

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, BASE, C.&G., & BITUMINOUS SURFACING

County State Aid Highway No. 2

Between CR 102-MAIN STREET And 577 ± WEST OF INTERSECTION OF CSAH 2
 & CR 102
 A PT. 943.56' S. & 726.72' W. OF THE NE. COR. A PT. 658.20' S. OF THE NE. COR. OF SEC. 34,
 From OF SEC. 34, T. 30 N., R. 24 W. To T. 30 N., R. 24 W.

Give proper reference to Sections, Township and Range

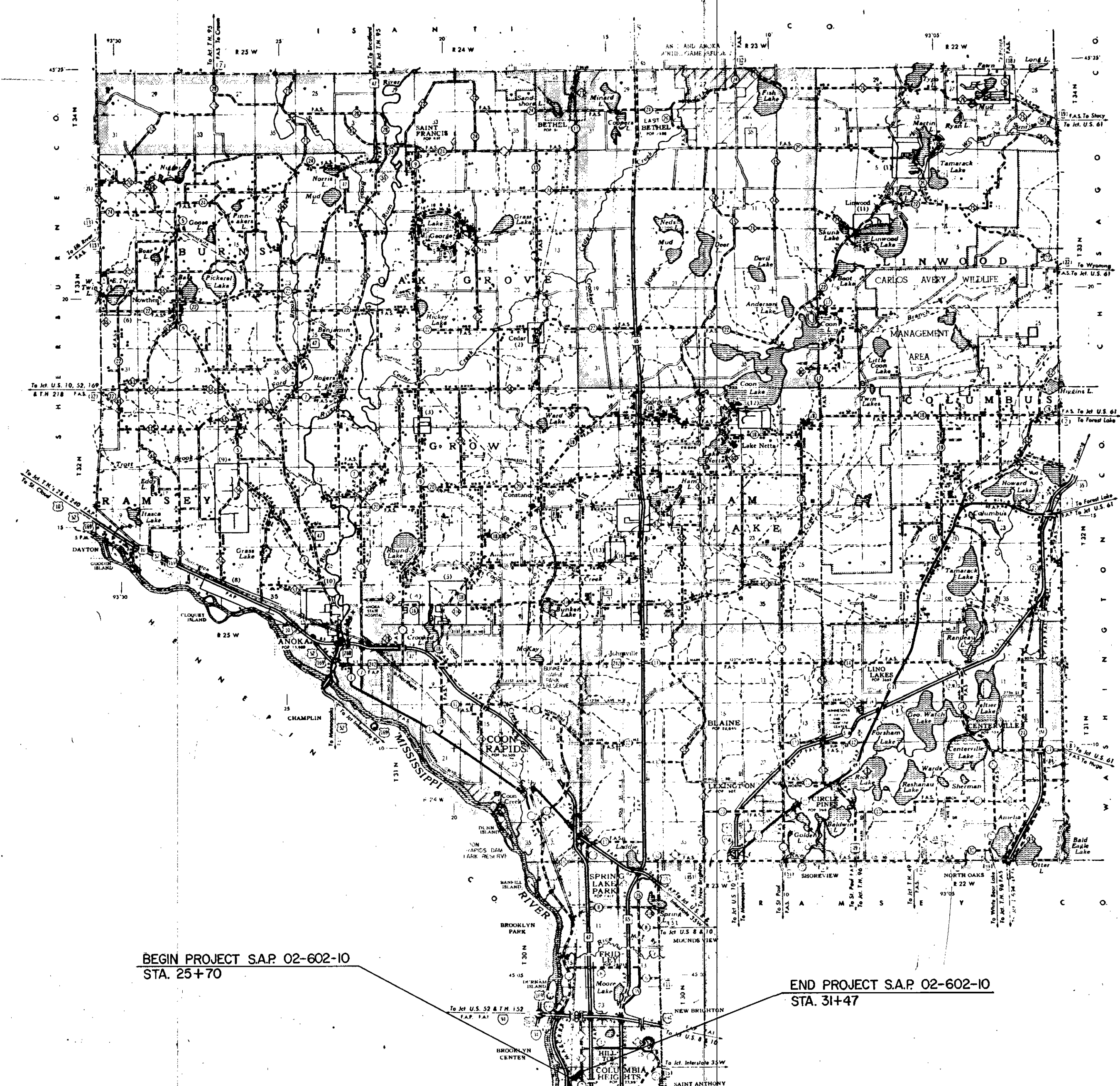
GROSS LENGTH 577.00 FEET .109 MILES
 BRIDGES-LENGTH _____ FEET _____ MILES
 EXCEPTIONS-LENGTH _____ FEET _____ MILES
 NET LENGTH 577.00 FEET .109 MILES

INDEX OF SHEETS

- Sheet No. 1. Title Sheet & Layout Map
- No. 2. Est. Quantities & Typical Sec.
- No. 3-4 Misc. Const. Details
- No. 4 Sewer Details
- No. 5 Plan & Profile
- No. 6-7 Cross Sections

CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEEN LINE
- RIGHT OF WAY LINE
- PRESERVE RIGHT OF WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Except Land Lines)
- LOCATED PLATTER PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RYER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- ELECTRIC POWER LINE
- TELEPHONE OR TELEGRAPH LINE
- JOINT TELEPHONE AND POWER
- CONDUIT
- TELEPHONE CABLE-AERIAL
- TELEPHONE CABLE UNDERGROUND
- POWER CABLE UNDERGROUND
- GAS MAIN
- COUVERT
- DROP INLET
- GUARD RAIL
- BANDED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SHOW FENCE
- STONE WALL OR FENCE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- OPENER
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- HORSESHOE
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F FRAME
- C CONCRETE
- S STONE
- T TILE
- B BRICK
- ST STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BARROW PIT
- ROCK QUARRY
- MEANDER CORNER



SCALE
 INDEX MAP 2 MI.
 PLAN & PROFILE VERT. 5'
 HORIZ. 50'
 CROSS SECTIONS 10'

BEGIN PROJECT S.A.P. 02-602-10
STA. 25+70

END PROJECT S.A.P. 02-602-10
STA. 31+47

DESIGN DESIGNATION

ADT (CURRENT YEAR) 9,285
 ADT (FUTURE YEAR) 14,855
 HCADT (HEAVY COMMERCIAL) 600-1,100
9 Ton Design
 Design Speed 30 MPH
 Design Speed not achieved at:
 STA _____ TO STA _____ MPH
 STA _____ MPH

SPECIFICATIONS

THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, 1983 EDITION AND SUPPLEMENTAL SPECIFICATIONS, DATED JUNE 1, 1984, SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

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.

Paul K. Rind
 COUNTY ENGINEER DATE 8-9-84

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL _____ 19____
 DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL _____ 19____

APPROVED _____ 19____
 STATE AID ENGINEER

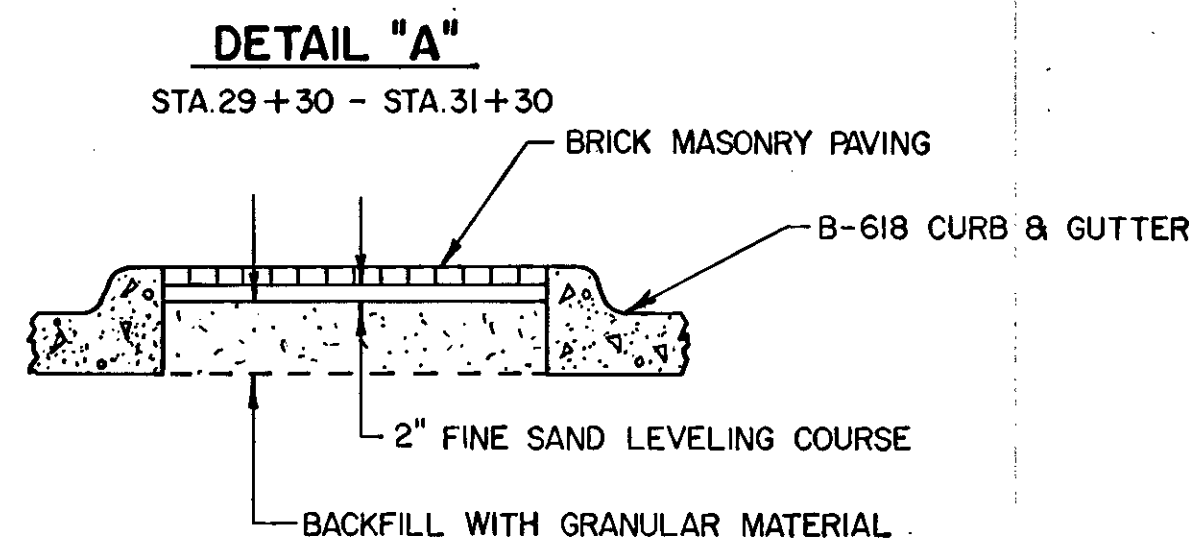
Minn. Proj. No. _____ County Proj. No. _____
 State Proj. No. _____ S. A. P. 02-602-10

