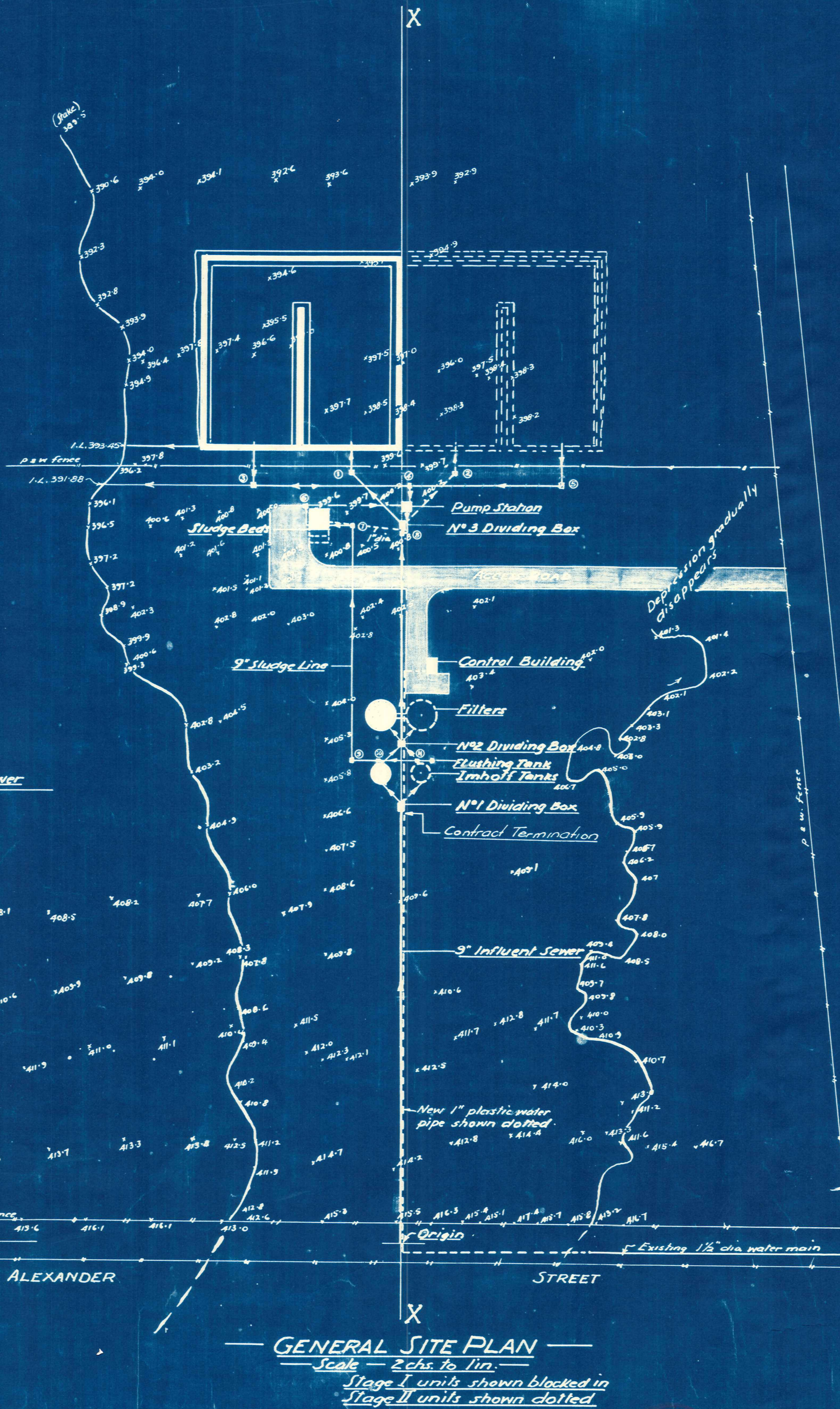
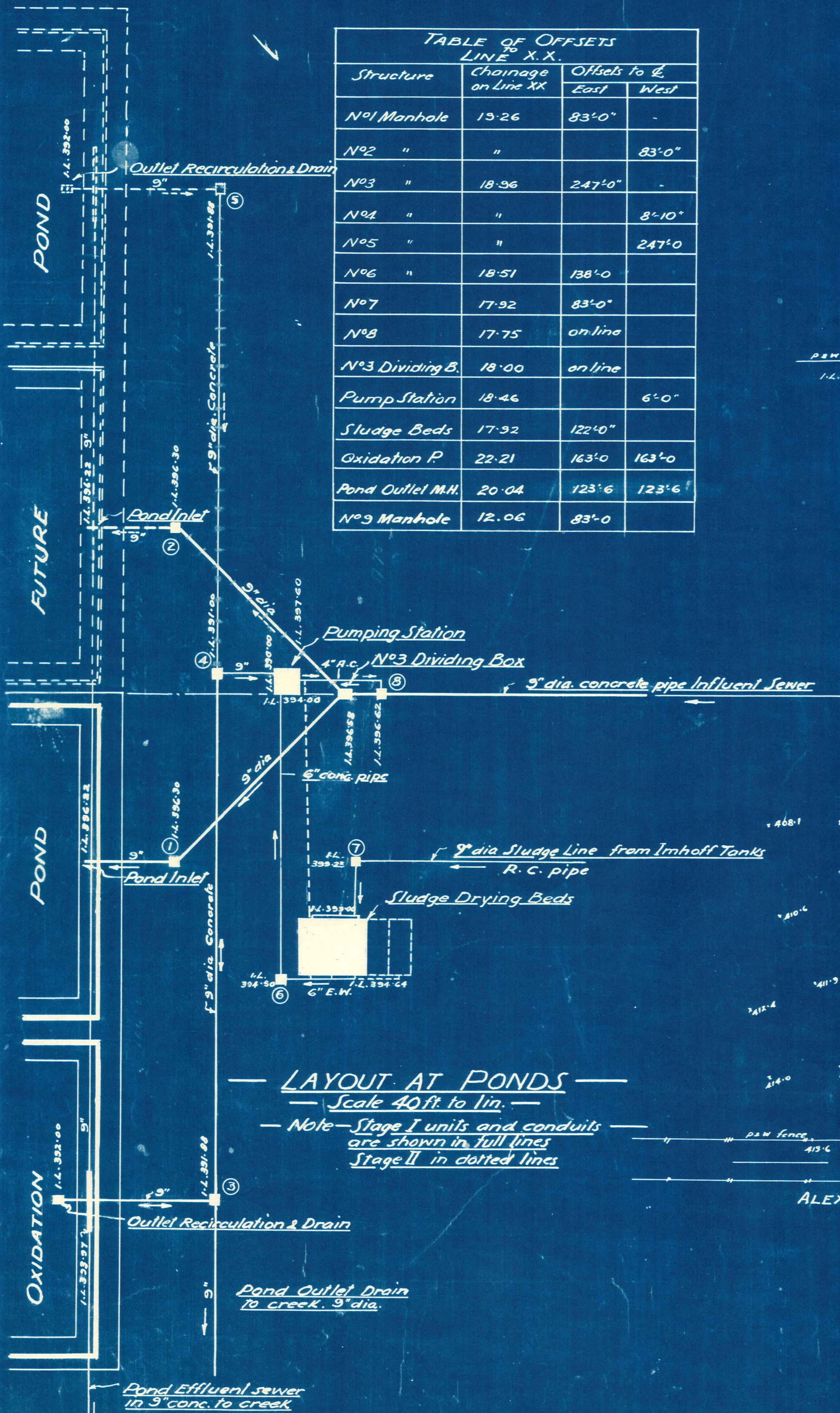


TABLE OF OFFSETS  
LINE X.X.

Structure	Chainage on Line XX	Offsets to &	
		East	West
Nº1 Manhole	15.26	83'0"	
Nº2 "	"		83'0"
Nº3 "	18.96	247'0"	
Nº4 "	"	8'-10"	
Nº5 "	"	247'0"	
Nº6 "	18.51	138'0"	
Nº7 "	17.92	83'0"	
Nº8 "	17.75	on line	
Nº3 Dividing B.	18.00	on line	
Pump Station	18.46		6'0"
Sludge Beds	17.92	122'0"	
Oxidation P.	22.21	163'0"	163'0"
Pond Outlet M.H.	20.04	123'6"	123'6"
Nº9 Manhole	12.06	83'0"	

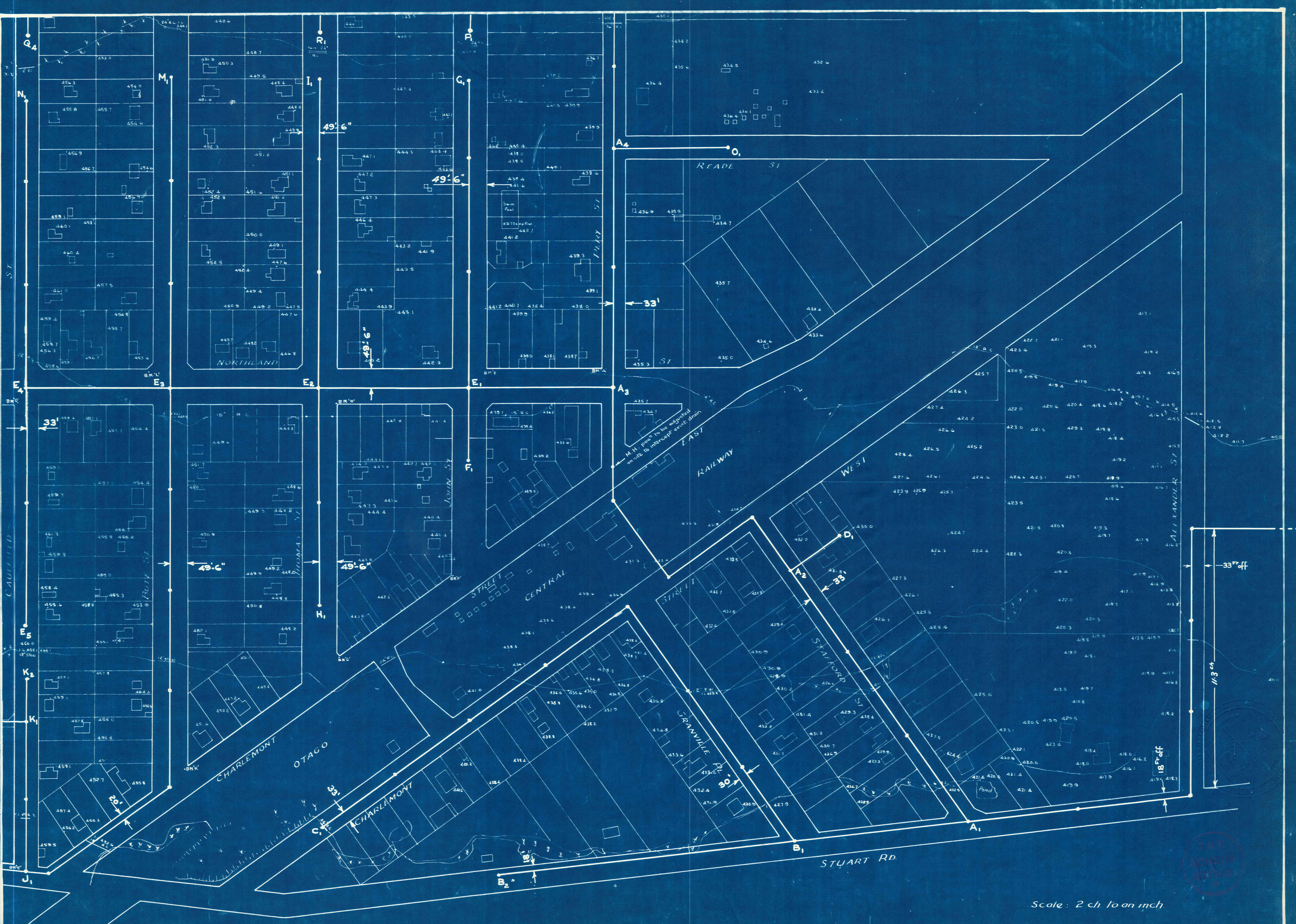
TABLE OF OFFSETS  
LINE X.X.

Structure	Chainage on Line X.X.	Offsets to &	
		East	West
Alexander St &	On origin		
Nº1 Dividing Box	11.00	on line	
Imhoff Tanks	11.75	33'0"	33'0"
Nº5 & 10 M.H.	12.06	36'0"	30'6"
Nº2 Dividing Box	12.40	on line	
Filters	13.21	31'6"	31'6"
Nº3 Dividing Box	18.00	on line	



LAYOUT AT PONDS  
Scale 40 ft to 1 in.  
Note—Stage I units and conduits are shown in full lines  
Stage II in dotted lines

GENERAL SITE PLAN  
Scale 2 chs. to 1 in.  
Stage I units shown blocked in  
Stage II units shown dotted



Scale: 2 ch to an inch

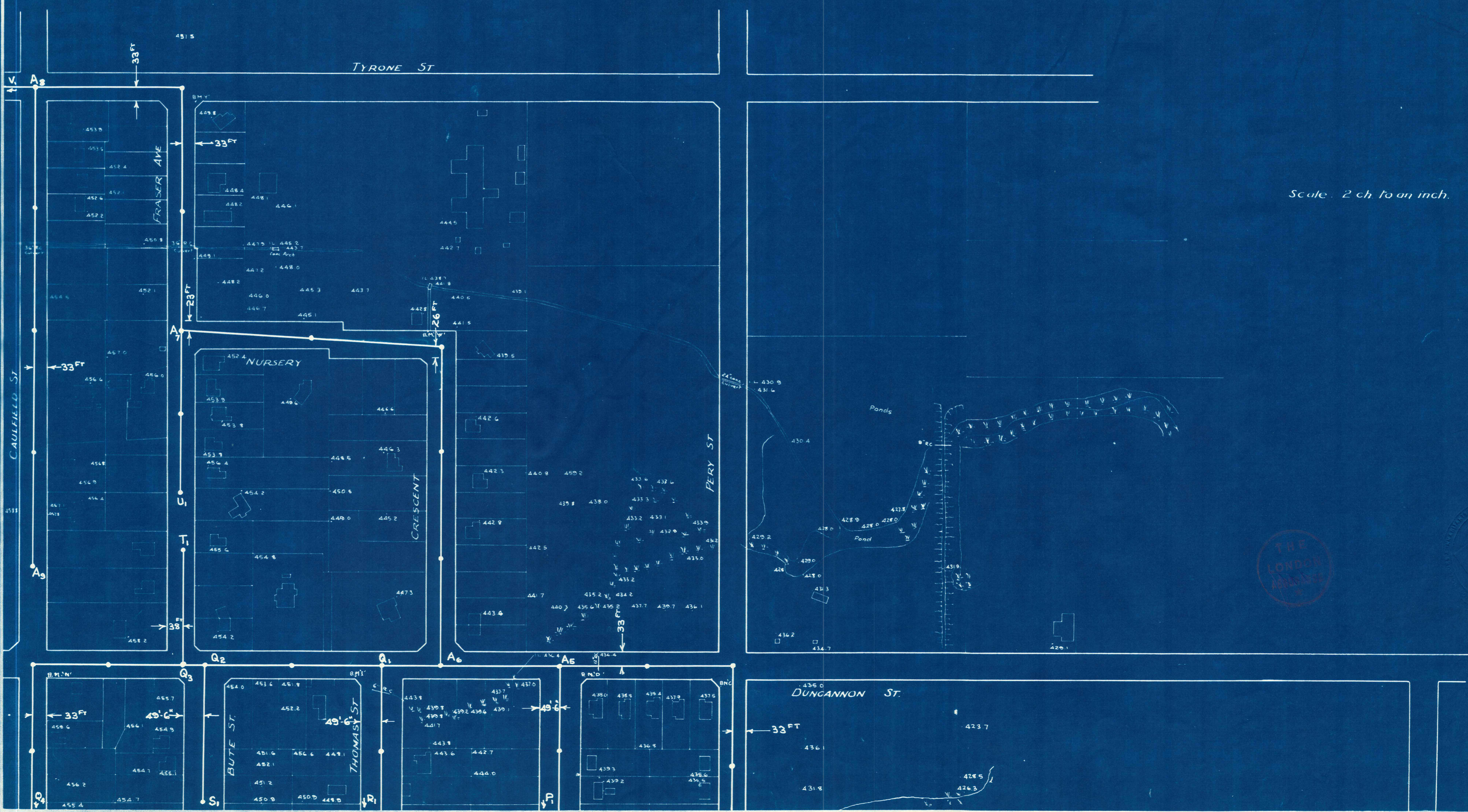
MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME  
LAYOUT PLAN

DUFFILL, WATTS & KING  
CIVIL ENGINEERS AND SURVEYORS  
DUNEDIN and INVERCARGILL

DESIGNED BY	A.B.C.	DATE	Sept. 58
DRAWN BY			
CHECKED BY			
TRACED BY			
		Approved	May 1960
			G.H.F. April 60

JOB NO.  
2895/12  
FILE NO.



Scale: 2 ch to an inch.



