

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR BITUMINOUS OVERLAY, CONC. MEDIAN & SIGNAL REVISIONS

TRUNK HIGHWAY NO. 12-104

BETWEEN WEST LIMITS OF ST. PAUL AND PARK ST. (ST. PAUL)

From To

MINN. PROJ. M 5406 (1) STATE PROJ. NO. 6208-24 (T.H. 12-104)

GROSS LENGTH	..... FT. MI.	GROSS LENGTH	28,058.00	FT. 5,314	MI.
BRIDGES-LENGTH	..... FT. MI.	BRIDGES-LENGTH	0.00	FT. 0.000	MI.
EXCEPTIONS-LENGTH FT. MI.	EXCEPTIONS-LENGTH	0.00	FT. 0.000	MI.
NET LENGTH FT. MI.	NET LENGTH	28,058.00	FT. 5,314	MI.

Fed. Proj. No. M 5406 (1)

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SPECIFICATIONS

THE MINNESOTA HIGHWAY DEPARTMENT
"STANDARD SPECIFICATIONS FOR HIGHWAY
CONSTRUCTION" DATED JANUARY 1, 1972,
AS AMENDED BY "SUPPLEMENTAL
SPECIFICATIONS" DATED JANUARY 1, 1974,
SHALL GOVERN.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY
ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM
A DULY REGISTERED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF MINNESOTA.

R. H. Cartford

DATE 4-30-74 REG. NO. 6974

Right of Way Approval *[Signature]* 5-10-74
Engineer of Lands and Right of Way

Recommended for Approval *Leonard D. Eilts* 5/9, 1974
Road Plans Engineer

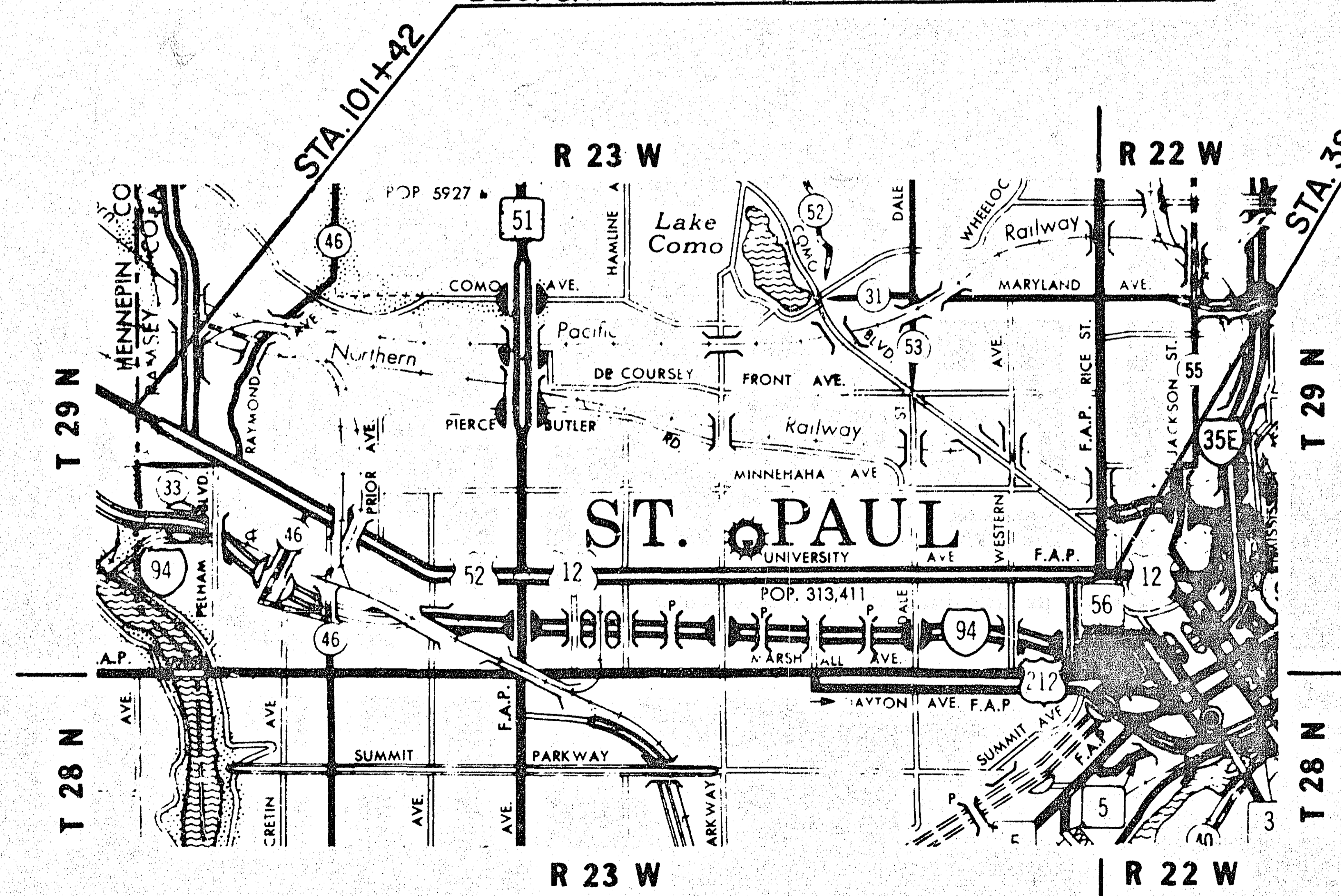
Recommended for Approval *[Signature]* 4/30
District Engineer

Recommended for Approval *[Signature]* 5/9, 1974
Traffic Engineer

Recommended for Approval *[Signature]* 5-10, 74
Road Design Engineer

Approved 5-13, 1974 *[Signature]*
Deputy Chief Engineer

BEG. S.P. 6208-24 (T.H. 12-104) END S.P. 6208-24 (T.H. 12-104)



DESIGN DESIGNATION

Design Speed 30 MPH
Based on Stopping Sight Distance
Height of eye 3.75' Height of object 3.75'
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH _____
STA. _____ TO STA. _____ MPH _____

ADT (CURRENT YEAR) 1971 = 20,390
ADT (FUTURE YEAR) 1985 = _____
DHV (DESIGN HOUR VOLUME) = _____
D (DIRECTIONAL DISTRIBUTION) = 50/50%
T (HEAVY COMMERCIAL) = 5.8 %

REVISIONS		
DATE	SHEET NO.	APPROVED BY

FINAL CONSTRUCTION CHANGES COMPLETED
[Signature]
PROJECT OR RESIDENT ENGINEER
3-31-77
DATE

FEDERAL HIGHWAY ADMINISTRATION
APPROVED:

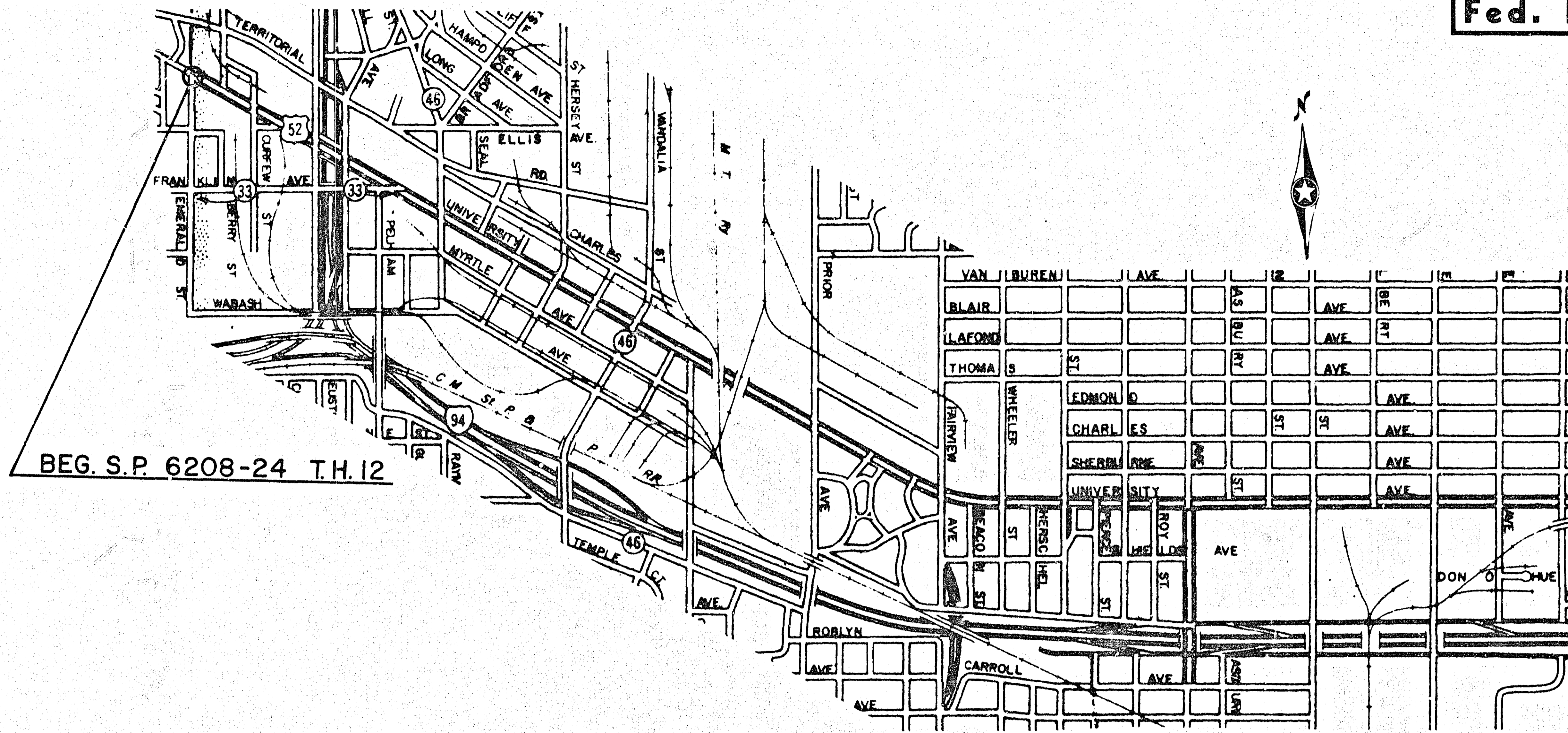
Division Engineer Date
Design Squad D. JOHNSON

AREA 94 JOB 572

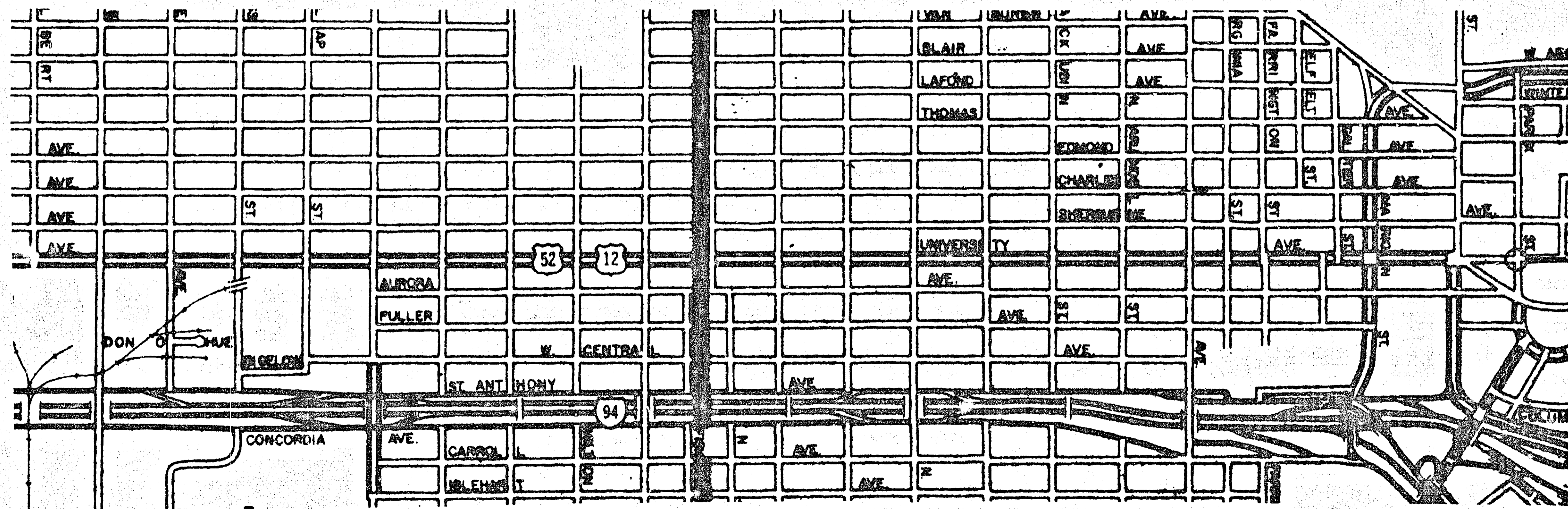
State Proj. No. 6208-24 (T.H. 12-104) Sheet No. 1 of 41 Sheets

ROGERS 20 MAY 1, 1966

5-14-74 F.R.C.M.



BEG. S.P. 6208-24 T.H.12



END S.P. 6208-24 T.H.12

FINAL CONSTRUCTION CHANGES COMPLETED
David H. Gaylord
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

GENERAL LAYOUT

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	MOBILIZATION	L.S.		L.S.
2104.503	REMOVE CONCRETE ISLAND	S.F.	114,386(P)	114,386 (P)
2104.505	REMOVE BITUMINOUS SURFACING	S.Y.	400	1,597
2104.501	REMOVE CURB	L.F.	775	768
2104.509	REMOVE SIGN BASE	EACH	1	1
2104.523	SALVAGE GUIDE POSTS (3)	EACH	112	97
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	909	688.88
2341.518	BIT. MATERIAL FOR LEVELING COURSE	TON	18,189	15,322.9
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	26,595	20,346
2361.504	ASPHALT CEMENT	TON	1,002	804.02
2361.508	WEARING COURSE MIXTURE	TON	10,025	12,349
2506.511	RECONSTRUCT MANHOLES	L.F.	190	34.6
2506.512	RECONSTRUCT CATCH BASINS	L.F.	67	23.7
2506.516	CASTING ASSEMBLIES (1)	EACH	143	8
2506.522	ADJUST FRAME AND RING CASTING (2)	EACH	168	342
504.679	ADJUST VALVE BOX	BOX	293	278
2506.521	INSTALL CASTINGS	EACH	81	26
2531.502	CONCRETE CURB, DESIGN B6	L.F.	775	776
2531.503	CONCRETE MEDIAN	S.Y.	17,277(P)	17,277 (P)
565.640	STEEL GUARD POST	POST	126	140
2564.511	CONCRETE FOOTINGS (TYPE OH-SHAFT)	C.Y.	1	1
0564.626	SIGN LEGEND REVISION, TYPE "OH"	EACH	1	1
0564.626	MODIFY SIGN OH 3-280	EACH	1	1

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
0565.610	REVISE SIGNAL SYSTEM A	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM B	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM C	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM D	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM E	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM F	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM G	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM H	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM I	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM J	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM K	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM L	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM M	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM N	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM O	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM P	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM Q	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM R	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM S	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM T	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM U	SYST.	1	1
0565.610	REVISE SIGNAL SYSTEM V	SYST.	1	1
412.623	ADJUST MONUMENTS	EACH	12	5
564.626	INSTALL SIGN PIER & COLLAR	EACH	96	93

(1) NO. OF CASTING ASSEMBLIES ARE APPROX. ONLY. ACTUAL NO. OF ASSEMBLIES REQUIRED SHALL BE DETERMINED BY THE ENGINEER. CASTING ASSEMBLY CONSISTS OF THE ST. PAUL STANDARD CASTING ASSEMBLY INCLUDING ADJUSTING RING (23 3/4" DIA.). ADJUSTING RING INCLUDED FOR STAGE CONSTRUCTION WILL NOT BE REQUIRED IF CASTING IS PLACED CONCURRENT WITH A BITUMINOUS SURFACING.

(2) CITY OF ST. PAUL STRUCTURES, IN MOST CASES, THE ST. PAUL STANDARD ADJUSTING RING (23 3/4" DIA.) MAY BE USED.

(3) SEE SHEETS NO. 8 AND NO. 9

NOTE:
CASTING ASSEMBLIES SHALL BE USED AS DIRECTED BY THE ENGINEER. IF A NEW ASSEMBLY IS PLACED ON A STRUCTURE, ITEM NO. 2506.521 - INSTALL CASTING - SHALL NOT APPLY.

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE NO.	DESCRIPTION
0002 A	SPECIFICATION REFERENCE TO STANDARD PLATES
7020 G	CONCRETE CURBS
8000 F	STANDARD BARRICADES
8116 C	STEEL GUARD POST
8117 E	PRECAST CONCRETE HANDHOLE
4108 D	MANHOLE ADJUSTING RING

FINAL CONSTRUCTION CHANGES COMPLETED
David H. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

STATEMENT OF ESTIMATED QUANTITIES
&
STANDARD PLATES

PUBLIC UTILITIES

LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP
100+60 LT. 17'RT.	M.H.	LEAVE AS IS	N.W.B.T.
100+97 RT. 20'LT.	M.H.	LEAVE AS IS	N.W.B.T.
101+02 LT. 10'RT.	M.H.	LEAVE AS IS	N.W.B.T.
101+77 RT. 3'LT.	M.H.	ABANDON	N.S.P.
102+09 LT. 2'RT.	M.H.	ADJUST	W.U.
103+93 LT. 16'RT.	M.H.	ABANDON	N.S.P.
104+12 LT. 11'RT.	M.H.	ADJUST	N.W.B.T.
104+81 LT. 3'RT.	M.H.	ADJUST	W.U.
105+54 LT. 9'RT.	M.H.	LEAVE AS IS	N.W.B.T.
106+73 RT. 4'LT.	M.H.	ABANDON	N.S.P.
107+21 LT. 12'RT.	M.H.	ADJUST	N.W.B.T.
107+22 LT. 4'RT.	M.H.	ADJUST	N.W.B.T.
107+50 LT. 3'RT.	M.H.	ADJUST	W.U.
108+92 LT. 17'RT.	M.H.	ABANDON	N.S.P.
110+30 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
111+71 RT. 2'LT.	M.H.	ABANDON	N.S.P.
111+81 LT. 5'RT.	M.H.	ADJUST	W.U.
113+41 LT. 11'RT.	M.H.	LEAVE AS IS	N.W.B.T.
113+50 RT. 2'RT.	S.O.V.	LEAVE AS IS	N.S.P.
115+47 LT. 13'RT.	M.H.	LEAVE AS IS	N.W.B.T.
116+50 LT. 18'RT.	M.H.	LEAVE AS IS	N.W.B.T.
117+05 LT. 10'RT.	M.H.	LEAVE AS IS	W.U.
120+27 LT. 14'RT.	M.H.	LEAVE AS IS	N.W.B.T.
124+10 LT. 10'RT.	M.H.	LEAVE AS IS	N.W.B.T.
124+14 LT. 21'RT.	M.H.	ABANDON	N.S.P.
125+97 LT. 4'RT.	M.H.	LEAVE AS IS	W.U.
125+97 LT. 14'RT.	M.H.	ADJUST	N.W.B.T.
126+04 LT. 14'RT.	M.H.	ADJUST	N.W.B.T.
126+15 RT. 17'LT.	M.H.	ADJUST	N.W.B.T.
126+24 RT. 16'LT.	M.H.	ADJUST	N.W.B.T.
126+60 RT. 4'LT.	M.H.	ADJUST	N.S.P.
126+80 C	M.H.	ABANDON	N.S.P.
127+91 LT. 12'RT.	M.H.	ADJUST	N.W.B.T.
129+13 RT. 17'LT.	M.H.	ADJUST	N.W.B.T.
130+49 LT. 4'RT.	M.H.	ADJUST	W.U.
131+56 RT. 4'LT.	M.H.	ABANDON	N.S.P.
131+65 LT. 10'RT.	M.H.	ADJUST	N.W.B.T.
131+73 LT. 15'RT.	M.H.	ADJUST	N.W.B.T.
132+03 LT. 7'RT.	M.H.	ADJUST	N.W.B.T.
132+03 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
132+03 RT. 17'LT.	M.H.	ADJUST	N.W.B.T.
134+55 RT. 2'LT.	M.H.	ADJUST	N.W.B.T.
135+20 LT. 5'RT.	M.H.	ADJUST	W.U.
135+51 LT. 12'RT.	M.H.	ADJUST	N.W.B.T.

PUBLIC UTILITIES

LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP
135+71 LT. 3'RT.	M.H.	ADJUST	W.U.
135+97 C	M.H.	ABANDON	N.S.P.
136+09 LT. 14'RT.	M.H.	ADJUST	N.W.B.T.
138+92 RT. 3'LT.	M.H.	ADJUST	N.W.B.T.
139+10 LT. 10'RT.	M.H.	ADJUST	N.W.B.T.
139+99 LT. 4'RT.	M.H.	ADJUST	W.U.
140+75 C	M.H.	ABANDON	N.W.B.T.
140+98 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
141+91 LT. 0.5'RT.	S.O.V.	ADJUST	N.S.P.
142+12 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
145+08 LT. 3'RT.	M.H.	ADJUST	W.U.
145+45 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
145+53 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
145+68 LT. 2'RT.	M.H.	ADJUST	N.W.B.T.
145+72 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
145+85 RT. 3'LT.	M.H.	ADJUST	N.W.B.T.
147+82 LT. 1'RT.	M.H.	ADJUST	N.S.P.
148+72 LT. 5'RT.	M.H.	ADJUST	W.U.
148+80 LT. 14'RT.	M.H.	ADJUST	N.W.B.T.
148+87 LT. 10'RT.	M.H.	ADJUST	N.W.B.T.
150+35 C	M.H.	ABANDON	N.S.P.
150+54 LT. 14'RT.	M.H.	ADJUST	N.W.B.T.
150+56 LT. 15'RT.	M.H.	ADJUST	N.W.B.T.
151+10 RT. 0.5'LT.	M.H.	ADJUST	N.S.P.
151+45 LT. 3'RT.	M.H.	ADJUST	N.W.B.T.
152+23 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
152+72 LT. 2'RT.	M.H.	ADJUST	N.W.B.T. & W.U.
154+40 RT. 0'LT.	M.H.	ADJUST	N.W.B.T.
154+50 RT. 3'LT.	M.H.	ABANDON	N.S.P.
155+05 LT. 13'RT.	M.H.	ADJUST	N.W.B.T.
155+39 LT. 11'RT.	M.H.	ADJUST	N.W.B.T.
158+35 LT. 2'RT.	M.H.	ADJUST	N.W.B.T.
159+17 LT. 2'RT.	M.H.	ADJUST	N.W.B.T.
161+78 LT. 3'RT.	M.H.	ADJUST	N.W.B.T.
161+85 LT. 3'RT.	M.H.	ADJUST	N.W.B.T.
175+96 LT. 3'RT.	M.H.	ADJUST	N.W.B.T.
176+04 LT. 3'RT.	M.H.	ADJUST	N.W.B.T.
176+68 LT. 5'RT.	M.H.	ADJUST	N.W.B.T.
177+06 LT. 6'RT.	M.H.	ADJUST	N.W.B.T.
177+40 RT. 3'LT.	M.H.	ADJUST	N.W.B.T.
180+10 LT. 10'RT.	M.H.	ADJUST	N.W.B.T.
183+51 LT. 12'RT.	M.H.	ADJUST	N.W.B.T.
184+74 RT. 5'LT.	M.H.	ADJUST	N.W.B.T.
187+65 LT. 11'RT.	M.H.	ADJUST	N.W.B.T.

FINAL CONSTRUCTION CHANGES COMPLETE

David H. England
PROJECT OR RESIDENT ENGINEER

3-31-77

DATE

- LEGEND**
 N.W.B.T. NORTHWESTERN BELL TELE.
 N.S.P. NORTHERN STATES POWER
 W.U. WESTERN UNION

PUBLIC UTILITIES

THE CONTRACTOR SHALL OBTAIN, FROM THE UTILITY COMPANIES, THE EXACT LOCATION OF ANY UTILITIES WHICH HE MAY ENCOUNTER IN THE PERFORMANCE OF HIS WORK.

PUBLIC UTILITIES

LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP	
188+64	℄	M.H.	ABANDON	N.S.P.
191+87	LT. 11' RT.	M.H.	ADJUST	N.W.B.T.
191+93	RT. 3' LT.	M.H.	ADJUST	N.W.B.T.
192+07	LT. 8' RT.	M.H.	ADJUST	W.U.
192+28	LT. 10' RT.	M.H.	ADJUST	N.W.B.T.
195+32	LT. 12' RT.	M.H.	ADJUST	N.W.B.T.
195+90	RT. 4' LT.	M.H.	ABANDON	N.S.P.
196+50	LT. 7' RT.	M.H.	ADJUST	W.U.
198+61	LT. 12' RT.	M.H.	ADJUST	N.W.B.T.
198+67	LT. 12' RT.	M.H.	ADJUST	N.W.B.T.
200+82	RT. 4' LT.	M.H.	ABANDON	N.S.P.
200+89	LT. 8' RT.	M.H.	ADJUST	W.U.
201+93	LT. 11' RT.	M.H.	ADJUST	N.W.B.T.
205+25	LT. 11' RT.	M.H.	ADJUST	N.W.B.T.
205+32	LT. 7' RT.	M.H.	ADJUST	W.U.
205+42	LT. 6' RT.	M.H.	ADJUST	N.S.P.
205+79	RT. 3' LT.	M.H.	ABANDON	N.S.P.
208+66	LT. 5' RT.	M.H.	ADJUST	N.W.B.T.
208+66	LT. 11' RT.	M.H.	ADJUST	N.W.B.T.
210+75	RT. 3' LT.	M.H.	ABANDON	N.S.P.
212+07	LT. 10' RT.	M.H.	ADJUST	N.W.B.T.
213+73	RT. 4' LT.	S.O.V.	ADJUST	N.S.P.
215+49	LT. 10' RT.	M.H.	ADJUST	N.W.B.T.
215+72	RT. 3' LT.	M.H.	ABANDON	N.S.P.
218+74	RT. 2' LT.	M.H.	ADJUST	N.S.P.
218+75	LT. 13' RT.	M.H.	ADJUST	N.W.B.T.
218+81	LT. 19' RT.	M.H.	RECONSTRUCT	N.W.B.T.
220+20	RT. 2' LT.	M.H.	ABANDON	N.S.P.
220+68	RT. 3' LT.	M.H.	ABANDON	N.S.P.
220+75	LT. 2' RT.	M.H.	ADJUST	N.W.B.T.
222+73	LT. 3' RT.	M.H.	ADJUST	N.W.B.T.
222+81	LT. 3' RT.	M.H.	ADJUST	N.W.B.T.
225+61	RT. 3' LT.	M.H.	ABANDON	N.S.P.
227+04	LT. 3' RT.	M.H.	ADJUST	N.W.B.T.
227+15	RT. 3' LT.	M.H.	ABANDON	N.S.P.
230+63	RT. 3' LT.	M.H.	ABANDON	N.S.P.
231+62	LT. 0' RT.	M.H.	ADJUST	N.W.B.T.
231+83	℄	M.H.	ABANDON	N.S.P.
234+87	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
235+59	RT. 1' LT.	M.H.	ABANDON	N.S.P.
238+15	LT. 3' RT.	M.H.	ADJUST	N.W.B.T.
238+44	℄	M.H.	ABANDON	N.S.P.
244+82	LT. 1' RT.	M.H.	ADJUST	N.W.B.T.
248+02	RT. 5' LT. VALVE BOX COVER		ADJUST	N.S.P.

PUBLIC UTILITIES

LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP	
255+40	RT. 1' LT.	M.H.	ABANDON	N.S.P.
258+28	LT. 0' RT.	M.H.	ADJUST	N.W.B.T.
264+82	LT. 3' RT.	M.H.	ADJUST	N.W.B.T.
265+34	RT. 3' LT.	M.H.	ABANDON	N.S.P.
269+24	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
270+30	RT. 3' LT.	M.H.	ABANDON	N.S.P.
271+81	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
275+25	RT. 2' LT.	M.H.	ABANDON	N.S.P.
277+80	℄	M.H.	ABANDON	N.S.P.
277+96	LT. 3' RT.	M.H.	ADJUST	N.W.B.T.
278+53	RT. 2' LT.	S.O.V.	ADJUST	N.S.P.
280+22	RT. 3' LT.	M.H.	ABANDON	N.S.P.
280+52	LT. 2' RT.	M.H.	ADJUST	N.W.B.T.
284+59	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
285+18	RT. 3' LT.	M.H.	ABANDON	N.S.P.
289+23	LT. 2' RT. STEM BOX COVER		ADJUST	N.S.P.
290+15	RT. 3' LT.	M.H.	ABANDON	N.S.P.
290+94	℄	M.H.	ABANDON	N.S.P.
291+14	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
294+74	LT. 25' RT.	M.H.	ADJUST	N.W.B.T.
295+11	RT. 3' LT.	M.H.	ABANDON	N.S.P.
297+53	LT. 38' RT.	M.H.	ABANDON	N.S.P.
297+53	℄	M.H.	ABANDON	N.S.P.
297+73	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
300+08	RT. 3' LT.	M.H.	ABANDON	N.S.P.
304+04	℄	M.H.	ABANDON	N.S.P.
304+35	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
305+76	RT. 25' LT. STEM BOX COVER		ADJUST	N.S.P.
306+76	LT. 2' RT. STEM BOX COVER		ADJUST	N.S.P.
310+01	RT. 2' LT.	M.H.	ABANDON	N.S.P.
310+62	℄	M.H.	ABANDON	N.S.P.
310+85	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
314+97	RT. 3' LT.	M.H.	ABANDON	N.S.P.
316+80	RT. 12' LT. STEM BOX COVER		ADJUST	N.S.P.
317+08	℄	M.H.	ABANDON	N.S.P.
317+30	LT. 4' RT.	M.H.	ADJUST	N.W.B.T.
318+25	RT. 6' LT.	M.H.	ADJUST	N.S.P.
319+84	RT. 3' LT.	M.H.	ABANDON	N.S.P.
323+57	RT. 1' LT.	M.H.	ABANDON	N.S.P.
323+83	RT. 24' LT.	M.H.	ADJUST	N.W.B.T.
323+91	LT. 5' RT.	M.H.	ADJUST	N.W.B.T.
323+91	RT. 23' LT.	M.H.	ADJUST	N.W.B.T.
330+21	RT. 0' LT.	M.H.	ADJUST	N.W.B.T.
330+21	RT. 25' LT.	M.H.	ADJUST	N.W.B.T.

FINAL CONSTRUCTION CHANGES COMPLETED

Dennis J. DeGroot
PROJECT OR RESIDENT ENGINEER

3-31-77
DATE

LEGEND

- N.W.B.T. NORTHWESTERN BELL TELE.
- N.S.P. NORTHERN STATES POWER
- W.U. WESTERN UNION

PUBLIC UTILITIES

THE CONTRACTOR SHALL OBTAIN, FROM THE UTILITY COMPANIES, THE EXACT LOCATION OF ANY UTILITIES WHICH HE MAY ENCOUNTER IN THE PERFORMANCE OF HIS WORK.

PUBLIC UTILITIES					
LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP		
331+65 RT 21' LT.	VALVE BOX COVER	ADJUST	N.S.P.		
333+93 RT. 23' LT.	M.H.	ADJUST	N.W.B.T.		
334+20 RT. 22' LT.	M.H.	ADJUST	N.W.B.T.		
336+81 RT. 25' LT.	M.H.	ADJUST	N.W.B.T.		
337+34 LT. 11' RT.	STEM BOX COVER	ADJUST	N.S.P.		
339+41 RT. 25' LT.	M.H.	ADJUST	N.W.B.T.		
343+50 RT. 25' LT.	M.H.	ADJUST	N.W.B.T.		
344+66 LT. 3' RT.	VALVE BOX COVER	ADJUST	N.S.P.		
350+12 RT. 25' LT.	M.H.	LEAVE AS IS	N.W.B.T.		
353+55 RT. 24' LT.	M.H.	LEAVE AS IS	N.W.B.T.		
353+64 RT. 24' LT.	M.H.	ADJUST	N.W.B.T.		
353+80 RT. 0' LT.	M.H.	ADJUST	N.S.P.		
355+30 RT. 34' LT.	STEM BOX COVER	ADJUST	N.S.P.		
357+36 RT. 25' LT.	M.H.	ADJUST	N.W.B.T.		
363+20 RT. 24' LT.	M.H.	ADJUST	N.W.B.T.		
367+82 RT. 25' LT.	STEM BOX COVER	ADJUST	N.S.P.		
368+09 RT. 25' LT.	M.H.	ADJUST	N.W.B.T.		
372+02 RT 24' LT.	M.H.	ADJUST	N.W.B.T.		
375+65 RT. 25' LT.	M.H.	ADJUST	N.W.B.T.		
376+33 RT. 26' LT.	VALVE BOX COVER	ADJUST	N.S.P.		
376+43 RT. 26' LT.	M.H.	ADJUST	N.S.P.		
376+74 RT. 24' LT.	M.H.	ADJUST	N.W.B.T.		
376+82 RT. 23' LT.	M.H.	ADJUST	N.W.B.T.		
377+52 LT. 26' RT.	M.H.	ADJUST	N.S.P.		

THE CONTRACTOR SHALL OBTAIN, FROM THE UTILITY COMPANIES, THE EXACT LOCATION OF ANY UTILITIES WHICH HE MAY ENCOUNTER IN THE PERFORMANCE OF HIS WORK.

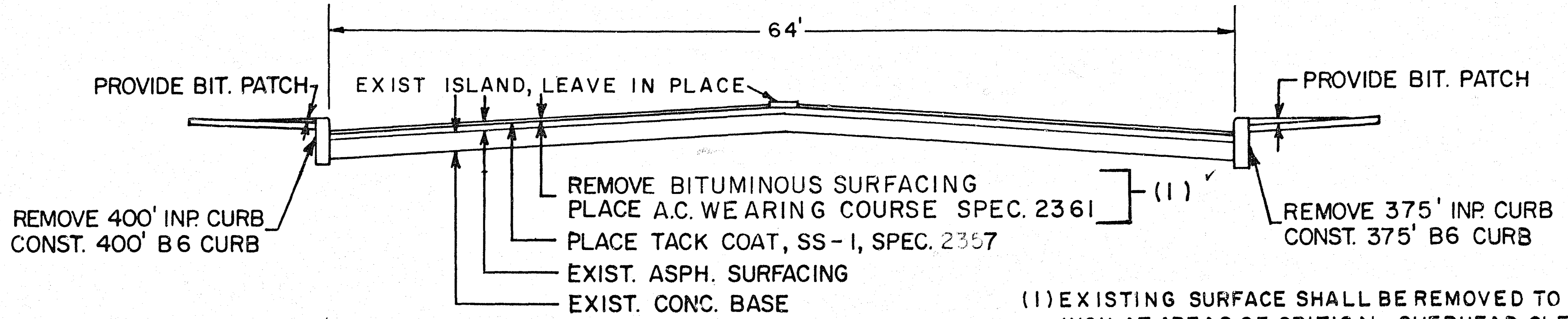
LEGEND
 N.W.B.T.
 NORTHWESTERN BELL TELE.
 N.S.P.
 NORTHERN STATES POWER
 W.U.
 WESTERN UNION

FINAL CONSTRUCTION CHANGES COMPLETED
David J. Haglund
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

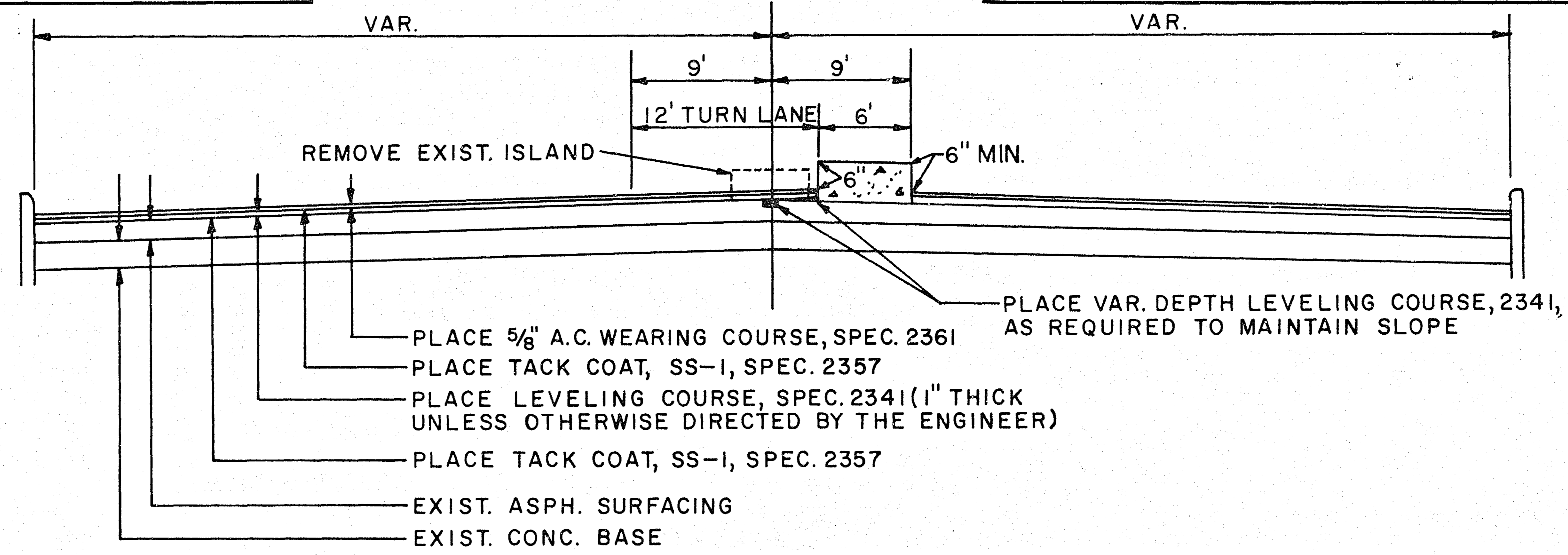
PUBLIC UTILITIES

MINN. TRANSFER RY. UNDERPASS
STA. 164+88 TO STA. 168+88

Fed. Proj. No.

