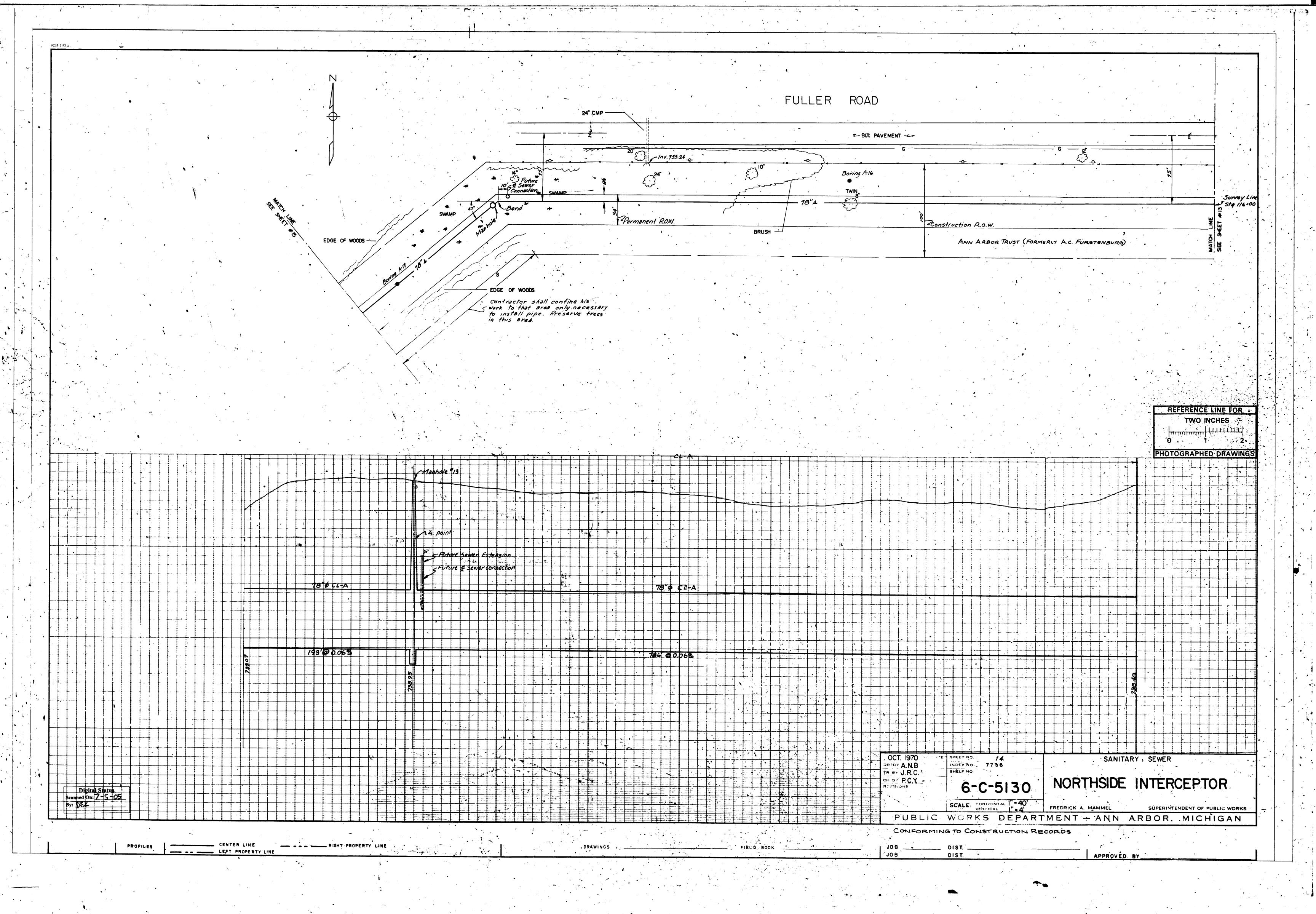
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