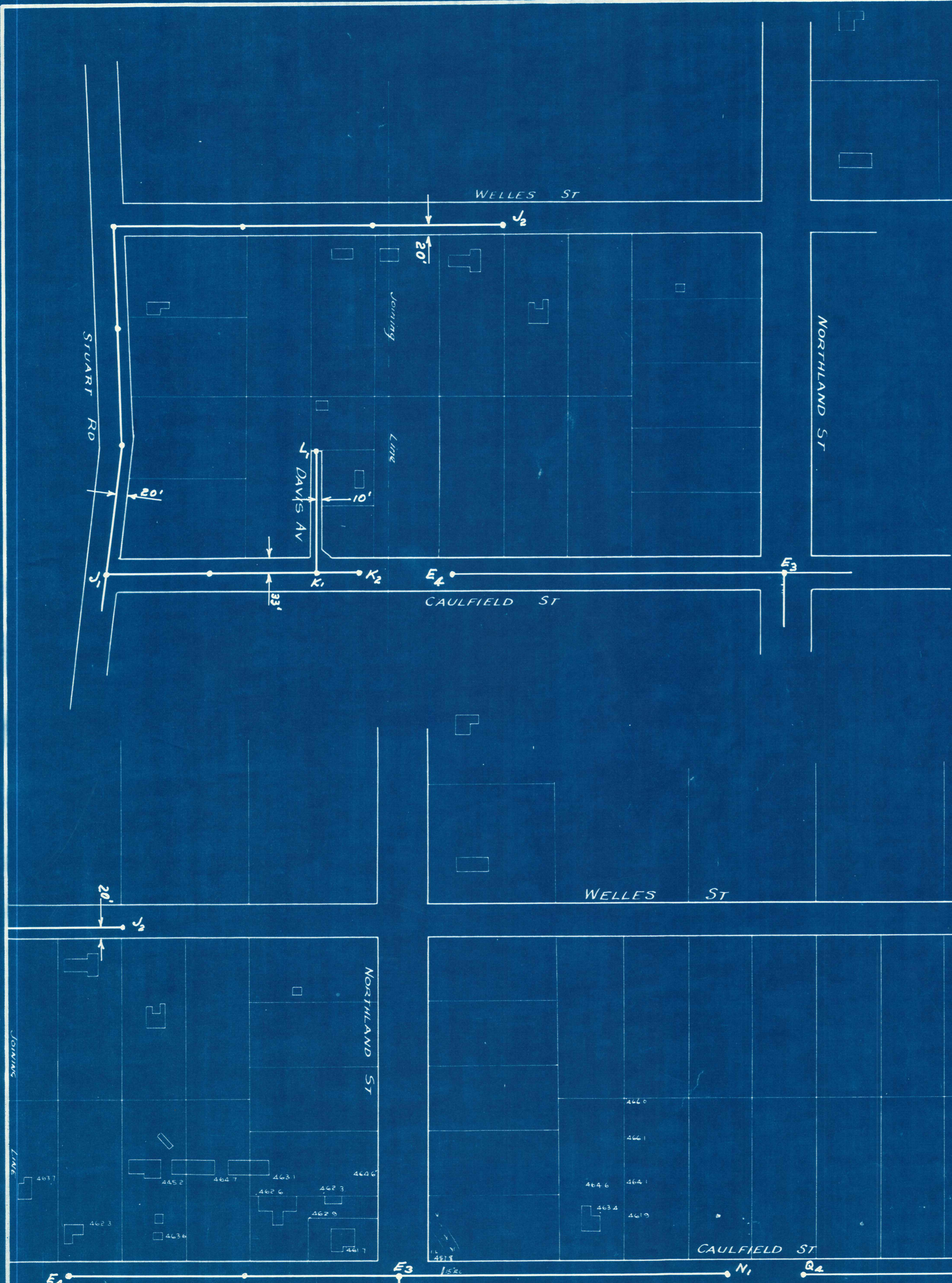
MANIOTOTO COUNTY COUNCIL

### RANFURLY SEWERAGE SCHEME LAY-OUT PLAN

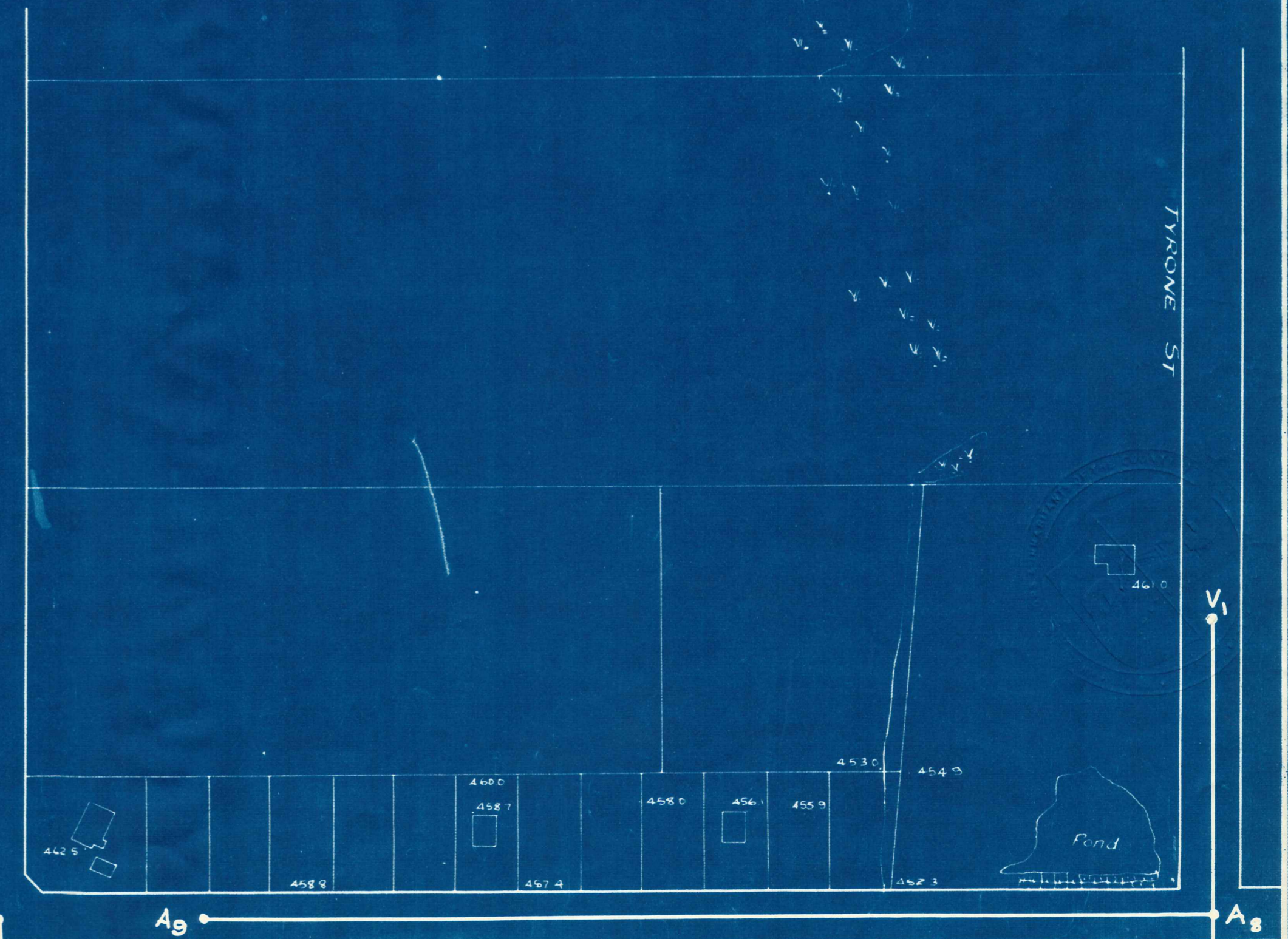
DUFFILL, WATTS & KING  
CIVIL ENGINEERS AND SURVEYORS  
DUNEDIN and INVERCARGILL

NAME	DATE
DRAWN BY A.B.C.	Sept 58
CHECKED BY G.H.F.	April 60

JOB NO.  
**2895/13**  
FILE NO.



Scale: 2 ch. to an inch.



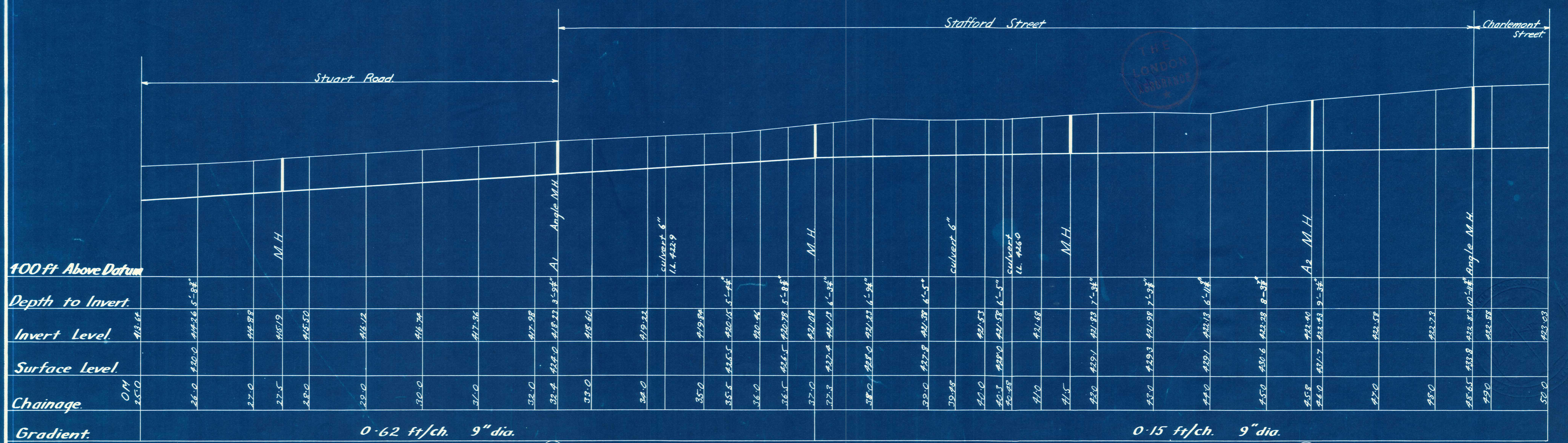
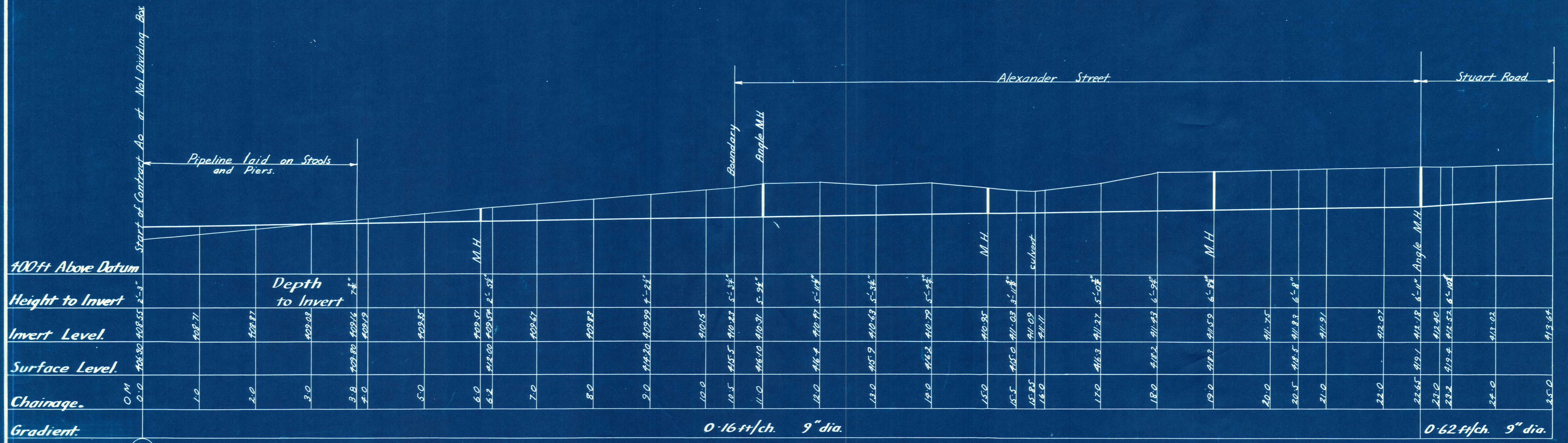
MANIOTOTO COUNTY COUNCIL

**RANFURLY SEWERAGE SCHEME  
LAYOUT  
PLAN**

DUFFILL, WATTS & KING  
CIVIL ENGINEERS AND SURVEYORS  
DUNEDIN and INVERCARGILL

DESIGNED BY	A.B.C.	DATE	Sept 58
DRAWN BY	A.B.C.		
CHECKED	<i>Wesuffell</i>	DATE	May 1960
TRACED	C.H.F.	DATE	April 60

JOB NO.  
**2895/14**  
F.B.K. FILE No.



SCALES: HORIZ: 1 chain to 1 inch.  
VERT: 10 feet to 1 inch.

PART SEWER A0 - A2

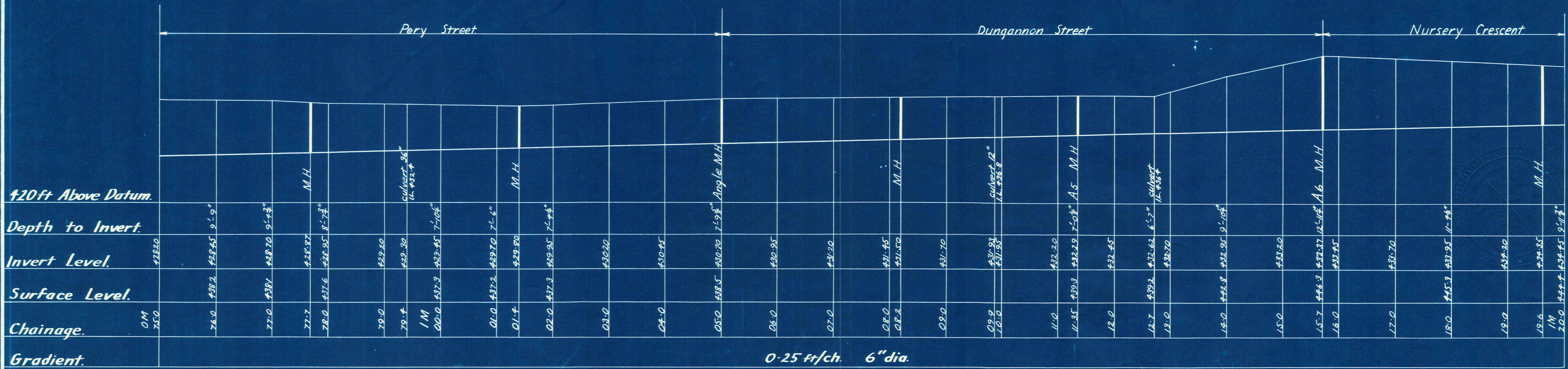
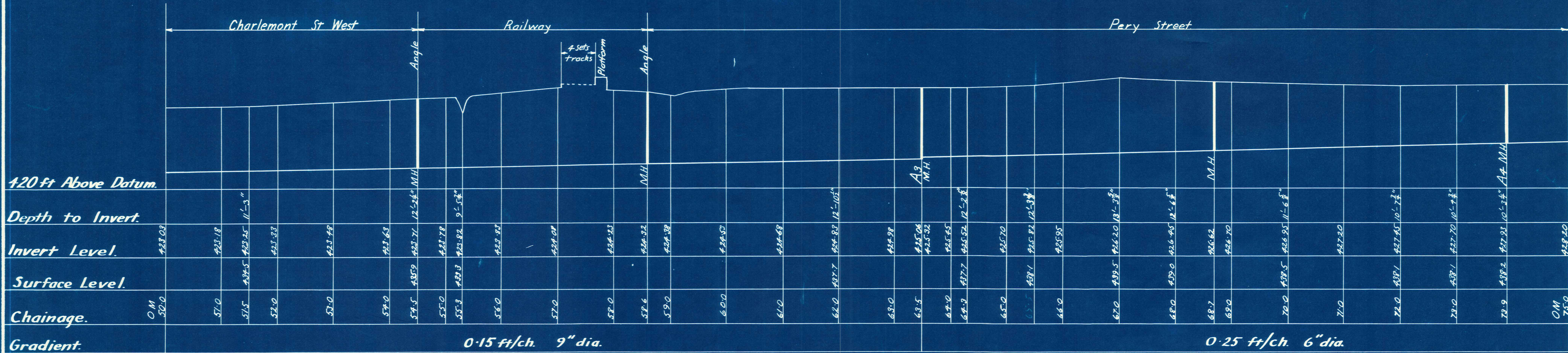
MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME  
SEWER PROFILES

DUFFILL, WATTS & KING  
CIVIL ENGINEERS AND SURVEYORS  
DUNEDIN and INVERCARGILL

DESIGNED BY	A. B. C.	DATE	Sept '57
CHECKED BY	J. R. P.	DATE	April '60
TRACED BY	T. E. P.	DATE	April '60

JOB NO.  
**2895/15**  
F.B.K. 151 FILE NO. 5/6/32



SCALES: HORIZ: 1 chain to 1 inch  
VERT: 10 feet to 1 inch.

PART SEWER A0 - A9

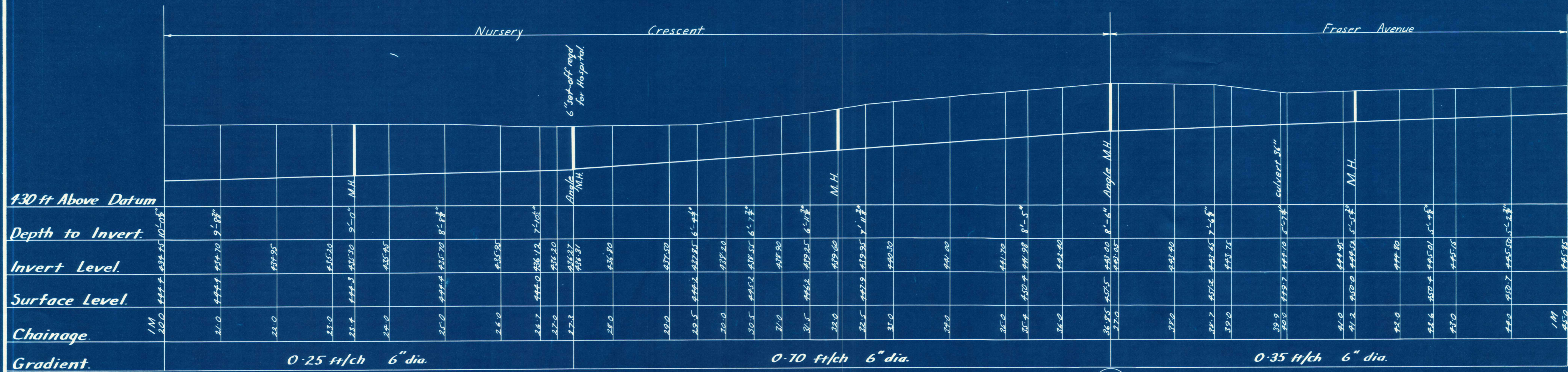
MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME  
 SEWER PROFILES

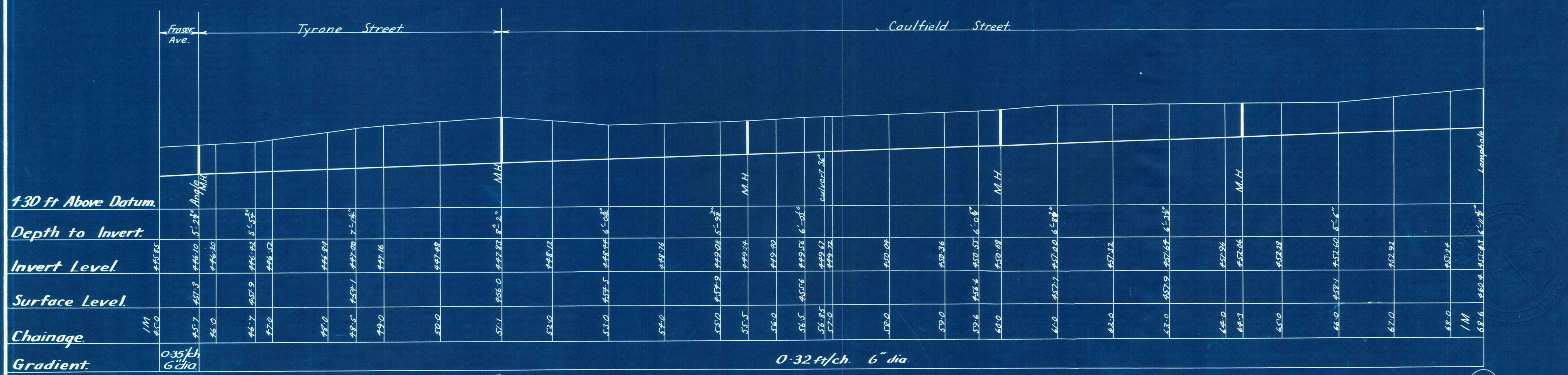
DUFFILL, WATTS & KING  
 CIVIL ENGINEERS AND SURVEYORS  
 DUNEDIN and INVERCARGILL

SURVEYED BY: A.B.C.  
 DRAWN BY: T.R.P.  
 CALCULATED BY: T.F.P.  
 DATE: Sept '58  
 APRIL 1960

JOB NO. 2895/16  
 F.BK. 157 FILE No. 5/4/32



A7



A8

A9

SCALES: HORIZ: 1 chain to 1 inch  
VERT: 10 feet to 1 inch.