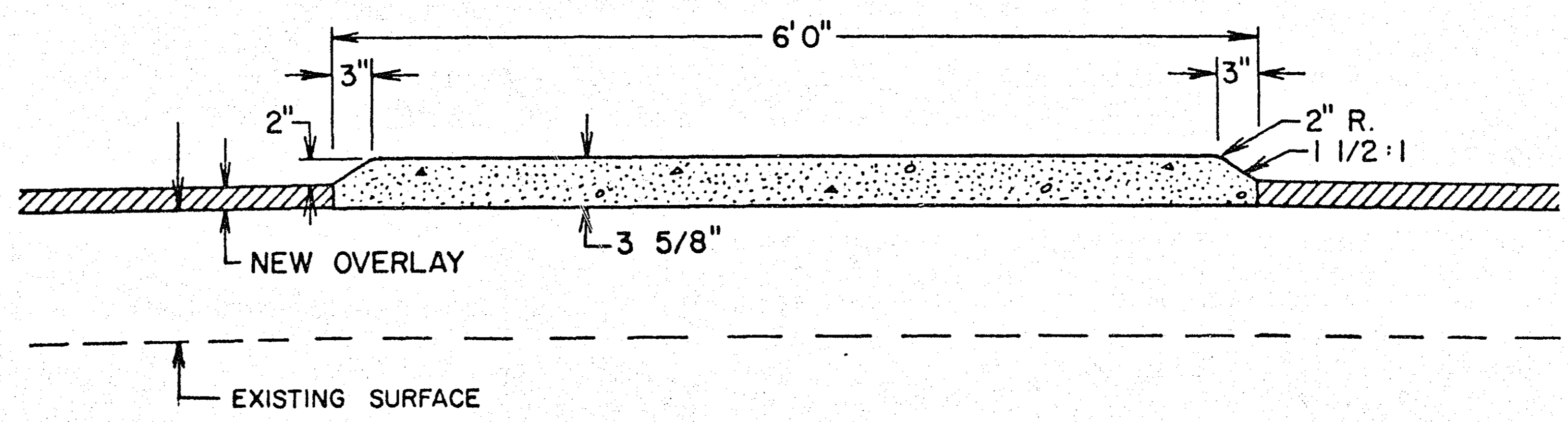


TYPICAL SECTION, EXCEPT AS NOTED
ABOVE AND ϕ BELOW



MOUNTABLE CONCRETE MEDIAN

STATION 152+40 TO 153+65 ✓
STATION 315+77 TO 316+77 ✓



FINAL CONSTRUCTION CHANGES COMPLETED
David H. [Signature]
PROJECT OR RESIDENT ENGINEER
3-31-77
DATE
TYPICAL SECTIONS

CURB, MEDIAN, & GUARD POST							
LOCATION	REMOVE CONCRETE MEDIAN	SALVAGE (2) STEEL GUARD POST	CONSTRUCT B6 CURB	CONSTRUCT CONCRETE MEDIAN	F.&I. STEEL GUARD POST	REMOVE CURB	
	SQ. FT.	EACH	LIN. FT.	SQ. YD.	EACH	LIN. FT.	
GRIGGS AVE. TO DUNLAP AVE.	2951	1		392			
DUNLAP AVE. TO LEXINGTON AVE.	2874	2		372	3 ✓		
LEXINGTON AVE. TO OXFORD ST.	2853	3		376	3 ✓		
OXFORD ST. TO CHATSWORTH ST.	2914	1		384	3 ✓		
CHATSWORTH ST. TO MILTON ST.	2935	2		388	3 ✓		
MILTON ST. TO VICTORIA ST.	2928	4		386	3 ✓		
VICTORIA ST. TO AVON ST.	2926	4		386	3 ✓		
AVON ST. TO GROTTO ST.	2910	3		384	3 ✓		
GROTTO ST. TO ST. ALBANS ST.	2926	4		385 (1)	3 ✓		
ST. ALBANS ST. TO DALE ST.	2937	4		386	3 ✓		
DALE ST. TO KENT ST.	2955	2		382	3 ✓		
KENT ST. TO MACKUBIN ST.	2952	2		388	3 ✓		
MACKUBIN ST. TO ARUNDEL ST.	2961	2		384	3 ✓		
ARUNDEL ST. TO WESTERN AVE.	2928	4		383	3 ✓		
WESTERN AVE. TO FARRINGTON ST.	3130	2		415	3 ✓		
FARRINGTON ST. TO GALTIER ST.	2852	2		415	3		
GALTIER ST. TO MARION ST.	1750	2		217	3 ✓		
MARION ST. TO RICE ST.	3729	3		495	6 ✓		
RICE ST. TO PARK ST.				270	3		
	SUB-TOTAL	52,411 ✓	47	0	7,188 ✓	51 54	0
SHEET NO. ___	SUB-TOTAL	61,975 ✓	65	775 776	10,089 ✓	75 86	775 768
	TOTAL	114,386 ✓	112	775 776	17,277 ✓	126 140	775 768

(1) INCLUDES 67 SQ. YDS. OF MOUNTABLE CONCRETE MEDIAN
 (2) PAID FOR UNDER ITEM 2104.523 (SALVAGE GUIDE POSTS) ✓

FINAL CONSTRUCTION CHANGES COMPLETED
David H. Haglund
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

TABULATIONS

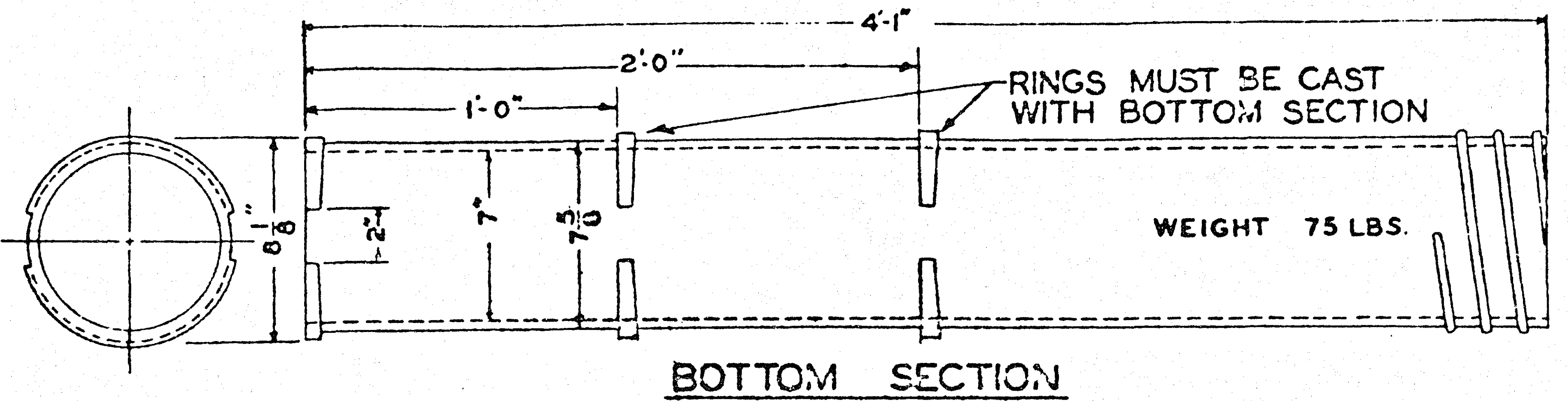
MISCELLANEOUS STRUCTURES - D. Table with columns: LOCATION, STRUCTURE (TYPE, SIZE), F & I. CASTING ASSEMBLY EACH, ADJ. FRAME & RING CASTING EACH, ADJ. VALVE BOX BOX, RECON-STRUCT L.F.

MISCELLANEOUS STRUCTURES - E. Table with columns: LOCATION, STRUCTURE (TYPE, SIZE), F & I. CASTING ASSEMBLY EACH, ADJ. FRAME & RING CASTING EACH, ADJ. VALVE BOX BOX, RECON-STRUCT L.F.

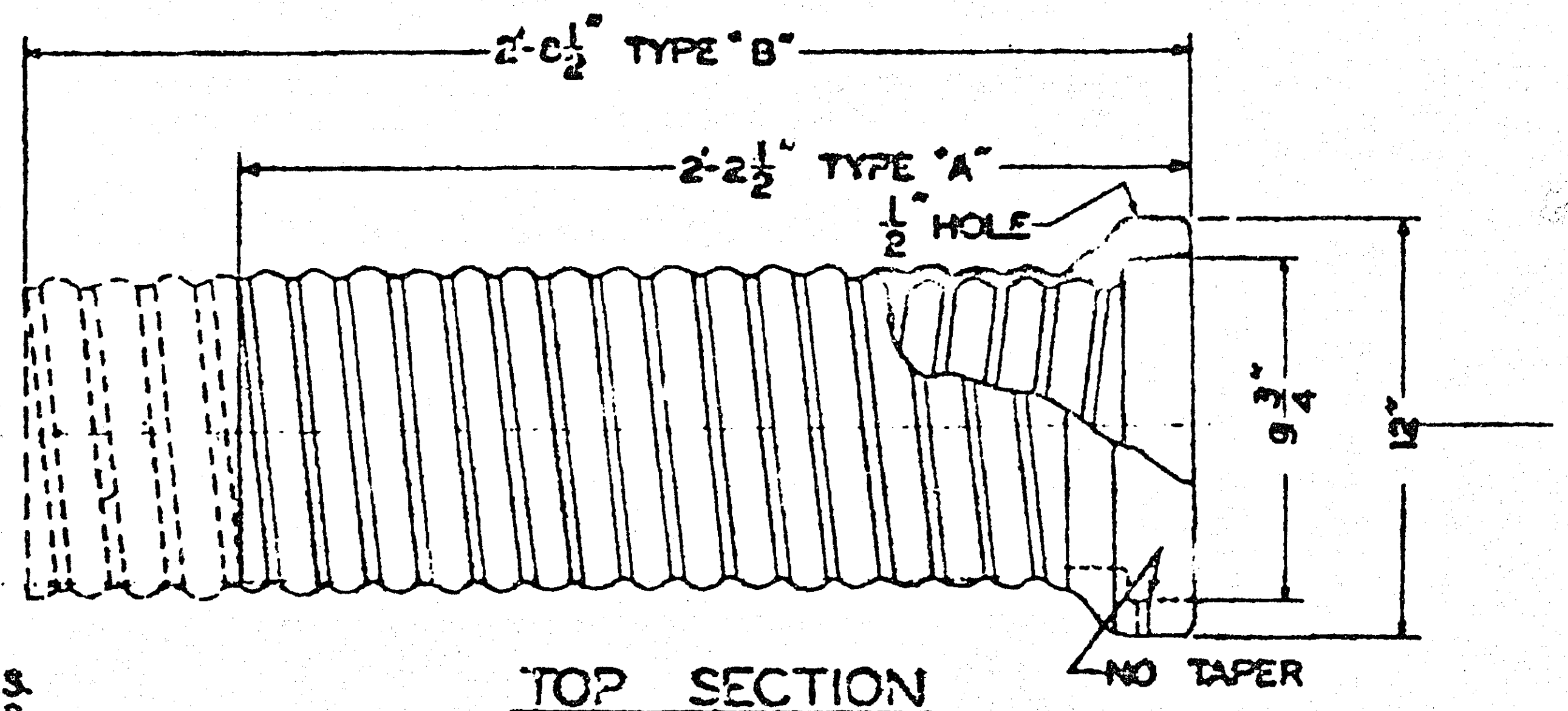
MISCELLANEOUS STRUCTURES - F. Table with columns: LOCATION, STRUCTURE (TYPE, SIZE), F & I. CASTING ASSEMBLY EACH, ADJ. FRAME & RING CASTING EACH, ADJ. VALVE BOX BOX, RECON-STRUCT L.F.

David S. Glynn
PROJECT OR RESIDENT ENGINEER
3.31.77
DATE

TABULATIONS

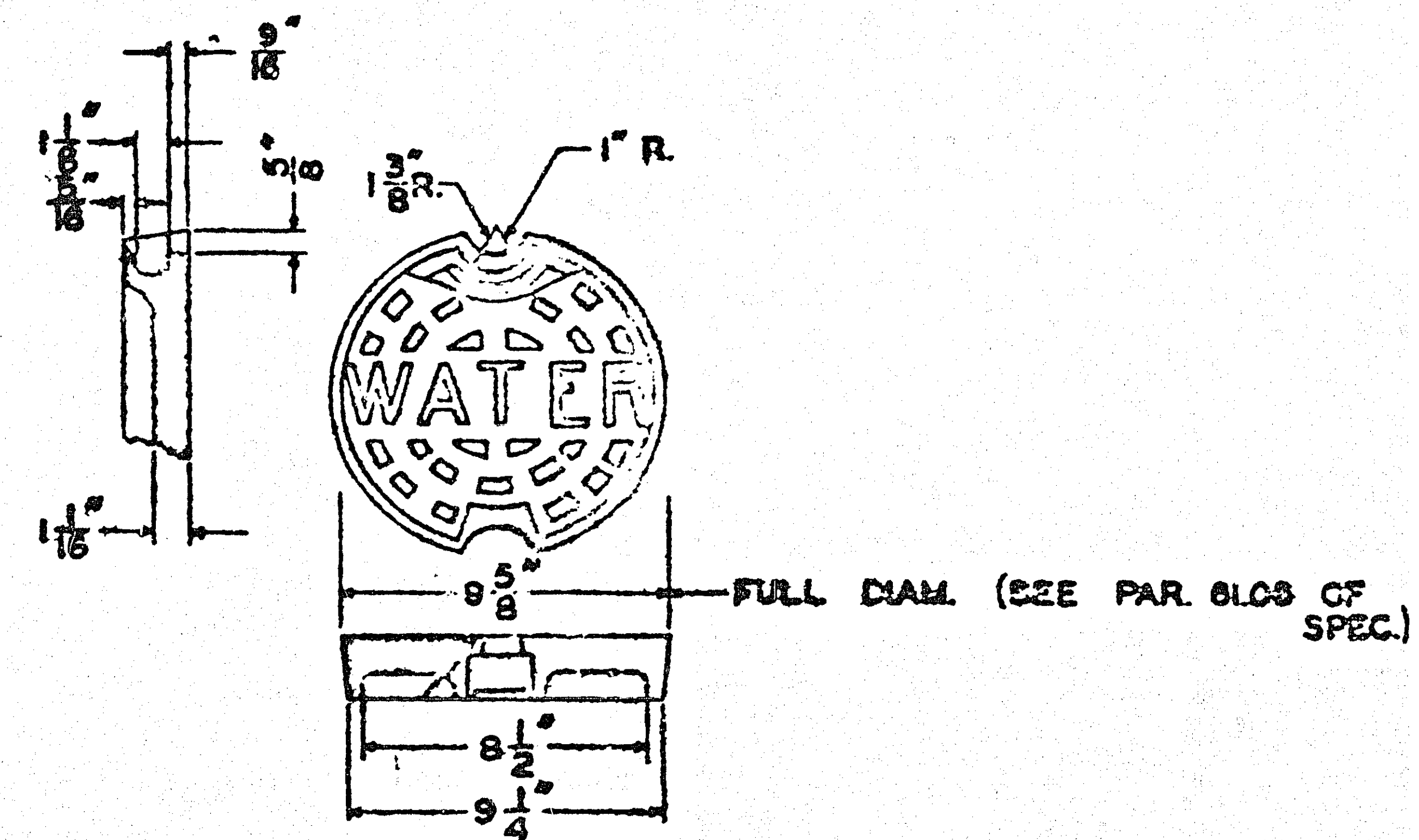


BOTTOM SECTION



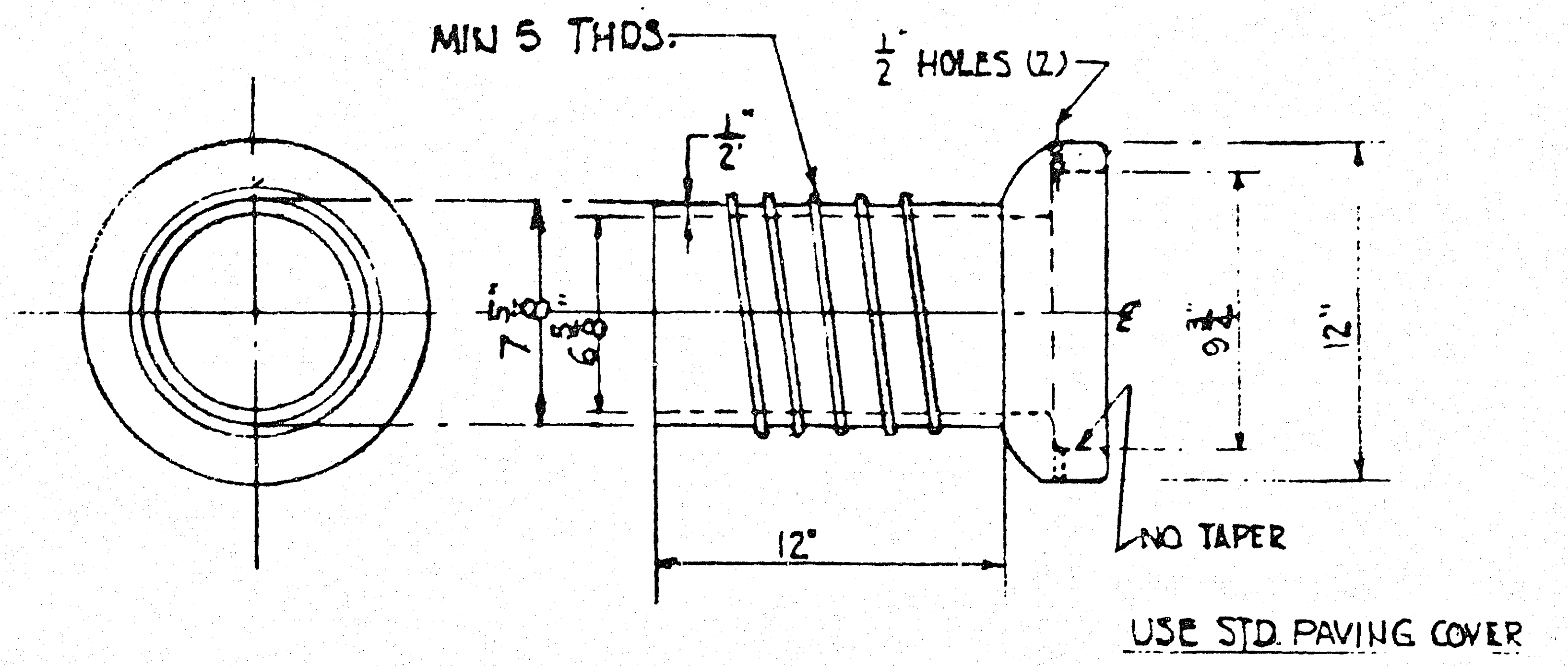
TOP SECTION

TYPE	WT.
A	75 LBS.
B	92 LBS.



PAVING COVER

STD. WT. # 20 LBS.



FINAL CONSTRUCTION CHANGES COMPLETED
David H. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

REF. SH.5 AI-2286

DR. SK	TR.
CH.	RWH
APPROVED	

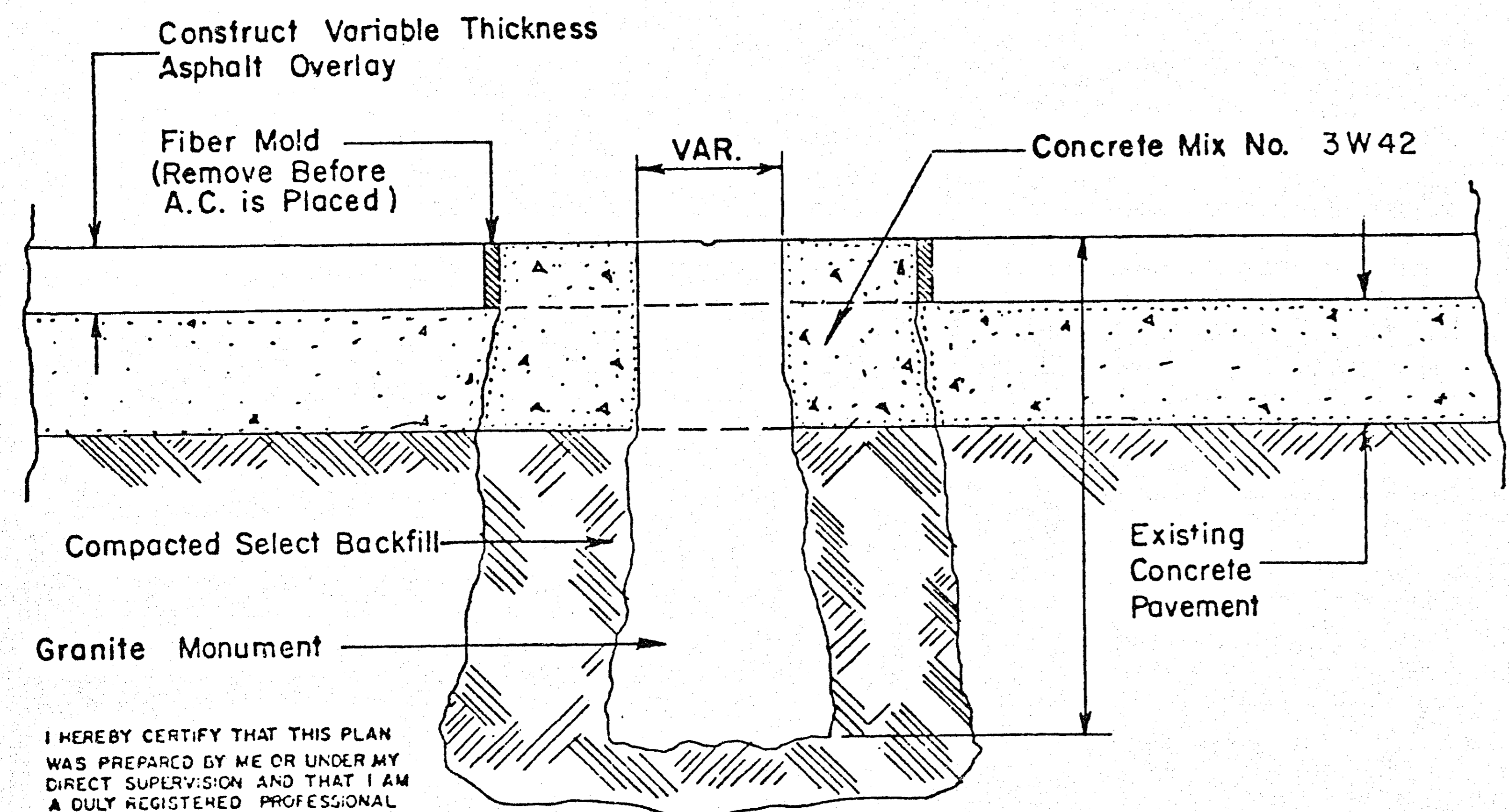
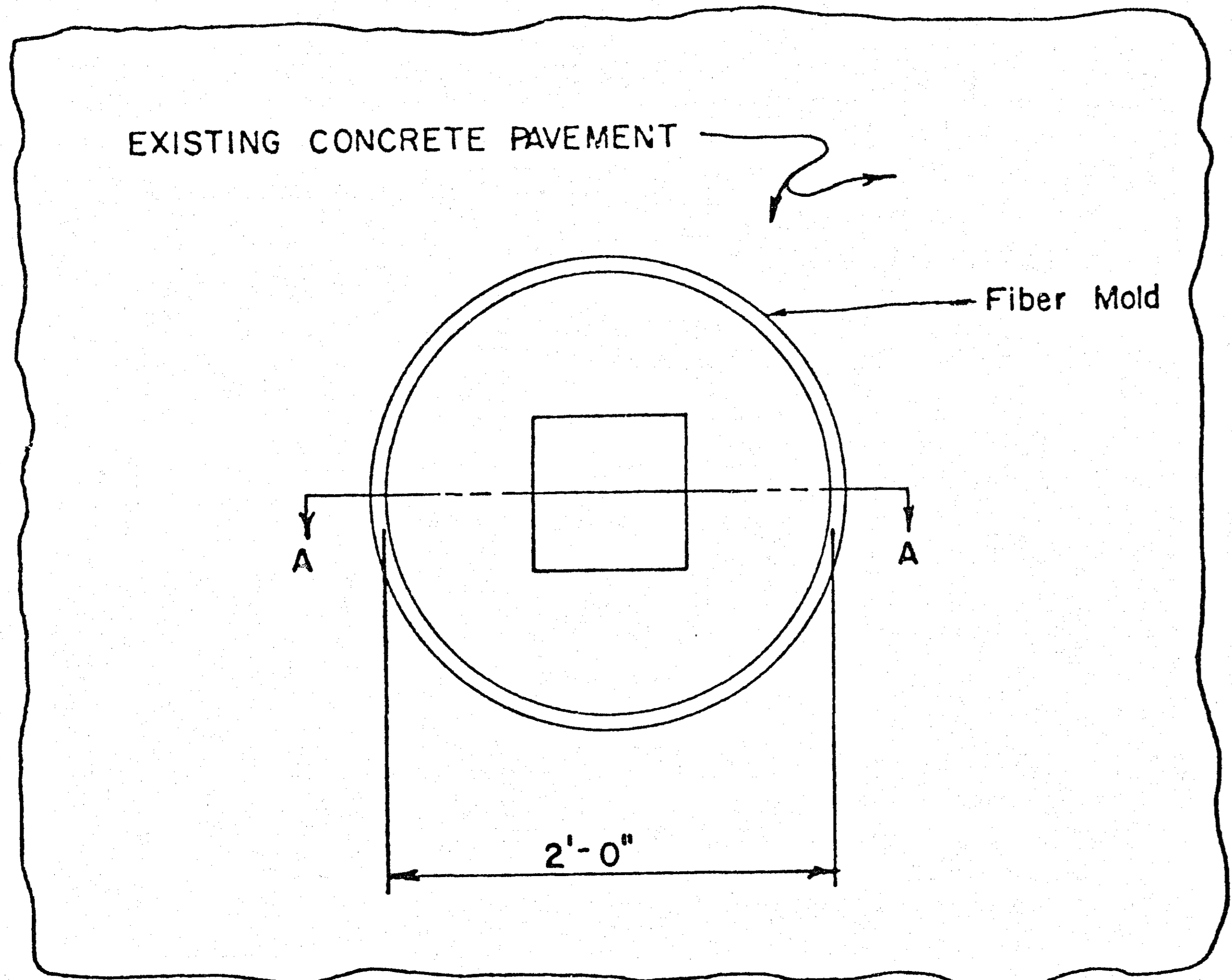
WATER DEPARTMENT - CITY OF ST. PAUL, MINN.

SCALE NONE
FEB 5, 1973
REVISIONS

INSIDE VALVE BOX EXTENSION

<p>Drawn Bottom Section Ad-5232 (3-15-66)</p>		<p>DRAWN 3-13-60</p>
<p>DR. AJC TR. AJC</p> <p>CH. RWH</p> <p>APPROVED</p>	<p>WATER DEPARTMENT CITY OF ST. PAUL, MINN.</p> <p>STANDARD VALVE BOX</p>	<p>SCALE NONE</p> <p>REVISIONS</p>

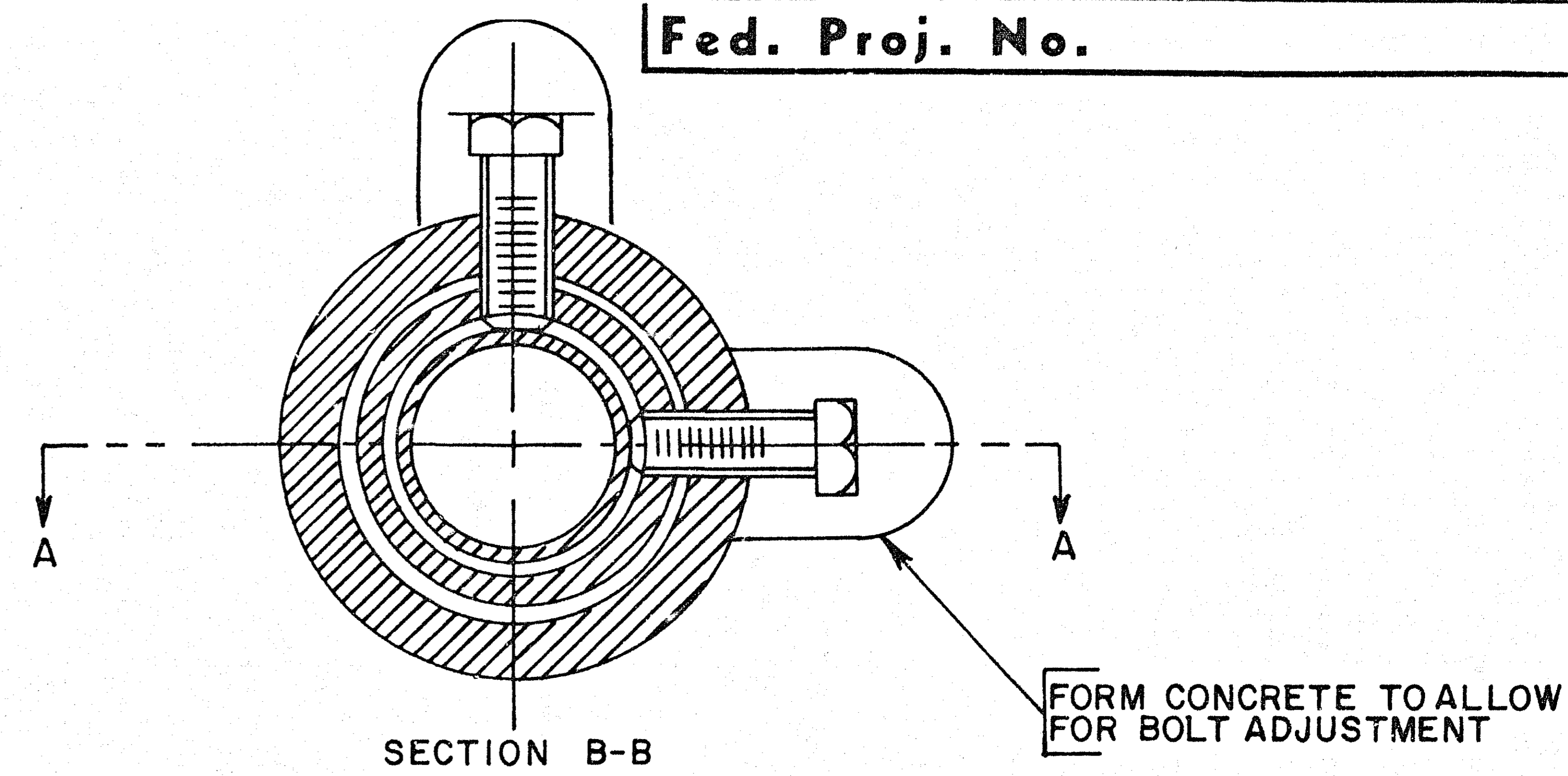
DETAILS



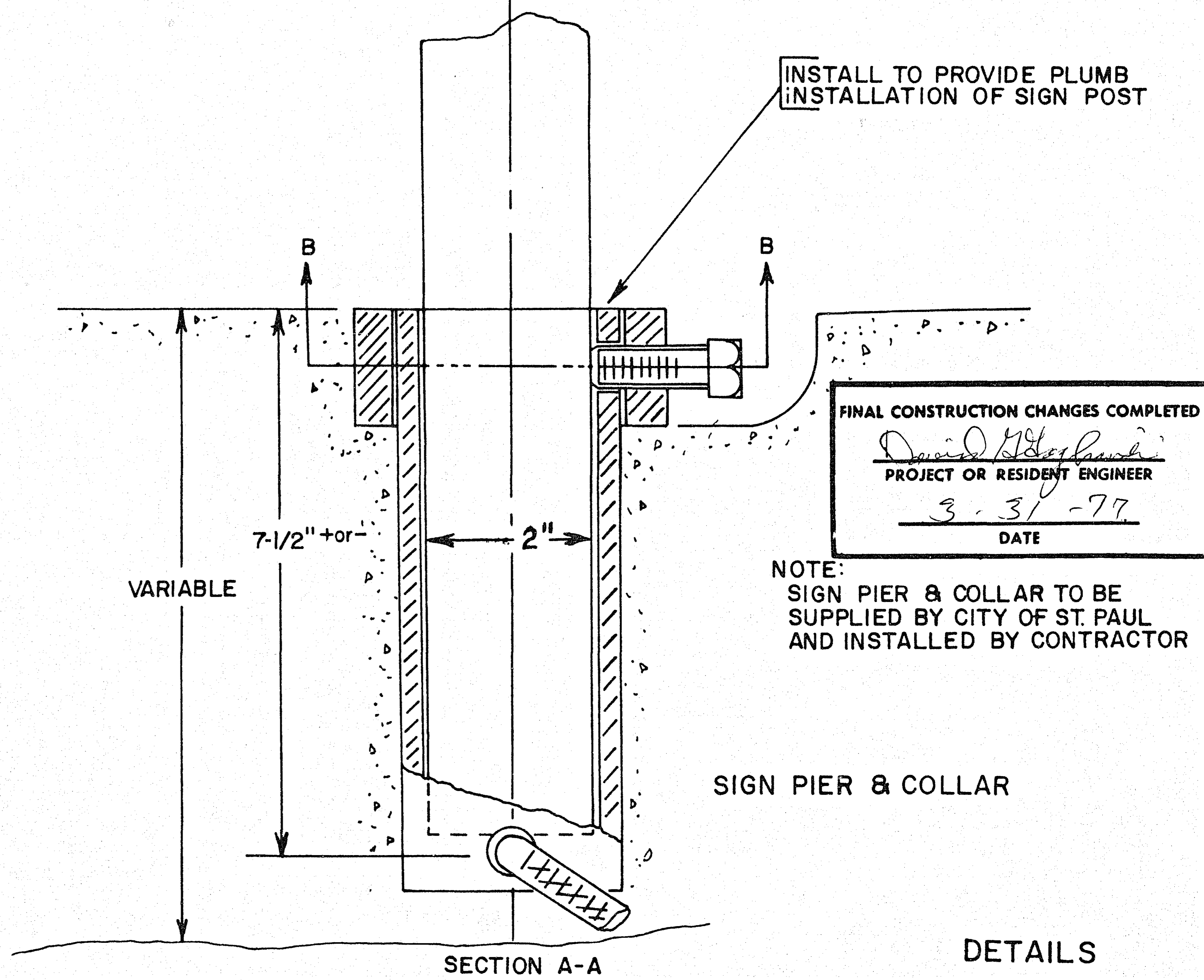
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Robert V. Avery
 DATE 2-1-68 REG. NO. 5822

SECTION A-A



SECTION B-B



FINAL CONSTRUCTION CHANGES COMPLETED

David G. Hoganson
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

NOTE:
 SIGN PIER & COLLAR TO BE SUPPLIED BY CITY OF ST. PAUL AND INSTALLED BY CONTRACTOR

SIGN PIER & COLLAR

SECTION A-A

DETAILS

APPROVED FEB. 2, 1968

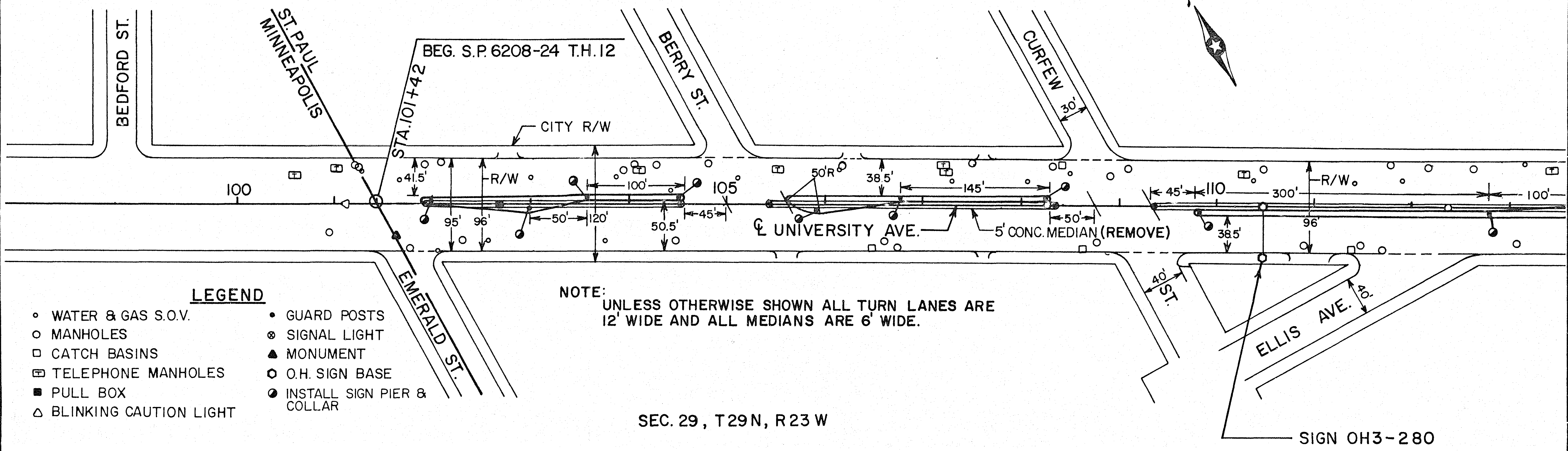
Robert V. Avery
 CHIEF ENGINEER

CITY OF ST. PAUL
 DEPARTMENT OF PUBLIC WORKS

RESET MONUMENT

Date of Revision

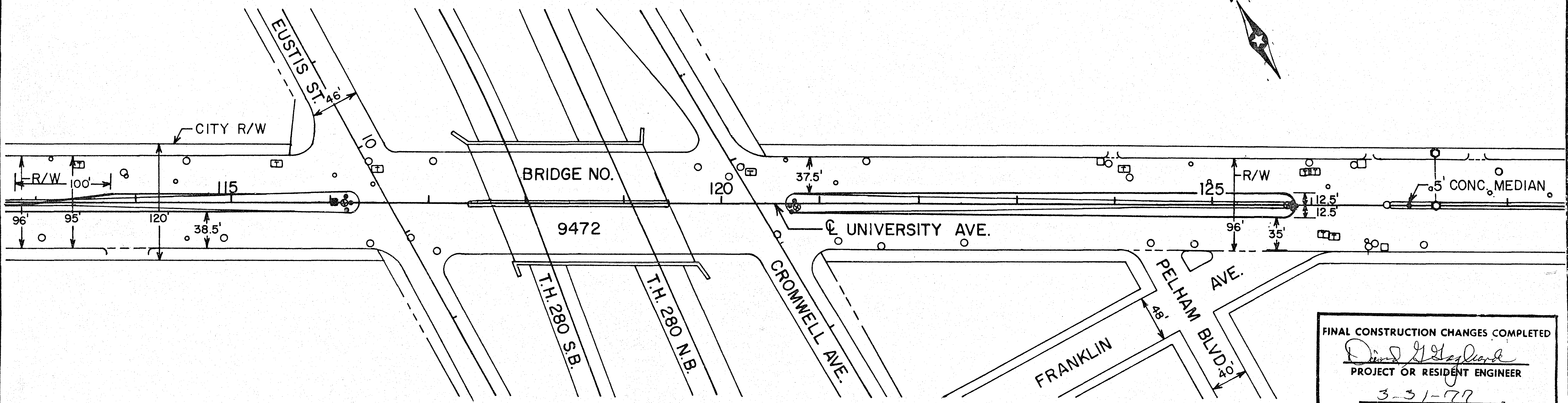
Standard Plate No. 6200



LEGEND

- WATER & GAS S.O.V.
- MANHOLES
- CATCH BASINS
- ▣ TELEPHONE MANHOLES
- PULL BOX
- △ BLINKING CAUTION LIGHT
- GUARD POSTS
- ⊗ SIGNAL LIGHT
- ▲ MONUMENT
- O.H. SIGN BASE
- INSTALL SIGN PIER & COLLAR

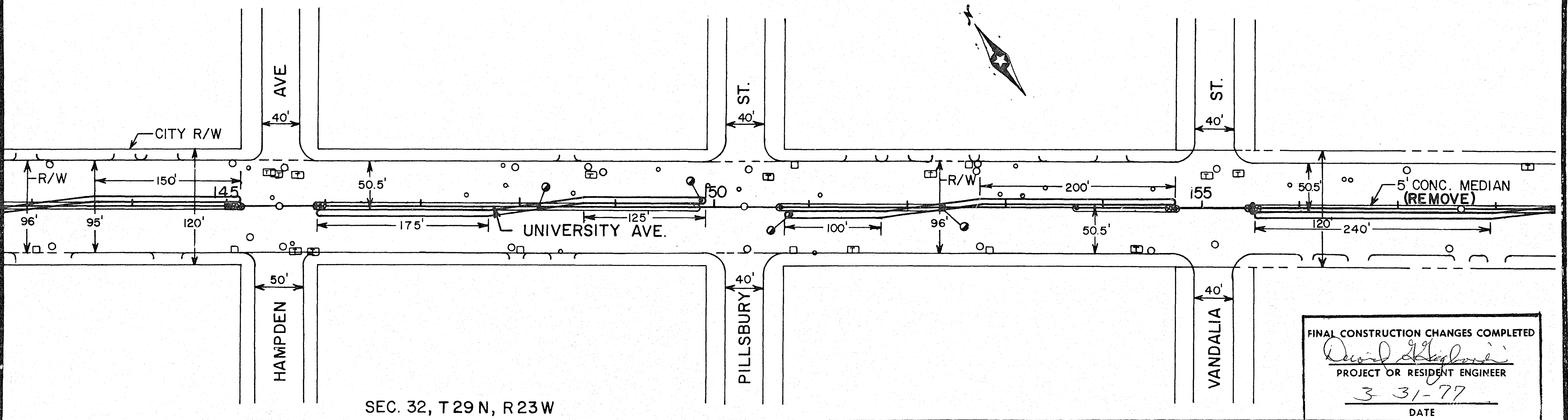
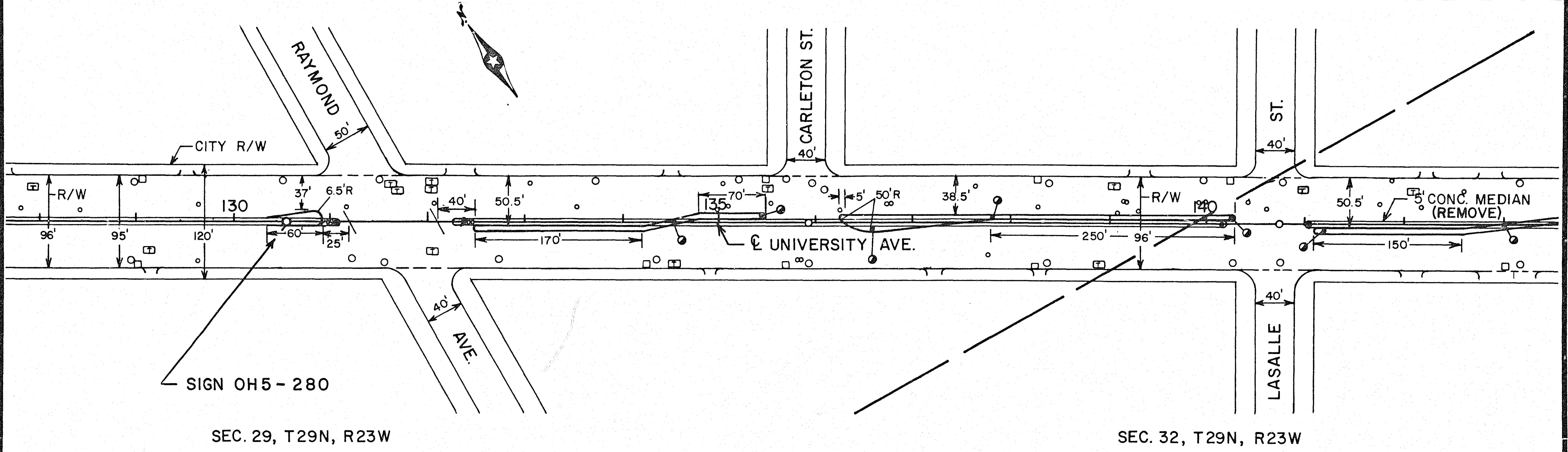
NOTE: UNLESS OTHERWISE SHOWN ALL TURN LANES ARE 12' WIDE AND ALL MEDIANS ARE 6' WIDE.