County, Minnesota. Plan No. _____ Sheet 1 of 7 Sheets

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE, TYPE D	EACH	1	
2101.502	CLEARING	TREE	3	
2101.507	GRUBBING	TREE	3	
2104.521	SALVAGE FENCE	LIN. FT.	240	
0557.603	INSTALL FENCE	LIN. FT.	240	
④ 2105.501	COMMON EXCAVATION	CU. YD.	1,666	
2105.525	TOPSOIL BORROW (L.V.)	CU. YD.	85	
① 2130.501	WATER	M-GALLON	15	
2211.503	AGGREGATE BASE PLACED, CLASS- 5A	CU. YD.	969	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	57	
2331.510	BINDER COURSE MIXTURE	TON	315	
2331.574	BASE COURSE MIXTURE	TON	945	
2331.531	TEMPORARY LANE MARKING	RD. STA.	37	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	14	
2341.508	WEARING COURSE MIXTURE	TON	240	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	290	
2503.541	12" R.C. PIPE SEWER, DESIGN 3006	LIN. FT.	179	
2503.541	15" R.C. PIPE SEWER, DESIGN 3006	LIN. FT.	181	
2506.506	CONSTRUCT MANHOLES, DESIGN A OR F	LIN. FT.	6.1	
2506.506	CONSTRUCT MANHOLES, DESIGN 4020	LIN. FT.	6.7	
2506.507	CONSTRUCT CATCH BASINS, DESIGN SPECIAL NO.1	LIN. FT.	7.6	
2506.507	CONSTRUCT CATCH BASINS, DESIGN SPECIAL NO.2	LIN. FT.	5.3	
2506.507	CONSTRUCT CATCH BASINS, DESIGN C OR G	LIN. FT.	4.7	
2506.516	CASTING ASSEMBLIES	EACH	6	
2506.522	ADJUST FRAME AND RING CASTINGS	EACH	6	
② 2531.501	CONCRETE CURB AND GUTTER, DESIGN B-618	LIN. FT.	1,354	
⑤ 0531.503	BRICK MEDIAN	SQ. YD.	61	
2535.501	BITUMINOUS CURB	LIN. FT.	24	
0504.602	RELOCATE HYDRANT	EACH	1	
0504.602	ADJUST WATER GATE HOUSING	EACH	1	
0504.602	RELOCATE SPRINKLER SYSTEM	SYSTEM	1	
③ 2545.521	3" RIGID STEEL CONDUIT - SIGNAL	LIN. FT.	80	
2575.505	SODDING	SQ. YD.	840	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	0.1	

1. PROVIDED FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
2. INCLUDES 413' FOR MEDIAN.
3. FOR FUTURE SIGNAL SYSTEM.
4. COMMON EXCAVATION QUANTITY INCLUDES ALL BITUMINOUS PAVEMENT MATERIAL TO BE REMOVED.
5. FOR PAVING MEDIAN WITH RED BRICK



STANDARD PLATES

PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 I	REINFORCED CONCRETE PIPE
3006 D	GASKET JOINT FOR R.C. PIPE
3100 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
4000 I	MANHOLE OR CATCH BASIN - DESIGN A
4002 E	MANHOLE OR CATCH BASIN - DESIGN C
4005 K	MANHOLE OR CATCH BASIN - DESIGN F
4006 K	MANHOLE OR CATCH BASIN - DESIGN G
4020 D	MANHOLE OR CATCH BASIN
4C10 F	CONCRETE SHORT CONE & ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 D	COVER CASTING FOR MANHOLE
4180 G	MANHOLE OR CATCH BASIN STEP
7036 C	PEDESTRIAN CURB RAMP
7065 C	BITUMINOUS CURB
7100 F	CONCRETE CURB & GUTTER
7110 E	CURB & GUTTER CONSTRUCTION AT CATCH BASIN
7111 F	INSTALLATION OF CATCH BASIN CASTINGS
8000 H	STANDARD BARRICADES
8003 B	BREAKAWAY SIGN SUPPORT (PLASTIC)
9322 I	CHAIN LINK FENCE

BASIS OF PLANNED QUANTITIES

- 2211 AGGREGATE BASE CLASS - 5A, 145 LBS./CU. FT. COMPACTED.
- 2331 PLANT MIXED BASE COURSE, BITUMINOUS MIXTURE 110 LBS./S. Y. PER 1" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 4.5% BY WT.
- 2331 PLANT MIXED BINDER COURSE, BITUMINOUS MIXTURE 110 LBS./S. Y. PER 1" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 4.5% BY WT.
- 2341 PLANT MIXED WEARING COURSE, BITUMINOUS MIXTURE 110 LBS./S. Y. PER 1" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 6.0% BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER S. Y.
- 2575 COMMERCIAL FERTILIZER, ANALYSIS 10-10-10, 500# /AC. ON ALL SOD AREAS.

ADJ. FRAME & RING CASTINGS

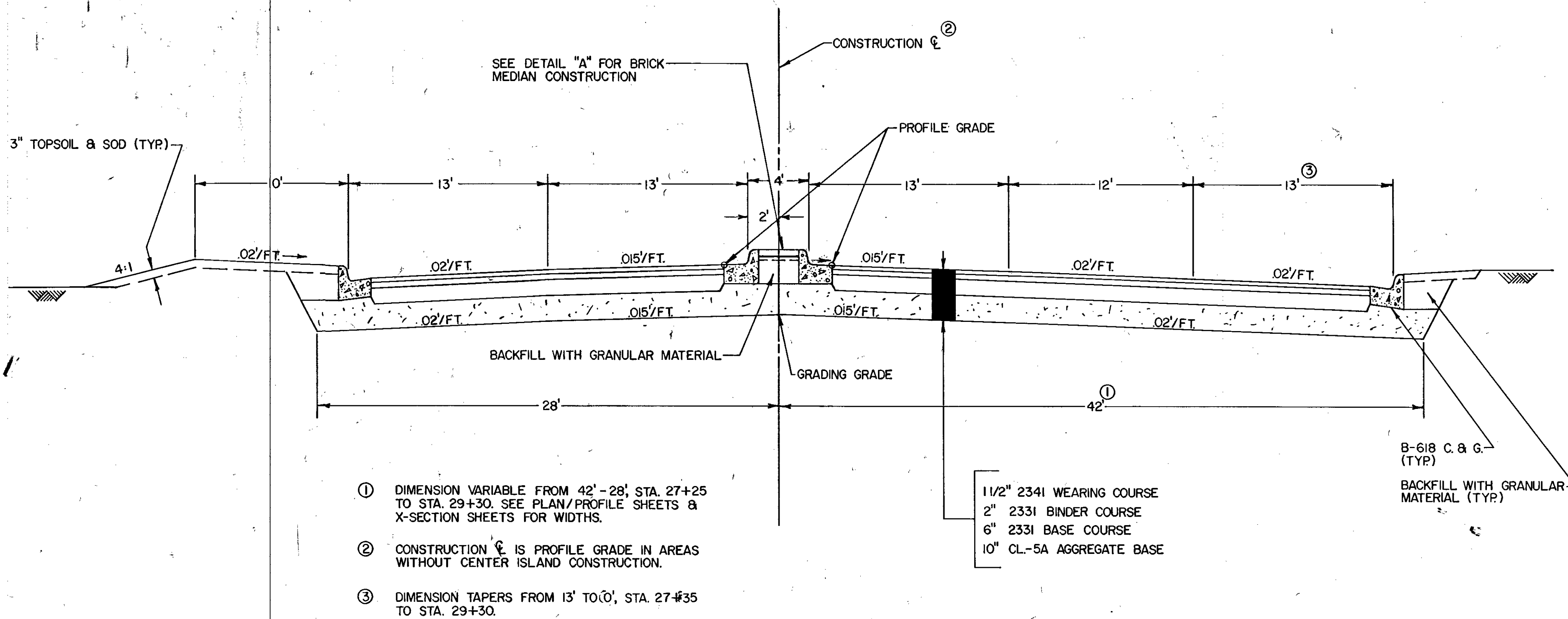
STATION	LOCATION	TYPE
27+50	28' LT.	M.H.
29+45	32' LT.	M.H.
29+65	15' LT.	M.H.
29+86	32' LT.	M.H.