PART SEWER A8 - A9

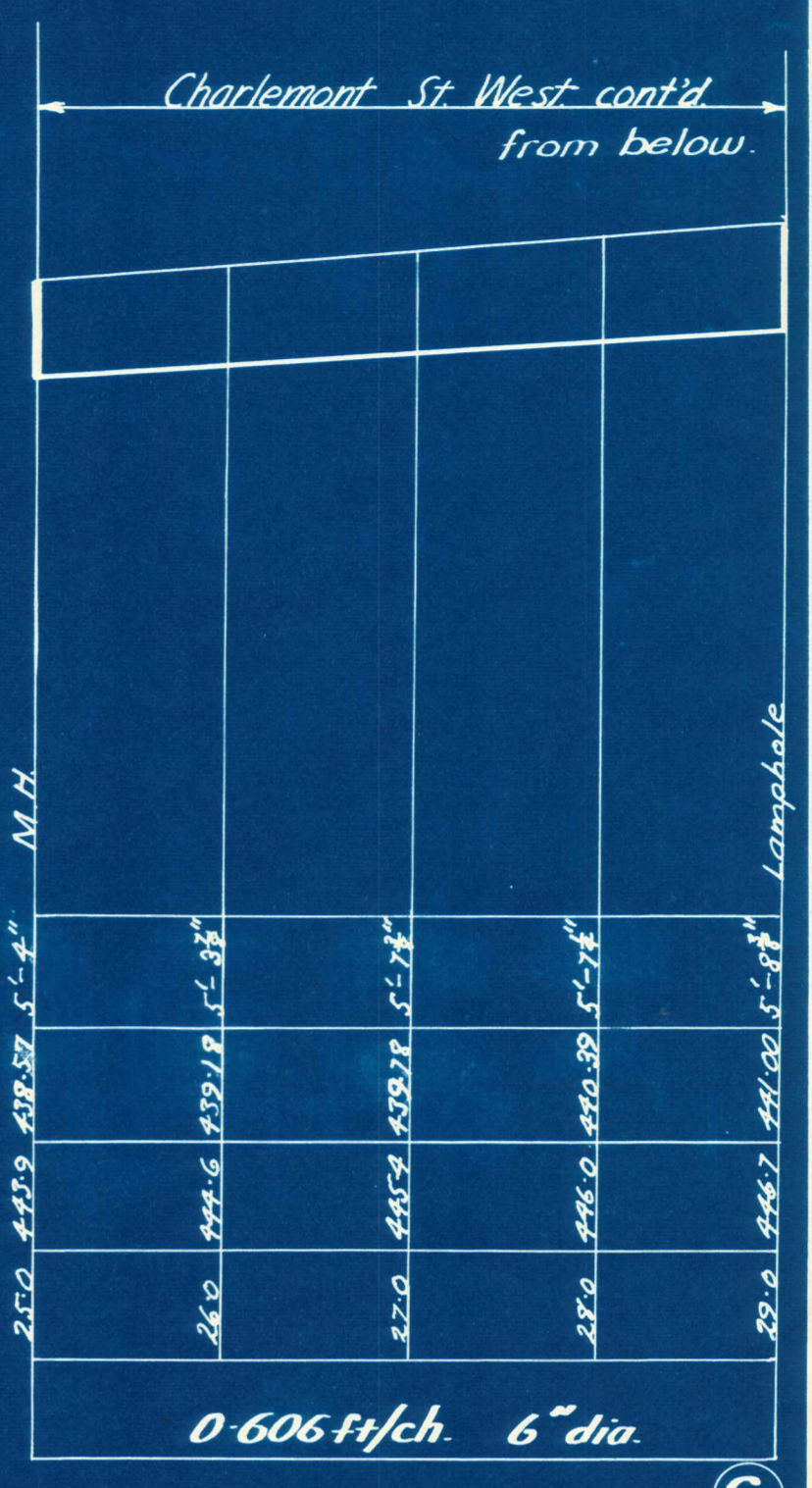
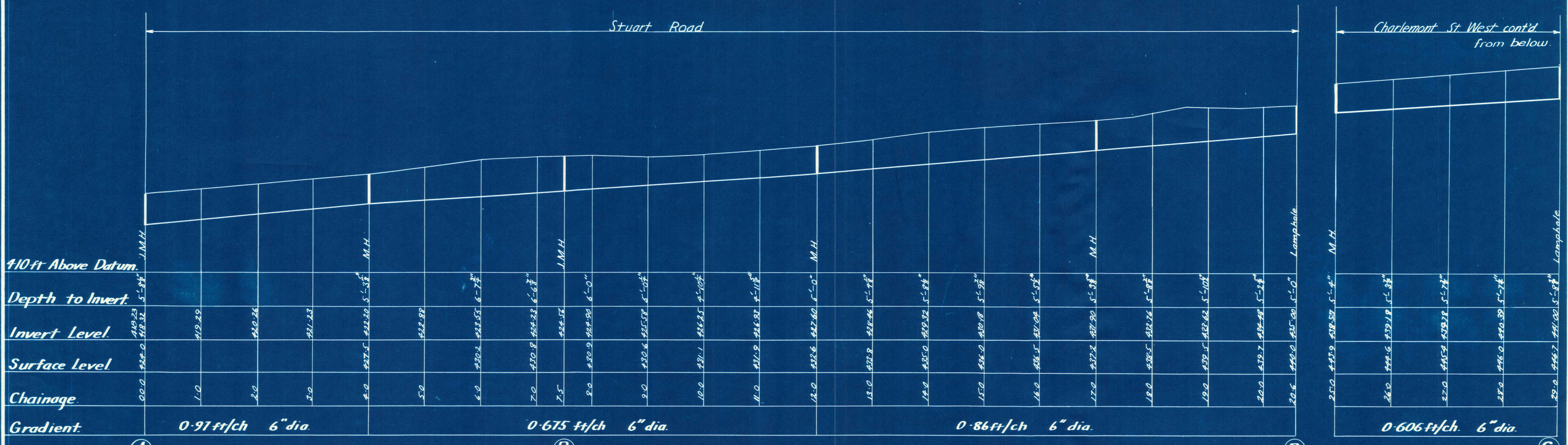
MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME  
SEWER PROFILES

DUFFILL, WATTS & KING  
CIVIL ENGINEERS AND SURVEYORS  
DUNEDIN and INVERCARGILL

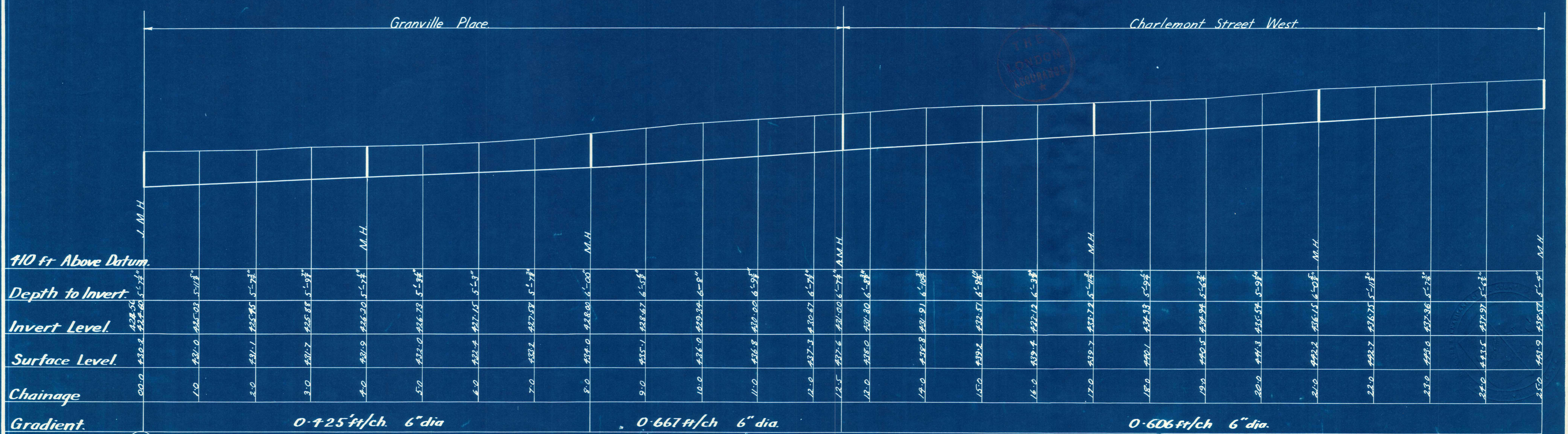
APPROVED BY: A.B.C. I.R.P.  
DRAWN BY: T.F.P.  
DATE: Sept 58, April 60, May 1960, April 60

JOB NO. 2895/17  
F.B.K. 151 FILE No. 5/4/32



SEWER A1 - B2

PART B1 - C1



SEWER PART B1 - C1

SCALES: HORIZ: 1 chain to 1 inch.  
VERT: 10 feet to 1 inch.

cont'd above

MANIOTOTO COUNTY COUNCIL

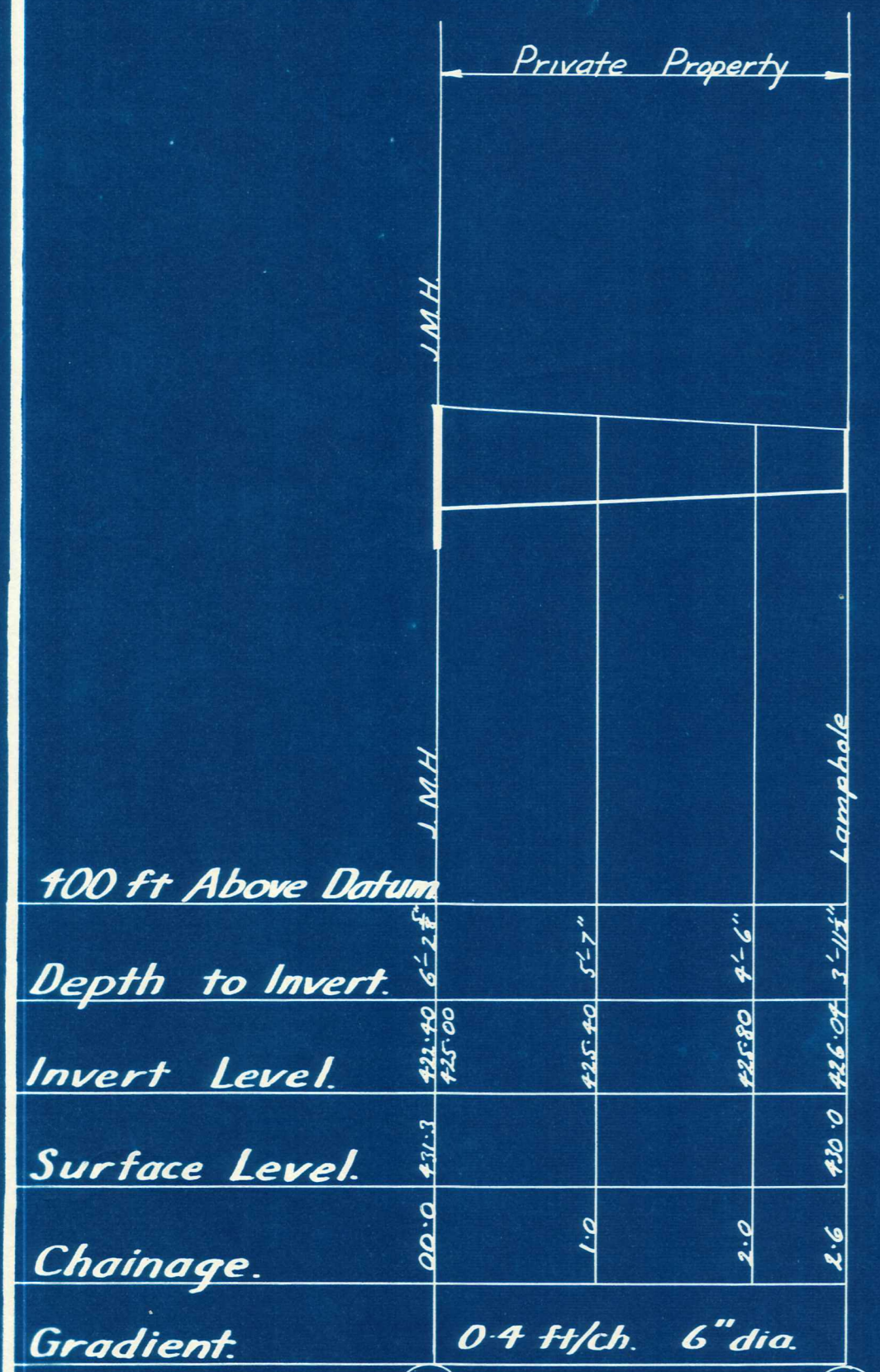
RANFURLY SEWERAGE SCHEME  
SEWER PROFILES

DUFFILL, WATTS & KING  
CIVIL ENGINEERS AND SURVEYORS  
DUNEDIN and INVERCARGILL

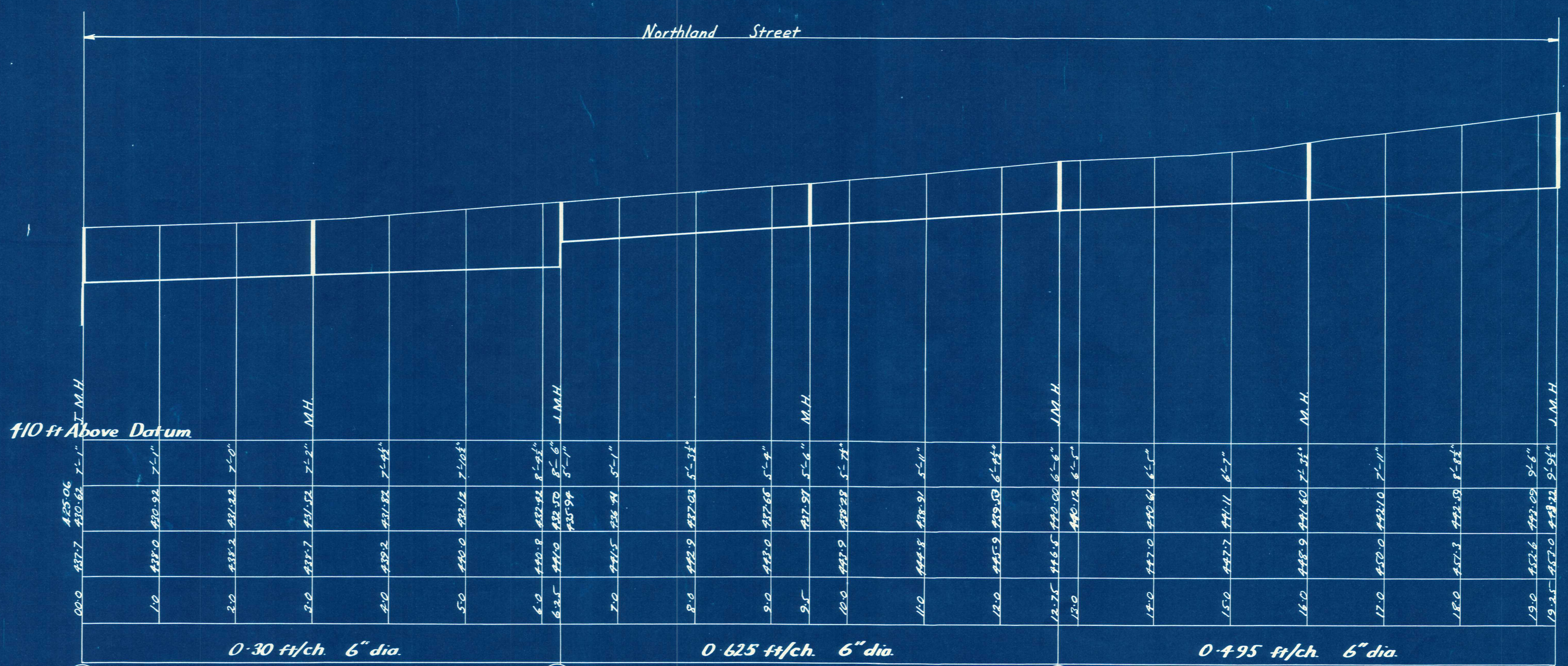
NAME: A.B.C.  
DATE: Sep 188  
April 60  
DRAWN: T.F.P.  
CHECKED: T.F.P.  
DATE: May 1960  
April 60