FINAL CONSTRUCTION CHANGES COMPLETED

David J. Hayward
PROJECT OR RESIDENT ENGINEER

3-31-77
DATE



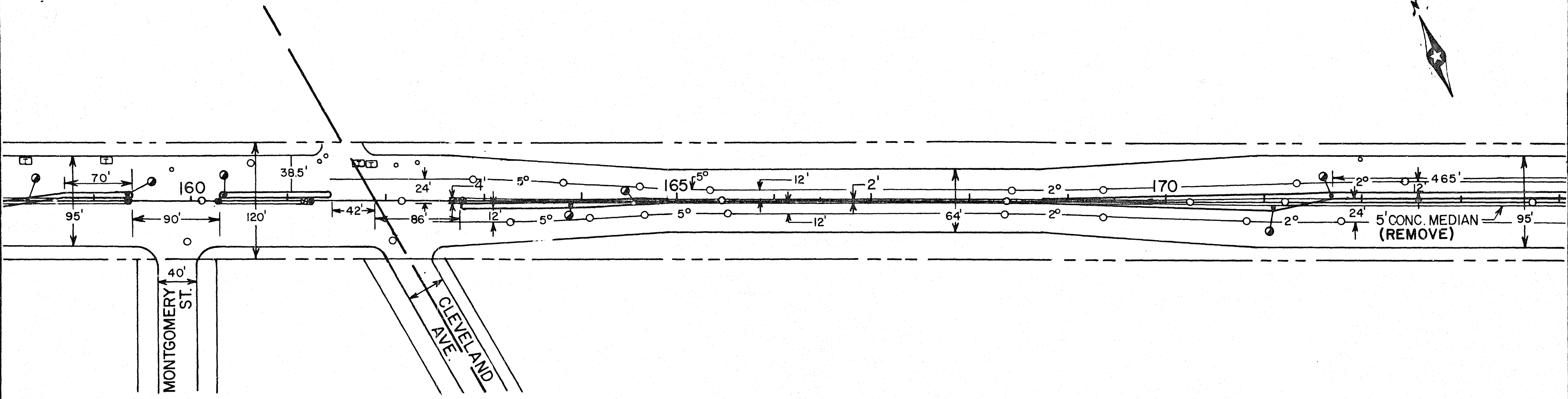
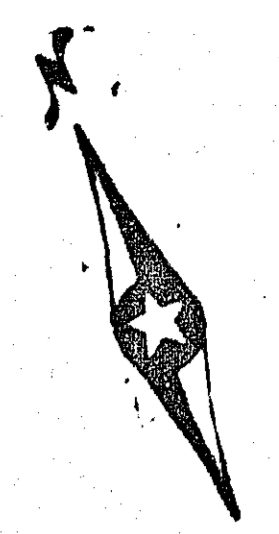
FINAL CONSTRUCTION CHANGES COMPLETED

David Highland

PROJECT OR RESIDENT ENGINEER

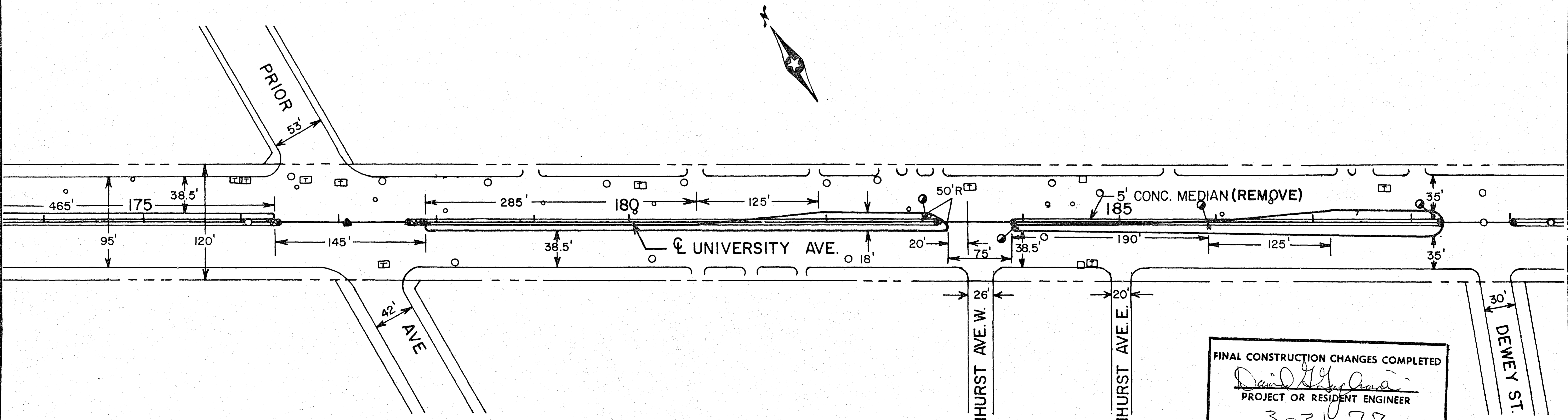
3-31-77

DATE



SEC. 32, T29W, R23W

SEC. 33, T29, R23W



SEC. 33, T29N, R23W

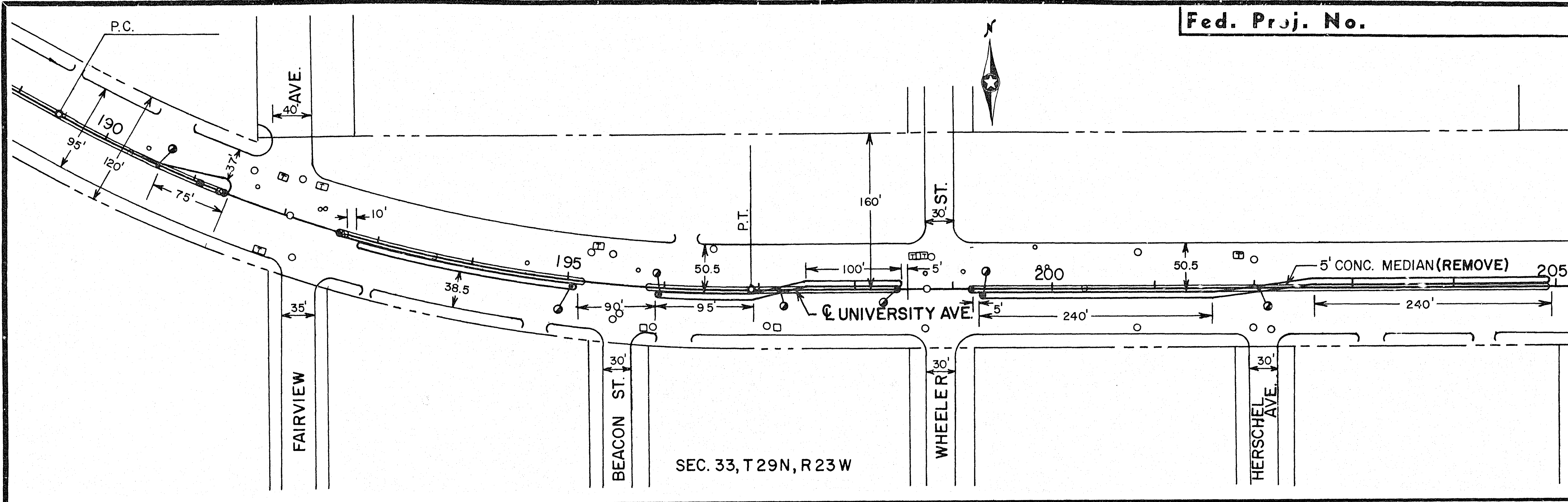
FINAL CONSTRUCTION CHANGES COMPLETED

David G. [Signature]

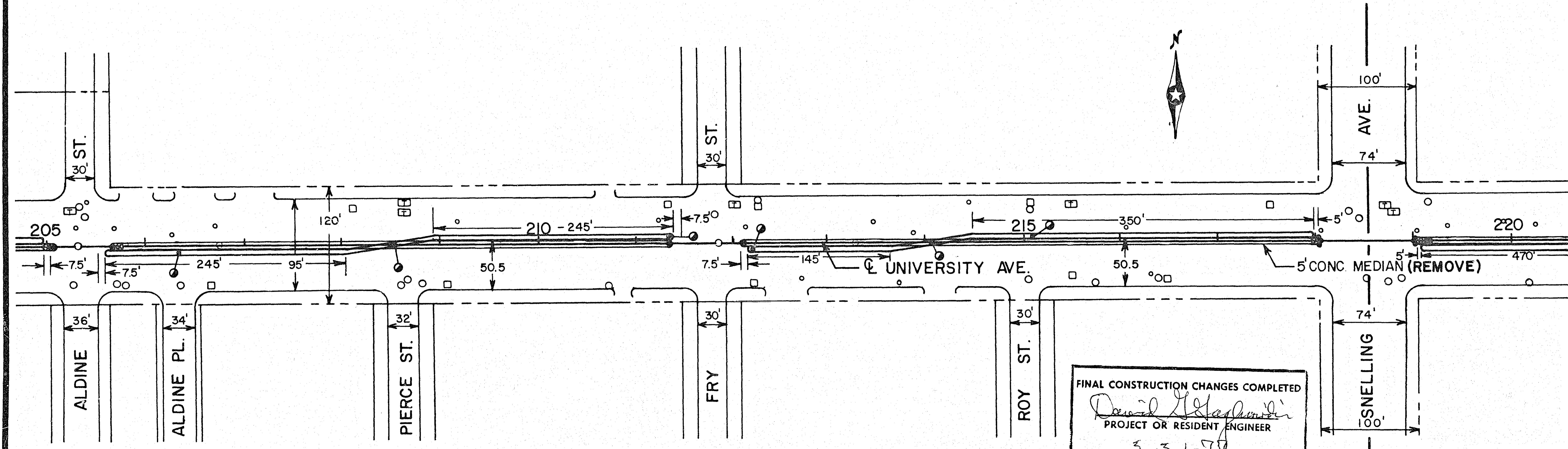
PROJECT OR RESIDENT ENGINEER

3-31-77

DATE



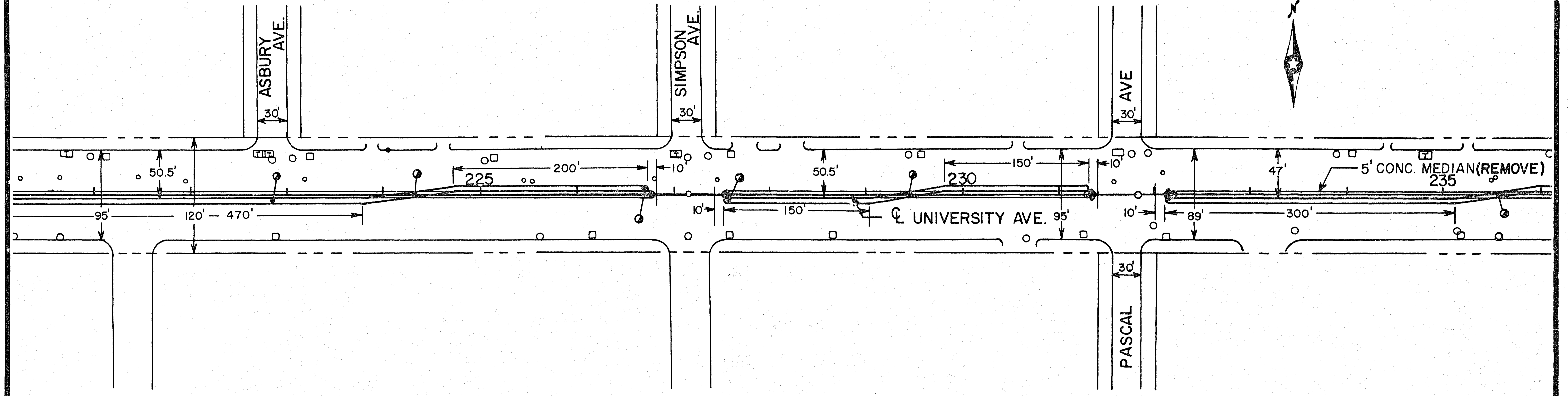
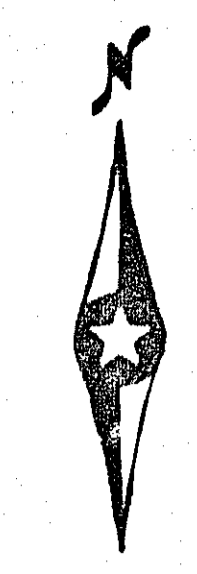
SEC. 33, T 29N, R 23 W



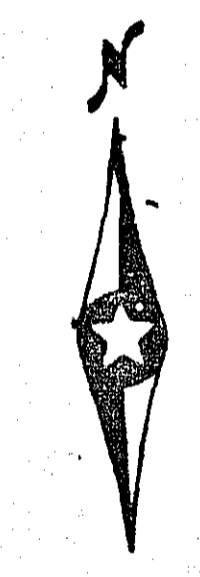
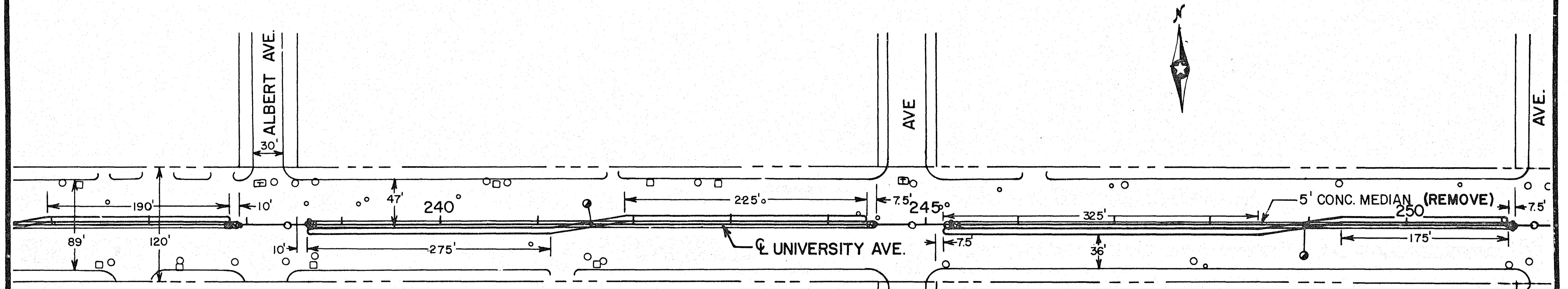
SEC. 33, T 29N, R 23 W

SEC. 34, T 29N, R 23 W

FINAL CONSTRUCTION CHANGES COMPLETED
David J. Haglund
 PROJECT OR RESIDENT ENGINEER
 3-31-78
 DATE



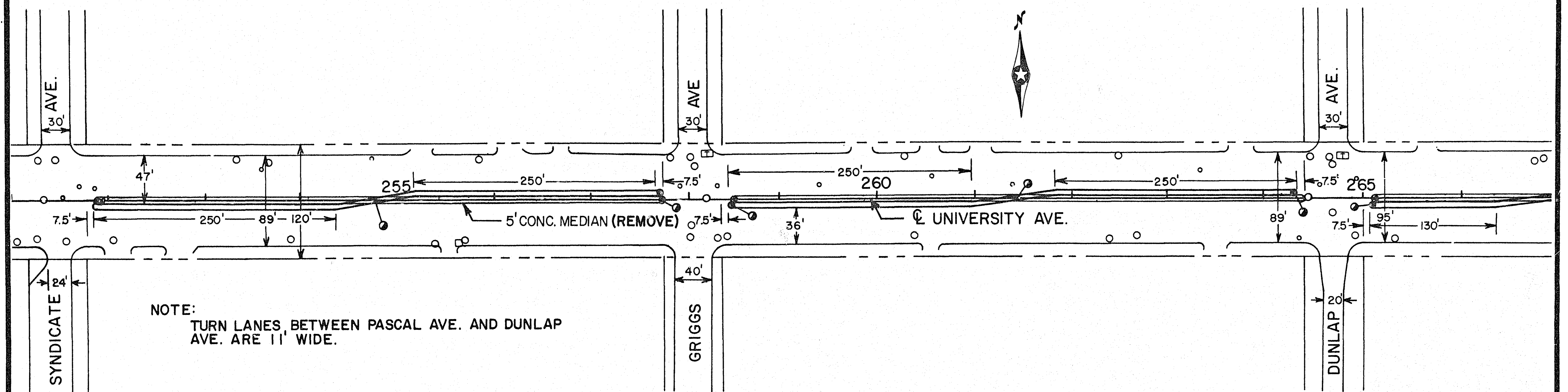
SEC. 34, T29N, R23W



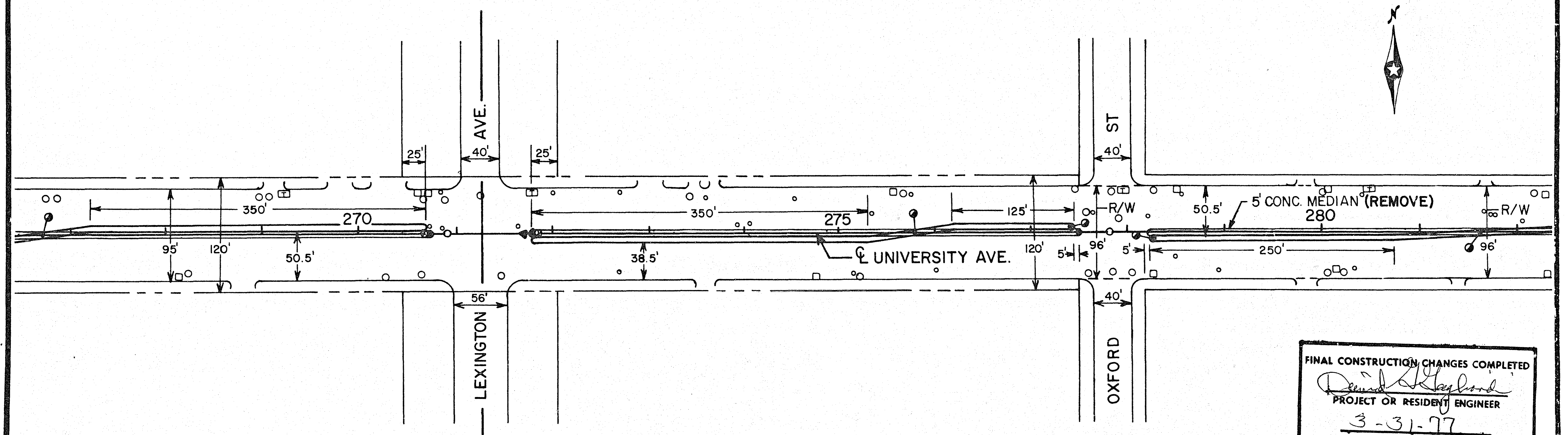
NOTE:
TURN LANES BETWEEN PASCAL AVE. AND DUNLAP AVE. ARE 11' WIDE.

SEC. 34, T29N, R23W

FINAL CONSTRUCTION CHANGES COMPLETED
David H. Haglund
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE



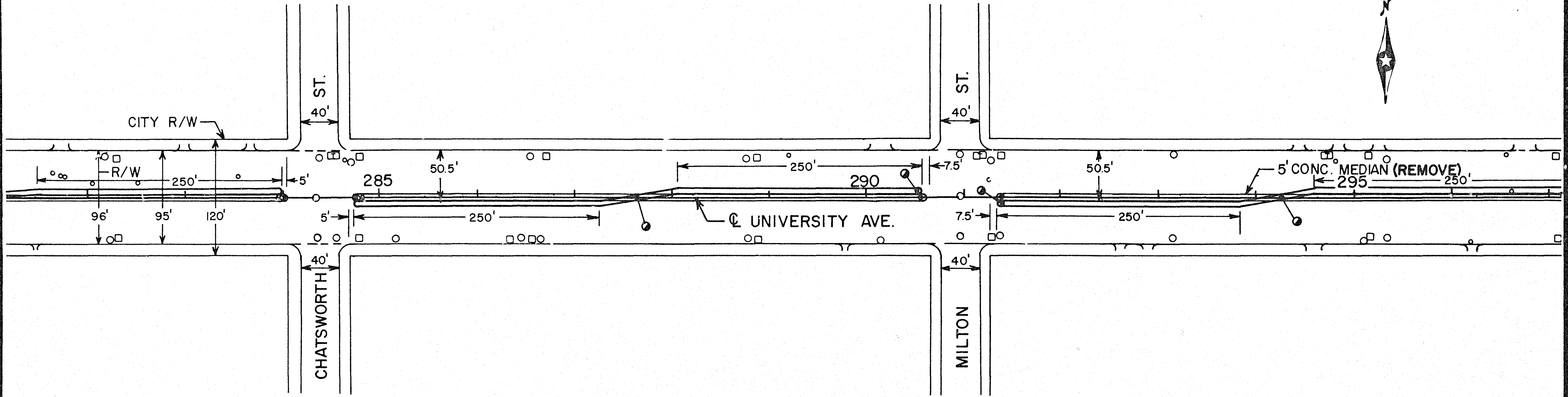
SEC. 34, T29N, R23W



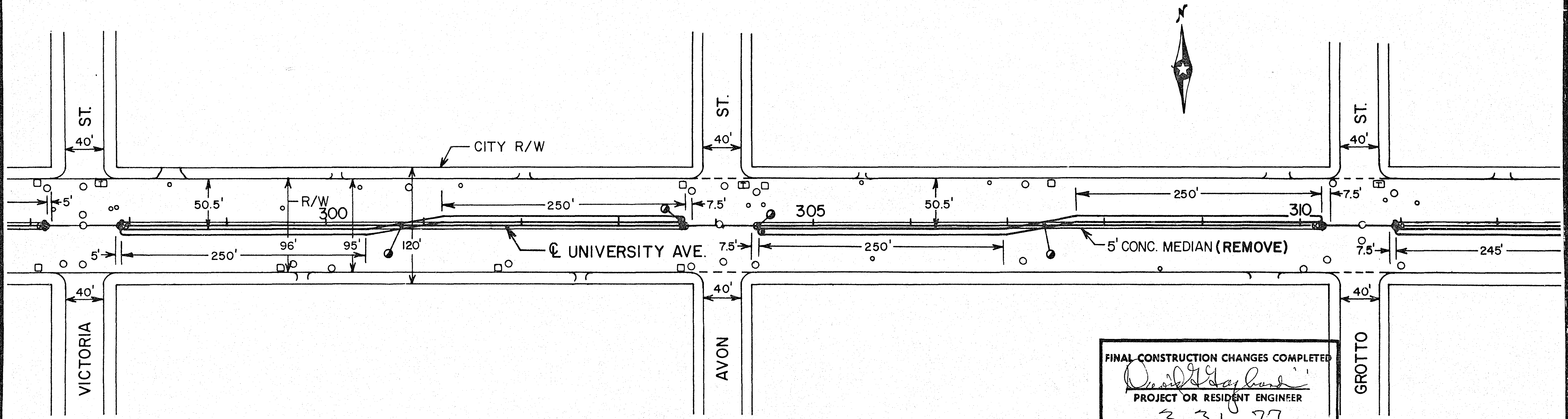
SEC. 34, T29N, R23W

SEC. 35, T29N, R23W

FINAL CONSTRUCTION CHANGES COMPLETED
David A. Hayward
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

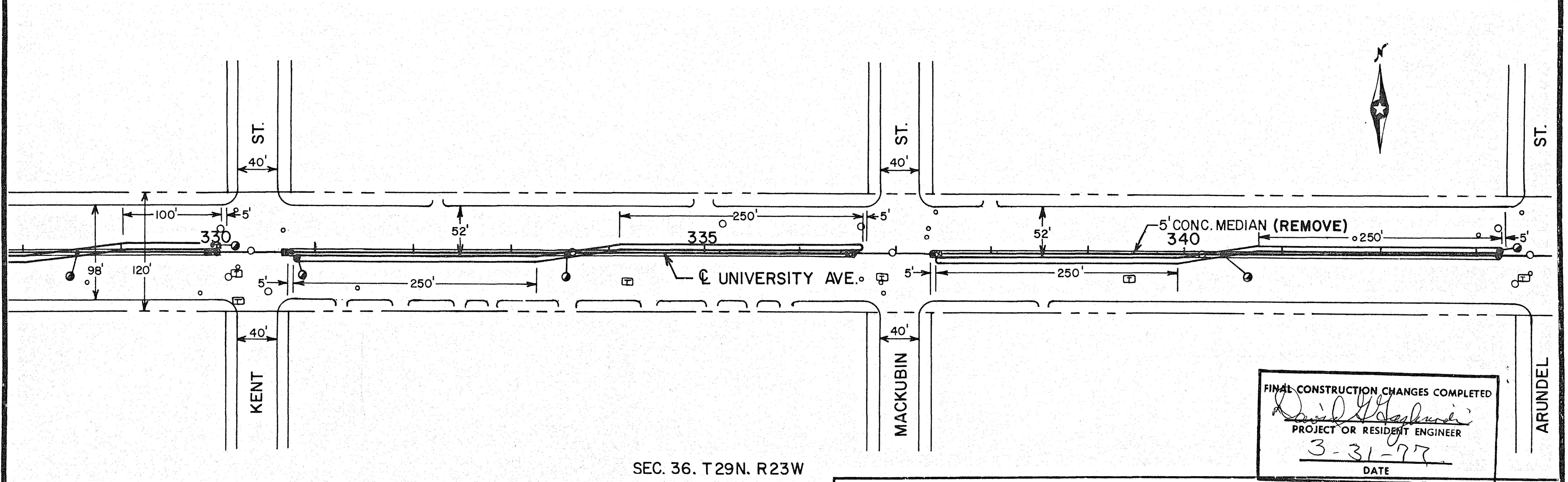
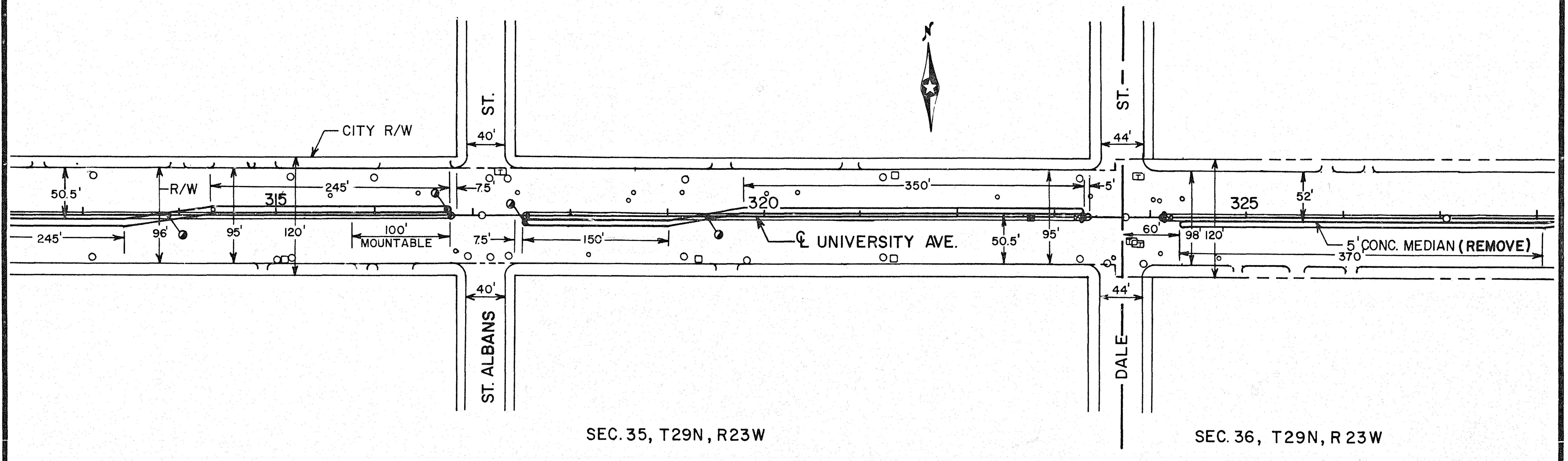


SEC. 35, T29N, R23W

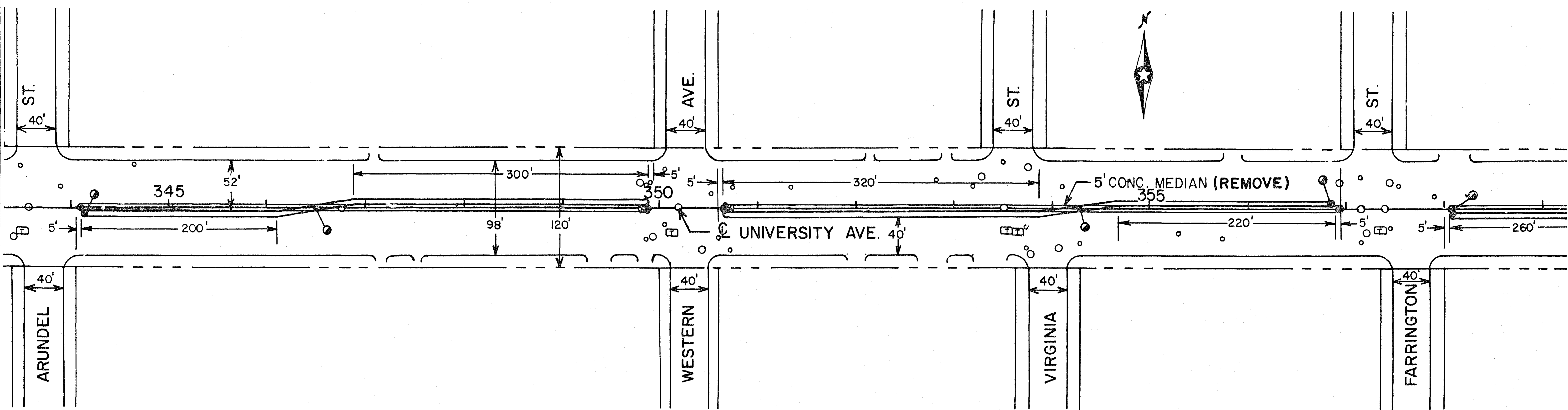


SEC. 35, T29N, R23W

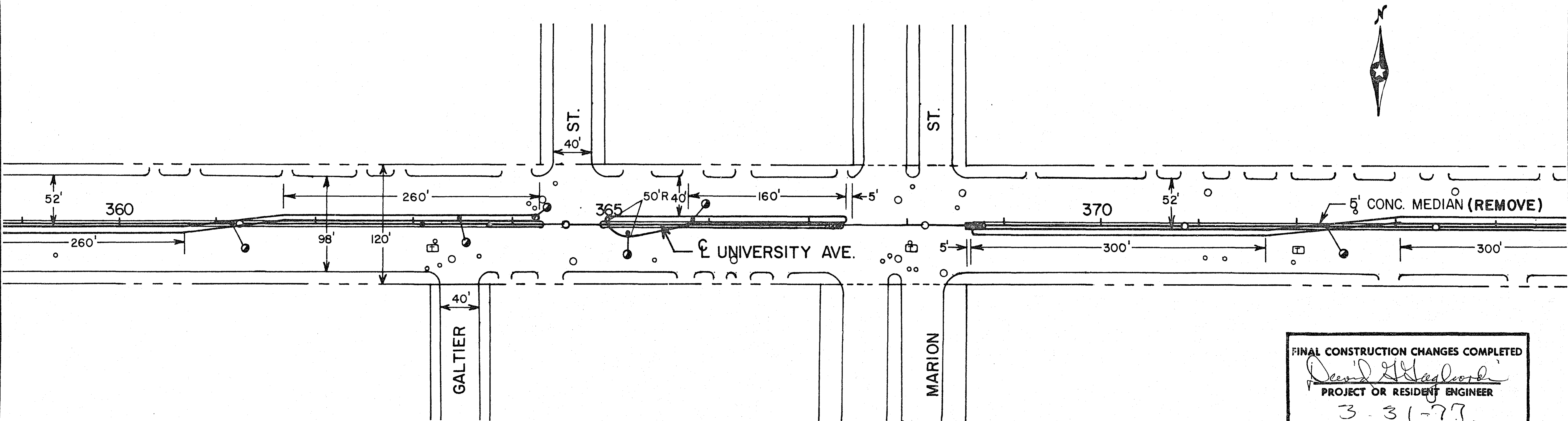
FINAL CONSTRUCTION CHANGES COMPLETED
David G. Gayburn
 PROJECT OR RESIDENT ENGINEER
 3 31 77
 DATE



FINAL CONSTRUCTION CHANGES COMPLETED
David G. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE



SEC. 35, T29N, R23W



SEC. 35, T29N, R23W

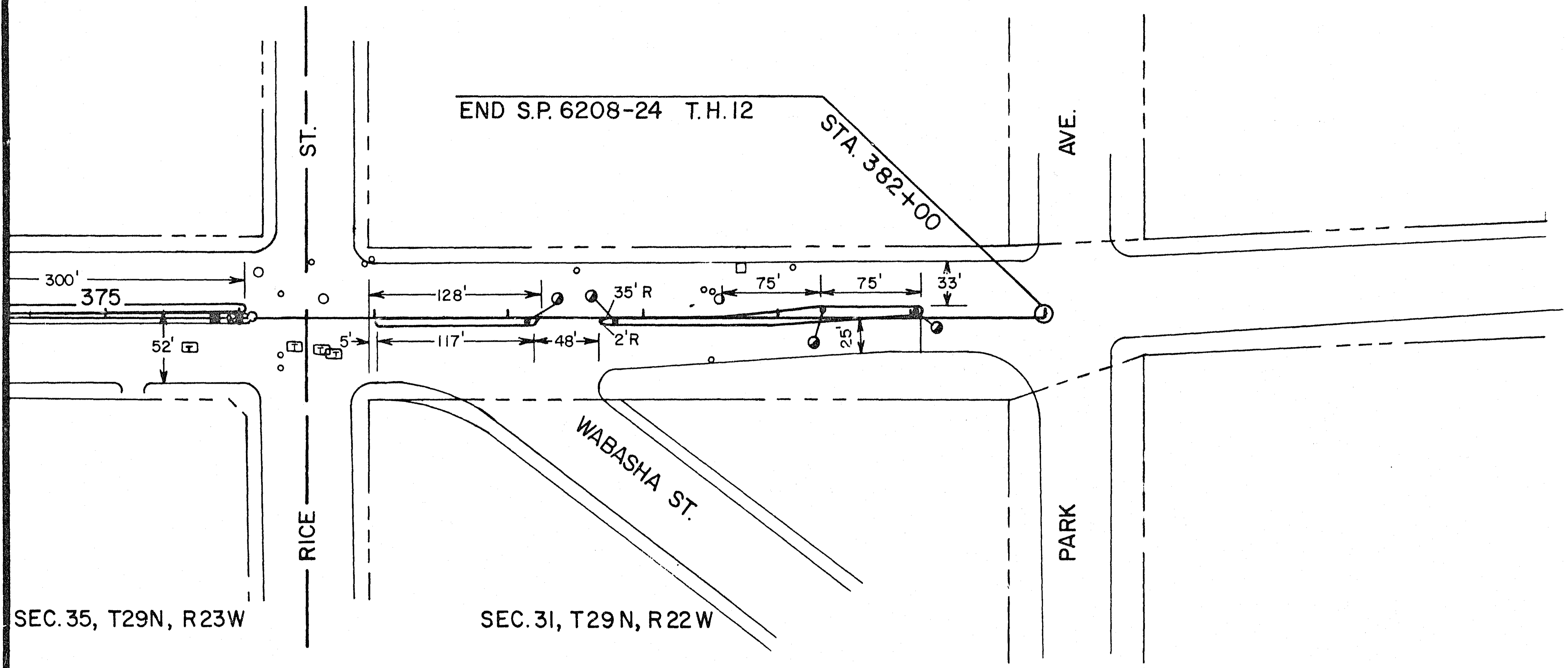
FINAL CONSTRUCTION CHANGES COMPLETED

David L. Haglund

PROJECT OR RESIDENT ENGINEER

3-31-77

DATE



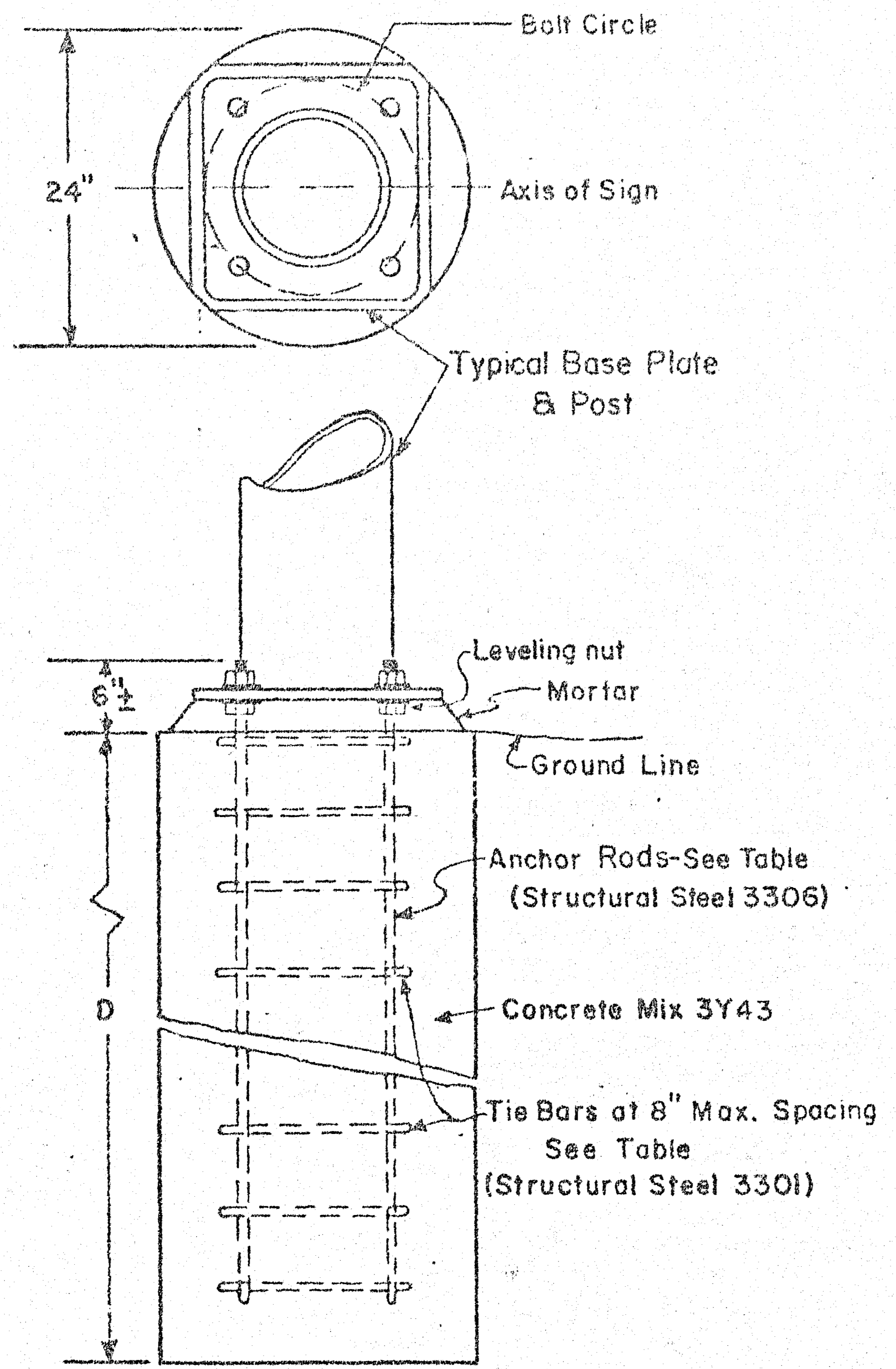
FINAL CONSTRUCTION CHANGES COMPLETED

David S. Johnson

PROJECT OR RESIDENT ENGINEER

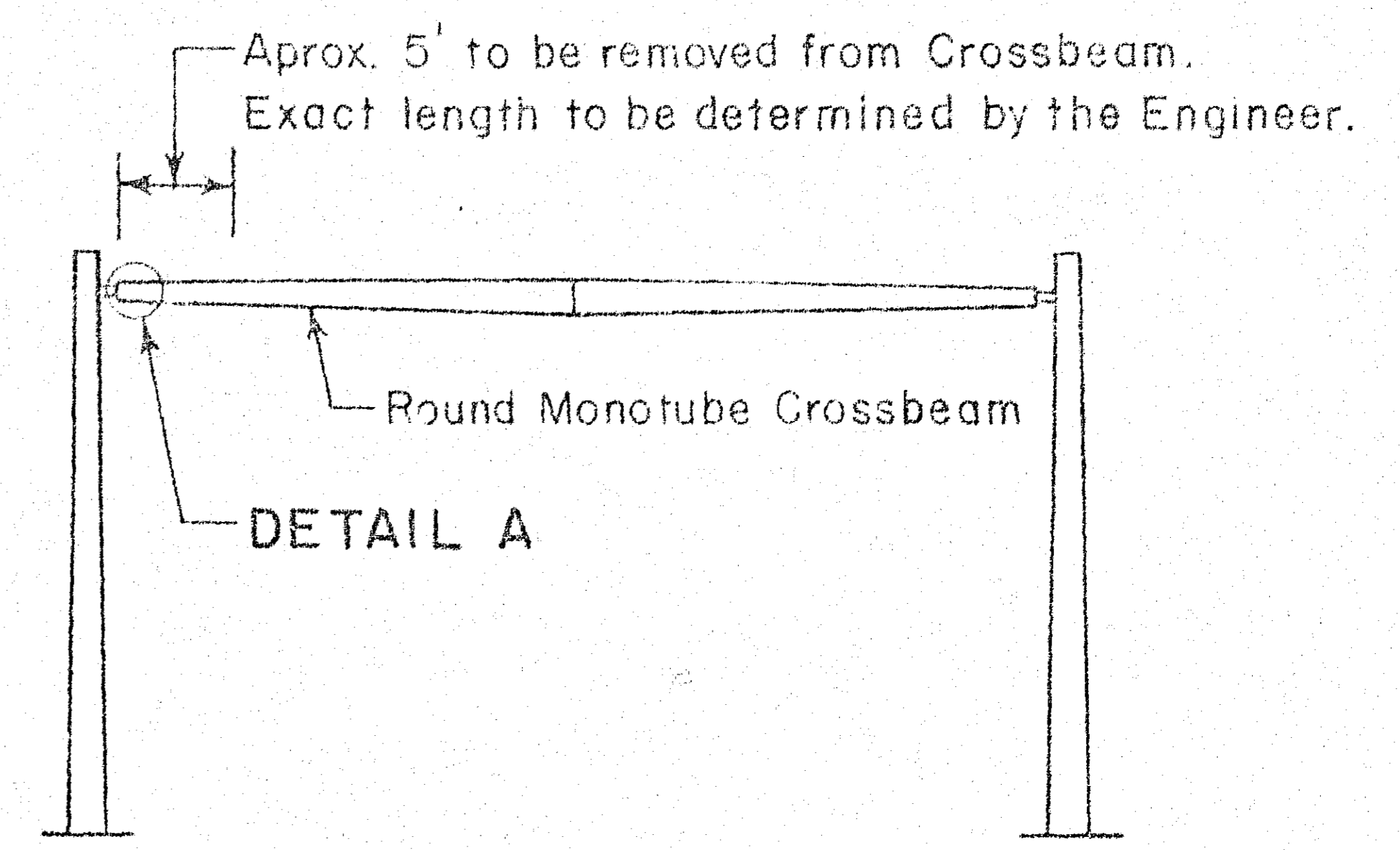
3/31/77

DATE

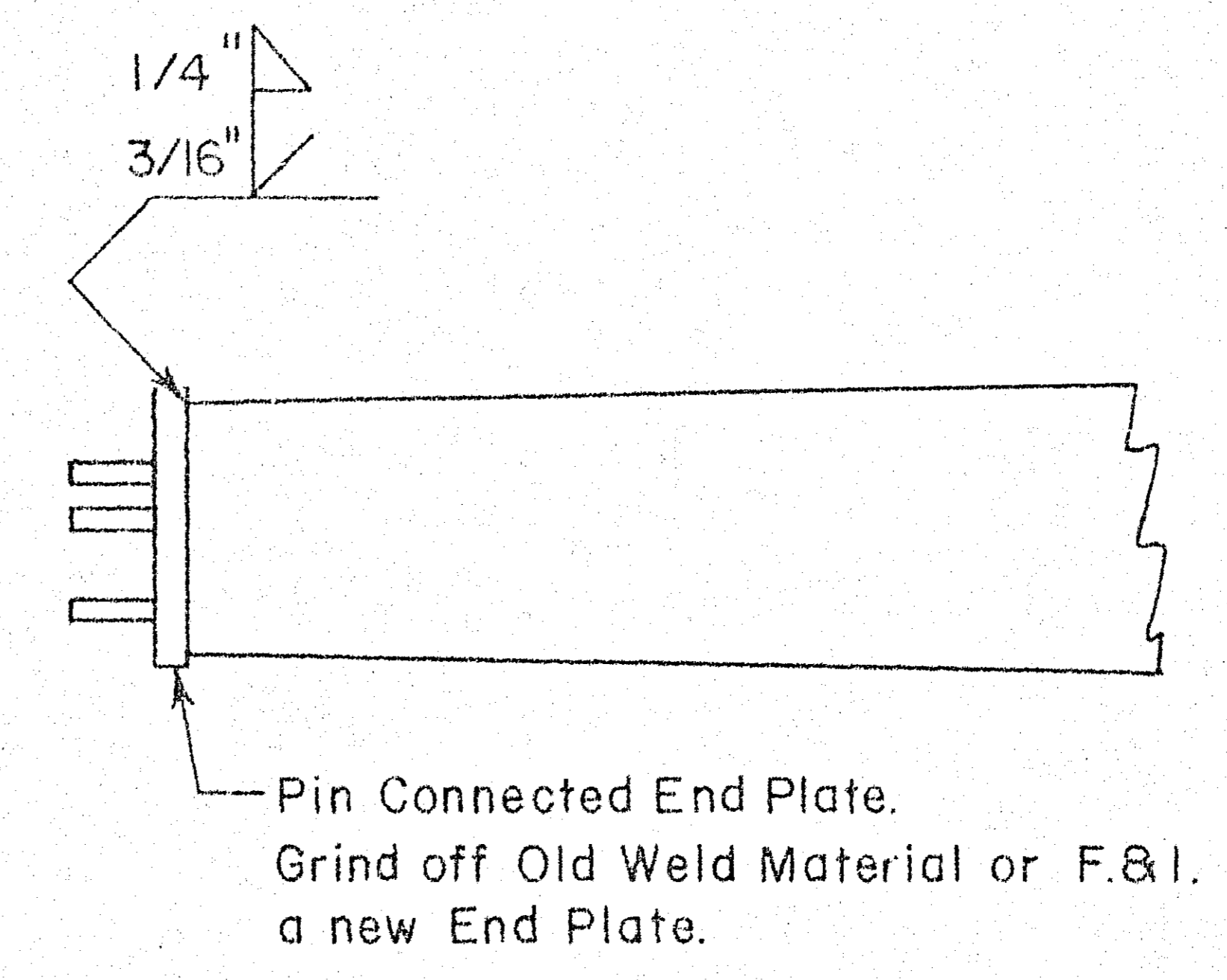


SIGN NO.	"D"	ANCHOR RODS		TIES	BOLT CIRCLE
		LENGTH	DIAMETER		
OH 3-280	6	6	1-1/2"	1/2"	13-1/2"

FOOTING, REINFORCEMENT,
AND ANCHORAGE



INPLACE SIGN OH 3-280



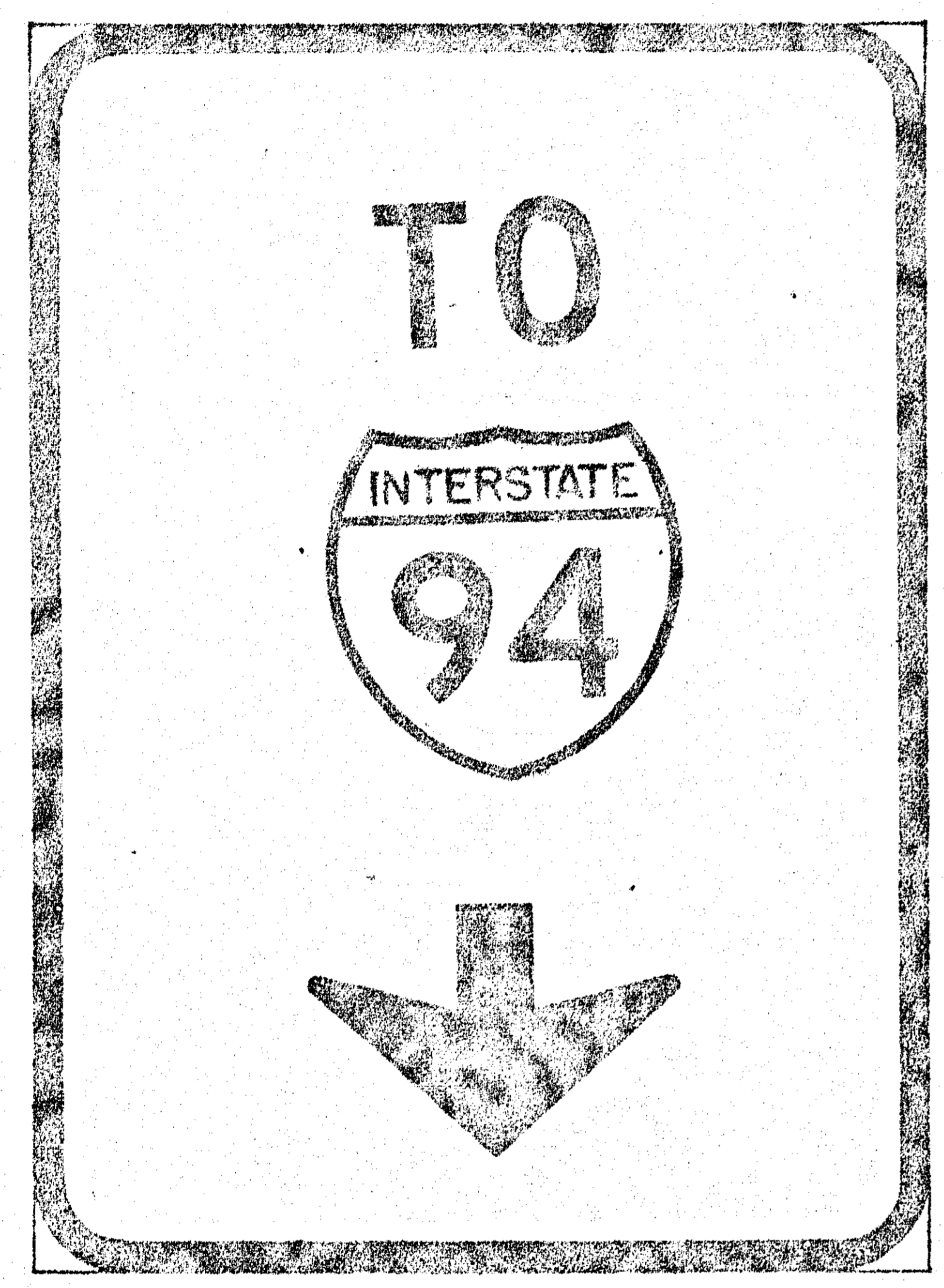
DETAIL A

NOTES:

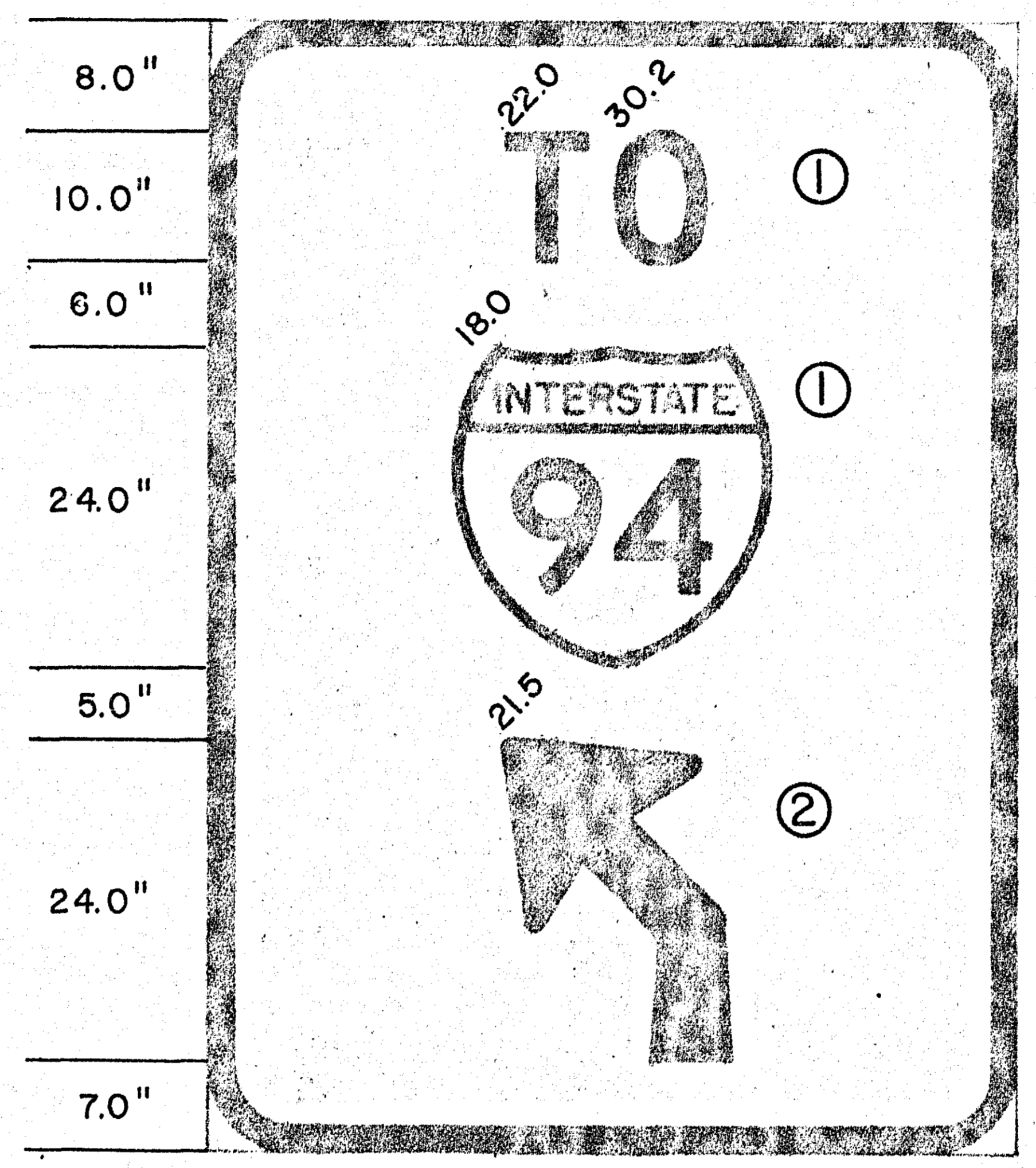
1. Flame cutting will be permitted in accordance with M.H.D. 2471.3C4.
2. Welding to be continuous.
3. Galvanizing shall be repaired in accordance with M.H.D. 2471.3L4.

FINAL CONSTRUCTION CHANGES COMPLETED
David G. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3 31 77
 DATE

O.H. SIGN MODIFICATIONS
SIGN SUPPORTS
 FOR SIGN OH 3-280



OH 5 - 280 Inplace Legend



60" X 84" OH 5-280 Revised Legend

NOTES:

- 1. See Standard Signs Manual for Arrow detail.
- 2. New legend shall be white.

- ① Existing Legend Repositioned.
- ② New Legend (No.7 - 45° Advance Turn Arrow).

FINAL CONSTRUCTION CHANGES COMPLETED
David D. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

TYPE "OH" SIGN
LEGEND REVISION

LOCATION				SYSTEM
T. H. 12	UNIVERSITY AT	FRANKLIN AVE.	(C.S.A.H.33)	A
"	"	"	RAYMOND AVE.	B
"	"	"	HAMPDEN AVE.	C
"	"	"	VANDALIA ST.	D
"	"	"	CLEVELAND AVE.	E
"	"	"	PRIOR AVE.	F
"	"	"	FAIRVIEW AVE.	G
"	"	"	ALDINE ST.	H
"	"	"	PASCAL ST.	I
"	"	"	T.H. 51(SNELLING AVE.)	J
"	"	"	ALBERT ST.	K
"	"	"	HAMLIN AVE.	L
"	"	"	SYNDICATE ST.	M
"	"	"	CHATSWORTH ST.	N
"	"	"	VICTORIA AVE.	O
"	"	"	GROTTO ST.	P
"	"	"	MACKUBIN ST	Q
"	"	"	WESTERN AVE.	R
"	"	"	MARION ST.	S
"	"	"	T.H. 49 (RICE ST)	T
"	"	"	LEXINGTON AVE.	U
"	"	"	DALE ST.	V

THESE LEGEND OF SYMBOLS AND NOTES APPLY TO
SHEET 28 TO SHEET 41 ONLY.

LEGEND OF SYMBOLS

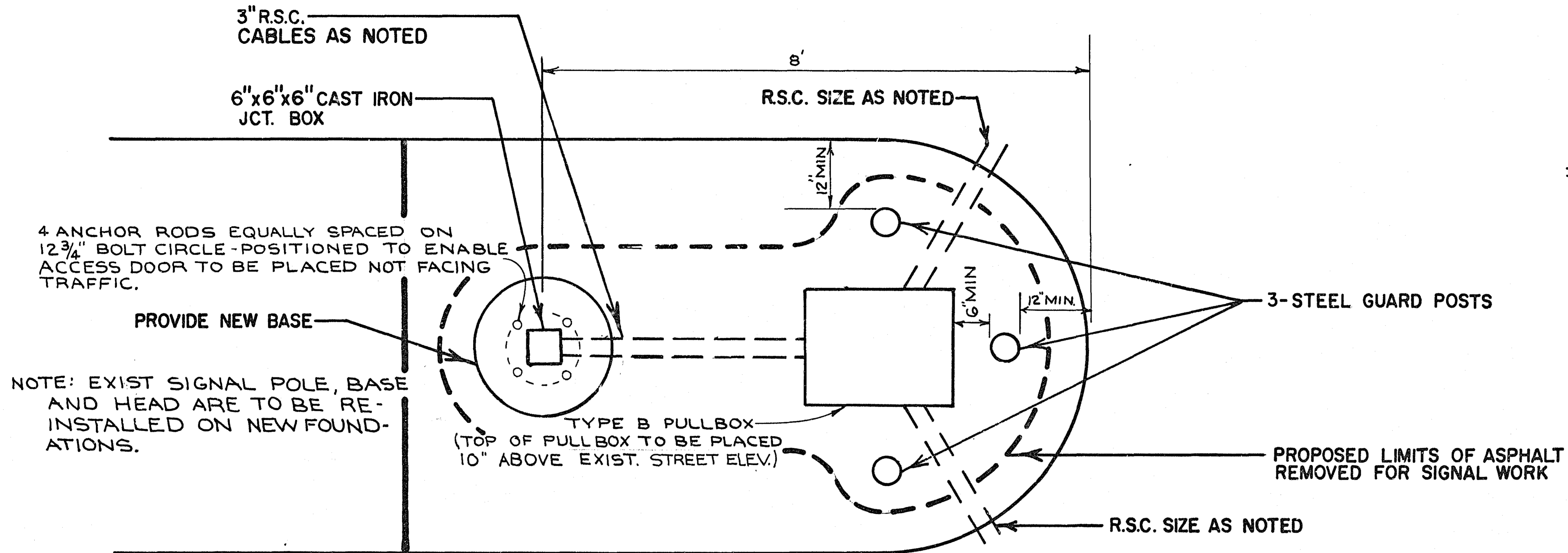
- R.S.C. INPLACE - SIZE AS NOTED ON PLAN SHEET
- ==== CONDUIT SIZE AS NOTE
- ⊗ LIGHT POLE WITH SIGNAL HEADS INPLACE
- ⊠ SIGNAL POLE INPLACE, RELOCATE POLE AND REMOVE FOUNDATION UNLESS NOTED
- PROVIDE NEW FOUNDATION AND INSTALL RELOCATED POLE
- X HANDHOLE INPLACE
- HANDHOLE INSTALL
- ⊠ CONTROLLER CABINET INPLACE
- ↔ OPTICOM INPLACE

NOTE:

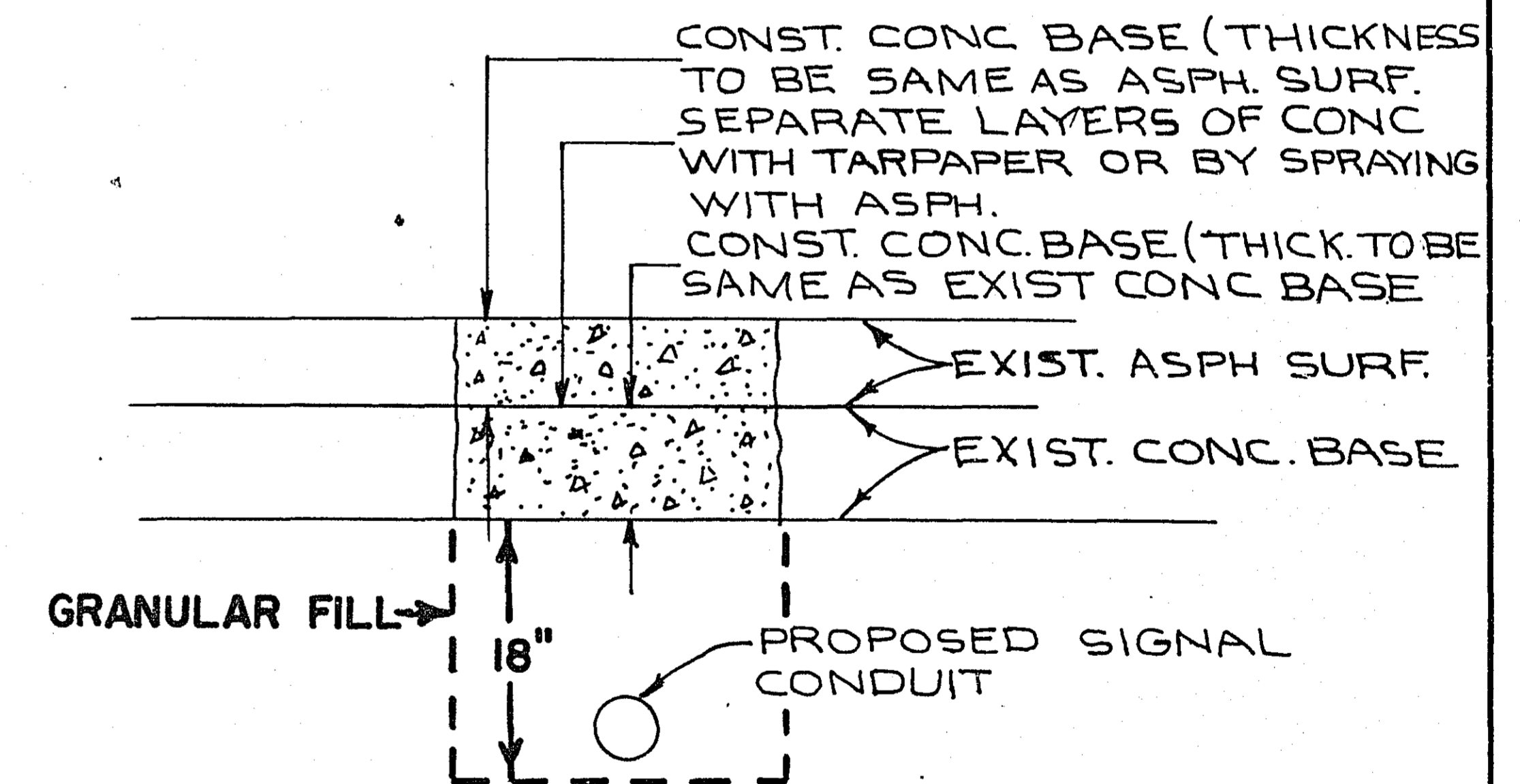
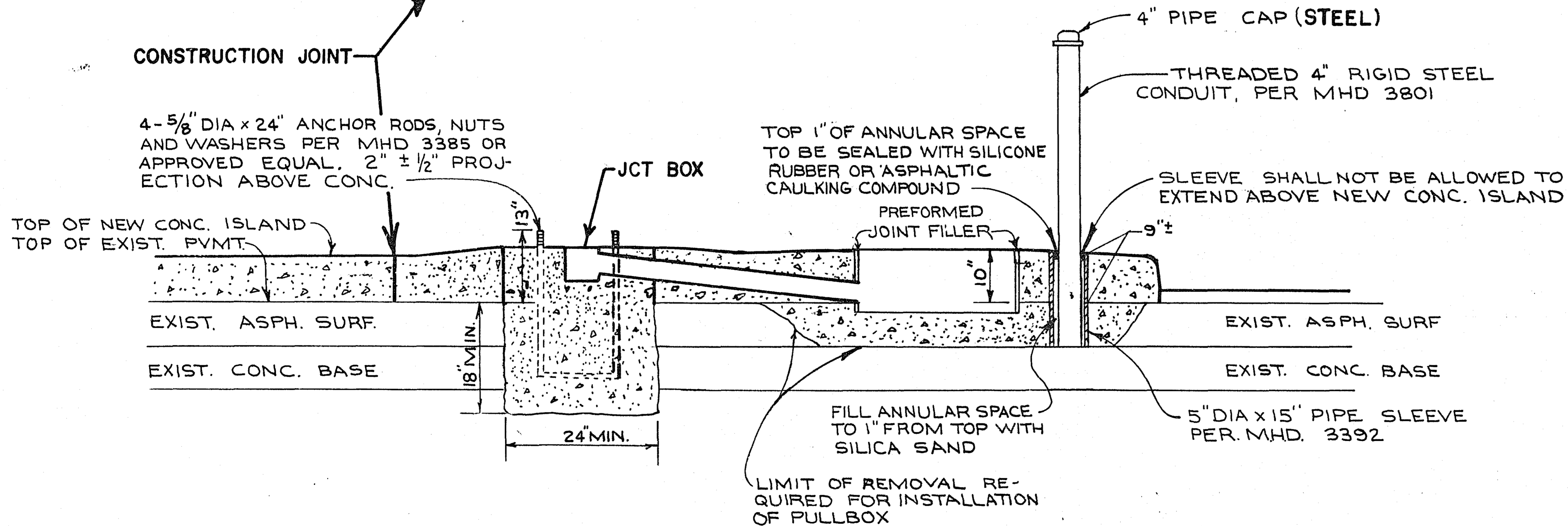
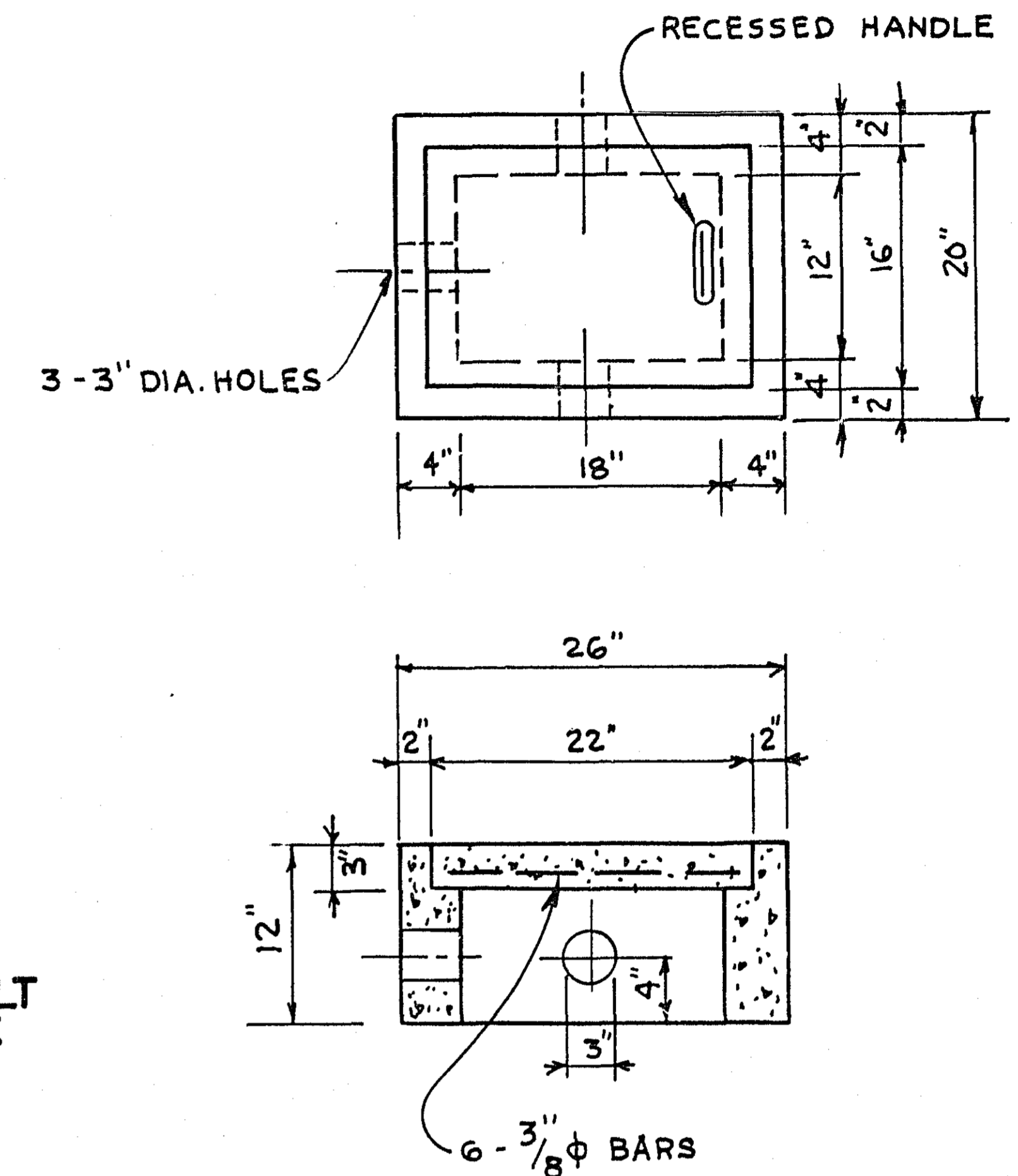
- (1) ALL CONDUIT HAVING NEW CABLE FURNISHED AND INSTALLED SHALL HAVE ALL INPLACE CABLE REMOVED AND SALVAGED UNLESS OTHERWISE NOTED. SALVAGED CABLES SHALL BE DELIVERED TO THE STATE AT THE JOB SITE.
- (2) ALL INPLACE ITEMS SHALL REMAIN INPLACE UNLESS NOTED.
- (3) SPLICES CALLED FOR ON PLAN SHEETS SHALL BE AS PER FIELD WIRING DIAGRAM PROVIDED BY THE CITY OF ST. PAUL.