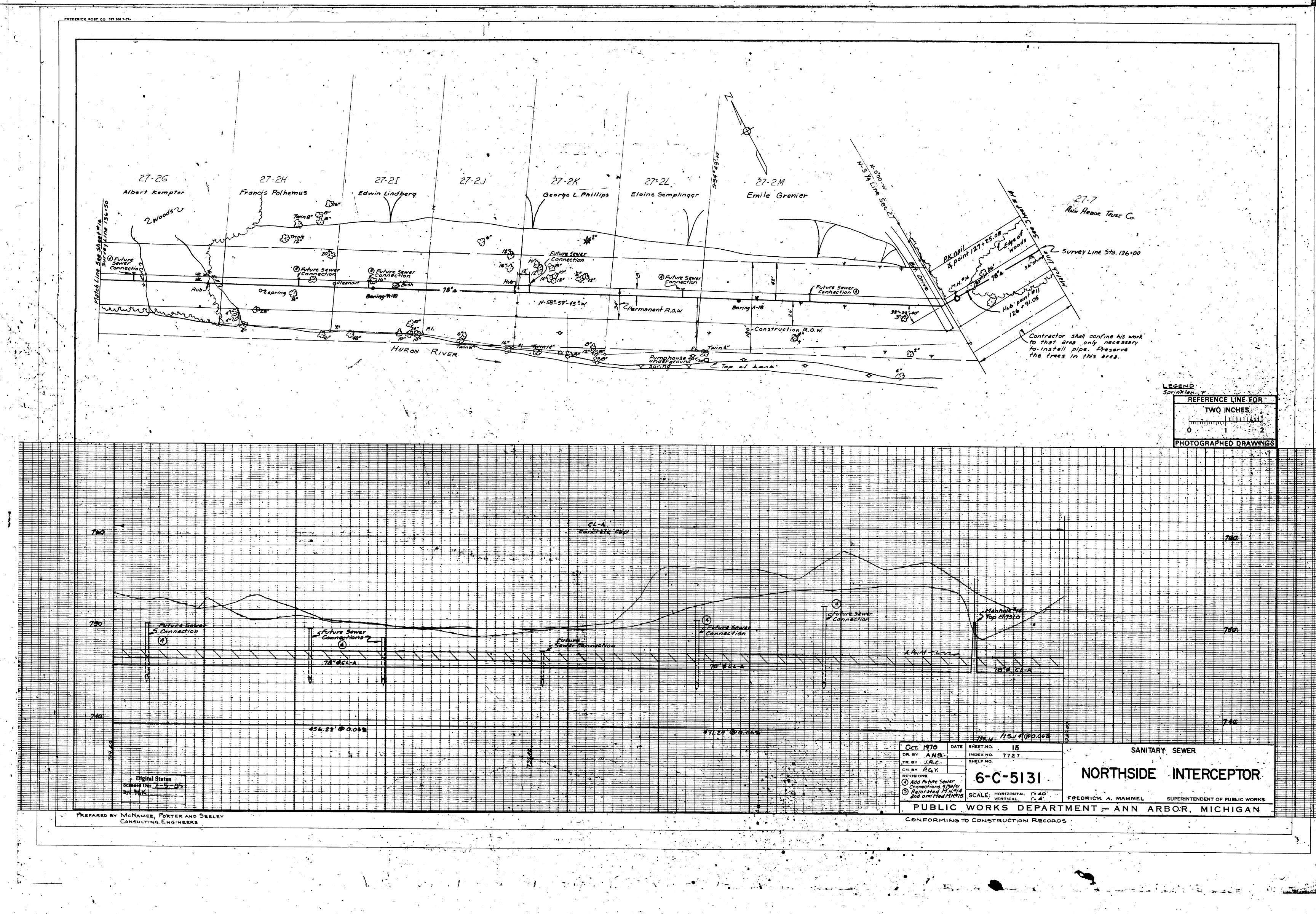


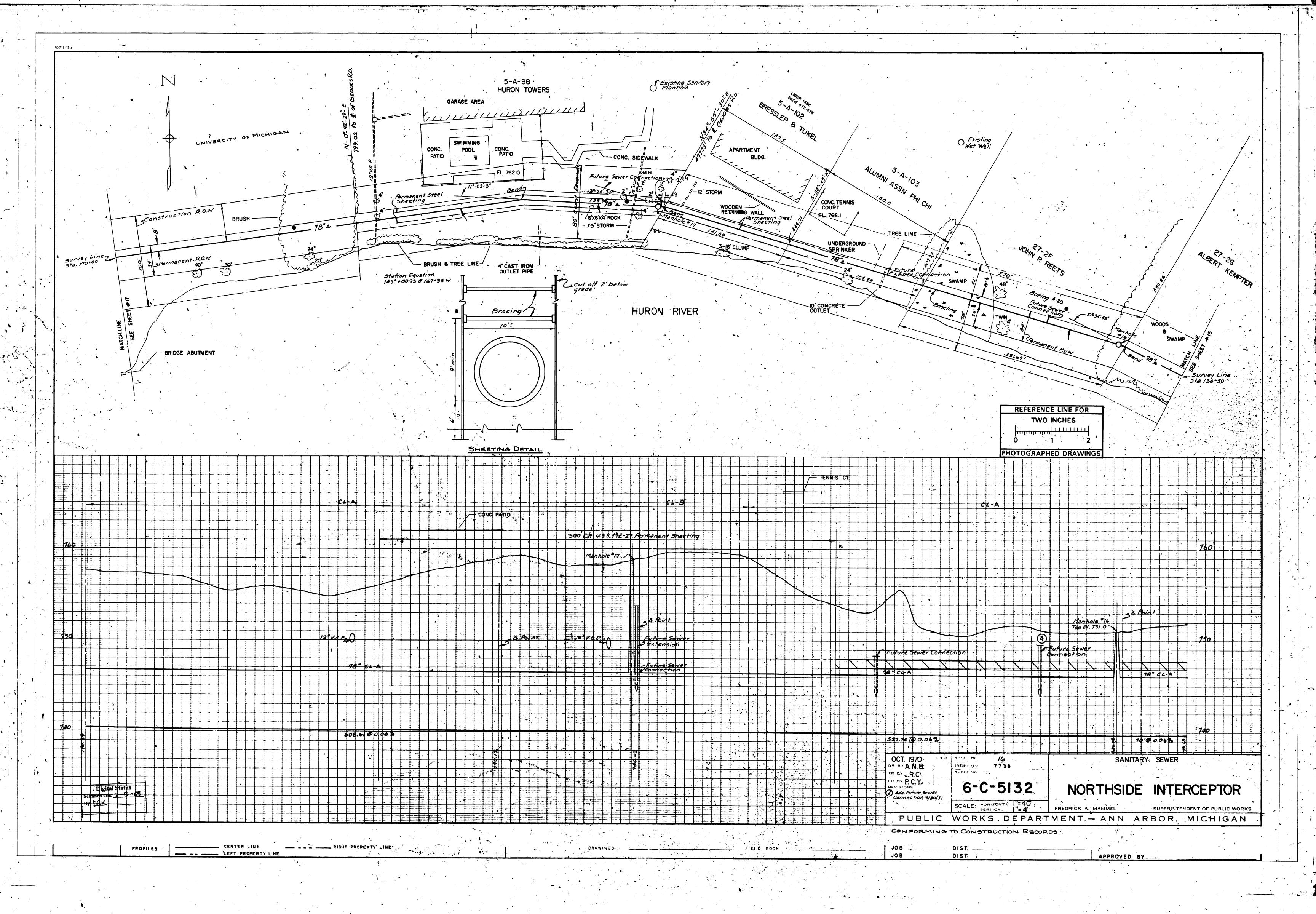
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