SPECIAL DETAILS

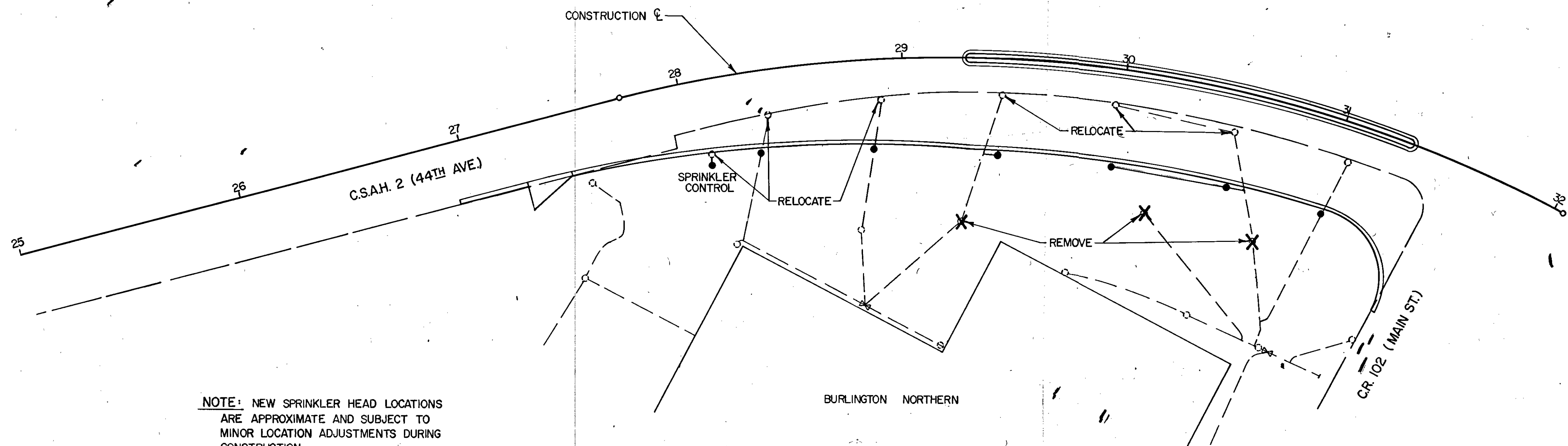
INPLACE TOPSOIL SHALL BE SALVAGED AND USED TO THE FULLEST EXTENT POSSIBLE PRIOR TO THE USE OF TOPSOIL BORROW ON AREAS DISTURBED BY CONSTRUCTION OPERATIONS. SALVAGE OF INPLACE TOPSOIL FOR USE IN TURF ESTABLISHMENT SHALL BE CONSIDERED TO BE INCIDENTAL TO COMMON EXCAVATION AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.

DISPOSAL OF ANY EXCESS EXCAVATED MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE PROVISIONS OF 2104. ALL BITUMINOUS PAVEMENT SCHEDULED TO BE REMOVED (APPROXIMATELY 1,732 SQ. YDS.) IS INCLUDED IN COMMON EXCAVATION QUANTITIES. DISPOSAL WILL NOT BE ALLOWED WITHIN THE RIGHT OF WAY.

GRADING, BASE & BITUMINOUS SECTION



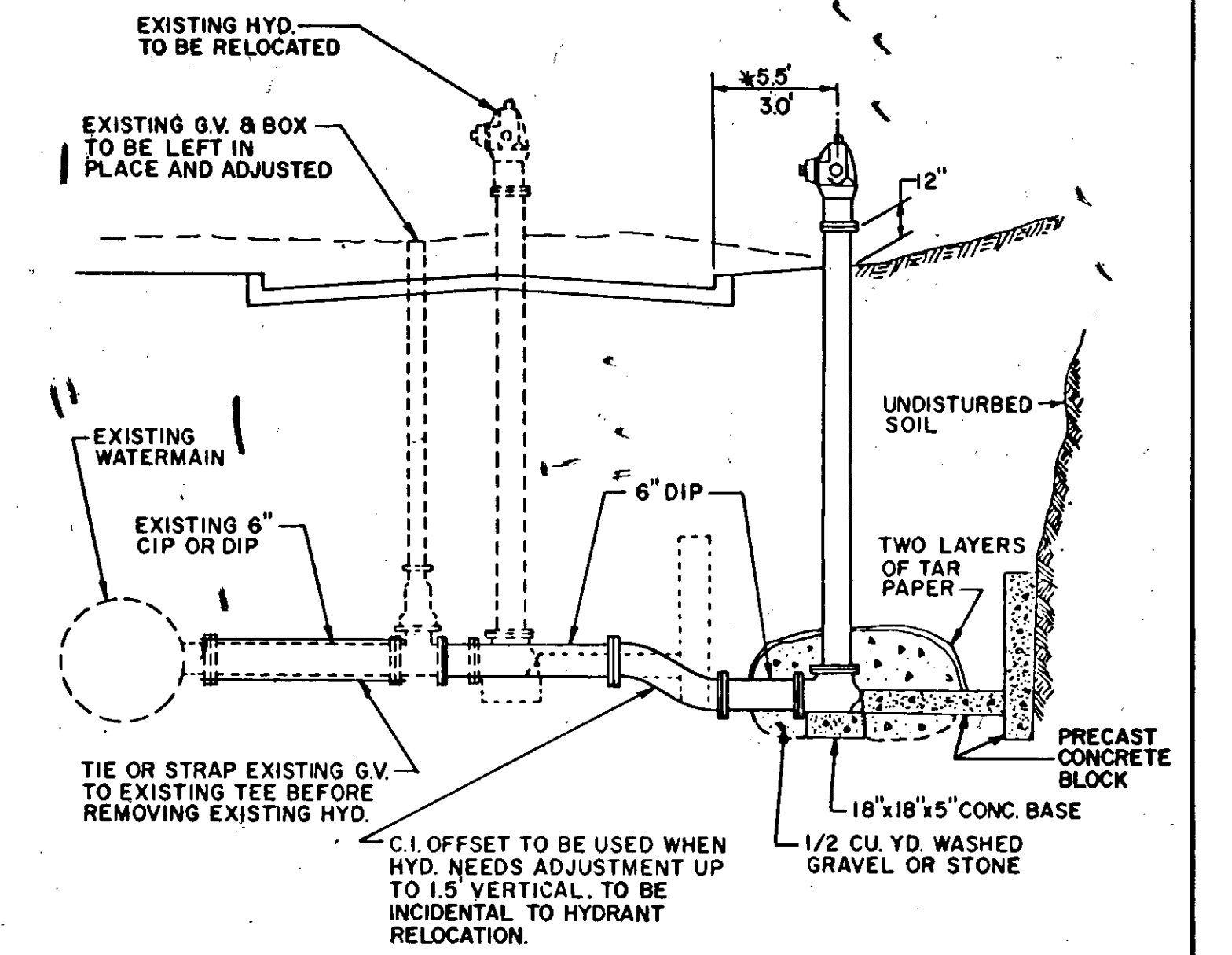
DETAIL "B"
SPRINKLER SYSTEM RELOCATION DETAIL



NOTE: NEW SPRINKLER HEAD LOCATIONS ARE APPROXIMATE AND SUBJECT TO MINOR LOCATION ADJUSTMENTS DURING CONSTRUCTION.