FINAL CONSTRUCTION CHANGES COMPLETED
David G. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

TYPICAL SIGNAL INSTALLATION



TYPE B PULLBOX



TRENCH RESTORATION

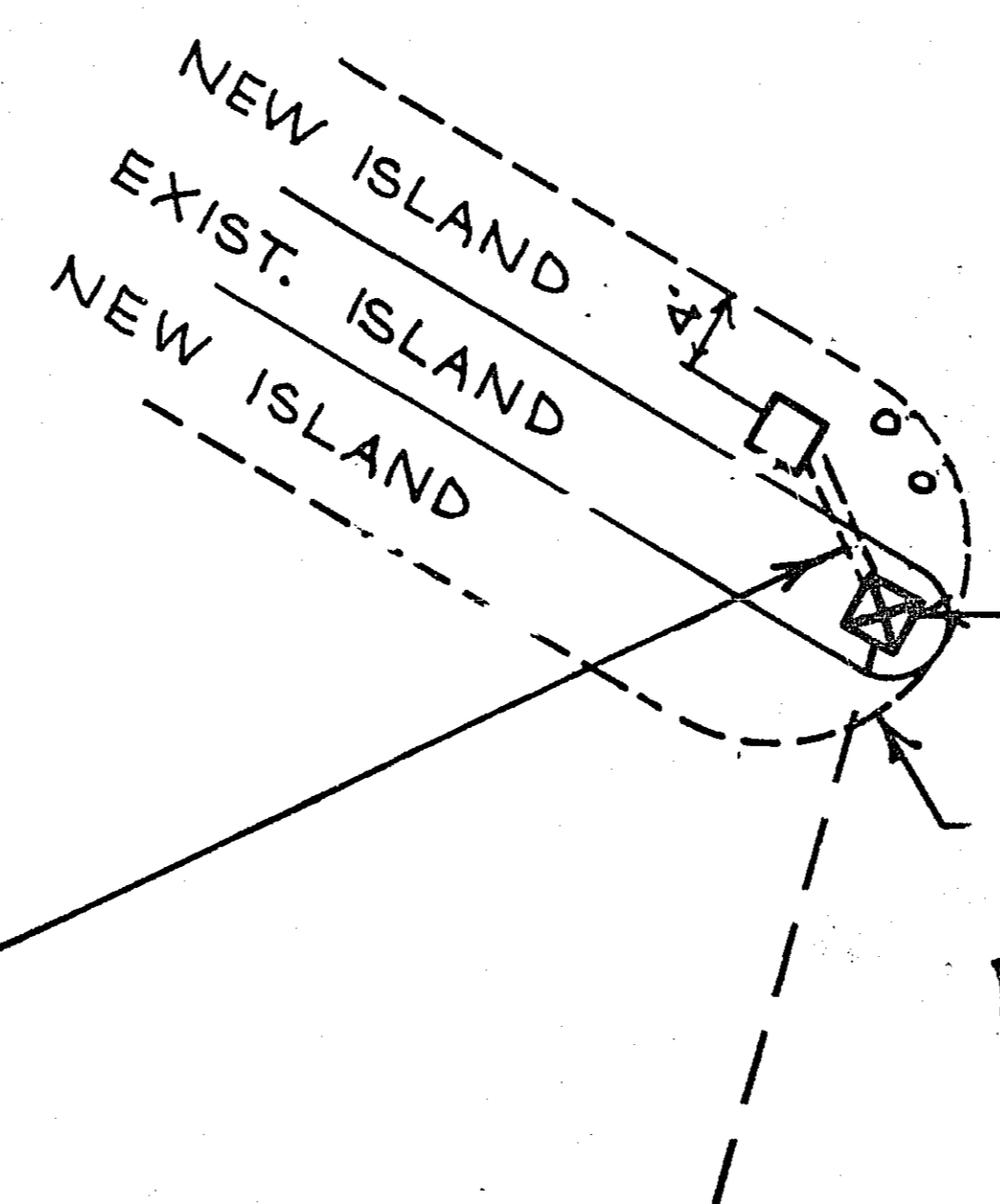
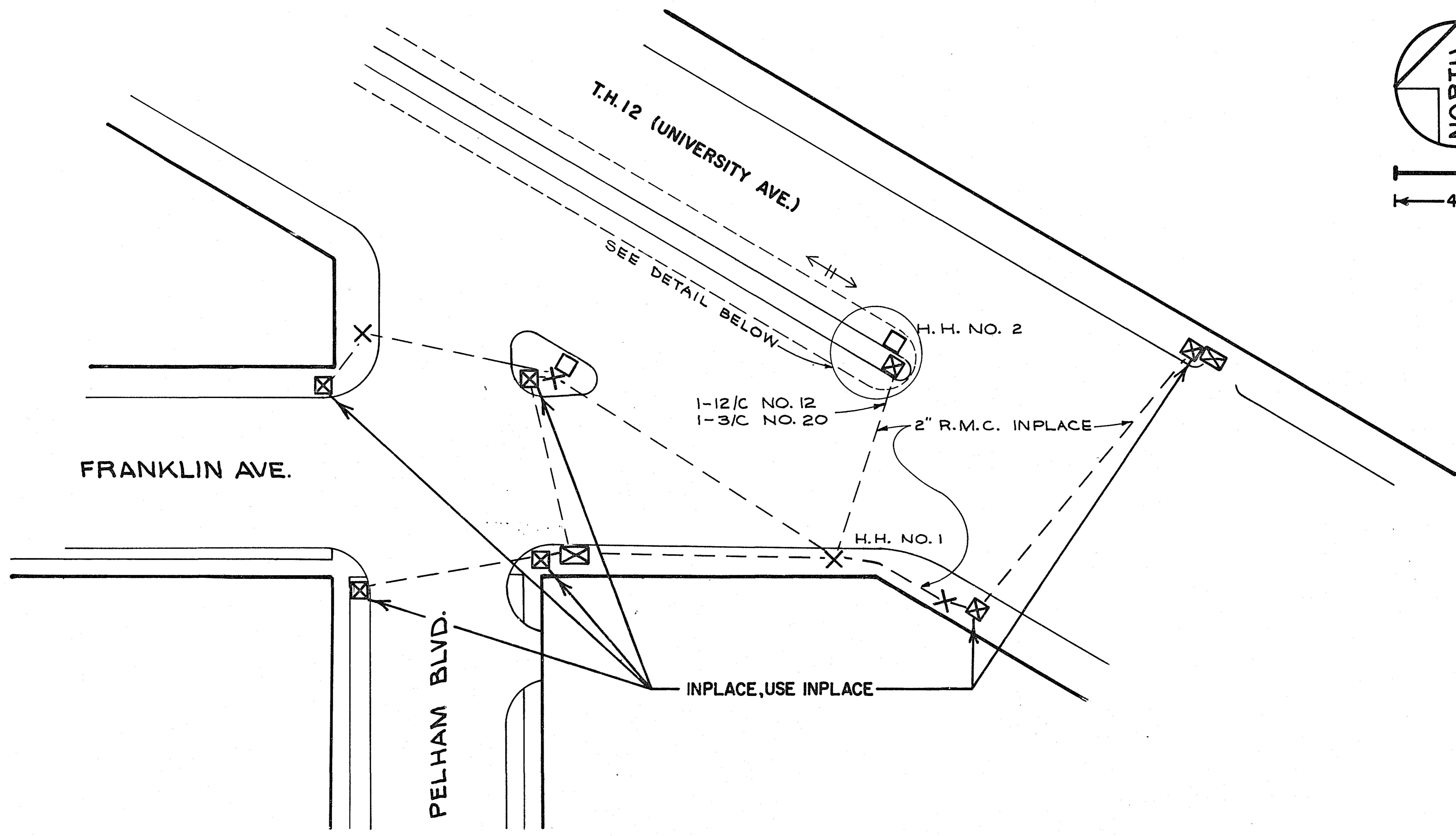
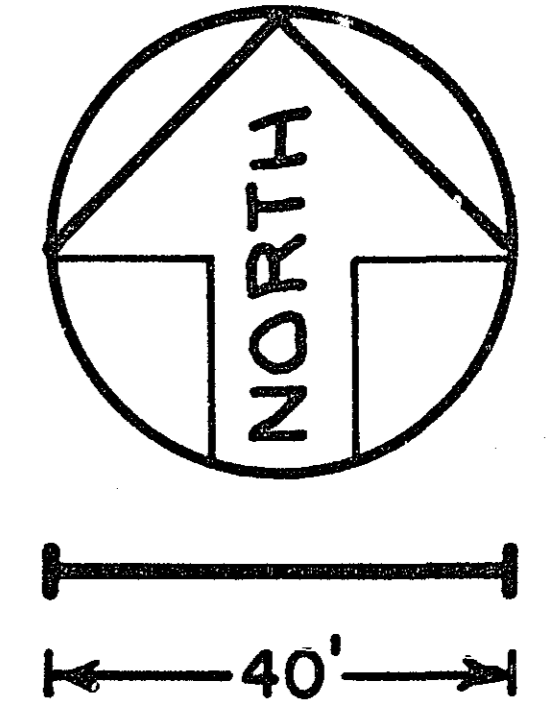
FINAL CONSTRUCTION CHANGES CONTROLLED

[Signature]
PROJECT OR RESIDENT ENGINEER

3/31/77
DATE

NOTE: R.M.C. ABOVE CONC SHALL BE PAINTED WITH TREATMENT SOLUTION PER MHD 2476 AND 2 COATS YELLOW PER MHD 3572 AFTER THE CAP IS INSTALLED

TOPS OF GUARD POSTS TO BE SAME ELEV AT EACH ISLAND

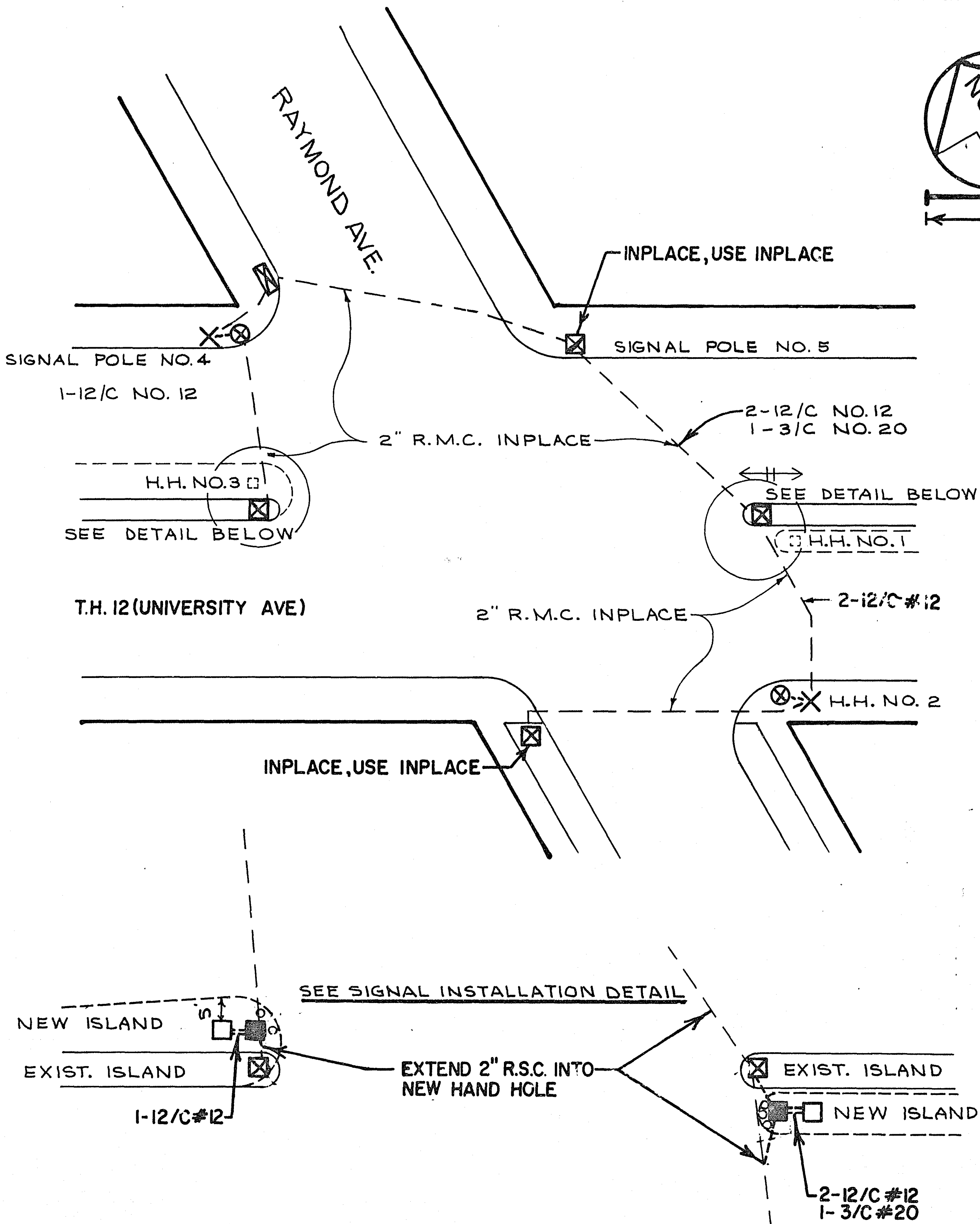


SEE SIGNAL INSTALLATION DETAIL

NOTE:
 PROVIDE 15' OF SLACK 1-12/C #12 AND 1-3/C #20
 IN H.H.1 SPLICE ONTO INPLACE CABLES IN H.H.1

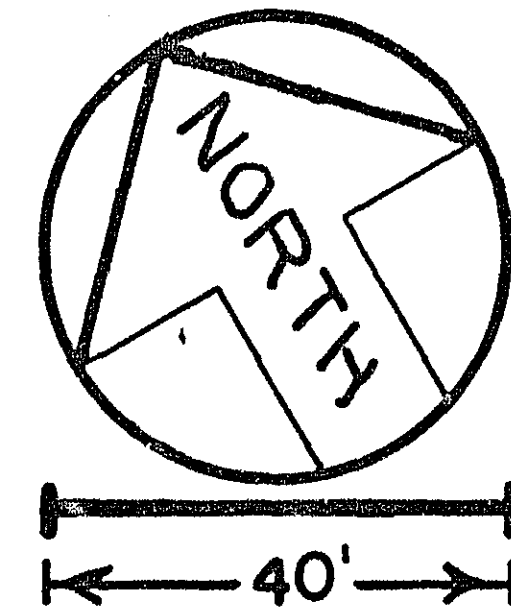
FINAL CONSTRUCTION CHANGES COMPLETED
David H. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-3-77
 DATE

SYSTEM "A"
 T.H.12 (UNIVERSITY AVE.) AT FRANKLIN AVE.

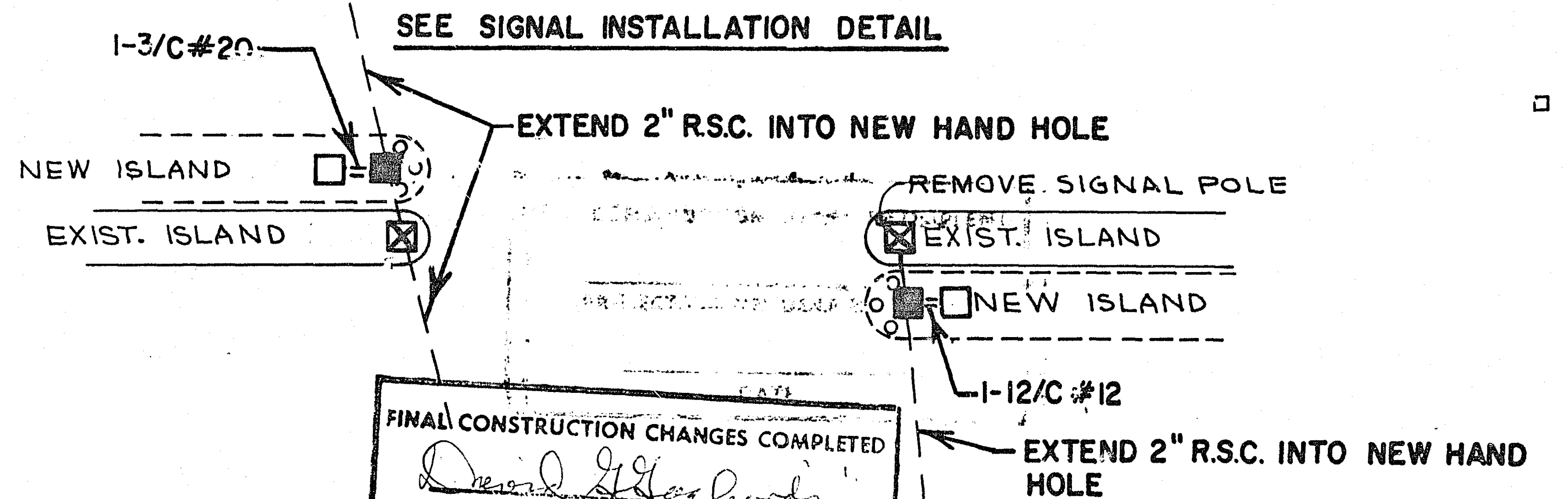
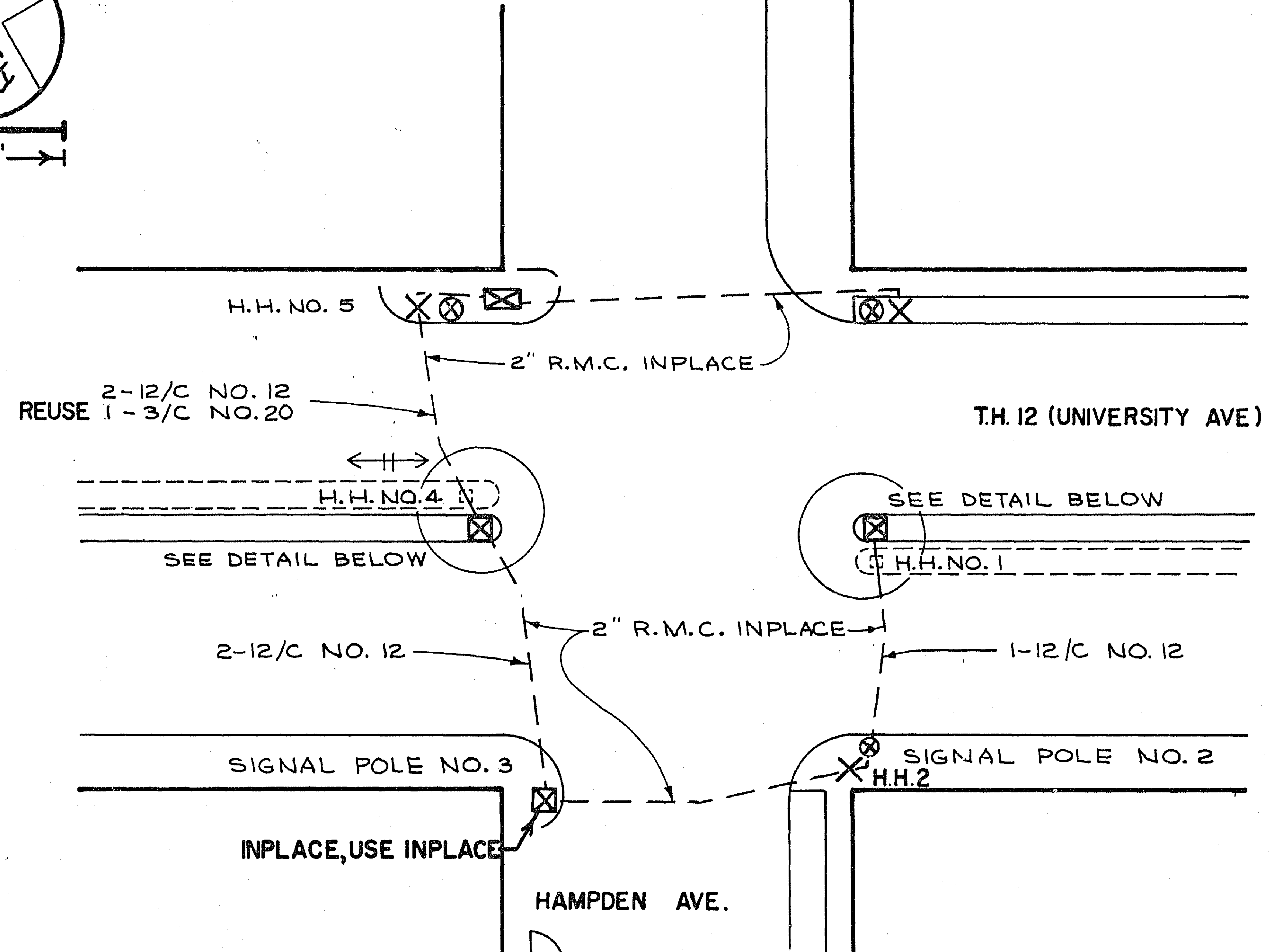


NOTE:
 (1) PROVIDE 15' OF SLACK 1-12/C#12 IN H.H. 4, 2-12/C#12 IN H.H. 2. SPLICE INTO INPLACE CABLE IN H.H. 2 AND H.H. 4.

"SYSTEM B"
 T.H. 12 (UNIVERSITY AVE) AT
 RAYMOND AVE

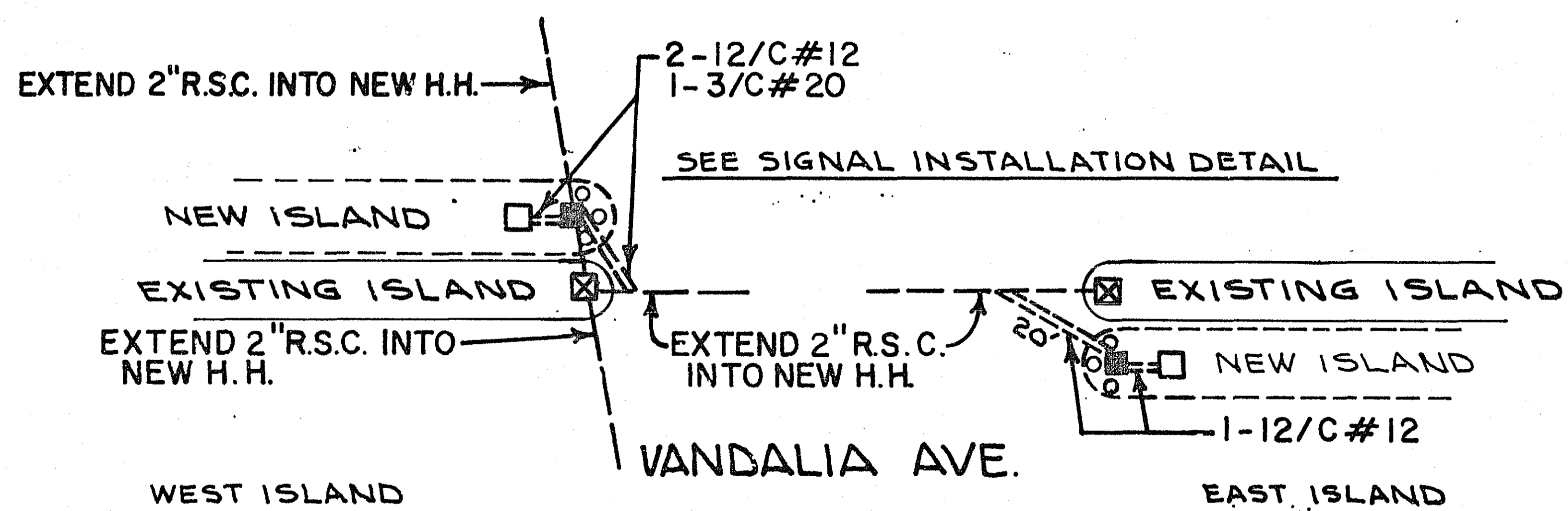
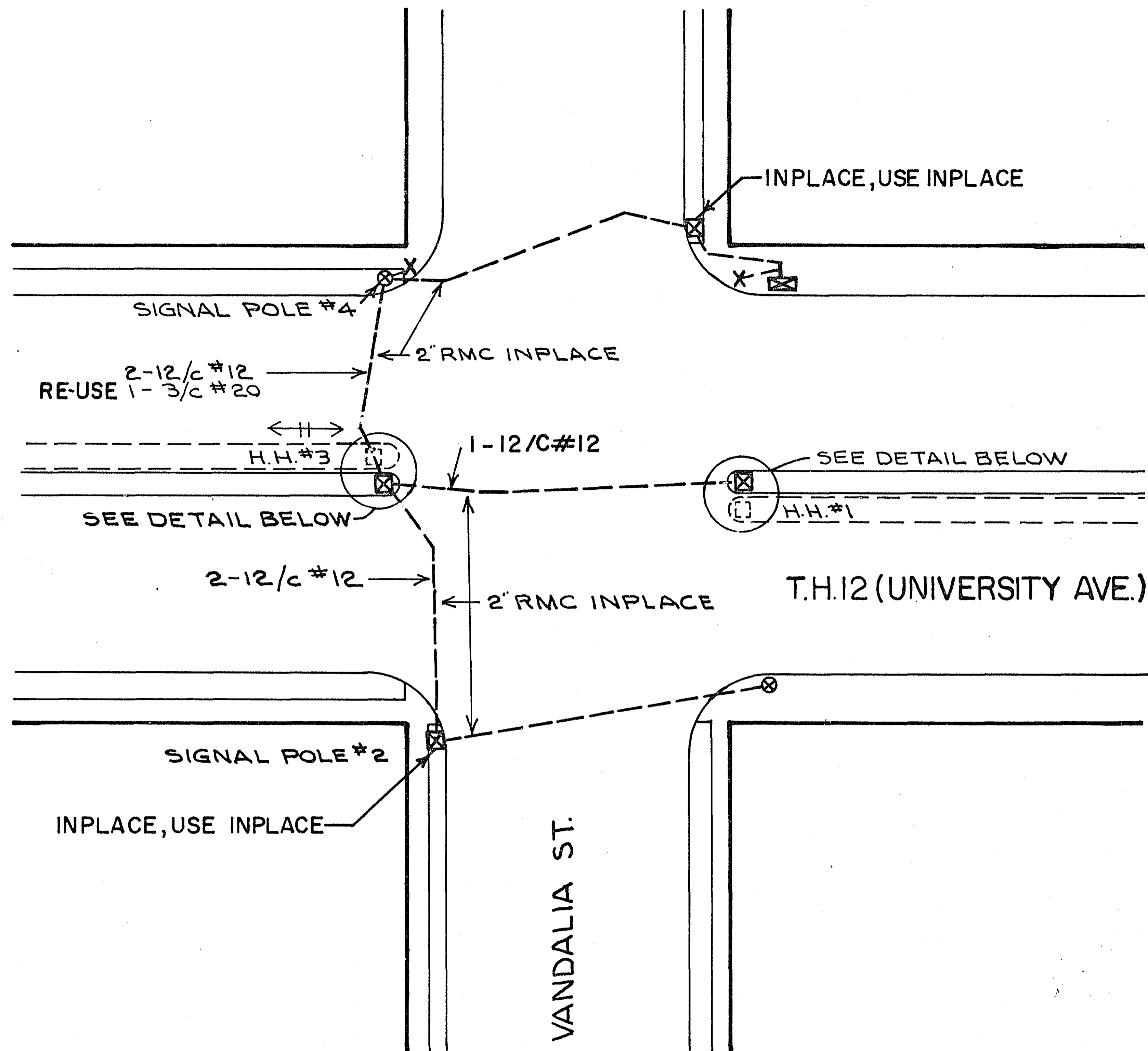


NOTE:
 (1) PROVIDE 15' OF SLACK 2-12/C#12 IN H.H. 5, 1-12/C#12 IN H.H. 2. SPLICE INTO INPLACE CABLES IN H.H. 5 & H.H. 2

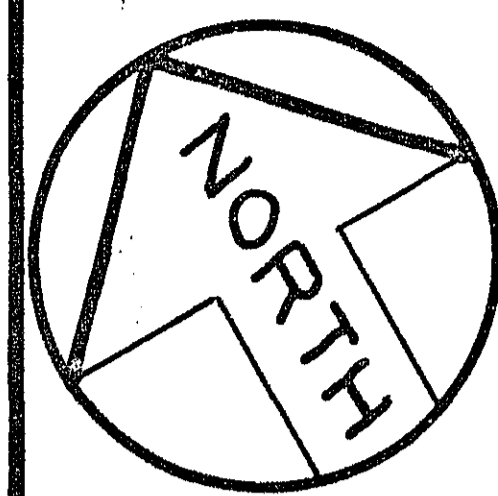


FINAL CONSTRUCTION CHANGES COMPLETED
David J. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3. 31. 72
 DATE

"SYSTEM C"
 T.H. 12 (UNIVERSITY AVE) AT HAMPDEN AVE.

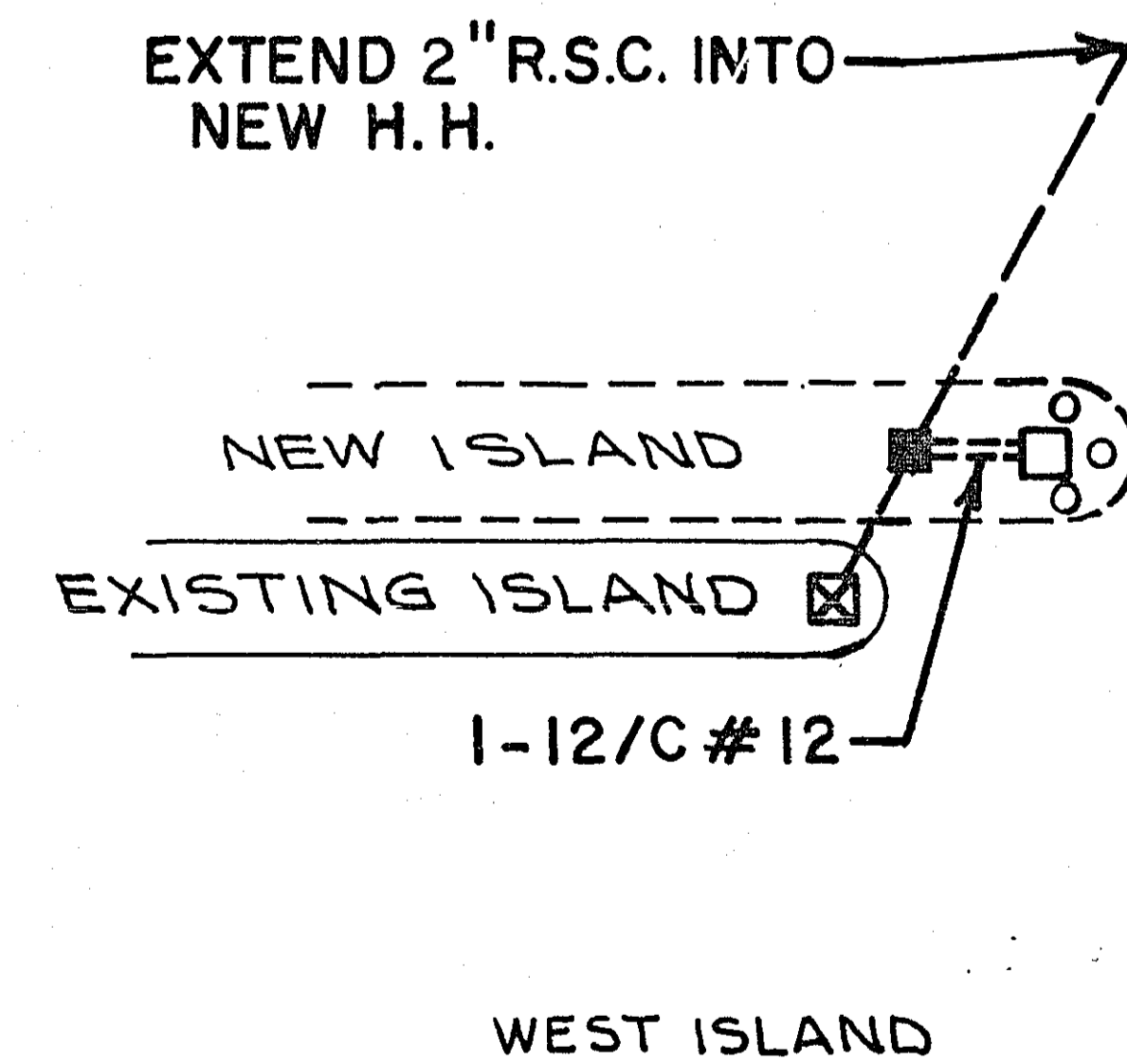
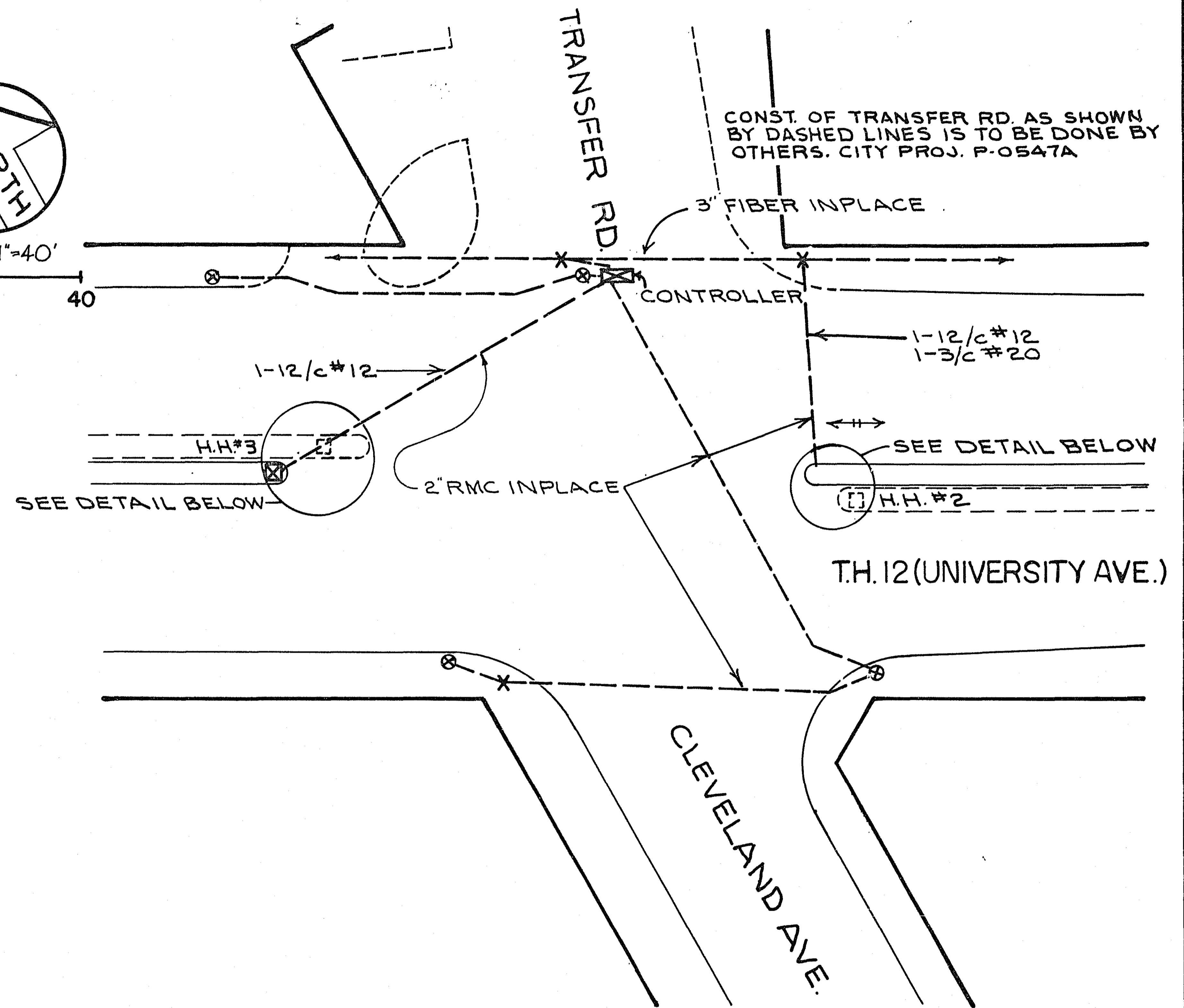


SYSTEM D
T.H.12 (UNIVERSITY) AT VANDALIA AVE.