ARBOR TRUST (FORMER	3 Relocate. Center Line (3) 6/3.0 RLY A.C. FURSTENBURG)	o'' 78''A	Construction ROW.	3 Future sewer connection Manhole •12 20' 60
Hea	Profile # 18 0		3 Profile of Revocated center line	Mainhol
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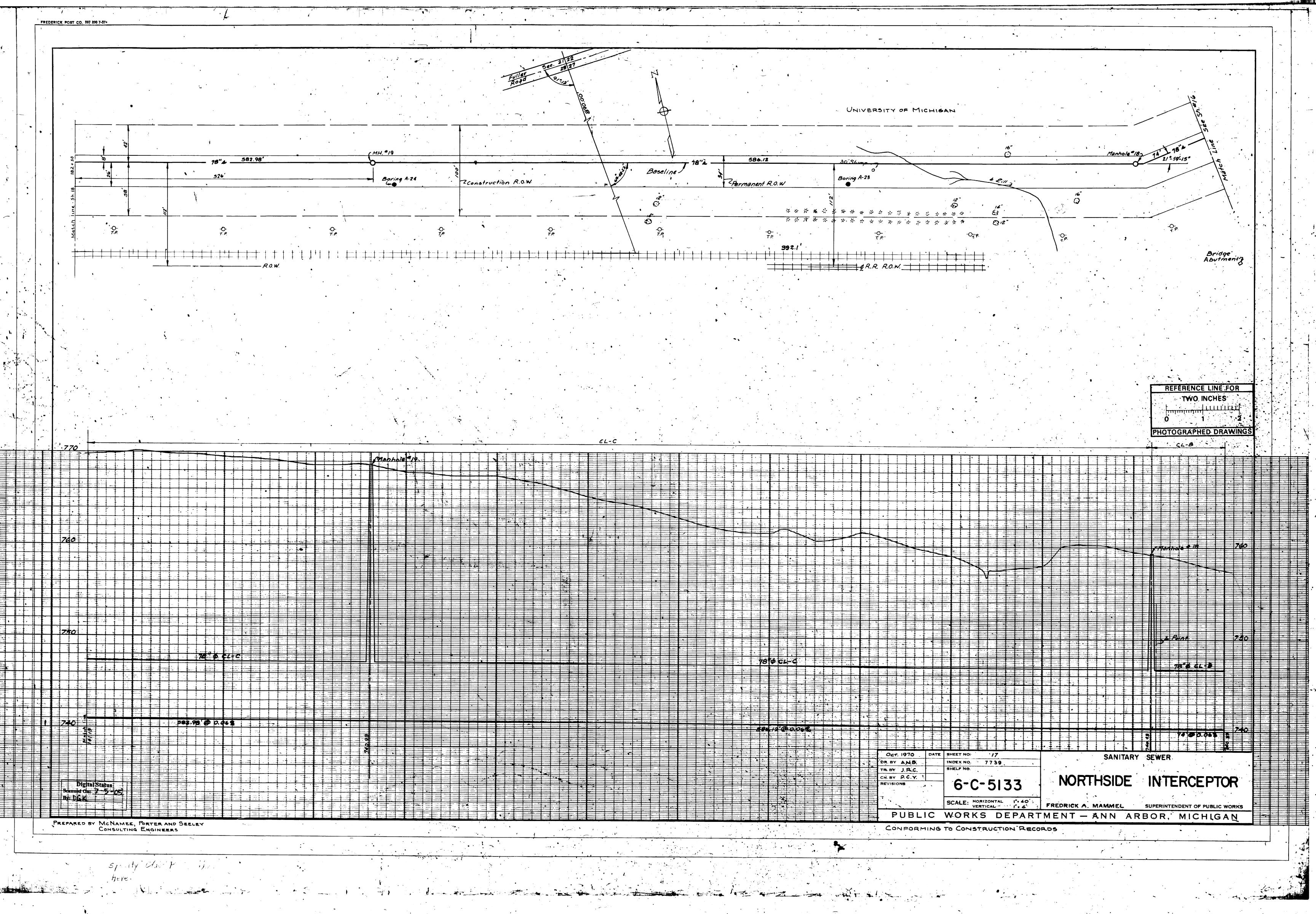