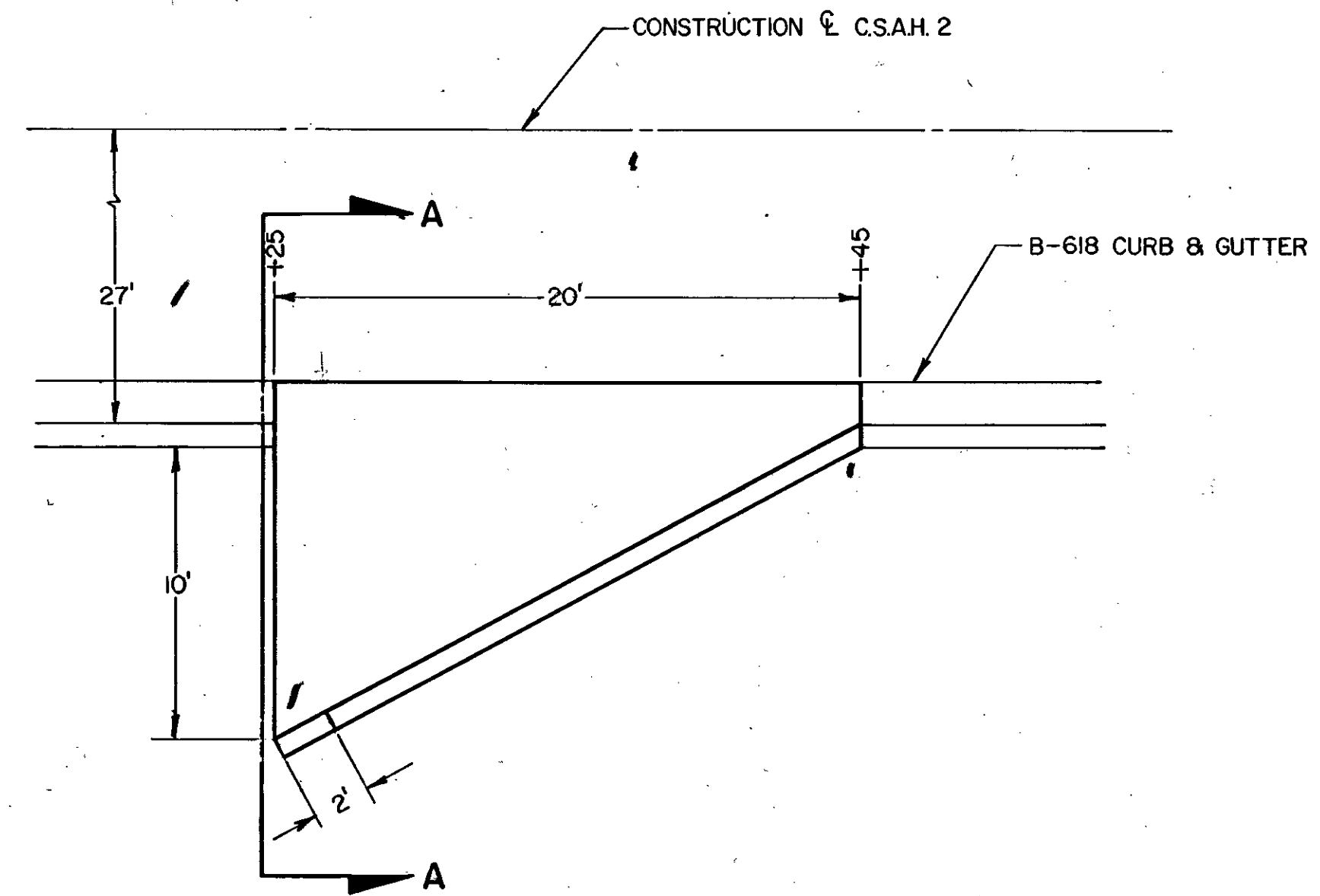
- SPRINKLER HEADS:**
- EXISTING LOCATION
 - PROPOSED LOCATION

HYDRANT RELOCATION DETAIL

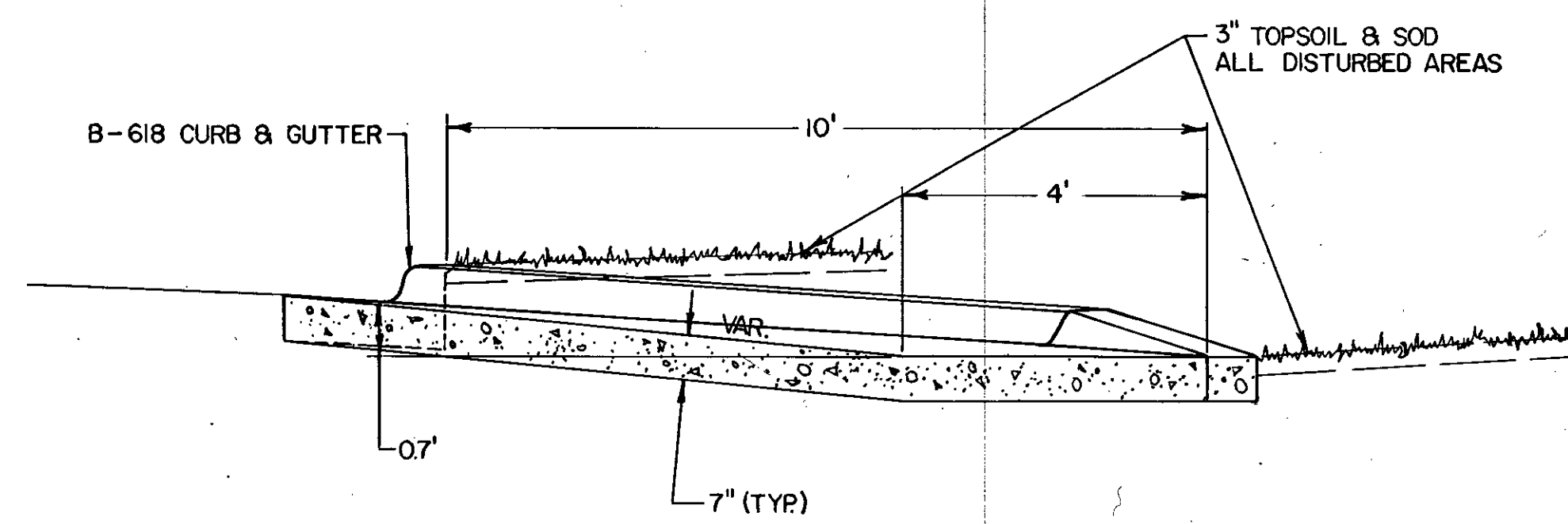


NOTE: HYDRANT RELOCATION SHALL INCLUDE ALL TOOLS, MATERIALS AND LABOR TO SECURE THE EXISTING GATE VALVE TO THE EXISTING TEE, REMOVE AND RELOCATE THE EXISTING HYDRANT INCLUDING CAST IRON PIPE, GRAVEL, TIMBERS, COMPACTOR OF DISTURBED RAILS AND ALL ELSE NECESSARY TO RELOCATE THE HYDRANT WITHOUT SHUTTING DOWN THE WATERMAIN.

FLUME CONSTRUCTION DETAIL
STA. 27+25 TO STA. 27+45 RT.