SCALE: 1"=40'

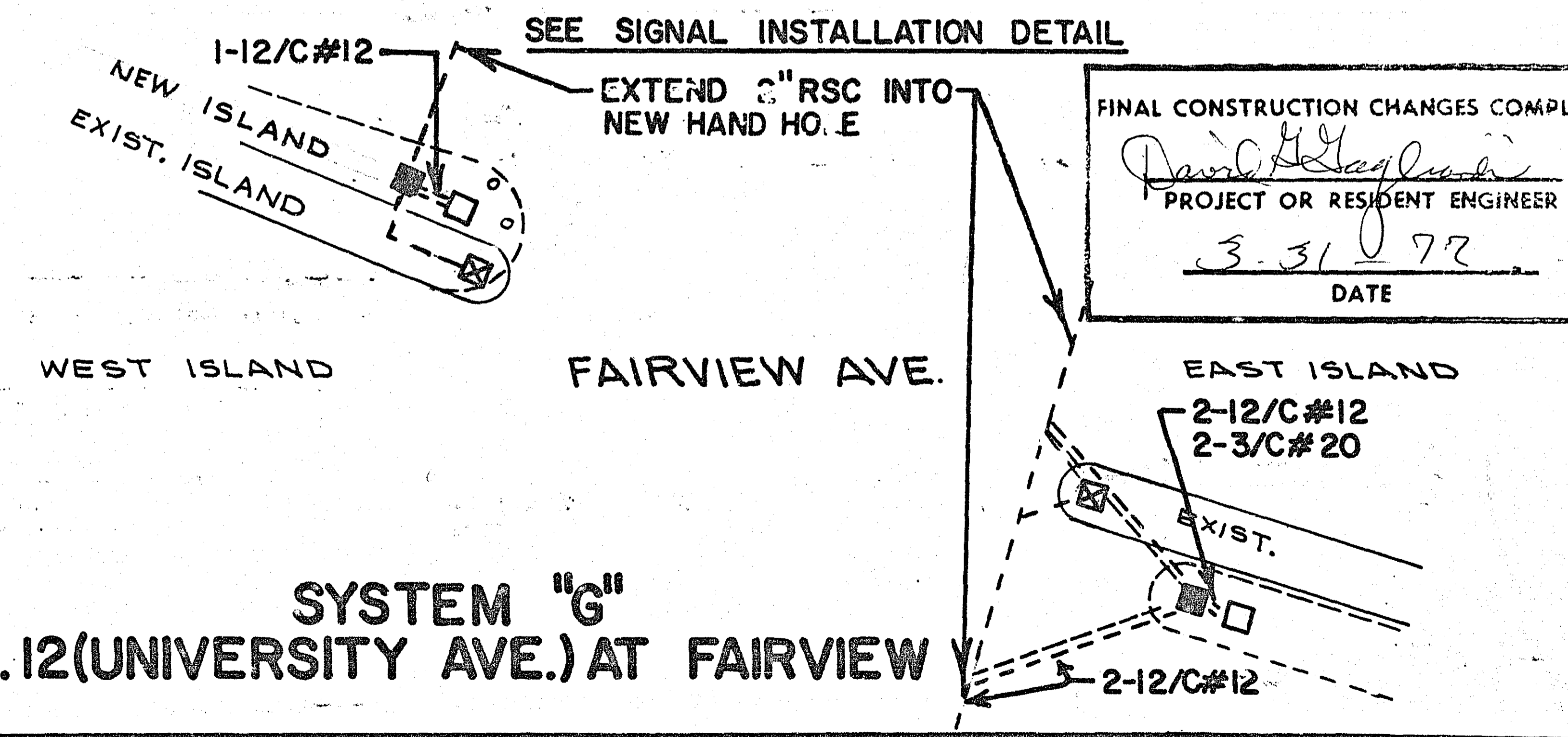
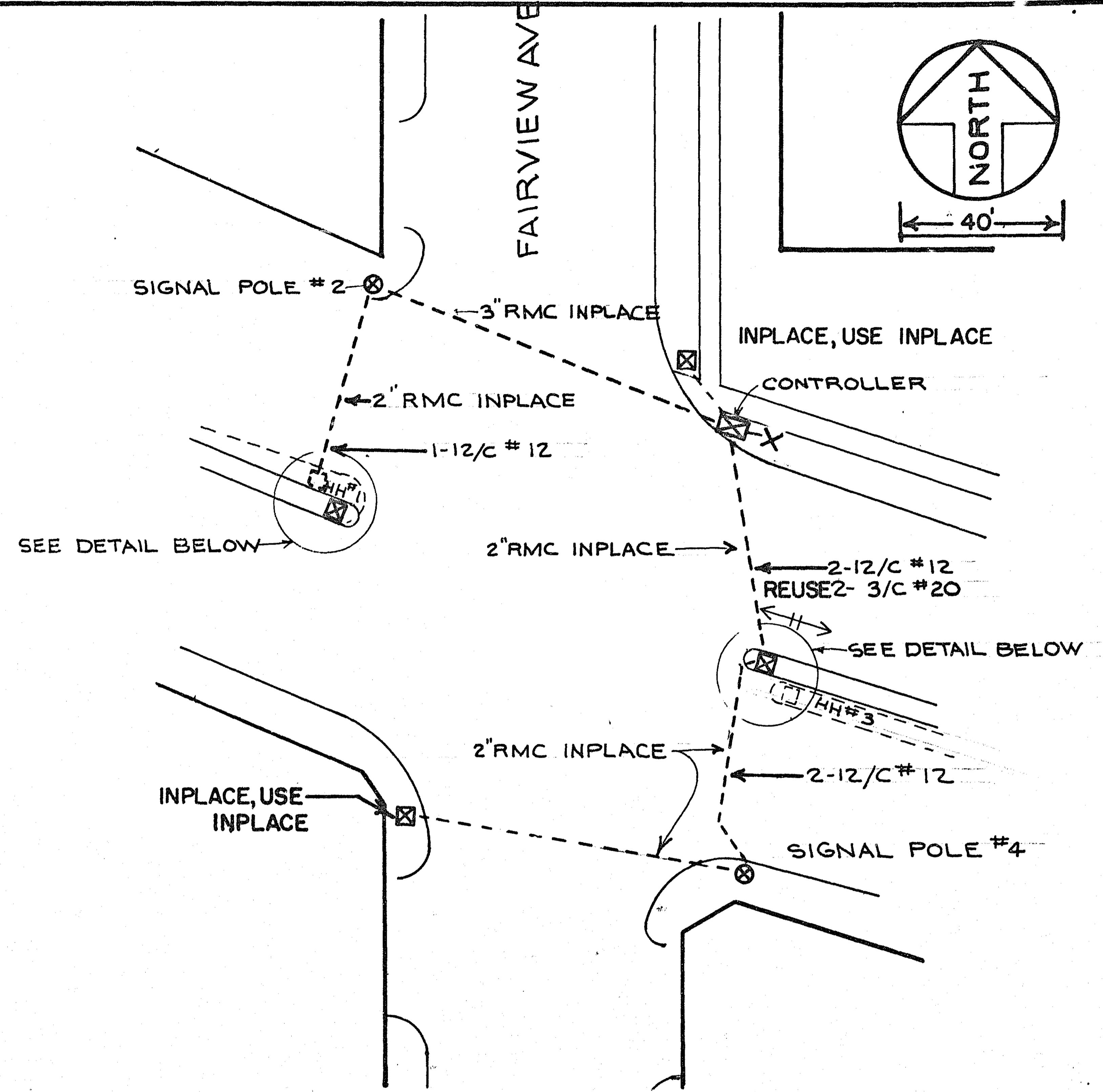
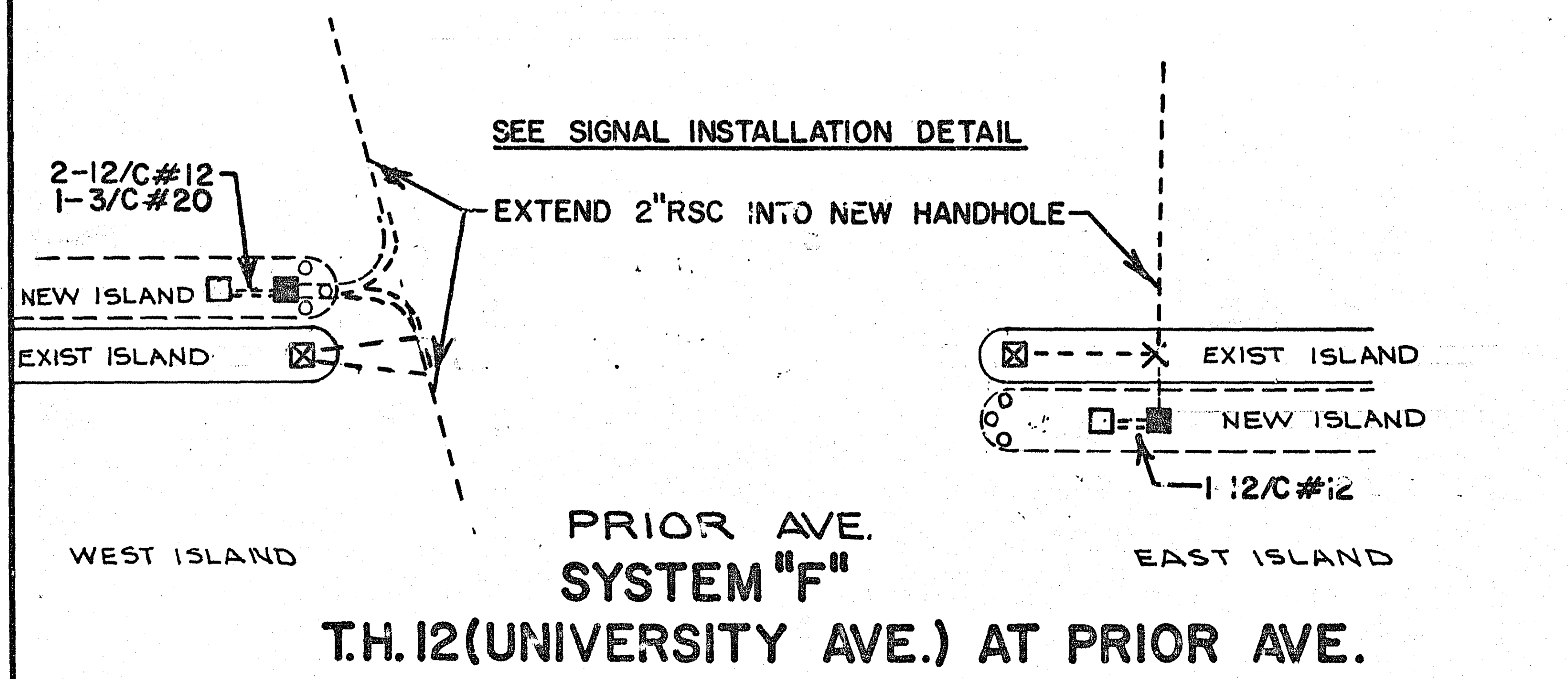
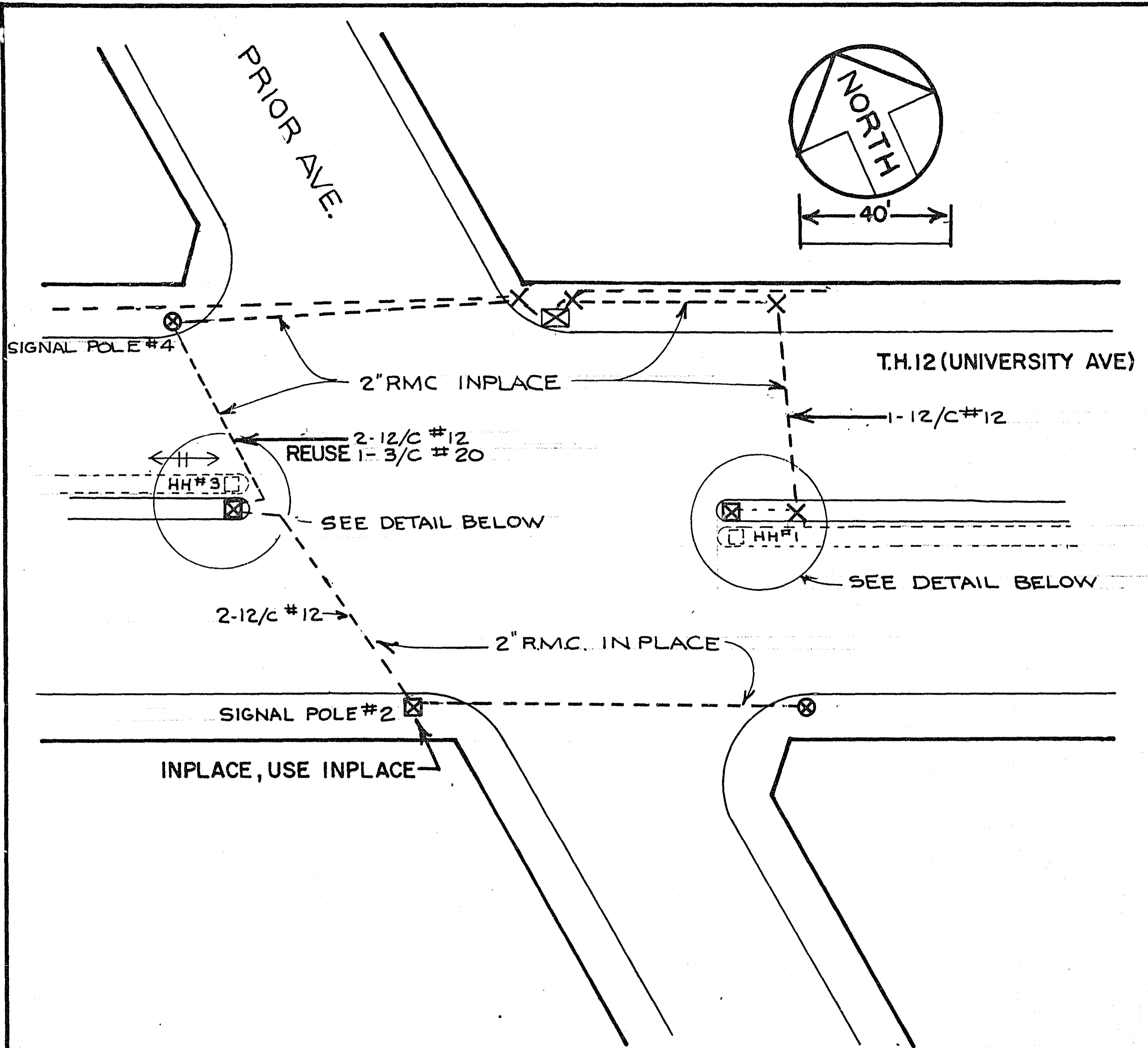
0 40



FINAL CONSTRUCTION CHANGES COMPLETED
David G. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3.31.99
 DATE

SEE SIGNAL INSTALLATION DETAIL

CLEVELAND AVE.
SYSTEM E
 T.H.12 (UNIVERSITY) AT CLEVELAND AVE.



FINAL CONSTRUCTION CHANGES COMPLETE

David H. [Signature]

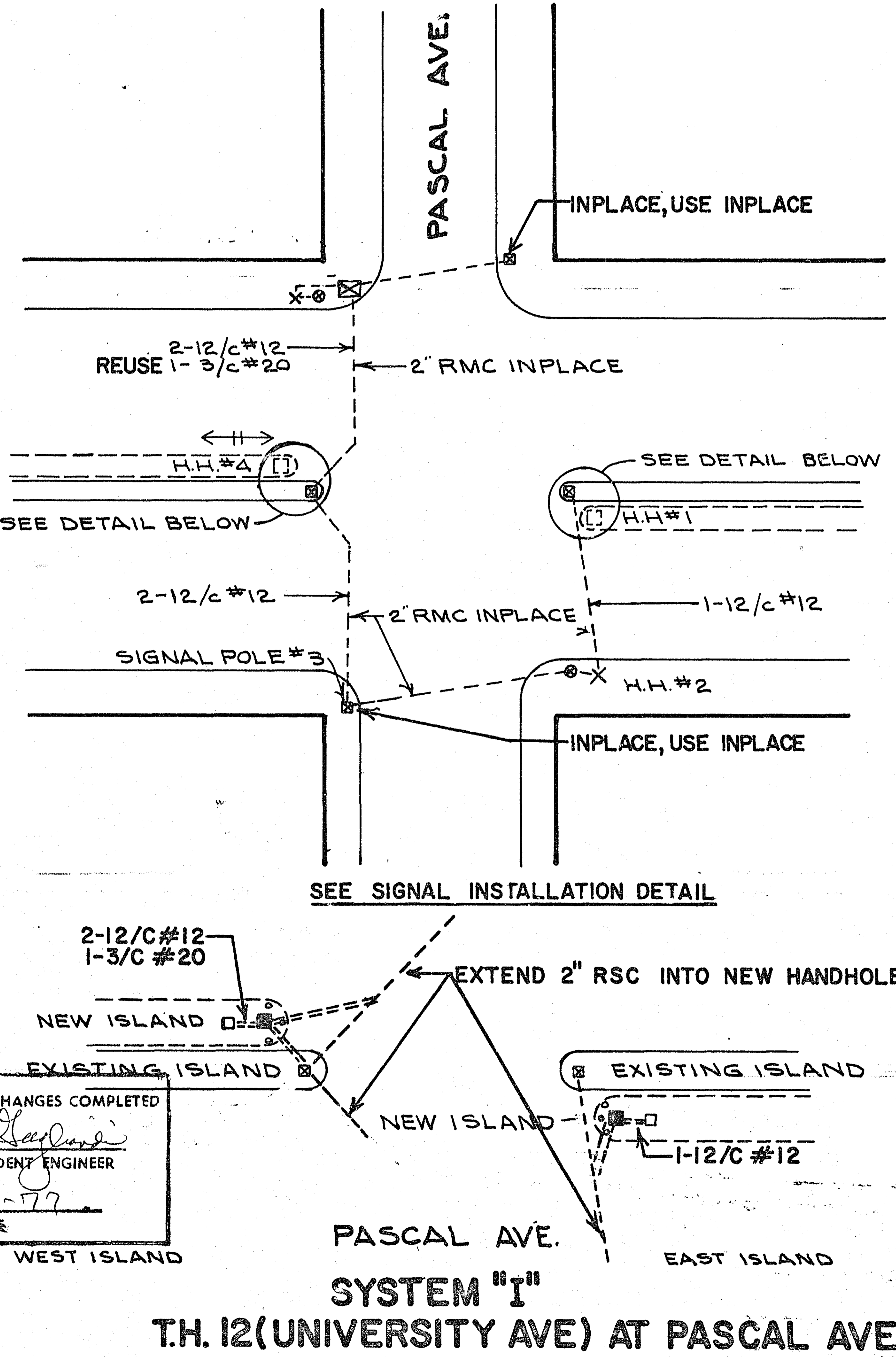
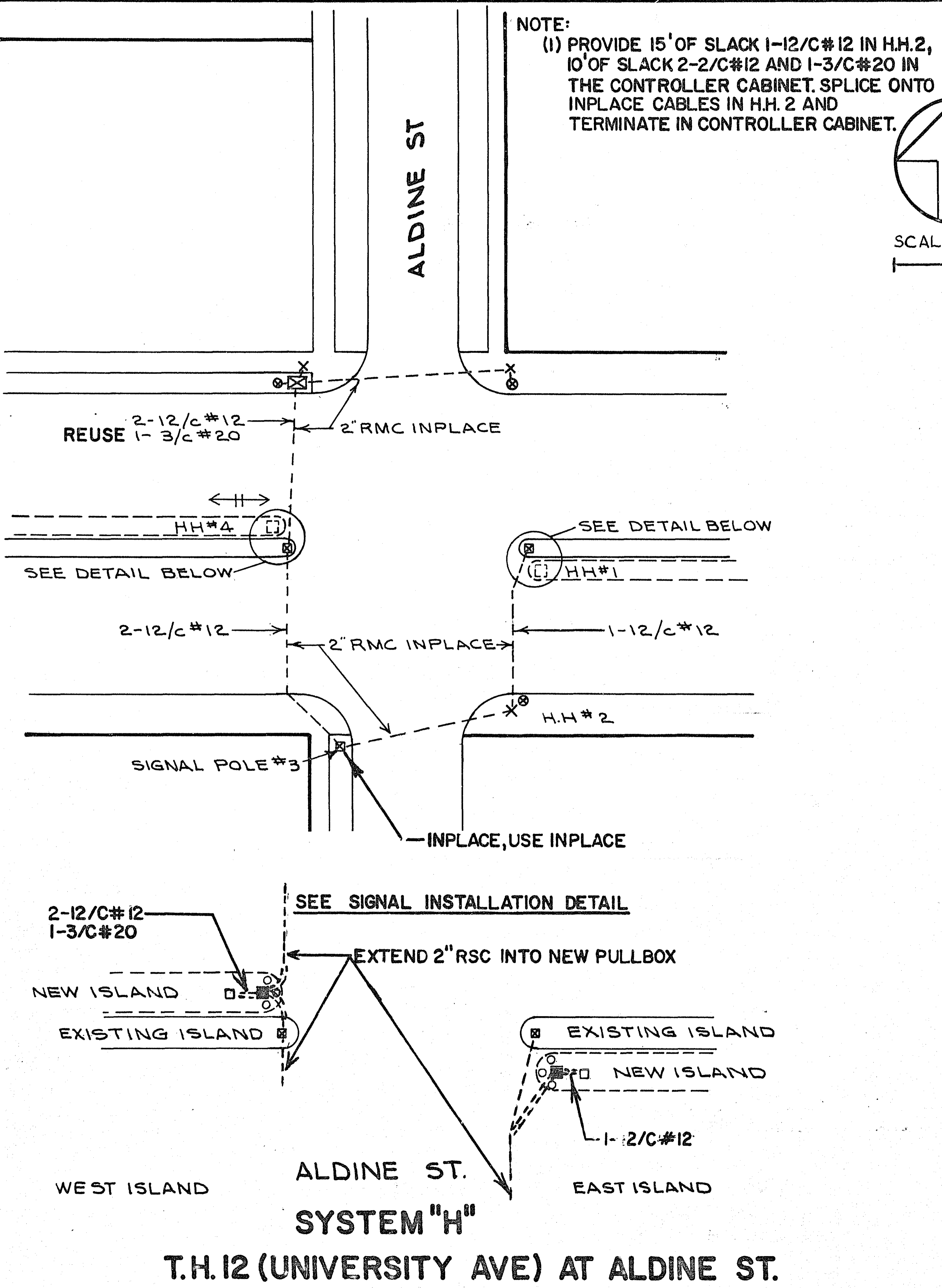
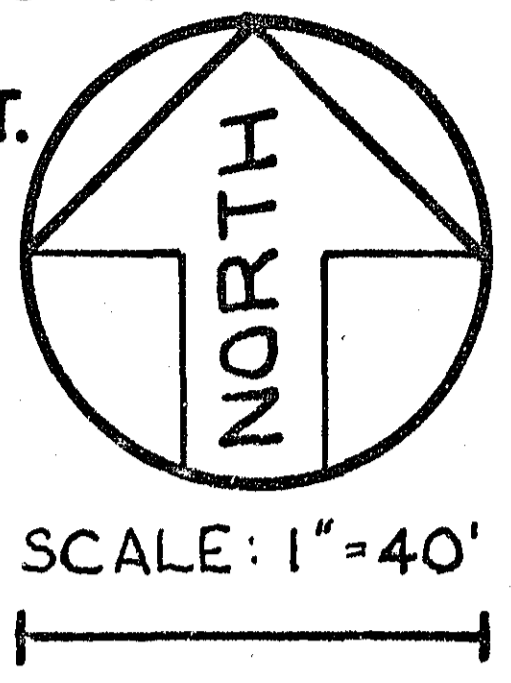
PROJECT OR RESIDENT ENGINEER

3-31-72

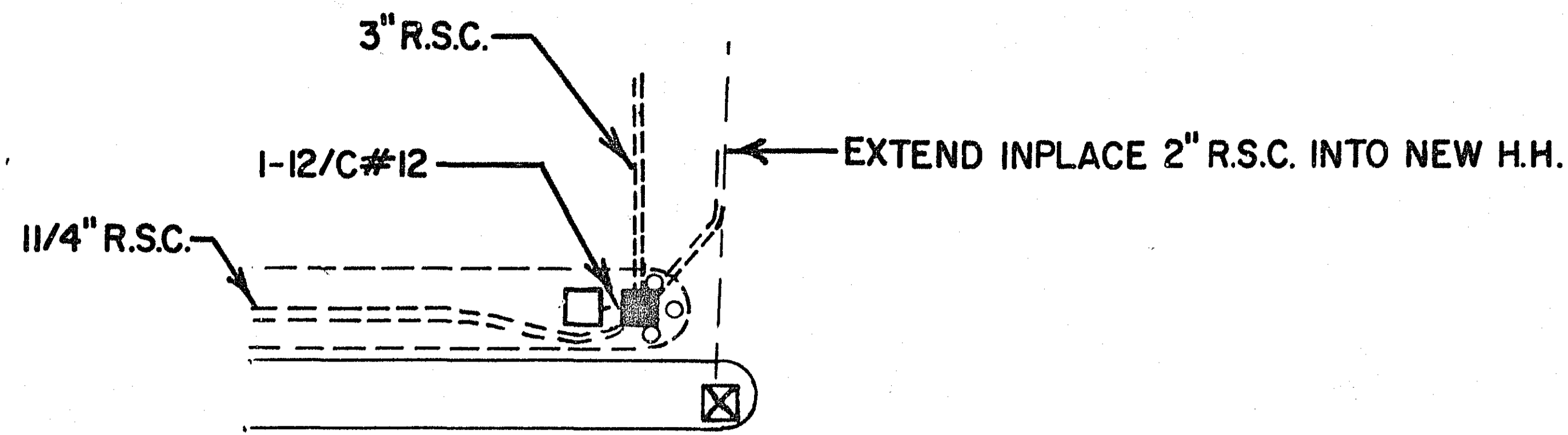
DATE

NOTE:
 (1) PROVIDE 15' OF SLACK 1-12/C#12 IN H.H.2,
 10' OF SLACK 2-2/C#12 AND 1-3/C#20 IN
 THE CONTROLLER CABINET. SPLICE ONTO
 INPLACE CABLES IN H.H. 2 AND
 TERMINATE IN CONTROLLER CABINET.

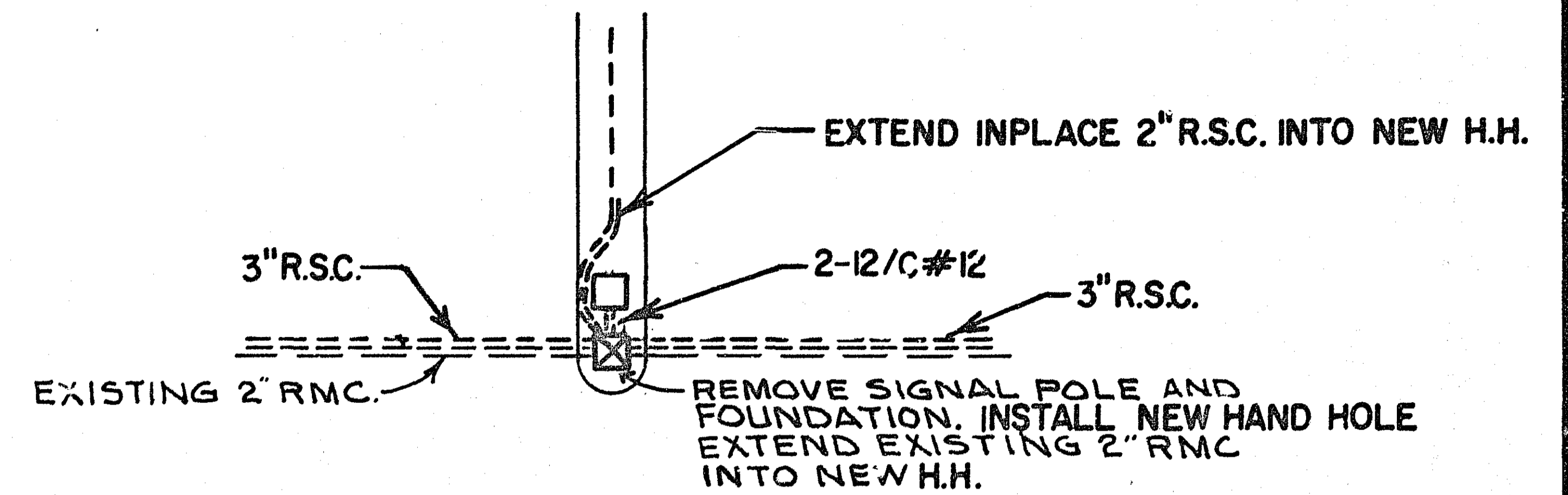
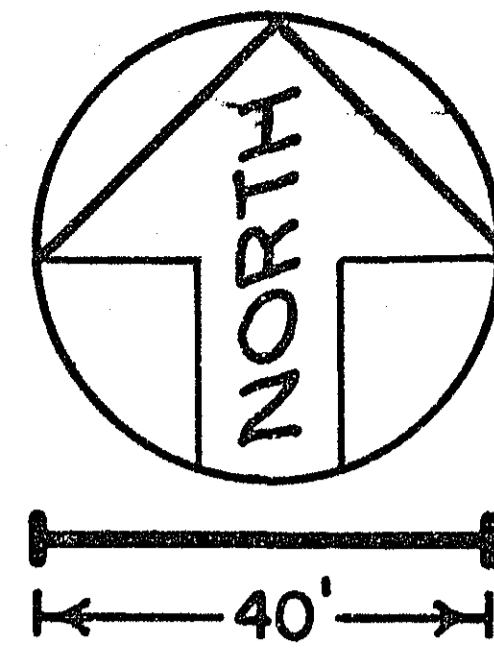
NOTE:
 (1) PROVIDE 15' OF SLACK 1-12/C#12 IN H.H.2, 10' OF SLACK 2-12/C#12 IN
 THE CONTROLLER CABINET. SPLICE ONTO INPLACE CABLES IN H.H. 2
 AND TERMINATE IN CONTROLLER CABINET.



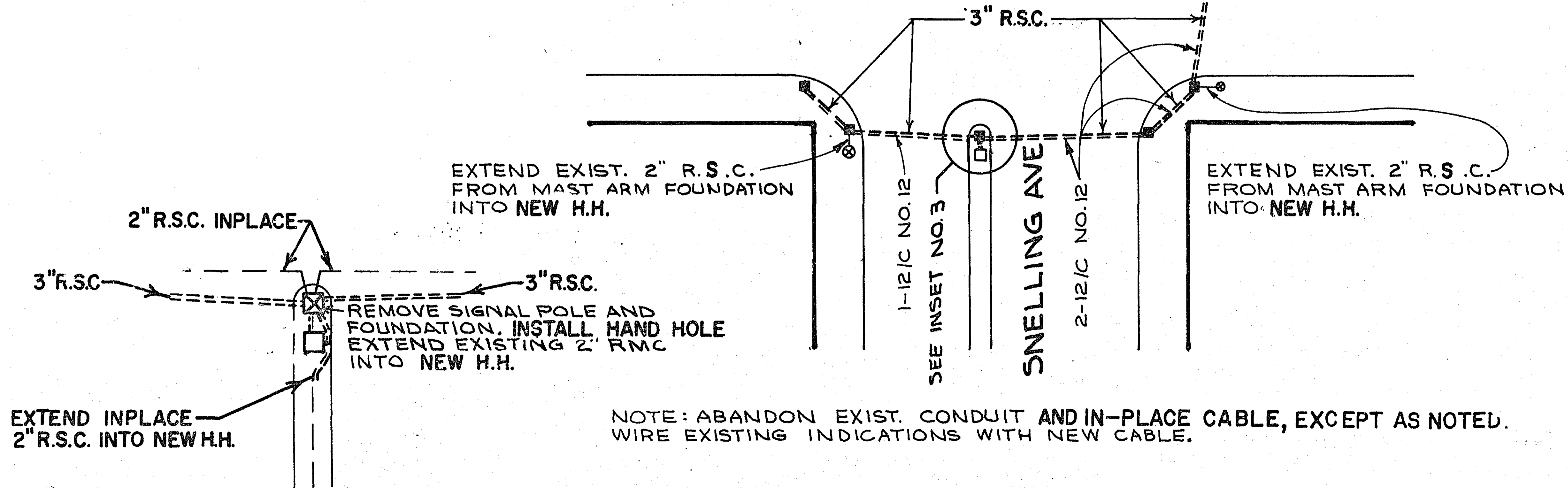
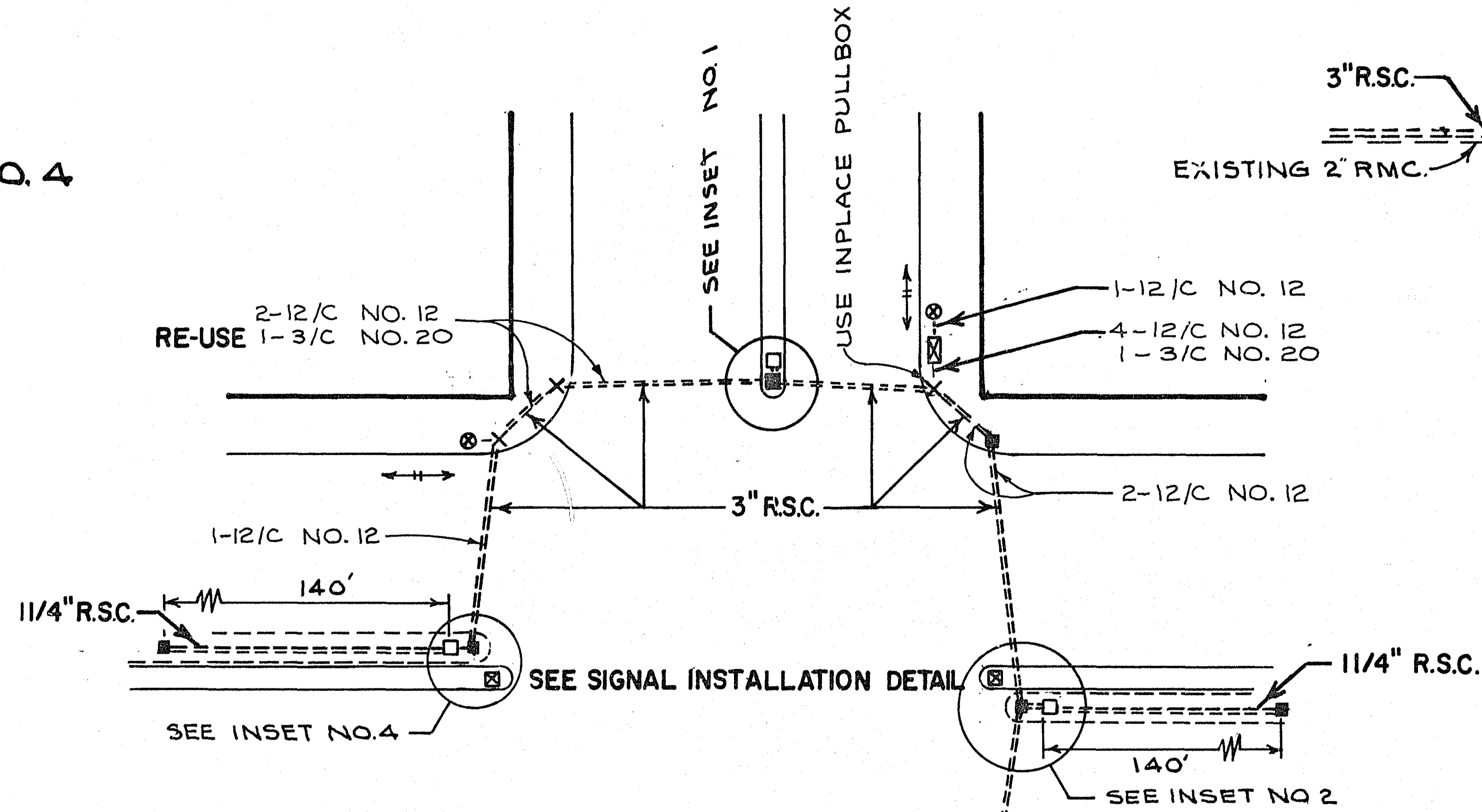
FINAL CONSTRUCTION CHANGES COMPLETED
David H. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE



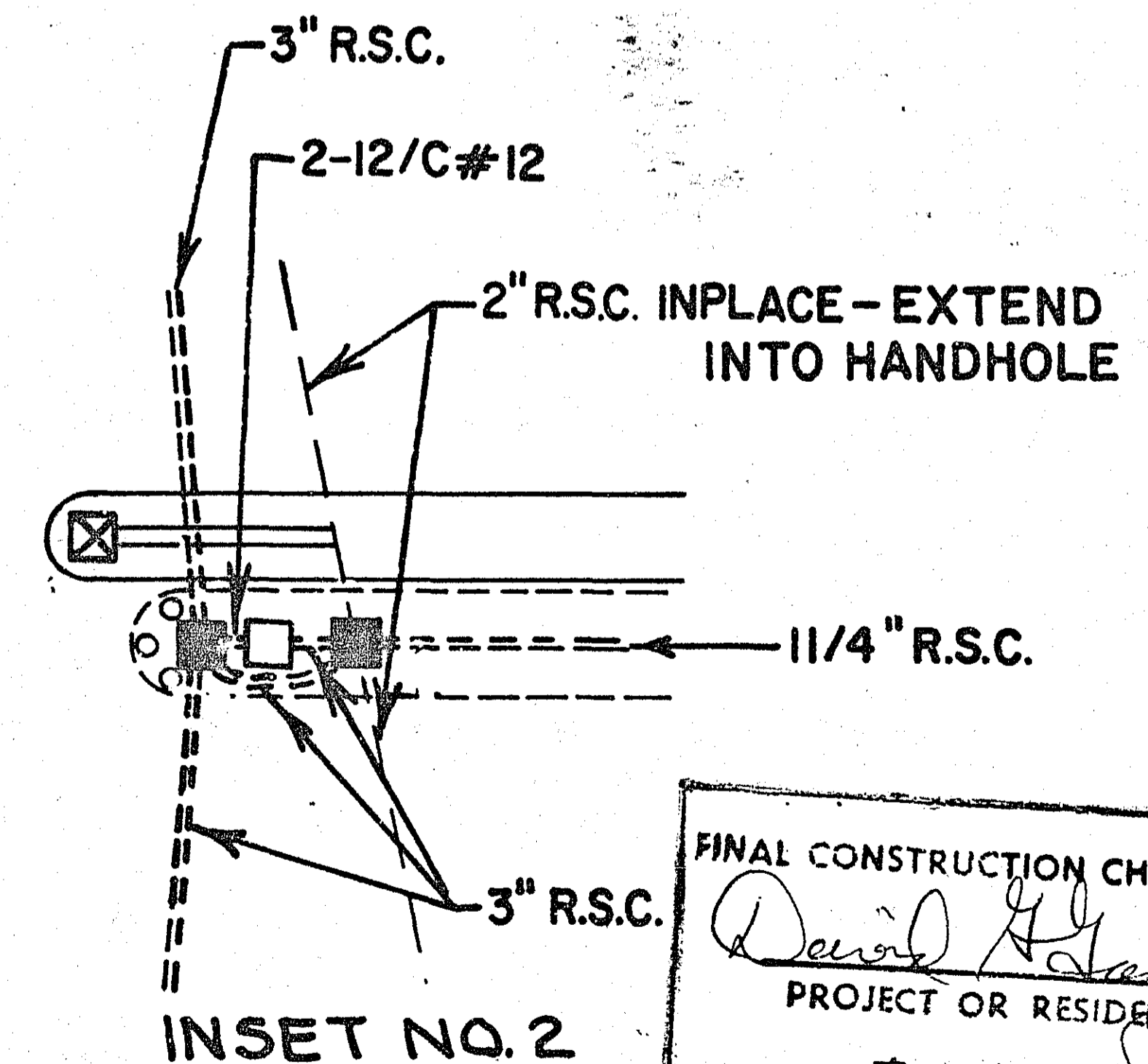
INSET NO. 4



INSET NO. 1



INSET NO. 3



INSET NO. 2

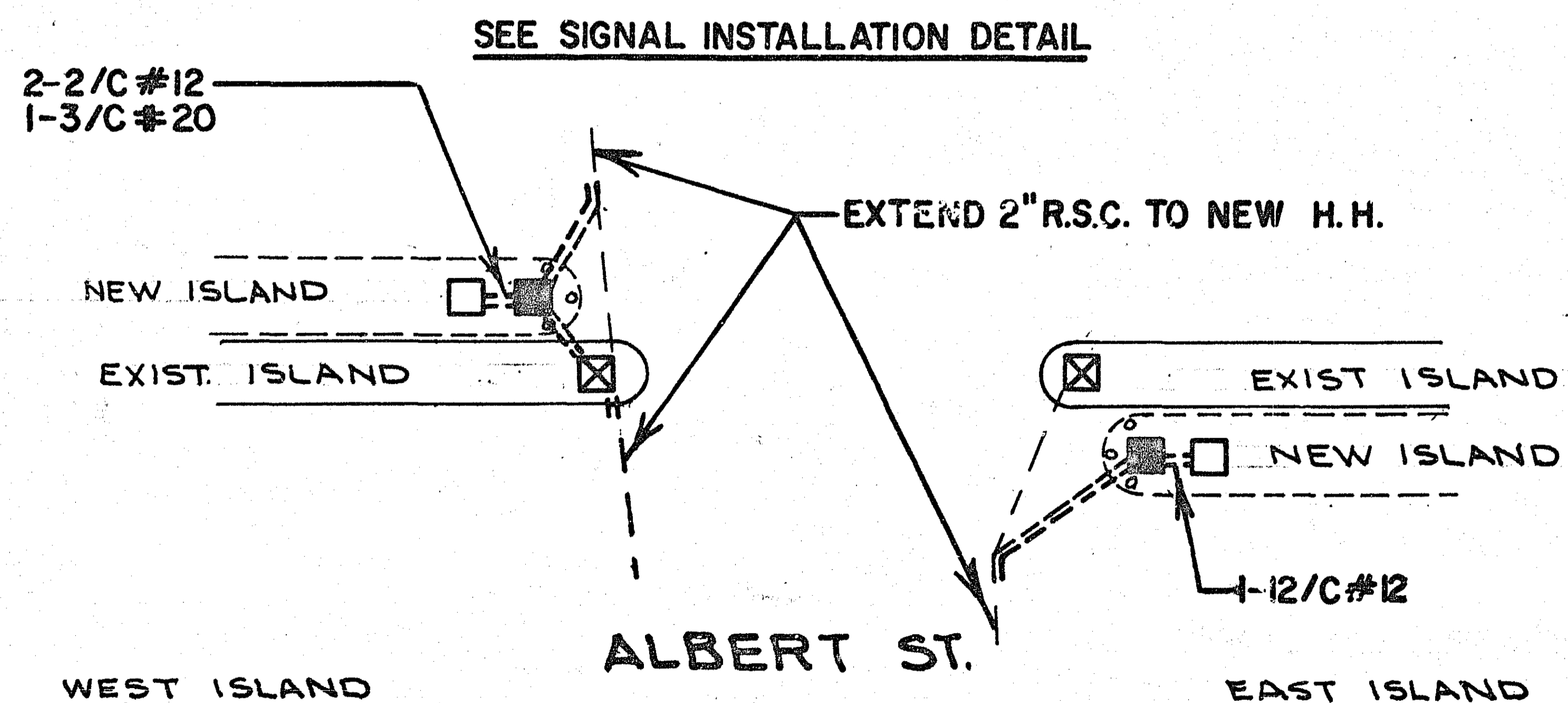
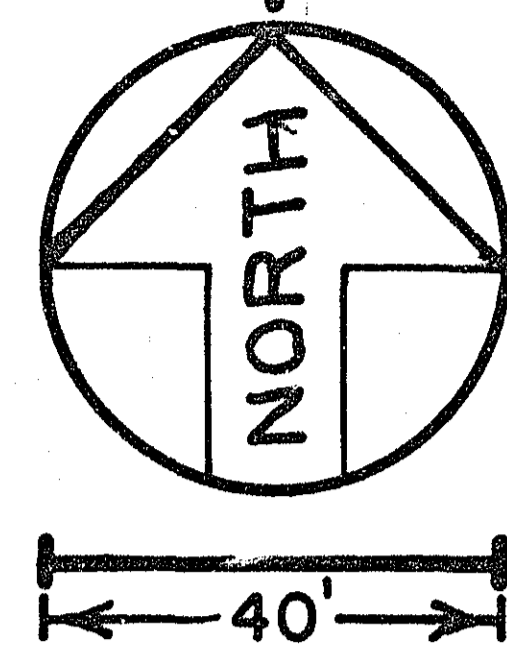
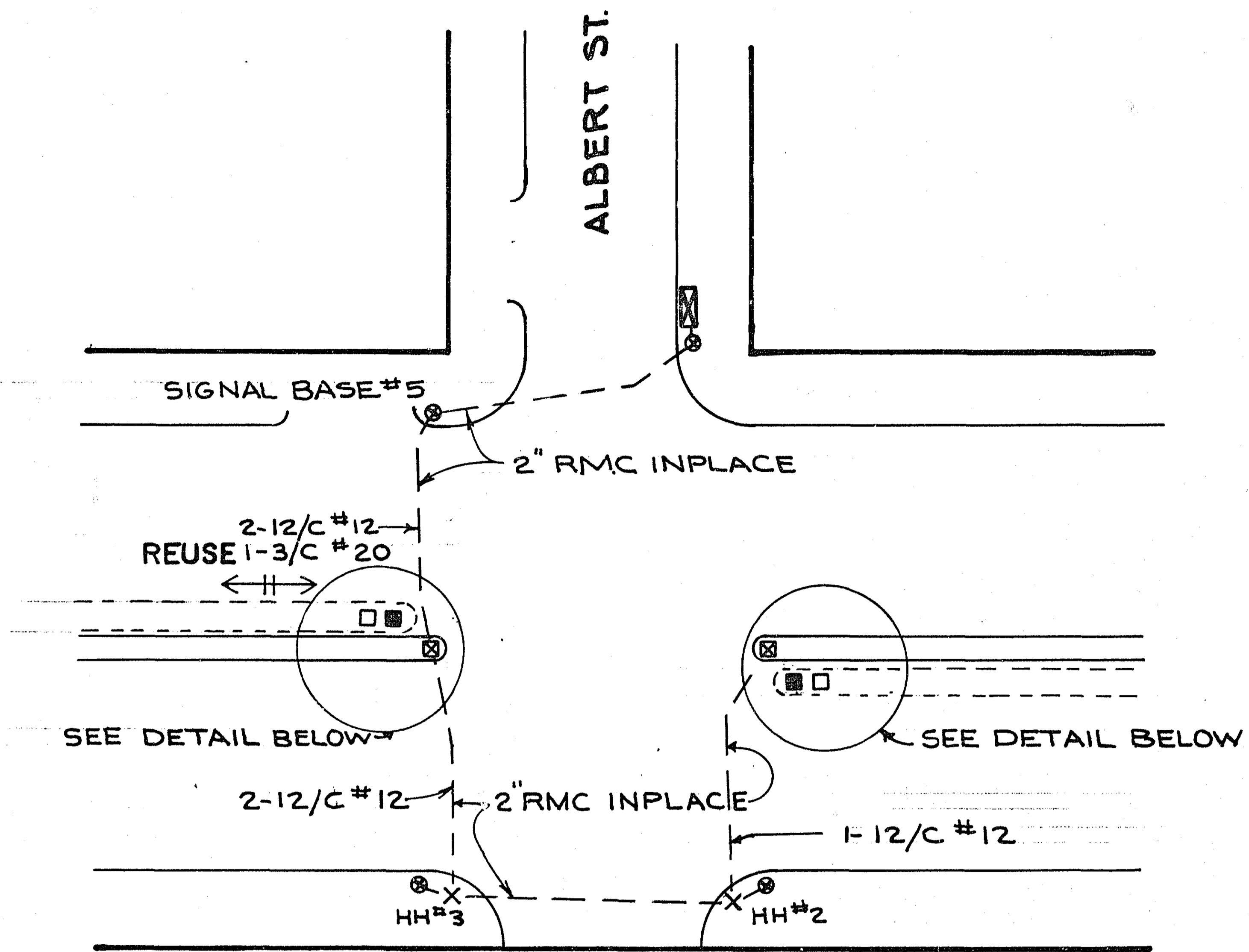
NOTE: ABANDON EXIST. CONDUIT AND IN-PLACE CABLE, EXCEPT AS NOTED. WIRE EXISTING INDICATIONS WITH NEW CABLE.

SYSTEM J
T.H.12 (UNIVERSITY AVE.) AT T.H.51(SNELLING AVE.)

FINAL CONSTRUCTION CHANGES COMPLETED
David H. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-97
 DATE

NOTE:

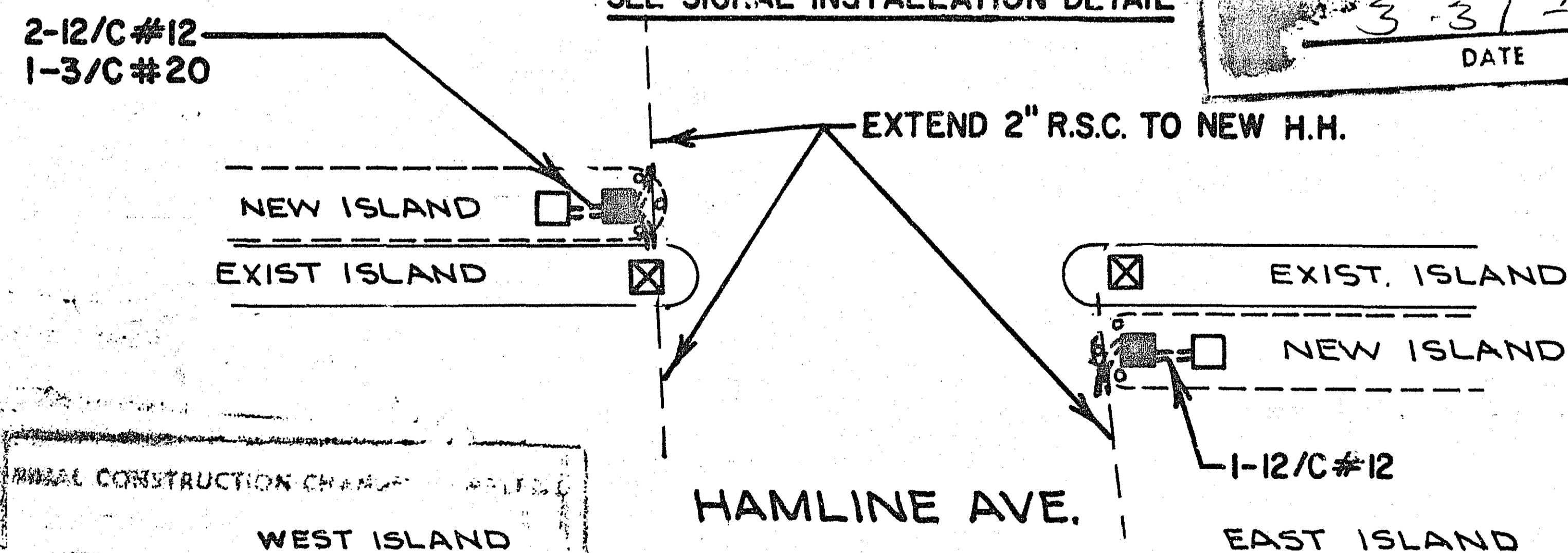
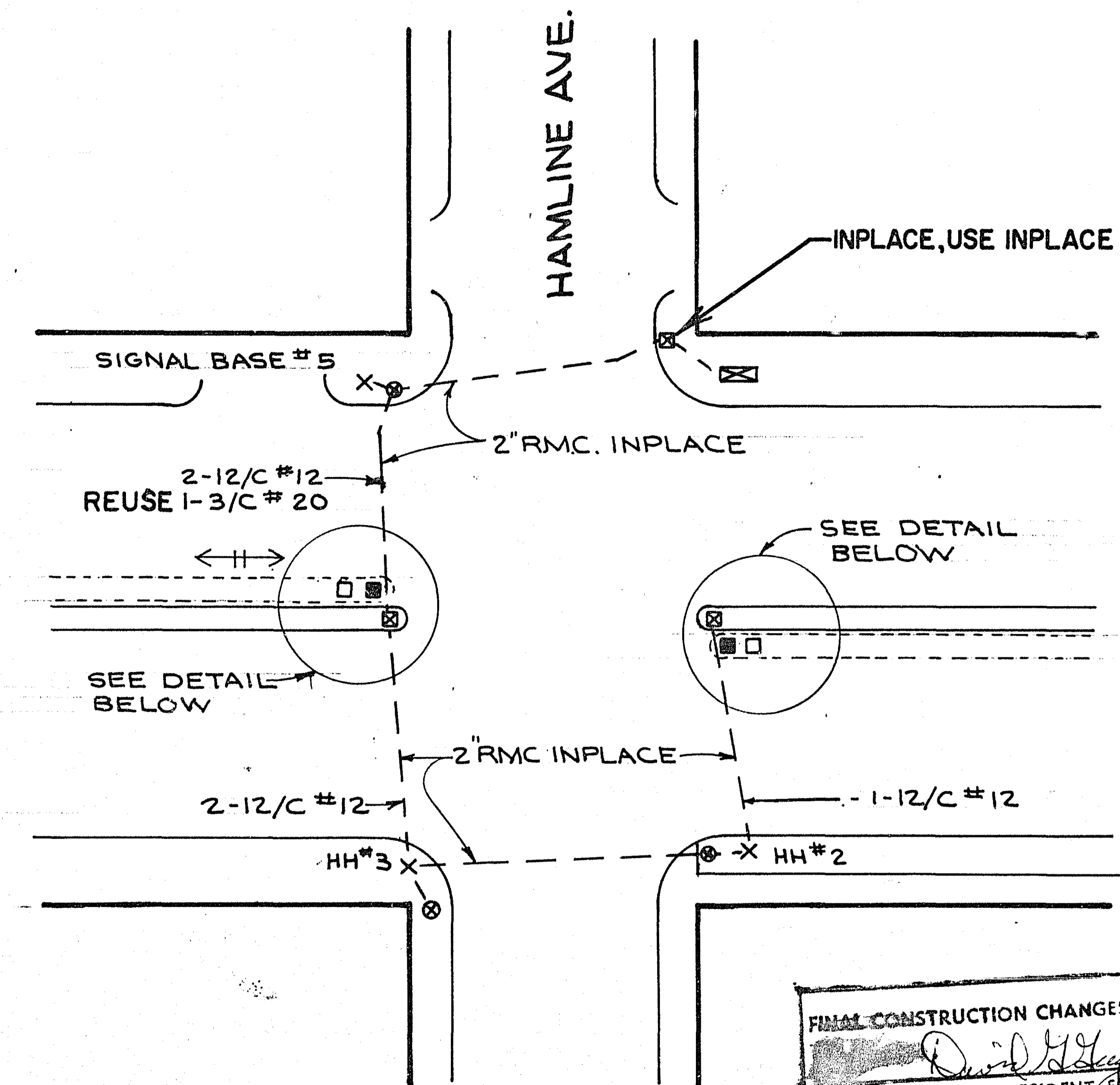
(I) PROVIDE 15' OF SLACK 2-12/C #12 IN H.H. 3,
1-12/C #12 IN H.H. 2. SPLICE ONTO INPLACE
CABLES IN H.H. 2 & H.H. 3.



SYSTEM K
T.H.12 (UNIVERSITY AVE.) AT ALBERT ST.

NOTE:

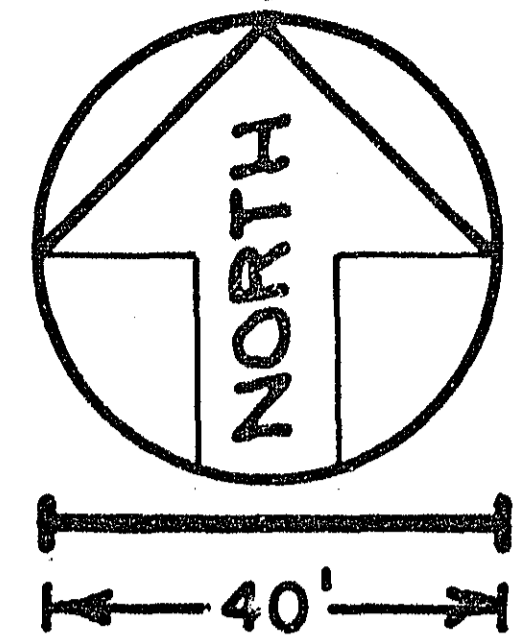
(I) PROVIDE 15' OF SLACK 2-12/C #12 IN H.H. 3,
1-12/C #12 IN H.H. 2. SPLICE ONTO INPLACE
CABLES IN H.H. 2 & H.H. 3.



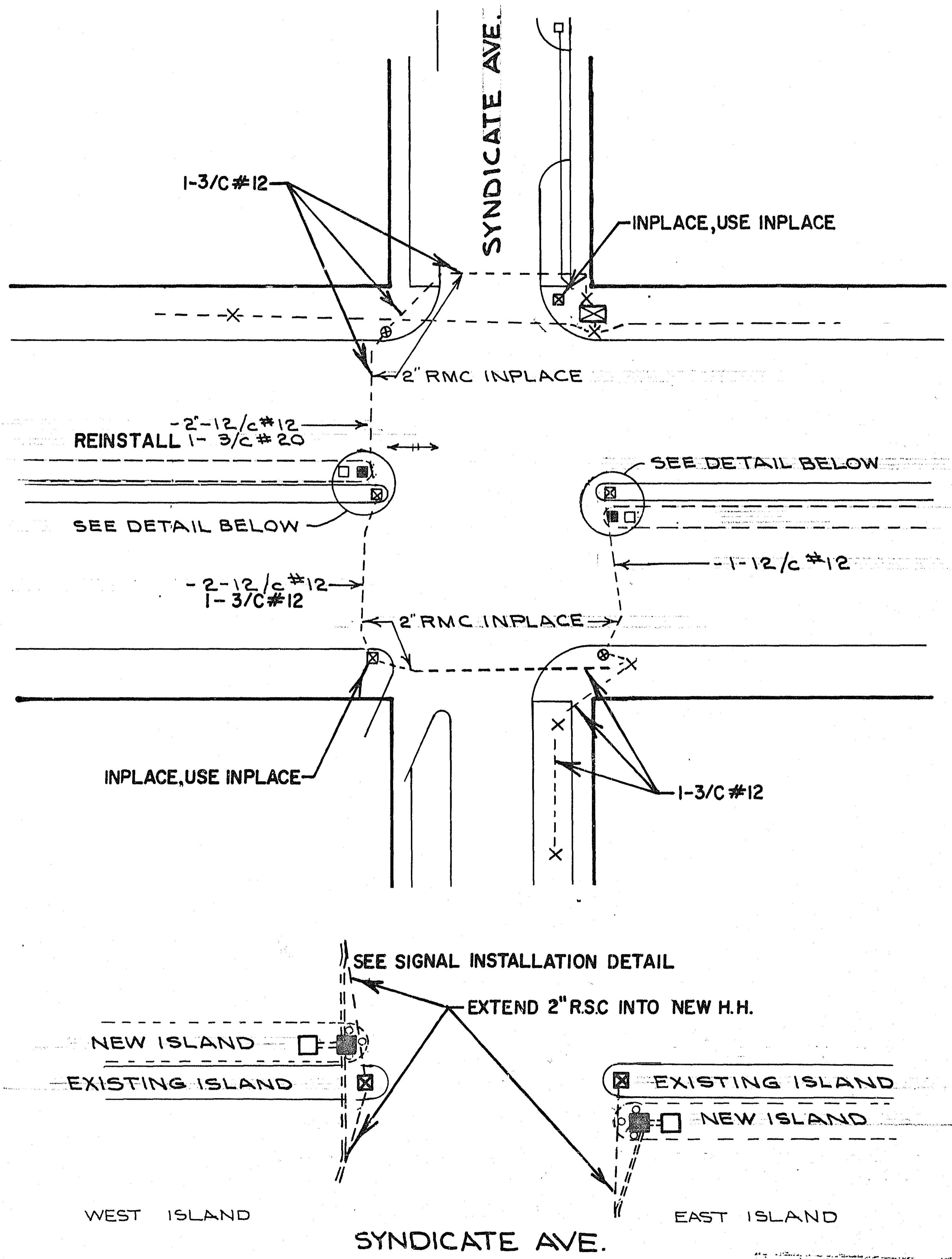
SYSTEM L
T.H.12 (UNIVERSITY AVE.) AT HAMLINE AVE.

FINAL CONSTRUCTION CHANGES COMPLETED
David G. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-27
 DATE

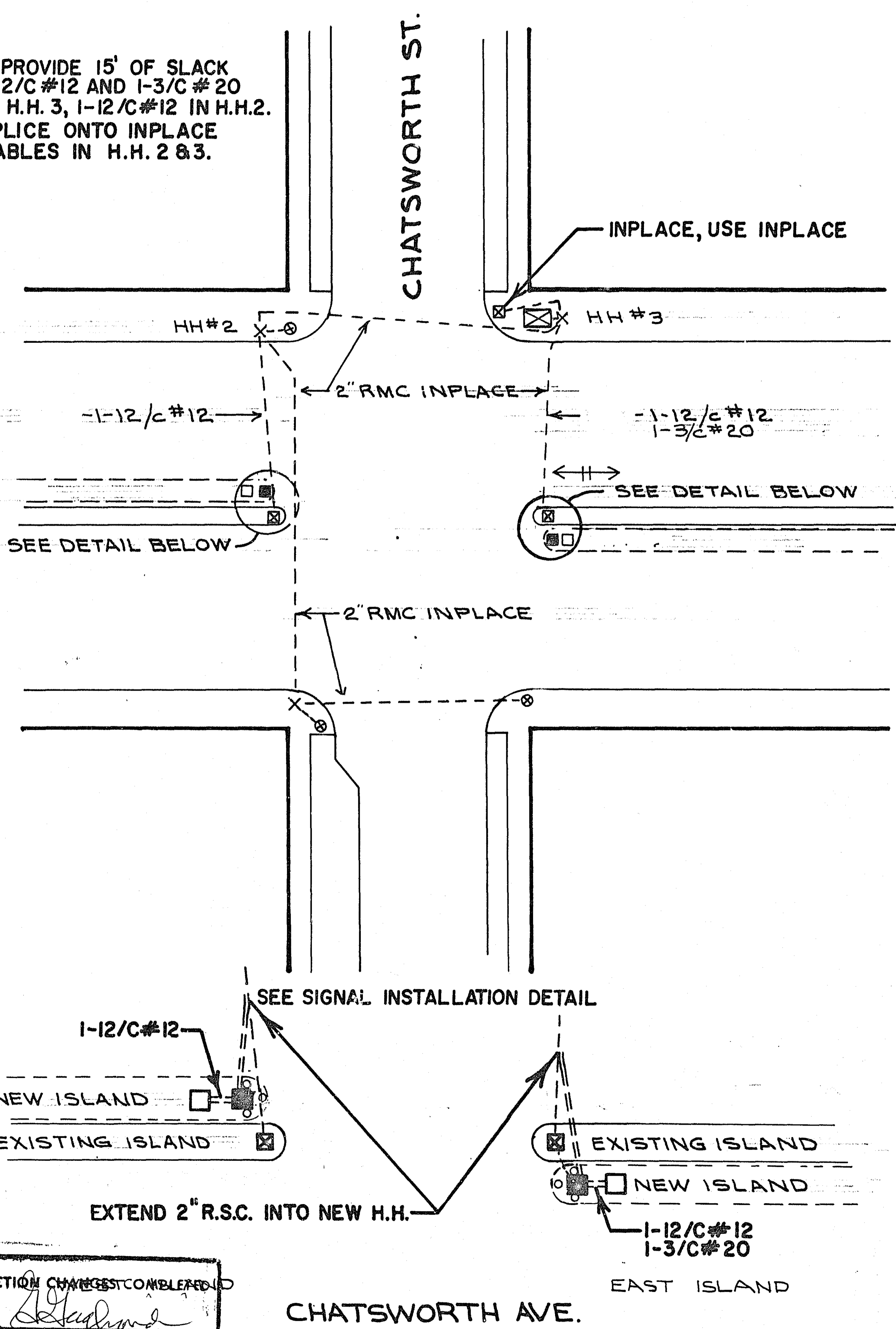
FINAL CONSTRUCTION CHANGES COMPLETED
 WEST ISLAND
 PROJECT OR RESIDENT ENGINEER



NOTE:
 (1) PROVIDE 15' OF SLACK
 1-12/C #12 AND 1-3/C #20
 IN H.H. 3, 1-12/C #12 IN H.H.2.
 SPLICE ONTO INPLACE
 CABLES IN H.H. 2 & 3.



SYSTEM M
T.H.12 (UNIVERSITY AVE) AT SYNDICATE AVE.

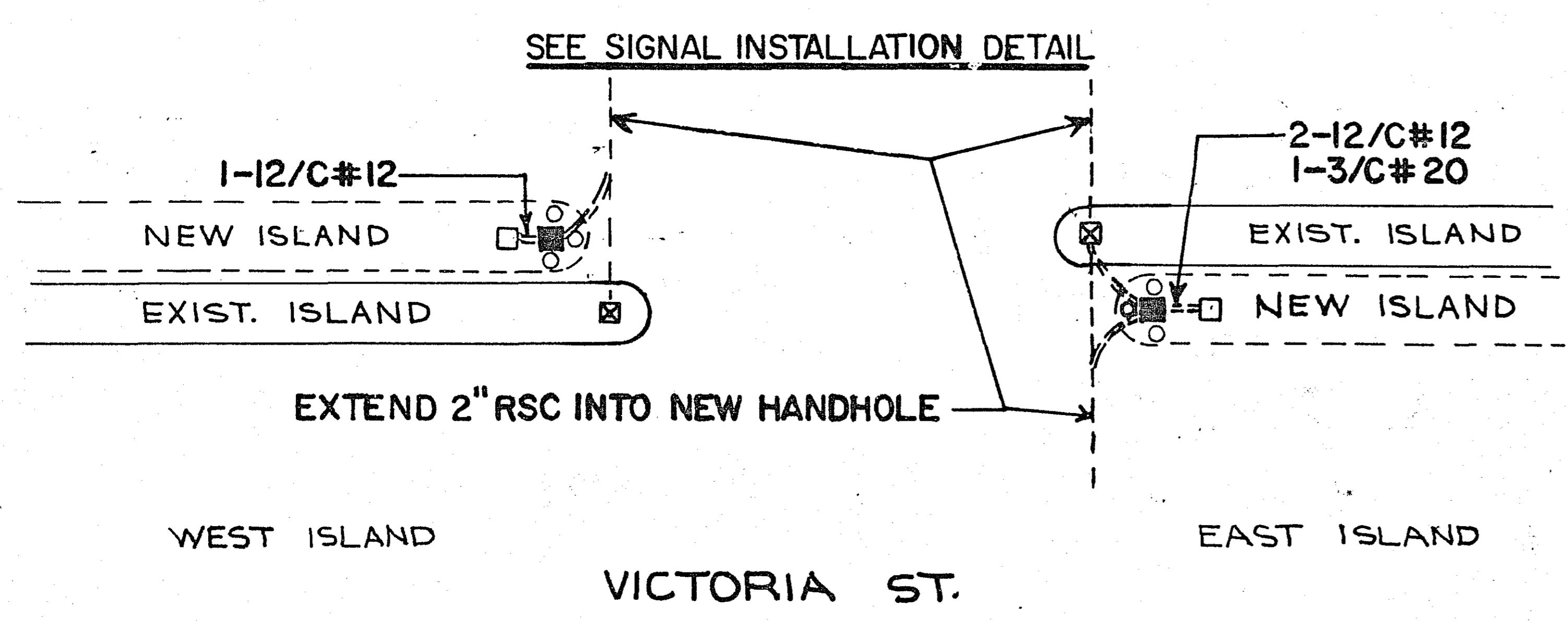
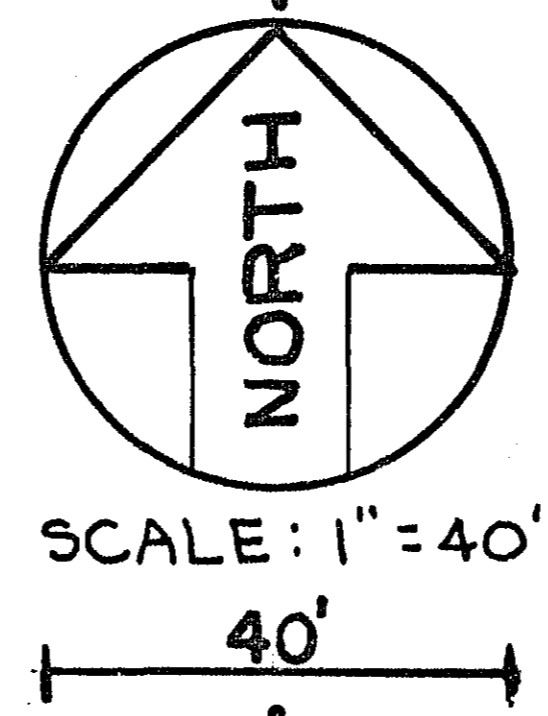
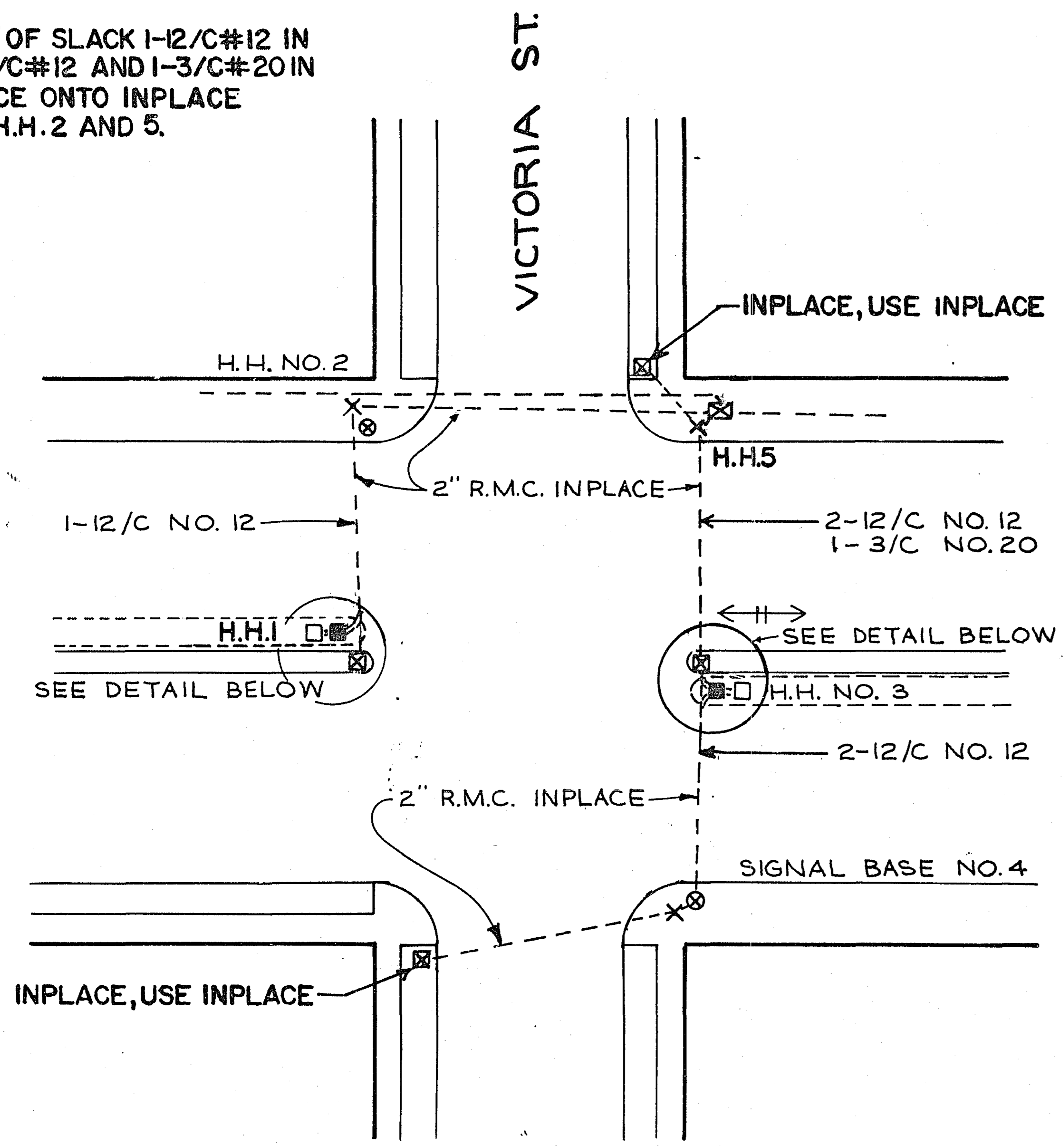


SYSTEM N
T.H.12 (UNIVERSITY AVE.) AT CHATSWORTH AVE.

FINAL CONSTRUCTION CHANGES COMPLETED
David S. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3.31.72
 DATE

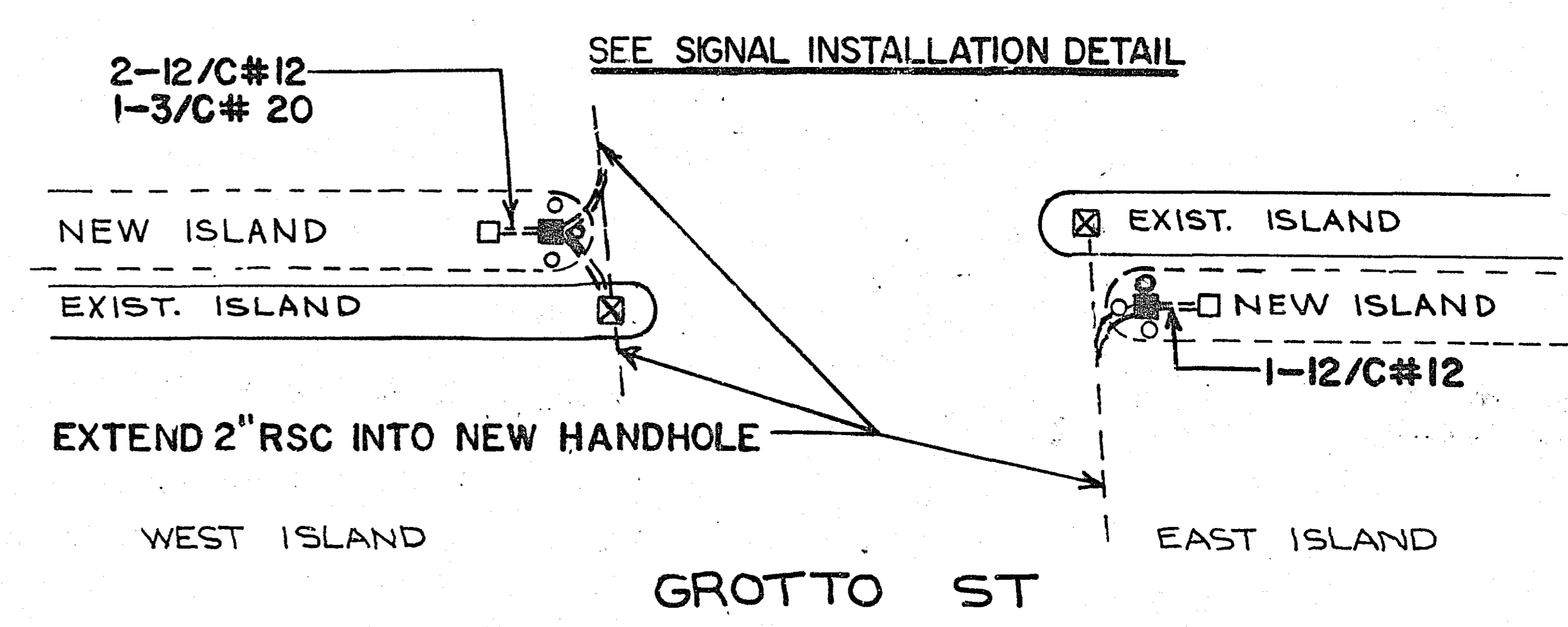
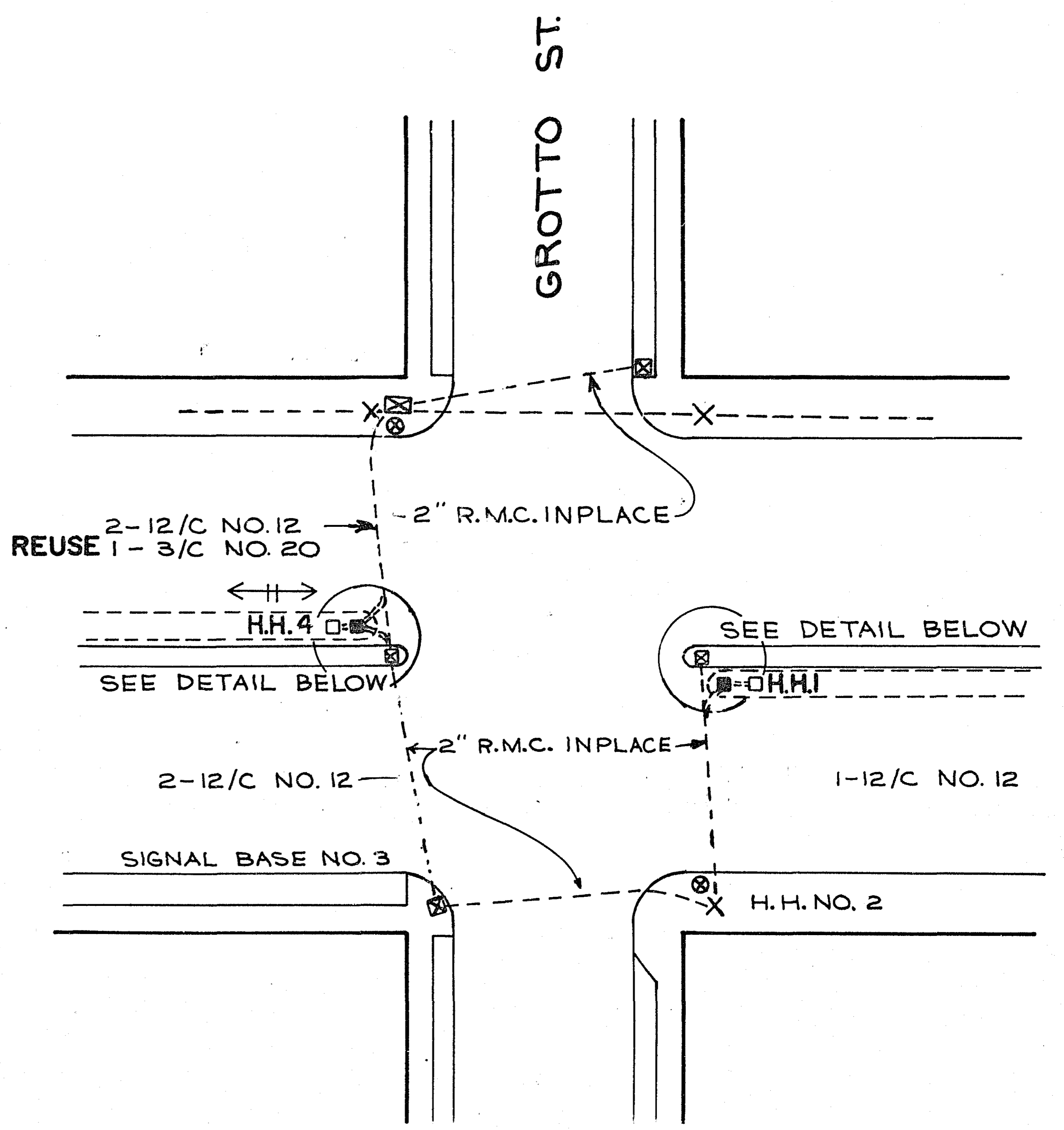
NOTE:

(1) PROVIDE 15' OF SLACK 1-12/C#12 IN H.H.2, 2-12/C#12 AND 1-3/C#20 IN H.H.5. SPLICE ONTO INPLACE CABLES IN H.H.2 AND 5.