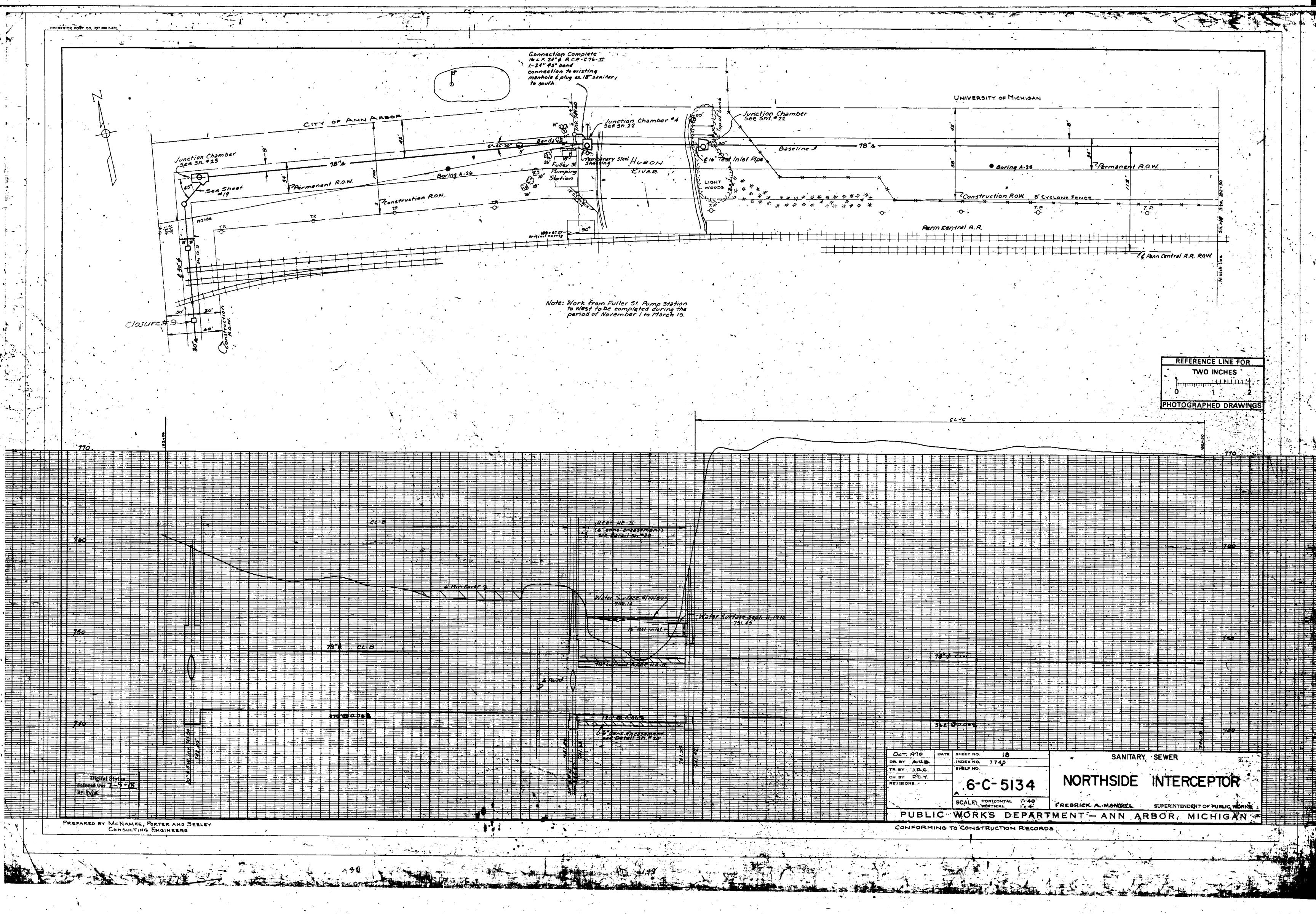
🔶 ta Katabasa

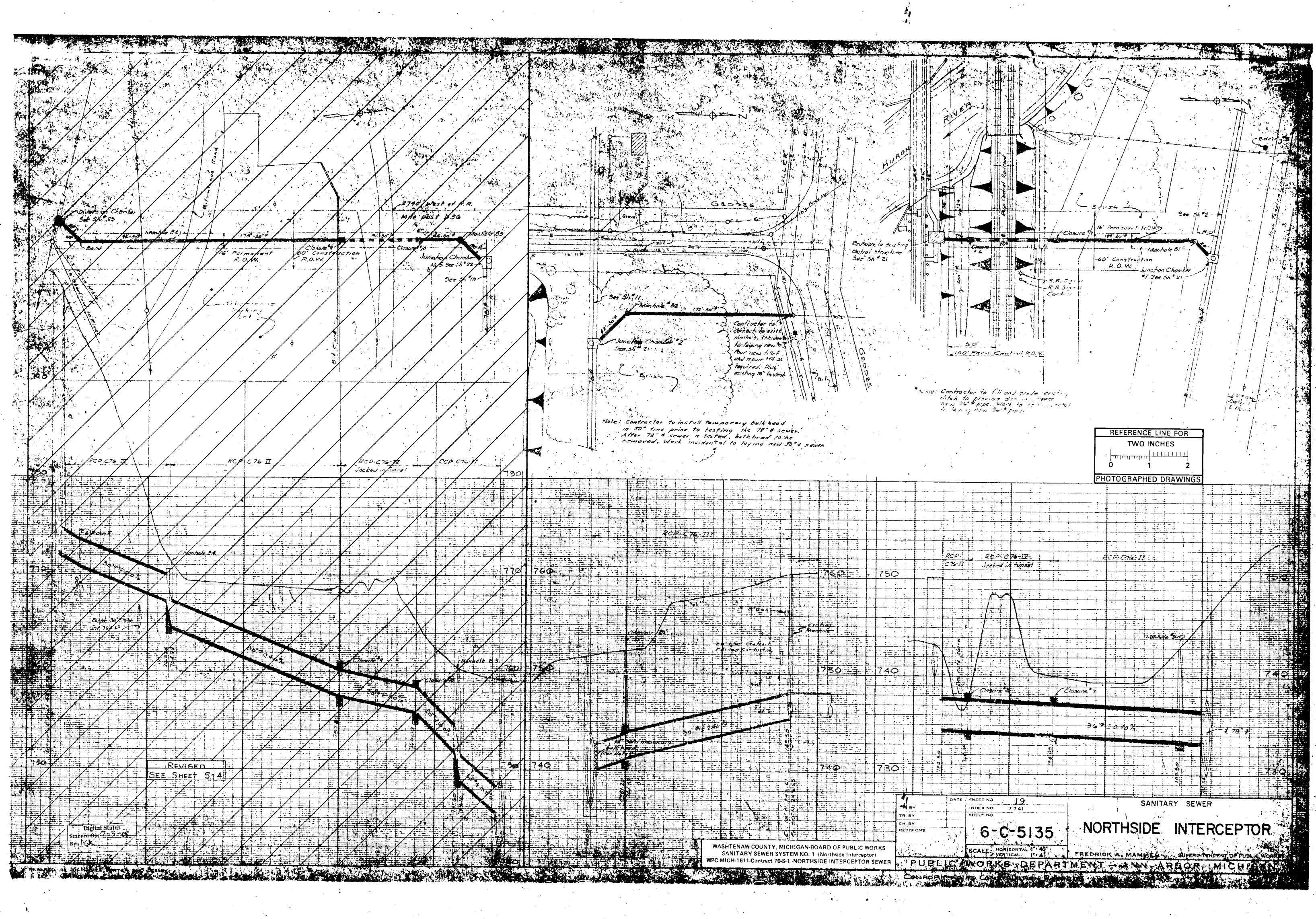