JOB NO. 2895/18  
FILE No. 5/6/32

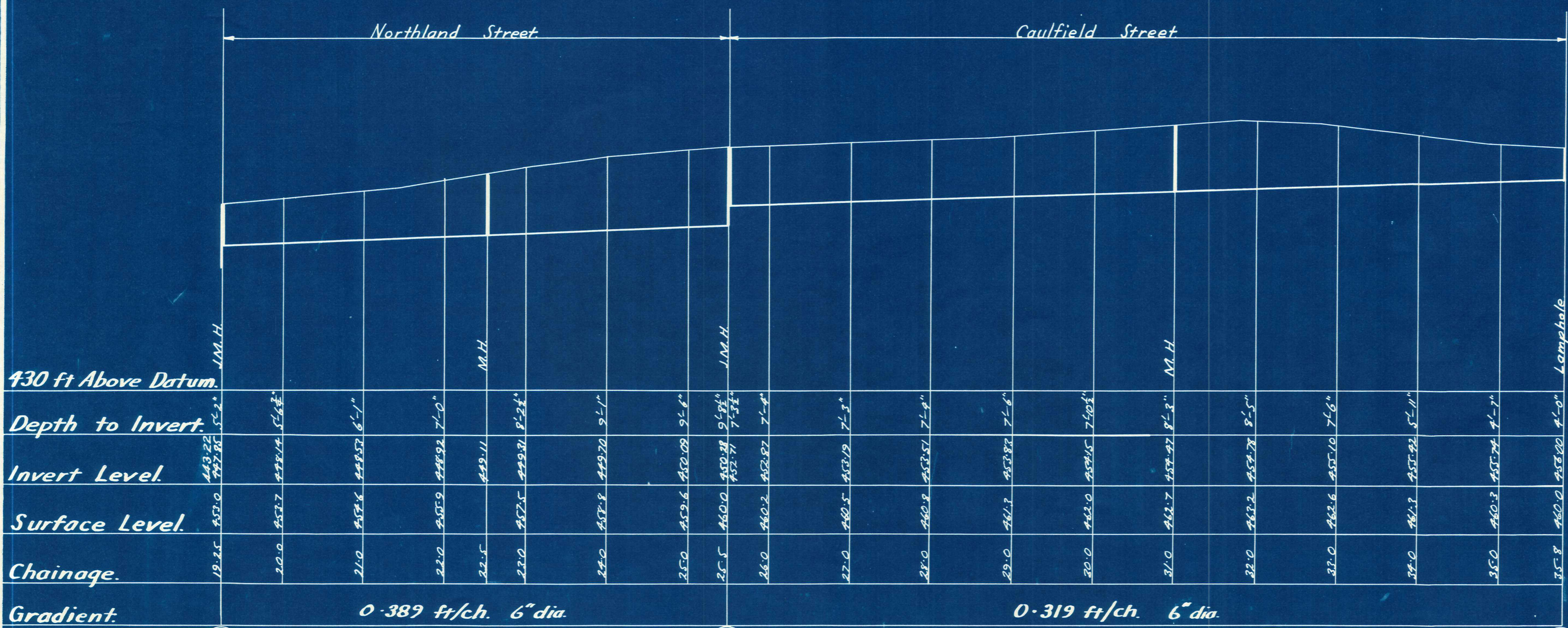




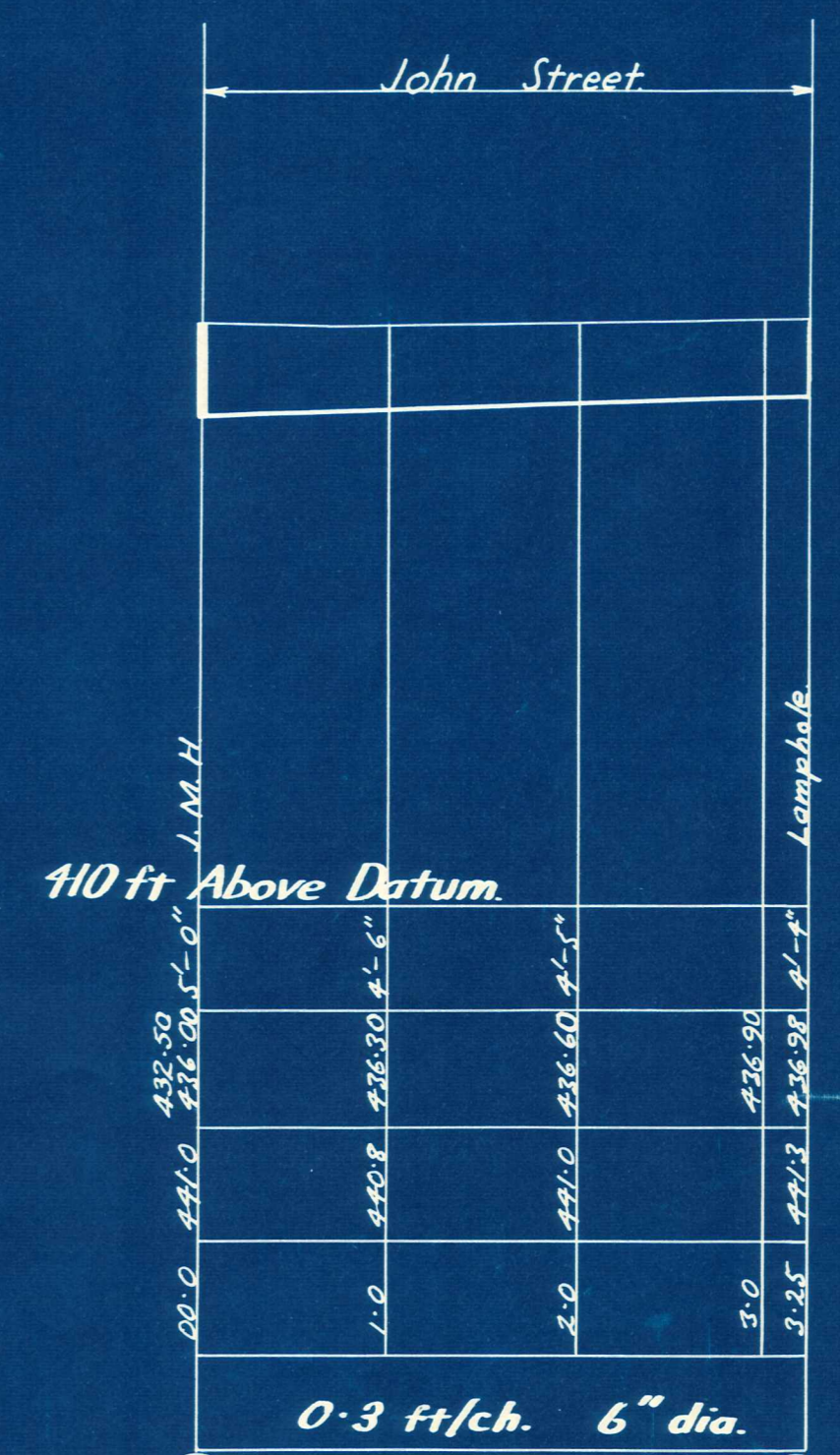
**SEWER A2 - D1**



**PART SEWER A3 - E5**

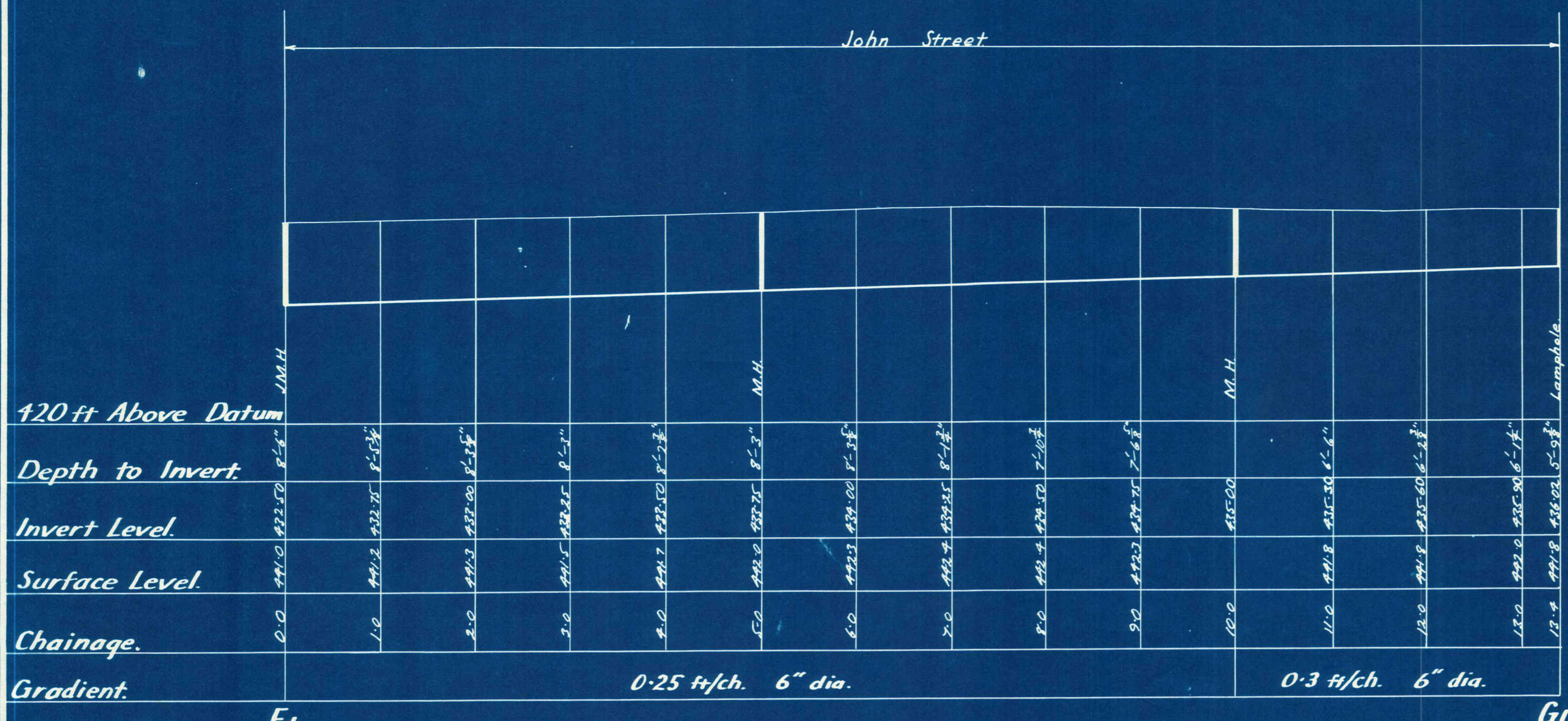


**PART SEWER A3 - E5**



**SEWER E1 - F1**

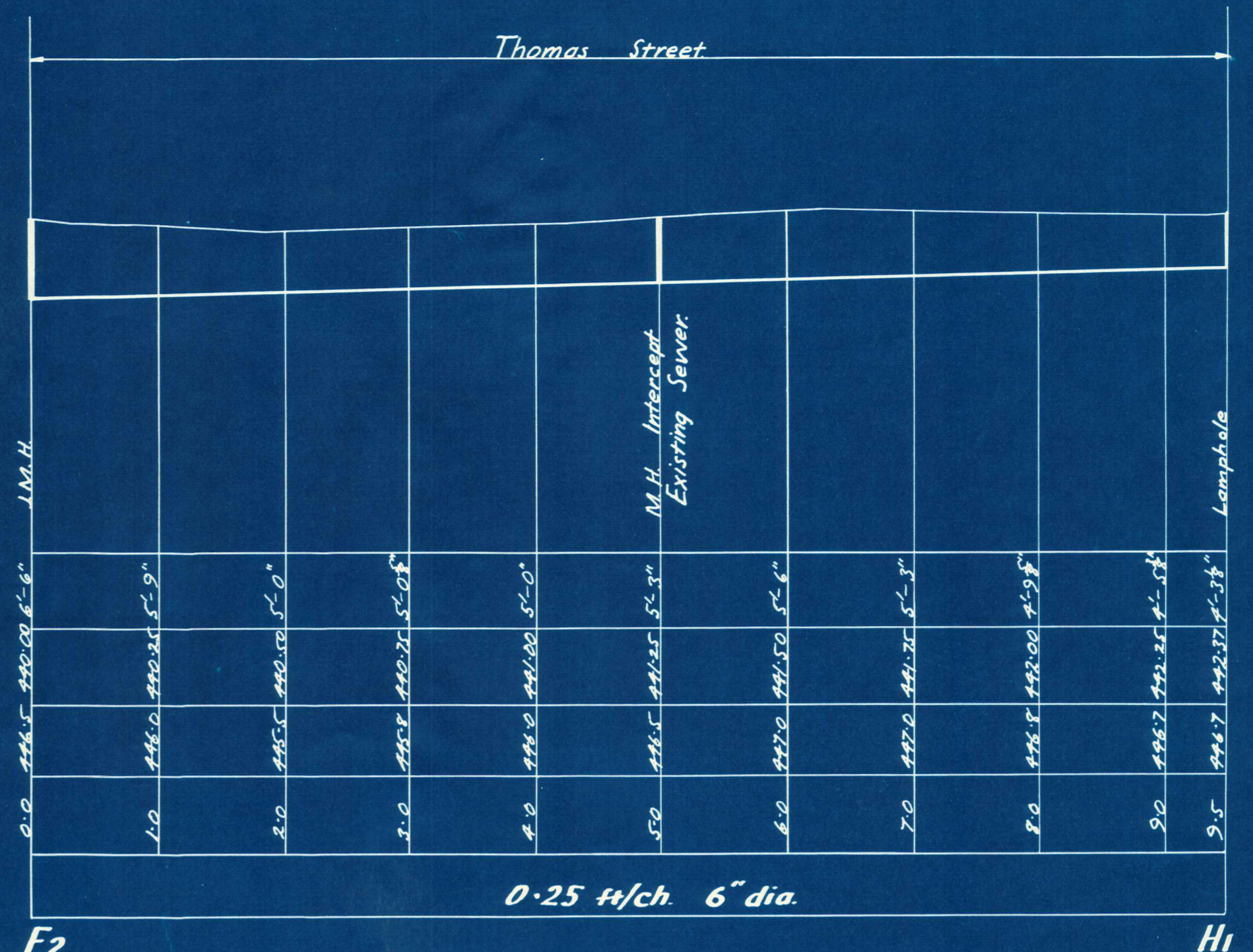
SCALES: HORIZ: 1 chain to 1 inch  
VERT: 10 feet to 1 inch