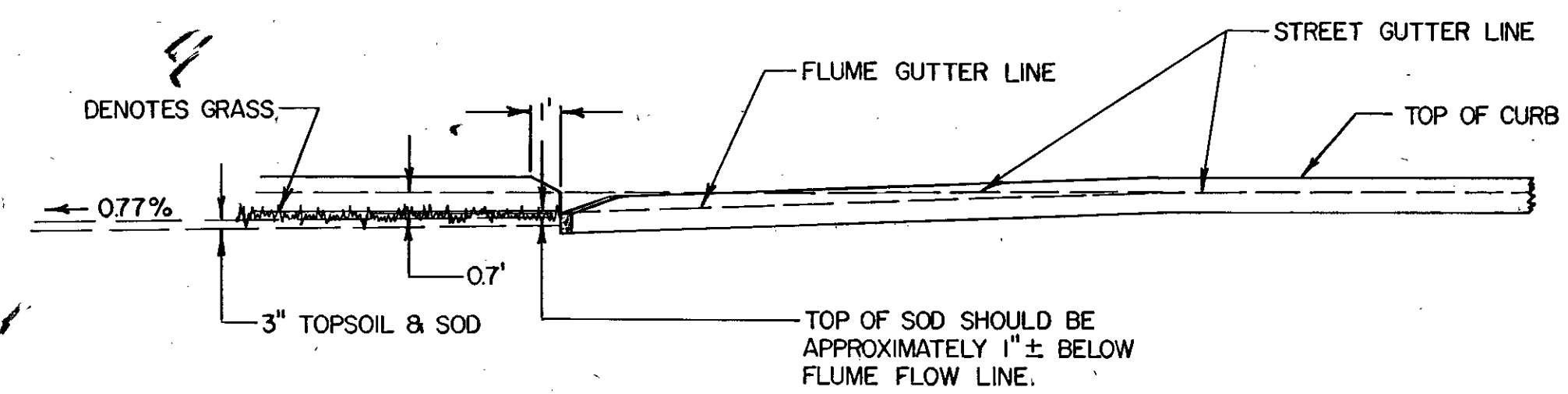


SECTION A-A



NOTE: FLUME CONSTRUCTION WILL BE CONSIDERED AS INCIDENTAL TO CURB AND GUTTER CONSTRUCTION, AND NO ADDITIONAL COMPENSATION WILL BE MADE.

GUTTER PROFILE



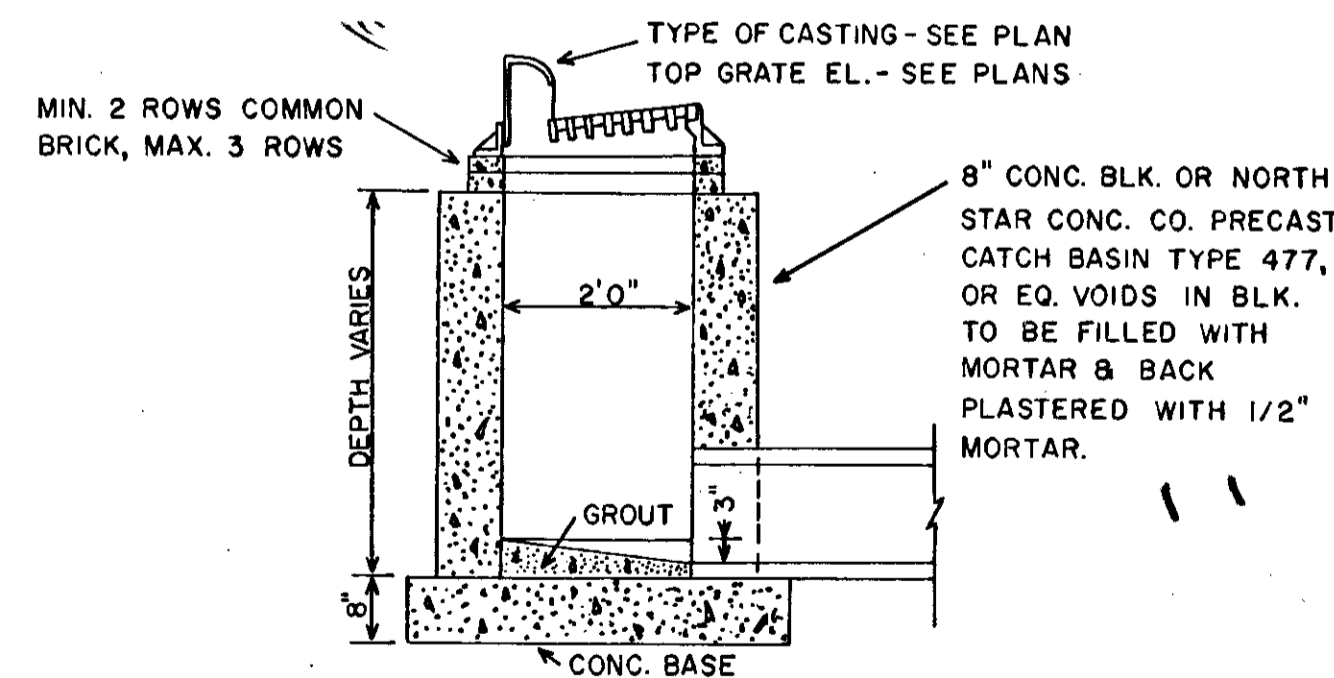
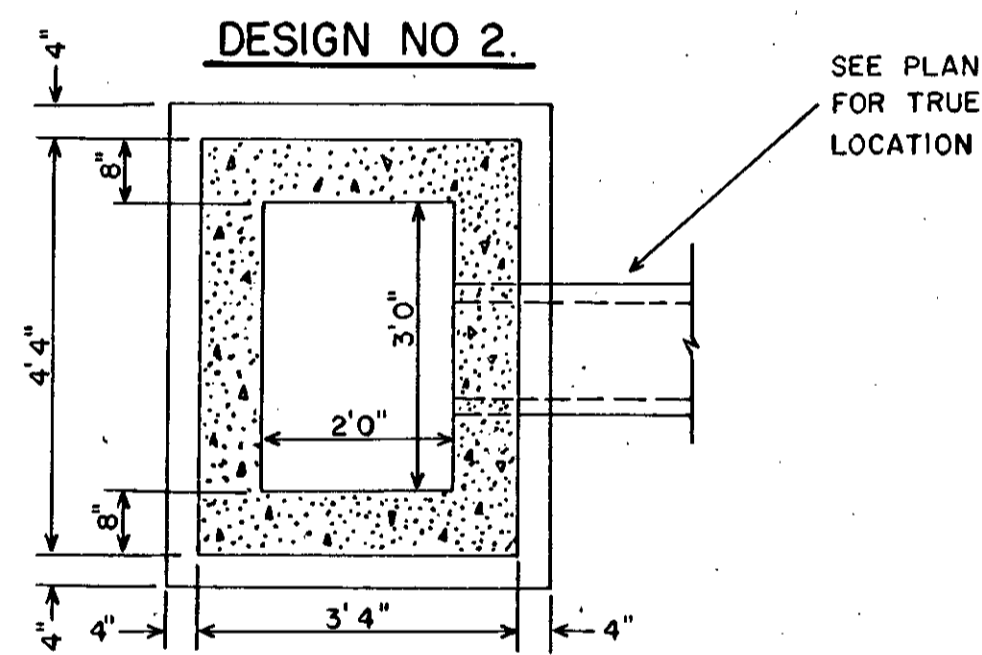
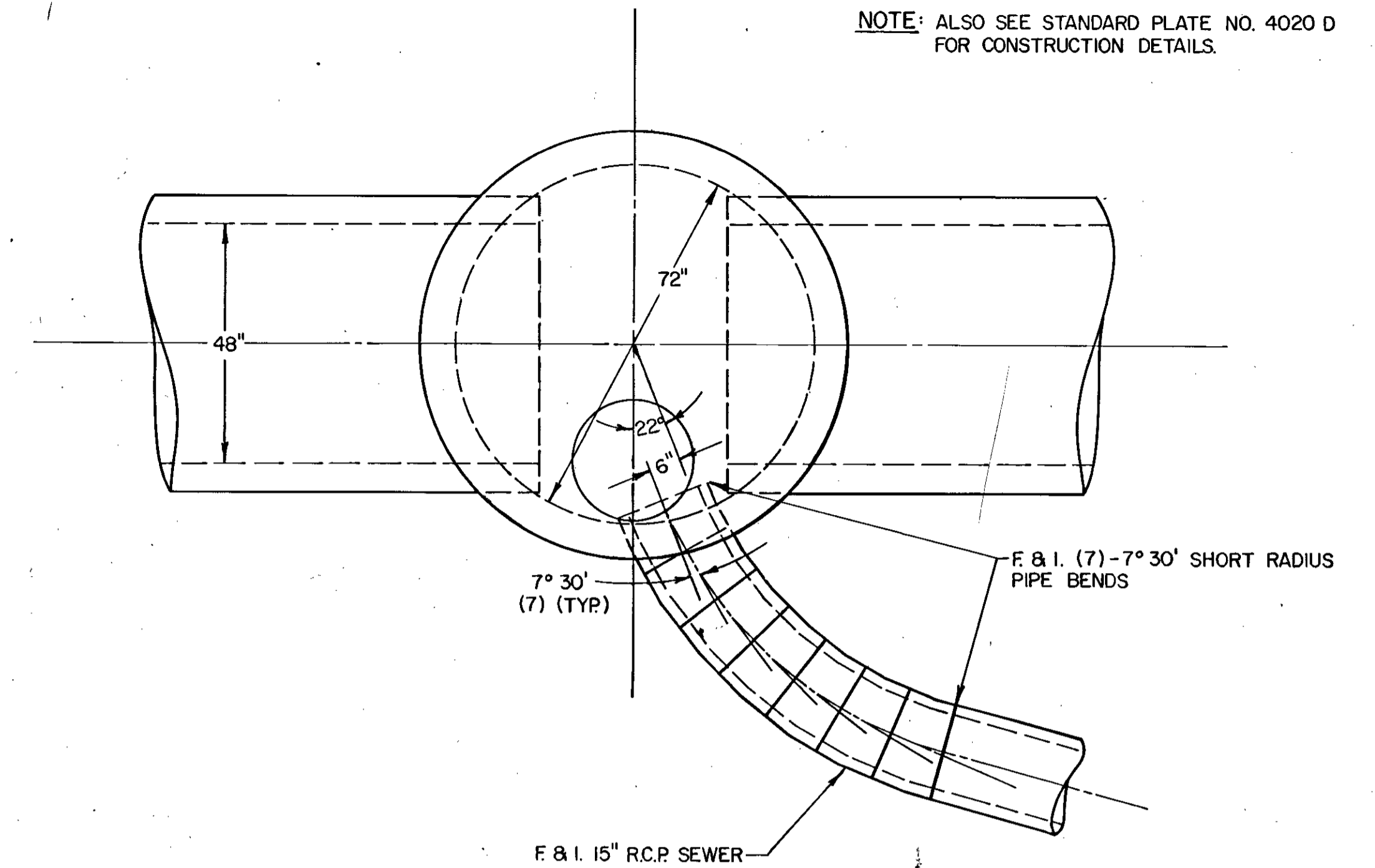
STORM SEWER													
NO.	STA.	LOC.	REMARKS	TYPE	DESIGN	LIN. FT.	TOP	OUTLET	DRAINS TO	F&I CAST. ASSEMBLY	F&I R.C. SEWER PIPE		RCP APRON
											12" CL. II	15" CL. II	
1	30+35	39.5' RT.		CB	SPECIAL #2	3.4	844.63	841.50	CB 2	B	67'		
2	30+35	27.5' LT.		CB	SPECIAL #2	4.2	844.87	840.94	MH 3	B		90'	
3	31+20	36.0' LT.		MH	A OR F	6.1	846.60	840.58	MH 5	A		① 83'	
4	31+47	75.0' RT.		CB	SPECIAL #1	5.3	848.07	843.00	MH 3	② C	112'		
5	5+82	28.0' LT.	CONST. MH ON INPLACE 48" RCP SEWER	MH	③ 4020	6.7	844.50	837.85	48" INPL.	A			
6	25+70	22.0' LT.	F & I. 15" RCP APRON	CB	C OR G	4.7	843.20	838.75	DITCH	D		8'	1
TOTALS										6	179'	181'	1