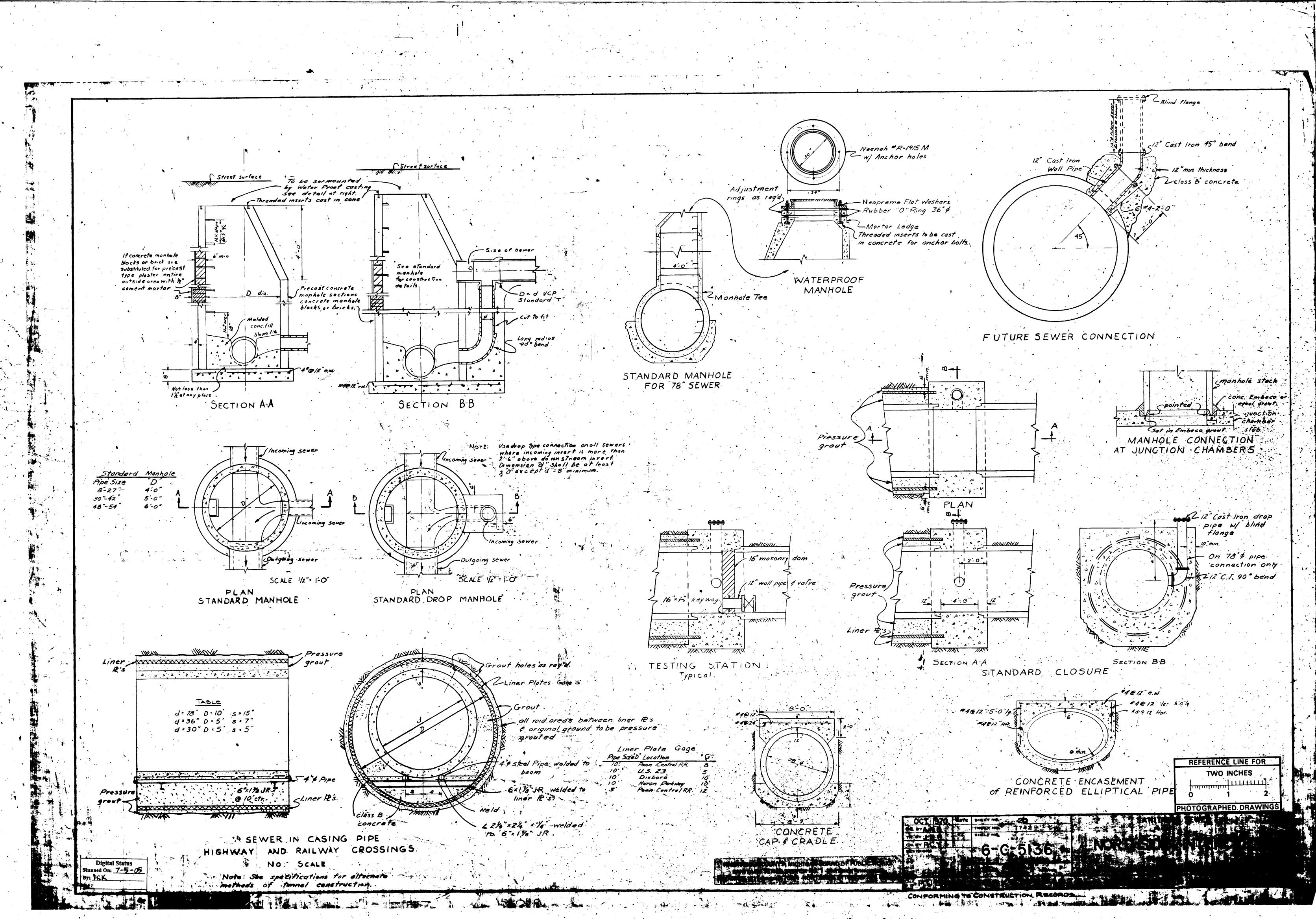




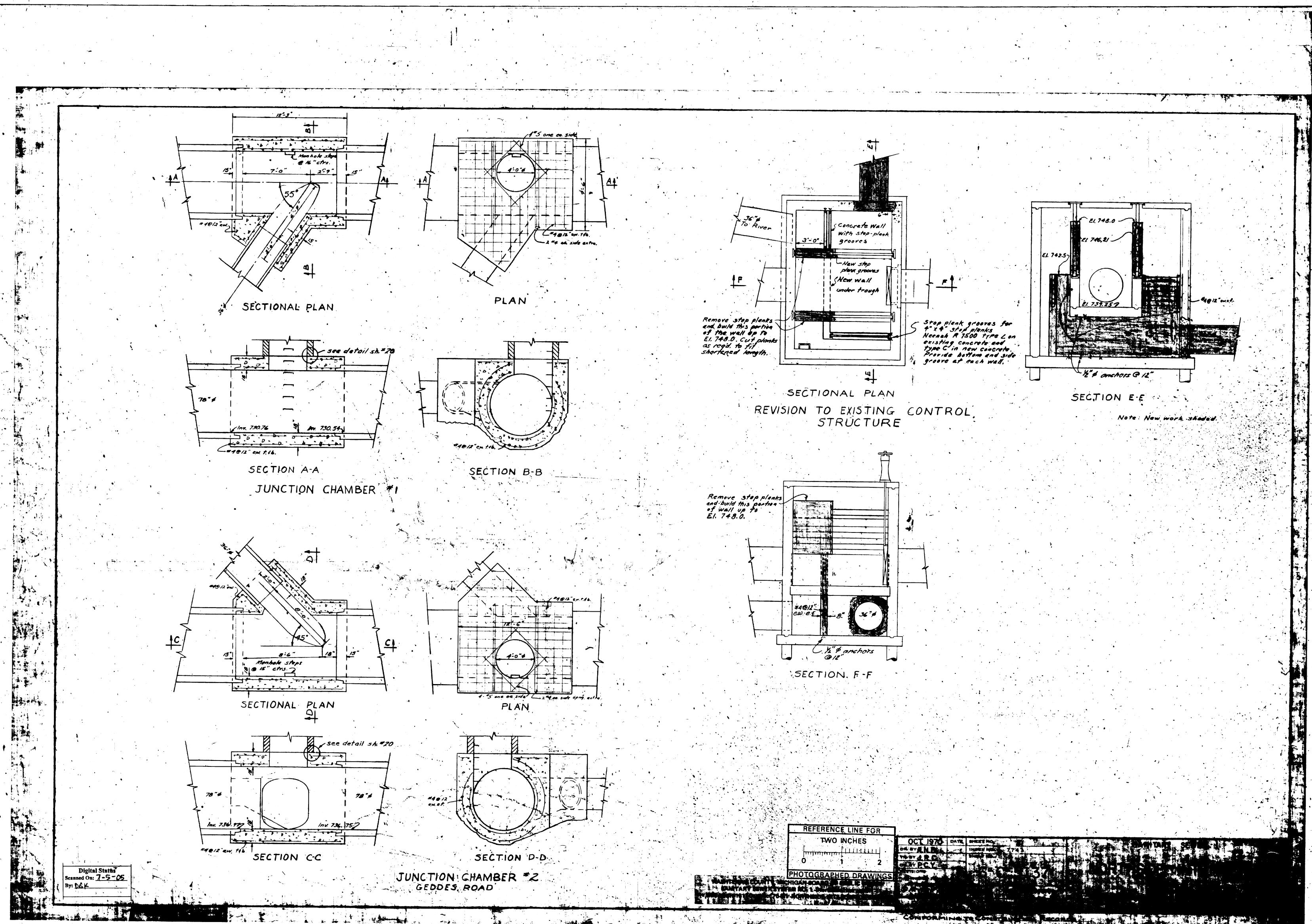


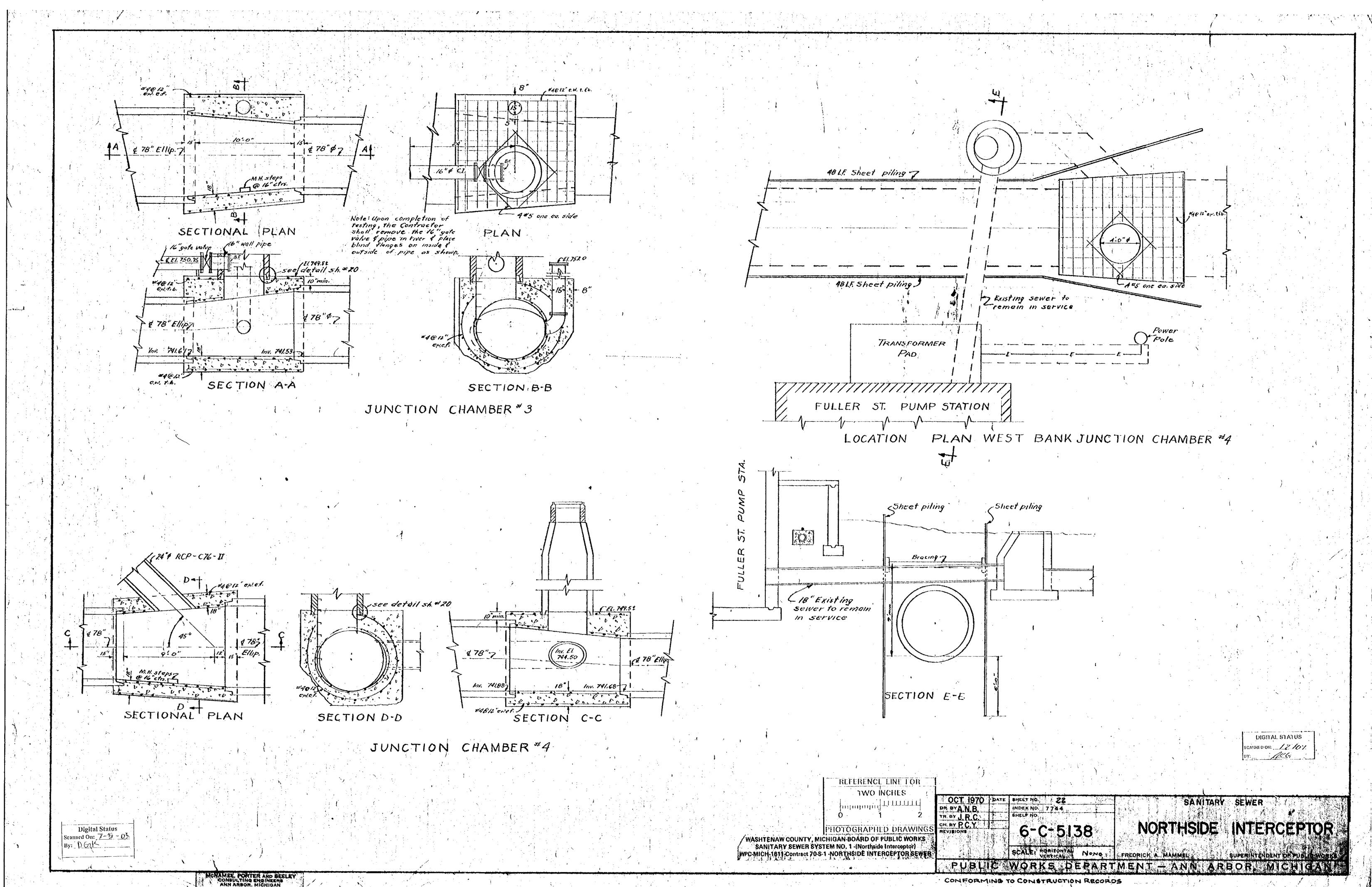






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CONFORMING TO CONSTRUCTION RECORDS