E1

G1

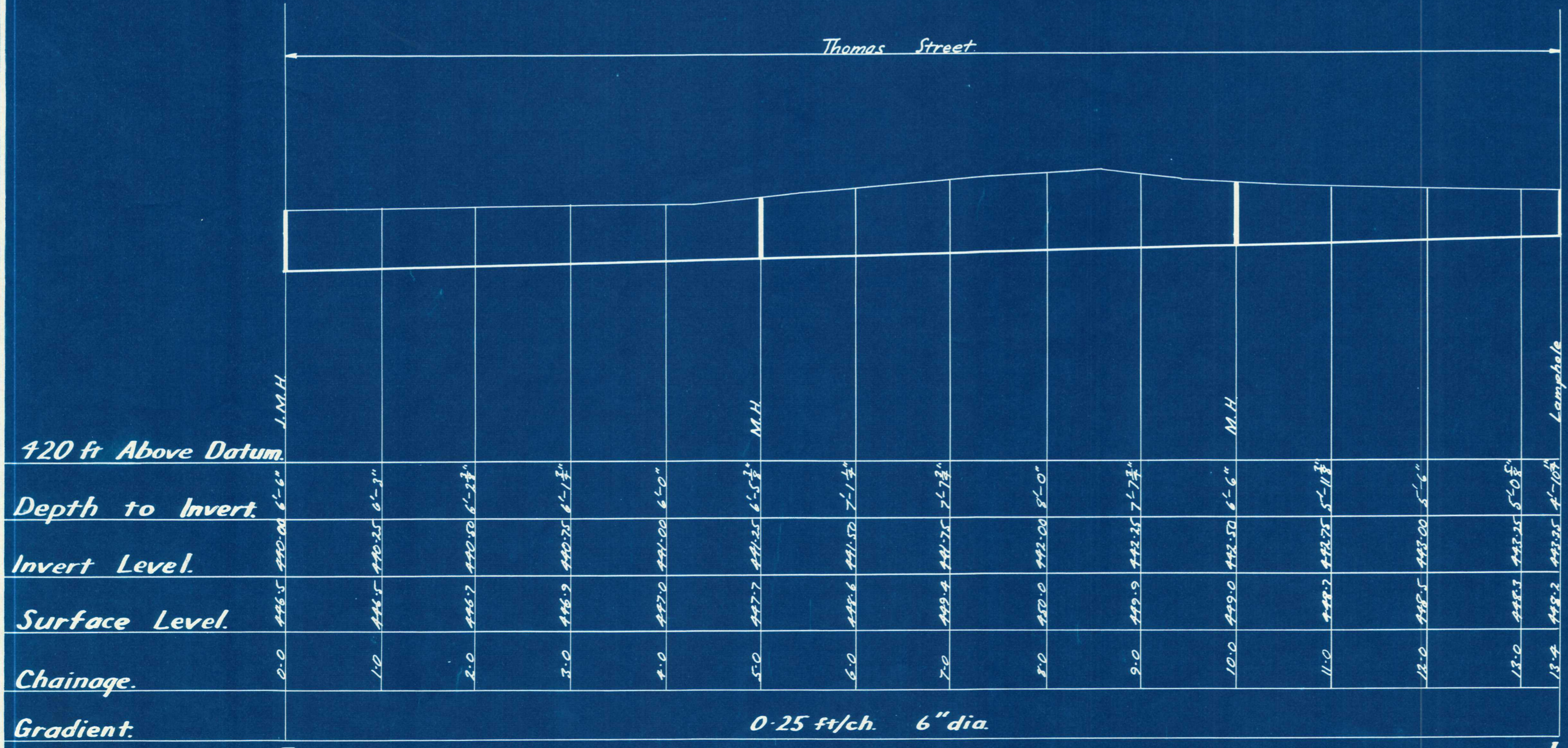
SEWER E1 - G1



E2

H1

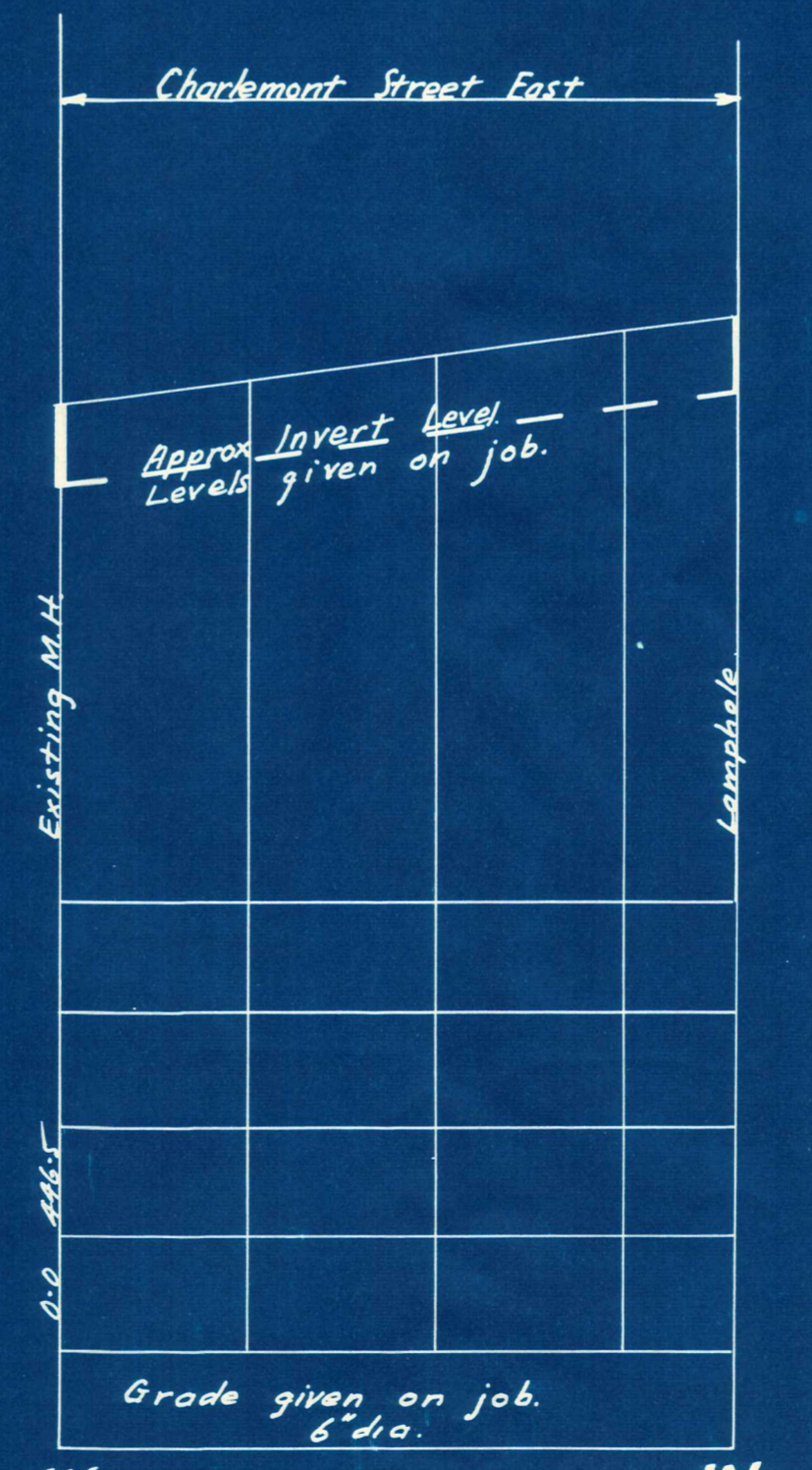
SEWER E2 - H1



E2

I1

SEWER E2 - I1

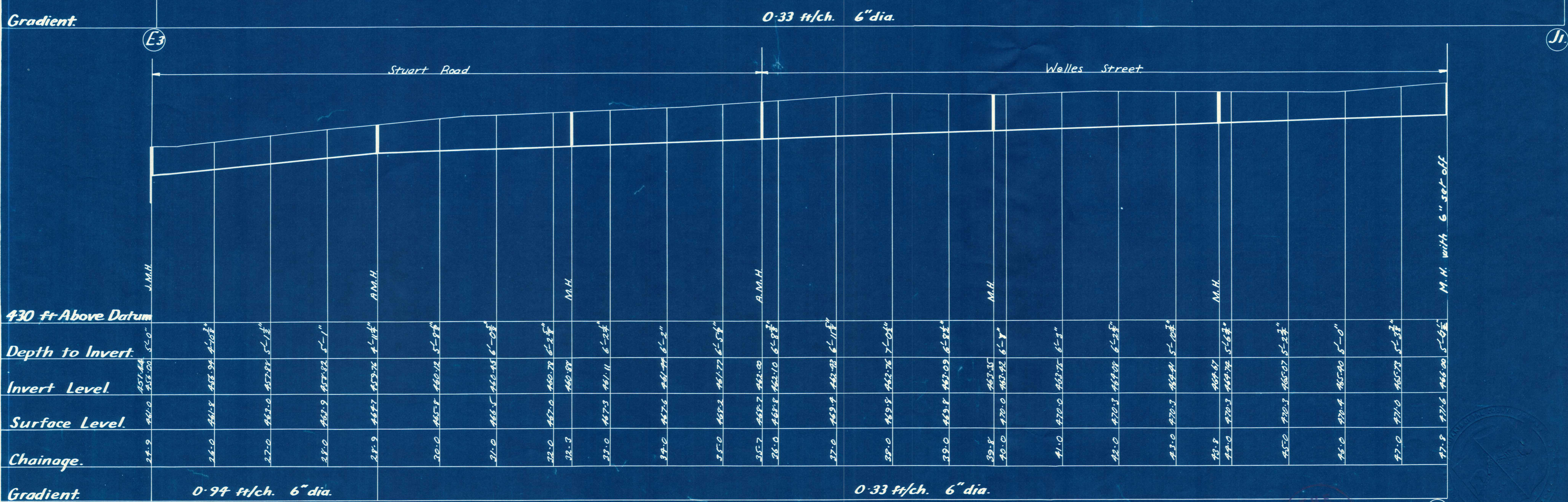
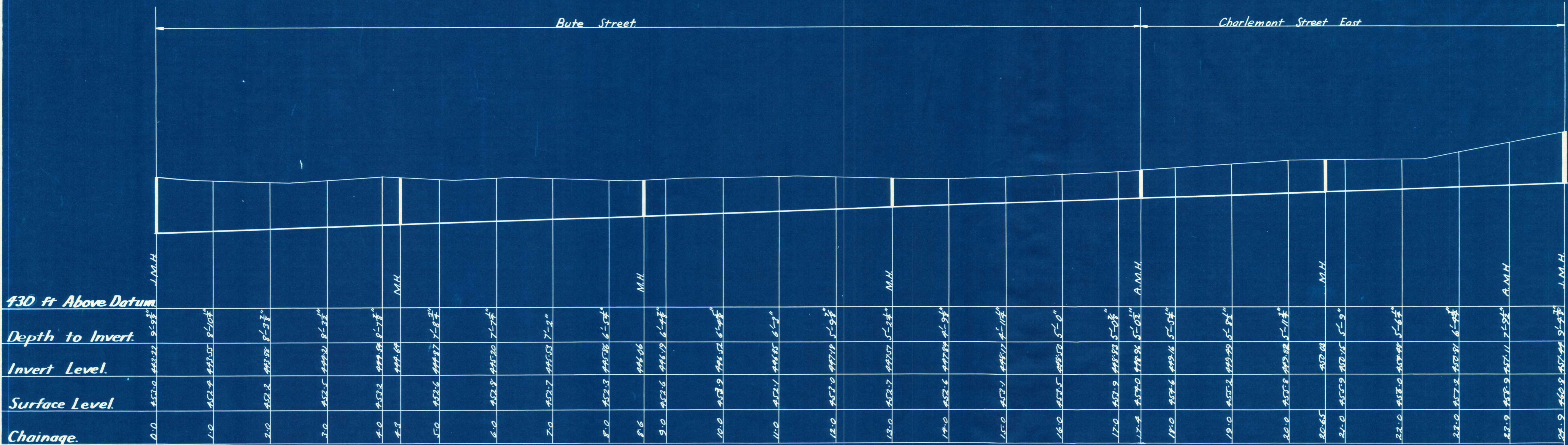


W1

W2

SEWER W1 - W2

SCALES: HORIZ: 1 chain to 1 inch  
VERT: 10 feet to 1 inch.



SCALES: HORIZ: 1 chain to 1 inch  
 VERT: 10 feet to 1 inch.

SEWER E3-J2

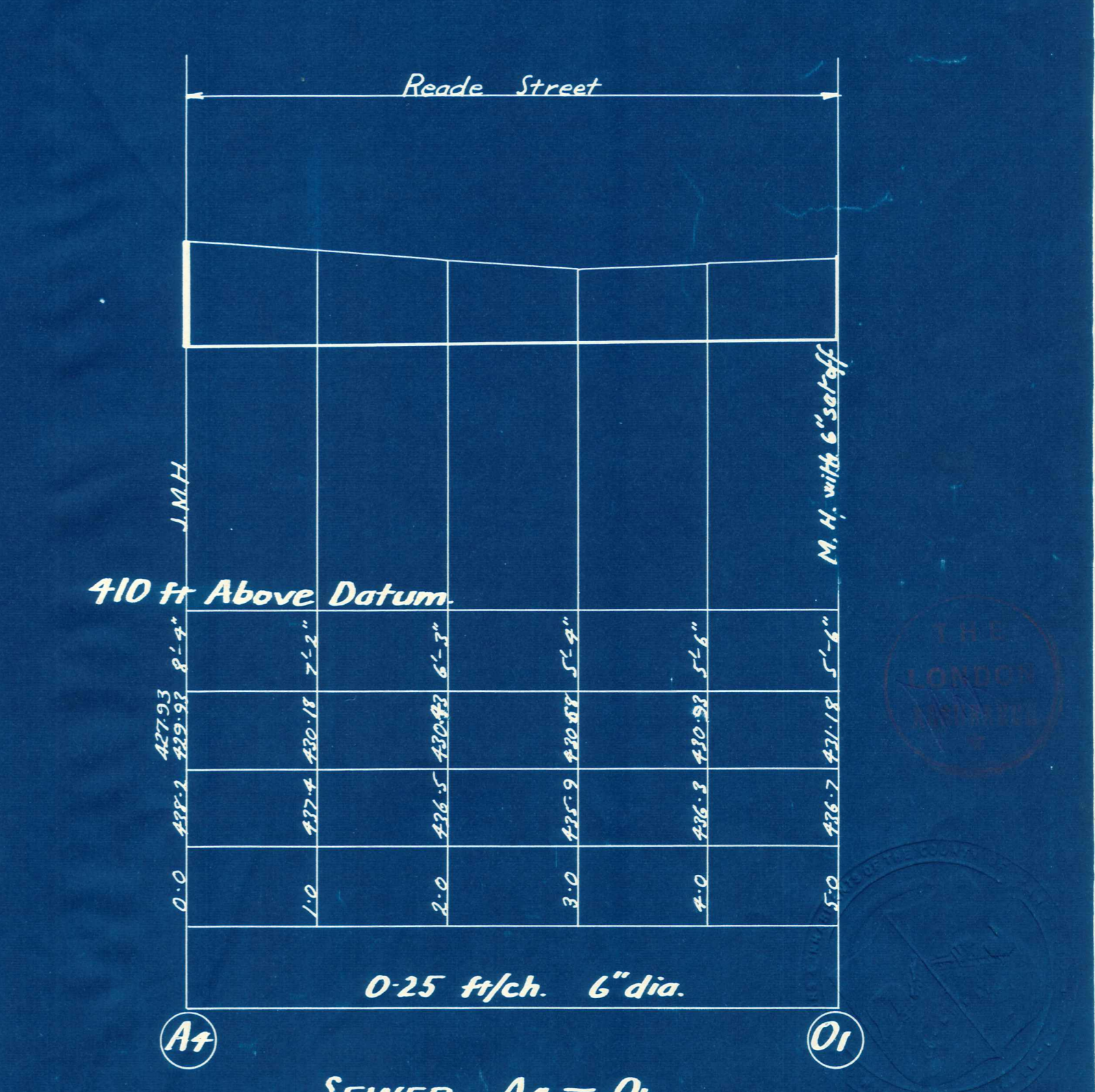
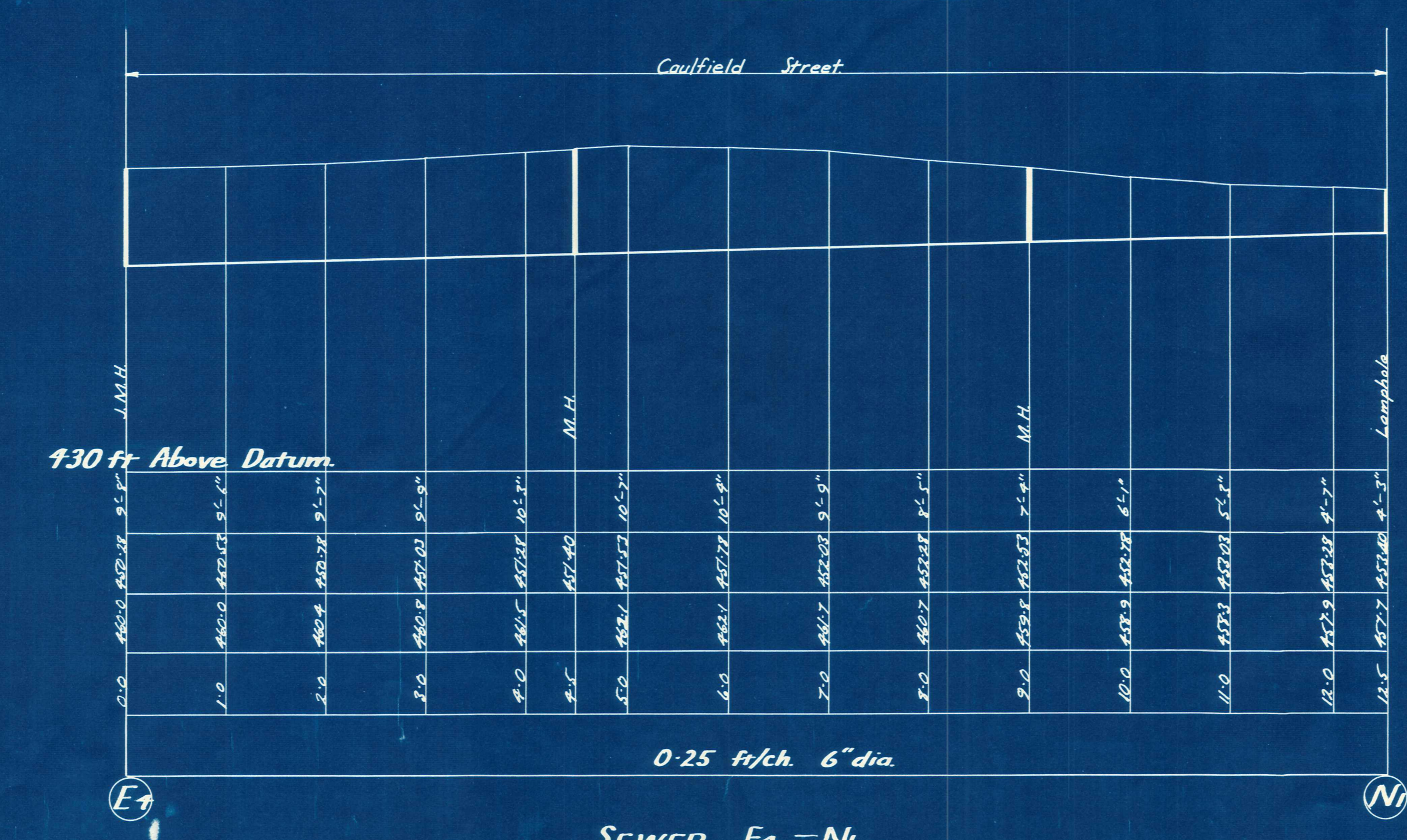
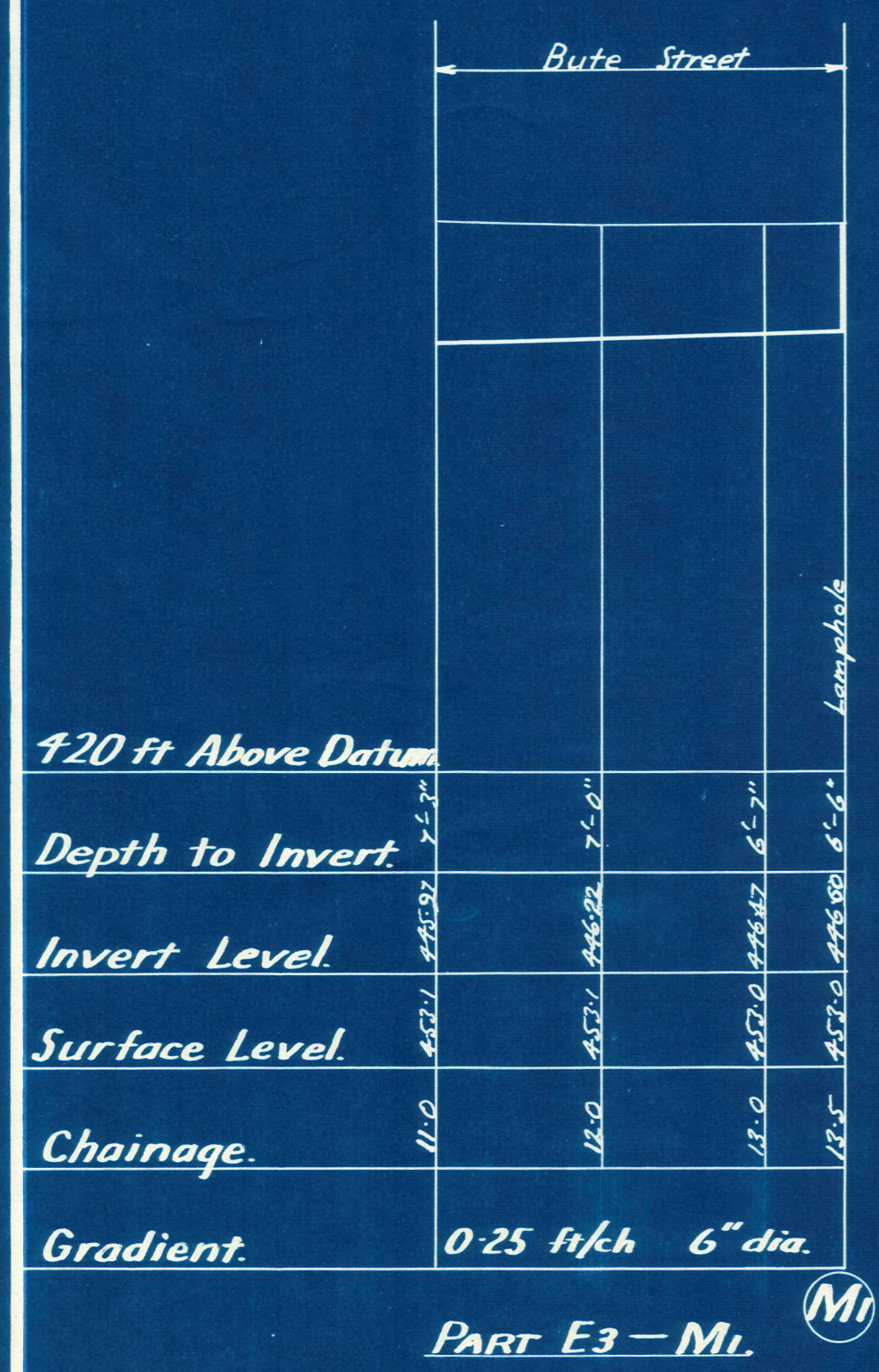
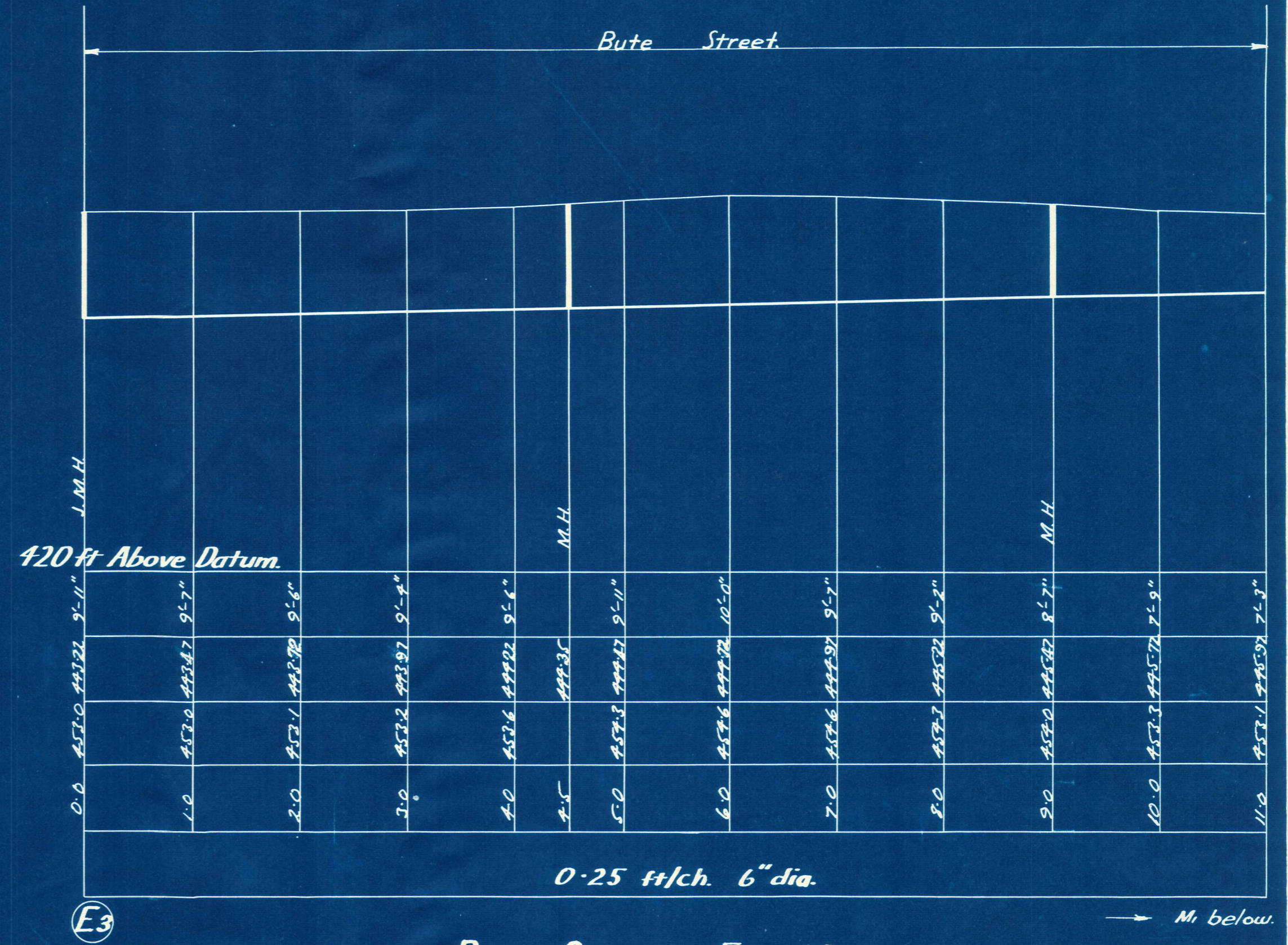
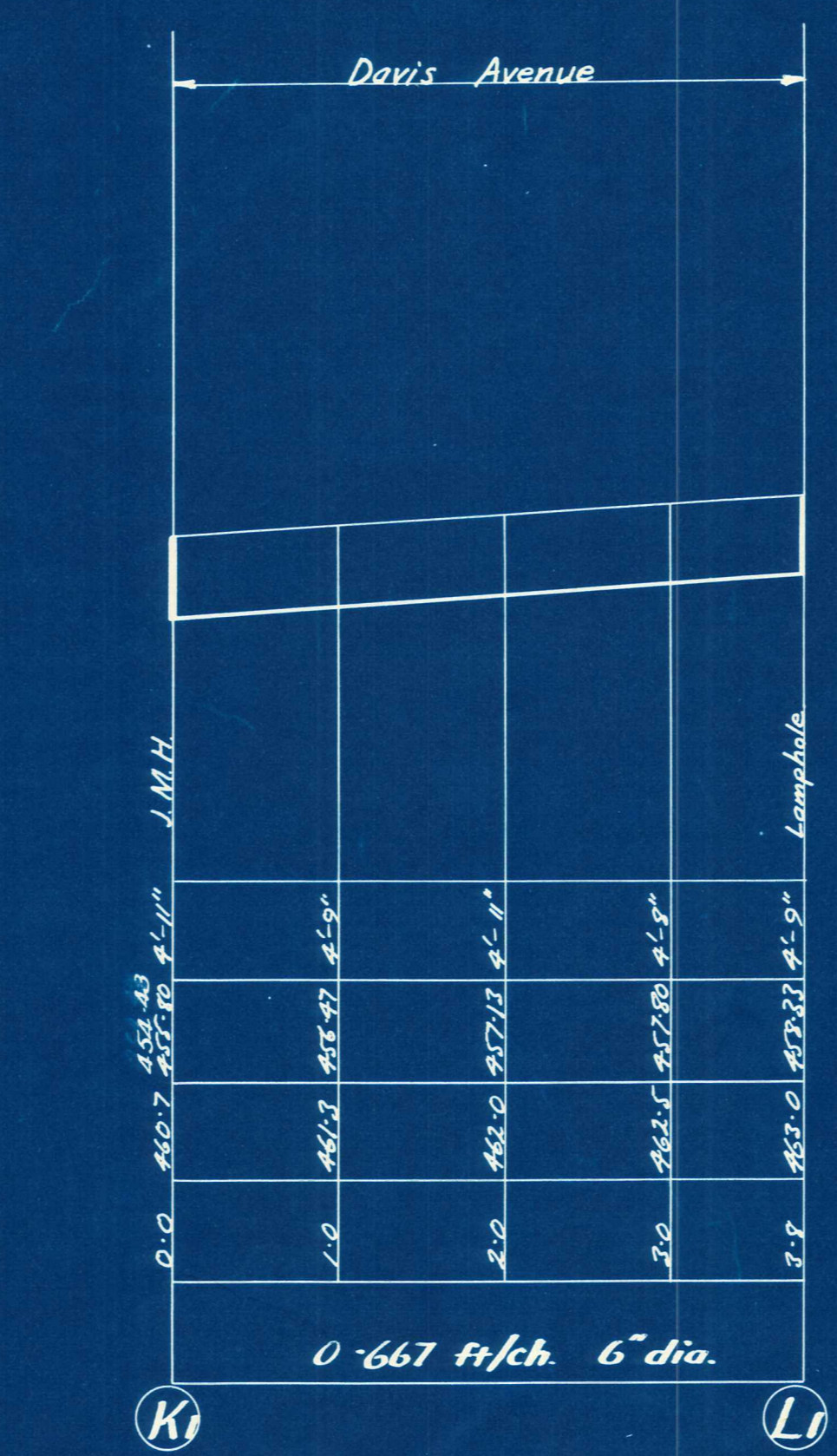
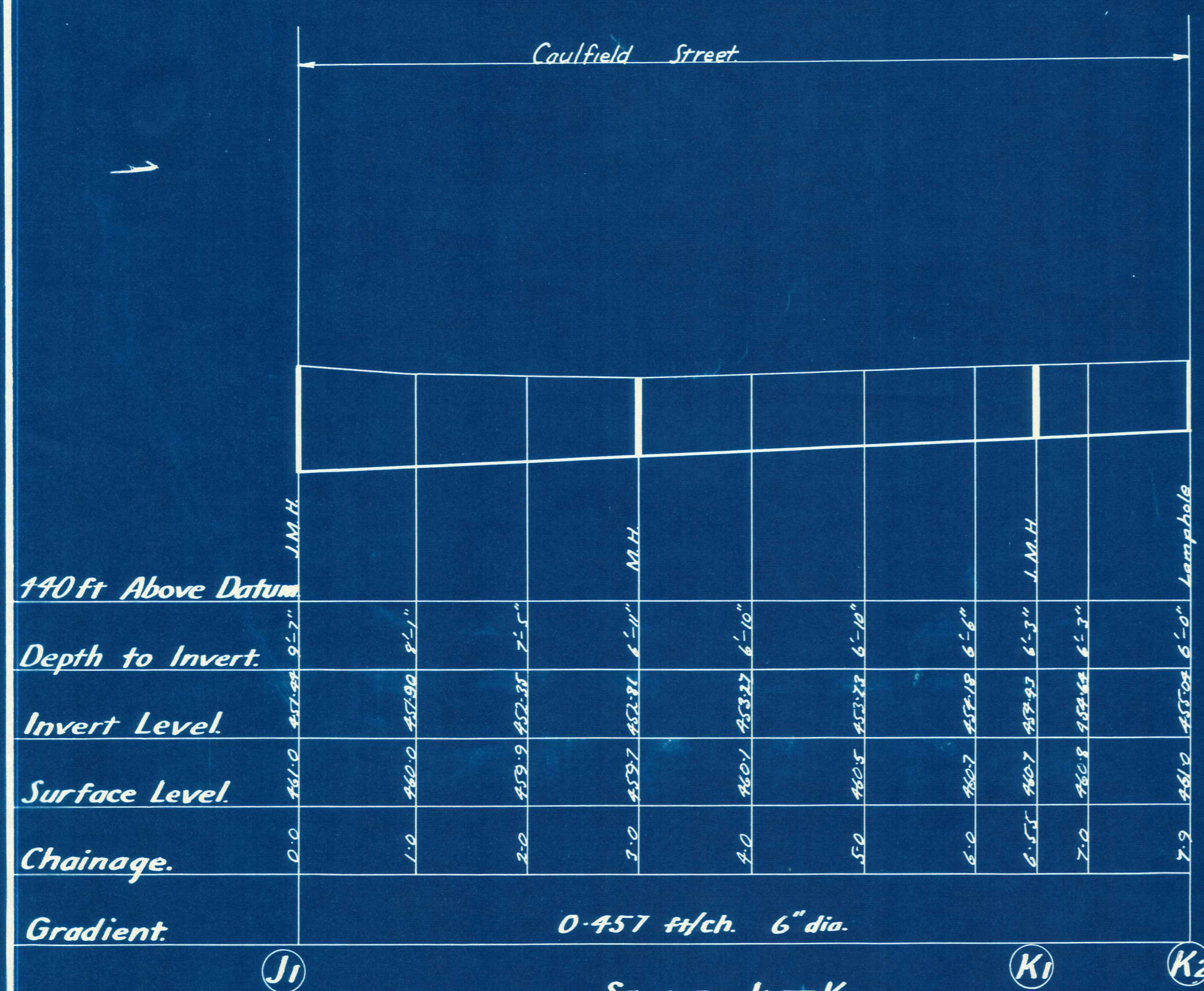
MANIOTOTO COUNTY COUNCIL