- ① INCLUDES (7)-7' 30" SHORT RADIUS PIPE BENDS
- ② DOUBLE UNIT CONSIDERED AS ONE ASSEMBLY FOR PAYMENT
- ③ 72" INSIDE DIAMETER

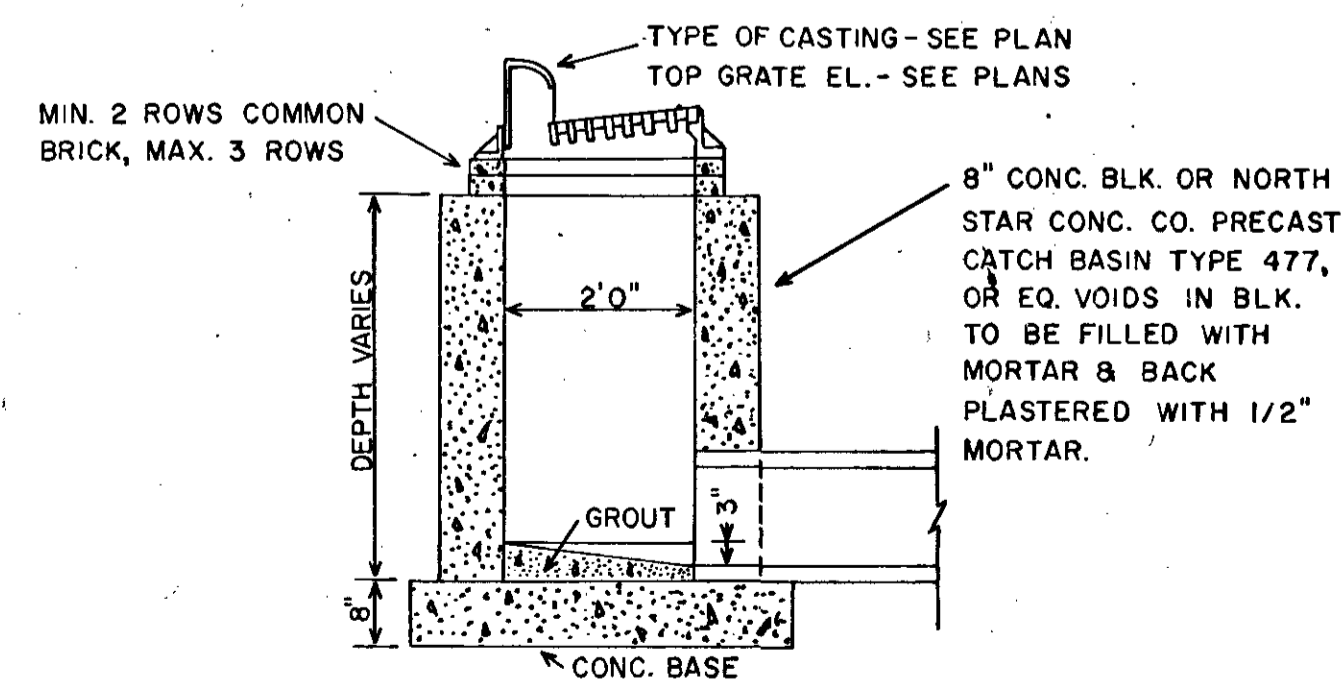
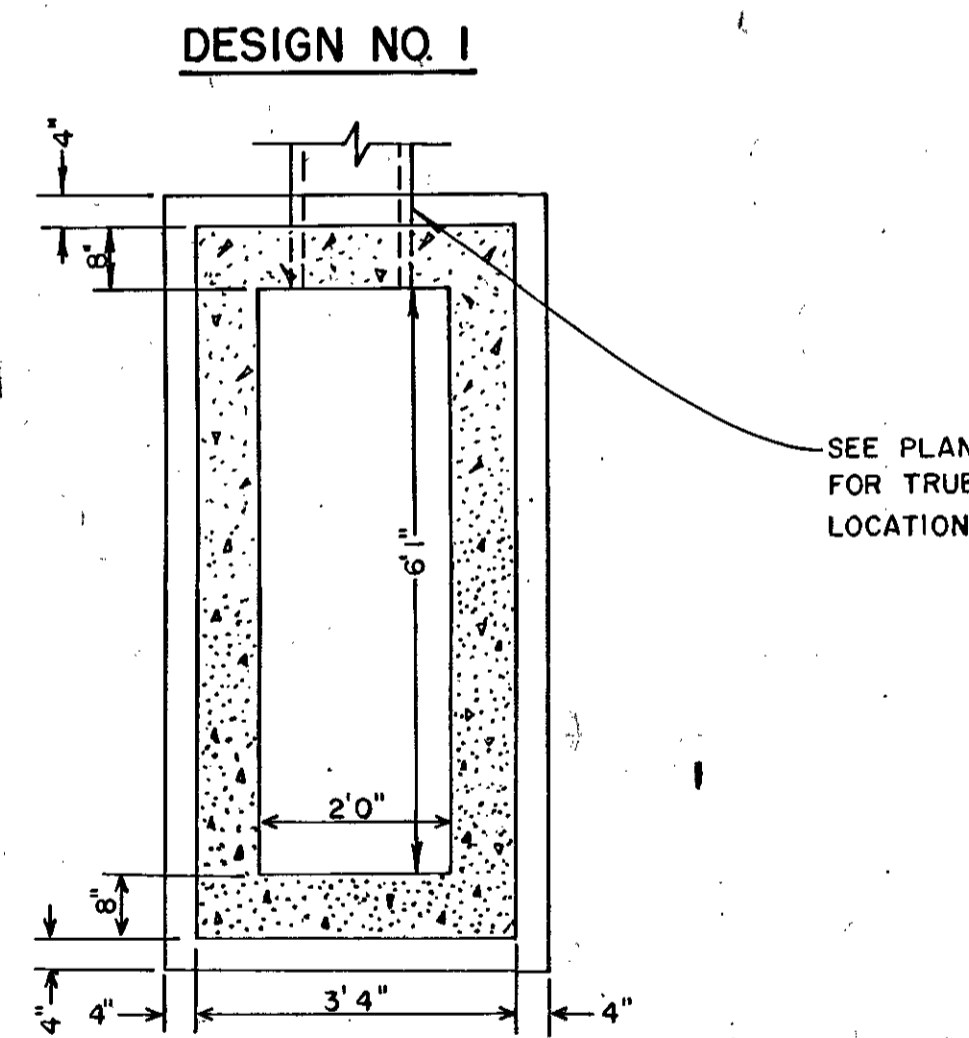
CASTING ASSEMBLIES			
ASSEMBLY	ITEM	CASTING NO.	QUANTITY
A	FRAME COVER	700-7 712	2
B	FRAME GRATE CURB BOX	NEENAH R-3067 OR EQUAL SEE CASTING DETAIL	2
C	DOUBLE UNIT INLET FRAME GRATE CURB BOX	NEENAH R-3295-AV OR EQUAL SEE CASTING DETAIL	1
D	FRAME GRATE CURB BOX	NEENAH R-3229-L OR EQUAL SEE CASTING DETAIL	1