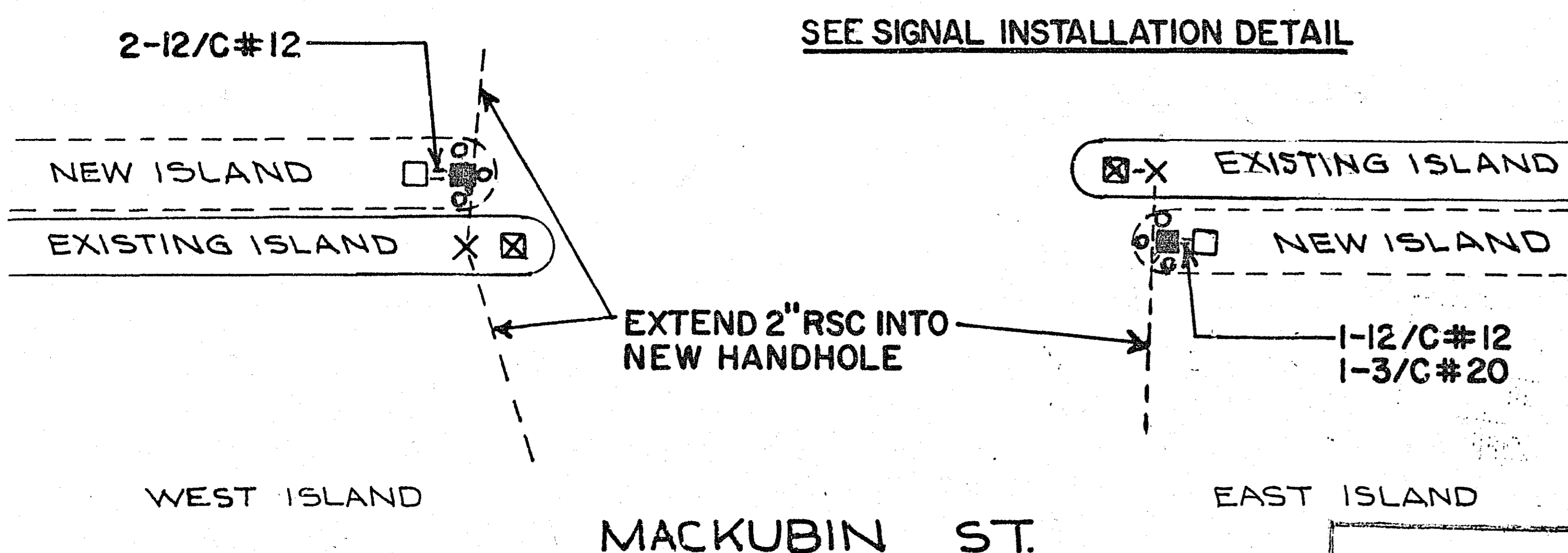
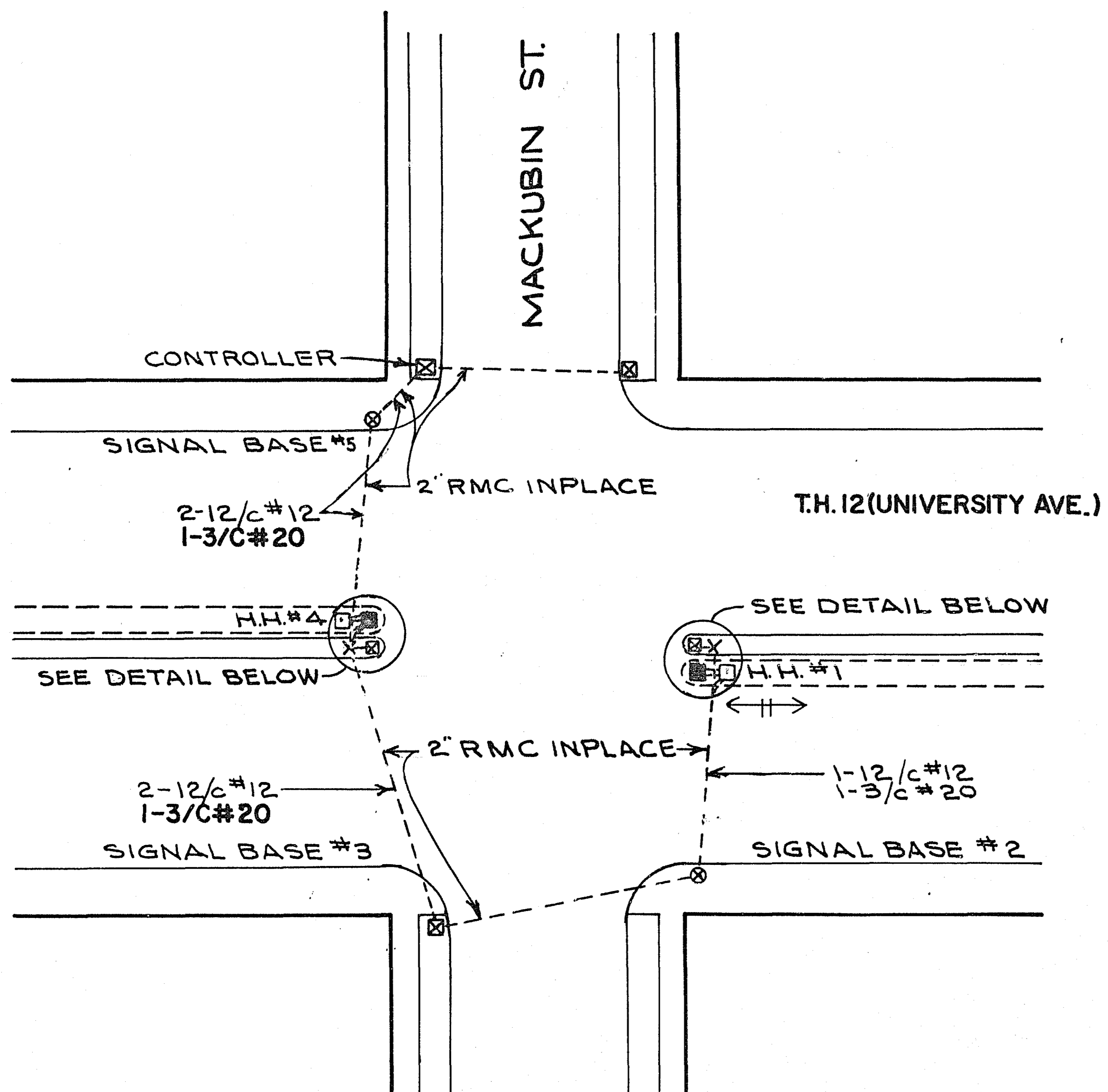
**SYSTEM O
T.H.12(UNIVERSITY AVE.) AT VICTORIA ST.**

FINAL CONSTRUCTION CHANGES COMPLETED
David J. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE



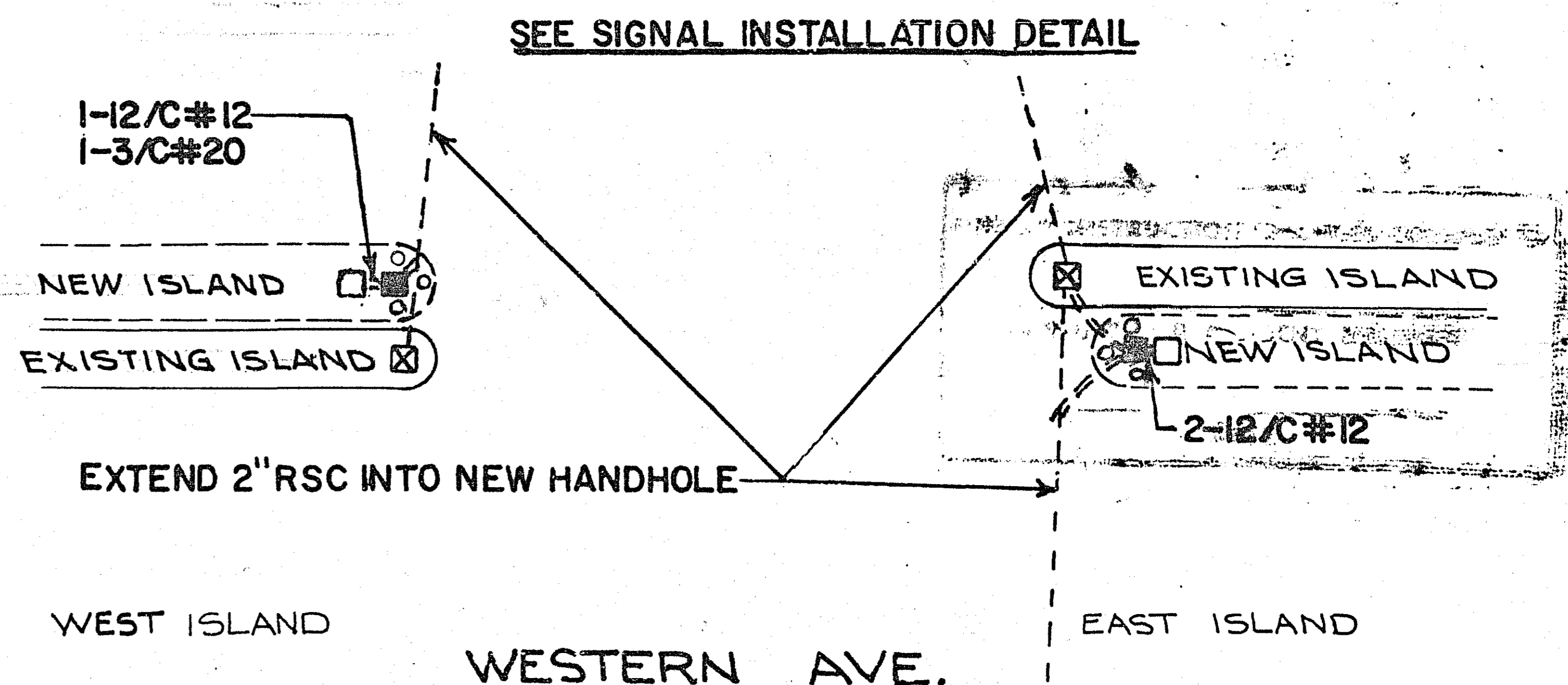
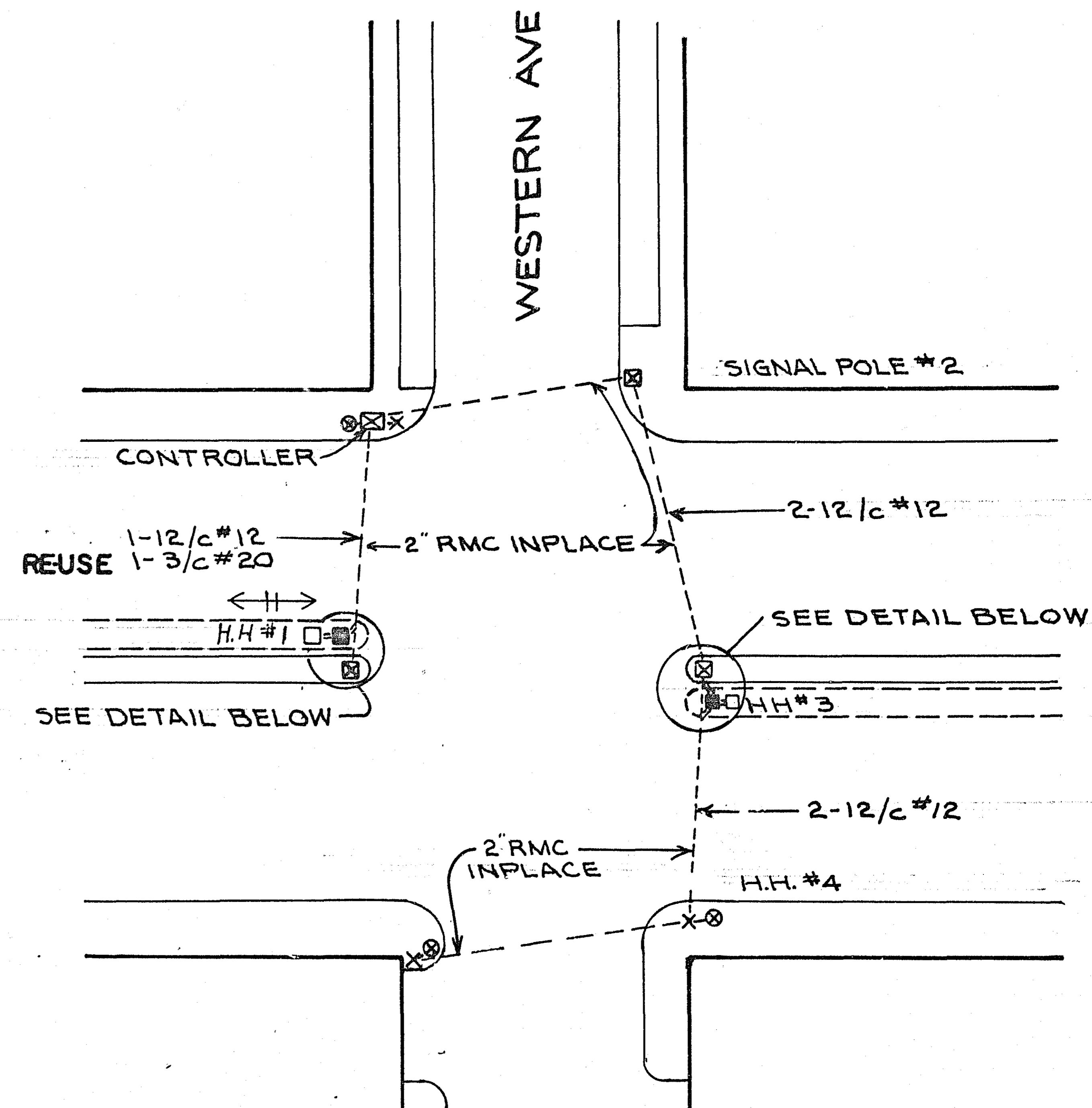
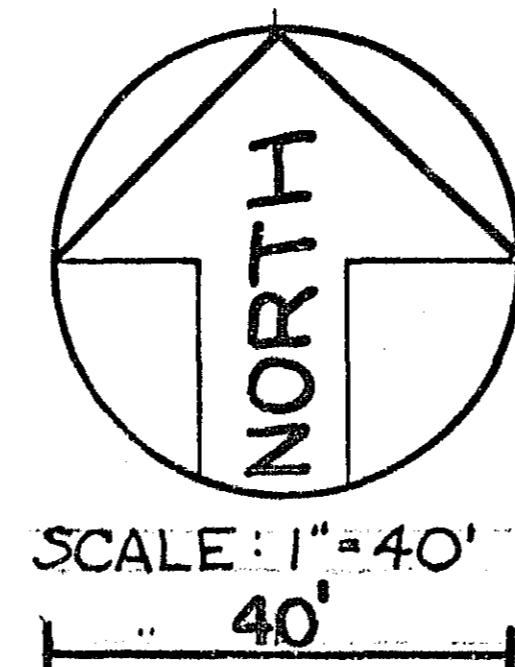
**SYSTEM P
T.H.12(UNIVERSITY AVE.) AT GROTTTO ST.**

NOTE:
 (1) PROVIDE 15' OF SLACK 2-12/C#12 IN H.H.4 AND 10' OF SLACK 1-12/C#12 IN THE CONTROLLER CABINET.

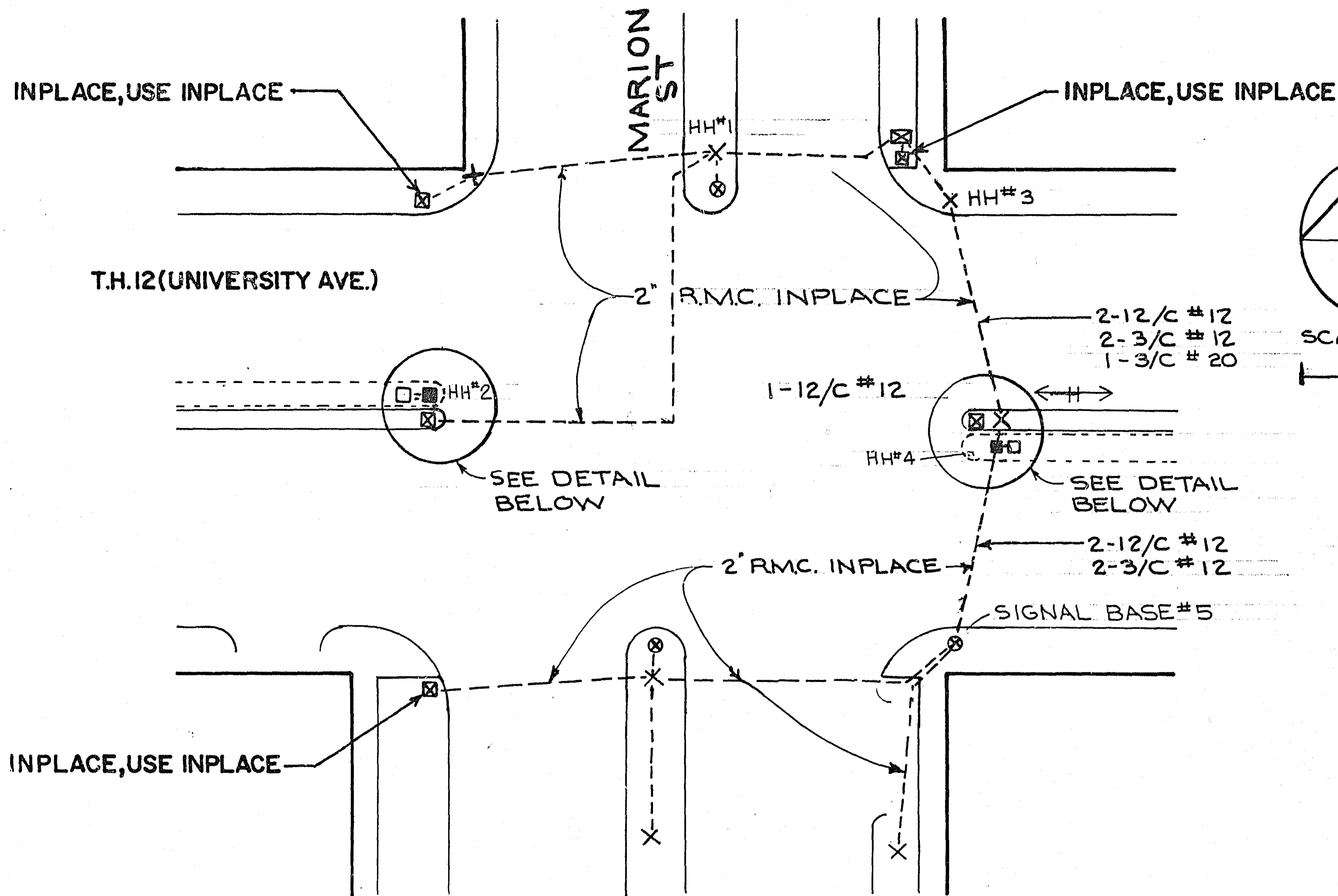


SYSTEM Q
 T.H.12 (UNIVERSITY AVE.) AT MACKUBIN ST.

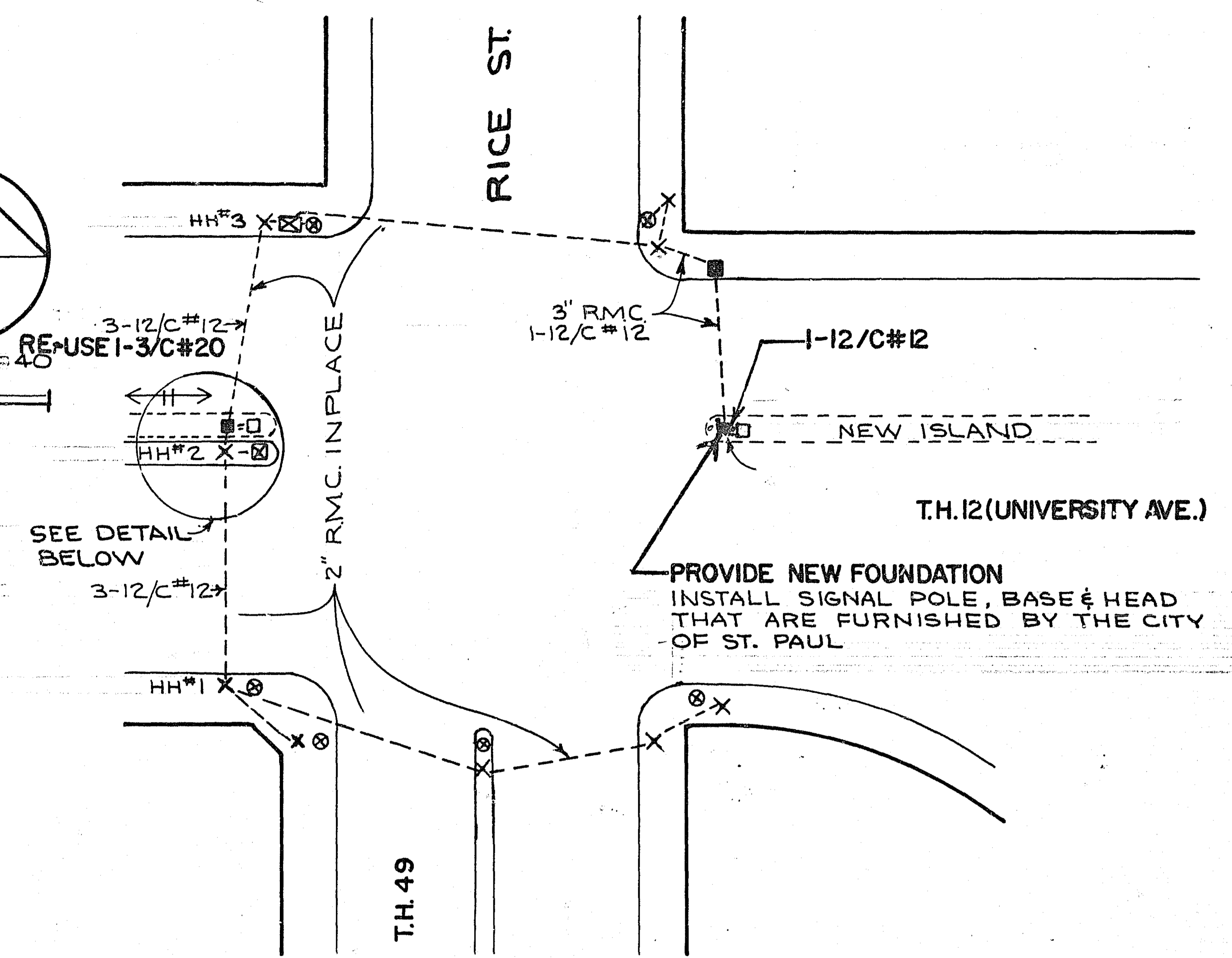
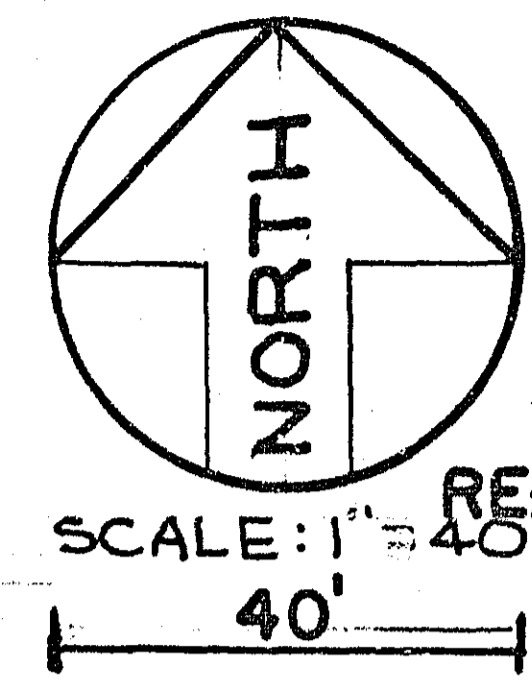
FINAL CONSTRUCTION CHANGES COMPLETED
David J. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE



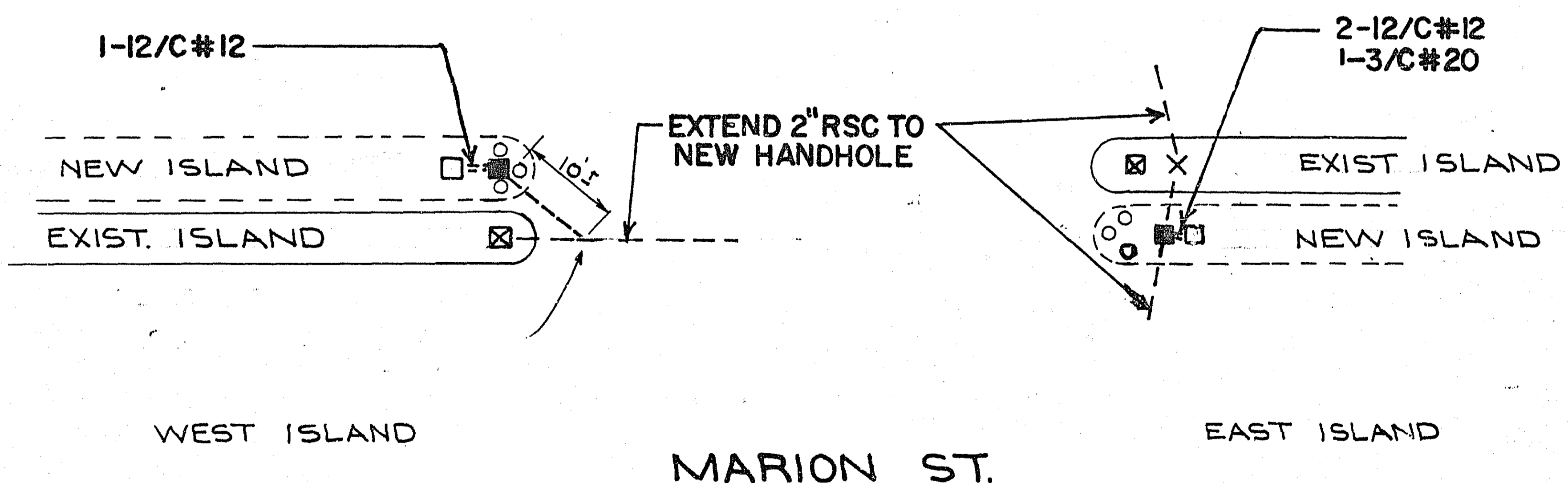
SYSTEM R
 T.H.12 (UNIVERSITY AVE.) AT WESTERN AVE.



SEE SIGNAL INSTALLATION DETAIL

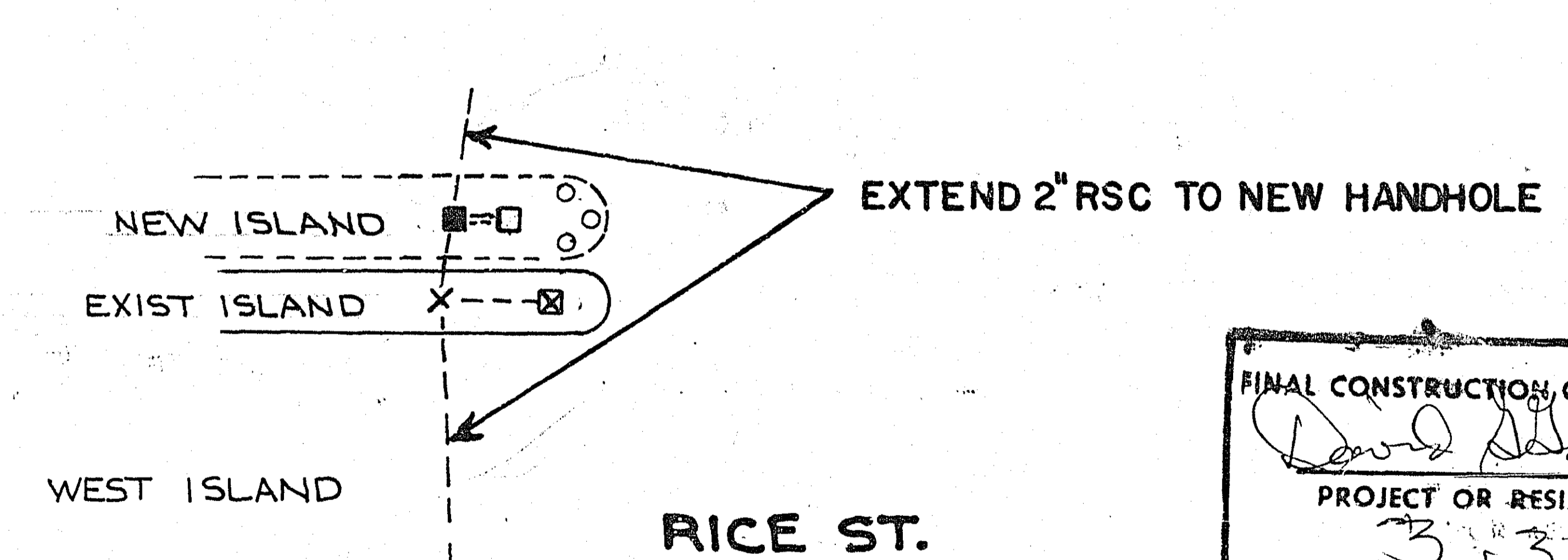


SEE SIGNAL INSTALLATION DETAIL



NOTE: PROVIDE 15' OF SLACK 2-12/C#12, 2-3/C#12, AND 1-3/C#20 IN H.H.3; SPLICE ONTO INPLACE CABLES IN H.H.3.

SYSTEM S
T.H.12 (UNIVERSITY AVE.) AT MARION ST.

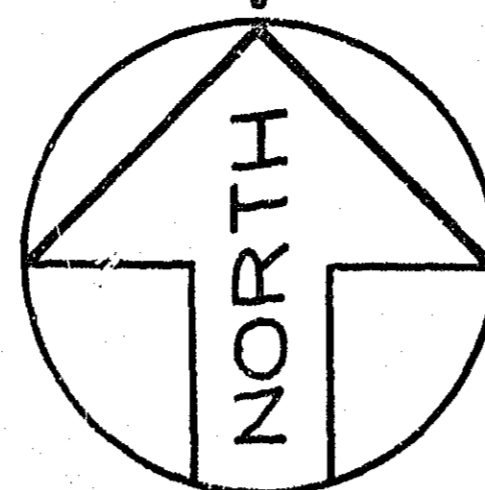


NOTE: PROVIDE 15' OF SLACK 3-12/C#12 AND 1-3/C#20 IN H.H.3 AND 3-12/C#12 IN H.H.1. SPLICE ONTO INPLACE CABLE IN H.H.1 AND 3.

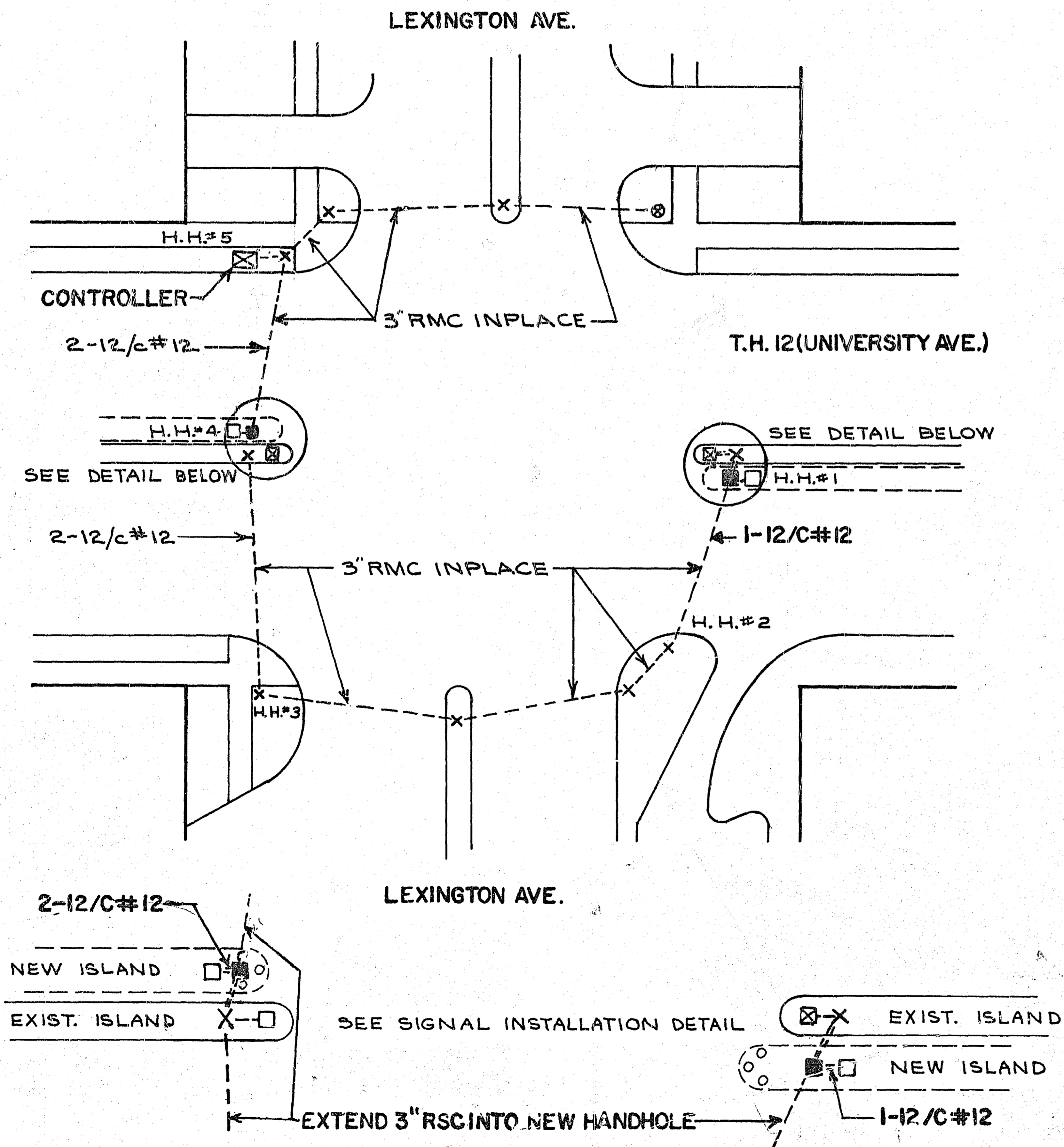
SYSTEM T
T.H.12 (UNIVERSITY AVE.) AT T.H.49 (RICE ST.)

FINAL CONSTRUCTION CHANGES COMPLETED
David [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE

NOTE:
 (1) PROVIDE 15' OF SLACK 2-12/C#12 IN H.H. 3 AND 5, AND 1-12/C#12 IN H.H. 2. SPLICE ONTO INPLACE CABLES IN H.H. 2, 3, AND 5.

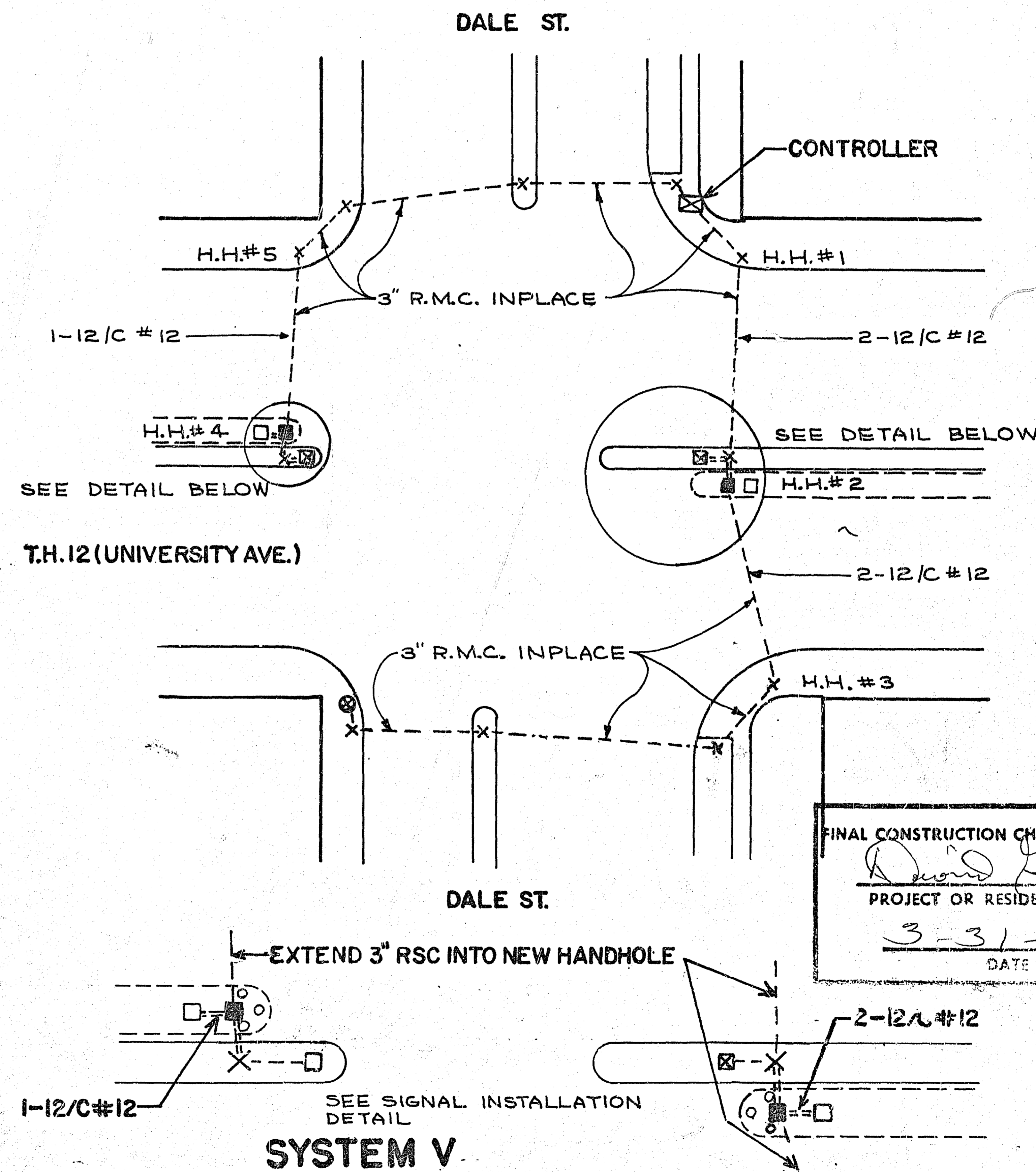


SCALE: 1" = 40'
 40'



SYSTEM U
T.H.12 (UNIVERSITY AVE.) AT LEXINGTON AVE.

NOTE:
 (1) PROVIDE 15' OF SLACK 1-12/C#12 IN H.H. 5 AND 2-12/C#12 IN H.H. 1 AND 3. SPLICE ONTO INPLACE CABLES IN H.H. 1, 3, AND 5.



SYSTEM V
T.H.12 (UNIVERSITY AVE.) AT DALE ST.

FINAL CONSTRUCTION CHANGES COMPLETED
David G. [Signature]
 PROJECT OR RESIDENT ENGINEER
 3-31-77
 DATE