RANFURLY SEWERAGE SCHEME  
 SEWER PROFILES

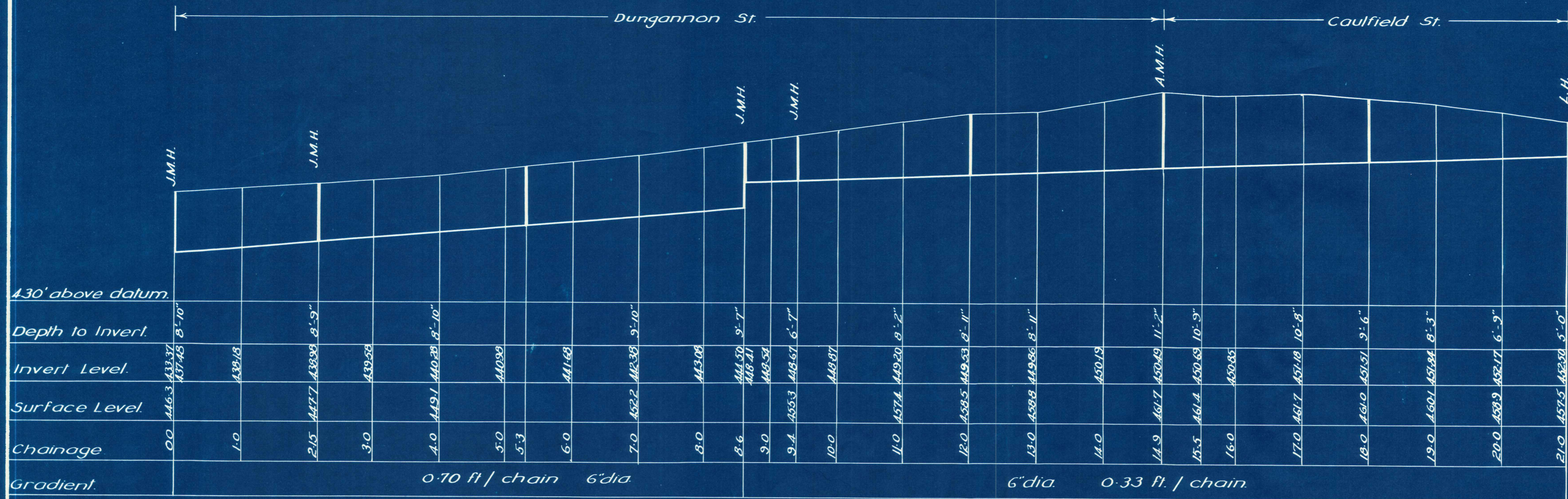
DUFFILL, WATTS & KING  
 CIVIL ENGINEERS AND SURVEYORS  
 DUNEDIN and INVERCARGILL

DESIGNED BY	ABC	DATE	Sept 58
DRAWN BY	ABC	DATE	April 60
CHECKED BY	ABC	DATE	May 1960
TRACKED BY	T.F.P.	DATE	April 60

JOB NO.  
**2895/21**  
 FEB. 157 FILE No. 5/6/62



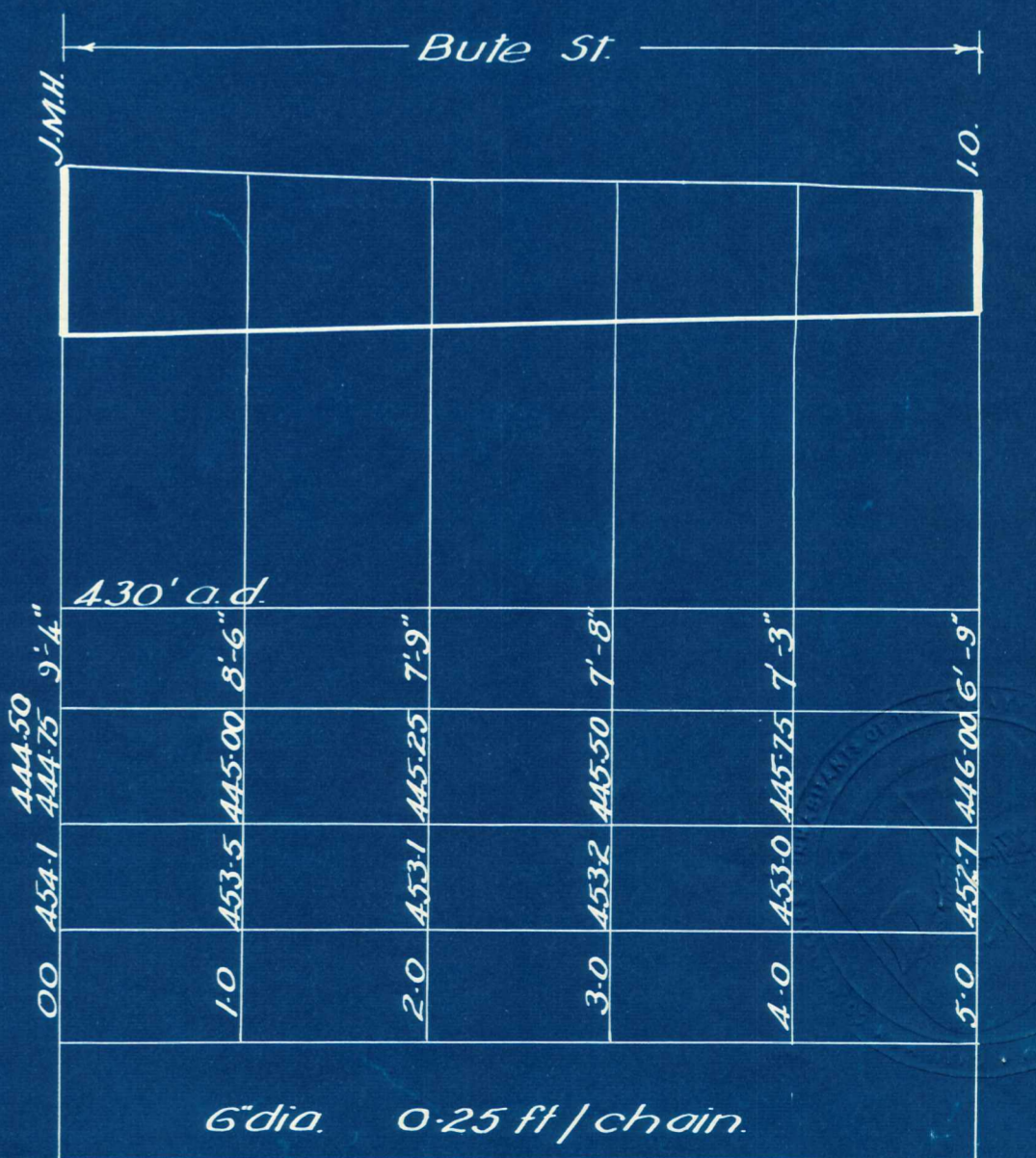
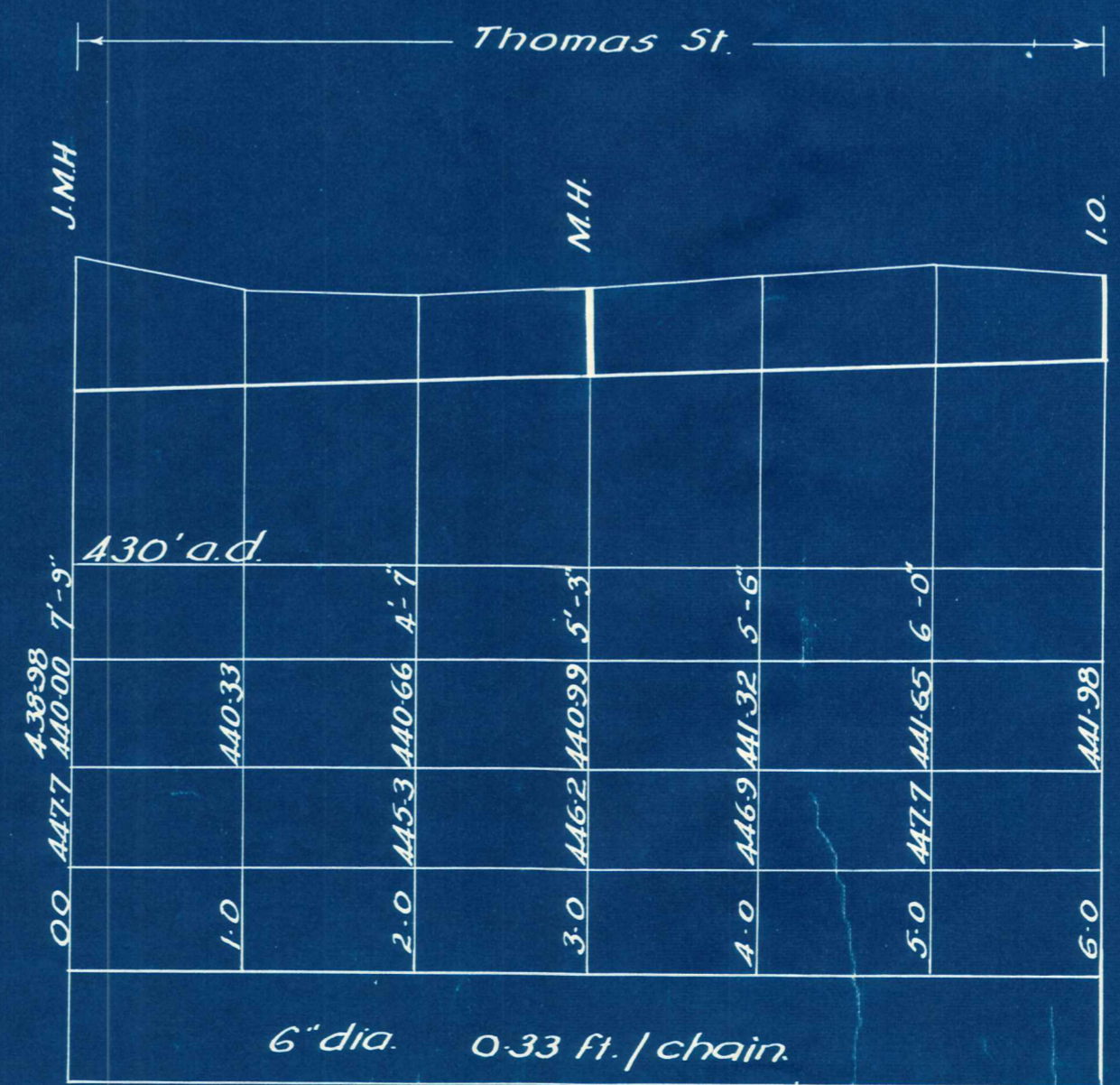
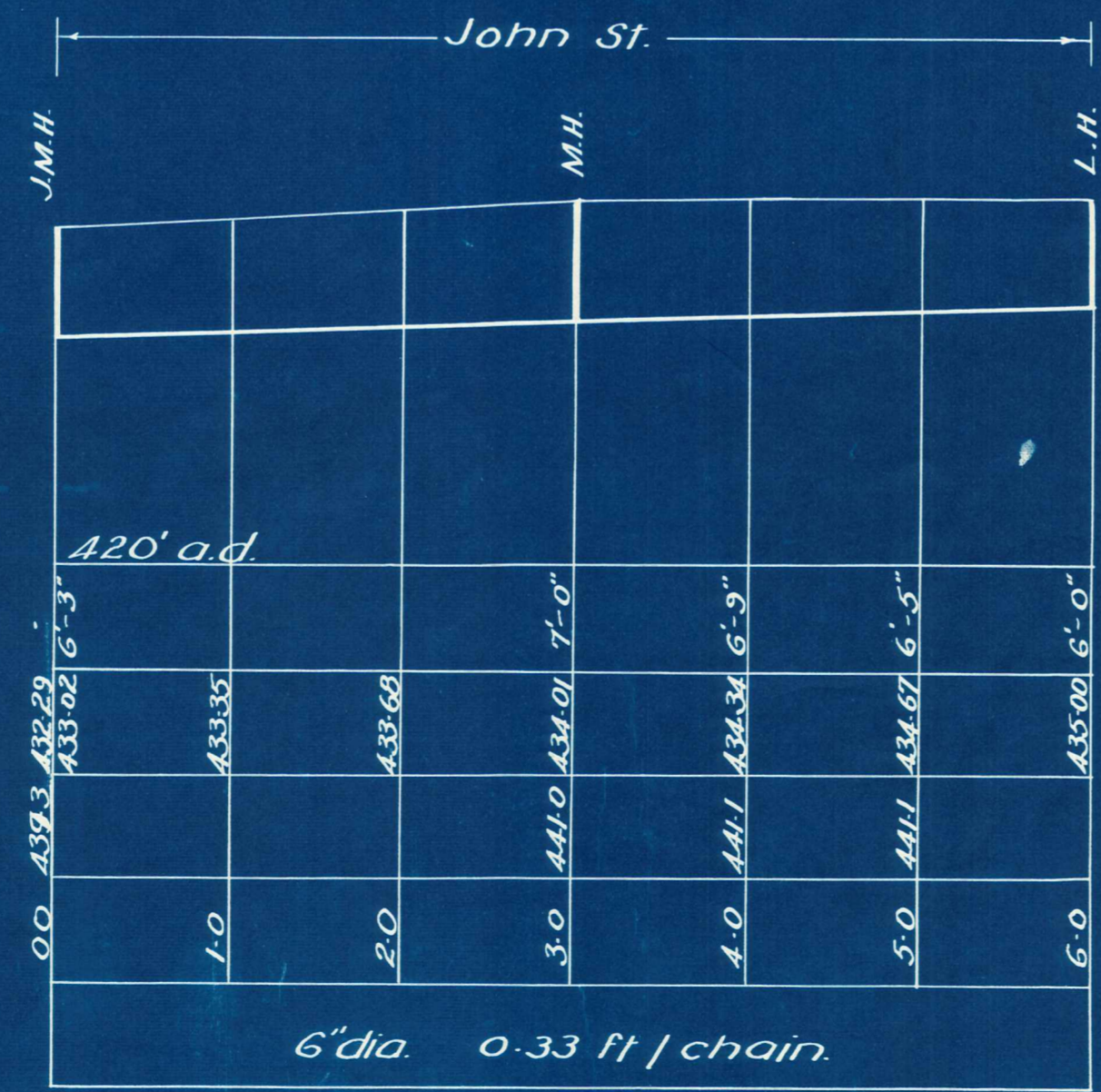
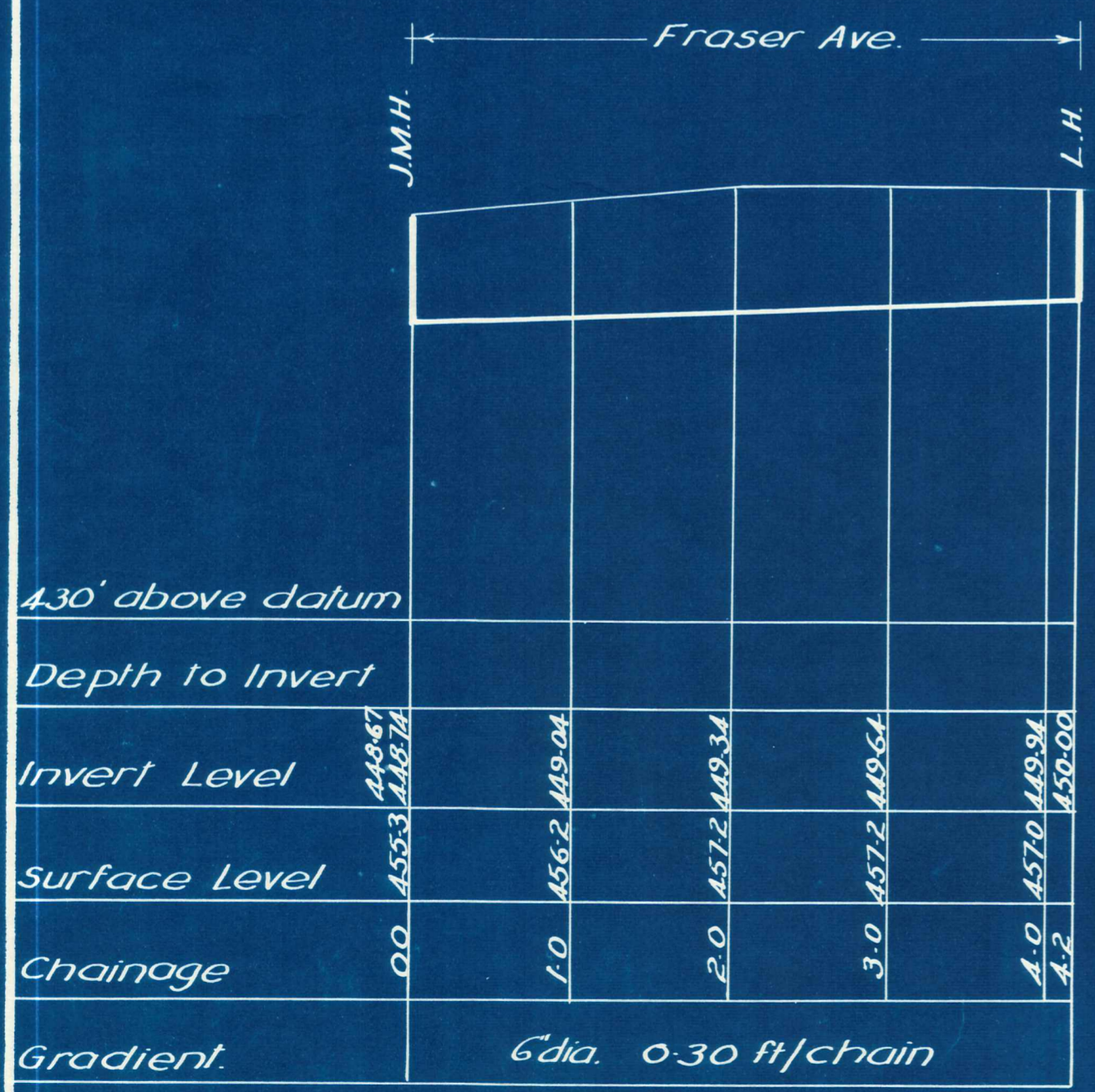
SCALES: HORIZ: 1 chain to 1 inch.  
VERT: 10 feet to 1 inch.