MH #5 DESIGN 4020

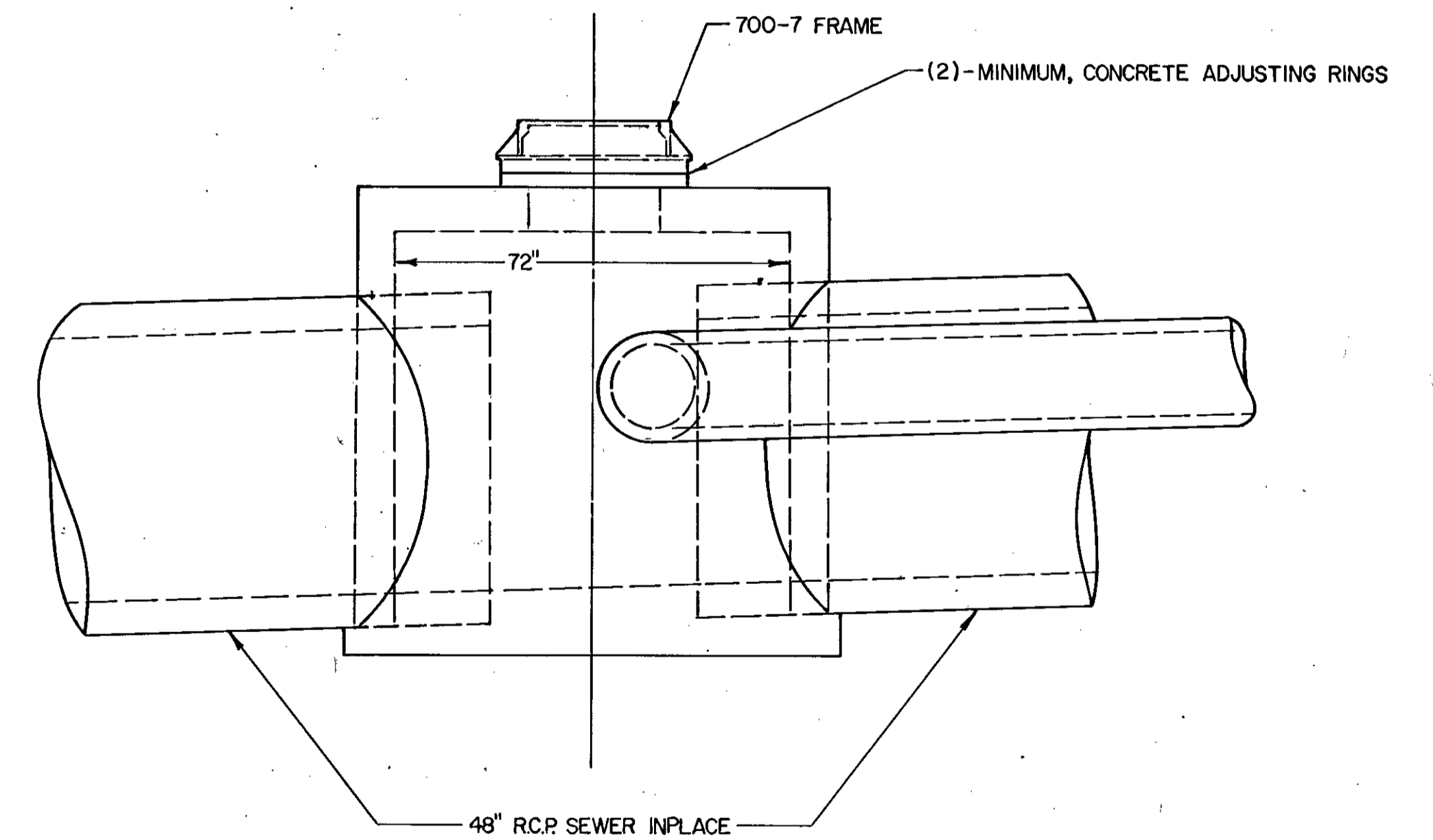
NOTE: ALSO SEE STANDARD PLATE NO. 4020 D FOR CONSTRUCTION DETAILS.



SPECIAL CATCH BASIN DETAIL
SCALE: 1/2" = 1'0"

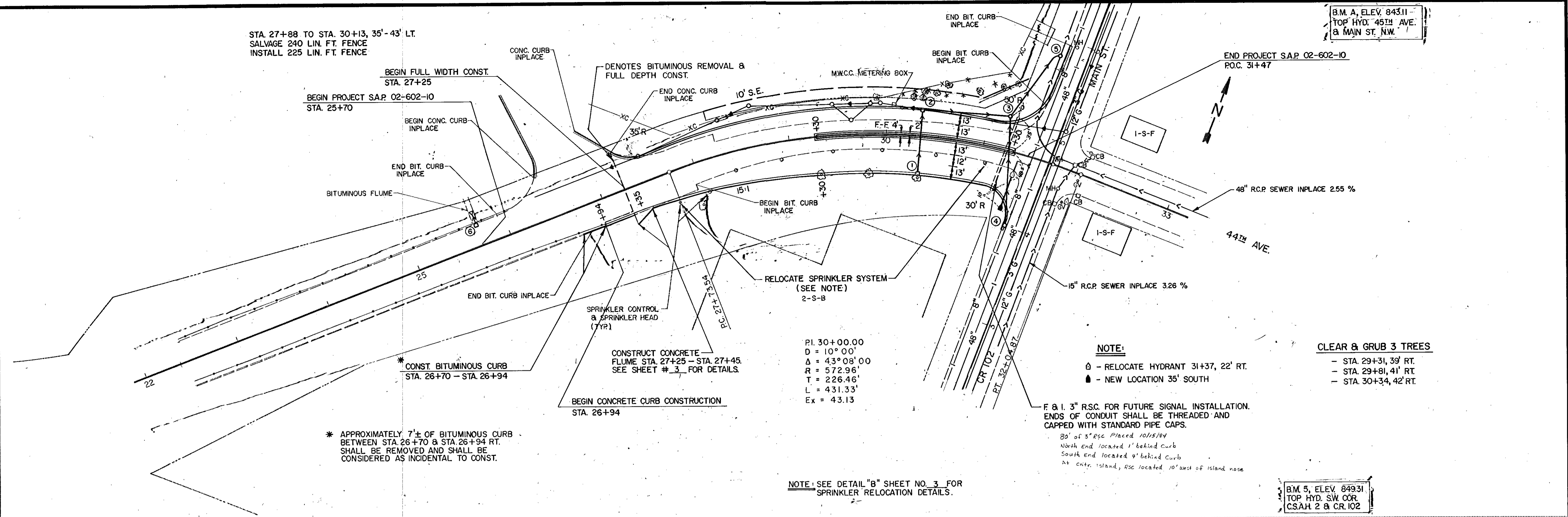


SPECIAL CATCH BASIN DETAIL
SCALE: 1/2" = 1'0"



STA 27+88 TO STA. 30+13, 35'-43' LT.
SALVAGE 240 LIN. FT. FENCE
INSTALL 225 LIN. FT. FENCE

B.M. A, ELEV. 843.11
TOP HYD. 45TH AVE.
& MAIN ST. N.W.