A6 Q1 Q2 Q3 Q4

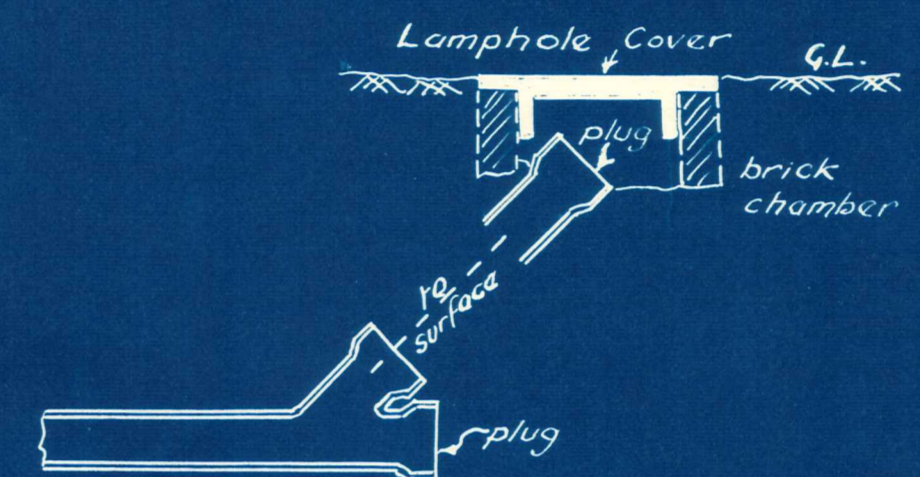
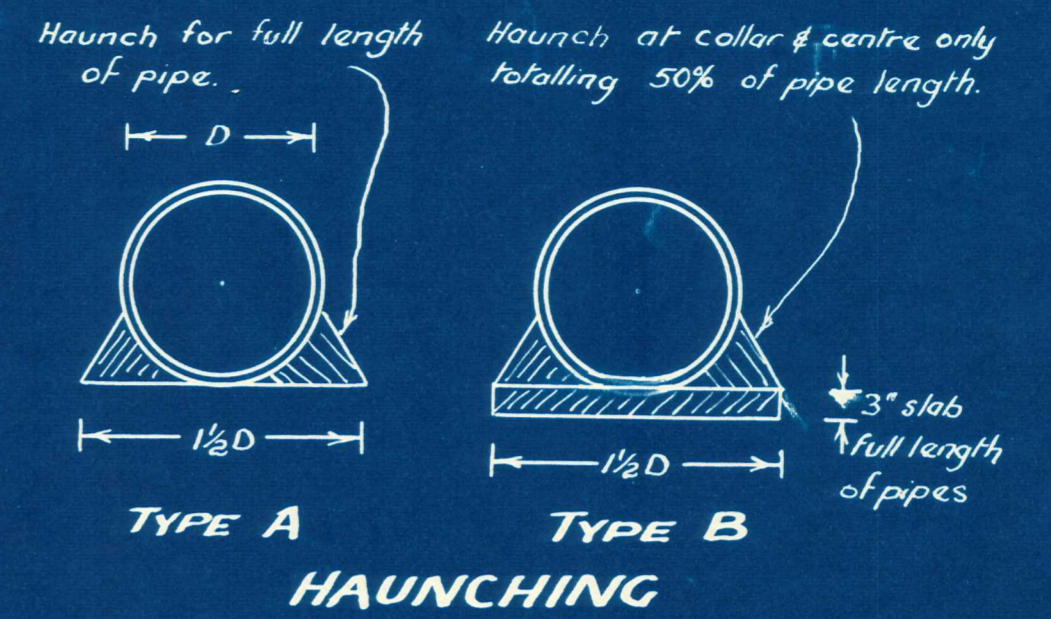
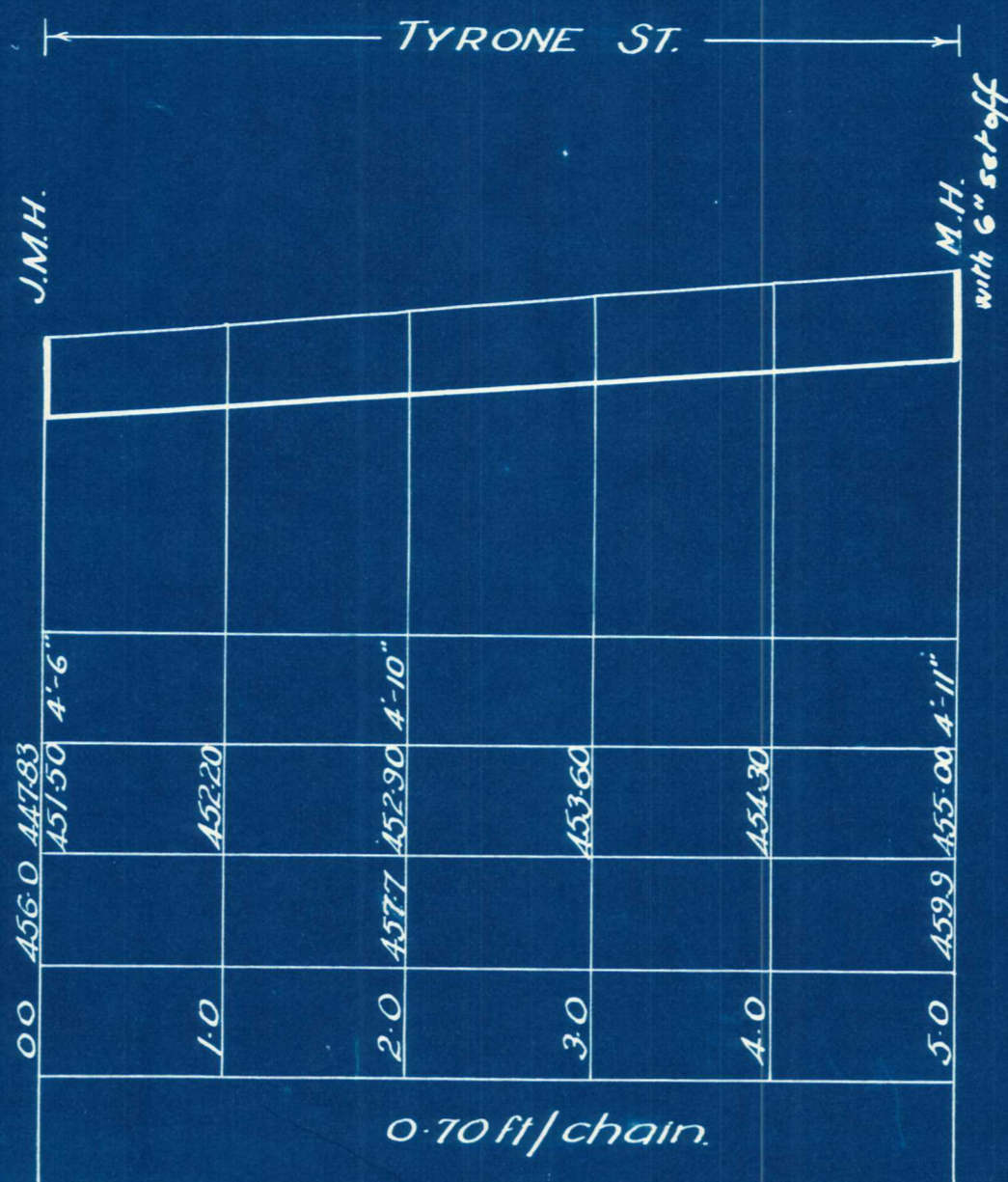
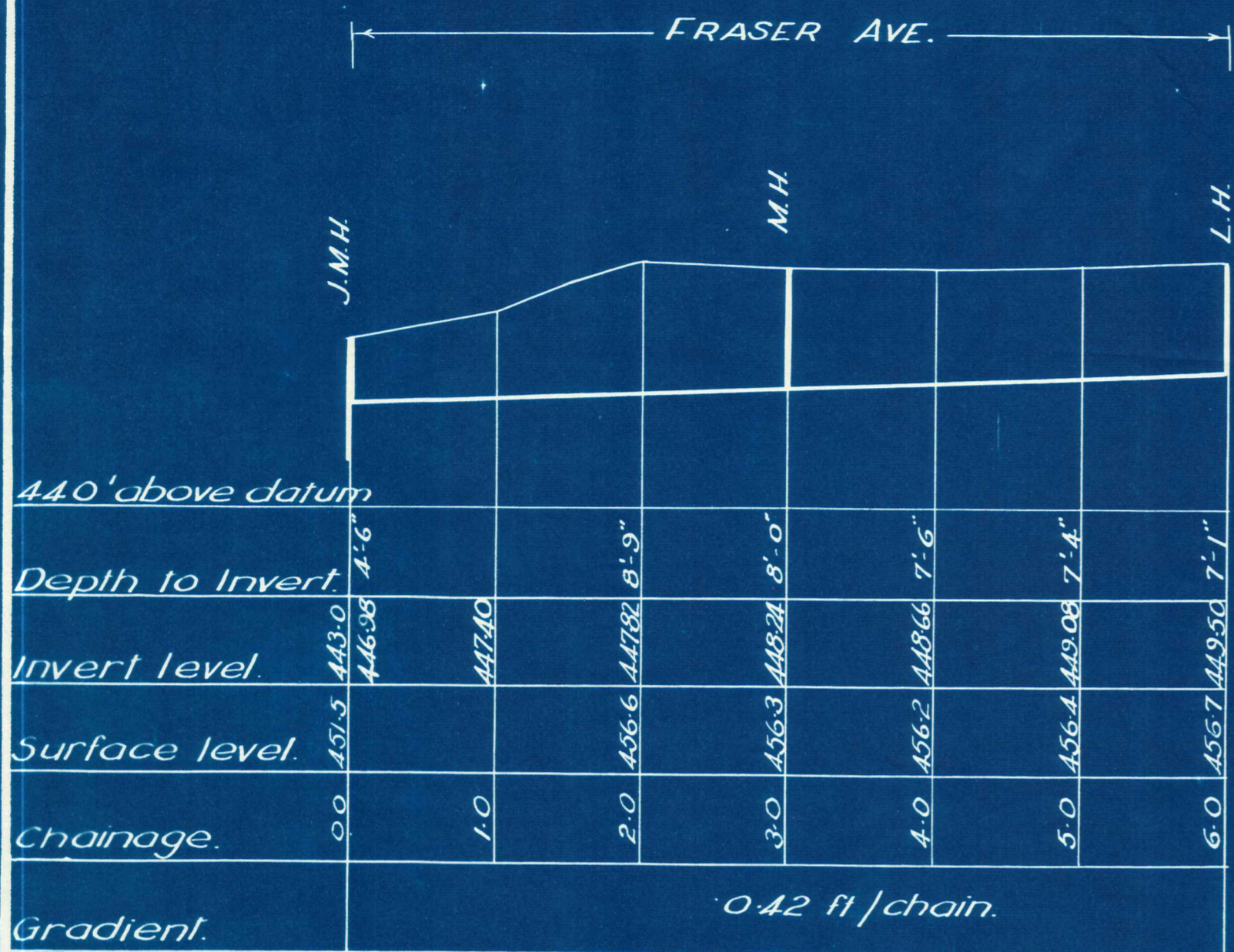
**SEWER A7-Q4.**

Scales Horiz. One chain to an inch. Vert. 10 feet to an inch.



Q3 T1 A5 P1 Q1 R1 Q2 S1

**SEWER Q3-T1**      **SEWER A5-P1**      **SEWER Q1-R1**      **SEWER Q2-S1**

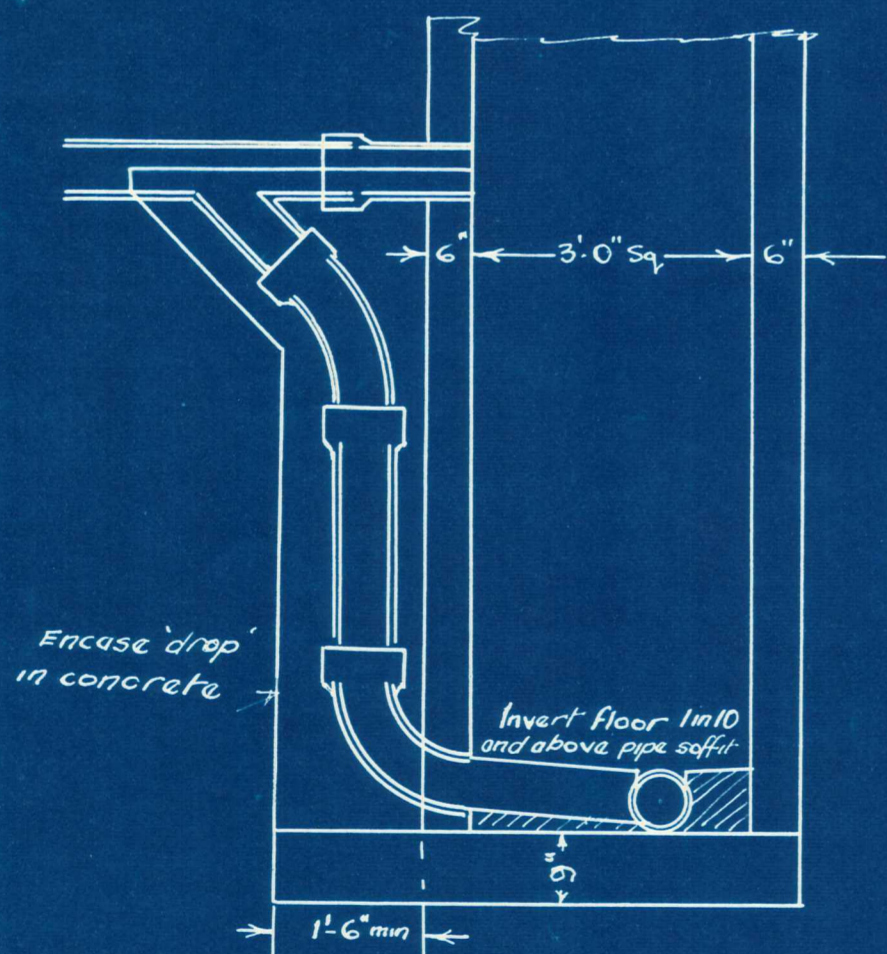


LAMP HOLE DETAILS

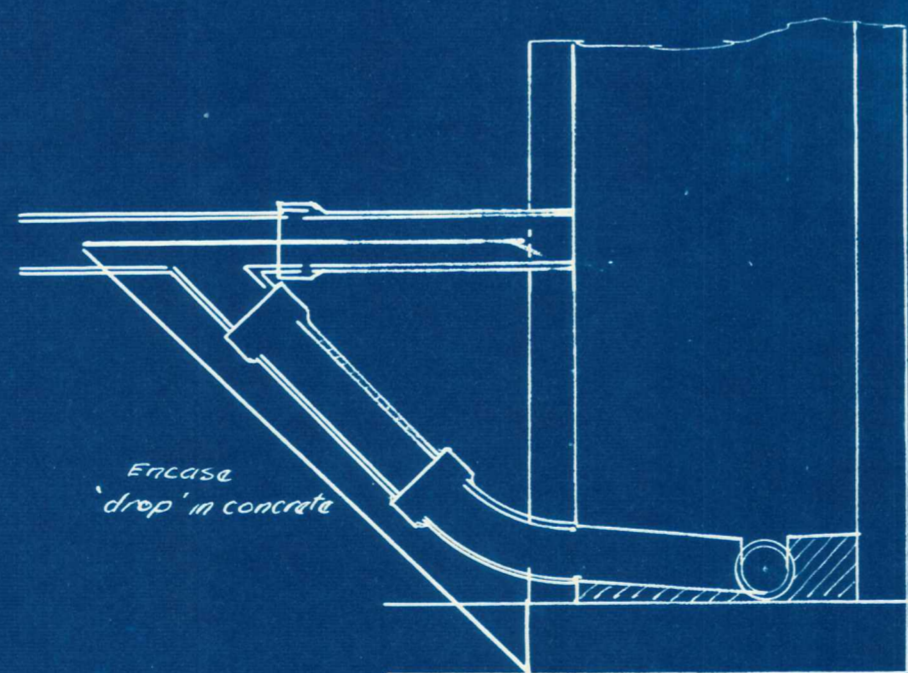
SEWER A7-U1

SEWER A8-V1

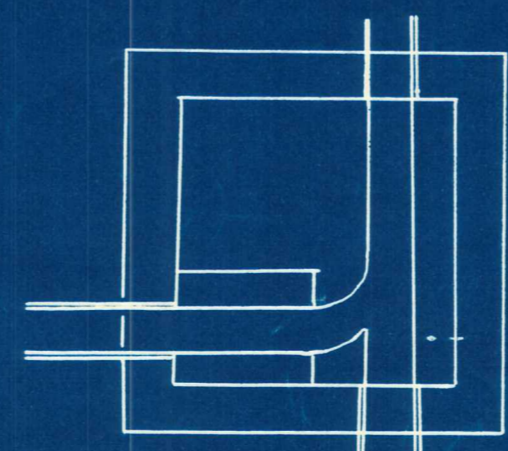
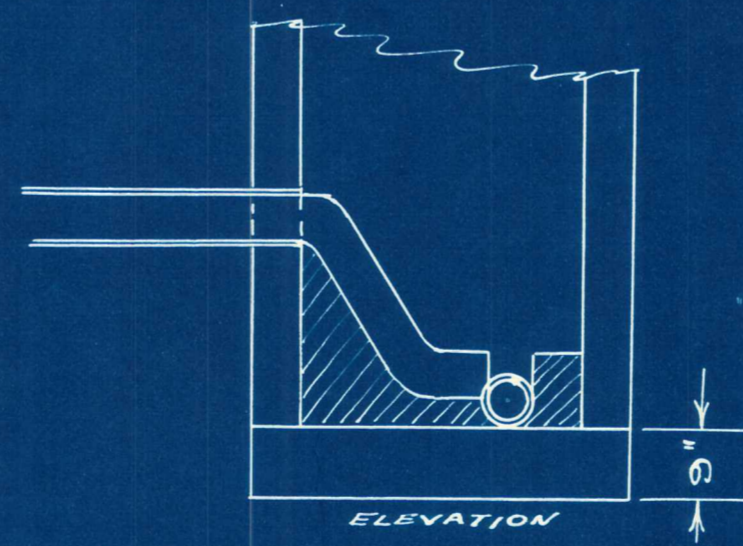
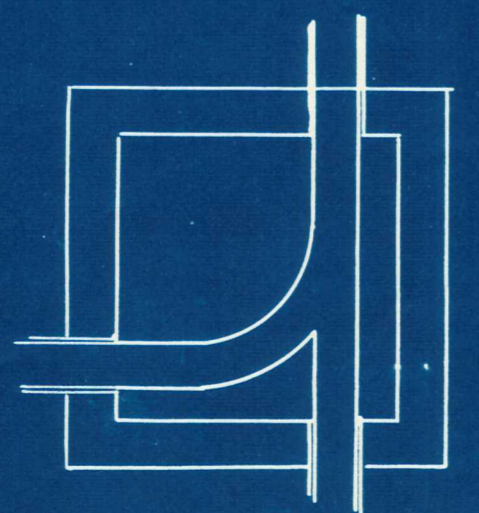
SCALE 10 FT TO 1" VERTICAL  
1 CH TO 1" HORIZONTAL



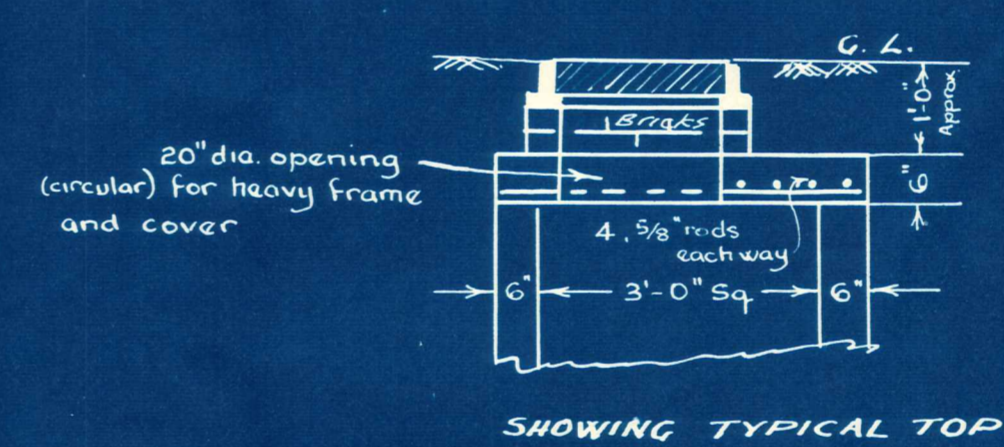
DETAIL DROP STRUCTURE FOR DROPS OVER 3'-10"



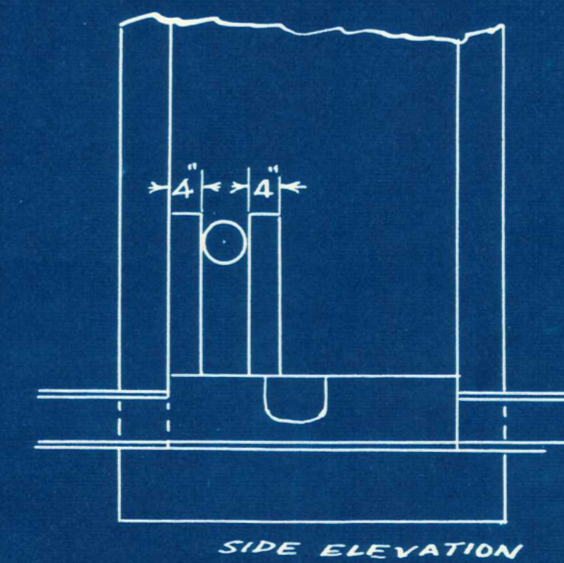
DETAIL DROP STRUCTURE FOR DROPS BETWEEN 2'-0" AND 3'-10"



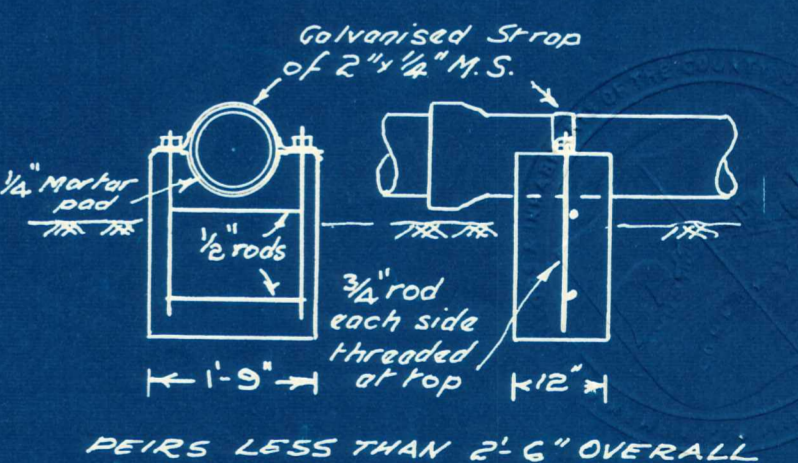
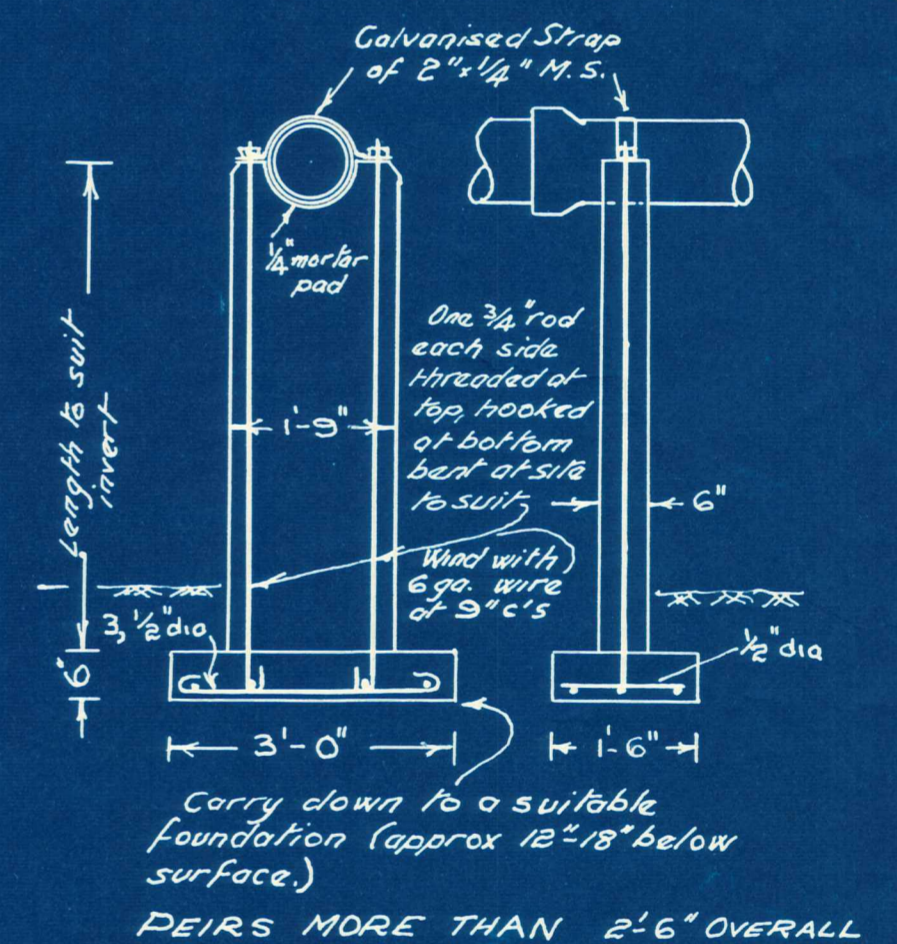
MANHOLE DETAILS SCALE 1/2" TO 1'-0"



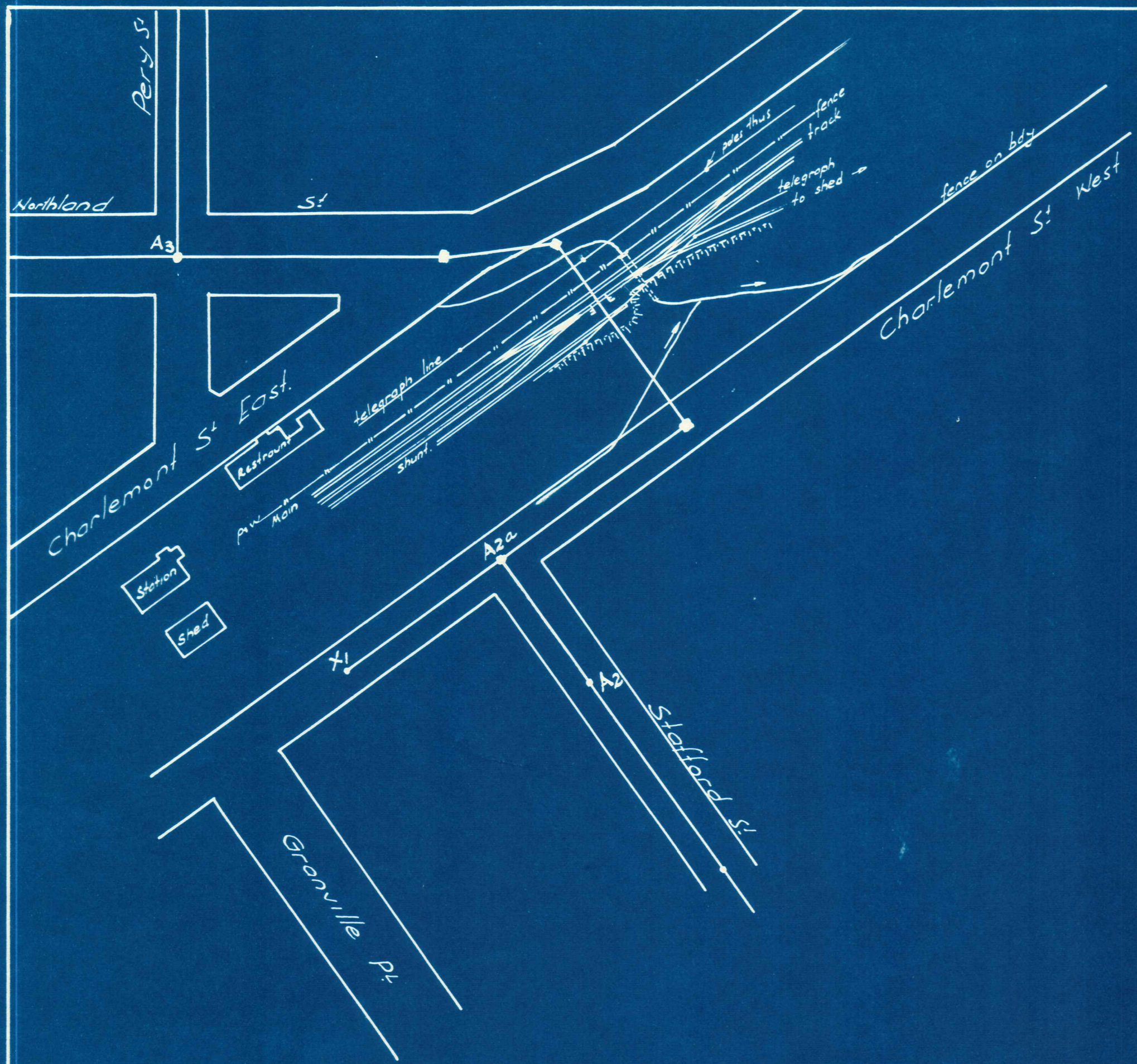
SHOWING TYPICAL TOP



DETAIL DROP STRUCTURE FOR DROPS 2'-0" AND UNDER

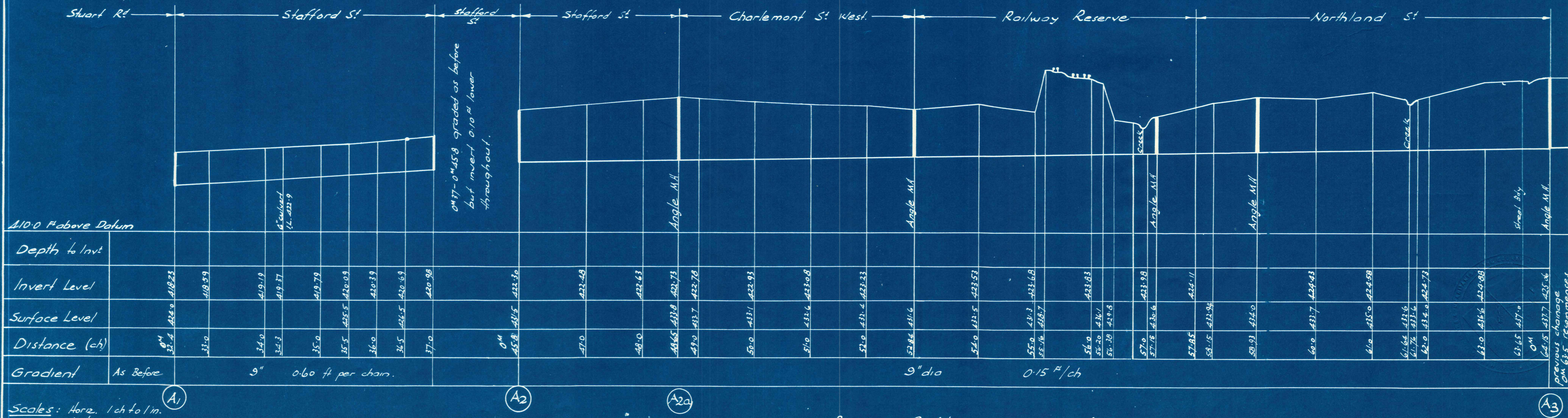


PEIR AND STOOL DETAILS SCALE 1/2" TO 1'-0"



Plan of Revised R/Way Crossing  
2 ch to 1m

	Charlemont St West.				
A20 <sup>ft</sup> above Datum					
Depth to Invert					
Invert Level	428.50	428.90	429.30	429.64	429.94
Surface Level	433.8			434.5	
Distance - chains	0.0	1.0	2.0	2.85	3.60
Gradient	6" 0.4"/ch.				



Scales: Horiz. 1 ch to 1 m.  
Vert. 10 ft to 1 m.

Revised Profiles on account of Amended R/Way Crossing.