PI. 30+00.00
D = 10° 00'
Δ = 43° 08' 00"
R = 572.96'
T = 226.46'
L = 431.33'
Ex = 43.13

NOTE:

- ⊙ - RELOCATE HYDRANT 31+37, 22' RT.
 - ▲ - NEW LOCATION 35' SOUTH
- F & I. 3" R.S.C. FOR FUTURE SIGNAL INSTALLATION. ENDS OF CONDUIT SHALL BE THREADED AND CAPPED WITH STANDARD PIPE CAPS.
80' of 3" Rsc Placed 10/15/84
North end located 1' behind curb
South end located 4' behind curb
At cntr. island, Rsc located 10' west of island nose

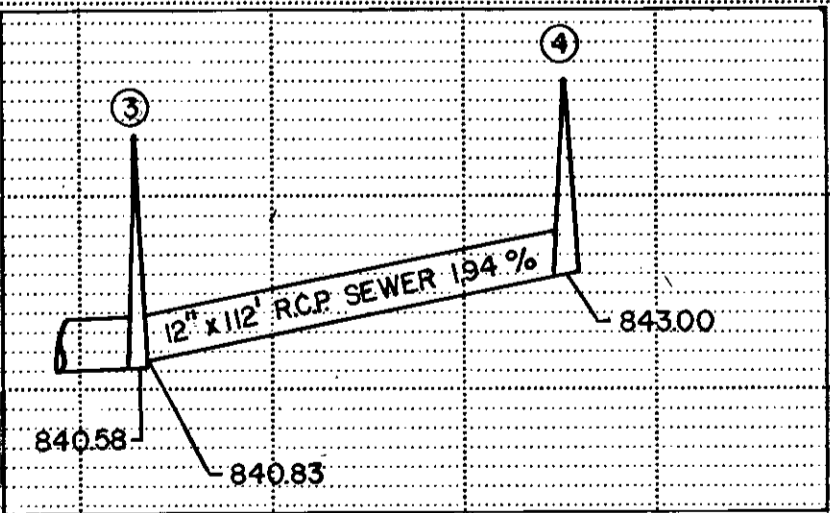
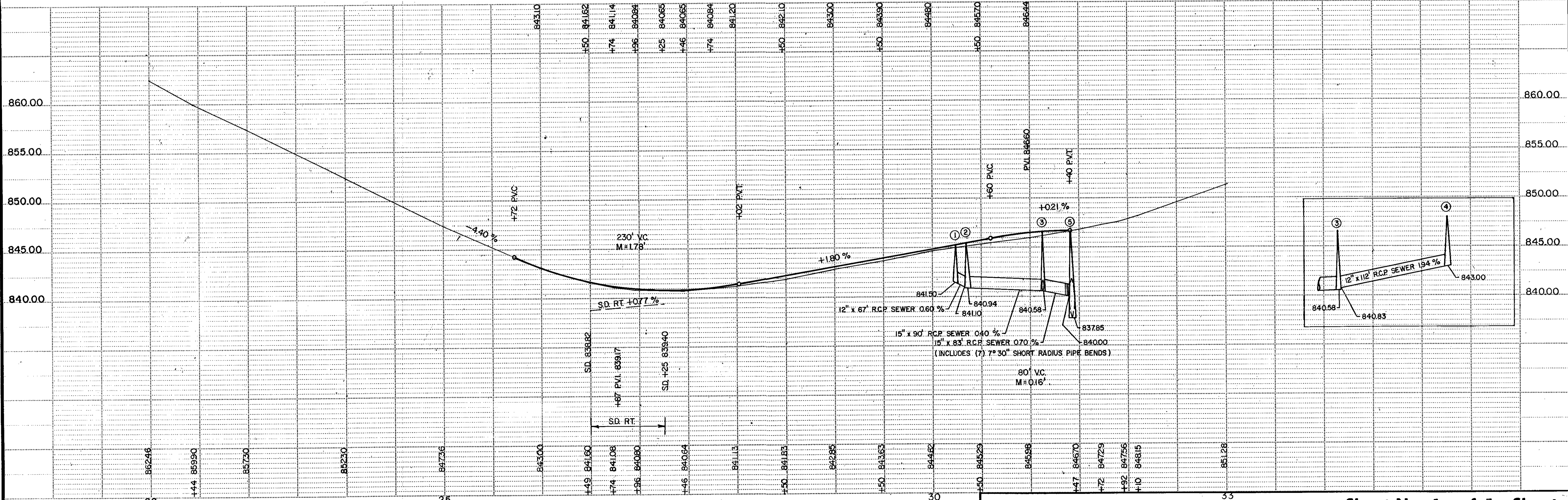
CLEAR & GRUB 3 TREES

- STA. 29+31, 39' RT.
- STA. 29+81, 41' RT.
- STA. 30+34, 42' RT.

* APPROXIMATELY 7'± OF BITUMINOUS CURB BETWEEN STA 26+70 & STA 26+94 RT. SHALL BE REMOVED AND SHALL BE CONSIDERED AS INCIDENTAL TO CONST.

NOTE: SEE DETAIL "B" SHEET NO. 3 FOR SPRINKLER RELOCATION DETAILS.

B.M. 5, ELEV. 849.31
TOP HYD. SW COR.
CSAH 2 & CR 102



TELEPHONE POST - SINGLE PLAN - PROFILE - 102M

EXCAVATION EMBANKMENT

Fed. Proj. No.

BIT. ENT. LT. 26+74 841.08

EXCAVATION EMBANKMENT

Sta. Yds. Cts. Yds. Sub-TOTAL

Sta. Yds. Cts. Yds. Sub-TOTAL

16.0 T.S. 7

30+00 844.62

26+49 841.60 WEST EDGE BIT. ENT. LT.

29+50 843.63

307 59 T.S. 20

4' S.D. 838.82

29+00 842.85

FL. 8' EUP

26+00 843.00

28+50 841.83

FL. 838.61
F&I 15" x 8" RCP SEWER CL. II, 100%
F&I (1)-15" RCP APRON

25+70 844.20

25+00 847.36

361 83 T.S. 17

24+00 852.30

28+00 841.13

39' OAK

85 21 T.S. 7

27+74 840.75

23+00 857.30

27+45 840.64

83 25 T.S. 6

22+44 859.90

27+25 840.64

32 13 T.S. 5

26+96 840.80 EAST EDGE BIT. ENT. LT. FL. 839.40

15 3 T.S. 6

4' S.D. 839.17

STA. 22+44 TO STA. 30+00

TYPING NOT CROSS SECTION BIT INSBP

EXCAVATION EMBANKMENT

Substruc. cu. cu. SUBTOTAL
104 Yds. Yds.

Fed. Proj. No.

31+72 847.29 C MAIN ST.

33+00 851.28

31+47 846.70 WEST GUTTER MAIN ST.

32+10 848.15

306 2 TS 3

31+00 845.38

31+92 847.56 EAST GUTTER MAIN ST.

30+50 845.29

380 22 TS 17

STA. 30+50 TO STA. 33+00

TELETYPE FOR CROSS SECTION INT. IN 1987